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*PMCS
DDE Server Interface Reference*

**Installation Guide
GEH-6509**

GE Power Management Control System 6.14

GEH-6509

NOTES

Notes call attention to information that is especially significant to understanding and operating the software.

This document is based on information available at the time of its publication. While efforts have been made to ensure accuracy, the information contained herein does not cover all details or variations in hardware and software, nor does it provide for every possible contingency in connection with installation, operation, and maintenance. Features may be described herein that are not present in all hardware and software systems. GE Electrical Distribution & Control assumes no obligation of notice to holders of this document with respect to changes subsequently made.

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REFERENCES

For details of the Modbus RTU protocol, refer to PI-MBUS-300 Rev. E from Modicon/AEG Schneider Automation.

For details of RS485 communications, refer to the EIA-485 standard.

For details of the Modbus RTU register maps available in the Concentrator, refer to GEH-6508, *Modbus Concentrator Protocol Reference*.

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Introduction

- *USING THE MANUAL*
- *UNDERSTANDING THE PROGRAM*

USING THE MANUAL



This manual provides the references necessary to build custom client applications for accessing power-management data through GE's Power Management Control System DDE Server.

Please read the *PMCS Network and Device Configurator DDE Server User's Guide* prior to using this manual. The DDE Server User's Guide provides vital background information necessary to understanding the DDE Server.

DDE (Dynamic Data Exchange) is a communications protocol designed by Microsoft to allow independently developed Microsoft Windows programs to communicate data and instructions with each other.

DDE implements a *client-server* relationship between two concurrently running programs. The *server* application provides data to and accepts requests from any other applications interested in its data. The applications requesting the data are called *clients*.

To accomplish this exchange of data, a client program must know the correct format for a DDE data request, meeting specific interface requirements. This manual, the *DDE Server Interface Reference*, explains the interface requirements for DDE clients to request data from the Power Management Control System (PMCS) DDE Server. It provides DDE interface look-up tables for the register-based data available in the PMCS DDE Server. These tables detail all the various attributes of the power management devices compatible with the PMCS DDE Server—event registers, setpoint registers, data registers, and others as appropriate. With these tables, a programmer may design custom interfaces to control and monitor the data of a PMCS network through the PMCS DDE Server.

This manual will assist system engineers or system integrators to:

- Assign PMCS data to customized Excel spreadsheets.
- Assign PMCS data to custom graphical user interface screens developed using third-party or generic HMIs
- Assign PMCS data to other DDE applications

Users of this manual are expected to have experience with HMI design and Modbus protocols. A background in SCADA programming experience is also valuable for designing custom power-management applications using the PMCS DDE Server.

Organization of the Manual

The following table shows the organization of this manual:

Tab Titles	Contents
Introduction	DDE terms and protocols for GE devices
Specific System Devices: <ul style="list-style-type: none"> ■ Trip Units ■ Meters ■ Relays ■ Controls ■ General 	Each section covers a single device and contains device-specific look-up tables for the following types of registers: <ul style="list-style-type: none"> ■ Dynamic Value Inputs ■ Setpoints ■ Fixed Value Inputs ■ Command Coils ■ Additional tables as appropriate
Generic Interface	Contains information needed for setting up devices not covered in the previous chapters. You must also refer to the <i>PMCS Network and Device Configurator DDE Server User Guide</i> .
Modbus Concentrator	Setpoint table with addresses for the Modbus Concentrator.
Modbus Monitor	Setpoint table with addresses for the Modbus Monitor.
Events	Special protocols of Event handling.
Waveform Capture	Special protocols of Waveform Capture.

Device Tables

The tables contained in this manual describe the DDE interface registers—the names and numbers assigned to each, and the type of data and data formats accepted. Interface tables are provided for each device listed in the table below.

NOTE: The register maps provided here reflect the device firmware revisions supported by Power Management Control System version 6.14.

Device Name
TRIP UNITS
Spectra MicroVersa Trip (RMS 6)
Enhanced MicroVersaTrip-C/D (RMS9C/RMS9D)
METERS
EPM 3710,3720 Electronic Power Meter
Power Quality Meter (PQM), MLPQMII - Power Quality Meter II
POWER LEADER Electronic Power Meter,POWER LEADER Meter
EPM6000 (Multifunction Electricity Meter)
EPM 1000 & EPM 4000 (Sub - Meter), EPM 2000 (Digital Power Meter)
EPM 7300 Electronic Power Meter
EPM 7330 Electronic Power Meter
EPM 7500 Electronic Power Meter
EPM 7600 Electronic Power Meter
EPM 7700 Electronic Power Meter
EPM5000P Electronic Power Meter
EPM5200P Electronic Power Meter
EPM5300P Electronic Power Meter
EPM5350P Electronic Power Meter
EPM7430D/EPM7450D Electronic Power Meter
EPM9450Q,EPM9650Q Electronic Power Meter
RELAYS
Universal Relay devices
369 Motor Management Relay
SR469 Motor Management Relay
239 Motor Protection Relay
269+ Motor Relay
SR750,SR760 & MIFII Feeder Management Relay
F650 Bay Controller

Device Name
ENTELLISYS Low Voltage Switch Gear
735 Feeder Relay
565 Feeder Management Relay
SR489 Generator Management Relay
SR745 Transformer Management Relay
MDP Overcurrent Relay
Motor Manager II
CONTROLS
Spectra ECM Electronic Control Module
GE Fanuc Series 90 Programmable Logic Controllers: PLC 90-30, PLC 90-70 and Micro 90 PLC
GE-Zenith Generator PLC (Series 90-70)
GE-Zenith MX200, MX150 & MX250 (Microprocessor Controller)
GENERAL
Generic Device Interface
POWER LEADER Modbus Concentrator
POWER LEADER Modbus Monitor

Additional Information

You can find additional information relating to interface configuration in the following manuals:

1. *PMCS Network and Device Configurator User's Guide* (required)
2. *Modbus Concentrator Protocol Reference*, GEH-6508 (optional)
3. Specific device manuals, as appropriate

UNDERSTANDING THE PROGRAM

The Power Management Control System Network and Device Configurator is, at its heart, a DDE Server. The job of the DDE Server is to respond to requests for data from client programs and then, having answered the initial request, continue to automatically update the data from the devices in the system, alerting the client software of any changes. This automatic updating is called a “hot link” between the server and the client and means that the data you view in the application is always fresh.

Once the data has been received by a client application, it can be formatted, graphed, or used in calculations.

Applications can access the Server’s data if they are Windows NT-based and DDE-capable (compliant with Microsoft’s DDE standards). Typical programs are Microsoft Excel, Word, and Access, and third-party HMI platforms.

Basic Concepts

You might think of the DDE Server as a bank of P.O. boxes. The DDE Server has a box for every piece of data it might be called on to monitor; these boxes are called registers. In the Post Office, each box is assigned a unique number, like Box 122, and the name of an individual, like John Doe. In the DDE system, each box has a unique number, the register number, like R00012, and a name, like VOLTS_A. The names, typically those of device parameters such as volts or amps on a particular phase, are permanently attached to each register number.

The data contained in a register is called the register contents. Register contents are available for use by any DDE-compatible application. The data may be utilized by several applications simultaneously.

Software

The PMCS DDE Server software is provided on CD ROM for installation on your host PC.

Once the Server is running, its data can be accessed using any of three kinds of client programs:

1. **GE PMCS client software applications** such as Cost Allocation Module, Waveform Capture, or Event Logger. Procedures for using these software packages can be found in the respective users guides for these programs. This manual is not required to use these applications.
2. **DDE-compliant software** such as Microsoft Excel, Word or Access may also be used as clients to access the DDE Server’s data. This manual will explain how to set up links from such programs to the DDE Server.
3. **Using third-party generic human-machine interface (HMI) tools, you can design your own HMI clients** to provide a custom graphical interface for your power management system.

If you prefer not to build custom client applications from the ground up, you may purchase the PMCS User Screen Configurator, which provides “Wizards” for all the GE and third-party devices supported by the DDE Server. These software Wizards offer graphical representations of devices, complete with working buttons and displays, and can be used to create custom power-management applications based on the PMCS DDE Server. They come with all logic and programming from the DDE interface tables built in and provide a ready-to-use front end for supported devices.

This manual focuses on items 2 and 3 from the above list, accessing data from existing DDE-compliant software applications and creating your own custom client applications. To access data from the DDE Server, you’ll need to know where to find it in the Server’s maps of registers. This manual will tell you where to find the data you want.

WORKING WITH THE DDE SERVER

The process of working with the DDE Server from a custom client application is summarized below:

1. Obtain a list of topics and associated devices previously configured in the DDE Server. (See the *PMCS Network and Device Configurator DDE Server User ‘s Guide* if you are unsure what this means.)
2. Choose a device (topic) whose data you wish to view.
3. Find the chapter in this reference manual that corresponds to the device type of the topic of interest.
4. Find the register name and number which contains the data of interest for this device (topic).
5. Use this information to program an Excel spreadsheet or to develop a custom user interface with third-party HMI tools.

DDE Interface Protocol

Much as the Post Office requires correct addressing on an envelope (name, street, city, state, ZIP code), the DDE protocol also has rules for addressing, organizing, coding, and packaging data. These rules comprise the protocol for sending data to and from the DDE Server and are discussed in the following sections.

Standard Data-Naming Conventions

Each DDE request for data must be identified with three character strings: *application*, *topic*, and *item*. These tell the DDE protocol which DDE Server (application) to contact for the data, which device (topic) the Server should get the data from, and the particular data (item) to get from that device.

In Excel, a data identifier is formatted as:

=application|topic|item

A typical data identifier might be written as:

=GE32MODB|EPM_2!AMPS_A

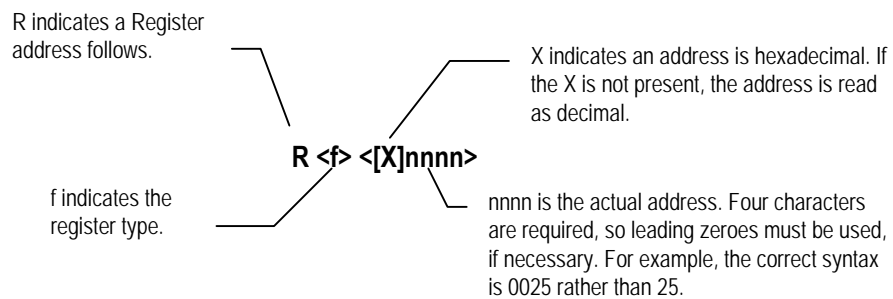
The following table explains the three parts of a data identifier and what they mean:

Data Naming Conventions			
Data Identifier	Description	Where Obtained	Example
Application	The name of the PMCS DDE Server, which is always the same for a given system.	GE32MODB if Modbus GE32MTCP if Ethernet	GE32MODB or GE32MTCP
Topic	Device name; different for each device in the system.	User assigns during DDE Server configuration.	EPM_2
Item	Register number or name. Each box has two identifiers: a register number and an item name. You may use either as the item identifier.	Choose from the tables in this manual. Register numbers are set by the system.	R31092F is a register number. AMPS_A is an item name.

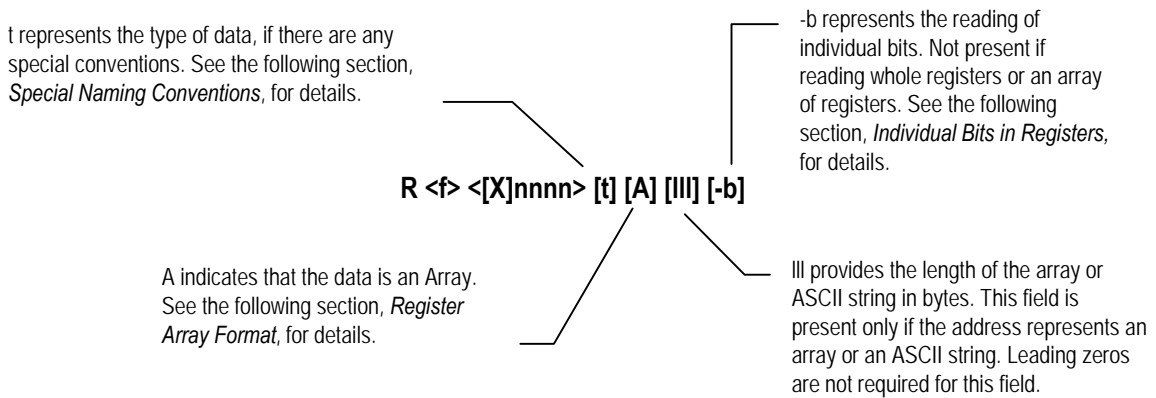
Data-Addressing Conventions

The PMCS DDE Server (version 6.11a) is capable of interpreting both decimal and hexadecimal addresses. This allows access to the Modbus RTU protocol's extended register mode. The two addressing schemes are identical with one exception; an "X" is inserted prior to the address number, to indicate that the address following is in hexadecimal format. The R character is *always* present. Items in < > represent a variable numeric value. Capital letters in brackets [] indicate a hard character that does not change; it is either present or not. Lower-case letters in brackets [] indicate switches that may or may not be present; refer to the following sections for details.

The basic addressing scheme is as follows:



Switches may be used to modify addresses. The possible switches are shown below, and are detailed in the following sections:



Standard Data Organization

Data is organized according to data type, numeric range, tag type, and access type.

Data Types

There are four data types typically used by the GE devices. These four data types are the possible values for 'f' in the address. (Each data type is organized in a separate table for each device in this manual):

1. Dynamic Value
2. Setpoint
3. Command Coil
4. Fixed Value

Each data type is assigned a range of register numbers, tag type, and access as shown below:

Data Organization					
Data Type	Use	Register Range (hexadecimal)	Register Range (decimal)	DDE Tag Type	Type of Access
Command Coil	<ol style="list-style-type: none"> 1. Commands a device to take action. 2. Reads the status of an action or discrete input. 	R0X0000 – R0XFFFF	R00000 – R09999	Discrete	Read and Write
Dynamic Value	Read frequently, such as metering values that change constantly.	R3X0000 – R3XFFFF	R30000 – R39999	Analog	Read Only
Fixed Value	Read only once at power-up; info such as Product ID and configuration options.	R4X0000 – R4XFFFF	R40000 – R49999	Analog	Read Only
Setpoint	Read to view device parameters or written to set device parameters.	R4X0000 – R4XFFFF	R40000 – R49999	Analog	Read and Write

Examples

Here are some examples of different types of register numbers:

Register number	Represents
R00005	Coil command, number 5, with Read/Write access to the user
R31005	Dynamic value, number 1005, Read Only access
R43010	Fixed value or Setpoint, number 3010, with Read Only access to the user

Special Naming Conventions

Use the following conventions for special handling of data from devices.

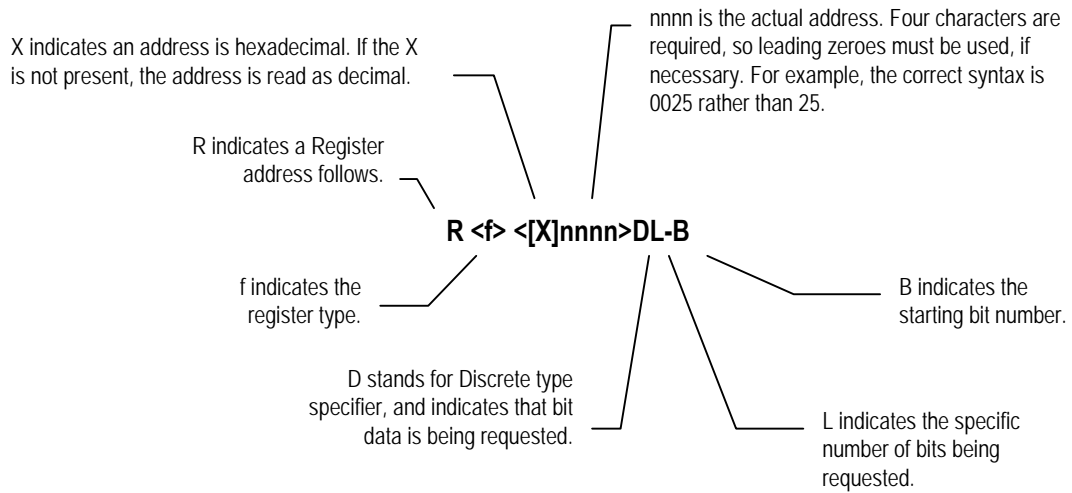
Long Words and Special Numbers

By default, a register item is treated as an unsigned integer. To treat the contents of any register differently, refer to the table below:

Special Data Item	Naming Convention	Example
Unsigned Integer	Default	R40001
16-bit Signed Integers with values between -32,768 and 32,767	Append letter I to item number.	R40001I
32-bit Signed Integers (Long Integers)	Append L to item number.	R40001L
32-bit floating-point numbers	Append F to item number.	R40001F
Modulus 10000 Used in 32-bit register mode for EPM 3710 and 3720.	Append E to the item name <i>Note:</i> See 3710 and 3720 ACM Modbus Protocol Manuals for details.	R40010E
ASCII data string	Append S to item number. [III] field immediately after S character represents the number of characters to read. If no length is specified ([III] field is not provided), only one register of characters (2 or 4) will be read. The High byte represents the first character and the Low byte represents the second character. <i>Note:</i> No array type is allowed with S data items, nor are ASCII strings supported for coil registers. <i>Note 2:</i> For 16-bit-mode devices there are two characters per register. For 32-bit-mode devices, there are four characters per register. <i>Note 3:</i> The maximum value for the S string is 250.	R40010S020

Individual Bits In Registers

Individual bits in registers are read-only. They can be read as discrete/integer tags with the following notation (explained beneath):



Examples

Register Number	Represents
R40001D1-0	Specifies least-significant bit of first holding register
R30008D1-15	Specifies most-significant bit of an input register
R40001D2-5	Specifies 5 th and 6 th from the least-significant bit of first holding register.

Register Array Format

If multiple data items are requested from a single topic, it is more efficient to request a block of contiguous registers than to place multiple requests for single registers. This is referred to as *register array format*. The register array format is used for the following applications:

- To read a block of register values into a column of cells in a worksheet (Excel or Access).
- To pass waveform data to a client application (refer to Appendix B for details).

The rules for register arrays are as follows:

1. A register array (a series of consecutive registers) can be treated as a block of numeric values. Up to 125 sixteen-bit registers or 62 thirty-two-bit registers can be read as a block. Enter the starting register address, append it with type specifier “A”, followed by the length field.

Example: R30501A12

Input registers 501 through 512 are read and written as a block.

2. When the DDE Server returns a new value for a register array to the client, it is in the form of a character string containing a value for each register, separated by a carriage return and line feed.

Example: For R30021A6, the values returned might look like:

```
50<cr><lf>  
17<cr><lf>  
0<cr><lf>  
5<cr><lf>  
1007<cr><lf>  
20<cr><lf>
```

Note: All arrays must be terminated by a null character (ASCII 0).

3. When the client application writes a value to a register array, it must be in the form of a character string containing a value for each register in the array. The register values can be separated by commas, tabs, spaces, carriage returns or line feeds. When writing to an array, we recommend the <cr><lf> format for character separation.

Example: For R40001A6, the value string could be written:

1,2,3,4,5,6 or 1<tab>2<tab>3<tab>4<tab>5<tab>6 or 1 2 3 4 5 6

SETTING UP A DDE LINK IN EXCEL

To view device data in a specific cell in a spreadsheet:

1. Be sure the DDE Server has been started.
2. Define the source of the data you wish to bring in by
 - DDE Server name (application)
 - Device name (topic as configured in the DDE Server software), and
 - Register number or name (item chosen from the list in this manual).
3. Open the appropriate file in Excel.
4. Place your cursor in the cell where the information is to be viewed.
5. In the cell, type the data source in the following format:

=application|topic!item
6. The value of the chosen device parameter will appear in the cell in the spreadsheet. The value will update automatically if there is any change in the data.

Example

You need to set up a cell to view the Phase A current of an Electronic Power Meter (EPM) located in your north plant. You run the Modbus version of the DDE Server, which has the application name GE32MODB. You have configured a topic in the PMCS DDE Server as NP_EPM, which refers to this device. The mnemonic AMPS_A is used as the item.

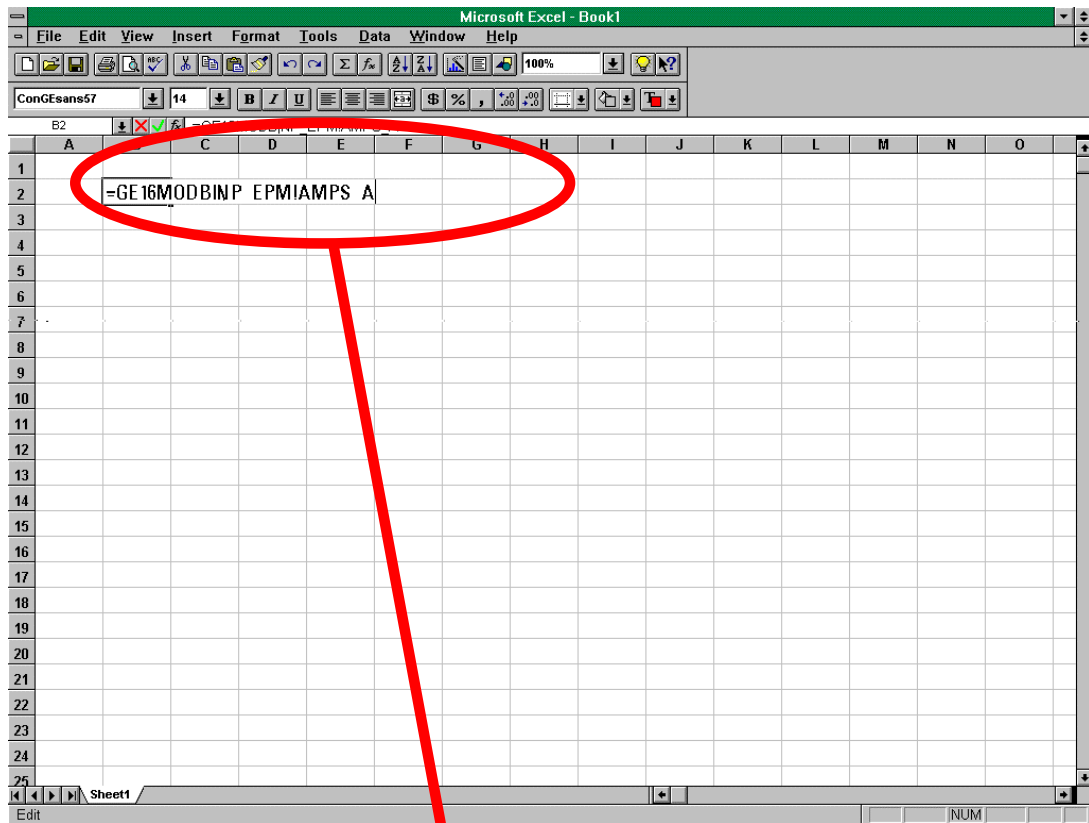
You would type the following in the Excel cell:

=GE32MODB|NP_EPM!AMPS_A

Alternatively, you may use the register number as the item, which you find in the DDE Interface Guide's EPM Table. To use the register number directly, you would type the following in the cell:

=GE32MODB|NP_EPM!R31092F

Excel queries the PMCS DDE Server for the contents of register R31092F of topic NP_EPM. The Server collects the data from the device and sends it back to the client application, which displays the data in the spreadsheet cell. In the example below, the value 50 is retrieved, indicating that Phase A current at the NP_EPM is 50 amps.



	50		

IMPORTANT NOTE

Because Excel will see a dash character as a minus sign, any register address with a dash in it must be enclosed in single quotes, which tells Excel to regard the contents as straight text. For example, when requesting bit mapped data with the following address:

```
=GE32MODB|NP_EPM!R30078D1-10
```

Excel will return with a #NAME response. To force Excel to process the expression correctly, format the request as follows:

```
=GE32MODB|NP_EPM!'R30078D1-10'
```

Enhanced MicroVersaTrip-C and -D Trip Units (RMS 9C and 9D)

- *DYNAMIC VALUE REGISTERS*

- *SETPOINT REGISTERS*

- *FIXED VALUE REGISTERS*

- *COMMAND COILS*

DYNAMIC VALUE REGISTERS

Dynamic Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R31000	PENDING_EVENTS	Number of pending event messages	0 to 8	RO	Integer
R31001I	KWH_OVERFLOW_FLAG	Energy Overflow Flag	1= 1 Overflow 0= No Overflow -1= Multiple Overflow	RO	Signed Integer
R31002F	AMPS_A	RMS Current Phase A	Amps	RO	Real
R31004F	AMPS_B	RMS Current Phase B	Amps	RO	Real
R31006F	AMPS_C	RMS Current Phase C	Amps	RO	Real
R31008F	AMPS_N	RMS Current Phase N	Amps	RO	Real
R31010F	VOLTS_A	RMS Voltage L-N Phase A	Volts	RO	Real
R31012F	VOLTS_B	RMS Voltage L-N Phase B	Volts	RO	Real
R31014F	VOLTS_C	RMS Voltage L-N Phase C	Volts	RO	Real
R31016F	VOLTS_AB	RMS Voltage L-L Phase A-B	Volts	RO	Real
R31018F	VOLTS_BC	RMS Voltage L-L Phase B-C	Volts	RO	Real
R31020F	VOLTS_CA	RMS Voltage L-L Phase C-A	Volts	RO	Real
R31022F	KW_A	Real Power Phase A	kW	RO	Real
R31024F	KW_B	Real Power Phase B	kW	RO	Real
R31026F	KW_C	Real Power Phase C	kW	RO	Real
R31028F	KW_TOTAL	Total Real Power	kW	RO	Real
R31030F	KVAR_A	Reactive Power Phase A	kVar	RO	Real
R31032F	KVAR_B	Reactive Power Phase B	kVar	RO	Real
R31034F	KVAR_C	Reactive Power Phase C	kVar	RO	Real
R31036F	KVAR_TOTAL	Total Reactive Power	kVar	RO	Real
R31038F	KVA_A	Apparent Power Phase A	kVA	RO	Real
R31040F	KVA_B	Apparent Power Phase B	kVA	RO	Real
R31042F	KVA_C	Apparent Power Phase C	kVA	RO	Real
R31044F	KVA_TOTAL	Total Apparent Power	kVA	RO	Real
R31046F	KWH	Energy	kWh	RO	Real
R31048F	KW_DMND	Power Demand	kW	RO	Real
R31050F	KW_PEAK_DMND	Peak Power Demand	KW	RO	Real
R31052F	PF	Power Factor	Lead (-), Lag (+)	RO	Real
R31054F	FREQUENCY	Frequency	Hz	RO	Real
R31056	BRKR_STATUS	Breaker status	Bitmapped to 0 to FFFFh If the bit is 1, the condition exists, b0 : Current unbalance trip b1 : Undervoltage trip b2 : Voltage unbalance b3 : Power reversal trip b4 : Inst. trip b5 : Short time trip b6 : long time trip b7 : ground fault trip b8 : breaker closed b9 : breaker in short time pick up condition b10 : breaker in long time pick up condition	RO	Integer

Dynamic Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
			b11 : breaker in ground fault pickup condition b12 : overvoltage trip condition b13 : breaker opened remotely. Bit 14 and 15 are used to decode which phase caused the trip in overvoltage or undervoltage trip condition only Bit 15 Bit 14 0 0 Phase N 0 1 Phase A 1 0 Phase B 1 1 Phase C		
R31057	BRKR_FAIL_STATUS	Breaker Failure status	Bitmapped to 0 to FFFFh If the bit is 1, the condition exists, b0 : NVM failure in the ground fault unit b1 : ROM failure in the ground fault unit b2 : RAM failure in ground fault unit b3 : A/D converter failure in the ground fault unit b4 : NVM failure on the protection unit b5 : ROM failure on the protection board b6 : RAM failure on the protection board b7 : A/D converter failure on protection board b8 : Medium voltage ground fault unit is connected b9 : unused b10 : IPC failure on the metering board b11 : NVM failure on the metering board b12 : interrupt failure on the metering board b13 : ROM failure on the metering board. b14 : RAM failure on the metering board. b15 : A/D converter failure on metering board.	RO	Integer
R31058	INST_TRIP_COUNT	Inst. trips count	Integer	RO	Integer
R31059	ST_TRIP_COUNT	Short time trips count	Integer	RO	Integer
R31060	LT_TRIP_COUNT	Long time trips count	Integer	RO	Integer
R31061	GF_TRIP_COUNT	Ground Fault trip count	Integer	RO	Integer
R31062F	PREV_ACCUM_ENERGY	Previous Accumulated Energy	kWh	RO	Float
R31064	CLR_ENERGY_STATUS	Energy Cleared Status	0- Not Cleared 1- Cleared	RO	Integer

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R43000	HOUR	Hour	0-23 hours	RO	Integer
R43001	MIN	Minute	0-59 minutes	RO	Integer
R43002	SEC	Seconds	0-59 seconds	RO	Integer
R43006	CSR	Current Sensor Rating	Amps	RO	Integer
R43007F	RATING_PLUG	Rating Plug Value	Amps	RO	Real
R43009F	PT_RATING	PT Rating	Volts	RO	Real
R43011F	LT_PICKUP	Long Time Pickup	0.50–1.1, step 0.05	RO	Real
R43013	LT_DELAY	Long Time Delay	1-4 step 1	RO	Integer
R43014F	ST_PICKUP	Short Time Pickup	0.75–9.9, step 0.05	RO	Real
R43016	ST_DELAY	Short Time Delay	0-20 Value Band I ² T 0 OFF N/A 1 1 In 2 2 In 3 3 In 4 4 In 17 1 Out 18 2 Out 19 3 Out 20 4 Out	RO	Integer
R43017F	GF_PICKUP	Ground Fault Pickup	0.2–0.6 step 0.01	RO	Real
R43019	GF_DELAY	Ground Fault Delay	0-20 Value Band I ² T 0 OFF N/A 1 1 In 2 2 In 3 3 In 4 4 In 17 1 Out 18 2 Out 19 3 Out 20 4 Out	RO	Integer
R43020F	INST_PICKUP	Inst. Pickup	1.5–15.0, step 0.5, 0=Off	RO	Real
R43022	NP_FACTOR	Neutral Protection Factor (0, 50, 100)	0–100% Applicable only for 4 wire 0=OFF ie No protection provided	RO	Integer
R43023	UV_SETPT	Undervoltage Setpoint	50–90%, step 1%	RO	Integer
R43024	UV_DELAY	Undervoltage time Delay	0–15 sec, step 1 sec, 0=Off	RO	Integer
R43025	OV_SETPT	Overvoltage Setpoint	110–150%, step 1%	RO	Integer
R43026	OV_DELAY	Overvoltage Time Delay	0–15 sec, step 1 sec, 0=Off	RO	Integer
R43027	VU_SETPT	Voltage Unbalance Setpoint	10–50%, step 1%	RO	Integer
R43028	VU_DELAY	Voltage Unbalance Time Delay	0–15 sec, step 1 sec, 0=Off	RO	Integer
R43029	CU_SETPT	Current Unbalance Setpoint	10–50%, step 1%	RO	Integer
R43030	CU_DELAY	Current Unbalance Time Delay	0–15 sec, step 1 sec, 0=Off	RO	Integer
R43031	PR_SETPT	Power Reversal Setpoint	10–7200 kW, step 10 kW	RO	Integer
R43032	PR_DELAY	Power Reversal Time Delay	0–15 sec, step 1 sec, 0=Off	RO	Integer

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R43033	POWER_FLOW_DIR	Power Flow direction	0-1 0-Line to load 1-Load to line	RO	Integer
R43034	DMND_INTERVAL	Demand time interval	5-60 step 5 minutes	RO	Integer
R43035	PT_CONNECT	Delta or Wye connection	0=Delta, 1=Wye	RO	Integer

FIXED VALUE REGISTERS

Fixed Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40000	PRODUCT_ID ¹	Product Id	Always 11	RO	Integer
R40002	COMMNET_ADDR	Commnet Address	300-514	RO	Integer
R40003	MODBUS_ADDR	Modbus Address	33-247	RO	Integer
R40006D1-0	LT_OC_ENA	Longtime Overcurrent Protection	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-1	SWH_GF_ENA	Switchable Ground Fault Function (3 wire only)	0=Unswitchable, 1=Switchable	RO	Discrete
R40006D1-2	ST_PICKUP_CFG	Short Time Pickup Configuration	0=f(LT pickup), 1=f(Rating plug)	RO	Discrete
R40006D1-3	IOC_ENA	Instantaneous Overcurrent Protection	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-5	PROT_RELAY_ENA	Protective Relays	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-6	ANSI_UL_CFG	ANSI/UL	0=UL, 1=ANSI	RO	Discrete
R40006D1-8	GF_ENA	Ground Fault Protection	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-9	TARGET_ENA	Targets	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-10	ST_ENA	Short Time Function	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-11	LIMITED_MTR_ENA	Metering Limited	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-12	FULL_MTR_ENA	Metering Full	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-13	COMM_ENA	Commnet Communication	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-14	GF_CURVE_CFG	Ground Fault Curve	0=Normal Curve, 1=W-Curve	RO	Discrete
R40007	FRAME_SIZE	Frame Size	Amps (2000, 3200, 4000, 5000)	RO	Integer
R40008D1-5	TRIP_COUNT_ENA	Trip Operations counter	0-Disabled 1-Enabled	RO	Discrete
R40008D1-6	WIRE_MODE	3/4 Wire mode	0-3 wire 1-4 wire	RO	Discrete
R40008D1-7	SWH_INST_ST_ENA	Switchable inst/Short time function	0=Disabled, 1=Enabled	RO	Discrete
R40008D1-8	CU_ONLY_RELAY	Current unbalance only relay	0=Disabled, 1=Enabled	RO	Discrete
R40008D1-9	ZS1_ENA	Ground fault ZS1 selected	0=Disabled, 1=Enabled	RO	Discrete
R40008D1-10	ZS2_ENA	Short time ZS1 selected	0=Disabled, 1=Enabled	RO	Discrete
R40009D1-0	CU_ENA	Current Unbalance Protective Relay Enabled	0=Disabled, 1=Enabled	RO	Discrete
R40009D1-1	UV_ENA	Under Voltage Protective Relay Enabled	0=Disabled, 1=Enabled	RO	Discrete
R40009D1-2	VU_ENA	Voltage Unbalance Protective Relay Enabled	0=Disabled, 1=Enabled	RO	Discrete
R40009D1-3	PR_ENA	Power Reversal Protective Relay Enabled	0=Disabled, 1=Enabled	RO	Discrete
R40009D1-5	OV_ENA	Over Voltage Protective Relay Enabled	0=Disabled, 1=Enabled	RO	Discrete
R40010	SW_REV	Software revision	4 digit BCD with decimal between 2nd and 3rd places	RO	Integer
R40011	PROD_REV	Product revision	0C-RMS9C 0D-RMS9D	RO	Integer

¹ RMS9C and RMS9D use the same product ID (11). To differentiate between the two releases, product revision code is used.

COMMAND COILS

Command Coils					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value	R/W	Data Type
R00000	CLEAR_ENERGY	Clear Energy/Var-Hour	Set to 1 to clear device energy.	WO	Discrete
R00001	CLEAR_DMND	Clear peak demand	Set to 1 to clear peak demand	WO	Discrete
R00002	RESET_INST_COUNT	Reset inst. trip counter	Set to 1 to clear trip count	WO	Discrete
R00003	RESET_ST_COUNT	Reset short time trip count	Set to 1 to clear trip count	WO	Discrete
R00004	RESET_LT_COUNT	Reset long time trip count	Set to 1 to clear trip count	WO	Discrete
R00005	RESET_GF_COUNT	Reset ground fault trip count	Set to 1 to clear trip count	WO	Discrete

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Spectra MicroVersaTrip Trip Unit (RMS 6)

- *DYNAMIC VALUE REGISTERS*

- *SETPOINT REGISTERS*

- *FIXED VALUE REGISTERS*

- *COMMAND COILS*

DYNAMIC VALUE REGISTERS

Dynamic Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R31000	PENDING_EVENTS	Number of pending event messages	0 to 8	RO	Integer
R31002F	AMPS_A	RMS Current Phase A	Amps	RO	Real
R31004F	AMPS_B	RMS Current Phase B	Amps	RO	Real
R31006F	AMPS_C	RMS Current Phase C	Amps	RO	Real
R31008F	VOLTS_A	RMS Voltage L-N Phase A	Volts	RO	Real
R31010F	VOLTS_B	RMS Voltage L-N Phase B	Volts	RO	Real
R31012F	VOLTS_C	RMS Voltage L-N Phase C	Volts	RO	Real
R31014F	VOLTS_AB	RMS Voltage L-L Phase A-B	Volts	RO	Real
R31016F	VOLTS_BC	RMS Voltage L-L Phase B-C	Volts	RO	Real
R31018F	VOLTS_CA	RMS Voltage L-L Phase C-A	Volts	RO	Real
R31020F	KW_A	Real Power Phase A	kW	RO	Real
R31022F	KW_B	Real Power Phase B	kW	RO	Real
R31024F	KW_C	Real Power Phase C	kW	RO	Real
R31026F	KW_TOTAL	Total Real Power	kW	RO	Real
R31028F	KVAR_A	Reactive Power Phase A	kVar	RO	Real
R31030F	KVAR_B	Reactive Power Phase B	kVar	RO	Real
R31032F	KVAR_C	Reactive Power Phase C	kVar	RO	Real
R31034F	KVAR_TOTAL	Total Reactive Power	kVar	RO	Real
R31036F	KVA_A	Apparent Power Phase A	kVA	RO	Real
R31038F	KVA_B	Apparent Power Phase B	kVA	RO	Real
R31040F	KVA_C	Apparent Power Phase C	kVA	RO	Real
R31042F	KVA_TOTAL	Total Apparent Power	kVA	RO	Real
R31050F	PF	Power Factor	Lead (-), Lag (+)	RO	Real
R31052F	FREQUENCY	Frequency	Hz	RO	Real

Dynamic Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R31054	BRKR_STATUS	Breaker status	Bitmapped to 0 to FFFFh If the bit is 1, the condition exists, b0 : Current unbalance trip b1 : Undervoltage trip b2 : Voltage unbalance b3 : Power reversal trip b4 : Inst. trip b5 : Short time trip b6 : long time trip b7 : ground fault trip b8 : breaker closed b9 : breaker in short time pick up condition b10 : breaker in long time pick up condition b11 : breaker in ground fault pickup condition b12 : overvoltage trip condition b13 : breaker opened remotely. Bit 14 and 15 are used to decode which phase caused the trip in overvoltage or undervoltage trip condition only Bit 15 Bit 14 0 0 Phase N 0 1 Phase A 1 0 Phase B 1 1 Phase C	RO	Integer
R31055	BRKR_FAIL_STATUS	Breaker Failure status	Bitmapped to 0 to FFFFh If the bit is 1, the condition exists, b0 : NVM failure in the ground fault unit b1 : ROM failure in the ground fault unit b2 : RAM failure in ground fault unit b3 : A/D converter failure in the ground fault unit b4 : NVM failure on the protection unit b5 : ROM failure on the protection board b6 : RAM failure on the protection board b7 : A/D converter failure on protection board b8–b15 : not used	RO	Integer
N/A	KWH	Energy	kWh	RO	Real
N/A	KWH_OVERFLOW_FLAG	Energy Overflow Flag	1= 1 Overflow 0= No Overflow -1= Multiple Overflow	RO	Signed Integer
N/A	KW_DMND	Power Demand	kW	RO	Real
N/A	KW_PEAK_DMND	Peak Power Demand	kW	RO	Real

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R43000	HOUR	Hour	0–23 hours	RO	Integer
R43001	MIN	Minute	0–59 minutes	RO	Integer
R43002	SEC	Seconds	0–59 seconds	RO	Integer
R43006	CSR	Current Sensor Rating	Amps	RO	Integer
R43007F	RATING_PLUG	Rating Plug Value	Amps	RO	Real
R43009F	PT_RATING	PT Rating	Volts	RO	Real
R43011F	LT_PICKUP	Long Time Pickup	0.50–1.0, step 0.05	RO	Real
R43013	LT_DELAY	Long Time Delay	1–4 step 1	RO	Integer
R43014F	ST_PICKUP	Short Time Pickup	1.5–9.0, step 0.5	RO	Real
R43016	ST_DELAY	Short Time Delay	0–20 Value Band I ² T 0 OFF N/A 1 1 In 2 2 In 3 3 In 4 4 In 17 1 Out 18 2 Out 19 3 Out 20 4 Out	RO	Integer
R43017F	GF_PICKUP	Ground Fault Pickup	0.2–0.6 step 0.05	RO	Real
R43019	GF_DELAY	Ground Fault Delay	0–20 Value Band I ² T 0 OFF N/A 1 1 In 2 2 In 3 3 In 4 4 In 17 1 Out 18 2 Out 19 3 Out 20 4 Out	RO	Integer
R43020F	INST_PICKUP	Inst. Pickup	1.5–10.0, step 0.5	RO	Real
R43022	UV_SETPT	Undervoltage Setpoint	50–90%, step 1%	RO	Integer
R43023	UV_DELAY	Undervoltage time Delay	0–15 sec, step 1 sec, 0=Off	RO	Integer
R43024	OV_SETPT	Overvoltage Setpoint	110–150%, step 1%	RO	Integer
R43025	OV_DELAY	Overvoltage Time Delay	0–15 sec, step 1 sec, 0=Off	RO	Integer
R43026	VU_SETPT	Voltage Unbalance Setpoint	10–50%, step 1%	RO	Integer
R43027	VU_DELAY	Voltage Unbalance Time Delay	0–15 sec, step 1 sec, 0=Off	RO	Integer
R43028	CU_SETPT	Current Unbalance Setpoint	10–50%, step 1%	RO	Integer
R43029	CU_DELAY	Current Unbalance Time Delay	0–15 sec, step 1 sec, 0=Off	RO	Integer
R43030	PR_SETPT	Power Reversal Setpoint	10–7200 kW, step 10 kW	RO	Integer
R43031	PR_DELAY	Power Reversal Time Delay	0–15 sec, step 1 sec, 0=Off	RO	Integer
R43032	POWER_FLOW_DIR	Power Flow direction	0–Line to load 1–Load to line	RO	Integer

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R43033	PT_CONNECT	Delta or Wye connection	0=Delta, 1=Wye	RO	Integer

FIXED VALUE REGISTERS

Fixed Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40000	PRODUCT_ID	Product Id	Always 3	RO	Integer
R40002	COMMNET_ADDR	Commnet Address	300-514	RO	Integer
R40003	MODBUS_ADDR	Modbus Address	33-247	RO	Integer
R40006D1-0	LT_OC_ENA	Longtime Overcurrent Protection	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-1	LT_PICKUP_ENA	Long time pickup	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-2	LT_DELAY_ENA	Long time delay	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-3	INST_FUNCNT_ENA	Inst. function	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-4	INST_LIMITED_ENA	Inst. limited	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-5	PROT_RELAY_ENA	Protective Relays	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-8	GF_ENA	Ground Fault Protection	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-9	TARGET_ENA	Targets	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-10	ST_ENA	Short Time Function	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-11	LIMITED_MTR_ENA	Metering Limited	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-12	FULL_MTR_ENA	Metering Full	0=Disabled, 1=Enabled	RO	Discrete
R40006D1-13	COMM_ENA	Commnet Communication	0=Disabled, 1=Enabled	RO	Discrete
R40007	CURRENT_SENSOR	Current Sensor	Amps (150, 400 600, 800, 1200)	RO	Integer
R40008	FRAME_TYPE	Frame type	0-G Frame 1-F Frame	RO	Integer
R40009	RELAY_OPTIONS	Relay Options	Bit mapped: b4: 0-Delta, 1-Wye Other bits not assigned	RO	Integer
R40010	SW_REV	Software revision	4 digit BCD with decimal between 2nd and 3rd places	RO	Integer
R40011	PROD_REV	Product revision	4 digit BCD with decimal between second and third places	RO	Integer

COMMAND COILS

Command Coils					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value	R/W	Data Type
R00000	DISP_ADDR	Display Address on device	Set to 1 to display address.	WO	Discrete
N/A	CLEAR_DMND	Clear peak demand	Set to 1 to clear peak demand	WO	Discrete

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EPM 3720 – Electronic Power Meter

- *REAL TIME*
- *STATUS REGISTERS*
- *SETPOINTS*
- *THERMAL DEMAND*
- *SLIDING WINDOW/PREDICTED DEMAND*
- *HARMONIC DATA*
- *DEVICE PARAMETERS*
- *EVENT COUNTERS*
- *TIME OF USE INFORMATION*

REAL TIME MEASUREMENTS

Real Time Measurements					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40001	YEAR	Year (minus 1900)	Year - 1900	RW	Integer
R40002	MONTH	Month	1-12	RW	Integer
R40003	DAY	Day	1-31	RW	Integer
R40004	HOUR	Hour	0-23	RW	Integer
R40005	MINUTE	Minute	0-59	RW	Integer
R40006	SECOND	Second	0-59	RW	Integer
R40007	UNIX_TIME	Seconds since Jan 1, 1970	Seconds	RW	Integer
R40010E	VOLTS_A	RMS Voltage L-N Phase A	Volts	RO	M10000
R40011E	VOLTS_B	RMS Voltage L-N Phase B	Volts	RO	M10000
R40012E	VOLTS_C	RMS Voltage L-N Phase C	Volts	RO	M10000
R40013E	VOLTS_AVG_LN	Average Line-to-Neutral Voltage	Volts	RO	M10000
R40014E	VOLTS_AB	RMS Voltage L-L Phase A-B	Volts	RO	M10000
R40015E	VOLTS_BC	RMS Voltage L-L Phase B-C	Volts	RO	M10000
R40016E	VOLTS_CA	RMS Voltage L-L Phase C-A	Volts	RO	M10000
R40017E	VOLTS_AVG_LL	Average Line-to-Line Voltage	Volts	RO	M10000
R40019E	VOLTS_AUX	RMS Voltage Auxiliary	Volts	RO	M10000
R40020E	AMPS_A	RMS Current Phase A	Amps	RO	M10000
R40021E	AMPS_B	RMS Current Phase B	Amps	RO	M10000
R40022E	AMPS_C	RMS Current Phase C	Amps	RO	M10000
R40023E	AMPS_AVG	Average Phase Current	Amps	RO	M10000
R40025E	AMPS_N	RMS Current Neutral	Amps	RO	M10000
R40027E	VOLTAGE_IMBALANCE	Voltage Imbalance	%	RO	M10000
R40028E	CURRENT_IMBALANCE	Current Imbalance	%	RO	M10000
R40030E	KW_A	Integer Power Phase A	kW	RO	M10000
R40031E	KW_B	Integer Power Phase B	kW	RO	M10000
R40032E	KW_C	Integer Power Phase C	kW	RO	M10000
R40033E	KW_TOTAL	Total Integer Power	kW	RO	M10000
R40034E	KVAR_A	Reactive Power Phase A	kVar	RO	M10000
R40035E	KVAR_B	Reactive Power Phase B	kVar	RO	M10000
R40036E	KVAR_C	Reactive Power Phase C	kVar	RO	M10000
R40037E	KVAR_TOTAL	Total Reactive Power	kVar	RO	M10000
R40038E	PF_A	Power Factor Phase A	%	RO	M10000
R40039E	PF_B	Power Factor Phase B	%	RO	M10000
R40040E	PF_C	Power Factor Phase C	%	RO	M10000
R40041E	PF_TOTAL	Power Factor Total	%	RO	M10000
R40042E	KVA_A	Apparent Power Phase A	kVA	RO	M10000
R40043E	KVA_B	Apparent Power Phase B	kVA	RO	M10000
R40044E	KVA_C	Apparent Power Phase C	kVA	RO	M10000
R40045E	KVA_TOTAL	Total Apparent Power	kVA	RO	M10000
R40047E	FREQUENCY_V1	Frequency	0.01 Hz	RO	M10000
R40048	PHASE_REVERSAL	Phase Reversal	logical	RO	Integer
R40049	RT_POLARITY	Integer Time Polarity	Bitmapped	RO	Integer
R40050	KWH_IMPORT	Import Energy	kWh	RO	Integer

Real Time Measurements					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40051	M_GWH_IMPORT	Import Energy	16bit:Mega 32bit:Giga	RO	Integer
R40052	KWH_EXPORT	Export Energy	kWh	RO	Integer
R40053	M_GWH_EXPORT	Export Energy	16bit:Mega 32bit:Giga	RO	Integer
R40054	KWH_TOTAL	Total Energy	kWh	RO	Integer
R40055	M_GWH_TOTAL	Total Energy	16bit:Mega 32bit:Giga	RO	Integer
R40056	KWH_NET	Net Energy	kWh	RO	Integer
R40057	M_GWH_NET	Net Energy	16bit:Mega 32bit: Giga	RO	Integer
R40060	KVARH_IMPORT	Import Reactive Energy	kVARh	RO	Integer
R40061	M_GVARH_IMPORT	Import Reactive Energy	16bit:Mega 32bit:Giga	RO	Integer
R40062	KVARH_EXPORT	Export Reactive Energy	kVAh	RO	Integer
R40063	M_GVARH_EXPORT	Export Reactive Energy	16bit:Mega 32bit:Giga	RO	Integer
R40064	KVARH_TOTAL	Total Reactive Energy	kVAh	RO	Integer
R40065	M_GVARH_TOTAL	Total Reactive Energy	16bit:Mega 32bit:Giga	RO	Integer
R40066	KVARH_NET	Net Reactive Energy	kWh	RO	Integer
R40067	M_GVARH_NET	Net Reactive Energy	16bit:Mega 32bit: Giga	RO	Integer
R40070	KVAH_IMPORT	kVAh Import	kVAh	RO	Integer
R40071	M_GVAH_IMPORT	VA-Hour Import	16bit:Mega 32bit:Giga	RO	Integer
R40072	KVAH_EXPORT	kVAh Export	kVAh	RO	Integer
R40073	M_GVAH_EXPORT	VA-Hour Export	16bit:Mega 32bit:Giga	RO	Integer
R40074	KVAH_TOTAL	kVAh Total	kVAh	RO	Integer
R40075	M_GVAH_TOTAL	VA-Hour Total	16bit:Mega 32bit:Giga	RO	Integer
R40076	KVAH_NET	kVAh Net	kVAh	RO	Integer
R40077	M_GVAH_NET	VA-Hour Net	16bit:Mega 32bit:Giga	RO	Integer

Note : See the 3720 ACM Modbus Protocol Document for a description of the interpretation of the Energy values.

MINIMUM REAL TIME MEASUREMENTS

Minimum Real Time Measurements					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40310E	VOLTS_A_MIN	Minimum RMS Voltage L-N Phase A	Volts	RO	M10000
R40311E	VOLTS_B_MIN	Minimum RMS Voltage L-N Phase B	Volts	RO	M10000
R40312E	VOLTS_C_MIN	Minimum RMS Voltage L-N Phase C	Volts	RO	M10000
R40313E	VOLTS_AVG_LN_MIN	Minimum Average Line-to-Neutral Voltage	Volts	RO	M10000
R40314E	VOLTS_AB_MIN	Minimum RMS Voltage L-L Phase A-B	Volts	RO	M10000
R40315E	VOLTS_BC_MIN	Minimum RMS Voltage L-L Phase B-C	Volts	RO	M10000
R40316E	VOLTS_CA_MIN	Minimum RMS Voltage L-L Phase C-A	Volts	RO	M10000
R40317E	VOLTS_AVG_LL_MIN	Minimum Average Line-to-Line Voltage	Volts	RO	M10000
R40319E	VOLTS_AUX_MIN	Minimum RMS Voltage Auxiliary	Volts	RO	M10000
R40320E	AMPS_A_MIN	Minimum RMS Current Phase A	Amps	RO	M10000
R40321E	AMPS_B_MIN	Minimum RMS Current Phase B	Amps	RO	M10000
R40322E	AMPS_C_MIN	Minimum RMS Current Phase C	Amps	RO	M10000
R40323E	AMPS_AVG_MIN	Minimum Average Phase Current	Amps	RO	M10000
R40325E	AMPS_N_MIN	Minimum RMS Current Neutral	Amps	RO	M10000
R40327E	VOLTS_IMBALANCE_MIN	Minimum Voltage Imbalance	%	RO	M10000
R40328E	CURR_IMBALANCE_MIN	Minimum Current Imbalance	%	RO	M10000
R40330E	KW_A_MIN	Minimum Integer Power Phase A	kW	RO	M10000
R40331E	KW_B_MIN	Minimum Integer Power Phase B	kW	RO	M10000
R40332E	KW_C_MIN	Minimum Integer Power Phase C	kW	RO	M10000
R40333E	KW_TOTAL_MIN	Minimum Total Integer Power	kW	RO	M10000
R40334E	KVAR_A_MIN	Minimum Reactive Power Phase A	kVar	RO	M10000
R40335E	KVAR_B_MIN	Minimum Reactive Power Phase B	kVar	RO	M10000
R40336E	KVAR_C_MIN	Minimum Reactive Power Phase C	kVar	RO	M10000
R40337E	KVAR_TOTAL_MIN	Minimum Total Reactive Power	kVar	RO	M10000
R40338E	PF_A_MIN	Minimum Power Factor Phase A	%	RO	M10000
R40339E	PF_B_MIN	Minimum Power Factor Phase B	%	RO	M10000
R40340E	PF_C_MIN	Minimum Power Factor Phase C	%	RO	M10000
R40341E	PF_TOTAL_MIN	Minimum Power Factor Total	%	RO	M10000
R40342E	KVA_A_MIN	Minimum Apparent Power Phase A	kVA	RO	M10000
R40343E	KVA_B_MIN	Minimum Apparent Power Phase B	kVA	RO	M10000
R40344E	KVA_C_MIN	Minimum Apparent Power Phase C	kVA	RO	M10000
R40345E	KVA_TOTAL_MIN	Minimum Total Apparent Power	kVA	RO	M10000
R40347E	FREQ_V1_MIN	Minimum Frequency	0.01 Hz	RO	M10000
R40349	RT_POLARITY_MIN	Minimum Integer Time Polarity	Bitmapped	RO	Integer

MINIMUM REAL TIME TIMESTAMPS

Minimum Real Time Timestamps					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40410	VOLTS_A_MINT	Minimum Timestamp for RMS Voltage L-N Phase A	Unix Time	RO	Integer
R40411	VOLTS_B_MINT	Minimum Timestamp for RMS Voltage L-N Phase B	Unix Time	RO	Integer
R40412	VOLTS_C_MINT	Minimum Timestamp for RMS Voltage L-N Phase C	Unix Time	RO	Integer
R40413	VOLTS_AVG_LN_MINT	Minimum Timestamp for Average Line-to-Neutral Voltage	Unix Time	RO	Integer
R40414	VOLTS_AB_MINT	Minimum Timestamp for RMS Voltage L-L Phase A-B	Unix Time	RO	Integer
R40415	VOLTS_BC_MINT	Minimum Timestamp for RMS Voltage L-L Phase B-C	Unix Time	RO	Integer
R40416	VOLTS_CA_MINT	Minimum Timestamp for RMS Voltage L-L Phase C-A	Unix Time	RO	Integer
R40417	VOLTS_AVG_LL_MINT	Minimum Timestamp for Average Line-to-Line Voltage	Unix Time	RO	Integer
R40419	VOLTS_AUX_MINT	Minimum Timestamp for RMS Voltage Auxiliary	Unix Time	RO	Integer
R40420	AMPS_A_MINT	Minimum Timestamp for RMS Current Phase A	Unix Time	RO	Integer
R40421	AMPS_B_MINT	Minimum Timestamp for RMS Current Phase B	Unix Time	RO	Integer
R40422	AMPS_C_MINT	Minimum Timestamp for RMS Current Phase C	Unix Time	RO	Integer
R40423	AMPS_AVG_MINT	Minimum Timestamp for Average Phase Current	Unix Time	RO	Integer
R40425	AMPS_N_MINT	Minimum Timestamp for RMS Current Neutral	Unix Time	RO	Integer
R40427	VOLTS_IMBALANCE_MINT	Minimum Timestamp for Voltage Imbalance	Unix Time	RO	Integer
R40428	CURR_IMBAL_MINT	Minimum Timestamp for Current Imbalance	Unix Time	RO	Integer
R40430	KW_A_MINT	Minimum Timestamp for Integer Power Phase A	Unix Time	RO	Integer
R40431	KW_B_MINT	Minimum Timestamp for Integer Power Phase B	Unix Time	RO	Integer
R40432	KW_C_MINT	Minimum Timestamp for Integer Power Phase C	Unix Time	RO	Integer
R40433	KW_TOTAL_MINT	Minimum Timestamp for Total Integer Power	Unix Time	RO	Integer
R40434	KVAR_A_MINT	Minimum Timestamp for Reactive Power Phase A	Unix Time	RO	Integer
R40435	KVAR_B_MINT	Minimum Timestamp for Reactive Power Phase B	Unix Time	RO	Integer
R40436	KVAR_C_MINT	Minimum Timestamp for Reactive Power Phase C	Unix Time	RO	Integer
R40437	KVAR_TOTAL_MINT	Minimum Timestamp for Total Reactive Power	Unix Time	RO	Integer
R40438	PF_A_MINT	Minimum Timestamp for Power Factor Phase A	Unix Time	RO	Integer
R40439	PF_B_MINT	Minimum Timestamp for Power Factor Phase B	Unix Time	RO	Integer
R40440	PF_C_MINT	Minimum Timestamp for Power Factor Phase C	Unix Time	RO	Integer
R40441	PF_TOTAL_MINT	Minimum Timestamp for Power Factor Total	Unix Time	RO	Integer
R40442	KVA_A_MINT	Minimum Timestamp for Apparent Power Phase A	Unix Time	RO	Integer
R40443	KVA_B_MINT	Minimum Timestamp for Apparent Power Phase B	Unix Time	RO	Integer
R40444	KVA_C_MINT	Minimum Timestamp for Apparent Power Phase C	Unix Time	RO	Integer
R40445	KVA_TOTAL_MINT	Minimum Timestamp for Total Apparent Power	Unix Time	RO	Integer
R40447	FREQ_V1_MINT	Minimum Timestamp for Frequency	Unix Time	RO	Integer

MAXIMUM REAL TIME VALUES

Maximum Real Time Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40610E	VOLTS_A_MAX	Maximum RMS Voltage L-N Phase A	Volts	RO	M10000
R40611E	VOLTS_B_MAX	Maximum RMS Voltage L-N Phase B	Volts	RO	M10000
R40612E	VOLTS_C_MAX	Maximum RMS Voltage L-N Phase C	Volts	RO	M10000
R40613E	VOLTS_AVG_LN_MAX	Maximum Average Line-to-Neutral Voltage	Volts	RO	M10000
R40614E	VOLTS_AB_MAX	Maximum RMS Voltage L-L Phase A-B	Volts	RO	M10000
R40615E	VOLTS_BC_MAX	Maximum RMS Voltage L-L Phase B-C	Volts	RO	M10000
R40616E	VOLTS_CA_MAX	Maximum RMS Voltage L-L Phase C-A	Volts	RO	M10000
R40617E	VOLTS_AVG_LL_MAX	Maximum Average Line-to-Line Voltage	Volts	RO	M10000
R40619E	VOLTS_AUX_MAX	Maximum RMS Voltage Auxiliary	Volts	RO	M10000
R40620E	AMPS_A_MAX	Maximum RMS Current Phase A	Amps	RO	M10000
R40621E	AMPS_B_MAX	Maximum RMS Current Phase B	Amps	RO	M10000
R40622E	AMPS_C_MAX	Maximum RMS Current Phase C	Amps	RO	M10000
R40623E	AMPS_AVG_MAX	Maximum Average Phase Current	Amps	RO	M10000
R40625E	AMPS_N_MAX	Maximum RMS Current Neutral	Amps	RO	M10000
R40627E	VOLTS_IMBALANCE_MAX	Maximum Voltage Imbalance	%	RO	M10000
R40628E	CURR_IMBALANCE_MAX	Maximum Current Imbalance	%	RO	M10000
R40630E	KW_A_MAX	Maximum Integer Power Phase A	kW	RO	M10000
R40631E	KW_B_MAX	Maximum Integer Power Phase B	kW	RO	M10000
R40632E	KW_C_MAX	Maximum Integer Power Phase C	kW	RO	M10000
R40633E	KW_TOTAL_MAX	Maximum Total Integer Power	kW	RO	M10000
R40634E	KVAR_A_MAX	Maximum Reactive Power Phase A	kVar	RO	M10000
R40635E	KVAR_B_MAX	Maximum Reactive Power Phase B	kVar	RO	M10000
R40636E	KVAR_C_MAX	Maximum Reactive Power Phase C	kVar	RO	M10000
R40637E	KVAR_TOTAL_MAX	Maximum Total Reactive Power	kVar	RO	M10000
R40638E	PF_A_MAX	Maximum Power Factor Phase A	%	RO	M10000
R40639E	PF_B_MAX	Maximum Power Factor Phase B	%	RO	M10000
R40640E	PF_C_MAX	Maximum Power Factor Phase C	%	RO	M10000
R40641E	PF_TOTAL_MAX	Maximum Power Factor Total	%	RO	M10000
R40642E	KVA_A_MAX	Maximum Apparent Power Phase A	kVA	RO	M10000
R40643E	KVA_B_MAX	Maximum Apparent Power Phase B	kVA	RO	M10000
R40644E	KVA_C_MAX	Maximum Apparent Power Phase C	kVA	RO	M10000
R40645E	KVA_TOTAL_MAX	Maximum Total Apparent Power	kVA	RO	M10000
R40647E	FREQ_V1_MAX	Maximum Frequency	0.01 Hz	RO	M10000
R40649	RT_POLARITY_MAX	Maximum Integer Time Polarity	Bit-mapped	RO	Integer

MAXIMUM REAL TIME TIMESTAMPS

Maximum Real Time Timestamps					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/ Value/Range	R/W	Data Type
R40710	VOLTS_A_MAXT	Maximum Timestamp for RMS Voltage L-N Phase A	Unix Time	RO	Integer
R40711	VOLTS_B_MAXT	Maximum Timestamp for RMS Voltage L-N Phase B	Unix Time	RO	Integer
R40712	VOLTS_C_MAXT	Maximum Timestamp for RMS Voltage L-N Phase C	Unix Time	RO	Integer
R40713	VOLTS_AVG_LN_MAXT	Maximum Timestamp for Average Line-to-Neutral Voltage	Unix Time	RO	Integer
R40714	VOLTS_AB_MAXT	Maximum Timestamp for RMS Voltage L-L Phase A-B	Unix Time	RO	Integer
R40715	VOLTS_BC_MAXT	Maximum Timestamp for RMS Voltage L-L Phase B-C	Unix Time	RO	Integer
R40716	VOLTS_CA_MAXT	Maximum Timestamp for RMS Voltage L-L Phase C-A	Unix Time	RO	Integer
R40717	VOLTS_AVG_LL_MAXT	Maximum Timestamp for Average Line-to-Line Voltage	Unix Time	RO	Integer
R40719	VOLTS_AUX_MAXT	Maximum Timestamp for RMS Voltage Auxiliary	Unix Time	RO	Integer
R40720	AMPS_A_MAXT	Maximum Timestamp for RMS Current Phase A	Unix Time	RO	Integer
R40721	AMPS_B_MAXT	Maximum Timestamp for RMS Current Phase B	Unix Time	RO	Integer
R40722	AMPS_C_MAXT	Maximum Timestamp for RMS Current Phase C	Unix Time	RO	Integer
R40723	AMPS_AVG_MAXT	Maximum Timestamp for Average Phase Current	Unix Time	RO	Integer
R40725	AMPS_N_MAXT	Maximum Timestamp for RMS Current Neutral	Unix Time	RO	Integer
R40727	VOLTS_IMBALANCE_MAXT	Maximum Timestamp for Voltage Imbalance	Unix Time	RO	Integer
R40728	CURR_IMBAL_MAXT	Maximum Timestamp for Current Imbalance	Unix Time	RO	Integer
R40730	KW_A_MAXT	Maximum Timestamp for Integer Power Phase A	Unix Time	RO	Integer
R40731	KW_B_MAXT	Maximum Timestamp for Integer Power Phase B	Unix Time	RO	Integer
R40732	KW_C_MAXT	Maximum Timestamp for Integer Power Phase C	Unix Time	RO	Integer
R40733	KW_TOTAL_MAXT	Maximum Timestamp for Total Integer Power	Unix Time	RO	Integer
R40734	KVAR_A_MAXT	Maximum Timestamp for Reactive Power Phase A	Unix Time	RO	Integer
R40735	KVAR_B_MAXT	Maximum Timestamp for Reactive Power Phase B	Unix Time	RO	Integer
R40736	KVAR_C_MAXT	Maximum Timestamp for Reactive Power Phase C	Unix Time	RO	Integer
R40737	KVAR_TOTAL_MAXT	Maximum Timestamp for Total Reactive Power	Unix Time	RO	Integer
R40738	PF_A_MAXT	Maximum Timestamp for Power Factor Phase A	Unix Time	RO	Integer
R40739	PF_B_MAXT	Maximum Timestamp for Power Factor Phase B	Unix Time	RO	Integer
R40740	PF_C_MAXT	Maximum Timestamp for Power Factor Phase C	Unix Time	RO	Integer
R40741	PF_TOTAL_MAXT	Maximum Timestamp for Power Factor Total	Unix Time	RO	Integer
R40742	KVA_A_MAXT	Maximum Timestamp for Apparent Power Phase A	Unix Time	RO	Integer
R40743	KVA_B_MAXT	Maximum Timestamp for Apparent Power Phase B	Unix Time	RO	Integer
R40744	KVA_C_MAXT	Maximum Timestamp for Apparent Power Phase C	Unix Time	RO	Integer
R40745	KVA_TOTAL_MAXT	Maximum Timestamp for Total Apparent Power	Unix Time	RO	Integer
R40747	FREQ_V1_MAXT	Maximum Timestamp for Frequency	Unix Time	RO	Integer

STATUS REGISTERS

Status Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40200	RELAY1_STATUS	Status of Control Relay 1: The status can be forced by writing a new status to these bits	Bit b1-b0: Reading: 00=released 01=operated 10=forced released 11=forced operated Writing: 00=normal 01=force operate 10=force release Bit b2: Reading: 0=Relay is latched 1=Relay is pulsed.	RW	Integer
R40201	RELAY2_STATUS	Status of Control Relay 2: The status can be forced by writing a new status to these bits	Bit b1-b0: Reading: 00=released 01=operated 10=forced released 11=forced operated Writing: 00=normal 01=force operate 10=force release Bit b2: Reading: 0=Relay is latched 1=Relay is pulsed.	RW	Integer
R40202	RELAY3_STATUS	Status of Control Relay 3: The status can be forced by writing a new status to these bits	Bit b1-b0: Reading: 00=released 01=operated 10=forced released 11=forced operated Writing: 00=normal 01=force operate 10=force release Bit b2: Reading: 0=Relay is latched 1=Relay is pulsed.	RW	Integer
R40209D1-0	STATUS_INPUT_1	Status Input 1	0 = Normal 1 = Active	RO	Discrete
R40209D1-1	STATUS_INPUT_2	Status Input 2	0 = Normal 1 = Active	RO	Discrete
R40209D1-2	STATUS_INPUT_3	Status Input 3	0 = Normal 1 = Active	RO	Discrete
R40209D1-3	STATUS_INPUT_4	Status Input 4	0 = Normal 1 = Active	RO	Discrete

Status Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40210D7-0	SP1_INDEX	Setpoint1 Setpoint Index	0-127	RO	Integer
R40210D1-7	SP1_STATUS	Setpoint1 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40211D7-0	SP2_INDEX	Setpoint2 Setpoint Index	0-127	RO	Integer
R40211D1-7	SP2_STATUS	Setpoint2 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40212D7-0	SP3_INDEX	Setpoint3 Setpoint Index	0-127	RO	Integer
R40212D1-7	SP3_STATUS	Setpoint3 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40213D7-0	SP4_INDEX	Setpoint4 Setpoint Index	0-127	RO	Integer
R40213D1-7	SP4_STATUS	Setpoint4 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40214D7-0	SP5_INDEX	Setpoint5 Setpoint Index	0-127	RO	Integer
R40214D1-7	SP5_STATUS	Setpoint5 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40215D7-0	SP6_INDEX	Setpoint6 Setpoint Index	0-127	RO	Integer
R40215D1-7	SP6_STATUS	Setpoint6 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40216D7-0	SP7_INDEX	Setpoint7 Setpoint Index	0-127	RO	Integer
R40216D1-7	SP7_STATUS	Setpoint7 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40217D7-0	SP8_INDEX	Setpoint8 Setpoint Index	0-127	RO	Integer
R40217D1-7	SP8_STATUS	Setpoint8 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40218D7-0	SP9_INDEX	Setpoint9 Setpoint Index	0-127	RO	Integer
R40218D1-7	SP9_STATUS	Setpoint9 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40219D7-0	SP10_INDEX	Setpoint10 Setpoint Index	0-127	RO	Integer
R40219D1-7	SP10_STATUS	Setpoint10 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40220D7-0	SP11_INDEX	Setpoint11 Setpoint Index	0-127	RO	Integer
R40220D1-7	SP11_STATUS	Setpoint11 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40221D7-0	HSPD_SP1_INDEX	High speed Setpoint#1 Setpoint Index	0-127	RO	Integer
R40221D1-7	HSPD_SP1_STATUS	High speed Setpoint#1 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40222D7-0	HSPD_SP2_INDEX	High speed Setpoint#2 Setpoint Index	0-127	RO	Integer
R40222D1-7	HSPD_SP2_STATUS	High speed Setpoint#2 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40223D7-0	HSPD_SP3_INDEX	High speed Setpoint#3 Setpoint Index	0-127	RO	Integer
R40223D1-7	HSPD_SP3_STATUS	High speed Setpoint#3 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40224D7-0	HSPD_SP4_INDEX	High speed Setpoint#4 Setpoint Index	0-127	RO	Integer
R40224D1-7	HSPD_SP4_STATUS	High speed Setpoint#4 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40225D7-0	HSPD_SP5_INDEX	High speed Setpoint#5 Setpoint Index	0-127	RO	Integer
R40225D1-7	HSPD_SP5_STATUS	High speed Setpoint#5 Setpoint status	0 = Normal 1 = Active	RO	Discrete

Status Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40226D7-0	HSPD_SP6_INDEX	High speed Setpoint#6 Setpoint Index	0-127	RO	Integer
R40226D1-7	HSPD_SP6_STATUS	High speed Setpoint#6 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40240	STATUS1_COUNTER	Status #1 Counter	0, 1, 2, ...	RO	Integer
R40241	STATUS2_COUNTER	Status #2 Counter	0, 1, 2, ...	RO	Integer
R40242	STATUS3_COUNTER	Status #4 Counter	0, 1, 2, ...	RO	Integer
R40243	STATUS4_COUNTER	Status #4 Counter	0, 1, 2, ...	RO	Integer

SETPOINT #1

Setpoint #1					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R43300	SP1_FLAG	Operation Flags for Setpoint #1	00 = Under positive 01 = Over positive 10 = Under negative 11 = Over negative	RW	Integer
R43301	SP1_TRIGGER_KEY	Trigger Key for Setpoint #1		RW	
R43302	SP1_HIGH_H	High limit high order word for Setpoint #1	Depending on Setpoint Key	RW	Integer
R43303	SP1_HIGH_L	High limit low order word for Setpoint #1	Depending on Setpoint Key	RW	Integer
R43304	SP1_LOW_H	Low limit high order word for Setpoint #1	Depending on Setpoint Key	RW	Integer
R43305	SP1_LOW_L	Low limit low order word for Setpoint #1	Depending on Setpoint Key	RW	Integer
R43306	SP1_OP_DELAY	Time delay to operate	STD = seconds HS = cycles	RW	Integer
R43307	SP1_RLS_DELAY	Time delay to release	STD = seconds HS = cycles	RW	Integer
R43308	SP1_ACTION1_KEY	Action #1 key	N/A	RW	Integer
R43309	SP1_ACTION2_KEY	Action #2 Key	N/A	RW	Integer

SETPOINT #2 THROUGH #17 (CORRESPONDING TO SETPOINT #1)

Setpoint #2 through #17						
	Register	Mnemonic	Contents	Units/Value	R/W	Data Type
Setpoint #1	R43300 - R43309	SP1_XXX	"XXX" for setpoint #1	XXX	RW	XXX
Setpoint #2	R43310 - R43319	SP2_XXX	"XXX" for setpoint #2	XXX	RW	XXX
Setpoint #3	R43320 - R43329	SP3_XXX	"XXX" for setpoint #3	XXX	RW	XXX
Setpoint #4	R43330 - R43339	SP4_XXX	"XXX" for setpoint #4	XXX	RW	XXX
Setpoint #5	R43340 - R43349	SP5_XXX	"XXX" for setpoint #5	XXX	RW	XXX
Setpoint #6	R43350 - R43359	SP6_XXX	"XXX" for setpoint #6	XXX	RW	XXX
Setpoint #7	R43360 - R43369	SP7_XXX	"XXX" for setpoint #7	XXX	RW	XXX
Setpoint #8	R43370 - R43379	SP8_XXX	"XXX" for setpoint #8	XXX	RW	XXX
Setpoint #9	R43380 - R43389	SP9_XXX	"XXX" for setpoint #9	XXX	RW	XXX
Setpoint #10	R43390 - R43399	SP10_XXX	"XXX" for setpoint #10	XXX	RW	XXX
Setpoint #11	R43400 - R43409	SP11_XXX	"XXX" for setpoint #11	XXX	RW	XXX
High speed Setpoint #1	R43410 - R43419	HSPD_SP1_XXX	"XXX" for High speed setpoint #1	XXX	RW	XXX
High speed Setpoint #2	R43420 - R43429	HSPD_SP2_XXX	"XXX" for High speed setpoint #2	XXX	RW	XXX
High speed Setpoint #3	R43430 - R43439	HSPD_SP3_XXX	"XXX" for High speed setpoint #3	XXX	RW	XXX
High speed Setpoint #4	R43440 - R43449	HSPD_SP4_XXX	"XXX" for High speed setpoint #4	XXX	RW	XXX
High speed Setpoint #5	R43450 - R43459	HSPD_SP5_XXX	"XXX" for High speed setpoint #5	XXX	RW	XXX
High speed Setpoint #6	R43460 - R43469	HSPD_SP6_XXX	"XXX" for High speed setpoint #6	XXX	RW	XXX

THERMAL DEMAND MEASUREMENTS

Thermal Demand Measurements					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40110E	VOLTS_A_THM	Thermal Demand RMS Voltage L-N Phase A	Volts	RO	M10000
R40111E	VOLTS_B_THM	Thermal Demand RMS Voltage L-N Phase B	Volts	RO	M10000
R40112E	VOLTS_C_THM	Thermal Demand RMS Voltage L-N Phase C	Volts	RO	M10000
R40113E	VOLTS_AVG_LN_THM	Thermal Demand Average Line-to-Neutral Voltage	Volts	RO	M10000
R40114E	VOLTS_AB_THM	Thermal Demand RMS Voltage L-L Phase A-B	Volts	RO	M10000
R40115E	VOLTS_BC_THM	Thermal Demand RMS Voltage L-L Phase B-C	Volts	RO	M10000
R40116E	VOLTS_CA_THM	Thermal Demand RMS Voltage L-L Phase C-A	Volts	RO	M10000
R40117E	VOLTS_AVG_LL_THM	Thermal Demand Average Line-to-Line Voltage	Volts	RO	M10000
R40119E	VOLTS_AUX_THM	Thermal Demand RMS Voltage Auxiliary	Volts	RO	M10000
R40120E	AMPS_A_THM	Thermal Demand RMS Current Phase A	Amps	RO	M10000
R40121E	AMPS_B_THM	Thermal Demand RMS Current Phase B	Amps	RO	M10000
R40122E	AMPS_C_THM	Thermal Demand RMS Current Phase C	Amps	RO	M10000
R40123E	AMPS_AVG_THM	Thermal Demand Average Phase Current	Amps	RO	M10000
R40125E	AMPS_N_THM	Thermal Demand RMS Current Neutral	Amps	RO	M10000
R40127E	VOLTS_IMBALANCE_THM	Thermal Demand Voltage Imbalance	%	RO	M10000
R40128E	CURR_IMBALANCE_THM	Thermal Demand Current Imbalance	%	RO	M10000
R40130E	KW_A_THM	Thermal Demand Integer Power Phase A	kW	RO	M10000
R40131E	KW_B_THM	Thermal Demand Integer Power Phase B	kW	RO	M10000
R40132E	KW_C_THM	Thermal Demand Integer Power Phase C	kW	RO	M10000
R40133E	KW_TOTAL_THM	Thermal Demand Total Integer Power	kW	RO	M10000
R40134E	KVAR_A_THM	Thermal Demand Reactive Power Phase A	kVar	RO	M10000
R40135E	KVAR_B_THM	Thermal Demand Reactive Power Phase B	kVar	RO	M10000
R40136E	KVAR_C_THM	Thermal Demand Reactive Power Phase C	kVar	RO	M10000
R40137E	KVAR_TOTAL_THM	Thermal Demand Total Reactive Power	kVar	RO	M10000
R40138E	PF_A_THM	Thermal Demand Power Factor Phase A	%	RO	M10000
R40139E	PF_B_THM	Thermal Demand Power Factor Phase B	%	RO	M10000
R40140E	PF_C_THM	Thermal Demand Power Factor Phase C	%	RO	M10000
R40141E	PF_TOTAL_THM	Thermal Demand Power Factor Total	%	RO	M10000
R40142E	KVA_A_THM	Thermal Demand Apparent Power Phase A	kVA	RO	M10000
R40143E	KVA_B_THM	Thermal Demand Apparent Power Phase B	kVA	RO	M10000
R40144E	KVA_C_THM	Thermal Demand Apparent Power Phase C	kVA	RO	M10000
R40145E	KVA_TOTAL_THM	Thermal Demand Total Apparent Power	kVA	RO	M10000
R40147E	FREQ_V1_THM	Thermal Demand Frequency	0.01 Hz	RO	M10000
R40149	POLARITY_THM	Thermal Polarity	Bit-mapped	RO	Integer

MINIMUM THERMAL DEMAND MEASUREMENTS

Minimum Thermal Demand Measurements					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40810E	VOLTS_A_THM_MIN	Minimum Thermal Demand RMS Voltage L-N Phase A	Volts	RO	M10000
R40811E	VOLTS_B_THM_MIN	Minimum Thermal Demand RMS Voltage L-N Phase B	Volts	RO	M10000
R40812E	VOLTS_C_THM_MIN	Minimum Thermal Demand RMS Voltage L-N Phase C	Volts	RO	M10000
R40813E	VOLTS_AVG_LN_THM_MIN	Minimum Thermal Demand Average Line-to-Neutral Voltage	Volts	RO	M10000
R40814E	VOLTS_AB_THM_MIN	Minimum Thermal Demand RMS Voltage L-L Phase A-B	Volts	RO	M10000
R40815E	VOLTS_BC_THM_MIN	Minimum Thermal Demand RMS Voltage L-L Phase B-C	Volts	RO	M10000
R40816E	VOLTS_CA_THM_MIN	Minimum Thermal Demand RMS Voltage L-L Phase C-A	Volts	RO	M10000
R40817E	VOLTS_AVG_LL_THM_MIN	Minimum Thermal Demand Average Line-to-Line Voltage	Volts	RO	M10000
R40819E	VOLTS_AUX_THM_MIN	Minimum Thermal Demand RMS Voltage Auxiliary	Volts	RO	M10000
R40820E	AMPS_A_THM_MIN	Minimum Thermal Demand RMS Current Phase A	Amps	RO	M10000
R40821E	AMPS_B_THM_MIN	Minimum Thermal Demand RMS Current Phase B	Amps	RO	M10000
R40822E	AMPS_C_THM_MIN	Minimum Thermal Demand RMS Current Phase C	Amps	RO	M10000
R40823E	AMPS_AVG_THM_MIN	Minimum Thermal Demand Average Phase Current	Amps	RO	M10000
R40825E	AMPS_N_THM_MIN	Minimum Thermal Demand RMS Current Neutral	Amps	RO	M10000
R40827E	VOLTS_IMBAL_THM_MIN	Minimum Thermal Demand Voltage Imbalance	%	RO	M10000
R40828E	CURR_IMBAL_THM_MIN	Minimum Thermal Demand Current Imbalance	%	RO	M10000
R40830E	KW_A_THM_MIN	Minimum Thermal Demand Integer Power Phase A	kW	RO	M10000
R40831E	KW_B_THM_MIN	Minimum Thermal Demand Integer Power Phase B	kW	RO	M10000
R40832E	KW_C_THM_MIN	Minimum Thermal Demand Integer Power Phase C	kW	RO	M10000
R40833E	KW_TOTAL_THM_MIN	Minimum Thermal Demand Total Integer Power	kW	RO	M10000
R40834E	KVAR_A_THM_MIN	Minimum Thermal Demand Reactive Power Phase A	kVar	RO	M10000
R40835E	KVAR_B_THM_MIN	Minimum Thermal Demand Reactive Power Phase B	kVar	RO	M10000
R40836E	KVAR_C_THM_MIN	Minimum Thermal Demand Reactive Power Phase C	kVar	RO	M10000
R40837E	KVAR_TOTAL_THM_MIN	Minimum Thermal Demand Total Reactive Power	kVar	RO	M10000
R40838E	PF_A_THM_MIN	Minimum Thermal Demand Power Factor Phase A	%	RO	M10000
R40839E	PF_B_THM_MIN	Minimum Thermal Demand Power Factor Phase B	%	RO	M10000
R40840E	PF_C_THM_MIN	Minimum Thermal Demand Power Factor Phase C	%	RO	M10000
R40841E	PF_TOTAL_THM_MIN	Minimum Thermal Demand Power Factor Total	%	RO	M10000
R40842E	KVA_A_THM_MIN	Minimum Thermal Demand Apparent Power Phase A	kVA	RO	M10000
R40843E	KVA_B_THM_MIN	Minimum Thermal Demand Apparent Power Phase B	kVA	RO	M10000
R40844E	KVA_C_THM_MIN	Minimum Thermal Demand Apparent Power Phase C	kVA	RO	M10000
R40845E	KVA_TOTAL_THM_MIN	Minimum Thermal Demand Total Apparent Power	kVA	RO	M10000
R40847E	FREQ_V1_THM_MIN	Minimum Thermal Demand Frequency	0.01 Hz	RO	M10000
R40849	POLARITY_THM_MIN	Minimum Thermal Polarity	Bitmapped	RO	Integer

MAXIMUM THERMAL DEMAND MEASUREMENTS

Maximum Thermal Demand Measurements					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/ Value/Range	R/W	Data Type
R41010E	VOLTS_A_THM_MAX	Maximum Thermal Demand RMS Voltage L-N Phase A	Volts	RO	M10000
R41011E	VOLTS_B_THM_MAX	Maximum Thermal Demand RMS Voltage L-N Phase B	Volts	RO	M10000
R41012E	VOLTS_C_THM_MAX	Maximum Thermal Demand RMS Voltage L-N Phase C	Volts	RO	M10000
R41013E	VOLTS_AVG_LN_THM_MAX	Maximum Thermal Demand Average Line-to-Neutral Voltage	Volts	RO	M10000
R41014E	VOLTS_AB_THM_MAX	Maximum Thermal Demand RMS Voltage L-L Phase A-B	Volts	RO	M10000
R41015E	VOLTS_BC_THM_MAX	Maximum Thermal Demand RMS Voltage L-L Phase B-C	Volts	RO	M10000
R41016E	VOLTS_CA_THM_MAX	Maximum Thermal Demand RMS Voltage L-L Phase C-A	Volts	RO	M10000
R41017E	VOLTS_AVG_LL_THM_MAX	Maximum Thermal Demand Average Line-to-Line Voltage	Volts	RO	M10000
R41019E	VOLTS_AUX_THM_MAX	Maximum Thermal Demand RMS Voltage Auxiliary	Volts	RO	M10000
R41020E	AMPS_A_THM_MAX	Maximum Thermal Demand RMS Current Phase A	Amps	RO	M10000
R41021E	AMPS_B_THM_MAX	Maximum Thermal Demand RMS Current Phase B	Amps	RO	M10000
R41022E	AMPS_C_THM_MAX	Maximum Thermal Demand RMS Current Phase C	Amps	RO	M10000
R41023E	AMPS_AVG_THM_MAX	Maximum Thermal Demand Average Phase Current	Amps	RO	M10000
R41025E	AMPS_N_THM_MAX	Maximum Thermal Demand RMS Current Neutral	Amps	RO	M10000
R41027E	VOLTS_IMBAL_THM_MAX	Maximum Thermal Demand Voltage Imbalance	%	RO	M10000
R41028E	CURR_IMBAL_THM_MAX	Maximum Thermal Demand Current Imbalance	%	RO	M10000
R41030E	KW_A_THM_MAX	Maximum Thermal Demand Integer Power Phase A	kW	RO	M10000
R41031E	KW_B_THM_MAX	Maximum Thermal Demand Integer Power Phase B	kW	RO	M10000
R41032E	KW_C_THM_MAX	Maximum Thermal Demand Integer Power Phase C	kW	RO	M10000
R41033E	KW_TOTAL_THM_MAX	Maximum Thermal Demand Total Integer Power	kW	RO	M10000
R41034E	KVAR_A_THM_MAX	Maximum Thermal Demand Reactive Power Phase A	kVar	RO	M10000
R41035E	KVAR_B_THM_MAX	Maximum Thermal Demand Reactive Power Phase B	kVar	RO	M10000
R41036E	KVAR_C_THM_MAX	Maximum Thermal Demand Reactive Power Phase C	kVar	RO	M10000
R41037E	KVAR_TOTAL_THM_MAX	Maximum Thermal Demand Total Reactive Power	kVar	RO	M10000
R41038E	PF_A_THM_MAX	Maximum Thermal Demand Power Factor Phase A	%	RO	M10000
R41039E	PF_B_THM_MAX	Maximum Thermal Demand Power Factor Phase B	%	RO	M10000
R41040E	PF_C_THM_MAX	Maximum Thermal Demand Power Factor Phase C	%	RO	M10000
R41041E	PF_TOTAL_THM_MAX	Maximum Thermal Demand Power Factor Total	%	RO	M10000
R41042E	KVA_A_THM_MAX	Maximum Thermal Demand Apparent Power Phase A	kVA	RO	M10000
R41043E	KVA_B_THM_MAX	Maximum Thermal Demand Apparent Power Phase B	kVA	RO	M10000
R41044E	KVA_C_THM_MAX	Maximum Thermal Demand Apparent Power Phase C	kVA	RO	M10000
R41045E	KVA_TOTAL_THM_MAX	Maximum Thermal Demand Total Apparent Power	kVA	RO	M10000
R41047E	FREQ_V1_THM_MAX	Maximum Thermal Demand Frequency	0.01 Hz	RO	M10000
R41049	POLARITY_THM_MAX	Maximum Thermal Polarity	Bit-mapped	RO	Integer

MINIMUM THERMAL DEMAND TIMESTAMPS

Minimum Thermal Demand Timestamps					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40910	VOLTS_A_THM_MINT	Minimum Thermal Demand Timestamp for RMS Voltage L-N Phase A	Unix Time	RO	Integer
R40911	VOLTS_B_THM_MINT	Minimum Thermal Demand Timestamp for RMS Voltage L-N Phase B	Unix Time	RO	Integer
R40912	VOLTS_C_THM_MINT	Minimum Thermal Demand Timestamp for RMS Voltage L-N Phase C	Unix Time	RO	Integer
R40913	VOLTS_AVG_LN_THM_MINT	Minimum Thermal Demand Timestamp for Average Line-to-Neutral Voltage	Unix Time	RO	Integer
R40914	VOLTS_AB_THM_MINT	Minimum Thermal Demand Timestamp for RMS Voltage L-L Phase A-B	Unix Time	RO	Integer
R40915	VOLTS_BC_THM_MINT	Minimum Thermal Demand Timestamp for RMS Voltage L-L Phase B-C	Unix Time	RO	Integer
R40916	VOLTS_CA_THM_MINT	Minimum Thermal Demand Timestamp for RMS Voltage L-L Phase C-A	Unix Time	RO	Integer
R40917	VOLTS_AVG_LL_THM_MINT	Minimum Thermal Demand Timestamp for Average Line-to-Line Voltage	Unix Time	RO	Integer
R40919	VOLTS_AUX_THM_MINT	Minimum Thermal Demand Timestamp for RMS Voltage Auxiliary	Unix Time	RO	Integer
R40920	AMPS_A_THM_MINT	Minimum Thermal Demand Timestamp for RMS Current Phase A	Unix Time	RO	Integer
R40921	AMPS_B_THM_MINT	Minimum Thermal Demand Timestamp for RMS Current Phase B	Unix Time	RO	Integer
R40922	AMPS_C_THM_MINT	Minimum Thermal Demand Timestamp for RMS Current Phase C	Unix Time	RO	Integer
R40923	AMPS_AVG_THM_MINT	Minimum Thermal Demand Timestamp for Average Phase Current	Unix Time	RO	Integer
R40925	AMPS_N_THM_MINT	Minimum Thermal Demand Timestamp for RMS Current Neutral	Unix Time	RO	Integer
R40927	VOLTS_IMBAL_THM_MINT	Minimum Thermal Demand Timestamp for Voltage Imbalance	Unix Time	RO	Integer
R40928	CURR_IMBAL_THM_MINT	Minimum Thermal Demand Timestamp for Current Imbalance	Unix Time	RO	Integer
R40930	KW_A_THM_MINT	Minimum Thermal Demand Timestamp for Integer Power Phase A	Unix Time	RO	Integer
R40931	KW_B_THM_MINT	Minimum Thermal Demand Timestamp for Integer Power Phase B	Unix Time	RO	Integer
R40932	KW_C_THM_MINT	Minimum Thermal Demand Timestamp for Integer Power Phase C	Unix Time	RO	Integer
R40933	KW_TOTAL_THM_MINT	Minimum Thermal Demand Timestamp for Total Integer Power	Unix Time	RO	Integer
R40934	KVAR_A_THM_MINT	Minimum Thermal Demand Timestamp for Reactive Power Phase A	Unix Time	RO	Integer
R40935	KVAR_B_THM_MINT	Minimum Thermal Demand Timestamp for Reactive Power Phase B	Unix Time	RO	Integer
R40936	KVAR_C_THM_MINT	Minimum Thermal Demand Timestamp for Reactive Power Phase C	Unix Time	RO	Integer
R40937	KVAR_TOTAL_THM_MINT	Minimum Thermal Demand Timestamp for Total Reactive Power	Unix Time	RO	Integer

Minimum Thermal Demand Timestamps					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40938	PF_A_THM_MINT	Minimum Thermal Demand Timestamp for Power Factor Phase A	Unix Time	RO	Integer
R40939	PF_B_THM_MINT	Minimum Thermal Demand Timestamp for Power Factor Phase B	Unix Time	RO	Integer
R40940	PF_C_THM_MINT	Minimum Thermal Demand Timestamp for Power Factor Phase C	Unix Time	RO	Integer
R40941	PF_TOTAL_THM_MINT	Minimum Thermal Demand Timestamp for Power Factor Total	Unix Time	RO	Integer
R40942	KVA_A_THM_MINT	Minimum Thermal Demand Timestamp for Apparent Power Phase A	Unix Time	RO	Integer
R40943	KVA_B_THM_MINT	Minimum Thermal Demand Timestamp for Apparent Power Phase B	Unix Time	RO	Integer
R40944	KVA_C_THM_MINT	Minimum Thermal Demand Timestamp for Apparent Power Phase C	Unix Time	RO	Integer
R40945	KVA_TOTAL_THM_MINT	Minimum Thermal Demand Timestamp for Total Apparent Power	Unix Time	RO	Integer
R40947	FREQ_V1_THM_MINT	Minimum Thermal Demand Timestamp for Frequency	Unix Time	RO	Integer

MAXIMUM THERMAL DEMAND TIMESTAMPS

Maximum Thermal Demand Timestamps					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/ Value	R/ W	Data Type
R41110	VOLTS_A_THM_MAXT	Maximum Thermal Demand Timestamp for RMS Voltage L-N Phase A	Unix Time	RO	Integer
R41111	VOLTS_B_THM_MAXT	Maximum Thermal Demand Timestamp for RMS Voltage L-N Phase B	Unix Time	RO	Integer
R41112	VOLTS_C_THM_MAXT	Maximum Thermal Demand Timestamp for RMS Voltage L-N Phase C	Unix Time	RO	Integer
R41113	VOLTS_AVG_LN_THM_MAXT	Maximum Thermal Demand Timestamp for Average Line-to-Neutral Voltage	Unix Time	RO	Integer
R41114	VOLTS_AB_THM_MAXT	Maximum Thermal Demand Timestamp for RMS Voltage L-L Phase A-B	Unix Time	RO	Integer
R41115	VOLTS_BC_THM_MAXT	Maximum Thermal Demand Timestamp for RMS Voltage L-L Phase B-C	Unix Time	RO	Integer
R41116	VOLTS_CA_THM_MAXT	Maximum Thermal Demand Timestamp for RMS Voltage L-L Phase C-A	Unix Time	RO	Integer
R41117	VOLTS_AVG_LL_THM_MAXT	Maximum Thermal Demand Timestamp for Average Line-to-Line Voltage	Unix Time	RO	Integer
R41119	VOLTS_AUX_THM_MAXT	Maximum Thermal Demand Timestamp for RMS Voltage Auxiliary	Unix Time	RO	Integer
R41120	AMPS_A_THM_MAXT	Maximum Thermal Demand Timestamp for RMS Current Phase A	Unix Time	RO	Integer
R41121	AMPS_B_THM_MAXT	Maximum Thermal Demand Timestamp for RMS Current Phase B	Unix Time	RO	Integer
R41122	AMPS_C_THM_MAXT	Maximum Thermal Demand Timestamp for RMS Current Phase C	Unix Time	RO	Integer
R41123	AMPS_AVG_THM_MAXT	Maximum Thermal Demand Timestamp for Average Phase Current	Unix Time	RO	Integer
R41125	AMPS_N_THM_MAXT	Maximum Thermal Demand Timestamp for RMS Current Neutral	Unix Time	RO	Integer
R41127	VOLTS_IMBAL_THM_MAXT	Maximum Thermal Demand Timestamp for Voltage Imbalance	Unix Time	RO	Integer
R41128	CURR_IMBAL_THM_MAXT	Maximum Thermal Demand Timestamp for Current Imbalance	Unix Time	RO	Integer
R41130	KW_A_THM_MAXT	Maximum Thermal Demand Timestamp for Integer Power Phase A	Unix Time	RO	Integer
R41131	KW_B_THM_MAXT	Maximum Thermal Demand Timestamp for Integer Power Phase B	Unix Time	RO	Integer
R41132	KW_C_THM_MAXT	Maximum Thermal Demand Timestamp for Integer Power Phase C	Unix Time	RO	Integer
R41133	KW_TOTAL_THM_MAXT	Maximum Thermal Demand Timestamp for Total Integer Power	Unix Time	RO	Integer
R41134	KVAR_A_THM_MAXT	Maximum Thermal Demand Timestamp for Reactive Power Phase A	Unix Time	RO	Integer
R41135	KVAR_B_THM_MAXT	Maximum Thermal Demand Timestamp for Reactive Power Phase B	Unix Time	RO	Integer
R41136	KVAR_C_THM_MAXT	Maximum Thermal Demand Timestamp for Reactive Power Phase C	Unix Time	RO	Integer
R41137	KVAR_TOTAL_THM_MAXT	Maximum Thermal Demand Timestamp for Total Reactive Power	Unix Time	RO	Integer
R41138	PF_A_THM_MAXT	Maximum Thermal Demand Timestamp for Power Factor Phase A	Unix Time	RO	Integer
R41139	PF_B_THM_MAXT	Maximum Thermal Demand Timestamp for Power Factor Phase B	Unix Time	RO	Integer
R41140	PF_C_THM_MAXT	Maximum Thermal Demand Timestamp for Power Factor Phase C	Unix Time	RO	Integer
R41141	PF_TOTAL_THM_MAXT	Maximum Thermal Demand Timestamp for Power Factor Total	Unix Time	RO	Integer
R41142	KVA_A_THM_MAXT	Maximum Thermal Demand Timestamp for Apparent Power Phase A	Unix Time	RO	Integer
R41143	KVA_B_THM_MAXT	Maximum Thermal Demand Timestamp for Apparent Power Phase B	Unix Time	RO	Integer
R41144	KVA_C_THM_MAXT	Maximum Thermal Demand Timestamp for Apparent Power Phase C	Unix Time	RO	Integer

Maximum Thermal Demand Timestamps					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/ Value	R/ W	Data Type
R41145	KVA_TOTAL_THM_MAXT	Maximum Thermal Demand Timestamp for Total Apparent Power	Unix Time	RO	Integer
R41147	FREQ_V1_THM_MAXT	Maximum Thermal Demand Timestamp for Frequency	Unix Time	RO	Integer

Sliding Window Demand and Predicted Demand Measurements

(Corresponding to Thermal Demand Measurements)

Sliding Window/Predicted Demand Measurements			
	Thermal Demand Measurement	Sliding Window Demand Measurement	Predicted Demand Measurement
Register	R40110E - R40149	R40510E - R40549	R41610E - R41649
Mnemonics	XXXX_THM	XXXX_SLW	XXXX_PRD
Contents	Thermal Demand For "XXX"	Sliding Window Demand for "XXX"	Predicted Demand for "XXX"
Units	XXX	XXX	XXX
Read/Write	RO	RO	RO
Data Type	M10000/Integer	M10000/Integer	M10000/Integer

Example:

Register	R40114E	R40514E	R41614E
Mnemonics	VOLTS_AB_THM	VOLTS_AB_SLW	VOLTS_AB_PRD
Contents	Thermal Demand RMS Voltage L-L Phase A-B	Sliding Window Demand RMS Voltage L-L Phase A-B	Predicted Demand RMS Voltage L-L Phase A-B
Units	Volts	Volts	Volts
Read/Write	RO	RO	RO
Data Type	M10000	M10000	M10000

Minimum Sliding Window Demand and Predicted Demand Measurements

(Corresponding to Minimum Thermal Demand Measurements)

Minimum Sliding Window/Predicted Demand Measurements			
	Minimum Thermal Demand Measurement	Minimum Sliding Window Demand Measurement	Minimum Predicted Demand Measurement
Register	R40810E - R40849	R41210E - R41249	R41710E - R41749
Mnemonics	XXXX_THM_MIN	XXXX_SLW_MIN	XXXX_PRD_MIN
Contents	Minimum Thermal Demand For "XXX"	Minimum Sliding Window Demand for "XXX"	Minimum Predicted Demand for "XXX"
Units	XXX	XXX	XXX
Read/Write	RO	RO	RO
Data Type	M10000/Integer	M10000/Integer	M10000/Integer

Example:

Register	R40820E	R41220E	R41720E
Mnemonics	AMPS_A_THM_MIN	AMPS_A_SLW_MIN	AMPS_A_PRD_MIN
Contents	Minimum Thermal Demand RMS Current Phase A	Minimum Sliding Window Demand RMS Current Phase A	Minimum Predicted Demand RMS Current Phase A
Units	Amps	Amps	Amps
Read/Write	RO	RO	RO
Data Type	M10000	M10000	M10000

Maximum Sliding Window Demand and Predicted Demand Measurements

(Corresponding to Maximum Thermal Demand Measurements)

Maximum Sliding Window/Predicted Demand Measurements			
	Maximum Thermal Demand Measurement	Maximum Sliding Window Demand Measurement	Maximum Predicted Demand Measurement
Register	R41010E - R41049	R41410E - R41449	R41910E - R41949
Mnemonics	XXXX_THM_MAX	XXXX_SLW_MAX	XXXX_PRD_MAX
Contents	Maximum Thermal Demand For "XXX"	Maximum Sliding Window Demand for "XXX"	Maximum Predicted Demand for "XXX"
Units	XXX	XXX	XXX
Read/Write	RO	RO	RO
Data Type	M10000/Integer	M10000/Integer	M10000/Integer

Example:

Register	R41020E	R41420E	R41920E
Mnemonics	AMPS_A_THM_MAX	AMPS_A_SLW_MAX	AMPS_A_PRD_MAX
Contents	Maximum Thermal Demand RMS Current Phase A	Maximum Sliding Window Demand RMS Current Phase A	Maximum Predicted Demand RMS Current Phase A
Units	Amps	Amps	Amps
Read/Write	RO	RO	RO
Data Type	M10000	M10000	M10000

Minimum Sliding Window Demand and Predicted Demand Timestamps

(Corresponding to Minimum Thermal Demand Timestamps)

Minimum Sliding Window/Predicted Demand Timestamps			
	Minimum Thermal Demand Timestamps	Minimum Sliding Window Demand Timestamps	Minimum Predicted Demand Timestamps
Register	R40910 - R40947	R41310 - R41347	R41810 - R41847
Mnemonics	XXXX_THM_MINT	XXXX_SLW_MINT	XXXX_PRD_MINT
Contents	Minimum Thermal Demand Timestamp For "XXX"	Minimum Sliding Window Demand Timestamp for "XXX"	Minimum Predicted Demand Timestamp for "XXX"
Units	Unix Time	Unix Time	Unix Time
Read/Write	RO	RO	RO
Data Type	INTEGER	INTEGER	INTEGER

Example:

Register	R40941	R41341	R41841
Mnemonics	PF_TOTAL_THM_MINT	PF_TOTAL_SLW_MINT	PF_TOTAL_PRD_MINT
Contents	Minimum Thermal Demand Timestamp for Power Factor Total	Minimum Sliding Window Timestamp for Power Factor Total	Minimum Predicted Demand Timestamp for Power Factor Total
Units	Unix Time	Unix Time	Unix Time
Read/Write	RO	RO	RO
Data Type	Integer	Integer	Integer

Maximum Sliding Window Demand and Predicted Demand Timestamps

(Corresponding to Maximum Thermal Demand Timestamps)

Maximum Sliding Window/Predicted Demand Timestamps			
	Maximum Thermal Demand Timestamps	Maximum Sliding Window Demand Timestamps	Maximum Predicted Demand Timestamps
Register	R41110 - R41147	R41510 - R41547	R42010 - R42047
Mnemonics	XXXX_THM_MAXT	XXXX_SLW_MAXT	XXXX_PRD_MAXT
Contents	Maximum Thermal Demand Timestamp For "XXX"	Maximum Sliding Window Demand Timestamp for "XXX"	Maximum Predicted Demand Timestamp for "XXX"
Units	Unix Time	Unix Time	Unix Time
Read/Write	RO	RO	RO
Data Type	INTEGER	INTEGER	INTEGER

Example:

Register	R41141	R41541	R42041
Mnemonics	PF_TOTAL_THM_MAXT	PF_TOTAL_SLW_MAXT	PF_TOTAL_PRD_MAXT
Contents	Maximum Thermal Demand Timestamp for Power Factor Total	Maximum Sliding Window Timestamp for Power Factor Total	Maximum Predicted Demand Timestamp for Power Factor Total
Units	Unix Time	Unix Time	Unix Time
Read/Write	RO	RO	RO
Data Type	Integer	Integer	Integer

HARMONIC DATA

Harmonic Data		
Harmonic Data Group	Mnemonics	Register Address Range
Integer Time Harmonic Measurements	N/A	45048–45199
Minimum Integer Time Harmonic Measurements	N/A	45248–45399
Minimum Integer Time Harmonic Timestamps	N/A	45448–45599
Maximum Integer Time Harmonic Measurements	N/A	45648–45799
Maximum Integer Time Harmonic Timestamps	N/A	45848–45999
Thermal Demand Harmonic Measurements	N/A	46048–46199
Minimum Thermal Demand Harmonic Measurements	N/A	46248–46399
Minimum Thermal Demand Harmonic Timestamps	N/A	46448–46599
Maximum Thermal Demand Harmonic Measurements	N/A	46648–46799
Maximum Thermal Demand Harmonic Timestamps	N/A	46848–46999
Sliding Demand Harmonic Measurements	N/A	47048–47199
Minimum Sliding Demand Harmonic Measurements	N/A	47248–47399
Minimum Sliding Demand Harmonic Timestamps	N/A	47448–47599
Maximum Sliding Demand Harmonic Measurements	N/A	47648–47799
Maximum Sliding Demand Harmonic Timestamps	N/A	47848–47999
Predicted Demand Harmonic Measurements	N/A	48048–48199
Minimum Predicted Demand Harmonic Measurements	N/A	48248–48399
Minimum Predicted Demand Harmonic Timestamps	N/A	48448–48599
Maximum Predicted Demand Harmonic Measurements	N/A	48648–48799
Maximum Predicted Demand Harmonic Timestamps	N/A	48848–48999

NOTES:

Due to large amount of harmonic data in the PML 3720, no mnemonics are provided for the above groups. All these registers are accessible using standard register-item naming conventions. Refer to Introduction discussion of [DDE Item Names](#) for details regarding register-item naming conventions.

For register contents definition, refer to “3720 ACM Advanced Digital Power Instrumentation Package, Modbus Register Map”.

DEVICE CONFIGURATION PARAMETERS

Device Configuration Parameters					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R43001E	VOLT_SCALE	Voltage Scale	1 - 999999 V	RW	M10000
R43002E	VAUX_SCALE	Vaux Scale	1 - 999999 V	RW	M10000
R43003E	CURR_SCALE	Current Scale	1 - 30000 A	RW	M10000
R43004E	VOLT_INPUT_MODE	Volt. Input Mode	0 = 4-w Y 1 = D 2 = Single Phase 3 = Demo 4 = 3-w Y	RW	M10000
R43005	SLAVE_ID	Slave ID Number	1-247	RW	Integer
R43006E	BAUD_RATE	Baud rate	1 = 1200 2 = 2400 3 = 4800 4 = 9600 5 = 19200	RW	M10000
R43007E	SLW_DMND_PERIOD	Sliding Demand period	1-99 minutes 0 = off	RW	M10000
R43008E	CURR_N_SCALE	Neutral current scale	1 - 9999 Amps	RW	M10000
R43009E	PASSWORD	Password	0 - 9999	WO	M10000
R43010E	RESET_MINMAX	Reset min/max	1 = reset all min/max parameters	WO	
R43011E	RESET_INTEGRATOR	Reset energy integrators	1 = reset kWh, kVARh, kVAh integrators	WO	M10000
R43012	FIRMWARE_REV	Firmware revision number	In hex. Ex Rev 1.3.0.0 = 1300h	RO	Integer
R43015E	DEVICE_TYPE	Device type	3720d	RO	M10000
R43017E	NO_SLW_DMND_PERIOD	Number of sliding demand period	1 - 15	RW	M10000
R43018E	SLW_DMND_SYNC	Sliding demand synchronization	0 = internal 1 = external (status input #1)	RW	M10000
R43019E	THM_DMND_PERIOD	Thermal demand period	1-99 minutes 0 = off		M10000
R43020E	PHASE_SEQ	Phase sequence	0 = Positive, 1 = Negative	RW	M10000
R43021E	IOUT_RANGE	Iout Range (Proportional current output range)	0 = 0 - 20 mA 1 = 4 - 20 mA	RW	M10000
R43022E	IOUT_KEY	Iout Key (which measured parameter the current output will be proportional)	0, 1, 2, ..., 25	RW	M10000
R43023E	IOUT_SCALE	Iout Scale	0 - 999999	RW	M10000
R43024E	STANDARD_FREQ	Standard Frequency	0 = 60 Hz, 1 = 50 Hz	RW	M10000
R43025E	COMM_MODE	Serial Communication Mode	0 = RS-232, 1 = RS-485	RO	M10000
R43026	RELAY1_MODE	Relay #1 Mode	0 = Setpoint 1 = KWH Pulse 2 = KVARH Pulse 3=KVAH Pulse 4=KWH-F Pulse 5=KWH-R Pulse 6=KVARH-F Pulse 7=KVARH-R Pulse	RW	Integer

Device Configuration Parameters					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R43027	RELAY1_VALUE	Relay #1 Value, controls pulse interval	0=Latch mode/ disable pulsing 1-65535=pulse duration/unit hours	RW	Integer
R43028	RELAY2_MODE	Relay #2 Mode	0 = Setpoint 1 = KWH Pulse 2 = KVARH Pulse 3=KVAH Pulse 4=KWH-F Pulse 5=KWH-R Pulse 6=KVARH-F Pulse 7=KVARH-R Pulse	RW	Integer
R43029	RELAY2_VALUE	Relay #2 Value, controls pulse interval	0=Latch mode/ disable pulsing 1-65535=pulse duration/unit hrs	RW	Integer
R43030	RELAY3_MODE	Relay #3 Mode	0 = Setpoint 1 = KWH Pulse 2 = KVARH Pulse 3=KVAH Pulse 4=KWH-F Pulse 5=KWH-R Pulse 6=KVARH-F Pulse 7=KVARH-R Pulse	RW	Integer
R43031	RELAY3_VALUE	Relay #3 Value, controls pulse interval	0=Latch mode/ disable pulsing 1-65535=pulse duration/unit hours	RW	Integer
R43032	LOG_STATUS_CHG	Log status change, specify whether changes to status inputs are logged in the event log	Bit b3-b0: Log S4 0 - No, 1 = Yes Bit b7-b4: Log S3 0 - No, 1 = Yes Bit b11-b8: Log S2 0 - No, 1 = Yes Bit b15-b12: Log S1 0 - No, 1 = Yes	RW	Integer
R43033	WF_CHANNEL	Trigger / rearm waveform capture	Y D 0= V1-n V1-2 1= I1 I1 2= V2-n N/A 3= I2 I2 4= V3-n V3-1 5= I3 I3 6= I4 I4 7= Vaux Vaux Other = WFC rearm command	WO	Integer
R43034	PRESET_S1	Preset Status #1 counter	N/A	RW	Integer
R43035	PRESET_S2	Preset Status #2 counter	N/A	RW	Integer
R43036	PRESET_S3	Preset Status #3 counter	N/A	RW	Integer
R43037	PRESET_S4	Preset Status #4 counter	N/A	RW	Integer
R43040E	RTS_LINE_MODE	RTS line mode	0 = Active low, 1 = Active high	RW	M10000

Device Configuration Parameters					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R43041E	DSP_TIMEOUT	Display time out	1 - 999 0 = remain on	RW	M10000
R43042E	PHASE_LABEL	Phase labels	0 = ABC 1 = XYZ 2 = RYB 3 = RST	RW	M10000
R43043E	NUM_FORMAT	Numeric Format	0 = 1,234.5, 1 = 1234,5	RW	M10000
R43044E	EXT_DIAG	Extended diagnostics	0 = No, 1 = Yes	RW	M10000
R43045	VAUX_ZERO_SCALE	Vaux zero scale	-999999 - 999999	RW	Integer*
R43046	IOUT_ZERO_SCALE	Iout zero scale	-999999 - 999999	RW	Integer*
R43047E	PREDICT_BASE	Prediction base	1 - 99%, 0 = off	RW	M10000
R43050	PACKET_PASSWORD	Packet password	0 - 9999	WO	Integer
R43051	SLW1_KEY	Sliding window #1 key	N/A	RW	Integer
R43052	SLW2_KEY	Sliding window #2 key	N/A	RW	Integer
R43053	SLW3_KEY	Sliding window #3 key	N/A	RW	Integer
R43054	SLW4_KEY	Sliding window #4 key	N/A	RW	Integer
R43055	SLW5_KEY	Sliding window #5 key	N/A	RW	Integer
R43056	SLW6_KEY	Sliding window #6 key	N/A	RW	Integer
R43057	SLW7_KEY	Sliding window #7 key	N/A	RW	Integer
R43058	SLW8_KEY	Sliding window #8 key	N/A	RW	Integer
R43059	SLW9_KEY	Sliding window #9 key	N/A	RW	Integer
R43060	SLW10_KEY	Sliding window #10 key	N/A	RW	Integer
R43062E	ACTIVE_PROTOCOL	Active protocol	0 = None, 1 = PML 3720, 2 = Modbus	RW	M10000
R43063E	REGISTER_SIZE	Register size	0 = 16 bits, 1 = 32 bits	RW	M10000
R43064E	RETURN_INVALID	Return invalid objects	0 = No, 1 = Yes	RW	M10000
R43065E	PASSWORD_PROTECT	Password protect	0 = No, 1 = Yes	RW	M10000
R43066E	TRANSMIT_DELAY	Transmit delay	0 - 999 msec	RW	M10000
R43070	S1_SCALE	S1 counter scale	Counts/Pulse	RW	Integer
R43071	S2_SCALE	S2 counter scale	Counts/Pulse	RW	Integer
R43072	S3_SCALE	S3 counter scale	Counts/Pulse	RW	Integer
R43073	S4_SCALE	S4 counter scale	Counts/Pulse	RW	Integer
R43075	S1_ROLLOVER	S1 counter Roll-over	Counts	RW	Integer
R43076	S2_ROLLOVER	S2 counter Roll-over	Counts	RW	Integer
R43077	S3_ROLLOVER	S3 counter Roll-over	Counts	RW	Integer
R43078	S4_ROLLOVER	S4 counter Roll-over	Counts	RW	Integer

Note:

* Negative Modulus 10000, calculate as follows:

RegisterHigh = +/-[ABS(value)/10000]. RegisterLow = +/-[ABS(value) MODULUS 10000]

Example:

To program offset: -99999:

Writing: RegisterHigh= -9(FFF7) RegisterLow= -9999(D8F1)

Reading: RegisterHigh: -9(FFF7) RegisterLow: -9999(D8F1)

EVENT COUNTERS

Event Counters					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/ Value/Range	R/W	Data Type
R43200	SP_CHG_CNT	Setpoint changed state	N/A	RO	Integer
R43203	SLW_DMND_CONFIG_CNT	Sliding demand configuration	N/A	RO	Integer
R43204	EVENT_LOG_CNT	Event log	N/A	RO	Integer
R43206	MINMAX_CNT	Min/Max	N/A	RO	Integer
R43207	WF_CNT	Waveform capture	N/A	RO	Integer
R43216	RESET_INTEGRATOR_CNT	Integrator reset	N/A	RO	Integer
R43217	ALL_MINMAX_RS_CNT	all min/max reset counter	N/A	RO	Integer
R43218	RT_MINMAX_CNT	Integer time min/max counter	N/A	RO	Integer
R43219	THM_DMND_MNMX_CNT	thermal demand min/max counter	N/A	RO	Integer
R43220	SLW_DMND_MNMX_CNT	Sliding demand min/max counter	N/A	RO	Integer
R43221	HM_VA_MNMX_CNT	Harmonic Va min/max counter	N/A	RO	Integer
R43222	HM_VB_MNMX_CNT	Harmonic Vb min/max counter	N/A	RO	Integer
R43223	HM_VC_MNMX_CNT	Harmonic Vc min/max counter	N/A	RO	Integer
R43224	HM_VAUX_MNMX_CNT	Harmonic Vaux min/max counter	N/A	RO	Integer
R43225	HM_VA_DMND_MNMX_CNT	Harmonic Va demand min/max counter	N/A	RO	Integer
R43226	HM_VB_DMND_MNMX_CNT	Harmonic Vb demand min/max counter	N/A	RO	Integer
R43227	HM_VC_DMND_MNMX_CNT	Harmonic Vc demand min/max counter	N/A	RO	Integer
R43228	HM_VX_DMND_MNMX_CNT	Harmonic Vaux demand min/max counter	N/A	RO	Integer
R43229	HM_IA_MNMX_CNT	Harmonic Ia min/max counter	N/A	RO	Integer
R43230	HM_IB_MNMX_CNT	Harmonic Ib min/max counter	N/A	RO	Integer
R43231	HM_IC_MNMX_CNT	Harmonic Ic min/max counter	N/A	RO	Integer
R43232	HM_IN_MNMX_CNT	Harmonic In min/max counter	N/A	RO	Integer
R43233	HM_IA_DMND_MNMX_CNT	Harmonic Ia demand min/max counter	N/A	RO	Integer
R43234	HM_IB_DMND_MNMX_CNT	Harmonic Ib demand min/max counter	N/A	RO	Integer
R43235	HM_IC_DMND_MNMX_CNT	Harmonic Ic demand min/max counter	N/A	RO	Integer
R43236	HM_IN_DMND_MNMX_CNT	Harmonic In demand min/max counter	N/A	RO	Integer
R43237	PRD_DMND_MNMX_CNT	Predicted demand min/max counter	N/A	RO	Integer
R43240	RELAY1_CNT	Relay #1 counter	N/A	RO	Integer
R43241	RELAY2_CNT	Relay #2 counter	N/A	RO	Integer
R43242	RELAY3_CNT	Relay #3 counter	N/A	RO	Integer
R43243	SP1_CNT	Setpoint #1 counter	N/A	RO	Integer
R43244	SP2_CNT	Setpoint #2 counter	N/A	RO	Integer
R43245	SP3_CNT	Setpoint #3 counter	N/A	RO	Integer
R43246	SP4_CNT	Setpoint #4 counter	N/A	RO	Integer
R43247	SP5_CNT	Setpoint #5 counter	N/A	RO	Integer
R43248	SP6_CNT	Setpoint #6 counter	N/A	RO	Integer
R43249	SP7_CNT	Setpoint #7 counter	N/A	RO	Integer
R43250	SP8_CNT	Setpoint #8 counter	N/A	RO	Integer
R43251	SP9_CNT	Setpoint #9 counter	N/A	RO	Integer
R43252	SP10_CNT	Setpoint #10 counter	N/A	RO	Integer
R43253	SP11_CNT	Setpoint #11 counter	N/A	RO	Integer
R43254	HSPD_SP1_CNT	High speed Setpoint #1 counter	N/A	RO	Integer
R43255	HSPD_SP2_CNT	High speed Setpoint #2 counter	N/A	RO	Integer

Event Counters					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/ Value/Range	R/W	Data Type
R43256	HSPD_SP3_CNT	High speed Setpoint #3 counter	N/A	RO	Integer
R43257	HSPD_SP4_CNT	High speed Setpoint #4 counter	N/A	RO	Integer
R43258	HSPD_SP5_CNT	High speed Setpoint #5 counter	N/A	RO	Integer
R43259	HSPD_SP6_CNT	High speed Setpoint #6 counter	N/A	RO	Integer

TIME OF USE INFORMATION

Time of Use Information					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/ Value/ Range	R/W	Data Type
R43700	ENERGY_R1_TRF1	Energy register #1,Tariff #1	N/A	RO	Integer
R43701	ENERGY_R1_TRF2	Energy register #1,Tariff #2	N/A	RO	Integer
R43702	ENERGY_R1_TRF3	Energy register #1,Tariff #3	N/A	RO	Integer
R43703	ENERGY_R1_TRF4	Energy register #1,Tariff #4	N/A	RO	Integer
R43704	ENERGY_R1_TRF5	Energy register #1,Tariff #5	N/A	RO	Integer
R43705	ENERGY_R1_TRF6	Energy register #1,Tariff #6	N/A	RO	Integer
R43706	ENERGY_R1_TRF7	Energy register #1,Tariff #7	N/A	RO	Integer
R43707	ENERGY_R1_TRF8	Energy register #1,Tariff #8	N/A	RO	Integer
R43708	ENERGY_R1_TRF9	Energy register #1,Tariff #9	N/A	RO	Integer
R43709	ENERGY_R1_TRF10	Energy register #1,Tariff #10	N/A	RO	Integer
R43710	ENERGY_R2_TRF1	Energy register #2,Tariff #1	N/A	RO	Integer
R43711	ENERGY_R2_TRF2	Energy register #2,Tariff #2	N/A	RO	Integer
R43712	ENERGY_R2_TRF3	Energy register #2,Tariff #3	N/A	RO	Integer
R43713	ENERGY_R2_TRF4	Energy register #2,Tariff #4	N/A	RO	Integer
R43714	ENERGY_R2_TRF5	Energy register #2,Tariff #5	N/A	RO	Integer
R43715	ENERGY_R2_TRF6	Energy register #2,Tariff #6	N/A	RO	Integer
R43716	ENERGY_R2_TRF7	Energy register #2,Tariff #7	N/A	RO	Integer
R43717	ENERGY_R2_TRF8	Energy register #2,Tariff #8	N/A	RO	Integer
R43718	ENERGY_R2_TRF9	Energy register #2,Tariff #9	N/A	RO	Integer
R43719	ENERGY_R2_TRF10	Energy register #2,Tariff #10	N/A	RO	Integer
R43720	ENERGY_R3_TRF1	Energy register #3,Tariff #1	N/A	RO	Integer
R43721	ENERGY_R3_TRF2	Energy register #3,Tariff #2	N/A	RO	Integer
R43722	ENERGY_R3_TRF3	Energy register #3,Tariff #3	N/A	RO	Integer
R43723	ENERGY_R3_TRF4	Energy register #3,Tariff #4	N/A	RO	Integer
R43724	ENERGY_R3_TRF5	Energy register #3,Tariff #5	N/A	RO	Integer
R43725	ENERGY_R3_TRF6	Energy register #3,Tariff #6	N/A	RO	Integer
R43726	ENERGY_R3_TRF7	Energy register #3,Tariff #7	N/A	RO	Integer
R43727	ENERGY_R3_TRF8	Energy register #3,Tariff #8	N/A	RO	Integer
R43728	ENERGY_R3_TRF9	Energy register #3,Tariff #9	N/A	RO	Integer
R43729	ENERGY_R3_TRF10	Energy register #3,Tariff #10	N/A	RO	Integer
R43730	PK_DMND_R1_TRF1	Peak Demand register #1,Tariff #1	N/A	RO	Integer
R43731	PK_DMND_R1_TRF2	Peak Demand register #1,Tariff #2	N/A	RO	Integer
R43732	PK_DMND_R1_TRF3	Peak Demand register #1,Tariff #3	N/A	RO	Integer
R43733	PK_DMND_R1_TRF4	Peak Demand register #1,Tariff #4	N/A	RO	Integer
R43734	PK_DMND_R1_TRF5	Peak Demand register #1,Tariff #5	N/A	RO	Integer
R43735	PK_DMND_R1_TRF6	Peak Demand register #1,Tariff #6	N/A	RO	Integer
R43736	PK_DMND_R1_TRF7	Peak Demand register #1,Tariff #7	N/A	RO	Integer
R43737	PK_DMND_R1_TRF8	Peak Demand register #1,Tariff #8	N/A	RO	Integer
R43738	PK_DMND_R1_TRF9	Peak Demand register #1,Tariff #9	N/A	RO	Integer
R43739	PK_DMND_R1_TRF10	Peak Demand register #1,Tariff #10	N/A	RO	Integer
R43740	PK_DMND_R2_TRF1	Peak Demand register #2,Tariff #1	N/A	RO	Integer
R43741	PK_DMND_R2_TRF2	Peak Demand register #2,Tariff #2	N/A	RO	Integer

Time of Use Information					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/ Value/ Range	R/W	Data Type
R43742	PK_DMND_R2_TRF3	Peak Demand register #2,Tariff #3	N/A	RO	Integer
R43743	PK_DMND_R2_TRF4	Peak Demand register #2,Tariff #4	N/A	RO	Integer
R43744	PK_DMND_R2_TRF5	Peak Demand register #2,Tariff #5	N/A	RO	Integer
R43745	PK_DMND_R2_TRF6	Peak Demand register #2,Tariff #6	N/A	RO	Integer
R43746	PK_DMND_R2_TRF7	Peak Demand register #2,Tariff #7	N/A	RO	Integer
R43747	PK_DMND_R2_TRF8	Peak Demand register #2,Tariff #8	N/A	RO	Integer
R43748	PK_DMND_R2_TRF9	Peak Demand register #2,Tariff #9	N/A	RO	Integer
R43749	PK_DMND_R2_TRF10	Peak Demand register #2,Tariff #10	N/A	RO	Integer
R43750	PK_DMND_R3_TRF1	Peak Demand register #3,Tariff #1	N/A	RO	Integer
R43751	PK_DMND_R3_TRF2	Peak Demand register #3,Tariff #2	N/A	RO	Integer
R43752	PK_DMND_R3_TRF3	Peak Demand register #3,Tariff #3	N/A	RO	Integer
R43753	PK_DMND_R3_TRF4	Peak Demand register #3,Tariff #4	N/A	RO	Integer
R43754	PK_DMND_R3_TRF5	Peak Demand register #3,Tariff #5	N/A	RO	Integer
R43755	PK_DMND_R3_TRF6	Peak Demand register #3,Tariff #6	N/A	RO	Integer
R43756	PK_DMND_R3_TRF7	Peak Demand register #3,Tariff #7	N/A	RO	Integer
R43757	PK_DMND_R3_TRF8	Peak Demand register #3,Tariff #8	N/A	RO	Integer
R43758	PK_DMND_R3_TRF9	Peak Demand register #3,Tariff #9	N/A	RO	Integer
R43759	PK_DMND_R3_TRF10	Peak Demand register #3,Tariff #10	N/A	RO	Integer
R43760	ACTIVE_TRF	Active Tariff	N/A	RO	Integer
R43761	ENERGY_R1_CFG	Energy register #1 configuration	N/A	RO	Integer
R43762	ENERGY_R2_CFG	Energy register #2 configuration	N/A	RO	Integer
R43763	ENERGY_R3_CFG	Energy register #3 configuration	N/A	RO	Integer
R43764	PK_DMND_R1_CFG	Peak demand register #1 configuration	N/A	RO	Integer
R43765	PK_DMND_R2_CFG	Peak demand register #2 configuration	N/A	RO	Integer
R43766	PK_DMND_R3_CFG	Peak demand register #3 configuration	N/A	RO	Integer
R43767	ACTIVE_PROFILE	Active profile	N/A	RO	Integer

COMMANDS

Commands							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X0080L	COMMAND_KEYS	Command Function Code	-	-	5	WO	F1
R4X0081		Command Operation Code	-	1	1-35	WO	F7
R4X0082		Command Data 1	-	1	0-65535		*
R4X0083		Command Data 2	-	1	0-65535		*
R4X0084		Command Data 3	-	1	0-65535		*
R4X0085		Command Data 4	-	1	0-65535		*
R4X0086		Command Data 5	-	1	0-65535		*
R4X0087		Command Data 6	-	1	0-65535		*
R4X0088		Command Data 7	-	1	0-65535		*
R4X0089		Command Data 8	-	1	0-65535		*
R4X008A		Command Data 9	-	1	0-65535		*
R4X008B		Command Data 10	-	1	0-65535		*
R4X008C		Command Data 11	-	1	0-65535		*

EPM 3710 – Electronic Power Meter

- *REAL TIME*
- *SETPOINTS*
- *SETUP REGISTERS*
- *STATUS REGISTERS*

Real Time Parameters

Real Time Parameters					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40001	YEAR	Year (minus 1900)	N/A	RW	Integer
R40002	MONTH	Month(1-12)	N/A	RW	Integer
R40003	DAY	Day (1-31)	N/A	RW	Integer
R40004	HOURL	Hour(0-23)	N/A	RW	Integer
R40005	MINUTE	Minute(0-59)	N/A	RW	Integer
R40006	SECOND	Second(0-59)	N/A	RW	Integer
R40010E	VOLTS_A	RMS Voltage L-N Phase A	Volts, Note (a)	RO	M10000
R40011E	VOLTS_B	RMS Voltage L-N Phase B	Volts, Note (a)	RO	M10000
R40012E	VOLTS_C	RMS Voltage L-N Phase C	Volts, Note (a,b)	RO	M10000
R40013E	VOLTS_AVG_LN	Average Line-to-Neutral Voltage	Volts, Note (a)	RO	M10000
R40014E	VOLTS_AB	RMS Voltage L-L Phase A-B	Volts	RO	M10000
R40015E	VOLTS_BC	RMS Voltage L-L Phase B-C	Volts, Note (b)	RO	M10000
R40016E	VOLTS_CA	RMS Voltage L-L Phase C-A	Volts, Note (b)	RO	M10000
R40017E	VOLTS_AVG_LL	Average Line-to-Line Voltage	Volts, Note (c)	RO	M10000
R40019E	VOLTS_AUX	RMS Voltage Auxiliary	Volts	RO	M10000
R40020E	AMPS_A	RMS Current Phase A	Amps	RO	M10000
R40021E	AMPS_B	RMS Current Phase B	Amps	RO	M10000
R40022E	AMPS_C	RMS Current Phase C	Amps, Note (b)	RO	M10000
R40023E	AMPS_AVG	Average Phase Current	Amps	RO	M10000
R40025E	AMPS_N	RMS Current Neutral	Amps	RO	M10000
R40030E	KW_A	Real Power Phase A	kW, Note (a)	RO	M10000
R40031E	KW_B	Real Power Phase B	kW, Note (a)	RO	M10000
R40032E	KW_C	Real Power Phase C	kW, Note (a, b)	RO	M10000
R40033E	KW_TOTAL	Total Real Power	kW	RO	M10000
R40034E	KVAR_A	Reactive Power Phase A	kVar, Note (a)	RO	M10000
R40035E	KVAR_B	Reactive Power Phase B	kVar, Note (a)	RO	M10000
R40036E	KVAR_C	Reactive Power Phase C	kVar, Note (a, b)	RO	M10000
R40037E	KVAR_TOTAL	Total Reactive Power	kVar	RO	M10000
R40041E	PF	Power Factor	N/A	RO	M10000
R40042E	KVA_A	Apparent Power Phase A	kVA, Note (a)	RO	M10000
R40043E	KVA_B	Apparent Power Phase B	kVA, Note (a)	RO	M10000
R40044E	KVA_C	Apparent Power Phase C	kVA, Note (a, b)	RO	M10000
R40045E	KVA_TOTAL	Total Apparent Power	kVA	RO	M10000
R40047E	FREQUENCY_V1	Frequency	Hz	RO	M10000
R40049	RT_POLARITY	Real Time Polarity	Bitmap,Note (e)	RO	Integer
R40050	KWH_IMPORT	Import Energy	kWh	RO	Integer
R40051	M_GWH_IMPORT	Import Energy	16bit:Mega 32bit:Giga, Note (d)	RO	Integer
R40052	KWH_EXPORT	Export Energy	kWh	RO	Integer
R40053	M_GWH_EXPORT	Export Energy	16bit:Mega 32bit:Giga, Note (d)	RO	Integer
R40054	KWH_TOTAL	Total Energy	kWh	RO	Integer
R40055	M_GWH_TOTAL	Total Energy	16bit:Mega	RO	Integer

Real Time Parameters					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
			32bit:Giga, Note (d)		
R40060	KVARH_IMPORT	Import Reactive Energy	kVARh	RO	Integer
R40061	M_GVARH_IMPORT	Import Reactive Energy	16bit:Mega 32bit:Giga, Note (d)	RO	Integer
R40062	KVARH_EXPORT	Export Reactive Energy	kVAh	RO	Integer
R40063	M_GVARH_EXPORT	Export Reactive Energy	16bit:Mega 32bit:Giga, Note (d)	RO	Integer
R40064	KVARH_TOTAL	Total Reactive Energy	kVAh	RO	Integer
R40065	M_GVARH_TOTAL	Total Reactive Energy	16bit:Mega 32bit:Giga, Note (d)	RO	Integer
R40080E	I_DMND_OR_KVA_DMND	Current Average Demand or KVA demand	Amps or kVA , Note (OPT)	RO	M10000
R40081E	KW_DMND_TOTAL	KW Total Demand	kW	RO	M10000

Note: Please see the 3710 ACM Modbus Protocol Document for a description of the interpretation of the Energy values.

Minimum Real Time Values

Minimum Real Time Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40310E	VOLTS_A_MIN	Minimum RMS Voltage L-N Phase A	Volts, Note (a)	RO	M10000
R40311E	VOLTS_B_MIN	Minimum RMS Voltage L-N Phase B	Volts, Note (a)	RO	M10000
R40312E	VOLTS_C_MIN	Minimum RMS Voltage L-N Phase C	Volts, Note (a, b)	RO	M10000
R40313E	VOLTS_AVG_LN_MIN	Minimum Average Line-to-Neutral Voltage	Volts, Note (a)	RO	M10000
R40314E	VOLTS_AB_MIN	Minimum RMS Voltage L-L Phase A-B	Volts	RO	M10000
R40315E	VOLTS_BC_MIN	Minimum RMS Voltage L-L Phase B-C	Volts, Note (b)	RO	M10000
R40316E	VOLTS_CA_MIN	Minimum RMS Voltage L-L Phase C-A	Volts, Note (b)	RO	M10000
R40317E	VOLTS_AVG_LL_MIN	Minimum Average Line-to-Line Voltage	Volts, Note (c)	RO	M10000
R40319E	VOLTS_AUX_MIN	Minimum RMS Voltage Auxiliary	Volts	RO	M10000
R40320E	AMPS_A_MIN	Minimum RMS Current Phase A	Amps	RO	M10000
R40321E	AMPS_B_MIN	Minimum RMS Current Phase B	Amps	RO	M10000
R40322E	AMPS_C_MIN	Minimum RMS Current Phase C	Amps, Note (b)	RO	M10000
R40323E	AMPS_AVG_MIN	Minimum Average Phase Current	Amps	RO	M10000
R40325E	AMPS_N_MIN	Minimum RMS Current Neutral	Amps	RO	M10000
R40333E	KW_TOTAL_MIN	Minimum Total Real Power	kW	RO	M10000
R40337E	KVAR_TOTAL_MIN	Minimum Total Reactive Power	kVar	RO	M10000
R40341E	PF_MIN	Minimum Power Factor	N/A	RO	M10000
R40345E	KVA_TOTAL_MIN	Minimum Total Apparent Power	kVA	RO	M10000
R40347E	FREQ_MIN	Minimum Frequency	Hz	RO	M10000
R40349	RT_POLARITY_MIN	Minimum real polarity	Bit Map, Note (e)	RO	Integer
R40380E	I_AVG_DMND_MIN	Minimum Current Average Demand	Amps or kVA	RO	M10000
R40381E	KW_DMND_TOT_MIN	Minimum KW Total Demand	kW	RO	M10000

Minimum Time Stamps*

Minimum Time Stamps					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40410	VOLTS_A_MINT	Minimum Time Stamp for RMS Voltage L-N Phase A	Compressed Time, Note (a)	RO	Integer
R40411	VOLTS_B_MINT	Minimum Time Stamp for RMS Voltage L-N Phase B	Compressed Time , Note (a)	RO	Integer
R40412	VOLTS_C_MINT	Minimum Time Stamp for RMS Voltage L-N Phase C	Compressed Time, Note (a,b)	RO	Integer
R40413	VOLTS_AVG_LN_MINT	Minimum Time Stamp for Average Line-to-Neutral Voltage	Compressed Time , Note (a)	RO	Integer
R40414	VOLTS_AB_MINT	Minimum Time Stamp for RMS Voltage L-L Phase A-B	Compressed Time	RO	Integer
R40415	VOLTS_BC_MINT	Minimum Time Stamp for RMS Voltage L-L Phase B-C	Compressed Time, Note (b)	RO	Integer
R40416	VOLTS_CA_MINT	Minimum Time Stamp for RMS Voltage L-L Phase C-A	Compressed Time, Note (b)	RO	Integer
R40417	VOLTS_AVG_LL_MINT	Minimum Time Stamp for Average Line-to-Line Voltage	Compressed Time, Note (c)	RO	Integer
R40419	VOLTS_AUX_MINT	Minimum Time Stamp for RMS Voltage Auxiliary	Compressed Time	RO	Integer
R40420	AMPS_A_MINT	Minimum Time Stamp for RMS Current Phase A	Compressed Time	RO	Integer
R40421	AMPS_B_MINT	Minimum Time Stamp for RMS Current Phase B	Compressed Time	RO	Integer
R40422	AMPS_C_MINT	Minimum Time Stamp for RMS Current Phase C	Compressed Time , Note (b)	RO	Integer
R40423	AMPS_AVG_MINT	Minimum Time Stamp for Average Phase Current	Compressed Time	RO	Integer
R40425	AMPS_N_MINT	Minimum Time Stamp for RMS Current Neutral	Compressed Time	RO	Integer
R40433	KW_TOTAL_MINT	Minimum Time Stamp for Total Real Power	Compressed Time	RO	Integer
R40437	KVAR_TOTAL_MINT	Minimum Time Stamp for Total Reactive Power	Compressed Time	RO	Integer
R40441	PF_MINT	Minimum Time Stamp for Power Factor	Compressed Time	RO	Integer
R40445	KVA_TOTAL_MINT	Minimum Time Stamp for Total Apparent Power	Compressed Time	RO	Integer
R40447	FREQ_MINT	Minimum Time Stamp for Frequency	Compressed Time	RO	Integer
R40480	I_AVG_DMND_MINT	Minimum Time Stamp for Current Average Demand or KVA demand	Compressed Time, Note (OPT)	RO	Integer
R40481	KW_DMND_TOT_MINT	Minimum Time Stamp for KW Total Demand	Compressed Time	RO	Integer

Maximum Real Time Values

Maximum Real Time Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40610E	VOLTS_A_MAX	Maximum RMS Voltage L-N Phase A	Volts , Note (a)	RO	M10000
R40611E	VOLTS_B_MAX	Maximum RMS Voltage L-N Phase B	Volts, Note (a)	RO	M10000
R40612E	VOLTS_C_MAX	Maximum RMS Voltage L-N Phase C	Volts, Note (a,b)	RO	M10000
R40613E	VOLTS_AVG_LN_MAX	Maximum Average Line-to-Neutral Voltage	Volts, Note (a)	RO	M10000
R40614E	VOLTS_AB_MAX	Maximum RMS Voltage L-L Phase A-B	Volts	RO	M10000
R40615E	VOLTS_BC_MAX	Maximum RMS Voltage L-L Phase B-C	Volts, Note (b)	RO	M10000
R40616E	VOLTS_CA_MAX	Maximum RMS Voltage L-L Phase C-A	Volts, Note (b)	RO	M10000
R40617E	VOLTS_AVG_LL_MAX	Maximum Average Line-to-Line Voltage	Volts, Note (c)	RO	M10000
R40619E	VOLTS_AUX_MAX	Maximum RMS Voltage Auxiliary	Volts	RO	M10000
R40620E	AMPS_A_MAX	Maximum RMS Current Phase A	Amps	RO	M10000
R40621E	AMPS_B_MAX	Maximum RMS Current Phase B	Amps	RO	M10000
R40622E	AMPS_C_MAX	Maximum RMS Current Phase C	Amps, Note (b)	RO	M10000
R40623E	AMPS_AVG_MAX	Maximum Average Phase Current	Amps	RO	M10000
R40625E	AMPS_N_MAX	Maximum RMS Current Neutral	Amps	RO	M10000
R40633E	KW_TOTAL_MAX	Maximum Total Integer Power	kW	RO	M10000
R40637E	KVAR_TOTAL_MAX	Maximum Total Reactive Power	kVar	RO	M10000
R40641E	PF_MAX	Maximum Power Factor	N/A	RO	M10000
R40645E	KVA_TOTAL_MAX	Maximum Total Apparent Power	kVA	RO	M10000
R40647E	FREQ_MAX	Maximum Frequency	Hz	RO	M10000
R40649	RT_POLARITY_MAX	Maximum Integer polarity	Bitmapped, Note (e)	RO	Integer
R40680E	I_AVG_DMND_MAX	Maximum Current Average Demand	Amps or kVA, Note (OPT)	RO	M10000
R40681E	KW_DMND_TOT_MAX	Maximum KW Total Demand	kW	RO	M10000

Maximum Time Stamps*

Maximum Time Stamps					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40710	VOLTS_A_MAXT	Maximum Time Stamp for RMS Voltage L-N Phase A	Compressed Time, Note (a)	RO	Integer
R40711	VOLTS_B_MAXT	Maximum Time Stamp for RMS Voltage L-N Phase B	Compressed Time, Note (a)	RO	Integer
R40712	VOLTS_C_MAXT	Maximum Time Stamp for RMS Voltage L-N Phase C	Compressed Time, Note (a,b)	RO	Integer
R40713	VOLTS_AVG_LN_MAXT	Maximum Time Stamp for Average Line-to-Neutral Voltage	Compressed Time, Note (a)	RO	Integer
R40714	VOLTS_AB_MAXT	Maximum Time Stamp for RMS Voltage L-L Phase A-B	Compressed Time	RO	Integer
R40715	VOLTS_BC_MAXT	Maximum Time Stamp for RMS Voltage L-L Phase B-C	Compressed Time, Note (b)	RO	Integer
R40716	VOLTS_CA_MAXT	Maximum Time Stamp for RMS Voltage L-L Phase C-A	Compressed Time, Note (b)	RO	Integer
R40717	VOLTS_AVG_LL_MAXT	Maximum Time Stamp for Average Line-to-Line Voltage	Compressed Time, Note (c)	RO	Integer
R40719	VOLTS_AUX_MAXT	Maximum Time Stamp for RMS Voltage Auxiliary	Compressed Time	RO	Integer
R40720	AMPS_A_MAXT	Maximum Time Stamp for RMS Current Phase A	Compressed Time	RO	Integer
R40721	AMPS_B_MAXT	Maximum Time Stamp for RMS Current Phase B	Compressed Time	RO	Integer
R40722	AMPS_C_MAXT	Maximum Time Stamp for RMS Current Phase C	Compressed Time, Note (b)	RO	Integer
R40723	AMPS_AVG_MAXT	Maximum Time Stamp for Average Phase Current	Compressed Time	RO	Integer
R40724	AMPS_N_MAXT	Maximum Time Stamp for RMS Current Neutral	Compressed Time	RO	Integer
R40733	KW_TOTAL_MAXT	Maximum Time Stamp for Total Integer Power	Compressed Time	RO	Integer
R40737	KVAR_TOTAL_MAXT	Maximum Time Stamp for Total Reactive Power	Compressed Time	RO	Integer
R40741	PF_MAXT	Maximum Time Stamp for Power Factor	Compressed Time	RO	Integer
R40745	KVA_TOTAL_MAXT	Maximum Time Stamp for Total Apparent Power	Compressed Time	RO	Integer
R40747	FREQ_MAXT	Maximum Time Stamp for Frequency	Compressed Time	RO	Integer
R40780	I_AVG_DMND_MAXT	Maximum Time Stamp for Current Average Demand	Compressed Time	RO	Integer
R40781	KW_DMND_TOT_MAXT	Maximum Time Stamp for KW Total Demand	Compressed Time	RO	Integer

SETPOINTS

Setpoint #1

Setpoint #1					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40901E	SP1_LOW	Low Limit for Setpoint 1	Depending on Setpoint Key	RW	M10000
R40902E	SP1_HIGH	High Limit for Setpoint 1	Depending on Setpoint Key	RW	M10000
R40903E	SP1_RLS_DELAY	Release time delay for Setpoint 1		RW	M10000
R40904E	SP1_OP_DELAY	Operate time delay for Setpoint 1		RW	M10000
R40905E	SP1_RELAY_NO	Relay Number for Setpoint 1	N/A	RW	M10000
R40906E	SP1_SPKEY	Setpoint key for Setpoint 1	0-30	RW	M10000

Note: Refer to "PML 3710 ACM Modbus Protocol" Page 14 for Setpoint Key Codes.

Setpoint #2 through #17 (Corresponding to Setpoint #1 registers)

Setpoint #2-#17						
	Register	Mnemonic	Contents	Units/Value	R/W	Data Type
Setpoint #2	R40911E - R40916E	SP2_XXX	"XXX" for setpoint #2	XXX	RW	XXX
Setpoint #3	R40921E - R40926E	SP3_XXX	"XXX" for setpoint #3	XXX	RW	XXX
Setpoint #4	R40931E - R40936E	SP4_XXX	"XXX" for setpoint #4	XXX	RW	XXX
Setpoint #5	R40941E - R40946E	SP5_XXX	"XXX" for setpoint #5	XXX	RW	XXX
Setpoint #6	R40951E - R40956E	SP6_XXX	"XXX" for setpoint #6	XXX	RW	XXX
Setpoint #7	R40961E - R40966E	SP7_XXX	"XXX" for setpoint #7	XXX	RW	XXX
Setpoint #8	R40971E - R40976E	SP8_XXX	"XXX" for setpoint #8	XXX	RW	XXX
Setpoint #9	R40981E - R40986E	SP9_XXX	"XXX" for setpoint #9	XXX	RW	XXX
Setpoint #10	R40991E - R40996E	SP10_XXX	"XXX" for setpoint #10	XXX	RW	XXX
Setpoint #11	R41001E - R41006E	SP11_XXX	"XXX" for setpoint #11	XXX	RW	XXX
Setpoint #12	R41011E - R41016E	SP12_XXX	"XXX" for setpoint #12	XXX	RW	XXX
Setpoint #13	R41021E - R41026E	SP13_XXX	"XXX" for setpoint #13	XXX	RW	XXX
Setpoint #14	R41031E - R41036E	SP14_XXX	"XXX" for setpoint #14	XXX	RW	XXX
Setpoint #15	R41041E - R41046E	SP15_XXX	"XXX" for setpoint #15	XXX	RW	XXX
Setpoint #16	R41051E - R41056E	SP16_XXX	"XXX" for setpoint #16	XXX	RW	XXX
Setpoint #17	R41061E - R41066E	SP17_XXX	"XXX" for setpoint #17	XXX	RW	XXX

SETUP REGISTERS

Setup Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R43001E	VOLT_SCALE	Voltage Scale	N/A	RW	M10000
R43002E	VAUX_SCALE	Vaux Scale	N/A	RW	M10000
R43003E	CURR_SCALE	Current Scale	N/A	RW	M10000
R43004E	VOLT_INPUT_MODE	Volt. Input Mode	0 = 4-w Y 1 = D 2 = Single Phase 3 = Demo 4 = 3-w Y	RW	M10000
R43005	UNIT_ID	Unit ID Number	N/A	RW	Integer
R43006E	BAUD_RATE	Baud rate	N/A	RW	M10000
R43007E	DMND_PERIOD	Demand period		RW	M10000
R43008E	CURR_N_SCALE	Neutral current scale	N/A	RW	M10000
R43009E	PASSWORD	Password	N/A	WO	M10000
R43010E	RESET_MINMAX	Reset min/max	Any value will cause reset	WO	
R43011E	RESET_HR_COUNTER	Reset hour counter	0 = not reset 1 = reset KWH 2 = reset KVARH 3 = reset KWH & KVARH	WO	M10000
R43012	FIRMWARE_REV	Firmware revision number	N/A	RO	Integer
R43014	FEAT_CODE	Feat. Code	B0:kva demand(*) B1: Alarm Dialer B2: waveform capture B3: Amps demand(*) B4: WEP Snapshot(**) B5: Expanded Pulse(***) B6: Expanded Ram(****) (*) Amp Demand is replaced by KVA Demand for units equipped with KVD or MDK options. (**) Pre-set snapshot log supporting different set of parameters than the standard 3710 model (custom version). (***)Relay pulse operation based on forward & reverse energy values. (****) Provides 1 programmable snapshot log & expanded event log.	RO	Integer
R43015E	DEVICE_TYPE	Device type	N/A	RO	M10000
R43017E	NO_DMND_PERIOD	Number of demand period	N/A	RW	M10000
R43020E	PHASE_SEQ	Phase sequence	0 = ABC, XYZ, RYB, RST 1 = ACB, XZY, RBY, RTS	RW	M10000
R43021E	IOUT_RANGE	Iout Range (Proportional current output range)	0 = 0 - 20 mA 1 = 4 - 20 mA	RW	M10000
R43022E	IOUT_KEY	Iout Key (which measured parameter the current output will be proportional)	0, 1, 2, ..., 25	RW	M10000
R43023E	IOUT_SCALE	Iout Scale		RW	M10000
R43024E	STANDARD_FREQ	Standard Frequency	Hz	RW	M10000

Setup Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R43025E	COMM_MODE	Serial Communication Mode	0 = RS-232 1 = RS-485	RO	M10000
R43026E	RELAY1_MODE	Relay #1 Mode	0 = Setpoint 1 = KWH Pulse 2 = KVARH Pulse 3=KVAH Pulse 4=KWH-F Pulse 5=KWH-R Pulse 6=KVARH-F Pulse 7=KVARH-R Pulse (Modes 4-7 applicable w/ expanded pulse feature)	RW	M10000
R43027E	RELAY1_VALUE	Relay #1 Value, controls pulse interval	0=Latch mode/ disable pulsing 1-65535=pulse duration/unit hrs	RW	M10000
R43028E	RELAY2_MODE	Relay #2 Mode	0 = Setpoint 1 = KWH Pulse 2 = KVARH Pulse 3=KVAH Pulse 4=KWH-F Pulse 5=KWH-R Pulse 6=KVARH-F Pulse 7=KVARH-R Pulse (Modes 4-7 applicable w/ expanded pulse feature)	RW	M10000
R43029E	RELAY2_VALUE	Relay #2 Value, controls pulse interval	0=Latch mode/ disable pulsing 1-65535=pulse duration/unit hrs	RW	M10000
R43030E	RELAY3_MODE	Relay #3 Mode	0 = Setpoint 1 = KWH Pulse 2 = KVARH Pulse 3=KVAH Pulse 4=KWH-F Pulse 5=KWH-R Pulse 6=KVARH-F Pulse 7=KVARH-R Pulse (Modes 4-7 applicable w/ expanded pulse feature)	RW	M10000
R43031E	RELAY3_VALUE	Relay #3 Value, controls pulse interval	0=Latch mode/ disable pulsing 1-65535=pulse duration/unit hrs	RW	M10000
R43032E	LOG_STATUS_CHG	Log status change, specify whether changes to status inputs are logged in the event log	Bit b3-b0: Log S4 0 - No, 1 = Yes Bit b7-b4: Log S3 0 - No, 1 = Yes Bit b11-b8: Log S2 0 - No, 1 = Yes Bit b15-b12: Log S1 0 - No, 1 = Yes	RW	M10000

Setup Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R43033E	WF_CHANNEL	Waveform Channel number	Y D 0= V1-n V1-2 1= I1 I1 2= V2-n N/A 3= I2 I2 4= V3-n V3-1 5= I3 I3 6= I4 I4 7= Vaux Vaux	RW	M10000
R43034E	RESET_STATUS1	Reset Status #1 channel	N/A	WO	M10000
R43050E	PACKET_PASSWORD	Packet password	N/A, Note (f)	WO	M10000

Note: Refer to "PML 3710 ACM Modbus Protocol" Page 16 for Iout Key Code buffers.

Notes:

* Time stamps are returned in a 32-bit compressed format. To access the time stamps, the meter must be set to 32-bit register size. If the register size is set to 16 bits, a value of 65535 is returned.

OPT KVA Demand is an optional feature.

- a. Not available in DELTA mode.
- b. Not available in SINGLE PHASE mode.
- c. Available in DELTA mode only.
- d. Register size dependent: 16 BIT = MWH/MVARH/MVAH
32 BIT = GWH/GVARH/GVAH
- e. Each bit in a polarity register indicates the polarity of a data register.
0 = Positive 1 = Negative
Refer to 3710 Modbus protocols on Page A-6 for polarity register bits.
- f. A valid password must be written in the packet password register before one can write to other registers.

STATUS REGISTERS

Status Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40200	RELAY1_STATUS	Status of Control Relay 1: The status can be forced by writing a new status to these bits	Bit b1-b0: Reading: 00=released 01=operated 10=forced released 11=forced operated Writing: 00=normal 01=force operate 10=force release Bit b2: Reading: 0=Relay is latched 1=Relay is pulsed.	RW	Integer
R40201	RELAY2_STATUS	Status of Control Relay 2: The status can be forced by writing a new status to these bits	Bit b1-b0: Reading: 00=released 01=operated 10=forced released 11=forced operated Writing: 00=normal 01=force operate 10=force release Bit b2: Reading: 0=Relay is latched 1=Relay is pulsed.	RW	Integer
R40202	RELAY3_STATUS	Status of Control Relay 3: The status can be forced by writing a new status to these bits	Bit b1-b0: Reading: 00=released 01=operated 10=forced released 11=forced operated Writing: 00=normal 01=force operate 10=force release Bit b2: Reading: 0=Relay is latched 1=Relay is pulsed.	RW	Integer
R40209D1-0	STATUS_INPUT_1	Status Input 1	0 = Normal 1 = Active	RO	Discrete
R40209D1-1	STATUS_INPUT_2	Status Input 2	0 = Normal 1 = Active	RO	Discrete
R40209D1-2	STATUS_INPUT_3	Status Input 3	0 = Normal 1 = Active	RO	Discrete

Status Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40209D1-3	STATUS_INPUT_4	Status Input 4	0 = Normal 1 = Active	RO	Discrete
R40210D7-0	SP1_INDEX	Setpoint1 Setpoint Index	0-127	RO	Integer
R40210D1-7	SP1_STATUS	Setpoint1 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40211D7-0	SP2_INDEX	Setpoint2 Setpoint Index	0-127	RO	Integer
R40211D1-7	SP2_STATUS	Setpoint2 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40212D7-0	SP3_INDEX	Setpoint3 Setpoint Index	0-127	RO	Integer
R40212D1-7	SP3_STATUS	Setpoint3 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40213D7-0	SP4_INDEX	Setpoint4 Setpoint Index	0-127	RO	Integer
R40213D1-7	SP4_STATUS	Setpoint4 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40214D7-0	SP5_INDEX	Setpoint5 Setpoint Index	0-127	RO	Integer
R40214D1-7	SP5_STATUS	Setpoint5 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40215D7-0	SP6_INDEX	Setpoint6 Setpoint Index	0-127	RO	Integer
R40215D1-7	SP6_STATUS	Setpoint6 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40216D7-0	SP7_INDEX	Setpoint7 Setpoint Index	0-127	RO	Integer
R40216D1-7	SP7_STATUS	Setpoint7 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40217D7-0	SP8_INDEX	Setpoint8 Setpoint Index	0-127	RO	Integer
R40217D1-7	SP8_STATUS	Setpoint8 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40218D7-0	SP9_INDEX	Setpoint9 Setpoint Index	0-127	RO	Integer
R40218D1-7	SP9_STATUS	Setpoint9 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40219D7-0	SP10_INDEX	Setpoint10 Setpoint Index	0-127	RO	Integer
R40219D1-7	SP10_STATUS	Setpoint10 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40220D7-0	SP11_INDEX	Setpoint11 Setpoint Index	0-127	RO	Integer
R40220D1-7	SP11_STATUS	Setpoint11 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40221D7-0	SP12_INDEX	Setpoint12 Setpoint Index	0-127	RO	Integer
R40221D1-7	SP12_STATUS	Setpoint12 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40222D7-0	SP13_INDEX	Setpoint13 Setpoint Index	0-127	RO	Integer
R40222D1-7	SP13_STATUS	Setpoint13 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40223D7-0	SP14_INDEX	Setpoint14 Setpoint Index	0-127	RO	Integer
R40223D1-7	SP14_STATUS	Setpoint14 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40224D7-0	SP15_INDEX	Setpoint15 Setpoint Index	0-127	RO	Integer
R40224D1-7	SP15_STATUS	Setpoint15 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40225D7-0	SP16_INDEX	Setpoint16 Setpoint Index	0-127	RO	Integer
R40225D1-7	SP16_STATUS	Setpoint16 Setpoint status	0 = Normal	RO	Discrete

Status Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
			1 = Active		
R40226D7-0	SP17_INDEX	Setpoint17 Setpoint Index	0-127	RO	Integer
R40226D1-7	SP17_STATUS	Setpoint17 Setpoint status	0 = Normal 1 = Active	RO	Discrete
R40240	S1_INPUT_COUNTER	S1 Input Counter	0, 1, 2, ...	RO	Integer

Note: Refer to "PML 3710 ACM Modbus Protocol", Section 5.1.3 Setpoint Status Registers, for Setpoint Index.

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Multilin PQM (Power Quality Meter)

- *ACTUAL VALUES*

- *SETPOINT REGISTERS*

- *COMMAND COILS*

Format Codes

The Format Codes column contains references to special formatting which applies to a given register. These formatting characteristics are provided in the Multilin PQM Instruction Manual.

ACTUAL VALUES

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X0000	DEVICE_CODE	Multilin Product Device Code	-	-	-	RO	F1
R3X0001	HW_REV	Hardware Version Code	-	-	-	RO	F5
R3X0002	SW_REV	Main Software Version Code	-	-	-	RO	F1
R3X0003	MOD_FILE_NUM	Modification File Number 1	-	-	-	RO	F1
R3X0004	BOOT_REV	Boot Software Version Code	-	-	-	RO	F1
R3X0005	SUPERVISOR_REV	Supervisor Processor Version Code	-	-	-	RO	F1
R3X0006	ORDER_CODE	Order Code options	-	-	-	RO	F100
R3X0007	MOD_FILE_2	Modification File Number 2	-	-	-	RO	F1
R3X0008	MOD_FILE_3	Modification File Number 3	-	-	-	RO	F1
R3X0009	MOD_FILE_4	Modification File Number 4	-	-	-	RO	F1
R3X000A	MOD_FILE_5	Modification File Number 5	-	-	-	RO	F1
R3X0020S8	SERIAL_NUM	Serial Number (8 characters)	ASCII	-	-	RO	F10
R3X0021	SERIAL_NUM_3_4	Serial Number Character 3 and 4	ASCII	-	-	RO	F10
R3X0022	SERIAL_NUM_5_6	Serial Number Character 5 and 6	ASCII	-	-	RO	F10
R3X0023	SERIAL_NUM_7_8	Serial Number Character 7 and 8	ASCII	-	-	RO	F10
R3X0030L	DATE_MANUF	Manufacture Month/Day	-	-	-	RO	F24
R3X0031	YEAR_MANUF	Manufacture Year	-	-	-	RO	F25
R3X0032L	DATE_CALIB	Calibration Month/Day	-	-	-	RO	F24
R3X0033	YEAR_CALIB	Calibration Year	-	-	-	RO	F25
User Definable: Registers (Input Registers)							
R3X0100		User Definable Data 0000	-	-	-	RO	-
R3X0101		User Definable Data 0001	-	-	-	RO	-
to		...	-	-	-	RO	-
R3X0177		User Definable Data 0077	-	-	-	RO	-
User Definable: Register Index (Holding Registers)							
R3X0180		Register address for User Definable Data 0000	-	1	**	RO	F1
R3X0181		Register address for User Definable Data 0001	-	1	**	RO	F1
to		...	-	1	**	RO	F1
R3X01F7		Register address for User Definable Data 0077	-	1	**	RO	F1
Actual Values (Input Registers) Addresses							
R3X0200	SW_INPUT_STATUS	Switch Input Status	-	-	-	RO	F101
R3X0201	LED_STATUS	LED Status Flags	-	-	-	RO	F102
R3X0202	LED_ATTR	LED Attribute Flags	-	-	-	RO	F103
R3X0203	OUTPUT_RLY_STATUS	Output Relay Status Flags	-	-	-	RO	F104
R3X0204	ALM_1	Alarm Active Status Flags 1	-	-	-	RO	F105
R3X0205	ALM_PKUP_1	Alarm Pickup Status Flags 1	-	-	-	RO	F105
R3X0206	ALM_2	Alarm Active Status Flags 2	-	-	-	RO	F106
R3X0207	ALM_PKUP_2	Alarm Pickup Status Flags 2	-	-	-	RO	F106
R3X0208	ALM_3	Alarm Active Status Flags 3	-	-	-	RO	F107
R3X0209	ALM_PKUP_3	Alarm Pickup Status Flags 3	-	-	-	RO	F107
R3X020A	AUX1_1	Aux. 1 Active Status Flags 1	-	-	-	RO	F105
R3X020B	AUX1_PKUP_1	Aux. 1 Pickup Status Flags 1	-	-	-	RO	F105

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X020C	AUX1_2	Aux. 1 Active Status Flags 2	-	-	-	RO	F106
R3X020D	AUX1_PKUP_2	Aux. 1 Pickup Status Flags 2	-	-	-	RO	F106
R3X020E	AUX1_3	Aux. 1 Active Status Flags 3	-	-	-	RO	F107
R3X020F	AUX1_PKUP_3	Aux. 1 Pickup Status Flags 3	-	-	-	RO	F107
R3X0210	AUX2_1	Aux. 2 Active Status Flags 1	-	-	-	RO	F105
R3X0211	AUX2_PKUP_1	Aux. 2 Pickup Status Flags 1	-	-	-	RO	F105
R3X0212	AUX2_2	Aux. 2 Active Status Flags 2	-	-	-	RO	F106
R3X0213	AUX2_PKUP_2	Aux. 2 Pickup Status Flags 2	-	-	-	RO	F106
R3X0214	AUX2_3	Aux. 2 Active Status Flags 3	-	-	-	RO	F107
R3X0215	AUX2_PKUP_3	Aux. 2 Pickup Status Flags 3	-	-	-	RO	F107
R3X0216	AUX3_1	Aux. 3 Active Status Flags 1	-	-	-	RO	F105
R3X0217	AUX3_PKUP_1	Aux. 3 Pickup Status Flags 1	-	-	-	RO	F105
R3X0218	AUX3_2	Aux. 3 Active Status Flags 2	-	-	-	RO	F106
R3X0219	AUX3_PKUP_2	Aux. 3 Pickup Status Flags 2	-	-	-	RO	F106
R3X021A	AUX3_3	Aux. 3 Active Status Flags 3	-	-	-	RO	F107
R3X021B	AUX3_PKUP_3	Aux. 3 Pickup Status Flags 3	-	-	-	RO	F107
R3X021C	GENERAL_STATUS	General Status	-	-	-	RO	F109
R3X021D	PASSCODE	Encrypted Passcode	-	-	-	RO	F1
R3X0230L	TIME	Time - Hours/Minutes/Seconds	-	-	-	RO	F22, F23
R3X0232L	DATE	Date - Month/Day/Year	-	-	-	RO	F24, F25
R3X0240	AMPS_A	Phase A Current	A	-	-	RO	F1
R3X0241	AMPS_B	Phase B Current	A	-	-	RO	F1
R3X0242	AMPS_C	Phase C Current	A	-	-	RO	F1
R3X0243	AMPS_AVG	Average Current	A	-	-	RO	F1
R3X0244	AMPS_N	Neutral Current	A	-	-	RO	F1
R3X0245	AMPS_UB	Current Unbalance	0.1 x %	-	-	RO	F1
R3X0246	AMPS_A_MIN	Phase A Current - Minimum	A	-	-	RO	F1
R3X0247	AMPS_B_MIN	Phase B Current - Minimum	A	-	-	RO	F1
R3X0248	AMPS_C_MIN	Phase C Current - Minimum	A	-	-	RO	F1
R3X0249	AMPS_N_MIN	Neutral Current - Minimum	A	-	-	RO	F1
R3X024A	AMPS_UB_MIN	Current Unbalance - Minimum	0.1 x %	-	-	RO	F1
R3X024B	AMPS_A_MAX	Phase A Current - Maximum	A	-	-	RO	F1
R3X024C	AMPS_B_MAX	Phase B Current - Maximum	A	-	-	RO	F1
R3X024D	AMPS_C_MAX	Phase C Current - Maximum	A	-	-	RO	F1
R3X024E	AMPS_N_MAX	Neutral Current - Maximum	A	-	-	RO	F1
R3X024F	AMPS_UB_MAX	Current Unbalance - Maximum	0.1 x %	-	-	RO	F1
R3X0250L	AMPS_A_MIN_TIME	Time - Hours/Minutes/Seconds of Phase A Current Min.	-	-	-	RO	F22, F23
R3X0252L	AMPS_A_MIN_DATE	Date - Month/Day/Year of Phase A Current Min.	-	-	-	RO	F24, F25
R3X0254L	AMPS_B_MIN_TIME	Time - Hours/Minutes/Seconds of Phase B Current Min.	-	-	-	RO	F22, F23
R3X0256L	AMPS_B_MIN_DATE	Date - Month/Day/Year of Phase B Current Min.	-	-	-	RO	F24, F25
R3X0258L	AMPS_C_MIN_TIME	Time - Hours/Minutes/Seconds of Phase C Current Min.	-	-	-	RO	F22, F23
R3X025AL	AMPS_C_MIN_DATE	Date - Month/Day/Year of Phase C Current Min.	-	-	-	RO	F24, F25
R3X025CL	AMPS_N_MIN_TIME	Time - Hours/Minutes/Seconds of Neutral Current Min.	-	-	-	RO	F22, F23
R3X025EL	AMPS_N_MIN_DATE	Date - Month/Day/Year of Neutral Current Min.	-	-	-	RO	F24, F25
R3X0260L	AMPS_UB_MIN_TIME	Time - Hours/Minutes/Seconds of Current Unbalance Min.	-	-	-	RO	F22, F23
R3X0262L	AMPS_UB_MIN_DATE	Date - Month/Day/Year of Current Unbalance Min.	-	-	-	RO	F24, F25

PQM – Power Quality Meter

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X0264L	AMPS_A_MAX_TIME	Time - Hours/Minutes/Seconds of Phase A Current Max.	-	-	-	RO	F22, F23
R3X0266L	AMPS_A_MAX_DATE	Date - Month/Day/Year of Phase A Current Max.	-	-	-	RO	F24, F25
R3X0268L	AMPS_B_MAX_TIME	Time - Hours/Minutes/Seconds of Phase B Current Max.	-	-	-	RO	F22, F23
R3X026AL	AMPS_B_MAX_DATE	Date - Month/Day/Year of Phase B Current Max.	-	-	-	RO	F24, F25
R3X026CL	AMPS_C_MAX_TIME	Time - Hours/Minutes/Seconds of Phase C Current Max.	-	-	-	RO	F22, F23
R3X026EL	AMPS_C_MAX_DATE	Date - Month/Day/Year of Phase C Current Max.	-	-	-	RO	F24, F25
R3X0270L	AMPS_N_MAX_TIME	Time - Hours/Minutes/Seconds of Neutral Current Max.	-	-	-	RO	F22, F23
R3X0272L	AMPS_N_MAX_DATE	Date - Month/Day/Year of Neutral Current Max.	-	-	-	RO	F24, F25
R3X0274L	AMPS_UB_MAX_TIME	Time - Hours/Minutes/Seconds of Current Unbalance Max.	-	-	-	RO	F22, F23
R3X0276L	AMPS_UB_MAX_DATE	Date - Month/Day/Year of Current Unbalance Max.	-	-	-	RO	F24, F25
R3X0280L	VOLTS_AN	Voltage Van	V	-	-	RO	F3
R3X0282L	VOLTS_BN	Voltage Vbn	V	-	-	RO	F3
R3X0284L	VOLTS_CN	Voltage Vcn	V	-	-	RO	F3
R3X0286L	VOLTS_AVG_PHASE	Average Phase Voltage	V	-	-	RO	F3
R3X0288L	VOLTS_AB	Voltage Vab	V	-	-	RO	F3
R3X028AL	VOLTS_BC	Voltage Vbc	V	-	-	RO	F3
R3X028CL	VOLTS_CA	Voltage Vca	V	-	-	RO	F3
R3X028EL	VOLTS_AVG_LINE	Average Line Voltage	V	-	-	RO	F3
R3X0290	VOLTS_UB	Voltage Unbalance	0.1 x %	-	-	RO	F1
R3X0291L	VOLTS_AN_MIN	Voltage Van - Minimum	V	-	-	RO	F3
R3X0293L	VOLTS_BN_MIN	Voltage Vbn - Minimum	V	-	-	RO	F3
R3X0295L	VOLTS_CN_MIN	Voltage Vcn - Minimum	V	-	-	RO	F3
R3X0297L	VOLTS_AB_MIN	Voltage Vab - Minimum	V	-	-	RO	F3
R3X0299L	VOLTS_BC_MIN	Voltage Vbc - Minimum	V	-	-	RO	F3
R3X029BL	VOLTS_CA_MIN	Voltage Vca - Minimum	V	-	-	RO	F3
R3X029DL	VOLTS_UB_MIN	Voltage Unbalance - Minimum	0.1 x %	-	-	RO	F1
R3X029EL	VOLTS_AN_MAX	Voltage Van - Maximum	V	-	-	RO	F3
R3X02A0L	VOLTS_BN_MAX	Voltage Vbn - Maximum	V	-	-	RO	F3
R3X02A2L	VOLTS_CN_MAX	Voltage Vcn - Maximum	V	-	-	RO	F3
R3X02A4L	VOLTS_AB_MAX	Voltage Vab - Maximum	V	-	-	RO	F3
R3X02A6L	VOLTS_BC_MAX	Voltage Vbc - Maximum	V	-	-	RO	F3
R3X02A8L	VOLTS_CA_MAX	Voltage Vca - Maximum	V	-	-	RO	F3
R3X02AAL	VOLTS_UB_MAX	Voltage Unbalance - Maximum	0.1 x %	-	-	RO	F1
R3X02ABL	VOLTS_AN_MIN_TIME	Time - Hours/Minutes/Seconds of Voltage Van Min.	-	-	-	RO	F22, F23
R3X02ADL	VOLTS_AN_MIN_DATE	Date - Month/Day/Year of Voltage Van Min.	-	-	-	RO	F24, F25
R3X02AFL	VOLTS_BN_MIN_TIME	Time - Hours/Minutes/Seconds of Voltage Vbn Min.	-	-	-	RO	F22, F23
R3X02B1L	VOLTS_BN_MIN_DATE	Date - Month/Day/Year of Voltage Vbn Min.	-	-	-	RO	F24, F25
R3X02B3L	VOLTS_CN_MIN_TIME	Time - Hours/Minutes/Seconds of Voltage Vcn Min.	-	-	-	RO	F22, F23
R3X02B5L	VOLTS_CN_MIN_DATE	Date - Month/Day/Year of Voltage Vcn Min.	-	-	-	RO	F24, F25
R3X02B7L	VOLTS_AB_MIN_TIME	Time - Hours/Minutes/Seconds of Voltage Vab Min.	-	-	-	RO	F22, F23
R3X02B9L	VOLTS_AB_MIN_DATE	Date - Month/Day/Year of Voltage Vab Min.	-	-	-	RO	F24, F25
R3X02BBL	VOLTS_BC_MIN_TIME	Time - Hours/Minutes/Seconds of Voltage Vbc Min.	-	-	-	RO	F22, F23
R3X02BDL	VOLTS_BC_MIN_DATE	Date - Month/Day/Year of Voltage Vbc Min.	-	-	-	RO	F24, F25
R3X02BFL	VOLTS_CA_MIN_TIME	Time - Hours/Minutes/Seconds of Voltage Vca Min.	-	-	-	RO	F22, F23
R3X02C1L	VOLTS_CA_MIN_DATE	Date - Month/Day/Year of Voltage Vca Min.	-	-	-	RO	F24, F25
R3X02C3L	VOLTS_UB_MIN_TIME	Time - Hours/Minutes/Seconds of Voltage	-	-	-	RO	F22, F23

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
		Unbalance Min.					
R3X02C5L	VOLTS_UB_MIN_DATE	Date - Month/Day/Year of Voltage Unbalance Min.	-	-	-	RO	F24, F25
R3X02C7L	VOLTS_AN_MAX_TIME	Time - Hours/Minutes/Seconds of Voltage Van Max.	-	-	-	RO	F22, F23
R3X02C9L	VOLTS_AN_MAX_DATE	Date - Month/Day/Year of Voltage Van Max.	-	-	-	RO	F24, F25
R3X02CBL	VOLTS_BN_MAX_TIME	Time - Hours/Minutes/Seconds of Voltage Vbn Max.	-	-	-	RO	F22, F23
R3X02CDL	VOLTS_BN_MAX_DATE	Date - Month/Day/Year of Voltage Vbn Max.	-	-	-	RO	F24, F25
R3X02CFL	VOLTS_CN_MAX_TIME	Time - Hours/Minutes/Seconds of Voltage Vcn Max.	-	-	-	RO	F22, F23
R3X02D1L	VOLTS_CN_MAX_DATE	Date - Month/Day/Year of Voltage Vcn Max.	-	-	-	RO	F24, F25
R3X02D3L	VOLTS_AB_MAX_TIME	Time - Hours/Minutes/Seconds of Voltage Vab Max.	-	-	-	RO	F22, F23
R3X02D5L	VOLTS_AB_MAX_DATE	Date - Month/Day/Year of Voltage Vab Max.	-	-	-	RO	F24, F25
R3X02D7L	VOLTS_BC_MAX_TIME	Time - Hours/Minutes/Seconds of Voltage Vbc Max.	-	-	-	RO	F22, F23
R3X02D9L	VOLTS_BC_MAX_DATE	Date - Month/Day/Year of Voltage Vbc Max.	-	-	-	RO	F24, F25
R3X02DBL	VOLTS_CA_MAX_TIME	Time - Hours/Minutes/Seconds of Voltage Vca Max.	-	-	-	RO	F22, F23
R3X02DDL	VOLTS_CA_MAX_DATE	Date - Month/Day/Year of Voltage Vca Max.	-	-	-	RO	F24, F25
R3X02DFL	VOLTS_UB_MAX_TIME	Time - Hours/Minutes/Seconds of Voltage Unbalance Max.	-	-	-	RO	F22, F23
R3X02E1L	VOLTS_UB_MAX_DATE	Date - Month/Day/Year of Voltage Unbalance Max.	-	-	-	RO	F24, F25
R3X02E7	V_PHASOR_A	Va Phasor Angle	Degrees LAG/LEAD	---	---	RO	F2
R3X02E8	V_PHASOR_B	Vb Phasor Angle	Degrees LAG/LEAD	---	---	RO	F2
R3X02E9	V_PHASOR_C	Vc Phasor Angle	Degrees LAG/LEAD	---	---	RO	F2
R3X02EA	I_PHASOR_A	Ia Phasor Angle	Degrees LAG/LEAD	---	---	RO	F2
R3X02EB	I_PHASOR_B	Ib Phasor Angle	Degrees LAG/LEAD	---	---	RO	F2
R3X02EC	I_PHASOR_C	Ic Phasor Angle	Degrees LAG/LEAD	---	---	RO	F2
R3X02F0L	KW	Three-phase Real Power	0.01 x kW	-	-	RO	F4
R3X02F2L	KVAR	Three-phase Reactive Power	0.01 x kvar	-	-	RO	F4
R3X02F4L	KVA	Three-phase Apparent Power	0.01 x kVA	-	-	RO	F3
R3X02F6L	PF	Three-phase Power Factor	0.01 x PF	-	-	RO	F2
R3X02F7L	KW_A	Phase A Real Power	0.01 x kW	-	-	RO	F4
R3X02F9L	KVAR_A	Phase A Reactive Power	0.01 x kvar	-	-	RO	F4
R3X02FBL	KVA_A	Phase A Apparent Power	0.01 x kVA	-	-	RO	F3
R3X02FDI	PF_A	Phase A Power Factor	0.01 x PF	-	-	RO	F2
R3X02FEL	KW_B	Phase B Real Power	0.01 x kW	-	-	RO	F4
R3X0300L	KVAR_B	Phase B Reactive Power	0.01 x kvar	-	-	RO	F4
R3X0302L	KVA_B	Phase B Apparent Power	0.01 x kVA	-	-	RO	F3
R3X0304L	PF_B	Phase B Power Factor	0.01 x PF	-	-	RO	F2
R3X0305L	KW_C	Phase C Real Power	0.01 x kW	-	-	RO	F4
R3X0307L	KVAR_C	Phase C Reactive Power	0.01 x kvar	-	-	RO	F4

PQM – Power Quality Meter

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X0309L	KVA_C	Phase C Apparent Power	0.01 x kVA	-	-	RO	F3
R3X030BI	PF_C	Phase C Power Factor	0.01 x PF	-	-	RO	F2
R3X030CL	KW_MIN	Three-phase Real Power - Minimum	0.01 x kW	-	-	RO	F4
R3X030EL	KVAR_MIN	Three-phase Reactive Power - Minimum	0.01 x kvar	-	-	RO	F4
R3X0310L	KVA_MIN	Three-phase Apparent Power - Minimum	0.01 x kVA	-	-	RO	F3
R3X0312I	PF_MIN	Three-phase Power Factor - Minimum	0.01 x PF	-	-	RO	F2
R3X0313L	KW_MAX	Three-phase Real Power - Maximum	0.01 x kW	-	-	RO	F4
R3X0315L	KVAR_MAX	Three-phase Reactive Power - Maximum	0.01 x kvar	-	-	RO	F4
R3X0317L	KVA_MAX	Three-phase Apparent Power - Maximum	0.01 x kVA	-	-	RO	F3
R3X0319I	PF_MAX	Three-phase Power Factor - Maximum	0.01 x PF	-	-	RO	F2
R3X031AL	KW_A_MIN	Phase A Real Power - Minimum	0.01 x kW	-	-	RO	F4
R3X031CL	KVAR_A_MIN	Phase A Reactive Power - Minimum	0.01 x kvar	-	-	RO	F4
R3X031EL	KVA_A_MIN	Phase A Apparent Power - Minimum	0.01 x kVA	-	-	RO	F3
R3X0320I	PF_A_MIN	Phase A Power Factor - Minimum	0.01 x PF	-	-	RO	F2
R3X0321L	KW_A_MAX	Phase A Real Power - Maximum	0.01 x kW	-	-	RO	F4
R3X0323L	KVAR_A_MAX	Phase A Reactive Power - Maximum	0.01 x kvar	-	-	RO	F4
R3X0325L	KVA_A_MAX	Phase A Apparent Power - Maximum	0.01 x kVA	-	-	RO	F3
R3X0327I	PF_A_MAX	Phase A Power Factor - Maximum	0.01 x PF	-	-	RO	F2
R3X0328L	KW_B_MIN	Phase B Real Power - Minimum	0.01 x kW	-	-	RO	F4
R3X032AL	KVAR_B_MIN	Phase B Reactive Power - Minimum	0.01 x kvar	-	-	RO	F4
R3X032CL	KVA_B_MIN	Phase B Apparent Power - Minimum	0.01 x kVA	-	-	RO	F3
R3X032EI	PF_B_MIN	Phase B Power Factor - Minimum	0.01 x PF	-	-	RO	F2
R3X032FL	KW_B_MAX	Phase B Real Power - Maximum	0.01 x kW	-	-	RO	F4
R3X0331L	KVAR_B_MAX	Phase B Reactive Power - Maximum	0.01 x kvar	-	-	RO	F4
R3X0333L	KVA_B_MAX	Phase B Apparent Power - Maximum	0.01 x kVA	-	-	RO	F3
R3X0335I	PF_B_MAX	Phase B Power Factor - Maximum	0.01 x PF	-	-	RO	F2
R3X0336L	KW_C_MIN	Phase C Real Power - Minimum	0.01 x kW	-	-	RO	F4
R3X0338L	KVAR_C_MIN	Phase C Reactive Power - Minimum	0.01 x kvar	-	-	RO	F4
R3X033AL	KVA_C_MIN	Phase C Apparent Power - Minimum	0.01 x kVA	-	-	RO	F3
R3X033CI	PF_C_MIN	Phase C Power Factor - Minimum	0.01 x PF	-	-	RO	F2
R3X033DL	KW_C_MAX	Phase C Real Power - Maximum	0.01 x kW	-	-	RO	F4
R3X033FL	KVAR_C_MAX	Phase C Reactive Power - Maximum	0.01 x kvar	-	-	RO	F4
R3X0341L	KVA_C_MAX	Phase C Apparent Power - Maximum	0.01 x kVA	-	-	RO	F3
R3X0343I	PF_C_MAX	Phase C Power Factor - Maximum	0.01 x PF	-	-	RO	F2
R3X0344L	KW_MIN_TIME	Time - Hours/Minutes/Seconds of Real Power Min.	-	-	-	RO	F22, F23

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X0346L	KW_MIN_DATE	Date - Month/Day/Year of Real Power Min.	-	-	-	RO	F24, F25
R3X0348L	KVAR_MIN_TIME	Time - Hours/Minutes/Seconds of Reactive Power Min.	-	-	-	RO	F22, F23
R3X034AL	KVAR_MIN_DATE	Date - Month/Day/Year of Reactive Power Min.	-	-	-	RO	F24, F25
R3X034CL	KVA_MIN_TIME	Time - Hours/Minutes/Seconds of Apparent Power Min.	-	-	-	RO	F22, F23
R3X034EL	KVA_MIN_DATE	Date - Month/Day/Year of Apparent Power Min.	-	-	-	RO	F24, F25
R3X0350L	PF_MIN_TIME	Time - Hours/Minutes/Seconds of Power Factor Min.	-	-	-	RO	F22, F23
R3X0352L	PF_MIN_DATE	Date - Month/Day/Year of Power Factor Min.	-	-	-	RO	F24, F25
R3X0354L	KW_MAX_TIME	Time - Hours/Minutes/Seconds of Real Power Max.	-	-	-	RO	F22, F23
R3X0356L	KW_MAX_DATE	Date - Month/Day/Year of Real Power Max.	-	-	-	RO	F24, F25
R3X0358L	KVAR_MAX_TIME	Time - Hours/Minutes/Seconds of Reactive Power Max.	-	-	-	RO	F22, F23
R3X035AL	KVAR_MAX_DATE	Date - Month/Day/Year of Reactive Power Max.	-	-	-	RO	F24, F25
R3X035CL	KVA_MAX_TIME	Time - Hours/Minutes/Seconds of Apparent Power Max.	-	-	-	RO	F22, F23
R3X035EL	KVA_MAX_DATE	Date - Month/Day/Year of Apparent Power Max.	-	-	-	RO	F24, F25
R3X0360L	PF_MAX_TIME	Time - Hours/Minutes/Seconds of Power Factor Max.	-	-	-	RO	F22, F23
R3X0362L	PF_MAX_DATE	Date - Month/Day/Year of Power Factor Max.	-	-	-	RO	F24, F25
R3X0364L	KW_A_MIN_TIME	Time - Hours/Minutes/Seconds of Phase A Real Power Min.	-	-	-	RO	F22, F23
R3X0366L	KW_A_MIN_DATE	Date - Month/Day/Year of Phase A Real Power Min.	-	-	-	RO	F24, F25
R3X0368L	KVAR_A_MIN_TIME	Time - Hours/Minutes/Seconds of Phase A Reactive Power Min.	-	-	-	RO	F22, F23
R3X036AL	KVAR_A_MIN_DATE	Date - Month/Day/Year of Phase A Reactive Power Min.	-	-	-	RO	F24, F25
R3X036CL	KVA_A_MIN_TIME	Time - Hours/Minutes/Seconds of Phase A Apparent Power Min.	-	-	-	RO	F22, F23
R3X036EL	KVA_A_MIN_DATE	Date - Month/Day/Year of Phase A Apparent Power Min.	-	-	-	RO	F24, F25
R3X0370L	PF_A_MIN_TIME	Time - Hours/Minutes/Seconds of Phase A Power Factor Min.	-	-	-	RO	F22, F23
R3X0372L	PF_A_MIN_DATE	Date - Month/Day/Year of Phase A Power Factor Min.	-	-	-	RO	F24, F25
R3X0374L	KW_A_MAX_TIME	Time - Hours/Minutes/Seconds of Phase A Real Power Max.	-	-	-	RO	F22, F23
R3X0376L	KW_A_MAX_DATE	Date - Month/Day/Year of Phase A Real Power Max.	-	-	-	RO	F24, F25
R3X0378L	KVAR_A_MAX_TIME	Time - Hours/Minutes/Seconds of Phase A Reactive Power Max.	-	-	-	RO	F22, F23
R3X037AL	KVAR_A_MAX_DATE	Date - Month/Day/Year of Phase A Reactive Power Max.	-	-	-	RO	F24, F25
R3X037CL	KVA_A_MAX_TIME	Time - Hours/Minutes/Seconds of Phase A Apparent Power Max.	-	-	-	RO	F22, F23
R3X037EL	KVA_A_MAX_DATE	Date - Month/Day/Year of Phase A Apparent Power Max.	-	-	-	RO	F24, F25
R3X0380L	PF_A_MAX_TIME	Time - Hours/Minutes/Seconds of Phase A Power Factor Max.	-	-	-	RO	F22, F23
R3X0382L	PF_A_MAX_DATE	Date - Month/Day/Year of Phase A Power Factor	-	-	-	RO	F24, F25

PQM – Power Quality Meter

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
		Max.					
R3X0384L	KW_B_MIN_TIME	Time - Hours/Minutes/Seconds of Phase B Real Power Min.	-	-	-	RO	F22, F23
R3X0386L	KW_B_MIN_DATE	Date - Month/Day/Year of Phase B Real Power Min.	-	-	-	RO	F24, F25
R3X0388L	KVAR_B_MIN_TIME	Time - Hours/Minutes/Seconds of Phase B Reactive Power Min.	-	-	-	RO	F22, F23
R3X038AL	KVAR_B_MIN_DATE	Date - Month/Day/Year of Phase B Reactive Power Min.	-	-	-	RO	F24, F25
R3X038CL	KVA_B_MIN_TIME	Time - Hours/Minutes/Seconds of Phase B Apparent Power Min.	-	-	-	RO	F22, F23
R3X038EL	KVA_B_MIN_DATE	Date - Month/Day/Year of Phase B Apparent Power Min.	-	-	-	RO	F24, F25
R3X0390L	PF_B_MIN_TIME	Time - Hours/Minutes/Seconds of Phase B Power Factor Min.	-	-	-	RO	F22, F23
R3X0392L	PF_B_MIN_DATE	Date - Month/Day/Year of Phase B Power Factor Min.	-	-	-	RO	F24, F25
R3X0394L	KW_B_MAX_TIME	Time - Hours/Minutes/Seconds of Phase B Real Power Max.	-	-	-	RO	F22, F23
R3X0396L	KW_B_MAX_DATE	Date - Month/Day/Year of Phase B Real Power Max.	-	-	-	RO	F24, F25
R3X0398L	KVAR_B_MAX_TIME	Time - Hours/Minutes/Seconds of Phase B Reactive Power Max.	-	-	-	RO	F22, F23
R3X039AL	KVAR_B_MAX_DATE	Date - Month/Day/Year of Phase B Reactive Power Max.	-	-	-	RO	F24, F25
R3X039CL	KVA_B_MAX_TIME	Time - Hours/Minutes/Seconds of Phase B Apparent Power Max.	-	-	-	RO	F22, F23
R3X039EL	KVA_B_MAX_DATE	Date - Month/Day/Year of Phase B Apparent Power Max.	-	-	-	RO	F24, F25
R3X03A0L	PF_B_MAX_TIME	Time - Hours/Minutes/Seconds of Phase B Power Factor Max.	-	-	-	RO	F22, F23
R3X03A2L	PF_B_MAX_DATE	Date - Month/Day/Year of Phase B Power Factor Max.	-	-	-	RO	F24, F25
R3X03A4L	KW_C_MIN_TIME	Time - Hours/Minutes/Seconds of Phase C Real Power Min.	-	-	-	RO	F22, F23
R3X03A6L	KW_C_MIN_DATE	Date - Month/Day/Year of Phase C Real Power Min.	-	-	-	RO	F24, F25
R3X03A8L	KVAR_C_MIN_TIME	Time Hours/Minutes/Seconds of Phase C Reactive Power Min.	-	-	-	RO	F22, F23
R3X03AAL	KVAR_C_MIN_DATE	Date - Month/Day/Year of Phase C Reactive Power Min.	-	-	-	RO	F24, F25
R3X03ACL	KVA_C_MIN_TIME	Time - Hours/Minutes/Seconds of Phase C Apparent Power Min.	-	-	-	RO	F22, F23
R3X03AEL	KVA_C_MIN_DATE	Date - Month/Day/Year of Phase C Apparent Power Min.	-	-	-	RO	F24, F25
R3X03B0L	PF_C_MIN_TIME	Time - Hours/Minutes/Seconds of Phase C Power Factor Min.	-	-	-	RO	F22, F23
R3X03B2L	PF_C_MIN_DATE	Date - Month/Day/Year of Phase C Power Factor Min.	-	-	-	RO	F24, F25
R3X03B4L	KW_C_MAX_TIME	Time - Hours/Minutes/Seconds of Phase C Real Power Max.	-	-	-	RO	F22, F23
R3X03B6L	KW_C_MAX_DATE	Date - Month/Day/Year of Phase C Real Power	-	-	-	RO	F24, F25

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
		Max.					
R3X03B8L	KVAR_C_MAX_TIME	Time - Hours/Minutes/Seconds of Phase C Reactive Power Max.	-	-	-	RO	F22, F23
R3X03BAL	KVAR_C_MAX_DATE	Date - Month/Day/Year of Phase C Reactive Power Max.	-	-	-	RO	F24, F25
R3X03BCL	KVA_C_MAX_TIME	Time - Hours/Minutes/Seconds of Phase C Apparent Power Max.	-	-	-	RO	F22, F23
R3X03BEL	KVA_C_MAX_DATE	Date - Month/Day/Year of Phase C Apparent Power Max.	-	-	-	RO	F24, F25
R3X03C0L	PF_C_MAX_TIME	Time - Hours/Minutes/Seconds of Phase C Power Factor Max.	-	-	-	RO	F22, F23
R3X03C2L	PF_C_MAX_DATE	Date - Month/Day/Year of Phase C Power Factor Max.	-	-	-	RO	F24, F25
R3X03D0L	KWH_POS	Three-phase Positive Real Energy Used	kWh	-	-	RO	F3
R3X03D2L	KWH_NEG	Three-phase Negative Real Energy Used	kWh	-	-	RO	F3
R3X03D4L	KVARH_POS	Three-phase Positive Reactive Energy Used	kvarh	-	-	RO	F3
R3X03D6L	KVARH_NEG	Three-phase Negative Reactive Energy Used	kvarh	-	-	RO	F3
R3X03D8L	KVAH	Three-phase Apparent Energy Used	kVAh	-	-	RO	F3
R3X03DAL	KWH_24_HOURS	Three-phase Energy Used In Last 24 h	kWh	-	-	RO	F3
R3X03DCL	KWH_COST	Three-phase Energy Cost Since Last Reset	\$ x0.01	-	-	RO	F3
R3X03DEL	KWH_COST_PER_DAY	Three-phase Energy Cost Per Day	\$ x0.01	-	-	RO	F3
R3X03E0L	RESET_TIME	Time - Hours/Minutes/Seconds of Last Reset	-	-	-	RO	F22, F23
R3X03E2L	RESET_DATE	Date - Month/Day/Year of Last Reset	-	-	-	RO	F24, F25
R3X03E4L	TP1_POS_ENER	Tariff Period 1 Positive Real Energy	-	-	kWh	RO	F3
R3X03E6L	TP1_NEG_ENER	Tariff Period 1 Negative Real Energy (high)	-	-	kWh	RO	F3
R3X03E8L	TP2_POS_ENER	Tariff Period 2 Positive Real Energy (high)	-	-	kWh	RO	F3
R3X03EAL	TP2_NEG_ENER	Tariff Period 2 Negative Real Energy (high)	-	-	kWh	RO	F3
R3X03ECL	TP3_POS_ENER	Tariff Period 3 Positive Real Energy (high)	-	-	kWh	RO	F3
R3X03EEL	TP3_NEG_ENER	Tariff Period 3 Negative Real Energy (high)	-	-	kWh	RO	F3
R3X03F0L	TP1_COST	Tariff Period 1 Cost (high)	-	-	\$ x 0.01	RO	F3
R3X03F2L	TP2_COST	Tariff Period 2 Cost (high)	-	-	\$ x 0.01	RO	F3
R3X03F4L	TP3_COST	Tariff Period 3 Cost (high)	-	-	\$ x 0.01	RO	F3
R3X03F6L	TP1_NET_ENER	Tariff Period 1 Net Energy Used (high)	-	-	\$ x 0.01	RO	F3
R3X03F8L	TP2_NET_ENER	Tariff Period 2 Net Energy Used (high)	-	-	\$ x 0.01	RO	F3
R3X03FAL	TP3_NET_ENER	Tariff Period 3 Net Energy Used (high)	-	-	\$ x 0.01	RO	F3
R3X0400	AMPS_A_DMND	Phase A Current Demand	A	-	-	RO	F1
R3X0401	AMPS_B_DMND	Phase B Current Demand	A	-	-	RO	F1
R3X0402	AMPS_C_DMND	Phase C Current Demand	A	-	-	RO	F1
R3X0403	AMPS_N_DMND	Neutral Current Demand	A	-	-	RO	F1
R3X0404L	KW_DMND	Three-phase Real Power Demand	0.01 x kW	-	-	RO	F4
R3X0406L	KVAR_DMND	Three-phase Reactive Power Demand	0.01 x kvar	-	-	RO	F4
R3X0408L	KVA_DMND	Three-phase Apparent Power Demand	0.01 x kVA	-	-	RO	F3
R3X040A	AMPS_A_DMND_MAX	Phase A Current Demand - Maximum	A	-	-	RO	F1
R3X040B	AMPS_B_DMND_MAX	Phase B Current Demand - Maximum	A	-	-	RO	F1
R3X040C	AMPS_C_DMND_MAX	Phase C Current Demand - Maximum	A	-	-	RO	F1
R3X040D	AMPS_N_DMND_MAX	Neutral Current Demand - Maximum	A	-	-	RO	F1
R3X040EL	KW_DMND_MAX	Three-phase Real Power Dmd - Maximum	0.01 x kW	-	-	RO	F4
R3X0410L	KVAR_DMND_MAX	Three-phase React Power Dmd - Maximum	0.01 x kvar	-	-	RO	F4

PQM – Power Quality Meter

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X0412L	KVA_DMND_MAX	Three-phase App Power Dmd- Maximum	0.01 x kVA	-	-	RO	F3
R3X0414L	AMPS_A_DMND_MAX_TIME	Time - Hours/Minutes/Seconds of Phase A Cur. Dem. Max.	-	-	-	RO	F22, F23
R3X0416L	AMPS_A_DMND_MAX_DATE	Date - Month/Day/Year of Phase A Cur. Dem. Max.	-	-	-	RO	F24, F25
R3X0418L	AMPS_B_DMND_MAX_TIME	Time - Hours/Minutes/Seconds of Phase B Cur. Dem. Max.	-	-	-	RO	F22, F23
R3X041AL	AMPS_B_DMND_MAX_DATE	Date - Month/Day/Year of Phase B Cur. Dem. Max.	-	-	-	RO	F24, F25
R3X041CL	AMPS_C_DMND_MAX_TIME	Time - Hours/Minutes/Seconds of Phase C Cur. Dem. Max.	-	-	-	RO	F22, F23
R3X041EL	AMPS_C_DMND_MAX_DATE	Date - Month/Day/Year of Phase C Cur. Dem. Max.	-	-	-	RO	F24, F25
R3X0420L	AMPS_N_DMND_MAX_TIME	Time - Hours/Minutes/Seconds of Neutral Cur. Dem. Max.	-	-	-	RO	F22, F23
R3X0422L	AMPS_N_DMND_MAX_DATE	Date - Month/Day/Year of Neutral Cur. Dem. Max.	-	-	-	RO	F24, F25
R3X0424L	KW_DMND_MAX_TIME	Time - Hours/Minutes/Seconds of Real Power Dem. Max.	-	-	-	RO	F22, F23
R3X0426L	KW_DMND_MAX_DATE	Date - Month/Day/Year of Real Power Dem. Max.	-	-	-	RO	F24, F25
R3X0428L	KVAR_DMND_MAX_TIME	Time - Hours/Minutes/Seconds of Reactive Power Dem. Max.	-	-	-	RO	F22, F23
R3X042AL	KVAR_DMND_MAX_DATE	Date - Month/Day/Year of Reactive Power Dem. Max.	-	-	-	RO	F24, F25
R3X042CL	KVA_DMND_MAX_TIME	Time - Hours/Minutes/Seconds of Apparent Power Dem. Max.	-	-	-	RO	F22, F23
R3X042EL	KVA_DMND_MAX_DATE	Date - Month/Day/Year of Apparent Power Dem. Max.	-	-	-	RO	F24, F25
R3X0440	FREQUENCY	Frequency	0.01 x Hz	-	-	RO	F1
R3X0441	FREQ_MIN	Frequency Minimum	0.01 x Hz	-	-	RO	F1
R3X0442	FREQ_MAX	Frequency Maximum	0.01 x Hz	-	-	RO	F1
R3X0443L	FREQ_MIN_TIME	Time - Hours/Minutes/Seconds of Frequency Min.	-	-	-	RO	F22, F23
R3X0445L	FREQ_MIN_DATE	Date - Month/Day/Year of Frequency Min.	-	-	-	RO	F24, F25
R3X0447L	FREQ_MAX_TIME	Time - Hours/Minutes/Seconds of Frequency Max.	-	-	-	RO	F22, F23
R3X0449L	FREQ_MAX_DATE	Date - Month/Day/Year of Frequency Max.	-	-	-	RO	F24, F25
R3X0450L	PULSE_INPUT_1	Pulse Input 1	-	-	-	RO	F3
R3X0452L	PULSE_INPUT_2	Pulse Input 2	-	-	-	RO	F3
R3X0454L	PULSE_INPUT_3	Pulse Input 3	-	-	-	RO	F3
R3X0456L	PULSE_INPUT_4	Pulse Input 4	-	-	-	RO	F3
R3X0458L	ANALOG_INPUT	Main/Alternate Analog Input	-	-	-	RO	F3
R3X0460L	TOTAL_PULSE_INPUT	Totalized Pulse Input	-	-	-	RO	F3
R3X0470	AMPS_A_CF	Ia Crest Factor	0.001 x CF	-	-	RO	F1
R3X0471	AMPS_B_CF	Ib Crest Factor	0.001 x CF	-	-	RO	F1
R3X0472	AMPS_C_CF	Ic Crest Factor	0.001 x CF	-	-	RO	F1
R3X0473	AMPS_A_THDF	Ia Transformer Harmonic Derating Factor	0.01 x THDF	-	-	RO	F1
R3X0474	AMPS_B_THDF	Ib Transformer Harmonic Derating Factor	0.01 x THDF	-	-	RO	F1
R3X0475	AMPS_C_THDF	Ic Transformer Harmonic Derating Factor	0.01 x THDF	-	-	RO	F1
R3X0478	AMPS_A_THD	Phase A Current THD	0.1 x %	-	-	RO	F1
R3X0479	AMPS_B_THD	Phase B Current THD	0.1 x %	-	-	RO	F1

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X047A	AMPS_C_THD	Phase C Current THD	0.1 x %	-	-	RO	F1
R3X047B	AMPS_N_THD	Neutral Current THD	0.1 x %	-	-	RO	F1
R3X047C	VOLTS_AN_THD	Voltage Van THD	0.1 x %	-	-	RO	F1
R3X047D	VOLTS_BN_THD	Voltage Vbn THD	0.1 x %	-	-	RO	F1
R3X047E	VOLTS_CN_THD	Voltage Vcn THD	0.1 x %	-	-	RO	F1
R3X047F	VOLTS_AB_THD	Voltage Vab THD	0.1 x %	-	-	RO	F1
R3X0480	VOLTS_BC_THD	Voltage Vbc THD	0.1 x %	-	-	RO	F1
R3X0481	VOLTS_CA_THD	Voltage Vca THD	0.1 x %	-	-	RO	F1
R3X0482	AMPS_A_THD_MAX	Phase A Current THD - Maximum	0.1 x %	-	-	RO	F1
R3X0483	AMPS_B_THD_MAX	Phase B Current THD - Maximum	0.1 x %	-	-	RO	F1
R3X0484	AMPS_C_THD_MAX	Phase C Current THD - Maximum	0.1 x %	-	-	RO	F1
R3X0485	AMPS_N_THD_MAX	Neutral Current THD - Maximum	0.1 x %	-	-	RO	F1
R3X0486	VOLTS_AN_THD_MAX	Voltage Van THD - Maximum	0.1 x %	-	-	RO	F1
R3X0487	VOLTS_BN_THD_MAX	Voltage Vbn THD - Maximum	0.1 x %	-	-	RO	F1
R3X0488	VOLTS_CN_THD_MAX	Voltage Vcn THD - Maximum	0.1 x %	-	-	RO	F1
R3X0489	VOLTS_AB_THD_MAX	Voltage Vab THD - Maximum	0.1 x %	-	-	RO	F1
R3X048A	VOLTS_BC_THD_MAX	Voltage Vbc THD - Maximum	0.1 x %	-	-	RO	F1
R3X048B	VOLTS_CA_THD_MAX	Voltage Vca THD - Maximum	0.1 x %	-	-	RO	F1
R3X048CL	AMPS_A_THD_MAX_TIME	Time - Hours/Minutes/Seconds of Phase A Cur. THD Max.	-	-	-	RO	F22, F23
R3X048EL	AMPS_A_THD_MAX_DATE	Date - Month/Day/Year of Phase A Cur. THD Max.	-	-	-	RO	F24, F25
R3X0490L	AMPS_B_THD_MAX_TIME	Time - Hours/Minutes/Seconds of Phase B Cur. THD Max.	-	-	-	RO	F22, F23
R3X0492L	AMPS_B_THD_MAX_DATE	Date - Month/Day/Year of Phase B Cur. THD Max.	-	-	-	RO	F24, F25
R3X0494L	AMPS_C_THD_MAX_TIME	Time - Hours/Minutes/Seconds of Phase C Cur. THD Max.	-	-	-	RO	F22, F23
R3X0496L	AMPS_C_THD_MAX_DATE	Date - Month/Day/Year of Phase C Cur. THD Max.	-	-	-	RO	F24, F25
R3X0498L	AMPS_N_THD_MAX_TIME	Time - Hours/Minutes/Seconds of Neutral Cur. THD Max.	-	-	-	RO	F22, F23
R3X049AL	AMPS_N_THD_MAX_DATE	Date - Month/Day/Year of Neutral Cur. THD Max.	-	-	-	RO	F24, F25
R3X049CL	VOLTS_AN_THD_MAX_TIM	Time - Hours/Minutes/Seconds of Van THD Max.	-	-	-	RO	F22, F23
R3X049EL	VOLTS_AN_THD_MAX_DAT	Date - Month/Day/Year of Van THD Max.	-	-	-	RO	F24, F25
R3X04A0L	VOLTS_BN_THD_MAX_TIM	Time - Hours/Minutes/Seconds of Vbn THD Max.	-	-	-	RO	F22, F23
R3X04A2L	VOLTS_BN_THD_MAX_DAT	Date - Month/Day/Year of Vbn THD Max.	-	-	-	RO	F24, F25
R3X04A4L	VOLTS_CN_THD_MAX_TIM	Time - Hours/Minutes/Seconds of Vcn THD Max.	-	-	-	RO	F22, F23
R3X04A6L	VOLTS_CN_THD_MAX_DAT	Date - Month/Day/Year of Vcn THD Max.	-	-	-	RO	F24, F25
R3X04A8L	VOLTS_AB_THD_MAX_TIM	Time - Hours/Minutes/Seconds of Vab THD Max.	-	-	-	RO	F22, F23
R3X04AAL	VOLTS_AB_THD_MAX_DAT	Date - Month/Day/Year of Vab THD Max.	-	-	-	RO	F24, F25
R3X04ACL	VOLTS_BC_THD_MAX_TIM	Time - Hours/Minutes/Seconds of Vbc THD Max.	-	-	-	RO	F22, F23
R3X04AEL	VOLTS_BC_THD_MAX_DAT	Date - Month/Day/Year of Vbc THD Max.	-	-	-	RO	F24, F25
R3X04B0L	VOLTS_CA_THD_MAX_TIM	Time - Hours/Minutes/Seconds of Vca THD Max.	-	-	-	RO	F22, F23
R3X04B2L	VOLTS_CA_THD_MAX_DAT	Date - Month/Day/Year of Vca THD Max.	-	-	-	RO	F24, F25
R3X04B4	I AVG_THD	Average Current THD	0.1 x %	-	-	RO	F1
R3X04B5	V AVG_THD	Average Voltage THD	0.1 x %	-	-	RO	F1
R3X04C8	REFERENCE	ADC Reference	-	-	-	RO	F1
R3X04C9	PWR_LOSS_FINE_TIME	Power Loss Fine Time	10 ms	-	-	RO	F1
R3X04CA	PWR_LOSS_COARSE_TIME	Power Loss Coarse Time	0.1 min	-	-	RO	F1
R3X04CB	MODBUS_KEY	Current Key Press	-	-	-	RO	F6
R3X04CC	SELF_TEST_CODE	Internal Fault Error Code	-	-	-	RO	F108
R3X04D8S40	MSG_BUFFER	Message Buffer	ASCII	-	-	RO	F10
R3X04F8	HSS_PARAMETER	High-Speed Sampling Parameter	-	-	-	RO	F26

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Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X04F9L	HSS_SCALE_FACTOR	High-Speed Sampling Scale Factor	AorV x10000	-	-	RO	F3
R3X04FB	HSS_FREQUENCY	Frequency of High-Speed Sampling Waveform	0.01 x Hz	-	-	RO	F1
R3X04FCL	HSS_TIME	Time - Hours/Minutes/Seconds of Last Sampling	-	-	-	RO	F22, F23
R3X04FEL	HSS_DATE	Date - Month/Day/Year of Last Sampling	-	-	-	RO	F24, F25
R3X0500I		High-Speed Sample Buffer 1	ADC counts	-	-	RO	F2
...						RO	
R3X05FFI		High-Speed Sample Buffer 256	ADC counts	-	-	RO	F2
R3X0620L	WAVEFORM_TIME	Time - Hours/Minutes/Seconds of Last Capture	-	-	-	RO	F22, F23
R3X0622L	WAVEFORM_DATE	Date - Month/Day/Year of Last Capture	-	-	-	RO	F24, F25
R3X0624	WAVEFORM_FREQUENCY	Frequency of Last Capture	0.01 x Hz	-	-	RO	F1
R3X0628L	WF_IA_SCALE	Ia Waveform Capture Scale Factor	A x10000	-	-	RO	F3
R3X062AI		Ia Sample Buffer 1	ADC counts	-	-	RO	F2
...		...					
R3X06A9I		Ia Sample Buffer 128	ADC counts	-	-	RO	F2
R3X06B0L	WF_IB_SCALE	Ib Waveform Capture Scale Factor	A x10000	-	-	RO	F3
R3X06B2I		Ib Sample Buffer 1	ADC counts	-	-	RO	F2
...		...					
R3X0731I		Ib Sample Buffer 128	ADC counts	-	-	RO	F2
R3X0738	WF_IC_SCALE	Ic Waveform Capture Scale Factor	A x10000	-	-	RO	F3
R3X073AI		Ic Sample Buffer 1	ADC counts	-	-	RO	F2
...		...					
R3X07B9I		Ic Sample Buffer 128	ADC counts	-	-	RO	F2
R3X07C0L	WF_IN_SCALE	In Waveform Capture Scale Factor	A x10000	-	-	RO	F3
R3X07C2I		In Sample Buffer 1	ADC counts	-	-	RO	F2
...		...					
R3X0841I		In Sample Buffer 128	ADC counts	-	-	RO	F2
R3X0848L	WF_VA_SCALE	Van Waveform Capture Scale Factor	V x10000	-	-	RO	F3
R3X084AI		Van Sample Buffer 1	ADC counts	-	-	RO	F2
...		...					
R3X08C9I		Van Sample Buffer 128	ADC counts	-	-	RO	F2
R3X08D0L	WF_VB_SCALE	Vbn Waveform Capture Scale Factor	V x10000	-	-	RO	F3
R3X08D2I		Vbn Sample Buffer 1	ADC counts	-	-	RO	F2
...		...					
R3X0951I		Vbn Sample Buffer 128	ADC counts	-	-	RO	F2
R3X0958L	WF_VC_SCALE	Vcn Waveform Capture Scale Factor	V x10000	-	-	RO	F3
R3X095AI		Vcn Sample Buffer 1	ADC counts	-	-	RO	F2

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
...		...					
R3X09D9I		Vcn Sample Buffer 128	ADC counts	-	-	RO	F2
R3X0A00	DATA_LOG_BLOCK	Data Log Memory Access Block Number	-	-	-	RO	F1
R3X0A01	DATA_LOG_REGISTERS	Data Log Register 1	-	-	-	RO	-
...	
R3X0A40		Data Log Register 64	-	-	-	RO	-
R3X0A50	DLOG_IA_INTVL	Ia Log Number	-	-	-	RO	F110
R3X0A51	DLOG_IB_INTVL	Ib Log Number	-	-	-	RO	F110
R3X0A52	DLOG_IC_INTVL	Ic Log Number	-	-	-	RO	F110
R3X0A53	DLOG_IAVG_INTVL	Iavg Log Number	-	-	-	RO	F110
R3X0A54	DLOG_IN_INTVL	In Log Number	-	-	-	RO	F110
R3X0A55	DLOG_I_UB_INTVL	I Unbalance Log Number	-	-	-	RO	F110
R3X0A56	DLOG_VAN_INTVL	Van Log Number	-	-	-	RO	F110
R3X0A57	DLOG_VBN_INTVL	Vbn Log Number	-	-	-	RO	F110
R3X0A58	DLOG_VCN_INTVL	Vcn Log Number	-	-	-	RO	F110
R3X0A59	DLOG_VPAVG_INTVL	Vpavg Log Number	-	-	-	RO	F110
R3X0A5A	DLOG_VAB_INTVL	Vab Log Number	-	-	-	RO	F110
R3X0A5B	DLOG_VBC_INTVL	Vbc Log Number	-	-	-	RO	F110
R3X0A5C	DLOG_VCA_INTVL	Vca Log Number	-	-	-	RO	F110
R3X0A5D	DLOG_VLAVG_INTVL	Vlavg Log Number	-	-	-	RO	F110
R3X0A5E	DLOG_V_UB_INTVL	V Unbalance Log Number	-	-	-	RO	F110
R3X0A5F	DLOG_PA_INTVL	Pa Log Number	-	-	-	RO	F110
R3X0A60	DLOG_QA_INTVL	Qa Log Number	-	-	-	RO	F110
R3X0A61	DLOG_SA_INTVL	Sa Log Number	-	-	-	RO	F110
R3X0A62	DLOG_PFA_INTVL	PFa Log Number	-	-	-	RO	F110
R3X0A63	DLOG_PB_INTVL	Pb Log Number	-	-	-	RO	F110
R3X0A64	DLOG_QB_INTVL	Qb Log Number	-	-	-	RO	F110
R3X0A65	DLOG_SB_INTVL	Sb Log Number	-	-	-	RO	F110
R3X0A66	DLOG_PFB_INTVL	PFb Log Number	-	-	-	RO	F110
R3X0A67	DLOG_PC_INTVL	Pc Log Number	-	-	-	RO	F110
R3X0A68	DLOG_QC_INTVL	Qc Log Number	-	-	-	RO	F110
R3X0A69	DLOG_SC_INTVL	Sc Log Number	-	-	-	RO	F110
R3X0A6A	DLOG_PFC_INTVL	PFc Log Number	-	-	-	RO	F110
R3X0A6B	DLOG_P3_INTVL	P3 Log Number	-	-	-	RO	F110
R3X0A6C	DLOG_Q3_INTVL	Q3 Log Number	-	-	-	RO	F110
R3X0A6D	DLOG_S3_INTVL	S3 Log Number	-	-	-	RO	F110
R3X0A6E	DLOG_PF3_INTVL	PF3 Log Number	-	-	-	RO	F110
R3X0A6F	DLOG_FREQ_INTVL	Frequency Log Number	-	-	-	RO	F110
R3X0A70	DLOG_POS_KWH_INTVL	Positive kWh Log Number	-	-	-	RO	F110
R3X0A71	DLOG_NEG_KWH_INTVL	Negative kWh Log Number	-	-	-	RO	F110
R3X0A72	DLOG_POS_KVARH_INTVL	Positive kvarh Log Number	-	-	-	RO	F110
R3X0A73	DLOG_NEG_KVARH_INTVL	Negative kvarh Log Number	-	-	-	RO	F110
R3X0A74	DLOG_POS_KVAH_INTVL	kVAh Log Number	-	-	-	RO	F110
R3X0A75	DLOG_IA_DMD_INTVL	Ia Demand Log Number	-	-	-	RO	F110
R3X0A76	DLOG_IB_DMD_INTVL	Ib Demand Log Number	-	-	-	RO	F110
R3X0A77	DLOG_IC_DMD_INTVL	Ic Demand Log Number	-	-	-	RO	F110
R3X0A78	DLOG_IN_DMD_INTVL	In Demand Log Number	-	-	-	RO	F110
R3X0A79	DLOG_P3_DMD_INTVL	P3 Demand Log Number	-	-	-	RO	F110
R3X0A7A	DLOG_Q3_DMD_INTVL	Q3 Demand Log Number	-	-	-	RO	F110
R3X0A7B	DLOG_S3_DMD_INTVL	S3 Demand Log Number	-	-	-	RO	F110

PQM – Power Quality Meter

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X0A7C	DLOG_IA_THD_INTVL	Ia THD Log Number	-	-	-	RO	F110
R3X0A7D	DLOG_IB_THD_INTVL	Ib THD Log Number	-	-	-	RO	F110
R3X0A7E	DLOG_IC_THD_INTVL	Ic THD Log Number	-	-	-	RO	F110
R3X0A7F	DLOG_IN_THD_INTVL	In THD Log Number	-	-	-	RO	F110
R3X0A80	DLOG_VAN_THD_INTVL	Van THD Log Number	-	-	-	RO	F110
R3X0A81	DLOG_VBN_THD_INTVL	Vbn THD Log Number	-	-	-	RO	F110
R3X0A82	DLOG_VCN_THD_INTVL	Vcn THD Log Number	-	-	-	RO	F110
R3X0A83	DLOG_VAB_THD_INTVL	Vab THD Log Number	-	-	-	RO	F110
R3X0A84	DLOG_VBC_THD_INTVL	Vbc THD Log Number	-	-	-	RO	F110
R3X0A85	DLOG_AI_INTVL	Analog Input Log Number	-	-	-	RO	F110
R3X0A90L	LOG_1_INTVL	Log 1 Time Interval	s	-	-	RO	F3
R3X0A92L	LOG_1_TIME	Log 1 Time - Hours/Minutes/Seconds	-	-	-	RO	F22, F23
R3X0A94L	LOG_1_DATE	Log 1 Date - Month/Day/Year	-	-	-	RO	F24, F25
R3X0A96	LOG_1_START_ADDR	Log 1 Start Address	-	-	-	RO	F1
R3X0A97	LOG_1_REC_SIZE	Log 1 Record Size	bytes	-	-	RO	F1
R3X0A98	LOG_1_TOTAL_RECS	Log 1 Total Records	-	-	-	RO	F1
R3X0A99	LOG_1_FIRST	Log 1 Pointer to First Item of First Record	-	-	-	RO	F1
R3X0A9A	LOG_1_LAST	Log 1 Pointer to First Item of Last Record	-	-	-	RO	F1
R3X0A9B	LOG_1_STATUS	Log 1 Status	-	-	-	RO	F35
R3X0A9C	LOG_1_RECS_USED	Log 1 Records Used	-	-	-	RO	F1
R3X0A9DL	DATA_LOG_1_TIMER	Log 1 Time Remaining Until Next Reading	s	-	-	RO	F3
R3X0AA8L	LOG_2_INTVL	Log 2 Time Interval	s	-	-	RO	F3
R3X0AAAL	LOG_2_TIME	Log 2 Time - Hours/Minutes/Seconds	-	-	-	RO	F22, F23
R3X0AACL	LOG_2_DATE	Log 2 Date - Month/Day/Year	-	-	-	RO	F24, F25
R3X0AAE	LOG_2_START_ADDR	Log 2 Start Address	-	-	-	RO	F1
R3X0AAF	LOG_2_REC_SIZE	Log 2 Record Size	bytes	-	-	RO	F1
R3X0AB0	LOG_2_TOTAL_RECS	Log 2 Total Records	-	-	-	RO	F1
R3X0AB1	LOG_2_FIRST	Log 2 Pointer to First Item of First Record	-	-	-	RO	F1
R3X0AB2	LOG_2_LAST	Log 2 Pointer to First Item of Last Record	-	-	-	RO	F1
R3X0AB3	LOG_2_STATUS	Log 2 Status	-	-	-	RO	F35
R3X0AB4	LOG_2_RECS_USED	Log 2 Records Used	-	-	-	RO	F1
R3X0AB5L	DATA_LOG_2_TIMER	Log 2 Time Remaining Until Next Reading	s	-	-	RO	F3
R3X0AD0	EVENT_NUMBER	Total Number of Events Since Last Clear	-	-	-	RO	F1
R3X0AD1L	EE_ER_LAST_CLRD_TIME	Event Record Last Cleared Time - Hours/Minutes/Seconds	-	-	-	RO	F22, F23
R3X0AD3L	EE_ER_LAST_CLRD_DATE	Event Record Last Cleared Date - Month/Day/Year	-	-	-	RO	F24, F25
R3X0AE0	EVENT_REC_NUMBER	Record #N Event Number	-	-	-	RO	F1
R3X0AE1	EVENT_REC_CAUSE	Record #N Event Cause	-	-	-	RO	F36
R3X0AE2L	EVENT_REC_TIME	Record #N Time - Hours/Minutes/Seconds	-	-	-	RO	F22, F23
R3X0AE4L	EVENT_REC_DATE	Record #N Date - Month/Day/Year	-	-	-	RO	F24, F25
R3X0AE6	EVENT_REC_SW_RLYS	Record #N Switches and Relays States	-	-	-	RO	F111
R3X0AE7	EVENT_REC_IA	Record #N Ia	A	-	-	RO	F1
R3X0AE8	EVENT_REC_IB	Record #N Ib	A	-	-	RO	F1
R3X0AE9	EVENT_REC_IC	Record #N Ic	A	-	-	RO	F1
R3X0AEA	EVENT_REC_IN	Record #N In	A	-	-	RO	F1
R3X0AEB	EVENT_REC_I_UB	Record #N I unbalance	0.1 x %	-	-	RO	F1
R3X0AECL	EVENT_REC_VAN	Record #N Van	V	-	-	RO	F3
R3X0AEEL	EVENT_REC_VBN	Record #N Vbn	V	-	-	RO	F3
R3X0AF0L	EVENT_REC_VCN	Record #N Vcn	V	-	-	RO	F3
R3X0AF2L	EVENT_REC_VAB	Record #N Vab	V	-	-	RO	F3
R3X0AF4L	EVENT_REC_VBC	Record #N Vbc	V	-	-	RO	F3

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X0AF6L	EVENT_REC_VCA	Record #N Vca	V	-	-	RO	F3
R3X0AF8	EVENT_REC_V_UB	Record #N V unbalance	0.1 x %	-	-	RO	F1
R3X0AF9L	EVENT_REC_PA	Record #N Pa	0.01 x kW	-	-	RO	F4
R3X0AFBL	EVENT_REC_QA	Record #N Qa	0.01 x kvar	-	-	RO	F4
R3X0AFDL	EVENT_REC_SA	Record #N Sa	0.01 x kVA	-	-	RO	F3
R3X0AFFI	EVENT_REC_PFA	Record #N PFa	0.01 x PF	-	-	RO	F2
R3X0B00L	EVENT_REC_PB	Record #N Pb	0.01 x kW	-	-	RO	F4
R3X0B02L	EVENT_REC_QB	Record #N Qb	0.01 x kvar	-	-	RO	F4
R3X0B04L	EVENT_REC_SB	Record #N Sb	0.01 x kVA	-	-	RO	F3
R3X0B06I	EVENT_REC_PFB	Record #N PFb	0.01 x PF	-	-	RO	F2
R3X0B07L	EVENT_REC_PC	Record #N Pc	0.01 x kW	-	-	RO	F4
R3X0B09L	EVENT_REC_QC	Record #N Qc	0.01 x kvar	-	-	RO	F4
R3X0B0BL	EVENT_REC_SC	Record #N Sc	0.01 x kVA	-	-	RO	F3
R3X0B0DI	EVENT_REC_PFC	Record #N PFc	0.01 x PF	-	-	RO	F2
R3X0B0EL	EVENT_REC_P3	Record #N P3	0.01 x kW	-	-	RO	F4
R3X0B10L	EVENT_REC_Q3	Record #N Q3	0.01 x kvar	-	-	RO	F4
R3X0B12L	EVENT_REC_S3	Record #N S3	0.01 x kVA	-	-	RO	F3
R3X0B14I	EVENT_REC_PF3	Record #N PF3	0.01 x PF	-	-	RO	F2
R3X0B15	EVENT_REC_FREQUENCY	Record #N Frequency	0.01 x Hz	-	-	RO	F1
R3X0B16L	EVENT_REC_POS_KWH	Record #N Positive kWh	kWh	-	-	RO	F3
R3X0B18L	EVENT_REC_NEG_KWH	Record #N Negative kWh	kWh	-	-	RO	F3
R3X0B1AL	EVENT_REC_POS_KVARH	Record #N Positive kvarh	kvarh	-	-	RO	F3
R3X0B1CL	EVENT_REC_NEG_KVARH	Record #N Negative kvarh	kvarh	-	-	RO	F3
R3X0B1EL	EVENT_REC_KVAH	Record #N kVAh	kVAh	-	-	RO	F3
R3X0B20	EVENT_REC_IA_DMD	Record #N Ia Demand	A	-	-	RO	F1
R3X0B21	EVENT_REC_IB_DMD	Record #N Ib Demand	A	-	-	RO	F1
R3X0B22	EVENT_REC_IC_DMD	Record #N Ic Demand	A	-	-	RO	F1
R3X0B23	EVENT_REC_IN_DMD	Record #N In Demand	A	-	-	RO	F1
R3X0B24L	EVENT_REC_P3_DMD	Record #N P3 Demand	0.01 x kW	-	-	RO	F4
R3X0B26L	EVENT_REC_Q3_DMD	Record #N Q3 Demand	0.01 x kvar	-	-	RO	F4
R3X0B28L	EVENT_REC_S3_DMD	Record #N S3 Demand	0.01 x kVA	-	-	RO	F3
R3X0B2A	EVENT_REC_IA_THD	Record #N Ia THD	0.1 x %	-	-	RO	F1
R3X0B2B	EVENT_REC_IB_THD	Record #N Ib THD	0.1 x %	-	-	RO	F1
R3X0B2C	EVENT_REC_IC_THD	Record #N Ic THD	0.1 x %	-	-	RO	F1
R3X0B2D	EVENT_REC_IN_THD	Record #N In THD	0.1 x %	-	-	RO	F1
R3X0B2E	EVENT_REC_VAN_THD	Record #N Van THD	0.1 x %	-	-	RO	F1
R3X0B2F	EVENT_REC_VBN_THD	Record #N Vbn THD	0.1 x %	-	-	RO	F1
R3X0B30	EVENT_REC_VCN_THD	Record #N Vcn THD	0.1 x %	-	-	RO	F1
R3X0B31	EVENT_REC_VAB_THD	Record #N Vab THD	0.1 x %	-	-	RO	F1
R3X0B32	EVENT_REC_VBC_THD	Record #N Vbc THD	0.1 x %	-	-	RO	F1
R3X0B33L	EVENT_REC_ANAL_IN	Record #N Analog Input	-	-	-	RO	F3

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X0B35	EVENT_REC_MEM_TRIG	Record #N Trace Memory Trigger Cause	-	-	-	RO	F41
R3X0B36	REC_IF_ERR_COD	Record #N Internal Fault Error Code	-	-	-	RO	F108
R3X0B80	TRACE_USAGE	Trace Memory Usage	-	-	-	RO	F37
R3X0B81	TM_TRIG_FLAG	Trace Memory Trigger Flag	-	-	-	RO	F113
R3X0B82	TM_TRIG_CNT	Trace Memory Trigger Counter	-	-	-	RO	F1
R3X0B83	TM_TRIG_TOT	Total Trace Memory Triggers	-	-	-	RO	F1
R3X0B88	TRIG_CAUSE_TRACE_1	Trigger Cause - Trace 1	-	-	-	RO	F41
R3X0B89L	TIME_TRACE_1	Time - Hours/Minutes/Seconds - Trace 1	-	-	-	RO	F22, F23
R3X0B8BL	DATE_TRACE_1	Date - Month/Day/Year - Trace 1	-	-	-	RO	F24, F25
R3X0B8D	TRIG_SAMP_1	Trigger Sample Number 1	-	-	-	RO	F1
R3X0B8E	FREQ_1	Frequency 1	0.01 x Hz	-	-	RO	F1
R3X0B98	TRIG_CAUSE_TRACE_2	Trigger Cause - Trace 2	-	-	-	RO	F41
R3X0B99L	TIME_TRACE_2	Time - Hours/Minutes/Seconds - Trace 2	-	-	-	RO	F22, F23
R3X0B9BL	DATE_TRACE_2	Date - Month/Day/Year - Trace 2	-	-	-	RO	F24, F25
R3X0B9D	TRIG_SAMP_2	Trigger Sample Number 2	-	-	-	RO	F1
R3X0B9E	FREQ_2	Frequency 2	0.01 x Hz	-	-	RO	F1
R3X0BA8	TRIG_CAUSE_TRACE_3	Trigger Cause - Trace 3	-	-	-	RO	F41
R3X0BA9L	TIME_TRACE_3	Time - Hours/Minutes/Seconds - Trace 3	-	-	-	RO	F22, F23
R3X0BABL	DATE_TRACE_3	Date - Month/Day/Year - Trace 3	-	-	-	RO	F24, F25
R3X0BAD	TRIG_SAMP_3	Trigger Sample Number 3	-	-	-	RO	F1
R3X0BAE	FREQ_3	Frequency 3	0.01 x Hz	-	-	RO	F1
R3X0BB8	TM_WAVE_SEL	Trace Memory Waveform Selection	-	-	-	RO	F40
R3X0BB9L	WAVE_SCALE	Waveform Scale Factor	A/V x10000	-	-	RO	F3
R3X0BBBI	TM_DATA_BUFFER	Data Buffer 1	ADC counts/2	-	-	RO	F2
...	
R3X0DFAi	XX_TRACE[]	Data Buffer 576	ADC counts/2	-	-	RO	F2

SETPOINT VALUES

Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X00F0	HOUR_MIN	Time Hours/Minutes	hr/min	1	0 to 65535	R/W	F22
R4X00F1	SECONDS	Time Seconds	ms	1	0 to 59999	R/W	F23
R4X00F2	MONTH_DAY	Date Month/Day	---	1	0 to 65535	R/W	F24
R4X00F3	YEAR	Date Year	---	1	0 to 59999	R/W	F25
R4X100S20	METER_ID	Meter ID	ASCII	-	-	R/W	F10
R4X1010	DEFAULT_MSG_TIME	Default Message Time	Min x 0.1	1	1-1201 ***	R/W	F1
R4X1011	DEFAULT_MSG_BRIGHT	Default Message Brightness	%	20	0-100	R/W	F1
R4X1012	DISP_FILTER_CONST	Display Filter Constant	-	1	1-10	R/W	F1
R4X1018	MODBUS_ADDR	Serial Communication Address	-	1	1-255	R/W	F1
R4X1019	BAUD_RATE_COM1	Modbus Baud Rate	-	1	0-4	R/W	F12
R4X101A	PARITY_COM1	COM1 Parity	-	1	0-2	R/W	F13
R4X1020	BAUD_RATE_COM2	Modbus Baud Rate	-	1	0-4	R/W	F12
R4X1021	PARITY_COM2	COM2 Parity	-	1	0-2	R/W	F13
R4X1028	BAUD_RATE_RS232	Modbus Baud Rate	-	1	0-4	R/W	F12
R4X1029	PARITY_RS232	RS232 Parity	-	1	0-2	R/W	F13
R4X1030	CURR_DMND_TYPE	Current Demand Calculation Type	-	1	0-2	R/W	F28
R4X1031	CURR_DMND_INTVL	Current Demand Time Interval	minutes	1	5-180	R/W	F1
R4X1032	PWR_DMND_TYPE	Power Demand Calculation Type	-	1	0-2	R/W	F28
R4X1033	PWR_DMND_INTVL	Power Demand Time Interval	minutes	1	5-180	R/W	F1
R4X1034	COST_PER_KWH	Energy Cost Per 0.01 x kWh	cents x 0.01	1	1-50000	R/W	F1
R4X1035		Extract Fundamental	-	1	0-1	R/W	F11
R4X1038	CLEAR_ENERGY	Clear Energy Values	-	1	0-1	R/W	F31
R4X1039	CLEAR_DEMAND	Clear Max Demand Values	-	1	0-1	R/W	F31
R4X103A	CLEAR_CURRENT	Clear Min/Max Current Values	-	1	0-1	R/W	F31
R4X103B	CLEAR_VOLTAGE	Clear Min/Max Voltage Values	-	1	0-1	R/W	F31
R4X103C	CLEAR_PWR	Clear Min/Max Power Values	-	1	0-1	R/W	F31
R4X103D	CLEAR_THD	Clear Max THD Values	-	1	0-1	R/W	F31
R4X103E	CLEAR_PULSE_COUNTER	Clear Pulse Input Values	-	1	0-1	R/W	F31
R4X103F	CLEAR_EVENT_REC	Clear Event Record	-	1	0-1	R/W	F31
R4X1040	CLR_DMD_VAL	Clear All Demand	-	1	0-1	R/W	F31
R4X1041	CLR_FREQ_VAL	Clear Frequency Values	-	1	0-1	R/W	F31
R4X1044	DNP_PORT	DNP Port	---	1	0-3	R/W	F47
R4X1045	DNP_SLAVE_ADD	DNP Slave Address	---	1	0-255	R/W	F1
R4X1046	DNP_TRN_AR_TIME	DNP Turnaround Time	ms	10	0-100	R/W	F1
R4X1047	TP1_START_TIME	Tarrif Period 1 Start time	minutes	1	0 to 1439	R/W	F1
R4X1048	TP1_PER_MWH	Tarrif Period 1 Cost per MWh	$\phi \times 0.01$	1	1 to 50000	R/W	F1
R4X1049	TP2_START_TIME	Tarrif Period 2 Start time	minutes	1	0 to 1439	R/W	F1
R4X104A	TP2_PER_MWH	Tarrif Period 2 Cost per MWh	$\phi \times 0.01$	1	1 to 50000	R/W	F1
R4X104B	TP3_START_TIME	Tarrif Period 3 Start time	minutes	1	0 to 1439	R/W	F1
R4X104C	TP3_PER_MWH	Tarrif Period 3 Cost per MWh	$\phi \times 0.01$	1	1 to 50000	R/W	F1
R4X1050	CT_PRIMARY	Phase CT Primary	A	5	0-12000 ****	R/W	F1

Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X1051	NEUTRAL_CURR_SENSING	Neutral Current Sensing	-	1	0-2	R/W	F16
R4X1052	NEUTRAL_CT_PRI	Neutral CT Primary	A	5	5-6000	R/W	F1
R4X1053	VT_WIRING	VT Wiring	-	1	0-6	R/W	F15
R4X1054	VT_RATIO	VT Ratio	0.1 x ratio	1	10-35000	R/W	F1
R4X1055	VT_NOM_SEC	VT Nominal Secondary Voltage	V	1	40-600	R/W	F1
R4X1056	VOLTS_NOM_DIR_INP	Nominal Direct Input Voltage	V	1	40-600	R/W	F1
R4X1057	FREQ_NOM_SYS	Nominal Frequency	Hz	10	50-60	R/W	F1
R4X1058	CT_WIRING	CT Wiring	-	1	0-3	R/W	F44
R4X1059	UNDER_FREQ_LEVEL	Underfrequency Level	0.01xHz	1	2000-7000	R/W	F1
R4X1060	ANAL_OUT_1_TYPE	Analog Output 1 Main Type	-	1	0-59	R/W	F14
R4X1061	ANAL_OUT_1_MAIN_MIN	Analog Output 1 Main Minimum Value (Depends on Analog Output 1 Main Type Register)			See Table 7.1	R/W	
R4X1062	ANAL_OUT_1_MAIN_MAX	Analog Output 1 Main Maximum Value (Depends on Analog Output 1 Main Type Register)			See Table 7.1	R/W	
R4X1063	ANAL_OUT_1_ALT_TYPE	Analog Output 1 Alternate Type	-	1	0-58	R/W	F14
R4X1064	ANAL_OUT_1_ALT_MIN	Analog Output 1 Alternate Minimum Value (Depends on Analog Output 1 Alternate Type Register)			See Table 7.1	R/W	
R4X1065	ANAL_OUT_1_ALT_MAX	Analog Output 1 Alternate Maximum Value (Depends on Analog Output 1 Alternate Type Register)			See Table 7.1	R/W	
R4X1067	AO_1_SER_VALUE	Analog Output 1 Serial Value	-	1	*see details	R/W	F2
R4X1068	ANAL_OUT_2_TYPE	Analog Output 2 Main Type	-	1	0-59	R/W	F14
R4X1069	ANAL_OUT_2_MAIN_MIN	Analog Output 2 Main Minimum Value (Depends on Analog Output 2 Main Type Register)			See Table 7.1	R/W	
R4X106A	ANAL_OUT_2_MAIN_MAX	Analog Output 2 Main Maximum Value (Depends on Analog Output 2 Main Type Register)			See Table 7.1	R/W	
R4X106B	ANAL_OUT_2_ALT_TYPE	Analog Output 2 Alternate Type	-	1	0-58	R/W	F14
R4X106C	ANAL_OUT_2_ALT_MIN	Analog Output 2 Alternate Minimum Value (Depends on Analog Output 2 Alternate Type Register)			See Table 7.1	R/W	
R4X106D	ANAL_OUT_2_ALT_MAX	Analog Output 2 Alternate Maximum Value (Depends on Analog Output 2 Alternate Type Register)			See Table 7.1	R/W	
R4X106F	AO_2_SER_VALUE	Analog Output 2 Serial Value	-	1	*see details	R/W	F2
R4X1070	ANAL_OUT_3_TYPE	Analog Output 3 Main Type	-	1	0-59	R/W	F14
R4X1071	ANAL_OUT_3_MAIN_MIN	Analog Output 3 Main Minimum Value (Depends on Analog Output 3 Main Type Register)			See Table 7.1	R/W	
R4X1072	ANAL_OUT_3_MAIN_MAX	Analog Output 3 Main Maximum Value (Depends on Analog Output 3 Main Type Register)			See Table 7.1	R/W	
R4X1073	ANAL_OUT_3_ALT_TYPE	Analog Output 3 Alternate Type	-	1	0-58	R/W	F14
R4X1074	ANAL_OUT_3_ALT_MIN	Analog Output 3 Alternate Minimum Value (Depends on Analog Output 3 Alternate Type Register)			See Table 7.1	R/W	

Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X1075	ANAL_OUT_3_ALT_MAX	Analog Output 3 Alternate Maximum Value (Depends on Analog Output 3 Alternate Type Register)			See Table 7.1	R/W	
R4X1077	AO_3_SER_VALUE	Analog Output 3 Serial Value	–	1	*see details	R/W	F2
R4X1078	ANAL_OUT_4_TYPE	Analog Output 4 Main Type	–	1	0–59	R/W	F14
R4X1079	ANAL_OUT_4_MAIN_MIN	Analog Output 4 Main Minimum Value (Depends on Analog Output 4 Main Type Register)			See Table 7.1	R/W	
R4X107A	ANAL_OUT_4_MAIN_MAX	Analog Output 4 Main Maximum Value (Depends on Analog Output 4 Main Type Register)			See Table 7.1	R/W	
R4X107B	ANAL_OUT_4_ALT_TYPE	Analog Output 4 Alternate Type	–	1	0–58	R/W	F14
R4X107C	ANAL_OUT_4_ALT_MIN	Analog Output 4 Alternate Minimum Value (Depends on Analog Output 4 Alternate Type Register)			See Table 7.1	R/W	
R4X107D	ANAL_OUT_4_ALT_MAX	Analog Output 4 Alternate Maximum Value (Depends on Analog Output 4 Alternate Type Register)			See Table 7.1	R/W	
R4X107F	AO_4_SER_VALUE	Analog Output 4 Serial Value	–	1	*see details	R/W	F2
R4X1080	ANAL_INPUT_SEL	Analog Input Main/Alternate Select Relay	–	1	0–3	R/W	F19
R4X1081S20	ANAL_IN_MAIN_NAME	Analog Input Main Name	ASCII	–	–	R/W	F10
R4X108BS10	ANAL_IN_MAIN_UNITS	Analog Input Main Units	ASCII	–	–	R/W	F10
R4X1090	SP_MAIN_4MA_VALUE	Analog Input Main 4 mA Value	–	1	0–65000	R/W	F1
R4X1091	SP_MAIN_20MA_VALUE	Analog Input Main 20 mA Value	–	1	0–65000	R/W	F1
R4X1092	SP_AI_MAIN_RLY	Analog Input Main Relay	–	1	0–4	R/W	F29
R4X1093	SP_AI_MAIN_LVL	Analog Input Main Level	–	1	0–65000	R/W	F1
R4X1094	SP_AI_MAIN_DLY	Analog Input Main Delay	0.1 x s	5	5–6000	R/W	F1
R4X1098S20	ANAL_IN_ALT_NAME	Analog Input Alternate Name	ASCII	–	–	R/W	F10
R4X10A2S10	ANAL_IN_ALT_UNITS	Analog Input Alternate Units	ASCII	–	–	R/W	F10
R4X10A7	SP_ALT_4MA_VALUE	Analog Input Alternate 4 mA Value	–	1	0–65000	R/W	F1
R4X10A8	SP_ALT_20MA_VALUE	Analog Input Alternate 20 mA Value	–	1	0–65000	R/W	F1
R4X10A9	SP_AI_ALT_RLY	Analog Input Alternate Relay	–	1	0–4	R/W	F29
R4X10AA	SP_AI_ALT_LVL	Analog Input Alternate Level	–	1	0–65000	R/W	F1
R4X10AB	SP_AI_ALT_DLY	Analog Input Alternate Delay	0.1 x s	5	5–6000	R/W	F1
R4X10B0S20	SWITCH_A_NAME	Switch A Name	ASCII	–	–	R/W	F10
R4X10BA	SWITCH_A_FUNCTION	Switch A Function	–	1	0–12	R/W	F20
R4X10BB	SWITCH_A_ACTIV	Switch A Activation	–	1	0–1	R/W	F27
R4X10BC	SWITCH_A_TIME_DLY	Switch A Time Delay	0.1 x s	1	0–6000	R/W	F1
R4X10C0S20	SWITCH_B_NAME	Switch B Name	ASCII	–	–	R/W	F10
R4X10CA	SWITCH_B_FUNCTION	Switch B Function	–	1	0–12	R/W	F20
R4X10CB	SWITCH_B_ACTIV	Switch B Activation	–	1	0–1	R/W	F27
R4X10CC	SWITCH_B_DLY	Switch B Time Delay	0.1 x s	1	0–6000	R/W	F1
R4X10D0S20	SWITCH_C_NAME	Switch C Name	ASCII	–	–	R/W	F10
R4X10DA	SWITCH_C_FUNCTION	Switch C Function	–	1	0–12	R/W	F20
R4X10DB	SWITCH_C_ACTIV	Switch C Activation	–	1	0–1	R/W	F27
R4X10DC	SWITCH_C_DLY	Switch C Time Delay	0.1 x s	1	0–6000	R/W	F1
R4X10E0S20	SWITCH_D_NAME	Switch D Name	ASCII	–	–	R/W	F10
R4X10EA	SWITCH_D_FUNCTION	Switch D Function	–	1	0–12	R/W	F20
R4X10EB	SWITCH_D_ACTIV	Switch D Activation	–	1	0–1	R/W	F27

PQM – Power Quality Meter

Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X10EC	SWITCH_D_DLY	Switch D Time Delay	0.1 x s	1	0–6000	R/W	F1
R4X10F0	POS_KWH_PULSE_RLY	Positive kWh Pulse Output Relay	–	1	0–4	R/W	F29
R4X10F1	POS_KWH_PULSE_INT	Positive kWh Pulse Output Interval	kWh	1	1–65000	R/W	F1
R4X10F2	NEG_KWH_PULSE_RLY	Negative kWh Pulse Output Relay	–	1	0–4	R/W	F29
R4X10F3	NEG_KWH_PULSE_INT	Negative kWh Pulse Output Interval	kWh	1	1–65000	R/W	F1
R4X10F4	POS_KVARH_PULSE_RLY	Positive kvarh Pulse Output Relay	–	1	0–3	R/W	F29
R4X10F5	POS_KVARH_PULSE_INT	Positive kvarh Pulse Output Interval	kvarh	1	1–65000	R/W	F1
R4X10F6	NEG_KVARH_PULSE_RLY	Negative kvarh Pulse Output Relay	–	1	0–3	R/W	F29
R4X10F7	NEG_KVARH_PULSE_INT	Negative kvarh Pulse Output Interval	kvarh	1	1–65000	R/W	F1
R4X10F8	KVAH_PULSE_RLY	kVAh Pulse Output Relay	–	1	0–3	R/W	F29
R4X10F9	KVAH_PULSE_INT	kVAh Pulse Output Interval	kVAh	1	1–65000	R/W	F1
R4X10FA	PULSE_OUTPUT_WIDTH	Pulse Output Width	ms	10	100–2000	R/W	F1
R4X10FB	SER_PUL_RLYINTL	Serial Pulse Relay Interval	Ms	100	100 to 10000	R/W	F1
R4X10FDS10	PULSE_INPUT_UNITS	Pulse Input Units	ASCII	–	–	R/W	F10
R4X1102	PULSE_INPUT1_VAL	Pulse Input 1 Value	Units	1	0–65000	R/W	F1
R4X1103	PULSE_INPUT2_VAL	Pulse Input 2 Value	Units	1	0–65000	R/W	F1
R4X1104	PULSE_INPUT3_VAL	Pulse Input 3 Value	Units	1	0–65000	R/W	F1
R4X1105	PULSE_INPUT4_VAL	Pulse Input 4 Value	Units	1	0–65000	R/W	F1
R4X1106	PULSE_INPUT_TOTAL_SP	Pulse Input Total		1	0–9	R/W	F43
R4X1108	ALARM_RLY_OP	Alarm Relay Operation	–	1	0–1	R/W	F17
R4X1109	ALARM_RLY_ACTIV	Alarm Relay Activation	–	1	0–1	R/W	F18
R4X1110	AUX_RLY_1_OP	Auxiliary Relay 1 Operation	–	1	0–1	R/W	F17
R4X1111	AUX_RLY_1_ACTIV	Auxiliary Relay 1 Activation	–	1	0–1	R/W	F18
R4X1118	AUX_RLY_2_OP	Auxiliary Relay 2 Operation	–	1	0–1	R/W	F17
R4X1119	AUX_RLY_2_ACTIV	Auxiliary Relay 2 Activation	–	1	0–1	R/W	F18
R4X1120	AUX_RLY_3_OP	Auxiliary Relay 3 Operation	–	1	0–1	R/W	F17
R4X1121	AUX_RLY_3_ACTIV	Auxiliary Relay 3 Activation	–	1	0–1	R/W	F18
R4X1126	PH_OC_ACT	Phase Overcurrent Activation	–	1	0–1	R/W	F115
R4X1127	DET_IV_ALMS	Detect I/V Alarms Using Percentage	–	1	0–1	R/W	F31
R4X1128	PHASE_UC_RLY	Phase Undercurrent Relay	–	1	0–4	R/W	F29
R4X1129	PHASE_UC_LVL	Phase Undercurrent Level in Amps	A	1	1–7500	R/W	F1
R4X112A	PHASE_UC_DLY	Phase Undercurrent Delay	0.1 x s	5	5–6000	R/W	F1
R4X112B	PHASE_OC_RLY	Phase Overcurrent Relay	–	1	0–4	R/W	F29
R4X112C	PHASE_OC_LVL	Phase Overcurrent Level in Amps	A	1	1–7500	R/W	F1
R4X112D	PHASE_OC_DLY	Phase Overcurrent Delay	0.1 x s	5	5–6000	R/W	F1
R4X112E	NEUT_OC_RLY	Neutral Overcurrent Relay	–	1	0–4	R/W	F29
R4X112F	NEUT_OC_LVL	Neutral Overcurrent Level in Amps	A	1	1–7500	R/W	F1
R4X1130	NEUT_OC_DLY	Neutral Overcurrent Delay	0.1 x s	5	5–6000	R/W	F1
R4X1131	UV_RLY	Undervoltage Relay	–	1	0–4	R/W	F29
R4X1132	UV_LVL	Undervoltage Level in Volts	V	1	20–65000	R/W	F1
R4X1133	UV_DLY	Undervoltage Delay	0.1 x s	5	5–6000	R/W	F1
R4X1134	PH_REQ_FOR_OP_UV	Phases Required for Operation of Undervoltage	–	1	0–2	R/W	F30
R4X1135	ZERO_VOLTS_DETECT	Detects U/V Below 20V	–	1	0–1	R/W	F11
R4X1136	OV_RLY	Overvoltage Relay	–	1	0–4	R/W	F29
R4X1137	OV_LVL	Overvoltage Level in Volts	V	1	1–65000	R/W	F1
R4X1138	OV_DLY	Overvoltage Delay	0.1 x s	5	5–6000	R/W	F1
R4X1139	PH_REQ_FOR_OP_OV	Phases Required for Operation of Overvoltage	–	1	0–2	R/W	F30
R4X113A	PH_CURR_UB_RLY	Phase Current Unbalance Relay	–	1	0–4	R/W	F29

Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X113B	PH_CURR_UB_LVL	Phase Current Unbalance Level	%	1	1–100	R/W	F1
R4X113C	PH_CURR_UB_DLY	Phase Current Unbalance Delay	0.1 x s	5	5–6000	R/W	F1
R4X113D	VOLT_UB_RLY	Voltage Unbalance Relay	–	1	0–4	R/W	F29
R4X113E	VOLT_UB_LVL	Voltage Unbalance Level	%	1	1–100	R/W	F1
R4X113F	VOLT_UB_DLY	Voltage Unbalance Delay	0.1 x s	5	5–6000	R/W	F1
R4X1140	PH_VOLT_REV_RLY	Phase Voltage Reversal Relay	–	1	0–4	R/W	F29
R4X1141	PH_VOLT_REV_DLY	Phase Voltage Reversal Delay	0.1 x s	5	5–6000	R/W	F1
R4X1142	ZERO_AMPS_DETECT	Detect Undercurrent When 0A	–	1	0–1	R/W	F31
R4X1143	CTPH_UC_LEVEL	Phase Undercurrent Level in % of CT	%	1	0–100	R/W	F1
R4X1144	CTPH_OC_LEVEL	Phase Overcurrent Level in % of CT	%	1	0–150	R/W	F1
R4X1145	CTNEUT_OC_LEVEL	Neutral Overcurrent Level in % of CT	%	1	0–150	R/W	F1
R4X1146	VTUV_LEVEL	Undervoltage Level in % of VT	%	1	20–150	R/W	F1
R4X1147	VTOV_LEVEL	Overvoltage Level in % of VT	%	1	20–150	R/W	F1
R4X1148	AVG_CURR_THD_RLY	Average Current THD Relay	–	1	0–4	R/W	F29
R4X1149	AVG_CURR_THD_LVL	Average Current THD Level	0.1 x %	5	5–1000	R/W	F1
R4X114A	AVG_CURR_THD_DLY	Average Current THD Delay	0.1 x s	5	5–6000	R/W	F1
R4X114B	AVG_VOLT_THD_RLY	Average Voltage THD Relay	–	1	0–4	R/W	F29
R4X114C	AVG_VOLT_THD_LVL	Average Voltage THD Level	0.1 x %	5	5–1000	R/W	F1
R4X114D	AVG_VOLT_THD_DLY	Average Voltage THD Delay	0.1 x s	5	5–6000	R/W	F1
R4X1158	UF_RLY	Under Frequency Relay	–	1	0–4	R/W	F29
R4X1159	UF_LVL	Under Frequency Level	0.01 x Hz	1	2000–7000	R/W	F1
R4X115A	UF_DLY	Under Frequency Delay	0.1 x s	1	1–100	R/W	F1
R4X115B	ZERO_FREQ_DETECT	Zero Frequency Detect	–	1	0–1	R/W	F11
R4X115C	OF_RLY	Over Frequency Relay	–	1	0–4	R/W	F29
R4X115D	OF_LVL	Over Frequency Level	0.01 x Hz	1	2000–12500	R/W	F1
R4X115E	OF_DLY	Over Frequency Delay	0.1 x s	1	1–100	R/W	F1
R4X1167	POW_ALMS_UNITS	Power Alarms Level Base Units	–	1	0–1	R/W	F114
R4X1168	POS_REAL_PWR_RLY	Positive Real Power Relay	–	1	0–4	R/W	F29
R4X1169	POS_REAL_PWR_LVL	Positive Real Power Level in KW	kW	1	1–65000	R/W	F1
R4X116A	POS_REAL_PWR_DLY	Positive Real Power Delay	0.1 x s	5	5–6000	R/W	F1
R4X116B	NEG_REAL_PWR_RLY	Negative Real Power Relay	–	1	0–4	R/W	F29
R4X116C	NEG_REAL_PWR_LVL	Negative Real Power Level in KW	kW	1	1–65000	R/W	F1
R4X116D	NEG_REAL_PWR_DLY	Negative Real Power Delay	0.1 x s	5	5–6000	R/W	F1
R4X116E	POS_REACT_PWR_RLY	Positive Reactive Power Relay	–	1	0–4	R/W	F29
R4X116F	POS_REACT_PWR_LVL	Positive Reactive Power Level in kVAR	kvar	1	1–65000	R/W	F1
R4X1170	POS_REACT_PWR_DLY	Positive Reactive Power Delay	0.1 x s	5	5–6000	R/W	F1
R4X1171	NEG_REACT_PWR_RLY	Negative Reactive Power Relay	–	1	0–4	R/W	F29
R4X1172	NEG_REACT_PWR_LVL	Negative Reactive Power Level in kVAR	kvar	1	1–65000	R/W	F1
R4X1173	NEG_REACT_PWR_DLY	Negative Reactive Power Delay	0.1 x s	5	5–6000	R/W	F1
R4X1174	POS_REAL_LEV_MW	Positive Real Power Level in MW	0.01MW	1	1–65000	R/W	F1
R4X1175	NEG_REAL_LEV_MW	Negative Real Power Level in MW	0.01MW	1	1–65000	R/W	F1
R4X1176	POS_REAC_LEV_MW	Positive Reactive Power Level in MVAR	0.01MVAR	1	1–65000	R/W	F1
R4X1177	NEG_REAC_LEV_MW	Negative Reactive Power Level in MVAR	0.01MVAR	1	1–65000	R/W	F1
R4X1178	PF_LEAD_1_RLY	Power Factor Lead 1 Relay	–	1	0–4	R/W	F29
R4X1179	PF_LEAD_1_PU_LVL	Power Factor Lead 1 Pickup Level	0.01 x PF	1	0–100	R/W	F1
R4X117A	PF_LEAD_1_DO_LVL	Power Factor Lead 1 Dropout Level	0.01 x PF	1	0–100	R/W	F1
R4X117B	PF_LEAD_1_DLY	Power Factor Lead 1 Delay	0.1 x s	5	5–6000	R/W	F1
R4X117C	PF_LAG_1_RLY	Power Factor Lag 1 Relay	–	1	0–4	R/W	F29

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Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X117D	PF_LAG_1_PU_LVL	Power Factor Lag 1 Pickup Level	0.01 x PF	1	0–100	R/W	F1
R4X117E	PF_LAG_1_DO_LVL	Power Factor Lag 1 Dropout Level	0.01 x PF	1	0–100	R/W	F1
R4X117F	PF_LAG_1_DLY	Power Factor Lag 1 Delay	0.1 x s	5	5–6000	R/W	F1
R4X1180	PF_LEAD_2_RLY	Power Factor Lead 2 Relay	–	1	0–4	R/W	F29
R4X1181	PF_LEAD_2_PU_LVL	Power Factor Lead 2 Pickup Level	0.01 x PF	1	0–100	R/W	F1
R4X1182	PF_LEAD_2_DO_LVL	Power Factor Lead 2 Dropout Level	0.01 x PF	1	0–100	R/W	F1
R4X1183	PF_LEAD_2_DLY	Power Factor Lead 2 Delay	0.1 x s	5	5–6000	R/W	F1
R4X1184	PF_LAG_2_RLY	Power Factor Lag 2 Relay	–	1	0–4	R/W	F29
R4X1185	PF_LAG_2_PU_LVL	Power Factor Lag 2 Pickup Level	0.01 x PF	1	0–100	R/W	F1
R4X1186	PF_LAG_2_DO_LVL	Power Factor Lag 2 Dropout Level	0.01 x PF	1	0–100	R/W	F1
R4X1187	PF_LAG_2_DLY	Power Factor Lag 2 Delay	0.1 x s	5	5–6000	R/W	F1
R4X1190	PH_A_CURR_DMND_RLY	Phase A Current Demand Relay	–	1	0–4	R/W	F29
R4X1191	PH_A_CURR_DMND_LVL	Phase A Current Demand Level	A	1	1–7500	R/W	F1
R4X1192	PH_B_CURR_DMND_RLY	Phase B Current Demand Relay	–	1	0–4	R/W	F29
R4X1193	PH_B_CURR_DMND_LVL	Phase B Current Demand Level	A	1	1–7500	R/W	F1
R4X1194	PH_C_CURR_DMND_RLY	Phase C Current Demand Relay	–	1	0–4	R/W	F29
R4X1195	PH_C_CURR_DMND_LVL	Phase C Current Demand Level	A	1	1–7500	R/W	F1
R4X1196	NEUT_CURR_DMND_RLY	Neutral Current Demand Relay	–	1	0–4	R/W	F29
R4X1197	NEUT_CURR_DMND_LVL	Neutral Current Demand Level	0.1 x A	1	1–65000	R/W	F1
R4X1198	POS_REAL_PWR_DMD_RLY	Positive Real Power Demand Relay	–	1	0–4	R/W	F29
R4X1199	POS_REAL_PWR_DMD_LVL	Positive Real Power Demand Level	kW	1	1–65000	R/W	F1
R4X119A	POS_REAC_PWR_DMD_RLY	Positive Reactive Power Demand Relay	–	1	0–4	R/W	F29
R4X119B	POS_REAC_PWR_DMD_LVL	Positive Reactive Power Demand Level	kvar	1	1–65000	R/W	F1
R4X119C	APPAR_PWR_DMD_RLY	Apparent Power Demand Relay	–	1	0–4	R/W	F29
R4X119D	APPAR_PWR_DMD_LVL	Apparent Power Demand Level	kVA	1	1–65000	R/W	F1
R4X119E	NEG_REAL_PWR_DMD_RLY	Negative Real Power Demand Relay	–	1	0–4	R/W	F29
R4X119F	NEG_REAL_PWR_DMD_LVL	Negative Real Power Demand Level	kW	1	1–65000	R/W	F1
R4X11A0	NEG_REAC_PWR_DMD_RLY	Negative Reactive Power Demand Relay	–	1	0–4	R/W	F29
R4X11A1	NEG_REAC_PWR_DMD_LVL	Negative Reactive Power Demand Level	kvar	1	1–65000	R/W	F1
R4X11A8	PULSE_IN1_RLY	Pulse Count Relay	–	1	0–4	R/W	F29
R4X11A9	PULSE_IN1_LVL	Pulse Count Level	–	1	1–65000	R/W	F1
R4X11AA	PULSE_IN1_DLY	Pulse Count Delay	0.1 x s	5	5–6000	R/W	F1
R4X11B0	COM1_FAIL_ALM_DLY	Serial COM1 Failure Alarm Delay	s	1	5–61 ***	R/W	F1
R4X11B1	COM2_FAIL_ALM_DLY	Serial COM2 Failure Alarm Delay	s	1	5–61 ***	R/W	F1
R4X11B2	CLOCK_NOT_SET_ALM	Clock Not Set Alarm	–	1	0–1	R/W	F11
R4X11B3	DATALOG1_PER_FUL_ALM	Data Log 1 Percentage Full Alarm	%	1	50–101 ***	R/W	F1
R4X11B4	DATALOG2_PER_FUL_ALM	Data Log 2 Percentage Full Alarm	%	1	50–101 ***	R/W	F1
R4X11B8	PULSE_IN2_RLY	Pulse Input 2 Relay	–	1	0–4	R/W	F29
R4X11B9	PULSE_IN2_LVL	Pulse Input 2 Level	–	1	1–65000	R/W	F1
R4X11BA	PULSE_IN2_DLY	Pulse Input 2 Delay	0.1 x S	5	5–6000	R/W	F1
R4X11BB	PULSE_IN3_RLY	Pulse Input 3 Relay	–	1	0–4	R/W	F29
R4X11BC	PULSE_IN3_LVL	Pulse Input 3 Level	–	1	1–65000	R/W	F1
R4X11BD	PULSE_IN3_DLY	Pulse Input 3 Delay	0.1 x S	5	5–6000	R/W	F1
R4X11BE	PULSE_IN4_RLY	Pulse Input 4 Relay	–	1	0–4	R/W	F29
R4X11BF	PULSE_IN4_LVL	Pulse Input 4 Level	–	1	1–65000	R/W	F1
R4X11C0	PULSE_IN4_DLY	Pulse Input 4 Delay	0.1 x S	5	5–6000	R/W	F1
R4X11C1	PULSE_TOT_RLY	Totalized Pulse Input Relay	–	1	0–4	R/W	F29
R4X11C2	PULSE_TOT_LVL	Totalized Pulse Input Level	–	1	1–65000	R/W	F1
R4X11C3	PULSE_TOT_DLY	Totalized Pulse Input Delay	0.1 x S	5	5–6000	R/W	F1
R4X11C8	CURR_VOLT_SIM	Current/Voltage Simulation	–	1	0–1	R/W	F11

Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X11C9	CURR_VOLT_SIM_TIME	Current/Voltage Simulation Time	min	5	5–305	R/W	F1****
R4X11CA	AMPS_A_SIM	Phase A Current	A	1	0–10000	R/W	F1
R4X11CB	AMPS_B_SIM	Phase B Current	A	1	0–10000	R/W	F1
R4X11CC	AMPS_C_SIM	Phase C Current	A	1	0–10000	R/W	F1
R4X11CD	AMPS_N_SIM	Neutral Current	0.1 x A	1	0–5000	R/W	F1
R4X11CE	VAX_VOLTS_SIM	Vax Voltage	V	1	0–65000	R/W	F1
R4X11CF	VBX_VOLTS_SIM	Vbx Voltage	V	1	0–65000	R/W	F1
R4X11D0	VCX_VOLTS_SIM	Vcx Voltage	V	1	0–65000	R/W	F1
R4X11D1	PHASE_ANGLE_SIM	Phase Angle	degrees	1	0–359	R/W	F1
R4X11D2	ANAL_OUT_SIM	Analog Outputs Simulation	–	1	0–1	R/W	F11
R4X11D3	ANAL_OUT_SIM_TIME	Analog Outputs Simulation Time	min	5	5–305	R/W	F1****
R4X11D4	ANAL_OUT1_SIM	Analog Output 1	0.1 x %	1	0–1201***	R/W	F1
R4X11D5	ANAL_OUT2_SIM	Analog Output 2	0.1 x %	1	0–1201***	R/W	F1
R4X11D6	ANAL_OUT3_SIM	Analog Output 3	0.1 x %	1	0–1201***	R/W	F1
R4X11D7	ANAL_OUT4_SIM	Analog Output 4	0.1 x %	1	0–1201***	R/W	F1
R4X11D8	ANAL_IN_SIM	Analog Input Simulation	–	1	0–1	R/W	F11
R4X11D9	ANAL_IN_SIM_TIME	Analog Input Simulation Time	min	5	5–305	R/W	F1****
R4X11DA	ANAL_IN_VALUE_SIM	Analog Input	0.1 x mA	1	40–201	R/W	F1***
R4X11DB	SWITCH_IN_SIM	Switch Inputs Simulation	–	1	0–1	R/W	F11
R4X11DC	SWITCH_IN_SIM_TIME	Switch Inputs Simulation Time	min	5	5–305	R/W	F1****
R4X11DD	SWITCH_IN_A_SIM	Switch Input A	–	1	0–1	R/W	F27
R4X11DE	SWITCH_IN_B_SIM	Switch Input B	–	1	0–1	R/W	F27
R4X11DF	SWITCH_IN_C_SIM	Switch Input C	–	1	0–1	R/W	F27
R4X11E0	SWITCH_IN_D_SIM	Switch Input D	–	1	0–1	R/W	F27
R4X11E4	TIME_RLY	Time Relay	–	1	0–4	R/W	F29
R4X11E5	PICKUP_HR_MIN	Pickup Time Hours/Minutes	hr/min	1	0–65535	R/W	F22
R4X11E6	PICKUP_SEC	Pickup Time Seconds	ms	1000	0–59000	R/W	F1
R4X11E7	DROPOUT_HR_MIN	Dropout Time Hours/Minutes	hr/min	1	0–65535	R/W	F22
R4X11E8	DROPOUT_SEC	Dropout Time Seconds	ms	1000	0–59000	R/W	F1
R4X11F0S40	PROG_MSG	Programmable message	ASCII	1	32–127	R/W	F10
R4X1210S40	FLSH_MSG	Flash message	ASCII	1	32–127	R/W	F10
R4X1260L	SP_LOG_1_INTVL	Log 1 Interval	s	1	1–86400	R/W	F3
R4X1262L	SP_LOG_2_INTVL	Log 2 Interval	s	1	1–86400	R/W	F3
R4X1264	SP_LOG_1_MODE	Log 1 Mode	–	1	0–1	R/W	F32
R4X1265	SP_LOG_2_MODE	Log 2 Mode	–	1	0–1	R/W	F32
R4X1266	SP_LOG_SIZE_DETERM	Log Size Determination	–	1	0–1	R/W	F33
R4X1267	SP_LOG_1_SIZE	Log 1 Size	%	1	0–100	R/W	F1
R4X1268	SP_LOG_BLOCK	Data Log Memory Access Block Number	–	1	0–511	R/W	F1
R4X1269	STOP_LOG_1	Stop Data Log 1	–	1	0–1	R/W	F31
R4X126A	STOP_LOG_2	Stop Data Log 2	–	1	0–1	R/W	F31
R4X1270	SP_IA_INTVL	Ia Log Assignment	–	1	0–3	R/W	F34
R4X1271	SP_IB_INTVL	Ib Log Assignment	–	1	0–3	R/W	F34
R4X1272	SP_IC_INTVL	Ic Log Assignment	–	1	0–3	R/W	F34
R4X1273	SP_I AVG_INTVL	Iavg Log Assignment	–	1	0–3	R/W	F34
R4X1274	SP_IN_INTVL	In Log Assignment	–	1	0–3	R/W	F34
R4X1275	SP_I_UB_INTVL	I Unbalance Log Assignment	–	1	0–3	R/W	F34
R4X1276	SP_VAN_INTVL	Van Log Assignment	–	1	0–3	R/W	F34
R4X1277	SP_VBN_INTVL	Vbn Log Assignment	–	1	0–3	R/W	F34
R4X1278	SP_VCN_INTVL	Vcn Log Assignment	–	1	0–3	R/W	F34
R4X1279	SP_VPAVG_INTVL	Vpavg Log Assignment	–	1	0–3	R/W	F34
R4X127A	SP_VAB_INTVL	Vab Log Assignment	–	1	0–3	R/W	F34

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Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X127B	SP_VBC_INTVL	Vbc Log Assignment	-	1	0-3	R/W	F34
R4X127C	SP_VCA_INTVL	Vca Log Assignment	-	1	0-3	R/W	F34
R4X127D	SP_VLAVG_INTVL	Vlavg Log Assignment	-	1	0-3	R/W	F34
R4X127E	SP_V_UB_INTVL	V Unbalance Log Assignment	-	1	0-3	R/W	F34
R4X127F	SP_PA_INTVL	Pa Log Assignment	-	1	0-3	R/W	F34
R4X1280	SP_OA_INTVL	Qa Log Assignment	-	1	0-3	R/W	F34
R4X1281	SP_SA_INTVL	Sa Log Assignment	-	1	0-3	R/W	F34
R4X1282	SP_PFA_INTVL	PFa Log Assignment	-	1	0-3	R/W	F34
R4X1283	SP_PB_INTVL	Pb Log Assignment	-	1	0-3	R/W	F34
R4X1284	SP_OB_INTVL	Qb Log Assignment	-	1	0-3	R/W	F34
R4X1285	SP_SB_INTVL	Sb Log Assignment	-	1	0-3	R/W	F34
R4X1286	SP_PFB_INTVL	PFb Log Assignment	-	1	0-3	R/W	F34
R4X1287	SP_PC_INTVL	Pc Log Assignment	-	1	0-3	R/W	F34
R4X1288	SP_QC_INTVL	Qc Log Assignment	-	1	0-3	R/W	F34
R4X1289	SP_SC_INTVL	Sc Log Assignment	-	1	0-3	R/W	F34
R4X128A	SP_PFC_INTVL	PFc Log Assignment	-	1	0-3	R/W	F34
R4X128B	SP_P3_INTVL	P3 Log Assignment	-	1	0-3	R/W	F34
R4X128C	SP_Q3_INTVL	Q3 Log Assignment	-	1	0-3	R/W	F34
R4X128D	SP_S3_INTVL	S3 Log Assignment	-	1	0-3	R/W	F34
R4X128E	SP_PF3_INTVL	PF3 Log Assignment	-	1	0-3	R/W	F34
R4X128F	SP_FREQUENCY_INTVL	Frequency Log Assignment	-	1	0-3	R/W	F34
R4X1290	SP_POS_KWH_INTVL	Positive kWh Log Assignment	-	1	0-3	R/W	F34
R4X1291	SP_NEG_KWH_INTVL	Negative kWh Log Assignment	-	1	0-3	R/W	F34
R4X1292	SP_POS_KVARH_INTVL	Positive kvarh Log Assignment	-	1	0-3	R/W	F34
R4X1293	SP_NEG_KVARH_INTVL	Negative kvarh Log Assignment	-	1	0-3	R/W	F34
R4X1294	SP_KVAH_INTVL	kVAh Log Assignment	-	1	0-3	R/W	F34
R4X1295	SP_IA_DMD_INTVL	Ia Demand Log Assignment	-	1	0-3	R/W	F34
R4X1296	SP_IB_DMD_INTVL	Ib Demand Log Assignment	-	1	0-3	R/W	F34
R4X1297	SP_IC_DMD_INTVL	Ic Demand Log Assignment	-	1	0-3	R/W	F34
R4X1298	SP_IN_DMD_INTVL	In Demand Log Assignment	-	1	0-3	R/W	F34
R4X1299	SP_P3_DMD_INTVL	P3 Demand Log Assignment	-	1	0-3	R/W	F34
R4X129A	SP_Q3_DMD_INTVL	Q3 Demand Log Assignment	-	1	0-3	R/W	F34
R4X129B	SP_S3_DMD_INTVL	S3 Demand Log Assignment	-	1	0-3	R/W	F34
R4X129C	SP_IA_THD_INTVL	Ia THD Log Assignment	-	1	0-3	R/W	F34
R4X129D	SP_IB_THD_INTVL	Ib THD Log Assignment	-	1	0-3	R/W	F34
R4X129E	SP_IC_THD_INTVL	Ic THD Log Assignment	-	1	0-3	R/W	F34
R4X129F	SP_IN_THD_INTVL	In THD Log Assignment	-	1	0-3	R/W	F34
R4X12A0	SP_VAN_THD_INTVL	Van THD Log Assignment	-	1	0-3	R/W	F34
R4X12A1	SP_VBN_THD_INTVL	Vbn THD Log Assignment	-	1	0-3	R/W	F34
R4X12A2	SP_VCN_THD_INTVL	Vcn THD Log Assignment	-	1	0-3	R/W	F34
R4X12A3	SP_VAB_THD_INTVL	Vab THD Log Assignment	-	1	0-3	R/W	F34
R4X12A4	SP_VBC_THD_INTVL	Vbc THD Log Assignment	-	1	0-3	R/W	F34
R4X12A5	SP_AI_INTVL	Analog Input Log Assignment	-	1	0-3	R/W	F34
R4X12C0	SP_ER_EVENT_NUMBER	Event Recorder Memory Access Event Number	-	1	0-65535	R/W	F1
R4X12C1	SP_ER_OPERATION	Event Recorder Operation	-	1	0-1	R/W	F11
R4X12C2	SP_ER_ENABLE_FLAGS_1	Event Recorder Event Enable Flags 1	-	1	0-65535	R/W	F105
R4X12C3	SP_ER_ENABLE_FLAGS_2	Event Recorder Event Enable Flags 2	-	1	0-65535	R/W	F106
R4X12C4	SP_ER_ENABLE_FLAGS_3	Event Recorder Event Enable Flags 3	-	1	0-65535	R/W	F107
R4X12C5	SP_ER_ENABLE_FLAGS_4	Event Recorder Event Enable Flags 4	-	1	0-65535	R/W	F112
R4X12D0	SP_TRACE_USAGE	Trace Memory Usage	-	1	0-2	R/W	F37

Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X12D1	SP_TRACE_TRIG_MODE	Trace Memory Trigger Mode	–	1	0–1	R/W	F38
R4X12D2	SP_TRACE_IA_LVL	Ia Overcurrent Trigger Level	% CT	1	1-151 ***	R/W	F1
R4X12D3	SP_TRACE_IB_LVL	Ib Overcurrent Trigger Level	% CT	1	1-151 ***	R/W	F1
R4X12D4	SP_TRACE_IC_LVL	Ic Overcurrent Trigger Level	% CT	1	1-151 ***	R/W	F1
R4X12D5	SP_TRACE_IN_LVL	In Overcurrent Trigger Level	% CT	1	1-151 ***	R/W	F1
R4X12D6	SP_TRACE_VA_OV_LVL	Va Overvoltage Trigger Level	% VT	1	20-151 ***	R/W	F1
R4X12D7	SP_TRACE_VB_OV_LVL	Vb Overvoltage Trigger Level	% VT	1	20-151 ***	R/W	F1
R4X12D8	SP_TRACE_VC_OV_LVL	Vc Overvoltage Trigger Level	% VT	1	20-151 ***	R/W	F1
R4X12D9	SP_TRACE_VA_UV_LVL	Va Undervoltage Trigger Level	% VT	1	20-151 ***	R/W	F1
R4X12DA	SP_TRACE_VB_UV_LVL	Vb Undervoltage Trigger Level	% VT	1	20-151 ***	R/W	F1
R4X12DB	SP_TRACE_VC_UV_LVL	Vc Undervoltage Trigger Level	% VT	1	20-151 ***	R/W	F1
R4X12DC	SP_TRACE_SWA_TRIG	Switch Input A Trigger	–	1	0–2	R/W	F39
R4X12DD	SP_TRACE_SWB_TRIG	Switch Input B Trigger	–	1	0–2	R/W	F39
R4X12DE	SP_TRACE_SWC_TRIG	Switch Input C Trigger	–	1	0–2	R/W	F39
R4X12DF	SP_TRACE_SWD_TRIG	Switch Input D Trigger	–	1	0–2	R/W	F39
R4X12E0	SP_TRACE_TRIG_DLY	Trace Memory Trigger Delay	cycles	1	0–30	R/W	F1
R4X12E1	SP_TRACE_MEM_SELION	Trace Memory Waveform Selection	–	1	0–6	R/W	F40
R4X12E2	TM_TRIG_DLY	Trace Memory Trigger Relay	–	1	0–4	R/W	F29
R4X12F0	PRO_OPT_UPG	Product Options Upgrade	–	1	0–23	R/W	F116
R4X12F1	PRO_MOD_UPG_MOD1	Product Modifications Upgrade MOD1	–	1	0–999	R/W	F1
R4X12F2	PRO_MOD_UPG_MOD2	Product Modifications Upgrade MOD2	–	1	0–999	R/W	F1
R4X12F3	PRO_MOD_UPG_MOD3	Product Modifications Upgrade MOD3	–	1	0–999	R/W	F1
R4X12F4	PRO_MOD_UPG_MOD4	Product Modifications Upgrade MOD4	–	1	0–999	R/W	F1
R4X12F5	PRO_MOD_UPG_MOD5	Product Modifications Upgrade MOD5	–	1	0–999	R/W	F1
R4X12F6	PC_IP_01	Passcode Input 1	–	1	32–127	R/W	F10
R4X12F7	PC_IP_02	Passcode Input 2	–	1	32–127	R/W	F10
R4X12F8	PC_IP_03	Passcode Input 3	–	1	32–127	R/W	F10
R4X12F9	PC_IP_04	Passcode Input 4	–	1	32–127	R/W	F10
R4X12FA	PC_IP_05	Passcode Input 5	–	1	32–127	R/W	F10
R4X12FB	PC_IP_06	Passcode Input 6	–	1	32–127	R/W	F10
R4X12FC	PC_IP_07	Passcode Input 7	–	1	32–127	R/W	F10
R4X12FD	PC_IP_08	Passcode Input 8	–	1	32–127	R/W	F10
R4X12FE	PC_IP_09	Passcode Input 9	–	1	32–127	R/W	F10
R4X12FF	PC_IP_10	Passcode Input 10	–	1	32–127	R/W	F10

NOTES:

* = Data type depends on the Command Operation Code.

** = Any valid Actual Values or Setpoints address.

*** = Maximum Setpoint value represents "OFF".

**** = Minimum Setpoint value represents "OFF".

***** = Maximum Setpoint value represents "UNLIMITED".

F4, a long signed integer, is passed as an unsigned long integer.

COMMANDS

Commands							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X0080L	COMMAND_KEYS	Command Function Code	-	-	5	WO	F1
R4X0081		Command Operation Code	-	1	1-35	WO	F7
R4X0082		Command Data 1	-	1	0-65535		*
R4X0083		Command Data 2	-	1	0-65535		*
R4X0084		Command Data 3	-	1	0-65535		*
R4X0085		Command Data 4	-	1	0-65535		*
R4X0086		Command Data 5	-	1	0-65535		*
R4X0087		Command Data 6	-	1	0-65535		*
R4X0088		Command Data 7	-	1	0-65535		*
R4X0089		Command Data 8	-	1	0-65535		*
R4X008A		Command Data 9	-	1	0-65535		*
R4X008B		Command Data 10	-	1	0-65535		*
R4X008C		Command Data 11	-	1	0-65535		*

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Multilin PQM II (Power Quality Meter II)

- *ACTUAL VALUES*

- *SETPOINT REGISTERS*

- *COMMAND COILS*

Format Codes

The Format Codes column contains references to special formatting which applies to a given register. These formatting characteristics are provided in the Multilin PQM Instruction Manual.

ACTUAL VALUES

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X0000	DEVICE_CODE	Multilin Product Device Code	-	-	-	RO	F1
R3X0001	HW_REV	Hardware Version Code	-	-	-	RO	F5
R3X0002	SW_REV	Main Software Version Code	-	-	-	RO	F1
R3X0003	MOD_FILE_NUM	Modification File Number 1	-	-	-	RO	F1
R3X0004	BOOT_REV	Boot Software Version Code	-	-	-	RO	F1
R3X0005	SUPERVISOR_REV	Supervisor Processor Version Code	-	-	-	RO	F1
R3X0006	ORDER_CODE	Order Code options	-	-	-	RO	F100
R3X0007	MOD_FILE_2	Modification File Number 2	-	-	-	RO	F1
R3X0008	MOD_FILE_3	Modification File Number 3	-	-	-	RO	F1
R3X0009	MOD_FILE_4	Modification File Number 4	-	-	-	RO	F1
R3X000A	MOD_FILE_5	Modification File Number 5	-	-	-	RO	F1
R3X0020S8	SERIAL_NUM	Serial Number (8 characters)	ASCII	-	-	RO	F10
R3X0021	SERIAL_NUM_3_4	Serial Number Character 3 and 4	ASCII	-	-	RO	F10
R3X0022	SERIAL_NUM_5_6	Serial Number Character 5 and 6	ASCII	-	-	RO	F10
R3X0023	SERIAL_NUM_7_8	Serial Number Character 7 and 8	ASCII	-	-	RO	F10
R3X0030L	DATE_MANUF	Manufacture Month/Day	-	-	-	RO	F24
R3X0031	YEAR_MANUF	Manufacture Year	-	-	-	RO	F25
R3X0032L	DATE_CALIB	Calibration Month/Day	-	-	-	RO	F24
R3X0033	YEAR_CALIB	Calibration Year	-	-	-	RO	F25
User Definable Registers (Input Registers)							
R3X0100		User Definable Data 0000	-	-	-	RO	-
R3X0101		User Definable Data 0001	-	-	-	RO	-
to		...	-	-	-	RO	-
R3X0177		User Definable Data 0077	-	-	-	RO	-
User Definable Register Index (Holding Registers)							
R3X0180		Register address for User Definable Data 0000	-	1	**	RO	F1
R3X0181		Register address for User Definable Data 0001	-	1	**	RO	F1
to		...	-	1	**	RO	F1
R3X01F7		Register address for User Definable Data 0077	-	1	**	RO	F1
Actual Values (Input Registers) Addresses							
R3X0200	SW_INPUT_STATUS	Switch Input Status	-	-	-	RO	F101
R3X0201	LED_STATUS	LED Status Flags	-	-	-	RO	F102
R3X0202	LED_ATTR	LED Attribute Flags	-	-	-	RO	F103
R3X0203	OUTPUT_RLY_STATUS	Output Relay Status Flags	-	-	-	RO	F104
R3X0204	ALM_1	Alarm Active Status Flags 1	-	-	-	RO	F105
R3X0205	ALM_PKUP_1	Alarm Pickup Status Flags 1	-	-	-	RO	F105
R3X0206	ALM_2	Alarm Active Status Flags 2	-	-	-	RO	F106
R3X0207	ALM_PKUP_2	Alarm Pickup Status Flags 2	-	-	-	RO	F106
R3X0208	ALM_3	Alarm Active Status Flags 3	-	-	-	RO	F107
R3X0209	ALM_PKUP_3	Alarm Pickup Status Flags 3	-	-	-	RO	F107
R3X020A	AUX1_1	Aux. 1 Active Status Flags 1	-	-	-	RO	F105
R3X020B	AUX1_PKUP_1	Aux. 1 Pickup Status Flags 1	-	-	-	RO	F105

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X020C	AUX1_2	Aux. 1 Active Status Flags 2	-	-	-	RO	F106
R3X020D	AUX1_PKUP_2	Aux. 1 Pickup Status Flags 2	-	-	-	RO	F106
R3X020E	AUX1_3	Aux. 1 Active Status Flags 3	-	-	-	RO	F107
R3X020F	AUX1_PKUP_3	Aux. 1 Pickup Status Flags 3	-	-	-	RO	F107
R3X0210	AUX2_1	Aux. 2 Active Status Flags 1	-	-	-	RO	F105
R3X0211	AUX2_PKUP_1	Aux. 2 Pickup Status Flags 1	-	-	-	RO	F105
R3X0212	AUX2_2	Aux. 2 Active Status Flags 2	-	-	-	RO	F106
R3X0213	AUX2_PKUP_2	Aux. 2 Pickup Status Flags 2	-	-	-	RO	F106
R3X0214	AUX2_3	Aux. 2 Active Status Flags 3	-	-	-	RO	F107
R3X0215	AUX2_PKUP_3	Aux. 2 Pickup Status Flags 3	-	-	-	RO	F107
R3X0216	AUX3_1	Aux. 3 Active Status Flags 1	-	-	-	RO	F105
R3X0217	AUX3_PKUP_1	Aux. 3 Pickup Status Flags 1	-	-	-	RO	F105
R3X0218	AUX3_2	Aux. 3 Active Status Flags 2	-	-	-	RO	F106
R3X0219	AUX3_PKUP_2	Aux. 3 Pickup Status Flags 2	-	-	-	RO	F106
R3X021A	AUX3_3	Aux. 3 Active Status Flags 3	-	-	-	RO	F107
R3X021B	AUX3_PKUP_3	Aux. 3 Pickup Status Flags 3	-	-	-	RO	F107
R3X021C	GENERAL_STATUS	General Status	-	-	-	RO	F109
R3X021D	PASSCODE	Encrypted Passcode	-	-	-	RO	F1
R3X0230L	TIME	Time - Hours/Minutes/Seconds	-	-	-	RO	F22, F23
R3X0232L	DATE	Date - Month/Day/Year	-	-	-	RO	F24, F25
R3X0240	AMPS_A	Phase A Current	A	-	-	RO	F1
R3X0241	AMPS_B	Phase B Current	A	-	-	RO	F1
R3X0242	AMPS_C	Phase C Current	A	-	-	RO	F1
R3X0243	AMPS_AVG	Average Current	A	-	-	RO	F1
R3X0244	AMPS_N	Neutral Current	A	-	-	RO	F1
R3X0245	AMPS_UB	Current Unbalance	0.1 x %	-	-	RO	F1
R3X0246	AMPS_A_MIN	Phase A Current - Minimum	A	-	-	RO	F1
R3X0247	AMPS_B_MIN	Phase B Current - Minimum	A	-	-	RO	F1
R3X0248	AMPS_C_MIN	Phase C Current - Minimum	A	-	-	RO	F1
R3X0249	AMPS_N_MIN	Neutral Current - Minimum	A	-	-	RO	F1
R3X024A	AMPS_UB_MIN	Current Unbalance - Minimum	0.1 x %	-	-	RO	F1
R3X024B	AMPS_A_MAX	Phase A Current - Maximum	A	-	-	RO	F1
R3X024C	AMPS_B_MAX	Phase B Current - Maximum	A	-	-	RO	F1
R3X024D	AMPS_C_MAX	Phase C Current - Maximum	A	-	-	RO	F1
R3X024E	AMPS_N_MAX	Neutral Current - Maximum	A	-	-	RO	F1
R3X024F	AMPS_UB_MAX	Current Unbalance - Maximum	0.1 x %	-	-	RO	F1
R3X0250L	AMPS_A_MIN_TIME	Time - Hours/Minutes/Seconds of Phase A Current Min.	-	-	-	RO	F22, F23
R3X0252L	AMPS_A_MIN_DATE	Date - Month/Day/Year of Phase A Current Min.	-	-	-	RO	F24, F25
R3X0254L	AMPS_B_MIN_TIME	Time - Hours/Minutes/Seconds of Phase B Current Min.	-	-	-	RO	F22, F23
R3X0256L	AMPS_B_MIN_DATE	Date - Month/Day/Year of Phase B Current Min.	-	-	-	RO	F24, F25
R3X0258L	AMPS_C_MIN_TIME	Time - Hours/Minutes/Seconds of Phase C Current Min.	-	-	-	RO	F22, F23
R3X025AL	AMPS_C_MIN_DATE	Date - Month/Day/Year of Phase C Current Min.	-	-	-	RO	F24, F25
R3X025CL	AMPS_N_MIN_TIME	Time - Hours/Minutes/Seconds of Neutral Current Min.	-	-	-	RO	F22, F23
R3X025EL	AMPS_N_MIN_DATE	Date - Month/Day/Year of Neutral Current Min.	-	-	-	RO	F24, F25
R3X0260L	AMPS_UB_MIN_TIME	Time - Hours/Minutes/Seconds of Current Unbalance Min.	-	-	-	RO	F22, F23
R3X0262L	AMPS_UB_MIN_DATE	Date - Month/Day/Year of Current Unbalance Min.	-	-	-	RO	F24, F25

MLPQMII – Power Quality Meter II

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X0264L	AMPS_A_MAX_TIME	Time - Hours/Minutes/Seconds of Phase A Current Max.	-	-	-	RO	F22, F23
R3X0266L	AMPS_A_MAX_DATE	Date - Month/Day/Year of Phase A Current Max.	-	-	-	RO	F24, F25
R3X0268L	AMPS_B_MAX_TIME	Time - Hours/Minutes/Seconds of Phase B Current Max.	-	-	-	RO	F22, F23
R3X026AL	AMPS_B_MAX_DATE	Date - Month/Day/Year of Phase B Current Max.	-	-	-	RO	F24, F25
R3X026CL	AMPS_C_MAX_TIME	Time - Hours/Minutes/Seconds of Phase C Current Max.	-	-	-	RO	F22, F23
R3X026EL	AMPS_C_MAX_DATE	Date - Month/Day/Year of Phase C Current Max.	-	-	-	RO	F24, F25
R3X0270L	AMPS_N_MAX_TIME	Time - Hours/Minutes/Seconds of Neutral Current Max.	-	-	-	RO	F22, F23
R3X0272L	AMPS_N_MAX_DATE	Date - Month/Day/Year of Neutral Current Max.	-	-	-	RO	F24, F25
R3X0274L	AMPS_UB_MAX_TIME	Time - Hours/Minutes/Seconds of Current Unbalance Max.	-	-	-	RO	F22, F23
R3X0276L	AMPS_UB_MAX_DATE	Date - Month/Day/Year of Current Unbalance Max.	-	-	-	RO	F24, F25
R3X0280L	VOLTS_AN	Voltage Van	V	-	-	RO	F3
R3X0282L	VOLTS_BN	Voltage Vbn	V	-	-	RO	F3
R3X0284L	VOLTS_CN	Voltage Vcn	V	-	-	RO	F3
R3X0286L	VOLTS_AVG_PHASE	Average Phase Voltage	V	-	-	RO	F3
R3X0288L	VOLTS_AB	Voltage Vab	V	-	-	RO	F3
R3X028AL	VOLTS_BC	Voltage Vbc	V	-	-	RO	F3
R3X028CL	VOLTS_CA	Voltage Vca	V	-	-	RO	F3
R3X028EL	VOLTS_AVG_LINE	Average Line Voltage	V	-	-	RO	F3
R3X0290	VOLTS_UB	Voltage Unbalance	0.1 x %	-	-	RO	F1
R3X0291L	VOLTS_AN_MIN	Voltage Van - Minimum	V	-	-	RO	F3
R3X0293L	VOLTS_BN_MIN	Voltage Vbn - Minimum	V	-	-	RO	F3
R3X0295L	VOLTS_CN_MIN	Voltage Vcn - Minimum	V	-	-	RO	F3
R3X0297L	VOLTS_AB_MIN	Voltage Vab - Minimum	V	-	-	RO	F3
R3X0299L	VOLTS_BC_MIN	Voltage Vbc - Minimum	V	-	-	RO	F3
R3X029BL	VOLTS_CA_MIN	Voltage Vca - Minimum	V	-	-	RO	F3
R3X029DL	VOLTS_UB_MIN	Voltage Unbalance - Minimum	0.1 x %	-	-	RO	F1
R3X029EL	VOLTS_AN_MAX	Voltage Van - Maximum	V	-	-	RO	F3
R3X02A0L	VOLTS_BN_MAX	Voltage Vbn - Maximum	V	-	-	RO	F3
R3X02A2L	VOLTS_CN_MAX	Voltage Vcn - Maximum	V	-	-	RO	F3
R3X02A4L	VOLTS_AB_MAX	Voltage Vab - Maximum	V	-	-	RO	F3
R3X02A6L	VOLTS_BC_MAX	Voltage Vbc - Maximum	V	-	-	RO	F3
R3X02A8L	VOLTS_CA_MAX	Voltage Vca - Maximum	V	-	-	RO	F3
R3X02AAL	VOLTS_UB_MAX	Voltage Unbalance - Maximum	0.1 x %	-	-	RO	F1
R3X02ABL	VOLTS_AN_MIN_TIME	Time - Hours/Minutes/Seconds of Voltage Van Min.	-	-	-	RO	F22, F23
R3X02ADL	VOLTS_AN_MIN_DATE	Date - Month/Day/Year of Voltage Van Min.	-	-	-	RO	F24, F25
R3X02AFL	VOLTS_BN_MIN_TIME	Time - Hours/Minutes/Seconds of Voltage Vbn Min.	-	-	-	RO	F22, F23
R3X02B1L	VOLTS_BN_MIN_DATE	Date - Month/Day/Year of Voltage Vbn Min.	-	-	-	RO	F24, F25
R3X02B3L	VOLTS_CN_MIN_TIME	Time - Hours/Minutes/Seconds of Voltage Vcn Min.	-	-	-	RO	F22, F23
R3X02B5L	VOLTS_CN_MIN_DATE	Date - Month/Day/Year of Voltage Vcn Min.	-	-	-	RO	F24, F25
R3X02B7L	VOLTS_AB_MIN_TIME	Time - Hours/Minutes/Seconds of Voltage Vab Min.	-	-	-	RO	F22, F23
R3X02B9L	VOLTS_AB_MIN_DATE	Date - Month/Day/Year of Voltage Vab Min.	-	-	-	RO	F24, F25
R3X02BBL	VOLTS_BC_MIN_TIME	Time - Hours/Minutes/Seconds of Voltage Vbc Min.	-	-	-	RO	F22, F23
R3X02BDL	VOLTS_BC_MIN_DATE	Date - Month/Day/Year of Voltage Vbc Min.	-	-	-	RO	F24, F25
R3X02BFL	VOLTS_CA_MIN_TIME	Time - Hours/Minutes/Seconds of Voltage Vca Min.	-	-	-	RO	F22, F23
R3X02C1L	VOLTS_CA_MIN_DATE	Date - Month/Day/Year of Voltage Vca Min.	-	-	-	RO	F24, F25
R3X02C3L	VOLTS_UB_MIN_TIME	Time - Hours/Minutes/Seconds of Voltage	-	-	-	RO	F22, F23

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
		Unbalance Min.					
R3X02C5L	VOLTS_UB_MIN_DATE	Date - Month/Day/Year of Voltage Unbalance Min.	-	-	-	RO	F24, F25
R3X02C7L	VOLTS_AN_MAX_TIME	Time - Hours/Minutes/Seconds of Voltage Van Max.	-	-	-	RO	F22, F23
R3X02C9L	VOLTS_AN_MAX_DATE	Date - Month/Day/Year of Voltage Van Max.	-	-	-	RO	F24, F25
R3X02CBL	VOLTS_BN_MAX_TIME	Time - Hours/Minutes/Seconds of Voltage Vbn Max.	-	-	-	RO	F22, F23
R3X02CDL	VOLTS_BN_MAX_DATE	Date - Month/Day/Year of Voltage Vbn Max.	-	-	-	RO	F24, F25
R3X02CFL	VOLTS_CN_MAX_TIME	Time - Hours/Minutes/Seconds of Voltage Vcn Max.	-	-	-	RO	F22, F23
R3X02D1L	VOLTS_CN_MAX_DATE	Date - Month/Day/Year of Voltage Vcn Max.	-	-	-	RO	F24, F25
R3X02D3L	VOLTS_AB_MAX_TIME	Time - Hours/Minutes/Seconds of Voltage Vab Max.	-	-	-	RO	F22, F23
R3X02D5L	VOLTS_AB_MAX_DATE	Date - Month/Day/Year of Voltage Vab Max.	-	-	-	RO	F24, F25
R3X02D7L	VOLTS_BC_MAX_TIME	Time - Hours/Minutes/Seconds of Voltage Vbc Max.	-	-	-	RO	F22, F23
R3X02D9L	VOLTS_BC_MAX_DATE	Date - Month/Day/Year of Voltage Vbc Max.	-	-	-	RO	F24, F25
R3X02DBL	VOLTS_CA_MAX_TIME	Time - Hours/Minutes/Seconds of Voltage Vca Max.	-	-	-	RO	F22, F23
R3X02DDL	VOLTS_CA_MAX_DATE	Date - Month/Day/Year of Voltage Vca Max.	-	-	-	RO	F24, F25
R3X02DFL	VOLTS_UB_MAX_TIME	Time - Hours/Minutes/Seconds of Voltage Unbalance Max.	-	-	-	RO	F22, F23
R3X02E1L	VOLTS_UB_MAX_DATE	Date - Month/Day/Year of Voltage Unbalance Max.	-	-	-	RO	F24, F25
R3X02E7	V_PHASOR_A	Va Phasor Angle	Degrees LAG/LEAD	---	---	RO	F2
R3X02E8	V_PHASOR_B	Vb Phasor Angle	Degrees LAG/LEAD	---	---	RO	F2
R3X02E9	V_PHASOR_C	Vc Phasor Angle	Degrees LAG/LEAD	---	---	RO	F2
R3X02EA	I_PHASOR_A	Ia Phasor Angle	Degrees LAG/LEAD	---	---	RO	F2
R3X02EB	I_PHASOR_B	Ib Phasor Angle	Degrees LAG/LEAD	---	---	RO	F2
R3X02EC	I_PHASOR_C	Ic Phasor Angle	Degrees LAG/LEAD	---	---	RO	F2
R3X02F0L	KW	Three-phase Real Power	0.01 x kW	-	-	RO	F4
R3X02F2L	KVAR	Three-phase Reactive Power	0.01 x kvar	-	-	RO	F4
R3X02F4L	KVA	Three-phase Apparent Power	0.01 x kVA	-	-	RO	F3
R3X02F6L	PF	Three-phase Power Factor	0.01 x PF	-	-	RO	F2
R3X02F7L	KW_A	Phase A Real Power	0.01 x kW	-	-	RO	F4
R3X02F9L	KVAR_A	Phase A Reactive Power	0.01 x kvar	-	-	RO	F4
R3X02FBL	KVA_A	Phase A Apparent Power	0.01 x kVA	-	-	RO	F3
R3X02FDI	PF_A	Phase A Power Factor	0.01 x PF	-	-	RO	F2
R3X02FEL	KW_B	Phase B Real Power	0.01 x kW	-	-	RO	F4
R3X0300L	KVAR_B	Phase B Reactive Power	0.01 x kvar	-	-	RO	F4
R3X0302L	KVA_B	Phase B Apparent Power	0.01 x kVA	-	-	RO	F3
R3X0304L	PF_B	Phase B Power Factor	0.01 x PF	-	-	RO	F2
R3X0305L	KW_C	Phase C Real Power	0.01 x kW	-	-	RO	F4
R3X0307L	KVAR_C	Phase C Reactive Power	0.01 x kvar	-	-	RO	F4

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Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X0309L	KVA_C	Phase C Apparent Power	0.01 x kVA	-	-	RO	F3
R3X030BI	PF_C	Phase C Power Factor	0.01 x PF	-	-	RO	F2
R3X030CL	KW_MIN	Three-phase Real Power - Minimum	0.01 x kW	-	-	RO	F4
R3X030EL	KVAR_MIN	Three-phase Reactive Power - Minimum	0.01 x kvar	-	-	RO	F4
R3X0310L	KVA_MIN	Three-phase Apparent Power - Minimum	0.01 x kVA	-	-	RO	F3
R3X0312I	PF_MIN	Three-phase Power Factor - Minimum	0.01 x PF	-	-	RO	F2
R3X0313L	KW_MAX	Three-phase Real Power - Maximum	0.01 x kW	-	-	RO	F4
R3X0315L	KVAR_MAX	Three-phase Reactive Power - Maximum	0.01 x kvar	-	-	RO	F4
R3X0317L	KVA_MAX	Three-phase Apparent Power - Maximum	0.01 x kVA	-	-	RO	F3
R3X0319I	PF_MAX	Three-phase Power Factor - Maximum	0.01 x PF	-	-	RO	F2
R3X031AL	KW_A_MIN	Phase A Real Power - Minimum	0.01 x kW	-	-	RO	F4
R3X031CL	KVAR_A_MIN	Phase A Reactive Power - Minimum	0.01 x kvar	-	-	RO	F4
R3X031EL	KVA_A_MIN	Phase A Apparent Power - Minimum	0.01 x kVA	-	-	RO	F3
R3X0320I	PF_A_MIN	Phase A Power Factor - Minimum	0.01 x PF	-	-	RO	F2
R3X0321L	KW_A_MAX	Phase A Real Power - Maximum	0.01 x kW	-	-	RO	F4
R3X0323L	KVAR_A_MAX	Phase A Reactive Power - Maximum	0.01 x kvar	-	-	RO	F4
R3X0325L	KVA_A_MAX	Phase A Apparent Power - Maximum	0.01 x kVA	-	-	RO	F3
R3X0327I	PF_A_MAX	Phase A Power Factor - Maximum	0.01 x PF	-	-	RO	F2
R3X0328L	KW_B_MIN	Phase B Real Power - Minimum	0.01 x kW	-	-	RO	F4
R3X032AL	KVAR_B_MIN	Phase B Reactive Power - Minimum	0.01 x kvar	-	-	RO	F4
R3X032CL	KVA_B_MIN	Phase B Apparent Power - Minimum	0.01 x kVA	-	-	RO	F3
R3X032EI	PF_B_MIN	Phase B Power Factor - Minimum	0.01 x PF	-	-	RO	F2
R3X032FL	KW_B_MAX	Phase B Real Power - Maximum	0.01 x kW	-	-	RO	F4
R3X0331L	KVAR_B_MAX	Phase B Reactive Power - Maximum	0.01 x kvar	-	-	RO	F4
R3X0333L	KVA_B_MAX	Phase B Apparent Power - Maximum	0.01 x kVA	-	-	RO	F3
R3X0335I	PF_B_MAX	Phase B Power Factor - Maximum	0.01 x PF	-	-	RO	F2
R3X0336L	KW_C_MIN	Phase C Real Power - Minimum	0.01 x kW	-	-	RO	F4
R3X0338L	KVAR_C_MIN	Phase C Reactive Power - Minimum	0.01 x kvar	-	-	RO	F4
R3X033AL	KVA_C_MIN	Phase C Apparent Power - Minimum	0.01 x kVA	-	-	RO	F3
R3X033CI	PF_C_MIN	Phase C Power Factor - Minimum	0.01 x PF	-	-	RO	F2
R3X033DL	KW_C_MAX	Phase C Real Power - Maximum	0.01 x kW	-	-	RO	F4
R3X033FL	KVAR_C_MAX	Phase C Reactive Power - Maximum	0.01 x kvar	-	-	RO	F4
R3X0341L	KVA_C_MAX	Phase C Apparent Power - Maximum	0.01 x kVA	-	-	RO	F3
R3X0343I	PF_C_MAX	Phase C Power Factor - Maximum	0.01 x PF	-	-	RO	F2
R3X0344L	KW_MIN_TIME	Time - Hours/Minutes/Seconds of Real Power Min.	-	-	-	RO	F22, F23

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X0346L	KW_MIN_DATE	Date - Month/Day/Year of Real Power Min.	-	-	-	RO	F24, F25
R3X0348L	KVAR_MIN_TIME	Time - Hours/Minutes/Seconds of Reactive Power Min.	-	-	-	RO	F22, F23
R3X034AL	KVAR_MIN_DATE	Date - Month/Day/Year of Reactive Power Min.	-	-	-	RO	F24, F25
R3X034CL	KVA_MIN_TIME	Time - Hours/Minutes/Seconds of Apparent Power Min.	-	-	-	RO	F22, F23
R3X034EL	KVA_MIN_DATE	Date - Month/Day/Year of Apparent Power Min.	-	-	-	RO	F24, F25
R3X0350L	PF_MIN_TIME	Time - Hours/Minutes/Seconds of Power Factor Min.	-	-	-	RO	F22, F23
R3X0352L	PF_MIN_DATE	Date - Month/Day/Year of Power Factor Min.	-	-	-	RO	F24, F25
R3X0354L	KW_MAX_TIME	Time - Hours/Minutes/Seconds of Real Power Max.	-	-	-	RO	F22, F23
R3X0356L	KW_MAX_DATE	Date - Month/Day/Year of Real Power Max.	-	-	-	RO	F24, F25
R3X0358L	KVAR_MAX_TIME	Time - Hours/Minutes/Seconds of Reactive Power Max.	-	-	-	RO	F22, F23
R3X035AL	KVAR_MAX_DATE	Date - Month/Day/Year of Reactive Power Max.	-	-	-	RO	F24, F25
R3X035CL	KVA_MAX_TIME	Time - Hours/Minutes/Seconds of Apparent Power Max.	-	-	-	RO	F22, F23
R3X035EL	KVA_MAX_DATE	Date - Month/Day/Year of Apparent Power Max.	-	-	-	RO	F24, F25
R3X0360L	PF_MAX_TIME	Time - Hours/Minutes/Seconds of Power Factor Max.	-	-	-	RO	F22, F23
R3X0362L	PF_MAX_DATE	Date - Month/Day/Year of Power Factor Max.	-	-	-	RO	F24, F25
R3X0364L	KW_A_MIN_TIME	Time - Hours/Minutes/Seconds of Phase A Real Power Min.	-	-	-	RO	F22, F23
R3X0366L	KW_A_MIN_DATE	Date - Month/Day/Year of Phase A Real Power Min.	-	-	-	RO	F24, F25
R3X0368L	KVAR_A_MIN_TIME	Time - Hours/Minutes/Seconds of Phase A Reactive Power Min.	-	-	-	RO	F22, F23
R3X036AL	KVAR_A_MIN_DATE	Date - Month/Day/Year of Phase A Reactive Power Min.	-	-	-	RO	F24, F25
R3X036CL	KVA_A_MIN_TIME	Time - Hours/Minutes/Seconds of Phase A Apparent Power Min.	-	-	-	RO	F22, F23
R3X036EL	KVA_A_MIN_DATE	Date - Month/Day/Year of Phase A Apparent Power Min.	-	-	-	RO	F24, F25
R3X0370L	PF_A_MIN_TIME	Time - Hours/Minutes/Seconds of Phase A Power Factor Min.	-	-	-	RO	F22, F23
R3X0372L	PF_A_MIN_DATE	Date - Month/Day/Year of Phase A Power Factor Min.	-	-	-	RO	F24, F25
R3X0374L	KW_A_MAX_TIME	Time - Hours/Minutes/Seconds of Phase A Real Power Max.	-	-	-	RO	F22, F23
R3X0376L	KW_A_MAX_DATE	Date - Month/Day/Year of Phase A Real Power Max.	-	-	-	RO	F24, F25
R3X0378L	KVAR_A_MAX_TIME	Time - Hours/Minutes/Seconds of Phase A Reactive Power Max.	-	-	-	RO	F22, F23
R3X037AL	KVAR_A_MAX_DATE	Date - Month/Day/Year of Phase A Reactive Power Max.	-	-	-	RO	F24, F25
R3X037CL	KVA_A_MAX_TIME	Time - Hours/Minutes/Seconds of Phase A Apparent Power Max.	-	-	-	RO	F22, F23
R3X037EL	KVA_A_MAX_DATE	Date - Month/Day/Year of Phase A Apparent Power Max.	-	-	-	RO	F24, F25
R3X0380L	PF_A_MAX_TIME	Time - Hours/Minutes/Seconds of Phase A Power Factor Max.	-	-	-	RO	F22, F23
R3X0382L	PF_A_MAX_DATE	Date - Month/Day/Year of Phase A Power Factor	-	-	-	RO	F24, F25

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Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
		Max.					
R3X0384L	KW_B_MIN_TIME	Time - Hours/Minutes/Seconds of Phase B Real Power Min.	-	-	-	RO	F22, F23
R3X0386L	KW_B_MIN_DATE	Date - Month/Day/Year of Phase B Real Power Min.	-	-	-	RO	F24, F25
R3X0388L	KVAR_B_MIN_TIME	Time - Hours/Minutes/Seconds of Phase B Reactive Power Min.	-	-	-	RO	F22, F23
R3X038AL	KVAR_B_MIN_DATE	Date - Month/Day/Year of Phase B Reactive Power Min.	-	-	-	RO	F24, F25
R3X038CL	KVA_B_MIN_TIME	Time - Hours/Minutes/Seconds of Phase B Apparent Power Min.	-	-	-	RO	F22, F23
R3X038EL	KVA_B_MIN_DATE	Date - Month/Day/Year of Phase B Apparent Power Min.	-	-	-	RO	F24, F25
R3X0390L	PF_B_MIN_TIME	Time - Hours/Minutes/Seconds of Phase B Power Factor Min.	-	-	-	RO	F22, F23
R3X0392L	PF_B_MIN_DATE	Date - Month/Day/Year of Phase B Power Factor Min.	-	-	-	RO	F24, F25
R3X0394L	KW_B_MAX_TIME	Time - Hours/Minutes/Seconds of Phase B Real Power Max.	-	-	-	RO	F22, F23
R3X0396L	KW_B_MAX_DATE	Date - Month/Day/Year of Phase B Real Power Max.	-	-	-	RO	F24, F25
R3X0398L	KVAR_B_MAX_TIME	Time - Hours/Minutes/Seconds of Phase B Reactive Power Max.	-	-	-	RO	F22, F23
R3X039AL	KVAR_B_MAX_DATE	Date - Month/Day/Year of Phase B Reactive Power Max.	-	-	-	RO	F24, F25
R3X039CL	KVA_B_MAX_TIME	Time - Hours/Minutes/Seconds of Phase B Apparent Power Max.	-	-	-	RO	F22, F23
R3X039EL	KVA_B_MAX_DATE	Date - Month/Day/Year of Phase B Apparent Power Max.	-	-	-	RO	F24, F25
R3X03A0L	PF_B_MAX_TIME	Time - Hours/Minutes/Seconds of Phase B Power Factor Max.	-	-	-	RO	F22, F23
R3X03A2L	PF_B_MAX_DATE	Date - Month/Day/Year of Phase B Power Factor Max.	-	-	-	RO	F24, F25
R3X03A4L	KW_C_MIN_TIME	Time - Hours/Minutes/Seconds of Phase C Real Power Min.	-	-	-	RO	F22, F23
R3X03A6L	KW_C_MIN_DATE	Date - Month/Day/Year of Phase C Real Power Min.	-	-	-	RO	F24, F25
R3X03A8L	KVAR_C_MIN_TIME	Time Hours/Minutes/Seconds of Phase C Reactive Power Min.	-	-	-	RO	F22, F23
R3X03AAL	KVAR_C_MIN_DATE	Date - Month/Day/Year of Phase C Reactive Power Min.	-	-	-	RO	F24, F25
R3X03ACL	KVA_C_MIN_TIME	Time - Hours/Minutes/Seconds of Phase C Apparent Power Min.	-	-	-	RO	F22, F23
R3X03AEL	KVA_C_MIN_DATE	Date - Month/Day/Year of Phase C Apparent Power Min.	-	-	-	RO	F24, F25
R3X03B0L	PF_C_MIN_TIME	Time - Hours/Minutes/Seconds of Phase C Power Factor Min.	-	-	-	RO	F22, F23
R3X03B2L	PF_C_MIN_DATE	Date - Month/Day/Year of Phase C Power Factor Min.	-	-	-	RO	F24, F25
R3X03B4L	KW_C_MAX_TIME	Time - Hours/Minutes/Seconds of Phase C Real Power Max.	-	-	-	RO	F22, F23
R3X03B6L	KW_C_MAX_DATE	Date - Month/Day/Year of Phase C Real Power	-	-	-	RO	F24, F25

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
		Max.					
R3X03B8L	KVAR_C_MAX_TIME	Time - Hours/Minutes/Seconds of Phase C Reactive Power Max.	-	-	-	RO	F22, F23
R3X03BAL	KVAR_C_MAX_DATE	Date - Month/Day/Year of Phase C Reactive Power Max.	-	-	-	RO	F24, F25
R3X03BCL	KVA_C_MAX_TIME	Time - Hours/Minutes/Seconds of Phase C Apparent Power Max.	-	-	-	RO	F22, F23
R3X03BEL	KVA_C_MAX_DATE	Date - Month/Day/Year of Phase C Apparent Power Max.	-	-	-	RO	F24, F25
R3X03C0L	PF_C_MAX_TIME	Time - Hours/Minutes/Seconds of Phase C Power Factor Max.	-	-	-	RO	F22, F23
R3X03C2L	PF_C_MAX_DATE	Date - Month/Day/Year of Phase C Power Factor Max.	-	-	-	RO	F24, F25
R3X03D0L	KWH_POS	Three-phase Positive Real Energy Used	kWh	-	-	RO	F3
R3X03D2L	KWH_NEG	Three-phase Negative Real Energy Used	kWh	-	-	RO	F3
R3X03D4L	KVARH_POS	Three-phase Positive Reactive Energy Used	kvarh	-	-	RO	F3
R3X03D6L	KVARH_NEG	Three-phase Negative Reactive Energy Used	kvarh	-	-	RO	F3
R3X03D8L	KVAH	Three-phase Apparent Energy Used	kVAh	-	-	RO	F3
R3X03DAL	KWH_24_HOURS	Three-phase Energy Used In Last 24 h	kWh	-	-	RO	F3
R3X03DCL	KWH_COST	Three-phase Energy Cost Since Last Reset	\$ x0.01	-	-	RO	F3
R3X03DEL	KWH_COST_PER_DAY	Three-phase Energy Cost Per Day	\$ x0.01	-	-	RO	F3
R3X03E0L	RESET_TIME	Time - Hours/Minutes/Seconds of Last Reset	-	-	-	RO	F22, F23
R3X03E2L	RESET_DATE	Date - Month/Day/Year of Last Reset	-	-	-	RO	F24, F25
R3X03E4L	TP1_POS_ENER	Tariff Period 1 Positive Real Energy	-	-	kWh	RO	F3
R3X03E6L	TP1_NEG_ENER	Tariff Period 1 Negative Real Energy (high)	-	-	kWh	RO	F3
R3X03E8L	TP2_POS_ENER	Tariff Period 2 Positive Real Energy (high)	-	-	kWh	RO	F3
R3X03EAL	TP2_NEG_ENER	Tariff Period 2 Negative Real Energy (high)	-	-	kWh	RO	F3
R3X03ECL	TP3_POS_ENER	Tariff Period 3 Positive Real Energy (high)	-	-	kWh	RO	F3
R3X03EEL	TP3_NEG_ENER	Tariff Period 3 Negative Real Energy (high)	-	-	kWh	RO	F3
R3X03F0L	TP1_COST	Tariff Period 1 Cost (high)	-	-	\$ x 0.01	RO	F3
R3X03F2L	TP2_COST	Tariff Period 2 Cost (high)	-	-	\$ x 0.01	RO	F3
R3X03F4L	TP3_COST	Tariff Period 3 Cost (high)	-	-	\$ x 0.01	RO	F3
R3X03F6L	TP1_NET_ENER	Tariff Period 1 Net Energy Used (high)	-	-	\$ x 0.01	RO	F3
R3X03F8L	TP2_NET_ENER	Tariff Period 2 Net Energy Used (high)	-	-	\$ x 0.01	RO	F3
R3X03FAL	TP3_NET_ENER	Tariff Period 3 Net Energy Used (high)	-	-	\$ x 0.01	RO	F3
R3X0400	AMPS_A_DMND	Phase A Current Demand	A	-	-	RO	F1
R3X0401	AMPS_B_DMND	Phase B Current Demand	A	-	-	RO	F1
R3X0402	AMPS_C_DMND	Phase C Current Demand	A	-	-	RO	F1
R3X0403	AMPS_N_DMND	Neutral Current Demand	A	-	-	RO	F1
R3X0404L	KW_DMND	Three-phase Real Power Demand	0.01 x kW	-	-	RO	F4
R3X0406L	KVAR_DMND	Three-phase Reactive Power Demand	0.01 x kvar	-	-	RO	F4
R3X0408L	KVA_DMND	Three-phase Apparent Power Demand	0.01 x kVA	-	-	RO	F3
R3X040A	AMPS_A_DMND_MAX	Phase A Current Demand - Maximum	A	-	-	RO	F1
R3X040B	AMPS_B_DMND_MAX	Phase B Current Demand - Maximum	A	-	-	RO	F1
R3X040C	AMPS_C_DMND_MAX	Phase C Current Demand - Maximum	A	-	-	RO	F1
R3X040D	AMPS_N_DMND_MAX	Neutral Current Demand - Maximum	A	-	-	RO	F1
R3X040EL	KW_DMND_MAX	Three-phase Real Power Dmd - Maximum	0.01 x kW	-	-	RO	F4
R3X0410L	KVAR_DMND_MAX	Three-phase React Power Dmd - Maximum	0.01 x kvar	-	-	RO	F4

MLPQMII – Power Quality Meter II

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X0412L	KVA_DMND_MAX	Three-phase App Power Dmd- Maximum	0.01 x kVA	-	-	RO	F3
R3X0414L	AMPS_A_DMND_MAX_TIME	Time - Hours/Minutes/Seconds of Phase A Cur. Dem. Max.	-	-	-	RO	F22, F23
R3X0416L	AMPS_A_DMND_MAX_DATE	Date - Month/Day/Year of Phase A Cur. Dem. Max.	-	-	-	RO	F24, F25
R3X0418L	AMPS_B_DMND_MAX_TIME	Time - Hours/Minutes/Seconds of Phase B Cur. Dem. Max.	-	-	-	RO	F22, F23
R3X041AL	AMPS_B_DMND_MAX_DATE	Date - Month/Day/Year of Phase B Cur. Dem. Max.	-	-	-	RO	F24, F25
R3X041CL	AMPS_C_DMND_MAX_TIME	Time - Hours/Minutes/Seconds of Phase C Cur. Dem. Max.	-	-	-	RO	F22, F23
R3X041EL	AMPS_C_DMND_MAX_DATE	Date - Month/Day/Year of Phase C Cur. Dem. Max.	-	-	-	RO	F24, F25
R3X0420L	AMPS_N_DMND_MAX_TIME	Time - Hours/Minutes/Seconds of Neutral Cur. Dem. Max.	-	-	-	RO	F22, F23
R3X0422L	AMPS_N_DMND_MAX_DATE	Date - Month/Day/Year of Neutral Cur. Dem. Max.	-	-	-	RO	F24, F25
R3X0424L	KW_DMND_MAX_TIME	Time - Hours/Minutes/Seconds of Real Power Dem. Max.	-	-	-	RO	F22, F23
R3X0426L	KW_DMND_MAX_DATE	Date - Month/Day/Year of Real Power Dem. Max.	-	-	-	RO	F24, F25
R3X0428L	KVAR_DMND_MAX_TIME	Time - Hours/Minutes/Seconds of Reactive Power Dem. Max.	-	-	-	RO	F22, F23
R3X042AL	KVAR_DMND_MAX_DATE	Date - Month/Day/Year of Reactive Power Dem. Max.	-	-	-	RO	F24, F25
R3X042CL	KVA_DMND_MAX_TIME	Time - Hours/Minutes/Seconds of Apparent Power Dem. Max.	-	-	-	RO	F22, F23
R3X042EL	KVA_DMND_MAX_DATE	Date - Month/Day/Year of Apparent Power Dem. Max.	-	-	-	RO	F24, F25
R3X0440	FREQUENCY	Frequency	0.01 x Hz	-	-	RO	F1
R3X0441	FREQ_MIN	Frequency Minimum	0.01 x Hz	-	-	RO	F1
R3X0442	FREQ_MAX	Frequency Maximum	0.01 x Hz	-	-	RO	F1
R3X0443L	FREQ_MIN_TIME	Time - Hours/Minutes/Seconds of Frequency Min.	-	-	-	RO	F22, F23
R3X0445L	FREQ_MIN_DATE	Date - Month/Day/Year of Frequency Min.	-	-	-	RO	F24, F25
R3X0447L	FREQ_MAX_TIME	Time - Hours/Minutes/Seconds of Frequency Max.	-	-	-	RO	F22, F23
R3X0449L	FREQ_MAX_DATE	Date - Month/Day/Year of Frequency Max.	-	-	-	RO	F24, F25
R3X0450L	PULSE_INPUT_1	Pulse Input 1	-	-	-	RO	F3
R3X0452L	PULSE_INPUT_2	Pulse Input 2	-	-	-	RO	F3
R3X0454L	PULSE_INPUT_3	Pulse Input 3	-	-	-	RO	F3
R3X0456L	PULSE_INPUT_4	Pulse Input 4	-	-	-	RO	F3
R3X0458L	ANALOG_INPUT	Main/Alternate Analog Input	-	-	-	RO	F3
R3X0460L	TOTAL_PULSE_INPUT	Totalized Pulse Input	-	-	-	RO	F3
R3X0470	AMPS_A_CF	Ia Crest Factor	0.001 x CF	-	-	RO	F1
R3X0471	AMPS_B_CF	Ib Crest Factor	0.001 x CF	-	-	RO	F1
R3X0472	AMPS_C_CF	Ic Crest Factor	0.001 x CF	-	-	RO	F1
R3X0473	AMPS_A_THDF	Ia Transformer Harmonic Derating Factor	0.01 x THDF	-	-	RO	F1
R3X0474	AMPS_B_THDF	Ib Transformer Harmonic Derating Factor	0.01 x THDF	-	-	RO	F1
R3X0475	AMPS_C_THDF	Ic Transformer Harmonic Derating Factor	0.01 x THDF	-	-	RO	F1
R3X0478	AMPS_A_THD	Phase A Current THD	0.1 x %	-	-	RO	F1
R3X0479	AMPS_B_THD	Phase B Current THD	0.1 x %	-	-	RO	F1

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X047A	AMPS_C_THD	Phase C Current THD	0.1 x %	-	-	RO	F1
R3X047B	AMPS_N_THD	Neutral Current THD	0.1 x %	-	-	RO	F1
R3X047C	VOLTS_AN_THD	Voltage Van THD	0.1 x %	-	-	RO	F1
R3X047D	VOLTS_BN_THD	Voltage Vbn THD	0.1 x %	-	-	RO	F1
R3X047E	VOLTS_CN_THD	Voltage Vcn THD	0.1 x %	-	-	RO	F1
R3X047F	VOLTS_AB_THD	Voltage Vab THD	0.1 x %	-	-	RO	F1
R3X0480	VOLTS_BC_THD	Voltage Vbc THD	0.1 x %	-	-	RO	F1
R3X0481	VOLTS_CA_THD	Voltage Vca THD	0.1 x %	-	-	RO	F1
R3X0482	AMPS_A_THD_MAX	Phase A Current THD - Maximum	0.1 x %	-	-	RO	F1
R3X0483	AMPS_B_THD_MAX	Phase B Current THD - Maximum	0.1 x %	-	-	RO	F1
R3X0484	AMPS_C_THD_MAX	Phase C Current THD - Maximum	0.1 x %	-	-	RO	F1
R3X0485	AMPS_N_THD_MAX	Neutral Current THD - Maximum	0.1 x %	-	-	RO	F1
R3X0486	VOLTS_AN_THD_MAX	Voltage Van THD - Maximum	0.1 x %	-	-	RO	F1
R3X0487	VOLTS_BN_THD_MAX	Voltage Vbn THD - Maximum	0.1 x %	-	-	RO	F1
R3X0488	VOLTS_CN_THD_MAX	Voltage Vcn THD - Maximum	0.1 x %	-	-	RO	F1
R3X0489	VOLTS_AB_THD_MAX	Voltage Vab THD - Maximum	0.1 x %	-	-	RO	F1
R3X048A	VOLTS_BC_THD_MAX	Voltage Vbc THD - Maximum	0.1 x %	-	-	RO	F1
R3X048B	VOLTS_CA_THD_MAX	Voltage Vca THD - Maximum	0.1 x %	-	-	RO	F1
R3X048CL	AMPS_A_THD_MAX_TIME	Time - Hours/Minutes/Seconds of Phase A Cur. THD Max.	-	-	-	RO	F22, F23
R3X048EL	AMPS_A_THD_MAX_DATE	Date - Month/Day/Year of Phase A Cur. THD Max.	-	-	-	RO	F24, F25
R3X0490L	AMPS_B_THD_MAX_TIME	Time - Hours/Minutes/Seconds of Phase B Cur. THD Max.	-	-	-	RO	F22, F23
R3X0492L	AMPS_B_THD_MAX_DATE	Date - Month/Day/Year of Phase B Cur. THD Max.	-	-	-	RO	F24, F25
R3X0494L	AMPS_C_THD_MAX_TIME	Time - Hours/Minutes/Seconds of Phase C Cur. THD Max.	-	-	-	RO	F22, F23
R3X0496L	AMPS_C_THD_MAX_DATE	Date - Month/Day/Year of Phase C Cur. THD Max.	-	-	-	RO	F24, F25
R3X0498L	AMPS_N_THD_MAX_TIME	Time - Hours/Minutes/Seconds of Neutral Cur. THD Max.	-	-	-	RO	F22, F23
R3X049AL	AMPS_N_THD_MAX_DATE	Date - Month/Day/Year of Neutral Cur. THD Max.	-	-	-	RO	F24, F25
R3X049CL	VOLTS_AN_THD_MAX_TIM	Time - Hours/Minutes/Seconds of Van THD Max.	-	-	-	RO	F22, F23
R3X049EL	VOLTS_AN_THD_MAX_DAT	Date - Month/Day/Year of Van THD Max.	-	-	-	RO	F24, F25
R3X04A0L	VOLTS_BN_THD_MAX_TIM	Time - Hours/Minutes/Seconds of Vbn THD Max.	-	-	-	RO	F22, F23
R3X04A2L	VOLTS_BN_THD_MAX_DAT	Date - Month/Day/Year of Vbn THD Max.	-	-	-	RO	F24, F25
R3X04A4L	VOLTS_CN_THD_MAX_TIM	Time - Hours/Minutes/Seconds of Vcn THD Max.	-	-	-	RO	F22, F23
R3X04A6L	VOLTS_CN_THD_MAX_DAT	Date - Month/Day/Year of Vcn THD Max.	-	-	-	RO	F24, F25
R3X04A8L	VOLTS_AB_THD_MAX_TIM	Time - Hours/Minutes/Seconds of Vab THD Max.	-	-	-	RO	F22, F23
R3X04AAL	VOLTS_AB_THD_MAX_DAT	Date - Month/Day/Year of Vab THD Max.	-	-	-	RO	F24, F25
R3X04ACL	VOLTS_BC_THD_MAX_TIM	Time - Hours/Minutes/Seconds of Vbc THD Max.	-	-	-	RO	F22, F23
R3X04AEL	VOLTS_BC_THD_MAX_DAT	Date - Month/Day/Year of Vbc THD Max.	-	-	-	RO	F24, F25
R3X04B0L	VOLTS_CA_THD_MAX_TIM	Time - Hours/Minutes/Seconds of Vca THD Max.	-	-	-	RO	F22, F23
R3X04B2L	VOLTS_CA_THD_MAX_DAT	Date - Month/Day/Year of Vca THD Max.	-	-	-	RO	F24, F25
R3X04B4	I AVG_THD	Average Current THD	0.1 x %	-	-	RO	F1
R3X04B5	V AVG_THD	Average Voltage THD	0.1 x %	-	-	RO	F1
R3X04C8	REFERENCE	ADC Reference	-	-	-	RO	F1
R3X04C9	PWR_LOSS_FINE_TIME	Power Loss Fine Time	10 ms	-	-	RO	F1
R3X04CA	PWR_LOSS_COARSE_TIME	Power Loss Coarse Time	0.1 min	-	-	RO	F1
R3X04CB	MODBUS_KEY	Current Key Press	-	-	-	RO	F6
R3X04CC	SELF_TEST_CODE	Internal Fault Error Code	-	-	-	RO	F108
R3X04D8S40	MSG_BUFFER	Message Buffer	ASCII	-	-	RO	F10
R3X04F8	HSS_PARAMETER	High-Speed Sampling Parameter	-	-	-	RO	F26

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Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X04F9L	HSS_SCALE_FACTOR	High-Speed Sampling Scale Factor	AorV x10000	-	-	RO	F3
R3X04FB	HSS_FREQUENCY	Frequency of High-Speed Sampling Waveform	0.01 x Hz	-	-	RO	F1
R3X04FCL	HSS_TIME	Time - Hours/Minutes/Seconds of Last Sampling	-	-	-	RO	F22, F23
R3X04FEL	HSS_DATE	Date - Month/Day/Year of Last Sampling	-	-	-	RO	F24, F25
R3X0500I		High-Speed Sample Buffer 1	ADC counts	-	-	RO	F2
...						RO	
R3X05FFI		High-Speed Sample Buffer 256	ADC counts	-	-	RO	F2
R3X0620L	WAVEFORM_TIME	Time - Hours/Minutes/Seconds of Last Capture	-	-	-	RO	F22, F23
R3X0622L	WAVEFORM_DATE	Date - Month/Day/Year of Last Capture	-	-	-	RO	F24, F25
R3X0624	WAVEFORM_FREQUENCY	Frequency of Last Capture	0.01 x Hz	-	-	RO	F1
R3X0628L	WF_IA_SCALE	Ia Waveform Capture Scale Factor	A x10000	-	-	RO	F3
R3X062AI		Ia Sample Buffer 1	ADC counts	-	-	RO	F2
...		...					
R3X06A9I		Ia Sample Buffer 128	ADC counts	-	-	RO	F2
R3X06B0L	WF_IB_SCALE	Ib Waveform Capture Scale Factor	A x10000	-	-	RO	F3
R3X06B2I		Ib Sample Buffer 1	ADC counts	-	-	RO	F2
...		...					
R3X0731I		Ib Sample Buffer 128	ADC counts	-	-	RO	F2
R3X0738	WF_IC_SCALE	Ic Waveform Capture Scale Factor	A x10000	-	-	RO	F3
R3X073AI		Ic Sample Buffer 1	ADC counts	-	-	RO	F2
...		...					
R3X07B9I		Ic Sample Buffer 128	ADC counts	-	-	RO	F2
R3X07C0L	WF_IN_SCALE	In Waveform Capture Scale Factor	A x10000	-	-	RO	F3
R3X07C2I		In Sample Buffer 1	ADC counts	-	-	RO	F2
...		...					
R3X0841I		In Sample Buffer 128	ADC counts	-	-	RO	F2
R3X0848L	WF_VA_SCALE	Van Waveform Capture Scale Factor	V x10000	-	-	RO	F3
R3X084AI		Van Sample Buffer 1	ADC counts	-	-	RO	F2
...		...					
R3X08C9I		Van Sample Buffer 128	ADC counts	-	-	RO	F2
R3X08D0L	WF_VB_SCALE	Vbn Waveform Capture Scale Factor	V x10000	-	-	RO	F3
R3X08D2I		Vbn Sample Buffer 1	ADC counts	-	-	RO	F2
...		...					
R3X0951I		Vbn Sample Buffer 128	ADC counts	-	-	RO	F2
R3X0958L	WF_VC_SCALE	Vcn Waveform Capture Scale Factor	V x10000	-	-	RO	F3
R3X095AI		Vcn Sample Buffer 1	ADC counts	-	-	RO	F2

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
...		...					
R3X09D9I		Vcn Sample Buffer 128	ADC counts	-	-	RO	F2
R3X0A00	DATA_LOG_BLOCK	Data Log Memory Access Block Number	-	-	-	RO	F1
R3X0A01	DATA_LOG_REGISTERS	Data Log Register 1	-	-	-	RO	-
...	
R3X0A40		Data Log Register 64	-	-	-	RO	-
R3X0A50	DLOG_IA_INTVL	Ia Log Number	-	-	-	RO	F110
R3X0A51	DLOG_IB_INTVL	Ib Log Number	-	-	-	RO	F110
R3X0A52	DLOG_IC_INTVL	Ic Log Number	-	-	-	RO	F110
R3X0A53	DLOG_IAVG_INTVL	Iavg Log Number	-	-	-	RO	F110
R3X0A54	DLOG_IN_INTVL	In Log Number	-	-	-	RO	F110
R3X0A55	DLOG_I_UB_INTVL	I Unbalance Log Number	-	-	-	RO	F110
R3X0A56	DLOG_VAN_INTVL	Van Log Number	-	-	-	RO	F110
R3X0A57	DLOG_VBN_INTVL	Vbn Log Number	-	-	-	RO	F110
R3X0A58	DLOG_VCN_INTVL	Vcn Log Number	-	-	-	RO	F110
R3X0A59	DLOG_VPAVG_INTVL	Vpavg Log Number	-	-	-	RO	F110
R3X0A5A	DLOG_VAB_INTVL	Vab Log Number	-	-	-	RO	F110
R3X0A5B	DLOG_VBC_INTVL	Vbc Log Number	-	-	-	RO	F110
R3X0A5C	DLOG_VCA_INTVL	Vca Log Number	-	-	-	RO	F110
R3X0A5D	DLOG_VLAVG_INTVL	Vlavg Log Number	-	-	-	RO	F110
R3X0A5E	DLOG_V_UB_INTVL	V Unbalance Log Number	-	-	-	RO	F110
R3X0A5F	DLOG_PA_INTVL	Pa Log Number	-	-	-	RO	F110
R3X0A60	DLOG_QA_INTVL	Qa Log Number	-	-	-	RO	F110
R3X0A61	DLOG_SA_INTVL	Sa Log Number	-	-	-	RO	F110
R3X0A62	DLOG_PFA_INTVL	PFa Log Number	-	-	-	RO	F110
R3X0A63	DLOG_PB_INTVL	Pb Log Number	-	-	-	RO	F110
R3X0A64	DLOG_QB_INTVL	Qb Log Number	-	-	-	RO	F110
R3X0A65	DLOG_SB_INTVL	Sb Log Number	-	-	-	RO	F110
R3X0A66	DLOG_PFB_INTVL	PFb Log Number	-	-	-	RO	F110
R3X0A67	DLOG_PC_INTVL	Pc Log Number	-	-	-	RO	F110
R3X0A68	DLOG_QC_INTVL	Qc Log Number	-	-	-	RO	F110
R3X0A69	DLOG_SC_INTVL	Sc Log Number	-	-	-	RO	F110
R3X0A6A	DLOG_PFC_INTVL	PFc Log Number	-	-	-	RO	F110
R3X0A6B	DLOG_P3_INTVL	P3 Log Number	-	-	-	RO	F110
R3X0A6C	DLOG_Q3_INTVL	Q3 Log Number	-	-	-	RO	F110
R3X0A6D	DLOG_S3_INTVL	S3 Log Number	-	-	-	RO	F110
R3X0A6E	DLOG_PF3_INTVL	PF3 Log Number	-	-	-	RO	F110
R3X0A6F	DLOG_FREQ_INTVL	Frequency Log Number	-	-	-	RO	F110
R3X0A70	DLOG_POS_KWH_INTVL	Positive kWh Log Number	-	-	-	RO	F110
R3X0A71	DLOG_NEG_KWH_INTVL	Negative kWh Log Number	-	-	-	RO	F110
R3X0A72	DLOG_POS_KVARH_INTVL	Positive kvarh Log Number	-	-	-	RO	F110
R3X0A73	DLOG_NEG_KVARH_INTVL	Negative kvarh Log Number	-	-	-	RO	F110
R3X0A74	DLOG_POS_KVAH_INTVL	kVAh Log Number	-	-	-	RO	F110
R3X0A75	DLOG_IA_DMD_INTVL	Ia Demand Log Number	-	-	-	RO	F110
R3X0A76	DLOG_IB_DMD_INTVL	Ib Demand Log Number	-	-	-	RO	F110
R3X0A77	DLOG_IC_DMD_INTVL	Ic Demand Log Number	-	-	-	RO	F110
R3X0A78	DLOG_IN_DMD_INTVL	In Demand Log Number	-	-	-	RO	F110
R3X0A79	DLOG_P3_DMD_INTVL	P3 Demand Log Number	-	-	-	RO	F110
R3X0A7A	DLOG_Q3_DMD_INTVL	Q3 Demand Log Number	-	-	-	RO	F110
R3X0A7B	DLOG_S3_DMD_INTVL	S3 Demand Log Number	-	-	-	RO	F110

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Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X0A7C	DLOG_IA_THD_INTVL	Ia THD Log Number	-	-	-	RO	F110
R3X0A7D	DLOG_IB_THD_INTVL	Ib THD Log Number	-	-	-	RO	F110
R3X0A7E	DLOG_IC_THD_INTVL	Ic THD Log Number	-	-	-	RO	F110
R3X0A7F	DLOG_IN_THD_INTVL	In THD Log Number	-	-	-	RO	F110
R3X0A80	DLOG_VAN_THD_INTVL	Van THD Log Number	-	-	-	RO	F110
R3X0A81	DLOG_VBN_THD_INTVL	Vbn THD Log Number	-	-	-	RO	F110
R3X0A82	DLOG_VCN_THD_INTVL	Vcn THD Log Number	-	-	-	RO	F110
R3X0A83	DLOG_VAB_THD_INTVL	Vab THD Log Number	-	-	-	RO	F110
R3X0A84	DLOG_VBC_THD_INTVL	Vbc THD Log Number	-	-	-	RO	F110
R3X0A85	DLOG_AI_INTVL	Analog Input Log Number	-	-	-	RO	F110
R3X0A90L	LOG_1_INTVL	Log 1 Time Interval	s	-	-	RO	F3
R3X0A92L	LOG_1_TIME	Log 1 Time - Hours/Minutes/Seconds	-	-	-	RO	F22, F23
R3X0A94L	LOG_1_DATE	Log 1 Date - Month/Day/Year	-	-	-	RO	F24, F25
R3X0A96	LOG_1_START_ADDR	Log 1 Start Address	-	-	-	RO	F1
R3X0A97	LOG_1_REC_SIZE	Log 1 Record Size	bytes	-	-	RO	F1
R3X0A98	LOG_1_TOTAL_RECS	Log 1 Total Records	-	-	-	RO	F1
R3X0A99	LOG_1_FIRST	Log 1 Pointer to First Item of First Record	-	-	-	RO	F1
R3X0A9A	LOG_1_LAST	Log 1 Pointer to First Item of Last Record	-	-	-	RO	F1
R3X0A9B	LOG_1_STATUS	Log 1 Status	-	-	-	RO	F35
R3X0A9C	LOG_1_RECS_USED	Log 1 Records Used	-	-	-	RO	F1
R3X0A9DL	DATA_LOG_1_TIMER	Log 1 Time Remaining Until Next Reading	s	-	-	RO	F3
R3X0AA8L	LOG_2_INTVL	Log 2 Time Interval	s	-	-	RO	F3
R3X0AAAL	LOG_2_TIME	Log 2 Time - Hours/Minutes/Seconds	-	-	-	RO	F22, F23
R3X0AACL	LOG_2_DATE	Log 2 Date - Month/Day/Year	-	-	-	RO	F24, F25
R3X0AAE	LOG_2_START_ADDR	Log 2 Start Address	-	-	-	RO	F1
R3X0AAF	LOG_2_REC_SIZE	Log 2 Record Size	bytes	-	-	RO	F1
R3X0AB0	LOG_2_TOTAL_RECS	Log 2 Total Records	-	-	-	RO	F1
R3X0AB1	LOG_2_FIRST	Log 2 Pointer to First Item of First Record	-	-	-	RO	F1
R3X0AB2	LOG_2_LAST	Log 2 Pointer to First Item of Last Record	-	-	-	RO	F1
R3X0AB3	LOG_2_STATUS	Log 2 Status	-	-	-	RO	F35
R3X0AB4	LOG_2_RECS_USED	Log 2 Records Used	-	-	-	RO	F1
R3X0AB5L	DATA_LOG_2_TIMER	Log 2 Time Remaining Until Next Reading	s	-	-	RO	F3
R3X0AD0	EVENT_NUMBER	Total Number of Events Since Last Clear	-	-	-	RO	F1
R3X0AD1L	EE_ER_LAST_CLRD_TIME	Event Record Last Cleared Time - Hours/Minutes/Seconds	-	-	-	RO	F22, F23
R3X0AD3L	EE_ER_LAST_CLRD_DATE	Event Record Last Cleared Date - Month/Day/Year	-	-	-	RO	F24, F25
R3X0AE0	EVENT_REC_NUMBER	Record #N Event Number	-	-	-	RO	F1
R3X0AE1	EVENT_REC_CAUSE	Record #N Event Cause	-	-	-	RO	F36
R3X0AE2L	EVENT_REC_TIME	Record #N Time - Hours/Minutes/Seconds	-	-	-	RO	F22, F23
R3X0AE4L	EVENT_REC_DATE	Record #N Date - Month/Day/Year	-	-	-	RO	F24, F25
R3X0AE6	EVENT_REC_SW_RLYS	Record #N Switches and Relays States	-	-	-	RO	F111
R3X0AE7	EVENT_REC_IA	Record #N Ia	A	-	-	RO	F1
R3X0AE8	EVENT_REC_IB	Record #N Ib	A	-	-	RO	F1
R3X0AE9	EVENT_REC_IC	Record #N Ic	A	-	-	RO	F1
R3X0AEA	EVENT_REC_IN	Record #N In	A	-	-	RO	F1
R3X0AEB	EVENT_REC_I_UB	Record #N I unbalance	0.1 x %	-	-	RO	F1
R3X0AECL	EVENT_REC_VAN	Record #N Van	V	-	-	RO	F3
R3X0AEEL	EVENT_REC_VBN	Record #N Vbn	V	-	-	RO	F3
R3X0AF0L	EVENT_REC_VCN	Record #N Vcn	V	-	-	RO	F3
R3X0AF2L	EVENT_REC_VAB	Record #N Vab	V	-	-	RO	F3
R3X0AF4L	EVENT_REC_VBC	Record #N Vbc	V	-	-	RO	F3

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X0AF6L	EVENT_REC_VCA	Record #N Vca	V	-	-	RO	F3
R3X0AF8	EVENT_REC_V_UB	Record #N V unbalance	0.1 x %	-	-	RO	F1
R3X0AF9L	EVENT_REC_PA	Record #N Pa	0.01 x kW	-	-	RO	F4
R3X0AFBL	EVENT_REC_QA	Record #N Qa	0.01 x kvar	-	-	RO	F4
R3X0AFDL	EVENT_REC_SA	Record #N Sa	0.01 x kVA	-	-	RO	F3
R3X0AFFI	EVENT_REC_PFA	Record #N PFa	0.01 x PF	-	-	RO	F2
R3X0B00L	EVENT_REC_PB	Record #N Pb	0.01 x kW	-	-	RO	F4
R3X0B02L	EVENT_REC_QB	Record #N Qb	0.01 x kvar	-	-	RO	F4
R3X0B04L	EVENT_REC_SB	Record #N Sb	0.01 x kVA	-	-	RO	F3
R3X0B06I	EVENT_REC_PFB	Record #N PFb	0.01 x PF	-	-	RO	F2
R3X0B07L	EVENT_REC_PC	Record #N Pc	0.01 x kW	-	-	RO	F4
R3X0B09L	EVENT_REC_QC	Record #N Qc	0.01 x kvar	-	-	RO	F4
R3X0B0BL	EVENT_REC_SC	Record #N Sc	0.01 x kVA	-	-	RO	F3
R3X0B0DI	EVENT_REC_PFC	Record #N PFc	0.01 x PF	-	-	RO	F2
R3X0B0EL	EVENT_REC_P3	Record #N P3	0.01 x kW	-	-	RO	F4
R3X0B10L	EVENT_REC_Q3	Record #N Q3	0.01 x kvar	-	-	RO	F4
R3X0B12L	EVENT_REC_S3	Record #N S3	0.01 x kVA	-	-	RO	F3
R3X0B14I	EVENT_REC_PF3	Record #N PF3	0.01 x PF	-	-	RO	F2
R3X0B15	EVENT_REC_FREQUENCY	Record #N Frequency	0.01 x Hz	-	-	RO	F1
R3X0B16L	EVENT_REC_POS_KWH	Record #N Positive kWh	kWh	-	-	RO	F3
R3X0B18L	EVENT_REC_NEG_KWH	Record #N Negative kWh	kWh	-	-	RO	F3
R3X0B1AL	EVENT_REC_POS_KVARH	Record #N Positive kvarh	kvarh	-	-	RO	F3
R3X0B1CL	EVENT_REC_NEG_KVARH	Record #N Negative kvarh	kvarh	-	-	RO	F3
R3X0B1EL	EVENT_REC_KVAH	Record #N kVAh	kVAh	-	-	RO	F3
R3X0B20	EVENT_REC_IA_DMD	Record #N Ia Demand	A	-	-	RO	F1
R3X0B21	EVENT_REC_IB_DMD	Record #N Ib Demand	A	-	-	RO	F1
R3X0B22	EVENT_REC_IC_DMD	Record #N Ic Demand	A	-	-	RO	F1
R3X0B23	EVENT_REC_IN_DMD	Record #N In Demand	A	-	-	RO	F1
R3X0B24L	EVENT_REC_P3_DMD	Record #N P3 Demand	0.01 x kW	-	-	RO	F4
R3X0B26L	EVENT_REC_Q3_DMD	Record #N Q3 Demand	0.01 x kvar	-	-	RO	F4
R3X0B28L	EVENT_REC_S3_DMD	Record #N S3 Demand	0.01 x kVA	-	-	RO	F3
R3X0B2A	EVENT_REC_IA_THD	Record #N Ia THD	0.1 x %	-	-	RO	F1
R3X0B2B	EVENT_REC_IB_THD	Record #N Ib THD	0.1 x %	-	-	RO	F1
R3X0B2C	EVENT_REC_IC_THD	Record #N Ic THD	0.1 x %	-	-	RO	F1
R3X0B2D	EVENT_REC_IN_THD	Record #N In THD	0.1 x %	-	-	RO	F1
R3X0B2E	EVENT_REC_VAN_THD	Record #N Van THD	0.1 x %	-	-	RO	F1
R3X0B2F	EVENT_REC_VBN_THD	Record #N Vbn THD	0.1 x %	-	-	RO	F1
R3X0B30	EVENT_REC_VCN_THD	Record #N Vcn THD	0.1 x %	-	-	RO	F1
R3X0B31	EVENT_REC_VAB_THD	Record #N Vab THD	0.1 x %	-	-	RO	F1
R3X0B32	EVENT_REC_VBC_THD	Record #N Vbc THD	0.1 x %	-	-	RO	F1
R3X0B33L	EVENT_REC_ANAL_IN	Record #N Analog Input	-	-	-	RO	F3

MLPQMII – Power Quality Meter II

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R3X0B35	EVENT_REC_MEM_TRIG	Record #N Trace Memory Trigger Cause	-	-	-	RO	F41
R3X0B36	REC_IF_ERR_COD	Record #N Internal Fault Error Code	-	-	-	RO	F108
R3X0B80	TRACE_USAGE	Trace Memory Usage	-	-	-	RO	F37
R3X0B81	TM_TRIG_FLAG	Trace Memory Trigger Flag	-	-	-	RO	F113
R3X0B82	TM_TRIG_CNT	Trace Memory Trigger Counter	-	-	-	RO	F1
R3X0B83	TM_TRIG_TOT	Total Trace Memory Triggers	-	-	-	RO	F1
R3X0B88	TRIG_CAUSE_TRACE_1	Trigger Cause - Trace 1	-	-	-	RO	F41
R3X0B89L	TIME_TRACE_1	Time - Hours/Minutes/Seconds - Trace 1	-	-	-	RO	F22, F23
R3X0B8BL	DATE_TRACE_1	Date - Month/Day/Year - Trace 1	-	-	-	RO	F24, F25
R3X0B8D	TRIG_SAMP_1	Trigger Sample Number 1	-	-	-	RO	F1
R3X0B8E	FREQ_1	Frequency 1	0.01 x Hz	-	-	RO	F1
R3X0B98	TRIG_CAUSE_TRACE_2	Trigger Cause - Trace 2	-	-	-	RO	F41
R3X0B99L	TIME_TRACE_2	Time - Hours/Minutes/Seconds - Trace 2	-	-	-	RO	F22, F23
R3X0B9BL	DATE_TRACE_2	Date - Month/Day/Year - Trace 2	-	-	-	RO	F24, F25
R3X0B9D	TRIG_SAMP_2	Trigger Sample Number 2	-	-	-	RO	F1
R3X0B9E	FREQ_2	Frequency 2	0.01 x Hz	-	-	RO	F1
R3X0BA8	TRIG_CAUSE_TRACE_3	Trigger Cause - Trace 3	-	-	-	RO	F41
R3X0BA9L	TIME_TRACE_3	Time - Hours/Minutes/Seconds - Trace 3	-	-	-	RO	F22, F23
R3X0BABL	DATE_TRACE_3	Date - Month/Day/Year - Trace 3	-	-	-	RO	F24, F25
R3X0BAD	TRIG_SAMP_3	Trigger Sample Number 3	-	-	-	RO	F1
R3X0BAE	FREQ_3	Frequency 3	0.01 x Hz	-	-	RO	F1
R3X0BB8	TM_WAVE_SEL	Trace Memory Waveform Selection	-	-	-	RO	F40
R3X0BB9L	WAVE_SCALE	Waveform Scale Factor	A/V x10000	-	-	RO	F3
R3X0BBBI	TM_DATA_BUFFER	Data Buffer 1	ADC counts/2	-	-	RO	F2
...	
R3X0DFAI	XX_TRACE[]	Data Buffer 576	ADC counts/2	-	-	RO	F2

SETPOINT VALUES

Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X00F0	HOUR_MIN	Time Hours/Minutes	hr/min	1	0 to 65535	R/W	F22
R4X00F1	SECONDS	Time Seconds	ms	1	0 to 59999	R/W	F23
R4X00F2	MONTH_DAY	Date Month/Day	---	1	0 to 65535	R/W	F24
R4X00F3	YEAR	Date Year	---	1	0 to 59999	R/W	F25
R4X100S20	METER_ID	Meter ID	ASCII	-	-	R/W	F10
R4X1010	DEFAULT_MSG_TIME	Default Message Time	Min x 0.1	1	1-1201***	R/W	F1
R4X1011	DEFAULT_MSG_BRIGHT	Default Message Brightness	%	20	0-100	R/W	F1
R4X1012	DISP_FILTER_CONST	Display Filter Constant	-	1	1-10	R/W	F1
R4X1018	MODBUS_ADDR	Serial Communication Address	-	1	1-255	R/W	F1
R4X1019	BAUD_RATE_COM1	Modbus Baud Rate	-	1	0-4	R/W	F12
R4X101A	PARITY_COM1	COM1 Parity	-	1	0-2	R/W	F13
R4X1020	BAUD_RATE_COM2	Modbus Baud Rate	-	1	0-4	R/W	F12
R4X1021	PARITY_COM2	COM2 Parity	-	1	0-2	R/W	F13
R4X1028	BAUD_RATE_RS232	Modbus Baud Rate	-	1	0-4	R/W	F12
R4X1029	PARITY_RS232	RS232 Parity	-	1	0-2	R/W	F13
R4X1030	CURR_DMND_TYPE	Current Demand Calculation Type	-	1	0-2	R/W	F28
R4X1031	CURR_DMND_INTVL	Current Demand Time Interval	minutes	1	5-180	R/W	F1
R4X1032	PWR_DMND_TYPE	Power Demand Calculation Type	-	1	0-2	R/W	F28
R4X1033	PWR_DMND_INTVL	Power Demand Time Interval	minutes	1	5-180	R/W	F1
R4X1034	COST_PER_KWH	Energy Cost Per 0.01 x kWh	cents x 0.01	1	1-50000	R/W	F1
R4X1035		Extract Fundamental	-	1	0-1	R/W	F11
R4X1038	CLEAR_ENERGY	Clear Energy Values	-	1	0-1	R/W	F31
R4X1039	CLEAR_DEMAND	Clear Max Demand Values	-	1	0-1	R/W	F31
R4X103A	CLEAR_CURRENT	Clear Min/Max Current Values	-	1	0-1	R/W	F31
R4X103B	CLEAR_VOLTAGE	Clear Min/Max Voltage Values	-	1	0-1	R/W	F31
R4X103C	CLEAR_PWR	Clear Min/Max Power Values	-	1	0-1	R/W	F31
R4X103D	CLEAR_THD	Clear Max THD Values	-	1	0-1	R/W	F31
R4X103E	CLEAR_PULSE_COUNTER	Clear Pulse Input Values	-	1	0-1	R/W	F31
R4X103F	CLEAR_EVENT_REC	Clear Event Record	-	1	0-1	R/W	F31
R4X1040	CLR_DMD_VAL	Clear All Demand	-	1	0-1	R/W	F31
R4X1041	CLR_FREQ_VAL	Clear Frequency Values	-	1	0-1	R/W	F31
R4X1044	DNP_PORT	DNP Port	---	1	0-3	R/W	F47
R4X1045	DNP_SLAVE_ADD	DNP Slave Address	---	1	0-255	R/W	F1
R4X1046	DNP_TRN_AR_TIME	DNP Turnaround Time	ms	10	0-100	R/W	F1
R4X1047	TP1_START_TIME	Tarrif Period 1 Start time	minutes	1	0 to 1439	R/W	F1
R4X1048	TP1_PER_MWH	Tarrif Period 1 Cost per MWh	¢ x 0.01	1	1 to 50000	R/W	F1
R4X1049	TP2_START_TIME	Tarrif Period 2 Start time	minutes	1	0 to 1439	R/W	F1
R4X104A	TP2_PER_MWH	Tarrif Period 2 Cost per MWh	¢ x 0.01	1	1 to 50000	R/W	F1
R4X104B	TP3_START_TIME	Tarrif Period 3 Start time	minutes	1	0 to 1439	R/W	F1
R4X104C	TP3_PER_MWH	Tarrif Period 3 Cost per MWh	¢ x 0.01	1	1 to 50000	R/W	F1
R4X1050	CT_PRIMARY	Phase CT Primary	A	5	0-12000 ****	R/W	F1

Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X1051	NEUTRAL_CURR_SENSING	Neutral Current Sensing	-	1	0–2	R/W	F16
R4X1052	NEUTRAL_CT_PRI	Neutral CT Primary	A	5	5–6000	R/W	F1
R4X1053	VT_WIRING	VT Wiring	-	1	0–6	R/W	F15
R4X1054	VT_RATIO	VT Ratio	0.1 x ratio	1	10–35000	R/W	F1
R4X1055	VT_NOM_SEC	VT Nominal Secondary Voltage	V	1	40–600	R/W	F1
R4X1056	VOLTS_NOM_DIR_INP	Nominal Direct Input Voltage	V	1	40–600	R/W	F1
R4X1057	FREQ_NOM_SYS	Nominal Frequency	Hz	10	50–60	R/W	F1
R4X1058	CT_WIRING	CT Wiring	-	1	0–3	R/W	F44
R4X1059	UNDER_FREQ_LEVEL	Underfrequency Level	0.01xHz	1	2000-7000	R/W	F1
R4X1060	ANAL_OUT_1_TYPE	Analog Output 1 Main Type	-	1	0–59	R/W	F14
R4X1061	ANAL_OUT_1_MAIN_MIN	Analog Output 1 Main Minimum Value (Depends on Analog Output 1 Main Type Register)			See Table 7.1	R/W	
R4X1062	ANAL_OUT_1_MAIN_MAX	Analog Output 1 Main Maximum Value (Depends on Analog Output 1 Main Type Register)			See Table 7.1	R/W	
R4X1063	ANAL_OUT_1_ALT_TYPE	Analog Output 1 Alternate Type	-	1	0–58	R/W	F14
R4X1064	ANAL_OUT_1_ALT_MIN	Analog Output 1 Alternate Minimum Value (Depends on Analog Output 1 Alternate Type Register)			See Table 7.1	R/W	
R4X1065	ANAL_OUT_1_ALT_MAX	Analog Output 1 Alternate Maximum Value (Depends on Analog Output 1 Alternate Type Register)			See Table 7.1	R/W	
R4X1067	AO_1_SER_VALUE	Analog Output 1 Serial Value	-	1	*see details	R/W	F2
R4X1068	ANAL_OUT_2_TYPE	Analog Output 2 Main Type	-	1	0–59	R/W	F14
R4X1069	ANAL_OUT_2_MAIN_MIN	Analog Output 2 Main Minimum Value (Depends on Analog Output 2 Main Type Register)			See Table 7.1	R/W	
R4X106A	ANAL_OUT_2_MAIN_MAX	Analog Output 2 Main Maximum Value (Depends on Analog Output 2 Main Type Register)			See Table 7.1	R/W	
R4X106B	ANAL_OUT_2_ALT_TYPE	Analog Output 2 Alternate Type	-	1	0–58	R/W	F14
R4X106C	ANAL_OUT_2_ALT_MIN	Analog Output 2 Alternate Minimum Value (Depends on Analog Output 2 Alternate Type Register)			See Table 7.1	R/W	
R4X106D	ANAL_OUT_2_ALT_MAX	Analog Output 2 Alternate Maximum Value (Depends on Analog Output 2 Alternate Type Register)			See Table 7.1	R/W	
R4X106F	AO_2_SER_VALUE	Analog Output 2 Serial Value	-	1	*see details	R/W	F2
R4X1070	ANAL_OUT_3_TYPE	Analog Output 3 Main Type	-	1	0–59	R/W	F14
R4X1071	ANAL_OUT_3_MAIN_MIN	Analog Output 3 Main Minimum Value (Depends on Analog Output 3 Main Type Register)			See Table 7.1	R/W	
R4X1072	ANAL_OUT_3_MAIN_MAX	Analog Output 3 Main Maximum Value (Depends on Analog Output 3 Main Type Register)			See Table 7.1	R/W	
R4X1073	ANAL_OUT_3_ALT_TYPE	Analog Output 3 Alternate Type	-	1	0–58	R/W	F14
R4X1074	ANAL_OUT_3_ALT_MIN	Analog Output 3 Alternate Minimum Value (Depends on Analog Output 3 Alternate Type Register)			See Table 7.1	R/W	

Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X1075	ANAL_OUT_3_ALT_MAX	Analog Output 3 Alternate Maximum Value (Depends on Analog Output 3 Alternate Type Register)			See Table 7.1	R/W	
R4X1077	AO_3_SER_VALUE	Analog Output 3 Serial Value	–	1	*see details	R/W	F2
R4X1078	ANAL_OUT_4_TYPE	Analog Output 4 Main Type	–	1	0–59	R/W	F14
R4X1079	ANAL_OUT_4_MAIN_MIN	Analog Output 4 Main Minimum Value (Depends on Analog Output 4 Main Type Register)			See Table 7.1	R/W	
R4X107A	ANAL_OUT_4_MAIN_MAX	Analog Output 4 Main Maximum Value (Depends on Analog Output 4 Main Type Register)			See Table 7.1	R/W	
R4X107B	ANAL_OUT_4_ALT_TYPE	Analog Output 4 Alternate Type	–	1	0–58	R/W	F14
R4X107C	ANAL_OUT_4_ALT_MIN	Analog Output 4 Alternate Minimum Value (Depends on Analog Output 4 Alternate Type Register)			See Table 7.1	R/W	
R4X107D	ANAL_OUT_4_ALT_MAX	Analog Output 4 Alternate Maximum Value (Depends on Analog Output 4 Alternate Type Register)			See Table 7.1	R/W	
R4X107F	AO_4_SER_VALUE	Analog Output 4 Serial Value	–	1	*see details	R/W	F2
R4X1080	ANAL_INPUT_SEL	Analog Input Main/Alternate Select Relay	–	1	0–3	R/W	F19
R4X1081S20	ANAL_IN_MAIN_NAME	Analog Input Main Name	ASCII	–	–	R/W	F10
R4X108BS10	ANAL_IN_MAIN_UNITS	Analog Input Main Units	ASCII	–	–	R/W	F10
R4X1090	SP_MAIN_4MA_VALUE	Analog Input Main 4 mA Value	–	1	0–65000	R/W	F1
R4X1091	SP_MAIN_20MA_VALUE	Analog Input Main 20 mA Value	–	1	0–65000	R/W	F1
R4X1092	SP_AI_MAIN_RLY	Analog Input Main Relay	–	1	0–4	R/W	F29
R4X1093	SP_AI_MAIN_LVL	Analog Input Main Level	–	1	0–65000	R/W	F1
R4X1094	SP_AI_MAIN_DLY	Analog Input Main Delay	0.1 x s	5	5–6000	R/W	F1
R4X1098S20	ANAL_IN_ALT_NAME	Analog Input Alternate Name	ASCII	–	–	R/W	F10
R4X10A2S10	ANAL_IN_ALT_UNITS	Analog Input Alternate Units	ASCII	–	–	R/W	F10
R4X10A7	SP_ALT_4MA_VALUE	Analog Input Alternate 4 mA Value	–	1	0–65000	R/W	F1
R4X10A8	SP_ALT_20MA_VALUE	Analog Input Alternate 20 mA Value	–	1	0–65000	R/W	F1
R4X10A9	SP_AI_ALT_RLY	Analog Input Alternate Relay	–	1	0–4	R/W	F29
R4X10AA	SP_AI_ALT_LVL	Analog Input Alternate Level	–	1	0–65000	R/W	F1
R4X10AB	SP_AI_ALT_DLY	Analog Input Alternate Delay	0.1 x s	5	5–6000	R/W	F1
R4X10B0S20	SWITCH_A_NAME	Switch A Name	ASCII	–	–	R/W	F10
R4X10BA	SWITCH_A_FUNCTION	Switch A Function	–	1	0–12	R/W	F20
R4X10BB	SWITCH_A_ACTIV	Switch A Activation	–	1	0–1	R/W	F27
R4X10BC	SWITCH_A_TIME_DLY	Switch A Time Delay	0.1 x s	1	0–6000	R/W	F1
R4X10C0S20	SWITCH_B_NAME	Switch B Name	ASCII	–	–	R/W	F10
R4X10CA	SWITCH_B_FUNCTION	Switch B Function	–	1	0–12	R/W	F20
R4X10CB	SWITCH_B_ACTIV	Switch B Activation	–	1	0–1	R/W	F27
R4X10CC	SWITCH_B_DLY	Switch B Time Delay	0.1 x s	1	0–6000	R/W	F1
R4X10D0S20	SWITCH_C_NAME	Switch C Name	ASCII	–	–	R/W	F10
R4X10DA	SWITCH_C_FUNCTION	Switch C Function	–	1	0–12	R/W	F20
R4X10DB	SWITCH_C_ACTIV	Switch C Activation	–	1	0–1	R/W	F27
R4X10DC	SWITCH_C_DLY	Switch C Time Delay	0.1 x s	1	0–6000	R/W	F1
R4X10E0S20	SWITCH_D_NAME	Switch D Name	ASCII	–	–	R/W	F10
R4X10EA	SWITCH_D_FUNCTION	Switch D Function	–	1	0–12	R/W	F20
R4X10EB	SWITCH_D_ACTIV	Switch D Activation	–	1	0–1	R/W	F27

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Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X10EC	SWITCH_D_DLY	Switch D Time Delay	0.1 x s	1	0–6000	R/W	F1
R4X10F0	POS_KWH_PULSE_RLY	Positive kWh Pulse Output Relay	–	1	0–4	R/W	F29
R4X10F1	POS_KWH_PULSE_INT	Positive kWh Pulse Output Interval	kWh	1	1–65000	R/W	F1
R4X10F2	NEG_KWH_PULSE_RLY	Negative kWh Pulse Output Relay	–	1	0–4	R/W	F29
R4X10F3	NEG_KWH_PULSE_INT	Negative kWh Pulse Output Interval	kWh	1	1–65000	R/W	F1
R4X10F4	POS_KVARH_PULSE_RLY	Positive kvarh Pulse Output Relay	–	1	0–3	R/W	F29
R4X10F5	POS_KVARH_PULSE_INT	Positive kvarh Pulse Output Interval	kvarh	1	1–65000	R/W	F1
R4X10F6	NEG_KVARH_PULSE_RLY	Negative kvarh Pulse Output Relay	–	1	0–3	R/W	F29
R4X10F7	NEG_KVARH_PULSE_INT	Negative kvarh Pulse Output Interval	kvarh	1	1–65000	R/W	F1
R4X10F8	KVAH_PULSE_RLY	kVAh Pulse Output Relay	–	1	0–3	R/W	F29
R4X10F9	KVAH_PULSE_INT	kVAh Pulse Output Interval	kVAh	1	1–65000	R/W	F1
R4X10FA	PULSE_OUTPUT_WIDTH	Pulse Output Width	ms	10	100–2000	R/W	F1
R4X10FB	SER_PUL_RLYINTL	Serial Pulse Relay Interval	Ms	100	100 to 10000	R/W	F1
R4X10FDS10	PULSE_INPUT_UNITS	Pulse Input Units	ASCII	–	–	R/W	F10
R4X1102	PULSE_INPUT1_VAL	Pulse Input 1 Value	Units	1	0–65000	R/W	F1
R4X1103	PULSE_INPUT2_VAL	Pulse Input 2 Value	Units	1	0–65000	R/W	F1
R4X1104	PULSE_INPUT3_VAL	Pulse Input 3 Value	Units	1	0–65000	R/W	F1
R4X1105	PULSE_INPUT4_VAL	Pulse Input 4 Value	Units	1	0–65000	R/W	F1
R4X1106	PULSE_INPUT_TOTAL_SP	Pulse Input Total		1	0–9	R/W	F43
R4X1108	ALARM_RLY_OP	Alarm Relay Operation	–	1	0–1	R/W	F17
R4X1109	ALARM_RLY_ACTIV	Alarm Relay Activation	–	1	0–1	R/W	F18
R4X1110	AUX_RLY_1_OP	Auxiliary Relay 1 Operation	–	1	0–1	R/W	F17
R4X1111	AUX_RLY_1_ACTIV	Auxiliary Relay 1 Activation	–	1	0–1	R/W	F18
R4X1118	AUX_RLY_2_OP	Auxiliary Relay 2 Operation	–	1	0–1	R/W	F17
R4X1119	AUX_RLY_2_ACTIV	Auxiliary Relay 2 Activation	–	1	0–1	R/W	F18
R4X1120	AUX_RLY_3_OP	Auxiliary Relay 3 Operation	–	1	0–1	R/W	F17
R4X1121	AUX_RLY_3_ACTIV	Auxiliary Relay 3 Activation	–	1	0–1	R/W	F18
R4X1126	PH_OC_ACT	Phase Overcurrent Activation	–	1	0–1	R/W	F115
R4X1127	DET_IV_ALMS	Detect I/V Alarms Using Percentage	–	1	0–1	R/W	F31
R4X1128	PHASE_UC_RLY	Phase Undercurrent Relay	–	1	0–4	R/W	F29
R4X1129	PHASE_UC_LVL	Phase Undercurrent Level in Amps	A	1	1–7500	R/W	F1
R4X112A	PHASE_UC_DLY	Phase Undercurrent Delay	0.1 x s	5	5–6000	R/W	F1
R4X112B	PHASE_OC_RLY	Phase Overcurrent Relay	–	1	0–4	R/W	F29
R4X112C	PHASE_OC_LVL	Phase Overcurrent Level in Amps	A	1	1–7500	R/W	F1
R4X112D	PHASE_OC_DLY	Phase Overcurrent Delay	0.1 x s	5	5–6000	R/W	F1
R4X112E	NEUT_OC_RLY	Neutral Overcurrent Relay	–	1	0–4	R/W	F29
R4X112F	NEUT_OC_LVL	Neutral Overcurrent Level in Amps	A	1	1–7500	R/W	F1
R4X1130	NEUT_OC_DLY	Neutral Overcurrent Delay	0.1 x s	5	5–6000	R/W	F1
R4X1131	UV_RLY	Undervoltage Relay	–	1	0–4	R/W	F29
R4X1132	UV_LVL	Undervoltage Level in Volts	V	1	20–65000	R/W	F1
R4X1133	UV_DLY	Undervoltage Delay	0.1 x s	5	5–6000	R/W	F1
R4X1134	PH_REQ_FOR_OP_UV	Phases Required for Operation of Undervoltage	–	1	0–2	R/W	F30
R4X1135	ZERO_VOLTS_DETECT	Detects U/V Below 20V	–	1	0–1	R/W	F11
R4X1136	OV_RLY	Overvoltage Relay	–	1	0–4	R/W	F29
R4X1137	OV_LVL	Overvoltage Level in Volts	V	1	1–65000	R/W	F1
R4X1138	OV_DLY	Overvoltage Delay	0.1 x s	5	5–6000	R/W	F1
R4X1139	PH_REQ_FOR_OP_OV	Phases Required for Operation of Overvoltage	–	1	0–2	R/W	F30
R4X113A	PH_CURR_UB_RLY	Phase Current Unbalance Relay	–	1	0–4	R/W	F29

Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X113B	PH_CURR_UB_LVL	Phase Current Unbalance Level	%	1	1–100	R/W	F1
R4X113C	PH_CURR_UB_DLY	Phase Current Unbalance Delay	0.1 x s	5	5–6000	R/W	F1
R4X113D	VOLT_UB_RLY	Voltage Unbalance Relay	–	1	0–4	R/W	F29
R4X113E	VOLT_UB_LVL	Voltage Unbalance Level	%	1	1–100	R/W	F1
R4X113F	VOLT_UB_DLY	Voltage Unbalance Delay	0.1 x s	5	5–6000	R/W	F1
R4X1140	PH_VOLT_REV_RLY	Phase Voltage Reversal Relay	–	1	0–4	R/W	F29
R4X1141	PH_VOLT_REV_DLY	Phase Voltage Reversal Delay	0.1 x s	5	5–6000	R/W	F1
R4X1142	ZERO_AMPS_DETECT	Detect Undercurrent When 0A	–	1	0–1	R/W	F31
R4X1143	CTPH_UC_LEVEL	Phase Undercurrent Level in % of CT	%	1	0–100	R/W	F1
R4X1144	CTPH_OC_LEVEL	Phase Overcurrent Level in % of CT	%	1	0–150	R/W	F1
R4X1145	CTNEUT_OC_LEVEL	Neutral Overcurrent Level in % of CT	%	1	0–150	R/W	F1
R4X1146	VTUV_LEVEL	Undervoltage Level in % of VT	%	1	20–150	R/W	F1
R4X1147	VTOV_LEVEL	Overvoltage Level in % of VT	%	1	20–150	R/W	F1
R4X1148	AVG_CURR_THD_RLY	Average Current THD Relay	–	1	0–4	R/W	F29
R4X1149	AVG_CURR_THD_LVL	Average Current THD Level	0.1 x %	5	5–1000	R/W	F1
R4X114A	AVG_CURR_THD_DLY	Average Current THD Delay	0.1 x s	5	5–6000	R/W	F1
R4X114B	AVG_VOLT_THD_RLY	Average Voltage THD Relay	–	1	0–4	R/W	F29
R4X114C	AVG_VOLT_THD_LVL	Average Voltage THD Level	0.1 x %	5	5–1000	R/W	F1
R4X114D	AVG_VOLT_THD_DLY	Average Voltage THD Delay	0.1 x s	5	5–6000	R/W	F1
R4X1158	UF_RLY	Under Frequency Relay	–	1	0–4	R/W	F29
R4X1159	UF_LVL	Under Frequency Level	0.01 x Hz	1	2000–7000	R/W	F1
R4X115A	UF_DLY	Under Frequency Delay	0.1 x s	1	1–100	R/W	F1
R4X115B	ZERO_FREQ_DETECT	Zero Frequency Detect	–	1	0–1	R/W	F11
R4X115C	OF_RLY	Over Frequency Relay	–	1	0–4	R/W	F29
R4X115D	OF_LVL	Over Frequency Level	0.01 x Hz	1	2000–12500	R/W	F1
R4X115E	OF_DLY	Over Frequency Delay	0.1 x s	1	1–100	R/W	F1
R4X1167	POW_ALMS_UNITS	Power Alarms Level Base Units	–	1	0–1	R/W	F114
R4X1168	POS_REAL_PWR_RLY	Positive Real Power Relay	–	1	0–4	R/W	F29
R4X1169	POS_REAL_PWR_LVL	Positive Real Power Level in KW	kW	1	1–65000	R/W	F1
R4X116A	POS_REAL_PWR_DLY	Positive Real Power Delay	0.1 x s	5	5–6000	R/W	F1
R4X116B	NEG_REAL_PWR_RLY	Negative Real Power Relay	–	1	0–4	R/W	F29
R4X116C	NEG_REAL_PWR_LVL	Negative Real Power Level in KW	kW	1	1–65000	R/W	F1
R4X116D	NEG_REAL_PWR_DLY	Negative Real Power Delay	0.1 x s	5	5–6000	R/W	F1
R4X116E	POS_REACT_PWR_RLY	Positive Reactive Power Relay	–	1	0–4	R/W	F29
R4X116F	POS_REACT_PWR_LVL	Positive Reactive Power Level in kVAR	kvar	1	1–65000	R/W	F1
R4X1170	POS_REACT_PWR_DLY	Positive Reactive Power Delay	0.1 x s	5	5–6000	R/W	F1
R4X1171	NEG_REACT_PWR_RLY	Negative Reactive Power Relay	–	1	0–4	R/W	F29
R4X1172	NEG_REACT_PWR_LVL	Negative Reactive Power Level in kVAR	kvar	1	1–65000	R/W	F1
R4X1173	NEG_REACT_PWR_DLY	Negative Reactive Power Delay	0.1 x s	5	5–6000	R/W	F1
R4X1174	POS_REAL_LEV_MW	Positive Real Power Level in MW	0.01MW	1	1–65000	R/W	F1
R4X1175	NEG_REAL_LEV_MW	Negative Real Power Level in MW	0.01MW	1	1–65000	R/W	F1
R4X1176	POS_REAC_LEV_MW	Positive Reactive Power Level in MVAR	0.01MVAR	1	1–65000	R/W	F1
R4X1177	NEG_REAC_LEV_MW	Negative Reactive Power Level in MVAR	0.01MVAR	1	1–65000	R/W	F1
R4X1178	PF_LEAD_1_RLY	Power Factor Lead 1 Relay	–	1	0–4	R/W	F29
R4X1179	PF_LEAD_1_PU_LVL	Power Factor Lead 1 Pickup Level	0.01 x PF	1	0–100	R/W	F1
R4X117A	PF_LEAD_1_DO_LVL	Power Factor Lead 1 Dropout Level	0.01 x PF	1	0–100	R/W	F1
R4X117B	PF_LEAD_1_DLY	Power Factor Lead 1 Delay	0.1 x s	5	5–6000	R/W	F1
R4X117C	PF_LAG_1_RLY	Power Factor Lag 1 Relay	–	1	0–4	R/W	F29

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Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X117D	PF_LAG_1_PU_LVL	Power Factor Lag 1 Pickup Level	0.01 x PF	1	0–100	R/W	F1
R4X117E	PF_LAG_1_DO_LVL	Power Factor Lag 1 Dropout Level	0.01 x PF	1	0–100	R/W	F1
R4X117F	PF_LAG_1_DLY	Power Factor Lag 1 Delay	0.1 x s	5	5–6000	R/W	F1
R4X1180	PF_LEAD_2_RLY	Power Factor Lead 2 Relay	–	1	0–4	R/W	F29
R4X1181	PF_LEAD_2_PU_LVL	Power Factor Lead 2 Pickup Level	0.01 x PF	1	0–100	R/W	F1
R4X1182	PF_LEAD_2_DO_LVL	Power Factor Lead 2 Dropout Level	0.01 x PF	1	0–100	R/W	F1
R4X1183	PF_LEAD_2_DLY	Power Factor Lead 2 Delay	0.1 x s	5	5–6000	R/W	F1
R4X1184	PF_LAG_2_RLY	Power Factor Lag 2 Relay	–	1	0–4	R/W	F29
R4X1185	PF_LAG_2_PU_LVL	Power Factor Lag 2 Pickup Level	0.01 x PF	1	0–100	R/W	F1
R4X1186	PF_LAG_2_DO_LVL	Power Factor Lag 2 Dropout Level	0.01 x PF	1	0–100	R/W	F1
R4X1187	PF_LAG_2_DLY	Power Factor Lag 2 Delay	0.1 x s	5	5–6000	R/W	F1
R4X1190	PH_A_CURR_DMND_RLY	Phase A Current Demand Relay	–	1	0–4	R/W	F29
R4X1191	PH_A_CURR_DMND_LVL	Phase A Current Demand Level	A	1	1–7500	R/W	F1
R4X1192	PH_B_CURR_DMND_RLY	Phase B Current Demand Relay	–	1	0–4	R/W	F29
R4X1193	PH_B_CURR_DMND_LVL	Phase B Current Demand Level	A	1	1–7500	R/W	F1
R4X1194	PH_C_CURR_DMND_RLY	Phase C Current Demand Relay	–	1	0–4	R/W	F29
R4X1195	PH_C_CURR_DMND_LVL	Phase C Current Demand Level	A	1	1–7500	R/W	F1
R4X1196	NEUT_CURR_DMND_RLY	Neutral Current Demand Relay	–	1	0–4	R/W	F29
R4X1197	NEUT_CURR_DMND_LVL	Neutral Current Demand Level	0.1 x A	1	1–65000	R/W	F1
R4X1198	POS_REAL_PWR_DMD_RLY	Positive Real Power Demand Relay	–	1	0–4	R/W	F29
R4X1199	POS_REAL_PWR_DMD_LVL	Positive Real Power Demand Level	kW	1	1–65000	R/W	F1
R4X119A	POS_REAC_PWR_DMD_RLY	Positive Reactive Power Demand Relay	–	1	0–4	R/W	F29
R4X119B	POS_REAC_PWR_DMD_LVL	Positive Reactive Power Demand Level	kvar	1	1–65000	R/W	F1
R4X119C	APPAR_PWR_DMD_RLY	Apparent Power Demand Relay	–	1	0–4	R/W	F29
R4X119D	APPAR_PWR_DMD_LVL	Apparent Power Demand Level	kVA	1	1–65000	R/W	F1
R4X119E	NEG_REAL_PWR_DMD_RLY	Negative Real Power Demand Relay	–	1	0–4	R/W	F29
R4X119F	NEG_REAL_PWR_DMD_LVL	Negative Real Power Demand Level	kW	1	1–65000	R/W	F1
R4X11A0	NEG_REAC_PWR_DMD_RLY	Negative Reactive Power Demand Relay	–	1	0–4	R/W	F29
R4X11A1	NEG_REAC_PWR_DMD_LVL	Negative Reactive Power Demand Level	kvar	1	1–65000	R/W	F1
R4X11A8	PULSE_IN1_RLY	Pulse Count Relay	–	1	0–4	R/W	F29
R4X11A9	PULSE_IN1_LVL	Pulse Count Level	–	1	1–65000	R/W	F1
R4X11AA	PULSE_IN1_DLY	Pulse Count Delay	0.1 x s	5	5–6000	R/W	F1
R4X11B0	COM1_FAIL_ALM_DLY	Serial COM1 Failure Alarm Delay	s	1	5–61 ***	R/W	F1
R4X11B1	COM2_FAIL_ALM_DLY	Serial COM2 Failure Alarm Delay	s	1	5–61 ***	R/W	F1
R4X11B2	CLOCK_NOT_SET_ALM	Clock Not Set Alarm	–	1	0–1	R/W	F11
R4X11B3	DATALOG1_PER_FUL_ALM	Data Log 1 Percentage Full Alarm	%	1	50–101 ***	R/W	F1
R4X11B4	DATALOG2_PER_FUL_ALM	Data Log 2 Percentage Full Alarm	%	1	50–101 ***	R/W	F1
R4X11B8	PULSE_IN2_RLY	Pulse Input 2 Relay	–	1	0–4	R/W	F29
R4X11B9	PULSE_IN2_LVL	Pulse Input 2 Level	–	1	1–65000	R/W	F1
R4X11BA	PULSE_IN2_DLY	Pulse Input 2 Delay	0.1 x S	5	5–6000	R/W	F1
R4X11BB	PULSE_IN3_RLY	Pulse Input 3 Relay	–	1	0–4	R/W	F29
R4X11BC	PULSE_IN3_LVL	Pulse Input 3 Level	–	1	1–65000	R/W	F1
R4X11BD	PULSE_IN3_DLY	Pulse Input 3 Delay	0.1 x S	5	5–6000	R/W	F1
R4X11BE	PULSE_IN4_RLY	Pulse Input 4 Relay	–	1	0–4	R/W	F29
R4X11BF	PULSE_IN4_LVL	Pulse Input 4 Level	–	1	1–65000	R/W	F1
R4X11C0	PULSE_IN4_DLY	Pulse Input 4 Delay	0.1 x S	5	5–6000	R/W	F1
R4X11C1	PULSE_TOT_RLY	Totalized Pulse Input Relay	–	1	0–4	R/W	F29
R4X11C2	PULSE_TOT_LVL	Totalized Pulse Input Level	–	1	1–65000	R/W	F1
R4X11C3	PULSE_TOT_DLY	Totalized Pulse Input Delay	0.1 x S	5	5–6000	R/W	F1
R4X11C8	CURR_VOLT_SIM	Current/Voltage Simulation	–	1	0–1	R/W	F11

Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X11C9	CURR_VOLT_SIM_TIME	Current/Voltage Simulation Time	min	5	5–305	R/W	F1*****
R4X11CA	AMPS_A_SIM	Phase A Current	A	1	0–10000	R/W	F1
R4X11CB	AMPS_B_SIM	Phase B Current	A	1	0–10000	R/W	F1
R4X11CC	AMPS_C_SIM	Phase C Current	A	1	0–10000	R/W	F1
R4X11CD	AMPS_N_SIM	Neutral Current	0.1 x A	1	0–5000	R/W	F1
R4X11CE	VAX_VOLTS_SIM	Vax Voltage	V	1	0–65000	R/W	F1
R4X11CF	VBX_VOLTS_SIM	Vbx Voltage	V	1	0–65000	R/W	F1
R4X11D0	VCX_VOLTS_SIM	Vcx Voltage	V	1	0–65000	R/W	F1
R4X11D1	PHASE_ANGLE_SIM	Phase Angle	degrees	1	0–359	R/W	F1
R4X11D2	ANAL_OUT_SIM	Analog Outputs Simulation	–	1	0–1	R/W	F11
R4X11D3	ANAL_OUT_SIM_TIME	Analog Outputs Simulation Time	min	5	5–305	R/W	F1*****
R4X11D4	ANAL_OUT1_SIM	Analog Output 1	0.1 x %	1	0–1201 ***	R/W	F1
R4X11D5	ANAL_OUT2_SIM	Analog Output 2	0.1 x %	1	0–1201 ***	R/W	F1
R4X11D6	ANAL_OUT3_SIM	Analog Output 3	0.1 x %	1	0–1201 ***	R/W	F1
R4X11D7	ANAL_OUT4_SIM	Analog Output 4	0.1 x %	1	0–1201 ***	R/W	F1
R4X11D8	ANAL_IN_SIM	Analog Input Simulation	–	1	0–1	R/W	F11
R4X11D9	ANAL_IN_SIM_TIME	Analog Input Simulation Time	min	5	5–305	R/W	F1*****
R4X11DA	ANAL_IN_VALUE_SIM	Analog Input	0.1 x mA	1	40–201	R/W	F1***
R4X11DB	SWITCH_IN_SIM	Switch Inputs Simulation	–	1	0–1	R/W	F11
R4X11DC	SWITCH_IN_SIM_TIME	Switch Inputs Simulation Time	min	5	5–305	R/W	F1*****
R4X11DD	SWITCH_IN_A_SIM	Switch Input A	–	1	0–1	R/W	F27
R4X11DE	SWITCH_IN_B_SIM	Switch Input B	–	1	0–1	R/W	F27
R4X11DF	SWITCH_IN_C_SIM	Switch Input C	–	1	0–1	R/W	F27
R4X11E0	SWITCH_IN_D_SIM	Switch Input D	–	1	0–1	R/W	F27
R4X11E4	TIME_RLY	Time Relay	–	1	0–4	R/W	F29
R4X11E5	PICKUP_HR_MIN	Pickup Time Hours/Minutes	hr/min	1	0–65535	R/W	F22
R4X11E6	PICKUP_SEC	Pickup Time Seconds	ms	1000	0–59000	R/W	F1
R4X11E7	DROPOUT_HR_MIN	Dropout Time Hours/Minutes	hr/min	1	0–65535	R/W	F22
R4X11E8	DROPOUT_SEC	Dropout Time Seconds	ms	1000	0–59000	R/W	F1
R4X11F0S40	PROG_MSG	Programmable message	ASCII	1	32–127	R/W	F10
R4X1210S40	FLSH_MSG	Flash message	ASCII	1	32–127	R/W	F10
R4X1260L	SP_LOG_1_INTVL	Log 1 Interval	s	1	1–86400	R/W	F3
R4X1262L	SP_LOG_2_INTVL	Log 2 Interval	s	1	1–86400	R/W	F3
R4X1264	SP_LOG_1_MODE	Log 1 Mode	–	1	0–1	R/W	F32
R4X1265	SP_LOG_2_MODE	Log 2 Mode	–	1	0–1	R/W	F32
R4X1266	SP_LOG_SIZE_DETERM	Log Size Determination	–	1	0–1	R/W	F33
R4X1267	SP_LOG_1_SIZE	Log 1 Size	%	1	0–100	R/W	F1
R4X1268	SP_LOG_BLOCK	Data Log Memory Access Block Number	–	1	0–511	R/W	F1
R4X1269	STOP_LOG_1	Stop Data Log 1	–	1	0–1	R/W	F31
R4X126A	STOP_LOG_2	Stop Data Log 2	–	1	0–1	R/W	F31
R4X1270	SP_IA_INTVL	Ia Log Assignment	–	1	0–3	R/W	F34
R4X1271	SP_IB_INTVL	Ib Log Assignment	–	1	0–3	R/W	F34
R4X1272	SP_IC_INTVL	Ic Log Assignment	–	1	0–3	R/W	F34
R4X1273	SP_I AVG_INTVL	Iavg Log Assignment	–	1	0–3	R/W	F34
R4X1274	SP_IN_INTVL	In Log Assignment	–	1	0–3	R/W	F34
R4X1275	SP_I_UB_INTVL	I Unbalance Log Assignment	–	1	0–3	R/W	F34
R4X1276	SP_VAN_INTVL	Van Log Assignment	–	1	0–3	R/W	F34
R4X1277	SP_VBN_INTVL	Vbn Log Assignment	–	1	0–3	R/W	F34
R4X1278	SP_VCN_INTVL	Vcn Log Assignment	–	1	0–3	R/W	F34
R4X1279	SP_VPAVG_INTVL	Vpavg Log Assignment	–	1	0–3	R/W	F34
R4X127A	SP_VAB_INTVL	Vab Log Assignment	–	1	0–3	R/W	F34

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Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X127B	SP_VBC_INTVL	Vbc Log Assignment	-	1	0-3	R/W	F34
R4X127C	SP_VCA_INTVL	Vca Log Assignment	-	1	0-3	R/W	F34
R4X127D	SP_VLAVG_INTVL	Vlavg Log Assignment	-	1	0-3	R/W	F34
R4X127E	SP_V_UB_INTVL	V Unbalance Log Assignment	-	1	0-3	R/W	F34
R4X127F	SP_PA_INTVL	Pa Log Assignment	-	1	0-3	R/W	F34
R4X1280	SP_OA_INTVL	Qa Log Assignment	-	1	0-3	R/W	F34
R4X1281	SP_SA_INTVL	Sa Log Assignment	-	1	0-3	R/W	F34
R4X1282	SP_PFA_INTVL	PFa Log Assignment	-	1	0-3	R/W	F34
R4X1283	SP_PB_INTVL	Pb Log Assignment	-	1	0-3	R/W	F34
R4X1284	SP_OB_INTVL	Qb Log Assignment	-	1	0-3	R/W	F34
R4X1285	SP_SB_INTVL	Sb Log Assignment	-	1	0-3	R/W	F34
R4X1286	SP_PFB_INTVL	PFb Log Assignment	-	1	0-3	R/W	F34
R4X1287	SP_PC_INTVL	Pc Log Assignment	-	1	0-3	R/W	F34
R4X1288	SP_QC_INTVL	Qc Log Assignment	-	1	0-3	R/W	F34
R4X1289	SP_SC_INTVL	Sc Log Assignment	-	1	0-3	R/W	F34
R4X128A	SP_PFC_INTVL	PFc Log Assignment	-	1	0-3	R/W	F34
R4X128B	SP_P3_INTVL	P3 Log Assignment	-	1	0-3	R/W	F34
R4X128C	SP_Q3_INTVL	Q3 Log Assignment	-	1	0-3	R/W	F34
R4X128D	SP_S3_INTVL	S3 Log Assignment	-	1	0-3	R/W	F34
R4X128E	SP_PF3_INTVL	PF3 Log Assignment	-	1	0-3	R/W	F34
R4X128F	SP_FREQUENCY_INTVL	Frequency Log Assignment	-	1	0-3	R/W	F34
R4X1290	SP_POS_KWH_INTVL	Positive kWh Log Assignment	-	1	0-3	R/W	F34
R4X1291	SP_NEG_KWH_INTVL	Negative kWh Log Assignment	-	1	0-3	R/W	F34
R4X1292	SP_POS_KVARH_INTVL	Positive kvarh Log Assignment	-	1	0-3	R/W	F34
R4X1293	SP_NEG_KVARH_INTVL	Negative kvarh Log Assignment	-	1	0-3	R/W	F34
R4X1294	SP_KVAH_INTVL	kVAh Log Assignment	-	1	0-3	R/W	F34
R4X1295	SP_IA_DMD_INTVL	Ia Demand Log Assignment	-	1	0-3	R/W	F34
R4X1296	SP_IB_DMD_INTVL	Ib Demand Log Assignment	-	1	0-3	R/W	F34
R4X1297	SP_IC_DMD_INTVL	Ic Demand Log Assignment	-	1	0-3	R/W	F34
R4X1298	SP_IN_DMD_INTVL	In Demand Log Assignment	-	1	0-3	R/W	F34
R4X1299	SP_P3_DMD_INTVL	P3 Demand Log Assignment	-	1	0-3	R/W	F34
R4X129A	SP_Q3_DMD_INTVL	Q3 Demand Log Assignment	-	1	0-3	R/W	F34
R4X129B	SP_S3_DMD_INTVL	S3 Demand Log Assignment	-	1	0-3	R/W	F34
R4X129C	SP_IA_THD_INTVL	Ia THD Log Assignment	-	1	0-3	R/W	F34
R4X129D	SP_IB_THD_INTVL	Ib THD Log Assignment	-	1	0-3	R/W	F34
R4X129E	SP_IC_THD_INTVL	Ic THD Log Assignment	-	1	0-3	R/W	F34
R4X129F	SP_IN_THD_INTVL	In THD Log Assignment	-	1	0-3	R/W	F34
R4X12A0	SP_VAN_THD_INTVL	Van THD Log Assignment	-	1	0-3	R/W	F34
R4X12A1	SP_VBN_THD_INTVL	Vbn THD Log Assignment	-	1	0-3	R/W	F34
R4X12A2	SP_VCN_THD_INTVL	Vcn THD Log Assignment	-	1	0-3	R/W	F34
R4X12A3	SP_VAB_THD_INTVL	Vab THD Log Assignment	-	1	0-3	R/W	F34
R4X12A4	SP_VBC_THD_INTVL	Vbc THD Log Assignment	-	1	0-3	R/W	F34
R4X12A5	SP_AI_INTVL	Analog Input Log Assignment	-	1	0-3	R/W	F34
R4X12C0	SP_ER_EVENT_NUMBER	Event Recorder Memory Access Event Number	-	1	0-65535	R/W	F1
R4X12C1	SP_ER_OPERATION	Event Recorder Operation	-	1	0-1	R/W	F11
R4X12C2	SP_ER_ENABLE_FLAGS_1	Event Recorder Event Enable Flags 1	-	1	0-65535	R/W	F105
R4X12C3	SP_ER_ENABLE_FLAGS_2	Event Recorder Event Enable Flags 2	-	1	0-65535	R/W	F106
R4X12C4	SP_ER_ENABLE_FLAGS_3	Event Recorder Event Enable Flags 3	-	1	0-65535	R/W	F107
R4X12C5	SP_ER_ENABLE_FLAGS_4	Event Recorder Event Enable Flags 4	-	1	0-65535	R/W	F112
R4X12D0	SP_TRACE_USAGE	Trace Memory Usage	-	1	0-2	R/W	F37

Setpoint Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X12D1	SP_TRACE_TRIG_MODE	Trace Memory Trigger Mode	–	1	0–1	R/W	F38
R4X12D2	SP_TRACE_IA_LVL	Ia Overcurrent Trigger Level	% CT	1	1-151 ***	R/W	F1
R4X12D3	SP_TRACE_IB_LVL	Ib Overcurrent Trigger Level	% CT	1	1-151 ***	R/W	F1
R4X12D4	SP_TRACE_IC_LVL	Ic Overcurrent Trigger Level	% CT	1	1-151 ***	R/W	F1
R4X12D5	SP_TRACE_IN_LVL	In Overcurrent Trigger Level	% CT	1	1-151 ***	R/W	F1
R4X12D6	SP_TRACE_VA_OV_LVL	Va Overvoltage Trigger Level	% VT	1	20-151 ***	R/W	F1
R4X12D7	SP_TRACE_VB_OV_LVL	Vb Overvoltage Trigger Level	% VT	1	20-151 ***	R/W	F1
R4X12D8	SP_TRACE_VC_OV_LVL	Vc Overvoltage Trigger Level	% VT	1	20-151 ***	R/W	F1
R4X12D9	SP_TRACE_VA_UV_LVL	Va Undervoltage Trigger Level	% VT	1	20-151 ***	R/W	F1
R4X12DA	SP_TRACE_VB_UV_LVL	Vb Undervoltage Trigger Level	% VT	1	20-151 ***	R/W	F1
R4X12DB	SP_TRACE_VC_UV_LVL	Vc Undervoltage Trigger Level	% VT	1	20-151 ***	R/W	F1
R4X12DC	SP_TRACE_SWA_TRIG	Switch Input A Trigger	–	1	0–2	R/W	F39
R4X12DD	SP_TRACE_SWB_TRIG	Switch Input B Trigger	–	1	0–2	R/W	F39
R4X12DE	SP_TRACE_SWC_TRIG	Switch Input C Trigger	–	1	0–2	R/W	F39
R4X12DF	SP_TRACE_SWD_TRIG	Switch Input D Trigger	–	1	0–2	R/W	F39
R4X12E0	SP_TRACE_TRIG_DLY	Trace Memory Trigger Delay	cycles	1	0–30	R/W	F1
R4X12E1	SP_TRACE_MEM_SELION	Trace Memory Waveform Selection	–	1	0–6	R/W	F40
R4X12E2	TM_TRIG_DLY	Trace Memory Trigger Relay	–	1	0–4	R/W	F29
R4X12F0	PRO_OPT_UPG	Product Options Upgrade	–	1	0–23	R/W	F116
R4X12F1	PRO_MOD_UPG_MOD1	Product Modifications Upgrade MOD1	–	1	0–999	R/W	F1
R4X12F2	PRO_MOD_UPG_MOD2	Product Modifications Upgrade MOD2	–	1	0–999	R/W	F1
R4X12F3	PRO_MOD_UPG_MOD3	Product Modifications Upgrade MOD3	–	1	0–999	R/W	F1
R4X12F4	PRO_MOD_UPG_MOD4	Product Modifications Upgrade MOD4	–	1	0–999	R/W	F1
R4X12F5	PRO_MOD_UPG_MOD5	Product Modifications Upgrade MOD5	–	1	0–999	R/W	F1
R4X12F6	PC_IP_01	Passcode Input 1	–	1	32–127	R/W	F10
R4X12F7	PC_IP_02	Passcode Input 2	–	1	32–127	R/W	F10
R4X12F8	PC_IP_03	Passcode Input 3	–	1	32–127	R/W	F10
R4X12F9	PC_IP_04	Passcode Input 4	–	1	32–127	R/W	F10
R4X12FA	PC_IP_05	Passcode Input 5	–	1	32–127	R/W	F10
R4X12FB	PC_IP_06	Passcode Input 6	–	1	32–127	R/W	F10
R4X12FC	PC_IP_07	Passcode Input 7	–	1	32–127	R/W	F10
R4X12FD	PC_IP_08	Passcode Input 8	–	1	32–127	R/W	F10
R4X12FE	PC_IP_09	Passcode Input 9	–	1	32–127	R/W	F10
R4X12FF	PC_IP_10	Passcode Input 10	–	1	32–127	R/W	F10

NOTES:

* = Data type depends on the Command Operation Code.

** = Any valid Actual Values or Setpoints address.

*** = Maximum Setpoint value represents "OFF".

**** = Minimum Setpoint value represents "OFF".

***** = Maximum Setpoint value represents "UNLIMITED".

F4, a long signed integer, is passed as an unsigned long integer.

COMMANDS

Commands							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Codes
R4X0080L	COMMAND_KEYS	Command Function Code	-	-	5	WO	F1
R4X0081		Command Operation Code	-	1	1-35	WO	F7
R4X0082		Command Data 1	-	1	0-65535		*
R4X0083		Command Data 2	-	1	0-65535		*
R4X0084		Command Data 3	-	1	0-65535		*
R4X0085		Command Data 4	-	1	0-65535		*
R4X0086		Command Data 5	-	1	0-65535		*
R4X0087		Command Data 6	-	1	0-65535		*
R4X0088		Command Data 7	-	1	0-65535		*
R4X0089		Command Data 8	-	1	0-65535		*
R4X008A		Command Data 9	-	1	0-65535		*
R4X008B		Command Data 10	-	1	0-65535		*
R4X008C		Command Data 11	-	1	0-65535		*

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POWER leader Electronic Power Meter (PLEPM)

- *DYNAMIC VALUE REGISTERS*
- *SETPOINT REGISTERS*
- *FIXED VALUE REGISTERS*
- *COMMAND COILS*

DYNAMIC VALUE REGISTERS

Dynamic Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R31000	PENDING_EVENTS	Number of pending event messages	0 to 8	RO	Integer
R31002F	KVA_MAX_TOTAL	KVA max, total of all phases	kVA	RO	Real
R31004F	KW_MAX_TOTAL	KW max, total of all phases	kW	RO	Real
R31006F	KVAR_LG_MAX_TOTAL	KVAR lag max, total of all phases	kVAR	RO	Real
R31008F	KVAR_LD_MAX_TOTAL	KVAR lead max, total of all phases	kVAR	RO	Real
R31010F	AMPS_MAX_A	Current Max Phase A	amp	RO	Real
R31012F	AMPS_MAX_B	Current Max Phase B	amp	RO	Real
R31014F	AMPS_MAX_C	Current Max Phase C	amp	RO	Real
R31016F	KVARH_LG_TOTAL	KVARH lag, total of all phases	kVARh	RO	Real
R31018F	KVARH_LD_TOTAL	KVARH lead, total of all phases	kVARh	RO	Real
R31020F	KWH_TOTAL	KWH, total of all phases	kWh	RO	Real
R31022F	KQH_TOTAL	KQH, total of all phases	kqh $Q=(\sqrt{3}) * \text{var} + W)/2$	RO	Real
R31024F	KVAH_TOTAL	KVAH, total of all phases	kVAh	RO	Real
R31026F	PF_AVG	PF avg. since last reset, total of all phases	Dimensionless	RO	Real
R31028F	PF_AT_KVA_MAX	PF, total of all phases, @KVAmx	Dimensionless	RO	Real
R31030F	KVA_DMND_TOTAL	KVA, total of all phases (demand)	kVA	RO	Real
R31032F	KW_DMND_TOTAL	KW total of all phases (demand)	kW	RO	Real
R31034F	KVAR_LG_DMND_TOTAL	KVAR lag, total of all phases (demand)	kVAR	RO	Real
R31036F	KVAR_LD_DMND_TOTAL	KVAR lead, total of all phases(demand)	kVAR	RO	Real
R31038F	AMPS_DMND_A	Current, Phase A (demand)	amp	RO	Real
R31040F	AMPS_DMND_B	Current, Phase B (demand)	amp	RO	Real
R31042F	AMPS_DMND_C	Current, Phase C (demand)	amp	RO	Real
R31044F	PF_DMND	PF, total of all phases(over last demand interval)	Dimensionless	RO	Real
R31046F	KW_A	KW, Phase A	kW	RO	Real
R31048F	KW_B	KW, Phase B	kW	RO	Real
R31050F	KW_C	KW, Phase C	kW	RO	Real
R31052F	KVAR_A	KVAR, Phase A	kVAR	RO	Real
R31054F	KVAR_B	KVAR, Phase B	kVAR	RO	Real
R31056F	KVAR_C	KVAR, Phase C	kVAR	RO	Real
R31058F	KVA_A	KVA, Phase A	kVA	RO	Real
R31060F	KVA_B	KVA, Phase B	kVA	RO	Real
R31062F	KVA_C	KVA, Phase C	kVA	RO	Real
R31064F	PF_A	PF, Phase A	Dimensionless	RO	Real
R31066F	PF_B	PF, Phase B	Dimensionless	RO	Real
R31068F	PF_C	PF, Phase C	Dimensionless	RO	Real
R31070F	KVA_TOTAL	KVA, total of all phases	kVA	RO	Real
R31072F	KW_TOTAL	KW, total of all phases	kW	RO	Real

Dynamic Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R31074F	KVAR_TOTAL	KVAR, total of all phases	kVAR	RO	Real
R31076F	VOLTS_A	VOLTAGE L-N phase A-N	volts	RO	Real
R31078F	VOLTS_B	VOLTAGE L-N phase B-N	volts	RO	Real
R31080F	VOLTS_C	VOLTAGE L-N phase C-N	volts	RO	Real
R31082F	VOLTS_AB	VOLTAGE L-L phase A-B	volts	RO	Real
R31084F	VOLTS_BC	VOLTAGE L-L phase B-C	volts	RO	Real
R31086F	VOLTS_CA	VOLTAGE L-L phase C-A	volts	RO	Real
R31088F	PF	PF total of all phases	Dimensionless	RO	Real
R31090F	KW_TOTAL_ AT_KVA_MAX	KW, total of all phases, @KVAm _{ax}	kW	RO	Real
R31092F	AMPS_A	Current Phase A	amps	RO	Real
R31094F	AMPS_B	Current Phase B	amps	RO	Real
R31096F	AMPS_C	Current Phase C	amps	RO	Real
R31098F	AMPS_N	Neutral Current	amps	RO	Real
R31100F	FREQUENCY	Frequency Phase A	Hz	RO	Real
R31102	TIME_LEFT	Time left in demand interval	second	RO	Integer
R31103	NO_OF_RESET	Number of resets	Non-volatile count of demand resets since commissioning. Range of 0 to 255 with wrap to 0 on the 256th demand reset. Cleared when meter initialize is executed.	RO	Integer
R31104	NO_OF_PWR_FAILS	Number of power failures	Non-volatile count of power failures since commissioning. Range of 0 to 255 with wrap to 0 on the 256th power failure. Cleared when meter initialize is executed.	RO	Integer
R31105	METER_ERRORS	Meter error flags	Bit mapped. b1: 1=All energy lost b4: 1=Internal comm error b7: 1=Energy data loss (<12hr)	RO	Integer
R31106	VOLTS_PHASE_ERR	Voltage phase loss errors	Bitmapped. b0: 1=A-N voltage lost b1: 1=B-N voltage lost b2: 1=C-N voltage lost	RO	Integer
R31107	LD_LG_PF_TOTAL	Lead/lag qualifier for total of all phases (instantaneous)	Enumerated data. 0=lagging 1=leading	RO	Integer
R31108	LD_LG_PF_A	Lead/Lag qualifier for phase A (instantaneous)	Enumerated data. 0=lagging 1=leading	RO	Integer
R31109	LD_LG_PF_B	Lead/Lag qualifier for phase B (instantaneous)	Enumerated data. 0=lagging 1=leading	RO	Integer
R31110	LD_LG_PF_C	Lead/Lag qualifier for phase C (instantaneous)	Enumerated data. 0=lagging 1=leading	RO	Integer

Dynamic Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R31111	DATA_RESET_FLAG	Data Resetting flags	Bitmapped. Indicates the occurrence of one or more locally or remotely commanded reset operations. May only be cleared remotely. b0: Demand reset b1: Energy reset b2: Meter initialize b3: Errors clear	RO	Integer
R31112F	PREV_ACCUM_WH	Previous Accumulated Wh	Wh	RO	Float
R31114F	PREV_ACCUM_VARH_LG	Previous Accumulated varh lagging	varh	RO	Float
R31116F	PREV_ACCUM_VARH_LD	Previous Accumulated varh leading	varh	RO	Float
R31118	DATA_CLR_STATUS	Data Cleared Status	0–Not Cleared 1–Cleared	RO	Integer

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R43000	HOUR ¹	Hour	0–23 hours	RO	Integer
R43001	MIN ¹	Minute	0–59 minutes	RO	Integer
R43002	SEC ¹	Seconds	0–59 seconds	RO	Integer
R43003	PASSWORD	Password	Always 00h	RO	Integer
R43005F	PULSE_VALUE_1	Pulse value interval time for pulse KYZ output 1	Units are kWh, kVAh, kvarh, or kQh, see appropriate pulse units register below. 0=off, range up to 999.999999.	RO	Real
R43007F	PULSE_VALUE_2	Pulse value interval time for pulse KYZ output 2	Units are kWh, kVAh, kvarh, or kQh, see appropriate pulse units register below. 0=off, range up to 999.999999.	RO	Real
R43009	PULSE_UNIT_1	Pulse units for KYZ output 1	Enumerated data. 00h : kVAh 01h : kWh 02h : kvarh 03h : kQh	RO	Integer
R43010	PULSE_UNIT_2	Pulse units for KYZ output 2	Enumerated data. 00h : kVAh 01h : kWh 02h : kvarh 03h : kQh	RO	Integer
R43011L	CONFIG_FLAG_1	Programming Flags	b0 : 1=Access to Data Resetting menu restricted. b1 : 1=Access to Data Formatting menu restricted b2 : 1=Access to KYZ Pulse Setup menu restricted b3 : 1=Access to Configuration menu restricted b4 : 1=Access to Commnet Address Setup restricted b5–7 : unused b8 : 1=leading zeros enabled b9 : 1=Single meter configuration allowed b10 : 1=unused b11 : 1=Pulse Outputs menu disabled (no pulse output option installed) b12 : unused b13 : 1=Test Mode active edge (rising edge if set) b14 : 1=Reserved for manufacturing b15 : unused b16–23 : spare for later development b24 : 1=Access to Demand Reset restricted b25 : 1=Access to Energy Reset restricted b26 : 1=Access to Meter Initialize restricted b27 : 1=Access to Errors Clear restricted b28–31 : unused	RO	Long Integer
R43013	DMND_INTERVAL	Demand Interval length	Minutes 15,20,30, or 60	RO	Integer
R43014	NO_OF_SUB_INTERVAL	Number of sub-intervals	Number 1 to 6, valid combinations of demand interval length and number of subintervals listed below: <u>Demand/No. of sub</u>	RO	Integer

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
			15 / 1,3 20 / 1,2,4 30 / 1,2,3,6 60 / 1,2,3,4,6		
R43015	DISPLAY_SCROLL_TIME	Display scroll time	Seconds 00 to 99 (00 means auto scroll disabled)	RO	Integer
R43016	METER_CONFIG	Meter Configuration	Enumerated type 1: 2 element delta 120V 2: 2.5 element wye 120V 3: 3 element wye 120V 5: 2 element delta 240V 6: 2.5 element wye 240V 7: 3 element wye 240V 11: 2 element delta 480V 13: 2 element delta 600V 54: 2.5 element wye 69V 55: 3 element wye 69V 56: 2.5 element wye 277V 57: 3 element wye 277V 58: 2.5 element wye 345V 59: 3 element wye 345V	RO	Integer
R43017F	PT_RATIO	Potential Transformer Ratio	PTR:1	RO	Real
R43019F	CT_RATIO	Current Transformer Ratio	CTR:1	RO	Real
R43021	ENERGY_FORMAT	Energy Display Format	40h : XXXX 41h : XXXX.X 42h : XXXX.XX 50h : XXXXX 51h : XXXXX.X 60h : XXXXXX	RO	Integer
R43022	DMND_FORMAT	Demand Display Format	30h : XXX 31h : XXX.X 32h : XXX.XX 33h : XXX.XXX 40h : XXXX 41h : XXXX.X 42h : XXXX.XX 50h : XXXXX 51h : XXXXX.X 60h : XXXXXX	RO	Integer
R43023	VOLT_FORMAT	Voltage Display Format	Same as demand display format	RO	Integer
R43024	AMPS_FORMAT	Amps Display Format	Same as demand display format	RO	Integer
R43025	ENERGY_SCALE	Energy Display Scale (kWh, MWh)	Enumerated. 4Dh : M (X10 ⁶) 6Bh : k (X10 ³)	RO	Integer
R43026	DMND_SCALE	Demand Display Scale (W, kW, MW)	Enumerated. 4Dh : M (X10 ⁶) 6Bh : k (X10 ³) 20h : unit (X10 ⁰)	RO	Integer
R43027	VOLT_SCALE	Voltage Display Scale (V, kV)	Enumerated. 6Bh : k (X10 ³) 20h : unit (X10 ⁰)	RO	Integer
R43028	AMPS_SCALE	Amps Display Scale (A,	Enumerated.	RO	Integer

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
		kA)	6Bh : k (X10 ³) 20h : unit (X10 ⁰)		
R43029A03	EPM_PASSWORD	Local faceplate password	Encoding scheme: 0 D5h 1 D4h 2 D3h 3 D2h 4 D1h 5 D0h 6 CFh 7 CEh 8 CDh 9 CCh Encoded 6 character string. Password is comprised of 6 digits with the encoding scheme as shown. 00-00-00 to 99-99-99 12-34-56 would be encoded as D4D3D2D1D0CFh	RO	Message
R43032	SOFTWARE_FAIL	Number of watchdog resets or software traps in EPM	Number 0 to FFh. Counter indicating number of internal watchdog resets and software traps. Used for diagnostics	RO	Integer

Note:

¹ Time registers are read and write for PLEPM if it is connected directly on the RS-485 line and has true Modbus protocol firmware. Time registers will be read-only if the PLEPM is connected through a POWER LEADER Modbus Concentrator and firmware is for commnet.

FIXED VALUE REGISTERS

Fixed Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40000	PRODUCT_ID	Product Id	Always 0Eh	RO	Integer
R40002	COMMNET_ADDR	Commnet Address	300-514	RO	Integer
R40003	MODBUS_ADDR	Modbus Address	33-215	RO	Integer
R40004L	SERIAL_NUM	Serial Number		RO	Long Integer
R40006L	SW_REV	Mothercard's Firmware Revision number	00.00 to 99.99. 4 character string with decimal implied between 2nd and 3rd places.	RO	Long Integer
R40008	COC_REV	COC Software Revision	4 digit BCD with decimal between 2nd and 3rd places	RO	Integer
R40009	COMM_CLASS	Commnet Class	Always 80h	RO	Integer

COMMAND COILS

Command Coils					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value	R/W	Data Type
R00000	CLEAR_DMND	Clear Watt Demand	Set to 1 to perform demand reset	WO	Discrete
R00001	MTR_INITIALIZE	Initialize meter	Set to 1 to perform meter initialize.	WO	Discrete
R00002	CLEAR_ENERGY	Clear Energy/Var-Hour	Set to 1 to perform clear accumulated energy.	WO	Discrete
R00003	CLEAR_ERROR	Clear Meter Errors	Set to 1 to clear all meter errors.	WO	Discrete

POWER LEADER Meter

- *DYNAMIC VALUE REGISTERS*
- *SETPOINT REGISTERS*
- *FIXED VALUE REGISTERS*
- *COMMAND COILS*

DYNAMIC VALUE REGISTERS

Dynamic Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value	R/W	Data Type
R31000	PENDING_EVENTS	Number of Pending Events	0–8	RO	Integer
R31001I	KWH_OVERFLOW_FLAG	Energy Overflow Flag	1= 1 Overflow 0= No Overflow 1= Multiple Overflow	RO	Signed Integer
R31002F	AMPS_A	Current Phase A	5–6000 amps	RO	Real
R31004F	AMPS_B	Current Phase B	5–6000 amps	RO	Real
R31006F	AMPS_C	Current Phase C	5–6000 amps	RO	Real
R31008F	AMPS_A_MAX	Current Max Phase A	5–6000 amps	RO	Real
R31010F	AMPS_B_MAX	Current Max Phase B	5–6000 amps	RO	Real
R31012F	AMPS_C_MAX	Current Max Phase C	5–6000 amps	RO	Real
R31014F	AMPS_DMND_A	Current, Phase A (demand)	5–6000 amps	RO	Real
R31016F	AMPS_DMND_B	Current, Phase B (demand)	5–6000 amps	RO	Real
R31018F	AMPS_DMND_C	Current, Phase C (demand)	5–6000 amps	RO	Real
R31020F	VOLTS_A	RMS Voltage L-N phase A-N	120–14,400 volts	RO	Real
R31022F	VOLTS_B	RMS Voltage L-N phase B-N	120–14,400 volts	RO	Real
R31024F	VOLTS_C	RMS Voltage L-N phase C-N	120–14,400 volts	RO	Real
R31026F	VOLTS_AB	RMS Voltage L-L, phase A-B	120–14,400 volts	RO	Real
R31028F	VOLTS_BC	RMS Voltage L-L, phase B-C	120–14,400 volts	RO	Real
R31030F	VOLTS_CA	RMS Voltage L-L, phase C-A	120–14,400 volts	RO	Real
R31032F	KW_A	KW, phase A	kw	RO	Real
R31034F	KW_B	KW, phase B	kw	RO	Real
R31036F	KW_C	KW, phase C	kw	RO	Real
R31038F	KW_TOTAL	Total Power	kw	RO	Real
R31040F	KVAR_A	KVAR, phase A	kvar	RO	Real
R31042F	KVAR_B	KVAR, phase B	kvar	RO	Real
R31044F	KVAR_C	KVAR, phase C	kvar	RO	Real
R31046F	KVAR_TOTAL	Total Reactive Power	kvar	RO	Real
R31048F	KVA_A	KVA, phase A	kva	RO	Real
R31050F	KVA_B	KVA, phase B	kva	RO	Real
R31052F	KVA_C	KVA, phase C	kva	RO	Real
R31054F	KVA_TOTAL	Total Apparent Power	kva	RO	Real
R31056F	PF	Total Power Factor		RO	Real
R31058F	KW_DMND	Watt Demand	kw	RO	Real
R31060F	KW_DMND_MAX	Peak Power Demand	kw	RO	Real
R31062F	KWH	Energy	kwh	RO	Real
R31064F	KVARH	Reactive Energy	kvarh	RO	Real
R31066F	FREQUENCY	Frequency	hz	RO	Real
R31068F	HARM_DIST	Harmonic Distortion	0–100%	RO	Real
R31070F	PREV_ACCUM_ENERGY	Previous Accumulated Energy	kWh	RO	Float
R31072F	PREV_ACCUM_KVARH	Previous Accumulated Reactive Energy	kVarh	RO	Float
R31074	ENERGY_CLR_STATUS	Energy Cleared Status	0–not cleared 1–cleared	RO	Integer

Dynamic Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value	R/W	Data Type
R31075	KVARH_CLR_STATUS	Reactive Energy Cleared Status	0–not cleared 1–cleared	RO	Integer
R31076I	KVARH_OVERFLOW_FLAG	Reactive Energy Overflow Flag	1= 1 Overflow 0= No Overflow 1= Multiple Overflow	RO	Signed Integer
R31088	WF_STATUS	Waveform Capture Status	0=normal operations 1= waveform failed	RO	Discrete
R31089	WF_AVAIL	Waveform Capture Availability	0=no waveform captured yet 1= waveform present	RO	Discrete
R31090	WF_CHANNEL	Waveform Channel	1–Phase A 2–Phase B 3–Phase C	RO	Integer
R31091F R31093F R31345F	N/A	Waveform samples #0 through #127	Each sample is a floating point number contained in two registers.	RO	Real
N/A	WF_DATA	Waveform samples #0 through #127	A single (cr)(lf) delimited text string containing all 128 samples. This single text item contains the 128 samples from registers 31072 to 31327 as a sequence of floating point numbers.	RO	Message
R31347	WF_HOUR	Wave Capture Hour	0–23	RO	Integer
R31348	WF_MIN	Wave Capture Minute	0–59	RO	Integer
R31349	WF_SEC	Wave Capture Second	0–59	RO	Integer
R31350	WF_MSEC	Wave Capture Milliseconds	0–999 milliseconds	RO	Integer

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value	R/W	Data Type
R43000	HOUR	Hours	0–23 hours	RO	Integer
R43001	MIN	Minute	0–59 minutes	RO	Integer
R43002	SEC	Seconds	0–59 seconds	RO	Integer
R43004	CT_RATIO_PRI	CT Ratio - Primary current (amps)	5:5–100:5 A in increments of 5A; 100:5–300:5 A in increments of 50A; 300:5 A–800:5 A in increments of 100A, then: 1000(:5) A 1200(:5) A 1500(:5) A 1600(:5) A 2000(:5) A 2500(:5) A 3000(:5) A 3200(:5) A 4000(:5) A 5000(:5) A 6000(:5) A	RO	Integer
R43005	CT_RATIO_SEC	CT Ratio - Secondary current (amps)	always 5 amps	RO	Integer
R43006	PT_RATIO_PRI	PT Ratio - Primary voltage (volts)	120(:120)V 208(:120)V 240(:120)V 277(:120)V 288(:120)V 360(:120)V 380(:120)V 415(:120)V 460(:120)V 480(:120)V 515(:120)V 600(:120)V 720(:120)V 840(:120)V 960(:120)V 1080(:120)V 1200(:120)V 1320(:120)V 1440(:120)V 1560(:120)V 1680(:120)V 1800(:120)V 1920(:120)V 2040(:120)V 2160(:120)V 2280(:120)V 2400(:120)V 4160(:120)V 4200(:120)V 4800(:120)V	RO	Integer

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value	R/W	Data Type
			7200(:120)V 8400(:120)V 12000(:120)V 14400(:120)V		
R43007	PT_RATIO_SEC	PT Ratio - Secondary voltage (volts)	Always 120 volts	R/W	Integer
R43008	PT_CONNECT	DELTA / WYE connection	0=WYE 1=DELTA	R/W	Integer
R43009	CU_SETPT	Current unbalance trip setpoint	Trip setpoint =10%–50% in steps of 1% (Meter does not support waveform capture with this function asserted)	R/W	Integer
R43010	CU_DELAY	Current unbalance trip time delay	Trip time delay = 1–60 sec in 1 sec increments. 0 = Current Unbalance Trip relay disabled (Meter does not support waveform capture with this function asserted)	R/W	Integer
R43011	CU_ALARM_SETPT	Current unbalance alarm setpoint	Alarm setpoint =10%–50% in steps of 1% (Meter does not support waveform capture with this function asserted)	R/W	Integer
R43012	CU_ALARM_DELAY	Current unbalance alarm time delay	Alarm time delay = 1–60 sec in 1 sec increments 0 = Current Unbalance Alarm relay disabled (Meter does not support waveform capture with this function asserted)	R/W	Integer
R43013	VU_SETPT	Voltage unbalance trip setpoint	Trip setpoint =10%–50% in steps of 1% (Meter does not support waveform capture with this function asserted)	RO	Integer
R43014	VU_DELAY	Voltage unbalance trip time delay	Trip time delay = 1–60 sec in 1 sec increments. 0 = Voltage Unbalance Trip relay disabled (Meter does not support waveform capture with this function asserted)	RO	Integer
R43015	VU_ALARM_SETPT	Voltage unbalance alarm setpoint	Alarm setpoint =10%–50% in steps of 1% (Meter does not support waveform capture with this function asserted)	RO	Integer
R43016	VU_ALARM_DELAY	Voltage unbalance alarm time delay	Alarm time delay = 1–60 sec in 1 sec increments 0 = Voltage Unbalance Alarm relay disabled (Meter does not support waveform capture with this function asserted)	RO	Integer
R43017	OV_SETPT	Overvoltage trip Setpoint	Trip setpoint =110%–150% by steps of 1% (Meter does not support waveform capture with this function asserted)	RO	Integer
R43018	OV_DELAY	Overvoltage trip time delay	Trip time delay = 1–60 sec in 1 sec increments. 0 = Overvoltage Trip relay disabled (Meter does not support waveform capture with this function asserted)	RO	Integer
R43019	OV_ALARM_SETPT	Overvoltage alarm setpoint	Alarm setpoint =110%–150% in steps of 1% (Meter does not support waveform capture with this function asserted)	RO	Integer
R43020	OV_ALARM_DELAY	Overvoltage alarm time delay	Alarm time delay = 1–60 sec in 1 sec increments 0 = Overvoltage Alarm relay disabled (Meter does not support waveform capture with this function asserted)	RO	Integer
R43021	UV_SETPT	Undervoltage trip setpoint	Trip setpoint =50%–90% in steps of 1% (Meter does not support waveform capture with this	RO	Integer

POWER LEADER Meter

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value	R/W	Data Type
			function asserted)		
R43022	UV_DELAY	Undervoltage trip time delay	Trip time delay = 1–60 sec in 1 sec increments. 0 = Undervoltage Trip relay disabled (Meter does not support waveform capture with this function asserted)	RO	Integer
R43023	UV_ALARM_SETPT	Undervoltage alarm setpoint	Alarm setpoint =50%–90% in steps of 1% (Meter does not support waveform capture with this function asserted)	RO	Integer
R43024	UV_ALARM_DELAY	Undervoltage alarm time delay	Alarm time delay = 1–60 sec in 1 sec increments 0 = Undervoltage alarm relay disabled (Meter does not support waveform capture with this function asserted)	RO	Integer
R43025F	PR_SETPT	Power Reversal Trip Setpoint	10kw–1000kw in 10kw increments (Meter does not support waveform capture with this function asserted)	RO	Real
R43027	PR_DELAY	Power Reversal Trip Time Delay	Alarm time delay = 1–60 sec in 1 sec increments 0 = Power Reversal Trip relay disabled (Meter does not support waveform capture with this function asserted)	RO	Integer
R43028F	PR_ALARM_SETPT	Power Reversal Alarm Setpoint	10kw–1000kw in 10kw increments (Meter does not support waveform capture with this function asserted)	RO	Real
R43030	PR_ALARM_DELAY	Power Reversal Alarm Time Delay	Alarm time delay = 1–60 sec in 1 sec increments 0 = Power Reversal Alarm relay disabled (Meter does not support waveform capture with this function asserted)	RO	Integer
R43031	OC_ALARM_SETPT	Overcurrent Relay Alarm Setpoint	Alarm setpoint =10%–110% in steps of 1% (Meter does not support waveform capture with this function asserted)	RO	Integer
R43032	OC_ALARM_DELAY	Overcurrent Relay Alarm Time Delay	Alarm time delay = 1–60 sec in 1 sec increments 0 = Overcurrent alarm relay disabled (Meter does not support waveform capture with this function asserted)	RO	Integer
R43033	WF_SETPT	Overcurrent waveform capture setpoint for all 3 phases.	Waveform capture setpoint = 110%–150% in steps of 1% 0 = Overcurrent waveform triggering disabled	RO	Integer
R43034	DMND_PERIOD	Demand Time Period	15 or 30 minutes	RO	Integer

FIXED VALUE REGISTERS

Fixed Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value	R/W	Data Type
R40000	PRODUCT_ID	Product ID	Always =00 05h	RO	Integer
R40002	COMMNET_ADDR	Commnet Address	Range= 300-514	RO	Integer
R40003	MODBUS_ADDR	Modbus Address	Range=33-247	RO	Integer
R40004D1-0	OPT_RLY_WF	Relay & Waveform options present	0=False, 1=True	RO	Discrete
R40004D1-1	OPT_RLY	Relay option present	0=False, 1=True	RO	Discrete
R40004D1-2	OPT_WF	Waveform option present	0=False, 1=True	RO	Discrete
R40004D1-3	OPT_MTR	Meter only	0=False, 1=True	RO	Discrete

COMMAND COILS

Command Coils					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value	R/W	Data Type
R00000	CLEAR_ENERGY	Clear Energy	Set to 1 to clear device energy.	WO	Discrete
R00001	CLEAR_AMPS	Clear peak current	Set to 1 to clear peak current	WO	Discrete
R00002	CLEAR_DMND	Clear peak demand	Set to 1 to clear peak demand	WO	Discrete
R00003	TRIGGER_WF_CAPTURE	Manual waveform trigger	Set to 1 to manually trigger waveform capture	WO	Discrete
R00004	CLR_WF_CAPTURE	Required to resume automatic waveform capture, i.e., clear the captured waveform	Set to 1 to arm/clear waveform capture	WO	Discrete

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EPM 7300 – Electronic Power Meter

- *SETPOINTS*

- *DYNAMIC VALUES*

Setpoints

Setpoint Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	Format Code	Type
R42000	EXT_PULSE1	ExtPulse #1 (MIN/ MAX Reset)	Set to 1 to Reset Min/Max	R/W	Integer
R42001	EXT_PULSE2	ExtPulse #2 (Sliding Window Demand Reset)	Set to 1 to Reset SWD	R/W	Integer
R42002	EXT_PULSE3	ExtPulse #3		R/W	Integer
R42003	EXT_PULSE4	ExtPulse #4 (Energy Integrator Reset)	Set to 1 to Reset Energy	R/W	Integer
R42004	EXT_PULSE5	ExtPulse #5 (Force Digital Output 1 ON)	Set to 1 to Force DO1 ON	R/W	Integer
R42005	EXT_PULSE6	ExtPulse #6 (Force Digital Output 1 Off)	Set to 1 to Force DO1 OFF	R/W	Integer
R42006	EXT_PULSE7	ExtPulse #7 (Force Digital Output 2 ON)	Set to 1 to Force DO2 ON	R/W	Integer
R42007	EXT_PULSE8	ExtPulse #8 (Force Digital Output 2 OFF)	Set to 1 to Force DO2 OFF	R/W	Integer
R42008	EXT_PULSE9	ExtPulse #9 (Force Digital Output 3 ON)	Set to 1 to Force DO3 ON	R/W	Integer
R42009	EXT_PULSE10	ExtPulse #10 (Force Digital Output 3 OFF)	Set to 1 to Force DO3 OFF	R/W	Integer
R42010	EXT_PULSE11	ExtPulse #11		R/W	Integer
R42011	EXT_PULSE12	ExtPulse #12		R/W	Integer
R42012	EXT_PULSE13	ExtPulse #13		R/W	Integer
R42013	EXT_PULSE14	ExtPulse #14		R/W	Integer
R42014	EXT_PULSE15	ExtPulse #15		R/W	Integer
R42015	EXT_PULSE16	ExtPulse #16		R/W	Integer
R42016	EXT_PULSE17	ExtPulse #17		R/W	Integer
R42017	EXT_PULSE18	ExtPulse #18		R/W	Integer
R42018	EXT_PULSE19	ExtPulse #19		R/W	Integer
R42019	EXT_PULSE20	ExtPulse #20		R/W	Integer
R42020	EXT_PULSE21	ExtPulse #21		R/W	Integer
R42021	EXT_PULSE22	ExtPulse #22		R/W	Integer
R42022	EXT_PULSE23	ExtPulse #23		R/W	Integer
R42023	EXT_PULSE24	ExtPulse #24		R/W	Integer
R42024	EXT_PULSE25	ExtPulse #25		R/W	Integer
R42025	EXT_PULSE26	ExtPulse #26		R/W	Integer
R42026	EXT_PULSE27	ExtPulse #27		R/W	Integer
R42027	EXT_PULSE28	ExtPulse #28		R/W	Integer
R42028	EXT_PULSE29	ExtPulse #29		R/W	Integer
R42029	EXT_PULSE30	ExtPulse #30		R/W	Integer
R42030	EXT_PULSE31	ExtPulse #31		R/W	Integer
R42031	EXT_PULSE32	ExtPulse #32		R/W	Integer
R42200	EXT_BOOL1	ExtBool#1		R/W	Integer
R42201	EXT_BOOL2	ExtBool#2		R/W	Integer
R42202	EXT_BOOL3	ExtBool#3		R/W	Integer
R42203	EXT_BOOL4	ExtBool#4		R/W	Integer
R42204	EXT_BOOL5	ExtBool#5		R/W	Integer
R42205	EXT_BOOL6	ExtBool#6		R/W	Integer
R42206	EXT_BOOL7	ExtBool#7		R/W	Integer
R42207	EXT_BOOL8	ExtBool#8		R/W	Integer

Setpoint Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	Format Code	Type
R42300L	EXT_NUM1	ExtNum #1		R/W	Long Signed
R42302L	EXT_NUM2	ExtNum #2		R/W	Long Signed
R42304L	EXT_NUM3	ExtNum #3		R/W	Long Signed
R42306L	EXT_NUM4	ExtNum #4		R/W	Long Signed
R44000	PT_CONNECT	PT Connections	0= 4W- WYE; 1= DELTA; 2= SINGLE; 3= DEMO; 4= 3W- WYE	R/W	Integer
R44001	I1_POLARITY	I1Polarity	0= Normal; 1= Inverted	R/W	Integer
R44002	I2_POLARITY	I2Polarity	0= Normal; 1= Inverted	R/W	Integer
R44003	I3_POLARITY	I3Polarity	0= Normal; 1= Inverted	R/W	Integer
R44004	PH_ORDER	Phase Order	0= ABC; 1= ACB	R/W	Integer
R44005	PH_LBLS	Phase Lbls	0= ABC; 1= RST; 2= XYZ; 3= RYB; 4= 123	R/W	Integer
R44120	DO01_EVLOG_MODE	DO01 EvLog Mode	0= Log Off; 1= Log On	R/W	Integer
R44121	DO02_EVLOG_MODE	DO02 EvLog Mode	0= Log Off; 1= Log On	R/W	Integer
R44122	DO03_EVLOG_MODE	DO03 EvLog Mode	0= Log Off; 1= Log On	R/W	Integer
R44123	DO04_EVLOG_MODE	DO04 EvLog Mode	0= Log Off; 1= Log On	R/W	Integer
R44124	DO05_EVLOG_MODE	DO05 EvLog Mode	0= Log Off; 1= Log On	R/W	Integer
R44150	DO01_POLARITY	DO01 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44151	DO02_POLARITY	DO02 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44152	DO03_POLARITY	DO03 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44153	DO04_POLARITY	DO04 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44154	DO05_POLARITY	DO05 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44180	PU01_OUTPUT_MODE	PU01 OutputMode	0= Pulse; 1= KYZ	R/W	Integer
R44181	PU02_OUTPUT_MODE	PU02 OutputMode	0= Pulse; 1= KYZ	R/W	Integer
R44182	PU03_OUTPUT_MODE	PU03 OutputMode	0= Pulse; 1= KYZ	R/W	Integer
R44183	PU04_OUTPUT_MODE	PU04 OutputMode	0= Pulse; 1= KYZ	R/W	Integer
R44184	PU05_OUTPUT_MODE	PU05 OutputMode	0= Pulse; 1= KYZ	R/W	Integer
R44190	PU01_POLARITY	PU01 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44191	PU02_POLARITY	PU02 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44192	PU03_POLARITY	PU03 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44193	PU04_POLARITY	PU04 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44194	PU05_POLARITY	PU05 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44216	INT01_MODE	IN01 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44217	INT02_MODE	IN02 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44218	INT03_MODE	IN03 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44219	INT04_MODE	IN04 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44220	INT05_MODE	IN05 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44221	INT06_MODE	IN06 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44222	INT07_MODE	IN07 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44223	INT08_MODE	IN08 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44224	INT09_MODE	IN09 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44225	INT10_MODE	IN10 Mode	0= Forward; 1= Reverse; 2=	R/W	Integer

Setpoint Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	Format Code	Type
			Absolute; 3= Net		
R44226	INT11_MODE	IN11 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44227	INT12_MODE	IN12 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44228	INT13_MODE	IN13 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44229	INT14_MODE	IN14 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44230	INT15_MODE	IN15 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44231	INT16_MODE	IN16 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44390	CM01_COMM_MODE	CM01 Comm Mode	1= RS485	R/W	Integer
R44391	CM01_BAUD_RATE	CM01 Baud Rate	1= 1200; 2= 2400; 3= 4800; 4= 9600; 5= 19200	R/W	Integer
R44392	CM01_HSHAKE_MODE	CM01 Hshake Mode	0= RTS w/ Delay	R/W	Integer
R44393	CM01_RTS_LVL	CM01 RTS Level	0= Normal; 1= Inverted	R/W	Integer
R44394	CM01_CTS_LVL	CM01 CTS Level	0= Normal; 1= Inverted	R/W	Integer
R44395	FAC_NOM_FREQ	FAC Nom Freq	0= 60Hz; 1= 50Hz	R/W	Integer
R44445	DO01_PORT	DO01 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44446	DO02_PORT	DO02 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44447	DO03_PORT	DO03 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44448	DO04_PORT	DO04 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44449	DO05_PORT	DO05 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44513	PU01_PORT	PU01 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44514	PU02_PORT	PU02 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44515	PU03_PORT	PU03 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44516	PU04_PORT	PU04 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44517	PU05_PORT	PU05 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44586	PM_V1_POLARITY	PM V1Polarity	0= Normal; 1= Inverted	R/W	Integer
R44587	PM_V2_POLARITY	PM V2Polarity	0= Normal; 1= Inverted	R/W	Integer

Setpoint Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	Format Code	Type
R44588	PM_V3_POLARITY	PM V3Polarity	0= Normal; 1= Inverted	R/W	Integer
R44589	CM03_BAUD_RATE	CM03 Baud Rate	1= 1200; 2= 2400; 3= 4800; 4= 9600; 5= 19200	R/W	Integer
R44591	CM01_PROTOCOL	CM01 Protocol	0= ION; 1= MODBUS	R/W	Integer
R44593	CM03_PROTOCOL	CM03 Protocol	0= ION; 1= MODBUS; 2= Infrared I/ O; 3= Factory	R/W	Integer
R46000L	PM_PT_PRIM	PM PT Prim	1- 999999	R/W	Long Signed
R46002L	PM_PT_SEC	PM PT Sec	1- 999999	R/W	Long Signed
R46004L	PM_CT_PRIM	PM CT Prim	1- 999999	R/W	Long Signed
R46006L	PM_CT_SEC	PM CT Sec	1- 999999	R/W	Long Signed
R46280L	DO01_PULSE_WIDTH	DO01 PulseWidth	0- 2000000	R/W	Long Signed
R46282L	DO02_PULSE_WIDTH	DO02 PulseWidth	0- 2000000	R/W	Long Signed
R46284L	DO03_PULSE_WIDTH	DO03 PulseWidth	0- 2000000	R/W	Long Signed
R46286L	DO04_PULSE_WIDTH	DO04 PulseWidth	0- 2000000	R/W	Long Signed
R46288L	DO05_PULSE_WIDTH	DO05 PulseWidth	0- 2000000	R/W	Long Signed
R46340L	PV01_PULSE_WIDTH	PU01 PulseWidth	0- 2000000	R/W	Long Signed
R46342L	PV02_PULSE_WIDTH	PU02 PulseWidth	0- 2000000	R/W	Long Signed
R46344L	PV03_PULSE_WIDTH	PU03 PulseWidth	0- 2000000	R/W	Long Signed
R46346L	PV04_PULSE_WIDTH	PU04 PulseWidth	0- 2000000	R/W	Long Signed
R46348L	PV05_PULSE_WIDTH	PU05 PulseWidth	0- 2000000	R/W	Long Signed
R46360L	SD01_SUB_INTVL	SD01 Sub Intvl	60- 5940	R/W	Long Signed
R46362L	SD02_SUB_INTVL	SD02 Sub Intvl	60- 5940	R/W	Long Signed
R46364L	SD03_SUB_INTVL	SD03 Sub Intvl	60- 5940	R/W	Long Signed
R46366L	SD04_SUB_INTVL	SD04 Sub Intvl	60- 5940	R/W	Long Signed
R46368L	SD05_SUB_INTVL	SD05 Sub Intvl	60- 5940	R/W	Long Signed
R46370L	SD06_SUB_INTVL	SD06 Sub Intvl	60- 5940	R/W	Long Signed
R46372L	SD07_SUB_INTVL	SD07 Sub Intvl	60- 5940	R/W	Long Signed
R46374L	SD08_SUB_INTVL	SD08 Sub Intvl	60- 5940	R/W	Long Signed
R46376L	SD09_SUB_INTVL	SD09 Sub Intvl	60- 5940	R/W	Long Signed
R46378L	SD10_SUB_INTVL	SD10 Sub Intvl	60- 5940	R/W	Long Signed
R46380L	SD11_SUB_INTVL	SD11 Sub Intvl	60- 5940	R/W	Long Signed
R46382L	SD12_SUB_INTVL	SD12 Sub Intvl	60- 5940	R/W	Long Signed
R46384L	SD13_SUB_INTVL	SD13 Sub Intvl	60- 5940	R/W	Long Signed
R46386L	SD14_SUB_INTVL	SD14 Sub Intvl	60- 5940	R/W	Long Signed
R46388L	SD15_SUB_INTVL	SD15 Sub Intvl	60- 5940	R/W	Long Signed
R46390L	SD16_SUB_INTVL	SD16 Sub Intvl	60- 5940	R/W	Long Signed
R46392L	SD01_SUB_INTVLS	SD01 #SubIntvls	1- 15	R/W	Long Signed
R46394L	SD02_SUB_INTVLS	SD02 #SubIntvls	1- 15	R/W	Long Signed
R46396L	SD03_SUB_INTVLS	SD03 #SubIntvls	1- 15	R/W	Long Signed
R46398L	SD04_SUB_INTVLS	SD04 #SubIntvls	1- 15	R/W	Long Signed
R46400L	SD05_SUB_INTVLS	SD05 #SubIntvls	1- 15	R/W	Long Signed
R46402L	SD06_SUB_INTVLS	SD06 #SubIntvls	1- 15	R/W	Long Signed
R46404L	SD07_SUB_INTVLS	SD07 #SubIntvls	1- 15	R/W	Long Signed
R46406L	SD08_SUB_INTVLS	SD08 #SubIntvls	1- 15	R/W	Long Signed
R46408L	SD09_SUB_INTVLS	SD09 #SubIntvls	1- 15	R/W	Long Signed
R46410L	SD10_SUB_INTVLS	SD10 #SubIntvls	1- 15	R/W	Long Signed
R46412L	SD11_SUB_INTVLS	SD11 #SubIntvls	1- 15	R/W	Long Signed
R46414L	SD12_SUB_INTVLS	SD12 #SubIntvls	1- 15	R/W	Long Signed
R46416L	SD13_SUB_INTVLS	SD13 #SubIntvls	1- 15	R/W	Long Signed
R46418L	SD14_SUB_INTVLS	SD14 #SubIntvls	1- 15	R/W	Long Signed

Setpoint Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	Format Code	Type
R46420L	SD15_SUB_INTVLS	SD15 #SubIntvls	1- 15	R/W	Long Signed
R46422L	SD16_SUB_INTVLS	SD16 #SubIntvls	1- 15	R/W	Long Signed
R46424L	SD01_PRED_RESP	SD01 Pred Resp	0- 99	R/W	Long Signed
R46426L	SD02_PRED_RESP	SD02 Pred Resp	0- 99	R/W	Long Signed
R46428L	SD03_PRED_RESP	SD03 Pred Resp	0- 99	R/W	Long Signed
R46430L	SD04_PRED_RESP	SD04 Pred Resp	0- 99	R/W	Long Signed
R46432L	SD05_PRED_RESP	SD05 Pred Resp	0- 99	R/W	Long Signed
R46434L	SD06_PRED_RESP	SD06 Pred Resp	0- 99	R/W	Long Signed
R46436L	SD07_PRED_RESP	SD07 Pred Resp	0- 99	R/W	Long Signed
R46438L	SD08_PRED_RESP	SD08 Pred Resp	0- 99	R/W	Long Signed
R46440L	SD09_PRED_RESP	SD09 Pred Resp	0- 99	R/W	Long Signed
R46442L	SD10_PRED_RESP	SD10 Pred Resp	0- 99	R/W	Long Signed
R46444L	SD11_PRED_RESP	SD11 Pred Resp	0- 99	R/W	Long Signed
R46446L	SD12_PRED_RESP	SD12 Pred Resp	0- 99	R/W	Long Signed
R46448L	SD13_PRED_RESP	SD13 Pred Resp	0- 99	R/W	Long Signed
R46450L	SD14_PRED_RESP	SD14 Pred Resp	0- 99	R/W	Long Signed
R46452L	SD15_PRED_RESP	SD15 Pred Resp	0- 99	R/W	Long Signed
R46454L	SD16_PRED_RESP	SD16 Pred Resp	0- 99	R/W	Long Signed
R46456L	TD01_INTVL	TD01 Interval	60- 5940	R/W	Long Signed
R46458L	TD02_INTVL	TD02 Interval	60- 5940	R/W	Long Signed
R46460L	TD03_INTVL	TD03 Interval	60- 5940	R/W	Long Signed
R46462L	TD04_INTVL	TD04 Interval	60- 5940	R/W	Long Signed
R46464L	TD05_INTVL	TD05 Interval	60- 5940	R/W	Long Signed
R46466L	TD06_INTVL	TD06 Interval	60- 5940	R/W	Long Signed
R46468L	TD07_INTVL	TD07 Interval	60- 5940	R/W	Long Signed
R46470L	TD08_INTVL	TD08 Interval	60- 5940	R/W	Long Signed
R46472L	TD09_INTVL	TD09 Interval	60- 5940	R/W	Long Signed
R46474L	TD10_INTVL	TD10 Interval	60- 5940	R/W	Long Signed
R46476L	TD11_INTVL	TD11 Interval	60- 5940	R/W	Long Signed
R46478L	TD12_INTVL	TD12 Interval	60- 5940	R/W	Long Signed
R46480L	TD13_INTVL	TD13 Interval	60- 5940	R/W	Long Signed
R46482L	TD14_INTVL	TD14 Interval	60- 5940	R/W	Long Signed
R46484L	TD15_INTVL	TD15 Interval	60- 5940	R/W	Long Signed
R46486L	TD16_INTVL	TD16 Interval	60- 5940	R/W	Long Signed
R46488L	TD01_TIME_CONST	TD01 Time Const	1- 99	R/W	Long Signed
R46490L	TD02_TIME_CONST	TD02 Time Const	1- 99	R/W	Long Signed
R46492L	TD03_TIME_CONST	TD03 Time Const	1- 99	R/W	Long Signed
R46494L	TD04_TIME_CONST	TD04 Time Const	1- 99	R/W	Long Signed
R46496L	TD05_TIME_CONST	TD05 Time Const	1- 99	R/W	Long Signed
R46498L	TD06_TIME_CONST	TD06 Time Const	1- 99	R/W	Long Signed
R46500L	TD07_TIME_CONST	TD07 Time Const	1- 99	R/W	Long Signed
R46502L	TD08_TIME_CONST	TD08 Time Const	1- 99	R/W	Long Signed
R46504L	TD09_TIME_CONST	TD09 Time Const	1- 99	R/W	Long Signed
R46506L	TD10_TIME_CONST	TD10 Time Const	1- 99	R/W	Long Signed
R46508L	TD11_TIME_CONST	TD11 Time Const	1- 99	R/W	Long Signed
R46510L	TD12_TIME_CONST	TD12 Time Const	1- 99	R/W	Long Signed
R46512L	TD13_TIME_CONST	TD13 Time Const	1- 99	R/W	Long Signed
R46514L	TD14_TIME_CONST	TD14 Time Const	1- 99	R/W	Long Signed
R46516L	TD15_TIME_CONST	TD15 Time Const	1- 99	R/W	Long Signed
R46518L	TD16_TIME_CONST	TD16 Time Const	1- 99	R/W	Long Signed

Setpoint Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	Format Code	Type
R46520L	INT01_DIVISOR	IN01 Divisor	1- 1000000	R/W	Long Signed
R46522L	INT02_DIVISOR	IN02 Divisor	1- 1000000	R/W	Long Signed
R46524L	INT03_DIVISOR	IN03 Divisor	1- 1000000	R/W	Long Signed
R46526L	INT04_DIVISOR	IN04 Divisor	1- 1000000	R/W	Long Signed
R46528L	INT05_DIVISOR	IN05 Divisor	1- 1000000	R/W	Long Signed
R46530L	INT06_DIVISOR	IN06 Divisor	1- 1000000	R/W	Long Signed
R46532L	INT07_DIVISOR	IN07 Divisor	1- 1000000	R/W	Long Signed
R46534L	INT08_DIVISOR	IN08 Divisor	1- 1000000	R/W	Long Signed
R46536L	INT09_DIVISOR	IN09 Divisor	1- 1000000	R/W	Long Signed
R46538L	INT10_DIVISOR	IN10 Divisor	1- 1000000	R/W	Long Signed
R46540L	INT11_DIVISOR	IN11 Divisor	1- 1000000	R/W	Long Signed
R46542L	INT12_DIVISOR	IN12 Divisor	1- 1000000	R/W	Long Signed
R46544L	INT13_DIVISOR	IN13 Divisor	1- 1000000	R/W	Long Signed
R46546L	INT14_DIVISOR	IN14 Divisor	1- 1000000	R/W	Long Signed
R46548L	INT15_DIVISOR	IN15 Divisor	1- 1000000	R/W	Long Signed
R46550L	INT16_DIVISOR	IN16 Divisor	1- 1000000	R/W	Long Signed
R46552L	INT01_VALU_PULSE	IN01 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46554L	INT02_VALU_PULSE	IN02 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46556L	INT03_VALU_PULSE	IN03 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46558L	INT04_VALU_PULSE	IN04 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46560L	INT05_VALU_PULSE	IN05 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46562L	INT06_VALU_PULSE	IN06 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46564L	INT07_VALU_PULSE	IN07 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46566L	INT08_VALU_PULSE	IN08 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46568L	INT09_VALU_PULSE	IN09 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46570L	INT10_VALU_PULSE	IN10 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46572L	INT11_VALU_PULSE	IN11 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46574L	INT12_VALU_PULSE	IN12 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46576L	INT13_VALU_PULSE	IN13 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46578L	INT14_VALU_PULSE	IN14 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46580L	INT15_VALU_PULSE	IN15 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46582L	INT16_VALU_PULSE	IN16 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46978L	CM01_UNIT_ID	CM01 Unit ID	0- 9999	R/W	Long Signed
R47084L	INT01_ROLL_VALUE	IN01 RollValue	0- 1000000000	R/W	Long Signed
R47086L	INT02_ROLL_VALUE	IN02 RollValue	0- 1000000000	R/W	Long Signed
R47088L	INT03_ROLL_VALUE	IN03 RollValue	0- 1000000000	R/W	Long Signed
R47090L	INT04_ROLL_VALUE	IN04 RollValue	0- 1000000000	R/W	Long Signed
R47092L	INT05_ROLL_VALUE	IN05 RollValue	0- 1000000000	R/W	Long Signed
R47094L	INT06_ROLL_VALUE	IN06 RollValue	0- 1000000000	R/W	Long Signed
R47096L	INT07_ROLL_VALUE	IN07 RollValue	0- 1000000000	R/W	Long Signed
R47098L	INT08_ROLL_VALUE	IN08 RollValue	0- 1000000000	R/W	Long Signed
R47100L	INT09_ROLL_VALUE	IN09 RollValue	0- 1000000000	R/W	Long Signed
R47102L	INT10_ROLL_VALUE	IN10 RollValue	0- 1000000000	R/W	Long Signed
R47104L	INT11_ROLL_VALUE	IN11 RollValue	0- 1000000000	R/W	Long Signed
R47106L	INT12_ROLL_VALUE	IN12 RollValue	0- 1000000000	R/W	Long Signed
R47108L	INT13_ROLL_VALUE	IN13 RollValue	0- 1000000000	R/W	Long Signed
R47110L	INT14_ROLL_VALUE	IN14 RollValue	0- 1000000000	R/W	Long Signed
R47112L	INT15_ROLL_VALUE	IN15 RollValue	0- 1000000000	R/W	Long Signed
R47114L	INT16_ROLL_VALUE	IN16 RollValue	0- 1000000000	R/W	Long Signed
R47130L	CM03_UNIT_ID	CM03 Unit ID	0- 1	R/W	Long Signed

Dynamic Values

Dynamic Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/ Value/ Range	Format Code	Type
R40010L	VOLTS_AN	Van	Volts	RO	Long Signed
R40012L	VOLTS_BN	Vbn	Volts	RO	Long Signed
R40014L	VOLTS_CN	Vcn	Volts	RO	Long Signed
R40016L	VOLTS_AVG_LINE	Vln avg	Volts	RO	Long Signed
R40018L	VOLTS_AB	Vab	Volts	RO	Long Signed
R40020L	VOLTS_BC	Vbc	Volts	RO	Long Signed
R40022L	VOLTS_CA	Vca	Volts	RO	Long Signed
R40024L	VOLTS_AVG_PHASE	Vll avg	Volts	RO	Long Signed
R40026L	AMPS_A	Ia	Amps	RO	Long Signed
R40028L	AMPS_B	Ib	Amps	RO	Long Signed
R40030L	AMPS_C	Ic	Amps	RO	Long Signed
R40032L	AMPS_AVG	I avg	Amps	RO	Long Signed
R40034L	DIG_OUT_1_STATE	Digital Output State 01	0 = Off; 1 = On	RO	Long Signed
R40036L	DIG_OUT_2_STATE	Digital Output State 02	0 = Off; 1 = On	RO	Long Signed
R40038L	DIG_OUT_3_STATE	Digital Output State 03	0 = Off; 1 = On	RO	Long Signed
R40040L	PHASE_REVERSAL	Phase Reversal	0 = Off; 1 = On	RO	Long Signed
R40042L	KW_A	kWa	kW	RO	Long Signed
R40044L	KW_B	kWb	kW	RO	Long Signed
R40046L	KW_C	kWc	kW	RO	Long Signed
R40048L	KW_TOTAL	kW tot	kW	RO	Long Signed
R40050L	KVAR_A	kVARa	kVAR	RO	Long Signed
R40052L	KVAR_B	kVARb	kVAR	RO	Long Signed
R40054L	KVAR_C	kVARc	kVAR	RO	Long Signed
R40056L	KVAR_TOTAL	kVAR tot	kVAR	RO	Long Signed
R40058L	KVA_A	kVAa	kVA	RO	Long Signed
R40060L	KVA_B	kVAb	kVA	RO	Long Signed
R40062L	KVA_C	kVAc	kVA	RO	Long Signed
R40064L	KVA_TOTAL	kVA tot	kVA	RO	Long Signed
R40066L	KWH_IMPORT	kWh import	kWh	RO	Unsigned Long
R40068L	KWH_EXPORT	kWh export	kWh	RO	Unsigned Long
R40070L	KVARH_IMPORT	kVARh import	kVARh	RO	Unsigned Long
R40072L	KVARH_EXPORT	kVARh export	kVARh	RO	Unsigned Long
R40074L	KW_SD	kW Sliding Demand	kW	RO	Long Signed
R40076L	KW_PD	kW Predicted Demand	kW	RO	Long Signed
R40078L	KVAR_SD	kVAR Sliding Demand	kVAR	RO	Long Signed
R40080L	KVAR_PD	kVAR Predicted Demand	kVAR	RO	Long Signed
R40082L	KVA_SD	kVA Sliding Demand	kVA	RO	Long Signed
R40084L	KVA_PD	kVA Predicted Demand	kVA	RO	Long Signed
R40086L	VLN_AVG_MAX	Vln avg Max	Volts	RO	Long Signed
R40088L	I_AVG_MAX	I avg Max	Amps	RO	Long Signed
R40090L	KW_TOT_MAX	kW tot Max	kW	RO	Long Signed
R40092L	KVAR_TOT_MAX	kVAR tot Max	kVAR	RO	Long Signed
R40094L	KVA_TOT_MAX	kVA tot Max	kVA	RO	Long Signed
R40096L	FREQ_MAX	Freq Max	Hz	RO	Long Signed
R40098L	VLN_AVG_MIN	Vln avg Min	Volts	RO	Long Signed
R40100L	I_AVG_MIN	I avg Min	Amps	RO	Long Signed
R40102L	FREQ_MIN	Freq Min	Hz	RO	Long Signed
R40104L	KVAH_TOTAL	kVAh total	kVAh	RO	Unsigned Long

Dynamic Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/ Value/ Range	Format Code	Type
R40106L	THD_V1	Total Harmonics Distortion V1	0.01x%	RO	Long Signed
R40108L	THD_V2	Total Harmonics Distortion V2	0.01x%	RO	Long Signed
R40110L	THD_V3	Total Harmonics Distortion V3	0.01x%	RO	Long Signed
R40112L	THD_I1	Total Harmonics Distortion I1	0.01x%	RO	Long Signed
R40114L	THD_I2	Total Harmonics Distortion I2	0.01x%	RO	Long Signed
R40116L	THD_I3	Total Harmonics Distortion I3	0.01x%	RO	Long Signed
R40118L	KFACTOR_I1	K Factor I1	0.01x	RO	Long Signed
R40120L	KFACTOR_I2	K Factor I2	0.01x	RO	Long Signed
R40122L	KFACTOR_I3	K Factor I3	0.01x	RO	Long Signed
R40124L	PF_A	pf signed a	0.01x%	RO	Long Signed
R40126L	PF_B	pf signed b	0.01x%	RO	Long Signed
R40128L	PF_C	pf signed c	0.01x%	RO	Long Signed
R40130L	PF_AVG	pf signed avg	0.01x%	RO	Long Signed
R40132L	VOLTAGE_UNBALANCE	V unbal	0.01x%	RO	Long Signed
R40134L	CURRENT_UNBALANCE	I unbal	0.01x%	RO	Long Signed
R40136L	FREQUENCY	Frequency	0.01xHz	RO	Long Signed

Format Codes:

F1: Integer

F2: Unsigned Long

F3: Long Signed Int

F4: SF = .01

Type Codes:

SP = Setpoint (read/write)

DV = Discrete Value (read-only)

Refer to the *7300 Installation and Operation Manual* and the *7300 Modicon Modbus Serial Communications Protocol Guide* for more information on ranges and responses to special conditions.

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EPM 7330 – Electronic Power Meter

■ *SETPOINTS*

■ *DYNAMIC VALUES*

Setpoints

Setpoint Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	Format Code	Type
R42000	EXT_PULSE1	ExtPulse #1 (MIN/ MAX Reset)	Set to 1 to Reset Min/Max	R/W	Integer
R42001	EXT_PULSE2	ExtPulse #2 (Sliding Window Demand Reset)	Set to 1 to Reset SWD	R/W	Integer
R42002	EXT_PULSE3	ExtPulse #3		R/W	Integer
R42003	EXT_PULSE4	ExtPulse #4 (Energy Integrator Reset)	Set to 1 to Reset Energy	R/W	Integer
R42004	EXT_PULSE5	ExtPulse #5 (Force Digital Output 1 ON)	Set to 1 to Force DO1 ON	R/W	Integer
R42005	EXT_PULSE6	ExtPulse #6 (Force Digital Output 1 Off)	Set to 1 to Force DO1 OFF	R/W	Integer
R42006	EXT_PULSE7	ExtPulse #7 (Force Digital Output 2 ON)	Set to 1 to Force DO2 ON	R/W	Integer
R42007	EXT_PULSE8	ExtPulse #8 (Force Digital Output 2 OFF)	Set to 1 to Force DO2 OFF	R/W	Integer
R42008	EXT_PULSE9	ExtPulse #9 (Force Digital Output 3 ON)	Set to 1 to Force DO3 ON	R/W	Integer
R42009	EXT_PULSE10	ExtPulse #10 (Force Digital Output 3 OFF)	Set to 1 to Force DO3 OFF	R/W	Integer
R42010	EXT_PULSE11	ExtPulse #11		R/W	Integer
R42011	EXT_PULSE12	ExtPulse #12		R/W	Integer
R42012	EXT_PULSE13	ExtPulse #13		R/W	Integer
R42013	EXT_PULSE14	ExtPulse #14		R/W	Integer
R42014	EXT_PULSE15	ExtPulse #15		R/W	Integer
R42015	EXT_PULSE16	ExtPulse #16		R/W	Integer
R42016	EXT_PULSE17	ExtPulse #17		R/W	Integer
R42017	EXT_PULSE18	ExtPulse #18		R/W	Integer
R42018	EXT_PULSE19	ExtPulse #19		R/W	Integer
R42019	EXT_PULSE20	ExtPulse #20		R/W	Integer
R42020	EXT_PULSE21	ExtPulse #21		R/W	Integer
R42021	EXT_PULSE22	ExtPulse #22		R/W	Integer
R42022	EXT_PULSE23	ExtPulse #23		R/W	Integer
R42023	EXT_PULSE24	ExtPulse #24		R/W	Integer
R42024	EXT_PULSE25	ExtPulse #25		R/W	Integer
R42025	EXT_PULSE26	ExtPulse #26		R/W	Integer
R42026	EXT_PULSE27	ExtPulse #27		R/W	Integer
R42027	EXT_PULSE28	ExtPulse #28		R/W	Integer
R42028	EXT_PULSE29	ExtPulse #29		R/W	Integer
R42029	EXT_PULSE30	ExtPulse #30		R/W	Integer
R42030	EXT_PULSE31	ExtPulse #31		R/W	Integer
R42031	EXT_PULSE32	ExtPulse #32		R/W	Integer
R42200	EXT_BOOL1	ExtBool#1		R/W	Integer
R42201	EXT_BOOL2	ExtBool#2		R/W	Integer
R42202	EXT_BOOL3	ExtBool#3		R/W	Integer
R42203	EXT_BOOL4	ExtBool#4		R/W	Integer
R42204	EXT_BOOL5	ExtBool#5		R/W	Integer
R42205	EXT_BOOL6	ExtBool#6		R/W	Integer
R42206	EXT_BOOL7	ExtBool#7		R/W	Integer
R42207	EXT_BOOL8	ExtBool#8		R/W	Integer
R42300L	EXT_NUM1	ExtNum #1		R/W	Long Signed
R42302L	EXT_NUM2	ExtNum #2		R/W	Long Signed
R42304L	EXT_NUM3	ExtNum #3		R/W	Long Signed
R42306L	EXT_NUM4	ExtNum #4		R/W	Long Signed

Setpoint Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	Format Code	Type
R44000	PT_CONNECT	PT Connections	0= 4W- WYE; 1= DELTA; 2= SINGLE; 3= DEMO; 4= 3W- WYE	R/W	Integer
R44001	I1_POLARITY	I1Polarity	0= Normal; 1= Inverted	R/W	Integer
R44002	I2_POLARITY	I2Polarity	0= Normal; 1= Inverted	R/W	Integer
R44003	I3_POLARITY	I3Polarity	0= Normal; 1= Inverted	R/W	Integer
R44004	PH_ORDER	Phase Order	0= ABC; 1= ACB	R/W	Integer
R44005	PH_LBLS	Phase Lbls	0= ABC; 1= RST; 2= XYZ; 3= RYB; 4= 123	R/W	Integer
R44120	DO01_EVLOG_MODE	DO01 EvLog Mode	0= Log Off; 1= Log On	R/W	Integer
R44121	DO02_EVLOG_MODE	DO02 EvLog Mode	0= Log Off; 1= Log On	R/W	Integer
R44122	DO03_EVLOG_MODE	DO03 EvLog Mode	0= Log Off; 1= Log On	R/W	Integer
R44123	DO04_EVLOG_MODE	DO04 EvLog Mode	0= Log Off; 1= Log On	R/W	Integer
R44124	DO05_EVLOG_MODE	DO05 EvLog Mode	0= Log Off; 1= Log On	R/W	Integer
R44150	DO01_POLARITY	DO01 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44151	DO02_POLARITY	DO02 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44152	DO03_POLARITY	DO03 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44153	DO04_POLARITY	DO04 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44154	DO05_POLARITY	DO05 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44180	PU01_OUTPUT_MODE	PU01 OutputMode	0= Pulse; 1= KYZ	R/W	Integer
R44181	PU02_OUTPUT_MODE	PU02 OutputMode	0= Pulse; 1= KYZ	R/W	Integer
R44182	PU03_OUTPUT_MODE	PU03 OutputMode	0= Pulse; 1= KYZ	R/W	Integer
R44183	PU04_OUTPUT_MODE	PU04 OutputMode	0= Pulse; 1= KYZ	R/W	Integer
R44184	PU05_OUTPUT_MODE	PU05 OutputMode	0= Pulse; 1= KYZ	R/W	Integer
R44190	PU01_POLARITY	PU01 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44191	PU02_POLARITY	PU02 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44192	PU03_POLARITY	PU03 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44193	PU04_POLARITY	PU04 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44194	PU05_POLARITY	PU05 Polarity	0= Non- Inverting; 1= Inverting	R/W	Integer
R44216	INT01_MODE	IN01 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44217	INT02_MODE	IN02 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44218	INT03_MODE	IN03 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44219	INT04_MODE	IN04 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44220	INT05_MODE	IN05 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44221	INT06_MODE	IN06 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44222	INT07_MODE	IN07 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44223	INT08_MODE	IN08 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44224	INT09_MODE	IN09 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44225	INT10_MODE	IN10 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44226	INT11_MODE	IN11 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44227	INT12_MODE	IN12 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer

Setpoint Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	Format Code	Type
R44228	INT13_MODE	IN13 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44229	INT14_MODE	IN14 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44230	INT15_MODE	IN15 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44231	INT16_MODE	IN16 Mode	0= Forward; 1= Reverse; 2= Absolute; 3= Net	R/W	Integer
R44390	CM01_COMM_MODE	CM01 Comm Mode	1= RS485	R/W	Integer
R44391	CM01_BAUD_RATE	CM01 Baud Rate	1= 1200; 2= 2400; 3= 4800; 4= 9600; 5= 19200	R/W	Integer
R44392	CM01_HSHAKE_MODE	CM01 Hshake Mode	0= RTS w/ Delay	R/W	Integer
R44393	CM01_RTS_LVL	CM01 RTS Level	0= Normal; 1= Inverted	R/W	Integer
R44394	CM01_CTS_LVL	CM01 CTS Level	0= Normal; 1= Inverted	R/W	Integer
R44395	FAC_NOM_FREQ	FAC Nom Freq	0= 60Hz; 1= 50Hz	R/W	Integer
R44445	DO01_PORT	DO01 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44446	DO02_PORT	DO02 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44447	DO03_PORT	DO03 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44448	DO04_PORT	DO04 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44449	DO05_PORT	DO05 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44513	PU01_PORT	PU01 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44514	PU02_PORT	PU02 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44515	PU03_PORT	PU03 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44516	PU04_PORT	PU04 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44517	PU05_PORT	PU05 Port	0= Not Used; 1= PortD1; 2= PortD2; 3= PortD3; 4= PortD4; 5= L1; 6= IR LED	R/W	Integer
R44586	PM_V1_POLARITY	PM V1Polarity	0= Normal; 1= Inverted	R/W	Integer
R44587	PM_V2_POLARITY	PM V2Polarity	0= Normal; 1= Inverted	R/W	Integer
R44588	PM_V3_POLARITY	PM V3Polarity	0= Normal; 1= Inverted	R/W	Integer
R44589	CM03_BAUD_RATE	CM03 Baud Rate	1= 1200; 2= 2400; 3= 4800; 4= 9600; 5= 19200	R/W	Integer
R44591	CM01_PROTOCOL	CM01 Protocol	0= ION; 1= MODBUS	R/W	Integer
R44593	CM03_PROTOCOL	CM03 Protocol	0= ION; 1= MODBUS; 2= Infrared	R/W	Integer

Setpoint Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	Format Code	Type
			I/O: 3= Factory		
R46000L	PM_PT_PRIM	PM PT Prim	1- 999999	R/W	Long Signed
R46002L	PM_PT_SEC	PM PT Sec	1- 999999	R/W	Long Signed
R46004L	PM_CT_PRIM	PM CT Prim	1- 999999	R/W	Long Signed
R46006L	PM_CT_SEC	PM CT Sec	1- 999999	R/W	Long Signed
R46280L	DO01_PULSE_WIDTH	DO01 PulseWidth	0- 2000000	R/W	Long Signed
R46282L	DO02_PULSE_WIDTH	DO02 PulseWidth	0- 2000000	R/W	Long Signed
R46284L	DO03_PULSE_WIDTH	DO03 PulseWidth	0- 2000000	R/W	Long Signed
R46286L	DO04_PULSE_WIDTH	DO04 PulseWidth	0- 2000000	R/W	Long Signed
R46288L	DO05_PULSE_WIDTH	DO05 PulseWidth	0- 2000000	R/W	Long Signed
R46340L	PV01_PULSE_WIDTH	PU01 PulseWidth	0- 2000000	R/W	Long Signed
R46342L	PV02_PULSE_WIDTH	PU02 PulseWidth	0- 2000000	R/W	Long Signed
R46344L	PV03_PULSE_WIDTH	PU03 PulseWidth	0- 2000000	R/W	Long Signed
R46346L	PV04_PULSE_WIDTH	PU04 PulseWidth	0- 2000000	R/W	Long Signed
R46348L	PV05_PULSE_WIDTH	PU05 PulseWidth	0- 2000000	R/W	Long Signed
R46360L	SD01_SUB_INTVL	SD01 Sub Intvl	60- 5940	R/W	Long Signed
R46362L	SD02_SUB_INTVL	SD02 Sub Intvl	60- 5940	R/W	Long Signed
R46364L	SD03_SUB_INTVL	SD03 Sub Intvl	60- 5940	R/W	Long Signed
R46366L	SD04_SUB_INTVL	SD04 Sub Intvl	60- 5940	R/W	Long Signed
R46368L	SD05_SUB_INTVL	SD05 Sub Intvl	60- 5940	R/W	Long Signed
R46370L	SD06_SUB_INTVL	SD06 Sub Intvl	60- 5940	R/W	Long Signed
R46372L	SD07_SUB_INTVL	SD07 Sub Intvl	60- 5940	R/W	Long Signed
R46374L	SD08_SUB_INTVL	SD08 Sub Intvl	60- 5940	R/W	Long Signed
R46376L	SD09_SUB_INTVL	SD09 Sub Intvl	60- 5940	R/W	Long Signed
R46378L	SD10_SUB_INTVL	SD10 Sub Intvl	60- 5940	R/W	Long Signed
R46380L	SD11_SUB_INTVL	SD11 Sub Intvl	60- 5940	R/W	Long Signed
R46382L	SD12_SUB_INTVL	SD12 Sub Intvl	60- 5940	R/W	Long Signed
R46384L	SD13_SUB_INTVL	SD13 Sub Intvl	60- 5940	R/W	Long Signed
R46386L	SD14_SUB_INTVL	SD14 Sub Intvl	60- 5940	R/W	Long Signed
R46388L	SD15_SUB_INTVL	SD15 Sub Intvl	60- 5940	R/W	Long Signed
R46390L	SD16_SUB_INTVL	SD16 Sub Intvl	60- 5940	R/W	Long Signed
R46392L	SD01_SUB_INTVLS	SD01 #SubIntvls	1- 15	R/W	Long Signed
R46394L	SD02_SUB_INTVLS	SD02 #SubIntvls	1- 15	R/W	Long Signed
R46396L	SD03_SUB_INTVLS	SD03 #SubIntvls	1- 15	R/W	Long Signed
R46398L	SD04_SUB_INTVLS	SD04 #SubIntvls	1- 15	R/W	Long Signed
R46400L	SD05_SUB_INTVLS	SD05 #SubIntvls	1- 15	R/W	Long Signed
R46402L	SD06_SUB_INTVLS	SD06 #SubIntvls	1- 15	R/W	Long Signed
R46404L	SD07_SUB_INTVLS	SD07 #SubIntvls	1- 15	R/W	Long Signed
R46406L	SD08_SUB_INTVLS	SD08 #SubIntvls	1- 15	R/W	Long Signed
R46408L	SD09_SUB_INTVLS	SD09 #SubIntvls	1- 15	R/W	Long Signed
R46410L	SD10_SUB_INTVLS	SD10 #SubIntvls	1- 15	R/W	Long Signed
R46412L	SD11_SUB_INTVLS	SD11 #SubIntvls	1- 15	R/W	Long Signed
R46414L	SD12_SUB_INTVLS	SD12 #SubIntvls	1- 15	R/W	Long Signed
R46416L	SD13_SUB_INTVLS	SD13 #SubIntvls	1- 15	R/W	Long Signed
R46418L	SD14_SUB_INTVLS	SD14 #SubIntvls	1- 15	R/W	Long Signed
R46420L	SD15_SUB_INTVLS	SD15 #SubIntvls	1- 15	R/W	Long Signed
R46422L	SD16_SUB_INTVLS	SD16 #SubIntvls	1- 15	R/W	Long Signed
R46424L	SD01_PRED_RESP	SD01 Pred Resp	0- 99	R/W	Long Signed
R46426L	SD02_PRED_RESP	SD02 Pred Resp	0- 99	R/W	Long Signed
R46428L	SD03_PRED_RESP	SD03 Pred Resp	0- 99	R/W	Long Signed
R46430L	SD04_PRED_RESP	SD04 Pred Resp	0- 99	R/W	Long Signed

Setpoint Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	Format Code	Type
R46432L	SD05_PRED_RESP	SD05 Pred Resp	0- 99	R/W	Long Signed
R46434L	SD06_PRED_RESP	SD06 Pred Resp	0- 99	R/W	Long Signed
R46436L	SD07_PRED_RESP	SD07 Pred Resp	0- 99	R/W	Long Signed
R46438L	SD08_PRED_RESP	SD08 Pred Resp	0- 99	R/W	Long Signed
R46440L	SD09_PRED_RESP	SD09 Pred Resp	0- 99	R/W	Long Signed
R46442L	SD10_PRED_RESP	SD10 Pred Resp	0- 99	R/W	Long Signed
R46444L	SD11_PRED_RESP	SD11 Pred Resp	0- 99	R/W	Long Signed
R46446L	SD12_PRED_RESP	SD12 Pred Resp	0- 99	R/W	Long Signed
R46448L	SD13_PRED_RESP	SD13 Pred Resp	0- 99	R/W	Long Signed
R46450L	SD14_PRED_RESP	SD14 Pred Resp	0- 99	R/W	Long Signed
R46452L	SD15_PRED_RESP	SD15 Pred Resp	0- 99	R/W	Long Signed
R46454L	SD16_PRED_RESP	SD16 Pred Resp	0- 99	R/W	Long Signed
R46456L	TD01_INTVL	TD01 Interval	60- 5940	R/W	Long Signed
R46458L	TD02_INTVL	TD02 Interval	60- 5940	R/W	Long Signed
R46460L	TD03_INTVL	TD03 Interval	60- 5940	R/W	Long Signed
R46462L	TD04_INTVL	TD04 Interval	60- 5940	R/W	Long Signed
R46464L	TD05_INTVL	TD05 Interval	60- 5940	R/W	Long Signed
R46466L	TD06_INTVL	TD06 Interval	60- 5940	R/W	Long Signed
R46468L	TD07_INTVL	TD07 Interval	60- 5940	R/W	Long Signed
R46470L	TD08_INTVL	TD08 Interval	60- 5940	R/W	Long Signed
R46472L	TD09_INTVL	TD09 Interval	60- 5940	R/W	Long Signed
R46474L	TD10_INTVL	TD10 Interval	60- 5940	R/W	Long Signed
R46476L	TD11_INTVL	TD11 Interval	60- 5940	R/W	Long Signed
R46478L	TD12_INTVL	TD12 Interval	60- 5940	R/W	Long Signed
R46480L	TD13_INTVL	TD13 Interval	60- 5940	R/W	Long Signed
R46482L	TD14_INTVL	TD14 Interval	60- 5940	R/W	Long Signed
R46484L	TD15_INTVL	TD15 Interval	60- 5940	R/W	Long Signed
R46486L	TD16_INTVL	TD16 Interval	60- 5940	R/W	Long Signed
R46488L	TD01_TIME_CONST	TD01 Time Const	1- 99	R/W	Long Signed
R46490L	TD02_TIME_CONST	TD02 Time Const	1- 99	R/W	Long Signed
R46492L	TD03_TIME_CONST	TD03 Time Const	1- 99	R/W	Long Signed
R46494L	TD04_TIME_CONST	TD04 Time Const	1- 99	R/W	Long Signed
R46496L	TD05_TIME_CONST	TD05 Time Const	1- 99	R/W	Long Signed
R46498L	TD06_TIME_CONST	TD06 Time Const	1- 99	R/W	Long Signed
R46500L	TD07_TIME_CONST	TD07 Time Const	1- 99	R/W	Long Signed
R46502L	TD08_TIME_CONST	TD08 Time Const	1- 99	R/W	Long Signed
R46504L	TD09_TIME_CONST	TD09 Time Const	1- 99	R/W	Long Signed
R46506L	TD10_TIME_CONST	TD10 Time Const	1- 99	R/W	Long Signed
R46508L	TD11_TIME_CONST	TD11 Time Const	1- 99	R/W	Long Signed
R46510L	TD12_TIME_CONST	TD12 Time Const	1- 99	R/W	Long Signed
R46512L	TD13_TIME_CONST	TD13 Time Const	1- 99	R/W	Long Signed
R46514L	TD14_TIME_CONST	TD14 Time Const	1- 99	R/W	Long Signed
R46516L	TD15_TIME_CONST	TD15 Time Const	1- 99	R/W	Long Signed
R46518L	TD16_TIME_CONST	TD16 Time Const	1- 99	R/W	Long Signed
R46520L	INT01_DIVISOR	IN01 Divisor	1- 1000000	R/W	Long Signed
R46522L	INT02_DIVISOR	IN02 Divisor	1- 1000000	R/W	Long Signed
R46524L	INT03_DIVISOR	IN03 Divisor	1- 1000000	R/W	Long Signed
R46526L	INT04_DIVISOR	IN04 Divisor	1- 1000000	R/W	Long Signed
R46528L	INT05_DIVISOR	IN05 Divisor	1- 1000000	R/W	Long Signed
R46530L	INT06_DIVISOR	IN06 Divisor	1- 1000000	R/W	Long Signed
R46532L	INT07_DIVISOR	IN07 Divisor	1- 1000000	R/W	Long Signed

Setpoint Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	Format Code	Type
R46534L	INT08_DIVISOR	IN08 Divisor	1- 1000000	R/W	Long Signed
R46536L	INT09_DIVISOR	IN09 Divisor	1- 1000000	R/W	Long Signed
R46538L	INT10_DIVISOR	IN10 Divisor	1- 1000000	R/W	Long Signed
R46540L	INT11_DIVISOR	IN11 Divisor	1- 1000000	R/W	Long Signed
R46542L	INT12_DIVISOR	IN12 Divisor	1- 1000000	R/W	Long Signed
R46544L	INT13_DIVISOR	IN13 Divisor	1- 1000000	R/W	Long Signed
R46546L	INT14_DIVISOR	IN14 Divisor	1- 1000000	R/W	Long Signed
R46548L	INT15_DIVISOR	IN15 Divisor	1- 1000000	R/W	Long Signed
R46550L	INT16_DIVISOR	IN16 Divisor	1- 1000000	R/W	Long Signed
R46552L	INT01_VALU_PULSE	IN01 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46554L	INT02_VALU_PULSE	IN02 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46556L	INT03_VALU_PULSE	IN03 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46558L	INT04_VALU_PULSE	IN04 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46560L	INT05_VALU_PULSE	IN05 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46562L	INT06_VALU_PULSE	IN06 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46564L	INT07_VALU_PULSE	IN07 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46566L	INT08_VALU_PULSE	IN08 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46568L	INT09_VALU_PULSE	IN09 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46570L	INT10_VALU_PULSE	IN10 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46572L	INT11_VALU_PULSE	IN11 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46574L	INT12_VALU_PULSE	IN12 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46576L	INT13_VALU_PULSE	IN13 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46578L	INT14_VALU_PULSE	IN14 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46580L	INT15_VALU_PULSE	IN15 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46582L	INT16_VALU_PULSE	IN16 Valu/Pulse	0- 1000000000	R/W	Long Signed
R46978L	CM01_UNIT_ID	CM01 Unit ID	0- 9999	R/W	Long Signed
R47084L	INT01_ROLL_VALUE	IN01 RollValue	0- 1000000000	R/W	Long Signed
R47086L	INT02_ROLL_VALUE	IN02 RollValue	0- 1000000000	R/W	Long Signed
R47088L	INT03_ROLL_VALUE	IN03 RollValue	0- 1000000000	R/W	Long Signed
R47090L	INT04_ROLL_VALUE	IN04 RollValue	0- 1000000000	R/W	Long Signed
R47092L	INT05_ROLL_VALUE	IN05 RollValue	0- 1000000000	R/W	Long Signed
R47094L	INT06_ROLL_VALUE	IN06 RollValue	0- 1000000000	R/W	Long Signed
R47096L	INT07_ROLL_VALUE	IN07 RollValue	0- 1000000000	R/W	Long Signed
R47098L	INT08_ROLL_VALUE	IN08 RollValue	0- 1000000000	R/W	Long Signed
R47100L	INT09_ROLL_VALUE	IN09 RollValue	0- 1000000000	R/W	Long Signed
R47102L	INT10_ROLL_VALUE	IN10 RollValue	0- 1000000000	R/W	Long Signed
R47104L	INT11_ROLL_VALUE	IN11 RollValue	0- 1000000000	R/W	Long Signed
R47106L	INT12_ROLL_VALUE	IN12 RollValue	0- 1000000000	R/W	Long Signed
R47108L	INT13_ROLL_VALUE	IN13 RollValue	0- 1000000000	R/W	Long Signed
R47110L	INT14_ROLL_VALUE	IN14 RollValue	0- 1000000000	R/W	Long Signed
R47112L	INT15_ROLL_VALUE	IN15 RollValue	0- 1000000000	R/W	Long Signed
R47114L	INT16_ROLL_VALUE	IN16 RollValue	0- 1000000000	R/W	Long Signed
R47130L	CM03_UNIT_ID	CM03 Unit ID	0- 1	R/W	Long Signed

Dynamic Values

Dynamic Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/ Value/ Range	Format Code	Type
R40010L	VOLTS_ AN	Van	Volts	RO	Long Signed

Dynamic Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/ Value/ Range	Format Code	Type
R40012L	VOLTS_BN	Vbn	Volts	RO	Long Signed
R40014L	VOLTS_CN	Vcn	Volts	RO	Long Signed
R40016L	VOLTS_AVG_LINE	Vln avg	Volts	RO	Long Signed
R40018L	VOLTS_AB	Vab	Volts	RO	Long Signed
R40020L	VOLTS_BC	Vbc	Volts	RO	Long Signed
R40022L	VOLTS_CA	Vca	Volts	RO	Long Signed
R40024L	VOLTS_AVG_PHASE	Vll avg	Volts	RO	Long Signed
R40026L	AMPS_A	Ia	Amps	RO	Long Signed
R40028L	AMPS_B	Ib	Amps	RO	Long Signed
R40030L	AMPS_C	Ic	Amps	RO	Long Signed
R40032L	AMPS_AVG	I avg	Amps	RO	Long Signed
R40034L	DIG_OUT_1_STATE	Digital Output State 01	0 = Off; 1 = On	RO	Long Signed
R40036L	DIG_OUT_2_STATE	Digital Output State 02	0 = Off; 1 = On	RO	Long Signed
R40038L	DIG_OUT_3_STATE	Digital Output State 03	0 = Off; 1 = On	RO	Long Signed
R40040L	PHASE_REVERSAL	Phase Reversal	0 = Off; 1 = On	RO	Long Signed
R40042L	KW_A	kWa	kW	RO	Long Signed
R40044L	KW_B	kWb	kW	RO	Long Signed
R40046L	KW_C	kWc	kW	RO	Long Signed
R40048L	KW_TOTAL	kW tot	kW	RO	Long Signed
R40050L	KVAR_A	kVARa	kVAR	RO	Long Signed
R40052L	KVAR_B	kVARb	kVAR	RO	Long Signed
R40054L	KVAR_C	kVARc	kVAR	RO	Long Signed
R40056L	KVAR_TOTAL	kVAR tot	kVAR	RO	Long Signed
R40058L	KVA_A	kVAa	kVA	RO	Long Signed
R40060L	KVA_B	kVAb	kVA	RO	Long Signed
R40062L	KVA_C	kVAc	kVA	RO	Long Signed
R40064L	KVA_TOTAL	kVA tot	kVA	RO	Long Signed
R40066L	KWH_IMPORT	kWh import	kWh	RO	Unsigned Long
R40068L	KWH_EXPORT	kWh export	kWh	RO	Unsigned Long
R40070L	KVARH_IMPORT	kVARh import	kVARh	RO	Unsigned Long
R40072L	KVARH_EXPORT	kVARh export	kVARh	RO	Unsigned Long
R40074L	KW_SD	kW Sliding Demand	kW	RO	Long Signed
R40076L	KW_PD	kW Predicted Demand	kW	RO	Long Signed
R40078L	KVAR_SD	kVAR Sliding Demand	kVAR	RO	Long Signed
R40080L	KVAR_PD	kVAR Predicted Demand	kVAR	RO	Long Signed
R40082L	KVA_SD	kVA Sliding Demand	kVA	RO	Long Signed
R40084L	KVA_PD	kVA Predicted Demand	kVA	RO	Long Signed
R40086L	VLN_AVG_MAX	Vln avg Max	Volts	RO	Long Signed
R40088L	I_AVG_MAX	I avg Max	Amps	RO	Long Signed
R40090L	KW_TOT_MAX	kW tot Max	kW	RO	Long Signed
R40092L	KVAR_TOT_MAX	kVAR tot Max	kVAR	RO	Long Signed
R40094L	KVA_TOT_MAX	kVA tot Max	kVA	RO	Long Signed
R40096L	FREQ_MAX	Freq Max	Hz	RO	Long Signed
R40098L	VLN_AVG_MIN	Vln avg Min	Volts	RO	Long Signed
R40100L	I_AVG_MIN	I avg Min	Amps	RO	Long Signed
R40102L	FREQ_MIN	Freq Min	Hz	RO	Long Signed
R40104L	KVAH_TOTAL	kVAh total	kVAh	RO	Unsigned Long
R40106L	THD_V1	Total Harmonics Distortion V1	0.01x%	RO	Long Signed
R40108L	THD_V2	Total Harmonics Distortion V2	0.01x%	RO	Long Signed
R40110L	THD_V3	Total Harmonics Distortion V3	0.01x%	RO	Long Signed
R40112L	THD_I1	Total Harmonics Distortion I1	0.01x%	RO	Long Signed

Dynamic Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/ Value/ Range	Format Code	Type
R40114L	THD_I2	Total Harmonics Distortion I2	0.01x%	RO	Long Signed
R40116L	THD_I3	Total Harmonics Distortion I3	0.01x%	RO	Long Signed
R40118L	KFACTOR_I1	K Factor I1	0.01x	RO	Long Signed
R40120L	KFACTOR_I2	K Factor I2	0.01x	RO	Long Signed
R40122L	KFACTOR_I3	K Factor I3	0.01x	RO	Long Signed
R40124L	PF_A	pf signed a	0.01x%	RO	Long Signed
R40126L	PF_B	pf signed b	0.01x%	RO	Long Signed
R40128L	PF_C	pf signed c	0.01x%	RO	Long Signed
R40130L	PF_AVG	pf signed avg	0.01x%	RO	Long Signed
R40132L	VOLTAGE_UNBALANCE	V unbal	0.01x%	RO	Long Signed
R40134L	CURRENT_UNBALANCE	I unbal	0.01x%	RO	Long Signed
R40136L	FREQUENCY	Frequency	0.01xHz	RO	Long Signed

Format Codes:

F1: Integer

F2: Unsigned Long

F3: Long Signed Int

F4: SF = .01

Type Codes:

SP = Setpoint (read/write)

DV = Discrete Value (read-only)

Refer to the *7330 Installation and Operation Manual* and the *7330 Modicon Modbus Serial Communications Protocol Guide* for more information on ranges and responses to special conditions.

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7500 POWER METER

7500 Meter

The 7500 Power Meter is different from the currently supported PMCS device types in that its registers are not accessed through the PMCS DDE Server. Instead, two separate pieces of software are used, one (the ION Link) to read registers from the 7500, and one (the GE 7700 Gateway) to write registers to the 7500.

For detailed theory of operation information on the 7500 and its associated software components, see DEH-40035, the GE 7700 Gateway Users Manual.

POWER METER REGISTERS

Power Meter Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22528	0x5800	VIn a	0 to 1 E6	RO	Real
22529	0x5801	VIn b	0 to 1 E6	RO	Real
22530	0x5802	VIn c	0 to 1 E6	RO	Real
22531	0x5803	VIn avg	0 to 1 E6	RO	Real
22532	0x5804	VII ab	0 to 2 E6	RO	Real
22533	0x5805	VII bc	0 to 2 E6	RO	Real
22534	0x5806	VII ca	0 to 2 E6	RO	Real
22535	0x5807	VII avg	0 to 2 E6	RO	Real
22536	0x5808	I a	0 to 1 E6	RO	Real
22537	0x5809	I b	0 to 1 E6	RO	Real
22538	0x580A	I c	0 to 1 E6	RO	Real
22539	0x580B	I avg	0 to 1 E6	RO	Real
22540	0x580C	kW a	0 to +/-3.3 E7	RO	Real
22541	0x580D	kW b	0 to +/-3.3 E7	RO	Real
22542	0x580E	kW c	0 to +/-3.3 E7	RO	Real
22543	0x580F	kW total	0 to +/-3.3 E7	RO	Real
22544	0x5810	kVAR a	0 to +/-3.3 E7	RO	Real
22545	0x5811	kVAR b	0 to +/-3.3 E7	RO	Real
22546	0x5812	kVAR c	0 to +/-3.3 E7	RO	Real
22547	0x5813	kVAR total	0 to +/-3.3 E7	RO	Real
22548	0x5814	kVA a	0 to +/-3.3 E7	RO	Real
22549	0x5815	kVA b	0 to +/-3.3 E7	RO	Real
22550	0x5816	kVA c	0 to +/-3.3 E7	RO	Real
22551	0x5817	kVA total	0 to +/-3.3 E7	RO	Real
22552	0x5818	PF sign a	+ or -	RO	Real
22553	0x5819	PF sign b	+ or -	RO	Real
22554	0x581A	PF sign c	+ or -	RO	Real
22555	0x581B	PF sign total	+ or -	RO	Real
22556	0x581C	PF lead a	-.01 to -100, .01 to 100	RO	Real
22557	0x581D	PF lead b	-.01 to -100, .01 to 100	RO	Real
22558	0x581E	PF lead c	-.01 to -100, .01 to 100	RO	Real
22559	0x581F	PF lead total	-.01 to -100, .01 to 100	RO	Real
22560	0x5820	PF lag a	-.01 to -100, .01 to 100	RO	Real
22561	0x5821	PF lag b	-.01 to -100, .01 to 100	RO	Real
22562	0x5822	PF lag c	-.01 to -100, .01 to 100	RO	Real

Power Meter Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22563	0x5823	PF lag total	-.01 to -100, .01 to 100	RO	Real
22564	0x5824	V unbal	%	RO	Real
22565	0x5825	I unbal	%	RO	Real
22566	0x5826	I4	0 to 1 E6	RO	Real
22567	0x5827	Freq	20-70 Hz	RO	Real
24576	0x6000	Phase Rev	Flag	RO	Real
25083	0x61FB	Quadrant 1	0 or 1	RO	Discrete
25084	0x61FC	Quadrant 2	0 or 1	RO	Discrete
25085	0x61FD	Quadrant 3	0 or 1	RO	Discrete
25086	0x61FE	Quadrant 4	0 or 1	RO	Discrete
28672	0x7000	PT Primary	1 to 999999	RW	Integer
28673	0x7001	PT Secondary	1 to 999999	RW	Integer
28674	0x7002	CT Primary	1 to 999999	RW	Integer
28675	0x7003	CT Secondary	1 to 999999	RW	Integer
28676	0x7004	I4 CT Primary	1 to 999999	RW	Integer
28677	0x7005	I4 CT Secondary	1 to 999999	RW	Integer
30720	0x7800	Volts Mode	4W-WYE, 3W-WYE, DELTA, SINGLE, DEMO	RW	Integer
30721	0x7801	I1 Polarity	NORMAL, INVERTED	RW	Integer
30722	0x7802	I2 Polarity	NORMAL, INVERTED	RW	Integer
30723	0x7803	I3 Polarity	NORMAL, INVERTED	RW	Integer
30724	0x7804	Phase Order	ABC, ACB	RW	Integer
30724	0x7804	Phase Order	NORMAL, INVERTED	RW	Integer
31305	0x7A49	I4 Polarity	NORMAL, INVERTED	RW	Integer
31306	0x7A4A	V1 Polarity	NORMAL, INVERTED	RW	Integer
31307	0x7A4B	V2 Polarity	NORMAL, INVERTED	RW	Integer
31308	0x7A4C	V3 Polarity	NORMAL, INVERTED	RW	Integer

HARMONIC ANALYZER REGISTERS

Harmonic Analyzer Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22847	0x593F	V1 THD	.0001 to 100	RO	Real
22913	0x5981	V2 THD	.0001 to 100	RO	Real
22979	0x59C3	V3 THD	.0001 to 100	RO	Real
23045	0x5A05	I1 THD	.0001 to 100	RO	Real
23048	0x5A08	I1 K Factor	0 to 1 E6	RO	Real
23112	0x5A48	I2 THD	.0001 to 100	RO	Real
23115	0x5A4B	I2 K Factor	0 to 1 E6	RO	Real
23179	0x5A8B	I3 THD	.0001 to 100	RO	Real
23182	0x5A8E	I3 K Factor	0 to 1 E6	RO	Real
23246	0x5ACE	I4 THD	.0001 to 100	RO	Real
23249	0x5AD1	I4 K Factor	0 to 1 E6	RO	Real

COMMUNICATION REGISTERS

Communication Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
4936	0x1348	Ethernet IP address	Text	RW	Text
4937	0x1349	Ethernet Subnet	Text	RW	Text
4938	0x134A	Ethernet Def Gateway	Text	RW	Text
29160	0x71E8	Comm 1 RTS Delay	0 to 1 second	RW	Integer
29161	0x71E9	Comm 1 Unit ID	1 to 9999	RW	Integer
29234	0x7232	Comm 2 RTS Delay	0 to 1 second	RW	Integer
29235	0x7233	Comm 3 RTS Delay	0 to 1 second	RW	Integer
29236	0x7234	Comm 2 Unit ID	1 to 9999	RW	Integer
29237	0x7235	Comm 3 Unit ID	1 to 9999	RW	Integer
31110	0x7986	Comm 1 Mode	RS232, RS485	RW	Integer
31111	0x7987	Comm 1 Baud	300, 1200, 2400, 4800, 9600, 19200	RW	Integer
31112	0x7988	Comm 1 HshakeMode	RTS/CTS or RTS WITH DELAY	RW	Integer
31113	0x7989	Comm 1 RTS Level	NORMAL, INVERTED	RW	Integer
31114	0x798A	Comm 1 CTS Level	NORMAL, INVERTED	RW	Integer
31309	0x7A4D	Comm 2 Baud	300, 1200, 2400, 4800, 9600, 19201	RW	Integer
31310	0x7A4E	Comm 3 Baud	300, 1200, 2400, 4800, 9600, 19202	RW	Integer
31311	0x7A4F	Comm 1 Protocol	ION, Modbus	RW	Integer
31312	0x7A50	Comm 2 Protocol	ION, Modbus	RW	Integer
31313	0x7A51	Comm 3 Protocol	ION, Modbus	RW	Integer

DEVICE INFORMATION REGISTERS

Device Information Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
4864	0x1300	Device Type	Text	RW	Text
4867	0x1303	Revision	Text	RW	Text
4868	0x1304	Serial Number	Text	RW	Text
31115	0x798B	Nominal Freq	50 or 60	RW	Integer

CLOCK MODULE REGISTERS

Clock Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23420	0x5B7C	UnivTime		RO	Real
29230	0x722E	TZ offset	-43,200 to 43,200	RW	Integer
29231	0x722F	DST Start	0 to 4.3 E9	RW	Integer
29232	0x7230	DST End	86400 to 4.3 E9	RW	Integer
29233	0x7231	DST Offset	-10,800 to 10,800	RW	Integer

COUNTER MODULE REGISTERS

Counter Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23250	0x5AD2	Counter 1 Accumulator		RO	Real
23251	0x5AD3	Counter 2 Accumulator		RO	Real
23252	0x5AD4	Counter 3 Accumulator		RO	Real
23253	0x5AD5	Counter 4 Accumulator		RO	Real
23254	0x5AD6	Counter 5 Accumulator		RO	Real
23255	0x5AD7	Counter 6 Accumulator		RO	Real
23256	0x5AD8	Counter 7 Accumulator		RO	Real
23257	0x5AD9	Counter 8 Accumulator		RO	Real
23258	0x5ADA	Counter 9 Accumulator		RO	Real
23259	0x5ADB	Counter 10 Accumulator		RO	Real
23625	0x5C49	Counter 11 Accumulator		RO	Real

DATA ACQUISITION MODULE REGISTERS

Data Acquisition Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
3847	0x0F07	V1		RO	Real
3848	0x0F08	V2		RO	Real
3849	0x0F09	V3		RO	Real
3858	0x0F12	V4		RO	Real
3850	0x0FOA	I1		RO	Real
3851	0x0FOB	I2		RO	Real
3852	0x0F0C	I3		RO	Real
3853	0x0F0D	I4		RO	Real
3859	0x0F13	I5		RO	Real
3854	0x0F0E	Aux1		RO	Real
3855	0x0F0F	Aux2		RO	Real
3856	0x0F10	Aux3		RO	Real
3857	0x0F11	Aux4		RO	Real

DATA RECORDER MODULE REGISTERS

Data Recorder Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
3968	0x0F80	Data Rec 1 Data Log		RO	Log
3969	0x0F81	Data Rec 2 Data Log		RO	Log
3970	0x0F82	Data Rec 3 Data Log		RO	Log
3971	0x0F83	Data Rec 4 Data Log		RO	Log
3972	0x0F84	Data Rec 5 Data Log		RO	Log
3973	0x0F85	Data Rec 6 Data Log		RO	Log
3974	0x0F86	Data Rec 7 Data Log		RO	Log
3975	0x0F87	Data Rec 8 Data Log		RO	Log
24751	0x60AF	Data Rec 1 Log State		RO	Discrete
24752	0x60B0	Data Rec 2 Log State		RO	Discrete
24753	0x60B1	Data Rec 3 Log State		RO	Discrete
24754	0x60B2	Data Rec 4 Log State		RO	Discrete
24755	0x60B3	Data Rec 5 Log State		RO	Discrete
24756	0x60B4	Data Rec 6 Log State		RO	Discrete
24757	0x60B5	Data Rec 7 Log State		RO	Discrete
24758	0x60B6	Data Rec 8 Log State		RO	Discrete
27264	0x6A80	Data Rec 1 Record Complete		RO	Pulse
27265	0x6A81	Data Rec 2 Record Complete		RO	Pulse
27266	0x6A82	Data Rec 3 Record Complete		RO	Pulse
27267	0x6A83	Data Rec 4 Record Complete		RO	Pulse
27268	0x6A84	Data Rec 5 Record Complete		RO	Pulse
27269	0x6A85	Data Rec 6 Record Complete		RO	Pulse

Data Recorder Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
27270	0x6A86	Data Rec 7 Record Complete		RO	Pulse
27271	0x6A87	Data Rec 8 Record Complete		RO	Pulse
29084	0x719C	Data Rec 1 Depth	0 to 4 E9	RW	Real
29085	0x719D	Data Rec 2 Depth	1 to 4 E9	RW	Real
29086	0x719E	Data Rec 3 Depth	2 to 4 E9	RW	Real
29087	0x719F	Data Rec 4 Depth	3 to 4 E9	RW	Real
29088	0x71A0	Data Rec 5 Depth	4 to 4 E9	RW	Real
29089	0x71A1	Data Rec 6 Depth	5 to 4 E9	RW	Real
29090	0x71A2	Data Rec 7 Depth	6 to 4 E9	RW	Real
29091	0x71A3	Data Rec 8 Depth	7 to 4 E9	RW	Real
31000	0x7918	Data Rec 1 RecordMode	CIRCULAR	RW	Integer
31001	0x7919	Data Rec 2 RecordMode	CIRCULAR	RW	Integer
31002	0x791A	Data Rec 3 RecordMode	CIRCULAR	RW	Integer
31003	0x791B	Data Rec 4 RecordMode	CIRCULAR	RW	Integer
31004	0x791C	Data Rec 5 RecordMode	CIRCULAR	RW	Integer
31005	0x791D	Data Rec 6 RecordMode	CIRCULAR	RW	Integer
31006	0x791E	Data Rec 7 RecordMode	CIRCULAR	RW	Integer
31007	0x791F	Data Rec 8 RecordMode	CIRCULAR	RW	Integer

ENERGY DEMAND MODULE REGISTERS

Energy Demand Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22656	0x5880	kW swd	0 to +/-3.3 E7	RO	Real
22657	0x5881	kVAR swd	0 to +/-3.3 E7	RO	Real
22658	0x5882	kVA swd	0 to +/-3.3 E7	RO	Real
22659	0x5883	I avg swd	0 to 1 E6	RO	Real
22688	0x58A0	kW td	0 to +/-3.3 E7	RO	Real
22689	0x58A1	kVAR td	0 to +/-3.3 E7	RO	Real
22690	0x58A2	kVA td	0 to +/-3.3 E7	RO	Real
22691	0x58A3	I avg td	0 to 1 E6	RO	Real
22704	0x58B0	kWh imp	0 to +/- 1 E38	RO	Real
22705	0x58B1	kWh exp	0 to +/- 1 E38	RO	Real
22706	0x58B2	kWh tot	0 to +/- 1 E38	RO	Real
22707	0x58B3	kWh net	0 to +/- 1 E38	RO	Real
22708	0x58B4	kVARh imp	0 to +/- 1 E38	RO	Real
22709	0x58B5	kVARh exp	0 to +/- 1 E38	RO	Real
22710	0x58B6	kVARh tot	0 to +/- 1 E38	RO	Real
22711	0x58B7	kVARh net	0 to +/- 1 E38	RO	Real
22712	0x58B8	kVAh	0 to +/- 1 E38	RO	Real
26799	0x68AF	SWDemand Reset	Pulse	RW	Trigger
26800	0x68B0	TDemand Reset	Pulse	RW	Trigger

Energy Demand Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
26803	0x68B3	Energy Reset	Pulse	RW	Trigger
24722	0x6092	Energy Enable	0 or 1	RO	Discrete

MIN/MAX REGISTERS

Min/Max Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22752	0x58E0	Vln a max	0 to 1 E6	RO	Real
22753	0x58E1	Vln b max	0 to 1 E6	RO	Real
22754	0x58E2	Vln c max	0 to 1 E6	RO	Real
22755	0x58E3	Vln avg max	0 to 1 E6	RO	Real
22756	0x58E4	Vll ab max	0 to 2 E6	RO	Real
22757	0x58E5	Vll bc max	0 to 2 E6	RO	Real
22758	0x58E6	Vll ca max	0 to 2 E6	RO	Real
22759	0x58E7	Vll avg max	0 to 2 E6	RO	Real
22760	0x58E8	V unbal max	0 to 1 E6	RO	Real
22761	0x58E9	I a max	0 to 1 E6	RO	Real
22762	0x58EA	I b max	0 to 1 E6	RO	Real
22763	0x58EB	I c max	0 to 1 E6	RO	Real
22764	0x58EC	I avg max	0 to 1 E6	RO	Real
22765	0x58ED	kW tot max	0 to +/-3.3 E7	RO	Real
22766	0x58EE	kVAR tot max	0 to +/-3.3 E7	RO	Real
22767	0x58EF	kVA tot max	0 to +/-3.3 E7	RO	Real
22768	0x58F0	kW swd max	0 to +/-3.3 E7	RO	Real
22769	0x58F1	kVAR swd max	0 to +/-3.3 E7	RO	Real
22770	0x58F2	kVA swd max	0 to +/-3.3 E7	RO	Real
22771	0x58F3	kW td max	0 to +/-3.3 E7	RO	Real
22772	0x58F4	Freq max	20-70 Hz	RO	Real
22773	0x58F5	PF lead max	-.01 to -100, .01 to 100	RO	Real
22774	0x58F6	PF lag max	-.01 to -100, .01 to 100	RO	Real
22775	0x58F7	V1 THD max	.0001 to 100	RO	Real
22776	0x58F8	V2 THD max	.0001 to 100	RO	Real
22777	0x58F9	V3 THD max	.0001 to 100	RO	Real
22778	0x58FA	I1 THD max	.0001 to 100	RO	Real
22779	0x58FB	I2 THD max	.0001 to 100	RO	Real
22780	0x58FC	I3 THD max	.0001 to 100	RO	Real
22781	0x58FD	kVAR td max	0 to +/-3.3 E7	RO	Real
22782	0x58FE	kVA td max	0 to +/-3.3 E7	RO	Real
22783	0x58FF	I4 Max	0 to 1 E6	RO	Real
24102	0x5E26	I1 K Factor max	0 to 1 E6	RO	Real
24103	0x5E27	I2 K Factor max	0 to 1 E6	RO	Real
24104	0x5E28	I3 K Factor max	0 to 1 E6	RO	Real

Min/Max Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
24105	0x5E29	I4 K Factor max	0 to 1 E6	RO	Real
24106	0x5E2A	I4 THD Max	.0001 to 100	RO	Real
22720	0x58C0	Vln a min	0 to 1 E6	RO	Real
22721	0x58C1	Vln b min	0 to 1 E6	RO	Real
22722	0x58C2	Vln c min	0 to 1 E6	RO	Real
22723	0x58C3	Vln avg min	0 to 1 E6	RO	Real
22724	0x58C4	Vll ab min	0 to 2 E6	RO	Real
22725	0x58C5	Vll bc min	0 to 2 E6	RO	Real
22726	0x58C6	Vll ca min	0 to 2 E6	RO	Real
22727	0x58C7	Vll avg min	0 to 2 E6	RO	Real
22728	0x58C8	V unbal min	0 to 1 E6	RO	Real
22729	0x58C9	I a min	0 to 1 E6	RO	Real
22730	0x58CA	I b min	0 to 1 E6	RO	Real
22731	0x58CB	I c min	0 to 1 E6	RO	Real
22732	0x58CC	I avg min	0 to 1 E6	RO	Real
22733	0x58CD	kW tot min	0 to +/-3.3 E7	RO	Real
22734	0x58CE	kVAR tot min	0 to +/-3.3 E7	RO	Real
22735	0x58CF	kVA tot min	0 to +/-3.3 E7	RO	Real
22736	0x58D0	kW swd min	0 to +/-3.3 E7	RO	Real
22737	0x58D1	kVAR swd min	0 to +/-3.3 E7	RO	Real
22738	0x58D2	kVA swd min	0 to +/-3.3 E7	RO	Real
22739	0x58D3	kW td min	0 to +/-3.3 E7	RO	Real
22740	0x58D4	Freq min	20-70 Hz	RO	Real
22741	0x58D5	PF lead min	-.01 to -100, .01 to 100	RO	Real
22742	0x58D6	PF lag min	-.01 to -100, .01 to 100	RO	Real
22743	0x58D7	V1 THD min	.0001 to 100	RO	Real
22744	0x58D8	V2 THD min	.0001 to 100	RO	Real
22745	0x58D9	V3 THD min	.0001 to 100	RO	Real
22746	0x58DA	I1 THD min	.0001 to 100	RO	Real
22747	0x58DB	I2 THD min	.0001 to 100	RO	Real
22748	0x58DC	I3 THD min	.0001 to 100	RO	Real
22749	0x58DD	I4 Max	0 to 1 E6	RO	Real
22750	0x58DE	I1 K Factor min	0 to 1 E6	RO	Real
22751	0x58DF	I2 K Factor min	0 to 1 E6	RO	Real
24074	0x5E0A	I3 K Factor min	0 to 1 E6	RO	Real
24075	0x5E0B	I4 K Factor min	0 to 1 E6	RO	Real
24076	0x5E0C	I4 THD Min	.0001 to 100	RO	Real
24077	0x5E0D	KVAR TD min	0 to +/-3.3 E7	RO	Real
24078	0x5E0E	KVA TD min	0 to +/-3.3 E7	RO	Real
26798	0x68AE	Min/Max Reset	0 or 1	RW	Trigger
26805	0x68B5	Peak Dmd Reset	0 or 1	RW	Trigger
26808	0x68B8	Harm Mn Max Reset	0 or 1	RW	Trigger
24729	0x6099	Min/Max Enble	0 or 1	RO	Discrete

ENERGY AND DEMAND LOG REGISTERS

Energy and Demand Log Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
3968	0x0F80	EgyDmd Log	0 to +/- 1 E38	RW	Log
22656	0x5880	kW swd	0 to +/-3.3 E7	RO	Real
22657	0x5881	kVAR swd	0 to +/-3.3 E7	RO	Real
22658	0x5882	kVA swd	0 to +/-3.3 E7	RO	Real
22659	0x5883	I avg swd	0 to 1 E6	RO	Real
22660	0x5884	PF lead swd	-.01 to -100, .01 to 100	RO	Real
22661	0x5885	PF lag swd	-.01 to -100, .01 to 100	RO	Real
22713	0x58B9	kWh imp log	0 to +/- 1 E38	RO	Real
22714	0x58BA	kWh exp log	0 to +/- 1 E38	RO	Real
22715	0x58BB	kWh net log	0 to +/- 1 E38	RO	Real
22716	0x58BC	kVARh imp log	0 to +/- 1 E38	RO	Real
22717	0x58BD	kVARh exp log	0 to +/- 1 E38	RO	Real
22718	0x58BE	kVARh net log	0 to +/- 1 E38	RO	Real
22719	0x58BF	kVAh log	0 to +/- 1 E38	RO	Real
24719	0x608F	EgyDmd Log Enable	Pulse	RW	Trigger
26766	0x688E	EgyDmd Log Trg	Pulse	RW	Trigger
26801	0x68B1	Integrator Init	Pulse	RW	Trigger

POWER QUALITY MONITORING REGISTERS

Power Quality Monitoring Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
3969	0x0F81	Sag/Swell Log	Data Log	RO	Log
3988	0x0F94	Wfm Rec V1	Data Log	RO	Log
3989	0x0F95	Wfm Rec V2	Data Log	RO	Log
3990	0x0F96	Wfm Rec V3	Data Log	RO	Log
3991	0x0F97	Wfm Rec I1	Data Log	RO	Log
3992	0x0F98	Wfm Rec I2	Data Log	RO	Log
3993	0x0F99	Wfm Rec I3	Data Log	RO	Log
3994	0x0F9A	Wfm Rec I4	Data Log	RO	Log
3995	0x0F9B	Wfm Rec V4	Data Log	RO	Log
3996	0x0F9C	Wfm Rec I5	Data Log	RO	Log
23258	0x5ADA	Sag/Swell Count	Count	RO	Real
23293	0x5AFD	Sag/Swell Duration	Time	RO	Real
23295	0x5AFF	Dist V1 Min	0 to 1 E6	RO	Real
23297	0x5B01	Dist V1 Max	0 to 1 E6	RO	Real
23299	0x5B03	Dist V1 Avg	0 to 1 E6	RO	Real
23301	0x5B05	Dist V1 Energy	0 to +/-3.3 E7	RO	Real
23303	0x5B07	Dist V2 Min	0 to 1 E6	RO	Real
23305	0x5B09	Dist V2 Max	0 to 1 E6	RO	Real
23307	0x5B0B	Dist V2 Avg	0 to 1 E6	RO	Real

Power Quality Monitoring Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23309	0x5B0D	Dist V2 Energy	0 to +/-3.3 E7	RO	Real
23311	0x5B0F	Dist V3 Min	0 to 1 E6	RO	Real
23313	0x5B11	Dist V3 Max	0 to 1 E6	RO	Real
23315	0x5B13	Dist V3 Avg	0 to 1 E6	RO	Real
23317	0x5B15	Dist V3 Energy	0 to +/-3.3 E7	RO	Real
23319	0x5B17	Sub V1 Avg	0 to 1 E6	RO	Real
23321	0x5B19	Sub V1 Dur	Time	RO	Real
23323	0x5B1B	Sub V2 Avg	0 to 1 E6	RO	Real
23325	0x5B1D	Sub V2 Dur	Time	RO	Real
23327	0x5B1F	Sub V3 Avg	0 to 1 E6	RO	Real
23329	0x5B21	Sub V3 Dur	Time	RO	Real
23625	0x5C49	Reset timestamp	Time	RO	Real
23735	0x5CB7	Tran V1 Dur	Time	RO	Real
23736	0x5CB8	Tran V1 Max	0 to 1 E6	RO	Real
23737	0x5CB9	Tran V2 Dur	Time	RO	Real
23738	0x5CBA	Tran V2 Max	0 to 1 E6	RO	Real
23739	0x5CBB	Tran V3 Dur	Time	RO	Real
23740	0x5CBC	Tran V3 Max	0 to 1 E6	RO	Real
24024	0x5DD8	Dist Nominal	0 to 1 E6	RO	Real
24720	0x6090	Wfm Rec Enable	0 or 1	RO	Discrete
24721	0x6091	Sag/Swell Enable	0 or 1	RO	Discrete
24785	0x60D1	Dist State	0 or 1	RO	Discrete
26804	0x68B4	Dist Count Reset	Pulse	RO	Trigger
26806	0x68B6	Man Wfm Trg	Pulse	RO	Trigger
26934	0x6936	Wfm Trg Merge	Pulse	RO	Trigger
26942	0x693E	Dist Start	Pulse	RO	Trigger
26944	0x6940	Dist End	Pulse	RO	Trigger
26946	0x6942	Sub V1 Trig	Pulse	RO	Trigger
26948	0x6944	Sub V2 Trig	Pulse	RO	Trigger
26950	0x6946	Sub V3 Trig	Pulse	RO	Trigger
27148	0x6A0C	Tran V1 Trig	Pulse	RO	Trigger
27149	0x6A0D	Tran V2 Trig	Pulse	RO	Trigger
27150	0x6A0E	Tran V3 Trig	Pulse	RO	Trigger
27151	0x6A0F	Any Trig	0 or 1	RO	Trigger
29104	0x71B0	Wfm Rec V1 Depth	0 to 2 E9	RW	Real
29105	0x71B1	Wfm Rec V2 Depth	0 to 2 E9	RW	Real
29106	0x71B2	Wfm Rec V3 Depth	0 to 2 E9	RW	Real
29107	0x71B3	Wfm Rec I1 Depth	0 to 2 E9	RW	Real
29108	0x71B4	Wfm Rec I2 Depth	0 to 2 E9	RW	Real
29109	0x71B5	Wfm Rec I3 Depth	0 to 2 E9	RW	Real
29110	0x71B6	Wfm Rec I4 Depth	0 to 2 E9	RW	Real
29111	0x71B7	Wfm Rec V4 Depth	0 to 2 E9	RW	Real
29112	0x71B8	Wfm Rec I5 Depth	0 to 2 E9	RW	Real
29550	0x736E	Wfm Rec V1 Record Delay	Cycles	RW	Real

Power Quality Monitoring Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
29551	0x736F	Wfm Rec V2 Record Delay	Cycles	RW	Real
29552	0x7370	Wfm Rec V3 Record Delay	Cycles	RW	Real
29553	0x7371	Wfm Rec I1 Record Delay	Cycles	RW	Real
29554	0x7372	Wfm Rec I2 Record Delay	Cycles	RW	Real
29555	0x7373	Wfm Rec I3 Record Delay	Cycles	RW	Real
29556	0x7374	Wfm Rec I4 Record Delay	Cycles	RW	Real
29557	0x7375	Wfm Rec V4 Record Delay	Cycles	RW	Real
29558	0x7376	Wfm Rec I5 Record Delay	Cycles	RW	Real
31020	0x792C	Wfm Rec V1 Mode	Circular	RW	Integer
31021	0x792D	Wfm Rec V2 Mode	Circular	RW	Integer
31022	0x792E	Wfm Rec V3 Mode	Circular	RW	Integer
31023	0x792F	Wfm Rec I1 Mode	Circular	RW	Integer
31024	0x7930	Wfm Rec I2 Mode	Circular	RW	Integer
31025	0x7931	Wfm Rec I3 Mode	Circular	RW	Integer
31026	0x7932	Wfm Rec I4 Mode	Circular	RW	Integer
31027	0x7933	Wfm Rec V4 Mode	Circular	RW	Integer
31028	0x7934	Wfm Rec I5 Mode	Circular	RW	Integer

SETPOINT REGISTERS

Setpoint Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23245	0x5ACD	kW swd Nominal		RO	Real
23246	0x5ACE	I a nominal	0 to 1 E6	RO	Real
23247	0x5ACF	I b nominal	0 to 1 E6	RO	Real
23248	0x5AD0	I c nominal	0 to 1 E6	RO	Real
23249	0x5AD1	V unbal nominal	0 to 1 E6	RO	Real
24723	0x6093	Over kW Enable	0 or 1	RO	Discrete
24724	0x6094	Over Amp Enable	0 or 1	RO	Discrete
24725	0x6095	Over Vunb Enable	0 or 1	RO	Discrete
29686	0x73F6	Over kW swd	0 to +/-3.3 E7	RO	Real
29687	0x73F7	Over I a	0 to 1 E6	RO	Real
29688	0x73F8	Over I b	0 to 1 E6	RO	Real
29689	0x73F9	Over I c	0 to 1 E6	RO	Real
29690	0x73FA	Over V unbal	0 to 1 E6	RO	Real

DIGITAL INPUT REGISTERS

Digital Input Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
24577	0x6001	Digital In 1 (S1)	0 or 1	RO	Discrete
24578	0x6002	Digital In 2 (S2)	0 or 1	RO	Discrete
24579	0x6003	Digital In 3 (S3)	0 or 1	RO	Discrete
24580	0x6004	Digital In 4 (S4)	0 or 1	RO	Discrete
24581	0x6005	Digital In 5 (S5)	0 or 1	RO	Discrete
24582	0x6006	Digital In 6 (S6)	0 or 1	RO	Discrete
24583	0x6007	Digital In 7 (S7)	0 or 1	RO	Discrete
24584	0x6008	Digital In 8 (S8)	0 or 1	RO	Discrete

EVENT LOG CONTROLLER MODULE REGISTERS

Event Log Controller Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
29158	0x71E6	Depth	0 TO 20,000	RW	Real
29159	0x71E7	Protection	128	RW	Real
29445	0x7305	Cutoff		RW	Real

EXTERNAL DISCRETE MODULE REGISTERS

External Discrete Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
24719	0x608F	Ext Bool 1 Switch		RO	Discrete
24720	0x6090	Ext Bool 2 Switch		RO	Discrete
24721	0x6091	Ext Bool 3 Switch		RO	Discrete
24722	0x6092	Ext Bool 4 Switch		RO	Discrete
24723	0x6093	Ext Bool 5 Switch		RO	Discrete
24724	0x6094	Ext Bool 6 Switch		RO	Discrete
24725	0x6095	Ext Bool 7 Switch		RO	Discrete
24726	0x6096	Ext Bool 8 Switch		RO	Discrete
24727	0x6097	Ext Bool 9 Switch		RO	Discrete
24728	0x6098	Ext Bool 10 Switch		RO	Discrete
24729	0x6099	Ext Bool 11 Switch		RO	Discrete
24730	0x609A	Ext Bool 12 Switch		RO	Discrete
24731	0x609B	Ext Bool 13 Switch		RO	Discrete
24732	0x609C	Ext Bool 14 Switch		RO	Discrete
24733	0x609D	Ext Bool 15 Switch		RO	Discrete

EXTERNAL REAL MODULE REGISTERS

External Real Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23260	0x5ADC	Ext Num 1 Real		RO	Real
23261	0x5ADD	Ext Num 2 Real		RO	Real
23262	0x5ADE	Ext Num 3 Real		RO	Real
23263	0x5ADF	Ext Num 4 Real		RO	Real
23264	0x5AE0	Ext Num 5 Real		RO	Real

EXTERNAL PULSE MODULE REGISTERS

External Pulse Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
26798	0x68AE	Ext Pulse 1 Trigger		RO	Pulse
26799	0x68AF	Ext Pulse 2 Trigger		RO	Pulse
26800	0x68B0	Ext Pulse 3 Trigger		RO	Pulse
26801	0x68B1	Ext Pulse 4 Trigger		RO	Pulse
26802	0x68B2	Ext Pulse 5 Trigger		RO	Pulse
26803	0x68B3	Ext Pulse 6 Trigger		RO	Pulse
26804	0x68B4	Ext Pulse 7 Trigger		RO	Pulse
26805	0x68B5	Ext Pulse 8 Trigger		RO	Pulse
26806	0x68B6	Ext Pulse 9 Trigger		RO	Pulse
26807	0x68B7	Ext Pulse 10 Trigger		RO	Pulse
26808	0x68B8	Ext Pulse 11 Trigger		RO	Pulse
26809	0x68B9	Ext Pulse 12 Trigger		RO	Pulse
26810	0x68BA	Ext Pulse 13 Trigger		RO	Pulse
26811	0x68BB	Ext Pulse 14 Trigger		RO	Pulse
26812	0x68BC	Ext Pulse 15 Trigger		RO	Pulse
26813	0x68BD	Ext Pulse 16 Trigger		RO	Pulse
26814	0x68BE	Ext Pulse 17 Trigger		RO	Pulse
26815	0x68BF	Ext Pulse 18 Trigger		RO	Pulse
26816	0x68C0	Ext Pulse 19 Trigger		RO	Pulse
26817	0x68C1	Ext Pulse 20 Trigger		RO	Pulse
26818	0x68C2	Ext Pulse 21 Trigger		RO	Pulse
26819	0x68C3	Ext Pulse 22 Trigger		RO	Pulse
26820	0x68C4	Ext Pulse 23 Trigger		RO	Pulse
26821	0x68C5	Ext Pulse 24 Trigger		RO	Pulse
26822	0x68C6	Ext Pulse 25 Trigger		RO	Pulse

FACTORY MODULE REGISTERS

Factory Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
4864	0x1300	Device Type		RW	String
4865	0x1301	Compliance		RW	String
4866	0x1302	Options		RW	String
4867	0x1303	Revision		RW	String
4868	0x1304	SerialNum		RW	String
30510	0x772E	ION Version		RW	String
4989	0x137D	Template		RW	String
4990	0x137E	Factory Default Template		RW	String
4933	0x1345	Owner		RW	String
4934	0x1346	Tag 1		RW	String
4935	0x1347	Tag 2		RW	String
29163	0x71EB	V Nominal		RW	Real
29164	0x71EC	I Nominal		RW	Real
29165	0x71ED	I4 Nominal		RW	Real
29166	0x71EE	I20 Nominal		RW	Real
31115	0x798B	Nom Freq		RW	Integer

INTEGRATOR MODULE REGISTERS

Integrator Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22704	0x58B0	Integrator 1 Result		RO	Real
22705	0x58B1	Integrator 2 Result		RO	Real
22706	0x58B2	Integrator 3 Result		RO	Real
22707	0x58B3	Integrator 4 Result		RO	Real
22708	0x58B4	Integrator 5 Result		RO	Real
22709	0x58B5	Integrator 6 Result		RO	Real
22710	0x58B6	Integrator 7 Result		RO	Real
22711	0x58B7	Integrator 8 Result		RO	Real
22712	0x58B8	Integrator 9 Result		RO	Real
22713	0x58B9	Integrator 10 Result		RO	Real
22714	0x58BA	Integrator 11 Result		RO	Real
22715	0x58BB	Integrator 12 Result		RO	Real
22716	0x58BC	Integrator 13 Result		RO	Real
22717	0x58BD	Integrator 14 Result		RO	Real
22718	0x58BE	Integrator 15 Result		RO	Real
22719	0x58BF	Integrator 16 Result		RO	Real

PERIODIC TIMER MODULE REGISTERS

Periodic Timer Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
26766	0x688E	Periodic Tmr 1 Trigger		RO	Pulse
26767	0x688F	Periodic Tmr 2 Trigger		RO	Pulse
26768	0x6890	Periodic Tmr 3 Trigger		RO	Pulse
29116	0x71BC	Periodic Tmr 1 Period	0.010 to 2 E6 s	RW	Real
29117	0x71BD	Periodic Tmr 2 Period	0.010 to 2 E6 s	RW	Real
29118	0x71BE	Periodic Tmr 3 Period	0.010 to 2 E6 s	RW	Real
31064	0x7958	Periodic Tmr 1 Sync Mode	NO TRIG ON SYNC, TRIGGER ON SYNC	RW	Integer
31065	0x7959	Periodic Tmr 2 Sync Mode	NO TRIG ON SYNC, TRIGGER ON SYNC	RW	Integer
31066	0x795A	Periodic Tmr 3 Sync Mode	NO TRIG ON SYNC, TRIGGER ON SYNC	RW	Integer

PULSER MODULE REGISTERS

Pulser Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
28842	0x70AA	Pulser 1 PulseWidth	0.020 to 2 E6 ms	RW	Real
30900	0x78B4	Pulser 1 ROMode	PULSE, KYZ	RW	Integer
31233	0x7A01	Pulser 1 Port	variable	RW	Integer
35262	0x89BE	Pulser 1 RO Polarity	NON-INVERTING, INVERTING	RW	Integer

RELATIVE SETPOINT MODULE REGISTERS

Relative Setpoint Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
25053	0x61DD	RSP #1 Status		RO	Integer
25054	0x61DE	RSP #2 Status		RO	Integer
25055	0x61DF	RSP #3 Status		RO	Integer
25056	0x61E0	RSP #4 Status		RO	Integer
25057	0x61E1	RSP #5 Status		RO	Integer
25063	0x61E7	RSP #1 Over Output		RO	Integer
25064	0x61E8	RSP #2 Over Output		RO	Integer
25065	0x61E9	RSP #3 Over Output		RO	Integer
25066	0x61EA	RSP #4 Over Output		RO	Integer
25067	0x61EB	RSP #5 Over Output		RO	Integer
25073	0x61F1	RSP #1 Under Output		RO	Integer
25074	0x61F2	RSP #2 Under Output		RO	Integer

Relative Setpoint Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
25075	0x61F3	RSP #3 Under Output		RO	Integer
25076	0x61F4	RSP #4 Under Output		RO	Integer
25077	0x61F5	RSP #5 Under Output		RO	Integer
29686	0x73F6	RSP #1 Over Pickup		RW	Real
29687	0x73F7	RSP #2 Over Pickup		RW	Real
29688	0x73F8	RSP #3 Over Pickup		RW	Real
29689	0x73F9	RSP #4 Over Pickup		RW	Real
29690	0x73FA	RSP #5 Over Pickup		RW	Real
29696	0x7400	RSP #1 Over Dropout		RW	Real
29697	0x7401	RSP #2 Over Dropout		RW	Real
29698	0x7402	RSP #3 Over Dropout		RW	Real
29699	0x7403	RSP #4 Over Dropout		RW	Real
29700	0x7404	RSP #5 Over Dropout		RW	Real
29706	0x740A	RSP #1 Under Pickup		RW	Real
29707	0x740B	RSP #2 Under Pickup		RW	Real
29708	0x740C	RSP #3 Under Pickup		RW	Real
29709	0x740D	RSP #4 Under Pickup		RW	Real
29710	0x740E	RSP #5 Under Pickup		RW	Real
29716	0x7414	RSP #1 Under Dropout		RW	Real
29717	0x7415	RSP #2 Under Dropout		RW	Real
29718	0x7416	RSP #3 Under Dropout		RW	Real
29719	0x7417	RSP #4 Under Dropout		RW	Real
29720	0x7418	RSP #5 Under Dropout		RW	Real
29726	0x741E	RSP #1 SusUntlOn		RW	Real
29727	0x741F	RSP #2 SusUntlOn		RW	Real
29728	0x7420	RSP #3 SusUntlOn		RW	Real
29729	0x7421	RSP #4 SusUntlOn		RW	Real
29730	0x7422	RSP #5 SusUntlOn		RW	Real
29736	0x7428	RSP #1 SusUntlOff		RW	Real
29737	0x7429	RSP #2 SusUntlOff		RW	Real
29738	0x742A	RSP #3 SusUntlOff		RW	Real
29739	0x742B	RSP #4 SusUntlOff		RW	Real
29740	0x742C	RSP #5 SusUntlOff		RW	Real
29746	0x7432	RSP #1 EvPriority		RW	Real
29747	0x7433	RSP #2 EvPriority		RW	Real
29748	0x7434	RSP #3 EvPriority		RW	Real
29749	0x7435	RSP #4 EvPriority		RW	Real
29750	0x7436	RSP #5 EvPriority		RW	Real
31649	0x7BA1	RSP #1 Eval Mode		RW	Integer
31650	0x7BA2	RSP #2 Eval Mode		RW	Integer
31651	0x7BA3	RSP #3 Eval Mode		RW	Integer
31652	0x7BA4	RSP #4 Eval Mode		RW	Integer
31653	0x7BA5	RSP #5 Eval Mode		RW	Integer

SLIDING WINDOW DEMAND MODULE REGISTERS

Sliding Window Demand Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
28852	0x70B4	SWD #1 Sub Intvl	60 to 5940 s	RW	Integer
28853	0x70B5	SWD #2 Sub Intvl	61 to 5940 s	RW	Integer
28854	0x70B6	SWD #3 Sub Intvl	62 to 5940 s	RW	Integer
28855	0x70B7	SWD #4 Sub Intvl	63 to 5940 s	RW	Integer
28856	0x70B8	SWD #5 Sub Intvl	64 to 5940 s	RW	Integer
28857	0x70B9	SWD #6 Sub Intvl	65 to 5940 s	RW	Integer
28858	0x70BA	SWD #7 Sub Intvl	66 to 5940 s	RW	Integer
28859	0x70BB	SWD #8 Sub Intvl	67 to 5940 s	RW	Integer
28860	0x70BC	SWD #9 Sub Intvl	68 to 5940 s	RW	Integer
28861	0x70BD	SWD #10 Sub Intvl	69 to 5940 s	RW	Integer
...	...	...		RW	Integer
30049	0x7561	SWD #29 Sub Intvl	69 to 5940 s	RW	Integer
28868	0x70C4	SWD #1 #SubIntvls	1 to 15	RW	Integer
28869	0x70C5	SWD #2 #SubIntvls	1 to 15	RW	Integer
28870	0x70C6	SWD #3 #SubIntvls	1 to 15	RW	Integer
28871	0x70C7	SWD #4 #SubIntvls	1 to 15	RW	Integer
28872	0x70C8	SWD #5 #SubIntvls	1 to 15	RW	Integer
28873	0x70C9	SWD #6 #SubIntvls	1 to 15	RW	Integer
28874	0x70CA	SWD #7 #SubIntvls	1 to 15	RW	Integer
28875	0x70CB	SWD #8 #SubIntvls	1 to 15	RW	Integer
28876	0x70CC	SWD #9 #SubIntvls	1 to 15	RW	Integer
28877	0x70CD	SWD #10 #SubIntvls	1 to 15	RW	Integer
...	...	...		RW	Integer
30073	0x7579	SWD #29 #SubIntvls	1 to 15	RW	Integer
28884	0x70D4	SWD #1 Pred Resp	0 to 99	RW	Integer
28885	0x70D5	SWD #2 Pred Resp	0 to 99	RW	Integer
28886	0x70D6	SWD #3 Pred Resp	0 to 99	RW	Integer
28887	0x70D7	SWD #4 Pred Resp	0 to 99	RW	Integer
28888	0x70D8	SWD #5 Pred Resp	0 to 99	RW	Integer
28889	0x70D9	SWD #6 Pred Resp	0 to 99	RW	Integer
28890	0x70DA	SWD #7 Pred Resp	0 to 99	RW	Integer
28891	0x70DB	SWD #8 Pred Resp	0 to 99	RW	Integer
28892	0x70DC	SWD #9 Pred Resp	0 to 99	RW	Integer
28893	0x70DD	SWD #10 Pred Resp	0 to 99	RW	Integer
...	...	...			Integer
30097	0x7591	SWD #29 Pred Resp	0 to 99	RW	Integer
22656	0x5880	SWD #1 SWD		Output	Real
22657	0x5881	SWD #2 SWD		Output	Real
22658	0x5882	SWD #3 SWD		Output	Real
22659	0x5883	SWD #4 SWD		Output	Real

Sliding Window Demand Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22660	0x5884	SWD #5 SWD		Output	Real
22661	0x5885	SWD #6 SWD		Output	Real
22662	0x5886	SWD #7 SWD		Output	Real
22663	0x5887	SWD #8 SWD		Output	Real
22664	0x5888	SWD #9 SWD		Output	Real
22665	0x5889	SWD #10 SWD		Output	Real
...			
24038	0x5DE6	SWD #29 SWD		Output	Real
22672	0x5890	SWD #1		Output	Real
22673	0x5891	SWD #2		Output	Real
22674	0x5892	SWD #3		Output	Real
22675	0x5893	SWD #4		Output	Real
22676	0x5894	SWD #5		Output	Real
22677	0x5895	SWD #6		Output	Real
22678	0x5896	SWD #7		Output	Real
22679	0x5897	SWD #8		Output	Real
22680	0x5898	SWD #9		Output	Real
22681	0x5899	SWD #10		Output	Real
...			
24062	0x5DFE	SWD #29		Output	Real

THERMAL DEMAND MODULE REGISTERS

Thermal Demand Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22688	0x58A0	TD #1 ThrmDemand		RO	Real
22689	0x58A1	TD #2 ThrmDemand		RO	Real
22690	0x58A2	TD #3 ThrmDemand		RO	Real
22691	0x58A3	TD #4 ThrmDemand		RO	Real
28900	0x70E4	TD #1 Period	60 to 5940 s	RW	Integer
28901	0x70E5	TD #2 Period	60 to 5940 s	RW	Integer
28902	0x70E6	TD #3 Period	60 to 5940 s	RW	Integer
28903	0x70E7	TD #4 Period	60 to 5940 s	RW	Integer
28916	0x70F4	TD #1 Time Const	1 to 99%	RW	Real
28917	0x70F5	TD #2 Time Const	1 to 99%	RW	Real
28918	0x70F6	TD #3 Time Const	1 to 99%	RW	Real
28919	0x70F7	TD #4 Time Const	1 to 99%	RW	Real

SYMMETRICAL COMPONENT MODULE REGISTERS

Symmetrical Component Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23281	0x5AF1	SYM #1 ZS Mag		RO	Real
23282	0x5AF2	SYM #1 ZS Phase		RO	Real
23283	0x5AF3	SYM #1 PS Mag		RO	Real
23284	0x5AF4	SYM #1 PS Phase		RO	Real
23285	0x5AF5	SYM #1 NS Mag		RO	Real
23286	0x5AF6	SYM #1 NS Phase		RO	Real
23287	0x5AF7	SYM #2 ZS Mag		RO	Real
23288	0x5AF8	SYM #2 ZS Phase		RO	Real
23289	0x5AF9	SYM #2 PS Mag		RO	Real
23290	0x5AFA	SYM #2 PS Phase		RO	Real
23291	0x5AFB	SYM #2 NS Mag		RO	Real
23292	0x5AFC	SYM #2 NS Phase		RO	Real

SAG/SWELL MODULE REGISTERS

Sag/Swell Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
29204	0x7214	Swell Limit Max		RW	Real
29206	0x7216	Sag Limit Max		RW	Real
29208	0x7218	Change Criteria		RW	Real
29210	0x721A	Sag Swell Nominal		RW	Real

WAVEFORM MODULE REGISTER

Waveform Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
31032	0x7938	Waveform Format		RO	Integer

7600 POWER METER

7600 Meter

The 7600 Power Meter is different from the currently supported PMCS device types in that its registers are not accessed through the PMCS DDE Server. Instead, two separate pieces of software are used, one (the ION Link) to read registers from the 7600, and one (the GE 7700 Gateway) to write registers to the 7600.

For detailed theory of operation information on the 7600 and its associated software components, see DEH-40035, the GE 7700 Gateway Users Manual.

POWER METER REGISTERS

Power Meter Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22528	0x5800	Vln a	0 to 1 E6	RO	Real
22529	0x5801	Vln b	0 to 1 E6	RO	Real
22530	0x5802	Vln c	0 to 1 E6	RO	Real
22531	0x5803	Vln avg	0 to 1 E6	RO	Real
22532	0x5804	Vll ab	0 to 2 E6	RO	Real
22533	0x5805	Vll bc	0 to 2 E6	RO	Real
22534	0x5806	Vll ca	0 to 2 E6	RO	Real
22535	0x5807	Vll avg	0 to 2 E6	RO	Real
22536	0x5808	I a	0 to 1 E6	RO	Real
22537	0x5809	I b	0 to 1 E6	RO	Real
22538	0x580A	I c	0 to 1 E6	RO	Real
22539	0x580B	I avg	0 to 1 E6	RO	Real
22540	0x580C	kW a	0 to +/-3.3 E7	RO	Real
22541	0x580D	kW b	0 to +/-3.3 E7	RO	Real
22542	0x580E	kW c	0 to +/-3.3 E7	RO	Real
22543	0x580F	kW total	0 to +/-3.3 E7	RO	Real
22544	0x5810	kVAR a	0 to +/-3.3 E7	RO	Real
22545	0x5811	kVAR b	0 to +/-3.3 E7	RO	Real
22546	0x5812	kVAR c	0 to +/-3.3 E7	RO	Real
22547	0x5813	kVAR total	0 to +/-3.3 E7	RO	Real
22548	0x5814	kVA a	0 to +/-3.3 E7	RO	Real
22549	0x5815	kVA b	0 to +/-3.3 E7	RO	Real
22550	0x5816	kVA c	0 to +/-3.3 E7	RO	Real
22551	0x5817	kVA total	0 to +/-3.3 E7	RO	Real
22552	0x5818	PF sign a	+ or -	RO	Real
22553	0x5819	PF sign b	+ or -	RO	Real
22554	0x581A	PF sign c	+ or -	RO	Real
22555	0x581B	PF sign total	+ or -	RO	Real
22556	0x581C	PF lead a	-.01 to -100, .01 to 100	RO	Real
22557	0x581D	PF lead b	-.01 to -100, .01 to 100	RO	Real
22558	0x581E	PF lead c	-.01 to -100, .01 to 100	RO	Real
22559	0x581F	PF lead total	-.01 to -100, .01 to 100	RO	Real
22560	0x5820	PF lag a	-.01 to -100, .01 to 100	RO	Real
22561	0x5821	PF lag b	-.01 to -100, .01 to 100	RO	Real
22562	0x5822	PF lag c	-.01 to -100, .01 to 100	RO	Real
22563	0x5823	PF lag total	-.01 to -100, .01 to 100	RO	Real
22564	0x5824	V unbal	%	RO	Real

Power Meter Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22565	0x5825	I unbal	%	RO	Real
22566	0x5826	I4	0 to 1 E6	RO	Real
22567	0x5827	Freq	20-70 Hz	RO	Real
24576	0x6000	Phase Rev	Flag	RO	Real
25083	0x61FB	Quadrant 1	0 or 1	RO	Discrete
25084	0x61FC	Quadrant 2	0 or 1	RO	Discrete
25085	0x61FD	Quadrant 3	0 or 1	RO	Discrete
25086	0x61FE	Quadrant 4	0 or 1	RO	Discrete
28672	0x7000	PT Primary	1 to 999999	RW	Integer
28673	0x7001	PT Secondary	1 to 999999	RW	Integer
28674	0x7002	CT Primary	1 to 999999	RW	Integer
28675	0x7003	CT Secondary	1 to 999999	RW	Integer
28676	0x7004	I4 CT Primary	1 to 999999	RW	Integer
28677	0x7005	I4 CT Secondary	1 to 999999	RW	Integer
30720	0x7800	Volts Mode	4W-WYE, 3W-WYE, DELTA, SINGLE, DEMO	RW	Integer
30721	0x7801	I1 Polarity	NORMAL, INVERTED	RW	Integer
30722	0x7802	I2 Polarity	NORMAL, INVERTED	RW	Integer
30723	0x7803	I3 Polarity	NORMAL, INVERTED	RW	Integer
30724	0x7804	Phase Order	ABC, ACB	RW	Integer
30724	0x7804	Phase Order	NORMAL, INVERTED	RW	Integer
31305	0x7A49	I4 Polarity	NORMAL, INVERTED	RW	Integer
31306	0x7A4A	V1 Polarity	NORMAL, INVERTED	RW	Integer
31307	0x7A4B	V2 Polarity	NORMAL, INVERTED	RW	Integer
31308	0x7A4C	V3 Polarity	NORMAL, INVERTED	RW	Integer

HARMONIC ANALYZER REGISTERS

Harmonic Analyzer Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22847	0x593F	V1 THD	.0001 to 100	RO	Real
22913	0x5981	V2 THD	.0001 to 100	RO	Real
22979	0x59C3	V3 THD	.0001 to 100	RO	Real
23045	0x5A05	I1 THD	.0001 to 100	RO	Real
23048	0x5A08	I1 K Factor	0 to 1 E6	RO	Real
23112	0x5A48	I2 THD	.0001 to 100	RO	Real
23115	0x5A4B	I2 K Factor	0 to 1 E6	RO	Real
23179	0x5A8B	I3 THD	.0001 to 100	RO	Real
23182	0x5A8E	I3 K Factor	0 to 1 E6	RO	Real
23246	0x5ACE	I4 THD	.0001 to 100	RO	Real
23249	0x5AD1	I4 K Factor	0 to 1 E6	RO	Real

COMMUNICATION REGISTERS

Communication Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
4936	0x1348	Ethernet IP address	Text	RW	Text
4937	0x1349	Ethernet Subnet	Text	RW	Text
4938	0x134A	Ethernet Def Gateway	Text	RW	Text
29160	0x71E8	Comm 1 RTS Delay	0 to 1 second	RW	Integer
29161	0x71E9	Comm 1 Unit ID	1 to 9999	RW	Integer
29234	0x7232	Comm 2 RTS Delay	0 to 1 second	RW	Integer
29235	0x7233	Comm 3 RTS Delay	0 to 1 second	RW	Integer
29236	0x7234	Comm 2 Unit ID	1 to 9999	RW	Integer
29237	0x7235	Comm 3 Unit ID	1 to 9999	RW	Integer
31110	0x7986	Comm 1 Mode	RS232, RS485	RW	Integer
31111	0x7987	Comm 1 Baud	300, 1200, 2400, 4800, 9600, 19200	RW	Integer
31112	0x7988	Comm 1 HshakeMode	RTS/CTS or RTS WITH DELAY	RW	Integer
31113	0x7989	Comm 1 RTS Level	NORMAL, INVERTED	RW	Integer
31114	0x798A	Comm 1 CTS Level	NORMAL, INVERTED	RW	Integer
31309	0x7A4D	Comm 2 Baud	300, 1200, 2400, 4800, 9600, 19201	RW	Integer
31310	0x7A4E	Comm 3 Baud	300, 1200, 2400, 4800, 9600, 19202	RW	Integer
31311	0x7A4F	Comm 1 Protocol	ION, Modbus	RW	Integer
31312	0x7A50	Comm 2 Protocol	ION, Modbus	RW	Integer
31313	0x7A51	Comm 3 Protocol	ION, Modbus	RW	Integer

DEVICE INFORMATION REGISTERS

Device Information Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
4864	0x1300	Device Type	Text	RW	Text
4867	0x1303	Revision	Text	RW	Text
4868	0x1304	Serial Number	Text	RW	Text
31115	0x798B	Nominal Freq	50 or 60	RW	Integer

CLOCK MODULE REGISTERS

Clock Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23420	0x5B7C	UnivTime		RO	Real
29230	0x722E	TZ offset	-43,200 to 43,200	RW	Integer
29231	0x722F	DST Start	0 to 4.3 E9	RW	Integer
29232	0x7230	DST End	86400 to 4.3 E9	RW	Integer
29233	0x7231	DST Offset	-10,800 to 10,800	RW	Integer

COUNTER MODULE REGISTERS

Counter Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23250	0x5AD2	Counter 1 Accumulator		RO	Real
23251	0x5AD3	Counter 2 Accumulator		RO	Real
23252	0x5AD4	Counter 3 Accumulator		RO	Real
23253	0x5AD5	Counter 4 Accumulator		RO	Real
23254	0x5AD6	Counter 5 Accumulator		RO	Real
23255	0x5AD7	Counter 6 Accumulator		RO	Real
23256	0x5AD8	Counter 7 Accumulator		RO	Real
23257	0x5AD9	Counter 8 Accumulator		RO	Real
23258	0x5ADA	Counter 9 Accumulator		RO	Real
23259	0x5ADB	Counter 10 Accumulator		RO	Real
23625	0x5C49	Counter 11 Accumulator		RO	Real

DATA ACQUISITION MODULE REGISTERS

Data Acquisition Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
3847	0x0F07	V1		RO	Real
3848	0x0F08	V2		RO	Real
3849	0x0F09	V3		RO	Real
3858	0x0F12	V4		RO	Real
3850	0x0FOA	I1		RO	Real
3851	0x0FOB	I2		RO	Real
3852	0x0F0C	I3		RO	Real
3853	0x0F0D	I4		RO	Real
3859	0x0F13	I5		RO	Real
3854	0x0F0E	Aux1		RO	Real
3855	0x0F0F	Aux2		RO	Real
3856	0x0F10	Aux3		RO	Real
3857	0x0F11	Aux4		RO	Real

DATA RECORDER MODULE REGISTERS

Data Recorder Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
3968	0x0F80	Data Rec 1 Data Log		RO	Log
3969	0x0F81	Data Rec 2 Data Log		RO	Log
3970	0x0F82	Data Rec 3 Data Log		RO	Log
3971	0x0F83	Data Rec 4 Data Log		RO	Log
3972	0x0F84	Data Rec 5 Data Log		RO	Log
3973	0x0F85	Data Rec 6 Data Log		RO	Log
3974	0x0F86	Data Rec 7 Data Log		RO	Log
3975	0x0F87	Data Rec 8 Data Log		RO	Log
24751	0x60AF	Data Rec 1 Log State		RO	Discrete
24752	0x60B0	Data Rec 2 Log State		RO	Discrete
24753	0x60B1	Data Rec 3 Log State		RO	Discrete
24754	0x60B2	Data Rec 4 Log State		RO	Discrete
24755	0x60B3	Data Rec 5 Log State		RO	Discrete
24756	0x60B4	Data Rec 6 Log State		RO	Discrete
24757	0x60B5	Data Rec 7 Log State		RO	Discrete
24758	0x60B6	Data Rec 8 Log State		RO	Discrete
27264	0x6A80	Data Rec 1 Record Complete		RO	Pulse
27265	0x6A81	Data Rec 2 Record Complete		RO	Pulse
27266	0x6A82	Data Rec 3 Record Complete		RO	Pulse
27267	0x6A83	Data Rec 4 Record Complete		RO	Pulse
27268	0x6A84	Data Rec 5 Record Complete		RO	Pulse

Data Recorder Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
27269	0x6A85	Data Rec 6 Record Complete		RO	Pulse
27270	0x6A86	Data Rec 7 Record Complete		RO	Pulse
27271	0x6A87	Data Rec 8 Record Complete		RO	Pulse
29084	0x719C	Data Rec 1 Depth	0 to 4 E9	RW	Real
29085	0x719D	Data Rec 2 Depth	1 to 4 E9	RW	Real
29086	0x719E	Data Rec 3 Depth	2 to 4 E9	RW	Real
29087	0x719F	Data Rec 4 Depth	3 to 4 E9	RW	Real
29088	0x71A0	Data Rec 5 Depth	4 to 4 E9	RW	Real
29089	0x71A1	Data Rec 6 Depth	5 to 4 E9	RW	Real
29090	0x71A2	Data Rec 7 Depth	6 to 4 E9	RW	Real
29091	0x71A3	Data Rec 8 Depth	7 to 4 E9	RW	Real
31000	0x7918	Data Rec 1 RecordMode	CIRCULAR	RW	Integer
31001	0x7919	Data Rec 2 RecordMode	CIRCULAR	RW	Integer
31002	0x791A	Data Rec 3 RecordMode	CIRCULAR	RW	Integer
31003	0x791B	Data Rec 4 RecordMode	CIRCULAR	RW	Integer
31004	0x791C	Data Rec 5 RecordMode	CIRCULAR	RW	Integer
31005	0x791D	Data Rec 6 RecordMode	CIRCULAR	RW	Integer
31006	0x791E	Data Rec 7 RecordMode	CIRCULAR	RW	Integer
31007	0x791F	Data Rec 8 RecordMode	CIRCULAR	RW	Integer

ENERGY DEMAND MODULE REGISTERS

Energy Demand Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22656	0x5880	kW swd	0 to +/-3.3 E7	RO	Real
22657	0x5881	kVAR swd	0 to +/-3.3 E7	RO	Real
22658	0x5882	kVA swd	0 to +/-3.3 E7	RO	Real
22659	0x5883	I avg swd	0 to 1 E6	RO	Real
22688	0x58A0	kW td	0 to +/-3.3 E7	RO	Real
22689	0x58A1	kVAR td	0 to +/-3.3 E7	RO	Real
22690	0x58A2	kVA td	0 to +/-3.3 E7	RO	Real
22691	0x58A3	I avg td	0 to 1 E6	RO	Real
22704	0x58B0	kWh imp	0 to +/- 1 E38	RO	Real
22705	0x58B1	kWh exp	0 to +/- 1 E38	RO	Real
22706	0x58B2	kWh tot	0 to +/- 1 E38	RO	Real
22707	0x58B3	kWh net	0 to +/- 1 E38	RO	Real
22708	0x58B4	kVARh imp	0 to +/- 1 E38	RO	Real
22709	0x58B5	kVARh exp	0 to +/- 1 E38	RO	Real
22710	0x58B6	kVARh tot	0 to +/- 1 E38	RO	Real
22711	0x58B7	kVARh net	0 to +/- 1 E38	RO	Real
22712	0x58B8	kVAh	0 to +/- 1 E38	RO	Real
26799	0x68AF	SWDemand Reset	Pulse	RW	Trigger

Energy Demand Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
26800	0x68B0	TDemand Reset	Pulse	RW	Trigger
26803	0x68B3	Energy Reset	Pulse	RW	Trigger
24722	0x6092	Energy Enble	0 or 1	RO	Discrete

MIN/MAX REGISTERS

Min/Max Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22752	0x58E0	Vln a max	0 to 1 E6	RO	Real
22753	0x58E1	Vln b max	0 to 1 E6	RO	Real
22754	0x58E2	Vln c max	0 to 1 E6	RO	Real
22755	0x58E3	Vln avg max	0 to 1 E6	RO	Real
22756	0x58E4	Vll ab max	0 to 2 E6	RO	Real
22757	0x58E5	Vll bc max	0 to 2 E6	RO	Real
22758	0x58E6	Vll ca max	0 to 2 E6	RO	Real
22759	0x58E7	Vll avg max	0 to 2 E6	RO	Real
22760	0x58E8	V unbal max	0 to 1 E6	RO	Real
22761	0x58E9	I a max	0 to 1 E6	RO	Real
22762	0x58EA	I b max	0 to 1 E6	RO	Real
22763	0x58EB	I c max	0 to 1 E6	RO	Real
22764	0x58EC	I avg max	0 to 1 E6	RO	Real
22765	0x58ED	kW tot max	0 to +/-3.3 E7	RO	Real
22766	0x58EE	kVAR tot max	0 to +/-3.3 E7	RO	Real
22767	0x58EF	kVA tot max	0 to +/-3.3 E7	RO	Real
22768	0x58F0	kW swd max	0 to +/-3.3 E7	RO	Real
22769	0x58F1	kVAR swd max	0 to +/-3.3 E7	RO	Real
22770	0x58F2	kVA swd max	0 to +/-3.3 E7	RO	Real
22771	0x58F3	kW td max	0 to +/-3.3 E7	RO	Real
22772	0x58F4	Freq max	20-70 Hz	RO	Real
22773	0x58F5	PF lead max	-.01 to -100, .01 to 100	RO	Real
22774	0x58F6	PF lag max	-.01 to -100, .01 to 100	RO	Real
22775	0x58F7	V1 THD max	.0001 to 100	RO	Real
22776	0x58F8	V2 THD max	.0001 to 100	RO	Real
22777	0x58F9	V3 THD max	.0001 to 100	RO	Real
22778	0x58FA	I1 THD max	.0001 to 100	RO	Real
22779	0x58FB	I2 THD max	.0001 to 100	RO	Real
22780	0x58FC	I3 THD max	.0001 to 100	RO	Real
22781	0x58FD	kVAR td max	0 to +/-3.3 E7	RO	Real
22782	0x58FE	kVA td max	0 to +/-3.3 E7	RO	Real
22783	0x58FF	I4 Max	0 to 1 E6	RO	Real
24102	0x5E26	I1 K Factor max	0 to 1 E6	RO	Real
24103	0x5E27	I2 K Factor max	0 to 1 E6	RO	Real

Min/Max Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
24104	0x5E28	I3 K Factor max	0 to 1 E6	RO	Real
24105	0x5E29	I4 K Factor max	0 to 1 E6	RO	Real
24106	0x5E2A	I4 THD Max	.0001 to 100	RO	Real
22720	0x58C0	Vln a min	0 to 1 E6	RO	Real
22721	0x58C1	Vln b min	0 to 1 E6	RO	Real
22722	0x58C2	Vln c min	0 to 1 E6	RO	Real
22723	0x58C3	Vln avg min	0 to 1 E6	RO	Real
22724	0x58C4	Vll ab min	0 to 2 E6	RO	Real
22725	0x58C5	Vll bc min	0 to 2 E6	RO	Real
22726	0x58C6	Vll ca min	0 to 2 E6	RO	Real
22727	0x58C7	Vll avg min	0 to 2 E6	RO	Real
22728	0x58C8	V unbal min	0 to 1 E6	RO	Real
22729	0x58C9	I a min	0 to 1 E6	RO	Real
22730	0x58CA	I b min	0 to 1 E6	RO	Real
22731	0x58CB	I c min	0 to 1 E6	RO	Real
22732	0x58CC	I avg min	0 to 1 E6	RO	Real
22733	0x58CD	kW tot min	0 to +/-3.3 E7	RO	Real
22734	0x58CE	KVAR tot min	0 to +/-3.3 E7	RO	Real
22735	0x58CF	kVA tot min	0 to +/-3.3 E7	RO	Real
22736	0x58D0	kW swd min	0 to +/-3.3 E7	RO	Real
22737	0x58D1	KVAR swd min	0 to +/-3.3 E7	RO	Real
22738	0x58D2	kVA swd min	0 to +/-3.3 E7	RO	Real
22739	0x58D3	kW td min	0 to +/-3.3 E7	RO	Real
22740	0x58D4	Freq min	20-70 Hz	RO	Real
22741	0x58D5	PF lead min	-.01 to -100, .01 to 100	RO	Real
22742	0x58D6	PF lag min	-.01 to -100, .01 to 100	RO	Real
22743	0x58D7	V1 THD min	.0001 to 100	RO	Real
22744	0x58D8	V2 THD min	.0001 to 100	RO	Real
22745	0x58D9	V3 THD min	.0001 to 100	RO	Real
22746	0x58DA	I1 THD min	.0001 to 100	RO	Real
22747	0x58DB	I2 THD min	.0001 to 100	RO	Real
22748	0x58DC	I3 THD min	.0001 to 100	RO	Real
22749	0x58DD	I4 Max	0 to 1 E6	RO	Real
22750	0x58DE	I1 K Factor min	0 to 1 E6	RO	Real
22751	0x58DF	I2 K Factor min	0 to 1 E6	RO	Real
24074	0x5E0A	I3 K Factor min	0 to 1 E6	RO	Real
24075	0x5E0B	I4 K Factor min	0 to 1 E6	RO	Real
24076	0x5E0C	I4 THD Min	.0001 to 100	RO	Real
24077	0x5E0D	KVAR TD min	0 to +/-3.3 E7	RO	Real
24078	0x5E0E	KVA TD min	0 to +/-3.3 E7	RO	Real
26798	0x68AE	Min/Max Reset	0 or 1	RW	Trigger
26805	0x68B5	Peak Dmd Reset	0 or 1	RW	Trigger
26808	0x68B8	Harm Mn Max Reset	0 or 1	RW	Trigger
24729	0x6099	Min/Max Enable	0 or 1	RO	Discrete

ENERGY AND DEMAND LOG REGISTERS

Energy and Demand Log Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
3968	0x0F80	EgyDmd Log	0 to +/- 1 E38	RW	Log
22656	0x5880	kW swd	0 to +/-3.3 E7	RO	Real
22657	0x5881	kVAR swd	0 to +/-3.3 E7	RO	Real
22658	0x5882	kVA swd	0 to +/-3.3 E7	RO	Real
22659	0x5883	I avg swd	0 to 1 E6	RO	Real
22660	0x5884	PF lead swd	-.01 to -100, .01 to 100	RO	Real
22661	0x5885	PF lag swd	-.01 to -100, .01 to 100	RO	Real
22713	0x58B9	kWh imp log	0 to +/- 1 E38	RO	Real
22714	0x58BA	kWh exp log	0 to +/- 1 E38	RO	Real
22715	0x58BB	kWh net log	0 to +/- 1 E38	RO	Real
22716	0x58BC	kVARh imp log	0 to +/- 1 E38	RO	Real
22717	0x58BD	kVARh exp log	0 to +/- 1 E38	RO	Real
22718	0x58BE	kVARh net log	0 to +/- 1 E38	RO	Real
22719	0x58BF	kVAh log	0 to +/- 1 E38	RO	Real
24719	0x608F	EgyDmd Log Enable	Pulse	RW	Trigger
26766	0x688E	EgyDmd Log Trg	Pulse	RW	Trigger
26801	0x68B1	Integrator Init	Pulse	RW	Trigger

POWER QUALITY MONITORING REGISTERS

Power Quality Monitoring Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
3969	0x0F81	Sag/Swell Log	Data Log	RO	Log
3988	0x0F94	Wfm Rec V1	Data Log	RO	Log
3989	0x0F95	Wfm Rec V2	Data Log	RO	Log
3990	0x0F96	Wfm Rec V3	Data Log	RO	Log
3991	0x0F97	Wfm Rec I1	Data Log	RO	Log
3992	0x0F98	Wfm Rec I2	Data Log	RO	Log
3993	0x0F99	Wfm Rec I3	Data Log	RO	Log
3994	0x0F9A	Wfm Rec I4	Data Log	RO	Log
3995	0x0F9B	Wfm Rec V4	Data Log	RO	Log
3996	0x0F9C	Wfm Rec I5	Data Log	RO	Log
23258	0x5ADA	Sag/Swell Count	Count	RO	Real
23293	0x5AFD	Sag/Swell Duration	Time	RO	Real
23295	0x5AFF	Dist V1 Min	0 to 1 E6	RO	Real
23297	0x5B01	Dist V1 Max	0 to 1 E6	RO	Real
23299	0x5B03	Dist V1 Avg	0 to 1 E6	RO	Real
23301	0x5B05	Dist V1 Energy	0 to +/-3.3 E7	RO	Real
23303	0x5B07	Dist V2 Min	0 to 1 E6	RO	Real

Power Quality Monitoring Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23305	0x5B09	Dist V2 Max	0 to 1 E6	RO	Real
23307	0x5B0B	Dist V2 Avg	0 to 1 E6	RO	Real
23309	0x5B0D	Dist V2 Energy	0 to +/-3.3 E7	RO	Real
23311	0x5B0F	Dist V3 Min	0 to 1 E6	RO	Real
23313	0x5B11	Dist V3 Max	0 to 1 E6	RO	Real
23315	0x5B13	Dist V3 Avg	0 to 1 E6	RO	Real
23317	0x5B15	Dist V3 Energy	0 to +/-3.3 E7	RO	Real
23319	0x5B17	Sub V1 Avg	0 to 1 E6	RO	Real
23321	0x5B19	Sub V1 Dur	Time	RO	Real
23323	0x5B1B	Sub V2 Avg	0 to 1 E6	RO	Real
23325	0x5B1D	Sub V2 Dur	Time	RO	Real
23327	0x5B1F	Sub V3 Avg	0 to 1 E6	RO	Real
23329	0x5B21	Sub V3 Dur	Time	RO	Real
23625	0x5C49	Reset timestamp	Time	RO	Real
23735	0x5CB7	Tran V1 Dur	Time	RO	Real
23736	0x5CB8	Tran V1 Max	0 to 1 E6	RO	Real
23737	0x5CB9	Tran V2 Dur	Time	RO	Real
23738	0x5CBA	Tran V2 Max	0 to 1 E6	RO	Real
23739	0x5CBB	Tran V3 Dur	Time	RO	Real
23740	0x5CBC	Tran V3 Max	0 to 1 E6	RO	Real
24024	0x5DD8	Dist Nominal	0 to 1 E6	RO	Real
24720	0x6090	Wfm Rec Enable	0 or 1	RO	Discrete
24721	0x6091	Sag/Swell Enable	0 or 1	RO	Discrete
24785	0x60D1	Dist State	0 or 1	RO	Discrete
26804	0x68B4	Dist Count Reset	Pulse	RO	Trigger
26806	0x68B6	Man Wfm Trg	Pulse	RO	Trigger
26934	0x6936	Wfm Trg Merge	Pulse	RO	Trigger
26942	0x693E	Dist Start	Pulse	RO	Trigger
26944	0x6940	Dist End	Pulse	RO	Trigger
26946	0x6942	Sub V1 Trig	Pulse	RO	Trigger
26948	0x6944	Sub V2 Trig	Pulse	RO	Trigger
26950	0x6946	Sub V3 Trig	Pulse	RO	Trigger
27148	0x6A0C	Tran V1 Trig	Pulse	RO	Trigger
27149	0x6A0D	Tran V2 Trig	Pulse	RO	Trigger
27150	0x6A0E	Tran V3 Trig	Pulse	RO	Trigger
27151	0x6A0F	Any Trig	0 or 1	RO	Trigger
29104	0x71B0	Wfm Rec V1 Depth	0 to 2 E9	RW	Real
29105	0x71B1	Wfm Rec V2 Depth	0 to 2 E9	RW	Real
29106	0x71B2	Wfm Rec V3 Depth	0 to 2 E9	RW	Real
29107	0x71B3	Wfm Rec I1 Depth	0 to 2 E9	RW	Real
29108	0x71B4	Wfm Rec I2 Depth	0 to 2 E9	RW	Real
29109	0x71B5	Wfm Rec I3 Depth	0 to 2 E9	RW	Real
29110	0x71B6	Wfm Rec I4 Depth	0 to 2 E9	RW	Real
29111	0x71B7	Wfm Rec V4 Depth	0 to 2 E9	RW	Real

Power Quality Monitoring Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
29112	0x71B8	Wfm Rec I5 Depth	0 to 2 E9	RW	Real
29550	0x736E	Wfm Rec V1 Record Delay	Cycles	RW	Real
29551	0x736F	Wfm Rec V2 Record Delay	Cycles	RW	Real
29552	0x7370	Wfm Rec V3 Record Delay	Cycles	RW	Real
29553	0x7371	Wfm Rec I1 Record Delay	Cycles	RW	Real
29554	0x7372	Wfm Rec I2 Record Delay	Cycles	RW	Real
29555	0x7373	Wfm Rec I3 Record Delay	Cycles	RW	Real
29556	0x7374	Wfm Rec I4 Record Delay	Cycles	RW	Real
29557	0x7375	Wfm Rec V4 Record Delay	Cycles	RW	Real
29558	0x7376	Wfm Rec I5 Record Delay	Cycles	RW	Real
31020	0x792C	Wfm Rec V1 Mode	Circular	RW	Integer
31021	0x792D	Wfm Rec V2 Mode	Circular	RW	Integer
31022	0x792E	Wfm Rec V3 Mode	Circular	RW	Integer
31023	0x792F	Wfm Rec I1 Mode	Circular	RW	Integer
31024	0x7930	Wfm Rec I2 Mode	Circular	RW	Integer
31025	0x7931	Wfm Rec I3 Mode	Circular	RW	Integer
31026	0x7932	Wfm Rec I4 Mode	Circular	RW	Integer
31027	0x7933	Wfm Rec V4 Mode	Circular	RW	Integer
31028	0x7934	Wfm Rec I5 Mode	Circular	RW	Integer

SETPOINT REGISTERS

Setpoint Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23245	0x5ACD	kW swd Nominal		RO	Real
23246	0x5ACE	I a nominal	0 to 1 E6	RO	Real
23247	0x5ACF	I b nominal	0 to 1 E6	RO	Real
23248	0x5AD0	I c nominal	0 to 1 E6	RO	Real
23249	0x5AD1	V unbal nominal	0 to 1 E6	RO	Real
24723	0x6093	Over kW Enable	0 or 1	RO	Discrete
24724	0x6094	Over Amp Enable	0 or 1	RO	Discrete
24725	0x6095	Over Vunb Enable	0 or 1	RO	Discrete
29686	0x73F6	Over kW swd	0 to +/-3.3 E7	RO	Real
29687	0x73F7	Over I a	0 to 1 E6	RO	Real
29688	0x73F8	Over I b	0 to 1 E6	RO	Real
29689	0x73F9	Over I c	0 to 1 E6	RO	Real
29690	0x73FA	Over V unbal	0 to 1 E6	RO	Real

DIGITAL INPUT REGISTERS

Digital Input Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
24577	0x6001	Digital In 1 (S1)	0 or 1	RO	Discrete
24578	0x6002	Digital In 2 (S2)	0 or 1	RO	Discrete
24579	0x6003	Digital In 3 (S3)	0 or 1	RO	Discrete
24580	0x6004	Digital In 4 (S4)	0 or 1	RO	Discrete
24581	0x6005	Digital In 5 (S5)	0 or 1	RO	Discrete
24582	0x6006	Digital In 6 (S6)	0 or 1	RO	Discrete
24583	0x6007	Digital In 7 (S7)	0 or 1	RO	Discrete
24584	0x6008	Digital In 8 (S8)	0 or 1	RO	Discrete

EVENT LOG CONTROLLER MODULE REGISTERS

Event Log Controller Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
29158	0x71E6	Depth	0 TO 20,000	RW	Real
29159	0x71E7	Protection	128	RW	Real
29445	0x7305	Cutoff		RW	Real

EXTERNAL DISCRETE MODULE REGISTERS

External Discrete Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
24719	0x608F	Ext Bool 1 Switch		RO	Discrete
24720	0x6090	Ext Bool 2 Switch		RO	Discrete
24721	0x6091	Ext Bool 3 Switch		RO	Discrete
24722	0x6092	Ext Bool 4 Switch		RO	Discrete
24723	0x6093	Ext Bool 5 Switch		RO	Discrete
24724	0x6094	Ext Bool 6 Switch		RO	Discrete
24725	0x6095	Ext Bool 7 Switch		RO	Discrete
24726	0x6096	Ext Bool 8 Switch		RO	Discrete
24727	0x6097	Ext Bool 9 Switch		RO	Discrete
24728	0x6098	Ext Bool 10 Switch		RO	Discrete
24729	0x6099	Ext Bool 11 Switch		RO	Discrete
24730	0x609A	Ext Bool 12 Switch		RO	Discrete
24731	0x609B	Ext Bool 13 Switch		RO	Discrete
24732	0x609C	Ext Bool 14 Switch		RO	Discrete
24733	0x609D	Ext Bool 15 Switch		RO	Discrete

EXTERNAL REAL MODULE REGISTERS

External Real Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23260	0x5ADC	Ext Num 1 Real		RO	Real
23261	0x5ADD	Ext Num 2 Real		RO	Real
23262	0x5ADE	Ext Num 3 Real		RO	Real
23263	0x5ADF	Ext Num 4 Real		RO	Real
23264	0x5AE0	Ext Num 5 Real		RO	Real

EXTERNAL PULSE MODULE REGISTERS

External Pulse Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
26798	0x68AE	Ext Pulse 1 Trigger		RO	Pulse
26799	0x68AF	Ext Pulse 2 Trigger		RO	Pulse
26800	0x68B0	Ext Pulse 3 Trigger		RO	Pulse
26801	0x68B1	Ext Pulse 4 Trigger		RO	Pulse
26802	0x68B2	Ext Pulse 5 Trigger		RO	Pulse
26803	0x68B3	Ext Pulse 6 Trigger		RO	Pulse
26804	0x68B4	Ext Pulse 7 Trigger		RO	Pulse
26805	0x68B5	Ext Pulse 8 Trigger		RO	Pulse
26806	0x68B6	Ext Pulse 9 Trigger		RO	Pulse
26807	0x68B7	Ext Pulse 10 Trigger		RO	Pulse
26808	0x68B8	Ext Pulse 11 Trigger		RO	Pulse
26809	0x68B9	Ext Pulse 12 Trigger		RO	Pulse
26810	0x68BA	Ext Pulse 13 Trigger		RO	Pulse
26811	0x68BB	Ext Pulse 14 Trigger		RO	Pulse
26812	0x68BC	Ext Pulse 15 Trigger		RO	Pulse
26813	0x68BD	Ext Pulse 16 Trigger		RO	Pulse
26814	0x68BE	Ext Pulse 17 Trigger		RO	Pulse
26815	0x68BF	Ext Pulse 18 Trigger		RO	Pulse
26816	0x68C0	Ext Pulse 19 Trigger		RO	Pulse
26817	0x68C1	Ext Pulse 20 Trigger		RO	Pulse
26818	0x68C2	Ext Pulse 21 Trigger		RO	Pulse
26819	0x68C3	Ext Pulse 22 Trigger		RO	Pulse
26820	0x68C4	Ext Pulse 23 Trigger		RO	Pulse
26821	0x68C5	Ext Pulse 24 Trigger		RO	Pulse
26822	0x68C6	Ext Pulse 25 Trigger		RO	Pulse

FACTORY MODULE REGISTERS

Factory Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
4864	0x1300	Device Type		RW	String
4865	0x1301	Compliance		RW	String
4866	0x1302	Options		RW	String
4867	0x1303	Revision		RW	String
4868	0x1304	SerialNum		RW	String
30510	0x772E	ION Version		RW	String
4989	0x137D	Template		RW	String
4990	0x137E	Factory Default Template		RW	String
4933	0x1345	Owner		RW	String
4934	0x1346	Tag 1		RW	String
4935	0x1347	Tag 2		RW	String
29163	0x71EB	V Nominal		RW	Real
29164	0x71EC	I Nominal		RW	Real
29165	0x71ED	I4 Nominal		RW	Real
29166	0x71EE	I20 Nominal		RW	Real
31115	0x798B	Nom Freq		RW	Integer

INTEGRATOR MODULE REGISTERS

Integrator Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22704	0x58B0	Integrator 1 Result		RO	Real
22705	0x58B1	Integrator 2 Result		RO	Real
22706	0x58B2	Integrator 3 Result		RO	Real
22707	0x58B3	Integrator 4 Result		RO	Real
22708	0x58B4	Integrator 5 Result		RO	Real
22709	0x58B5	Integrator 6 Result		RO	Real
22710	0x58B6	Integrator 7 Result		RO	Real
22711	0x58B7	Integrator 8 Result		RO	Real
22712	0x58B8	Integrator 9 Result		RO	Real
22713	0x58B9	Integrator 10 Result		RO	Real
22714	0x58BA	Integrator 11 Result		RO	Real
22715	0x58BB	Integrator 12 Result		RO	Real
22716	0x58BC	Integrator 13 Result		RO	Real
22717	0x58BD	Integrator 14 Result		RO	Real
22718	0x58BE	Integrator 15 Result		RO	Real
22719	0x58BF	Integrator 16 Result		RO	Real

PERIODIC TIMER MODULE REGISTERS

Periodic Timer Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
26766	0x688E	Periodic Tmr 1 Trigger		RO	Pulse
26767	0x688F	Periodic Tmr 2 Trigger		RO	Pulse
26768	0x6890	Periodic Tmr 3 Trigger		RO	Pulse
29116	0x71BC	Periodic Tmr 1 Period	0.010 to 2 E6 s	RW	Real
29117	0x71BD	Periodic Tmr 2 Period	0.010 to 2 E6 s	RW	Real
29118	0x71BE	Periodic Tmr 3 Period	0.010 to 2 E6 s	RW	Real
31064	0x7958	Periodic Tmr 1 Sync Mode	NO TRIG ON SYNC, TRIGGER ON SYNC	RW	Integer
31065	0x7959	Periodic Tmr 2 Sync Mode	NO TRIG ON SYNC, TRIGGER ON SYNC	RW	Integer
31066	0x795A	Periodic Tmr 3 Sync Mode	NO TRIG ON SYNC, TRIGGER ON SYNC	RW	Integer

PULSER MODULE REGISTERS

Pulser Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
28842	0x70AA	Pulser 1 PulseWidth	0.020 to 2 E6 ms	RW	Real
30900	0x78B4	Pulser 1 RMode	PULSE, KYZ	RW	Integer
31233	0x7A01	Pulser 1 Port	variable	RW	Integer
35262	0x89BE	Pulser 1 RO Polarity	NON-INVERTING, INVERTING	RW	Integer

RELATIVE SETPOINT MODULE REGISTERS

Relative Setpoint Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
25053	0x61DD	RSP #1 Status		RO	Integer
25054	0x61DE	RSP #2 Status		RO	Integer
25055	0x61DF	RSP #3 Status		RO	Integer
25056	0x61E0	RSP #4 Status		RO	Integer
25057	0x61E1	RSP #5 Status		RO	Integer
25063	0x61E7	RSP #1 Over Output		RO	Integer
25064	0x61E8	RSP #2 Over Output		RO	Integer
25065	0x61E9	RSP #3 Over Output		RO	Integer
25066	0x61EA	RSP #4 Over Output		RO	Integer
25067	0x61EB	RSP #5 Over Output		RO	Integer
25073	0x61F1	RSP #1 Under Output		RO	Integer
25074	0x61F2	RSP #2 Under Output		RO	Integer

Relative Setpoint Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
25075	0x61F3	RSP #3 Under Output		RO	Integer
25076	0x61F4	RSP #4 Under Output		RO	Integer
25077	0x61F5	RSP #5 Under Output		RO	Integer
29686	0x73F6	RSP #1 Over Pickup		RW	Real
29687	0x73F7	RSP #2 Over Pickup		RW	Real
29688	0x73F8	RSP #3 Over Pickup		RW	Real
29689	0x73F9	RSP #4 Over Pickup		RW	Real
29690	0x73FA	RSP #5 Over Pickup		RW	Real
29696	0x7400	RSP #1 Over Dropout		RW	Real
29697	0x7401	RSP #2 Over Dropout		RW	Real
29698	0x7402	RSP #3 Over Dropout		RW	Real
29699	0x7403	RSP #4 Over Dropout		RW	Real
29700	0x7404	RSP #5 Over Dropout		RW	Real
29706	0x740A	RSP #1 Under Pickup		RW	Real
29707	0x740B	RSP #2 Under Pickup		RW	Real
29708	0x740C	RSP #3 Under Pickup		RW	Real
29709	0x740D	RSP #4 Under Pickup		RW	Real
29710	0x740E	RSP #5 Under Pickup		RW	Real
29716	0x7414	RSP #1 Under Dropout		RW	Real
29717	0x7415	RSP #2 Under Dropout		RW	Real
29718	0x7416	RSP #3 Under Dropout		RW	Real
29719	0x7417	RSP #4 Under Dropout		RW	Real
29720	0x7418	RSP #5 Under Dropout		RW	Real
29726	0x741E	RSP #1 SusUntlOn		RW	Real
29727	0x741F	RSP #2 SusUntlOn		RW	Real
29728	0x7420	RSP #3 SusUntlOn		RW	Real
29729	0x7421	RSP #4 SusUntlOn		RW	Real
29730	0x7422	RSP #5 SusUntlOn		RW	Real
29736	0x7428	RSP #1 SusUntlOff		RW	Real
29737	0x7429	RSP #2 SusUntlOff		RW	Real
29738	0x742A	RSP #3 SusUntlOff		RW	Real
29739	0x742B	RSP #4 SusUntlOff		RW	Real
29740	0x742C	RSP #5 SusUntlOff		RW	Real
29746	0x7432	RSP #1 EvPriority		RW	Real
29747	0x7433	RSP #2 EvPriority		RW	Real
29748	0x7434	RSP #3 EvPriority		RW	Real
29749	0x7435	RSP #4 EvPriority		RW	Real
29750	0x7436	RSP #5 EvPriority		RW	Real
31649	0x7BA1	RSP #1 Eval Mode		RW	Integer
31650	0x7BA2	RSP #2 Eval Mode		RW	Integer
31651	0x7BA3	RSP #3 Eval Mode		RW	Integer
31652	0x7BA4	RSP #4 Eval Mode		RW	Integer
31653	0x7BA5	RSP #5 Eval Mode		RW	Integer

SLIDING WINDOW DEMAND MODULE REGISTERS

Sliding Window Demand Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
28852	0x70B4	SWD #1 Sub Intvl	60 to 5940 s	RW	Integer
28853	0x70B5	SWD #2 Sub Intvl	61 to 5940 s	RW	Integer
28854	0x70B6	SWD #3 Sub Intvl	62 to 5940 s	RW	Integer
28855	0x70B7	SWD #4 Sub Intvl	63 to 5940 s	RW	Integer
28856	0x70B8	SWD #5 Sub Intvl	64 to 5940 s	RW	Integer
28857	0x70B9	SWD #6 Sub Intvl	65 to 5940 s	RW	Integer
28858	0x70BA	SWD #7 Sub Intvl	66 to 5940 s	RW	Integer
28859	0x70BB	SWD #8 Sub Intvl	67 to 5940 s	RW	Integer
28860	0x70BC	SWD #9 Sub Intvl	68 to 5940 s	RW	Integer
28861	0x70BD	SWD #10 Sub Intvl	69 to 5940 s	RW	Integer
...	...	...		RW	Integer
30049	0x7561	SWD #29 Sub Intvl	69 to 5940 s	RW	Integer
28868	0x70C4	SWD #1 #SubIntvls	1 to 15	RW	Integer
28869	0x70C5	SWD #2 #SubIntvls	1 to 15	RW	Integer
28870	0x70C6	SWD #3 #SubIntvls	1 to 15	RW	Integer
28871	0x70C7	SWD #4 #SubIntvls	1 to 15	RW	Integer
28872	0x70C8	SWD #5 #SubIntvls	1 to 15	RW	Integer
28873	0x70C9	SWD #6 #SubIntvls	1 to 15	RW	Integer
28874	0x70CA	SWD #7 #SubIntvls	1 to 15	RW	Integer
28875	0x70CB	SWD #8 #SubIntvls	1 to 15	RW	Integer
28876	0x70CC	SWD #9 #SubIntvls	1 to 15	RW	Integer
28877	0x70CD	SWD #10 #SubIntvls	1 to 15	RW	Integer
...	...	...		RW	Integer
30073	0x7579	SWD #29 #SubIntvls	1 to 15	RW	Integer
28884	0x70D4	SWD #1 Pred Resp	0 to 99	RW	Integer
28885	0x70D5	SWD #2 Pred Resp	0 to 99	RW	Integer
28886	0x70D6	SWD #3 Pred Resp	0 to 99	RW	Integer
28887	0x70D7	SWD #4 Pred Resp	0 to 99	RW	Integer
28888	0x70D8	SWD #5 Pred Resp	0 to 99	RW	Integer
28889	0x70D9	SWD #6 Pred Resp	0 to 99	RW	Integer
28890	0x70DA	SWD #7 Pred Resp	0 to 99	RW	Integer
28891	0x70DB	SWD #8 Pred Resp	0 to 99	RW	Integer
28892	0x70DC	SWD #9 Pred Resp	0 to 99	RW	Integer
28893	0x70DD	SWD #10 Pred Resp	0 to 99	RW	Integer
...	...	...			Integer
30097	0x7591	SWD #29 Pred Resp	0 to 99	RW	Integer
22656	0x5880	SWD #1 SWD		Output	Real
22657	0x5881	SWD #2 SWD		Output	Real
22658	0x5882	SWD #3 SWD		Output	Real
22659	0x5883	SWD #4 SWD		Output	Real

Sliding Window Demand Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22660	0x5884	SWD #5 SWD		Output	Real
22661	0x5885	SWD #6 SWD		Output	Real
22662	0x5886	SWD #7 SWD		Output	Real
22663	0x5887	SWD #8 SWD		Output	Real
22664	0x5888	SWD #9 SWD		Output	Real
22665	0x5889	SWD #10 SWD		Output	Real
...			
24038	0x5DE6	SWD #29 SWD		Output	Real
22672	0x5890	SWD #1		Output	Real
22673	0x5891	SWD #2		Output	Real
22674	0x5892	SWD #3		Output	Real
22675	0x5893	SWD #4		Output	Real
22676	0x5894	SWD #5		Output	Real
22677	0x5895	SWD #6		Output	Real
22678	0x5896	SWD #7		Output	Real
22679	0x5897	SWD #8		Output	Real
22680	0x5898	SWD #9		Output	Real
22681	0x5899	SWD #10		Output	Real
...			
24062	0x5DFE	SWD #29		Output	Real

THERMAL DEMAND MODULE REGISTERS

Thermal Demand Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22688	0x58A0	TD #1 ThrmDemand		RO	Real
22689	0x58A1	TD #2 ThrmDemand		RO	Real
22690	0x58A2	TD #3 ThrmDemand		RO	Real
22691	0x58A3	TD #4 ThrmDemand		RO	Real
28900	0x70E4	TD #1 Period	60 to 5940 s	RW	Integer
28901	0x70E5	TD #2 Period	60 to 5940 s	RW	Integer
28902	0x70E6	TD #3 Period	60 to 5940 s	RW	Integer
28903	0x70E7	TD #4 Period	60 to 5940 s	RW	Integer
28916	0x70F4	TD #1 Time Const	1 to 99%	RW	Real
28917	0x70F5	TD #2 Time Const	1 to 99%	RW	Real
28918	0x70F6	TD #3 Time Const	1 to 99%	RW	Real
28919	0x70F7	TD #4 Time Const	1 to 99%	RW	Real

SYMMETRICAL COMPONENT MODULE REGISTERS

Symmetrical Component Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23281	0x5AF1	SYM #1 ZS Mag		RO	Real
23282	0x5AF2	SYM #1 ZS Phase		RO	Real
23283	0x5AF3	SYM #1 PS Mag		RO	Real
23284	0x5AF4	SYM #1 PS Phase		RO	Real
23285	0x5AF5	SYM #1 NS Mag		RO	Real
23286	0x5AF6	SYM #1 NS Phase		RO	Real
23287	0x5AF7	SYM #2 ZS Mag		RO	Real
23288	0x5AF8	SYM #2 ZS Phase		RO	Real
23289	0x5AF9	SYM #2 PS Mag		RO	Real
23290	0x5AFA	SYM #2 PS Phase		RO	Real
23291	0x5AFB	SYM #2 NS Mag		RO	Real
23292	0x5AFC	SYM #2 NS Phase		RO	Real

SAG/SWELL MODULE REGISTERS

Sag/Swell Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
29204	0x7214	Swell Limit Max		RW	Real
29206	0x7216	Sag Limit Max		RW	Real
29208	0x7218	Change Criteria		RW	Real
29210	0x721A	Sag Swell Nominal		RW	Real

WAVEFORM MODULE REGISTER

Waveform Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
31032	0x7938	Waveform Format		RO	Integer

7700 POWER METER

7700 Meter

The 7700 Power Meter is different from the currently supported PMCS device types in that its registers are not accessed through the PMCS DDE Server. Instead, two separate pieces of software are used, one (the ION Link) to read registers from the 7700, and one (the GE 7700 Gateway) to write registers to the 7700.

For detailed theory of operation information on the 7700 and its associated software components, see DEH-40035, the GE 7700 Gateway Users Manual.

POWER METER REGISTERS

Power Meter Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22528	0x5800	VIn a	0 to 1 E6	RO	Real
22529	0x5801	VIn b	0 to 1 E6	RO	Real
22530	0x5802	VIn c	0 to 1 E6	RO	Real
22531	0x5803	VIn avg	0 to 1 E6	RO	Real
22532	0x5804	VII ab	0 to 2 E6	RO	Real
22533	0x5805	VII bc	0 to 2 E6	RO	Real
22534	0x5806	VII ca	0 to 2 E6	RO	Real
22535	0x5807	VII avg	0 to 2 E6	RO	Real
22536	0x5808	I a	0 to 1 E6	RO	Real
22537	0x5809	I b	0 to 1 E6	RO	Real
22538	0x580A	I c	0 to 1 E6	RO	Real
22539	0x580B	I avg	0 to 1 E6	RO	Real
22540	0x580C	kW a	0 to +/-3.3 E7	RO	Real
22541	0x580D	kW b	0 to +/-3.3 E7	RO	Real
22542	0x580E	kW c	0 to +/-3.3 E7	RO	Real
22543	0x580F	kW total	0 to +/-3.3 E7	RO	Real
22544	0x5810	kVAR a	0 to +/-3.3 E7	RO	Real
22545	0x5811	kVAR b	0 to +/-3.3 E7	RO	Real
22546	0x5812	kVAR c	0 to +/-3.3 E7	RO	Real
22547	0x5813	kVAR total	0 to +/-3.3 E7	RO	Real
22548	0x5814	kVA a	0 to +/-3.3 E7	RO	Real
22549	0x5815	kVA b	0 to +/-3.3 E7	RO	Real
22550	0x5816	kVA c	0 to +/-3.3 E7	RO	Real
22551	0x5817	kVA total	0 to +/-3.3 E7	RO	Real
22552	0x5818	PF sign a	+ or -	RO	Real
22553	0x5819	PF sign b	+ or -	RO	Real
22554	0x581A	PF sign c	+ or -	RO	Real
22555	0x581B	PF sign total	+ or -	RO	Real
22556	0x581C	PF lead a	-.01 to -100, .01 to 100	RO	Real
22557	0x581D	PF lead b	-.01 to -100, .01 to 100	RO	Real
22558	0x581E	PF lead c	-.01 to -100, .01 to 100	RO	Real
22559	0x581F	PF lead total	-.01 to -100, .01 to 100	RO	Real
22560	0x5820	PF lag a	-.01 to -100, .01 to 100	RO	Real
22561	0x5821	PF lag b	-.01 to -100, .01 to 100	RO	Real
22562	0x5822	PF lag c	-.01 to -100, .01 to 100	RO	Real

Power Meter Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22563	0x5823	PF lag total	-.01 to -100, .01 to 100	RO	Real
22564	0x5824	V unbal	%	RO	Real
22565	0x5825	I unbal	%	RO	Real
22566	0x5826	I4	0 to 1 E6	RO	Real
22567	0x5827	Freq	20-70 Hz	RO	Real
24576	0x6000	Phase Rev	Flag	RO	Real
25083	0x61FB	Quadrant 1	0 or 1	RO	Discrete
25084	0x61FC	Quadrant 2	0 or 1	RO	Discrete
25085	0x61FD	Quadrant 3	0 or 1	RO	Discrete
25086	0x61FE	Quadrant 4	0 or 1	RO	Discrete
28672	0x7000	PT Primary	1 to 999999	RW	Integer
28673	0x7001	PT Secondary	1 to 999999	RW	Integer
28674	0x7002	CT Primary	1 to 999999	RW	Integer
28675	0x7003	CT Secondary	1 to 999999	RW	Integer
28676	0x7004	I4 CT Primary	1 to 999999	RW	Integer
28677	0x7005	I4 CT Secondary	1 to 999999	RW	Integer
30720	0x7800	Volts Mode	4W-WYE, 3W-WYE, DELTA, SINGLE, DEMO	RW	Integer
30721	0x7801	I1 Polarity	NORMAL, INVERTED	RW	Integer
30722	0x7802	I2 Polarity	NORMAL, INVERTED	RW	Integer
30723	0x7803	I3 Polarity	NORMAL, INVERTED	RW	Integer
30724	0x7804	Phase Order	ABC, ACB	RW	Integer
30724	0x7804	Phase Order	NORMAL, INVERTED	RW	Integer
31305	0x7A49	I4 Polarity	NORMAL, INVERTED	RW	Integer
31306	0x7A4A	V1 Polarity	NORMAL, INVERTED	RW	Integer
31307	0x7A4B	V2 Polarity	NORMAL, INVERTED	RW	Integer
31308	0x7A4C	V3 Polarity	NORMAL, INVERTED	RW	Integer

HARMONIC ANALYZER REGISTERS

Harmonic Analyzer Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22847	0x593F	V1 THD	.0001 to 100	RO	Real
22913	0x5981	V2 THD	.0001 to 100	RO	Real
22979	0x59C3	V3 THD	.0001 to 100	RO	Real
23045	0x5A05	I1 THD	.0001 to 100	RO	Real
23048	0x5A08	I1 K Factor	0 to 1 E6	RO	Real
23112	0x5A48	I2 THD	.0001 to 100	RO	Real
23115	0x5A4B	I2 K Factor	0 to 1 E6	RO	Real
23179	0x5A8B	I3 THD	.0001 to 100	RO	Real
23182	0x5A8E	I3 K Factor	0 to 1 E6	RO	Real
23246	0x5ACE	I4 THD	.0001 to 100	RO	Real
23249	0x5AD1	I4 K Factor	0 to 1 E6	RO	Real

COMMUNICATION REGISTERS

Communication Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
4936	0x1348	Ethernet IP address	Text	RW	Text
4937	0x1349	Ethernet Subnet	Text	RW	Text
4938	0x134A	Ethernet Def Gateway	Text	RW	Text
29160	0x71E8	Comm 1 RTS Delay	0 to 1 second	RW	Integer
29161	0x71E9	Comm 1 Unit ID	1 to 9999	RW	Integer
29234	0x7232	Comm 2 RTS Delay	0 to 1 second	RW	Integer
29235	0x7233	Comm 3 RTS Delay	0 to 1 second	RW	Integer
29236	0x7234	Comm 2 Unit ID	1 to 9999	RW	Integer
29237	0x7235	Comm 3 Unit ID	1 to 9999	RW	Integer
31110	0x7986	Comm 1 Mode	RS232, RS485	RW	Integer
31111	0x7987	Comm 1 Baud	300, 1200, 2400, 4800, 9600, 19200	RW	Integer
31112	0x7988	Comm 1 HshakeMode	RTS/CTS or RTS WITH DELAY	RW	Integer
31113	0x7989	Comm 1 RTS Level	NORMAL, INVERTED	RW	Integer
31114	0x798A	Comm 1 CTS Level	NORMAL, INVERTED	RW	Integer
31309	0x7A4D	Comm 2 Baud	300, 1200, 2400, 4800, 9600, 19201	RW	Integer
31310	0x7A4E	Comm 3 Baud	300, 1200, 2400, 4800, 9600, 19202	RW	Integer
31311	0x7A4F	Comm 1 Protocol	ION, Modbus	RW	Integer
31312	0x7A50	Comm 2 Protocol	ION, Modbus	RW	Integer
31313	0x7A51	Comm 3 Protocol	ION, Modbus	RW	Integer
31314	0x7A52	Ethernet Protocol	ION, Modbus	RW	Integer

DEVICE INFORMATION REGISTERS

Device Information Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
4864	0x1300	Device Type	Text	RW	Text
4867	0x1303	Revision	Text	RW	Text
4868	0x1304	Serial Number	Text	RW	Text
31115	0x798B	Nominal Freq	50 or 60	RW	Integer

ANALOG INPUT MODULE REGISTERS

Analog Input Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22608	0x5850	AI #1 ScaledValu		RO	Real
22609	0x5851	AI #2 ScaledValu		RO	Real
22610	0x5852	AI #3 ScaledValu		RO	Real
22611	0x5853	AI #4 ScaledValu		RO	Real
28678	0x7006	AI #1 Zero Scale	-1 to 1 E9	RW	Real
28679	0x7007	AI #2 Zero Scale	-1 to 1 E9	RW	Real
28680	0x7008	AI #3 Zero Scale	-1 to 1 E9	RW	Real
28681	0x7009	AI #4 Zero Scale	-1 to 1 E9	RW	Real
28696	0x7018	AI #1 Full Scale	-1 to 1 E9	RW	Real
28697	0x7019	AI #2 Full Scale	-1 to 1 E9	RW	Real
28698	0x701A	AI #3 Full Scale	-1 to 1 E9	RW	Real
28699	0x701B	AI #4 Full Scale	-1 to 1 E9	RW	Real
31117	0x798D	AI #1 Port	variable	RW	Integer
31118	0x798E	AI #2 Port	variable	RW	Integer
31119	0x798F	AI #3 Port	variable	RW	Integer
31120	0x7990	AI #4 Port	variable	RW	Integer

CLOCK MODULE REGISTERS

Clock Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23420	0x5B7C	UnivTime		RO	Real
29230	0x722E	TZ offset	-43,200 to 43,200	RW	Integer
29231	0x722F	DST Start	0 to 4.3 E9	RW	Integer
29232	0x7230	DST End	86400 to 4.3 E9	RW	Integer
29233	0x7231	DST Offset	-10,800 to 10,800	RW	Integer

COUNTER MODULE REGISTERS

Counter Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23250	0x5AD2	Counter 1 Accumulator		RO	Real
23251	0x5AD3	Counter 2 Accumulator		RO	Real
23252	0x5AD4	Counter 3 Accumulator		RO	Real
23253	0x5AD5	Counter 4 Accumulator		RO	Real
23254	0x5AD6	Counter 5 Accumulator		RO	Real
23255	0x5AD7	Counter 6 Accumulator		RO	Real
23256	0x5AD8	Counter 7 Accumulator		RO	Real
23257	0x5AD9	Counter 8 Accumulator		RO	Real

DATA ACQUISITION MODULE REGISTERS

Data Acquisition Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
3847	0x0F07	V1		RO	Real
3848	0x0F08	V2		RO	Real
3849	0x0F09	V3		RO	Real
3850	0x0F0A	I1		RO	Real
3851	0x0F0B	I2		RO	Real
3852	0x0F0C	I3		RO	Real
3853	0x0F0D	I4		RO	Real
3854	0x0F0E	Aux1		RO	Real
3855	0x0F0F	Aux2		RO	Real
3856	0x0F10	Aux3		RO	Real
3857	0x0F11	Aux4		RO	Real

DATA RECORDER MODULE REGISTERS

Data Recorder Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
3968	0x0F80	Data Rec 1 Data Log		RO	Log
3969	0x0F81	Data Rec 2 Data Log		RO	Log
3970	0x0F82	Data Rec 3 Data Log		RO	Log
24751	0x60AF	Data Rec 1 Log State		RO	Discrete
24752	0x60B0	Data Rec 2 Log State		RO	Discrete
24753	0x60B1	Data Rec 3 Log State		RO	Discrete
27264	0x6A80	Data Rec 1 Record Complete		RO	Pulse
27265	0x6A81	Data Rec 2 Record Complete		RO	Pulse
27266	0x6A82	Data Rec 3 Record Complete		RO	Pulse
29084	0x719C	Data Rec 1 Depth	0 to 4 E9	RW	Real
29085	0x719D	Data Rec 2 Depth	1 to 4 E9	RW	Real
29086	0x719E	Data Rec 3 Depth	2 to 4 E9	RW	Real
31000	0x7918	Data Rec 1 RecordMode	CIRCULAR, STOP-WHEN-FULL	RW	Integer
31001	0x7919	Data Rec 2 RecordMode	CIRCULAR, STOP-WHEN-FULL	RW	Integer
31002	0x791A	Data Rec 3 RecordMode	CIRCULAR, STOP-WHEN-FULL	RW	Integer

ENERGY DEMAND MODULE REGISTERS

Energy Demand Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22656	0x5880	kW swd	0 to +/-3.3 E7	RO	Real
22657	0x5881	kVAR swd	0 to +/-3.3 E7	RO	Real
22658	0x5882	kVA swd	0 to +/-3.3 E7	RO	Real
22659	0x5883	I avg swd	0 to 1 E6	RO	Real
22688	0x58A0	kW td	0 to +/-3.3 E7	RO	Real
22689	0x58A1	kVAR td	0 to +/-3.3 E7	RO	Real
22690	0x58A2	kVA td	0 to +/-3.3 E7	RO	Real
22691	0x58A3	I avg td	0 to 1 E6	RO	Real
22704	0x58B0	kWh imp	0 to +/- 1 E38	RO	Real
22705	0x58B1	kWh exp	0 to +/- 1 E38	RO	Real
22706	0x58B2	kWh tot	0 to +/- 1 E38	RO	Real
22707	0x58B3	kWh net	0 to +/- 1 E38	RO	Real
22708	0x58B4	kVARh imp	0 to +/- 1 E38	RO	Real
22709	0x58B5	kVARh exp	0 to +/- 1 E38	RO	Real
22710	0x58B6	kVARh tot	0 to +/- 1 E38	RO	Real
22711	0x58B7	kVARh net	0 to +/- 1 E38	RO	Real
22712	0x58B8	kVAh	0 to +/- 1 E38	RO	Real
26799	0x68AF	SWDemand Reset	Pulse	RW	Trigger
26800	0x68B0	TDemand Reset	Pulse	RW	Trigger
26803	0x68B3	Energy Reset	Pulse	RW	Trigger

MIN/MAX REGISTERS

Min/Max Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22752	0x58E0	Vln a max	0 to 1 E6	RO	Real
22753	0x58E1	Vln b max	0 to 1 E6	RO	Real
22754	0x58E2	Vln c max	0 to 1 E6	RO	Real
22755	0x58E3	Vln avg max	0 to 1 E6	RO	Real
22756	0x58E4	Vll ab max	0 to 2 E6	RO	Real
22757	0x58E5	Vll bc max	0 to 2 E6	RO	Real
22758	0x58E6	Vll ca max	0 to 2 E6	RO	Real
22759	0x58E7	Vll avg max	0 to 2 E6	RO	Real
22760	0x58E8	V unbal max	0 to 1 E6	RO	Real
22761	0x58E9	I a max	0 to 1 E6	RO	Real
22762	0x58EA	I b max	0 to 1 E6	RO	Real
22763	0x58EB	I c max	0 to 1 E6	RO	Real
22764	0x58EC	I avg max	0 to 1 E6	RO	Real
22765	0x58ED	kW tot max	0 to +/-3.3 E7	RO	Real
22766	0x58EE	kVAR tot max	0 to +/-3.3 E7	RO	Real

Min/Max Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22767	0x58EF	kVA tot max	0 to +/-3.3 E7	RO	Real
22768	0x58F0	kW swd max	0 to +/-3.3 E7	RO	Real
22769	0x58F1	kVAR swd max	0 to +/-3.3 E7	RO	Real
22770	0x58F2	kVA swd max	0 to +/-3.3 E7	RO	Real
22771	0x58F3	kW td max	0 to +/-3.3 E7	RO	Real
22772	0x58F4	Freq max	20-70 Hz	RO	Real
22773	0x58F5	PF lead max	-.01 to -100, .01 to 100	RO	Real
22774	0x58F6	PF lag max	-.01 to -100, .01 to 100	RO	Real
22775	0x58F7	V1 THD max	.0001 to 100	RO	Real
22776	0x58F8	V2 THD max	.0001 to 100	RO	Real
22777	0x58F9	V3 THD max	.0001 to 100	RO	Real
22778	0x58FA	I1 THD max	.0001 to 100	RO	Real
22779	0x58FB	I2 THD max	.0001 to 100	RO	Real
22780	0x58FC	I3 THD max	.0001 to 100	RO	Real
22781	0x58FD	kVAR td max	0 to +/-3.3 E7	RO	Real
22782	0x58FE	kVA td max	0 to +/-3.3 E7	RO	Real
22783	0x58FF	I4 Max	0 to 1 E6	RO	Real
24102	0x5E26	I1 K Factor max	0 to 1 E6	RO	Real
24103	0x5E27	I2 K Factor max	0 to 1 E6	RO	Real
24104	0x5E28	I3 K Factor max	0 to 1 E6	RO	Real
24105	0x5E29	I4 K Factor max	0 to 1 E6	RO	Real
24106	0x5E2A	I4 THD Max	.0001 to 100	RO	Real
22720	0x58C0	Vln a min	0 to 1 E6	RO	Real
22721	0x58C1	Vln b min	0 to 1 E6	RO	Real
22722	0x58C2	Vln c min	0 to 1 E6	RO	Real
22723	0x58C3	Vln avg min	0 to 1 E6	RO	Real
22724	0x58C4	Vll ab min	0 to 2 E6	RO	Real
22725	0x58C5	Vll bc min	0 to 2 E6	RO	Real
22726	0x58C6	Vll ca min	0 to 2 E6	RO	Real
22727	0x58C7	Vll avg min	0 to 2 E6	RO	Real
22728	0x58C8	V unbal min	0 to 1 E6	RO	Real
22729	0x58C9	I a min	0 to 1 E6	RO	Real
22730	0x58CA	I b min	0 to 1 E6	RO	Real
22731	0x58CB	I c min	0 to 1 E6	RO	Real
22732	0x58CC	I avg min	0 to 1 E6	RO	Real
22733	0x58CD	kW tot min	0 to +/-3.3 E7	RO	Real
22734	0x58CE	kVAR tot min	0 to +/-3.3 E7	RO	Real
22735	0x58CF	kVA tot min	0 to +/-3.3 E7	RO	Real
22736	0x58D0	kW swd min	0 to +/-3.3 E7	RO	Real
22737	0x58D1	kVAR swd min	0 to +/-3.3 E7	RO	Real
22738	0x58D2	kVA swd min	0 to +/-3.3 E7	RO	Real
22739	0x58D3	kW td min	0 to +/-3.3 E7	RO	Real
22740	0x58D4	Freq min	20-70 Hz	RO	Real
22741	0x58D5	PF lead min	-.01 to -100, .01 to 100	RO	Real

Min/Max Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22742	0x58D6	PF lag min	-.01 to -100, .01 to 100	RO	Real
22743	0x58D7	V1 THD min	.0001 to 100	RO	Real
22744	0x58D8	V2 THD min	.0001 to 100	RO	Real
22745	0x58D9	V3 THD min	.0001 to 100	RO	Real
22746	0x58DA	I1 THD min	.0001 to 100	RO	Real
22747	0x58DB	I2 THD min	.0001 to 100	RO	Real
22748	0x58DC	I3 THD min	.0001 to 100	RO	Real
22749	0x58DD	I4 Max	0 to 1 E6	RO	Real
22750	0x58DE	I1 K Factor min	0 to 1 E6	RO	Real
22751	0x58DF	I2 K Factor min	0 to 1 E6	RO	Real
24074	0x5E0A	I3 K Factor min	0 to 1 E6	RO	Real
24075	0x5E0B	I4 K Factor min	0 to 1 E6	RO	Real
24076	0x5E0C	I4 THD Min	.0001 to 100	RO	Real
24077	0x5E0D	KVAR TD min	0 to +/-3.3 E7	RO	Real
24078	0x5E0E	KVA TD min	0 to +/-3.3 E7	RO	Real
26798	0x68AE	Min/Max Reset	0 or 1	RW	Trigger
26805	0x68B5	Peak Dmd Reset	0 or 1	RW	Trigger

ENERGY AND DEMAND LOG REGISTERS

Energy and Demand Log Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
3968	0x0F80	EgyDmd Log	0 to +/- 1 E38	RW	Log
22656	0x5880	kW swd	0 to +/-3.3 E7	RO	Real
22657	0x5881	kVAR swd	0 to +/-3.3 E7	RO	Real
22658	0x5882	kVA swd	0 to +/-3.3 E7	RO	Real
22659	0x5883	I avg swd	0 to 1 E6	RO	Real
22660	0x5884	PF lead swd	-.01 to -100, .01 to 100	RO	Real
22661	0x5885	PF lag swd	-.01 to -100, .01 to 100	RO	Real
22713	0x58B9	kWh imp log	0 to +/- 1 E38	RO	Real
22714	0x58BA	kWh exp log	0 to +/- 1 E38	RO	Real
22715	0x58BB	kWh net log	0 to +/- 1 E38	RO	Real
22716	0x58BC	kVARh imp log	0 to +/- 1 E38	RO	Real
22717	0x58BD	kVARh exp log	0 to +/- 1 E38	RO	Real
22718	0x58BE	kVARh net log	0 to +/- 1 E38	RO	Real
22719	0x58BF	kVAh log	0 to +/- 1 E38	RO	Real
24719	0x608F	EgyDmd Log Enable	Pulse	RW	Trigger
26766	0x688E	EgyDmd Log Trg	Pulse	RW	Trigger
26801	0x68B1	Integrator Init	Pulse	RW	Trigger

POWER QUALITY MONITORING REGISTERS

Power Quality Monitoring Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
3969	0x0F81	Sag/Swell Log	Data Log	RO	Log
3970	0x0F82	Transient Log	Data Log	RO	Log
3988	0x0F94	Wfm Rec V1	Data Log	RO	Log
3989	0x0F95	Wfm Rec V2	Data Log	RO	Log
3990	0x0F96	Wfm Rec V3	Data Log	RO	Log
3991	0x0F97	Wfm Rec I1	Data Log	RO	Log
3992	0x0F98	Wfm Rec I2	Data Log	RO	Log
3993	0x0F99	Wfm Rec I3	Data Log	RO	Log
3994	0x0F9A	Wfm Rec I4	Data Log	RO	Log
23258	0x5ADA	Sag/Swell Count	Count	RO	Real
23259	0x5ADB	Transient Count	Count	RO	Real
23293	0x5AFD	Sag/Swell Duration	Time	RO	Real
23295	0x5AFF	Dist V1 Min	0 to 1 E6	RO	Real
23297	0x5B01	Dist V1 Max	0 to 1 E6	RO	Real
23299	0x5B03	Dist V1 Avg	0 to 1 E6	RO	Real
23301	0x5B05	Dist V1 Energy	0 to +/-3.3 E7	RO	Real
23303	0x5B07	Dist V2 Min	0 to 1 E6	RO	Real
23305	0x5B09	Dist V2 Max	0 to 1 E6	RO	Real
23307	0x5B0B	Dist V2 Avg	0 to 1 E6	RO	Real
23309	0x5B0D	Dist V2 Energy	0 to +/-3.3 E7	RO	Real
23311	0x5B0F	Dist V3 Min	0 to 1 E6	RO	Real
23313	0x5B11	Dist V3 Max	0 to 1 E6	RO	Real
23315	0x5B13	Dist V3 Avg	0 to 1 E6	RO	Real
23317	0x5B15	Dist V3 Energy	0 to +/-3.3 E7	RO	Real
23319	0x5B17	Sub V1 Avg	0 to 1 E6	RO	Real
23321	0x5B19	Sub V1 Dur	Time	RO	Real
23323	0x5B1B	Sub V2 Avg	0 to 1 E6	RO	Real
23325	0x5B1D	Sub V2 Dur	Time	RO	Real
23327	0x5B1F	Sub V3 Avg	0 to 1 E6	RO	Real
23329	0x5B21	Sub V3 Dur	Time	RO	Real
23625	0x5C49	Reset timestamp	Time	RO	Real
23735	0x5CB7	Tran V1 Dur	Time	RO	Real
23736	0x5CB8	Tran V1 Max	0 to 1 E6	RO	Real
23737	0x5CB9	Tran V2 Dur	Time	RO	Real
23738	0x5CBA	Tran V2 Max	0 to 1 E6	RO	Real
23739	0x5CBB	Tran V3 Dur	Time	RO	Real
23740	0x5CBC	Tran V3 Max	0 to 1 E6	RO	Real
24023	0x5DD7	Tran Nominal	0 to 1 E6	RO	Real
24024	0x5DD8	Dist Nominal	0 to 1 E6	RO	Real
24720	0x6090	Wfm Rec Enable	0 or 1	RO	Discrete
24721	0x6091	Sag/Swell Enable	0 or 1	RO	Discrete
24722	0x6092	Transient Enable	0 or 1	RO	Discrete
24785	0x60D1	Dist State	0 or 1	RO	Discrete

Power Quality Monitoring Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
26804	0x68B4	Dist Count Reset	Pulse	RO	Trigger
26806	0x68B6	Man Wfm Trg	Pulse	RO	Trigger
26934	0x6936	Wfm Trg Merge	Pulse	RO	Trigger
26942	0x693E	Dist Start	Pulse	RO	Trigger
26944	0x6940	Dist End	Pulse	RO	Trigger
26946	0x6942	Sub V1 Trig	Pulse	RO	Trigger
26948	0x6944	Sub V2 Trig	Pulse	RO	Trigger
26950	0x6946	Sub V3 Trig	Pulse	RO	Trigger
27148	0x6A0C	Tran V1 Trig	Pulse	RO	Trigger
27149	0x6A0D	Tran V2 Trig	Pulse	RO	Trigger
27150	0x6A0E	Tran V3 Trig	Pulse	RO	Trigger
27151	0x6A0F	Any Trig	0 or 1	RO	Trigger
29104	0x71B0	Wfm Rec V1 Depth	0 to 2 E9	RW	Real
29105	0x71B1	Wfm Rec V2 Depth	0 to 2 E9	RW	Real
29106	0x71B2	Wfm Rec V3 Depth	0 to 2 E9	RW	Real
29107	0x71B3	Wfm Rec I1 Depth	0 to 2 E9	RW	Real
29108	0x71B4	Wfm Rec I2 Depth	0 to 2 E9	RW	Real
29109	0x71B5	Wfm Rec I3 Depth	0 to 2 E9	RW	Real
29110	0x71B6	Wfm Rec I4 Depth	0 to 2 E9	RW	Real
29550	0x736E	Wfm Rec V1 Record Delay	Cycles	RW	Real
29551	0x736F	Wfm Rec V2 Record Delay	Cycles	RW	Real
29552	0x7370	Wfm Rec V3 Record Delay	Cycles	RW	Real
29553	0x7371	Wfm Rec I1 Record Delay	Cycles	RW	Real
29554	0x7372	Wfm Rec I2 Record Delay	Cycles	RW	Real
29555	0x7373	Wfm Rec I3 Record Delay	Cycles	RW	Real
29556	0x7374	Wfm Rec I4 Record Delay	Cycles	RW	Real
31020	0x792C	Wfm Rec V1 Mode	circ or stop when full	RW	Integer
31021	0x792D	Wfm Rec V2 Mode	circ or stop when full	RW	Integer
31022	0x792E	Wfm Rec V3 Mode	circ or stop when full	RW	Integer
31023	0x792F	Wfm Rec I1 Mode	circ or stop when full	RW	Integer
31024	0x7930	Wfm Rec I2 Mode	circ or stop when full	RW	Integer
31025	0x7931	Wfm Rec I3 Mode	circ or stop when full	RW	Integer
31026	0x7932	Wfm Rec I4 Mode	circ or stop when full	RW	Integer

SETPOINT REGISTERS

Setpoint Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23245	0x5ACD	kW swd Nominal		RO	Real
23246	0x5ACE	I a nominal	0 to 1 E6	RO	Real
23247	0x5ACF	I b nominal	0 to 1 E6	RO	Real
23248	0x5AD0	I c nominal	0 to 1 E6	RO	Real
23249	0x5AD1	V unbal nominal	0 to 1 E6	RO	Real
24723	0x6093	Over kW Enable	0 or 1	RO	Discrete
24724	0x6094	Over Amp Enable	0 or 1	RO	Discrete
24725	0x6095	Over Vunb Enable	0 or 1	RO	Discrete
29686	0x73F6	Over kW swd	0 to +/-3.3 E7	RO	Real
29687	0x73F7	Over I a	0 to 1 E6	RO	Real
29688	0x73F8	Over I b	0 to 1 E6	RO	Real
29689	0x73F9	Over I c	0 to 1 E6	RO	Real
29690	0x73FA	Over V unbal	0 to 1 E6	RO	Real

DIGITAL INPUT REGISTERS

Digital Input Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
24577	0x6001	Digital In 1 (S1)	0 or 1	RO	Discrete
24578	0x6002	Digital In 2 (S2)	0 or 1	RO	Discrete
24579	0x6003	Digital In 3 (S3)	0 or 1	RO	Discrete
24580	0x6004	Digital In 4 (S4)	0 or 1	RO	Discrete
24581	0x6005	Digital In 5 (S5)	0 or 1	RO	Discrete
24582	0x6006	Digital In 6 (S6)	0 or 1	RO	Discrete
24583	0x6007	Digital In 7 (S7)	0 or 1	RO	Discrete
24584	0x6008	Digital In 8 (S8)	0 or 1	RO	Discrete

EVENT LOG CONTROLLER MODULE REGISTERS

Event Log Controller Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
29158	0x71E6	Depth	0 TO 20,000	RW	Real
29159	0x71E7	Protection	128	RW	Real
29445	0x7305	Cutoff		RW	Real

EXTERNAL DISCRETE MODULE REGISTERS

External Discrete Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
24719	0x608F	Ext Bool 1 Switch		RO	Discrete
24720	0x6090	Ext Bool 2 Switch		RO	Discrete
24721	0x6091	Ext Bool 3 Switch		RO	Discrete
24722	0x6092	Ext Bool 4 Switch		RO	Discrete
24723	0x6093	Ext Bool 5 Switch		RO	Discrete
24724	0x6094	Ext Bool 6 Switch		RO	Discrete
24725	0x6095	Ext Bool 7 Switch		RO	Discrete
24726	0x6096	Ext Bool 8 Switch		RO	Discrete
24727	0x6097	Ext Bool 9 Switch		RO	Discrete

EXTERNAL REAL MODULE REGISTERS

External Real Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23260	0x5ADC	Ext Num 1 Real		RO	Real
23261	0x5ADD	Ext Num 2 Real		RO	Real
23262	0x5ADE	Ext Num 3 Real		RO	Real
23263	0x5ADF	Ext Num 4 Real		RO	Real
23264	0x5AE0	Ext Num 5 Real		RO	Real

EXTERNAL PULSE MODULE REGISTERS

External Pulse Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
26798	0x68AE	Ext Pulse 1 Trigger		RO	Pulse
26799	0x68AF	Ext Pulse 2 Trigger		RO	Pulse
26800	0x68B0	Ext Pulse 3 Trigger		RO	Pulse
26801	0x68B1	Ext Pulse 4 Trigger		RO	Pulse
26802	0x68B2	Ext Pulse 5 Trigger		RO	Pulse
26803	0x68B3	Ext Pulse 6 Trigger		RO	Pulse
26804	0x68B4	Ext Pulse 7 Trigger		RO	Pulse
26805	0x68B5	Ext Pulse 8 Trigger		RO	Pulse
26806	0x68B6	Ext Pulse 9 Trigger		RO	Pulse
26807	0x68B7	Ext Pulse 10 Trigger		RO	Pulse
26808	0x68B8	Ext Pulse 11 Trigger		RO	Pulse
26809	0x68B9	Ext Pulse 12 Trigger		RO	Pulse
26810	0x68BA	Ext Pulse 13 Trigger		RO	Pulse
26811	0x68BB	Ext Pulse 14 Trigger		RO	Pulse
26812	0x68BC	Ext Pulse 15 Trigger		RO	Pulse
26813	0x68BD	Ext Pulse 16 Trigger		RO	Pulse
26814	0x68BE	Ext Pulse 17 Trigger		RO	Pulse
26815	0x68BF	Ext Pulse 18 Trigger		RO	Pulse

FACTORY MODULE REGISTERS

Factory Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
4864	0x1300	Device Type		RW	String
4865	0x1301	Compliance		RW	String
4866	0x1302	Options		RW	String
4867	0x1303	Revision		RW	String
4868	0x1304	SerialNum		RW	String
4933	0x1345	Owner		RW	String
4934	0x1346	Tag 1		RW	String
4935	0x1347	Tag 2		RW	String
29163	0x71EB	V Nominal		RW	Real
29164	0x71EC	I Nominal		RW	Real
29165	0x71ED	I4 Nominal		RW	Real
29166	0x71EE	I20 Nominal		RW	Real
31115	0x798B	Nom Freq		RW	Integer

INTEGRATOR MODULE REGISTERS

Integrator Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22704	0x58B0	Integrator 1 Result		RO	Real
22705	0x58B1	Integrator 2 Result		RO	Real
22706	0x58B2	Integrator 3 Result		RO	Real
22707	0x58B3	Integrator 4 Result		RO	Real
22708	0x58B4	Integrator 5 Result		RO	Real
22709	0x58B5	Integrator 6 Result		RO	Real
22710	0x58B6	Integrator 7 Result		RO	Real
22711	0x58B7	Integrator 8 Result		RO	Real
22712	0x58B8	Integrator 9 Result		RO	Real
22713	0x58B9	Integrator 10 Result		RO	Real
22714	0x58BA	Integrator 11 Result		RO	Real
22715	0x58BB	Integrator 12 Result		RO	Real
22716	0x58BC	Integrator 13 Result		RO	Real
22717	0x58BD	Integrator 14 Result		RO	Real
22718	0x58BE	Integrator 15 Result		RO	Real
22719	0x58BF	Integrator 16 Result		RO	Real

PERIODIC TIMER MODULE REGISTERS

Periodic Timer Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
26766	0x688E	Periodic Tmr 1 Trigger		RO	Pulse
26767	0x688F	Periodic Tmr 2 Trigger		RO	Pulse
26768	0x6890	Periodic Tmr 3 Trigger		RO	Pulse
29116	0x71BC	Periodic Tmr 1 Period	0.010 to 2 E6 s	RW	Real
29117	0x71BD	Periodic Tmr 2 Period	0.010 to 2 E6 s	RW	Real
29118	0x71BE	Periodic Tmr 3 Period	0.010 to 2 E6 s	RW	Real
31064	0x7958	Periodic Tmr 1 Sync Mode	NO TRIG ON SYNC, TRIGGER ON SYNC	RW	Integer
31065	0x7959	Periodic Tmr 2 Sync Mode	NO TRIG ON SYNC, TRIGGER ON SYNC	RW	Integer
31066	0x795A	Periodic Tmr 3 Sync Mode	NO TRIG ON SYNC, TRIGGER ON SYNC	RW	Integer

PULSER MODULE REGISTERS

Pulser Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
28842	0x70AA	Pulser 1 PulseWidth	0.020 to 2 E6 ms	RW	Real
30900	0x78B4	Pulser 1 ROMode	PULSE, KYZ	RW	Integer
31233	0x7A01	Pulser 1 Port	variable	RW	Integer
35262	0x89BE	Pulser 1 RO Polarity	NON-INVERTING, INVERTING	RW	Integer

RELATIVE SETPOINT MODULE REGISTERS

Relative Setpoint Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
25053	0x61DD	RSP #1 Status		RO	Integer
25054	0x61DE	RSP #2 Status		RO	Integer
25055	0x61DF	RSP #3 Status		RO	Integer
25056	0x61E0	RSP #4 Status		RO	Integer
25057	0x61E1	RSP #5 Status		RO	Integer
25063	0x61E7	RSP #1 Over Output		RO	Integer
25064	0x61E8	RSP #2 Over Output		RO	Integer
25065	0x61E9	RSP #3 Over Output		RO	Integer
25066	0x61EA	RSP #4 Over Output		RO	Integer
25067	0x61EB	RSP #5 Over Output		RO	Integer
25073	0x61F1	RSP #1 Under Output		RO	Integer
25074	0x61F2	RSP #2 Under Output		RO	Integer

Relative Setpoint Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
25075	0x61F3	RSP #3 Under Output		RO	Integer
25076	0x61F4	RSP #4 Under Output		RO	Integer
25077	0x61F5	RSP #5 Under Output		RO	Integer
29686	0x73F6	RSP #1 Over Pickup		RW	Real
29687	0x73F7	RSP #2 Over Pickup		RW	Real
29688	0x73F8	RSP #3 Over Pickup		RW	Real
29689	0x73F9	RSP #4 Over Pickup		RW	Real
29690	0x73FA	RSP #5 Over Pickup		RW	Real
29696	0x7400	RSP #1 Over Dropout		RW	Real
29697	0x7401	RSP #2 Over Dropout		RW	Real
29698	0x7402	RSP #3 Over Dropout		RW	Real
29699	0x7403	RSP #4 Over Dropout		RW	Real
29700	0x7404	RSP #5 Over Dropout		RW	Real
29706	0x740A	RSP #1 Under Pickup		RW	Real
29707	0x740B	RSP #2 Under Pickup		RW	Real
29708	0x740C	RSP #3 Under Pickup		RW	Real
29709	0x740D	RSP #4 Under Pickup		RW	Real
29710	0x740E	RSP #5 Under Pickup		RW	Real
29716	0x7414	RSP #1 Under Dropout		RW	Real
29717	0x7415	RSP #2 Under Dropout		RW	Real
29718	0x7416	RSP #3 Under Dropout		RW	Real
29719	0x7417	RSP #4 Under Dropout		RW	Real
29720	0x7418	RSP #5 Under Dropout		RW	Real
29726	0x741E	RSP #1 SusUntlOn		RW	Real
29727	0x741F	RSP #2 SusUntlOn		RW	Real
29728	0x7420	RSP #3 SusUntlOn		RW	Real
29729	0x7421	RSP #4 SusUntlOn		RW	Real
29730	0x7422	RSP #5 SusUntlOn		RW	Real
29736	0x7428	RSP #1 SusUntlOff		RW	Real
29737	0x7429	RSP #2 SusUntlOff		RW	Real
29738	0x742A	RSP #3 SusUntlOff		RW	Real
29739	0x742B	RSP #4 SusUntlOff		RW	Real
29740	0x742C	RSP #5 SusUntlOff		RW	Real
29746	0x7432	RSP #1 EvPriority		RW	Real
29747	0x7433	RSP #2 EvPriority		RW	Real
29748	0x7434	RSP #3 EvPriority		RW	Real
29749	0x7435	RSP #4 EvPriority		RW	Real
29750	0x7436	RSP #5 EvPriority		RW	Real
31649	0x7BA1	RSP #1 Eval Mode		RW	Integer
31650	0x7BA2	RSP #2 Eval Mode		RW	Integer
31651	0x7BA3	RSP #3 Eval Mode		RW	Integer
31652	0x7BA4	RSP #4 Eval Mode		RW	Integer
31653	0x7BA5	RSP #5 Eval Mode		RW	Integer

SLIDING WINDOW DEMAND MODULE REGISTERS

Sliding Window Demand Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
28852	0x70B4	SWD #1 Sub Intvl	60 to 5940 s	RW	Integer
28853	0x70B5	SWD #2 Sub Intvl	61 to 5940 s	RW	Integer
28854	0x70B6	SWD #3 Sub Intvl	62 to 5940 s	RW	Integer
28855	0x70B7	SWD #4 Sub Intvl	63 to 5940 s	RW	Integer
28856	0x70B8	SWD #5 Sub Intvl	64 to 5940 s	RW	Integer
28857	0x70B9	SWD #6 Sub Intvl	65 to 5940 s	RW	Integer
28858	0x70BA	SWD #7 Sub Intvl	66 to 5940 s	RW	Integer
28859	0x70BB	SWD #8 Sub Intvl	67 to 5940 s	RW	Integer
28860	0x70BC	SWD #9 Sub Intvl	68 to 5940 s	RW	Integer
28861	0x70BD	SWD #10 Sub Intvl	69 to 5940 s	RW	Integer
...	...	...		RW	Integer
30049	0x7561	SWD #29 Sub Intvl	69 to 5940 s	RW	Integer
28868	0x70C4	SWD #1 #SubIntvls	1 to 15	RW	Integer
28869	0x70C5	SWD #2 #SubIntvls	1 to 15	RW	Integer
28870	0x70C6	SWD #3 #SubIntvls	1 to 15	RW	Integer
28871	0x70C7	SWD #4 #SubIntvls	1 to 15	RW	Integer
28872	0x70C8	SWD #5 #SubIntvls	1 to 15	RW	Integer
28873	0x70C9	SWD #6 #SubIntvls	1 to 15	RW	Integer
28874	0x70CA	SWD #7 #SubIntvls	1 to 15	RW	Integer
28875	0x70CB	SWD #8 #SubIntvls	1 to 15	RW	Integer
28876	0x70CC	SWD #9 #SubIntvls	1 to 15	RW	Integer
28877	0x70CD	SWD #10 #SubIntvls	1 to 15	RW	Integer
...	...	...		RW	Integer
30073	0x7579	SWD #29 #SubIntvls	1 to 15	RW	Integer
28884	0x70D4	SWD #1 Pred Resp	0 to 99	RW	Integer
28885	0x70D5	SWD #2 Pred Resp	0 to 99	RW	Integer
28886	0x70D6	SWD #3 Pred Resp	0 to 99	RW	Integer
28887	0x70D7	SWD #4 Pred Resp	0 to 99	RW	Integer
28888	0x70D8	SWD #5 Pred Resp	0 to 99	RW	Integer
28889	0x70D9	SWD #6 Pred Resp	0 to 99	RW	Integer
28890	0x70DA	SWD #7 Pred Resp	0 to 99	RW	Integer
28891	0x70DB	SWD #8 Pred Resp	0 to 99	RW	Integer
28892	0x70DC	SWD #9 Pred Resp	0 to 99	RW	Integer
28893	0x70DD	SWD #10 Pred Resp	0 to 99	RW	Integer
...	...	...			Integer
30097	0x7591	SWD #29 Pred Resp	0 to 99	RW	Integer
22656	0x5880	SWD #1 SWD		Output	Real
22657	0x5881	SWD #2 SWD		Output	Real
22658	0x5882	SWD #3 SWD		Output	Real
22659	0x5883	SWD #4 SWD		Output	Real

Sliding Window Demand Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22660	0x5884	SWD #5 SWD		Output	Real
22661	0x5885	SWD #6 SWD		Output	Real
22662	0x5886	SWD #7 SWD		Output	Real
22663	0x5887	SWD #8 SWD		Output	Real
22664	0x5888	SWD #9 SWD		Output	Real
22665	0x5889	SWD #10 SWD		Output	Real
...			
24038	0x5DE6	SWD #29 SWD		Output	Real
22672	0x5890	SWD #1		Output	Real
22673	0x5891	SWD #2		Output	Real
22674	0x5892	SWD #3		Output	Real
22675	0x5893	SWD #4		Output	Real
22676	0x5894	SWD #5		Output	Real
22677	0x5895	SWD #6		Output	Real
22678	0x5896	SWD #7		Output	Real
22679	0x5897	SWD #8		Output	Real
22680	0x5898	SWD #9		Output	Real
22681	0x5899	SWD #10		Output	Real
...			
24062	0x5DFE	SWD #29		Output	Real

THERMAL DEMAND MODULE REGISTERS

Thermal Demand Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
22688	0x58A0	TD #1 ThrmDemand		RO	Real
22689	0x58A1	TD #2 ThrmDemand		RO	Real
22690	0x58A2	TD #3 ThrmDemand		RO	Real
22691	0x58A3	TD #4 ThrmDemand		RO	Real
28900	0x70E4	TD #1 Period	60 to 5940 s	RW	Integer
28901	0x70E5	TD #2 Period	60 to 5940 s	RW	Integer
28902	0x70E6	TD #3 Period	60 to 5940 s	RW	Integer
28903	0x70E7	TD #4 Period	60 to 5940 s	RW	Integer
28916	0x70F4	TD #1 Time Const	1 to 99%	RW	Real
28917	0x70F5	TD #2 Time Const	1 to 99%	RW	Real
28918	0x70F6	TD #3 Time Const	1 to 99%	RW	Real
28919	0x70F7	TD #4 Time Const	1 to 99%	RW	Real

SYMMETRICAL COMPONENT MODULE REGISTERS

Symmetrical Component Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
23281	0x5AF1	SYM #1 ZS Mag		RO	Real
23282	0x5AF2	SYM #1 ZS Phase		RO	Real
23283	0x5AF3	SYM #1 PS Mag		RO	Real
23284	0x5AF4	SYM #1 PS Phase		RO	Real
23285	0x5AF5	SYM #1 NS Mag		RO	Real
23286	0x5AF6	SYM #1 NS Phase		RO	Real
23287	0x5AF7	SYM #2 ZS Mag		RO	Real
23288	0x5AF8	SYM #2 ZS Phase		RO	Real
23289	0x5AF9	SYM #2 PS Mag		RO	Real
23290	0x5AFA	SYM #2 PS Phase		RO	Real
23291	0x5AFB	SYM #2 NS Mag		RO	Real
23292	0x5AFC	SYM #2 NS Phase		RO	Real

SAG/SWELL MODULE REGISTERS

Sag/Swell Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
29204	0x7214	Swell Limit Max		RW	Real
29206	0x7216	Sag Limit Max		RW	Real
29208	0x7218	Change Criteria		RW	Real
29210	0x721A	Sag Swell Nominal		RW	Real

TRANSIENT MODULE REGISTER

Transient Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
29508	0x7344	Transient Threshold		RW	Real

WAVEFORM MODULE REGISTER

Waveform Module Registers					
Register Address (Decimal)	Register Address (Hex)	Description/Contents	Units/Value/Range	Read/Write	Data Type
31032	0x7938	Waveform Format		RO	Integer

7700 Meter

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UNIVERSAL RELAY

■ *SETPOINT REGISTERS*

■ *ACTUAL VALUES*

Universal Relay

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3X0000	PROD_TYPE UR	UR Product Type	---	1	0 to 65535	RO	F001
R0x0001	UR_RESET					RW	
R3X0002	PROD_VER	Product Version	---	0.01	0 to 65535	RO	F001
R3X0010S16	SERIAL_NUM	Serial Number	---	---	---	RO	F203
R3X0020L	MFG_DATE	Manufacturing Date	---	1	0 to 4294967295	RO	F050
R3X0022	MOD_NUM	Modification Number	---	1	0 to 65535	RO	F001
R3X0040S80	ORDER_CODE	Order Code	---	---	---	RO	F204
R3X0090S12	MAC_ADDR	Ethernet MAC Address	---	---	---	RO	F072
R3X0200L	SELF_TEST_STATE	Self Test States	0	1	0 to 4294967295	RO	F143
R3X0204	LED_COL_STATE_ALL	LED Column State (All)	---	1	0 to 65535	RO	F501
R3X0204	LED_COL_STATE	LED State Column 1	---	1	0 to 65535	RO	F501
R3X0205	LED_COL_STATE_2	LED State Column 2	---	1	0 to 65535	RO	F501
R3X0206	LED_COL_STATE_3	LED State Column 3	---	1	0 to 65535	RO	F501
R3X0207	LED_COL_STATE_4	LED State Column 4	---	1	0 to 65535	RO	F501
R3X0208	LED_COL_STATE_5	LED State Column 5	---	1	0 to 65535	RO	F501
R3X0209	LED_COL_STATE_6	LED State Column 6	---	1	0 to 65535	RO	F501
R3X020A	LED_COL_STATE_7	LED State Column 7	---	1	0 to 65535	RO	F501
R3X020B	LED_COL_STATE_8	LED State Column 8	---	1	0 to 65535	RO	F501
R3X020C	LED_COL_STATE_9	LED State Column 9	---	1	0 to 65535	RO	F501
R3X0220S80	DISP_MSG	Display Message	---	---	---	RO	F204
R4X0400	VIRT_IN_STATE_1	Virtual Input State 1	---	1	0 to 1	RW	F108
R4X0401	VIRT_IN_STATE_2	Virtual Input State 2	---	1	0 to 1	RW	F108
R4X0402	VIRT_IN_STATE_3	Virtual Input State 3	---	1	0 to 1	RW	F108
R4X0403	VIRT_IN_STATE_4	Virtual Input State 4	---	1	0 to 1	RW	F108
R4X0404	VIRT_IN_STATE_5	Virtual Input State 5	---	1	0 to 1	RW	F108
R4X0405	VIRT_IN_STATE_6	Virtual Input State 6	---	1	0 to 1	RW	F108
R4X0406	VIRT_IN_STATE_7	Virtual Input State 7	---	1	0 to 1	RW	F108
R4X0407	VIRT_IN_STATE_8	Virtual Input	---	1	0 to 1	RW	F108

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		State 8					
R4X0408	VIRT_IN_STATE_9	Virtual Input State 9	---	1	0 to 1	RW	F108
R4X0409	VIRT_IN_STATE_10	Virtual Input State 10	---	1	0 to 1	RW	F108
R4X040A	VIRT_IN_STATE_11	Virtual Input State 11	---	1	0 to 1	RW	F108
R4X040B	VIRT_IN_STATE_12	Virtual Input State 12	---	1	0 to 1	RW	F108
R4X040C	VIRT_IN_STATE_13	Virtual Input State 13	---	1	0 to 1	RW	F108
R4X040D	VIRT_IN_STATE_14	Virtual Input State 14	---	1	0 to 1	RW	F108
R4X040E	VIRT_IN_STATE_15	Virtual Input State 15	---	1	0 to 1	RW	F108
R4X040F	VIRT_IN_STATE_16	Virtual Input State 16	---	1	0 to 1	RW	F108
R4X0410	VIRT_IN_STATE_17	Virtual Input State 17	---	1	0 to 1	RW	F108
R4X0411	VIRT_IN_STATE_18	Virtual Input State 18	---	1	0 to 1	RW	F108
R4X0412	VIRT_IN_STATE_19	Virtual Input State 19	---	1	0 to 1	RW	F108
R4X0413	VIRT_IN_STATE_20	Virtual Input State 20	---	1	0 to 1	RW	F108
R4X0414	VIRT_IN_STATE_21	Virtual Input State 21	---	1	0 to 1	RW	F108
R4X0415	VIRT_IN_STATE_22	Virtual Input State 22	---	1	0 to 1	RW	F108
R4X0416	VIRT_IN_STATE_23	Virtual Input State 23	---	1	0 to 1	RW	F108
R4X0417	VIRT_IN_STATE_24	Virtual Input State 24	---	1	0 to 1	RW	F108
R4X0418	VIRT_IN_STATE_25	Virtual Input State 25	---	1	0 to 1	RW	F108
R4X0419	VIRT_IN_STATE_26	Virtual Input State 26	---	1	0 to 1	RW	F108
R4X041A	VIRT_IN_STATE_27	Virtual Input State 27	---	1	0 to 1	RW	F108
R4X041B	VIRT_IN_STATE_28	Virtual Input State 28	---	1	0 to 1	RW	F108
R4X041C	VIRT_IN_STATE_29	Virtual Input State 29	---	1	0 to 1	RW	F108
R4X041D	VIRT_IN_STATE_30	Virtual Input State 30	---	1	0 to 1	RW	F108
R4X041E	VIRT_IN_STATE_31	Virtual Input State 31	---	1	0 to 1	RW	F108
R4X041F	VIRT_IN_STATE_32	Virtual Input State 32	---	1	0 to 1	RW	F108
R3X0802	DIG_CNT_FRZ1	Digital Counter 1 Frozen	---	1	-2147483647 to 2147483647	RO	F004
R3X0804	DIG_CNT_FRZ_TIME 1	Digital Counter 1 Frozen Time Stamp	---	1	0 to 4294967295	RO	F003

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3X0806	DIG_CNT_FRZ_TIME US1	Digital Counter 1 Frozen Time Stamp us	---	1	0 to 4294967295	RO	F003
R3X080A	DIG_CNT_FRZ2	Digital Counter 2 Frozen	---	1	-2147483647 to 2147483647	RO	F004
R3X080C	DIG_CNT_FRZ_TIME 2	Digital Counter 2 Frozen Time Stamp	---	1	0 to 4294967295	RO	F003
R3X080E	DIG_CNT_FRZ_TIME US2	Digital Counter 2 Frozen Time Stamp us	---	1	0 to 4294967295	RO	F003
R3X0812	DIG_CNT_FRZ3	Digital Counter 3 Frozen	---	1	-2147483647 to 2147483647	RO	F004
R3X0814	DIG_CNT_FRZ_TIME 3	Digital Counter 3 Frozen Time Stamp	---	1	0 to 4294967295	RO	F003
R3X0816	DIG_CNT_FRZ_TIME US3	Digital Counter 3 Frozen Time Stamp us	---	1	0 to 4294967295	RO	F003
R3X081A	DIG_CNT_FRZ4	Digital Counter 4 Frozen	---	1	-2147483647 to 2147483647	RO	F004
R3X081C	DIG_CNT_FRZ_TIME 4	Digital Counter 4 Frozen Time Stamp	---	1	0 to 4294967295	RO	F003
R3X081E	DIG_CNT_FRZ_TIME US4	Digital Counter 4 Frozen Time Stamp us	---	1	0 to 4294967295	RO	F003
R3X0822	DIG_CNT_FRZ5	Digital Counter 5 Frozen	---	1	-2147483647 to 2147483647	RO	F004
R3X0824	DIG_CNT_FRZ_TIME 5	Digital Counter 5 Frozen Time Stamp	---	1	0 to 4294967295	RO	F003
R3X0826	DIG_CNT_FRZ_TIME US5	Digital Counter 5 Frozen Time Stamp us	---	1	0 to 4294967295	RO	F003
R3X082A	DIG_CNT_FRZ6	Digital Counter 6 Frozen	---	1	-2147483647 to 2147483647	RO	F004
R3X082C	DIG_CNT_FRZ_TIME	Digital Counter 6 Frozen Time Stamp	---	1	0 to 4294967295	RO	F003
R3X082E	DIG_CNT_FRZ_TIME US6	Digital Counter 6 Frozen Time Stamp us	---	1	0 to 4294967295	RO	F003
R3X0832	DIG_CNT_FRZ7	Digital Counter 7 Frozen	---	1	-2147483647 to 2147483647	RO	F004
R3X0834	DIG_CNT_FRZ_TIME 7	Digital Counter 7 Frozen Time Stamp	---	1	0 to 4294967295	RO	F003
R3X0836	DIG_CNT_FRZ_TIME US7	Digital Counter 7 Frozen Time Stamp us	---	1	0 to 4294967295	RO	F003
R3X083A	DIG_CNT_FRZ8	Digital Counter 8 Frozen	---	1	-2147483647 to 2147483647	RO	F004
R3X083C	DIG_CNT_FRZ_TIME 8	Digital Counter 8 Frozen Time Stamp	---	1	0 to 4294967295	RO	F003

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3X083E	DIG_CNT_FRZ_TIME US8	Digital Counter 8 Frozen Time Stamp us	---	1	0 to 4294967295	RO	F003
R3x15A0	DIRECT_INP_STATE_1	Direct Input x 1 State	1	---	0 to 1	DV	F108
R3x15A1	DIRECT_INP_STATE_2	Direct Input x 2 State	1	---	0 to 1	DV	F108
R3x1500	CONT_INP_1	Contact Input States 1 – 16	---	1	0 to 65535	RO	F500
R3x1501	CONT_INP_2	Contact Input States 17 - 32	---	1	0 to 65535	RO	F500
R3x1502	CONT_INP_3	Contact Input States 33 – 48	---	1	0 to 65535	RO	F500
R3x1503	CONT_INP_4	Contact Input States 49 – 64	---	1	0 to 65535	RO	F500
R3x1504	CONT_INP_5	Contact Input States 65 – 80	---	1	0 to 65535	RO	F500
R3x1505	CONT_INP_6	Contact Input States 81 - 96	---	1	0 to 65535	RO	F500
R3x1508	VIRT_INP_1	Virtual Input States 1 - 16	---	1	0 to 65535	RO	F500
R3x1509	VIRT_INP_2	Virtual Input States 17 – 32	---	1	0 to 65535	RO	F500
R3x1510	CONT_OUT_STATE_1	Contact Output States 1 – 16	---	1	0 to 65535	RO	F500
R3x1511	CONT_OUT_STATE_2	Contact Output States 17 – 32	---	1	0 to 65535	RO	F500
R3x1512	CONT_OUT_STATE_3	Contact Output States 33 – 48	---	1	0 to 65535	RO	F500
R3x1513	CONT_OUT_STATE_4	Contact Output States 49 – 64	---	1	0 to 65535	RO	F500
R3x1518	CONT_OUT_CSTATE_1	Contact Output Current States 1 – 16	---	1	0 to 65535	RO	F500
R3x1519	CONT_OUT_CSTATE_2	Contact Output Current States 17 – 32	---	1	0 to 65535	RO	F500
R3x151A	CONT_OUT_CSTATE_3	Contact Output Current States 33 – 48	---	1	0 to 65535	RO	F500
R3x151B	CONT_OUT_CSTATE_4	Contact Output Current States 49 – 64	---	1	0 to 65535	RO	F500
R3x1520	CONT_OUT_VSTATE_1	Contact Output Voltage States 1 – 16	---	1	0 to 65535	RO	F500
R3x1521	CONT_OUT_VSTATE_2	Contact Output Voltage States 17 – 32	---	1	0 to 65535	RO	F500
R3x1522	CONT_OUT_VSTATE_3	Contact Output Voltage States 33 – 48	---	1	0 to 65535	RO	F500
R3x1523	CONT_OUT_VSTATE_4	Contact Output Voltage States	---	1	0 to 65535	RO	F500

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		49 – 64					
R3x1528	VIRT_OUT_STATE_1	Virtual Output States 1 – 16	---	1	0 to 65535	RO	F500
R3x1529	VIRT_OUT_STATE_2	Virtual Output States 17 – 32	---	1	0 to 65535	RO	F500
R3x152A	VIRT_OUT_STATE_3	Virtual Output States 33 – 48	---	1	0 to 65535	RO	F500
R3x152B	VIRT_OUT_STATE_4	Virtual Output States 49 – 64	---	1	0 to 65535	RO	F500
R3x1530	CONT_OUT_DETECT_1	Contact Output Detectors 1 - 16	---	1	0 to 65535	RO	F500
R3x1531	CONT_OUT_DETECT_2	Contact Output Detectors 17 - 32	---	1	0 to 65535	RO	F500
R3x1532	CONT_OUT_DETECT_3	Contact Output Detectors 33 - 48	---	1	0 to 65535	RO	F500
R3x1533	CONT_OUT_DETECT_4	Contact Output Detectors 49 - 64	---	1	0 to 65535	RO	F500
R3x161BL	DLOG_NEWEST_TIME	Time of newest available samples	Seconds	1	0 to 4294967295	DV	F050
R3x161D	DLOG_DURATION	Data Logger Duration	DAYS	0.1	0 to 999.9	DV	F001
R3x1610	ENET_PRIM_STATUS	Ethernet Primary Fibre Channel Status	---	1	0 to 2	RO	F134
R3x1611	ENET_SEC_STATUS	Ethernet Secondary Fibre Channel Status	---	1	0 to 2	RO	F134
R3x1618	DLOG_CH_CNT	Data Logger Channel Count	CHNL	1	0 to 16	DV	F001
R3x1619L	DLOG_OLDEST_TIME	Time of oldest available samples	seconds	1	0 to 4294967295	DV	F050
R3x1620	CHAN1_STAT	L90 Channel 1 Status	---	1	0 to 2	DV	F134
R3x1627	CHAN2_STAT	L90 Channel 2 Status	---	1	0 to 2	DV	F134
R3x1800F	S1_AMPS_A_RMS	Source 1 Phase A Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1802F	S1_AMPS_B_RMS	Source 1 Phase B Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1804F	S1_AMPS_C_RMS	Source 1 Phase C Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1806F	S1_AMPS_N_RMS	Source 1 Neutral Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1808F	S1_AMPS_A	Source 1 Phase A Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x180AI	S1_AMPS_A_ANGLE	Source 1 Phase A Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x180BF	S1_AMPS_B	Source 1 Phase B Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x180DI	S1_AMPS_B_ANGLE	Source 1 Phase B Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x180EF	S1_AMPS_C	Source 1 Phase C	A	0.001	0 to	RO	F060

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Current Magnitude			999999.999		
R3x1810I	S1_AMPS_C_ANGLE	Source 1 Phase C Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1811F	S1_AMPS_N	Source 1 Neutral Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1813I	S1_AMPS_N_ANGLE	Source 1 Neutral Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1814F	S1_AMPS_GND_RMS	Source 1 Ground Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1816F	S1_AMPS_GND	Source 1 Ground Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1818I	S1_AMPS_GND_ANGLE	Source 1 Ground Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1819F	S1_AMPS_I_0	Source 1 Zero Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x181BI	S1_AMPS_I_0_ANGLE	Source 1 Zero Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x181CF	S1_AMPS_I_1	Source 1 Positive Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x181EI	S1_AMPS_I_1_ANGLE	Source 1 Positive Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x181FF	S1_AMPS_I_2	Source 1 Negative Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1821I	S1_AMPS_I_2_ANGLE	Source 1 Negative Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x184BF	S2_AMPS_B	Source 2 Phase B Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x184DI	S2_AMPS_B_ANGLE	Source 2 Phase B Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x184EF	S2_AMPS_C	Source 2 Phase C Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1850I	S2_AMPS_C_ANGLE	Source 2 Phase C Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1851F	S2_AMPS_N	Source 2 Neutral Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1853I	S2_AMPS_N_ANGLE	Source 2 Neutral Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1854F	S2_AMPS_GND_RMS	Source 2 Ground Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1856F	S2_AMPS_GND	Source 2 Ground Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1858I	S2_AMPS_GND_ANGLE	Source 2 Ground Current Angle	°	0.1	-359.9 to 0	RO	F002

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3x1859F	S2_AMPS_I_0	Source 2 Zero Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x185BI	S2_AMPS_I_0_ANG	Source 2 Zero Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x185CF	S2_AMPS_I_1	Source 2 Positive Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x185EI	S2_AMPS_I_1_ANG	Source 2 Positive Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x185FF	S2_AMPS_I_2	Source 2 Negative Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1861I	S2_AMPS_I_2_ANG	Source 2 Negative Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1880F	S3_AMPS_A_RMS	Source 3 Phase A Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1882F	S3_AMPS_B_RMS	Source 3 Phase B Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1884F	S3_AMPS_C_RMS	Source 3 Phase C Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1886F	S3_AMPS_N_RMS	Source 3 Neutral Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1888F	S3_AMPS_A	Source 3 Phase A Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x188AI	S3_AMPS_A_ANGLE	Source 3 Phase A Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x188BF	S3_AMPS_B	Source 3 Phase B Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x188DI	S3_AMPS_B_ANGLE	Source 3 Phase B Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x188EF	S3_AMPS_C	Source 3 Phase C Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1890I	S3_AMPS_C_ANGLE	Source 3 Phase C Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1891F	S3_AMPS_N	Source 3 Neutral Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1893I	S3_AMPS_N_ANGLE	Source 3 Neutral Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1894F	S3_AMPS_GND_RMS	Source 3 Ground Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1896F	S3_AMPS_GND	Source 3 Ground Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1898I	S3_AMPS_GND_ANGLE	Source 3 Ground Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1899F	S3_AMPS_I_0	Source 3 Zero Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x189BI	S3_AMPS_I_0_ANG	Source 3 Zero Sequence	°	0.1	-359.9 to 0	RO	F002

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Current Angle					
R3x189CF	S3_AMPS_I_1	Source 3 Positive Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x189EI	S3_AMPS_I_1_ANG	Source 3 Positive Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x189FF	S3_AMPS_I_2	Source 3 Negative Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x18A1I	S3_AMPS_I_2_ANG	Source 3 Negative Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x18C0F	S4_AMPS_A_RMS	Source 4 Phase A Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x18C2F	S4_AMPS_B_RMS	Source 4 Phase B Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x18C4F	S4_AMPS_C_RMS	Source 4 Phase C Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x18C6F	S4_AMPS_N_RMS	Source 4 Neutral Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x18C8F	S4_AMPS_A	Source 4 Phase A Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x18CAI	S4_AMPS_A_ANGLE	Source 4 Phase A Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x18CBF	S4_AMPS_B	Source 4 Phase B Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x18CDI	S4_AMPS_B_ANGLE	Source 4 Phase B Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x18CEF	S4_AMPS_C	Source 4 Phase C Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x18D0I	S4_AMPS_C_ANGLE	Source 4 Phase C Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x18D1F	S4_AMPS_N	Source 4 Neutral Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x18D3I	S4_AMPS_N_ANGLE	Source 4 Neutral Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x18D4F	S4_AMPS_GND_RMS	Source 4 Ground Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x18D6F	S4_AMPS_GND	Source 4 Ground Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x18D8I	S4_AMPS_GND_ANGLE	Source 4 Ground Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x18D9F	S4_AMPS_I_0	Source 4 Zero Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x18DBI	S4_AMPS_I_0_ANG	Source 4 Zero Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x18DCF	S4_AMPS_I_1	Source 4 Positive Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3x18DEI	S4_AMPS_I_1_ANG	Source 4 Positive Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x18DFF	S4_AMPS_I_2	Source 4 Negative Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x18E1I	S4_AMPS_I_2_ANG	Source 4 Negative Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1900F	S5_AMPS_A_RMS	SRC5 Phase A Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1902F	S5_AMPS_B_RMS	SRC5 Phase B Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1904F	S5_AMPS_C_RMS	SRC5 Phase C Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1906F	S5_AMPS_N_RMS	SRC5 Neutral Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1908F	S5_AMPS_A	SRC5 Phase A Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x190AI	S5_AMPS_A_ANGLE	SRC5 Phase A Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x190BF	S5_AMPS_B	SRC5 Phase B Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x190DI	S5_AMPS_B_ANGLE	SRC5 Phase B Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x190EF	S5_AMPS_C	SRC5 Phase C Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1910I	S5_AMPS_C_ANGLE	SRC5 Phase C Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1911F	S5_AMPS_N	SRC5 Neutral Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1913I	S5_AMPS_N_ANGLE	SRC5 Neutral Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1914F	S5_AMPS_GND_RMS	SRC5 Ground Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1916F	S5_AMPS_GND	Source 5 Ground Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1918I	S5_AMPS_GND_ANGLE	Source 5 Ground Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1919F	S5_AMPS_I_0	Source 5 Zero Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x191BI	S5_AMPS_I_0_ANG	Source 5 Zero Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x191CF	S5_AMPS_I_1	Source 5 Positive Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x191EI	S5_AMPS_I_1_ANG	Source 5 Positive Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x191FF	S5_AMPS_I_2	Source 5 Negative Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3x1921I	S5_AMPS_I_2_ANG	Source 5 Zero Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1940F	S6_AMPS_A_RMS	Source 6 Phase A Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1942F	S6_AMPS_B_RMS	Source 6 Phase B Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1944F	S6_AMPS_C_RMS	Source 6 Phase C Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1946F	S6_AMPS_N_RMS	Source 6 Neutral Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1948F	S6_AMPS_A	Source 6 Phase A Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x194AI	S6_AMPS_A_ANGLE	Source 6 Phase A Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x194BF	S6_AMPS_B	Source 6 Phase B Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x194DI	S6_AMPS_B_ANGLE	Source 6 Phase B Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x194EF	S6_AMPS_C	Source 6 Phase C Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1950I	S6_AMPS_C_ANGLE	Source 6 Phase C Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1951F	S6_AMPS_N	Source 6 Neutral Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1953I	S6_AMPS_N_ANGLE	Source 6 Neutral Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1954F	S6_AMPS_GND_RMS	Source 6 Ground Current RMS	A	0.001	0 to 999999.999	RO	F060
R3x1956F	S6_AMPS_GND	Source 6 Ground Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1958I	S6_AMPS_GND_ANGLE	Source 6 Ground Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1959F	S6_AMPS_I_0	Source 6 Zero Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x195BI	S6_AMPS_I_0_ANG	Source 6 Zero Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x195CF	S6_AMPS_I_1	Source 6 Positive Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x195EI	S6_AMPS_I_1_ANG	Source 6 Positive Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x195FF	S6_AMPS_I_2	Source 6 Negative Sequence Current Magnitude	A	0.001	0 to 999999.999	RO	F060
R3x1961I	S6_AMPS_I_2_ANG	Source 6 Negative Sequence Current Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A00F	S1_VLN_AG_RMS	Phase AG Voltage RMS	V	0.001	0 to 999999.999	RO	F060

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3x1A02F	S1_VLN_BG_RMS	Phase BG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A04F	S1_VLN_CG_RMS	Phase CG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A06F	S1_VLN_AG	Phase AG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A08I	S1_VLN_AG_ANGLE	Phase AG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A09F	S1_VLN_BG	Phase BG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A0BI	S1_VLN_BG_ANGLE	Phase BG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A0CF	S1_VLN_CG	Phase CG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A0EI	S1_VLN_CG_ANGLE	Phase CG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A0FF	S1_VLL_AB_RMS	Phase AB or AC Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A11F	S1_VLL_BC_RMS	Phase BC or BA Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A13F	S1_VLL_CA_RMS	Phase CA or CB Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A15F	S1_VLL_AB	Phase AB or AC Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A17I	S1_VLL_AB_ANGLE	Phase AB or AC Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A18F	S1_VLL_BC	Phase BC or BA Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A1AI	S1_VLL_BC_ANGLE	Phase BC or BA Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A1BF	S1_VLL_CA	Phase CA or CB Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A1DI	S1_VLL_CA_ANGLE	Phase CA or CB Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A1EF	S1_VAUX_RMS	Auxiliary Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A20F	S1_VAUX	Auxiliary Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A22I	S1_VAUX_ANG	Auxiliary Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A23F	S1_VOLTS_V_0	Zero Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A25I	S1_VOLTS_V_0_ANGLE	Zero Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A26F	S1_VOLTS_V_1	Positive Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A28I	S1_VOLTS_V_1_ANGLE	Positive Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A29F	S1_VOLTS_V_2	Negative Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3x1A2BI	S1_VOLTS_V_2_ANGLE	Negative Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A40F	S2_VLN_AG_RMS	Phase AG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A42F	S2_VLN_BG_RMS	Phase BG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A44F	S2_VLN_CG_RMS	Phase CG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A46F	S2_VLN_AG	Phase AG Voltage	V	0.001	0 to 999999.999	RO	F060
R3x1A48I	S2_VLN_AG_ANGLE	Phase AG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A49F	S2_VLN_BG	Phase BG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A4BI	S2_VLN_BG_ANGLE	Phase BG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A4CF	S2_VLN_CG	Phase CG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A4EI	S2_VLN_CG_ANGLE	Phase CG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A4FF	S2_VLL_AB_RMS	Phase AB or AC Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A51F	S2_VLL_BC_RMS	Phase BC or BA Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A53F	S2_VLL_CA_RMS	Phase CA or CB Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A55F	S2_VLL_AB	Phase AB or AC Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A57I	S2_VLL_AB_ANGLE	Phase AB or AC Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A58F	S2_VLL_BC	Phase BC or BA Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A5AI	S2_VLL_BC_ANGLE	Phase BC or BA Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A5BF	S2_VLL_CA	Phase CA or CB Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A5DI	S2_VLL_CA_ANGLE	Phase CA or CB Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A5EF	S2_VAUX_RMS	Auxiliary Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A60F	S2_VAUX	Auxiliary Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A62I	S2_VAUX_ANGLE	Auxiliary Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A63F	S2_VOLTS_V_0	Zero Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A65I	S2_VOLTS_V_0_ANGLE	Zero Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A66F	S2_VOLTS_V_1	Positive Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A68I	S2_VOLTS_V_1_ANGLE	Positive Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A69F	S2_VOLTS_V_2	Negative Sequence	V	0.001	0 to	RO	F060

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Voltage Magnitude			999999.999		
R3x1A6BI	S2_VOLTS_V_2_ANGLE	Negative Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A80F	S3_VLN_AG_RMS	Phase AG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A82F	S3_VLN_BG_RMS	Phase BG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A84F	S3_VLN_CG_RMS	Phase CG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A86F	S3_VLN_AG	Phase AG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A88I	S3_VLN_AG_ANGLE	Phase AG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A89F	S3_VLN_BG	Phase BG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A8BI	S3_VLN_BG_ANGLE	Phase BG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A8CF	S3_VLN_CG	Phase CG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A8EI	S3_VLN_CG_ANGLE	Phase CG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A8FF	S3_VLL_AB_RMS	Phase AB or AC Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A91F	S3_VLL_BC_RMS	Phase BC or BA Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A93F	S3_VLL_CA_RMS	Phase CA or CB Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1A95F	S3_VLL_AB	Phase AB or AC Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A97I	S3_VLL_AB_ANGLE	Phase AB or AC Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A98F	S3_VLL_BC	Phase BC or BA Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A9AI	S3_VLL_BC_ANGLE	Phase BC or BA Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A9BF	S3_VLL_CA	Phase CA or CB Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1A9DI	S3_VLL_CA_ANGLE	Phase CA or CB Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1A9EF	S3_VAUX_RMS	Auxiliary Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1AA0F	S3_VAUX	Auxiliary Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1AA2I	S3_VAUX_ANGLE	Auxiliary Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1AA3F	S3_VOLTS_V_0	Zero Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1AA5I	S3_VOLTS_V_0_ANGLE	Zero Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1AA6F	S3_VOLTS_V_1	Positive Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1AA8I	S3_VOLTS_V_1_ANGLE	Positive Sequence	°	0.1	-359.9 to 0	RO	F002

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
	LE	Voltage Angle					
R3x1AA9F	S3_VOLTS_V_2	Negative Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1AABI	S3_VOLTS_V_2_ANG LE	Negative Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1AC0F	S4_VLN_AG_RMS	Phase AG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1AC2F	S4_VLN_BG_RMS	Phase BG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1AC4F	S4_VLN_CG_RMS	Phase CG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1AC6F	S4_VLN_AG	Phase AG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1AC8I	S4_VLN_AG_ANGLE	Phase AG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1AC9F	S4_VLN_BG	Phase BG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1ACBI	S4_VLN_BG_ANGLE	Phase BG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1ACCF	S4_VLN_CG	Phase CG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1ACEI	S4_VLN_CG_ANGLE	Phase CG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1ACFF	S4_VLL_AB_RMS	Phase AB or AC Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1AD1F	S4_VLL_BC_RMS	Phase BC or BA Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1AD3F	S4_VLL_CA_RMS	Phase CA or CB Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1AD5F	S4_VLL_AB	Phase AB or AC Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1AD7I	S4_VLL_AB_ANGLE	Phase AB or AC Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1AD8F	S4_VLL_BC	Phase BC or BA Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1ADAI	S4_VLL_BC_ANGLE	Phase BC or BA Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1ADBF	S4_VLL_CA	Phase CA or CB Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1ADDI	S4_VLL_CA_ANGLE	Phase CA or CB Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1ADEF	S4_VAUX_RMS	Auxiliary Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1AE0F	S4_VAUX	Auxiliary Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1AE2I	S4_VAUX_ANG	Auxiliary Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1AE3F	S4_VOLTS_V_0	Zero Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1AE5I	S4_VOLTS_V_0_ANG LE	Zero Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1AE6F	S4_VOLTS_V_1	Positive Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3x1AE8I	S4_VOLTS_V_1_ANGLE	Positive Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1AE9F	S4_VOLTS_V_2	Negative Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1AEBI	S4_VOLTS_V_2_ANGLE	Negative Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B00F	S5_VLN_AG_RMS	Phase AG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1B02F	S5_VLN_BG_RMS	Phase BG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1B04F	S5_VLN_CG_RMS	Phase CG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1B06F	S5_VLN_AG	Phase AG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B08I	S5_VLN_AG_ANGLE	Phase AG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B09F	S5_VLN_BG	Phase BG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B0BI	S5_VLN_BG_ANGLE	Phase BG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B0CF	S5_VLN_CG	Phase CG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B0EI	S5_VLN_CG_ANGLE	Phase CG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B0FF	S5_VLL_AB_RMS	Phase AB or AC Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1B11F	S5_VLL_BC_RMS	Phase BC or BA Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1B13F	S5_VLL_CA_RMS	Phase CA or CB Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1B15F	S5_VLL_AB	Phase AB or AC Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B17I	S5_VLL_AB_ANGLE	Phase AB or AC Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B18F	S5_VLL_BC	Phase BC or BA Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B1AI	S5_VLL_BC_ANGLE	Phase BC or BA Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B1BF	S5_VLL_CA	Phase CA or CB Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B1DI	S5_VLL_CA_ANGLE	Phase CA or CB Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B1EF	S5_VAUX_RMS	Auxiliary Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1B20F	S5_VAUX	Auxiliary Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B22I	S5_VAUX_ANGLE	Auxiliary Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B23F	S5_VOLTS_V_0	SRC5 Zero Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3x1B25I	S5_VOLTS_V_0_ANGLE	Zero Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B26F	S5_VOLTS_V_1	Positive Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B28I	S5_VOLTS_V_1_ANGLE	Positive Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B29F	S5_VOLTS_V_2	Negative Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B2BI	S5_VOLTS_V_2_ANGLE	Negative Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B40F	S6_VLN_AG_RMS	Phase AG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1B42F	S6_VLN_BG_RMS	Phase BG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1B44F	S6_VLN_CG_RMS	Phase CG Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1B46F	S6_VLN_AG	Phase AG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B48I	S6_VLN_AG_ANGLE	Phase AG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B49F	S6_VLN_BG	Phase BG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B4BI	S6_VLN_BG_ANGLE	Phase BG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B4CF	S6_VLN_CG	Phase CG Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B4EI	S6_VLN_CG_ANGLE	Phase CG Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B4FF	S6_VLL_AB_RMS	Phase AB or AC Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1B51F	S6_VLL_BC_R	MS Phase BC or BA Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1B53F	S6_VLL_CA_RMS	Phase CA or CB Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1B55F	S6_VLL_AB	Phase AB or AC Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B57I	S6_VLL_AB_ANGLE	Phase AB or AC Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B58F	S6_VLL_BC	Phase BC or BA Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B5AI	S6_VLL_BC_ANGLE	Phase BC or BA Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B5BF	S6_VLL_CA	Phase CA or CB Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B5DI	S6_VLL_CA_ANGLE	Phase CA or CB Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B5EF	S6_VAUX_RMS	Auxiliary Voltage RMS	V	0.001	0 to 999999.999	RO	F060
R3x1B60F	S6_VAUX	Auxiliary Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3x1B62I	S6_VAUX_ANG	Auxiliary Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B63F	S6_VOLTS_V_0	Zero Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B65I	S6_VOLTS_V_0_ANGLE	Zero Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B66F	S6_VOLTS_V_1	Positive Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B68I	S6_VOLTS_V_1_ANGLE	Positive Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1B69F	S6_VOLTS_V_2	Negative Sequence Voltage Magnitude	V	0.001	0 to 999999.999	RO	F060
R3x1B6BI	S6_VOLTS_V_2_ANGLE	Negative Sequence Voltage Angle	°	0.1	-359.9 to 0	RO	F002
R3x1C00F	S1_THREE_PH_WATTS	Three Phase Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C02F	S1_WATTS_A	Phase A Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C04F	S1_WATTS_B	Phase B Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C06F	S1_WATTS_C	Phase C Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C08F	S1_THREE_PH_VARS	Three Phase Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C0AF	S1_KVAR_A	Phase A Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C0CF	S1_KVAR_B	Phase B Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C0EF	S1_KVAR_C	Phase C Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C10F	S1_THREE_PH_VA	Three Phase Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C12F	S1_KVA_A	Phase A Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C14F	S1_KVA_B	Phase B Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C16F	S1_KVA_C	Phase C Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C18I	S1_THREE_PH_PF	Three Phase Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C19I	S1_PF_A	Phase A Power Factor	---	0.001	-0.999 to 1	RO	F013

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3x1C1AI	S1_PF_B	Phase B Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C1BI	S1_PF_C	Phase C Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C20F	S2_THREE_PH_WATTS	Three Phase Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C22F	S2_WATTS_A	Phase A Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C24F	S2_WATTS_B	Phase B Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C26F	S2_WATTS_C	Phase C Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C28F	S2_THREE_PH_VARS	Three Phase Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C2AF	S2_KVAR_A	Phase A Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C2CF	S2_KVAR_B	Phase B Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C2EF	S2_KVAR_C	Phase C Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C30F	S2_THREE_PH_VA	Three Phase Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C32F	S2_KVA_A	Phase A Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C34F	S2_KVA_B	Phase B Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C36F	S2_KVA_C	Phase C Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C38I	S2_THREE_PH_PF	Three Phase Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C39I	S2_PF_A	Phase A Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C3AI	S2_PF_B	Phase B Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C3BI	S2_PF_C	Phase C Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C40F	S3_THREE_PH_WATTS	Three Phase Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
					1000000000000		
R3x1C42F	S3_WATTS_A	Phase A Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C44F	S3_WATTS_B	Phase B Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C46F	S3_WATTS_C	Phase C Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C48F	S3_THREE_PH_VARS	Three Phase Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C4AF	S3_KVAR_A	Phase A Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C4CF	S3_KVAR_B	Phase B Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C4EF	S3_KVAR_C	Phase C Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C50F	S3_THREE_PH_VA	Three Phase Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C52F	S3_KVA_A	Phase A Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C54F	S3_KVA_B	Phase B Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C56F	S3_KVA_C	Phase C Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C58I	S3_THREE_PH_PF	Three Phase Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C59I	S3_PF_A	Phase A Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C5AI	S3_PF_B	Phase B Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C5BI	S3_PF_C	Phase C Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C60F	S4_THREE_PH_WATTS	Three Phase Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C62F	S4_WATTS_A	Phase A Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C64F	S4_WATTS_B	Phase B Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3x1C66F	S4_WATTS_C	Phase C Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C68F	S4_THREE_PH_VARS	Three Phase Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C6AF	S4_KVAR_A	Phase A Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C6CF	S4_KVAR_B	Phase B Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C6EF	S4_KVAR_C	Phase C Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C70F	S4_THREE_PH_VA	Three Phase Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C72F	S4_KVA_A	Phase A Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C74F	S4_KVA_B	Phase B Apparent Power	VA	0.001	-1000000000 000 to 1000000000 000	RO	F060
R3x1C76F	S4_KVA_C	Phase C Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C78I	S4_THREE_PH_PF	Three Phase Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C79I	S4_PF_A	Phase A Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C7AI	S4_PF_B	Phase B Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C7BI	S4_PF_C	Phase C Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C80F	S5_THREE_PH_WATTS	Three Phase Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C82F	S5_WATTS_A	Phase A Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C84F	S5_WATTS_B	Phase B Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C86F	S5_WATTS_C	Phase C Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C88F	S5_THREE_PH_VARS	Three Phase Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
					1000000000000		
R3x1C8AF	S5_KVAR_A	Phase A Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C8CF	S5_KVAR_B	Phase B Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C8EF	S5_KVAR_C	Phase C Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C90F	S5_THREE_PHVA	Three phase apparent power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C92F	S5_KVA_A	Phase A Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C94F	S5_KVA_B	Phase B Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C96F	S5_KVA_C	Phase C Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1C98I	S5_THREE_PH_PF	Three Phase Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C99I	S5_PF_A	Phase A Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C9AI	S5_PF_B	Phase B Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1C9BI	S5_PF_C	Phase C Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1CA0F	S6_THREE_PH_WATTS	Three Phase Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1CA2F	S6_WATTS_A	Phase A Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1CA4F	S6_WATTS_B	Phase B Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1CA6F	S6_WATTS_C	Phase C Real Power	W	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1CA8F	S6_THREE_PH_VARS	Three Phase Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1CAAF	S6_KVAR_A	Phase A Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1CACF	S6_KVAR_B	Phase B	var	0.001	-1000000000000	RO	F060

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Reactive Power			to 1000000000000		
R3x1CAEF	S6_KVAR_C	Phase C Reactive Power	var	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1CB0F	S6_THREE_PH_VA	Three Phase Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1CB2F	S6_KVA_A	Phase A Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1CB4F	S6_KVA_B	Phase B Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1CB6F	S6_KVA_C	Phase C Apparent Power	VA	0.001	-1000000000000 to 1000000000000	RO	F060
R3x1CB8I	S6_THREE_PH_PF	Three Phase Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1CB9I	S6_PF_A	Phase A Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1CBAI	S6_PF_B	Phase B Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1CBBI	S6_PF_C	Phase C Power Factor	---	0.001	-0.999 to 1	RO	F013
R3x1D00F	S1_POS_WH	SRC1 Positive Watthour	Wh	3	0 to 2147483.647	DV	F060
R3x1D02F	S1_NEG_WH	SRC1 Negative Watthour	Wh	3	-2147483.647 to 0	DV	F060
R3x1D04F	S1_POS_VARH	SRC1 Positive Varhour	varh	3	0 to 2147483.647	DV	F060
R3x1D06F	S1_NEG_VARH	SRC1 Negative Varhour	varh	3	-2147483.647 to 0	DV	F060
R3x1D10F	S2_POS_WH	SRC2 Positive Watthour	Wh	3	0 to 2147483.647	DV	F060
R3x1D12F	S2_NEG_WH	SRC2 Negative Watthour	Wh	3	-2147483.647 to 0	DV	F060
R3x1D14F	S2_POS_VARH	SRC2 Positive Varhour	varh	3	0 to 2147483.647	DV	F060
R3x1D16F	S2_NEG_VARH	SRC2 Negative Varhour	varh	3	-2147483.647 to 0	DV	F060
R3x1D20F	S3_POS_WH	SRC3 Positive Watthour	Wh	3	0 to 2147483.647	DV	F060
R3x1D22F	S3_NEG_WH	SRC3 Negative Watthour	Wh	3	-2147483.647 to 0	DV	F060
R3x1D24F	S3_POS_VARH	SRC3 Positive Varhour	varh	3	0 to 2147483.647	DV	F060
R3x1D26F	S3_NEG_VARH	SRC3 Negative Varhour	varh	3	-2147483.647 to 0	DV	F060
R3x1D30F	S4_POS_WH	SRC4 Positive Watthour	Wh	3	0 to 2147483.647	DV	F060

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3x1D32F	S4_NEG_WH	SRC4 Negative Wathour	Wh	3	-2147483.647 to 0	DV	F060
R3x1D34F	S4_POS_VARH	SRC4 Positive Varhour	varh	3	0 to 2147483.647	DV	F060
R3x1D36F	S4_NEG_VARH	SRC4 Negative Varhour	Varh	3	-2147483.647 to 0	DV	F060
R3x1D40F	S5_POS_WH	SRC5 Positive Wathour	Wh	3	0 to 2147483.647	DV	F060
R3x1D42F	S5_NEG_WH	SRC5 Negative Wathour	Wh	3	-2147483.647 to 0	DV	F060
R3x1D44F	S5_POS_VARH	SRC5 Positive Varhour	varh	3	0 to 2147483.647	DV	F060
R3x1D46F	S5_NEG_VARH	SRC5 Negative Varhour	varh	3	-2147483.647 to 0	DV	F060
R3x1D50F	S6_POS_WH	SRC6 Positive Wathour	Wh	3	0 to 2147483.647	DV	F060
R3x1D52F	S6_NEG_WH	SRC6 Negative Wathour	Wh	3	-2147483.647 to 0	DV	F060
R3x1D54F	S6_POS_VARH	SRC6 Positive Varhour	varh	3	0 to 2147483.647	DV	F060
R3x1D56F	S6_NEG_VARH	SRC6 Negative Varhour	varh	3	-2147483.647 to 0	DV	F060
R3x1D80	FREQUENCY	Frequency	---	0.01	2 to 90	RO	F001
R3x1D80	S1_FREQUENCY	SRC1 Frequency	Hz	0.01	2 to 90	DV	F001
R3x1D81	S2_FREQUENCY	SRC2 Frequency	Hz	0.01	2 to 90	DV	F001
R3x1D82	S3_FREQUENCY	SRC3 Frequency	Hz	0.01	2 to 90	DV	F001
R3x1D83	S4_FREQUENCY	SRC4 Frequency	Hz	0.01	2 to 90	DV	F001
R3x1D84	S5_FREQUENCY	SRC5 Frequency	Hz	0.01	2 to 90	DV	F001
R3x1D85	S6_FREQUENCY	SRC6 Frequency	Hz	0.01	2 to 90	DV	F001
R3x1E00F	S1_AMPS_A_DMD	SRC1 Demand Ia	A	0.001	0 to 999999.999	DV	F060
R3x1E02F	S1_AMPS_B_DMD	SRC1 Demand Ib	A	0.001	0 to 999999.999	DV	F060
R3x1E04F	S1_AMPS_C_DMD	SRC1 Demand Ic	A	0.001	0 to 999999.999	DV	F060
R3x1E06F	S1_WATT_DMD	SRC1 Demand Watt	W	0.001	0 to 999999.999	DV	F060
R3x1E08F	S1_VAR_DMD	SRC1 Demand Var	var	0.001	0 to 999999.999	DV	F060
R3x1E0AF	S1_VA_DMD	SRC1 Demand Va	VA	0.001	0 to 999999.999	DV	F060
R3x1E10F	S2_AMPS_A_DMD	SRC2 Demand Ia	A	0.001	0 to 999999.999	DV	F060
R3x1E12F	S2_AMPS_B_DMD	SRC2 Demand Ib	A	0.001	0 to 999999.999	DV	F060
R3x1E14F	S2_AMPS_C_DMD	SRC2 Demand Ic	A	0.001	0 to 999999.999	DV	F060
R3x1E16F	S2_WATT_DMD	SRC2 Demand Watt	W	0.001	0 to 999999.999	DV	F060
R3x1E18F	S2_VAR_DMD	SRC2 Demand Var	Var	0.001	0 to 999999.999	DV	F060
R3x1E1AF	S2_VA_DMD	SRC2 Demand Va	VA	0.001	0 to 999999.999	DV	F060
R3x1E20F	S3_AMPS_A_DMD	SRC3 Demand Ia	A	0.001	0 to 999999.999	DV	F060
R3x1E22F	S3_AMPS_B_DMD	SRC3 Demand Ib	A	0.001	0 to 999999.999	DV	F060
R3x1E24F	S3_AMPS_C_DMD	SRC3 Demand Ic	A	0.001	0 to 999999.999	DV	F060
R3x1E26F	S3_WATT_DMD	SRC3 Demand Watt	W	0.001	0 to 999999.999	DV	F060
R3x1E28F	S3_VAR_DMD	SRC3 Demand Var	Var	0.001	0 to 999999.999	DV	F060
R3x1E2AF	S3_VA_DMD	SRC3 Demand Va	VA	0.001	0 to 999999.999	DV	F060
R3x1E30F	S4_AMPS_A_DMD	SRC4 Demand Ia	A	0.001	0 to 999999.999	DV	F060
R3x1E32F	S4_AMPS_B_DMD	SRC4 Demand Ib	A	0.001	0 to 999999.999	DV	F060

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3x1E34F	S4_AMPS_C_DMD	SRC4 Demand Ic	A	0.001	0 to 999999.999	DV	F060
R3x1E36F	S4_WATT_DMD	SRC4 Demand Watt	W	0.001	0 to 999999.999	DV	F060
R3x1E38F	S4_VAR_DMD	SRC4 Demand Var	var	0.001	0 to 999999.999	DV	F060
R3x1E3AF	S4_VA_DMD	SRC4 Demand Va	VA	0.001	0 to 999999.999	DV	F060
R3x1E40F	S5_AMPS_A_DMD	SRC5 Demand Ia	A	0.001	0 to 999999.999	DV	F060
R3x1E42F	S5_AMPS_B_DMD	SRC5 Demand Ib	A	0.001	0 to 999999.999	DV	F060
R3x1E44F	S5_AMPS_C_DMD	SRC5 Demand Ic	A	0.001	0 to 999999.999	DV	F060
R3x1E46F	S5_WATT_DMD	SRC5 Demand Watt	W	0.001	0 to 999999.999	DV	F060
R3x1E48F	S5_VAR_DMD	SRC5 Demand Var	var	0.001	0 to 999999.999	DV	F060
R3x1E4AF	S5_VA_DMD	SRC5 Demand Va	VA	0.001	0 to 999999.999	DV	F060
R3x1E50F	S6_AMPS_A_DMD	SRC6 Demand Ia	A	0.001	0 to 999999.999	DV	F060
R3x1E52F	S6_AMPS_B_DMD	SRC6 Demand Ib	A	0.001	0 to 999999.999	DV	F060
R3x1E54F	S6_AMPS_C_DMD	SRC6 Demand Ic	A	0.001	0 to 999999.999	DV	F060
R3x1E56F	S6_WATT_DMD	SRC6 Demand Watt	W	0.001	0 to 999999.999	DV	F060
R3x1E58F	S6_VAR_DMD	SRC6 Demand Var	var	0.001	0 to 999999.999	DV	F060
R3x1E5AF	S6_VA_DMD	SRC6 Demand Va	VA	0.001	0 to 999999.999	DV	F060
R3x1E80F	S1_PK_IA	SRC 1 Demand Ia Max	A	0.001	0 to 999999.999	DV	F060
R3x1E82L	S1_PK_IA_DATE	SRC 1 Demand Ia Max Date	---	1	0 to 4294967295	DV	F050
R3x1E84F	S1_PK_IB	SRC 1 Demand Ib Max	A	0.001	0 to 999999.999	DV	F060
R3x1E86L	S1_PK_IB_DATE	SRC 1 Demand Ib Max Date	---	1	0 to 4294967295	DV	F050
R3x1E88F	S1_PK_IC	SRC 1 Demand Ic Max	A	0.001	0 to 999999.999	DV	F060
R3x1E8AL	S1_PK_IC_DATE	SRC 1 Demand Ic Max Date	1	---	0 to 4294967295	DV	F050
R3x1E8CF	S1_PK_WATT	SRC 1 Demand Watt Max	W	0.001	0 to 999999.999	DV	F060
R3x1E8EL	S1_PK_WATT_DATE	SRC 1 Demand Watt Max Date	---	1	0 to 4294967295	DV	F050
R3x1E90F	S1_PK_VAR	SRC 1 Demand Var	var	0.001	0 to 999999.999	DV	F060
R3x1E92L	S1_PK_VAR_DATE	SRC 1 Demand Var Max Date	---	1	0 to 4294967295	DV	F050
R3x1E94F	S1_PK_VA	SRC 1 Demand Va Max	VA	0.001	0 to 999999.999	DV	F060
R3x1E96L	S1_PK_VA_DATE	SRC 1 Demand Va Max Date	---	1	0 to 4294967295	DV	F050
R3x1EA0F	S2_PK_IA	SRC2 Demand Ia Max	A	0.001	0 to 999999.999	DV	F060
R3x1EA2L	S2_PK_IA_DATE	SRC2 Demand Ia Max Date	---	1	0 to 4294967295	DV	F050
R3x1EA4F	S2_PK_IB	SRC2 Demand Ib Max	A	0.001	0 to 999999.999	DV	F060
R3x1EA6L	S2_PK_IB_DATE	SRC2 Demand Ib Max Date	---	1	0 to 4294967295	DV	F050
R3x1EA8F	S2_PK_IC	SRC2 Demand Ic Max	A	0.001	0 to 999999.999	DV	F060
R3x1EAAL	S2_PK_IC_DATE	SRC2 Demand Ic Max Date	---	1	0 to 4294967295	DV	F050

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3x1EACF	S2_PK_WATT	SRC2 Demand Watt Max	W	0.001	0 to 999999.999	DV	F060
R3x1EAEL	S2_PK_WATT_DATE	SRC2 Demand Watt Max Date	---	1	0 to 4294967295	DV	F050
R3x1EB0F	S2_PK_VAR	SRC2 Demand Var	var	0.001	0 to 999999.999	DV	F060
R3x1EB2L	S2_PK_VAR_DATE	SRC2 Demand Var Max Date	---	1	0 to 4294967295	DV	F050
R3x1EB4F	S2_PK_VA	SRC2 Demand Va Max	VA	0.001	0 to 999999.999	DV	F060
R3x1EB6L	S2_PK_VA_DATE	SRC2 Demand Va Max Date	---	1	0 to 4294967295	DV	F050
R3x1EC0F	S3_PK_IA	SRC3 Demand Ia Max	A	0.001	0 to 999999.999	DV	F060
R3x1EC2L	S3_PK_IA_DATE	SRC3 Demand Ia Max Date	---	1	0 to 4294967295	DV	F050
R3x1EC4F	S3_PK_IB	SRC3 Demand Ib Max	A	0.001	0 to 999999.999	DV	F060
R3x1EC6L	S3_PK_IB_DATE	SRC3 Demand Ib Max Date	---	1	0 to 4294967295	DV	F050
R3x1EC8F	S3_PK_IC	SRC3 Demand Ic Max	A	0.001	0 to 999999.999	DV	F060
R3x1ECAL	S3_PK_IC_DATE	SRC3 Demand Ic Max Date	---	1	0 to 4294967295	DV	F050
R3x1ECCF	S3_PK_WATT	SRC3 Demand Watt Max	W	0.001	0 to 999999.999	DV	F060
R3x1ECEL	S3_PK_WATT_DATE	SRC3 Demand Watt Max Date	---	1	0 to 4294967295	DV	F050
R3x1ED0F	S3_PK_VAR	SRC3 Demand Var	var	0.001	0 to 999999.999	DV	F060
R3x1ED2L	S3_PK_VAR_DATE	SRC3 Demand Var Max Date	---	1	0 to 4294967295	DV	F050
R3x1ED4F	S3_PK_VA	SRC3 Demand Va Max	VA	0.001	0 to 999999.999	DV	F060
R3x1ED6L	S3_PK_VA_DATE	SRC3 Demand Va Max Date	---	1	0 to 4294967295	DV	F050
R3x1EE0F	S4_PK_IA	SRC4 Demand Ia Max	A	0.001	0 to 999999.999	DV	F060
R3x1EE2L	S4_PK_IA_DATE	SRC4 Demand Ia Max Date	---	1	0 to 4294967295	DV	F050
R3x1EE4F	S4_PK_IB	SRC4 Demand Ib Max	A	0.001	0 to 999999.999	DV	F060
R3x1EE6L	S4_PK_IB_DATE	SRC4 Demand Ib Max Date	---	1	0 to 4294967295	DV	F050
R3x1EE8F	S4_PK_IC	SRC4 Demand Ic Max	A	0.001	0 to 999999.999	DV	F060
R3x1EEAL	S4_PK_IC_DATE	SRC4 Demand Ic Max Date	---	1	0 to 4294967295	DV	F050
R3x1EECF	S4_PK_WATT	SRC4 Demand Watt Max	W	0.001	0 to 999999.999	DV	F060
R3x1EEEL	S4_PK_WATT_DATE	SRC4 Demand Watt Max Date	---	1	0 to 4294967295	DV	F050
R3x1EF0F	S4_PK_VAR	SRC4 Demand Var	var	0.001	0 to 999999.999	DV	F060
R3x1EF2L	S4_PK_VAR_DATE	SRC4 Demand Var Max Date	---	1	0 to 4294967295	DV	F050

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3x1EF4F	S4_PK_VA	SRC4 Demand Va Max	VA	0.001	0 to 999999.999	DV	F060
R3x1EF6L	S4_PK_VA_DATE	SRC4 Demand Va Max Date	---	1	0 to 4294967295	DV	F050
R3x1F00F	S5_PK_IA	SRC5 Demand Ia Max	A	0.001	0 to 999999.999	DV	F060
R3x1F02L	S5_PK_IA_DATE	SRC5 Demand Ia Max Date	---	1	0 to 4294967295	DV	F050
R3x1F04F	S5_PK_IB	SRC5 Demand Ib Max	A	0.001	0 to 999999.999	DV	F060
R3x1F06L	S5_PK_IB_DATE	SRC5 Demand Ib Max Date	---	1	0 to 4294967295	DV	F050
R3x1F08F	S5_PK_IC	SRC5 Demand Ic Max	A	0.001	0 to 999999.999	DV	F060
R3x1F0AL	S5_PK_IC_DATE	SRC5 Demand Ic Max Date	---	1	0 to 4294967295	DV	F050
R3x1F0CF	S5_PK_WATT	SRC5 Demand Watt Max	W	0.001	0 to 999999.999	DV	F060
R3x1F0EL	S5_PK_WATT_DATE	SRC5 Demand Watt Max Date	---	1	0 to 4294967295	DV	F050
R3x1F10F	S5_PK_VAR	SRC5 Demand Var	var	0.001	0 to 999999.999	DV	F060
R3x1F12L	S5_PK_VAR_DATE	SRC5 Demand Var Max Date	---	1	0 to 4294967295	DV	F050
R3x1F14F	S5_PK_VA	SRC5 Demand Va Max	VA	0.001	0 to 999999.999	DV	F060
R3x1F16L	S5_PK_VA_DATE	SRC5 Demand Va Max Date	---	1	0 to 4294967295	DV	F050
R3x1F20F	S6_PK_IA	SRC6 Demand Ia Max	A	0.001	0 to 999999.999	DV	F060
R3x1F22L	S6_PK_IA_DATE	SRC6 Demand Ia Max Date	---	1	0 to 4294967295	DV	F050
R3x1F24F	S6_PK_IB	SRC6 Demand Ib Max	A	0.001	0 to 999999.999	DV	F060
R3x1F26L	S6_PK_IB_DATE	SRC6 Demand Ib Max Date	---	1	0 to 4294967295	DV	F050
R3x1F28F	S6_PK_IC	SRC6 Demand Ic Max	A	0.001	0 to 999999.999	DV	F060
R3x1F2AL	S6_PK_IC_DATE	SRC6 Demand Ic Max Date	---	1	0 to 4294967295	DV	F050
R3x1F2CF	S6_PK_WATT	SRC6 Demand Watt Max	W	0.001	0 to 999999.999	DV	F060
R3x1F2EL	S6_PK_WATT_DATE	SRC6 Demand Watt Max Date	---	1	0 to 4294967295	DV	F050
R3x1F30F	S6_PK_VAR	SRC6 Demand Var	var	0.001	0 to 999999.999	DV	F060
R3x1F32L	S6_PK_VAR_DATE	SRC6 Demand Var Max Date	---	1	0 to 4294967295	DV	F050
R3x1F34F	S6_PK_VA	SRC6 Demand Va Max	VA	0.001	0 to 999999.999	DV	F060
R3x1F36L	S6_PK_VA_DATE	SRC6 Demand Va Max Date	---	1	0 to 4294967295	DV	F050
R3x2200F	BKR_ARC1_IA	Breaker 1 Arcing Amp Phase A	kA2-cyc	1	0 to 99999999	DV	F060
R3x2202F	BKR_ARC1_IB	Breaker 1 Arcing	kA2-	1	0 to 99999999	DV	F060

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Amp Phase B	cyc				
R3x2204F	BKR_ARC1_IC	Breaker 1 Arcing Amp Phase C	kA2- cyc	1	0 to 99999999	DV	F060
R3x2206F	BKR_ARC2_IA	Breaker 2 Arcing Amp Phase A	kA2- cyc	1	0 to 99999999	DV	F060
R3x2208F	BKR_ARC2_IB	Breaker 2 Arcing Amp Phase B	kA2- cyc	1	0 to 99999999	DV	F060
R3x220AF	BKR_ARC2_IC	Breaker 2 Arcing Amp Phase C	kA2- cyc	1	0 to 99999999	DV	F060
R4x220C	BKR_ARC1_CLR	Breaker 1 Arcing Clear Command	---	1	0 to 1	SP	F126
R4x220D	BKR_ARC2_CLR	Breaker 2 Arcing Clear Command	---	1	0 to 1	SP	F126
R3x2300	TX_REF_WDG	Transformer Reference Winding	---	1	1 to 6	RO	F001
R3x2301	TX_DIFF_IAD	Transformer Differential Phasor Iad Magnitude	Pu	0.001	0 to 30	RO	F001
R3x2302I	TX_DIFF_IAD_ANG LE	Transformer Differential Phasor Iad Angle	°	0.1	-359.9 to 0	RO	F002
R3x2303	TX_DIFF_IAR	Transformer Restraint Phasor Iar Magnitude	Pu	0.001	0 to 30	RO	F001
R3x2304I	TX_DIFF_IAR_ANG LE	Transformer Restraint Phasor Iar Angle	°	0.1	-359.9 to 0	RO	F002
R3x2305	TXDIFF_IAD_H2	Transformer Differential 2nd Harm Iad Magnitude	% fo	0.1	0 to 999.9	RO	F001
R3x2306I	TXDIFF_IAD_H2_ANG GLE	Transformer Differential 2nd Harm Iad Angle	°	0.1	-359.9 to 0	RO	F002
R3x2307	TXDIFF_IAD_H5	Transformer Differential 5th Harm Iad Magnitude	% fo	0.1	0 to 999.9	RO	F001
R3x2308I	TXDIFF_IAD_H5_ANG GLE	Transformer Differential 5th Harm Iad Angle	°	0.1	-359.9 to 0	RO	F002
R3x2309	TX_DIFF_IBD	Transformer Differential Phasor Ibd Magnitude	pu	0.001	0 to 30	RO	F001
R3x230AI	TX_DIFF_IBD_ANG LE	Transformer Differential Phasor Ibd Angle	°	0.1	-359.9 to 0	RO	F002

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3x230B	TX_DIFF_IBR	Transformer Restraint Phasor Ibr Magnitude	pu	0.001	0 to 30	RO	F001
R3x230CI	TX_DIFF_IBR_ANGLE	Transformer Restraint Phasor Ibr Angle	°	0.1	-359.9 to 0	RO	F002
R3x230D	TXDIFF_IBD_H2	Transformer Differential 2nd Harm Ibd Magnitude	% fo	0.1	0 to 999.9	RO	F001
R3x230EI	TXDIFF_IBD_H2_ANGLE	Transformer Differential 2nd Harm Ibd Angle	°	0.1	-359.9 to 0	RO	F002
R3x230F	TXDIFF_IBD_H5	Transformer Differential 5th Harm Ibd Magnitude	% fo	0.1	0 to 999.9	RO	F001
R3x2310I	TXDIFF_IBD_H5_ANGLE	Transformer Differential 5th Harm Ibd Angle	°	0.1	-359.9 to 0	RO	F002
R3x2311	TX_DIFF_ICD	Transformer Differential Phasor Icd Magnitude	pu	0.001	0 to 30	RO	F001
R3x2312I	TX_DIFF_ICD_ANGLE	Transformer Differential Phasor Icd Angle	°	0.1	-359.9 to 0	RO	F002
R3x2313	TX_DIFF_ICR	Transformer Restraint Phasor Icr Magnitude	pu	0.001	0 to 30	RO	F001
R3x2314I	TX_DIFF_ICR_ANGLE	Transformer Restraint Phasor Icr Angle	°	0.1	-359.9 to 0	RO	F002
R3x2315	TXDIFF_ICD_H2	Transformer Differential 2nd Harm Icd Magnitude	% fo	0.1	0 to 999.9	RO	F001
R3x2316I	TXDIFF_ICD_H2_ANGLE	Transformer Differential 2nd Harm Icd Angle	°	0.1	-359.9 to 0	RO	F002
R3x2317	TXDIFF_ICD_H5	Transformer Differential 5th Harm Icd Magnitude	% fo	0.1	0 to 999.9	RO	F001
R3x2318I	TXDIFF_ICD_H5_ANGLE	Transformer Differential 5th Harm Icd Angle	°	0.1	-359.9 to 0	RO	F002
R3x2400F	SYNC1_DELTA_V	Synchrocheck 1 Delta Voltage	V	1	-1000000000000 to	DV	F060

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
					1000000000000		
R3x2402	SYNC1_DELTA_F	Synchrocheck 1 Delta Frequency	Hz	0.01	0 to 655.35	DV	F001
R3x2403	SYNC1_DELTA_PH	Synchrocheck 1 Delta Phase	°	0.1	0 to 359.9	DV	F001
R3x2404F	SYNC2_DELTA_V	Synchrocheck 2 Delta Voltage	V	1	-1000000000000 to 1000000000000	DV	F060
R3x2406	SYNC2_DELTA_F	Synchrocheck 2 Delta Frequency	Hz	0.01	0 to 655.35	DV	F001
R3x2407	SYNC2_DELTA_PH	Synchrocheck 2 Delta Phase	°	0.1	0 to 359.9	DV	F001
R3x2410	AUTO_RCLS1_CNT	Autoreclose Count 1	---	1	0 to 65535	DV	F001
R3x2411	AUTO_RCLS2_CNT	Autoreclose Count 2	---	1	0 to 65535	DV	F001
R3x2412	AUTO_RCLS3_CNT	Autoreclose Count 3	---	1	0 to 65535	DV	F001
R3x2413	AUTO_RCLS4_CNT	Autoreclose Count 4	---	1	0 to 65535	DV	F001
R3x2414	AUTO_RCLS51_CNT	Autoreclose Count 5	---	1	0 to 65535	DV	F001
R3x2415	AUTO_RCLS6_CNT	Autoreclose Count 6	---	1	0 to 65535	DV	F001
R3x2480F	LOCAL_IA	Local IA Magnitude	A	0.001	0 to 999999.999	DV	F060
R3x2482F	LOCAL_IB	Local IB Magnitude	A	0.001	0 to 999999.999	DV	F060
R3x2484F	LOCAL_IC	Local IC Magnitude	A	0.001	0 to 999999.999	DV	F060
R3x2486F	REMOTE1_IA	Remote1 IA Magnitude	A	0.001	0 to 999999.999	DV	F060
R3x2488F	REMOTE1_IB	Remote1 IB Magnitude	A	0.001	0 to 999999.999	DV	F060
R3x248AF	REMOTE1_IC	Remote1 IC Magnitude	A	0.001	0 to 999999.999	DV	F060
R3x248CF	REMOTE2_IA	Remote2 IA Magnitude	A	0.001	0 to 999999.999	DV	F060
R3x248EF	REMOTE2_IB	Remote2 IB Magnitude	A	0.001	0 to 999999.999	DV	F060
R3x2490F	REMOTE2_IC	Remote2 IC Magnitude	A	0.001	0 to 999999.999	DV	F060
R3x2492F	DIFF_IA	Differential Current IA Magnitude	A	0.001	0 to 999999.999	DV	F060
R3x2494F	DIFF_IB	Differential Current IB Magnitude	A	0.001	0 to 999999.999	DV	F060
R3x2496F	DIFF_IC	Differential Current IC Magnitude	A	0.001	0 to 999999.999	DV	F060
R3x2498I	LOCAL_IA_ANG	Local IA Angle	°	0.1	-359.9 to 0	DV	F002
R3x2499I	LOCAL_IB_ANG	Local IB Angle	°	0.1	-359.9 to 0	DV	F002
R3x249AI	LOCAL_IC_ANG	Local IC Angle	°	0.1	-359.9 to 0	DV	F002
R3x249BI	REMOTE1_IA_ANG	Remote1 IA Angle	°	0.1	-359.9 to 0	DV	F002
R3x249C	REMOTE1_IB_ANG	Remote1 IB Angle	°	0.1	-359.9 to 0	DV	F002
R3x249D	REMOTE1_IC_ANG	Remote1 IC Angle	°	0.1	-359.9 to 0	DV	F002
R3x249E	REMOTE2_IA_ANG	Remote2 IA Angle	°	0.1	-359.9 to 0	DV	F002
R3x249F	REMOTE2_IB_ANG	Remote2 IB Angle	°	0.1	-359.9 to 0	DV	F002
R3x24A0I	REMOTE2_IC_ANG	Remote2 IC Angle	°	0.1	-359.9 to 0	DV	F002
R4X2600	BUS1_ZONE_FUNC	Bus Zone X Function	---	1	0 to 1	SP	F102

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3X2700F	BUS1_DIFF_IA	Bus 1 Diff IA Magnitude	A	0.001	0 to 999999.999	DV	F060
R3X2702I	BUS1_DIFF_IA_ANG	Bus Diff IA Angle	°	0.1	-359.9 to 0	DV	F002
R3X2703F	BUS1_DIFF_IB	Bus Diff IB Magnitude	A	0.001	0 to 999999.999	DV	F060
R3X2705I	BUS1_DIFF_IB_ANG	Buss Diff IB Angle	°	0.1	-359.9 to 0	DV	F002
R3X2706F	BUS1_DIFF_IC	Bus Diff IC Magnitude	A	0.001	0 to 999999.999	DV	F060
R3X2708I	BUS1_DIFF_IC_ANG	Bus Diff IC Angle	°	0.1	-359.9 to 0	DV	F002
R3X2709F	BUS1_DIFF_RES_IA	Bus Diff Rest IA Magnitude	A	0.001	0 to 999999.999	DV	F060
R3X270BI	BUS1_DIFFRES_IA_ANG	Bus Diff Rest IA Angle	°	0.1	-359.9 to 0	DV	F002
R3X270CF	BUS1_DIFF_RES_IB	Bus Diff Rest IB Magnitude	A	0.001	0 to 999999.999	DV	F060
R3X270EI	BUS1_DIFFRES_IB_ANG	Bus Diff Rest IB Angle	°	0.1	-359.9 to 0	DV	F002
R3X270FF	BUS1_DIFF_RES_IC	Bus Diff Rest IC Magnitude	A	0.001	0 to 999999.999	DV	F060
R3X2711I	BUS1_DIFFRES_IC_ANG	Bus Diff Rest IC Angle	°	0.1	-359.9 to 0	DV	F002
R3X2712I	BUS1_DIREC_A	Bus Direction A	°	0.1	-359.9 to 0	DV	F002
R3X2713I	BUS1_DIREC_B	Bus Direction B	°	0.1	-359.9 to 0	DV	F002
R3X2714I	BUS1_DIREC_C	Bus Direction C	°	0.1	-359.9 to 0	DV	F002
R3x3002L	OSC_LST_CLR	Oscillography Last Cleared Date	---	1	0 to 400000000	RO	F050
R4x3004	OSC_CLEAR_DATA	Oscillography Clear Data	---	1	0 to 1	RW	F126
R4x3020	OSC_FILE_IDEN	Oscillography File Identifier	---	1	0 to 65535	RW	F001
R4x3021	OSC_FILE_TYPE	Oscillography File Type	---	1	0 to 2	RW	F138
R3x3022L	OSC_FILE_SIZE	Oscillography File Size	---	1	0 to 4294967295	RO	F003
R3x3024L	OSC_FILE_POS	Oscillography File Position	---	1	0 to 4294967295	RO	F003
R4x3026	OSC_FILE_ACC	Oscillography File Access (123 items)	---	1	0 to 65535	RW	F001
R3x3400L	EVT_SNC_CLR	Events Since Last Clear	---	1	0 to 4294967295	RO	F003
R3x3402L	NUM_AVAIL_EVT	Number of Available Events	---	1	0 to 4294967295	RO	F003
R3x3404L	EVT_REC_LST_CLR	Event Recorder Last Cleared Date	---	1	0 to 4294967295	RO	F050
R4x3406	EVT_REC_CLR	Event Recorder Clear Command	---	1	0 to 1	RW	F126
R4x3420L	EVT_FILE_FIRST	Event File First Event	---	1	0 to 4294967295	RW	F003

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4x3422L	EVT_FILE_LAST	Event File Last Event	---	1	0 to 4294967295	RW	F003
R4x3424	EVT_FILE_TYPE	Event File Type	---	1	0 to 2	RW	F142
R3x3425L	EVT_FILE_POS	Event File Position	---	1	0 to 4294967295	RO	F003
R3x3427	EVT_FILE_ACC	Event File Access (123 items)	---	1	0 to 65535	RO	F001
R3x34B0L	FLTLOC_SEC	Fault Location Seconds	---	1	0 to 4294967295	RO	F050
R3x34B2L	FLTLOC_USEC	Fault Location Microseconds	---	1	0 to 4294967295	RO	F003
R3x34B4	FLTLOC_TYPE	Fault Location Type	---	1	0 to 11	RO	F148
R3x34B5I	FLTLOC	Fault Location	---	0.1	-3276.7 to 3276.7	RO	F002
R3x34C0	DCMA_INP_1	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34C2	DCMA_INP_2	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34C4	DCMA_INP_3	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34C6	DCMA_INP_4	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34C8	DCMA_INP_5	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34CA	DCMA_INP_6	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34CC	DCMA_INP_7	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34CE	DCMA_INP_8	DCMA Inputs x Value	---	0.001	-999.999 to 9999.999	RO	F004
R3x34D0	DCMA_INP_9	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34D2	DCMA_INP_10	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34D4	DCMA_INP_11	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34D6	DCMA_INP_12	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34D8	DCMA_INP_13	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34DA	DCMA_INP_14	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34DC	DCMA_INP_15	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34DE	DCMA_INP_16	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34E0	DCMA_INP_17	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34E2	DCMA_INP_18	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34E4	DCMA_INP_19	DCMA Inputs x	---	0.001	-9999.999 to	RO	F004

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Value			9999.999		
R3x34E6	DCMA_INP_20	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34E8	DCMA_INP_21	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34EA	DCMA_INP_22	DCMA Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34EC	DCMA_INP_23	DCMA Inputs x Value	---	.001	-9999.999 to 9999.999	RO	F004
R3x34EE	DCMA_INP_24 DCMA	Inputs x Value	---	0.001	-9999.999 to 9999.999	RO	F004
R3x34F0I	RTDIP01_TEMP	RTD Inputs 1 Value	°C	1	-32768 to 32767	DV	F002
R3x34F1I	RTDIP02_TEMP	RTD Inputs 2 Value	°C	1	-32768 to 32767	DV	F002
R3x34F2I	RTDIP03_TEMP	RTD Inputs 3 Value	°C	1	-32768 to 32767	DV	F002
R3x34F3I	RTDIP04_TEMP	RTD Inputs 4 Value	°C	1	-32768 to 32767	DV	F002
R3x34F4I	RTDIP05_TEMP	RTD Inputs 5 Value	°C	1	-32768 to 32767	DV	F002
R3x34F5I	RTDIP06_TEMP	RTD Inputs 6 Value	°C	1	-32768 to 32767	DV	F002
R3x34F6I	RTDIP07_TEMP	RTD Inputs 7 Value	°C	1	-32768 to 32767	DV	F002
R3x34F7I	RTDIP08_TEMP	RTD Inputs 8 Value	°C	1	-32768 to 32767	DV	F002
R3x34F8I	RTDIP09_TEMP	RTD Inputs 9 Value	°C	1	-32768 to 32767	DV	F002
R3x34F9I	RTDIP10_TEMP	RTD Inputs 10 Value	°C	1	-32768 to 32767	DV	F002
R3x34FAI	RTDIP11_TEMP	RTD Inputs 11 Value	°C	1	-32768 to 32767	DV	F002
R3x34FBI	RTDIP12_TEMP	RTD Inputs 12 Value	°C	1	-32768 to 32767	DV	F002
R3x34FCI	RTDIP13_TEMP	RTD Inputs 13 Value	°C	1	-32768 to 32767	DV	F002
R3x34FDI	RTDIP14_TEMP	RTD Inputs 14 Value	°C	1	-32768 to 32767	DV	F002
R3x34FEI	RTDIP15_TEMP	RTD Inputs 15 Value	°C	1	-32768 to 32767	DV	F002
R3x34FFI	RTDIP16_TEMP	RTD Inputs 16 Value	°C	1	-32768 to 32767	DV	F002
R3x3500I	RTDIP17_TEMP	RTD Inputs 17 Value	°C	1	-32768 to 32767	DV	F002
R3x3501I	RTDIP18_TEMP	RTD Inputs 18 Value	°C	1	-32768 to 32767	DV	F002
R3x3502I	RTDIP19_TEMP	RTD Inputs 19 Value	°C	1	-32768 to 32767	DV	F002
R3x3503I	RTDIP20_TEMP	RTD Inputs 20 Value	°C	1	-32768 to 32767	DV	F002
R3x3504I	RTDIP21_TEMP	RTD Inputs 21 Value	°C	1	-32768 to 32767	DV	F002
R3x3505I	RTDIP22_TEMP	RTD Inputs 22 Value	°C	1	-32768 to 32767	DV	F002
R3x3506I	RTDIP23_TEMP	RTD Inputs 23 Value	°C	1	-32768 to 32767	DV	F002
R3x3507I	RTDIP24_TEMP	RTD Inputs 24 Value	°C	1	-32768 to 32767	DV	F002
R3x3508I	RTDIP25_TEMP	RTD Inputs 25 Value	°C	1	-32768 to 32767	DV	F002

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3x3509I	RTDIP26_TEMP	RTD Inputs 26 Value	°C	1	-32768 to 32767	DV	F002
R3x350AI	RTDIP27_TEMP	RTD Inputs 27 Value	°C	1	-32768 to 32767	DV	F002
R3x350BI	RTDIP28_TEMP	RTD Inputs 28 Value	°C	1	-32768 to 32767	DV	F002
R3x350CI	RTDIP29_TEMP	RTD Inputs 29 Value	°C	1	-32768 to 32767	DV	F002
R3x350DI	RTDIP30_TEMP	RTD Inputs 30 Value	°C	1	-32768 to 32767	DV	F002
R3x350EI	RTDIP31_TEMP	RTD Inputs 31 Value	°C	1	-32768 to 32767	DV	F002
R3x350FI	RTDIP32_TEMP	RTD Inputs 32 Value	°C	1	-32768 to 32767	DV	F002
R3x3510I	RTDIP33_TEMP	RTD Inputs 33 Value	°C	1	-32768 to 32767	DV	F002
R3x3511I	RTDIP34_TEMP	RTD Inputs 34 Value	°C	1	-32768 to 32767	DV	F002
R3x3512I	RTDIP35_TEMP	RTD Inputs 35 Value	°C	1	-32768 to 32767	DV	F002
R3x3513I	RTDIP36_TEMP	RTD Inputs 36 Value	°C	1	-32768 to 32767	DV	F002
R3x3514I	RTDIP37_TEMP	RTD Inputs 37 Value	°C	1	-32768 to 32767	DV	F002
R3x3515I	RTDIP38_TEMP	RTD Inputs 38 Value	°C	1	-32768 to 32767	DV	F002
R3x3516I	RTDIP39_TEMP	RTD Inputs 39 Value	°C	1	-32768 to 32767	DV	F002
R3x3517I	RTDIP40_TEMP	RTD Inputs 40 Value	°C	1	-32768 to 32767	DV	F002
R3x3518I	RTDIP41_TEMP	RTD Inputs 41 Value	°C	1	-32768 to 32767	DV	F002
R3x3519I	RTDIP42_TEMP	RTD Inputs 42 Value	°C	1	-32768 to 32767	DV	F002
R3x351AI	RTDIP43_TEMP	RTD Inputs 43 Value	°C	1	-32768 to 32767	DV	F002
R3x351BI	RTDIP44_TEMP	RTD Inputs 44 Value	°C	1	-32768 to 32767	DV	F002
R3x351CI	RTDIP45_TEMP	RTD Inputs 45 Value	°C	1	-32768 to 32767	DV	F002
R3x351DI	RTDIP46_TEMP	RTD Inputs 46 Value	°C	1	-32768 to 32767	DV	F002
R3x351EI	RTDIP47_TEMP	RTD Inputs 47 Value	°C	1	-32768 to 32767	DV	F002
R3x351FI	RTDIP48_TEMP	RTD Inputs 48 Value	°C	1	-32768 to 32767	DV	F002
R4x4080	MODBUS_ADDR	Modbus Slave Address	---	1	1 to 254	RW	F001
R4x4083	COM1_BAUD	RS485 Com1 Baud Rate	---	1	0 to 8	RW	F112
R4x4084	COM1_PAR	RS485 Com1 Parity	---	1	0 to 2	RW	F113
R4x4085	COM2_BAUD	RS485 Com2	---	1	0 to 8	RW	F112

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Baud Rate					
R4x4086	COM2_PAR	RS485 Com2 Parity	---	1	0 to 2	RW	F113
R4x4087L	IP_ADDR	Ethernet IP Address	---	1	0 to 4294967295	RW	F003
R4x4089L	GWY_IP_ADDR	Gateway IP Address	---	1	0 to 4294967295	RW	F003
R4x408BS40	NET_ADDR_NSAP	Network Address NSAP	---	---	---	RW	F074
R4x4170	DLOG_CLR	Clear Data Logger	---	1	0 to 1	SP	F126
R4x4180	DLOG_RATE	Data Logger Rate	---	1	0 to 7	SP	F178
R4x41A6	IRIGB_TYPE	IRIG-B Signal Type	---	1	0 to 2	SP	F114
R4x41A0L	DATE	Current Date	---	1	0 to 4294967295	RW	F050
R4X41C0	UR_NUM_REC	Oscillography Number of Records	---	1	1 to 64	RW	F001
R4X41C1	UR_MODE	Oscillography Trigger Mode	---	1	0 to 1	RW	F118
R4x43E0	RELAY_PROG_STATE	Relay Programmed State	---	1	0 to 1	RW	F133
R4x43E1S20	RELAY_NAME	Relay Name	---	1	---	RW	F202
R4x4480	PHS_CT_PRI	Phase CT Primary	A	1	1 to 65000	RW	F001
R4x4481	PHS_CT_SEC	Phase CT Secondary	---	1	0 to 1	RW	F123
R4x4482	GND_CT_PRI	Ground CT Primary	A	1	1 to 65000	RW	F001
R4x4483	GND_CT_SEC	Ground CT Secondary	---	1	0 to 1	RW	F123
R4x4484	PHS_CT_PRI_2	Phase CT Primary	A	1	1 to 65000	RW	F001
R4x4485	PHS_CT_SEC_2	Phase CT Secondary	---	1	0 to 1	RW	F123
R4x4486	GND_CT_PRI_2	Ground CT Primary	A	1	1 to 65000	RW	F001
R4x4487	GND_CT_SEC_2	Ground CT Secondary	---	1	0 to 1	RW	F123
R4x4488	PHS_CT_PRI_3	Phase CT Primary	A	1	1 to 65000	RW	F001
R4x4489	PHS_CT_SEC_3	Phase CT Secondary	---	1	0 to 1	RW	F123
R4x448A	GND_CT_PRI_3	Ground CT Primary	A	1	1 to 65000	RW	F001
R4x448B	GND_CT_SEC_3	Ground CT Secondary	---	1	0 to 1	RW	F123
R4x448C	PHS_CT_PRI_4	Phase CT Primary	A	1	1 to 65000	RW	F001
R4x448D	PHS_CT_SEC_4	Phase CT Secondary	---	1	0 to 1	RW	F123
R4x448E	GND_CT_PRI_4	Ground CT	A	1	1 to 65000	RW	F001

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Primary					
R4x448F	GND_CT_SEC_4	Ground CT Secondary	---	1	0 to 1	RW	F123
R4x4490	PHS_CT_PRI_5	Phase CT Primary	A	1	1 to 65000	RW	F001
R4x4491	PHS_CT_SEC_5	Phase CT Secondary	---	1	0 to 1	RW	F123
R4x4492	GND_CT_PRI_5	Ground CT Primary	A	1	1 to 65000	RW	F001
R4x4493	GND_CT_SEC_5	Ground CT Secondary	---	1	0 to 1	RW	F123
R4x4494	PHS_CT_PRI_6	Phase CT Primary	A	1	1 to 65000	RW	F001
R4x4495	PHS_CT_SEC_6	Phase CT Secondary	---	1	0 to 1	RW	F123
R4x4496	GND_CT_PRI_6	Ground CT Primary	A	1	1 to 65000	RW	F001
R4x4497	GND_CT_SEC_6	Ground CT Secondary	---	1	0 to 1	RW	F123
R4x4500	VT_TYPE	Phase VT Connection	---	0.1	0 to 1	RW	F100
R4x4501	VT_SEC	Phase VT Secondary	V	1	50 to 240	RW	F001
R4x4502F	VT_RATIO	Phase VT Ratio	:1	1	1 to 24000	RW	F060
R4x4504	VT_AUX_TYPE	Auxiliary VT Connection	---	0.1	0 to 6	RW	F166
R4x4505	VT_AUX_SEC	Auxiliary VT Secondary	V	1	50 to 240	RW	F001
R4x4506F	VT_AUX_RATIO	Auxiliary VT Ratio	:1	1	1 to 24000	RW	F060
R4x4508	VT_TYPE_2	Phase VT Connection	---	0.1	0 to 1	RW	F100
R4x4509	VT_SEC_2	Phase VT Secondary	V	1	50 to 240	RW	F001
R4x450AF	VT_RATIO_2	Phase VT Ratio	:1	1	1 to 24000	RW	F060
R4x450C	VT_AUX_TYPE_2	Auxiliary VT Connection	---	0.1	0 to 6	RW	F166
R4x450D	VT_AUX_SEC_2	Auxiliary VT Secondary	V	1	50 to 240	RW	F001
R4x450EF	VT_AUX_RATIO_2	Auxiliary VT Ratio	:1	1	1 to 24000	RW	F060
R4x4510	VT_TYPE_3	Phase VT Connection	---	0.1	0 to 1	RW	F100
R4x4511	VT_SEC_3	Phase VT Secondary	V	1	50 to 240	RW	F001
R4x4512F	VT_RATIO_3	Phase VT Ratio	:1	1	1 to 24000	RW	F060
R4x4514	VT_AUX_TYPE_3	Auxiliary VT Connection	---	0.1	0 to 6	RW	F166
R4x4515	VT_AUX_SEC_3	Auxiliary VT Secondary	V	1	50 to 240	RW	F001
R4x4516F	VT_AUX_RATIO_3	Auxiliary VT Ratio	:1	---	1 to 24000	RW	F060
R4x4580S6	S1_NAME	Source Name	---	1	---	RW	F206

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4x4583	S1_PHS_CT	Source Phase CT	---	1	0 to 63	RW	F400
R4x4584	S1_GND_CT	Source Ground CT	---	1	0 to 63	RW	F400
R4x4585	S1_PHS_VT	Source Phase VT	---	1	0 to 63	RW	F400
R4x4586	S1_AUX_VT	Source Auxiliary VT	---	---	0 to 63	RW	F400
R4x4587S6	S2_NAME	Source Name	---	1	---	RW	F206
R4x458A	S2_PHS_CT	Source Phase CT	---	1	0 to 63	RW	F400
R4x458B	S2_GND_CT	Source Ground CT	---	1	0 to 63	RW	F400
R4x458C	S2_PHS_VT	Source Phase VT	---	1	0 to 63	RW	F400
R4x458D	S2_AUX_VT	Source Auxiliary VT	---	---	0 to 63	RW	F400
R4x458ES6	S3_NAME	Source Name	---	1	---	RW	F206
R4x4591	S3_PHS_CT	Source Phase CT	---	1	0 to 63	RW	F400
R4x4592	S3_GND_CT	Source Ground CT	---	1	0 to 63	RW	F400
R4x4593	S3_PHS_VT	Source Phase VT	---	1	0 to 63	RW	F400
R4x4594	S3_AUX_VT	Source Auxiliary VT	---	---	0 to 63	RW	F400
R4x4595S6	S4_NAME	Source Name	---	1	---	RW	F206
R4x4598	S4_PHS_CT	Source Phase CT	---	1	0 to 63	RW	F400
R4x4599	S4_GND_CT	Source Ground CT	---	1	0 to 63	RW	F400
R4x459A	S4_PHS_VT	Source Phase VT	---	1	0 to 63	RW	F400
R4x459B	S4_AUX_VT	Source Auxiliary VT	---	---	0 to 63	RW	F400
R4x459CS6	S5_NAME	Source Name	---	1	---	RW	F206
R4x459F	S5_PHS_CT	Source Phase CT	---	1	0 to 63	RW	F400
R4x45A0	S5_GND_CT	Source Ground CT	---	1	0 to 63	RW	F400
R4x45A1	S5_PHS_VT	Source Phase VT	---	1	0 to 63	RW	F400
R4x45A2	S5_AUX_VT	Source Auxiliary VT	---	---	0 to 63	RW	F400
R4x45A3S6	S6_NAME	Source Name	---	1	---	RW	F206
R4x45A6	S6_PHS_CT	Source Phase CT	---	1	0 to 63	RW	F400
R4x45A7	S6_GND_CT	Source Ground CT	---	1	0 to 63	RW	F400
R4x45A8	S6_PHS_VT	Source Phase VT	---	1	0 to 63	RW	F400

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4x45A9	S6_AUX_VT	Source Auxiliary VT	---	1	0 to 63	RW	F400
R4x4600	NOM_FREQ	Nominal Frequency	Hz	1	25 to 60	RW	F001
R4x4601	PHA_ROTATION	Phase Rotation	---	1	0 to 1	RW	F106
R4x4602	PHA_TRACK	Frequency And Phase Reference	---		0 to 63	RW	F001
R4x46D0	LINE_POS_IMP	Line Pos Seq Impedance	p	0.01	0.01 to 250	SP	F001
R4x46D1	LINE_POS_IMP_ANG	Line Pos Seq Impedance Angle	°	1	25 to 90	SP	F001
R4x46D2	LINE_ZERO_IMP	Line Zero Seq Impedance	p	0.01	0.01 to 650	SP	F001
R4x46D3	LINE_ZERO_IMP_ANG	Line Zero Seq Impedance Angle	°	1	25 to 90	SP	F001
R4x46D5	LINE_LEN_UNIT	Line Length Units	1	---	0 to 1	RW	F147
R4x4700	BKR1_FUNC	Breaker x Function	1	---	0 to 1	RW	F102
R4x4701S6	BKR1_NAME	Breaker x Name	---	---	---	RW	F206
R4x4705	BKR1_OPN	Breaker x Open	1	---	0 to 65535	RW	F300
R4x4706	BKR1_CLS	Breaker x Close	1	---	0 to 65535	RW	F300
R4X4718	BKR2_FUNC	Breaker x Function	1	---	0 to 1	RW	F102
R4x4719S6	BKR2_NAME	Breaker x Name	---	---	---	RW	F206
R4X471D	BKR2_OPN	Breaker x Open	1	---	0 to 65535	RW	F300
R4X471E	BKR2_CLS	Breaker x Close	1	---	0 to 65535	RW	F300
R4x4780	SYNC1_FUNC	Synchrocheck Function	---	1	0 to 1	SP	F102
R4x4790	SYNC2_FUNC	Synchrocheck Function	---	1	0 to 1	SP	F102
R4x47D0	DMD_AMPS_MTHD	Demand Current Method	---	1	0 to 2	SP	F139
R4x47D1	DMD_WATTS_MTHD	Demand Power Method	---	1	0 to 2	SP	F139
R4x47D2	DMD_INTVL	Demand Interval	---	1	0 to 5	SP	F132
R4x47D4	DMD_CLR	Demand Clear Record	---	1	0 to 1	SP	F126
R4x5900	PHSTOC1_FUNC	Phase TOC1 Function	1	---	0 to 1	RW	F102
R4x5910	PHSTOC2_FUNC	Phase TOC2 Function	1	---	0 to 1	RW	F102
R4x5920	PHSTOC3_FUNC	Phase TOC3 Function	---	1	0 to 1	SP	F102
R4x5930	PHSTOC4_FUNC	Phase TOC4 Function	---	1	0 to 1	SP	F102
R4x5940	PHSTOC5_FUNC	Phase TOC5 Function	---	1	0 to 1	SP	F102
R4x5950	PHSTOC6_FUNC	Phase TOC6	---	1	0 to 1	SP	F102

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Function					
R4x5A00	PHSIOC1_FUNC	Phase IOC1 Function	1	---	0 to 1	RW	F102
R4x5A10	PHSIOC2_FUNC	Phase IOC2 Function	1	---	0 to 1	RW	F102
R4x5A20	PHSIOC3_FUNC	Phase IOC3 Function	---	1	0 to 1	SP	F102
R4x5A30	PHSIOC4_FUNC	Phase IOC4 Function	---	1	0 to 1	SP	F102
R4x5A40	PHSIOC5_FUNC	Phase IOC5 Function	---	1	0 to 1	SP	F102
R4x5A50	PHSIOC6_FUNC	Phase IOC6 Function	---	1	0 to 1	SP	F102
R4x5A60	PHSIOC7_FUNC	Phase IOC7 Function	---	1	0 to 1	SP	F102
R4x5A70	PHSIOC8_FUNC	Phase IOC8 Function	---	1	0 to 1	SP	F102
R4x5A80	PHSIOC9_FUNC	Phase IOC9 Function	---	1	0 to 1	SP	F102
R4x5A90	PHSIOC10_FUNC	Phase IOC10 Function	---	1	0 to 1	SP	F102
R4x5AA0	PHSIOC11_FUNC	Phase IOC11 Function	---	1	0 to 1	SP	F102
R4x5AB0	PHSIOC12_FUNC	Phase IOC12 Function	---	1	0 to 1	SP	F102
R4x5B00	NEUTO1_FUNC	Neutral TOC1 Function	---	1	0 to 1	SP	F102
R4x5B10	NEUTO2_FUNC	Neutral TOC2 Function	---	1	0 to 1	SP	F102
R4x5B20	NEUTO3_FUNC	Neutral TOC3 Function	---	1	0 to 1	SP	F102
R4x5B30	NEUTO4_FUNC	Neutral TOC4 Function	---	1	0 to 1	SP	F102
R4x5B40	NEUTO5_FUNC	Neutral TOC5 Function	---	1	0 to 1	SP	F102
R4x5B50	NEUTO6_FUNC	Neutral TOC6 Function	---	1	0 to 1	SP	F102
R4x5C00	NEUIOC1_FUNC	Neutral IOC1 Function	---	1	0 to 1	SP	F102
R4x5C10	NEUIOC2_FUNC	Neutral IOC2 Function	---	1	0 to 1	SP	F102
R4x5C20	NEUIOC3_FUNC	Neutral IOC3 Function	---	1	0 to 1	SP	F102
R4x5C30	NEUIOC4_FUNC	Neutral IOC4 Function	---	1	0 to 1	SP	F102
R4x5C40	NEUIOC5_FUNC	Neutral IOC5 Function	---	1	0 to 1	SP	F102
R4x5C50	NEUIOC6_FUNC	Neutral IOC6 Function	---	1	0 to 1	SP	F102
R4x5C60	NEUIOC7_FUNC	Neutral IOC7 Function	---	1	0 to 1	SP	F102
R4x5C70	NEUIOC8_FUNC	Neutral IOC8 Function	---	1	0 to 1	SP	F102

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4x5C80	NEUIOC9_FUNC	Neutral IOC9 Function	---	1	0 to 1	SP	F102
R4x5C90	NEUIOC10_FUNC	Neutral IOC10 Function	---	1	0 to 1	SP	F102
R4x5CA0	NEUIOC11_FUNC	Neutral IOC11 Function	---	1	0 to 1	SP	F102
R4x5CB0	NEUIOC12_FUNC	Neutral IOC12 Function	---	1	0 to 1	SP	F102
R4x5D00	GND_TOC1_FUNC	Ground TOC1 Function	---	1	0 to 1	SP	F102
R4x5D10	GND_TOC2_FUNC	Ground TOC2 Function	---	1	0 to 1	SP	F102
R4x5D20	GND_TOC3_FUNC	Ground TOC3 Function	---	1	0 to 1	SP	F102
R4x5D30	GND_TOC4_FUNC	Ground TOC4 Function	---	1	0 to 1	SP	F102
R4x5D40	GND_TOC5_FUNC	Ground TOC5 Function	---	1	0 to 1	SP	F102
R4x5D50	GND_TOC6_FUNC	Ground TOC6 Function	---	1	0 to 1	SP	F102
R4x5E01	GND_IOC1_FUNC	Ground IOC1 Function	---	1	0 to 1	SP	F102
R4x5E11	GND_IOC2_FUNC	Ground IOC2 Function	---	1	0 to 1	SP	F102
R4x5E21	GND_IOC3_FUNC	Ground IOC3 Function	---	1	0 to 1	SP	F102
R4x5E31	GND_IOC4_FUNC	Ground IOC4 Function	---	1	0 to 1	SP	F102
R4x5E41	GND_IOC5_FUNC	Ground IOC5 Function	---	1	0 to 1	SP	F102
R4x5E51	GND_IOC6_FUNC	Ground IOC6 Function	---	1	0 to 1	SP	F102
R4x5E61	GND_IOC7_FUNC	Ground IOC7 Function	---	1	0 to 1	SP	F102
R4x5E71	GND_IOC8_FUNC	Ground IOC8 Function	---	1	0 to 1	SP	F102
R4x5E81	GND_IOC9_FUNC	Ground IOC9 Function	---	1	0 to 1	SP	F102
R4x5E91	GND_IOC10_FUNC	Ground IOC10 Function	---	1	0 to 1	SP	F102
R4x5EA1	GND_IOC11_FUNC	Ground IOC11 Function	---	1	0 to 1	SP	F102
R4x5EB1	GND_IOC12_FUNC	Ground IOC12 Function	---	1	0 to 1	SP	F102
R4x5E90	NEGSEQ_TOC1_FUNC	Negative Sequence TOC1 Function	1	---	0 to 1	RW	F102
R4x5EA0	NEGSEQ_TOC2_FUNC	Negative Sequence TOC2 Function	1	---	0 to 1	RW	F102
R4x5EB0	NEGSEQ_IOC1_FUNC	Negative Sequence IOC1 Function	1	---	0 to 1	RW	F102
R4x5EC0	NEGSEQ_IOC2_FUNC	Negative Sequence IOC2 Function	1	---	0 to 1	RW	F102
R4x5F00	TRP_OUT_FUNC	Trip Output	1	---	0 to 1	RW	F102

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Function					
R4x5EE0	FUNC_87L_TRIP	87L Trip Function	---	1	0 to 1	SP	F102
R4x5F10	STUB_BUS_FUNC	Stub Bus Function	---	1	0 to 1	SP	F102
R4x5F20	DD_FUNC	DD Function	---	1	0 to 1	SP	F102
R4x6000	FUNC_87L	87L Function	1	---	0 to 1	RW	F102
R4x6030	OPNPOL_DETFUNC	Open Pole Detect Function	1	---	0 to 1	RW	F102
R4x60F0	FUNC_87PC	87PC Function	1	---	0 to 1	RW	F102
R4x6120	CT_FAIL_FUNC	CT Fail Function	---	1	0 to 1	SP	F102
R4x6130	CONT_MON_FUNC	Cont Monitor Function	---	1	0 to 1	SP	F102
R4x6200	PCNT_DIFF_FUNC	Percent Differential Function	---	1	0 to 1	SP	F102
R4x6206	INRUSH_IN_FUNC	Inrush Inhibit Function	---	1	0 to 1	SP	F168
R4x6208	OVEREX_IN_FUNC	Overexcitation Inhibit Function	---	1	0 to 1	SP	F169
R4x6220	INST_DIFF_FUNC	Inst Differential Function	---	1	0 to 1	SP	F102
R4x6240	AUTO_RCLS1_FUNC	Autoreclose 1 Function	---	1	0 to 1	SP	F102
R4x625E	AUTO_RCLS2_FUNC	Autoreclose 2 Function	---	1	0 to 1	SP	F102
R4x627C	AUTO_RCLS3_FUNC	Autoreclose 3 Function	---	1	0 to 1	SP	F102
R4x629A	AUTO_RCLS4_FUNC	Autoreclose 4 Function	---	1	0 to 1	SP	F102
R4x62B8	AUTO_RCLS5_FUNC	Autoreclose 5 Function	---	1	0 to 1	SP	F102
R4x62D6	AUTO_RCLS6_FUNC	Autoreclose 6 Function	---	1	0 to 1	SP	F102
R4x7000	PHUV1FUNC	Phase UV1 Function	1	---	0 to 1	RW	F102
R4x7010	PHUV2FUNC	Phase UV1 Function	1	---	0 to 1	RW	F102
R4x7130	PH_DISTZ1_FUNC_1	Phase Distance Z x Function	1	---	0 to 1	RW	F102
R4x7144	PH_DISTZ1_FUNC_2	Phase Distance Z x Reach	1	---	0 to 1	RW	F102
R4x7158	PH_DISTZ1_FUNC_3	Phase Distance Z x Direction	1	---	0 to 1	RW	F102
R4x716C	PH_DISTZ1_FUNC_4	Phase Distance Z x Comp Limit	1	---	0 to 1	RW	F102
R4x7190	GND_DISTZ1_FUNC_1	Ground Distance Z x Function	1	---	0 to 1	RW	F102
R4x71A7	GND_DISTZ1_FUNC_2	Ground Distance Z x Reach	1	---	0 to 1	RW	F102
R4x71BE	GND_DISTZ1_FUNC_3	Ground Distance Z x Direction	1	---	0 to 1	RW	F102
R4x71D5	GND_DISTZ1_FUNC_4	Ground Distance Z x Comp Limit	1	---	0 to 1	RW	F102

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4x71F0	LN_PU_FUNC	Line Pickup Function	1	---	0 to 1	RW	F102
R4x7280	NEUT_DIR_OC1_FUNC	Neutral DIR OC1 Function	---	1	0 to 1	SP	F102
R4x728F	NEUT_DIR_OC2_FUNC	Neutral DIR OC2 Function	---	1	0 to 1	SP	F102
R4x72A0	NEG_SEQ_DIR1_FUNC	Negative sequence DIR 1 Function	---	1	0 to 1	SP	F102
R4x72B0	NEG_SEQ_DIR2_FUNC	Negative sequence DIR 2 Function	---	1	0 to 1	SP	F102
R4x7300	DCMA_INP1_FUNC	DCMA Inputs 1 Function	---	1	0 to 1	SP	F102
R4x7301S20	DCMA_INP1_ID	DCMA Inputs 1 ID	---	---	---	SP	F202
R4x730BS6	DCMA_INP1_UNIT	DCMA Inputs 1 Units	---	---	---	SP	F206
R4x7318	DCMA_INP2_FUNC	DCMA Inputs 2 Function	---	1	0 to 1	SP	F102
R4x7319S20	DCMA_INP2_ID	DCMA Inputs 2 ID	---	---	---	SP	F202
R4x7323S6	DCMA_INP2_UNIT	DCMA Inputs 2 Units	---	---	---	SP	F206
R4x7330	DCMA_INP3_FUNC	DCMA Inputs 3 Function	---	1	0 to 1	SP	F102
R4x7331S20	DCMA_INP3_ID	DCMA Inputs 3 ID	---	---	---	SP	F202
R4x733BS6	DCMA_INP3_UNIT	DCMA Inputs 3 Units	---	---	---	SP	F206
R4x7348	DCMA_INP4_FUNC	DCMA Inputs 4 Function	---	1	0 to 1	SP	F102
R4x7349S20	DCMA_INP4_ID	DCMA Inputs 4 ID	---	---	---	SP	F202
R4x7353S6	DCMA_INP4_UNIT	DCMA Inputs 4 Units	---	---	---	SP	F206
R4x7360	DCMA_INP5_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x7361S20	DCMA_INP5_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x736BS6	DCMA_INP5_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x7378	DCMA_INP6_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x7379S20	DCMA_INP6_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x7383S6	DCMA_INP6_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x7390	DCMA_INP7_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x7391S20	DCMA_INP7_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x739BS6	DCMA_INP7_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x73A8	DCMA_INP8_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x73A9S20	DCMA_INP8_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x73B3S6	DCMA_INP8_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x73C0	DCMA_INP9_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4x73C1S20	DCMA_INP9_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x73CBS6	DCMA_INP9_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x73D8	DCMA_INP10_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x73D9S20	DCMA_INP10_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x73E3S6	DCMA_INP10_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x73F0	DCMA_INP11_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x73F1S20	DCMA_INP11_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x73FBS6	DCMA_INP11_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x7408	DCMA_INP12_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x7409S20	DCMA_INP12_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x7413S6	DCMA_INP12_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x7420	DCMA_INP13_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x7421S20	DCMA_INP13_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x742BS6	DCMA_INP13_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x7438	DCMA_INP14_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x7439S20	DCMA_INP14_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x7443S6	DCMA_INP14_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x7450	DCMA_INP15_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x7451S20	DCMA_INP15_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x745BS6	DCMA_INP15_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x7468	DCMA_INP16_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x7469S20	DCMA_INP16_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x7473S6	DCMA_INP16_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x7480	DCMA_INP17_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x7481S20	DCMA_INP17_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x748BS6	DCMA_INP17_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x7498	DCMA_INP18_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x7499S20	DCMA_INP18_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x74A3S6	DCMA_INP18_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x74B0	DCMA_INP19_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x74B1S20	DCMA_INP19_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x74BBS6	DCMA_INP19_UNIT	DCMA Inputs x	---	---	---	SP	F206

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Units					
R4x74C8	DCMA_INP20_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x74C9S20	DCMA_INP20_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x74D3S6	DCMA_INP20_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x74E0	DCMA_INP21_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x74E1S20	DCMA_INP21_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x74EBS6	DCMA_INP21_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x74F8	DCMA_INP22_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x74F9S20	DCMA_INP22_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x7503S6	DCMA_INP22_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x7510	DCMA_INP23_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x7511S20	DCMA_INP23_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x751BS6	DCMA_INP23_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x7528	DCMA_INP24_FUNC	DCMA Inputs x Function	---	1	0 to 1	SP	F102
R4x7529S20	DCMA_INP24_ID	DCMA Inputs x ID	---	---	---	SP	F202
R4x7533S6	DCMA_INP24_UNIT	DCMA Inputs x Units	---	---	---	SP	F206
R4x7540	RTDIP01_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7541S20	RTDIP01_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7550	RTDIP02_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7551S20	RTDIP02_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7560	RTDIP03_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7561S20	RTDIP03_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7570	RTDIP04_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7571S20	RTDIP04_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7580	RTDIP05_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7581S20	RTDIP05_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7590	RTDIP06_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7591S20	RTDIP06_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x75A0	RTDIP07_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x75A1S20	RTDIP07_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x75B0	RTDIP08_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x75B1S20	RTDIP08_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x75C0	RTDIP09_FUNC	RTD Inputs x	---	1	0 to 1	SP	F102

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Function					
R4x75C1S20	RTDIP09_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x75D0	RTDIP10_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x75D1S20	RTDIP10_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x75E0	RTDIP11_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x75E1S20	RTDIP11_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x75F0	RTDIP12_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x75F1S20	RTDIP12_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7600	RTDIP13_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7601S20	RTDIP13_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7610	RTDIP14_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7611S20	RTDIP14_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7620	RTDIP15_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7621S20	RTDIP15_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7630	RTDIP16_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7631S20	RTDIP16_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7640	RTDIP17_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7641S20	RTDIP17_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7650	RTDIP18_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7651S20	RTDIP18_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7660	RTDIP19_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7661S20	RTDIP19_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7670	RTDIP20_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7671S20	RTDIP20_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7680	RTDIP21_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7681S20	RTDIP21_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7690	RTDIP22_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7691S20	RTDIP22_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x76A0	RTDIP23_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x76A1S20	RTDIP23_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x76B0	RTDIP24_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x76B1S20	RTDIP24_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x76C0	RTDIP25_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x76C1S20	RTDIP25_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x76D0	RTDIP26_FUNC	RTD Inputs x	---	1	0 to 1	SP	F102

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Function					
R4x76D1S20	RTDIP26_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x76E0	RTDIP27_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x76E1S20	RTDIP27_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x76F0	RTDIP28_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x76F1S20	RTDIP28_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7700	RTDIP29_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7701S20	RTDIP29_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7710	RTDIP30_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7711S20	RTDIP30_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7720	RTDIP31_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7721S20	RTDIP31_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7730	RTDIP32_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7731S20	RTDIP32_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7740	RTDIP33_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7741S20	RTDIP33_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7750	RTDIP34_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7751S20	RTDIP34_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7760	RTDIP35_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7761S20	RTDIP35_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7770	RTDIP36_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7771S20	RTDIP36_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7780	RTDIP37_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7781S20	RTDIP37_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7790	RTDIP38_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7791S20	RTDIP38_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x77A0	RTDIP39_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x77A1S20	RTDIP39_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x77B0	RTDIP40_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x77B1S20	RTDIP40_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x77C0	RTDIP41_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x77C1S20	RTDIP41_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x77D0	RTDIP42_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x77D1S20	RTDIP42_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x77E0	RTDIP43_FUNC	RTD Inputs x	---	1	0 to 1	SP	F102

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Function					
R4x77E1S20	RTDIP43_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x77F0	RTDIP44_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x77F1S20	RTDIP44_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7800	RTDIP45_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7801S20	RTDIP45_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7810	RTDIP46_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7811S20	RTDIP46_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7820	RTDIP47_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7821S20	RTDIP47_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7830	RTDIP48_FUNC	RTD Inputs x Function	---	1	0 to 1	SP	F102
R4x7831S20	RTDIP48_ID	RTD Inputs x ID	---	---	---	SP	F202
R4x7A00	HIZ_FUNC	Hi-Z Function	---	1	0 to 1	SP	F102
R4x7A40	GND_DIST_Z2_FUNC	Ground Distance Z2 Function	---	1	0 to 1	SP	F102
R4x7E00	UNDER_FREQ_FUNC	Under Frequency Function	---	1	0 to 1	SP	F102
R4X7E11	UNDER_FREQ_FUNC_2	Under Frequency Function 2	---	1	0 to 1	SP	F102
R4X7E22	UNDER_FREQ_FUNC_3	Under Frequency Function 3	---	1	0 to 1	SP	F102
R4X7E33	UNDER_FREQ_FUNC_4	Under Frequency Function 4	---	1	0 to 1	SP	F102
R4X7E44	UNDER_FREQ_FUNC_5	Under Frequency Function 5	---	1	0 to 1	SP	F102
R4X7E55	UNDER_FREQ_FUNC_6	Under Frequency Function 6	---	1	0 to 1	SP	F102
R4X9000	FLEXELE_FUNC_01	FlexElement Function 1	---	1	0 to 1	SP	F102
R4X9001S6	FLEXELE_NAME_01	FlexElement Name 1	---	---	---	---	F206
R4X9014	FLEXELE_FUNC_02	FlexElement Function 2	---	1	0 to 1	SP	F102
R4X9015S6	FLEXELE_NAME_02	FlexElement Name 2	---	---	---	---	F206
R4X9028	FLEXELE_FUNC_03	FlexElement Function 3	---	1	0 to 1	SP	F102
R4X9029S6	FLEXELE_NAME_03	FlexElement Name 3	---	---	---	---	F206
R4X903C	FLEXELE_FUNC_04	FlexElement Function 4	---	1	0 to 1	SP	F102
R4X903DS6	FLEXELE_NAME_04	FlexElement Name 4	---	---	---	---	F206
R4X9050	FLEXELE_FUNC_05	FlexElement Function 5	---	1	0 to 1	SP	F102
R4X9051S6	FLEXELE_NAME_05	FlexElement Name 5	---	---	---	---	F206
R4X9064	FLEXELE_FUNC_06	FlexElement Function 6	---	1	0 to 1	SP	F102

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X9065S6	FLEXELE_NAME_06	FlexElement Name 6	---	---	---	---	F206
R4X9078	FLEXELE_FUNC_07	FlexElement Function 7	---	1	0 to 1	SP	F102
R4X9079S6	FLEXELE_NAME_07	FlexElement Name 7	---	---	---	---	F206
R4X908C	FLEXELE_FUNC_08	FlexElement Function 8	---	1	0 to 1	SP	F102
R4X908DS6	FLEXELE_NAME_08	FlexElement Name 8	---	---	---	---	F206
R4X90A0	FLEXELE_FUNC_09	FlexElement Function 9	---	1	0 to 1	SP	F102
R4X90A1S6	FLEXELE_NAME_09	FlexElement Name 9	---	---	---	---	F206
R4X90B4	FLEXELE_FUNC_10	FlexElement Function 10	---	1	0 to 1	SP	F102
R4X90B5S6	FLEXELE_NAME_10	FlexElement Name 10	---	---	---	---	F206
R4X90C8	FLEXELE_FUNC_11	FlexElement Function 11	---	1	0 to 1	SP	F102
R4X90C9S6	FLEXELE_NAME_11	FlexElement Name 11	---	---	---	---	F206
R4X90DC	FLEXELE_FUNC_12	FlexElement Function 12	---	1	0 to 1	SP	F102
R4X90DDS6	FLEXELE_NAME_12	FlexElement Name 12	---	---	---	---	F206
R4X90F0	FLEXELE_FUNC_13	FlexElement Function 13	---	1	0 to 1	SP	F102
R4X90F1S6	FLEXELE_NAME_13	FlexElement Name 13	---	---	---	---	F206
R4X9104	FLEXELE_FUNC_14	FlexElement Function 14	---	1	0 to 1	SP	F102
R4X9105S6	FLEXELE_NAME_14	FlexElement Name 14	---	---	---	---	F206
R4X9118	FLEXELE_FUNC_15	FlexElement Function 15	---	1	0 to 1	SP	F102
R4X9119S6	FLEXELE_NAME_15	FlexElement Name 15	---	---	---	---	F206
R4X912C	FLEXELE_FUNC_16	FlexElement Function 16	---	1	0 to 1	SP	F102
R4X912DS6	FLEXELE_NAME_16	FlexElement Name 16	---	---	---	---	F206
R4X9A01L	FLEXELE_ACT_01	FlexElement Actual	---	0.001	-2147483.647 to 2147483.647	---	F004
R4X9A03L	FLEXELE_ACT_02	FlexElement Actual	---	0.001	-2147483.647 to 2147483.647	---	F004
R4X9A05L	FLEXELE_ACT_03	FlexElement Actual	---	0.001	-2147483.647 to 2147483.647	---	F004
R4X9A07L	FLEXELE_ACT_04	FlexElement Actual	---	0.001	-2147483.647 to 2147483.647	---	F004
R4X9A09L	FLEXELE_ACT_05	FlexElement Actual	---	0.001	-2147483.647 to 2147483.647	---	F004
R4X9A0BL	FLEXELE_ACT_06	FlexElement Actual	---	0.001	-2147483.647 to 2147483.647	---	F004
R4X9A0DL	FLEXELE_ACT_07	FlexElement Actual	---	0.001	-2147483.647 to 2147483.647	---	F004
R4X9A0FL	FLEXELE_ACT_08	FlexElement	---	0.001	-2147483.647 to 2147483.647	---	F004

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Actual					
R4X9A11L	FLEXELE_ACT_09	FlexElement Actual	---	0.001	-2147483.647 to 2147483.647	---	F004
R4X9A13L	FLEXELE_ACT_10	FlexElement Actual	---	0.001	-2147483.647 to 2147483.647	---	F004
R4X9A15L	FLEXELE_ACT_11	FlexElement Actual	---	0.001	-2147483.647 to 2147483.647	---	F004
R4X9A17L	FLEXELE_ACT_12	FlexElement Actual	---	0.001	-2147483.647 to 2147483.647	---	F004
R4X9A19L	FLEXELE_ACT_13	FlexElement Actual	---	0.001	-2147483.647 to 2147483.647	---	F004
R4X9A1BL	FLEXELE_ACT_14	FlexElement Actual	---	0.001	-2147483.647 to 2147483.647	---	F004
R4X9A1DL	FLEXELE_ACT_15	FlexElement Actual	---	0.001	-2147483.647 to 2147483.647	---	F004
R4X9A1FL	FLEXELE_ACT_16	FlexElement Actual	---	0.001	-2147483.647 to 2147483.647	---	F004
R4xA000	GROUP_COMM_GROUP	Setting Group For Communications (0 means group 1)	1	---	0 to 7	RW	F001
R4xA001	GROUP_EDIT_GROUP	Setting Group for Display Editing	1	---	0 to 8	RW	F152
R4xA010	CLP_FUNC1	Cold Load Pickup x Function	1	---	0 to 1	RW	F102
R4xA018	CLP_FUNC2	Cold Load Pickup x Function	1	---	0 to 1	RW	F102
R4xA03A	VT_FUSEFAIL_FUNC VT	Fuse Fail Function	1	---	0 to 1	RW	F102
R4xA040	S1_VT_FUSEFAIL_FUNC	VT Fuse Failure Function	---	1	0 to 1	SP	F102
R4xA041	S2_VT_FUSEFAIL_FUNC	VT Fuse Failure Function	---	1	0 to 1	SP	F102
R4xA042	S3_VT_FUSEFAIL_FUNC	VT Fuse Failure Function	---	1	0 to 1	SP	F102
R4xA043	S4_VT_FUSEFAIL_FUNC	VT Fuse Failure Function	---	1	0 to 1	SP	F102
R4xA044	S5_VT_FUSEFAIL_FUNC	VT Fuse Failure Function	---	1	0 to 1	SP	F102
R4xA045	S6_VT_FUSEFAIL_FUNC	VT Fuse Failure Function	---	1	0 to 1	SP	F102
R4xA050	DUTT_FUNC	DUTT Scheme Function	---	1	0 to 1	SP	F102
R4xA060	PUTT_FUNC	PUTT Scheme Function	---	1	0 to 1	SP	F102
R4xA070	POTT_FUNC	POTT Scheme Function	---	1	0 to 1	SP	F102
R4xA080	HYB_POTT_FUNC	Hybrid POTT Scheme Function	---	1	0 to 1	SP	F102
R4xA090	BLK_SCHM_FUNC	Blocking Scheme Function	---	1	0 to 1	SP	F102
R4xB000	DIG_ELEM1_FUNC	Digital Element X Function	—	1	0 to 1	RW	F102
R4xB001S16	DIG_ELEM1_NAME	Digital Element X Name	—	—	—	RW	F203
R4xB020	DIG_ELEM2_FUNC	Digital Element X	—	1	0 to 1	RW	F102

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Function					
R4xB021S16	DIG_ELEM2_NAME	Digital Element X Name	___	___	___	RW	F203
R4xB040	DIG_ELEM3_FUNC	Digital Element X Function	__	1	0 to 1	RW	F102
R4xB041S16	DIG_ELEM3_NAME	Digital Element X Name	___	___	___	RW	F203
R4xB060	DIG_ELEM4_FUNC	Digital Element X Function	__	1	0 to 1	RW	F102
R4xB061S16	DIG_ELEM4_NAME	Digital Element X Name	___	___	___	RW	F203
R4xB080	DIG_ELEM5_FUNC	Digital Element X Function	__	1	0 to 1	RW	F102
R4xB081S16	DIG_ELEM5_NAME	Digital Element X Name	___	___	___	RW	F203
R4xB0A0	DIG_ELEM6_FUNC	Digital Element X Function	__	1	0 to 1	RW	F102
R4xB0A1S16	DIG_ELEM6_NAME	Digital Element X Name	___	___	___	RW	F203
R4xB0C0	DIG_ELEM7_FUNC	Digital Element X Function	__	1	0 to 1	RW	F102
R4xB0C1S16	DIG_ELEM7_NAME	Digital Element X Name	___	___	___	RW	F203
R4xB0E0	DIG_ELEM8_FUNC	Digital Element X Function	__	1	0 to 1	RW	F102
R4xB0E1S16	DIG_ELEM8_NAME	Digital Element X Name	___	___	___	RW	F203
R4xB100	DIG_ELEM9_FUNC	Digital Element X Function	__	1	0 to 1	RW	F102
R4xB101S16	DIG_ELEM9_NAME	Digital Element X Name	___	___	___	RW	F203
R4xB120	DIG_ELEM10_FUNC	Digital Element X Function	__	1	0 to 1	RW	F102
R4xB121S16	DIG_ELEM10_NAME	Digital Element X Name	___	___	___	RW	F203
R4xB140	DIG_ELEM11_FUNC	Digital Element X Function	__	1	0 to 1	RW	F102
R4xB141S16	DIG_ELEM11_NAME	Digital Element X Name	___	___	___	RW	F203
R4xB160	DIG_ELEM12_FUNC	Digital Element X Function	__	1	0 to 1	RW	F102
R4xB161S16	DIG_ELEM12_NAME	Digital Element X Name	___	___	___	RW	F203
R4xB180	DIG_ELEM13_FUNC	Digital Element X Function	__	1	0 to 1	RW	F102
R4xB181S16	DIG_ELEM13_NAME	Digital Element X Name	___	___	___	RW	F203
R4xB1A0	DIG_ELEM14_FUNC	Digital Element X Function	__	1	0 to 1	RW	F102
R4xB1A1S16	DIG_ELEM14_NAME	Digital Element X Name	___	___	___	RW	F203
R4xB1C0	DIG_ELEM15_FUNC	Digital Element X Function	__	1	0 to 1	RW	F102

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4xB1C1S16	DIG_ELEM15_NAME	Digital Element X Name	---	---	---	RW	F203
R4xB1E0	DIG_ELEM16_FUNC	Digital Element X Function	---	1	0 to 1	RW	F102
R4xB1E1S16	DIG_ELEM16_NAME	Digital Element X Name	---	---	---	RW	F203
R4xB300	DIG_CNT1_FUNC	Digital Counter X Function	---	1	0 to 1	RW	F102
R4xB301S12	DIG_CNT1_NAME	Digital Counter X Name	---	---	---	RW	F205
R4xB320	DIG_CNT2_FUNC	Digital Counter X Function	---	1	0 to 1	RW	F102
R4xB321S12	DIG_CNT2_NAME	Digital Counter X Name	---	---	---	RW	F205
R4xB340	DIG_CNT3_FUNC	Digital Counter X Function	---	1	0 to 1	RW	F102
R4xB341S12	DIG_CNT3_NAME	Digital Counter X Name	---	---	---	RW	F205
R4xB360	DIG_CNT4_FUNC	Digital Counter X Function	---	1	0 to 1	RW	F102
R4xB361S12	DIG_CNT4_NAME	Digital Counter X Name	---	---	---	RW	F205
R4xB380	DIG_CNT5_FUNC	Digital Counter X Function	---	1	0 to 1	RW	F102
R4xB381S12	DIG_CNT5_NAME	Digital Counter X Name	---	---	---	RW	F205
R4xB3A0	DIG_CNT6_FUNC	Digital Counter X Function	---	1	0 to 1	RW	F102
R4xB3A1S12	DIG_CNT6_NAME	Digital Counter X Name	---	---	---	RW	F205
R4xB3C0	DIG_CNT7_FUNC	Digital Counter X Function	---	1	0 to 1	RW	F102
R4xB3C1S12	DIG_CNT7_NAME	Digital Counter X Name	---	---	---	RW	F205
R4xB3E0	DIG_CNT8_FUNC	Digital Counter X Function	---	1	0 to 1	RW	F102
R4xB3E1S12	DIG_CNT8_NAME	Digital Counter X Name	---	---	---	RW	F205
R4xC000S12	CONT_INP1_NAME	Contact Input 1 Name	---	---	---	RW	F205
R4XC008S12	CONT_INP2_NAME	Contact Input 2 Name	---	---	---	RW	F205
R4XC010S12	CONT_INP3_NAME	Contact Input 3 Name	---	---	---	RW	F205
R4XC018S12	CONT_INP4_NAME	Contact Input 4 Name	---	---	---	RW	F205
R4XC020S12	CONT_INP5_NAME	Contact Input 5 Name	---	---	---	RW	F205
R4XC028S12	CONT_INP6_NAME	Contact Input 6 Name	---	---	---	RW	F205
R4XC030S12	CONT_INP7_NAME	Contact Input 7 Name	---	---	---	RW	F205
R4XC038S12	CONT_INP8_NAME	Contact Input 8	---	---	---	RW	F205

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Name					
R4XC040S12	CONT_INP9_NAME	Contact Input 9 Name	---	---	---	RW	F205
R4XC048S12	CONT_INP10_NAME	Contact Input 10 Name	---	---	---	RW	F205
R4XC050S12	CONT_INP11_NAME	Contact Input 11 Name	---	---	---	RW	F205
R4XC058S12	CONT_INP12_NAME	Contact Input 12 Name	---	---	---	RW	F205
R4XC060S12	CONT_INP13_NAME	Contact Input 13 Name	---	---	---	RW	F205
R4XC068S12	CONT_INP14_NAME	Contact Input 14 Name	---	---	---	RW	F205
R4XC070S12	CONT_INP15_NAME	Contact Input 15 Name	---	---	---	RW	F205
R4XC078S12	CONT_INP16_NAME	Contact Input 16 Name	---	---	---	RW	F205
R4XC080S12	CONT_INP17_NAME	Contact Input 17 Name	---	---	---	RW	F205
R4XC088S12	CONT_INP18_NAME	Contact Input 18 Name	---	---	---	RW	F205
R4XC090S12	CONT_INP19_NAME	Contact Input 19 Name	---	---	---	RW	F205
R4XC098S12	CONT_INP20_NAME	Contact Input 20 Name	---	---	---	RW	F205
R4XC0A0S12	CONT_INP21_NAME	Contact Input 21 Name	---	---	---	RW	F205
R4XC0A8S12	CONT_INP22_NAME	Contact Input 22 Name	---	---	---	RW	F205
R4XC0B0S12	CONT_INP23_NAME	Contact Input 23 Name	---	---	---	RW	F205
R4XC0B8S12	CONT_INP24_NAME	Contact Input 24 Name	---	---	---	RW	F205
R4XC0C0S12	CONT_INP25_NAME	Contact Input 25 Name	---	---	---	RW	F205
R4XC0C8S12	CONT_INP26_NAME	Contact Input 26 Name	---	---	---	RW	F205
R4XC0D0S12	CONT_INP27_NAME	Contact Input 27 Name	---	---	---	RW	F205
R4XC0D8S12	CONT_INP28_NAME	Contact Input 28 Name	---	---	---	RW	F205
R4XC0E0S12	CONT_INP29_NAME	Contact Input 29 Name	---	---	---	RW	F205
R4XC0E8S12	CONT_INP30_NAME	Contact Input 30 Name	---	---	---	RW	F205
R4XC0F0S12	CONT_INP31_NAME	Contact Input 31 Name	---	---	---	RW	F205
R4XC0F8S12	CONT_INP32_NAME	Contact Input 32 Name	---	---	---	RW	F205
R4XC100S12	CONT_INP33_NAME	Contact Input 33 Name	---	---	---	RW	F205
R4XC108S12	CONT_INP34_NAME	Contact Input 34 Name	---	---	---	RW	F205

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4XC110S12	CONT_INP35_NAME	Contact Input 35 Name	---	---	---	RW	F205
R4XC118S12	CONT_INP36_NAME	Contact Input 36 Name	---	---	---	RW	F205
R4XC120S12	CONT_INP37_NAME	Contact Input 37 Name	---	---	---	RW	F205
R4XC128S12	CONT_INP38_NAME	Contact Input 38 Name	---	---	---	RW	F205
R4XC130S12	CONT_INP39_NAME	Contact Input 39 Name	---	---	---	RW	F205
R4XC138S12	CONT_INP40_NAME	Contact Input 40 Name	---	---	---	RW	F205
R4XC140S12	CONT_INP41_NAME	Contact Input 41 Name	---	---	---	RW	F205
R4XC148S12	CONT_INP42_NAME	Contact Input 42 Name	---	---	---	RW	F205
R4XC150S12	CONT_INP43_NAME	Contact Input 43 Name	---	---	---	RW	F205
R4XC158S12	CONT_INP44_NAME	Contact Input 44 Name	---	---	---	RW	F205
R4XC160S12	CONT_INP45_NAME	Contact Input 45 Name	---	---	---	RW	F205
R4XC168S12	CONT_INP46_NAME	Contact Input 46 Name	---	---	---	RW	F205
R4XC170S12	CONT_INP47_NAME	Contact Input 47 Name	---	---	---	RW	F205
R4XC178S12	CONT_INP48_NAME	Contact Input 48 Name	---	---	---	RW	F205
R4XC180S12	CONT_INP49_NAME	Contact Input 49 Name	---	---	---	RW	F205
R4XC188S12	CONT_INP50_NAME	Contact Input 50 Name	---	---	---	RW	F205
R4XC190S12	CONT_INP51_NAME	Contact Input 51 Name	---	---	---	RW	F205
R4XC198S12	CONT_INP52_NAME	Contact Input 52 Name	---	---	---	RW	F205
R4XC1A0S12	CONT_INP53_NAME	Contact Input 53 Name	---	---	---	RW	F205
R4XC1A8S12	CONT_INP54_NAME	Contact Input 54 Name	---	---	---	RW	F205
R4XC1B0S12	CONT_INP55_NAME	Contact Input 55 Name	---	---	---	RW	F205
R4XC1B8S12	CONT_INP56_NAME	Contact Input 56 Name	---	---	---	RW	F205
R4XC1C0S12	CONT_INP57_NAME	Contact Input 57 Name	---	---	---	RW	F205
R4XC1C8S12	CONT_INP58_NAME	Contact Input 58 Name	---	---	---	RW	F205
R4XC1D0S12	CONT_INP59_NAME	Contact Input 59 Name	---	---	---	RW	F205
R4XC1D8S12	CONT_INP60_NAME	Contact Input 60 Name	---	---	---	RW	F205
R4XC1E0S12	CONT_INP61_NAME	Contact Input 61 Name	---	---	---	RW	F205

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Name					
R4XC1E8S12	CONT_INP62_NAME	Contact Input 62 Name	---	---	---	RW	F205
R4XC1F0S12	CONT_INP63_NAME	Contact Input 63 Name	---	---	---	RW	F205
R4XC1F8S12	CONT_INP64_NAME	Contact Input 64 Name	---	---	---	RW	F205
R4XC200S12	CONT_INP65_NAME	Contact Input 65 Name	---	---	---	RW	F205
R4XC208S12	CONT_INP66_NAME	Contact Input 66 Name	---	---	---	RW	F205
R4XC210S12	CONT_INP67_NAME	Contact Input 67 Name	---	---	---	RW	F205
R4XC218S12	CONT_INP68_NAME	Contact Input 68 Name	---	---	---	RW	F205
R4XC220S12	CONT_INP69_NAME	Contact Input 69 Name	---	---	---	RW	F205
R4XC228S12	CONT_INP70_NAME	Contact Input 70 Name	---	---	---	RW	F205
R4XC230S12	CONT_INP71_NAME	Contact Input 71 Name	---	---	---	RW	F205
R4XC238S12	CONT_INP72_NAME	Contact Input 72 Name	---	---	---	RW	F205
R4XC240S12	CONT_INP73_NAME	Contact Input 73 Name	---	---	---	RW	F205
R4XC248S12	CONT_INP74_NAME	Contact Input 74 Name	---	---	---	RW	F205
R4XC250S12	CONT_INP75_NAME	Contact Input 75 Name	---	---	---	RW	F205
R4XC258S12	CONT_INP76_NAME	Contact Input 76 Name	---	---	---	RW	F205
R4XC260S12	CONT_INP77_NAME	Contact Input 77 Name	---	---	---	RW	F205
R4XC268S12	CONT_INP78_NAME	Contact Input 78 Name	---	---	---	RW	F205
R4XC270S12	CONT_INP79_NAME	Contact Input 79 Name	---	---	---	RW	F205
R4XC278S12	CONT_INP80_NAME	Contact Input 80 Name	---	---	---	RW	F205
R4XC280S12	CONT_INP81_NAME	Contact Input 81 Name	---	---	---	RW	F205
R4XC288S12	CONT_INP82_NAME	Contact Input 82 Name	---	---	---	RW	F205
R4XC290S12	CONT_INP83_NAME	Contact Input 83 Name	---	---	---	RW	F205
R4XC298S12	CONT_INP84_NAME	Contact Input 84 Name	---	---	---	RW	F205
R4XC2A0S12	CONT_INP85_NAME	Contact Input 85 Name	---	---	---	RW	F205
R4XC2A8S12	CONT_INP86_NAME	Contact Input 86 Name	---	---	---	RW	F205
R4XC2B0S12	CONT_INP87_NAME	Contact Input 87 Name	---	---	---	RW	F205

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4XC2B8S12	CONT_INP88_NAME	Contact Input 88 Name	---	---	---	RW	F205
R4XC2C0S12	CONT_INP89_NAME	Contact Input 89 Name	---	---	---	RW	F205
R4XC2C8S12	CONT_INP90_NAME	Contact Input 90 Name	---	---	---	RW	F205
R4XC2D0S12	CONT_INP91_NAME	Contact Input 91 Name	---	---	---	RW	F205
R4XC2D8S12	CONT_INP92_NAME	Contact Input 92 Name	---	---	---	RW	F205
R4XC2E0S12	CONT_INP93_NAME	Contact Input 93 Name	---	---	---	RW	F205
R4XC2E8S12	CONT_INP94_NAME	Contact Input 94 Name	---	---	---	RW	F205
R4XC2F0S12	CONT_INP95_NAME	Contact Input 95 Name	---	---	---	RW	F205
R4XC2F8S12	CONT_INP96_NAME	Contact Input 96 Name	---	---	---	RW	F205
R4xC690	VIRT_INP01_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC691S12	VIRT_INP01_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC6A0	VIRT_INP02_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC6A1S12	VIRT_INP02_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC6B0	VIRT_INP03_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC6B1S12	VIRT_INP03_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC6C0	VIRT_INP04_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC6C1S12	VIRT_INP04_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC6D0	VIRT_INP05_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC6D1S12	VIRT_INP05_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC6E0	VIRT_INP06_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC6E1S12	VIRT_INP06_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC6F0	VIRT_INP07_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC6F1S12	VIRT_INP07_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC700	VIRT_INP08_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC701S12	VIRT_INP08_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC710	VIRT_INP09_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4xC711S12	VIRT_INP09_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC720	VIRT_INP10_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC721S12	VIRT_INP10_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC730	VIRT_INP11_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC731S12	VIRT_INP11_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC740	VIRT_INP12_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC741S12	VIRT_INP12_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC750	VIRT_INP13_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC751S12	VIRT_INP13_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC760	VIRT_INP14_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC761S12	VIRT_INP14_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC770	VIRT_INP15_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC771S12	VIRT_INP15_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC780	U VIRT_INP16_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC781S12	VIRT_INP16_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC790	VIRT_INP17_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC791S12	VIRT_INP17_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC7A0	VIRT_INP18_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC7A1S12	VIRT_INP18_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC7B0	VIRT_INP19_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC7B1S12	VIRT_INP19_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC7C0	VIRT_INP20_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC7C1S12	VIRT_INP20_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC7D0	VIRT_INP21_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC7D1S12 RW F205	VIRT_INP21_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC7E0	VIRT_INP22_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4xC7E1S12	VIRT_INP22_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC7F0	VIRT_INP23_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC7F1S12	VIRT_INP23_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC800	VIRT_INP24_FUNC	Virtual Input x Function	1	---		RW	F102
R4xC801S12	VIRT_INP24_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC810	VIRT_INP25_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC811S12	VIRT_INP25_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC820	VIRT_INP26_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC821S12	VIRT_INP26_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC830	VIRT_INP27_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC831S12	VIRT_INP27_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC840	VIRT_INP28_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC841S12	VIRT_INP28_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC850	VIRT_INP29_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC851S12	VIRT_INP29_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC860	VIRT_INP30_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC861S12	VIRT_INP30_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC870	VIRT_INP31_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC871S12	VIRT_INP31_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xC880	VIRT_INP32_FUNC	Virtual Input x Function	1	---	0 to 1	RW	F102
R4xC881S12	VIRT_INP32_NAME	Virtual Input x Name	---	---	---	RW	F205
R4xCC90S12	VIRT_OUT1_NAME	Virtual Output 1 Name	---	---	---	SP	F205
R4xCCA0S12	VIRT_OUT2_NAME	Virtual Output 2 Name	---	---	---	SP	F205
R4xCCB0S12	VIRT_OUT3_NAME	Virtual Output 3 Name	---	---	---	SP	F205
R4xCCC0S12	VIRT_OUT4_NAME	Virtual Output 4 Name	---	---	---	SP	F205
R4xCCD0S12	VIRT_OUT5_NAME	Virtual Output 5 Name	---	---	---	SP	F205

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4xCCE0S12	VIRT_OUT6_NAME	Virtual Output 6 Name	---	---	---	SP	F205
R4xCCF0S12	VIRT_OUT7_NAME	Virtual Output 7 Name	---	---	---	SP	F205
R4xCD00S12	VIRT_OUT8_NAME	Virtual Output 8 Name	---	---	---	SP	F205
R4xCD10S12	VIRT_OUT9_NAME	Virtual Output 9 Name	---	---	---	SP	F205
R4xCD20S12	VIRT_OUT10_NAME	Virtual Output 10 Name	---	---	---	SP	F205
R4xCD30S12	VIRT_OUT11_NAME	Virtual Output 11 Name	---	---	---	SP	F205
R4xCD40S12	VIRT_OUT12_NAME	Virtual Output 12 Name	---	---	---	SP	F205
R4xCD50S12	VIRT_OUT13_NAME	Virtual Output 13 Name	---	---	---	SP	F205
R4xCD60S12	VIRT_OUT14_NAME	Virtual Output 14 Name	---	---	---	SP	F205
R4xCD70S12	VIRT_OUT15_NAME	Virtual Output 15 Name	---	---	---	SP	F205
R4xCD80S12	VIRT_OUT16_NAME	Virtual Output 16 Name	---	---	---	SP	F205
R4xCD90S12	VIRT_OUT17_NAME	Virtual Output 17 Name	---	---	---	SP	F205
R4xCDA0S12	VIRT_OUT18_NAME	Virtual Output 18 Name	---	---	---	SP	F205
R4xCDB0S12	VIRT_OUT19_NAME	Virtual Output 19 Name	---	---	---	SP	F205
R4xCDC0S12	VIRT_OUT20_NAME	Virtual Output 20 Name	---	---	---	SP	F205
R4xCDD0S12	VIRT_OUT21_NAME	Virtual Output 21 Name	---	---	---	SP	F205
R4xCDE0S12	VIRT_OUT22_NAME	Virtual Output 22 Name	---	---	---	SP	F205
R4xCDF0S12	VIRT_OUT23_NAME	Virtual Output 23 Name	---	---	---	SP	F205
R4xCE00S12	VIRT_OUT24_NAME	Virtual Output 24 Name	---	---	---	SP	F205
R4xCE10S12	VIRT_OUT25_NAME	Virtual Output 25 Name	---	---	---	SP	F205
R4xCE20S12	VIRT_OUT26_NAME	Virtual Output 26 Name	---	---	---	SP	F205
R4xCE30S12	VIRT_OUT27_NAME	Virtual Output 27 Name	---	---	---	SP	F205
R4xCE40S12	VIRT_OUT28_NAME	Virtual Output 28 Name	---	---	---	SP	F205
R4xCE50S12	VIRT_OUT29_NAME	Virtual Output 29 Name	---	---	---	SP	F205
R4xCE60S12	VIRT_OUT30_NAME	Virtual Output 30 Name	---	---	---	SP	F205
R4xCE70S12	VIRT_OUT31_NAME	Virtual Output 31 Name	---	---	---	SP	F205
R4xCE80S12	VIRT_OUT32_NAME	Virtual Output 32	---	---	---	SP	F205

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Name					
R4xCE90S12	VIRT_OUT33_NAME	Virtual Output 33 Name	---	---	---	SP	F205
R4xCEA0S12	VIRT_OUT34_NAME	Virtual Output 34 Name	---	---	---	SP	F205
R4xCEB0S12	VIRT_OUT35_NAME	Virtual Output 35 Name	---	---	---	SP	F205
R4xCEC0S12	VIRT_OUT36_NAME	Virtual Output 36 Name	---	---	---	SP	F205
R4xCED0S12	VIRT_OUT37_NAME	Virtual Output 37 Name	---	---	---	SP	F205
R4xC EE0S12	VIRT_OUT38_NAME	Virtual Output 38 Name	---	---	---	SP	F205
R4xCEF0S12	VIRT_OUT39_NAME	Virtual Output 39 Name	---	---	---	SP	F205
R4xCF00S12	VIRT_OUT40_NAME	Virtual Output 40 Name	---	---	---	SP	F205
R4xCF10S12	VIRT_OUT41_NAME	Virtual Output 41 Name	---	---	---	SP	F205
R4xCF20S12	VIRT_OUT42_NAME	Virtual Output 42 Name	---	---	---	SP	F205
R4xCF30S12	VIRT_OUT43_NAME	Virtual Output 43 Name	---	---	---	SP	F205
R4xCF40S12	VIRT_OUT44_NAME	Virtual Output 44 Name	---	---	---	SP	F205
R4xCF50S12	VIRT_OUT45_NAME	Virtual Output 45 Name	---	---	---	SP	F205
R4xCF60S12	VIRT_OUT46_NAME	Virtual Output 46 Name	---	---	---	SP	F205
R4xCF70S12	VIRT_OUT47_NAME	Virtual Output 47 Name	---	---	---	SP	F205
R4xCF80S12	VIRT_OUT48_NAME	Virtual Output 48 Name	---	---	---	SP	F205
R4xCF90S12	VIRT_OUT49_NAME	Virtual Output 49 Name	---	---	---	SP	F205
R4xCFA0S12	VIRT_OUT50_NAME	Virtual Output 50 Name	---	---	---	SP	F205
R4xCFB0S12	VIRT_OUT51_NAME	Virtual Output 51 Name	---	---	---	SP	F205
R4xCFC0S12	VIRT_OUT52_NAME	Virtual Output 52 Name	---	---	---	SP	F205
R4xCFD0S12	VIRT_OUT53_NAME	Virtual Output 53 Name	---	---	---	SP	F205
R4xCFE0S12	VIRT_OUT54_NAME	Virtual Output 54 Name	---	---	---	SP	F205
R4xCFF0S12	VIRT_OUT55_NAME	Virtual Output 55 Name	---	---	---	SP	F205
R4xD000S12	VIRT_OUT56_NAME	Virtual Output 56 Name	---	---	---	SP	F205
R4xD010S12	VIRT_OUT57_NAME	Virtual Output 57 Name	---	---	---	SP	F205
R4xD020S12	VIRT_OUT58_NAME	Virtual Output 58 Name	---	---	---	SP	F205

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4xD030S12	VIRT_OUT59_NAME	Virtual Output 59 Name	---	---	---	SP	F205
R4xD040S12	VIRT_OUT60_NAME	Virtual Output 60 Name	---	---	---	SP	F205
R4xD050S12	VIRT_OUT61_NAME	Virtual Output 61 Name	---	---	---	SP	F205
R4xD060S12	VIRT_OUT62_NAME	Virtual Output 62 Name	---	---	---	SP	F205
R4xD070S12	VIRT_OUT63_NAME	Virtual Output 63 Name	---	---	---	SP	F205
R4xD080S12	VIRT_OUT64_NAME	Virtual Output 64 Name	---	---	---	SP	F205
R4xD290S12	CONT_OUT1_NAME	Contact Output 1 Name	---	---	---	SP	F205
R4xD2A0S12	CONT_OUT2_NAME	Contact Output 2 Name	---	---	---	SP	F205
R4xD2B0S12	CONT_OUT3_NAME	Contact Output 3 Name	---	---	---	SP	F205
R4xD2C0S12	CONT_OUT4_NAME	Contact Output 4 Name	---	---	---	SP	F205
R4xD2D0S12	CONT_OUT5_NAME	Contact Output 5 Name	---	---	---	SP	F205
R4xD2E0S12	CONT_OUT6_NAME	Contact Output 6 Name	---	---	---	SP	F205
R4xD2F0S12	CONT_OUT7_NAME	Contact Output 7 Name	---	---	---	SP	F205
R4xD300S12	CONT_OUT8_NAME	Contact Output 8 Name	---	---	---	SP	F205
R4xD310S12	CONT_OUT9_NAME	Contact Output 9 Name	---	---	---	SP	F205
R4xD320S12	CONT_OUT10_NAME	Contact Output 10 Name	---	---	---	SP	F205
R4xD330S12	CONT_OUT11_NAME	Contact Output 11 Name	---	---	---	SP	F205
R4xD340S12	CONT_OUT12_NAME	Contact Output 12 Name	---	---	---	SP	F205
R4xD350S12	CONT_OUT13_NAME	Contact Output 13 Name	---	---	---	SP	F205
R4xD360S12	CONT_OUT14_NAME	Contact Output 14 Name	---	---	---	SP	F205
R4xD370S12	CONT_OUT15_NAME	Contact Output 15 Name	---	---	---	SP	F205
R4xD380S12	CONT_OUT16_NAME	Contact Output 16 Name	---	---	---	SP	F205
R4xD390S12	CONT_OUT17_NAME	Contact Output 17 Name	---	---	---	SP	F205
R4xD3A0S12	CONT_OUT18_NAME	Contact Output 18 Name	---	---	---	SP	F205
R4xD3B0S12	CONT_OUT19_NAME	Contact Output 19 Name	---	---	---	SP	F205
R4xD3C0S12	CONT_OUT20_NAME	Contact Output 20 Name	---	---	---	SP	F205
R4xD3D0S12	CONT_OUT21_NAME	Contact Output 21 Name	---	---	---	SP	F205

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Name					
R4xD3E0S12	CONT_OUT22_NAME	Contact Output 22 Name	---	---	---	SP	F205
R4xD3F0S12	CONT_OUT23_NAME	Contact Output 23 Name	---	---	---	SP	F205
R4xD400S12	CONT_OUT24_NAME	Contact Output 24 Name	---	---	---	SP	F205
R4xD410S12	CONT_OUT25_NAME	Contact Output 25 Name	---	---	---	SP	F205
R4xD420S12	CONT_OUT26_NAME	Contact Output 26 Name	---	---	---	SP	F205
R4xD430S12	CONT_OUT27_NAME	Contact Output 27 Name	---	---	---	SP	F205
R4xD440S12	CONT_OUT28_NAME	Contact Output 28 Name	---	---	---	SP	F205
R4xD450S12	CONT_OUT29_NAME	Contact Output 29 Name	---	---	---	SP	F205
R4xD460S12	CONT_OUT30_NAME	Contact Output 30 Name	---	---	---	SP	F205
R4xD470S12	CONT_OUT31_NAME	Contact Output 31 Name	---	---	---	SP	F205
R4xD480S12	CONT_OUT32_NAME	Contact Output 32 Name	---	---	---	SP	F205
R4xD490S12	CONT_OUT33_NAME	Contact Output 33 Name	---	---	---	SP	F205
R4xD4A0S12	CONT_OUT34_NAME	Contact Output 34 Name	---	---	---	SP	F205
R4xD4B0S12	CONT_OUT35_NAME	Contact Output 35 Name	---	---	---	SP	F205
R4xD4C0S12	CONT_OUT36_NAME	Contact Output 36 Name	---	---	---	SP	F205
R4xD4D0S12	CONT_OUT37_NAME	Contact Output 37 Name	---	---	---	SP	F205
R4xD4E0S12	CONT_OUT38_NAME	Contact Output 38 Name	---	---	---	SP	F205
R4xD4F0S12	CONT_OUT39_NAME	Contact Output 39 Name	---	---	---	SP	F205
R4xD500S12	CONT_OUT40_NAME	Contact Output 40 Name	---	---	---	SP	F205
R4xD510S12	CONT_OUT41_NAME	Contact Output 41 Name	---	---	---	SP	F205
R4xD520S12	CONT_OUT42_NAME	Contact Output 42 Name	---	---	---	SP	F205
R4xD530S12	CONT_OUT43_NAME	Contact Output 43 Name	---	---	---	SP	F205
R4xD540S12	CONT_OUT44_NAME	Contact Output 44 Name	---	---	---	SP	F205
R4xD550S12	CONT_OUT45_NAME	Contact Output 45 Name	---	---	---	SP	F205
R4xD560S12	CONT_OUT46_NAME	Contact Output 46 Name	---	---	---	SP	F205
R4xD570S12	CONT_OUT47_NAME	Contact Output 47 Name	---	---	---	SP	F205

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4xD580S12	CONT_OUT48_NAME	Contact Output 48 Name	---	---	---	SP	F205
R4xD590S12	CONT_OUT49_NAME	Contact Output 49 Name	---	---	---	SP	F205
R4xD5A0S12	CONT_OUT50_NAME	Contact Output 50 Name	---	---	---	SP	F205
R4xD5B0S12	CONT_OUT51_NAME	Contact Output 51 Name	---	---	---	SP	F205
R4xD5C0S12	CONT_OUT52_NAME	Contact Output 52 Name	---	---	---	SP	F205
R4xD5D0S12	CONT_OUT53_NAME	Contact Output 53 Name	---	---	---	SP	F205
R4xD5E0S12	CONT_OUT54_NAME	Contact Output 54 Name	---	---	---	SP	F205
R4xD5F0S12	CONT_OUT55_NAME	Contact Output 55 Name	---	---	---	SP	F205
R4xD600S12	CONT_OUT56_NAME	Contact Output 56 Name	---	---	---	SP	F205
R4xD610S12	CONT_OUT57_NAME	Contact Output 57 Name	---	---	---	SP	F205
R4xD620S12	CONT_OUT58_NAME	Contact Output 58 Name	---	---	---	SP	F205
R4xD630S12	CONT_OUT59_NAME	Contact Output 59 Name	---	---	---	SP	F205
R4xD640S12	CONT_OUT60_NAME	Contact Output 60 Name	---	---	---	SP	F205
R4xD650S12	CONT_OUT61_NAME	Contact Output 61 Name	---	---	---	SP	F205
R4xD660S12	CONT_OUT62_NAME	Contact Output 62 Name	---	---	---	SP	F205
R4xD670S12	CONT_OUT63_NAME	Contact Output 63 Name	---	---	---	SP	F205
R4xD680S12	CONT_OUT64_NAME	Contact Output 64 Name	---	---	---	SP	F205
R4xEF00	RES_GF1_FUNC	Restricted Ground Fault 1 Function	---	1	0 to 1	SP	F102
R4xEF09	RES_GF2_FUNC	Restricted Ground Fault 2 Function	---	1	0 to 1	SP	F102
R4xEF12	RES_GF3_FUNC	Restricted Ground Fault 3 Function	---	1	0 to 1	SP	F102
R4xEF1B	RES_GF4_FUNC	Restricted Ground Fault 4 Function	---	1	0 to 1	SP	F102
R4xEF24	RES_GF5_FUNC	Restricted Ground Fault 5 Function	---	1	0 to 1	SP	F102
R4xEF2D	RES_GF6_FUNC	Restricted Ground Fault 6 Function	---	1	0 to 1	SP	F102

Notes

In the following notes, MSB or MSByte refers to the 'most significant byte'; LSB or LSByte refer to the 'least-significant byte'; MSb or MSbit refer to the 'most-significant bit'; LSb or LSbit refer to the 'least-significant bit'.

CODE	TYPE/BITMASK	DEFINITION
F000_NEW	BITFIELD	PHASE SELECT ELEMENT STATE
F001	UR_UINT16	UNSIGNED 16 BIT INTEGER
F002	UR_SINT16	SIGNED 16 BIT INTEGER
F003	UR_UINT32	UNSIGNED 32 BIT INTEGER (2 registers)
		High order word is stored in the first register.
		Low order word is stored in the second register.
F004	UR_SINT32	SIGNED 32 BIT INTEGER (2 registers)
		High order word is stored in the first register.
		Low order word is stored in the second register.
F005	UR_UINT8	UNSIGNED 8 BIT INTEGER
F006	UR_SINT8	SIGNED 8 BIT INTEGER
F011	UR_UINT16	FLEXCURVE DATA (120 POINTS)
		A FlexCurve is an array of 120 consecutive data points (x,y) which are interpolated to generate a smooth curve. The y-axis is the user defined trip or operation time setting; the x-axis is the pickup ratio and is pre-defined. Refer to format F119 for a listing of the pickup ratios; the enumeration value for the pickup ratio indicates the offset into the FlexCurve base address where the corresponding time value is stored.
F012	DISPLAY_SCALE	DISPLAY SCALING (UNSIGNED 16 BIT INTEGER)
		MSB indicates the SI units as a power of ten.
		LSB indicates the number of decimal points to display.
		Example: Current values are stored as 32 bit numbers with three decimal places and base units in Amps. If the retrieved value is 12345.678 A and the display scale equals 0x0302 then the displayed value on the unit is 12.35 kA.
F013	POWER_FACTOR	POWER FACTOR (SIGNED 16 BIT INTEGER)
		Positive values indicate lagging power factor; negative values indicate leading.
F040	UR_UINT48	48-BIT UNSIGNED INTEGER
F050	UR_UINT32	TIME and DATE (UNSIGNED 32 BIT INTEGER)
		Gives the current time in seconds elapsed since 00:00:00 January 1, 1970.
F051	UR_UINT32	DATE in SR style format (alternate format for F050)
		First 16 bits are Month/Day (MM/DD/xxxx)
		Month (1=January,2=February,....,12=December)
		Day(1 to 31 in steps of 1)
		Last 16 bits are Year (xx/xx/YYYY)
		1970 to 2106 in steps of 1
F052	UR_UINT32	TIME in SR style format (alternate format for F050)
		First 16 bits are Hours/Minutes (HH:MM:xx.xxx)
		Hours (0=12am,1=1am,....,12=12pm,....23=11pm)
		Minutes(0 to 59 in steps of 1)
		Last 16 bits are Seconds (xx:xx:SS.SSS)
		(0=00.000s,1=00.001,....,59999=59.999s)
F060	FLOATING_POINT	IEE FLOATING POINT (32 bits)
F070	HEX2	2 BYTES - 4 ASCII DIGITS

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CODE	TYPE/BITMASK	DEFINITION
F071	HEX4	4 BYTES - 8 ASCII DIGITS
F072	HEX6	6 BYTES - 12 ASCII DIGITS
F073	HEX8	8 BYTES - 16 ASCII DIGITS
F074	HEX20	20 BYTES - 40 ASCII DIGITS
F100	ENUMERATION	VT CONNECTION TYPE
		0 Wye
		1 Delta
F101	ENUMERATION	MESSAGE DISPLAY INTENSITY
		0 0.25
		1 0.5
		2 0.75
		3 1
F102	ENUMERATION	DISABLED/ENABLED
		0 Disabled
		1 Enabled
F103	ENUMERATION	CURVE SHAPES
		0 IEEE Mod Inv
		1 IEEE Very Inv
		2 IEEE Ext Inv
		3 IEC Curve A
		4 IEC Curve B
		5 IEC Curve C
		6 IEC Short Inv
		7 IAC Ext Inv
		8 IAC Very Inv
		9 IAC Inverse
		10 IAC Short Inv
		11 I ² t
		12 Definite Time
		13 Flexcurve A
		14 Flexcurve B
F104	ENUMERATION	RESET TYPE
		0 Instantaneous
		1 Timed
F105	ENUMERATION	LOGIC INPUT
		0 Disabled
		1 Input 1
		2 Input 2
F106	ENUMERATION	PHASE ROTATION
		0 ABC
		1 ACB
F108	ENUMERATION	OFF/ON
		0 Off
		1 On
F109	ENUMERATION	CONTACT OUTPUT OPERATION
		0 Self-reset

CODE	TYPE/BITMASK	DEFINITION
		1 Latched
		2 Disabled
F110	ENUMERATION	CONTACT OUTPUT LED CONTROL
		0 Trip
		1 Alarm
		2 None
F111	ENUMERATION	UNDERVOLTAGE CURVE SHAPES
		0 Definite Time
		1 Inverse Time
F112	ENUMERATION	RS485 BAUD RATES
		0 300
		1 1200
		2 2400
		3 4800
		4 9600
		5 19200
		6 38400
		7 57600
		8 115200
F113	ENUMERATION	PARITY
		0 None
		1 Odd
		2 Even
F114	ENUMERATION	IRIG-B SIGNAL TYPE
		0 None
		1 DC Shift
		2 Amplitude Modulated
F115	ENUMERATION	BREAKER STATUS
		0 Auxiliary A
		1 Auxiliary B
F117	ENUMERATION	NUMBER OF OSCILLOGRAPHY RECORDS
		0 1 x 72 Cycles
		1 3 x 36 Cycles
		2 7 x 18 Cycles
		3 15 x 9 Cycles
F118	ENUMERATION	OSCILLOGRAPHY MODE
		0 Automatic Overwrite
		1 Protected
F119	ENUMERATION	FLEXCURVE PICKUP RATIOS
		0 0
		1 0.05
		2 0.1
		3 0.15
		4 0.2
		5 0.25
		6 0.3

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CODE	TYPE/BITMASK	DEFINITION
		7 0.35
		8 0.4
		9 0.45
		10 0.48
		11 0.5
		12 0.52
		13 0.54
		14 0.56
		15 0.58
		16 0.6
		17 0.62
		18 0.64
		19 0.66
		20 0.68
		21 0.7
		22 0.72
		23 0.74
		24 0.76
		25 0.78
		26 0.8
		27 0.82
		28 0.84
		29 0.86
		30 0.88
		31 0.9
		32 0.91
		33 0.92
		34 0.93
		35 0.94
		36 0.95
		37 0.96
		38 0.97
		39 0.98
		40 1.03
		41 1.05
		42 1.1
		43 1.2
		44 1.3
		45 1.4
		46 1.5
		47 1.6
		48 1.7
		49 1.8
		50 1.9
		51 2
		52 2.1

CODE	TYPE/BITMASK	DEFINITION
		53 2.2
		54 2.3
		55 2.4
		56 2.5
		57 2.6
		58 2.7
		59 2.8
		60 2.9
		61 3
		62 3.1
		63 3.2
		64 3.3
		65 3.4
		66 3.5
		67 3.6
		68 3.7
		69 3.8
		70 3.9
		71 4
		72 4.1
		73 4.2
		74 4.3
		75 4.4
		76 4.5
		77 4.6
		78 4.7
		79 4.8
		80 4.9
		81 5
		82 5.1
		83 5.2
		84 5.3
		85 5.4
		86 5.5
		87 5.6
		88 5.7
		89 5.8
		90 5.9
		91 6
		92 6.5
		93 7
		94 7.5
		95 8
		96 8.5
		97 9
		98 9.5

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CODE	TYPE/BITMASK	DEFINITION
		99 10
		100 10.5
		101 11
		102 11.5
		103 12
		104 12.5
		105 13
		106 13.5
		107 14
		108 14.5
		109 15
		110 15.5
		111 16
		112 16.5
		113 17
		114 17.5
		115 18
		116 18.5
		117 19
		118 19.5
		119 20
F122	ENUMERATION	ELEMENT INPUT SIGNAL TYPE
		0 Phasor
		1 RMS
F123	ENUMERATION	CT SECONDARY
		0 1 A
		1 5 A
F124	ENUMERATION	LIST OF ELEMENTS
		0 PHASE IOC1
		1 PHASE IOC2
		2 PHASE IOC3
		3 PHASE IOC4
		4 PHASE IOC5
		5 PHASE IOC6
		6 PHASE IOC7
		7 PHASE IOC8
		8 PHASE IOC9
		9 PHASE IOC10
		10 PHASE IOC11
		11 PHASE IOC12
		16 PHASE TOC1
		17 PHASE TOC2
		18 PHASE TOC3
		19 PHASE TOC4
		20 PHASE TOC5
		21 PHASE TOC6

CODE	TYPE/BITMASK	DEFINITION
		24 PH DIR1
		25 PH DIR2
		32 NEUTRAL IOC1
		33 NEUTRAL IOC2
		34 NEUTRAL IOC3
		35 NEUTRAL IOC4
		36 NEUTRAL IOC5
		37 NEUTRAL IOC6
		38 NEUTRAL IOC7
		39 NEUTRAL IOC8
		40 NEUTRAL IOC9
		41 NEUTRAL IOC10
		42 NEUTRAL IOC11
		43 NEUTRAL IOC12
		48 NEUTRAL TOC1
		49 NEUTRAL TOC2
		50 NEUTRAL TOC3
		51 NEUTRAL TOC4
		52 NEUTRAL TOC5
		53 NEUTRAL TOC6
		56 NTRL DIR1
		57 NTRL DIR2
		64 GROUND IOC1
		65 GROUND IOC2
		66 GROUND IOC3
		67 GROUND IOC4
		68 GROUND IOC5
		69 GROUND IOC6
		70 GROUND IOC7
		71 GROUND IOC8
		72 GROUND IOC9
		73 GROUND IOC10
		74 GROUND IOC11
		75 GROUND IOC12
		80 GROUND TOC1
		81 GROUND TOC2
		82 GROUND TOC3
		83 GROUND TOC4
		84 GROUND TOC5
		85 GROUND TOC6
		96 NEG SEQ IOC1
		97 NEG SEQ IOC2
		112 NEG SEQ TOC1
		113 NEG SEQ TOC2
		144 PHASE UV1
		145 PHASE UV2

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CODE	TYPE/BITMASK	DEFINITION
	152	PHASE OV1
	160	PH DIST Z1
	161	PH DIST Z2
	162	PH DIST Z3
	163	PH DIST Z4
	168	LINE PICKUP
	176	GND DIST Z1
	177	GND DIST Z2
	178	GND DIST Z3
	179	GND DIST Z4
	184	DUTT
	185	PUTT
	186	POTT
	187	HYBRID POTT
	188	BLOCK SCHEME
	208	XFMR INST DIFF
	209	XFMR PCNT DIFF
	224	VTFE
	232	CT FAIL
	240	87L DIFF
	241	IT TRIP
	242	OPEN POLE
	243	PHASE SELECT
	244	50DD
	245	CONT MONITOR
	246	IB LOW SET
	247	TRIP PERM
	248	TRIP SELECT
	249	TRIP OUTPUT
	250	STUB BUS
	256	87PC
	272	BREAKER 1
	273	BREAKER 2
	280	BKR FAIL 1
	281	BKR FAIL 2
	288	BKR ARC 1
	289	BKR ARC 2
	304	AR 1
	305	AR 2
	306	AR 3
	307	AR 4
	308	AR 5
	309	AR 6
	312	SYNC 1
	313	SYNC 2
	320	COLD LOAD 1

CODE	TYPE/BITMASK	DEFINITION
		321 COLD LOAD 2
		336 SETTING GROUP
		337 RESET
		352 UNDERFREQ
		512 DIG ELEM 1
		513 DIG ELEM 2
		514 DIG ELEM 3
		515 DIG ELEM 4
		516 DIG ELEM 5
		517 DIG ELEM 6
		518 DIG ELEM 7
		519 DIG ELEM 8
		520 DIG ELEM 9
		521 DIG ELEM 10
		522 DIG ELEM 11
		523 DIG ELEM 12
		524 DIG ELEM 13
		525 DIG ELEM 14
		526 DIG ELEM 15
		527 DIG ELEM 16
		544 COUNTER 1
		545 COUNTER 2
		546 COUNTER 3
		547 COUNTER 4
		548 COUNTER 5
		549 COUNTER 6
		550 COUNTER 7
		551 COUNTER 8
F125	ENUMERATION	ACCESS LEVEL
		0 Restricted
		1 Command
		2 Setting
		3 Factory Service
F126	ENUMERATION	NO/YES CHOICE
		0 No
		1 Yes
F127	ENUMERATION	VIRTUAL INPUT TYPE
		0 Normal
		1 Self-Reset
		2 SBO-Once
		3 SBO-Many
F128	ENUMERATION	CONTACT INPUT THRESHOLD
		0 16 Vdc
		1 30 Vdc
		2 80 Vdc
		3 140 Vdc

CODE	TYPE/BITMASK	DEFINITION
F129	ENUMERATION	FLEXLOGIC TIMER TYPE
		0 millisecond
		1 second
		2 minute
F130	ENUMERATION	SIMULATION MODE
		0 Off
		1 Pre-Fault
		2 Fault
		3 Post-Fault
F131	ENUMERATION	FORCED CONTACT OUTPUT STATE
		0 Disabled
		1 Energized
		2 De-energized
		3 Freeze
F132	ENUMERATION	DEMAND INTERVAL
		0 5 MIN
		1 10 MIN
		2 15 MIN
		3 20 MIN
		4 30 MIN
		5 60 MIN
F133	ENUMERATION	PROGRAM STATE
		0 Not Programmed
		1 Programmed
F134	ENUMERATION	PASS/FAIL
		0 Fail
		1 OK
		2 n/a
F135	ENUMERATION	GAIN CALIBRATION
		0 x1
		1 x16
F136	ENUMERATION	NUMBER OF OSCILLOGRAPHY RECORDS
		0 31 x 8 cycles
		1 15 x 16 cycles
		2 7 x 32 cycles
		3 3 x 64 cycles
		4 1 x 128 cycles
F138	ENUMERATION	OSCILLOGRAPHY FILE TYPE
		0 Data File
		1 Configuration File
		2 Header File
F139	ENUMERATION	OK/FAIL
		0 Failed
		1 Passed
		2 n/a
F140	ENUMERATION	CURRENT, SENS CURRENT, VOLTAGE, DISABLED

CODE	TYPE/BITMASK	DEFINITION
		0 Disabled
		1 Current
		2 Voltage
		3 Sens Current
F141	ENUMERATION	SELF TEST ERROR
		0 Any Self-Tests
		1 IRIG-B FAILURE
		2 DSP ERROR
		4 NO DSP INTERRUPTS
		5 UNIT NOT CALIBRATED
		7 CLOCK NOT SET
		8 FACTORY SERVICE MODE
		9 PROTOTYPE FIRMWARE
		10 FLEXLOGIC ERR TOKEN
		11 EQUIPMENT MISMATCH
		12 RAM CODE FAILURE
		13 UNIT NOT PROGRAMMED
		14 SYSTEM EXCEPTION
		15 SYNCHRONIZING
		16 CHANNEL 1 FAILED
		17 CHANNEL 2 FAILED
		18 FLASH PROGRAMMING
		19 BATTERY FAIL
		20 PRI ETHERNET FAIL
		21 SEC ETHERNET FAIL
		22 EEPROM DATA ERROR
		23 SRAM DATA ERROR
		24 PROGRAM MEMORY
		25 WATCHDOG ERROR
		26 LOW ON MEMORY
		27 REMOTE DEVICE OFF
F142	ENUMERATION	EVENT RECORDER ACCESS FILE TYPE
		0 All Record Data
		1 Headers Only
		2 Numeric Event Cause
F143	UR_UINT32	32 BIT ERROR CODE (F141 specifies the bit number)
		A bit value of 0 = no error, 1 = error
F144	ENUMERATION	FORCED CONTACT INPUT STATE
		0 Disabled
		1 Open
		2 Closed
F145	ENUMERATION	ALPHABET LETTER
		0 null
		1 A
		2 B
		3 C

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CODE	TYPE/BITMASK	DEFINITION
		4 D
		5 E
		6 F
		7 G
		8 H
		9 I
		10 J
		11 K
		12 L
		13 M
		14 N
		15 O
		16 P
		17 Q
		18 R
		19 S
		20 T
		21 U
		22 V
		23 W
		24 X
		25 Y
		26 Z
F146	ENUMERATION	MISC. EVENT CAUSES
		0 EVENTS CLEARED
		1 OSCILLOGRAPHY TRIG'D
		2 DATE/TIME CHANGED
		3 DEF SETTINGS LOADED
		4 TEST MODE ON
		5 TEST MODE OFF
		6 POWER ON
		7 POWER OFF
		8 RELAY IN SERVICE
		9 RELAY OUT OF SERVICE
		10 WATCHDOG RESET
		11 OSCILLOGRAPHY CLEAR
F147	ENUMERATION	LINE LENGTH UNITS
		0 km
		1 miles
F148	ENUMERATION	FAULT TYPE
		0 None
		1 AG
		2 BG
		3 CG
		4 AB
		5 BC

CODE	TYPE/BITMASK	DEFINITION
		6 AC
		7 ABG
		8 BCG
		9 ACG
		10 ABC
		11 ABCG
F149	ENUMERATION	87L PHASE COMP SCHEME SELECTION
		0 2TL-PT-DPC-3FC
		1 2TL-PT-SPC-2FC
		2 2TL-PT-DPC-2FC
		3 2TL-BL-DPC-2FC
		4 2/3TL-BL-SPC-AMC
		5 3TL-PT-SPC-2FC
		6 3TL-BL-SPC-2FC
F150	ENUMERATION	87L PHASE COMP SCHEME SIGNAL SELECTION
		0 Composite
		1 310
F151	ENUMERATION	87L PH CMP 52B KEYING SELECT
		0 FDL
		1 FDM
F152	ENUMERATION	SETTING GROUP
		0 Active Group
		1 Group 1
		2 Group 2
		3 Group 3
		4 Group 4
		5 Group 5
		6 Group 6
		7 Group 7
		8 Group 8
F154	ENUMERATION	DISTANCE DIRECTION
		0 Forward
		1 Reverse
F155	ENUMERATION	REMOTE DEVICE STATE
		0 Offline
		1 Online
F156	ENUMERATION	REMOTE INPUT BIT PAIRS
		0 None
		1 DNA-1
		2 DNA-2
		3 DNA-3
		4 DNA-4
		5 DNA-5
		6 DNA-6
		7 DNA-7
		8 DNA-8

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CODE	TYPE/BITMASK	DEFINITION
		9 DNA-9
		10 DNA-10
		11 DNA-11
		12 DNA-12
		13 DNA-13
		14 DNA-14
		15 DNA-15
		16 DNA-16
		17 DNA-17
		18 DNA-18
		19 DNA-19
		20 DNA-20
		21 DNA-21
		22 DNA-22
		23 DNA-23
		24 DNA-24
		25 DNA-25
		26 DNA-26
		27 DNA-27
		28 DNA-28
		29 DNA-29
		30 DNA-30
		31 DNA-31
		32 DNA-32
		33 UserSt-1
		34 UserSt-2
		35 UserSt-3
		36 UserSt-4
		37 UserSt-5
		38 UserSt-6
		39 UserSt-7
		40 UserSt-8
		41 UserSt-9
		42 UserSt-10
		43 UserSt-11
		44 UserSt-12
		45 UserSt-13
		46 UserSt-14
		47 UserSt-15
		48 UserSt-16
		49 UserSt-17
		50 UserSt-18
		51 UserSt-19
		52 UserSt-20
		53 UserSt-21
		54 UserSt-22

CODE	TYPE/BITMASK	DEFINITION
		55 UserSt-23
		56 UserSt-24
		57 UserSt-25
		58 UserSt-26
		59 UserSt-27
		60 UserSt-28
		61 UserSt-29
		62 UserSt-30
		63 UserSt-31
		64 UserSt-32
F157	ENUMERATION	BREAKER MODE
		0 3-Pole
		1 1-Pole
F158	ENUMERATION	SCHEME CALIBRATION TEST
		0 Normal
		1 Symmetry 1
		2 Symmetry 2
		3 Delay 1
		4 Delay 2
F159	ENUMERATION	BREAKER AUX CONTACT KEYING
		0 52a
		1 52b
		2 None
F160	ENUMERATION	TRANSFORMER PHASE COMPENSATION
		0 Internal (software)
		1 External (with CTs)
F161	ENUMERATION	TRANSFORMER RATED WINDING TEMP RISE
		0 55°C (oil)
		1 65°C (oil)
		2 80°C (dry)
		3 115°C (dry)
		4 150°C (dry)
F162	ENUMERATION	TRANSFORMER TYPE OF COOLING
		0 OA
		1 FA
		2 Non-directed FOA/FOW
		3 Directed FOA/FOW
F163	ENUMERATION	TRANSFORMER WINDING CONNECTION
		0 Wye
		1 Delta
		2 Zig-zag
F164	ENUMERATION	TRANSFORMER WINDING GROUNDING
		0 Not within zone
		1 Within zone
F165	ENUMERATION	TRANSFORMER TAP INPUT
		0 None

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CODE	TYPE/BITMASK	DEFINITION
		1 Tap Input 1
		2 Tap Input 2
		3 Auto-detect
F166	ENUMERATION	AUXILIARY VT CONNECTION TYPE
		0 Vn
		1 Vag
		2 Vbg
		3 Vcg
		4 Vab
		5 Vbc
		6 Vca
F167	ENUMERATION	SIGNAL SOURCE
		0 SRC 1
		1 SRC 2
		2 SRC 3
		3 SRC 4
		4 SRC 5
		5 SRC 6
F168	ENUMERATION	INRUSH INHIBIT FUNCTION
		0 Disabled
		1 2nd
F169	ENUMERATION	OVEREXCITATION INHIBIT FUNCTION
		0 Disabled
		1 5th
F170	ENUMERATION	LOW/HIGH OFFSET&GAIN TRANSDUCER IO SELECTION
		0 LOW
		1 HIGH
F171	ENUMERATION	TRANSDUCER CHANNEL INPUT TYPE
		0 dcmA IN
		1 OHMS IN
		2 RTD IN
		3 dcmA OUT
F172	ENUMERATION	SLOT LETTERS
		0 F
		1 G
		2 H
		3 J
		4 K
		5 L
		6 M
		7 N
		8 P
		9 R
		10 S
		11 T
		12 U

CODE	TYPE/BITMASK	DEFINITION
		13 V
		14 W
		15 X
F173	ENUMERATION	TRANSDUCER DCMA INPUT/OUTPUT RANGE
		0 0 to -1 mA
		1 0 to 1 mA
		2 -1 to 1 mA
		3 0 to 5 mA
		4 0 to 10 mA
		5 0 to 20 mA
		6 4 to 20 mA
F174	ENUMERATION	TRANSDUCER RTD INPUT TYPE
		0 100 Ohm Platinum
		1 120 Ohm Nickel
		2 100 Ohm Nickel
		3 10 Ohm Copper
F175	ENUMERATION	PHASE LETTERS
		0 A
		1 B
		2 C
F176	ENUMERATION	SYNCHROCHECK DEAD SOURCE SELECT
		0 None
		1 LV1 and DV2
		2 DV1 and LV2
		3 DV1 or DV2
		4 DV1 Xor DV2
		5 DV1 and DV2
F177	ENUMERATION	COMMUNICATION PORT
		0 NONE
		1 COM1 - RS485
		2 COM2 - RS485
		3 FRONT PANEL - RS232
		4 NETWORK
F178	ENUMERATION	DATA LOGGER RATES
		0 1 sec
		1 1 min
		2 5 min
		3 10 min
		4 15 min
		5 20 min
		6 30 min
		7 60 min
F179	ENUMERATION	NEGATIVE SEQUENCE DIR OC TYPE
		0 Neg Sequence
		1 Zero Sequence
F180	ENUMERATION	PHASE/GROUND

CODE	TYPE/BITMASK	DEFINITION
		0 PHASE
		1 GROUND
F181	ENUMERATION	ODD/EVEN/NON
		0 ODD
		1 EVEN
		2 NON
F182	ENUMERATION	LOSS OF LOAD/ARCING SUSPECTED/ARCING/OVERCURRENT DOWNED CONDUCTOR/EXTERNAL
		0 LOSS OF LOAD
		1 ARCING SUSPECTED
		2 ARCING
		3 OVERCURRENT
		4 DOWNED CONDUCTOR
		5 EXTERNAL
F183	ENUMERATION	AC INPUT WAVEFORMS
		0 Off
		1 8 samples/cycle
		2 16 samples/cycle
		3 32 samples/cycle
		4 64 samples/cycle
F184	ENUMERATION	FUNCTION ENUMERATION
		0 DISABLED
		1 ENABLED
		2 ALARM
		3 TRIP-3P
F185	ENUMERATION	PHASE A,B,C, GROUND SELECTOR
		0 A
		1 B
		2 C
		3 G
F186	ENUMERATION	MEASUREMENT MODE
		0 Phase to Ground
		1 Phase to Phase
F187	ENUMERATION	HIZ States
		0 NORMAL
		1 COORDINATION TIMEOUT
		2 ARMED
		5 ARCING
		9 DOWNED CONDUCTOR
F188	ENUMERATION	HIZ CAPTURE TRIGGER TYPES
		0 NONE
		1 LOSS OF LOAD
		2 ARCING SUSPECTED
		3 ARCING
		4 OVERCURRENT
		5 DOWNED CONDUCTOR

CODE	TYPE/BITMASK	DEFINITION
		6 EXTERNAL
F189	ENUMERATION	ENABLED/DISABLED/ALARM
		0 DISABLED
		1 ENABLED
		2 ALARM
F190	ENUMERATION	Simulated Keypress
		0 No key -- use between real keys
		1 1
		2 2
		3 3
		4 4
		5 5
		6 6
		7 7
		8 8
		9 9
		10 0
		11 Decimal Point
		12 Plus/Minus
		13 Value Up
		14 Value Down
		15 Message Up
		16 Message Down
		17 Message Left
		18 Message Right
		19 Menu
		20 Help
		21 Escape
		22 Enter
		23 Reset
		24 User 1
		25 User 2
		26 User 3
F200	TEXT40	40 CHARACTER ASCII TEXT
		20 registers -16 Bits: 1st Char MSB, 2nd Char. LSB
F201	TEXT8	8 CHARACTER ASCII PASSCODE
		4 registers -16 Bits: 1st Char MSB, 2nd Char. LSB
F202	TEXT20	20 CHARACTER ASCII TEXT
		10 registers -16 Bits: 1st Char MSB, 2nd Char. LSB
F203	TEXT16	16 CHARACTER ASCII TEXT
F204	TEXT80	80 CHARACTER ASCII TEXT
F205	TEXT12	12 CHARACTER ASCII TEXT
F206	TEXT6	6 CHARACTER ASCII TEXT
F207	TEXT4	4 CHARACTER ASCII TEXT
F208	TEXT2	2 CHARACTER ASCII TEXT
F222	ENUMERATION	TEST ENUMERATION

CODE	TYPE/BITMASK	DEFINITION
		0 Test Enumeration 0
		1 Test Enumeration 1
F230	ENUMERATION	DIRECTIONAL POLARIZING
		0 Voltage
		1 Current
		2 Dual
F300	UR_UINT16	FLEXLOGIC BASE TYPE (6 bit type)
		The flexlogic BASE type is 6 bits and is combined with a 9 bit descriptor and 1 bit for protection
		element to form a 16 bit value. The combined bits are of the form : PTTTTTDDDDDDDD
		where P bit if set, indicates that the flexlogic type is associated with a protection element state
		and T represents bits for the BASE type, and D represents bits for the descriptor.
		The values in square brackets indicate the base type with P prefix [PTTTTT] and the values in round brackets indicate the descriptor range.
		[0] Off(0) this is boolean FALSE value
		[0] On (1)This is boolean TRUE value
		[2] CONTACT INPUTS (1 - 96)
		[3] CONTACT INPUTS OFF (1-96)
		[4] VIRTUAL INPUTS (1-64)
		[6] VIRTUAL OUTPUTS (1-64)
		[10] CONTACT OUTPUTS VOLTAGE DETECTED (1-64)
		[11] CONTACT OUTPUTS VOLTAGE OFF DETECTED (1-64)
		[12] CONTACT OUTPUTS CURRENT DETECTED (1-64)
		[13] CONTACT OUTPUTS CURRENT OFF DETECTED (1-64)
		[14] REMOTE INPUTS (1-32)
		[28] INSERT (Via Keypad only)
		[32] END
		[34] NOT (1 INPUT)
		[36] 2 INPUT XOR (0)
		[38] LATCH SET/RESET (2 INPUTS)
		[40] OR (2-16 INPUTS)
		[42] AND (2-16 INPUTS)
		[44] NOR (2-16 INPUTS)
		[46] NAND (2-16 INPUTS)
		[48] TIMER (1-32)
		[50] ASSIGN VIRTUAL OUTPUT (1 - 64)
		[52] SELF-TEST ERROR (See F141 for range)
		[56] ACTIVE SETTING GROUP (1-8)
		[62] MISCELLANEOUS EVENTS (See F146 for range)
		[64-127] ELEMENT STATES (Refer to Memory Map Element States Section)
F400	UR_UINT16	CT/VT BANK SELECTION
		0 Card 1 Contact 1 to 4
		1 Card 1 Contact 5 to 8
		2 Card 2 Contact 1 to 4
		3 Card 2 Contact 5 to 8

CODE	TYPE/BITMASK	DEFINITION
		4 Card 3 Contact 1 to 4
		5 Card 3 Contact 5 to 8
F500	UR_UINT16	PACKED BITFIELD
		First register indicates I/O state with bits 0(MSB)-15(LSB) corresponding to I/O state 1-16
		Second register indicates I/O state with bits 0-15 corresponding to I/O state 17-32
		Third register indicates I/O state with bits 0-15 corresponding to I/O state 33-48
		Fourth register indicates I/O state with bits 0-15 corresponding to I/O state 49-64
		A bit value of 0 = Off, 1 = On
F501	UR_UINT16	LED STATUS
		Low byte of register indicates LED status with bit 0 representing the top LED and bit 7 the bottom LED. A bit value of 1 indicates the LED is on, 0 indicates the LED is off.
F502	BITFIELD	ELEMENT OPERATE STATES
		Each bit contains the operate state for an element.
		Bit 0 of the first register is the "any element operated" state.
		See the F124 format code for a list of element IDs.
		The operate bit for element ID X is bit [X mod 16] in register [X/16].
F504	BITFIELD	3 PHASE ELEMENT STATE
		0 Pickup
		1 Operate
		2 Pickup Phase A
		3 Pickup Phase B
		4 Pickup Phase C
		5 Operate Phase A
		6 Operate Phase B
		7 Operate Phase C
F505	BITFIELD	CONTACT OUTPUT STATE
		0 Contact State
		1 Voltage Detected
		2 Current Detected
F506	BITFIELD	1 PHASE ELEMENT STATE
		0 Pickup
		1 Operate
F507	BITFIELD	COUNTER ELEMENT STATE
		0 Count Greater Than
		1 Count Equal To
		2 Count Less Than
F508	BITFIELD	DISTANCE ELEMENT STATE
		0 Pickup
		1 Operate
		2 Pickup AB
		3 Pickup BC
		4 Pickup CA
		5 Operate AB
		6 Operate BC

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CODE	TYPE/BITMASK	DEFINITION
		7 Operate CA
		8 Timed
		9 Operate IAB
		10 Operate IBC
		11 Operate ICA
F509	BITFIELD	SIMPLE ELEMENT STATE
		0 Operate
F510	BITFIELD	87L ELEMENT STATE
		0 Operate A
		1 Operate B
		2 Operate C
		3 Received DTT
		4 Operate
		5 Key DTT
		6 PFL Fail
		7 PFL OK
		8 Channel 1 Fail
		9 Channel 2 Fail
		10 Channel 1 Lost Packet
		11 Channel 2 Lost Packet
		12 Channel 1 CRC Fail
		13 Channel 2 CRC Fail
F511	BITFIELD	3 PHASE SIMPLE ELEMENT STATE
		0 Operate
		1 Operate A
		2 Operate B
		3 Operate C
F512	ENUMERATION	HARMONIC NUMBER
		0 2ND
		1 3RD
		2 4TH
		3 5TH
		4 6TH
		5 7TH
		6 8TH
		7 9TH
		8 10TH
		9 11TH
		10 12TH
		11 13TH
		12 14TH
		13 15TH
		14 16TH
		15 17TH
		16 18TH
		17 19TH

CODE	TYPE/BITMASK	DEFINITION
		18 20TH
		19 21ST
		20 22ND
		21 23RD
		22 24TH
		23 25TH
F600	UR_UINT16	FlexAnalog Parameter
		The 16-bit value corresponds to the modbus address
		of the value to be used when this parameter is selected.
		Only certain values may be used as FlexAnalogs
		(basically all the metering quantities used in protection)
MMI_FLASH	ENUMERATION	Flash message definitions for Front-panel MMI
		0
		1 ADJUSTED VALUE HAS BEEN STORED
		2 ENTERED PASSCODE IS INVALID
		3 COMMAND EXECUTED
		4 DEFAULT MESSAGE HAS BEEN ADDED
		5 DEFAULT MESSAGE HAS BEEN REMOVED
		6 INPUT FUNCTION IS ALREADY ASSIGNED
		7 PRESS [ENTER] TO ADD AS DEFAULT
		8 PRESS [ENTER] TO REMOVE MESSAGE
		9 PRESS [ENTER] TO BEGIN TEXT EDIT
		10 ENTRY MISMATCH - CODE NOT STORED
		11 PRESSED KEY IS INVALID HERE
		12 INVALID KEY: MUST BE IN LOCAL MODE
		13 NEW PASSWORD HAS BEEN STORED
		14 PLEASE ENTER A NON-ZERO PASSCODE
		15 NO ACTIVE TARGETS (TESTING LEDS)
		16 OUT OF RANGE - VALUE NOT STORED
		17 RESETTING LATCHED CONDITIONS
		18 SETPOINT ACCESS IS NOW ALLOWED
		19 SETPOINT ACCESS DENIED (PASSCODE)
		20 SETPOINT ACCESS IS NOW RESTRICTED
		21 NEW SETTING HAS BEEN STORED
		22 SETPOINT ACCESS DENIED (SWITCH)
		23 DATA NOT ACCEPTED
		24 NOT ALL CONDITIONS HAVE BEEN RESET
		25 DATE NOT ACCEPTED IRIGB IS ENABLED
		26 NOT EXECUTED
		27 DISPLAY ADDED TO USER DISPLAY LIST
		28 DISPLAY NOT ADDED TOUSER DISPLAY LIST
		29 DISPLAY REMOVED FROMUSER DISPLAY LIST
MMI_PASSWO RD_TYPE	ENUMERATION	Password types for display in password prompts
		0 NO
		1 MASTER

CODE	TYPE/BITMASK	DEFINITION
		2 SETTING
		3 COMMAND
		4 FACTORY
MMI_SETTING _TYPE	ENUMERATION	Setting types for display in web pages
		0 Unrestricted Setting
		1 Master-accessed Setting
		2 Setting
		3 Command
		4 Factory Setting

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369 Motor Management Relay

- *SETPOINT REGISTERS*

- *ACTUAL VALUES*

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R0x0001	RESET_DEVICE_CMD	Reset Device Command	---	---	---	---	RW	---
R0x0002	START_MOTOR_CMD	Start Motor Command	---	---	---	---	RW	---
R0x0003	STOP_MOTOR_CMD	Stop Motor Command	---	---	---	---	RW	---
R0x0004	WF_CAPTURE_CMD	Trigger Waveform Command	---	---	---	---	RW	---
R3x0100	USER_MAP1	User Map Value # 1	---	---	---	---	RO	---
R3x0101	USER_MAP2	User Map Value # 2	---	---	---	---	RO	---
R3x017C	USER_MAP125	User Map Value # 125	---	---	---	---	RO	---
R3x0180	USER_MAP_ADDR1	User Map Address # 1	1	hex	0	3FFF	RO	F1
R3x0181	USER_MAP_ADDR2	User Map Address # 2	1	hex	0	3FFF	RO	F1
R3x01FC	USER_MAP_ADDR125	User Map Address # 125	1	hex	0	3FFF	RO	F1
R3x0200	MOTOR_STATUS	Motor Status	1	-	0	4	RO	F133
R3x0201	THM_CAP_USED	Motor Thermal Capacity Used	1	%	0	100	RO	F1
R3x0202I	ESTM_TIME_TO_TRP	Estimated Time to Trip on Overload	1	s	-1	65550	RO	F20
R3x0220	LAST_TRP_CAUSE	Cause of Last Trip	1	-	0	169	RO	F134
R3x0221L	LAST_TRIP_TIME	Time of Last Trip (2 words)	N/A	N/A	N/A	N/A	RO	F19
R3x0223L	LAST_TRIP_DATE	Date of Last Trip (2 words)	N/A	N/A	N/A	N/A	RO	F18
R3x0226	PT_AMPS_A	Phase A Pre-Trip Current	1	A	0	65535	RO	F1
R3x0228	PT_AMPS_B	Phase B Pre-Trip Current	1	A	0	65535	RO	F1
R3x022A	PT_AMPS_C	Phase C Pre-Trip Current	1	A	0	65535	RO	F1
R3x022C	PT_MOTOR_LOAD	Motor Load Pre - Trip	1	FLA	0	2000	RO	F3
R3x022D	PT_CUR_UNBAL	Current Unbalance Pre - Trip	1	%	0	100	RO	F1
R3x022E	PT_GND_AMPS	Ground Current Pre - Trip	1	A	0	50000	RO	F23
R3x0234	HOTTEST_STAT_TRIP	Hottest Stator RTD During Trip	1	-	0	12	RO	F1
R3x0235I	PT_HOTTEST_STAT	Pre-Trip Temperature of Hottest Stator RTD	1	DEG C	-40	200	RO	F4
R3x0236	PT_VOLTS_AB	Pre-Trip Voltage Vab	1	V	0	20000	RO	F1
R3x0237	PT_VOLTS_BC	Pre-Trip Voltage Vbc	1	V	0	20000	RO	F1
R3x0238	PT_VOLTS_CA	Pre-Trip Voltage Vca	1	V	0	20000	RO	F1
R3x0239	PT_VOLTS_AN	Pre-Trip Voltage Van	1	V	0	20000	RO	F1
R3x023A	PT_VOLTS_BN	Pre-Trip Voltage Vbn	1	V	0	20000	RO	F1
R3x023B	PT_VOLTS_CN	Pre-Trip Voltage Vcn	1	V	0	20000	RO	F1
R3x023C	PT_SYS_FREQ	Pre-Trip System Frequency	1	Hz	0	12000	RO	F3
R3x023DI	PT_WATTS	Pre-Trip Real Power	1	kW	-32000	32000	RO	F4
R3x023EI	PT_KVAR	Pre-Trip Reactive Power	1	kvar	-32000	32000	RO	F4
R3x023F	PT_KVA	Pre-Trip Apparent Power	1	kVA	0	50000	RO	F1
R3x0240I	PT_PF	Pre-Trip Power Factor	1	-	-99	100	RO	F21
R3x0260	SPA_SW_ALM_STAT	General Spare Switch Alarm Status	1	-	0	4	RO	F123
R3x0261	EMG_SW_ALM_STAT	General Emergency Restart Switch Alarm Status	1	-	0	4	RO	F123
R3x0262	DIFF_SW_ALM_STAT	General Differential Switch Alarm Status	1	-	0	4	RO	F123
R3x0263	SPD_SW_ALM_STAT	General Speed Switch Alarm Status	1	-	0	4	RO	F123
R3x0264	RST_SW_ALM_STAT	General Reset Switch Alarm Status	1	-	0	4	RO	F123
R3x0267	THMCAP_ALM	Thermal Capacity Alarm	1	-	0	4	RO	F123
R3x0268	OL_ALM_STAT	Overload Alarm Status	1	-	0	4	RO	F123

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R3x0269	MECH_JAM_ALM_STAT	Mechanical Jam Alarm Status	1	-	0	4	RO	F123
R3x026A	UC_ALM_STAT	Undercurrent Alarm Status	1	-	0	4	RO	F123
R3x026B	CU_ALM_STAT	Current Unbalance Alarm Status	1	-	0	4	RO	F123
R3x026C	GF_ALM_STAT	Ground Fault Alarm Status	1	-	0	4	RO	F123
R3x026F	UV_ALM_STAT	Undervoltage Alarm Status	1	-	0	4	RO	F123
R3x0270	OV_ALM_STAT	Overvoltage Alarm Status	1	-	0	4	RO	F123
R3x0271	UF_ALM_STAT	Under Frequency Alarm Status	1	-	0	4	RO	F123
R3x0272	OF_ALM_STAT	Over Frequency Alarm Status	1	-	0	4	RO	F123
R3x0275	LEAD_PF_ALM_STAT	Lead Power Factor Alarm Status	1	-	0	4	RO	F123
R3x0276	LAG_PF_ALM_STAT	Lag Power Factor Alarm Status	1	-	0	4	RO	F123
R3x0277	POS_KVAR_ALM	Positive kvar Alarm Status	1	-	0	4	RO	F123
R3x0278	NEG_KVAR_ALM	Negative kvar Alarm Status	1	-	0	4	RO	F123
R3x0279	UDR_PWR_ALM	Underpower Alarm Status	1	-	0	4	RO	F123
R3x027A	RP_ALM_STAT	Reverse Power Alarm Status	1	-	0	4	RO	F123
R3x027D	LOC_RTD1_ALM	Local RTD #1 Alarm Status	1	-	0	4	RO	F123
R3x027E	LOC_RTD2_ALM	Local RTD #2 Alarm Status	1	-	0	4	RO	F123
R3x027F	LOC_RTD3_ALM	Local RTD #3 Alarm Status	1	-	0	4	RO	F123
R3x0280	LOC_RTD4_ALM	Local RTD #4 Alarm Status	1	-	0	4	RO	F123
R3x0281	LOC_RTD5_ALM	Local RTD #5 Alarm Status	1	-	0	4	RO	F123
R3x0282	LOC_RTD6_ALM	Local RTD #6 Alarm Status	1	-	0	4	RO	F123
R3x0283	LOC_RTD7_ALM	Local RTD #7 Alarm Status	1	-	0	4	RO	F123
R3x0284	LOC_RTD8_ALM	Local RTD #8 Alarm Status	1	-	0	4	RO	F123
R3x0285	LOC_RTD9_ALM	Local RTD #9 Alarm Status	1	-	0	4	RO	F123
R3x0286	LOC_RTD10_ALM	Local RTD #10 Alarm Status	1	-	0	4	RO	F123
R3x0287	LOC_RTD11_ALM	Local RTD #11 Alarm Status	1	-	0	4	RO	F123
R3x0288	LOC_RTD12_ALM	Local RTD #12 Alarm Status	1	-	0	4	RO	F123
R3x0289	LOC_RTD1_HI_ALM	Local RTD #1 High Alarm Status	1	-	0	4	RO	F123
R3x028A	LOC_RTD2_HI_ALM	Local RTD #2 High Alarm Status	1	-	0	4	RO	F123
R3x028B	LOC_RTD3_HI_ALM	Local RTD #3 High Alarm Status	1	-	0	4	RO	F123
R3x028C	LOC_RTD4_HI_ALM	Local RTD #4 High Alarm Status	1	-	0	4	RO	F123
R3x028D	LOC_RTD5_HI_ALM	Local RTD #5 High Alarm Status	1	-	0	4	RO	F123
R3x028E	LOC_RTD6_HI_ALM	Local RTD #6 High Alarm Status	1	-	0	4	RO	F123
R3x028F	LOC_RTD7_HI_ALM	Local RTD #7 High Alarm Status	1	-	0	4	RO	F123
R3x0290	LOC_RTD8_HI_ALM	Local RTD #8 High Alarm Status	1	-	0	4	RO	F123
R3x0291	LOC_RTD9_HI_ALM	Local RTD #9 High Alarm Status	1	-	0	4	RO	F123
R3x0292	LOC_RTD10_HI_ALM	Local RTD #10 High Alarm Status	1	-	0	4	RO	F123
R3x0293	LOC_RTD11_HI_ALM	Local RTD #11 High Alarm Status	1	-	0	4	RO	F123
R3x0294	LOC_RTD12_HI_ALM	Local RTD #12 High Alarm Status	1	-	0	4	RO	F123
R3x0295	OPEN_RTD_ALM	Broken / Open RTD Alarm Status	1	-	0	4	RO	F123
R3x0296	SHORT_RTD_ALM	Short / Low Temp Alarm Status	1	-	0	1	RO	F156
R3x0297	RTD_COMM_ALM	Lost Remote RTD Communication	1	-	0	4	RO	F123
R3x0298	TRIP_CNT_ALM	Trip Counter Alarm Status	1	-	0	4	RO	F123
R3x0299	START_FAIL_ALM	Starter Failure Alarm	1	-	0	4	RO	F123
R3x029A	CUR_DMD_ALM	Current Demand Alarm Status	1	-	0	4	RO	F123
R3x029B	KW_DMD_ALM_STAT	kW Demand Alarm Status	1	-	0	4	RO	F123
R3x029C	KVAR_DMD_ALM_STAT	kvar Demand Alarm Status	1	-	0	4	RO	F123

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R3x029D	KVA_DMD_ALM_STAT	kVA Demand Alarm Status	1	-	0	4	RO	F123
R3x029E	SELF_TEST_ALM	Self Test Alarm					RO	
R3x02C0	OL_LO_TMR	Overload Lockout Timer	1	min	0	500	RO	F1
R3x02C1	START_TMR1	Start Timer 1	1	min	0	60	RO	F1
R3x02C2	START_TMR2	Start Timer 2	1	min	0	60	RO	F1
R3x02C3	START_TMR3	Start Timer 3	1	min	0	60	RO	F1
R3x02C4	START_TMR4	Start Timer 4	1	min	0	60	RO	F1
R3x02C5	START_TMR5	Start Timer 5	1	min	0	60	RO	F1
R3x02C6	BTWN_STRT_TMR	Time Between Starts Timer	1	min	0	500	RO	F1
R3x02C7	RSTRT_BLK_TMR	Restart Block Timer	1	s	0	50000	RO	F1
R3x02C9	STR_INHIBIT_TMR	Start Inhibit Timer	1	min	0	60	RO	F1
R3x02D0	ACCESS_SW_STAT	Access Switch Status	1	-	0	1	RO	F131
R3x02D1	SPEED_SW_STAT	Speed Switch Status	1	-	0	1	RO	F131
R3x02D2	SPARE_SW_STAT	Spare Switch Status	1	-	0	1	RO	F131
R3x02D3	DIFF_RELAY_STAT	Differential Relay Status	1	-	0	1	RO	F131
R3x02D4	EMG_RESTART_STAT	Emergency Restart Status	1	-	0	1	RO	F131
R3x02D5	RESET_SW_STAT	Reset Status	1	-	0	1	RO	F131
R3x02E0	TRIP_STATUS	Trip Status	1	N/A	0	2	RO	F150
R3x02E1	ALARM_STATUS	Alarm Status	1	N/A	0	2	RO	F150
R3x02E2	AUX1_STATUS	Aux.1 Status	1	N/A	0	2	RO	F150
R3x02E3	AUX2_STATUS	Aux.2 Status	1	N/A	0	2	RO	F150
R3x02F0L	RTC_DATE	Date (Read Only)	N/A	N/A	N/A	N/A	RO	F18
R3x02F4L	RTC_TIME	Time (Read Only)	N/A	N/A	N/A	N/A	RO	F19
R3x0300	AMPS_A	Phase A Current	1	A	0	65535	RO	F1
R3x0302	AMPS_B	Phase B Current	1	A	0	65535	RO	F1
R3x0304	AMPS_C	Phase C Current	1	A	0	65535	RO	F1
R3x0306	AMPS_AVG	Average Phase Current	1	A	0	65535	RO	F1
R3x0308	MOTOR_LOAD	Motor Load	1	xFLA	0	2000	RO	F3
R3x0309	CUR_UNBAL	Current Unbalance	1	%	0	100	RO	F1
R3x030B	GND_AMPS	Ground Current	1	A	0	50000	RO	F23
R3x031F	HOT_RTD_ID	Hottest Stator RTD Number	1	-	0	12	RO	F1
R3x0320I	HOT_RTD_TEMP	Hottest Stator RTD Temp	1	DEG C	-40	200	RO	F4
R3x0321I	LOC_RTD1_TEMP	Local RTD #1 Temp	1	DEG C	-40	200	RO	F4
R3x0322I	LOC_RTD2_TEMP	Local RTD #2 Temp	1	DEG C	-40	200	RO	F4
R3x0323I	LOC_RTD3_TEMP	Local RTD #3 Temp	1	DEG C	-40	200	RO	F4
R3x0324I	LOC_RTD4_TEMP	Local RTD #4 Temp	1	DEG C	-40	200	RO	F4
R3x0325I	LOC_RTD5_TEMP	Local RTD #5 Temp	1	DEG C	-40	200	RO	F4
R3x0326I	LOC_RTD6_TEMP	Local RTD #6 Temp	1	DEG C	-40	200	RO	F4
R3x0327I	LOC_RTD7_TEMP	Local RTD #7 Temp	1	DEG C	-40	200	RO	F4
R3x0328I	LOC_RTD8_TEMP	Local RTD #8 Temp	1	DEG C	-40	200	RO	F4
R3x0329I	LOC_RTD9_TEMP	Local RTD #9 Temp	1	DEG C	-40	200	RO	F4
R3x032AI	LOC_RTD10_TEMP	Local RTD #10 Temp	1	DEG C	-40	200	RO	F4
R3x032BI	LOC_RTD11_TEMP	Local RTD #11 Temp	1	DEG C	-40	200	RO	F4
R3x032CI	LOC_RTD12_TEMP	Local RTD #12 Temp	1	DEG C	-40	200	RO	F4
R3x0360	VOLTS_AB	Vab	1	V	0	20000	RO	F1
R3x0361	VOLTS_BC	Vbc	1	V	0	20000	RO	F1

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R3x0362	VOLTS_CA	Vca	1	V	0	20000	RO	F1
R3x0363	VOLTS_AVG_LL	Average Line Voltage	1	V	0	20000	RO	F1
R3x0364	VOLTS_AN	Van	1	V	0	20000	RO	F1
R3x0365	VOLTS_BN	Vbn	1	V	0	20000	RO	F1
R3x0366	VOLTS_CN	Vcn	1	V	0	20000	RO	F1
R3x0367	VOLTS_AVG_LN	Average_Phase_Voltage	1	V	0	20000	RO	F1
R3x0368	SYS_FREQ	System Frequency	1	Hz	0	12000	RO	F3
R3x0369	BKSPN_FREQ	Backspin Frequency	1	Hz	0	12000	RO	F3
R3x036A	BKSPN_DETECT	Backspin Detection State	1	-	0	6	RO	F27
R3x036B	BKSPN_PREDICT	Backspin Prediction Timer	1	s	0	50000	RO	F2
R3x0370I	PF	Power Factor	1	-	-99	100	RO	F21
R3x0371I	KW	Real Power	1	kW	-32000	32000	RO	F4
R3x0373	HP	Real Power	1	hp	0	65000	RO	F1
R3x0374I	KVAR	Reactive Power	1	kvar	-32000	32000	RO	F4
R3x0376	KVA	Apparent Power	1	kVA	0	50000	RO	F1
R3x0377	MWH	Positive Watthours	1	MWh	0	65535	RO	F7
R3x0379	POS_KVARH	Positive Varhours	1	kvarh	0	65535	RO	F7
R3x037B	NEG_KVARH	Negative Varhours	1	kvarh	0	65535	RO	F7
R3x0390	CUR_DMD	Current Demand	1	A	0	50000	RO	F1
R3x0392	KW_DMD	Real Power Demand	1	kW	0	50000	RO	F1
R3x0394	KVAR_DMD	Reactive Power Demand	1	kvar	0	50000	RO	F1
R3x0396	KVA_DMD	Apparent Power Demand	1	kVA	0	50000	RO	F1
R3x0397	PEAK_CURR_DMD	Peak Current Demand	1	A	0	65535	RO	F1
R3x0399	PEAK_KW_DMD	Peak Real Power Demand	1	kW	0	50000	RO	F1
R3x039B	PEAK_KVAR_DMD	Peak Reactive Power Demand	1	kvar	-32000	32000	RO	F1
R3x039D	PEAK_KVA_DMD	Peak Apparent Power Demand	1	kVA	0	50000	RO	F1
R3x03C0	LRND_ACCEL_TIME	Learned Acceleration Time	1	s	1	2500	RO	F2
R3x03C1	LRND_STRT_CUR	Learned Starting Current	1	A	0	65535	RO	F1
R3x03C2	LRND_STRT_CAP	Learned Starting Capacity	1	%	0	100	RO	F1
R3x03C3	LRND_RUN_COOL	Learned Running Cool Time Constant	1	min	0	500	RO	F1
R3x03C4	LRND_STOP_COOL	Learned Stopped Cool Time Constant	1	min	0	500	RO	F1
R3x03C5	LAST_START_CURR	Last Starting Current	1	A	0	65535	RO	F1
R3x03C6	LAST_START_CAP	Last Starting Capacity	1	%	0	100	RO	F1
R3x03C7	LAST_ACCEL_TIME	Last Acceleration Time	1	s	1	2500	RO	F2
R3x03C8	LRND_AVG_LOAD	Average Motor Load Learned	1	xFLA	0	2000	RO	F3
R3x03C9	LRND_UNBAL_KF	Learned Unbalance k factor	1	-	0	29	RO	F1
R3x03E0I	LOCAL_RTD1_MAXTEMP	Local RTD # 1 Max. Temp	1	DEG C	-40	200	RO	F4
R3x03E1I	LOCAL_RTD2_MAXTEMP	Local RTD # 2 Max. Temp	1	DEG C	-40	200	RO	F4
R3x03E2I	LOCAL_RTD3_MAXTEMP	Local RTD # 3 Max. Temp	1	DEG C	-40	200	RO	F4
R3x03E3I	LOCAL_RTD4_MAXTEMP	Local RTD # 4 Max. Temp	1	DEG C	-40	200	RO	F4
R3x03E4I	LOCAL_RTD5_MAXTEMP	Local RTD # 5 Max. Temp	1	DEG C	-40	200	RO	F4
R3x03E5I	LOCAL_RTD6_MAXTEMP	Local RTD # 6 Max. Temp	1	DEG C	-40	200	RO	F4
R3x03E6I	LOCAL_RTD7_MAXTEMP	Local RTD # 7 Max. Temp	1	DEG C	-40	200	RO	F4
R3x03E7I	LOCAL_RTD8_MAXTEMP	Local RTD # 8 Max. Temp	1	DEG C	-40	200	RO	F4
R3x03E8I	LOCAL_RTD9_MAXTEMP	Local RTD # 9 Max. Temp	1	DEG C	-40	200	RO	F4
R3x03E9I	LOCAL_RTD10_MAXTEMP	Local RTD # 10 Max. Temp	1	DEG C	-40	200	RO	F4

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R3x03EAI	LOCAL_RTD11_MAXTEMP	Local RTD # 11 Max. Temp	1	DEG C	-40	200	RO	F4
R3x03EBI	LOCAL_RTD12_MAXTEMP	Local RTD # 12 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0430	TOT_NUM_TRIPS	Total Number of Trips	1	-	0	50000	RO	F1
R3x0433	SW_TRIPS	Switch Trips	1	-	0	50000	RO	F1
R3x0436	OL_TRIPS	Overload Trips	1	-	0	50000	RO	F1
R3x0437	SC_TRIPS	Short Circuit Trips	1	-	0	50000	RO	F1
R3x0438	MECH_JAM_TRIPS	Mechanical Jam Trips	1	-	0	50000	RO	F1
R3x0439	UC_TRIPS	Undercurrent Trips	1	-	0	50000	RO	F1
R3x043A	CU_TRIPS	Current Unbalance Trips	1	-	0	50000	RO	F1
R3x043B	SNGL_PHS_TRIPS	Single Phase Trips					RO	
R3x043C	GF_TRIPS	Ground Fault Trips	1	-	0	50000	RO	F1
R3x043D	ACCEL_TRIPS	Acceleration Trips	1	-	0	50000	RO	F1
R3x043F	UV_TRIPS	Under Voltage Trips	1	-	0	50000	RO	F1
R3x0440	OV_TRIPS	Over Voltage Trips	1	-	0	50000	RO	F1
R3x0441	PR_TRIPS	Phase Reversal Trips	1	-	0	50000	RO	F1
R3x0442	UF_TRIPS	Under Frequency Trips	1	-	0	50000	RO	F1
R3x0443	OF_TRIPS	Over Frequency Trips	1	-	0	50000	RO	F1
R3x0446	LEAD_PF_TRIPS	Lead Power Factor Trips	1	-	0	50000	RO	F1
R3x0447	LAG_PF_TRIPS	Lag Power Factor Trips	1	-	0	50000	RO	F1
R3x0448	POS_KVAR_TRIPS	Positive Reactive Power Trips	1	-	0	50000	RO	F1
R3x0449	NEG_KVAR_TRIPS	Negative Reactive Power Trips	1	-	0	50000	RO	F1
R3x044A	UP_TRIPS	Underpower Trips	1	-	0	50000	RO	F1
R3x044B	RP_TRIPS	Reverse Power Trips	1	-	0	50000	RO	F1
R3x044E	STATOR_RTD_TRPS	Stator RTD Trips	1	-	0	50000	RO	F1
R3x044F	BEARING_RTD_TRPS	Bearing RTD Trips	1	-	0	50000	RO	F1
R3x0450	OTHER_RTD_TRPS	Other RTD Trips	1	-	0	50000	RO	F1
R3x0451	AMBIENT_RTD_TRPS	Ambient RTD Trips	1	-	0	50000	RO	F1
R3x0454	INCOMP_SEQ_TRPS	Incomplete Sequence Trips	1	-	0	50000	RO	F1
R3x0457L	TRP_CNT_LST_CLRDR	Trip Counters Last Cleared	N/A	N/A	N/A	N/A	RO	F18
R3x0470	NUM_MOTOR_STRT	Number of Motor Starts	1	-	0	50000	RO	F1
R3x0471	NUM_EMG_RESTRT	Number of Emergency Restarts	1	-	0	50000	RO	F1
R3x0473	DIG_COUNTER	Digital Counter	1	-	0	65535	RO	F1
R3x04A0	MOTOR_HOURS	Motor Running Hours	1	hr	0	65535	RO	F1
R3x0500	VOLTS_A_ANGLE	Va Angle	1	DEG	0	359	RO	F1
R3x0501	VOLTS_B_ANGLE	Vb Angle	1	DEG	0	359	RO	F1
R3x0502	VOLTS_C_ANGLE	Vc Angle	1	DEG	0	359	RO	F1
R3x0503	AMPS_A_ANGLE	Ia Angle	1	DEG	0	359	RO	F1
R3x0504	AMPS_B_ANGLE	Ib Angle	1	DEG	0	359	RO	F1
R3x0505	AMPS_C_ANGLE	Ic Angle	1	DEG	0	359	RO	F1
R3x0600	RRTD1_HOT_STAT_ID	RRTD 1 - Hottest Stator Number	1	-	0	12	RO	F1
R3x0601I	RRTD1_HOT_STAT_TEMP	RRTD 1 - Hottest Stator Temp	1	DEG C	-40	200	RO	F4
R3x0602I	RRTD1_RTD1_TEMP	RRTD 1 - RTD #1 Temp	1	DEG C	-40	200	RO	F4
R3x0603I	RRTD1_RTD2_TEMP	RRTD 1 - RTD #2 Temp	1	DEG C	-40	200	RO	F4
R3x0604I	RRTD1_RTD3_TEMP	RRTD 1 - RTD #3 Temp	1	DEG C	-40	200	RO	F4
R3x0605I	RRTD1_RTD4_TEMP	RRTD 1 - RTD #4 Temp	1	DEG C	-40	200	RO	F4
R3x0606I	RRTD1_RTD5_TEMP	RRTD 1 - RTD #5 Temp	1	DEG C	-40	200	RO	F4

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R3x0607I	RRTD1_RTD6_TEMP	RRTD 1 - RTD #6 Temp	1	DEG C	-40	200	RO	F4
R3x0608I	RRTD1_RTD7_TEMP	RRTD 1 - RTD #7 Temp	1	DEG C	-40	200	RO	F4
R3x0609I	RRTD1_RTD8_TEMP	RRTD 1 - RTD #8 Temp	1	DEG C	-40	200	RO	F4
R3x060AI	RRTD1_RTD9_TEMP	RRTD 1 - RTD #9 Temp	1	DEG C	-40	200	RO	F4
R3x060BI	RRTD1_RTD10_TEMP	RRTD 1 - RTD #10 Temp	1	DEG C	-40	200	RO	F4
R3x060CI	RRTD1_RTD11_TEMP	RRTD 1 - RTD #11 Temp	1	DEG C	-40	200	RO	F4
R3x060DI	RRTD1_RTD12_TEMP	RRTD 1 - RTD #12 Temp	1	DEG C	-40	200	RO	F4
R3x0610	RRTD2_HOT_STAT_ID	RRTD 2 - RTD - Hottest Stator Number	1	-	0	12	RO	F1
R3x0611I	RRTD2_HOT_STAT_TEMP	RRTD 2 - RTD - Hottest Stator Temp	1	DEG C	-40	200	RO	F4
R3x0612I	RRTD2_RTD1_TEMP	RRTD 2 - RTD #1 Temp	1	DEG C	-40	200	RO	F4
R3x0613I	RRTD2_RTD2_TEMP	RRTD 2 - RTD #2 Temp	1	DEG C	-40	200	RO	F4
R3x0614I	RRTD2_RTD3_TEMP	RRTD 2 - RTD #3 Temp	1	DEG C	-40	200	RO	F4
R3x0615I	RRTD2_RTD4_TEMP	RRTD 2 - RTD #4 Temp	1	DEG C	-40	200	RO	F4
R3x0616I	RRTD2_RTD5_TEMP	RRTD 2 - RTD #5 Temp	1	DEG C	-40	200	RO	F4
R3x0617I	RRTD2_RTD6_TEMP	RRTD 2 - RTD #6 Temp	1	DEG C	-40	200	RO	F4
R3x0618I	RRTD2_RTD7_TEMP	RRTD 2 - RTD #7 Temp	1	DEG C	-40	200	RO	F4
R3x0619I	RRTD2_RTD8_TEMP	RRTD 2 - RTD #8 Temp	1	DEG C	-40	200	RO	F4
R3x061AI	RRTD2_RTD9_TEMP	RRTD 2 - RTD #9 Temp	1	DEG C	-40	200	RO	F4
R3x061BI	RRTD2_RTD10_TEMP	RRTD 2 - RTD #10 Temp	1	DEG C	-40	200	RO	F4
R3x061CI	RRTD2_RTD11_TEMP	RRTD 2 - RTD #11 Temp	1	DEG C	-40	200	RO	F4
R3x061DI	RRTD2_RTD12_TEMP	RRTD 2 - RTD #12 Temp	1	DEG C	-40	200	RO	F4
R3x0620	RRTD3_HOT_STAT_ID	RRTD 3 - RTD - Hottest Stator Number	1	-	0	12	RO	F1
R3x0621I	RRTD3_HOT_STAT_TEMP	RRTD 3 - RTD - Hottest Stator Temp	1	DEG C	-40	200	RO	F4
R3x0622I	RRTD3_RTD1_TEMP	RRTD 3 - RTD #1 Temp	1	DEG C	-40	200	RO	F4
R3x0623I	RRTD3_RTD2_TEMP	RRTD 3 - RTD #2 Temp	1	DEG C	-40	200	RO	F4
R3x0624I	RRTD3_RTD3_TEMP	RRTD 3 - RTD #3 Temp	1	DEG C	-40	200	RO	F4
R3x0625I	RRTD3_RTD4_TEMP	RRTD 3 - RTD #4 Temp	1	DEG C	-40	200	RO	F4
R3x0626I	RRTD3_RTD5_TEMP	RRTD 3 - RTD #5 Temp	1	DEG C	-40	200	RO	F4
R3x0627I	RRTD3_RTD6_TEMP	RRTD 3 - RTD #6 Temp	1	DEG C	-40	200	RO	F4
R3x0628I	RRTD3_RTD7_TEMP	RRTD 3 - RTD #7 Temp	1	DEG C	-40	200	RO	F4
R3x0629I	RRTD3_RTD8_TEMP	RRTD 3 - RTD #8 Temp	1	DEG C	-40	200	RO	F4
R3x062AI	RRTD3_RTD9_TEMP	RRTD 3 - RTD #9 Temp	1	DEG C	-40	200	RO	F4
R3x062BI	RRTD3_RTD10_TEMP	RRTD 3 - RTD #10 Temp	1	DEG C	-40	200	RO	F4
R3x062CI	RRTD3_RTD11_TEMP	RRTD 3 - RTD #11 Temp	1	DEG C	-40	200	RO	F4
R3x062DI	RRTD3_RTD12_TEMP	RRTD 3 - RTD #12 Temp	1	DEG C	-40	200	RO	F4
R3x0630	RRTD4_HOT_STAT_ID	RRTD 4 - RTD - Hottest Stator Number	1	-	0	12	RO	F1
R3x0631I	RRTD4_HOT_STAT_TEMP	RRTD 4 - RTD - Hottest Stator Temp	1	DEG C	-40	200	RO	F4
R3x0632I	RRTD4_RTD1_TEMP	RRTD 4 - RTD#1 Temp	1	DEG C	-40	200	RO	F4
R3x0633I	RRTD4_RTD2_TEMP	RRTD 4 - RTD#2 Temp	1	DEG C	-40	200	RO	F4
R3x0634I	RRTD4_RTD3_TEMP	RRTD 4 - RTD#3 Temp	1	DEG C	-40	200	RO	F4
R3x0635I	RRTD4_RTD4_TEMP	RRTD 4 - RTD#4 Temp	1	DEG C	-40	200	RO	F4
R3x0636I	RRTD4_RTD5_TEMP	RRTD 4 - RTD#5 Temp	1	DEG C	-40	200	RO	F4
R3x0637I	RRTD4_RTD6_TEMP	RRTD 4 - RTD#6 Temp	1	DEG C	-40	200	RO	F4
R3x0638I	RRTD4_RTD7_TEMP	RRTD 4 - RTD#7 Temp	1	DEG C	-40	200	RO	F4

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R3x0639I	RRTD4_RTD8_TEMP	RRTD 4 - RTD#8 Temp	1	DEG C	-40	200	RO	F4
R3x063AI	RRTD4_RTD9_TEMP	RRTD 4 - RTD#9 Temp	1	DEG C	-40	200	RO	F4
R3x063BI	RRTD4_RTD10_TEMP	RRTD 4 - RTD#10 Temp	1	DEG C	-40	200	RO	F4
R3x063CI	RRTD4_RTD11_TEMP	RRTD 4 - RTD#11 Temp	1	DEG C	-40	200	RO	F4
R3x063DI	RRTD4_RTD12_TEMP	RRTD 4 - RTD#12 Temp	1	DEG C	-40	200	RO	F4
R3x063E	RRTD_COMM_ALM	Lost RRTD Communications alarm	1	-	0	4	RO	F123
R3x0650	RRTD1_RTD1_ALM	RRTD 1 - RTD #1 Alarm Status	1	-	0	4	RO	F123
R3x0651	RRTD1_RTD2_ALM	RRTD 1 - RTD #2 Alarm Status	1	-	0	4	RO	F123
R3x0652	RRTD1_RTD3_ALM	RRTD 1 - RTD #3 Alarm Status	1	-	0	4	RO	F123
R3x0653	RRTD1_RTD4_ALM	RRTD 1 - RTD #4 Alarm Status	1	-	0	4	RO	F123
R3x0654	RRTD1_RTD5_ALM	RRTD 1 - RTD #5 Alarm Status	1	-	0	4	RO	F123
R3x0655	RRTD1_RTD6_ALM	RRTD 1 - RTD #6 Alarm Status	1	-	0	4	RO	F123
R3x0656	RRTD1_RTD7_ALM	RRTD 1 - RTD #7 Alarm Status	1	-	0	4	RO	F123
R3x0657	RRTD1_RTD8_ALM	RRTD 1 - RTD #8 Alarm Status	1	-	0	4	RO	F123
R3x0658	RRTD1_RTD9_ALM	RRTD 1 - RTD #9 Alarm Status	1	-	0	4	RO	F123
R3x0659	RRTD1_RTD10_ALM	RRTD 1 - RTD #10 Alarm Status	1	-	0	4	RO	F123
R3x065A	RRTD1_RTD11_ALM	RRTD 1 - RTD #11 Alarm Status	1	-	0	4	RO	F123
R3x065B	RRTD1_RTD12_ALM	RRTD 1 - RTD #12 Alarm Status	1	-	0	4	RO	F123
R3x065C	RRTD1_RTD1_HI_ALM	RRTD 1 - RTD #1 High Alarm Status	1	-	0	4	RO	F123
R3x065D	RRTD1_RTD2_HI_ALM	RRTD 1 - RTD #2 High Alarm Status	1	-	0	4	RO	F123
R3x065E	RRTD1_RTD3_HI_ALM	RRTD 1 - RTD #3 High Alarm Status	1	-	0	4	RO	F123
R3x065F	RRTD1_RTD4_HI_ALM	RRTD 1 - RTD #4 High Alarm Status	1	-	0	4	RO	F123
R3x0660	RRTD1_RTD5_HI_ALM	RRTD 1 - RTD #5 High Alarm Status	1	-	0	4	RO	F123
R3x0661	RRTD1_RTD6_HI_ALM	RRTD 1 - RTD #6 High Alarm Status	1	-	0	4	RO	F123
R3x0662	RRTD1_RTD7_HI_ALM	RRTD 1 - RTD #7 High Alarm Status	1	-	0	4	RO	F123
R3x0663	RRTD1_RTD8_HI_ALM	RRTD 1 - RTD #8 High Alarm Status	1	-	0	4	RO	F123
R3x0664	RRTD1_RTD9_HI_ALM	RRTD 1 - RTD #9 High Alarm Status	1	-	0	4	RO	F123
R3x0665	RRTD1_RTD10_HI_ALM	RRTD 1 - RTD #10 High Alarm Status	1	-	0	4	RO	F123
R3x0666	RRTD1_RTD11_HI_ALM	RRTD 1 - RTD #11 High Alarm Status	1	-	0	4	RO	F123
R3x0667	RRTD1_RTD12_HI_ALM	RRTD 1 - RTD #12 High Alarm Status	1	-	0	4	RO	F123
R3x0668	RRTD1_OPEN_RTD_ALM	RRTD 1 - Broken / Open RTD Alarm Status	1	-	0	4	RO	F123
R3x0669	RRTD1_SHORT_RTD	RRTD 1 - Short / Low Temp Alarm Status	1	-	0	1	RO	F156
R3x066A	RRTD1_DIG_INP6_ALM	RRTD 1 - Digital Input 6 Alarm Status	1	-	0	4	RO	F123
R3x066B	RRTD1_DIG_INP2_ALM	RRTD 1 - Digital Input 2 Alarm Status	1	-	0	4	RO	F123
R3x066C	RRTD1_DIG_INP5_ALM	RRTD 1 - Digital Input 5 Alarm Status	1	-	0	4	RO	F123
R3x066D	RRTD1_DIG_INP4_ALM	RRTD 1 - Digital Input 4 Alarm Status	1	-	0	4	RO	F123
R3x066E	RRTD1_DIG_INP1_ALM	RRTD 1 - Digital Input 1 Alarm Status	1	-	0	4	RO	F123
R3x066F	RRTD1_DIG_INP3_ALM	RRTD 1 - Digital Input 3 Alarm Status	1	-	0	4	RO	F123
R3x0670	RRTD2_RTD1_ALM	RRTD 2 - RTD #1 Alarm Status	1	-	0	4	RO	F123
R3x0671	RRTD2_RTD2_ALM	RRTD 2 - RTD #2 Alarm Status	1	-	0	4	RO	F123
R3x0672	RRTD2_RTD3_ALM	RRTD 2 - RTD #3 Alarm Status	1	-	0	4	RO	F123
R3x0673	RRTD2_RTD4_ALM	RRTD 2 - RTD #4 Alarm Status	1	-	0	4	RO	F123
R3x0674	RRTD2_RTD5_ALM	RRTD 2 - RTD #5 Alarm Status	1	-	0	4	RO	F123
R3x0675	RRTD2_RTD6_ALM	RRTD 2 - RTD #6 Alarm Status	1	-	0	4	RO	F123
R3x0676	RRTD2_RTD7_ALM	RRTD 2 - RTD #7 Alarm Status	1	-	0	4	RO	F123

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R3x0677	RRTD2_RTD8_ALM	RRTD 2 - RTD #8 Alarm Status	1	-	0	4	RO	F123
R3x0678	RRTD2_RTD9_ALM	RRTD 2 - RTD #9 Alarm Status	1	-	0	4	RO	F123
R3x0679	RRTD2_RTD10_ALM	RRTD 2 - RTD #10 Alarm Status	1	-	0	4	RO	F123
R3x067A	RRTD2_RTD11_ALM	RRTD 2 - RTD #11 Alarm Status	1	-	0	4	RO	F123
R3x067B	RRTD2_RTD12_ALM	RRTD 2 - RTD #12 Alarm Status	1	-	0	4	RO	F123
R3x067C	RRTD2_RTD1_HI_ALM	RRTD 2 - RTD #1 High Alarm Status	1	-	0	4	RO	F123
R3x067D	RRTD2_RTD2_HI_ALM	RRTD 2 - RTD #2 High Alarm Status	1	-	0	4	RO	F123
R3x067E	RRTD2_RTD3_HI_ALM	RRTD 2 - RTD #3 High Alarm Status	1	-	0	4	RO	F123
R3x067F	RRTD2_RTD4_HI_ALM	RRTD 2 - RTD #4 High Alarm Status	1	-	0	4	RO	F123
R3x0680	RRTD2_RTD5_HI_ALM	RRTD 2 - RTD #5 High Alarm Status	1	-	0	4	RO	F123
R3x0681	RRTD2_RTD6_HI_ALM	RRTD 2 - RTD #6 High Alarm Status	1	-	0	4	RO	F123
R3x0682	RRTD2_RTD7_HI_ALM	RRTD 2 - RTD #7 High Alarm Status	1	-	0	4	RO	F123
R3x0683	RRTD2_RTD8_HI_ALM	RRTD 2 - RTD #8 High Alarm Status	1	-	0	4	RO	F123
R3x0684	RRTD2_RTD9_HI_ALM	RRTD 2 - RTD #9 High Alarm Status	1	-	0	4	RO	F123
R3x0685	RRTD2_RTD10_HI_ALM	RRTD 2 - RTD #10 High Alarm Status	1	-	0	4	RO	F123
R3x0686	RRTD2_RTD11_HI_ALM	RRTD 2 - RTD #11 High Alarm Status	1	-	0	4	RO	F123
R3x0687	RRTD2_RTD12_HI_ALM	RRTD 2 - RTD #12 High Alarm Status	1	-	0	4	RO	F123
R3x0688	RRTD2_OPEN_RTD_ALM	RRTD 2 - Broken / Open RTD Alarm Status	1	-	0	4	RO	F123
R3x0689	RRTD2_SHORT_RTD	RRTD 2 - Short / Low Temp Alarm Status	1	-	0	1	RO	F156
R3x068A	RRTD2_DIG_INP6_ALM	RRTD 2 - Digital Input 6 Alarm Status	1	-	0	4	RO	F123
R3x068B	RRTD2_DIG_INP2_ALM	RRTD 2 - Digital Input 2 Alarm Status	1	-	0	4	RO	F123
R3x068C	RRTD2_DIG_INP5_ALM	RRTD 2 - Digital Input 5 Alarm Status	1	-	0	4	RO	F123
R3x068D	RRTD2_DIG_INP4_ALM	RRTD 2 - Digital Input 4 Alarm Status	1	-	0	4	RO	F123
R3x068E	RRTD2_DIG_INP1_ALM	RRTD 2 - Digital Input 1 Alarm Status	1	-	0	4	RO	F123
R3x068F	RRTD2_DIG_INP3_ALM	RRTD 2 - Digital Input 3 Alarm Status	1	-	0	4	RO	F123
R3x0690	RRTD3_RTD1_ALM	RRTD 3 - RTD #1 Alarm Status	1	-	0	4	RO	F123
R3x0691	RRTD3_RTD2_ALM	RRTD 3 - RTD #2 Alarm Status	1	-	0	4	RO	F123
R3x0692	RRTD3_RTD3_ALM	RRTD 3 - RTD #3 Alarm Status	1	-	0	4	RO	F123
R3x0693	RRTD3_RTD4_ALM	RRTD 3 - RTD #4 Alarm Status	1	-	0	4	RO	F123
R3x0694	RRTD3_RTD5_ALM	RRTD 3 - RTD #5 Alarm Status	1	-	0	4	RO	F123
R3x0695	RRTD3_RTD6_ALM	RRTD 3 - RTD #6 Alarm Status	1	-	0	4	RO	F123
R3x0696	RRTD3_RTD7_ALM	RRTD 3 - RTD #7 Alarm Status	1	-	0	4	RO	F123
R3x0697	RRTD3_RTD8_ALM	RRTD 3 - RTD #8 Alarm Status	1	-	0	4	RO	F123
R3x0698	RRTD3_RTD9_ALM	RRTD 3 - RTD #9 Alarm Status	1	-	0	4	RO	F123
R3x0699	RRTD3_RTD10_ALM	RRTD 3 - RTD #10 Alarm Status	1	-	0	4	RO	F123
R3x069A	RRTD3_RTD11_ALM	RRTD 3 - RTD #11 Alarm Status	1	-	0	4	RO	F123
R3x069B	RRTD3_RTD12_ALM	RRTD 3 - RTD #12 Alarm Status	1	-	0	4	RO	F123
R3x069C	RRTD3_RTD1_HI_ALM	RRTD 3 - RTD #1 High Alarm Status	1	-	0	4	RO	F123
R3x069D	RRTD3_RTD2_HI_ALM	RRTD 3 - RTD #2 High Alarm Status	1	-	0	4	RO	F123
R3x069E	RRTD3_RTD3_HI_ALM	RRTD 3 - RTD #3 High Alarm Status	1	-	0	4	RO	F123
R3x069F	RRTD3_RTD4_HI_ALM	RRTD 3 - RTD #4 High Alarm Status	1	-	0	4	RO	F123
R3x06A0	RRTD3_RTD5_HI_ALM	RRTD 3 - RTD #5 High Alarm Status	1	-	0	4	RO	F123
R3x06A1	RRTD3_RTD6_HI_ALM	RRTD 3 - RTD #6 High Alarm Status	1	-	0	4	RO	F123
R3x06A2	RRTD3_RTD7_HI_ALM	RRTD 3 - RTD #7 High Alarm Status	1	-	0	4	RO	F123
R3x06A3	RRTD3_RTD8_HI_ALM	RRTD 3 - RTD #8 High Alarm Status	1	-	0	4	RO	F123

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R3x06A4	RRTD3_RTD9_HI_ALM	RRTD 3 - RTD #9 High Alarm Status	1	-	0	4	RO	F123
R3x06A5	RRTD3_RTD10_HI_ALM	RRTD 3 - RTD #10 High Alarm Status	1	-	0	4	RO	F123
R3x06A6	RRTD3_RTD11_HI_ALM	RRTD 3 - RTD #11 High Alarm Status	1	-	0	4	RO	F123
R3x06A7	RRTD3_RTD12_HI_ALM	RRTD 3 - RTD #12 High Alarm Status	1	-	0	4	RO	F123
R3x06A8	RRTD3_OPEN_RTD_ALM	RRTD 3 - Broken / Open RTD Alarm Status	1	-	0	4	RO	F123
R3x06A9	RRTD3_SHORT_RTD	RRTD 3 - Short / Low Temp Alarm Status	1	-	0	1	RO	F156
R3x06AA	RRTD3_DIG_INP6_ALM	RRTD 3 - Digital Input 6 Alarm Status	1	-	0	4	RO	F123
R3x06AB	RRTD3_DIG_INP2_ALM	RRTD 3 - Digital Input 2 Alarm Status	1	-	0	4	RO	F123
R3x06AC	RRTD3_DIG_INP5_ALM	RRTD 3 - Digital Input 5 Alarm Status	1	-	0	4	RO	F123
R3x06AD	RRTD3_DIG_INP4_ALM	RRTD 3 - Digital Input 4 Alarm Status	1	-	0	4	RO	F123
R3x06AE	RRTD3_DIG_INP1_ALM	RRTD 3 - Digital Input 1 Alarm Status	1	-	0	4	RO	F123
R3x06AF	RRTD3_DIG_INP3_ALM	RRTD 3 - Digital Input 3 Alarm Status	1	-	0	4	RO	F123
R3x06B0	RRTD4_RTD1_ALM	RRTD 4 - RTD #1 Alarm Status	1	-	0	4	RO	F123
R3x06B1	RRTD4_RTD2_ALM	RRTD 4 - RTD #2 Alarm Status	1	-	0	4	RO	F123
R3x06B2	RRTD4_RTD3_ALM	RRTD 4 - RTD #3 Alarm Status	1	-	0	4	RO	F123
R3x06B3	RRTD4_RTD4_ALM	RRTD 4 - RTD #4 Alarm Status	1	-	0	4	RO	F123
R3x06B4	RRTD4_RTD5_ALM	RRTD 4 - RTD #5 Alarm Status	1	-	0	4	RO	F123
R3x06B5	RRTD4_RTD6_ALM	RRTD 4 - RTD #6 Alarm Status	1	-	0	4	RO	F123
R3x06B6	RRTD4_RTD7_ALM	RRTD 4 - RTD #7 Alarm Status	1	-	0	4	RO	F123
R3x06B7	RRTD4_RTD8_ALM	RRTD 4 - RTD #8 Alarm Status	1	-	0	4	RO	F123
R3x06B8	RRTD4_RTD9_ALM	RRTD 4 - RTD #9 Alarm Status	1	-	0	4	RO	F123
R3x06B9	RRTD4_RTD10_ALM	RRTD 4 - RTD #10 Alarm Status	1	-	0	4	RO	F123
R3x06BA	RRTD4_RTD11_ALM	RRTD 4 - RTD #11 Alarm Status	1	-	0	4	RO	F123
R3x06BB	RRTD4_RTD12_ALM	RRTD 4 - RTD #12 Alarm Status	1	-	0	4	RO	F123
R3x06BC	RRTD4_RTD1_HI_ALM	RRTD 4 - RTD #1 High Alarm Status	1	-	0	4	RO	F123
R3x06BD	RRTD4_RTD2_HI_ALM	RRTD 4 - RTD #2 High Alarm Status	1	-	0	4	RO	F123
R3x06BE	RRTD4_RTD3_HI_ALM	RRTD 4 - RTD #3 High Alarm Status	1	-	0	4	RO	F123
R3x06BF	RRTD4_RTD4_HI_ALM	RRTD 4 - RTD #4 High Alarm Status	1	-	0	4	RO	F123
R3x06C0	RRTD4_RTD5_HI_ALM	RRTD 4 - RTD #5 High Alarm Status	1	-	0	4	RO	F123
R3x06C1	RRTD4_RTD6_HI_ALM	RRTD 4 - RTD #6 High Alarm Status	1	-	0	4	RO	F123
R3x06C2	RRTD4_RTD7_HI_ALM	RRTD 4 - RTD #7 High Alarm Status	1	-	0	4	RO	F123
R3x06C3	RRTD4_RTD8_HI_ALM	RRTD 4 - RTD #8 High Alarm Status	1	-	0	4	RO	F123
R3x06C4	RRTD4_RTD9_HI_ALM	RRTD 4 - RTD #9 High Alarm Status	1	-	0	4	RO	F123
R3x06C5	RRTD4_RTD10_HI_ALM	RRTD 4 - RTD #10 High Alarm Status	1	-	0	4	RO	F123
R3x06C6	RRTD4_RTD11_HI_ALM	RRTD 4 - RTD #11 High Alarm Status	1	-	0	4	RO	F123
R3x06C7	RRTD4_RTD12_HI_ALM	RRTD 4 - RTD #12 High Alarm Status	1	-	0	4	RO	F123
R3x06C8	RRTD4_OPEN_RTD_ALM	RRTD 4 - Broken / Open RTD Alarm Status	1	-	0	4	RO	F123
R3x06C9	RRTD4_SHORT_RTD	RRTD 4 - Short / Low Temp Alarm Status	1	-	0	1	RO	F156
R3x06CA	RRTD4_DIG_INP6_ALM	RRTD 4 - Digital Input 6 Alarm Status	1	-	0	4	RO	F123
R3x06CB	RRTD4_DIG_INP2_ALM	RRTD 4 - Digital Input 2 Alarm Status	1	-	0	4	RO	F123
R3x06CC	RRTD4_DIG_INP5_ALM	RRTD 4 - Digital Input 5 Alarm Status	1	-	0	4	RO	F123
R3x06CD	RRTD4_DIG_INP4_ALM	RRTD 4 - Digital Input 4 Alarm Status	1	-	0	4	RO	F123
R3x06CE	RRTD4_DIG_INP1_ALM	RRTD 4 - Digital Input 1 Alarm Status	1	-	0	4	RO	F123

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R3x06CF	RRTD4_DIG_INP3_ALM	RRTD 4 - Digital Input 3 Alarm Status	1	-	0	4	RO	F123
R3x0700I	RRTD1_RTD1_MAX_TMP	RRTD 1 - RTD # 1 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0701I	RRTD1_RTD2_MAX_TMP	RRTD 1 - RTD # 2 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0702I	RRTD1_RTD3_MAX_TMP	RRTD 1 - RTD # 3 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0703I	RRTD1_RTD4_MAX_TMP	RRTD 1 - RTD # 4 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0704I	RRTD1_RTD5_MAX_TMP	RRTD 1 - RTD # 5 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0705I	RRTD1_RTD6_MAX_TMP	RRTD 1 - RTD # 6 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0706I	RRTD1_RTD7_MAX_TMP	RRTD 1 - RTD # 7 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0707I	RRTD1_RTD8_MAX_TMP	RRTD 1 - RTD # 8 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0708I	RRTD1_RTD9_MAX_TMP	RRTD 1 - RTD # 9 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0709I	RRTD1_RTD10_MAX_TMP	RRTD 1 - RTD # 10 Max. Temp	1	DEG C	-40	200	RO	F4
R3x070AI	RRTD1_RTD11_MAX_TMP	RRTD 1 - RTD # 11 Max. Temp	1	DEG C	-40	200	RO	F4
R3x070BI	RRTD1_RTD12_MAX_TMP	RRTD 1 - RTD # 12 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0710I	RRTD2_RTD1_MAX_TMP	RRTD 2 - RTD # 1 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0711I	RRTD2_RTD2_MAX_TMP	RRTD 2 - RTD # 2 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0712I	RRTD2_RTD3_MAX_TMP	RRTD 2 - RTD # 3 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0713I	RRTD2_RTD4_MAX_TMP	RRTD 2 - RTD # 4 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0714I	RRTD2_RTD5_MAX_TMP	RRTD 2 - RTD # 5 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0715I	RRTD2_RTD6_MAX_TMP	RRTD 2 - RTD # 6 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0716I	RRTD2_RTD7_MAX_TMP	RRTD 2 - RTD # 7 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0717I	RRTD2_RTD8_MAX_TMP	RRTD 2 - RTD # 8 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0718I	RRTD2_RTD9_MAX_TMP	RRTD 2 - RTD # 9 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0719I	RRTD2_RTD10_MAX_TMP	RRTD 2 - RTD # 10 Max. Temp	1	DEG C	-40	200	RO	F4
R3x071AI	RRTD2_RTD11_MAX_TMP	RRTD 2 - RTD # 11 Max. Temp	1	DEG C	-40	200	RO	F4
R3x071BI	RRTD2_RTD12_MAX_TMP	RRTD 2 - RTD # 12 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0720I	RRTD3_RTD1_MAX_TMP	RRTD 3 - RTD # 1 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0721I	RRTD3_RTD2_MAX_TMP	RRTD 3 - RTD # 2 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0722I	RRTD3_RTD3_MAX_TMP	RRTD 3 - RTD # 3 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0723I	RRTD3_RTD4_MAX_TMP	RRTD 3 - RTD # 4 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0724I	RRTD3_RTD5_MAX_TMP	RRTD 3 - RTD # 5 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0725I	RRTD3_RTD6_MAX_TMP	RRTD 3 - RTD # 6 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0726I	RRTD3_RTD7_MAX_TMP	RRTD 3 - RTD # 7 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0727I	RRTD3_RTD8_MAX_TMP	RRTD 3 - RTD # 8 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0728I	RRTD3_RTD9_MAX_TMP	RRTD 3 - RTD # 9 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0729I	RRTD3_RTD10_MAX_TMP	RRTD 3 - RTD # 10 Max. Temp	1	DEG C	-40	200	RO	F4
R3x072AI	RRTD3_RTD11_MAX_TMP	RRTD 3 - RTD # 11 Max. Temp	1	DEG C	-40	200	RO	F4
R3x072BI	RRTD3_RTD12_MAX_TMP	RRTD 3 - RTD # 12 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0730I	RRTD4_RTD1_MAX_TMP	RRTD 4 - RTD # 1 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0731I	RRTD4_RTD2_MAX_TMP	RRTD 4 - RTD # 2 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0732I	RRTD4_RTD3_MAX_TMP	RRTD 4 - RTD # 3 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0733I	RRTD4_RTD4_MAX_TMP	RRTD 4 - RTD # 4 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0734I	RRTD4_RTD5_MAX_TMP	RRTD 4 - RTD # 5 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0735I	RRTD4_RTD6_MAX_TMP	RRTD 4 - RTD # 6 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0736I	RRTD4_RTD7_MAX_TMP	RRTD 4 - RTD # 7 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0737I	RRTD4_RTD8_MAX_TMP	RRTD 4 - RTD # 8 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0738I	RRTD4_RTD9_MAX_TMP	RRTD 4 - RTD # 9 Max. Temp	1	DEG C	-40	200	RO	F4

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R3x0739I	RRTD4_RTD10_MAX_TMP	RRTD 4 - RTD # 10 Max. Temp	1	DEG C	-40	200	RO	F4
R3x073AI	RRTD4_RTD11_MAX_TMP	RRTD 4 - RTD # 11 Max. Temp	1	DEG C	-40	200	RO	F4
R3x073BI	RRTD4_RTD12_MAX_TMP	RRTD 4 - RTD # 12 Max. Temp	1	DEG C	-40	200	RO	F4
R3x0800	RRTD1_STATOR_TRPS	RRTD 1 - Stator RTD Trips	1	-	0	50000	RO	F1
R3x0801	RRTD1_BEARING_TRPS	RRTD 1 - Bearing RTD Trips	1	-	0	50000	RO	F1
R3x0802	RRTD1_OTHER_TRIPS	RRTD 1 - Other RTD Trips	1	-	0	50000	RO	F1
R3x0803	RRTD1_AMB_TRIPS	RRTD 1 - Ambient RTD Trips	1	-	0	50000	RO	F1
R3x0804	RRTD1_DIG_INP_TRPS	RRTD 1 - Digital Input Trips	1	-	0	50000	RO	F1
R3x0810	RRTD2_STATOR_TRPS	RRTD 2 - Stator RTD Trips	1	-	0	50000	RO	F1
R3x0811	RRTD2_BEARING_TRPS	RRTD 2 - Bearing RTD Trips	1	-	0	50000	RO	F1
R3x0812	RRTD2_OTHER_TRIPS	RRTD 2 - Other RTD Trips	1	-	0	50000	RO	F1
R3x0813	RRTD2_AMB_TRIPS	RRTD 2 - Ambient RTD Trips	1	-	0	50000	RO	F1
R3x0814	RRTD2_DIG_INP_TRPS	RRTD 2 - Digital Input Trips	1	-	0	50000	RO	F1
R3x0820	RRTD3_STATOR_TRPS	RRTD 3 - Stator RTD Trips	1	-	0	50000	RO	F1
R3x0821	RRTD3_BEARING_TRPS	RRTD 3 - Bearing RTD Trips	1	-	0	50000	RO	F1
R3x0822	RRTD3_OTHER_TRIPS	RRTD 3 - Other RTD Trips	1	-	0	50000	RO	F1
R3x0823	RRTD3_AMB_TRIPS	RRTD 3 - Ambient RTD Trips	1	-	0	50000	RO	F1
R3x0824	RRTD3_DIG_INP_TRPS	RRTD 3 - Digital Input Trips	1	-	0	50000	RO	F1
R3x0830	RRTD4_STATOR_TRPS	RRTD 4 - Stator RTD Trips	1	-	0	50000	RO	F1
R3x0831	RRTD4_BEARING_TRPS	RRTD 4 - Bearing RTD Trips	1	-	0	50000	RO	F1
R3x0832	RRTD4_OTHER_TRIPS	RRTD 4 - Other RTD Trips	1	-	0	50000	RO	F1
R3x0833	RRTD4_AMB_TRIPS	RRTD 4 - Ambient RTD Trips	1	-	0	50000	RO	F1
R3x0834	RRTD4_DIG_INP_TRPS	RRTD 4 - Digital Input Trips	1	-	0	50000	RO	F1
R3x0840	RRTD1_DIG_INP_3	RRTD1 Digital Input 3	1	-	0	1	RO	F131
R3x0841	RRTD1_DIG_INP_4	RRTD1 Digital Input 4	1	-	0	1	RO	F131
R3x0842	RRTD1_DIG_INP_6	RRTD1 Digital Input 6	1	-	0	1	RO	F131
R3x0843	RRTD1_DIG_INP_5	RRTD1 Digital Input 5	1	-	0	1	RO	F131
R3x0844	RRTD1_DIG_INP_2	RRTD1 Digital Input 2	1	-	0	1	RO	F131
R3x0845	RRTD1_DIG_INP_1	RRTD1 Digital Input 1	1	-	0	1	RO	F131
R3x0850	RRTD2_DIG_INP_3	RRTD2 Digital Input 3	1	-	0	1	RO	F131
R3x0851	RRTD2_DIG_INP_4	RRTD2 Digital Input 4	1	-	0	1	RO	F131
R3x0852	RRTD2_DIG_INP_6	RRTD2 Digital Input 6	1	-	0	1	RO	F131
R3x0853	RRTD2_DIG_INP_5	RRTD2 Digital Input 5	1	-	0	1	RO	F131
R3x0854	RRTD2_DIG_INP_2	RRTD2 Digital Input 2	1	-	0	1	RO	F131
R3x0855	RRTD2_DIG_INP_1	RRTD2 Digital Input 1	1	-	0	1	RO	F131
R3x0860	RRTD3_DIG_INP_3	RRTD3 Digital Input 3	1	-	0	1	RO	F131
R3x0861	RRTD3_DIG_INP_4	RRTD3 Digital Input 4	1	-	0	1	RO	F131
R3x0862	RRTD3_DIG_INP_6	RRTD3 Digital Input 6	1	-	0	1	RO	F131
R3x0863	RRTD3_DIG_INP_5	RRTD3 Digital Input 5	1	-	0	1	RO	F131
R3x0864	RRTD3_DIG_INP_2	RRTD3 Digital Input 2	1	-	0	1	RO	F131
R3x0865	RRTD3_DIG_INP_1	RRTD3 Digital Input 1	1	-	0	1	RO	F131
R3x0870	RRTD4_DIG_INP_3	RRTD4 Digital Input 3	1	-	0	1	RO	F131
R3x0871	RRTD4_DIG_INP_4	RRTD4 Digital Input 4	1	-	0	1	RO	F131
R3x0872	RRTD4_DIG_INP_6	RRTD4 Digital Input 6	1	-	0	1	RO	F131
R3x0873	RRTD4_DIG_INP_5	RRTD4 Digital Input 5	1	-	0	1	RO	F131
R3x0874	RRTD4_DIG_INP_2	RRTD4 Digital Input 2	1	-	0	1	RO	F131

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R3x0875	RRTD4_DIG_INP_1	RRTD4 Digital Input 1	1	-	0	1	RO	F131
R3x0880	RRTD1_TRIP	RRTD 1 - Trip	1	N/A	0	2	RO	F150
R3x0881	RRTD1_ALM	RRTD 1 - Alarm	1	N/A	0	2	RO	F150
R3x0882	RRTD1_AUX1	RRTD 1 - Aux. 1	1	N/A	0	2	RO	F150
R3x0883	RRTD1_AUX2	RRTD 1 - Aux. 2	1	N/A	0	2	RO	F150
R3x0890	RRTD2_TRIP	RRTD 2 - Trip	1	N/A	0	2	RO	F150
R3x0891	RRTD2_ALM	RRTD 2 - Alarm	1	N/A	0	2	RO	F150
R3x0892	RRTD2_AUX1	RRTD 2 - Aux. 1	1	N/A	0	2	RO	F150
R3x0893	RRTD2_AUX2	RRTD 2 - Aux. 2	1	N/A	0	2	RO	F150
R3x08A0	RRTD3_TRIP	RRTD 3 - Trip	1	N/A	0	2	RO	F150
R3x08A1	RRTD3_ALM	RRTD 3 - Alarm	1	N/A	0	2	RO	F150
R3x08A2	RRTD3_AUX1	RRTD 3 - Aux. 1	1	N/A	0	2	RO	F150
R3x08A3	RRTD3_AUX2	RRTD 3 - Aux. 2	1	N/A	0	2	RO	F150
R3x08B0	RRTD4_TRIP	RRTD 4 - Trip	1	N/A	0	2	RO	F150
R3x08B1	RRTD4_ALM	RRTD 4 - Alarm	1	N/A	0	2	RO	F150
R3x08B2	RRTD4_AUX1	RRTD 4 - Aux. 1	1	N/A	0	2	RO	F150
R3x08B3	RRTD4_AUX2	RRTD 4 - Aux. 2	1	N/A	0	2	RO	F150
R4x0000	DEVICE_CODE	Multilin Product Code	-	-	-	-	RO	F1
R4x0001	HARDWARE_REV	Product Hardware Revision	1	N/A	1	26	RO	F15
R4x0002	FIRMWARE_REV	Firmware Revision	N/A	N/A	N/A	N/A	RO	F16
R4x0003	MOD_NUMBER	Modification Number	1	N/A	0	999	RO	F1
R4x0004	BOOT_REV	Boot Revision	1	-	0	999	RO	F1
R4x0005	BOOT_MOD_NUM	Boot Mod Number	-	-	-	-	RO	-
R4x0008	ORDER_CODE	Order Code	1	N/A	0	63	RO	0
R4x000F	MOD_OPTIONS	Modify Options	-	N/A	0	N/A	RO	N/A
R4x0010S8	MOD_PASSWD	Modify Options Passcode	1	-	32	127	RO	F1A
R4x0020S12	SERIAL_NUM	Serial Number	N/A	ASCII	N/A	N/A	RO	F22A
R4x0030L	CAL_DATE	Calibration Date	1	-	1995	2094	RO	F18
R4x0040L	MFG_DATE	Manufacturing Date	1	-	1995	2094	RO	F18
R4x0050	KEY_ACCESS	Keypad Access Level	1	N/A	0	1	RO	F162
R4x0051	COMM_ACCESS	Comm Access Level	1	N/A	0	1	RO	F162
R4x0052S8	ACCESS_PASSWD	Access Password	1	-	32	127	RO	F1A
R4x0056S8	ACCESS_PASSWD_ENCR	Encrypted Access Password	1	-	32	127	RO	F1A
R4x0080	CMD_FUNC_CODE	Command Function Code	1	-	0	4	RW	F31
R4x0082	RRTD1_CMD_CODE	RRTD 1 Command Function Code	1	-	0	4	RW	F31
R4x0083	RRTD2_CMD_CODE	RRTD 2 Command Function Code	1	-	0	4	RW	F31
R4x0084	RRTD3_CMD_CODE	RRTD 3 Command Function Code	1	-	0	4	RW	F31
R4x0085	RRTD4_CMD_CODE	RRTD 4 Command Function Code	1	-	0	4	RW	F31
R4x1000	DEF_MSG_CYC_TM	Default Message Cycle Time	1	s	5	100	RW	F1
R4x1001	DEF_MSG_TIMEOUT	Default Message Timeout	1	s	10	900	RW	F1
R4x1002	CONTRAST	Contrast Adjustment	1	-	1	254	RW	F1
R4x1003	FLASH_MSG	Flash Message	1	s	1	10	RW	F1
R4x1004	TEMP_UNITS	Temperature Display Units	1	-	0	1	RW	F100
R4x1008	TRIGGER_POS	Trigger Position	1	%	0	100	RW	F1
R4x1009	NUM_RECORDS	Number of Records	1	-	0	3	RW	F152
R4x1010	SLAVE_ADDR	Slave Address	1	-	1	254	RW	F1

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x1011	COMPUTR_BAUD	Computer RS232 Baud Rate	1	-	0	4	RW	F101
R4x1012	COMPUTR_PARITY	Computer RS232 Parity	1	-	0	2	RW	F102
R4x1013	CH1_PARITY	CHANNEL 1 Parity	1	-	0	2	RW	F102
R4x1014	CH1_BAUD	CHANNEL 1 Baud Rate	1	-	0	4	RW	F101
R4x1015	CH2_PARITY	CHANNEL 2 Parity	1	-	0	2	RW	F102
R4x1016	CH2_BAUD	CHANNEL 2 Baud Rate	1	-	0	4	RW	F101
R4x1017	CH3_PARITY	CHANNEL 3 Parity	1	-	0	2	RW	F102
R4x1018	CH3_BAUD	CHANNEL 3 Baud Rate	1	-	0	4	RW	F101
R4x1019	CH3_CONNECTION	CHANNEL 3 Connection	1	-	0	1	RW	F151
R4x101A	CH3_APPLICATION	CHANNEL 3 Application	1	-	0	1	RW	F149
R4x1030L	DATE	Date (2 words)	N/A	-	valid	date	RW	F18
R4x1034L	TIME	Time (2 words)	N/A	-	valid	time	RW	F19
R4x1041	DEF_METER	Default to Current Metering	1	-	0	1	RW	F103
R4x1042	DEF_LOAD	Default to Motor Load	1	-	0	1	RW	F103
R4x1043	DEF_DELTA	Default to Delta Voltage Metering	1	-	0	1	RW	F103
R4x1044	DEF_PF	Default to Power Factor	1	-	0	1	RW	F103
R4x1045	DEF_POS_WH	Default to Positive Watthours	1	-	0	1	RW	F103
R4x1046	DEF_REAL_PWR	Default to Real Power	1	-	0	1	RW	F103
R4x1047	DEF_REACTIVE_PWR	Default to Reactive Power	1	-	0	1	RW	F103
R4x1048	DEF_HOT_STATOR	Default to Hottest Stator RTD	1	-	0	1	RW	F103
R4x1049	DEF_TXT_MSG1	Default to Text Message 1	1	-	0	1	RW	F103
R4x104A	DEF_TXT_MSG2	Default to Text Message 2	1	-	0	1	RW	F103
R4x104B	DEF_TXT_MSG3	Default to Text Message 3	1	-	0	1	RW	F103
R4x104C	DEF_TXT_MSG4	Default to Text Message 4	1	-	0	1	RW	F103
R4x104D	DEF_TXT_MSG5	Default to Text Message 5	1	-	0	1	RW	F103
R4x1060S40	SCRATCHMSG1	1st Scratchpad Message	1	-	32	127	RW	F1B
R4x1074S40	SCRATCHMSG2	2nd Scratchpad Message	1	-	32	127	RW	F1B
R4x1088S40	SCRATCHMSG3	3rd Scratchpad Message	1	-	32	127	RW	F1B
R4x109CS40	SCRATCHMSG4	4th Scratchpad Message	1	-	32	127	RW	F1B
R4x10B0S40	SCRATCHMSG5	5th Scratchpad Message	1	-	32	127	RW	F1B
R4x1130	CLR_LAST_TRIP	Clear Last Trip Data	1	-	0	1	RW	F103
R4x1131	CLR_PEAK_DMD	Clear Peak Demand Data	1	-	0	1	RW	F103
R4x1132	CLR_RTD_MAX	Clear RTD Maximums	1	-	0	1	RW	F103
R4x1133	PRESET_MWH	Preset MWh	1	MWh	0	65535	RW	F7
R4x1134	CLR_TRIP_CNTR	Clear Trip Counters	1	-	0	1	RW	F103
R4x1135	PRESET_DIG_CNTR	Preset Digital Counter	1	-	0	65535	RW	F1
R4x1136	CLR_EVENTS	Clear Event Records	1	-	0	1	RW	F103
R4x1137	PST_POS_KVARH	Preset Positive kvarh	1	kvarh	0	65535	RW	F7
R4x1138	PST_NEG_KVARH	Preset Negative kvarh	1	kvarh	0	65535	RW	F7
R4x1140	CLEAR_MTR_DATA	Clear Motor Data	1	-	0	1	RW	F103
R4x1142	CLR_ALL_DATA	Clear All Data	1	-	0	1	RW	F103
R4x1143	RRTD1_PST_DIG_CNT	RRTD 1 - Preset Digital Counter	1	-	0	65535	RW	F1
R4x1145	RRTD2_PST_DIG_CNT	RRTD 2 - Preset Digital Counter	1	-	0	65535	RW	F1
R4x1147	RRTD3_PST_DIG_CNT	RRTD 3 - Preset Digital Counter	1	-	0	65535	RW	F1
R4x1149	RRTD4_PST_DIG_CNT	RRTD 4 - Preset Digital Counter	1	-	0	65535	RW	F1
R4x1180	PHASE_CT_PRI	Phase CT Primary	1	A	1	5000	RW	F1

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x1181	MOTOR_FLA	Motor Full Load Amps	1	A	1	5000	RW	F1
R4x1182	GND_CT_TYPE	Ground CT Type	1	-	0	3	RW	F104
R4x1183	GND_CT_PRI	Ground CT Primary	1	A	1	5000	RW	F1
R4x11A0	VT_CONNECTION	Voltage Transformer Connection Type	1	-	0	2	RW	F106
R4x11A1	VT_RATIO	Voltage Transformer Ratio	1	-	100	24000	RW	F3
R4x11A2	MOTOR_VOLTS	Motor Rated Voltage	1	V	100	20000	RW	F1
R4x11C0	NOMINAL_FREQ	Nominal Frequency	1	-	0	2	RW	F107
R4x11C1	PHASE_SEQ	System Phase Sequence	1	-	0	1	RW	F124
R4x11C8	SER_COMM_CTL	Serial Communication Control	1	-	0	1	RW	F103
R4x11C9	ASGN_STR_CTL_RLY	Assign Start Control Relays	1	-	0	7	RW	F113
R4x11D0	REDUCD_VOLT_STRT	Reduced Voltage Starting	1	-	0	1	RW	F103
R4x11D1	STRT_CTL_RELAYS	Start Control Relays	1	-	0	2	RW	F113
R4x11D2	TRANSITION_ON	Transition On	1	-	0	2	RW	F108
R4x11D3	INCOMP_SEQ_TRP_RLY	Incomplete Sequence Trip Relays	1	-	0	6	RW	F111
R4x11D4	RED_V_STRT_LVL	Reduced Voltage Start Level	1	% FLA	25	300	RW	F1
R4x11D5	RED_V_STRT_TMR	Reduced Voltage Start Timer	1	s	1	500	RW	F1
R4x12E6S12	DIG_CNTR_NAME	Counter Name	1	-	32	127	RW	F1C
R4x12F2S12	DIG_CNTR_UNIT_NAME	Counter Unit Name	1	-	32	127	RW	F1C
R4x12F8	DIG_CNTR_TYPE	Counter Type	1	-	0	1	RW	F114
R4x12F9	DIG_CNTR_ALM	Digital Counter Alarm	1	-	0	2	RW	F115
R4x12FA	ASGN_ALM_RLYS	Assign Alarm Relays	1	-	0	6	RW	F113
R4x12FB	DIG_CNTR_ALM_LVL	Counter Alarm Level	1	-	0	65535	RW	F1
R4x12FE	DIG_CNTR_EVENTS	Record Alarms as Events	1	-	0	1	RW	F103
R4x1330S16	EMG_SW_NAME	Emergency Switch Name	1	-	32	127	RW	F22B
R4x1340	EMG_SW_TYPE	General Emergency Switch Type	1	-	0	1	RW	F116
R4x1341	EMG_SW_BLOCK	General Emergency Switch Block Input From Start	1	s	0	5000	RW	F1
R4x1342	EMG_SW_ALM	General Emergency Switch Alarm	1	-	0	2	RW	F115
R4x1343	EMG_SW_ALM_RLYS	General Emergency Switch Alarm Relays	1	-	0	6	RW	F113
R4x1344	EMG_SW_ALM_DLY	General Emergency Switch Alarm Delay	1	100ms	1	50000	RW	F2
R4x1345	EMG_SW_ALM_EVENTS	General Emergency Switch Alarm Events	1	-	0	1	RW	F103
R4x1346	EMG_SW_TRIP	General Emergency Switch Trip	1	-	0	2	RW	F115
R4x1347	EMG_SW_TRP_RLYS	General Emergency Switch Trip Relays	1	-	0	6	RW	F111
R4x1348	EMG_SW_TRP_DLY	General Emergency Switch Trip Delay	1	100ms	1	50000	RW	F2
R4x1349	EMB_ASGN_FUNC	Emergency Switch Assignable Function	1	-	0	7	RW	F110
R4x1370S16	DIFF_SW_NAME	Differential Switch Name	1	-	32	127	RW	F22B
R4x1380	DIFF_SW_TYPE	General Differential Switch Type	1	-	0	1	RW	F116
R4x1381	DIFF_SW_BLOCK	General Differential Switch Block Input From Start	1	s	0	5000	RW	F1
R4x1382	DIFF_SW_ALM	General Differential Switch Alarm	1	-	0	2	RW	F115
R4x1383	DIFF_SW_ALM_RLYS	General Differential Switch Alarm Relays	1	-	0	7	RW	F113

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x1384	DIFF_SW_ALM_DLY	General Differential Switch Alarm Delay	1	100ms	1	50000	RW	F2
R4x1385	DIFF_SW_ALM_EVENT	General Differential Switch Alarm Events	1	-	0	1	RW	F103
R4x1386	DIFF_SW_TRIP	General Differential Switch Trip	1	-	0	2	RW	F115
R4x1387	DIFF_SW_TRP_RLY	General Differential Switch Trip Relays	1	-	0	7	RW	F111
R4x1388	DIFF_SW_TRP_DLY	General Differential Switch Trip Delay	1	100ms	1	50000	RW	F2
R4x1389	DIFF_SW_ASGN_FUNC	Differential Switch Assignable Function	1	-	0	7	RW	F157
R4x138A	DIFF_SW_ASGN_RLY	Assign Differential Switch Trip Relays	1	-	0	7	RW	F111
R4x13A0S16	SPD_SW_NAME	Speed Switch Name	1	-	32	127	RW	F22B
R4x13B0	SPD_SW_TYPE	General Speed Switch Type	1	-	0	1	RW	F116
R4x13B1	SPD_SW_BLOCK	General Speed Switch Block Input from Start	1	s	0	5000	RW	F1
R4x13B2	SPD_SW_ALM	General Speed Switch Alarm	1	-	0	2	RW	F115
R4x13B3	SPD_SW_ALM_RLY	General Speed Switch Alarm Relays	1	-	0	7	RW	F113
R4x13B4	SPD_SW_ALM_DLY	General Speed Switch Alarm Delay	1	100ms	1	50000	RW	F2
R4x13B5	SPD_SW_ALM_EVENT	General Speed Switch Alarm Events	1	-	0	1	RW	F103
R4x13B6	SPD_SW_TRIP	General Speed Switch Trip	1	-	0	2	RW	F115
R4x13B7	SPD_SW_TRP_RLY	General Speed Switch Trip Relays	1	-	0	7	RW	F111
R4x13B8	SPD_SW_TRP_DLY	General Speed Switch Trip Delay	1	100ms	1	50000	RW	F2
R4x13B9	SPD_SW_ASGN_FUNC	Speed Switch Assignable Function	1	-	0	7	RW	F158
R4x13BA	SPD_SW_DLY	Speed Switch Delay	5	100ms	5	1000	RW	F2
R4x13BB	SPD_SW_ASGN_RLY	Assign Speed Switch Trip Relays	1	-	0	7	RW	F111
R4x13D0S16	RST_SW_NAME	Reset Switch Name	1	-	32	127	RW	F22B
R4x13E0	RST_SW_TYPE	General Reset Switch Type	1	-	0	1	RW	F116
R4x13E1	RST_SW_BLOCK	General Reset Switch Block Input From Start	1	s	0	5000	RW	F1
R4x13E2	RST_SW_ALM	General Reset Switch Alarm	1	-	0	2	RW	F115
R4x13E3	RST_SW_ALM_RLYS	General Reset Switch Alarm Relays	1	-	0	7	RW	F113
R4x13E4	RST_SW_ALM_DLY	General Reset Switch Alarm Delay	1	100ms	1	50000	RW	F2
R4x13E5	RST_SW_ALM_EVENT	General Reset Switch Alarm Events	1	-	0	1	RW	F103
R4x13E6	RST_SW_TRIP	General Reset Switch Trip	1	-	0	2	RW	F115
R4x13E7	RST_SW_TRP_RLYS	General Reset Switch Trip Relays	1	-	0	7	RW	F111
R4x13E8	RST_SW_TRP_DLY	General Reset Switch Trip Delay	1	100ms	1	50000	RW	F2
R4x13E9	RST_SW_ASGN_FUNC	Reset Switch Assignable Function	1	-	0	7	RW	F160
R4x1400S16	SPR_SW_NAME	Spare Switch Name	1	-	32	127	RW	F22B
R4x1410	SPR_SW_TYPE	General Spare Switch Type	1	-	0	1	RW	F116
R4x1411	SPR_SW_BLOCK	General Spare Switch Block Input From Start	1	s	0	5000	RW	F1
R4x1412	SPR_SW_ALM	General Spare Switch Alarm	1	-	0	2	RW	F115
R4x1413	SPR_SW_ALM_RLYS	General Spare Switch Alarm Relays	1	-	0	7	RW	F113
R4x1414	SPR_SW_ALM_DLY	General Spare Switch Alarm Delay	1	100ms	1	50000	RW	F2
R4x1415	SPR_SW_ALM_EVENT	General Spare Switch Alarm Events	1	-	0	1	RW	F103
R4x1416	SPR_SW_TRIP	General Spare Switch Trip	1	-	0	1	RW	F115
R4x1417	SPR_SW_TRP_RLYS	General Spare Switch Trip Relays	1	-	0	7	RW	F111
R4x1418	SPR_SW_TRP_DLY	General Spare Switch Trip Delay	1	100ms	1	50000	RW	F2

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x1419	SPR_SW_ASGN_FUNC	Spare Switch Assignable Function	1	-	0	7	RW	F159
R4x141A	STRT_AUX_TYPE	Starter Aux Contact Type	1	-	0	1	RW	F109
R4x1500	TRP_RLY_RST_MODE	Trip Relay Reset Mode	1	-	0	2	RW	F117
R4x1501	ALM_RLY_RST_MODE	Alarm Relay Reset Mode	1	-	0	2	RW	F117
R4x1502	AUX1_RLY_RST_MODE	Aux 1 Relay Reset Mode	1	-	0	2	RW	F117
R4x1503	AUX2_RLY_RST_MODE	Aux 2 Relay Reset Mode	1	-	0	2	RW	F117
R4x1504	TRP_RLY_OP	Trip Relay Operation	1	-	0	1	RW	F161
R4x1505	ALM_RLY_OP	Alarm Relay Operation	1	-	0	1	RW	F161
R4x1506	AUX1_RLY_OP	Aux1 Relay Operation	1	-	0	1	RW	F161
R4x1507	AUX2_RLY_OP	Aux2 Relay Operation	1	-	0	1	RW	F161
R4x1581	OL_PU_LVL	Overload Pickup Level	1	.01xFLA	101	125	RW	F3
R4x1582	ASGN_THM_CAP_TRP	Assign Thermal Capacity Trip Relay	1	-	0	7	RW	F111
R4x1583	UNBAL_KFACTOR	Unbalance k Factor (0=Learned)	1	-	0	29	RW	F1
R4x1584	RUN_COOL_CONST	Running Cool Time Constant	1	min	1	500	RW	F1
R4x1585	STOP_COOL_CONST	Stopped Cool Time Constant	1	min	1	500	RW	F1
R4x1586	SAFE_STALL_RATIO	Hot/Cold Safe Stall Ratio	1	-	1	100	RW	F3
R4x1587	RTD_BIASING	RTD Biasing	1	-	0	1	RW	F103
R4x1588	RTD_BIAS_MIN	RTD Bias Minimum	1	DEG C	0	198	RW	F1
R4x1589	RTD_BIAS_MIDPT	RTD Bias Mid Point	1	DEG C	0	199	RW	F1
R4x158A	RTD_BIAS_MAX	RTD Bias Maximum	1	DEG C	0	200	RW	F1
R4x158B	THM_CAP_ALM	Thermal Capacity Alarm	1	-	0	2	RW	F115
R4x158C	ASGN_THM_CAP_RLY	Assign Thermal Capacity Alarm Relays	1	-	0	7	RW	F113
R4x158D	THM_CAP_ALM_LVL	Thermal Capacity Alarm Level	1	% used	1	100	RW	F1
R4x158E	THM_CAP_ALM_EVT	Thermal Capacity Alarm Events	1	-	0	1	RW	F103
R4x158F	EN_LRND_COOL_TIM	Enable Learned Cool Time	1	-	0	1	RW	F103
R4x1590	EN_UNBAL_BIAS	Enable Unbalance Biasing	1	-	0	1	RW	F103
R4x15AE	SEL_CURVE_STYLE	Select Curve Style	1	-	0	1	RW	F128
R4x15AF	STD_OL_CURVE_NUM	Standard Overload Curve Number	1	-	1	15	RW	F1
R4x15B0	TRP_TIME_101X	Time to Trip at 1.01 x FLA	1	s	0	65500	RW	F1
R4x15B2	TRP_TIME_105X	Time to Trip at 1.05 x FLA	1	s	0	65500	RW	F1
R4x15B4	TRP_TIME_110X	Time to Trip at 1.1 x FLA	1	s	0	65500	RW	F1
R4x15B6	TRP_TIME_120X	Time to Trip at 1.2 x FLA	1	s	0	65500	RW	F1
R4x15B8	TRP_TIME_130X	Time to Trip at 1.3 x FLA	1	s	0	65500	RW	F1
R4x15BA	TRP_TIME_140X	Time to Trip at 1.4 x FLA	1	s	0	65500	RW	F1
R4x15BC	TRP_TIME_150X	Time to Trip at 1.5 x FLA	1	s	0	65500	RW	F1
R4x15BE	TRP_TIME_175X	Time to Trip at 1.75 x FLA	1	s	0	65500	RW	F1
R4x15C0	TRP_TIME_200X	Time to Trip at 2 x FLA	1	s	0	65500	RW	F1
R4x15C2	TRP_TIME_225X	Time to Trip at 2.25 x FLA	1	s	0	65500	RW	F1
R4x15C4	TRP_TIME_250X	Time to Trip at 2.5 x FLA	1	s	0	65500	RW	F1
R4x15C6	TRP_TIME_275X	Time to Trip at 2.75 x FLA	1	s	0	65500	RW	F1
R4x15C8	TRP_TIME_300X	Time to Trip at 3 x FLA	1	s	0	65500	RW	F1
R4x15CA	TRP_TIME_325X	Time to Trip at 3.25 x FLA	1	s	0	65500	RW	F1
R4x15CC	TRP_TIME_350X	Time to Trip at 3.5 x FLA	1	s	0	65500	RW	F1
R4x15CE	TRP_TIME_375X	Time to Trip at 3.75 x FLA	1	s	0	65500	RW	F1
R4x15D0	TRP_TIME_400X	Time to Trip at 4 x FLA	1	s	0	65500	RW	F1

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x15D2	TRP_TIME_425X	Time to Trip at 4.25 x FLA	1	s	0	65500	RW	F1
R4x15D4	TRP_TIME_450X	Time to Trip at 4.5 x FLA	1	s	0	65500	RW	F1
R4x15D6	TRP_TIME_475X	Time to Trip at 4.75 x FLA	1	s	0	65500	RW	F1
R4x15D8	TRP_TIME_500X	Time to Trip at 5 x FLA	1	s	0	65500	RW	F1
R4x15DA	TRP_TIME_550X	Time to Trip at 5.5 x FLA	1	s	0	65500	RW	F1
R4x15DC	TRP_TIME_600X	Time to Trip at 6 x FLA	1	s	0	65500	RW	F1
R4x15DE	TRP_TIME_650X	Time to Trip at 6.5 x FLA	1	s	0	65500	RW	F1
R4x15E0	TRP_TIME_700X	Time to Trip at 7 x FLA	1	s	0	65500	RW	F1
R4x15E2	TRP_TIME_750X	Time to Trip at 7.5 x FLA	1	s	0	65500	RW	F1
R4x15E4	TRP_TIME_800X	Time to Trip at 8 x FLA	1	s	0	65500	RW	F1
R4x15E6	TRP_TIME_1000X	Time to Trip at 10 x FLA	1	s	0	65500	RW	F1
R4x15E8	TRP_TIME_1500X	Time to Trip at 15 x FLA	1	s	0	65500	RW	F1
R4x15EA	TRP_TIME_2000X	Time to Trip at 20 x FLA	1	s	0	65500	RW	F1
R4x1640	SC_TRIP	Short Circuit Trip	1	-	0	1	RW	F103
R4x1642	ASGN_TRP_RLY	Assign Trip Relays	1	-	0	7	RW	F111
R4x1643	SC_PU	Short Circuit Pickup	1	xCT	20	200	RW	F2
R4x1644	SC_TRP_DLY	Short Circuit Trip Delay	0.01	s	0	255	RW	F3
R4x1645	SC_TRP_BKP	Short Circuit Trip Backup	1	-	0	2	RW	F115
R4x1646	ASGN_BKP_RLY	Assign Backup Relays	1	-	0	3	RW	F119
R4x1647	SC_TRP_BKP_DLY	Short Circuit Trip Backup Delay	0.01	s	0	25500	RW	F3
R4x1650	OL_ALM	Overload Alarm	1	-	0	2	RW	F115
R4x1651	OL_ALM_LVL	Overload Alarm Level	1	.01XFLA	101	150	RW	F3
R4x1652	ASGN_OL_ALM_RLY	Assign Overload Alarm Relays	1	-	0	7	RW	F113
R4x1653	OL_ALM_DLY	Overload Alarm Delay	1	s	1	600	RW	F2
R4x1654	OL_ALM_EVENT	Overload Alarm Events	1	-	0	1	RW	F103
R4x1660	MECH_JAM_ALM	Mechanical Jam Alarm	1	-	0	2	RW	F115
R4x1661	ASGN_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1662	MJ_ALM_PU	Mechanical Jam Alarm Pickup	1	.01XFLA	101	600	RW	F3
R4x1663	MJ_ALM_DLY	Mechanical Jam Alarm Delay	5	s	5	1250	RW	F2
R4x1664	MJ_ALM_EVT	Mechanical Jam Alarm Events	1	-	0	1	RW	F103
R4x1665	MJ_TRIP	Mechanical Jam Trip	1	-	0	2	RW	F115
R4x1666	ASGN_MJ_TRP_RLY	Assign Trip Relays	1	-	0	7	RW	F111
R4x1667	MJ_TRIP_PU	Mechanical Jam Trip Pickup	1	.01XFLA	101	600	RW	F3
R4x1668	MJ_TRIP_DLY	Mechanical Jam Trip Delay	5	s	5	1250	RW	F2
R4x1670	UC_BLOCK	Block Undercurrent from Start	1	s	0	15000	RW	F1
R4x1671	UC_ALM	Undercurrent Alarm	1	-	0	2	RW	F115
R4x1672	ASGN_UC_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1673	UC_ALM_PU	Undercurrent Alarm Pickup	1	.01XFLA	10	99	RW	F3
R4x1674	UC_ALM_DLY	Undercurrent Alarm Delay	1	s	1	255	RW	F1
R4x1675	UC_ALM_EVT	Undercurrent Alarm Events	1	-	0	1	RW	F103
R4x1676	UC_TRIP	Undercurrent Trip	1	-	0	2	RW	F115
R4x1677	ASGN_UC_TRP_RLY	Assign Trip Relays	1	-	0	7	RW	F111
R4x1678	UC_TRIP_PU	Undercurrent Trip Pickup	1	.01XFLA	10	99	RW	F3
R4x1679	UC_TRP_DLY	Undercurrent Trip Delay	1	s	1	255	RW	F1
R4x1680	CU_BLOCK	Block Unbalance From Start	1	s	0	5000	RW	F1
R4x1681	CU_ALM	Current Unbalance Alarm	1	-	0	2	RW	F115

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x1682	ASGN_CU_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1683	CU_ALM_PU	Unbalance Alarm Pickup	1	%	4	30	RW	F1
R4x1684	CU_ALM_DLY	Unbalance Alarm Delay	1	s	1	255	RW	F1
R4x1685	CU_ALM_EVT	Unbalance Alarm Events	1	-	0	1	RW	F103
R4x1686	CU_TRIP	Current Unbalance Trip	1	-	0	2	RW	F115
R4x1687	ASGN_CU_TRP_RLY	Assign Trip Relays	1	-	0	7	RW	F111
R4x1688	CU_TRP_PU	Unbalance Trip Pickup	1	%	4	30	RW	F1
R4x1689	CU_TRP_DLY	Unbalance Trip Delay	1	s	1	255	RW	F1
R4x16A1	GF_ALM	Ground Fault Alarm	1	-	0	2	RW	F115
R4x16A2	ASGN_GF_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x16A3	GF_ALM_PU	Ground Fault Alarm Pickup	1	0.1XCT	10	100	RW	F3
R4x16A4	GF_ALM_CT_PU	Alarm Pickup for Multilin CT 50 / 0.025	1	Amps	25	2500	RW	F3
R4x16A5	GF_ALM_DLY	Ground Fault Alarm Delay	0.01	s	0	255	RW	F3
R4x16A6	GF_ALM_EVT	Ground Fault Alarm Events	1	-	0	1	RW	F103
R4x16A7	GF_TRIP	Ground Fault Trip	1	-	0	2	RW	F115
R4x16A8	ASGN_GF_TRP_RLY	Assign Trip Relays	1	-	0	7	RW	F111
R4x16A9	GF_TRP_PU	Ground Fault Trip Pickup	1	0.1XCT	10	100	RW	F3
R4x16AA	GF_TRP_PU_CT	Trip Pickup for Multilin CT 50 / 0.025	1	0.1XCT	25	2500	RW	F3
R4x16AB	GF_TRP_DLY	Ground Fault Trip Delay	0.01	s	0	255	RW	F3
R4x16AC	GF_TRP_BKP	Ground Fault Trip Backup	1	-	0	1	RW	F103
R4x16AD	GF_TRP_BKP_RLYS	Ground Fault Trip Backup Relays	1	-	0	3	RW	F119
R4x16AE	GF_TRP_BKP_DLY	Ground Fault Trip Backup Delay	0.01	s	0.1	255	RW	F3
R4x16D0	ACL_TRIP	Acceleration Trip	1	-	0	1	RW	F115
R4x16D1	ASGN_ACL_TRP_RLY	Assign Trip Relays	1	-	0	7	RW	F111
R4x16D2	ACL_TMR	Acceleration Timer From Start	1	1s	10	2500	RW	F1
R4x16E0	EN_SGL_SHOT_RSRT	Enable Single Shot Restart	1	-	0	1	RW	F103
R4x16E1	EN_STRT_INHIBIT	Enable Start Inhibit	1	-	0	1	RW	F103
R4x16E2	MAX_STRTS_HR	Maximum Starts/Hour Permissible	1	-	0	5	RW	F1
R4x16E3	TM_BTWN_STRTS	Time Between Starts	1	min	0	500	RW	F1
R4x16E4	RSTRT_BLOCK	Restart Block	1	s	0	50000	RW	F1
R4x16E5	ASGN_STRT_RLY	Assign Start Inhibit Relay	1	-	0	7	RW	F111
R4x1780	EN_BKSPN_STR_BLK	Enable Back-Spin Start Inhibit	1	-	0	1	RW	F103
R4x1781	LF_STRT_LVL	Minimum Permissible Frequency	1	Hz	2	30	RW	F1
R4x1784	EN_PREDICTION	Enable Prediction Algorithm	1	-	0	1	RW	F111
R4x1785	ASGN_BKSPN_RLY	Assign Backspin Inhibit Relays	1	-	0	7	RW	F111
R4x1786	NUM_MTR_POLES	Number of Motor Poles	2	-	2	16	RW	F1
R4x1790	LOCRTD1_APPL	Local RTD #1 Application	1	-	0	4	RW	F121
R4x1791	LOCRTD1_HI_ALM	Local RTD #1 High Alarm	1	-	0	2	RW	F115
R4x1792	LOCRTD1_HI_ALM_RLY	Local RTD #1 High Alarm Relays	1	-	0	7	RW	F113
R4x1793	LOCRTD1_HI_ALM_LVL	Local RTD #1 High Alarm Level	1	DEG C	1	200	RW	F1
R4x1794	LOCRTD1_ALM	Local RTD #1 Alarm	1	-	0	2	RW	F115
R4x1795	LOCRTD1_ALM_RLYS	Local RTD #1 Alarm Relays	1	-	0	7	RW	F113
R4x1796	LOCRTD1_ALM_LVL	Local RTD #1 Alarm Level	1	DEG C	1	200	RW	F1
R4x1797	LOCRTD1_ALM_EVT	Record RTD #1 Alarms as Events	1	-	0	1	RW	F103
R4x1798	LOCRTD1_TRIP	Local RTD #1 Trip	1	-	0	2	RW	F115

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x1799	LOCRTD1_TRP_VOTE	Enable RTD #1 Trip Voting	1	-	0	13	RW	F122
R4x179A	LOCRTD1_TRP_RLY	Local RTD #1 Trip Relays	1	-	0	7	RW	F111
R4x179B	LOCRTD1_TRP_LVL	Local RTD #1 Trip Level	1	DEG C	1	200	RW	F1
R4x179C	LOCRTD1_TYPE	Local RTD #1 RTD Type	1	-	0	3	RW	F120
R4x17A0S8	LOCRTD1_NAME	Local RTD #1 Name	1	-	32	127	RW	F1A
R4x17B0	LOCRTD2_APPL	Local RTD #2 Application	1	-	0	4	RW	F121
R4x17B1	LOCRTD2_HI_ALM	Local RTD #2 High Alarm	1	-	0	2	RW	F115
R4x17B2	LOCRTD2_HI_ALM_RLY	Local RTD #2 High Alarm Relays	1	-	0	7	RW	F113
R4x17B3	LOCRTD2_HI_ALM_LVL	Local RTD #2 High Alarm Level	1	DEG C	1	200	RW	F1
R4x17B4	LOCRTD2_ALM	Local RTD #2 Alarm	1	-	0	2	RW	F115
R4x17B5	LOCRTD2_ALM_RLYS	Local RTD #2 Alarm Relays	1	-	0	7	RW	F113
R4x17B6	LOCRTD2_ALM_LVL	Local RTD #2 Alarm Level	1	DEG C	1	200	RW	F1
R4x17B7	LOCRTD2_ALM_EVT	Record RTD #2 Alarms as Events	1	-	0	1	RW	F103
R4x17B8	LOCRTD2_TRIP	Local RTD #2 Trip	1	-	0	2	RW	F115
R4x17B9	LOCRTD2_TRP_VOTE	Enable RTD #2 Trip Voting	1	-	0	13	RW	F122
R4x17BA	LOCRTD2_TRP_RLY	Local RTD #2 Trip Relays	1	-	0	7	RW	F111
R4x17BB	LOCRTD2_TRP_LVL	Local RTD #2 Trip Level	1	DEG C	1	200	RW	F1
R4x17BC	LOCRTD2_TYPE	Local RTD #2 RTD Type	1	-	0	3	RW	F120
R4x17C0S8	LOCRTD2_NAME	Local RTD #2 Name	1	-	32	127	RW	F1A
R4x17D0	LOCRTD3_APPL	Local RTD #3 Application	1	-	0	4	RW	F121
R4x17D1	LOCRTD3_HI_ALM	Local RTD #3 High Alarm	1	-	0	2	RW	F115
R4x17D2	LOCRTD3_HI_ALM_RLY	Local RTD #3 High Alarm Relays	1	-	0	7	RW	F113
R4x17D3	LOCRTD3_HI_ALM_LVL	Local RTD #3 High Alarm Level	1	DEG C	1	200	RW	F1
R4x17D4	LOCRTD3_ALM	Local RTD #3 Alarm	1	-	0	2	RW	F115
R4x17D5	LOCRTD3_ALM_RLYS	Local RTD #3 Alarm Relays	1	-	0	7	RW	F113
R4x17D6	LOCRTD3_ALM_LVL	Local RTD #3 Alarm Level	1	DEG C	1	200	RW	F1
R4x17D7	LOCRTD3_ALM_EVT	Record RTD #3 Alarms as Events	1	-	0	1	RW	F103
R4x17D8	LOCRTD3_TRIP	Local RTD #3 Trip	1	-	0	2	RW	F115
R4x17D9	LOCRTD3_TRP_VOTE	Enable RTD #3 Trip Voting	1	-	0	13	RW	F122
R4x17DA	LOCRTD3_TRP_RLY	Local RTD #3 Trip Relays	1	-	0	7	RW	F111
R4x17DB	LOCRTD3_TRP_LVL	Local RTD #3 Trip Level	1	DEG C	1	200	RW	F1
R4x17DC	LOCRTD3_TYPE	Local RTD #3 RTD Type	1	-	0	3	RW	F120
R4x17E0S8	LOCRTD3_NAME	Local RTD #3 Name	1	-	32	127	RW	F1A
R4x17F0	LOCRTD4_APPL	Local RTD #4 Application	1	-	0	4	RW	F121
R4x17F1	LOCRTD4_HI_ALM	Local RTD #4 High Alarm	1	-	0	2	RW	F115
R4x17F2	LOCRTD4_HI_ALM_RLY	Local RTD #4 High Alarm Relays	1	-	0	7	RW	F113
R4x17F3	LOCRTD4_HI_ALM_LVL	Local RTD #4 High Alarm Level	1	DEG C	1	200	RW	F1
R4x17F4	LOCRTD4_ALM	Local RTD #4 Alarm	1	-	0	2	RW	F115
R4x17F5	LOCRTD4_ALM_RLYS	Local RTD #4 Alarm Relays	1	-	0	7	RW	F113
R4x17F6	LOCRTD4_ALM_LVL	Local RTD #4 Alarm Level	1	DEG C	1	200	RW	F1
R4x17F7	LOCRTD4_ALM_EVT	Enable RTD #4 Alarms as Events	1	-	0	1	RW	F103
R4x17F8	LOCRTD4_TRIP	Local RTD #4 Trip	1	-	0	2	RW	F115
R4x17F9	LOCRTD4_TRP_VOTE	Enable RTD #4 Trip Voting	1	-	0	13	RW	F122
R4x17FA	LOCRTD4_TRP_RLY	Local RTD #4 Trip Relays	1	-	0	7	RW	F111
R4x17FB	LOCRTD4_TRP_LVL	Local RTD #4 Trip Level	1	DEG C	1	200	RW	F1
R4x17FC	LOCRTD4_TYPE	Local RTD #4 RTD Type	1	-	0	3	RW	F120

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x1800S8	LOCRTD4_NAME	Local RTD #4 Name	1	-	32	127	RW	F1A
R4x1810	LOCRTD5_APPL	Local RTD #5 Application	1	-	0	4	RW	F121
R4x1811	LOCRTD5_HI_ALM	Local RTD #5 High Alarm	1	-	0	2	RW	F115
R4x1812	LOCRTD5_HI_ALM_RLY	Local RTD #5 High Alarm Relays	1	-	0	7	RW	F113
R4x1813	LOCRTD5_HI_ALM_LVL	Local RTD #5 High Alarm Level	1	DEG C/DEG F	1	250	RW	F1
R4x1814	LOCRTD5_ALM	Local RTD #5 Alarm	1	-	0	2	RW	F115
R4x1815	LOCRTD5_ALM_RLYS	Local RTD #5 Alarm Relays	1	-	0	7	RW	F113
R4x1816	LOCRTD5_ALM_LVL	Local RTD #5 Alarm Level	1	DEG C	1	200	RW	F1
R4x1817	LOCRTD5_ALM_EVT	Record RTD #5 Alarms as Events	1	-	0	1	RW	F103
R4x1818	LOCRTD5_TRIP	Local RTD #5 Trip	1	-	0	2	RW	F115
R4x1819	LOCRTD5_TRP_VOTE	Enable RTD #5 Trip Voting	1	-	0	13	RW	F122
R4x181A	LOCRTD5_TRP_RLY	Local RTD #5 Trip Relays	1	-	0	7	RW	F111
R4x181B	LOCRTD5_TRP_LVL	Local RTD #5 Trip Level	1	DEG C	1	200	RW	F1
R4x181C	LOCRTD5_TYPE	Local RTD #5 RTD Type	1	-	0	3	RW	F120
R4x1820S8	LOCRTD5_NAME	Local RTD #5 Name	1	-	32	127	RW	F1A
R4x1830	LOCRTD6_APPL	Local RTD #6 Application	1	-	0	4	RW	F121
R4x1831	LOCRTD6_HI_ALM	Local RTD #6 High Alarm	1	-	0	2	RW	F115
R4x1832	LOCRTD6_HI_ALM_RLY	Local RTD #6 High Alarm Relays	1	-	0	7	RW	F113
R4x1833	LOCRTD6_HI_ALM_LVL	Local RTD #6 High Alarm Level	1	DEG C	1	200	RW	F1
R4x1834	LOCRTD6_ALM	Local RTD #6 Alarm	1	-	0	2	RW	F115
R4x1835	LOCRTD6_ALM_RLYS	Local RTD #6 Alarm Relays	1	-	0	7	RW	F113
R4x1836	LOCRTD6_ALM_LVL	Local RTD #6 Alarm Level	1	DEG C	1	200	RW	F1
R4x1837	LOCRTD6_ALM_EVT	Record RTD #6 Alarms as Events	1	-	0	1	RW	F103
R4x1838	LOCRTD6_TRIP	Local RTD #6 Trip	1	-	0	2	RW	F115
R4x1839	LOCRTD6_TRP_VOTE	Enable RTD #6 Trip Voting	1	-	0	13	RW	F122
R4x183A	LOCRTD6_TRP_RLY	Local RTD #6 Trip Relays	1	-	0	7	RW	F111
R4x183B	LOCRTD6_TRP_LVL	Local RTD #6 Trip Level	1	DEG C	1	200	RW	F1
R4x183C	LOCRTD6_TYPE	Local RTD #6 RTD Type	1	-	0	3	RW	F120
R4x1840S8	LOCRTD6_NAME	Local RTD #6 Name	1	-	32	127	RW	F1A
R4x1850	LOCRTD7_APPL	Local RTD #7 Application	1	-	0	4	RW	F121
R4x1851	LOCRTD7_HI_ALM	Local RTD #7 High Alarm	1	-	0	2	RW	F115
R4x1852	LOCRTD7_HI_ALM_RLY	Local RTD #7 High Alarm Relays	1	-	0	7	RW	F113
R4x1853	LOCRTD7_HI_ALM_LVL	Local RTD #7 High Alarm Level	1	DEG C	1	200	RW	F1
R4x1854	LOCRTD7_ALM	Local RTD #7 Alarm	1	-	0	2	RW	F115
R4x1855	LOCRTD7_ALM_RLYS	Local RTD #7 Alarm Relays	1	-	0	7	RW	F113
R4x1856	LOCRTD7_ALM_LVL	Local RTD #7 Alarm Level	1	DEG C	1	200	RW	F1
R4x1857	LOCRTD7_ALM_EVT	Record RTD #7 Alarms as Events	1	-	0	1	RW	F103
R4x1858	LOCRTD7_TRIP	Local RTD #7 Trip	1	-	0	2	RW	F115
R4x1859	LOCRTD7_TRP_VOTE	Enable RTD #7 Trip Voting	1	-	0	13	RW	F122
R4x185A	LOCRTD7_TRP_RLY	Local RTD #7 Trip Relays	1	-	0	7	RW	F111
R4x185B	LOCRTD7_TRP_LVL	Local RTD #7 Trip Level	1	DEG C	1	200	RW	F1
R4x185C	LOCRTD7_TYPE	Local RTD #7 RTD Type	1	-	0	3	RW	F120
R4x1860S8	LOCRTD7_NAME	Local RTD #7 Name	1	-	32	127	RW	F1A
R4x1870	LOCRTD8_APPL	Local RTD #8 Application	1	-	0	4	RW	F121

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x1871	LOCRTD8_HI_ALM	Local RTD #8 High Alarm	1	-	0	2	RW	F115
R4x1872	LOCRTD8_HI_ALM_RLY	Local RTD #8 High Alarm Relays	1	-	0	7	RW	F113
R4x1873	LOCRTD8_HI_ALM_LVL	Local RTD #8 High Alarm Level	1	DEG C	1	200	RW	F1
R4x1874	LOCRTD8_ALM	Local RTD #8 Alarm	1	-	0	2	RW	F115
R4x1875	LOCRTD8_ALM_RLYS	Local RTD #8 Alarm Relays	1	-	0	7	RW	F113
R4x1876	LOCRTD8_ALM_LVL	Local RTD #8 Alarm Level	1	DEG C	1	200	RW	F1
R4x1877	LOCRTD8_ALM_EVT	Record RTD #8 Alarms as Events	1	-	0	1	RW	F103
R4x1878	LOCRTD8_TRIP	Local RTD #8 Trip	1	-	0	2	RW	F115
R4x1879	LOCRTD8_TRP_VOTE	Enable RTD #8 Trip Voting	1	-	0	13	RW	F122
R4x187A	LOCRTD8_TRP_RLY	Local RTD #8 Trip Relays	1	-	0	7	RW	F111
R4x187B	LOCRTD8_TRP_LVL	Local RTD #8 Trip Level	1	DEG C	1	200	RW	F1
R4x187C	LOCRTD8_TYPE	Local RTD #8 RTD Type	1	-	0	3	RW	F120
R4x1880S8	LOCRTD8_NAME	Local RTD #8 Name	1	-	32	127	RW	F1A
R4x1890	LOCRTD9_APPL	Local RTD #9 Application	1	-	0	4	RW	F121
R4x1891	LOCRTD9_HI_ALM	Local RTD #9 High Alarm	1	-	0	2	RW	F115
R4x1892	LOCRTD9_HI_ALM_RLY	Local RTD #9 High Alarm Relays	1	-	0	7	RW	F113
R4x1893	LOCRTD9_HI_ALM_LVL	Local RTD #9 High Alarm Level	1	DEG C	1	200	RW	F1
R4x1894	LOCRTD9_ALM	Local RTD #9 Alarm	1	-	0	2	RW	F115
R4x1895	LOCRTD9_ALM_RLYS	Local RTD #9 Alarm Relays	1	-	0	7	RW	F113
R4x1896	LOCRTD9_ALM_LVL	Local RTD #9 Alarm Level	1	DEG C	1	200	RW	F1
R4x1897	LOCRTD9_ALM_EVT	Record RTD #9 Alarms as Events	1	-	0	1	RW	F103
R4x1898	LOCRTD9_TRIP	Local RTD #9 Trip	1	-	0	2	RW	F115
R4x1899	LOCRTD9_TRP_VOTE	Enable RTD #9 Trip Voting	1	-	0	13	RW	F122
R4x189A	LOCRTD9_TRP_RLY	Local RTD #9 Trip Relays	1	-	0	7	RW	F111
R4x189B	LOCRTD9_TRP_LVL	Local RTD #9 Trip Level	1	DEG C	1	200	RW	F1
R4x189C	LOCRTD9_TYPE	Local RTD #9 RTD Type	1	-	0	3	RW	F120
R4x18A0S8	LOCRTD9_NAME	Local RTD #9 Name	1	-	32	127	RW	F1A
R4x18B0	LOCRTD10_APPL	Local RTD #10 Application	1	-	0	4	RW	F121
R4x18B1	LOCRTD10_HI_ALM	Local RTD #10 High Alarm	1	-	0	2	RW	F115
R4x18B2	LOCRTD10_HI_ALM_RLY	Local RTD #10 High Alarm Relays	1	-	0	7	RW	F113
R4x18B3	LOCRTD10_HI_ALM_LVL	Local RTD #10 High Alarm Level	1	DEG C	1	200	RW	F1
R4x18B4	LOCRTD10_ALM	Local RTD #10 Alarm	1	-	0	2	RW	F115
R4x18B5	LOCRTD10_ALM_RLYS	Local RTD #10 Alarm Relays	1	-	0	7	RW	F113
R4x18B6	LOCRTD10_ALM_LVL	Local RTD #10 Alarm Level	1	DEG C	1	200	RW	F1
R4x18B7	LOCRTD10_ALM_EVT	Record RTD #10 Alarms as Events	1	-	0	1	RW	F103
R4x18B8	LOCRTD10_TRIP	Local RTD #10 Trip	1	-	0	2	RW	F115
R4x18B9	LOCRTD10_TRP_VOTE	Enable RTD #10 Trip Voting	1	-	0	13	RW	F122
R4x18BA	LOCRTD10_TRP_RLY	Local RTD #10 Trip Relays	1	-	0	7	RW	F111
R4x18BB	LOCRTD10_TRP_LVL	Local RTD #10 Trip Level	1	DEG C	1	200	RW	F1
R4x18BC	LOCRTD10_TYPE	Local RTD #10 RTD Type	1	-	0	3	RW	F120
R4x18C0S8	LOCRTD10_NAME	Local RTD #10 Name	1	-	32	127	RW	F1A
R4x18D0	LOCRTD11_APPL	Local RTD #11 Application	1	-	0	4	RW	F121
R4x18D1	LOCRTD11_HI_ALM	Local RTD #11 High Alarm	1	-	0	2	RW	F115
R4x18D2	LOCRTD11_HI_ALM_RLY	Local RTD #11 High Alarm Relays	1	-	0	7	RW	F113
R4x18D3	LOCRTD11_HI_ALM_LVL	Local RTD #11 High Alarm Level	1	DEG C	1	200	RW	F1
R4x18D4	LOCRTD11_ALM	Local RTD #11 Alarm	1	-	0	2	RW	F115

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x18D5	LOCRTD11_ALM_RLYS	Local RTD #11 Alarm Relays	1	-	0	7	RW	F113
R4x18D6	LOCRTD11_ALM_LVL	Local RTD #11 Alarm Level	1	DEG C	1	200	RW	F1
R4x18D7	LOCRTD11_ALM_EVT	Record RTD #11 Alarm Events	1	-	0	1	RW	F103
R4x18D8	LOCRTD11_TRIP	Local RTD #11 Trip	1	-	0	2	RW	F115
R4x18D9	LOCRTD11_TRP_VOTE	Enable RTD #11 Trip Voting	1	-	0	13	RW	F122
R4x18DA	LOCRTD11_TRP_RLY	Local RTD #11 Trip Relays	1	-	0	7	RW	F111
R4x18DB	LOCRTD11_TRP_LVL	Local RTD #11 Trip Level	1	DEG C	1	200	RW	F1
R4x18DC	LOCRTD11_TYPE	Local RTD #11 RTD Type	1	-	0	3	RW	F120
R4x18E0S8	LOCRTD11_NAME	Local RTD #11 Name	1	-	32	127	RW	F1A
R4x18F0	LOCRTD12_APPL	Local RTD #12 Application	1	-	0	4	RW	F121
R4x18F1	LOCRTD12_HI_ALM	Local RTD #12 High Alarm	1	-	0	2	RW	F115
R4x18F2	LOCRTD12_HI_ALM_RLY	Local RTD #12 High Alarm Relays	1	-	0	7	RW	F113
R4x18F3	LOCRTD12_HI_ALM_LVL	Local RTD #12 High Alarm Level	1	DEG C	1	200	RW	F1
R4x18F4	LOCRTD12_ALM	Local RTD #12 Alarm	1	-	0	2	RW	F115
R4x18F5	LOCRTD12_ALM_RLYS	Local RTD #12 Alarm Relays	1	-	0	7	RW	F113
R4x18F6	LOCRTD12_ALM_LVL	Local RTD #12 Alarm Level	1	DEG C	1	200	RW	F1
R4x18F7	LOCRTD12_ALM_EVT	Record RTD #12 Alarms as Events	1	-	0	1	RW	F103
R4x18F8	LOCRTD12_TRIP	Local RTD #12 Trip	1	-	0	2	RW	F115
R4x18F9	LOCRTD12_TRP_VOTE	Enable RTD #12 Trip Voting	1	-	0	13	RW	F122
R4x18FA	LOCRTD12_TRP_RLY	Local RTD #12 Trip Relays	1	-	0	7	RW	F111
R4x18FB	LOCRTD12_TRP_LVL	Local RTD #12 Trip Level	1	DEG C	1	200	RW	F1
R4x18FC	LOCRTD12_TYPE	Local RTD #12 RTD Type	1	-	0	3	RW	F120
R4x1900S8	LOCRTD12_NAME	Local RTD #12 Name	1	-	32	127	RW	F1A
R4x1B20	OPN_RTD_ALM	Open RTD Alarm	1	-	0	2	RW	F115
R4x1B21	ASGN_OPN_RTD_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1B22	OPN_RTD_ALM_EVT	Open RTD Alarm Events	1	-	0	1	RW	F103
R4x1B23	LOW_RTD_ALM	Short / Low Temp RTD Alarm	1	-	0	2	RW	F115
R4x1B24	ASGN_LO_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1B25	LO_RTD_ALM_EVT	Short / Low Temp Alarm Events	1	-	0	1	RW	F103
R4x1B30	RRTD_COMM_ALM_LOSS	Loss RRTD Comm Alarm	1	-	0	2	RW	F115
R4x1B31	RRTD_COMM_RLY	Loss RRTD Comm Alarm Relays	1	-	0	7	RW	F113
R4x1B32	RRTD_COMM_EVT	Loss RRTD Comm Alarm Events	1	-	0	1	RW	F103
R4x1B60	UV_MTR_STOP	Undervoltage Active If Motor Stopped	1	-	0	1	RW	F103
R4x1B61	UV_ALM	Undervoltage Alarm	1	-	0	2	RW	F115
R4x1B62	ASGN_UV_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1B63	UV_ALM_PU	Undervoltage Alarm Pickup	1	xRated	50	99	RW	F3
R4x1B64	UV_ALM_STR_PU	Starting Undervoltage Alarm Pickup	1	xRated	50	99	RW	F3
R4x1B65	UV_ALM_DLY	Undervoltage Alarm Delay	1	0.1s	0	2550	RW	F2
R4x1B66	UV_ALM_EVT	Undervoltage Alarm Events	1	-	0	1	RW	F103
R4x1B67	UV_TRIP	Undervoltage Trip	1	-	0	2	RW	F115
R4x1B68	UV_TRP_RLYS	Undervoltage Trip Relays	1	-	0	7	RW	F111
R4x1B69	UV_TRIP_PU	Undervoltage Trip Pickup	1	xRated	50	99	RW	F3
R4x1B6A	UV_STR_TRIP_PU	Starting Undervoltage Trip Pickup	1	xRated	50	99	RW	F3
R4x1B6B	UV_TRP_DLY	Undervoltage Trip Delay	1	0.1s	0	2550	RW	F2
R4x1B80	OV_ALM	Overvoltage Alarm	1	-	0	2	RW	F115
R4x1B81	OV_ALM_RLYS	Overvoltage Alarm Relays	1	-	0	7	RW	F113

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x1B82	OV_ALM_PU	Overvoltage Alarm Pickup	1	xRated	101	125	RW	F3
R4x1B83	OV_ALM_DLY	Overvoltage Alarm Delay	1	s	0	2550	RW	F2
R4x1B84	OV_ALM_EVT	Overvoltage Alarm Events	1	-	0	1	RW	F103
R4x1B85	OV_TRIP	Overvoltage Trip	1	-	0	1	RW	F103
R4x1B86	OV_TRIP_RLY	Overvoltage Trip Relays	1	-	0	7	RW	F111
R4x1B87	OV_TRIP_PU	Overvoltage Trip Pickup	1	xRated	101	125	RW	F3
R4x1B88	OV_TRIP_DLY	Overvoltage Trip Delay	1	s	0	2550	RW	F2
R4x1BA0	PR_TRIP	Phase Reversal Trip	1	-	0	2	RW	F115
R4x1BA1	ASGN_PR_RLY	Assign Trip Relays	1	-	0	7	RW	F111
R4x1BB0	OF_BLOCK_STRT	Block Overfrequency on Start	1	s	0	5000	RW	F1
R4x1BB1	OF_ALM	Overfrequency Alarm	1	-	0	2	RW	F115
R4x1BB2	ASGN_OF_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1BB3	OF_ALM_LVL	Overfrequency Alarm Level	1	Hz	2000	7000	RW	F3
R4x1BB4	OF_ALM_DLY	Overfrequency Alarm Delay	1	s	0	2550	RW	F2
R4x1BB5	OF_ALM_EVT	Overfrequency Alarm Events	1	-	0	1	RW	F103
R4x1BB6	OF_TRIP	Overfrequency Trip	1	-	0	1	RW	F103
R4x1BB7	OF_TRIP_RLY	Assign Trip Relays	1	-	0	7	RW	F111
R4x1BB8	OF_TRIP_LVL	Overfrequency Trip Level	1	Hz	2000	7000	RW	F3
R4x1BB9	OF_TRIP_DLY	Overfrequency Trip Delay	1	s	0	2550	RW	F2
R4x1BC0	UF_BLOCK	Block Underfrequency on Start	1	s	0	5000	RW	F1
R4x1BC1	UF_ALM	Underfrequency Alarm	1	-	0	2	RW	F115
R4x1BC2	UF_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1BC3	UF_ALM_LVL	Underfrequency Alarm Level	1	Hz	2000	7000	RW	F3
R4x1BC4	UF_ALM_DLY	Underfrequency Alarm Delay	1	s	0	2550	RW	F2
R4x1BC5	UF_ALM_EVT	Underfrequency Alarm Events	1	-	0	1	RW	F103
R4x1BC6	UF_TRIP	Underfrequency Trip	1	-	0	2	RW	F115
R4x1BC7	UF_TRIP_RLY	Assign Trip Relays	1	-	0	7	RW	F111
R4x1BC8	UF_TRIP_LVL	Underfrequency Trip Level	1	Hz	2000	7000	RW	F3
R4x1BC9	UF_TRIP_DLY	Underfrequency Trip Delay	1	s	0	2550	RW	F2
R4x1BD0	LDPF_BLOCK	Block Lead Power Factor From Start	1	s	0	5000	RW	F1
R4x1BD1	LDPF_ALM	Lead Power Factor Alarm	1	-	0	2	RW	F115
R4x1BD2	LDPF_ALM_RLY	Assign Lead Power Factor Alarm Relays	1	-	0	7	RW	F113
R4x1BD3	LDPF_ALM_LVL	Lead Power Factor Alarm Level	1	-	5	99	RW	F3
R4x1BD4	LDPF_ALM_DLY	Lead Power Factor Alarm Delay	1	s	1	2550	RW	F2
R4x1BD5	LDPF_ALM_EVT	Lead Power Factor Alarm Events	1	-	0	1	RW	F103
R4x1BD6	LDPF_TRIP	Lead Power Factor Trip	1	-	0	2	RW	F115
R4x1BD7	LDPF_TRIP_RLY	Lead Power Factor Trip Relays	1	-	0	7	RW	F111
R4x1BD8	LDPF_TRIP_LVL	Lead Power Factor Trip Level	1	-	5	99	RW	F3
R4x1BD9	LDPF_TRIP_DLY	Lead Power Factor Trip Delay	1	s	1	2550	RW	F2
R4x1BE0	LGPF_BLOCK	Block Lag Power Factor From Start	1	s	0	5000	RW	F1
R4x1BE1	LGPF_ALM	Lag Power Factor Alarm	1	-	0	2	RW	F115
R4x1BE2	LGPF_ALM_RLY	Assign Lag Power Factor Alarm Relays	1	-	0	7	RW	F113
R4x1BE3	LGPF_ALM_LVL	Lag Power Factor Alarm Level	1	-	5	99	RW	F3
R4x1BE4	LGPF_ALM_DLY	Lag Power Factor Alarm Delay	1	s	1	2550	RW	F2
R4x1BE5	LGPF_ALM_EVT	Lag Power Factor Alarm Events	1	-	0	1	RW	F103

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x1BE6	LGPF_TRIP	Lag Power Factor Trip	1	-	0	2	RW	F115
R4x1BE7	LGPF_TRIP_RLY	Assign Lag Power Factor Trip Relays	1	-	0	7	RW	F111
R4x1BE8	LGPF_TRIP_LVL	Lag Power Factor Trip Level	1	-	5	99	RW	F3
R4x1BE9	LGPF_TRIP_DLY	Lag Power Factor Trip Delay	1	s	1	2550	RW	F2
R4x1BF0	POSVAR_BLOCK	Block Positive kvar Element From Start	1	s	0	5000	RW	F1
R4x1BF1	POSVAR_ALM	Positive kvar Alarm	1	-	0	2	RW	F115
R4x1BF2	POSVAR_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1BF3	POSVAR_ALM_LVL	Positive kvar Alarm Level	1	kvar	1	25000	RW	F1
R4x1BF4	POSVAR_ALM_DLY	Positive kvar Alarm Delay	1	s	1	2550	RW	F2
R4x1BF5	POSVAR_ALM_EVT	Positive kvar Alarm Events	1	-	0	1	RW	F103
R4x1BF6	POSVAR_TRIP	Positive kvar Trip	1	-	0	1	RW	F103
R4x1BF7	POSVAR_TRP_RLY	Assign Trip Relays	1	-	0	7	RW	F111
R4x1BF8	POSVAR_TRP_LVL	Positive kvar Trip Level	1	kvar	1	25000	RW	F1
R4x1BF9	POSVAR_TRP_DLY	Positive kvar Trip Delay	1	s	1	2550	RW	F2
R4x1C00	NEGVAR_BLOCK	Block kvar Element from Start	1	s	0	5000	RW	F1
R4x1C01	NEGVAR_ALM	Negative kvar Alarm	1	-	0	2	RW	F115
R4x1C02	NEGVAR_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1C03	NEGVAR_ALM_LVL	Negative kvar Alarm Level	1	kvar	1	25000	RW	F1
R4x1C04	NEGVAR_ALM_DLY	Negative kvar Alarm Delay	1	s	1	2550	RW	F2
R4x1C05	NEGVAR_ALM_EVT	Negative kvar Alarm Events	1	-	0	1	RW	F103
R4x1C06	NEGVAR_TRIP	Negative kvar Trip	1	-	0	1	RW	F103
R4x1C07	NEGVAR_TRP_RLY	Assign Trip Relays	1	-	0	7	RW	F111
R4x1C08	NEGVAR_TRP_LVL	Negative kvar Trip Level	1	kvar	1	25000	RW	F1
R4x1C09	NEGVAR_TRP_DLY	Negative kvar Trip Delay	1	s	1	2550	RW	F2
R4x1C10	UDRPWR_BLOCK	Block Underpower From Start	1	s	0	15000	RW	F1
R4x1C11	UDRPWR_ALM	Underpower Alarm	1	-	0	2	RW	F115
R4x1C12	UDRPWR_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1C13	UDRPWR_ALM_LVL	Underpower Alarm Level	1	kW	1	25000	RW	F1
R4x1C14	UDRPWR_ALM_DLY	Underpower Alarm Delay	1	s	5	2550	RW	F2
R4x1C15	UDRPWR_ALM_EVT	Underpower Alarm Events	1	-	0	1	RW	F103
R4x1C16	UDRPWR_TRIP	Underpower Trip	1	-	0	2	RW	F115
R4x1C17	UDRPWR_TRP_RLY	Underpower Trip Relays	1	-	0	7	RW	F111
R4x1C18	UDRPWR_TRP_LVL	Underpower Trip Level	1	kW	1	25000	RW	F1
R4x1C19	UDRPWR_TRP_DLY	Underpower Trip Delay	1	s	5	2550	RW	F1
R4x1C20	RP_BLOCK	Block Reverse Power From Start	1	s	0	50000	RW	F1
R4x1C21	RP_ALM	Reverse Power Alarm	1	-	0	2	RW	F115
R4x1C22	RP_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1C23	RP_ALM_LVL	Reverse Power Alarm Level	1	kW	1	25000	RW	F1
R4x1C24	RP_ALM_DLY	Reverse Power Alarm Delay	1	s	5	300	RW	F2
R4x1C25	RP_ALM_EVT	Reverse Power Alarm Events	1	-	0	1	RW	F103
R4x1C26	RP_TRIP	Reverse Power Trip	1	-	0	2	RW	F115
R4x1C27	RP_TRIP_RLY	Assign Trip Relays	1	-	0	7	RW	F111
R4x1C28	RP_TRP_LVL	Reverse Power Trip Level	1	kW	1	25000	RW	F1
R4x1C29	RP_TRP_DLY	Reverse Power Trip Delay	1	s	5	300	RW	F2
R4x1C80	TRP_CNT_ALM	Trip Counter Alarm	1	-	0	2	RW	F115

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x1C81	TRP_CNT_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1C82	TRP_CNT_ALM_PU	Alarm Pickup Level	1	-	0	50000	RW	F1
R4x1C83	TRP_CNT_ALM_EVT	Trip Counter Alarm Events	1	-	0	1	RW	F103
R4x1C90	STRT_FAIL_ALM	Starter Failure Alarm	1	-	0	2	RW	F115
R4x1C91	STRT_TYPE	Starter Type	1	-	0	1	RW	F125
R4x1C92	STRT_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1C93	STRT_FAIL_DLY	Starter Failure Delay	10	ms	10	1000	RW	F1
R4x1C94	STRT_FAIL_EVT	Starter Failure Alarm Events	1	-	0	1	RW	F103
R4x1CD0	CURR_DMD_PERIOD	Current Demand Period	1	min	5	90	RW	F1
R4x1CD1	CURR_DMD_ALM	Current Demand Alarm	1	-	0	2	RW	F115
R4x1CD2	CURR_DMD_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1CD3	CURR_DMD_ALM_LVL	Current Demand Alarm Level	1	A	10	65535	RW	F1
R4x1CD5	CURR_DMD_ALM_EVT	Current Demand Alarm Events	1	-	0	1	RW	F103
R4x1CE0	KW_DMD_PERIOD	kW Demand Period	1	min	5	90	RW	F1
R4x1CE1	KW_DMD_ALM	kW Demand Alarm	1	-	0	2	RW	F115
R4x1CE2	KW_DMD_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1CE3	KW_DMD_ALM_LVL	kW Demand Alarm Level	1	kW	1	50000	RW	F1
R4x1CE4	KW_DMD_ALM_EVT	kW Demand Alarm Events	1	-	0	1	RW	F103
R4x1CF0	KVAR_DMD_PERIOD	kvar Demand Period	1	min	5	90	RW	F1
R4x1CF1	KVAR_DMD_ALM	kvar Demand Alarm	1	-	0	2	RW	F115
R4x1CF2	KVAR_DMD_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1CF3	KVAR_DMD_ALM_LVL	kvar Demand Alarm Level	1	kvar	-32000	32000	RW	F1
R4x1CF4	KVAR_DMD_ALM_EVT	kvar Demand Alarm Events	1	-	0	1	RW	F103
R4x1D00	KVA_DMD_PERIOD	kVA Demand Period	1	min	5	90	RW	F1
R4x1D01	KVA_DMD_ALM	kVA Demand Alarm	1	-	0	2	RW	F115
R4x1D02	KVA_DMD_ALM_RLY	Assign Alarm Relays	1	-	0	7	RW	F113
R4x1D03	KVA_DMD_ALM_LVL	kVA Demand Alarm Level	1	kVA	1	50000	RW	F1
R4x1D04	KVA_DMD_ALM_EVT	kVA Demand Alarm Events	1	-	0	1	RW	F103
R4x1D40	EN_ANLG_OP1	Enable Analog Output 1	1	-	0	1	RW	F103
R4x1D41	ANLG_OP1_RANGE	Assign Analog Output 1 Output Range	1	-	0	2	RW	F26
R4x1D42	ANLG_OP1_PARAM	Assign Analog Output 1 Parameter	1	-	0	111	RW	F127
R4x1D43	ANLG_OP1_MIN	Analog Output 1 Minimum	1	-	TBD	TBD	RW	F1
R4x1D44	ANLG_OP1_MAX	Analog Output 1 Maximum	1	-	TBD	TBD	RW	F1
R4x1D45	EN_ANLG_OP2	Enable Analog Output 2	1	-	0	1	RW	F103
R4x1D46	ANLG_OP2_RANGE	Assign Analog Output 2 Output Range	1	-	0	2	RW	F26
R4x1D47	ANLG_OP2_PARAM	Assign Analog Output 2 Parameter	1	-	0	111	RW	F127
R4x1D48	ANLG_OP2_MIN	Analog Output 2 Minimum	1	-	TBD	TBD	RW	F1
R4x1D49	ANLG_OP2_MAX	Analog Output 2 Maximum	1	-	TBD	TBD	RW	F1
R4x1D4A	EN_ANLG_OP3	Enable Analog Output 3	1	-	0	1	RW	F103
R4x1D4B	ANLG_OP3_RANGE	Assign Analog Output 3 Output Range	1	-	0	2	RW	F26
R4x1D4C	ANLG_OP3_PARAM	Assign Analog Output 3 Parameter	1	-	0	111	RW	F127
R4x1D4D	ANLG_OP3_MIN	Analog Output 3 Minimum	1	-	TBD	TBD	RW	F1
R4x1D4E	ANLG_OP3_MAX	Analog Output 3 Maximum	1	-	TBD	TBD	RW	F1
R4x1D4F	EN_ANLG_OP4	Enable Analog Output 4	1	-	0	1	RW	F103

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x1D50	ANLG_OP4_RANGE	Assign Analog Output 4 Output Range	1	-	0	2	RW	F26
R4x1D51	ANLG_OP4_PARAM	Assign Analog Output 4 Parameter	1	-	0	111	RW	F127
R4x1D52	ANLG_OP4_MIN	Analog Output 4 Minimum	1	-	TBD	TBD	RW	F1
R4x1D53	ANLG_OP4_MAX	Analog Output 4 Maximum	1	-	TBD	TBD	RW	F1
R4x1F00	SIM_MODE	Simulation Mode	1	-	0	3	RW	F138
R4x1F01	PREFLT_FLT_DLY	Pre-Fault to Fault Time Delay	1	s	0	300	RW	F1
R4x1F10	PREFLT_AMPS_A	Pre-Fault Current Phase A	1	xFLA	0	2000	RW	F3
R4x1F11	PREFLT_AMPS_B	Pre-Fault Current Phase B	1	xFLA	0	2000	RW	F3
R4x1F12	PREFLT_AMPS_C	Pre-Fault Current Phase C	1	xFLA	0	2000	RW	F3
R4x1F13	PREFLT_GND	Pre-Fault Ground Current (1A/5A)	1	xCT	0	110	RW	F3
R4x1F14	PREFLT_SENS_GND	Pre-Fault Ground Current (50:0.025)	1	A	0	1000	RW	F3
R4x1F15	PREFLT_VOLTS_A	Pre - Fault Voltage Phase A	1	xVT	0	110	RW	F3
R4x1F16	PREFLT_VOLTS_B	Pre - Fault Voltage Phase B	1	xVT	0	110	RW	F3
R4x1F17	PREFLT_VOLTS_C	Pre - Fault Voltage Phase C	1	xVT	0	110	RW	F3
R4x1F18	PREFLT_I_LAGS_V	Pre-Fault Current Lags Voltage	1	degrees	0	359	RW	F1
R4x1F19	PREFLT_SYS_FREQ	Pre - Fault System Frequency	1	Hz	250	700	RW	F2
R4x1F1AI	PREFLT_STAT_TEMP	Stator RTD Pre-Fault Temp	1	DEG C	-40	200	RW	F4
R4x1F1BI	PREFLT_BEAR_TEMP	Bearing RTD Pre-Fault Temp	1	DEG C	-40	200	RW	F4
R4x1F1CI	PREFLT_OTHER_TEMP	Other RTD Pre-Fault Temp	1	DEG C	-40	200	RW	F4
R4x1F1DI	PREFLT_AMB_TEMP	Ambient RTD Pre-Fault Temp	1	DEG C	-40	200	RW	F4
R4x1F30	FAULT_AMPS_A	Fault Current Phase A	1	xFLA	0	2000	RW	F3
R4x1F31	FAULT_AMPS_B	Fault Current Phase B	1	xFLA	0	2000	RW	F3
R4x1F32	FAULT_AMPS_C	Fault Current Phase C	1	xFLA	0	2000	RW	F3
R4x1F33	FAULT_GND	Fault Ground Current (1A/5A)	1	CT	0	110	RW	F3
R4x1F34	FAULT_SENSE_GND	Fault Ground Current (50:0.025)	1	A	0	1000	RW	F3
R4x1F35	FAULT_VOLTS_A	Fault Voltage Phase A	1	xVT	0	110	RW	F3
R4x1F36	FAULT_VOLTS_B	Fault Voltage Phase B	1	xVT	0	110	RW	F3
R4x1F37	FAULT_VOLTS_C	Fault Voltage Phase C	1	xVT	0	110	RW	F3
R4x1F38	FAULT_I_LAGS_V	Fault Current Lag Voltage	1	degrees	0	359	RW	F1
R4x1F39	FAULT_SYS_FREQ	Fault System Frequency	1	Hz	250	700	RW	F2
R4x1F3AI	FAULT_STAT_TEMP	Stator RTD Fault Temp	1	DEG C	-40	200	RW	F4
R4x1F3BI	FAULT_BEAR_TEMP	Bearing RTD Fault Temp	1	DEG C	-40	200	RW	F4
R4x1F3CI	FAULT_OTHER_TEMP	Other RTD Fault Temp	1	DEG C	-40	200	RW	F4
R4x1F3DI	FAULT_AMB_TEMP	Ambient RTD Fault Temp	1	DEG C	-40	200	RW	F4
R4x1F80	FORCE_TRP_RLY	Force Trip Relay	1	-	0	2	RW	F150
R4x1F81	FORC_TRP_RLY_DUR	Force Trip Relay Duration	1	s	1	300	RW	F1
R4x1F82	FORCE_AUX1	Force AUX1 Relay	1	-	0	2	RW	F150
R4x1F83	FORCE_AUX1_DUR	Force AUX1 Relay Duration	1	s	1	300	RW	F1
R4x1F84	FORCE_AUX2	Force AUX2 Relay	1	-	0	2	RW	F150
R4x1F85	FORCE_AUX2_DUR	Force AUX2 Relay Duration	1	s	1	300	RW	F1
R4x1F86	FORCE_ALM_RLY	Force Alarm Relay	1	-	0	2	RW	F150
R4x1F87	FORCE_RLY_RANGE	Force Alarm Relay Range	1	s	1	300	RW	F1
R4x1F90	FORCE_ANLG_OP	Force Analog Outputs	1	-	0	1	RW	F126
R4x1F91	ANLG_OPI_FVALUE	Analog Output 1 Forced Value	1	% range	0	100	RW	F1
R4x1F92	ANLG_OP2_FVALUE	Analog Output 2 Forced Value	1	% range	0	100	RW	F1

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x1F93	ANLG_OP3_FVALUE	Analog Output 3 Forced Value	1	% range	0	100	RW	F1
R4x1F94	ANLG_OP4_FVALUE	Analog Output 4 Forced Value	1	% range	0	100	RW	F1
R4x1FF0	RRTD1_SLAVE_ADDR	RRTD1 - Slave Address	1	-	0	254	RW	F1
R4x1FF1	RRTD2_SLAVE_ADDR	RRTD2 - Slave Address	1	-	0	254	RW	F1
R4x1FF2	RRTD3_SLAVE_ADDR	RRTD3 - Slave Address	1	-	0	254	RW	F1
R4x1FF3	RRTD4_SLAVE_ADDR	RRTD4 - Slave Address	1	-	0	254	RW	F1
R4x2000	RRTD1_1_APPL	RRTD 1 - RTD #1 Application	1	-	0	4	RW	F121
R4x2001	RRTD1_1_HI_ALM	RRTD 1 - RTD #1 High Alarm	1	-	0	2	RW	F115
R4x2002	RRTD1_1_HI_ALM_RLY	RRTD 1 - RTD #1 High Alarm Relays	1	-	0	7	RW	F113
R4x2003	RRTD1_1_HI_ALM_LVL	RRTD 1 - RTD #1 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2004	RRTD1_1_ALM	RRTD 1 - RTD #1 Alarm	1	-	0	2	RW	F115
R4x2005	RRTD1_1_ALM_RLY	RRTD 1 - RTD #1 Alarm Relays	1	-	0	7	RW	F113
R4x2006	RRTD1_1_ALM_LVL	RRTD 1 - RTD #1 Alarm Level	1	DEG C	1	200	RW	F1
R4x2007	RRTD1_1_ALM_EVT	RRTD 1 - RTD #1 Alarms as Events	1	-	0	1	RW	F103
R4x2008	RRTD1_1_TRIP	RRTD 1 - RTD #1 Trip	1	-	0	2	RW	F115
R4x2009	RRTD1_1_TRP_VOTE	Enable RRTD 1 - RTD #1 Trip Voting	1	-	0	13	RW	F122
R4x200A	RRTD1_1_TRP_RLY	RRTD 1 - RTD #1 Trip Relays	1	-	0	7	RW	F111
R4x200B	RRTD1_1_TRP_LVL	RRTD 1 - RTD #1 Trip Level	1	DEG C	1	200	RW	F1
R4x200C	RRTD1_1_TYPE	RRTD 1 - RTD #1 RTD Type	1	-	0	3	RW	F120
R4x2010S8	RRTD1_1_NAME	RRTD 1 - RTD #1 Name	1	-	32	127	RW	F1A
R4x2020	RRTD1_2_APPL	RRTD 1 - RTD #2 Application	1	-	0	4	RW	F121
R4x2021	RRTD1_2_HI_ALM	RRTD 1 - RTD #2 High Alarm	1	-	0	2	RW	F115
R4x2022	RRTD1_2_HI_ALM_RLY	RRTD 1 - RTD #2 High Alarm Relays	1	-	0	7	RW	F113
R4x2023	RRTD1_2_HI_ALM_LVL	RRTD 1 - RTD #2 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2024	RRTD1_2_ALM	RRTD 1 - RTD #2 Alarm	1	-	0	2	RW	F115
R4x2025	RRTD1_2_ALM_RLY	RRTD 1 - RTD #2 Alarm Relays	1	-	0	7	RW	F113
R4x2026	RRTD1_2_ALM_LVL	RRTD 1 - RTD #2 Alarm Level	1	DEG C	1	200	RW	F1
R4x2027	RRTD1_2_ALM_EVT	Record RRTD 1 - RTD #2 Alarms as Events	1	-	0	1	RW	F103
R4x2028	RRTD1_2_TRIP	RRTD 1 - RTD #2 Trip	1	-	0	2	RW	F115
R4x2029	RRTD1_2_TRP_VOTE	Enable A Remote RTD #2 Trip Voting	1	-	0	13	RW	F122
R4x202A	RRTD1_2_TRP_RLY	RRTD 1 - RTD #2 Trip Relays	1	-	0	7	RW	F111
R4x202B	RRTD1_2_TRP_LVL	RRTD 1 - RTD #2 Trip Level	1	DEG C	1	200	RW	F1
R4x202C	RRTD1_2_TYPE	RRTD 1 - RTD #2 RTD Type	1	-	0	3	RW	F120
R4x2030S8	RRTD1_2_NAME	RRTD 1 - RTD #2 Name	1	-	32	127	RW	F1A
R4x2040	RRTD1_3_APPL	RRTD 1 - RTD #3 Application	1	-	0	4	RW	F121
R4x2041	RRTD1_3_HI_ALM	RRTD 1 - RTD #3 High Alarm	1	-	0	2	RW	F115
R4x2042	RRTD1_3_HI_ALM_RLY	RRTD 1 - RTD #3 High Alarm Relays	1	-	0	7	RW	F113
R4x2043	RRTD1_3_HI_ALM_LVL	RRTD 1 - RTD #3 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2044	RRTD1_3_ALM	RRTD 1 - RTD #3 Alarm	1	-	0	2	RW	F115
R4x2045	RRTD1_3_ALM_RLY	RRTD 1 - RTD #3 Alarm Relays	1	-	0	7	RW	F113
R4x2046	RRTD1_3_ALM_LVL	RRTD 1 - RTD #3 Alarm Level	1	DEG C	1	200	RW	F1
R4x2047	RRTD1_3_ALM_EVT	Record RRTD 1 - RTD #3 Alarms as Events	1	-	0	1	RW	F103
R4x2048	RRTD1_3_TRIP	RRTD 1 - RTD #3 Trip	1	-	0	2	RW	F115
R4x2049	RRTD1_3_TRP_VOTE	Enable RRTD 1 - RTD #3 Trip Voting	1	-	0	13	RW	F122
R4x204A	RRTD1_3_TRP_RLY	RRTD 1 - RTD #3 Trip Relays	1	-	0	7	RW	F111

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x204B	RRTD1_3_TRP_LVL	RRTD 1 - RTD #3 Trip Level	1	DEG C	1	200	RW	F1
R4x204C	RRTD1_3_TYPE	RRTD 1 - RTD #3 RTD Type	1	-	0	3	RW	F120
R4x2050S8	RRTD1_3_NAME	RRTD 1 - RTD # Name	1	-	32	127	RW	F1A
R4x2060	RRTD1_4_APPL	RRTD 1 - RTD #4 Application	1	-	0	4	RW	F121
R4x2061	RRTD1_4_HI_ALM	RRTD 1 - RTD #4 High Alarm	1	-	0	2	RW	F115
R4x2062	RRTD1_4_HI_ALM_RLY	RRTD 1 - RTD #4 High Alarm Relays	1	-	0	7	RW	F113
R4x2063	RRTD1_4_HI_ALM_LVL	RRTD 1 - RTD #4 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2064	RRTD1_4_ALM	RRTD 1 - RTD #4 Alarm	1	-	0	2	RW	F115
R4x2065	RRTD1_4_ALM_RLY	RRTD 1 - RTD #4 Alarm Relays	1	-	0	7	RW	F113
R4x2066	RRTD1_4_ALM_LVL	RRTD 1 - RTD #4 Alarm Level	1	DEG C	1	200	RW	F1
R4x2067	RRTD1_4_ALM_EVT	Record RRTD 1 - RTD #4 Alarms as Events	1	-	0	1	RW	F103
R4x2068	RRTD1_4_TRIP	RRTD 1 - RTD #4 Trip	1	-	0	2	RW	F115
R4x2069	RRTD1_4_TRP_VOTE	Enable RRTD 1 - RTD #4 Trip Voting	1	-	0	13	RW	F122
R4x2069	RRTD2_4_TRP_VOTE	Enable RRTD 2 - RTD #4 Trip Voting	1	-	0	13	RW	F122
R4x206A	RRTD1_4_TRP_RLY	RRTD 1 - RTD #4 Trip Relays	1	-	0	7	RW	F111
R4x206B	RRTD1_4_TRP_LVL	RRTD 1 - RTD #4 Trip Level	1	DEG C	1	200	RW	F1
R4x206C	RRTD1_4_TYPE	RRTD 1 - RTD #4 RTD Type	1	-	0	3	RW	F120
R4x2070S8	RRTD1_4_NAME	RRTD 1 - RTD #4 Name	1	-	32	127	RW	F1A
R4x2080	RRTD1_5_APPL	RRTD 1 - RTD #5 Application	1	-	0	4	RW	F121
R4x2081	RRTD1_5_HI_ALM	RRTD 1 - RTD #5 High Alarm	1	-	0	2	RW	F115
R4x2082	RRTD1_5_HI_ALM_RLY	RRTD 1 - RTD #5 High Alarm Relays	1	-	0	7	RW	F113
R4x2083	RRTD1_5_HI_ALM_LVL	RRTD 1 - RTD #5 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2084	RRTD1_5_ALM	RRTD 1 - RTD #5 Alarm	1	-	0	2	RW	F115
R4x2085	RRTD1_5_ALM_RLY	RRTD 1 - RTD #5 Alarm Relays	1	-	0	7	RW	F113
R4x2086	RRTD1_5_ALM_LVL	RRTD 1 - RTD #5 Alarm Level	1	DEG C	1	200	RW	F1
R4x2087	RRTD1_5_ALM_EVT	Record RRTD 1 - RTD #5 Alarms as Events	1	-	0	1	RW	F103
R4x2088	RRTD1_5_TRIP	RRTD 1 - RTD #5 Trip	1	-	0	2	RW	F115
R4x2089	RRTD1_5_TRP_VOTE	Enable RRTD 1 - RTD #5 Trip Voting	1	-	0	13	RW	F122
R4x208A	RRTD1_5_TRP_RLY	RRTD 1 - RTD #5 Trip Relays	1	-	0	7	RW	F111
R4x208B	RRTD1_5_TRP_LVL	RRTD 1 - RTD #5 Trip Level	1	DEG C	1	200	RW	F1
R4x208C	RRTD1_5_TYPE	RRTD 1 - RTD #5 RTD Type	1	-	0	3	RW	F120
R4x2090S8	RRTD1_5_NAME	RRTD 1 - RTD #5 Name	1	-	32	127	RW	F1A
R4x20A0	RRTD1_6_APPL	RRTD 1 - RTD #6 Application	1	-	0	4	RW	F121
R4x20A1	RRTD1_6_HI_ALM	RRTD 1 - RTD #6 High Alarm	1	-	0	2	RW	F115
R4x20A2	RRTD1_6_HI_ALM_RLY	RRTD 1 - RTD #6 High Alarm Relays	1	-	0	7	RW	F113
R4x20A3	RRTD1_6_HI_ALM_LVL	RRTD 1 - RTD #6 High Alarm Level	1	DEG C	1	200	RW	F1
R4x20A4	RRTD1_6_ALM	RRTD 1 - RTD #6 Alarm	1	-	0	2	RW	F115
R4x20A5	RRTD1_6_ALM_RLY	RRTD 1 - RTD #6 Alarm Relays	1	-	0	7	RW	F113
R4x20A6	RRTD1_6_ALM_LVL	RRTD 1 - RTD #6 Alarm Level	1	DEG C	1	200	RW	F1
R4x20A7	RRTD1_6_ALM_EVT	Record RRTD 1 - RTD #6 Alarms as Events	1	-	0	1	RW	F103
R4x20A8	RRTD1_6_TRIP	RRTD 1 - RTD #6 Trip	1	-	0	2	RW	F115
R4x20A9	RRTD1_6_TRP_VOTE	Enable RRTD 1 - RTD #6 Trip Voting	1	-	0	13	RW	F122
R4x20AA	RRTD1_6_TRP_RLY	RRTD 1 - RTD #6 Trip Relays	1	-	0	7	RW	F111
R4x20AB	RRTD1_6_TRP_LVL	RRTD 1 - RTD #6 Trip Level	1	DEG C	1	200	RW	F1

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x20AC	RRTD1_6_TYPE	RRTD 1 - RTD #6 RTD Type	1	-	0	3	RW	F120
R4x20B0S8	RRTD1_6_NAME	RRTD 1 - RTD #6 Name	1	-	32	127	RW	F1A
R4x20C0	RRTD1_7_APPL	RRTD 1 - RTD #7 Application	1	-	0	4	RW	F121
R4x20C1	RRTD1_7_HI_ALM	RRTD 1 - RTD #7 High Alarm	1	-	0	2	RW	F115
R4x20C2	RRTD1_7_HI_ALM_RLY	RRTD 1 - RTD #7 High Alarm Relays	1	-	0	7	RW	F113
R4x20C3	RRTD1_7_HI_ALM_LVL	RRTD 1 - RTD #7 High Alarm Level	1	DEG C	1	200	RW	F1
R4x20C4	RRTD1_7_ALM	RRTD 1 - RTD #7 Alarm	1	-	0	2	RW	F115
R4x20C5	RRTD1_7_ALM_RLY	RRTD 1 - RTD #7 Alarm Relays	1	-	0	7	RW	F113
R4x20C6	RRTD1_7_ALM_LVL	RRTD 1 - RTD #7 Alarm Level	1	DEG C	1	200	RW	F1
R4x20C7	RRTD1_7_ALM_EVT	Record RRTD 1 - RTD #7 Alarms as Events	1	-	0	1	RW	F103
R4x20C8	RRTD1_7_TRIP	RRTD 1 - RTD #7 Trip	1	-	0	2	RW	F115
R4x20C9	RRTD1_7_TRP_VOTE	Enable RRTD 1 - RTD #7 Trip Voting	1	-	0	13	RW	F122
R4x20CA	RRTD1_7_TRP_RLY	RRTD 1 - RTD #7 Trip Relays	1	-	0	7	RW	F111
R4x20CB	RRTD1_7_TRP_LVL	RRTD 1 - RTD #7 Trip Level	1	DEG C	1	200	RW	F1
R4x20CC	RRTD1_7_TYPE	RRTD 1 - RTD #7 RTD Type	1	-	0	3	RW	F120
R4x20D0S8	RRTD1_7_NAME	RRTD 1 - RTD #7 Name	1	-	32	127	RW	F1A
R4x20E0	RRTD1_8_APPL	RRTD 1 - RTD #8 Application	1	-	0	4	RW	F121
R4x20E1	RRTD1_8_HI_ALM	RRTD 1 - RTD #8 High Alarm	1	-	0	2	RW	F115
R4x20E2	RRTD1_8_HI_ALM_RLY	RRTD 1 - RTD #8 High Alarm Relays	1	-	0	7	RW	F113
R4x20E3	RRTD1_8_HI_ALM_LVL	RRTD 1 - RTD #8 High Alarm Level	1	DEG C	1	200	RW	F1
R4x20E4	RRTD1_8_ALM	RRTD 1 - RTD #8 Alarm	1	-	0	2	RW	F115
R4x20E5	RRTD1_8_ALM_RLY	RRTD 1 - RTD #8 Alarm Relays	1	-	0	7	RW	F113
R4x20E6	RRTD1_8_ALM_LVL	RRTD 1 - RTD #8 Alarm Level	1	DEG C	1	200	RW	F1
R4x20E7	RRTD1_8_ALM_EVT	Record RRTD 1 - RTD #8 Alarms as Events	1	-	0	1	RW	F103
R4x20E8	RRTD1_8_TRIP	RRTD 1 - RTD #8 Trip	1	-	0	2	RW	F115
R4x20E9	RRTD1_8_TRP_VOTE	Enable RRTD 1 - RTD #8 Trip Voting	1	-	0	13	RW	F122
R4x20EA	RRTD1_8_TRP_RLY	RRTD 1 - RTD #8 Trip Relays	1	-	0	7	RW	F111
R4x20EB	RRTD1_8_TRP_LVL	RRTD 1 - RTD #8 Trip Level	1	DEG C	1	200	RW	F1
R4x20EC	RRTD1_8_TYPE	RRTD 1 - RTD #8 RTD Type	1	-	0	3	RW	F120
R4x20F0S8	RRTD1_8_NAME	RRTD 1 - RTD #8 Name	1	-	32	127	RW	F1A
R4x2100	RRTD1_9_APPL	RRTD 1 - RTD #9 Application	1	-	0	4	RW	F121
R4x2101	RRTD1_9_HI_ALM	RRTD 1 - RTD #9 High Alarm	1	-	0	2	RW	F115
R4x2102	RRTD1_9_HI_ALM_RLY	RRTD 1 - RTD #9 High Alarm Relays	1	-	0	7	RW	F113
R4x2103	RRTD1_9_HI_ALM_LVL	RRTD 1 - RTD #9 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2104	RRTD1_9_ALM	RRTD 1 - RTD #9 Alarm	1	-	0	2	RW	F115
R4x2105	RRTD1_9_ALM_RLY	RRTD 1 - RTD #9 Alarm Relays	1	-	0	7	RW	F113
R4x2106	RRTD1_9_ALM_LVL	RRTD 1 - RTD #9 Alarm Level	1	DEG C	1	200	RW	F1
R4x2107	RRTD1_9_ALM_EVT	Record RRTD 1 - RTD #9 Alarms as Events	1	-	0	1	RW	F103
R4x2108	RRTD1_9_TRIP	RRTD 1 - RTD #9 Trip	1	-	0	2	RW	F115
R4x2109	RRTD1_9_TRP_VOTE	Enable RRTD 1 - RTD #9 Trip Voting	1	-	0	13	RW	F122
R4x210A	RRTD1_9_TRP_RLY	RRTD 1 - RTD #9 Trip Relays	1	-	0	7	RW	F111
R4x210B	RRTD1_9_TRP_LVL	RRTD 1 - RTD #9 Trip Level	1	DEG C	1	200	RW	F1
R4x210C	RRTD1_9_TYPE	RRTD 1 - RTD #9 RTD Type	1	-	0	3	RW	F120
R4x2110S8	RRTD1_9_NAME	RRTD 1 - RTD #9 Name	1	-	32	127	RW	F1A

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x2120	RRTD1_10_APPL	RRTD 1 - RTD #10 Application	1	-	0	4	RW	F121
R4x2121	RRTD1_10_HI_ALM	RRTD 1 - RTD #10 High Alarm	1	-	0	2	RW	F115
R4x2122	RRTD1_10_HI_ALM_RLY	RRTD 1 - RTD #10 High Alarm Relays	1	-	0	7	RW	F113
R4x2123	RRTD1_10_HI_ALM_LVL	RRTD 1 - RTD #10 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2124	RRTD1_10_ALM	RRTD 1 - RTD #10 Alarm	1	-	0	2	RW	F115
R4x2125	RRTD1_10_ALM_RLY	RRTD 1 - RTD #10 Alarm Relays	1	-	0	7	RW	F113
R4x2126	RRTD1_10_ALM_LVL	RRTD 1 - RTD #10 Alarm Level	1	DEG C	1	200	RW	F1
R4x2127	RRTD1_10_ALM_EVT	Record RRTD 1 - RTD #10 Alarms as Events	1	-	0	1	RW	F103
R4x2128	RRTD1_10_TRIP	RRTD 1 - RTD #10 Trip	1	-	0	2	RW	F115
R4x2129	RRTD1_10_TRP_VOTE	Enable RRTD 1 - RTD#10 Trip Voting	1	-	0	13	RW	F122
R4x212A	RRTD1_10_TRP_RLY	RRTD 1 - RTD #10 Trip Relays	1	-	0	7	RW	F111
R4x212B	RRTD1_10_TRP_LVL	RRTD 1 - RTD #10 Trip Level	1	DEG C	1	200	RW	F1
R4x212C	RRTD1_10_TYPE	RRTD 1 - RTD #10 RTD Type	1	-	0	3	RW	F120
R4x2130S8	RRTD1_10_NAME	RRTD 1 - RTD #10 Name	1	-	32	127	RW	F1A
R4x2140	RRTD1_11_APPL	RRTD 1 - RTD #11 Application	1	-	0	4	RW	F121
R4x2141	RRTD1_11_HI_ALM	RRTD 1 - RTD #11 High Alarm	1	-	0	2	RW	F115
R4x2142	RRTD1_11_HI_ALM_RLY	RRTD 1 - RTD #11 High Alarm Relays	1	-	0	7	RW	F113
R4x2143	RRTD1_11_HI_ALM_LVL	RRTD 1 - RTD #11 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2144	RRTD1_11_ALM	RRTD 1 - RTD #11 Alarm	1	-	0	2	RW	F115
R4x2145	RRTD1_11_ALM_RLY	RRTD 1 - RTD #11 Alarm Relays	1	-	0	7	RW	F113
R4x2146	RRTD1_11_ALM_LVL	RRTD 1 - RTD #11 Alarm Level	1	DEG C	1	200	RW	F1
R4x2147	RRTD1_11_ALM_EVT	Record RRTD 1 - RTD #11 Alarms as Events	1	-	0	1	RW	F103
R4x2148	RRTD1_11_TRIP	RRTD 1 - RTD #11 Trip	1	-	0	2	RW	F115
R4x2149	RRTD1_11_TRP_VOTE	Enable RRTD 1 - RTD #11 Trip Voting	1	-	0	13	RW	F122
R4x214A	RRTD1_11_TRP_RLY	RRTD 1 - RTD #11 Trip Relays	1	-	0	7	RW	F111
R4x214B	RRTD1_11_TRP_LVL	RRTD 1 - RTD #11 Trip Level	1	DEG C	1	200	RW	F1
R4x214C	RRTD1_11_TYPE	RRTD 1 - RTD #11 RTD Type	1	-	0	3	RW	F120
R4x2150S8	RRTD1_11_NAME	RRTD 1 - RTD #11 Name	1	-	32	127	RW	F1A
R4x2160	RRTD1_12_APPL	RRTD 1 - RTD #12 Application	1	-	0	4	RW	F121
R4x2161	RRTD1_12_HI_ALM	RRTD 1 - RTD #12 High Alarm	1	-	0	2	RW	F115
R4x2162	RRTD1_12_HI_ALM_RLY	RRTD 1 - RTD #12 High Alarm Relays	1	-	0	7	RW	F113
R4x2163	RRTD1_12_HI_ALM_LVL	RRTD 1 - RTD #12 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2164	RRTD1_12_ALM	RRTD 1 - RTD #12 Alarm	1	-	0	2	RW	F115
R4x2165	RRTD1_12_ALM_RLY	RRTD 1 - RTD #12 Alarm Relays	1	-	0	7	RW	F113
R4x2166	RRTD1_12_ALM_LVL	RRTD 1 - RTD #12 Alarm Level	1	DEG C	1	200	RW	F1
R4x2167	RRTD1_12_ALM_EVT	Record RRTD 1 - RTD #12 Alarms as Events	1	-	0	1	RW	F103
R4x2168	RRTD1_12_TRIP	RRTD 1 - RTD #12 Trip	1	-	0	2	RW	F115
R4x2169	RRTD1_12_TRP_VOTE	Enable RRTD 1 - RTD #12 Trip Voting	1	-	0	13	RW	F122
R4x216A	RRTD1_12_TRP_RLY	RRTD 1 - RTD #12 Trip Relays	1	-	0	7	RW	F111
R4x216B	RRTD1_12_TRP_LVL	RRTD 1 - RTD #12 Trip Level	1	DEG C	1	200	RW	F1

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x216C	RRTD1_12_TYPE	RRTD 1 - RTD #12 RTD Type	1	-	0	3	RW	F120
R4x2170S8	RRTD1_12_NAME	RRTD 1 - RTD #12 Name	1	-	32	127	RW	F1A
R4x2180	RRTD1_OPN_ALM	RRTD 1 - Open RTD Alarm	1	-	0	2	RW	F115
R4x2181	RRTD1_OPN_RLY	RRTD 1 - Assign Alarm Relays	1	-	0	7	RW	F113
R4x2182	RRTD1_OPN_ALM_EVT	RRTD 1 - Open RTD Alarm Events	1	-	0	1	RW	F103
R4x2183	RRTD1_LO_ALM	RRTD 1 - Short / Low Temp RTD Alarm	1	-	0	2	RW	F115
R4x2184	RRTD1_LO_RLY	RRTD 1 - Assign Alarm Relays	1	-	0	7	RW	F113
R4x2185	RRTD1_LO_EVT	RRTD 1 - Short / Low Temp Alarm Events	1	-	0	1	RW	F103
R4x2200	RRTD2_1_APPL	RRTD 2 - RTD #1 Application	1	-	0	4	RW	F121
R4x2201	RRTD2_1_HI_ALM	RRTD 2 - RTD #1 High Alarm	1	-	0	2	RW	F115
R4x2202	RRTD2_1_HI_ALM_RLY	RRTD 2 - RTD #1 High Alarm Relays	1	-	0	7	RW	F113
R4x2203	RRTD2_1_HI_ALM_LVL	RRTD 2 - RTD #1 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2204	RRTD2_1_ALM	RRTD 2 - RTD #1 Alarm	1	-	0	2	RW	F115
R4x2205	RRTD2_1_ALM_RLY	RRTD 2 - RTD #1 Alarm Relays	1	-	0	7	RW	F113
R4x2206	RRTD2_1_ALM_LVL	RRTD 2 - RTD #1 Alarm Level	1	DEG C	1	200	RW	F1
R4x2207	RRTD2_1_ALM_EVT	Record RRTD 2 - RTD #1 Alarms as Events	1	-	0	1	RW	F103
R4x2208	RRTD2_1_TRIP	RRTD 2 - RTD #1 Trip	1	-	0	2	RW	F115
R4x2209	RRTD2_1_TRP_VOTE	Enable RRTD 2 - RTD #1 Trip Voting	1	-	0	13	RW	F122
R4x220A	RRTD2_1_TRP_RLY	RRTD 2 - RTD #1 Trip Relays	1	-	0	7	RW	F111
R4x220B	RRTD2_1_TRP_LVL	RRTD 2 - RTD #1 Trip Level	1	DEG C	1	200	RW	F1
R4x220C	RRTD2_1_TYPE	RRTD 2 - RTD #1 RTD Type	1	-	0	3	RW	F120
R4x2210S8	RRTD2_1_NAME	RRTD 2 - RTD #1 Name	1	-	32	127	RW	F1A
R4x2220	RRTD2_2_APPL	RRTD 2 - RTD #2 Application	1	-	0	4	RW	F121
R4x2221	RRTD2_2_HI_ALM	RRTD 2 - RTD #2 High Alarm	1	-	0	2	RW	F115
R4x2222	RRTD2_2_HI_ALM_RLY	RRTD 2 - RTD #2 High Alarm Relays	1	-	0	7	RW	F113
R4x2223	RRTD2_2_HI_ALM_LVL	RRTD 2 - RTD #2 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2224	RRTD2_2_ALM	RRTD 2 - RTD #2 Alarm	1	-	0	2	RW	F115
R4x2225	RRTD2_2_ALM_RLY	RRTD 2 - RTD #2 Alarm Relays	1	-	0	7	RW	F113
R4x2226	RRTD2_2_ALM_LVL	RRTD 2 - RTD #2 Alarm Level	1	DEG C	1	200	RW	F1
R4x2227	RRTD2_2_ALM_EVT	Record RRTD 2 - RTD #2 Alarms as Events	1	-	0	1	RW	F103
R4x2228	RRTD2_2_TRIP	RRTD 2 - RTD #2 Trip	1	-	0	2	RW	F115
R4x2229	RRTD2_2_TRP_VOTE	Enable A Remote RTD #2 Trip Voting	1	-	0	13	RW	F122
R4x222A	RRTD2_2_TRP_RLY	RRTD 2 - RTD #2 Trip Relays	1	-	0	7	RW	F111
R4x222B	RRTD2_2_TRP_LVL	RRTD 2 - RTD #2 Trip Level	1	DEG C	1	200	RW	F1
R4x222C	RRTD2_2_TYPE	RRTD 2 - RTD #2 RTD Type	1	-	0	3	RW	F120
R4x2230S8	RRTD2_2_NAME	RRTD 2 - RTD #2 Name	1	-	32	127	RW	F1A
R4x2240	RRTD2_3_APPL	RRTD 2 - RTD #3 Application	1	-	0	4	RW	F121
R4x2241	RRTD2_3_HI_ALM	RRTD 2 - RTD #3 High Alarm	1	-	0	2	RW	F115
R4x2242	RRTD2_3_HI_ALM_RLY	RRTD 2 - RTD #3 High Alarm Relays	1	-	0	7	RW	F113
R4x2243	RRTD2_3_HI_ALM_LVL	RRTD 2 - RTD #3 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2244	RRTD2_3_ALM	RRTD 2 - RTD #3 Alarm	1	-	0	2	RW	F115
R4x2245	RRTD2_3_ALM_RLY	RRTD 2 - RTD #3 Alarm Relays	1	-	0	7	RW	F113
R4x2246	RRTD2_3_ALM_LVL	RRTD 2 - RTD #3 Alarm Level	1	DEG C	1	200	RW	F1

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x2247	RRTD2_3_ALM_EVT	Record RRTD 2 - RTD #3 Alarms as Events	1	-	0	1	RW	F103
R4x2248	RRTD2_3_TRIP	RRTD 2 - RTD #3 Trip	1	-	0	2	RW	F115
R4x2249	RRTD2_3_TRP_VOTE	Enable RRTD 2 - RTD #3 Trip Voting	1	-	0	13	RW	F122
R4x224A	RRTD2_3_TRP_RLY	RRTD 2 - RTD #3 Trip Relays	1	-	0	7	RW	F111
R4x224B	RRTD2_3_TRP_LVL	RRTD 2 - RTD #3 Trip Level	1	DEG C	1	200	RW	F1
R4x224C	RRTD2_3_TYPE	RRTD 2 - RTD #3 RTD Type	1	-	0	3	RW	F120
R4x2250S8	RRTD2_3_NAME	RRTD 2 - RTD #3 Name	1	-	32	127	RW	F1A
R4x2260	RRTD2_4_APPL	RRTD 2 - RTD #4 Application	1	-	0	4	RW	F121
R4x2261	RRTD2_4_HI_ALM	RRTD 2 - RTD #4 High Alarm	1	-	0	2	RW	F115
R4x2262	RRTD2_4_HI_ALM_RLY	RRTD 2 - RTD #4 High Alarm Relays	1	-	0	7	RW	F113
R4x2263	RRTD2_4_HI_ALM_LVL	RRTD 2 - RTD #4 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2264	RRTD2_4_ALM	RRTD 2 - RTD #4 Alarm	1	-	0	2	RW	F115
R4x2265	RRTD2_4_ALM_RLY	RRTD 2 - RTD #4 Alarm Relays	1	-	0	7	RW	F113
R4x2266	RRTD2_4_ALM_LVL	RRTD 2 - RTD #4 Alarm Level	1	DEG C	1	200	RW	F1
R4x2267	RRTD2_4_ALM_EVT	Record RRTD 2 - RTD #4 Alarms as Events	1	-	0	1	RW	F103
R4x2268	RRTD2_4_TRIP	RRTD 2 - RTD #4 Trip	1	-	0	2	RW	F115
R4x226A	RRTD2_4_TRP_RLY	RRTD 2 - RTD #4 Trip Relays	1	-	0	7	RW	F111
R4x226B	RRTD2_4_TRP_LVL	RRTD 2 - RTD #4 Trip Level	1	DEG C	1	200	RW	F1
R4x226C	RRTD2_4_TYPE	RRTD 2 - RTD #4 RTD Type	1	-	0	3	RW	F120
R4x2270S8	RRTD2_4_NAME	RRTD 2 - RTD #4 Name	1	-	32	127	RW	F1A
R4x2280	RRTD2_5_APPL	RRTD 2 - RTD #5 Application	1	-	0	4	RW	F121
R4x2281	RRTD2_5_HI_ALM	RRTD 2 - RTD #5 High Alarm	1	-	0	2	RW	F115
R4x2282	RRTD2_5_HI_ALM_RLY	RRTD 2 - RTD #5 High Alarm Relays	1	-	0	7	RW	F113
R4x2283	RRTD2_5_HI_ALM_LVL	RRTD 2 - RTD #5 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2284	RRTD2_5_ALM	RRTD 2 - RTD #5 Alarm	1	-	0	2	RW	F115
R4x2285	RRTD2_5_ALM_RLY	RRTD 2 - RTD #5 Alarm Relays	1	-	0	7	RW	F113
R4x2286	RRTD2_5_ALM_LVL	RRTD 2 - RTD #5 Alarm Level	1	DEG C	1	200	RW	F1
R4x2287	RRTD2_5_ALM_EVT	Record RRTD 2 - RTD #5 Alarms as Events	1	-	0	1	RW	F103
R4x2288	RRTD2_5_TRIP	RRTD 2 - RTD #5 Trip	1	-	0	2	RW	F115
R4x2289	RRTD2_5_TRP_VOTE	Enable RRTD 2 - RTD #5 Trip Voting	1	-	0	13	RW	F122
R4x228A	RRTD2_5_TRP_RLY	RRTD 2 - RTD #5 Trip Relays	1	-	0	7	RW	F111
R4x228B	RRTD2_5_TRP_LVL	RRTD 2 - RTD #5 Trip Level	1	DEG C	1	200	RW	F1
R4x228C	RRTD2_5_TYPE	RRTD 2 - RTD #5 RTD Type	1	-	0	3	RW	F120
R4x2290S8	RRTD2_5_NAME	RRTD 2 - RTD #5 Name	1	-	32	127	RW	F1A
R4x22A0	RRTD2_6_APPL	RRTD 2 - RTD #6 Application	1	-	0	4	RW	F121
R4x22A1	RRTD2_6_HI_ALM	RRTD 2 - RTD #6 High Alarm	1	-	0	2	RW	F115
R4x22A2	RRTD2_6_HI_ALM_RLY	RRTD 2 - RTD #6 High Alarm Relays	1	-	0	7	RW	F113
R4x22A3	RRTD2_6_HI_ALM_LVL	RRTD 2 - RTD #6 High Alarm Level	1	DEG C	1	200	RW	F1
R4x22A4	RRTD2_6_ALM	RRTD 2 - RTD #6 Alarm	1	-	0	2	RW	F115
R4x22A5	RRTD2_6_ALM_RLY	RRTD 2 - RTD #6 Alarm Relays	1	-	0	7	RW	F113
R4x22A6	RRTD2_6_ALM_LVL	RRTD 2 - RTD #6 Alarm Level	1	DEG C	1	200	RW	F1
R4x22A7	RRTD2_6_ALM_EVT	Record RRTD 2 - RTD #6 Alarms as Events	1	-	0	1	RW	F103
R4x22A8	RRTD2_6_TRIP	RRTD 2 - RTD #6 Trip	1	-	0	2	RW	F115

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x22A9	RRTD2_6_TRP_VOTE	Enable RRTD 2 - RTD #6 Trip Voting	1	-	0	13	RW	F122
R4x22AA	RRTD2_6_TRP_RLY	RRTD 2 - RTD #6 Trip Relays	1	-	0	7	RW	F111
R4x22AB	RRTD2_6_TRP_LVL	RRTD 2 - RTD #6 Trip Level	1	DEG C	1	200	RW	F1
R4x22AC	RRTD2_6_TYPE	RRTD 2 - RTD #6 RTD Type	1	-	0	3	RW	F120
R4x22B0S8	RRTD2_6_NAME	RRTD 2 - RTD #6 Name	1	-	32	127	RW	F1A
R4x22C0	RRTD2_7_APPL	RRTD 2 - RTD #7 Application	1	-	0	4	RW	F121
R4x22C1	RRTD2_7_HI_ALM	RRTD 2 - RTD #7 High Alarm	1	-	0	2	RW	F115
R4x22C2	RRTD2_7_HI_ALM_RLY	RRTD 2 - RTD #7 High Alarm Relays	1	-	0	7	RW	F113
R4x22C3	RRTD2_7_HI_ALM_LVL	RRTD 2 - RTD #7 High Alarm Level	1	DEG C	1	200	RW	F1
R4x22C4	RRTD2_7_ALM	RRTD 2 - RTD #7 Alarm	1	-	0	2	RW	F115
R4x22C5	RRTD2_7_ALM_RLY	RRTD 2 - RTD #7 Alarm Relays	1	-	0	7	RW	F113
R4x22C6	RRTD2_7_ALM_LVL	RRTD 2 - RTD #7 Alarm Level	1	DEG C	1	200	RW	F1
R4x22C7	RRTD2_7_ALM_EVT	Record RRTD 2 - RTD #7 Alarms as Events	1	-	0	1	RW	F103
R4x22C8	RRTD2_7_TRIP	RRTD 2 - RTD #7 Trip	1	-	0	2	RW	F115
R4x22C9	RRTD2_7_TRP_VOTE	Enable RRTD 2 - RTD #7 Trip Voting	1	-	0	13	RW	F122
R4x22CA	RRTD2_7_TRP_RLY	RRTD 2 - RTD #7 Trip Relays	1	-	0	7	RW	F111
R4x22CB	RRTD2_7_TRP_LVL	RRTD 2 - RTD #7 Trip Level	1	DEG C	1	200	RW	F1
R4x22CC	RRTD2_7_TYPE	RRTD 2 - RTD #7 RTD Type	1	-	0	3	RW	F120
R4x22D0S8	RRTD2_7_NAME	RRTD 2 - RTD #7 Name	1	-	32	127	RW	F1A
R4x22E0	RRTD2_8_APPL	RRTD 2 - RTD #8 Application	1	-	0	4	RW	F121
R4x22E1	RRTD2_8_HI_ALM	RRTD 2 - RTD #8 High Alarm	1	-	0	2	RW	F115
R4x22E2	RRTD2_8_HI_ALM_RLY	RRTD 2 - RTD #8 High Alarm Relays	1	-	0	7	RW	F113
R4x22E3	RRTD2_8_HI_ALM_LVL	RRTD 2 - RTD #8 High Alarm Level	1	DEG C	1	200	RW	F1
R4x22E4	RRTD2_8_ALM	RRTD 2 - RTD #8 Alarm	1	-	0	2	RW	F115
R4x22E5	RRTD2_8_ALM_RLY	RRTD 2 - RTD #8 Alarm Relays	1	-	0	7	RW	F113
R4x22E6	RRTD2_8_ALM_LVL	RRTD 2 - RTD #8 Alarm Level	1	DEG C	1	200	RW	F1
R4x22E7	RRTD2_8_ALM_EVT	Record RRTD 2 - RTD #8 Alarms as Events	1	-	0	1	RW	F103
R4x22E8	RRTD2_8_TRIP	RRTD 2 - RTD #8 Trip	1	-	0	2	RW	F115
R4x22E9	RRTD2_8_TRP_VOTE	Enable RRTD 2 - RTD #8 Trip Voting	1	-	0	13	RW	F122
R4x22EA	RRTD2_8_TRP_RLY	RRTD 2 - RTD #8 Trip Relays	1	-	0	7	RW	F111
R4x22EB	RRTD2_8_TRP_LVL	RRTD 2 - RTD #8 Trip Level	1	DEG C	1	200	RW	F1
R4x22EC	RRTD2_8_TYPE	RRTD 2 - RTD #8 RTD Type	1	-	0	3	RW	F120
R4x22F0S8	RRTD2_8_NAME	RRTD 2 - RTD #8 Name	1	-	32	127	RW	F1A
R4x2300	RRTD2_9_APPL	RRTD 2 - RTD #9 Application	1	-	0	4	RW	F121
R4x2301	RRTD2_9_HI_ALM	RRTD 2 - RTD #9 High Alarm	1	-	0	2	RW	F115
R4x2302	RRTD2_9_HI_ALM_RLY	RRTD 2 - RTD #9 High Alarm Relays	1	-	0	7	RW	F113
R4x2303	RRTD2_9_HI_ALM_LVL	RRTD 2 - RTD #9 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2304	RRTD2_9_ALM	RRTD 2 - RTD #9 Alarm	1	-	0	2	RW	F115
R4x2305	RRTD2_9_ALM_RLY	RRTD 2 - RTD #9 Alarm Relays	1	-	0	7	RW	F113
R4x2306	RRTD2_9_ALM_LVL	RRTD 2 - RTD #9 Alarm Level	1	DEG C	1	200	RW	F1
R4x2307	RRTD2_9_ALM_EVT	Record RRTD 2 - RTD #9 Alarms as Events	1	-	0	1	RW	F103
R4x2308	RRTD2_9_TRIP	RRTD 2 - RTD #9 Trip	1	-	0	2	RW	F115
R4x2309	RRTD2_9_TRP_VOTE	Enable RRTD 2 - RTD #9 Trip Voting	1	-	0	13	RW	F122
R4x230A	RRTD2_9_TRP_RLY	RRTD 2 - RTD #9 Trip Relays	1	-	0	7	RW	F111

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x230B	RRTD2_9_TRP_LVL	RRTD 2 - RTD #9 Trip Level	1	DEG C	1	200	RW	F1
R4x230C	RRTD2_9_TYPE	RRTD 2 - RTD #9 RTD Type	1	-	0	3	RW	F120
R4x2310S8	RRTD2_9_NAME	RRTD 2 - RTD #9 Name	1	-	32	127	RW	F1A
R4x2320	RRTD2_10_APPL	RRTD 2 - RTD #10 Application	1	-	0	4	RW	F121
R4x2321	RRTD2_10_HI_ALM	RRTD 2 - RTD #10 High Alarm	1	-	0	2	RW	F115
R4x2322	RRTD2_10_HI_ALM_RLY	RRTD 2 - RTD #10 High Alarm Relays	1	-	0	7	RW	F113
R4x2323	RRTD2_10_HI_ALM_LVL	RRTD 2 - RTD #10 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2324	RRTD2_10_ALM	RRTD 2 - RTD #10 Alarm	1	-	0	2	RW	F115
R4x2325	RRTD2_10_ALM_RLY	RRTD 2 - RTD #10 Alarm Relays	1	-	0	7	RW	F113
R4x2326	RRTD2_10_ALM_LVL	RRTD 2 - RTD #10 Alarm Level	1	DEG C	1	200	RW	F1
R4x2327	RRTD2_10_ALM_EVT	Record RRTD 2 - RTD #10 Alarms as Events	1	-	0	1	RW	F103
R4x2328	RRTD2_10_TRIP	RRTD 2 - RTD #10 Trip	1	-	0	2	RW	F115
R4x2329	RRTD2_10_TRP_VOTE	Enable RRTD 2 - RTD #10 Trip Voting	1	-	0	13	RW	F122
R4x232A	RRTD2_10_TRP_RLY	RRTD 2 - RTD #10 Trip Relays	1	-	0	7	RW	F111
R4x232B	RRTD2_10_TRP_LVL	RRTD 2 - RTD #10 Trip Level	1	DEG C	1	200	RW	F1
R4x232C	RRTD2_10_TYPE	RRTD 2 - RTD #10 RTD Type	1	-	0	3	RW	F120
R4x2330S8	RRTD2_10_NAME	RRTD 2 - RTD #10 Name	1	-	32	127	RW	F1A
R4x2340	RRTD2_11_APPL	RRTD 2 - RTD #11 Application	1	-	0	4	RW	F121
R4x2341	RRTD2_11_HI_ALM	RRTD 2 - RTD #11 High Alarm	1	-	0	2	RW	F115
R4x2342	RRTD2_11_HI_ALM_RLY	RRTD 2 - RTD #11 High Alarm Relays	1	-	0	7	RW	F113
R4x2343	RRTD2_11_HI_ALM_LVL	RRTD 2 - RTD #11 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2344	RRTD2_11_ALM	RRTD 2 - RTD #11 Alarm	1	-	0	2	RW	F115
R4x2345	RRTD2_11_ALM_RLY	RRTD 2 - RTD #11 Alarm Relays	1	-	0	7	RW	F113
R4x2346	RRTD2_11_ALM_LVL	RRTD 2 - RTD #11 Alarm Level	1	DEG C	1	200	RW	F1
R4x2347	RRTD2_11_ALM_EVT	Record RRTD 2 - RTD #11 Alarms as Events	1	-	0	1	RW	F103
R4x2348	RRTD2_11_TRIP	RRTD 2 - RTD #11 Trip	1	-	0	2	RW	F115
R4x2349	RRTD2_11_TRP_VOTE	Enable RRTD 2 - RTD #11 Trip Voting	1	-	0	13	RW	F122
R4x234A	RRTD2_11_TRP_RLY	RRTD 2 - RTD #11 Trip Relays	1	-	0	7	RW	F111
R4x234B	RRTD2_11_TRP_LVL	RRTD 2 - RTD #11 Trip Level	1	DEG C	1	200	RW	F1
R4x234C	RRTD2_11_TYPE	RRTD 2 - RTD #11 RTD Type	1	-	0	3	RW	F120
R4x2350S8	RRTD2_11_NAME	RRTD 2 - RTD #11 Name	1	-	32	127	RW	F1A
R4x2360	RRTD2_12_APPL	RRTD 2 - RTD #12 Application	1	-	0	4	RW	F121
R4x2361	RRTD2_12_HI_ALM	RRTD 2 - RTD #12 High Alarm	1	-	0	2	RW	F115
R4x2362	RRTD2_12_HI_ALM_RLY	RRTD 2 - RTD #12 High Alarm Relays	1	-	0	7	RW	F113
R4x2363	RRTD2_12_HI_ALM_LVL	RRTD 2 - RTD #12 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2364	RRTD2_12_ALM	RRTD 2 - RTD #12 Alarm	1	-	0	2	RW	F115
R4x2365	RRTD2_12_ALM_RLY	RRTD 2 - RTD #12 Alarm Relays	1	-	0	7	RW	F113
R4x2366	RRTD2_12_ALM_LVL	RRTD 2 - RTD #12 Alarm Level	1	DEG C	1	200	RW	F1
R4x2367	RRTD2_12_ALM_EVT	Record RRTD 2 - RTD #12 Alarms as Events	1	-	0	1	RW	F103
R4x2368	RRTD2_12_TRIP	RRTD 2 - RTD #12 Trip	1	-	0	2	RW	F115
R4x2369	RRTD2_12_TRP_VOTE	Enable RRTD 2 - RTD #12 Trip	1	-	0	13	RW	F122

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
		Voting						
R4x236A	RRTD2_12_TRP_RLY	RRTD 2 - RTD #12 Trip Relays	1	-	0	7	RW	F111
R4x236B	RRTD2_12_TRP_LVL	RRTD 2 - RTD #12 Trip Level	1	DEG C	1	200	RW	F1
R4x236C	RRTD2_12_TYPE	RRTD 2 - RTD #12 RTD Type	1	-	0	3	RW	F120
R4x2370S8	RRTD2_12_NAME	RRTD 2 - RTD #12 Name	1	-	32	127	RW	F1A
R4x2380	RRTD2_OPN_ALM	RRTD 2 - Open RTD Alarm	1	-	0	2	RW	F115
R4x2381	RRTD2_OPN_RLY	RRTD 2 - Assign Alarm Relays	1	-	0	7	RW	F113
R4x2382	RRTD2_OPN_ALM_EVT	RRTD 2 - Open RTD Alarm Events	1	-	0	1	RW	F103
R4x2383	RRTD2_LO_ALM	RRTD 2 - Short / Low Temp RTD Alarm	1	-	0	2	RW	F115
R4x2384	RRTD2_LO_RLY	RRTD 2 - Assign Alarm Relays	1	-	0	7	RW	F113
R4x2385	RRTD2_LO_EVT	RRTD 2 - Short / Low Temp Alarm Events	1	-	0	1	RW	F103
R4x2400	RRTD3_1_APPL	RRTD 3 - RTD #1 Application	1	-	0	4	RW	F121
R4x2401	RRTD3_1_HI_ALM	RRTD 3 - RTD #1 High Alarm	1	-	0	2	RW	F115
R4x2402	RRTD3_1_HI_ALM_RLY	RRTD 3 - RTD #1 High Alarm Relays	1	-	0	7	RW	F113
R4x2403	RRTD3_1_HI_ALM_LVL	RRTD 3 - RTD #1 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2404	RRTD3_1_ALM	RRTD 3 - RTD #1 Alarm	1	-	0	2	RW	F115
R4x2405	RRTD3_1_ALM_RLY	RRTD 3 - RTD #1 Alarm Relays	1	-	0	7	RW	F113
R4x2406	RRTD3_1_ALM_LVL	RRTD 3 - RTD #1 Alarm Level	1	DEG C	1	200	RW	F1
R4x2407	RRTD3_1_ALM_EVT	Record RRTD 3 - RTD #1 Alarms as Events	1	-	0	1	RW	F103
R4x2408	RRTD3_1_TRIP	RRTD 3 - RTD #1 Trip	1	-	0	2	RW	F115
R4x2409	RRTD3_1_TRP_VOTE	Enable RRTD 3 - RTD #1 Trip Voting	1	-	0	13	RW	F122
R4x240A	RRTD3_1_TRP_RLY	RRTD 3 - RTD #1 Trip Relays	1	-	0	7	RW	F111
R4x240B	RRTD3_1_TRP_LVL	RRTD 3 - RTD #1 Trip Level	1	DEG C	1	200	RW	F1
R4x240C	RRTD3_1_TYPE	RRTD 3 - RTD #1 RTD Type	1	-	0	3	RW	F120
R4x2410S8	RRTD3_1_NAME	RRTD 3 - RTD #1 Name	1	-	32	127	RW	F1A
R4x2420	RRTD3_2_APPL	RRTD 3 - RTD #2 Application	1	-	0	4	RW	F121
R4x2421	RRTD3_2_HI_ALM	RRTD 3 - RTD #2 High Alarm	1	-	0	2	RW	F115
R4x2422	RRTD3_2_HI_ALM_RLY	RRTD 3 - RTD #2 High Alarm Relays	1	-	0	7	RW	F113
R4x2423	RRTD3_2_HI_ALM_LVL	RRTD 3 - RTD #2 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2424	RRTD3_2_ALM	RRTD 3 - RTD #2 Alarm	1	-	0	2	RW	F115
R4x2425	RRTD3_2_ALM_RLY	RRTD 3 - RTD #2 Alarm Relays	1	-	0	7	RW	F113
R4x2426	RRTD3_2_ALM_LVL	RRTD 3 - RTD #2 Alarm Level	1	DEG C	1	200	RW	F1
R4x2427	RRTD3_2_ALM_EVT	Record RRTD 3 - RTD #2 Alarms as Events	1	-	0	1	RW	F103
R4x2428	RRTD3_2_TRIP	RRTD 3 - RTD #2 Trip	1	-	0	2	RW	F115
R4x2429	RRTD3_2_TRP_VOTE	Enable RRTD 3 - RTD #2 Trip Voting	1	-	0	13	RW	F122
R4x242A	RRTD3_2_TRP_RLY	RRTD 3 - RTD #2 Trip Relays	1	-	0	7	RW	F111
R4x242B	RRTD3_2_TRP_LVL	RRTD 3 - RTD #2 Trip Level	1	DEG C	1	200	RW	F1
R4x242C	RRTD3_2_TYPE	RRTD 3 - RTD #2 RTD Type	1	-	0	3	RW	F120
R4x2430S8	RRTD3_2_NAME	RRTD 3 - RTD #2 Name	1	-	32	127	RW	F1A
R4x2440	RRTD3_3_APPL	RRTD 3 - RTD #3 Application	1	-	0	4	RW	F121
R4x2441	RRTD3_3_HI_ALM	RRTD 3 - RTD #3 High Alarm	1	-	0	2	RW	F115
R4x2442	RRTD3_3_HI_ALM_RLY	RRTD 3 - RTD #3 High Alarm Relays	1	-	0	7	RW	F113
R4x2443	RRTD3_3_HI_ALM_LVL	RRTD 3 - RTD #3 High Alarm Level	1	DEG C	1	200	RW	F1

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x2444	RRTD3_3_ALM	RRTD 3 - RTD #3 Alarm	1	-	0	2	RW	F115
R4x2445	RRTD3_3_ALM_RLY	RRTD 3 - RTD #3 Alarm Relays	1	-	0	7	RW	F113
R4x2446	RRTD3_3_ALM_LVL	RRTD 3 - RTD #3 Alarm Level	1	DEG C	1	200	RW	F1
R4x2447	RRTD3_3_ALM_EVT	Record RRTD 3 - RTD #3 Alarms as Events	1	-	0	1	RW	F103
R4x2448	RRTD3_3_TRIP	RRTD 3 - RTD #3 Trip	1	-	0	2	RW	F115
R4x2449	RRTD3_3_TRP_VOTE	Enable RRTD 3 - RTD #3 Trip Voting	1	-	0	13	RW	F122
R4x244A	RRTD3_3_TRP_RLY	RRTD 3 - RTD #3 Trip Relays	1	-	0	7	RW	F111
R4x244B	RRTD3_3_TRP_LVL	RRTD 3 - RTD #3 Trip Level	1	DEG C	1	200	RW	F1
R4x244C	RRTD3_3_TYPE	RRTD 3 - RTD #3 RTD Type	1	-	0	3	RW	F120
R4x2450S8	RRTD3_3_NAME	RRTD 3 - RTD #3 Name	1	-	32	127	RW	F1A
R4x2460	RRTD3_4_APPL	RRTD 3 - RTD #4 Application	1	-	0	4	RW	F121
R4x2461	RRTD3_4_HI_ALM	RRTD 3 - RTD #4 High Alarm	1	-	0	2	RW	F115
R4x2462	RRTD3_4_HI_ALM_RLY	RRTD 3 - RTD #4 High Alarm Relays	1	-	0	7	RW	F113
R4x2463	RRTD3_4_HI_ALM_LVL	RRTD 3 - RTD #4 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2464	RRTD3_4_ALM	RRTD 3 - RTD #4 Alarm	1	-	0	2	RW	F115
R4x2465	RRTD3_4_ALM_RLY	RRTD 3 - RTD #4 Alarm Relays	1	-	0	7	RW	F113
R4x2466	RRTD3_4_ALM_LVL	RRTD 3 - RTD #4 Alarm Level	1	DEG C	1	200	RW	F1
R4x2467	RRTD3_4_ALM_EVT	Record RRTD 3 - RTD #4 Alarms as Events	1	-	0	1	RW	F103
R4x2468	RRTD3_4_TRIP	RRTD 3 - RTD #4 Trip	1	-	0	2	RW	F115
R4x2469	RRTD3_4_TRP_VOTE	Enable RRTD 3 - RTD #4 Trip Voting	1	-	0	13	RW	F122
R4x246A	RRTD3_4_TRP_RLY	RRTD 3 - RTD #4 Trip Relays	1	-	0	7	RW	F111
R4x246B	RRTD3_4_TRP_LVL	RRTD 3 - RTD #4 Trip Level	1	DEG C	1	200	RW	F1
R4x246C	RRTD3_4_TYPE	RRTD 3 - RTD #4 RTD Type	1	-	0	3	RW	F120
R4x2470S8	RRTD3_4_NAME	RRTD 3 - RTD #4 Name	1	-	32	127	RW	F1A
R4x2480	RRTD3_5_APPL	RRTD 3 - RTD #5 Application	1	-	0	4	RW	F121
R4x2481	RRTD3_5_HI_ALM	RRTD 3 - RTD #5 High Alarm	1	-	0	2	RW	F115
R4x2482	RRTD3_5_HI_ALM_RLY	RRTD 3 - RTD #5 High Alarm Relays	1	-	0	7	RW	F113
R4x2483	RRTD3_5_HI_ALM_LVL	RRTD 3 - RTD #5 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2484	RRTD3_5_ALM	RRTD 3 - RTD #5 Alarm	1	-	0	2	RW	F115
R4x2485	RRTD3_5_ALM_RLY	RRTD 3 - RTD #5 Alarm Relays	1	-	0	7	RW	F113
R4x2486	RRTD3_5_ALM_LVL	RRTD 3 - RTD #5 Alarm Level	1	DEG C	1	200	RW	F1
R4x2487	RRTD3_5_ALM_EVT	Record RRTD 3 - RTD #5 Alarms as Events	1	-	0	1	RW	F103
R4x2488	RRTD3_5_TRIP	RRTD 3 - RTD #5 Trip	1	-	0	2	RW	F115
R4x2489	RRTD3_5_TRP_VOTE	Enable RRTD 3 - RTD #5 Trip Voting	1	-	0	13	RW	F122
R4x248A	RRTD3_5_TRP_RLY	RRTD 3 - RTD #5 Trip Relays	1	-	0	7	RW	F111
R4x248B	RRTD3_5_TRP_LVL	RRTD 3 - RTD #5 Trip Level	1	DEG C	1	200	RW	F1
R4x248C	RRTD3_5_TYPE	RRTD 3 - RTD #5 RTD Type	1	-	0	3	RW	F120
R4x2490S8	RRTD3_5_NAME	RRTD 3 - RTD #5 Name	1	-	32	127	RW	F1A
R4x24A0	RRTD3_6_APPL	RRTD 3 - RTD #6 Application	1	-	0	4	RW	F121
R4x24A1	RRTD3_6_HI_ALM	RRTD 3 - RTD #6 High Alarm	1	-	0	2	RW	F115
R4x24A2	RRTD3_6_HI_ALM_RLY	RRTD 3 - RTD #6 High Alarm Relays	1	-	0	7	RW	F113
R4x24A3	RRTD3_6_HI_ALM_LVL	RRTD 3 - RTD #6 High Alarm Level	1	DEG C	1	200	RW	F1
R4x24A4	RRTD3_6_ALM	RRTD 3 - RTD #6 Alarm	1	-	0	2	RW	F115
R4x24A5	RRTD3_6_ALM_RLY	RRTD 3 - RTD #6 Alarm Relays	1	-	0	7	RW	F113

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x24A6	RRTD3_6_ALM_LVL	RRTD 3 - RTD #6 Alarm Level	1	DEG C	1	200	RW	F1
R4x24A7	RRTD3_6_ALM_EVT	Record RRTD 3 - RTD #6 Alarms as Events	1	-	0	1	RW	F103
R4x24A8	RRTD3_6_TRIP	RRTD 3 - RTD #6 Trip	1	-	0	2	RW	F115
R4x24A9	RRTD3_6_TRP_VOTE	Enable RRTD 3 - RTD #6 Trip Voting	1	-	0	13	RW	F122
R4x24AA	RRTD3_6_TRP_RLY	RRTD 3 - RTD #6 Trip Relays	1	-	0	7	RW	F111
R4x24AB	RRTD3_6_TRP_LVL	RRTD 3 - RTD #6 Trip Level	1	DEG C	1	200	RW	F1
R4x24AC	RRTD3_6_TYPE	RRTD 3 - RTD #6 RTD Type	1	-	0	3	RW	F120
R4x24B0S8	RRTD3_6_NAME	RRTD 3 - RTD #6 Name	1	-	32	127	RW	F1A
R4x24C0	RRTD3_7_APPL	RRTD 3 - RTD #7 Application	1	-	0	4	RW	F121
R4x24C1	RRTD3_7_HI_ALM	RRTD 3 - RTD #7 High Alarm	1	-	0	2	RW	F115
R4x24C2	RRTD3_7_HI_ALM_RLY	RRTD 3 - RTD #7 High Alarm Relays	1	-	0	7	RW	F113
R4x24C3	RRTD3_7_HI_ALM_LVL	RRTD 3 - RTD #7 High Alarm Level	1	DEG C	1	200	RW	F1
R4x24C4	RRTD3_7_ALM	RRTD 3 - RTD #7 Alarm	1	-	0	2	RW	F115
R4x24C5	RRTD3_7_ALM_RLY	RRTD 3 - RTD #7 Alarm Relays	1	-	0	7	RW	F113
R4x24C6	RRTD3_7_ALM_LVL	RRTD 3 - RTD #7 Alarm Level	1	DEG C	1	200	RW	F1
R4x24C7	RRTD3_7_ALM_EVT	Record RRTD 3 - RTD #7 Alarms as Events	1	-	0	1	RW	F103
R4x24C8	RRTD3_7_TRIP	RRTD 3 - RTD #7 Trip	1	-	0	2	RW	F115
R4x24C9	RRTD3_7_TRP_VOTE	Enable RRTD 3 - RTD #7 Trip Voting	1	-	0	13	RW	F122
R4x24CA	RRTD3_7_TRP_RLY	RRTD 3 - RTD #7 Trip Relays	1	-	0	7	RW	F111
R4x24CB	RRTD3_7_TRP_LVL	RRTD 3 - RTD #7 Trip Level	1	DEG C	1	200	RW	F1
R4x24CC	RRTD3_7_TYPE	RRTD 3 - RTD #7 RTD Type	1	-	0	3	RW	F120
R4x24D0S8	RRTD3_7_NAME	RRTD 3 - RTD #7 Name	1	-	32	127	RW	F1A
R4x24E0	RRTD3_8_APPL	RRTD 3 - RTD #8 Application	1	-	0	4	RW	F121
R4x24E1	RRTD3_8_HI_ALM	RRTD 3 - RTD #8 High Alarm	1	-	0	2	RW	F115
R4x24E2	RRTD3_8_HI_ALM_RLY	RRTD 3 - RTD #8 High Alarm Relays	1	-	0	7	RW	F113
R4x24E3	RRTD3_8_HI_ALM_LVL	RRTD 3 - RTD #8 High Alarm Level	1	DEG C	1	200	RW	F1
R4x24E4	RRTD3_8_ALM	RRTD 3 - RTD #8 Alarm	1	-	0	2	RW	F115
R4x24E5	RRTD3_8_ALM_RLY	RRTD 3 - RTD #8 Alarm Relays	1	-	0	7	RW	F113
R4x24E6	RRTD3_8_ALM_LVL	RRTD 3 - RTD #8 Alarm Level	1	DEG C	1	200	RW	F1
R4x24E7	RRTD3_8_ALM_EVT	Record RRTD 3 - RTD #8 Alarms as Events	1	-	0	1	RW	F103
R4x24E8	RRTD3_8_TRIP	RRTD 3 - RTD #8 Trip	1	-	0	2	RW	F115
R4x24E9	RRTD3_8_TRP_VOTE	Enable RRTD 3 - RTD #8 Trip Voting	1	-	0	13	RW	F122
R4x24EA	RRTD3_8_TRP_RLY	RRTD 3 - RTD #8 Trip Relays	1	-	0	7	RW	F111
R4x24EB	RRTD3_8_TRP_LVL	RRTD 3 - RTD #8 Trip Level	1	DEG C	1	200	RW	F1
R4x24EC	RRTD3_8_TYPE	RRTD 3 - RTD #8 RTD Type	1	-	0	3	RW	F120
R4x24F0S8	RRTD3_8_NAME	RRTD 3 - RTD #8 Name	1	-	32	127	RW	F1A
R4x2500	RRTD3_9_APPL	RRTD 3 - RTD #9 Application	1	-	0	4	RW	F121
R4x2501	RRTD3_9_HI_ALM	RRTD 3 - RTD #9 High Alarm	1	-	0	2	RW	F115
R4x2502	RRTD3_9_HI_ALM_RLY	RRTD 3 - RTD #9 High Alarm Relays	1	-	0	7	RW	F113
R4x2503	RRTD3_9_HI_ALM_LVL	RRTD 3 - RTD #9 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2504	RRTD3_9_ALM	RRTD 3 - RTD #9 Alarm	1	-	0	2	RW	F115
R4x2505	RRTD3_9_ALM_RLY	RRTD 3 - RTD #9 Alarm Relays	1	-	0	7	RW	F113
R4x2506	RRTD3_9_ALM_LVL	RRTD 3 - RTD #9 Alarm Level	1	DEG C	1	200	RW	F1
R4x2507	RRTD3_9_ALM_EVT	Record RRTD 3 - RTD #9 Alarms as	1	-	0	1	RW	F103

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
		Events						
R4x2508	RRTD3_9_TRIP	RRTD 3 - RTD #9 Trip	1	-	0	2	RW	F115
R4x2509	RRTD3_9_TRP_VOTE	Enable RRTD 3 - RTD #9 Trip Voting	1	-	0	13	RW	F122
R4x250A	RRTD3_9_TRP_RLY	RRTD 3 - RTD #9 Trip Relays	1	-	0	7	RW	F111
R4x250B	RRTD3_9_TRP_LVL	RRTD 3 - RTD #9 Trip Level	1	DEG C	1	200	RW	F1
R4x250C	RRTD3_9_TYPE	RRTD 3 - RTD #9 RTD Type	1	-	0	3	RW	F120
R4x2510S8	RRTD3_9_NAME	RRTD 3 - RTD #9 Name	1	-	32	127	RW	F1A
R4x2520	RRTD3_10_APPL	RRTD 3 - RTD #10 Application	1	-	0	4	RW	F121
R4x2521	RRTD3_10_HI_ALM	RRTD 3 - RTD #10 High Alarm	1	-	0	2	RW	F115
R4x2522	RRTD3_10_HI_ALM_RLY	RRTD 3 - RTD #10 High Alarm Relays	1	-	0	7	RW	F113
R4x2523	RRTD3_10_HI_ALM_LVL	RRTD 3 - RTD #10 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2524	RRTD3_10_ALM	RRTD 3 - RTD #10 Alarm	1	-	0	2	RW	F115
R4x2525	RRTD3_10_ALM_RLY	RRTD 3 - RTD #10 Alarm Relays	1	-	0	7	RW	F113
R4x2526	RRTD3_10_ALM_LVL	RRTD 3 - RTD #10 Alarm Level	1	DEG C	1	200	RW	F1
R4x2527	RRTD3_10_ALM_EVT	Record RRTD 3 - RTD #10 Alarms as Events	1	-	0	1	RW	F103
R4x2528	RRTD3_10_TRIP	RRTD 3 - RTD #10 Trip	1	-	0	2	RW	F115
R4x2529	RRTD3_10_TRP_VOTE	Enable RRTD 3 - RTD#10 Trip Voting	1	-	0	13	RW	F122
R4x252A	RRTD3_10_TRP_RLY	RRTD 3 - RTD #10 Trip Relays	1	-	0	7	RW	F111
R4x252B	RRTD3_10_TRP_LVL	RRTD 3 - RTD #10 Trip Level	1	DEG C	1	200	RW	F1
R4x252C	RRTD3_10_TYPE	RRTD 3 - RTD #10 RTD Type	1	-	0	3	RW	F120
R4x2530S8	RRTD3_10_NAME	RRTD 3 - RTD #10 Name	1	-	32	127	RW	F1A
R4x2540	RRTD3_11_APPL	RRTD 3 - RTD #11 Application	1	-	0	4	RW	F121
R4x2541	RRTD3_11_HI_ALM	RRTD 3 - RTD #11 High Alarm	1	-	0	2	RW	F115
R4x2542	RRTD3_11_HI_ALM_RLY	RRTD 3 - RTD #11 High Alarm Relays	1	-	0	7	RW	F113
R4x2543	RRTD3_11_HI_ALM_LVL	RRTD 3 - RTD #11 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2544	RRTD3_11_ALM	RRTD 3 - RTD #11 Alarm	1	-	0	2	RW	F115
R4x2545	RRTD3_11_ALM_RLY	RRTD 3 - RTD #11 Alarm Relays	1	-	0	7	RW	F113
R4x2546	RRTD3_11_ALM_LVL	RRTD 3 - RTD #11 Alarm Level	1	DEG C	1	200	RW	F1
R4x2547	RRTD3_11_ALM_EVT	Record RRTD 3 - RTD #11 Alarms as Events	1	-	0	1	RW	F103
R4x2548	RRTD3_11_TRIP	RRTD 3 - RTD #11 Trip	1	-	0	2	RW	F115
R4x2549	RRTD3_11_TRP_VOTE	Enable RRTD 3 - RTD #11 Trip Voting	1	-	0	13	RW	F122
R4x254A	RRTD3_11_TRP_RLY	RRTD 3 - RTD #11 Trip Relays	1	-	0	7	RW	F111
R4x254B	RRTD3_11_TRP_LVL	RRTD 3 - RTD #11 Trip Level	1	DEG C	1	200	RW	F1
R4x254C	RRTD3_11_TYPE	RRTD 3 - RTD #11 RTD Type	1	-	0	3	RW	F120
R4x2550S8	RRTD3_11_NAME	RRTD 3 - RTD #11 Name	1	-	32	127	RW	F1A
R4x2560	RRTD3_12_APPL	RRTD 3 - RTD #12 Application	1	-	0	4	RW	F121
R4x2561	RRTD3_12_HI_ALM	RRTD 3 - RTD #12 High Alarm	1	-	0	2	RW	F115
R4x2562	RRTD3_12_HI_ALM_RLY	RRTD 3 - RTD #12 High Alarm Relays	1	-	0	7	RW	F113
R4x2563	RRTD3_12_HI_ALM_LVL	RRTD 3 - RTD #12 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2564	RRTD3_12_ALM	RRTD 3 - RTD #12 Alarm	1	-	0	2	RW	F115
R4x2565	RRTD3_12_ALM_RLY	RRTD 3 - RTD #12 Alarm Relays	1	-	0	7	RW	F113
R4x2566	RRTD3_12_ALM_LVL	RRTD 3 - RTD #12 Alarm Level	1	DEG C	1	200	RW	F1

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x2567	RRTD3_12_ALM_EVT	Record RRTD 3 - RTD #12 Alarms as Events	1	-	0	1	RW	F103
R4x2568	RRTD3_12_TRIP	RRTD 3 - RTD #12 Trip	1	-	0	2	RW	F115
R4x2569	RRTD3_12_TRP_VOTE	Enable RRTD 3 - RTD #12 Trip Voting	1	-	0	13	RW	F122
R4x256A	RRTD3_12_TRP_RLY	RRTD 3 - RTD #12 Trip Relays	1	-	0	7	RW	F111
R4x256B	RRTD3_12_TRP_LVL	RRTD 3 - RTD #12 Trip Level	1	DEG C	1	200	RW	F1
R4x256C	RRTD3_12_TYPE	RRTD 3 - RTD #12 RTD Type	1	-	0	3	RW	F120
R4x2570S8	RRTD3_12_NAME	RRTD 3 - RTD #12 Name	1	-	32	127	RW	F1A
R4x2580	RRTD3_OPN_ALM	RRTD 3 - Open RTD Alarm	1	-	0	2	RW	F115
R4x2581	RRTD3_OPN_RLY	RRTD 3 - Assign Alarm Relays	1	-	0	7	RW	F113
R4x2582	RRTD3_OPN_ALM_EVT	RRTD 3 - Open RTD Alarm Events	1	-	0	1	RW	F103
R4x2583	RRTD3_LO_ALM	RRTD 3 - Short / Low Temp RTD Alarm	1	-	0	2	RW	F115
R4x2584	RRTD3_LO_RLY	RRTD 3 - Assign Alarm Relays	1	-	0	7	RW	F113
R4x2585	RRTD3_LO_EVT	RRTD 3 - Short / Low Temp Alarm Events	1	-	0	1	RW	F103
R4x2600	RRTD4_1_APPL	RRTD 4 - RTD #1 Application	1	-	0	4	RW	F121
R4x2601	RRTD4_1_HI_ALM	RRTD 4 - RTD #1 High Alarm	1	-	0	2	RW	F115
R4x2602	RRTD4_1_HI_ALM_RLY	RRTD 4 - RTD #1 High Alarm Relays	1	-	0	7	RW	F113
R4x2603	RRTD4_1_HI_ALM_LVL	RRTD 4 - RTD #1 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2604	RRTD4_1_ALM	RRTD 4 - RTD #1 Alarm	1	-	0	2	RW	F115
R4x2605	RRTD4_1_ALM_RLY	RRTD 4 - RTD #1 Alarm Relays	1	-	0	7	RW	F113
R4x2606	RRTD4_1_ALM_LVL	RRTD 4 - RTD #1 Alarm Level	1	DEG C	1	200	RW	F1
R4x2607	RRTD4_1_ALM_EVT	Record RRTD 4 - RTD #1 Alarms as Events	1	-	0	1	RW	F103
R4x2608	RRTD4_1_TRIP	RRTD 4 - RTD #1 Trip	1	-	0	2	RW	F115
R4x2609	RRTD4_1_TRP_VOTE	Enable RRTD 4 - RTD #1 Trip Voting	1	-	0	13	RW	F122
R4x260A	RRTD4_1_TRP_RLY	RRTD 4 - RTD #1 Trip Relays	1	-	0	7	RW	F111
R4x260B	RRTD4_1_TRP_LVL	RRTD 4 - RTD #1 Trip Level	1	DEG C	1	200	RW	F1
R4x260C	RRTD4_1_TYPE	RRTD 4 - RTD #1 RTD Type	1	-	0	3	RW	F120
R4x2610S8	RRTD4_1_NAME	RRTD 4 - RTD #1 Name	1	-	32	127	RW	F1A
R4x2620	RRTD4_2_APPL	RRTD 4 - RTD #2 Application	1	-	0	4	RW	F121
R4x2621	RRTD4_2_HI_ALM	RRTD 4 - RTD #2 High Alarm	1	-	0	2	RW	F115
R4x2622	RRTD4_2_HI_ALM_RLY	RRTD 4 - RTD #2 High Alarm Relays	1	-	0	7	RW	F113
R4x2623	RRTD4_2_HI_ALM_LVL	RRTD 4 - RTD #2 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2624	RRTD4_2_ALM	RRTD 4 - RTD #2 Alarm	1	-	0	2	RW	F115
R4x2625	RRTD4_2_ALM_RLY	RRTD 4 - RTD #2 Alarm Relays	1	-	0	7	RW	F113
R4x2626	RRTD4_2_ALM_LVL	RRTD 4 - RTD #2 Alarm Level	1	DEG C	1	200	RW	F1
R4x2627	RRTD4_2_ALM_EVT	Record RRTD 4 - RTD #2 Alarms as Events	1	-	0	1	RW	F103
R4x2628	RRTD4_2_TRIP	RRTD 4 - RTD #2 Trip	1	-	0	2	RW	F115
R4x2629	RRTD4_2_TRP_VOTE	Enable Remote RTD #2 Trip Voting	1	-	0	13	RW	F122
R4x262A	RRTD4_2_TRP_RLY	RRTD 4 - RTD #2 Trip Relays	1	-	0	7	RW	F111
R4x262B	RRTD4_2_TRP_LVL	RRTD 4 - RTD #2 Trip Level	1	DEG C	1	200	RW	F1
R4x262C	RRTD4_2_TYPE	RRTD 4 - RTD #2 RTD Type	1	-	0	3	RW	F120
R4x2630S8	RRTD4_2_NAME	RRTD 4 - RTD #2 Name	1	-	32	127	RW	F1A
R4x2640	RRTD4_3_APPL	RRTD 4 - RTD #3 Application	1	-	0	4	RW	F121

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x2641	RRTD4_3_HI_ALM	RRTD 4 - RTD #3 High Alarm	1	-	0	2	RW	F115
R4x2642	RRTD4_3_HI_ALM_RLY	RRTD 4 - RTD #3 High Alarm Relays	1	-	0	7	RW	F113
R4x2643	RRTD4_3_HI_ALM_LVL	RRTD 4 - RTD #3 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2644	RRTD4_3_ALM	RRTD 4 - RTD #3 Alarm	1	-	0	2	RW	F115
R4x2645	RRTD4_3_ALM_RLY	RRTD 4 - RTD #3 Alarm Relays	1	-	0	7	RW	F113
R4x2646	RRTD4_3_ALM_LVL	RRTD 4 - RTD #3 Alarm Level	1	DEG C	1	200	RW	F1
R4x2647	RRTD4_3_ALM_EVT	Record RRTD 4 - RTD #3 Alarms as Events	1	-	0	1	RW	F103
R4x2648	RRTD4_3_TRIP	RRTD 4 - RTD #3 Trip	1	-	0	2	RW	F115
R4x2649	RRTD4_3_TRP_VOTE	Enable RRTD 4 - RTD #3 Trip Voting	1	-	0	13	RW	F122
R4x264A	RRTD4_3_TRP_RLY	RRTD 4 - RTD #3 Trip Relays	1	-	0	7	RW	F111
R4x264B	RRTD4_3_TRP_LVL	RRTD 4 - RTD #3 Trip Level	1	DEG C	1	200	RW	F1
R4x264C	RRTD4_3_TYPE	RRTD 4 - RTD #3 RTD Type	1	-	0	3	RW	F120
R4x2650S8	RRTD4_3_NAME	RRTD 4 - RTD # Name	1	-	32	127	RW	F1A
R4x2660	RRTD4_4_APPL	RRTD 4 - RTD #4 Application	1	-	0	4	RW	F121
R4x2661	RRTD4_4_HI_ALM	RRTD 4 - RTD #4 High Alarm	1	-	0	2	RW	F115
R4x2662	RRTD4_4_HI_ALM_RLY	RRTD 4 - RTD #4 High Alarm Relays	1	-	0	7	RW	F113
R4x2663	RRTD4_4_HI_ALM_LVL	RRTD 4 - RTD #4 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2664	RRTD4_4_ALM	RRTD 4 - RTD #4 Alarm	1	-	0	2	RW	F115
R4x2665	RRTD4_4_ALM_RLY	RRTD 4 - RTD #4 Alarm Relays	1	-	0	7	RW	F113
R4x2666	RRTD4_4_ALM_LVL	RRTD 4 - RTD #4 Alarm Level	1	DEG C	1	200	RW	F1
R4x2667	RRTD4_4_ALM_EVT	Record RRTD 4 - RTD #4 Alarms as Events	1	-	0	1	RW	F103
R4x2668	RRTD4_4_TRIP	RRTD 4 - RTD #4 Trip	1	-	0	2	RW	F115
R4x2669	RRTD4_4_TRP_VOTE	Enable RRTD 4 - RTD #4 Trip Voting	1	-	0	13	RW	F122
R4x266A	RRTD4_4_TRP_RLY	RRTD 4 - RTD #4 Trip Relays	1	-	0	7	RW	F111
R4x266B	RRTD4_4_TRP_LVL	RRTD 4 - RTD #4 Trip Level	1	DEG C	1	200	RW	F1
R4x266C	RRTD4_4_TYPE	RRTD 4 - RTD #4 RTD Type	1	-	0	3	RW	F120
R4x2670S8	RRTD4_4_NAME	RRTD 4 - RTD #4 Name	1	-	32	127	RW	F1A
R4x2680	RRTD4_5_APPL	RRTD 4 - RTD #5 Application	1	-	0	4	RW	F121
R4x2681	RRTD4_5_HI_ALM	RRTD 4 - RTD #5 High Alarm	1	-	0	2	RW	F115
R4x2682	RRTD4_5_HI_ALM_RLY	RRTD 4 - RTD #5 High Alarm Relays	1	-	0	7	RW	F113
R4x2683	RRTD4_5_HI_ALM_LVL	RRTD 4 - RTD #5 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2684	RRTD4_5_ALM	RRTD 4 - RTD #5 Alarm	1	-	0	2	RW	F115
R4x2685	RRTD4_5_ALM_RLY	RRTD 4 - RTD #5 Alarm Relays	1	-	0	7	RW	F113
R4x2686	RRTD4_5_ALM_LVL	RRTD 4 - RTD #5 Alarm Level	1	DEG C	1	200	RW	F1
R4x2687	RRTD4_5_ALM_EVT	Record RRTD 4 - RTD #5 Alarms as Events	1	-	0	1	RW	F103
R4x2688	RRTD4_5_TRIP	RRTD 4 - RTD #5 Trip	1	-	0	2	RW	F115
R4x2689	RRTD4_5_TRP_VOTE	Enable RRTD 4 - RTD #5 Trip Voting	1	-	0	13	RW	F122
R4x268A	RRTD4_5_TRP_RLY	RRTD 4 - RTD #5 Trip Relays	1	-	0	7	RW	F111
R4x268B	RRTD4_5_TRP_LVL	RRTD 4 - RTD #5 Trip Level	1	DEG C	1	200	RW	F1
R4x268C	RRTD4_5_TYPE	RRTD 4 - RTD #5 RTD Type	1	-	0	3	RW	F120
R4x2690S8	RRTD4_5_NAME	RRTD 4 - RTD #5 Name	1	-	32	127	RW	F1A
R4x26A0	RRTD4_6_APPL	RRTD 4 - RTD #6 Application	1	-	0	4	RW	F121
R4x26A1	RRTD4_6_HI_ALM	RRTD 4 - RTD #6 High Alarm	1	-	0	2	RW	F115
R4x26A2	RRTD4_6_HI_ALM_RLY	RRTD 4 - RTD #6 High Alarm Relays	1	-	0	7	RW	F113

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x26A3	RRTD4_6_HI_ALM_LVL	RRTD 4 - RTD #6 High Alarm Level	1	DEG C	1	200	RW	F1
R4x26A4	RRTD4_6_ALM	RRTD 4 - RTD #6 Alarm	1	-	0	2	RW	F115
R4x26A5	RRTD4_6_ALM_RLY	RRTD 4 - RTD #6 Alarm Relays	1	-	0	7	RW	F113
R4x26A6	RRTD4_6_ALM_LVL	RRTD 4 - RTD #6 Alarm Level	1	DEG C	1	200	RW	F1
R4x26A7	RRTD4_6_ALM_EVT	Record RRTD 4 - RTD #6 Alarms as Events	1	-	0	1	RW	F103
R4x26A8	RRTD4_6_TRIP	RRTD 4 - RTD #6 Trip	1	-	0	2	RW	F115
R4x26A9	RRTD4_6_TRP_VOTE	Enable RRTD 4 - RTD #6 Trip Voting	1	-	0	13	RW	F122
R4x26AA	RRTD4_6_TRP_RLY	RRTD 4 - RTD #6 Trip Relays	1	-	0	7	RW	F111
R4x26AB	RRTD4_6_TRP_LVL	RRTD 4 - RTD #6 Trip Level	1	DEG C	1	200	RW	F1
R4x26AC	RRTD4_6_TYPE	RRTD 4 - RTD #6 RTD Type	1	-	0	3	RW	F120
R4x26B0S8	RRTD4_6_NAME	RRTD 4 - RTD #6 Name	1	-	32	127	RW	F1A
R4x26C0	RRTD4_7_APPL	RRTD 4 - RTD #7 Application	1	-	0	4	RW	F121
R4x26C1	RRTD4_7_HI_ALM	RRTD 4 - RTD #7 High Alarm	1	-	0	2	RW	F115
R4x26C2	RRTD4_7_HI_ALM_RLY	RRTD 4 - RTD #7 High Alarm Relays	1	-	0	7	RW	F113
R4x26C3	RRTD4_7_HI_ALM_LVL	RRTD 4 - RTD #7 High Alarm Level	1	DEG C	1	200	RW	F1
R4x26C4	RRTD4_7_ALM	RRTD 4 - RTD #7 Alarm	1	-	0	2	RW	F115
R4x26C5	RRTD4_7_ALM_RLY	RRTD 4 - RTD #7 Alarm Relays	1	-	0	7	RW	F113
R4x26C6	RRTD4_7_ALM_LVL	RRTD 4 - RTD #7 Alarm Level	1	DEG C	1	200	RW	F1
R4x26C7	RRTD4_7_ALM_EVT	Record RRTD 4 - RTD #7 Alarms as Events	1	-	0	1	RW	F103
R4x26C8	RRTD4_7_TRIP	RRTD 4 - RTD #7 Trip	1	-	0	2	RW	F115
R4x26C9	RRTD4_7_TRP_VOTE	Enable RRTD 4 - RTD #7 Trip Voting	1	-	0	13	RW	F122
R4x26CA	RRTD4_7_TRP_RLY	RRTD 4 - RTD #7 Trip Relays	1	-	0	7	RW	F111
R4x26CB	RRTD4_7_TRP_LVL	RRTD 4 - RTD #7 Trip Level	1	DEG C	1	200	RW	F1
R4x26CC	RRTD4_7_TYPE	RRTD 4 - RTD #7 RTD Type	1	-	0	3	RW	F120
R4x26D0S8	RRTD4_7_NAME	RRTD 4 - RTD #7 Name	1	-	32	127	RW	F1A
R4x26E0	RRTD4_8_APPL	RRTD 4 - RTD #8 Application	1	-	0	4	RW	F121
R4x26E1	RRTD4_8_HI_ALM	RRTD 4 - RTD #8 High Alarm	1	-	0	2	RW	F115
R4x26E2	RRTD4_8_HI_ALM_RLY	RRTD 4 - RTD #8 High Alarm Relays	1	-	0	7	RW	F113
R4x26E3	RRTD4_8_HI_ALM_LVL	RRTD 4 - RTD #8 High Alarm Level	1	DEG C	1	200	RW	F1
R4x26E4	RRTD4_8_ALM	RRTD 4 - RTD #8 Alarm	1	-	0	2	RW	F115
R4x26E5	RRTD4_8_ALM_RLY	RRTD 4 - RTD #8 Alarm Relays	1	-	0	7	RW	F113
R4x26E6	RRTD4_8_ALM_LVL	RRTD 4 - RTD #8 Alarm Level	1	DEG C	1	200	RW	F1
R4x26E7	RRTD4_8_ALM_EVT	Record RRTD 4 - RTD #8 Alarms as Events	1	-	0	1	RW	F103
R4x26E8	RRTD4_8_TRIP	RRTD 4 - RTD #8 Trip	1	-	0	2	RW	F115
R4x26E9	RRTD4_8_TRP_VOTE	Enable RRTD 4 - RTD #8 Trip Voting	1	-	0	13	RW	F122
R4x26EA	RRTD4_8_TRP_RLY	RRTD 4 - RTD #8 Trip Relays	1	-	0	7	RW	F111
R4x26EB	RRTD4_8_TRP_LVL	RRTD 4 - RTD #8 Trip Level	1	DEG C	1	200	RW	F1
R4x26EC	RRTD4_8_TYPE	RRTD 4 - RTD #8 RTD Type	1	-	0	3	RW	F120
R4x26F0S8	RRTD4_8_NAME	RRTD 4 - RTD #8 Name	1	-	32	127	RW	F1A
R4x2700	RRTD4_9_APPL	RRTD 4 - RTD #9 Application	1	-	0	4	RW	F121
R4x2701	RRTD4_9_HI_ALM	RRTD 4 - RTD #9 High Alarm	1	-	0	2	RW	F115
R4x2702	RRTD4_9_HI_ALM_RLY	RRTD 4 - RTD #9 High Alarm Relays	1	-	0	7	RW	F113
R4x2703	RRTD4_9_HI_ALM_LVL	RRTD 4 - RTD #9 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2704	RRTD4_9_ALM	RRTD 4 - RTD #9 Alarm	1	-	0	2	RW	F115

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x2705	RRTD4_9_ALM_RLY	RRTD 4 - RTD #9 Alarm Relays	1	-	0	7	RW	F113
R4x2706	RRTD4_9_ALM_LVL	RRTD 4 - RTD #9 Alarm Level	1	DEG C	1	200	RW	F1
R4x2707	RRTD4_9_ALM_EVT	Record RRTD 4 - RTD #9 Alarms as Events	1	-	0	1	RW	F103
R4x2708	RRTD4_9_TRIP	RRTD 4 - RTD #9 Trip	1	-	0	2	RW	F115
R4x2709	RRTD4_9_TRP_VOTE	Enable RRTD 4 - RTD #9 Trip Voting	1	-	0	13	RW	F122
R4x270A	RRTD4_9_TRP_RLY	RRTD 4 - RTD #9 Trip Relays	1	-	0	7	RW	F111
R4x270B	RRTD4_9_TRP_LVL	RRTD 4 - RTD #9 Trip Level	1	DEG C	1	200	RW	F1
R4x270C	RRTD4_9_TYPE	RRTD 4 - RTD #9 RTD Type	1	-	0	3	RW	F120
R4x2710S8	RRTD4_9_NAME	RRTD 4 - RTD #9 Name	1	-	32	127	RW	F1A
R4x2720	RRTD4_10_APPL	RRTD 4 - RTD #10 Application	1	-	0	4	RW	F121
R4x2721	RRTD4_10_HI_ALM	RRTD 4 - RTD #10 High Alarm	1	-	0	2	RW	F115
R4x2722	RRTD4_10_HI_ALM_RLY	RRTD 4 - RTD #10 High Alarm Relays	1	-	0	7	RW	F113
R4x2723	RRTD4_10_HI_ALM_LVL	RRTD 4 - RTD #10 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2724	RRTD4_10_ALM	RRTD 4 - RTD #10 Alarm	1	-	0	2	RW	F115
R4x2725	RRTD4_10_ALM_RLY	RRTD 4 - RTD #10 Alarm Relays	1	-	0	7	RW	F113
R4x2726	RRTD4_10_ALM_LVL	RRTD 4 - RTD #10 Alarm Level	1	DEG C	1	200	RW	F1
R4x2727	RRTD4_10_ALM_EVT	Record RRTD 4 - RTD #10 Alarms as Events	1	-	0	1	RW	F103
R4x2728	RRTD4_10_TRIP	RRTD 4 - RTD #10 Trip	1	-	0	2	RW	F115
R4x2729	RRTD4_10_TRP_VOTE	Enable RRTD 4 - RTD #10 Trip Voting	1	-	0	13	RW	F122
R4x272A	RRTD4_10_TRP_RLY	RRTD 4 - RTD #10 Trip Relays	1	-	0	7	RW	F111
R4x272B	RRTD4_10_TRP_LVL	RRTD 4 - RTD #10 Trip Level	1	DEG C	1	200	RW	F1
R4x272C	RRTD4_10_TYPE	RRTD 4 - RTD #10 RTD Type	1	-	0	3	RW	F120
R4x2730S8	RRTD4_10_NAME	RRTD 4 - RTD #10 Name	1	-	32	127	RW	F1A
R4x2740	RRTD4_11_APPL	RRTD 4 - RTD #11 Application	1	-	0	4	RW	F121
R4x2741	RRTD4_11_HI_ALM	RRTD 4 - RTD #11 High Alarm	1	-	0	2	RW	F115
R4x2742	RRTD4_11_HI_ALM_RLY	RRTD 4 - RTD #11 High Alarm Relays	1	-	0	7	RW	F113
R4x2743	RRTD4_11_HI_ALM_LVL	RRTD 4 - RTD #11 High Alarm Level	1	DEG C	1	200	RW	F1
R4x2744	RRTD4_11_ALM	RRTD 4 - RTD #11 Alarm	1	-	0	2	RW	F115
R4x2745	RRTD4_11_ALM_RLY	RRTD 4 - RTD #11 Alarm Relays	1	-	0	7	RW	F113
R4x2746	RRTD4_11_ALM_LVL	RRTD 4 - RTD #11 Alarm Level	1	DEG C	1	200	RW	F1
R4x2747	RRTD4_11_ALM_EVT	Record RRTD 4 - RTD #11 Alarms as Events	1	-	0	1	RW	F103
R4x2748	RRTD4_11_TRIP	RRTD 4 - RTD #11 Trip	1	-	0	2	RW	F115
R4x2749	RRTD4_11_TRP_VOTE	Enable RRTD 4 - RTD #11 Trip Voting	1	-	0	13	RW	F122
R4x274A	RRTD4_11_TRP_RLY	RRTD 4 - RTD #11 Trip Relays	1	-	0	7	RW	F111
R4x274B	RRTD4_11_TRP_LVL	RRTD 4 - RTD #11 Trip Level	1	DEG C	1	200	RW	F1
R4x274C	RRTD4_11_TYPE	RRTD 4 - RTD #11 RTD Type	1	-	0	3	RW	F120
R4x2750S8	RRTD4_11_NAME	RRTD 4 - RTD #11 Name	1	-	32	127	RW	F1A
R4x2760	RRTD4_12_APPL	RRTD 4 - RTD #12 Application	1	-	0	4	RW	F121
R4x2761	RRTD4_12_HI_ALM	RRTD 4 - RTD #12 High Alarm	1	-	0	2	RW	F115
R4x2762	RRTD4_12_HI_ALM_RLY	RRTD 4 - RTD #12 High Alarm Relays	1	-	0	7	RW	F113
R4x2763	RRTD4_12_HI_ALM_LVL	RRTD 4 - RTD #12 High Alarm Level	1	DEG C	1	200	RW	F1

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x2764	RRTD4_12_ALM	RRTD 4 - RTD #12 Alarm	1	-	0	2	RW	F115
R4x2765	RRTD4_12_ALM_RLY	RRTD 4 - RTD #12 Alarm Relays	1	-	0	7	RW	F113
R4x2766	RRTD4_12_ALM_LVL	RRTD 4 - RTD #12 Alarm Level	1	DEG C	1	200	RW	F1
R4x2767	RRTD4_12_ALM_EVT	Record RRTD 4 - RTD #12 Alarms as Events	1	-	0	1	RW	F103
R4x2768	RRTD4_12_TRIP	RRTD 4 - RTD #12 Trip	1	-	0	2	RW	F115
R4x2769	RRTD4_12_TRP_VOTE	Enable RRTD 4 - RTD #12 Trip Voting	1	-	0	13	RW	F122
R4x276A	RRTD4_12_TRP_RLY	RRTD 4 - RTD #12 Trip Relays	1	-	0	7	RW	F111
R4x276B	RRTD4_12_TRP_LVL	RRTD 4 - RTD #12 Trip Level	1	DEG C	1	200	RW	F1
R4x276C	RRTD4_12_TYPE	RRTD 4 - RTD #12 RTD Type	1	-	0	3	RW	F120
R4x2770S8	RRTD4_12_NAME	RRTD 4 - RTD #12 Name	1	-	32	127	RW	F1A
R4x2780	RRTD4_OPN_ALM	RRTD 4 - Open RTD Alarm	1	-	0	2	RW	F115
R4x2781	RRTD4_OPN_RLY	RRTD 4 - Assign Alarm Relays	1	-	0	7	RW	F113
R4x2782	RRTD4_OPN_ALM_EVT	RRTD 4 - Open RTD Alarm Events	1	-	0	1	RW	F103
R4x2783	RRTD4_LO_ALM	RRTD 4 - Short / Low Temp RTD Alarm	1	-	0	2	RW	F115
R4x2784	RRTD4_LO_RLY	RRTD 4 - Assign Alarm Relays	1	-	0	7	RW	F113
R4x2785	RRTD4_LO_EVT	RRTD 4 - Short / Low Temp Alarm Events	1	-	0	1	RW	F103
R4x27A0	RRTD1_TRP_RST_MODE	RRTD1 Trip Relay Reset Mode	1	-	0	2	RW	F117
R4x27A1	RRTD1_ALM_RST_MODE	RRTD1 Alarm Relay Reset Mode	1	-	0	2	RW	F117
R4x27A2	RRTD1_AUX1_RST_MODE	RRTD1 Aux 1 Relay Reset Mode	1	-	0	2	RW	F117
R4x27A3	RRTD1_AUX2_RST_MODE	RRTD1 Aux 2 Relay Reset Mode	1	-	0	2	RW	F117
R4x27A4	RRTD1_TRP_RLY_OP	RRTD1 Trip Relay Operation	1	-	0	1	RW	F161
R4x27A5	RRTD1_ALM_RLY_OP	RRTD1 Alarm Relay Operation	1	-	0	1	RW	F161
R4x27A6	RRTD1_AUX1_RLY_OP	RRTD1 Aux1 Relay Operation	1	-	0	1	RW	F161
R4x27A7	RRTD1_AUX2_RLY_OP	RRTD1 Aux2 Relay Operation	1	-	0	1	RW	F161
R4x27B0	RRTD2_TRP_RST_MODE	RRTD2 Trip Relay Reset Mode	1	-	0	2	RW	F117
R4x27B1	RRTD2_ALM_RST_MODE	RRTD2 Alarm Relay Reset Mode	1	-	0	2	RW	F117
R4x27B2	RRTD2_AUX1_RST_MODE	RRTD2 Aux 1 Relay Reset Mode	1	-	0	2	RW	F117
R4x27B3	RRTD2_AUX2_RST_MODE	RRTD2 Aux 2 Relay Reset Mode	1	-	0	2	RW	F117
R4x27B4	RRTD2_TRP_RLY_OP	RRTD2 Trip Relay Operation	1	-	0	1	RW	F161
R4x27B5	RRTD2_ALM_RLY_OP	RRTD2 Alarm Relay Operation	1	-	0	1	RW	F161
R4x27B6	RRTD2_AUX1_RLY_OP	RRTD2 Aux1 Relay Operation	1	-	0	1	RW	F161
R4x27B7	RRTD2_AUX2_RLY_OP	RRTD2 Aux2 Relay Operation	1	-	0	1	RW	F161
R4x27C0	RRTD3_TRP_RST_MODE	RRTD3 Trip Relay Reset Mode	1	-	0	2	RW	F117
R4x27C1	RRTD3_ALM_RST_MODE	RRTD3 Alarm Relay Reset Mode	1	-	0	2	RW	F117
R4x27C2	RRTD3_AUX1_RST_MODE	RRTD3 Aux 1 Relay Reset Mode	1	-	0	2	RW	F117
R4x27C3	RRTD3_AUX2_RST_MODE	RRTD3 Aux 2 Relay Reset Mode	1	-	0	2	RW	F117
R4x27C4	RRTD3_TRP_RLY_OP	RRTD3 Trip Relay Operation	1	-	0	1	RW	F161
R4x27C5	RRTD3_ALM_RLY_OP	RRTD3 Alarm Relay Operation	1	-	0	1	RW	F161
R4x27C6	RRTD3_AUX1_RLY_OP	RRTD3 Aux1 Relay Operation	1	-	0	1	RW	F161
R4x27C7	RRTD3_AUX2_RLY_OP	RRTD3 Aux2 Relay Operation	1	-	0	1	RW	F161
R4x27D0	RRTD4_TRP_RST_MODE	RRTD4 Trip Relay Reset Mode	1	-	0	2	RW	F117
R4x27D1	RRTD4_ALM_RST_MODE	RRTD4 Alarm Relay Reset Mode	1	-	0	2	RW	F117
R4x27D2	RRTD4_AUX1_RST_MODE	RRTD4 Aux 1 Relay Reset Mode	1	-	0	2	RW	F117

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x27D3	RRTD4_AUX2_RST_MODE	RRTD4 Aux 2 Relay Reset Mode	1	-	0	2	RW	F117
R4x27D4	RRTD4_TRP_RLY_OP	RRTD4 Trip Relay Operation	1	-	0	1	RW	F161
R4x27D5	RRTD4_ALM_RLY_OP	RRTD4 Alarm Relay Operation	1	-	0	1	RW	F161
R4x27D6	RRTD4_AUX1_RLY_OP	RRTD4 Aux1 Relay Operation	1	-	0	1	RW	F161
R4x27D7	RRTD4_AUX2_RLY_OP	RRTD4 Aux2 Relay Operation	1	-	0	1	RW	F161
R4x27E0	RRTD1_EN_AO1	RRTD1 Enable Analog Output 1	1	-	0	1	RW	F103
R4x27E1	RRTD1_AO1_RANGE	RRTD1 Assign Analog Output 1 Output Range	1	-	0	2	RW	F26
R4x27E2	RRTD1_AO1_PARAM	RRTD1 Assign Analog Output 1 Parameter	1	-	12	24	RW	F127
R4x27E3I	RRTD1_AO1_MIN	RRTD1 Analog Output 1 Minimum	1	-	-40	200	RW	F4
R4x27E4I	RRTD1_AO1_MAX	RRTD1 Analog Output 1 Maximum	1	-	-40	200	RW	F4
R4x27E5	RRTD1_EN_AO2	RRTD1 Enable Analog Output 2	1	-	0	1	RW	F103
R4x27E6	RRTD1_AO2_RANGE	RRTD1 Assign Analog Output 2 Output Range	1	-	0	2	RW	F26
R4x27E7	RRTD1_AO2_PARAM	RRTD1 Assign Analog Output 2 Parameter	1	-	12	24	RW	F127
R4x27E8I	RRTD1_AO2_MIN	RRTD1 Analog Output 2 Minimum	1	-	-40	200	RW	F4
R4x27E9I	RRTD1_AO2_MAX	RRTD1 Analog Output 2 Maximum	1	-	-40	200	RW	F4
R4x27EA	RRTD1_EN_AO3	RRTD1 Enable Analog Output 3	1	-	0	1	RW	F103
R4x27EB	RRTD1_AO3_RANGE	RRTD1 Assign Analog Output 3 Output Range	1	-	0	2	RW	F26
R4x27EC	RRTD1_AO3_PARAM	RRTD1 Assign Analog Output 3 Parameter	1	-	12	24	RW	F127
R4x27EDI	RRTD1_AO3_MIN	RRTD1 Analog Output 3 Minimum	1	-	-40	200	RW	F4
R4x27EEI	RRTD1_AO3_MAX	RRTD1 Analog Output 3 Maximum	1	-	-40	200	RW	F4
R4x27EF	RRTD1_EN_AO4	RRTD1 Enable Analog Output 4	1	-	0	1	RW	F103
R4x27F0	RRTD1_AO4_RANGE	RRTD1 Assign Analog Output 4 Output Range	1	-	0	2	RW	F26
R4x27F1	RRTD1_AO4_PARAM	RRTD1 Assign Analog Output 4 Parameter	1	-	12	24	RW	F127
R4x27F2I	RRTD1_AO4_MIN	RRTD1 Analog Output 4 Minimum	1	-	-40	200	RW	F4
R4x27F3I	RRTD1_AO4_MAX	RRTD1 Analog Output 4 Maximum	1	-	-40	200	RW	F4
R4x2800	RRTD2_EN_AO1	RRTD2 Enable Analog Output 1	1	-	0	1	RW	F103
R4x2801	RRTD2_AO1_RANGE	RRTD2 Assign Analog Output 1 Output Range	1	-	0	2	RW	F26
R4x2802	RRTD2_AO1_PARAM	RRTD2 Assign Analog Output 1 Parameter	1	-	12	24	RW	F127
R4x2803I	RRTD2_AO1_MIN	RRTD2 Analog Output 1 Minimum	1	-	-40	200	RW	F4
R4x2804I	RRTD2_AO1_MAX	RRTD2 Analog Output 1 Maximum	1	-	-40	200	RW	F4
R4x2805	RRTD2_EN_AO2	RRTD2 Enable Analog Output 2	1	-	0	1	RW	F103
R4x2806	RRTD2_AO2_RANGE	RRTD2 Assign Analog Output 2 Output Range	1	-	0	2	RW	F26
R4x2807	RRTD2_AO2_PARAM	RRTD2 Assign Analog Output 2 Parameter	1	-	12	24	RW	F127
R4x2808I	RRTD2_AO2_MIN	RRTD2 Analog Output 2 Minimum	1	-	-40	200	RW	F4
R4x2809I	RRTD2_AO2_MAX	RRTD2 Analog Output 2 Maximum	1	-	-40	200	RW	F4
R4x280A	RRTD2_EN_AO3	RRTD2 Enable Analog Output 3	1	-	0	1	RW	F103
R4x280B	RRTD2_AO3_RANGE	RRTD2 Assign Analog Output 3	1	-	0	2	RW	F26

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
		Output Range						
R4x280C	RRTD2_AO3_PARAM	RRTD2 Assign Analog Output 3 Parameter	1	-	12	24	RW	F127
R4x280DI	RRTD2_AO3_MIN	RRTD2 Analog Output 3 Minimum	1	-	-40	200	RW	F4
R4x280EI	RRTD2_AO3_MAX	RRTD2 Analog Output 3 Maximum	1	-	-40	200	RW	F4
R4x280F	RRTD2_EN_AO4	RRTD2 Enable Analog Output 4	1	-	0	1	RW	F103
R4x2810	RRTD2_AO4_RANGE	RRTD2 Assign Analog Output 4 Output Range	1	-	0	2	RW	F26
R4x2811	RRTD2_AO4_PARAM	RRTD2 Assign Analog Output 4 Parameter	1	-	12	24	RW	F127
R4x2812I	RRTD2_AO4_MIN	RRTD2 Analog Output 4 Minimum	1	-	-40	200	RW	F4
R4x2813I	RRTD2_AO4_MAX	RRTD2 Analog Output 4 Maximum	1	-	-40	200	RW	F4
R4x2820	RRTD3_EN_AO1	RRTD3 Enable Analog Output 1	1	-	0	1	RW	F103
R4x2821	RRTD3_AO1_RANGE	RRTD3 Assign Analog Output 1 Output Range	1	-	0	2	RW	F26
R4x2822	RRTD3_AO1_PARAM	RRTD3 Assign Analog Output 1 Parameter	1	-	12	24	RW	F127
R4x2823I	RRTD3_AO1_MIN	RRTD3 Analog Output 1 Minimum	1	-	-40	200	RW	F4
R4x2824I	RRTD3_AO1_MAX	RRTD3 Analog Output 1 Maximum	1	-	-40	200	RW	F4
R4x2825	RRTD3_EN_AO2	RRTD3 Enable Analog Output 2	1	-	0	1	RW	F103
R4x2826	RRTD3_AO2_RANGE	RRTD3 Assign Analog Output 2 Output Range	1	-	0	2	RW	F26
R4x2827	RRTD3_AO2_PARAM	RRTD3 Assign Analog Output 2 Parameter	1	-	12	24	RW	F127
R4x2828I	RRTD3_AO2_MIN	RRTD3 Analog Output 2 Minimum	1	-	-40	200	RW	F4
R4x2829I	RRTD3_AO2_MAX	RRTD3 Analog Output 2 Maximum	1	-	-40	200	RW	F4
R4x282A	RRTD3_EN_AO3	RRTD3 Enable Analog Output 3	1	-	0	1	RW	F103
R4x282B	RRTD3_AO3_RANGE	RRTD3 Assign Analog Output 3 Output Range	1	-	0	2	RW	F26
R4x282C	RRTD3_AO3_PARAM	RRTD3 Assign Analog Output 3 Parameter	1	-	12	24	RW	F127
R4x282DI	RRTD3_AO3_MIN	RRTD3 Analog Output 3 Minimum	1	-	-40	200	RW	F4
R4x282EI	RRTD3_AO3_MAX	RRTD3 Analog Output 3 Maximum	1	-	-40	200	RW	F4
R4x282F	RRTD3_EN_AO4	RRTD3 Enable Analog Output 4	1	-	0	1	RW	F103
R4x2830	RRTD3_AO4_RANGE	RRTD3 Assign Analog Output 4 Output Range	1	-	0	2	RW	F26
R4x2831	RRTD3_AO4_PARAM	RRTD3 Assign Analog Output 4 Parameter	1	-	12	24	RW	F127
R4x2832I	RRTD3_AO4_MIN	RRTD3 Analog Output 4 Minimum	1	-	-40	200	RW	F4
R4x2833I	RRTD3_AO4_MAX	RRTD3 Analog Output 4 Maximum	1	-	-40	200	RW	F4
R4x2840	RRTD4_EN_AO1	RRTD4 Enable Analog Output 1	1	-	0	1	RW	F103
R4x2841	RRTD4_AO1_RANGE	RRTD4 Assign Analog Output 1 Output Range	1	-	0	2	RW	F26
R4x2842	RRTD4_AO1_PARAM	RRTD4 Assign Analog Output 1 Parameter	1	-	12	24	RW	F127
R4x2843I	RRTD4_AO1_MIN	RRTD4 Analog Output 1 Minimum	1	-	-40	200	RW	F4
R4x2844I	RRTD4_AO1_MAX	RRTD4 Analog Output 1 Maximum	1	-	-40	200	RW	F4
R4x2845	RRTD4_EN_AO2	RRTD4 Enable Analog Output 2	1	-	0	1	RW	F103
R4x2846	RRTD4_AO2_RANGE	RRTD4 Assign Analog Output 2 Output Range	1	-	0	2	RW	F26

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x2847	RRTD4_AO2_PARAM	RRTD4 Assign Analog Output 2 Parameter	1	-	12	24	RW	F127
R4x2848I	RRTD4_AO2_MIN	RRTD4 Analog Output 2 Minimum	1	-	-40	200	RW	F4
R4x2849I	RRTD4_AO2_MAX	RRTD4 Analog Output 2 Maximum	1	-	-40	200	RW	F4
R4x284A	RRTD4_EN_AO3	RRTD4 Enable Analog Output 3	1	-	0	1	RW	F103
R4x284B	RRTD4_AO3_RANGE	RRTD4 Assign Analog Output 3 Output Range	1	-	0	2	RW	F26
R4x284C	RRTD4_AO3_PARAM	RRTD4 Assign Analog Output 3 Parameter	1	-	12	24	RW	F127
R4x284DI	RRTD4_AO3_MIN	RRTD4 Analog Output 3 Minimum	1	-	-40	200	RW	F4
R4x284EI	RRTD4_AO3_MAX	RRTD4 Analog Output 3 Maximum	1	-	-40	200	RW	F4
R4x284F	RRTD4_EN_AO4	RRTD4 Enable Analog Output 4	1	-	0	1	RW	F103
R4x2850	RRTD4_AO4_RANGE	RRTD4 Assign Analog Output 4 Output Range	1	-	0	2	RW	F26
R4x2851	RRTD4_AO4_PARAM	RRTD4 Assign Analog Output 4 Parameter	1	-	12	24	RW	F127
R4x2852I	RRTD4_AO4_MIN	RRTD4 Analog Output 4 Minimum	1	-	-40	200	RW	F4
R4x2853I	RRTD4_AO4_MAX	RRTD4 Analog Output 4 Maximum	1	-	-40	200	RW	F4
R4x2860S12	RRTD1_DI2_NAME	RRTD1 Digital Input 2 Name	1	-	32	127	RW	F22A
R4x2870	RRTD1_DI2_TYPE	RRTD1 Digital Input 2 Type	1	-	0	1	RW	F116
R4x2872	RRTD1_DI2_ALM	RRTD1 Digital Input 2 Alarm	1	-	0	2	RW	F115
R4x2873	RRTD1_DI2_ALM_RLY	RRTD1 Digital Input 2 Alarm Relays	1	-	0	6	RW	F113
R4x2874	RRTD1_DI2_ALM_DLY	RRTD1 Digital Input 2 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2875	RRTD1_DI2_ALM_EVT	RRTD1 Digital Input 2 Alarm Events	1	-	0	1	RW	F103
R4x2876	RRTD1_DI2_TRP	RRTD1 Digital Input 2 Trip	1	-	0	2	RW	F115
R4x2877	RRTD1_DI2_TRP_RLY	RRTD1 Digital Input 2 Trip Relays	1	-	0	6	RW	F111
R4x2878	RRTD1_DI2_TRP_DLY	RRTD1 Digital Input 2 Trip Delay	1	100ms	1	50000	RW	F2
R4x2879	RRTD1_DI2_FUNC	RRTD1 Digital Input 2 Assignable Function	1	-	0	3	RW	F163
R4x2880S12	RRTD1_DI5_NAME	RRTD1 Digital Input 5 Name	1	-	32	127	RW	F22A
R4x2890	RRTD1_DI5_TYPE	RRTD1 Digital Input 5 Type	1	-	0	1	RW	F116
R4x2892	RRTD1_DI5_ALM	RRTD1 Digital Input 5 Alarm	1	-	0	2	RW	F115
R4x2893	RRTD1_DI5_ALM_RLY	RRTD1 Digital Input 5 Alarm Relays	1	-	0	6	RW	F113
R4x2894	RRTD1_DI5_ALM_DLY	RRTD1 Digital Input 5 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2895	RRTD1_DI5_ALM_EVT	RRTD1 Digital Input 5 Alarm Events	1	-	0	1	RW	F103
R4x2896	RRTD1_DI5_TRP	RRTD1 Digital Input 5 Trip	1	-	0	2	RW	F115
R4x2897	RRTD1_DI5_TRP_RLY	RRTD1 Digital Input 5 Trip Relays	1	-	0	6	RW	F111
R4x2898	RRTD1_DI5_TRP_DLY	RRTD1 Digital Input 5 Trip Delay	1	100ms	1	50000	RW	F2
R4x2899	RRTD1_DI5_FUNC	RRTD1 Digital Input 5 Assignable Function	1	-	0	3	RW	F163
R4x28A0S12	RRTD1_DI4_NAME	RRTD1 Digital Input 4 Name	1	-	32	127	RW	F22A
R4x28B0	RRTD1_DI4_TYPE	RRTD1 Digital Input 4 Type	1	-	0	1	RW	F116
R4x28B2	RRTD1_DI4_ALM	RRTD1 Digital Input 4 Alarm	1	-	0	2	RW	F115
R4x28B3	RRTD1_DI4_ALM_RLY	RRTD1 Digital Input 4 Alarm Relays	1	-	0	6	RW	F113
R4x28B4	RRTD1_DI4_ALM_DLY	RRTD1 Digital Input 4 Alarm Delay	1	100ms	1	50000	RW	F2
R4x28B5	RRTD1_DI4_ALM_EVT	RRTD1 Digital Input 4 Alarm Events	1	-	0	1	RW	F103
R4x28B6	RRTD1_DI4_TRP	RRTD1 Digital Input 4 Trip	1	-	0	2	RW	F115
R4x28B7	RRTD1_DI4_TRP_RLY	RRTD1 Digital Input 4 Trip Relays	1	-	0	6	RW	F111

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x28B8	RRTD1_DI4_TRP_DLY	RRTD1 Digital Input 4 Trip Delay	1	100ms	1	50000	RW	F2
R4x28B9	RRTD1_DI4_FUNC	RRTD1 Digital Input 4 Assignable Function	1	-	0	3	RW	F163
R4x28C0S12	RRTD1_DI1_NAME	RRTD1 Digital Input 1 Name	1	-	32	127	RW	F22A
R4x28D0	RRTD1_DI1_TYPE	RRTD1 Digital Input 1 Type	1	-	0	1	RW	F116
R4x28D2	RRTD1_DI1_ALM	RRTD1 Digital Input 1 Alarm	1	-	0	2	RW	F115
R4x28D3	RRTD1_DI1_ALM_RLY	RRTD1 Digital Input 1 Alarm Relays	1	-	0	6	RW	F113
R4x28D4	RRTD1_DI1_ALM_DLY	RRTD1 Digital Input 1 Alarm Delay	1	100ms	1	50000	RW	F2
R4x28D5	RRTD1_DI1_ALM_EVT	RRTD1 Digital Input 1 Alarm Events	1	-	0	1	RW	F103
R4x28D6	RRTD1_DI1_TRP	RRTD1 Digital Input 1 Trip	1	-	0	2	RW	F115
R4x28D7	RRTD1_DI1_TRP_RLY	RRTD1 Digital Input 1 Trip Relays	1	-	0	6	RW	F111
R4x28D8	RRTD1_DI1_TRP_DLY	RRTD1 Digital Input 1 Trip Delay	1	100ms	1	50000	RW	F2
R4x28D9	RRTD1_DI1_FUNC	RRTD1 Digital Input 1 Assignable Function	1	-	0	3	RW	F163
R4x28E0S12	RRTD1_DI6_NAME	RRTD1 Digital Input 6 Name	1	-	32	127	RW	F22A
R4x28F0	RRTD1_DI6_TYPE	RRTD1 Digital Input 6 Type	1	-	0	1	RW	F116
R4x28F2	RRTD1_DI6_ALM	RRTD1 Digital Input 6 Alarm	1	-	0	2	RW	F115
R4x28F3	RRTD1_DI6_ALM_RLY	RRTD1 Digital Input 6 Alarm Relays	1	-	0	6	RW	F113
R4x28F4	RRTD1_DI6_ALM_DLY	RRTD1 Digital Input 6 Alarm Delay	1	100ms	1	50000	RW	F2
R4x28F5	RRTD1_DI6_ALM_EVT	RRTD1 Digital Input 6 Alarm Events	1	-	0	1	RW	F103
R4x28F6	RRTD1_DI6_TRP	RRTD1 Digital Input 6 Trip	1	-	0	2	RW	F115
R4x28F7	RRTD1_DI6_TRP_RLY	RRTD1 Digital Input 6 Trip Relays	1	-	0	6	RW	F111
R4x28F8	RRTD1_DI6_TRP_DLY	RRTD1 Digital Input 6 Trip Delay	1	100ms	1	50000	RW	F2
R4x28F9	RRTD1_DI6_FUNC	RRTD1 Digital Input 6 Assignable Function	1	-	0	3	RW	F163
R4x2900S12	RRTD1_DI3_NAME	RRTD1 Digital Input 3 Name	1	-	32	127	RW	F22A
R4x2910	RRTD1_DI3_TYPE	RRTD1 Digital Input 3 Type	1	-	0	1	RW	F116
R4x2912	RRTD1_DI3_ALM	RRTD1 Digital Input 3 Alarm	1	-	0	2	RW	F115
R4x2913	RRTD1_DI3_ALM_RLY	RRTD1 Digital Input 3 Alarm Relays	1	-	0	6	RW	F113
R4x2914	RRTD1_DI3_ALM_DLY	RRTD1 Digital Input 3 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2915	RRTD1_DI3_ALM_EVT	RRTD1 Digital Input 3 Alarm Events	1	-	0	1	RW	F103
R4x2916	RRTD1_DI3_TRP	RRTD1 Digital Input 3 Trip	1	-	0	2	RW	F115
R4x2917	RRTD1_DI3_TRP_RLY	RRTD1 Digital Input 3 Trip Relays	1	-	0	6	RW	F111
R4x2918	RRTD1_DI3_TRP_DLY	RRTD1 Digital Input 3 Trip Delay	1	100ms	1	50000	RW	F2
R4x2919	RRTD1_DI3_FUNC	RRTD1 Digital Input 3 Assignable Function	1	-	0	3	RW	F163
R4x2920S12	RRTD2_DI2_NAME	RRTD2 Digital Input 2 Name	1	-	32	127	RW	F22A
R4x2930	RRTD2_DI2_TYPE	RRTD2 Digital Input 2 Type	1	-	0	1	RW	F116
R4x2932	RRTD2_DI2_ALM	RRTD2 Digital Input 2 Alarm	1	-	0	2	RW	F115
R4x2933	RRTD2_DI2_ALM_RLY	RRTD2 Digital Input 2 Alarm Relays	1	-	0	6	RW	F113
R4x2934	RRTD2_DI2_ALM_DLY	RRTD2 Digital Input 2 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2935	RRTD2_DI2_ALM_EVT	RRTD2 Digital Input 2 Alarm Events	1	-	0	1	RW	F103
R4x2936	RRTD2_DI2_TRP	RRTD2 Digital Input 2 Trip	1	-	0	2	RW	F115
R4x2937	RRTD2_DI2_TRP_RLY	RRTD2 Digital Input 2 Trip Relays	1	-	0	6	RW	F111
R4x2938	RRTD2_DI2_TRP_DLY	RRTD2 Digital Input 2 Trip Delay	1	100ms	1	50000	RW	F2
R4x2939	RRTD2_DI2_FUNC	RRTD2 Digital Input 2 Assignable Function	1	-	0	3	RW	F163

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x2940S12	RRTD2_DI5_NAME	RRTD2 Digital Input 5 Name	1	-	32	127	RW	F22A
R4x2950	RRTD2_DI5_TYPE	RRTD2 Digital Input 5 Type	1	-	0	1	RW	F116
R4x2952	RRTD2_DI5_ALM	RRTD2 Digital Input 5 Alarm	1	-	0	2	RW	F115
R4x2953	RRTD2_DI5_ALM_RLY	RRTD2 Digital Input 5 Alarm Relays	1	-	0	6	RW	F113
R4x2954	RRTD2_DI5_ALM_DLY	RRTD2 Digital Input 5 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2955	RRTD2_DI5_ALM_EVT	RRTD2 Digital Input 5 Alarm Events	1	-	0	1	RW	F103
R4x2956	RRTD2_DI5_TRP	RRTD2 Digital Input 5 Trip	1	-	0	2	RW	F115
R4x2957	RRTD2_DI5_TRP_RLY	RRTD2 Digital Input 5 Trip Relays	1	-	0	6	RW	F111
R4x2958	RRTD2_DI5_TRP_DLY	RRTD2 Digital Input 5 Trip Delay	1	100ms	1	50000	RW	F2
R4x2959	RRTD2_DI5_FUNC	RRTD2 Digital Input 5 Assignable Function	1	-	0	3	RW	F163
R4x2960S12	RRTD2_DI4_NAME	RRTD2 Digital Input 4 Name	1	-	32	127	RW	F22A
R4x2970	RRTD2_DI4_TYPE	RRTD2 Digital Input 4 Type	1	-	0	1	RW	F116
R4x2972	RRTD2_DI4_ALM	RRTD2 Digital Input 4 Alarm	1	-	0	2	RW	F115
R4x2973	RRTD2_DI4_ALM_RLY	RRTD2 Digital Input 4 Alarm Relays	1	-	0	6	RW	F113
R4x2974	RRTD2_DI4_ALM_DLY	RRTD2 Digital Input 4 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2975	RRTD2_DI4_ALM_EVT	RRTD2 Digital Input 4 Alarm Events	1	-	0	1	RW	F103
R4x2976	RRTD2_DI4_TRP	RRTD2 Digital Input 4 Trip	1	-	0	2	RW	F115
R4x2977	RRTD2_DI4_TRP_RLY	RRTD2 Digital Input 4 Trip Relays	1	-	0	6	RW	F111
R4x2978	RRTD2_DI4_TRP_DLY	RRTD2 Digital Input 4 Trip Delay	1	100ms	1	50000	RW	F2
R4x2979	RRTD2_DI4_FUNC	RRTD2 Digital Input 4 Assignable Function	1	-	0	3	RW	F163
R4x2980S12	RRTD2_DI1_NAME	RRTD2 Digital Input 1 Name	1	-	32	127	RW	F22A
R4x2990	RRTD2_DI1_TYPE	RRTD2 Digital Input 1 Type	1	-	0	1	RW	F116
R4x2992	RRTD2_DI1_ALM	RRTD2 Digital Input 1 Alarm	1	-	0	2	RW	F115
R4x2993	RRTD2_DI1_ALM_RLY	RRTD2 Digital Input 1 Alarm Relays	1	-	0	6	RW	F113
R4x2994	RRTD2_DI1_ALM_DLY	RRTD2 Digital Input 1 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2995	RRTD2_DI1_ALM_EVT	RRTD2 Digital Input 1 Alarm Events	1	-	0	1	RW	F103
R4x2996	RRTD2_DI1_TRP	RRTD2 Digital Input 1 Trip	1	-	0	2	RW	F115
R4x2997	RRTD2_DI1_TRP_RLY	RRTD2 Digital Input 1 Trip Relays	1	-	0	6	RW	F111
R4x2998	RRTD2_DI1_TRP_DLY	RRTD2 Digital Input 1 Trip Delay	1	100ms	1	50000	RW	F2
R4x2999	RRTD2_DI1_FUNC	RRTD2 Digital Input 1 Assignable Function	1	-	0	3	RW	F163
R4x29A0S12	RRTD2_DI6_NAME	RRTD2 Digital Input 6 Name	1	-	32	127	RW	F22A
R4x29B0	RRTD2_DI6_TYPE	RRTD2 Digital Input 6 Type	1	-	0	1	RW	F116
R4x29B2	RRTD2_DI6_ALM	RRTD2 Digital Input 6 Alarm	1	-	0	2	RW	F115
R4x29B3	RRTD2_DI6_ALM_RLY	RRTD2 Digital Input 6 Alarm Relays	1	-	0	6	RW	F113
R4x29B4	RRTD2_DI6_ALM_DLY	RRTD2 Digital Input 6 Alarm Delay	1	100ms	1	50000	RW	F2
R4x29B5	RRTD2_DI6_ALM_EVT	RRTD2 Digital Input 6 Alarm Events	1	-	0	1	RW	F103
R4x29B6	RRTD2_DI6_TRP	RRTD2 Digital Input 6 Trip	1	-	0	2	RW	F115
R4x29B7	RRTD2_DI6_TRP_RLY	RRTD2 Digital Input 6 Trip Relays	1	-	0	6	RW	F111
R4x29B8	RRTD2_DI6_TRP_DLY	RRTD2 Digital Input 6 Trip Delay	1	100ms	1	50000	RW	F2
R4x29B9	RRTD2_DI6_FUNC	RRTD2 Digital Input 6 Assignable Function	1	-	0	3	RW	F163
R4x29C0S12	RRTD2_DI3_NAME	RRTD2 Digital Input 3 Name	1	-	32	127	RW	F22A
R4x29D0	RRTD2_DI3_TYPE	RRTD2 Digital Input 3 Type	1	-	0	1	RW	F116
R4x29D2	RRTD2_DI3_ALM	RRTD2 Digital Input 3 Alarm	1	-	0	2	RW	F115

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x29D3	RRTD2_DI3_ALM_RLY	RRTD2 Digital Input 3 Alarm Relays	1	-	0	6	RW	F113
R4x29D4	RRTD2_DI3_ALM_DLY	RRTD2 Digital Input 3 Alarm Delay	1	100ms	1	50000	RW	F2
R4x29D5	RRTD2_DI3_ALM_EVT	RRTD2 Digital Input 3 Alarm Events	1	-	0	1	RW	F103
R4x29D6	RRTD2_DI3_TRP	RRTD2 Digital Input 3 Trip	1	-	0	2	RW	F115
R4x29D7	RRTD2_DI3_TRP_RLY	RRTD2 Digital Input 3 Trip Relays	1	-	0	6	RW	F111
R4x29D8	RRTD2_DI3_TRP_DLY	RRTD2 Digital Input 3 Trip Delay	1	100ms	1	50000	RW	F2
R4x29D9	RRTD2_DI3_FUNC	RRTD2 Digital Input 3 Assignable Function	1	-	0	3	RW	F163
R4x29E0S12	RRTD3_DI2_NAME	RRTD3 Digital Input 2 Name	1	-	32	127	RW	F22A
R4x29F0	RRTD3_DI2_TYPE	RRTD3 Digital Input 2 Type	1	-	0	1	RW	F116
R4x29F2	RRTD3_DI2_ALM	RRTD3 Digital Input 2 Alarm	1	-	0	2	RW	F115
R4x29F3	RRTD3_DI2_ALM_RLY	RRTD3 Digital Input 2 Alarm Relays	1	-	0	6	RW	F113
R4x29F4	RRTD3_DI2_ALM_DLY	RRTD3 Digital Input 2 Alarm Delay	1	100ms	1	50000	RW	F2
R4x29F5	RRTD3_DI2_ALM_EVT	RRTD3 Digital Input 2 Alarm Events	1	-	0	1	RW	F103
R4x29F6	RRTD3_DI2_TRP	RRTD3 Digital Input 2 Trip	1	-	0	2	RW	F115
R4x29F7	RRTD3_DI2_TRP_RLY	RRTD3 Digital Input 2 Trip Relays	1	-	0	6	RW	F111
R4x29F8	RRTD3_DI2_TRP_DLY	RRTD3 Digital Input 2 Trip Delay	1	100ms	1	50000	RW	F2
R4x29F9	RRTD3_DI2_FUNC	RRTD3 Digital Input 2 Assignable Function	1	-	0	3	RW	F163
R4x2A00S12	RRTD3_DI5_NAME	RRTD3 Digital Input 5 Name	1	-	32	127	RW	F22A
R4x2A10	RRTD3_DI5_TYPE	RRTD3 Digital Input 5 Type	1	-	0	1	RW	F116
R4x2A12	RRTD3_DI5_ALM	RRTD3 Digital Input 5 Alarm	1	-	0	2	RW	F115
R4x2A13	RRTD3_DI5_ALM_RLY	RRTD3 Digital Input 5 Alarm Relays	1	-	0	6	RW	F113
R4x2A14	RRTD3_DI5_ALM_DLY	RRTD3 Digital Input 5 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2A15	RRTD3_DI5_ALM_EVT	RRTD3 Digital Input 5 Alarm Events	1	-	0	1	RW	F103
R4x2A16	RRTD3_DI5_TRP	RRTD3 Digital Input 5 Trip	1	-	0	2	RW	F115
R4x2A17	RRTD3_DI5_TRP_RLY	RRTD3 Digital Input 5 Trip Relays	1	-	0	6	RW	F111
R4x2A18	RRTD3_DI5_TRP_DLY	RRTD3 Digital Input 5 Trip Delay	1	100ms	1	50000	RW	F2
R4x2A19	RRTD3_DI5_FUNC	RRTD3 Digital Input 5 Assignable Function	1	-	0	3	RW	F163
R4x2A20S12	RRTD3_DI4_NAME	RRTD3 Digital Input 4 Name	1	-	32	127	RW	F22A
R4x2A30	RRTD3_DI4_TYPE	RRTD3 Digital Input 4 Type	1	-	0	1	RW	F116
R4x2A32	RRTD3_DI4_ALM	RRTD3 Digital Input 4 Alarm	1	-	0	2	RW	F115
R4x2A33	RRTD3_DI4_ALM_RLY	RRTD3 Digital Input 4 Alarm Relays	1	-	0	6	RW	F113
R4x2A34	RRTD3_DI4_ALM_DLY	RRTD3 Digital Input 4 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2A35	RRTD3_DI4_ALM_EVT	RRTD3 Digital Input 4 Alarm Events	1	-	0	1	RW	F103
R4x2A36	RRTD3_DI4_TRP	RRTD3 Digital Input 4 Trip	1	-	0	2	RW	F115
R4x2A37	RRTD3_DI4_TRP_RLY	RRTD3 Digital Input 4 Trip Relays	1	-	0	6	RW	F111
R4x2A38	RRTD3_DI4_TRP_DLY	RRTD3 Digital Input 4 Trip Delay	1	100ms	1	50000	RW	F2
R4x2A39	RRTD3_DI4_FUNC	RRTD3 Digital Input 4 Assignable Function	1	-	0	3	RW	F163
R4x2A40S12	RRTD3_DI1_NAME	RRTD3 Digital Input 1 Name	1	-	32	127	RW	F22A
R4x2A50	RRTD3_DI1_TYPE	RRTD3 Digital Input 1 Type	1	-	0	1	RW	F116
R4x2A52	RRTD3_DI1_ALM	RRTD3 Digital Input 1 Alarm	1	-	0	2	RW	F115
R4x2A53	RRTD3_DI1_ALM_RLY	RRTD3 Digital Input 1 Alarm Relays	1	-	0	6	RW	F113
R4x2A54	RRTD3_DI1_ALM_DLY	RRTD3 Digital Input 1 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2A55	RRTD3_DI1_ALM_EVT	RRTD3 Digital Input 1 Alarm Events	1	-	0	1	RW	F103

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x2A56	RRTD3_DI1_TRP	RRTD3 Digital Input 1 Trip	1	-	0	2	RW	F115
R4x2A57	RRTD3_DI1_TRP_RLY	RRTD3 Digital Input 1 Trip Relays	1	-	0	6	RW	F111
R4x2A58	RRTD3_DI1_TRP_DLY	RRTD3 Digital Input 1 Trip Delay	1	100ms	1	50000	RW	F2
R4x2A59	RRTD3_DI1_FUNC	RRTD3 Digital Input 1 Assignable Function	1	-	0	3	RW	F163
R4x2A60S12	RRTD3_DI6_NAME	RRTD3 Digital Input 6 Name	1	-	32	127	RW	F22A
R4x2A70	RRTD3_DI6_TYPE	RRTD3 Digital Input 6 Type	1	-	0	1	RW	F116
R4x2A72	RRTD3_DI6_ALM	RRTD3 Digital Input 6 Alarm	1	-	0	2	RW	F115
R4x2A73	RRTD3_DI6_ALM_RLY	RRTD3 Digital Input 6 Alarm Relays	1	-	0	6	RW	F113
R4x2A74	RRTD3_DI6_ALM_DLY	RRTD3 Digital Input 6 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2A75	RRTD3_DI6_ALM_EVT	RRTD3 Digital Input 6 Alarm Events	1	-	0	1	RW	F103
R4x2A76	RRTD3_DI6_TRP	RRTD3 Digital Input 6 Trip	1	-	0	2	RW	F115
R4x2A77	RRTD3_DI6_TRP_RLY	RRTD3 Digital Input 6 Trip Relays	1	-	0	6	RW	F111
R4x2A78	RRTD3_DI6_TRP_DLY	RRTD3 Digital Input 6 Trip Delay	1	100ms	1	50000	RW	F2
R4x2A79	RRTD3_DI6_FUNC	RRTD3 Digital Input 6 Assignable Function	1	-	0	3	RW	F163
R4x2A80S12	RRTD3_DI3_NAME	RRTD3 Digital Input 3 Name	1	-	32	127	RW	F22A
R4x2A90	RRTD3_DI3_TYPE	RRTD3 Digital Input 3 Type	1	-	0	1	RW	F116
R4x2A92	RRTD3_DI3_ALM	RRTD3 Digital Input 3 Alarm	1	-	0	2	RW	F115
R4x2A93	RRTD3_DI3_ALM_RLY	RRTD3 Digital Input 3 Alarm Relays	1	-	0	6	RW	F113
R4x2A94	RRTD3_DI3_ALM_DLY	RRTD3 Digital Input 3 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2A95	RRTD3_DI3_ALM_EVT	RRTD3 Digital Input 3 Alarm Events	1	-	0	1	RW	F103
R4x2A96	RRTD3_DI3_TRP	RRTD3 Digital Input 3 Trip	1	-	0	2	RW	F115
R4x2A97	RRTD3_DI3_TRP_RLY	RRTD3 Digital Input 3 Trip Relays	1	-	0	6	RW	F111
R4x2A98	RRTD3_DI3_TRP_DLY	RRTD3 Digital Input 3 Trip Delay	1	100ms	1	50000	RW	F2
R4x2A99	RRTD3_DI3_FUNC	RRTD3 Digital Input 3 Assignable Function	1	-	0	3	RW	F163
R4x2AA0S12	RRTD4_DI2_NAME	RRTD4 Digital Input 2 Name	1	-	32	127	RW	F22A
R4x2AB0	RRTD4_DI2_TYPE	RRTD4 Digital Input 2 Type	1	-	0	1	RW	F116
R4x2AB2	RRTD4_DI2_ALM	RRTD4 Digital Input 2 Alarm	1	-	0	2	RW	F115
R4x2AB3	RRTD4_DI2_ALM_RLY	RRTD4 Digital Input 2 Alarm Relays	1	-	0	6	RW	F113
R4x2AB4	RRTD4_DI2_ALM_DLY	RRTD4 Digital Input 2 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2AB5	RRTD4_DI2_ALM_EVT	RRTD4 Digital Input 2 Alarm Events	1	-	0	1	RW	F103
R4x2AB6	RRTD4_DI2_TRP	RRTD4 Digital Input 2 Trip	1	-	0	2	RW	F115
R4x2AB7	RRTD4_DI2_TRP_RLY	RRTD4 Digital Input 2 Trip Relays	1	-	0	6	RW	F111
R4x2AB8	RRTD4_DI2_TRP_DLY	RRTD4 Digital Input 2 Trip Delay	1	100ms	1	50000	RW	F2
R4x2AB9	RRTD4_DI2_FUNC	RRTD4 Digital Input 2 Assignable Function	1	-	0	3	RW	F163
R4x2AC0S12	RRTD4_DI5_NAME	RRTD4 Digital Input 5 Name	1	-	32	127	RW	F22A
R4x2AD0	RRTD4_DI5_TYPE	RRTD4 Digital Input 5 Type	1	-	0	1	RW	F116
R4x2AD2	RRTD4_DI5_ALM	RRTD4 Digital Input 5 Alarm	1	-	0	2	RW	F115
R4x2AD3	RRTD4_DI5_ALM_RLY	RRTD4 Digital Input 5 Alarm Relays	1	-	0	6	RW	F113
R4x2AD4	RRTD4_DI5_ALM_DLY	RRTD4 Digital Input 5 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2AD5	RRTD4_DI5_ALM_EVT	RRTD4 Digital Input 5 Alarm Events	1	-	0	1	RW	F103
R4x2AD6	RRTD4_DI5_TRP	RRTD4 Digital Input 5 Trip	1	-	0	2	RW	F115
R4x2AD7	RRTD4_DI5_TRP_RLY	RRTD4 Digital Input 5 Trip Relays	1	-	0	6	RW	F111

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x2AD8	RRTD4_DI5_TRP_DLY	RRTD4 Digital Input 5 Trip Delay	1	100ms	1	50000	RW	F2
R4x2AD9	RRTD4_DI5_FUNC	RRTD4 Digital Input 5 Assignable Function	1	-	0	3	RW	F163
R4x2AE0S12	RRTD4_DI4_NAME	RRTD4 Digital Input 4 Name	1	-	32	127	RW	F22A
R4x2AF0	RRTD4_DI4_TYPE	RRTD4 Digital Input 4 Type	1	-	0	1	RW	F116
R4x2AF2	RRTD4_DI4_ALM	RRTD4 Digital Input 4 Alarm	1	-	0	2	RW	F115
R4x2AF3	RRTD4_DI4_ALM_RLY	RRTD4 Digital Input 4 Alarm Relays	1	-	0	6	RW	F113
R4x2AF4	RRTD4_DI4_ALM_DLY	RRTD4 Digital Input 4 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2AF5	RRTD4_DI4_ALM_EVT	RRTD4 Digital Input 4 Alarm Events	1	-	0	1	RW	F103
R4x2AF6	RRTD4_DI4_TRP	RRTD4 Digital Input 4 Trip	1	-	0	2	RW	F115
R4x2AF7	RRTD4_DI4_TRP_RLY	RRTD4 Digital Input 4 Trip Relays	1	-	0	6	RW	F111
R4x2AF8	RRTD4_DI4_TRP_DLY	RRTD4 Digital Input 4 Trip Delay	1	100ms	1	50000	RW	F2
R4x2AF9	RRTD4_DI4_FUNC	RRTD4 Digital Input 4 Assignable Function	1	-	0	3	RW	F163
R4x2B00S12	RRTD4_DI1_NAME	RRTD4 Digital Input 1 Name	1	-	32	127	RW	F22A
R4x2B10	RRTD4_DI1_TYPE	RRTD4 Digital Input 1 Type	1	-	0	1	RW	F116
R4x2B12	RRTD4_DI1_ALM	RRTD4 Digital Input 1 Alarm	1	-	0	2	RW	F115
R4x2B13	RRTD4_DI1_ALM_RLY	RRTD4 Digital Input 1 Alarm Relays	1	-	0	6	RW	F113
R4x2B14	RRTD4_DI1_ALM_DLY	RRTD4 Digital Input 1 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2B15	RRTD4_DI1_ALM_EVT	RRTD4 Digital Input 1 Alarm Events	1	-	0	1	RW	F103
R4x2B16	RRTD4_DI1_TRP	RRTD4 Digital Input 1 Trip	1	-	0	2	RW	F115
R4x2B17	RRTD4_DI1_TRP_RLY	RRTD4 Digital Input 1 Trip Relays	1	-	0	6	RW	F111
R4x2B18	RRTD4_DI1_TRP_DLY	RRTD4 Digital Input 1 Trip Delay	1	100ms	1	50000	RW	F2
R4x2B19	RRTD4_DI1_FUNC	RRTD4 Digital Input 1 Assignable Function	1	-	0	3	RW	F163
R4x2B20S12	RRTD4_DI6_NAME	RRTD4 Digital Input 6 Name	1	-	32	127	RW	F22A
R4x2B30	RRTD4_DI6_TYPE	RRTD4 Digital Input 6 Type	1	-	0	1	RW	F116
R4x2B32	RRTD4_DI6_ALM	RRTD4 Digital Input 6 Alarm	1	-	0	2	RW	F115
R4x2B33	RRTD4_DI6_ALM_RLY	RRTD4 Digital Input 6 Alarm Relays	1	-	0	6	RW	F113
R4x2B34	RRTD4_DI6_ALM_DLY	RRTD4 Digital Input 6 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2B35	RRTD4_DI6_ALM_EVT	RRTD4 Digital Input 6 Alarm Events	1	-	0	1	RW	F103
R4x2B36	RRTD4_DI6_TRP	RRTD4 Digital Input 6 Trip	1	-	0	2	RW	F115
R4x2B37	RRTD4_DI6_TRP_RLY	RRTD4 Digital Input 6 Trip Relays	1	-	0	6	RW	F111
R4x2B38	RRTD4_DI6_TRP_DLY	RRTD4 Digital Input 6 Trip Delay	1	100ms	1	50000	RW	F2
R4x2B39	RRTD4_DI6_FUNC	RRTD4 Digital Input 6 Assignable Function	1	-	0	3	RW	F163
R4x2B40S12	RRTD4_DI3_NAME	RRTD4 Digital Input 3 Name	1	-	32	127	RW	F22A
R4x2B50	RRTD4_DI3_TYPE	RRTD4 Digital Input 3 Type	1	-	0	1	RW	F116
R4x2B52	RRTD4_DI3_ALM	RRTD4 Digital Input 3 Alarm	1	-	0	2	RW	F115
R4x2B53	RRTD4_DI3_ALM_RLY	RRTD4 Digital Input 3 Alarm Relays	1	-	0	6	RW	F113
R4x2B54	RRTD4_DI3_ALM_DLY	RRTD4 Digital Input 3 Alarm Delay	1	100ms	1	50000	RW	F2
R4x2B55	RRTD4_DI3_ALM_EVT	RRTD4 Digital Input 3 Alarm Events	1	-	0	1	RW	F103
R4x2B56	RRTD4_DI3_TRP	RRTD4 Digital Input 3 Trip	1	-	0	2	RW	F115
R4x2B57	RRTD4_DI3_TRP_RLY	RRTD4 Digital Input 3 Trip Relays	1	-	0	6	RW	F111
R4x2B58	RRTD4_DI3_TRP_DLY	RRTD4 Digital Input 3 Trip Delay	1	100ms	1	50000	RW	F2
R4x2B59	RRTD4_DI3_FUNC	RRTD4 Digital Input 3 Assignable Function	1	-	0	3	RW	F163

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x2B60	RRTD1_FRC_TRP	Force RRTD1 Trip Relay	1	-	0	2	RW	F150
R4x2B61	RRTD1_FRC_TRP_DUR	Force RRTD1 Trip Relay Duration	1	s	0	300	RW	F1
R4x2B62	RRTD1_FRC_AUX1	Force RRTD1 AUX1 Relay	1	-	0	2	RW	F150
R4x2B63	RRTD1_FRC_AUX1_DUR	Force RRTD1 AUX1 Relay Duration	1	s	0	300	RW	F1
R4x2B64	RRTD1_FRC_AUX2	Force RRTD1 AUX2 Relay	1	-	0	2	RW	F150
R4x2B65	RRTD1_FRC_AUX2_DUR	Force RRTD1 AUX2 Relay Duration	1	s	0	300	RW	F1
R4x2B66	RRTD1_FRC_ALM	Force RRTD1 Alarm Relay	1	-	0	2	RW	F150
R4x2B67	RRTD1_FRC_ALM_RNG	Force RRTD1 Alarm Relay Range	1	s	1	300	RW	F1
R4x2B70	RRTD2_FRC_TRP	Force RRTD2 Trip Relay	1	-	0	2	RW	F150
R4x2B71	RRTD2_FRC_TRP_DUR	Force RRTD2 Trip Relay Duration	1	s	0	300	RW	F1
R4x2B72	RRTD2_FRC_AUX1	Force RRTD2 AUX1 Relay	1	-	0	2	RW	F150
R4x2B73	RRTD2_FRC_AUX1_DUR	Force RRTD2 AUX1 Relay Duration	1	s	0	300	RW	F1
R4x2B74	RRTD2_FRC_AUX2	Force RRTD2 AUX2 Relay	1	-	0	2	RW	F150
R4x2B75	RRTD2_FRC_AUX2_DUR	Force RRTD2 AUX2 Relay Duration	1	s	0	300	RW	F1
R4x2B76	RRTD2_FRC_ALM	Force RRTD2 Alarm Relay	1	-	0	2	RW	F150
R4x2B77	RRTD2_FRC_ALM_RNG	Force RRTD2 Alarm Relay Range	1	s	0	300	RW	F1
R4x2B80	RRTD3_FRC_TRP	Force RRTD3 Trip Relay	1	-	0	2	RW	F150
R4x2B81	RRTD3_FRC_TRP_DUR	Force RRTD3 Trip Relay Duration	1	s	0	300	RW	F1
R4x2B82	RRTD3_FRC_AUX1	Force RRTD3 AUX1 Relay	1	-	0	2	RW	F150
R4x2B83	RRTD3_FRC_AUX1_DUR	Force RRTD3 AUX1 Relay Duration	1	s	0	300	RW	F1
R4x2B84	RRTD3_FRC_AUX2	Force RRTD3 AUX2 Relay	1	-	0	2	RW	F150
R4x2B85	RRTD3_FRC_AUX2_DUR	Force RRTD3 AUX2 Relay Duration	1	s	0	300	RW	F1
R4x2B86	RRTD3_FRC_ALM	Force RRTD3 Alarm Relay	1	-	0	2	RW	F150
R4x2B87	RRTD3_FRC_ALM_RNG	Force RRTD3 Alarm Relay Range	1	s	0	300	RW	F1
R4x2B90	RRTD4_FRC_TRP	Force RRTD4 Trip Relay	1	-	0	2	RW	F150
R4x2B91	RRTD4_FRC_TRP_DUR	Force RRTD4 Trip Relay Duration	1	s	0	300	RW	F1
R4x2B92	RRTD4_FRC_AUX1	Force RRTD4 AUX1 Relay	1	-	0	2	RW	F150
R4x2B93	RRTD4_FRC_AUX1_DUR	Force RRTD4 AUX1 Relay Duration	1	s	0	300	RW	F1
R4x2B94	RRTD4_FRC_AUX2	Force RRTD4 AUX2 Relay	1	-	0	2	RW	F150
R4x2B95	RRTD4_FRC_AUX2_DUR	Force RRTD4 AUX2 Relay Duration	1	s	0	300	RW	F1
R4x2B96	RRTD4_FRC_ALM	Force RRTD4 Alarm Relay	1	-	0	2	RW	F150
R4x2B97	RRTD4_FRC_ALM_RNG	Force RRTD4 Alarm Relay Range	1	s	0	300	RW	F1
R4x2BA0	RRTD1_FRC_AO	Force RRTD1 Analog Outputs	1	-	0	1	RW	F126
R4x2BA1	RRTD1_FRC_AO1_VAL	RRTD1 Analog Output 1 Forced Value	1	% range	0	100	RW	F1
R4x2BA2	RRTD1_FRC_AO2_VAL	RRTD1 Analog Output 2 Forced Value	1	% range	0	100	RW	F1
R4x2BA3	RRTD1_FRC_AO3_VAL	RRTD1 Analog Output 3 Forced Value	1	% range	0	100	RW	F1
R4x2BA4	RRTD1_FRC_AO4_VAL	RRTD1 Analog Output 4 Forced Value	1	% range	0	100	RW	F1
R4x2BB0	RRTD2_FRC_AO	Force RRTD2 Analog Outputs	1	-	0	1	RW	F126
R4x2BB1	RRTD2_FRC_AO1_VAL	RRTD2 Analog Output 1 Forced Value	1	% range	0	100	RW	F1
R4x2BB2	RRTD2_FRC_AO2_VAL	RRTD2 Analog Output 2 Forced Value	1	% range	0	100	RW	F1
R4x2BB3	RRTD2_FRC_AO3_VAL	RRTD2 Analog Output 3 Forced Value	1	% range	0	100	RW	F1

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x2BB4	RRTD2_FRC_AO4_VAL	RRTD2 Analog Output 4 Forced Value	1	% range	0	100	RW	F1
R4x2BC0	RRTD3_FRC_AO	Force RRTD3 Analog Outputs	1	-	0	1	RW	F126
R4x2BC1	RRTD3_FRC_AO1_VAL	RRTD3 Analog Output 1 Forced Value	1	% range	0	100	RW	F1
R4x2BC2	RRTD3_FRC_AO2_VAL	RRTD3 Analog Output 2 Forced Value	1	% range	0	100	RW	F1
R4x2BC3	RRTD3_FRC_AO3_VAL	RRTD3 Analog Output 3 Forced Value	1	% range	0	100	RW	F1
R4x2BC4	RRTD3_FRC_AO4_VAL	RRTD3 Analog Output 4 Forced Value	1	% range	0	100	RW	F1
R4x2BD0	RRTD4_FRC_AO	Force RRTD4 Analog Outputs	1	-	0	1	RW	F126
R4x2BD1	RRTD4_FRC_AO1_VAL	RRTD4 Analog Output 1 Forced Value	1	% range	0	100	RW	F1
R4x2BD2	RRTD4_FRC_AO2_VAL	RRTD4 Analog Output 2 Forced Value	1	% range	0	100	RW	F1
R4x2BD3	RRTD4_FRC_AO3_VAL	RRTD4 Analog Output 3 Forced Value	1	% range	0	100	RW	F1
R4x2BD4	RRTD4_FRC_AO4_VAL	RRTD4 Analog Output 4 Forced Value	1	% range	0	100	RW	F1
R4x2BE0S12	RRTD1_CNTR_NAME	RRTD1 Counter Name	1	-	32	127	RW	F1C
R4x2BECS12	RRTD1_CNT_UNIT_NM	RRTD1 Counter Unit Name	1	-	32	127	RW	F1C
R4x2BF2	RRTD1_CNT_TYPE	RRTD1 Counter Type	1	-	0	1	RW	F114
R4x2BF3	RRTD1_CNT_ALM	Digital RRTD1 Counter Alarm	1	-	0	2	RW	F115
R4x2BF4	RRTD1_CNT_ALM_RLY	Assign RRTD1 Counter Alarm Relays	1	-	0	6	RW	F113
R4x2BF5	RRTD1_CNT_ALM_LVL	RRTD1 Counter Alarm Level	1	-	0	65535	RW	F1
R4x2BF8	RRTD1_CNT_ALM_EVT	Record RRTD1 Counter Alarms as Events	1	-	0	1	RW	F103
R4x2C00S12	RRTD2_CNTR_NAME	RRTD2 Counter Name	1	-	32	127	RW	F1C
R4x2C00CS12	RRTD2_CNT_UNIT_NM	RRTD2 Counter Unit Name	1	-	32	127	RW	F1C
R4x2C12	RRTD2_CNT_TYPE	RRTD2 Counter Type	1	-	0	1	RW	F114
R4x2C13	RRTD2_CNT_ALM	Digital RRTD2 Counter Alarm	1	-	0	2	RW	F115
R4x2C14	RRTD2_CNT_ALM_RLY	Assign RRTD2 Counter Alarm Relays	1	-	0	6	RW	F113
R4x2C15S8	RRTD2_CNT_ALM_LVL	RRTD2 Counter Alarm Level	1	-	0	65535	RW	F1A
R4x2C18	RRTD2_CNT_ALM_EVT	Record RRTD2 Counter Alarms as Events	1	-	0	1	RW	F103
R4x2C20S12	RRTD3_CNTR_NAME	RRTD3 Counter Name	1	-	32	127	RW	F1C
R4x2C20CS12	RRTD3_CNT_UNIT_NM	RRTD3 Counter Unit Name	1	-	32	127	RW	F1C
R4x2C32	RRTD3_CNT_TYPE	RRTD3 Counter Type	1	-	0	1	RW	F114
R4x2C33	RRTD3_CNT_ALM	Digital RRTD3 Counter Alarm	1	-	0	2	RW	F115
R4x2C34	RRTD3_CNT_ALM_RLY	Assign RRTD3 Counter Alarm Relays	1	-	0	6	RW	F113
R4x2C35S8	RRTD3_CNT_ALM_LVL	RRTD3 Counter Alarm Level	1	-	0	65535	RW	F1A
R4x2C38	RRTD3_CNT_ALM_EVT	Record RRTD3 Counter Alarms as Events	1	-	0	1	RW	F103
R4x2C40S12	RRTD4_CNTR_NAME	RRTD4 Counter Name	1	-	32	127	RW	F1C
R4x2C40CS12	RRTD4_CNT_UNIT_NM	RRTD4 Counter Unit Name	1	-	32	127	RW	F1C

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range		R/W	Data Type
					Min.	Max.		
R4x2C52	RRTD4_CNT_TYPE	RRTD4 Counter Type	1	-	0	1	RW	F114
R4x2C53	RRTD4_CNT_ALM	Digital RRTD4 Counter Alarm	1	-	0	2	RW	F115
R4x2C54	RRTD4_CNT_ALM_RLY	Assign RRTD4 Counter Alarm Relays	1	-	0	6	RW	F113
R4x2C55S8	RRTD4_CNT_ALM_LVL	RRTD4 Counter Alarm Level	1	-	0	65535	RW	F1A
R4x2C58	RRTD4_CNT_ALM_EVT	Record RRTD4 Counter Alarms as Events	1	-	0	1	RW	F103
R4x3000L	EVT_LAST_RESET	Event Recorder Last Reset (2 words)	N/A	N/A	N/A	N/A	RW	F18
R4x3002	EVT_SNC_CLR	Total Number of Events Since Last Clear	1	N/A	0	65535	RW	F1
R4x3003	EVT_REC_SLCT	Event Record Selector (1=oldest, 40=newest)	1	N/A	1	40	RW	F1
R4x3004	EVENT_CAUSE	Cause of Event	1	-	0	40	RW	F134
R4x3005L	EVENT_TIME	Time of Event (2 words)	N/A	N/A	N/A	N/A	RW	F19
R4x3007L	EVENT_DATE	Date of Event (2 words)	N/A	N/A	N/A	N/A	RW	F18
R4x300BS8	EVENT_AMPS_A	Event Phase A Current	1	A	0	65535	RW	F1A
R4x300CS8	EVENT_AMPS_B	Event Phase B Current	1	A	0	65535	RW	F1A
R4x300DS8	EVENT_AMPS_C	Event Phase C Current	1	A	0	65535	RW	F1A
R4x300E	EVENT_MTR_LOAD	Event Motor Load	1	FLA	0	2000	RW	F3
R4x300F	EVENT_CU	Event Current Unbalance	1	%	0	100	RW	F1
R4x3010	EVENT_AMPS_GND	Event Ground Current	1	A	0	50000	RW	F23
R4x3012	EVENT_HOT_RTD_ID	Event Hottest Stator RTD	1	-	0	12	RW	F1
R4x3013I	EVENT_HOT_TEMP	Event Temperature of Hottest Stator RTD	1	DEG C	-40	200	RW	F4
R4x301A	EVENT_VOLTS_AB	Event Voltage Vab	1	V	0	20000	RW	F1
R4x301B	EVENT_VOLTS_BC	Event Voltage Vbc	1	V	0	20000	RW	F1
R4x301C	EVENT_VOLTS_CA	Event Voltage Vca	1	V	0	20000	RW	F1
R4x301D	EVENT_VOLTS_VAN	Event Voltage Van	1	V	0	20000	RW	F1
R4x301E	EVENT_VOLTS_VBN	Event Voltage Vbn	1	V	0	20000	RW	F1
R4x301F	EVENT_VOLTS_VCN	Event Voltage Vcn	1	V	0	20000	RW	F1
R4x3020	EVENT_SYS_FREQ	Event System Frequency	1	Hz	0	12000	RW	F3
R4x3021I	EVENT_KW	Event Real Power	1	kW	-32000	32000	RW	F4
R4x3022I	EVENT_KVAR	Event Reactive Power	1	kvar	-32000	32000	RW	F4
R4x3023	EVENT_KVA	Event Apparent Power	1	kVA	0	50000	RW	F1
R4x3024I	EVENT_PF	Event Power Factor	1	-	-99	100	RW	F21
R4x30F0	TRACE_MEM_SLCT	Trace Memory Channel Selector	1	-	0	9	RW	F1
R4x30F1L	TRACE_MEM_DATE	Trace Memory Date	N/A	N/A	N/A	N/A	RW	F18
R4x30F3L	TRACE_MEM_TIME	Trace Memory Time	N/A	N/A	N/A	N/A	RW	F19
R4x3100I	FST_TRC_MEM_SMPL	First Trace Memory Sample	1	-	-32767	32767	RW	F4
R4x3400I	LST_TRC_MEM_SMPL	Last Trace Memory Sample	1	-	-32767	32767	RW	F4

Notes

In the following notes, MSB or MSByte refers to the 'most significant byte'; LSB or LSByte refer to the 'least-significant byte'; MSb or MSbit refer to the 'most-significant bit'; LSb or LSbit refer to the 'least-significant bit'.

CODE	TYPE	DEFINITION
F1	16 bits	UNSIGNED VALUE

CODE	TYPE	DEFINITION
		Example: 1234 stored as 1234
F2	16 bits	UNSIGNED VALUE, 1 DECIMAL PLACE
		Example: 123.4 stored as 1234
F3	16 bits	UNSIGNED VALUE, 2 DECIMAL PLACES
		Example: 12.34 stored as 1234
F4	16 bits	2's COMPLEMENT SIGNED VALUE
		Example: -1234 stored as -1234 (i.e. 64302)
F5	16 bits	2's COMPLEMENT SIGNED VALUE, 1 DECIMAL PLACES
		Example: -123.4 stored as -1234 (i.e. 64302)
F6	16 bits	2's COMPLEMENT SIGNED VALUE, 2 DECIMAL PLACES
		Example: -12.34 stored as -1234 (i.e. 64302)
F7	16 bits	2's COMPLEMENT SIGNED VALUE, 3 DECIMAL PLACES
		Example: -1.234 stored as -1234 (i.e. 64302)
F8	16 bits	2's COMPLEMENT SIGNED VALUE, 4 DECIMAL PLACES
		Example: -0.1234 stored as -1234 (i.e. 64302)
F15	16 bits	HARDWARE REVISION
		0000 0 0 1 1 = A
		0000 0 0 10 2 = B
	
		0000 0 1 1010 26 = Z
F16	16 bits	SOFTWARE REVISION
		1111 1111 xxxx xxxx Major Revision Number
		0 to 9 in steps of 1
		xxxx xxxx 1111 1111 Minor Revision Number (two BCD digits)
		00 to 99 in steps of 1
		Example: Revision 2.3 stored as 230 hex
F18	32 bits	DATE (MM/DD/YYYY)
		1st byte Month (1 to 12)
		2nd byte Day (1 to 31)
		3rd and 4th byte Year (1998 to 2094)
		Example: Feb 20, 1995 stored as 34867142 (i.e. 1st word: 0214, 2nd word 07C6)
		Feb = 02, 20th = 14, 1995 = 07C6 thus 021407C6hex = 34867142decimal
F19	32 bits	TIME (HH:MM:SS:hh)
		1st byte Hours (0 to 23)
		2nd byte Minutes (0 to 59)
		3rd byte Seconds (0 to 59)
		4th byte Hundreds of seconds (0 to 99) - Not used by 369
		Example: 2:05pm stored as 235208704 (i.e. 1st word: 0E05, 2nd word 0000)
F20	16 bits	2's COMPLEMENT SIGNED VALUE
		1st 16 bits contain Value
		Note: -1 means "Never"
F21	16 bits	2's COMPLEMENT SIGNED VALUE, 2 DECIMAL PLACES (Power Factor)
		< 0 Leading Power Factor - Negative
		> 0 Lagging Power Factor - Positive
		Example: Power Factor of 0.87 lag is used as 87 (i.e. 0057)
F22	16 bits	TWO 8-BIT CHARACTERS PACKED INTO 16-BIT UNSIGNED

CODE	TYPE	DEFINITION
		MSB First Character
		LSB Second Character
		Example: String "AB" stored as 4142 hex.
F23	16 Bits	Ground current scaling factor - unsigned 16 bit
		Example: For 1A/5A CT, G/F current = 1000.0 A
		Example: For 50: .025 A CT, G/F current = 25.00
F26	16 Bits	Analog Output Selection
		0 0 - 1mA
		1 0 - 20 mA
		2 4 - 20 mA
F27	16 Bits	Backspin Detection State
		0 Motor Running
		1 No Backspin
		2 Slowdown
		3 Acceleration
		4 ---
		5 Backspinning
		6 Prediction
		7 Soon to Restart
F30	16 Bits	Disable / Enable Selection
		0 Disabled
		1 Enabled
F31	16 Bits	Command Function Codes
		0 Not in use
		1 Reset 369
		2 Motor Start
		3 Motor Stop
		4 Waveform Trigger
		5 Reserved
		6 Clear Trip Counters
		7 Clear Last Trip Date
		8 Reserved
		9 Reserved
		10 Clear RTD Maximums
		11 Reset Motor Info
		12 Clear/Reset all Data
F100	Unsigned 16 bit integer	Temperature Display Units
		0 Celsius
		1 Fahrenheit
F101	Unsigned 16 bit integer	RS 485 Baud Rate
		0 1200 baud
		1 2400 baud
		2 4800 baud
		3 9600 baud
		4 19200 baud
F102	Unsigned 16 bit integer	RS 485 Parity

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CODE	TYPE	DEFINITION
		0 None
		1 Odd
		2 Even
F103	Unsigned 16 bit integer	Off / On or No / Yes Selection
		0 Off / No
		1 On / Yes
F104	Unsigned 16 bit integer	Ground CT Type
		0 None
		1 1 A Secondary
		2 5 A Secondary
		3 Multilin CT 50/0.025
F105	Unsigned 16 bit integer	CT Type
		0 None
		1 1 A Secondary
		2 5 A Secondary
F106	Unsigned 16 bit integer	Voltage Transformer Connection Type
		0 None
		1 Open Delta
		2 Wye
F107	Unsigned 16 bit integer	Nominal Frequency
		0 60 H z
		1 50 H z
		2 Variable
F108	Unsigned 16 bit integer	Reduced Voltage Starting Transition On
		0 Current Only
		1 Current or Timer
		2 Current and Timer
F109	Unsigned 16 bit integer	Starter Status Switch
		0 Starter Aux a (52a)
		1 Starter Aux b (52b)
F110	Unsigned 16 bit integer	Emergency Restart Switch Input Function
		0 Off
		1 Emergency Switch
		2 General Switch
		3 Digital Counter
		4 Waveform Capture
		5 Simulate Pre - Fault
		6 Simulate Fault
		7 Simulate Pre - Fault to Fault
F111	Unsigned 16 bit integer	Trip Relays
		0 none
		1 Trip
		2 Aux1
		3 Aux2
		4 Trip & Aux1
		5 Trip & Aux2

CODE	TYPE	DEFINITION
		6 Aux1 & Aux2
		7 Trip & Aux1 & Aux2
F112	Unsigned 16 bit integer	Not Defined
		0
		1
F113	Unsigned 16 bit integer	Alarm Relays
		0 None
		1 Alarm
		2 Aux1
		3 Aux2
		4 Alarm & Aux1
		5 Alarm & Aux2
		6 Aux1 & Aux2
		7 Alarm & Aux1 & Aux2
F114	Unsigned 16 bit integer	Counter Type
		0 Increment
		1 Decrement
F115	Unsigned 16 bit integer	Alarm/Trip Type Selection
		0 Off
		1 Latched
		2 Unlatched
F116	Unsigned 16 bit integer	Switch Type
		0 Normally Open
		1 Normally Closed
F117	Unsigned 16 bit integer	Reset Mode
		0 All Resets
		1 Remote Reset Only
		2 Local Reset Only
F119	Unsigned 16 bit integer	Backup Relays
		0 None
		1 Aux 1
		2 Aux1 & Aux2
		3 Aux2
F120	Unsigned 16 bit integer	RTD Type
		0 100 Ohm Platinum
		1 120 Ohm Nickel
		2 100 Ohm Nickel
		3 10 Ohm Copper
F121	Unsigned 16 bit integer	RTD Application
		0 None
		1 Stator
		2 Bearing
		3 Ambient
		4 Other
F122	Unsigned 16 bit integer	Local / Remote RTD Voting Selection
		0 Off

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CODE	TYPE	DEFINITION
		1 RTD #1
		2 RTD #2
		3 RTD #3
		4 RTD #4
		5 RTD #5
		6 RTD #6
		7 RTD #7
		8 RTD #8
		9 RTD #9
		10 RTD #10
		11 RTD #11
		12 RTD #12
		13 All Stator
F123	Unsigned 16 bit integer	Alarm Status
		0 Off
		1 Not Active
		2 Timing Out
		3 Active
		4 Latched
F124	Unsigned 16 bit integer	Phase Rotation at Motor Terminals
		0 ABC
		1 ACB
F125	Unsigned 16 bit integer	Starter Type
		0 Breaker
		1 Contactor
F127	Unsigned 16 bit integer	Analog Output Parameter Selection
		0 Phase A Current
		1 Phase B Current
		2 Phase C Current
		3 Average Phase Current
		4 AB Line Voltage
		5 BC Line Voltage
		6 CA Line Voltage
		7 Average Line Voltage
		8 Phase AN Voltage
		9 Phase BN Voltage
		10 Phase CN Voltage
		11 Average Phase Voltage
		12 Hottest Stator RTD
		13 Local RTD #1
		14 Local RTD #2
		15 Local RTD #3
		16 Local RTD #4
		17 Local RTD #5
		18 Local RTD #6
		19 Local RTD #7

CODE	TYPE	DEFINITION
		20 Local RTD #8
		21 Local RTD #9
		22 Local RTD #10
		23 Local RTD #11
		24 Local RTD #12
		25 Power Factor
		26 Reactive Power (kvar)
		27 Real Power (kW)
		28 Apparent Power (KVA)
		29 Thermal Capacity Used
		30 Relay Lockout Time
		31 Current Demand
		32 kvar Demand
		33 kW Demand
		34 kVA Demand
		35 Motor Load
F128	Unsigned 16 bit integer	Curve Style
		0 Standard
		1 Custom
F130	Unsigned 16 bit integer	Digital Input Pickup Type
		0 Over
		1 Under
F131	Unsigned 16 bit integer	Input Switch Status
		0 Open
		1 Closed
F133	Unsigned 16 bit integer	Motor Status
		0 Stopped
		1 Starting
		2 Running
		3 Overloaded
		4 Tripped
F134	Unsigned 16 bit integer	Cause of Event / Cause of Last Trip (up to 40)
		0 No Event
		1 Forced Setpoints Dump
		2 Speed Switch Trip
		3 Diff Switch Trip
		4 Access Switch Trip
		5 Spare Switch Trip
		6 Emergency Switch Trip
		7 Unexpected Reset
		8 Eeprom Memory
		9 Reset Switch Trip
		10 Factory Setpoints Dump
		11 Overload Trip
		12 Short Circuit Trip
		13 Short Circuit Backup Trip

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CODE	TYPE	DEFINITION
		14 Mechanical Jam Trip
		15 Undercurrent Trip
		16 Current Unbalance Trip
		17 Single Phasing Trip
		18 Ground Fault Trip
		19 Ground Fault Backup Trip
		20 Overload Block
		21 Acceleration Timer Trip
		22 Start Inhibit Block
		23 Starts Hour Block
		24 Time Between Starts Block
		25 Restart Block
		26 Backspin Block
		27 Single Shot Restart
		28 Undervoltage Trip
		29 Overvoltage Trip
		30 Voltage Phase Reversal Trip
		31 Underfrequency Trip
		32 Overfrequency Trip
		33 Lead Power Factor Trip
		34 Lag Power Factor Trip
		35 Positive Kvar Trip
		36 Negative Kvar Trip
		37 Underpower Trip
		38 Reverse Power Trip
		39 RTD1 Trip
		40 RTD2 Trip
		41 RTD3 Trip
		42 RTD4 Trip
		43 RTD5 Trip
		44 RTD6 Trip
		45 RTD7 Trip
		46 RTD8 Trip
		47 RTD9 Trip
		48 RTD10 Trip
		49 RTD11 Trip
		50 RTD12 Trip
		51 Trace Trigger Manual
		52 Trace Trigger Automatic
		53 Spare Switch Alarm
		54 Emergency Switch Alarm
		55 Diff Switch Alarm
		56 Speed Switch Alarm
		57 Reset Switch Alarm
		58 Access Switch Alarm
		59 Thermal Capacity Alarm

CODE	TYPE	DEFINITION
		60 Overload Alarm
		61 Mechanical Jam Alarm
		62 Undercurrent Alarm
		63 Current Unbalance Alarm
		64 Ground Fault Alarm
		65 Undervoltage Alarm
		66 Overvoltage Alarm
		67 Overfrequency Alarm
		68 Underfrequency Alarm
		69 Lead Power Factor Alarm
		70 Lag Power Factor Alarm
		71 Positive Kvar Alarm
		72 Negative Kvar Alarm
		73 Underpower Alarm
		74 Reverse Power Alarm
		75 RTD1 Alarm
		76 RTD2 Alarm
		77 RTD3 Alarm
		78 RTD4 Alarm
		79 RTD5 Alarm
		80 RTD6 Alarm
		81 RTD7 Alarm
		82 RTD8 Alarm
		83 RTD9 Alarm
		84 RTD10 Alarm
		85 RTD11 Alarm
		86 RTD12 Alarm
		87 RTD1 Hi Alarm
		88 RTD2 Hi Alarm
		89 RTD3 Hi Alarm
		90 RTD4 Hi Alarm
		91 RTD5 Hi Alarm
		92 RTD6 Hi Alarm
		93 RTD7 Hi Alarm
		94 RTD8 Hi Alarm
		95 RTD9 Hi Alarm
		96 RTD10 Hi Alarm
		97 RTD11 Hi Alarm
		98 RTD12 Hi Alarm
		99 Open RTD Alarm
		100 Lost RTD Comm Alarm
		101 Low RTD Alarm
		102 Trip Counter Alarm
		103 Current Demand Alarm
		104 Kw Demand Alarm
		105 Kvar Demand Alarm

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CODE	TYPE	DEFINITION
		106 Kva Demand Alarm
		107 Digital Counter Alarm
		108 Service Alarm
		109 Control Power Lost
		110 Control Power App
		111 Emergency Restart Closed
		112 Emergency Restart Open
		113 Start While Blocked
		114 Starter Fail Alarm
		115 Breaker Failure
		116 Welded Contactor
		117 Incomplete Sequence Trip
		118 Simulation Start
		119 Simulation Stop
		120 Waveform Capture
		121 RRTD1 Trip
		122 RRTD2 Trip
		123 RRTD3 Trip
		124 RRTD4 Trip
		125 RRTD5 Trip
		126 RRTD6 Trip
		127 RRTD7 Trip
		128 RRTD8 Trip
		129 RRTD9 Trip
		130 RRTD10 Trip
		131 RRTD11 Trip
		132 RRTD12 Trip
		133 RRTD2 RTD1 Trip
		134 RRTD2 RTD2 Trip
		135 RRTD2 RTD3 Trip
		136 RRTD2 RTD4 Trip
		137 RRTD2 RTD5 Trip
		138 RRTD2 RTD6 Trip
		139 RRTD2 RTD7 Trip
		140 RRTD2 RTD8 Trip
		141 RRTD2 RTD9 Trip
		142 RRTD2 RTD10 Trip
		143 RRTD2 RTD11 Trip
		144 RRTD2 RTD12 Trip
		145 RRTD3 RTD1 Trip
		146 RRTD3 RTD2 Trip
		147 RRTD3 RTD3 Trip
		148 RRTD3 RTD4 Trip
		149 RRTD3 RTD5 Trip
		150 RRTD3 RTD6 Trip
		151 RRTD3 RTD7 Trip

CODE	TYPE	DEFINITION
		152 RRTD3 RTD8 Trip
		153 RRTD3 RTD9 Trip
		154 RRTD3 RTD10 Trip
		155 RRTD3 RTD11 Trip
		156 RRTD3 RTD12 Trip
		157 RRTD4 RTD1 Trip
		158 RRTD4 RTD2 Trip
		159 RRTD4 RTD3 Trip
		160 RRTD4 RTD4 Trip
		161 RRTD4 RTD5 Trip
		162 RRTD4 RTD6 Trip
		163 RRTD4 RTD7 Trip
		164 RRTD4 RTD8 Trip
		165 RRTD4 RTD9 Trip
		166 RRTD4 RTD10 Trip
		167 RRTD4 RTD11 Trip
		168 RRTD4 RTD12 Trip
		169 RRTD1 Alarm
		170 RRTD2 Alarm
		171 RRTD3 Alarm
		172 RRTD4 Alarm
		173 RRTD5 Alarm
		174 RRTD6 Alarm
		175 RRTD7 Alarm
		176 RRTD8 Alarm
		177 RRTD9 Alarm
		178 RRTD10 Alarm
		179 RRTD11 Alarm
		180 RRTD12 Alarm
		181 RRTD1 Hi Alarm
		182 RRTD2 Hi Alarm
		183 RRTD3 Hi Alarm
		184 RRTD4 Hi Alarm
		185 RRTD5 Hi Alarm
		186 RRTD6 Hi Alarm
		187 RRTD7 Hi Alarm
		188 RRTD8 Hi Alarm
		189 RRTD9 Hi Alarm
		190 RRTD10 Hi Alarm
		191 RRTD11 Hi Alarm
		192 RRTD12 Hi Alarm
		193 RRTD1 Open RTD Alarm
		194 RRTD1 Low RTD Alarm
		195 RRTD2 RTD1 Alarm
		196 RRTD2 RTD2 Alarm
		197 RRTD2 RTD3 Alarm

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CODE	TYPE	DEFINITION
		198 RRTD2 RTD4 Alarm
		199 RRTD2 RTD5 Alarm
		200 RRTD2 RTD6 Alarm
		201 RRTD2 RTD7 Alarm
		202 RRTD2 RTD8 Alarm
		203 RRTD2 RTD9 Alarm
		204 RRTD2 RTD10 Alarm
		205 RRTD2 RTD11 Alarm
		206 RRTD2 RTD12 Alarm
		207 RRTD2 RTD1 Hi Alarm
		208 RRTD2 RTD2 Hi Alarm
		209 RRTD2 RTD3 Hi Alarm
		210 RRTD2 RTD4 Hi Alarm
		211 RRTD2 RTD5 Hi Alarm
		212 RRTD2 RTD6 Hi Alarm
		213 RRTD2 RTD7 Hi Alarm
		214 RRTD2 RTD8 Hi Alarm
		215 RRTD2 RTD9 Hi Alarm
		216 RRTD2 RTD10 Hi Alarm
		217 RRTD2 RTD11 Hi Alarm
		218 RRTD2 RTD12 Hi Alarm
		219 RRTD2 Open RTD Alarm
		220 RRTD2 Low RTD Alarm
		221 RRTD3 RTD1 Alarm
		222 RRTD3 RTD2 Alarm
		223 RRTD3 RTD3 Alarm
		224 RRTD3 RTD4 Alarm
		225 RRTD3 RTD5 Alarm
		226 RRTD3 RTD6 Alarm
		227 RRTD3 RTD7 Alarm
		228 RRTD3 RTD8 Alarm
		229 RRTD3 RTD9 Alarm
		230 RRTD3 RTD10 Alarm
		231 RRTD3 RTD11 Alarm
		232 RRTD3 RTD12 Alarm
		233 RRTD3 RTD1 Hi Alarm
		234 RRTD3 RTD2 Hi Alarm
		235 RRTD3 RTD3 Hi Alarm
		236 RRTD3 RTD4 Hi Alarm
		237 RRTD3 RTD5 Hi Alarm
		238 RRTD3 RTD6 Hi Alarm
		239 RRTD3 RTD7 Hi Alarm
		240 RRTD3 RTD8 Hi Alarm
		241 RRTD3 RTD9 Hi Alarm
		242 RRTD3 RTD10 Hi Alarm
		243 RRTD3 RTD11 Hi Alarm

CODE	TYPE	DEFINITION
		244 RRTD3 RTD12 Hi Alarm
		245 RRTD3 Open RTD Alarm
		246 RRTD3 Low RTD Alarm
		247 RRTD4 RTD1 Alarm
		248 RRTD4 RTD2 Alarm
		249 RRTD4 RTD3 Alarm
		250 RRTD4 RTD4 Alarm
		251 RRTD4 RTD5 Alarm
		252 RRTD4 RTD6 Alarm
		253 RRTD4 RTD7 Alarm
		254 RRTD4 RTD8 Alarm
		255 RRTD4 RTD9 Alarm
		256 RRTD4 RTD10 Alarm
		257 RRTD4 RTD11 Alarm
		258 RRTD4 RTD12 Alarm
		259 RRTD4 RTD1 Hi Alarm
		260 RRTD4 RTD2 Hi Alarm
		261 RRTD4 RTD3 Hi Alarm
		262 RRTD4 RTD4 Hi Alarm
		263 RRTD4 RTD5 Hi Alarm
		264 RRTD4 RTD6 Hi Alarm
		265 RRTD4 RTD7 Hi Alarm
		266 RRTD4 RTD8 Hi Alarm
		267 RRTD4 RTD9 Hi Alarm
		268 RRTD4 RTD10 Hi Alarm
		269 RRTD4 RTD11 Hi Alarm
		270 RRTD4 RTD12 Hi Alarm
		271 RRTD4 Open RTD Alarm
		272 RRTD4 Low RTD Alarm
		273 Power Failure
		274 Software Reset
		275 Clock Failure
		276 A/D Failure
F135	Unsigned 16 bit integer	Motor Speed
		0 = Low Speed (Speed 1)
		1 = High Speed (Speed 2)
F136	Unsigned 16 bit integer	369 Order Code
		Bit 0 1 = Profibus Option Installed
		Bit 1 1 = Fiber Optics Option Installed
		Bit 2 1 = Metering option installed
		Bit 3 1 = Backspin option installed (includes metering)
		Bit 4 1 = Internal RTD Option Installed
		Bit 5 1 = HI Power Supply Installed
		0 = LO Power Supply Installed
		Bit 6 1 = IO Option (Always zero for 369)
		Bit 7 - 16 Unused

369 Motor Management Relay

CODE	TYPE	DEFINITION
		RRTD Order Code
		Bit 0 1 = Profibus Option
		Bit 1 1 = Fiber Optics Option
		Bit 2 & Bit 3 0-0 = No Metering or Backspin Option (Always 0 for RRTD)
		Bit 4 1 = Internal RTD Option (Always 1 for RRTD)
		Bit 5 1 = HI Power Supply
		0 = LO Power Supply
		Bit 6 1 = IO Option
		Bit 7-16 Unused
F141	Unsigned 16 bit integer	Output Relay Status
		bit 0 Trip
		bit 1 Alarm
		bit 2 Auxiliary 1
		bit 3 Auxiliary 2
F149	Unsigned 16 Bit Integer	Channel 3 Application
		0 MODBUS
		1 Remote RTD
F150	Unsigned 16 Bit Integer	Output Relay Status
		0 De - Energized
		1 Energized
F151	Unsigned 16 Bit Integer	Channel Type
		0 RS 485
		1 Fiber Optic
F152	Unsigned 16 Bit Integer	Number of Records
		0 1 * 64 cycles
		1 2 * 32 cycles
		2 4 * 16 cycles
		3 8 * 8 cycles
F156	Unsigned 16 Bit Integer	Remote RTD Communication Status
		0 Remote RTD Module Communication Lost
		1 Remote RTD Communication on Line
F157	Unsigned 16 Bit Integer	Differential Switch Input Function
		0 OFF
		1 Differential Switch
		2 General Switch
		3 Digital Counter
		4 Waveform Capture
		5 Simulate Pre - Fault
		6 Simulate Fault
		7 Simulate Pre-Fault to Fault
F158	Unsigned 16 Bit Integer	Speed Switch Input Function
		0 OFF
		1 Speed Switch
		2 General Switch
		3 Digital Counter

CODE	TYPE	DEFINITION
		4 Waveform Capture
		5 Simulate Pre - Fault
		6 Simulate Fault
		7 Simulate Pre-Fault to Fault
F159	Unsigned 16 Bit Integer	Spare Switch Input Function
		0 OFF
		1 Starter Status Switch
		2 General Switch
		3 Digital Counter
		4 Waveform Capture
		5 Simulate Pre - Fault
		6 Simulate Fault
		7 Simulate Pre-Fault to Fault
F160	Unsigned 16 Bit Integer	Reset Switch Input Function
		0 OFF
		1 Reset Switch
		2 General Switch
		3 Digital Counter
		4 Waveform Capture
		5 Simulate Pre - Fault
		6 Simulate Fault
		7 Simulate Pre-Fault to Fault
F161	Unsigned 16 Bit Integer	Output Relay Fail Safe Code (0 = Failsafe, 1 = Nonfailsafe)
		0 Failsafe
		1 Non Failsafe
F162	Unsigned 16 Bit Integer	Access Level
		0 Read Only
		1 Read / Write
		2 Factory Service
F163	Unsigned 16 Bit Integer	RRTD Digital Input Function
		0 Off
		1 undefined
		2 General Switch
		3 Digital Counter
F164	Unsigned 16 Bit Integer	COMMUNICATIONS MODULE STATUS
		0x0001 Ethernet Connection OK
		0x0002 IP Configuration OK
		0x0004 IP Address Error
		0x0008 Communications Module Error
		0x0010 Network Activity Present

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239 Motor Protection Relay

- *SETPOINT REGISTERS*
- *ACTUAL VALUES*
- *COMMAND COILS*

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X1000	TEMP_DISP_UNITS	Temp. Display Units	-, 1		F9
R4X1001	MSG_TIME	Default Message Time	min x0.1, 1, 1-51		F1**
R4X1002	MSG_BRIGHT	Default Message Brightness	%, 20, 0-100		F1
R4X1003	BLK_KP_TRP_RST	Block Keypad Trip Reset	-, 1, 0-1		F14
R4X1008	ANALOG_OUT_TYPE	Analog Output Type	-, 1		F10
R4X1009	ANALOG_OUT_RANGE	Analog Output Range	-, 1, 0-2		F11
R4X1010	SER_COMM_FAIL_ALM	Serial Communication Failure Alarm	-, 1, 0-1		F20
R4X1011	BAUD	Modbus Baud Rate	-, 1, 0-4		F13
R4X1012	PARITY	Parity	-, 1, 0-2		F35
R4X1018	LD_FACT_DFLT	Load Factory Defaults	-, 1, 0-1		F14
R4X1019	CLR_PRETRP_DATA	Clear Pre-trip Data	-, 1, 0-1		F14
R4X101A	CLEAR_STAT_DAT	Clear Statistics Data	-,1,0-1		F14
R4X1020	CT_PRIMARY	Phase CT Primary	A, 5, 0-1500		F1*
R4X1021	GND_SENSE	Ground Sensing	-, 1, 0-3		F15
R4X1022	GND_CT_PRI	Ground CT Primary	A, 5, 5-1500		F1
R4X1023	NOM_FREQ	Nominal Frequency	Hz, 10, 50-60		F1
R4X1028	FULL_LD_CURR	Motor Full Load Current	***, 1, 0-1500		F1*
R4X1029	OVLD_PICKUP_LVL	Overload Pickup Inhibit	0.01 x FLC, 5, 100-500		F1
R4X102A	LKD_RTR_CURR	Locked Rotor Current	0.1 x FLC, 1, 5-110		F1
R4X102B	SAFE_STALL_COLD	Safe Stall Time Cold	0.1 x s, 1, 10-6000		F1
R4X102C	HOT_COLD_CRV	Hot / Cold Curve Ratio	%, 1, 5-100		F1
R4X102D	DIS_STARTS	Disable Starts	---, 1, 0-1		F14
R4X102E	USEOL_PKP_INH_ON	Use Overload Pickup Inhibit On	---, 1, 0-2		F43
R4X1038	TRP_OP	Trip Operation	-, 1, 0-1		F16
R4X1040	ALM_OP	Alarm Operation	-, 1, 0-1		F16
R4X1041	ALM_ACT	Alarm Activation	-, 1, 0-1		F17
R4X1048	AUX_OP	Auxiliary Operation	-, 1, 0-1		F16
R4X1049	AUX_ACT	Auxiliary Activation	-, 1, 0-1		F17
R4X104A	AUX_FUNC	Auxiliary Function	-, 1, 0-2		F18
R4X1050	PH_TIME_OVLD_CV_NO	Phase Timed O/L Curve No	-, 1, 1-15		F1
R4X1051	PH_TIME_OL_LO_TIME	Phase Timed O/L Lockout Time	min, 1, 1-5000		F1
R4X1052	OV_LVL_CALC_TRP_TIME	Overload Level to Calculate Trip Time	0.01x FLC, 1, 101-2000		F1
R4X1053	AUTO_RST_OVLD_TRP	Auto Reset Overload Trips	-, 1, 0-1		F14
R4X1058	PHS_SC_TRP	Phase S/C Trip	-, 1, 0-3		F19
R4X1059	PHS_SC_PKUP	Phase S/C Pickup	0.1 x CT, 1, 10-110		F1
R4X105A	PHS_SC_DLY	Phase S/C Delay	ms, 10, 0-60000		F1*****
R4X1060	IMMED_OVLD_ALM	Immediate Overload Alarm	-, 1, 0-1		F20
R4X1061	IMMED_OVLD_PKUP	Immediate Overload Pickup	0.1 x FLC, 1, 5-20		F1
R4X1062	IM_OL_INH_SEN_ON	Inhibit Sensing On Start For	s, 1, 0-6001 (6001 = unlimited)		F1
R4X1068	MECH_JAM_TRP	Mechanical Jam Trip	-, 1, 0-4		F23
R4X1069	MECH_JAM_PKUP	Mechanical Jam Pickup	0.1 x FLC, 1, 10-45		F1
R4X106A	MECH_JAM_DLY	Mechanical Jam Delay	s, 1, 0-250		F1
R4X106B	MJ_INH_SEN_ON	Inhibit Sensing On Start For	s, 1, 0-6001 (6001 = unlimited)		F1
R4X1070	UC_FUNC	Undercurrent Function	-, 1, 0-5		F21
R4X1071	UC_PKUP	Undercurrent Pickup	0.01 x FLC, 1, 5-100		F1
R4X1072	UC_DLY	Undercurrent Delay	s, 1, 0-250		F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X1078	PH_UNBAL_TRP	Phase Unbalance Trip	-, 1, 0-1		F20
R4X1079	PH_UNBAL_TRP_PKUP	Phase Unbalance Trip Pickup	%, 1, 5-100		F1
R4X107A	PH_UNBAL_DLY	Phase Unbalance Delay	s, 1, 0-60		F1
R4X107B	PH_UNBAL_ALM	Phase Unbalance Alarm	-, 1, 0-1		F20
R4X107C	PH_UNBAL_ALM_PKUP	Phase Unbalance Alarm Pickup	%, 1, 5-100		F1
R4X1080	THM_CAP_USED_ALM	% Thermal Capacity Used Alarm	%, 1, 1-101		F1**
R4X1083	BRKR_FAIL_FUNC	Breaker Failure Function	---, 1, 0-3 (0=OFF)		F44
R4X1084	BRKR_FAIL_PKP	Breaker Failure Pickup	0.1xCT, 1, 1-110		F1
R4X1085	BRKR_FAIL_PKP_DLY	Breaker Fail Pickup Delay	ms, 10, 10-60000		F1
R4X1086	BRKR_FAIL_DROPOU T_DLY	Breaker Fail Dropout Delay	ms, 10, 10-60000		F1
R4X1088	GND_TRP	Ground Trip	-, 1, 0-3		F38
R4X1089	GND_PRM_TRP_PKUP_5A	Ground Primary Trip Pickup (5A CT)	% of CT, 1, 3-100		F1
R4X108A	GND_PRM_TRP_PKUP_50	Ground Primary Trip Pickup (50:0.025 CT)	0.01 x A, 1, 5-1500		F1
R4X108B	GND_TRP_DLY_ON_RUN	Ground Trip Delay On Run	ms, 10, 0-20000		F1*****
R4X108C	GND_ALM	Ground Alarm	-, 1, 0-2		F22
R4X108D	GND_PRM_ALM_LVL_5A	Ground Primary Alarm Level (5A CT)	% of CT, 1, 3-100		F1
R4X108E	GND_PRM_ALM_LVL_50	Ground Primary Alarm Level (50:0.025 CT)	0.01 x A, 1, 5-1500		F1
R4X108F	GND_ALM_DLY_ON_RUN	Ground Alarm Delay On Run	0.1 x s, 1, 0-600		F1
R4X1090	GND_TRP_DLY_ON_ST	Ground Trip Delay On Start	ms, 10, 0-20000		F1*****
R4X1091	GND_ALM_DLY_ON_ST	Ground Alarm Delay On Start	0.1 x s, 1, 0-600		F1
R4X1098	THM_FUNC	Thermistor Function	-, 1, 0-4		F23
R4X1099	THM_HOT_RES	Thermistor Hot Resistance	0.1 kW, 1, 1-300		F1
R4X109A	THM_COLD_RES	Thermistor Cold Resistance	0.1 kW, 1, 1-300		F1
R4X109B	THM_FAIL_ALM	Thermistor Failure Alarm	-, 1, 0-1		F20
R4X10A0	RTD1_APPL	RTD 1 Application (RTD Option)	-, 1, 0-2		F24
R4X10A1	RTD1_TYPE	RTD 1 Type	-, 1, 0-3		F25
R4X10A2	RTD1_TRP_TEMP_C	RTD 1 Trip Temp. (RTD Option)	°C, 1, 0-201		F1**
R4X10A3	RTD1_TRP_TEMP_F	RTD 1 Trip Temp. (RTD Option)	°F, 1, 0-401		F1**
R4X10A4	RTD1_ALM_TEMP_C	RTD 1 Alarm Temp. (RTD Option)	°C, 1, 0-201		F1**
R4X10A5	RTD1_ALM_TEMP_F	RTD 1 Alarm Temp. (RTD Option)	°F, 1, 0-401		F1**
R4X10A8	RTD2_APPL	RTD 2 Application (RTD Option)	-, 1, 0-2		F24
R4X10A9	RTD2_TYPE	RTD 2 Type	-, 1, 0-3		F25
R4X10AA	RTD2_TRP_TEMP_C	RTD 2 Trip Temp. (RTD Option)	°C, 1, 0-201		F1**
R4X10AB	RTD2_TRP_TEMP_F	RTD 2 Trip Temp. (RTD Option)	°F, 1, 0-401		F1**
R4X10AC	RTD2_ALM_TEMP_C	RTD 2 Alarm Temp. (RTD Option)	°C, 1, 0-201		F1**
R4X10AD	RTD2_ALM_TEMP_F	RTD 2 Alarm Temp. (RTD Option)	°F, 1, 0-401		F1**
R4X10B0	RTD3_APPL	RTD 3 Application (RTD Option)	-, 1, 0-2		F24
R4X10B1	RTD3_TYPE	RTD 3 Type	-, 1, 0-3		F25
R4X10B2	RTD3_TRP_TEMP_C	RTD 3 Trip Temp. (RTD Option)	°C, 1, 0-201		F1**
R4X10B3	RTD3_TRP_TEMP_F	RTD 3 Trip Temp. (RTD Option)	°F, 1, 0-401		F1**
R4X10B4	RTD3_ALM_TEMP_C	RTD 3 Alarm Temp. (RTD Option)	°C, 1, 0-201		F1**
R4X10B5	RTD3_ALM_TEMP_F	RTD 3 Alarm Temp. (RTD Option)	°F, 1, 0-401		F1**
R4X10B8	RTD_SENS_FAIL_ALM	RTD Sensor Fail Alarm (RTD Option)	-, 1, 0-1		F20
R4X10C0	OPT_SW1_FUNC	Option Switch 1 Function	-, 1, 0-4		F26
R4X10C1	OPT_SW1_TIME_DLY	Option Switch 1 Time Delay	0.1 x s, 1, 0-600		F1
R4X10C8	OPT_SW2_FUNC	Option Switch 2 Function	-, 1, 0-5		F26
R4X10C9	OPT_SW2_TIME_DLY	Option Switch 2 Time Delay	0.1 x s, 1, 0-600		F1
R4X10D0	AMPS_SIM	Simulation	-, 1, 0-1		F20

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X10D1	AMPS_A_SIM	Phase A Current	***, 1, 0–10000		F1
R4X10D2	AMPS_B_SIM	Phase B Current	***, 1, 0–10000		F1
R4X10D3	AMPS_C_SIM	Phase C Current	***, 1, 0–10000		F1
R4X10D4	AMPS_GND_SIM	Ground Current	0.1 x A, 1, 0–5000		F1
R4X10D5	CURR_SIM_PD	Current Simulation Period	min, 5, 5–305		F1 note c
R4X10D8	ANALOG_SIM	Simulation	–, 1, 0–1		F20
R4X10D9	FORCE_ANALOG_OUT	Force Analog Output (AN Option)	0.1%, 1, 0–1201		F1**
R4X10DA	ANALOG_OUT_SIM_PD	Analog Output Simulation Period (AN Option)	min, 5, 5–305		F1 note c
R4X10F8S40	FLASH_MSG	Flash message	ASCII, 1, 32–127		F8
R4X1110S40	PROG_MSG	Programmable message	ASCII, 1, 32–127		F8
R4X1128	SWITCH_SIM	Simulation	–, 1, 0–1		F20
R4X1129	EMER_RESTART_IN	Emergency Restart Input	–, 1, 0–1		F36
R4X112A	EXT_RST_IN	External Reset Input	–, 1, 0–1		F36
R4X112B	OPT_1_IN	Option 1 Input	–, 1, 0–1		F36
R4X112C	OPT_2_IN	Option 2 Input	–, 1, 0–1		F36
R4X112D	SWITCH_SIM_PD	Switch Simulation Period	min, 5, 5–305		F1 note c
R4X1130	THM_SIM	Simulation	–, 1, 0–1		F20
R4X1131	THM_RES	Thermistor Resistance	W, 1, 0–30000		F1
R4X1132	THM_SIM_PD	Thermistor Simulation Period	min, 5, 5–305		F1 note c
R4X1135	RTD_SIM	Simulation	–, 1, 0–1		F20
R4X1136	RTD1_TEMP_C	RTD 1 Temperature (RTD Option)	°C, 1, 0–240		F1 note a
R4X1137	RTD1_TEMP_F	RTD 1 Temperature (RTD Option)	°F, 1, 0–440		F1 note a
R4X1138	RTD2_TEMP_C	RTD 2 Temperature (RTD Option)	°C, 1, 0–240		F1 note a
R4X1139	RTD2_TEMP_F	RTD 2 Temperature (RTD Option)	°F, 1, 0–440		F1 note a
R4X113A	RTD3_TEMP_C	RTD 3 Temperature (RTD Option)	°C, 1, 0–240		F1 note a
R4X113B	RTD3_TEMP_F	RTD 3 Temperature (RTD Option)	°F, 1, 0–440		F1 note a
R4X113C	RTD_SIM_PD	RTD Simulation Period (RTD Option)	min, 5, 5–305		F1 note c
R4X113F	DIS_ST_PROT	Disable Start Protection	–, 1, 0–1		F14
R4X1140	ST_PROT_DIS_PD	Start Protection Disable Period	min, 5, 5–305		F1 note c
R4X1141	DISABLE_STAT_LOG	Disable Statistics Logging	–, 1, 0–1		F14
R4X1190S20	OPT_SW1_NAME	Option Switch 1	ASCII, 1, 32–127		F8
R4X119A	PH2_CT	2nd Phase CT Primary	A, 5, 5–1500		F1
R4X119B	2ND_MTR_FL_CURR	2nd Motor Full Load Current	***, 1, 1–1500		F1
R4X119C	PH2_TIME_OL_CRV_NO	2nd Phase Timed O/L Curve No	–, 1, 1–15		F1
R4X119D	PH2_SC_TRP	2nd Phase S/C Trip	–, 1, 0–3		F19
R4X119E	PH2_SC_PKUP	2nd Phase S/C Pickup	0.1 x CT, 1, 0–60000		F1
R4X119F	PH2_SC_DLY	2nd Phase S/C Delay	ms, 10, 0–2000		F1*****
R4X11B0S20	OPT_SW2_NAME	Option Switch 2	ASCII, 1, 32–127		F8
R4X11BA	PH3_CT	3rd Phase CT Primary	A, 5, 5–1500		F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X11BB	3RD_MTR_FL_CURR	3rd Motor Full Load Current	***, 1, 1-1500		F1
R4X11BC	PH3_TIME_OL_CRV_NO	3rd Phase Timed O/L Curve No	-, 1, 1-15		F1
R4X11BD	PH3_SC_TRP	3rd Phase S/C Trip	-, 1, 0-3		F19
R4X11BE	PH3_SC_PKUP	3rd Phase S/C Pickup	0.1 x CT, 1, 10-110		F1
R4X11BF	PH3_SC_DLY	3rd Phase S/C Delay	ms, 10, 0-60000		F1*****
R4X11C0	PH4_CT	4th Phase CT Primary	A, 5, 5-1500		F1
R4X11C1	4TH_MTR_FL_CURR	4th Motor Full Load Current	***, 1, 1-1500		F1
R4X11C2	PH4_TIME_OL_CRV_NO	4th Phase Timed O/L Curve No	-, 1, 1-15		F1
R4X11C3	PH4_SC_TRP	4th Phase S/C Trip	-, 1, 0-3		F19
R4X11C4	PH4_SC_PKUP	4th Phase S/C Pickup	0.1 x CT, 1, 10-110		F1
R4X11C5	PH4_SC_DLY	4th Phase S/C Delay	ms, 10, 0-60000		F1*****

NOTES:

* = Minimum Setpoint value represents "OFF"

** = Maximum Setpoint value and FFFF represent "OFF"

*** = 1/Phase current Scale Factor x A

**** = 32767 represents "NO RTD"

***** = Any valid Actual Values or Setpoints address

***** = Minimum Setpoint value represents "INST"

a = Display value = (Modbus Register Value - 40)

b = Display value = 0.0-600.0 sec, 10.0-6553.5 min.

c = Maximum Setpoint value represents "UNLIMITED"

ACTUAL VALUES

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X0000	DEVICE_CODE	Multilin Product Device Code	-, -, -		F1
R3X0001	HW_REV	Hardware Version Code	-, -, -		F3
R3X0002	FIRMWARE_REV	Main Software Version Code	-, -, -		F1
R3X0003	MOD_FILE_NO	Modification File Number 1	-, -, -		F1
R3X0004	BOOT_SW_REV	Boot Software Version Code	-, -, -		F1
R3X0005	SUPERVISOR_PROC_REV	Supervisor Processor Version Code	-, -, -		F1
R3X0006	PRODUCT_OPT	Multilin product options	-, -, -		F104
R3X0007	MOD_FILE_2	Modification File Number 2	-, -, -		F1
R3X0008	MOD_FILE_3	Modification File Number 3	-, -, -		F1
R3X0009	MOD_FILE_4	Modification File Number 4	-, -, -		F1
R3X000A	MOD_FILE_5	Modification File Number 5	-, -, -		F1
R3X000B	MAIN_VER_MD	Main Version Month, Day	-, -, -		F40
R3X000C	MAIN_VER_YEAR	Main Version Year	-, -, -		F41
R3X000D	SUP_REV_MD	Supervisor Revision Month, Day	-, -, -		F40
R3X000E	SUP_REV_YEAR	Supervisor Revision Year	-, -, -		F41
R3X000F	BOOT_REV_MD	Boot Revision Month, Day	-, -, -		F40
R3X0010	BOOT_REV_YEAR	Boot Revision Year	-, -, -		F41
R3X0020S8	SERIAL_NUMBER	Serial Number	ASCII, -, -		F8
R3X0030	CALIB_DAY	Calibration Day	-, -, -		F1
R3X0031	CALIB_MONTH	Calibration Month	-, -, -		F109
R3X0032	CALIB_YEAR	Calibration Year	-, -, -		F1
R3X0040	MANUFAC_DAY	Manufacture Day	-, -, -		F1
R3X0041	MANUFAC_MONTH	Manufacture Month	-, -, -		F109
R3X0042	MANUFAC_YEAR	Manufacture Year	-, -, -		F1
R3X0200	SWITCH_INPUT_STAT	Switch Input Status	-, -, -		F100
R3X0201	LED_STAT	LED Status Flags	-, -, -		F101
R3X0202	LED_ATTRIB	LED Attribute Flags	-, -, -		F108
R3X0203	OUTPUT_RLY_STAT	Output Relay Status Flags	-, -, -		F107
R3X0204	AUX_ACTIVE_STAT	Auxiliary Active Status Flags	-, -, -		F106
R3X0205	AUX_PICKUP_STAT	Auxiliary Pickup Status Flags	-, -, -		F106
R3X0206	ALARM_ACTIVE_STAT	Alarm Active Status Flags	-, -, -		F102
R3X0207	ALARM_PICKUP_STAT	Alarm Pickup Status Flags	-, -, -		F102
R3X0208	TRIP_ACTIVE_STAT	Trip Active Status Flags	-, -, -		F103
R3X0209	TRIP_PICKUP_STAT	Trip Pickup Status Flags	-, -, -		F103
R3X020A	MOTOR_MODE	Motor Mode	-, -, -		F4
R3X020B	TRIP_CAUSE	Cause of Trip	-, -, -		F5
R3X020C	SYSTEM_STAT	System Status	-, -, -		F29
R3X020D	TIME_TO_TRIP	Time To Trip	0.1 x sec 0.1 x min, -, -		F1 note b
R3X020E	TIME_TO_TRIP_UNITS	Time To Trip Units	-, -, -		F110
R3X020F	TRIP_TYPE_FOR_TTT	Trip Type for Time To Trip	-, -, -		F5
R3X0210	LASTTRIP_CAUSE	Cause of Last Trip	-, -, -		F5
R3X0211	PRETRP_AMPS_A	Pre-Trip Phase A Current	***, -, -		F1
R3X0212	PRETRP_AMPS_B	Pre-Trip Phase B Current	***, -, -		F1
R3X0213	PRETRP_AMPS_C	Pre-Trip Phase C Current	***, -, -		F1
R3X0214	PRETRP_AMPS_GND	Pre-Trip Ground Current	0.1 x A, -, -		F1
R3X0215	PRETRP_CURR_UNBAL	Pre-Trip Current Unbalance	%, -, -		F1
R3X0216I	PRETRP_TEMP_RTD1_C	Pre-Trip RTD 1 Temp. (RTD Option)	°C, -, -		F2****

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X0217I	PRETRP_TEMP_RTD1_F	Pre-Trip RTD 1 Temp. (RTD Option)	°F, -, -		F2****
R3X0218I	PRETRP_TEMP_RTD2_C	Pre-Trip RTD 2 Temp (RTD Option)	°C, -, -		F2****
R3X0219I	PRETRP_TEMP_RTD2_F	Pre-Trip RTD 2 Temp. (RTD Option)	°F, -, -		F2****
R3X021AI	PRETRP_TEMP_RTD3_C	Pre-Trip RTD 3 Temp. (RTD Option)	°C, -, -		F2****
R3X021BI	PRETRP_TEMP_RTD3_F	Pre-Trip RTD 3 Temp. (RTD Option)	°F, -, -		F2****
R3X021C	LASTTRIP_2_CAUSE	Cause of 2nd Last Trip	-, -, -		F5
R3X021D	LASTTRIP_3_CAUSE	Cause of 3rd Last Trip	-, -, -		F5
R3X021E	LASTTRIP_4_CAUSE	Cause of 4th Last Trip	-, -, -		F5
R3X021F	LASTTRIP_5_CAUSE	Cause of 5th Last Trip	-, -, -		F5
R3X0220	SETPT_GRP_USE	Setpoints Group in Use	-, -, 0 - 3		F113
R3X0222	CURRENT_SP_GROUP	Currently Selected Setpoints Group	-, -, -		F113
R3X0228	MAIN_PH_CUR_SF	Main Phase Current Scale Factor	-, -, -		F1
R3X0229	AMPS_A	Phase A Current	***, -, -		F1
R3X022A	AMPS_B	Phase B Current	***, -, -		F1
R3X022B	AMPS_C	Phase C Current	***, -, -		F1
R3X022C	AMPS_GND	Ground Current	0.1 x A, -, -		F1
R3X022D	CURRENT_UNBAL	Current Unbalance	%, -, -		F1
R3X022E	CUR_SC_FAC_GND	Ground Current Scale Factor	-, -, -		F114
R3X022F	CUR_SC_FAC_2PH	2nd Phase Current Scale Factor	-, -, -		F1
R3X0230	CUR_SC_FAC_3PH	3rd Phase Current Scale Factor	-, -, -		F1
R3X0231	CUR_SC_FAC_4PH	4th Phase Current Scale Factor	-, -, -		F1
R3X0238	MOTOR_LOAD	Motor Load	% of FLC, -, -		F1
R3X0239	THERM_CAP	Thermal Capacity	%, -, -		F1
R3X023A	CALC_TIME_TO_OL_TRP	Calculated Time To O/L Trip	F39, -, -		F1
R3X023B	OL_TIME_UNITS_SCALE	Time To O/L Trip Units and Scale	-, -, -		F39
R3X023C	MOTCAP_OL_RST_TIME	Time To Overload Reset	---, ---, 0.1xmi		F1
R3X0229	AMPS_A	Phase A Current	-, -, ***		F1
R3X0240I	TEMP_RTD1_C	RTD 1 Temperature (RTD Option)	°C, -, -		F2****
R3X0241I	TEMP_RTD1_F	RTD 1 Temperature (RTD Option)	°F, -, -		F2****
R3X0242I	TEMP_RTD2_C	RTD 2 Temperature (RTD Option)	°C, -, -		F2****
R3X0243I	TEMP_RTD2_F	RTD 2 Temperature (RTD Option)	°F, -, -		F2****
R3X0244I	TEMP_RTD3_C	RTD 3 Temperature (RTD Option)	°C, -, -		F2****
R3X0245I	TEMP_RTD3_F	RTD 3 Temperature (RTD Option)	°F, -, -		F2****
R3X0246	THERMISTOR	Thermistor	-, -, -		F6
R3X0247	FAIL_CAUSE_RTD_SENS	RTD Sensor Failure Cause (RTD Option)	-, -, -		F33
R3X0248	HOTTEST_STA_RTD	Hottest Stator RTD Number (RTD Option)	-, -, -		F1
R3X0249	HOTTEST_BEAR_RTD	Hottest Bearing RTD Number (RTD Option)	-, -, -		F1
R3X0250	ADC_REF	ADC Reference	-, -, -		F1
R3X0251	THERMISTOR_READ	Thermistor Reading	Ohms, -, -		F1
R3X0252	PL_FINE	Power Loss Fine Time	10 ms, -, -		F1
R3X0253	PL_COARSE	Power Loss Coarse Time	0.1 min, -, -		F1
R3X0254	KEY_PRESS	Current key press	-, -, -		F7
R3X0255	ERROR_CODE_INT_FAULT	Internal Fault Error Code	-, -, -		F105
R3X0256	AMPS_A_FAST	Phase A Current (fast update)	***, -, -		F1
R3X0257	AMPS_B_FAST	Phase B Current (fast update)	***, -, -		F1
R3X0258	AMPS_C_FAST	Phase C Current (fast update)	***, -, -		F1
R3X0259	AMPS_GND_FAST	Ground Current (fast update)	0.1 x A, -, -		F1
R3X025A	RTD1_CALIB_UNSC	Calibrated Unscaled RTD 1 value	ADC counts, -, -		F1
R3X025B	RTD_REF	RTD Reference	-, -, -		F1
R3X025C	UPLOAD_MODE_CNT	Upload Mode Count	-, -, -		F1
R3X0260S40	MESSAGE_BUFFER	Message Buffer	ASCII, -, -		F8

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X02B0	MOT_MAX_ST_CUR	Motor Max Starting Current	A,1,0-10000	R	F1
R3X02B4L	MOT_RUN_TIME	Motor Running Time (high)	0.1 * hr, - , -	R	F45

COMMAND COILS

Command Coils					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value	R/W	Format Code
R4X0080L	COMMAND_KEYS	Command Function Code	5	R/W	F1
R4X0081		Command Operation Code	1-13	R/W	F27
R4X0082	COMM_DATA_01	Command Data 1	0-65535, step 1	R/W	F8,F28,F30
R4X0083	COMM_DATA_02	Command Data 2	0-65535, step 1	R/W	F31
R4X0084	COMM_DATA_03	Command Data 3	0-65535, step 1	R/W	F8
R4X0085	COMM_DATA_04	Command Data 4	0-65535, step 1	R/W	F8
R4X0086	COMM_DATA_05	Command Data 5	0-65535, step 1	R/W	F8
R4X0087	COMM_DATA_06	Command Data 6	0-65535, step 1	R/W	F8
R4X0088	COMM_DATA_07	Command Data 7	0-65535, step 1	R/W	F8
R4X0089	COMM_DATA_08	Command Data 8	0-65535, step 1	R/W	F8
R4X008A	COMM_DATA_09	Command Data 9	0-65535, step 1	R/W	F8
R4X008B	COMM_DATA_10	Command Data 10	0-65535, step 1	R/W	F8
R4X008C	COMM_DATA_11	Command Data 11	0-65535, step 1	R/W	F8

269+ Motor Relay

- *SETPOINT REGISTERS*
- *ACTUAL VALUES*

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40000	CT_RATIO	Phase C.T. ratio	x1, 20–1500	RW	Integer
R40001	FULL_LD_CURR	Motor Full load current	Amps, 10–1500	RW	Integer
R40002	ACC_TIME	Acceleration time (Note 8)	X0.5 SEC., 1–251	RW	Integer
R40003	STARTS_PER_HR	Starts per hour	(Note 9) 1–6	RW	Integer
R40004	UNBAL_ALM_LVL	Unbalance Alarm level (Note 10)	%, 4–31	RW	Integer
R40005	UNBAL_ALM_DLY	Unbalance Alarm delay	seconds, 3–255	RW	Integer
R40006	UNBAL_TRP_LVL	Unbalance Trip level (Note 10)	%, 4–31	RW	Integer
R40007	UNBAL_TRP_DLY	Unbalance Trip delay	seconds, 3–255	RW	Integer
R40008	GF_CT_RATIO	G/F C.T. ratio (Note 11)	x1, 20–1500	RW	Integer
R40009	GF_ALM_LVL	G/F Alarm level	(Note 12), 1–11	RW	Integer
R40010	GF_ALM_DLY	G/F Alarm delay	seconds, 1–255	RW	Integer
R40011	GF_TRP_LVL	G/F Trip level	(Note 12), 1–11	RW	Integer
R40012	GF_TRP_DLY	G/F Trip delay (Note 13)	X0.5 SEC., 0–41	RW	Integer
R40013	UC_LVL	Undercurrent level (Note 14)	Amps, 1–1001	RW	Integer
R40014	UC_DLY	Undercurrent delay	seconds, 1–255	RW	Integer
R40015	RPD_TRP_LVL	Rapid Trip level (Note 15)	X0.5 FLC, 3–13 (13 = OFF)	RW	Integer
R40016	RPD_TRP_DLY	Rapid Trip delay	X0.5 SECS., 1–250	RW	Integer
R40017	SC_LVL	Short Circuit level (Note 16)	X1 FLC, 4–13	RW	Integer
R40018	SC_DLY	Short Circuit delay (Note 17)	X0.5 SECS., 0–41	RW	Integer
R40019	IM_OVLD	Immediate overload (Note 18)	x0.01 XFCL, 101–151	RW	Integer
R40020	CT_SEC	Phase CT Secondary	(Note 31), 9–10	RW	Integer
R40021	OVLD_PICKUP_LVL	Overload Pickup Level	x0.01 FLC 105–195 (service only)	RW	Integer
R40024	CELS_FAHR	Celsius/Fahrenheit (Note 55)	°C/°F, 41H = Celsius 42H = Fahrenheit	RW	Integer
R40025	NO_OF_STA_RTD	Number of stator RTDs selected	0–6	RW	Integer
R40026	RTD1_ALM_LVL	RTD 1 Alarm Level (Note 40)	°C, 0–201	RW	Integer
R40027	RTD1_TRP_LVL	RTD 1 Trip Level (Note 40)	°C, 0–201	RW	Integer
R40028	RTD2_ALM_LVL	RTD 2 Alarm Level (Note 40)	°C, 0–201	RW	Integer
R40029	RTD2_TRP_LVL	RTD 2 Trip Level (Note 40)	°C, 0–201	RW	Integer
R40030	RTD3_ALM_LVL	RTD 3 Alarm Level (Note 40)	°C, 0–201	RW	Integer
R40031	RTD3_TRP_LVL	RTD 3 Trip Level (Note 40)	°C, 0–201	RW	Integer
R40032	RTD4_ALM_LVL	RTD 4 Alarm Level (Note 40)	°C, 0–201	RW	Integer
R40033	RTD4_TRP_LVL	RTD 4 Trip Level (Note 40)	°C, 0–201	RW	Integer
R40034	RTD5_ALM_LVL	RTD 5 Alarm Level (Note 40)	°C, 0–201	RW	Integer
R40035	RTD5_TRP_LVL	RTD 5 Trip Level (Note 40)	°C, 0–201	RW	Integer
R40036	RTD6_ALM_LVL	RTD 6 Alarm Level (Note 40)	°C, 0–201	RW	Integer
R40037	RTD6_TRP_LVL	RTD 6 Trip Level (Note 40)	°C, 0–201	RW	Integer
R40038	RTD7_ALM_LVL	RTD 7 Alarm Level (Note 40)	°C, 0–201	RW	Integer
R40039	RTD7_TRP_LVL	RTD 7 Trip Level (Note 40)	°C, 0–201	RW	Integer
R40040	RTD8_ALM_LVL	RTD 8 Alarm Level (Note 40)	°C, 0–201	RW	Integer
R40041	RTD8_TRP_LVL	RTD 8 Trip Level (Note 40)	°C, 0–201	RW	Integer
R40042	RTD9_ALM_LVL	RTD 9 Alarm Level (Note 40)	°C, 0–201	RW	Integer

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40043	RTD9_TRP_LVL	RTD 9 Trip Level (Note 40)	°C, 0–201	RW	Integer
R40044	RTD10_ALM_LVL	RTD 10 Alarm Level (Note 40)	°C, 0–201	RW	Integer
R40045	RTD10_TRP_LVL	RTD 10 Trip Level (Note 40)	°C, 0–201	RW	Integer
R40048	OVLD_CURVE	Selected Overload curve	(Note 19), 1–8	RW	Integer
R40049	TRP_TIME_105X	Trip time at 1.05 XFCLC	seconds, 1–12000	RW	Integer
R40050	TRP_TIME_110X	Trip time at 1.10 XFCLC	seconds, 1–12000	RW	Integer
R40051	TRP_TIME_120X	Trip time at 1.20 XFCLC	seconds, 1–12000	RW	Integer
R40052	TRP_TIME_130X	Trip time at 1.30 XFCLC	seconds, 1–12000	RW	Integer
R40053	TRP_TIME_140X	Trip time at 1.40 XFCLC	seconds, 1–12000	RW	Integer
R40054	TRP_TIME_150X	Trip time at 1.50 XFCLC	seconds, 1–2000	RW	Integer
R40055	TRP_TIME_175X	Trip time at 1.75 XFCLC	seconds, 1–2000	RW	Integer
R40056	TRP_TIME_200X	Trip time at 2.00 XFCLC	seconds, 1–2000	RW	Integer
R40057	TRP_TIME_225X	Trip time at 2.25 XFCLC	seconds, 1–2000	RW	Integer
R40058	TRP_TIME_250X	Trip time at 2.50 XFCLC	seconds, 1–2000	RW	Integer
R40059	TRP_TIME_275X	Trip time at 2.75 XFCLC	seconds, 1–2000	RW	Integer
R40060	TRP_TIME_300X	Trip time at 3.00 XFCLC	seconds, 1–2000	RW	Integer
R40061	TRP_TIME_350X	Trip time at 3.50 XFCLC	seconds, 1–2000	RW	Integer
R40062	TRP_TIME_400X	Trip time at 4.00 XFCLC	seconds, 1–2000	RW	Integer
R40063	TRP_TIME_450X	Trip time at 4.50 XFCLC	seconds, 1–2000	RW	Integer
R40064	TRP_TIME_500X	Trip time at 5.00 XFCLC	seconds, 1–2000	RW	Integer
R40065	TRP_TIME_550X	Trip time at 5.50 XFCLC	seconds, 1–2000	RW	Integer
R40066	TRP_TIME_600X	Trip time at 6.00 XFCLC	seconds, 1–2000	RW	Integer
R40067	TRP_TIME_650X	Trip time at 6.50 XFCLC	seconds, 1–2000	RW	Integer
R40068	TRP_TIME_700X	Trip time at 7.00 XFCLC	seconds, 1–2000	RW	Integer
R40069	TRP_TIME_750X	Trip time at 7.50 XFCLC	seconds, 1–2000	RW	Integer
R40070	TRP_TIME_800X	Trip time at 8.00 XFCLC	seconds, 1–2000	RW	Integer
R40073	OVLD_TRP_ASGN	Overload Trip assignment	(Note 20) 16 to 18 10H = assign–AUX.1 11H = assign–TRIP 12H = assign–both	RW	Integer
R40074	UNBAL_TRP_ASGN	Unbalance Trip assignment	(Note 20) 16 to 18 10H = assign–AUX.1 11H = assign–TRIP 12H = assign–both	RW	Integer
R40075	SC_TRP_ASGN	Short Circuit Trip assignment	(Note 20) 16 to 18 10H = assign–AUX.1 11H = assign–TRIP 12H = assign–both	RW	Integer
R40076	RPD_TRP_ASGN	Rapid Trip assignment	(Note 20) 16 to 18 10H = assign–AUX.1 11H = assign–TRIP 12H = assign–both	RW	Integer

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40077	STA_RTD_TRP_ASGN	Stator RTD Trip assignment	(Note 20) 16 to 18 10H = assign-AUX.1 11H = assign-TRIP 12H = assign-both	RW	Integer
R40078	RTD_TRP_ASGN	RTD Trip assignment	(Note 20) 16 to 18 10H = assign-AUX.1 11H = assign-TRIP 12H = assign-both	RW	Integer
R40079	GF_TRP_ASGN	Ground Fault Trip assignment	(Note 20) 16 to 18 10H = assign-AUX.1 11H = assign-TRIP 12H = assign-both	RW	Integer
R40080	ACC_TRP_ASGN	Acceleration Trip assignment	(Note 20) 16 to 18 10H = assign-AUX.1 11H = assign-TRIP 12H = assign-both	RW	Integer
R40081	PHA_RVRSL_TRP_ASGN	Phase Reversal Trip assignment	(Note 20) 16 to 18 10H = assign-AUX.1 11H = assign-TRIP 12H = assign-both	RW	Integer
R40082	INHIB_TRP_ASGN	Inhibits Trip assignment	(Note 20) 16 to 18 10H = assign-AUX.1 11H = assign-TRIP 12H = assign-both	RW	Integer
R40083	SPD_SW_TRP_ASGN	Speed Switch Trip assignment	(Note 20) 16 to 18 10H = assign-AUX.1 11H = assign-TRIP 12H = assign-both	RW	Integer
R40084	DIF_INPUT_TRP_ASGN	Differential Input Trip assignment	(Note 20) 16 to 18 10H = assign-AUX.1 11H = assign-TRIP 12H = assign-both	RW	Integer
R40085	SGL_PHA_TRP_ASGN	Single Phase Trip assignment	(Note 20) 16 to 18 10H = assign-AUX.1 11H = assign-TRIP 12H = assign-both	RW	Integer
R40086	SPR_INPUT_TRP_ASGN	Spare Input Trip assignment	(Note 20) 16 to 18 10H = assign-AUX.1 11H = assign-TRIP 12H = assign-both	RW	Integer
R40087	PF_TRP_ASGN	Power Factor Trip assignment	(Note 20) 16 to 18 10H = assign-AUX.1 11H = assign-TRIP 12H = assign-both	RW	Integer

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40088	UV_TRP_ASGN	Undervoltage Trip assignment	(Note 20) 16 to 18 10H = assign-AUX.1 11H = assign-TRIP 12H = assign-both	RW	Integer
R40089	OVLW_WNG_ASGN	Overload Warning assignment	(Note 20) 13 to 16 0DH = assign-AUX.2 0EH = assign-ALARM 0FH = assign-NO	RW	Integer
R40090	GF_ALM_ASGN	Ground Fault Alarm assignment	(Note 20) 13 to 16 0DH = assign-AUX.2 0EH = assign-ALARM 0FH = assign-NO	RW	Integer
R40091	UNBAL_ALM_ASGN	Unbalance Alarm assignment	(Note 20) 13 to 16 0DH = assign-AUX.2 0EH = assign-ALARM 0FH = assign-NO	RW	Integer
R40092	UC_ALM_ASGN	Undercurrent Alarm assignment	(Note 20) 13 to 16 0DH = assign-AUX.2 0EH = assign-ALARM 0FH = assign-NO	RW	Integer
R40093	STA_RTD_ALM_ASGN	Stator RTD Alarm assignment	(Note 20) 13 to 16 0DH = assign-AUX.2 0EH = assign-ALARM 0FH = assign-NO	RW	Integer
R40094	RTD_ALM_ASGN	RTD Alarm assignment	(Note 20) 13 to 16 0DH = assign-AUX.2 0EH = assign-ALARM 0FH = assign-NO	RW	Integer
R40095	NOSENSOR_ALM_ASGN	No Sensor Alarm assignment	(Note 20) 13 to 16 0DH = assign-AUX.2 0EH = assign-ALARM 0FH = assign-NO	RW	Integer
R40096	SLFTST_ALM_ASGN	Self-Test assignment	(Note 20) 13 to 16 0DH = assign-AUX.2 0EH = assign-ALARM 0FH = assign-NO	RW	Integer
R40097	SPR_INPUT_ALM_ASGN	Spare Input Alarm assignment	(Note 20) 13 to 16 0DH = assign-AUX.2 0EH = assign-ALARM 0FH = assign-NO	RW	Integer
R40098	NOSLAVE_ASGN	No Slave Message assignment	(Note 20) 13 to 16 0DH = assign-AUX.2 0EH = assign-ALARM 0FH = assign-NO	RW	Integer

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40099	PF_ALM_ASGN	Power Factor Alarm assignment	(Note 20) 13 to 16 ODH = assign-AUX.2 OEH = assign-ALARM OFH = assign-NO	RW	Integer
R40100	UV_ALM_ASGN	Undervoltage Alarm assignment	(Note 20) 13 to 16 ODH = assign-AUX.2 OEH = assign-ALARM OFH = assign-NO	RW	Integer
R40101	KVAR_ALM_ASGN	KVAR Limit Alarm assignment	(Note 20) 13 to 16 ODH = assign-AUX.2 OEH = assign-ALARM OFH = assign-NO	RW	Integer
R40102	MTMCOMM_ALM_ASGN	MTM Comm. Alarm assignment	(Note 20) 13 to 16 ODH = assign-AUX.2 OEH = assign-ALARM OFH = assign-NO	RW	Integer
R40103	THM_ALM_ASGN	Thermal capacity alarm assignment	(Note 20) 13 to 16 ODH = assign-AUX.2 OEH = assign-ALARM OFH = assign-NO	RW	Integer
R40104	LOW_TEMP_ALM_ASGN	Low temp alarm assignment	(Note 20) 13 to 16 ODH = assign-AUX.2 OEH = assign-ALARM OFH = assign-NO	RW	Integer
R40109	DFT_DSP_LINE_CODE	Default Display Line Code	1-40	RW	Integer
R40110	DFT_DSP_PAGE_CODE	Default Display Page Code	1-10	RW	Integer
R40111	RTD_BIAS_MIN	RTD Bias minimum value (Note 21)	°C, 0-200	RW	Integer
R40112	RTD_BIAS_MAX	RTD Bias maximum value (Note 21)	°C, 0-200	RW	Integer
R40113	DFT_RUN_COOL_TIME	Default Running Cool Time (Note 22)	minutes, 1-45	RW	Integer
R40114	DFT_STP_COOL_TIME	Default Stopped Cool Time (Note 22)	minutes, 5-213	RW	Integer
R40115	DA_OUTPUT	D/A Output parameter	(Note 23), 45-49 45 = max stator temp outputted 46 = thermal memory used outputted 47 = motor load as % of full load output 48 = % CT secondary	RW	Integer
R40116	ALM_RLY_LTCHCODE	Alarm Relay Latchcode	(Note 24), 1-7	RW	Integer
R40117	RLY_FS_CODE	Relay Failsafe code	(Note 25), 1-8	RW	Integer
R40118	SPD_SW_DLY	Speed Switch Delay	X 0.5 SECS, 1-200 (Set-Disabled if Speed Switch is disabled)	RW	Integer
R40119	SPA_INPUT_ALM_DLY	Spare Input Alarm Delay (Note 32)	seconds, 1-255	RW	Integer
R40120	SPA_INPUT_TRP_DLY	Spare Input Trip Delay (Note 32)	seconds, 1-255	RW	Integer
R40121	DFT_K	Default K (Note 39)	1-20	RW	Integer
R40122	FLC_THM_REDUCTION	FLC Thermal Capacity Reduction	%, 5-90	RW	Integer
R40123	ANALOG_SCALE	Type of User Analog Output scale	(Note 41), 32H-34H	RW	Integer

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40124	BS_TMR_SETPT	Backspin Timer Setpoint (Note 32)	Minutes, 1–255	RW	Integer
R40125	TIME_BTW_STARTS	Time Between Starts (Note 32)	Minutes, 1–255	RW	Integer
R40126	THM_ALM_LVL	Thermal Capacity Alarm Level (Note 54)	% TC used, 1–101	RW	Integer
R40127	THM_ALM_DLY	Thermal Capacity Alarm Delay	seconds, 1–255	RW	Integer
R40128	RTD_CTR_THM	RTD Bias Center Thermal Capacity	% TC used, 1–99	RW	Integer
R40129	RTD_CTR_TEMP	RTD Bias Center Temperature	°C, 1–199 (RTD bias min < RTD bias cen < RTD bias max)	RW	Integer
R40130	AO_ML_FS	Analog Output Motor Load Full Scale	%, 25–250	RW	Integer
R40131	SLAVE_FUNC_REG1	SLAVE FUNCTION Register 1	(Note 27) 0–65535	RW	Integer
R40132	SLAVE_FUNC_REG2	SLAVE FUNCTION Register 2	(Note 27) 0–65535	RW	Integer
R40133	SLAVE_FUNC_REG3	SLAVE FUNCTION Register 3	(Note 27) 0–65535	RW	Integer
R40136	RLY_FRC_CODE	User relay force code	(Note 35), 1BH–20H	RW	Integer
R40137	RTD_FRC_CODE	User RTD force code	(Note 36), 0–10	RW	Integer
R40138	RTD_FRC_CODE_VAL	User RTD force code value	°C, 0–201 (Note 34)	RW	Integer
R40139	AO_FRC_CODE	User analog force code	(Note 37), 0–255 0 (0=0mA; 255=20mA)	RW	Integer
R40140	SW_INP_FRC_CODE	Switch Input Force Code	(Note 42), 27H–2CH	RW	Integer
R40141	SW_INP_STATUS	Switch Input Status	(Note 42), 25H–26H	RW	Integer
R40153	SP_STATUS_1	Setpoints Status Bits Register 1	(Note 26) Register 1	RW	Discrete
R40154	SP_STATUS_2	Setpoints Status Bits Register 2	(Note 26) Register 2	RW	Discrete
R40155	TRP_MSG_CNT	TRPMSGCONT(Reserved)	(Note 30)	RW	Integer
R40156	TIME_OUT	TIMEOUT- Display timeout counter	(Note 33)	RW	Integer
R40159	MTM_CT_RATIO	MTM CT Ratio	x 1, 20–1500	RW	Integer
R40160	MTM_PT_RATIO	MTM PT Ratio	x 0.1, 10–2550	RW	Integer
R40161	UV_ALM_LVL	Undervoltage Alarm Level	(Note 43), 30–96 (96=OFF)	RW	Integer
R40162	UV_ALM_DLY	Undervoltage Alarm Delay	seconds, 1–255	RW	Integer
R40163	UV_TRP_LVL	Undervoltage Trip Level	(Note 43), 30–96 (96=OFF)	RW	Integer
R40164	UV_TRP_DLY	Undervoltage Trip Delay	seconds, 1–255	RW	Integer
R40165	PF_LEAD_ALM_LVL	Power Factor Lead Alarm Level	(Note 44), 5–100	RW	Integer
R40166	PF_LAG_ALM_LVL	Power Factor Lag Alarm Level	(Note 44), 5–100	RW	Integer
R40167	PF_ALM_DLY	Power Factor Alarm Delay	seconds, 1–255	RW	Integer
R40168	PF_LEAD_TRP_LVL	Power Factor Lead Trip Level	(Note 44), 5–100	RW	Integer
R40169	PF_LAG_TRP_LVL	Power Factor Lag Trip Level	(Note 44), 5–100	RW	Integer
R40170	PF_TRP_DLY	Power Factor Trip Delay	seconds, 1–255	RW	Integer
R40171	KVAR_ALM_LVL	KVAR Alarm Level	(Note 45), 1–251	RW	Integer
R40172	KVAR_ALM_DLY	KVAR Alarm Delay	seconds, 1–255	RW	Integer
R40173	AO_SCALE_FACTOR	Analog Output Scale Factor	x 1, 1–255	RW	Integer
R40174	PF_PRT_DLY	Power Factor Protection Delay (Note 32)	seconds, 1–255	RW	Integer
R40175	OV_ALM_LVL	Overvoltage Alarm Level	% (Note 43), 101–116	RW	Integer
R40176	OV_ALM_DLY	Overvoltage Alarm Delay	seconds, 1–255	RW	Integer
R40177	OV_TRP_LVL	Overvoltage Trip Level	% (Note 43), 101–116	RW	Integer
R40178	OV_TRP_DLY	Overvoltage Trip Delay	seconds, 1–255	RW	Integer
R40192	OV_TRP_ASGN	Overvoltage Trip Assignment	(Note 20), 16–18	RW	Integer
R40200	OV_ALM_ASGN	Overvoltage Alarm Assignment	(Note 20), 13–16	RW	Integer

ACTUAL VALUES

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R30000	DEVICE_CODE	Multilin product device code	(Note 50), 20 or 52	RO	Integer
R30001	HARDWARE_REV	Multilin product hardware rev code	(Note 51), 0000H-FFFFH	RO	Integer
R30002	FIRMWARE_REV	Multilin product firmware rev code	(Note 52), 0100H-FFFFH	RO	Integer
R30003	MOD_FILE_NO	Multilin Mod. File Number	(Note 53), 0-FFFFH	RO	Integer
R30016	Amps_A	phase 1 current	Amps, 0-18000	RO	Integer
R30017	Amps_B	phase 2 current	Amps, 0-18000	RO	Integer
R30018	Amps_C	phase 3 current	Amps, 0-18000	RO	Integer
R30019	Amps_AVG	average current	Amps, 0-18000	RO	Integer
R30020	HOTTEST_STA_TEMP	hottest stator temperature	°C, 0-200	RO	Integer
R30021	UNBAL_RATIO	unbalance ratio	%, 0-31	RO	Integer
R30022	GF_CURRENT	ground fault current	(note 1), 0-255	RO	Integer
R30023	BG_CNT	bargraph count	x0.25 FLC, 0-24	RO	Integer
R30028	HOTTEST_STA_RTD	hottest stator RTD #	1-6	RO	Integer
R30029	MAX_STA_TEMP	hottest stator temperature	°C, 0-200	RO	Integer
R30030	TEMP_RTD1	RTD 1 temperature (Note 34)	°C, 0-201	RO	Integer
R30031	TEMP_RTD2	RTD 2 temperature (Note 34)	°C, 0-201	RO	Integer
R30032	TEMP_RTD3	RTD 3 temperature (Note 34)	°C, 0-201	RO	Integer
R30033	TEMP_RTD4	RTD 4 temperature (Note 34)	°C, 0-201	RO	Integer
R30034	TEMP_RTD5	RTD 5 temperature (Note 34)	°C, 0-201	RO	Integer
R30035	TEMP_RTD6	RTD 6 temperature (Note 34)	°C, 0-201	RO	Integer
R30036	TEMP_RTD7	RTD 7 temperature (Note 34)	°C, 0-201	RO	Integer
R30037	TEMP_RTD8	RTD 8 temperature (Note 34)	°C, 0-201	RO	Integer
R30038	TEMP_RTD9	RTD 9 temperature (Note 34)	°C, 0-201	RO	Integer
R30039	TEMP_RTD10	RTD 10 temperature (Note 34)	°C, 0-201	RO	Integer
R30040	HOTTEST_STA_RTD_LAST	hottest stator RTD # since last acc.	°C, 1- 6	RO	Integer
R30041	HOTTEST_ST_TEMP_LAST	hottest stator temp. since last acc.	°C, 0-200	RO	Integer
R30042	RTD7_MAX	max. RTD 7 since last acc.	°C, 0-200	RO	Integer
R30043	RTD8_MAX	max. RTD 8 since last acc.	°C, 0-200	RO	Integer
R30044	RTD9_MAX	max. RTD 9 since last acc.	°C, 0-200	RO	Integer
R30045	RTD10_MAX	max. RTD 10 since last acc.	°C, 0-200	RO	Integer
R30050	NO_OF_OVTRP_LAST	# of overvoltage trips since last commissioning	0-255	RO	Integer
R30051	ESTM_TIME_TO_TRP	estimated-time-to-trip (Note 2)	seconds, 0-65535	RO	Integer
R30052	MOTOR_LOAD	motor load (% Full load)	%, 0-1200	RO	Integer
R30053	THM_CAP_USED	thermal capacity used	%, 0-100	RO	Integer
R30054	START_PER_HR_CNT_1	starts/hr counter 1	minutes, 0-60	RO	Integer
R30055	START_PER_HR_CNT_2	starts/hr counter 2	minutes, 0-60	RO	Integer
R30056	START_PER_HR_CNT_3	starts/hr counter 3	minutes, 0-60	RO	Integer
R30057	START_PER_HR_CNT_4	starts/hr counter 4	minutes, 0-60	RO	Integer
R30058	START_PER_HR_CNT_5	starts/hr counter 5	minutes, 0-60	RO	Integer
R30059	RUN_HOURS	running hours since commissioning	HOURS, 0-65535	RO	Integer
R30060	NO_OF_STARTS	# of starts since commissioning	0-65535	RO	Integer
R30061	NO_OF_TRPS	# of trips since commissioning	0-65535	RO	Integer

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R30062	NO_OF_OL_TRPS	# of O/L trips since commissioning	0–255	RO	Integer
R30063	NO_OF_RPD_TRPS	# of Rapid trips since commissioning	0–255	RO	Integer
R30064	NO_OF_UNBAL_TRPS	# of U/B trips since commissioning	0–255	RO	Integer
R30065	NO_OF_GF_TRPS	# of G/F trips since commissioning	0–255	RO	Integer
R30066	NO_OF_RTD_TRPS	# of RTD trips since commissioning	0–255	RO	Integer
R30067	NO_OF_START_TRPS	# of start trips since commissioning	0–255	RO	Integer
R30068	NO_OF_SC_TRPS	# of S/C trips since commissioning	0–255	RO	Integer
R30069	MWH	MegaWattHours since commissioning	MWHR, 0–65535	RO	Integer
R30070	NO_OF_UV_TRPS	# of undervoltage trips since commissioning	0–255	RO	Integer
R30071	NO_OF_PF_TRPS	# of power factor trips since commissioning	0–255	RO	Integer
R30072	NO_OF_PHS_RVRSL_TRPS	# of voltage phase reversal trips since commissioning	0–255	RO	Integer
R30073D1-0	OV_ALM_STATUS	Motor Alarm Status 2, overvoltage	(Note 4, Motor Alarm Status 2)	RO	Discrete
R30074D1-0	OV_TRIP_STATUS	Motor Trip Status 2, overvoltage	(Note 5, Motor Trip Status 2)	RO	Discrete
R30075	LOTEMP_ALM_RTD	Lotemp Alarm RTD Num	1–10	RO	Integer
R30077	MT_CURRENT_STAT	Motor Current Status	(Note 3), 0–3	RO	Integer
R30078D1-0	IM_OL_WNG	Motor Alarm Status 1, immediate OL warning	(Note 4)	RO	Discrete
R30078D1-1	GF_ALM	Motor Alarm Status 1, Ground/Fault alarm	(Note 4)	RO	Discrete
R30078D1-2	UNBAL_ALM	Motor Alarm Status 1, unbalance alarm	(Note 4)	RO	Discrete
R30078D1-3	UC_ALM	Motor Alarm Status 1, undercurrent alarm	(Note 4)	RO	Discrete
R30078D1-4	STA_RTD_ALM	Motor Alarm Status 1, Stator RTD alarm	(Note 4)	RO	Discrete
R30078D1-5	BRNG_RTD_ALM	Motor Alarm Status 1, bearing RTD alarm	(Note 4)	RO	Discrete
R30078D1-6	BRKN_SENS_ALM	Motor Alarm Status 1, broken sensor alarm	(Note 4)	RO	Discrete
R30078D1-7	SLFTST_FAIL_ALM	Motor Alarm Status 1, selftest failure	(Note 4)	RO	Discrete
R30078D1-8	SPA_INP_ALM	Motor Alarm Status 1, spare input alarm	(Note 4)	RO	Discrete
R30078D1-10	PF_ALM	Motor Alarm Status 1, power factor alarm	(Note 4)	RO	Discrete
R30078D1-11	UV_ALM	Motor Alarm Status 1, undervoltage alarm	(Note 4)	RO	Discrete
R30078D1-12	KVAR_ALM	Motor Alarm Status 1, KVAR limit alarm	(Note 4)	RO	Discrete
R30078D1-13	MTMCOM_ALM	Motor Alarm Status 1, MTM comm failure alarm	(Note 4)	RO	Discrete
R30078D1-14	THMCAP_ALM	Motor Alarm Status 1, thermal capacity alarm	(Note 4)	RO	Discrete
R30078D1-15	LOTEMP_ALM	Motor Alarm Status 1, RTD low temp alarm	(Note 4)	RO	Discrete
R30079D1-0	OL_TRIP	Motor Trip Status 1, overload trip	(Note 5)	RO	Discrete
R30079D1-1	UNBAL_TRIP	Motor Trip Status 1, unbalance trip	(Note 5)	RO	Discrete
R30079D1-2	SC_TRIP	Motor Trip Status 1, short circuit trip	(Note 5)	RO	Discrete
R30079D1-3	RPD_TRIP	Motor Trip Status 1, rapid trip	(Note 5)	RO	Discrete

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R30079D1-4	STA_RTD_TRIP	Motor Trip Status 1, stator RTD trip	(Note 5)	RO	Discrete
R30079D1-5	RTD_TRIP	Motor Trip Status 1, RTD trip	(Note 5)	RO	Discrete
R30079D1-6	GF_TRIP	Motor Trip Status 1, ground fault trip	(Note 5)	RO	Discrete
R30079D1-7	ACC_TIME_TRIP	Motor Trip Status 1, acceleration time trip	(Note 5)	RO	Discrete
R30079D1-8	PHS_RVRSL_TRIP	Motor Trip Status 1, phase reversal trip	(Note 5)	RO	Discrete
R30079D1-9	INH_TRIP	Motor Trip Status 1, inhibits	(Note 5)	RO	Discrete
R30079D1-10	SPDSW_TRIP	Motor Trip Status 1, speed switch trip	(Note 5)	RO	Discrete
R30079D1-11	DIFF_INP_TRIP	Motor Trip Status 1, differential input trip	(Note 5)	RO	Discrete
R30079D1-12	SINGLE_PHS_TRIP	Motor Trip Status 1, single phase trip	(Note 5)	RO	Discrete
R30079D1-13	SPA_INP_TRIP	Motor Trip Status 1, spare input trip	(Note 5)	RO	Discrete
R30079D1-14	PF_TRIP	Motor Trip Status 1, power factor trip	(Note 5)	RO	Discrete
R30079D1-15	UV_TRIP	Motor Trip Status 1, undervoltage trip	(Note 5)	RO	Discrete
R30080	INH_TYPE	Inhibit Type	(Note 48), 37H–3AH	RO	Integer
R30081	MTM_FAIL_TYPE	MTM Failure Type	(Note 49), 3BH–3CH	RO	Integer
R30082D1-0	SP1_CURVE	Setpoints Status Bits Register 1, curve selection	(Note 26) 1 = custom curve	RO	Discrete
R30082D1-3	SP1_RTD_BIAS	Setpoints Status Bits Register 1, RTD bias	(Note 26) 1 = RTD bias defeated	RO	Discrete
R30082D1-4	SP1_STRT_INH	Setpoints Status Bits Register 1, start inhibit feature	(Note 26) 1 = start inhibit enabled	RO	Discrete
R30082D1-5	SP1_UNBAL_BIAS	Setpoints Status Bits Register 1, unbalance bias	(Note 26) 1 = unbalance bias defeated	RO	Discrete
R30082D1-6	SP1_PHS_RVRSL	Setpoints Status Bits Register 1, phase reversal	(Note 26) 1 = phase reversal enabled	RO	Discrete
R30082D1-7	SP1_SGL_SHT_RESTRT	Setpoints Status Bits Register 1, single shot restart	(Note 26) 1 = single shot restart enabled	RO	Discrete
R30082D1-8	SP1_GF_CT	Setpoints Status Bits Register 1, ground fault CT	(Note 26) 1 = xxx:5 0 = 2000:1	RO	Discrete
R30082D1-10	SP1_CLR_LST_RTD	Setpoints Status Bits Register 1, clear last RTD data	(Note 26) 1 = set-clear last RTD access data	RO	Discrete
R30082D1-11	SP1_CLR_COM	Setpoints Status Bits Register 1, clear commissioning data	(Note 26) 1 = set-clear commissioning data	RO	Discrete
R30082D1-12	SP1_NO_SENSOR_ALM	Setpoints Status Bits Register 1, no sensor alarm	(Note 26) 1 = no sensor alarm defeated	RO	Discrete
R30082D1-13	SP1_LRN_COOL_RATE	Setpoints Status Bits Register 1, learned cool rate	(Note 26) 1 = learned cool rate defeated	RO	Discrete
R30082D1-14	SP1_RTD10_AMB	Setpoints Status Bits Register 1, RTD10 made ambient sensor	(Note 26) 1 = RTD10 made ambient sensor	RO	Discrete
R30082D1-15	SP1_SPD_SW_INPUT	Setpoints Status Bits Register 1, speed switch input defeated	(Note 26) 1 = speed swtch input defeated	RO	Discrete
R30083D1-0	SP2_SPCL_EXT_RST	Setpoints Status Bits Register 2, special external reset	(Note 26) 1 = special external reset enabled	RO	Discrete
R30083D1-8	SP2_MTM_ONLN	Setpoints Status Bits Register 2, MTM on line	(Note 26) 1 = MTM on line	RO	Discrete

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R30083D1-9	SP2_VOL_PHS_RVRSL	Setpoints Status Bits Register 2, voltage phase reversal	(Note 26) 1 = voltage phase reversal enabled	RO	Discrete
R30083D1-10	SP2_SPARE	Setpoints Status Bits Register 2, spare enable	(Note 26) 1 = spare enabled as 52B	RO	Discrete
R30083D1-12	SP2_RTD_LO_TEMP	Setpoints Status Bits Register 2, RTD low temp	(Note 26) 1 = RTD low temp enabled	RO	Discrete
R30083D1-13	SP2_STA_RTD_VOTING	Setpoints Status Bits Register 2, stator RTD voting	(Note 26) 1 = enable stator RTD voting	RO	Discrete
R30084	LED_ILL	LEDATA	(Note 29), 0-255	RO	Integer
R30085	LOCKOUT_TIME	Lockout Time	minutes, 0-60	RO	Integer
R30086	AVG_CURR_PRETRP	Pre-Trip average current	Amps, 0-18000	RO	Integer
R30087	UB_RATIO_PRETRP	Pre-Trip unbalance ratio	%, 0-31	RO	Integer
R30088	GF_CURR_PRETRP	Pre-Trip ground fault current	(Note 1), 0-255	RO	Integer
R30089	MAX_STA_PRETRP	Pre-Trip maximum stator #	1-6	RO	Integer
R30090	MAX_STA_TEMP_PRETRP	Pre-Trip maximum stator temp.	°C, 0-200	RO	Integer
R30091	AVG_VOLT_PRETRP	Pretrip Average Voltage	Volts, 0-65535	RO	Integer
R30092	WATT_PRETRP	Pretrip Watts	KWATTS, 0-65535	RO	Integer
R30093	VAR_PRETRP	Pretrip VARS	KVARS, 0-65535	RO	Integer
R30094	PF_PRETRP	Pretrip Power Factor	(Note 44), 0-100	RO	Integer
R30095	PF_SIGN_PRETRP	Pretrip Power Factor sign	(Note 46), 4E H, 5D H, 5E H	RO	Integer
R30096	FREQ_PRETRP	Pretrip Frequency	(Note 47), 0, 400-720	RO	Integer
R30097	RTD_TRP_LVL	RTD Trip Level	°C, 0-200	RO	Integer
R30098	NO_OF_RTD_TRPPED	Number of RTDs Tripped	1-10	RO	Integer
R30101	LAST_TRP_MSG	Cause of Last Trip Message	(Note 56), 45H-56H	RO	Integer
R30102	LEARNED_AVG_ISTART	Learned avg. Istart (Note 6)	Amps, 0-18000	RO	Integer
R30103	LEARNED_LST_ISTART	Learned last Istart	Amps, 0-18000	RO	Integer
R30104	LEARNED_K_FACTOR	Learned K factor	(Note 7), 3-19	RO	Integer
R30105	LEARNED_RUN_COOLTIME	Learned running cool time	minutes, 5-60	RO	Integer
R30106	LEARNED_STP_COOLTIME	Learned stopped cool time	minutes, 5-60	RO	Integer
R30107	LEARNED_ACC_TIME	Learned acceleration time	x0.5 SECS., 0-255	RO	Integer
R30108	LEARNED_START_CAP	Learned start capacity	%, 10-90	RO	Integer
R30109	TIME_BTW_START_CNT	Time between starts counter	minutes, 1-254	RO	Integer
R30121	VOLT_AB	Voltage AB	Volts, 0-65535	RO	Integer
R30122	VOLT_BC	Voltage BC	Volts, 0-65535	RO	Integer
R30123	VOLT_CA	Voltage CA	Volts, 0-65535	RO	Integer
R30124	WATTS	Actual Watts	KWATTS, 0-65535	RO	Integer
R30125	KVARS	Actual VARS	KVARS, 0-65535	RO	Integer
R30126	PF	Power Factor	(Note 44), 0-100	RO	Integer
R30127	PF_SIGN	Power Factor sign	(Note 46), 4E H, 5D H, 5E H	RO	Integer
R30128	FREQUENCY	Frequency	(Note 47), 0, 400-720	RO	Integer

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Notes

In the following notes, MSB or MSByte refers to the 'most significant byte'; LSB or LSByte refer to the 'least-significant byte'; MSb or MSbit refer to the 'most-significant bit'; LSb or LSbit refer to the 'least-significant bit'.

- 1) If G/F C.T. ratio = xxx:5, then units = amps
If G/F C.T. ratio = 2000:1, then units = x0.1 amps
(See note 26, byte 2) bit 0)
- 2) When the reading is 65535 decimal, this indicates that no reading is available.
- 3) Motor Current Status

Value (HEX)	Meaning
00	motor stopped (Iavg < 5% FLC)
01	motor running normal (Iavg < 1FLC)
02	motor in O/L (Iavg > 1FLC)
03	motor starting

- 4) Motor Alarm Status 1

	Bit #	Meaning if bit value = 1
LSB	0	immediate O/L warning
	1	ground fault alarm
	2	unbalance alarm
	3	undercurrent alarm
	4	stator RTD alarm
	5	bearing RTD alarm
	6	broken sensor alarm
MSB	7	self-test failure
	8	spare input alarm
	9	undefined
	10	power factor alarm
	11	undervoltage alarm
	12	kvar limit alarm
	13	MTM comm. failure alarm
	14	thermal capacity alarm
	15	RTD Iotemp alarm

Motor Alarm Status 2

	Bit #	Meaning if bit value = 1
LSB	0	Overvoltage
	1	Undefined
	2	Undefined
	3	Undefined
	4	Undefined
	5	Undefined
	6	Undefined
	7	Undefined

Bit 0 is the LSbit of the LSByte; Bit 15 is the MSbit of MSByte. A state of 0 for any bit indicates that the meaning is reversed.

5) Motor Trip Status 1

	Bit #	Meaning if bit value = 1
LSB	0	overload trip
	1	unbalance trip
	2	short circuit trip
	3	rapid trip
	4	stator RTD trip
	5	RTD trip
	6	ground fault trip
MSB	7	acceleration time trip
	8	phase reversal trip
	9	inhibits
	10	speed switch trip
	11	differential input trip
	12	single phase trip
	13	spare input trip
	14	power factor trip
	15	undervoltage trip

Motor Trip Status 2

	Bit #	Meaning if bit value = 1
LSB	0	Overvoltage
	1	Undefined
	2	Undefined
	3	Undefined
	4	Undefined
	5	Undefined
	6	Undefined
	7	Undefined

Bit 0 is the LSbit of the LSByte; Bit 15 is the MSbit of the MSByte. A state of 0 for any bit indicates that the meaning is reversed.

- 6) Average of 4 starts.
- 7) $K = (I_{start}/I_{FLC})^2/7.41$, value in register should be multiplied by 0.1 to get actual K. (i.e. 32 means 3.2).
- 8) If acceleration time = 251 decimal, this indicates an 'OFF' setpoint.
- 9) If starts/hour = 6, this indicates an 'OFF' setpoint.
- 10) If U/B alarm or trip = 31, this indicates an 'OFF' setpoint.
- 11) This G/F C.T. ratio is used by 269 only if the G/F C.T. type is chosen as :5 (see note 26).
- 12) G/F Alarm and Trip levels are in increments of 1 amp if G/F C.T. ratio is 2000:1 (but 11 is an OFF setpoint), and in increments of 10% of chosen G/F C.T. ratio if xxx:5 chosen. For example, if G/F C.T. ratio type is xxx:5, and G/F C.T. ratio is set-2, and G/F Alarm level is 3, this implies the alarm level is set-0.10(2x50)x3=30amps.
- 13) If G/F trip delay = 0, this indicates a '0.0' setpoint, 41 indicates a 0.25 second delay.
- 14) An Undercurrent setting of 1001 indicates an 'OFF' setpoint.
- 15) A Rapid Trip setting of 10 indicates an 'OFF' setpoint.
- 16) If the Short Circuit setting is 13, this indicates an 'OFF' setpoint.
- 17) If Short Circuit delay setting is 0, this indicates an 'INST' setpoint.
- 18) If immediate O/L setting is 151, this indicates an 'OFF' setpoint.
- 19) If custom curve building is disabled (see note 26), then Selected Overload Curve alters Trip time setpoints to build standard curve.

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20) Assignments are as follows

Value	Meaning
0DH	assign-AUX. 2
0EH	assign-ALARM
0FH	assign-NO
10H	assign-AUX. 1
11H	assign-TRIP
12H	assign-TRIP and AUX. 1

21) RTD Bias minimum, maximum and center temperature values are used by 269 only if RTD Bias is enabled (see note 26). For proper operation, RTD Bias min < RTD Bias center temperature < RTD Bias max.

22) Default Stopped and Running Cool times are used by 269 if LEARNED COOL TIME is defeated (see note 26).

23) D/A OUTPUT parameter assignments are as follows

Value	Meaning
45 (2DH)	Max. Stator temperature outputted
46 (2EH)	Thermal Memory used outputted
47 (2FH)	Motor Load as a % of Full load outputted
48 (30H)	% C.T. Secondary

24) Alarm Relay latchcodes are as follows

Value	Meaning			
	TRIP	ALAR M	AUX. 1	AUX. 2
1	L	U	U	L
2,3	L	L	U	L
4,5	L	U	L	L
6,7	L	L	L	L

25) Relay Failsafe code's are as follows

Value	Meaning			
	TRIP	ALAR M	AUX. 1	AUX. 2
1	F	N	N	F
2	N	F	N	F
3	F	F	N	F
4	N	N	F	F
5	F	N	F	F
6	N	F	F	F
7	F	F	F	F
8	N	N	N	F

N = non-failsafe F = failsafe

26) SETPOINT BITS

	Bit #	Meaning if bit value = 1
Register 1 LSB	0	custom curve selected
	1	reserved
	2	reserved
	3	RTD bias defeated
	4	start inhibit feature enabled
	5	unbalance bias defeated
	6	phase reversal enabled
	7	single shot restart enabled
MSB	8	G/F C.T. = xxx:5 (=2000:1 if '0')
	9	reserved
	10	Set-clear RTD last access data
	11	set-clear commissioning data
	12	no sensor alarm defeated
	13	learned cool rate defeated
	14	RTD10 made ambient sensor
	15	speed switch input defeated
Register 2 LSB	0	special external reset enabled
	1	reserved
	2	reserved
	3	reserved
	4	reserved
	5	reserved
	6	reserved
	7	reserved
MSB	8	MTM on line
	9	voltage phase reversal enabled
	10	spare enabled as 52B
	11	reserved
	12	enable RTD Iotemp alarm
	13	enable Stator RTD voting
	14	reserved
	15	reserved

Bit #0 is the LSbit
Bit #15 is the MSbit

27) SLAVE FUNCTION

Value (HEX)	Meaning
0x0000	do nothing - so can check integrity of SCL without actually doing anything
0x0100	undefined
0x0200	simulate DIFFERENTIAL TRIP
0x0400	undefined
0x0800	simulate EMERGENCY RESTART
0x1000	simulate EXTERNAL RESET
0x2000	Reserved
0x4000	Reserved
0x8000	Reserved

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- 29) LEDATA is a byte indicating which front panel LED is illuminated.

Bit #	Meaning if = 1
0	TRIP relay active
1	ALARM relay active
2	AUX. 1 relay active
3	AUX. 2 relay active
4	
5	
6	
7	

- 30) Reserved byte for 269 Plus.

- 31) If value = 9, implies xxxx:1 phase C.T., if value = 10, implies xxxx:5 C.T.

- 32) A value of 255 means an OFF setpoint.

- 33) This value is the reload value for the display timeout counter in seconds.

- 34) A value of 200 indicates temperature values greater than or equal to 200°C. A value of 201 indicates a broken sensor line (no RTD).

- 35) The following values will 'energize' the indicated relay.

Value	Energized relay
1BH	NO relay
1CH	TRIP
1DH	ALARM
1EH	AUX. 1
1FH	AUX. 2
20H	ALL relays

NOTE: will not work until protected motor is stopped.

- 36) The following values will stop the scanning of RTDs and force scanning of 1 RTD only.

Value	RTD forced
0	normal scan
1	RTD 1
2	RTD 2
3	RTD 3
4	RTD 4
5	RTD 5
6	RTD 6
7	RTD 7
8	RTD 8
9	RTD 9
10	RTD 10

- 37) The following values will force the analog to the indicated value.

Value	Analog out
21H	not forced
22H	minimum analog out
23H	mid-scale analog out
24H	full-scale analog out (Maximum)

NOTE: will not work until protected motor is stopped.

- 38) The reserved locations MUST NOT BE ALTERED. Attempting to alter these locations could compromise motor protection.

- 39) A value of 20 indicates 'OFF' and enables learned K.

40) A value of 201 decimal indicates an OFF setpoint.

41) The following values indicate analog output scale for the 269:

Value	Analog Output Scale
32H	4-20 mA
33H	0-20 mA
34H	0-1 mA

42) When a value for "SWITCH INPUT FORCE CODE" is stored, the status of that switch may be viewed at switch input status.

Switch Input Force Code	Switch Input Status
27H - external reset	26H - open
28H - emergency reset	25H - short
29H - access	
2AH - speed switch	
2BH - differential input	
2CH - spare input	

43) Undervoltage values are entered as a percent (96 is 'OFF').
Overvoltage values are entered as a percent (116 is 'OFF').

44) Value in register should be multiplied by 0.01 to get P.F. ie. if 5 is the value, it represents 0.05. (100=Off)

45) Value in register should be multiplied by 100 to get KVAR alarm values. A register value of 251 means 'OFF'. Ex. If 249 is the value, it represents 24,900 KVARs.

46) A value of 35H for P.F. sign means positive "+".
A value of 36H for P.F. sign means negative "-".

47) Frequency will be represented by 0 if it is outside of the range 400-720 Hz. Register value should be multiplied by 0.1 get frequency. For example, a value of 605 represents 60.5 Hz.

48) This byte allows determination of the type of inhibit that is active.

Value	Meaning
37H	starts per hour
38H	start inhibit
39H	time between starts
3AH	backspin timer

49) This byte allows determination of the type of MTM communication failure that is active.

Value	Meaning
3BH	incompatible revisions
3CH	hardware failure

50) This register allows determination of the device connected.

Value	Meaning
52 decimal	269 Plus Motor Management Relay (was 1 prior to B5.0)
20 decimal	269 Motor Management Relay (was 0 prior to B5.0)

51) This register represents the current hardware revision letter.

Value	Meaning
00 00H	not available
00 01H	"A"
00 02H	"B"

etc.

269+ Motor Relay

- 52) This register represents the product firmware revision code.

Value	Meaning
01 00H	1.0
01 01H	1.1
05 02H	5.0.2 (starting B5.0 revision)

etc.

- 53) This register represents the current product firmware modification file number.

Value	Meaning
00 00H	no modifications (ie. standard unit)
00 FBH	Mod #248
01 0AH	Mod #266

etc.

- 54) A value of 101 indicates "OFF".

- 55) 41 hex = Celsius

42 hex = Fahrenheit

This selection is for 269 display only. All values on COM port will be in Celsius only.

- 56) This value represents the cause of last trip message.

Value	Meaning
45H	Overload
46H	Unbalance
47H	Short circuit
48H	Rapid trip
49H	Stator RTD
4AH	RTD
4BH	Ground fault
4CH	Acceleration
4DH	Phase reversal
4EH	(BLANK)
4FH	Speed switch
50H	Differential
51H	Single phase
52H	Spare input
53H	Power factor
54H	Undervoltage
55H	Overvoltage

SR469 Motor Management Relay

- *SETPOINT REGISTERS*
- *ACTUAL VALUES*
- *COMMAND COILS*

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X0088	COMM_PASSCODE	Communications Port Passcode	1, 0, 99999999	RW	F12
R4X00F0	TIME_BRDCST	Time (Broadcast)	-, -, -	RW	F24
R4X00F2	DATE_BRDCST	Date (Broadcast)	-, -, -	RW	F18
R4X1000	MSG_CYCLE_TIME	Default Message Cycle Time	s, 5, 5-100	RW	F2
R4X1001	MSG_TIMEOUT	Default Message Timeout	s, 1, 10-900	RW	F1
R4X1003	AVG_LOAD_CALC_PER	Average Motor Load Calculation Period	min, 1, 1-90	RW	F1
R4X1004	TEMP_DISPLAY_UNITS	Temperature Display Units	-, 1, 0-1	RW	FC100
R4X1005	TRACE_MEM_TRIG_POS	Trace Memory Trigger	%, 1, 1-100	RW	F1
R4X1006	TRACE_MEM_BUFFERS	Trace Memory Buffers	cycles, 1, 1 to 16	RW	F1
R4X1007	DISP_UPD_INTL	Display Update Interval	s, 0.1, 0.1 to 6	RW	F2
R4X1008	CYC_LF_INTL	Cyclic Load Filter Interval	cycles, 1, 0 to 32	RW	F1
R4X1009	PASSCODE	Passcode (Write Only)	N/A, 1, 0 to 99999999	RW	F12
R4X100B	ENCRY_PASSCODE	Encrypted Passcode (Read Only)	N/A, N/A, N/A	RW	F12
R4X1010	SLAVE_ADDR	Slave Address	-, 1, 1-254	RW	F1
R4X1011	RS485_BAUD_RATE	Computer RS485 Baud Rate	-, 1, 0-5	RW	FC101
R4X1012	RS485_PARITY	Computer RS485 Parity	-, 1, 0-2	RW	FC102
R4X1013	AUX_RS485_BAUD_RATE	Auxiliary RS485 Baud Rate	-, 1, 0-5	RW	FC101
R4X1014	AUX_RS485_PARITY	Auxiliary RS485 Parity	-, 1, 0-2	RW	FC102
R4X1030L	SP_DATE	Date	N/A, N/A, N/A-N/A	RW	F18
R4X1032L	SP_TIME	Time	N/A, N/A, N/A-N/A	RW	F19
R4X1060S40	SCRATCHPAD_1	First Scratchpad Message	ASCII	RW	F1
R4X1080S40	SCRATCHPAD_2	Second Scratchpad Message	ASCII	RW	F1
R4X10A0S40	SCRATCHPAD_3	3rd Scratchpad Message	ASCII	RW	F1
R4X10C0S40	SCRATCHPAD_4	4th Scratchpad Message	ASCII	RW	F1
R4X10E0S40	SCRATCHPAD_5	5th Scratchpad Message	ASCII	RW	F1
R4X1130	CLEAR_LAST_TRIP	Clear Last Trip Data Prompt	-, 1, 0-1	RW	FC103
R4X1131	RESET_METERS	Reset MWh and Mvarh Meters	-, 1, 0-1	RW	FC103
R4X1132	CLEAR_PEAK_DMND	Clear Peak Demand Data	-, 1, 0-1	RW	FC103
R4X1133	CLEAR_RTD_MAX	Clear RTD Maximums	-, 1, 0-1	RW	FC103
R4X1134	CLEAR_AI_MIN_MAX	Clear Analog Input Min/Max Data	-, 1, 0-1	RW	FC103
R4X1135	CLEAR_TRIP_CTRS	Clear Trip Counters	-, 1, 0-1	RW	FC103
R4X1136	RESET_DIGITAL_CTR	Preset Digital Counter	-, 1, 0-1	RW	FC103
R4X1137	CLEAR_EVENT_RECS	Clear Event Records	-, 1, 0-1	RW	FC103
R4X1140	RESET_MOTOR_INFO	Reset Motor Information	-, 1, 0-1	RW	FC103
R4X1141	RESET_START_INFO	Reset Starter Information	-, 1, 0-1	RW	FC103
R4X1180	CT_PRI	Phase CT Primary	A, 1, 1-5001	RW	F1
R4X1181	MOTOR_FULL_LOAD	Motor Full Load Amps	A, 1, 1-5001	RW	F1
R4X1182	GND_CT_TYPE	Ground CT Type	-, 1, 0-3	RW	FC104
R4X1183	GND_CT_PRI	Ground CT Primary	A, 1, 1-5000	RW	F1
R4X1184	DIFF_CT_TYPE	Phase Differential CT Type	-, 1, 0-2	RW	FC105
R4X1185	DIFF_CT_PRI	Phase Differential CT Primary	A, 1, 1-5000	RW	F1
R4X1186	SPEED2_ENABLE	Enable Two Speed Motor Option	-, 1, 0-1	RW	FC103
R4X1187	SPEED2_CT_PRI	Speed Two Phase CT Primary	A, 1, 1-5000	RW	F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X1188	SPD2_MTR_FULL_LOAD	Speed Two Motor Full Load Amps	A, 1, 1-5000	RW	F1
R4X11A0	VOLT_XFORM_TYPE	Voltage Transformer Connection Type	-, 1, 0-2	RW	FC106
R4X11A1	VOLT_XFORM_RATIO	Voltage Transformer Ratio	-, 1, 100-15000	RW	F3
R4X11A2	VOLT_MOTOR_NAME	Motor Nameplate Voltage	V, 1, 100-20000	RW	F1
R4X11A3	ENABLE_VT_CONN	Enable Single VT Connection	-, 1, 0-1	RW	FC143
R4X11C0	NOM_FREQ	Nominal System Frequency	-, 1, 0-1	RW	FC107
R4X11C1	SYS_PHA_SEQ	System Phase Sequence	-, 1, 0-1	RW	FC124
R4X11C2	SPEED2_PH_SEQ	Speed2 Phase Sequence	-, 1, 0-1	RW	FC124
R4X11C8	SER_COMM_CONTROL	Serial Communication Control	-, 1, 0-1	RW	FC103
R4X11C9	ASSN_ST_CNTRL_RLYS	Assign Start Control Relays	-, 1, 0-2	RW	FC137
R4X11D0	RED_VOLT_START	Reduced Voltage Starting	-, 1, 0-1	RW	FC103
R4X11D1	RED_VOLT_STRT_RELAYS	Control Relays for Reduced Voltage Starting	-, 1, 0-2	RW	FC137
R4X11D2	TRANSITION_ON	Transition On	-, 1, 0-2	RW	FC108
R4X11D3	RED_VOLT_START_LEVEL	Reduced Voltage Start Level	% FLA, 1, 25-300	RW	F1
R4X11D4	RED_VOLT_START_TIMER1	Reduced Voltage Start Timer	s, 1, 1-250	RW	F1
R4X11D5	INC_SEQ_TRP_RELAYS	Incomplete Sequence Trip Relays	-, 1, 0-3	RW	FC111
R4X1230	STARTER_STAT_SW	Starter Status Switch	-, 1, 0-1	RW	FC109
R4X1240	I1_FUNC	Assignable Input 1 Function	-, 1, 0-14	RW	FC110
R4X1241	I2_FUNC	Assignable Input 2 Function	-, 1, 0-14	RW	FC110
R4X1242	I3_FUNC	Assignable Input 3 Function	-, 1, 0-14	RW	FC110
R4X1243	I4_FUNC	Assignable Input 4 Function	-, 1, 0-14	RW	FC110
R4X125AS20	REM_ALM_NAME	Remote Alarm Name	ASCII	RW	F22
R4X1264	REM_ALM_FUNCTION	Remote Alarm Function	-, 1, 1-2	RW	FC115
R4X1265	REM_ALM_RLYS	Remote Alarm Relays	-, 1, 0-6	RW	FC113
R4X1266	REM_ALM_EVNT	Remote Alarm Events	-, 1, 0-1	RW	FC103
R4X127AS20	REM_TRIP_NAME	Remote Trip Name	ASCII	RW	F22
R4X1284	REM_TRIP_RLYS	Remote Trip Relays	-, 1, 0-3	RW	FC111
R4X1290	SPD_SW_TRP_RLYS	Speed Switch Trip Relays	-, 1, 0-3	RW	FC111
R4X1291	SPD_SW_TRP_DLY	Speed Switch Trip Delay	s, 1, 10-2500	RW	F2
R4X12A0	LOAD_SHED_TRP_RLYS	Load Shed Trip Relays	-, 1, 0-3	RW	FC111
R4X12B0	BLK_PRS_SW_ALM	Block Pressure Switch Alarm from Start	s, 1, 0-5000	RW	F1
R4X12B1	PRS_SW_ALM_FUNC	Pressure Switch Alarm Function	-, 1, 1-2	RW	FC115
R4X12B2	PRS_SW_ALM_RLYS	Pressure Switch Alarm Relays	-, 1, 0-6	RW	FC113
R4X12B3	PRS_SW_ALM_DLY	Pressure Switch Alarm Delay	s, 1, 1-1000	RW	F2
R4X12B4	PRS_SW_ALM_EVNT	Pressure Switch Alarm Events	-, 1, 0-1	RW	FC103
R4X12C0	BLK_PRS_SW_TRP	Block Pressure Switch Trip from Start	s, 1, 0-5000	RW	F1
R4X12C1	PRS_SW_TRP_RLYS	Pressure Switch Trip Relays	-, 1, 0-3	RW	FC111
R4X12C2	PRS_SW_TRP_DLY	Pressure Switch Trip Delay	s, 1, 1-1000	RW	F2
R4X12D0	VIB_SW_ALM_FUNC	Vibration Switch Alarm Function	-, 1, 1-2	RW	FC115
R4X12D1	VIB_SW_ALM_RLYS	Vibration Switch Alarm Relays	-, 1, 0-6	RW	FC113
R4X12D2	VIB_SW_ALM_DLY	Vibration Switch Alarm Delay	s, 1, 1-1000	RW	F2
R4X12D3	VIB_SW_ALM_EVNT	Vibration Switch Alarm Events	-, 1, 0-1	RW	FC103
R4X12E0	VIB_SW_TRP_RLYS	Vibration Switch Trip Relays	-, 1, 0-3	RW	FC111

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X12E1	VIB_SW_TRP_DLY	Vibration Switch Trip Delay	s, 1, 1–1000	RW	F2
R4X12F3S6	DIGITAL_CTR_UNITS	Counter Units Name	ASCII	RW	F22
R4X12F6L	CTR_PRESET	Counter Preset Value	–, 1, 0–1000000000	RW	F9
R4X12F8	CTR_TYPE	Counter Type	–, 1, 0–1	RW	FC114
R4X12F9	CTR_ALM	Counter Alarm	–, 1, 0–2	RW	FC115
R4X12FA	CTR_ALM_RLYS	Counter Alarm Relays	–, 1, 0–6	RW	FC113
R4X12FBL	CTR_ALM_LVL	Counter Alarm Level	–, 1, 0–1000000000	RW	F9
R4X12FD	CTR_ALM_PKUP	Counter Alarm Pickup	–, 1, 0–1	RW	FC130
R4X12FE	CTR_ALM_EVNT	Counter Alarm Events	–, 1, 0–1	RW	FC103
R4X1310	RATED_SPEED	Rated Speed	RPM, 1, 100–7200	RW	F1
R4X1311	TACH_ALM	Tachometer Alarm	–, 1, 0–2	RW	FC115
R4X1312	TACH_ALM_RLYS	Tachometer Alarm Relays	–, 1, 0–6	RW	FC113
R4X1313	TACH_ALM_SPD	Tachometer Alarm Speed	% Rated, 1, 5–100	RW	F1
R4X1314	TACH_ALM_DLY	Tachometer Alarm Delay	s, 1, 1–250	RW	F1
R4X1315	TACH_ALM_EVNT	Tachometer Alarm Events	–, 1, 0–1	RW	FC103
R4X1316	TACH_TRP	Tachometer Trip	–, 1, 0–2	RW	FC115
R4X1317	TACH_TRP_RLYS	Tachometer Trip Relays	–, 1, 0–3	RW	FC111
R4X1318	TACH_TRP_SPD	Tachometer Trip Speed	% Rated, 1, 5–95	RW	F1
R4X1319	TACH_TRP_DLY	Tachometer Trip Delay	s, 1, 1–250	RW	F1
R4X1336S12	SWITCH_A_NAME	General Switch A Name	ASCII	RW	F22
R4X133C	SW_A_NORM_STATE	General Switch A Normal State	–, 1, 0–1	RW	FC116
R4X133D	SW_A_BLK_INPUT	General Switch A Block Input From Start	s, 1, 0–5000	RW	F1
R4X133E	SW_A_ALM	General Switch A Alarm	–, 1, 0–2	RW	FC115
R4X133F	SW_A_ALM_RLYS	General Switch A Alarm Relays	–, 1, 0–6	RW	FC113
R4X1340	SW_A_ALM_DLY	General Switch A Alarm Delay	s, 1, 1–50000	RW	F2
R4X1341	SW_A_ALM_EVNT	General Switch A Alarm Events	–, 1, 0–1	RW	FC103
R4X1342	SW_A_TRP	General Switch A Trip	–, 1, 0–2	RW	FC115
R4X1343	SW_A_TRP_RLY	General Switch A Trip Relays	–, 1, 0–3	RW	FC111
R4X1344	SW_A_TRP_DLY	General Switch A Trip Delay	s, 1, 1–50000	RW	F2
R4X1366S12	SWITCH_B_NAME	General Switch B Name	ASCII	RW	F22
R4X136C	SW_B_NORM_STATE	General Switch B Normal State	–, 1, 0–1	RW	FC116
R4X136D	SW_B_BLK_INPUT	General Switch B Block Input From Start	s, 1, 0–5000	RW	F1
R4X136E	SW_B_ALM	General Switch B Alarm	–, 1, 0–2	RW	FC115
R4X136F	SW_B_ALM_RLYS	General Switch B Alarm Relays	–, 1, 0–6	RW	FC113
R4X1370	SW_B_ALM_DLY	General Switch B Alarm Delay	s, 1, 1–50000	RW	F2
R4X1371	SW_B_ALM_EVNT	General Switch B Alarm Events	–, 1, 0–1	RW	FC103
R4X1372	SW_B_TRP	General Switch B Trip	–, 1, 0–2	RW	FC115
R4X1373	SW_B_TRP_RLY	General Switch B Trip Relays	–, 1, 0–3	RW	FC111
R4X1374	SW_B_TRP_DLY	General Switch B Trip Delay	s, 1, 1–50000	RW	F2
R4X1396S12	SWITCH_C_NAME	General Switch C Name	ASCII	RW	F22
R4X139C	SW_C_NORM_STATE	General Switch C Normal State	–, 1, 0–1	RW	FC116
R4X139D	SW_C_BLK_INPUT	General Switch C Block Input From Start	s, 1, 0–5000	RW	F1
R4X139E	SW_C_ALM	General Switch C Alarm	–, 1, 0–2	RW	FC115

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X139F	SW_C_ALM_RLYS	General Switch C Alarm Relays	-, 1, 0-6	RW	FC113
R4X13A0	SW_C_ALM_DLY	General Switch C Alarm Delay	s, 1, 1-50000	RW	F2
R4X13A1	SW_C_ALM_EVNT	General Switch C Alarm Events	-, 1, 0-1	RW	FC103
R4X13A2	SW_C_TRP	General Switch C Trip	-, 1, 0-2	RW	FC115
R4X13A3	SW_C_TRP_RLY	General Switch C Trip Relays	-, 1, 0-3	RW	FC111
R4X13A4	SW_C_TRP_DLY	General Switch C Trip Delay	s, 1, 1-50000	RW	F2
R4X13C6S12	SWITCH_D_NAME	General Switch D Name	ASCII	RW	F22
R4X13CC	SW_D_NORM_STATE	General Switch D Normal State	-, 1, 0-1	RW	FC116
R4X13CD	SW_D_BLK_INPUT	General Switch D Block Input From Start	s, 1, 0-5000	RW	F1
R4X13CE	SW_D_ALM	General Switch D Alarm	-, 1, 0-2	RW	FC115
R4X13CF	SW_D_ALM_RLYS	General Switch D Alarm Relays	-, 1, 0-6	RW	FC113
R4X13D0	SW_D_ALM_DLY	General Switch D Alarm Delay	s, 1, 1-50000	RW	F2
R4X13D1	SW_D_ALM_EVNT	General Switch D Alarm Events	-, 1, 0-1	RW	FC103
R4X13D2	SW_D_TRP	General Switch D Trip	-, 1, 0-2	RW	FC115
R4X13D3	SW_D_TRP_RLY	General Switch D Trip Relays	-, 1, 0-3	RW	FC111
R4X13D4	SW_D_TRP_DLY	General Switch D Trip Delay	s, 1, 1-50000	RW	F2
R4X1500	RESETMODE_R1_TRP	Reset Mode R1 TRIP	-, 1, 0-2	RW	FC117
R4X1501	RESETMODE_R2_AUX	Reset Mode R2 AUXILIARY	-, 1, 0-2	RW	FC117
R4X1502	RESETMODE_R3_AUX	Reset Mode R3 AUXILIARY	-, 1, 0-2	RW	FC117
R4X1503	RESETMODE_R4_ALM	Reset Mode R4 ALARM	-, 1, 0-1	RW	FC117
R4X1505	RESETMODE_R6_SVC	Reset Mode R6 SERVICE	-, 1, 0-1	RW	FC117
R4X1506	FORCE_R1_OR	Force R1 Output Relay	-, 1, 0-1	RW	FC126
R4X1507	FORCE_R1_OT	Force R1 Operate Time	s, 1, 0-3	RW	F1
R4X1508	FORCE_R2_OR	Force R2 Output Relay	-, 1, 0-1	RW	FC126
R4X1509	FORCE_R2_OT	Force R2 Operate Time	s, 1, 0-3	RW	F1
R4X150A	FORCE_R3_OR	Force R3 Output Relay	-, 1, 0-1	RW	FC126
R4X150B	FORCE_R3_OT	Force R3 Operate Time	s, 1, 0-3	RW	F1
R4X150C	FORCE_R4_OR	Force R4 Output Relay	-, 1, 0-1	RW	FC126
R4X150D	FORCE_R4_OT	Force R4 Operate Time	s, 1, 0-3	RW	F1
R4X150E	FORCE_R5_OR	Force R5 Output Relay	-, 1, 0-1	RW	FC126
R4X150F	FORCE_R5_OT	Force R5 Operate Time	s, 1, 0-3	RW	F1
R4X1580	CURVE_STYLE	Curve Style	-, 1, 0-2	RW	FC128
R4X1581	OL_PICKUP_LEVEL	Overload Pickup Level	x FLA, 1, 101-125	RW	F3
R4X1582	UNBAL_K_FACTOR	Unbalance k Factor	-, 1, 0-12	RW	F1
R4X1583	COOL_TIME_RUNNING	Cool Time Constant Running	min, 1, 1-500	RW	F1
R4X1584	COOL_TIME_STOPPED	Cool Time Constant Stopped	min, 1, 1-500	RW	F1
R4X1585	SAFE_STALL_RATIO	Hot/Cold Safe Stall Ratio	-, 1, 1-100	RW	F3
R4X1586	RTD_BIASING	RTD Biasing	-, 1, 0-1	RW	FC103
R4X1587	RTD_BIAS_MIN	RTD Bias Minimum	°C, 1, 0-250	RW	F1
R4X1588	RTD_BIAS_CTR	RTD Bias Center Point	°C, 1, 0-250	RW	F1
R4X1589	RTD_BIAS_MAX	RTD Bias Maximum	°C, 1, 0-250	RW	F1
R4X158A	THERM_ALARM	Thermal Capacity Alarm	-, 1, 0-2	RW	FC115
R4X158B	THERM_ALM_RELAYS	Thermal Capacity Alarm Relays	-, 1, 0-6	RW	FC113
R4X158C	THERM_ALM_LEVEL	Thermal Capacity Alarm Level	% used, 1, 10-100	RW	F1
R4X158D	THERM_ALM_EVENTS	Thermal Capacity Alarm Events	-, 1, 0-1	RW	FC103

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X158E	OL_TRIP_RELAYS	Overload Trip Relays	-, 1, 0-3	RW	FC111
R4X15AE	RTD_BIAS_MAX_F	RTD Bias Maximum (in Fahrenheit)	°F, 1, 32-482	RW	F1
R4X15AF	STND_OL_CRV_NUM	Standard Overload Curve Number	-, 1, 1-15	RW	F1
R4X15B0	TIME_TRP_0101XFLA	Time to Trip at 1.01 x FLA	s, 1, 5-999999	RW	F10
R4X15B2	TIME_TRP_0105XFLA	Time to Trip at 1.05 x FLA	s, 1, 5-999999	RW	F10
R4X15B4	TIME_TRP_0110XFLA	Time to Trip at 1.10 x FLA	s, 1, 5-999999	RW	F10
R4X15B6	TIME_TRP_0120XFLA	Time to Trip at 1.20 x FLA	s, 1, 5-999999	RW	F10
R4X15B8	TIME_TRP_0130XFLA	Time to Trip at 1.30 x FLA	s, 1, 5-999999	RW	F10
R4X15BA	TIME_TRP_0140XFLA	Time to Trip at 1.40 x FLA	s, 1, 5-999999	RW	F10
R4X15BC	TIME_TRP_0150XFLA	Time to Trip at 1.50 x FLA	s, 1, 5-999999	RW	F10
R4X15BE	TIME_TRP_0175XFLA	Time to Trip at 1.75 x FLA	s, 1, 5-999999	RW	F10
R4X15C0	TIME_TRP_0200XFLA	Time to Trip at 2.00 x FLA	s, 1, 5-999999	RW	F10
R4X15C2	TIME_TRP_0225XFLA	Time to Trip at 2.25 x FLA	s, 1, 5-999999	RW	F10
R4X15C4	TIME_TRP_0250XFLA	Time to Trip at 2.50 x FLA	s, 1, 5-999999	RW	F10
R4X15C6	TIME_TRP_0275XFLA	Time to Trip at 2.75 x FLA	s, 1, 5-999999	RW	F10
R4X15C8	TIME_TRP_0300XFLA	Time to Trip at 3.00 x FLA	s, 1, 5-999999	RW	F10
R4X15CA	TIME_TRP_0325XFLA	Time to Trip at 3.25 x FLA	s, 1, 5-999999	RW	F10
R4X15CC	TIME_TRP_0350XFLA	Time to Trip at 3.50 x FLA	s, 1, 5-999999	RW	F10
R4X15CE	TIME_TRP_0375XFLA	Time to Trip at 3.75 x FLA	s, 1, 5-999999	RW	F10
R4X15D0	TIME_TRP_0400XFLA	Time to Trip at 4.00 x FLA	s, 1, 5-999999	RW	F10
R4X15D2	TIME_TRP_0425XFLA	Time to Trip at 4.25 x FLA	s, 1, 5-999999	RW	F10
R4X15D4	TIME_TRP_0450XFLA	Time to Trip at 4.50 x FLA	s, 1, 5-999999	RW	F10
R4X15D6	TIME_TRP_0475XFLA	Time to Trip at 4.75 x FLA	s, 1, 5-999999	RW	F10
R4X15D8	TIME_TRP_0500XFLA	Time to Trip at 5.00 x FLA	s, 1, 5-999999	RW	F10
R4X15DA	TIME_TRP_0550XFLA	Time to Trip at 5.50 x FLA	s, 1, 5-999999	RW	F10
R4X15DC	TIME_TRP_0600XFLA	Time to Trip at 6.00 x FLA	s, 1, 5-999999	RW	F10
R4X15DE	TIME_TRP_0650XFLA	Time to Trip at 6.50 x FLA	s, 1, 5-999999	RW	F10
R4X15E0	TIME_TRP_0700XFLA	Time to Trip at 7.00 x FLA	s, 1, 5-999999	RW	F10
R4X15E2	TIME_TRP_0750XFLA	Time to Trip at 7.50 x FLA	s, 1, 5-999999	RW	F10
R4X15E4	TIME_TRP_0800XFLA	Time to Trip at 8.00 x FLA	s, 1, 5-999999	RW	F10
R4X15E6	TIME_TRP_1000XFLA	Time to Trip at 10.0 x FLA	s, 1, 5-999999	RW	F10
R4X15E8	TIME_TRP_1500XFLA	Time to Trip at 15.0 x FLA	s, 1, 5-999999	RW	F10
R4X15EA	TIME_TRP_2000XFLA	Time to Trip at 20.0 x FLA	s, 1, 5-999999	RW	F10
R4X1600	MIN_ALLOW_LN_V	Minimum Allowable Line Voltage	% Rated, 1, 70-95	RW	F1
R4X1601	STALL_CURR_MIN_VLN	Stall Current at Min Vline	x FLA, 1, 200-1500	RW	F3
R4X1602	SAFE_STALL_MIN_VLN	Safe Stall Time at Min Vline	s, 1, 5-9999	RW	F2
R4X1603	ACC_INT_MIN_VLN	Accel. Intersect at Min Vline	x FLA, 1, 200-1500	RW	F3
R4X1604	STALL_CURR_100_VLN	Stall Current at 100 % Vline	x FLA, 1, 200-1500	RW	F3
R4X1605	SAFE_STALL_100_VLN	Safe Stall Time at 100 % Vline	s, 1, 5-9999	RW	F2
R4X1606	ACC_INT_100_VLN	Accel. Intersect at 100 % Vline	x FLA, 1, 200-1500	RW	F3
R4X1640	SHT_CIR_TRP	Short Circuit Trip	-, 1, 0-2	RW	FC103
R4X1641	OR_FILTER	Overreach Filter	-, 1, 0-1	RW	FC103
R4X1642	SHT_CIR_TRP_RLYS	Short Circuit Trip Relays	-, 1, 0-6	RW	FC118
R4X1643	SHT_CIR_PKUP	Short Circuit Pickup	x CT, 1, 20-200	RW	F2
R4X1644	INTL_SHT_CIR_TRP_DLY	Intentional Short Circuit Trip Delay	ms, 10, 0-1000	RW	F1

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X1645	SHT_CIR_TRP_BKUP	Short Circuit Trip Backup	-, 1, 0-1	RW	FC103
R4X1646	SHT_CIR_BKUP_RLYS	Short Circuit Backup Relays	-, 1, 0-2	RW	FC119
R4X1647	SHT_CIR_TRP_BKUP_DLY	Short Circuit Trip Backup Delay	ms, 10, 10-2000	RW	F1
R4X1650	OL_ALM	Overload Alarm	-, 1, 0-2	RW	FC115
R4X1651	OL_ALM_RLYS	Overload Alarm Relays	-, 1, 0-6	RW	FC113
R4X1652	OL_ALM_EVNT	Overload Alarm Events	-, 1, 0-1	RW	FC103
R4X1653	OL_ALM_DLYS	Overload Alarm Delay	s, 1, 1-600	RW	F2
R4X1660	MECH_JAM_TRP	Mechanical Jam Trip	-, 1, 0-2	RW	FC115
R4X1661	MECH_JAM_TRP_RLYS	Mechanical Jam Trip Relays	-, 1, 0-3	RW	FC111
R4X1662	MECH_JAM_PKUP	Mechanical Jam Pickup	x FLA, 1, 101-300	RW	F3
R4X1663	MECH_JAM_DLY	Mechanical Jam Delay	s, 1, 1-30	RW	F1
R4X1670	BLK_UC_START	Block Undercurrent from Start	s, 1, 0-15000	RW	F1
R4X1671	UC_ALM	Undercurrent Alarm	-, 1, 0-2	RW	FC115
R4X1672	UC_ALM_RLYS	Undercurrent Alarm Relays	-, 1, 0-6	RW	FC113
R4X1673	UC_ALM_PKUP	Undercurrent Alarm Pickup	x FLA, 1, 10-95	RW	F3
R4X1674	UC_ALM_DLY	Undercurrent Alarm Delay	s, 1, 1-60	RW	F1
R4X1675	UC_ALM_EVNT	Undercurrent Alarm Events	-, 1, 0-1	RW	FC103
R4X1676	UC_TRP	Undercurrent Trip	-, 1, 0-2	RW	FC115
R4X1677	UC_TRP_RLYS	Undercurrent Trip Relays	-, 1, 0-3	RW	FC111
R4X1678	UC_TRP_PKUP	Undercurrent Trip Pickup	x FLA, 1, 10-99	RW	F3
R4X1679	UC_TRP_DLY	Undercurrent Trip Delay	s, 1, 1-60	RW	F1
R4X1680	CURR_UB_ALM	Current Unbalance Alarm	-, 1, 0-2	RW	FC115
R4X1681	CURR_UB_ALM_RLYS	Current Unbalance Alarm Relays	-, 1, 0-6	RW	FC113
R4X1682	CURR_UB_ALMK_PKUP	Current Unbalance Alarm Pickup	%, 1, 4-40	RW	F1
R4X1683	CURR_UB_ALM_DLY	Current Unbalance Alarm Delay	s, 1, 1-60	RW	F1
R4X1684	CURR_UB_ALM_EVNT	Current Unbalance Alarm Events	-, 1, 0-1	RW	FC103
R4X1685	CURR_UB_TRP	Current Unbalance Trip	-, 1, 0-2	RW	FC115
R4X1686	CURR_UB_TRP_RLYS	Current Unbalance Trip Relays	-, 1, 0-3	RW	FC111
R4X1687	CURR_UB_TRP_PKUP	Current Unbalance Trip Pickup	%, 1, 4-40	RW	F1
R4X1688	CURR_UB_TRP_DLY	Current Unbalance Trip Delay	s, 1, 1-60	RW	F1
R4X16A1	GF_ALM	Ground Fault Alarm	-, 1, 0-2	RW	FC115
R4X16A2	GF_ALM_RLYS	Ground Fault Alarm Relays	-, 1, 0-6	RW	FC113
R4X16A3	GF_ALM_PKUP	Ground Fault Alarm Pickup	x CT, 1, 10-100	RW	F3
R4X16A4	ALM_PKUP_CT_50_025	Alarm Pickup for Multilin CT 50 / .025	A, 1, 25-2500	RW	F3
R4X16A5	INTL_GF_ALM_DLY	Intentional GF Alarm Delay	ms, 10, 0-1000	RW	F1
R4X16A6	GF_ALM_EVNT	Ground Fault Alarm Events	-, 1, 0-1	RW	FC103
R4X16A7	GF_TRP	Ground Fault Trip	-, 1, 0-2	RW	FC115
R4X16A8	GF_TRP_RLYS	Ground Fault Trip Relays	-, 1, 0-6	RW	FC118
R4X16A9	GF_TRP_PKUP	Ground Fault Trip Pickup	x CT, 1, 10-100	RW	F3
R4X16AA	TRP_PKUP_CT_50_025	Trip Pickup for Multilin CT 50 / .025	A, 1, 25-2500	RW	F3
R4X16AB	INTL_GF_TRP_DLY	Intentional GF Trip Delay	ms, 10, 0-1000	RW	F1
R4X16AC	GF_TRP_BKUP	Ground Fault Trip Backup	-, 1, 0-1	RW	FC103
R4X16AD	GF_TRP_BKUP_RLYS	Ground Fault Trip Backup Relays	-, 1, 0-2	RW	FC119
R4X16AE	GF_TRP_BKUP_DLY	Ground Fault Trip Backup Delay	ms, 10, 10-2000	RW	F1
R4X16C0	PH_DIFF_TRP	Phase Differential Trip	-, 1, 0-2	RW	FC115

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X16C1	PH_DIFF_TRP_RLYS	Phase Differential Trip Relays	-, 1, 0-6	RW	FC118
R4X16C2	PH_DIFF_TRP_PKUP	Phase Differential Trip Pickup	x CT, 1, 5-100	RW	F3
R4X16C3	INTL_PH_DIFF_TRP_DLY	Intentional Phase Diff. Trip Delay	ms, 10, 0-1000	RW	F1
R4X16C4	DIFF_PKP_RUN	Differential Trip Pickup While Running	x CT, 1, 5-100	RW	F3
R4X16C5	DIFF_DLY_RUN	Differential Trip Delay While Running	ms, 10, 0-1000	RW	F1
R4X16D0	ACC_TIME_TRP	Acceleration Timer Trip	-, 1, 0-2	RW	FC115
R4X16D1	ACC_TIME_TRP_RLYS	Acceleration Timer Trip Relays	-, 1, 0-3	RW	FC111
R4X16D2	ACC_TIME_FROM_START	Acceleration Timer from Start	s, 1, 10-1000	RW	F2
R4X16E0	START_INHIBIT_ON	Start Inhibit Block	-, 1, 0-1	RW	FC103
R4X16E1	TH_CAP_USED	Thermal Capacity Used Margin	%, 1, 0-25	RW	F1
R4X16F0	JOGGING_BLK_ON	Jogging Block	-, 1, 0-1	RW	FC103
R4X16F1	MAX_STARTS_HOUR	Maximum Starts/Hour Permissible	-, 1, 1-5	RW	F1
R4X16F2	TIME_BTWN_STARTS_SP	Time Between Starts	min, 1, 0-500	RW	F1
R4X1700	RESTART_BLK_ON	Restart Block	-, 1, 0-1	RW	FC103
R4X1701	RESTART_BLK_TIME	Restart Block Time	s, 1, 1-50000	RW	F1
R4X1780	STATOR_RTD_TYPE	Stator RTD Type	-, 1, 0-3	RW	FC120
R4X1781	BEAR_RTD_TYPE	Bearing RTD Type	-, 1, 0-3	RW	FC120
R4X1782	AMB_RTD_TYPE	Ambient RTD Type	-, 1, 0-3	RW	FC120
R4X1783	OTHER_RTD_TYPE	Other RTD Type	-, 1, 0-3	RW	FC120
R4X1790	RTD1_TYPE	RTD #1 Application	-, 1, 0-4	RW	FC121
R4X1791	RTD1_ALM	RTD #1 Alarm	-, 1, 0-2	RW	FC115
R4X1792	RTD1_ALM_RLYS	RTD #1 Alarm Relays	-, 1, 0-6	RW	FC113
R4X1793	RTD1_ALM_LVL	RTD #1 Alarm Temperature	°C, 1, 1-250	RW	F1
R4X1794	RTD1_ALM_EVNT	RTD #1 Alarm Events	-, 1, 0-1	RW	FC103
R4X1795	RTD1_TRP	RTD #1 Trip	-, 1, 0-2	RW	FC115
R4X1796	RTD1_TRP_VOTING	RTD #1 Trip Voting	-, 1, 1-12	RW	FC122
R4X1797	RTD1_RLYS	RTD #1 Trip Relays	-, 1, 0-3	RW	FC111
R4X1798	RTD1_TRP_TEMP	RTD #1 Trip Temperature	°C, 1, 1-250	RW	F1
R4X1799S8	RTD1_NAME	RTD #1 Name	ASCII	RW	F22
R4X17AE	RTD1_ALM_TEMP_F	RTD #1 Alarm Temperature (in Fahrenheit)	°F, 1, 34-482	RW	F1
R4X17AF	RTD1_TRP_TEMP_F	RTD #1 Trip Temperature (in Fahrenheit)	°F, 1, 34-482	RW	F1
R4X17B0	RTD2_TYPE	RTD #2 Application	-, 1, 0-4	RW	FC121
R4X17B1	RTD2_ALM	RTD #2 Alarm	-, 1, 0-2	RW	FC115
R4X17B2	RTD2_ALM_RLYS	RTD #2 Alarm Relays	-, 1, 0-6	RW	FC113
R4X17B3	RTD2_ALM_LVL	RTD #2 Alarm Temperature	°C, 1, 1-250	RW	F1
R4X17B4	RTD2_ALM_EVNT	RTD #2 Alarm Events	-, 1, 0-1	RW	FC103
R4X17B5	RTD2_TRP	RTD #2 Trip	-, 1, 0-2	RW	FC115
R4X17B6	RTD2_TRP_VOTING	RTD #2 Trip Voting	-, 1, 1-12	RW	FC122
R4X17B7	RTD2_RLYS	RTD #2 Trip Relays	-, 1, 0-3	RW	FC111
R4X17B8	RTD2_TRP_LVL	RTD #2 Trip Temperature	°C, 1, 1-250	RW	F1
R4X17B9S8	RTD2_NAME	RTD #2 Name	ASCII	RW	F22
R4X17CE	RTD2_ALM_TEMP_F	RTD #2 Alarm Temperature (in Fahrenheit)	°F, 1, 34-482	RW	F1

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X17CF	RTD2_TRP_TEMP_F	RTD #2 Trip Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X17D0	RTD3_TYPE	RTD #3 Application	–, 1, 0–4	RW	FC121
R4X17D1	RTD3_ALM	RTD #3 Alarm	–, 1, 0–2	RW	FC115
R4X17D2	RTD3_ALM_RLYS	RTD #3 Alarm Relays	–, 1, 0–6	RW	FC113
R4X17D3	RTD3_ALM_LVL	RTD #3 Alarm Temperature	°C, 1, 1–250	RW	F1
R4X17D4	RTD3_ALM_EVNT	RTD #3 Alarm Events	–, 1, 0–1	RW	FC103
R4X17D5	RTD3_TRP	RTD #3 Trip	–, 1, 0–2	RW	FC115
R4X17D6	RTD3_TRP_VOTING	RTD #3 Trip Voting	–, 1, 1–12	RW	FC122
R4X17D7	RTD3_RLYS	RTD #3 Trip Relays	–, 1, 0–3	RW	FC111
R4X17D8	RTD3_TRP_LVL	RTD #3 Trip Temperature	°C, 1, 1–250	RW	F1
R4X17D9S8	RTD3_NAME	RTD #3 Name	ASCII	RW	F22
R4X17EE	RTD3_ALM_TEMP_F	RTD #3 Alarm Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X17EF	RTD3_TRP_TEMP_F	RTD #3 Trip Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X17F0	RTD4_TYPE	RTD #4 Application	–, 1, 0–4	RW	FC121
R4X17F1	RTD4_ALM	RTD #4 Alarm	–, 1, 0–2	RW	FC115
R4X17F2	RTD4_ALM_RLYS	RTD #4 Alarm Relays	–, 1, 0–6	RW	FC113
R4X17F3	RTD4_ALM_LVL	RTD #4 Alarm Temperature	°C, 1, 1–250	RW	F1
R4X17F4	RTD4_ALM_EVNT	RTD #4 Alarm Events	–, 1, 0–1	RW	FC103
R4X17F5	RTD4_TRP	RTD #4 Trip	–, 1, 0–2	RW	FC115
R4X17F6	RTD4_TRP_VOTING	RTD #4 Trip Voting	–, 1, 1–12	RW	FC122
R4X17F7	RTD4_RLYS	RTD #4 Trip Relays	–, 1, 0–3	RW	FC111
R4X17F8	RTD4_TRP_LVL	RTD #4 Trip Temperature	°C, 1, 1–250	RW	F1
R4X17F9S8	RTD4_NAME	RTD #4 Name	ASCII	RW	F22
R4X180E	RTD4_ALM_TEMP_F	RTD #4 Alarm Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X180F	RTD4_TRP_TEMP_F	RTD #4 Trip Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X1810	RTD5_TYPE	RTD #5 Application	–, 1, 0–4	RW	FC121
R4X1811	RTD5_ALM	RTD #5 Alarm	–, 1, 0–2	RW	FC115
R4X1812	RTD5_ALM_RLYS	RTD #5 Alarm Relays	–, 1, 0–6	RW	FC113
R4X1813	RTD5_ALM_LVL	RTD #5 Alarm Temperature	°C, 1, 1–250	RW	F1
R4X1814	RTD5_ALM_EVNT	RTD #5 Alarm Events	–, 1, 0–1	RW	FC103
R4X1815	RTD5_TRP	RTD #5 Trip	–, 1, 0–2	RW	FC115
R4X1816	RTD5_TRP_VOTING	RTD #5 Trip Voting	–, 1, 1–12	RW	FC122
R4X1817	RTD5_RLYS	RTD #5 Trip Relays	–, 1, 0–3	RW	FC111
R4X1818	RTD5_TRP_LVL	RTD #5 Trip Temperature	°C, 1, 1–250	RW	F1
R4X1819S8	RTD5_NAME	RTD #5 Name	ASCII	RW	F22
R4X182E	RTD5_ALM_TEMP_F	RTD #5 Alarm Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X182F	RTD5_TRP_TEMP_F	RTD #5 Trip Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X1830	RTD6_TYPE	RTD #6 Application	–, 1, 0–4	RW	FC121
R4X1831	RTD6_ALM	RTD #6 Alarm	–, 1, 0–2	RW	FC115
R4X1832	RTD6_ALM_RLYS	RTD #6 Alarm Relays	–, 1, 0–6	RW	FC113

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X1833	RTD6_ALM_LVL	RTD #6 Alarm Temperature	°C, 1, 1–250	RW	F1
R4X1834	RTD6_ALM_EVNT	RTD #6 Alarm Events	–, 1, 0–1	RW	FC103
R4X1835	RTD6_TRP	RTD #6 Trip	–, 1, 0–2	RW	FC115
R4X1836	RTD6_TRP_VOTING	RTD #6 Trip Voting	–, 1, 1–12	RW	FC122
R4X1837	RTD6_RLYS	RTD #6 Trip Relays	–, 1, 0–3	RW	FC111
R4X1838	RTD6_TRP_LVL	RTD #6 Trip Temperature	°C, 1, 1–250	RW	F1
R4X1839S8	RTD6_NAME	RTD #6 Name	ASCII	RW	F22
R4X184E	RTD6_ALM_TEMP_F	RTD #6 Alarm Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X184F	RTD6_TRP_TEMP_F	RTD #6 Trip Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X1850	RTD7_TYPE	RTD #7 Application	–, 1, 0–4	RW	FC121
R4X1851	RTD7_ALM	RTD #7 Alarm	–, 1, 0–2	RW	FC115
R4X1852	RTD7_ALM_RLYS	RTD #7 Alarm Relays	–, 1, 0–6	RW	FC113
R4X1853	RTD7_ALM_LVL	RTD #7 Alarm Temperature	°C, 1, 1–250	RW	F1
R4X1854	RTD7_ALM_EVNT	RTD #7 Alarm Events	–, 1, 0–1	RW	FC103
R4X1855	RTD7_TRP	RTD #7 Trip	–, 1, 0–2	RW	FC115
R4X1856	RTD7_TRP_VOTING	RTD #7 Trip Voting	–, 1, 1–12	RW	FC122
R4X1857	RTD7_RLYS	RTD #7 Trip Relays	–, 1, 0–3	RW	FC111
R4X1858	RTD7_TRP_LVL	RTD #7 Trip Temperature	°C, 1, 1–250	RW	F1
R4X1859S8	RTD7_NAME	RTD #7 Name	ASCII	RW	F22
R4X186E	RTD7_ALM_TEMP_F	RTD #7 Alarm Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X186F	RTD7_TRP_TEMP_F	RTD #7 Trip Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X1870	RTD8_TYPE	RTD #8 Application	–, 1, 0–4	RW	FC121
R4X1871	RTD8_ALM	RTD #8 Alarm	–, 1, 0–2	RW	FC115
R4X1872	RTD8_ALM_RLYS	RTD #8 Alarm Relays	–, 1, 0–6	RW	FC113
R4X1873	RTD8_ALM_LVL	RTD #8 Alarm Temperature	°C, 1, 1–250	RW	F1
R4X1874	RTD8_ALM_EVNT	RTD #8 Alarm Events	–, 1, 0–1	RW	FC103
R4X1875	RTD8_TRP	RTD #8 Trip	–, 1, 0–2	RW	FC115
R4X1876	RTD8_TRP_VOTING	RTD #8 Trip Voting	–, 1, 1–12	RW	FC122
R4X1877	RTD8_RLYS	RTD #8 Trip Relays	–, 1, 0–3	RW	FC111
R4X1878	RTD8_TRP_LVL	RTD #8 Trip Temperature	°C, 1, 1–250	RW	F1
R4X1879S8	RTD8_NAME	RTD #8 Name	ASCII	RW	F22
R4X188E	RTD8_ALM_TEMP_F	RTD #8 Alarm Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X188F	RTD8_TRP_TEMP_F	RTD #8 Trip Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X1890	RTD9_TYPE	RTD #9 Application	–, 1, 0–4	RW	FC121
R4X1891	RTD9_ALM	RTD #9 Alarm	–, 1, 0–2	RW	FC115
R4X1892	RTD9_ALM_RLYS	RTD #9 Alarm Relays	–, 1, 0–6	RW	FC113
R4X1893	RTD9_ALM_LVL	RTD #9 Alarm Temperature	°C, 1, 1–250	RW	F1
R4X1894	RTD9_ALM_EVNT	RTD #9 Alarm Events	–, 1, 0–1	RW	FC103
R4X1895	RTD9_TRP	RTD #9 Trip	–, 1, 0–2	RW	FC115
R4X1896	RTD9_TRP_VOTING	RTD #9 Trip Voting	–, 1, 1–12	RW	FC122
R4X1897	RTD9_RLYS	RTD #9 Trip Relays	–, 1, 0–3	RW	FC111

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X1898	RTD9_TRP_LVL	RTD #9 Trip Temperature	°C, 1, 1–250	RW	F1
R4X1899S8	RTD9_NAME	RTD #9 Name	ASCII	RW	F22
R4X18AE	RTD9_ALM_TEMP_F	RTD #9 Alarm Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X18AF	RTD9_TRP_TEMP_F	RTD #9 Trip Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X18B0	RTD10_TYPE	RTD #10 Application	–, 1, 0–4	RW	FC121
R4X18B1	RTD10_ALM	RTD #10 Alarm	–, 1, 0–2	RW	FC115
R4X18B2	RTD10_ALM_RLYS	RTD #10 Alarm Relays	–, 1, 0–6	RW	FC113
R4X18B3	RTD10_ALM_LVL	RTD #10 Alarm Temperature	°C, 1, 1–250	RW	F1
R4X18B4	RTD10_ALM_EVNT	RTD #10 Alarm Events	–, 1, 0–1	RW	FC103
R4X18B5	RTD10_TRP	RTD #10 Trip	–, 1, 0–2	RW	FC115
R4X18B6	RTD10_TRP_VOTING	RTD #10 Trip Voting	–, 1, 1–12	RW	FC122
R4X18B7	RTD10_RLYS	RTD #10 Trip Relays	–, 1, 0–3	RW	FC111
R4X18B8	RTD10_TRP_LVL	RTD #10 Trip Temperature	°C, 1, 1–250	RW	F1
R4X18B9S8	RTD10_NAME	RTD #10 Name	ASCII	RW	F22
R4X18CE	RTD10_ALM_TEMP_F	RTD #10 Alarm Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X18CF	RTD10_TRP_TEMP_F	RTD #10 Trip Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X18D0	RTD11_TYPE	RTD #11 Application	–, 1, 0–4	RW	FC121
R4X18D1	RTD11_ALM	RTD #11 Alarm	–, 1, 0–2	RW	FC115
R4X18D2	RTD11_ALM_RLYS	RTD #11 Alarm Relays	–, 1, 0–6	RW	FC113
R4X18D3	RTD11_ALM_LVL	RTD #11 Alarm Temperature	°C, 1, 1–250	RW	F1
R4X18D4	RTD11_ALM_EVNT	RTD #11 Alarm Events	–, 1, 0–1	RW	FC103
R4X18D5	RTD11_TRP	RTD #11 Trip	–, 1, 0–2	RW	FC115
R4X18D6	RTD11_TRP_VOTING	RTD #11 Trip Voting	–, 1, 1–12	RW	FC122
R4X18D7	RTD11_RLYS	RTD #11 Trip Relays	–, 1, 0–3	RW	FC111
R4X18D8	RTD11_TRP_LVL	RTD #11 Trip Temperature	°C, 1, 1–250	RW	F1
R4X18D9S8	RTD11_NAME	RTD #11 Name	ASCII	RW	F22
R4X18EE	RTD11_ALM_TEMP_F	RTD #11 Alarm Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X18EF	RTD11_TRP_TEMP_F	RTD #11 Trip Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X18F0	RTD12_TYPE	RTD #12 Application	–, 1, 0–4	RW	FC121
R4X18F1	RTD12_ALM	RTD #12 Alarm	–, 1, 0–2	RW	FC115
R4X18F2	RTD12_ALM_RLYS	RTD #12 Alarm Relays	–, 1, 0–6	RW	FC113
R4X18F3	RTD12_ALM_LVL	RTD #12 Alarm Temperature	°C, 1, 1–250	RW	F1
R4X18F4	RTD12_ALM_EVNT	RTD #12 Alarm Events	–, 1, 0–1	RW	FC103
R4X18F5	RTD12_TRP	RTD #12 Trip	–, 1, 0–2	RW	FC115
R4X18F6	RTD12_TRP_VOTING	RTD #12 Trip Voting	–, 1, 1–12	RW	FC122
R4X18F7	RTD12_RLYS	RTD #12 Trip Relays	–, 1, 0–3	RW	FC111
R4X18F8	RTD12_TRP_LVL	RTD #12 Trip Temperature	°C, 1, 1–250	RW	F1
R4X18F9S8	RTD12_NAME	RTD #12 Name	ASCII	RW	F22
R4X190E	RTD12_ALM_TEMP_F	RTD #12 Alarm Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1
R4X190F	RTD12_TRP_TEMP_F	RTD #12 Trip Temperature (in Fahrenheit)	°F, 1, 34–482	RW	F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X1910	OP_RTD_SEN_ALM	Open RTD Sensor Alarm	-, 1, 0-2	RW	FC115
R4X1911	OP_RTD_SEN_ALM_RLY S	Open RTD Sensor Alarm Relays	-, 1, 0-6	RW	FC113
R4X1912	OP_RTD_SEN_ALM_EVNT	Open RTD Sensor Alarm Events	-, 1, 0-1	RW	FC103
R4X1920	RTD_OP_LT_ALM	RTD Open / Low Temp Alarm	-, 1, 0-2	RW	FC115
R4X1921	RTD_OP_LT_ALM_RLYS	RTD Open / Low Temp Alarm Relays	-, 1, 0-6	RW	FC113
R4X1922	RTD_OP_LT_ALM_EVNT	RTD Open / Low Temp Alarm Events	-, 1, 0-1	RW	FC103
R4X1930	RTD1_HI_ALM	RTD #1 Hi Alarm	-, 1, 0-2	RW	FC115
R4X1931	RTD1_HI_ALM_RLY	RTD #1 Hi Alarm Relays	-, 1, 0-6	RW	FC113
R4X1932	RTD1_HI_ALM_LVL	RTD #1 Hi Alarm Level	°C, 1, 1-250	RW	F1
R4X1933		Reserved		RW	
R4X1934	RTD2_HI_ALM	RTD #2 Hi Alarm	-, 1, 0-2	RW	FC115
R4X1935	RTD2_HI_ALM_RLY	RTD #2 Hi Alarm Relays	-, 1, 0-6	RW	FC113
R4X1936	RTD2_HI_ALM_LVL	RTD #2 Hi Alarm Level	°C, 1, 1-250	RW	F1
R4X1937		Reserved		RW	
R4X1938	RTD3_HI_ALM	RTD #3 Hi Alarm	-, 1, 0-2	RW	FC115
R4X1939	RTD3_HI_ALM_RLY	RTD #3 Hi Alarm Relays	-, 1, 0-6	RW	FC113
R4X193A	RTD3_HI_ALM_LVL	RTD #3 Hi Alarm Level	°C, 1, 1-250	RW	F1
R4X193B		Reserved		RW	
R4X193C	RTD4_HI_ALM	RTD #4 Hi Alarm	-, 1, 0-2	RW	FC115
R4X193D	RTD4_HI_ALM_RLY	RTD #4 Hi Alarm Relays	-, 1, 0-6	RW	FC113
R4X193E	RTD4_HI_ALM_LVL	RTD #4 Hi Alarm Level	°C, 1, 1-250	RW	F1
R4X193F		Reserved		RW	
R4X1940	RTD5_HI_ALM	RTD #5 Hi Alarm	-, 1, 0-2	RW	FC115
R4X1941	RTD5_HI_ALM_RLY	RTD #5 Hi Alarm Relays	-, 1, 0-6	RW	FC113
R4X1942	RTD5_HI_ALM_LVL	RTD #5 Hi Alarm Level	°C, 1, 1-250	RW	F1
R4X1943		Reserved		RW	
R4X1944	RTD6_HI_ALM	RTD #6 Hi Alarm	-, 1, 0-2	RW	FC115
R4X1945	RTD6_HI_ALM_RLY	RTD #6 Hi Alarm Relays	-, 1, 0-6	RW	FC113
R4X1946	RTD6_HI_ALM_LVL	RTD #6 Hi Alarm Level	°C, 1, 1-250	RW	F1
R4X1947		Reserved		RW	
R4X1948	RTD7_HI_ALM	RTD #7 Hi Alarm	-, 1, 0-2	RW	FC115
R4X1949	RTD7_HI_ALM_RLY	RTD #7 Hi Alarm Relays	-, 1, 0-6	RW	FC113
R4X194A	RTD7_HI_ALM_LVL	RTD #7 Hi Alarm Level	°C, 1, 1-250	RW	F1
R4X194B		Reserved		RW	
R4X194C	RTD8_HI_ALM	RTD #8 Hi Alarm	-, 1, 0-2	RW	FC115
R4X194D	RTD8_HI_ALM_RLY	RTD #8 Hi Alarm Relays	-, 1, 0-6	RW	FC113
R4X194E	RTD8_HI_ALM_LVL	RTD #8 Hi Alarm Level	°C, 1, 1-250	RW	F1
R4X194F		Reserved		RW	
R4X1950	RTD9_HI_ALM	RTD #9 Hi Alarm	-, 1, 0-2	RW	FC115
R4X1951	RTD9_HI_ALM_RLY	RTD #9 Hi Alarm Relays	-, 1, 0-6	RW	FC113
R4X1952	RTD9_HI_ALM_LVL	RTD #9 Hi Alarm Level	°C, 1, 1-250	RW	F1
R4X1953		Reserved		RW	
R4X1954	RTD10_HI_ALM	RTD #10 Hi Alarm	-, 1, 0-2	RW	FC115
R4X1955	RTD10_HI_ALM_RLY	RTD #10 Hi Alarm Relays	-, 1, 0-6	RW	FC113

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X1956	RTD10_HI_ALM_LVL	RTD #10 Hi Alarm Level	°C, 1, 1–250	RW	F1
R4X1957		Reserved		RW	
R4X1958	RTD11_HI_ALM	RTD #11 Hi Alarm	-, 1, 0–2	RW	FC115
R4X1959	RTD11_HI_ALM_RLY	RTD #11 Hi Alarm Relays	-, 1, 0–6	RW	FC113
R4X195A	RTD11_HI_ALM_LVL	RTD #11 Hi Alarm Level	°C, 1, 1–250	RW	F1
R4X195B		Reserved		RW	
R4X195C	RTD12_HI_ALM	RTD #12 Hi Alarm	-, 1, 0–2	RW	FC115
R4X195D	RTD12_HI_ALM_RLY	RTD #12 Hi Alarm Relays	-, 1, 0–6	RW	FC113
R4X195E	RTD12_HI_ALM_LVL	RTD #12 Hi Alarm Level	°C, 1, 1–250	RW	F1
R4X195F		Reserved		RW	
R4X1960	BLK_UV_NO_V	Block Undervoltage on No Voltage	-, 1, 0–1	RW	FC103
R4X1961	UV_ALM	Undervoltage Alarm	-, 1, 0–2	RW	FC115
R4X1962	UV_ALM_RLYS	Undervoltage Alarm Relays	-, 1, 0–6	RW	FC113
R4X1963	UV_ALM_PKUP	Undervoltage Alarm Pickup	x Rated, 1, 60–99	RW	F3
R4X1964	ST_UV_ALM_PKUP	Starting Undervoltage Alarm Pickup	x Rated, 1, 60–99	RW	F3
R4X1965	UV_ALM_DLY	Undervoltage Alarm Delay	s, 1, 0–600	RW	F2
R4X1966	UV_ALM_EVNT	Undervoltage Alarm Events	-, 1, 0–1	RW	FC103
R4X1967	UV_TRP	Undervoltage Trip	-, 1, 0–2	RW	FC115
R4X1968	UV_TRP_RLYS	Undervoltage Trip Relays	-, 1, 0–3	RW	FC111
R4X1969	UV_TRP_PKUP	Undervoltage Trip Pickup	x Rated, 1, 60–99	RW	F3
R4X196A	ST_UV_TRP_PKUP	Starting Undervoltage Trip Pickup	x Rated, 1, 60–99	RW	F3
R4X196B	UV_TRP_DLY	Undervoltage Trip Delay	s, 1, 0–600	RW	F2
R4X1980	OV_ALM	Overvoltage Alarm	-, 1, 0–2	RW	FC115
R4X1981	OV_RLYS	Overvoltage Relays	-, 1, 0–6	RW	FC113
R4X1982	OV_ALM_PKUP	Overvoltage Alarm Pickup	x Rated, 1, 101–110	RW	F3
R4X1983	OV_ALM_DLY	Overvoltage Alarm Delay	s, 1, 5–600	RW	F2
R4X1984	OV_ALM_EVNT	Overvoltage Alarm Events	-, 1, 0–1	RW	FC103
R4X1985	OV_TRP	Overvoltage Trip	-, 1, 0–2	RW	FC115
R4X1986	OV_TRP_RLYS	Overvoltage Trip Relays	-, 1, 0–3	RW	FC111
R4X1987	OV_TRP_PKUP	Overvoltage Trip Pickup	x Rated, 1, 101–110	RW	F3
R4X1988	OV_TRP_DLY	Overvoltage Trip Delay	s, 1, 5–600	RW	F2
R4X19A0	V_PH_REV_TRP	Voltage Phase Reversal Trip	-, 1, 0–2	RW	FC115
R4X19A1	V_PH_REV_TRP_RLYS	Voltage Phase Reversal Trip Relays	-, 1, 0–3	RW	FC111
R4X19B0	V_FREQ_ALM	Voltage Frequency Alarm	-, 1, 0–2	RW	FC115
R4X19B1	V_FREQ_ALM_RLYS	Voltage Frequency Alarm Relays	-, 1, 0–6	RW	FC113
R4X19B2	OF_ALM_LVL	Overfrequency Alarm Level	Hz, 1, 2501–7000	RW	F3
R4X19B3	UF_ALM_LVL	Underfrequency Alarm Level	Hz, 1, 2000–6000	RW	F3
R4X19B4	V_FREQ_ALM_DLY	Voltage Frequency Alarm Delay	s, 1, 0–600	RW	F2
R4X19B5	V_FREQ_ALM_EVNT	Voltage Frequency Alarm Events	-, 1, 0–1	RW	FC103
R4X19B6	V_FREQ_TRP	Voltage Frequency Trip	-, 1, 0–2	RW	FC115
R4X19B7	V_FREQ_TRP_RLYS	Voltage Frequency Trip Relays	-, 1, 0–3	RW	FC111
R4X19B8	OF_TRP_LVL	Overfrequency Trip Level	Hz, 1, 2501–7000	RW	F3
R4X19B9	UF_TRP_LVL	Underfrequency Trip Level	Hz, 1, 2000–6000	RW	F3
R4X19BA	V_FREQ_TRP_DLY	Voltage Frequency Trip Delay	s, 1, 0–600	RW	F2
R4X19D0	BLK_PF_ELEM_START	Block Power Factor Element from Start	s, 1, 0–5000	RW	F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X19D1	PF_ALM	Power Factor Alarm	-, 1, 0-2	RW	FC115
R4X19D2	PF_ALM_RLYS	Power Factor Alarm Relays	-, 1, 0-6	RW	FC113
R4X19D3	PF_LEAD_ALM_LVL	Power Factor Lead Alarm Level	-, 1, 5-100	RW	F3
R4X19D4	PF_LAG_ALM_LVL	Power Factor Lag Alarm Level	-, 1, 5-100	RW	F3
R4X19D5	PF_ALM_DLY	Power Factor Alarm Delay	s, 1, 2-300	RW	F1
R4X19D6	PF_ALM_EVNT	Power Factor Alarm Events	-, 1, 0-1	RW	FC103
R4X19D7	PF_TRP	Power Factor Trip	-, 1, 0-2	RW	FC115
R4X19D8	PF_TRP_RLYS	Power Factor Trip Relays	-, 1, 0-3	RW	FC111
R4X19D9	PF_LEAD_TRP_LVL	Power Factor Lead Trip Level	-, 1, 5-100	RW	F3
R4X19DA	PF_LAG_TRP_LVL	Power Factor Lag Trip Level	-, 1, 5-100	RW	F3
R4X19DB	PF_TRP_DLY	Power Factor Trip Delay	s, 1, 2-300	RW	F1
R4X19F0	BLK_KVAR_ELEM_STAR T	Block kvar Element from Start	s, 1, 0-5000	RW	F1
R4X19F1	RP_ALM	Reactive Power Alarm	-, 1, 0-2	RW	FC115
R4X19F2	RP_ALM_RLYS	Reactive Power Alarm Relays	-, 1, 0-6	RW	FC113
R4X19F3	POS_RP_ALM_LVL	Positive Reactive Power Alarm Level	kvar, 1, 1-25000	RW	F1
R4X19F4	NEG_RP_ALM_LVL	Negative Reactive Power Alarm Level	kvar, 1, 1-25000	RW	F1
R4X19F5	RP_ALM_DLY	Reactive Power Alarm Delay	s, 1, 2-300	RW	F2
R4X19F6	RP_ALM_EVNT	Reactive Power Alarm Events	-, 1, 0-1	RW	FC103
R4X19F7	RP_TRP	Reactive Power Trip	-, 1, 0-2	RW	FC115
R4X19F8	RP_TRP_RLYS	Reactive Power Trip Relays	-, 1, 0-3	RW	FC111
R4X19F9	POS_RP_TRP_LVL	Positive Reactive Power Trip Level	kvar, 1, 1-25000	RW	F1
R4X19FA	NEG_RP_TRP_LVL	Negative Reactive Power Trip Level	kvar, 1, 1-25000	RW	F1
R4X19FB	RP_TRP_DLY	Reactive Power Trip Delay	s, 1, 2-300	RW	F2
R4X1A10	BLK_UP_START	Block Underpower From Start	s, 1, 0-15000	RW	F1
R4X1A11	UP_ALM	Underpower Alarm	-, 1, 0-2	RW	FC115
R4X1A12	UP_ALM_RLYS	Underpower Alarm Relays	-, 1, 0-6	RW	FC113
R4X1A13	UP_ALM_LVL	Underpower Alarm Level	kW, 1, 1-25000	RW	F1
R4X1A14	UP_ALM_DLY	Underpower Alarm Delay	s, 1, 1-30	RW	F1
R4X1A15	UP_ALM_EVNT	Underpower Alarm Events	-, 1, 0-1	RW	FC103
R4X1A16	UP_TRP	Underpower Trip	-, 1, 0-2	RW	FC115
R4X1A17	UP_TRP_RLYS	Underpower Trip Relays	-, 1, 0-3	RW	FC111
R4X1A18	UP_TRP_LVL	Underpower Trip Level	kW, 1, 1-25000	RW	F1
R4X1A19	UP_TRP_DLY	Underpower Trip Delay	s, 1, 1-30	RW	F1
R4X1A20	BLK_REV_POW	Block Reverse Power From Start	s, 1, 0-5000	RW	F1
R4X1A21	REV_POW_ALM	Reverse Power Alarm	-, 1, 0-2	RW	FC115
R4X1A22	REV_POW_ALM_RLY	Reverse Power Alarm Relays	-, 1, 0-6	RW	FC113
R4X1A23	REV_POW_ALM_LEV	Reverse Power Alarm Level	kW, 1, 1-25000	RW	F1
R4X1A24	REV_POW_ALM_DLY	Reverse Power Alarm Delay	s, 1, 2-300	RW	F1
R4X1A25	REV_POW_ALM_EVE	Reverse Power Alarm Events	s, 1, 0-1	RW	FC103
R4X1A26	REV_POW_TRIP	Reverse Power Trip	s, 1, 0-2	RW	FC115
R4X1A27	REV_POW_TRIP_RLY	Reverse Power Trip Relays	-, 1, 0-3	RW	FC111
R4X1A28	REV_POW_TRIP_LEV	Reverse Power Trip Level	kW, 1, 1-25000	RW	F1
R4X1A29	REV_POW_TRIP_DLY	Reverse Power Trip Delay	s, 1, 2-300	RW	F1
R4X1A30	TORQ_METER	Torque Metering	N/A, 1, 0-1	RW	FC126
R4X1A31	STATOR_RES	Stator Resistance	mohms, 1, 1-50000	RW	F17

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X1A32	POLE_PAIRS	Pole Pairs	-, 2, 2-128	RW	F1
R4X1A33	TORO_UNIT	Torque Unit	-, 1, 0-1	RW	FC148
R4X1A40	OT_ALM	Overtorque Alarm	-, 1, 0-2	RW	FC115
R4X1A41	OT_ALM_RLY	Overtorque Alarm Relays	-, 1, 0-6	RW	FC113
R4X1A42L	OT_ALM_LEV	Overtorque Alarm Level	Nm/ftlb, 1, 10-99999999	RW	F2
R4X1A44	OT_ALM_DLY	Overtorque Alarm Delay	s, 1, 2-300	RW	F2
R4X1A45	OT_ALM_EVE	Overtorque Alarm Events	-, 1, 0-1	RW	FC103
R4X1A80	TRP_CTR_ALM	Trip Counter Alarm	-, 1, 0-2	RW	FC115
R4X1A81	TRP_CTR_ALM_RLYS	Trip Counter Alarm Relays	-, 1, 0-6	RW	FC113
R4X1A82	TRP_CTR_ALM_LVL	Trip Counter Alarm Level	-, 1, 1-50000	RW	F1
R4X1A83	TRP_CTR_ALM_EVNT	Trip Counter Alarm Events	-, 1, 0-1	RW	FC103
R4X1A90	STR_FAIL_ALM	Starter Failure Alarm	-, 1, 0-2	RW	FC115
R4X1A91	STR_TYP	Starter Type	-, 1, 0-1	RW	FC125
R4X1A92	STR_FAIL_ALM_RLYS	Starter Failure Alarm Relays	-, 1, 0-6	RW	FC113
R4X1A93	STR_FAIL_ALM_DLY	Starter Failure Alarm Delay	ms, 10, 10-1000	RW	F1
R4X1A94	SUPER_TRP_COIL	Supervision of Trip Coil	-, 1, 0-2	RW	FC142
R4X1A95	STR_FAIL_ALM_EVNT	Starter Failure Alarm Events	-, 1, 0-1	RW	FC103
R4X1AD0	AMPS_DMD_PD	Current Demand Period	min, 1, 5-90	RW	F1
R4X1AD1	AMPS_DMD_ALM	Current Demand Alarm	-, 1, 0-2	RW	FC115
R4X1AD2	AMPS_DMD_ALM_RLYS	Current Demand Alarm Relays	-, 1, 0-6	RW	FC113
R4X1AD3L	AMPS_DMD_ALM_LVL	Current Demand Alarm Level	A, 1, 10-100000	RW	F9
R4X1AD5	AMPS_DMD_ALM_EVNTS	Current Demand Alarm Events	-, 1, 0-1	RW	FC103
R4X1AE0	KW_DMD_PD	kW Demand Period	min, 1, 5-90	RW	F1
R4X1AE1	KW_DMD_ALM	kW Demand Alarm	-, 1, 0-2	RW	FC115
R4X1AE2	KW_DMD_ALM_RLYS	kW Demand Alarm Relays	-, 1, 0-6	RW	FC113
R4X1AE3	KW_DMD_ALM_LVL	kW Demand Alarm Level	kW, 1, 1-50000	RW	F1
R4X1AE4	KW_DMD_ALM_EVNT	kW Demand Alarm Events	-, 1, 0-1	RW	FC103
R4X1AF0	KVAR_DMD_PD	kvar Demand Period	min, 1, 5-90	RW	F1
R4X1AF1	KVAR_DMD_ALM	kvar Demand Alarm	-, 1, 0-2	RW	FC115
R4X1AF2	KVAR_DMD_ALM_RLYS	kvar Demand Alarm Relays	-, 1, 0-6	RW	FC113
R4X1AF3	KVAR_DMD_ALM_LVL	kvar Demand Alarm Level	kvar, 1, 1-50000	RW	F1
R4X1AF4	KVAR_DMD_ALM_EVNT	kvar Demand Alarm Events	-, 1, 0-1	RW	FC103
R4X1B00	KVA_DMD_PD	kVA Demand Period	min, 1, 5-90	RW	F1
R4X1B01	KVA_DMD_ALM	kVA Demand Alarm	-, 1, 0-2	RW	FC115
R4X1B02	KVA_DMD_ALM_RLYS	kVA Demand Alarm Relays	-, 1, 0-6	RW	FC113
R4X1B03	KVA_DMD_ALM_LVL	kVA Demand Alarm Level	kVA, 1, 1-50000	RW	F1
R4X1B04	KVA_DMD_ALM_EVNT	kVA Demand Alarm Events	-, 1, 0-1	RW	FC103
R4X1B10	POSKWH_PO_RLY	Positive kWh Pulse Output Relay	-, 1, 0-3	RW	FC144
R4X1B11	POSKWH_PO_INTL	Positive kWh Pulse Output Interval	kWh, 1, 1-50000	RW	F1
R4X1B12	POSKVARH_PO_RLY	Positive kvarh Pulse Output Relay	-, 1, 0-3	RW	FC144
R4X1B13	POSKVARH_PO_INTL	Positive kvarh Pulse Output Interval	kvarh, 1, 1-50000	RW	F1
R4X1B14	NEGKVARH_PO_RLY	Negative kvarh Pulse Output Relay	-, 1, 0-3	RW	FC144
R4X1B15	NEGKVARH_PO_INTL	Negative kvarh Pulse Output Interval	kvarh, 1, 1-50000	RW	F1
R4X1B16	RUN_TP_RLY	Running Time Pulse Relay	-, 1, 0-3	RW	FC144
R4X1B17	RUN_TP_INTL	Running Time Pulse Interval	sec, 1, 1-50000	RW	F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X1B40	ANAL_OUT1_SEL	Analog Output 1 Selection	-, 1, 0-46	RW	FC127
R4X1B41	ANAL_OUT2_SEL	Analog Output 2 Selection	-, 1, 0-46	RW	FC127
R4X1B42	ANAL_OUT3_SEL	Analog Output 3 Selection	-, 1, 0-46	RW	FC127
R4X1B43	ANAL_OUT4_SEL	Analog Output 4 Selection	-, 1, 0-46	RW	FC127
R4X1B44L	AMPS_A_MIN	Phase A Current Minimum	A, 1, 0-100000	RW	F9
R4X1B46L	AMPS_A_MAX	Phase A Current Maximum	A, 1, 0-100000	RW	F9
R4X1B48L	AMPS_B_MIN	Phase B Current Minimum	A, 1, 0-100000	RW	F9
R4X1B4AL	AMPS_B_MAX	Phase B Current Maximum	A, 1, 0-100000	RW	F9
R4X1B4CL	AMPS_C_MIN	Phase C Current Minimum	A, 1, 0-100000	RW	F9
R4X1B4EL	AMPS_C_MAX	Phase C Current Maximum	A, 1, 0-100000	RW	F9
R4X1B50L	AVG_PH_AMPS_MIN	Average Phase Current Minimum	A, 1, 0-100000	RW	F9
R4X1B52L	AVG_PH_AMPS_MAX	Average Phase Current Maximum	A, 1, 0-100000	RW	F9
R4X1B54	AB_LN_V_MIN	AB Line Voltage Minimum	V, 1, 50-20000	RW	F1
R4X1B55	AB_LN_V_MAX	AB Line Voltage Maximum	V, 1, 50-20000	RW	F1
R4X1B56	BC_LN_V_MIN	BC Line Voltage Minimum	V, 1, 50-20000	RW	F1
R4X1B57	BC_LN_V_MAX	BC Line Voltage Maximum	V, 1, 50-20000	RW	F1
R4X1B58	CA_LN_V_MIN	CA Line Voltage Minimum	V, 1, 50-20000	RW	F1
R4X1B59	CA_LN_V_MAX	CA Line Voltage Maximum	V, 1, 50-20000	RW	F1
R4X1B5A	AVG_LN_V_MIN	Average Line Voltage Minimum	V, 1, 50-20000	RW	F1
R4X1B5B	AVG_LN_V_MAX	Average Line Voltage Maximum	V, 1, 50-20000	RW	F1
R4X1B5C	AN_V_MIN	Phase AN Voltage Minimum	V, 1, 50-20000	RW	F1
R4X1B5D	AN_V_MAX	Phase AN Voltage Maximum	V, 1, 50-20000	RW	F1
R4X1B5E	BN_V_MIN	Phase BN Voltage Minimum	V, 1, 50-20000	RW	F1
R4X1B5F	BN_V_MAX	Phase BN Voltage Maximum	V, 1, 50-20000	RW	F1
R4X1B60	CN_V_MIN	Phase CN Voltage Minimum	V, 1, 50-20000	RW	F1
R4X1B61	CN_V_MAX	Phase CN Voltage Maximum	V, 1, 50-20000	RW	F1
R4X1B62	AVG_PH_V_MIN	Average Phase Voltage Minimum	V, 1, 50-20000	RW	F1
R4X1B63	AVG_PH_V_MAX	Average Phase Voltage Maximum	V, 1, 50-20000	RW	F1
R4X1B64I	HOT_STAT_RTD_MIN	Hottest Stator RTD Minimum	°C, 1, -50-250	RW	F4
R4X1B65I	HOT_STAT_RTD_MAX	Hottest Stator RTD Maximum	°C, 1, -50-250	RW	F4
R4X1B66I	HOT_BEAR_RTD_MIN	Hottest Bearing RTD Minimum	°C, 1, -50-250	RW	F4
R4X1B67I	HOT_BEAR_RTD_MAX	Hottest Bearing RTD Maximum	°C, 1, -50-250	RW	F4
R4X1B68I	HOT_AMB_RTD_MIN	Hottest Ambient RTD Minimum	°C, 1, -50-250	RW	F4
R4X1B69I	HOT_AMB_RTD_MAX	Hottest Ambient RTD Maximum	°C, 1, -50-250	RW	F4
R4X1B6AI	AO_RTD1_MIN	RTD #1 Minimum	°C, 1, -50-250	RW	F4
R4X1B6BI	AO_RTD1_MAX	RTD #1 Maximum	°C, 1, -50-250	RW	F4
R4X1B6CI	AO_RTD2_MIN	RTD #2 Minimum	°C, 1, -50-250	RW	F4
R4X1B6DI	AO_RTD2_MAX	RTD #2 Maximum	°C, 1, -50-250	RW	F4
R4X1B6EI	AO_RTD3_MIN	RTD #3 Minimum	°C, 1, -50-250	RW	F4
R4X1B6FI	AO_RTD3_MAX	RTD #3 Maximum	°C, 1, -50-250	RW	F4
R4X1B70I	AO_RTD4_MIN	RTD #4 Minimum	°C, 1, -50-250	RW	F4
R4X1B71I	AO_RTD4_MAX	RTD #4 Maximum	°C, 1, -50-250	RW	F4
R4X1B72I	AO_RTD5_MIN	RTD #5 Minimum	°C, 1, -50-250	RW	F4
R4X1B73I	AO_RTD5_MAX	RTD #5 Maximum	°C, 1, -50-250	RW	F4
R4X1B74I	AO_RTD6_MIN	RTD #6 Minimum	°C, 1, -50-250	RW	F4

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R4X1B75I	AO_RTD6_MAX	RTD #6 Maximum	°C, 1, -50–250	RW	F4
R4X1B76I	AO_RTD7_MIN	RTD #7 Minimum	°C, 1, -50–250	RW	F4
R4X1B77I	AO_RTD7_MAX	RTD #7 Maximum	°C, 1, -50–250	RW	F4
R4X1B78I	AO_RTD8_MIN	RTD #8 Minimum	°C, 1, -50–250	RW	F4
R4X1B79I	AO_RTD8_MAX	RTD #8 Maximum	°C, 1, -50–250	RW	F4
R4X1B7AI	AO_RTD9_MIN	RTD #9 Minimum	°C, 1, -50–250	RW	F4
R4X1B7BI	AO_RTD9_MAX	RTD #9 Maximum	°C, 1, -50–250	RW	F4
R4X1B7CI	AO_RTD10_MIN	RTD #10 Minimum	°C, 1, -50–250	RW	F4
R4X1B7DI	AO_RTD10_MAX	RTD #10 Maximum	°C, 1, -50–250	RW	F4
R4X1B7EI	AO_RTD11_MIN	RTD #11 Minimum	°C, 1, -50–250	RW	F4
R4X1B7FI	AO_RTD11_MAX	RTD #11 Maximum	°C, 1, -50–250	RW	F4
R4X1B80I	AO_RTD12_MIN	RTD #12 Minimum	°C, 1, -50–250	RW	F4
R4X1B81I	AO_RTD12_MAX	RTD #12 Maximum	°C, 1, -50–250	RW	F4
R4X1B82	PF_MIN	Power Factor Minimum	lead/lag, 1, -99–100	RW	F21
R4X1B83	PF_MAX	Power Factor Maximum	lead/lag, 1, -99–100	RW	F21
R4X1B84L	REAC_PWR_MIN	Reactive Power Minimum	kvar, 1, -50000–50000	RW	F12
R4X1B86L	REAC_PWR_MAX	Reactive Power Maximum	kvar, 1, -50000–50000	RW	F12
R4X1B88L	RP_MIN	Real Power Minimum	kW, 1, -50000–50000	RW	F12
R4X1B8AL	RP_MAX	Real Power Maximum	kW, 1, -50000–50000	RW	F12
R4X1B8C	APP_PWR_MIN	Apparent Power Minimum	kVA, 1, 0–50000	RW	F1
R4X1B8D	APP_PWR_MAX	Apparent Power Maximum	kVA, 1, 0–50000	RW	F1
R4X1B8E	THERM_CAP_USED_MIN	Thermal Capacity Used Minimum	% used, 1, 0–100	RW	F1
R4X1B8F	THERM_CAP_USED_MAX	Thermal Capacity Used Maximum	% used, 1, 0–100	RW	F1
R4X1B90	RLY_LKOUT_MAX	Relay Lockout Time Minimum	min, 1, 0–500	RW	F1
R4X1B91	RLY_LKOUT_MIN	Relay Lockout Time Maximum	min, 1, 0–500	RW	F1
R4X1B92L	AMPS_DMD_MIN	Current Demand Minimum	A, 1, 0–100000	RW	F9
R4X1B94L	AMPS_DMD_MAX	Current Demand Maximum	A, 1, 0–100000	RW	F9
R4X1B96	KVAR_DMD_MIN	kvar Demand Minimum	kvar, 1, 0–50000	RW	F1
R4X1B97	KVAR_DMD_MAX	kvar Demand Maximum	kvar, 1, 0–50000	RW	F1
R4X1B98	KW_DMD_MIN	kW Demand Minimum	kW, 1, 0–50000	RW	F1
R4X1B99	KW_DMD_MAX	kW Demand Maximum	kW, 1, 0–50000	RW	F1
R4X1B9A	KVA_DMD_MIN	kVA Demand Minimum	kVA, 1, 0–50000	RW	F1
R4X1B9B	KVA_DMD_MAX	kVA Demand Maximum	kVA, 1, 0–50000	RW	F1
R4X1B9C	MTR_LD_MIN	Motor Load Minimum	x FLA, 1, 0–2000	RW	F3
R4X1B9D	MTR_LD_MAX	Motor Load Maximum	x FLA, 1, 0–2000	RW	F3
R4X1B9EL	AO_ANAL_IN1_MIN	Analog Input 1 Minimum	–, 1, -50000–50000	RW	F12
R4X1BA0L	AO_ANAL_IN1_MAX	Analog Input 1 Maximum	–, 1, -50000–50000	RW	F12
R4X1BA2L	AO_ANAL_IN2_MIN	Analog Input 2 Minimum	–, 1, -50000–50000	RW	F12
R4X1BA4L	AO_ANAL_IN2_MAX	Analog Input 2 Maximum	–, 1, -50000–50000	RW	F12
R4X1BA6L	AO_ANAL_IN3_MIN	Analog Input 3 Minimum	–, 1, -50000–50000	RW	F12
R4X1BA8L	AO_ANAL_IN3_MAX	Analog Input 3 Maximum	–, 1, -50000–50000	RW	F12
R4X1BAAL	AO_ANAL_IN4_MIN	Analog Input 4 Minimum	–, 1, -50000–50000	RW	F12
R4X1BACL	AO_ANAL_IN4_MAX	Analog Input 4 Maximum	–, 1, -50000–50000	RW	F12
R4X1BAE	TACH_MIN	Tachometer Min	R.P.M., 1, 100–7200	RW	F1
R4X1BAF	TACH_MAX	Tachometer Max	R.P.M., 1, 100–7200	RW	F1

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R4X1BB0	MWH_MIN	MWh Minimum	MWh, 1, 0–1E+09	RW	F17
R4X1BB2	MWH_MAX	MWh Maximum	MWh, 1, 0–1E+09	RW	F17
R4X1BC0	TORQUE_MIN	Torque Minimum	Nm/ftlb, 1, 0–9999999	RW	F2
R4X1BC2	TORQUE_MAX	Torque Maximum	Nm/ftlb, 1, 0–9999999	RW	F2
R4X1BD4I	HOT_STAT_RTD_MIN_F	Hottest Stator RTD Minimum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BD5I	HOT_STAT_RTD_MAX_F	Hottest Stator RTD Maximum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BD6I	HOT_BEAR_RTD_MIN_F	Hottest Bearing RTD Minimum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BC7I	HOT_BEAR_RTD_MAX_F	Hottest Bearing RTD Maximum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BD8I	HOT_AMB_RTD_MIN_F	Hottest Ambient RTD Minimum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BD9I	HOT_AMB_RTD_MAX_F	Hottest Ambient RTD Maximum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BDAI	AO_RTD1_MIN_F	RTD #1 Minimum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BDBI	AO_RTD1_MAX_F	RTD #1 Maximum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BDCI	AO_RTD2_MIN_F	RTD #2 Minimum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BDDI	AO_RTD2_MAX_F	RTD #2 Maximum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BDEI	AO_RTD3_MIN_F	RTD #3 Minimum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BDFI	AO_RTD3_MAX_F	RTD #3 Maximum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BE0I	AO_RTD4_MIN_F	RTD #4 Minimum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BE1I	AO_RTD4_MAX_F	RTD #4 Maximum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BE2I	AO_RTD5_MIN_F	RTD #5 Minimum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BE3I	AO_RTD5_MAX_F	RTD #5 Maximum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BE4I	AO_RTD6_MIN_F	RTD #6 Minimum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BE5I	AO_RTD6_MAX_F	RTD #6 Maximum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BE6I	AO_RTD7_MIN_F	RTD #7 Minimum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BE7I	AO_RTD7_MAX_F	RTD #7 Maximum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BE8I	AO_RTD8_MIN_F	RTD #8 Minimum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BE9I	AO_RTD8_MAX_F	RTD #8 Maximum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BEAI	AO_RTD9_MIN_F	RTD #9 Minimum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BEBI	AO_RTD9_MAX_F	RTD #9 Maximum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BECI	AO_RTD10_MIN_F	RTD #10 Minimum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BEDI	AO_RTD10_MAX_F	RTD #10 Maximum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BEEI	AO_RTD11_MIN_F	RTD #11 Minimum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BEFI	AO_RTD11_MAX_F	RTD #11 Maximum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BF0I	AO_RTD12_MIN_F	RTD #12 Minimum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BF1I	AO_RTD12_MAX_F	RTD #12 Maximum (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1BF8L	ANAL_IN_DIFF_12_MIN	Analog Input Diff 1-2 Minimum	-, 1, -50000–50000	RW	F12
R4X1BFAL	ANAL_IN_DIFF_12_MAX	Analog Input Diff 1-2 Maximum	-, 1, -50000–50000	RW	F12
R4X1BFCL	ANAL_IN_DIFF_34_MIN	Analog Input Diff 3-4 Minimum	-, 1, -50000–50000	RW	F12
R4X1BFEL	ANAL_IN_DIFF_34_MAX	Analog Input Diff 3-4 Maximum	-, 1, -50000–50000	RW	F12
R4X1C0B	ANAL_IN1_SETUP	Analog Input 1 Setup	-, 1, 0–3	RW	FC129
R4X1C10S6	ANAL_IN1_UNITS	Analog Input 1 Units	ASCII	RW	F22
R4X1C13L	ANAL_IN1_MIN	Analog Input 1 Minimum	-, 1, -50000–50000	RW	F12

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R4X1C15L	ANAL_IN1_MAX	Analog Input 1 Maximum	-, 1, -50000-50000	RW	F12
R4X1C17	BLK_ANAL_IN1_START	Block Analog Input 1 From Start	s, 1, 0-5000	RW	F1
R4X1C18	ANAL_IN1_ALM	Analog Input 1 Alarm	-, 1, 0-2	RW	FC115
R4X1C19	ANAL_IN1_RLYS	Analog Input 1 Alarm Relays	-, 1, 0-6	RW	FC113
R4X1C1AL	ANAL_IN1_LVL	Analog Input 1 Alarm Level	-, 1, -50000-50000	RW	F12
R4X1C1C	ANAL_IN1_ALM_PKUP	Analog Input 1 Alarm Pickup	-, 1, 0-1	RW	FC130
R4X1C1D	ANAL_IN1_ALM_DLY	Analog Input 1 Alarm Delay	s, 1, 1-3000	RW	F2
R4X1C1E	ANAL_IN1_ALM_EVNT	Analog Input 1 Alarm Events	-, 1, 0-1	RW	FC103
R4X1C1F	ANAL_IN1_TRP	Analog Input 1 Trip	-, 1, 0-2	RW	FC115
R4X1C20	ANAL_IN1_TRP_RLYS	Analog Input 1 Trip Relays	-, 1, 0-3	RW	FC111
R4X1C21L	ANAL_IN1_TRP_LVL	Analog Input 1 Trip Level	-, 1, -50000-50000	RW	F12
R4X1C23	ANAL_IN1_TRP_PKUP	Analog Input 1 Trip Pickup	-, 1, 0-1	RW	FC130
R4X1C24	ANAL_IN1_TRP_DLY	Analog Input 1 Trip Delay	s, 1, 1-3000	RW	F2
R4X1C25S12	ANAL_IN1_NAME	Analog Input 1 Name	ASCII	RW	F22
R4X1C4B	ANAL_IN2_SETUP	Analog Input 2 Setup	-, 1, 0-3	RW	FC129
R4X1C50S6	ANAL_IN2_UNITS	Analog Input 2 Units	ASCII	RW	F22
R4X1C53L	ANAL_IN2_MIN	Analog Input 2 Minimum	-, 1, -50000-50000	RW	F12
R4X1C55L	ANAL_IN2_MAX	Analog Input 2 Maximum	-, 1, -50000-50000	RW	F12
R4X1C57	BLK_ANAL_IN2_START	Block Analog Input 2 From Start	s, 1, 0-5000	RW	F1
R4X1C58	ANAL_IN2_ALM	Analog Input 2 Alarm	-, 1, 0-2	RW	FC115
R4X1C59	ANAL_IN2_RLYS	Analog Input 2 Alarm Relays	-, 1, 0-6	RW	FC113
R4X1C5AL	ANAL_IN2_LVL	Analog Input 2 Alarm Level	-, 1, -50000-50000	RW	F12
R4X1C5C	ANAL_IN2_ALM_PKUP	Analog Input 2 Alarm Pickup	-, 1, 0-1	RW	FC130
R4X1C5D	ANAL_IN2_ALM_DLY	Analog Input 2 Alarm Delay	s, 1, 1-3000	RW	F2
R4X1C5E	ANAL_IN2_ALM_EVNT	Analog Input 2 Alarm Events	-, 1, 0-1	RW	FC103
R4X1C5F	ANAL_IN2_TRP	Analog Input 2 Trip	-, 1, 0-2	RW	FC115
R4X1C60	ANAL_IN2_TRP_RLYS	Analog Input 2 Trip Relays	-, 1, 0-3	RW	FC111
R4X1C61L	ANAL_IN2_TRP_LVL	Analog Input 2 Trip Level	-, 1, -50000-50000	RW	F12
R4X1C63	ANAL_IN2_TRP_PKUP	Analog Input 2 Trip Pickup	-, 1, 0-1	RW	FC130
R4X1C64	ANAL_IN2_TRP_DLY	Analog Input 2 Trip Delay	s, 1, 1-3000	RW	F2
R4X1C65S12	ANAL_IN2_NAME	Analog Input 2 Name	ASCII	RW	F22
R4X1C8B	ANAL_IN3_SETUP	Analog Input 3 Setup	-, 1, 0-3	RW	FC129
R4X1C90S6	ANAL_IN3_UNITS	Analog Input 3 Units	ASCII	RW	F22
R4X1C93L	ANAL_IN3_MIN	Analog Input 3 Minimum	-, 1, -50000-50000	RW	F12
R4X1C95L	ANAL_IN3_MAX	Analog Input 3 Maximum	-, 1, -50000-50000	RW	F12
R4X1C97	BLK_ANAL_IN3_START	Block Analog Input 3 From Start	s, 1, 0-5000	RW	F1
R4X1C98	ANAL_IN3_ALM	Analog Input 3 Alarm	-, 1, 0-2	RW	FC115
R4X1C99	ANAL_IN3_RLYS	Analog Input 3 Alarm Relays	-, 1, 0-6	RW	FC113
R4X1C9AL	ANAL_IN3_LVL	Analog Input 3 Alarm Level	-, 1, -50000-50000	RW	F12
R4X1C9C	ANAL_IN3_ALM_PKUP	Analog Input 3 Alarm Pickup	-, 1, 0-1	RW	FC130
R4X1C9D	ANAL_IN3_ALM_DLY	Analog Input 3 Alarm Delay	s, 1, 1-3000	RW	F2
R4X1C9E	ANAL_IN3_ALM_EVNT	Analog Input 3 Alarm Events	-, 1, 0-1	RW	FC103
R4X1C9F	ANAL_IN3_TRP	Analog Input 3 Trip	-, 1, 0-2	RW	FC115
R4X1CA0	ANAL_IN3_TRP_RLYS	Analog Input 3 Trip Relays	-, 1, 0-3	RW	FC111
R4X1CA1L	ANAL_IN3_TRP_LVL	Analog Input 3 Trip Level	-, 1, -50000-50000	RW	F12

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R4X1CA3	ANAL_IN3_TRP_PKUP	Analog Input 3 Trip Pickup	-, 1, 0-1	RW	FC130
R4X1CA4	ANAL_IN3_TRP_DLY	Analog Input 3 Trip Delay	s, 1, 1-3000	RW	F2
R4X1CA5S12	ANAL_IN3_NAME	Analog Input 3 Name	ASCII	RW	F22
R4X1CCB	ANAL_IN4_SETUP	Analog Input 4 Setup	-, 1, 0-3	RW	FC129
R4X1CD0S6	ANAL_IN4_UNITS	Analog Input 4 Units	ASCII	RW	F22
R4X1CD3L	ANAL_IN4_MIN	Analog Input 4 Minimum	-, 1, -50000-50000	RW	F12
R4X1CD5L	ANAL_IN4_MAX	Analog Input 4 Maximum	-, 1, -50000-50000	RW	F12
R4X1CD7	BLK_ANAL_IN4_START	Block Analog Input 4 From Start	s, 1, 0-5000	RW	F1
R4X1CD8	ANAL_IN4_ALM	Analog Input 4 Alarm	-, 1, 0-2	RW	FC115
R4X1CD9	ANAL_IN4_RLYS	Analog Input 4 Alarm Relays	-, 1, 0-6	RW	FC113
R4X1CDAL	ANAL_IN4_LVL	Analog Input 4 Alarm Level	-, 1, -50000-50000	RW	F12
R4X1CDC	ANAL_IN4_ALM_PKUP	Analog Input 4 Alarm Pickup	-, 1, 0-1	RW	FC130
R4X1CDD	ANAL_IN4_ALM_DLY	Analog Input 4 Alarm Delay	s, 1, 1-3000	RW	F2
R4X1CDE	ANAL_IN4_ALM_EVNT	Analog Input 4 Alarm Events	-, 1, 0-1	RW	FC103
R4X1CDF	ANAL_IN4_TRP	Analog Input 4 Trip	-, 1, 0-2	RW	FC115
R4X1CE0	ANAL_IN4_TRP_RLYS	Analog Input 4 Trip Relays	-, 1, 0-3	RW	FC111
R4X1CE1L	ANAL_IN4_TRP_LVL	Analog Input 4 Trip Level	-, 1, -50000-50000	RW	F12
R4X1CE3	ANAL_IN4_TRP_PKUP	Analog Input 4 Trip Pickup	-, 1, 0-1	RW	FC130
R4X1CE4	ANAL_IN4_TRP_DLY	Analog Input 4 Trip Delay	s, 1, 1-3000	RW	F2
R4X1CE5S12	ANAL_IN4_NAME	Analog Input 4 Name	ASCII	RW	F22
R4X1D00	SIM_MODE	Simulation Mode	-, 1, 0-3	RW	FC138
R4X1D01	SIM_PREFLT_FLT_DLY	Pre-Fault to Fault Time Delay	s, 1, 0-300	RW	F1
R4X1D10	PREFLT_AMPS_A	Pre-Fault Current Phase A	x FLA, 1, 0-2000	RW	F3
R4X1D11	PREFLT_AMPS_B	Pre-Fault Current Phase B	x FLA, 1, 0-2000	RW	F3
R4X1D12	PREFLT_AMPS_C	Pre-Fault Current Phase C	x FLA, 1, 0-2000	RW	F3
R4X1D13	PREFLT_AMPS_GND	Pre-Fault Ground Current	A, 1, 0-50000	RW	F2
R4X1D14	PREFLT_LN_V	Pre-Fault Line Voltages	x Rated, 1, 0-110	RW	F3
R4X1D15	PREFLT_CURR_LAG_V	Pre-Fault Current Lags Voltage	0, 1, 0-359	RW	F1
R4X1D16I	STAT_RTD_PRE_TEMP	Stator RTD Pre-Fault Temperature	°C, 1, -50-250	RW	F4
R4X1D17I	BEAR_RTD_PRE_TEMP	Bearing RTD Pre-Fault Temperature	°C, 1, -50-250	RW	F4
R4X1D18I	OTH_RTD_PRE_TEMP	Other RTD Pre-Fault Temperature	°C, 1, -50-250	RW	F4
R4X1D19I	AMB_RTD_PRE_TEMP	Ambient RTD Pre-Fault Temperature	°C, 1, -50-250	RW	F4
R4X1D1A	PRE_SYS_FREQ	Pre-Fault System Frequency	Hz, 1, 450-700	RW	F2
R4X1D1B	PRE_ANAL_IN1	Pre-Fault Analog Input 1	% range, 1, 0-100	RW	F1
R4X1D1C	PRE_ANAL_IN2	Pre-Fault Analog Input 2	% range, 1, 0-100	RW	F1
R4X1D1D	PRE_ANAL_IN3	Pre-Fault Analog Input 3	% range, 1, 0-100	RW	F1
R4X1D1E	PRE_ANAL_IN4	Pre-Fault Analog Input 4	% range, 1, 0-100	RW	F1
R4X1D1F	PRE_FAULT_DIFFCURR	Pre-Fault Differential Current	xCT, 1, 0-110	RW	F3
R4X1D3CI	STAT_RTD_PRE_TEMP_F	Pre-Fault Stator RTD Temperature (in Fahr.)	°F, 1, -58-482	RW	F4
R4X1D3DI	BEAR_RTD_PRE_TEMP_F	Pre-Fault Bearing RTD Temperature (in Fahr.)	°F, 1, -58-482	RW	F4
R4X1D3EI	OTH_RTD_PRE_TEMP_F	Pre-Fault Other RTD Temperature (in Fahr.)	°F, 1, -58-482	RW	F4
R4X1D3FI	AMB_RTD_PRE_TEMP_F	Pre-Fault Ambient RTD Temperature (in Fahr.)	°F, 1, -58-482	RW	F4

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X1D40	FAULT_AMPS_A	Fault Current Phase A	x FLA, 1, 0–2000	RW	F3
R4X1D41	FAULT_AMPS_B	Fault Current Phase B	x FLA, 1, 0–2000	RW	F3
R4X1D42	FAULT_AMPS_C	Fault Current Phase C	x FLA, 1, 0–2000	RW	F3
R4X1D43	FAULT_AMPS_GND	Fault Ground Current	A, 1, 0–50000	RW	F2
R4X1D44	FAULT_LN_V	Fault Line Voltages	x Rated, 1, 0–110	RW	F3
R4X1D45	FAULT_CURR_LAG_V	Fault Current Lags Voltage	0, 30, 0–120	RW	F1
R4X1D46I	STAT_RTD_FAULT_TEMP	Stator RTD Fault Temperature	°C, 1, -50–250	RW	F4
R4X1D47I	BEAR_RTD_FAULT_TEMP	Bearing RTD Fault Temperature	°C, 1, -50–250	RW	F4
R4X1D48I	OTH_RTD_FAULT_TEMP	Other RTD Fault Temperature	°C, 1, -50–250	RW	F4
R4X1D49I	AMB_RTD_FAULT_TEMP	Ambient RTD Fault Temperature	°C, 1, -50–250	RW	F4
R4X1D4A	FAULT_SYS_FREQ	Fault System Frequency	Hz, 1, 450–700	RW	F2
R4X1D4B	FAULT_ANAL_IN1	Fault Analog Input 1	% range, 1, 0–100	RW	F1
R4X1D4C	FAULT_ANAL_IN2	Fault Analog Input 2	% range, 1, 0–100	RW	F1
R4X1D4D	FAULT_ANAL_IN3	Fault Analog Input 3	% range, 1, 0–100	RW	F1
R4X1D4E	FAULT_ANAL_IN4	Fault Analog Input 4	% range, 1, 0–100	RW	F1
R4X1D4F	FAULT_DIFFCURR	Fault Differential Current	xCT, 1, 0–110	RW	F3
R4X1D7CI	STAT_RTD_FAULT_TEMP F	Fault Stator RTD Temperature (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1D7DI	BEAR_RTD_FAULT_TEMP PF	Fault Bearing RTD Temperature (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1D7EI	OTH_RTD_FAULT_TEMP F	Fault Other RTD Temperature (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1D7FI	AMB_RTD_FAULT_TEMP F	Fault Ambient RTD Temperature (in Fahrenheit)	°F, 1, -58–482	RW	F4
R4X1D80	FORCE_RLYS	Force Operation of Relays	–, 1, 0–8	RW	FC139
R4X1D90	FORCE_ANAL_OUT	Force Analog Outputs	–, 1, 0–1	RW	FC126
R4X1D91	ANAL_OUT1_FORCE_VAL	Analog Output 1 Forced Value	% range, 1, 0–100	RW	F1
R4X1D92	ANAL_OUT2_FORCE_VAL	Analog Output 2 Forced Value	% range, 1, 0–100	RW	F1
R4X1D93	ANAL_OUT3_FORCE_VAL	Analog Output 3 Forced Value	% range, 1, 0–100	RW	F1
R4X1D94	ANAL_OUT4_FORCE_VAL	Analog Output 4 Forced Value	% range, 1, 0–100	RW	F1
R4X1DFF	SP2_STD_OL_CRV_NUM	Speed2 Standard Overload Curve Number	–, 1, 1–15	RW	F1
R4X1E00	SP2_TM_TP_0101_FLA	Speed2 Time to Trip at 1.01 x FLA	s, 1, 5–999999	RW	F10
R4X1E02	SP2_TM_TP_0105_FLA	Speed2 Time to Trip at 1.05 x FLA	s, 1, 5–999999	RW	F10
R4X1E04	SP2_TM_TP_0110_FLA	Speed2 Time to Trip at 1.10 x FLA	s, 1, 5–999999	RW	F10
R4X1E06	SP2_TM_TP_0120_FLA	Speed2 Time to Trip at 1.20 x FLA	s, 1, 5–999999	RW	F10
R4X1E08	SP2_TM_TP_0130_FLA	Speed2 Time to Trip at 1.30 x FLA	s, 1, 5–999999	RW	F10
R4X1E0A	SP2_TM_TP_0140_FLA	Speed2 Time to Trip at 1.40 x FLA	s, 1, 5–999999	RW	F10
R4X1E0C	SP2_TM_TP_0150_FLA	Speed2 Time to Trip at 1.50 x FLA	s, 1, 5–999999	RW	F10
R4X1E0E	SP2_TM_TP_0175_FLA	Speed2 Time to Trip at 1.75 x FLA	s, 1, 5–999999	RW	F10
R4X1E10	SP2_TM_TP_0200_FLA	Speed2 Time to Trip at 2.00 x FLA	s, 1, 5–999999	RW	F10
R4X1E12	SP2_TM_TP_0225_FLA	Speed2 Time to Trip at 2.25 x FLA	s, 1, 5–999999	RW	F10
R4X1E14	SP2_TM_TP_0250_FLA	Speed2 Time to Trip at 2.50 x FLA	s, 1, 5–999999	RW	F10

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X1E16	SP2_TM_TP_0275_FLA	Speed2 Time to Trip at 2.75 x FLA	s, 1, 5-999999	RW	F10
R4X1E18	SP2_TM_TP_0300_FLA	Speed2 Time to Trip at 3.00 x FLA	s, 1, 5-999999	RW	F10
R4X1E1A	SP2_TM_TP_0325_FLA	Speed2 Time to Trip at 3.25 x FLA	s, 1, 5-999999	RW	F10
R4X1E1C	SP2_TM_TP_0350_FLA	Speed2 Time to Trip at 3.50 x FLA	s, 1, 5-999999	RW	F10
R4X1E1E	SP2_TM_TP_0375_FLA	Speed2 Time to Trip at 3.75 x FLA	s, 1, 5-999999	RW	F10
R4X1E20	SP2_TM_TP_0400_FLA	Speed2 Time to Trip at 4.00 x FLA	s, 1, 5-999999	RW	F10
R4X1E22	SP2_TM_TP_0425_FLA	Speed2 Time to Trip at 4.25 x FLA	s, 1, 5-999999	RW	F10
R4X1E24	SP2_TM_TP_0450_FLA	Speed2 Time to Trip at 4.50 x FLA	s, 1, 5-999999	RW	F10
R4X1E26	SP2_TM_TP_0475_FLA	Speed2 Time to Trip at 4.75 x FLA	s, 1, 5-999999	RW	F10
R4X1E28	SP2_TM_TP_0500_FLA	Speed2 Time to Trip at 5.00 x FLA	s, 1, 5-999999	RW	F10
R4X1E2A	SP2_TM_TP_0550_FLA	Speed2 Time to Trip at 5.50 x FLA	s, 1, 5-999999	RW	F10
R4X1E2C	SP2_TM_TP_0600_FLA	Speed2 Time to Trip at 6.00 x FLA	s, 1, 5-999999	RW	F10
R4X1E2E	SP2_TM_TP_0650_FLA	Speed2 Time to Trip at 6.50 x FLA	s, 1, 5-999999	RW	F10
R4X1E30	SP2_TM_TP_0700_FLA	Speed2 Time to Trip at 7.00 x FLA	s, 1, 5-999999	RW	F10
R4X1E32	SP2_TM_TP_0750_FLA	Speed2 Time to Trip at 7.50 x FLA	s, 1, 5-999999	RW	F10
R4X1E34	SP2_TM_TP_0800_FLA	Speed2 Time to Trip at 8.00 x FLA	s, 1, 5-999999	RW	F10
R4X1E36	SP2_TM_TP_1000_FLA	Speed2 Time to Trip at 10.0 x FLA	s, 1, 5-999999	RW	F10
R4X1E38	SP2_TM_TP_1500_FLA	Speed2 Time to Trip at 15.0 x FLA	s, 1, 5-999999	RW	F10
R4X1E3A	SP2_TM_TP_2000_FLA	Speed2 Time to Trip at 20.0 x FLA	s, 1, 5-999999	RW	F10
R4X1E50	SP2_MIN_ALL_LN_V	Speed2 Minimum Allowable Line Voltage	% Rated, 1, 70-95	RW	F1
R4X1E51	SP2_STL_CUR_MIN_VLN	Speed2 Stall Current at Min Vline	x FLA, 1, 200-1500	RW	F3
R4X1E52	SP2_SAF_STL_MIN_VLN	Speed2 Safe Stall Time at Min Vline	s, 1, 5-9999	RW	F2
R4X1E53	SP2_ACC_INTR_MIN_VLN	Speed2 Accel. Intersect at Min Vline	x FLA, 1, 200-1500	RW	F3
R4X1E54	SP2_STL_CUR_100_VLN	Speed2 Stall Current at 100 % Vline	x FLA, 1, 200-1500	RW	F3
R4X1E55	SP2_SAF_STL_100_VLN	Speed2 Safe Stall Time at 100 % Vline	s, 1, 5-9999	RW	F2
R4X1E56	SP2_ACC_INTR_100_VLN	Speed2 Accel. Intersect at 100 % Vline	x FLA, 1, 200-1500	RW	F3
R4X1E90	BLK_SP2_UC_START	Block Speed2 Undercurrent from Start	s, 1, 0-15000	RW	F1
R4X1E91	SP2_UC_ALM	Speed2 Undercurrent Alarm	-, 1, 0-2	RW	FC115
R4X1E93	SP2_UC_ALM_PKUP	Speed2 Undercurrent Alarm Pickup	x FLA, 1, 10-95	RW	F3
R4X1E94	SP2_UC_ALM_DLY	Speed2 Undercurrent Alarm Delay	s, 1, 1-60	RW	F1
R4X1E95	SP2_UC_ALM_EVNT	Speed2 Undercurrent Alarm Events	-, 1, 0-1	RW	FC103
R4X1E96	SP2_UC_TRP	Speed2 Undercurrent Trip	-, 1, 0-2	RW	FC115
R4X1E98	SP2_UC_TRP_PKUP	Speed2 Undercurrent Trip Pickup	x FLA, 1, 10-99	RW	F3
R4X1E99	SP2_UC_TRP_DLY	Speed2 Undercurrent Trip Delay	s, 1, 1-60	RW	F1
R4X1EB0	SP2_ACC_TIMER_START	Speed2 Acceleration Timer From Start	s, 1, 10-2500	RW	F2
R4X1EB1	ACC_TIMER_SP1_SP2	Acceleration Timer From Speed One to Two	s, 1, 10-2500	RW	F2
R4X1EB2	SPD_SW_TRP_SP2_DLY	Speed Switch Trip Speed2 Delay	s, 1, 10-2500	RW	F2
R4X1EB3	SP2_RATED_SPEED	Speed2 Rated Speed	R.P.M., 1, 100-7200	RW	F1
R4X1F00	AN_IN_DIF12	Analog Differential 1-2 Enable	-, 1, 0-1	RW	FC126
R4X1F01	AN_IN_DIF12_12	1st and 2nd Char of Analog in Diff 1-2 Name	-, 1, 0-65535	RW	F22
...		...		RW	
R4X1F06	AN_IN_DIF12_1112	11th and 12th Char of Analog in Diff 1-2 Name	-, 1, 0-65535	RW	F22

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X1F07	ANAL_DIFF_12_COMP	Analog In Differential 1-2 Comparison	-, 1, 0-1	RW	FC145
R4X1F08	ANAL_DIFF_12_LOGIC	Analog In Differential 1-2 Logic	-, 1, 0-2	RW	FC146
R4X1F09	ANAL_DIFF_12_ACTIVE	Analog In Differential 1-2 Active When	-, 1, 0-1	RW	FC147
R4X1F0A	ANAL_DIFF_12_BLK	Analog In Differential 1-2 Block from Start	s, 1, 0-5000	RW	F1
R4X1F0B	ANAL_DIFF_12_ALM	Analog In Differential 1-2 Alarm	-, 1, 0-2	RW	FC115
R4X1F0C	ANAL_DIFF_12_ALM_RLY	Analog In Differential 1-2 Alarm Relays	-, 1, 0-6	RW	FC113
R4X1F0D	ANAL_DIFF_12_PCT_ALM	Analog In Differential 1-2 Percent Alarm	%, 1, 0-500	RW	F1
R4X1F0E	ANAL_DIFF_12_ABS_ALM	Analog In Differential 1-2 Absolute Alarm	Units, 1, 0-50000	RW	F1
R4X1F0F	ANAL_DIFF_12_ALM_DLY	Analog In Differential 1-2 Alarm Delay	s, 1, 1-3000	RW	F22
R4X1F10	ANAL_DIFF_12_ALM_EVT	Analog In Differential 1-2 Alarm Events	-, 1, 0-1	RW	FC103
R4X1F11	ANAL_DIFF_12_TRP	Analog In Differential 1-2 Trip	-, 1, 0-2	RW	FC115
R4X1F12	ANAL_DIFF_12_TRP_RLY	Analog In Differential 1-2 Trip Relays	-, 1, 0-6	RW	FC111
R4X1F13	ANAL_DIFF_12_PCT_TRP	Analog In Differential 1-2 Percent Trip	%, 1, 0-500	RW	F1
R4X1F14	ANAL_DIFF_12_ABS_TRP	Analog in Differential 1-2 Absolute Trip	Units, 1, 0-50000	RW	F1
R4X1F15	ANAL_DIFF_12_TRP_DLY	Analog In Differential 1-2 Trip Delay	s, 1, 1-3000	RW	F2
R4X1F20	AN_IN_DIF34	Analog In Differential 3-4 Enable	-, 1, 0-1	RW	FC126
R4X1F21	AN_IN_DIF34_12	1st and 2nd Char of Analog in Diff 3-4 Name	-, 1, 0-65535	RW	F22
...		...		RW	
R4X1F26	AN_IN_DIF34_1112	11th and 12th Char of Analog in Diff 3-4 Name	-, 1, 0-65535	RW	F22
R4X1F27	ANAL_DIFF_34_COMP	Analog In Differential 3-4 Comparison	-, 1, 0-1	RW	FC145
R4X1F28	ANAL_DIFF_34_LOGIC	Analog In Differential 3-4 Logic	-, 1, 0-2	RW	FC146
R4X1F29	ANAL_DIFF_34_ACTIVE	Analog In Differential 3-4 Active When	-, 1, 0-1	RW	FC147
R4X1F2A	ANAL_DIFF_34_BLK	Analog In Differential 3-4 Block from Start	s, 1, 0-5000	RW	F1
R4X1F2B	ANAL_DIFF_34_ALM	Analog In Differential 3-4 Alarm	-, 1, 0-2	RW	FC115
R4X1F2C	ANAL_DIFF_34_ALM_RLY	Analog In Differential 3-4 Alarm Relays	-, 1, 0-6	RW	FC113
R4X1F2D	ANAL_DIFF_34_PCT_ALM	Analog In Differential 3-4 Percent Alarm	%, 1, 0-500	RW	F1
R4X1F2E	ANAL_DIFF_34_ABS_ALM	Analog In Differential 3-4 Absolute Alarm	Units, 1, 0-50000	RW	F1
R4X1F2F	ANAL_DIFF_34_ALM_DLY	Analog In Differential 3-4 Alarm Delay	s, 1, 1-3000	RW	F2
R4X1F30	ANAL_DIFF_34_ALM_EVT	Analog In Differential 3-4 Alarm Events	-, 1, 0-1	RW	FC103
R4X1F31	ANAL_DIFF_34_TRP	Analog In Differential 3-4 Trip	-, 1, 0-2	RW	FC115
R4X1F32	ANAL_DIFF_34_TRP_RLY	Analog In Differential 3-4 Trip Relays	-, 1, 0-6	RW	FC111
R4X1F33	ANAL_DIFF_34_PCT_TRP	Analog In Differential 3-4 Percent Trip	%, 1, 0-500	RW	F1
R4X1F34	ANAL_DIFF_34_ABS_TRP	Analog In Differential 3-4 Absolute Trip	Units, 1, 0-50000	RW	F1
R4X1F35	ANAL_DIFF_34_TRP_DLY	Analog In Differential 3-4 Trip Delay	s, 1, 1-3000	RW	F2
R4X3000L	EVNT_REC_LST_RSET	Event Recorder Last Reset (2 words)	N/A, N/A, N/A-N/A	RW	F18
R4X3002	EVNTS_SINCE_LST_CLR	Total Number of Events Since Last Clear	N/A, 1, 0-65535	RW	F1
R4X3003	EVNT_REC_SEL	Event Record Selector (1=newest, 40=oldest)	N/A, 1, 1-40	RW	F1
R4X3004	EVNT_CAUSE	Cause of Event	-, 1, 0-131	RW	FC134
R4X3005L	EVNT_TIME	Time of Event (2 words)	N/A, N/A, N/A-N/A	RW	F19
R4X3007L	EVNT_DATE	Date of Event (2 words)	N/A, N/A, N/A-N/A	RW	F18

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X3009	EVNT_MTR_SPD	Motor Speed During Event	-, 1, 0-1	RW	FC135
R4X300A	EVNT_TACH_RPM	Event Tachometer RPM	R.P.M., 1, 0-3600	RW	F1
R4X300BL	EVNT_AMPS_A	Event Phase A Current	A, 1, 0-100000	RW	F9
R4X300DL	EVNT_AMPS_B	Event Phase B Current	A, 1, 0-100000	RW	F9
R4X300FL	EVNT_AMPS_C	Event Phase C Current	A, 1, 0-100000	RW	F9
R4X3011	EVNT_MTR_LOAD	Event Motor Load	FLA, 1, 0-2000	RW	F3
R4X3012	EVNT_CURR_UB	Event Current Unbalance	%, 1, 0-100	RW	F1
R4X3013L	EVNT_AMPS_GND	Event Ground Current	A, 1, 0-500000	RW	F11
R4X3015	EVNT_PH_A_DIFF_CURR	Event Phase A Differential Current	A, 1, 0-5000	RW	F1
R4X3016	EVNT_PH_B_DIFF_CURR	Event Phase B Differential Current	A, 1, 0-5000	RW	F1
R4X3017	EVNT_PH_C_DIFF_CURR	Event Phase C Differential Current	A, 1, 0-5000	RW	F1
R4X3018	EVNT_HOT_STAT_RTD	Event Hottest Stator RTD	-, 1, 0-12	RW	F1
R4X3019I	EVNT_TEMP_HOT_STAT	Event Temperature of Hottest Stator RTD	°C, 1, -50-250	RW	F4
R4X301A	EVNT_HOT_BEAR_RTD	Event Hottest Bearing RTD	-, 1, 0-12	RW	F1
R4X301BI	EVNT_TEMP_HOT_BEAR	Event Temperature of Hottest Bearing RTD	°C, 1, -50-250	RW	F4
R4X301C	EVNT_HOT_OTHER_RTD	Event Hottest Other RTD	-, 1, 0-12	RW	F1
R4X301DI	EVNT_TEMP_HOT_OTHE R	Event Temperature of Hottest Other RTD	°C, 1, -50-250	RW	F4
R4X301E	EVNT_HOT_AMB_RTD	Event Hottest Ambient RTD	-, 1, 0-12	RW	F1
R4X301FI	EVNT_ABM_TEMP	Event Ambient RTD Temperature	°C, 1, -50-250	RW	F4
R4X3020	EVNT_V_AB	Event Voltage Vab	V, 1, 0-20000	RW	F1
R4X3021	EVNT_V_BC	Event Voltage Vbc	V, 1, 0-20000	RW	F1
R4X3022	EVNT_V_CA	Event Voltage Vca	V, 1, 0-20000	RW	F1
R4X3023	EVNT_V_AN	Event Voltage Van	V, 1, 0-20000	RW	F1
R4X3024	EVNT_V_BN	Event Voltage Vbn	V, 1, 0-20000	RW	F1
R4X3025	EVNT_V_CN	Event Voltage Vcn	V, 1, 0-20000	RW	F1
R4X3026	EVNT_SYS_FREQ	Event System Frequency	Hz, 1, 0-12000	RW	F3
R4X3027L	EVNT_REAL_PWR	Event Real Power	kW, 1, -50000-50000	RW	F12
R4X3029L	EVNT_REAC_PWR	Event Reactive Power	kvar, 1, -50000-50000	RW	F12
R4X302B	EVNT_APP_PWR	Event Apparent Power	kVA, 1, 0-50000	RW	F1
R4X302C	EVNT_PF	Event Power Factor	-, 1, -99-100	RW	F21
R4X302DL	EVNT_ANAL_IN1	Event Analog Input #1	-, 1, -50000-50000	RW	F12
R4X302FL	EVNT_ANAL_IN2	Event Analog Input #2	-, 1, -50000-50000	RW	F12
R4X3031L	EVNT_ANAL_IN3	Event Analog Input #3	-, 1, -50000-50000	RW	F12
R4X3033L	EVNT_ANAL_IN4	Event Analog Input #4	-, 1, -50000-50000	RW	F12
R4X3035	EVENT_TORQUE	Event Torque	Nm/ftlb, 1, 0-999999	R/w	F2
R4X30F6	TRACE_TRIG_CAUSE	Trace Trigger Cause	-, 0, 1-65535	R/W	FC134
R4X30E0I	EVNT_TEMP_HOT_STAT _F	Event Temp. of Hottest Stator RTD (in Fahr.)	°F, 1, -58-482	RW	F4
R4X30E1I	EVNT_TEMP_HOT_BEAR _F	Event Temp. of Hottest Bearing RTD (in Fahr.)	°F, 1, -58-482	RW	F4
R4X30E2I	EVNT_TEMP_HOT_OTH _F	Event Temp. of Hottest Other RTD (in Fahr.)	°F, 1, -58-482	RW	F4
R4X30E3I	EVNT_TEMP_HOT_AMB _F	Event Ambient RTD Temperature (in Fahr.)	°F, 1, -58-482	RW	F4

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X30F0	TRACE_NUM_SEL	Trace Number Selector	-, 1, -1-65535		F1
R4X30F1	TM_CHAN_SEL	Trace Memory Channel Selector	-, 1, 0-9	RW	F1
R4X30F2L	TM_DATE	Trace Memory Date	N/A, N/A, N/A-N/A	RW	F18
R4X30F4L	TM_TIME	Trace Memory Time	N/A, N/A, N/A-N/A	RW	F19
R4X30F6	TRACE_TRIG_CAUSE	Trace Trigger Cause	-, 1, 0-131	RW	FC134
R4X30F7	NUM_SAMP_PER_TRACE	Number of Samples per Trace	-, 1, 1-768	RW	F1
R4X30F8	NUM_TRACE_TAKEN	Number of Traces Taken	-, 1, -1-65535	RW	F1
R4X3100IA96	TM_SAMP1	Trace Memory Samples 1-96	-, 1, -32767-32767	RW	F4
R4X3160IA96	TM_SAMP2	Trace Memory Samples 97-192	-, 1, -32767-32767	RW	F4
R4X3400	LAST_TRACE_SAMPLE	Last Trace Memory Sample	-, 1, -32767-32767	RW	F4

ACTUAL VALUES

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Code
R3X0000	DEV_CODE	Multilin Product Device Code	N/A	N/A	N/A	RO	F1
R3X0001	PROD_HW_REV	Product Hardware Revision	1	1	26	RO	F15
R3X0002	PROD_SW_REV	Product Software Revision	N/A	N/A	N/A	RO	F16
R3X0003	PROD_MOD_NUM	Product Modification Number	0	1	999	RO	F1
R3X0010	BOOT_REV	Boot Program Revision	N/A	N/A	N/A	RO	F16
R3X0011	BOOT_MOD_NUM	Boot Program Modification Number	0	1	999	RO	F1
R3X0180	UM_ADD_001	User Map Address # 001	hex	1	0-3FFF	R	F1
R3X0181	UM_ADD_002	User Map Address # 002	hex	1	0-3FFF	R	F1
R3X0182	UM_ADD_003	User Map Address # 003	hex	1	0-3FFF	R	F1
R3X0183	UM_ADD_004	User Map Address # 004	hex	1	0-3FFF	R	F1
R3X0184	UM_ADD_005	User Map Address # 005	hex	1	0-3FFF	R	F1
R3X0185	UM_ADD_006	User Map Address # 006	hex	1	0-3FFF	R	F1
R3X0186	UM_ADD_007	User Map Address # 007	hex	1	0-3FFF	R	F1
R3X0187	UM_ADD_008	User Map Address # 008	hex	1	0-3FFF	R	F1
R3X0188	UM_ADD_009	User Map Address # 009	hex	1	0-3FFF	R	F1
R3X0189	UM_ADD_010	User Map Address # 010	hex	1	0-3FFF	R	F1
R3X018A	UM_ADD_011	User Map Address # 011	hex	1	0-3FFF	R	F1
R3X018B	UM_ADD_012	User Map Address # 012	hex	1	0-3FFF	R	F1
R3X018C	UM_ADD_013	User Map Address # 013	hex	1	0-3FFF	R	F1
R3X018D	UM_ADD_014	User Map Address # 014	hex	1	0-3FFF	R	F1
R3X018E	UM_ADD_015	User Map Address # 015	hex	1	0-3FFF	R	F1
R3X018F	UM_ADD_016	User Map Address # 016	hex	1	0-3FFF	R	F1
R3X0190	UM_ADD_017	User Map Address # 017	hex	1	0-3FFF	R	F1
R3X0191	UM_ADD_018	User Map Address # 018	hex	1	0-3FFF	R	F1
R3X0192	UM_ADD_019	User Map Address # 019	hex	1	0-3FFF	R	F1
R3X0193	UM_ADD_020	User Map Address # 020	hex	1	0-3FFF	R	F1
R3X0194	UM_ADD_021	User Map Address # 021	hex	1	0-3FFF	R	F1
R3X0195	UM_ADD_022	User Map Address # 022	hex	1	0-3FFF	R	F1
R3X0196	UM_ADD_023	User Map Address # 023	hex	1	0-3FFF	R	F1
R3X0197	UM_ADD_024	User Map Address # 024	hex	1	0-3FFF	R	F1
R3X0198	UM_ADD_025	User Map Address # 025	hex	1	0-3FFF	R	F1
R3X0199	UM_ADD_026	User Map Address # 026	hex	1	0-3FFF	R	F1
R3X019A	UM_ADD_027	User Map Address # 027	hex	1	0-3FFF	R	F1
R3X019B	UM_ADD_028	User Map Address # 028	hex	1	0-3FFF	R	F1
R3X019C	UM_ADD_029	User Map Address # 029	hex	1	0-3FFF	R	F1
R3X019D	UM_ADD_030	User Map Address # 030	hex	1	0-3FFF	R	F1
R3X019E	UM_ADD_031	User Map Address # 031	hex	1	0-3FFF	R	F1
R3X019F	UM_ADD_032	User Map Address # 032	hex	1	0-3FFF	R	F1
R3X01A0	UM_ADD_033	User Map Address # 033	hex	1	0-3FFF	R	F1
R3X01A1	UM_ADD_034	User Map Address # 034	hex	1	0-3FFF	R	F1
R3X01A2	UM_ADD_035	User Map Address # 035	hex	1	0-3FFF	R	F1

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Code
R3X01A3	UM_ADD_036	User Map Address # 036	hex	1	0-3FFF	R	F1
R3X01A4	UM_ADD_037	User Map Address # 037	hex	1	0-3FFF	R	F1
R3X01A5	UM_ADD_038	User Map Address # 038	hex	1	0-3FFF	R	F1
R3X01A6	UM_ADD_039	User Map Address # 039	hex	1	0-3FFF	R	F1
R3X01A7	UM_ADD_040	User Map Address # 040	hex	1	0-3FFF	R	F1
R3X01A8	UM_ADD_041	User Map Address # 041	hex	1	0-3FFF	R	F1
R3X01A9	UM_ADD_042	User Map Address # 042	hex	1	0-3FFF	R	F1
R3X01AA	UM_ADD_043	User Map Address # 043	hex	1	0-3FFF	R	F1
R3X01AB	UM_ADD_044	User Map Address # 044	hex	1	0-3FFF	R	F1
R3X01AC	UM_ADD_045	User Map Address # 045	hex	1	0-3FFF	R	F1
R3X01AD	UM_ADD_046	User Map Address # 046	hex	1	0-3FFF	R	F1
R3X01AE	UM_ADD_047	User Map Address # 047	hex	1	0-3FFF	R	F1
R3X01AF	UM_ADD_048	User Map Address # 048	hex	1	0-3FFF	R	F1
R3X01B0	UM_ADD_049	User Map Address # 049	hex	1	0-3FFF	R	F1
R3X01B1	UM_ADD_050	User Map Address # 050	hex	1	0-3FFF	R	F1
R3X01B2	UM_ADD_051	User Map Address # 051	hex	1	0-3FFF	R	F1
R3X01B3	UM_ADD_052	User Map Address # 052	hex	1	0-3FFF	R	F1
R3X01B4	UM_ADD_053	User Map Address # 053	hex	1	0-3FFF	R	F1
R3X01B5	UM_ADD_054	User Map Address # 054	hex	1	0-3FFF	R	F1
R3X01B6	UM_ADD_055	User Map Address # 055	hex	1	0-3FFF	R	F1
R3X01B7	UM_ADD_056	User Map Address # 056	hex	1	0-3FFF	R	F1
R3X01B8	UM_ADD_057	User Map Address # 057	hex	1	0-3FFF	R	F1
R3X01B9	UM_ADD_058	User Map Address # 058	hex	1	0-3FFF	R	F1
R3X01BA	UM_ADD_059	User Map Address # 059	hex	1	0-3FFF	R	F1
R3X01BB	UM_ADD_060	User Map Address # 060	hex	1	0-3FFF	R	F1
R3X01BC	UM_ADD_061	User Map Address # 061	hex	1	0-3FFF	R	F1
R3X01BD	UM_ADD_062	User Map Address # 062	hex	1	0-3FFF	R	F1
R3X01BE	UM_ADD_063	User Map Address # 063	hex	1	0-3FFF	R	F1
R3X01BF	UM_ADD_064	User Map Address # 064	hex	1	0-3FFF	R	F1
R3X01C0	UM_ADD_065	User Map Address # 065	hex	1	0-3FFF	R	F1
R3X01C1	UM_ADD_066	User Map Address # 066	hex	1	0-3FFF	R	F1
R3X01C2	UM_ADD_067	User Map Address # 067	hex	1	0-3FFF	R	F1
R3X01C3	UM_ADD_068	User Map Address # 068	hex	1	0-3FFF	R	F1
R3X01C4	UM_ADD_069	User Map Address # 069	hex	1	0-3FFF	R	F1
R3X01C5	UM_ADD_070	User Map Address # 070	hex	1	0-3FFF	R	F1
R3X01C6	UM_ADD_071	User Map Address # 071	hex	1	0-3FFF	R	F1
R3X01C7	UM_ADD_072	User Map Address # 072	hex	1	0-3FFF	R	F1
R3X01C8	UM_ADD_073	User Map Address # 073	hex	1	0-3FFF	R	F1
R3X01C9	UM_ADD_074	User Map Address # 074	hex	1	0-3FFF	R	F1
R3X01CA	UM_ADD_075	User Map Address # 075	hex	1	0-3FFF	R	F1
R3X01CB	UM_ADD_076	User Map Address # 076	hex	1	0-3FFF	R	F1
R3X01CC	UM_ADD_077	User Map Address # 077	hex	1	0-3FFF	R	F1
R3X01CD	UM_ADD_078	User Map Address # 078	hex	1	0-3FFF	R	F1
R3X01CE	UM_ADD_079	User Map Address # 079	hex	1	0-3FFF	R	F1
R3X01CF	UM_ADD_080	User Map Address # 080	hex	1	0-3FFF	R	F1

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Code
R3X01D0	UM_ADD_081	User Map Address # 081	hex	1	0-3FFF	R	F1
R3X01D1	UM_ADD_082	User Map Address # 082	hex	1	0-3FFF	R	F1
R3X01D2	UM_ADD_083	User Map Address # 083	hex	1	0-3FFF	R	F1
R3X01D3	UM_ADD_084	User Map Address # 084	hex	1	0-3FFF	R	F1
R3X01D4	UM_ADD_085	User Map Address # 085	hex	1	0-3FFF	R	F1
R3X01D5	UM_ADD_086	User Map Address # 086	hex	1	0-3FFF	R	F1
R3X01D6	UM_ADD_087	User Map Address # 087	hex	1	0-3FFF	R	F1
R3X01D7	UM_ADD_088	User Map Address # 088	hex	1	0-3FFF	R	F1
R3X01D8	UM_ADD_089	User Map Address # 089	hex	1	0-3FFF	R	F1
R3X01D9	UM_ADD_090	User Map Address # 090	hex	1	0-3FFF	R	F1
R3X01DA	UM_ADD_091	User Map Address # 091	hex	1	0-3FFF	R	F1
R3X01DB	UM_ADD_092	User Map Address # 092	hex	1	0-3FFF	R	F1
R3X01DC	UM_ADD_093	User Map Address # 093	hex	1	0-3FFF	R	F1
R3X01DD	UM_ADD_094	User Map Address # 094	hex	1	0-3FFF	R	F1
R3X01DE	UM_ADD_095	User Map Address # 095	hex	1	0-3FFF	R	F1
R3X01DF	UM_ADD_096	User Map Address # 096	hex	1	0-3FFF	R	F1
R3X01E0	UM_ADD_097	User Map Address # 097	hex	1	0-3FFF	R	F1
R3X01E1	UM_ADD_098	User Map Address # 098	hex	1	0-3FFF	R	F1
R3X01E2	UM_ADD_099	User Map Address # 099	hex	1	0-3FFF	R	F1
R3X01E3	UM_ADD_100	User Map Address # 100	hex	1	0-3FFF	R	F1
R3X01E4	UM_ADD_101	User Map Address # 101	hex	1	0-3FFF	R	F1
R3X01E5	UM_ADD_102	User Map Address # 102	hex	1	0-3FFF	R	F1
R3X01E6	UM_ADD_103	User Map Address # 103	hex	1	0-3FFF	R	F1
R3X01E7	UM_ADD_104	User Map Address # 104	hex	1	0-3FFF	R	F1
R3X01E8	UM_ADD_105	User Map Address # 105	hex	1	0-3FFF	R	F1
R3X01E9	UM_ADD_106	User Map Address # 106	hex	1	0-3FFF	R	F1
R3X01EA	UM_ADD_107	User Map Address # 107	hex	1	0-3FFF	R	F1
R3X01EB	UM_ADD_108	User Map Address # 108	hex	1	0-3FFF	R	F1
R3X01EC	UM_ADD_109	User Map Address # 109	hex	1	0-3FFF	R	F1
R3X01ED	UM_ADD_110	User Map Address # 110	hex	1	0-3FFF	R	F1
R3X01EE	UM_ADD_111	User Map Address # 111	hex	1	0-3FFF	R	F1
R3X01EF	UM_ADD_112	User Map Address # 112	hex	1	0-3FFF	R	F1
R3X01F0	UM_ADD_113	User Map Address # 113	hex	1	0-3FFF	R	F1
R3X01F1	UM_ADD_114	User Map Address # 114	hex	1	0-3FFF	R	F1
R3X01F2	UM_ADD_115	User Map Address # 115	hex	1	0-3FFF	R	F1
R3X01F3	UM_ADD_116	User Map Address # 116	hex	1	0-3FFF	R	F1
R3X01F4	UM_ADD_117	User Map Address # 117	hex	1	0-3FFF	R	F1
R3X01F5	UM_ADD_118	User Map Address # 118	hex	1	0-3FFF	R	F1
R3X01F6	UM_ADD_119	User Map Address # 119	hex	1	0-3FFF	R	F1
R3X01F7	UM_ADD_120	User Map Address # 120	hex	1	0-3FFF	R	F1
R3X01F8	UM_ADD_121	User Map Address # 121	hex	1	0-3FFF	R	F1
R3X01F9	UM_ADD_122	User Map Address # 122	hex	1	0-3FFF	R	F1
R3X01FA	UM_ADD_123	User Map Address # 123	hex	1	0-3FFF	R	F1
R3X01FB	UM_ADD_124	User Map Address # 124	hex	1	0-3FFF	R	F1
R3X01FC	UM_ADD_125	User Map Address # 125	hex	1	0-3FFF	R	F1

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Code
R3X0200	MOTOR_STATUS	Motor Status	-	1	0-4	RW	FC133
R3X0201	MOTOR_THERM_CAP	Motor Thermal Capacity Used	%	1	0-100	RW	F1
R3X0202L	EST_MOTOR_TRIP_TIME	Estimated Time to Trip on Overload	s	1	-1-99999	RW	F20
R3X0204	MOTOR_SPEED	Motor Speed	-	1	0-1	RW	FC135
R3X0205	COMM_SP_ACCESS	Communication Setpoint Access	-	1	0-1		FC135
R3X0210	GEN_STATUS	General Status	-	1	0-65535	RW	FC140
R3X0211	LED_RELAY	Output Relay Status	-	1	0-63	RW	FC141
R3X0220	TRIP_CAUSE	Cause of Last Trip	-	1	0-45	RW	FC134
R3X0221L	TRIP_TIME	Time of Last Trip (2 words)	N/A	N/A	N/A-N/A	RW	F19
R3X0223L	TRIP_DATE	Date of Last Trip (2 words)	N/A	N/A	N/A-N/A	RW	F18
R3X0225	MOTOR_SPEED_TRIP	Motor Speed During Trip	-	1	0-1	RW	FC135
R3X0226	TACH_RPM_PRETRP	Pre-Trip Tachometer RPM	R.P.M.	1	0-3600	RW	F1
R3X0227L	AMPS_A_PRETRP	Phase A Pre-Trip Current	A	1	0-100000	RW	F9
R3X0229L	AMPS_B_PRETRP	Phase B Pre-Trip Current	A	1	0-100000	RW	F9
R3X022BL	AMPS_C_PRETRP	Phase C Pre-Trip Current	A	1	0-100000	RW	F9
R3X022D	MOTOR_LOAD_PRETRP	Pre-Trip Motor Load	FLA	1	0-2000	RW	F3
R3X022E	AMPS_UNBAL_PRETRP	Pre-Trip Current Unbalance	%	1	0-100	RW	F1
R3X022FL	AMPS_GND_PRETRP	Pre-Trip Ground Current	A	1	0-500000	RW	F11
R3X0231	AMPS_A_DIFF_PRETRP	Phase A Pre-Trip Differential Current	A	1	0-5000	RW	F1
R3X0232	AMPS_B_DIFF_PRETRP	Phase B Pre-Trip Differential Current	A	1	0-5000	RW	F1
R3X0233	AMPS_C_DIFF_PRETRP	Phase C Pre-Trip Differential Current	A	1	0-5000	RW	F1
R3X0234	HOT_STATOR_TRIP	Hottest Stator RTD During Trip	-	1	0-12	RW	F1
R3X0235I	TEMP_STATOR_PRETRP	Pre-Trip Temperature of Hottest Stator RTD	°C	1	-50-250	RW	F4
R3X0236	HOT_BEARING_TRIP	Hottest Bearing RTD During Trip	-	1	0-12	RW	F1
R3X0237I	TEMP_BEAR_PRETRP	Pre-Trip Temperature of Hottest Bearing RTD	°C	1	-50-250	RW	F4
R3X0238	HOT_OTHER_TRIP	Hottest Other RTD During Trip	-	1	0-12	RW	F1
R3X0239I	TEMP_OTHER_PRETRP	Pre-Trip Temperature of Hottest Other RTD	°C	1	-50-250	RW	F4
R3X023A	HOT_AMBIENT_TRIP	Hottest Ambient RTD During Trip	-	1	0-12	RW	F1
R3X023BI	TEMP_AMB_PRETRP	Pre-Trip Ambient RTD Temperature	°C	1	-50-250	RW	F4
R3X023C	VOLT_AB_PRETRP	Pre-Trip Voltage Vab	V	1	0-20000	RW	F1
R3X023D	VOLT_BC_PRETRP	Pre-Trip Voltage Vbc	V	1	0-20000	RW	F1
R3X023E	VOLT_CA_PRETRP	Pre-Trip Voltage Vca	V	1	0-20000	RW	F1
R3X023F	VOLT_AN_PRETRP	Pre-Trip Voltage Van	V	1	0-20000	RW	F1
R3X0240	VOLT_BN_PRETRP	Pre-Trip Voltage Vbn	V	1	0-20000	RW	F1
R3X0241	VOLT_CN_PRETRP	Pre-Trip Voltage Vcn	V	1	0-20000	RW	F1
R3X0242	FREQ_PRETRP	Pre-Trip System Frequency	Hz	1	0-12000	RW	F3
R3X0243L	WATTS_PRETRP	Pre-Trip Real Power	kW	1	-50000-50000	RW	F12
R3X0245L	KVARS_PRETRP	Pre-Trip Reactive Power	kvar	1	-50000-50000	RW	F12
R3X0247	KVA_PRETRP	Pre-Trip Apparent Power	kVA	1	0-50000	RW	F1
R3X0248	PF_PRETRP	Pre-Trip Power Factor	-	1	-99-100	RW	F21

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Code
R3X0249L	AI1_PRETRP	Analog Input #1 Pre-Trip	-	1	-50000–50000	RW	F12
R3X024BL	AI2_PRETRP	Analog Input #2 Pre-Trip	-	1	-50000–50000	RW	F12
R3X024DL	AI3_PRETRP	Analog Input #3 Pre-Trip	-	1	-50000–50000	RW	F12
R3X024FL	AI4_PRETRP	Analog Input #4 Pre-Trip	-	1	-50000–50000	RW	F12
R3X025CI	TEMP_STATOR_PRETRP_F	Pre-Trip Temp. of Hottest Stator RTD (°F)	°F	1	-58–482	RW	F4
R3X025DI	TEMP_BEAR_PRETRP_F	Pre-Trip Temp. of Hottest Bearing RTD (°F)	°F	1	-58–482	RW	F4
R3X025EI	TEMP_OTHER_PRETRP_F	Pre-Trip Temp. of Hottest Other RTD (°F)	°F	1	-58–482	RW	F4
R3X025FI	TEMP_AMB_PRETRP_F	Pre-Trip Temp. of Hottest Ambient RTD (°F)	°F	1	-58–482	RW	F4
R3X0265	ALM_REMOTE	Remote Alarm Status	-	1	0–4	RW	FC123
R3X0266	ALM_PRES_SW	Pressure Switch Alarm Status	-	1	0–4	RW	FC123
R3X0267	ALM_VIB_SW	Vibration Switch Alarm Status	-	1	0–4	RW	FC123
R3X0268	ALM_DIG_CTR	Digital Counter Alarm Status	-	1	0–4	RW	FC123
R3X0269	ALM_TACH	Tachometer Alarm Status	-	1	0–4	RW	FC123
R3X026A	ALM_SW_A	General Switch A Alarm Status	-	1	0–4	RW	FC123
R3X026B	ALM_SW_B	General Switch B Alarm Status	-	1	0–4	RW	FC123
R3X026C	ALM_SW_C	General Switch C Alarm Status	-	1	0–4	RW	FC123
R3X026D	ALM_SW_D	General Switch D Alarm Status	-	1	0–4	RW	FC123
R3X026E	ALM_THERM_CAP	Thermal Capacity Alarm	-	1	0–4	RW	FC123
R3X026F	ALM_OL	Overload Alarm Status	-	1	0–4	RW	FC123
R3X0270	ALM_UC	Undercurrent Alarm Status	-	1	0–4	RW	FC123
R3X0271	ALM_UNBAL	Current Unbalance Alarm Status	-	1	0–4	RW	FC123
R3X0272	ALM_GF	Ground Fault Alarm Status	-	1	0–4	RW	FC123
R3X0273	ALM_RTD1	RTD #1 Alarm Status	-	1	0–4	RW	FC123
R3X0274	ALM_RTD2	RTD #2 Alarm Status	-	1	0–4	RW	FC123
R3X0275	ALM_RTD3	RTD #3 Alarm Status	-	1	0–4	RW	FC123
R3X0276	ALM_RTD4	RTD #4 Alarm Status	-	1	0–4	RW	FC123
R3X0277	ALM_RTD5	RTD #5 Alarm Status	-	1	0–4	RW	FC123
R3X0278	ALM_RTD6	RTD #6 Alarm Status	-	1	0–4	RW	FC123
R3X0279	ALM_RTD7	RTD #7 Alarm Status	-	1	0–4	RW	FC123
R3X027A	ALM_RTD8	RTD #8 Alarm Status	-	1	0–4	RW	FC123
R3X027B	ALM_RTD9	RTD #9 Alarm Status	-	1	0–4	RW	FC123
R3X027C	ALM_RTD10	RTD #10 Alarm Status	-	1	0–4	RW	FC123
R3X027D	ALM_RTD11	RTD #11 Alarm Status	-	1	0–4	RW	FC123
R3X027E	ALM_RTD12	RTD #12 Alarm Status	-	1	0–4	RW	FC123
R3X027F	ALM_OPEN_RTD	Open RTD Sensor Alarm Status	-	1	0–4	RW	FC123
R3X0280	ALM_LOW_TEMP	Short Sensor/Low Temp Alarm Status	-	1	0–4	RW	FC123
R3X0281	ALM_UV	Undervoltage Alarm Status	-	1	0–4	RW	FC123
R3X0282	ALM_OV	Overvoltage Alarm Status	-	1	0–4	RW	FC123
R3X0283	ALM_FREQ	System Frequency Alarm Status	-	1	0–4	RW	FC123

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Code
R3X0284	ALM_PF	Power Factor Alarm Status	-	1	0-4	RW	FC123
R3X0285	ALM_KVARS	Reactive Power Alarm Status	-	1	0-4	RW	FC123
R3X0286	ALM_UP	Underpower Alarm Status	-	1	0-4	RW	FC123
R3X0287	ALM_TRIP_CTR	Trip Counter Alarm Status	-	1	0-4	RW	FC123
R3X0288	ALM_STARTER	Starter Failure Alarm	-	1	0-4	RW	FC123
R3X0289	ALM_DMND_AMPS	Current Demand Alarm Status	-	1	0-4	RW	FC123
R3X028A	ALM_DMND_WATTS	kW Demand Alarm Status	-	1	0-4	RW	FC123
R3X028B	ALM_DMND_KVARS	kvar Demand Alarm Status	-	1	0-4	RW	FC123
R3X028C	ALM_DMND_KVA	kVA Demand Alarm Status	-	1	0-4	RW	FC123
R3X028D	ALM_INPUT1	Analog Input 1 Alarm Status	-	1	0-4	RW	FC123
R3X028E	ALM_INPUT2	Analog Input 2 Alarm Status	-	1	0-4	RW	FC123
R3X028F	ALM_INPUT3	Analog Input 3 Alarm Status	-	1	0-4	RW	FC123
R3X0290	ALM_INPUT4	Analog Input 4 Alarm Status	-	1	0-4	RW	FC123
R3X0291	ALM_REV_POWER	Analog Input 4 Alarm Status	-	1	0-4	RW	FC123
R3X0292	RTD1_HI_ALM_STAT	RTD #1 High Alarm Status	-	1	0-4		FC123
R3X0293	RTD2_HI_ALM_STAT	RTD #2 High Alarm Status	-	1	0-4		FC123
R3X0294	RTD3_HI_ALM_STAT	RTD #3 High Alarm Status	-	1	0-4		FC123
R3X0295	RTD4_HI_ALM_STAT	RTD #4 High Alarm Status	-	1	0-4		FC123
R3X0296	RTD5_HI_ALM_STAT	RTD #5 High Alarm Status	-	1	0-4		FC123
R3X0297	RTD6_HI_ALM_STAT	RTD #6 High Alarm Status	-	1	0-4		FC123
R3X0298	RTD7_HI_ALM_STAT	RTD #7 High Alarm Status	-	1	0-4		FC123
R3X0299	RTD8_HI_ALM_STAT	RTD #8 High Alarm Status	-	1	0-4		FC123
R3X029A	RTD9_HI_ALM_STAT	RTD #9 High Alarm Status	-	1	0-4		FC123
R3X029B	RTD10_HI_ALM_STAT	RTD #10 High Alarm Status	-	1	0-4		FC123
R3X029C	RTD11_HI_ALM_STAT	RTD #11 High Alarm Status	-	1	0-4		FC123
R3X029D	RTD12_HI_ALM_STAT	RTD #12 High Alarm Status	-	1	0-4		FC123
R3X029E	AN_DIFF_12_ALMSTA	Analog Diff 1-2 Alarm Status	-	1	0-4		FC123
R3X029F	AN_DIFF_34_ALMSTA	Analog Diff 3-4 Alarm Status	-	1	0-4		FC123
R3X02A0	OT_ALM_STATUS	Over Torque Alarm Status	-	1	0-4		FC123
R3X02A1	LO_OC_ALM_STATUS	Lo-set Overcurrent Alarm Status	-	1	0-4		FC123
R3X02AF	ALM_SELF_TEST	Self Test Alarm	-	1	0-FFFF	RW	
R3X02B0	OL_LOCK_BLK	Overload Lockout Block	min	1	0-500	RW	F1
R3X02B1	START_INH_BLK_LOCK	Start Inhibit Block Lockout Time	min	1	1-500	RW	F1
R3X02B2	STARTS_HR_BLK_LOCK	Starts/Hour Block Lockout Time	min	1	1-60	RW	F1
R3X02B3	BTWN_STARTS_LOCK	Time Between Starts Lockout Time	min	1	1-500	RW	F1
R3X02B4	RESTART_BLK_LOCK	Restart Block Lockout	s	1	1-30000	RW	F1
R3X02D0	ACCESS_SW_STATUS	Access Switch Status	-	1	0-1	RW	FC131
R3X02D1	TEST_SW_STATUS	Test Switch Status	-	1	0-1	RW	FC131
R3X02D2	STARTER_SW_STATUS	Starter Switch Status	-	1	0-1	RW	FC131
R3X02D3	EMER_RESET_SW_STS	Emergency Restart Switch Status	-	1	0-1	RW	FC131
R3X02D4	REM_RESET_SW_STS	Remote Reset Switch Status	-	1	0-1	RW	FC131
R3X02D5	SW1_STS	Assignable Switch #1 Status	-	1	0-1	RW	FC131
R3X02D6	SW2_STS	Assignable Switch #2 Status	-	1	0-1	RW	FC131
R3X02D7	SW3_STS	Assignable Switch #3 Status	-	1	0-1	RW	FC131
R3X02D8	SW4_STS	Assignable Switch #4 Status	-	1	0-1	RW	FC131

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Code
R3X02D9	TRIP_COIL_STS	Trip Coil Supervision	-	1	0-1	RW	FC132
R3X02FCL	DATE	Date (Read Only)	N/A	N/A	N/A-N/A	RW	F18
R3X02FEL	TIME	Time (Read Only)	N/A	N/A	N/A-N/A	RW	F19
R3X0300L	AMPS_A	Phase A Current	A	1	0-100000	RW	F9
R3X0302L	AMPS_B	Phase B Current	A	1	0-100000	RW	F9
R3X0304L	AMPS_C	Phase C Current	A	1	0-100000	RW	F9
R3X0306L	AMPS_AVG	Average Phase Current	A	1	0-100000	RW	F9
R3X0308	MOTOR_LOAD	Motor Load	FLA	1	0-2000	RW	F3
R3X0309	AMPS_UNBAL	Current Unbalance	%	1	0-100	RW	F1
R3X030A	EQUIV_MOTOR_LOAD	Equivalent Motor Load	FLA	1	0-2000	RW	F3
R3X030BL	AMPS_GND	Ground Current	A	1	0-500000	RW	F11
R3X030D	AMPS_A_DIFF	Phase A Differential Current	A	1	0-5000	RW	F1
R3X030E	AMPS_B_DIFF	Phase B Differential Current	A	1	0-5000	RW	F1
R3X030F	AMPS_C_DIFF	Phase C Differential Current	A	1	0-5000	RW	F1
R3X0320I	TEMP_HOTTEST_RTD	Hottest Stator RTD	°C	1	-50-250	RW	F4
R3X0321I	TEMP_RTD1	RTD #1 Temperature	°C	1	-50-250	RW	F4
R3X0322I	TEMP_RTD2	RTD #2 Temperature	°C	1	-50-250	RW	F4
R3X0323I	TEMP_RTD3	RTD #3 Temperature	°C	1	-50-250	RW	F4
R3X0324I	TEMP_RTD4	RTD #4 Temperature	°C	1	-50-250	RW	F4
R3X0325I	TEMP_RTD5	RTD #5 Temperature	°C	1	-50-250	RW	F4
R3X0326I	TEMP_RTD6	RTD #6 Temperature	°C	1	-50-250	RW	F4
R3X0327I	TEMP_RTD7	RTD #7 Temperature	°C	1	-50-250	RW	F4
R3X0328I	TEMP_RTD8	RTD #8 Temperature	°C	1	-50-250	RW	F4
R3X0329I	TEMP_RTD9	RTD #9 Temperature	°C	1	-50-250	RW	F4
R3X032AI	TEMP_RTD10	RTD #10 Temperature	°C	1	-50-250	RW	F4
R3X032BI	TEMP_RTD11	RTD #11 Temperature	°C	1	-50-250	RW	F4
R3X032CI	TEMP_RTD12	RTD #12 Temperature	°C	1	-50-250	RW	F4
R3X0330I	TEMP_HOTTEST_RTD_F	Hottest Stator RTD (in Fahrenheit)	°F	1	-58-482	RW	F4
R3X0331I	TEMP_RTD1_F	RTD #1 Temperature (in Fahrenheit)	°F	1	-58-482	RW	F4
R3X0332I	TEMP_RTD2_F	RTD #2 Temperature (in Fahrenheit)	°F	1	-58-482	RW	F4
R3X0333I	TEMP_RTD3_F	RTD #3 Temperature (in Fahrenheit)	°F	1	-58-482	RW	F4
R3X0334I	TEMP_RTD4_F	RTD #4 Temperature (in Fahrenheit)	°F	1	-58-482	RW	F4
R3X0335I	TEMP_RTD5_F	RTD #5 Temperature (in Fahrenheit)	°F	1	-58-482	RW	F4
R3X0336I	TEMP_RTD6_F	RTD #6 Temperature (in Fahrenheit)	°F	1	-58-482	RW	F4
R3X0337I	TEMP_RTD7_F	RTD #7 Temperature (in Fahrenheit)	°F	1	-58-482	RW	F4
R3X0338I	TEMP_RTD8_F	RTD #8 Temperature (in Fahrenheit)	°F	1	-58-482	RW	F4
R3X0339I	TEMP_RTD9_F	RTD #9 Temperature (in Fahrenheit)	°F	1	-58-482	RW	F4
R3X033AI	TEMP_RTD10_F	RTD #10 Temperature (in Fahrenheit)	°F	1	-58-482	RW	F4
R3X033BI	TEMP_RTD11_F	RTD #11 Temperature (in Fahrenheit)	°F	1	-58-482	RW	F4
R3X033CI	TEMP_RTD12_F	RTD #12 Temperature (in Fahrenheit)	°F	1	-58-482	RW	F4
R3X0340	VOLT_AB	Vab	V	1	0-20000	RW	F1
R3X0341	VOLT_BC	Vbc	V	1	0-20000	RW	F1
R3X0342	VOLT_CA	Vca	V	1	0-20000	RW	F1
R3X0343	VOLT_AVG_LINE	Average Line Voltage	V	1	0-20000	RW	F1

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Code
R3X0344	VOLT_AN	Van	V	1	0-20000	RW	F1
R3X0345	VOLT_BN	Vbn	V	1	0-20000	RW	F1
R3X0346	VOLT_CN	Vcn	V	1	0-20000	RW	F1
R3X0347	VOLT_AVG_PHASE	Average_Phase_Voltage	V	1	0-20000	RW	F1
R3X0348	FREQUENCY	System Frequency	Hz	1	0-12000	RW	F3
R3X0360	TACH_RPM	Tachometer RPM	R.P.M.	1	0-3600	RW	F1
R3X0370	PF	Power Factor	-	1	-99-100	RW	F21
R3X0371L	WATTS	Real Power	kW	1	-50000-50000	RW	F12
R3X0373	HP	Real Power (HP)	hp	1	0-65000	RW	F1
R3X0374L	KVARS	Reactive Power	kvar	1	-50000-50000	RW	F12
R3X0376	KVA	Apparent Power	kVA	1	0-50000	RW	F1
R3X0377L	MWH_CONS	MWh Consumption	MWh	1	0-999999999	RW	F17
R3X0379L	MVARH_CONS	Mvarh Consumption	Mvarh	1	0-999999999	RW	F17
R3X037BL	MVARH_GEN	Mvarh Generation	Mvarh	1	0-999999999	RW	F17
R3X037D	TORQUE	Torque	Nm/ftlb	1	0-999999999	RW	F2
R3X0390L	DMND_A	Current Demand	A	1	0-100000	RW	F9
R3X0392L	DMND_KW	Real Power Demand	kW	1	-50000-50000	RW	F12
R3X0394L	DMND_KVAR	Reactive Power Demand	kvar	1	-50000-50000	RW	F12
R3X0396	DMND_KVA	Apparent Power Demand	kVA	1	0-50000	RW	F1
R3X0397L	PEAK_DMND_A	Peak Current Demand	A	1	0-100000	RW	F9
R3X0399L	PEAK_DMND_KW	Peak Real Power Demand	kW	1	-50000-50000	RW	F12
R3X039BL	PEAK_DMND_KVAR	Peak Reactive Power Demand	kvar	1	-50000-50000	RW	F12
R3X039D	PEAK_DMND_KVA	Peak Apparent Power Demand	kVA	1	0-50000	RW	F1
R3X03B0L	ANAL_IN1	Analog I/P 1	-	1	-50000-50000	RW	F12
R3X03B2L	ANAL_IN2	Analog I/P 2	-	1	-50000-50000	RW	F12
R3X03B4L	ANAL_IN3	Analog I/P 3	-	1	-50000-50000	RW	F12
R3X03B6L	ANAL_IN4	Analog I/P 4	-	1	-50000-50000	RW	F12
R3X03B8	AN_DIFF_12_ABS	Analog Diff 1-2 Absolute	-	1	-100000-100000	RW	F12
R3X03BA	AN_DIFF_34_ABS	Analog Diff 3-4 Absolute	-	1	-100000-100000	RW	F12
R3X03C0	LEARN_ACC_TIME	Learned Acceleration Time	s	1	0-2000	RW	F2
R3X03C1L	LEARN_START_AMPS	Learned Starting Current	A	1	0-100000	RW	F9
R3X03C3	LEARN_START_CAP	Learned Starting Capacity	%	1	0-100	RW	F1
R3X03C4	LAST_ACC_TIME	Last Acceleration Time	s	1	0-2000	RW	F2
R3X03C5L	LAST_START_AMPS	Last Starting Current	A	1	0-100000	RW	F9

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Code
R3X03C7	LAST_START_CAP	Last Starting Capacity	%	1	0–100	RW	F1
R3X03D0	LEARN_MOTOR_LOAD	Average Motor Load Learned	xFLA	1	0–2000	RW	F3
R3X03E0I	RTD1_MAX	RTD # 1 Max. Temperature	°C	1	-50–250	RW	F4
R3X03E1I	RTD2_MAX	RTD # 2 Max. Temperature	°C	1	-50–250	RW	F4
R3X03E2I	RTD3_MAX	RTD # 3 Max. Temperature	°C	1	-50–250	RW	F4
R3X03E3I	RTD4_MAX	RTD # 4 Max. Temperature	°C	1	-50–250	RW	F4
R3X03E4I	RTD5_MAX	RTD # 5 Max. Temperature	°C	1	-50–250	RW	F4
R3X03E5I	RTD6_MAX	RTD # 6 Max. Temperature	°C	1	-50–250	RW	F4
R3X03E6I	RTD7_MAX	RTD # 7 Max. Temperature	°C	1	-50–250	RW	F4
R3X03E7I	RTD8_MAX	RTD # 8 Max. Temperature	°C	1	-50–250	RW	F4
R3X03E8I	RTD9_MAX	RTD # 9 Max. Temperature	°C	1	-50–250	RW	F4
R3X03E9I	RTD10_MAX	RTD # 10 Max. Temperature	°C	1	-50–250	RW	F4
R3X03EAI	RTD11_MAX	RTD # 11 Max. Temperature	°C	1	-50–250	RW	F4
R3X03EBI	RTD12_MAX	RTD # 12 Max. Temperature	°C	1	-50–250	RW	F4
R3X03F0I	RTD1_MAX_F	RTD # 1 Max. Temperature (in Fahrenheit)	°F	1	-58–482	RW	F4
R3X03F1I	RTD2_MAX_F	RTD # 2 Max. Temperature (in Fahrenheit)	°F	1	-58–482	RW	F4
R3X03F2I	RTD3_MAX_F	RTD # 3 Max. Temperature (in Fahrenheit)	°F	1	-58–482	RW	F4
R3X03F3I	RTD4_MAX_F	RTD # 4 Max. Temperature (in Fahrenheit)	°F	1	-58–482	RW	F4
R3X03F4I	RTD5_MAX_F	RTD # 5 Max. Temperature (in Fahrenheit)	°F	1	-58–482	RW	F4
R3X03F5I	RTD6_MAX_F	RTD # 6 Max. Temperature (in Fahrenheit)	°F	1	-58–482	RW	F4
R3X03F6I	RTD7_MAX_F	RTD # 7 Max. Temperature (in Fahrenheit)	°F	1	-58–482	RW	F4
R3X03F7I	RTD8_MAX_F	RTD # 8 Max. Temperature (in Fahrenheit)	°F	1	-58–482	RW	F4
R3X03F8I	RTD9_MAX_F	RTD # 9 Max. Temperature (in Fahrenheit)	°F	1	-58–482	RW	F4
R3X03F9I	RTD10_MAX_F	RTD # 10 Max. Temperature (in Fahrenheit)	°F	1	-58–482	RW	F4
R3X03FAI	RTD11_MAX_F	RTD # 11 Max. Temperature (in Fahrenheit)	°F	1	-58–482	RW	F4
R3X03FBI	RTD12_MAX_F	RTD # 12 Max. Temperature (in Fahrenheit)	°F	1	-58–482	RW	F4
R3X0400L	AI1_MIN	Analog I/P 1 Minimum	-	1	-50000–50000	RW	F12
R3X0402L	AI1_MAX	Analog I/P 1 Maximum	-	1	-50000–50000	RW	F12
R3X0404L	AI2_MIN	Analog I/P 2 Minimum	-	1	-50000–50000	RW	F12
R3X0406L	AI2_MAX	Analog I/P 2 Maximum	-	1	-50000–50000	RW	F12
R3X0408L	AI3_MIN	Analog I/P 3 Minimum	-	1	-50000–50000	RW	F12
R3X040AL	AI3_MAX	Analog I/P 3 Maximum	-	1	-50000–50000	RW	F12

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Code
R3X040CL	AI4_MIN	Analog I/P 4 Minimum	-	1	-50000-50000	RW	F12
R3X040EL	AI4_MAX	Analog I/P 4 Maximum	-	1	-50000-50000	RW	F12
R3X0420	ORIG_CALI_DATE	Original Calibration Date	n/a	n/a	n/a	R/O	F18
R3X0422	LAST_CALI_DATE	Last Calibration Date	n/a	n/a	n/a	R/O	F18
R3X0430	TOTAL_TRIPS	Total Number of Trips	-	1	0-50000	RW	F1
R3X0431	INC_SEQ_TRIPS	Incomplete Sequence Trips	-	1	0-50000	RW	F1
R3X0432	INPUT_SW_TRIPS	Input Switch Trips	-	1	0-50000	RW	F1
R3X0433	TACH_TRIPS	Tachometer Trips	-	1	0-50000	RW	F1
R3X0434	OL_TRIPS	Overload Trips	-	1	0-50000	RW	F1
R3X0435	SHORT_CIR_TRIPS	Short Circuit Trips	-	1	0-50000	RW	F1
R3X0436	MECH_JAM_TRIPS	Mechanical Jam Trips	-	1	0-50000	RW	F1
R3X0437	UC_TRIPS	Undercurrent Trips	-	1	0-50000	RW	F1
R3X0438	CURR_UNBAL_TRIPS	Current Unbalance Trips	-	1	0-50000	RW	F1
R3X0439	GND_FLT_TRIPS	Ground Fault Trips	-	1	0-50000	RW	F1
R3X043A	PHASE_DIFF_TRIPS	Phase Differential Trips	-	1	0-50000	RW	F1
R3X043B	MOTOR_ACC_TRIPS	Motor Acceleration Trips	-	1	0-50000	RW	F1
R3X043C	STATOR_RTD_TRIPS	Stator RTD Trips	-	1	0-50000	RW	F1
R3X043D	BEARING_RTD_TRIPS	Bearing RTD Trips	-	1	0-50000	RW	F1
R3X043E	OTHER_RTD_TRIPS	Other RTD Trips	-	1	0-50000	RW	F1
R3X043F	AMBIENT_RTD_TRIPS	Ambient RTD Trips	-	1	0-50000	RW	F1
R3X0440	UV_TRIPS	Undervoltage Trips	-	1	0-50000	RW	F1
R3X0441	OV_TRIPS	Overvoltage Trips	-	1	0-50000	RW	F1
R3X0442	PHASE_REV_TRIPS	Voltage Phase Reversal Trips	-	1	0-50000	RW	F1
R3X0443	VOLT_FREQ_TRIPS	Voltage Frequency Trips	-	1	0-50000	RW	F1
R3X0444	PF_TRIPS	Power Factor Trips	-	1	0-50000	RW	F1
R3X0445	RP_TRIPS	Reactive Power Trips	-	1	0-50000	RW	F1
R3X0446	UP_TRIPS	Underpower Trips	-	1	0-50000	RW	F1
R3X0447	AI1_TRIPS	Analog I/P 1 Trips	-	1	0-50000	RW	F1
R3X0448	AI2_TRIPS	Analog I/P 2 Trips	-	1	0-50000	RW	F1
R3X0449	AI3_TRIPS	Analog I/P 3 Trips	-	1	0-50000	RW	F1
R3X044A	AI4_TRIPS	Analog I/P 4 Trips	-	1	0-50000	RW	F1
R3X044B	REV_POWER_TRIPS	Reverse Power Trips	-	1	0-50000	RW	F1
R3X044C	ANAL_DIFF_1_2_TRIPS	Analog Diff 1-2 Trips	-	1	0-50000	RW	F1
R3X044D	ANAL_DIFF_3_4_TRIPS	Analog Diff 3-4 Trips	-	1	0-50000	RW	F1
R3X044E	LO_OC_TRIP	Lo-set Overcurrent Trip	-	1	0-50000	RW	F1
R3X0470	MOTOR_START_CTR	Number of Motor Starts	-	1	0-50000	RW	F1
R3X0471	EMER_RESTART_CTR	Number of Emergency Restarts	-	1	0-50000	RW	F1
R3X0472	STARTER_CTR	Number of Starter Operations	-	1	0-50000	RW	F1
R3X0473L	DIGITAL_CTR	Digital Counter	-	1	0-100000000	RW	F9
R3X04A0L	MOTOR_RUN_HOURS	Motor Running Hours	hr	1	1-100000	RW	F9
R3X04A2	TIME_BETWEEN_STARTS	Time Between Starts Timer	min	1	0-500	RW	F1
R3X04A3	START_TIMER_1	Start Timer 1	min	1	0-60	RW	F1
R3X04A4	START_TIMER_2	Start Timer 2	min	1	0-60	RW	F1

Actual Values							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range			R/W	Format Code
R3X04A5	START_TIMER_3	Start Timer 3	min	1	0-60	RW	F1
R3X04A6	START_TIMER_4	Start Timer 4	min	1	0-60	RW	F1
R3X04A7	START_TIMER_5	Start Timer 5	min	1	0-60	RW	F1
R3X04C0	ORDER_CODE	Order Code	N/A	1	0-65535	RW	FC136
R3X04C1L	SERIAL_NUM	Relay Serial Number	-	1	3050001	RW	F9
R3X04E0L	DATE_ORIG_CALIB	Original Calibration Date				RW	F18
R3X04E2L	DATE_LAST_CALIB	Last Calibration Date				RW	F19
R3X0500	VA_ANG	Va Angle	°	1	0-359	RW	F1
R3X0501	VB_ANG	Vb Angle	°	1	0-359	RW	F1
R3X0502	VC_ANG	Vc Angle	°	1	0-359	RW	F1
R3X0503	IA_ANG	Ia Angle	°	1	0-359	RW	F1
R3X0504	IB_ANG	Ib Angle	°	1	0-359	RW	F1
R3X0505	IC_ANG	Ic Angle	°	1	0-359	RW	F1

COMMAND COILS

Command Coils							
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value			R/W	Format Code
R0X0001	CMD_RESET					WO	
R0X0002	CMD_METER_START					WO	
R0X0003	CMD_MOTOR_START					WO	

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SR750 Feeder Management Relay

- *SETPOINT REGISTERS*

- *ACTUAL VALUES*

- *COMMAND COILS*

Format Codes

The Format Codes column contains references to special formatting that applies to a given register. These formatting characteristics are provided in the Multilin SR750 Instruction Manual.

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R00006	TRIGGER_TM				
R4X0080	COMMAND_CODE	Command Operation Code	-, -	RW	F19
R4X0081	SIM_KEYPRESS	Simulate Front Panel Key Press	-, -	RW	F55
R4X0088S8	COMM_PORT_PASSCODE	Communications Port Passcode (4 words)	-, -	RW	F33
		VIRTUAL INPUTS		RW	
R4X0091	VIRT_IN1	Virtual Input 1	-, -	RW	F66
R4X0092	VIRT_IN2	Virtual Input 2	-, -	RW	F66
R4X0093	VIRT_IN3	Virtual Input 3	-, -	RW	F67
R4X0094	VIRT_IN4	Virtual Input 4	-, -	RW	F68
R4X0095	VIRT_IN5	Virtual Input 5	-, -	RW	F69
R4X0096	VIRT_IN6	Virtual Input 6	-, -	RW	F70
R4X0097	VIRT_IN7	Virtual Input 7	-, -	RW	F71
R4X0098	VIRT_IN8	Virtual Input 8	-, -	RW	F72
R4X0099	VIRT_IN9	Virtual Input 9	-, -	RW	F73
R4X009A	VIRT_IN10	Virtual Input 10	-, -	RW	F74
R4X009B	VIRT_IN11	Virtual Input 11	-, -	RW	F75
R4X009C	VIRT_IN12	Virtual Input 12	-, -	RW	F76
R4X009D	VIRT_IN13	Virtual Input 13	-, -	RW	F77
R4X009E	VIRT_IN14	Virtual Input 14	-, -	RW	F78
R4X009F	VIRT_IN15	Virtual Input 15	-, -	RW	F79
R4X00A0	VIRT_IN16	Virtual Input 16	-, -	RW	F80
R4X00A1	VIRT_IN17	Virtual Input 17	-, -	RW	F81
R4X00A2	VIRT_IN18	Virtual Input 18	-, -	RW	F82
R4X00A3	VIRT_IN19	Virtual Input 19	-, -	RW	F83
R4X00A4	VIRT_IN20	Virtual Input 20	-, -	RW	F66
R4X00F0L	SET_TIME_CMD	Set Time (2 words)	-, -, -	RW	F22
R4X00F1	SET_DATE_2	Set Date (2 words)	-, -, -	RW	F23
R4X00F2L	SET_DATE_CMD	Set Date (2 words)	-, -	RW	F23
R4X1000	BEEPER	Beeper	-, -	RW	F30
R4X1001	FLSH_MSG_TIME	Flash Message Time	s, 0.5-10.0	RW	F2
R4X1002	DFT_MSG_TIMEOUT	Default Message Timeout	s, 10-900	RW	F1
R4X1003	DFT_MSG_INTEN	Default Message Intensity (25, 50, 75, or 100)	%, 25-100	RW	F1
R4X1004	DISP_FILTER_CONST	Display Filter Constant	---, 0, 0 to 255	RW	F1
R4X1006L	SET_DATE	Set Date (2 words)	-, -	RW	F23
R4X1008L	SET_TIME	Set Time (2 words)	-, -	RW	F22
R4X100A	760_OP	SR760 Operation	-, -	RW	F29
R4X100B	IRIG_B_TIME_SYNC	IRIG-B Signal Type	-, -	RW	F43

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X100CS8	ENCRYPTED_PASSCODE	Encrypted Passcode (4 words)	-, -	RW	F33
		EVENT RECORDER SETUP		RW	
R4X1010	EVNT_REC_FUNC	Event Recorder Function	-, -	RW	F30
R4X1011	REC_TRP_EVNT	Recording of Trip Events	-, -	RW	F30
R4X1012	REC_ALM_EVNT	Recording of Alarm Events	-, -	RW	F30
R4X1013	REC_CNTR_EVNT	Recording of Control Events	-, -	RW	F30
R4X1014	REC_LOGIC_IN_EVNT	Recording of Logic Input Events	-, -	RW	F30
R4X1015	REC_PU_EVNT	Recording of Pickup Events	-, -	RW	F30
R4X1016	REC_DO_EVNT	Recording of Dropout Events	-, -	RW	F30
R4X1017	REC_SET_DATE_EVNT	Recording of Set Time/Date Events	--- Enabled ---		F30
		TRACE MEMORY SETUP		RW	
R4X1018	BUFFER_ORG	Buffer Organization	-, -	RW	F81
R4X1019	TRIG_POS	Trigger Position	%, 0-100	RW	F1
R4X101A	TRIG_SOURCE	Trigger Source	-, -	RW	F82
		DEFAULT MESSAGES		RW	
R4X1020	MSGSEL	Number Of Messages Selected (read only)	-, 0-20	RW	F1
R4X1021	DFT_MSG1	Default Message #1	-, -	RW	F32
R4X1022	DFT_MSG2	Default Message #2	-, -	RW	F32
R4X1023	DFT_MSG3	Default Message #3	-, -	RW	F32
R4X1024	DFT_MSG4	Default Message #4	-, -	RW	F32
R4X1025	DFT_MSG5	Default Message #5	-, -	RW	F32
R4X1026	DFT_MSG6	Default Message #6	-, -	RW	F32
R4X1027	DFT_MSG7	Default Message #7	-, -	RW	F32
R4X1028	DFT_MSG8	Default Message #8	-, -	RW	F32
R4X1029	DFT_MSG9	Default Message #9	-, -	RW	F32
R4X102A	DFT_MSG10	Default Message #10	-, -	RW	F32
R4X102B	DFT_MSG11	Default Message #11	-, -	RW	F32
R4X102C	DFT_MSG12	Default Message #12	-, -	RW	F32
R4X102D	DFT_MSG13	Default Message #13	-, -	RW	F32
R4X102E	DFT_MSG14	Default Message #14	-, -	RW	F32
R4X102F	DFT_MSG15	Default Message #15	-, -	RW	F32
R4X1030	DFT_MSG16	Default Message #16	-, -	RW	F32
R4X1031	DFT_MSG17	Default Message #17	-, -	RW	F32
R4X1032	DFT_MSG18	Default Message #18	-, -	RW	F32
R4X1033	DFT_MSG19	Default Message #19	-, -	RW	F32
R4X1034	DFT_MSG20	Default Message #20	-, -	RW	F32
R4X1035	DFT_MSG21	Default Message #21	-, -	RW	F32
R4X1036	DFT_MSG22	Default Message #22	-, -	RW	F32
R4X1037	DFT_MSG23	Default Message #23	-, -	RW	F32
R4X1038	DFT_MSG24	Default Message #24	-, -	RW	F32
R4X1039	DFT_MSG25	Default Message #25	-, -	RW	F32
R4X103A	DFT_MSG26	Default Message #26	-, -	RW	F32
R4X103B	DFT_MSG27	Default Message #27	-, -	RW	F32
R4X103C	DFT_MSG28	Default Message #28	-, -	RW	F32

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X103D	DFT_MSG29	Default Message #29	-, -	RW	F32
R4X103E	DFT_MSG30	Default Message #30	-, -	RW	F32
		:			
		USER TEXT MESSAGES		RW	
R4X1040S40	USR_TXT_MSG1	User Text Message 1 (20 words)	-, -	RW	F33
R4X1054S40	USR_TXT_MSG2	User Text Message 2 (20 words)	-, -	RW	F33
R4X1068S40	USR_TXT_MSG3	User Text Message 3 (20 words)	-, -	RW	F33
R4X107CS40	USR_TXT_MSG4	User Text Message 4 (20 words)	-, -	RW	F33
R4X1090S40	USR_TXT_MSG5	User Text Message 5 (20 words)	-, -	RW	F33
		OVERRIDE MESSAGE		RW	
R4X10B0	OVRD_MSG_DISP_TIME	Override Message Display Time	s, 0-9000	RW	F1
R4X10B1S40	OVRD_MSG	Override Message (20 words)	-, -	RW	F33
		COMMUNICATIONS		RW	
R4X10D0	MODBUS_ADDR	Slave Address	-, 1-254	RW	F1
R4X10D1	COM1_BAUD	COM1 Baud Rate	-, -	RW	F31
R4X10D2	COM1_PARITY	COM1 Parity	-, -	RW	F27
R4X10D3	COM1_HW	COM1 Communication Hardware	-, -	RW	F17
R4X10D4	FRNT_RS232_BAUD	Front Panel RS232 Baud Rate	-, -	RW	F31
R4X10D5	FRNT_RS232_PARITY	Front Panel RS232 Parity	-, -	RW	F27
R4X10D8	COM2_BAUD	COM2 Baud Rate	-, -	RW	F31
R4X10D9	COM2_PARITY	COM2 Parity	-, -	RW	F31
R4X10DA	DNP_PORT	DNP Port	-, -	RW	F27
R4X10DB	DNP_POINT_MAPPING	DNP Point Mapping	-, -	RW	F62
		DATA LOGGER		RW	
R4X10E0	DL_SAMPLE_RATE	Sample Rate	-, -	RW	F74
R4X10E1	DL_CONT_MODE	Continuous Mode	-, -	RW	F30
R4X10E2	DL_BUFFER_ORG	Buffer Organization	-, -	RW	F81
R4X10E3	DL_TRIG_POS	Trigger Position	%, 0-100	RW	F1
R4X10E4	DL_TRIG_SRC	Trigger Source	-, -	RW	F82
R4X10E5	DL_CH1_SRC	Channel 1 Source	-, -	RW	F77
R4X10E6	DL_CH2_SRC	Channel 2 Source	-, -	RW	F77
R4X10E7	DL_CH3_SRC	Channel 3 Source	-, -	RW	F77
R4X10E8	DL_CH4_SRC	Channel 4 Source	-, -	RW	F77
R4X10E9	DL_CH5_SRC	Channel 5 Source	-, -	RW	F77
R4X10EA	DL_CH6_SRC	Channel 6 Source	-, -	RW	F77
R4X10EB	DL_CH7_SRC	Channel 7 Source	-, -	RW	F77
R4X10EC	DL_CH8_SRC	Channel 8 Source	-, -	RW	F77
R4X10F0	XMISSION_DLY	Transmission Delay	---, ms, 0 to 65000		F1
R4X10F1	DL_CONF_MODE	Data Link Confirmation Mode	---, ---, ---		F89
R4X10F2	DL_CONF_TIMEOUT	Data Link Confirmation Timeout	---, ms, 1 to 65000		F1
R4X10F3	DL_CONF_RETRIES	Data Link Confirmation Retries	---, ---, 0 to 100		F1
R4X10F4	ARM_TMR_DURATION	Select/Operate Arm Timer Duration	---, ms, 1 to 65000		F1
R4X10F5	WRITE_TIME_EN	Write Time Interval	---, ms, 0 to 65000		F1
R4X10F6	INHIBIT_COLD_RESTART	Inhibit Cold Restart	---, ---, ---		F30
		SYSTEM SETUP		RW	

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1100	CT_PRIMARY	Phase CT Primary	A, 1-5000	RW	F1
R4X1102	GND_CT_PRI	Ground CT Primary	A, 1-5000	RW	F1
R4X1103	VT_CONN_TYPE	Bus VT Connection Type	-, -	RW	F28
R4X1104	VT_NOM_SEC	Bus Nominal VT Secondary Voltage	V, 50.0-240.0	RW	F2
R4X1105	VT_RATIO	Bus VT Ratio	xxx : 1, 1.0-5000.0	RW	F2
R4X1106	NOM_FREQ	Nominal Frequency	Hz, 25-60	RW	F1
R4X1107	COST_OF_ENERGY	Cost of energy	¢/kWh, 1.0-25.0	RW	F2
R4X1108	POLAR_CT_PRI	Polarizing CT Primary	A, 1-5000	RW	F1
R4X1109	LN_VT_CONN	Line VT Connection	-, -	RW	F18
R4X110A	LN_VT_NOM_SEC	Line Nominal VT Secondary Voltage	V, 50.0-240.0	RW	F2
R4X110B	LN_VT_RATIO	Line VT Ratio	xxx : 1, 1.0-5000.0	RW	F1
R4X110C	LN_PHASE_SEQ	Phase Sequence	-, -	RW	F83
R4X110D	SENS_GND_CT_PRI	Sensitive Ground CT Primary	A 1000 A 1 to 50000	RW	F1
		LOGIC INPUT STATE LOGIC		RW	
R4X1140	LI1_STATE_LOGIC	Logic Input 1 State Logic	-, -	RW	F63
R4X1141	LI2_STATE_LOGIC	Logic Input 2 State Logic	-, -	RW	F63
R4X1142	LI3_STATE_LOGIC	Logic Input 3 State Logic	-, -	RW	F63
R4X1143	LI4_STATE_LOGIC	Logic Input 4 State Logic	-, -	RW	F63
R4X1144	LI5_STATE_LOGIC	Logic Input 5 State Logic	-, -	RW	F63
R4X1145	LI6_STATE_LOGIC	Logic Input 6 State Logic	-, -	RW	F63
R4X1146	LI7_STATE_LOGIC	Logic Input 7 State Logic	-, -	RW	F63
R4X1147	LI8_STATE_LOGIC	Logic Input 8 State Logic	-, -	RW	F63
R4X1148	LI9_STATE_LOGIC	Logic Input 9 State Logic	-, -	RW	F63
R4X1149	LI10_STATE_LOGIC	Logic Input 10 State Logic	-, -	RW	F63
R4X114A	LI11_STATE_LOGIC	Logic Input 11 State Logic	-, -	RW	F63
R4X114B	LI12_STATE_LOGIC	Logic Input 12 State Logic	-, -	RW	F63
R4X114C	LI13_STATE_LOGIC	Logic Input 13 State Logic	-, -	RW	F63
R4X114D	LI14_STATE_LOGIC	Logic Input 14 State Logic	-, -	RW	F63
R4X114E	LI15_ASSERT_LOGIC	Logic Input 14 Asserted Logic	-, -	RW	F64
R4X114F	LI16_ASSERT_LOGIC	Logic Input 14 Asserted Logic	-, -	RW	F64
		LOGIC INPUT ASSERTED CONTACT STATE		RW	
R4X1150	LI1_ASSERT_STATE	Logic Input 1 Asserted Contact State	-, -	RW	F64
R4X1151	LI2_ASSERT_STATE	Logic Input 2 Asserted Contact State	-, -	RW	F64
R4X1152	LI3_ASSERT_STATE	Logic Input 3 Asserted Contact State	-, -	RW	F64
R4X1153	LI4_ASSERT_STATE	Logic Input 4 Asserted Contact State		RW	
R4X1154	LI5_ASSERT_STATE	Logic Input 5 Asserted Contact State	-, -	RW	F64
R4X1155	LI6_ASSERT_STATE	Logic Input 6 Asserted Contact State	-, -	RW	F64
R4X1156	LI7_ASSERT_STATE	Logic Input 7 Asserted Contact State	-, -	RW	F64
R4X1157	LI8_ASSERT_STATE	Logic Input 8 Asserted Contact State	-, -	RW	F64
R4X1158	LI9_ASSERT_STATE	Logic Input 9 Asserted Contact State	-, -	RW	F64
R4X1159	LI10_ASSERT_STATE	Logic Input 10 Asserted Contact State	-, -	RW	F64
R4X115A	LI11_ASSERT_STATE	Logic Input 11 Asserted Contact State	-, -	RW	F64
R4X115B	LI12_ASSERT_STATE	Logic Input 12 Asserted Contact State	-, -	RW	F64

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X115C	LI13_ASSERT_STATE	Logic Input 13 Asserted Contact State	-, -	RW	F64
R4X115D	LI14_ASSERT_STATE	Logic Input 14 Asserted Contact State	-, -	RW	F64
		BREAKER FUNCTIONS		RW	
R4X1160	52A_CONTACT_FUNC	52a Contact	-, -	RW	F65
R4X1161	52B_CONTACT_FUNC	52b Contact	-, -	RW	F65
R4X1162	BRKR_CONNECT_FUNC	Breaker Connected	-, -	RW	F65
		CONTROL FUNCTIONS		RW	
R4X1170	LOCAL_MODE_FUNC	Local Mode	-, -	RW	F65
R4X1171	REM_RST_FUNC	Remote Reset	-, -	RW	F65
R4X1172	REM_OPEN_FUNC	Remote Open	-, -	RW	F65
R4X1173	REM_CLS_FUNC	Remote Close	-, -	RW	F65
R4X1174	CLD_LD_PU_FUNC	Cold Load Pickup	-, -	RW	F65
R4X1175	SP_GRP2_FUNC	Setpoint Group 2	-, -	RW	F65
R4X1176	SP_GRP3_FUNC	Setpoint Group 3	-, -	RW	F65
R4X1177	SP_GRP4_FUNC	Setpoint Group 4	-, -	RW	F65
		USER INPUT A		RW	
R4X1180S18	USER_IN_A_NAME	User Input A Name (9 registers)	-, -	RW	F33
R4X1189	USER_IN_A_SRC	User Input A Source	-, -	RW	F65
R4X118A	USER_IN_A_FUNC	User Input A Function	-, -	RW	F37
R4X118B	USER_IN_A_RLYS	User Input A Relays	-, -	RW	F57
R4X118C	USER_IN_A_DLY	User Input A Delay	s, 0.00–600.00	RW	F3
		USER INPUT B		RW	
R4X1190S18	USER_IN_B_NAME	User Input B Name (9 registers)	-, -	RW	F33
R4X1199	USER_IN_B_SRC	User Input B Source	-, -	RW	F65
R4X119A	USER_IN_B_FUNC	User Input B Function	-, -	RW	F37
R4X119B	USER_IN_B_RLYS	User Input B Relays	-, -	RW	F57
R4X119C	USER_IN_B_DLY	User Input B Delay	s, 0.00–600.00	RW	F3
		USER INPUT C		RW	
R4X11A0S18	USER_IN_C_NAME	User Input C Name (9 registers)	-, -	RW	F33
R4X11A9	USER_IN_C_SRC	User Input C Source	-, -	RW	F65
R4X11AA	USER_IN_C_FUNC	User Input C Function	-, -	RW	F37
R4X11AB	USER_IN_C_RLYS	User Input C Relays	-, -	RW	F57
R4X11AC	USER_IN_C_DLY	User Input C Delay	s, 0.00–600.00	RW	F3
		USER INPUT D		RW	
R4X11B0S18	USER_IN_D_NAME	User Input D Name (9 registers)	-, -	RW	F33
R4X11B9	USER_IN_D_SRC	User Input D Source	-, -	RW	F65
R4X11BA	USER_IN_D_FUNC	User Input D Function	-, -	RW	F37
R4X11BB	USER_IN_D_RLYS	User Input D Relays	-, -	RW	F57
R4X11BC	USER_IN_D_DLY	User Input D Delay	s, 0.00–600.00	RW	F3
		USER INPUT E		RW	
R4X11C0S18	USER_IN_E_NAME	User Input E Name (9 registers)	-, -	RW	F33
R4X11C9	USER_IN_E_SRC	User Input E Source	-, -	RW	F65
R4X11CA	USER_IN_E_FUNC	User Input E Function	-, -	RW	F37
R4X11CB	USER_IN_E_RLYS	User Input E Relays	-, -	RW	F57
R4X11CC	USER_IN_E_DLY	User Input E Delay	s, 0.00–600.00	RW	F3

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
		USER INPUT F		RW	
R4X11D0S18	USER_IN_F_NAME	User Input F Name (9 registers)	-, -	RW	F33
R4X11D9	USER_IN_F_SRC	User Input F Source	-, -	RW	F65
R4X11DA	USER_IN_F_FUNC	User Input F Function	-, -	RW	F37
R4X11DB	USER_IN_F_RLYS	User Input F Relays	-, -	RW	F57
R4X11DC	USER_IN_F_DLY	User Input F Delay	s, 0.00–600.00	RW	F3
		USER INPUT G		RW	
R4X11E0S18	USER_IN_G_NAME	User Input G Name (9 registers)	-, -	RW	F33
R4X11E9	USER_IN_G_SRC	User Input G Source	-, -	RW	F65
R4X11EA	USER_IN_G_FUNC	User Input G Function	-, -	RW	F37
R4X11EB	USER_IN_G_RLYS	User Input G Relays	-, -	RW	F57
R4X11EC	USER_IN_G_DLY	User Input G Delay	s, 0.00–600.00	RW	F3
		USER INPUT H		RW	
R4X11F0S18	USER_IN_H_NAME	User Input H Name (9 registers)	-, -	RW	F33
R4X11F9	USER_IN_H_SRC	User Input H Source	-, -	RW	F65
R4X11FA	USER_IN_H_FUNC	User Input H Function	-, -	RW	F37
R4X11FB	USER_IN_H_RLYS	User Input H Relays	-, -	RW	F57
R4X11FC	USER_IN_H_DLY	User Input H Delay	s, 0.00–600.00	RW	F3
		BLOCKING FUNCTIONS		RW	
R4X1240	BLK_1_TRP_RLY	Block 1 TRIP Relay	-, -	RW	F65
R4X1241	BLK_2_CLS_RLY	Block 2 CLOSE Relay	-, -	RW	F65
R4X1242	BLK_RST	Block Reset	-, -	RW	F65
R4X1243	BLK_UV1	Block Undervoltage 1	-, -	RW	F65
R4X1244	BLK_UV2	Block Undervoltage 2	-, -	RW	F65
R4X1245	BLK_UV3	Block Undervoltage 3	-, -	RW	F65
R4X1246	BLK_UV4	Block Undervoltage 4	-, -	RW	F65
R4X1247	BLK_UF1	Block Underfrequency 1	-, -	RW	F65
R4X1248	BLK_UF2	Block Underfrequency 2	-, -	RW	F65
R4X1249	BYPASS_SYNC	Bypass Synchrocheck	-, -	RW	F65
R4X124A	BLK_BRKR_STAT	Block Breaker Statistics	-, -	RW	F65
R4X124B	BLK_NEG_SEQ_V	Block Negative Sequence Voltage	-, -	RW	F65
R4X124C	BLK_RESTOR	Block Restoration	-, -	RW	F65
R4X124D	BLK_FREQ_DECAY	Block Frequency Decay	-, -	RW	F65
R4X124F	BLK_NEUT_DISP	Block Neutral Displacement	--- Disabled ---		F65
		OVERCURRENT BLOCKING FUNCTIONS		RW	
R4X1260	BLK_ALL_OC	Block All Overcurrent	-, -	RW	F65
R4X1261	BLK_ALL_PH_OC	Block All Phase Overcurrent	-, -	RW	F65
R4X1262	BLK_ALL_GND_OC	Block All Ground Overcurrent	-, -	RW	F65
R4X1263	BLK_ALL_N_OC	Block All Neutral Overcurrent	-, -	RW	F65
R4X1264	BLK_PH_TIME_OC1	Block Phase Time Overcurrent 1	-, -	RW	F65
R4X1265	BLK_PH_INST_OC1	Block Phase Inst Overcurrent 1	-, -	RW	F65
R4X1266	BLK_PH_INST_OC2	Block Phase Inst Overcurrent 2	-, -	RW	F65
R4X1267	BLK_GND_TIME_OC	Block Ground Time Overcurrent	-, -	RW	F65
R4X1268	BLK_GND_INST_OC	Block Ground Inst Overcurrent	-, -	RW	F65

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1269	BLK_N_TIME_OC1	Block Neutral Time Overcurrent 1	-, -	RW	F65
R4X126A	BLK_N_TIME_OC2	Block Neutral Time Overcurrent 2	-, -	RW	F65
R4X126B	BLK_N_INST_OC1	Block Neutral Inst Overcurrent 1	-, -	RW	F65
R4X126C	BLK_N_INST_OC2	Block Neutral Inst Overcurrent 2	-, -	RW	F65
R4X126D	BLK_NEG_SEQ_TIME_OC	Block Negative Sequence Time Overcurrent	-, -	RW	F65
R4X126E	BLK_NEG_SEQ_INST_OC	Block Negative Sequence Inst Overcurrent	-, -	RW	F65
R4X126F	BLK_PH_TIME_OC2	Block Phase Time Overcurrent 2	-, -	RW	F65
R4X1270	BLK_ALL_SENS_GND_OC	Block All Sensitive Ground Overcurrent	--- Disabled ---		F65
R4X1271	BLK_SENS_GND_INST_OC	Block Sensitive Ground Instantaneous O/C	--- Disabled ---		F65
R4X1272	BLK_SENS_GND_TIME_OC	Block Sensitive Ground Time O/C	--- Disabled ---		F65
		TRANSFER FUNCTIONS		RW	
R4X1280	SEL_TO_TRP	Selected To Trip	-, -	RW	F65
R4X1281	UV_ON_OTH_SRC	Undervoltage on Other Source	-, -	RW	F65
R4X1282	INC1_BRKR_CLS	Incomer 1 Breaker Closed	-, -	RW	F65
R4X1283	INC2_BRKR_CLS	Incomer 2 Breaker Closed	-, -	RW	F65
R4X1284	TIE_BRKR_CONN	Tie Breaker Connected	-, -	RW	F65
R4X1285	TIE_BRKR_CLS	Tie Breaker Closed	-, -	RW	F65
R4X1286	BLK_TRANS	Block Transfer	-, -	RW	F65
R4X1287	TRANS_LOCK	Transformer Lockout	-, -	RW	F65
R4X1288	SRC_TRP	Source Trip	-, -	RW	F65
R4X1289	CLS_INC1	Close From Incomer 1	-, -	RW	F65
R4X128A	CLS_INC2	Close From Incomer 2	-, -	RW	F65
R4X1290	INIT_RECL	Initiate Reclosure	-, -	RW	F65
R4X1291	CAN_RECL	Cancel Recloser	-, -	RW	F65
R4X1292	BLK_RECL	Block Recloser	-, -	RW	F65
		MISCELLANEOUS FUNCTIONS		RW	
R4X12A0	TRIG_TM	Trigger Trace Memory	-, -	RW	F65
R4X12A1	SIM_FAULT	Simulate Fault	-, -	RW	F65
R4X12A2	TRIG_DL	Trigger Data Logger	-, -	RW	F65
R4X12A3	START_DMD_INTVL	Start Demand Interval	---		F65
R4X1300	RLY1_TRP_SEAL_TIME	Relay 2 TRIP Seal In Time	s, 0.00 to 9.99		F3
R4X1310		Relay 2 CLOSE Seal In Time	s, 0.00 to 9.99		F3
		RELAY 3 AUXILIARY		RW	
R4X1320S16	RLY3_AUX_NAME	Relay 3 AUXILIARY Name (8 words)	-, -	RW	F33
R4X1328	RLY3_AUX_NONOP_STATE	Relay 3 AUXILIARY Non-operated State	-, -	RW	F34
R4X1329	RLY3_AUX_OUTPUT_TYPE	Relay 3 AUXILIARY Output Type	-, -	RW	F35
R4X132A	RLY3_AUX_PULSE_DWELL	Relay 3 AUXILIARY Pulse Dwell Time	s, 0.1-6000.0	RW	F2
		RELAY 4 AUXILIARY		RW	
R4X1330S16	RLY4_AUX_NAME	Relay 4 AUXILIARY Name (8 words)	-, -	RW	F33
R4X1338	RLY4_AUX_NONOP_STATE	Relay 4 AUXILIARY Non-operated State	-, -	RW	F34
R4X1339	RLY4_AUX_OUTPUT_TYPE	Relay 4 AUXILIARY Output Type	-, -	RW	F35

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X133A	RLY4_AUX_PULSE_DWELL	Relay 4 AUXILIARY Pulse Dwell Time	s, 0.1–6000.0	RW	F2
		RELAY 5 AUXILIARY		RW	
R4X1340S16	RLY5_AUX_NAME	Relay 5 AUXILIARY Name (8 words)	-, -	RW	F33
R4X1348	RLY5_AUX_NONOP_STATE	Relay 5 AUXILIARY Non-operated State	-, -	RW	F34
R4X1349	RLY5_AUX_OUTPUT_TYPE	Relay 5 AUXILIARY Output Type	-, -	RW	F35
R4X134A	RLY5_AUX_PULSE_DWELL	Relay 5 AUXILIARY Pulse Dwell Time	s, 0.1–6000.0	RW	F2
		RELAY 6 AUXILIARY		RW	
R4X1350S16	RLY6_AUX_NAME	Relay 6 AUXILIARY Name (8 words)	-, -	RW	F33
R4X1358	RLY6_AUX_NONOP_STATE	Relay 6 AUXILIARY Non-operated State	-, -	RW	F34
R4X1359	RLY6_AUX_OUTPUT_TYPE	Relay 6 AUXILIARY Output Type	-, -	RW	F35
R4X135A	RLY6_AUX_PULSE_DWELL	Relay 6 AUXILIARY Pulse Dwell Time	s, 0.1–6000.0	RW	F2
		RELAY 7 AUXILIARY		RW	
R4X1360S16	RLY7_AUX_NAME	Relay 7 AUXILIARY Name (8 words)	-, -	RW	F33
R4X1368	RLY7_AUX_NONOP_STATE	Relay 7 AUXILIARY Non-operated State	-, -	RW	F34
R4X1369	RLY7_AUX_OUTPUT_TYPE	Relay 7 AUXILIARY Output Type	-, -	RW	F35
R4X136A	RLY7_AUX_PULSE_DWELL	Relay 7 AUXILIARY Pulse Dwell Time	s, 0.1–6000.0	RW	F2
S3		USER INPUT I		RW	
R4X1370		User Input I Name (9 Registers)	---, ---	RW	F33
R4X1379		User Input I Source	---, ---	RW	F65
R4X137A		User Input I Function	---, ---	RW	F37
R4X137B		User Input I Relays	---, ---	RW	F57
R4X137C		User Input I Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT J		RW	
R4X1380		User Input J Name (9 Registers)	---, ---	RW	F33
R4X1389		User Input J Source	---, ---	RW	F65
R4X138A		User Input J Function	---, ---	RW	F37
R4X138B		User Input J Relays	---, ---	RW	F57
R4X138C		User Input J Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT K		RW	
R4X1390		User Input K Name (9 Registers)	---, ---	RW	F33
R4X1399		User Input K Source	---, ---	RW	F65
R4X139A		User Input K Function	---, ---	RW	F37
R4X139B		User Input K Relays	---, ---	RW	F57
R4X139C		User Input K Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT L		RW	
R4X13A0		User Input L Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input L Source	---, ---	RW	F65
R4X13AA		User Input L Function	---, ---	RW	F37
R4X13AB		User Input L Relays	---, ---	RW	F57
R4X13AC		User Input L Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT M		RW	
R4X13A0		User Input M Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input M Source	---, ---	RW	F65
R4X13AA		User Input M Function	---, ---	RW	F37
R4X13AB		User Input M Relays	---, ---	RW	F57

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X13AC		User Input M Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT N		RW	
R4X13A0		User Input N Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input N Source	---, ---	RW	F65
R4X13AA		User Input N Function	---, ---	RW	F37
R4X13AB		User Input N Relays	---, ---	RW	F57
R4X13AC		User Input N Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT O		RW	
R4X13A0		User Input O Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input O Source	---, ---	RW	F65
R4X13AA		User Input O Function	---, ---	RW	F37
R4X13AB		User Input O Relays	---, ---	RW	F57
R4X13AC		User Input O Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT P		RW	
R4X13A0		User Input P Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input P Source	---, ---	RW	F65
R4X13AA		User Input P Function	---, ---	RW	F37
R4X13AB		User Input P Relays	---, ---	RW	F57
R4X13AC		User Input P Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT Q		RW	
R4X13A0		User Input Q Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input Q Source	---, ---	RW	F65
R4X13AA		User Input Q Function	---, ---	RW	F37
R4X13AB		User Input Q Relays	---, ---	RW	F57
R4X13AC		User Input Q Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT R		RW	
R4X13A0		User Input R Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input R Source	---, ---	RW	F65
R4X13AA		User Input R Function	---, ---	RW	F37
R4X13AB		User Input R Relays	---, ---	RW	F57
R4X13AC		User Input R Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT S		RW	
R4X13A0		User Input S Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input S Source	---, ---	RW	F65
R4X13AA		User Input S Function	---, ---	RW	F37
R4X13AB		User Input S Relays	---, ---	RW	F57
R4X13AC		User Input S Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT T		RW	
R4X13A0		User Input T Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input T Source	---, ---	RW	F65
R4X13AA		User Input T Function	---, ---	RW	F37
R4X13AB		User Input T Relays	---, ---	RW	F57
R4X13AC		User Input T Delay	s, 0.00 to 600.00	RW	F3
		FLEXCURVE A TRIP TIMES		RW	
R4X1430	FLEXCURVE_A	FlexCurve A Trip Time (80 Words)	ms, 0-65535	RW	F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1431	Flex_A_105	FlexCurve A Trip Time at 1.05 x PU	ms, 0-65535	RW	F1
R4X1432	Flex_A_110	FlexCurve A Trip Time at 1.10 x PU	ms, 0-65535	RW	F1
R4X1433	Flex_A_120	FlexCurve A Trip Time at 1.20 x PU	ms, 0-65535	RW	F1
R4X1434	Flex_A_130	FlexCurve A Trip Time at 1.30 x PU	ms, 0-65535	RW	F1
R4X1435	Flex_A_140	FlexCurve A Trip Time at 1.40 x PU	ms, 0-65535	RW	F1
R4X1436	Flex_A_150	FlexCurve A Trip Time at 1.50 x PU	ms, 0-65535	RW	F1
R4X1437	Flex_A_160	FlexCurve A Trip Time at 1.60 x PU	ms, 0-65535	RW	F1
R4X1438	Flex_A_170	FlexCurve A Trip Time at 1.70 x PU	ms, 0-65535	RW	F1
R4X1439	Flex_A_180	FlexCurve A Trip Time at 1.80 x PU	ms, 0-65535	RW	F1
R4X143A	Flex_A_190	FlexCurve A Trip Time at 1.90 x PU	ms, 0-65535	RW	F1
R4X143B	Flex_A_200	FlexCurve A Trip Time at 2.00 x PU	ms, 0-65535	RW	F1
R4X143C	Flex_A_210	FlexCurve A Trip Time at 2.10 x PU	ms, 0-65535	RW	F1
R4X143D	Flex_A_220	FlexCurve A Trip Time at 2.20 x PU	ms, 0-65535	RW	F1
R4X143E	Flex_A_230	FlexCurve A Trip Time at 2.30 x PU	ms, 0-65535	RW	F1
R4X143F	Flex_A_240	FlexCurve A Trip Time at 2.40 x PU	ms, 0-65535	RW	F1
R4X1440	Flex_A_250	FlexCurve A Trip Time at 2.50 x PU	ms, 0-65535	RW	F1
R4X1441	Flex_A_260	FlexCurve A Trip Time at 2.60 x PU	ms, 0-65535	RW	F1
R4X1442	Flex_A_270	FlexCurve A Trip Time at 2.70 x PU	ms, 0-65535	RW	F1
R4X1443	Flex_A_280	FlexCurve A Trip Time at 2.80 x PU	ms, 0-65535	RW	F1
R4X1444	Flex_A_290	FlexCurve A Trip Time at 2.90 x PU	ms, 0-65535	RW	F1
R4X1445	Flex_A_300	FlexCurve A Trip Time at 3.00 x PU	ms, 0-65535	RW	F1
R4X1446	Flex_A_310	FlexCurve A Trip Time at 3.10 x PU	ms, 0-65535	RW	F1
R4X1447	Flex_A_320	FlexCurve A Trip Time at 3.20 x PU	ms, 0-65535	RW	F1
R4X1448	Flex_A_330	FlexCurve A Trip Time at 3.30 x PU	ms, 0-65535	RW	F1
R4X1449	Flex_A_340	FlexCurve A Trip Time at 3.40 x PU	ms, 0-65535	RW	F1
R4X144A	Flex_A_350	FlexCurve A Trip Time at 3.50 x PU	ms, 0-65535	RW	F1
R4X144B	Flex_A_360	FlexCurve A Trip Time at 3.60 x PU	ms, 0-65535	RW	F1
R4X144C	Flex_A_370	FlexCurve A Trip Time at 3.70 x PU	ms, 0-65535	RW	F1
R4X144D	Flex_A_380	FlexCurve A Trip Time at 3.80 x PU	ms, 0-65535	RW	F1
R4X144E	Flex_A_390	FlexCurve A Trip Time at 3.90 x PU	ms, 0-65535	RW	F1
R4X144F	Flex_A_400	FlexCurve A Trip Time at 4.00 x PU	ms, 0-65535	RW	F1
R4X1450	Flex_A_410	FlexCurve A Trip Time at 4.10 x PU	ms, 0-65535	RW	F1
R4X1451	Flex_A_420	FlexCurve A Trip Time at 4.20 x PU	ms, 0-65535	RW	F1
R4X1452	Flex_A_430	FlexCurve A Trip Time at 4.30 x PU	ms, 0-65535	RW	F1
R4X1453	Flex_A_440	FlexCurve A Trip Time at 4.40 x PU	ms, 0-65535	RW	F1
R4X1454	Flex_A_450	FlexCurve A Trip Time at 4.50 x PU	ms, 0-65535	RW	F1
R4X1455	Flex_A_460	FlexCurve A Trip Time at 4.60 x PU	ms, 0-65535	RW	F1
R4X1456	Flex_A_470	FlexCurve A Trip Time at 4.70 x PU	ms, 0-65535	RW	F1
R4X1457	Flex_A_480	FlexCurve A Trip Time at 4.80 x PU	ms, 0-65535	RW	F1
R4X1458	Flex_A_490	FlexCurve A Trip Time at 4.90 x PU	ms, 0-65535	RW	F1
R4X1459	Flex_A_500	FlexCurve A Trip Time at 5.00 x PU	ms, 0-65535	RW	F1
R4X145A	Flex_A_510	FlexCurve A Trip Time at 5.10 x PU	ms, 0-65535	RW	F1
R4X145B	Flex_A_520	FlexCurve A Trip Time at 5.20 x PU	ms, 0-65535	RW	F1
R4X145C	Flex_A_530	FlexCurve A Trip Time at 5.30 x PU	ms, 0-65535	RW	F1
R4X145D	Flex_A_540	FlexCurve A Trip Time at 5.40 x PU	ms, 0-65535	RW	F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X145E	Flex_A_550	FlexCurve A Trip Time at 5.50 x PU	ms, 0-65535	RW	F1
R4X145F	Flex_A_560	FlexCurve A Trip Time at 5.60 x PU	ms, 0-65535	RW	F1
R4X1460	Flex_A_570	FlexCurve A Trip Time at 5.70 x PU	ms, 0-65535	RW	F1
R4X1461	Flex_A_580	FlexCurve A Trip Time at 5.80 x PU	ms, 0-65535	RW	F1
R4X1462	Flex_A_590	FlexCurve A Trip Time at 5.90 x PU	ms, 0-65535	RW	F1
R4X1463	Flex_A_600	FlexCurve A Trip Time at 6.00 x PU	ms, 0-65535	RW	F1
R4X1464	Flex_A_650	FlexCurve A Trip Time at 6.50 x PU	ms, 0-65535	RW	F1
R4X1465	Flex_A_700	FlexCurve A Trip Time at 7.00 x PU	ms, 0-65535	RW	F1
R4X1466	Flex_A_750	FlexCurve A Trip Time at 7.50 x PU	ms, 0-65535	RW	F1
R4X1467	Flex_A_800	FlexCurve A Trip Time at 8.00 x PU	ms, 0-65535	RW	F1
R4X1468	Flex_A_850	FlexCurve A Trip Time at 8.50 x PU	ms, 0-65535	RW	F1
R4X1469	Flex_A_900	FlexCurve A Trip Time at 9.00 x PU	ms, 0-65535	RW	F1
R4X146A	Flex_A_950	FlexCurve A Trip Time at 9.50 x PU	ms, 0-65535	RW	F1
R4X146B	Flex_A_1000	FlexCurve A Trip Time at 10.0 x PU	ms, 0-65535	RW	F1
R4X146C	Flex_A_1050	FlexCurve A Trip Time at 10.5 x PU	ms, 0-65535	RW	F1
R4X146D	Flex_A_1100	FlexCurve A Trip Time at 11.0 x PU	ms, 0-65535	RW	F1
R4X146E	Flex_A_1150	FlexCurve A Trip Time at 11.5 x PU	ms, 0-65535	RW	F1
R4X146F	Flex_A_1200	FlexCurve A Trip Time at 12.0 x PU	ms, 0-65535	RW	F1
R4X1470	Flex_A_1250	FlexCurve A Trip Time at 12.5 x PU	ms, 0-65535	RW	F1
R4X1471	Flex_A_1300	FlexCurve A Trip Time at 13.0 x PU	ms, 0-65535	RW	F1
R4X1472	Flex_A_1350	FlexCurve A Trip Time at 13.5 x PU	ms, 0-65535	RW	F1
R4X1473	Flex_A_1400	FlexCurve A Trip Time at 14.0 x PU	ms, 0-65535	RW	F1
R4X1474	Flex_A_1450	FlexCurve A Trip Time at 14.5 x PU	ms, 0-65535	RW	F1
R4X1475	Flex_A_1500	FlexCurve A Trip Time at 15.0 x PU	ms, 0-65535	RW	F1
R4X1476	Flex_A_1550	FlexCurve A Trip Time at 15.5 x PU	ms, 0-65535	RW	F1
R4X1477	Flex_A_1600	FlexCurve A Trip Time at 16.0 x PU	ms, 0-65535	RW	F1
R4X1478	Flex_A_1650	FlexCurve A Trip Time at 16.5 x PU	ms, 0-65535	RW	F1
R4X1479	Flex_A_1700	FlexCurve A Trip Time at 17.0 x PU	ms, 0-65535	RW	F1
R4X147A	Flex_A_1750	FlexCurve A Trip Time at 17.5 x PU	ms, 0-65535	RW	F1
R4X147B	Flex_A_1800	FlexCurve A Trip Time at 18.0 x PU	ms, 0-65535	RW	F1
R4X147C	Flex_A_1850	FlexCurve A Trip Time at 18.5 x PU	ms, 0-65535	RW	F1
R4X147D	Flex_A_1900	FlexCurve A Trip Time at 19.0 x PU	ms, 0-65535	RW	F1
R4X147E	Flex_A_1950	FlexCurve A Trip Time at 19.5 x PU	ms, 0-65535	RW	F1
R4X147F	Flex_A_2000	FlexCurve A Trip Time at 20.0 x PU	ms, 0-65535	RW	F1
R4X1480	Flex_B_103	FlexCurve B Trip Time at 1.03 x PU	ms, 0-65535	RW	F1
R4X1481	Flex_B_105	FlexCurve B Trip Time at 1.05 x PU	ms, 0-65535	RW	F1
R4X1482	Flex_B_110	FlexCurve B Trip Time at 1.10 x PU	ms, 0-65535	RW	F1
R4X1483	Flex_B_120	FlexCurve B Trip Time at 1.20 x PU	ms, 0-65535	RW	F1
R4X1484	Flex_B_130	FlexCurve B Trip Time at 1.30 x PU	ms, 0-65535	RW	F1
R4X1485	Flex_B_140	FlexCurve B Trip Time at 1.40 x PU	ms, 0-65535	RW	F1
R4X1486	Flex_B_150	FlexCurve B Trip Time at 1.50 x PU	ms, 0-65535	RW	F1
R4X1487	Flex_B_160	FlexCurve B Trip Time at 1.60 x PU	ms, 0-65535	RW	F1
R4X1488	Flex_B_170	FlexCurve B Trip Time at 1.70 x PU	ms, 0-65535	RW	F1
R4X1489	Flex_B_180	FlexCurve B Trip Time at 1.80 x PU	ms, 0-65535	RW	F1
R4X148A	Flex_B_190	FlexCurve B Trip Time at 1.90 x PU	ms, 0-65535	RW	F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X148B	Flex_B_200	FlexCurve B Trip Time at 2.00 x PU	ms, 0-65535	RW	F1
R4X148C	Flex_B_210	FlexCurve B Trip Time at 2.10 x PU	ms, 0-65535	RW	F1
R4X148D	Flex_B_220	FlexCurve B Trip Time at 2.20 x PU	ms, 0-65535	RW	F1
R4X148E	Flex_B_230	FlexCurve B Trip Time at 2.30 x PU	ms, 0-65535	RW	F1
R4X148F	Flex_B_240	FlexCurve B Trip Time at 2.40 x PU	ms, 0-65535	RW	F1
R4X1490	Flex_B_250	FlexCurve B Trip Time at 2.50 x PU	ms, 0-65535	RW	F1
R4X1491	Flex_B_260	FlexCurve B Trip Time at 2.60 x PU	ms, 0-65535	RW	F1
R4X1492	Flex_B_270	FlexCurve B Trip Time at 2.70 x PU	ms, 0-65535	RW	F1
R4X1493	Flex_B_280	FlexCurve B Trip Time at 2.80 x PU	ms, 0-65535	RW	F1
R4X1494	Flex_B_290	FlexCurve B Trip Time at 2.90 x PU	ms, 0-65535	RW	F1
R4X1495	Flex_B_300	FlexCurve B Trip Time at 3.00 x PU	ms, 0-65535	RW	F1
R4X1496	Flex_B_310	FlexCurve B Trip Time at 3.10 x PU	ms, 0-65535	RW	F1
R4X1497	Flex_B_320	FlexCurve B Trip Time at 3.20 x PU	ms, 0-65535	RW	F1
R4X1498	Flex_B_330	FlexCurve B Trip Time at 3.30 x PU	ms, 0-65535	RW	F1
R4X1499	Flex_B_340	FlexCurve B Trip Time at 3.40 x PU	ms, 0-65535	RW	F1
R4X149A	Flex_B_350	FlexCurve B Trip Time at 3.50 x PU	ms, 0-65535	RW	F1
R4X149B	Flex_B_360	FlexCurve B Trip Time at 3.60 x PU	ms, 0-65535	RW	F1
R4X149C	Flex_B_370	FlexCurve B Trip Time at 3.70 x PU	ms, 0-65535	RW	F1
R4X149D	Flex_B_380	FlexCurve B Trip Time at 3.80 x PU	ms, 0-65535	RW	F1
R4X149E	Flex_B_390	FlexCurve B Trip Time at 3.90 x PU	ms, 0-65535	RW	F1
R4X149F	Flex_B_400	FlexCurve B Trip Time at 4.00 x PU	ms, 0-65535	RW	F1
R4X14A0	Flex_B_410	FlexCurve B Trip Time at 4.10 x PU	ms, 0-65535	RW	F1
R4X14A1	Flex_B_420	FlexCurve B Trip Time at 4.20 x PU	ms, 0-65535	RW	F1
R4X14A2	Flex_B_430	FlexCurve B Trip Time at 4.30 x PU	ms, 0-65535	RW	F1
R4X14A3	Flex_B_440	FlexCurve B Trip Time at 4.40 x PU	ms, 0-65535	RW	F1
R4X14A4	Flex_B_450	FlexCurve B Trip Time at 4.50 x PU	ms, 0-65535	RW	F1
R4X14A5	Flex_B_460	FlexCurve B Trip Time at 4.60 x PU	ms, 0-65535	RW	F1
R4X14A6	Flex_B_470	FlexCurve B Trip Time at 4.70 x PU	ms, 0-65535	RW	F1
R4X14A7	Flex_B_480	FlexCurve B Trip Time at 4.80 x PU	ms, 0-65535	RW	F1
R4X14A8	Flex_B_490	FlexCurve B Trip Time at 4.90 x PU	ms, 0-65535	RW	F1
R4X14A9	Flex_B_500	FlexCurve B Trip Time at 5.00 x PU	ms, 0-65535	RW	F1
R4X14AA	Flex_B_510	FlexCurve B Trip Time at 5.10 x PU	ms, 0-65535	RW	F1
R4X14AB	Flex_B_520	FlexCurve B Trip Time at 5.20 x PU	ms, 0-65535	RW	F1
R4X14AC	Flex_B_530	FlexCurve B Trip Time at 5.30 x PU	ms, 0-65535	RW	F1
R4X14AD	Flex_B_540	FlexCurve B Trip Time at 5.40 x PU	ms, 0-65535	RW	F1
R4X14AE	Flex_B_550	FlexCurve B Trip Time at 5.50 x PU	ms, 0-65535	RW	F1
R4X14AF	Flex_B_560	FlexCurve B Trip Time at 5.60 x PU	ms, 0-65535	RW	F1
R4X14B0	Flex_B_570	FlexCurve B Trip Time at 5.70 x PU	ms, 0-65535	RW	F1
R4X14B1	Flex_B_580	FlexCurve B Trip Time at 5.80 x PU	ms, 0-65535	RW	F1
R4X14B2	Flex_B_590	FlexCurve B Trip Time at 5.90 x PU	ms, 0-65535	RW	F1
R4X14B3	Flex_B_600	FlexCurve B Trip Time at 6.00 x PU	ms, 0-65535	RW	F1
R4X14B4	Flex_B_650	FlexCurve B Trip Time at 6.50 x PU	ms, 0-65535	RW	F1
R4X14B5	Flex_B_700	FlexCurve B Trip Time at 7.00 x PU	ms, 0-65535	RW	F1
R4X14B6	Flex_B_750	FlexCurve B Trip Time at 7.50 x PU	ms, 0-65535	RW	F1
R4X14B7	Flex_B_800	FlexCurve B Trip Time at 8.00 x PU	ms, 0-65535	RW	F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X14B8	Flex_B_850	FlexCurve B Trip Time at 8.50 x PU	ms, 0–65535	RW	F1
R4X14B9	Flex_B_850	FlexCurve B Trip Time at 9.00 x PU	ms, 0–65535	RW	F1
R4X14BA	Flex_B_950	FlexCurve B Trip Time at 9.50 x PU	ms, 0–65535	RW	F1
R4X14BB	Flex_B_1000	FlexCurve B Trip Time at 10.0 x PU	ms, 0–65535	RW	F1
R4X14BC	Flex_B_1050	FlexCurve B Trip Time at 10.5 x PU	ms, 0–65535	RW	F1
R4X14BD	Flex_B_1100	FlexCurve B Trip Time at 11.0 x PU	ms, 0–65535	RW	F1
R4X14BE	Flex_B_1150	FlexCurve B Trip Time at 11.5 x PU	ms, 0–65535	RW	F1
R4X14BF	Flex_B_1200	FlexCurve B Trip Time at 12.0 x PU	ms, 0–65535	RW	F1
R4X14C0	Flex_B_1250	FlexCurve B Trip Time at 12.5 x PU	ms, 0–65535	RW	F1
R4X14C1	Flex_B_1300	FlexCurve B Trip Time at 13.0 x PU	ms, 0–65535	RW	F1
R4X14C2	Flex_B_1350	FlexCurve B Trip Time at 13.5 x PU	ms, 0–65535	RW	F1
R4X14C3	Flex_B_1400	FlexCurve B Trip Time at 14.0 x PU	ms, 0–65535	RW	F1
R4X14C4	Flex_B_1450	FlexCurve B Trip Time at 14.5 x PU	ms, 0–65535	RW	F1
R4X14C5	Flex_B_1500	FlexCurve B Trip Time at 15.0 x PU	ms, 0–65535	RW	F1
R4X14C6	Flex_B_1550	FlexCurve B Trip Time at 15.5 x PU	ms, 0–65535	RW	F1
R4X14C7	Flex_B_1600	FlexCurve B Trip Time at 16.0 x PU	ms, 0–65535	RW	F1
R4X14C8	Flex_B_1650	FlexCurve B Trip Time at 16.5 x PU	ms, 0–65535	RW	F1
R4X14C9	Flex_B_1700	FlexCurve B Trip Time at 17.0 x PU	ms, 0–65535	RW	F1
R4X14CA	Flex_B_1750	FlexCurve B Trip Time at 17.5 x PU	ms, 0–65535	RW	F1
R4X14CB	Flex_B_1800	FlexCurve B Trip Time at 18.0 x PU	ms, 0–65535	RW	F1
R4X14CC	Flex_B_1850	FlexCurve B Trip Time at 18.5 x PU	ms, 0–65535	RW	F1
R4X14CD	Flex_B_1900	FlexCurve B Trip Time at 19.0 x PU	ms, 0–65535	RW	F1
R4X14CE	Flex_B_1950	FlexCurve B Trip Time at 19.5 x PU	ms, 0–65535	RW	F1
R4X14CF	Flex_B_2000	FlexCurve B Trip Time at 20.0 x PU	ms, 0–65535	RW	F1
		PHASE TIME OVERCURRENT 1		RW	
R4X1500	PH_TIME_OC_FUNC	Phase Time Overcurrent 1 Function	–, –	RW	F37
R4X1501	PH_TIME_OC_RLYS	Phase Time Overcurrent 1 Relays	–, –	RW	F57
R4X1502	PH_TIME_OC_CRV	Phase Time Overcurrent 1 Curve	–, –	RW	F36
R4X1503	PH_TIME_OC_V_RESTR	Phase Time Overcurrent 1 Voltage Restraint	–, –	RW	F30
R4X1504	PH_TIME_OC1_PKUP	Phase Time Overcurrent 1 Pickup	x CT, 0.05–20.00	RW	F3
R4X1505	PH_TIME_OC1_MULT	Phase Time Overcurrent 1 Multiplier	–, 0.00–100.00	RW	F3
R4X1506	PH_TIME_OC1_RESET	Phase Time Overcurrent 1 Reset Time	–, –	RW	F68
R4X1507	PH_TIME_OC1_DIR	Phase Time Overcurrent 1 Direction	–, –	RW	F84
		PHASE INSTANTANEOUS OVERCURRENT 1		RW	
R4X1508	PH_LO_OC_FUNC	Phase Inst Overcurrent 1 Function	–, –	RW	F37
R4X1509	PH_LO_OC_RLYS	Phase Inst Overcurrent 1 Relays	–, –	RW	F57
R4X150A	PH_LO_OC_PKUP	Phase Inst Overcurrent 1 Pickup	x CT, 0.05–20.00	RW	F3
R4X150B	PH_LO_OC_DLY	Phase Inst Overcurrent 1 Delay	s, 0.00–600.00	RW	F3
R4X150C	PH_LO_REQ_FOR_OP	Phases Required for Operation	–, –	RW	F41
R4X150D	PH_LO_OC_DIR	Phase Inst Overcurrent 1 Direction	–, –	RW	F84
		PHASE INSTANTANEOUS OVERCURRENT 2		RW	
R4X1510	PH_HI_OC_FUNC	Phase Inst Overcurrent 2 Function	–, –	RW	F37
R4X1511	PH_HI_OC_RLYS	Phase Inst Overcurrent 2 Relays	–, –	RW	F57
R4X1512	PH_HI_OC_PKUP	Phase Inst Overcurrent 2 Pickup	x CT, 0.05–20.00	RW	F3

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1513	PH_HI_OC_DLY	Phase Inst Overcurrent 2 Delay	s, 0.00–600.00	RW	F3
R4X1514	PH_HI_REQ_FOR_OP	Phases Required for Operation	–, –	RW	F41
R4X1515	PH_HI_OC_DIR	Phase Inst Overcurrent 2 Direction	–, –	RW	F84
		PHASE DIRECTIONAL		RW	
R4X1520	PH_DIR_FUNC	Phase Directional Function	–, –	RW	F38
R4X1521	PH_DIR_MAX_TORQ_ANGL	Phase Directional Maximum Torque Angle	° Lead, 0–359	RW	F1
R4X1522	PH_MIN_POLAR_VOLTS	Minimum Polarizing Voltage	xVT, 0.00–1.25	RW	F3
R4X1523	PH_DIR_RLYS	Phase Directional Relays	–, –	RW	F57
R4X1524	BLK_OC_NO_VOLT_MEM	Block OC When Voltage Memory Expires	–, –	RW	F30
		PHASE TIME OVERCURRENT 2		RW	
R4X1530	PH_TIME_OC2_FUNC	Phase Time Overcurrent 2 Function	–, –	RW	F37
R4X1531	PH_TIME_OC2_RLYS	Phase Time Overcurrent 2 Relays	–, –	RW	F57
R4X1532	PH_TIME_OC2_CRV	Phase Time Overcurrent 2 Curve	–, –	RW	F36
R4X1533	PH_TIME_OC2_V_RESTR	Phase Time Overcurrent 2 Voltage Restraint	–, –	RW	F30
R4X1534	PH_TIME_OC2_PKUP	Phase Time Overcurrent 2 Pickup	x CT, 0.05–20.00	RW	F3
R4X1535	PH_TIME_OC2_MULT	Phase Time Overcurrent 2 Multiplier	–, 0.00–100.00	RW	F3
R4X1536	PH_TIME_OC2_RESET	Phase Time Overcurrent 2 Reset Time	–, –	RW	F68
R4X1537	PH_TIME_OC2_DIR	Phase Time Overcurrent 2 Direction	–, –	RW	F84
		GROUND TIME OVERCURRENT		RW	
R4X1600	GND_TIME_OC_FUNC	Ground Time Overcurrent Function	–, –	RW	F37
R4X1601	GND_TIME_OC_RLYS	Ground Time Overcurrent Relays	–, –	RW	F57
R4X1602	GND_TIME_OC_CRV	Ground Time Overcurrent Curve	–, –	RW	F36
R4X1603	GND_TIME_OC_PKUP	Ground Time Overcurrent Pickup	x CT, 0.05–20.00	RW	F3
R4X1604	GND_TIME_OC_MULT	Ground Time Overcurrent Multiplier	–, 0.00–100.00	RW	F3
R4X1605	GND_TIME_OC_RESET	Ground Time Overcurrent Reset Time	–, –	RW	F68
R4X1606	GND_TIME_OC_DIR	Ground Time Overcurrent Direction	--- Disabled ---		F84
		GROUND INSTANTANEOUS OVERCURRENT		RW	
R4X1608	GND_LO_OC_FUNC	Ground Inst Overcurrent Function	–, –	RW	F37
R4X1609	GND_LO_OC_RLYS	Ground Inst Overcurrent Relays	–, –	RW	F57
R4X160A	GND_LO_OC_PKUP	Ground Inst Overcurrent Pickup	x CT, 0.05–20.00	RW	F3
R4X160B	GND_LO_OC_DLY	Ground Inst Overcurrent Delay	s, 0.00–600.00	RW	F3
R4X160C	GND_LO_OC_DIR	Ground Inst Overcurrent Direction	Disabled		F84
R4X160E	GND_DIR_FUNC	Ground Directional Function			F38
R4X160F	GND_DIR_MAX_TORQ_ANG	Ground Directional Maximum Torque Angle	° Lead 0 to 359		F1
R4X1610	GND_DIR_MIN_POL_VOLT	Ground Directional Minimum Polarizing Voltage	0.00 to 1.25		F3
R4X1611	GND_DIR_POL	Ground Directional Polarizing			F50

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1612	GND_DIR_RLYS	Ground Directional Relays			F57
		NEUTRAL TIME OVERCURRENT 1		RW	
R4X1630	N_TIME_OC1_FUNC	Neutral Time Overcurrent 1 Function	-, -	RW	F37
R4X1631	N_TIME_OC1_RLYS	Neutral Time Overcurrent 1 Relays	-, -	RW	F57
R4X1632	N_TIME_OC1_CRV	Neutral Time Overcurrent 1 Curve	-, -	RW	F36
R4X1633	N_TIME_OC1_PKUP	Neutral Time Overcurrent 1 Pickup	x CT, 0.05–20.00	RW	F3
R4X1634	N_TIME_OC1_MULT	Neutral Time Overcurrent 1 Multiplier	-, 0.00–100.00	RW	F3
R4X1635	N_TIME_OC1_RESET	Neutral Time Overcurrent 1 Reset Time	-, -	RW	F68
R4X1636	N_TIME_OC1_DIR	Neutral Time Overcurrent 1 Direction	-, -	RW	F84
		NEUTRAL INSTANANEOUS OVERCURRENT 1		RW	
R4X1640	N_LO_OC1_FUNC	Neutral Inst Overcurrent 1 Function	-, -	RW	F37
R4X1641	N_LO_OC1_RLYS	Neutral Inst Overcurrent 1 Relays	-, -	RW	F57
R4X1642	N_LO_OC1_PKUP	Neutral Inst Overcurrent 1 Pickup	x CT, 0.05–20.00	RW	F3
R4X1643	N_LO_OC1_DLY	Neutral Inst Overcurrent 1 Delay	s, 0.00–600.00	RW	F3
R4X1644	N_LO_OC1_DIR	Neutral Inst Overcurrent 1 Direction	-, -	RW	F84
		NEUTRAL INSTANTANEOUS OVERCURRENT 2		RW	
R4X1650	N_HI_OC2_FUNC	Neutral Inst Overcurrent 2 Function	-, -	RW	F37
R4X1651	N_HI_OC2_RLYS	Neutral Inst Overcurrent 2 Relays	-, -	RW	F57
R4X1652	N_HI_OC2_PKUP	Neutral Inst Overcurrent 2 Pickup	x CT, 0.05–20.00	RW	F3
R4X1653	N_HI_OC2_DLY	Neutral Inst Overcurrent 2 Delay	s, 0.00–600.00	RW	F3
R4X1654	N_HI_OC2_DIR	Neutral Inst Overcurrent 2 Direction	-, -	RW	F84
		NEUTRAL TIME OVERCURRENT 2		RW	
R4X1660	N_TIME_OC2_FUNC	Neutral Time Overcurrent 2 Function	-, -	RW	F37
R4X1661	N_TIME_OC2_RLYS	Neutral Time Overcurrent 2 Relays	-, -	RW	F57
R4X1662	N_TIME_OC2_CRV	Neutral Time Overcurrent 2 Curve	-, -	RW	F36
R4X1663	N_TIME_OC2_PKUP	Neutral Time Overcurrent 2 Pickup	x CT, 0.05–20.00	RW	F3
R4X1664	N_TIME_OC2_MULT	Neutral Time Overcurrent 2 Multiplier	-, 0.00–100.00	RW	F3
R4X1665	N_TIME_OC2_RESET	Neutral Time Overcurrent 2 Reset Time	-, -	RW	F68
R4X1666	N_TIME_OC2_DIR	Neutral Time Overcurrent 2 Direction	-, -	RW	F84
		NEUTRAL DIRECTIONAL		RW	
R4X1670	N_DIR_FUNC	Neutral Directional Function	-, -	RW	F38
R4X1671	N_DIR_MAX_TORQ	Neutral Directional Maximum Torque Angle	°, 0–359	RW	F1
R4X1672	MIN_POLAR_V	Minimum Polarizing Voltage	x VT, 0.00–1.25	RW	F3
R4X1674	N_DIR_POLAR	Neutral Directional Polarizing	-, -	RW	F50
R4X1675	N_DIR_RLYS	Neutral Directional Relays	-, -	RW	F57
		NEGATIVE SEQUENCE TIME OVERCURRENT		RW	
R4X1700	NEG_SEQ_TIME_OC_FUNC	Negative Sequence Time Overcurrent Function	-, -	RW	F37
R4X1701	NEG_SEQ_TIME_OC_RLYS	Negative Sequence Time Overcurrent Relays	-, -	RW	F57
R4X1702	NEG_SEQ_TIME_OC_CRV	Negative Sequence Time Overcurrent Curve	-, -	RW	F36

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1703	NEG_SEQ_TIME_OC_PKUP	Negative Sequence Time Overcurrent Pickup	x CT, 0.05–20.00	RW	F3
R4X1704	NEG_SEQ_TIME_OC_MULT	Negative Sequence Time Overcurrent Multiplier	–, 0.00–100.00	RW	F3
R4X1705	NEG_SEQ_TIME_OC_RSET	Negative Sequence Time Overcurrent Reset Time	–, –	RW	F68
R4X1706	NEG_SEQ_TIME_OC_DIR	Negative Sequence Time Overcurrent Direction	–, –	RW	F84
		NEGATIVE SEQUENCE INST OVERCURRENT		RW	
R4X1710	NEG_SEQ_INST_OC_FUNC	Negative Sequence Inst Overcurrent Function	–, –	RW	F37
R4X1711	NEG_SEQ_INST_OC_RLYS	Negative Sequence Inst Overcurrent Relays	–, –	RW	F57
R4X1712	NEG_SEQ_INST_OC_PKUP	Negative Sequence Inst Overcurrent Pickup	x CT, 0.05–20.00	RW	F3
R4X1713	NEG_SEQ_INST_OC_DLY	Negative Sequence Inst Overcurrent Delay	s, 0.00–600.00	RW	F3
R4X1714	NEG_SEQ_INST_OC_DIR	Negative Sequence Inst Overcurrent Direction	–, –	RW	F84
		NEGATIVE SEQUENCE VOLTAGE		RW	
R4X1720	NEG_SEQ_V_FUNC	Negative Sequence Voltage Function	–, –	RW	F37
R4X1721	NEG_SEQ_V_RLYS	Negative Sequence Voltage Relays	–, –	RW	F57
R4X1722	NEG_SEQ_V_PKUP	Negative Sequence Voltage Pickup	x VT, 0.00–1.25	RW	F3
R4X1723	NEG_SEQ_V_DLY	Negative Sequence Voltage Delay	s, 0.0–6000.0	RW	F2
		NEGATIVE SEQUENCE DIRECTIONAL			
R4X1730	NEG_SEQ_DIR_FUNC	Negative Sequence Directional Function	--- Disabled ---		F38
R4X1731	NEG_SEQ_DIR_MAX_T_ANGLE	Neg Seq Directional Maximum Torque Angle (MTA)	° 315° 0 to 359		F1
R4X1732	MIN_POL_VOLTS	Neg Seq Minimum Polarizing Voltage	x VT 0.05 x VT 0.00 to 1.25		F3
R4X1733	NEG_SEQ_DIR_RLYS	Negative Sequence Directional Relays	--- None ---		F57
		SENSITIVE GROUND INSTANTANEOUS OC	R/W	R/W	
R4X1740	SENS_GND_INST_OC_FUNC	Sensitive Ground Instantaneous Overcurrent Function	--- Disabled ---		F37
R4X1741	SENS_GND_INST_OC_RLYS	Sensitive Ground Instantaneous Overcurrent Relays	--- None ---		F57
R4X1742	SENS_GND_INST_OC_PKUP	Sensitive Ground Instantaneous Overcurrent Pickup	x CT 0.100 x CT 0.005 to 1.000		F70
R4X1743	SENS_GND_INST_OC_DLYS	Sensitive Ground Instantaneous Overcurrent Delay	s 0.00 s 0.00 to 600.00		F3
R4X1744	SENS_GND_INST_OC_DIR	Sensitive Ground Instantaneous	---		F84

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
		Overcurrent Direction	Disabled ---		
		SENSITIVE GROUND TIME OC		R/W	
R4X1750	SENS_GND_TIME_OC_FUNC	Sensitive Ground Time Overcurrent Function	-----		F37
R4X1751	SENS_GND_TIME_OC_RLYS	Sensitive Ground Time Overcurrent Relays	--- None ---		F57
R4X1752	SENS_GND_TIME_OC_CURV	Sensitive Ground Time Overcurrent Curve	--- Ext. Inverse ---		F36
R4X1753	SENS_GND_TIME_OC_PKUP	Sensitive Ground Time Overcurrent Pickup	x CT 0.100 x CT 0.005 to 1.000		F70
R4X1754	SENS_GND_TIME_OC_MULT	Sensitive Ground Time Overcurrent Multiplier	--- 1 0.00 to 100.00		F3
R4X1755	SENS_GND_TIME_OC_RESET	Sensitive Ground Time Overcurrent Reset Time	--- Instantaneous ---		F68
R4X1756	SENS_GND_TIME_OC_DIR	Sensitive Ground Time Overcurrent Direction	--- Disabled ---		F84
		SENSITIVE GROUND DIRECTIONAL		R/W	
R4X1760	SENS_GND_DIR_FUNC	Sensitive Ground Directional Function	--- Disabled ---		F38
R4X1761	SENS_GND_DIR_MAX_TANG	Sensitive Ground Directional Maximum Torque Angle	° 315° 0 to 359		F1
R4X1762	MIN_POL_VOLTS_2	Sensitive Ground Minimum Polarizing Voltage	x VT 0.05 x VT 0.00 to 1.25		F3
R4X1763	SENS_GND_DIR_POL	Sensitive Ground Directional Polarizing	--- Voltage ---		F50
R4X1764	SENS_GND_DIR_RLYS	Sensitive Ground Directional Relays	--- None ---		F57
R4X1770	RESTR_GND_FLT_FUNC	Restricted Earth Fault Function			F39
R4X1771	RESTR_GND_FLT_RLYS	Restricted Earth Fault Relays			F57
R4X1772	RESTR_GND_FLT_PKUP	Restricted Earth Fault Pickup	x CT 0.005 x 1.000		F70
R4X1773	RESTR_GND_FLT_DLY	Restricted Earth Fault Delay	s 0.00 - 600.00w		F3
		BUS UNDERVOLTAGE 1		RW	
R4X1780	BUS_UV1_FUNC	Bus Undervoltage 1 Function	-, -	RW	F39
R4X1781	BUS_UV1_RLYS	Bus Undervoltage 1 Relays	-, -	RW	F57
R4X1782	BUS_UV1_PKUP	Bus Undervoltage 1 Pickup	x VT, 0.00-1.25	RW	F3
R4X1783	BUS_UV1_DLY	Bus Undervoltage 1 Delay	s, 0.0-6000.0	RW	F2
R4X1784	BUS_UV1_PH_REQ_OP	Bus Undervoltage 1 Phases Required for	-, -	RW	F41

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
		Operation			
R4X1785	BUS_UV1_MIN_OP_V	Bus Undervoltage 1 Minimum Operating Voltage	x VT, 0.00–1.25	RW	F3
R4X1786	BUS_UV1_CRV	Bus Undervoltage 1 Curve	–, –	RW	F45
		BUS UNDERVOLTAGE 2		RW	
R4X1788	BUS_UV2_FUNC	Bus Undervoltage 2 Function	–, –	RW	F39
R4X1789	BUS_UV2_RLYS	Bus Undervoltage 2 Relays	–, –	RW	F57
R4X178A	BUS_UV2_PKUP	Bus Undervoltage 2 Pickup	x VT, 0.00–1.25	RW	F3
R4X178B	BUS_UV2_DLY	Bus Undervoltage 2 Delay	s, 0.0–6000.0	RW	F2
R4X178C	BUS_UV2_PH_REQ_OP	Bus Undervoltage 2 Phases Required for Operation	–, –	RW	F41
R4X178D	BUS_UV2_MIN_OP_V	Bus Undervoltage 2 Minimum Operating Voltage	x VT, 0.00–1.25	RW	F3
R4X178E	BUS_UV2_CRV	Bus Undervoltage 2 Curve	–, –	RW	F45
		OVERVOLTAGE 1		RW	
R4X1790	OV1_FUNC	Overvoltage 1 Function	–, –	RW	F39
R4X1791	OV1_RLYS	Overvoltage 1 Relays	–, –	RW	F57
R4X1792	OV1_PKUP	Overvoltage 1 Pickup	x VT, 0.00–1.25	RW	F3
R4X1793	OV1_DLY	Overvoltage 1 Delay	s, 0.0–6000.0	RW	F2
R4X1794	OV1_PH_REQ_OP	Overvoltage 1 Phases Required for Operation	–, –	RW	F41
		OVERVOLTAGE 2		RW	
R4X1798	OV2_FUNC	Overvoltage 2 Function	–, –	RW	F39
R4X1799	OV2_RLYS	Overvoltage 2 Relays	–, –	RW	F57
R4X179A	OV2_PKUP	Overvoltage 2 Pickup	x VT, 0.00–1.25	RW	F3
R4X179B	OV2_DLY	Overvoltage 2 Delay	s, 0.0–6000.0	RW	F2
R4X179C	OV2_PH_REQ_OP	Overvoltage 2 Phases Required for Operation	–, –	RW	F41
		UNDERFREQUENCY 1		RW	
R4X17A0	UF1_FUNC	Underfrequency 1 Function	–, –	RW	F39
R4X17A1	UF1_RLYS	Underfrequency 1 Relays	–, –	RW	F57
R4X17A2	UF1_PKUP	Underfrequency 1 Pickup	Hz, 20.00–65.00	RW	F3
R4X17A3	UF1_DLY	Underfrequency 1 Delay	s, 0.00–600.00	RW	F3
R4X17A4	UF1_MIN_OP_V	Underfrequency 1 Minimum Operating Voltage	x VT, 0.00–1.25	RW	F3
R4X17A5	UF1_MIN_OP_A	Underfrequency 1 Minimum Operating Current	x CT, 0.00–20.00	RW	F3
		UNDERFREQUENCY 2		RW	
R4X17A8	UF2_FUNC	Underfrequency 2 Function	–, –	RW	F39
R4X17A9	UF2_RLYS	Underfrequency 2 Relays	–, –	RW	F57
R4X17AA	UF2_PKUP	Underfrequency 2 Pickup	Hz, 20.00–65.00	RW	F3
R4X17AB	UF2_DLY	Underfrequency 2 Delay	s, 0.00–600.00	RW	F3
R4X17AC	UF2_MIN_OP_V	Underfrequency 2 Minimum Operating Voltage	x VT, 0.00–1.25	RW	F3
R4X17AD	UF2_MIN_OP_CURR	Underfrequency 2 Minimum Operating Current	x CT, 0.00–20.00	RW	F3
		LINE UNDERVOLTAGE 3		RW	
R4X17B0	LN_UV3_FUNC	Line Undervoltage 3 Function	–, –	RW	F39

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X17B1	LN_UV3_RLYS	Line Undervoltage 3 Relays	-, -	RW	F57
R4X17B2	LN_UV3_PKUP	Line Undervoltage 3 Pickup	x VT, 0.00–1.25	RW	F3
R4X17B3	LN_UV3_DLY	Line Undervoltage 3 Delay	s, 0.0–6000.0	RW	F2
R4X17B4	LN_UV3_MIN_OP_V	Line Undervoltage 3 Minimum Operating Voltage	x VT, 0.00–1.25	RW	F3
R4X17B5	LN_UV3_CRV	Line Undervoltage 3 Curve	-, -	RW	F45
		LINE UNDERVOLTAGE 4		RW	
R4X17B8	LN_UV4_FUNC	Line Undervoltage 4 Function	-, -	RW	F39
R4X17B9	LN_UV4_RLYS	Line Undervoltage 4 Relays	-, -	RW	F57
R4X17BA	LN_UV4_PKUP	Line Undervoltage 4 Pickup	x VT, 0.00–1.25	RW	F3
R4X17BB	LN_UV4_DLY	Line Undervoltage 4 Delay	s, 0.0–6000.0	RW	F2
R4X17BC	LN_UV4_MIN_OP_V	Line Undervoltage 4 Minimum Operating Voltage	x VT, 0.00–1.25	RW	F3
R4X17BD	LN_UV4_CRV	Line Undervoltage 4 Curve	-, -	RW	F45
		FREQUENCY DECAY		RW	
R4X17C0	FREQ_DEC_FUNC	Frequency Decay Function	-, -	RW	F39
R4X17C1	FREQ_DEC_RLYS	Frequency Decay Relays	-, -	RW	F57
R4X17C2	FREQ_DEC_RATE	Frequency Decay Rate	Hz/s, 0.01–5.00	RW	F3
R4X17C3	FREQ_DEC_PKUP	Frequency Decay Pickup	Hz, 20.00–65.00	RW	F3
R4X17C4	FREQ_DEC_DLY	Frequency Decay Delay	s, 0.00–600.00	RW	F3
R4X17C5	FREQ_DEC_MIN_OP_V	Frequency Decay Minimum Operating Voltage	x VT, 0.00–1.25	RW	F3
R4X17C6	FREQ_DEC_MIN_OP_CURR	Frequency Decay Minimum Operating Current	x CT, 0.00–20.00	RW	F3
		RESERVED FOR MOD 008			
R4X17C8		Reserved for MOD 008	---, ---, Disabled		F39
R4X17C9		Reserved for MOD 008	---, ---, None		F57
R4X17CA		Reserved for MOD 008	0.015 to 0.600, x RATED, 0.050 x RATED		F70
R4X17CB		Reserved for MOD 008	0.0 to 6000.0, s, 10.0 s		F2
		NEUTRAL DISPLACEMENT			
R4X17CE		Neutral Displacement Function	---, ---, Disabled		F39
R4X17CF		Neutral Displacement Relays	---, ---, None		F57
R4X17D0		Neutral Displacement Pickup	0.00 to 1.25, x VT, 1.00 x VT		F3
R4X17D1		Neutral Displacement Multiplier	0.00 to 100.00, ---, 1		F3
R4X17D2		Neutral Displacement Curve	---, ---, Ext. Inverse		F36
R4X17D3		Neutral Displacement Reset Time	---, ---, Instantaneous		F68
R4X1800	PH_CURR_LVL_FUNC	Phase Current Level Function	-, -	RW	F38
R4X1801	PH_CURR_LVL_RLYS	Phase Current Level Relays	-, -	RW	F57
R4X1802	PH_CURR_LVL_PKUP	Phase Current Level Pickup	x CT, 0.05–20.00	RW	F3
R4X1803	PH_CURR_LVL_DLY	Phase Current Level Delay	s, 0–60,000	RW	F1
		NEUTRAL CURRENT LEVEL		RW	
R4X1808	N_CURR_LVL_FUNC	Neutral Current Level Function	-, -	RW	F38
R4X1809	N_CURR_LVL_RLYS	Neutral Current Level Relays	-, -	RW	F57

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X180A	N_CURR_LVL_PKUP	Neutral Current Level Pickup	x CT, 0.05–20.00	RW	F3
R4X180B	N_CURR_LVL_DLY	Neutral Current Level Delay	s, 0–60,000	RW	F1
		POWER FACTOR 1		RW	
R4X1810	PF1_FUNC	Power Factor 1 Function	-, -	RW	F38
R4X1811	PF1_RLYS	Power Factor 1 Relays	-, -	RW	F57
R4X1812I	PF1_PKUP	Power Factor 1 Pickup (+ Lag, - Lead)	-, -0.50–+0.50	RW	F6
R4X1813I	PF1_DROPOUT	Power Factor 1 Dropout (+ Lag, - Lead)	-, -0.50–+0.50	RW	F6
R4X1814	PF1_DLY	Power Factor 1 Delay	s, 0–60,000	RW	F1
		POWER FACTOR 2		RW	
R4X1818	PF2_FUNC	Power Factor 2 Function	-, -	RW	F38
R4X1819	PF2_RLYS	Power Factor 2 Relays	-, -	RW	F57
R4X181AI	PF2_PKUP	Power Factor 2 Pickup (+ Lag, - Lead)	-, -0.50–+0.50	RW	F6
R4X181BI	PF2_DROPOUT	Power Factor 2 Dropout (+ Lag, - Lead)	-, -0.50–+0.50	RW	F6
R4X181C	PF2_DLY	Power Factor 2 Delay	s, 0–60,000	RW	F1
		FAULT LOCATOR		RW	
R4X1830	FEEDER_LENGTH	Length of Feeder	km, mi, 0.1–99.9	RW	F2
R4X1831	UNITS_LENGTH	Units of Length	-, -	RW	F75
R4X1832	ZPOS_RES	Zpos (Resistive) of Feeder	W, 0.01–99.99	RW	F3
R4X1833	ZPOS_INDUCT	Zpos (Inductive) of Feeder	W, 0.01–99.99	RW	F3
R4X1834	ZZERO_RES	Zzero (Resistive) of Feeder	W, 0.01–99.99	RW	F3
R4X1835	ZZERO_INDUCT	Zzero (Inductive) of Feeder	W, 0.01–99.99	RW	F3
R4X1836	FLT_TYPE_OUT_RLYS	Fault Type Output to Relays 4 to 7	-, -	RW	F38
		CURRENT DEMAND		RW	
R4X1840	CURR_DMND_FUNC	Current Demand Function	-, -	RW	F38
R4X1841	CURR_DMND_MEAS	Current Demand Measurement Type	-, -	RW	F58
R4X1842	CURR_DMND_THM_90	Current Demand Thermal 90% Response	-, -	RW	F16
R4X1843	CURR_DMND_INTV	Current Demand Time Interval	-, -	RW	F16
R4X1844	CURR_DMND_RLYS	Current Demand Relays	-, -	RW	F57
R4X1845	CURR_DMND_PKUP	Current Demand Pickup	A, 10–10000	RW	F1
		REAL POWER DEMAND		RW	
R4X1848	MW_DMND_FUNC	Real Power Demand Function	-, -	RW	F38
R4X1849	MW_DMND_MEAS	Real Power Demand Measurement Type	-, -	RW	F58
R4X184A	MW_DMND_THM_90	Real Power Demand Thermal 90% Response	-, -	RW	F16
R4X184B	MW_DMND_INTV	Real Power Demand Time Interval	-, -	RW	F16
R4X184C	MW_DMND_RLYS	Real Power Demand Relays	-, -	RW	F57
R4X184D	MW_DMND_PKUP	Real Power Demand Pickup	MW, 0.1–3000.0	RW	F86
		REACTIVE POWER DEMAND		RW	
R4X1850	MVAR_DMND_FUNC	Reactive Power Demand Function	-, -	RW	F38
R4X1851	MVAR_DMND_MEAS	Reactive Power Demand Measurement Type	-, -	RW	F58
R4X1852	MVAR_DMND_THM_90	Reactive Power Demand Thermal 90% Response	-, -	RW	F16
R4X1853	MVAR_DMND_INTV	Reactive Power Demand Time Interval	-, -	RW	F16
R4X1854	MVAR_DMND_RLYS	Reactive Power Demand Relays	-, -	RW	F57
R4X1855	MVAR_DMND_PKUP	Reactive Power Demand Pickup	Mvar, 0.1–3000.0	RW	F86

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
		APPARENT POWER DEMAND		RW	
R4X1858	MVA_DMND_FUNC	Apparent Power Demand Function	-, -	RW	F38
R4X1859	MVA_DMND_MEAS	Apparent Power Demand Measurement Type	-, -	RW	F58
R4X185A	MVA_DMND_THM_90	App. Power Demand Thermal 90% Response	-, -	RW	F16
R4X185B	MVA_DMND_INTV	Apparent Power Demand Time Interval	-, -	RW	F16
R4X185C	MVA_DMND_RLYS	Apparent Power Demand Relays	-, -	RW	F57
R4X185D	MVA_DMND_PKUP	Apparent Power Demand Pickup	MVA, 0.1–3000.0	RW	F86
R4X1860		Pulse Output Function	--- Disabled ---		F38
R4X1861		Positive Watthours Pulse Output Relays	--- None ---		F57
R4X1862		Positive Watthours Pulse Interval	kWh 100 kWh 0 to 65535		F86
R4X1863		Negative Wathours Pulse Output Relays	--- None ---		F57
R4X1864		Negative Watthours Pulse Interval	kWh 100 kWh 0 to 65535		F86
R4X1865		Positive Varhours Pulse Output Relays	--- None ---		F57
R4X1866		Positive Varhours Pulse Interval	kvarh 100 kvarh 0 to 65535		F86
R4X1867		Negative Varhours Pulse Ouput Relays	--- None ---		F57
R4X1868		Negative Varhours Pulse Interval	kvarh 100 kvarh 0 to 65535		F86
		ANALOG INPUT SETUP		RW	
R4X1880S20	ANAL_IN_NAME	Analog Input Name (10 words)	-, -	RW	F33
R4X188A	ANAL_IN_UNITS	Analog Input Units (3 words)	-, -	RW	F33
R4X188D	ANAL_IN_RANGE	Analog Input Range	-, -	RW	F42
R4X188E	ANAL_IN_MIN	Analog Input Minimum Value	Units, 0–65535	RW	F1
R4X188F	ANAL_IN_MAX	Analog Input Maximum Value	Units, 0–65535	RW	F1
		ANALOG INPUT THRESHOLD 1		RW	
R4X18A0	ANAL_IN_THR1_FUNC	Analog Threshold 1 Function	-, -	RW	F38
R4X18A1	ANAL_IN_THR1_RLYS	Analog Threshold 1 Relays	-, -	RW	F57
R4X18A2	ANAL_IN_THR1_PKUP	Analog Threshold 1 Pickup	Units, 0–65535	RW	F1
R4X18A3	ANAL_IN_THR1_DLY	Analog Threshold 1 Delay	s, 0–60,000	RW	F1
R4X18A4	ANAL_IN_THR1_PU_TYPE	Analog Threshold 1 Pickup Type	-, -	RW	F85
		ANALOG INPUT THRESHOLD 2		RW	

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X18A8	ANAL_IN_THR2_FUNC	Analog Threshold 2 Function	-, -	RW	F38
R4X18A9	ANAL_IN_THR2_RLYS	Analog Threshold 2 Relays	-, -	RW	F57
R4X18AA	ANAL_IN_THR2_PKUP	Analog Threshold 2 Pickup	Units, 0-65535	RW	F1
R4X18AB	ANAL_IN_THR2_DLY	Analog Threshold 2 Delay	s, 0-60,000	RW	F1
R4X18AC	ANAL_IN_THR2_PU_TYPE	Analog Threshold 2 Pickup Type	-, -	RW	F85
		ANALOG INPUT RATE 1		RW	
R4X18B0	ANAL_IN_RATE1_FUNC	Analog In Rate 1 Function	-, -	RW	F38
R4X18B1	ANAL_IN_RATE1_RLYS	Analog In Rate 1 Relays	-, -	RW	F57
R4X18B2I	ANAL_IN_RATE1_PKUP	Analog In Rate 1 Pickup	Units/hr, -1000.0-1000.0	RW	F5
R4X18B3	ANAL_IN_RATE1_DLY	Analog In Rate 1 Delay	s, 0-60,000	RW	F1
		ANALOG INPUT RATE 2		RW	
R4X18B8	ANAL_IN_RATE2_FUNC	Analog In Rate 2 Function	-, -	RW	F38
R4X18B9	ANAL_IN_RATE2_RLYS	Analog In Rate 2 Relays	-, -	RW	F57
R4X18BAI	ANAL_IN_RATE2_PKUP	Analog In Rate 2 Pickup	Units / hr, -1000.0-1000.0	RW	F5
R4X18BB	ANAL_IN_RATE2_DLY	Analog In Rate 2 Delay	s, 0-60,000	RW	F1
		ANALOG OUTPUT 1		RW	
R4X18C0	ANAL_OUT1_PARAM	Analog Output 1 Parameter	-, -	RW	F77
R4X18C1	ANAL_OUT1_MIN	Analog Output 1 Minimum	-, -	RW	F78
R4X18C2	ANAL_OUT1_MAX	Analog Output 1 Maximum	-, -	RW	F78
		ANALOG OUTPUT 2		RW	
R4X18C4	ANAL_OUT2_PARAM	Analog Output 2 Parameter	-, -	RW	F77
R4X18C5	ANAL_OUT2_MIN	Analog Output 2 Minimum	-, -	RW	F78
R4X18C6	ANAL_OUT2_MAX	Analog Output 2 Maximum	-, -	RW	F78
		ANALOG OUTPUT 3		RW	
R4X18C8	ANAL_OUT3_PARAM	Analog Output 3 Parameter	-, -	RW	F77
R4X18C9	ANAL_OUT3_MIN	Analog Output 3 Minimum	-, -	RW	F78
R4X18CA	ANAL_OUT3_MAX	Analog Output 3 Maximum	-, -	RW	F78
		ANALOG OUTPUT 4		RW	
R4X18CC	ANAL_OUT4_PARAM	Analog Output 4 Parameter	-, -	RW	F77
R4X18CD	ANAL_OUT4_MIN	Analog Output 4 Minimum	-, -	RW	F78
R4X18CE	ANAL_OUT4_MAX	Analog Output 4 Maximum	-, -	RW	F78
		ANALOG OUTPUT 5		RW	
R4X18D0	ANAL_OUT5_PARAM	Analog Output 5 Parameter	-, -	RW	F77
R4X18D1	ANAL_OUT5_MIN	Analog Output 5 Minimum	-, -	RW	F78
R4X18D2	ANAL_OUT5_MAX	Analog Output 5 Maximum	-, -	RW	F78
		ANALOG OUTPUT 6		RW	
R4X18D4	ANAL_OUT6_PARAM	Analog Output 6 Parameter	-, -	RW	F77
R4X18D5	ANAL_OUT6_MIN	Analog Output 6 Minimum	-, -	RW	F78
R4X18D6	ANAL_OUT6_MAX	Analog Output 6 Maximum	-, -	RW	F78
		ANALOG OUTPUT 7		RW	
R4X18D8	ANAL_OUT7_PARAM	Analog Output 7 Parameter	-, -	RW	F77
R4X18D9	ANAL_OUT7_MIN	Analog Output 7 Minimum	-, -	RW	F78
R4X18DA	ANAL_OUT7_MAX	Analog Output 7 Maximum	-, -	RW	F78
		ANALOG OUTPUT 8		RW	

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X18DC	ANAL_OUT8_PARAM	Analog Output 8 Parameter	-, -	RW	F77
R4X18DD	ANAL_OUT8_MIN	Analog Output 8 Minimum	-, -	RW	F78
R4X18DE	ANAL_OUT8_MAX	Analog Output 8 Maximum	-, -	RW	F78
		OVERFREQUENCY		RW	
R4X18E0	OF_FUNC	Overfrequency Function	-, -	RW	F38
R4X18E1	OF_RLYS	Overfrequency Relays	-, -	RW	F57
R4X18E2	OF_PKUP	Overfrequency Pickup	Hz, 20.00–65.00	RW	F3
R4X18E3	OF_DLY	Overfrequency Delay	s, 0.0–6000.0	RW	F2
		TRIP COUNTER		RW	
R4X1900	TRP_CTR_FUNC	Trip Counter Function	-, -	RW	F38
R4X1901	TRP_CTR_RLYS	Trip Counter Relays	-, -	RW	F57
R4X1902	TRP_CTR_LIM	Trip Counter Limit	-, 1–10000	RW	F1
		TOTAL ARCING CURRENT		RW	
R4X1908	TOT_ARC_CURR_FUNC	Total Arcing Current Function	-, -	RW	F38
R4X1909	TOT_ARC_CURR_RLYS	Total Arcing Current Relays	-, -	RW	F57
R4X190A	TOT_ARC_CURR_ST_DLY	Total Arcing Current Start Delay	ms, 0–100	RW	F1
R4X190B	TOT_ARC_CURR_LIM	Total Arcing Current Limit	kA2-cyc, 1–50000	RW	F1
		VT FAILURE		RW	
R4X1918	VT_FAIL_FUNC	VT Failure Function	-, -	RW	F38
R4X1919	VT_FAIL_RLYS	VT Failure Relays	-, -	RW	F57
R4X191A	VT_FAIL_DLY	VT Failure Delay	s, 0–60,000	RW	F1
		SIMULATION SETUP		RW	
R4X1920	SIM_STATUS	Simulation Status	-, -	RW	F48
R4X1921	CB_SIM	Circuit Breaker Simulation	-, -	RW	F30
R4X1922	SIM_ALLOW_RLY_OP	Allow Operation of Relays	-, -	RW	F57
		SIMULATION PRE-FAULT VALUES		RW	
R4X1930	SIM_PRE_AMPS_ABC_LVL	Prefault Phase A/B/C Current Level	x CT, 0.00–20.00	RW	F3
R4X1931	SIM_PRE_PF_ANGLE	Prefault Power Factor Angle	° Lag, 0–359	RW	F1
		SIMULATION FAULT VALUES		RW	
R4X1940	SIM_VOLTS_AN_LVL	Fault Phase A-N Voltage Level	x VT, 0.00–2.00	RW	F3
R4X1941	SIM_VOLTS_AN_POS	Fault Phase A-N Voltage Position	° Lag, 0–359	RW	F1
R4X1942	SIM_VOLTS_BN_LVL	Fault Phase B-N Voltage Level	x T, 0.00–2.00	RW	F3
R4X1943	SIM_VOLTS_BN_POS	Fault Phase B-N Voltage Position	° Lag, 0–359	RW	F1
R4X1944	SIM_VOLTS_CN_LVL	Fault Phase C-N Voltage Level	x T, 0.00–2.00	RW	F3
R4X1945	SIM_VOLTS_CN_POS	Fault Phase C-N Voltage Position	° Lag, 0–359	RW	F1
R4X1946	SIM_AMPS_A_LVL	Fault Phase A Current Level	x CT, 0.00–20.00	RW	F3
R4X1947	SIM_AMPS_A_POS	Fault Phase A Current Position	° Lag, 0–359	RW	F1
R4X1948	SIM_AMPS_B_LVL	Fault Phase B Current Level	x CT, 0.00–20.00	RW	F3
R4X1949	SIM_AMPS_B_POS	Fault Phase B Current Position	° Lag, 0–359	RW	F1
R4X194A	SIM_AMPS_C_LVL	Fault Phase C Current Level	x CT, 0.00–20.00	RW	F3
R4X194B	SIM_AMPS_C_POS	Fault Phase C Current Position	° Lag, 0–359	RW	F1
R4X194C	SIM_SYS_FREQ	Fault System Frequency	Hz, 20.00–65.00	RW	F3
R4X194D	SIM_ANAL_IN_CURR	Fault Analog Input Current	mA, 0.00–20.00	RW	F3
R4X194E	SIM_POL_CURR_LVL	Fault Polarizing Current Level	x CT, 0.00–20.00	RW	F3
R4X194F	SIM_POL_CURR_POS	Fault Polarizing Current Position	° Lag, 0–359	RW	F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1950	SIM_GND_CURR_LVL	Fault Ground Current Level	x CT, 0.00–20.00	RW	F3
R4X1951	SIM_GND_CURR_POS	Fault Ground Current Position	° Lag, 0–359	RW	F1
R4X1952	SIM_SNS_GND_CURR_LVL	Fault Sensitive Ground Current Level	x CT 0.100 x CT 0.005 to 1.000	RW	F70
R4X1953	SIM_SNS_GND_CURR_POS	Fault Sensitive Ground Current Position	° Lag 0° 0 to 359	RW	F1
		SIMULATION POST-FAULT VALUES		RW	
R4X1960	SIM_POST_BUS_V_LVL	Postfault Bus Voltage Level	x VT, 0.00–2.00	RW	F3
R4X1961	SIM_POST_BUS_V_FREQ	Postfault Bus Voltage Frequency	Hz, 20.00–65.00	RW	F3
R4X1962	SIM_POST_SYNC_V_LVL	Postfault Synchronous Voltage Level	x VT, 0.00–2.00	RW	F3
R4X1963	SIM_POST_SYNC_V_POS	Postfault Synchronous Voltage Position	° Lag, 0–359	RW	F1
R4X1964	SIM_POST_SYNC_V_FREQ	Postfault Synchronous Voltage Frequency	Hz, 20.00–65.00	RW	F3
		BREAKER FAILURE		RW	
R4X1980	BRKR_FAIL_FUNC	Breaker Failure Function	–, –	RW	F38
R4X1981	BRKR_FAIL_RLYS	Breaker Failure Relays	–, –	RW	F57
R4X1982	BRKR_FAIL_DLYS	Breaker Failure Delay	s, 0.03–1.00	RW	F3
R4X1983	BRKR_FAIL_CURR	Breaker Failure Current	x CT, 0.05–20.00	RW	F3
		BREAKER OPERATION		RW	
R4X1988	BRKR_OP_FUNC	Breaker Operation Function	–, –	RW	F38
R4X1989	BRKR_OP_RLYS	Breaker Operation Relays	–, –	RW	F57
R4X198A	BRKR_OP_DLY	Breaker Operation Delay	s, 0.03–1.00	RW	F3
		TRIP COIL MONITOR		RW	
R4X1990	TRP_COIL_MON_FUNC	Trip Coil Monitor Function	–, –	RW	F38
R4X1991	TRP_COIL_MON_RLYS	Trip Coil Monitor Relays	–, –	RW	F57
R4X1992	OPEN_BRKR_PERMISS	Open Breaker Permissive	–, –	RW	F30
R4X1993	COIL_MON1_DLY	Coil Monitor 2 Delay	s, 5 s, 5 to 100		F1
R4X1994	COIL_MON1_TYPE	Coil Monitor 2 Type	–, Trip, –		F90
		CLOSE COIL MONITOR		RW	
R4X1998	CLS_COIL_MON_FUNC	Close Coil Monitor Function	–, –	RW	F38
R4X1999	CLS_COIL_MON_RLYS	Close Coil Monitor Relays	–, –	RW	F57
R4X199A	CLSD_BRKR_PERMISS	Closed Breaker Permissive	–, –	RW	F30
R4X199B	COIL_MON2_DLY	Coil Monitor 2 Delay	s, 5 s, 5 to 100	RW	F1
R4X199C	COIL_MON2_TYPE	Coil Monitor 2 Type	–, Close, –	RW	F90
		COIL MONITOR NAMES			
R4X19A0	COIL_MON1_NAME	Coil Monitor 2 Name (9 registers)	–, "Trip Coil Monitor", –	RW	F33
R4X19A9	COIL_MON2_NAME	Coil Monitor 2 Name (9 registers)	–, "Close Coil Monitor", –	RW	F33
		FORCE OUTPUT RELAYS		RW	
R4X1A00	FORCE_OUT_RLYS_FUNC	Force Output Relays Function	–, –	RW	F30
R4X1A01	FORCE1_TRP_RLY	Force 1 TRIP Relay	–, –	RW	F34
R4X1A02	FORCE2_CLS_RLY	Force 2 CLOSE Relay	–, –	RW	F34
R4X1A03	FORCE3_ALM_RLY	Force 3 ALARM Relay	–, –	RW	F34
R4X1A04	FORCE4_AUX_RLY	Force 4 AUXILIARY Relay	–, –	RW	F34
R4X1A05	FORCE5_AUX_RLY	Force 5 AUXILIARY Relay	–, –	RW	F34

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1A06	FORCE6_AUX_RLY	Force 6 AUXILIARY Relay	-, -	RW	F34
R4X1A07	FORCE7_AUX_RLY	Force 7 AUXILIARY Relay	-, -	RW	F34
R4X1A08	FORCE8_SELFTEST_WARN	Force 8 SELF-TEST WARNING Relay	-, -	RW	F34
R4X1A09	FORCE_SOLID_ST_OUT	Force Solid State Output	-, -	RW	F34
		FORCE ANALOG OUTPUTS		RW	
R4X1A10	FORCE_ANAL_OUT_FUNC	Force Analog Outputs Function	-, -	RW	F30
R4X1A11	FORCE_ANAL_OUT1	Force Analog Output 1	%, 0-100	RW	F1
R4X1A12	FORCE_ANAL_OUT2	Force Analog Output 2	%, 0-100	RW	F1
R4X1A13	FORCE_ANAL_OUT3	Force Analog Output 3	%, 0-100	RW	F1
R4X1A14	FORCE_ANAL_OUT4	Force Analog Output 4	%, 0-100	RW	F1
R4X1A15	FORCE_ANAL_OUT5	Force Analog Output 5	%, 0-100	RW	F1
R4X1A16	FORCE_ANAL_OUT6	Force Analog Output 6	%, 0-100	RW	F1
R4X1A17	FORCE_ANAL_OUT7	Force Analog Output 7	%, 0-100	RW	F1
R4X1A18	FORCE_ANAL_OUT8	Force Analog Output 8	%, 0-100	RW	F1
		PICKUP TEST		RW	
R4X1A20	PKUP_TEST_FUNC	Pickup Test Function	-, -	RW	F30
R4X1A21	PKUP_TEST_RLYS	Pickup Test Relays	-, -	RW	F57
		SETPOINT GROUP		RW	
R4X1B00	ACTIVE_SP_GRP_SP	Active Setpoint Group	-, -	RW	F79
R4X1B01	EDIT_SP_GRP_SP	Edit Setpoint Group	-, -	RW	F80
R4X1B02	BRKR_OPEN_INHIB	Breaker Open Inhibit	-, -	RW	F30
R4X1B03	OC_PKUP_INHIB	Overcurrent Pickup Inhibit	-, -	RW	F30
R4X1B04	OV_PKUP_INHIB	Overvoltage Pickup Inhibit	-, -	RW	F30
R4X1B05	UV_PKUP_INHIB	Undervoltage Pickup Inhibit	-, -	RW	F30
R4X1B06	UF_PKUP_INHIB	Underfrequency Pickup Inhibit	-, -	RW	F30
		SYNCHROCHECK		RW	
R4X1B10	SYNC_CHK_FUNC	Synchrocheck Function	-, -	RW	F38
R4X1B11	DEAD_SRC_PERMISS	Dead Source Permissive	-, -	RW	F20
R4X1B12	DEAD_BUS_MAX_V	Dead Bus Maximum Voltage	x VT, 0.00-1.25	RW	F3
R4X1B13	DEAD_LN_MAX_V	Dead Line Maximum Voltage	x VT, 0.00-1.25	RW	F3
R4X1B14	LIVE_BUS_MIN_V	Live Bus Minimum Voltage	x VT, 0.00-1.25	RW	F3
R4X1B15	LIVE_LN_MIN_V	Live Line Minimum Voltage	x VT, 0.00-1.25	RW	F3
R4X1B16	MAX_V_DIFF	Maximum Voltage Difference	kV, 0.01-100.00	RW	F3
R4X1B17	MAX_ANGLE_DIFF	Maximum Angle Difference	°, 0-100	RW	F1
R4X1B18	MAX_FREQ_DIFF	Maximum Frequency Difference	Hz, 0-5.00	RW	F3
R4X1B19	SYNC_CHK_RLY	Synchrocheck Relays	-, -	RW	F57
		MANUAL CLOSE FEATURE BLOCKING		RW	
R4X1B20	MC_FEAT_BLK_FUNC	Manual Close Feature Blocking Function	-, -	RW	F38
R4X1B21	MC_RLYS	Manual Close Relays	-, -	RW	F57
R4X1B22	MC_BLK_TM	Manual Close Block Time	s, 1-1000	RW	F1
R4X1B23	SEL_SETPT_GRP	Select Setpoint Group	---, Active Group, ---	RW	F80
R4X1B24	OC_BLK_FLGS	Overcurrent Blocking Flags	---, None Blocked, ---	RW	F59
R4X1B25	PH_TM_OC1_RSD_PKUP	Phase Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100	RW	F1
R4X1B26	N_TM_OC1_RSD_PKUP	Neutral Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100	RW	F1
R4X1B27	GND_TM_OC1_RSD_PKUP	Ground Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100	RW	F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1B28	NEG_SEQ_TM_OC_RSD_PKUP	Negative Sequence Time Overcurrent Raised Pickup	%, 0%, 0 to 100	RW	F1
R4X1B29	SENS_GND_TM_OC_RSD_PKUP	Sensitive Ground Time Overcurrent Raised Pickup	%, 0%, 0 to 100	RW	F1
		COLD LOAD FEATURE BLOCKING			
R4X1B40	CL_PU_BLK_FUNC	Cold Load Pickup Feature Blocking Function	-, -	RW	F38
R4X1B41	CL_PKUP_RLYS	Cold Load Pickup Relays	-, -	RW	F57
R4X1B42	CL_OUT_TM_B4_CL	Outage Time Before Cold Load	min, 1-1000	RW	F1
R4X1B43	CL_PKUP_BLK_TM	Cold Load Pickup Block Time	s, 1-1000	RW	F1
R4X1B44		Select Setpoint Group	---, Disabled, ---		F38
R4X1B45		Overcurrent Blocking Flags	---, Disabled, ---		F38
R4X1B46	PH_TM_OC2_RSD_PKUP	Phase Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100		F1
R4X1B47	N_TM_OC2_RSD_PKUP	Neutral Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100		F1
R4X1B48	GND_TM_OC2_RSD_PKUP	Ground Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100		F1
R4X1B49		Negative Sequence Time Overcurrent Raised Pickup	%, 0%, 0 to 100		F1
R4X1B4A		Sensitive Ground Time Overcurrent Raised Pickup	%, 0%, 0 to 100		F1
		UNDERVOLTAGE RESTORATION			
R4X1B60	UV_REST_FUNC	Undervoltage Restoration Function	-, -	RW	F38
R4X1B61	UV_REST_RLYS	Undervoltage Restoration Relays	-, -	RW	F57
R4X1B62	UV_REST_PH_REQ_OP	Undervoltage Restoration Phases Required for Operation	-, -	RW	F41
R4X1B63	UV_REST_MIN_V	Undervoltage Restoration Minimum Voltage	x VT, 0.00-1.25	RW	F3
R4X1B64	UV_REST_DLY	Undervoltage Restoration Delay	s, 0-10000	RW	F1
R4X1B65	UV_REST_INC_SEQ_TIME	Undervoltage Restoration Incomplete Sequence Time	min, 1-10,000	RW	F1
R4X1B66	UV_REST_SRC	Undervoltage Restoration Source	--- Bus ---		F87
		UNDERFREQUENCY RESTORATION			
R4X1B70	UF_REST_FUNC	Underfrequency Restoration Function	-, -	RW	F38
R4X1B71	UF_REST_RLYS	Underfrequency Restoration Relays	-, -	RW	F57
R4X1B72	UF_REST_MIN_V	Underfrequency Restoration Minimum Voltage	x VT, 0.00-1.25	RW	F3
R4X1B73	UF_REST_MIN_FREQ	Underfrequency Restoration Minimum Frequency	Hz, 20.00-60.00	RW	F3
R4X1B74	UF_REST_DLY	Underfrequency Restoration Delay	s, 0-10000	RW	F1
R4X1B75	UF_REST_INC_SEQ_TIME	Underfrequency Restoration Incomplete Sequence Time	min, 1-10,000	RW	F1
		TRANSFER			
R4X1B80	TXF_FUNC	Transfer Function	-, -	RW	F56
R4X1B81	TXF_DLY_THIS_SRC	Transfer Delay This Source	s, 0.0-10.0	RW	F2
R4X1B82	TXF_DLY_OTHER_SRC	Transfer Delay Other Source	s, 0.0-10.0	RW	F2
R4X1B83	BLK_TRP_ON_DBL_LOSS	Block Trip On Double Loss	-, -	RW	F30
R4X1BA0	AUTO_RECL_FUNC	Autoreclose Function	-, -	RW	F30
R4X1BA1	NUM_RECL_SHOTS	Number of Reclosure Shots	1, 1-4	RW	F1

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1BA2	AUTO_RECL_TIME	Autoreclose Reset Time	s, 1-1000	RW	F1
R4X1BA3	AUTO_RECL_TIME_MAN	Autoreclose Block Time Upon Manual Close	s, 1-200	RW	F1
R4X1BA4	INC_SEQ_TIME	Incomplete Sequence Time	s, 1-1000	RW	F1
R4X1BA5	RECL_ENABLE_RELAYS	Reclosure Enabled Relays	-, -	RW	F57
R4X1BA6	RECL_INPROG_RELAYS	Reclose In Progress Relays	-, -	RW	F57
R4X1BA7	RECL_LOCKOUT_RELAYS	Reclosure Lockout Relays	-, -	RW	F57
R4X1BB0	CURR_SUPER_FUNC	Current Supervision Function	-, -	RW	F30
R4X1BB1	CURR_3_SHOTS	3 Shots For Current Above	x CT, 0.00-20.00	RW	F3
R4X1BB2	CURR_2_SHOTS	2 Shots For Current Above	x CT, 0.00-20.00	RW	F3
R4X1BB3	CURR_1_SHOT	1 Shot For Current Above	x CT, 0.00-20.00	RW	F3
R4X1BB4	CURR_SUPER_LOCKOUT	Current Supervision to Lockout	-, -	RW	F30
R4X1BB5	CURR_LOCKOUT_ABOVE	Lockout For Current Above	x CT, 0.00-20.00	RW	F3
R4X1BB8	ZONE_CO_FUNC	Zone Coordination Function	-, -	RW	F30
R4X1BB9	ZC_PH_CURR_INC	Phase Current Increase	x CT, 0.00-20.00	RW	F3
R4X1BBA	ZC_NEUT_CURR_INC	Neutral Current Increase	x CT, 0.05-20.00	RW	F3
R4X1BBB	ZC_MAX_FLT_CLR_TIME	Maximum Fault Clearing Time	s, 1-1000	RW	F1
R4X1BC0	RECL1_DEADTIME	Deadtime Before Reclosure 1	s, 0.00-300.00	RW	F3
R4X1BC1	RECL1_SETPT_GRP	Select Setpoint Group	-, -	RW	F80
R4X1BC2	RECL1_INST_OC1_BLK	Overcurrent Blocking Flags	-, -	RW	F59
R4X1BC3	RECL1_INST_OC2_BLK	Phase Time Overcurrent 1 Raised Pickup	%, 0-100	RW	F1
R4X1BC4	RECL1_TIME_OC1_PKUP	Neutral Time Overcurrent 1 Raised Pickup	%, 0-100	RW	F1
R4X1BC5	RECL1_TIME_OC2_PKUP	Ground Time Overcurrent Raised Pickup	%, 0-100	RW	F1
R4X1BC6	RECL1_NEQ_SEQ_PKUP	Negative Sequence Time Overcurrent Raised Pickup	%, 0-100	RW	F1
R4X1BC7	RECL1_SNS_GND_PKUP	Sensitive Ground Time Overcurrent Raised Pickup	%, 0-100	RW	F1
R4X1BD0	RECL2_DEADTIME	Deadtime Before Reclosure 2	-, -	RW	
R4X1BD1	RECL2_SETPT_GRP	Select Setpoint Group	-, -	RW	
R4X1BD2	RECL2_INST_OC1_BLK	Overcurrent Blocking Flags	-, -	RW	
R4X1BD3	RECL2_INST_OC2_BLK	Phase Time Overcurrent 1 Raised Pickup	%, 0-100	RW	F1
R4X1BD4	RECL2_TIME_OC1_PKUP	Neutral Time Overcurrent 1 Raised Pickup	%, 0-100	RW	F1
R4X1BD5	RECL2_TIME_OC2_PKUP	Ground Time Overcurrent Raised Pickup	%, 0-100	RW	F1
R4X1BD6	RECL2_NEQ_SEQ_PKUP	Negative Sequence Time Overcurrent Raised Pickup	%, 0-100	RW	F1
R4X1BD7	RECL2_SNS_GND_PKUP	Sensitive Ground Time Overcurrent Raised Pickup	%, 0-100	RW	F1
R4X1BE0	RECL3_DEADTIME	Deadtime Before Reclosure 3	s, 0.00-300.00	RW	F3
R4X1BE1	RECL3_SETPT_GRP	Select Setpoint Group	-, -	RW	F80
R4X1BE2	RECL3_INST_OC1_BLK	Overcurrent Blocking Flags	-, -	RW	F59
R4X1BE3	RECL3_INST_OC2_BLK	Phase Time Overcurrent 1 Raised Pickup	%, 0-100	RW	F1
R4X1BE4	RECL3_TIME_OC1_PKUP	Neutral Time Overcurrent 1 Raised Pickup	%, 0-100	RW	F1
R4X1BE5	RECL3_TIME_OC2_PKUP	Ground Time Overcurrent Raised Pickup	%, 0-100	RW	F1
R4X1BE6	RECL3_NEQ_SEQ_PKUP	Negative Sequence Time Overcurrent Raised Pickup	%, 0-100	RW	F1
R4X1BE7	RECL3_SNS_GND_PKUP	Sensitive Ground Time Overcurrent Raised Pickup	%, 0-100	RW	F1
R4X1BF0	RECL4_DEADTIME	Deadtime Before Reclosure 4	-, -	RW	

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1BF1	RECL4_SETPT_GRP	Select Setpoint Group	-, -	RW	F80
R4X1BF2	RECL4_INST_OC1_BLK	Overcurrent Blocking Flags	-, -	RW	F59
R4X1BF3	RECL4_INST_OC2_BLK	Phase Time Overcurrent 1 Raised Pickup	%, 0-100		F1
R4X1BF4	RECL4_TIME_OC1_PKUP	Neutral Time Overcurrent 1 Raised Pickup	%, 0-100		F1
R4X1BF5	RECL4_TIME_OC2_PKUP	Ground Time Overcurrent Raised Pickup	%, 0-100		F1
R4X1BF6	RECL4_NEQ_SEQ_PKUP	Negative Sequence Time Overcurrent Raised Pickup	%, 0-100		F1
R4X1BF7	RECL4_SNS_GND_PKUP	Sensitive Ground Time Overcurrent Raised Pickup	%, 0-100		F1
R4X1C00S18	LOGIC_IN1_NAME	Logic Input 1 Name (9 words = 18 characters)			F33
R4X1C09S18	LOGIC_IN2_NAME	Logic Input 2 Name (9 words = 18 characters)			F33
R4X1C12S18	LOGIC_IN3_NAME	Logic Input 3 Name (9 words = 18 characters)			F33
R4X1C1BS18	LOGIC_IN4_NAME	Logic Input 4 Name (9 words = 18 characters)			F33
R4X1C24S18	LOGIC_IN5_NAME	Logic Input 5 Name (9 words = 18 characters)			F33
R4X1C2DS18	LOGIC_IN6_NAME	Logic Input 6 Name (9 words = 18 characters)			F33
R4X1C36S18	LOGIC_IN7_NAME	Logic Input 7 Name (9 words = 18 characters)			F33
R4X1C3FS18	LOGIC_IN8_NAME	Logic Input 8 Name (9 words = 18 characters)			F33
R4X1C48S18	LOGIC_IN9_NAME	Logic Input 9 Name (9 words = 18 characters)			F33
R4X1C51S18	LOGIC_IN10_NAME	Logic Input 10 Name (9 words = 18 characters)			F33
R4X1C5AS18	LOGIC_IN11_NAME	Logic Input 11 Name (9 words = 18 characters)			F33
R4X1C63S18	LOGIC_IN12_NAME	Logic Input 12 Name (9 words = 18 characters)			F33
R4X1C6CS18	LOGIC_IN13_NAME	Logic Input 13 Name (9 words = 18 characters)			F33
R4X1C75S18	LOGIC_IN14_NAME	Logic Input 14 Name (9 words = 18 characters)			F33
R4X1C7ES18	LOGIC_IN15_NAME	Logic Input 15 Name (9 words = 18 characters)			F33
R4X1C87S18	LOGIC_IN16_NAME	Logic Input 16 Name (9 words = 18 characters)			F33
R4X1C90S18	LOGIC_IN17_NAME	Logic Input 17 Name (9 words = 18 characters)			F33
R4X1C99S18	LOGIC_IN18_NAME	Logic Input 18 Name (9 words = 18 characters)			F33
R4X1CA2S18	LOGIC_IN19_NAME	Logic Input 19 Name (9 words = 18 characters)			F33
R4X1CABS18	LOGIC_IN20_NAME	Logic Input 20 Name (9 words = 18 characters)			F33
		EVENT RECORD SELECTOR			
R4X2000	EVNT_NUM_SEL	Event Number Selector	-, 0-65535	RW	F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
		EVENT RECORDOR INFORMATION			
R4X2001	TOT_EVNTS_SINCE_CLR	Number of Events Since Clear	-, 0-65535	RW	F1
R4X2002L	EVNT_REC_LAST_CLR	Event Recorder Last Cleared (2 words)	-, -	RW	F23
R4X2110A10	TM_HEADER	Trace Memory Header			
		EVENT RECORD DATA			
R4X2010L		Record #N Date of Event (2 words)	-, -	RW	F23
R4X2012L		Record #N Time of Event (2 words)	-, -	RW	F22
R4X2014		Record #N Cause of Event	-, -	RW	F24
R4X2015	EVNT_PH_A_AMPS	Record #N Phase A Current Magnitude	A, ---, 0 to 65535	RW	F1
R4X2016	EVNT_PH_B_AMPS	Record #N Phase B Current Magnitude	A, ---, 0 to 65535	RW	F1
R4X2017	EVNT_PH_C_AMPS	Record #N Phase C Current Magnitude	A, ---, 0 to 65535	RW	F1
R4X2018	EVNT_GND_AMPS	Record #N Ground Current Magnitude	A, ---, 0 to 65535	RW	F1
R4X2019	EVNT_PH_AN_VOLTS	Record #N A-N (A-B) Voltage Magnitude	kV, ---, 0.00 to 600.00	RW	F3
R4X201A	EVNT_PH_BN_VOLTS	Record #N B-N (B-C) Voltage Magnitude	kV, ---, 0.00 to 600.00	RW	F3
R4X201B	EVNT_PH_CN_VOLTS	Record #N C-N (C-A) Voltage Magnitude	kV, ---, 0.00 to 600.00	RW	F3
R4X201C	EVNT_SYS_FREQ	Record #N System Frequency	Hz, ---, 0.00 to 90.00	RW	F3
R4X201D	EVNT_ANALOG_IN	Record #N Analog Input	Units, ---, 0 to 65535	RW	F1
R4X201E	EVNT_PH_A_AMPS_ANG	Record #N Phase A Current Angle	° Lag, ---, 0 to 359	RW	F1
R4X201F	EVNT_PH_B_AMPS_ANG	Record #N Phase B Current Angle	° Lag, ---, 0 to 359	RW	F1
R4X2020	EVNT_PH_C_AMPS_ANG	Record #N Phase C Current Angle	° Lag, ---, 0 to 359	RW	F1
R4X2021	EVNT_GND_AMPS_ANG	Record #N Ground Current Angle	° Lag, ---, 0 to 359	RW	F1
R4X2022	EVNT_PH_AN_V_ANG	Record #N A-N (A-B) Voltage Angle	° Lag, ---, 0 to 359	RW	F1
R4X2023	EVNT_PH_BN_V_ANG	Record #N B-N (B-C) Voltage Angle	° Lag, ---, 0 to 359	RW	F1
R4X2024	EVNT_PH_CN_V_ANG	Record #N C-N (C-A) Voltage Angle	° Lag, ---, 0 to 359	RW	F1
R4X2025	EVNT_SYNC_RMS_VOLTS	Record #N Synchronizing RMS Voltage Magnitude	kV, ---, 0.00 to 600.00	RW	F3
R4X2026	EVNT_SYNC_V_ANG	Record #N Synchronizing Voltage Angle	° Lag, ---, 0 to 359	RW	F1
R4X2027	EVNT_SYNC_RMS_V_FREQ	Record #N Synchronizing RMS Voltage Frequency	Hz, ---, 0.00 to 90.00	RW	F3
R4X2028	EVNT_SENS_GND_AMPS	Record #N Sensitive Ground Current Magnitude	A, ---, 0.00 to 655.35	RW	F3
R4X2029	EVNT_SENS_GND_AMPS_ANG	Record #N Sensitive Ground Current Angle	° Lag, ---, 0 to 359	RW	F1
		TRACE MEMORY SELECTORS			
R4X2100	TM_BUFFER_SEL	Trace Memory Number Selector	-, 0-65535	RW	F1
R4X2101	TM_CHAN_SEL	Trace Memory Channel Selector	-, -	RW	F26
R4X2102	TM_SAMPLE_SEL	Trace Memory Sample Selector (TMSS)	-, 0-4095	RW	F1
		TRACE MEMORY INFORMATION			
R4X2110	TM_BUFFER_CNT	Number of Trace Memory Triggers Since Clear	-, 0-65535	RW	F1
R4X2111	TM_SAMPLE_CNT	Number of Trace Memory Samples Stored	-, 0-4096	RW	F1
R4X2112	TM_START_INDEX	Trace Memory Start Index	-, 0-4095	RW	F1
R4X2113	TM_TRIG_INDEX	Trace Memory Trigger Index	-, 0-4095	RW	F1
R4X2114	TM_TRIG_CAUSE	Trace Memory Trigger Cause	-, -	RW	F24
R4X2115L	TM_TRIG_DATE	Trace Memory Trigger Date	-, -	RW	F23
R4X2117L	TM_TRIG_TIME	Trace Memory Trigger Time	-, -	RW	F22
R4X2119	TM_SAMPLE_FREQ	Trace Memory Sampling Frequency	Hz, 16.00-65.00	RW	F3

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
		TRACE MEMORY SAMPLES			
R4X2120IA64	TM_SAMPLES	Trace Memory Sample 0–63	-, -	RW	F25
R4X2120I	TM_SAMPLE_0	Trace Memory Sample TMSS+0			F25
R4X2121I	TM_SAMPLE_1	Trace Memory Sample TMSS+1			F25
R4X2122I	TM_SAMPLE_2	Trace Memory Sample TMSS+2			F25
R4X2123I	TM_SAMPLE_3	Trace Memory Sample TMSS+3			F25
R4X2124I	TM_SAMPLE_4	Trace Memory Sample TMSS+4			F25
R4X2125I	TM_SAMPLE_5	Trace Memory Sample TMSS+5			F25
R4X2126I	TM_SAMPLE_6	Trace Memory Sample TMSS+6			F25
R4X2127I	TM_SAMPLE_7	Trace Memory Sample TMSS+7			F25
R4X2128I	TM_SAMPLE_8	Trace Memory Sample TMSS+8			F25
R4X2129I	TM_SAMPLE_9	Trace Memory Sample TMSS+9			F25
R4X212AI	TM_SAMPLE_10	Trace Memory Sample TMSS+10			F25
R4X212BI	TM_SAMPLE_11	Trace Memory Sample TMSS+11			F25
R4X212CI	TM_SAMPLE_12	Trace Memory Sample TMSS+12			F25
R4X212DI	TM_SAMPLE_13	Trace Memory Sample TMSS+13			F25
R4X212EI	TM_SAMPLE_14	Trace Memory Sample TMSS+14			F25
R4X212FI	TM_SAMPLE_15	Trace Memory Sample TMSS+15			F25
R4X2130I	TM_SAMPLE_16	Trace Memory Sample TMSS+16			F25
R4X2131I	TM_SAMPLE_17	Trace Memory Sample TMSS+17			F25
R4X2132I	TM_SAMPLE_18	Trace Memory Sample TMSS+18			F25
R4X2133I	TM_SAMPLE_19	Trace Memory Sample TMSS+19			F25
R4X2134I	TM_SAMPLE_20	Trace Memory Sample TMSS+20			F25
R4X2135I	TM_SAMPLE_21	Trace Memory Sample TMSS+21			F25
R4X2136I	TM_SAMPLE_22	Trace Memory Sample TMSS+22			F25
R4X2137I	TM_SAMPLE_23	Trace Memory Sample TMSS+23			F25
R4X2138I	TM_SAMPLE_24	Trace Memory Sample TMSS+24			F25
R4X2139I	TM_SAMPLE_25	Trace Memory Sample TMSS+25			F25
R4X213AI	TM_SAMPLE_26	Trace Memory Sample TMSS+26			F25
R4X213BI	TM_SAMPLE_27	Trace Memory Sample TMSS+27			F25
R4X213CI	TM_SAMPLE_28	Trace Memory Sample TMSS+28			F25
R4X213DI	TM_SAMPLE_29	Trace Memory Sample TMSS+29			F25
R4X213EI	TM_SAMPLE_30	Trace Memory Sample TMSS+30			F25
R4X213FI	TM_SAMPLE_31	Trace Memory Sample TMSS+31			F25
R4X2140I	TM_SAMPLE_32	Trace Memory Sample TMSS+32			F25
R4X2141I	TM_SAMPLE_33	Trace Memory Sample TMSS+33			F25
R4X2142I	TM_SAMPLE_34	Trace Memory Sample TMSS+34			F25
R4X2143I	TM_SAMPLE_35	Trace Memory Sample TMSS+35			F25
R4X2144I	TM_SAMPLE_36	Trace Memory Sample TMSS+36			F25
R4X2145I	TM_SAMPLE_37	Trace Memory Sample TMSS+37			F25
R4X2146I	TM_SAMPLE_38	Trace Memory Sample TMSS+38			F25
R4X2147I	TM_SAMPLE_39	Trace Memory Sample TMSS+39			F25
R4X2148I	TM_SAMPLE_40	Trace Memory Sample TMSS+40			F25
R4X2149I	TM_SAMPLE_41	Trace Memory Sample TMSS+41			F25
R4X214AI	TM_SAMPLE_42	Trace Memory Sample TMSS+42			F25

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X214BI	TM_SAMPLE_43	Trace Memory Sample TMSS+43			F25
R4X214CI	TM_SAMPLE_44	Trace Memory Sample TMSS+44			F25
R4X214DI	TM_SAMPLE_45	Trace Memory Sample TMSS+45			F25
R4X214EI	TM_SAMPLE_46	Trace Memory Sample TMSS+46			F25
R4X214FI	TM_SAMPLE_47	Trace Memory Sample TMSS+47			F25
R4X2150I	TM_SAMPLE_48	Trace Memory Sample TMSS+48			F25
R4X2151I	TM_SAMPLE_49	Trace Memory Sample TMSS+49			F25
R4X2152I	TM_SAMPLE_50	Trace Memory Sample TMSS+50			F25
R4X2153I	TM_SAMPLE_51	Trace Memory Sample TMSS+51			F25
R4X2154I	TM_SAMPLE_52	Trace Memory Sample TMSS+52			F25
R4X2155I	TM_SAMPLE_53	Trace Memory Sample TMSS+53			F25
R4X2156I	TM_SAMPLE_54	Trace Memory Sample TMSS+54			F25
R4X2157I	TM_SAMPLE_55	Trace Memory Sample TMSS+55			F25
R4X2158I	TM_SAMPLE_56	Trace Memory Sample TMSS+56			F25
R4X2159I	TM_SAMPLE_57	Trace Memory Sample TMSS+57			F25
R4X215AI	TM_SAMPLE_58	Trace Memory Sample TMSS+58			F25
R4X215BI	TM_SAMPLE_59	Trace Memory Sample TMSS+59			F25
R4X215CI	TM_SAMPLE_60	Trace Memory Sample TMSS+60			F25
R4X215DI	TM_SAMPLE_61	Trace Memory Sample TMSS+61			F25
R4X215EI	TM_SAMPLE_62	Trace Memory Sample TMSS+62			F25
R4X215FI	TM_SAMPLE_63	Trace Memory Sample TMSS+63			F25
		DATA LOG SELECTORS			
R4X2200	DL_BUFFER_SEL	Data Log Number Selector	-, 0-65535	RW	F1
R4X2201	DL_CHAN_SEL	Data Log Channel Selector	-, 0-7	RW	F1
R4X2202	DL_SAMPLE_SEL	Data Log Sample Selector (DLSS)	-, 0-4095	RW	F1
		DATA LOG INFORMATION			
R4X2210	DL_BUFFER_CNT	Number of Data Log Triggers Since Clear	-, 0-65535	RW	F1
R4X2211	DL_SAMPLE_CNT	Number of Data Log Samples Stored	-, 0-4096	RW	F1
R4X2212	DL_START_INDEX	Data Log Start Index	-, 0-4095	RW	F1
R4X2213	DL_TRIG_INDEX	Data Log Trigger Index	-, 0-4095	RW	F1
R4X2214	DL_TRIG_CAUSE	Data Log Trigger Cause	-, -	RW	F24
R4X2215L	DL_TRIG_DATE	Data Log Trigger Date	-, -	RW	F23
R4X2217L	DL_TRIG_TIME	Data Log Trigger Time	-, -	RW	F22
		DATA LOG SAMPLES			
R4X2220	DL_SAMPLE_0	Data Log Sample DLSS+0	-, -	RW	F78
R4X2221	DL_SAMPLE_1	Data Log Sample DLSS+1	-, -	RW	F78
R4X2222	DL_SAMPLE_2	Data Log Sample DLSS+2			F78
R4X2223	DL_SAMPLE_3	Data Log Sample DLSS+3			F78
R4X2224	DL_SAMPLE_4	Data Log Sample DLSS+4			F78
R4X2225	DL_SAMPLE_5	Data Log Sample DLSS+5			F78
R4X2226	DL_SAMPLE_6	Data Log Sample DLSS+6			F78
R4X2227	DL_SAMPLE_7	Data Log Sample DLSS+7			F78
R4X2228	DL_SAMPLE_8	Data Log Sample DLSS+8			F78
R4X2229	DL_SAMPLE_9	Data Log Sample DLSS+9			F78
R4X222A	DL_SAMPLE_10	Data Log Sample DLSS+10			F78

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X222B	DL_SAMPLE_11	Data Log Sample DLSS+11			F78
R4X222C	DL_SAMPLE_12	Data Log Sample DLSS+12			F78
R4X222D	DL_SAMPLE_13	Data Log Sample DLSS+13			F78
R4X222E	DL_SAMPLE_14	Data Log Sample DLSS+14			F78
R4X222F	DL_SAMPLE_15	Data Log Sample DLSS+15			F78
R4X2230	DL_SAMPLE_16	Data Log Sample DLSS+16			F78
R4X2231	DL_SAMPLE_17	Data Log Sample DLSS+17			F78
R4X2232	DL_SAMPLE_18	Data Log Sample DLSS+18			F78
R4X2233	DL_SAMPLE_19	Data Log Sample DLSS+19			F78
R4X2234	DL_SAMPLE_20	Data Log Sample DLSS+20			F78
R4X2235	DL_SAMPLE_21	Data Log Sample DLSS+21			F78
R4X2236	DL_SAMPLE_22	Data Log Sample DLSS+22			F78
R4X2237	DL_SAMPLE_23	Data Log Sample DLSS+23			F78
R4X2238	DL_SAMPLE_24	Data Log Sample DLSS+24			F78
R4X2239	DL_SAMPLE_25	Data Log Sample DLSS+25			F78
R4X223A	DL_SAMPLE_26	Data Log Sample DLSS+26			F78
R4X223B	DL_SAMPLE_27	Data Log Sample DLSS+27			F78
R4X223C	DL_SAMPLE_28	Data Log Sample DLSS+28			F78
R4X223D	DL_SAMPLE_29	Data Log Sample DLSS+29			F78
R4X223E	DL_SAMPLE_30	Data Log Sample DLSS+30			F78
R4X223F	DL_SAMPLE_31	Data Log Sample DLSS+31			F78
R4X2240	DL_SAMPLE_32	Data Log Sample DLSS+32			F78
R4X2241	DL_SAMPLE_33	Data Log Sample DLSS+33			F78
R4X2242	DL_SAMPLE_34	Data Log Sample DLSS+34			F78
R4X2243	DL_SAMPLE_35	Data Log Sample DLSS+35			F78
R4X2244	DL_SAMPLE_36	Data Log Sample DLSS+36			F78
R4X2245	DL_SAMPLE_37	Data Log Sample DLSS+37			F78
R4X2246	DL_SAMPLE_38	Data Log Sample DLSS+38			F78
R4X2247	DL_SAMPLE_39	Data Log Sample DLSS+39			F78
R4X2248	DL_SAMPLE_40	Data Log Sample DLSS+40			F78
R4X2249	DL_SAMPLE_41	Data Log Sample DLSS+41			F78
R4X224A	DL_SAMPLE_42	Data Log Sample DLSS+42			F78
R4X224B	DL_SAMPLE_43	Data Log Sample DLSS+43			F78
R4X224C	DL_SAMPLE_44	Data Log Sample DLSS+44			F78
R4X224D	DL_SAMPLE_45	Data Log Sample DLSS+45			F78
R4X224E	DL_SAMPLE_46	Data Log Sample DLSS+46			F78
R4X224F	DL_SAMPLE_47	Data Log Sample DLSS+47			F78
R4X2250	DL_SAMPLE_48	Data Log Sample DLSS+48			F78
R4X2251	DL_SAMPLE_49	Data Log Sample DLSS+49			F78
R4X2252	DL_SAMPLE_50	Data Log Sample DLSS+50			F78
R4X2253	DL_SAMPLE_51	Data Log Sample DLSS+51			F78
R4X2254	DL_SAMPLE_52	Data Log Sample DLSS+52			F78
R4X2255	DL_SAMPLE_53	Data Log Sample DLSS+53			F78
R4X2256	DL_SAMPLE_54	Data Log Sample DLSS+54			F78
R4X2257	DL_SAMPLE_55	Data Log Sample DLSS+55			F78

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X2258	DL_SAMPLE_56	Data Log Sample DLSS+56			F78
R4X2259	DL_SAMPLE_57	Data Log Sample DLSS+57			F78
R4X225A	DL_SAMPLE_58	Data Log Sample DLSS+58			F78
R4X225B	DL_SAMPLE_59	Data Log Sample DLSS+59			F78
R4X225C	DL_SAMPLE_60	Data Log Sample DLSS+60			F78
R4X225D	DL_SAMPLE_61	Data Log Sample DLSS+61			F78
R4X225E	DL_SAMPLE_62	Data Log Sample DLSS+62			F78
:		:		RW	
R4X225F	DL_SAMPLE_63	Data Log Sample DLSS+63	-, -	RW	F78
R4X4100L	DATE_LAST_CALIB	Date of Last Calibration	-, -	RW	F23
R4X4102L	DATE_ORIG_CALIB	Date of Factory Calibration	-, -	RW	F23

ACTUAL VALUES

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X0000	DEVICE_CODE	Multilin Product Device Code	-, -		F1
R3X0001	HW_REV	Hardware Revision	-, 1-26		F13
R3X0002	SW_REV	Software Revision	-, -		F14
R3X0003	VERSION	Version Number	-, 000-999		F1
R3X0004	BOOT_REV	Bootware Revision	-, -		F14
R3X0005	ORDER_CODE	Installed Options	-, -		F15
R3X0006S8	SERIAL_NUM	Serial Number (4 words)	-, -		F33
R3X000AL	DATE_MANUF	Date Of Manufacture (2 words)	-, -		F23
R3X0200	GENERAL_STATUS	General Status	-, -		F21
R3X0201	760_OP_STAT	SR760 Operation Status	-, -		F44
R3X0202	COMM_SETUP_ACC_STAT	Communications Port Setpoint Access Status	-, -		F30
R3X0204	CONTACT_INP_STAT	Contact Input Status	-, -		F46
R3X0205	TRP_CLS_COIL_STAT	Trip/Close Coil Status	-, -		F47
R3X0206	OUTPUT_RLY_STAT	Output Relay Status	-, -		F40
R3X0207L	DATE	Date (2 words)	-, -		F23
R3X0209L	TIME	Time (2 words)	-, -		F22
R3X020B	ACTIVE_SP_GRP	Active Setpoint Group	-, -		F79
R3X020C	EDIT_SP_GRP	Edit Setpoint Group	-, -		F79
		ACTIVE CONDITION QUEUE			
R3X0210	ACT_COND_1	Active Condition #1	-, -		F24
R3X0211	ACT_COND_2	Active Condition #2	-, -		F24
R3X0212	ACT_COND_3	Active Condition #3			F24
R3X0213	ACT_COND_4	Active Condition #4	-, -		F24
R3X0214	ACT_COND_5	Active Condition #5	-, -		F24
R3X0215	ACT_COND_6	Active Condition #6	-, -		F24
R3X0216	ACT_COND_7	Active Condition #7	-, -		F24
R3X0217	ACT_COND_8	Active Condition #8	-, -		F24
R3X0218	ACT_COND_9	Active Condition #9	-, -		F24
R3X0219	ACT_COND_10	Active Condition #10	-, -		F24
R3X021A	ACT_COND_11	Active Condition #11	-, -		F24
R3X021B	ACT_COND_12	Active Condition #12	-, -		F24
R3X021C	ACT_COND_13	Active Condition #13	-, -		F24
R3X021D	ACT_COND_14	Active Condition #14	-, -		F24
R3X021E	ACT_COND_15	Active Condition #15	-, -		F24
R3X021F	ACT_COND_16	Active Condition #16	-, -		F24
R3X0220	ACT_COND_17	Active Condition #17	-, -		F24
R3X0221	ACT_COND_18	Active Condition #18	-, -		F24
R3X0222	ACT_COND_19	Active Condition #19	-, -		F24
R3X0223	ACT_COND_20	Active Condition #20	-, -		F24
R3X0224	ACT_COND_21	Active Condition #21	-, -		F24
R3X0225	ACT_COND_22	Active Condition #22	-, -		F24
R3X0226	ACT_COND_23	Active Condition #23	-, -		F24
R3X0227	ACT_COND_24	Active Condition #24	-, -		F24
R3X0228	ACT_COND_25	Active Condition #25	-, -		F24
R3X0229	ACT_COND_26	Active Condition #26	-, -		F24

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X022A	ACT_COND_27	Active Condition #27	-, -		F24
R3X022B	ACT_COND_28	Active Condition #28	-, -		F24
R3X022C	ACT_COND_29	Active Condition #29	-, -		F24
R3X022D	ACT_COND_30	Active Condition #30	-, -		F24
R3X022E	ACT_COND_31	Active Condition #31	-, -		F24
R3X022F	ACT_COND_32	Active Condition #32	-, -		F24
		LATCHED CONTACT INPUT STATE			
R3X0230	LATCH_CONT_INP_STAT	Contact Input Status (Closed Contacts are Latched Until Read via Communications)	-, -		F46
R3X0231	LATCH_OUTPUT_RLY_STAT	Output Relay Status (Asserted Outputs are Latched Until Read via Communications)	-, -, -		F40
		LOGIC INPUT STATES			
R3X0241	LOGIC_IN1_STATE	Logic Input 1 State	-, -		F69
R3X0242	LOGIC_IN2_STATE	Logic Input 2 State	-, -		F69
R3X0243	LOGIC_IN3_STATE	Logic Input 3 State			
R3X0244	LOGIC_IN4_STATE	Logic Input 4 State	-, -		F69
R3X0245	LOGIC_IN5_STATE	Logic Input 5 State	-, -		F69
R3X0246	LOGIC_IN6_STATE	Logic Input 6 State	-, -		F69
R3X0247	LOGIC_IN7_STATE	Logic Input 7 State	-, -		F69
R3X0248	LOGIC_IN8_STATE	Logic Input 8 State	-, -		F69
R3X0249	LOGIC_IN9_STATE	Logic Input 9 State	-, -		F69
R3X024A	LOGIC_IN10_STATE	Logic Input 10 State	-, -		F69
R3X024B	LOGIC_IN11_STATE	Logic Input 11 State	-, -		F69
R3X024C	LOGIC_IN12_STATE	Logic Input 12 State	-, -		F69
R3X024D	LOGIC_IN13_STATE	Logic Input 13 State	-, -		F69
R3X024E	LOGIC_IN14_STATE	Logic Input 14 State	-, -		F69
R3X024F	LOGIC_IN15_STATE	Logic Input 15 State	-, -		F69
R3X0250	LOGIC_IN16_STATE	Logic Input 16 State	-, -		F69
R3X0251	LOGIC_IN17_STATE	Logic Input 17 State	-, -		F69
R3X0252	LOGIC_IN18_STATE	Logic Input 18 State	-, -		F69
R3X0253	LOGIC_IN19_STATE	Logic Input 19 State	-, -		F69
R3X0254	LOGIC_IN20_STATE	Logic Input 20 State	-, -		F69
R3X0260	AUTO_RCLS_SHOT_NUMBER	Autoreclose Shot Number	-, -		F1
R3X0261	AUTO_RCLS_SHOTS_LEFT	Autoreclose Shots Remaining	-, -		F1
R3X0262	MAN_CLOSE_BLOCKING	Manual Close Blocking	-, -		F30
		LAST TRIP DATA			
R3X02E0L	TRIP_DATE	Date of Last Trip (2 words)	-, -		F23
R3X02E2L	TRIP_TIME	Time of Last Trip (2 words)	-, -		F22
R3X02E4	TRIP_CAUSE	Cause of Last Trip	-, -		F24
R3X02E5	PRETRP_AMPS_A	Last Trip Phase A Current	A, 0-65535		F1
R3X02E6	PRETRP_AMPS_B	Last Trip Phase B Current	A, 0-65535		F1
R3X02E7	PRETRP_AMPS_C	Last Trip Phase C Current	A, 0-65535		F1
R3X02E8	PRETRP_AMPS_GND	Last Trip Ground Current	A, 0-65535		F1
R3X02E9	PRETRP_VOLTS_ABN	Last Trip A-N (A-B) Voltage	kV, 0.00-600.00		F3
R3X02EA	PRETRP_VOLTS_BCN	Last Trip B-N (B-C) Voltage	kV, 0.00-600.00		F3
R3X02EB	PRETRP_VOLTS_CAN	Last Trip C-N (C-A) Voltage	kV, 0.00-600.00		F3
R3X02EC	PRETRP_SYS_FREQ	Last Trip System Frequency	Hz, 0.00-90.00		F3
R3X02ED	PRETRP_ANAL_IN	Last Trip Analog Input	Units, 0-65535		F1

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X02EE	PRETRP_AMPS_N	Last Trip Neutral Current	A, 0–65535		F1
R3X02EF	PRETRP_AMPS_SENS_GND	Last Trip Sensitive Ground Current	A, 0–65535		F3
R3X02F0	PRETRP_VOLTS_NEUTRAL	Last Trip Neutral Voltage	kV, 0–65535		F3
R3X02FE	NEUTRAL_VOLTS	Neutral Voltage	kV, 0–65535		F3
R3X02FF	SENS_GND_CURR	Sensitive Ground Current	A, 0–65535		F3
		CURRENT AND VOLTAGE			
R3X0300	AMPS_A	Phase A RMS Current	A, 0–65535		F1
R3X0301	AMPS_B	Phase B RMS Current	A, 0–65535		F1
R3X0302	AMPS_C	Phase C RMS Current	A, 0–65535		F1
R3X0303	PERC_LD_TRP	Percent of Load-to-Trip	%, 0–2000		F1
R3X0304	AMPS_GND	Ground Current	A, 0–65535		F1
R3X0305	VOLTS_AN	A-N RMS Voltage	kV, 0.00–600.00		F3
R3X0306	VOLTS_BN	B-N RMS Voltage	kV, 0.00–600.00		F3
R3X0307	VOLTS_CN	C-N RMS Voltage	kV, 0.00–600.00		F3
R3X0308	VOLTS_AB	A-B RMS Voltage	kV, 0.00–600.00		F3
R3X0309	VOLTS_BC	B-C RMS Voltage	kV, 0.00–600.00		F3
R3X030A	VOLTS_CA	C-A RMS Voltage	kV, 0.00–600.00		F3
R3X030B	GND_POLAR_CURR	Ground Polarizing Current	A, 0–65535		F1
R3X030C	AMPS_AVG	Average Current	A, 0–65535		F1
R3X030D	VOLTS_AVG_LINE	Average Line Voltage	kV, 0.00–600.00		F3
R3X030E	VOLTS_AVG_PHASE	Average Phase Voltage	kV, 0.00–600.00		F3
R3X030F	NEUT_CURR	Neutral Current	A, 0–65535		F1
		3-phase POWER, FREQUENCY			
R3X0310I	MW	3 ϕ Real Power	KW, –, -30000 to 30000		F86
R3X0311I	MVAR	3 ϕ Reactive Power	Kvar, --, -30000 to 30000		F86
R3X0312	KVA	3-phase Apparent Power	KVA, –, 0 to 30000		F86
R3X0313I	PF	3-phase Power Factor	–, -0.99+1.00		F6
R3X0314	FREQUENCY	System Frequency	Hz, 0.00–90.00		F3
R3X0315I	FREQ_DECAY_RATE	System Frequency Decay Rate	Hz/s, -10.00–10.00		F6
R3X0316	PR_MULTIPLIER	Auto Ranging Power / Energy Multiplier	–, 1–100		F1
		SYNCHRONIZING VOLTAGE			
R3X0318	SYNC_VOLTS	Synchronizing RMS Voltage	kV, 0.00–600.00		F3
R3X0319	SYNC_FREQ	Synchronizing RMS Voltage Frequency	Hz, 0.00–90.00		F3
R3X031A	SYNC_VOLTS_DIFF	Synchronizing Voltage Difference	kV, 0.00–600.00		F3
R3X031B	SYNC_PH_DIFF	Synchronizing Phase Difference	°, 0–359		F1
R3X031C	SYNC_FREQ_DIFF	Synchronizing Frequency Difference	Hz, 0.00–90.00		F3
R3X031D	SYNC_VOLTS_ANGLE	Synchronizing Voltage Angle	° Lag, 0–359		F1
		ENERGY USE			
R3X0320L	POS_KWH	Positive Watthours (2 words)	KWh --- 0 to 4e9		F86
R3X0322L	POS_WH_COST	Positive Watthour Cost (2 words)	\$ --- 0 to 4e9		F7
R3X0324L	NEG_KWH	Negative Watthours (2 words)	KWh --- 0 to 4e9		F86
R3X0326L	NEG_WH_COST	Negative Watthour Cost (2 words)	\$ --- 0 to 4e9		F7

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X0328L	POS_KVARH	Positive Varhours (2 words)	Kvarh --- 0 to 4e9		F86
R3X032AL	NEG_KVARH	Negative Varhours (2 words)	Kvarh --- 0 to 4e9		F86
R3X032CL	ENERGY_LAST_RESET	Energy Use Data Last Reset (2 words)	-, -		F23
		LAST DEMAND			
R3X0330	AMPS_A_DMND	Last Phase A Current Demand	A, 0-65535		F1
R3X0331	AMPS_B_DMND	Last Phase B Current Demand	A, 0-65535		F1
R3X0332	AMPS_C_DMND	Last Phase C Current Demand	A, 0-65535		F1
R3X0333I	MW_DMND	Last Real Power Demand	kW, -30000-30000		F86
R3X0334I	MVAR_DMND	Last Reactive Power Demand	Kvar, -30000-30000		F86
R3X0335	KVA_DMND	Last Apparent Power Demand	KVA, 0-30000		F86
		MAXIMUM DEMAND			
R3X0340	AMPS_A_DMND_MAX	Maximum Phase A Current Demand	A, 0-65535		F1
R3X0341L	AMPS_A_MAX_DATE	Maximum Phase A Current Date (2 words)	-, -		F23
R3X0343L	AMPS_A_MAX_TIME	Maximum Phase A Current Time (2 words)	-, -		F22
R3X0345	AMPS_B_DMND_MAX	Maximum Phase B Current Demand	A, 0-65535		F1
R3X0346L	AMPS_B_MAX_DATE	Maximum Phase B Current Date (2 words)	-, -		F23
R3X0348L	AMPS_B_MAX_TIME	Maximum Phase B Current Time (2 words)	-, -		F22
R3X034A	AMPS_C_DMND_MAX	Maximum Phase C Current Demand	A, 0-65535		F1
R3X034BL	AMPS_C_MAX_DATE	Maximum Phase C Current Date (2 words)	-, -		F23
R3X034DL	AMPS_C_MAX_TIME	Maximum Phase C Current Time (2 words)	-, -		F22
R3X034FI	MW_DMND_MAX	Maximum Real Power Demand	KW, -30000-30000		F86
R3X0350L	MW_DMND_MAX_DATE	Maximum Real Power Date (2 words)	-, -		F23
R3X0352L	MW_DMND_MAX_TIME	Maximum Real Power Time (2 words)	-, -		F22
R3X0354I	MVAR_DMND_MAX	Maximum Reactive Power Demand	Kvar, -30000-30000		F86
R3X0355L	MVAR_DMND_MAX_DATE	Maximum Reactive Power Date (2 words)	-, -		F23
R3X0357L	MVAR_DMND_MAX_TIME	Maximum Reactive Power Time (2 words)	-, -		F22
R3X0359	KVA_DMND_MAX	Maximum Apparent Power Demand	KVA, 0-30000		F86
R3X035AL	MVA_DMND_MAX_DATE	Maximum Apparent Power Date (2 words)	-, -		F23
R3X035CL	MVA_DMND_MAX_TIME	Maximum Apparent Power Time (2 words)	-, -		F22
R3X035EL	DMND_RESET_DATE	Demand Data Last Reset (2 words)	-, -		F23
		One Phase POWER			
R3X0360I	MW_A	iA Real Power	kW, ---, -30000 to 30000		F86
R3X0361I	MVAR_A	iA Reactive Power	kvar, ---, -30000 to 30000		F86
R3X0362	kVA_A	fA Apparent Power	kVA, ---, 0 to 30000		F86
R3X0363I	PF_A	fA Power Factor	---, ---, -0.99 to +1.00		F6

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X0364I	MW_B	Real Power	KW, ---, -30000 to 30000		F86
R3X0365I	MVAR_B	Reactive Power	Kvar, ---, -30000 to 30000		F86
R3X0366	KVA_B	fB Apparent Power	KVA, ---, 0 to 30000		F86
R3X0367I	PF_B	fB Power Factor	---, ---, -0.99 to +1.00		F6
R3X0368I	MW_C	iC Real Power	KW, ---, -30000 to 30000		F86
R3X0369I	MVAR_C	iC Reactive Power	Kvar, ---, -30000 to 30000		F86
R3X036A	KVA_C	fC Apparent Power	KVA, ---, 0 to 30000		F86
R3X036BI	PF_C	fC Power Factor	---, ---, -0.99 to +1.00		F6
		ANALOG INPUT			
R3X0370	ANAL_IN	Analog Input	Units, 0–65535		F1
R3X0371I	ANAL_IN_FAST_ROC	Analog Input Fast Rate of Change	Units / min, –		F5
R3X0372I	ANAL_IN_SLOW_ROC	Analog Input Slow Rate of Change	Units / hr, –		F5
		TRIP COUNTERS			
R3X0380	BRKR_TRPS	Breaker Trips	–, 0–65535		F1
R3X0381	GND_OC_TRPS	Ground Overcurrent Trips	–, 0–65535		F1
R3X0382	N_OC_TRPS	Neutral Overcurrent Trips	–, 0–65535		F1
R3X0383	ONE_PH_OC_TRPS	One Phase Overcurrent Trips	–, 0–65535		F1
R3X0384	TWO_PH_OC_TRPS	Two Phase Overcurrent Trips	–, 0–65535		F1
R3X0385	THREE_PH_OC_TRPS	Three Phase Overcurrent Trips	–, 0–65535		F1
R3X0386L	TRP_CTR_LST_RST_DATE	Trip Counters Last Reset Date (2 words)	–, –		F23
R3X0388	NEG_SEQ_OC_TRPS	Negative Sequence Overcurrent Trips	–, 0–65535		F1
R3X0389	SENS_GND_OC_TRPS	Sensitive Ground Overcurrent Trips	–, 0–65535		F1
		TOTAL ARCING CURRENT			
R3X03A0	TOT_ARC_AMPS_A	Total Arcing Current Phase A	kA2cyc, 0–65535		F1
R3X03A1	TOT_ARC_AMPS_B	Total Arcing Current Phase B	kA2cyc, 0–65535		F1
R3X03A2	TOT_ARC_AMPS_C	Total Arcing Current Phase C	kA2cyc, 0–65535		F1
R3X03A3L	TOT_ARC_AMPS_LST_RST	Total Arcing Current Last Reset (2 words)	–, –		F23
		FAULT LOCATION 1			
R3X03B0L	FAULT1_DATE	Date of Fault (2 words)	–, –		F23
R3X03B2L	FAULT1_TIME	Time of Fault (2 words)	–, –		F22
R3X03B4	FAULT1_TYPE	Type of Fault	–, –		F76
R3X03B5I	FAULT1_DISTANCE	Distance to Fault	km, mi, -327.68–327.67		F52
R3X03B6	FAULT1_Z1	Line Z1 to Fault (magnitude)	W, 0.00–655.35		F53
		FAULT LOCATION 2			
R3X03B8L	FAULT2_DATE	Date of Fault (2 words)	–, –		F23
R3X03BAL	FAULT2_TIME	Time of Fault (2 words)	–, –		F22
R3X03BC	FAULT2_TYPE	Type of Fault	–, –		F76
R3X03BDI	FAULT2_DISTANCE	Distance to Fault	km, -327.68–327.67		F52
R3X03BE	FAULT2_Z1	Line Z1 to Fault (magnitude)	W, 0.00–655.35		F53
		FAULT LOCATION 3			
R3X03C0L	FAULT3_DATE	Date of Fault (2 words)	–, –		F23
R3X03C2L	FAULT3_TIME	Time of Fault (2 words)	–, –		F22
R3X03C4	FAULT3_TYPE	Type of Fault	–, –		F76
R3X03C5I	FAULT3_DISTANCE	Distance to Fault	km, -327.68–327.67		F52
R3X03C6	FAULT3_Z1	Line Z1 to Fault (magnitude)	W, 0.00–655.35		F53
		FAULT LOCATION 4			

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X03C8L	FAULT4_DATE	Date of Fault (2 words)	-, -		F23
R3X03CAL	FAULT4_TIME	Time of Fault (2 words)	-, -		F22
R3X03CC	FAULT4_TYPE	Type of Fault	-, -		F76
R3X03CDI	FAULT4_DISTANCE	Distance to Fault	km, -327.68-327.67		F52
R3X03CE	FAULT4_Z1	Line Z1 to Fault (magnitude)	W, 0.00-655.35		F53
		FAULT LOCATION 5			
R3X03D0L	FAULT5_DATE	Date of Fault (2 words)	-, -		F23
R3X03D2L	FAULT5_TIME	Time of Fault (2 words)	-, -		F22
R3X03D4	FAULT5_TYPE	Type of Fault	-, -		F76
R3X03D5I	FAULT5_DISTANCE	Distance to Fault	km, -327.68-327.67		F52
R3X03D6	FAULT5_Z1	Line Z1 to Fault (magnitude)	W, 0.00-655.35		F53
		FAULT LOCATION 6			
R3X03D8L	FAULT6_DATE	Date of Fault (2 words)	-, -		F23
R3X03DAL	FAULT6_TIME	Time of Fault (2 words)	-, -		F22
R3X03DC	FAULT6_TYPE	Type of Fault	-, -		F76
R3X03DDI	FAULT6_DISTANCE	Distance to Fault	km, -327.68-327.67		F52
R3X03DE	FAULT6_Z1	Line Z1 to Fault (magnitude)	W, 0.00-655.35		F53
		FAULT LOCATION 7			
R3X03E0L	FAULT7_DATE	Date of Fault (2 words)	-, -		F23
R3X03E2L	FAULT7_TIME	Time of Fault (2 words)	-, -		F22
R3X03E4	FAULT7_TYPE	Type of Fault	-, -		F76
R3X03E5I	FAULT7_DISTANCE	Distance to Fault	km, -327.68-327.67		F52
R3X03E6	FAULT7_Z1	Line Z1 to Fault (magnitude)	W, 0.00-655.35		F53
		FAULT LOCATION 8			
R3X03E8L	FAULT8_DATE	Date of Fault (2 words)	-, -		F23
R3X03EAL	FAULT8_TIME	Time of Fault (2 words)	-, -		F22
R3X03EC	FAULT8_TYPE	Type of Fault	-, -		F76
R3X03EDI	FAULT8_DISTANCE	Distance to Fault	km, -327.68-327.67		F52
R3X03EE	FAULT8_Z1	Line Z1 to Fault (magnitude)	W, 0.00-655.35		F53
		FAULT LOCATION 9			
R3X03F0L	FAULT9_DATE	Date of Fault (2 words)	-, -		F23
R3X03F2L	FAULT9_TIME	Time of Fault (2 words)	-, -		F22
R3X03F4	FAULT9_TYPE	Type of Fault	-, -		F76
R3X03F5I	FAULT9_DISTANCE	Distance to Fault	km, -327.68-327.67		F52
R3X03F6	FAULT9_Z1	Line Z1 to Fault (magnitude)	W, 0.00-655.35		F53
		FAULT LOCATION 10			
R3X03F8L	FAULT10_DATE	Date of Fault (2 words)	-, -		F23
R3X03FAL	FAULT10_TIME	Time of Fault (2 words)	-, -		F22
R3X03FC	FAULT10_TYPE	Type of Fault	-, -		F76
R3X03FDI	FAULT10_DISTANCE	Distance to Fault	km, -327.68-327.67		F52
R3X03FE	FAULT10_Z1	Line Z1 to Fault (magnitude)	W, 0.00-655.35		F53
A2		CURRENT PHASE ANGLES			
R3X0400	AMPS_A_ANGLE	Phase A Current Angle	° Lag, 0-359		F1
R3X0401	AMPS_B_ANGLE	Phase B Current Angle	° Lag, 0-359		F1
R3X0402	AMPS_C_ANGLE	Phase C Current Angle	° Lag, 0-359		F1
R3X0403	NEUT_CURR_ANGLE	Neutral Current Angle	° Lag, 0-359		F1
R3X0404	GND_CURR_ANGLE	Ground Current Angle	° Lag, 0-359		F1
R3X0405	GND_POLAR_CURR_ANGLE	Ground Polarizing Current Angle	° Lag, 0-359		F1
R3X0406	SENS_GND_CURR_ANGLE	Sensitive Ground Current Angle	° Lag, 0-359		F1
A2		VOLTAGE PHASE ANGLES			

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X0410	VOLTS_AN_ANGLE	A-N Voltage Angle	° Lag, 0–359		F1
R3X0411	VOLTS_BN_ANGLE	B-N Voltage Angle	° Lag, 0–359		F1
R3X0412	VOLTS_CN_ANGLE	C-N Voltage Angle	° Lag, 0–359		F1
R3X0413	VOLTS_AB_ANGLE	A-B Voltage Angle	° Lag, 0–359		F1
R3X0414	VOLTS_BC_ANGLE	B-C Voltage Angle	° Lag, 0–359		F1
R3X0415	VOLTS_CA_ANGLE	C-A Voltage Angle	° Lag, 0–359		F1
R3X0416	NEUTRAL_VOLTS_ANGLE	Neutral Voltage Angle	° Lag, 0–359		F1
A2		SYMMETRICAL COMPONENTS			
R3X0420	POS_SEQ_CURR	Positive Sequence Current Magnitude	A, 0–65535		F1
R3X0421	POS_SEQ_CURR_ANGLE	Positive Sequence Current Angle	° Lag, 0–359		F1
R3X0422	NEG_SEQ_CURR	Negative Sequence Current Magnitude	A, 0–65535		F1
R3X0423	NEG_SEQ_CURR_ANGLE	Negative Sequence Current Angle	° Lag, 0–359		F1
R3X0424	ZERO_SEQ_CURR	Zero Sequence Current Magnitude	A, 0–65535		F1
R3X0425	ZERO_SEQ_CURR_ANGLE	Zero Sequence Current Angle	° Lag, 0–359		F1
R3X0426	POS_SEQ_VOLTS	Positive Sequence Voltage Magnitude	kV, 0.00–600.00		F3
R3X0427	POS_SEQ_V_ANGLE	Positive Sequence Voltage Angle	° Lag, 0–359		F1
R3X0428	NEG_SEQ_VOLTS	Negative Sequence Voltage Magnitude	kV, 0.00–600.00		F3
R3X0429	NEG_SEQ_V_ANGLE	Negative Sequence Voltage Angle	° Lag, 0–359		F1
R3X042A	ZERO_SEQ_VOLTS	Zero Sequence Voltage Magnitude	kV, 0.00–600.00		F3
R3X042B	ZERO_SEQ_V_ANGLE	Zero Sequence Voltage Angle	° Lag, 0–359		F1
		PROTECTION FUNCTION STATES			
R3X0601	ALM_PH_TIME_OC1	Phase Time Overcurrent 1	-, -		F49
R3X0602	ALM_PH_INST_OC1	Phase Inst Overcurrent 1	-, -		F49
R3X0603	ALM_PH_INST_OC2	Phase Inst Overcurrent 2	-, -		F49
R3X0604	ALM_GND_TIME_OC	Ground Time Overcurrent	-, -		F49
R3X0605	ALM_GND_INST_OC	Ground Inst Overcurrent	-, -		F49
R3X0606	ALM_N_TIME_OC1	Neutral Time Overcurrent 1	-, -		F49
R3X0607	ALM_N_TIME_OC2	Neutral Time Overcurrent 2	-, -		F49
R3X0608	ALM_N_INST_OC1	Neutral Inst Overcurrent 1	-, -		F49
R3X0609	ALM_N_INST_OC2	Neutral Inst Overcurrent 2	-, -		F49
R3X060A	ALM_PH_DIR_BLK	Phase Directional Blocking	-, -		F49
R3X060B	ALM_GND_DIR_BLK	Ground Directional Blocking	-, -		F49
R3X060C	ALM_MAN_CLS_BLK	Manual Close Blocking	-, -		F49
R3X060D	ALM_CLD_LD_PU_BLK	Cold Load Pickup Blocking	-, -		F49
R3X060E	ALM_BUS_UV1	Bus Undervoltage 1	-, -		F49
R3X060F	ALM_BUS_UV2	Bus Undervoltage 2	-, -		F49
R3X0610	ALM_LN_UV3	Line Undervoltage 3	-, -		F49
R3X0611	ALM_LN_UV4	Line Undervoltage 4	-, -		F49
R3X0612	ALM_OV1	Overvoltage 1	-, -		F49
R3X0613	ALM_OV2	Overvoltage 2	-, -		F49
R3X0614	ALM_UF1	Underfrequency 1	-, -		F49
R3X0615	ALM_UF2	Underfrequency 2	-, -		F49
R3X0616	ALM_PH_CURR_LVL	Phase Current Level	-, -		F49
R3X0617	ALM_N_CURR_LVL	Neutral Current Level	-, -		F49
R3X0618	ALM_PF1	Power Factor 1	-, -		F49
R3X0619	ALM_PF2	Power Factor 2	-, -		F49
R3X061A	ALM_SYNC_CHK_BLK	Synchrocheck Block (Not In Sync)	-, -		F49
R3X061B	ALM_CURR_DMND	Current Demand	-, -		F49
R3X061C	ALM_MW_DMND	Real Power Demand	-, -		F49
R3X061D	ALM_MVAR_DMND	Reactive Power Demand	-, -		F49

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X061E	ALM_MVA_DMND	Apparent Power Demand	-, -		F49
R3X061F	ALM_ANAL_IN_THR1	Analog Input Threshold 1	-, -		F49
R3X0620	ALM_ANAL_IN_THR2	Analog Input Threshold 2	-, -		F49
R3X0621	ALM_ANAL_IN_ROC1	Analog Input Rate of Change 1	-, -		F49
R3X0622	ALM_ANAL_IN_ROC2	Analog Input Rate of Change 2	-, -		F49
R3X0623	ALM_OF	Overfrequency	-, -		F49
R3X0624	ALM_TRP_CTR	Trip Counter	-, -		F49
R3X0625	ALM_ARC_CURR	Arcing Current	-, -		F49
R3X0626	ALM_VT_FAIL	VT Failure	-, -		F49
R3X0627	ALM_BRKR_FAIL	Breaker Failure	-, -		F49
R3X0628	ALM_BRKR_OP_FAIL	Breaker Operation Failure	-, -		F49
R3X0629	ALM_TRP_COIL_FAIL	Trip Coil Failure	-, -		F49
R3X062A	ALM_CLS_COIL_FAIL	Close Coil Failure	-, -		F49
R3X062B	ALM_USER_IN_A	User Input A	-, -		F49
R3X062C	ALM_USER_IN_B	User Input B	-, -		F49
R3X062D	ALM_USER_IN_C	User Input C	-, -		F49
R3X062E	ALM_USER_IN_D	User Input D	-, -		F49
R3X062F	ALM_USER_IN_E	User Input E	-, -		F49
R3X0630	ALM_USER_IN_F	User Input F	-, -		F49
R3X0631	ALM_USER_IN_G	User Input G	-, -		F49
R3X0632	ALM_USER_IN_H	User Input H	-, -		F49
R3X0633	ALM_NEG_SEQ_IOC	Negative Sequence Instantaneous O/C	-, -		F49
R3X0634	ALM_NEG_SEQ_TOC	Negative Sequence Time O/C	-, -		F49
R3X0635	ALM_NEG_SEQ_OV	Negative Sequence Overvoltage	-, -		F49
R3X0636	ALM_UV_RESTOR	Undervoltage Restoration	-, -		F49
R3X0637	ALM_UF_RESTOR	Underfrequency Restoration	-, -		F49
R3X0638	ALM_PH_TIME_OC2	Phase Time Overcurrent 2	---, ---, ---		F49
R3X0639	ALM_FREQ_DECAY	Frequency Decay	---, ---, ---		F49
R3X063A	NEG_SEQ_REVERSE	Negative Sequence Directional is Reverse	---, ---, ---		F49
R3X063B	SENSITIVE_GND_INST_OC	Sensitive Ground Instantaneous O/C	---, ---, ---		F49
R3X063C	SENSITIVE_GND_TIME_OC	Sensitive Ground Time O/C	---, ---, ---		F49
R3X063D	SENSITIVE_GND_REVERSE	Sensitive Ground Directional is Reverse	---, ---, ---		F49
R3X063E	--	Reserved for MOD 008	---, ---, ---		F49
R3X063F	NEUT_DISP	Neutral Displacement	---, ---, ---		F49
R3X0640	PULSE_OUT_POS_WATT_HR	Pulse Output Positive Watthours	---, ---, ---		F49
R3X0641	PULSE_OUT_NEG_WATT_HR	Pulse Output Negative Watthours	---, ---, ---		F49
R3X0642	PULSE_OUT_POS_VAR_HR	Pulse Output Positive Varhours	---, ---, ---		F49
R3X0643	PULSE_OUT_NEG_VAR_HR	Pulse Output Negative Varhours	---, ---, ---		F49
R3X0644	GND_REVERSE	Ground Directional is Reverse	---, ---, ---		F49
R3X0645	---	Reserved for MOD 010	---, ---, ---		F49
R3X0646	USER_INPUT_I	User Input I	---, ---, ---		F49
R3X0647	USER_INPUT_J	User Input J	---, ---, ---		F49
R3X0648	USER_INPUT_K	User Input K	---, ---, ---		F49
R3X0649	USER_INPUT_L	User Input L	---, ---, ---		F49
R3X064A	USER_INPUT_M	User Input M	---, ---, ---		F49
R3X064B	USER_INPUT_N	User Input N	---, ---, ---		F49
R3X064C	USER_INPUT_O	User Input O	---, ---, ---		F49
R3X064D	USER_INPUT_P	User Input P	---, ---, ---		F49
R3X064E	USER_INPUT_Q	User Input Q	---, ---, ---		F49

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X064F	ALM_NEUTRAL_DISPL	Neutral Displacement	---, ---, ---		F49
R3X0650	USER_INPUT_S	User Input S	---, ---, ---		F49
R3X0651	USER_INPUT_T	User Input T	---, ---, ---		F49
R3X0652	AUTO_RCLS_RATE_SUP	Autoreclose Rate Supervision	---, ---, ---		F49
R3X0653	RESTRICT_EARTH_FAULT	Restricted Earth Fault	---, ---, ---		F49

COMMAND COILS

The Multilin SR750 implements commands by writing an operation code to a designated command register (address R4X0080). The command codes are provided in the table below.

Setpoint Registers		
Operation Code	Name	Description
0000	NO OPERATION	Does not do anything.
0001	RESET	Performs the same function as the device's front-panel RESET key.
0002	OPEN BREAKER	Performs the same function as the device's front-panel OPEN key.
0003	CLOSE BREAKER	Performs the same function as the device's front-panel CLOSE key.
0004	SET TIME	Sets the device's internal clock time. See the Multilin 750 manual, section Clock Synchronization of Multiple Relays, for details.
0005	SET DATE	Sets the device's internal clock date. See the Multilin 750 manual, section Clock Synchronization of Multiple Relays, for details.
0006	TRIGGER TRACE MEMORY	Performs the same function as the logic input function Trigger Trace Memory.
0007	CLEAR ENERGY USE DATA	Performs the same function as the device's front-panel CLEAR ENERGY USE DATA command.
0008	CLEAR MAX DEMAND DATA	Performs the same function as the device's front-panel CLEAR MAX DEMAND DATA command.
0009	CLEAR EVENT RECORDER DATA	Performs the same function as the device's front-panel CLEAR EVENT RECORDER DATA command.
000A	RESET TRIP COUNTER DATA	Performs the same function as the device's front-panel RESET TRIP COUNTER command.
000B	RESET ARCING CURRENT DATA	Performs the same function as the device's front-panel RESET ARCING CURRENT DATA command.
000C	DISPLAY OVERRIDE PACKET	Displays the 40-character (20-register) Override_Packet (address 10B1–10C4 hex) for the time specified in Override_Time (address 10B0 hex).
000D	TRIGGER DATA LOGGER	Performs the same function as the logic input function Trigger Data Logger.

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- *SETPOINT REGISTERS*

- *ACTUAL VALUES*

- *COMMAND COILS*

Format Codes

The Format Codes column contains references to special formatting that applies to a given register. These formatting characteristics are provided in the Multilin SR760 Instruction Manual.

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
		COMMANDS		R/W	
R4X0080	COMMAND_CODE	Command Operation Code	--- 0 ---		F19
R4X0081	SIM_KEYPRESS	Simulate Front Panel Key Press	---, ---, ---		F55
R4X0088S8	COMM_PORT_PASSCODE	Communications Port Passcode (4 words)	---, ---, ---		F33
R4X00F0L	SET_TIME_CMD	Set Time (2 words)	---, ---, ---		F22
R4X00F2L	SET_DATE_CMD	Set Date (2 words)	---, ---, ---		F23
		VIRTUAL INPUTS		R/W	
R4X0091	VIRT_IN1	Virtual Input 1	--- NA ---		F66
R4X0092	VIRT_IN2	Virtual Input 2	--- NA ---		F66
R4X0093	VIRT_IN3	Virtual Input 3			
R4X0094	VIRT_IN4	Virtual Input 4			
R4X0095	VIRT_IN5	Virtual Input 5			
R4X0096	VIRT_IN6	Virtual Input 6			
R4X0097	VIRT_IN7	Virtual Input 7			
R4X0098	VIRT_IN8	Virtual Input 8			
R4X0099	VIRT_IN9	Virtual Input 9			
R4X009A	VIRT_IN10	Virtual Input 10			
R4X009B	VIRT_IN11	Virtual Input 11			
R4X009C	VIRT_IN12	Virtual Input 12			
R4X009D	VIRT_IN13	Virtual Input 13			
R4X009E	VIRT_IN14	Virtual Input 14			
R4X009F	VIRT_IN15	Virtual Input 15			
R4X00A0	VIRT_IN16	Virtual Input 16			
R4X00A1	VIRT_IN17	Virtual Input 17			
R4X00A2	VIRT_IN18	Virtual Input 18			
R4X00A3	VIRT_IN19	Virtual Input 19			
R4X00A4	VIRT_IN20	Virtual Input 20	--- NA ---		F66
R4X00F0L	SET_TIME_CMD	Set Time (2 words)	- , - , -	RW	F22
R4X00F1L	SET_DATE_2	Set Date (2 words)	- , - , -	RW	F23
R4X00F2L	SET_DATE_CMD	Set Date (2 words)			F23
		SR750/760 SETUP		R/W	

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1000	BEEPER	Beeper	--- Enabled ---		F30
R4X1001	FLSH_MSG_TIME	Flash Message Time	s 4.0 s 0.5 to 10.0		F2
R4X1002	DFT_MSG_TIMEOUT	Default Message Timeout	s 300 s 10 to 900		F1
R4X1003	DFT_MSG_INTEN	Default Message Intensity (25, 50, 75, or 100)	% 25% 25 to 100		F1
R4X1004	DISP_FILTER_CONST	Display Filter Constant	--- 0 0 to 255		F1
R4X1006L	SET_DATE	Set Date (2 words)	--- 1/1/93 ---		F23
R4X1008L	SET_TIME	Set Time (2 words)	--- 00:00.0 ---		F22
R4X100A	760_OP	SR760 Operation	--- Not Ready ---		F29
R4X100B	IRIG_B_TIME_SYNC	IRIG-B Signal Type	--- None ---		F43
R4X100CS8	ENCRYPTED_PASSCODE	Encrypted Passcode (4 words)	--- AIKFBAIK ---		F33
		EVENT RECORDER SETUP		R/W	
R4X1010	EVNT_REC_FUNC	Event Recorder Function	--- Enabled ---		F30
R4X1011	REC_TRP_EVNT	Recording of Trip Events	--- Enabled ---		F30
R4X1012	REC_ALM_EVNT	Recording of Alarm Events	--- Enabled ---		F30
R4X1013	REC_CNTR_EVNT	Recording of Control Events	--- Enabled ---		F30
R4X1014	REC_LOGIC_IN_EVNT	Recording of Logic Input Events	--- Enabled ---		F30
R4X1015	REC_PU_EVNT	Recording of Pickup Events	--- Enabled ---		F30
R4X1016	REC_DO_EVNT	Recording of Dropout Events	--- Enabled ---		F30

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1017	REC_SET_DATE_EVNT	Recording of Set Time/Date Events	--- Enabled ---		F30
		TRACE MEMORY SETUP	R/W	R/W	
R4X1018	BUFFER_ORG	Buffer Organization	--- 16 x 256 ---		F81
R4X1019	TRIG_POS	Trigger Position	% 25% 0 to 100		F1
R4X101A	TRIG_SOURCE	Trigger Source	--- Pickup & Trip ---		F82
		DEFAULT MESSAGES	R/W	R/W	
R4X1020	MSGSEL	Number Of Messages Selected (read only)	--- 3 0 to 20		F1
R4X1021	DFT_MSG1	Default Message #1	---, ---, ---		F32
R4X1022	DFT_MSG2	Default Message #2	---, ---, ---		F32
R4X1023	DFT_MSG3	Default Message #3	---, ---, ---		F32
R4X1024	DFT_MSG4	Default Message #4	---, ---, ---		F32
R4X1025	DFT_MSG5	Default Message #5	---, ---, ---		F32
R4X1026	DFT_MSG6	Default Message #6	---, ---, ---		F32
R4X1027	DFT_MSG7	Default Message #7	---, ---, ---		F32
R4X1028	DFT_MSG8	Default Message #8	---, ---, ---		F32
R4X1029	DFT_MSG9	Default Message #9	---, ---, ---		F32
R4X102A	DFT_MSG10	Default Message #10	---, ---, ---		F32
R4X102B	DFT_MSG11	Default Message #11	---, ---, ---		F32
R4X102C	DFT_MSG12	Default Message #12	---, ---, ---		F32
R4X102D	DFT_MSG13	Default Message #13	---, ---, ---		F32
R4X102E	DFT_MSG14	Default Message #14	---, ---, ---		F32
R4X102F	DFT_MSG15	Default Message #15	---, ---, ---		F32
R4X1030	DFT_MSG16	Default Message #16	---, ---, ---		F32
R4X1031	DFT_MSG17	Default Message #17	---, ---, ---		F32
R4X1032	DFT_MSG18	Default Message #18	---, ---, ---		F32
R4X1033	DFT_MSG19	Default Message #19	---, ---, ---		F32
R4X1034	DFT_MSG20	Default Message #20	---, ---, ---		F32
R4X1035	DFT_MSG21	Default Message #21	---, ---, ---		F32
R4X1036	DFT_MSG22	Default Message #22	---, ---, ---		F32
R4X1037	DFT_MSG23	Default Message #23	---, ---, ---		F32
R4X1038	DFT_MSG24	Default Message #24	---, ---, ---		F32
R4X1039	DFT_MSG25	Default Message #25	---, ---, ---		F32
R4X103A	DFT_MSG26	Default Message #26	---, ---, ---		F32
R4X103B	DFT_MSG27	Default Message #27	---, ---, ---		F32

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X103C	DFT_MSG28	Default Message #28	---, ---, ---		F32
R4X103D	DFT_MSG29	Default Message #29	---, ---, ---		F32
R4X103E	DFT_MSG30	Default Message #30	---, ---, ---		F32
		USER TEXT MESSAGES		R/W	
R4X1040S40	USR_TXT_MSG1	User Text Message 1 (20 words)	--- Text 1 ---		F33
R4X1054S40	USR_TXT_MSG2	User Text Message 2 (20 words)	--- Text 2 ---		F33
R4X1068S40	USR_TXT_MSG3	User Text Message 3 (20 words)	--- Text 3 ---		F33
R4X107CS40	USR_TXT_MSG4	User Text Message 4 (20 words)	--- Text 4 ---		F33
R4X1090S40	USR_TXT_MSG5	User Text Message 5 (20 words)	--- Text 5 ---		F33
		OVERRIDE MESSAGE	R/W	R/W	
R4X10B0	OVRD_MSG_DISP_TIME	Override Message Display Time	s 0 s 0 to 9000		F1
R4X10B1S40	OVRD_MSG	Override Message (20 words)	--- This is a test ---		F33
		COMMUNICATIONS		R/W	
R4X10D0	MODBUS_ADDR	Slave Address	--- 254 1 to 254		F1
R4X10D1	COM1_BAUD	COM1 Baud Rate	--- 9600 ---		F31
R4X10D2	COM1_PARITY	COM1 Parity	--- None ---		F27
R4X10D3	COM1_HW	COM1 Communication Hardware	--- RS485 ---		F17
R4X10D4	FRNT_RS232_BAUD	Front Panel RS232 Baud Rate	--- 9600 ---		F31
R4X10D5	FRNT_RS232_PARITY	Front Panel RS232 Parity	--- None ---		F27
R4X10D8	COM2_BAUD	COM2 Baud Rate	--- 9600 ---		F31
R4X10D9	COM2_PARITY	COM2 Parity	--- None ---		F27

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes

R4X10DA	DNP_PORT	DNP Port	--- None ---		F62
R4X10DB	DNP_POINT_MAPPING	DNP Point Mapping			F30
		DATA LOGGER	R/W	R/W	
R4X10E0	DL_SAMPLE_RATE	Sample Rate	--- 1 cycle ---		F74
R4X10E1	DL_CONT_MODE	Continuous Mode	--- Disabled ---		F30
R4X10E2	DL_BUFFER_ORG	Buffer Organization	--- 16 x 256 ---		F81
R4X10E3	DL_TRIG_POS	Trigger Position	% 25% 0 to 100		F1
R4X10E4	DL_TRIG_SRC	Trigger Source	--- Pickup & Trip ---		F82
R4X10E5	DL_CH1_SRC	Channel 1 Source	--- la ---		F77
R4X10E6	DL_CH2_SRC	Channel 2 Source	--- lb ---		F77
R4X10E7	DL_CH3_SRC	Channel 3 Source	--- lc ---		F77
R4X10E8	DL_CH4_SRC	Channel 4 Source	--- lg ---		F77
R4X10E9	DL_CH5_SRC	Channel 5 Source	--- Van ---		F77
R4X10EA	DL_CH6_SRC	Channel 6 Source	--- Vbn ---		F77
R4X10EB	DL_CH7_SRC	Channel 7 Source	--- Vcn ---		F77
R4X10EC	DL_CH8_SRC	Channel 8 Source	--- Frequency ---		F77
R4X10F0	XMISSION_DLY	Transmission Delay	---, ms, 0 to 65000		F1
R4X10F1	DL_CONF_MODE	Data Link Confirmation Mode	---, ---, ---		F89
R4X10F2	DL_CONF_TIMEOUT	Data Link Confirmation Timeout	---, ms, 1 to 65000		F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X10F3	DL_CONF_RETRIES	Data Link Confirmation Retries	---, ---, 0 to 100		F1
R4X10F4	ARM_TMR_DURATION	Select/Operate Arm Timer Duration	---, ms, 1 to 65000		F1
R4X10F5	WRITE_TIME_EN	Write Time Interval	---, ms, 0 to 65000		F1
R4X10F6	INHIBIT_COLD_RESTART	Inhibit Cold Restart	---, ---, ---		F30
		SYSTEM SETUP	R/W	R/W	
R4X1100	CT_PRIMARY	Phase CT Primary	A 1000 A 1 to 5000		F1
R4X1102	GND_CT_PRI	Ground CT Primary	A 50 A 1 to 5000		F1
R4X1103	VT_CONN_TYPE	Bus VT Connection Type	--- Wye ---		F28
R4X1104	VT_NOM_SEC	Bus Nominal VT Secondary Voltage	V 120.0 V 50.0 to 240.0		F2
R4X1105	VT_RATIO	Bus VT Ratio	xxx : 1 120.0:1 1.0 to 5000.0		F2
R4X1106	NOM_FREQ	Nominal Frequency	Hz 60 Hz 25 to 60		F1
R4X1107	COST_OF_ENERGY	Cost of energy	¢/kWh 5.0 ¢/kWh 1.0 to 25.0		F2
		Reserved for Polarizing CT Primary	A 200 A 1 to 5000		F1
R4X1109	LN_VT_CONN	Line VT Connection	--- Vbn ---		F18
R4X110A	LN_VT_NOM_SEC	Line Nominal VT Secondary Voltage	V 120.0 V 50.0 to 240.0		F2
R4X110B	LN_VT_RATIO	Line VT Ratio	xxx : 1 120.0:1 1.0 to 5000.0		F1
R4X110C	LN_PHASE_SEQ	Phase Sequence	--- ABC ---		F83
R4X110D	SENS_GND_CT_PRI	Sensitive Ground CT Primary	A 1000 A 1 to 50000		F1
		LOGIC INPUT STATE LOGIC		R/W	
R4X1140	LI1_ASSERT_LOGIC	Logic Input 1 Asserted Logic	--- Contact Close ---		F63
R4X1141	LI2_ASSERT_LOGIC	Logic Input 2 Asserted Logic	--- Contact Close		F63

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes

R4X1142	LI3_ASSERT_LOGIC	Logic Input 3 Asserted Logic	--- Contact Close ---		F63
R4X1143	LI4_ASSERT_LOGIC	Logic Input 4 Asserted Logic	--- Contact Close ---		F63
R4X1144	LI5_ASSERT_LOGIC	Logic Input 5 Asserted Logic	--- Contact Close ---		F63
R4X1145	LI6_ASSERT_LOGIC	Logic Input 6 Asserted Logic	--- Contact Close ---		F63
R4X1146	LI7_ASSERT_LOGIC	Logic Input 7 Asserted Logic	--- Contact Close ---		F63
R4X1147	LI8_ASSERT_LOGIC	Logic Input 8 Asserted Logic	--- Contact Close ---		F63
R4X1148	LI9_ASSERT_LOGIC	Logic Input 9 Asserted Logic	--- Contact Close ---		F63
R4X1149	LI10_ASSERT_LOGIC	Logic Input 10 Asserted Logic	--- Contact Close ---		F63
R4X114A	LI11_ASSERT_LOGIC	Logic Input 11 Asserted Logic	--- Contact Close ---		F63
R4X114B	LI12_ASSERT_LOGIC	Logic Input 12 Asserted Logic	--- Contact Close ---		F63
R4X114C	LI13_ASSERT_LOGIC	Logic Input 13 Asserted Logic	--- Contact Close ---		F63
R4X114D	LI14_ASSERT_LOGIC	Logic Input 14 Asserted Logic	--- Contact Close ---		F63
R4X114E	LI15_ASSERT_LOGIC	Logic Input 15 Asserted Logic	--- Disabled ---		F64
R4X114F	LI16_ASSERT_LOGIC	Logic Input 16 Asserted Logic	--- Disabled ---		F64
R4X1150	LI17_ASSERT_LOGIC	Logic Input 17 Asserted Logic	--- Disabled ---		F64
R4X1151	LI18_ASSERT_LOGIC	Logic Input 18 Asserted Logic	--- Disabled ---		F64
R4X1152	LI19_ASSERT_LOGIC	Logic Input 19 Asserted Logic	--- Disabled ---		F64

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1153	LI20_ASSERT_LOGIC	Logic Input 20 Asserted Logic	--- Disabled ---		F64
		BREAKER FUNCTIONS		R/W	
R4X1160	52A_CONTACT_FUNC	52a Contact	--- Disabled ---		F65
R4X1161	52B_CONTACT_FUNC	52b Contact	--- Disabled ---		F65
R4X1162	BRKR_CONNECT_FUNC	Breaker Connected	--- Disabled ---		F65
		CONTROL FUNCTIONS		R/W	
R4X1170	LOCAL_MODE_FUNC	Local Mode	--- Disabled ---		F65
R4X1171	REM_RST_FUNC	Remote Reset	--- Disabled ---		F65
R4X1172	REM_OPEN_FUNC	Remote Open	--- Disabled ---		F65
R4X1173	REM_CLS_FUNC	Remote Close	--- Disabled ---		F65
R4X1174	CLD_LD_PU_FUNC	Cold Load Pickup	--- Disabled ---		F65
R4X1175	SP_GRP2_FUNC	Setpoint Group 2	--- Disabled ---		F65
R4X1176	SP_GRP3_FUNC	Setpoint Group 3	--- Disabled ---		F65
R4X1177	SP_GRP4_FUNC	Setpoint Group 4	--- Disabled ---		F65
		USER INPUT A		R/W	
R4X1180S18	USER_IN_A_NAME	User Input A Name (9 registers)	--- User Input A ---		F33
R4X1189	USER_IN_A_SRC	User Input A Source	--- Disabled ---		F65
R4X118A	USER_IN_A_FUNC	User Input A Function	--- Disabled ---		F37
R4X118B	USER_IN_A_RLYS	User Input A Relays	--- None ---		F57
R4X118C	USER_IN_A_DLY	User Input A Delay	s		F3

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0.00 s 0.00 to 600.00		
		USER INPUT B		R/W	
R4X1190S18	USER_IN_B_NAME	User Input B Name (9 registers)	--- User Input B ---		F33
R4X1199	USER_IN_B_SRC	User Input B Source	--- Disabled ---		F65
R4X119A	USER_IN_B_FUNC	User Input B Function	--- Disabled ---		F37
R4X119B	USER_IN_B_RLYS	User Input B Relays	--- None ---		F57
R4X119C	USER_IN_B_DLY	User Input B Delay	s 0.00 s 0.00 to 600.00		F3
		USER INPUT C		R/W	
R4X11A0S18	USER_IN_C_NAME	User Input C Name (9 registers)	--- User Input C ---		F33
R4X11A9	USER_IN_C_SRC	User Input C Source	--- Disabled ---		F65
R4X11AA	USER_IN_C_FUNC	User Input C Function	--- Disabled ---		F37
R4X11AB	USER_IN_C_RLYS	User Input C Relays	--- None ---		F57
R4X11AC	USER_IN_C_DLY	User Input C Delay	s 0.00 s 0.00 to 600.00		F3
		USER INPUT D		R/W	
R4X11B0S18	USER_IN_D_NAME	User Input D Name (9 registers)	--- User Input D ---		F33
R4X11B9	USER_IN_D_SRC	User Input D Source	--- Disabled ---		F65
R4X11BA	USER_IN_D_FUNC	User Input D Function	--- Disabled ---		F37
R4X11BB	USER_IN_D_RLYS	User Input D Relays	--- None ---		F57
R4X11BC	USER_IN_D_DLY	User Input D Delay	s 0.00 s 0.00 to 600.00		F3
		USER INPUT E		R/W	
R4X11C0S18	USER_IN_E_NAME	User Input E Name (9 registers)	---		F33

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			User Input E ---		
R4X11C9	USER_IN_E_SRC	User Input E Source	--- Disabled ---		F65
R4X11CA	USER_IN_E_FUNC	User Input E Function	--- Disabled ---		F37
R4X11CB	USER_IN_E_RLYS	User Input E Relays	--- None ---		F57
R4X11CC	USER_IN_E_DLY	User Input E Delay	s 0.00 s 0.00 to 600.00		F3
		USER INPUT F		R/W	
R4X11D0S18	USER_IN_F_NAME	User Input F Name (9 registers)	--- User Input F ---		F33
R4X11D9	USER_IN_F_SRC	User Input F Source	--- Disabled ---		F65
R4X11DA	USER_IN_F_FUNC	User Input F Function	--- Disabled ---		F37
R4X11DB	USER_IN_F_RLYS	User Input F Relays	--- None ---		F57
R4X11DC	USER_IN_F_DLY	User Input F Delay	s 0.00 s 0.00 to 600.00		F3
		USER INPUT G		R/W	
R4X11E0S18	USER_IN_G_NAME	User Input G Name (9 registers)	--- User Input G ---		F33
R4X11E9	USER_IN_G_SRC	User Input G Source	--- Disabled ---		F65
R4X11EA	USER_IN_G_FUNC	User Input G Function	--- Disabled ---		F37
R4X11EB	USER_IN_G_RLYS	User Input G Relays	--- None ---		F57
R4X11EC	USER_IN_G_DLY	User Input G Delay	s 0.00 s 0.00 to 600.00		F3
		USER INPUT H		R/W	
R4X11F0S18	USER_IN_H_NAME	User Input H Name (9 registers)	--- User Input H ---		F33
R4X11F9	USER_IN_H_SRC	User Input H Source	--- Disabled ---		F65

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes

R4X11FA	USER_IN_H_FUNC	User Input H Function	--- Disabled ---		F37
R4X11FB	USER_IN_H_RLYS	User Input H Relays	--- None ---		F57
R4X11FC	USER_IN_H_DLY	User Input H Delay	s 0.00 s 0.00 to 600.00		F3
		BLOCKING FUNCTIONS		R/W	
R4X1240	BLK_1_TRP_RLY	Block 1 TRIP Relay	--- Disabled ---		F65
R4X1241	BLK_2_CLS_RLY	Block 2 CLOSE Relay	--- Disabled ---		F65
R4X1242	BLK_RST	Block Reset	--- Disabled ---		F65
R4X1243	BLK_UV1	Block Undervoltage 1	--- Disabled ---		F65
R4X1244	BLK_UV2	Block Undervoltage 2	--- Disabled ---		F65
R4X1245	BLK_UV3	Block Undervoltage 3	--- Disabled ---		F65
R4X1246	BLK_UV4	Block Undervoltage 4	--- Disabled ---		F65
R4X1247	BLK_UF1	Block Underfrequency 1	--- Disabled ---		F65
R4X1248	BLK_UF2	Block Underfrequency 2	--- Disabled ---		F65
R4X1249	BYPASS_SYNC	Bypass Synchrocheck	--- Disabled ---		F65
R4X124A	BLK_BRKR_STAT	Block Breaker Statistics	--- Disabled ---		F65
R4X124B	BLK_NEG_SEQ_V	Block Negative Sequence Voltage	--- Disabled ---		F65
R4X124C	BLK_RESTOR	Block Restoration	--- Disabled ---		F65
R4X124D	BLK_FREQ_DECAY	Block Frequency Decay	--- Disabled ---		F65

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes

		Reserved for MOD 008	--- Disabled ---		F65
R4X124F	BLK_NEUT_DISP	Block Neutral Displacement	--- Disabled ---		F65
		OVERCURRENT BLOCKING FUNCTIONS		R/W	
R4X1260	BLK_ALL_OC	Block All Overcurrent	--- Disabled ---		F65
R4X1261	BLK_ALL_PH_OC	Block All Phase Overcurrent	--- Disabled ---		F65
R4X1262	BLK_ALL_GND_OC	Block All Ground Overcurrent	--- Disabled ---		F65
R4X1263	BLK_ALL_N_OC	Block All Neutral Overcurrent	--- Disabled ---		F65
R4X1264	BLK_PH_TIME_OC1	Block Phase Time Overcurrent 1	--- Disabled ---		F65
R4X1265	BLK_PH_INST_OC1	Block Phase Inst Overcurrent 1	--- Disabled ---		F65
R4X1266	BLK_PH_INST_OC2	Block Phase Inst Overcurrent 2	--- Disabled ---		F65
R4X1267	BLK_GND_TIME_OC	Block Ground Time Overcurrent	--- Disabled ---		F65
R4X1268	BLK_GND_INST_OC	Block Ground Inst Overcurrent	--- Disabled ---		F65
R4X1269	BLK_N_TIME_OC1	Block Neutral Time Overcurrent 1	--- Disabled ---		F65
R4X126A	BLK_N_TIME_OC2	Block Neutral Time Overcurrent 2	--- Disabled ---		F65
R4X126B	BLK_N_INST_OC1	Block Neutral Inst Overcurrent 1	--- Disabled ---		F65
R4X126C	BLK_N_INST_OC2	Block Neutral Inst Overcurrent 2	--- Disabled ---		F65
R4X126D	BLK_NEG_SEQ_TIME_OC	Block Negative Sequence Time Overcurrent	--- Disabled ---		F65
R4X126E	BLK_NEG_SEQ_INST_OC	Block Negative Sequence Inst Overcurrent	---		F65

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			Disabled ---		
R4X126F	BLK_PH_TIME_OC2	Block Phase Time Overcurrent 2	--- Disabled ---		F65
R4X1270	BLK_ALL_SENS_GND_OC	Block All Sensitive Ground Overcurrent	--- Disabled ---		F65
R4X1271	BLK_SENS_GND_INST_OC	Block Sensitive Ground Instantaneous O/C	--- Disabled ---		F65
R4X1272	BLK_SENS_GND_TIME_OC	Block Sensitive Ground Time O/C	--- Disabled ---		F65
		TRANSFER FUNCTIONS		R/W	
R4X1280	SEL_TO_TRP	Selected To Trip	--- Disabled ---		F65
R4X1281	UV_ON_OTH_SRC	Undervoltage on Other Source	--- Disabled ---		F65
R4X1282	INC1_BRKR_CLS	Incomer 1 Breaker Closed	--- Disabled ---		F65
R4X1283	INC2_BRKR_CLS	Incomer 2 Breaker Closed	--- Disabled ---		F65
R4X1284	TIE_BRKR_CONN	Tie Breaker Connected	--- Disabled ---		F65
R4X1285	TIE_BRKR_CLS	Tie Breaker Closed	--- Disabled ---		F65
R4X1286	BLK_TRANS	Block Transfer	--- Disabled ---		F65
R4X1287	TRANS_LOCK	Transformer Lockout	--- Disabled ---		F65
R4X1288	SRC_TRP	Source Trip	--- Disabled ---		F65
R4X1289	CLS_INC1	Close From Incomer 1	--- Disabled ---		F65
R4X128A	CLS_INC2	Close From Incomer 2	--- Disabled ---		F65
		AUTORECLOSE FUNCTIONS (SR760 ONLY)		R/W	
R4X1290	INIT_RECL	Initiate Reclosure	--- Disabled		F65

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes

R4X1291	CAN_RECL	Cancel Reclosure	--- Disabled ---		F65
R4X1292	BLK_RECL	Block Reclosure	--- Disabled ---		F65
		MISCELLANEOUS FUNCTIONS		R/W	
R4X12A0	TRIG_TM	Trigger Trace Memory	--- Disabled ---		F65
R4X12A1	SIM_FAULT	Simulate Fault	--- Disabled ---		F65
R4X12A2	TRIG_DL	Trigger Data Logger	--- Disabled ---		F65
R4X12A3	START_DMD_INTVL	Start Demand Interval	---		F65
R4X1300	RLY1_TRP_SEAL_TIME	Relay 2 TRIP Seal In Time	s, 0.00 to 9.99		F3
R4X1310		Relay 2 CLOSE Seal In Time	s, 0.00 to 9.99		F3
		RELAY 3 AUXILIARY		R/W	
R4X1320S16	RLY3_AUX_NAME	Relay 3 AUXILIARY Name (8 words)	--- AUXILIARY ---		F33
R4X1328	RLY3_AUX_NONOP_STATE	Relay 3 AUXILIARY Non-operated State	--- De-energized ---		F34
R4X1329	RLY3_AUX_OUTPUT_TYPE	Relay 3 AUXILIARY Output Type	--- Self-resetting ---		F35
R4X132A	RLY3_AUX_PULSE_DWELL	Relay 3 AUXILIARY Pulse Dwell Time	s 0.1 s 0.1 to 6000.0		F2
		RELAY 4 AUXILIARY		R/W	
R4X1330S16	RLY4_AUX_NAME	Relay 4 AUXILIARY Name (8 words)	--- AUXILIARY ---		F33
R4X1338	RLY4_AUX_NONOP_STATE	Relay 4 AUXILIARY Non-operated State	--- De-energized ---		F34
R4X1339	RLY4_AUX_OUTPUT_TYPE	Relay 4 AUXILIARY Output Type	--- Self-resetting ---		F35
R4X133A	RLY4_AUX_PULSE_DWELL	Relay 4 AUXILIARY Pulse Dwell Time	s 0.1 s 0.1 to 6000.0		F2
		RELAY 5 AUXILIARY		R/W	
R4X1340S16	RLY5_AUX_NAME	Relay 5 AUXILIARY Name (8 words)	--- AUXILIARY ---		F33
R4X1348	RLY5_AUX_NONOP_STATE	Relay 5 AUXILIARY Non-operated State	---		F34

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			De-energized ---		
R4X1349	RLY5_AUX_OUTPUT_TYPE	Relay 5 AUXILIARY Output Type	--- Self-resetting ---		F35
R4X134A	RLY5_AUX_PULSE_DWELL	Relay 5 AUXILIARY Pulse Dwell Time	s 0.1 s 0.1 to 6000.0		F2
		RELAY 6 AUXILIARY		R/W	
R4X1350S16	RLY6_AUX_NAME	Relay 6 AUXILIARY Name (8 words)	--- AUXILIARY ---		F33
R4X1358	RLY6_AUX_NONOP_STATE	Relay 6 AUXILIARY Non-operated State	--- De-energized ---		F34
R4X1359	RLY6_AUX_OUTPUT_TYPE	Relay 6 AUXILIARY Output Type	--- Self-resetting ---		F35
R4X135A	RLY6_AUX_PULSE_DWELL	Relay 6 AUXILIARY Pulse Dwell Time	s 0.1 s 0.1 to 6000.0		F2
		RELAY 7 AUXILIARY		R/W	
R4X1360S16	RLY7_AUX_NAME	Relay 7 AUXILIARY Name (8 words)	--- AUXILIARY ---		F33
R4X1368	RLY7_AUX_NONOP_STATE	Relay 7 AUXILIARY Non-operated State	--- De-energized ---		F34
R4X1369	RLY7_AUX_OUTPUT_TYPE	Relay 7 AUXILIARY Output Type	--- Self-resetting ---		F35
R4X136A	RLY7_AUX_PULSE_DWELL	Relay 7 AUXILIARY Pulse Dwell Time	s 0.1 s 0.1 to 6000.0		F2
S3		USER INPUT I		RW	
R4X1370		User Input I Name (9 Registers)	---, ---	RW	F33
R4X1379		User Input I Source	---, ---	RW	F65
R4X137A		User Input I Function	---, ---	RW	F37
R4X137B		User Input I Relays	---, ---	RW	F57
R4X137C		User Input I Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT J		RW	
R4X1380		User Input J Name (9 Registers)	---, ---	RW	F33
R4X1389		User Input J Source	---, ---	RW	F65
R4X138A		User Input J Function	---, ---	RW	F37
R4X138B		User Input J Relays	---, ---	RW	F57
R4X138C		User Input J Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT K		RW	
R4X1390		User Input K Name (9 Registers)	---, ---	RW	F33
R4X1399		User Input K Source	---, ---	RW	F65
R4X139A		User Input K Function	---, ---	RW	F37

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X139B		User Input K Relays	---, ---	RW	F57
R4X139C		User Input K Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT L		RW	
R4X13A0		User Input L Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input L Source	---, ---	RW	F65
R4X13AA		User Input L Function	---, ---	RW	F37
R4X13AB		User Input L Relays	---, ---	RW	F57
R4X13AC		User Input L Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT M		RW	
R4X13A0		User Input M Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input M Source	---, ---	RW	F65
R4X13AA		User Input M Function	---, ---	RW	F37
R4X13AB		User Input M Relays	---, ---	RW	F57
R4X13AC		User Input M Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT N		RW	
R4X13A0		User Input N Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input N Source	---, ---	RW	F65
R4X13AA		User Input N Function	---, ---	RW	F37
R4X13AB		User Input N Relays	---, ---	RW	F57
R4X13AC		User Input N Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT O		RW	
R4X13A0		User Input O Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input O Source	---, ---	RW	F65
R4X13AA		User Input O Function	---, ---	RW	F37
R4X13AB		User Input O Relays	---, ---	RW	F57
R4X13AC		User Input O Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT P		RW	
R4X13A0		User Input P Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input P Source	---, ---	RW	F65
R4X13AA		User Input P Function	---, ---	RW	F37
R4X13AB		User Input P Relays	---, ---	RW	F57
R4X13AC		User Input P Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT Q		RW	
R4X13A0		User Input Q Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input Q Source	---, ---	RW	F65
R4X13AA		User Input Q Function	---, ---	RW	F37
R4X13AB		User Input Q Relays	---, ---	RW	F57
R4X13AC		User Input Q Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT R		RW	
R4X13A0		User Input R Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input R Source	---, ---	RW	F65
R4X13AA		User Input R Function	---, ---	RW	F37
R4X13AB		User Input R Relays	---, ---	RW	F57
R4X13AC		User Input R Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT S		RW	

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X13A0		User Input S Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input S Source	---, ---	RW	F65
R4X13AA		User Input S Function	---, ---	RW	F37
R4X13AB		User Input S Relays	---, ---	RW	F57
R4X13AC		User Input S Delay	s, 0.00 to 600.00	RW	F3
S3		USER INPUT T		RW	
R4X13A0		User Input T Name (9 Registers)	---, ---	RW	F33
R4X13A9		User Input T Source	---, ---	RW	F65
R4X13AA		User Input T Function	---, ---	RW	F37
R4X13AB		User Input T Relays	---, ---	RW	F57
R4X13AC		User Input T Delay	s, 0.00 to 600.00	RW	F3
		FLEXCURVE A TRIP TIMES		R/W	
R4X1430	FLEXCURVE_A	FlexCurve A Trip Time at 1.03 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 1.05 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 1.10 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 1.20 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 1.30 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 1.40 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 1.50 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 1.60 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 1.70 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 1.80 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 1.90 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 2.00 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 2.10 x PU	ms 0 ms 0 to 65535		F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
		FlexCurve A Trip Time at 2.20 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 2.30 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 2.40 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 2.50 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 2.60 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 2.70 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 2.80 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 2.90 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 3.00 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 3.10 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 3.20 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 3.30 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 3.40 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 3.50 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 3.60 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 3.70 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 3.80 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 3.90 x PU	ms		F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0 ms 0 to 65535		
		FlexCurve A Trip Time at 4.00 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 4.10 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 4.20 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 4.30 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 4.40 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 4.50 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 4.60 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 4.70 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 4.80 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 4.90 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 5.00 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 5.10 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 5.20 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 5.30 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 5.40 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 5.50 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 5.60 x PU	ms 0 ms		F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0 to 65535		
		FlexCurve A Trip Time at 5.70 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 5.80 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 5.90 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 6.00 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 6.50 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 7.00 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 7.50 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 8.00 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 8.50 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 9.00 x PU	ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 9.50 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 10.0 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 10.5 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 11.0 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 11.5 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 12.0 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 12.5 x PU	Ms 0 ms 0 to 65535		F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
		FlexCurve A Trip Time at 13.0 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 13.5 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 14.0 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 14.5 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 15.0 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 15.5 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 16.0 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 16.5 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 17.0 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 17.5 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 18.0 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 18.5 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 19.0 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 19.5 x PU	Ms 0 ms 0 to 65535		F1
		FlexCurve A Trip Time at 20.0 x PU	Ms 0 ms 0 to 65535		F1
R4X1431	Flex_A_105	FlexCurve A Trip Time at 1.05 x PU	Ms 0 ms 0 to 65535		F1
R4X1432	Flex_A_110	FlexCurve A Trip Time at 1.10 x PU	Ms 0 ms 0 to 65535		F1
R4X1433	Flex_A_120	FlexCurve A Trip Time at 1.20 x PU	Ms		F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0 ms 0 to 65535		
R4X1434	Flex_A_130	FlexCurve A Trip Time at 1.30 x PU	Ms 0 ms 0 to 65535		F1
R4X1435	Flex_A_140	FlexCurve A Trip Time at 1.40 x PU	Ms 0 ms 0 to 65535		F1
R4X1436	Flex_A_150	FlexCurve A Trip Time at 1.50 x PU	Ms 0 ms 0 to 65535		F1
R4X1437	Flex_A_160	FlexCurve A Trip Time at 1.60 x PU	Ms 0 ms 0 to 65535		F1
R4X1438	Flex_A_170	FlexCurve A Trip Time at 1.70 x PU	Ms 0 ms 0 to 65535		F1
R4X1439	Flex_A_180	FlexCurve A Trip Time at 1.80 x PU	Ms 0 ms 0 to 65535		F1
R4X143A	Flex_A_190	FlexCurve A Trip Time at 1.90 x PU	Ms 0 ms 0 to 65535		F1
R4X143B	Flex_A_200	FlexCurve A Trip Time at 2.00 x PU	Ms 0 ms 0 to 65535		F1
R4X143C	Flex_A_210	FlexCurve A Trip Time at 2.10 x PU	Ms 0 ms 0 to 65535		F1
R4X143D	Flex_A_220	FlexCurve A Trip Time at 2.20 x PU	Ms 0 ms 0 to 65535		F1
R4X143E	Flex_A_230	FlexCurve A Trip Time at 2.30 x PU	Ms 0 ms 0 to 65535		F1
R4X143F	Flex_A_240	FlexCurve A Trip Time at 2.40 x PU	Ms 0 ms 0 to 65535		F1
R4X1440	Flex_A_250	FlexCurve A Trip Time at 2.50 x PU	Ms 0 ms 0 to 65535		F1
R4X1441	Flex_A_260	FlexCurve A Trip Time at 2.60 x PU	Ms 0 ms 0 to 65535		F1
R4X1442	Flex_A_270	FlexCurve A Trip Time at 2.70 x PU	Ms 0 ms 0 to 65535		F1
R4X1443	Flex_A_280	FlexCurve A Trip Time at 2.80 x PU	Ms 0 ms 0 to 65535		F1
R4X1444	Flex_A_290	FlexCurve A Trip Time at 2.90 x PU	Ms 0 ms		F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0 to 65535		
R4X1445	Flex_A_300	FlexCurve A Trip Time at 3.00 x PU	Ms 0 ms 0 to 65535		F1
R4X1446	Flex_A_310	FlexCurve A Trip Time at 3.10 x PU	Ms 0 ms 0 to 65535		F1
R4X1447	Flex_A_320	FlexCurve A Trip Time at 3.20 x PU	Ms 0 ms 0 to 65535		F1
R4X1448	Flex_A_330	FlexCurve A Trip Time at 3.30 x PU	Ms 0 ms 0 to 65535		F1
R4X1449	Flex_A_340	FlexCurve A Trip Time at 3.40 x PU	Ms 0 ms 0 to 65535		F1
R4X144A	Flex_A_350	FlexCurve A Trip Time at 3.50 x PU	Ms 0 ms 0 to 65535		F1
R4X144B	Flex_A_360	FlexCurve A Trip Time at 3.60 x PU	Ms 0 ms 0 to 65535		F1
R4X144C	Flex_A_370	FlexCurve A Trip Time at 3.70 x PU	Ms 0 ms 0 to 65535		F1
R4X144D	Flex_A_380	FlexCurve A Trip Time at 3.80 x PU	Ms 0 ms 0 to 65535		F1
R4X144E	Flex_A_390	FlexCurve A Trip Time at 3.90 x PU	Ms 0 ms 0 to 65535		F1
R4X144F	Flex_A_400	FlexCurve A Trip Time at 4.00 x PU	Ms 0 ms 0 to 65535		F1
R4X1450	Flex_A_410	FlexCurve A Trip Time at 4.10 x PU	Ms 0 ms 0 to 65535		F1
R4X1451	Flex_A_420	FlexCurve A Trip Time at 4.20 x PU	Ms 0 ms 0 to 65535		F1
R4X1452	Flex_A_430	FlexCurve A Trip Time at 4.30 x PU	Ms 0 ms 0 to 65535		F1
R4X1453	Flex_A_440	FlexCurve A Trip Time at 4.40 x PU	Ms 0 ms 0 to 65535		F1
R4X1454	Flex_A_450	FlexCurve A Trip Time at 4.50 x PU	Ms 0 ms 0 to 65535		F1
R4X1455	Flex_A_460	FlexCurve A Trip Time at 4.60 x PU	Ms 0 ms 0 to 65535		F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1456	Flex_A_470	FlexCurve A Trip Time at 4.70 x PU	Ms 0 ms 0 to 65535		F1
R4X1457	Flex_A_480	FlexCurve A Trip Time at 4.80 x PU	Ms 0 ms 0 to 65535		F1
R4X1458	Flex_A_490	FlexCurve A Trip Time at 4.90 x PU	Ms 0 ms 0 to 65535		F1
R4X1459	Flex_A_500	FlexCurve A Trip Time at 5.00 x PU	Ms 0 ms 0 to 65535		F1
R4X145A	Flex_A_510	FlexCurve A Trip Time at 5.10 x PU	Ms 0 ms 0 to 65535		F1
R4X145B	Flex_A_520	FlexCurve A Trip Time at 5.20 x PU	Ms 0 ms 0 to 65535		F1
R4X145C	Flex_A_530	FlexCurve A Trip Time at 5.30 x PU	Ms 0 ms 0 to 65535		F1
R4X145D	Flex_A_540	FlexCurve A Trip Time at 5.40 x PU	Ms 0 ms 0 to 65535		F1
R4X145E	Flex_A_550	FlexCurve A Trip Time at 5.50 x PU	Ms 0 ms 0 to 65535		F1
R4X145F	Flex_A_560	FlexCurve A Trip Time at 5.60 x PU	Ms 0 ms 0 to 65535		F1
R4X1460	Flex_A_570	FlexCurve A Trip Time at 5.70 x PU	Ms 0 ms 0 to 65535		F1
R4X1461	Flex_A_580	FlexCurve A Trip Time at 5.80 x PU	Ms 0 ms 0 to 65535		F1
R4X1462	Flex_A_590	FlexCurve A Trip Time at 5.90 x PU	Ms 0 ms 0 to 65535		F1
R4X1463	Flex_A_600	FlexCurve A Trip Time at 6.00 x PU	Ms 0 ms 0 to 65535		F1
R4X1464	Flex_A_650	FlexCurve A Trip Time at 6.50 x PU	Ms 0 ms 0 to 65535		F1
R4X1465	Flex_A_700	FlexCurve A Trip Time at 7.00 x PU	Ms 0 ms 0 to 65535		F1
R4X1466	Flex_A_750	FlexCurve A Trip Time at 7.00 x PU	Ms 0 ms 0 to 65535		F1
R4X1467	Flex_A_800	FlexCurve A Trip Time at 8.00 x PU	Ms		F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0 ms 0 to 65535		
R4X1468	Flex_A_850	FlexCurve A Trip Time at 8.50 x PU	Ms 0 ms 0 to 65535		F1
R4X1469	Flex_A_900	FlexCurve A Trip Time at 9.00 x PU	Ms 0 ms 0 to 65535		F1
R4X146A	Flex_A_950	FlexCurve A Trip Time at 9.50 x PU	Ms 0 ms 0 to 65535		F1
R4X146B	Flex_A_1000	FlexCurve A Trip Time at 10.0 x PU	Ms 0 ms 0 to 65535		F1
R4X146C	Flex_A_1050	FlexCurve A Trip Time at 10.5 x PU	Ms 0 ms 0 to 65535		F1
R4X146D	Flex_A_1100	FlexCurve A Trip Time at 11.0 x PU	Ms 0 ms 0 to 65535		F1
R4X146E	Flex_A_1150	FlexCurve A Trip Time at 11.5 x PU	Ms 0 ms 0 to 65535		F1
R4X146F	Flex_A_1200	FlexCurve A Trip Time at 12.0 x PU	Ms 0 ms 0 to 65535		F1
R4X1470	Flex_A_1250	FlexCurve A Trip Time at 12.5 x PU	Ms 0 ms 0 to 65535		F1
R4X1471	Flex_A_1300	FlexCurve A Trip Time at 13.0 x PU	Ms 0 ms 0 to 65535		F1
R4X1472	Flex_A_1350	FlexCurve A Trip Time at 13.5 x PU	Ms 0 ms 0 to 65535		F1
R4X1473	Flex_A_1400	FlexCurve A Trip Time at 14.0 x PU	Ms 0 ms 0 to 65535		F1
R4X1474	Flex_A_1450	FlexCurve A Trip Time at 14.5 x PU	Ms 0 ms 0 to 65535		F1
R4X1475	Flex_A_1500	FlexCurve A Trip Time at 15.0 x PU	Ms 0 ms 0 to 65535		F1
R4X1476	Flex_A_1550	FlexCurve A Trip Time at 15.5 x PU	Ms 0 ms 0 to 65535		F1
R4X1477	Flex_A_1600	FlexCurve A Trip Time at 16.0 x PU	Ms 0 ms 0 to 65535		F1
R4X1478	Flex_A_1650	FlexCurve A Trip Time at 16.5 x PU	Ms 0 ms		F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0 to 65535		
R4X1479	Flex_A_1700	FlexCurve A Trip Time at 17.0 x PU	Ms 0 ms 0 to 65535		F1
R4X147A	Flex_A_1750	FlexCurve A Trip Time at 17.5 x PU	Ms 0 ms 0 to 65535		F1
R4X147B	Flex_A_1800	FlexCurve A Trip Time at 18.0 x PU	Ms 0 ms 0 to 65535		F1
R4X147C	Flex_A_1850	FlexCurve A Trip Time at 18.5 x PU	Ms 0 ms 0 to 65535		F1
R4X147D	Flex_A_1900	FlexCurve A Trip Time at 19.0 x PU	Ms 0 ms 0 to 65535		F1
R4X147E	Flex_A_1950	FlexCurve A Trip Time at 19.5 x PU	Ms 0 ms 0 to 65535		F1
R4X147F	Flex_A_2000	FlexCurve A Trip Time at 20.0 x PU	Ms 0 ms 0 to 65535		F1
		FLEXCURVE B		R/W	
R4X1480	Flex_B_103	FlexCurve B Trip Time at 1.03 x PU	Ms 0 ms 0 to 65535		F1
R4X1481	Flex_B_105	FlexCurve B Trip Time at 1.05 x PU	Ms 0 ms 0 to 65535		F1
R4X1482	Flex_B_110	FlexCurve B Trip Time at 1.10 x PU	Ms 0 ms 0 to 65535		F1
R4X1483	Flex_B_120	FlexCurve B Trip Time at 1.20 x PU	Ms 0 ms 0 to 65535		F1
R4X1484	Flex_B_130	FlexCurve B Trip Time at 1.30 x PU	Ms 0 ms 0 to 65535		F1
R4X1485	Flex_B_140	FlexCurve B Trip Time at 1.40 x PU	Ms 0 ms 0 to 65535		F1
R4X1486	Flex_B_150	FlexCurve B Trip Time at 1.40 x PU	Ms 0 ms 0 to 65535		F1
R4X1487	Flex_B_160	FlexCurve B Trip Time at 1.60 x PU	Ms 0 ms 0 to 65535		F1
R4X1488	Flex_B_170	FlexCurve B Trip Time at 1.70 x PU	Ms 0 ms 0 to 65535		F1
R4X1489	Flex_B_180	FlexCurve B Trip Time at 1.80 x PU	Ms 0 ms		F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0 to 65535		
R4X148A	Flex_B_190	FlexCurve B Trip Time at 1.90 x PU	Ms 0 ms 0 to 65535		F1
R4X148B	Flex_B_200	FlexCurve B Trip Time at 2.00 x PU	Ms 0 ms 0 to 65535		F1
R4X148C	Flex_B_210	FlexCurve B Trip Time at 2.10 x PU	Ms 0 ms 0 to 65535		F1
R4X148D	Flex_B_220	FlexCurve B Trip Time at 2.20 x PU	Ms 0 ms 0 to 65535		F1
R4X148E	Flex_B_230	FlexCurve B Trip Time at 2.30 x PU	Ms 0 ms 0 to 65535		F1
R4X148F	Flex_B_240	FlexCurve B Trip Time at 2.40 x PU	Ms 0 ms 0 to 65535		F1
R4X1490	Flex_B_250	FlexCurve B Trip Time at 2.50 x PU	Ms 0 ms 0 to 65535		F1
R4X1491	Flex_B_260	FlexCurve B Trip Time at 2.60 x PU	Ms 0 ms 0 to 65535		F1
R4X1492	Flex_B_270	FlexCurve B Trip Time at 2.70 x PU	Ms 0 ms 0 to 65535		F1
R4X1493	Flex_B_280	FlexCurve B Trip Time at 2.80 x PU	Ms 0 ms 0 to 65535		F1
R4X1494	Flex_B_290	FlexCurve B Trip Time at 2.90 x PU	Ms 0 ms 0 to 65535		F1
R4X1495	Flex_B_300	FlexCurve B Trip Time at 3.00 x PU	Ms 0 ms 0 to 65535		F1
R4X1496	Flex_B_310	FlexCurve B Trip Time at 3.10 x PU	Ms 0 ms 0 to 65535		F1
R4X1497	Flex_B_320	FlexCurve B Trip Time at 3.20 x PU	Ms 0 ms 0 to 65535		F1
R4X1498	Flex_B_330	FlexCurve B Trip Time at 3.30 x PU	Ms 0 ms 0 to 65535		F1
R4X1499	Flex_B_340	FlexCurve B Trip Time at 3.40 x PU	Ms 0 ms 0 to 65535		F1
R4X149A	Flex_B_350	FlexCurve B Trip Time at 3.50 x PU	Ms 0 ms 0 to 65535		F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X149B	Flex_B_360	FlexCurve B Trip Time at 3.60 x PU	Ms 0 ms 0 to 65535		F1
R4X149C	Flex_B_370	FlexCurve B Trip Time at 3.70 x PU	Ms 0 ms 0 to 65535		F1
R4X149D	Flex_B_380	FlexCurve B Trip Time at 3.80 x PU	Ms 0 ms 0 to 65535		F1
R4X149E	Flex_B_390	FlexCurve B Trip Time at 3.90 x PU	Ms 0 ms 0 to 65535		F1
R4X149F	Flex_B_400	FlexCurve B Trip Time at 4.00 x PU	Ms 0 ms 0 to 65535		F1
R4X14A0	Flex_B_410	FlexCurve B Trip Time at 4.10 x PU	Ms 0 ms 0 to 65535		F1
R4X14A1	Flex_B_420	FlexCurve B Trip Time at 4.20 x PU	Ms 0 ms 0 to 65535		F1
R4X14A2	Flex_B_430	FlexCurve B Trip Time at 4.30 x PU	Ms 0 ms 0 to 65535		F1
R4X14A3	Flex_B_440	FlexCurve B Trip Time at 4.40 x PU	Ms 0 ms 0 to 65535		F1
R4X14A4	Flex_B_450	FlexCurve B Trip Time at 4.50 x PU	Ms 0 ms 0 to 65535		F1
R4X14A5	Flex_B_460	FlexCurve B Trip Time at 4.60 x PU	Ms 0 ms 0 to 65535		F1
R4X14A6	Flex_B_470	FlexCurve B Trip Time at 4.60 x PU	Ms 0 ms 0 to 65535		F1
R4X14A7	Flex_B_480	FlexCurve B Trip Time at 4.80 x PU	Ms 0 ms 0 to 65535		F1
R4X14A7	Flex_B_490	FlexCurve B Trip Time at 4.90 x PU	Ms 0 ms 0 to 65535		F1
R4X14A9	Flex_B_500	FlexCurve B Trip Time at 5.00 x PU	Ms 0 ms 0 to 65535		F1
R4X14AA	Flex_B_510	FlexCurve B Trip Time at 5.10 x PU	Ms 0 ms 0 to 65535		F1
R4X14AB	Flex_B_520	FlexCurve B Trip Time at 5.20 x PU	Ms 0 ms 0 to 65535		F1
R4X14AC	Flex_B_530	FlexCurve B Trip Time at 5.30 x PU	Ms		F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0 ms 0 to 65535		
R4X14AD	Flex_B_540	FlexCurve B Trip Time at 5.40 x PU	Ms 0 ms 0 to 65535		F1
R4X14AE	Flex_B_550	FlexCurve B Trip Time at 5.50 x PU	Ms 0 ms 0 to 65535		F1
R4X14AF	Flex_B_560	FlexCurve B Trip Time at 5.60 x PU	Ms 0 ms 0 to 65535		F1
R4X14B0	Flex_B_570	FlexCurve B Trip Time at 5.70 x PU	Ms 0 ms 0 to 65535		F1
R4X14B1	Flex_B_580	FlexCurve B Trip Time at 5.80 x PU	Ms 0 ms 0 to 65535		F1
R4X14B2	Flex_B_590	FlexCurve B Trip Time at 5.90 x PU	Ms 0 ms 0 to 65535		F1
R4X14B3	Flex_B_600	FlexCurve B Trip Time at 6.00 x PU	Ms 0 ms 0 to 65535		F1
R4X14B4	Flex_B_650	FlexCurve B Trip Time at 6.50 x PU	Ms 0 ms 0 to 65535		F1
R4X14B5	Flex_B_700	FlexCurve B Trip Time at 7.00 x PU	Ms 0 ms 0 to 65535		F1
R4X14B6	Flex_B_750	FlexCurve B Trip Time at 7.50 x PU	Ms 0 ms 0 to 65535		F1
R4X14B7	Flex_B_800	FlexCurve B Trip Time at 8.00 x PU	Ms 0 ms 0 to 65535		F1
R4X14B8	Flex_B_800	FlexCurve B Trip Time at 8.50 x PU	Ms 0 ms 0 to 65535		F1
R4X14B9	Flex_B_900	FlexCurve B Trip Time at 9.00 x PU	Ms 0 ms 0 to 65535		F1
R4X14BA	Flex_B_950	FlexCurve B Trip Time at 9.50 x PU	Ms 0 ms 0 to 65535		F1
R4X14BB	Flex_B_1000	FlexCurve B Trip Time at 10.0 x PU	Ms 0 ms 0 to 65535		F1
R4X14BC	Flex_B_1050	FlexCurve B Trip Time at 10.5 x PU	Ms 0 ms 0 to 65535		F1
R4X14BD	Flex_B_1100	FlexCurve B Trip Time at 11.0 x PU	Ms 0 ms		F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0 to 65535		
R4X14BE	Flex_B_1150	FlexCurve B Trip Time at 11.5 x PU	Ms 0 ms 0 to 65535		F1
R4X14BF	Flex_B_1200	FlexCurve B Trip Time at 12.0 x PU	Ms 0 ms 0 to 65535		F1
R4X14C0	Flex_B_1250	FlexCurve B Trip Time at 12.5 x PU	Ms 0 ms 0 to 65535		F1
R4X14C1	Flex_B_1300	FlexCurve B Trip Time at 13.0 x PU	Ms 0 ms 0 to 65535		F1
R4X14C2	Flex_B_1350	FlexCurve B Trip Time at 13.5 x PU	Ms 0 ms 0 to 65535		F1
R4X14C3	Flex_B_1400	FlexCurve B Trip Time at 14.0 x PU	Ms 0 ms 0 to 65535		F1
R4X14C4	Flex_B_1450	FlexCurve B Trip Time at 14.5 x PU	Ms 0 ms 0 to 65535		F1
R4X14C5	Flex_B_1500	FlexCurve B Trip Time at 15.0 x PU	Ms 0 ms 0 to 65535		F1
R4X14C6	Flex_B_1550	FlexCurve B Trip Time at 15.5 x PU	Ms 0 ms 0 to 65535		F1
R4X14C7	Flex_B_1600	FlexCurve B Trip Time at 16.0 x PU	Ms 0 ms 0 to 65535		F1
R4X14C8	Flex_B_1650	FlexCurve B Trip Time at 16.5 x PU	Ms 0 ms 0 to 65535		F1
R4X14C9	Flex_B_1700	FlexCurve B Trip Time at 17.0 x PU	Ms 0 ms 0 to 65535		F1
R4X14CA	Flex_B_1750	FlexCurve B Trip Time at 17.5 x PU	Ms 0 ms 0 to 65535		F1
R4X14CB	Flex_B_1800	FlexCurve B Trip Time at 18.0 x PU	Ms 0 ms 0 to 65535		F1
R4X14CC	Flex_B_1850	FlexCurve B Trip Time at 18.5 x PU	Ms 0 ms 0 to 65535		F1
R4X14CD	Flex_B_1900	FlexCurve B Trip Time at 19.0 x PU	Ms 0 ms 0 to 65535		F1
R4X14CE	Flex_B_1950	FlexCurve B Trip Time at 19.5 x PU	Ms 0 ms 0 to 65535		F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X14CF	Flex_B_2000	FlexCurve B Trip Time at 20.0 x PU	Ms 0 ms 0 to 65535		F1
R4X1500	PH_TIME_OC_FUNC	Phase Time Overcurrent 1 Function			F37
R4X1501	PH_TIME_OC_RLYS	Phase Time Overcurrent 1 Relays			F57
R4X1502	PH_TIME_OC_CRV	Phase Time Overcurrent 1 Curve			F36
R4X1503	PH_TIME_OC_V_RESTR	Phase Time Overcurrent 1 Voltage Restraint			F30
R4X1504	PH_TIME_OC_PKUP	Phase Time Overcurrent 1 Pickup	x CT 0.05 x CT 0.05 to 20.00		F3
R4X1505	PH_TIME_OC_MULT	Phase Time Overcurrent 1 Multiplier	0.00 to 100.00		F3
R4X1506	PH_TIME_OC_RESET	Phase Time Overcurrent 1 Reset Time			F68
R4X1507	PH_TIME_OC_DIR	Phase Time Overcurrent 1 Direction			F84
R4X1508	PH_INST_OC1_FUNC	Phase Instantaneous Overcurrent 1 Function			F37
R4X1509	PH_INST_OC1_RLYS	Phase Instantaneous Overcurrent 1 Relays			F57
R4X150A	PH_INST_OC1_PKUP	Phase Instantaneous Overcurrent 1 Pickup	x CT 0.05 x CT 0.05 to 20.00		F3
R4X150B	PH_INST_OC1_DLY	Phase Instantaneous Overcurrent 1 Delay	0.0 to 600.00		F3
R4X150C	PH_INST_OC1_PHASES	Phases Required for Operation			F41
R4X150D	PH_INST_OC1_DIR	Phase Instantaneous Overcurrent 1 Direction			F84
R4X1510	PH_INST_OC2_FUNC	Phase Instantaneous Overcurrent 2 Function			F37
R4X1511	PH_INST_OC2_RLYS	Phase Instantaneous Overcurrent 2 Relays			F57
R4X1512	PH_INST_OC2_PKUP	Phase Instantaneous Overcurrent 2 Pickup	x CT 0.05 x CT 0.05 to 20.00		F3
R4X1513	PH_INST_OC2_DLY	Phase Instantaneous Overcurrent 2 Delay	0.00 to 600.00		F3
R4X1514	PH_INST_OC2_PHASES	Phases Required for Operation			F41
R4X1515	PH_INST_OC2_DIR	Phase Instantaneous Overcurrent 2 Direction			F84
R4X1520	PH_DIR_FUNC	Phase Directional Function			F38
R4X1521	PH_DIR_MAX_TORQ_ANGL	Phase Directional Maximum Torque Angle	° Lead 30° Lead 0 to 359		F1
R4X1522	PH_MIN_POLAR_VOLTS	Minimum Polarizing Voltage	x VT 0.05 x VT 1 to 1.25		F3
R4X1523	PH_DIR_RLYS	Phase Directional Relays	--- None ---		F57
R4X1524	BLK_OC_NO_VOLT_MEM	Block OC When Voltage Memory Expires	--- Disabled ---		F30
		PHASE TIME OVERCURRENT 2		R/W	

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1530	PH_TIME_OC2_FUNC	Phase Time Overcurrent 2 Function	--- Disabled ---		F37
R4X1531	PH_TIME_OC2_RLYS	Phase Time Overcurrent 2 Relays	--- None ---		F57
R4X1532	PH_TIME_OC2_CURVE	Phase Time Overcurrent 2 Curve	--- Ext. Inverse ---		F36
R4X1533	PH_TIME_OC2_V_RES	Phase Time Overcurrent 2 Voltage Restraint	--- Disabled ---		F30
R4X1534	PH_TIME_OC2_PKUP	Phase Time Overcurrent 2 Pickup	x CT 1.00 x CT 0.05 to 20.00		F3
R4X1535	PH_TIME_OC2_MULT	Phase Time Overcurrent 2 Multiplier	--- 1 0.00 to 100.00		F3
R4X1536	PH_TIME_OC2_RESET	Phase Time Overcurrent 2 Reset Time	--- Instantaneous ---		F68
R4X1537	PH_TIME_OC2_DIR	Phase Time Overcurrent 2 Direction	--- Both ---		F84
		GROUND TIME OVERCURRENT		R/W	
R4X1600	GND_TIME_OC_FUNC	Ground Time Overcurrent Function	--- Disabled ---		F37
R4X1601	GND_TIME_OC_RLYS	Ground Time Overcurrent Relays	--- None ---		F57
R4X1602	GND_TIME_OC_CRV	Ground Time Overcurrent Curve	--- Ext. Inverse ---		F36
R4X1603	GND_TIME_OC_PKUP	Ground Time Overcurrent Pickup	x CT 1.00 x CT 0.05 to 20.00		F3
R4X1604	GND_TIME_OC_MULT	Ground Time Overcurrent Multiplier	--- 1 0.00 to 100.00		F3
R4X1605	GND_TIME_OC_RESET	Ground Time Overcurrent Reset Time	--- Instantaneous ---		F68
R4X1606	GND_TIME_OC_DIR	Ground Time Overcurrent Direction	--- Disabled ---		F84
		GROUND INSTANTANEOUS OVERCURRENT		R/W	
R4X1608	GND_LO_OC_FUNC	Ground Inst Overcurrent Function	--- Disabled ---		F37
R4X1609	GND_LO_OC_RLYS	Ground Inst Overcurrent Relays	---		F57

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			None ---		
R4X160A	GND_LO_OC_PKUP	Ground Inst Overcurrent Pickup	x CT 1.00 x CT 0.05 to 20.00		F3
R4X160B	GND_LO_OC_DLY	Ground Inst Overcurrent Delay	s 0.00 s 0.00 to 600.00		F3
R4X160C	GND_LO_OC_DIR	Ground Inst Overcurrent Direction	Disabled		F84
R4X160E	GND_DIR_FUNC	Ground Directional Function			F38
R4X160F	GND_DIR_MAX_TORQ_ANG	Ground Directional Maximum Torque Angle	° Lead 0 to 359		F1
R4X1610	GND_DIR_MIN_POL_VOLT	Ground Directional Minimum Polarizing Voltage	0.00 to 1.25		F3
R4X1611	GND_DIR_POL	Ground Directional Polarizing			F50
R4X1612	GND_DIR_RLYS	Ground Directional Relays			F57
		NEUTRAL TIME OVERCURRENT 1		R/W	
R4X1630	N_TIME_OC1_FUNC	Neutral Time Overcurrent 1 Function	--- Disabled ---		F37
R4X1631	N_TIME_OC1_RLYS	Neutral Time Overcurrent 1 Relays	--- None ---		F57
R4X1632	N_TIME_OC1_CRV	Neutral Time Overcurrent 1 Curve	--- Ext. Inverse ---		F36
R4X1633	N_TIME_OC1_PKUP	Neutral Time Overcurrent 1 Pickup	x CT 1.00 x CT 0.05 to 20.00		F3
R4X1634	N_TIME_OC1_MULT	Neutral Time Overcurrent 1 Multiplier	--- 1 0.00 to 100.00		F3
R4X1635	N_TIME_OC1_RESET	Neutral Time Overcurrent 1 Reset Time	--- Instantaneous ---		F68
R4X1636	N_TIME_OC1_DIR	Neutral Time Overcurrent 1 Direction	--- Both ---		F84
		NEUTRAL INSTANANEOUS OVERCURRENT 1		R/W	
R4X1640	N_INST_OC1_FUNC	Neutral Inst Overcurrent 1 Function	--- Disabled		F37

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes

R4X1641	N_INST_OC1_RLYS	Neutral Inst Overcurrent 1 Relays	--- None ---		F57
R4X1642	N_INST_OC1_PKUP	Neutral Inst Overcurrent 1 Pickup	x CT 1.00 x CT 0.05 to 20.00		F3
R4X1643	N_INST_OC1_DLY	Neutral Inst Overcurrent 1 Delay	s 0.00 s 0.00 to 600.00		F3
R4X1644	N_INST_OC1_DIR	Neutral Inst Overcurrent 1 Direction	--- Disabled ---		F84
		NEUTRAL INSTANTANEOUS OVERCURRENT 2		R/W	
R4X1650	N_INST_OC2_FUNC	Neutral Inst Overcurrent 2 Function	--- Disabled ---		F37
R4X1651	N_INST_OC2_RLYS	Neutral Inst Overcurrent 2 Relays	--- None ---		F57
R4X1652	N_INST_OC2_PKUP	Neutral Inst Overcurrent 2 Pickup	x CT 1.00 x CT 0.05 to 20.00		F3
R4X1653	N_INST_OC2_DLY	Neutral Inst Overcurrent 2 Delay	s 0.00 s 0.00 to 600.00		F3
R4X1654	N_INST_OC2_DIR	Neutral Inst Overcurrent 2 Direction	--- Disabled ---		F84
		NEUTRAL TIME OVERCURRENT 2		R/W	
R4X1660	N_TIME_OC2_FUNC	Neutral Time Overcurrent 2 Function	--- Disabled ---		F37
R4X1661	N_TIME_OC2_RLYS	Neutral Time Overcurrent 2 Relays	--- None ---		F57
R4X1662	N_TIME_OC2_CRV	Neutral Time Overcurrent 2 Curve	--- Ext. Inverse ---		F36
R4X1663	N_TIME_OC2_PKUP	Neutral Time Overcurrent 2 Pickup	x CT 1.00 x CT 0.05 to 20.00		F3
R4X1664	N_TIME_OC2_MULT	Neutral Time Overcurrent 2 Multiplier	--- 1 0.00 to 100.00		F3
R4X1665	N_TIME_OC2_RESET	Neutral Time Overcurrent 2 Reset Time	--- Instantaneous ---		F68
R4X1666	N_TIME_OC2_DIR	Neutral Time Overcurrent 2 Direction	--- Disabled ---		F84

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
		NEUTRAL DIRECTIONAL		R/W	
R4X1670	N_DIR_FUNC	Neutral Directional Function	--- Disabled ---		F38
R4X1671	N_DIR_MAX_TORQ_ANG	Neutral Directional Maximum Torque Angle	° 315° 0 to 359		F1
R4X1672	N_MIN_POLAR_VOLTS	Minimum Polarizing Voltage	x VT 0.05 x VT 0.00 to 1.25		F3
R4X1674	N_DIR_POLARIZING	Neutral Directional Polarizing	--- Voltage ---		F50
R4X1675	N_DIR_RELAYS	Neutral Directional Relays	--- None ---		F57
		NEGATIVE SEQUENCE TIME OVERCURRENT		R/W	
R4X1700	NEG_SEQ_TIME_OC_FUNC	Negative Sequence Time Overcurrent Function	--- Disabled ---		F37
R4X1701	NEG_SEQ_TIME_OC_RLYS	Negative Sequence Time Overcurrent Relays	--- None ---		F57
R4X1702	NEG_SEQ_TIME_OC_CRV	Negative Sequence Time Overcurrent Curve	--- Ext. Inverse ---		F36
R4X1703	NEG_SEQ_TIME_OC_PKUP	Negative Sequence Time Overcurrent Pickup	x CT 1.00 x CT 0.05 to 20.00		F3
R4X1704	NEG_SEQ_TIME_OC_MULT	Negative Sequence Time Overcurrent Multiplier	--- 1 0.00 to 100.00		F3
R4X1705	NEG_SEQ_TIME_OC_TIME	Negative Sequence Time Overcurrent Reset Time	--- Instantaneous ---		F68
R4X1706	NEG_SEQ_TIME_OC_DIR	Negative Sequence Time Overcurrent Direction	--- Disabled ---		F84
		NEGATIVE SEQUENCE INST OVERCURRENT		R/W	
R4X1710	NEG_SEQ_INST_OC_FUNC	Negative Sequence Inst Overcurrent Function	--- Disabled ---		F37
R4X1711	NEG_SEQ_INST_OC_RLYS	Negative Sequence Inst Overcurrent Relays	--- None ---		F57
R4X1712	NEG_SEQ_INST_OC_PKUP	Negative Sequence Inst Overcurrent Pickup	x CT 1.00 x CT 0.05 to 20.00		F3
R4X1713	NEG_SEQ_INST_OC_DLY	Negative Sequence Inst Overcurrent Delay	s 0.00 s		F3

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0.00 to 600.00		
R4X1714	NEG_SEQ_INST_OC_DIR	Negative Sequence Inst Overcurrent Direction	--- Disabled ---		F84
		NEGATIVE SEQUENCE VOLTAGE		R/W	
R4X1720	NEG_SEQ_V_FUNC	Negative Sequence Voltage Function	--- Disabled ---		F39
R4X1721	NEG_SEQ_V_RLYS	Negative Sequence Voltage Relays	--- None ---		F57
R4X1722	NEG_SEQ_V_PKUP	Negative Sequence Voltage Pickup	x VT 0.1 0.00 to 1.25		F3
R4X1723	NEG_SEQ_V_DLY	Negative Sequence Voltage Delay	s 2.0 s 0.0 to 6000.0		F2
		NEGATIVE SEQUENCE DIRECTIONAL			
R4X1730	NEG_SEQ_DIR_FUNC	Negative Sequence Directional Function	--- Disabled ---		F38
R4X1731	NEG_SEQ_DIR_MAX_T_ANGLE	Neg Seq Directional Maximum Torque Angle (MTA)	° 315° 0 to 359		F1
R4X1732	MIN_POL_VOLTS	Neg Seq Minimum Polarizing Voltage	x VT 0.05 x VT 0.00 to 1.25		F3
R4X1733	NEG_SEQ_DIR_RLYS	Negative Sequence Directional Relays	--- None ---		F57
		SENSITIVE GROUND INSTANTANEOUS OC	R/W	R/W	
R4X1740	SENS_GND_INST_OC_FUNC	Sensitive Ground Instantaneous Overcurrent Function	--- Disabled ---		F37
R4X1741	SENS_GND_INST_OC_RLYS	Sensitive Ground Instantaneous Overcurrent Relays	--- None ---		F57
R4X1742	SENS_GND_INST_OC_PKUP	Sensitive Ground Instantaneous Overcurrent Pickup	x CT 0.100 x CT 0.005 to 1.000		F70
R4X1743	SENS_GND_INST_OC_DLYS	Sensitive Ground Instantaneous Overcurrent Delay	s 0.00 s 0.00 to 600.00		F3
R4X1744	SENS_GND_INST_OC_DIR	Sensitive Ground Instantaneous Overcurrent Direction	--- Disabled ---		F84
		SENSITIVE GROUND TIME OC		R/W	
R4X1750	SENS_GND_TIME_OC_FUNC	Sensitive Ground Time Overcurrent Function	-----		F37

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1751	SENS_GND_TIME_OC_RLYS	Sensitive Ground Time Overcurrent Relays	--- None ---		F57
R4X1752	SENS_GND_TIME_OC_CURV	Sensitive Ground Time Overcurrent Curve	--- Ext. Inverse ---		F36
R4X1753	SENS_GND_TIME_OC_PKUP	Sensitive Ground Time Overcurrent Pickup	x CT 0.100 x CT 0.005 to 1.000		F70
R4X1754	SENS_GND_TIME_OC_MULT	Sensitive Ground Time Overcurrent Multiplier	--- 1 0.00 to 100.00		F3
R4X1755	SENS_GND_TIME_OC_RESET	Sensitive Ground Time Overcurrent Reset Time	--- Instantaneous ---		F68
R4X1756	SENS_GND_TIME_OC_DIR	Sensitive Ground Time Overcurrent Direction	--- Disabled ---		F84
		SENSITIVE GROUND DIRECTIONAL		R/W	
R4X1760	SENS_GND_DIR_FUNC	Sensitive Ground Directional Function	--- Disabled ---		F38
R4X1761	SENS_GND_DIR_MAX_TANG	Sensitive Ground Directional Maximum Torque Angle	° 315° 0 to 359		F1
R4X1762	MIN_POL_VOLTS_2	Sensitive Ground Minimum Polarizing Voltage	x VT 0.05 x VT 0.00 to 1.25		F3
R4X1763	SENS_GND_DIR_POL	Sensitive Ground Directional Polarizing	--- Voltage ---		F50
R4X1764	SENS_GND_DIR_RLYS	Sensitive Ground Directional Relays	--- None ---		F57
R4X1770	RESTR_GND_FLT_FUNC	Restricted Earth Fault Function			F39
R4X1771	RESTR_GND_FLT_RLYS	Restricted Earth Fault Relays			F57
R4X1772	RESTR_GND_FLT_PKUP	Restricted Earth Fault Pickup	x CT 0.005 x 1.000		F70
R4X1773	RESTR_GND_FLT_DLY	Restricted Earth Fault Delay	s 0.00 - 600.00w		F3
		BUS UNDERVOLTAGE 1		R/W	
R4X1780	BUS_UV1_FUNC	Bus Undervoltage 1 Function	--- Disabled ---		F39
R4X1781	BUS_UV1_RLYS	Bus Undervoltage 1 Relays	--- None ---		F57
R4X1782	BUS_UV1_PKUP	Bus Undervoltage 1 Pickup	x VT 0.75 x VT 0.00 to 1.25		F3
R4X1783	BUS_UV1_DLY	Bus Undervoltage 1 Delay	s 2.0 s		F2

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0.0 to 6000.0		
R4X1784	BUS_UV1_PH_REQ_OP	Bus Undervoltage 1 Phases Required for Operation	--- All Three ---		F41
R4X1785	BUS_UV1_MIN_OP_V	Bus Undervoltage 1 Minimum Operating Voltage	x VT 0.30 x V 0.00 to 1.25		F3
R4X1786	BUS_UV1_CRV	Bus Undervoltage 1 Curve	--- Definite Time ---		F45
		BUS UNDERVOLTAGE 2		R/W	
R4X1788	BUS_UV2_FUNC	Bus Undervoltage 2 Function	--- Disabled ---		F39
R4X1789	BUS_UV2_RLYS	Bus Undervoltage 2 Relays	--- None ---		F57
R4X178A	BUS_UV2_PKUP	Bus Undervoltage 2 Pickup	x VT 0.75 x VT 0.00 to 1.25		F3
R4X178B	BUS_UV2_DLY	Bus Undervoltage 2 Delay	s 2.0 s 0.0 to 6000.0		F2
R4X178C	BUS_UV2_PH_REQ_OP	Bus Undervoltage 2 Phases Required for Operation	--- All Three ---		F41
R4X178D	BUS_UV2_MIN_OP_V	Bus Undervoltage 2 Minimum Operating Voltage	x VT 0.30 x V 0.00 to 1.25		F3
R4X178E	BUS_UV2_CRV	Bus Undervoltage 2 Curve	--- Definite Time ---		F45
		OVERVOLTAGE 1		R/W	
R4X1790	OV1_FUNC	Overvoltage 1 Function	--- Disabled ---		F39
R4X1791	OV1_RLYS	Overvoltage 1 Relays	--- None ---		F57
R4X1792	OV1_PKUP	Overvoltage 1 Pickup	x VT 1.25 x VT 0.00 to 1.25		F3
R4X1793	OV1_DLY	Overvoltage 1 Delay	s 2.0 s 0.0 to 6000.0		F2
R4X1794	OV1_PH_REQ_OP	Overvoltage 1 Phases Required for Operation	--- All Three ---		F41
		OVERVOLTAGE 2		R/W	
R4X1798	OV2_FUNC	Overvoltage 2 Function	--- Disabled ---		F39

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1799	OV2_RLYS	Overvoltage 2 Relays	--- None ---		F57
R4X179A	OV2_PKUP	Overvoltage 2 Pickup	x VT 1.25 x VT 0.00 to 1.25		F3
R4X179B	OV2_DLY	Overvoltage 2 Delay	s 2.0 s 0.0 to 6000.0		F2
R4X179C	OV2_PH_REQ_OP	Overvoltage 2 Phases Required for Operation	--- All Three ---		F41
		UNDERFREQUENCY 1		R/W	
R4X17A0	UF1_FUNC	Underfrequency 1 Function	--- Disabled ---		F39
R4X17A1	UF1_RLYS	Underfrequency 1 Relays	--- None ---		F57
R4X17A2	UF1_PKUP	Underfrequency 1 Pickup	Hz 59.00 Hz 20.00 to 65.00		F3
R4X17A3	UF1_DLY	Underfrequency 1 Delay	s 2.00 s 0.00 to 600.00		F3
R4X17A4	UF1_MIN_OP_V	Underfrequency 1 Minimum Operating Voltage	x VT 0.70 x VT 0.00 to 1.25		F3
R4X17A5	UF1_MIN_OP_A	Underfrequency 1 Minimum Operating Current	x CT 0.20 x CT 0.00 to 20.00		F3
		UNDERFREQUENCY 2		R/W	
R4X17A8	UF2_FUNC	Underfrequency 2 Function	--- Disabled ---		F39
R4X17A9	UF2_RLYS	Underfrequency 2 Relays	--- None ---		F57
R4X17AA	UF2_PKUP	Underfrequency 2 Pickup	Hz 58.00 Hz 20.00 to 65.00		F3
R4X17AB	UF2_DLY	Underfrequency 2 Delay	s 3.00 s 0.00 to 600.00		F3
R4X17AC	UF2_MIN_OP_V	Underfrequency 2 Minimum Operating Voltage	x VT 0.70 x VT 0.00 to 1.25		F3
		Underfrequency 2 Minimum Operating Current	x CT 0.20 x CT 0.00 to 20.00		F3
R4X17AD	UF2_MIN_OP_CURR	Underfrequency 2 Minimum Operating Current	x CT 0.20 x CT		F3

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0.00 to 20.00		
		LINE UNDERVOLTAGE 3		R/W	
R4X17B0	LN_UV3_FUNC	Line Undervoltage 3 Function	--- Disabled ---		F39
R4X17B1	LN_UV3_RLYS	Line Undervoltage 3 Relays	--- None ---		F57
R4X17B2	LN_UV3_PKUP	Line Undervoltage 3 Pickup	x VT 0.75 x VT 0.00 to 1.25		F3
R4X17B3	LN_UV3_DLY	Line Undervoltage 3 Delay	s 2.0 s 0.0 to 6000.0		F2
R4X17B4	LN_UV3_MIN_OP_V	Line Undervoltage 3 Minimum Operating Voltage	x VT 0.30 x V 0.00 to 1.25		F3
R4X17B5	LN_UV3_CRV	Line Undervoltage 3 Curve	--- Definite Time ---		F45
		LINE UNDERVOLTAGE 4		R/W	
R4X17B8	LN_UV4_FUNC	Line Undervoltage 4 Function	--- Disabled ---		F39
R4X17B9	LN_UV4_RLYS	Line Undervoltage 4 Relays	--- None ---		F57
R4X17BA	LN_UV4_PKUP	Line Undervoltage 4 Pickup	x VT 0.75 x VT 0.00 to 1.25		F3
R4X17BB	LN_UV4_DLY	Line Undervoltage 4 Delay	s 2.0 s 0.0 to 6000.0		F2
R4X17BC	LN_UV4_MIN_OP_V	Line Undervoltage 4 Minimum Operating Voltage	x VT 0.30 x V 0.00 to 1.25		F3
R4X17BD	LN_UV4_CRV	Line Undervoltage 4 Curve	--- Definite Time ---		F45
		FREQUENCY DECAY		R/W	
R4X17C0	FREQ_DEC_FUNC	Frequency Decay Function	--- Disabled ---		F39
R4X17C1	FREQ_DEC_RELAYS	Frequency Decay Relays	--- None ---		F57
R4X17C2	FREQ_DEC_RATE	Frequency Decay Rate	Hz/s 1.0 Hz/s 0.01 to 5.00		F3
R4X17C3	FREQ_DEC_PKUP	Frequency Decay Pickup	Hz 59.00 Hz 20.00 to 65.00		F3

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X17C4	FREQ_DEC_DELAY	Frequency Decay Delay	s 2.00 s 0.00 to 600.00		F3
R4X17C5	FREQ_DEC_MIN_V	Frequency Decay Minimum Operating Voltage	x VT 0.70 x VT 0.00 to 1.25		F3
R4X17C6	FREQ_DEC_MIN_I	Frequency Decay Minimum Operating Current	x CT 0.00 x CT 0.00 to 20.00		F3
		RESERVED FOR MOD 008			
R4X17C8		Reserved for MOD 008	---, ---, Disabled		F39
R4X17C9		Reserved for MOD 008	---, ---, None		F57
R4X17CA		Reserved for MOD 008	0.015 to 0.600, x RATED, 0.050 x RATED		F70
R4X17CB		Reserved for MOD 008	0.0 to 6000.0, s, 10.0 s		F2
		NEUTRAL DISPLACEMENT			
R4X17CE		Neutral Displacement Function	---, ---, Disabled		F39
R4X17CF		Neutral Displacement Relays	---, ---, None		F57
R4X17D0		Neutral Displacement Pickup	0.00 to 1.25, x VT, 1.00 x VT		F3
R4X17D1		Neutral Displacement Multiplier	0.00 to 100.00, ---, 1		F3
R4X17D2		Neutral Displacement Curve	---, ---, Ext. Inverse		F36
R4X17D3		Neutral Displacement Reset Time	---, ---, Instantaneous		F68
		NEUTRAL DISPLACEMENT		R/W	
R4X17CE	NEUT_DISP_FUNC	Neutral Displacement Function	--- Disabled ---		F39
R4X17CF	NEUT_DISP_RLY	Neutral Displacement Relays	--- None ---		F57
R4X17D0	NEUT_DISP_PKUP	Neutral Displacement Pickup	x VT 1.00 x VT 0.00 to 1.25		F3
R4X17D1	NEUT_DISP_MULT	Neutral Displacement Multiplier	--- 1 0.00 to 100.00		F3
R4X17D2	NEUT_DISP_CURV	Neutral Displacement Curve	--- Ext. Inverse ---		F36
R4X17D3	NEUT_DISP_RESET_TIME	Neutral Displacement Reset Time	--- Instantaneous ---		F68
		PHASE CURRENT LEVEL		R/W	
R4X1800	PH_CURR_LVL_FUNC	Phase Current Level Function	--- Disabled ---	Disabled	F38
R4X1801	PH_CURR_LVL_RLYS	Phase Current Level Relays	--- None ---		F57
R4X1802	PH_CURR_LVL_PKUP	Phase Current Level Pickup	x CT 1.10 x CT		F3

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0.05 to 20.00		
R4X1803	PH_CURR_LVL_DLY	Phase Current Level Delay	s 2 s 0 to 60,000		F1
		NEUTRAL CURRENT LEVEL		R/W	
R4X1808	N_CURR_LVL_FUNC	Neutral Current Level Function	--- Disabled ---		F38
R4X1809	N_CURR_LVL_RLYS	Neutral Current Level Relays	--- None ---		F57
R4X180A	N_CURR_LVL_PKUP	Neutral Current Level Pickup	x CT 1.10 x CT 0.05 to 20.00		F3
R4X180B	N_CURR_LVL_DLY	Neutral Current Level Delay	s 2 s 0 to 60,000		F1
		POWER FACTOR 1		R/W	
R4X1810	PF1_FUNC	Power Factor 1 Function	--- Disabled ---		F38
R4X1811	PF1_RLYS	Power Factor 1 Relays	--- None ---		F57
R4X1812I	PF1_PKUP	Power Factor 1 Pickup (+ Lag, - Lead)	--- 0.80 Lag -0.99 to +1.00		F6
R4X1813I	PF1_DROPOUT	Power Factor 1 Dropout (+ Lag, - Lead)	--- 1 -0.99 to +1.00		F6
R4X1814	PF1_DLY	Power Factor 1 Delay	s 50 s 0 to 60,000		F1
		POWER FACTOR 2		R/W	
R4X1818	PF2_FUNC	Power Factor 2 Function	--- Disabled ---		F38
R4X1819	PF2_RLYS	Power Factor 2 Relays	--- None ---		F57
R4X181AI	PF2_PKUP	Power Factor 2 Pickup (+ Lag, - Lead)	--- 0.80 Lag -0.99 to +1.00		F6
R4X181BI	PF2_DROPOUT	Power Factor 2 Dropout (+ Lag, - Lead)	--- 1 -0.99 to +1.00		F6
R4X181C	PF2_DLY	Power Factor 2 Delay	s 50 s 0 to 60,000		F1
		FAULT LOCATOR		R/W	
R4X1830	FEEDER_LENGTH	Length of Feeder	km, mi 0.1		F2

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0.1 to 99.9		
R4X1831	UNITS_LENGTH	Units of Length	--- km ---		F75
R4X1832	ZPOS_RES	Zpos (Resistive) of Feeder	W 0.01 W 0.01 to 99.99		F3
R4X1833	ZPOS_INDUCT	Zpos (Inductive) of Feeder	W 0.01 W 0.01 to 99.99		F3
R4X1834	ZZERO_RES	Zzero (Resistive) of Feeder	W 0.01 W 0.01 to 99.99		F3
R4X1835	ZZERO_INDUCT	Zzero (Inductive) of Feeder	W 0.01 W 0.01 to 99.99		F3
R4X1836	FLT_TYPE_OUT_RLYS	Fault Type Output to Relays 4 to 7	-, -	RW	F38
		CURRENT DEMAND		R/W	
R4X1840	CURR_DMND_FUNC	Current Demand Function	--- Disabled ---		F38
R4X1841	CURR_DMND_MEAS	Current Demand Measurement Type	--- Thermal Exp. ---		F58
R4X1842	CURR_DMND_THM_90	Current Demand Thermal 90% Response	--- 15 min ---		F16
R4X1843	CURR_DMND_INTV	Current Demand Time Interval	--- 20 min ---		F16
R4X1844	CURR_DMND_RLYS	Current Demand Relays	--- None ---		F57
R4X1845	CURR_DMND_PKUP	Current Demand Pickup	A 1000 A 10 to 10000		F1
		REAL POWER DEMAND		R/W	
R4X1848	MW_DMND_FUNC	Real Power Demand Function	--- Disabled ---		F38
R4X1849	MW_DMND_MEAS	Real Power Demand Measurement Type	--- Block Interval ---		F58
R4X184A	MW_DMND_THM_90	Real Power Demand Thermal 90% Response	--- 15 min ---		F16
R4X184B	MW_DMND_INTV	Real Power Demand Time Interval	--- 20 min ---		F16
R4X184C	MW_DMND_RLYS	Real Power Demand Relays	--- None ---		F57

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X184D	MW_DMND_PKUP	Real Power Demand Pickup			F86
R4X184DI	MW_DMND_PKUP	Real Power Demand Pickup	KW 100 kW 1 to 30000		F86
		REACTIVE POWER DEMAND		R/W	
R4X1850	MVAR_DMND_FUNC	Reactive Power Demand Function	--- Disabled ---		F38
R4X1851	MVAR_DMND_MEAS	Reactive Power Demand Measurement Type	--- Block Interval ---		F58
R4X1852	MVAR_DMND_THM_90	Reactive Power Demand Thermal 90% Response	--- 15 min ---		F16
R4X1853	MVAR_DMND_INTV	Reactive Power Demand Time Interval	--- 20 min ---		F16
R4X1854	MVAR_DMND_RLYS	Reactive Power Demand Relays	--- None ---		F57
R4X1855	MVAR_DMND_PKUP	Reactive Power Demand Pickup	Kvar 100 kvar 1 to 30000		F86
R4X1855I	MVAR_DMND_PKUP	Reactive Power Demand Pickup	Kvar 100 kvar 1 to 30000		F86
		APPARENT POWER DEMAND			
R4X1858	MVA_DMND_FUNC	Apparent Power Demand Function	--- Disabled ---		F38
R4X1859	MVA_DMND_MEAS	Apparent Power Demand Measurement Type	--- Block Interval ---		F58
R4X185A	MVA_DMND_THM_90	App. Power Demand Thermal 90% Response	--- 15 min ---		F16
R4X185B	MVA_DMND_INTV	Apparent Power Demand Time Interval	--- 20 min ---		F16
R4X185C	MVA_DMND_RLYS	Apparent Power Demand Relays	--- None ---		F57
R4X185D	MVA_DMND_PKUP	Apparent Power Demand Pickup	KVA 100 kVA 1 to 30000		F86
R4X185DI	MVA_DMND_PKUP	Apparent Power Demand Pickup	kVA 100 kVA 1 to 30000		F86
		PULSE OUTPUT		R/W	
R4X1860		Pulse Output Function	--- Disabled ---		F38

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1861		Positive Watthours Pulse Output Relays	--- None ---		F57
R4X1862		Positive Watthours Pulse Interval	kWh 100 kWh 0 to 65535		F86
R4X1863		Negative Watthours Pulse Output Relays	--- None ---		F57
R4X1864		Negative Watthours Pulse Interval	kWh 100 kWh 0 to 65535		F86
R4X1865		Positive Varhours Pulse Output Relays	--- None ---		F57
R4X1866		Positive Varhours Pulse Interval	kvarh 100 kvarh 0 to 65535		F86
R4X1867		Negative Varhours Pulse Ouput Relays	--- None ---		F57
R4X1868		Negative Varhours Pulse Interval	kvarh 100 kvarh 0 to 65535		F86
		ANALOG INPUT SETUP		R/W	
R4X1880S20	ANAL_IN_NAME	Analog Input Name (10 words)	--- ANALOG INPUT ---		F33
R4X188A	ANAL_IN_UNITS	Analog Input Units (3 words)			F33
R4X188AS6	ANAL_IN_UNITS	Analog Input Units (3 words)	--- μA ---		F33
R4X188D	ANAL_IN_RANGE	Analog Input Range	--- 0-20 mA ---		F42
R4X188E	ANAL_IN_MIN	Analog Input Minimum Value	Units 0 0 to 65535		F1
R4X188F	ANAL_IN_MAX	Analog Input Maximum Value	Units 20000 0 to 65535		F1
		ANALOG INPUT THRESHOLD 1		R/W	
R4X18A0	ANAL_IN_THR1_FUNC	Analog Threshold 1 Function	--- Disabled ---		F38
R4X18A1	ANAL_IN_THR1_RLYS	Analog Threshold 1 Relays	--- None ---		F57
R4X18A2	ANAL_IN_THR1_PKUP	Analog Threshold 1 Pickup	Units 100 0 to 65535		F1
R4X18A3	ANAL_IN_THR1_DLY	Analog Threshold 1 Delay	S		F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			100 s 0 to 60,000		
R4X18A4	ANAL_IN_THR1_PU_TYPE	Analog Threshold 1 Pickup Type	--- Over ---		F85
		ANALOG INPUT THRESHOLD 2		R/W	
R4X18A8	ANAL_IN_THR2_FUNC	Analog Threshold 2 Function	--- Disabled ---		F38
R4X18A9	ANAL_IN_THR2_RLYS	Analog Threshold 2 Relays	--- None ---		F57
R4X18AA	ANAL_IN_THR2_PKUP	Analog Threshold 2 Pickup	Units 100 0 to 65535		F1
R4X18AB	ANAL_IN_THR2_DLY	Analog Threshold 2 Delay	s 100 s 0 to 60,000		F1
R4X18AC	ANAL_IN_THR2_PU_TYPE	Analog Threshold 2 Pickup Type	--- Over ---		F85
		ANALOG INPUT RATE 1		R/W	
R4X18B0	ANAL_IN_RATE1_FUNC	Analog In Rate 1 Function	--- Disabled ---		F38
R4X18B1	ANAL_IN_RATE1_RLYS	Analog In Rate 1 Relays	--- None ---		F57
R4X18B2I	ANAL_IN_RATE1_PKUP	Analog In Rate 1 Pickup	Units / hr 10.0 uA/hr -1000.0 to 1000.0		F5
R4X18B3	ANAL_IN_RATE1_DLY	Analog In Rate 1 Delay	s 0 s 0 to 60,000		F1
		ANALOG INPUT RATE 2		R/W	
R4X18B8	ANAL_IN_RATE2_FUNC	Analog In Rate 2 Function	--- Disabled ---		F38
R4X18B9	ANAL_IN_RATE2_RLYS	Analog In Rate 2 Relays	--- None ---		F57
R4X18BAI	ANAL_IN_RATE2_PKUP	Analog In Rate 2 Pickup	Units / hr 10.0 uA/hr -1000.0 to 1000.0		F5
R4X18BB	ANAL_IN_RATE2_DLY	Analog In Rate 2 Delay	s 0 s 0 to 60,000		F1
		ANALOG OUTPUT 1		R/W	
R4X18C0	ANAL_OUT1_PARAM	Analog Output 1 Parameter	--- Disabled ---		F77
R4X18C1	ANAL_OUT1_MIN	Analog Output 1 Minimum	---		F78

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0 ---		
R4X18C2	ANAL_OUT1_MAX	Analog Output 1 Maximum	--- 0 ---		F78
		ANALOG OUTPUT 2		R/W	
R4X18C4	ANAL_OUT2_PARAM	Analog Output 2 Parameter	--- Disabled ---		F77
R4X18C5	ANAL_OUT2_MIN	Analog Output 2 Minimum	--- 0 ---		F78
R4X18C6	ANAL_OUT2_MAX	Analog Output 2 Maximum	--- 0 ---		F78
		ANALOG OUTPUT 3		R/W	
R4X18C8	ANAL_OUT3_PARAM	Analog Output 3 Parameter	--- Disabled ---		F77
R4X18C9	ANAL_OUT3_MIN	Analog Output 3 Minimum	--- 0 ---		F78
R4X18CA	ANAL_OUT3_MAX	Analog Output 3 Maximum	--- 0 ---		F78
		ANALOG OUTPUT 4		R/W	
R4X18CC	ANAL_OUT4_PARAM	Analog Output 4 Parameter	--- Disabled ---		F77
R4X18CD	ANAL_OUT4_MIN	Analog Output 4 Minimum	--- 0 ---		F78
R4X18CE	ANAL_OUT4_MAX	Analog Output 4 Maximum	--- 0 ---		F78
		ANALOG OUTPUT 5		R/W	
R4X18D0	ANAL_OUT5_PARAM	Analog Output 5 Parameter	--- Disabled ---		F77
R4X18D1	ANAL_OUT5_MIN	Analog Output 5 Minimum	--- 0 ---		F78
R4X18D2	ANAL_OUT5_MAX	Analog Output 5 Maximum	--- 0 ---		F78
		ANALOG OUTPUT 6		R/W	
R4X18D4	ANAL_OUT6_PARAM	Analog Output 6 Parameter	--- Disabled ---		F77
R4X18D5	ANAL_OUT6_MIN	Analog Output 6 Minimum	--- 0 ---		F78

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X18D6	ANAL_OUT6_MAX	Analog Output 6 Maximum	--- 0 ---		F78
		ANALOG OUTPUT 7		R/W	
R4X18D8	ANAL_OUT7_PARAM	Analog Output 7 Parameter	--- Disabled ---		F77
R4X18D9	ANAL_OUT7_MIN	Analog Output 7 Minimum	--- 0 ---		F78
R4X18DA	ANAL_OUT7_MAX	Analog Output 7 Maximum	--- 0 ---		F78
		ANALOG OUTPUT 8		R/W	
R4X18DC	ANAL_OUT8_PARAM	Analog Output 8 Parameter	--- Disabled ---		F77
R4X18DD	ANAL_OUT8_MIN	Analog Output 8 Minimum	--- 0 ---		F78
R4X18DE	ANAL_OUT8_MAX	Analog Output 8 Maximum	--- 0 ---		F78
		OVERFREQUENCY		R/W	
R4X18E0	OF_FUNC	Overfrequency Function	--- Disabled ---		F38
R4X18E1	OF_RLYS	Overfrequency Relays	--- None ---		F57
R4X18E2	OF_PKUP	Overfrequency Pickup	Hz 60.50 Hz 20.00 to 65.00		F3
R4X18E3	OF_DLY	Overfrequency Delay	s 5.0 s 0.0 to 6000.0		F2
		TRIP COUNTER		R/W	
R4X1900	TRP_CTR_FUNC	Trip Counter Function	--- Disabled ---		F38
R4X1901	TRP_CTR_RLYS	Trip Counter Relays	--- None ---		F57
R4X1902	TRP_CTR_LIM	Trip Counter Limit	--- 10000 Trips 1 to 10000		F1
		TOTAL ARCING CURRENT		R/W	
R4X1908	TOT_ARC_CURR_FUNC	Total Arcing Current Function	--- Disabled ---		F38
R4X1909	TOT_ARC_CURR_RLYS	Total Arcing Current Relays	--- None		F57

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes

R4X190A	TOT_ARC_CURR_ST_DLY	Total Arcing Current Start Delay	ms 32 ms 0 to 100		F1
R4X190B	TOT_ARC_CURR_LIM	Total Arcing Current Limit	kA2-cyc 1000 kA2cyc 1 to 50000		F1
		VT FAILURE		R/W	
R4X1918	VT_FAIL_FUNC	VT Failure Function	--- Disabled ---		F38
R4X1919	VT_FAIL_RLYS	VT Failure Relays	--- None ---		F57
R4X191A	VT_FAIL_DLY	VT Failure Delay	s 10 s 0 to 60,000		F1
		SIMULATION SETUP		R/W	
R4X1920	SIM_STATUS	Simulation Status	--- Disabled ---		F48
R4X1921	CB_SIM	Circuit Breaker Simulation	--- Enabled ---		F30
R4X1922	SIM_ALLOW_RLY_OP	Allow Operation of Relays	--- None ---		F57
		SIMULATION PRE-FAULT VALUES		R/W	
R4X1930	SIM_PRE_AMPS_ABC_LVL	Prefault Phase A/B/C Current Level	x CT 0.50 x CT 0.00 to 20.00		F3
R4X1931	SIM_PRE_PF_ANGLE	Prefault Power Factor Angle	° Lag 0° Lag 0 to 359		F1
		SIMULATION FAULT VALUES		R/W	
R4X1940	SIM_VOLTS_AN_LVL	Fault Phase A-N Voltage Level	x VT 1.00 x VT 0.00 to 2.00		F3
R4X1941	SIM_VOLTS_AN_POS	Fault Phase A-N Voltage Position	° Lag 0° Lag 0 to 359		F1
R4X1942	SIM_VOLTS_BN_LVL	Fault Phase B-N Voltage Level	x T 1.00 x VT 0.00 to 2.00		F3
R4X1943	SIM_VOLTS_BN_POS	Fault Phase B-N Voltage Position	° Lag 120° Lag 0 to 359		F1
R4X1944	SIM_VOLTS_CN_LVL	Fault Phase C-N Voltage Level	x T 1.00 x VT 0.00 to 2.00		F3
R4X1945	SIM_VOLTS_CN_POS	Fault Phase C-N Voltage Position	° Lag 240° Lag		F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0 to 359		
R4X1946	SIM_AMPS_A_LVL	Fault Phase A Current Level	x CT 1.00 x CT 0.00 to 20.00		F3
R4X1947	SIM_AMPS_A_POS	Fault Phase A Current Position	° Lag 60° Lag 0 to 359		F1
R4X1948	SIM_AMPS_B_LVL	Fault Phase B Current Level	x CT 1.00 x CT 0.00 to 20.00		F3
R4X1949	SIM_AMPS_B_POS	Fault Phase B Current Position	° Lag 180° Lag 0 to 359		F1
R4X194A	SIM_AMPS_C_LVL	Fault Phase C Current Level	x CT 1.00 x CT 0.00 to 20.00		F3
R4X194B	SIM_AMPS_C_POS	Fault Phase C Current Position	° Lag 300° Lag 0 to 359		F1
R4X194C	SIM_SYS_FREQ	Fault System Frequency	Hz 60.00 Hz 20.00 to 65.00		F3
R4X194D	SIM_ANAL_IN_CURR	Fault Analog Input Current	mA 0.00 mA 0.00 to 20.00		F3
		Reserved for Fault Polarizing Current Level	x CT 1.00 x CT 0.00 to 20.00		F3
		Reserved for Fault Polarizing Current Position	° Lag 0° 0 to 359		F1
R4X1950	SIM_GND_CURR_LVL	Fault Ground Current Level	x CT 0.00 x CT 0.00 to 20.00		F3
R4X1951	SIM_GND_CURR_POS	Fault Ground Current Position	° Lag 0° 0 to 359		F1
R4X1952	SIM_SNS_GND_CURR_LVL	Fault Sensitive Ground Current Level	x CT 0.100 x CT 0.005 to 1.000		F70
R4X1953	SIM_SNS_GND_CURR_POS	Fault Sensitive Ground Current Position	° Lag 0° 0 to 359		F1
		SIMULATION POST-FAULT VALUES		R/W	
R4X1960	SIM_POST_BUS_V_LVL	Postfault Bus Voltage Level	x VT 1.00 x VT 0.00 to 2.00		F3
R4X1961	SIM_POST_BUS_V_FREQ	Postfault Bus Voltage Frequency	Hz 60.00 Hz 20.00 to 65.00		F3
R4X1962	SIM_POST_SYNC_V_LVL	Postfault Synchronous Voltage Level	x VT 1.00 x VT		F3

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0.00 to 2.00		
R4X1963	SIM_POST_SYNC_V_POS	Postfault Synchronous Voltage Position	° Lag 0° 0 to 359		F1
R4X1964	SIM_POST_SYNC_V_FREQ	Postfault Synchronous Voltage Frequency	Hz 60.00 Hz 20.00 to 65.00		F3
		BREAKER FAILURE		R/W	
R4X1980	BRKR_FAIL_FUNC	Breaker Failure Function	--- Disabled ---		F38
R4X1981	BRKR_FAIL_RLYS	Breaker Failure Relays	--- None ---		F57
R4X1982	BRKR_FAIL_DLYS	Breaker Failure Delay	s 0.10 s 0.03 to 1.00		F3
R4X1983	BRKR_FAIL_CURR	Breaker Failure Current	x CT 1.00 x CT 0.05 to 20.00		F3
		BREAKER OPERATION		R/W	
R4X1988	BRKR_OP_FUNC	Breaker Operation Function	--- Disabled ---		F38
R4X1989	BRKR_OP_RLYS	Breaker Operation Relays	--- None ---		F57
R4X198A	BRKR_OP_DLY	Breaker Operation Delay	s 0.10 s 0.03 to 1.00		F3
		TRIP COIL MONITOR		R/W	
R4X1990	TRP_COIL_MON_FUNC	Trip Coil Monitor Function	--- Disabled ---		F38
R4X1991	TRP_COIL_MON_RLYS	Trip Coil Monitor Relays	--- None ---		F57
R4X1992	OPEN_BRKR_PERMISS	Open Breaker Permissive	--- Disabled ---		F30
R4X1993	COIL_MON1_DLY	Coil Monitor 2 Delay	s, 5 s, 5 to 100		F1
R4X1994	COIL_MON1_TYPE	Coil Monitor 2 Type	---, Trip, ---		F90
		CLOSE COIL MONITOR		R/W	
R4X1998	CLS_COIL_MON_FUNC	Close Coil Monitor Function	--- Disabled ---		F38
R4X1999	CLS_COIL_MON_RLYS	Close Coil Monitor Relays	--- None ---		F57
R4X199A	CLSD_BRKR_PERMISS	Closed Breaker Permissive	--- Disabled		F30

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes

R4X199B	COIL_MON2_DLY	Coil Monitor 2 Delay	s, 5 s, 5 to 100	RW	F1
R4X199C	COIL_MON2_TYPE	Coil Monitor 2 Type	---, Close, ---	RW	F90
		COIL MONITOR NAMES			
R4X19A0	COIL_MON1_NAME	Coil Monitor 2 Name (9 registers)	---, "Trip Coil Monitor", ---	RW	F33
R4X19A9	COIL_MON2_NAME	Coil Monitor 2 Name (9 registers)	---, "Close Coil Monitor", ---	RW	F33
		FORCE OUTPUT RELAYS		R/W	
R4X1A00	FORCE_OUT_RLYS_FUNC	Force Output Relays Function	--- Disabled ---		F30
R4X1A01	FORCE1_TRP_RLY	Force 1 TRIP Relay	--- De-energized ---		F34
R4X1A02	FORCE2_CLS_RLY	Force 2 CLOSE Relay	--- De-energized ---		F34
R4X1A03	FORCE3_ALM_RLY	Force 3 ALARM Relay	--- De-energized ---		F34
R4X1A04	FORCE4_AUX_RLY	Force 4 AUXILIARY Relay	--- De-energized ---		F34
R4X1A05	FORCE5_AUX_RLY	Force 5 AUXILIARY Relay	--- De-energized ---		F34
R4X1A06	FORCE6_AUX_RLY	Force 6 AUXILIARY Relay	--- De-energized ---		F34
R4X1A07	FORCE7_AUX_RLY	Force 7 AUXILIARY Relay	--- De-energized ---		F34
R4X1A08	FORCE8_SELFTEST_WARN	Force 8 SELF-TEST WARNING Relay	--- De-energized ---		F34
R4X1A09	FORCE_SOLID_ST_OUT	Force Solid State Output	--- De-energized ---		F34
		FORCE ANALOG OUTPUTS		R/W	
R4X1A10	FORCE_ANAL_OUT_FUNC	Force Analog Outputs Function	--- Disabled ---		F30
R4X1A11	FORCE_ANAL_OUT1	Force Analog Output 1	% 0% 0 to 100		F1
R4X1A12	FORCE_ANAL_OUT2	Force Analog Output 2	% 0% 0 to 100		F1
R4X1A13	FORCE_ANAL_OUT3	Force Analog Output 3	% 0% 0 to 100		F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1A14	FORCE_ANAL_OUT4	Force Analog Output 4	% 0% 0 to 100		F1
R4X1A15	FORCE_ANAL_OUT5	Force Analog Output 5	% 0% 0 to 100		F1
R4X1A16	FORCE_ANAL_OUT6	Force Analog Output 6	% 0% 0 to 100		F1
R4X1A17	FORCE_ANAL_OUT7	Force Analog Output 7	% 0% 0 to 100		F1
R4X1A18	FORCE_ANAL_OUT8	Force Analog Output 8	% 0% 0 to 100		F1
		PICKUP TEST		R/W	
R4X1A20	PKUP_TEST_FUNC	Pickup Test Function	--- Disabled ---		F30
R4X1A21	PKUP_TEST_RLYS	Pickup Test Relays	--- None ---		F57
		SETPOINT GROUP		R/W	
R4X1B00	ACTIVE_SP_GRP_SP	Active Setpoint Group	--- Group 1 ---		F79
R4X1B01	EDIT_SP_GRP_SP	Edit Setpoint Group	--- Active Group ---		F80
R4X1B02	BRKR_OPEN_INHIB	Breaker Open Inhibit	--- Disabled ---		F30
R4X1B03	OC_PKUP_INHIB	Overcurrent Pickup Inhibit	--- Disabled ---		F30
R4X1B04	OV_PKUP_INHIB	Overvoltage Pickup Inhibit	--- Disabled ---		F30
R4X1B05	UV_PKUP_INHIB	Undervoltage Pickup Inhibit	--- Disabled ---		F30
R4X1B06	UF_PKUP_INHIB	Underfrequency Pickup Inhibit	--- Disabled ---		F30
		SYNCHROCHECK		R/W	
R4X1B10	SYNC_CHK_FUNC	Synchrocheck Function	--- Disabled ---		F38
R4X1B11	DEAD_SRC_PERMISS	Dead Source Permissive	--- OFF ---		F20
R4X1B12	DEAD_BUS_MAX_V	Dead Bus Maximum Voltage	x VT		F3

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0.20 x VT 0.00 to 1.25		
R4X1B13	DEAD_LN_MAX_V	Dead Line Maximum Voltage	x VT 0.20 x VT 0.00 to 1.25		F3
R4X1B14	LIVE_BUS_MIN_V	Live Bus Minimum Voltage	x VT 0.80 x VT 0.00 to 1.25		F3
R4X1B15	LIVE_LN_MIN_V	Live Line Minimum Voltage	x VT 0.80 x VT 0.00 to 1.25		F3
R4X1B16	MAX_V_DIFF	Maximum Voltage Difference	kV 2.00 kV 0.01 to 100.00		F3
R4X1B17	MAX_ANGLE_DIFF	Maximum Angle Difference	° 24° 0 to 100		F1
R4X1B18	MAX_FREQ_DIFF	Maximum Frequency Difference	Hz 2.00 Hz 0 to 5.00		F3
R4X1B19	SYNC_CHK_RLY	Syncrocheck Relays	--- None ---		F57
		MANUAL CLOSE FEATURE BLOCKING		R/W	
R4X1B20	MC_FEAT_BLK_FUNC	Manual Close Feature Blocking Function	--- Disabled ---		F38
R4X1B21	MC_RLYS	Manual Close Relays	--- None ---		F57
R4X1B22	MC_BLK_TM	Manual Close Block Time	s 5 s 1 to 1000		F1
R4X1B23	SEL_SETPT_GRP	Select Setpoint Group	---, Active Group, ---	RW	F80
R4X1B24	OC_BLK_FLGS	Overcurrent Blocking Flags	---, None Blocked, ---	RW	F59
R4X1B25	PH_TM_OC1_RSD_PKUP	Phase Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100	RW	F1
R4X1B26	N_TM_OC1_RSD_PKUP	Neutral Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100	RW	F1
R4X1B27	GND_TM_OC1_RSD_PKUP	Ground Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100	RW	F1
R4X1B28	NEG_SEQ_TM_OC_RSD_PKUP	Negative Sequence Time Overcurrent Raised Pickup	%, 0%, 0 to 100	RW	F1
R4X1B29	SENS_GND_TM_OC_RSD_PKUP	Sensitive Ground Time Overcurrent Raised Pickup	%, 0%, 0 to 100	RW	F1
		COLD LOAD FEATURE BLOCKING		R/W	
R4X1B40	CL_PU_BLK_FUNC	Cold Load Pickup Feature Blocking Function	--- Disabled ---		F38
R4X1B41	CL_PKUP_RLYS	Cold Load Pickup Relays	--- None ---		F57
R4X1B42	CL_OUT_TM_B4_CL	Outage Time Before Cold Load	min 100 min		F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			1 to 1000		
R4X1B43	CL_PKUP_BLK_TM	Cold Load Pickup Block Time	s 5 s 1 to 1000		F1
R4X1B44		Select Setpoint Group	---, Disabled, ---		F38
R4X1B45		Overcurrent Blocking Flags	---, Disabled, ---		F38
R4X1B46	PH_TM_OC2_RSD_PKUP	Phase Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100		F1
R4X1B47	N_TM_OC2_RSD_PKUP	Neutral Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100		F1
R4X1B48	GND_TM_OC2_RSD_PKUP	Ground Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100		F1
R4X1B49		Negative Sequence Time Overcurrent Raised Pickup	%, 0%, 0 to 100		F1
R4X1B4A		Sensitive Ground Time Overcurrent Raised Pickup	%, 0%, 0 to 100		F1
		UNDERVOLTAGE RESTORATION		R/W	
R4X1B60	UV_REST_FUNC	Undervoltage Restoration Function	--- Disabled ---		F38
R4X1B61	UV_REST_RLYS	Undervoltage Resoration Relays	--- None ---		F57
R4X1B62	UV_REST_PH_REQ_OP	Undervoltage Restoration Phases Required for Operation	--- All Three ---		F41
R4X1B63	UV_REST_MIN_V	Undervoltage Resoration Minimum Voltage	x VT 0.90 x V 0.00 to 1.25		F3
R4X1B64	UV_REST_DLY	Undervoltage Resoration Delay	s 10 s 0 to 10000		F1
R4X1B65	UV_REST_INC_SEQ_TIME	Undervoltage Resoration Incomplete Sequence Time	min 100 min 1 to 10,000		F1
R4X1B66	UV_REST_SRC	Undervoltage Restoration Source	--- Bus ---		F87
		UNDERFREQUENCY RESTORATION		R/W	
R4X1B70	UF_REST_FUNC	Underfrequency Restoration Function	--- Disabled ---		F38
R4X1B71	UF_REST_RLYS	Underfrequency Resoration Relays	--- None ---		F57
R4X1B72	UF_REST_MIN_V	Underfrequency Resoration Minimum Voltage	x VT 0.90 x V 0.00 to 1.25		F3
R4X1B73	UF_REST_MIN_FREQ	Underfrequency Resoration Minimum Frequency	Hz 59.90 Hz 20.00 to 60.00		F3
R4X1B74	UF_REST_DLY	Underfrequency Resoration Delay	s 10 s 0 to 10000		F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1B75	UF_REST_INC_SEQ_TIME	Underfrequency Resoration Incomplete Sequence Time	min 100 min 1 to 10,000		F1
		TRANSFER		R/W	
R4X1B80	TXF_FUNC	Transfer Function	--- Disabled ---		F56
R4X1B81	TXF_DLY_THIS_SRC	Transfer Delay This Source	s 1.0 s 0.0 to 10.0		F2
R4X1B82	TXF_DLY_OTHER_SRC	Transfer Delay Other Source	s 3.0 s 0.0 to 10.0		F2
R4X1B83	BLK_TRP_ON_DBL_LOSS	Block Trip On Double Loss	--- Disabled ---		F30
		AUTORECLOSE SETUP - SR760 ONLY		R/W	
R4X1BA0	AUTO_RECL_FUNC	Autoreclose Function	--- Disabled ---		F30
R4X1BA1	NUM_RECL_SHOTS	Number of Reclosure Shots	1 1 1 to 4		F1
R4X1BA2	AUTO_RECL_TIME	Autoreclose Reset Time	s 60 s 1 to 1000		F1
R4X1BA3	AUTO_RECL_TIME_MAN	Autoreclose Block Time Upon Manual Close	s 10 s 0 to 200		F1
R4X1BA4	INC_SEQ_TIME	Incompleted Sequence Time	s 30 s 1 to 1000		F1
R4X1BA5	RECL_ENABLE_RELAYS	Reclosure Enabled Relays	--- None ---		F57
R4X1BA6	RECL_INPROG_RELAYS	Reclose In Progress Relays	--- None ---		F57
R4X1BA7	RECL_LOCKOUT_RELAYS	Reclosure Lockout Relays	--- None ---		F57
R4X1BA8	AUTO_RECL_EXT_LOGIC	Autoreclose External Close Logic	---, Disabled, ---		F30
		AUTORECLOSE RATE SUPERVISION - SR760 ONLY			
R4X1BA8	RATE_SUP_FUNC	Rate Supervision Function	---, Disabled, ---		F38
R4X1BAB	MAX_AUTO_RCLS_RATE	Max Autoreclose Rate	/hr, 25, 1 to 50		F1
R4X1BAC	RATE_SUP_RLYS	Rate Supervision Relays	---, None, ---		F57
		CURRENT SUPERVISION - SR760 ONLY		R/W	
R4X1BB0	CURR_SUPER_FUNC	Current Supervision Function	--- Disabled ---		F30

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1BB1	CURR_3_SHOTS	3 Shots For Current Above	x CT 17.0 x CT 0.0 to 20.0		F2
R4X1BB2	CURR_2_SHOTS	2 Shots For Current Above	x CT 18.0 x CT 0.0 to 20.0		F2
R4X1BB3	CURR_1_SHOT	1 Shot For Current Above	x CT 19.0 x CT 0.0 to 20.0		F2
R4X1BB4	CURR_SUPER_LOCKOUT	Current Supervision To Lockout	--- Disabled ---		F30
R4X1BB5	CURR_LOCKOUT_ABOVE	Lockout For Current Above	x CT 20.0 x CT 0.0 to 20.0		F2
		ZONE COORDINATION - SR760 ONLY			
R4X1BB8	ZONE_COORD_FUNC	Zone Coordination Function	---, Disabled, ---		F30
R4X1BB9	F_CURR_INCR	Phase Current Increase	x CT, 1.00 x CT, 0.05 to 20.00		F3
R4X1BBA	NEUT_CURR_INCR	Neutral Current Increase	x CT, 1.00 x CT, 0.05 to 20.00		F3
R4X1BBB	MAX_FLT_CLEAR_TM	Maximum Fault Clearing Time	s, 10 s, 1 to 1000		F1
		RECLOSURE SHOT 1 - SR760 ONLY		R/W	
R4X1BC0	RECL1_DEADTIME	Deadtime Before Reclosure 1	s 0.5 s 0.00 to 300.0		F3
R4X1BC1	RECL1_SETPT_GRP	Select Setpoint Group	--- Active Group ---		F80
R4X1BC2	RECL1_BLK_FLGS	Overcurrent Blocking Flags	---, None blocked, ---		F59
R4X1BC3	RECL1_PH_OC1_RSD_PKUP	Phase Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100		F1
R4X1BC4	RECL1_N_OC1_RSD_PKUP	Neutral Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100		F1
R4X1BC5	RECL1_GND_OC_RSD_PKUP	Ground Time Overcurrent Raised Pickup	%, 0%, 0 to 100		F1
R4X1BC6	RECL1_NEG_SEQ_OC_RSD_PKUP	Negative Sequence Time Overcurrent Raised Pickup	%, 0%, 0 to 100		F1
R4X1BC7	RECL1_SENS_OC_RSD_PKUP	Sensitive Ground Time Overcurrent Raised Pickup	%, 0%, 0 to 100		F1
		RECLOSURE SHOT 2 - SR760 ONLY		R/W	
R4X1BD0	RECL2_DEADTIME	Deadtime Before Reclosure 2	s, 3.0 s, 0.0 to 300.0		F3
R4X1BD1	RECL2_SETPT_GRP	Select Setpoint Group	---, Active Group, ---		F80
R4X1BD2	RECL2_BLK_FLGS	Overcurrent Blocking Flags	---, None blocked, ---		F59
R4X1BD3	RECL2_PH_OC1_RSD_PKUP	Phase Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100		F1
R4X1BD4	RECL2_N_OC1_RSD_PKUP	Neutral Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100		F1
R4X1BD5	RECL2_GND_OC_RSD_PKUP	Ground Time Overcurrent Raised Pickup	%, 0%, 0 to 100		F1
R4X1BD6	RECL2_NEG_SEQ_OC_RSD_PKUP	Negative Sequence Time Overcurrent Raised Pickup	%, 0%, 0 to 100		F1
R4X1BD7	RECL2_SENS_OC_RSD_PKUP	Sensitive Ground Time Overcurrent Raised Pickup	%, 0%, 0 to 100		F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
		RECLOSURE SHOT 3 - SR760 ONLY		R/W	
R4X1BE0	RECL3_DEADTIME	Deadtime Before Reclosure 3	s, 4.0 s, 0.0 to 300.0		F2
R4X1BE1	RECL3_SETPT_GRP	Select Setpoint Group	---, Active Group, ---		F80
R4X1BE2	RECL3_BLK_FLGS	Overcurrent Blocking Flags	---, None blocked, ---		F59
R4X1BE3	RECL3_PH_OC1_RSD_PKUP	Phase Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100		F1
R4X1BE4	RECL3_N_OC1_RSD_PKUP	Neutral Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100		F1
R4X1BE5	RECL3_GND_OC_RSD_PKUP	Ground Time Overcurrent Raised Pickup	%, 0%, 0 to 100		F1
R4X1BE6	RECL3_NEG_SEQ_OC_RSD_PKUP	Negative Sequence Time Overcurrent Raised Pickup	%, 0%, 0 to 100		F1
R4X1BE7	RECL3_SENS_OC_RSD_PKUP	Sensitive Ground Time Overcurrent Raised Pickup	%, 0%, 0 to 100		F1
		RECLOSURE SHOT 4 - SR760 ONLY		R/W	
R4X1BF0	RECL4_DEADTIME	Deadtime Before Reclosure 4	s, 5.0 s, 0.1 to 300.0		F2
R4X1BF1	RECL4_SETPT_GRP	Select Setpoint Group	---, Active Group, ---		F80
R4X1BF2	RECL4_INST_OC1_BLK	Overcurrent Blocking Flags	---, None blocked, ---		F38
R4X1BF3	RECL4_PH_OC1_RSD_PKUP	Phase Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100		F1
R4X1BF4	RECL4_N_OC1_RSD_PKUP	Neutral Time Overcurrent 2 Raised Pickup	%, 0%, 0 to 100		F1
R4X1BF5	RECL4_GND_OC_RSD_PKUP	Ground Time Overcurrent Raised Pickup	%, 0%, 0 to 100		F1
R4X1BF6	RECL4_NEG_SEQ_OC_RSD_PKUP	Negative Sequence Time Overcurrent Raised Pickup	%, 0%, 0 to 100		F1
R4X1BF7	RECL4_SENS_OC_RSD_PKUP	Sensitive Ground Time Overcurrent Raised Pickup	%, 0%, 0 to 100		F1
		LOGIC INPUTS NAMES		R/W	
R4X1C00S18	LOGIC_IN1_NAME	Logic Input 1 Name (9 words = 18 characters)	--- Logic Input 1 ---		F33
R4X1C09S18	LOGIC_IN2_NAME	Logic Input 2 Name (9 words = 18 characters)	--- Logic Input 2 ---		F33
R4X1C12S18	LOGIC_IN3_NAME	Logic Input 3 Name (9 words = 18 characters)	--- Logic Input 3 ---		F33
R4X1C1BS18	LOGIC_IN4_NAME		--- Logic Input 1 ---		F33
R4X1C24S18	LOGIC_IN5_NAME		--- Logic Input 2 ---		F33
R4X1C2DS18	LOGIC_IN6_NAME		--- Logic Input 3 ---		F33
R4X1C36S18	LOGIC_IN7_NAME		--- Logic Input 1 ---		F33
R4X1C3FS18	LOGIC_IN8_NAME		--- Logic Input 2 ---		F33
R4X1C48S18	LOGIC_IN9_NAME		---		F33

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			Logic Input 3 ---		
R4X1C51S18	LOGIC_IN10_NAME		--- Logic Input 1 ---		F33
R4X1C5AS18	LOGIC_IN11_NAME		--- Logic Input 1 ---		F33
R4X1C63S18	LOGIC_IN12_NAME		--- Logic Input 1 ---		F33
R4X1C6CS18	LOGIC_IN13_NAME		--- Logic Input 1 ---		F33
R4X1C75S18	LOGIC_IN14_NAME		--- Logic Input 1 ---		F33
R4X1C7ES18	LOGIC_IN15_NAME		--- Logic Input 1 ---		F33
R4X1C87S18	LOGIC_IN16_NAME		--- Logic Input 1 ---		F33
R4X1C90S18	LOGIC_IN17_NAME		--- Logic Input 1 ---		F33
R4X1C99S18	LOGIC_IN18_NAME		--- Logic Input 1 ---		F33
R4X1CA2S18	LOGIC_IN19_NAME		--- Logic Input 1 ---		F33
R4X1CABS18	LOGIC_IN20_NAME	Logic Input 20 Name (9 words = 18 characters)	--- Logic Input 20 ---		F33
		EVENT RECORD SELECTOR		R/W	
R4X2000	EVNT_NUM_SEL	Event Number Selector	--- 0 0 to 65535	0	F1
		EVENT RECORDOR INFORMATION	RO	RO	
R4X2001	TOT_EVNTS_SINCE_CLR	Number of Events Since Clear	--- 0 0 to 65535		F1
R4X2002L	EVNT_REC_LAST_CLR	Event Recorder Last Cleared (2 words)	---,---, ---		F23
R4X2010L	EVENT_DATE	Record #N Date of Event (2 words)			F23
R4X2012L	EVENT_TIME	Record #N Time of Event (2 words)			F22
		EVENT RECORD DATA	RO	RO	
R4X2010	EVENT_DATE	Record #N Date of Event (2 words)	---,---, ---		F23

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X2012	EVENT_TIME	Record #N Time of Event (2 words)	---, ---, ---		F22
R4X2014	EVENT_CAUSE	Record #N Cause of Event	---, ---, ---		F24
R4X2015	EVNT_PH_A_AMPS	Record #N Phase A Current Magnitude	A, ---, 0 to 65535		F1
R4X2016	EVNT_PH_B_AMPS	Record #N Phase B Current Magnitude	A, ---, 0 to 65535		F1
R4X2017	EVNT_PH_C_AMPS	Record #N Phase C Current Magnitude	A, ---, 0 to 65535		F1
R4X2018	EVNT_GND_AMPS	Record #N Ground Current Magnitude	A, ---, 0 to 65535		F1
R4X2019	EVNT_PH_AN_VOLTS	Record #N A-N (A-B) Voltage Magnitude	kV, ---, 0.00 to 600.00		F3
R4X201A	EVNT_PH_BN_VOLTS	Record #N B-N (B-C) Voltage Magnitude	kV, ---, 0.00 to 600.00		F3
R4X201B	EVNT_PH_CN_VOLTS	Record #N C-N (C-A) Voltage Magnitude	kV, ---, 0.00 to 600.00		F3
R4X201C	EVNT_SYS_FREQ	Record #N System Frequency	Hz, ---, 0.00 to 90.00		F3
R4X201D	EVNT_ANALOG_IN	Record #N Analog Input	Units, ---, 0 to 65535		F1
R4X201E	EVNT_PH_A_AMPS_ANG	Record #N Phase A Current Angle	° Lag, ---, 0 to 359		F1
R4X201F	EVNT_PH_B_AMPS_ANG	Record #N Phase B Current Angle	° Lag, ---, 0 to 359		F1
R4X2020	EVNT_PH_C_AMPS_ANG	Record #N Phase C Current Angle	° Lag, ---, 0 to 359		F1
R4X2021	EVNT_GND_AMPS_ANG	Record #N Ground Current Angle	° Lag, ---, 0 to 359		F1
R4X2022	EVNT_PH_AN_V_ANG	Record #N A-N (A-B) Voltage Angle	° Lag, ---, 0 to 359		F1
R4X2023	EVNT_PH_BN_V_ANG	Record #N B-N (B-C) Voltage Angle	° Lag, ---, 0 to 359		F1
R4X2024	EVNT_PH_CN_V_ANG	Record #N C-N (C-A) Voltage Angle	° Lag, ---, 0 to 359		F1
R4X2025	EVNT_SYNC_RMS_VOLTS	Record #N Synchronizing RMS Voltage Magnitude	kV, ---, 0.00 to 600.00		F3
R4X2026	EVNT_SYNC_V_ANG	Record #N Synchronizing Voltage Angle	° Lag, ---, 0 to 359		F1
R4X2027	EVNT_SYNC_RMS_V_FREQ	Record #N Synchronizing RMS Voltage Frequency	Hz, ---, 0.00 to 90.00		F3
R4X2028	EVNT_SENS_GND_AMPS	Record #N Sensitive Ground Current Magnitude	A, ---, 0.00 to 655.35		F3
R4X2029	EVNT_SENS_GND_AMPS_ANG	Record #N Sensitive Ground Current Angle	° Lag, ---, 0 to 359		F1
		TRACE MEMORY SELECTORS		R/W	
R4X2100	TM_BUFFER_SEL	Trace Memory Number Selector	--- 0 0 to 65535		F1
R4X2101	TM_CHAN_SEL	Trace Memory Channel Selector	--- la ---		F26
R4X2102	TM_SAMPLE_SEL	Trace Memory Sample Selector (TMSS)	--- 0 0 to 4095		F1
R4X2110A10	TM_HEADER	Trace Memory Header			
		TRACE MEMORY INFORMATION		RO	
R4X2110	TM_BUFFER_CNT	Number of Trace Memory Triggers Since Clear	--- --- 0 to 65535		F1
R4X2111	TM_SAMPLE_CNT	Number of Trace Memory Samples Stored	--- --- 0 to 4096		F1
R4X2112	TM_START_INDEX	Trace Memory Start Index	--- --- 0 to 4095		F1
R4X2113	TM_TRIG_INDEX	Trace Memory Trigger Index	---		F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			--- 0 to 4095		
R4X2114	TM_TRIG_CAUSE	Trace Memory Trigger Cause	---,---, ---		F24
R4X2115L	TM_TRIG_DATE	Trace Memory Trigger Date	---,---, ---		F23
R4X2117L	TM_TRIG_TIME	Trace Memory Trigger Time	---,---, ---		F22
R4X2119	TM_SAMPLE_FREQ	Trace Memory Sampling Frequency	Hz --- 16.00 to 65.00		F3
		TRACE MEMORY SAMPLES		RO	
R4X2120IA64	TM_SAMPLES	Trace Memory Sample TMSS+0	---,---, ---		F25
R4X2120I	TM_SAMPLE_0	Trace Memory Sample TMSS+0			F25
R4X2121I	TM_SAMPLE_1	Trace Memory Sample TMSS+1	---,---, ---		F25
		:			
R4X2122I	TM_SAMPLE_2	Trace Memory Sample TMSS+2			F25
R4X2123I	TM_SAMPLE_3	Trace Memory Sample TMSS+3			F25
R4X2124I	TM_SAMPLE_4	Trace Memory Sample TMSS+4			F25
R4X2125I	TM_SAMPLE_5	Trace Memory Sample TMSS+5			F25
R4X2126I	TM_SAMPLE_6	Trace Memory Sample TMSS+6			F25
R4X2127I	TM_SAMPLE_7	Trace Memory Sample TMSS+7			F25
R4X2128I	TM_SAMPLE_8	Trace Memory Sample TMSS+8			F25
R4X2129I	TM_SAMPLE_9	Trace Memory Sample TMSS+9			F25
R4X212AI	TM_SAMPLE_10	Trace Memory Sample TMSS+10			F25
R4X212BI	TM_SAMPLE_11	Trace Memory Sample TMSS+11			F25
R4X212CI	TM_SAMPLE_12	Trace Memory Sample TMSS+12			F25
R4X212DI	TM_SAMPLE_13	Trace Memory Sample TMSS+13			F25
R4X212EI	TM_SAMPLE_14	Trace Memory Sample TMSS+14			F25
R4X212FI	TM_SAMPLE_15	Trace Memory Sample TMSS+15			F25
R4X2130I	TM_SAMPLE_16	Trace Memory Sample TMSS+16			F25
R4X2131I	TM_SAMPLE_17	Trace Memory Sample TMSS+17			F25
R4X2132I	TM_SAMPLE_18	Trace Memory Sample TMSS+18			F25
R4X2133I	TM_SAMPLE_19	Trace Memory Sample TMSS+19			F25
R4X2134I	TM_SAMPLE_20	Trace Memory Sample TMSS+20			F25
R4X2135I	TM_SAMPLE_21	Trace Memory Sample TMSS+21			F25
R4X2136I	TM_SAMPLE_22	Trace Memory Sample TMSS+22			F25
R4X2137I	TM_SAMPLE_23	Trace Memory Sample TMSS+23			F25
R4X2138I	TM_SAMPLE_24	Trace Memory Sample TMSS+24			F25
R4X2139I	TM_SAMPLE_25	Trace Memory Sample TMSS+25			F25
R4X213AI	TM_SAMPLE_26	Trace Memory Sample TMSS+26			F25
R4X213BI	TM_SAMPLE_27	Trace Memory Sample TMSS+27			F25
R4X213CI	TM_SAMPLE_28	Trace Memory Sample TMSS+28			F25
R4X213DI	TM_SAMPLE_29	Trace Memory Sample TMSS+29			F25
R4X213EI	TM_SAMPLE_30	Trace Memory Sample TMSS+30			F25
R4X213FI	TM_SAMPLE_31	Trace Memory Sample TMSS+31			F25
R4X2140I	TM_SAMPLE_32	Trace Memory Sample TMSS+32			F25
R4X2141I	TM_SAMPLE_33	Trace Memory Sample TMSS+33			F25
R4X2142I	TM_SAMPLE_34	Trace Memory Sample TMSS+34			F25

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X2143I	TM_SAMPLE_35	Trace Memory Sample TMSS+35			F25
R4X2144I	TM_SAMPLE_36	Trace Memory Sample TMSS+36			F25
R4X2145I	TM_SAMPLE_37	Trace Memory Sample TMSS+37			F25
R4X2146I	TM_SAMPLE_38	Trace Memory Sample TMSS+38			F25
R4X2147I	TM_SAMPLE_39	Trace Memory Sample TMSS+39			F25
R4X2148I	TM_SAMPLE_40	Trace Memory Sample TMSS+40			F25
R4X2149I	TM_SAMPLE_41	Trace Memory Sample TMSS+41			F25
R4X214AI	TM_SAMPLE_42	Trace Memory Sample TMSS+42			F25
R4X214BI	TM_SAMPLE_43	Trace Memory Sample TMSS+43			F25
R4X214CI	TM_SAMPLE_44	Trace Memory Sample TMSS+44			F25
R4X214DI	TM_SAMPLE_45	Trace Memory Sample TMSS+45			F25
R4X214EI	TM_SAMPLE_46	Trace Memory Sample TMSS+46			F25
R4X214FI	TM_SAMPLE_47	Trace Memory Sample TMSS+47			F25
R4X2150I	TM_SAMPLE_48	Trace Memory Sample TMSS+48			F25
R4X2151I	TM_SAMPLE_49	Trace Memory Sample TMSS+49			F25
R4X2152I	TM_SAMPLE_50	Trace Memory Sample TMSS+50			F25
R4X2153I	TM_SAMPLE_51	Trace Memory Sample TMSS+51			F25
R4X2154I	TM_SAMPLE_52	Trace Memory Sample TMSS+52			F25
R4X2155I	TM_SAMPLE_53	Trace Memory Sample TMSS+53			F25
R4X2156I	TM_SAMPLE_54	Trace Memory Sample TMSS+54			F25
R4X2157I	TM_SAMPLE_55	Trace Memory Sample TMSS+55			F25
R4X2158I	TM_SAMPLE_56	Trace Memory Sample TMSS+56			F25
R4X2159I	TM_SAMPLE_57	Trace Memory Sample TMSS+57			F25
R4X215AI	TM_SAMPLE_58	Trace Memory Sample TMSS+58			F25
R4X215BI	TM_SAMPLE_59	Trace Memory Sample TMSS+59			F25
R4X215CI	TM_SAMPLE_60	Trace Memory Sample TMSS+60			F25
R4X215DI	TM_SAMPLE_61	Trace Memory Sample TMSS+61			F25
R4X215EI	TM_SAMPLE_62	Trace Memory Sample TMSS+62			F25
R4X215FI	TM_SAMPLE_63	Trace Memory Sample TMSS+63	---,---, ---		F25
		DATA LOG SELECTORS		R/W	
R4X2200	DL_BUFFER_SEL	Data Log Number Selector	--- 0 0 to 65535		F1
R4X2201	DL_CHAN_SEL	Data Log Channel Selector	--- 0 0 to 7		F1
R4X2202	DL_SAMPLE_SEL	Data Log Sample Selector (DLSS)	--- 0 0 to 4095		F1
		DATA LOG INFORMATION		RO	
R4X2210	DL_BUFFER_CNT	Number of Data Log Triggers Since Clear	--- --- 0 to 65535		F1
R4X2211	DL_SAMPLE_CNT	Number of Data Log Samples Stored	--- --- 0 to 4096		F1
R4X2212	DL_START_INDEX	Data Log Start Index	--- ---		F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0 to 4095		
R4X2213	DL_TRIG_INDEX	Data Log Trigger Index	--- --- 0 to 4095		F1
R4X2214	DL_TRIG_CAUSE	Data Log Trigger Cause	---,---, ---		F24
R4X2215L	DL_TRIG_DATE	Data Log Trigger Date	---,---, ---		F23
R4X2217L	DL_TRIG_TIME	Data Log Trigger Time	--- --- ---		F22
		DATA LOG SAMPLES		RO	
R4X2220	DL_SAMPLE_0	Data Log Sample DLSS+0	---,---, ---		F78
R4X2221	DL_SAMPLE_1	Data Log Sample DLSS+1	---,---, ---		F78
R4X2222	DL_SAMPLE_2	Data Log Sample DLSS+2	---,---, ---		F78
R4X2223	DL_SAMPLE_3	Data Log Sample DLSS+3	---,---, ---		F78
R4X2224	DL_SAMPLE_4	Data Log Sample DLSS+4	---,---, ---		F78
R4X2225	DL_SAMPLE_5	Data Log Sample DLSS+5	---,---, ---		F78
R4X2226	DL_SAMPLE_6	Data Log Sample DLSS+6	---,---, ---		F78
R4X2227	DL_SAMPLE_7	Data Log Sample DLSS+7	---,---, ---		F78
R4X2228	DL_SAMPLE_8	Data Log Sample DLSS+8	---,---, ---		F78
R4X2229	DL_SAMPLE_9	Data Log Sample DLSS+9	---,---, ---		F78
R4X222A	DL_SAMPLE_10	Data Log Sample DLSS+10	---,---, ---		F78
R4X222B	DL_SAMPLE_11	Data Log Sample DLSS+11	---,---, ---		F78
R4X222C	DL_SAMPLE_12	Data Log Sample DLSS+12	---,---, ---		F78
R4X222D	DL_SAMPLE_13	Data Log Sample DLSS+13	---,---, ---		F78
R4X222E	DL_SAMPLE_14	Data Log Sample DLSS+14	---,---, ---		F78
R4X222F	DL_SAMPLE_15	Data Log Sample DLSS+15	---,---, ---		F78
R4X2230	DL_SAMPLE_16	Data Log Sample DLSS+16	---,---, ---		F78
R4X2231	DL_SAMPLE_17	Data Log Sample DLSS+17	---,---, ---		F78
R4X2232	DL_SAMPLE_18	Data Log Sample DLSS+18	---,---, ---		F78
R4X2233	DL_SAMPLE_19	Data Log Sample DLSS+19	---,---, ---		F78
R4X2234	DL_SAMPLE_20	Data Log Sample DLSS+20	---,---, ---		F78
R4X2235	DL_SAMPLE_21	Data Log Sample DLSS+21	---,---, ---		F78
R4X2236	DL_SAMPLE_22	Data Log Sample DLSS+22	---,---, ---		F78
R4X2237	DL_SAMPLE_23	Data Log Sample DLSS+23	---,---, ---		F78
R4X2238	DL_SAMPLE_24	Data Log Sample DLSS+24	---,---, ---		F78
R4X2239	DL_SAMPLE_25	Data Log Sample DLSS+25	---,---, ---		F78
R4X223A	DL_SAMPLE_26	Data Log Sample DLSS+26	---,---, ---		F78
R4X223B	DL_SAMPLE_27	Data Log Sample DLSS+27	---,---, ---		F78
R4X223C	DL_SAMPLE_28	Data Log Sample DLSS+28	---,---, ---		F78
R4X223D	DL_SAMPLE_29	Data Log Sample DLSS+29	---,---, ---		F78
R4X223E	DL_SAMPLE_30	Data Log Sample DLSS+30	---,---, ---		F78
R4X223F	DL_SAMPLE_31	Data Log Sample DLSS+31	---,---, ---		F78
R4X2240	DL_SAMPLE_32	Data Log Sample DLSS+32	---,---, ---		F78
R4X2241	DL_SAMPLE_33	Data Log Sample DLSS+33	---,---, ---		F78
R4X2242	DL_SAMPLE_34	Data Log Sample DLSS+34	---,---, ---		F78
R4X2243	DL_SAMPLE_35	Data Log Sample DLSS+35	---,---, ---		F78

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X2244	DL_SAMPLE_36	Data Log Sample DLSS+36	---,---, ---		F78
R4X2245	DL_SAMPLE_37	Data Log Sample DLSS+37	---,---, ---		F78
R4X2246	DL_SAMPLE_38	Data Log Sample DLSS+38	---,---, ---		F78
R4X2247	DL_SAMPLE_39	Data Log Sample DLSS+39	---,---, ---		F78
R4X2248	DL_SAMPLE_40	Data Log Sample DLSS+40	---,---, ---		F78
R4X2249	DL_SAMPLE_41	Data Log Sample DLSS+41	---,---, ---		F78
R4X224A	DL_SAMPLE_42	Data Log Sample DLSS+42	---,---, ---		F78
R4X224B	DL_SAMPLE_43	Data Log Sample DLSS+43	---,---, ---		F78
R4X224C	DL_SAMPLE_44	Data Log Sample DLSS+44	---,---, ---		F78
R4X224D	DL_SAMPLE_45	Data Log Sample DLSS+45	---,---, ---		F78
R4X224E	DL_SAMPLE_46	Data Log Sample DLSS+46	---,---, ---		F78
R4X224F	DL_SAMPLE_47	Data Log Sample DLSS+47	---,---, ---		F78
R4X2250	DL_SAMPLE_48	Data Log Sample DLSS+48	---,---, ---		F78
R4X2251	DL_SAMPLE_49	Data Log Sample DLSS+49	---,---, ---		F78
R4X2252	DL_SAMPLE_50	Data Log Sample DLSS+50	---,---, ---		F78
R4X2253	DL_SAMPLE_51	Data Log Sample DLSS+51	---,---, ---		F78
R4X2254	DL_SAMPLE_52	Data Log Sample DLSS+52	---,---, ---		F78
R4X2255	DL_SAMPLE_53	Data Log Sample DLSS+53	---,---, ---		F78
R4X2256	DL_SAMPLE_54	Data Log Sample DLSS+54	---,---, ---		F78
R4X2257	DL_SAMPLE_55	Data Log Sample DLSS+55	---,---, ---		F78
R4X2258	DL_SAMPLE_56	Data Log Sample DLSS+56	---,---, ---		F78
R4X2259	DL_SAMPLE_57	Data Log Sample DLSS+57	---,---, ---		F78
R4X225A	DL_SAMPLE_58	Data Log Sample DLSS+58	---,---, ---		F78
R4X225B	DL_SAMPLE_59	Data Log Sample DLSS+59	---,---, ---		F78
R4X225C	DL_SAMPLE_60	Data Log Sample DLSS+60	---,---, ---		F78
R4X225D	DL_SAMPLE_61	Data Log Sample DLSS+61	---,---, ---		F78
R4X225E	DL_SAMPLE_62	Data Log Sample DLSS+62	---,---, ---		F78
		:			
		:			
R4X225F	DL_SAMPLE_63	Data Log Sample DLSS+63	---,---, ---		F78
R4X4100L	DATE_LAST_CALIB	Date of Last Calibration	---,---, ---		F23
R4X4102L	DATE_ORIG_CALIB	Date of Factory Calibration	---,---, ---		F23

ACTUAL VALUES

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
		PRODUCT ID		RO	
R00006	TRIGGER_TM	Trigger Trace memory command			F1
R3X0000	DEVICE_CODE	Multilin Product Device Code	---,---, ---		F1
R3X0001	HW_REV	Hardware Revision	--- --- 1 to 26		F13
R3X0002	SW_REV	Software Revision	---,---, ---		F14
R3X0003	VERSION	Version Number	--- --- 000 to 999		F1
R3X0004	BOOT_REV	Bootware Revision	---,---, ---		F14
R3X0005	ORDER_CODE	Installed Options	---,---, ---		F15
R3X0006S 8	SERIAL_NUM	Serial Number (4 words)	---,---, ---		F33
R3X000AL	DATE_MANUF	Date Of Manufacture (2 words)	---,---, ---		F23
R3X0200	GENERAL_STATUS	General Status	---,---, ---		F21
R3X0201	760_OP_STAT	SR760 Operation Status	---,---, ---		F44
R3X0202	COMM_SETUP_ACC_STAT	Communications Port Setpoint Access Status	---,---, ---		F30
R3X0204	CONTACT_INP_STAT	Contact Input Status	---,---, ---		F46
R3X0205	TRP_CLS_COIL_STAT	Trip/Close Coil Status	---,---, ---		F47
R3X0206	OUTPUT_RLY_STAT	Output Relay Status	---,---, ---		F40
R3X0207L	DATE	Date (2 words)	---,---, ---		F23
R3X0209L	TIME	Time (2 words)	---,---, ---		F22
R3X020B	ACTIVE_SP_GRP	Active Setpoint Group	---,---, ---		F79
R3X020C	EDIT_SP_GRP	Edit Setpoint Group	---,---, ---		F79
		ACTIVE CONDITION QUEUE		RO	
R3X0210	ACT_COND_1	Active Condition #1	---,---, ---		F24
R3X0211	ACT_COND_2	Active Condition #2	---,---, ---		F24
R3X0212	ACT_COND_3	:			
R3X0213	ACT_COND_4		---,---, ---		F24
R3X0214	ACT_COND_5		---,---, ---		F24
R3X0215	ACT_COND_6		---,---, ---		F24
R3X0216	ACT_COND_7		---,---, ---		F24
R3X0217	ACT_COND_8		---,---, ---		F24
R3X0218	ACT_COND_9		---,---, ---		F24
R3X0219	ACT_COND_10		---,---, ---		F24
R3X021A	ACT_COND_11		---,---, ---		F24
R3X021B	ACT_COND_12		---,---, ---		F24
R3X021C	ACT_COND_13		---,---, ---		F24
R3X021D	ACT_COND_14		---,---, ---		F24
R3X021E	ACT_COND_15		---,---, ---		F24
R3X021F	ACT_COND_16		---,---, ---		F24
R3X0220	ACT_COND_17		---,---, ---		F24
R3X0221	ACT_COND_18		---,---, ---		F24
R3X0222	ACT_COND_19		---,---, ---		F24
R3X0223	ACT_COND_20		---,---, ---		F24

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X0224	ACT_COND_21		---,---, ---		F24
R3X0225	ACT_COND_22		---,---, ---		F24
R3X0226	ACT_COND_23		---,---, ---		F24
R3X0227	ACT_COND_24		---,---, ---		F24
R3X0228	ACT_COND_25		---,---, ---		F24
R3X0229	ACT_COND_26		---,---, ---		F24
R3X022A	ACT_COND_27		---,---, ---		F24
R3X022B	ACT_COND_28		---,---, ---		F24
R3X022C	ACT_COND_29		---,---, ---		F24
R3X022D	ACT_COND_30		---,---, ---		F24
R3X022E	ACT_COND_31		---,---, ---		F24
R3X022F	ACT_COND_32	Active Condition #32	---,---, ---		F24
		LATCHED CONTACT INPUT STATE		RO	
R3X0230	LATCH_CONT_INP_STAT	Contact Input Status (Closed Contacts are Latched Until Read via Communications)	---,---, ---		F46
		LOGIC INPUT STATES		RO	
R3X0241	LOGIC_IN1_STATE	Logic Input 1 State	---,---, ---		F69
R3X0242	LOGIC_IN2_STATE	Logic Input 2 State	---,---, ---		F69
R3X0243	LOGIC_IN3_STATE	:			
R3X0244	LOGIC_IN4_STATE		---,---, ---		F69
R3X0245	LOGIC_IN5_STATE		---,---, ---		F69
R3X0246	LOGIC_IN6_STATE		---,---, ---		F69
R3X0247	LOGIC_IN7_STATE		---,---, ---		F69
R3X0248	LOGIC_IN8_STATE		---,---, ---		F69
R3X0249	LOGIC_IN9_STATE		---,---, ---		F69
R3X024A	LOGIC_IN10_STATE		---,---, ---		F69
R3X024B	LOGIC_IN11_STATE		---,---, ---		F69
R3X024C	LOGIC_IN12_STATE		---,---, ---		F69
R3X024D	LOGIC_IN13_STATE		---,---, ---		F69
R3X024E	LOGIC_IN14_STATE		---,---, ---		F69
R3X024F	LOGIC_IN15_STATE		---,---, ---		F69
R3X0250	LOGIC_IN16_STATE		---,---, ---		F69
R3X0251	LOGIC_IN17_STATE		---,---, ---		F69
R3X0252	LOGIC_IN18_STATE		---,---, ---		F69
R3X0253	LOGIC_IN19_STATE		---,---, ---		F69
R3X0254	LOGIC_IN20_STATE	Logic Input 20 State	---,---, ---		F69
		AUTORECLOSE STATUS - SR760 ONLY		RO	
R3X0260	AUTO_RCLS_SHOT_NUM	Autoreclose Shot Number	---,---, ---		F1
R3X0261	AUTO_RCLS_SHOTS_LEFT	Autoreclose Shots Remaining	---,---, ---		F1
R3X0262	MAN_CLOSE_BLOCKING	Manual Close Blocking	---,---, ---		F30
		LAST TRIP DATA		RO	
R3X02E0L	TRIP_DATE	Date of Last Trip (2 words)	---,---, ---		F23
R3X02E2L	TRIP_TIME	Time of Last Trip (2 words)	---,---, ---		F22
R3X02E4	TRIP_CAUSE	Cause of Last Trip	---,---, ---		F24
R3X02E5	PRETRP_AMPS_A	Last Trip Phase A Current	A --- 0 to 65535		F1
R3X02E6	PRETRP_AMPS_B	Last Trip Phase B Current	A --- 0 to 65535		F1

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X02E7	PRETRP_AMPS_C	Last Trip Phase C Current	A --- 0 to 65535		F1
R3X02E8	PRETRP_AMPS_GND	Last Trip Ground Current	A --- 0 to 65535		F1
R3X02E9	PRETRP_VOLTS_ABN	Last Trip A-N (A-B) Voltage	kV --- 0.00 to 600.00		F3
R3X02EA	PRETRP_VOLTS_BCN	Last Trip B-N (B-C) Voltage	kV --- 0.00 to 600.00		F3
R3X02EB	PRETRP_VOLTS_CAN	Last Trip C-N (C-A) Voltage	kV --- 0.00 to 600.00		F3
R3X02EC	PRETRP_SYS_FREQ	Last Trip System Frequency	Hz --- 0.00 to 90.00		F3
R3X02ED	PRETRP_ANAL_IN	Last Trip Analog Input	Units --- 0 to 65535		F1
R3X02EE	PRETRP_AMPS_N	Last Trip Neutral Current	A --- 0 to 65535		F1
R3X02EF	PRETRP_AMPS_SENS_GND	Last Trip Sensitive Ground Current	A --- 0 to 65535		F3
R3X02F0	PRETRP_VOLTS_NEUTRAL	Last Trip Neutral Voltage	kV --- 0 to 65535		F3
		CURRENT AND VOLTAGE		RO	
R3X02FE	NEUTRAL_VOLTS	Neutral Voltage	kV --- 0 to 65535		F3
R3X02FF	SENSITIVE_AMPS_GND	Sensitive Ground Current	A --- 0 to 65535		F3
R3X0300	AMPS_A	Phase A RMS Current	A --- 0 to 65535		F1
R3X0301	AMPS_B	Phase B RMS Current	A --- 0 to 65535		F1
R3X0302	AMPS_C	Phase C RMS Current	A --- 0 to 65535		F1
R3X0303	PERC_LD_TRP	Percent of Load-to-Trip	% --- 0 to 2000		F1
R3X0304	AMPS_GND	Ground Current	A --- 0 to 65535		F1

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X0305	VOLTS_AN	A-N RMS Voltage	kV --- 0.00 to 600.00		F3
R3X0306	VOLTS_BN	B-N RMS Voltage	kV --- 0.00 to 600.00		F3
R3X0307	VOLTS_CN	C-N RMS Voltage	kV --- 0.00 to 600.00		F3
R3X0308	VOLTS_AB	A-B RMS Voltage	kV --- 0.00 to 600.00		F3
R3X0309	VOLTS_BC	B-C RMS Voltage	kV --- 0.00 to 600.00		F3
R3X030A	VOLTS_CA	C-A RMS Voltage	kV --- 0.00 to 600.00		F3
		Reserved for Ground Polarizing Current	A --- 0 to 65535		F1
R3X030C	AMPS_AVG	Average Current	A --- 0 to 65535		F1
R3X030D	VOLTS_AVG_LINE	Average Line Voltage	kV --- 0.00 to 600.00		F3
R3X030E	VOLTS_AVG_PHASE	Average Phase Voltage	kV --- 0.00 to 600.00		F3
R3X030F	NEUT_CURR	Neutral Current	A --- 0 to 65535		F1
		3f POWER, FREQUENCY		RO	
R3X0310I	KW	3f Real Power	kW, -, -30000 to 30000		F86
R3X0311I	KVAR	3f Reactive Power	kvar, --, 30000 to 30000		F86
R3X0312	MVA	3 ϕ Apparent Power	kVA, -, 0 to 30000		F86
R3X0312I	KVA	3f Apparent Power	kVA, -, 0 to 30000		F86
R3X0313I	PF	3f Power Factor	--- --- -0.99 to +1.00		F6
R3X0314	FREQUENCY	System Frequency	Hz --- 0.00 to 90.00		F3
R3X0315 I	FREQ_DECAY_RATE	System Frequency Decay Rate	Hz/s --- -10.00 to 10.00		F6
R3X0315	FREQ_DECAY_RATE	System Frequency Decay Rate	Hz/s --- -10.00 to 10.00		F3
R3X0316	PR_MULTIPLIER	Auto Ranging Power / Energy Multiplier	--- ---		F1

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			1 to 100		
		SYNCHRONIZING VOLTAGE		RO	
R3X0318	SYNC_VOLTS	Synchronizing RMS Voltage	kV --- 0.00 to 600.00		F3
R3X0319	SYNC_FREQ	Synchronizing RMS Voltage Frequency	Hz --- 0.00 to 90.00		F3
R3X031A	SYNC_VOLTS_DIFF	Synchronizing Voltage Difference	kV --- 0.00 to 600.00		F3
R3X031B	SYNC_PH_DIFF	Synchronizing Phase Difference	° --- 0 to 359		F1
R3X031C	SYNC_FREQ_DIFF	Synchronizing Frequency Difference	Hz --- 0.00 to 90.00		F3
R3X031D	SYNC_VOLTS_ANGLE	Synchronizing Voltage Angle	° Lag --- 0 to 359		F1
		ENERGY USE		RO	
R3X0320L	POS_KWH	Positive Watthours (2 words)	kWh --- 0 to 4e9		F86
R3X0322L	POS_WH_COST	Positive Watthour Cost (2 words)	\$ --- 0 to 4e9		F7
R3X0324L	NEG_KWH	Negative Watthours (2 words)	kWh --- 0 to 4e9		F86
R3X0326L	NEG_WH_COST	Negative Watthour Cost (2 words)	\$ --- 0 to 4e9		F7
R3X0328L	POS_KVARH	Positive Varhours (2 words)	kvarh --- 0 to 4e9		F86
R3X032AL	NEG_KVARH	Negative Varhours (2 words)	kvarh --- 0 to 4e9		F86
R3X032CL	ENERGY_LAST_RESET	Energy Use Data Last Reset (2 words)	---,---, ---		F23
		LAST DEMAND		RO	
R3X0330	AMPS_A_DMND	Last Phase A Current Demand	A --- 0 to 65535		F1
R3X0331	AMPS_B_DMND	Last Phase B Current Demand	A --- 0 to 65535		F1
R3X0332	AMPS_C_DMND	Last Phase C Current Demand	A --- 0 to 65535		F1
R3X0333I	KW_DMND	Last Real Power Demand	kW ---		F86

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			-30000 to 30000		
R3X0334I	KVAR_DMND	Last Reactive Power Demand	kvar --- -30000 to 30000		F86
R3X0335	MVA_DMND	Last Apparent Power Demand	kVA --- -30000 to 30000		F86
R3X0335I	KVA_DMND	Last Apparent Power Demand	kVA --- 0 to 30000		F86
		MAXIMUM DEMAND		RO	
R3X0340	AMPS_A_DMND_MAX	Maximum Phase A Current Demand	A --- 0 to 65535		F1
R3X0341L	AMPS_A_MAX_DATE	Maximum Phase A Current Date (2 words)	---,---, ---		F23
R3X0343L	AMPS_A_MAX_TIME	Maximum Phase A Current Time (2 words)	---,---, ---		F22
R3X0345	AMPS_B_DMND_MAX	Maximum Phase B Current Demand	A --- 0 to 65535		F1
R3X0346L	AMPS_B_MAX_DATE	Maximum Phase B Current Date (2 words)	---,---, ---		F23
R3X0348L	AMPS_B_MAX_TIME	Maximum Phase B Current Time (2 words)	---,---, ---		F22
R3X034A	AMPS_C_DMND_MAX	Maximum Phase C Current Demand	A --- 0 to 65535		F1
R3X034BL	AMPS_C_MAX_DATE	Maximum Phase C Current Date (2 words)	---,---, ---		F23
R3X034DL	AMPS_C_MAX_TIME	Maximum Phase C Current Time (2 words)	---,---, ---		F22
R3X034FI	KW_DMND_MAX	Maximum Real Power Demand	kW --- -30000 to 30000		F86
R3X0350L	MW_DMND_MAX_DATE	Maximum Real Power Date (2 words)	---,---, ---		F23
R3X0352L	MW_DMND_MAX_TIME	Maximum Real Power Time (2 words)	---,---, ---		F22
R3X0354I	KVAR_DMND_MAX	Maximum Reactive Power Demand	kvar --- -30000 to 30000		F86
R3X0355L	MVAR_DMND_MAX_DATE	Maximum Reactive Power Date (2 words)	---,---, ---		F23
R3X0357L	MVAR_DMND_MAX_TIME	Maximum Reactive Power Time (2 words)	---,---, ---		F22
R3X0359	MVA_DMND_MAX	Maximum Apparent Power Demand	kVA --- 0 to 30000		F86
R3X0359I	KVA_DMND_MAX	Maximum Apparent Power Demand	kVA --- 0 to 30000		F86
R3X035AL	MVA_DMND_MAX_DATE	Maximum Apparent Power Date (2 words)	---,---, ---		F23
R3X035CL	MVA_DMND_MAX_TIME	Maximum Apparent Power Time (2 words)	---,---, ---		F22
R3X035EL	DMND_RESET_DATE	Demand Data Last Reset (2 words)	---,---, ---		F23
		1f POWER		RO	
R3X0360I	KW_A	fA Real Power	kW, ---, -30000 to 30000		F86
R3X0361I	KVAR_A	fA Reactive Power	kvar, ---, -30000 to 30000		F86
R3X0362	MVA_A	φA Apparent Power	kVA, ---, 0 to 30000		F86
R3X0362I	kVA_A	fA Apparent Power	kVA, ---, 0 to 30000		F86

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X0363I	PF_A	fA Power Factor	---, ---, -0.99 to +1.00		F6
R3X0364I	KW_B	fB Real Power	KW, ---, -30000 to 30000		F86
R3X0365I	KVAR_B	fB Reactive Power	Kvar, ---, -30000 to 30000		F86
R3X0366I	KVA_B	fB Apparent Power	KVA, ---, 0 to 30000		F86
R3X0367I	PF_B	fB Power Factor	---, ---, -0.99 to +1.00		F6
R3X0368I	KW_C	fC Real Power	KW, ---, -30000 to 30000		F86
R3X0369I	KVAR_C	fC Reactive Power	Kvar, ---, -30000 to 30000		F86
R3X036A	MVA_C	φC Apparent Power	KVA, ---, 0 to 30000		F86
R3X036AI	KVA_C	fC Apparent Power	KVA, ---, 0 to 30000		F86
R3X036BI	PF_C	fC Power Factor	---, ---, -0.99 to +1.00		F6
		ANALOG INPUT		RO	
R3X0370	ANAL_IN	Analog Input	Units --- 0 to 65535		F1
R3X0371I	ANAL_IN_FAST_ROC	Analog Input Fast Rate of Change	Units / min --- ---		F5
R3X0372I	ANAL_IN_SLOW_ROC	Analog Input Slow Rate of Change	Units / hr --- ---		F5
		TRIP COUNTERS		RO	
R3X0380	BRKR_TRPS	Breaker Trips	--- --- 0 to 65535		F1
R3X0381	GND_OC_TRPS	Ground Overcurrent Trips	--- --- 0 to 65535		F1
R3X0382	N_OC_TRPS	Neutral Overcurrent Trips	--- --- 0 to 65535		F1
R3X0383	ONE_PH_OC_TRPS	One Phase Overcurrent Trips	--- --- 0 to 65535		F1
R3X0384	TWO_PH_OC_TRPS	Two Phase Overcurrent Trips	--- --- 0 to 65535		F1
R3X0385	THREE_PH_OC_TRPS	Three Phase Overcurrent Trips	--- --- 0 to 65535		F1
R3X0386L	TRP_CTR_LST_RST_DATE	Trip Counters Last Reset Date (2 words)	---,---, ---		F23
R3X0388	NEG_SEQ_OC_TRPS	Negative Sequence Overcurrent Trips	--- --- 0 to 65535		F1
R3X0389	SENS_GND_OC_TRPS	Sensitive Ground Overcurrent Trips	--- --- 0 to 65535		F1
		TOTAL ARCING CURRENT		RO	
R3X03A0	TOT_ARC_AMPS_A	Total Arcing Current Phase A	kA2cyc --- 0 to 65535		F1

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X03A1	TOT_ARC_AMPS_B	Total Arcing Current Phase B	kA2cyc --- 0 to 65535		F1
R3X03A2	TOT_ARC_AMPS_C	Total Arcing Current Phase C	kA2cyc --- 0 to 65535		F1
R3X03A3L	TOT_ARC_AMPS_LST_RST	Total Arcing Current Last Reset (2 words)	---,---, ---		F23
		FAULT LOCATION 1		RO	
R3X03B0L	FAULT1_DATE	Date of Fault (2 words)	---,---, ---		F23
R3X03B2L	FAULT1_TIME	Time of Fault (2 words)	---,---, ---		F22
R3X03B4	FAULT1_TYPE	Type of Fault	---,---, ---		F76
R3X03B5I	FAULT1_DISTANCE	Distance to Fault	km, mi --- -327.68 to 327.67		F52
R3X03B6	FAULT1_Z1	Line Z1 to Fault (magnitude)	W --- 0.00 to 655.35		F53
		FAULT LOCATION 2		RO	
R3X03B8L	FAULT2_DATE	Date of Fault (2 words)	---,---, ---		F23
R3X03BAL	FAULT2_TIME	Time of Fault (2 words)	---,---, ---		F22
R3X03BC	FAULT2_TYPE	Type of Fault	---,---, ---		F76
R3X03BDI	FAULT2_DISTANCE	Distance to Fault	km --- -327.68 to 327.67		F52
R3X03BE	FAULT2_Z1	Line Z1 to Fault (magnitude)	W --- 0.00 to 655.35		F53
		FAULT LOCATION 3		RO	
R3X03C0L	FAULT3_DATE	Date of Fault (2 words)	---,---, ---		F23
R3X03C2L	FAULT3_TIME	Time of Fault (2 words)	---,---, ---		F22
R3X03C4	FAULT3_TYPE	Type of Fault	---,---, ---		F76
R3X03C5I	FAULT3_DISTANCE	Distance to Fault	km --- -327.68 to 327.67		F52
R3X03C6	FAULT3_Z1	Line Z1 to Fault (magnitude)	W --- 0.00 to 655.35		F53
		FAULT LOCATION 4		RO	
R3X03C8L	FAULT4_DATE	Date of Fault (2 words)	---,---, ---		F23
R3X03CAL	FAULT4_TIME	Time of Fault (2 words)	---,---, ---		F22
R3X03CC	FAULT4_TYPE	Type of Fault	---,---, ---		F76
R3X03CDI	FAULT4_DISTANCE	Distance to Fault	km --- -327.68 to 327.67		F52
R3X03CE	FAULT4_Z1	Line Z1 to Fault (magnitude)	W --- 0.00 to 655.35		F53
		FAULT LOCATION 5		RO	
R3X03D0L	FAULT5_DATE	Date of Fault (2 words)	---,---, ---		F23
R3X03D2L	FAULT5_TIME	Time of Fault (2 words)	---,---, ---		F22
R3X03D4	FAULT5_TYPE	Type of Fault	---,---, ---		F76

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X03D5I	FAULT5_DISTANCE	Distance to Fault	km --- -327.68 to 327.67		F52
R3X03D6	FAULT5_Z1	Line Z1 to Fault (magnitude)	W --- 0.00 to 655.35		F53
		FAULT LOCATION 6		RO	
R3X03D8L	FAULT6_DATE	Date of Fault (2 words)	---,---, ---		F23
R3X03DAL	FAULT6_TIME	Time of Fault (2 words)	---,---, ---		F22
R3X03DC	FAULT6_TYPE	Type of Fault	---,---, ---		F76
R3X03DDI	FAULT6_DISTANCE	Distance to Fault	km --- -327.68 to 327.67		F52
R3X03DE	FAULT6_Z1	Line Z1 to Fault (magnitude)	W --- 0.00 to 655.35		F53
		FAULT LOCATION 7		RO	
R3X03E0L	FAULT7_DATE	Date of Fault (2 words)	---,---, ---		F23
R3X03E2L	FAULT7_TIME	Time of Fault (2 words)	---,---, ---		F22
R3X03E4	FAULT7_TYPE	Type of Fault	---,---, ---		F76
R3X03E5I	FAULT7_DISTANCE	Distance to Fault	km --- -327.68 to 327.67		F52
R3X03E6	FAULT7_Z1	Line Z1 to Fault (magnitude)	W --- 0.00 to 655.35		F53
		FAULT LOCATION 8		RO	
R3X03E8L	FAULT8_DATE	Date of Fault (2 words)	---,---, ---		F23
R3X03EAL	FAULT8_TIME	Time of Fault (2 words)	---,---, ---		F22
R3X03EC	FAULT8_TYPE	Type of Fault	---,---, ---		F76
R3X03EDI	FAULT8_DISTANCE	Distance to Fault	km --- -327.68 to 327.67		F52
R3X03EE	FAULT8_Z1	Line Z1 to Fault (magnitude)	W --- 0.00 to 655.35		F53
		FAULT LOCATION 9		RO	
R3X03F0L	FAULT9_DATE	Date of Fault (2 words)	---,---, ---		F23
R3X03F2L	FAULT9_TIME	Time of Fault (2 words)	---,---, ---		F22
R3X03F4	FAULT9_TYPE	Type of Fault	---,---, ---		F76
R3X03F5I	FAULT9_DISTANCE	Distance to Fault	km --- -327.68 to 327.67		F52
R3X03F6	FAULT9_Z1	Line Z1 to Fault (magnitude)	W --- 0.00 to 655.35		F53
		FAULT LOCATION 10		RO	
R3X03F8L	FAULT10_DATE	Date of Fault (2 words)	---,---, ---		F23
R3X03FAL	FAULT10_TIME	Time of Fault (2 words)	---,---, ---		F22
R3X03FC	FAULT10_TYPE	Type of Fault	---,---, ---		F76
R3X03FDI	FAULT10_DISTANCE	Distance to Fault	km		F52

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			--- -327.68 to 327.67		
R3X03FE	FAULT10_Z1	Line Z1 to Fault (magnitude)	W --- 0.00 to 655.35		F53
		CURRENT PHASE ANGLES		RO	
R3X0400	AMPS_A_ANGLE	Phase A Current Angle	° Lag --- 0 to 359		F1
R3X0401	AMPS_B_ANGLE	Phase B Current Angle	° Lag --- 0 to 359		F1
R3X0402	AMPS_C_ANGLE	Phase C Current Angle	° Lag --- 0 to 359		F1
R3X0403	NEUT_CURR_ANGLE	Neutral Current Angle	° Lag --- 0 to 359		F1
R3X0404	GND_CURR_ANGLE	Ground Current Angle	° Lag --- 0 to 359		F1
		Reserved for Ground Polarizing Current Angle	° Lag --- 0 to 359		F1
R3X0406	SENS_GND_CURR_ANGLE	Sensitive Ground Current Angle	° Lag --- 0 to 359		F1
		VOLTAGE PHASE ANGLES		RO	
R3X0410	VOLTS_AN_ANGLE	A-N Voltage Angle	° Lag --- 0 to 359		F1
R3X0411	VOLTS_BN_ANGLE	B-N Voltage Angle	° Lag --- 0 to 359		F1
R3X0412	VOLTS_CN_ANGLE	C-N Voltage Angle	° Lag --- 0 to 359		F1
R3X0413	VOLTS_AB_ANGLE	A-B Voltage Angle	° Lag --- 0 to 359		F1
R3X0414	VOLTS_BC_ANGLE	B-C Voltage Angle	° Lag --- 0 to 359		F1
R3X0415	VOLTS_CA_ANGLE	C-A Voltage Angle	° Lag --- 0 to 359		F1
R3X0416	NEUTRAL_VOLTS_ANGLE	Neutral Voltage Angle	° Lag --- 0 to 359		F1
		SYMMETRICAL COMPONENTS		RO	
R3X0420	POS_SEQ_CURR	Positive Sequence Current Magnitude	A ---		F1

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
			0 to 65535		
R3X0421	POS_SEQ_CURR_ANGLE	Positive Sequence Current Angle	° Lag --- 0 to 359		F1
R3X0422	NEG_SEQ_CURR	Negative Sequence Current Magnitude	A --- 0 to 65535		F1
R3X0423	NEG_SEQ_CURR_ANGLE	Negative Sequence Current Angle	° Lag --- 0 to 359		F1
R3X0424	ZERO_SEQ_CURR	Zero Sequence Current Magnitude	A --- 0 to 65535		F1
R3X0425	ZERO_SEQ_CURR_ANGLE	Zero Sequence Current Angle	° Lag --- 0 to 359		F1
R3X0426	POS_SEQ_VOLTS	Positive Sequence Voltage Magnitude	kV --- 0.00 to 600.00		F3
R3X0427	POS_SEQ_V_ANGLE	Positive Sequence Voltage Angle	° Lag --- 0 to 359		F1
R3X0428	NEG_SEQ_VOLTS	Negative Sequence Voltage Magnitude	kV --- 0.00 to 600.00		F3
R3X0429	NEG_SEQ_V_ANGLE	Negative Sequence Voltage Angle	° Lag --- 0 to 359		F1
R3X042A	ZERO_SEQ_VOLTS	Zero Sequence Voltage Magnitude	kV --- 0.00 to 600.00		F3
R3X042B	ZERO_SEQ_V_ANGLE	Zero Sequence Voltage Angle	° Lag --- 0 to 359		F1
		PROTECTION FUNCTION STATES		RO	
R3X0601	ALM_PH_TIME_OC1	Phase Time Overcurrent 1	---,---, ---		F49
R3X0602	ALM_PH_INST_OC1	Phase Inst Overcurrent 1	---,---, ---		F49
R3X0603	ALM_PH_INST_OC2	Phase Inst Overcurrent 2	---,---, ---		F49
R3X0604	ALM_GND_TIME_OC	Ground Time Overcurrent	---,---, ---		F49
R3X0605	ALM_GND_INST_OC	Ground Inst Overcurrent	---,---, ---		F49
R3X0606	ALM_N_TIME_OC1	Neutral Time Overcurrent 1	---,---, ---		F49
R3X0607	ALM_N_TIME_OC2	Neutral Time Overcurrent 2	---,---, ---		F49
R3X0608	ALM_N_INST_OC1	Neutral Inst Overcurrent 1	---,---, ---		F49
R3X0609	ALM_N_INST_OC2	Neutral Inst Overcurrent 2	---,---, ---		F49
R3X060A	ALM_PH_DIR_BLK	Phase Directional Blocking	---,---, ---		F49
R3X060B	ALM_GND_DIR_BLK	Ground Directional Blocking	---,---, ---		F49
R3X060C	ALM_MAN_CLS_BLK	Manual Close Blocking	---,---, ---		F49
R3X060D	ALM_CLD_LD_PU_BLK	Cold Load Pickup Blocking	---,---, ---		F49
R3X060E	ALM_BUS_UV1	Bus Undervoltage 1	---,---, ---		F49
R3X060F	ALM_BUS_UV2	Bus Undervoltage 2	---,---, ---		F49
R3X0610	ALM_LN_UV3	Line Undervoltage 3	---,---, ---		F49
R3X0611	ALM_LN_UV4	Line Undervoltage 4	---,---, ---		F49

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X0612	ALM_OV1	Overvoltage 1	---,---, ---		F49
R3X0613	ALM_OV2	Overvoltage 2	---,---, ---		F49
R3X0614	ALM_UF1	Underfrequency 1	---,---, ---		F49
R3X0615	ALM_UF2	Underfrequency 2	---,---, ---		F49
R3X0616	ALM_PH_CURR_LVL	Phase Current Level	---,---, ---		F49
R3X0617	ALM_N_CURR_LVL	Neutral Current Level	---,---, ---		F49
R3X0618	ALM_PF1	Power Factor 1	---,---, ---		F49
R3X0619	ALM_PF2	Power Factor 2	---,---, ---		F49
R3X061A	ALM_SYNC_CHK_BLK	Synchrocheck Block (Not In Sync)	---,---, ---		F49
R3X061B	ALM_CURR_DMND	Current Demand	---,---, ---		F49
R3X061C	ALM_MW_DMND	Real Power Demand	---,---, ---		F49
R3X061D	ALM_MVAR_DMND	Reactive Power Demand	---,---, ---		F49
R3X061E	ALM_MVA_DMND	Apparent Power Demand	---,---, ---		F49
R3X061F	ALM_ANAL_IN_THR1	Analog Input Threshold 1	---,---, ---		F49
R3X0620	ALM_ANAL_IN_THR2	Analog Input Threshold 2	---,---, ---		F49
R3X0621	ALM_ANAL_IN_ROC1	Analog Input Rate of Change 1	---,---, ---		F49
R3X0622	ALM_ANAL_IN_ROC2	Analog Input Rate of Change 2	---,---, ---		F49
R3X0623	ALM_OF	Overfrequency	---,---, ---		F49
R3X0624	ALM_TRP_CTR	Trip Counter	---,---, ---		F49
R3X0625	ALM_ARC_CURR	Arcing Current	---,---, ---		F49
R3X0626	ALM_VT_FAIL	VT Failure	---,---, ---		F49
R3X0627	ALM_BRKR_FAIL	Breaker Failure	---,---, ---		F49
R3X0628	ALM_BRKR_OP_FAIL	Breaker Operation Failure	---,---, ---		F49
R3X0629	ALM_TRP_COIL_FAIL	Trip Coil Failure	---,---, ---		F49
R3X062A	ALM_CLS_COIL_FAIL	Close Coil Failure	---,---, ---		F49
R3X062B	ALM_USER_IN_A	User Input A	---,---, ---		F49
R3X062C	ALM_USER_IN_B	User Input B	---,---, ---		F49
R3X062D	ALM_USER_IN_C	User Input C	---,---, ---		F49
R3X062E	ALM_USER_IN_D	User Input D	---,---, ---		F49
R3X062F	ALM_USER_IN_E	User Input E	---,---, ---		F49
R3X0630	ALM_USER_IN_F	User Input F	---,---, ---		F49
R3X0631	ALM_USER_IN_G	User Input G	---,---, ---		F49
R3X0632	ALM_USER_IN_H	User Input H	---,---, ---		F49
R3X0633	ALM_NEG_SEQ_IOC	Negative Sequence Instantaneous O/C	---,---, ---		F49
R3X0634	ALM_NEG_SEQ_TOC	Negative Sequence Time O/C	---,---, ---		F49
R3X0635	ALM_NEG_SEQ_OV	Negative Sequence Overvoltage	---,---, ---		F49
R3X0636	ALM_UV_RESTOR	Undervoltage Restoration	---,---, ---		F49
R3X0637	ALM_UF_RESTOR	Underfrequency Restoration	---,---, ---		F49
R3X0638	ALM_PH_TIME_OC2	Phase Time Overcurrent 2	---, ---, ---		F49
R3X0639	ALM_FREQ_DECAY	Frequency Decay	---, ---, ---		F49
R3X063A	NEG_SEQ_REVERSE	Negative Sequence Directional is Reverse	---, ---, ---		F49
R3X063B	SENSITIVE_GND_INST_OC	Sensitive Ground Instantaneous O/C	---, ---, ---		F49
R3X063C	SENSITIVE_GND_TIME_OC	Sensitive Ground Time O/C	---, ---, ---		F49
R3X063D	SENSITIVE_GND_REVERS E	Sensitive Ground Directional is Reverse	---, ---, ---		F49
R3X064F	ALM_NEUTRAL_DISPL	Neutral Displacement	---, ---, ---		F49
R3X063E	--	Reserved for MOD 008	---, ---, ---		F49
R3X063F	NEUT_DISP	Neutral Displacement	---, ---, ---		F49
R3X0640	PULSE_OUT_POS_WATT_ HR	Pulse Output Positive Watthours	---, ---, ---		F49

SR760 Feeder Management Relay

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R3X0641	PULSE_OUT_NEG_WATT_HR	Pulse Output Negative Watthours	---, ---, ---		F49
R3X0642	PULSE_OUT_POS_VAR_HR	Pulse Output Positive Varhours	---, ---, ---		F49
R3X0643	PULSE_OUT_NEG_VAR_HR	Pulse Output Negative Varhours	---, ---, ---		F49
R3X0644	GND_REVERSE	Ground Directional is Reverse	---, ---, ---		F49
R3X0645	---	Reserved for MOD 010	---, ---, ---		F49
R3X0646	USER_INPUT_I	User Input I	---, ---, ---		F49
R3X0647	USER_INPUT_J	User Input J	---, ---, ---		F49
R3X0648	USER_INPUT_K	User Input K	---, ---, ---		F49
R3X0649	USER_INPUT_L	User Input L	---, ---, ---		F49
R3X064A	USER_INPUT_M	User Input M	---, ---, ---		F49
R3X064B	USER_INPUT_N	User Input N	---, ---, ---		F49
R3X064C	USER_INPUT_O	User Input O	---, ---, ---		F49
R3X064D	USER_INPUT_P	User Input P	---, ---, ---		F49
R3X064E	USER_INPUT_Q	User Input Q	---, ---, ---		F49
R3X064F	USER_INPUT_R	User Input R	---, ---, ---		F49
R3X0650	USER_INPUT_S	User Input S	---, ---, ---		F49
R3X0651	USER_INPUT_T	User Input T	---, ---, ---		F49
R3X0652	AUTO_RCLS_RATE_SUP	Autoreclose Rate Supervision	---, ---, ---		F49
R3X0653	RESTRICT_EARTH_FAULT	Restricted Earth Fault	---, ---, ---		F49

COMMAND COILS

The SR760 implements commands by writing an operation code to a designated command register (address R4X0080).

The command codes are provided in the table below.

Command Coil Codes		
Operation Code	Name	Description
0000	NO OPERATION	Does not do anything.
0001	RESET	Performs the same function as the device's front-panel RESET key.
0002	OPEN BREAKER	Performs the same function as the device's front-panel OPEN key.
0003	CLOSE BREAKER	Performs the same function as the device's front-panel CLOSE key.
0004	SET TIME	Sets the device's internal clock time. See the Multilin 760 manual, section Clock Synchronization of Multiple Relays, for details.
0005	SET DATE	Sets the device's internal clock date. See the Multilin 760 manual, section Clock Synchronization of Multiple Relays, for details.
0006	TRIGGER TRACE MEMORY	Performs the same function as the logic input function Trigger Trace Memory.
0007	CLEAR ENERGY USE DATA	Performs the same function as the device's front-panel CLEAR ENERGY USE DATA command.
0008	CLEAR MAX DEMAND DATA	Performs the same function as the device's front-panel CLEAR MAX DEMAND DATA command.
0009	CLEAR EVENT RECORDER DATA	Performs the same function as the device's front-panel CLEAR EVENT RECORDER DATA command.
000A	RESET TRIP COUNTER DATA	Performs the same function as the device's front-panel RESET TRIP COUNTER command.
000B	RESET ARCING CURRENT DATA	Performs the same function as the device's front-panel RESET ARCING CURRENT DATA command.
000C	DISPLAY OVERRIDE PACKET	Displays the 40-character (20-register) Override_Packet (address 10B1–10C4 hex) for the time specified in Override_Time (address 10B0 hex).
000D	TRIGGER DATA LOGGER	Performs the same function as the logic input function Trigger Data Logger.

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Multilin 735 Feeder Relay

- *SETPOINT REGISTERS*
- *ACTUAL VALUES*

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R4X0050	PH_PICKUP_REM	Phase Pickup dial (Remote)	dial position, 1, 1–19	RW	F108
R4X0051	PH_CURVE_SHAPE_REM	Phase Curve Shape dial (Remote)	dial position, 1, 1–5	RW	F104
R4X0052	PH_TIME_MULT_REM	Phase Time Multiplier dial (Remote)	dial position, 1, 1–10	RW	F112
R4X0053	PH_INST_REM	Phase Instantaneous dial (Remote)	dial position, 1, 1–10	RW	F109
R4X0054	GND_PICKUP_REM	Ground Pickup dial (Remote)	dial position, 1, 1–19	RW	F110
R4X0055	GND_CURVE_SHAPE_REM	Ground Curve Shape dial (Remote)	dial position, 1, 1–5	RW	F104
R4X0056	GND_TIME_MULT_REM	Ground Time Multiplier dial (Remote)	dial position, 1, 1–10	RW	F112
R4X0057	GND_INST_REM	Ground Instantaneous dial (Remote)	dial position, 1, 1–10	RW	F111
R4X0058	AMPS_A_SIM	Phase A current (Simulation)	% of CT, 1, 0–2000	RW	F1
R4X0059	AMPS_B_SIM	Phase B current (Simulation)	% of CT, 1, 0–2000	RW	F1
R4X005A	AMPS_C_SIM	Phase C current (Simulation)	% of CT, 1, 0–2000	RW	F1
R4X005B	AMPS_GND_SIM	Ground current (Simulation)	% of CT, 1, 0–2000	RW	F1
R4X005C	OUTPUT_RLY_TEST	Output relays (Test - I/O)	---, ---, Bits	RW	F103
R4X005D	LED_TEST	LED (Test - I/O)	---, ---, Bits	RW	F105
R4X005E	BARGRAPH_TEST	Bargraph (Test - I/O)	---, ---, Bits	RW	F106
R4X005F	CURVE_SHIFT_SW_TEST	Curve shift switch	---, ---, Bits	RW	F114
R4X0060	CURVE_SHAPE	Curve Shape	---, 1, 0–2	RW	F116
R4X0061	BLOCK_INST	Block Instantaneous	0=OFF, 1, 0–180	RW	F117
R4X0062	AUX_TRIP_RLY	Aux Trip Relay	---, 1, 0–2	RW	F118
R4X0063	RESET	Reset	1=reset, 1, 0–1	RW	F1
R4X0064	CLR_LST_TRIPS	Clear Last Trips	1=clear, 1, 0–1	RW	F1

NOTES:

The Multilin 735 uses many special function codes which are detailed in the 735 Users Manual. Please refer to that publication for details of format codes.

ACTUAL VALUES

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X0000	DEVICE_CODE	Multilin product device code	---, ---, 25-26		F1
R3X0001	HW_REV	Multilin product hardware revision code	---, ---, 1-26n		F1
R3X0002	FIRMWARE_REV	Multilin product firmware revision code	---, ---, 1-255		F3
R3X0003	MOD_FILE_NO	Multilin product modification file number	---, ---, 0-1000		F1
R3X0010	AMPS_A	Phase A current	% of CT, 1, 0-2000		F1
R3X0011	AMPS_B	Phase B current	% of CT, 1, 0-2000		F1
R3X0012	AMPS_C	Phase C current	% of CT, 1, 0-2000		F1
R3X0013	AMPS_GND	Ground current	% of CT, 1, 0-2000		F1
R3X0014	RLY_STATUS	Relay Status Register	---, 1, ---		F101
R3X0015	OUTPUT_RLY	Output relays	---, ---, ---		F103
R3X0017	LEDS	LEDs	---, ---, ---		F105
R3X0018	BARGRAPH	Bargraph	---, ---, ---		F106
R3X0020	PRETRP_AMPS_A	Phase A pre-trip current	% of CT, 1, 0-2000		F1
R3X0021	PRETRP_AMPS_B	Phase B pre-trip current	% of CT, 1, 0-2000		F1
R3X0022	PRETRP_AMPS_C	Phase C pre-trip current	% of CT, 1, 0-2000		F1
R3X0023	PRETRP_AMPS_GND	Ground pre-trip current	% of CT, 1, 0-2000		F1
R3X0024	LASTTRIP_CAUSE	Cause of last trip	---, ---, Bits		F113
R3X0025	LAST_OC_TRIP_TIME	Last OC trip time	mS, 1, 0-65000		F115
R3X0026	LASTTRIP_2_CAUSE	Cause of second last trip	---, ---, Bits		F113
R3X0027	LASTTRIP_3_CAUSE	Cause of third last trip	---, ---, Bits		F113
R3X0028	LASTTRIP_4_CAUSE	Cause of fourth last trip	---, ---, Bits		F113
R3X0029	LASTTRIP_5_CAUSE	Cause of fifth last trip	---, ---, Bits		F113
R3X002A	PH_PICKUP_DIAL	Phase Pickup dial setting	dial position, 1, 1-19		F108
R3X002B	PH_CURVE_SHAPE_DIAL	Phase Curve Shape dial setting	dial position, 1, 1-10		F107
R3X002C	PH_TIME_MULT_DIAL	Phase Time Multiplier dial setting	dial position, 1, 1-10		F112
R3X002D	PH_INST_DIAL	Phase Instantaneous dial setting	dial position, 1, 1-10		F109
R3X002E	GND_PICKUP_DIAL	Ground Pickup dial setting	dial position, 1, 1-19		F110
R3X002F	GND_CURVE_SHAPE_DIAL	Ground Curve Shape dial setting	dial position, 1, 1-10		F107
R3X0030	GND_TIME_MULT_DIAL	Ground Time Multiplier dial setting	dial position, 1, 1-10		F112
R3X0031	GND_INST_DIAL	Ground Instantaneous dial setting	dial position, 1, 1-10		F111
R3X0032	COMM_DIP	Comm DIP switch setting	---, ---, ---		F102
R3X0033	CURVE_SHIFT_SWITCH	Curve shift switch setting	---, ---, ---		F114
R3X0034	RESET_SWITCH	Reset switch status	1=on, 1, 0-1		F1

NOTES:

The Multilin 735 uses many special function codes which are detailed in the 735 Users Manual. Please refer to that publication for details of format codes.

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- *SETPOINT REGISTERS*
- *ACTUAL VALUES*
- *COMMAND COILS*

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40256	USER_LEVEL	User level	0 = basic 1 = advanced	RW	Unsigned integer
R40257	SECURITY	Security feature	0 = enabled 1 = disabled	RW	Unsigned integer
R40258	SETPT_ACCESS	Setpoint access	0 = enabled 1 = disabled	RW	Unsigned integer
R40260	PHS_CT_PRI_RATING	Phase CT primary rating	Amps, 10-5000, step = 5A	RW	Unsigned Integer
R40261	PHS_OC_CURVE	Phase O/C curve shape	0-7, See Note 1	RW	Unsigned Integer
R40262	PHS_OC_PKUP	Phase O/C pickup	% CT rating, 25-250% step = 1%, scale = 1.00	RW	Unsigned Integer
R40263	PHS_OC_TIME_DIAL	Phase O/C time dial	scale = 1.00 1-32, step = 1	RW	Unsigned Integer
R40264	PHS_OC_TRP_RLY	Phase O/C trip relay	0-6, See Note 2	RW	Unsigned Integer
R40265	PHS_OC_ALM	Phase O/C alarm	0-Enabled 1-Disabled	RW	Unsigned Integer
R40266	PHS_OC_ALM_LVL	Phase O/C alarm level	0.1 * P/U, 0.5-1, step = 0.1 1-3, step = 0.5	RW	Unsigned Integer
R40267	PHS_OC_ALM_DLY	Phase O/C alarm delay	second, Scale = 1.00, 1-255 sec, step = 1	RW	Unsigned Integer
R40268	PHS_OC_ALM_RLY	Phase O/C alarm relay	0-2, See Note 3	RW	Unsigned Integer
R40269	PHS_INST_TRP	Phase inst trip	0 = enabled 1 = disabled	RW	Unsigned Integer
R40270	PHS_INST_TRP_LVL	Phase inst trip level	0.1 * PU, 1-18, step = 0.5	RW	Unsigned Integer
R40271	PHS_INST_TRP_DLY	Phase inst trip delay	cycles, Scale = 1.00, 0-40 cycles, step = 1 cycle	RW	Unsigned Integer
R40272	PHS_INST_TRP_RLY	Phase inst trip relay	0-6, See Note 2	RW	Unsigned Integer
R40281	PHS_CURR_TRP_TIME	Phase current trip time	Sec x P/U, 0.1-1092.2 sec, step = 0.1	Reser ved	Unsigned Integer
R40300	GND_CURR_SENSING	Ground current sensing	0 = enabled 1 = disabled	RW	Unsigned Integer
R40301	GND_CURR_SENSING_SYS	Ground current sensing system	0 = residual 1 = zero sequence	RW	Unsigned Integer
R40302	GND_CT_PRI_RATING	Ground CT primary rating	Amp, Scale = 1.00, 10-5000A, step = 5A	RW	Unsigned Integer
R40303	GND_OC_CURVE	Ground O/C curve shape	0-7, See Note 1	RW	Unsigned Integer
R40304	GND_OC_PKUP	Ground O/C pickup	% CT rating, 5-100%, step = 1%	RW	Integer
R40305	GND_OC_TIME_DIAL	Ground O/C time dial	Scale = 1.00, 1-32, step = 1	RW	Unsigned Integer
R40306	GND_OC_RLY	Ground O/C relay	0-6, See Note 2	RW	Unsigned Integer
R40307	GND_OC_ALM	Ground O/C alarm	0 = enabled 1 = disabled	RW	Unsigned Integer
R40308	GND_OC_ALM_LVL	Ground O/C alarm level	0.1 * P/U, 0.5-1, step = 0.1 1-3, step = 0.5	RW	Unsigned Integer

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40309	GND_OC_ALM_DLY	Ground O/C alarm delay	seconds, Scale = 1.00 1-255 sec, step = 1 sec	RW	Unsigned Integer
R40310	GND_OC_ALM_RLY	Ground O/C alarm relay	0-2, See Note 3	RW	Unsigned Integer
R40311	GND_INST_TRP	Ground inst trip	0 = enabled 1 = disabled	RW	Unsigned Integer
R40312	GND_INST_TRP_LVL	Ground inst trip level	0.1 * PU, 1-7, step = 0.5	RW	Unsigned Integer
R40313	GND_INST_TRP_DLY	Ground inst trip delay	cycles, Scale = 1.00, 0-40 cycle, step = 1 cycle	RW	Unsigned Integer
R40314	GND_INST_TRP_RLY	Ground inst trip relay	0-6, See Note 2	RW	Unsigned Integer
R40323	GND_CURR_TRP_TIME	Ground current trip time	P/U, 0.1-1092.2 sec step = 0.1 sec	Reser ved	Unsigned Integer
R40325	GND_INST_TRP2_LVL	Ground inst trip 2 level	0.1 * PU	RW	Unsigned Integer
R40329	EXT_TRP1_DLY	External trip #1 delay	cycles, 0-60, step = 1	RW	Unsigned Integer
R40330	EXT_TRP2_DLY	External trip #2 delay	cycles, Scale = 1.00, 0-60, step = 1	RW	Unsigned Integer
R40331	EXT_TRP3_DLY	External trip #3 delay	cycles, Scale = 1.00, 0-60, step = 1	RW	Unsigned Integer
R40332	EXT_TRP4_SW	External trip #4 switch	0-8, See Note 4	RW	Unsigned Integer
R40333	EXT_TRP4_RLY	External trip #4 relay	0-6, See Note 2	RW	Unsigned Integer
R40334	EXT_TRP4_DLY	External trip #4 delay	cycles, Scale = 1.00, 0-60, step = 1	RW	Unsigned Integer
R40335	BRK_DISCREPANCY	Breaker discrepancy	0 = enabled 1 = disabled	RW	Unsigned Integer
R40337	COLD_LD_PU_DLY	Cold load PU delay	0.1 second	RW	Integer
R40338	TRP_COIL_SUPRVISON	Trip coil supervision	0 = enabled 1 = disabled	RW	Discrete
R40339	BLK_GND_TRP	Block ground trips	0-8, See Note 4	RW	Unsigned Integer
R40340L	CONFIG_SET_TIME	Configuration set time	BCD, XX SS MM HH	RW	Long Integer
R40342L	CONFIG_SET_DATE	Configuration set date	BCD, XX DD MM YY	RW	Long Integer
R40344	BLK_RST_SW	Block reset switch	0-8, See Note 4	RW	Unsigned Integer
R40345	BLK_INST_TRP_SW	Block inst trips switch	0-8, see Note 4	RW	Unsigned Integer
R40346	BLK_TIMED_OC_TRP_SW	Block timed O/C trips switch	0-8, See Note 4	RW	Unsigned Integer
R40347	DEF_TIME1_ALM_SW	Definite time #1 alarm switch	0-8, See Note 4	RW	Unsigned Integer
R40348	DEF_TIME1_ALM_DLY	Definite time #1 delay	Seconds, Scale = 1.00 1-255, step = 1 sec	RW	Unsigned Integer
R40349	DEF_TIME1_ALM_RLY	Definite time #1 relay	0-2, See Note 3	RW	Unsigned Integer
R40350	EXT_TRP1_SW	External trip #1 switch	0-8, See Note 4	RW	Unsigned Integer
R40351	EXT_TRP1_RLY	External trip #1 relay	0-6, See Note 2	RW	Unsigned Integer
R40352	CURVE_ADJ_SW	Curve adjustment switch	0-8, See Note 4	RW	Unsigned Integer
R40353	SW1_CONTACT	Switch 1 contact	0 = Open 1 = Closed	RW	Unsigned Integer
R40354	SW2_CONTACT	Switch 2 contact	0 = Open 1 = Closed	RW	Unsigned Integer
R40355	SW3_CONTACT	Switch 3 contact	0 = Open 1 = Closed	RW	Unsigned Integer
R40356	SW4_CONTACT	Switch 4 contact	0 = Open 1 = Closed	RW	Unsigned Integer

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40357	TRP_RLY_DRIVE	Trip relay drive	0 = latched 1 = pulsed	RW	Unsigned Integer
R40358	TRP_RLY_PLS_TIME	Trip relay pulse time	seconds, Scale = 0.1, 0.1–0.6 sec, step = 0.1 sec	RW	Unsigned Integer
R40359	AUX1_DRIVE	Aux 1 relay drive	0 = latched, 1 = unlatched, 2 = pulsed	RW	Unsigned Integer
R40360	AUX1_PULSE_TIME	Aux 1 relay pulse time	seconds, Scale = 0.1 0.1–0.6 sec, step = 0.1 sec	RW	Unsigned Integer
R40361	AUX2_DRIVE	Aux 2 relay drive	0 = latched, 1 = unlatched, 2 = pulsed	RW	Unsigned Integer
R40362	AUX2_PULSE_TIME	Aux 2 relay pulse time	seconds, Scale = 0.1 0.1–0.6 sec, step = 0.1 sec	RW	Unsigned Integer
R40365	BRK_RSPNS_DLY	Breaker response delay	ms, Scale = 1.00, 1–167, step = 1ms	RW	Unsigned Integer
R40366	ACC_KA_ALM_ENA	Accumulated KA alarm	0=enabled, 1=disabled	RW	Unsigned Integer
R40367L	ACC_KA_ALM_LVL	Accumulated KA alarm level	5000–10000KA, step = 10KA	RW	Long Integer
R40369	ACC_KA_ALM_RLY	Accumulated KA alarm relay	0–2, See Note 3	RW	Unsigned Integer
R40370	EVENT_RECORDING	Event recording	0=enabled, 1=disabled	RW	Unsigned Integer
R40371	EVENT_PRINTING	Event printing	0=off line, 1=on line	RW	Unsigned Integer
R40372	MTM_COMM_ENA	MTM communications	0=enabled, 1=disabled	RW	Unsigned Integer
R40373	DEF_TIME2_ALM_SW	Definite time #2 alarm switch	0–8, See Note 4	RW	Unsigned Integer
R40374	DEF_TIME2_DLY	Definite time #2 delay	seconds, Scale = 1.00, 1–255, step = 1 sec	RW	Unsigned Integer
R40375	DEF_TIME2_RLY	Definite time #2 relay	0–2, See Note 3	RW	Unsigned Integer
R40376	EXT_TRP2_SW	External trip #2 switch	0–8, See Note 4	RW	Unsigned Integer
R40377	EXT_TRP2_RLY	External trip #2 relay	0–6, See Note 2	RW	Unsigned Integer
R40378	EXT_TRP3_SW	External trip #3 switch	0–8, See Note 4	RW	Unsigned Integer
R40379	EXT_TRP3_RLY	External trip #3 relay	0–6, See Note 2	RW	Unsigned Integer
R40384	EXT_RST_SW	External reset switch	0–8, See Note 4	RW	Unsigned Integer
R40385	SW5_CONTACT	Switch 5 contact	0 = Open 1 = Closed	RW	Unsigned Integer
R40386	SW6_CONTACT	Switch 6 contact	0 = Open 1 = Closed	RW	Unsigned Integer
R40387	SW7_CONTACT	Switch 7 contact	0 = Open 1 = Closed	RW	Unsigned Integer
R40388	SW8_CONTACT	Switch 8 contact	0 = Open 1 = Closed	RW	Unsigned Integer
R40389	BRK_DISCR_DLY	Breaker discrepancy delay	ms, scale = 1.00, 100–1000ms , step = 10 ms	RW	Unsigned Integer
R40390	ANALOG_INP	Analog input	0=enabled, 1=disabled	RW	Unsigned Integer
R40391	ANALOG_INP_TITLE	Analog input title		Reser ved	Unsigned Integer
R40392	ANALOG_INP_UNIT	Analog input units		Reser ved	Unsigned Integer
R40393L	MIN_INP_CUR_SCALE	Minimum input current scale value	Scale = 0.01 user units, output for 4 mA input, 0–1023, step = 0.01	RW	Long Integer
R40395L	MAX_INP_CUR_SCALE	Maximum input current scale value	Scale = 0.01 user units, output for 20 mA input,	RW	Long Integer

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
			0-1023, step = 0.01		
R40397	ANALOG_INP_TRP	Analog input trip	0=enabled, 1=disabled	RW	Unsigned Integer
R40398L	ANALOG_INP_TRP_LVL	Analog input trip level	See Note 11	RW	Long Integer
R40400	ANALOG_INP_TRP_DLY	Analog input trip delay	seconds, Scale = 1.00 1-255 sec, step = 1 sec	RW	Unsigned Integer
R40401	ANALOG_INP_TRP_RLY	Analog input trip relay	0-6, See Note 2	RW	Unsigned Integer
R40402	ANALOG_INP_ALM	Analog input alarm	0=enabled, 1=disabled	RW	Unsigned Integer
R40403L	ANALOG_INP_ALM_LVL	Analog input alarm level	See Note 11	RW	Long Integer
R40405	ANALOG_INP_ALM_DLY	Analog input alarm delay	seconds, Scale = 1.00 1-255 sec, step = 1 sec	RW	Unsigned Integer
R40406	ANALOG_INP_ALM_RLY	Analog input alarm relay	0-2, See Note 3	RW	Unsigned Integer
R40420	ANAL_OUT_PARAM	Analog output parameter	0-, See Note 6	RW	Unsigned Integer
R40421	ANAL_OUT_RNG	Analog output range	0 = 0-1 mA, 1 = 4-20 mA	RW	Unsigned Integer
R40430	RLY_ADDR	Relay address	Scale = 1.00 1-254, step = 1	RW	Unsigned Integer
R40431	BAUD_RATE	Baud rate	0-3, See Note 7	RW	Unsigned Integer
R40440	EXER_RLY	Exercise relay	0-4, See Note 8	RW	Unsigned Integer
R40441	SW1_STATUS_CALIB	Switch #1 status - Calibration Mode	0=open, 1=closed	RW	Unsigned Integer
R40442	SW2_STATUS_CALIB	Switch #2 status - Calibration Mode	0=open, 1=closed	RW	Unsigned Integer
R40443	SW3_STATUS_CALIB	Switch #3 status - Calibration Mode	0=open, 1=closed	RW	Unsigned Integer
R40444	SW4_STATUS_CALIB	Switch #4 status - Calibration Mode	0=open, 1=closed	RW	Unsigned Integer
R40445	BRK_OPEN_STAT	Breaker open status	0=no, 1=yes	RW	Unsigned Integer
R40446	BRK_CLOSE_STAT	Breaker closed status	0=no, 1=yes	RW	Unsigned Integer
R40447	ANAL_SEL_A	Analog select A status	0=off, 1=on	RW	Unsigned Integer
R40448	ANAL_SEL_B	Analog select B status	0=off, 1=on	RW	Unsigned Integer
R40449	ANAL_SEL_C	Analog select C status	0=off, 1=on	RW	Unsigned Integer
R40450	ANAL_SEL_D	Analog select D status	0=off, 1=on	RW	Unsigned Integer
R40451	ACCESS_JUMP_STAT	Access jumper status	0=disabled, 1=enabled	RW	Unsigned Integer
R40452	REMOTE_LOCAL_STAT	Remote/local 43 status	0 = local, 1 = remote	RW	Unsigned Integer
R40460	LCD_CONTRAST	LCD contrast	Scale = 1.00 0-10, step = 1	RW	Unsigned Integer
R40461L	REV_DATE	Revision date	BCD, XX DD MM YY	RW	Long Integer
R40464	ANAL_OUT_FORCED	Analog output forced to	Scale = 1.00	RW	Unsigned Integer
R40466	TEST_LCD	Test LCD display?		Reserved	Unsigned Integer
R40468	LD_FACTORY_SETTING	load factory settings		Reserved	Unsigned Integer
R40469	ANAL_4MA	Analog in at 4mA		Reserved	Unsigned Integer
R40470	ANAL_20MA	Analog in at 20mA		Reserved	Unsigned Integer
R40471	SW5_STATUS_CALIB	Switch #5 status - Calibration Mode	0=open, 1=closed	RW	Unsigned Integer
R40472	SW6_STATUS_CALIB	Switch #6 status - Calibration Mode	0=open, 1=closed	RW	Unsigned Integer

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
		Mode			
R40473	SW7_STATUS_CALIB	Switch #7 status - Calibration Mode	0=open, 1=closed	RW	Unsigned Integer
R40474	SW8_STATUS_CALIB	Switch #8 status - Calibration Mode	0=open, 1=closed	RW	Unsigned Integer
R40490	VT_CONNECT	VT connection	0=none, 1=wye, 2=open delta 3 = Delta/Wye	RW	Unsigned Integer
R40491	VT_SEC_VOLT	VT nominal secondary volts	scale = 0.1 Volts	RW	Unsigned Integer
R40492	VT_PRI_VOLT	VT primary volts	KV, Scale = 0.01	RW	Unsigned Integer
R40493	UV_TRP	Undervoltage trip	0=enabled, 1=disabled	RW	Unsigned Integer
R40494	UV_TRP_LVL	Undervoltage trip level	% VT, Scale = 1.00, 30-100%, step = 1%	RW	Unsigned Integer
R40495	UV_TRP_DLY	Undervoltage trip delay	seconds, Scale = 0.1 0.1-25.5 sec, step = 0.1 sec	RW	Unsigned Integer
R40496	UV_TRP_RLY	Undervoltage trip relay	0-6, See Note 2	RW	Unsigned Integer
R40497	UV_ALM_ENA	Undervoltage alarm	0=enabled, 1=disabled	RW	Unsigned Integer
R40498	UV_ALM_LVL	Undervoltage alarm level	% VT, Scale = 1.00 30-100%, step = 1%	RW	Unsigned Integer
R40499	UV_ALM_DLY	Undervoltage alarm delay	seconds, Scale = 0.1 0.1-25.5 sec, step = 0.1 sec	RW	Unsigned Integer
R40500	UV_ALM_RLY	Undervoltage alarm relay	0-2, See Note 3	RW	Unsigned Integer
R40501	OV_TRP	Overvoltage trip	0=enabled, 1=disabled	RW	Unsigned Integer
R40502	OV_TRP_LVL	Overvoltage trip level	% VT, Scale = 1.00 101-125%, step = 1%	RW	Unsigned Integer
R40503	OV_TRP_DLY	Overvoltage trip delay	seconds, Scale = 0.1 0.1-25.5 sec, step = 0.1 sec	RW	Unsigned Integer
R40504	OV_TRP_RLY	Overvoltage trip relay	0-6, See Note 2	RW	Unsigned Integer
R40505	OV_ALM_ENA	Overvoltage alarm	0=enabled, 1=disabled	RW	Unsigned Integer
R40506	OV_ALM_LVL	Overvoltage alarm level	% VT, Scale = 1.00 101-125%, step = 1%	RW	Unsigned Integer
R40507	OV_ALM_DLY	Overvoltage alarm delay	seconds, Scale = 0.1 0.1-25.5 sec, step = 0.1 sec	RW	Unsigned Integer
R40508	OV_ALM_RLY	Overvoltage alarm relay	0-2, See Note 3	RW	Unsigned Integer
R40520	AMPS_DMND	Amps demand	0=enabled, 1=disabled	RW	Unsigned Integer
R40521	AMPS_DMND_PERIOD	Amps demand time period	Min, Scale = 1.00 5-120min; step = 1 min	RW	Unsigned Integer
R40522	AMPS_DMND_ALM_ENA	Amps demand alarm	0=enabled, 1=disabled	RW	Unsigned Integer
R40523	AMPS_DMND_ALM_LVL	Peak amps demand alarm level	Amps, Scale = 1.00 10-5000A step = 5A	RW	Unsigned Integer
R40524	AMPS_DMND_ALM_RLY	Peak amps demand alarm relay	0-2, See Note 3	RW	Unsigned Integer
R40525	KW_DMND	KW demand	0=enabled, 1=disabled	RW	Unsigned Integer
R40526	KW_DMND_PERIOD	KW demand time period	Min, Scale = 1.00 5-120 min, step = 1 min	RW	Unsigned Integer
R40527	KW_DMND_ALM_ENA	KW demand alarm	0=enabled, 1=disabled	RW	Unsigned Integer
R40528	KW_DMND_ALM_LVL	KW demand alarm level	KW, Scale = 1.00 100-65,000kW, step = 100kW	RW	Unsigned Integer
R40529	KW_DMND_ALM_RLY	KW demand alarm relay	0-2, See Note 3	RW	Unsigned Integer
R40530	KVAR_DMND	KVAR demand	0=enabled, 1=disabled	RW	Unsigned Integer

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40531	KVAR_DMND_PERIOD	KVAR demand time period	Min, Scale = 1.00 5–120 min; step = 1 min	RW	Unsigned Integer
R40532	KVAR_DMND_ALM_ENA	KVAR demand alarm	0=enabled, 1=disabled	RW	Unsigned Integer
R40533	KVAR_DMND_ALM_LVL	KVAR demand alarm level	KVAR, Scale = 1.00 100–65,000kVar, step = 100kVar	RW	Unsigned Integer
R40534	KVAR_DMND_ALM_RLY	KVAR demand alarm relay	0–2, See Note 3	RW	Unsigned Integer
R40546	MTM_COMM_ALM_ENA	MTM comm alarm	0=enabled, 1=disabled	RW	Unsigned Integer
R40547	MTM_COMM_ALM_RLY	MTM comm alarm relay	0–2, See Note 3	RW	Unsigned Integer
R40548	MTM_CT_SEL	MTM CT select	0=common, 1=separate	RW	Unsigned Integer
R40549	MTM_CT_PRI_RATING	MTM CT primary rating	Amps, Scale = 1.00, 5–5000A, step = 5A	RW	Unsigned Integer
R40550	PF_ALM_ENA	Power factor alarm	0=enabled, 1=disabled	RW	Unsigned Integer
R40551	PF_LEAD_ALM_LVL	Power factor lead alarm level	Scale = 0.01 0–1, step = 0.05	RW	Unsigned Integer
R40552	PF_LAG_ALM_LVL	Power factor lag alarm level	Scale = 0.01 0–1, step = 0.05	RW	Unsigned Integer
R40553	PF_ALM_DLY	Power factor alarm delay	sec, Scale = 0.1 1–127 sec, step = 0.5 sec	RW	Unsigned Integer
R40554	PF_ALM_RLY	Power factor alarm relay	0–2, See Note 3	RW	Unsigned Integer
R40555	PF_TRP	Power factor trip	0=enabled, 1=disabled	RW	Unsigned Integer
R40556	PF_LEAD_TRP_LVL	Power factor lead trip level	Scale = 0.01 0–1, step = 0.05	RW	Unsigned Integer
R40557	PF_LAG_TRP_LVL	Power factor lag trip level	Scale = 0.01 0–1, step = 0.05	RW	Unsigned Integer
R40558	PF_TRP_DLY	Power factor trip delay	sec, Scale = 0.1 1–127 sec, step = 0.5 sec	RW	Unsigned Integer
R40559	PF_TRP_RLY	Power factor trip relay	0–6, See Note 2	RW	Unsigned Integer
R40560	MTM_FREQ_ALM	MTM frequency alarm	0=enabled, 1=disabled	RW	Unsigned Integer
R40561	MTM_U_FREQ_ALM_LVL	MTM under frequency alarm level	Hz, Scale = 0.1 40–60 Hz, step = 0.1 Hz	RW	Unsigned Integer
R40562	MTM_O_FREQ_ALM_LVL	MTM over frequency alarm level	Hz, Scale = 0.1 50–72 Hz, step = 0.1 Hz	RW	Unsigned Integer
R40563	MTM_FREQ_ALM_DLY	MTM frequency alarm delay	sec, Scale = 0.1 1–127 sec, step = 0.5 sec	RW	Unsigned Integer
R40564	MTM_FREQ_ALM_RLY	MTM frequency alarm relay	0–2, see Note 3	RW	Unsigned Integer
R40565	MTM_FREQ_TRP	MTM frequency trip	0=enabled, 1=disabled	RW	Unsigned Integer
R40566	MTM_U_FREQ_TRP_LVL	MTM under frequency trip level	Hz, Scale = 0.1 40–60 Hz, step = 0.1 Hz	RW	Unsigned Integer
R40567	MTM_O_FREQ_TRP_LVL	MTM over frequency trip level	Hz, Scale = 0.1 50–72 Hz, step = 0.1 Hz	RW	Unsigned Integer
R40568	MTM_FREQ_TRP_DLY	MTM frequency trip delay	sec, Scale = 0.1	RW	Unsigned Integer
R40569	MTM_FREQ_TRP_RLY	MTM frequency trip relay	0–6, See Note 3	RW	Unsigned Integer
R40570	MTM_SCAL_FACTOR	MTM scaling factor	Scale = 1.00 1–655, step = 1	RW	Unsigned Integer
R40571	VOLT_REV_TRP	Voltage reversal trip	0=enabled, 1=disabled	RW	Unsigned Integer
R40572	VOLT_REV_TRP_DLY	Voltage reversal trip delay	sec, Scale = 0.1	RW	Unsigned Integer
R40573	VOLT_REV_TRP_RLY	Voltage reversal trip relay	0–6, See Note 2	RW	Unsigned Integer
R41615	ZERO_VOLT_DETECT	Voltage, zero voltage detect	0=enabled, 1=disabled	RW	Unsigned Integer

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R4100A79 (R41000 - R41078)	CUST_PHS_CURR_CURV E	Custom phase current curve	See Note 10, 0.1 sec, 1-19922	RW	Unsigned Integer
R41100A79 (R41100 - R41178)	CUST_GND_CURR_CURV E	Custom ground current curve	See Note 10, 0.1 sec, 1-19922	RW	Unsigned Integer

NOTES:

1.

Value	Meaning	Value	Meaning
0	Moderately inverse	5	IEC A
1	Normal inverse	6	IEC B
2	Very inverse	7	IEC C
3	Extremely inverse		
4	Custom		

2.

Value	Relay
0	Trip
1	Aux 1
2	Aux 2
3	Trip and Aux 1
4	Trip and Aux2
5	Aux1 and Aux2
6	Trip , Aux1 and Aux2

3.

Value	Relay
0	Aux 1
1	Aux 2
2	Aux1 and Aux2

4.

Value	Meaning
0	Disabled
1	SW.1
2	SW.2
3	SW.3
4	SW.4
5	SW.5
6	SW.6
7	SW.7
8	SW.8

5. None.

6.

Value	Quantity
0	Phase A current
1	Phase B current
2	Phase C current
3	Ground current
4	Phase A-X voltage
5	Phase B-X voltage
6	Phase C-X voltage
7	Feeder frequency
8	External analog select

7.

Value	Baud Rate
0	1200
1	2400
2	4800
3	9600

8.

Value	Relay
0	Trip
1	Aux 1
2	Aux 2
3	Aux 3
4	All

9. None.

10. Values are time at pickup current multiples of 1.03, 1.1 to 5.9 in steps of 0.1, 6 to 20 in steps of 0.5.

11. Scaling value is calculated as follows:

$\text{"span"} = \text{max_inp_cur_scale} - \text{min_inp_cur_scale}$
 $\text{scale} = .01$ if $\text{"span"} < 40.89$
 $\text{scale} = .1$ if $\text{"span"} > 40.88$ and < 408.80
 $\text{scale} = 1$ if $\text{"span"} > 408.79$

ACTUAL VALUES

ActualValues					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R30000	DEVICE_CODE	Multilin product device code	18 = 565	RO	Unsigned Integer
R30001	HW_REV	Multilin product hardware rev code	1 = "A", 2 = "B", 3 = "C", 4 = "D", 5 = "E", etc.	RO	Unsigned Integer
R30002	FIRMWARE_REV	Multilin product firmware rev code	00.00 to 99.99 01 00 = 1.0 01 01 = 1.1 02 04 = 2.4 etc.	RO	Unsigned Integer
R30003	MOD_FILE_NO	Multilin Mod. File Number	00 00 = No modifications (standard unit) Any other value indicates the actual modification file number.	RO	Unsigned Integer
R30026	TRIP_STATUS	Trip Status	0 = no trip since last reset 1 = relay tripped	RO	Unsigned Integer
R30027	BRKR_STATUS	open/closed	10h = breaker open 20h = breaker closed 30h = breaker open & closed	RO	Unsigned Integer
R30028D1-1	MTM_COMM_ALM	MTM COMM alarm	1 = MTM COMM alarm	RO	Discrete
R30028D1-2	SWITCH_ALM_2	Switch #2 alarm	1 = switch #2 alarm	RO	Discrete
R30028D1-3	TRP_COIL_ALM	Trip coil alarm	1 = trip coil alarm	RO	Discrete
R30028D1-4	FREQ_ALM	Frequency alarm	1 = frequency alarm	RO	Discrete
R30028D1-5	PF_ALM	Power factor alarm	1 = power factor alarm	RO	Discrete
R30028D1-6	KVAR_DMND_ALM	KVAR demand alarm	1 = KVAR demand alarm	RO	Discrete
R30028D1-7	KW_DMND_ALM	KW demand alarm	1 = KW demand alarm	RO	Discrete
R30029D1-0	AMPS_DMND_ALM	Amps demand alarm	1 = amp demand alarm	RO	Discrete
R30029D1-1	ACC_KA_ALM	Accumulated KA alarm	1 = accumulated KA alarm	RO	Discrete
R30029D1-2	OV_ALM	Overvoltage alarm	1 = overvoltage alarm	RO	Discrete
R30029D1-3	UV_ALM	Undervoltage alarm	1 = undervoltage alarm	RO	Discrete
R30029D1-4	ANALOG_IN_ALM	Analog input alarm	1 = analog input alarm	RO	Discrete
R30029D1-5	SWITCH_ALM_1	Switch #1 alarm	1 = switch #1 alarm	RO	Discrete
R30029D1-6	GROUND_ALM	Ground alarm	1 = ground alarm	RO	Discrete
R30029D1-7	PHASE_ALM	Phase alarm	1 = phase alarm	RO	Discrete
R30030D1-0	SW1_STATUS	Switch #1 status	1 = closed	RO	Discrete
R30030D1-1	SW2_STATUS	Switch #2 status	1 = closed	RO	Discrete
R30030D1-2	SW3_STATUS	Switch #3 status	1 = closed	RO	Discrete
R30030D1-3	SW4_STATUS	Switch #4 status	1 = closed	RO	Discrete
R30030D1-4	SW5_STATUS	Switch #5 status	1 = closed	RO	Discrete
R30030D1-5	SW6_STATUS	Switch #6 status	1 = closed	RO	Discrete
R30030D1-6	SW7_STATUS	Switch #7 status	1 = closed	RO	Discrete
R30030D1-7	SW8_STATUS	Switch #8 status	1 = closed	RO	Discrete
R30031D1-1	RLY_STAT_AUX2	Relay AUX2 status	1 = AUX2 is or has been energized by a trip condition	RO	Discrete
R30031D1-2	RLY_STAT_AUX1	Relay AUX1 status	1 = AUX1 is or has been energized by a trip condition	RO	Discrete
R30031D1-3	RLY_STAT_TRIP	Relay TRIP status	1 = TRIP is or has been energized by a trip condition	RO	Discrete

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ActualValues					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R30031D1-4	RLY_STAT_AUX3	AUX3's status	1 = AUX3 is currently de-energized by a trip or alarm condition	RO	Discrete
R30031D1-5	RLY_TRP_COND_AUX2	AUX2's trip condition	1 = AUX2 is currently energized by a trip or alarm condition	RO	Discrete
R30031D1-6	RLY_TRP_COND_AUX1	AUX1's trip condition	1 = AUX1 is currently energized by a trip or alarm condition	RO	Discrete
R30031D1-7	RLY_TRP_COND_TRP	TRIP relay trip condition	1 = TRIP is currently energized by a trip or alarm condition	RO	Discrete
R30032L	AMPS_A	phase 1 current	Scale = 0.01 AMPS,	RO	Long Integer
R30034L	AMPS_B	phase 2 current	Scale = 0.01 AMPS	RO	Long Integer
R30036L	AMPS_C	phase 3 current	Scale = 0.01 AMPS	RO	Long Integer
R30038L	AMPS_GND	ground current	Scale = 0.01 AMPS	RO	Long Integer
R30040	VOLTS_AX	For Delta Connection: Line A-B voltage For Wye Connection : Phase A-N voltage	Scale = 0.01 kV	RO	Unsigned Integer
R30041	VOLTS_BX	For Delta Connection: Line B-C voltage For Wye Connection : Phase B-N voltage	Scale = 0.01 kV	RO	Unsigned Integer
R30042	VOLTS_CX	For Delta Connection: Line C-A voltage For Wye Connection : Phase C-N voltage	Scale = 0.01 kV	RO	Unsigned Integer
R30043	FREQ	Frequency	Scale = 0.01 Hz	RO	Unsigned Integer
R30044L	ANALOG_INPUT	Analog input	Scale = 0.01	RO	Long Integer
R30048L	BRKR_DATE	Breaker date	BCD, XX DD MM YY	RO	Long Integer
R30050	BRKR_TRIPS	Breaker trips	Scale = 1.00	RO	Unsigned Integer
R30051L	ACC_KA_A	Phase A accumulated KA	Scale = 0.01	RO	Long Integer
R30053L	ACC_KA_B	Phase B accumulated KA	Scale = 0.01	RO	Long Integer
R30055L	ACC_KA_C	Phase C accumulated KA	Scale = 0.01	RO	Long Integer
R30058L	DATE_MAINT_DATA_CLR	Date maintenance data cleared last	BCD, XX DD MM YY	RO	Long Integer
R30060	TIMED_PHS_OC_TRPS	Timed phase overcurrent trips	Scale = 1.00	RO	Unsigned Integer
R30061	INST_PHS_OC_TRPS	Inst phase overcurrent trips	Scale = 1.00	RO	Unsigned Integer
R30062	TIMED_GND_OC_TRPS	Timed ground overcurrent trips	Scale = 1.00	RO	Unsigned Integer
R30063	INST_GND_OC_TRPS	Inst ground overcurrent trips	Scale = 1.00	RO	Unsigned Integer
R30064	OV_TRPS	Overvoltage trips	Scale = 1.00	RO	Unsigned Integer
R30065	UV_TRPS	Undervoltage trips	Scale = 1.00	RO	Unsigned Integer
R30066	ANALOG_IN_TRPS	Analog input trips	Scale = 1.00	RO	Unsigned Integer
R30068L	DATE_OPER_DATA_CLR	Operations data cleared last	BCD, XX DD MM YY	RO	Long Integer
R30072L	LAST_TRP_CAUSE	Cause of last trip	See Note 5	RO	Long integer
R30074L	PRETRP_AMPS_A	Phase A pretrip current	Scale = 0.01 Amps	RO	Long Integer
R30076L	PRETRP_AMPS_B	Phase B pretrip current	Scale = 0.01 Amps	RO	Long Integer
R30078L	PRETRP_AMPS_C	Phase C pretrip current	Scale = 0.01 Amps	RO	Long Integer
R30080L	PRETRP_AMPS_GND	Ground pretrip current	Scale = 0.01 Amps	RO	Long Integer
R30082	PRETRP_VOLTS_AX	For Wye Connection:	Scale = 0.01 kV	RO	Unsigned Integer

ActualValues					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
		Phase A-B pretrip voltage For Wye Connection : Phase A-N voltage			
R30083	PRETRP_VOLTS_BX	For Wye Connection: Phase B-C pretrip voltage For Wye Connection : Phase B-N voltage	Scale = 0.01 kV	RO	Unsigned Integer
R30084	PRETRP_VOLTS_CX	For Wye Connection: Phase C-A pretrip voltage For Wye Connection : Phase C-N voltage	Scale = 0.01 kV	RO	Unsigned Integer
R30085	PRETRP_FREQ	Frequency at trip	Scale = 0.01 Hz	RO	Unsigned Integer
R30086L	DATE_LAST_TRIP	Date of last trip	BCD, XX DD MM YY	RO	Long Integer
R30088L	TIME_LAST_TRIP	Time of last trip	BCD, XX SS MM HH	RO	Long Integer
R30092L	PEAK_DMND_A	Phase A peak demand	Scale = 0.01 Amps	RO	Long Integer
R30094L	PEAK_DMND_B	Phase B peak demand	Scale = 0.01 Amps	RO	Long Integer
R30096L	PEAK_DMND_C	Phase C peak demand	Scale = 0.01 Amps	RO	Long Integer
R30099L	DATE_DMND_CLR	Date demand last cleared	BCD, XX DD MM YY	RO	Long Integer
R30101	PEAK_KW_DMND	Peak KW demand	KW, Scale = 1.00	RO	Unsigned Integer
R30103L	DATE_KW_DMND_CLR	Date peak KW demand last cleared	BCD, XX DD MM YY	RO	Long Integer
R30105	PEAK_KVAR_DMND	Peak KVAR demand	KVAR, Scale = 1.00	RO	Unsigned Integer
R30107L	DATE_KVAR_DMND_CLR	Date peak KVAR demand last cleared	BCD, XX DD MM YY	RO	Long Integer
R30110I	PF	Power factor	signed Scale = 0.01	RO	Signed Integer
R30111	MTM_FREQ	MTM frequency	Scale = 0.10 Hz	RO	Integer
R30112I	REAL_POWER	Real power	KW, Scale = 1.00	RO	Signed Integer
R30113I	REACTIVE_POWER	Reactive power	KVAR, Scale = 1.00	RO	Signed Integer
R30114	ENERGY	Energy	MWHr, Scale = 1.00	RO	Unsigned Integer
R30116	NO_OF_EVENTS	Number of events	Scale = 1.00	RO	Unsigned Integer
R30121L	DATE_EVENT_CLR	Date events last cleared	BCD, XX DD MM YY	RO	Long Integer

COMMAND COILS

Command Coils					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value	R/W	Data Type
R00000	RESET_KEYPAD	Reset keypad	Set to 1 to perform keypad reset	WO	Discrete
R00001	END_OF_RLY_TST	End of relay test	Set to 1 to perform end of relay test	WO	Discrete
R00002	END_OF_LED_TST	End of LED test	Set to 1 to perform end of LED test	WO	Discrete
R00003	END_OF_ANA_OUT_TST	End of analog output test	Set to 1 to perform end of analog output test.	WO	Discrete
R00004	TEST_LCD_DISPLAY	Test LCD display	Set to 1 to test LCD display	WO	Discrete
R00005	TEST_LED	Test LED	Set to 1 to test LED	WO	Discrete
R00015	MAINT_DATA_CLR	Clear maintenance data	Set to 1 to clear maintenance data	WO	Discrete
R00016	CLEAR_OPERAT_DATA	Clear operation data	Set to 1 to clear operation data	WO	Discrete
R00017	CLR_AMPS_DMND	Clear Amp demand	Set to 1 to clear Amp demand	WO	Discrete
R00018	CLR_KW_DMND	Clear kW demand	Set to 1 to clear kW demand	WO	Discrete
R00019	CLR_KVAR_DMND	Clear kVAR demand	Set to 1 to clear kVAR demand	WO	Discrete
R00020	CLEAR_EVENTS	Clear events	Set to 1 to clear events	WO	Discrete
R00021	CLEAR_ENERGY	Clear energy used data	Set to 1 to clear energy used data	WO	Discrete

NOTES:

1.

	Bit	Meaning if bit = 1 (MSByte = 0)
LSB	0	not assigned
	1	MTM communications alarm
	2	Switch #2 alarm
	3	Trip coil alarm
	4	Frequency alarm
	5	Power factor alarm
	6	KVAR demand alarm
MSB	7	KW demand alarm

2.

	Bit	Meaning if bit = 1 (MSByte = 0)
LSB	0	Amps demand alarm
	1	Accumulated KA alarm
	2	Overvoltage alarm
	3	Undervoltage alarm
	4	Analog input alarm
	5	Switch #1 alarm
	6	Ground current alarm
MSB	7	Phase current alarm

3.

	Bit	Switch bit (MSByte = 0)
LSB	0	1
	1	2
	2	3
	3	4
	4	5
	5	6
	6	7
MSB	7	8

4.

	Bit	Meaning if bit = 1 (MSByte = 0)
LSB	0	Reserved
	1	Aux 2 is or has been energized by a trip condition (no reset performed)
	2	Aux 1 is or has been energized by a trip condition (no reset performed)
	3	Trip is or has been energized by a trip condition (no reset performed)
	4	Aux 3 is currently de-energized by an alarm condition
	5	Aux 2 is currently energized by a trip or alarm condition
	6	Aux 1 is currently energized by a trip or alarm condition
MSB	7	Trip is currently energized by a trip or alarm condition

5. All values in hex bits:

00000000	No trips reported
00000080	Voltage Phase Reversal
00000100	External switch #1
00000200	External switch #4
00000400	Not used
00000800	Analog input
00001000	Power Factor (MTM)
00002000	Frequency MTM
00004000	External switch #2
00008000	External switch #3
00010000	Not used
00020000	Not used
00040000	Not used
00080000	Not used
00100000	Not used
00200000	Not used
00400000	Overvoltage
00800000	Undervoltage
01000000	Phase A Timed O/C
02000000	Phase B timed O/C
04000000	Phase C timed O/C
08000000	Ground timed O/C
10000000	Phase A inst O/C
20000000	Phase B inst O/C
40000000	Phase C inst O/C
80000000	Ground Inst O/C

Note: Multiple trips can be reported if occurring in same cycle

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▮ **SR489 Generator Management Relay**

■ *SETPOINT REGISTERS*

■ *ACTUAL VALUES*

■ *COMMAND COILS*

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1000	MSG_CYCLE_TIME	DEFAULT MESSAGE CYCLE TIME	s, 5, 5-100	RW	F2
R4X1001	MSG_TIMEOUT	DEFAULT MESSAGE TIMEOUT	s, 1, 10-900	RW	F1
R4X1003	AVG_CALC_PERIOD	PARAMETER AVERAGES CALC. PERIOD	min, 1, 1-90	RW	F1
R4X1004	TEMP_DISPLAY_UNITS	TEMPERATURE DISPLAY	-, 1, 0-1	RW	F100
R4X1005	TRACE_MEM_TRIGGER	TRACE MEMORY TRIGGER AFTER	%, 1, 1-100	RW	F1
R4X100A	TRACE_MEM_BUFFER	WAVEFORM MEMORY BUFFER	-, 1, 1 to 16	RW	F1
R4X1010	SLAVE_ADDRESS	SLAVE ADDRESS	-, 1, 1-254	RW	F1
R4X1011	RS485_BAUD_RATE	COMPUTER RS485 BAUD RATE	-, 1, 0-5	RW	F101
R4X1012	RS485_PARITY	COMPUTER RS485 PARITY	-, 1, 0-2	RW	F102
R4X1013	AUX_RS485_BAUD_RATE	AUXILIARY RS485 BAUD RATE	-, 1, 0-5	RW	F101
R4X1014	AUX_RS485_PARITY	AUXILIARY RS485 PARITY	-, 1, 0-2	RW	F102
R4X1015	DNP_PORT	PORT USED FOR DNP	-, 1, 0-3	RW	F216
R4X1016	DNP_SLV_ADDR	DNP SLAVE ADDRESS	-, 1, 0-255	RW	F1
R4X1017	DNP_TURNARND_TM	DNP TURNAROUND TIME	ms, 10, 0-100	RW	F1
R4X1030L	SP_DATE	DATE	N/A, N/A, N/A	RW	F18
R4X1032L	SP_TIME	TIME	N/A, N/A, N/A	RW	F19
R4X1060S40	SCRATCHPAD_1	Scratchpad	ASCII	RW	F22
R4X1080S40	SCRATCHPAD_2	Scratchpad	ASCII	RW	F22
R4X10A0S40	SCRATCHPAD_3	Scratchpad	ASCII	RW	F22
R4X10C0S40	SCRATCHPAD_4	Scratchpad	ASCII	RW	F22
R4X10E0S40	SCRATCHPAD_5	Scratchpad	ASCII	RW	F22
R4X1130	CLEAR_LAST_TRIP	CLEAR LAST TRIP DATA	-, 1, 0-1	RW	F103
R4X1131	RESET_METERS	CLEAR MWh and Mvarh METERS	-, 1, 0-1	RW	F103
R4X1132	CLEAR_PEAK_DMND	CLEAR PEAK DEMAND DATA	-, 1, 0-1	RW	F103
R4X1133	CLEAR_RTD_MAX	CLEAR RTD MAXIMUMS	-, 1, 0-1	RW	F103
R4X1134	CLEAR_AI_MIN_MAX	CLEAR ANALOG I/P MIN/MAX	-, 1, 0-1	RW	F103
R4X1135	CLEAR_TRIP_CTRS	CLEAR TRIP COUNTERS	-, 1, 0-1	RW	F103
R4X1136	CLEAR_EVENT_RECS	CLEAR EVENT RECORD	-, 1, 0-1	RW	F103
R4X1137	CLEAR_GEN_INFO	CLEAR GENERATOR INFORMATION	-, 1, 0-1	RW	F103
R4X1138	CLEAR_BRKR_INFO	CLEAR BREAKER INFORMATION	-, 1, 0-1	RW	F103
R4X1180	CT_PRIMARY	PHASE CT PRIMARY	Amps, 1, 10-50001	RW	F1
R4X1181	GND_CT	GROUND CT	-, 1, 0-2	RW	F104
R4X1182	GND_CT_RATIO	GROUND CT RATIO	: 1, 1, 10-10000	RW	F1
R4X11A0	VT_TYPE	VT CONNECTION TYPE	-, 1, 0-2	RW	F106
R4X11A1	VT_RATIO	VOLTAGE TRANSFORMER RATIO	: 1, 1, 100-24000	RW	F3
R4X11A2	NEUTRAL_VT_RATIO	NEUTRAL V.T. RATIO	: 1, 1, 100-24000	RW	F3
R4X11A3	NEUTRAL_VT	NEUTRAL VOLTAGE TRANSFORMER	-, 1, 0-1	RW	F103
R4X11C0L	GEN_RATED_MVA	GENERATOR RATED MVA	MVA, 1, 10-2000001	RW	F13
R4X11C2	GEN_RATED_PF	GENERATOR RATED POWER FACTOR	-, 1, 5-100	RW	F3
R4X11C3	GEN_V_PH_PH	GENERATOR VOLTAGE PHASE-PHASE	V, 1, 100-30001	RW	F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X11C4	GEN_NOM_FREQ	GENERATOR NOMINAL FREQUENCY	Hz, 1, 0-3	RW	F107
R4X11C5	GEN_PH_SEQ	GENERATOR PHASE SEQUENCE	-, 1, 0-2	RW	F124
R4X11E0	SERIAL_INIT	SERIAL START/STOP INITIATION	-, 1, 0-1	RW	F105
R4X11E1	STARTUP_INIT_RLYS	STARTUP INITIATION RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X11E2	SHUTDOWN_INIT_RLYS	SHUTDOWN INITIATION RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X11E3	SERIAL_EVENTS	SERIAL START/STOP EVENTS	-, 1, 0-1	RW	F105
R4X1200	BRKR_TYPE	BREAKER STATUS	-, 1, 0-1	RW	F209
R4X1210	SW1_DIG_IN	ASSIGN DIGITAL INPUT	-, 1, 0-7	RW	F210
R4X1211	SW1_ASSERT_STATE	ASSERTED DIGITAL INPUT STATE	-, 1, 0-1	RW	F131
R4X1212S12	SW1_INPUT_NAME	INPUT NAME	ASCII	RW	F22
R4X1218	SW1_BLK_INPUT_ONLINE	BLOCK INPUT FROM ONLINE	s, 1, 0-5000	RW	F1
R4X1219	SW1_CONTROL	GENERAL INPUT A CONTROL	-, 1, 0-1	RW	F105
R4X121A	SW1_PLS_CTRL_DWELL	PULSED CONTROL RELAY DWELL TIME	s, 1, 0-250	RW	F2
R4X121B	SW1_CTRL_RLYS	ASSIGN CONTROL RELAYS (1-5)	-, 1, 0-4	RW	F50
R4X121C	SW1_CTRL_EVNTS	GENERAL INPUT A CONTROL EVENTS	-, 1, 0-1	RW	F105
R4X121D	SW1_ALM	GENERAL INPUT A ALARM	-, 1, 0-2	RW	F115
R4X121E	SW1_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X121F	SW1_ALM_DLY	GENERAL INPUT A ALARM DELAY	s, 1, 1-50000	RW	F2
R4X1220	SW1_ALM_EVNTS	GENERAL INPUT A ALARM EVENTS	-, 1, 0-1	RW	F105
R4X1221	SW1_TRP	GENERAL INPUT A TRIP	-, 1, 0-2	RW	F115
R4X1222	SW1_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X1223	SW1_TRP_DLY	GENERAL INPUT A TRIP DELAY	s, 1, 1-50000	RW	F2
R4X1230	SW2_DIG_IN	ASSIGN DIGITAL INPUT	-, 1, 0-7	RW	F210
R4X1231	SW2_ASSERTI_STATE	ASSERTED DIGITAL INPUT STATE	-, 1, 0-1	RW	F131
R4X1232S12	SW2_INPUT_NAME	INPUT NAME	ASCII	RW	F22
R4X1238	SW2_BLK_INPUT_ONLINE	BLOCK INPUT FROM ONLINE	s, 1, 0-5000	RW	F1
R4X1239	SW2_CONTROL	GENERAL INPUT B CONTROL	-, 1, 0-1	RW	F105
R4X123A	SW2_PLS_CTRL_DWELL	PULSED CONTROL RELAY DWELL TIME	s, 1, 0-250	RW	F2
R4X123B	SW2_CTRL_RLYS	ASSIGN CONTROL RELAYS (1-5)	-, 1, 0-4	RW	F50
R4X123C	SW2_CTRL_EVNTS	GENERAL INPUT B CONTROL EVENTS	-, 1, 0-1	RW	F105
R4X123D	SW2_ALM	GENERAL INPUT B ALARM	-, 1, 0-2	RW	F115
R4X123E	SW2_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X123F	SW2_ALM_DLY	GENERAL INPUT B ALARM DELAY	s, 1, 1-50000	RW	F2
R4X1240	SW2_ALM_EVNTS	GENERAL INPUT B ALARM EVENTS	-, 1, 0-1	RW	F105
R4X1241	SW2_TRP	GENERAL INPUT B TRIP	-, 1, 0-2	RW	F115
R4X1242	SW2_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X1243	SW2_TRP_DLY	GENERAL INPUT B TRIP DELAY	s, 1, 1-50000	RW	F2
R4X1250	SW3_DIG_IN	ASSIGN DIGITAL INPUT	-, 1, 0-7	RW	F210
R4X1251	SW3_ASSERT_STATE	ASSERTED DIGITAL INPUT STATE	-, 1, 0-1	RW	F131
R4X1252S12	SW3_INPUT_NAME	INPUT NAME	ASCII	RW	F22
R4X1258	SW3_BLK_INPUT_ONLINE	BLOCK INPUT FROM ONLINE	s, 1, 0-5000	RW	F1
R4X1259	SW3_CONTROL	GENERAL INPUT C CONTROL	-, 1, 0-1	RW	F105

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X125A	SW3_PLS_CTRL_DWELL	PULSED CONTROL RELAY DWELL TIME	s, 1, 0-250	RW	F2
R4X125B	SW3_CTRL_RLYS	ASSIGN CONTROL RELAYS (1-5)	-, 1, 0-4	RW	F50
R4X125C	SW3_CTRL_EVNTS	GENERAL INPUT C CONTROL EVENTS	-, 1, 0-1	RW	F105
R4X125D	SW3_ALM	GENERAL INPUT C ALARM	-, 1, 0-2	RW	F115
R4X125E	SW3_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X125F	SW3_ALM_DLY	GENERAL INPUT C ALARM DELAY	s, 1, 1-50000	RW	F2
R4X1260	SW3_ALM_EVNTS	GENERAL INPUT C ALARM EVENTS	-, 1, 0-1	RW	F105
R4X1261	SW3_TRP	GENERAL INPUT C TRIP	-, 1, 0-2	RW	F115
R4X1262	SW3_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X1263	SW3_TRP_DLY	GENERAL INPUT C TRIP DELAY	s, 1, 1-50000	RW	F2
R4X1270	SW4_DIG_IN	ASSIGN DIGITAL INPUT	-, 1, 0-7	RW	F210
R4X1271	SW4_ASSERT_STATE	ASSERTED DIGITAL INPUT STATE	-, 1, 0-1	RW	F131
R4X1272S12	SW4_INPUT_NAME	INPUT NAME	ASCII	RW	F22
R4X1278	SW4_BLK_INPUT_ONLINE	BLOCK INPUT FROM ONLINE	s, 1, 0-5000	RW	F1
R4X1279	SW4_CONTROL	GENERAL INPUT D CONTROL	-, 1, 0-1	RW	F105
R4X127A	SW4_PLS_CTRL_DWELL	PULSED CONTROL RELAY DWELL TIME	s, 1, 0-250	RW	F2
R4X127B	SW4_CTRL_RLYS	ASSIGN CONTROL RELAYS (1-5)	-, 1, 0-4	RW	F50
R4X127C	SW4_CTRL_EVNTS	GENERAL INPUT D CONTROL EVENTS	-, 1, 0-1	RW	F105
R4X127D	SW4_ALM	GENERAL INPUT D ALARM	-, 1, 0-2	RW	F115
R4X127E	SW4_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X127F	SW4_ALM_DLY	GENERAL INPUT D ALARM DELAY	s, 1, 1-50000	RW	F2
R4X1280	SW4_ALM_EVNTS	GENERAL INPUT D ALARM EVENTS	-, 1, 0-1	RW	F105
R4X1281	SW4_TRP	GENERAL INPUT D TRIP	-, 1, 0-2	RW	F115
R4X1282	SW4_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X1283	SW4_TRP_DLY	GENERAL INPUT D TRIP DELAY	s, 1, 1-50000	RW	F2
R4X1290	SW5_DIG_IN	ASSIGN DIGITAL INPUT	-, 1, 0-7	RW	F210
R4X1291	SW5_ASSERT_STATE	ASSERTED DIGITAL INPUT STATE	-, 1, 0-1	RW	F131
R4X1292S12	SW5_INPUT_NAME	INPUT NAME	ASCII	RW	F22
R4X1298	SW5_BLK_INPUT_ONLINE	BLOCK INPUT FROM ONLINE	s, 1, 0-5000	RW	F1
R4X1299	SW5_CONTROL	GENERAL INPUT E CONTROL	-, 1, 0-1	RW	F105
R4X129A	SW5_PLS_CTRL_DWELL	PULSED CONTROL RELAY DWELL TIME	s, 1, 0-250	RW	F2
R4X129B	SW5_CTRL_RLYS	ASSIGN CONTROL RELAYS (1-5)	-, 1, 0-4	RW	F50
R4X129C	SW5_CTRL_EVNTS	GENERAL INPUT E CONTROL EVENTS	-, 1, 0-1	RW	F105
R4X129D	SW5_ALM	GENERAL INPUT E ALARM	-, 1, 0-2	RW	F115
R4X129E	SW5_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X129F	SW5_ALM_DLY	GENERAL INPUT E ALARM DELAY	s, 1, 1-50000	RW	F2
R4X12A0	SW5_ALM_EVNTS	GENERAL INPUT E ALARM EVENTS	-, 1, 0-1	RW	F105
R4X12A1	SW5_TRP	GENERAL INPUT E TRIP	-, 1, 0-2	RW	F115
R4X12A2	SW5_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X12A3	SW5_TRP_DLY	GENERAL INPUT E TRIP DELAY	s, 1, 1-50000	RW	F2
R4X12B0	SW6_DIG_IN	ASSIGN DIGITAL INPUT	-, 1, 0-7	RW	F210

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X12B1	SW6_ASSERT_STATE	ASSERTED DIGITAL INPUT STATE	-, 1, 0-1	RW	F131
R4X12B2S12	SW6_INPUT_NAME	INPUT NAME	ASCII	RW	F22
R4X12B8	SW6_BLK_INPUT_ONLINE	BLOCK INPUT FROM ONLINE	s, 1, 0-5000	RW	F1
R4X12B9	SW6_CONTROL	GENERAL INPUT F CONTROL	-, 1, 0-1	RW	F105
R4X12BA	SW6_PLS_CTRL_DWELL	PULSED CONTROL RELAY DWELL TIME	s, 1, 0-250	RW	F2
R4X12BB	SW6_CTRL_RLYS	ASSIGN CONTROL RELAYS (1-5)	-, 1, 0-4	RW	F50
R4X12BC	SW6_CTRL_EVNTS	GENERAL INPUT F CONTROL EVENTS	-, 1, 0-1	RW	F105
R4X12BD	SW6_ALM	GENERAL INPUT F ALARM	-, 1, 0-2	RW	F115
R4X12BE	SW6_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X12BF	SW6_ALM_DLY	GENERAL INPUT F ALARM DELAY	s, 1, 1-50000	RW	F2
R4X12C0	SW6_ALM_EVNTS	GENERAL INPUT F ALARM EVENTS	-, 1, 0-1	RW	F105
R4X12C1	SW6_TRP	GENERAL INPUT F TRIP	-, 1, 0-2	RW	F115
R4X12C2	SW6_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X12C3	SW6_TRP_DLY	GENERAL INPUT F TRIP DELAY	s, 1, 1-50000	RW	F2
R4X12D0	SW7_DIG_IN	ASSIGN DIGITAL INPUT	-, 1, 0-7	RW	F210
R4X12D1	SW7_ASSERT_STATE	ASSERTED DIGITAL INPUT STATE	-, 1, 0-1	RW	F131
R4X12D2S12	SW7_INPUT_NAME	INPUT NAME	ASCII	RW	F22
R4X12D8	SW7_BLK_INPUT_ONLINE	BLOCK INPUT FROM ONLINE	s, 1, 0-5000	RW	F1
R3X12D9	SW7_CONTROL	GENERAL INPUT G CONTROL	-, 1, 0-1	RW	F105
R3X12DA	SW7_PLS_CTRL_DWELL	PULSED CONTROL RELAY DWELL TIME	s, 1, 0-250	RW	F2
R3X12DB	SW7_CTRL_RLYS	ASSIGN CONTROL RELAYS (1-5)	-, 1, 0-4	RW	F50
R4X12DC	SW7_CTRL_EVNTS	GENERAL INPUT G CONTROL EVENTS	-, 1, 0-1	RW	F105
R4X12DD	SW7_ALM	GENERAL INPUT G ALARM	-, 1, 0-2	RW	F115
R4X12DE	SW7_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X12DF	SW7_ALM_DLY	GENERAL INPUT G ALARM DELAY	s, 1, 1-50000	RW	F2
R4X12E0	SW7_ALM_EVNTS	GENERAL INPUT G ALARM EVENTS	-, 1, 0-1	RW	F105
R4X12E1	SW7_TRP	GENERAL INPUT G TRIP	-, 1, 0-2	RW	F115
R4X12E2	SW7_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X12E3	SW7_TRP_DLY	GENERAL INPUT G TRIP DELAY	s, 1, 1-50000	RW	F2
R4X1300	REM_RST_DIG_IN	ASSIGN DIGITAL INPUT	-, 1, 0-7	RW	F210
R4X1310	TEST_DIG_IN	ASSIGN DIGITAL INPUT	-, 1, 0-7	RW	F210
R4X1320	THERM_RESET_DIG_IN	ASSIGN DIGITAL INPUT	-, 1, 0-7	RW	F210
R4X1340	DUAL_SP_DIG_IN	ASSIGN DIGITAL INPUT	-, 1, 0-7	RW	F210
R4X1341	ACTIVE_SP_GROUP	ACTIVE SETPOINT GROUP	-, 1, 0-1	RW	F118
R4X1342	EDIT_SP_GROUP	EDIT SETPOINT GROUP	-, 1, 0-1	RW	F118
R4X1360	SEQ_TRP_DIG_IN	ASSIGN DIGITAL INPUT	-, 1, 0-7	RW	F210
R4X1361	SEQ_TRP_TYPE	SEQUENTIAL TRIP TYPE	-, 1, 0-1	RW	F206
R4X1362	SEQ_TRP_TRP_RLY	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X1363L	SEQ_TRP_LVL	SEQUENTIAL TRIP LEVEL	x Rated MW, 1, 2-99	RW	F14
R4X1365	SEQ_TRP_DLY	SEQUENTIAL TRIP DELAY	s, 1, 2-1200	RW	F2
R4X1380	FBD_DIG_IN	ASSIGN DIGITAL INPUT	-, 1, 0-7	RW	F210
R4X1381	FBD_FLD_STAT_CONTACT	FIELD STATUS CONTACT	-, 1, 0-1	RW	F109

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1382	FBD_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X1383	FBD_TRP_DLY	FIELD-BKR DISCREP. TRIP DELAY	s, 1, 1-5000	RW	F2
R4X13A0	TACH_DIG_IN	ASSIGN DIGITAL INPUT	-, 1, 0-7	RW	F210
R4X13A1	RATED_SPD	RATED SPEED	RPM, 1, 100-3600	RW	F1
R4X13A2	TACH_ALM	TACHOMETER ALARM	-, 1, 0-2	RW	F115
R4X13A3	TACH_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X13A4	TACH_ALM_SPD	TACHOMETER ALARM SPEED	% Rated, 1, 101-175	RW	F1
R4X13A5	TACH_ALM_DLY	TACHOMETER ALARM DELAY	s, 1, 1-250	RW	F1
R4X13A6	TACH_ALM_EVNT	TACHOMETER ALARM EVENTS	-, 1, 0-1	RW	F105
R4X13A7	TACH_TRP	TACHOMETER TRIP	-, 1, 0-2	RW	F115
R4X13A8	TACH_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X13A9	TACH_TRP_SPD	TACHOMETER TRIP SPEED	% Rated, 1, 101-175	RW	F1
R4X13AA	TACH_TRP_DLY	TACHOMETER TRIP DELAY	s, 1, 1-250	RW	F1
R4X13D0	ASSN_DIGI_INPUT	ASSIGN DIGITAL INPUT	-, 1, 0-7	RW	F210
R4X13D1	GND_SW_CONTACT	GROUND SWITCH CONTACT	-, 1, 0-1	RW	F109
R4X13C0	ASSIGN_DIGITAL_INPUT	ASSIGN DIGITAL INPUT	-, 1, 0-7	RW	F210
R4X1400	RESETMODE_R1_TRP	R1 TRIP	-, 1, 0-1	RW	F117
R4X1401	RESETMODE_R2_AUX	R2 AUXILIARY	-, 1, 0-1	RW	F117
R4X1402	RESETMODE_R3_AUX	R3 AUXILIARY	-, 1, 0-1	RW	F117
R4X1403	RESETMODE_R4_AUX	R4 AUXILIARY	-, 1, 0-1	RW	F117
R4X1404	RESETMODE_R5_ALM	R5 ALARM	-, 1, 0-1	RW	F117
R4X1405	RESETMODE_R6_SVC	R6 SERVICE	-, 1, 0-1	RW	F117
R4X1500	OC_ALM	OVERCURRENT ALARM	-, 1, 0-2	RW	F1
R4X1501	OC_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X1502	OC_ALM_LVL	OVERCURRENT ALARM LEVEL	x FLA, 1, 10-150	RW	F3
R4X1503	OC_ALM_DLY	OVERCURRENT ALARM DELAY	s, 1, 1-2500	RW	F2
R4X1504	OC_ALM_EVNTS	OVERCURRENT ALARM EVENTS	-, 1, 0-1	RW	F1
R4X1520	OFFLN_OC_TRP	OFFLINE OVERCURRENT TRIP	-, 1, 0-2	RW	F1
R4X1521	OFFLN_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X1522	OFFLN_OC_PKUP	OFFLINE OVERCURRENT PICKUP	x CT, 1, 5-100	RW	F3
R4X1523	OFFLN_OC_TRP_DLY	OFFLINE OVERCURRENT TRIP DELAY	Cycles, 1, 3-99	RW	F1
R4X1540	IAE_TRP	INADVERTENT ENERGIZE TRIP	-, 1, 0-2	RW	F1
R4X1541	IAE_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X1542	IAE_ARMING_SIGNAL	ARMING SIGNAL	-, 1, 0-1	RW	F1
R4X1543	IAE_ENERGZ_OC_PKUP	INADVERTENT ENERGIZE O/C PICKUP	x CT, 1, 5-300	RW	F3
R4X1544	IAE_ENERGZ_PKUP	INADVERTENT ENERGIZE PICKUP	x Rated V, 1, 50-99	RW	F3
R4X1600	PH_OC_TRP	PHASE OVERCURRENT TRIP	-, 1, 0-2	RW	F1
R4X1601	PH_OC_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X1602	PH_OC_ENABL_V_REST	ENABLE VOLTAGE RESTRAINT	-, 1, 0-1	RW	F1
R4X1603	PH_OC_PKUP	PHASE OVERCURRENT PICKUP	x CT, 1, 15-2000	RW	F3
R4X1604	PH_OC_CURVE_SHAPE	CURVE SHAPE	-, 1, 0-13	RW	F1
R4X1654	PH_OC_FLXCRV_TRP_TM	FLEXCURVE TRIP TIME AT 20.0xPU	ms, 1, 0-65535	RW	F1
R4X1655L	PH_OC_CRV_MULTIP	OVERCURRENT CURVE MULTIPLIER	-, 1, 0-100000	RW	F14
R4X1657	PH_OC_CRV_RESET	OVERCURRENT CURVE RESET	-, 1, 0-1	RW	F2

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1658	VOLT_LOW_LIMIT	VOLTAGE LOWER LIMIT	%, 1, 10-60	RW	F1
R4X1700	NEG_SEQ_ALM	NEGATIVE SEQUENCE ALARM	-, 1, 0-2	RW	F1
R4X1701	NEG_SEQ_ALM_RLY	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X1702	NEG_SEQ_ALM_PKUP_LVL	NEG. SEQUENCE ALARM PICKUP	% FLA, 1, 3-100	RW	F1
R4X1703	NEG_SEQ_ALM_DLY	NEGATIVE SEQUENCE ALARM DELAY	s, 1, 1-1000	RW	F2
R4X1704	NEG_SEQ_ALM_EVNTS	NEGATIVE SEQUENCE ALARM EVENTS	-, 1, 0-1	RW	F1
R4X1705	NEG_SEQ_OC_TRP	NEGATIVE SEQUENCE O/C TRIP	-, 1, 0-2	RW	F1
R4X1706	NEG_SEQ_TRP_RLY	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X1707	NEG_SEQ_OC_PKUP_LVL	NEG. SEQUENCE O/C TRIP PICKUP	% FLA, 1, 3-100	RW	F1
R4X1708	NEG_SEQ_OC_CONST_K	NEG. SEQUENCE O/C CONSTANT K	-, 1, 1-100	RW	F1
R4X1709	NEG_SEQ_MAX_TIME	NEG. SEQUENCE O/C MAX. TIME	s, 1, 10-1000	RW	F1
R4X170A	NEG_SEQ_RST_RATE	NEG. SEQUENCE O/C RESET RATE	s, 1, 0-9999	RW	F2
R4X1720	GND_OC_ALM	GROUND OVERCURRENT ALARM	-, 1, 0-2	RW	F1
R4X1721	GND_OC_ALM_RLY	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X1722	GND_OC_ALM_PKUP_LVL	GROUND O/C ALARM PICKUP	x CT, 1, 5-2000	RW	F3
R4X1723	GND_OC_ALM_DLY	GROUND O/C ALARM DELAY	Cycles, 1, 0-100	RW	F1
R4X1724	GND_OC_ALM_EVNTS	GROUND OVERCURRENT ALARM EVENTS	-, 1, 0-1	RW	F1
R4X1725	GND_OC_TRP	GROUND OVERCURRENT TRIP	-, 1, 0-2	RW	F1
R4X1726	GND_OC_TRP_RLY	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X1727	GND_OC_TRP_PKUP_LVL	GROUND O/C TRIP PICKUP	x CT, 1, 5-2000	RW	F3
R4X1728	GND_OC_CRV_SHAPE	CURVE SHAPE	-, 1, 0-13	RW	F1
R4X1778	GND_OC_FLXCRV_TRP_TM	FLEXCURVE TRIP TIME AT 20.0xPU	ms, 1, 0-65535	RW	F1
R4X1779L	GND_OC_CRV_MULTIP	OVERCURRENT CURVE MULTIPLIER	-, 1, 0-100000	RW	F14
R4X177B	GND_OC_CRV_RST	OVERCURRENT CURVE RESET	-, 1, 0-1	RW	F2
R4X17E0	PH_DIFF_TRP	PHASE DIFFERENTIAL TRIP	-, 1, 0-2	RW	F1
R4X17E1	PH_DIFF_TRP_RLY	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X17E2	PH_DIFF_TRP_PKUP_LVL	DIFFERENTIAL TRIP MIN. PICKUP	x CT, 1, 5-100	RW	F3
R4X17E3	PH_DIFF_TRP_SLOPE1	DIFFERENTIAL TRIP SLOPE 1	%, 1, 1-100	RW	F1
R4X17E4	PH_DIFF_TRP_SLOPE2	DIFFERENTIAL TRIP SLOPE 2	%, 1, 1-100	RW	F1
R4X17E5	PH_DIFF_TRP_DLY	DIFFERENTIAL TRIP DELAY	Cycles, 1, 0-100	RW	F1
R4X1800	SUP_DIGI_INPUT	SUPERVISE WITH DIGITAL INPUT	-, 1, 0-1	RW	F103
R4X1801	GND_DIREC_MTA	GROUND DIRECTIONAL MTA	-, 1, 0-3	RW	F217
R4X1802	GND_DIREC_ALM	GROUND DIRECTIONAL ALARM	-, 1, 0-2	RW	F115
R4X1803	ALARM_RELAYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 14	RW	F50
R4X1804	GND_DIR_ALM_PKP	GROUND DIR. ALARM PICKUP	x CT, 1, 5-2000	RW	F3
R4X1805	GND_DIR_ALM_DLY	GROUND DIR. ALARM DELAY	s, 1, 1-1200	RW	F2
R4X1806	GND_DIR_ALM_EVEN	GROUND DIR. ALARM EVENTS	-, 1, 0-1	RW	F105
R4X1807	GND_DIR_TRIP	GROUND DIRECTIONAL TRIP	-, 1, 0-2	RW	F115
R4X1808	TRIP_RELAYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X1809	GND_DIR_TRIP_PKP	GROUND DIR. TRIP PICKUP	x CT, 1, 5-2000	RW	F3
R4X180A	GND_DIR_TRIP_DLY	GROUND DIR. TRIP DELAY	s, 1, 1-1200	RW	F2
R4X1830	HI_SET_PH_OC_TRP	HIGH-SET PHASE O/C TRIP	-, 1, 0-2	RW	F115
R4X1831		ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50

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R4X1832	HI_SET_PH_OC_PKUP	HIGH-SET PHASE O/C PICKUP	x CT, 1, 15-2000	RW	F3
R4X1833	HI_SET_PH_OC_DLY	HIGH-SET PHASE O/C DELAY	s, 1, 0-10000	RW	F3
R4X2000	UV_ALM	UNDERVOLTAGE ALARM	-, 1, 0-2	RW	F1
R4X2001	UV_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X2002	UV_ALM_PKUP_LVL	UNDERVOLTAGE ALARM PICKUP	x Rated, 1, 50-99	RW	F3
R4X2003	UV_ALM_DLY	UNDERVOLTAGE ALARM DELAY	s, 1, 2-1200	RW	F2
R4X2004	UV_ALM_EVNT	UNDERVOLTAGE ALARM EVENTS	-, 1, 0-1	RW	F1
R4X2005	UV_TRP	UNDERVOLTAGE TRIP	-, 1, 0-2	RW	F1
R4X2006	UV_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X2007	UV_TRP_PKUP_LVL	UNDERVOLTAGE TRIP PICKUP	x Rated, 1, 50-99	RW	F3
R4X2008	UV_TRP_DLY	UNDERVOLTAGE TRIP DELAY	s, 1, 2-100	RW	F2
R4X2009	UV_CRV_RST_RATE	UNDERVOLTAGE CURVE RESET RATE	s, 1, 0-9999	RW	F2
R4X200A	UV_CRV_ELEMENT	UNDERVOLTAGE CURVE ELEMENT	-, 1, 0-1	RW	F1
R4X2020	OV_ALM	OVERVOLTAGE ALARM	-, 1, 0-2	RW	F1
R4X2021	OV_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X2022	OV_ALM_PKUP_LVL	OVERVOLTAGE ALARM PICKUP	x Rated, 1, 101-150	RW	F3
R4X2023	OV_ALM_DLY	OVERVOLTAGE ALARM DELAY	s, 1, 1-1200	RW	F2
R4X2024	OV_ALM_EVNT	OVERVOLTAGE ALARM EVENTS	-, 1, 0-1	RW	F1
R4X2025	OV_TRP	OVERVOLTAGE TRIP	-, 1, 0-2	RW	F1
R4X2026	OV_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X2027	OV_TRP_PKUP_LVL	OVERVOLTAGE TRIP PICKUP	x Rated, 1, 101-150	RW	F3
R4X2028	OV_TRP_DLY	OVERVOLTAGE TRIP DELAY	s, 1, 1-100	RW	F2
R4X2029	OV_CRV_RST_RATE	OVERVOLTAGE CURVE RESET RATE	s, 1, 0-9999	RW	F2
R4X202A	OV_CRV_ELEMENT	OVERVOLTAGE CURVE ELEMENT	-, 1, 0-1	RW	F1
R4X2040	V_H_ALM	VOLTS/HERTZ ALARM	-, 1, 0-2	RW	F1
R4X2041	V_H_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X2042	V_H_ALM_PKUP_LVL	VOLTS/HERTZ ALARM PICKUP	x Nominal, 1, 50-199	RW	F3
R4X2043	V_H_ALM_DLY	VOLTS/HERTZ ALARM DELAY	s, 1, 1-1500	RW	F2
R4X2044	V_H_ALM_EVNTS	VOLTS/HERTZ ALARM EVENTS	-, 1, 0-1	RW	F1
R4X2045	V_H_TRP	VOLTS/HERTZ TRIP	-, 1, 0-2	RW	F1
R4X2046	V_H_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X2047	V_H_TRP_PKUP_LVL	VOLTS/HERTZ TRIP PICKUP	x Nominal, 1, 50-199	RW	F3
R4X2048	V_H_TRP_DLY	VOLTS/HERTZ TRIP DELAY	s, 1, 1-1500	RW	F2
R4X2049	V_H_CRV_RST_RATE	VOLTS/HERTZ CURVE RESET RATE	s, 1, 0-9999	RW	F2
R4X204A	V_H_TRP_ELEMENT	VOLTS/HERTZ TRIP ELEMENT	-, 1, 0-3	RW	F1
R4X2060	V_PH_REV_TRP	PHASE REVERSAL TRIP	-, 1, 0-2	RW	F1
R4X2061	V_PH_REV_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X2080	UF_BLK_FROM_ONLN	BLOCK UNDERFREQUENCY FROM ONLINE	s, 1, 0-5	RW	F1
R4X2081	UF_V_LVL_CUTOFF	VOLTAGE LEVEL CUTOFF	x Rated, 1, 50-99	RW	F3
R4X2082	UF_ALM	UNDERFREQUENCY ALARM	-, 1, 0-2	RW	F1
R4X2083	UF_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X2084	UF_ALM_LVL	UNDERFREQUENCY ALARM LEVEL	Hz, 1, 2000-6000	RW	F3
R4X2085	UF_ALM_DLY	UNDERFREQUENCY ALARM DELAY	s, 1, 1-50000	RW	F2
R4X2086	UF_ALM_EVNTS	UNDERFREQUENCY ALARM EVENTS	-, 1, 0-1	RW	F1

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X2087	UF_TRP	UNDERFREQUENCY TRIP	-, 1, 0-2	RW	F1
R4X2088	UF_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X2089	UF_TRP_LVL1	UNDERFREQUENCY TRIP LEVEL1	Hz, 1, 2000-6000	RW	F3
R4X208A	UF_TRP_DLY1	UNDERFREQUENCY TRIP DELAY1	s, 1, 1-50000	RW	F2
R4X208B	UF_TRP_LVL2	UNDERFREQUENCY TRIP LEVEL2	Hz, 1, 2000-6000	RW	F3
R4X208C	UF_TRP_DLY2	UNDERFREQUENCY TRIP DELAY2	s, 1, 1-50000	RW	F2
R4X20A0	OF_BLK_FROM_ONLN	BLOCK OVERFREQUENCY FROM ONLINE	s, 1, 0-5	RW	F1
R4X20A1	OF_V_LVL_CUTOFF	VOLTAGE LEVEL CUTOFF	x Rated, 1, 50-99	RW	F3
R4X20A2	OF_ALM	OVERFREQUENCY ALARM	-, 1, 0-2	RW	F1
R4X20A3	OF_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X20A4	OF_ALM_LVL	OVERFREQUENCY ALARM LEVEL	Hz, 1, 2501-7000	RW	F3
R4X20A5	OF_ALM_DLY	OVERFREQUENCY ALARM DELAY	s, 1, 1-50000	RW	F2
R4X20A6	OF_ALM_EVNTS	OVERFREQUENCY ALARM EVENTS	-, 1, 0-1	RW	F1
R4X20A7	OF_TRP	OVERFREQUENCY TRIP	-, 1, 0-2	RW	F1
R4X20A8	OF_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X20A9	OF_TRP_LVL1	OVERFREQUENCY TRIP LEVEL1	Hz, 1, 2501-7000	RW	F3
R4X20AA	OF_TRP_DLY1	OVERFREQUENCY TRIP DELAY1	s, 1, 1-50000	RW	F2
R4X20AB	OF_TRP_LVL2	OVERFREQUENCY TRIP LEVEL2	Hz, 1, 2501-7000	RW	F3
R4X20AC	OF_TRP_DLY2	OVERFREQUENCY TRIP DELAY2	s, 1, 1-50000	RW	F2
R4X20C0	NEUT_OV_ALM	NEUTRAL OVERVOLTAGE ALARM	-, 1, 0-2	RW	F1
R4X20C1	NEUT_OV_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X20C2	NEUT_OV_ALM_LVL	NEUTRAL OVERVOLTAGE ALARM LEVEL	V, 1, 20-1000	RW	F2
R4X20C3	NEUT_OV_ALM_DLY	NEUTRAL OVERVOLTAGE ALARM DELAY	s, 1, 1-1200	RW	F2
R4X20C4	NEUT_OV_ALM_EVNTS	NEUTRAL OVERVOLTAGE ALARM EVENTS	-, 1, 0-1	RW	F1
R4X20C5	NEUT_OV_TRIP	NEUTRAL OVERVOLTAGE TRIP	-, 1, 0-2	RW	F1
R4X20C6	NEUT_OV_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X20C7	NEUT_OV_TRP_LVL	NEUTRAL OVERVOLTAGE TRIP LEVEL	V, 1, 20-1000	RW	F2
R4X20C8	NEUT_OV_TRP_DLY	NEUTRAL OVERVOLTAGE TRIP DELAY	s, 1, 1-1200	RW	F2
R4X20C9	SUP_DIGI_INPUT	SUPERVISE WITH DIGITAL INPUT	-, 1, 0-1	RW	F103
R4X20CA	NEUT_OV_CURV_RESET_RATE	NEUTRAL OV CURVE RESET RATE	s, 1, 0-9999	RW	F2
R4X20CB	NEUT_OV_TRP_ELMNT	NEUTRAL OV TRIP ELEMENT	-, 1, 0-1	RW	F208
R4X20E0L	LOW_PWR_BLK_LVL	LOW POWER BLOCKING LEVEL	x Rated MW, 1, 2-99	RW	F14
R4X20E2	LOW_V_BLK_LVL	LOW VOLTAGE BLOCKING LEVEL	x Rated, 1, 50-100	RW	F3
R4X20E3	NEUT_UV_ALM	NEUTRAL UNDERVOLTAGE ALARM	-, 1, 0-2	RW	F1
R4X20E4	NEUT_UV_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X20E5	NEUT_UV_ALM_LVL	NEUTRAL UNDERVOLTAGE ALARM LEVEL	V, 1, 5-200	RW	F2
R4X20E6	NEUT_UV_ALM_DLY	NEUTRAL UNDERVOLTAGE ALARM DELAY	s, 1, 1-1200	RW	F2
R4X20E7	NEUT_UV_ALM_EVNTS	NEUTRAL UNDERVOLTAGE ALARM EVENTS	-, 1, 0-1	RW	F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X20E8	NEUT_UV_TRIP	NEUTRAL UNDERVOLTAGE TRIP	-, 1, 0-2	RW	F1
R4X20E9	NEUT_UV_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X20EA	NEUT_UV_TRP_LVL	NEUTRAL UNDERVOLTAGE TRIP LEVEL	V, 1, 5-200	RW	F2
R4X20EB	NEUT_UV_TRP_DLY	NEUTRAL UNDERVOLTAGE TRIP DELAY	s, 1, 1-1200	RW	F2
R4X2100	EN_VOLT_SUP	ENABLE VOLTAGE SUPERVISION	-, 1, 0-1	RW	F103
R4X2101	VOLT_LVL	VOLTAGE LEVEL	x rated, 1, 70 to 100	RW	F3
R4X2102	CIR1_TRP	CIRCLE 1 TRIP	-, 1, 0-2	RW	F115
R4X2103	ASSN_CIR1_TRP_RLY_1_4	ASSIGN CIRCLE 1 TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X2104	CIR1_DIAMETER	CIRCLE 1 DIAMETER	ohms s, 1, 25 to 3000	RW	F2
R4X2105	CIR1_OFFSET	CIRCLE 1 OFFSET	ohms s, 1, 25 to 3000	RW	F2
R4X2106	CIR1_TRP_DLY	CIRCLE 1 TRIP DELAY	s, 1, 1-100	RW	F2
R4X2107	CIR2_TRP	CIRCLE 2 TRIP	-, 1, 0-2	RW	F115
R4X2108	ASSN_CIR2_TRP_RLY_1_4	ASSIGN CIRCLE 2 TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X2109	CIR2_DIAMETER	CIRCLE 2 DIAMETER	ohms s, 1, 25 to 3000	RW	F2
R4X210A	CIR2_OFFSET	CIRCLE 2 OFFSET	ohms s, 1, 25 to 3000	RW	F2
R4X210B	CIR2_TRP_DLY	CIRCLE 2 TRIP DELAY	s, 1, 1-100	RW	F2
R4X2130	STP_UP_XFMR_SETUP	STEP UP TRANSFORMER SETUP	-, 1, 0-1	RW	F219
R4X2131	FUSE_FAIL_SUP	FUSE FAILURE SUPERVISION	-, 1, 0-1	RW	F105
R4X2132	ZONE1_TRP	ZONE 1 TRIP	-, 1, 0-2	RW	F115
R4X2133	ASSN_ZONE1_TRP_RLY_1_4	ASSIGN ZONE 1 TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X2134	ZONE1_REACH	ZONE 1 REACH	ohms s, 1, 1 to 5000	RW	F2
R4X2135	ZONE1_ANG	ZONE 1 ANGLE	-, 1, 50 to 85	RW	F1
R4X2136	ZONE1_TRP_DLY	ZONE 1 TRIP DELAY	s, 1, 0-1500	RW	F2
R4X2137	ZONE2_TRP	ZONE 2 TRIP	-, 1, 0-2	RW	F115
R4X2138	ASSN_ZONE2_TRP_RLY_1_4	ASSIGN ZONE 2 TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X2139	ZONE2_REACH	ZONE 2 REACH	s, 1, 0-5000	RW	F2
R4X213A	ZONE2_ANG	ZONE 2 ANGLE	-, 1, 50 to 85	RW	F1
R4X213B	ZONE2_TRP_DLY	ZONE 2 TRIP DELAY	s, 1, 0-1500	RW	F2
R4X2200	MVAR_BLK_FROM_ONLNL	BLOCK Mvar ELEMENT FROM ONLINE	s, 1, 0-5000	RW	F1
R4X2201	MVAR_ALM	REACTIVE POWER ALARM	-, 1, 0-2	RW	F1
R4X2202	MVAR_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X2203L	MVAR_POS_ALM_LVL	POSITIVE Mvar ALARM LEVEL	x Rated, 1, 2-201	RW	F14
R4X2205L	MVAR_NEG_ALM_LVL	NEGATIVE Mvar ALARM LEVEL	x Rated, 1, 2-201	RW	F14
R4X2207	MVAR_ALM_DLY	NEGATIVE MVAR ALARM DELAY	s, 1, 2-1200	RW	F2
R4X2208	MVAR_ALM_EVNTS	REACTIVE POWER ALARM EVENTS	-, 1, 0-1	RW	F1
R4X2209	MVAR_TRP	REACTIVE POWER TRIP	-, 1, 0-2	RW	F1
R4X220A	MVAR_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X220BL	MVAR_POS_TRP_LVL	POSITIVE Mvar TRIP LEVEL	Mvar, 1, 2-201	RW	F14
R4X220DL	MVAR_NEG_TRP_LVL	NEGATIVE Mvar TRIP LEVEL	Mvar, 1, 2-201	RW	F14
R4X220F	MVAR_TRP_DLY	NEGATIVE Mvar TRIP DELAY	s, 1, 2-1200	RW	F2
R4X2210	POS_MVAR_TRIP_DLY	POSITIVE MVAR TRIP DELAY	s, 1, 2-1200	RW	F2
R4X2211	POS_MVAR_ALM_DLY	POSITIVE MVAR ALARM DELAY	s, 1, 2-1200	RW	F2
R4X2240	REV_PWR_BLK_ONLNL	BLOCK REVERSE POWER FROM	s, 1, 0-5000	RW	F1

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
		ONLINE			
R4X2241	REV_PWR_ALM	REVERSE POWER ALARM	-, 1, 0-2	RW	F1
R4X2242	REV_PWR_ALM_RLY	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X2243L	REV_PWR_POS_ALM_LVL	REVERSE POWER ALARM LEVEL	x Rated, 1, 2-99	RW	F14
R4X2245	REV_PWR_ALM_DLY	REVERSE POWER ALARM DELAY	s, 1, 2-1200	RW	F2
R4X2246	REV_PWR_ALM_EVNTS	REVERSE POWER ALARM EVENTS	-, 1, 0-1	RW	F1
R4X2247	REV_PWR_TRP	REVERSE POWER TRIP	-, 1, 0-2	RW	F1
R4X2248	REV_PWR_TRP_RLY	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X2249L	REV_PWR_TRP_LVL	REVERSE POWER TRIP LEVEL	x Rated, 1, 2-99	RW	F14
R4X224B	REV_PWR_TRP_DLY	REVERSE POWER TRIP DELAY	s, 1, 2-1200	RW	F2
R4X2280	LO_FWD_BLK_ONLN	BLOCK LOW FWD POWER FROM ONLINE	s, 1, 0-15000	RW	F1
R4X2281	LO_FWD_ALM	LOW FORWARD POWER ALARM	-, 1, 0-2	RW	F1
R4X2282	LO_FWD_ALM_RLY	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X2283L	LO_FWD_POS_ALM_LVL	LOW FWD POWER ALARM LEVEL	x Rated MW, 1, 2-99	RW	F14
R4X2285	LO_FWD_ALM_DLY	LOW FWD POWER ALARM DELAY	s, 1, 2-1200	RW	F2
R4X2286	LO_FWD_ALM_EVNTS	LOW FWD POWER ALARM EVENTS	-, 1, 0-1	RW	F1
R4X2287	LO_FWD_TRP	LOW FORWARD POWER TRIP	-, 1, 0-2	RW	F1
R4X2288	LO_FWD_TRP_RLY	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X2289L	LO_FWD_TRP_LVL	LOW FWD POWER TRIP LEVEL	x Rated MW, 1, 2-99	RW	F14
R4X228B	LO_FWD_TRP_DLY	LOW FWD POWER TRIP DELAY	s, 1, 2-1200	RW	F2
R4X2400	STATOR_RTD_TYPE	STATOR RTD TYPE	-, 1, 0-3	RW	F1
R4X2401	BEARING_RTD_TYPE	BEARING RTD TYPE	-, 1, 0-3	RW	F1
R4X2402	AMBIENT_RTD_TYPE	AMBIENT RTD TYPE	-, 1, 0-3	RW	F1
R4X2403	OTHER_RTD_TYPE	OTHER RTD TYPE	-, 1, 0-3	RW	F1
R4X2420	RTD1_TYPE	RTD #1 APPLICATION	-, 1, 0-4	RW	F1
R4X2421	RTD1_ALM	RTD #1 ALARM	-, 1, 0-2	RW	F1
R4X2422	RTD1_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X2423	RTD1_ALM_LVL	RTD #1 ALARM TEMPERATURE	°C, 1, 1-250	RW	F1
R4X2424	RTD1_ALM_EVNT	RTD #1 ALARM EVENTS	-, 1, 0-1	RW	F1
R4X2425	RTD1_TRP	RTD #1 TRIP	-, 1, 0-2	RW	F1
R4X2426	RTD1_TRP_VOTING	RTD #1 TRIP VOTING	-, 1, 1-12	RW	F1
R4X2427	RTD1_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X2428	RTD1_TRP_TEMP	RTD #1 TRIP TEMPERATURE	°C, 1, 1-250	RW	F1
R4X2429S8	RTD1_NAME	RTD #1 NAME	ASCII	RW	F22
R4X2460	RTD2_TYPE	RTD #2 APPLICATION	-, 1, 0-4	RW	F1
R4X2461	RTD2_ALM	RTD #2 ALARM	-, 1, 0-2	RW	F1
R4X2462	RTD2_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X2463	RTD2_ALM_LVL	RTD #2 ALARM TEMPERATURE	°C, 1, 1-250	RW	F1
R4X2464	RTD2_ALM_EVNT	RTD #2 ALARM EVENTS	-, 1, 0-1	RW	F1
R4X2465	RTD2_TRP	RTD #2 TRIP	-, 1, 0-2	RW	F1
R4X2466	RTD2_TRP_VOTING	RTD #2 TRIP VOTING	-, 1, 1-12	RW	F1
R4X2467	RTD2_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X2468	RTD2_TRP_TEMP	RTD #2 TRIP TEMPERATURE	°C, 1, 1-250	RW	F1
R4X2469S8	RTD2_NAME	RTD #2 NAME	ASCII	RW	F22
R4X24A0	RTD3_TYPE	RTD #3 APPLICATION	-, 1, 0-4	RW	F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X24A1	RTD3_ALM	RTD #3 ALARM	-, 1, 0-2	RW	F1
R4X24A2	RTD3_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X24A3	RTD3_ALM_LVL	RTD #3 ALARM TEMPERATURE	°C, 1, 1-250	RW	F1
R4X24A4	RTD3_ALM_EVNT	RTD #3 ALARM EVENTS	-, 1, 0-1	RW	F1
R4X24A5	RTD3_TRP	RTD #3 TRIP	-, 1, 0-2	RW	F1
R4X24A6	RTD3_TRP_VOTING	RTD #3 TRIP VOTING	-, 1, 1-12	RW	F1
R4X24A7	RTD3_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X24A8	RTD3_TRP_TEMP	RTD #3 TRIP TEMPERATURE	°C, 1, 1-250	RW	F1
R4X24A9S8	RTD3_NAME	RTD #3 NAME	ASCII	RW	F22
R4X24E0	RTD4_TYPE	RTD #4 APPLICATION	-, 1, 0-4	RW	F1
R4X24E1	RTD4_ALM	RTD #4 ALARM	-, 1, 0-2	RW	F1
R4X24E2	RTD4_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X24E3	RTD4_ALM_LVL	RTD #4 ALARM TEMPERATURE	°C, 1, 1-250	RW	F1
R4X24E4	RTD4_ALM_EVNT	RTD #4 ALARM EVENTS	-, 1, 0-1	RW	F1
R4X24E5	RTD4_TRP	RTD #4 TRIP	-, 1, 0-2	RW	F1
R4X24E6	RTD4_TRP_VOTING	RTD #4 TRIP VOTING	-, 1, 1-12	RW	F1
R4X24E7	RTD4_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X24E8	RTD4_TRP_TEMP	RTD #4 TRIP TEMPERATURE	°C, 1, 1-250	RW	F1
R4X24E9S8	RTD4_NAME	RTD #4 NAME	ASCII	RW	F22
R4X2520	RTD5_TYPE	RTD #5 APPLICATION	-, 1, 0-4	RW	F1
R4X2521	RTD5_ALM	RTD #5 ALARM	-, 1, 0-2	RW	F1
R4X2522	RTD5_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X2523	RTD5_ALM_LVL	RTD #5 ALARM TEMPERATURE	°C, 1, 1-250	RW	F1
R4X2524	RTD5_ALM_EVNT	RTD #5 ALARM EVENTS	-, 1, 0-1	RW	F1
R4X2525	RTD5_TRP	RTD #5 TRIP	-, 1, 0-2	RW	F1
R4X2526	RTD5_TRP_VOTING	RTD #5 TRIP VOTING	-, 1, 1-12	RW	F1
R4X2527	RTD5_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X2528	RTD5_TRP_TEMP	RTD #5 TRIP TEMPERATURE	°C, 1, 1-250	RW	F1
R4X2529S8	RTD5_NAME	RTD #5 NAME	ASCII	RW	F22
R4X2560	RTD6_TYPE	RTD #6 APPLICATION	-, 1, 0-4	RW	F1
R4X2561	RTD6_ALM	RTD #6 ALARM	-, 1, 0-2	RW	F1
R4X2562	RTD6_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X2563	RTD6_ALM_LVL	RTD #6 ALARM TEMPERATURE	°C, 1, 1-250	RW	F1
R4X2564	RTD6_ALM_EVNT	RTD #6 ALARM EVENTS	-, 1, 0-1	RW	F1
R4X2565	RTD6_TRP	RTD #6 TRIP	-, 1, 0-2	RW	F1
R4X2566	RTD6_TRP_VOTING	RTD #6 TRIP VOTING	-, 1, 1-12	RW	F1
R4X2567	RTD6_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X2568	RTD6_TRP_TEMP	RTD #6 TRIP TEMPERATURE	°C, 1, 1-250	RW	F1
R4X2569S8	RTD6_NAME	RTD #6 NAME	ASCII	RW	F22
R4X25A0	RTD7_TYPE	RTD #7 APPLICATION	-, 1, 0-4	RW	F1
R4X25A1	RTD7_ALM	RTD #7 ALARM	-, 1, 0-2	RW	F1
R4X25A2	RTD7_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X25A3	RTD7_ALM_LVL	RTD #7 ALARM TEMPERATURE	°C, 1, 1-250	RW	F1
R4X25A4	RTD7_ALM_EVNT	RTD #7 ALARM EVENTS	-, 1, 0-1	RW	F1
R4X25A5	RTD7_TRP	RTD #7 TRIP	-, 1, 0-2	RW	F1

Setpoint Registers					
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R4X25A6	RTD7_TRP_VOTING	RTD #7 TRIP VOTING	-, 1, 1-12	RW	F1
R4X25A7	RTD7_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X25A8	RTD7_TRP_TEMP	RTD #7 TRIP TEMPERATURE	°C, 1, 1-250	RW	F1
R4X25A9S8	RTD7_NAME	RTD #7 NAME	ASCII	RW	F22
R4X25E0	RTD8_TYPE	RTD #8 APPLICATION	-, 1, 0-4	RW	F1
R4X25E1	RTD8_ALM	RTD #8 ALARM	-, 1, 0-2	RW	F1
R4X25E2	RTD8_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X25E3	RTD8_ALM_LVL	RTD #8 ALARM TEMPERATURE	°C, 1, 1-250	RW	F1
R4X25E4	RTD8_ALM_EVNT	RTD #8 ALARM EVENTS	-, 1, 0-1	RW	F1
R4X25E5	RTD8_TRP	RTD #8 TRIP	-, 1, 0-2	RW	F1
R4X25E6	RTD8_TRP_VOTING	RTD #8 TRIP VOTING	-, 1, 1-12	RW	F1
R4X25E7	RTD8_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X25E8	RTD8_TRP_TEMP	RTD #8 TRIP TEMPERATURE	°C, 1, 1-250	RW	F1
R4X25E9S8	RTD8_NAME	RTD #8 NAME	ASCII	RW	F22
R4X2620	RTD9_TYPE	RTD #9 APPLICATION	-, 1, 0-4	RW	F1
R4X2621	RTD9_ALM	RTD #9 ALARM	-, 1, 0-2	RW	F1
R4X2622	RTD9_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X2623	RTD9_ALM_LVL	RTD #9 ALARM TEMPERATURE	°C, 1, 1-250	RW	F1
R4X2624	RTD9_ALM_EVNT	RTD #9 ALARM EVENTS	-, 1, 0-1	RW	F1
R4X2625	RTD9_TRP	RTD #9 TRIP	-, 1, 0-2	RW	F1
R4X2626	RTD9_TRP_VOTING	RTD #9 TRIP VOTING	-, 1, 1-12	RW	F1
R4X2627	RTD9_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X2628	RTD9_TRP_TEMP	RTD #9 TRIP TEMPERATURE	°C, 1, 1-250	RW	F1
R4X2629S8	RTD9_NAME	RTD #9 NAME	ASCII	RW	F22
R4X2660	RTD10_TYPE	RTD #10 APPLICATION	-, 1, 0-4	RW	F1
R4X2661	RTD10_ALM	RTD #10 ALARM	-, 1, 0-2	RW	F1
R4X2662	RTD10_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X2663	RTD10_ALM_LVL	RTD #10 ALARM TEMPERATURE	°C, 1, 1-250	RW	F1
R4X2664	RTD10_ALM_EVNT	RTD #10 ALARM EVENTS	-, 1, 0-1	RW	F1
R4X2665	RTD10_TRP	RTD #10 TRIP	-, 1, 0-2	RW	F1
R4X2666	RTD10_TRP_VOTING	RTD #10 TRIP VOTING	-, 1, 1-12	RW	F1
R4X2667	RTD10_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X2668	RTD10_TRP_TEMP	RTD #10 TRIP TEMPERATURE	°C, 1, 1-250	RW	F1
R4X2669S8	RTD10_NAME	RTD #10 NAME	ASCII	RW	F22
R4X26A0	RTD11_TYPE	RTD #11 APPLICATION	-, 1, 0-4	RW	F1
R4X26A1	RTD11_ALM	RTD #11 ALARM	-, 1, 0-2	RW	F1
R4X26A2	RTD11_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X26A3	RTD11_ALM_LVL	RTD #11 ALARM TEMPERATURE	°C, 1, 1-250	RW	F1
R4X26A4	RTD11_ALM_EVNT	RTD #11 ALARM EVENTS	-, 1, 0-1	RW	F1
R4X26A5	RTD11_TRP	RTD #11 TRIP	-, 1, 0-2	RW	F1
R4X26A6	RTD11_TRP_VOTING	RTD #11 TRIP VOTING	-, 1, 1-12	RW	F1
R4X26A7	RTD11_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X26A8	RTD11_TRP_TEMP	RTD #11 TRIP TEMPERATURE	°C, 1, 1-250	RW	F1
R4X26A9S8	RTD11_NAME	RTD #11 NAME	ASCII	RW	F22
R4X26E0	RTD12_TYPE	RTD #12 APPLICATION	-, 1, 0-4	RW	F1

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X26E1	RTD12_ALM	RTD #12 ALARM	-, 1, 0-2	RW	F1
R4X26E2	RTD12_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X26E3	RTD12_ALM_LVL	RTD #12 ALARM TEMPERATURE	°C, 1, 1-250	RW	F1
R4X26E4	RTD12_ALM_EVNT	RTD #12 ALARM EVENTS	-, 1, 0-1	RW	F1
R4X26E5	RTD12_TRP	RTD #12 TRIP	-, 1, 0-2	RW	F1
R4X26E6	RTD12_TRP_VOTING	RTD #12 TRIP VOTING	-, 1, 1-12	RW	F1
R4X26E7	RTD12_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X26E8	RTD12_TRP_TEMP	RTD #12 TRIP TEMPERATURE	°C, 1, 1-250	RW	F1
R4X26E9S8	RTD12_NAME	RTD #12 NAME	ASCII	RW	F22
R4X2720	OP_RTD_SEN_ALM	OPEN RTD SENSOR ALARM	-, 1, 0-2	RW	F1
R4X2721	OP_RTD_SEN_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X2722	OP_RTD_SEN_ALM_EVNT	OPEN RTD SENSOR ALARM EVENTS	-, 1, 0-1	RW	F1
R4X2740	RTD_OP_LT_ALM	RTD SHORT/LOW TEMP ALARM	-, 1, 0-2	RW	F1
R4X2741	RTD_OP_LT_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X2742	RTD_OP_LT_ALM_EVNT	RTD SHORT/LOW TEMP ALARM EVENTS	-, 1, 0-1	RW	F1
R4X2800	THERM_MODL_ENABLE	ENABLE THERMAL MODEL	-, 1, 0-1	RW	F1
R4X2801	THERMAL_OL_PKUP_LVL	OVERLOAD PICKUP LEVEL	x FLA, 1, 101-125	RW	F3
R4X2802	THERMAL_UB_K_FACTOR	UNBALANCE BIAS K FACTOR	-, 1, 0-12	RW	F1
R4X2803	COOL_TIME_CONST_ON	COOL TIME CONSTANT ONLINE	min, 1, 0-500	RW	F1
R4X2804	COOL_TIME_CONST_OFF	COOL TIME CONSTANT OFFLINE	min, 1, 0-500	RW	F1
R4X2805	SAFE_STALL_RATIO	HOT/COLD SAFE STALL RATIO	-, 1, 1-100	RW	F3
R4X2806	THERM_RTD_BIASING	ENABLE RTD BIASING	-, 1, 0-1	RW	F1
R4X2807	THERM_RTD_BIAS_MIN	RTD BIAS MINIMUM	°C, 1, 0-250	RW	F1
R4X2808	THERM_RTD_BIAS_CTR	RTD BIAS CENTER POINT	°C, 1, 0-250	RW	F1
R4X2809	THERM_RTD_BIAS_MAX	RTD BIAS MAXIMUM	°C, 1, 0-250	RW	F1
R4X280A	THERM_CURVE_STYLE	SELECT CURVE STYLE	-, 1, 0-2	RW	F1
R4X280B	THERM_OL_CURVE_NUM	STANDARD OVERLOAD CURVE NUMBER	-, 1, 1-15	RW	F1
R4X280CL	THERM_TRIP_TIME	TIME TO TRIP AT 1.01 x FLA	s, 1, 5-999999	RW	F10
R4X280EL		TIME TO TRIP AT 1.05 x FLA	s, 1, 5-999999	RW	F10
R4X2810L		TIME TO TRIP AT 1.10 x FLA	s, 1, 5-999999	RW	F10
R4X2812L		TIME TO TRIP AT 1.20 x FLA	s, 1, 5-999999	RW	F10
R4X2814L		TIME TO TRIP AT 1.30 x FLA	s, 1, 5-999999	RW	F10
R4X2816L		TIME TO TRIP AT 1.40 x FLA	s, 1, 5-999999	RW	F10
R4X2818L		TIME TO TRIP AT 1.50 x FLA	s, 1, 5-999999	RW	F10
R4X281AL		TIME TO TRIP AT 1.75 x FLA	s, 1, 5-999999	RW	F10
R4X281CL		TIME TO TRIP AT 2.00 x FLA	s, 1, 5-999999	RW	F10
R4X281EL		TIME TO TRIP AT 2.25 x FLA	s, 1, 5-999999	RW	F10
R4X2820L		TIME TO TRIP AT 2.50 x FLA	s, 1, 5-999999	RW	F10
R4X2822L		TIME TO TRIP AT 2.75 x FLA	s, 1, 5-999999	RW	F10
R4X2824L		TIME TO TRIP AT 3.00 x FLA	s, 1, 5-999999	RW	F10
R4X2826L		TIME TO TRIP AT 3.25 x FLA	s, 1, 5-999999	RW	F10
R4X2828L		TIME TO TRIP AT 3.50 x FLA	s, 1, 5-999999	RW	F10
R4X282AL		TIME TO TRIP AT 3.75 x FLA	s, 1, 5-999999	RW	F10
R4X282CL		TIME TO TRIP AT 4.00 x FLA	s, 1, 5-999999	RW	F10

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X282EL		TIME TO TRIP AT 4.25 x FLA	s, 1, 5-999999	RW	F10
R4X2830L		TIME TO TRIP AT 4.50 x FLA	s, 1, 5-999999	RW	F10
R4X2832L		TIME TO TRIP AT 4.75 x FLA	s, 1, 5-999999	RW	F10
R4X2834L		TIME TO TRIP AT 5.00 x FLA	s, 1, 5-999999	RW	F10
R4X2836L		TIME TO TRIP AT 5.50 x FLA	s, 1, 5-999999	RW	F10
R4X2838L		TIME TO TRIP AT 6.00 x FLA	s, 1, 5-999999	RW	F10
R4X283AL		TIME TO TRIP AT 6.50 x FLA	s, 1, 5-999999	RW	F10
R4X283CL		TIME TO TRIP AT 7.00 x FLA	s, 1, 5-999999	RW	F10
R4X283EL		TIME TO TRIP AT 7.50 x FLA	s, 1, 5-999999	RW	F10
R4X2840L		TIME TO TRIP AT 8.00 x FLA	s, 1, 5-999999	RW	F10
R4X2842L		TIME TO TRIP AT 10.0 x FLA	s, 1, 5-999999	RW	F10
R4X2844L		TIME TO TRIP AT 15.0 x FLA	s, 1, 5-999999	RW	F10
R4X2846L		TIME TO TRIP AT 20.0 x FLA	s, 1, 5-999999	RW	F10
R4X2848	THERM_V_MIN	MINIMUM ALLOWABLE VOLTAGE	%, 1, 70-95	RW	F1
R4X2849	THERM_STALL_A_MINV	STALL CURRENT @ MIN VOLTAGE	x FLA, 1, 200-1500	RW	F3
R4X284A	THERM_STALL_TM_MINV	SAFE STALL TIME @ MIN VOLTAGE	s, 1, 5-9999	RW	F2
R4X284B	THERM_ACC_INT_MINV	ACCEL. INTERSECT @ MIN VOLT	x FLA, 1, 200-1500	RW	F3
R4X284C	THERM_STALL_A_100V	STALL CURRENT @ 100%VOLTAGE	x FLA, 1, 200-1500	RW	F3
R4X284D	THERM_STALL_TM_100V	SAFE STALL TIME @ 100%VOLTAGE	s, 1, 5-9999	RW	F2
R4X284E	THERM_ACC_INT_100V	ACCEL. INTERSECT @ 100%VOLT	-, 1, 200-1500	RW	F3
R4X2900	THERM_MODL_ALM	THERMAL MODEL ALARM	-, 1, 0-2	RW	F1
R4X2901	THERM_MODL_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F1
R4X2902	THERM_MODL_ALM_LVL	THERMAL ALARM LEVEL	% Used, 1, 10-100	RW	F1
R4X2903	THERM_MODL_ALM_EVNTS	THERMAL MODEL ALARM EVENTS	-, 1, 0-1	RW	F1
R4X2904	THERM_MODL_TRP	THERMAL MODEL TRIP	-, 1, 0-2	RW	F1
R4X2905	THERM_MODL_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F1
R4X2A00	TRP_CTR_ALM	TRIP COUNTER ALARM	-, 1, 0-2	RW	F115
R4X2A01	TRP_CTR_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X2A02	TRP_CTR_ALM_LVL	TRIP COUNTER ALARM LEVEL	Trips, 1, 1-50000	RW	F1
R4X2A03	TRP_CTR_ALM_EVNT	TRIP COUNTER ALARM EVENTS	-, 1, 0-1	RW	F105
R4X2A20	BK_FAIL_ALM	BREAKER FAILURE ALARM	-, 1, 0-2	RW	F115
R4X2A21	BK_FAIL_ALM_RLY	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X2A22	BK_FAIL_LVL	BREAKER FAILURE LEVEL	x CT, 1, 5-2000	RW	F3
R4X2A23	BK_FAIL_DLY	BREAKER FAILURE DELAY	ms, 10, 10-1000	RW	F1
R4X2A24	BK_FAIL_ALM_EVNT	BREAKER FAILURE ALARM EVENTS	-, 1, 0-1	RW	F105
R4X2A30	TRP_CL_MON_ALM	TRIP COIL MONITOR ALARM	-, 1, 0-2	RW	F115
R4X2A31	TRP_CL_ALM_RLY	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X2A32	TRP_CL_MON_ALM_EVNT	TRIP COIL MONITOR ALARM EVENTS	-, 1, 0-1	RW	F105
R4X2A50	VT_FUSE_FAIL_ALM	VT FUSE FAILURE ALARM	-, 1, 0-2	RW	F115
R4X2A51	VT_FUSE_ALM_RLY	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X2A52	VT_FUSE_FAIL_EVNT	VT FUSE FAILURE ALARM EVENTS	-, 1, 0-1	RW	F105
R4X2A60	AMPS_DMD_PERIOD	CURRENT DEMAND PERIOD	min, 1, 5-90	RW	F1
R4X2A61	AMPS_DMD_ALM	CURRENT DEMAND ALARM	-A, 1, 0-2	RW	F115
R4X2A62	AMPS_DMD_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-A, 1, 1-4	RW	F50
R4X2A63L	AMPS_DMD_LIMIT	CURRENT DEMAND LIMIT	x FLA, 1, 10-2000	RW	F14

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X2A65	AMPS_DMD_ALM_EVNTS	CURRENT DEMAND ALARM EVENTS	-A, 1, 0-1	RW	F105
R4X2A70	MW_DMD_PD	MW DEMAND PERIOD	min, 1, 5-90	RW	F1
R4X2A71	MW_DMD_ALM	MW DEMAND ALARM	-, 1, 0-2	RW	F115
R4X2A72	MW_DMD_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X2A73L	MW_DMD_LIMIT	MW DEMAND LIMIT	x Rated, 1, 10-200	RW	F14
R4X2A75	MW_DMD_ALM_EVNT	MW DEMAND ALARM EVENTS	-, 1, 0-1	RW	F105
R4X2A80	MVAR_DMD_PD	Mvar DEMAND PERIOD	min, 1, 5-90	RW	F1
R4X2A81	MVAR_DMD_ALM	Mvar DEMAND ALARM	-, 1, 0-2	RW	F115
R4X2A82	MVAR_DMD_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X2A83L	MVAR_DMD_LIMIT	Mvar DEMAND LIMIT	x Rated, 1, 10-200	RW	F14
R4X2A85	MVAR_DMD_ALM_EVNT	Mvar DEMAND ALARM EVENTS	-, 1, 0-1	RW	F105
R4X2A90	MVA_DMD_PD	MVA DEMAND PERIOD	min, 1, 5-90	RW	F1
R4X2A91	MVA_DMD_ALM	MVA DEMAND ALARM	-, 1, 0-2	RW	F115
R4X2A92	MVA_DMD_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X2A93L	MVA_DMD_LIMIT	MVA DEMAND LIMIT	x Rated, 1, 10-200	RW	F14
R4X2A95	MVA_DMD_ALM_EVNT	MVA DEMAND ALARM EVENTS	-, 1, 0-1	RW	F105
R4X2AB0	POS_KWH_PLS_OUT_RLY_2_5	POS. KWH PULSE OUT RELAYS (2-5)	-, 1, 1-4		F50
R4X2AB1	POS_KWH_PLS_OUT_INTVL	POS. KWH PULSE OUT INTERVAL	-, 1, 1-50000		F1
R4X2AB2	POS_KVARH_PLS_OUT_RLY_2_5	POS. KVARH PULSE OUT RELAYS (2-5)	-, 1, 1-4		F50
R4X2AB3	POS_KVARH_PLS_OUT_INTVL	POS. KVARH PULSE OUT INTERVAL	-, 1, 1-50000		F1
R4X2AB4	NEG_KVARH_PLS_OUT_RLY_2_5	NEG. KVARH PULSE OUT RELAYS (2-5)	-, 1, 1-4		F50
R4X2AB5	NEG_KVARH_PLS_OUT_INTVL	NEG. KVARH PULSE OUT INTERVAL	-, 1, 1-50000		F1
R4X2AB6	PULSE_WIDTH	PULSE WIDTH	-, 1, 200-1000		F1
R4X2B00	ANAL_OUT1_SEL	ANALOG OUTPUT 1	-, 1, 0-42	RW	F127
R4X2B01	ANAL_OUT2_SEL	ANALOG OUTPUT 2	-, 1, 0-42	RW	F127
R4X2B02	ANAL_OUT3_SEL	ANALOG OUTPUT 3	-, 1, 0-42	RW	F127
R4X2B03	ANAL_OUT4_SEL	ANALOG OUTPUT 4	-, 1, 0-42	RW	F127
R4X2B04	AMPS_A_MIN	IA OUTPUT CURRENT MIN	x FLA, 1, 0-2000	RW	F3
R4X2B05	AMPS_A_MAX	IA OUTPUT CURRENT MAX	x FLA, 1, 0-2000	RW	F3
R4X2B06	AMPS_B_MIN	IB OUTPUT CURRENT MIN	x FLA, 1, 0-2000	RW	F3
R4X2B07	AMPS_B_MAX	IB OUTPUT CURRENT MAX	x FLA, 1, 0-2000	RW	F3
R4X2B08	AMPS_C_MIN	IC OUTPUT CURRENT MIN	x FLA, 1, 0-2000	RW	F3
R4X2B09	AMPS_C_MAX	IC OUTPUT CURRENT MAX	x FLA, 1, 0-2000	RW	F3
R4X2B0A	AVG_AMPS_MIN	AVG OUTPUT CURRENT MIN	x FLA, 1, 0-2000	RW	F3
R4X2B0B	AVG_AMPS_MAX	AVG OUTPUT CURRENT MAX	x FLA, 1, 0-2000	RW	F3
R4X2B0C	NEG_SEQ_CURR_MIN	NEG. SEQ. CURRENT MIN	% FLA, 1, 0-2000	RW	F1
R4X2B0D	NEG_SEQ_CURR_MAX	NEG. SEQ. CURRENT MAX	% FLA, 1, 0-2000	RW	F1
R4X2B0E	AVG_GEN_LOAD_MIN	AVERAGED GEN. LOAD MIN	x FLA, 1, 0-2000	RW	F3
R4X2B0F	AVG_GEN_LOAD_MAX	AVERAGED GEN. LOAD MAX	x FLA, 1, 0-2000	RW	F3
R4X2B10I	HOT_STAT_RTD_MIN	HOTTEST STATOR RTD MIN	°C, 1, -50-250	RW	F4
R4X2B11I	HOT_STAT_RTD_MAX	HOTTEST STATOR RTD MAX	°C, 1, -50-250	RW	F4
R4X2B12I	HOT_BEAR_RTD_MIN	HOTTEST BEARING RTD MIN	°C, 1, -50-250	RW	F4
R4X2B13I	HOT_BEAR_RTD_MAX	HOTTEST BEARING RTD MAX	°C, 1, -50-250	RW	F4
R4X2B14I	HOT_AMB_RTD_MIN	AMBIENT RTD MIN	°C, 1, -50-250	RW	F4

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R4X2B15I	HOT_AMB_RTD_MAX	AMBIENT RTD MAX	°C, 1, -50-250	RW	F4
R4X2B16I	AO_RTD1_MIN	RTD #1 MIN	°C, 1, -50-250	RW	F4
R4X2B17I	AO_RTD1_MAX	RTD #1 MAX	°C, 1, -50-250	RW	F4
R4X2B18I	AO_RTD2_MIN	RTD #2 MIN	°C, 1, -50-250	RW	F4
R4X2B19I	AO_RTD2_MAX	RTD #2 MAX	°C, 1, -50-250	RW	F4
R4X2B1AI	AO_RTD3_MIN	RTD #3 MIN	°C, 1, -50-250	RW	F4
R4X2B1BI	AO_RTD3_MAX	RTD #3 MAX	°C, 1, -50-250	RW	F4
R4X2B1CI	AO_RTD4_MIN	RTD #4 MIN	°C, 1, -50-250	RW	F4
R4X2B1DI	AO_RTD4_MAX	RTD #4 MAX	°C, 1, -50-250	RW	F4
R4X2B1EI	AO_RTD5_MIN	RTD #5 MIN	°C, 1, -50-250	RW	F4
R4X2B1FI	AO_RTD5_MAX	RTD #5 MAX	°C, 1, -50-250	RW	F4
R4X2B20I	AO_RTD6_MIN	RTD #6 MIN	°C, 1, -50-250	RW	F4
R4X2B21I	AO_RTD6_MAX	RTD #6 MAX	°C, 1, -50-250	RW	F4
R4X2B22I	AO_RTD7_MIN	RTD #7 MIN	°C, 1, -50-250	RW	F4
R4X2B23I	AO_RTD7_MAX	RTD #7 MAX	°C, 1, -50-250	RW	F4
R4X2B24I	AO_RTD8_MIN	RTD #8 MIN	°C, 1, -50-250	RW	F4
R4X2B25I	AO_RTD8_MAX	RTD #8 MAX	°C, 1, -50-250	RW	F4
R4X2B26I	AO_RTD9_MIN	RTD #9 MIN	°C, 1, -50-250	RW	F4
R4X2B27I	AO_RTD9_MAX	RTD #9 MAX	°C, 1, -50-250	RW	F4
R4X2B28I	AO_RTD10_MIN	RTD #10 MIN	°C, 1, -50-250	RW	F4
R4X2B29I	AO_RTD10_MAX	RTD #10 MAX	°C, 1, -50-250	RW	F4
R4X2B2AI	AO_RTD11_MIN	RTD #11 MIN	°C, 1, -50-250	RW	F4
R4X2B2BI	AO_RTD11_MAX	RTD #11 MAX	°C, 1, -50-250	RW	F4
R4X2B2CI	AO_RTD12_MIN	RTD #12 MIN	°C, 1, -50-250	RW	F4
R4X2B2DI	AO_RTD12_MAX	RTD #12 MAX	°C, 1, -50-250	RW	F4
R4X2B2E	AB_LN_V_MIN	AB VOLTAGE MIN	x Rated, 1, 0-150	RW	F3
R4X2B2F	AB_LN_V_MAX	AB VOLTAGE MAX	x Rated, 1, 0-150	RW	F3
R4X2B30	BC_LN_V_MIN	BC VOLTAGE MIN	x Rated, 1, 0-150	RW	F3
R4X2B31	BC_LN_V_MAX	BC VOLTAGE MAX	x Rated, 1, 0-150	RW	F3
R4X2B32	CA_LN_V_MIN	CA VOLTAGE MIN	x Rated, 1, 0-150	RW	F3
R4X2B33	CA_LN_V_MAX	CA VOLTAGE MAX	x Rated, 1, 0-150	RW	F3
R4X2B34	AVG_LN_V_MIN	AVERAGE VOLTAGE MIN	x Rated, 1, 0-150	RW	F3
R4X2B35	AVG_LN_V_MAX	AVERAGE VOLTAGE MAX	x Rated, 1, 0-150	RW	F3
R4X2B36	V_HZ_MIN	VOLTS/HERTZ MIN	x Rated, 1, 0-200	RW	F3
R4X2B37	V_HZ_MAX	VOLTS/HERTZ MAX	x Rated, 1, 0-200	RW	F3
R4X2B38	FREQ_MIN	FREQUENCY MIN	Hz, 1, 0-9000	RW	F3
R4X2B39	FREQ_MAX	FREQUENCY MAX	Hz, 1, 0-9000	RW	F3
R4X2B3CI	PF_MIN	POWER FACTOR MIN	-, 1, -99-100	RW	F6
R4X2B3DI	PF_MAX	POWER FACTOR MAX	-, 1, -99-100	RW	F6
R4X2B3EI	REAC_PWR_MIN	REACTIVE POWER MIN	x Rated, 1, -200-200	RW	F6
R4X2B3FI	REAC_PWR_MAX	REACTIVE POWER MAX	x Rated, 1, -200-200	RW	F6
R4X2B40I	RP_MIN	REAL POWER (MW) MIN	x Rated, 1, -200-200	RW	F6
R4X2B41I	RP_MAX	REAL POWER (MW) MAX	x Rated, 1, -200-200	RW	F6
R4X2B42	APP_PWR_MIN	APPARENT POWER MIN	x Rated, 1, 0-200	RW	F3
R4X2B43	APP_PWR_MAX	APPARENT POWER MAX	x Rated, 1, 0-200	RW	F3

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R4X2B44L	AO_ANAL_IN1_MIN	ANALOG INPUT 1 MIN	Units, 1, -50000-50000	RW	F12
R4X2B46L	AO_ANAL_IN1_MAX	ANALOG INPUT 1 MAX	Units, 1, -50000-50000	RW	F12
R4X2B48L	AO_ANAL_IN2_MIN	ANALOG INPUT 2 MIN	Units, 1, -50000-50000	RW	F12
R4X2B4AL	AO_ANAL_IN2_MAX	ANALOG INPUT 2 MAX	Units, 1, -50000-50000	RW	F12
R4X2B4CL	AO_ANAL_IN3_MIN	ANALOG INPUT 3 MIN	Units, 1, -50000-50000	RW	F12
R4X2B4EL	AO_ANAL_IN3_MAX	ANALOG INPUT 3 MAX	Units, 1, -50000-50000	RW	F12
R4X2B50L	AO_ANAL_IN4_MIN	ANALOG INPUT 4 MIN	Units, 1, -50000-50000	RW	F12
R4X2B52L	AO_ANAL_IN4_MAX	ANALOG INPUT 4 MAX	Units, 1, -50000-50000	RW	F12
R4X2B54	TACH_MIN	TACHOMETER MIN	RPM, 1, 0-7200	RW	F1
R4X2B55	TACH_MAX	TACHOMETER MAX	RPM, 1, 0-7200	RW	F1
R4X2B56	THERM_CAP_USED_MIN	THERM. CAPACITY USED MIN	%, 1, 0-100	RW	F1
R4X2B57	THERM_CAP_USED_MAX	THERM. CAPACITY USED MAX	%, 1, 0-100	RW	F1
R4X2B58L	NEUT_V_3RD_MIN	NEUTRAL VOLT THIRD MIN	Volts, 1, 0-250000	RW	F10
R4X2B5AL	NEUT_V_3RD_MAX	NEUTRAL VOLT THIRD MAX	Volts, 1, 0-250000	RW	F10
R4X2B5C	AMPS_DMND_MIN	CURRENT DEMAND MIN	x FLA, 1, 0-2000	RW	F3
R4X2B5D	AMPS_DMND_MAX	CURRENT DEMAND MAX	x FLA, 1, 0-2000	RW	F3
R4X2B5E	MVAR_DMND_MIN	Mvar DEMAND MIN	x Rated, 1, 0-200	RW	F3
R4X2B5F	MVAR_DMND_MAX	Mvar DEMAND MAX	x Rated, 1, 0-200	RW	F3
R4X2B60	MW_DMND_MIN	MW DEMAND MIN	x Rated, 1, 0-200	RW	F3
R4X2B61	MW_DMND_MAX	MW DEMAND MAX	x Rated, 1, 0-200	RW	F3
R4X2B62	MVA_DMND_MIN	MVA DEMAND MIN	x Rated, 1, 0-200	RW	F3
R4X2B63	MVA_DMND_MAX	MVA DEMAND MAX	x Rated, 1, 0-200	RW	F3
R4X2C00	ANAL_IN1_SETUP	ANALOG INPUT1	-, 1, 0-3	RW	F129
R4X2C05S6	ANAL_IN1_UNITS	ANALOG INPUT1 UNITS	ASCII	RW	F22
R4X2C08L	ANAL_IN1_MIN	ANALOG INPUT1 MINIMUM	Units, 1, -50000-50000	RW	F12
R4X2C0AL	ANAL_IN1_MAX	ANALOG INPUT1 MAXIMUM	Units, 1, -50000-50000	RW	F12
R4X2C0C	BLK_ANAL_IN1_ONLNL	BLOCK ANALOG INPUT1 FROM ONLINE	s, 1, 0-5000	RW	F1
R4X2C0D	ANAL_IN1_ALM	ANALOG INPUT1 ALARM	-, 1, 0-2	RW	F115
R4X2C0E	ANAL_IN1_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X2C0FL	ANAL_IN1_ALM_LVL	ANALOG INPUT1 ALARM LEVEL	Units, 1, -50000-50000	RW	F12
R4X2C11	ANAL_IN1_ALM_PKUP	ANALOG INPUT1 ALARM PICKUP	-, 1, 0-1	RW	F130
R4X2C12	ANAL_IN1_ALM_DLY	ANALOG INPUT1 ALARM DELAY	s, 1, 1-3000	RW	F2
R4X2C13	ANAL_IN1_ALM_EVNT	ANALOG INPUT1 ALARM EVENTS	-, 1, 0-1	RW	F105
R4X2C14	ANAL_IN1_TRP	ANALOG INPUT1 TRIP	-, 1, 0-2	RW	F115
R4X2C15	ANAL_IN1_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X2C16L	ANAL_IN1_TRP_LVL	ANALOG INPUT1 TRIP LEVEL	Units, 1, -50000-50000	RW	F12
R4X2C18	ANAL_IN1_TRP_PKUP	ANALOG INPUT1 TRIP PICKUP	-, 1, 0-1	RW	F130
R4X2C19	ANAL_IN1_TRP_DLY	ANALOG INPUT1 TRIP DELAY	s, 1, 1-3000	RW	F2
R4X2C1AS12	ANAL_IN1_NAME	ANALOG INPUT1 NAME	ASCII	RW	F22
R4X2C40	ANAL_IN2_SETUP	ANALOG INPUT2	-, 1, 0-3	RW	F129
R4X2C45S6	ANAL_IN2_UNITS	ANALOG INPUT2 UNITS	ASCII	RW	F22
R4X2C48L	ANAL_IN2_MIN	ANALOG INPUT2 MINIMUM	Units, 1, -50000-50000	RW	F12
R4X2C4AL	ANAL_IN2_MAX	ANALOG INPUT2 MAXIMUM	Units, 1, -50000-50000	RW	F12
R4X2C4C	BLK_ANAL_IN2_ONLNL	BLOCK ANALOG INPUT2 FROM ONLINE	s, 1, 0-5000	RW	F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X2C4D	ANAL_IN2_ALM	ANALOG INPUT2 ALARM	-, 1, 0-2	RW	F115
R4X2C4E	ANAL_IN2_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X2C4FL	ANAL_IN2_ALM_LVL	ANALOG INPUT2 ALARM LEVEL	Units, 1, -50000-50000	RW	F12
R4X2C51	ANAL_IN2_ALM_PKUP	ANALOG INPUT2 ALARM PICKUP	-, 1, 0-1	RW	F130
R4X2C52	ANAL_IN2_ALM_DLY	ANALOG INPUT2 ALARM DELAY	s, 1, 1-3000	RW	F2
R4X2C53	ANAL_IN2_ALM_EVNT	ANALOG INPUT2 ALARM EVENTS	-, 1, 0-1	RW	F105
R4X2C54	ANAL_IN2_TRP	ANALOG INPUT2 TRIP	-, 1, 0-2	RW	F115
R4X2C55	ANAL_IN2_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X2C56L	ANAL_IN2_TRP_LVL	ANALOG INPUT2 TRIP LEVEL	Units, 1, -50000-50000	RW	F12
R4X2C58	ANAL_IN2_TRP_PKUP	ANALOG INPUT2 TRIP PICKUP	-, 1, 0-1	RW	F130
R4X2C59	ANAL_IN2_TRP_DLY	ANALOG INPUT2 TRIP DELAY	s, 1, 1-3000	RW	F2
R4X2C5AS12	ANAL_IN2_NAME	ANALOG INPUT2 NAME	ASCII	RW	F22
R4X2C80	ANAL_IN3_SETUP	ANALOG INPUT3	-, 1, 0-3	RW	F129
R4X2C85S6	ANAL_IN3_UNITS	ANALOG INPUT3 UNITS	ASCII	RW	F22
R4X2C88L	ANAL_IN3_MIN	ANALOG INPUT3 MINIMUM	Units, 1, -50000-50000	RW	F12
R4X2C8AL	ANAL_IN3_MAX	ANALOG INPUT3 MAXIMUM	Units, 1, -50000-50000	RW	F12
R4X2C8C	BLK_ANAL_IN3_ONLN	BLOCK ANALOG INPUT3 FROM ONLINE	s, 1, 0-5000	RW	F1
R4X2C8D	ANAL_IN3_ALM	ANALOG INPUT3 ALARM	-, 1, 0-2	RW	F115
R4X2C8E	ANAL_IN3_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X2C8FL	ANAL_IN3_ALM_LVL	ANALOG INPUT3 ALARM LEVEL	Units, 1, -50000-50000	RW	F12
R4X2C91	ANAL_IN3_ALM_PKUP	ANALOG INPUT3 ALARM PICKUP	-, 1, 0-1	RW	F130
R4X2C92	ANAL_IN3_ALM_DLY	ANALOG INPUT3 ALARM DELAY	s, 1, 1-3000	RW	F2
R4X2C93	ANAL_IN3_ALM_EVNT	ANALOG INPUT3 ALARM EVENTS	-, 1, 0-1	RW	F105
R4X2C94	ANAL_IN3_TRP	ANALOG INPUT3 TRIP	-, 1, 0-2	RW	F115
R4X2C95	ANAL_IN3_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X2C96L	ANAL_IN3_TRP_LVL	ANALOG INPUT3 TRIP LEVEL	Units, 1, -50000-50000	RW	F12
R4X2C98	ANAL_IN3_TRP_PKUP	ANALOG INPUT3 TRIP PICKUP	-, 1, 0-1	RW	F130
R4X2C99	ANAL_IN3_TRP_DLY	ANALOG INPUT3 TRIP DELAY	s, 1, 1-3000	RW	F2
R4X2C9AS12	ANAL_IN3_NAME	ANALOG INPUT3 NAME	ASCII	RW	F22
R4X2CC0	ANAL_IN4_SETUP	ANALOG INPUT4	-, 1, 0-3	RW	F129
R4X2CC5S6	ANAL_IN4_UNITS	ANALOG INPUT4 UNITS	ASCII	RW	F22
R4X2CC8L	ANAL_IN4_MIN	ANALOG INPUT4 MINIMUM	Units, 1, -50000-50000	RW	F12
R4X2CCAL	ANAL_IN4_MAX	ANALOG INPUT4 MAXIMUM	Units, 1, -50000-50000	RW	F12
R4X2CCC	BLK_ANAL_IN4_ONLN	BLOCK ANALOG INPUT4 FROM ONLINE	s, 1, 0-5000	RW	F1
R4X2CCD	ANAL_IN4_ALM	ANALOG INPUT4 ALARM	-, 1, 0-2	RW	F115
R4X2CCE	ANAL_IN4_ALM_RLYS	ASSIGN ALARM RELAYS (2-5)	-, 1, 1-4	RW	F50
R4X2CCFL	ANAL_IN4_ALM_LVL	ANALOG INPUT4 ALARM LEVEL	Units, 1, -50000-50000	RW	F12
R4X2CD1	ANAL_IN4_ALM_PKUP	ANALOG INPUT4 ALARM PICKUP	-, 1, 0-1	RW	F130
R4X2CD2	ANAL_IN4_ALM_DLY	ANALOG INPUT4 ALARM DELAY	s, 1, 1-3000	RW	F2
R4X2CD3	ANAL_IN4_ALM_EVNT	ANALOG INPUT4 ALARM EVENTS	-, 1, 0-1	RW	F105
R4X2CD4	ANAL_IN4_TRP	ANALOG INPUT4 TRIP	-, 1, 0-2	RW	F115
R4X2CD5	ANAL_IN4_TRP_RLYS	ASSIGN TRIP RELAYS (1-4)	-, 1, 0-3	RW	F50
R4X2CD6L	ANAL_IN4_TRP_LVL	ANALOG INPUT4 TRIP LEVEL	Units, 1, -50000-50000	RW	F12
R4X2CD8	ANAL_IN4_TRP_PKUP	ANALOG INPUT4 TRIP PICKUP	-, 1, 0-1	RW	F130

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X2CD9	ANAL_IN4_TRP_DLY	ANALOG INPUT4 TRIP DELAY	s, 1, 1–3000	RW	F2
R4X2CDAS12	ANAL_IN4_NAME	ANALOG INPUT4 NAME	ASCII	RW	F22
R4X2D00	SIM_MODE	SIMULATION MODE	–, 1, 0–3	RW	F138
R4X2D01	SIM_PREFLT_FLT_DLY	PRE-FAULT TO FAULT TIME DELAY	s, 1, 0–300	RW	F1
R4X2D20	PREFLT_IPH_OUT	PRE-FAULT Iphase OUTPUT	x CT, 1, 0–2000	RW	F3
R4X2D21	PREFLT_V_PH_N	PRE-FAULT VOLTAGES PHASE-N	x Rated, 1, 0–150	RW	F3
R4X2D22	PREFLT_CURR_LAG_V	PRE-FAULT CURRENT LAGS VOLTAGE	°, 1, 0–359	RW	F1
R4X2D23	PREFLT_IPH_N	PRE-FAULT Iphase NEUTRAL	x CT, 1, 0–2000	RW	F3
R4X2D24	PREFLT_AMPS_GND	PRE-FAULT CURRENT GROUND	x CT, 1, 0–2000	RW	F3
R4X2D25	PREFLT_V_N	PRE-FAULT VOLTAGE NEUTRAL	Volts, 1, 0–1000	RW	F2
R4X2D26I	STAT_RTD_PRE_TEMP	PRE-FAULT STATOR RTD TEMP	°C, 1, -50–250	RW	F4
R4X2D27I	BEAR_RTD_PRE_TEMP	PRE-FAULT BEARING RTD TEMP	°C, 1, -50–250	RW	F4
R4X2D28I	OTH_RTD_PRE_TEMP	PRE-FAULT OTHER RTD TEMP	°C, 1, -50–250	RW	F4
R4X2D29I	AMB_RTD_PRE_TEMP	PRE-FAULT AMBIENT RTD TEMP	°C, 1, -50–250	RW	F4
R4X2D2A	PRE_SYS_FREQ	PRE-FAULT SYSTEM FREQUENCY	Hz, 1, 50–900	RW	F2
R4X2D2B	PRE_ANAL_IN1	PRE-FAULT ANALOG INPUT 1	%, 1, 0–100	RW	F1
R4X2D2C	PRE_ANAL_IN2	PRE-FAULT ANALOG INPUT 2	%, 1, 0–100	RW	F1
R4X2D2D	PRE_ANAL_IN3	PRE-FAULT ANALOG INPUT 3	%, 1, 0–100	RW	F1
R4X2D2E	PRE_ANAL_IN4	PRE-FAULT ANALOG INPUT 4	%, 1, 0–100	RW	F1
R4X2D4CI	STAT_RTD_PRE_TEMP_F	PRE-FAULT STATOR RTD TEMP	°F, 1, -50–250	RW	F4
R4X2D4DI	BEAR_RTD_PRE_TEMP_F	PRE-FAULT BEARING RTD TEMP	°F, 1, -50–250	RW	F4
R4X2D4EI	OTH_RTD_PRE_TEMP_F	PRE-FAULT OTHER RTD TEMP	°F, 1, -50–250	RW	F4
R4X2D4FI	AMB_RTD_PRE_TEMP_F	PRE-FAULT AMBIENT RTD TEMP	°F, 1, -50–250	RW	F4
R4X2D80	FAULT_IPH_OUT	FAULT Iphase OUTPUT	x CT, 1, 0–2000	RW	F3
R4X2D81	FAULT_V_PH_N	FAULT VOLTAGES PHASE-N	x Rated, 1, 0–150	RW	F3
R4X2D82	FAULT_AMPS_LAG_V	FAULT CURRENT LAGS VOLTAGE	°, 1, 0–359	RW	F1
R4X2D83	FAULT_IPH_N	FAULT Iphase NEUTRAL	x CT, 1, 0–2000	RW	F3
R4X2D84	FAULT_AMPS_GND	FAULT CURRENT GROUND	x CT, 1, 0–2000	RW	F3
R4X2D85	FAULT_V_N	FAULT VOLTAGE NEUTRAL	Volts, 1, 0–1000	RW	F2
R4X2D86I	STAT_RTD_FAULT_TEMP	FAULT STATOR RTD TEMP	°C, 1, -50–250	RW	F4
R4X2D87I	BEAR_RTD_FAULT_TEMP	FAULT BEARING RTD TEMP	°C, 1, -50–250	RW	F4
R4X2D88I	OTH_RTD_FAULT_TEMP	FAULT OTHER RTD TEMP	°C, 1, -50–250	RW	F4
R4X2D89I	AMB_RTD_FAULT_TEMP	FAULT AMBIENT RTD TEMP	°C, 1, -50–250	RW	F4
R4X2D8A	FAULT_SYS_FREQ	FAULT SYSTEM FREQUENCY	Hz, 1, 50–900	RW	F2
R4X2D8B	FAULT_ANAL_IN1	FAULT ANALOG INPUT 1	%, 1, 0–100	RW	F1
R4X2D8C	FAULT_ANAL_IN2	FAULT ANALOG INPUT 2	%, 1, 0–100	RW	F1
R4X2D8D	FAULT_ANAL_IN3	FAULT ANALOG INPUT 3	%, 1, 0–100	RW	F1
R4X2D8E	FAULT_ANAL_IN4	FAULT ANALOG INPUT 4	%, 1, 0–100	RW	F1
R4X2DBCI	STAT_RTD_FAULT_TEMP_F	FAULT STATOR RTD TEMP	°F, 1, -50–250	RW	F4
R4X2DBDI	BEAR_RTD_FAULT_TEMP_F	FAULT BEARING RTD TEMP	°F, 1, -50–250	RW	F4
R4X2DBEI	OTH_RTD_FAULT_TEMP_F	FAULT OTHER RTD TEMP	°F, 1, -50–250	RW	F4
R4X2DBFI	AMB_RTD_FAULT_TEMP_F	FAULT AMBIENT RTD TEMP	°F, 1, -50–250	RW	F4
R4X2DE0	FORCE_RLYS	FORCE OPERATION OF RELAYS	–, 1, 0–8	RW	F139
R4X2DF0	FORCE_ANAL_OUT	FORCE ANALOG OUTPUTS FUNCTION	–, 1, 0–1	RW	F126

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X2DF1	ANAL_OUT1_FORCE_VAL	ANALOG OUTPUT 1 FORCED VALUE	%, 1, 0-100	RW	F1
R4X2DF2	ANAL_OUT2_FORCE_VAL	ANALOG OUTPUT 2 FORCED VALUE	%, 1, 0-100	RW	F1
R4X2DF3	ANAL_OUT3_FORCE_VAL	ANALOG OUTPUT 3 FORCED VALUE	%, 1, 0-100	RW	F1
R4X2DF4	ANAL_OUT4_FORCE_VAL	ANALOG OUTPUT 4 FORCED VALUE	%, 1, 0-100	RW	F1
R4X3000L	EVNT_REC_LST_RSET	EVENT RECORDER LAST RESET DATE (2 WORDS)	N/A, N/A, N/A	RW	F18
R4X3002	EVNTS_SINCE_LST_CLR	TOTAL NUMBER OF EVENTS SINCE LAST CLEAR	N/A, 1, 0-65535	RW	F1
R4X3003	EVNT_REC_SEL	EVENT RECORD SELECTOR	-, 1, 0-65535	RW	F1
R4X3004	EVNT_CAUSE	CAUSE OF EVENT	-, 1, 0-139	RW	F134
R4X3005L	EVNT_TIME	TIME OF EVENT (2 WORDS)	N/A, N/A, N/A	RW	F19
R4X3007L	EVNT_DATE	DATE OF EVENT (2 WORDS)	N/A, N/A, N/A	RW	F18
R4X3009	EVNT_TACH_RPM	TACHOMETER	RPM, 1, 0-7200	RW	F1
R4X300AL	EVNT_AMPS_A	PHASE A CURRENT	Amps, 1, 0-999999	RW	F12
R4X300CL	EVNT_AMPS_B	PHASE B CURRENT	Amps, 1, 0-999999	RW	F12
R4X300EL	EVNT_AMPS_C	PHASE C CURRENT	Amps, 1, 0-999999	RW	F12
R4X3010	EVNT_PH_A_DIFF_CURR	PHASE A DIFFERENTIAL CURRENT	Amps, 1, 0-999999	RW	F12
R4X3012	EVNT_PH_B_DIFF_CURR	PHASE B DIFFERENTIAL CURRENT	Amps, 1, 0-999999	RW	F12
R4X3014	EVNT_PH_C_DIFF_CURR	PHASE C DIFFERENTIAL CURRENT	Amps, 1, 0-999999	RW	F12
R4X3016	EVNT_NEG_SEQ_CURR	NEG. SEQ. CURRENT	% FLA, 1, 0-2000	RW	F1
R4X3017L	EVNT_GND_CURR	GROUND CURRENT	A, 1, 0-20000000	RW	F14
R4X3019	EVNT_V_AB	A-B VOLTAGE	Volts, 1, 0-50000	RW	F1
R4X301A	EVNT_V_BC	B-C VOLTAGE	Volts, 1, 0-50000	RW	F1
R4X301B	EVNT_V_CA	C-A VOLTAGE	Volts, 1, 0-50000	RW	F1
R4X301C	EVNT_SYS_FREQ	FREQUENCY	Hz, 1, 0-12000	RW	F3
R4X301D	EVNT_ACTIVE_GROUP	ACTIVE GROUP	-, 1, 0-1	RW	F1
R4X301FL	EVNT_REAL_PWR	REAL POWER (MW)	MW, 1, -2000000-2000000	RW	F13
R4X3021L	EVNT_REAC_PWR	REACTIVE POWER Mvar	Mvar, 1, -2000000-2000000	RW	F13
R4X3023L	EVNT_APP_PWR	APPARENT POWER MVA	MVA, 1, 0-2000000	RW	F13
R4X3025	EVNT_HOT_STAT_RTD	LAST TRIP DATA STATOR RTD	°C, 1, 0-11	RW	F1
R4X3026I	EVNT_TEMP_HOT_STAT	HOTTEST STATOR RTD TEMPERATURE	°C, 1, -50-250	RW	F4
R4X3027	EVNT_HOT_BEAR_RTD	LAST TRIP DATA BEARING RTD	°C, 1, 0-11	RW	F1
R4X3028I	EVNT_TEMP_HOT_BEAR	HOTTEST BEARING RTD TEMPERATURE	°C, 1, -50-250	RW	F4
R4X3029	EVNT_HOT_OTHER_RTD	LAST TRIP DATA OTHER RTD	°C, 1, 0-11	RW	F1
R4X302AI	EVNT_TEMP_HOT_OTHER	HOTTEST OTHER RTD TEMPERATURE	°C, 1, -50-250	RW	F4
R4X302B	EVNT_HOT_AMB_RTD	LAST TRIP DATA AMBIENT RTD	°C, 1, 0-11	RW	F1
R4X302CI	EVNT_ABM_TEMP	HOTTEST AMBIENT RTD TEMPERATURE	°C, 1, -50-250	RW	F4
R4X302DL	EVNT_ANAL_IN1	ANALOG IN 1	Units, 1, -50000-50000	RW	F12
R4X302FL	EVNT_ANAL_IN2	ANALOG IN 2	Units, 1, -50000-50000	RW	F12
R4X3031L	EVNT_ANAL_IN3	ANALOG IN 3	Units, 1, -50000-50000	RW	F12
R4X3033L	EVNT_ANAL_IN4	ANALOG IN 4	Units, 1, -50000-50000	RW	F12
R4X30EOI	EVNT_TEMP_HOT_STAT_F	HOTTEST STATOR RTD	°F, 1, -50-250	RW	F4

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
		TEMPERATURE			
R4X30E1I	EVNT_TEMP_HOT_BEAR_F	HOTTEST BEARING RTD TEMPERATURE	°F, 1, -50–250	RW	F4
R4X30E2I	EVNT_TEMP_HOT_OTH_F	HOTTEST OTHER RTD TEMPERATURE	°F, 1, -50–250	RW	F4
R4X30E3I	EVNT_TEMP_HOT_AMB_F	HOTTEST AMBIENT RTD TEMPERATURE	°F, 1, -50–250	RW	F4
R4X30E5L	EVNT_NEUT_V_FUND	NEUTRAL VOLT FUND	Volts, 1, 0–250000	RW	F10
R4X30E7L	EVNT_NEUT_V_3RD	NEUTRAL VOLT 3rd	Volts, 1, 0–250000	RW	F10
R4X30E9	VAB_IAB	Vab/lab	ohms s, 1, 0 to 65535	RW	F1
R4X30EA	VAB_IAB_ANG	Vab/lab ANGLE	°, 1, 0 to 359	RW	F1
R4X30F0L	TM_DATE	TRACE MEMORY TRIGGER DATE	N/A, N/A, N/A	RW	F18
R4X30F2L	TM_TIME	TRACE MEMORY TRIGGER TIME	N/A, N/A, N/A	RW	F19
R4X30F4	FREQ_DURING_TRACE	Frequency during trace acquisition	Hz, 1, 0–12000	RW	F3
R4X30F5	TM_CHAN_SEL	TRACE MEMORY CHANNEL SELECTOR (HOLDING REGISTER)	N/A, 1, 0–9	RW	F1
R4X30F6	WAVE_TRIG_SEL	WAVEFORM TRIGGER SELECTOR	N/A, 1, 1–65535		F1
R4X30F7	WAVE_TRIG_CAUSE	WAVEFORM TRIGGER CAUSE (READ-ONLY)	N/A, 1, 0–139		F134
R4X30F8	NUM_SAMP_PER_WAVE_CAPT	NUMBER OF SAMPLES PER WAVEFORM CAPTURE	N/A, 1, 1–768		F1
R4X30F9	NUM_WAVE_CAPT	NUMBER OF WAVEFORM CAPTURES TAKEN	N/A, 1, 0–65535		F1
R4X3100IA96	TM_SAMP1	FIRST WAVEFORM MEMORY SAMPLES	N/A, 1, -32767–32767	RW	F4
R4X3400IA96	TM_SAMP1	LAST WAVEFORM MEMORY SAMPLES	N/A, 1, -32767–32767	RW	F4
R4X3160IA96	TM_SAMP2	TRACE MEMORY SAMPLE 97–192	N/A, 1, -32767–32767	RW	F4

NOTES:

The Multilin SR489 uses many special function codes which are detailed in the SR489 Users Manual. Please refer to that publication for details of format codes.

ACTUAL VALUES

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X0000	DEV_CODE	MULTILIN PRODUCT DEVICE CODE	N/A	RO	F1
R3X0001	PROD_HW_REV	PRODUCT HARDWARE REVISION	N/A, 1, 1 to 26	RO	F15
R3X0002	PROD_SW_REV	PRODUCT SOFTWARE REVISION	N/A	RO	F16
R3X0003	PROD_MOD_NUM	PRODUCT MODIFICATION NUMBER	N/A, 1, 0 to 999	RO	F1
R3X0010	BOOT_REV	BOOT PROGRAM REVISION	N/A	RO	F16
R3X0011	BOOT_MOD_NUM	BOOT PROGRAM MODIFICATION NUMBER	N/A, 1, 0 to 999	RO	F1
R3X0040S16	ORDER_CODE_ASCII	ORDER CODE	ASCII	RO	F22
R3X0050S12	REVISION	REVISION	ASCII	RO	F22
R3X0060S12	BOOT_REVISION	BOOT REVISION	ASCII	RO	F22
R4X0080	COMMAND_KEYS	COMMAND FUNCTION CODE (always 5)	N/A, N/A, 5	RO	F1
R4X0081	COMMAND_CODE	COMMAND OPERATION CODE	N/A, 1, 0 to 65535	RO	F1
R4X00F0	TIME_BRDCST	Time (Broadcast)	N/A, N/A, N/A	RO	F24
R4X00F1	DATE_BRDCST	Date (Broadcast)	N/A, N/A, N/A	RO	F18
R3X0200	GENERATOR_STATUS	GENERATOR STATUS	-, 1, 0 to 4	RO	F133
R3X0201	GENERATOR_THERM_CAP	GENERATOR THERMAL CAPACITY USED	%, 1, 0 to 100	RO	F1
R3X0202L	EST_GEN_TRIP_TIME	ESTIMATED TRIP TIME ON OVERLOAD	s, 1, 0 to 65535	RO	F12
R3X0210	GENERAL_STATUS	GENERAL STATUS	N/A, 1, 0 to 65535	RO	F140
R3X0211	LED_RELAY			RO	F1
R3X0220	TRIP_CAUSE	CAUSE OF LAST TRIP	-, 1, 0 to 139	RO	F134
R3X0221L	TRIP_TIME	TIME OF LAST TRIP	N/A	RO	F19
R3X0223L	TRIP_DATE	DATE OF LAST TRIP	N/A	RO	F18
R3X0225	TACH_RPM_PRETRP	TACHOMETER PreTrip	RPM, 1, 0 to 7200	RO	F1
R3X0226L	AMPS_A_PRETRP	PHASE A PRE-TRIP CURRENT	Amps, 1, 0 to 999999	RO	F12
R3X0228L	AMPS_B_PRETRP	PHASE B PRE-TRIP CURRENT	Amps, 1, 0 to 999999	RO	F12
R3X022AL	AMPS_C_PRETRP	PHASE C PRE-TRIP CURRENT	Amps, 1, 0 to 999999	RO	F12
R3X022CL	AMPS_A_DIFF_PRETRP	PHASE A PRE-TRIP DIFFERENTIAL CURRENT	Amps, 1, 0 to 999999	RO	F12
R3X022EL	AMPS_B_DIFF_PRETRP	PHASE B PRE-TRIP DIFFERENTIAL CURRENT	Amps, 1, 0 to 999999	RO	F12
R3X0230L	AMPS_C_DIFF_PRETRP	PHASE C PRE-TRIP DIFFERENTIAL CURRENT	Amps, 1, 0 to 999999	RO	F12
R3X0232	NEG_SEQ_PRETRP	NEG. SEQ. CURRENT PreTrip	% FLA, 1, 0 to 2000	RO	F1
R3X0233L	AMPS_GND_PRETRP	GROUND CURRENT PreTrip	A, 1, 0 to 20000000	RO	F14
R3X0235	VOLT_AB_PRETRP	PRE-TRIP A-B VOLTAGE	Volts, 1, 0 to 50000	RO	F1
R3X0236	VOLT_BC_PRETRP	PRE-TRIP B-C VOLTAGE	Volts, 1, 0 to 50000	RO	F1
R3X0237	VOLT_CA_PRETRP	PRE-TRIP C-A VOLTAGE	Volts, 1, 0 to 50000	RO	F1
R3X0238	FREQ_PRETRP	FREQUENCY Pretrip	Hz, 1, 0 to 12000	RO	F3
R3X023BL	MW_PRETRP	REAL POWER (MW) PreTrip	MW, 1, -2000000 to 2000000	RO	F13
R3X023DL	MVAR_PRETRP	REACTIVE POWER Mvar PreTrip	Mvar, 1, -2000000 to 2000000	RO	F13

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X023FL	MVA_PRETRP	APPARENT POWER MVA PreTrip	MVA, 1, 0 to 2000000	RO	F13
R3X0241	HOT_STATOR_TRIP	LAST TRIP DATA STATOR RTD	°C, 1, 0 to 11	RO	F1
R3X0242I	TEMP_STATOR_PRETRP	HOTTEST STATOR RTD TEMPERATURE	°C, 1, -50 to 250	RO	F4
R3X0243	HOT_BEARING_TRIP	LAST TRIP DATA BEARING RTD	°C, 1, 0 to 11	RO	F1
R3X0244I	TEMP_BEAR_PRETRP	HOTTEST BEARING RTD TEMPERATURE	°C, 1, -50 to 250	RO	F4
R3X0245	HOT_OTHER_TRIP	LAST TRIP DATA OTHER RTD	°C, 1, 0 to 11	RO	F1
R3X0246I	TEMP_OTHER_PRETRP	HOTTEST OTHER RTD TEMPERATURE	°C, 1, -50 to 250	RO	F4
R3X0247	HOT_AMBIENT_TRIP	HOTTEST AMBIENT RTD TEMPERATURE	°C, 1, 0 to 11	RO	F1
R3X0248I	TEMP_AMB_PRETRP	LAST TRIP DATA AMBIENT RTD	°C, 1, -50 to 250	RO	F4
R3X0249L	AI1_PRETRP	ANALOG IN 1 PreTrip	Units, 1, -50000 to 50000	RO	F12
R3X024BL	AI2_PRETRP	ANALOG IN 2 PreTrip	Units, 1, -50000 to 50000	RO	F12
R3X024DL	AI3_PRETRP	ANALOG IN 3 PreTrip	Units, 1, -50000 to 50000	RO	F12
R3X024FL	AI4_PRETRP	ANALOG IN 4 PreTrip	Units, 1, -50000 to 50000	RO	F12
R3X025CI	TEMP_STATOR_PRETRP_F	HOTTEST STATOR RTD TEMPERATURE	°F, 1, -50 to 250	RO	F4
R3X025DI	TEMP_BEAR_PRETRP_F	HOTTEST BEARING RTD TEMPERATURE	°F, 1, -50 to 250	RO	F4
R3X025EI	TEMP_OTHER_PRETRP_F	HOTTEST OTHER RTD TEMPERATURE	°F, 1, -50 to 250	RO	F4
R3X025FI	TEMP_AMB_PRETRP_F	HOTTEST AMBIENT RTD TEMPERATURE	°F, 1, -50 to 250	RO	F4
R3X0260L	NEUT_V_FUND_PRETRP	NEUTRAL VOLT FUND PreTrip	Volts, 1, 0 to 250000	RO	F10
R3X0262L	NEUT_V_3RD_PRETRP	NEUTRAL VOLT 3rd PreTrip	Volts, 1, 0 to 250000	RO	F10
R3X0264	PRE_TRP_VAB_IAB	PRE-TRIP Vab/Iab	Ohms, 1, 0 to 65535	RO	F2
R3X0265	PRE_TRP_VAB_IAB_ANG	PRE-TRIP Vab/Iab ANGLE	°, 1, 0 to 359	RO	F1
R3X0280	INPUT_A_TRP_PKUP	INPUT A PICKUP	-, 1, 0 to 4	RO	F123
R3X0281	INPUT_B_TRP_PKUP	INPUT B PICKUP	-, 1, 0 to 4	RO	F123
R3X0282	INPUT_C_TRP_PKUP	INPUT C PICKUP	-, 1, 0 to 4	RO	F123
R3X0283	INPUT_D_TRP_PKUP	INPUT D PICKUP	-, 1, 0 to 4	RO	F123
R3X0284	INPUT_E_TRP_PKUP	INPUT E PICKUP	-, 1, 0 to 4	RO	F123
R3X0285	INPUT_F_TRP_PKUP	INPUT F PICKUP	-, 1, 0 to 4	RO	F123
R3X0286	INPUT_G_TRP_PKUP	INPUT G PICKUP	-, 1, 0 to 4	RO	F123
R3X0287	SEQ_TRP_TRP_PKUP	SEQUENTIAL TRIP PICKUP	-, 1, 0 to 4	RO	F123
R3X0288	FLD_BKR_DSC_TRP_PKUP	FIELD-BKR DISCREP. PICKUP	-, 1, 0 to 4	RO	F123
R3X0289	TACH_TRP_PKUP	TACHOMETER PICKUP	-, 1, 0 to 4	RO	F123
R3X028A	OFFLN_OC_TRP_PKUP	OFFLINE OVERCURRENT PICKUP	-, 1, 0 to 4	RO	F123
R3X028B	INADV_NRG_TRP_PKUP	INADVERTENT ENERG. PICKUP	-, 1, 0 to 4	RO	F123
R3X028C	PH_OC_TRP_PKUP	PHASE OVERCURRENT PICKUP	-, 1, 0 to 4	RO	F123
R3X028D	NEG_SEQ_OC_TRP_PKUP	NEG.SEQ. OVERCURRENT PICKUP	-, 1, 0 to 4	RO	F123
R3X028E	GND_OC_TRP_PKUP	GROUND OVERCURRENT PICKUP	-, 1, 0 to 4	RO	F123
R3X028F	PH_DIFF_TRP_PKUP	PHASE DIFFERENTIAL PICKUP	-, 1, 0 to 4	RO	F123
R3X0290	UV_TRP_PKUP	UNDERVOLTAGE PICKUP	-, 1, 0 to 4	RO	F123
R3X0291	OV_TRP_PKUP	OVERVOLTAGE PICKUP	-, 1, 0 to 4	RO	F123

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X0292	V_HZ_TRP_PKUP	VOLTS/HERTZ PICKUP	-, 1, 0 to 4	RO	F123
R3X0293	PH_REV_TRP_PKUP	PHASE REVERSAL PICKUP	-, 1, 0 to 4	RO	F123
R3X0294	UF_TRP_PKUP	UNDERFREQUENCY PICKUP	-, 1, 0 to 4	RO	F123
R3X0295	OF_TRP_PKUP	OVERFREQUENCY PICKUP	-, 1, 0 to 4	RO	F123
R3X0296	NEUT_OV_TRP_PKUP	NEUTRAL O/V (Fund) PICKUP	-, 1, 0 to 4	RO	F123
R3X0297	NEUT_UV_TRP_PKUP	NEUTRAL U/V (3rd) PICKUP	-, 1, 0 to 4	RO	F123
R3X0298	REAC_PWR_TRP_PKUP	REACTIVE POWER PICKUP	-, 1, 0 to 4	RO	F123
R3X0299	REV_PWR_TRP_PKUP	REVERSE POWER PICKUP	-, 1, 0 to 4	RO	F123
R3X029A	LO_FWD_PWR_TRP_PKUP	LOW FORWARD POWER PICKUP	-, 1, 0 to 4	RO	F123
R3X029B	THERM_MODEL_TRP_PKUP	THERMAL MODEL PICKUP	-, 1, 0 to 4	RO	F123
R3X029C	RTD1_TRP_PKUP	RTD #1 PICKUP	-, 1, 0 to 4	RO	F123
R3X029D	RTD2_TRP_PKUP	RTD #2 PICKUP	-, 1, 0 to 4	RO	F123
R3X029E	RTD3_TRP_PKUP	RTD #3 PICKUP	-, 1, 0 to 4	RO	F123
R3X029F	RTD4_TRP_PKUP	RTD #4 PICKUP	-, 1, 0 to 4	RO	F123
R3X02A0	RTD5_TRP_PKUP	RTD #5 PICKUP	-, 1, 0 to 4	RO	F123
R3X02A1	RTD6_TRP_PKUP	RTD #6 PICKUP	-, 1, 0 to 4	RO	F123
R3X02A2	RTD7_TRP_PKUP	RTD #7 PICKUP	-, 1, 0 to 4	RO	F123
R3X02A3	RTD8_TRP_PKUP	RTD #8 PICKUP	-, 1, 0 to 4	RO	F123
R3X02A4	RTD9_TRP_PKUP	RTD #9 PICKUP	-, 1, 0 to 4	RO	F123
R3X02A5	RTD10_TRP_PKUP	RTD #10 PICKUP	-, 1, 0 to 4	RO	F123
R3X02A6	RTD11_TRP_PKUP	RTD #11 PICKUP	-, 1, 0 to 4	RO	F123
R3X02A7	RTD12_TRP_PKUP	RTD #12 PICKUP	-, 1, 0 to 4	RO	F123
R3X02A8	AI1_TRP_PKUP	Analog I/P 1 PICKUP	-, 1, 0 to 4	RO	F123
R3X02A9	AI2_TRP_PKUP	Analog I/P 2 PICKUP	-, 1, 0 to 4	RO	F123
R3X02AA	AI3_TRP_PKUP	Analog I/P 3 PICKUP	-, 1, 0 to 4	RO	F123
R3X02AB	AI4_TRP_PKUP	Analog I/P 4 PICKUP	-, 1, 0 to 4	RO	F123
R3X02AC	LOSS_EXCIT1_PKUP	LOSS OF EXCITATION 1 PICKUP	-, 1, 0 to 4		F123
R3X02AD	LOSS_EXCIT2_PKUP	LOSS OF EXCITATION 2 PICKUP	-, 1, 0 to 4		F123
R3X02AE	GND_DIR_PKUP	GROUND DIRECTIONAL PICKUP	-, 1, 0 to 4		F123
R3X02AF	HI_SET_PH_OC_PKUP	HIGH-SET PHASE O/C PICKUP	-, 1, 0 to 4		F123
R3X02B0	DIST1_PKUP	DISTANCE ZONE 1 PICKUP	-, 1, 0 to 4		F123
R3X02B1	DIST2_PKUP	DISTANCE ZONE 2 PICKUP	-, 1, 0 to 4		F123
R3X0300	INPUT_A_ALM_PKUP	INPUT A PICKUP	-, 1, 0 to 4	RO	F123
R3X0301	INPUT_B_ALM_PKUP	INPUT B PICKUP	-, 1, 0 to 4	RO	F123
R3X0302	INPUT_C_ALM_PKUP	INPUT C PICKUP	-, 1, 0 to 4	RO	F123
R3X0303	INPUT_D_ALM_PKUP	INPUT D PICKUP	-, 1, 0 to 4	RO	F123
R3X0304	INPUT_E_ALM_PKUP	INPUT E PICKUP	-, 1, 0 to 4	RO	F123
R3X0305	INPUT_F_ALM_PKUP	INPUT F PICKUP	-, 1, 0 to 4	RO	F123
R3X0306	INPUT_G_ALM_PKUP	INPUT G PICKUP	-, 1, 0 to 4	RO	F123
R3X0307	TACH_ALM_PKUP	TACHOMETER PICKUP	-, 1, 0 to 4	RO	F123
R3X0308	OC_ALM_PKUP	OVERCURRENT PICKUP	-, 1, 0 to 4	RO	F123
R3X0309	NEG_SEQ_ALM_PKUP	NEG SEQ PICKUP	-, 1, 0 to 4	RO	F123
R3X030A	GND_OC_ALM_PKUP	GROUND OC PICKUP	-, 1, 0 to 4	RO	F123
R3X030B	UV_ALM_PKUP	UNDERVOLTAGE PICKUP	-, 1, 0 to 4	RO	F123
R3X030C	OV_ALM_PKUP	OVERVOLTAGE PICKUP	-, 1, 0 to 4	RO	F123

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X030D	V_HZ_ALM_PKUP	VOLTS/HERTZ PICKUP	-, 1, 0 to 4	RO	F123
R3X030E	UF_ALM_PKUP	UNDERFREQUENCY PICKUP	-, 1, 0 to 4	RO	F123
R3X030F	OF_ALM_PKUP	OVERFREQUENCY PICKUP	-, 1, 0 to 4	RO	F123
R3X0310	NEUT_V_FUND_PKUP	NEUTRAL VOLT FUND PICKUP	-, 1, 0 to 4	RO	F123
R3X0311	NEUT_V_3RD_PKUP	NEUTRAL VOLT THIRD PICKUP	-, 1, 0 to 4	RO	F123
R3X0312	REAC_PWR_ALM_PKUP	REACTIVE POWER PICKUP	-, 1, 0 to 4	RO	F123
R3X0313	REV_PWR_ALM_PKUP	REVERSE POWER PICKUP	-, 1, 0 to 4	RO	F123
R3X0314	LO_FWD_PWR_ALM_PKUP	LOW FORWARD POWER PICKUP	-, 1, 0 to 4	RO	F123
R3X0315	RTD1_ALM_PKUP	RTD #1 PICKUP	-, 1, 0 to 4	RO	F123
R3X0316	RTD2_ALM_PKUP	RTD #2 PICKUP	-, 1, 0 to 4	RO	F123
R3X0317	RTD3_ALM_PKUP	RTD #3 PICKUP	-, 1, 0 to 4	RO	F123
R3X0318	RTD4_ALM_PKUP	RTD #4 PICKUP	-, 1, 0 to 4	RO	F123
R3X0319	RTD5_ALM_PKUP	RTD #5 PICKUP	-, 1, 0 to 4	RO	F123
R3X031A	RTD6_ALM_PKUP	RTD #6 PICKUP	-, 1, 0 to 4	RO	F123
R3X031B	RTD7_ALM_PKUP	RTD #7 PICKUP	-, 1, 0 to 4	RO	F123
R3X031C	RTD8_ALM_PKUP	RTD #8 PICKUP	-, 1, 0 to 4	RO	F123
R3X031D	RTD9_ALM_PKUP	RTD #9 PICKUP	-, 1, 0 to 4	RO	F123
R3X031E	RTD10_ALM_PKUP	RTD #10 PICKUP	-, 1, 0 to 4	RO	F123
R3X031F	RTD11_ALM_PKUP	RTD #11 PICKUP	-, 1, 0 to 4	RO	F123
R3X0320	RTD12_ALM_PKUP	RTD #12 PICKUP	-, 1, 0 to 4	RO	F123
R3X0321	OPEN_SENSOR_PKUP	OPEN SENSOR PICKUP	-, 1, 0 to 4	RO	F123
R3X0322	SHT_LO_TMP_ALM_PKUP	SHORT/LOW TEMP PICKUP	-, 1, 0 to 4	RO	F123
R3X0323	THERM_MODEL_ALM_PKUP	THERMAL MODEL PICKUP	-, 1, 0 to 4	RO	F123
R3X0324	TRP_CNT_ALM_PKUP	TRIP COUNTER PICKUP	-, 1, 0 to 4	RO	F123
R3X0325	BKR_FAIL_ALM_PKUP	BREAKER FAILURE PICKUP	-, 1, 0 to 4	RO	F123
R3X0326	TRP_CL_MON_ALM_PKUP	TRIP COIL MONITOR PICKUP	-, 1, 0 to 4	RO	F123
R3X0327	VT_FUSE_ALM_PKUP	VT FUSE FAILURE PICKUP	-, 1, 0 to 4	RO	F123
R3X0328	CURR_DMD_ALM_PKUP	CURRENT DEMAND PICKUP	-, 1, 0 to 4	RO	F123
R3X0329	MW_DMD_ALM_PKUP	MW DEMAND PICKUP	-, 1, 0 to 4	RO	F123
R3X032A	MVAR_DMD_ALM_PKUP	Mvar DEMAND PICKUP	-, 1, 0 to 4	RO	F123
R3X032B	MVA_DMD_ALM_PKUP	MVA DEMAND PICKUP	-, 1, 0 to 4	RO	F123
R3X032C	AI1_ALM_PKUP	ANALOG INPUT 1 PICKUP	-, 1, 0 to 4	RO	F123
R3X032D	AI2_ALM_PKUP	ANALOG INPUT 2 PICKUP	-, 1, 0 to 4	RO	F123
R3X032E	AI3_ALM_PKUP	ANALOG INPUT 3 PICKUP	-, 1, 0 to 4	RO	F123
R3X032F	AI4_ALM_PKUP	ANALOG INPUT 4 PICKUP	-, 1, 0 to 4	RO	F123
R3X0330	NOT_PROG_ALM_PKUP	NOT PROGRAMMED PICKUP	-, 1, 0 to 4	RO	F123
R3X0331	SIM_MODE_ALM_PKUP	SIMULATION MODE PICKUP	-, 1, 0 to 4	RO	F123
R3X0332	OUTPUT_RLY_FRCD_PKUP	OUTPUT RELAYS FORCED PICKUP	-, 1, 0 to 4	RO	F123
R3X0333	ANAL_OUT_FRCD_PKUP	ANALOG OUTPUT FORCED PICKUP	-, 1, 0 to 4	RO	F123
R3X0334	TST_SW_SHORT_PKUP	TEST SWITCH SHORTED PICKUP	-, 1, 0 to 4	RO	F123
R3X0335	GND_DIR_PKUP	GROUND DIRECTIONAL PICKUP	-, 1, 0 to 4	RO	F123
R3X0380	ACCESS_SW_STATUS	ACCESS SWITCH STATE	-, 1, 0 to 1	RO	F207
R3X0381	BRKR_SW_STATUS	BREAKER STATUS SWITCH STATE	-, 1, 0 to 1	RO	F207
R3X0382	SW1_STS	ASSIGNABLE DIGITAL INPUT1 STATE	-, 1, 0 to 1	RO	F207
R3X0383	SW2_STS	ASSIGNABLE DIGITAL INPUT2	-, 1, 0 to 1	RO	F207

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
		STATE			
R3X0384	SW3_STS	ASSIGNABLE DIGITAL INPUT3 STATE	-, 1, 0 to 1	RO	F207
R3X0385	SW4_STS	ASSIGNABLE DIGITAL INPUT4 STATE	-, 1, 0 to 1	RO	F207
R3X0386	SW5_STS	ASSIGNABLE DIGITAL INPUT5 STATE	-, 1, 0 to 1	RO	F207
R3X0387	SW6_STS	ASSIGNABLE DIGITAL INPUT6 STATE	-, 1, 0 to 1	RO	F207
R3X0388	SW7_STS	ASSIGNABLE DIGITAL INPUT7 STATE	-, 1, 0 to 1	RO	F207
R3X0389	TRIP_COIL_STS	TRIP COIL SUPERVISION	-, 1, 0 to 1	RO	F132
R3X03FCL	DATE	DATE (READ-ONLY)	N/A	RO	F18
R3X03FEL	TIME	TIME (READ-ONLY)	N/A	RO	F19
R3X0400L	AMPS_A	PHASE A OUTPUT CURRENT	Amps, 1, 0 to 999999	RO	F12
R3X0402L	AMPS_B	PHASE B OUTPUT CURRENT	Amps, 1, 0 to 999999	RO	F12
R3X0404L	AMPS_C	PHASE C OUTPUT CURRENT	Amps, 1, 0 to 999999	RO	F12
R3X0406L	AMPS_A_NEUT_SIDE	PHASE A NEUTRAL-SIDE CURRENT	Amps, 1, 0 to 999999	RO	F12
R3X0408L	AMPS_B_NEUT_SIDE	PHASE B NEUTRAL-SIDE CURRENT	Amps, 1, 0 to 999999	RO	F12
R3X040AL	AMPS_C_NEUT_SIDE	PHASE C NEUTRAL-SIDE CURRENT	Amps, 1, 0 to 999999	RO	F12
R3X040CL	AMPS_A_DIFF	PHASE A DIFFERENTIAL CURRENT	Amps, 1, 0 to 999999	RO	F12
R3X040EL	AMPS_B_DIFF	PHASE B DIFFERENTIAL CURRENT	Amps, 1, 0 to 999999	RO	F12
R3X0410L	AMPS_C_DIFF	PHASE C DIFFERENTIAL CURRENT	Amps, 1, 0 to 999999	RO	F12
R3X0412L	AMPS_AVG	AVERAGE PHASE CURRENT	Amps, 1, 0 to 999999	RO	F12
R3X0414	GEN_LOAD	GENERATOR LOAD	% FLA, 1, 0 to 2000	RO	F1
R3X0415	NEG_SEQ_CURR	NEGATIVE SEQUENCE CURRENT	% FLA, 1, 0 to 2000	RO	F1
R3X0416L	AMPS_GND	GROUND CURRENT	Amps, 1, 0 to 10000	RO	F14
R3X0420	AMPS_A_ANG	PHASE A CURRENT ANGLE	0, 1, 0 to 359	RO	F1
R3X0421	AMPS_B_ANG	PHASE B CURRENT ANGLE	0, 1, 0 to 359	RO	F1
R3X0422	AMPS_C_ANG	PHASE C CURRENT ANGLE	0, 1, 0 to 359	RO	F1
R3X0423	AMPS_A_NEUT_ANG	PHASE A NEUTRAL-SIDE ANGLE	0, 1, 0 to 359	RO	F1
R3X0424	AMPS_B_NEUT_ANG	PHASE B NEUTRAL-SIDE ANGLE	0, 1, 0 to 359	RO	F1
R3X0425	AMPS_C_NEUT_ANG	PHASE C NEUTRAL-SIDE ANGLE	0, 1, 0 to 359	RO	F1
R3X0426	AMPS_A_DIFF_ANG	PHASE A DIFFERENTIAL ANGLE	0, 1, 0 to 359	RO	F1
R3X0427	AMPS_B_DIFF_ANG	PHASE B DIFFERENTIAL ANGLE	0, 1, 0 to 359	RO	F1
R3X0428	AMPS_C_DIFF_ANG	PHASE C DIFFERENTIAL ANGLE	0, 1, 0 to 359	RO	F1
R3X0429	AMPS_GND_ANG	GROUND CURRENT ANGLE	0, 1, 0 to 359	RO	F1
R3X0420	PH_A_CURR_ANGLE	PHASE A CURRENT ANGLE	°, 1, 0 to 359	RO	F1
R3X0421	PH_B_CURR_ANGLE	PHASE B CURRENT ANGLE	°, 1, 0 to 359	RO	F1
R3X0422	PH_C_CURR_ANGLE	PHASE C CURRENT ANGLE	°, 1, 0 to 359	RO	F1
R3X0423	PH_A_N_SIDE_ANGLE	PHASE A NEUTRAL-SIDE ANGLE	°, 1, 0 to 359	RO	F1
R3X0424	PH_B_N_SIDE_ANGLE	PHASE B NEUTRAL-SIDE ANGLE	°, 1, 0 to 359	RO	F1
R3X0425	PH_C_N_SIDE_ANGLE	PHASE C NEUTRAL-SIDE ANGLE	°, 1, 0 to 359	RO	F1
R3X0426	PH_A_DIFF_ANGLE	PHASE A DIFFERENTIAL ANGLE	°, 1, 0 to 359	RO	F1
R3X0427	PH_B_DIFF_ANGLE	PHASE A DIFFERENTIAL ANGLE	°, 1, 0 to 359	RO	F1
R3X0428	PH_C_DIFF_ANGLE	PHASE A DIFFERENTIAL ANGLE	°, 1, 0 to 359	RO	F1
R3X0429	GROUND_CURR_VOLTAGE	GROUND CURRENT VOLTAGE	°, 1, 0 to 359	RO	F1

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X0440	VOLT_AB	PHASE A-B VOLTAGE	Volts, 1, 0 to 50000	RO	F1
R3X0441	VOLT_BC	PHASE B-C VOLTAGE	Volts, 1, 0 to 50000	RO	F1
R3X0442	VOLT_CA	PHASE C-A VOLTAGE	Volts, 1, 0 to 50000	RO	F1
R3X0443	VOLT_AVG_LINE	AVERAGE LINE VOLTAGE	Volts, 1, 0 to 50000	RO	F1
R3X0444	VOLT_AN	PHASE A-N VOLTAGE	Volts, 1, 0 to 50000	RO	F1
R3X0445	VOLT_BN	PHASE B-N VOLTAGE	Volts, 1, 0 to 50000	RO	F1
R3X0446	VOLT_CN	PHASE C-N VOLTAGE	Volts, 1, 0 to 50000	RO	F1
R3X0447	VOLT_AVG_PHASE	AVERAGE PHASE VOLTAGE	Volts, 1, 0 to 50000	RO	F1
R3X0448	PER_UNIT_V_HZ	PER UNIT MEASUREMENT OF V/Hz	-, 1, 0 to 200	RO	F3
R3X0449	FREQUENCY	FREQUENCY	Hz, 1, 500 to 9000	RO	F3
R3X044AL	VOLT_NEUT_FUND	NEUTRAL VOLTAGE FUND	Volts, 1, 0 to 250000	RO	F10
R3X044CL	VOLT_NEUT_3RD	NEUTRAL VOLTAGE 3rd HARM	Volts, 1, 0 to 250000	RO	F10
R3X044EL	VOLT_NEUT_TERM_3RD	NEUTRAL VOLTAGE Vp3 3rd HARM	Volts, 1, 0 to 250000	RO	F10
R3X0450	VAB_IAB	Vab/lab	Ohms, 1, 0 to 65535	RO	F2
R3X0451	VAB_IAB_ANG	Vab/lab ANGLE	°, 1, 0 to 359	RO	F1
R3X0460	VOLT_AB_ANG	LINE A-B VOLTAGE ANGLE	°, 1, 0 to 359	RO	F1
R3X0461	VOLT_BC_ANG	LINE B-C VOLTAGE ANGLE	°, 1, 0 to 359	RO	F1
R3X0462	VOLT_CA_ANG	LINE C-A VOLTAGE ANGLE	°, 1, 0 to 359	RO	F1
R3X0463	VOLT_AN_ANG	LINE A-N VOLTAGE ANGLE	°, 1, 0 to 359	RO	F1
R3X0464	VOLT_BN_ANG	LINE B-N VOLTAGE ANGLE	°, 1, 0 to 359	RO	F1
R3X0465	VOLT_CN_ANG	LINE C-N VOLTAGE ANGLE		RO	F1
R3X0466	VOLT_NEUT_ANG	NEUTRAL VOLTAGE ANGLE	°, 1, 0 to 359	RO	F1
R3X0460	LINE_AB_VOLT_ANGLE	LINE A-B VOLTAGE ANGLE	°, 1, 0 to 359	RO	F1
R3X0461	LINE_BC_VOLT_ANGLE	LINE B-C VOLTAGE ANGLE	°, 1, 0 to 359	RO	F1
R3X0462	LINE_CA_VOLT_ANGLE	LINE C-A VOLTAGE ANGLE	°, 1, 0 to 359	RO	F1
R3X0463	PH_AN_VOLT_ANGLE	PHASE A-N VOLTAGE ANGLE	°, 1, 0 to 359	RO	F1
R3X0464	PH_BN_VOLT_ANGLE	PHASE B-N VOLTAGE ANGLE	°, 1, 0 to 359	RO	F1
R3X0465	PH_CN_VOLT_ANGLE	PHASE C-N VOLTAGE ANGLE	°, 1, 0 to 359	RO	F1
R3X0480I	PF	POWER FACTOR	-, 1, -100 to 100	RO	F6
R3X0481L	MW	REAL POWER	MW, 1, -2000000 to 2000000	RO	F13
R3X0483L	MVAR	REACTIVE POWER	Mvar, 1, -2000000 to 2000000	RO	F13
R3X0485L	MVA	APPARENT POWER	MVA, 1, -2000000 to 2000000	RO	F13
R3X0487L	MWH_CONS	POSITIVE WATTHOURS	MWh, 1, 0 to 4000000000	RO	F13
R3X0489L	MVARH_CONS	POSITIVE VARHOURS	Mvarh, 1, 0 to 4000000000	RO	F13
R3X048BL	MVARH_NEG	NEGATIVE VARHOURS	Mvarh, 1, 0 to 4000000000	RO	F13
R3X04A0	HOTTEST_STATOR	HOTTEST STATOR RTD	°C, 1, 0 to 1	RO	F1
R3X04A1I	TEMP_HOTTEST_RTD	HOTTEST STATOR RTD TEMPERATURE	°C, 1, -52 to 250	RO	F4
R3X04A2I	TEMP_RTD1	RTD #1 TEMPERATURE	°C, 1, -52 to 251	RO	F4
R3X04A3I	TEMP_RTD2	RTD #2 TEMPERATURE	°C, 1, -52 to 251	RO	F4
R3X04A4I	TEMP_RTD3	RTD #3 TEMPERATURE	°C, 1, -52 to 251	RO	F4
R3X04A5I	TEMP_RTD4	RTD #4 TEMPERATURE	°C, 1, -52 to 251	RO	F4
R3X04A6I	TEMP_RTD5	RTD #5 TEMPERATURE	°C, 1, -52 to 251	RO	F4

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X04A7I	TEMP_RTD6	RTD #6 TEMPERATURE	°C, 1, -52 to 251	RO	F4
R3X04A8I	TEMP_RTD7	RTD #7 TEMPERATURE	°C, 1, -52 to 251	RO	F4
R3X04A9I	TEMP_RTD8	RTD #8 TEMPERATURE	°C, 1, -52 to 251	RO	F4
R3X04AAI	TEMP_RTD9	RTD #9 TEMPERATURE	°C, 1, -52 to 251	RO	F4
R3X04ABI	TEMP_RTD10	RTD #10 TEMPERATURE	°C, 1, -52 to 251	RO	F4
R3X04ACI	TEMP_RTD11	RTD #11 TEMPERATURE	°C, 1, -52 to 251	RO	F4
R3X04ADI	TEMP_RTD12	RTD #12 TEMPERATURE	°C, 1, -52 to 251	RO	F4
R3X04C0I	TEMP_HOTTEST_RTD_F	HOTTEST STATOR RTD TEMPERATURE	°F, 1, -52 to 250	RO	F4
R3X04C1I	TEMP_RTD1_F	RTD #1 TEMPERATURE	°F, 1, -52 to 251	RO	F4
R3X04C2I	TEMP_RTD2_F	RTD #2 TEMPERATURE	°F, 1, -52 to 251	RO	F4
R3X04C3I	TEMP_RTD3_F	RTD #3 TEMPERATURE	°F, 1, -52 to 251	RO	F4
R3X04C4I	TEMP_RTD4_F	RTD #4 TEMPERATURE	°F, 1, -52 to 251	RO	F4
R3X04C5I	TEMP_RTD5_F	RTD #5 TEMPERATURE	°F, 1, -52 to 251	RO	F4
R3X04C6I	TEMP_RTD6_F	RTD #6 TEMPERATURE	°F, 1, -52 to 251	RO	F4
R3X04C7I	TEMP_RTD7_F	RTD #7 TEMPERATURE	°F, 1, -52 to 251	RO	F4
R3X04C8I	TEMP_RTD8_F	RTD #8 TEMPERATURE	°F, 1, -52 to 251	RO	F4
R3X04C9I	TEMP_RTD9_F	RTD #9 TEMPERATURE	°F, 1, -52 to 251	RO	F4
R3X04CAI	TEMP_RTD10_F	RTD #10 TEMPERATURE	°F, 1, -52 to 251	RO	F4
R3X04CBI	TEMP_RTD11_F	RTD #11 TEMPERATURE	°F, 1, -52 to 251	RO	F4
R3X04CCI	TEMP_RTD12_F	RTD #12 TEMPERATURE	°F, 1, -52 to 251	RO	F4
R3X04E0L	DMND_A	CURRENT DEMAND	Amps, 1, 0 to 1000000	RO	F12
R3X04E2L	DMND_MW	MW DEMAND	MW, 1, 0 to 2000000	RO	F13
R3X04E4L	DMND_MVAR	Mvar DEMAND	Mvar, 1, 0 to 2000000	RO	F13
R3X04E6L	DMND_MVA	MVA DEMAND	MVA, 1, 0 to 2000000	RO	F13
R3X04E8L	PEAK_DMND_A	PEAK CURRENT DEMAND	Amps, 1, 0 to 1000000	RO	F12
R3X04EAL	PEAK_DMND_MW	PEAK MW DEMAND	MW, 1, 0 to 2000000	RO	F13
R3X04ECL	PEAK_DMND_MVAR	PEAK Mvar DEMAND	Mvar, 1, 0 to 2000000	RO	F13
R3X04EEL	PEAK_DMND_MVA	PEAK MVA DEMAND	MVA, 1, 0 to 2000000	RO	F13
R3X0500L	ANAL_IN1	ANALOG INPUT 1	Units, 1, -50000 to 50000	RO	F12
R3X0502L	ANAL_IN2	ANALOG INPUT 2	Units, 1, -50000 to 50000	RO	F12
R3X0504L	ANAL_IN3	ANALOG INPUT 3	Units, 1, -50000 to 50000	RO	F12
R3X0506L	ANAL_IN4	ANALOG INPUT 4	Units, 1, -50000 to 50000	RO	F12
R3X0520	TACH_RPM	TACHOMETER	RPM, 1, 0 to 7200	RO	F1
R3X0600	AVG_GEN_LOAD	AVERAGE GENERATOR LOAD	% FLA, 1, 0 to 2000	RO	F1
R3X0601	AVG_NEG_SEQ_CURR	AVERAGE NEG. SEQ. CURRENT	% FLA, 1, 0 to 2000	RO	F1
R3X0602	AVG_PH_PH_VOLTS	AVERAGE PHASE-PHASE VOLTAGE	V, 1, 0 to 50000	RO	F1
R3X0620I	RTD1_MAX	RTD #1 MAX. TEMP.	°C, 1, -52 to 251	RO	F4
R3X0621I	RTD2_MAX	RTD #2 MAX. TEMP.	°C, 1, -52 to 251	RO	F4
R3X0622I	RTD3_MAX	RTD #3 MAX. TEMP.	°C, 1, -52 to 251	RO	F4
R3X0623I	RTD4_MAX	RTD #4 MAX. TEMP.	°C, 1, -52 to 251	RO	F4
R3X0624I	RTD5_MAX	RTD #5 MAX. TEMP.	°C, 1, -52 to 251	RO	F4
R3X0625I	RTD6_MAX	RTD #6 MAX. TEMP.	°C, 1, -52 to 251	RO	F4
R3X0626I	RTD7_MAX	RTD #7 MAX. TEMP.	°C, 1, -52 to 251	RO	F4
R3X0627I	RTD8_MAX	RTD #8 MAX. TEMP.	°C, 1, -52 to 251	RO	F4
R3X0628I	RTD9_MAX	RTD #9 MAX. TEMP.	°C, 1, -52 to 251	RO	F4

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X0629I	RTD10_MAX	RTD #10 MAX. TEMP.	°C, 1, -52 to 251	RO	F4
R3X062AI	RTD11_MAX	RTD #11 MAX. TEMP.	°C, 1, -52 to 251	RO	F4
R3X062BI	RTD12_MAX	RTD #12 MAX. TEMP.	°C, 1, -52 to 251	RO	F4
R3X0640I	RTD1_MAX_F	RTD #1 MAX. TEMP.	°F, 1, -52 to 251	RO	F4
R3X0641I	RTD2_MAX_F	RTD #2 MAX. TEMP.	°F, 1, -52 to 251	RO	F4
R3X0642I	RTD3_MAX_F	RTD #3 MAX. TEMP.	°F, 1, -52 to 251	RO	F4
R3X0643I	RTD4_MAX_F	RTD #4 MAX. TEMP.	°F, 1, -52 to 251	RO	F4
R3X0644I	RTD5_MAX_F	RTD #5 MAX. TEMP.	°F, 1, -52 to 251	RO	F4
R3X0645I	RTD6_MAX_F	RTD #6 MAX. TEMP.	°F, 1, -52 to 251	RO	F4
R3X0646I	RTD7_MAX_F	RTD #7 MAX. TEMP.	°F, 1, -52 to 251	RO	F4
R3X0647I	RTD8_MAX_F	RTD #8 MAX. TEMP.	°F, 1, -52 to 251	RO	F4
R3X0648I	RTD9_MAX_F	RTD #9 MAX. TEMP.	°F, 1, -52 to 251	RO	F4
R3X0649I	RTD10_MAX_F	RTD #10 MAX. TEMP.	°F, 1, -52 to 251	RO	F4
R3X064AI	RTD11_MAX_F	RTD #11 MAX. TEMP.	°F, 1, -52 to 251	RO	F4
R3X064BI	RTD12_MAX_F	RTD #12 MAX. TEMP.	°F, 1, -52 to 251	RO	F4
R3X0700L	AI1_MIN	ANALOG INPUT 1 MINIMUM	Units, 1, -50000 to 50000	RO	F12
R3X0702L	AI1_MAX	ANALOG INPUT 1 MAXIMUM	Units, 1, -50000 to 50000	RO	F12
R3X0704L	AI2_MIN	ANALOG INPUT 2 MINIMUM	Units, 1, -50000 to 50000	RO	F12
R3X0706L	AI2_MAX	ANALOG INPUT 2 MAXIMUM	Units, 1, -50000 to 50000	RO	F12
R3X0708L	AI3_MIN	ANALOG INPUT 3 MINIMUM	Units, 1, -50000 to 50000	RO	F12
R3X070AL	AI3_MAX	ANALOG INPUT 3 MAXIMUM	Units, 1, -50000 to 50000	RO	F12
R3X070CL	AI4_MIN	ANALOG INPUT 4 MINIMUM	Units, 1, -50000 to 50000	RO	F12
R3X070EL	AI4_MAX	ANALOG INPUT 4 MAXIMUM	Units, 1, -50000 to 50000	RO	F12
R3X077FL	TRIP_CLEAR_DATE	TRIP COUNTERS LAST CLEARED (DATE)	N/A	RO	F18
R3X0781	TOTAL_TRIPS	TOTAL NUMBER OF TRIPS	-, 1, 0 to 50000	RO	F1
R3X0782	INPUT_SW_TRIPS	DIGITAL INPUT TRIPS	-, 1, 0 to 50000	RO	F1
R3X0783	SEQ_TRIPS	SEQUENTIAL TRIPS	-, 1, 0 to 50000	RO	F1
R3X0784	FLD_BKR_DISC_TRIPS	FIELD-BKR DISCREP. TRIPS	-, 1, 0 to 50000	RO	F1
R3X0785	TACH_TRIPS	TACHOMETER TRIPS	-, 1, 0 to 50000	RO	F1
R3X0786	OFFLN_OC_TRIPS	OFFLINE OVERCURRENT TRIPS	-, 1, 0 to 50000	RO	F1
R3X0787	PH_OC_TRIPS	PHASE OVERCURRENT TRIPS	-, 1, 0 to 50000	RO	F1
R3X0788	NEG_SEQ_OC_TRIPS	NEG.SEQ. OVERCURRENT TRIPS	-, 1, 0 to 50000	RO	F1
R3X0789	GND_OC_TRIPS	GROUND OVERCURRENT TRIPS	-, 1, 0 to 50000	RO	F1
R3X078A	PHASE_DIFF_TRIPS	PHASE DIFFERENTIAL TRIPS	-, 1, 0 to 50000	RO	F1
R3X078B	UV_TRIPS	UNDERVOLTAGE TRIPS	-, 1, 0 to 50000	RO	F1
R3X078C	OV_TRIPS	OVERVOLTAGE TRIPS	-, 1, 0 to 50000	RO	F1
R3X078D	V_HZ_TRIPS	VOLTS/HERTZ TRIPS	-, 1, 0 to 50000	RO	F1
R3X078E	PHASE_REV_TRIPS	PHASE REVERSAL TRIPS	-, 1, 0 to 50000	RO	F1
R3X078F	UF_TRIPS	UNDERFREQUENCY TRIPS	-, 1, 0 to 50000	RO	F1
R3X0790	OF_TRIPS	OVERFREQUENCY TRIPS	-, 1, 0 to 50000	RO	F1
R3X0791	NEUTRAL_OV_TRIPS	NEUTRAL O/V (Fund) TRIPS	-, 1, 0 to 50000	RO	F1
R3X0792	NEUTRAL_UV_TRIPS	NEUTRAL U/V (3rd) TRIPS	-, 1, 0 to 50000	RO	F1
R3X0793	RP_TRIPS	REACTIVE POWER TRIPS	-, 1, 0 to 50000	RO	F1
R3X0794	REV_PWR_TRIPS	REVERSE POWER TRIPS	-, 1, 0 to 50000	RO	F1
R3X0795	LO_FWD_PWR_TRIPS	LOW FORWARD POWER TRIPS	-, 1, 0 to 50000	RO	F1

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X0796	STATOR_RTD_TRIPS	STATOR RTD TRIPS	-, 1, 0 to 50000	RO	F1
R3X0797	BEARING_RTD_TRIPS	BEARING RTD TRIPS	-, 1, 0 to 50000	RO	F1
R3X0798	OTHER_RTD_TRIPS	OTHER RTD TRIPS	-, 1, 0 to 50000	RO	F1
R3X0799	AMBIENT_RTD_TRIPS	AMBIENT RTD TRIPS	-, 1, 0 to 50000	RO	F1
R3X079A	THERMAL_MODEL_TRIPS	THERMAL MODEL TRIPS	-, 1, 0 to 50000	RO	F1
R3X079B	INADV_ENERGY_TRIPS	INADVERTENT ENERG. TRIPS	-, 1, 0 to 50000	RO	F1
R3X079C	AI1_TRIPS	ANALOG INPUT 1 TRIPS	-, 1, 0 to 50000	RO	F1
R3X079D	AI2_TRIPS	ANALOG INPUT 2 TRIPS	-, 1, 0 to 50000	RO	F1
R3X079E	AI3_TRIPS	ANALOG INPUT 3 TRIPS	-, 1, 0 to 50000	RO	F1
R3X079F	AI4_TRIPS	ANALOG INPUT 4 TRIPS	-, 1, 0 to 50000	RO	F1
R3X07A0	BRKR_OPS	NUMBER OF BREAKER OPERATIONS	-, 1, 0 to 50000	RO	F1
R3X07A1L	NUM_THERMAL_RESETS	NUMBER OF THERMAL RESETS	-, 1, 0 to 50000	RO	F12
R3X07A2	R3X07A2	LOSS_EXCIT1_TRPS	-, 1, 0 to 50000	RO	F1
R3X07A3	R3X07A3	LOSS_EXCIT2_TRPS	-, 1, 0 to 50000	RO	F1
R3X07A4	R3X07A4	GND_DIR_TRPS	-, 1, 0 to 50000	RO	F1
R3X07A5	R3X07A5	HI_SET_PH_OC_TRPS	-, 1, 0 to 50000	RO	F1
R3X07A6	R3X07A6	DIST1_TRPS	-, 1, 0 to 50000	RO	F1
R3X07A7	R3X07A7	DIST2_TRPS	-, 1, 0 to 50000	RO	F1
R3X07E0L	GEN_HRS_ONLINE	GENERATOR HOURS ONLINE	h, 1, 0 to 1000000	RO	F12
R3X0800	ORDER_CODE	ORDER CODE	N/A, 1, 0 to 65535	RO	F136
R3X0801L	SERIAL_NUM	SR489 SERIAL NUMBER	-, 1, 3000000 to 9999999	RO	F12
R3X0810L	DATE_ORIG_CALIB	ORIGINAL CALIBRATION DATE	N/A	RO	F18
R3X0812L	DATE_LAST_CALIB	LAST CALIBRATION DATE	N/A	RO	F18

NOTES:

The Multilin SR489 uses many special function codes which are detailed in the SR489 Users Manual. Please refer to that publication for details of format codes.

COMMAND COILS

Command Coils					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value	R/W	Format Code
R0X0001	CMD_RESET				
R0X0002	CMD_GENERATOR_START				
R0X0003	CMD_GENERATOR_STOP				

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SR745 Transformer Management Relay

- *SETPOINT REGISTERS*
- *ACTUAL VALUES*
- *COMMAND COILS*

Format Codes

The Format Codes column contains references to special formatting which applies to a given register. These formatting characteristics are provided in the SR745 Instruction Manual.

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X0080	COMMAND_CODE	Command Operation Code	-, -, -	RW	F19
R4X0081S8	COMM_PORT_PASSCODE	Passcode Access (4 registers)	-, -, -	RW	F33
R4X0085S8	CHANGE_PASSCODE	Change Passcode (4 registers)	-, -, -	RW	F33
R4X0090	VIRT_IN1	Virtual Input 1 Programmed State	-, -, -	RW	F43
R4X0091	VIRT_IN2	Virtual Input 2 Programmed State	-, -, -	RW	F43
R4X0092	VIRT_IN3	Virtual Input 3 Programmed State	-, -, -	RW	F43
R4X0093	VIRT_IN4	Virtual Input 4 Programmed State	-, -, -	RW	F43
R4X0094	VIRT_IN5	Virtual Input 5 Programmed State	-, -, -	RW	F43
R4X0095	VIRT_IN6	Virtual Input 6 Programmed State	-, -, -	RW	F43
R4X0096	VIRT_IN7	Virtual Input 7 Programmed State	-, -, -	RW	F43
R4X0097	VIRT_IN8	Virtual Input 8 Programmed State	-, -, -	RW	F43
R4X0098	VIRT_IN9	Virtual Input 9 Programmed State	-, -, -	RW	F43
R4X0099	VIRT_IN10	Virtual Input 10 Programmed State	-, -, -	RW	F43
R4X009A	VIRT_IN11	Virtual Input 11 Programmed State	-, -, -	RW	F43
R4X009B	VIRT_IN12	Virtual Input 12 Programmed State	-, -, -	RW	F43
R4X009C	VIRT_IN13	Virtual Input 13 Programmed State	-, -, -	RW	F43
R4X009D	VIRT_IN14	Virtual Input 14 Programmed State	-, -, -	RW	F43
R4X009E	VIRT_IN15	Virtual Input 15 Programmed State	-, -, -	RW	F43
R4X009F	VIRT_IN16	Virtual Input 16 Programmed State	-, -, -	RW	F43
R4X00F0L	TIME	Time (2 registers)	-, -, -	RW	F22
R4X00F2L	DATE	Date (2 registers)	-, -, -	RW	F23
R4X0800L	EV_REC_LST_CLR_DATE	Event Recorder Last Clear Date (2 registers)	-, -, -	RO	F23
R4X0802L	EV_REC_LST_CLR_TIME	Event Recorder Last Clear Time (2 registers)	-, -, -	RO	F22
R4X0804	TOT_EVNTS_SINCE_CLR	Total Number of Events Since Last Clear	-, 1, 0-65535	RO	F1
R4X0805	EV_REC_NUM_SEL	Event Record Selector Index (XX)	-, 1, 1-65535	RW	F1
R4X0810		Maximum Event Winding 1 Phase A Current	A, -, -	RO	F78
R4X0811		Maximum Event Winding 1 Phase B Current	A, -, -	RO	F78
R4X0812		Maximum Event Winding 1 Phase C Current	A, -, -	RO	F78
R4X0813		Maximum Event Winding 1 Ground Current	A, -, -	RO	F81
R4X0814		Maximum Event Winding 2 Phase A Current	A, -, -	RO	F79
R4X0815		Maximum Event Winding 2 Phase B Current	A, -, -	RO	F79
R4X0816		Maximum Event Winding 2 Phase C Current	A, -, -	RO	F79
R4X0817		Maximum Event Winding 2 Ground Current	A, -, -	RO	F82
R4X0818		Maximum Event Winding 3 Phase A Current	A, -, -	RO	F80
R4X0819		Maximum Event Winding 3 Phase B Current	A, -, -	RO	F80
R4X081A		Maximum Event Winding 3 Phase C Current	A, -, -	RO	F80

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X081B		Maximum Event Winding 3 Ground Current	A, -, -	RO	F83
R4X0830L	EVENT_DATE	Event XX Date of Event (2 registers)	-, -, -	RO	F23
R4X0832L	EVENT_TIME	Event XX Time of Event (2 registers)	-, -, -	RO	F22
R4X0834	EVENT_CAUSE	Event XX Cause of Event	-, -, -	RO	F24
R4X0835		Event XX Winding 1 Phase A Current Magnitude	A, -, -	RO	F78
R4X0836		Event XX Winding 1 Phase A Current Angle	° Lag, -, 0	RO	F1
R4X0837		Event XX Winding 1 Phase B Current Magnitude	A, -, -	RO	F78
R4X0838		Event XX Winding 1 Phase B Current Angle	° Lag, 1, 0-359	RO	F1
R4X0839		Event XX Winding 1 Phase C Current Magnitude	A, -, -	RO	F78
R4X083A		Event XX Winding 1 Phase C Current Angle	° Lag, 1, 0-359	RO	F1
R4X083B		Event XX Winding 1 Ground Current Magnitude	A, -, -	RO	F81
R4X083C		Event XX Winding 1 Ground Current Angle	° Lag, 1, 0-359	RO	F1
R4X083D		Event XX Winding 1 Phase A 2nd Harmonic	% fo, 0.1, 0.0-99.9	RO	F2
R4X083E		Event XX Winding 1 Phase B 2nd Harmonic	% fo, 0.1, 0.0-99.9	RO	F2
R4X083F		Event XX Winding 1 Phase C 2nd Harmonic	% fo, 0.1, 0.0-99.9	RO	F2
R4X0840		Event XX Winding 1 Phase A 5th Harmonic	% fo, 0.1, 0.0-99.9	RO	F2
R4X0841		Event XX Winding 1 Phase B 5th Harmonic	% fo, 0.1, 0.0-99.9	RO	F2
R4X0842		Event XX Winding 1 Phase C 5th Harmonic	% fo, 0.1, 0.0-99.9	RO	F2
R4X0843		Event XX Winding 2 Phase A Current Magnitude	A, -, -	RO	F79
R4X0844		Event XX Winding 2 Phase A Current Angle	° Lag, 1, 0-359	RO	F1
R4X0845		Event XX Winding 2 Phase B Current Magnitude	A, -, -	RO	F79
R4X0846		Event XX Winding 2 Phase B Current Angle	° Lag, 1, 0-359	RO	F1
R4X0847		Event XX Winding 2 Phase C Current Magnitude	A, -, -	RO	F79
R4X0848		Event XX Winding 2 Phase C Current Angle	° Lag, 1, 0-359	RO	F1
R4X0849		Event XX Winding 2 Ground Current Magnitude	A, -, -	RO	F82
R4X084A		Event XX Winding 2 Ground Current Angle	° Lag, 1, 0-359	RO	F1
R4X084B		Event XX Winding 2 Phase A 2nd Harmonic	% fo, 0.1, 0.0-99.9	RO	F2
R4X084C		Event XX Winding 2 Phase B 2nd Harmonic	% fo, 0.1, 0.0-99.9	RO	F2
R4X084D		Event XX Winding 2 Phase C 2nd Harmonic	% fo, 0.1, 0.0-99.9	RO	F2
R4X084E		Event XX Winding 2 Phase A 5th Harmonic	% fo, 0.1, 0.0-99.9	RO	F2
R4X084F		Event XX Winding 2 Phase B 5th Harmonic	% fo, 0.1, 0.0-99.9	RO	F2
R4X0850		Event XX Winding 2 Phase C 5th Harmonic	% fo, 0.1, 0.0-99.9	RO	F2
R4X0851		Event XX Winding 3 Phase A Current Magnitude	A, -, -	RO	F80
R4X0852		Event XX Winding 3 Phase A Current Angle	° Lag, 1, 0-359	RO	F1
R4X0853		Event XX Winding 3 Phase B Current Magnitude	A, -, -	RO	F80
R4X0854		Event XX Winding 3 Phase B Current Angle	° Lag, 1, 0-359	RO	F1
R4X0855		Event XX Winding 3 Phase C Current Magnitude	A, -, -	RO	F80

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X0856		Event XX Winding 3 Phase C Current Angle	° Lag, 1, 0–359	RO	F1
R4X0857		Event XX Winding 3 Ground Current Magnitude	A, –, –	RO	F83
R4X0858		Event XX Winding 3 Ground Current Angle	° Lag, 1, 0–359	RO	F1
R4X0859		Event XX Winding 3 Phase A 2nd Harmonic	% fo, 0.1, 0.0–99.9	RO	F2
R4X085A		Event XX Winding 3 Phase B 2nd Harmonic	% fo, 0.1, 0.0–99.9	RO	F2
R4X085B		Event XX Winding 3 Phase C 2nd Harmonic	% fo, 0.1, 0.0–99.9	RO	F2
R4X085C		Event XX Winding 3 Phase A 5th Harmonic	% fo, 0.1, 0.0–99.9	RO	F2
R4X085D		Event XX Winding 3 Phase B 5th Harmonic	% fo, 0.1, 0.0–99.9	RO	F2
R4X085E		Event XX Winding 3 Phase C 5th Harmonic	% fo, 0.1, 0.0–99.9	RO	F2
R4X085F		Event XX Phase A Differential Current	x CT, 0.01, 0.00–655.35	RO	F3
R4X0860		Event XX Phase B Differential Current	x CT, 0.01, 0.00–655.35	RO	F3
R4X0861		Event XX Phase C Differential Current	x CT, 0.01, 0.00–655.35	RO	F3
R4X0862		Event XX Phase A Restraint Current	x CT, 0.01, 0.00–655.35	RO	F3
R4X0863		Event XX Phase B Restraint Current	x CT, 0.01, 0.00–655.35	RO	F3
R4X0864		Event XX Phase C Restraint Current	x CT, 0.01, 0.00–655.35	RO	F3
R4X0865		Event XX System Frequency	Hz, 0.01, 0.00–99.99	RO	F3
R4X0866I		Event XX Frequency Decay Rate	Hz/s, 0.01, -9.99–9.99	RO	F6
R4X0867		Event XX Tap Changer Position	–, 1, 1–50	RO	F1
R4X0868		Event XX Volts-per-Hertz	V/Hz, 0.01, 0.00–4.00	RO	F3
R4X0869I		Event XX Ambient Temperature	°C, 1, -51–251	RO	F4
R4X086A		Event XX Analog Input	<Units>, 1, 0–65000	RO	F1
R4X1000	DEVICE_PROGRAMMED	SR745 Setpoints	–, –, –	RW	F29
R4X1001S8	ENCRYPTED_PASSCODE	Encrypted Passcode (4 registers)	–, –, –	RO	F33
R4X1005	BEEPER	Beeper	–, –, –	RW	F30
R4X1006	FLSH_MSG_TIME	Flash Message Time	s, 0.5, 0.5–10.0	RW	F2
R4X1007	DFT_MSG_TIMEOUT	Default Message Timeout	s, 1, 10–900	RW	F1
R4X1008	DFT_MSG_INTEN	Default Message Intensity	%, 25, 0–100	RW	F1
R4X1009	MODBUS_ADDR	Slave Address	–, 1, 1–254	RW	F1
R4X100A	COM1_BAUD	COM1 Baud Rate	–, –, –	RW	F31
R4X100B	COM1_PARITY	COM1 Parity	–, –, –	RW	F73
R4X100C	COM1_HW	COM1 Communication Hardware	–, –, –	RW	F17
R4X100D	COM2_BAUD	COM2 Baud Rate	–, –, –	RW	F31
R4X100E	COM2_PARITY	COM2 Parity	–, –, –	RW	F73
R4X100F	FRNT_BAUD	Front Port Baud Rate	–, –, –	RW	F31
R4X1010	FRNT_PARITY	Front Port Parity	–, –, –	RW	F73
R4X1011	LOCAL_RESET_BLK	Local Reset Block	–, –, –	RW	F87
R4X1012	REM_RESET_SIGNAL	Remote Reset Signal	–, –, –	RW	F88
R4X1013	IRIG_B_SIGNAL	IRIG-B Signal Type	–, –, –	RW	F84
R4X1014	ACTIVE_SP_GRP	Active Setpoint Group	–, –, –	RW	F60
R4X1015	EDIT_SP_GRP	Edit Setpoint Group	–, –, –	RW	F74

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1016	SP_GRP2_ACTIVATE	Setpoint Group 2 Activate Signal	-, -, -	RW	F88
R4X1017	SP_GRP3_ACTIVATE	Setpoint Group 3 Activate Signal	-, -, -	RW	F88
R4X1018	SP_GRP4_ACTIVATE	Setpoint Group 4 Activate Signal	-, -, -	RW	F88
R4X1019	CLR_EVNT_RECORD	Clear Event Recorder Signal	-, -, -	RW	F88
R4X101A	DNP_PORT	DNP Port	-, -, -	RW	F99
R4X1020	MSGSEL	Number Of Default Messages Selected [READ only]	-, 1, 0-30	RW	F1
R4X1021L	DFT_MSG1	Default Message #1 (2 registers)	-, -, -	RW	F32
R4X1023L	DFT_MSG2	Default Message #2 (2 registers)	-, -, -	RW	F32
R4X1025L	DFT_MSG3	Default Message #3 (2 registers)	-, -, -	RW	F32
R4X1027L	DFT_MSG4	Default Message #4 (2 registers)	-, -, -	RW	F32
R4X1029L	DFT_MSG5	Default Message #5 (2 registers)	-, -, -	RW	F32
R4X102BL	DFT_MSG6	Default Message #6 (2 registers)	-, -, -	RW	F32
R4X102DL	DFT_MSG7	Default Message #7 (2 registers)	-, -, -	RW	F32
R4X102FL	DFT_MSG8	Default Message #8 (2 registers)	-, -, -	RW	F32
R4X1031L	DFT_MSG9	Default Message #9 (2 registers)	-, -, -	RW	F32
R4X1033L	DFT_MSG10	Default Message #10 (2 registers)	-, -, -	RW	F32
R4X1035L	DFT_MSG11	Default Message #11 (2 registers)	-, -, -	RW	F32
R4X1037L	DFT_MSG12	Default Message #12 (2 registers)	-, -, -	RW	F32
R4X1039L	DFT_MSG13	Default Message #13 (2 registers)	-, -, -	RW	F32
R4X103BL	DFT_MSG14	Default Message #14 (2 registers)	-, -, -	RW	F32
R4X103DL	DFT_MSG15	Default Message #15 (2 registers)	-, -, -	RW	F32
R4X103FL	DFT_MSG16	Default Message #16 (2 registers)	-, -, -	RW	F32
R4X1041L	DFT_MSG17	Default Message #17 (2 registers)	-, -, -	RW	F32
R4X1043L	DFT_MSG18	Default Message #18 (2 registers)	-, -, -	RW	F32
R4X1045L	DFT_MSG19	Default Message #19 (2 registers)	-, -, -	RW	F32
R4X1047L	DFT_MSG20	Default Message #20 (2 registers)	-, -, -	RW	F32
R4X1049L	DFT_MSG21	Default Message #21 (2 registers)	-, -, -	RW	F32
R4X104BL	DFT_MSG22	Default Message #22 (2 registers)	-, -, -	RW	F32
R4X104DL	DFT_MSG23	Default Message #23 (2 registers)	-, -, -	RW	F32
R4X104FL	DFT_MSG24	Default Message #24 (2 registers)	-, -, -	RW	F32
R4X1051L	DFT_MSG25	Default Message #25 (2 registers)	-, -, -	RW	F32
R4X1053L	DFT_MSG26	Default Message #26 (2 registers)	-, -, -	RW	F32
R4X1055L	DFT_MSG27	Default Message #27 (2 registers)	-, -, -	RW	F32
R4X1057L	DFT_MSG28	Default Message #28 (2 registers)	-, -, -	RW	F32
R4X1059L	DFT_MSG29	Default Message #29 (2 registers)	-, -, -	RW	F32
R4X105BL	DFT_MSG30	Default Message #30 (2 registers)	-, -, -	RW	F32
R4X1060S40	SCRATCH_MSG1	Scratchpad Message 1 (20 registers)	-, -, -	RW	F33
R4X1074S40	SCRATCH_MSG2	Scratchpad Message 2 (20 registers)	-, -, -	RW	F33
R4X1088S40	SCRATCH_MSG3	Scratchpad Message 3 (20 registers)	-, -, -	RW	F33
R4X109CS40	SCRATCH_MSG4	Scratchpad Message 4 (20 registers)	-, -, -	RW	F33
R4X10B0S40	SCRATCH_MSG5	Scratchpad Message 5 (20 registers)	-, -, -	RW	F33
R4X10D0	DNP_PORT	Port Used for DNP	---, ---, ---	RW	F99
R4X10D1	INCL_USR_MAP_PTS	Include User Map Points (Point Mapping)	---, ---, ---	RW	F30
R4X10D2	XMISSION_DLY	Transmission Delay	ms, 1, 0 to 65000	RW	F1
R4X10D3	DATA_LK_CONF_MODE	Data Link Confirmation Mode	---, ---, ---	RW	F102

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X10D4	DATA_LK_CONF_TIMEOUT	Data Link Confirmation Timeout	ms, 1, 1 to 65000	RW	F1
R4X10D5	DATA_LK_CONF_RETRIES	Data Link Confirmation Retries	---, 1, 0 to 100	RW	F1
R4X10D6	SEL_ARM_TMR_DUR	Select/Operate Arm Timer Duration	ms, 1, 1 to 65000	RW	F1
R4X10D7	WRITE_INTVL	Write Time Interval	ms, 1, 0 to 65000	RW	F1
R4X10D8	INHBT_COLD_RESTRT	Inhibit Cold Restart	---, ---, ---	RW	F30
R4X1100	NOM_FREQ	Nominal Frequency	Hz, 10, 50–60	RW	F1
R4X1101	PH_SEQ	Phase Sequence	-, -, -	RW	F27
R4X1102	TXF_TYPE	Transformer Type	-, -, -	RW	F28
R4X1103	RATED_WIND_TEMP_RISE	Rated Winding Temperature Rise	-, -, -	RW	F37
R4X1104	COOLING_TYPE	Type of Cooling	-, -, -	RW	F39
R4X1105	LOAD_LOSS_AT_RATED	Load Loss at Rated Load	kW, 1, 0–10000	RW	F1
R4X1106	LOW_VOLTAGE_RATING	Low Voltage Winding Rating	-, -, 0–2	RW	F89
R4X1107	NO_LOAD_LOSS	No-Load Loss	kW, 1, 1 to 20000	RW	F90
R4X1108	OIL_RISE	Top Oil Rise Over Ambient (at rated load)	° C, 1, 1 to 200	RW	F1
R4X1109	XFMR_THERM_CAP	Transformer Thermal Capacity	kwh/° C, 0.01, 0.00 to 200.00	RW	F3
R4X110A	TIME_CONST_OIL	Winding Time Constant Oil-Immersed	minutes, 0.01, 0.25 to 15.00	RW	F3
R4X110B	COOLING_TYPE_DRY	Type of Cooling: Dry	---, ---, ---	RW	F100
R4X110C	THERM_TIME_CONST	Thermal Time Constant: Dry	minutes, 0.01, 0.25 to 15.00	RW	F3
R4X110D	INIT_ACC_LOSS_LIFE	Set Initial Accumulated Loss of Life	hours x 10, 1, 0 to 20000	RW	F1
R4X110E	FREQ_TRACK	Frequency Tracking	---, ---, ---	RW	F30
R4X1120	W1_V_PH_PH	Winding 1 Nominal Phase-to-Phase Voltage	kV, 0.1, 0.1–1000.0	RW	F2
R4X1121	W1_RATED_LOAD	Winding 1 Rated Load	MVA, 0.1, 0.1–1000.0	RW	F2
R4X1122	W1_PH_CT	Winding 1 Phase CT Primary	:1 or :5 A, 1, 1–50000	RW	F1
R4X1123	W1_GND_CT	Winding 1 Ground CT Primary	:1 or :5 A, 1, 1–50000	RW	F1
R4X1124	W1_SER_3PH_RES	Winding 1 Series 3-Phase Resistance	Ohms, 0.001, 0.001–50.000	RW	F53
R4X1130	W2_V_PH_PH	Winding 2 Nominal Phase-to-Phase Voltage	kV, 0.1, 0.1–1000.0	RW	F2
R4X1131	W2_RATED_LOAD	Winding 2 Rated Load	MVA, 0.1, 0.1–1000.0	RW	F2
R4X1132	W2_PH_CT	Winding 2 Phase CT Primary	:1 or :5 A, 1, 1–50000	RW	F1
R4X1133	W2_GND_CT	Winding 2 Ground CT Primary	:1 or :5 A, 1, 1–50000	RW	F1
R4X1134	W2_SER_3PH_RES	Winding 2 Series 3-Phase Resistance	Ohms, 0.001, 0.001–50.000	RW	F53
R4X1140	W3_V_PH_PH	Winding 3 Nominal Phase-to-Phase Voltage	kV, 0.1, 0.1–1000.0	RW	F2
R4X1141	W3_RATED_LOAD	Winding 3 Rated Load	MVA, 0.1, 0.1–1000.0	RW	F2
R4X1142	W3_PH_CT	Winding 3 Phase CT Primary	:1 or :5 A, 1, 1–50000	RW	F1
R4X1143	W3_GND_CT	Winding 3 Ground CT Primary	:1 or :5 A, 1, 1–50000	RW	F1
R4X1144	W3_SER_3PH_RES	Winding 3 Series 3-Phase Resistance	Ohms, 0.001, 0.001–50.000	RW	F53
R4X1160	WINDING_TAP_CHANGER	Winding With Tap Changer	-, -, -	RW	F40
R4X1161	TAP_POSITIONS	Number of Tap Positions	-, 1, 2–50	RW	F1
R4X1162	MIN_TAP_POS_V	Minimum Tap Position Voltage	kV, 0.1, 0.1–1000.0	RW	F2
R4X1163	V_INCR_PER_TAP	Voltage Increment Per Tap	kV, 0.01, 0.01–20.00	RW	F3
R4X1164	RES_INCR_PER_TAP	Resistance Increment Per Tap	Ohms, 1, 10–500	RW	F1
R4X1168	HARM_DERATE_EST	Harmonic Derating Estimation	-, -, -	RW	F30

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1169	THD_MIN_HARM_NUM	THD Minimum Harmonic Number	-, -, -	RW	F92
R4X116A	THD_MAX_HARM_NUM	THD Maximum Harmonic Number	-, -, -	RW	F92
R4X1170A80	FLEXCURVE_A	FlexCurve A Delay at 1.03 x PKP	ms, 1, 0–65000	RW	F1
R4X11C0A80	FLEXCURVE_B	FlexCurve B (80 registers - see FlexCurve A)	-, -, -	RW	---
R4X1210A80	FLEXCURVE_C	FlexCurve C (80 registers - see FlexCurve A)	-, -, -	RW	---
R4X1270	V_SENSE	Voltage Sensing	-, -, -	RW	F30
R4X1271	V_INPUT_PARAM	Voltage Input Parameter	-, -, -	RW	F63
R4X1272	NOM_VT_SEC_V	Nominal VT Secondary Voltage	V, 0.1, 60.0–120.0	RW	F2
R4X1273	VT_RATIO	VT Ratio	:1, 1, 1–7000	RW	F1
R4X1280	AMB_TEMP_SENSE	Ambient Temperature Sensing	-, -, -	RW	F30
R4X1281	AMB_RTD_TYPE	Ambient RTD Type	-, -, -	RW	F41
R4X1282	AVG_AMB_TEMP_JAN	Average Ambient Temperature for January	°C, 1, -50 to 124	RW	F4
R4X1283	AVG_AMB_TEMP_FEB	Average Ambient Temperature for February	°C, 1, -50 to 125	RW	F4
R4X1284	AVG_AMB_TEMP_MAR	Average Ambient Temperature for March	°C, 1, -50 to 125	RW	F4
R4X1285	AVG_AMB_TEMP_APR	Average Ambient Temperature for April	°C, 1, -50 to 125	RW	F4
R4X1286	AVG_AMB_TEMP_MAY	Average Ambient Temperature for May	°C, 1, -50 to 125	RW	F4
R4X1287	AVG_AMB_TEMP_JUN	Average Ambient Temperature for June	°C, 1, -50 to 125	RW	F4
R4X1288	AVG_AMB_TEMP_JUL	Average Ambient Temperature for July	°C, 1, -50 to 125	RW	F4
R4X1289	AVG_AMB_TEMP_AUG	Average Ambient Temperature for August	°C, 1, -50 to 125	RW	F4
R4X128A	AVG_AMB_TEMP_SEP	Average Ambient Temperature for September	°C, 1, -50 to 125	RW	F4
R4X128B	AVG_AMB_TEMP_OCT	Average Ambient Temperature for October	°C, 1, -50 to 125	RW	F4
R4X128C	AVG_AMB_TEMP_NOV	Average Ambient Temperature for November	°C, 1, -50 to 125	RW	F4
R4X128D	AVG_AMB_TEMP_DEC	Average Ambient Temperature for December	°C, 1, -50 to 125	RW	F4
R4X1290S18	ANAL_IN_NAME	Analog Input Name (9 registers)	-, -, -	RW	F33
R4X1299S6	ANAL_IN_UNITS	Analog Input Units (3 registers)	-, -, -	RW	F33
R4X129C	ANAL_IN_RANGE	Analog Input Range	-, -, -	RW	F42
R4X129D	ANAL_IN_MIN	Analog Input Minimum Value	<Units>, 1, 0–65000	RW	F1
R4X129E	ANAL_IN_MAX	Analog Input Maximum Value	<Units>, 1, 0–65000	RW	F1
R4X12C0	CURR_DMND_MTR_TYPE	Current Demand Meter Type	-, -, -	RW	F58
R4X12C1	THERM_90_RESP_TIME	Thermal 90% Response Time	-, -, -	RW	F16
R4X12C2	DMND_TIME_INTV	Time Interval	-, -, -	RW	F16
R4X12D0	ANAL_OUT1_FUNC	Analog Output 1 Function	-, -, -	RW	F30
R4X12D1	ANAL_OUT1_VAL	Analog Output 1 Value	-, -, -	RW	F45
R4X12D2	ANAL_OUT1_RNG	Analog Output 1 Range	-, -, -	RW	F26
R4X12D3	ANAL_OUT1_MIN	Analog Output 1 Minimum	-, -, -	RW	---
R4X12D4	ANAL_OUT1_MAX	Analog Output 1 Maximum	-, -, -	RW	---
R4X12D5	ANAL_OUT2_FUNC	Analog Output 2 Function	-, -, -	RW	F30
R4X12D6	ANAL_OUT2_VAL	Analog Output 2 Value	-, -, -	RW	F45
R4X12D7	ANAL_OUT2_RNG	Analog Output 2 Range	-, -, -	RW	F26
R4X12D8	ANAL_OUT2_MIN	Analog Output 2 Minimum	-, -, -	RW	---
R4X12D9	ANAL_OUT2_MAX	Analog Output 2 Maximum	-, -, -	RW	---
R4X12DA	ANAL_OUT3_FUNC	Analog Output 3 Function	-, -, -	RW	F30

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X12DB	ANAL_OUT3_VAL	Analog Output 3 Value	-, -, -	RW	F45
R4X12DC	ANAL_OUT3_RNG	Analog Output 3 Range	-, -, -	RW	F26
R4X12DD	ANAL_OUT3_MIN	Analog Output 3 Minimum	-, -, -	RW	---
R4X12DE	ANAL_OUT3_MAX	Analog Output 3 Maximum	-, -, -	RW	---
R4X12DF	ANAL_OUT4_FUNC	Analog Output 4 Function	-, -, -	RW	F30
R4X12E0	ANAL_OUT4_VAL	Analog Output 4 Value	-, -, -	RW	F45
R4X12E1	ANAL_OUT4_RNG	Analog Output 4 Range	-, -, -	RW	F26
R4X12E2	ANAL_OUT4_MIN	Analog Output 4 Minimum	-, -, -	RW	---
R4X12E3	ANAL_OUT4_MAX	Analog Output 4 Maximum	-, -, -	RW	---
R4X12E4	ANAL_OUT5_FUNC	Analog Output 5 Function	-, -, -	RW	F30
R4X12E5	ANAL_OUT5_VAL	Analog Output 5 Value	-, -, -	RW	F45
R4X12E6	ANAL_OUT5_RNG	Analog Output 5 Range	-, -, -	RW	F26
R4X12E7	ANAL_OUT5_MIN	Analog Output 5 Minimum	-, -, -	RW	---
R4X12E8	ANAL_OUT5_MAX	Analog Output 5 Maximum	-, -, -	RW	---
R4X12E9	ANAL_OUT6_FUNC	Analog Output 6 Function	-, -, -	RW	F30
R4X12EA	ANAL_OUT6_VAL	Analog Output 6 Value	-, -, -	RW	F45
R4X12EB	ANAL_OUT6_RNG	Analog Output 6 Range	-, -, -	RW	F26
R4X12EC	ANAL_OUT6_MIN	Analog Output 6 Minimum	-, -, -	RW	---
R4X12ED	ANAL_OUT6_MAX	Analog Output 6 Maximum	-, -, -	RW	---
R4X12EE	ANAL_OUT7_FUNC	Analog Output 7 Function	-, -, -	RW	F30
R4X12EF	ANAL_OUT7_VAL	Analog Output 7 Value	-, -, -	RW	F45
R4X12F0	ANAL_OUT7_RNG	Analog Output 7 Range	-, -, -	RW	F26
R4X12F1	ANAL_OUT7_MIN	Analog Output 7 Minimum	-, -, -	RW	---
R4X12F2	ANAL_OUT7_MAX	Analog Output 7 Maximum	-, -, -	RW	---
R4X1300	LOGIC_IN1_FUNC	Logic Input 1 Function	-, -, -	RW	F30
R4X1301S18	LOGIC_IN1_NAME	Logic Input 1 Name (9 registers)	-, -, -	RW	F33
R4X130A	LOGIC_IN1_STATE	Logic Input 1 Asserted State	-, -, -	RW	F75
R4X130B	LOGIC_IN2_FUNC	Logic Input 2 Function	-, -, -	RW	F30
R4X130CS18	LOGIC_IN2_NAME	Logic Input 2 Name (9 registers)	-, -, -	RW	F33
R4X1315	LOGIC_IN2_STATE	Logic Input 2 Asserted State	-, -, -	RW	F75
R4X1316	LOGIC_IN3_FUNC	Logic Input 3 Function	-, -, -	RW	F30
R4X1317S18	LOGIC_IN3_NAME	Logic Input 3 Name (9 registers)	-, -, -	RW	F33
R4X1320	LOGIC_IN3_STATE	Logic Input 3 Asserted State	-, -, -	RW	F75
R4X1321S18	LOGIC_IN4_FUNC	Logic Input 4 Function	-, -, -	RW	F30
R4X1322	LOGIC_IN4_NAME	Logic Input 4 Name (9 registers)	-, -, -	RW	F33
R4X132B	LOGIC_IN4_STATE	Logic Input 4 Asserted State	-, -, -	RW	F75
R4X132C	LOGIC_IN5_FUNC	Logic Input 5 Function	-, -, -	RW	F30
R4X132DS18	LOGIC_IN5_NAME	Logic Input 5 Name (9 registers)	-, -, -	RW	F33
R4X1336	LOGIC_IN5_STATE	Logic Input 5 Asserted State	-, -, -	RW	F75
R4X1337S18	LOGIC_IN6_FUNC	Logic Input 6 Function	-, -, -	RW	F30
R4X1338	LOGIC_IN6_NAME	Logic Input 6 Name (9 registers)	-, -, -	RW	F33
R4X1341	LOGIC_IN6_STATE	Logic Input 6 Asserted State	-, -, -	RW	F75
R4X1342S18	LOGIC_IN7_FUNC	Logic Input 7 Function	-, -, -	RW	F30
R4X1343	LOGIC_IN7_NAME	Logic Input 7 Name (9 registers)	-, -, -	RW	F33
R4X134C	LOGIC_IN7_STATE	Logic Input 7 Asserted State	-, -, -	RW	F75

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X134D	LOGIC_IN8_FUNC	Logic Input 8 Function	-, -, -	RW	F30
R4X134ES18	LOGIC_IN8_NAME	Logic Input 8 Name (9 registers)	-, -, -	RW	F33
R4X1357	LOGIC_IN8_STATE	Logic Input 8 Asserted State	-, -, -	RW	F75
R4X1358	LOGIC_IN9_FUNC	Logic Input 9 Function	-, -, -	RW	F30
R4X1359S18	LOGIC_IN9_NAME	Logic Input 9 Name (9 registers)	-, -, -	RW	F33
R4X1362	LOGIC_IN9_STATE	Logic Input 9 Asserted State	-, -, -	RW	F75
R4X1363	LOGIC_IN10_FUNC	Logic Input 10 Function	-, -, -	RW	F30
R4X1364S18	LOGIC_IN10_NAME	Logic Input 10 Name (9 registers)	-, -, -	RW	F33
R4X136D	LOGIC_IN10_STATE	Logic Input 10 Asserted State	-, -, -	RW	F75
R4X136E	LOGIC_IN11_FUNC	Logic Input 11 Function	-, -, -	RW	F30
R4X136FS18	LOGIC_IN11_NAME	Logic Input 11 Name (9 registers)	-, -, -	RW	F33
R4X1378	LOGIC_IN11_STATE	Logic Input 11 Asserted State	-, -, -	RW	F75
R4X1379	LOGIC_IN12_FUNC	Logic Input 12 Function	-, -, -	RW	F30
R4X137AS18	LOGIC_IN12_NAME	Logic Input 12 Name (9 registers)	-, -, -	RW	F33
R4X1383	LOGIC_IN12_STATE	Logic Input 12 Asserted State	-, -, -	RW	F75
R4X1384	LOGIC_IN13_FUNC	Logic Input 13 Function	-, -, -	RW	F30
R4X1385S18	LOGIC_IN13_NAME	Logic Input 13 Name (9 registers)	-, -, -	RW	F33
R4X138E	LOGIC_IN13_STATE	Logic Input 13 Asserted State	-, -, -	RW	F75
R4X138F	LOGIC_IN14_FUNC	Logic Input 14 Function	-, -, -	RW	F30
R4X1390S18	LOGIC_IN14_NAME	Logic Input 14 Name (9 registers)	-, -, -	RW	F33
R4X1399	LOGIC_IN14_STATE	Logic Input 14 Asserted State	-, -, -	RW	F75
R4X139A	LOGIC_IN15_FUNC	Logic Input 15 Function	-, -, -	RW	F30
R4X139BS18	LOGIC_IN15_NAME	Logic Input 15 Name (9 registers)	-, -, -	RW	F33
R4X13A4	LOGIC_IN15_STATE	Logic Input 15 Asserted State	-, -, -	RW	F75
R4X13A5	LOGIC_IN16_FUNC	Logic Input 16 Function	-, -, -	RW	F30
R4X13A6S18	LOGIC_IN16_NAME	Logic Input 16 Name (9 registers)	-, -, -	RW	F33
R4X13AF	LOGIC_IN16_STATE	Logic Input 16 Asserted State	-, -, -	RW	F75
R4X13B0	LOGIC_IN1_TARGET	Logic Input 1 Target	-, -, -	RW	F46
R4X13B1	LOGIC_IN2_TARGET	Logic Input 2 Target	-, -, -	RW	F46
R4X13B2	LOGIC_IN3_TARGET	Logic Input 3 Target	-, -, -	RW	F46
R4X13B3	LOGIC_IN4_TARGET	Logic Input 4 Target	-, -, -	RW	F46
R4X13B4	LOGIC_IN5_TARGET	Logic Input 5 Target	-, -, -	RW	F46
R4X13B5	LOGIC_IN6_TARGET	Logic Input 6 Target	-, -, -	RW	F46
R4X13B6	LOGIC_IN7_TARGET	Logic Input 7 Target	-, -, -	RW	F46
R4X13B7	LOGIC_IN8_TARGET	Logic Input 8 Target	-, -, -	RW	F46
R4X13B8	LOGIC_IN9_TARGET	Logic Input 9 Target	-, -, -	RW	F46
R4X13B9	LOGIC_IN10_TARGET	Logic Input 10 Target	-, -, -	RW	F46
R4X13BA	LOGIC_IN11_TARGET	Logic Input 11 Target	-, -, -	RW	F46
R4X13BB	LOGIC_IN12_TARGET	Logic Input 12 Target	-, -, -	RW	F46
R4X13BC	LOGIC_IN13_TARGET	Logic Input 13 Target	-, -, -	RW	F46
R4X13BD	LOGIC_IN14_TARGET	Logic Input 14 Target	-, -, -	RW	F46
R4X13BE	LOGIC_IN15_TARGET	Logic Input 15 Target	-, -, -	RW	F46
R4X13BF	LOGIC_IN16_TARGET	Logic Input 16 Target	-, -, -	RW	F46
R4X13C0	VIRT_IN1_FUNC	Virtual Input 1 Function	-, -, -	RW	F30
R4X13C1S18	VIRT_IN1_NAME	Virtual Input 1 Name (9 registers)	-, -, -	RW	F33

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X13CA	VIRT_IN2_FUNC	Virtual Input 2 Function	-, -, -	RW	F30
R4X13CBS18	VIRT_IN2_NAME	Virtual Input 2 Name (9 registers)	-, -, -	RW	F33
R4X13D4	VIRT_IN3_FUNC	Virtual Input 3 Function	-, -, -	RW	F30
R4X13D5S18	VIRT_IN3_NAME	Virtual Input 3 Name (9 registers)	-, -, -	RW	F33
R4X13DE	VIRT_IN4_FUNC	Virtual Input 4 Function	-, -, -	RW	F30
R4X13DFS18	VIRT_IN4_NAME	Virtual Input 4 Name (9 registers)	-, -, -	RW	F33
R4X13E8	VIRT_IN5_FUNC	Virtual Input 5 Function	-, -, -	RW	F30
R4X13E9S18	VIRT_IN5_NAME	Virtual Input 5 Name (9 registers)	-, -, -	RW	F33
R4X13F2	VIRT_IN6_FUNC	Virtual Input 6 Function	-, -, -	RW	F30
R4X13F3S18	VIRT_IN6_NAME	Virtual Input 6 Name (9 registers)	-, -, -	RW	F33
R4X13FC	VIRT_IN7_FUNC	Virtual Input 7 Function	-, -, -	RW	F30
R4X13FDS18	VIRT_IN7_NAME	Virtual Input 7 Name (9 registers)	-, -, -	RW	F33
R4X1406	VIRT_IN8_FUNC	Virtual Input 8 Function	-, -, -	RW	F30
R4X1407S18	VIRT_IN8_NAME	Virtual Input 8 Name (9 registers)	-, -, -	RW	F33
R4X1410	VIRT_IN9_FUNC	Virtual Input 9 Function	-, -, -	RW	F30
R4X1411S18	VIRT_IN9_NAME	Virtual Input 9 Name (9 registers)	-, -, -	RW	F33
R4X141A	VIRT_IN10_FUNC	Virtual Input 10 Function	-, -, -	RW	F30
R4X141BS18	VIRT_IN10_NAME	Virtual Input 10 Name (9 registers)	-, -, -	RW	F33
R4X1424	VIRT_IN11_FUNC	Virtual Input 11 Function	-, -, -	RW	F30
R4X1425S18	VIRT_IN11_NAME	Virtual Input 11 Name (9 registers)	-, -, -	RW	F33
R4X142E	VIRT_IN12_FUNC	Virtual Input 12 Function	-, -, -	RW	F30
R4X142FS18	VIRT_IN12_NAME	Virtual Input 12 Name (9 registers)	-, -, -	RW	F33
R4X1438	VIRT_IN13_FUNC	Virtual Input 13 Function	-, -, -	RW	F30
R4X1439S18	VIRT_IN13_NAME	Virtual Input 13 Name (9 registers)	-, -, -	RW	F33
R4X1442	VIRT_IN14_FUNC	Virtual Input 14 Function	-, -, -	RW	F30
R4X1443S18	VIRT_IN14_NAME	Virtual Input 14 Name (9 registers)	-, -, -	RW	F33
R4X144C	VIRT_IN15_FUNC	Virtual Input 15 Function	-, -, -	RW	F30
R4X144DS18	VIRT_IN15_NAME	Virtual Input 15 Name (9 registers)	-, -, -	RW	F33
R4X1456	VIRT_IN16_FUNC	Virtual Input 16 Function	-, -, -	RW	F30
R4X1457S18	VIRT_IN16_NAME	Virtual Input 16 Name (9 registers)	-, -, -	RW	F33
R4X1460	VIRTUAL_IN1_TARGET	Virtual Input 1 Target			F46
R4X1461	VIRTUAL_IN2_TARGET	Virtual Input 2 Target			F46
R4X1462	VIRTUAL_IN3_TARGET	Virtual Input 3 Target			F46
R4X1463	VIRTUAL_IN4_TARGET	Virtual Input 4 Target			F46
R4X1464	VIRTUAL_IN5_TARGET	Virtual Input 5 Target			F46
R4X1465	VIRTUAL_IN6_TARGET	Virtual Input 6 Target			F46
R4X1466	VIRTUAL_IN7_TARGET	Virtual Input 7 Target			F46
R4X1467	VIRTUAL_IN8_TARGET	Virtual Input 8 Target			F46
R4X1468	VIRTUAL_IN9_TARGET	Virtual Input 9 Target			F46
R4X1469	VIRTUAL_IN10_TARGET	Virtual Input 10 Target			F46
R4X146A	VIRTUAL_IN11_TARGET	Virtual Input 11 Target			F46
R4X146B	VIRTUAL_IN12_TARGET	Virtual Input 12 Target			F46
R4X146C	VIRTUAL_IN13_TARGET	Virtual Input 13 Target			F46
R4X146D	VIRTUAL_IN14_TARGET	Virtual Input 14 Target			F46
R4X146E	VIRTUAL_IN15_TARGET	Virtual Input 15 Target			F46

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X146F	VIRTUAL_IN16_TARGET	Virtual Input 16 Target			F46
R4X1480S18	RELAY1_NAME	Output 1 Name (9 registers)	-, -, -	RW	F33
R4X1489	RELAY1_OP	Output 1 Operation	-, -, -	RW	F66
R4X148AA20	RELAY1_TYPE	Output 1 Type	-, -, -	RW	F38
R4X148BS18	RELAY1_FLEXLOGIC	Output 1 FlexLogic (20 registers)	-, -, -	RW	F47
R4X14B0	RELAY2_NAME	Output 2 Name (9 registers)	-, -, -	RW	F33
R4X14B9	RELAY2_OP	Output 2 Operation	-, -, -	RW	F66
R4X14BA	RELAY2_TYPE	Output 2 Type	-, -, -	RW	F38
R4X14BBA20	RELAY2_FLEXLOGIC	Output 2 FlexLogic (20 registers)	-, -, -	RW	F47
R4X14E0S18	RELAY3_NAME	Output 3 Name (9 registers)	-, -, -	RW	F33
R4X14E9	RELAY3_OP	Output 3 Operation	-, -, -	RW	F66
R4X14EA	RELAY3_TYPE	Output 3 Type	-, -, -	RW	F38
R4X14EBA20	RELAY3_FLEXLOGIC	Output 3 FlexLogic (20 registers)	-, -, -	RW	F47
R4X1510S18	RELAY4_NAME	Output 4 Name (9 registers)	-, -, -	RW	F33
R4X1519	RELAY4_OP	Output 4 Operation	-, -, -	RW	F66
R4X151A	RELAY4_TYPE	Output 4 Type	-, -, -	RW	F38
R4X151BA20	RELAY4_FLEXLOGIC	Output 4 FlexLogic (20 registers)	-, -, -	RW	F47
R4X1540S18	RELAY5_NAME	Output 5 Name (9 registers)	-, -, -	RW	F33
R4X1549	RELAY5_OP	Output 5 Operation	-, -, -	RW	F66
R4X154A	RELAY5_TYPE	Output 5 Type	-, -, -	RW	F38
R4X154BA20	RELAY5_FLEXLOGIC	Output 5 FlexLogic (20 registers)	-, -, -	RW	F47
R4X1570S18	RELAY6_NAME	Output 6 Name (9 registers)	-, -, -	RW	F33
R4X1579	RELAY6_OP	Output 6 Operation	-, -, -	RW	F66
R4X157A	RELAY6_TYPE	Output 6 Type	-, -, -	RW	F38
R4X157BA20	RELAY6_FLEXLOGIC	Output 6 FlexLogic (20 registers)	-, -, -	RW	F47
R4X15A0S18	RELAY7_NAME	Output 7 Name (9 registers)	-, -, -	RW	F33
R4X15A9	RELAY7_OP	Output 7 Operation	-, -, -	RW	F66
R4X15AA	RELAY7_TYPE	Output 7 Type	-, -, -	RW	F38
R4X15ABA20	RELAY7_FLEXLOGIC	Output 7 FlexLogic (20 registers)	-, -, -	RW	F47
R4X15D0S18	RELAY8_NAME	Output 8 Name (9 registers)	-, -, -	RW	F33
R4X15D9	RELAY8_OP	Output 8 Operation	-, -, -	RW	F66
R4X15DA	RELAY8_TYPE	Output 8 Type	-, -, -	RW	F38
R4X15DBA20	RELAY8_FLEXLOGIC	Output 8 FlexLogic (20 registers)	-, -, -	RW	F47
R4X1600	PRETRIG_CYCLES	Number of Pre-Trigger Cycles	cycles, 1, 1–15	RW	F1
R4X1601A10	TM_TRIG_FLEXLOGIC	Trace Memory Trigger FlexLogic (10 registers)	-, -, -	RW	F47
R4X1A00A10	VIRT_OUT1_FLEXLOGIC	Virtual Output 1 FlexLogic (10 registers)	-, -, -	RW	F47
R4X1A0AA10	VIRT_OUT2_FLEXLOGIC	Virtual Output 2 FlexLogic (10 registers)	-, -, -	RW	F47
R4X1A14A10	VIRT_OUT3_FLEXLOGIC	Virtual Output 3 FlexLogic (10 registers)	-, -, -	RW	F47
R4X1A1EA10	VIRT_OUT4_FLEXLOGIC	Virtual Output 4 FlexLogic (10 registers)	-, -, -	RW	F47
R4X1A28A10	VIRT_OUT5_FLEXLOGIC	Virtual Output 5 FlexLogic (10 registers)	-, -, -	RW	F47
R4X1D80	TIMER1_START	Timer 1 Start	-, -, -	RW	F62
R4X1D81	TIMER1_PKUP_DLY	Timer 1 Pickup Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D82	TIMER1_DROPOUT_DLY	Timer 1 Dropout Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D83	TIMER2_START	Timer 2 Start	-, -, -	RW	F62
R4X1D84	TIMER2_PKUP_DLY	Timer 2 Pickup Delay	s, 0.01, 0.00–600.00	RW	F3

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1D85	TIMER2_DROPOUT_DLY	Timer 2 Dropout Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D86	TIMER3_START	Timer 3 Start	-, -, -	RW	F62
R4X1D87	TIMER3_PKUP_DLY	Timer 3 Pickup Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D88	TIMER3_DROPOUT_DLY	Timer 3 Dropout Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D89	TIMER4_START	Timer 4 Start	-, -, -	RW	F62
R4X1D8A	TIMER4_PKUP_DLY	Timer 4 Pickup Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D8B	TIMER4_DROPOUT_DLY	Timer 4 Dropout Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D8C	TIMER5_START	Timer 5 Start	-, -, -	RW	F62
R4X1D8D	TIMER5_PKUP_DLY	Timer 5 Pickup Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D8E	TIMER5_DROPOUT_DLY	Timer 5 Dropout Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D8F	TIMER6_START	Timer 6 Start	-, -, -	RW	F62
R4X1D90	TIMER6_PKUP_DLY	Timer 6 Pickup Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D91	TIMER6_DROPOUT_DLY	Timer 6 Dropout Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D92	TIMER7_START	Timer 7 Start	-, -, -	RW	F62
R4X1D93	TIMER7_PKUP_DLY	Timer 7 Pickup Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D94	TIMER7_DROPOUT_DLY	Timer 7 Dropout Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D95	TIMER8_START	Timer 8 Start	-, -, -	RW	F62
R4X1D96	TIMER8_PKUP_DLY	Timer 8 Pickup Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D97	TIMER8_DROPOUT_DLY	Timer 8 Dropout Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D98	TIMER9_START	Timer 9 Start	-, -, -	RW	F62
R4X1D99	TIMER9_PKUP_DLY	Timer 9 Pickup Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D9A	TIMER9_DROPOUT_DLY	Timer 9 Dropout Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D9B	TIMER10_START	Timer 10 Start	-, -, -	RW	F62
R4X1D9C	TIMER10_PKUP_DLY	Timer 10 Pickup Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1D9D	TIMER10_DROPOUT_DLY	Timer 10 Dropout Delay	s, 0.01, 0.00–600.00	RW	F3
R4X1E00	FRC_OUTPUT_RLYS_FUNC	Force Output Relays Function	-, -, -	RW	F30
R4X1E01	FORCE_OUTPUT_RLY1	Force Output Relay 1	-, -, -	RW	F34
R4X1E02	FORCE_OUTPUT_RLY2	Force Output Relay 2	-, -, -	RW	F34
R4X1E03	FORCE_OUTPUT_RLY3	Force Output Relay 3	-, -, -	RW	F34
R4X1E04	FORCE_OUTPUT_RLY4	Force Output Relay 4	-, -, -	RW	F34
R4X1E05	FORCE_OUTPUT_RLY5	Force Output Relay 5	-, -, -	RW	F34
R4X1E06	FORCE_OUTPUT_RLY6	Force Output Relay 6	-, -, -	RW	F34
R4X1E07	FORCE_OUTPUT_RLY7	Force Output Relay 7	-, -, -	RW	F34
R4X1E08	FORCE_OUTPUT_RLY8	Force Output Relay 8	-, -, -	RW	F34
R4X1E09	FORCE_SELFTEST_RLY	Force Self-Test Relay	-, -, -	RW	F34
R4X1E10	FORCE_ANAL_OUT_FUNC	Force Analog Outputs Function	-, -, -	RW	F30
R4X1E11	FORCE_ANAL_OUT1	Force Analog Output 1	%, 1, 0–100	RW	F1
R4X1E12	FORCE_ANAL_OUT2	Force Analog Output 2	%, 1, 0–100	RW	F1
R4X1E13	FORCE_ANAL_OUT3	Force Analog Output 3	%, 1, 0–100	RW	F1
R4X1E14	FORCE_ANAL_OUT4	Force Analog Output 4	%, 1, 0–100	RW	F1
R4X1E15	FORCE_ANAL_OUT5	Force Analog Output 5	%, 1, 0–100	RW	F1
R4X1E16	FORCE_ANAL_OUT6	Force Analog Output 6	%, 1, 0–100	RW	F1
R4X1E17	FORCE_ANAL_OUT7	Force Analog Output 7	%, 1, 0–100	RW	F1
R4X1E20	SIM_FUNCTION	Simulation Function	-, -, -	RW	F48
R4X1E21	SIM_BLK_OUTPUTS	Block Operation of Outputs	-, -, -	RW	F67

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X1E22	SIM_FLT_MODE_SIGNAL	Start Fault Mode Signal	-, -, -	RW	F88
R4X1E23	SIM_START_PLAYBACK	Start Playback Mode Signal	-, -, -	RW	F88
R4X1E28	SIM_PRE_W1_ABC_CURR	Prefault Winding 1 Phase ABC Current Magnitudes	x CT, 0.1, 0.0–40.0	RW	F2
R4X1E29	SIM_PRE_W2_ABC_CURR	Prefault Winding 2 Phase ABC Current Magnitudes	x CT, 0.1, 0.0–40.0	RW	F2
R4X1E2A	SIM_PRE_W3_ABC_CURR	Prefault Winding 3 Phase ABC Current Magnitudes	x CT, 0.1, 0.0–40.0	RW	F2
R4X1E2B	SIM_PRE_VOLTS_IN	Prefault Voltage Input Magnitude	x VT, 0.1, 0.0–2.0	RW	F2
R4X1E30	SIM_W1_AMPS_A	Fault Winding 1 Phase A Current Magnitude	x CT, 0.1, 0.0–40.0	RW	F2
R4X1E31	SIM_W1_AMPS_A_ANG	Fault Winding 1 Phase A Current Angle	°, -, -	RW	F1
R4X1E32	SIM_W1_AMPS_B	Fault Winding 1 Phase B Current Magnitude	x CT, 0.1, 0.0–40.0	RW	F2
R4X1E33	SIM_W1_AMPS_B_ANG	Fault Winding 1 Phase B Current Angle	° Lag, 1, 0–359	RW	F1
R4X1E34	SIM_W1_AMPS_C	Fault Winding 1 Phase C Current Magnitude	x CT, 0.1, 0.0–40.0	RW	F2
R4X1E35	SIM_W1_AMPS_C_ANG	Fault Winding 1 Phase C Current Angle	° Lag, 1, 0–359	RW	F1
R4X1E36	SIM_W1_AMPS_G	Fault Winding 1 Ground Current Magnitude	x CT, 0.1, 0.0–40.0	RW	F2
R4X1E37	SIM_W1_AMPS_G_ANG	Fault Winding 1 Ground Current Angle	° Lag, 1, 0–359	RW	F1
R4X1E38	SIM_W2_AMPS_A	Fault Winding 2 Phase A Current Magnitude	x CT, 0.1, 0.0–40.0	RW	F2
R4X1E39	SIM_W2_AMPS_A_ANG	Fault Winding 2 Phase A Current Angle	° Lag, 1, 0–359	RW	F1
R4X1E3A	SIM_W2_AMPS_B	Fault Winding 2 Phase B Current Magnitude	x CT, 0.1, 0.0–40.0	RW	F2
R4X1E3B	SIM_W2_AMPS_B_ANG	Fault Winding 2 Phase B Current Angle	° Lag, 1, 0–359	RW	F1
R4X1E3C	SIM_W2_AMPS_C	Fault Winding 2 Phase C Current Magnitude	x CT, 0.1, 0.0–40.0	RW	F2
R4X1E3D	SIM_W2_AMPS_C_ANG	Fault Winding 2 Phase C Current Angle	° Lag, 1, 0–359	RW	F1
R4X1E3E	SIM_W2_AMPS_G	Fault Winding 2 Ground Current Magnitude	x CT, 0.1, 0.0–40.0	RW	F2
R4X1E3F	SIM_W2_AMPS_G_ANG	Fault Winding 2 Ground Current Angle	° Lag, 1, 0–359	RW	F1
R4X1E40	SIM_W3_AMPS_A	Fault Winding 3 Phase A Current Magnitude	x CT, 0.1, 0.0–40.0	RW	F2
R4X1E41	SIM_W3_AMPS_A_ANG	Fault Winding 3 Phase A Current Angle	° Lag, 1, 0–359	RW	F1
R4X1E42	SIM_W3_AMPS_B	Fault Winding 3 Phase B Current Magnitude	x CT, 0.1, 0.0–40.0	RW	F2
R4X1E43	SIM_W3_AMPS_B_ANG	Fault Winding 3 Phase B Current Angle	° Lag, 1, 0–359	RW	F1
R4X1E44	SIM_W3_AMPS_C	Fault Winding 3 Phase C Current Magnitude	x CT, 0.1, 0.0–40.0	RW	F2
R4X1E45	SIM_W3_AMPS_C_ANG	Fault Winding 3 Phase C Current Angle	° Lag, 1, 0–359	RW	F1
R4X1E46	SIM_W3_AMPS_G	Fault Winding 3 Ground Current Magnitude	x CT, 0.1, 0.0–40.0	RW	F2
R4X1E47	SIM_W3_AMPS_G_ANG	Fault Winding 3 Ground Current Angle	° Lag, 1, 0–359	RW	F1
R4X1E48	SIM_VOLTS_IN	Fault Voltage Input Magnitude	x VT, 0.1, 0.0–2.0	RW	F2
R4X1E49	SIM_VOLTS_IN_ANG	Fault Voltage Input Angle	° Lag, 1, 0–359	RW	F1
R4X1E4A	SIM_FREQ	Fault Frequency	Hz, 0.01, 45.00–60.00	RW	F3
R4X2000	PERC_DIFF_FUNC	Percent Differential Function	-, -, -	RW	F30
R4X2001	PERC_DIFF_TARGET	Percent Differential Target	-, -, -	RW	F46
R4X2002	PERC_DIFF_PKUP	Percent Differential Pickup	x CT, 0.01, 0.05–1.00	RW	F3
R4X2003	PERC_DIFF_SLOPE1	Percent Differential Slope 1	%, 1, 15–100	RW	F1
R4X2004	PERC_DIFF_KNEEPT	Percent Differential Kneepoint	x CT, 0.1, 1.0–20.0	RW	F2
R4X2005	PERC_DIFF_SLOPE2	Percent Differential Slope 2	%, 1, 50–200	RW	F1
R4X2006	PERC_DIFF_BLK	Percent Differential Block	-, -, -	RW	F87
R4X2008	HARM_INHIB_FUNC	Harmonic Inhibit Function	-, -, -	RW	F30
R4X2009	HARM_INHIB_PARAM	Harmonic Inhibit Parameters	-, -, -	RW	F64
R4X200A	HARM_AVG	Harmonic Averaging	-, -, -	RW	F30

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X200B	HARM_INHIB_LVL	Harmonic Inhibit Level	% fo, 0.1, 0.1–65.0	RW	F2
R4X200D	ENGZ_INHIB_FUNC	Energization Inhibit Function	-, -, -	RW	F30
R4X200E	ENGZ_INHIB_PARAM	Energization Inhibit Parameters	-, -, -	RW	F64
R4X200F	ENGZ_INHIB_HARM_AVG	Harmonic Averaging	-, -, -	RW	F30
R4X2010	ENGZ_INHIB_LVL	Energization Inhibit Level	% fo, 0.1, 0.1–65.0	RW	F2
R4X2011	ENGZ_INHIB_DURATION	Energization Inhibit Duration	s, 0.01, 0.05–600.00	RW	F1
R4X2012	ENGZ_SENSE_AMPS	Energization Sensing By Current	-, -, -	RW	F30
R4X2013	ENGZ_AMPS_MIN	Minimum Energization Current	x CT, 0.01, 0.10–0.50	RW	F3
R4X2014	ENGZ_SENSE_V	Energization Sensing By Voltage	-, -, -	RW	F30
R4X2015	ENGZ_V_MIN	Minimum Energization Voltage	x VT, 0.01, 0.50–0.99	RW	F3
R4X2016	BRKRS_OPEN	Breakers Are Open Signal	-, -, -	RW	F88
R4X2017	PARALLEL_TXF_BKR_CLS	Parallel Transformer Breaker Close Signal	-, -, -	RW	F88
R4X2019	5TH_HARM_INHIB	5th Harmonic Inhibit Function	-, -, -	RW	F30
R4X201A	5TH_HARM_AVG	Harmonic Averaging	-, -, -	RW	F30
R4X201B	5TH_HARM_INHIB_LVL	5th Harmonic Inhibit Level	% fo, 0.1, 0.1–65.0	RW	F2
R4X2020	INST_DIFF_FUNC	Inst Differential Function	-, -, -	RW	F30
R4X2021	INST_DIFF_TARG	Inst Differential Target	-, -, -	RW	F46
R4X2022	INST_DIFF_PKUP	Inst Differential Pickup	x CT, 0.01, 3.00–20.00	RW	F3
R4X2023	INST_DIFF_BLK	Inst Differential Block	-, -, -	RW	F87
R4X2040	W1_PH_TOC_FUNC	Winding 1 Phase Time O/C Function	-, -, -	RW	F30
R4X2041	W1_PH_TOC_TARG	Winding 1 Phase Time O/C Target	-, -, -	RW	F46
R4X2042	W1_PH_TOC_PKUP	Winding 1 Phase Time O/C Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2043	W1_PH_TOC_SHAPE	Winding 1 Phase Time O/C Shape	-, -, -	RW	F36
R4X2044	W1_PH_TOC_MULT	Winding 1 Phase Time O/C Multiplier	-, 0.01, 0.00–100.00	RW	F3
R4X2045	W1_PH_TOC_RESET	Winding 1 Phase Time O/C Reset	-, -, -	RW	F68
R4X2046	W1_PH_TOC_BLK	Winding 1 Phase Time O/C Block	-, -, -	RW	F87
R4X2047	W1_HARM_DERATE_CORR	Winding 1 Harmonic Derating Correction	-, -, -	RW	F30
R4X2050	W2_PH_TOC_FUNC	Winding 2 Phase Time O/C Function	-, -, -	RW	F30
R4X2051	W2_PH_TOC_TARG	Winding 2 Phase Time O/C Target	-, -, -	RW	F46
R4X2052	W2_PH_TOC_PKUP	Winding 2 Phase Time O/C Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2053	W2_PH_TOC_SHAPE	Winding 2 Phase Time O/C Shape	-, -, -	RW	F36
R4X2054	W2_PH_TOC_MULT	Winding 2 Phase Time O/C Multiplier	-, 0.01, 0.00–100.00	RW	F3
R4X2055	W2_PH_TOC_RESET	Winding 2 Phase Time O/C Reset	-, -, -	RW	F68
R4X2056	W2_PH_TOC_BLK	Winding 2 Phase Time O/C Block	-, -, -	RW	F87
R4X2057	W2_HARM_DERATE_CORR	Winding 2 Harmonic Derating Correction	-, -, -	RW	F30
R4X2060	W3_PH_TOC_FUNC	Winding 3 Phase Time O/C Function	-, -, -	RW	F30
R4X2061	W3_PH_TOC_TARG	Winding 3 Phase Time O/C Target	-, -, -	RW	F46
R4X2062	W3_PH_TOC_PKUP	Winding 3 Phase Time O/C Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2063	W3_PH_TOC_SHAPE	Winding 3 Phase Time O/C Shape	-, -, -	RW	F36
R4X2064	W3_PH_TOC_MULT	Winding 3 Phase Time O/C Multiplier	-, 0.01, 0.00–100.00	RW	F3
R4X2065	W3_PH_TOC_RESET	Winding 3 Phase Time O/C Reset	-, -, -	RW	F68
R4X2066	W3_PH_TOC_BLK	Winding 3 Phase Time O/C Block	-, -, -	RW	F87
R4X2067	W3_HARM_DERATE_CORR	Winding 3 Harmonic Derating Correction	-, -, -	RW	F30
R4X2070	W1_PH_IOC1_FUNC	Winding 1 Phase Inst O/C 1 Function	-, -, -	RW	F30
R4X2071	W1_PH_IOC1_TARG	Winding 1 Phase Inst O/C 1 Target	-, -, -	RW	F46

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X2072	W1_PH_IOC1_PKUP	Winding 1 Phase Inst O/C 1 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2073	W1_PH_IOC1_DLY	Winding 1 Phase Inst O/C 1 Delay	ms, 1, 0–60000	RW	F1
R4X2074	W1_PH_IOC1_BLK	Winding 1 Phase Inst O/C 1 Block	–, –, –	RW	F87
R4X2080	W2_PH_IOC1_FUNC	Winding 2 Phase Inst O/C 1 Function	–, –, –	RW	F30
R4X2081	W2_PH_IOC1_TARG	Winding 2 Phase Inst O/C 1 Target	–, –, –	RW	F46
R4X2082	W2_PH_IOC1_PKUP	Winding 2 Phase Inst O/C 1 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2083	W2_PH_IOC1_DLY	Winding 2 Phase Inst O/C 1 Delay	ms, 1, 0–60000	RW	F1
R4X2084	W2_PH_IOC1_BLK	Winding 2 Phase Inst O/C 1 Block	–, –, –	RW	F87
R4X2090	W3_PH_IOC1_FUNC	Winding 3 Phase Inst O/C 1 Function	–, –, –	RW	F30
R4X2091	W3_PH_IOC1_TARG	Winding 3 Phase Inst O/C 1 Target	–, –, –	RW	F46
R4X2092	W3_PH_IOC1_PKUP	Winding 3 Phase Inst O/C 1 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2093	W3_PH_IOC1_DLY	Winding 3 Phase Inst O/C 1 Delay	ms, 1, 0–60000	RW	F1
R4X2094	W3_PH_IOC1_BLK	Winding 3 Phase Inst O/C 1 Block	–, –, –	RW	F87
R4X20A0	W1_PH_IOC2_FUNC	Winding 1 Phase Inst O/C 2 Function	–, –, –	RW	F30
R4X20A1	W1_PH_IOC2_TARG	Winding 1 Phase Inst O/C 2 Target	–, –, –	RW	F46
R4X20A2	W1_PH_IOC2_PKUP	Winding 1 Phase Inst O/C 2 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X20A3	W1_PH_IOC2_DLY	Winding 1 Phase Inst O/C 2 Delay	ms, 1, 0–60000	RW	F1
R4X20A4	W1_PH_IOC2_BLK	Winding 1 Phase Inst O/C 2 Block	–, –, –	RW	F87
R4X20B0	W2_PH_IOC2_FUNC	Winding 2 Phase Inst O/C 2 Function	–, –, –	RW	F30
R4X20B1	W2_PH_IOC2_TARG	Winding 2 Phase Inst O/C 2 Target	–, –, –	RW	F46
R4X20B2	W2_PH_IOC2_PKUP	Winding 2 Phase Inst O/C 2 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X20B3	W2_PH_IOC2_DLY	Winding 2 Phase Inst O/C 2 Delay	ms, 1, 0–60000	RW	F1
R4X20B4	W2_PH_IOC2_BLK	Winding 2 Phase Inst O/C 2 Block	–, –, –	RW	F87
R4X20C0	W3_PH_IOC2_FUNC	Winding 3 Phase Inst O/C 2 Function	–, –, –	RW	F30
R4X20C1	W3_PH_IOC2_TARG	Winding 3 Phase Inst O/C 2 Target	–, –, –	RW	F46
R4X20C2	W3_PH_IOC2_PKUP	Winding 3 Phase Inst O/C 2 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X20C3	W3_PH_IOC2_DLY	Winding 3 Phase Inst O/C 2 Delay	ms, 1, 0–60000	RW	F1
R4X20C4	W3_PH_IOC2_BLK	Winding 3 Phase Inst O/C 2 Block	–, –, –	RW	F87
R4X20D0	W1_N_TOC_FUNC	Winding 1 Neutral Time O/C Function	–, –, –	RW	F30
R4X20D1	W1_N_TOC_TARG	Winding 1 Neutral Time O/C Target	–, –, –	RW	F46
R4X20D2	W1_N_TOC_PKUP	Winding 1 Neutral Time O/C Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X20D3	W1_N_TOC_SHAPE	Winding 1 Neutral Time O/C Shape	–, –, –	RW	F36
R4X20D4	W1_N_TOC_MULT	Winding 1 Neutral Time O/C Multiplier	–, 0.01, 0.00–100.00	RW	F3
R4X20D5	W1_N_TOC_RESET	Winding 1 Neutral Time O/C Reset	–, –, –	RW	F68
R4X20D6	W1_N_TOC_BLK	Winding 1 Neutral Time O/C Block	–, –, –	RW	F87
R4X20E0	W2_N_TOC_FUNC	Winding 2 Neutral Time O/C Function	–, –, –	RW	F30
R4X20E1	W2_N_TOC_TARG	Winding 2 Neutral Time O/C Target	–, –, –	RW	F46
R4X20E2	W2_N_TOC_PKUP	Winding 2 Neutral Time O/C Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X20E3	W2_N_TOC_SHAPE	Winding 2 Neutral Time O/C Shape	–, –, –	RW	F36
R4X20E4	W2_N_TOC_MULT	Winding 2 Neutral Time O/C Multiplier	–, 0.01, 0.00–100.00	RW	F3
R4X20E5	W2_N_TOC_RESET	Winding 2 Neutral Time O/C Reset	–, –, –	RW	F68
R4X20E6	W2_N_TOC_BLK	Winding 2 Neutral Time O/C Block	–, –, –	RW	F87
R4X20F0	W3_N_TOC_FUNC	Winding 3 Neutral Time O/C Function	–, –, –	RW	F30
R4X20F1	W3_N_TOC_TARG	Winding 3 Neutral Time O/C Target	–, –, –	RW	F46
R4X20F2	W3_N_TOC_PKUP	Winding 3 Neutral Time O/C Pickup	x CT, 0.01, 0.05–20.00	RW	F3

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X20F3	W3_N_TOC_SHAPE	Winding 3 Neutral Time O/C Shape	-, -, -	RW	F36
R4X20F4	W3_N_TOC_MULT	Winding 3 Neutral Time O/C Multiplier	-, 0.01, 0.00–100.00	RW	F3
R4X20F5	W3_N_TOC_RESET	Winding 3 Neutral Time O/C Reset	-, -, -	RW	F68
R4X20F6	W3_N_TOC_BLK	Winding 3 Neutral Time O/C Block	-, -, -	RW	F87
R4X2100	W1_N_IOC1_FUNC	Winding 1 Neutral Inst O/C 1 Function	-, -, -	RW	F30
R4X2101	W1_N_IOC1_TARG	Winding 1 Neutral Inst O/C 1 Target	-, -, -	RW	F46
R4X2102	W1_N_IOC1_PKUP	Winding 1 Neutral Inst O/C 1 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2103	W1_N_IOC1_DLY	Winding 1 Neutral Inst O/C 1 Delay	ms, 1, 0–60000	RW	F1
R4X2104	W1_N_IOC1_BLK	Winding 1 Neutral Inst O/C 1 Block	-, -, -	RW	F87
R4X2110	W2_N_IOC1_FUNC	Winding 2 Neutral Inst O/C 1 Function	-, -, -	RW	F30
R4X2111	W2_N_IOC1_TARG	Winding 2 Neutral Inst O/C 1 Target	-, -, -	RW	F46
R4X2112	W2_N_IOC1_PKUP	Winding 2 Neutral Inst O/C 1 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2113	W2_N_IOC1_DLY	Winding 2 Neutral Inst O/C 1 Delay	ms, 1, 0–60000	RW	F1
R4X2114	W2_N_IOC1_BLK	Winding 2 Neutral Inst O/C 1 Block	-, -, -	RW	F87
R4X2120	W3_N_IOC1_FUNC	Winding 3 Neutral Inst O/C 1 Function	-, -, -	RW	F30
R4X2121	W3_N_IOC1_TARG	Winding 3 Neutral Inst O/C 1 Target	-, -, -	RW	F46
R4X2122	W3_N_IOC1_PKUP	Winding 3 Neutral Inst O/C 1 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2123	W3_N_IOC1_DLY	Winding 3 Neutral Inst O/C 1 Delay	ms, 1, 0–60000	RW	F1
R4X2124	W3_N_IOC1_BLK	Winding 3 Neutral Inst O/C 1 Block	-, -, -	RW	F87
R4X2130	W1_N_IOC2_FUNC	Winding 1 Neutral Inst O/C 2 Function	-, -, -	RW	F30
R4X2131	W1_N_IOC2_TARG	Winding 1 Neutral Inst O/C 2 Target	-, -, -	RW	F46
R4X2132	W1_N_IOC2_PKUP	Winding 1 Neutral Inst O/C 2 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2133	W1_N_IOC2_DLY	Winding 1 Neutral Inst O/C 2 Delay	ms, 1, 0–60000	RW	F1
R4X2134	W1_N_IOC2_BLK	Winding 1 Neutral Inst O/C 2 Block	-, -, -	RW	F87
R4X2140	W2_N_IOC2_FUNC	Winding 2 Neutral Inst O/C 2 Function	-, -, -	RW	F30
R4X2141	W2_N_IOC2_TARG	Winding 2 Neutral Inst O/C 2 Target	-, -, -	RW	F46
R4X2142	W2_N_IOC2_PKUP	Winding 2 Neutral Inst O/C 2 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2143	W2_N_IOC2_DLY	Winding 2 Neutral Inst O/C 2 Delay	ms, 1, 0–60000	RW	F1
R4X2144	W2_N_IOC2_BLK	Winding 2 Neutral Inst O/C 2 Block	-, -, -	RW	F87
R4X2150	W3_N_IOC2_FUNC	Winding 3 Neutral Inst O/C 2 Function	-, -, -	RW	F30
R4X2151	W3_N_IOC2_TARG	Winding 3 Neutral Inst O/C 2 Target	-, -, -	RW	F46
R4X2152	W3_N_IOC2_PKUP	Winding 3 Neutral Inst O/C 2 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2153	W3_N_IOC2_DLY	Winding 3 Neutral Inst O/C 2 Delay	ms, 1, 0–60000	RW	F1
R4X2154	W3_N_IOC2_BLK	Winding 3 Neutral Inst O/C 2 Block	-, -, -	RW	F87
R4X2160	W1_G_TOC_FUNC	Winding 1 Ground Time O/C Function	-, -, -	RW	F30
R4X2161	W1_G_TOC_TARG	Winding 1 Ground Time O/C Target	-, -, -	RW	F46
R4X2162	W1_G_TOC_PKUP	Winding 1 Ground Time O/C Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2163	W1_G_TOC_SHAPE	Winding 1 Ground Time O/C Shape	-, -, -	RW	F36
R4X2164	W1_G_TOC_MULT	Winding 1 Ground Time O/C Multiplier	-, 0.01, 0.00–100.00	RW	F3
R4X2165	W1_G_TOC_RESET	Winding 1 Ground Time O/C Reset	-, -, -	RW	F68
R4X2166	W1_G_TOC_BLK	Winding 1 Ground Time O/C Block	-, -, -	RW	F87
R4X2170	W2_G_TOC_FUNC	Winding 2 Ground Time O/C Function	-, -, -	RW	F30
R4X2171	W2_G_TOC_TARG	Winding 2 Ground Time O/C Target	-, -, -	RW	F46
R4X2172	W2_G_TOC_PKUP	Winding 2 Ground Time O/C Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2173	W2_G_TOC_SHAPE	Winding 2 Ground Time O/C Shape	-, -, -	RW	F36

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X2174	W2_G_TOC_MULT	Winding 2 Ground Time O/C Multiplier	-, 0.01, 0.00–100.00	RW	F3
R4X2175	W2_G_TOC_RESET	Winding 2 Ground Time O/C Reset	-, -, -	RW	F68
R4X2176	W2_G_TOC_BLK	Winding 2 Ground Time O/C Block	-, -, -	RW	F87
R4X2180	W3_G_TOC_FUNC	Winding 3 Ground Time O/C Function	-, -, -	RW	F30
R4X2181	W3_G_TOC_TARG	Winding 3 Ground Time O/C Target	-, -, -	RW	F46
R4X2182	W3_G_TOC_PKUP	Winding 3 Ground Time O/C Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2183	W3_G_TOC_SHAPE	Winding 3 Ground Time O/C Shape	-, -, -	RW	F36
R4X2184	W3_G_TOC_MULT	Winding 3 Ground Time O/C Multiplier	-, 0.01, 0.00–100.00	RW	F3
R4X2185	W3_G_TOC_RESET	Winding 3 Ground Time O/C Reset	-, -, -	RW	F68
R4X2186	W3_G_TOC_BLK	Winding 3 Ground Time O/C Block	-, -, -	RW	F87
R4X2190	W1_G_IOC1_FUNC	Winding 1 Ground Inst O/C 1 Function	-, -, -	RW	F30
R4X2191	W1_G_IOC1_TARG	Winding 1 Ground Inst O/C 1 Target	-, -, -	RW	F46
R4X2192	W1_G_IOC1_PKUP	Winding 1 Ground Inst O/C 1 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2193	W1_G_IOC1_DLY	Winding 1 Ground Inst O/C 1 Delay	ms, 1, 0–60000	RW	F1
R4X2194	W1_G_IOC1_BLK	Winding 1 Ground Inst O/C 1 Block	-, -, -	RW	F87
R4X21A0	W2_G_IOC1_FUNC	Winding 2 Ground Inst O/C 1 Function	-, -, -	RW	F30
R4X21A1	W2_G_IOC1_TARG	Winding 2 Ground Inst O/C 1 Target	-, -, -	RW	F46
R4X21A2	W2_G_IOC1_PKUP	Winding 2 Ground Inst O/C 1 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X21A3	W2_G_IOC1_DLY	Winding 2 Ground Inst O/C 1 Delay	ms, 1, 0–60000	RW	F1
R4X21A4	W2_G_IOC1_BLK	Winding 2 Ground Inst O/C 1 Block	-, -, -	RW	F87
R4X21B0	W3_G_IOC1_FUNC	Winding 3 Ground Inst O/C 1 Function	-, -, -	RW	F30
R4X21B1	W3_G_IOC1_TARG	Winding 3 Ground Inst O/C 1 Target	-, -, -	RW	F46
R4X21B2	W3_G_IOC1_PKUP	Winding 3 Ground Inst O/C 1 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X21B3	W3_G_IOC1_DLY	Winding 3 Ground Inst O/C 1 Delay	ms, 1, 0–60000	RW	F1
R4X21B4	W3_G_IOC1_BLK	Winding 3 Ground Inst O/C 1 Block	-, -, -	RW	F87
R4X21C0	W1_G_IOC2_FUNC	Winding 1 Ground Inst O/C 2 Function	-, -, -	RW	F30
R4X21C1	W1_G_IOC2_TARG	Winding 1 Ground Inst O/C 2 Target	-, -, -	RW	F46
R4X21C2	W1_G_IOC2_PKUP	Winding 1 Ground Inst O/C 2 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X21C3	W1_G_IOC2_DLY	Winding 1 Ground Inst O/C 2 Delay	ms, 1, 0–60000	RW	F1
R4X21C4	W1_G_IOC2_BLK	Winding 1 Ground Inst O/C 2 Block	-, -, -	RW	F87
R4X21D0	W2_G_IOC2_FUNC	Winding 2 Ground Inst O/C 2 Function	-, -, -	RW	F30
R4X21D1	W2_G_IOC2_TARG	Winding 2 Ground Inst O/C 2 Target	-, -, -	RW	F46
R4X21D2	W2_G_IOC2_PKUP	Winding 2 Ground Inst O/C 2 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X21D3	W2_G_IOC2_DLY	Winding 2 Ground Inst O/C 2 Delay	ms, 1, 0–60000	RW	F1
R4X21D4	W2_G_IOC2_BLK	Winding 2 Ground Inst O/C 2 Block	-, -, -	RW	F87
R4X21E0	W3_G_IOC2_FUNC	Winding 3 Ground Inst O/C 2 Function	-, -, -	RW	F30
R4X21E1	W3_G_IOC2_TARG	Winding 3 Ground Inst O/C 2 Target	-, -, -	RW	F46
R4X21E2	W3_G_IOC2_PKUP	Winding 3 Ground Inst O/C 2 Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X21E3	W3_G_IOC2_DLY	Winding 3 Ground Inst O/C 2 Delay	ms, 1, 0–60000	RW	F1
R4X21E4	W3_G_IOC2_BLK	Winding 3 Ground Inst O/C 2 Block	-, -, -	RW	F87
R4X21F0	W1_RG_FAULT_FUNC	Winding 1 Restricted Ground Fault Function	-, -, -	RW	F30
R4X21F1	W1_RG_FAULT_TARG	Winding 1 Restricted Ground Fault Target	-, -, -	RW	F46
R4X21F2	W1_RG_FAULT_PKUP	Winding 1 Restricted Ground Fault Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X21F3	W1_RG_FAULT_SLOPE	Winding 1 Restricted Ground Fault Slope	%, 1, 0–100	RW	F1
R4X21F4	W1_RG_FAULT_DELAY	Winding 1 Restricted Ground Fault Delay	s, 0.01, 0.00–600.00	RW	F3

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X21F5	W1_RG_FAULT_BLK	Winding 1 Restricted Ground Fault Block	-, -, -	RW	F87
R4X2200	W2_RG_FAULT_FUNC	Winding 2 Restricted Ground Fault Function	-, -, -	RW	F30
R4X2201	W2_RG_FAULT_TARG	Winding 2 Restricted Ground Fault Target	-, -, -	RW	F46
R4X2202	W2_RG_FAULT_PKUP	Winding 2 Restricted Ground Fault Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2203	W2_RG_FAULT_SLOPE	Winding 2 Restricted Ground Fault Slope	%, 1, 0–100	RW	F1
R4X2204	W2_RG_FAULT_DELAY	Winding 2 Restricted Ground Fault Delay	s, 0.01, 0.00–600.00	RW	F3
R4X2205	W2_RG_FAULT_BLK	Winding 2 Restricted Ground Fault Block	-, -, -	RW	F87
R4X2210	W3_RG_FAULT_FUNC	Winding 3 Restricted Ground Fault Function	-, -, -	RW	F30
R4X2211	W3_RG_FAULT_TARG	Winding 3 Restricted Ground Fault Target	-, -, -	RW	F46
R4X2212	W3_RG_FAULT_PKUP	Winding 3 Restricted Ground Fault Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2213	W3_RG_FAULT_SLOPE	Winding 3 Restricted Ground Fault Slope	%, 1, 0–100	RW	F1
R4X2214	W3_RG_FAULT_DELAY	Winding 3 Restricted Ground Fault Delay	s, 0.01, 0.00–600.00	RW	F3
R4X2215	W3_RG_FAULT_BLK	Winding 3 Restricted Ground Fault Block	-, -, -	RW	F87
R4X2220	W1_RG_TREND_FUNC	Winding 1 Restricted Ground Trend Function	-, -, -	RW	F30
R4X2221	W1_RG_TREND_TARG	Winding 1 Restricted Ground Trend Target	-, -, -	RW	F46
R4X2222	W1_RG_TREND_PKUP	Winding 1 Restricted Ground Trend Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2223	W1_RG_TREND_SLOPE	Winding 1 Restricted Ground Trend Slope	%, 1, 0–100	RW	F1
R4X2224	W1_RG_TREND_DELAY	Winding 1 Restricted Ground Trend Delay	s, 0.01, 0.00–600.00	RW	F3
R4X2225	W1_RG_TREND_BLK	Winding 1 Restricted Ground Trend Block	-, -, -	RW	F87
R4X2230	W2_RG_TREND_FUNC	Winding 2 Restricted Ground Trend Function	-, -, -	RW	F30
R4X2231	W2_RG_TREND_TARG	Winding 2 Restricted Ground Trend Target	-, -, -	RW	F46
R4X2232	W2_RG_TREND_PKUP	Winding 2 Restricted Ground Trend Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2233	W2_RG_TREND_SLOPE	Winding 2 Restricted Ground Trend Slope	%, 1, 0–100	RW	F1
R4X2234	W2_RG_TREND_DELAY	Winding 2 Restricted Ground Trend Delay	s, 0.01, 0.00–600.00	RW	F3
R4X2235	W2_RG_TREND_BLK	Winding 2 Restricted Ground Trend Block	-, -, -	RW	F87
R4X2240	W3_RG_TREND_FUNC	Winding 3 Restricted Ground Trend Function	-, -, -	RW	F30
R4X2241	W3_RG_TREND_TARG	Winding 3 Restricted Ground Trend Target	-, -, -	RW	F46
R4X2242	W3_RG_TREND_PKUP	Winding 3 Restricted Ground Trend Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2243	W3_RG_TREND_SLOPE	Winding 3 Restricted Ground Trend Slope	%, 1, 0–100	RW	F1
R4X2244	W3_RG_TREND_DELAY	Winding 3 Restricted Ground Trend Delay	s, 0.01, 0.00–600.00	RW	F3
R4X2245	W3_RG_TREND_BLK	Winding 3 Restricted Ground Trend Block	-, -, -	RW	F87
R4X2250	W1_NEG_SEQ_TOC_FUNC	Winding 1 Neg Seq Time O/C Function	-, -, -	RW	F30
R4X2251	W1_NEG_SEQ_TOC_TARG	Winding 1 Neg Seq Time O/C Target	-, -, -	RW	F46
R4X2252	W1_NEG_SEQ_TOC_PKUP	Winding 1 Neg Seq Time O/C Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2253	W1_NEG_SEQ_TOC_SHAPE	Winding 1 Neg Seq Time O/C Shape	-, -, -	RW	F36
R4X2254	W1_NEG_SEQ_TOC_MULT	Winding 1 Neg Seq Time O/C Multiplier	-, 0.01, 0.00–100.00	RW	F3
R4X2255	W1_NEG_SEQ_TOC_RESET	Winding 1 Neg Seq Time O/C Reset	-, -, -	RW	F68
R4X2256	W1_NEG_SEQ_TOC_BLK	Winding 1 Neg Seq Time O/C Block	-, -, -	RW	F87
R4X2260	W2_NEG_SEQ_TOC_FUNC	Winding 2 Neg Seq Time O/C Function	-, -, -	RW	F30
R4X2261	W2_NEG_SEQ_TOC_TARG	Winding 2 Neg Seq Time O/C Target	-, -, -	RW	F46
R4X2262	W2_NEG_SEQ_TOC_PKUP	Winding 2 Neg Seq Time O/C Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2263	W2_NEG_SEQ_TOC_SHAPE	Winding 2 Neg Seq Time O/C Shape	-, -, -	RW	F36
R4X2264	W2_NEG_SEQ_TOC_MULT	Winding 2 Neg Seq Time O/C Multiplier	-, 0.01, 0.00–100.00	RW	F3

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X2265	W2_NEG_SEQ_TOC_RESET	Winding 2 Neg Seq Time O/C Reset	-, -, -	RW	F68
R4X2266	W2_NEG_SEQ_TOC_BLK	Winding 2 Neg Seq Time O/C Block	-, -, -	RW	F87
R4X2270	W3_NEG_SEQ_TOC_FUNC	Winding 3 Neg Seq Time O/C Function	-, -, -	RW	F30
R4X2271	W3_NEG_SEQ_TOC_TARG	Winding 3 Neg Seq Time O/C Target	-, -, -	RW	F46
R4X2272	W3_NEG_SEQ_TOC_PKUP	Winding 3 Neg Seq Time O/C Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2273	W3_NEG_SEQ_TOC_SHAPE	Winding 3 Neg Seq Time O/C Shape	-, -, -	RW	F36
R4X2274	W3_NEG_SEQ_TOC_MULT	Winding 3 Neg Seq Time O/C Multiplier	-, 0.01, 0.00–100.00	RW	F3
R4X2275	W3_NEG_SEQ_TOC_RESET	Winding 3 Neg Seq Time O/C Reset	-, -, -	RW	F68
R4X2276	W3_NEG_SEQ_TOC_BLK	Winding 3 Neg Seq Time O/C Block	-, -, -	RW	F87
R4X2280	W1_NEG_SEQ_IOC_FUNC	Winding 1 Neg Seq Inst O/C Function	-, -, -	RW	F30
R4X2281	W1_NEG_SEQ_IOC_TARG	Winding 1 Neg Seq Inst O/C Target	-, -, -	RW	F46
R4X2282	W1_NEG_SEQ_IOC_PKUP	Winding 1 Neg Seq Inst O/C Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2283	W1_NEG_SEQ_IOC_DLY	Winding 1 Neg Seq Inst O/C Delay	ms, 1, 0–60000	RW	F1
R4X2284	W1_NEG_SEQ_IOC_BLK	Winding 1 Neg Seq Inst O/C Block	-, -, -	RW	F87
R4X2290	W2_NEG_SEQ_IOC_FUNC	Winding 2 Neg Seq Inst O/C Function	-, -, -	RW	F30
R4X2291	W2_NEG_SEQ_IOC_TARG	Winding 2 Neg Seq Inst O/C Target	-, -, -	RW	F46
R4X2292	W2_NEG_SEQ_IOC_PKUP	Winding 2 Neg Seq Inst O/C Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X2293	W2_NEG_SEQ_IOC_DLY	Winding 2 Neg Seq Inst O/C Delay	ms, 1, 0–60000	RW	F1
R4X2294	W2_NEG_SEQ_IOC_BLK	Winding 2 Neg Seq Inst O/C Block	-, -, -	RW	F87
R4X22A0	W3_NEG_SEQ_IOC_FUNC	Winding 3 Neg Seq Inst O/C Function	-, -, -	RW	F30
R4X22A1	W3_NEG_SEQ_IOC_TARG	Winding 3 Neg Seq Inst O/C Target	-, -, -	RW	F46
R4X22A2	W3_NEG_SEQ_IOC_PKUP	Winding 3 Neg Seq Inst O/C Pickup	x CT, 0.01, 0.05–20.00	RW	F3
R4X22A3	W3_NEG_SEQ_IOC_DLY	Winding 3 Neg Seq Inst O/C Delay	ms, 1, 0–60000	RW	F1
R4X22A4	W3_NEG_SEQ_IOC_BLK	Winding 3 Neg Seq Inst O/C Block	-, -, -	RW	F87
R4X22B0	UF1_FUNC	Underfrequency 1 Function	-, -, -	RW	F30
R4X22B1	UF1_TARG	Underfrequency 1 Target	-, -, -	RW	F46
R4X22B2	UF1_MIN_OP_CURR	Underfrequency 1 Minimum Operating Current	x CT, 0.01, 0.20–1.00	RW	F3
R4X22B3	UF1_PKUP	Underfrequency 1 Pickup	Hz, 0.01, 45.00–59.99	RW	F3
R4X22B4	UF1_DLY	Underfrequency 1 Delay	s, 0.05, 0.00–600.00	RW	F3
R4X22B5	UF1_BLK	Underfrequency 1 Block	-, -, -	RW	F87
R4X22B6		Underfrequency 1 Current Sensing	---, ---, ---	RW	F30
R4X22B7		Underfrequency 1 Minimum Operating Voltage	x VT, 0.01, 0.10 to 0.99	RW	F3
R4X22C0	UF2_FUNC	Underfrequency 2 Function	-, -, -	RW	F30
R4X22C1	UF2_TARG	Underfrequency 2 Target	-, -, -	RW	F46
R4X22C2	UF2_MIN_OP_CURR	Underfrequency 2 Minimum Operating Current	x CT, 0.01, 0.20–1.00	RW	F3
R4X22C3	UF2_PKUP	Underfrequency 2 Pickup	Hz, 0.01, 45.00–59.99	RW	F3
R4X22C4	UF2_DLY	Underfrequency 2 Delay	s, 0.05, 0.00–600.00	RW	F3
R4X22C5	UF2_BLK	Underfrequency 2 Block	-, -, -	RW	F87
R4X22C6	UF2_AMPS_SENS	Underfrequency 2 Current Sensing	---, ---, ---	RW	F30
R4X22C7	UF2_MIN_OP_VOLTS	Underfrequency 2 Minimum Operating Voltage	x VT, 0.01, 0.10 to 0.99	RW	F3
R4X22D0	FREQ_DCY_FUNC	Frequency Decay Function	-, -, -	RW	F30
R4X22D1	FREQ_DCY_TARG	Frequency Decay Target	-, -, -	RW	F46

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X22D2	FREQ_DCY_MIN_OP_CURR	Frequency Decay Minimum Operating Current	x CT, 0.01, 0.20–1.00	RW	F3
R4X22D3	FREQ_DCY_THRES	Frequency Decay Threshold	Hz, 0.01, 45.00–59.99	RW	F3
R4X22D4	FREQ_DCY_R1	Frequency Decay Rate 1	Hz/s, 0.1, 0.1–5.0	RW	F2
R4X22D5	FREQ_DCY_R2	Frequency Decay Rate 2	Hz/s, 0.1, 0.1–5.0	RW	F2
R4X22D6	FREQ_DCY_R3	Frequency Decay Rate 3	Hz/s, 0.1, 0.1–5.0	RW	F2
R4X22D7	FREQ_DCY_R4	Frequency Decay Rate 4	Hz/s, 0.1, 0.1–5.0	RW	F2
R4X22D8	FREQ_DCY_BLK	Frequency Decay Block	–, –, –	RW	F87
R4X22D9	FREQ_DCY_AMPS_SENS	Frequency Decay Current Sensing	–, –, –	RW	F30
R4X22DA	FREQ_DCY_MIN_OP_VOLTS	Frequency Decay Minimum Operating Voltage	x VT, 0.01, 0.10 to 0.99	RW	F3
R4X22DB	FREQ_DCY_DLY	Frequency Decay Delay	s, 0.01, 0.00 to 600.00	RW	F3
R4X22E0	OF_FUNC	Overfrequency Function	–, –, –	RW	F30
R4X22E1	OF_TARG	Overfrequency Target	–, –, –	RW	F46
R4X22E2	OF_MIN_OP_CURR	Overfrequency Minimum Operating Current	x CT, 0.01, 0.20–1.00	RW	F3
R4X22E3	OF_PKUP	Overfrequency Pickup	Hz, 0.01, 50.01–65.00	RW	F3
R4X22E4	OF_DLY	Overfrequency Delay	s, 0.05, 0.00–600.00	RW	F3
R4X22E5	OF_BLK	Overfrequency Block	–, –, –	RW	F87
R4X22E6	OF_AMPS_SENS	Overfrequency Current Sensing	–, –, –		F30
R4X22E7	OF_MIN_OP_VOLTS	Overfrequency Minimum Operating Voltage	x VT, 0.01, 0.10 to 0.99		F3
R4X22F0	5TH_HARM_FUNC	5th Harmonic Level Function	–, –, –	RW	F30
R4X22F1	5TH_HARM_TARG	5th Harmonic Level Target	–, –, –	RW	F46
R4X22F2	5TH_HARM_MIN_OP_CURR	5th Harmonic Level Minimum Operating Current	x CT, 0.01, 0.03–1.00	RW	F3
R4X22F3	5TH_HARM_PKUP	5th Harmonic Level Pickup	% f_0 , 0.1, 0.1–99.9	RW	F1
R4X22F4	5TH_HARM_DLY	5th Harmonic Level Delay	s, 1, 0–60000	RW	F1
R4X22F5	5TH_HARM_BLK	5th Harmonic Level Block	–, –, –	RW	F87
R4X2300	V_HZ_1_FUNC	Volts-Per-Hertz 1 Function	–, –, –	RW	F30
R4X2301	V_HZ_1_TARG	Volts-Per-Hertz 1 Target	–, –, –	RW	F46
R4X2302	V_HZ_1_MIN_OP_CURR	Volts-Per-Hertz 1 Minimum Operating Voltage	x VT, 0.01, 0.10–0.99	RW	F3
R4X2303	V_HZ_1_PKUP	Volts-Per-Hertz 1 Pickup	V/Hz, 0.01, 1.00–4.00	RW	F3
R4X2304	V_HZ_1_SHAPE	Volts-Per-Hertz 1 Shape	–, –, –	RW	F86
R4X2305	V_HZ_1_DLY	Volts-Per-Hertz 1 Delay	s, 0.01, 0.00–600.00	RW	F3
R4X2306	V_HZ_1_RESET	Volts-Per-Hertz 1 Reset	s, 0.1, 0.0–6000.0	RW	F2
R4X2307	V_HZ_1_BLK	Volts-Per-Hertz 1 Block	–, –, –	RW	F87
R4X2310	V_HZ_2_FUNC	Volts-Per-Hertz 2 Function	–, –, –	RW	F30
R4X2311	V_HZ_2_TARG	Volts-Per-Hertz 2 Target	–, –, –	RW	F46
R4X2312	V_HZ_2_MIN_OP_VOLTS	Volts-Per-Hertz 2 Minimum Operating Voltage	x VT, 0.01, 0.10–0.99	RW	F3
R4X2313	V_HZ_2_PKUP	Volts-Per-Hertz 2 Pickup	V/Hz, 0.01, 1.00–4.00	RW	F3
R4X2314	V_HZ_2_SHAPE	Volts-Per-Hertz 2 Shape	–, –, –	RW	F86
R4X2315	V_HZ_2_DLY	Volts-Per-Hertz 2 Delay	s, 0.01, 0.00–600.00	RW	F3
R4X2316	V_HZ_2_RESET	Volts-Per-Hertz 2 Reset	s, 0.1, 0.0–6000.0	RW	F2
R4X2317	V_HZ_2_BLK	Volts-Per-Hertz 2 Block	–, –, –	RW	F87
R4X2320	W1_THD_LVL_FUNC	Winding 1 THD Level Function	–, –, –	RW	F30

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X2321	W1_THD_LVL_TARG	Winding 1 THD Level Target	-, -, -	RW	F46
R4X2322	W1_THD_LVL_MIN_OP	Winding 1 THD Level Minimum Operating Current	x CT, 0.01, 0.03–1.00	RW	F3
R4X2323	W1_THD_LVL_PKUP	Winding 1 THD Level Pickup	% fo, 0.1, 0.1–50.0	RW	F2
R4X2324	W1_THD_LVL_DLY	Winding 1 THD Level Delay	s, 1, 0–60000	RW	F1
R4X2325	W1_THD_LVL_BLK	Winding 1 THD Level Block	-, -, -	RW	F87
R4X2330	W2_THD_LVL_FUNC	Winding 2 THD Level Function	-, -, -	RW	F30
R4X2331	W2_THD_LVL_TARG	Winding 2 THD Level Target	-, -, -	RW	F46
R4X2332	W2_THD_LVL_MIN_OP	Winding 2 THD Level Minimum Operating Current	x CT, 0.01, 0.03–1.00	RW	F3
R4X2333	W2_THD_LVL_PKUP	Winding 2 THD Level Pickup	% fo, 0.1, 0.1–50.0	RW	F2
R4X2334	W2_THD_LVL_DLY	Winding 2 THD Level Delay	s, 1, 0–60000	RW	F1
R4X2335	W2_THD_LVL_BLK	Winding 2 THD Level Block	-, -, -	RW	F87
R4X2340	W3_THD_LVL_FUNC	Winding 3 THD Level Function	-, -, -	RW	F30
R4X2341	W3_THD_LVL_TARG	Winding 3 THD Level Target	-, -, -	RW	F46
R4X2342	W3_THD_LVL_MIN_OP	Winding 3 THD Level Minimum Operating Current	x CT, 0.01, 0.03–1.00	RW	F3
R4X2343	W3_THD_LVL_PKUP	Winding 3 THD Level Pickup	% fo, 0.1, 0.1–50.0	RW	F2
R4X2344	W3_THD_LVL_DLY	Winding 3 THD Level Delay	s, 1, 0–60000	RW	F1
R4X2345	W3_THD_LVL_BLK	Winding 3 THD Level Block	-, -, -	RW	F87
R4X2350	W1_HARM_DERAT_FUNC	Winding 1 Harm Derating Function	-, -, -	RW	F30
R4X2351	W1_HARM_DERAT_TARG	Winding 1 Harm Derating Target	-, -, -	RW	F46
R4X2352	W1_HARM_DERAT_MIN_OP	Winding 1 Harm Derating Minimum Operating Current	x CT, 0.01, 0.03–1.00	RW	F3
R4X2353	W1_HARM_DERAT_PKUP	Winding 1 Harm Derating Pickup	-, 0.01, 0.01–0.98	RW	F3
R4X2354	W1_HARM_DERAT_DLY	Winding 1 Harm Derating Delay	s, 1, 0–60000	RW	F1
R4X2355	W1_HARM_DERAT_BLK	Winding 1 Harm Derating Block	-, -, -	RW	F87
R4X2360	W2_HARM_DERAT_FUNC	Winding 2 Harm Derating Function	-, -, -	RW	F30
R4X2361	W2_HARM_DERAT_TARG	Winding 2 Harm Derating Target	-, -, -	RW	F46
R4X2362	W2_HARM_DERAT_MIN_OP	Winding 2 Harm Derating Minimum Operating Current	x CT, 0.01, 0.03–1.00	RW	F3
R4X2363	W2_HARM_DERAT_PKUP	Winding 2 Harm Derating Pickup	-, 0.01, 0.01–0.98	RW	F3
R4X2364	W2_HARM_DERAT_DLY	Winding 2 Harm Derating Delay	s, 1, 0–60000	RW	F1
R4X2365	W2_HARM_DERAT_BLK	Winding 2 Harm Derating Block	-, -, -	RW	F87
R4X2370	W3_HARM_DERAT_FUNC	Winding 3 Harm Derating Function	-, -, -	RW	F30
R4X2371	W3_HARM_DERAT_TARG	Winding 3 Harm Derating Target	-, -, -	RW	F46
R4X2372	W3_HARM_DERAT_MIN_OP	Winding 3 Harm Derating Minimum Operating Current	x CT, 0.01, 0.03–1.00	RW	F3
R4X2373	W3_HARM_DERAT_PKUP	Winding 3 Harm Derating Pickup	-, 0.01, 0.01–0.98	RW	F3
R4X2374	W3_HARM_DERAT_DLY	Winding 3 Harm Derating Delay	s, 1, 0–60000	RW	F1
R4X2375	W3_HARM_DERAT_BLK	Winding 3 Harm Derating Block	-, -, -	RW	F87
R4X2380	HOT_SPOT_LIM_FUNC	Hottest-spot Limit Function	-, -, -	RW	F30
R4X2381	HOT_SPOT_LIM_TARG	Hottest-spot Limit Target	-, -, -	RW	F46
R4X2382	HOT_SPOT_LIM_PKUP	Hottest-spot Limit Pickup	° C, 1, 40–200	RW	F1
R4X2383	HOT_SPOT_LIM_DLY	Hottest-spot Limit Delay	min, 1, 0–60000	RW	F1
R4X2384	HOT_SPOT_LIM_BLK	Hottest-spot Limit Block	-, -, -	RW	F87
R4X2390	LOL_LIM_FUNC	Loss-of-Life Limit Function	-, -, -	RW	F30

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X2391	LOL_LIM_TARG	Loss-of-Life Limit Target	-, -, -	RW	F46
R4X2392	LOL_LIM_PKUP	Loss-of-Life Limit Pickup	%, 1, 1-120	RW	F1
R4X2393	LOL_LIM_BLK	Loss-of-Life Limit Block	-, -, -	RW	F87
R4X23A0	ANAL_IN_LVL1_FUNC	Analog Input Level 1 Function	-, -, -	RW	F30
R4X23A1	ANAL_IN_LVL1_TARG	Analog Input Level 1 Target	-, -, -	RW	F46
R4X23A2	ANAL_IN_LVL1_PKUP	Analog Input Level 1 Pickup	<Units>, 1, 1-65000	RW	F1
R4X23A3	ANAL_IN_LVL1_DLY	Analog Input Level 1 Delay	s, 1, 0-60000	RW	F1
R4X23A4	ANAL_IN_LVL1_BLK	Analog Input Level 1 Block	-, -, -	RW	F87
R4X23B0	ANAL_IN_LVL2_FUNC	Analog Input Level 2 Function	-, -, -	RW	F30
R4X23B1	ANAL_IN_LVL2_TARG	Analog Input Level 2 Target	-, -, -	RW	F46
R4X23B2	ANAL_IN_LVL2_PKUP	Analog Input Level 2 Pickup	<Units>, 1, 1-65000	RW	F1
R4X23B3	ANAL_IN_LVL2_DLY	Analog Input Level 2 Delay	s, 1, 0-60000	RW	F1
R4X23B4	ANAL_IN_LVL2_BLK	Analog Input Level 2 Block	-, -, -	RW	F87
R4X23C0	W1_CURR_DMND_FUNC	Winding 1 Current Demand Function	-, -, -	RW	F30
R4X23C1	W1_CURR_DMND_TARG	Winding 1 Current Demand Target	-, -, -	RW	F46
R4X23C2	W1_CURR_DMND_PKUP	Winding 1 Current Demand Pickup	A, -, -	RW	F78
R4X23C3	W1_CURR_DMND_BLK	Winding 1 Current Demand Block	-, -, -	RW	F87
R4X23D0	W2_CURR_DMND_FUNC	Winding 2 Current Demand Function	-, -, -	RW	F30
R4X23D1	W2_CURR_DMND_TARG	Winding 2 Current Demand Target	-, -, -	RW	F46
R4X23D2	W2_CURR_DMND_PKUP	Winding 2 Current Demand Pickup	A, -, -	RW	F79
R4X23D3	W2_CURR_DMND_BLK	Winding 2 Current Demand Block	-, -, -	RW	F87
R4X23E0	W3_CURR_DMND_FUNC	Winding 3 Current Demand Function	-, -, -	RW	F30
R4X23E1	W3_CURR_DMND_TARG	Winding 3 Current Demand Target	-, -, -	RW	F46
R4X23E2	W3_CURR_DMND_PKUP	Winding 3 Current Demand Pickup	A, -, -	RW	F80
R4X23E3	W3_CURR_DMND_BLK	Winding 3 Current Demand Block	-, -, -	RW	F87
R4X23F0	TXF_OL_FUNC	Transformer Overload Function	-, -, -	RW	F30
R4X23F1	TXF_OL_TARG	Transformer Overload Target	-, -, -	RW	F46
R4X23F2	TXF_OL_PKUP	Transformer Overload Pickup	% rated, 1, 50-300	RW	F1
R4X23F3	TXF_OL_DLY	Transformer Overload Delay	s, 1, 0-60000	RW	F1
R4X23F4	TXF_OL_BLK	Transformer Overload Block	-, -, -	RW	F87
R4X23F5	TXF_OVR_TEMP_ALM	Transformer Overtemperature Alarm Signal	-, -, -	RW	F88
R4X2400	AG_FCTR_LIM_FUNC	Aging Factor Limit Function	---, ---, ---	RW	F30
R4X2401	AG_FCTR_LIM_TGT	Aging Factor Limit Target	---, ---, ---	RW	F46
R4X2402	AG_FCTR_LIM_PKUP	Aging Factor Limit Pickup	---, 0.1, 1.10 to 10.0	RW	F2
R4X2403	AG_FCTR_LIM_DLY	Aging Factor Limit Delay	minutes, 1, 0 to 60000	RW	F1
R4X2404	AG_FCTR_LIM_BLK	Aging Factor Limit Block	---, ---, ---	RW	F87
R4X2410	TAP_CHNGR_FAIL_FUNC	Tap Changer Failure Function	---, ---, ---	RW	F30
R4X2411	TAP_CHNGR_FAIL_TGT	Tap Changer Failure Target	---, ---, ---	RW	F46
R4X2412	TAP_CHNGR_FAIL_DLY	Tap Changer Failure Delay	s, 0.01, 0 to 600.00	RW	F3
R4X2413	TAP_CHNGR_FAIL_BLK	Tap Changer Failure Block	---, ---, ---	RW	F87
R4X400L	TM_LST_CLR_DATE	Trace Memory Last Clear Date (2 registers)	-, -, -	RO	F23
R4X400L	TM_LST_CLR_TIME	Trace Memory Last Clear Time (2 registers)	-, -, -	RO	F22
R4X4004	TM_TRIGS_SINCE_CLR	Total # of Trace Triggers Since Last Clear	-, 1, 0-65535	RO	F1
R4X4005	TM_BUFF_SELECT	Trace Buffer Selector Index (XX)	-, 1, 1-65535	RW	F1
R4X4006	TM_CHAN_SELECT	Trace Channel Selector Index (YY)	-, -, -	RW	F65

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Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X4010L	TM_BUFF_TRIG_DATE	Trace Buffer XX Trigger Date (2 registers)	-, -, -	RO	F23
R4X4012L	TM_BUFF_TRIG_TIME	Trace Buffer XX Trigger Time (2 registers)	-, -, -	RO	F22
R4X4014	TM_BUFF_TRIG_CAUSE	Trace Buffer XX Trigger Cause	-, -, -	RO	F85
R4X4015	TM_BUFF_TRIG_SMP_IND	Trace Buffer XX Trigger Sample Index	-, 1, 0-1023	RO	F1
R4X4016	TM_BUFF_FREQ	Trace Buffer XX System Frequency	Hz, 0.01, 2.00-65.00	RO	F3
R4X4017		Trace Buffer XX Channel YY Sample 0	-, -, -	RO	F70
R4X4018		Trace Buffer XX Channel YY Sample 1	-, -, -	RO	F70
:		:		RO	
R4X4416		Trace Buffer XX Channel YY Sample 1023	-, -, -	RO	F70
R4X4800	PLAYBACK_CHANNEL	Playback Channel Selector Index (XX)	-, -, -	RW	F69
R4X4810	PLAYBACK_CHAN_SAMPL	Playback Channel XX Sample 0	-, -, -	RW	F70
R4X4811		Playback Channel XX Sample 1	-, -, -	RW	F70
:		:		RW	
R4X4C0F		Playback Channel XX Sample 1023	-, -, -	RW	F70
R4X5000	FS_FUNC_PASSCODE	Factory Service Function Passcode	-, -, -	RW	F1
R4X5001	FS_COMMANDS	Factory Service Commands	-, -, -	RW	F71
R4X5002	FORCE_LED_STAT_COL1	Force LED Status Column 1	-, -, -	RW	F54
R4X5003	FORCE_LED_STAT_COL2	Force LED Status Column 2	-, -, -	RW	F54
R4X5004	FORCE_LED_STAT_COL3	Force LED Status Column 3	-, -, -	RW	F54
R4X5005	FORCE_OTHER_HW	Force Other Hardware	-, -, -	RW	F72
R4X500A	FLEX_EQ_EDITOR_ERR	FlexLogic Equation Error	-, -, -	RW	F76
R4X500B	BAD_TXF_SETTINGS_ERR	Bad Transformer Settings Error	-, -, -	RW	F77
R4X5010	LOGIC_IN_ERR	Logic Input Error Flag	-, -, -	RW	F52
R4X5011	ANAL_OUT_ERR	Analog Output Error Flag	-, -, -	RW	F52
R4X5012	CALIB_ERR	Calibration Error Flag	-, -, -	RW	F52
R4X5013	EEPROM_ERR	EEPROM Error Flag	-, -, -	RW	F52
R4X5014	REAL_TIME_CLK_ERR	Real Time Clock Error Flag	-, -, -	RW	F52
R4X5015	BATTERY_ERR	Battery Error Flag	-, -, -	RW	F52
R4X5016	EMUL_SW_ERR	Emulation Software Error Flag	-, -, -	RW	F52
R4X5017	INTL_TEMP_ERR	Internal Temperature Error Flag	-, -, -	RW	F52
R4X5018	FLEXLOGIC_ERR	Flexlogic Error Flag	-, -, -	RW	F52
R4X5019	DSP_ERR	DSP Error Flag	-, -, -	RW	F52
R4X501A	BAD_SETTINGS_ERR	Bad Settings Error Flag	-, -, -	RW	F52
R4X501B	IRIG_B_SIGNAL_ERR	IRIG-B Signal Error Flag	-, -, -	RW	F52
R4X501C	ACCESS_DENY_ERR	Access Denied Error Flag	-, -, -	RW	F52
R4X501D	AMB_TEMP_ERROR_FLG	Ambient Temperature Error Flag	-, -, -	RW	F52
R4X5020	OP_HRS_RELY	Operating Hours of Relay	hours, 1, 0-65535	RW	F1
R4X5021I	INTL_TEMP	Internal Temperature	° C, 0.1, -55.0-150.0	RW	F5
R4X5022I	MIN_INTL_TEMP	Minimum Internal Temperature	° C, 0.1, -55.0-150.0	RW	F5
R4X5023I	MAX_INTL_TEMP	Maximum Internal Temperature	° C, 0.1, -55.0-150.0	RW	F5
R4X5024	0_1_MA_ANAL_IN	0-1 mA Analog Input	µA, 1, 0-65535	RW	F1
R4X5025	0_20_MA_ANAL_IN	0-20 mA Analog Input	µA, 1, 0-65535	RW	F1
R4X5026	LAST_FRNT_KEY_PRESS	Last Front Panel Key Pressed	-, -, -	RW	F55
R4X5027	DSP_DIAGNOST_FLAGS	DSP Diagnostic Flags	-, -, -	RW	F51
R4X5030	UNEXP_INTRP_CTR	Unexpected Interrupt Counter	-, 1, 0-65535	RW	F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X5031	LST_UNEXP_INTRP_VCT	Last Unexpected Interrupt Vector	-, 1, 0-255	RW	F1
R4X5032	UNEXP_RST_CTR	Unexpected Reset Counter	-, 1, 0-65535	RW	F1
R4X5033	LST_UNEXP_RST_CAUSE	Last Unexpected Reset Cause	-, 1, 0-255	RW	F1
R4X5034	EEPROM_SCRUB_CTR	EEPROM Scrub Counter	-, 1, 0-65535	RW	F1
R4X5035	AD_VIRT_GND_ERR_CTR	A/D Virtual Ground Error Counter	-, 1, 0-65535	RW	F1
R4X5036	FRNT_232_ERR_CTR	Front RS232 Error Counter	-, 1, 0-65535	RW	F1
R4X5037	COM1_ERR_CTR	COM1 Error Counter	-, 1, 0-65535	RW	F1
R4X5038	COM2_ERR_CTR	COM2 Error Counter	-, 1, 0-65535	RW	F1
R4X5039	PROCESSOR_USE	Processor Usage	%, 0.1, 0.0-100.0	RW	F2
R4X503A	RAM_USE	RAM Memory Usage	%, 0.1, 0.0-100.0	RW	F2
R4X5040L	BOOT_PROG_COMP_DATE	Boot Program Compile Date (2 registers)	-, -, -	RW	F23
R4X5042L	BOOT_PROG_COMP_TIME	Boot Program Compile Time (2 registers)	-, -, -	RW	F22
R4X5044L	MAIN_PROG_COMP_DATE	Main Program Compile Date (2 registers)	-, -, -	RW	F23
R4X5046L	MAIN_PROG_COMP_TIME	Main Program Compile Time (2 registers)	-, -, -	RW	F22
R4X5100L	LAST_CALIB_DATE	Date of Last Calibration (2 registers)	-, -, -	RW	F23
R4X5102L	ORIG_CALIB_DATE	Date of Original Calibration (2 registers)	-, -, -	RW	F23
R4X5104	8_1_SATUR_LVL	x8 to x1 Saturation Level	counts, 1, 0-32767	RW	F1
R4X5105I	W1A_CURRX1_OFFST	Winding 1 Phase A Current x1 Offset	-, 1, -100-+100	RW	F4
R4X5106	W1A_CURRX1_GAIN	Winding 1 Phase A Current x1 Gain	-, 1, 0-20000	RW	F1
R4X5107I	W1A_CURRX8_OFFST	Winding 1 Phase A Current x8 Offset	-, 1, -100-+100	RW	F4
R4X5108	W1A_CURRX8_GAIN	Winding 1 Phase A Current x8 Gain	-, 1, 0-20000	RW	F1
R4X5109I	W1B_CURRX1_OFFST	Winding 1 Phase B Current x1 Offset	-, 1, -100-+100	RW	F4
R4X510A	W1B_CURRX1_GAIN	Winding 1 Phase B Current x1 Gain	-, 1, 0-20000	RW	F1
R4X510BI	W1B_CURRX8_OFFST	Winding 1 Phase B Current x8 Offset	-, 1, -100-+100	RW	F4
R4X510C	W1B_CURRX8_GAIN	Winding 1 Phase B Current x8 Gain	-, 1, 0-20000	RW	F1
R4X510DI	W1C_CURRX1_OFFST	Winding 1 Phase C Current x1 Offset	-, 1, -100-+100	RW	F4
R4X510E	W1C_CURRX1_GAIN	Winding 1 Phase C Current x1 Gain	-, 1, 0-20000	RW	F1
R4X510FI	W1C_CURRX8_OFFST	Winding 1 Phase C Current x8 Offset	-, 1, -100-+100	RW	F4
R4X5110	W1C_CURRX8_GAIN	Winding 1 Phase C Current x8 Gain	-, 1, 0-20000	RW	F1
R4X5111I	W12_G_CURRX1_OFFST	Winding 1/2 Ground Current x1 Offset	-, 1, -100-+100	RW	F4
R4X5112	W12_G_CURRX1_GAIN	Winding 1/2 Ground Current x1 Gain	-, 1, 0-20000	RW	F1
R4X5113I	W12_G_CURRX8_OFFST	Winding 1/2 Ground Current x8 Offset	-, 1, -100-+100	RW	F4
R4X5114	W12_G_CURRX8_GAIN	Winding 1/2 Ground Current x8 Gain	-, 1, 0-20000	RW	F1
R4X5115I	W2A_CURRX1_OFFST	Winding 2 Phase A Current x1 Offset	-, 1, -100-+100	RW	F4
R4X5116	W2A_CURRX1_GAIN	Winding 2 Phase A Current x1 Gain	-, 1, 0-20000	RW	F1
R4X5117I	W2A_CURRX8_OFFST	Winding 2 Phase A Current x8 Offset	-, 1, -100-+100	RW	F4
R4X5118	W2A_CURRX8_GAIN	Winding 2 Phase A Current x8 Gain	-, 1, 0-20000	RW	F1
R4X5119I	W2B_CURRX1_OFFST	Winding 2 Phase B Current x1 Offset	-, 1, -100-+100	RW	F4
R4X511A	W2B_CURRX1_GAIN	Winding 2 Phase B Current x1 Gain	-, 1, 0-20000	RW	F1
R4X511BI	W2B_CURRX8_OFFST	Winding 2 Phase B Current x8 Offset	-, 1, -100-+100	RW	F4
R4X511C	W2B_CURRX8_GAIN	Winding 2 Phase B Current x8 Gain	-, 1, 0-20000	RW	F1
R4X511DI	W2C_CURRX1_OFFST	Winding 2 Phase C Current x1 Offset	-, 1, -100-+100	RW	F4
R4X511E	W2C_CURRX1_GAIN	Winding 2 Phase C Current x1 Gain	-, 1, 0-20000	RW	F1
R4X511FI	W2C_CURRX8_OFFST	Winding 2 Phase C Current x8 Offset	-, 1, -100-+100	RW	F4
R4X5120	W2C_CURRX8_GAIN	Winding 2 Phase C Current x8 Gain	-, 1, 0-20000	RW	F1

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X5121I	W23_G_CURRX1_OFFST	Winding 2/3 Ground Current x1 Offset	-, 1, -100--+100	RW	F4
R4X5122	W23_G_CURRX1_GAIN	Winding 2/3 Ground Current x1 Gain	-, 1, 0-20000	RW	F1
R4X5123I	W23_G_CURRX8_OFFST	Winding 2/3 Ground Current x8 Offset	-, 1, -100--+100	RW	F4
R4X5124	W23_G_CURRX8_GAIN	Winding 2/3 Ground Current x8 Gain	-, 1, 0-20000	RW	F1
R4X5125I	W3A_CURRX1_OFFST	Winding 3 Phase A Current x1 Offset	-, 1, -100--+100	RW	F4
R4X5126	W3A_CURRX1_GAIN	Winding 3 Phase A Current x1 Gain	-, 1, 0-20000	RW	F1
R4X5127I	W3A_CURRX8_OFFST	Winding 3 Phase A Current x8 Offset	-, 1, -100--+100	RW	F4
R4X5128	W3A_CURRX8_GAIN	Winding 3 Phase A Current x8 Gain	-, 1, 0-20000	RW	F1
R4X5129I	W3B_CURRX1_OFFST	Winding 3 Phase B Current x1 Offset	-, 1, -100--+100	RW	F4
R4X512A	W3B_CURRX1_GAIN	Winding 3 Phase B Current x1 Gain	-, 1, 0-20000	RW	F1
R4X512BI	W3B_CURRX8_OFFST	Winding 3 Phase B Current x8 Offset	-, 1, -100--+100	RW	F4
R4X512C	W3B_CURRX8_GAIN	Winding 3 Phase B Current x8 Gain	-, 1, 0-20000	RW	F1
R4X512DI	W3C_CURRX1_OFFST	Winding 3 Phase C Current x1 Offset	-, 1, -100--+100	RW	F4
R4X512E	W3C_CURRX1_GAIN	Winding 3 Phase C Current x1 Gain	-, 1, 0-20000	RW	F1
R4X512FI	W3C_CURRX8_OFFST	Winding 3 Phase C Current x8 Offset	-, 1, -100--+100	RW	F4
R4X5130	W3C_CURRX8_GAIN	Winding 3 Phase C Current x8 Gain	-, 1, 0-20000	RW	F1
R4X5131I	V_INX1_OFFST	Voltage Input x1 Offset	-, 1, -100--+100	RW	F4
R4X5132	V_INX1_GAIN	Voltage Input x1 Gain	-, 1, 0-20000	RW	F1
R4X5133I	V_INX8_OFFST	Voltage Input x8 Offset	-, 1, -100--+100	RW	F4
R4X5134	V_INX8_GAIN	Voltage Input x8 Gain	-, 1, 0-20000	RW	F1
R4X5135I	TAP_CHG_IN_LO_OFFST	Tap Changer Input Low Offset	-, 1, -600--+600	RW	F4
R4X5136	TAP_CHG_IN_LO_GAIN	Tap Changer Input Low Gain	-, 1, 0-10000	RW	F1
R4X5137I	TAP_CHG_IN_HI_OFFST	Tap Changer Input High Offset	-, 1, -600--+600	RW	F4
R4X5138	TAP_CHG_IN_HI_GAIN	Tap Changer Input High Gain	-, 1, 0-1000	RW	F1
R4X5139I	AMB_TEMP_IN_LO_OFFST	Ambient Temperature RTD Input Low Offset	-, 1, -600--+600	RW	F4
R4X513A	AMB_TEMP_IN_LO_GAIN	Ambient Temperature RTD Input Low Gain	-, 1, 0-20000	RW	F1
R4X513BI	AMB_TEMP_IN_HI_OFFST	Ambient Temperature RTD Input High Offset	-, 1, -600--+600	RW	F4
R4X513C	AMB_TEMP_IN_HI_GAIN	Ambient Temperature RTD Input High Gain	-, 1, 0-20000	RW	F1
R4X513DI	ANAL__IN_1MA_OFFST	Analog Input 1 mA Offset	-, 1, -600--+600	RW	F4
R4X513E	ANAL_IN_1MA_GAIN	Analog Input 1 mA Gain	-, 1, 0-2000	RW	F1
R4X513FI	ANAL__IN_20MA_OFFST	Analog Input 20 mA Offset	-, 1, -600--+600	RW	F4
R4X5140	ANAL_IN_20MA_GAIN	Analog Input 20 mA Gain	-, 1, 0-30000	RW	F1
R4X5141	ANAL_OUT1_MIN_SCALE	Analog Output #1 Min Scale	-, 1, 0-4095	RW	F1
R4X5142	ANAL_OUT1_MAX_SCALE	Analog Output #1 Max Scale	-, 1, 0-4095	RW	F1
R4X5143	ANAL_OUT2_MIN_SCALE	Analog Output #2 Min Scale	-, 1, 0-4095	RW	F1
R4X5144	ANAL_OUT2_MAX_SCALE	Analog Output #2 Max Scale	-, 1, 0-4095	RW	F1
R4X5145	ANAL_OUT3_MIN_SCALE	Analog Output #3 Min Scale	-, 1, 0-4095	RW	F1
R4X5146	ANAL_OUT3_MAX_SCALE	Analog Output #3 Max Scale	-, 1, 0-4095	RW	F1
R4X5147	ANAL_OUT4_MIN_SCALE	Analog Output #4 Min Scale	-, 1, 0-4095	RW	F1
R4X5148	ANAL_OUT4_MAX_SCALE	Analog Output #4 Max Scale	-, 1, 0-4095	RW	F1
R4X5149	ANAL_OUT5_MIN_SCALE	Analog Output #5 Min Scale	-, 1, 0-4095	RW	F1
R4X514A	ANAL_OUT5_MAX_SCALE	Analog Output #5 Max Scale	-, 1, 0-4095	RW	F1
R4X514B	ANAL_OUT6_MIN_SCALE	Analog Output #6 Min Scale	-, 1, 0-4095	RW	F1
R4X514C	ANAL_OUT6_MAX_SCALE	Analog Output #6 Max Scale	-, 1, 0-4095	RW	F1
R4X514D	ANAL_OUT7_MIN_SCALE	Analog Output #7 Min Scale	-, 1, 0-4095	RW	F1

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Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X514E	ANAL_OUT7_MAX_SCALE	Analog Output #7 Max Scale	-, 1, 0-4095	RW	F1
R4X514F	ANAL_OUT8_REF	Analog Output #8 Reference	-, 1, 0-4095	RW	F1
R4X5160	FRC_ANAL_OUT1_DA_CNT	Force Analog Output 1 D/A Count	-, 1, 0-4095	RW	F1
R4X5161	FRC_ANAL_OUT2_DA_CNT	Force Analog Output 2 D/A Count	-, 1, 0-4095	RW	F1
R4X5162	FRC_ANAL_OUT3_DA_CNT	Force Analog Output 3 D/A Count	-, 1, 0-4095	RW	F1
R4X5163	FRC_ANAL_OUT4_DA_CNT	Force Analog Output 4 D/A Count	-, 1, 0-4095	RW	F1
R4X5164	FRC_ANAL_OUT5_DA_CNT	Force Analog Output 5 D/A Count	-, 1, 0-4095	RW	F1
R4X5165	FRC_ANAL_OUT6_DA_CNT	Force Analog Output 6 D/A Count	-, 1, 0-4095	RW	F1
R4X5166	FRC_ANAL_OUT7_DA_CNT	Force Analog Output 7 D/A Count	-, 1, 0-4095	RW	F1
R4X5170	W1A_AMPS	Winding 1 Phase A RMS Current	x CT, -, -	RW	F53
R4X5171	W1A_AMPS_MIN	Winding 1 Phase A RMS Current Minimum	x CT, -, -	RW	F53
R4X5172	W1A_AMPS_MAX	Winding 1 Phase A RMS Current Maximum	x CT, -, -	RW	F53
R4X5173	W1B_AMPS	Winding 1 Phase B RMS Current	x CT, -, -	RW	F53
R4X5174	W1B_AMPS_MIN	Winding 1 Phase B RMS Current Minimum	x CT, -, -	RW	F53
R4X5175	W1B_AMPS_MBX	Winding 1 Phase B RMS Current Maximum	x CT, -, -	RW	F53
R4X5176	W1C_AMPS	Winding 1 Phase C RMS Current	x CT, -, -	RW	F53
R4X5177	W1C_AMPS_MIN	Winding 1 Phase C RMS Current Minimum	x CT, -, -	RW	F53
R4X5178	W1C_AMPS_MCX	Winding 1 Phase C RMS Current Maximum	x CT, -, -	RW	F53
R4X5179	W12_G_AMPS	Winding 1/2 Ground RMS Current	x CT, -, -	RW	F53
R4X517A	W12_G_AMPS_MIN	Winding 1/2 Ground RMS Current Minimum	x CT, -, -	RW	F53
R4X517B	W12_G_AMPS_MAX	Winding 1/2 Ground RMS Current Maximum	x CT, -, -	RW	F53
R4X517C	W2A_AMPS	Winding 2 Phase A RMS Current	x CT, -, -	RW	F53
R4X517D	W2A_AMPS_MIN	Winding 2 Phase A RMS Current Minimum	x CT, -, -	RW	F53
R4X517E	W2A_AMPS_MAX	Winding 2 Phase A RMS Current Maximum	x CT, -, -	RW	F53
R4X517F	W2B_AMPS	Winding 2 Phase B RMS Current	x CT, -, -	RW	F53
R4X5180	W2B_AMPS_MIN	Winding 2 Phase B RMS Current Minimum	x CT, -, -	RW	F53
R4X5181	W2B_AMPS_MBX	Winding 2 Phase B RMS Current Maximum	x CT, -, -	RW	F53
R4X5182	W2C_AMPS	Winding 2 Phase C RMS Current	x CT, -, -	RW	F53
R4X5183	W2C_AMPS_MIN	Winding 2 Phase C RMS Current Minimum	x CT, -, -	RW	F53
R4X5184	W2C_AMPS_MCX	Winding 2 Phase C RMS Current Maximum	x CT, -, -	RW	F53
R4X5185	W23_G_AMPS	Winding 2/3 Ground RMS Current	x CT, -, -	RW	F53
R4X5186	W23_G_AMPS_MIN	Winding 2/3 Ground RMS Current Minimum	x CT, -, -	RW	F53
R4X5187	W23_G_AMPS_MAX	Winding 2/3 Ground RMS Current Maximum	x CT, -, -	RW	F53
R4X5188	W3A_AMPS	Winding 3 Phase A RMS Current	x CT, -, -	RW	F53
R4X5189	W3A_AMPS_MIN	Winding 3 Phase A RMS Current Minimum	x CT, -, -	RW	F53
R4X518A	W3A_AMPS_MAX	Winding 3 Phase A RMS Current Maximum	x CT, -, -	RW	F53
R4X518B	W3B_AMPS	Winding 3 Phase B RMS Current	x CT, -, -	RW	F53
R4X518C	W3B_AMPS_MIN	Winding 3 Phase B RMS Current Minimum	x CT, -, -	RW	F53
R4X518D	W3B_AMPS_MBX	Winding 3 Phase B RMS Current Maximum	x CT, -, -	RW	F53
R4X518E	W3C_AMPS	Winding 3 Phase C RMS Current	x CT, -, -	RW	F53
R4X518F	W3C_AMPS_MIN	Winding 3 Phase C RMS Current Minimum	x CT, -, -	RW	F53
R4X5190	W3C_AMPS_MCX	Winding 3 Phase C RMS Current Maximum	x CT, -, -	RW	F53
R4X51A0	W1A_AMPS_SAMPL	Winding 1 Phase A Current Sample	-, -, -	RW	F70
R4X51A1	W1B_AMPS_SAMPL	Winding 1 Phase B Current Sample	-, -, -	RW	F70
R4X51A2	W1C_AMPS_SAMPL	Winding 1 Phase C Current Sample	-, -, -	RW	F70

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Codes
R4X51A3	W12_G_CURR_SAMPL	Winding 1/2 Ground Current Sample	-, -, -	RW	F70
R4X51A4	W2A_AMPS_SAMPL	Winding 2 Phase A Current Sample	-, -, -	RW	F70
R4X51A5	W2B_AMPS_SAMPL	Winding 2 Phase B Current Sample	-, -, -	RW	F70
R4X51A6	W2C_AMPS_SAMPL	Winding 2 Phase C Current Sample	-, -, -	RW	F70
R4X51A7	W23_G_CURR_SAMPL	Winding 2/3 Ground Current Sample	-, -, -	RW	F70
R4X51A8	W3A_AMPS_SAMPL	Winding 3 Phase A Current Sample	-, -, -	RW	F70
R4X51A9	W3B_AMPS_SAMPL	Winding 3 Phase B Current Sample	-, -, -	RW	F70
R4X51AA	W3C_AMPS_SAMPL	Winding 3 Phase C Current Sample	-, -, -	RW	F70
R4X51AB	V_SAMPL	Voltage Sample	-, -, -	RW	F70
R4X51B0	W12_GND_CURR	Winding 1/2 Ground Current - RMS Magnitude	A, -, -	RW	F81 / F82
R4X51B1	W23_GND_CURR	Winding 2/3 Ground Current - RMS Magnitude	A, -, -	RW	F82 / F83
R4X51C0	20MA_ANAL_IN_CNT	20 mA Analog Input Count	-, -, 0-65535	RW	F1
R4X51C1	1MA_ANAL_IN_CNT	1 mA Analog Input Count	-, -, 0-65535	RW	F1
R4X51C2	RTD_HI_GAIN_CNT	RTD High-Gain Count	-, -, 0-65535	RW	F1
R4X51C3	RTD_LO_GAIN_CNT	RTD Low-Gain Count	-, -, 0-65535	RW	F1
R4X51C4	RTD_NO_SENS_CNT	RTD No-Sensor Count	-, -, 0-65535	RW	F1
R4X51C5	TAP_POS_HI_GAIN	Tap Position High-Gain Count	-, -, 0-65535	RW	F1
R4X51C6	TAP_POS_LO_GAIN	Tap Position Low-Gain Count	-, -, 0-65535	RW	F1
R4X51C7	32V_ANAL_OUT_MON	32V Analog Output Monitor	-, -, 0-65535	RW	F1
R4X51C8	INT_TEMP_ZERO_BIAS	Internal Temperature Zero Bias	-, -, 0-65535	RW	F1
R4X51C9	INT_TEMP	Internal Temperature	-, -, 0-65535	RW	F1
R4X51CA	ZERO_REF	Zero Reference	-, -, 0-65535	RW	F1
R4X51CB	HALF_SCALE_TEST	Half-Scale Test	-, -, 0-65535	RW	F1
R4X51CC	ZERO_SCALE_TEST	Zero-Scale Test	-, -, 0-65535	RW	F1
R4X51CD	FULL_SCALE_TEST	Full-Scale Test	-, -, 0-65535	RW	F1
R4X5200S40	FRONT_DISPLAY	Front Panel Display Buffer (20 registers)	-, -, -	RW	F33
R4X5220	OVERRIDE_MSG_FUNC	Override Message Function	-, -, -	RW	F30
R4X5221S40	OVERRIDE_MSG	Override Message (20 registers)	-, -, -	RW	F33

ACTUAL VALUES

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X0000	DEVICE_CODE	Multilin Product Device Code	-, -, -	RO	F1
R3X0001	HW_REV	Hardware Revision	-, -, -	RO	F13
R3X0002	SW_REV	Software Revision	-, -, -	RO	F14
R3X0003	VERSION	Version Number	-, 001, 000-999	RO	F1
R3X0004	BOOT_REV	Bootware Revision	-, 001, 000-999	RO	F14
R3X0005	ORDER_CODE	Installed Options	-, -, -	RO	F15
R3X0006S 8	SERIAL_NUM	Serial Number (4 registers)	-, -, -	RO	F33
R3X000AL	DATE_MANUF	Manufacture Date (2 registers)	-, -, -	RO	F23
R3X0020	NEW_OPTIONS	New Options	-, -, -	RO	F15
R3X0021	MOD_PASSCODE	Modify Passcode	-, -, -	RO	F33
R3X0100		User Map Value #1	-, -, -	RW	---
R3X0101		User Map Value #2	-, -, -	RW	---
:		:	,	RW	
R3X0177		User Map Value #120	-, -, -	RW	---
R3X0180		User Map Address #1	hex, 0001, 0000-FFFF	RW	F1
R3X0181		User Map Address #2	hex, 0001, 0000-FFFF	RW	F1
:		:		RW	
R3X01F7		User Map Address #120	hex, 0001, 0000-FFFF	RW	F1
R3X0200	RELAY_STATUS	Relay Status	-, -, -	RO	F20
R3X0201	SYSTEM_STATUS	System Status	-, -, -	RO	F21
R3X0202	CONDITIONS	Conditions	-, -, -	RO	F35
R3X0203	OP_STAT	Operation Status	-, -, -	RO	F44
R3X0204	LOGIC_IN_STAT	Logic Input Status	-, -, -	RO	F49
R3X0205	OUTPUT_RLY_STAT	Output Relay Status	-, -, -	RO	F50
R3X0208	ANY_EL_FLAG	Any Element Flag	-, -, -	RO	F52
R3X0209	ANY_WIND1_OC_EL	Any Winding 1 Overcurrent Element Flag	-, -, -	RO	F52
R3X020A	ANY_WIND2_OC_EL	Any Winding 2 Overcurrent Element Flag	-, -, -	RO	F52
R3X020B	ANY_WIND3_OC_EL	Any Winding 3 Overcurrent Element Flag	-, -, -	RO	F52
R3X020C	PERC_DIFF	Percent Differential Flag	-, -, -	RO	F52
R3X020D	INST_DIFF	Inst Differential Flag	-, -, -	RO	F52
R3X020E	WIND1_PH_TOC	Winding 1 Phase Time O/C Flag	-, -, -	RO	F52
R3X020F	WIND2_PH_TOC	Winding 2 Phase Time O/C Flag	-, -, -	RO	F52
R3X0210	WIND3_PH_TOC	Winding 3 Phase Time O/C Flag	-, -, -	RO	F52
R3X0211	WIND1_PH_INST_OC1	Winding 1 Phase Inst O/C 1 Flag	-, -, -	RO	F52
R3X0212	WIND2_PH_INST_OC1	Winding 2 Phase Inst O/C 1 Flag	-, -, -	RO	F52
R3X0213	WIND3_PH_INST_OC1	Winding 3 Phase Inst O/C 1 Flag	-, -, -	RO	F52
R3X0214	WIND1_PH_INST_OC2	Winding 1 Phase Inst O/C 2 Flag	-, -, -	RO	F52
R3X0215	WIND2_PH_INST_OC2	Winding 2 Phase Inst O/C 2 Flag	-, -, -	RO	F52
R3X0216	WIND3_PH_INST_OC2	Winding 3 Phase Inst O/C 2 Flag	-, -, -	RO	F52
R3X0217	WIND1_N_TOC	Winding 1 Neutral Time O/C Flag	-, -, -	RO	F52
R3X0218	WIND2_N_TOC	Winding 2 Neutral Time O/C Flag	-, -, -	RO	F52
R3X0219	WIND3_N_TOC	Winding 3 Neutral Time O/C Flag	-, -, -	RO	F52

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X021A	WIND1_N_INST_OC1	Winding 1 Neutral Inst O/C 1 Flag	-, -, -	RO	F52
R3X021B	WIND2_N_INST_OC1	Winding 2 Neutral Inst O/C 1 Flag	-, -, -	RO	F52
R3X021C	WIND3_N_INST_OC1	Winding 3 Neutral Inst O/C 1 Flag	-, -, -	RO	F52
R3X021D	WIND1_N_INST_OC2	Winding 1 Neutral Inst O/C 2 Flag	-, -, -	RO	F52
R3X021E	WIND2_N_INST_OC2	Winding 2 Neutral Inst O/C 2 Flag	-, -, -	RO	F52
R3X021F	WIND3_N_INST_OC2	Winding 3 Neutral Inst O/C 2 Flag	-, -, -	RO	F52
R3X0220	WIND1_G_TOC	Winding 1 Ground Time O/C Flag	-, -, -	RO	F52
R3X0221	WIND2_G_TOC	Winding 2 Ground Time O/C Flag	-, -, -	RO	F52
R3X0222	WIND3_G_TOC	Winding 3 Ground Time O/C Flag	-, -, -	RO	F52
R3X0223	WIND1_G_INST_OC1	Winding 1 Ground Inst O/C 1 Flag	-, -, -	RO	F52
R3X0224	WIND2_G_INST_OC1	Winding 2 Ground Inst O/C 1 Flag	-, -, -	RO	F52
R3X0225	WIND3_G_INST_OC1	Winding 3 Ground Inst O/C 1 Flag	-, -, -	RO	F52
R3X0226	WIND1_G_INST_OC2	Winding 1 Ground Inst O/C 2 Flag	-, -, -	RO	F52
R3X0227	WIND2_G_INST_OC2	Winding 2 Ground Inst O/C 2 Flag	-, -, -	RO	F52
R3X0228	WIND3_G_INST_OC2	Winding 3 Ground Inst O/C 2 Flag	-, -, -	RO	F52
R3X0229	WIND1_REST_G_TOC	Winding 1 Restricted Ground Time O/C Flag	-, -, -	RO	F52
R3X022A	WIND2_REST_G_TOC	Winding 2 Restricted Ground Time O/C Flag	-, -, -	RO	F52
R3X022B	WIND3_REST_G_TOC	Winding 3 Restricted Ground Time O/C Flag	-, -, -	RO	F52
R3X022C	WIND1_REST_G_INST_OC	Winding 1 Restricted Ground Inst O/C Flag	-, -, -	RO	F52
R3X022D	WIND2_REST_G_INST_OC	Winding 2 Restricted Ground Inst O/C Flag	-, -, -	RO	F52
R3X022E	WIND3_REST_G_INST_OC	Winding 3 Restricted Ground Inst O/C Flag	-, -, -	RO	F52
R3X022F	WIND1_NEG_SEQ_TOC	Winding 1 Neg Seq Time O/C Flag	-, -, -	RO	F52
R3X0230	WIND2_NEG_SEQ_TOC	Winding 2 Neg Seq Time O/C Flag	-, -, -	RO	F52
R3X0231	WIND3_NEG_SEQ_TOC	Winding 3 Neg Seq Time O/C Flag	-, -, -	RO	F52
R3X0232	WIND1_NEG_SEQ_IOC	Winding 1 Neg Seq Instantaneous O/C Flag	-, -, -	RO	F52
R3X0233	WIND2_NEG_SEQ_IOC	Winding 2 Neg Seq Instantaneous O/C Flag	-, -, -	RO	F52
R3X0234	WIND3_NEG_SEQ_IOC	Winding 3 Neg Seq Instantaneous O/C Flag	-, -, -	RO	F52
R3X0235	UF1	Underfrequency 1 Flag	-, -, -	RO	F52
R3X0236	UF2	Underfrequency 2 Flag	-, -, -	RO	F52
R3X0237	FREQ_DECAY_RATE1	Frequency Decay Rate 1 Flag	-, -, -	RO	F52
R3X0238	FREQ_DECAY_RATE2	Frequency Decay Rate 2 Flag	-, -, -	RO	F52
R3X0239	FREQ_DECAY_RATE3	Frequency Decay Rate 3 Flag	-, -, -	RO	F52
R3X023A	FREQ_DECAY_RATE4	Frequency Decay Rate 4 Flag	-, -, -	RO	F52
R3X023B	OF	Overfrequency Flag	-, -, -	RO	F52
R3X023C	5TH_HARM_LVL	5th Harmonic Level Flag	-, -, -	RO	F52
R3X023D	V_PER_HZ_1	Volts-Per-Hertz 1 Flag	-, -, -	RO	F52
R3X023E	V_PER_HZ_2	Volts-Per-Hertz 2 Flag	-, -, -	RO	F52
R3X023F	WIND1_THD	Winding 1 THD Level Flag	-, -, -	RO	F52
R3X0240	WIND2_THD	Winding 2 THD Level Flag	-, -, -	RO	F52
R3X0241	WIND3_THD	Winding 3 THD Level Flag	-, -, -	RO	F52
R3X0242	WIND1_HARM_DERATE	Winding 1 Harmonic Derating Flag	-, -, -	RO	F52
R3X0243	WIND2_HARM_DERATE	Winding 2 Harmonic Derating Flag	-, -, -	RO	F52
R3X0244	WIND3_HARM_DERATE	Winding 3 Harmonic Derating Flag	-, -, -	RO	F52
R3X0245	HOT_SPOT_TEMP_LIM	Hottest-Spot Temperature Limit Flag	-, -, -	RO	F52
R3X0246	LOL_LIM	Loss-Of-Life Limit Flag	-, -, -	RO	F52

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X0247	ANAL_IN_LVL1	Analog Input Level 1 Flag	-, -, -	RO	F52
R3X0248	ANAL_IN_LVL2	Analog Input Level 2 Flag	-, -, -	RO	F52
R3X0249	WIND1_AMPS_DMD	Winding 1 Current Demand Flag	-, -, -	RO	F52
R3X024A	WIND2_AMPS_DMD	Winding 2 Current Demand Flag	-, -, -	RO	F52
R3X024B	WIND3_AMPS_DMD	Winding 3 Current Demand Flag	-, -, -	RO	F52
R3X024C	TXF_OL	Transformer Overload Flag	-, -, -	RO	F52
R3X024D	AGE_FACTOR_LIM	Aging Factor Limit Flag	-, -, -	RO	F52
R3X024E	TAP_CHNG_FAIL	Tap Changer Failure Flag	-, -, -	RO	F52
R3X0260	LOGIC_IN_ASSERT	Logic Input Assert Flags	-, -, -	RO	F56
R3X0261	VIRT_IN_ASSERT	Virtual Input Assert Flags	-, -, -	RO	F56
R3X0262	OUTPUT_RLY_OP	Output Relay Operate Flags	-, -, -	RO	F57
R3X0263	VIRT_OUTPUT_OP	Virtual Output Operate Flags	-, -, -	RO	F59
R3X0264	TIMER_OP	Timer Operate Flags	-, -, -	RO	F61
R3X0280	WIND1_AMPS_A	Winding 1 Phase A Current - Magnitude	A, -, -	RO	F78
R3X0281	WIND1_AMPS_A_ANG	Winding 1 Phase A Current - Angle	° Lag, -, 0	RO	F1
R3X0282	WIND1_AMPS_B	Winding 1 Phase B Current - Magnitude	A, -, -	RO	F78
R3X0283	WIND1_AMPS_B_ANG	Winding 1 Phase B Current - Angle	° Lag, 1, 0-359	RO	F1
R3X0284	WIND1_AMPS_C	Winding 1 Phase C Current - Magnitude	A, -, -	RO	F78
R3X0285	WIND1_AMPS_C_ANG	Winding 1 Phase C Current - Angle	° Lag, 1, 0-359	RO	F1
R3X0286	WIND1_AMPS_N	Winding 1 Neutral Current - Magnitude	A, -, -	RO	F78
R3X0287	WIND1_AMPS_N_ANG	Winding 1 Neutral Current - Angle	° Lag, 1, 0-359	RO	F1
R3X0288	WIND1_AMPS_G	Winding 1 Ground Current - Magnitude	A, -, -	RO	F81
R3X0289	WIND1_AMPS_G_ANG	Winding 1 Ground Current - Angle	° Lag, 1, 0-359	RO	F1
R3X028A	WIND1_LOADING	Winding 1 Loading	% rated, 1, 0-999	RO	F1
R3X028B	WIND1_AMPS_AVG	Winding 1 Ave. Phase Current	A, -, -	RO	F78
R3X0290	WIND2_AMPS_A	Winding 2 Phase A Current - Magnitude	A, -, -	RO	F79
R3X0291	WIND2_AMPS_A_ANG	Winding 2 Phase A Current - Angle	° Lag, 1, 0-359	RO	F1
R3X0292	WIND2_AMPS_B	Winding 2 Phase B Current - Magnitude	A, -, -	RO	F79
R3X0293	WIND2_AMPS_B_ANG	Winding 2 Phase B Current - Angle	° Lag, 1, 0-359	RO	F1
R3X0294	WIND2_AMPS_C	Winding 2 Phase C Current - Magnitude	A, -, -	RO	F79
R3X0295	WIND2_AMPS_C_ANG	Winding 2 Phase C Current - Angle	° Lag, 1, 0-359	RO	F1
R3X0296	WIND2_AMPS_N	Winding 2 Neutral Current - Magnitude	A, -, -	RO	F79
R3X0297	WIND2_AMPS_N_ANG	Winding 2 Neutral Current - Angle	° Lag, 1, 0-359	RO	F1
R3X0298	WIND2_AMPS_G	Winding 2 Ground Current - Magnitude	A, -, -	RO	F82
R3X0299	WIND2_AMPS_G_ANG	Winding 2 Ground Current - Angle	° Lag, 1, 0-359	RO	F1
R3X029A	WIND2_LOADING	Winding 2 Loading	% rated, 1, 0-999	RO	F1
R3X029B	WIND2_AMPS_AVG	Winding 2 Ave. Phase Current	A, -, -	RO	F78
R3X02A0	WIND3_AMPS_A	Winding 3 Phase A Current - Magnitude	A, -, -	RO	F80
R3X02A1	WIND3_AMPS_A_ANG	Winding 3 Phase A Current - Angle	° Lag, 1, 0-359	RO	F1
R3X02A2	WIND3_AMPS_B	Winding 3 Phase B Current - Magnitude	A, -, -	RO	F80
R3X02A3	WIND3_AMPS_B_ANG	Winding 3 Phase B Current - Angle	° Lag, 1, 0-359	RO	F1
R3X02A4	WIND3_AMPS_C	Winding 3 Phase C Current - Magnitude	A, -, -	RO	F80
R3X02A5	WIND3_AMPS_C_ANG	Winding 3 Phase C Current - Angle	° Lag, 1, 0-359	RO	F1
R3X02A6	WIND3_AMPS_N	Winding 3 Neutral Current - Magnitude	A, -, -	RO	F80
R3X02A7	WIND3_AMPS_N_ANG	Winding 3 Neutral Current - Angle	° Lag, 1, 0-359	RO	F1

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X02A8	WIND3_AMPS_G	Winding 3 Ground Current - Magnitude	A, -, -	RO	F83
R3X02A9	WIND3_AMPS_G_ANG	Winding 3 Ground Current - Angle	° Lag, 1, 0-359	RO	F1
R3X02AA	WIND3_LOADING	Winding 3 Loading	% rated, 1, 0-999	RO	F1
R3X02AB	WIND3_AMPS_AVG	Winding 3 Ave. Phase Current	A, -, -	RO	F78
R3X02B0	W1_POS_SEQ_CURR	Winding 1 Positive Sequence Current - Magnitude	A, -, -	RO	F78
R3X02B1	W1_POS_SEQ_CURR_ANG	Winding 1 Positive Sequence Current - Angle	° Lag, 1, 0-359	RO	F1
R3X02B2	W2_POS_SEQ_CURR	Winding 2 Positive Sequence Current - Magnitude	A, -, -	RO	F79
R3X02B3	W2_POS_SEQ_CURR_ANG	Winding 2 Positive Sequence Current - Angle	° Lag, 1, 0-359	RO	F1
R3X02B4	W3_POS_SEQ_CURR	Winding 3 Positive Sequence Current - Magnitude	A, -, -	RO	F80
R3X02B5	W3_POS_SEQ_CURR_ANG	Winding 3 Positive Sequence Current - Angle	° Lag, 1, 0-359	RO	F1
R3X02B6	W1_NEG_SEQ_CURR	Winding 1 Negative Sequence Current - Magnitude	A, -, -	RO	F78
R3X02B7	W1_NEG_SEQ_CURR_ANG	Winding 1 Negative Sequence Current - Angle	° Lag, 1, 0-359	RO	F1
R3X02B8	W2_NEG_SEQ_CURR	Winding 2 Negative Sequence Current - Magnitude	A, -, -	RO	F79
R3X02B9	W2_NEG_SEQ_CURR_ANG	Winding 2 Negative Sequence Current - Angle	° Lag, 1, 0-359	RO	F1
R3X02BA	W3_NEG_SEQ_CURR	Winding 3 Negative Sequence Current - Magnitude	A, -, -	RO	F80
R3X02BB	W3_NEG_SEQ_CURR_ANG	Winding 3 Negative Sequence Current - Angle	° Lag, 1, 0-359	RO	F1
R3X02BC	W1_ZERO_SEQ_CURR	Winding 1 Zero Sequence Current - Magnitude	A, -, -	RO	F78
R3X02BD	W1_ZERO_SEQ_CURR_ANG	Winding 1 Zero Sequence Current - Angle	° Lag, 1, 0-359	RO	F1
R3X02BE	W2_ZERO_SEQ_CURR	Winding 2 Zero Sequence Current - Magnitude	A, -, -	RO	F79
R3X02BF	W2_ZERO_SEQ_CURR_ANG	Winding 2 Zero Sequence Current - Angle	° Lag, 1, 0-359	RO	F1
R3X02C0	W3_ZERO_SEQ_CURR	Winding 3 Zero Sequence Current - Magnitude	A, -, -	RO	F80
R3X02C1	W3_ZERO_SEQ_CURR_ANG	Winding 3 Zero Sequence Current - Angle	° Lag, 1, 0-359	RO	F1
R3X02D0	AMPS_A_DIFF	Phase A Differential Current - Magnitude	x CT, 0.01, 0.00-655.35	RO	F3
R3X02D1	AMPS_A_DIFF_ANG	Phase A Differential Current - Angle	° Lag, 1, 0-359	RO	F1
R3X02D2	AMPS_B_DIFF	Phase B Differential Current - Magnitude	x CT, 0.01, 0.00-655.35	RO	F3
R3X02D3	AMPS_B_DIFF_ANG	Phase B Differential Current - Angle	° Lag, 1, 0-359	RO	F1
R3X02D4	AMPS_C_DIFF	Phase C Differential Current - Magnitude	x CT, 0.01, 0.00-655.35	RO	F3
R3X02D5	AMPS_C_DIFF_ANG	Phase C Differential Current - Angle	° Lag, 1, 0-359	RO	F1
R3X02D6	AMPS_A_REST	Phase A Restraint Current	x CT, 0.01, 0.00-655.35	RO	F3
R3X02D7	AMPS_B_REST	Phase B Restraint Current	x CT, 0.01, 0.00-655.35	RO	F3
R3X02D8	AMPS_C_REST	Phase C Restraint Current	x CT, 0.01, 0.00-655.35	RO	F3
R3X02D9	W1_GND_DIFF_AMPS	Winding 1 Ground Differential Current	x CT, 0.001, 0.000-65.535	RO	F53
R3X02DA	W2_GND_DIFF_AMPS	Winding 2 Ground Differential Current	x CT, 0.001, 0.000-65.535	RO	F53
R3X02DB	W3_GND_DIFF_AMPS	Winding 3 Ground Differential Current	x CT, 0.001, 0.000-65.535	RO	F53

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X02E0	W1_A_2ND_HARM	Winding 1 Phase A 2nd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02E1	W1_B_2ND_HARM	Winding 1 Phase B 2nd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02E2	W1_C_2ND_HARM	Winding 1 Phase C 2nd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02E3	W2_A_2ND_HARM	Winding 2 Phase A 2nd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02E4	W2_B_2ND_HARM	Winding 2 Phase B 2nd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02E5	W2_C_2ND_HARM	Winding 2 Phase C 2nd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02E6	W3_A_2ND_HARM	Winding 3 Phase A 2nd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02E7	W3_B_2ND_HARM	Winding 3 Phase B 2nd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02E8	W3_C_2ND_HARM	Winding 3 Phase C 2nd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02F0	W1_A_3RD_HARM	Winding 1 Phase A 3rd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02F1	W1_B_3RD_HARM	Winding 1 Phase B 3rd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02F2	W1_C_3RD_HARM	Winding 1 Phase C 3rd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02F3	W2_A_3RD_HARM	Winding 2 Phase A 3rd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02F4	W2_B_3RD_HARM	Winding 2 Phase B 3rd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02F5	W2_C_3RD_HARM	Winding 2 Phase C 3rd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02F6	W3_A_3RD_HARM	Winding 3 Phase A 3rd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02F7	W3_B_3RD_HARM	Winding 3 Phase B 3rd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X02F8	W3_C_3RD_HARM	Winding 3 Phase C 3rd Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0300	W1_A_4TH_HARM	Winding 1 Phase A 4th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0301	W1_B_4TH_HARM	Winding 1 Phase B 4th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0302	W1_C_4TH_HARM	Winding 1 Phase C 4th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0303	W2_A_4TH_HARM	Winding 2 Phase A 4th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0304	W2_B_4TH_HARM	Winding 2 Phase B 4th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0305	W2_C_4TH_HARM	Winding 2 Phase C 4th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0306	W3_A_4TH_HARM	Winding 3 Phase A 4th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0307	W3_B_4TH_HARM	Winding 3 Phase B 4th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0308	W3_C_4TH_HARM	Winding 3 Phase C 4th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0310	W1_A_5TH_HARM	Winding 1 Phase A 5th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0311	W1_B_5TH_HARM	Winding 1 Phase B 5th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0312	W1_C_5TH_HARM	Winding 1 Phase C 5th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0313	W2_A_5TH_HARM	Winding 2 Phase A 5th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0314	W2_B_5TH_HARM	Winding 2 Phase B 5th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0315	W2_C_5TH_HARM	Winding 2 Phase C 5th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0316	W3_A_5TH_HARM	Winding 3 Phase A 5th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0317	W3_B_5TH_HARM	Winding 3 Phase B 5th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0318	W3_C_5TH_HARM	Winding 3 Phase C 5th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0320	W1_A_6TH_HARM	Winding 1 Phase A 6th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0321	W1_B_6TH_HARM	Winding 1 Phase B 6th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0322	W1_C_6TH_HARM	Winding 1 Phase C 6th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0323	W2_A_6TH_HARM	Winding 2 Phase A 6th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0324	W2_B_6TH_HARM	Winding 2 Phase B 6th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0325	W2_C_6TH_HARM	Winding 2 Phase C 6th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0326	W3_A_6TH_HARM	Winding 3 Phase A 6th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0327	W3_B_6TH_HARM	Winding 3 Phase B 6th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0328	W3_C_6TH_HARM	Winding 3 Phase C 6th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X0330	W1_A_7TH_HARM	Winding 1 Phase A 7th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0331	W1_B_7TH_HARM	Winding 1 Phase B 7th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0332	W1_C_7TH_HARM	Winding 1 Phase C 7th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0333	W2_A_7TH_HARM	Winding 2 Phase A 7th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0334	W2_B_7TH_HARM	Winding 2 Phase B 7th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0335	W2_C_7TH_HARM	Winding 2 Phase C 7th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0336	W3_A_7TH_HARM	Winding 3 Phase A 7th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0337	W3_B_7TH_HARM	Winding 3 Phase B 7th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0338	W3_C_7TH_HARM	Winding 3 Phase C 7th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0340	W1_A_8TH_HARM	Winding 1 Phase A 8th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0341	W1_B_8TH_HARM	Winding 1 Phase B 8th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0342	W1_C_8TH_HARM	Winding 1 Phase C 8th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0343	W2_A_8TH_HARM	Winding 2 Phase A 8th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0344	W2_B_8TH_HARM	Winding 2 Phase B 8th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0345	W2_C_8TH_HARM	Winding 2 Phase C 8th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0346	W3_A_8TH_HARM	Winding 3 Phase A 8th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0347	W3_B_8TH_HARM	Winding 3 Phase B 8th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0348	W3_C_8TH_HARM	Winding 3 Phase C 8th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0350	W1_A_9TH_HARM	Winding 1 Phase A 9th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0351	W1_B_9TH_HARM	Winding 1 Phase B 9th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0352	W1_C_9TH_HARM	Winding 1 Phase C 9th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0353	W2_A_9TH_HARM	Winding 2 Phase A 9th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0354	W2_B_9TH_HARM	Winding 2 Phase B 9th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0355	W2_C_9TH_HARM	Winding 2 Phase C 9th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0356	W3_A_9TH_HARM	Winding 3 Phase A 9th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0357	W3_B_9TH_HARM	Winding 3 Phase B 9th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0358	W3_C_9TH_HARM	Winding 3 Phase C 9th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0360	W1_A_10TH_HARM	Winding 1 Phase A 10th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0361	W1_B_10TH_HARM	Winding 1 Phase B 10th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0362	W1_C_10TH_HARM	Winding 1 Phase C 10th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0363	W2_A_10TH_HARM	Winding 2 Phase A 10th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0364	W2_B_10TH_HARM	Winding 2 Phase B 10th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0365	W2_C_10TH_HARM	Winding 2 Phase C 10th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0366	W3_A_10TH_HARM	Winding 3 Phase A 10th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0367	W3_B_10TH_HARM	Winding 3 Phase B 10th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0368	W3_C_10TH_HARM	Winding 3 Phase C 10th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0370	W1_A_11TH_HARM	Winding 1 Phase A 11th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0371	W1_B_11TH_HARM	Winding 1 Phase B 11th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0372	W1_C_11TH_HARM	Winding 1 Phase C 11th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0373	W2_A_11TH_HARM	Winding 2 Phase A 11th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0374	W2_B_11TH_HARM	Winding 2 Phase B 11th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0375	W2_C_11TH_HARM	Winding 2 Phase C 11th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0376	W3_A_11TH_HARM	Winding 3 Phase A 11th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0377	W3_B_11TH_HARM	Winding 3 Phase B 11th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0378	W3_C_11TH_HARM	Winding 3 Phase C 11th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X0380	W1_A_12TH_HARM	Winding 1 Phase A 12th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0381	W1_B_12TH_HARM	Winding 1 Phase B 12th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0382	W1_C_12TH_HARM	Winding 1 Phase C 12th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0383	W2_A_12TH_HARM	Winding 2 Phase A 12th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0384	W2_B_12TH_HARM	Winding 2 Phase B 12th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0385	W2_C_12TH_HARM	Winding 2 Phase C 12th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0386	W3_A_12TH_HARM	Winding 3 Phase A 12th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0387	W3_B_12TH_HARM	Winding 3 Phase B 12th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0388	W3_C_12TH_HARM	Winding 3 Phase C 12th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0390	W1_A_13TH_HARM	Winding 1 Phase A 13th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0391	W1_B_13TH_HARM	Winding 1 Phase B 13th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0392	W1_C_13TH_HARM	Winding 1 Phase C 13th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0393	W2_A_13TH_HARM	Winding 2 Phase A 13th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0394	W2_B_13TH_HARM	Winding 2 Phase B 13th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0395	W2_C_13TH_HARM	Winding 2 Phase C 13th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0396	W3_A_13TH_HARM	Winding 3 Phase A 13th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0397	W3_B_13TH_HARM	Winding 3 Phase B 13th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0398	W3_C_13TH_HARM	Winding 3 Phase C 13th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03A0	W1_A_14TH_HARM	Winding 1 Phase A 14th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03A1	W1_B_14TH_HARM	Winding 1 Phase B 14th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03A2	W1_C_14TH_HARM	Winding 1 Phase C 14th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03A3	W2_A_14TH_HARM	Winding 2 Phase A 14th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03A4	W2_B_14TH_HARM	Winding 2 Phase B 14th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03A5	W2_C_14TH_HARM	Winding 2 Phase C 14th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03A6	W3_A_14TH_HARM	Winding 3 Phase A 14th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03A7	W3_B_14TH_HARM	Winding 3 Phase B 14th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03A8	W3_C_14TH_HARM	Winding 3 Phase C 14th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03B0	W1_A_15TH_HARM	Winding 1 Phase A 15th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03B1	W1_B_15TH_HARM	Winding 1 Phase B 15th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03B2	W1_C_15TH_HARM	Winding 1 Phase C 15th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03B3	W2_A_15TH_HARM	Winding 2 Phase A 15th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03B4	W2_B_15TH_HARM	Winding 2 Phase B 15th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03B5	W2_C_15TH_HARM	Winding 2 Phase C 15th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03B6	W3_A_15TH_HARM	Winding 3 Phase A 15th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03B7	W3_B_15TH_HARM	Winding 3 Phase B 15th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03B8	W3_C_15TH_HARM	Winding 3 Phase C 15th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03C0	W1_A_16TH_HARM	Winding 1 Phase A 16th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03C1	W1_B_16TH_HARM	Winding 1 Phase B 16th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03C2	W1_C_16TH_HARM	Winding 1 Phase C 16th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03C3	W2_A_16TH_HARM	Winding 2 Phase A 16th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03C4	W2_B_16TH_HARM	Winding 2 Phase B 16th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03C5	W2_C_16TH_HARM	Winding 2 Phase C 16th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03C6	W3_A_16TH_HARM	Winding 3 Phase A 16th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03C7	W3_B_16TH_HARM	Winding 3 Phase B 16th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03C8	W3_C_16TH_HARM	Winding 3 Phase C 16th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X03D0	W1_A_17TH_HARM	Winding 1 Phase A 17th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03D1	W1_B_17TH_HARM	Winding 1 Phase B 17th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03D2	W1_C_17TH_HARM	Winding 1 Phase C 17th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03D3	W2_A_17TH_HARM	Winding 2 Phase A 17th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03D4	W2_B_17TH_HARM	Winding 2 Phase B 17th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03D5	W2_C_17TH_HARM	Winding 2 Phase C 17th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03D6	W3_A_17TH_HARM	Winding 3 Phase A 17th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03D7	W3_B_17TH_HARM	Winding 3 Phase B 17th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03D8	W3_C_17TH_HARM	Winding 3 Phase C 17th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03E0	W1_A_18TH_HARM	Winding 1 Phase A 18th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03E1	W1_B_18TH_HARM	Winding 1 Phase B 18th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03E2	W1_C_18TH_HARM	Winding 1 Phase C 18th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03E3	W2_A_18TH_HARM	Winding 2 Phase A 18th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03E4	W2_B_18TH_HARM	Winding 2 Phase B 18th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03E5	W2_C_18TH_HARM	Winding 2 Phase C 18th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03E6	W3_A_18TH_HARM	Winding 3 Phase A 18th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03E7	W3_B_18TH_HARM	Winding 3 Phase B 18th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03E8	W3_C_18TH_HARM	Winding 3 Phase C 18th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03F0	W1_A_19TH_HARM	Winding 1 Phase A 19th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03F1	W1_B_19TH_HARM	Winding 1 Phase B 19th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03F2	W1_C_19TH_HARM	Winding 1 Phase C 19th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03F3	W2_A_19TH_HARM	Winding 2 Phase A 19th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03F4	W2_B_19TH_HARM	Winding 2 Phase B 19th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03F5	W2_C_19TH_HARM	Winding 2 Phase C 19th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03F6	W3_A_19TH_HARM	Winding 3 Phase A 19th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03F7	W3_B_19TH_HARM	Winding 3 Phase B 19th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X03F8	W3_C_19TH_HARM	Winding 3 Phase C 19th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0400	W1_A_20TH_HARM	Winding 1 Phase A 20th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0401	W1_B_20TH_HARM	Winding 1 Phase B 20th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0402	W1_C_20TH_HARM	Winding 1 Phase C 20th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0403	W2_A_20TH_HARM	Winding 2 Phase A 20th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0404	W2_B_20TH_HARM	Winding 2 Phase B 20th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0405	W2_C_20TH_HARM	Winding 2 Phase C 20th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0406	W3_A_20TH_HARM	Winding 3 Phase A 20th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0407	W3_B_20TH_HARM	Winding 3 Phase B 20th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0408	W3_C_20TH_HARM	Winding 3 Phase C 20th Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0410	W1_A_21ST_HARM	Winding 1 Phase A 21st Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0411	W1_B_21ST_HARM	Winding 1 Phase B 21st Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0412	W1_C_21ST_HARM	Winding 1 Phase C 21st Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0413	W2_A_21ST_HARM	Winding 2 Phase A 21st Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0414	W2_B_21ST_HARM	Winding 2 Phase B 21st Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0415	W2_C_21ST_HARM	Winding 2 Phase C 21st Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0416	W3_A_21ST_HARM	Winding 3 Phase A 21st Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0417	W3_B_21ST_HARM	Winding 3 Phase B 21st Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2
R3X0418	W3_C_21ST_HARM	Winding 3 Phase C 21st Harmonic Content	% fo, 0.1, 0.0–99.9	RO	F2

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Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X0420	W1_A_THD	Winding 1 Phase A Total Harmonic Distortion	% fo, 0.1, 0.0–99.9	RO	F2
R3X0421	W1_B_THD	Winding 1 Phase B Total Harmonic Distortion	% fo, 0.1, 0.0–99.9	RO	F2
R3X0422	W1_C_THD	Winding 1 Phase C Total Harmonic Distortion	% fo, 0.1, 0.0–99.9	RO	F2
R3X0423	W2_A_THD	Winding 2 Phase A Total Harmonic Distortion	% fo, 0.1, 0.0–99.9	RO	F2
R3X0424	W2_B_THD	Winding 2 Phase B Total Harmonic Distortion	% fo, 0.1, 0.0–99.9	RO	F2
R3X0425	W2_C_THD	Winding 2 Phase C Total Harmonic Distortion	% fo, 0.1, 0.0–99.9	RO	F2
R3X0426	W3_A_THD	Winding 3 Phase A Total Harmonic Distortion	% fo, 0.1, 0.0–99.9	RO	F2
R3X0427	W3_B_THD	Winding 3 Phase B Total Harmonic Distortion	% fo, 0.1, 0.0–99.9	RO	F2
R3X0428	W3_C_THD	Winding 3 Phase C Total Harmonic Distortion	% fo, 0.1, 0.0–99.9	RO	F2
R3X0430	W1_HARM_DERATE	Winding 1 Harmonic Derating Factor	–, 0.01, 0.00–1.00	RO	F3
R3X0431	W2_HARM_DERATE	Winding 2 Harmonic Derating Factor	–, 0.01, 0.00–1.00	RO	F3
R3X0432	W3_HARM_DERATE	Winding 3 Harmonic Derating Factor	–, 0.01, 0.00–1.00	RO	F3
R3X0440	FREQUENCY	System Frequency	Hz, 0.01, 0.00–99.99	RO	F3
R3X0441I	FREQ_DECAY_RATE	Frequency Decay Rate	Hz/s, 0.01, -9.99–9.99	RO	F6
R3X0445	TAP_CHANGE_POS	Tap Changer Position	–, 1, 1–50	RO	F1
R3X0449	SYSTEM_VOLTS	System Line-to-Line Voltage	kV, 0.01, 0.00–600.00	RO	F3
R3X044A	VOLTS_PER_HZ	Volts-per-Hertz	V/Hz, 0.01, 0.00–4.00	RO	F3
R3X044B	VOLTS_LN	Line-to-Ntrl Voltage - Magnitude	kV, 0.01, 0.00-600.00	RO	F3
R3X044C	VOLTS_LN_ANG	Line-to-Ntrl Voltage - Angle	° lag, 1, 0 to 359	RO	F1
R3X0450L	DMND_LAST_CLR_DATE	Demand Data Last Clear Date (2 registers)	–, –, –	RO	F23
R3X0452L	DMND_LAST_CLR_TIME	Demand Data Last Clear Time (2 registers)	–, –, –	RO	F22
R3X0454	W1_AMPS_A_DMND	Winding 1 Phase A Current Demand	A, –, –	RO	F78
R3X0455	W1_AMPS_B_DMND	Winding 1 Phase B Current Demand	A, –, –	RO	F78
R3X0456	W1_AMPS_C_DMND	Winding 1 Phase C Current Demand	A, –, –	RO	F78
R3X0457	W1_AMPS_DMND_MAX	Winding 1 Max Current Demand	A, –, –	RO	F78
R3X0458	W1_AMPS_DMND_MAX_PH	Winding 1 Max Current Demand Phase	–, –, –	RO	F18
R3X0459L	W1_AMPS_DMND_MX_DATE	Winding 1 Max Current Demand Date (2 registers)	–, –, –	RO	F23
R3X045BL	W1_AMPS_DMND_MX_TIME	Winding 1 Max Current Demand Time (2 registers)	–, –, –	RO	F22
R3X045D	W2_AMPS_A_DMND	Winding 2 Phase A Current Demand	A, –, –	RO	F79
R3X045E	W2_AMPS_B_DMND	Winding 2 Phase B Current Demand	A, –, –	RO	F79
R3X045F	W2_AMPS_C_DMND	Winding 2 Phase C Current Demand	A, –, –	RO	F79
R3X0460	W2_AMPS_DMND_MAX	Winding 2 Max Current Demand	A, –, –	RO	F79
R3X0461	W2_AMPS_DMND_MAX_PH	Winding 2 Max Current Demand Phase	–, –, –	RO	F18
R3X0462L	W2_AMPS_DMND_MX_DATE	Winding 2 Max Current Demand Date (2 registers)	–, –, –	RO	F23
R3X0464L	W2_AMPS_DMND_MX_TIME	Winding 2 Max Current Demand Time (2 registers)	–, –, –	RO	F22
R3X0466	W3_AMPS_A_DMND	Winding 3 Phase A Current Demand	A, –, –	RO	F80

Actual Values					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format Code
R3X0467	W3_AMPS_B_DMND	Winding 3 Phase B Current Demand	A, -, -	RO	F80
R3X0468	W3_AMPS_C_DMND	Winding 3 Phase C Current Demand	A, -, -	RO	F80
R3X0469	W3_AMPS_DMND_MAX	Winding 3 Max Current Demand	A, -, -	RO	F80
R3X046A	W3_AMPS_DMND_MAX_PH	Winding 3 Max Current Demand Phase	-, -, -	RO	F18
R3X046BL	W3_AMPS_DMND_MX_DATE	Winding 3 Max Current Demand Date (2 registers)	-, -, -	RO	F23
R3X046DL	W3_AMPS_DMND_MX_TIME	Winding 3 Max Current Demand Time (2 registers)	-, -, -	RO	F22
R3X0478I	AMBIENT_TEMP	Ambient Temperature	°C, 1, -51–251	RO	F4
R3X0480I	HOT_SPOT_WIND_TEMP	Hottest-spot Winding Temperature	°C, 1, -50–300	RO	F4
R3X0481	TOTAL_LOL	Total Accumulated Loss-of-Life	%, 0.1, 0.0–200000.0	RO	F2
R3X0483	AG_FACTOR	Aging Factor	-, 0.1, 0.0–2000.0		F2
R3X0488	ANAL_IN	Analog Input	<Units>, 1, 0–65000	RO	F1
R3X0490I	W1_REAL_PWR	W1 Real Power	MW, ---, -32000 to 32000	RO	F93
R3X0491I	W1_REAC_PWR	W1 Reactive Power	Mvar, ---, -32000 to 32000	RO	F93
R3X0492	W1_APP_PWR	W1 Apparent Power	MVA, ---, 0 to 32000	RO	F93
R3X0493I	W1_PF	W1 Power Factor	---, 0.01, -0.00 to 1.00	RO	F3
R3X0494I	W2_REAL_PWR	W2 Real Power	MW, ---, -32000 to 32000	RO	F94
R3X0495I	W2_REAC_PWR	W2 Reactive Power	Mvar, ---, -32000 to 32000	RO	F94
R3X0496	W2_APP_PWR	W2 Apparent Power	MVA, ---, 0 to 32000	RO	F94
R3X0497I	W2_PF	W2 Power Factor	---, 0.01, -0.00 to 1.00	RO	F3
R3X0498I	W3_REAL_PWR	W3 Real Power	MW, ---, -32000 to 32000	RO	F95
R3X0499I	W3_REAC_PWR	W3 Reactive Power	Mvar, ---, -32000 to 32000	RO	F95
R3X049A	W3_APP_PWR	W3 Apparent Power	MVA, ---, 0 to 32000	RO	F95
R3X049BI	W3_PF	W3 Power Factor	---, 0.01, -0.00 to 1.00	RO	F3
R3X0500	ENRGY_CLR_DATE	Energy Clear Date	---, ---, ---	RO	F23
R3X0502	ENRGY_CLR_TIME	Energy Clear Time	---, ---, ---	RO	F23
R3X0504L	W1_SRC_MWH	W1 Source Watthours	MWh, ---, ---	RO	F96
R3X0506L	W1_LOAD_MWH	W1 Load Watthours	MWh, ---, ---	RO	F96
R3X0508L	W1_SRC_MVARH	W1 Source Varhours	Mvarh, ---, ---	RO	F96
R3X050AL	W1_LOAD_MVARH	W1 Load Varhours	Mvarh, ---, ---	RO	F96
R3X050CL	W2_SRC_MWH	W2 Source Watthours	MWh, ---, ---	RO	F97
R3X050EL	W2_LOAD_MWH	W2 Load Watthours	MWh, ---, ---	RO	F97
R3X0510L	W2_SRC_MVARH	W2 Source Varhours	Mvarh, ---, ---	RO	F97
R3X0512L	W2_LOAD_MVARH	W2 Load Varhours	Mvarh, ---, ---	RO	F97
R3X0514L	W3_SRC_MWH	W3 Source Watthours	MWh, ---, ---	RO	F98
R3X0516L	W3_LOAD_MWH	W3 Load Watthours	MWh, ---, ---	RO	F98
R3X0518L	W3_SRC_MVARH	W3 Source Varhours	Mvarh, ---, ---	RO	F98
R3X051AL	W3_LOAD_MVARH	W3 Load Varhours	Mvarh, ---, ---	RO	F98

COMMAND COILS

Command Coils					
Register Address	DDE Item Name (Mnemonic),	Contents	Units/Value	R/W	Format Code
R0X0001	CMD_RESET			WO	
R0X0002	TM_TRIGGER			WO	
R0X0004	RESET_EVENT_REC			WO	

MDP Overcurrent Relay

- *DYNAMIC VALUE REGISTERS*
- *SETPOINT REGISTERS*
- *FIXED VALUE REGISTERS*
- *COMMAND COILS*

DYNAMIC VALUE REGISTERS

Dynamic Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R31000	PENDING_EVENTS	Number of pending event messages	0-8	RO	Integer
R31001D1-0	READY	Front Panel Ready LED	0=Off, 1=On	RO	Discrete
R31001D1-1	PHASE_A_TRIP	Phase A has tripped LED	0=Off, 1=On	RO	Discrete
R31001D1-2	PHASE_B_TRIP	Phase B has tripped LED	0=Off, 1=On	RO	Discrete
R31001D1-3	PHASE_C_TRIP	Phase C has tripped LED	0=Off, 1=On	RO	Discrete
R31001D1-4	GND_TRIP	Ground has tripped LED	0=Off, 1=On	RO	Discrete
R31001D1-5	TOC_TRIP	Time Overcurrent tripped LED	0=Off, 1=On	RO	Discrete
R31001D1-6	IOC_TRIP	Instantaneous Overcurrent tripped LED	0=Off, 1=On	RO	Discrete
R31001D1-7	PICKUP	In pickup condition LED	0=Off, 1=On	RO	Discrete
R31002D1-0	BRKR_STATUS	Breaker Status	0=Closed, 1=Open	RO	Discrete
R31002D1-1	BLOCK_GND	External Input Block Ground	1=Asserted	RO	Discrete
R31002D1-2	BLOCK_IOC	External Input Block IOC	1=Asserted	RO	Discrete
R31002D1-3	SETTINGS	F.P. Switch Settings	1=Changed	RO	Discrete
R31002D1-7	RELAY_HW_STATUS	Relay Status	0=OK, 1=Fatal Error	RO	Discrete
R31003F	AMPS_A	RMS Current Phase A	Amps	RO	Real
R31005F	AMPS_B	RMS Current Phase B	Amps	RO	Real
R31007F	AMPS_C	RMS Current Phase C	Amps	RO	Real
R31009F	AMPS_GND	RMS Current Ground	Amps	RO	Real
R31011F	TRIP_AMPS_A	RMS Trip Current Phase A	Amps	RO	Real
R31013F	TRIP_AMPS_B	RMS Trip Current Phase B	Amps	RO	Real
R31015F	TRIP_AMPS_C	RMS Trip Current Phase C	Amps	RO	Real
R31017F	TRIP_AMPS_GND	RMS Trip Current Ground	Amps	RO	Real
R31019F	TRIP_TIME	Trip Time 0 - 999.99	Seconds	RO	Real
R31022	RELAY_STATUS	Relay Hardware Status	0=Relay OK 1=Relay not responding to read 2=Relay not responding to write 3=Report reports an error in command 4=Fatal Error	RO	Integer
R31023L	PHASE_A_AMPS	Phase A current in multiples of tap in ASCII	4 ASCII bytes XX.XX Decimal implied between registers ex: 00.90	RO	Long Integer
R31025L	PHASE_B_AMPS	Phase B current in multiples of tap in ASCII	4 ASCII bytes XX.XX Decimal implied between registers ex: 00.90	RO	Long Integer
R31027L	PHASE_C_AMPS	Phase C current in multiples of tap in ASCII	4 ASCII bytes XX.XX Decimal implied between registers ex: 00.90	RO	Long Integer
R31029L	GND_AMPS	Ground current in multiples of tap in ASCII	4 ASCII bytes XX.XX Decimal implied between registers ex: 00.90	RO	Long Integer
R31031L	PHASE_A_TRIP_AMPS	Phase A trip current in multiples of tap in ASCII	4 ASCII bytes XX.XX Decimal implied between registers ex: 00.90	RO	Long Integer
R31033L	PHASE_B_TRIP_AMPS	Phase B trip current in multiples of	4 ASCII bytes	RO	Long

Dynamic Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
		tap in ASCII	XX.XX Decimal implied between registers ex: 00.90		Integer
R31035L	PHASE_C_TRIP_AMPS	Phase C trip current in multiples of tap in ASCII	4 ASCII bytes XX.XX Decimal implied between registers ex: 00.90	RO	Long Integer
R31037L	GND_TRIP_AMPS	Ground trip current in multiples of tap in ASCII	4 ASCII bytes XX.XX Decimal implied between registers ex: 00.90	RO	Long Integer
R31039L	TRIP_TIME_PART1	Integer part of Trip time in ASCII. These two registers and next register contain total 6 ASCII bytes in XXXX.XX format. Decimal point implied between 2nd and 3rd registers ex: 100.90 Most significant byte of first register is undefined.	4 ASCII bytes in XXXX format. If trip time register is 100.90 then this register contains characters '1' '0' '0' Most significant byte of first register is undefined.	RO	Long Integer
R31041	TRIP_TIME_PART2	Decimal part of Trip time in ASCII. This register contains fractional value characters of Trip time.	2 ASCII bytes in XX format. If trip time is 100.90 then this register will contain two characters '9' '0'.	RO	Integer

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R43000	HOUR	Hour	0-23 hours	RO ¹	Integer
R43001	MIN	Minute	0-59 minutes	RO ¹	Integer
R43002	SEC	Seconds	0-59 seconds	RO ¹	Integer
R43004	PH_CURVE	Phase Curve Selection	0=not used 1=Long Time Inverse 2=Very Inverse 3=Extremely Inverse 4=Inverse	RO	Integer
R43005F	PH_DEF_TIME	Phase Definite Trip Time	0=not used	RO	Real
R43007	GND_CURVE	Ground Curve Selection	0=not used 1=Long Time Inverse 2=Very Inverse 3=Extremely Inverse 4=Inverse	RO	Integer
R43008F	GND_DEF_TIME	Phase Definite Trip Time	0=not used	RO	Real
R43010	OUTPUT_SEL	Output Selection	0 = A, 1 = B	RO	Integer
R43011F	GND_TDIAL	Ground Time Dial	5A Version: 0.5 - 10 in steps of 0.5 1A version: 0.05 - 1.0 in steps of 0.05	RO	Real
R43013F	GND_IOC_DELAY	Ground IOC Delay	0 - 1.55 Seconds	RO	Real
R43015F	GND_TOC_PKP	Ground TOC Pickup	5A Version: 0.5 - 4.375 in steps of 0.125 1A version: 0.1 - 0.875 in steps of .025 Amps	RO	Real
R43017F	GND_IOC_PKP	Ground IOC Pickup (TOC multiplier)	0 - 31	RO	Real
R43019F	PH_TDIAL	Phase Time Dial	5A Version: 0.5 - 10 in steps of 0.5 1A version: 0.05 - 1.0 in steps of 0.05	RO	Real
R43021F	PH_IOC_DELAY	Phase IOC Delay	0 - 1.55 Seconds	RO	Real
R43023F	PH_TOC_PKP	Phase TOC Pickup	5A Version: 1.5 - 13.125 in steps of 0.375 1A version: 0.3 - 2.625 in steps of 0.075 Amps	RO	Real
R43025F	PH_IOC_PKP	Phase IOC Pickup (TOC multiplier)	0 - 31	RO	Real
R43027	GND_TDIAL_SW	Ground Time Dial	If the bit is enabled, switch is in ON position. Disabled means switch is OFF. b0: Switch 1 b1: Switch 2 b2: Switch 3 b3: Switch 4 b4: Switch 5 b5-b15: undefined (Switch 1 is topmost switch on faceplate)	RO	Integer
R43028	GND_IOC_DLY_SW	Ground IOC Delay	If the bit is enabled, switch is in ON position. Disabled means switch is OFF. b0: Switch 1 b1: Switch 2 b2: Switch 3 b3: Switch 4 b4: Switch 5 b5-b15: undefined (Switch 1 is topmost switch on faceplate)	RO	Integer

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R43029	GND_TOC_PKUP_SW	Ground TOC Pickup	If the bit is enabled, switch is in ON position. Disabled means switch is OFF. b0: Switch 1 b1: Switch 2 b2: Switch 3 b3: Switch 4 b4: Switch 5 b5-b15: undefined (Switch 1 is topmost switch on faceplate)	RO	Integer
R43030	GND_IOC_PKUP_SW	Ground IOC Pickup	If the bit is enabled, switch is in ON position. Disabled means switch is OFF. b0: Switch 1 b1: Switch 2 b2: Switch 3 b3: Switch 4 b4: Switch 5 b5-b15: undefined (Switch 1 is topmost switch on faceplate)	RO	Integer
R43031	PH_TDIAL_SW	Phase Time Dial	If the bit is enabled, switch is in ON position. Disabled means switch is OFF. b0: Switch 1 b1: Switch 2 b2: Switch 3 b3: Switch 4 b4: Switch 5 b5-b15: undefined (Switch 1 is topmost switch on faceplate)	RO	Integer
R43032	PH_IOC_DLY_SW	Phase IOC Delay	If the bit is enabled, switch is in ON position. Disabled means switch is OFF. b0: Switch 1 b1: Switch 2 b2: Switch 3 b3: Switch 4 b4: Switch 5 b5-b15: undefined (Switch 1 is topmost switch on faceplate)	RO	Integer
R43033	PH_TOC_PKUP_SW	Phase TOC Pickup	If the bit is enabled, switch is in ON position. Disabled means switch is OFF. b0: Switch 1 b1: Switch 2 b2: Switch 3 b3: Switch 4 b4: Switch 5 b5-b15: undefined (Switch 1 is topmost switch on faceplate)	RO	Integer
R43034	PH_IOC_PKUP_SW	Phase IOC Pickup	If the bit is enabled, switch is in ON position. Disabled means switch is OFF. b0: Switch 1 b1: Switch 2 b2: Switch 3 b3: Switch 4 b4: Switch 5 b5-b15: undefined	RO	Integer

MDP Overcurrent Relay

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
			(Switch 1 is topmost switch on faceplate)		

NOTE:

1. Only the server may write to the time registers.

FIXED VALUE REGISTERS

Fixed Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40000	PRODUCT_ID	Product Id	13	RO	Integer
R40002	COMMNET_ADDR	Commnet Address	300 - 514	RO	Integer
R40003	MODBUS_ADDR	Modbus Address	33 - 215	RO	Integer
R40004	SW_REV	MDP Software Version	XX.XX(x100)	RO	Integer
R40005	MODEL	Model Type	0=1 Amp 1=5 Amp	RO	Integer
R40006	GND_SETTINGS	Ground Settings Scale	0=Nominal 1=Divide by 2 2=Multiply by 3 3=Divide by 5	RO	Integer
R40007	PROD_REV	COC Product Revision	##.## 00.00 to 99.99 4 digit BCD with implied decimal between 2nd and 3rd places.	RO	Integer
R40008	COC_REV	COC Software Revision	##.## 00.00 to 99.99 4 digit BCD with implied decimal between 2nd and 3rd places.	RO	Integer

COMMAND COILS

Command Coils					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R00000	RESET_EVENT	Reset an Event	1 = Reset Event	WO	Discrete
R00001	OPEN_BREAKER	Open the Breaker	1 = Open Breaker	RW	Discrete
R00002	CLOSE_BREAKER	Close the Breaker	1 = Close Breaker	RW	Discrete

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Spectra ECM (Electronic Control Module)

- *DYNAMIC VALUE REGISTERS*
- *SETPOINT REGISTERS*
- *FIXED VALUE REGISTERS*
- *COMMAND COILS*

DYNAMIC VALUE REGISTERS

Dynamic Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R31000	PENDING_EVENTS	Number of pending events	0-8	RO	Integer
R31002F	AMPS_A	Current in phase A	Amps; 0-24000 amps	RO	Real
R31004F	AMPS_B	Current in phase B	Amps; 0-24000 amps	RO	Real
R31006F	AMPS_C	Current in phase C	Amps; 0-24000 amps	RO	Real
R31008	UNBAL_RATIO	Unbalance ratio	%; 0-1600%	RO	Integer
R31009F	AMPS_N	Ground current	Amps; 0-25.5 amps	RO	Real
R31011F	AVG_AMPS	Average current	Amp; 0-24000 amps	RO	Real
R31013	MOTOR_LOAD	Motor load	% of full load amps, 0-2000%	RO	Integer
R31014	MOTOR_STATUS	Motor status	Enumerated data 0-FFh 00h : motor stopped (contactor(s) open)- Contactor 1. 01h : motor running normally ($I_{PH} \leq 100\%$ of FLC)- Contactor 1. 02h : motor in overload ($I_{PH} > 100\%$ of FLC)-Contactor 1. 03h : motor running normally ($I_{PH} \leq 100\%$ of FLC) - Contactor 2. 04h : motor in overload ($I_{PH} > 100\%$ of FLC) - Contactor 2.	RO	Integer
R31015	TRIP_STATUS	Trip status	Enumerated data 0-Ffh 00h : not tripped 01h : overload 04h : ground fault 06h : phase unbalance 0Bh : commanded	RO	Integer
R31016	CONTROL_STATUS	Control status	Bitmapped 0-FFFFh If the specified bit is 1, the control is asserted. The voltage at the input depends on whether or not the corresponding invert bit is set. b0 : run 1 b1 : run 2 b2 : reset b3 : auto b4 : advanced auto b5-7 : reserved b8 : external auto b9 : external run 2 b10 : external run 1 b11 : external reset b12-15 : reserved	RO	Integer

Dynamic Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R31017	CONTCTR_STATUS	Contacteur status	Bitmapped 0–Ffh If the specified drive bit is 1, the contacteur drive is asserted. If the specified sense bit is 1, the contacteur is closed. The voltage at the input depends on whether or not the corresponding invert bit is set. b0 : contacteur 1 drive b1 : contacteur 1 sense b2 : contacteur 2 drive b3 : contacteur 2 sense	RO	Integer
R31018	BRKR_STATUS	Breaker status (open/closed)	Bitmapped 0–Ffh If the specified bit is 1, the breaker is closed. The voltage at the input depends on whether or not the corresponding invert bit is set. b0 : breaker status	RO	Integer
R31019	ECM_STATUS	ECM status	Bitmapped 0–Ffh If the specified bit is 1, the condition is true or the output is asserted. b0 : pickup condition (average phase current above FLA) b1 : start inhibited b2 : green drive b3 : shunt trip	RO	Integer
R31020	TRIP_CAUSE	Cause of last trip	Enumerated data 0–Ffh 00h : no trip recorded 01h : overload 04h : ground fault 06h : phase unbalance 0Bh : commanded	RO	Integer
R31021F	TRIP_AMPS_A	Pretrip phase A current	Amps 0–24000 amps	RO	Real
R31023F	TRIP_AMPS_B	Pretrip phase B current	Amps 0–24000 amps	RO	Real
R31025F	TRIP_AMPS_C	Pretrip phase C current	Amps 0–24000 amps	RO	Real
R31027	TRIP_UNBAL_RATIO	Pretrip unbalance ratio	% 0–1600%	RO	Integer
R31028F	TRIP_AMPS_N	Pretrip ground current	Amps 0–25.5 amps	RO	Real
R31030	HARNES_STATUS	Open /short harness status	If the bit is set then the condition is asserted b0: Phase A shorted b1:Phase A opened b2:Phase B shorted b3:Phase B opened b4:Phase C shorted b5:Phase C open b6:Ident resistor invalid b7:Ident resistor open	RO	Integer

Spectra Electronic Control Module

Dynamic Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R31031	TEST_STATUS	Test status	If the bit is 1 then the condition is asserted: b0:Memory test fault b1:Open/ short test fault b2:Start inhibited b3:Contactor not responding b4: Config error b5:Control voltage low b6:Illegal interrupt b7:Illegal opcode	RO	Integer

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R43000	HOUR	Hour	Hours 0-23	RO	Integer
R43001	MIN	Minute	Minutes 0-59	RO	Integer
R43002	SEC	Seconds	Seconds 0-59	RO	Integer
R43003	PASSWORD	Password	Always 00h	RO	Integer
R43004		not assigned	Always 00h	RO	Integer
R43005	FULL_LOAD_AMPS	Full load current	Amps, 1-1200	RO	Integer
R43006	ECM_CFG	Configuration	Bitmapped 0-FFFFh b0 : 0=ground fault protection disabled, 1=enabled. b1 : 0=phase unbalance protection disabled, 1=enabled. <u>b3 b2 Class</u> 0 0 not used 0 1 class 10 1 0 class 20 1 1 class 30 b4-7 : reserved b8-11 : control module table index -1, 0Fh = open/none, b11 = MSB. b12-15 : display module table index -1, 0Fh = open/none, b15 = MSB.	RO	Integer

FIXED VALUE REGISTERS

Fixed Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40000	PRODUCT_ID	Product ID	Always 10h	RO	Integer
R40002	COMMNET_ADDR	Commnet address	300–514	RO	Integer
R40003	MODBUS_ADDR	Modbus address	33–247	RO	Integer
R40004	HW_REV	Hardware revision number	### 00.00–99.99 4 digit BCD with implied decimal between 2nd and 3rd places.	RO	Integer
R40005	SW_REV	Software revision number	### 00.00–99.99 4 digit BCD with implied decimal between 2nd and 3rd places.	RO	Integer
R40006	COMM_CLASS	Commnet class	Always 80h	RO	Integer
R40007	RATING_PLUG	Rating plug rating	1–1200 amps	RO	Integer
R40008	CU_PROT_TRHLD	Current unbalance protection threshold	5–100%	RO	Integer
R40009	CU_TRIP_LVL	Current unbalance trip level	5–100%	RO	Integer
R40010F	CU_TRIP_DLY	Current unbalance trip delay	0–25.5 sec	RO	Real
R40012F	GF_TRIP_LVL	Ground fault trip level	0.1–25.5 amps	RO	Real
R40014F	GF_TRIP_DLY	Ground fault trip delay	0–25.5 sec	RO	Real
R40016	SW_TIME_CONST	Software time constant	10 seconds 10–2550 sec	RO	Integer
R40017	HW_TIME_CONST	Hardware time constant	10 seconds 10–2550 sec	RO	Integer
R40018	ILR_IFL_RATIO	Locked rotor current divided by full load current (ILR/IFL)	dimensionless 1–20	RO	Integer
R40019F	TRIP_TRHLD	Basic trip threshold	normalized temperature units 0.01–2.55 NTU	RO	Real
R40021	LOCAL_INP_POLRITY_INV	Local input polarity invert	Bitmapped 0–Ffh If the bit is 1, the presence of a voltage at the specified input indicates the input is not asserted or the condition is not true (bit=1 means negative logic at this input). b0 : Run 1 b1 : Run 2 b2 : Reset b3 : Auto b4 : Contactor 1 sense b5 : Contactor 2 sense b6 : Breaker sense	RO	Integer

Fixed Value Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Data Type
R40022	EXT_INP_POLRTY_INV	External input polarity invert	Bitmapped 0–Ffh If the bit is 1, the presence of a voltage at the specified input indicates the input is not asserted or the condition is not true (bit=1 means negative logic at this input). b0 : Reserved b1 : Reserved b2 : Run 1 b3 : Reset	RO	Integer

COMMAND COILS

Command Coils					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value	R/W	Data Type
R00001	FAST_START_CONTACTR2	Fast Start contactor 2	Set to 1 to start contactor 2.	RW	Discrete
R00002	RVRS_START_CONTACTR2	Reverse start contactor 2	Set to 1 to reverse close contactor 2.	RW	Discrete
R00005	RESET_ECM	Reset ECM	Set to 1 to reset ECM.	WO	Discrete
R00006	START_CONTACTR1	Start contactor 1	Set to 1 to close contactor 1.	RW	Discrete
R00007	STOP_CONTACTR1_2	Stop contactor 1 and 2	Set to 1 to open contactors 1 and 2.	RW	Discrete
R00008	RESET_THRML_MEM	Initialize temperature variable	Set to 1 to reset thermal memory in ECM.	WO	Discrete
R00014	TRIP_ECM_CONTACTR	Trip ECM contactor	Set to 1 to trip ECM contactor.	RW	Discrete

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PLC 90-30 & PLC 90-70 Micro 90 PLC – GE Fanuc Series 90 Programmable Logic Controllers

■ *FUNCTIONS*

FUNCTIONS

The PLC 90-30, PLC 90-70, and Micro 90 PLC support a number of Modbus functions. The DDE Server implements a subset of the most commonly used Modbus commands for the PLC, as shown below:

PLCModbusServer Function Codes	
Function Code	Used For
01	Reading coil status
02	Reading contact/discrete inputs
03	Reading setpoint or holding registers
04	Reading actual value or input registers
05	Setting/forcing/executing coils
06	Presetting single setpoint register
16	Setting multiple registers

NOTES:

1. Valid register ranges are for 584/984 type PLC. The register range for PLC 90-30/90-70 types depends upon the PLC model, CPU, memory and user memory partitions.
2. No events are supported for the PLC 90-30/90-70. However, all registers are still accessible by standard register-item naming conventions.
3. No extended or special functions are supported by the Server.
4. For additional information, refer to: Series 90 PLC Serial Communications User's Manual, GFK-0582B.

Generic Device Interface

■ *FUNCTIONS*

FUNCTIONS

The PMCS DDE Server supports all PLC 90-30/90-70 applicable function codes and register ranges for the specific generic device. Refer to the appropriate section for PLC Function codes.

The codes and register ranges of specific generic devices may differ from the PLC numbers. Refer to the specific generic device manual for the valid register ranges and supported function codes.

Generic devices are not tightly integrated into the DDE Server. This means that the register maps and mnemonics are not part of the standard product offering. The standard event and waveform handling provided by the PMCS system are also not supported for generic devices.

To use a generic device type with PMCS, you will need to enter the generic device's register ranges and function codes into the DDE server. Event and waveform registers are accessible as standard Modbus registers and you may design an application to handle this data.

The following details the generic device support provided by the DDE Server.

Standard Modbus device support provided for generic devices:

- Device Address Range: 1 - 247
- Function Codes: 01, 02, 03, 04, 05, 06, 16.
- Exception Codes: 1, 2, 3, 4, 5, 6, 7
- Register address range: 0000 - FFFF
- Byte order (as per Modicon Modbus protocol): Most significant bit first
- Float format : LSW MSW (LSW in Nth register, MSW in (N+1)th register)
- Long format : MSW LSW

Features of the PMCS DDE Server that are not supported for generic device:

- Modbus plus functionality (except for the extended register range noted above)
- 32 bit device register mode
- Special event item: Special processing of events for the Event Logger.
- Waveform Capture: A generic device is not recognized by the waveform module.

POWER LEADER Modbus Concentrator

■ *SETPOINT REGISTERS*

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/ Value/ Range	R/W	Data Type
R43000	HOUR ¹	Hour	0–23 hours	RO	Integer
R43001	MIN ¹	Minute	0–59 minutes	RO	Integer
R43002	SEC ¹	Seconds	0–59 seconds	RO	Integer
R43006	COM_ADDR_OFFSET	Commnet Address offset	Always 267	RO	Integer
R43009	COM_ADDR_DEV1_SEG1	Commnet address - Device 1 Segment 1	300–514	RO	Integer
R43010	COM_ADDR_DEV2_SEG1	Commnet address - Device 2 Segment 1	300–514	RO	Integer
R43011	COM_ADDR_DEV3_SEG1	Commnet address - Device 3 Segment	300–514	RO	Integer
R43012	COM_ADDR_DEV4_SEG1	Commnet address - Device 4 Segment 1	300–514	RO	Integer
R43013	COM_ADDR_DEV1_SEG2	Commnet address - Device 1 Segment 2	300–514	RO	Integer
R43014	COM_ADDR_DEV2_SEG2	Commnet address - Device 2 Segment 2	300–514	RO	Integer
R43015	COM_ADDR_DEV3_SEG2	Commnet address - Device 3 Segment 2	300–514	RO	Integer
R43016	COM_ADDR_DEV4_SEG2	Commnet address - Device 4 Segment 2	300–514	RO	Integer
R43017	COM_ADDR_DEV1_SEG3	Commnet address - Device 1 Segment 3	300–514	RO	Integer
R43018	COM_ADDR_DEV2_SEG3	Commnet address - Device 2 Segment 3	300–514	RO	Integer
R43019	COM_ADDR_DEV3_SEG3	Commnet address - Device 3 Segment 3	300–514	RO	Integer
R43020	COM_ADDR_DEV4_SEG3	Commnet address - Device 4 Segment 3	300–514	RO	Integer
R43021	COM_ADDR_DEV1_SEG4	Commnet address - Device 1 Segment 4	300–514	RO	Integer
R43022	COM_ADDR_DEV2_SEG4	Commnet address - Device 2 Segment 4	300–514	RO	Integer
R43023	COM_ADDR_DEV3_SEG4	Commnet address - Device 3 Segment 4	300–514	RO	Integer
R43024	COM_ADDR_DEV4_SEG4	Commnet address - Device 4 Segment 4	300–514	RO	Integer
R43025	COM_ADDR_DEV1_SEG5	Commnet address - Device 1 Segment 5	300–514	RO	Integer
R43026	COM_ADDR_DEV2_SEG5	Commnet address - Device 2 Segment 5	300–514	RO	Integer
R43027	COM_ADDR_DEV3_SEG5	Commnet address - Device 3 Segment 5	300–514	RO	Integer
R43028	COM_ADDR_DEV4_SEG5	Commnet address - Device 4 Segment 5	300–514	RO	Integer
R43029	COM_ADDR_DEV1_SEG6	Commnet address - Device 1 Segment 6	300–514	RO	Integer
R43030	COM_ADDR_DEV2_SEG6	Commnet address - Device 2 Segment 6	300–514	RO	Integer
R43031	COM_ADDR_DEV3_SEG6	Commnet address - Device 3 Segment 6	300–514	RO	Integer
R43032	COM_ADDR_DEV4_SEG6	Commnet address - Device 4 Segment 6	300–514	RO	Integer
R43033	COM_ADDR_DEV1_SEG7	Commnet address - Device 1 Segment 7	300–514	RO	Integer
R43034	COM_ADDR_DEV2_SEG7	Commnet address - Device 2 Segment 7	300–514	RO	Integer
R43035	COM_ADDR_DEV3_SEG7	Commnet address - Device 3 Segment 7	300–514	RO	Integer
R43036	COM_ADDR_DEV4_SEG7	Commnet address - Device 4 Segment 7	300–514	RO	Integer
R43037	COM_ADDR_DEV1_SEG8	Commnet address - Device 1 Segment 8	300–514	RO	Integer
R43038	COM_ADDR_DEV2_SEG8	Commnet address - Device 2 Segment 8	300–514	RO	Integer
R43039	COM_ADDR_DEV3_SEG8	Commnet address - Device 3 Segment8	300–514	RO	Integer
R43040	COM_ADDR_DEV4_SEG8	Commnet address - Device 4 Segment 8	300–514	RO	Integer

NOTE:

1. Only the Server can write to time registers.
2. The Modbus Concentrator has only one register type, the setpoint registers.
3. The Host synchronizes time by writing to these registers.

POWER LEADER Modbus Monitor

■ *SETPOINT REGISTERS*

The Modbus Monitor supports a limited group of setpoint registers (Dynamic Value Registers and Event Registers.) For more information, refer to DEH-027, *Modbus Monitor Users Manual*.

SETPOINT REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Value/Range	R/W	Format
R40340		IEM Time Register	XX SS MM HH	RW	Long (BCD)
R40342		IEM Date Register	XX DD MM YY	RW	Long (BCD)
R41000		Product ID	30	R	unsigned integer
R41001		Modbus Address		R	unsigned integer
R41002- R41003		Serial Number		R	unsigned long integer (First Register contains Low Word, Second contains High Word)
R41004- R41005		Firmware Revision		R	unsigned long integer (First Register contains the integer part, Second Register contains the decimal part: High Byte = 0.1*N Low Byte = 0.01*M)
R41012		Proxy Status Indicator	0h - if PMCS Modbus Monitor Proxy software is not present 1h - if PMCS Modbus Monitor Proxy software is present	RW	unsigned integer
R41013		Event Logger Indicator	0h - if PMCS Event Logger client software is not present 1h - if PMCS Event Logger client software is present	RW	unsigned integer

Motor Manager II

The register map for the Motor Manager II device is presented differently from the register maps of the other devices in this manual. The MMII register map is presented according to the device tags used by the PMCS MMII Wizard. Each section below describes an element or tab of the PMCS MMII Wizard, and the tags used by that element.

INFO BOX REGISTERS

Info Box Registers				
Register Address	DDE Item Name (Mnemonic)	Contents	Scaling & Comments	Format Code
R30000	PRODUCT_ID	Multilin Product Device Code		F1
R30007S8	SERIAL_NUM	Serial Number	String 20 characters	F10
R30001	HW_REV	Hardware Version	Add 64 and convert to ASCII char	F4
R30002	FIRMWARE_REV	Firmware Revision	Divide by 100	F1
R30004	BOOT_SW_REV	Boot Software Version	Divide by 100	F1
R30005	SUP_PROC_REV	Supervisor Proc. Version	Divide by 100	F1

COMMAND REGISTERS

Command Registers				
Register Address	DDE Item Name (Mnemonic)	Contents	Scaling & Comments	Format Code
R44449L	COMMAND_KEYS	Commands Sent to the Relay		F22

METERING TAB REGISTERS

Metering Tab Registers				
Register Address	DDE Item Name (Mnemonic)	Contents	Scaling & Comments	Format Code
Motor Data (Currents):				
R30053	MOTOR_LOAD	Motor Load		F1
R30049	AMPS_A	Current Phase A	Divide by Current Scale Factor R30048	F1
R30050	AMPS_B	Current Phase B	Divide by Current Scale Factor R30048	F1
R30051	AMPS_C	Current Phase C	Divide by Current Scale Factor R30048	F1
R30052	AMPS_GND	Current Phase Ground	Multiply by 0.1	F1
R30055	CURRENT_UNBAL	Current Unbalance	%	F1
R30057	LAST_START_CURR	Last Starting Current	Divide by Current Scale Factor R30048	F1
Motor Data (Currents):				
R44344S20	ANAL_NAME	Analog Input String	String 20 characters	F10
R44354S10	ANAL_UNITS	Analog Input Units	String 10 characters	F10
R30072	ANAL_IN	Analog Input Value		F1
Motor Data (Miscellaneous):				
R30017	MT_STATUS_FLAGS	Motor Status data	Led Status 1	F101
R30054	THERMAL_CAPACITY	Thermal Capacity		F1
R30056	MT_ACCEL_TIME	Motor Acceleration Time	Multiply by 0.1	F1
R30058	OL_TIME_TO_TRIP	O/L Time to Trip		F1
R30059L	POWER	Power - high & low order	Multiply by 0.1	F3
R30062L	ENERGY	Energy Used - high & low order	Multiply by 0.1	F2
R30064	VOLTS	VT Voltage		F1

Additional Registers Used				
Register Address	DDE Item Name (Mnemonic)	Contents	Scaling & Comments	Format Code
R30048	AMPS_SCALING	Phase Current Scale Factor		F1

STATUS TAB REGISTERS

Status Tab Registers				
Register Address	DDE Item Name (Mnemonic)	Contents	Scaling & Comments	Format Code
Motor Data (Currents):				
R30035	DRIVE_STATUS_FLAGS	Motor Status	Drive Status	F7
R30036	MOTOR_MODE	Motor Mode		F8
R30112	DLYD_RESTART_IN_PROG	Delayed Restart In Progress	Multiply by 0.1	F1
R30113	DLYD_START_IN_PROG	Delayed Start In Progress		F1
R30114	TRANSFER_IN_PROGRESS	Transfer Time in Progress	Multiply by 0.5	F1
R30117	RESTART_INHIBIT	Restart Inhibit		F1
R30033	STOP_CAUSE	Cause of Stop		F5
R30040	LAST_STOP_CAUSE	Cause of Last Stop		F5
R30031	START_STATUS_FLAGS	Start Status Flags	0 = None	F109
Status Flags:				
R30019	OPRTN_STATUS_FLAGS	External Start/Stop	Operation Status Flags	F103
Interlock Inputs:				
R30016	SW_INPUT_STATUS	Interlock Input 1-10	AND with appropriate value in F100	F100
Other Inputs:				
R30016	SW_INPUT_STATUS	Start A Input	AND with 0x0800 from F100	F100
R30016	SW_INPUT_STATUS	Start B Input	AND with 0x1000 from F100	F100
R30016	SW_INPUT_STATUS	Stop Input	AND with 0x0400 from F100	F100
R30016	SW_INPUT_STATUS	Contact A N/O	AND with 0x4000 from F100	F100
R30016	SW_INPUT_STATUS	Contact B N/O	AND with 0x8000 from F100	F100
R30016	SW_INPUT_STATUS	Local Isolator N/O	AND with 0x2000 from F100	F100

ALARMS TAB REGISTERS

Alarms Tab Registers				
Register Address	DDE Item Name (Mnemonic)	Contents	Scaling & Comments	Format Code
Thermal:				
R30020	ALARMS_ACTIVE_1	Load Increase Active Alarm	AND with 0x0001	F104
R30020	ALARMS_ACTIVE_1	Phase Unbalance Active Alarm	AND with 0x0002	F104
R30020	ALARMS_ACTIVE_1	Undercurrent Active Alarm	AND with 0x0010	F104
R30020	ALARMS_ACTIVE_1	Acceleration Time Active Alarm	AND with 0x0020	F104
R30020	ALARMS_ACTIVE_1	Ground Fault Active Alarm	AND with 0x0040	F104
R30020	ALARMS_ACTIVE_1	Thermal Capacity Active Alarm	AND with 0x2000	F104
R30023	ALARMS_PICKUP_1	Load Increase Pickup Alarm	AND with 0x0001	F104
R30023	ALARMS_PICKUP_1	Phase Unbalance Pickup Alarm	AND with 0x0002	F104
R30023	ALARMS_PICKUP_1	Undercurrent Pickup Alarm	AND with 0x0010	F104
R30023	ALARMS_PICKUP_1	Acceleration Time Pickup Alarm	AND with 0x0020	F104
R30023	ALARMS_PICKUP_1	Ground Fault Pickup Alarm	AND with 0x0040	F104
R30023	ALARMS_PICKUP_1	Thermal Capacity Pickup Alarm	AND with 0x2000	F104
Voltage/Power:				
R30020	ALARMS_ACTIVE_1	Underpower Active Alarm	AND with 0x0008	F104
R30020	ALARMS_ACTIVE_1	Undervoltage Active Alarm	AND with 0x4000	F104
R30020	ALARMS_ACTIVE_1	Overvoltage Active Alarm	AND with 0x8000	F104
R30023	ALARMS_PICKUP_1	Underpower Pickup Alarm	AND with 0x0008	F104
R30023	ALARMS_PICKUP_1	Undervoltage Pickup Alarm	AND with 0x4000	F104
R30023	ALARMS_PICKUP_1	Overvoltage Pickup Alarm	AND with 0x8000	F104
Therm./Analog:				
R30020	ALARMS_ACTIVE_1	Thermistor Active Alarm	AND with 0x0004	F104
R30020	ALARMS_ACTIVE_1	Analog High Active Alarm	AND with 0x0080	F104
R30020	ALARMS_ACTIVE_1	Analog Low Active Alarm	AND with 0x0100	F104
R30023	ALARMS_PICKUP_1	Thermistor Pickup Alarm	AND with 0x0004	F104
R30023	ALARMS_PICKUP_1	Analog High Pickup Alarm	AND with 0x0080	F104
R30023	ALARMS_PICKUP_1	Analog Low Pickup Alarm	AND with 0x0100	F104
Control:				
R30021	ALARMS_ACTIVE_2	Open Control Circuit Active Alarm	AND with 0x0001	F105
R30021	ALARMS_ACTIVE_2	Welded Contactor Active Alarm	AND with 0x0002	F105
R30021	ALARMS_ACTIVE_2	Inverter Tripped Active Alarm	AND with 0x0004	F105
R30021	ALARMS_ACTIVE_2	Duty Motor Trip Active Alarm	AND with 0x0040	F105
R30024	ALARMS_PICKUP_2	Open Control Circuit Pickup Alarm	AND with 0x0001	F105
R30024	ALARMS_PICKUP_2	Welded Contactor Pickup Alarm	AND with 0x0002	F105
R30024	ALARMS_PICKUP_2	Inverter Tripped Pickup Alarm	AND with 0x0004	F105
R30024	ALARMS_PICKUP_2	Duty Motor Trip Pickup Alarm	AND with 0x0040	F105
Motor Status:				
R30020	ALARMS_ACTIVE_1	Max Motor Stop Time Active Alarm	AND with 0x0800	F104
R30021	ALARMS_ACTIVE_2	Drive Failed to Start Active Alarm	AND with 0x0008	F105
R30021	ALARMS_ACTIVE_2	Drive Failed to Stop Active Alarm	AND with 0x0010	F105
R30021	ALARMS_ACTIVE_2	Incomplete Start Active Alarm	AND with 0x0020	F105
R30021	ALARMS_ACTIVE_2	Start Block Active Alarm	AND with 0x0080	F105

Alarms Tab Registers				
Register Address	DDE Item Name (Mnemonic)	Contents	Scaling & Comments	Format Code
R30023	ALARMS_PICKUP_1	Max Motor Stop Time Pickup Alarm	AND with 0x0800	F104
R30024	ALARMS_PICKUP_2	Drive Failed to Start Pickup Alarm	AND with 0x0008	F105
R30024	ALARMS_PICKUP_2	Drive Failed to Stop Pickup Alarm	AND with 0x0010	F105
R30024	ALARMS_PICKUP_2	Incomplete Start Pickup Alarm	AND with 0x0020	F105
R30024	ALARMS_PICKUP_2	Start Block Pickup Alarm	AND with 0x0080	F105
		Maintenance:		
R30020	ALARMS_ACTIVE_1	Motor Greasing Interval Active Alarm	AND with 0x0200	F104
R30020	ALARMS_ACTIVE_1	Contactors Inspection Interval Active Alarm	AND with 0x0400	F104
R30023	ALARMS_PICKUP_1	Motor Greasing Interval Pickup Alarm	AND with 0x0200	F104
R30023	ALARMS_PICKUP_1	Contactors Inspection Interval Pickup Alarm	AND with 0x0400	F104
		Interlocks:		
R30022	INTERLOCK_ALM_ACTIVE	Process Interlock A Active Alarm	AND with 0x0002	F106
R30022	INTERLOCK_ALM_ACTIVE	Process Interlock B Active Alarm	AND with 0x0004	F106
R30022	INTERLOCK_ALM_ACTIVE	Process Interlock C Active Alarm	AND with 0x0008	F106
R30022	INTERLOCK_ALM_ACTIVE	Process Interlock D Active Alarm	AND with 0x0010	F106
R30022	INTERLOCK_ALM_ACTIVE	Process Interlock E Active Alarm	AND with 0x0020	F106
R30022	INTERLOCK_ALM_ACTIVE	Process Interlock F Active Alarm	AND with 0x0040	F106
R30022	INTERLOCK_ALM_ACTIVE	Process Interlock G Active Alarm	AND with 0x0080	F106
R30022	INTERLOCK_ALM_ACTIVE	Process Interlock H Active Alarm	AND with 0x0100	F106
R30022	INTERLOCK_ALM_ACTIVE	Process Interlock I Active Alarm	AND with 0x0200	F106
R30022	INTERLOCK_ALM_ACTIVE	Process Interlock J Active Alarm	AND with 0x0400	F106
R30025	INTERLOCK_ALM_PICKUP	Process Interlock A Pickup Alarm	AND with 0x0002	F106
R30025	INTERLOCK_ALM_PICKUP	Process Interlock B Pickup Alarm	AND with 0x0004	F106
R30025	INTERLOCK_ALM_PICKUP	Process Interlock C Pickup Alarm	AND with 0x0008	F106
R30025	INTERLOCK_ALM_PICKUP	Process Interlock D Pickup Alarm	AND with 0x0010	F106
R30025	INTERLOCK_ALM_PICKUP	Process Interlock E Pickup Alarm	AND with 0x0020	F106
R30025	INTERLOCK_ALM_PICKUP	Process Interlock F Pickup Alarm	AND with 0x0040	F106
R30025	INTERLOCK_ALM_PICKUP	Process Interlock G Pickup Alarm	AND with 0x0080	F106
R30025	INTERLOCK_ALM_PICKUP	Process Interlock H Pickup Alarm	AND with 0x0100	F106
R30025	INTERLOCK_ALM_PICKUP	Process Interlock I Pickup Alarm	AND with 0x0200	F106
R30025	INTERLOCK_ALM_PICKUP	Process Interlock J Pickup Alarm	AND with 0x0400	F106
		Miscellaneous:		
R30020	ALARMS_ACTIVE_1	Internal Fault Active Alarm	AND with 0x1000	F104
R30023	ALARMS_PICKUP_1	Internal Fault Pickup Alarm	AND with 0x1000	F104

TRIPS TAB REGISTERS

Trips Tab Registers				
Register Address	DDE Item Name (Mnemonic)	Contents	Scaling & Comments	Format Code
Pre-Trip Data:				
R30082	PRETRP_A	Pre Trip Phase A Amps	Divide by Current Scale Factor R30048	F1
R30083	PRETRP_B	Pre Trip Phase B Amps	Divide by Current Scale Factor R30048	F1
R30084	PRETRP_C	Pre Trip Phase C Amps	Divide by Current Scale Factor R30048	F1
R30085	PRETRP_GND	Pre Trip Ground Amps	Multiply by 0.1	F1
R30080	TRIP_CAUSE	Cause of Trip		F9
R30086	LAST_TRIP_CAUSE	Cause of Last Trip		F9
R30081	TIME_TO_RESET	Time to Reset		F1
Thermal:				
R30027	TRIPS_ACTIVE_1	Overload Active Trip Flag	AND with 0x0002	F107
R30027	TRIPS_ACTIVE_1	Ground Fault Active Trip Flag	AND with 0x0001	F107
R30027	TRIPS_ACTIVE_1	Undercurrent Active Trip Flag	AND with 0x0040	F107
R30027	TRIPS_ACTIVE_1	Acceleration Time Active Trip Flag	AND with 0x0008	F107
R30027	TRIPS_ACTIVE_1	Single Phase Active Trip Flag	AND with 0x0004	F107
R30027	TRIPS_ACTIVE_1	Stalled Rotor Active Trip Flag	AND with 0x0020	F107
R30029	TRIPS_PICKUP_1	Overload Pickup Trip Flag	AND with 0x0002	F107
R30029	TRIPS_PICKUP_1	Ground Fault Pickup Trip Flag	AND with 0x0001	F107
R30029	TRIPS_PICKUP_1	Undercurrent Pickup Trip Flag	AND with 0x0040	F107
R30029	TRIPS_PICKUP_1	Acceleration Time Pickup Trip Flag	AND with 0x0008	F107
R30029	TRIPS_PICKUP_1	Single Phase Pickup Trip Flag	AND with 0x0004	F107
R30029	TRIPS_PICKUP_1	Stalled Rotor Pickup Trip Flag	AND with 0x0020	F107
Voltage/Power:				
R30027	TRIPS_ACTIVE_1	Underpower Active Trip Flag	AND with 0x0080	F107
R30028	TRIPS_ACTIVE_2	Undervoltage Active Trip Flag	AND with 0x4000	F108
R30028	TRIPS_ACTIVE_2	Overvoltage Active Trip Flag	AND with 0x8000	F108
R30029	TRIPS_PICKUP_1	Underpower Pickup Trip Flag	AND with 0x0080	F107
R30030	TRIPS_PICKUP_2	Undervoltage Pickup Trip Flag	AND with 0x4000	F108
R30030	TRIPS_PICKUP_2	Overvoltage Pickup Trip Flag	AND with 0x8000	F108
Therm./Analog:				
R30027	TRIPS_ACTIVE_1	Thermistor Active Trip Flag	AND with 0x0010	F107
R30027	TRIPS_ACTIVE_1	Analog High Active Trip Flag	AND with 0x0100	F107
R30027	TRIPS_ACTIVE_1	Analog Low Active Trip Flag	AND with 0x0200	F107
R30029	TRIPS_PICKUP_1	Thermistor Pickup Trip Flag	AND with 0x0010	F107
R30029	TRIPS_PICKUP_1	Analog High Pickup Trip Flag	AND with 0x0100	F107
R30029	TRIPS_PICKUP_1	Analog Low Pickup Trip Flag	AND with 0x0200	F107
Control:				
R30027	TRIPS_ACTIVE_1	Emergency Stop Active Trip Flag	AND with 0x4000	F107
R30028	TRIPS_ACTIVE_2	Faceplate Stop Active Trip Flag	AND with 0x0020	F108
R30028	TRIPS_ACTIVE_2	Process Stop Active Trip Flag	AND with 0x0040	F108
R30028	TRIPS_ACTIVE_2	Open Control Circuit Active Trip Flag	AND with 0x2000	F108

Trips Tab Registers				
Register Address	DDE Item Name (Mnemonic)	Contents	Scaling & Comments	Format Code
R30029	TRIPS_PICKUP_1	Emergency Stop Pickup Trip Flag	AND with 0x4000	F107
R30030	TRIPS_PICKUP_2	Faceplate Stop Pickup Trip Flag	AND with 0x0020	F108
R30030	TRIPS_PICKUP_2	Process Stop Pickup Trip Flag	AND with 0x0040	F108
R30030	TRIPS_PICKUP_2	Open Control Circuit Pickup Trip Flag	AND with 0x2000	F108
		Interlocks:		
R30028	TRIPS_ACTIVE_2	Process Interlock A Active Trip Flag	AND with 0x0001	F108
R30028	TRIPS_ACTIVE_2	Process Interlock B Active Trip Flag	AND with 0x0002	F108
R30028	TRIPS_ACTIVE_2	Process Interlock C Active Trip Flag	AND with 0x0004	F108
R30028	TRIPS_ACTIVE_2	Process Interlock D Active Trip Flag	AND with 0x0008	F108
R30028	TRIPS_ACTIVE_2	Process Interlock E Active Trip Flag	AND with 0x0080	F108
R30028	TRIPS_ACTIVE_2	Process Interlock F Active Trip Flag	AND with 0x0100	F108
R30028	TRIPS_ACTIVE_2	Process Interlock G Active Trip Flag	AND with 0x0200	F108
R30028	TRIPS_ACTIVE_2	Process Interlock H Active Trip Flag	AND with 0x0400	F108
R30028	TRIPS_ACTIVE_2	Process Interlock I Active Trip Flag	AND with 0x0800	F108
R30028	TRIPS_ACTIVE_2	Process Interlock J Active Trip Flag	AND with 0x1000	F108
R30030	TRIPS_PICKUP_2	Process Interlock A Pickup Trip Flag	AND with 0x0001	F108
R30030	TRIPS_PICKUP_2	Process Interlock B Pickup Trip Flag	AND with 0x0002	F108
R30030	TRIPS_PICKUP_2	Process Interlock C Pickup Trip Flag	AND with 0x0004	F108
R30030	TRIPS_PICKUP_2	Process Interlock D Pickup Trip Flag	AND with 0x0008	F108
R30030	TRIPS_PICKUP_2	Process Interlock E Pickup Trip Flag	AND with 0x0080	F108
R30030	TRIPS_PICKUP_2	Process Interlock F Pickup Trip Flag	AND with 0x0100	F108
R30030	TRIPS_PICKUP_2	Process Interlock G Pickup Trip Flag	AND with 0x0200	F108
R30030	TRIPS_PICKUP_2	Process Interlock H Pickup Trip Flag	AND with 0x0400	F108
R30030	TRIPS_PICKUP_2	Process Interlock I Pickup Trip Flag	AND with 0x0800	F108
R30030	TRIPS_PICKUP_2	Process Interlock J Pickup Trip Flag	AND with 0x1000	F108
		Miscellaneous:		
R30027	TRIPS_ACTIVE_1	Local Isolator Active Trip Flag	AND with 0x0400	F107
R30027	TRIPS_ACTIVE_1	Plant Interlock Active Trip Flag	AND with 0x0800	F107
R30028	TRIPS_ACTIVE_2	Parameters Not Set Active Trip Flag	AND with 0x0010	F108
R30027	TRIPS_ACTIVE_1	Internal Fault Active Trip Flag	AND with 0x2000	F107
R30029	TRIPS_PICKUP_1	Local Isolator Pickup Trip Flag	AND with 0x0400	F107
R30029	TRIPS_PICKUP_1	Plant Interlock Pickup Trip Flag	AND with 0x0800	F107
R30030	TRIPS_PICKUP_2	Parameters Not Set Pickup Trip Flag	AND with 0x0010	F108
R30029	TRIPS_PICKUP_1	Internal Fault Pickup Trip Flag	AND with 0x2000	F107

MAINTENANCE TAB REGISTERS

Maintenance Tab Registers				
Register Address	DDE Item Name (Mnemonic)	Contents	Scaling & Comments	Format Code
		Start/Trip Counters:		
R30096L	NUM_STARTS	Number of Starts - high & low order		F2
R30098	TOTAL_TRIPS	Total Trips		F1
R30099	OVLDT_TRIPS	Overload Trips		F1
R30100	THERMISTOR_TRIPS	Thermistor Trips		F1
R30101	GND_FLT_TRIPS	Ground Fault Trips		F1
R30102	SINGLE_PH_TRIPS	Single Phase Trips		F1
R30103	ACCEL_TRIPS	Acceleration Trips		F1
R30104	UC_TRIPS	Undercurrent Trips		F1
R30105	UP_TRIPS	Underpower Trips		F1
R30106	STALLED_ROTOR_TRIPS	Stalled Rotor Trips		F1
R30107	CNTL_CMD_TRIPS	Control Command Trips		F1
		Timers:		
R30088	RUNNING_TIME	Running Time		F1
R30089	STOPPED_TIME	Stopped Time		F1
		Interlock Counter:		
R30108	INTERLOCK_COUNTER	Interlock Counter Value		F1

SETTINGS TAB REGISTERS

Settings Tab Registers				
Register Address	DDE Item Name (Mnemonic)	Contents	Scaling & Comments	Format Code
		Motor Identification:		
R44096S20	MOTOR_NAME	Motor Name	String 20 characters	F10
R44106	MOTOR_RATING	Motor Rating	Multiply by 0.1	F1
R44108	SYSTEM_VOLTAGE	System Supply Voltage		F1
		Starter:		
R44112	STARTER_TYPE	Starter Type		F11
R44121	STARTS_PER_HOUR	Starts per Hour		F1
		CT Inputs:		
R44128	CT_PRI	Phase CT Primary		F1
R44131	GND_CT_TYPE	Ground Fault CT Input		F13
R44130	GND_CT_PRI	Ground CT Primary	Display only if R44131 = 5A Sec CBCT	F1
		Thermistor:		
R44138	ENDIS_THRMSTR_TRIP	Thermistor Trip		F14
R44139	ENDIS_THRMSTR_ALM	Thermistor Alarm		F14
R44136	COLD_RESISTANCE	Cold Resistance	Multiply by 0.1	F1
R44137	HOT_RESISTANCE	Hot Resistance	Multiply by 0.1	F1
		Fault Mode:		
R44144	ENDIS_INTERNAL_TRIP	Internal Fault Trip		F14
R44146	COMM_ALM_SET	Comm. Failure Alarm	30 or 65535 = Off	F1
R44145	COMM_TRIP_SET	Comm. Failure Trip	30 or 65535 = Off	F1
R44147	ENDIS_CHG_CMD_MODE	Change Command Mode on Alarm		F14
		VT Inputs:		
R44132	VT_PRI	VT Primary Voltage		F1
R44133	VT_CONN_TYPE	VT Connection Type		F15
R44134	VT_NOM_SEC	VT Secondary Voltage		F1
R44135	NOM_FREQ	Nominal Frequency		F1

MX200 Microprocessor Controller

■ *ACTUAL VALUES*

Actual Values

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Range		R/W	Data Type
				Min.	Max.		
R40000	STATUS_0	Status 0	---	---	---	RO	UINT
	1 st Bit	Automatic Transfer Relay	On/Off	0	1		
	2 nd Bit	ATS Not in Auto Mode	Auto/Not in Auto	0	1		
	3 rd Bit	Fault	---	0	1		
	4 th Bit	Exerciser Enabled	Disabled/Enabled	0	1		
	5 th Bit	Load test running	Stopped/Running	0	1		
	6 th Bit	Load, No Load, Fast Load Test status	Stopped/Running	0	1		
	7 th Bit	Emergency Source available	Not Available/Available	0	1		
	8 th Bit	Normal Source available	Not Available/Available	0	1		
R40001	STATUS_1	Status 1				RO	UINT
	1 st Bit	N/A	---	---	---	---	---
	2 nd Bit	S5 selector switch	Off/On	0	1		
	3 rd Bit	S12 selector switch	Off/On	0	1		
	4 th Bit	Load Shed input	Off/On	0	1		
	5 th Bit	Q7 input	Off/On	0	1		
	6 th Bit	Q3 input	Off/On	0	1		
	7 th Bit	Auxiliary 2 Input	Single/Three	0	1		
	8 th Bit	Auxiliary 1 Input	Single/Three	0	1		
R40002	STATUS_2	Status 2				RO	UINT
	1 st Bit	SN limit switch	Off/On	0	1		
	2 nd Bit	SE limit switch	Off/On	0	1		
	3 rd Bit	SNO limit switch	Off/On	0	1		
	4 th Bit	SEO limit switch	Off/On	0	1		
	5 th Bit	Emergency Phase Rotation	Off/On	0	1		
	6 th Bit	Normal Phase Rotation	Off/On	0	1		
	7 th Bit	Number of Phases on Emergency	Off/On	0	1		
	8 th Bit	Number of Phases on Normal	Off/On	0	1		

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Range		R/W	Data Type
				Min.	Max.		
R40003	TIMER_ID	Timer ID	---	---	---	RO	UINT
	1 st Bit	Timer Bit 0	---	0	1		
	2 nd Bit	Timer Bit 1	---	0	1		
	3 rd Bit	Timer Bit 2	---	0	1		
	4 th Bit	N/A	---	---	---		
	5 th Bit	N/A	---	---	---		
	6 th Bit	N/A	---	---	---		
	7 th Bit	N/A	---	---	---		
	8 th Bit	N/A	---	---	---		
	9 th Bit	Timer active	Timer Stopped/Timer Running	0	1		
	10 th Bit	Normal Position Status	1 = Normal	0	1		
	11 th Bit	Emergency Position Status	1 = Emergency	0	1		
	12 th Bit	MX200 - Mod Card Comm Error	Comm OK / Comm Error	0	1		
	13 th Bit	N/A	---	---	---		
	14 th Bit	N/A	---	---	---		
	15 th Bit	N/A	---	---	---		
	16 th Bit	N/A	---	---	---		
R40004	TMR_CNT_DN_VAL	Timer Count down value	Seconds	---	---	RO	UINT
R40005	NOR_VOL_PH1_PH2	Normal Voltage Ph1-Ph2	Volts	---	---	RO	UINT
R40006	NOR_VOL_PH2_PH3	Normal Voltage Ph2-Ph3	Volts	---	---	RO	UINT
R40007	NOR_VOL_PH3_PH1	Normal Voltage Ph3-Ph1	Volts	---	---	RO	UINT
R40008	EMR_VOL_PH1_PH2	Emergency Voltage Ph1-Ph2	Volts	---	---	RO	UINT
R40009	EMR_VOL_PH2_PH3	Emergency Voltage Ph2-Ph3	Volts	---	---	RO	UINT
R40010	EMR_VOL_PH3_PH1	Emergency Voltage Ph3-Ph1	Volts	---	---	RO	UINT
R40012	NORM_FREQ	Normal Frequency (scaled value)	Hz	---	---	RO	UINT
R40014	EMR_FREQ	Emergency Frequency (scaled value)	Hz	---	---	RO	UINT
R40015	TIME_ON_EMR	Time On Emergency	Seconds	---	---	RO	UINT
R40016	NO_OF_TRANSFERS	Number of Transfers	---	---	---	RO	UINT
R40018	SERNUM_MSR	Serial Number - MSR	---	---	---	RO	UINT
R40019	SERNUM_LSR	Serial Number - LSR	---	---	---	RO	UINT

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Range		R/W	Data Type
				Min.	Max.		
							T
R40020	NOM_FS_VOLTAGE	Nominal Full Scale Voltage Value	---	---	---	RO	UINT
R40021	NETCONFIG_0	Net Config 0				RO	UINT
	1 st Bit	T3 Timer Bypass Option	1 = Configured	0	1	---	---
	2 nd Bit	T3 Timer Option	1 = Configured	0	1	---	---
	3 rd Bit	W3 Timer Bypass Option	1 = Configured	0	1	---	---
	4 th Bit	W3 Timer Option	1 = Configured	0	1	---	---
	5 th Bit	T Timer Bypass	1 = Configured	0	1	---	---
	6 th Bit	W Timer Bypass	1 = Configured	0	1	---	---
	7 th Bit	In Phase Monitor / Closed Transition	1 = Configured (Std ATS), 1 = Configured (Delay ATS)	0	1	---	---
	8 th Bit	ATS Type	0 = Standard 1 = Delay	0	1	---	---
R40022	NETCONFIG_1	Net Config 1				RO	UINT
	1 st Bit	S12 Auto/Manual Option	1 = Configured	0	1	---	---
	2 nd Bit	S5 Auto/Manual Bypass Option	1 = Configured	0	1	---	---
	3 rd Bit	Phase Sequence Check Option	1 = Configured	0	1	---	---
	4 th Bit	Emg Over Frequency Option	1 = Configured	0	1	---	---
	5 th Bit	Emg Over Voltage Option	1 = Configured	0	1	---	---
	6 th Bit	Norm Over Frequency Option	1 = Configured	0	1	---	---
	7 th Bit	Norm Under Frequency Option	1 = Configured	0	1	---	---
	8 th Bit	Norm Over Voltage Option	1 = Configured	0	1	---	---
R40032	P_TIME	P time	Seconds	0	1000	RW	UINT
R40033	W_TIME	W time	Seconds	0	300	RW	UINT
R40034	W3_TIME	W3 time	Seconds	0	60	RW	UINT
R40035	DW_TIME	DW time	Seconds	0	600	RW	UINT
R40036	T_TIME	T time	Seconds	0	3600	RW	UINT
R40037	T3_TIME	T3 time	Seconds	0	60	RW	UINT
R40038	DT_TIME	DT time	Seconds	0	600	RW	UINT

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Range		R/W	Data Type
				Min.	Max.		
							T
R40039	U_TIME	U time	Seconds	0	3600	RW	UINT
R40040	NORM_PKP_VOL	Normal Pickup Voltage	%	85	100	RW	UINT
R40041	NORM_DP_OUT_VOL	Normal Dropout Voltage	%	75	98	RW	UINT
R40042	EMR_PKP_VOL	Emergency Pickup Voltage	%	85	100	RW	UINT
R40043	EMR_DP_OUT_VOL	Emergency Dropout Voltage	%	75	98	RW	UINT
R40044	NORM_PKP_FREQ	Normal Pickup Frequency	%	90	100	RW	UINT
R40045	EMR_PKP_FREQ	Emergency Pickup Frequency	%	90	100	RW	UINT
R40046	NETCONTROL_0	Net Control 0	---	---	---	RW	UINT
	1 st Bit	N/A	---	---	---	---	---
	2 nd Bit	N/A	---	---	---	---	---
	3 rd Bit	N/A	---	---	---	---	---
	4 th Bit	YE control	Off/On	0	1	---	---
	5 th Bit	YN control	Off/On	0	1	---	---
	6 th Bit	No Load Test control	Off/On	0	1	---	---
	7 th Bit	Load Test control	Off/On	0	1	---	---
	8 th Bit	Fast Load Test control	Off/On	0	1	---	---
R40047	NETCONTROL_1	Net Control 1	---	---	---	RW	UINT
	1 st Bit	N/A	---	---	---	---	---
	2 nd Bit	S5 control	Off/On	0	1	---	---
	3 rd Bit	S12 control	Off/On	0	1	---	---
	4 th Bit	LS control	Off/On	0	1	---	---
	5 th Bit	Q7 control	Off/On	0	1	---	---
	6 th Bit	Q3 control	Off/On	0	1	---	---
	7 th Bit	AUX2 control	Off/On	0	1	---	---
	8 th Bit	AUX1 control	Off/On	0	1	---	---

MX150/MX250 Microprocessor Controllers

Read Only Register List

Holding Reg.	Bit	Coil	Description	Value
40001 MX Status 0				
	0	1	Automatic Transfer Relay	1 = On, 0 = Off
	1	2	ATS Not in Auto Mode	1 = Not in Auto
	2	3	General Purpose Alarm	1 = Alarm Active
	3	4	Unused	
	4	5	Load Test or Fast Load Test Running	1 = Running
	5	6	Load, No Load, Fast Load Test Status	1 = Running
	6	7	S2 Available	1 = Available
	7	8	S1 Available	1 = Available
40002 MX Status 1				
	0	9	SN Limit Switch	1 = On, 0 = Off
	1	10	SE Limit Switch	1 = On, 0 = Off
	2	11	SNO Limit Switch	1 = On, 0 = Off
	3	12	SEO Limit Switch	1 = On, 0 = Off
	4	13	S2 Phase Rotation - Valid only if 3ph and S2 Avail	1 = CW, 0 = CCW
	5	14	S1 Phase Rotation - Valid only if 3ph and S1 Avail	1 = CW, 0 = CCW
	6	15	Number of Phases on S2	1 = Three, 0 = One
	7	16	Number of Phases on S1	1 = Three, 0 = One
40003 MX Status 2				
	0	17	Unused	
	1	18	S5 Active	1 = On, 0 = Off
	2	19	S12 Active	1 = On, 0 = Off
	3	20	Load Shed (LS) Active	1 = On, 0 = Off
	4	21	Q7 Active	1 = On, 0 = Off
	5	22	Q3 Active	1 = On, 0 = Off
	6	23	Closed Transfer Relay (CTR) Active	1 = On, 0 = Off
	7	24	Transfer Mode Select (TMS) Active	1 = On, 0 = Off
40004 Timer ID 0				
	0	25	Timer Bit 0	See Table 1
	1	26	Timer Bit 1	See Table 1
	2	27	Timer Bit 2	See Table 1
	3	28	Unused	
	4	29	Unused	
	5	30	Unused	
	6	31	Unused	
	7	32	Unused	
	8	33	Timer Active	1 = Timer Running
	9	34	S1 Position Status	1 = S1 Position
	10	35	S2 Position Status	1 = S2 Position
	11	36	Unused	
	12	37	Unused	
	13	38	Unused	
	14	39	Unused	
	15	40	Unused	

Read Only Register List(cont'd)

Holding Reg.	Bit	Coil	Description	Value
40005			Timer Countdown Value	Seconds
40006			S1 Voltage (Phase A-B)	Volts
40007			S1 Voltage (Phase B-C)	Volts
40008			S1 Voltage (Phase C-A)	Volts
40009			S2 Voltage (Phase A-B)	Volts
40010			S2 Voltage (Phase B-C)	Volts
40011			S2 Voltage (Phase C-A)	Volts
40012			Unused	
40013			S1 Frequency	Freq Value = scaled value/10
40014			Unused	
40015			S2 Frequency	Freq Value = scaled value/10
40016			Unused	
40017			Total Transfers to S1	
40018			Unused	
40019			Serial Number (MSR)	
40020			Serial Number (LSR)	
40021			Nominal Full-Scale Voltage	
40022			MX Network Configuration 0	
	0	41	Unused	
	1	42	Unused	
	2	43	Unused	
	3	44	Unused	
	4	45	Unused	
	5	46	Closed Transition Configured	1 = Configured
	6	47	In-Phase Monitor Configured	1 = Configured
	7	48	ATS Type	1 = Delay, 0 = Standard
40023			MX Network Configuration 1	
	0	49	S12 Auto/Manual Option	1 = Configured
	1	50	S5 Auto/Manual Bypass Option	1 = Configured
	2	51	Phase Sequence Check Option	1 = Configured
	3	52	S2 Overfrequency Option	1 = Configured
	4	53	S2 Overvoltage Option	1 = Configured
	5	54	S1 Overfrequency Option	1 = Configured
	6	55	S1 Underfrequency Option	1 = Configured
	7	56	S1 Overvoltage Option	1 = Configured
40024			MX Network Configuration 2	
	0	57	Phase Imbalance Configured	1 = Configured
	1	58	Unused	
	2	59	Closed Transition Configured	1 = Configured
	3	60	Pre-Load Disconnect	1 = Configured
	4	61	Post-Load Disconnect	1 = Configured
	5	62	Open Loop Transfer Option	1 = Configured
	6	63	Unused	
	7	64	Controller Type	1 = MX150/250, 0 = MX200

Read Only Register List(cont'd)

Holding Reg.	Bit	Coil	Description	Value
40025			S1 Voltage (Phase A-B), Raw A/D	Raw A/D Value - See Note 1
40026			S1 Voltage (Phase B-C), Raw A/D	Raw A/D Value - See Note 1
40027			S1 Voltage (Phase C-A), Raw A/D	Raw A/D Value - See Note 1
40028			S2 Voltage (Phase A-B), Raw A/D	Raw A/D Value - See Note 1
40029			S2 Voltage (Phase B-C), Raw A/D	Raw A/D Value - See Note 1
40030			S2 Voltage (Phase C-A), Raw A/D	Raw A/D Value - See Note 1
40031			S1 Period Count	Raw Value - See Note 2
40032			S2 Period Count	Raw Value - See Note 2
40049			Total S1 Fails	
40050			Total Transfers to S2	
40051			Days Powered Up	
40052			Time S1 Available (MSR)	Hours
40053			Time S1 Available (LSR)	Hours
40054			Time S2 Available (MSR)	Hours
40055			Time S2 Available (LSR)	Hours
40056			Unused	
40057			Unused	
40058			Unused	
40059			Unused	
40060			Unused	
40061			Unused	
40062			Unused	
40063			Exerciser Schedule Status	
	0	81	Exerciser Type	1 = Clock, 0 = Timer
	1	82	Load/No Load Exerciser (Timer Exerciser Only)	1 = Load
	2	83	User can set load exercises (Clock Exerciser Only)	1 = Yes
	3	84	Unused	
	4	85	Unused	
	5	86	Unused	
	6	87	Unused	
	7	88	Unused	
	[15:8]		Timer Exerciser Run Duration	Minutes
40064			MX Status 3	
	0	89	Exerciser Pending	1 = Exerciser Pending
	1	90	Exerciser Bypassed	1 = Exerciser Bypassed
	2	91	Unused	
	3	92	Unused	
	4	93	Unused	
	5	94	Unused	
	6	95	Unused	
	7	96	Unused	
40065			Unused	
40066			Unused	
40067			Unused	

Read Only Register List(contd)

Holding Reg.	Bit	Coil	Description	Value	
40068			Timer ID 1		
	0	97	Unused		
	1	98	Unused		
	2	99	A6/A62 Timer Running	1 = Running	
	3	100	T Timer Running	1 = Running	
	4	101	DT Timer Running	1 = Running	
	5	102	T3/W3 Timer Running	1 = Running	
	6	103	W Timer Running	1 = Running	
	7	104	DW Timer Running	1 = Running	
40069			T or W Timer Countdown Value	Seconds	
40070			T3/W3 Timer Countdown Value	Seconds	
40071			A6/A62 Timer Countdown Value	Seconds	
40072			MX Firmware Revision	Ver = Value/10	
40073			Modbus Card Firmware Revision	Ver = Value/100	
40074			Unused		
40075			Unused		
40076			Unused		
40077			Most Recent Event Pointer		
40082			Unused		
40083			Unused		
40099			System Time – Day of Week		
Holding Reg.	Bit	Coil	Description	Range	Notes
40102			Exerciser Record – Hour	0 - 23	
40103			Exerciser Record – Minute	0 - 59	
40104			Exerciser Record – Month	1 - 12	Not writeable for Daily or Weekly Exercisers
40105			Exerciser Record – Day of Month	1 - 31	Max val. depends on month, year Not writeable for Daily or Weekly Exercisers
40106			Exerciser Record – Day of Week	1 = Sun., 7 = Sat.	Writeable for Weekly Exercisers Only
40107			Exerciser Record – Ex. Duration	0 - 600 minutes	
40108			Exerciser Record – Load/No Load	1 = Load, 0 = No Load	Writeable ONLY if Factory Configured for Load Exercisers
40109			Unused		
40110			Exerciser Schedule Selection	0 = Off	
				1 = Daily (1 Day)	
				2 = Weekly (7 Day)	
				3 = Bi-Weekly (14 Day)	
				4 = 4 Week (28 Day)	
				5 = Calendar (365 Day)	

Read Only Register List(cont'd)

Holding Reg.	Bit	Coil	Description	Value
40111			System Busy Status	
	0	105	System Busy due to R50	1 = System Busy
	1	106	Ready to Confirm Bypass R50	1 = Ready to Confirm Bypass
	2	107	Unused	
	3	108	Unused	
	4	109	Unused	
	5	110	Unused	
	6	111	Unused	
	7	112	Unused	
40113			Unused	
40114			Unused	
40115			Unused	
40116			Unused	
40117			Unused	
40118			Unused	
40119			Unused	
40120			Unused	
40121			Reason for Event 0	See Table 2
40122			Event 0	Second
40123			Event 0	Hour
40124			Event 0	Minute
40125			Event 0	Month
40126			Event 0	Day of Month
40127			Event 0	Year
40128			Reason for Event 1	See Table 2
40129			Event 1	Second
40130			Event 1	Hour
40131			Event 1	Minute
40132			Event 1	Month
40133			Event 1	Day of Month
40134			Event 1	Year
40135			Reason for Event 2	See Table 2
40136			Event 2	Second
40137			Event 2	Hour
40138			Event 2	Minute
40139			Event 2	Month
40140			Event 2	Day of Month
40141			Event 2	Year
40142			Reason for Event 3	See Table 2
40143			Event 3	Second
40144			Event 3	Hour
40145			Event 3	Minute
40146			Event 3	Month
40147			Event 3	Day of Month
40148			Event 3	Year

Read Only Register List(cont'd)

Holding Reg.	Bit Coil	Description	Value
40149		Reason for Event 4	See Table 2
40150		Event 4	Second
40151		Event 4	Hour
40152		Event 4	Minute
40153		Event 4	Month
40154		Event 4	Day of Month
40155		Event 4	Year
40156		Reason for Event 5	See Table 2
40157		Event 5	Second
40158		Event 5	Hour
40159		Event 5	Minute
40160		Event 5	Month
40161		Event 5	Day of Month
40162		Event 5	Year
40163		Reason for Event 6	See Table 2
40164		Event 6	Second
40165		Event 6	Hour
40166		Event 6	Minute
40167		Event 6	Month
40168		Event 6	Day of Month
40169		Event 6	Year
40170		Reason for Event 7	See Table 2
40171		Event 7	Second
40172		Event 7	Hour
40173		Event 7	Minute
40174		Event 7	Month
40175		Event 7	Day of Month
40176		Event 7	Year
40177		Reason for Event 8	See Table 2
40178		Event 8	Second
40179		Event 8	Hour
40180		Event 8	Minute
40181		Event 8	Month
40182		Event 8	Day of Month
40183		Event 8	Year
40184		Reason for Event 9	See Table 2
40185		Event 9	Second
40186		Event 9	Hour
40187		Event 9	Minute
40188		Event 9	Month
40189		Event 9	Day of Month
40190		Event 9	Year
40191		Reason for Event 10	See Table 2
40192		Event 10	Second
40193		Event 10	Hour
40194		Event 10	Minute
40195		Event 10	Month
40196		Event 10	Day of Month
40197		Event 10	Year

Read Only Register List(cont'd)

Holding Reg.	Bit Coil	Description	Value
40198		Reason for Event 11	See Table 2
40199		Event 11	Second
40200		Event 11	Hour
40201		Event 11	Minute
40202		Event 11	Month
40203		Event 11	Day of Month
40204		Event 11	Year
40205		Reason for Event 12	See Table 2
40206		Event 12	Second
40207		Event 12	Hour
40208		Event 12	Minute
40209		Event 12	Month
40210		Event 12	Day of Month
40211		Event 12	Year
40212		Reason for Event 13	See Table 2
40213		Event 13	Second
40214		Event 13	Hour
40215		Event 13	Minute
40216		Event 13	Month
40217		Event 13	Day of Month
40218		Event 13	Year
40219		Reason for Event 14	See Table 2
40210		Event 14	Second
40221		Event 14	Hour
40222		Event 14	Minute
40223		Event 14	Month
40224		Event 14	Day of Month
40225		Event 14	Year
40226		Reason for Event 15	See Table 2
40227		Event 15	Second
40228		Event 15	Hour
40229		Event 15	Minute
40230		Event 15	Month
40231		Event 15	Day of Month
40232		Event 15	Year

Read Only Register List(cont'd)

Notes:

- Registers 40025 - 40030 contain unscaled voltage values. In order to obtain a full-scale voltage value, use the following formula:

$$\text{Voltage} = (\text{A/D Raw Value} / 192) \times \text{Full Scale Voltage (Register 40021)}$$
- Registers 40031 and 40032 contain unscaled frequency values. In order to obtain a full-scale frequency value, use the following formula:

$$\text{Scales Frequency} + (20,000,000 / \text{Period Count})$$

Timer	Value
P	111b
W-W3, Unbypassed	110b
W-W3, YE bypassed	101b
T-T3, Unbypassed	011b
Y-T3, YN bypassed	010b
U	000b

Reason Code	Description
0	S1 Fail
1	S2 Fail
2	S1 Phase Imbalance
3	S2 Phase Imbalance
4	S2 Start
5	S2 Stop
6	Sync Fail
7	Load Shed
8	ATS Inhibit
9	Phase Rotation
10	Remove Test
11	Local Test
12	S1-S2 Volt. Imbalance
13	S1-S2 Freq. Imbalance
14	CT Xfr S1>S2
15	CT Xfr S2>S1
16	Xfr S1>S2
17	Xfr S2>S1
18	
19	
20	No Xfr
21	OLC
22	STE
23	S1 UV Fail
24	S1 OV Fail
25	S1 UF Fail
26	S1 OF Fail
27	S2 UV Fail
28	S2 OV Fail
29	S2 UF Fail
30	S2 OF Fail
31	S1 Restore
32	S2 to Open
33	Exerciser
34	Remote Test Network
35	Remote Inhibit
36	Local Inhibit
37	S2 Avail
38	S2 Off

Read/Write Register List

Holding Reg.	Bit	Coil	Description	Range	Notes
40033			P Timer Setting	0 - 1000 1/100 of a second	
40034			W Timer Setting	0 - 300 seconds	
40035			T3/W3 Timer Setting (Mirror of 40038)	0 - 60 seconds	
40036			DW Timer Setting	0 - 600 seconds	
40037			T Timer Setting	0 - 3600 seconds	
40038			T3/W3 Timer Setting (Mirror of 40035)	0 - 60 seconds	
40039			DT Timer Setting	0 - 600 seconds	
40040			U Timer Setting	0 - 3600 seconds	
40041			S1 Undervolt Restore	85 - 100 percent	Must be at least 2 > S1 UV Fail
40042			S1 Undervolt Fail	75 - 98 percent	Must be at least 2 < S1 UV Restore
40043			S2 Undervolt Restore	85 - 100 percent	Must be at least 2 > S2 UV Fail
40044			S2 Undervolt Fail	75 - 98 percent	Must be at least 2 < S2 UV Restore
40045			S1 Underfreq Restore	90 - 100 percent	Must be at least 2 > S1 UF Fail
40046			S2 Underfreq Restore	90 - 100 percent	Must be at least 2 > S2 UF Fail
40047			Net Control 0		
	0	65	Reset Time S2 Available	1 = Reset	
	1	66	Alarm Silence	1 = Silence Alarm	
	2	67	Unused		
	3	68	YE Control	1 = Bypass to S2	
	4	69	YN Control	1 = Bypass to S1	
	5	70	No Load Test Control	1 = Start Test	
	6	71	Load Test Control	1 = Start Test	
	7	72	Fast Load Test Control	1 = Start Test	
40048			Net Control 1		
	0	73	Unused		
	1	74	S5 Control	1 = On, 0 = Off	
	2	75	S12 Control	1 = On, 0 = Off	
	3	76	LS Control	1 = On, 0 = Off	
	4	77	Q7 Control	1 = On, 0 = Off	
	5	78	Q3 Control	1 = On, 0 = Off	
	6	79	Aux 2 Control	1 = On, 0 = Off	
	7	80	TMS Control	1 = On, 0 = Off	
40078			UMD Timer Setting	0 - 300 seconds	
40079			Phase Imbalance Timer Setting	10 - 30 seconds	
40080			Phase Imbalance Fail Setting	5 - 20 percent	
40081			Phase Imbalance Restore Setting	3 - 18 percent	
40084			S1 Overvoltage Fail	105 - 110 percent	Must be at least 2 > S1 OV Restore
40085			S1 Overvoltage Restore	103 - 108 percent	Must be at least 2 < S1 OV Fail
40086			S2 Overvoltage Fail	105 - 110 percent	Must be at least 2 > S2 OV Restore
40087			S2 Overvoltage Restore	103 - 108 percent	Must be at least 2 < S2 OV Fail
40088			S1 Underfreq Fail	88 - 98 percent	Must be at least 2 < S1 UF Restore
40089			S1 Overfreq Fail	103 - 105 percent	Must be at least 1 > S1 OF Restore
40090			S1 Overfreq Restore	102 - 104 percent	Must be at least 1 < S1 OF Fail
40091			S2 Underfreq Fail	88 - 98 percent	Must be at least 2 < S2 UF Restore
40092			S2 Overfreq Fail	103 - 105 percent	Must be at least 1 > S2 OF Restore
40093			S2 Overfreq Restore	102 - 104 percent	Must be at least 1 < S2 OF Fail

Read/Write Register List(cont'd)

Holding Reg.	Bit	Coil	Description	Range	Notes
HR 40094 - 40098 MUST ALL be written with a Write Multiple Holding Register Command					
40094			System Time – Hour	0 - 23	
40095			System Time – Minute	0 - 59	
40096			System Time – Day	1 - 31	Max val. depends on month, year
40097			System Time – Month	1 - 12	
40098			System Time – Year	0 - 255, 0 = Year 2000	
40100			Daylight Savings Time	1 = ATS follows DST	
HR 40101 - 40109 MUST ALL be written with a Write Multiple Holding Register Command					
HR's listed as "Not Writeable" under certain conditions must be written as zeros					
HR40101-40110 are for CDP Programmable Exercisers Only					
40112	System Busy Control				
	0	113	Command to Bypass In-Phase Monitor	1 = Bypass In-Phase Monitor	
	1	114	Confirm Bypass In-Phase Monitor	1 = Confirm	
	2	115	Unused		
	3	116	Unused		
	4	117	Unused		
	5	118	Unused		
	6	119	Unused		
	7	120	Unused		
40113	Net Control 2				
	0	121	Bypass Pending Exerciser	1 = Bypass	
	1	122	Cancel Exerciser Bypass	1 = Cancel Bypass	
	2	123	Unused		
	3	124	Unused		
	4	125	Unused		
	6	127	Unused		
	7	128	Unused		

GE - ZENITH GENPLC

■ *ACTUAL VALUES*

Actual Values

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Range		R/W	Data Type
				Min.	Max.		
R40051	NUM_OF_MAST	Number of Masters	----	----	----	RO	UINT
R40052	NUM_OF_GEN	Number of Generators	----	----	----	RO	UINT
R40369	M1_OIP_DISC_SIG	OIP Discrete Signal	----	----	----	RO	UINT
R40370	M1_EN_CHK_TIME	Engine Crank Time	Seconds	----	----	RO	UINT
R40371	M1_NO_OF_CHK	Number of Cranks	----	----	----	RO	UINT
R40372	M1_CO_DN_TIME	Cool Down Time	Seconds	----	----	RO	UINT
R40373	M1_AU_ST_BITS	Auto Start Bits	----	----	----	RO	UINT
R40374	M1_DD_BS_BITS	Dead Bus Bits	----	----	----	RO	UINT
R40385	LEADVAL_G01_G04	Lead values of Generator 1 to Generator 4 ***	----	----	----	RO	UINT
R40386	LEADVAL_G05_G08	Lead values of Generator 5 to Generator 8 ***	----	----	----	RO	UINT
R40387	LEADVAL_G09_G12	Lead values of Generator 9 to Generator 12 ***	----	----	----	RO	UINT
R40388	LEADVAL_G13_G16	Lead values of Generator 13 to Generator 16 ***	----	----	----	RO	UINT
R40401	SHT_DWNS_MAS_01	Shut downs of Master 1	----	----	----	RO	UINT
R40402	ALARM_MAS_01	Alarms of Master 1	----	----	----	RO	UINT
R40403	STAT_MAS_01	Status of Master 1	----	----	----	RO	UINT
R40404	RNTM_VAL_MAS_01	Runtime Value of Master 1	HOURS	----	----	RO	UINT
R40409	SHT_DWNS_MAS_02	Shut downs of Master 2	----	----	----	RO	UINT
R40410	ALARM_MAS_02	Alarms of Master 2	----	----	----	RO	UINT
R40411	STAT_MAS_02	Status of Master 2	----	----	----	RO	UINT
R40412	RNTM_VAL_MAS_02	Runtime Value of Master 2	HOURS	----	----	RO	UINT

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Range		R/ W	Dat a Typ e
				Min.	Max.		
R40417	SHT_DWNS_MAS_03	Shut downs of Master 3	----	----	----	RO	UIN T
R40418	ALARM_MAS_03	Alarms of Master 3	----	----	----	RO	UIN T
R40419	STAT_MAS_03	Status of Master 3	----	----	----	RO	UIN T
R40420	RNTM_VAL_MAS_03	Runtime Value of Master 3	HOURS	----	----	RO	UIN T
R40425	SHT_DWNS_MAS_04	Shut downs of Master 4	----	----	----	RO	UIN T
R40426	ALARM_MAS_04	Alarms of Master 4	----	----	----	RO	UIN T
R40427	STAT_MAS_04	Status of Master 4	----	----	----	RO	UIN T
R40428	RNTM_VAL_MAS_04	Runtime Value of Master 4	HOURS	----	----	RO	UIN T
R40433	SHT_DWNS_MAS_05	Shut downs of Master 5	----	----	----	RO	UIN T
R40434	ALARM_MAS_05	Alarms of Master 5	----	----	----	RO	UIN T
R40435	STAT_MAS_05	Status of Master 5	----	----	----	RO	UIN T
R40436	RNTM_VAL_MAS_05	Runtime Value of Master 5	HOURS	----	----	RO	UIN T
R40441	SHT_DWNS_MAS_06	Shut downs of Master 6	----	----	----	RO	UIN T
R40442	ALARM_MAS_06	Alarms of Master 6	----	----	----	RO	UIN T
R40443	STAT_MAS_06	Status of Master 6	----	----	----	RO	UIN T
R40444	RNTM_VAL_MAS_06	Runtime Value of Master 6	HOURS	----	----	RO	UIN T
R40449	SHT_DWNS_MAS_07	Shut downs of Master 7	----	----	----	RO	UIN T
R40450	ALARM_MAS_07	Alarms of Master 7	----	----	----	RO	UIN T
R40451	STAT_MAS_07	Status of Master 7	----	----	----	RO	UIN T
R40452	RNTM_VAL_MAS_07	Runtime Value of Master 7	HOURS	----	----	RO	UIN T
R40457	SHT_DWNS_MAS_08	Shut downs of Master 8	----	----	----	RO	UIN T
R40458	ALARM_MAS_08	Alarms of Master 8	----	----	----	RO	UIN T
R40459	STAT_MAS_08	Status of Master 8	----	----	----	RO	UIN T
R40460	RNTM_VAL_MAS_08	Runtime Value of Master 8	HOURS	----	----	RO	UIN T

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Range		R/W	Data Type
				Min.	Max.		
R40465	SHT_DWNS_MAS_09	Shut downs of Master 9	----	----	----	RO	UINT
R40466	ALARM_MAS_09	Alarms of Master 9	----	----	----	RO	UINT
R40467	STAT_MAS_09	Status of Master 9	----	----	----	RO	UINT
R40468	RNTM_VAL_MAS_09	Runtime Value of Master 9	HOURS	----	----	RO	UINT
R40473	SHT_DWNS_MAS_10	Shut downs of Master 10	----	----	----	RO	UINT
R40474	ALARM_MAS_10	Alarms of Master 10	----	----	----	RO	UINT
R40475	STAT_MAS_10	Status of Master 10	----	----	----	RO	UINT
R40476	RNTM_VAL_MAS_10	Runtime Value of Master 10	HOURS	----	----	RO	UINT
R40481	SHT_DWNS_MAS_11	Shut downs of Master 11	----	----	----	RO	UINT
R40482	ALARM_MAS_11	Alarms of Master 11	----	----	----	RO	UINT
R40483	STAT_MAS_11	Status of Master 11	----	----	----	RO	UINT
R40484	RNTM_VAL_MAS_11	Runtime Value of Master 11	HOURS	----	----	RO	UINT
R40489	SHT_DWNS_MAS_12	Shut downs of Master 12	----	----	----	RO	UINT
R40490	ALARM_MAS_12	Alarms of Master 12	----	----	----	RO	UINT
R40491	STAT_MAS_12	Status of Master 12	----	----	----	RO	UINT
R40492	RNTM_VAL_MAS_12	Runtime Value of Master 12	HOURS	----	----	RO	UINT
R40497	SHT_DWNS_MAS_13	Shut downs of Master 13	----	----	----	RO	UINT
R40498	ALARM_MAS_13	Alarms of Master 13	----	----	----	RO	UINT
R40499	STAT_MAS_13	Status of Master 13	----	----	----	RO	UINT
R40500	RNTM_VAL_MAS_13	Runtime Value of Master 13	HOURS	----	----	RO	UINT
R40505	SHT_DWNS_MAS_14	Shut downs of Master 14	----	----	----	RO	UINT
R40506	ALARM_MAS_14	Alarms of Master 14	----	----	----	RO	UINT
R40507	STAT_MAS_14	Status of Master 14	----	----	----	RO	UINT
R40508	RNTM_VAL_MAS_14	Runtime Value of Master 14	HOURS	----	----	RO	UINT

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Range		R/W	Data Type
				Min.	Max.		
R40513	SHT_DWNS_MAS_15	Shut downs of Master 15	----	----	----	RO	UINT
R40514	ALARM_MAS_15	Alarms of Master 15	----	----	----	RO	UINT
R40515	STAT_MAS_15	Status of Master 15	----	----	----	RO	UINT
R40516	RNTM_VAL_MAS_15	Runtime Value of Master 15	HOURS	----	----	RO	UINT
R40521	SHT_DWNS_MAS_16	Shut downs of Master 16	----	----	----	RO	UINT
R40522	ALARM_MAS_16	Alarms of Master 16	----	----	----	RO	UINT
R40523	STAT_MAS_16	Status of Master 16	----	----	----	RO	UINT
R40524	RNTM_VAL_MAS_16	Runtime Value of Master 16	HOURS	----	----	RO	UINT
R41001	MASTER_PM_1	Master Parameters 1	----	----	----	RO	UINT
	1 st Bit	Latched Underfrequency	---	0	1		
	2 nd Bit	Latched Overfrequency	---	0	1		
	3 rd Bit	n/a	---	---	---		
	4 th Bit	Communication Failure	---	0	1		
	5 th Bit	Main Tank Low Fuel Level	---	0	1		
	6 th Bit	Main Tank Critical Low Fuel Level	---	0	1		
	7 th Bit	Main Tank High Fuel Level	---	0	1		
	8 th Bit	Main Tank Fuel Leak	---	0	1		
	9 th Bit	Spare 1	---	---	---		
	10 th Bit	Spare 2	---	---	---		
	11 th Bit	Load Bank Breaker Bell Alarm	---	0	1		
	12 th Bit	n/a	---	---	---		
	13 th Bit	n/a	---	---	---		
	14 th Bit	n/a	---	---	---		
	15 th Bit	n/a	---	---	---		
	16 th Bit	n/a	---	---	---		
R41002	MASTER_PM_2	Master Parameters 2				RO	UINT
R41003	MASTER_PM_3	Master Parameters 3				RO	UINT
	1 st Bit	Spare Status 1	---	---	---		
	2 nd Bit	Spare Status 2	---	---	---		
	3 rd Bit	System Not in Auto	---	0	1		
	4 th Bit	System Under Test	---	0	1		

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Range		R/W	Data Type
				Min.	Max.		
	5 th Bit	Remote Start Signal Received	---	0	1		
	6 th Bit	available	---	---	---		
	7 th Bit	System in Load Demand Mode	---	0	1		
	8 th Bit	System Test with Load Bank	---	0	1		
	9 th Bit	Rem. Peak Shave Signal Rec'd	---	0	1		
	10 th Bit	Load Add Priority	---	0	1		
	11 th Bit	Load Add Priority 3	---	0	1		
	12 th Bit	Load Add Priority 4	---	0	1		
	13 th Bit	Spare Status 13	---	---	---		
	14 th Bit	Load Shed Priority 2	---	0	1		
	15 th Bit	Load Shed Priority 3	---	0	1		
	16 th Bit	Load Shed Priority 4	---	0	1		
R41005	SHUTDOWN_GEN_01	Shut downs of Generator 1#	----	----	----	RO	UINT
R41006	ALARM_GEN_01	Alarms of Generator 1##	----	----	----	RO	UINT
R41007	STATUS_GEN_01	Status of Generator 1###	----	----	----	RO	UINT
R41009	SHUTDOWN_GEN_02	Shut downs of Generator 2	----	----	----	RO	UINT
R41010	ALARM_GEN_02	Alarms of Generator 2	----	----	----	RO	UINT
R41011	STATUS_GEN_02	Status of Generator 2	----	----	----	RO	UINT
R41013	SHUTDOWN_GEN_03	Shut downs of Generator 3	----	----	----	RO	UINT
R41014	ALARM_GEN_03	Alarms of Generator 3	----	----	----	RO	UINT
R41015	STATUS_GEN_03	Status of Generator 3	----	----	----	RO	UINT
R41017	SHUTDOWN_GEN_04	Shut downs of Generator 4	----	----	----	RO	UINT
R41018	ALARM_GEN_04	Alarms of Generator 4	----	----	----	RO	UINT
R41019	STATUS_GEN_04	Status of Generator 4	----	----	----	RO	UINT
R41021	SHUTDOWN_GEN_05	Shut downs of Generator 5	----	----	----	RO	UINT
R41022	ALARM_GEN_05	Alarms of Generator 5	----	----	----	RO	UINT
R41023	STATUS_GEN_05	Status of Generator 5	----	----	----	RO	UINT
R41025	SHUTDOWN_GEN_	Shut downs of	----	----	----	RO	UINT

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Range		R/W	Data Type
				Min.	Max.		
	06	Generator 6					T
R41026	ALARM_GEN_06	Alarms of Generator 6	-----	----	----	RO	UINT
R41027	STATUS_GEN_06	Status of Generator 6	-----	----	----	RO	UINT
R41029	SHUTDOWN_GEN_07	Shut downs of Generator 7	-----	----	----	RO	UINT
R41030	ALARM_GEN_07	Alarms of Generator 7	-----	----	----	RO	UINT
R41031	STATUS_GEN_07	Status of Generator 7	-----	----	----	RO	UINT
R41033	SHUTDOWN_GEN_08	Shut downs of Generator 8	-----	----	----	RO	UINT
R41034	ALARM_GEN_08	Alarms of Generator 8	-----	----	----	RO	UINT
R41035	STATUS_GEN_08	Status of Generator 8	-----	----	----	RO	UINT
R41037	SHUTDOWN_GEN_09	Shut downs of Generator 9	-----	----	----	RO	UINT
R41038	ALARM_GEN_09	Alarms of Generator 9	-----	----	----	RO	UINT
R41039	STATUS_GEN_09	Status of Generator 9	-----	----	----	RO	UINT
R41041	SHUTDOWN_GEN_10	Shut downs of Generator 10	-----	----	----	RO	UINT
R41042	ALARM_GEN_10	Alarms of Generator 10	-----	----	----	RO	UINT
R41043	STATUS_GEN_10	Status of Generator 10	-----	----	----	RO	UINT
R41045	SHUTDOWN_GEN_11	Shut downs of Generator 11	-----	----	----	RO	UINT
R41046	ALARM_GEN_11	Alarms of Generator 11	-----	----	----	RO	UINT
R41047	STATUS_GEN_11	Status of Generator 11	-----	----	----	RO	UINT
R41049	SHUTDOWN_GEN_12	Shut downs of Generator 12	-----	----	----	RO	UINT
R41050	ALARM_GEN_12	Alarms of Generator 12	-----	----	----	RO	UINT
R41051	STATUS_GEN_12	Status of Generator 12	-----	----	----	RO	UINT
R41053	SHUTDOWN_GEN_13	Shut downs of Generator 13	-----	----	----	RO	UINT
R41054	ALARM_GEN_13	Alarms of Generator 13	-----	----	----	RO	UINT
R41055	STATUS_GEN_13	Status of Generator 13	-----	----	----	RO	UINT
R41057	SHUTDOWN_GEN_	Shut downs of	-----	----	----	RO	UINT

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Range		R/W	Data Type
				Min.	Max.		
	14	Generator 14					T
R41058	ALARM_GEN_14	Alarms of Generator 14	----	----	----	RO	UINT
R41059	STATUS_GEN_14	Status of Generator 14	----	----	----	RO	UINT
R41061	SHUTDOWN_GEN_15	Shut downs of Generator 15	----	----	----	RO	UINT
R41062	ALARM_GEN_15	Alarms of Generator 15	----	----	----	RO	UINT
R41063	STATUS_GEN_15	Status of Generator 15	----	----	----	RO	UINT
R41065	SHUTDOWN_GEN_16	Shut downs of Generator 16	----	----	----	RO	UINT
R41066	ALARM_GEN_16	Alarms of Generator 16	----	----	----	RO	UINT
R41067	STATUS_GEN_16	Status of Generator 16	----	----	----	RO	UINT

****** Generator Lead Value**

Lead values range from 1 through 16. Since we only have a limited number of registers available in our Genius communication scheme, we were trying to conserve registers and pack four values into one register. The least significant four bits (bits 1 through 4) represent the lead value for gen 1, bits 5 through 8 represent the lead value for gen 2, etc. Since the range of a four bit number is 0 through 15 rather than 1 through 16, you will have to add a 1 to each decoded number.

E.g., if register %R385 holds the following bit pattern

	0001	0000	0010	0011
G4	G3	G2	G1	
1	0	2	3	
+ 1	+ 1	+ 1	+1	
=	=	=	=	
2	1	3	4	

The last row represents the actual lead values.

Generator Shutdown

1st Bit	Overcrank
2nd Bit	Overspeed
3rd Bit	High Water Temp
4th Bit	Oil Pressure
5th Bit	Overvoltage
6th Bit	Reverse Power
7th Bit	Breaker Locked Out
8th Bit	Fail to Synchronize
9th Bit	Gen Failure
10th Bit	Emergency Stop
11th Bit	EMCP Diagnostic Failure
12th Bit	Gen Set Breaker
13th Bit	Air Damper Switch

14th Bit	Spare Shutdown 1
15th Bit	Lock Out 489 Relay
16th Bit	Fail Safe 489m Relay

Generator Alarm

1st Bit	Undervoltage
2nd Bit	High Water Temp Warning
3rd Bit	Battery Charger Failure
4th Bit	Low Fuel Day Tank
5th Bit	Oil Pressure Warning
6th Bit	Spare Alarm 1
7th Bit	Spare Alarm 2
8th Bit	Low Water Temperature
9th Bit	Low Water Level
10th Bit	Day Tank Critically Low Fuel Level
11th Bit	Day Tank High Fuel Level
12th Bit	Day Tank Fuel Leak
13th Bit	Spare Alarm 3
14th Bit	n/a
15th Bit	n/a
16th Bit	Summary Alarm

Generator Status

1st Bit	Gen Brealer Aux. Contact
2nd Bit	Breaker Close Ready
3rd Bit	Not in Auto
4th Bit	Reset
5th Bit	CPU Running
6th Bit	Engine in Cooldown
7th Bit	Engine Run Contact
8th Bit	Spare Status 1
9th Bit	Spare Status 2
10th Bit	Spare Status 3
11th Bit	Spare Status 4
12th Bit	Spare Status 5
13th Bit	n/a
14th Bit	n/a
15th Bit	n/a
16th Bit	n/a

EPM5000P

■ *ACTUAL VALUES*

ACTUAL REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X0008S8	METER_NAME	Meter Name	-, -, -	String_8	R
R4x0025S2	VERSION_NO	Modbus Version Number	-, -, -	UINT	R
R4x0028	INTERVAL	Interval	Seconds,-	UINT	R/W
R4x0029	MODBUS_ADDR	Address	-, -, -	UINT	R
R4x002A	BAUDRATE	Baud Rate	-, -, -	UINT	R
R4x002B	CONFIG	Bit 13 = MW Mega Watt	Enabled/disabled	UINT	R
		Bit 11 = LZ Leading Zero	Enabled/disabled	UINT	R
		Bit 10 = RST Reset Protection	Enabled/disabled	UINT	R
		Bit 08 = DLT Open Delta Installation	Enabled/disabled	UINT	R
		Bit 07 = KYZ Output for positive WH	Enabled/disabled	UINT	R
		Bit 06 = KYZ Output for -ve WH	Enabled/disabled	UINT	R
		Bit 04 = MODBUS/EI Protocol	MODBUS/EI	UINT	R
		Bit 03 = RLY1	Enabled/disabled	UINT	R
		Bit 02 = RLY2	Enabled/disabled	UINT	R
		Bit 01 = COMmunications	Enabled/disabled	UINT	R
		Bit 00 = DC Output	Enabled/disabled	UINT	R
R4x002C	WATT_FS	Full Scale Power	-,0-2000	UINT	R/W
R4x002F	POWER_DP	Power DP	Only High Bits	UINT	R/W
R4x0030	SET_AB_LIM1	Set Above/Below Limit1	-, -	UINT	R/W
		Bit 5 = Positive Limit 1	-, -		
		Bit 4 = Negative Limit 1	-, -		
R4x0031	SET_AB_LIM2	Set Above/Below Limit2	-, -	UINT	R/W
		Bit 5 = Positive Limit 2	-, -		
		Bit 4 = Negative Limit 2	-, -		
R4x0046	WATT_LIM1	Power Limit1	WATT,0-2000	UINT	R/W
R4x0047	WATT_LIM2	Power Limit2	WATT,0-2000	UINT	R/W
R4x0050	NEG_WATT_LIM1	Negative Watt Limit1	WATT,0-2000	UINT	R/W
R4x0051	NEG_WATT_LIM2	Negative Watt Limit2	WATT,0-2000	UINT	R/W
R4x0070	LIM1_RLY1	Limit 1 for Relay 1		UINT	R/W
		Bit 5 = Positive Limit 1	-, -		
		Bit 4 = Negative Limit 1	-, -		
R4x0071	LIM2_RLY1	Limit 2 for Relay 1		UINT	R/W
		Bit 5 = Positive Limit 2	-, -		
		Bit 4 = Negative Limit 2	-, -		
R4x0072	LIM1_RLY2	Limit 1 for Relay 2		UINT	R/W
		Bit 5 = Positive Limit 1	-, -		
		Bit 4 = Negative Limit 1	-, -		
R4x0073	LIM2_RLY2	Limit 2 for Relay 2		UINT	R/W
		Bit 5 = Positive Limit 2	-, -		
		Bit 4 = Negative Limit 2	-, -		
R4x0074	DELAY_ON_RLY	Delay on Relays	Seconds, 0...250, 0...250	UINT	R/W

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4x0120	WATT_INS	Instantaneous Power	WATT,-9999 - +9999	INT	R
R4x0147	WATT_AVE	Average Power	WATT,-9999 - +9999	INT	R
R4x016E	WATT_MAX	Maximum Power	WATT, 0 - +9999	INT	R
R4X01B2S16	WATT_HR	Watt Hour	Wh,0 - 19999999.99	STRING	R
R4x0504	RESET	Reset		UINT	W
		Bit 3 = RESET MAX WATT			
		Bit 5 = RESET MAX WATTHOUR			
R4x050A	NEG_WATT_MAX	Negative Maximum Power	WATT,-9999 - 0	INT	R
R4X09BAS16	NEG_WATT_HR	Negative Watt Hour	Wh,0 - 19999999.99	STRING	R

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■ *ACTUAL VALUES*

ACTUAL VALUES

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Range		R/W	Data Type
				Min.	Max.		
R4x002B	CONFIG	Configuration	---	---	---	RW	UINT
R4X002C	VOLT_FS	Volts Full Scale	Volts	---	---	RW	UINT
R4X002D	AMP_FS	Current Full Scale	Amps	---	---	RW	UINT
R4X002E	DECIMAL_PLAC	DECIMAL PLACEMENT	---	---	---	RW	UINT
R4X002F	DECIMAL_PLAC_2	DECIMAL PLACEMENT	---	---	---	RW	UINT
R4x0030	SET_AB_LIM1	Set Above/Below Lim1	---	---	---	RO	UINT
R4x0031	SET_AB_LIM2	Set Above/Below Lim2	---	---	---	RO	UINT
R4x0032	VOLT_AN_LIM1	AN Phase Voltage Limit 1	Volts	---	---	RW	UINT
R4x0033	VOLT_AN_LIM2	AN Phase Voltage Limit 2	Volts	---	---	RW	UINT
R4x0034	AMP_A_LIM1	Phase A Current Limit 1	Amps	---	---	RW	UINT
R4x0035	AMP_A_LIM2	Phase A Current Limit 2	Amps	---	---	RW	UINT
R4x0036	VOLT_BN_LIM1	BN Phase Voltage Limit 1	Volts	---	---	RW	UINT
R4x0037	VOLT_BN_LIM2	BN Phase Voltage Limit 2	Volts	---	---	RW	UINT
R4x0038	AMP_B_LIM1	Phase B Current Limit 1	Amps	---	---	RW	UINT
R4x0039	AMP_B_LIM2	Phase B Current Limit 2	Amps	---	---	RW	UINT
R4x003A	VOLT_CN_LIM1	CN Phase Voltage Limit 1	Volts	---	---	RW	UINT
R4x003B	VOLT_CN_LIM2	CN Phase Voltage Limit 2	Volts	---	---	RW	UINT
R4x003C	AMP_C_LIM1	Phase C Current Limit 1	Amps	---	---	RW	UINT
R4x003D	AMP_C_LIM2	Phase C Current Limit 2	Amps	---	---	RW	UINT
R4x003E	VOLT_AB_LIM1	AB Phase Voltage Limit 1	Volts	---	---	RW	UINT
R4x003F	VOLT_AB_LIM2	AB Phase Voltage Limit 2	Volts	---	---	RW	UINT
R4x0040	VOLT_BC_LIM1	BC Phase Voltage Limit 1	Volts	---	---	RW	UINT
R4x0041	VOLT_BC_LIM2	BC Phase Voltage Limit 2	Volts	---	---	RW	UINT
R4x0042	VOLT_CA_LIM1	CA Phase Voltage Limit 1	Volts	---	---	RW	UINT
R4x0043	VOLT_CA_LIM2	CA Phase Voltage Limit 2	Volts	---	---	RW	UINT
R4x0044	AMP_N_LIM1	Neutral Current Limit 1	Amps	---	---	RW	UINT
R4x0045	AMP_N_LIM2	Neutral Current Limit 2	Amps	---	---	RW	UINT
R4x0046	WATT_LIM1	Real Power Limit 1	Watt	---	---	RW	UINT
R4x0047	WATT_LIM2	Real Power Limit 2	Watt	---	---	RW	UINT
R4x0048	VAR_LIM1	Reactive Power Limit 1	VAR	---	---	RW	UINT
R4x0049	VAR_LIM2	Reactive Power Limit 2	VAR	---	---	RW	UINT
R4x004A	VA_LIM1	Apparent Power Limit 1	VA	---	---	RW	UINT
R4x004B	VA_LIM2	Apparent Power Limit 2	VA	---	---	RW	UINT
R4x004C	PF_LIM1	Power Factor Limit 1	---	-1.0	+1.0	RW	UINT
R4x004D	PF_LIM2	Power Factor Limit 2	---	-1.0	+1.0	RW	UINT
R4x004E	FREQ_LIM1	Frequency Limit 1	Hz	0	60	RW	UINT
R4x004F	FREQ_LIM2	Frequency Limit 2	Amps	0	60	RW	UINT
R4x0070	RLY1_LIM1	Relay 1 Limit 1	---	---	---	RO	UINT
R4x0071	RLY1_LIM2	Relay 1 Limit 2	---	---	---	RO	UINT
R4x0072	RLY2_LIM1	Relay 2 Limit 1	---	---	---	RO	UINT
R4x0073	RLY2_LIM2	Relay 2 Limit 2	---	---	---	RO	UINT
R4x0074	DLY_ON_RLY12	Delay ON RLY1-2	---	---	---	RO	UINT
R4x0084	RLY12_IMB_LIM1	RLY1-2 Imbalance Limit1	---	---	---	RO	UINT

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Range		R/W	Data Type
				Min.	Max.		
R4x0085	IMB_LIM1	Imbalance Limit 1	---	---	---	RO	UINT
R4x008A	DLY_OFF_RLY12	Delay off RLY1-2	---	---	---	RO	UINT
R4x0114	PH_REV	Phase Reversal	---	---	---	RO	UINT
R4x0115	PH_IMBAL	Phase Imbalance	---	---	---	RO	UINT
R4x0116I	DX_VOLT_AN_INS	AN Phase Voltage Instantaneous	Volts	---	---	RO	UINT
R4x0117I	DX_VOLT_BN_INS	BN Phase Voltage Instantaneous	Volts	---	---	RO	UINT
R4x0118I	DX_VOLT_CN_INS	CN Phase Voltage Instantaneous	Volts	---	---	RO	UINT
R4x0119I	DX_VOLT_AB_INS	AB Phase Voltage Instantaneous	Volts	---	---	RO	UINT
R4x011AI	DX_VOLT_BC_INS	BC Phase Voltage Instantaneous	Volts	---	---	RO	UINT
R4x011BI	DX_VOLT_CA_INS	CA Phase Voltage Instantaneous	Volts	---	---	RO	UINT
R4x011CI	DX_AMP_A_INS	Phase A Current Instantaneous	Amps	---	---	RO	UINT
R4x011DI	DX_AMP_B_INS	Phase B Current Instantaneous	Amps	---	---	RO	UINT
R4x011EI	DX_AMP_C_INS	Phase C Current Instantaneous	Amps	---	---	RO	UINT
R4x011FI	DX_AMP_N_INS	Neutral Current Instantaneous	Amps	---	---	RO	UINT
R4x0123I	DX_PF_INS	Power Factor	---	-1.0	+1.0	RO	UINT
R4x0124I	DX_FREQ_INS	Frequency	Hz	0	60	RO	UINT
R4x012EI	DX_PF_A_INS	Phase A Power Factor	---	-1.0	+1.0	RO	UINT
R4x012FI	DX_PF_B_INS	Phase B Power Factor	---	-1.0	+1.0	RO	UINT
R4x0130I	DX_PF_C_INS	Phase C Power Factor	---	-1.0	+1.0	RO	UINT
R4x0191I	DX_MAX_AMP_A	Phase A Current Maximum	Amps	---	---	RO	UINT
R4x0192I	DX_MAX_AMP_B	Phase B Current Maximum	Amps	---	---	RO	UINT
R4x0193I	DX_MAX_AMP_C	Phase C Current Maximum	Amps	---	---	RO	UINT
R4x0194I	DX_MAX_AMP_N	Neutral Current Maximum	Amps	---	---	RO	UINT
R4x01B2S16	POS_WATT_HR	Positive Watt Hour	---	---	---	RO	REAL
R4x01BAS16	POS_VAR_HR	Positive VAR Hour	---	---	---	RO	REAL
R4x01C2S16	VA_HR	VA HOUR	---	---	---	RO	REAL
R4x01CA	LIMIT1_DETECT_1	Limit 1 Detect in Relay 1	---	---	---	RO	UINT
R4x01CB	LIMIT1_DETECT_2	Limit 2 Detect in Relay 1	---	---	---	RO	UINT
R4x01CE	LIMIT2_DETECT_1	Limit 1 Detect in Relay 2	---	---	---	RO	UINT
R4x01CF	LIMIT2_DETECT_2	Limit 2 Detect in Relay 2	---	---	---	RO	UINT
R4X01EA	DX_THD_VOLTA_INS	THD Voltage A Instantaneous	Volts	---	---	RO	UINT
R4X01EB	DX_THD_VOLTB_INS	THD Voltage B Instantaneous	Volts	---	---	RO	UINT
R4X01EC	DX_THD_VOLTC_INS	THD Voltage C Instantaneous	Volts	---	---	RO	UINT
R4X01ED	DX_THD_AMP_A_INS	THD Current A Instantaneous	Amps	---	---	RO	UINT

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Range		R/W	Data Type
				Min.	Max.		
R4X01EE	DX_THD_AMPB_INS	THD Current B Instantaneous	Amps	---	---	RO	UINT
R4X01EF	DX_THD_AMPC_INS	THD Current C Instantaneous	Amps	---	---	RO	UINT
R4x0536L	WATT_INS	3 Phase Real Power Instantaneous	Watt	---	---	RO	REAL
R4x0538L	VAR_INS	3 Phase Reactive Power Instantaneous	VAR	---	---	RO	REAL
R4x053AL	VA_INS	3 Phase Apparent Power Instantaneous	VA	---	---	RO	Long
R4x0540L	WATT_A_INS	Phase A Real Power Instantaneous	Watt	---	---	RO	REAL
R4x0542L	WATT_B_INS	Phase B Real Power Instantaneous	Watt	---	---	RO	REAL
R4x0544L	WATT_C_INS	Phase C Real Power Instantaneous	Watt	---	---	RO	REAL
R4x0546L	VAR_A_INS	Phase A Reactive Power Instantaneous	VAR	---	---	RO	REAL
R4x0548L	VAR_B_INS	Phase B Reactive Power Instantaneous	VAR	---	---	RO	REAL
R4x054AL	VAR_C_INS	Phase C Reactive Power Instantaneous	VAR	---	---	RO	REAL
R4x054CL	VA_A_INS	Phase A Apparent Power Instantaneous	VA	---	---	RO	Long
R4x054EL	VA_B_INS	Phase B Apparent Power Instantaneous	VA	---	---	RO	Long
R4x0550L	VA_C_INS	Phase C Apparent Power Instantaneous	VA	---	---	RO	Long
R4x05EAL	MAX_WATT	3 Phase Real Power Maximum	Watt	---	---	RO	REAL
R4x05ECL	MAX_VAR	3 Phase Reactive Power Maximum	VAR	---	---	RO	REAL
R4x05EEL	MAX_VA	3 Phase Apparent Power Maximum	VA	---	---	RO	Long
R4x05F4L	MAX_WATT_A	Phase A Real Power Maximum	Watt	---	---	RO	REAL
R4x05F6L	MAX_WATT_B	Phase B Real Power Maximum	Watt	---	---	RO	REAL
R4x05F8L	MAX_WATT_C	Phase C Real Power Maximum	Watt	---	---	RO	REAL
R4x05FAL	MAX_VAR_A	Phase A Reactive Power Maximum	VAR	---	---	RO	REAL
R4x05FCL	MAX_VAR_B	Phase B Reactive Power Maximum	VAR	---	---	RO	REAL
R4x05FEL	MAX_VAR_C	Phase C Reactive Power Maximum	VAR	---	---	RO	REAL
R4x0600L	MAX_VA_A	Phase A Apparent Power Maximum	VA	---	---	RO	Long
R4x0602L	MAX_VA_B	Phase B Apparent Power Maximum	VA	---	---	RO	Long
R4x0604L	MAX_VA_C	Phase C Apparent Power Maximum	VA	---	---	RO	Long
R4X0504	RESET_4	Reset	---	---	---	RW	UINT

EPM9450Q

■ *ACTUAL VALUES*

FORMAT CODES

The Format Codes column contains references to special formatting which applies to a given register. These formatting characteristics are provided in the Nexus Modbus Protocol Map Instruction Manual.

ACTUAL REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4x0000S16	DEVICE_NAME	Device Name	-, -, -	F1	R
R4x0008S16	FW_STR_1	Firmware Variation String 1	-, -, -	F1	R
R4x0010S16	FW_STR_2	Firmware Variation String 2	-, -, -	F1	R
R4x0018S16	FW_STR_3	Firmware Variation String 3	-, -, -	F1	R
R4x0020S16	FW_STR_4	Firmware Variation String 4	-, -, -	F1	R
R4x0028S16	FW_STR_5	Firmware Variation String 5	-, -, -	F1	R
R4x0030S16	FW_STR_6	Firmware Variation String 6	-, -, -	F1	R
R4x0038S16	FW_STR_7	Firmware Variation String 7	-, -, -	F1	R
R4x0040S16	FW_STR_8	Firmware Variation String 8	-, -, -	F1	R
R4x0050L	ON_TIME_1	On Time	12/31/9999 23:59:59.99,10 msec	F3	R
R4x0052L	ON_TIME_2				
R4x0054L	CURRENT_TIME_1	Current Time	12/31/9999 23:59:59.99,10 msec	F3	R
R4x0056L	CURRENT_TIME_2				
R4x0058L	CUR_DAYOF_WEEK	Current Day of the Week	Monday - Sunday	F4	R/ W
R4x0048L	BOOT_VERNO	Firmware Comm Boot Version Number	9.9.9.9/0.0.0.0,0.0. 0.1 version	F2	R
R4x004AL	RUNTIME_VERNO	Nexus Comm Run-Time Version Number	9.9.9.9/0.0.0.0,0.0. 0.1 version	F2	R
R4x004CL	DSP_BOOT_VERNO	Nexus DSP Boot Version Number	9.9.9.9/0.0.0.0,0.0. 0.1 version	F2	R
R4x004EL	DSP_RUNTIME_VERNO	Nexus DSP Run-Time Version Number	9.9.9.9/0.0.0.0,0.0. 0.1 version	F2	R
R4X007AL	TS_VOLT_AN	Tenth Second Phase A-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X007CL	TS_VOLT_BN	Tenth Second Phase B-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X007EL	TS_VOLT_CN	Tenth Second Phase C-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X0080L	TS_VOLT_AUX	Tenth Second Auxiliary Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X0082L	TS_AMPA	Tenth Second Phase A Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X0084L	TS_AMPB	Tenth Second Phase B Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X0086L	TS_AMPC	Tenth Second Phase C Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X0088L	TS_AMPN_MEA	Tenth Second Measured Neutral Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X008AL	TS_VOLT_AB	Tenth Second Phase A-B Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
			65536 V sec		
R4X008CL	TS_VOLT_BC	Tenth Second Phase B-C Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X008EL	TS_VOLT_CA	Tenth Second Phase C-A Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X0090L	TS_VA_A	Tenth Second Phase A VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X0092L	TS_VA_B	Tenth Second Phase B VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X0094L	TS_VA_C	Tenth Second Phase C VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X0096L	TS_VA	Tenth Second Three Phase VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X0098L	TS_VAR_A	Tenth Second Phase A VAR	+32768 VAR / - 32768 VAR,1/ 65536 VAR sec	F7	R
R4X009AL	TS_VAR_B	Tenth Second Phase B VAR	+32768 VAR / - 32768 VAR,1/ 65536 VAR sec	F7	R
R4X009CL	TS_VAR_C	Tenth Second Phase C VAR	+32768 VAR / - 32768 VAR,1/ 65536 VAR sec	F7	R
R4X009EL	TS_VAR	Tenth Second Three Phase VAR	+32768 VAR / - 32768 VAR,1/ 65536 VAR sec	F7	R
R4X00A0L	TS_WATT_A	Tenth Second Phase A Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X00A2L	TS_WATT_B	Tenth Second Phase B Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X00A4L	TS_WATT_C	Tenth Second Phase C Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X00A6L	TS_WATT	Tenth Second Three Phase Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X00A8L	TS_FREQ	Tenth Second Frequency	+ 32768 Hz / 0 Hz,1/ 65536 Hz	F7	R
R4X00AA	TS_PF_A	Tenth Second Phase A Power Factor	3.999 / 0,0.001 PF	F8	R
R4X00AB	TS_PF_B	Tenth Second Phase B Power Factor	3.999 / 0,0.001 PF	F8	R
R4X00AC	TS_PF_C	Tenth Second Phase C Power Factor	3.999 / 0,0.001 PF	F8	R
R4X00AD	TS_PF	Tenth second Three Phase Power Factor	3.999 / 0,0.001 PF	F8	R
R4X00AE	TS_VOLTAN_ANG	Tenth second Phase A-N Voltage to Auxiliary Voltage Phase Angle	+ 180 / - 180,0.01 degree	F9	R
R4X00B5L	OS_VOLT_AN	One Second Phase A-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X00B7L	OS_VOLT_BN	One Second Phase B-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X00B9L	OS_VOLT_CN	One Second Phase C-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X00BBL	OS_VOLT_AUX	One Second Auxiliary Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X00BDL	OS_AMP_A	One Second Phase A Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X00BFL	OS_AMP_B	One Second Phase B Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X00C1L	OS_AMP_C	One Second Phase C Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X00C3L	OS_AMPN_MEA	One Second Measured Neutral Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X00C5L	OS_AMPN_CAL	One second Calculated Neutral Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X00C7L	OS_VOLT_AB	One Second Phase A-B Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X00AFL	OS_VOLT_BC	One Second Phase B-C Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X00C9L	OS_VOLT_CA	One Second Phase C-A Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X00CBL	OS_VA_A	One Second Phase A VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X00CDL	OS_VA_B	One Second Phase B VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X00CFL	OS_VA_C	One Second Phase C VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X00D1L	OS_VA	One Second VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X00D3L	OS_VAR_A	One Second Phase A VAR	+32768 VAR / - 32768 VAR,1/ 65536 VAR sec	F7	R
R4X00D5L	OS_VAR_B	One Second Phase B VAR	+32768 VAR / - 32768 VAR,1/ 65536 VAR sec	F7	R
R4X00D7L	OS_VAR_C	One Second Phase C VAR	+32768 VAR / - 32768 VAR,1/ 65536 VAR sec	F7	R
R4X00D9L	OS_VAR	One Second VAR	+32768 VAR / - 32768 VAR,1/ 65536 VAR sec	F7	R
R4X00DBL	OS_WATT_A	One Second Phase A Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X00DDL	OS_WATT_B	One Second Phase B Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X00DFL	OS_WATT_C	One Second Phase C Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X00E1L	OS_WATT	One Second Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X00E3L	OS_FREQ	One Second Frequency	+ 32768 Hz / 0 H,1/ 65536 Hz	F7	R
R4X00E5	OS_PF_A	One Second Phase A Power Factor	3.999 / 0,0.001 PF	F8	R
R4X00E6	OS_PF_B	One Second Phase B Power Factor	3.999 / 0,0.001 PF	F8	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X00E7	OS_PF_C	One Second Phase C Power Factor	3.999 / 0,0.001 PF	F8	R
R4X00E8	OS_PF	One second Three Phase Power Factor	3.999 / 0,0.001 PF	F8	R
R4X00E9	OS_VOL_IMBAL	One second Voltage Imbalance	+327% / -327%,0.01%	F10	R
R4X00EA	OS_CUR_IMBAL	One second Current Imbalance	+327% / -327%,0.01%	F10	R
R4X00EFL	TA_VOLTAN	Thermal Average Phase A-N Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X00F1L	TA_VOLTBN	Thermal Average Phase B-N Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X00F3L	TA_VOLTAN	Thermal Average Phase C-N Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X00F5L	TA_VOLTAUX	Thermal Average Auxiliary Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X00F7L	TA_AMP A	Thermal Average Phase A Current	+ 32768 A / 0 A,1/65536 A sec	F7	R
R4X00F9L	TA_AMP B	Thermal Average Phase B Current	+ 32768 A / 0 A,1/65536 A sec	F7	R
R4X00FBL	TA_AMP C	Thermal Average Phase C Current	+ 32768 A / 0 A,1/65536 A sec	F7	R
R4X00FDL	TA_AMPN_MEA	Thermal Average Measured Neutral Current	+ 32768 A / 0 A,1/65536 A sec	F7	R
R4X00FFL	TA_AMPN_CAL	Thermal Average Calculated Neutral Current	+ 32768 A / 0 A,1/65536 A sec	F7	R
R4X0101L	TA_VOLTAB	Thermal Average Phase A-B Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X0103L	TA_VOLTBC	Thermal Average Phase B-C Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X0105L	TA_VOLTCA	Thermal Average Phase C-A Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X0107L	TA_VA_A	Thermal Average Phase A VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X0109L	TA_VA_B	Thermal Average Phase B VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X010BL	TA_VA_C	Thermal Average Phase C VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X010DL	TA_VA	Thermal Average Three Phase VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X010FL	TA_VAR_A	Thermal Average Phase A VAR	+32768 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R
R4X0111L	TA_VAR_B	Thermal Average Phase B VAR	+32768 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R
R4X0113L	TA_VAR_C	Thermal Average Phase C VAR	+32768 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R
R4X0115L	TA_VAR	Thermal Average Three Phase VAR	+32768 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X0117L	TA_WATT_A	Thermal Average Phase A Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X0119L	TA_WATT_B	Thermal Average Phase B Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X011BL	TA_WATT_C	Thermal Average Phase C Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X011DL	TA_WATT	Thermal Average Three Phase Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X011FL	TA_FREQ	Thermal Average Frequency	+ 32768 Hz / 0 Hz,1/ 65536 Hz	F7	R
R4X0121	TA_PF_A	Thermal Average Phase A Power Factor	3.999 / 0,0.001 PF	F8	R
R4X0122	TA_PF_B	Thermal Average Phase B Power Factor	3.999 / 0,0.001 PF	F8	R
R4X0123	TA_PF_C	Thermal Average Phase C Power Factor	3.999 / 0,0.001 PF	F8	R
R4X0124	TA_PF	Thermal Average Three Phase Power Factor	3.999 / 0,0.001 PF	F8	R
R4X0125	TA_VOL_IMBAL	Thermal Average Voltage Imbalance	+327% / -327%,0.01%	F10	R
R4X0126	TA_CUR_IMBAL	Thermal Average Current Imbalance	+327% / -327%,0.01%	F10	R
R4X012BL	MAXTA_VOLTAN	Maximum Thermal Average Phase A-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X012DL	MAXTA_VOLTBN	Maximum Thermal Average Phase B-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X012FL	MAXTA_VOLTCN	Maximum Thermal Average Phase C-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X0131L	MAXTA_VAUX	Maximum Thermal Average Auxiliary Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X0133L	MAXTA_AMP A	Maximum Thermal Average Phase A Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X0135L	MAXTA_AMP B	Maximum Thermal Average Phase B Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X0137L	MAXTA_AMP C	Maximum Thermal Average Phase C Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X0139L	MAXTA_AMPN_ME	Maximum Thermal Average Measured Neutral Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X013BL	MAXTA_AMPN_CA	Maximum Thermal Average Calculated Neutral Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X013DL	MAXTA_VOLTAB	Maximum Thermal Average Phase A-B Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X013FL	MAXTA_VOLTBC	Maximum Thermal Average Phase B-C Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X0141L	MAXTA_VOLTCA	Maximum Thermal Average Phase C-A Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X0143L	MAXTA_VA_A	Maximum Thermal Average Phase A VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X0145L	MAXTA_VA_B	Maximum Thermal Average Phase B VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X0147L	MAXTA_VA_C	Maximum Thermal Average Phase C VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X0149L	MAXTA_VA	Maximum Thermal Average VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X014BL	MAXTA_POSVAR_A	Maximum Thermal Average Phase A Positive VAR	+32768 VAR / 0 VAR,1/ 65536 VAR sec	F7	R
R4X014DL	MAXTA_POSVAR_B	Maximum Thermal Average Phase B Positive VAR	+32768 VAR / 0 VAR,1/ 65536 VAR sec	F7	R
R4X014FL	MAXTA_POSVAR_C	Maximum Thermal Average Phase C Positive VAR	+32768 VAR / 0 VAR,1/ 65536 VAR sec	F7	R
R4X0151L	MAXTA_POSVAR	Maximum Thermal Average Positive VAR	+32768 VAR / 0 VAR,1/ 65536 VAR sec	F7	R
R4X0153L	MAXTA_NEGVAR_A	Maximum Thermal Average Phase A Negative VAR	0 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R
R4X0155L	MAXTA_NEGVAR_B	Maximum Thermal Average Phase B Negative VAR	0 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R
R4X0157L	MAXTA_NEGVAR_C	Maximum Thermal Average Phase C Negative VAR	0 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R
R4X0159L	MAXTA_NEGVAR	Maximum Thermal Average Negative VAR	0 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R
R4X015BL	MAXTA_POSWATT_A	Maximum Thermal Average Phase A Watts Positive	+32768 W / 0 W,1/ 65536 VAR sec	F7	R
R4X015DL	MAXTA_POSWATT_B	Maximum Thermal Average Phase B Watts Positive	+32768 W / 0 W,1/ 65536 VAR sec	F7	R
R4X015FL	MAXTA_POSWATT_C	Maximum Thermal Average Phase C Watts Positive	+32768 W / 0 W,1/ 65536 VAR sec	F7	R
R4X0161L	MAXTA_POSWATT	Maximum Thermal Average Watts Positive	+32768 W / 0 W,1/ 65536 VAR sec	F7	R
R4X0163L	MAXTA_NEGWATT_A	Maximum Thermal Average Phase A Watts Negative	0 W / -32768 W,1/ 65536 VAR sec	F7	R
R4X0165L	MAXTA_NEGWATT_B	Maximum Thermal Average Phase B Watts Negative	0 W / -32768 W,1/ 65536 VAR sec	F7	R
R4X0167L	MAXTA_NEGWATT_C	Maximum Thermal Average Phase C Watts Negative	0 W / -32768 W,1/ 65536 VAR sec	F7	R
R4X0169L	MAXTA_NEGWATT	Maximum Thermal Average Watts Negative	0 W / -32768 W,1/ 65536 VAR sec	F7	R
R4X016BL	MAXTA_FREQ	Maximum Thermal Average Frequency	+ 32768 Hz / 0 Hz,1/ 65536 VAR sec	F7	R
R4X016D	MAXTA_PF1_A	Maximum Thermal Average Phase A Power Factor Quadrant 1	0.999 / 0,0.001 PF	F8	R
R4X016E	MAXTA_PF1_B	Maximum Thermal Average Phase B Power Factor Quadrant 1	0.999 / 0,0.001 PF	F8	R
R4X016F	MAXTA_PF1_C	Maximum Thermal Average Phase C Power Factor Quadrant 1	0.999 / 0,0.001 PF	F8	R
R4X0170	MAXTA_PF1	Maximum Thermal Average Power Factor Quadrant 1	0.999 / 0,0.001 PF	F8	R
R4X0171	MAXTA_PF2_A	Maximum Thermal Average Phase	1.999 /	F8	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
		A Power Factor Quadrant 2	/1.000,0.001 PF		
R4X0172	MAXTA_PF2_B	Maximum Thermal Average Phase B Power Factor Quadrant 2	1.999 / /1.000,0.001 PF	F8	R
R4X0173	MAXTA_PF2_C	Maximum Thermal Average Phase C Power Factor Quadrant 2	1.999 / /1.000,0.001 PF	F8	R
R4X0174	MAXTA_PF2	Maximum Thermal Average Power Factor Quadrant 2	1.999 / /1.000,0.001 PF	F8	R
R4X0175	MAXTA_PF3_A	Maximum Thermal Average Phase A Power Factor Quadrant 3	2.999 / 2.000,0.001 PF	F8	R
R4X0176	MAXTA_PF3_B	Maximum Thermal Average Phase B Power Factor Quadrant 3	2.999 / 2.000,0.001 PF	F8	R
R4X0177	MAXTA_PF3_C	Maximum Thermal Average Phase C Power Factor Quadrant 3	2.999 / 2.000,0.001 PF	F8	R
R4X0178	MAXTA_PF3	Maximum Thermal Average Power Factor Quadrant 3	2.999 / 2.000,0.001 PF	F8	R
R4X0179	MAXTA_PF4_A	Maximum Thermal Average Phase A Power Factor Quadrant 4	3.999 / 3.000,0.001 PF	F8	R
R4X017A	MAXTA_PF4_B	Maximum Thermal Average Phase B Power Factor Quadrant 4	3.999 / 3.000,0.001 PF	F8	R
R4X017B	MAXTA_PF4_C	Maximum Thermal Average Phase C Power Factor Quadrant 4	3.999 / 3.000,0.001 PF	F8	R
R4X017C	MAXTA_PF4	Maximum Thermal Average Power Factor Quadrant 4	3.999 / 3.000,0.001 PF	F8	R
R4X017D	MAXTA_VOL_IMBAL	Maximum Thermal Average Voltage Imbalance	+327% / - 327%,0.01%	F10	R
R4X017E	MAXTA_CUR_IMBAL	Maximum Thermal Average Current Imbalance	+327% / - 327%,0.01%	F10	R
R4X017F	MAXTHD_VOLTA	Maximum THD Phase A-N / A-B Voltage	+327% / - 327%,0.01%	F10	R
R4X0180	MAXTHD_VOLTB	Maximum THD Phase B-N / B-C Voltage	+327% / - 327%,0.01%	F10	R
R4X0181	MAXTHD_VOLTC	Maximum THD Phase C-N / C-A Voltage	+327% / - 327%,0.01%	F10	R
R4X0182	MAXTHD_AMP A	Maximum THD Phase A Current	+327% / - 327%,0.01%	F10	R
R4X0183	MAXTHD_AMP B	Maximum THD Phase B Current	+327% / - 327%,0.01%	F10	R
R4X0184	MAXTHD_AMP C	Maximum THD Phase C Current	+327% / - 327%,0.01%	F10	R
R4X0185	MAXKF_AMP A	Maximum K-Factor Phase A Current	+327% / - 327%,0.01%	F10	R
R4X0186	MAXKF_AMP B	Maximum K-Factor Phase B Current	+327% / - 327%,0.01%	F10	R
R4X0187	MAXKF_AMP C	Maximum K-Factor Phase C Current	+327% / - 327%,0.01%	F10	R
R4X0188L	COIN_TAVAR_MAX_P WATT	Coincident Thermal Average VAR for Maximum Positive Watt	+32768 VAR / - 32768 VAR,1/ 65536 W sec	F7	R
R4X0188AL	COIN_TAVAR_MAX_N WATT	Coincident Thermal Average VAR for Maximum Negative Watt	+32768 VAR / - 32768 VAR,1/ 65536 W sec	F7	R
R4X0190L	MINTA_VOLTAN	Minimum Thermal Average Phase A-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X0192L	MINTA_VOLTBN	Minimum Thermal Average Phase B-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X0194L	MINTA_VOLT CN	Minimum Thermal Average Phase C-N Voltage	+ 32768 V / 0 V, 1/65536 V sec	F7	R
R4X0196L	MINTA_VAUX	Minimum Thermal Average Auxiliary Voltage	+ 32768 V / 0 V, 1/65536 V sec	F7	R
R4X0198L	MINTA_AMP A	Minimum Thermal Average Phase A Current	+ 32768 A / 0 A, 1/65536 A sec	F7	R
R4X019AL	MINTA_AMP B	Minimum Thermal Average Phase B Current	+ 32768 A / 0 A, 1/65536 A sec	F7	R
R4X019CL	MINTA_AMP C	Minimum Thermal Average Phase C Current	+ 32768 A / 0 A, 1/65536 A sec	F7	R
R4X019EL	MINTA_AMP N_ME	Minimum Thermal Average Measured Neutral Current	+ 32768 A / 0 A, 1/65536 A sec	F7	R
R4X01A0L	MINTA_AMP N_CA	Minimum Thermal Average Calculated Neutral Current	+ 32768 A / 0 A, 1/65536 A sec	F7	R
R4X01A2L	MINTA_VOLT AB	Minimum Thermal Average Phase A-B Voltage	+ 32768 V / 0 V, 1/65536 V sec	F7	R
R4X01A4L	MINTA_VOLT BC	Minimum Thermal Average Phase B-C Voltage	+ 32768 V / 0 V, 1/65536 V sec	F7	R
R4X01A6L	MINTA_VOLT CA	Minimum Thermal Average Phase C-A Voltage	+ 32768 V / 0 V, 1/65536 V sec	F7	R
R4X01A8L	MINTA_VA_A	Minimum Thermal Average Phase A VA	+32768 VA / 0 VA, 1/ 65536 VA sec	F7	R
R4X01AAL	MINTA_VA_B	Minimum Thermal Average Phase B VA	+32768 VA / 0 VA, 1/ 65536 VA sec	F7	R
R4X01ACL	MINTA_VA_C	Minimum Thermal Average Phase C VA	+32768 VA / 0 VA, 1/ 65536 VA sec	F7	R
R4X01AEL	MINTA_VA	Minimum Thermal Average VA	+32768 VA / 0 VA, 1/ 65536 VA sec	F7	R
R4X01B0L	MINTA_POSVAR_A	Minimum Thermal Average Phase A Positive VAR	+32768 VAR / 0 VAR, 1/ 65536 VAR sec	F7	R
R4X01B2L	MINTA_POSVAR_B	Minimum Thermal Average Phase B Positive VAR	+32768 VAR / 0 VAR, 1/ 65536 VAR sec	F7	R
R4X01B4L	MINTA_POSVAR_C	Minimum Thermal Average Phase C Positive VAR	+32768 VAR / 0 VAR, 1/ 65536 VAR sec	F7	R
R4X01B6L	MINTA_POSVAR	Minimum Thermal Average Positive VAR	+32768 VAR / 0 VAR, 1/ 65536 VAR sec	F7	R
R4X01B8L	MINTA_NEGVAR_A	Minimum Thermal Average Phase A Negative VAR	0 VAR / -32768 VAR, 1/65536 VAR sec	F7	R
R4X01BAL	MINTA_NEGVAR_B	Minimum Thermal Average Phase B Negative VAR	0 VAR / -32768 VAR, 1/ 65536 VAR sec	F7	R
R4X01BCL	MINTA_NEGVAR_C	Minimum Thermal Average Phase C Negative VAR	0 VAR / -32768 VAR, 1/ 65536 VAR sec	F7	R
R4X01BEL	MINTA_NEGVAR	Minimum Thermal Average Negative VAR	0 VAR / -32768 VAR, 1/ 65536 VAR	F7	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
			sec		
R4X01C0L	MINTA_POSWATT_A	Minimum Thermal Average Phase A Watts Positive	+32768 W / 0 W,1/65536 VAR sec	F7	R
R4X01C2L	MINTA_POSWATT_B	Minimum Thermal Average Phase B Watts Positive	+32768 W / 0 W,1/65536 VAR sec	F7	R
R4X01C4L	MINTA_POSWATT_C	Minimum Thermal Average Phase C Watts Positive	+32768 W / 0 W,1/65536 VAR sec	F7	R
R4X01C6L	MINTA_POSWATT	Minimum Thermal Average Watts Positive	+32768 W / 0 W,1/65536 VAR sec	F7	R
R4X01C8L	MINTA_NEGWATT_A	Minimum Thermal Average Phase A Watts Negative	0 W / -32768 W,1/65536 VAR sec	F7	R
R4X01CAL	MINTA_NEGWATT_B	Minimum Thermal Average Phase B Watts Negative	0 W / -32768 W,1/65536 VAR sec	F7	R
R4X01CCL	MINTA_NEGWATT_C	Minimum Thermal Average Phase C Watts Negative	0 W / -32768 W,1/65536 VAR sec	F7	R
R4X01CEL	MINTA_NEGWATT	Minimum Thermal Average Watts Negative	0 W / -32768 W,1/65536 VAR sec	F7	R
R4X01D0L	MINTA_FREQ	Minimum Thermal Average Frequency	+ 32768 Hz / 0 Hz,1/65536 VAR sec	F7	R
R4X01D2	MINTA_PF1_A	Minimum Thermal Average Phase A Power Factor Quadrant 1	0.999 / 0,0.001 PF	F8	R
R4X01D3	MINTA_PF1_B	Minimum Thermal Average Phase B Power Factor Quadrant 1	0.999 / 0,0.001 PF	F8	R
R4X01D4	MINTA_PF1_C	Minimum Thermal Average Phase C Power Factor Quadrant 1	0.999 / 0,0.001 PF	F8	R
R4X01D5	MINTA_PF1	Minimum Thermal Average Power Factor Quadrant 1	0.999 / 0,0.001 PF	F8	R
R4X01D6	MINTA_PF2_A	Minimum Thermal Average Phase A Power Factor Quadrant 2	1.999 / /1.000,0.001 PF	F8	R
R4X01D7	MINTA_PF2_B	Minimum Thermal Average Phase B Power Factor Quadrant 2	1.999 / /1.000,0.001 PF	F8	R
R4X01D8	MINTA_PF2_C	Minimum Thermal Average Phase C Power Factor Quadrant 2	1.999 / /1.000,0.001 PF	F8	R
R4X01D9	MINTA_PF2	Minimum Thermal Average Power Factor Quadrant 2	1.999 / /1.000,0.001 PF	F8	R
R4X01DA	MINTA_PF3_A	Minimum Thermal Average Phase A Power Factor Quadrant 3	2.999 / 2.000,0.001 PF	F8	R
R4X01DB	MINTA_PF3_B	Minimum Thermal Average Phase B Power Factor Quadrant 3	2.999 / 2.000,0.001 PF	F8	R
R4X01DC	MINTA_PF3_C	Minimum Thermal Average Phase C Power Factor Quadrant 3	2.999 / 2.000,0.001 PF	F8	R
R4X01DD	MINTA_PF3	Minimum Thermal Average Power Factor Quadrant 3	2.999 / 2.000,0.001 PF	F8	R
R4X01DE	MINTA_PF4_A	Minimum Thermal Average Phase A Power Factor Quadrant 4	3.999 / 3.000,0.001 PF	F8	R
R4X01DF	MINTA_PF4_B	Minimum Thermal Average Phase B Power Factor Quadrant 4	3.999 / 3.000,0.001 PF	F8	R
R4X01E0	MINTA_PF4_C	Minimum Thermal Average Phase C Power Factor Quadrant 4	3.999 / 3.000,0.001 PF	F8	R
R4X01E1	MINTA_PF4	Minimum Thermal Average Power Factor Quadrant 4	3.999 / 3.000,0.001 PF	F8	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X01E2	MINTA_VOL_IMBAL	Minimum Thermal Average Voltage Imbalance	+327% / -327%,0.01%	F10	R
R4X01E3	MINTA_CUR_IMBAL	Minimum Thermal Average Current Imbalance	+327% / -327%,0.01%	F10	R
R4X01E4	MINTHD_VOLTA	Minimum THD Phase A-N / A-B Voltage	+327% / -327%,0.01%	F10	R
R4X01E5	MINTHD_VOLTB	Minimum THD Phase B-N / B-C Voltage	+327% / -327%,0.01%	F10	R
R4X01E6	MINTHD_VOLTTC	Minimum THD Phase C-N / C-A Voltage	+327% / -327%,0.01%	F10	R
R4X01E7	MINTHD_AMP A	Minimum THD Phase A Current	+327% / -327%,0.01%	F10	R
R4X01E8	MINTHD_AMP B	Minimum THD Phase B Current	+327% / -327%,0.01%	F10	R
R4X01E9	MINTHD_AMP C	Minimum THD Phase C Current	+327% / -327%,0.01%	F10	R
R4X01EA	MINKF_AMP A	Minimum K-Factor Phase A Current	+327% / -327%,0.01%	F10	R
R4X01EB	MINKF_AMP B	Minimum K-Factor Phase B Current	+327% / -327%,0.01%	F10	R
R4X01EC	MINKF_AMP C	Minimum K-Factor Phase C Current	+327% / -327%,0.01%	F10	R
R4X01EDL	COIN_TAVAR_MIN_P WATT	Coincident Thermal Average VAR for Minimum Positive Watt	+32768 VAR / -32768 VAR,1/65536 W sec	F7	R
R4X01EFL	COIN_TAVAR_MIN_N WATT	Coincident Thermal Average VAR for Minimum Negative Watt	+32768 VAR / -32768 VAR,1/65536 W sec	F7	R
R4X03D5L	VA_HR_1	VAhour	+9,999,999,999,999,999 VAh / 0 VAh,1VAH	F11	R
R4X03D7L	VA_HR_2				
R4X03D9L	POSVAR_HR_1	Positive VARhour	+9,999,999,999,999,999 VARh / 0 VARh,1VARH	F11	R
R4X03DBL	POSVAR_HR_2				
R4X03DDL	NEGVAR_HR_1	Negative VARhour	0 VARh / -9,999,999,999,999,999 VARh,1VARH	F11	R
R4X03DFL	NEGVAR_HR_2				
R4X03E1L	POSWATT_HR_1	Positive Watthour	+9,999,999,999,999,999 Wh / 0 Wh,1WH	F11	R
R4X03E3L	POSWATT_HR_2				
R4X03E5L	NEGWATT_HR_1	Negative Watthour	0 Wh / -9,999,999,999,999,999 Wh,1WH	F11	R
R4X03E7L	NEGWATT_HR_2				
R4X03E9	VA_HR_3	VAhour	+9,999,999,999,999,999 VAh / 0 VAh,1VAH	F11	R
R4X03EA	VA_HR_4				
R4X03EB	VA_HR_5				

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X03EC	VA_HR_6				
R4X03ED	POSVAR_HR_3	Positive VARhour	+9,999,999,999,999,999 VARh / 0 VARh,1VARH	F11	R
R4X03EE	POSVAR_HR_4				
R4X03EF	POSVAR_HR_5				
R4X03F0	POSVAR_HR_6				
R4X03F1	NEGVAR_HR_3	Negative VARhour	0 VARh / -9,999,999,999,999,999 VARh,1VARH	F11	R
R4X03F2	NEGVAR_HR_4				
R4X03F3	NEGVAR_HR_5				
R4X03F4	NEGVAR_HR_6				
R4X03F5	POSWATT_HR_3	Positive Watthour	+9,999,999,999,999,999 Wh / 0 Wh,1WH	F11	R
R4X03F6	POSWATT_HR_4				
R4X03F7	POSWATT_HR_5				
R4X03F8	POSWATT_HR_6				
R4X03F9	NEGWATT_HR_3	Negative Watthour	0 Wh / -9,999,999,999,999,999 Wh,1WH	F11	R
R4X03FA	NEGWATT_HR_4				
R4X03FB	NEGWATT_HR_5				
R4X03FC	NEGWATT_HR_6				
R4X09FD	THDVOLT_AN	Phase A-N / Phase A-B Voltage THD	+327% / -327%,0.01%	F10	R
R4X09FE	THDVOLT_BN	Phase B-N / Phase B-C Voltage THD	+327% / -327%,0.01%	F10	R
R4X09FF	THDVOLT_CN	Phase C-N / Phase C-A Voltage THD	+327% / -327%,0.01%	F10	R
R4X0A00	THDAMP_A	Phase A Current THD	+327% / -327%,0.01%	F10	R
R4X0A01	THDAMP_B	Phase B Current THD	+327% / -327%,0.01%	F10	R
R4X0A02	THDAMP_C	Phase C Current THD	+327% / -327%,0.01%	F10	R
R4X0A03	KFAMP_A	Phase A Current K-Factor	+327% / -327%,0.01%	F10	R
R4X0A04	KFAMP_B	Phase B Current K-Factor	+327% / -327%,0.01%	F10	R
R4X0A05	KFAMP_C	Phase C Current K-Factor	+327% / -327%,0.01%	F10	R
R4X0A22	VOLT_AN_ANG	Phase Angle Phase A-N Voltage	+180 degree / -180 degree,0.01 degree	F9	R
R4X0A23	VOLT_BN_ANG	Phase Angle Phase B-N Voltage	+180 degree / -180 degree,0.01 degree	F9	R
R4X0A24	VOLT_CN_ANG	Phase Angle Phase C-N Voltage	+180 degree / -180 degree,0.01 degree	F9	R
R4X0A25	AMPA_ANG	Phase Angle Phase A Current	+180 degree / -180 degree,0.01 degree	F9	R
R4X0A26	AMPB_ANG	Phase Angle Phase B Current	+180 degree / -180	F9	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
			degree,0.01 degree		
R4X0A27	AMPC_ANG	Phase Angle Phase C Current	+180 degree / -180 degree,0.01 degree	F9	R
R4X0A28	VOLT_AB_ANG	Phase Angle Phase A-B Voltage	+180 degree / -180 degree,0.01 degree	F9	R
R4X0A29	VOLT_BC_ANG	Phase Angle Phase B-C Voltage	+180 degree / -180 degree,0.01 degree	F9	R
R4X0A2A	VOLT_CA_ANG	Phase Angle Phase C-A Voltage	+180 degree / -180 degree,0.01 degree	F9	R
R4X0A2B	PH_SEQ	Voltage Phase Sequence		F13	
R4X0A31L	FW_AVE_VA	Fixed Window Average VA	+32768 VA / 0 VA,1/ 65536 VA sec		R
R4X0A33L	FW_AVE_VAR	Fixed Window Average VAR	+32768 VAR / -32768 VAR,1/ 65536 VAR sec		R
R4X0A35L	FW_AVE_WATT	Fixed Window Average Watt	+32768 W / -32768 W,1/ 65536 W sec		R
R4X0A37L	FW_AVE_VA_MAX	Maximum Fixed Window Average VA	+32768 VA / 0 VA,1/ 65536 VA sec		R
R4X0A39L	FW_AVE_POSVAR_MAX	Maximum Fixed Window Average Positive VAR	+32768 VAR / 0 VAR,1/ 65536 VAR sec		R
R4X0A3BL	FW_AVE_NEGVAR_MAX	Maximum Fixed Window Average Negative VAR	0 VAR / -32768 VAR,1/ 65536 VAR sec		R
R4X0A3DL	FW_AVE_POSWATT_MAX	Maximum Fixed Window Average Positive Watt	+32768 W / 0 W,1/ 65536 W sec		R
R4X0A3FL	FW_AVE_NEGWATT_MAX	Maximum Fixed Window Average Negative Watt	0 W / -32768 W,1/ 65536 W sec		R
R4X0A41L	FW_AVE_VA_MIN	Minimum Fixed Window Average VA	+32768 VA / 0 VA,1/ 65536 VA sec		R
R4X0A43L	FW_AVE_POSVAR_MIN	Minimum Fixed Window Average Positive VAR	+32768 VAR / 0 VAR,1/ 65536 VAR sec		R
R4X0A45L	FW_AVE_NEGVAR_MIN	Minimum Fixed Window Average Negative VAR	0 VAR / -32768 VAR,1/ 65536 VAR sec		R
R4X0A47L	FW_AVE_POSWATT_MIN	Minimum Fixed Window Average Positive Watt	+32768 W / 0 W,1/ 65536 W sec		R
R4X0A49L	FW_AVE_NEGWATT_MIN	Minimum Fixed Window Average Negative Watt	0 W / -32768 W,1/ 65536 W sec		R
R4X0A4BL	FW_AVEVAR_MAX_P WATT	Coincident Fixed Window Average VAR for Maximum Positive Watt	+32768 VAR / -32768 VAR,1/ 65536 VAR sec		R
R4X0A4DL	FW_AVEVAR_MAX_N WATT	Coincident Fixed Window Average VAR for Maximum Negative Watt	+32768 VAR / -32768 VAR,1/ 65536 VAR sec		R
R4X0A4FL	FW_AVEVAR_MIN_P WATT	Coincident Fixed Window Average VAR for Minimum Positive Watt	+32768 VAR / -32768 VAR,1/ 65536 VAR sec		R
R4X0A51L	FW_AVEVAR_MIN_N	Coincident Fixed Window Average	+32768 VAR / -		R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
	WATT	VAR for Minimum Negative Watt	32768 VAR, 1/ 65536 VAR sec		
R4X0A80L	SW_AVEVA_PRE	Predictive Sliding Window Average VA	+32768 VA / 0 VA, 1/ 65536 VA sec		R
R4X0A82L	SW_AVEVAR_PRE	Predictive Sliding Window Average VAR	+32768 VAR / - 32768 VAR, 1/ 65536 VAR sec		R
R4X0A84L	SW_AVEWATT_PRE	Predictive Sliding Window Average Watt	+32768 W / -32768 W, 1/ 65536 W sec		R
R4X0A86L	SW_AVEVA	Sliding Window Average VA	+32768 VA / 0 VA, 1/ 65536 VA sec		R
R4X0A88L	SW_AVEVAR	Sliding Window Average VAR	+32768 VAR / - 32768 VAR, 1/ 65536 VAR sec		R
R4X0A8AL	SW_AVEWATT	Sliding Window Average Watt	+32768 W / -32768 W, 1/ 65536 W sec		R
R4X0A8CL	SW_MAX_AVEVA	Maximum Sliding Window Average VA	+32768 VA / 0 VA, 1/ 65536 VA sec		R
R4X0A8EL	SW_MAX_POS_AVEVAR	Maximum Sliding Window Average Positive VAR	+32768 VAR / 0 VAR, 1/ 65536 VAR sec		R
R4X0A90L	SW_MAX_NEG_AVEVAR	Maximum Sliding Window Average Negative VAR	0 VAR / -32768 VAR, 1/ 65536 VAR sec		R
R4X0A92L	SW_MAX_POS_AVEWATT	Maximum Sliding Window Average Positive Watt	+32768 W / 0 W, 1/ 65536 W sec		R
R4X0A94L	SW_MAX_NEG_AVEWATT	Maximum Sliding Window Average Negative Watt	0 W / -32768 W, 1/ 65536 W sec		R
R4X0A96L	SW_MIN_AVEVA	Minimum Sliding Window Average VA	+32768 VA / 0 VA, 1/ 65536 VA sec		R
R4X0A98L	SW_MIN_POS_AVEVAR	Minimum Sliding Window Average Positive VAR	+32768 VAR / 0 VAR, 1/ 65536 VAR sec		R
R4X0A9AL	SW_MIN_NEG_AVEVAR	Minimum Sliding Window Average Negative VAR	0 VAR / -32768 VAR, 1/ 65536 VAR sec		R
R4X0A9CL	SW_MIN_POS_AVEWATT	Minimum Sliding Window Average Positive Watt	+32768 W / 0 W, 1/ 65536 W sec		R
R4X0A9EL	SW_MIN_NEG_AVEWATT	Minimum Sliding Window Average Negative Watt	0 W / -32768 W, 1/ 65536 W sec		R
R4X0AA0L	SW_AVEVAR_MAX_P WATT	Coincident Sliding Window Average VAR for Maximum Positive Watt	+32768 VAR / - 32768 VAR, 1/ 65536 VAR sec		R
R4X0AA2L	SW_AVEVAR_MAX_N WATT	Coincident Sliding Window Average VAR for Maximum Negative Watt	+32768 VAR / - 32768 VAR, 1/ 65536 VAR sec		R
R4X0AA4L	SW_AVEVAR_MIN_P WATT	Coincident Sliding Window Average VAR for Minimum Positive Watt	+32768 VAR / - 32768 VAR, 1/ 65536 VAR sec		R
R4X0AA6L	SW_AVEVAR_MIN_N WATT	Coincident Sliding Window Average VAR for Minimum Negative Watt	+32768 VAR / - 32768 VAR, 1/		R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
			65536 VAR sec		
R4X0AD5	DI_MODULE1	Digital Input States, Module 1	-, -, -	F17	R
R4X0AD6L	MOD1_DI_1	Digital Input Accumulation 1, Module 1	-, -, -	F18	R
R4X0AD8L	MOD1_DI_2	Digital Input Accumulation 2, Module 1	-, -, -	F18	R
R4X0ADAL	MOD1_DI_3	Digital Input Accumulation 3, Module 1	-, -, -	F18	R
R4X0ADCL	MOD1_DI_4	Digital Input Accumulation 4, Module 1	-, -, -	F18	R
R4X0ADEL	MOD1_DI_5	Digital Input Accumulation 5, Module 1	-, -, -	F18	R
R4X0AE0L	MOD1_DI_6	Digital Input Accumulation 6, Module 1	-, -, -	F18	R
R4X0AE2L	MOD1_DI_7	Digital Input Accumulation 7, Module 1	-, -, -	F18	R
R4X0AE4L	MOD1_DI_8	Digital Input Accumulation 8, Module 1	-, -, -	F18	R
R4X0AE6	DI_MODULE2	Digital Input States, Module 2	-, -, -	F17	R
R4X0AE7L	MOD2_DI_1	Digital Input Accumulation 1, Module 2	-, -, -	F18	R
R4X0AE9L	MOD2_DI_2	Digital Input Accumulation 2, Module 2	-, -, -	F18	R
R4X0AEBL	MOD2_DI_3	Digital Input Accumulation 3, Module 2	-, -, -	F18	R
R4X0AEDL	MOD2_DI_4	Digital Input Accumulation 4, Module 2	-, -, -	F18	R
R4X0AEFL	MOD2_DI_5	Digital Input Accumulation 5, Module 2	-, -, -	F18	R
R4X0AF1L	MOD2_DI_6	Digital Input Accumulation 6, Module 2	-, -, -	F18	R
R4X0AF3L	MOD2_DI_7	Digital Input Accumulation 7, Module 2	-, -, -	F18	R
R4X0AF5L	MOD2_DI_8	Digital Input Accumulation 8, Module 2	-, -, -	F18	R
R4X0AF7	DI_MODULE3	Digital Input States, Module 3	-, -, -	F17	R
R4X0AF8L	MOD3_DI_1	Digital Input Accumulation 1, Module 3	-, -, -	F18	R
R4X0AFAL	MOD3_DI_2	Digital Input Accumulation 2, Module 3	-, -, -	F18	R
R4X0AFCL	MOD3_DI_3	Digital Input Accumulation 3, Module 3	-, -, -	F18	R
R4X0AFEL	MOD3_DI_4	Digital Input Accumulation 4, Module 3	-, -, -	F18	R
R4X0B00L	MOD3_DI_5	Digital Input Accumulation 5, Module 3	-, -, -	F18	R
R4X0B02L	MOD3_DI_6	Digital Input Accumulation 6, Module 3	-, -, -	F18	R
R4X0B04L	MOD3_DI_7	Digital Input Accumulation 7, Module 3	-, -, -	F18	R
R4X0B06L	MOD3_DI_8	Digital Input Accumulation 8, Module 3	-, -, -	F18	R
R4X0B08	DI_MODULE4	Digital Input States, Module 4	-, -, -	F17	R
R4X0B09L	MOD4_DI_1	Digital Input Accumulation 1,	-, -, -	F18	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
		Module 4			
R4X0B0BL	MOD4_DI_2	Digital Input Accumulation 2, Module 4	-, -, -	F18	R
R4X0B0DL	MOD4_DI_3	Digital Input Accumulation 3, Module 4	-, -, -	F18	R
R4X0B0FL	MOD4_DI_4	Digital Input Accumulation 4, Module 4	-, -, -	F18	R
R4X0B11L	MOD4_DI_5	Digital Input Accumulation 5, Module 4	-, -, -	F18	R
R4X0B13L	MOD4_DI_6	Digital Input Accumulation 6, Module 4	-, -, -	F18	R
R4X0B15L	MOD4_DI_7	Digital Input Accumulation 7, Module 4	-, -, -	F18	R
R4X0B17L	MOD4_DI_8	Digital Input Accumulation 8, Module 4	-, -, -	F18	R
R4X1674	DI_COUNTER_11	Scaled Pulse Accumulation Internal Input 1	18,446,744,073,709,55 1,615 / 0,1 Unit	F20	R
R4X1675	DI_COUNTER_12				
R4X1676	DI_COUNTER_13				
R4X1677	DI_COUNTER_14				
R4X1678	DI_COUNTER_21	Scaled Pulse Accumulation Internal Input 2	18,446,744,073,709,55 1,615 / 0,1 Unit	F20	R
R4X1679	DI_COUNTER_22				
R4X167A	DI_COUNTER_23				
R4X167B	DI_COUNTER_24				
R4X167C	DI_COUNTER_31	Scaled Pulse Accumulation Internal Input 3	18,446,744,073,709,55 1,615 / 0,1 Unit	F20	R
R4X167D	DI_COUNTER_32				
R4X167E	DI_COUNTER_33				
R4X167F	DI_COUNTER_34				
R4X1680	DI_COUNTER_41	Scaled Pulse Accumulation Internal Input 4	18,446,744,073,709,55 1,615 / 0,1 Unit	F20	R
R4X1681	DI_COUNTER_42				
R4X1682	DI_COUNTER_43				
R4X1683	DI_COUNTER_44				
R4X1684	DI_COUNTER_51	Scaled Pulse Accumulation Internal Input 5	18,446,744,073,709,55 1,615 / 0,1 Unit	F20	R
R4X1685	DI_COUNTER_52				
R4X1686	DI_COUNTER_53				
R4X1687	DI_COUNTER_54				
R4X1688	DI_COUNTER_61	Scaled Pulse Accumulation Internal Input 6	18,446,744,073,709,55 1,615 / 0,1 Unit	F20	R
R4X1689	DI_COUNTER_62				
R4X168A	DI_COUNTER_63				
R4X168B	DI_COUNTER_64				
R4X168C	DI_COUNTER_71	Scaled Pulse Accumulation Internal Input 7	18,446,744,073,709,55 1,615 / 0,1 Unit	F20	R
R4X168D	DI_COUNTER_72				
R4X168E	DI_COUNTER_73				
R4X168F	DI_COUNTER_74				

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X1690	DI_COUNTER_81	Scaled Pulse Accumulation Internal Input 8	18,446,744,073,709,55 1,615 / 0,1 Unit	F20	R
R4X1691	DI_COUNTER_82				
R4X1692	DI_COUNTER_83				
R4X1693	DI_COUNTER_84				
R4XB000	PORT4_ADD	Address, Port 4 (I/O)			
R4XB001	PORT4_BAUD	Protocol & Baud Rate, Port 4 (I/O)			
R4XB004	PORT3_ADD	Address, Port 3 (I/O)			
R4XB005	PORT3_BAUD	Protocol & Baud Rate, Port 3 (I/O)			
R4XB008	PORT2_ADD	Address, Port 2 (I/O)			
R4XB009	PORT2_BAUD	Protocol & Baud Rate, Port 2 (I/O)			
R4XB00C	PORT1_ADD	Address, Port 1 (I/O)			
R4XB00D	PORT1_BAUD	Protocol & Baud Rate, Port 1 (I/O)			
R4XB014	LINE_NUM_LIMIT_01	Line Number, Limit 1	-, -, -	F43	R
R4XB015	PT_SAB_LIMIT_01	Point Number and SAB, Limit 1	-, -, -	F44	R
R4XB016	VALUE1_LIMIT_01	Value 1, Limit 1	-, -, -	F45	R
R4XB017	VALUE2_LIMIT_01	Value 2, Limit 1	-, -, -	F45	R
R4XB018	LINE_NUM_LIMIT_02	Line Number, Limit 2	-, -, -	F43	R
R4XB019	PT_SAB_LIMIT_02	Point Number and SAB, Limit 2	-, -, -	F44	R
R4XB01A	VALUE1_LIMIT_02	Value 1, Limit 2	-, -, -	F45	R
R4XB01B	VALUE2_LIMIT_02	Value 2, Limit 2	-, -, -	F45	R
R4XB01C	LINE_NUM_LIMIT_03	Line Number, Limit 3	-, -, -	F43	R
R4XB01D	PT_SAB_LIMIT_03	Point Number and SAB, Limit 3	-, -, -	F44	R
R4XB01E	VALUE1_LIMIT_03	Value 1, Limit 3	-, -, -	F45	R
R4XB01F	VALUE2_LIMIT_03	Value 2, Limit 3	-, -, -	F45	R
R4XB020	LINE_NUM_LIMIT_04	Line Number, Limit 4	-, -, -	F43	R
R4XB021	PT_SAB_LIMIT_04	Point Number and SAB, Limit 4	-, -, -	F44	R
R4XB022	VALUE1_LIMIT_04	Value 1, Limit 4	-, -, -	F45	R
R4XB023	VALUE2_LIMIT_04	Value 2, Limit 4	-, -, -	F45	R
R4XB024	LINE_NUM_LIMIT_05	Line Number, Limit 5	-, -, -	F43	R
R4XB025	PT_SAB_LIMIT_05	Point Number and SAB, Limit 5	-, -, -	F44	R
R4XB026	VALUE1_LIMIT_05	Value 1, Limit 5	-, -, -	F45	R
R4XB027	VALUE2_LIMIT_05	Value 2, Limit 5	-, -, -	F45	R
R4XB028	LINE_NUM_LIMIT_06	Line Number, Limit 6	-, -, -	F43	R
R4XB029	PT_SAB_LIMIT_06	Point Number and SAB, Limit 6	-, -, -	F44	R
R4XB02A	VALUE1_LIMIT_06	Value 1, Limit 6	-, -, -	F45	R
R4XB02B	VALUE2_LIMIT_06	Value 2, Limit 6	-, -, -	F45	R
R4XB02C	LINE_NUM_LIMIT_07	Line Number, Limit 7	-, -, -	F43	R
R4XB02D	PT_SAB_LIMIT_07	Point Number and SAB, Limit 7	-, -, -	F44	R
R4XB02E	VALUE1_LIMIT_07	Value 1, Limit 7	-, -, -	F45	R
R4XB02F	VALUE2_LIMIT_07	Value 2, Limit 7	-, -, -	F45	R
R4XB030	LINE_NUM_LIMIT_08	Line Number, Limit 8	-, -, -	F43	R
R4XB031	PT_SAB_LIMIT_08	Point Number and SAB, Limit 8	-, -, -	F44	R
R4XB032	VALUE1_LIMIT_08	Value 1, Limit 8	-, -, -	F45	R
R4XB033	VALUE2_LIMIT_08	Value 2, Limit 8	-, -, -	F45	R
R4XB034	LINE_NUM_LIMIT_09	Line Number, Limit 9	-, -, -	F43	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4XB035	PT_SAB_LIMIT_09	Point Number and SAB, Limit 9	-,-,-	F44	R
R4XB036	VALUE1_LIMIT_09	Value 1, Limit 9	-,-,-	F45	R
R4XB037	VALUE2_LIMIT_09	Value 2, Limit 9	-,-,-	F45	R
R4XB038	LINE_NUM_LIMIT_10	Line Number, Limit 10	-,-,-	F43	R
R4XB039	PT_SAB_LIMIT_10	Point Number and SAB, Limit 10	-,-,-	F44	R
R4XB03A	VALUE1_LIMIT_10	Value 1, Limit 10	-,-,-	F45	R
R4XB03B	VALUE2_LIMIT_10	Value 2, Limit 10	-,-,-	F45	R
R4XB03C	LINE_NUM_LIMIT_11	Line Number, Limit 11	-,-,-	F43	R
R4XB03D	PT_SAB_LIMIT_11	Point Number and SAB, Limit 11	-,-,-	F44	R
R4XB03E	VALUE1_LIMIT_11	Value 1, Limit 11	-,-,-	F45	R
R4XB03F	VALUE2_LIMIT_11	Value 2, Limit 11	-,-,-	F45	R
R4XB040	LINE_NUM_LIMIT_12	Line Number, Limit 12	-,-,-	F43	R
R4XB041	PT_SAB_LIMIT_12	Point Number and SAB, Limit 12	-,-,-	F44	R
R4XB042	VALUE1_LIMIT_12	Value 1, Limit 12	-,-,-	F45	R
R4XB043	VALUE2_LIMIT_12	Value 2, Limit 12	-,-,-	F45	R
R4XB044	LINE_NUM_LIMIT_13	Line Number, Limit 13	-,-,-	F43	R
R4XB045	PT_SAB_LIMIT_13	Point Number and SAB, Limit 13	-,-,-	F44	R
R4XB046	VALUE1_LIMIT_13	Value 1, Limit 13	-,-,-	F45	R
R4XB047	VALUE2_LIMIT_13	Value 2, Limit 13	-,-,-	F45	R
R4XB048	LINE_NUM_LIMIT_14	Line Number, Limit 14	-,-,-	F43	R
R4XB049	PT_SAB_LIMIT_14	Point Number and SAB, Limit 14	-,-,-	F44	R
R4XB04A	VALUE1_LIMIT_14	Value 1, Limit 14	-,-,-	F45	R
R4XB04B	VALUE2_LIMIT_14	Value 2, Limit 14	-,-,-	F45	R
R4XB04C	LINE_NUM_LIMIT_15	Line Number, Limit 15	-,-,-	F43	R
R4XB04D	PT_SAB_LIMIT_15	Point Number and SAB, Limit 15	-,-,-	F44	R
R4XB04E	VALUE1_LIMIT_15	Value 1, Limit 15	-,-,-	F45	R
R4XB04F	VALUE2_LIMIT_15	Value 2, Limit 15	-,-,-	F45	R
R4XB050	LINE_NUM_LIMIT_16	Line Number, Limit 16	-,-,-	F43	R
R4XB051	PT_SAB_LIMIT_16	Point Number and SAB, Limit 16	-,-,-	F44	R
R4XB052	VALUE1_LIMIT_16	Value 1, Limit 16	-,-,-	F45	R
R4XB053	VALUE2_LIMIT_16	Value 2, Limit 16	-,-,-	F45	R
R4XB054	LINE_NUM_LIMIT_17	Line Number, Limit 17	-,-,-	F43	R
R4XB055	PT_SAB_LIMIT_17	Point Number and SAB, Limit 17	-,-,-	F44	R
R4XB056	VALUE1_LIMIT_17	Value 1, Limit 17	-,-,-	F45	R
R4XB057	VALUE2_LIMIT_17	Value 2, Limit 17	-,-,-	F45	R
R4XB058	LINE_NUM_LIMIT_18	Line Number, Limit 18	-,-,-	F43	R
R4XB059	PT_SAB_LIMIT_18	Point Number and SAB, Limit 18	-,-,-	F44	R
R4XB05A	VALUE1_LIMIT_18	Value 1, Limit 18	-,-,-	F45	R
R4XB05B	VALUE2_LIMIT_18	Value 2, Limit 18	-,-,-	F45	R
R4XB05C	LINE_NUM_LIMIT_19	Line Number, Limit 19	-,-,-	F43	R
R4XB05D	PT_SAB_LIMIT_19	Point Number and SAB, Limit 19	-,-,-	F44	R
R4XB05E	VALUE1_LIMIT_19	Value 1, Limit 19	-,-,-	F45	R
R4XB05F	VALUE2_LIMIT_19	Value 2, Limit 19	-,-,-	F45	R
R4XB060	LINE_NUM_LIMIT_20	Line Number, Limit 20	-,-,-	F43	R
R4XB061	PT_SAB_LIMIT_20	Point Number and SAB, Limit 20	-,-,-	F44	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4XB062	VALUE1_LIMIT_20	Value 1, Limit 20	-, -, -	F45	R
R4XB063	VALUE2_LIMIT_20	Value 2, Limit 20	-, -, -	F45	R
R4XB064	LINE_NUM_LIMIT_21	Line Number, Limit 21	-, -, -	F43	R
R4XB065	PT_SAB_LIMIT_21	Point Number and SAB, Limit 21	-, -, -	F44	R
R4XB066	VALUE1_LIMIT_21	Value 1, Limit 21	-, -, -	F45	R
R4XB067	VALUE2_LIMIT_21	Value 2, Limit 21	-, -, -	F45	R
R4XB068	LINE_NUM_LIMIT_22	Line Number, Limit 22	-, -, -	F43	R
R4XB069	PT_SAB_LIMIT_22	Point Number and SAB, Limit 22	-, -, -	F44	R
R4XB06A	VALUE1_LIMIT_22	Value 1, Limit 22	-, -, -	F45	R
R4XB06B	VALUE2_LIMIT_22	Value 2, Limit 22	-, -, -	F45	R
R4XB06C	LINE_NUM_LIMIT_23	Line Number, Limit 23	-, -, -	F43	R
R4XB06D	PT_SAB_LIMIT_23	Point Number and SAB, Limit 23	-, -, -	F44	R
R4XB06E	VALUE1_LIMIT_23	Value 1, Limit 23	-, -, -	F45	R
R4XB06F	VALUE2_LIMIT_23	Value 2, Limit 23	-, -, -	F45	R
R4XB070	LINE_NUM_LIMIT_24	Line Number, Limit 24	-, -, -	F43	R
R4XB071	PT_SAB_LIMIT_24	Point Number and SAB, Limit 24	-, -, -	F44	R
R4XB072	VALUE1_LIMIT_24	Value 1, Limit 24	-, -, -	F45	R
R4XB073	VALUE2_LIMIT_24	Value 2, Limit 24	-, -, -	F45	R
R4XB074	LINE_NUM_LIMIT_25	Line Number, Limit 25	-, -, -	F43	R
R4XB075	PT_SAB_LIMIT_25	Point Number and SAB, Limit 25	-, -, -	F44	R
R4XB076	VALUE1_LIMIT_25	Value 1, Limit 25	-, -, -	F45	R
R4XB077	VALUE2_LIMIT_25	Value 2, Limit 25	-, -, -	F45	R
R4XB078	LINE_NUM_LIMIT_26	Line Number, Limit 26	-, -, -	F43	R
R4XB079	PT_SAB_LIMIT_26	Point Number and SAB, Limit 26	-, -, -	F44	R
R4XB07A	VALUE1_LIMIT_26	Value 1, Limit 26	-, -, -	F45	R
R4XB07B	VALUE2_LIMIT_26	Value 2, Limit 26	-, -, -	F45	R
R4XB07C	LINE_NUM_LIMIT_27	Line Number, Limit 27	-, -, -	F43	R
R4XB07D	PT_SAB_LIMIT_27	Point Number and SAB, Limit 27	-, -, -	F44	R
R4XB07E	VALUE1_LIMIT_27	Value 1, Limit 27	-, -, -	F45	R
R4XB07F	VALUE2_LIMIT_27	Value 2, Limit 27	-, -, -	F45	R
R4XB080	LINE_NUM_LIMIT_28	Line Number, Limit 28	-, -, -	F43	R
R4XB081	PT_SAB_LIMIT_28	Point Number and SAB, Limit 28	-, -, -	F44	R
R4XB082	VALUE1_LIMIT_28	Value 1, Limit 28	-, -, -	F45	R
R4XB083	VALUE2_LIMIT_28	Value 2, Limit 28	-, -, -	F45	R
R4XB084	LINE_NUM_LIMIT_29	Line Number, Limit 29	-, -, -	F43	R
R4XB085	PT_SAB_LIMIT_29	Point Number and SAB, Limit 29	-, -, -	F44	R
R4XB086	VALUE1_LIMIT_29	Value 1, Limit 29	-, -, -	F45	R
R4XB087	VALUE2_LIMIT_29	Value 2, Limit 29	-, -, -	F45	R
R4XB088	LINE_NUM_LIMIT_30	Line Number, Limit 30	-, -, -	F43	R
R4XB089	PT_SAB_LIMIT_30	Point Number and SAB, Limit 30	-, -, -	F44	R
R4XB08A	VALUE1_LIMIT_30	Value 1, Limit 30	-, -, -	F45	R
R4XB08B	VALUE2_LIMIT_30	Value 2, Limit 30	-, -, -	F45	R
R4XB08C	LINE_NUM_LIMIT_31	Line Number, Limit 31	-, -, -	F43	R
R4XB08D	PT_SAB_LIMIT_31	Point Number and SAB, Limit 31	-, -, -	F44	R
R4XB08E	VALUE1_LIMIT_31	Value 1, Limit 31	-, -, -	F45	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4XB08F	VALUE2_LIMIT_31	Value 2, Limit 31	-, -, -	F45	R
R4XB090	LINE_NUM_LIMIT_32	Line Number, Limit 32	-, -, -	F43	R
R4XB091	PT_SAB_LIMIT_32	Point Number and SAB, Limit 32	-, -, -	F44	R
R4XB092	VALUE1_LIMIT_32	Value 1, Limit 32	-, -, -	F45	R
R4XB093	VALUE2_LIMIT_32	Value 2, Limit 32	-, -, -	F45	R
R4XB198	PHVOLT_AN_ASP	Phase A-N Voltage Above Setpoint	-, -, -	F45	R
R4XB199	PHVOLT_AN_BSP	Phase A-N Voltage Below Setpoint	-, -, -	F45	R
R4XB19A	PHVOLT_BN_ASP	Phase B-N Voltage Above Setpoint	-, -, -	F45	R
R4XB19B	PHVOLT_BN_BSP	Phase B-N Voltage Below Setpoint	-, -, -	F45	R
R4XB19C	PHVOLT_CN_ASP	Phase C-N Voltage Above Setpoint	-, -, -	F45	R
R4XB19D	PHVOLT_CN_BSP	Phase C-N Voltage Below Setpoint	-, -, -	F45	R
R4XB19E	AUXVOLT_ASP	Auxiliary Voltage Above Setpoint	-, -, -	F45	R
R4XB19F	AUXVOLT_BSP	Auxiliary Voltage Below Setpoint	-, -, -	F45	R
R4XB1A0	PHAMP_A_ASP	Phase A Current Above Setpoint	-, -, -	F45	R
R4XB1A1	PHAMP_A_BSP	Phase A Current Below Setpoint	-, -, -	F45	R
R4XB1A2	PHAMP_B_ASP	Phase B Current Above Setpoint	-, -, -	F45	R
R4XB1A3	PHAMP_B_BSP	Phase B Current Below Setpoint	-, -, -	F45	R
R4XB1A4	PHAMP_C_ASP	Phase C Current Above Setpoint	-, -, -	F45	R
R4XB1A5	PHAMP_C_BSP	Phase C Current Below Setpoint	-, -, -	F45	R
R4XB1A6	MEAAMP_ASP	Measured Neutral Current Above Setpoint	-, -, -	F45	R
R4XB1A7	MEAAMP_BSP	Measured Neutral Current Below Setpoint	-, -, -	F45	R
R4XB1A8	CALAMP_ASP	Calculated Neutral Current Above Setpoint	-, -, -	F45	R
R4XB1A9	CALAMP_BSP	Calculated Neutral Current Below Setpoint	-, -, -	F45	R
R4XB1AA	PHVOLT_AB_ASP	Phase A-B Voltage Above Setpoint	-, -, -	F45	R
R4XB1AB	PHVOLT_AB_BSP	Phase A-B Voltage Below Setpoint	-, -, -	F45	R
R4XB1AC	PHVOLT_BC_ASP	Phase B-C Voltage Above Setpoint	-, -, -	F45	R
R4XB1AD	PHVOLT_BC_BSP	Phase B-C Voltage Below Setpoint	-, -, -	F45	R
R4XB1AE	PHVOLT_CA_ASP	Phase C-A Voltage Above Setpoint	-, -, -	F45	R
R4XB1AF	PHVOLT_CA_BSP	Phase C-A Voltage Below Setpoint	-, -, -	F45	R
R4XB1B0	WF_ENABLE	Waveform Enables	-, -, -		R
R4XB1B2	PQ_ENABLE	PQ Enables	-, -, -		R
R4XB1B8	SAMPLE_RATE	Sample Rate and Total Captures	-, -, -	F50	R
R4XB1B9	MODE_CBEMA_ENABLE	Mode and CBEMA Enable	-, -, -	F51	R
R4XB1BA	HISPEED_IPWF_ENABLE	High Speed Input Waveform and PQ Enables	-, -, -		R
R4XB1BCS8	DI_NAME_1	Input 1 Name	-, -, -		R
R4XB1C4S8	DI_OPEN_1	Input 1 Open Label	-, -, -		R
R4XB1CCS8	DI_CLOSE_1	Input 1 Close Label	-, -, -		R
R4XB1D6	INPUT_1_MODE	Input 1 Mode			
R4XB1D8S8	DI_NAME_2	Input 2 Name	-, -, -		R
R4XB1E0S8	DI_OPEN_2	Input 2 Open Label	-, -, -		R
R4XB1E8S8	DI_CLOSE_2	Input 2 Close Label	-, -, -		R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4XB1F2	INPUT_2_MODE	Input 2 Mode			
R4XB1F4S8	DI_NAME_3	Input 3 Name	-, -, -		R
R4XB1FCS8	DI_OPEN_3	Input 3 Open Label	-, -, -		R
R4XB204S8	DI_CLOSE_3	Input 3 Close Label	-, -, -		R
R4XB20E	INPUT_3_MODE	Input 3 Mode			
R4XB210S8	DI_NAME_4	Input 4 Name	-, -, -		R
R4XB218S8	DI_OPEN_4	Input 4 Open Label	-, -, -		R
R4XB220S8	DI_CLOSE_4	Input 4 Close Label	-, -, -		R
R4XB22A	INPUT_4_MODE	Input 4 Mode			
R4XB22CS8	DI_NAME_5	Input 5 Name	-, -, -		R
R4XB234S8	DI_OPEN_5	Input 5 Open Label	-, -, -		R
R4XB23CS8	DI_CLOSE_5	Input 5 Close Label	-, -, -		R
R4XB246	INPUT_5_MODE	Input 5 Mode			
R4XB248S8	DI_NAME_6	Input 6 Name	-, -, -		R
R4XB250S8	DI_OPEN_6	Input 6 Open Label	-, -, -		R
R4XB258S8	DI_CLOSE_6	Input 6 Close Label	-, -, -		R
R4XB262	INPUT_6_MODE	Input 6 Mode			
R4XB264S8	DI_NAME_7	Input 7 Name	-, -, -		R
R4XB26CS8	DI_OPEN_7	Input 7 Open Label	-, -, -		R
R4XB274S8	DI_CLOSE_7	Input 7 Close Label	-, -, -		R
R4XB27E	INPUT_7_MODE	Input 7 Mode			
R4XB280S8	DI_NAME_8	Input 8 Name	-, -, -		R
R4XB288S8	DI_OPEN_8	Input 8 Open Label	-, -, -		R
R4XB290S8	DI_CLOSE_8	Input 8 Close Label	-, -, -		R
R4XB29A	INPUT_8_MODE	Input 8 Mode			
R4XB354L	PH_CT_NUME	Phase Current CT Ratio Numerator	+999,999.99 / +0.01,1/100 A pri		R
R4XB356L	PH_CT_DENO	Phase Current CT Ratio Denominator	+999,999.99 / +0.01,1/100 A sec		R
R4XB358L	NEUT_CT_NUME	Measured Neutral Current CT Ratio Numerator	+999,999.99 / +0.01,1/100 A pri		R
R4XB35AL	NEUT_CT_DENO	Measured Neutral Current CT Ratio Denominator	+999,999.99 / +0.01,1/100 A sec		R
R4XB35CL	PH_PT_NUME	Phase Voltage PT Ratio Numerator	+999,999.99 / +0.01,1/100 V pri		R
R4XB35EL	PH_PT_DENO	Phase Voltage PT Ratio Denominator	+999,999.99 / +0.01,1/100 V sec		R
R4XB360L	AUX_PT_NUME	Auxiliary Voltage PT Ratio Numerator	+999,999.99 / +0.01,1/100 V pri		R
R4XB362L	AUX_PT_DENO	Auxiliary Voltage PT Ratio Denominator	+999,999.99 / +0.01,1/100 V sec		R
R4XB367	TLC_FWASYNC_ENABLE	Transformer Loss Compensation (TLC) & FWA Sync Enables	-, -, -		R
R4XB37F	NO_SLID_TOULOG_ENABLE	Number of Sliding Windows / Time of Use Log Enable	-, -, -		R
R4XB390S16	METER_DESIG	Meter Designation			R
R4XB398S16	AUX_V_LABEL	Auxiliary Voltage Label R			R

EPM9650Q

■ *ACTUAL VALUES*

FORMAT CODES

The Format Codes column contains references to special formatting which applies to a given register. These formatting characteristics are provided in the Nexus Modbus Protocol Map Instruction Manual.

ACTUAL REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4x0000S16	DEVICE_NAME	Device Name	-, -, -	F1	R
R4x0008S16	FW_STR_1	Firmware Variation String 1	-, -, -	F1	R
R4x0010S16	FW_STR_2	Firmware Variation String 2	-, -, -	F1	R
R4x0018S16	FW_STR_3	Firmware Variation String 3	-, -, -	F1	R
R4x0020S16	FW_STR_4	Firmware Variation String 4	-, -, -	F1	R
R4x0028S16	FW_STR_5	Firmware Variation String 5	-, -, -	F1	R
R4x0030S16	FW_STR_6	Firmware Variation String 6	-, -, -	F1	R
R4x0038S16	FW_STR_7	Firmware Variation String 7	-, -, -	F1	R
R4x0040S16	FW_STR_8	Firmware Variation String 8	-, -, -	F1	R
R4x0050L	ON_TIME_1	On Time	12/31/9999 23:59:59.99,10 msec	F3	R
R4x0052L	ON_TIME_2				
R4x0054L	CURRENT_TIME_1	Current Time	12/31/9999 23:59:59.99,10 msec	F3	R
R4x0056L	CURRENT_TIME_2				
R4x0058L	CUR_DAYOF_WEEK	Current Day of the Week	Monday - Sunday	F4	R/ W
R4x0048L	BOOT_VERNO	Firmware Comm Boot Version Number	9.9.9.9/0.0.0.0,0.0.0.1 version	F2	R
R4x004AL	RUNTIME_VERNO	Nexus Comm Run-Time Version Number	9.9.9.9/0.0.0.0,0.0.0.0.1 version	F2	R
R4x004CL	DSP_BOOT_VERNO	Nexus DSP Boot Version Number	9.9.9.9/0.0.0.0,0.0.0.0.1 version	F2	R
R4x004EL	DSP_RUNTIME_VERN O	Nexus DSP Run-Time Version Number	9.9.9.9/0.0.0.0,0.0.0.0.1 version	F2	R
R4X007AL	TS_VOLT_AN	Tenth Second Phase A-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X007CL	TS_VOLT_BN	Tenth Second Phase B-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X007EL	TS_VOLT_CN	Tenth Second Phase C-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X0080L	TS_VOLT_AUX	Tenth Second Auxiliary Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X0082L	TS_AMPA	Tenth Second Phase A Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X0084L	TS_AMPB	Tenth Second Phase B Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X0086L	TS_AMPC	Tenth Second Phase C Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X0088L	TS_AMPN_MEA	Tenth Second Measured Neutral Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X008AL	TS_VOLT_AB	Tenth Second Phase A-B Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
			65536 V sec		
R4X008CL	TS_VOLT_BC	Tenth Second Phase B-C Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X008EL	TS_VOLT_CA	Tenth Second Phase C-A Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X0090L	TS_VA_A	Tenth Second Phase A VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X0092L	TS_VA_B	Tenth Second Phase B VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X0094L	TS_VA_C	Tenth Second Phase C VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X0096L	TS_VA	Tenth Second Three Phase VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X0098L	TS_VAR_A	Tenth Second Phase A VAR	+32768 VAR / - 32768 VAR,1/ 65536 VAR sec	F7	R
R4X009AL	TS_VAR_B	Tenth Second Phase B VAR	+32768 VAR / - 32768 VAR,1/ 65536 VAR sec	F7	R
R4X009CL	TS_VAR_C	Tenth Second Phase C VAR	+32768 VAR / - 32768 VAR,1/ 65536 VAR sec	F7	R
R4X009EL	TS_VAR	Tenth Second Three Phase VAR	+32768 VAR / - 32768 VAR,1/ 65536 VAR sec	F7	R
R4X00A0L	TS_WATT_A	Tenth Second Phase A Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X00A2L	TS_WATT_B	Tenth Second Phase B Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X00A4L	TS_WATT_C	Tenth Second Phase C Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X00A6L	TS_WATT	Tenth Second Three Phase Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X00A8L	TS_FREQ	Tenth Second Frequency	+ 32768 Hz / 0 Hz,1/ 65536 Hz	F7	R
R4X00AA	TS_PF_A	Tenth Second Phase A Power Factor	3.999 / 0,0.001 PF	F8	R
R4X00AB	TS_PF_B	Tenth Second Phase B Power Factor	3.999 / 0,0.001 PF	F8	R
R4X00AC	TS_PF_C	Tenth Second Phase C Power Factor	3.999 / 0,0.001 PF	F8	R
R4X00AD	TS_PF	Tenth second Three Phase Power Factor	3.999 / 0,0.001 PF	F8	R
R4X00AE	TS_VOLTAN_ANG	Tenth second Phase A-N Voltage to Auxiliary Voltage Phase Angle	+ 180 / - 180,0.01 degree	F9	R
R4X00B5L	OS_VOLT_AN	One Second Phase A-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X00B7L	OS_VOLT_BN	One Second Phase B-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X00B9L	OS_VOLT_CN	One Second Phase C-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X00BBL	OS_VOLT_AUX	One Second Auxiliary Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X00BDL	OS_AMP_A	One Second Phase A Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X00BFL	OS_AMP_B	One Second Phase B Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X00C1L	OS_AMP_C	One Second Phase C Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X00C3L	OS_AMPN_MEA	One Second Measured Neutral Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X00C5L	OS_AMPN_CAL	One second Calculated Neutral Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X00C7L	OS_VOLT_AB	One Second Phase A-B Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X00AFL	OS_VOLT_BC	One Second Phase B-C Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X00C9L	OS_VOLT_CA	One Second Phase C-A Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X00CBL	OS_VA_A	One Second Phase A VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X00CDL	OS_VA_B	One Second Phase B VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X00CFL	OS_VA_C	One Second Phase C VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X00D1L	OS_VA	One Second VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X00D3L	OS_VAR_A	One Second Phase A VAR	+32768 VAR / - 32768 VAR,1/ 65536 VAR sec	F7	R
R4X00D5L	OS_VAR_B	One Second Phase B VAR	+32768 VAR / - 32768 VAR,1/ 65536 VAR sec	F7	R
R4X00D7L	OS_VAR_C	One Second Phase C VAR	+32768 VAR / - 32768 VAR,1/ 65536 VAR sec	F7	R
R4X00D9L	OS_VAR	One Second VAR	+32768 VAR / - 32768 VAR,1/ 65536 VAR sec	F7	R
R4X00DBL	OS_WATT_A	One Second Phase A Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X00DDL	OS_WATT_B	One Second Phase B Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X00DFL	OS_WATT_C	One Second Phase C Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X00E1L	OS_WATT	One Second Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X00E3L	OS_FREQ	One Second Frequency	+ 32768 Hz / 0 H,1/ 65536 Hz	F7	R
R4X00E5	OS_PF_A	One Second Phase A Power Factor	3.999 / 0,0.001 PF	F8	R
R4X00E6	OS_PF_B	One Second Phase B Power Factor	3.999 / 0,0.001 PF	F8	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X00E7	OS_PF_C	One Second Phase C Power Factor	3.999 / 0,0.001 PF	F8	R
R4X00E8	OS_PF	One second Three Phase Power Factor	3.999 / 0,0.001 PF	F8	R
R4X00E9	OS_VOL_IMBAL	One second Voltage Imbalance	+327% / -327%,0.01%	F10	R
R4X00EA	OS_CUR_IMBAL	One second Current Imbalance	+327% / -327%,0.01%	F10	R
R4X00EFL	TA_VOLTAN	Thermal Average Phase A-N Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X00F1L	TA_VOLTBN	Thermal Average Phase B-N Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X00F3L	TA_VOLTCN	Thermal Average Phase C-N Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X00F5L	TA_VOLT_AUX	Thermal Average Auxiliary Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X00F7L	TA_AMP_A	Thermal Average Phase A Current	+ 32768 A / 0 A,1/65536 A sec	F7	R
R4X00F9L	TA_AMP_B	Thermal Average Phase B Current	+ 32768 A / 0 A,1/65536 A sec	F7	R
R4X00FBL	TA_AMP_C	Thermal Average Phase C Current	+ 32768 A / 0 A,1/65536 A sec	F7	R
R4X00FDL	TA_AMPN_MEA	Thermal Average Measured Neutral Current	+ 32768 A / 0 A,1/65536 A sec	F7	R
R4X00FFL	TA_AMPN_CAL	Thermal Average Calculated Neutral Current	+ 32768 A / 0 A,1/65536 A sec	F7	R
R4X0101L	TA_VOLT_AB	Thermal Average Phase A-B Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X0103L	TA_VOLT_BC	Thermal Average Phase B-C Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X0105L	TA_VOLT_CA	Thermal Average Phase C-A Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X0107L	TA_VA_A	Thermal Average Phase A VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X0109L	TA_VA_B	Thermal Average Phase B VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X010BL	TA_VA_C	Thermal Average Phase C VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X010DL	TA_VA	Thermal Average Three Phase VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X010FL	TA_VAR_A	Thermal Average Phase A VAR	+32768 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R
R4X0111L	TA_VAR_B	Thermal Average Phase B VAR	+32768 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R
R4X0113L	TA_VAR_C	Thermal Average Phase C VAR	+32768 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R
R4X0115L	TA_VAR	Thermal Average Three Phase VAR	+32768 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X0117L	TA_WATT_A	Thermal Average Phase A Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X0119L	TA_WATT_B	Thermal Average Phase B Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X011BL	TA_WATT_C	Thermal Average Phase C Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X011DL	TA_WATT	Thermal Average Three Phase Watts	+32768 W / -32768 W,1/ 65536 W sec	F7	R
R4X011FL	TA_FREQ	Thermal Average Frequency	+ 32768 Hz / 0 Hz,1/ 65536 Hz	F7	R
R4X0121	TA_PF_A	Thermal Average Phase A Power Factor	3.999 / 0,0.001 PF	F8	R
R4X0122	TA_PF_B	Thermal Average Phase B Power Factor	3.999 / 0,0.001 PF	F8	R
R4X0123	TA_PF_C	Thermal Average Phase C Power Factor	3.999 / 0,0.001 PF	F8	R
R4X0124	TA_PF	Thermal Average Three Phase Power Factor	3.999 / 0,0.001 PF	F8	R
R4X0125	TA_VOL_IMBAL	Thermal Average Voltage Imbalance	+327% / -327%,0.01%	F10	R
R4X0126	TA_CUR_IMBAL	Thermal Average Current Imbalance	+327% / -327%,0.01%	F10	R
R4X012BL	MAXTA_VOLTAN	Maximum Thermal Average Phase A-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X012DL	MAXTA_VOLTBN	Maximum Thermal Average Phase B-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X012FL	MAXTA_VOLTCN	Maximum Thermal Average Phase C-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X0131L	MAXTA_VAUX	Maximum Thermal Average Auxiliary Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X0133L	MAXTA_AMP A	Maximum Thermal Average Phase A Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X0135L	MAXTA_AMP B	Maximum Thermal Average Phase B Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X0137L	MAXTA_AMP C	Maximum Thermal Average Phase C Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X0139L	MAXTA_AMPN_ME	Maximum Thermal Average Measured Neutral Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X013BL	MAXTA_AMPN_CA	Maximum Thermal Average Calculated Neutral Current	+ 32768 A / 0 A,1/ 65536 A sec	F7	R
R4X013DL	MAXTA_VOLTAB	Maximum Thermal Average Phase A-B Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X013FL	MAXTA_VOLTBC	Maximum Thermal Average Phase B-C Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X0141L	MAXTA_VOLTCA	Maximum Thermal Average Phase C-A Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X0143L	MAXTA_VA_A	Maximum Thermal Average Phase A VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X0145L	MAXTA_VA_B	Maximum Thermal Average Phase B VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X0147L	MAXTA_VA_C	Maximum Thermal Average Phase C VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X0149L	MAXTA_VA	Maximum Thermal Average VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X014BL	MAXTA_POSVAR_A	Maximum Thermal Average Phase A Positive VAR	+32768 VAR / 0 VAR,1/ 65536 VAR sec	F7	R
R4X014DL	MAXTA_POSVAR_B	Maximum Thermal Average Phase B Positive VAR	+32768 VAR / 0 VAR,1/ 65536 VAR sec	F7	R
R4X014FL	MAXTA_POSVAR_C	Maximum Thermal Average Phase C Positive VAR	+32768 VAR / 0 VAR,1/ 65536 VAR sec	F7	R
R4X0151L	MAXTA_POSVAR	Maximum Thermal Average Positive VAR	+32768 VAR / 0 VAR,1/ 65536 VAR sec	F7	R
R4X0153L	MAXTA_NEGVAR_A	Maximum Thermal Average Phase A Negative VAR	0 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R
R4X0155L	MAXTA_NEGVAR_B	Maximum Thermal Average Phase B Negative VAR	0 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R
R4X0157L	MAXTA_NEGVAR_C	Maximum Thermal Average Phase C Negative VAR	0 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R
R4X0159L	MAXTA_NEGVAR	Maximum Thermal Average Negative VAR	0 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R
R4X015BL	MAXTA_POSWATT_A	Maximum Thermal Average Phase A Watts Positive	+32768 W / 0 W,1/ 65536 VAR sec	F7	R
R4X015DL	MAXTA_POSWATT_B	Maximum Thermal Average Phase B Watts Positive	+32768 W / 0 W,1/ 65536 VAR sec	F7	R
R4X015FL	MAXTA_POSWATT_C	Maximum Thermal Average Phase C Watts Positive	+32768 W / 0 W,1/ 65536 VAR sec	F7	R
R4X0161L	MAXTA_POSWATT	Maximum Thermal Average Watts Positive	+32768 W / 0 W,1/ 65536 VAR sec	F7	R
R4X0163L	MAXTA_NEGWATT_A	Maximum Thermal Average Phase A Watts Negative	0 W / -32768 W,1/ 65536 VAR sec	F7	R
R4X0165L	MAXTA_NEGWATT_B	Maximum Thermal Average Phase B Watts Negative	0 W / -32768 W,1/ 65536 VAR sec	F7	R
R4X0167L	MAXTA_NEGWATT_C	Maximum Thermal Average Phase C Watts Negative	0 W / -32768 W,1/ 65536 VAR sec	F7	R
R4X0169L	MAXTA_NEGWATT	Maximum Thermal Average Watts Negative	0 W / -32768 W,1/ 65536 VAR sec	F7	R
R4X016BL	MAXTA_FREQ	Maximum Thermal Average Frequency	+ 32768 Hz / 0 Hz,1/ 65536 VAR sec	F7	R
R4X016D	MAXTA_PF1_A	Maximum Thermal Average Phase A Power Factor Quadrant 1	0.999 / 0,0.001 PF	F8	R
R4X016E	MAXTA_PF1_B	Maximum Thermal Average Phase B Power Factor Quadrant 1	0.999 / 0,0.001 PF	F8	R
R4X016F	MAXTA_PF1_C	Maximum Thermal Average Phase C Power Factor Quadrant 1	0.999 / 0,0.001 PF	F8	R
R4X0170	MAXTA_PF1	Maximum Thermal Average Power Factor Quadrant 1	0.999 / 0,0.001 PF	F8	R
R4X0171	MAXTA_PF2_A	Maximum Thermal Average Phase	1.999 /	F8	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
		A Power Factor Quadrant 2	/1.000,0.001 PF		
R4X0172	MAXTA_PF2_B	Maximum Thermal Average Phase B Power Factor Quadrant 2	1.999 / /1.000,0.001 PF	F8	R
R4X0173	MAXTA_PF2_C	Maximum Thermal Average Phase C Power Factor Quadrant 2	1.999 / /1.000,0.001 PF	F8	R
R4X0174	MAXTA_PF2	Maximum Thermal Average Power Factor Quadrant 2	1.999 / /1.000,0.001 PF	F8	R
R4X0175	MAXTA_PF3_A	Maximum Thermal Average Phase A Power Factor Quadrant 3	2.999 / 2.000,0.001 PF	F8	R
R4X0176	MAXTA_PF3_B	Maximum Thermal Average Phase B Power Factor Quadrant 3	2.999 / 2.000,0.001 PF	F8	R
R4X0177	MAXTA_PF3_C	Maximum Thermal Average Phase C Power Factor Quadrant 3	2.999 / 2.000,0.001 PF	F8	R
R4X0178	MAXTA_PF3	Maximum Thermal Average Power Factor Quadrant 3	2.999 / 2.000,0.001 PF	F8	R
R4X0179	MAXTA_PF4_A	Maximum Thermal Average Phase A Power Factor Quadrant 4	3.999 / 3.000,0.001 PF	F8	R
R4X017A	MAXTA_PF4_B	Maximum Thermal Average Phase B Power Factor Quadrant 4	3.999 / 3.000,0.001 PF	F8	R
R4X017B	MAXTA_PF4_C	Maximum Thermal Average Phase C Power Factor Quadrant 4	3.999 / 3.000,0.001 PF	F8	R
R4X017C	MAXTA_PF4	Maximum Thermal Average Power Factor Quadrant 4	3.999 / 3.000,0.001 PF	F8	R
R4X017D	MAXTA_VOL_IMBAL	Maximum Thermal Average Voltage Imbalance	+327% / - 327%,0.01%	F10	R
R4X017E	MAXTA_CUR_IMBAL	Maximum Thermal Average Current Imbalance	+327% / - 327%,0.01%	F10	R
R4X017F	MAXTHD_VOLTA	Maximum THD Phase A-N / A-B Voltage	+327% / - 327%,0.01%	F10	R
R4X0180	MAXTHD_VOLTB	Maximum THD Phase B-N / B-C Voltage	+327% / - 327%,0.01%	F10	R
R4X0181	MAXTHD_VOLTC	Maximum THD Phase C-N / C-A Voltage	+327% / - 327%,0.01%	F10	R
R4X0182	MAXTHD_AMP A	Maximum THD Phase A Current	+327% / - 327%,0.01%	F10	R
R4X0183	MAXTHD_AMP B	Maximum THD Phase B Current	+327% / - 327%,0.01%	F10	R
R4X0184	MAXTHD_AMP C	Maximum THD Phase C Current	+327% / - 327%,0.01%	F10	R
R4X0185	MAXKF_AMP A	Maximum K-Factor Phase A Current	+327% / - 327%,0.01%	F10	R
R4X0186	MAXKF_AMP B	Maximum K-Factor Phase B Current	+327% / - 327%,0.01%	F10	R
R4X0187	MAXKF_AMP C	Maximum K-Factor Phase C Current	+327% / - 327%,0.01%	F10	R
R4X0188L	COIN_TAVAR_MAX_P WATT	Coincident Thermal Average VAR for Maximum Positive Watt	+32768 VAR / - 32768 VAR,1/ 65536 W sec	F7	R
R4X0188AL	COIN_TAVAR_MAX_N WATT	Coincident Thermal Average VAR for Maximum Negative Watt	+32768 VAR / - 32768 VAR,1/ 65536 W sec	F7	R
R4X0190L	MINTA_VOLTAN	Minimum Thermal Average Phase A-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R
R4X0192L	MINTA_VOLTBN	Minimum Thermal Average Phase B-N Voltage	+ 32768 V / 0 V,1/ 65536 V sec	F7	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X0194L	MINTA_VOLTCLN	Minimum Thermal Average Phase C-N Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X0196L	MINTA_VAUX	Minimum Thermal Average Auxiliary Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X0198L	MINTA_AMP A	Minimum Thermal Average Phase A Current	+ 32768 A / 0 A,1/65536 A sec	F7	R
R4X019AL	MINTA_AMPB	Minimum Thermal Average Phase B Current	+ 32768 A / 0 A,1/65536 A sec	F7	R
R4X019CL	MINTA_AMP C	Minimum Thermal Average Phase C Current	+ 32768 A / 0 A,1/65536 A sec	F7	R
R4X019EL	MINTA_AMPN_ME	Minimum Thermal Average Measured Neutral Current	+ 32768 A / 0 A,1/65536 A sec	F7	R
R4X01A0L	MINTA_AMPN_CA	Minimum Thermal Average Calculated Neutral Current	+ 32768 A / 0 A,1/65536 A sec	F7	R
R4X01A2L	MINTA_VOLTAB	Minimum Thermal Average Phase A-B Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X01A4L	MINTA_VOLTBC	Minimum Thermal Average Phase B-C Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X01A6L	MINTA_VOLTCA	Minimum Thermal Average Phase C-A Voltage	+ 32768 V / 0 V,1/65536 V sec	F7	R
R4X01A8L	MINTA_VA_A	Minimum Thermal Average Phase A VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X01AAL	MINTA_VA_B	Minimum Thermal Average Phase B VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X01ACL	MINTA_VA_C	Minimum Thermal Average Phase C VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X01AEL	MINTA_VA	Minimum Thermal Average VA	+32768 VA / 0 VA,1/ 65536 VA sec	F7	R
R4X01B0L	MINTA_POSVAR_A	Minimum Thermal Average Phase A Positive VAR	+32768 VAR / 0 VAR,1/ 65536 VAR sec	F7	R
R4X01B2L	MINTA_POSVAR_B	Minimum Thermal Average Phase B Positive VAR	+32768 VAR / 0 VAR,1/ 65536 VAR sec	F7	R
R4X01B4L	MINTA_POSVAR_C	Minimum Thermal Average Phase C Positive VAR	+32768 VAR / 0 VAR,1/ 65536 VAR sec	F7	R
R4X01B6L	MINTA_POSVAR	Minimum Thermal Average Positive VAR	+32768 VAR / 0 VAR,1/ 65536 VAR sec	F7	R
R4X01B8L	MINTA_NEGVAR_A	Minimum Thermal Average Phase A Negative VAR	0 VAR / -32768 VAR,1/65536 VAR sec	F7	R
R4X01BAL	MINTA_NEGVAR_B	Minimum Thermal Average Phase B Negative VAR	0 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R
R4X01BCL	MINTA_NEGVAR_C	Minimum Thermal Average Phase C Negative VAR	0 VAR / -32768 VAR,1/ 65536 VAR sec	F7	R
R4X01BEL	MINTA_NEGVAR	Minimum Thermal Average Negative VAR	0 VAR / -32768 VAR,1/ 65536 VAR	F7	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
			sec		
R4X01C0L	MINTA_POSWATT_A	Minimum Thermal Average Phase A Watts Positive	+32768 W / 0 W,1/65536 VAR sec	F7	R
R4X01C2L	MINTA_POSWATT_B	Minimum Thermal Average Phase B Watts Positive	+32768 W / 0 W,1/65536 VAR sec	F7	R
R4X01C4L	MINTA_POSWATT_C	Minimum Thermal Average Phase C Watts Positive	+32768 W / 0 W,1/65536 VAR sec	F7	R
R4X01C6L	MINTA_POSWATT	Minimum Thermal Average Watts Positive	+32768 W / 0 W,1/65536 VAR sec	F7	R
R4X01C8L	MINTA_NEGWATT_A	Minimum Thermal Average Phase A Watts Negative	0 W / -32768 W,1/65536 VAR sec	F7	R
R4X01CAL	MINTA_NEGWATT_B	Minimum Thermal Average Phase B Watts Negative	0 W / -32768 W,1/65536 VAR sec	F7	R
R4X01CCL	MINTA_NEGWATT_C	Minimum Thermal Average Phase C Watts Negative	0 W / -32768 W,1/65536 VAR sec	F7	R
R4X01CEL	MINTA_NEGWATT	Minimum Thermal Average Watts Negative	0 W / -32768 W,1/65536 VAR sec	F7	R
R4X01D0L	MINTA_FREQ	Minimum Thermal Average Frequency	+ 32768 Hz / 0 Hz,1/65536 VAR sec	F7	R
R4X01D2	MINTA_PF1_A	Minimum Thermal Average Phase A Power Factor Quadrant 1	0.999 / 0,0.001 PF	F8	R
R4X01D3	MINTA_PF1_B	Minimum Thermal Average Phase B Power Factor Quadrant 1	0.999 / 0,0.001 PF	F8	R
R4X01D4	MINTA_PF1_C	Minimum Thermal Average Phase C Power Factor Quadrant 1	0.999 / 0,0.001 PF	F8	R
R4X01D5	MINTA_PF1	Minimum Thermal Average Power Factor Quadrant 1	0.999 / 0,0.001 PF	F8	R
R4X01D6	MINTA_PF2_A	Minimum Thermal Average Phase A Power Factor Quadrant 2	1.999 / /1.000,0.001 PF	F8	R
R4X01D7	MINTA_PF2_B	Minimum Thermal Average Phase B Power Factor Quadrant 2	1.999 / /1.000,0.001 PF	F8	R
R4X01D8	MINTA_PF2_C	Minimum Thermal Average Phase C Power Factor Quadrant 2	1.999 / /1.000,0.001 PF	F8	R
R4X01D9	MINTA_PF2	Minimum Thermal Average Power Factor Quadrant 2	1.999 / /1.000,0.001 PF	F8	R
R4X01DA	MINTA_PF3_A	Minimum Thermal Average Phase A Power Factor Quadrant 3	2.999 / 2.000,0.001 PF	F8	R
R4X01DB	MINTA_PF3_B	Minimum Thermal Average Phase B Power Factor Quadrant 3	2.999 / 2.000,0.001 PF	F8	R
R4X01DC	MINTA_PF3_C	Minimum Thermal Average Phase C Power Factor Quadrant 3	2.999 / 2.000,0.001 PF	F8	R
R4X01DD	MINTA_PF3	Minimum Thermal Average Power Factor Quadrant 3	2.999 / 2.000,0.001 PF	F8	R
R4X01DE	MINTA_PF4_A	Minimum Thermal Average Phase A Power Factor Quadrant 4	3.999 / 3.000,0.001 PF	F8	R
R4X01DF	MINTA_PF4_B	Minimum Thermal Average Phase B Power Factor Quadrant 4	3.999 / 3.000,0.001 PF	F8	R
R4X01E0	MINTA_PF4_C	Minimum Thermal Average Phase C Power Factor Quadrant 4	3.999 / 3.000,0.001 PF	F8	R
R4X01E1	MINTA_PF4	Minimum Thermal Average Power Factor Quadrant 4	3.999 / 3.000,0.001 PF	F8	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X01E2	MINTA_VOL_IMBAL	Minimum Thermal Average Voltage Imbalance	+327% / -327%,0.01%	F10	R
R4X01E3	MINTA_CUR_IMBAL	Minimum Thermal Average Current Imbalance	+327% / -327%,0.01%	F10	R
R4X01E4	MINTHD_VOLTA	Minimum THD Phase A-N / A-B Voltage	+327% / -327%,0.01%	F10	R
R4X01E5	MINTHD_VOLTB	Minimum THD Phase B-N / B-C Voltage	+327% / -327%,0.01%	F10	R
R4X01E6	MINTHD_VOLTTC	Minimum THD Phase C-N / C-A Voltage	+327% / -327%,0.01%	F10	R
R4X01E7	MINTHD_AMP A	Minimum THD Phase A Current	+327% / -327%,0.01%	F10	R
R4X01E8	MINTHD_AMP B	Minimum THD Phase B Current	+327% / -327%,0.01%	F10	R
R4X01E9	MINTHD_AMP C	Minimum THD Phase C Current	+327% / -327%,0.01%	F10	R
R4X01EA	MINKF_AMP A	Minimum K-Factor Phase A Current	+327% / -327%,0.01%	F10	R
R4X01EB	MINKF_AMP B	Minimum K-Factor Phase B Current	+327% / -327%,0.01%	F10	R
R4X01EC	MINKF_AMP C	Minimum K-Factor Phase C Current	+327% / -327%,0.01%	F10	R
R4X01EDL	COIN_TAVAR_MIN_P WATT	Coincident Thermal Average VAR for Minimum Positive Watt	+32768 VAR / -32768 VAR,1/65536 W sec	F7	R
R4X01EFL	COIN_TAVAR_MIN_N WATT	Coincident Thermal Average VAR for Minimum Negative Watt	+32768 VAR / -32768 VAR,1/65536 W sec	F7	R
R4X03D5L	VA_HR_1	VAhour	+9,999,999,999,999,999 VAh / 0 VAh,1VAH	F11	R
R4X03D7L	VA_HR_2				
R4X03D9L	POSVAR_HR_1	Positive VARhour	+9,999,999,999,999,999 VARh / 0 VARh,1VARH	F11	R
R4X03DBL	POSVAR_HR_2				
R4X03DDL	NEGVAR_HR_1	Negative VARhour	0 VARh / -9,999,999,999,999,999 VARh,1VARH	F11	R
R4X03DFL	NEGVAR_HR_2				
R4X03E1L	POSWATT_HR_1	Positive Watthour	+9,999,999,999,999,999 Wh / 0 Wh,1WH	F11	R
R4X03E3L	POSWATT_HR_2				
R4X03E5L	NEGWATT_HR_1	Negative Watthour	0 Wh / -9,999,999,999,999,999 Wh,1WH	F11	R
R4X03E7L	NEGWATT_HR_2				
R4X03E9	VA_HR_3	VAhour	+9,999,999,999,999,999 VAh / 0 VAh,1VAH	F11	R
R4X03EA	VA_HR_4				
R4X03EB	VA_HR_5				

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X03EC	VA_HR_6				
R4X03ED	POSVAR_HR_3	Positive VARhour	+9,999,999,999,999,999 VARh / 0 VARh,1VARH	F11	R
R4X03EE	POSVAR_HR_4				
R4X03EF	POSVAR_HR_5				
R4X03F0	POSVAR_HR_6				
R4X03F1	NEGVAR_HR_3	Negative VARhour	0 VARh / -9,999,999,999,999,999 VARh,1VARH	F11	R
R4X03F2	NEGVAR_HR_4				
R4X03F3	NEGVAR_HR_5				
R4X03F4	NEGVAR_HR_6				
R4X03F5	POSWATT_HR_3	Positive Watthour	+9,999,999,999,999,999 Wh / 0 Wh,1WH	F11	R
R4X03F6	POSWATT_HR_4				
R4X03F7	POSWATT_HR_5				
R4X03F8	POSWATT_HR_6				
R4X03F9	NEGWATT_HR_3	Negative Watthour	0 Wh / -9,999,999,999,999,999 Wh,1WH	F11	R
R4X03FA	NEGWATT_HR_4				
R4X03FB	NEGWATT_HR_5				
R4X03FC	NEGWATT_HR_6				
R4X09FD	THDVOLT_AN	Phase A-N / Phase A-B Voltage THD	+327% / -327%,0.01%	F10	R
R4X09FE	THDVOLT_BN	Phase B-N / Phase B-C Voltage THD	+327% / -327%,0.01%	F10	R
R4X09FF	THDVOLT_CN	Phase C-N / Phase C-A Voltage THD	+327% / -327%,0.01%	F10	R
R4X0A00	THDAMP_A	Phase A Current THD	+327% / -327%,0.01%	F10	R
R4X0A01	THDAMP_B	Phase B Current THD	+327% / -327%,0.01%	F10	R
R4X0A02	THDAMP_C	Phase C Current THD	+327% / -327%,0.01%	F10	R
R4X0A03	KFAMP_A	Phase A Current K-Factor	+327% / -327%,0.01%	F10	R
R4X0A04	KFAMP_B	Phase B Current K-Factor	+327% / -327%,0.01%	F10	R
R4X0A05	KFAMP_C	Phase C Current K-Factor	+327% / -327%,0.01%	F10	R
R4X0A22	VOLT_AN_ANG	Phase Angle Phase A-N Voltage	+180 degree / -180 degree,0.01 degree	F9	R
R4X0A23	VOLT_BN_ANG	Phase Angle Phase B-N Voltage	+180 degree / -180 degree,0.01 degree	F9	R
R4X0A24	VOLT_CN_ANG	Phase Angle Phase C-N Voltage	+180 degree / -180 degree,0.01 degree	F9	R
R4X0A25	AMPA_ANG	Phase Angle Phase A Current	+180 degree / -180 degree,0.01 degree	F9	R
R4X0A26	AMPB_ANG	Phase Angle Phase B Current	+180 degree / -180	F9	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
			degree,0.01 degree		
R4X0A27	AMPC_ANG	Phase Angle Phase C Current	+180 degree / -180 degree,0.01 degree	F9	R
R4X0A28	VOLT_AB_ANG	Phase Angle Phase A-B Voltage	+180 degree / -180 degree,0.01 degree	F9	R
R4X0A29	VOLT_BC_ANG	Phase Angle Phase B-C Voltage	+180 degree / -180 degree,0.01 degree	F9	R
R4X0A2A	VOLT_CA_ANG	Phase Angle Phase C-A Voltage	+180 degree / -180 degree,0.01 degree	F9	R
R4X0A2B	PH_SEQ	Voltage Phase Sequence		F13	
R4X0A31L	FW_AVE_VA	Fixed Window Average VA	+32768 VA / 0 VA,1/ 65536 VA sec		R
R4X0A33L	FW_AVE_VAR	Fixed Window Average VAR	+32768 VAR / -32768 VAR,	1/ 65536 VAR sec	R
R4X0A35L	FW_AVE_WATT	Fixed Window Average Watt	+32768 W / -32768 W,1/ 65536 W sec		R
R4X0A37L	FW_AVE_VA_MAX	Maximum Fixed Window Average VA	+32768 VA / 0 VA,1/ 65536 VA sec		R
R4X0A39L	FW_AVE_POSVAR_MAX	Maximum Fixed Window Average Positive VAR	+32768 VAR / 0 VAR,1/ 65536 VAR sec		R
R4X0A3BL	FW_AVE_NEGVAR_MAX	Maximum Fixed Window Average Negative VAR	0 VAR / -32768 VAR,1/ 65536 VAR sec		R
R4X0A3DL	FW_AVE_POSWATT_MAX	Maximum Fixed Window Average Positive Watt	+32768 W / 0 W,1/ 65536 W sec		R
R4X0A3FL	FW_AVE_NEGWATT_MAX	Maximum Fixed Window Average Negative Watt	0 W / -32768 W,1/ 65536 W sec		R
R4X0A41L	FW_AVE_VA_MIN	Minimum Fixed Window Average VA	+32768 VA / 0 VA,1/ 65536 VA sec		R
R4X0A43L	FW_AVE_POSVAR_MIN	Minimum Fixed Window Average Positive VAR	+32768 VAR / 0 VAR,1/ 65536 VAR sec		R
R4X0A45L	FW_AVE_NEGVAR_MIN	Minimum Fixed Window Average Negative VAR	0 VAR / -32768 VAR,1/ 65536 VAR sec		R
R4X0A47L	FW_AVE_POSWATT_MIN	Minimum Fixed Window Average Positive Watt	+32768 W / 0 W,1/ 65536 W sec		R
R4X0A49L	FW_AVE_NEGWATT_MIN	Minimum Fixed Window Average Negative Watt	0 W / -32768 W,1/ 65536 W sec		R
R4X0A4BL	FW_AVEVAR_MAX_P WATT	Coincident Fixed Window Average VAR for Maximum Positive Watt	+32768 VAR / -32768 VAR,1/ 65536 VAR sec		R
R4X0A4DL	FW_AVEVAR_MAX_N WATT	Coincident Fixed Window Average VAR for Maximum Negative Watt	+32768 VAR / -32768 VAR,1/ 65536 VAR sec		R
R4X0A4FL	FW_AVEVAR_MIN_P WATT	Coincident Fixed Window Average VAR for Minimum Positive Watt	+32768 VAR / -32768 VAR,1/ 65536 VAR sec		R
R4X0A51L	FW_AVEVAR_MIN_N	Coincident Fixed Window Average	+32768 VAR / -		R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
	WATT	VAR for Minimum Negative Watt	32768 VAR, 1/ 65536 VAR sec		
R4X0A80L	SW_AVEVA_PRE	Predictive Sliding Window Average VA	+32768 VA / 0 VA, 1/ 65536 VA sec		R
R4X0A82L	SW_AVEVAR_PRE	Predictive Sliding Window Average VAR	+32768 VAR / - 32768 VAR, 1/ 65536 VAR sec		R
R4X0A84L	SW_AVEWATT_PRE	Predictive Sliding Window Average Watt	+32768 W / -32768 W, 1/ 65536 W sec		R
R4X0A86L	SW_AVEVA	Sliding Window Average VA	+32768 VA / 0 VA, 1/ 65536 VA sec		R
R4X0A88L	SW_AVEVAR	Sliding Window Average VAR	+32768 VAR / - 32768 VAR, 1/ 65536 VAR sec		R
R4X0A8AL	SW_AVEWATT	Sliding Window Average Watt	+32768 W / -32768 W, 1/ 65536 W sec		R
R4X0A8CL	SW_MAX_AVEVA	Maximum Sliding Window Average VA	+32768 VA / 0 VA, 1/ 65536 VA sec		R
R4X0A8EL	SW_MAX_POS_AVEVAR	Maximum Sliding Window Average Positive VAR	+32768 VAR / 0 VAR, 1/ 65536 VAR sec		R
R4X0A90L	SW_MAX_NEG_AVEVAR	Maximum Sliding Window Average Negative VAR	0 VAR / -32768 VAR, 1/ 65536 VAR sec		R
R4X0A92L	SW_MAX_POS_AVEWATT	Maximum Sliding Window Average Positive Watt	+32768 W / 0 W, 1/ 65536 W sec		R
R4X0A94L	SW_MAX_NEG_AVEWATT	Maximum Sliding Window Average Negative Watt	0 W / -32768 W, 1/ 65536 W sec		R
R4X0A96L	SW_MIN_AVEVA	Minimum Sliding Window Average VA	+32768 VA / 0 VA, 1/ 65536 VA sec		R
R4X0A98L	SW_MIN_POS_AVEVAR	Minimum Sliding Window Average Positive VAR	+32768 VAR / 0 VAR, 1/ 65536 VAR sec		R
R4X0A9AL	SW_MIN_NEG_AVEVAR	Minimum Sliding Window Average Negative VAR	0 VAR / -32768 VAR, 1/ 65536 VAR sec		R
R4X0A9CL	SW_MIN_POS_AVEWATT	Minimum Sliding Window Average Positive Watt	+32768 W / 0 W, 1/ 65536 W sec		R
R4X0A9EL	SW_MIN_NEG_AVEWATT	Minimum Sliding Window Average Negative Watt	0 W / -32768 W, 1/ 65536 W sec		R
R4X0AA0L	SW_AVEVAR_MAX_P WATT	Coincident Sliding Window Average VAR for Maximum Positive Watt	+32768 VAR / - 32768 VAR, 1/ 65536 VAR sec		R
R4X0AA2L	SW_AVEVAR_MAX_N WATT	Coincident Sliding Window Average VAR for Maximum Negative Watt	+32768 VAR / - 32768 VAR, 1/ 65536 VAR sec		R
R4X0AA4L	SW_AVEVAR_MIN_P WATT	Coincident Sliding Window Average VAR for Minimum Positive Watt	+32768 VAR / - 32768 VAR, 1/ 65536 VAR sec		R
R4X0AA6L	SW_AVEVAR_MIN_N WATT	Coincident Sliding Window Average VAR for Minimum Negative Watt	+32768 VAR / - 32768 VAR, 1/		R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
			65536 VAR sec		
R4X0AD5	DI_MODULE1	Digital Input States, Module 1	-, -, -	F17	R
R4X0AD6L	MOD1_DI_1	Digital Input Accumulation 1, Module 1	-, -, -	F18	R
R4X0AD8L	MOD1_DI_2	Digital Input Accumulation 2, Module 1	-, -, -	F18	R
R4X0ADAL	MOD1_DI_3	Digital Input Accumulation 3, Module 1	-, -, -	F18	R
R4X0ADCL	MOD1_DI_4	Digital Input Accumulation 4, Module 1	-, -, -	F18	R
R4X0ADEL	MOD1_DI_5	Digital Input Accumulation 5, Module 1	-, -, -	F18	R
R4X0AE0L	MOD1_DI_6	Digital Input Accumulation 6, Module 1	-, -, -	F18	R
R4X0AE2L	MOD1_DI_7	Digital Input Accumulation 7, Module 1	-, -, -	F18	R
R4X0AE4L	MOD1_DI_8	Digital Input Accumulation 8, Module 1	-, -, -	F18	R
R4X0AE6	DI_MODULE2	Digital Input States, Module 2	-, -, -	F17	R
R4X0AE7L	MOD2_DI_1	Digital Input Accumulation 1, Module 2	-, -, -	F18	R
R4X0AE9L	MOD2_DI_2	Digital Input Accumulation 2, Module 2	-, -, -	F18	R
R4X0AEBL	MOD2_DI_3	Digital Input Accumulation 3, Module 2	-, -, -	F18	R
R4X0AEDL	MOD2_DI_4	Digital Input Accumulation 4, Module 2	-, -, -	F18	R
R4X0AEFL	MOD2_DI_5	Digital Input Accumulation 5, Module 2	-, -, -	F18	R
R4X0AF1L	MOD2_DI_6	Digital Input Accumulation 6, Module 2	-, -, -	F18	R
R4X0AF3L	MOD2_DI_7	Digital Input Accumulation 7, Module 2	-, -, -	F18	R
R4X0AF5L	MOD2_DI_8	Digital Input Accumulation 8, Module 2	-, -, -	F18	R
R4X0AF7	DI_MODULE3	Digital Input States, Module 3	-, -, -	F17	R
R4X0AF8L	MOD3_DI_1	Digital Input Accumulation 1, Module 3	-, -, -	F18	R
R4X0AFAL	MOD3_DI_2	Digital Input Accumulation 2, Module 3	-, -, -	F18	R
R4X0AFCL	MOD3_DI_3	Digital Input Accumulation 3, Module 3	-, -, -	F18	R
R4X0AFEL	MOD3_DI_4	Digital Input Accumulation 4, Module 3	-, -, -	F18	R
R4X0B00L	MOD3_DI_5	Digital Input Accumulation 5, Module 3	-, -, -	F18	R
R4X0B02L	MOD3_DI_6	Digital Input Accumulation 6, Module 3	-, -, -	F18	R
R4X0B04L	MOD3_DI_7	Digital Input Accumulation 7, Module 3	-, -, -	F18	R
R4X0B06L	MOD3_DI_8	Digital Input Accumulation 8, Module 3	-, -, -	F18	R
R4X0B08	DI_MODULE4	Digital Input States, Module 4	-, -, -	F17	R
R4X0B09L	MOD4_DI_1	Digital Input Accumulation 1,	-, -, -	F18	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
		Module 4			
R4X0B0BL	MOD4_DI_2	Digital Input Accumulation 2, Module 4	-, -, -	F18	R
R4X0B0DL	MOD4_DI_3	Digital Input Accumulation 3, Module 4	-, -, -	F18	R
R4X0B0FL	MOD4_DI_4	Digital Input Accumulation 4, Module 4	-, -, -	F18	R
R4X0B11L	MOD4_DI_5	Digital Input Accumulation 5, Module 4	-, -, -	F18	R
R4X0B13L	MOD4_DI_6	Digital Input Accumulation 6, Module 4	-, -, -	F18	R
R4X0B15L	MOD4_DI_7	Digital Input Accumulation 7, Module 4	-, -, -	F18	R
R4X0B17L	MOD4_DI_8	Digital Input Accumulation 8, Module 4	-, -, -	F18	R
R4X1674	DI_COUNTER_11	Scaled Pulse Accumulation Internal Input 1	18,446,744,073,709,55 1,615 / 0,1 Unit	F20	R
R4X1675	DI_COUNTER_12				
R4X1676	DI_COUNTER_13				
R4X1677	DI_COUNTER_14				
R4X1678	DI_COUNTER_21	Scaled Pulse Accumulation Internal Input 2	18,446,744,073,709,55 1,615 / 0,1 Unit	F20	R
R4X1679	DI_COUNTER_22				
R4X167A	DI_COUNTER_23				
R4X167B	DI_COUNTER_24				
R4X167C	DI_COUNTER_31	Scaled Pulse Accumulation Internal Input 3	18,446,744,073,709,55 1,615 / 0,1 Unit	F20	R
R4X167D	DI_COUNTER_32				
R4X167E	DI_COUNTER_33				
R4X167F	DI_COUNTER_34				
R4X1680	DI_COUNTER_41	Scaled Pulse Accumulation Internal Input 4	18,446,744,073,709,55 1,615 / 0,1 Unit	F20	R
R4X1681	DI_COUNTER_42				
R4X1682	DI_COUNTER_43				
R4X1683	DI_COUNTER_44				
R4X1684	DI_COUNTER_51	Scaled Pulse Accumulation Internal Input 5	18,446,744,073,709,55 1,615 / 0,1 Unit	F20	R
R4X1685	DI_COUNTER_52				
R4X1686	DI_COUNTER_53				
R4X1687	DI_COUNTER_54				
R4X1688	DI_COUNTER_61	Scaled Pulse Accumulation Internal Input 6	18,446,744,073,709,55 1,615 / 0,1 Unit	F20	R
R4X1689	DI_COUNTER_62				
R4X168A	DI_COUNTER_63				
R4X168B	DI_COUNTER_64				
R4X168C	DI_COUNTER_71	Scaled Pulse Accumulation Internal Input 7	18,446,744,073,709,55 1,615 / 0,1 Unit	F20	R
R4X168D	DI_COUNTER_72				
R4X168E	DI_COUNTER_73				
R4X168F	DI_COUNTER_74				

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4X1690	DI_COUNTER_81	Scaled Pulse Accumulation Internal Input 8	18,446,744,073,709,55 1,615 / 0,1 Unit	F20	R
R4X1691	DI_COUNTER_82				
R4X1692	DI_COUNTER_83				
R4X1693	DI_COUNTER_84				
R4XB000	PORT4_ADD	Address, Port 4 (I/O)			
R4XB001	PORT4_BAUD	Protocol & Baud Rate, Port 4 (I/O)			
R4XB004	PORT3_ADD	Address, Port 3 (I/O)			
R4XB005	PORT3_BAUD	Protocol & Baud Rate, Port 3 (I/O)			
R4XB008	PORT2_ADD	Address, Port 2 (I/O)			
R4XB009	PORT2_BAUD	Protocol & Baud Rate, Port 2 (I/O)			
R4XB00C	PORT1_ADD	Address, Port 1 (I/O)			
R4XB00D	PORT1_BAUD	Protocol & Baud Rate, Port 1 (I/O)			
R4XB014	LINE_NUM_LIMIT_01	Line Number, Limit 1	-, -, -	F43	R
R4XB015	PT_SAB_LIMIT_01	Point Number and SAB, Limit 1	-, -, -	F44	R
R4XB016	VALUE1_LIMIT_01	Value 1, Limit 1	-, -, -	F45	R
R4XB017	VALUE2_LIMIT_01	Value 2, Limit 1	-, -, -	F45	R
R4XB018	LINE_NUM_LIMIT_02	Line Number, Limit 2	-, -, -	F43	R
R4XB019	PT_SAB_LIMIT_02	Point Number and SAB, Limit 2	-, -, -	F44	R
R4XB01A	VALUE1_LIMIT_02	Value 1, Limit 2	-, -, -	F45	R
R4XB01B	VALUE2_LIMIT_02	Value 2, Limit 2	-, -, -	F45	R
R4XB01C	LINE_NUM_LIMIT_03	Line Number, Limit 3	-, -, -	F43	R
R4XB01D	PT_SAB_LIMIT_03	Point Number and SAB, Limit 3	-, -, -	F44	R
R4XB01E	VALUE1_LIMIT_03	Value 1, Limit 3	-, -, -	F45	R
R4XB01F	VALUE2_LIMIT_03	Value 2, Limit 3	-, -, -	F45	R
R4XB020	LINE_NUM_LIMIT_04	Line Number, Limit 4	-, -, -	F43	R
R4XB021	PT_SAB_LIMIT_04	Point Number and SAB, Limit 4	-, -, -	F44	R
R4XB022	VALUE1_LIMIT_04	Value 1, Limit 4	-, -, -	F45	R
R4XB023	VALUE2_LIMIT_04	Value 2, Limit 4	-, -, -	F45	R
R4XB024	LINE_NUM_LIMIT_05	Line Number, Limit 5	-, -, -	F43	R
R4XB025	PT_SAB_LIMIT_05	Point Number and SAB, Limit 5	-, -, -	F44	R
R4XB026	VALUE1_LIMIT_05	Value 1, Limit 5	-, -, -	F45	R
R4XB027	VALUE2_LIMIT_05	Value 2, Limit 5	-, -, -	F45	R
R4XB028	LINE_NUM_LIMIT_06	Line Number, Limit 6	-, -, -	F43	R
R4XB029	PT_SAB_LIMIT_06	Point Number and SAB, Limit 6	-, -, -	F44	R
R4XB02A	VALUE1_LIMIT_06	Value 1, Limit 6	-, -, -	F45	R
R4XB02B	VALUE2_LIMIT_06	Value 2, Limit 6	-, -, -	F45	R
R4XB02C	LINE_NUM_LIMIT_07	Line Number, Limit 7	-, -, -	F43	R
R4XB02D	PT_SAB_LIMIT_07	Point Number and SAB, Limit 7	-, -, -	F44	R
R4XB02E	VALUE1_LIMIT_07	Value 1, Limit 7	-, -, -	F45	R
R4XB02F	VALUE2_LIMIT_07	Value 2, Limit 7	-, -, -	F45	R
R4XB030	LINE_NUM_LIMIT_08	Line Number, Limit 8	-, -, -	F43	R
R4XB031	PT_SAB_LIMIT_08	Point Number and SAB, Limit 8	-, -, -	F44	R
R4XB032	VALUE1_LIMIT_08	Value 1, Limit 8	-, -, -	F45	R
R4XB033	VALUE2_LIMIT_08	Value 2, Limit 8	-, -, -	F45	R
R4XB034	LINE_NUM_LIMIT_09	Line Number, Limit 9	-, -, -	F43	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4XB035	PT_SAB_LIMIT_09	Point Number and SAB, Limit 9	-, -, -	F44	R
R4XB036	VALUE1_LIMIT_09	Value 1, Limit 9	-, -, -	F45	R
R4XB037	VALUE2_LIMIT_09	Value 2, Limit 9	-, -, -	F45	R
R4XB038	LINE_NUM_LIMIT_10	Line Number, Limit 10	-, -, -	F43	R
R4XB039	PT_SAB_LIMIT_10	Point Number and SAB, Limit 10	-, -, -	F44	R
R4XB03A	VALUE1_LIMIT_10	Value 1, Limit 10	-, -, -	F45	R
R4XB03B	VALUE2_LIMIT_10	Value 2, Limit 10	-, -, -	F45	R
R4XB03C	LINE_NUM_LIMIT_11	Line Number, Limit 11	-, -, -	F43	R
R4XB03D	PT_SAB_LIMIT_11	Point Number and SAB, Limit 11	-, -, -	F44	R
R4XB03E	VALUE1_LIMIT_11	Value 1, Limit 11	-, -, -	F45	R
R4XB03F	VALUE2_LIMIT_11	Value 2, Limit 11	-, -, -	F45	R
R4XB040	LINE_NUM_LIMIT_12	Line Number, Limit 12	-, -, -	F43	R
R4XB041	PT_SAB_LIMIT_12	Point Number and SAB, Limit 12	-, -, -	F44	R
R4XB042	VALUE1_LIMIT_12	Value 1, Limit 12	-, -, -	F45	R
R4XB043	VALUE2_LIMIT_12	Value 2, Limit 12	-, -, -	F45	R
R4XB044	LINE_NUM_LIMIT_13	Line Number, Limit 13	-, -, -	F43	R
R4XB045	PT_SAB_LIMIT_13	Point Number and SAB, Limit 13	-, -, -	F44	R
R4XB046	VALUE1_LIMIT_13	Value 1, Limit 13	-, -, -	F45	R
R4XB047	VALUE2_LIMIT_13	Value 2, Limit 13	-, -, -	F45	R
R4XB048	LINE_NUM_LIMIT_14	Line Number, Limit 14	-, -, -	F43	R
R4XB049	PT_SAB_LIMIT_14	Point Number and SAB, Limit 14	-, -, -	F44	R
R4XB04A	VALUE1_LIMIT_14	Value 1, Limit 14	-, -, -	F45	R
R4XB04B	VALUE2_LIMIT_14	Value 2, Limit 14	-, -, -	F45	R
R4XB04C	LINE_NUM_LIMIT_15	Line Number, Limit 15	-, -, -	F43	R
R4XB04D	PT_SAB_LIMIT_15	Point Number and SAB, Limit 15	-, -, -	F44	R
R4XB04E	VALUE1_LIMIT_15	Value 1, Limit 15	-, -, -	F45	R
R4XB04F	VALUE2_LIMIT_15	Value 2, Limit 15	-, -, -	F45	R
R4XB050	LINE_NUM_LIMIT_16	Line Number, Limit 16	-, -, -	F43	R
R4XB051	PT_SAB_LIMIT_16	Point Number and SAB, Limit 16	-, -, -	F44	R
R4XB052	VALUE1_LIMIT_16	Value 1, Limit 16	-, -, -	F45	R
R4XB053	VALUE2_LIMIT_16	Value 2, Limit 16	-, -, -	F45	R
R4XB054	LINE_NUM_LIMIT_17	Line Number, Limit 17	-, -, -	F43	R
R4XB055	PT_SAB_LIMIT_17	Point Number and SAB, Limit 17	-, -, -	F44	R
R4XB056	VALUE1_LIMIT_17	Value 1, Limit 17	-, -, -	F45	R
R4XB057	VALUE2_LIMIT_17	Value 2, Limit 17	-, -, -	F45	R
R4XB058	LINE_NUM_LIMIT_18	Line Number, Limit 18	-, -, -	F43	R
R4XB059	PT_SAB_LIMIT_18	Point Number and SAB, Limit 18	-, -, -	F44	R
R4XB05A	VALUE1_LIMIT_18	Value 1, Limit 18	-, -, -	F45	R
R4XB05B	VALUE2_LIMIT_18	Value 2, Limit 18	-, -, -	F45	R
R4XB05C	LINE_NUM_LIMIT_19	Line Number, Limit 19	-, -, -	F43	R
R4XB05D	PT_SAB_LIMIT_19	Point Number and SAB, Limit 19	-, -, -	F44	R
R4XB05E	VALUE1_LIMIT_19	Value 1, Limit 19	-, -, -	F45	R
R4XB05F	VALUE2_LIMIT_19	Value 2, Limit 19	-, -, -	F45	R
R4XB060	LINE_NUM_LIMIT_20	Line Number, Limit 20	-, -, -	F43	R
R4XB061	PT_SAB_LIMIT_20	Point Number and SAB, Limit 20	-, -, -	F44	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4XB062	VALUE1_LIMIT_20	Value 1, Limit 20	-, -, -	F45	R
R4XB063	VALUE2_LIMIT_20	Value 2, Limit 20	-, -, -	F45	R
R4XB064	LINE_NUM_LIMIT_21	Line Number, Limit 21	-, -, -	F43	R
R4XB065	PT_SAB_LIMIT_21	Point Number and SAB, Limit 21	-, -, -	F44	R
R4XB066	VALUE1_LIMIT_21	Value 1, Limit 21	-, -, -	F45	R
R4XB067	VALUE2_LIMIT_21	Value 2, Limit 21	-, -, -	F45	R
R4XB068	LINE_NUM_LIMIT_22	Line Number, Limit 22	-, -, -	F43	R
R4XB069	PT_SAB_LIMIT_22	Point Number and SAB, Limit 22	-, -, -	F44	R
R4XB06A	VALUE1_LIMIT_22	Value 1, Limit 22	-, -, -	F45	R
R4XB06B	VALUE2_LIMIT_22	Value 2, Limit 22	-, -, -	F45	R
R4XB06C	LINE_NUM_LIMIT_23	Line Number, Limit 23	-, -, -	F43	R
R4XB06D	PT_SAB_LIMIT_23	Point Number and SAB, Limit 23	-, -, -	F44	R
R4XB06E	VALUE1_LIMIT_23	Value 1, Limit 23	-, -, -	F45	R
R4XB06F	VALUE2_LIMIT_23	Value 2, Limit 23	-, -, -	F45	R
R4XB070	LINE_NUM_LIMIT_24	Line Number, Limit 24	-, -, -	F43	R
R4XB071	PT_SAB_LIMIT_24	Point Number and SAB, Limit 24	-, -, -	F44	R
R4XB072	VALUE1_LIMIT_24	Value 1, Limit 24	-, -, -	F45	R
R4XB073	VALUE2_LIMIT_24	Value 2, Limit 24	-, -, -	F45	R
R4XB074	LINE_NUM_LIMIT_25	Line Number, Limit 25	-, -, -	F43	R
R4XB075	PT_SAB_LIMIT_25	Point Number and SAB, Limit 25	-, -, -	F44	R
R4XB076	VALUE1_LIMIT_25	Value 1, Limit 25	-, -, -	F45	R
R4XB077	VALUE2_LIMIT_25	Value 2, Limit 25	-, -, -	F45	R
R4XB078	LINE_NUM_LIMIT_26	Line Number, Limit 26	-, -, -	F43	R
R4XB079	PT_SAB_LIMIT_26	Point Number and SAB, Limit 26	-, -, -	F44	R
R4XB07A	VALUE1_LIMIT_26	Value 1, Limit 26	-, -, -	F45	R
R4XB07B	VALUE2_LIMIT_26	Value 2, Limit 26	-, -, -	F45	R
R4XB07C	LINE_NUM_LIMIT_27	Line Number, Limit 27	-, -, -	F43	R
R4XB07D	PT_SAB_LIMIT_27	Point Number and SAB, Limit 27	-, -, -	F44	R
R4XB07E	VALUE1_LIMIT_27	Value 1, Limit 27	-, -, -	F45	R
R4XB07F	VALUE2_LIMIT_27	Value 2, Limit 27	-, -, -	F45	R
R4XB080	LINE_NUM_LIMIT_28	Line Number, Limit 28	-, -, -	F43	R
R4XB081	PT_SAB_LIMIT_28	Point Number and SAB, Limit 28	-, -, -	F44	R
R4XB082	VALUE1_LIMIT_28	Value 1, Limit 28	-, -, -	F45	R
R4XB083	VALUE2_LIMIT_28	Value 2, Limit 28	-, -, -	F45	R
R4XB084	LINE_NUM_LIMIT_29	Line Number, Limit 29	-, -, -	F43	R
R4XB085	PT_SAB_LIMIT_29	Point Number and SAB, Limit 29	-, -, -	F44	R
R4XB086	VALUE1_LIMIT_29	Value 1, Limit 29	-, -, -	F45	R
R4XB087	VALUE2_LIMIT_29	Value 2, Limit 29	-, -, -	F45	R
R4XB088	LINE_NUM_LIMIT_30	Line Number, Limit 30	-, -, -	F43	R
R4XB089	PT_SAB_LIMIT_30	Point Number and SAB, Limit 30	-, -, -	F44	R
R4XB08A	VALUE1_LIMIT_30	Value 1, Limit 30	-, -, -	F45	R
R4XB08B	VALUE2_LIMIT_30	Value 2, Limit 30	-, -, -	F45	R
R4XB08C	LINE_NUM_LIMIT_31	Line Number, Limit 31	-, -, -	F43	R
R4XB08D	PT_SAB_LIMIT_31	Point Number and SAB, Limit 31	-, -, -	F44	R
R4XB08E	VALUE1_LIMIT_31	Value 1, Limit 31	-, -, -	F45	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4XB08F	VALUE2_LIMIT_31	Value 2, Limit 31	-, -, -	F45	R
R4XB090	LINE_NUM_LIMIT_32	Line Number, Limit 32	-, -, -	F43	R
R4XB091	PT_SAB_LIMIT_32	Point Number and SAB, Limit 32	-, -, -	F44	R
R4XB092	VALUE1_LIMIT_32	Value 1, Limit 32	-, -, -	F45	R
R4XB093	VALUE2_LIMIT_32	Value 2, Limit 32	-, -, -	F45	R
R4XB198	PHVOLT_AN_ASP	Phase A-N Voltage Above Setpoint	-, -, -	F45	R
R4XB199	PHVOLT_AN_BSP	Phase A-N Voltage Below Setpoint	-, -, -	F45	R
R4XB19A	PHVOLT_BN_ASP	Phase B-N Voltage Above Setpoint	-, -, -	F45	R
R4XB19B	PHVOLT_BN_BSP	Phase B-N Voltage Below Setpoint	-, -, -	F45	R
R4XB19C	PHVOLT_CN_ASP	Phase C-N Voltage Above Setpoint	-, -, -	F45	R
R4XB19D	PHVOLT_CN_BSP	Phase C-N Voltage Below Setpoint	-, -, -	F45	R
R4XB19E	AUXVOLT_ASP	Auxiliary Voltage Above Setpoint	-, -, -	F45	R
R4XB19F	AUXVOLT_BSP	Auxiliary Voltage Below Setpoint	-, -, -	F45	R
R4XB1A0	PHAMP_A_ASP	Phase A Current Above Setpoint	-, -, -	F45	R
R4XB1A1	PHAMP_A_BSP	Phase A Current Below Setpoint	-, -, -	F45	R
R4XB1A2	PHAMP_B_ASP	Phase B Current Above Setpoint	-, -, -	F45	R
R4XB1A3	PHAMP_B_BSP	Phase B Current Below Setpoint	-, -, -	F45	R
R4XB1A4	PHAMP_C_ASP	Phase C Current Above Setpoint	-, -, -	F45	R
R4XB1A5	PHAMP_C_BSP	Phase C Current Below Setpoint	-, -, -	F45	R
R4XB1A6	MEAAMP_ASP	Measured Neutral Current Above Setpoint	-, -, -	F45	R
R4XB1A7	MEAAMP_BSP	Measured Neutral Current Below Setpoint	-, -, -	F45	R
R4XB1A8	CALAMP_ASP	Calculated Neutral Current Above Setpoint	-, -, -	F45	R
R4XB1A9	CALAMP_BSP	Calculated Neutral Current Below Setpoint	-, -, -	F45	R
R4XB1AA	PHVOLT_AB_ASP	Phase A-B Voltage Above Setpoint	-, -, -	F45	R
R4XB1AB	PHVOLT_AB_BSP	Phase A-B Voltage Below Setpoint	-, -, -	F45	R
R4XB1AC	PHVOLT_BC_ASP	Phase B-C Voltage Above Setpoint	-, -, -	F45	R
R4XB1AD	PHVOLT_BC_BSP	Phase B-C Voltage Below Setpoint	-, -, -	F45	R
R4XB1AE	PHVOLT_CA_ASP	Phase C-A Voltage Above Setpoint	-, -, -	F45	R
R4XB1AF	PHVOLT_CA_BSP	Phase C-A Voltage Below Setpoint	-, -, -	F45	R
R4XB1B0	WF_ENABLE	Waveform Enables	-, -, -		R
R4XB1B2	PQ_ENABLE	PQ Enables	-, -, -		R
R4XB1B8	SAMPLE_RATE	Sample Rate and Total Captures	-, -, -	F50	R
R4XB1B9	MODE_CBEMA_ENABLE	Mode and CBEMA Enable	-, -, -	F51	R
R4XB1BA	HISPEED_IPWF_ENABLE	High Speed Input Waveform and PQ Enables	-, -, -		R
R4XB1BCS8	DI_NAME_1	Input 1 Name	-, -, -		R
R4XB1C4S8	DI_OPEN_1	Input 1 Open Label	-, -, -		R
R4XB1CCS8	DI_CLOSE_1	Input 1 Close Label	-, -, -		R
R4XB1D6	INPUT_1_MODE	Input 1 Mode			
R4XB1D8S8	DI_NAME_2	Input 2 Name	-, -, -		R
R4XB1E0S8	DI_OPEN_2	Input 2 Open Label	-, -, -		R
R4XB1E8S8	DI_CLOSE_2	Input 2 Close Label	-, -, -		R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units/Range	Format Codes	R/W
R4XB1F2	INPUT_2_MODE	Input 2 Mode			
R4XB1F4S8	DI_NAME_3	Input 3 Name	-, -, -		R
R4XB1FCS8	DI_OPEN_3	Input 3 Open Label	-, -, -		R
R4XB204S8	DI_CLOSE_3	Input 3 Close Label	-, -, -		R
R4XB20E	INPUT_3_MODE	Input 3 Mode			
R4XB210S8	DI_NAME_4	Input 4 Name	-, -, -		R
R4XB218S8	DI_OPEN_4	Input 4 Open Label	-, -, -		R
R4XB220S8	DI_CLOSE_4	Input 4 Close Label	-, -, -		R
R4XB22A	INPUT_4_MODE	Input 4 Mode			
R4XB22CS8	DI_NAME_5	Input 5 Name	-, -, -		R
R4XB234S8	DI_OPEN_5	Input 5 Open Label	-, -, -		R
R4XB23CS8	DI_CLOSE_5	Input 5 Close Label	-, -, -		R
R4XB246	INPUT_5_MODE	Input 5 Mode			
R4XB248S8	DI_NAME_6	Input 6 Name	-, -, -		R
R4XB250S8	DI_OPEN_6	Input 6 Open Label	-, -, -		R
R4XB258S8	DI_CLOSE_6	Input 6 Close Label	-, -, -		R
R4XB262	INPUT_6_MODE	Input 6 Mode			
R4XB264S8	DI_NAME_7	Input 7 Name	-, -, -		R
R4XB26CS8	DI_OPEN_7	Input 7 Open Label	-, -, -		R
R4XB274S8	DI_CLOSE_7	Input 7 Close Label	-, -, -		R
R4XB27E	INPUT_7_MODE	Input 7 Mode			
R4XB280S8	DI_NAME_8	Input 8 Name	-, -, -		R
R4XB288S8	DI_OPEN_8	Input 8 Open Label	-, -, -		R
R4XB290S8	DI_CLOSE_8	Input 8 Close Label	-, -, -		R
R4XB29A	INPUT_8_MODE	Input 8 Mode			
R4XB354L	PH_CT_NUME	Phase Current CT Ratio Numerator	+999,999.99 / +0.01,1/100 A pri		R
R4XB356L	PH_CT_DENO	Phase Current CT Ratio Denominator	+999,999.99 / +0.01,1/100 A sec		R
R4XB358L	NEUT_CT_NUME	Measured Neutral Current CT Ratio Numerator	+999,999.99 / +0.01,1/100 A pri		R
R4XB35AL	NEUT_CT_DENO	Measured Neutral Current CT Ratio Denominator	+999,999.99 / +0.01,1/100 A sec		R
R4XB35CL	PH_PT_NUME	Phase Voltage PT Ratio Numerator	+999,999.99 / +0.01,1/100 V pri		R
R4XB35EL	PH_PT_DENO	Phase Voltage PT Ratio Denominator	+999,999.99 / +0.01,1/100 V sec		R
R4XB360L	AUX_PT_NUME	Auxiliary Voltage PT Ratio Numerator	+999,999.99 / +0.01,1/100 V pri		R
R4XB362L	AUX_PT_DENO	Auxiliary Voltage PT Ratio Denominator	+999,999.99 / +0.01,1/100 V sec		R
R4XB367	TLC_FWASYNC_ENABLE	Transformer Loss Compensation (TLC) & FWA Sync Enables	-, -, -		R
R4XB37F	NO_SLID_TOULOG_ENABLE	Number of Sliding Windows / Time of Use Log Enable	-, -, -		R
R4XB390S16	METER_DESIG	Meter Designation			R
R4XB398S16	AUX_V_LABEL	Auxiliary Voltage Label R			R

FLICKER REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
R4XB50D	FLK_BASE_FREQ	Flicker Base Frequency	-,-,-	---	RO
R4X17E1L	FLK_STAT_BLK_TIME1	Flicker Status Block Date	-,12/31/9999 23:59:59.99,-	F3	RO
R4X17E3L	FLK_STAT_BLK_TIME2	Flicker Status Block Time	-,12/31/9999 23:59:59.99,-	F3	RO
R4X17E5L	FLK_START_TIME1	Flicker Start Date	-,12/31/9999 23:59:59.99,-	F3	RO
R4X17E7L	FLK_START_TIME2	Flicker Start Time	-,12/31/9999 23:59:59.99,-	F3	RO
R4X17E9L	FLK_END_TIME1	Flicker End Date	-,12/31/9999 23:59:59.99,-	F3	RO
R4X17EBL	FLK_END_TIME2	Flicker End Date	-,12/31/9999 23:59:59.99,-	F3	RO
R4X17ED	FLK_STATUS	Flicker Status	-,-,-	F14	RO
R4X17EEL	INST_FLK_BLK_TIME1	Instantaneous Flicker Block Date	-,12/31/9999 23:59:59.99,-	F3	RO
R4X17F0L	INST_FLK_BLK_TIME2	Instantaneous Flicker Block Time	-,12/31/9999 23:59:59.99,-	F3	RO
R4X17F2L	INST_FLK_VOLT_AN	Instantaneous Flicker Van	1/ 65536,+32767 / 0 , -	F7	RO
R4X17F4L	INST_FLK_VOLT_BN	Instantaneous Flicker Vbn	1/ 65536,+32767 / 0 ,	F7	RO
R4X17F6L	INST_FLK_VOLT_CN	Instantaneous Flicker Vcn	1/ 65536,+32767 / 0 ,	F7	RO
R4X17F8L	ST_FLK_BLK_TIME1	Short Term Flicker Block Date	-,-,-	F3	RO
R4X17FAL	ST_FLK_BLK_TIME2	Short Term Flicker Block Time	-,-,-	F3	RO
R4X17FCL	ST_FLK_VOLT_AN	Short Term Flicker Van	1/ 65536,+32767 / 0 ,	F7	RO
R4X17FEL	ST_FLK_VOLT_BN	Short Term Flicker Vbn	1/ 65536,+32767 / 0 ,	F7	RO
R4X1800L	ST_FLK_VOLT_CN	Short Term Flicker Vcn	1/ 65536,+32767 / 0 ,	F7	RO
R4X1802L	MAX_ST_FLK_VOLT_AN	Maximum Short Term Flicker Van	1/ 65536,+32767 / 0 ,	F7	RO
R4X1804L	MAX_ST_FLK_VOLT_BN	Maximum Short Term Flicker Vbn	1/ 65536,+32767 / 0 ,	F7	RO
R4X1806L	MAX_ST_FLK_VOLT_CN	Maximum Short Term Flicker Vcn	1/ 65536,+32767 / 0 ,	F7	RO
R4X1808L	MIN_ST_FLK_VOLT_AN	Minimum Short Term Flicker Van	1/ 65536,+32767 / 0 ,	F7	RO
R4X180AL	MIN_ST_FLK_VOLT_BN	Minimum Short Term Flicker Vbn	1/ 65536,+32767 / 0 ,	F7	RO
R4X180CL	MIN_ST_FLK_VOLT_CN	Minimum Short Term Flicker Vcn	1/ 65536,+32767 / 0 ,	F7	RO
R4X180EL	ST_FLK_INTVL_END_TM1	Short Term Flicker Interval End Date	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1810L	ST_FLK_INTVL_END_TM2	Short Term Flicker Interval End Time	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1812L	MAX_ST_FLK_V_AN_TM1	Maximum Short Term Flicker Van Date Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1814L	MAX_ST_FLK_V_AN_TM2	Maximum Short Term Flicker Van Time Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1816L	MAX_ST_FLK_V_BN_TM1	Maximum Short Term Flicker Vbn Date Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1818L	MAX_ST_FLK_V_BN_TM2	Maximum Short Term Flicker Vbn Time Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X181AL	MAX_ST_FLK_V_CN_TM1	Maximum Short Term Flicker Vcn Date Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X181CL	MAX_ST_FLK_V_CN_TM2	Maximum Short Term Flicker Vcn Time	-,12/31/9999	F3	RO

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
		Stamp	23:59:59.99,-		
R4X181EL	MIN_ST_FLK_V_AN_TM1	Minimum Short Term Flicker Van Date Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1820L	MIN_ST_FLK_V_AN_TM2	Minimum Short Term Flicker Van Time Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1822L	MIN_ST_FLK_V_BN_TM1	Minimum Short Term Flicker Vbn Date Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1824L	MIN_ST_FLK_V_BN_TM2	Minimum Short Term Flicker Vbn Time Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1826L	MIN_ST_FLK_V_CN_TM1	Minimum Short Term Flicker Vcn Date Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1828L	MIN_ST_FLK_V_CN_TM2	Minimum Short Term Flicker Vcn Time Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X182AL	LT_FLK_BLK_TIME1	Long Term Flicker Block Date	-,12/31/9999 23:59:59.99,-	F3	RO
R4X182CL	LT_FLK_BLK_TIME2	Long Term Flicker Block Time	1/ 65536,+32767 / 0 ,-	F3	RO
R4X182EL	LT_FLK_VOLT_AN	Long Term Flicker Van	1/ 65536,+32767 / 0 ,	F7	RO
R4X1830L	LT_FLK_VOLT_BN	Long Term Flicker Vbn	1/ 65536,+32767 / 0 ,	F7	RO
R4X1832L	LT_FLK_VOLT_CN	Long Term Flicker Vcn	1/ 65536,+32767 / 0 ,	F7	RO
R4X1834L	MAX_LT_FLK_V_AN	Maximum Long Term Flicker Van	1/ 65536,+32767 / 0 ,	F7	RO
R4X1836L	MAX_LT_FLK_V_BN	Maximum Long Term Flicker Vbn	1/ 65536,+32767 / 0 ,	F7	RO
R4X1838L	MAX_LT_FLK_V_CN	Maximum Long Term Flicker Vcn	1/ 65536,+32767 / 0 ,	F7	RO
R4X183AL	MIN_LT_FLK_V_AN	Minimum Long Term Flicker Van	1/ 65536,+32767 / 0 ,	F7	RO
R4X183CL	MIN_LT_FLK_V_BN	Minimum Long Term Flicker Vbn	1/ 65536,+32767 / 0 ,	F7	RO
R4X183EL	MIN_LT_FLK_V_CN	Minimum Long Term Flicker Vcn	1/ 65536,+32767 / 0 ,	F7	RO
R4X1840L	LT_FLK_INTVL_END_TM1	Long Term Flicker Interval End Date Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1842L	LT_FLK_INTVL_END_TM2	Long Term Flicker Interval End Time Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1844L	MAX_LT_FLK_V_AN_TM1	Maximum Long Term Flicker Van Date Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1846L	MAX_LT_FLK_V_AN_TM2	Maximum Long Term Flicker Van Time Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1848L	MAX_LT_FLK_V_BN_TM1	Maximum Long Term Flicker Vbn Date Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X184AL	MAX_LT_FLK_V_BN_TM2	Maximum Long Term Flicker Van Time Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X184CL	MAX_LT_FLK_V_CN_TM1	Maximum Long Term Flicker Vcn Date Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X184EL	MAX_LT_FLK_V_CN_TM2	Maximum Long Term Flicker Van Time Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1850L	MIN_LT_FLK_V_AN_TM1	Minimum Long Term Flicker Van Date Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1852L	MIN_LT_FLK_V_AN_TM2	Maximum Long Term Flicker Van Time Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1854L	MIN_LT_FLK_V_BN_TM1	Minimum Long Term Flicker Vbn Date Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1856L	MIN_LT_FLK_V_BN_TM2	Maximum Long Term Flicker Van Time Stamp	-,12/31/9999 23:59:59.99,-	F3	RO
R4X1858L	MIN_LT_FLK_V_CN_TM1	Minimum Long Term Flicker Vcn Date Stamp	-,12/31/9999 23:59:59.99,-	F3	RO

F650 BAY CONTROLLER

F650 Bay Controller

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3X0003	CPU_TIMER_STAT	TIMER STATUS	--	--	0 to 65535	RO	F001
R3X0087	CNT_INPT_STAT_BRD_F	Graphic status	--	--	0 to 65535	RO	F001
R3X0089	CNT_INPT_STAT1_BRD_F	Contact IO	--	--	0 to 65535	RO	F001
R3X0089	CNT_OPT_OPER_BRD_F	Contact IO	--	--	0 to 65535	RO	F001
R3X008A	C_OPT_LGL_STT_BRD_F	Contact Output Operate	--	--	0 to 65535	RO	F001
R3X008A	C_OUPT_RST_BRD_F	Board F: Contact Output Resets	--	--	0 to 65535	RO	F001
R3X008B	C_OUPT_RST1_BRD_F	Board F: Contact Output Resets	--	--	0 to 65535	RO	F001
R3X008B	CNT_OPT_STAT_BRD_F	Board F: Contact Outputs -physical status	--	--	0 to 65535	RO	F001
R3X008C	BRD_F_STAT	Board F: Contact Outputs -physical status	--	--	0 to 65535	RO	F001
R3X008C	CNT_OPT_STAT1_BRD_F	BOARD F STATUS	--	--	0 to 65535	RO	F001
R3X00B1	BRD_G_STAT	Board G: Contact Outputs -physical status	--	--	0 to 65535	RO	F001
R3X00D1	HMI_LED1	HMI LEDs	--	--	0 to 65535	RO	F001
R3X00D2	HMI_LED2	HMI Keys	--	--	0 to 65535	RO	F001
R3X00F2	PH_IOC_HIGH_BLK_A	Phase IOC High A	--	--	0 to 65535	RO	F001
R3X00F2	PH_IOC_HIGH_BLK_BC	Phase IOC High B	--	--	0 to 65535	RO	F001
R3X00F8	PH_IOC_HIGH_BLK_001	Phase IOC High A001	--	--	0 to 65535	RO	F001
R3X00F9	PH_IOC_HIGH_B_P001	Phase IOC High B001	--	--	0 to 65535	RO	F001
R3X00FE	PH_IOC_HIGH_BLK_002	Phase IOC High A003	--	--	0 to 65535	RO	F001
R3X0104	PH_IOC_LOW_BLK_A	Phase IOC Low A	--	--	0 to 65535	RO	F001
R3X0109	PH_IOC_LOW_BLK_001	Phase IOC Low A001	--	--	0 to 65535	RO	F001
R3X010A	PH_IOC_LOW_B_P001	Phase IOC Low B PK P001	--	--	0 to 65535	RO	F001
R3X010F	PH_IOC_LOW_BLK_002	Phase IOC Low A002	--	--	0 to 65535	RO	F001
R3X0110	PH_IOC_LOW_OP002	Phase IOC Low OP002	--	--	0 to 65535	RO	F001
R3X0115	NTRL_IOC_BLK	NEUTRAL IOC BLOCK	--	--	0 to 65535	RO	F001
R3X011A	NTRL_IOC_BLK001	NEUTRAL IOC BLOCK001	--	--	0 to 65535	RO	F001
R3X011F	NTRL_IOC_BLK002	NEUTRAL IOC BLOCK002	--	--	0 to 65535	RO	F001
R3X0124	GND_IOC_BLK	GROUND IOC BLOCK	--	--	0 to 65535	RO	F001
R3X0129	GND_IOC_BLK001	GROUND IOC BLOCK001	---	--	0 to 65535	RO	F001
R3X012F	GND_IOC_BLK002	GROUND IOC	---	--	0 to 65535	RO	F001

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		BLOCK002 7					
R3X0134	SENS_GND_IOC_BLK	SENS GND IOC BLK	---	--	0 to 65535	RO	F001
R3X0139	SENS_GND_IOC_BLK001	SENS GND IOC BLK001	---	--	0 to 65535	RO	F001
R3X013E	SENS_GND_IOC_BLK002	SENS GND IOC BLK002	---	--	0 to 65535	RO	F001
R3X0143	PH_TOC_HGH_BLK_A	PHASE TOC BLOCK A	---	--	0 to 65535	RO	F001
R3X0143	PH_TOC_HIGH_BLK	PHASE TOC A PKP	---	--	0 to 65535	RO	F001
R3X0144	PH_TOC_HIGH_OP	PHASE TOC A OP	---	--	0 to 65535	RO	F001
R3X0149	PH_TOC_HIGH_BLK_001	PHASE TOC BLOCK A001	---	--	0 to 65535	RO	F001
R3X014A	PH_TOC_HIGH_PKP001	PHASE TOC PKP001	---	--	0 to 65535	RO	F001
R3X014F	PH_TOC_HIGH_BLK_002	PHASE TOC BLOCK A002	---	--	0 to 65535	RO	F001
R3X0154	NTRL_TOC_BLK	NEUTRAL TOC BLOCK	---	--	0 to 65535	RO	F001
R3X015A	NTRL_TOC_PKP001	NEUTRAL TOC BLOCK002	---	--	0 to 65535	RO	F001
R3X0164	GND_TOC_BLK	GROUND TOC BLOCK	---	--	0 to 65535	RO	F001
R3X0169	GND_TOC_BLK001	GROUND TOC BLOCK001	---	--	0 to 65535	RO	F001
R3X016E	GND_TOC_BLK002	GROUND TOC BLOCK002	---	--	0 to 65535	RO	F001
R3X0173	SENS_GND_TOC_BLK	SENS GND TOC BLK	---	--	0 to 65535	RO	F001
R3X0179	SENS_GND_TOC_BLK001	SENS GND TOC BLK001	---	--	0 to 65535	RO	F001
R3X01AB	THRML_ALRM001	THERMAL A ALRM001	---	--	0 to 65535	RO	F001
R3X01B0	THRML_BLK002	THERMAL BLOCK002	---	--	0 to 65535	RO	F001
R3X01B1	THRML_ALRM002	THERMAL C ALRM002	---	--	0 to 65535	RO	F001
R3X01B6	PH_DIR_BLK_INP	PHASE DIR BLK INP	---	--	0 to 65535	RO	F001
R3X01BB	PH_DIR_BLK_INP001	PHASE DIR BLK INP001	---	--	0 to 65535	RO	F001
R3X01C1	PH_DIR_BLK_INP002	PHASE DIR BLK INP002	---	--	0 to 65535	RO	F001
R3X01C6	NTRL_DIR_BLK_INP	NTRL DIR BLK INP	---	--	0 to 65535	RO	F001
R3X01CB	NTRL_DIR_BLK_INP001	NTRL DIR BLK INP001	---	--	0 to 65535	RO	F001
R3X01D0	NTRL_DIR_BLK_INP002	NTRL DIR BLK INP002	---	--	0 to 65535	RO	F001
R3X01D6	GND_DIR_BLK_INP	GND DIR BLK INP	---	--	0 to 65535	RO	F001
R3X01DB	GND_DIR_BLK_INP001	GND DIR BLK INP001	---	--	0 to 65535	RO	F001
R3X01E0	GND_DIR_BLK_INP002	GND DIR BLK INP002	---	--	0 to 65535	RO	F001
R3X01E5	BKR_FAIL_INITIATE	BKR FAIL INITIATE	---	--	0 to 65535	RO	F001
R3X01EB	VT_FUSE_FAILURE	VT FUSE FAILURE	---	--	0 to 65535	RO	F001

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3X01F0	SYNCHK_BLK	SYNCHK BLOCK	---	--	0 to 65535	RO	F001
R3X01F5	AR1_LEVEL_BLK	AR LEVEL BLOCK	---	--	0 to 65535	RO	F001
R3X01F6	AR1_CONDS_INPUT	AR CONDS INPUT	---	--	0 to 65535	RO	F001
R3X01F6	AR2_CONDS_INPUT	AR CONDS INPUT	---	--	0 to 65535	RO	F001
R3X01F7	BLK_AFTER_3RD_SHOT	BLK AFTER 3rd SHOT	---	--	0 to 65535	RO	F001
R3X01FC	NTRL_OV_HIGH_BLK	NTRL OV HIGH BLK	---	--	0 to 65535	RO	F001
R3X0201	NTRL_OV_HIGH_BLK001	NTRL OV HIGH BLK001	---	--	0 to 65535	RO	F001
R3X0206	NTRL_OV_HIGH_BLK002	NTRL OV HIGH BLK002	---	--	0 to 65535	RO	F001
R3X020B	NTRL_OV_LOW_BLK	NTRL OV LOW BLK	---	--	0 to 65535	RO	F001
R3X0211	NTRL_OV_LOW_BLK001	NTRL OV LOW BLK001	---	--	0 to 65535	RO	F001
R3X0216	NTRL_OV_LOW_BLK002	NTRL OV LOW BLK002	---	--	0 to 65535	RO	F001
R3X021B	AUX_UV_BLK	AUX UV BLOCK	---	--	0 to 65535	RO	F001
R3X0220	AUX_UV_PKP001	AUX UV BLOCK001	---	--	0 to 65535	RO	F001
R3X0225	AUX_UV_PKP002	AUX UV BLOCK002	---	--	0 to 65535	RO	F001
R3X022A	PH_OV_BLK	PHASE OV BLOCK	---	--	0 to 65535	RO	F001
R3X022B	PH_OV_AB_PKP	PHASE OV AB PKP	---	--	0 to 65535	RO	F001
R3X0230	PH_OV_BLK001	PHASE OV BLOCK001	---	--	0 to 65535	RO	F001
R3X0231	PH_OV_OP001	PHASE OV OP001	---	--	0 to 65535	RO	F001
R3X0236	PH_OV_BLK002	PHASE OV BLOCK002	---	--	0 to 65535	RO	F001
R3X023B	AUX_OV_BLK	AUX OV BLOCK	---	--	0 to 65535	RO	F001
R3X0240	AUX_OV_BLK001	AUX OV BLOCK001	---	--	0 to 65535	RO	F001
R3X0246	AUX_OV_BLK002	AUX OV BLOCK002	---	--	0 to 65535	RO	F001
R3X024B	NEG_SEQ_TOC_BLK	NEG SEQ TOC BLOCK	---	--	0 to 65535	RO	F001
R3X0250	NEG_SEQ_TOC_BLK001	NEG SEQ TOC BLOCK001F001	---	--	0 to 65535	RO	F001
R3X0255	NEG_SEQ_TOC_BLK002	NEG SEQ TOC BLOCK2	---	--	0 to 65535	RO	F001
R3X025A	OVERFREQ_BLK	OVERFREQ BLOCK	---	--	0 to 65535	RO	F001
R3X0260	OVERFREQ_P001	OVERFREQ PKP001	---	--	0 to 65535	RO	F001
R3X0265	OVERFREQ_BLK002	OVERFREQ BLOCK002	---	--	0 to 65535	RO	F001
R3X026A	UNDERFREQ_BLK	UNDERFREQ BLOCK	---	--	0 to 65535	RO	F001
R3X026F	UNDERFREQ_BLK001	UNDERFREQ BLOCK001	---	--	0 to 65535	RO	F001
R3X0274	UNDERFREQ_BLK002	UNDERFREQ BLOCK002	---	--	0 to 65535	RO	F001
R3X0279	FCTRY_CALIBRATION	FACTORY CALIBRATION	---	--	0 to 65535	RO	F001

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3X027A	OSC_STATES_BRD_G	Digital Channel 1	---	--	0 to 65535	RO	F001
R3X027B	OSC_TRGGR_BRD_G	OSCILLO TRIGGER	---	--	0 to 65535	RO	F001
R3X028F	GROUP_STATES	GROUP 1 ACT ON	---	--	0 to 65535	RO	F001
R3X0294	DFLT_CHNL	Default Channel	---	--	0 to 65535	RO	F001
R3X0299	BROKEN_COND_BLK001	BROKEN CONDUCTBLK001	---	--	0 to 65535	RO	F001
R3X029F	BROKEN_COND_BLK002	BROKEN CONDUCTBLK002	---	--	0 to 65535	RO	F001
R3X02A4	Energy	Freeze Energy	---	--	0 to 65535	RO	F001
R3X02B8	ISLTD_GND_BLK	ISOLATED GND BLK	---	--	0 to 65535	RO	F001
R3X02C7	ISLTD_GND_BLK001	ISOLATED GND BLK001	---	--	0 to 65535	RO	F001
R3X02D6	ISLTD_GND_BLK002	ISOLATED GND BLK002	---	--	0 to 65535	RO	F001
R3X02E5	SEN_GND_DIR_BLK_INP	SENS GND DIR BLK INP	---	--	0 to 65535	RO	F001
R3X02E6	SENS_GND_DIR_BLK	SENS GND DIR BLOCK	---	--	0 to 65535	RO	F001
R3X02EB	SEN_GND_DIR_BLK_INP0	SENS GND DIR BLK INP001	---	--	0 to 65535	RO	F001
R3X02F0	SEN_GND_DIR_BLK_INP2	SENS GND DIR BLK INP002	---	--	0 to 65535	RO	F001
R3X02F5	FWD_POW_BLK	FWD POW BLOCK	---	--	0 to 65535	RO	F001
R3X02FA	FWD_POW_BLK001	FWD POW BLOCK001	---	--	0 to 65535	RO	F001
R3X02FB	FWD_POW_STG2_PKP001	FWD POW STG2 PKP001	---	--	0 to 65535	RO	F001
R3X0300	FWD_POW_BLK002	FWD POW BLOCK002	---	--	0 to 65535	RO	F001
R3X0319	CNT_INPT_STAT_BRD_H	CONTACT INPUT_02_00	---	--	0 to 65535	RO	F001
R3X031B	C_OPT_OPR_LGL_BRD_H	CONTACT INPUT_02_31	---	--	0 to 65535	RO	F001
R3X031C	OPT_OPR_LGL1_BRD_H	C OUTPUT OPER_02_15	---	--	0 to 65535	RO	F001
R3X031D	C_OPT_RST_BRD_H	C OUTPUT RESET_02_15	---	--	0 to 65535	RO	F001
R3X031E	BRD_H_STAT	CONTACT OUTPUT_02_15	---	--	0 to 65535	RO	F001
R3X031E	CNT_OPT_RST_BRD_H	BOARD H STATUS	---	--	0 to 65535	RO	F001
R3X0340	CNT_INPT_BRD_I	CONTACT INPUT_03_31	---	--	0 to 65535	RO	F001
R3X0341	C_OPT_OPR_LGL_BRD_I	C OUTPUT OPER_03_15	---	--	0 to 65535	RO	F001
R3X0342	C_OPT_RST_BRD_I	C OUTPUT RESET_03_15	---	--	0 to 65535	RO	F001
R3X0343	BRD_I_STAT	CONTACT OUTPUT_03_15	---	--	0 to 65535	RO	F001
R3X0363	PH_TOC_LOW_BLK	PHASE TOC LOW BLOCK A	---	--	0 to 65535	RO	F001
R3X0364	PH_TOC_LOW_PKP	PHASE TOC LOW B PKP	---	--	0 to 65535	RO	F001
R3X0369	PH_TOC_LOW_BLK_001	PHASE TOC LOW BLOCK A001	---	--	0 to 65535	RO	F001

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3X036A	PH_TOC_LOW_OP001	PHASE TOC LOW OP001	---	--	0 to 65535	RO	F001
R3X036F	PH_TOC_LOW_BLK_002	PHASE TOC LOW BLOCK A002	---	--	0 to 65535	RO	F001
R3X0374	SWTH_CNT_CONFIG_A_0	SWITCH_A_0	---	--	0 to 65535	RO	F001
R3X0376	SWTH_CNT_CONFIG_A_15	SWITCH_A_15	---	--	0 to 65535	RO	F001
R3X0378	SWTH_A_STAT_15	SWITCH_A_STAT US_0	---	--	0 to 65535	RO	F001
R3X0379	OPENED_1	OPENED_1	---	--	0 to 65535	RO	F001
R3X037C	OPENED_15	OPENED_15	---	--	0 to 65535	RO	F001
R3X037E	SWTH_INIT_OPEN_15	INIT_OPEN_15	---	--	0 to 65535	RO	F001
R3X037F	SWTH_FAIL_TO_OP_15	FAIL TO OPEN_15	---	--	0 to 65535	RO	F001
R3X0380	SWTH_FAIL_TO_CLS_15	FAIL TO CLOSE_15	---	--	0 to 65535	RO	F001
R3X0390	KI2t_PHA_BKR_ALARM	KI2t PHASEA ALARM	---	--	0 to 65535	RO	F001
R3X0391	MAX.BKR_OPEN_1_HOUR	MAX.BKR OPEN 1 HOUR	---	--	0 to 65535	RO	F001
R3X039B	USER_MAP_STAT	USER MAP STATUS	---	--	0 to 65535	RO	F001
R3X03A0	FLXCRV_STAT001	FlexCurve Status001	---	--	0 to 65535	RO	F001
R3X03A5	FLXCRV_STAT002	FlexCurve Status002	---	--	0 to 65535	RO	F001
R3X03AA	FLXCRV_STAT003	FlexCurve Status003	---	--	0 to 65535	RO	F001
R3X0C00L	AMS_PHSR_AMPS_A	Phasor Ia	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C02L	AMS_RMS_AMPS_A	RMS Ia	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C04L	AMS_REAL_AMPS_A	Ia Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C06L	AMS_IMAG_AMPS_A	Ia Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C08L	AMS_PHSR_AMPS_B	Phasor Ib	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C0AL	AMS_RMS_AMPS_B	RMS Ib	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C0CL	AMS_REAL_AMPS_B	Ib Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C0EL	AMS_IMAG_AMPS_B	Ib Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C10L	AMS_PHSR_AMPS_C	Phasor Ic	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C12L	AMS_RMS_AMPS_C	RMS Ic	--	--	-2147,483,648 to 2,147,483,647	RO	F002

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3X0C14L	AMS_REAL_AMPS_C	Ic Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C16L	AMS_IMAG_AMPS_C	Ic Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C18L	AMS_PHSR_AMPS_N	Phasor In	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C1AL	AMS_REAL_AMPS_N	In Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C1CL	AMS_IMAG_AMPS_N	In Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C1EL	AMS_PHSR_AMPS_G	Phasor Ig	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C20L	AMS_RMS_AMPS_G	RMS Ig	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C22L	AMS_REAL_AMPS_G	Ig Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C24L	AMS_IMAG_AMPS_G	Ig Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C26L	AMS_PHSR_AMPS_SG	Phasor Isg	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C28L	AMS_RMS_AMPS_SG	RMS Isg	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C2AL	AMS_REAL_AMPS_SG	Isg Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C2CL	AMS_IMAG_AMPS_SG	Isg Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C2EL	AMS_ZERO_SEQ_AMPS_0	Zero seq I0	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C30L	AMS_REAL_AMPS_0	I0 Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C32L	AMS_IMAG_AMPS_0	I0 Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C34L	AMS_ZERO_SEQ_AMPS_1	Positive Seq I1	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C36L	AMS_REAL_AMPS_1	I1 Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C38L	AMS_IMAG_AMPS_1	I1 Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C3AL	AMS_ZERO_SEQ_AMPS_2	Negative Seq I2	--	--	-2147,483,648 to 2,147,483,647	RO	F002

F650 Bay Controller

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
					2,147,483,647		
R3X0C3CL	AMS_REAL_AMPS_2	I2 Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C3EL	AMS_IMAG_AMPS_2	I2 Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C40L	AMS_PHSR_VLTS_AB	Phasor Vab	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C42L	AMS_REAL_VLTS_AB	Vab Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C44L	AMS_IMG_VLTS_AB	Vab Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C46L	AMS_PHSR_VLTS_BC	Phasor Vbc	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C48L	AMS_REAL_VLTS_BC	Vbc Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C4AL	AMS_IMG_VLTS_BC	Vbc Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C4CL	AMS_PHSR_VLTS_CA	Phasor Vca	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C4EL	AMS_REAL_VLTS_CA	Vca Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C50L	AMS_IMG_VLTS_CA	Vca Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C52L	AMS_PHSR_VLTS_AN	Phasor Van	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C54L	AMS_REAL_VLTS_A	Va Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C56L	AMS_IMG_VLTS_A	Va Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C58L	AMS_PHSR_VLTS_BN	Phasor Vbn	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C5AL	AMS_REAL_VLTS_B	Vb Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C5CL	AMS_IMG_VLTS_B	Vb Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C5EL	AMS_PHSR_VLTS_CN	Phasor Vcn	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C60L	AMS_REAL_VLTS_C	Vc Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002

F650 Bay Controller

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3X0C62L	AMS_IMG_VLTS_C	Vc Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C64L	AMS_PHSR_VLTS_VN	Phasor Vn	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C66L	AMS_REAL_VLTS_V	Vn Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C68L	AMS_IMG_VLTS_V	Vn Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C6AL	AMS_POS_SEQ_V1	Positive Seq V1	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C6CL	AMS_V1_REAL	V1 Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C6EL	AMS_V1_IMAG	V1 Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C70L	AMS_NEG_SEQ_V2	Negative Seq V2	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C72L	AMS_V2_REAL	V2 Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C74L	AMS_V2_IMAG	V2 Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C76L	AMS_ZERO_SEQ_V0	Zero Seq V0	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C78L	AMS_V0_REAL	V0 Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C7AL	AMS_V0_IMAG	V0 Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C7CL	AMS_PHSR_Vx	Phasor Vx	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C7EL	AMS_Vx_REAL	Vx Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C80L	AMS_Vx_IMAG	Vx Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C82L	AMS_Nominal_VOLT	Nominal Voltage	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C84L	AMS_VL_REAL	VL Real	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C86L	AMS_VL_IMAG	VL Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C88L	AMS_VBB_REAL	VBB Real	--	--	-2147,483,648 to	RO	F002

F650 Bay Controller

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
					2,147,483,647		
R3X0C8AL	AMS_VBB_IMAG	VBB Imag	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C8CL	AMS_Line_VOLT	Line Voltage	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C8EL	AMS_Bus_VOLT	Bus Voltage	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C90L	AMS_Line_FREQ	Line Frequency	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C92L	AMS_Bus_FREQ	Bus Frequency	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C94L	AMS_PH_A_AP_PWR	Phase A Apparent Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C96L	AMS_PH_B_AP_PWR	Phase B Apparent Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C98L	AMS_PH_C_AP_PWR	Phase C Apparent Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C9AL	AMS_PH_A_REAL_PWR	Phase A Real Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C9CL	AMS_PH_B_REAL_PWR	Phase B Real Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0C9EL	AMS_PH_C_REAL_PWR	Phase C Real Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0CA0L	AMS_PH_A_RECT_PWR	Phase A Reactive Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0CA2L	AMS_PH_B_RECT_PWR	Phase B Reactive Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0CA4L	AMS_PH_C_RECT_PWR	Phase C Reactive Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0CA6L	AMS_3_PH_AP_PWR	3 Phase Apparent Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0CA8L	AMS_3_PH_REAL_PWR	3 Phase Real Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0CAAL	AMS_3_PH_RECT_PWR	3 Phase Reactive Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0CACL	AMS_PH_A_PWR_FCTR	Phase A Power Factor	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0CAEL	AMS_PH_B_PWR_FCTR	Phase B Power Factor	--	--	-2147,483,648 to 2,147,483,647	RO	F002

F650 Bay Controller

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3X0CB0L	AMS_PH_C_PWR_FCTR	Phase C Power Factor	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0CB2L	AMS_3_PH_PWR_FCTR	3 Phase Power Factor	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0CB4L	AMS_CT_RATIO	CT Ratio	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0CB6L	AMS_CT_RATIO_LG	CT Ratio lg	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0CB8L	AMS_CT_RATIO_LSF	CT Ratio lsg	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0CBAL	AMS_PT_RATIO	PT Ratio	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0DD9F	THRML_IMAGE_A	THERMAL IMAGE A	--	--	3.4E +/- 38 (7 digits)	RO	F003
R3X0DDBF	THRML_IMAGE_B	THERMAL IMAGE B	--	--	3.4E +/- 38 (7 digits)	RO	F003
R3X0DDDF	THRML_IMAGE_C	THERMAL IMAGE C	--	--	3.4E +/- 38 (7 digits)	RO	F003
R3X0DE4F	THRML_IMAGE_A001	THERMAL IMAGE A001	--	--	3.4E +/- 38 (7 digits)	RO	F003
R3X0DE6F	THRML_IMAGE_B001	THERMAL IMAGE B001	--	--	3.4E +/- 38 (7 digits)	RO	F003
R3X0DE8F	THRML_IMAGE_C001	THERMAL IMAGE C001	--	--	3.4E +/- 38 (7 digits)	RO	F003
R3X0DEFF	THRML_IMAGE_A002	THERMAL IMAGE A002	--	--	3.4E +/- 38 (7 digits)	RO	F003
R3X0DF1F	THRML_IMAGE_B002	THERMAL IMAGE B002	--	--	3.4E +/- 38 (7 digits)	RO	F003
R3X0DF3F	THRML_IMAGE_C002	THERMAL IMAGE C002	--	--	3.4E +/- 38 (7 digits)	RO	F003
R3X0E36	AR2_STAT	AR STATUS	--	--	--	RO	F012
R3X0E37	AR2_LOCKOUT_MODE	AR LOCKOUT MODE	--	--	--	RO	F012
R3X0E38	AR2_BLK_MODE	AR BLOCK MODE	--	--	--	RO	F012
R3X0EB7L	OSC_TRIGG_NUMBER	OSC. TRIGG. NUMBER	--	--	-32,768 to 32,767	RO	F004
R3X0EBBF	FAULT_TYPE	FAULT TYPE	--	--	3.4E +/- 38 (7 digits)	RO	F003
R3X0EBDF	FAULT_LOCATION	FAULT LOCATION	--	--	3.4E +/- 38 (7 digits)	RO	F003
R3X0EE2L	AMP_PHSR_la_PRMY	Phasor Ia Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0EE4L	AMP_PHSR_lb_PRMY	Phasor Ib Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0EE6L	AMP_PHSR_lc_PRMY	Phasor Ic Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0EE8L	AMP_PHSR_lg_PRMY	Phasor Ig Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002

F650 Bay Controller

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
					to 2,147,483,647		
R3X0EEAL	AMP_PHSR_Isg_PRMY	Phasor Isg Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0EECL	AMP_PHSR_In_PRMY	Phasor In Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0EEEL	AMP_RMS_Ia_PRMY	RMS Ia Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0EF0L	AMP_RMS_Ib_PRMY	RMS Ib Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0EF2L	AMP_RMS_Ic_PRMY	RMS Ic Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0EF4L	AMP_RMS_Ig_PRMY	RMS Ig Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0EF6L	AMP_RMS_Isg_PRMY	RMS Isg Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0EF8L	AMP_I0_PRMY	I0 Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0EFAL	AMP_I1_PRMY	I1 Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0EFCL	AMP_I2_PRMY	I2 Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0EFEL	AMP_V0_PRMY	V0 Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F00L	AMP_V1_PRMY	V1 Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F02L	AMP_V2_PRMY	V2 Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F04L	AMP_Vab_PRMY	Vab Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F06L	AMP_Vbc_PRMY	Vbc Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F08L	AMP_Vca_PRMY	Vca Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F0AL	AMP_Va_PRMY	Va Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F0CL	AMP_Vb_PRMY	Vb Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F0EL	AMP_Vc_PRMY	Vc Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002

F650 Bay Controller

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3X0F10L	AMP_Vn_PRMY	Vn Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F12L	AMP_Vx_PRMY	Vx Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F14L	AMP_VBB_PRMY	VBB Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F16L	AMP_VL_PRMY	VL Primary	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F18L	AMP_PH_A_REAL_PWR	Phase A Real Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F1AL	AMP_PH_A_RECT_PWR	Phase A Reactive Pw	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F1CL	AMP_PH_A_AP_PWR	Phase A Apparent Pw	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F1EL	AMP_PH_B_REAL_PWR	Phase B Real Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F20L	AMP_PH_B_RECT_PWR	Phase B Reactive Pw	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F22L	AMP_PH_B_AP_PWR	Phase B Apparent Pw	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F24L	AMP_PH_C_REAL_PWR	Phase C Real Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F26L	AMP_PH_C_RECT_PWR	Phase C Reactive Pw	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F28L	AMP_PH_C_AP_PWR	Phase C Apparent Pw	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F2AL	AMP_3_PH_REAL_PWR	3 Phase Real Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F2CL	AMP_3_PH_RECT_PWR	3 Phase Reactive Pwr	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F2EL	AMP_3_PH_AP_PWR	3 Phase Apparent Pw	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F30L	AMP_PH_A_PWR_FCTR	Phase A Pow	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F32L	AMP_PH_B_PWR_FCTR	Phase B Pow	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F34L	AMP_PH_C_PWR_FCTR	Phase C Pow	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F36L	AMP_3_PH_PWR_FCTR	3 Phase Pow	--	--	-2147,483,648 to	RO	F002

F650 Bay Controller

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
					2,147,483,647		
R3X0F38L	AMP_Line_FREQ	Line Frequency	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F3AL	AMP_Bus_FREQ	Bus Frequency	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F3CL	AMP_POS_MWATTHR	Positive MWatthour	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F3EL	AMP_NEG_MWATTHR	Negative MWatthour	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F40L	AMP_POS_MVARHR	Positive MVarhour	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F42L	AMP_NEG_MVARHR	Negative MVarhour	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F44L	AMP_POS_MWATTHR_CNT	Positive MWatthour Cnt	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F46L	AMP_NEG_MWATTHR_CNT	Negative MWatthour Cnt	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F48L	AMP_POS_MVARHR_CNT	Positive MVarhour Cnt	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0F4AL	AMP_NEG_MVARHR_CNT	Negative MVarhour Cnt	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FABL	DMD_Ia	Demand Ia	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FADL	MAX_DMD_Ia	Max. Demand Ia	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FAF	MAX_DMD_Ia_DT	Max.Demand Ia Date	--	--	0 to 18446744073 709551614	RO	F011
R3X0FB0	MAX_DMD_Ia_DT1	Max.Demand Ia Date1	--	--			
R3X0FB1	MAX_DMD_Ia_DT2	Max.Demand Ia Date2	--	--			
R3X0FB2L	DMD_Ib_	Demand Ib	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FB4L	MAX_DMD_Ib	Max. Demand Ib	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FB6	MAX_DMD_Ib_DT	Max.Demand Ib Date	--	--	0 to 18446744073 709551614	RO	F011
R3X0FB7	MAX_DMD_Ib_DT1	Max.Demand Ib Date1	--	--			
R3X0FB8	MAX_DMD_Ib_DT2	Max.Demand Ib Date2	--	--			
R3X0FB9L	DMD_Ic_	Demand Ic	--	--	-2147,483,648 to 2,147,483,647	RO	F002

F650 Bay Controller

Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
					2,147,483,647		
R3X0FBBL	MAX_DMD_Ic	Max. Demand Ic	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FBD	MAX_DMD_Ic_DT	Max.Demand Ic Date	--	--	0 to 18446744073 709551614	RO	F011
R3X0FBE	MAX_DMD_Ic_DT1	Max.Demand Ic Date2	--	--			
R3X0FBF	MAX_DMD_Ic_DT2	Max.Demand Ic Date3	--	--			
R3X0FC0L	DMD_Ig_	Demand Ig	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FC2L	MAX_DMD_Ig	Max. Demand Ig	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FC4	MAX_DMD_Ig_DT	Max.Demand Ig Date	--	--	0 to 18446744073 709551614	RO	F011
R3X0FC5	MAX_DMD_Ig_DT1	Max.Demand Ig Date2	--	--			
R3X0FC6	MAX_DMD_Ig_DT2	Max.Demand Ig Date3	--	--			
R3X0FC7L	DMD_Isg_	Demand Isg	--	--				-2147,483,648 to 2,147,483,647	RO	F002
R3X0FC9L	MAX_DMD_Isg	Max. Demand Isg	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FCB	MAX_DMD_Isg_DT	Max.Demand Isg Date	--	--	0 to 18446744073 709551614	RO	F011
R3X0FCC	MAX_DMD_Isg_DT1	Max.Demand Isg Date2	--	--			
R3X0FCD	MAX_DMD_Isg_DT2	Max.Demand Isg Date3	--	--			
R3X0FCEL	DMD_I2_	Demand I2	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FD0L	MAX_DMD_I2	Max. Demand I2	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FD2	MAX_DMD_I2_DT	Max.Demand I2 Date	--	--	0 to 18446744073 709551614	RO	F011
R3X0FD3	MAX_DMD_I2_DT1	Max.Demand I2 Date2	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FD4	MAX_DMD_I2_DT2	Max.Demand I2 Date3	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FD5L	DMD_RL_PR	Demand RL PR	--	--	-2147,483,648 to 2,147,483,647	RO	F002

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R3X0FD7L	MAX_DMD_RL_PR	Max. Demand RL PR	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FD9	MAX_DMD_Real_DT	Max.Demand RL PR Date	--	--	0 to 18446744073 709551614	RO	F011
R3X0FDA	MAX_DMD_Real_DT1	Max.Demand RL PR Date2	--	--			
R3X0FDB	MAX_DMD_Real_DT2	Max.Demand RL PR Date3	--	--			
R3X0FDCL	DMD_RT_PR	Demad RT PR	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FDEL	MAX_DMD_RT_PR	Max. Demand RT PR	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FE0	MAX_DMD_RT_DT	Max.Demand RT PR Date	--	--	0 to 18446744073 709551614	RO	F011
R3X0FE1	MAX_DMD_RT_DT1	Max.Demand RT PR Date2	--	--			
R3X0FE2	MAX_DMD_RT_DT2	Max.Demand RT PR Date3	--	--			
R3X0FE3L	DMD_AP_PR	Demad AP PR	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FE5L	MAX_DMD_AP_PR	Max. Demand AP PR	--	--	-2147,483,648 to 2,147,483,647	RO	F002
R3X0FE7	MAX_DMD_AP_DT	Max.Demand AP PR Date	--	--	0 to 18446744073 709551614	RO	F011
R3X111DL	BREAKER_OPENINGS	BREAKER OPENINGS	--	--	0 to 4,294,967,295	RO	F005
R3X111FL	BREAKER_CLOSINGS	BREAKER CLOSINGS	--	--	0 to 4,294,967,295	RO	F005
R3X1121F	KI2t_PHASE_A	KI2t PHASE A	--	--	3.4E +/- 38 (7 digits)	RO	F003
R3X1123F	KI2t_PHASE_B	KI2t PHASE B	--	--	3.4E +/- 38 (7 digits)	RO	F003
R3X1125F	KI2t_PHASE_C	KI2t PHASE C	--	--	3.4E +/- 38 (7 digits)	RO	F003
R3X1127F	BKR_OPENED_TIME	BKR OPENED TIME	--	--	3.4E +/- 38 (7 digits)	RO	F003
R3X1129F	BKR_CLOSED_TIME	BKR CLOSED TIME	--	--	3.4E +/- 38 (7 digits)	RO	F003
R3X2F07	DMD_FUNC	Demand Function	--	--	--	RW	F012
R3X2F08	DMD_CRNT_MTHD	CRNT Demand Method	--	--	--	RW	F012
R3X2F09	DMD_PWR_DMD_MTHD	POWER Demand Method	--	--	--	RW	F012
R3X2F0A	DMD_INTVL	Demand Interval	--	--	--	RW	F012
R3X2F0B	DMD_TRIG_ENBLD	Trigger Enabled	--	--	--	RW	F012
R3X2F1F	DMD_CONFM_ADD	Confirmation	--	--	--	WO	--

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		address					
R3X3368F	BRKR_CNT_KI2T_PH_A	KI2t BKR Ph A Cnt	--	--	3.4E +/- 38 (7 digits)	RW	F003
R3X336AF	BRKR_CNT_KI2T_PH_B	KI2t BKR Ph B Cnt	--	--	3.4E +/- 38 (7 digits)	RW	F003
R3X336CF	BRKR_CNT_KI2T_PH_C	KI2t BKR Ph C Cnt	--	--	3.4E +/- 38 (7 digits)	RW	F003
R3X336EI	BRKR_CNT_OPENINGS	BKR Openings Cnt	--	--	0 to 9999	RW	F004
R3X336FI	BRKR_CNT_CLOSINGS	BKR Closings Cnt	--	--	0 to 9999	RW	F004
R3X3383	BRKR_CNT_CONFM_ADD	Confirmation address	--	--	--	WO	--
R3X6000	PLC_DATA_EQN	PLC equations	--	--	String	RO	F009
R3X9000	LCD_DATA_CONFG	LCD configuration	--	--	768	RO	--
R3XAFFE	CMD_OPERATION	Operation 1	--	--	0 to 65535	WO	F001
R3XB000	RLY_MODEL	Relay model	--	--	String	RO	F009
R3XB008	RLY_FRM_VER	Firmware version	--	--	String	RO	F009
R3XB018	RLY_YR_FRM_CMP	Year(0=2000.1=2001,...) and part of firmware compilation	--	--	0 to 65535	RO	F001
R3XB019	RLY_DAY_MNTH_FRM_CMP	Day and month of firmware compilation	--	--	0 to 65535	RO	F001
R3XF000	192_CNTL_EVNTS_STATS	Status of the 192 control events	--	--	0 to 65535	RO	F001
R3XF00C	ALARM_ACKNOWLEDGE	Acknowledge of the alarms	--	--	0 to 65535	RO	F001
R3XF018	CNTRL_EVNT_AS_ALARM	Indicate which control events are configured as alarm	--	--	0 to 65535	RO	F001
R3XF024	ALARM_01_16_DT	Date/Time of the 1	--	--	0 to 18446744073 709551614	RO	F011
R3XF064	ALARM_17_32_DT	Date/Time of the 17	--	--	0 to 18446744073 709551614	RO	F011
R3XF0A4	ALARM_33_48_DT	Date/Time of the 33	--	--	0 to 18446744073 709551614	RO	F011
R3XF0E4	ALARM_49_64_DT	Date/Time of the 49	--	--	0 to 18446744073 709551614	RO	F011
R3XF124	ALARM_65_80_DT	Date/Time of the 65	--	--	0 to 18446744073 709551614	RO	F011
R3XF164	ALARM_81_96_DT	Date/Time of the 81	--	--	0 to 18446744073 709551614	RO	F011
R3XF1A4	ALARM_97_112_DT	Date/Time of the 97	--	--	0 to 18446744073 709551614	RO	F011
R3XF1E4	ALARM_113_128_DT	Date/Time of the 113	--	--	0 to 18446744073	RO	F011

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
					709551614		
R3XF224	ALARM_129_144_DT	Date/Time of the 129	--	--	0 to 18446744073 709551614	RO	F011
R3XF264	ALARM_145_160_DT	Date/Time of the 145	--	--	0 to 18446744073 709551614	RO	F011
R3XF2A4	ALARM_161_176_DT	Date/Time of the 161	--	--	0 to 18446744073 709551614	RO	F011
R3XF2E4	ALARM_177_192_DT	Date/Time of the 177	--	--	0 to 18446744073 709551614	RO	F011
R3XF330I	USER_MAP_ADD_0	Address 00	--	--	-32,768 to 32,767	RO	F004
R3XF331I	USER_MAP_ADD_1	Address 01	--	--	-32,768 to 32,767	RO	F004
R3XF42FI	USER_MAP_ADD_255	Address 255	--	--	-32,768 to 32,767	RO	F004
R3XF430	VIR_INP_LATHD_SLF_RS	64 Virtual Inputs	--	--	0 TO 65535	WO	F001
R3XFE00	EVNT_FILE_NM	Name of the events file to read	--	--	--	RW	F009
R3XFE20I	FRC_OPENING_OPT_FL	Opening force output file	--	--	-32,768 to 32,767	WO	F004
R3XFE28I	FRC_CLOSING_OPT_FL	Closing force output file	--	--	-32,768 to 32,767	WO	F004
R3XFE40	OSC_FILE_NM	Name of the oscillography file to read	--	--	String	WO	F009
R3XFF20I	FORCING_OPTS	Forcing outputs	--	--	-32,768 to 32,767	WO	F004
R3XFF40	OSC_FILE_CURR_BLK_PO	Character position of current block within osc file	--	--	0 to 4,294,967,295	RO	F005
R3XFF42	OSC_FILE_SZ_CURR_BLK	Size of currently-available data block of osc file	--	--	-32,768 to 32,767	RO	F004
R3XFF43	OSC_FILE_REQ_BLK	Block of data requested osc file (122 items)	--	--	-32,768 to 32,767	RO	F004
R4X1C00S16	CMD_OPRN_00	OPERATION_00	--	--	String 16 chars	RW	F009
R4X1C10S16	CMD_OPRN_01	OPERATION_01	--	--	String 16 chars	RW	F009
R4X1D70S16	CMD_OPRN_23	OPERATION_23	--	--	String 16 chars	RW	F009
R4X1E3F	CMD_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X1E41I	VOLT_THR_A_00_BRD_F	Voltage Threshold A_00	--	--	0 to 255	RW	F004
R4X1E42I	VOLT_THR_B_00_BRD_F	Voltage Threshold B_00	--	--	0 to 255	RW	F004
R4X1E43I	DBNC_TM_A_00_BRD_F	Debounce Time A_00	--	--	0 to 50	RW	F004
R4X1E44I	DBNC_TM_B_00_BRD_F	Debounce Time B_00	--	--	0 to 50	RW	F004
R4X1E45	INP_TYP_00_BRD_F	Input Type_00_00	--	--	--	RW	F012

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Input Type_00_01	--	--	--	RW	F012
R4X1E46	INP_TYP_01_BRD_F	Input Type_00_01	--	--	--	RW	F012
R4X1E64	INP_TYP_31_BRD_F	Input Type_00_31	--	--	--	RW	F012
R4X1E65L	DLY_INP_TM_00_BRD_F	Delay Input Time_00_00	--	--	0 to 4,294,967,295	RW	F005
R4X1E67L	DLY_INP_TM_01_BRD_F	Delay Input Time_00_01	--	--	0 to 4,294,967,295	RW	F005
R4X1EA3L	DLY_INP_TM_31_BRD_F	Delay Input Time_00_31	--	--	0 to 4,294,967,295	RW	F005
R4X1EA5	OPT_LGC_00_BRD_F	Output Logic_00_00	--	--	--	RW	F012
R4X1EA6	OPT_LGC_01_BRD_F	Output Logic_00_01	--	--	--	RW	F012
R4X1EB5	OPT_TYP_00_BRD_F	Output Type_00_00	--	--	--	RW	F012
R4X1EB6	OPT_TYP_01_BRD_F	Output Type_00_01	--	--	--	RW	F012
R4X1EC4	OPT_TYP_15_BRD_F	Output Type_00_15	--	--	--	RW	F012
R4X1EC5L	PLS_OPT_TM_00_BRD_F	Pulse Output Time_00_00	--	--	0 to 4,294,967,295	RW	F005
R4X1EC7L	PLS_OPT_TM_01_BRD_F	Pulse Output Time_00_01	--	--	0 to 4,294,967,295	RW	F005
R4X1EE3L	PLS_OPT_TM_15_BRD_F	Pulse Output Time_00_15	--	--	0 to 4,294,967,295	RW	F005
R4X1FE4	PLS_CNFM_ADD_BRD_F	Confirmation address	--	--	--	WO	--
R4X1FE6I	VOLT_THR_A_01_BRD_G	Voltage Threshold A_01	--	--	0 to 255	RW	F004
R4X1FE7I	VOLT_THR_B_01_BRD_G	Voltage Threshold B_01	--	--	0 to 255	RW	F004
R4X1FE8I	DBNC_TM_A_01_BRD_G	Debounce Time A_01	--	--	0 to 255	RW	F004
R4X1FE9I	DBNC_TM_B_01_BRD_G	Debounce Time B_01	--	--	0 to 255	RW	F004
R4X1FEA	INP_TYP_00_BRD_G	Input Type_01_00	--	--	--	RW	F012
R4X1FEB	INP_TYP_01_BRD_G	Input Type_01_01	--	--	--	RW	F012
R4X1FEC	INP_TYP_01_02_BRD_G	Input Type_01_02	--	--	--	RW	F012
R4X2009	INP_TYP_31_BRD_G	Input Type_01_31	--	--	--	RW	F012
R4X200AL	DLY_INP_TM_00_BRD_G	Delay Input Time_01_00	--	--	0 to 4,294,967,295	RW	F005
R4X200CL	DLY_INP_TM_01_BRD_G	Delay Input Time_01_01	--	--	0 to 4,294,967,295	RW	F005
R4X2048L	DLY_INP_TM_31_BRD_G	Delay Input Time_01_31	--	--	0 to 4,294,967,295	RW	F005

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X204A	OPT_LGC_00_BRD_G	Output Logic_01_00	--	--	--	RW	F012
R4X204B	OPT_LGC_01_BRD_G	Output Logic_01_01	--	--	--	RW	F012
R4X2059	OPT_LGC_15_BRD_G	Output Logic_01_15	--	--	--	RW	F012
R4X205A	OPT_TYP_00_BRD_G	Output Type_01_00	--	--	--	RW	F012
R4X205B	OPT_TYP_01_BRD_G	Output Type_01_01	--	--	--	RW	F012
R4X205C	OPT_TYP_01_02_BRD_G	Output Type_01_02	--	--	--	RW	F012
R4X2069	OPT_TYP_15_BRD_G	Output Type_01_15	--	--	--	RW	F012
R4X206AL	PLS_OPT_TM_00_BRD_G	Pulse Output Time_01_00	--	--	0 to 4,294,967,295	RW	F005
R4X206CL	PLS_OPT_TM_01_BRD_G	Pulse Output Time_01_01	--	--	0 to 4,294,967,295	RW	F005
R4X2088L	PLS_OPT_TM_15_BRD_G	Pulse Output Time_01_15	--	--	0 to 4,294,967,295	RW	F005
R4X2189	PLS_CNFM_ADDR_BRD_G	Confirmation address	--	--	--	WO	--
R4X218AF	GEN_PH_CT_RT	Phase CT Ratio	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X218CF	GEN_GND_CT_RT	Ground CT Ratio	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X218EF	GEN_STV_GND_CT_RT	Stv Ground CT Ratio	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2190F	GEN_PH_VT_RT	Phase VT Ratio	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2192	GEN_PH_VT_CON	Phase VT Connection	--	--	--	RW	F012
R4X2193F	GEN_NOM_VOLT	Nominal Voltage	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2195	GEN_NOM_FREQ	Nominal Frequency	--	--	--	RW	F012
R4X2196	GEN_PH_ROTATION	Phase Rotation	--	--	--	RW	F012
R4X2197	GEN_FREQ_REF	Frequency Reference	--	--	--	RW	F012
R4X2198	GEN_AUX_VOLT	Auxiliary Voltage	--	--	--	RW	F012
R4X2199	GEN_LANG	Language	--	--	--	RW	F012
R4X219AI	GEN_MOD_ADD_COM1	Modbus Address COM1	--	--	-32,768 to 32,767	RW	F004
R4X219BI	GEN_MOD_ADD_COM2	Modbus Address COM2	--	--	-32,768 to 32,767	RW	F004
R4X219C	GEN_COM1_BAUD_RATE	COM1 Baud Rate	--	--	--	RW	F012
R4X219D	GEN_COM2_BAUD_RATE	COM2 Baud Rate	--	--	--	RW	F012

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X219EL	GEN_MODBUS_PORT_NUM	Modbus Port Number	--	--	0 to 4,294,967,295	RW	F005
R4X2203	GEN_CNFM_ADDR	Confirmation address	--	--	--	WO	--
R4X2204	PH_IOC_HG1_FUNC	Phase IOC High 1 Function	--	--	--	RW	F012
R4X2205	PH_IOC_HG1_INP	Input	--	--	--	RW	F012
R4X2206F	PH_IOC_HG1_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2208F	PH_IOC_HG1_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X220AF	PH_IOC_HG1_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X221F	PH_IOC_HG1_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2220	PH_IOC_HG2_FUNC	Phase IOC High 2 Function	--	--	--	RW	F012
R4X2221	PH_IOC_HG2_INP	Input	--	--	--	RW	F012
R4X2222F	PH_IOC_HG2_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2224F	PH_IOC_HG2_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2226F	PH_IOC_HG2_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X223B	PH_IOC_HG2_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X223C	PH_IOC_HG3_FUNC	Phase IOC High 3 Function	--	--	--	RW	F012
R4X223D	PH_IOC_HG3_INP	Input	--	--	--	RW	F012
R4X223EF	PH_IOC_HG3_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2240F	PH_IOC_HG3_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2242F	PH_IOC_HG3_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2257	PH_IOC_HG3_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2258	PH_IOC_LW1_FUNC	Phase IOC Low 1 Function	--	--	--	RW	F012
R4X2259	PH_IOC_LW1_INP	Input	--	--	--	RW	F012
R4X225AF	PH_IOC_LW1_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X225CF	PH_IOC_LW1_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X225EF	PH_IOC_LW1_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2273	PH_IOC_LW1_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2274	PH_IOC_LW2_FUNC	Phase IOC Low 2 Function	--	--	--	RW	F012
R4X2275	PH_IOC_LW2_INP	Input	--	--	--	RW	F012
R4X2276F	PH_IOC_LW2_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2278F	PH_IOC_LW2_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X227AF	PH_IOC_LW2_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X228F	PH_IOC_LW2_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2290	PH_IOC_LW3_FUNC	Phase IOC Low 3 Function	--	--	--	RW	F012
R4X2291	PH_IOC_LW3_INP	Input	--	--	--	RW	F012
R4X2292F	PH_IOC_LW3_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2294F	PH_IOC_LW3_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2296F	PH_IOC_LW3_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X22AB	PH_IOC_LW3_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X22AC	NEU_IOC1_FUNC	Neutral IOC 1 Function	--	--	--	RW	F012
R4X22ADF	NEU_IOC1_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X22AFF	NEU_IOC1_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X22B1F	NEU_IOC1_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X22C6	NEU_IOC1_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X22C7	NEU_IOC2_FUNC	Neutral IOC 2 Function	--	--	--	RW	F012
R4X22C8F	NEU_IOC2_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X22CAF	NEU_IOC2_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X22CCF	NEU_IOC2_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X22E1	NEU_IOC2_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X22E2	NEU_IOC3_FUNC	Neutral IOC 3 Function	--	--	--	RW	F012
R4X22E3F	NEU_IOC3_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X22E5F	NEU_IOC3_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X22E7F	NEU_IOC3_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X22FC	NEU_IOC3_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X22FD	GND_IOC1_FUNC	Ground IOC 1 Function	--	--	--	RW	F012
R4X22FE	GND_IOC1_IP	Input	--	--	--	RW	F012
R4X22FFF	GND_IOC1_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2301F	GND_IOC1_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2303F	GND_IOC1_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2318	GND_IOC1_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2319	GND_IOC2_FUNC	Ground IOC 2	--	--	--	RW	F012

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Function					
R4X231A	GND_IOC2_IP	Input	--	--	--	RW	F012
R4X231BF	GND_IOC2_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X231DF	GND_IOC2_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X231FF	GND_IOC2_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2334	GND_IOC2_CNFM_ADD	Confirmation address	--	--	--	WO	--
		Ground IOC 3					
R4X2335	GND_IOC3_FUNC	Function	--	--	--	RW	F012
R4X2336	GND_IOC3_IP	Input	--	--	--	RW	F012
R4X2337F	GND_IOC3_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2339F	GND_IOC3_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X233BF	GND_IOC3_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2350	GND_IOC3_CNFM_ADD	Confirmation address	--	--	--	WO	--
		Sensitive Ground IOC 1					
R4X2351	SEN_IOC1_FUNC	Function	--	--	--	RW	F012
R4X2352	SEN_IOC1_IP	Input	--	--	--	RW	F012
R4X2353F	SEN_IOC1_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2355F	SEN_IOC1_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2357F	SEN_IOC1_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X236C	SEN_IOC1_CNFM_ADD	Confirmation address	--	--	--	WO	--
		Sensitive Ground IOC 2					
R4X236D	SEN_IOC2_FUNC	Function	--	--	--	RW	F012
R4X236E	SEN_IOC2_IP	Input	--	--	--	RW	F012
R4X236FF	SEN_IOC2_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2371F	SEN_IOC2_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2373F	SEN_IOC2_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2388	SEN_IOC2_CNFM_ADD	Confirmation address	--	--	--	WO	--
		Sensitive Ground IOC 3					
R4X2389	SEN_IOC3_FUNC	Function	--	--	--	RW	F012
R4X238A	SEN_IOC3_IP	Input	--	--	--	RW	F012
R4X238BF	SEN_IOC3_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X238DF	SEN_IOC3_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X238FF	SEN_IOC3_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X23A4	SEN_IOC3_CNFM_ADD	Confirmation address	--	--	--	WO	--

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X23A5	PH_TOC_H1_FUNC	Phase TOC High 1 Function	--	--	--	RW	F012
R4X23A6	PH_TOC_H1_IP	Input	--	--	--	RW	F012
R4X23A7F	PH_TOC_H1_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X23AAF	PH_TOC_H1_TD_MUL	TD Multiplier	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X23AC	PH_TOC_H1_RST_DLY	Reset	--	--	--	RW	F012
R4X23AD	PH_TOC_H1_VOL_RES	Voltage Restraint	--	--	--	RW	F012
R4X23C1	PH_TOC_H1_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X23C2	PH_TOC_H2_FUNC	Phase TOC High 2 Function	--	--	--	RW	F012
R4X23C3	PH_TOC_H2_IP	Input	--	--	--	RW	F012
R4X23C4F	PH_TOC_H2_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X23C7F	PH_TOC_H2_TD_MUL	TD Multiplier	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X23C9	PH_TOC_H2_RST_DLY	Reset	--	--	--	RW	F012
R4X23CA	PH_TOC_H2_VOL_RES	Voltage Restraint	--	--	--	RW	F012
R4X23DE	PH_TOC_H2_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X23DF	PH_TOC_H3_FUNC	Phase TOC High 3 Function	--	--	--	RW	F012
R4X23E0	PH_TOC_H3_IP	Input	--	--	--	RW	F012
R4X23E1F	PH_TOC_H3_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X23E4F	PH_TOC_H3_TD_MUL	TD Multiplier	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X23E6	PH_TOC_H3_RST_DLY	Reset	--	--	--	RW	F012
R4X23E7	PH_TOC_H3_VOL_RES	Voltage Restraint	--	--	--	RW	F012
R4X23FB	PH_TOC_H3_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X23FC	NEU_TOC1_FUNC	Neutral TOC 1 Function	--	--	--	RW	F012
R4X23FDF	NEU_TOC1_PKP_LVL	Pickup Level	--	--	--	RW	F012
R4X2400F	NEU_TOC1_TD_MUL	TD Multiplier	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2402	NEU_TOC1_RST	Reset	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2416	NEU_TOC1_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2417	NEU_TOC2_FUNC	Neutral TOC 2 Function	--	--	--	RW	F012
R4X2418F	NEU_TOC2_PKP_LVL	Pickup Level	--	--	--	RW	F012
R4X241BF	NEU_TOC2_TD_MUL	TD Multiplier	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X241D	NEU_TOC2_RST	Reset	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2431	NEU_TOC2_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2432	NEU_TOC3_FUNC	Neutral TOC 3 Function	--	--	--	RW	F012

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X2433F	NEU_TOC3_PKP_LVL	Pickup Level	--	--	--	RW	F012
R4X2436F	NEU_TOC3_TD_MUL	TD Multiplier	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2438	NEU_TOC3_RST	Reset	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X244C	NEU_TOC3_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X244D	GND_TOC1_FUNC	Ground TOC 1 Function	--	--	--	RW	F012
R4X244E	GND_TOC_H1_IP	Input	--	--	--	RW	F012
R4X244FF	GND_TOC1_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2452F	GND_TOC1_TD_MUL	TD Multiplier	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2454	GND_TOC1_RST	Reset	--	--	--	RW	F012
R4X2468	GND_TOC1_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2469	GND_TOC2_FUNC	Ground TOC 2 Function	--	--	--	RW	F012
R4X246A	GND_TOC_H2_IP	Input	--	--	--	RW	F012
R4X246BF	GND_TOC2_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X246EF	GND_TOC2_TD_MUL	TD Multiplier	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2470	GND_TOC2_RST	Reset	--	--	--	RW	F012
R4X2484	GND_TOC2_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2485	GND_TOC3_FUNC	Ground TOC 3 Function	--	--	--	RW	F012
R4X2486	GND_TOC_H3_IP	Input	--	--	--	RW	F012
R4X2487F	GND_TOC3_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X248AF	GND_TOC3_TD_MUL	TD Multiplier	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X248C	GND_TOC3_RST	Reset	--	--	--	RW	F012
R4X24A0	GND_TOC3_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X24A1	SEN_TOC1_FUNC	Sensitive Ground TOC 1 Function	--	--	--	RW	F012
R4X24A2	SEN_TOC_H1_IP	Input	--	--	--	RW	F012
R4X24A3F	SEN_TOC1_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X24A6F	SEN_TOC1_TD_MUL	TD Multiplier	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X24A8	SEN_TOC1_RST	Reset	--	--	--	RW	F012
R4X24BC	SEN_TOC1_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X24BD	SEN_TOC2_FUNC	Sensitive Ground TOC 2 Function	--	--	--	RW	F012
R4X24BE	SEN_TOC_H2_IP	Input	--	--	--	RW	F012
R4X24BFF	SEN_TOC2_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X24C2F	SEN_TOC2_TD_MUL	TD Multiplier	---	--	3.4E +/- 38 (7 digits)	RW	F003

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X24C4	SEN_TOC2_RST	Reset	--	--	--	RW	F012
R4X24D8	SEN_TOC2_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X24D9	SEN_TOC3_FUNC	Sensitive Ground TOC 3 Function	--	--	--	RW	F012
R4X24DA	SEN_TOC_H3_IP	Input	--	--	--	RW	F012
R4X24DBF	SEN_TOC3_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X24DEF	SEN_TOC3_TD_MUL	TD Multiplier	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X24E0	SEN_TOC3_RST	Reset	--	--	--	RW	F012
R4X24F4	SEN_TOC3_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X24F5	PH_UV1_FN	Phase UV 1 Function	--	--	--	RW	F012
R4X24F6	PH_UV1_MOD	Mode	--	--	--	RW	F012
R4X24F9	PH_UV1_CURV	Curve	--	--	--	RW	F012
R4X24FAF	PH_UV1_DLY	Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X24FE	PH_UV1_LOG	Logic	--	--	--	RW	F012
R4X24FF	PH_UV1_SUP	Supervised by 52	--	--	--	RW	F012
R4X2513	PH_UV1_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2514	PH_UV2_FN	Phase UV 2 Function	--	--	--	RW	F012
R4X2515	PH_UV2_MOD	Mode	--	--	--	RW	F012
R4X2518	PH_UV2_CURV	Curve	--	--	--	RW	F012
R4X2519F	PH_UV2_DLY	Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X251D	PH_UV2_LOG	Logic	--	--	--	RW	F012
R4X251E	PH_UV2_SUP	Supervised by 52	--	--	--	RW	F012
R4X2532	PH_UV2_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2533	PH_UV3_FN	Phase UV 3 Function	--	--	--	RW	F012
R4X2534	PH_UV3_MOD	Mode	--	--	--	RW	F012
R4X2537	PH_UV3_CURV	Curve	--	--	--	RW	F012
R4X2538F	PH_UV3_DLY	Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X253C	PH_UV3_LOG	Logic	--	--	--	RW	F012
R4X253D	PH_UV3_SUP	Supervised by 52	--	--	--	RW	F012

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X2551	PH_UV3_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2552	V2_OV1_FN	V2 OV 1 Function	--	--	--	RW	F012
R4X2555F	V2_OV1_TRIP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2557F	V2_OV1_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X256C	V2_OV1_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X256D	V2_OV2_FN	V2 OV 2 Function	--	--	--	RW	F012
R4X2570F	V2_OV2_TRIP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2572F	V2_OV2_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2587	V2_OV2_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2588	V3_OV3_FN	V2 OV 3 Function	--	--	--	RW	F012
R4X258BF	V3_OV3_TRIP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X258DF	V3_OV3_RST_DLY	Reset Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X25A2	V3_OV3_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X25A3	THE_IMG1_FN	Thermal Image 1 Function	--	--	--	RW	F012
R4X25A4F	THE_IMG1_HT_T_CST	Heat Time Constant	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X25A6F	THE_IMG1_CL_T_CST	Cool Time Constant	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X25A8F	THE_IMG1_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X25AAF	THE_IMG1_ALM_LVL	Alarm Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X25BF	THE_IMG1_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X25C0	THE_IMG2_FN	Thermal Image 2 Function	--	--	--	RW	F012
R4X25C1F	THE_IMG2_HT_T_CST	Heat Time Constant	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X25C3F	THE_IMG2_CL_T_CST	Cool Time Constant	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X25C5F	THE_IMG2_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X25C7F	THE_IMG2_ALM_LVL	Alarm Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X25DC	THE_IMG2_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X25DD	THE_IMG3_FN	Thermal Image 3 Function	--	--	--	RW	F012
R4X25DEF	THE_IMG3_HT_T_CST	Heat Time Constant	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X25E0F	THE_IMG3_CL_T_CST	Cool Time Constant	---	--	3.4E +/- 38 (7 digits)	RW	F003

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X25E2F	THE_IMG3_PKP_LVL	Pickup Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X25E4F	THE_IMG3_ALM_LVL	Alarm Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X25F9	THE_IMG3_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X25FA	PH_DIR1_FN	Phase Directional 1 Function	--	--	--	RW	F012
R4X25FBF	PH_DIR1_MTA	MTA	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X25FD	PH_DIR1_DIR	Direction	--	--	--	RW	F012
R4X25FE	PH_DIR1_BLK_LOG	Block Logic	--	--	--	RW	F012
R4X25FF	PH_DIR1_PV_THR	Pol V Threshold	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2614	PH_DIR1_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2615	PH_DIR2_FN	Phase Directional 2 Function	--	--	--	RW	F012
R4X2616F	PH_DIR2_MTA	MTA	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2618	PH_DIR2_DIR	Direction	--	--	--	RW	F012
R4X2619	PH_DIR2_BLK_LOG	Block Logic	--	--	--	RW	F012
R4X261AF	PH_DIR2_PV_THR	Pol V Threshold	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X262F	PH_DIR2_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2630	PH_DIR3_FN	Phase Directional 3 Function	--	--	--	RW	F012
R4X2631F	PH_DIR3_MTA	MTA	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2633	PH_DIR3_DIR	Direction	--	--	--	RW	F012
R4X2634	PH_DIR3_BLK_LOG	Block Logic	--	--	--	RW	F012
R4X2635F	PH_DIR3_PV_THR	Pol V Threshold	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X264A	PH_DIR3_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X264B	NEU_DIR1_FN	Neutral Directional 1 Function	--	--	--	RW	F012
R4X264CF	NEU_DIR1_MTA	MTA	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X264E	NEU_DIR1_DIR	Direction	--	--	--	RW	F012
R4X264F	NEU_DIR1_POL	Polarization	--	--	--	RW	F012
R4X2650	NEU_DIR1_BLK_LOG	Block Logic	--	--	--	RW	F012
R4X2667	NEU_DIR2_FN	Neutral Directional 2	--	--	--	RW	F012

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Function					
R4X2668F	NEU_DIR2_MTA	MTA	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X266A	NEU_DIR2_DIR	Direction	--	--	--	RW	F012
R4X266B	NEU_DIR2_POL	Polarization	--	--	--	RW	F012
R4X266C	NEU_DIR2_BLK_LOG	Block Logic	--	--	--	RW	F012
R4X2683	NEU_DIR3_FN	Neutral Directional 3 Function	--	--	--	RW	F012
R4X2684F	NEU_DIR3_MTA	MTA	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2686	NEU_DIR3_DIR	Direction	--	--	--	RW	F012
R4X2687	NEU_DIR3_POL	Polarization	--	--	--	RW	F012
R4X2688	NEU_DIR3_BLK_LOG	Block Logic	--	--	--	RW	F012
R4X269F	GND_DIR1_FN	Ground Directional 1 Function	--	--	--	RW	F012
R4X26A0F	GND_DIR1_MTA	MTA	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X26A2	GND_DIR1_DIR	Direction	--	--	--	RW	F012
R4X26A3	GND_DIR1_POL	Polarization	--	--	--	RW	F012
R4X26A4	GND_DIR1_BLK_LOG	Block Logic	--	--	--	RW	F012
R4X26BB	GND_DIR2_FN	Ground Directional 2 Function	--	--	--	RW	F012
R4X26BCF	GND_DIR2_MTA	MTA	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X26BE	GND_DIR2_DIR	Direction	--	--	--	RW	F012
R4X26BF	GND_DIR2_POL	Polarization	--	--	--	RW	F012
R4X26C0	GND_DIR2_BLK_LOG	Block Logic	--	--	--	RW	F012
R4X26D7	GND_DIR3_FN	Ground Directional 3 Function	--	--	--	RW	F012
R4X26D8F	GND_DIR3_MTA	MTA	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X26DA	GND_DIR3_DIR	Direction	--	--	--	RW	F012
R4X26DB	GND_DIR3_POL	Polarization	--	--	--	RW	F012
R4X26DC	GND_DIR3_BLK_LOG	Block Logic	--	--	--	RW	F012
R4X26F3	BRK_FAIL_FN	Breaker Failure Function	--	--	--	RW	F012
R4X26F4F	BRK_FAIL_SUP_PKP	Supervision Pickup	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X26F6F	BRK_FAIL_HI_PKP	Hiset Pickup	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X26F8F	BRK_FAIL_LW_PKP	Lowset Pickup	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X26FAF	BRK_FAIL_IN_PKP	Internal Arc Pickup	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X26FCF	BRK_FAIL_IN_DLY	Internal Arc Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X26FEF	BRK_FAIL_SUP_DLY	Supervision Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2700F	BRK_FAIL_HI_DLY	HiSet Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2702F	BRK_FAIL_LW_DLY	LowSet Delay	---	--	3.4E +/- 38 (7	RW	F003

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
					digits)		
R4X2704F	BRK_FAIL_SP_DLY	2nd Step Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2706F	BRK_FAIL_I_DLY	No Current Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X271B	BRK_FAIL_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X271C	FU_FAIL_FN	Fuse Failure Function	--	--	--	RW	F012
R4X2730	FU_FAIL_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2731	SYNC_FN	Synchrocheck Function	--	--	--	RW	F012
R4X2732F	SYNC_DD_BS_LVL	Dead Bus Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2734F	SYNC_LI_BS_LVL	Live Bus Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2736F	SYNC_DD_LN_LVL	Dead Line Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2738F	SYNC_LI_LN_LVL	Live Line Level	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X273AF	SYNC_MX_VOL_DIFF	Max Volt Difference	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X273CF	SYNC_MX_AG_DIFF	Max Angle Difference	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X273EF	SYNC_FQ_DIFF	Max Freq Difference	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2740F	SYNC_TIME	Time	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2742	SYNC_DL_DB_FN	DL-DB Function	--	--	--	RW	F012
R4X2743	SYNC_LL_LB_FN	LL-DB Function	--	--	--	RW	F012
R4X2744	SYNC_DL_LB_FN	DL-LB Function	--	--	--	RW	F012
R4X2762	SYNC_CNFM_ADD	Confirmation address	--	--	--	WO	--
R4X2763	RC_FN	Recloser Function	--	--	--	RW	F012
R4X2764	RC_MX_NM_ST	Max Number Shots	---	--	-32,767 to 32768	RW	F004
R4X2765F	RC_DT1	Dead Time 1	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2767F	RC_DT2	Dead Time 2	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2769F	RC_DT3	Dead Time 3	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2A7DI	OSC_TRG_POS	Trigger Position	---	--	-32,767 to 32768	RW	F004
R4X2A7E	OSC_SAM_PER_CYC	Samples/Cycle	--	--	--	RW	F012
R4X2A92	OSC_CFRM_ADD	Confirmation address	--	--	--	WO	--
R4X2A93	FLTLCR_FUNC	Fault locator Function	--	--	--	RW	F012
R4X2A94	FLTLCR_POS_SEQ_MOD	Pos Seq Module	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2A96	FLTLCR_POS_SEQ_ANG	Pos Seq Angle	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2A98	FLTLCR_0_SEQ_MOD	Zero Seq Module	---	--	3.4E +/- 38 (7 digits)	RW	F003

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X2A9A	FLTLCR_ZERO_SEQ_ANGLE	Zero Seq Angle	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2A9C	FLTLCR_LINE_LEN	Line Length	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2AB1	FLTLCR_CONFM_ADD	Confirmation address	--	--	--	WO	--
R4X2AB2	GRP_SETG_FUNC	Group settings Function	--	--	--	RW	F012
R4X2AB3	GRP_SETG_ACT_GRP	Active Group	--	--	--	RW	F012
R4X2AC7	GRP_SETG_CONFM_ADD	Confirmation address	--	--	--	WO	--
R4X2AC8S16	OSC_DIG_CH1_TXT	Channel 1 Txt	--	--	String	RW	F009
R4X2AD8S16	OSC_DIG_CH2_TXT	Channel 2 Txt	--	--	String	RW	F009
R4X2AE8S16	OSC_DIG_CH3_TXT	Channel 3 Txt	--	--	String	RW	F009
R4X2AF8S16	OSC_DIG_CH4_TXT	Channel 4 Txt	--	--	String	RW	F009
R4X2B08S16	OSC_DIG_CH5_TXT	Channel 5 Txt	--	--	String	RW	F009
R4X2B18S16	OSC_DIG_CH6_TXT	Channel 6 Txt	--	--	String	RW	F009
R4X2B28S16	OSC_DIG_CH7_TXT	Channel 7 Txt	--	--	String	RW	F009
R4X2B38S16	OSC_DIG_CH8_TXT	Channel 8 Txt	--	--	String	RW	F009
R4X2B48S16	OSC_DIG_CH9_TXT	Channel 9 Txt	--	--	String	RW	F009
R4X2B58S16	OSC_DIG_CH10_TXT	Channel 10 Txt	--	--	String	RW	F009
R4X2B68S16	OSC_DIG_CH11_TXT	Channel 11 Txt	--	--	String	RW	F009
R4X2B78S16	OSC_DIG_CH12_TXT	Channel 12 Txt	--	--	String	RW	F009
R4X2B88S16	OSC_DIG_CH13_TXT	Channel 13 Txt	--	--	String	RW	F009
R4X2B98S16	OSC_DIG_CH14_TXT	Channel 14 Txt	--	--	String	RW	F009
R4X2BA8S16	OSC_DIG_CH15_TXT	Channel 15 Txt	--	--	String	RW	F009
R4X2BB8S16	OSC_DIG_CH16_TXT	Channel 16 Txt	--	--	String	RW	F009
R4X2C07	OSC_DIG_CONF_ADD	Confirmation address	--	--	--	WO	--
R4X2C08	BRKN_CDTR1_FUNC	Broken conductor 1 Function	--	--	--	RW	F012
R4X2C09F	BRKN_CDTR1_TAP	Tap	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2C0BF	BRKN_CDTR1_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2C20	BRKN_CDTR1_CONFM_ADD	Confirmation address	--	--	--	WO	--
R4X2C21	BRKN_CDTR2_FUNC	Broken conductor 2 Function	--	--	--	RW	F012
R4X2C22F	BRKN_CDTR2_TAP	Tap	---	--	3.4E +/- 38 (7 digits)	RW	F003

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
					digits)		
R4X2C24F	BRKN_CDTR2_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2C39	BRKN_CDTR2_CONFM_ADD	Confirmation address	--	--	--	WO	--
R4X2C3A	BRKN_CDTR3_FUNC	Broken conductor 3 Function	--	--	--	RW	F012
R4X2C3BF	BRKN_CDTR3_TAP	Tap	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2C3DF	BRKN_CDTR3_TRP_DLY	Trip Delay	---	--	3.4E +/- 38 (7 digits)	RW	F003
R4X2C52	BRKN_CDTR3_CONFM_ADD	Confirmation address	--	--	--	WO	--
R4X2C53I	ETHNET1_IPADD_OCT1	ETHERNET 1 IP Address Oct1	---	--	-32,767 to32768	RW	F004
R4X2C54I	ETHNET1_IPADD_OCT2	IP Address Oct2	---	--	-32,767 to32768	RW	F004
R4X2C55I	ETHNET1_IPADD_OCT3	IP Address Oct3	---	--	-32,767 to32768	RW	F004
R4X2C56I	ETHNET1_IPADD_OCT4	IP Address Oct4	---	--	-32,767 to32768	RW	F004
R4X2C57I	ETHNET1_NETMSK_OCT1	Netmask Oct1 F00	---	--	-32,767 to32768	RW	F004
R4X2C58I	ETHNET1_NETMSK_OCT2	Netmask Oct2 F00	---	--	-32,767 to32768	RW	F004
R4X2C59I	ETHNET1_NETMSK_OCT3	Netmask Oct3 F00	---	--	-32,767 to32768	RW	F004
R4X2C5AI	ETHNET1_NETMSK_OCT4	Netmask Oct4 F00	---	--	-32,767 to32768	RW	F004
R4X2C5BI	ETHNET1_GTWY_OCT1	Gateway IP Oct1	---	--	-32,767 to32768	RW	F004
R4X2C5CI	ETHNET1_GTWY_OCT2	Gateway IP Oct2	---	--	-32,767 to32768	RW	F004
R4X2C5DI	ETHNET1_GTWY_OCT3	Gateway IP Oct3	---	--	-32,767 to32768	RW	F004
R4X2C5EI	ETHNET1_GTWY_OCT4	Gateway IP Oct4	---	--	-32,767 to32768	RW	F004
R4X2C86I	ETHNET1_CONFM_ADD	Confirmation add	--	--	--	WO	--
R4X2C87I	ETHNET2_IPADD_OCT1	ETHERNET 2 IP Address Oct1	---	--	-32,767 to32768	RW	F004
R4X2C88I	ETHNET2_IPADD_OCT2	IP Address Oct2	---	--	-32,767 to32768	RW	F004
R4X2C89I	ETHNET2_IPADD_OCT3	IP Address Oct3	---	--	-32,767 to32768	RW	F004
R4X2C8AI	ETHNET2_IPADD_OCT4	IP Address Oct4	---	--	-32,767 to32768	RW	F004
R4X2C8BI	ETHNET2_NETMSK_OCT1	Netmask Oct1 F00	---	--	-32,767 to32768	RW	F004
R4X2C8CI	ETHNET2_NETMSK_OCT2	Netmask Oct2 F00	---	--	-32,767 to32768	RW	F004
R4X2C8DI	ETHNET2_NETMSK_OCT3	Netmask Oct3 F00	---	--	-32,767 to32768	RW	F004
R4X2C8EI	ETHNET2_NETMSK_OCT4	Netmask Oct4 F00	---	--	-32,767 to32768	RW	F004
R4X2C8FI	ETHNET2_GTWY_OCT1	Gateway IP Oct1	---	--	-32,767 to32768	RW	F004
R4X2C90I	ETHNET2_GTWY_OCT2	Gateway IP Oct2	---	--	-32,767	RW	F004

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
					to32768		
R4X2C91I	ETHNET2_GTWY_OCT3	Gateway IP Oct3	---	--	-32,767 to32768	RW	F004
R4X2C92I	ETHNET2_GTWY_OCT4	Gateway IP Oct4	---	--	-32,767 to32768	RW	F004
R4X2CBAI	ETHNET2_CONFM_ADD	Confirmation add	--	--	--	WO	--
R4X2CBB	DNP1_PHY_PORT	DNP 1 Physical Port	--	--	--	RW	F012
R4X2CBCL	DNP1_ADDRESS	Address	---	--	0 to 4,294,967,295	RW	F006
R4X2CBEI	DNP1_IPADD_CL1_OCT1	IP Addr Client1 Oct1	---	--	-32,767 to32768	RW	F004
R4X2CBFI	DNP1_IPADD_CL1_OCT2	IP Addr Client1 Oct2	---	--	-32,767 to32768	RW	F004
R4X2CC0I	DNP1_IPADD_CL1_OCT3	IP Addr Client1 Oct3	---	--	-32,767 to32768	RW	F004
R4X2CC1I	DNP1_IPADD_CL1_OCT4	IP Addr Client1 Oct4	---	--	-32,767 to32768	RW	F004
R4X2CC2I	DNP1_IPADD_CL2_OCT1	IP Addr Client2 Oct1	---	--	-32,767 to32768	RW	F004
R4X2CC3I	DNP1_IPADD_CL2_OCT2	IP Addr Client2 Oct2	---	--	-32,767 to32768	RW	F004
R4X2CC4I	DNP1_IPADD_CL2_OCT3	IP Addr Client2 Oct3	---	--	-32,767 to32768	RW	F004
R4X2CC5I	DNP1_IPADD_CL2_OCT4	IP Addr Client2 Oct4	---	--	-32,767 to32768	RW	F004
R4X2CC6I	DNP1_IPADD_CL3_OCT1	IP Addr Client3 Oct1	---	--	-32,767 to32768	RW	F004
R4X2CC7I	DNP1_IPADD_CL3_OCT2	IP Addr Client3 Oct2	---	--	-32,767 to32768	RW	F004
R4X2CC8I	DNP1_IPADD_CL3_OCT3	IP Addr Client3 Oct3	---	--	-32,767 to32768	RW	F004
R4X2CC9I	DNP1_IPADD_CL3_OCT4	IP Addr Client3 Oct4	---	--	-32,767 to32768	RW	F004
R4X2CCA I	DNP1_IPADD_CL4_OCT1	IP Addr Client4 Oct1	---	--	-32,767 to32768	RW	F004
R4X2CCBI	DNP1_IPADD_CL4_OCT2	IP Addr Client4 Oct2	---	--	-32,767 to32768	RW	F004
R4X2CCCI	DNP1_IPADD_CL4_OCT3	IP Addr Client4 Oct3	---	--	-32,767 to32768	RW	F004
R4X2CCDI	DNP1_IPADD_CL4_OCT4	IP Addr Client4 Oct4	---	--	-32,767 to32768	RW	F004
R4X2CCEI	DNP1_IPADD_CL5_OCT1	IP Addr Client5 Oct1	---	--	-32,767 to32768	RW	F004
R4X2CCFI	DNP1_IPADD_CL5_OCT2	IP Addr Client5 Oct2	---	--	-32,767 to32768	RW	F004
R4X2CD0I	DNP1_IPADD_CL5_OCT3	IP Addr Client5 Oct3	---	--	-32,767 to32768	RW	F004
R4X2CD1I	DNP1_IPADD_CL5_OCT4	IP Addr Client5 Oct4	---	--	-32,767 to32768	RW	F004
R4X2CD2L	DNP1_TCP_UDP_PORT	TCP/UDP Port	---	--	0 to 65535	RW	F005
R4X2CD4	DNP1_UNSL_RSP_FUNC	Unsol Resp Function	--	--	--	RW	F012
R4X2CD5L	DNP1_UNSL_RSP_TOUT	Unsol Resp TimeOut	---	--	0 to 65535	RW	F005
R4X2CD7I	DNP1_UNSL_RSP_MAXRT	Unsol Resp Max	---	--	-32,767 to32768	RW	F004

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X2CD8L	DNP1_UNSL_RSP_DESTA D	Unsol Resp Dest	---	--	0 to 65535	RW	F005
R4X2CDA	DNP1_CURR_SCA FACT	Current Scale Factor	--	--	--	RW	F012
R4X2CDB	DNP1_VOLT_SCA FACT	Voltage Scale Factor	--	--	--	RW	F012
R4X2CDC	DNP1_PWR_SCA FACT	Power Scale Factor	--	--	--	RW	F012
R4X2CDD	DNP1_ENER_SCA FACT	Energy Scale Factor	--	--	--	RW	F012
R4X2CDE	DNP1_OTHR_SCA FACT	Other Scale Factor	--	--	--	RW	F012
R4X2CDFL	DNP1_CURR_DBAND	Current Deadband	---	--	0 to 65535	RW	F005
R4X2CE1L	DNP1_VOLT_DBAND	Voltage Deadband	---	--	0 to 65535	RW	F005
R4X2CE3L	DNP1_PWR_DBAND	Power Deadband	---	--	0 to 65535	RW	F005
R4X2CE5L	DNP1_ENER_DBAND	Energy Deadband	---	--	0 to 65535	RW	F005
R4X2CE7L	DNP1_OTHER_DBAND	Other Deadband	---	--	0 to 65535	RW	F005
R4X2CE9L	DNP1_MSG_FRAG_SZ	Msg Fragment Size	---	--	0 to 65535	RW	F005
R4X2CEB	DNP1_BIN_INP_BLK00	Binary Input Block00	--	--	--	RW	F012
R4X2CEC	DNP1_BIN_INP_BLK01	Binary Input Block01	--	--	--	RW	F012
R4X2CED	DNP1_BIN_INP_BLK02	Binary Input Block02	--	--	--	RW	F012
R4X2CEE	DNP1_BIN_INP_BLK03	Binary Input Block03	--	--	--	RW	F012
R4X2CEF	DNP1_BIN_INP_BLK04	Binary Input Block04	--	--	--	RW	F012
R4X2CF0	DNP1_BIN_INP_BLK05	Binary Input Block05	--	--	--	RW	F012
R4X2CF1	DNP1_BIN_INP_BLK06	Binary Input Block06	--	--	--	RW	F012
R4X2CF2	DNP1_BIN_INP_BLK07	Binary Input Block07	--	--	--	RW	F012
R4X2CF3	DNP1_BIN_INP_BLK08	Binary Input Block08	--	--	--	RW	F012
R4X2CF4	DNP1_BIN_INP_BLK09	Binary Input Block09	--	--	--	RW	F012
R4X2D1C	DNP1_CONFM_ADD	Confirmation address	--	--	--	WO	--
R4X2D1D	DNP2_PHY_PORT	Physical Port	--	--	--	RW	F012
R4X2D1EL	DNP2_ADDRESS	Address	---	--	0 to 65534	RW	F005
R4X2D20I	DNP2_IPADD_CL1_OCT1	IP Addr Client1 Oct1	---	--	0 to 255	RW	F004
R4X2D21I	DNP2_IPADD_CL1_OCT2	IP Addr Client1 Oct2	---	--	0 to 255	RW	F004
R4X2D22I	DNP2_IPADD_CL1_OCT3	IP Addr Client1 Oct3	---	--	0 to 255	RW	F004
R4X2D23I	DNP2_IPADD_CL1_OCT4	IP Addr Client1 Oct4	---	--	0 to 255	RW	F004
R4X2D24I	DNP2_IPADD_CL2_OCT1	IP Addr Client2 Oct1	---	--	0 to 255	RW	F004
R4X2D25I	DNP2_IPADD_CL2_OCT2	IP Addr Client2 Oct2	---	--	0 to 255	RW	F004

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X2D26I	DNP2_IPADD_CL2_OCT3	IP Addr Client2 Oct3	---	--	0 to 255	RW	F004
R4X2D27I	DNP2_IPADD_CL2_OCT4	IP Addr Client2 Oct4	---	--	0 to 255	RW	F004
R4X2D28I	DNP2_IPADD_CL3_OCT1	IP Addr Client3 Oct1	---	--	0 to 255	RW	F004
R4X2D29I	DNP2_IPADD_CL3_OCT2	IP Addr Client3 Oct2	---	--	0 to 255	RW	F004
R4X2D2AI	DNP2_IPADD_CL3_OCT3	IP Addr Client3 Oct3	---	--	0 to 255	RW	F004
R4X2D2BI	DNP2_IPADD_CL3_OCT4	IP Addr Client3 Oct4	---	--	0 to 255	RW	F004
R4X2D2CI	DNP2_IPADD_CL4_OCT1	IP Addr Client4 Oct1	---	--	0 to 255	RW	F004
R4X2D2DI	DNP2_IPADD_CL4_OCT2	IP Addr Client4 Oct2	---	--	0 to 255	RW	F004
R4X2D2EI	DNP2_IPADD_CL4_OCT3	IP Addr Client4 Oct3	---	--	0 to 255	RW	F004
R4X2D2FI	DNP2_IPADD_CL4_OCT4	IP Addr Client4 Oct4	---	--	0 to 255	RW	F004
R4X2D30I	DNP2_IPADD_CL5_OCT1	IP Addr Client5 Oct1	---	--	0 to 255	RW	F004
R4X2D31I	DNP2_IPADD_CL5_OCT2	IP Addr Client5 Oct2	---	--	0 to 255	RW	F004
R4X2D32I	DNP2_IPADD_CL5_OCT3	IP Addr Client5 Oct3	---	--	0 to 255	RW	F004
R4X2D33I	DNP2_IPADD_CL5_OCT4	IP Addr Client5 Oct4	---	--	0 to 255	RW	F004
R4X2D34L	DNP2_TCP_UDP_PORT	TCP/UDP Port	---	--	0 to 65535	RW	F005
R4X2D36	DNP2_UNSL_RSP_FUNC	Unsol Resp Function	---	--	0 to 65535	RW	F005
R4X2D37L	DNP2_UNSL_RSP_TOUT	Unsol Resp TimeOut	--	--	--	RW	F012
R4X2D39I	DNP2_UNSL_RSP_MAXRT	Unsol Resp Max Ret	---	--	0 to 255	RW	F004
R4X2D3AL	DNP2_UNSL_RSP_DESTAD	Unsol Resp Dest Adr	---	--	0 to 65535	RW	F005
R4X2D3C	DNP2_CURR_SCA FACT	Current Scale Factor	--	--	--	RW	F012
R4X2D3D	DNP2_VOLT_SCA FACT	Voltage Scale Factor	--	--	--	RW	F012
R4X2D3E	DNP2_PWR_SCA FACT	Power Scale Factor	--	--	--	RW	F012
R4X2D3F	DNP2_ENER_SCA FACT	Energy Scale Factor	--	--	--	RW	F012
R4X2D40	DNP2_OTHR_SCA FACT	Other Scale Factor	--	--	--	RW	F012
R4X2D41L	DNP2_CURR_DBAND	Current Deadband	---	--	0 to 65535	RW	F005
R4X2D43L	DNP2_VOLT_DBAND	Voltage Deadband	---	--	0 to 65535	RW	F005
R4X2D45L	DNP2_PWR_DBAND	Power Deadband	---	--	0 to 65535	RW	F005
R4X2D47L	DNP2_ENER_DBAND	Energy Deadband	---	--	0 to 65535	RW	F005
R4X2D49L	DNP2_OTHER_DBAND	Other Deadband	---	--	0 to 65535	RW	F005
R4X2D4BL	DNP2_MSG_FRAG_SZ	Msg Fragment Size	--	--	--	RW	F012
R4X2D4D	DNP2_BIN_INP_BLK00	Binary Input Block00	--	--	--	RW	F012
R4X2D4E	DNP2_BIN_INP_BLK01	Binary Input Block01	--	--	--	RW	F012
R4X2D4F	DNP2_BIN_INP_BLK02	Binary Input Block002	--	--	--	RW	F012

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X2D50	DNP2_BIN_INP_BLK03	Binary Input Block03	--	--	--	RW	F012
R4X2D51	DNP2_BIN_INP_BLK04	Binary Input Block04	--	--	--	RW	F012
R4X2D52	DNP2_BIN_INP_BLK05	Binary Input Block05	--	--	--	RW	F012
R4X2D53	DNP2_BIN_INP_BLK06	Binary Input Block06	--	--	--	RW	F012
R4X2D54	DNP2_BIN_INP_BLK07	Binary Input Block07	--	--	--	RW	F012
R4X2D55	DNP2_BIN_INP_BLK08	Binary Input Block08	--	--	--	RW	F012
R4X2D56	DNP2_BIN_INP_BLK09	Binary Input Block09	--	--	--	RW	F012
R4X2D7E	DNP2_CONFM_ADD	Confirmation address	--	--	--	WO	--
R4X2D7F	DNP3_PHY_PORT	Physical Port	--	--	--	RW	F012
R4X2D80L	DNP3_ADDRESS	Address	---	--	0 to 65534	RW	F005
R4X2D82I	DNP3_IPADD_CL1_OCT1	IP Addr Client1 Oct1	---	--	0 to 255	RW	F004
R4X2D83I	DNP3_IPADD_CL1_OCT2	IP Addr Client1 Oct2	---	--	0 to 255	RW	F004
R4X2D84I	DNP3_IPADD_CL1_OCT3	IP Addr Client1 Oct3	---	--	0 to 255	RW	F004
R4X2D85I	DNP3_IPADD_CL1_OCT4	IP Addr Client1 Oct4	---	--	0 to 255	RW	F004
R4X2D86I	DNP3_IPADD_CL2_OCT1	IP Addr Client2 Oct1	---	--	0 to 255	RW	F004
R4X2D87I	DNP3_IPADD_CL2_OCT2	IP Addr Client2 Oct2	---	--	0 to 255	RW	F004
R4X2D88I	DNP3_IPADD_CL2_OCT3	IP Addr Client2 Oct3	---	--	0 to 255	RW	F004
R4X2D89I	DNP3_IPADD_CL2_OCT4	IP Addr Client2 Oct4	---	--	0 to 255	RW	F004
R4X2D8AI	DNP3_IPADD_CL3_OCT1	IP Addr Client3 Oct1	---	--	0 to 255	RW	F004
R4X2D8BI	DNP3_IPADD_CL3_OCT2	IP Addr Client3 Oct2	---	--	0 to 255	RW	F004
R4X2D8CI	DNP3_IPADD_CL3_OCT3	IP Addr Client3 Oct3	---	--	0 to 255	RW	F004
R4X2D8DI	DNP3_IPADD_CL3_OCT4	IP Addr Client3 Oct4	---	--	0 to 255	RW	F004
R4X2D8EI	DNP3_IPADD_CL4_OCT1	IP Addr Client4 Oct1	---	--	0 to 255	RW	F004
R4X2D8FI	DNP3_IPADD_CL4_OCT2	IP Addr Client4 Oct2	---	--	0 to 255	RW	F004
R4X2D90I	DNP3_IPADD_CL4_OCT3	IP Addr Client4 Oct3	---	--	0 to 255	RW	F004
R4X2D91I	DNP3_IPADD_CL4_OCT4	IP Addr Client4 Oct4	---	--	0 to 255	RW	F004
R4X2D92I	DNP3_IPADD_CL5_OCT1	IP Addr Client5 Oct1	---	--	0 to 255	RW	F004
R4X2D93I	DNP3_IPADD_CL5_OCT2	IP Addr Client5 Oct2	---	--	0 to 255	RW	F004
R4X2D94I	DNP3_IPADD_CL5_OCT3	IP Addr Client5 Oct3	---	--	0 to 255	RW	F004
R4X2D95I	DNP3_IPADD_CL5_OCT4	IP Addr Client5 Oct4	---	--	0 to 255	RW	F004

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
		Oct4					
R4X2D96L	DNP3_TCP_UDP_PORT	TCP/UDP Port	___	--	0 to 65535	RW	F005
R4X2D98	DNP3_UNSL_RSP_FUNC	Unsol Resp Function F	--	--	--	RW	F012
R4X2D99L	DNP3_UNSL_RSP_TOUT	Unsol Resp TimeOut	___	--	0 to 65535	RW	F005
R4X2D9BI	DNP3_UNSL_RSP_MAXRT	Unsol Resp Max Ret	___	--	0 to 255	RW	F004
R4X2D9CL	DNP3_UNSL_RSP_DESTA D	Unsol Resp Dest Adr	___	--	0 to 65535	RW	F005
R4X2D9E	DNP3_CURR_SCA FACT	Current Scale Factor	--	--	--	RW	F012
R4X2D9F	DNP3_VOLT_SCA FACT	Voltage Scale Factor	--	--	--	RW	F012
R4X2DA0	DNP3_PWR_SCA FACT	Power Scale Factor	--	--	--	RW	F012
R4X2DA1	DNP3_ENER_SCA FACT	Energy Scale Factor	--	--	--	RW	F012
R4X2DA2	DNP3_OTHR_SCA FACT	Other Scale Factor	--	--	--	RW	F012
R4X2DA3L	DNP3_CURR_DBAND	Current Deadband	___	--	0 to 65535	RW	F005
R4X2DA5L	DNP3_VOLT_DBAND	Voltage Deadband	___	--	0 to 65535	RW	F005
R4X2DA7L	DNP3_PWR_DBAND	Power Deadband	___	--	0 to 65535	RW	F005
R4X2DA9L	DNP3_ENER_DBAND	Energy Deadband	___	--	0 to 65535	RW	F005
R4X2DABL	DNP3_OTHER_DBAND	Other Deadband	___	--	0 to 65535	RW	F005
R4X2DADL	DNP3_MSG_FRAG_SZ	Msg Fragment Size	___	--	0 to 65535	RW	F005
R4X2DAF	DNP3_BIN_INP_BLK00	Binary Input Block00	--	--	--	RW	F012
R4X2DB0	DNP3_BIN_INP_BLK01	Binary Input Block01	--	--	--	RW	F012
R4X2DB1	DNP3_BIN_INP_BLK02	Binary Input Block02	--	--	--	RW	F012
R4X2DB2	DNP3_BIN_INP_BLK03	Binary Input Block03	--	--	--	RW	F012
R4X2DB3	DNP3_BIN_INP_BLK04	Binary Input Block04	--	--	--	RW	F012
R4X2DB4	DNP3_BIN_INP_BLK05	Binary Input Block05	--	--	--	RW	F012
R4X2DB5	DNP3_BIN_INP_BLK06	Binary Input Block06	--	--	--	RW	F012
R4X2DB6	DNP3_BIN_INP_BLK07	Binary Input Block07	--	--	--	RW	F012
R4X2DB7	DNP3_BIN_INP_BLK08	Binary Input Block08	--	--	--	RW	F012
R4X2DB8	DNP3_BIN_INP_BLK09	Binary Input Block09	--	--	--	RW	F012
R4X2DE0	DNP3_CONFM_ADD	Confiration Address	--	--	--	WO	--
R4X2DF6	ISO_GND_IOC1_FUNC	Ground IOC1 Function	--	--	--	RW	F012
R4X2DF7F	ISO_GND_IOC1_VHLVL	Vh Level	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2DF9F	ISO_GND_IOC1_IILVL	II LEVEL	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2DFBF	ISO_GND_IOC1_VILVL	VI LEVEL	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2DFDF	ISO_GND_IOC1_IHLVL	Ih LEVEL	---	-	3.4E +/- 38 (7 digits)	RW	F003

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X2DFFF	ISO_GND_IOC1_DLY	Delay	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E01F	ISO_GND_IOC1_TMINST	Time to inst	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E16F	ISO_GND_IOC1_CONFAD D	Confirmation Address	--	---	--	WO	----
R4X2E17	ISO_GND_IOC2_FUNC	Ground IOC2 Function	--	--	--	RW	F012
R4X2E18F	ISO_GND_IOC2_VHLVL	Vh Level	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E1AF	ISO_GND_IOC2_IILVL	II LEVEL	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E1CF	ISO_GND_IOC2_VILVL	VI LEVEL	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E1EF	ISO_GND_IOC2_IHLVL	Ih LEVEL	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E20F	ISO_GND_IOC2_DLY	Delay	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E22F	ISO_GND_IOC2_TMINST	Time to inst	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E37	ISO_GND_IOC2_CONFAD D	Confirmation Address	--	---	--	WO	----
R4X2E38	ISO_GND_IOC3_FUNC	Ground IOC3 Function	--	--	--	RW	F012
R4X2E39F	ISO_GND_IOC3_VHLVL	Vh Level	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E3BF	ISO_GND_IOC3_IILVL	II LEVEL	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E3DF	ISO_GND_IOC3_VILVL	VI LEVEL	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E3FF	ISO_GND_IOC3_IHLVL	Ih LEVEL	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E41F	ISO_GND_IOC3_DLY	Delay	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E43F	ISO_GND_IOC3_TMINST	Time to inst	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E58	ISO_GND_IOC3_CONFAD D	Confirmation Address	--	---	--	WO	----
R4X2E59	GND_SENS_DIR1_FUNC	Sensitive Ground Directional 1 Function	--	--	--	RW	F012
R4X2E5AF	GND_SENS_DIR1_MTA	MTA	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E5C	GND_SENS_DIR1_DIREC	Direction	--	--	--	RW	F012
R4X2E5D	GND_SENS_DIR1_BLKLG C		---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E5E	GND_SENS_DIR1_POLVT H	Pol V Threshold	--	--	--	RW	F012
R4X2E73	GND_SENS_DIR1_CONFA D	Confirmation address	--	---	--	WO	----
R4X2E74	GND_SENS_DIR2_FUNC	Sensitive Ground Directional 2 Function	--	--	--	RW	F012
R4X2E75F	GND_SENS_DIR2_MTA	MTA	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E77	GND_SENS_DIR2_DIREC	Direction	--	--	--	RW	F012

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X2E78	GND_SENS_DIR2_BLKLG C		---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E79	GND_SENS_DIR2_POLVT H	Pol V Threshold	--	--	--	RW	F012
R4X2E8E	GND_SENS_DIR2_CONFA D	Confirmation address	--	---	--	WO	----
R4X2E8F	GND_SENS_DIR3_FUNC	Sensitive Ground Directional 3 Function	--	--	--	RW	F012
R4X2E90F	GND_SENS_DIR3_MTA	MTA	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E92	GND_SENS_DIR3_DIREC	Direction	--	--	--	RW	F012
R4X2E93	GND_SENS_DIR3_BLKLG C		---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2E94	GND_SENS_DIR3_POLVT H	Pol V Threshold	--	--	--	RW	F012
R4X2EA9	GND_SENS_DIR3_CONFA D	Confirmation address	--	---	--	WO	----
R4X2EAA	FWD_PWR1_FUNC	Forward Power 1 Function	--	--	--	RW	F012
R4X2EABF	FWD_PWR1_BLK_TM	Blk Time After Close	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2EADF	FWD_PWR1_STG1_TAP	Stage 1 Tap	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2EAF	FWD_PWR1_STG1_TM	Stage 1 Time	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2EB1F	FWD_PWR1_STG2_TAP	Stage 2 Tap	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2EB3F	FWD_PWR1_STG2_TM	Stage 2 Time	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2EC8	FWD_PWR1_CONFM_AD D	Confirmation address	--	---	--	WO	----
R4X2EC9	FWD_PWR2_FUNC	Forward Power 2 Function	--	--	--	RW	F012
R4X2ECAF	FWD_PWR2_BLK_TM	Blk Time After Close	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2ECCF	FWD_PWR2_STG1_TAP	Stage 1 Tap	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2ECE	FWD_PWR2_STG1_TM	Stage 1 Time	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2ED0F	FWD_PWR2_STG2_TAP	Stage 2 Tap	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2ED2F	FWD_PWR2_STG2_TM	Stage 2 Time	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2EE7	FWD_PWR2_CONFM_AD D	Confirmation address	--	---	--	WO	----
R4X2EE8	FWD_PWR3_FUNC	Forward Power 3 Function	--	--	--	RW	F012
R4X2EE9F	FWD_PWR3_BLK_TM	Blk Time After Close	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2EEBF	FWD_PWR3_STG1_TAP	Stage 1 Tap	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2EEDF	FWD_PWR3_STG1_TM	Stage 1 Time	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2EEFF	FWD_PWR3_STG2_TAP	Stage 2 Tap	---	-	3.4E +/- 38 (7 digits)	RW	F003
R4X2EF1F	FWD_PWR3_STG2_TM	Stage 2 Time	---	-	3.4E +/- 38 (7 digits)	RW	F003

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
					digits)		
R4X2F06	FWD_PWR3_CONFM_ADD	Confirmation address	--	---	--	WO	----
R4X2F20	IEC_FUNC	IEC 870-5-104 Function	---	---	--	RW	F012
R4X2F21L	IEC_TCP_PORT	TCP Port	---	--	0 to 65535	RW	F005
R4X2F23L	IEC_COMN_ADD_ASDU	Common Addr of ASDU	---	--	0 to 65535	RW	F005
R4X2F25L	IEC_CYC_MTR_PRD	Cyclic Meter Period	---	--	0 to 65535	RW	F005
R4X2F27L	IEC_SYNC_EVNT	Synchronization Event	---	--	0 to 65535	RW	F005
R4X2F5A	IEC_CONFM_ADD	Confirmation address	---	--	--	WO	--
R4X2F5B	IO_TYP_BRD_H	I/O Board_02 Type	---	---	--	RW	F012
R4X2F5CI	VOLT_THRE_A_BRD_H	Voltage Threshold A_02	---	---	0 to 255	RW	F004
R4X2F5DI	VOLT_THRE_B_BRD_H	Voltage Threshold B_02	---	---	0 to 255	RW	F004
R4X2F5EI	DEBNCE_TM_A_BRD_H	Debounce Time A_02	---	---	0 to 50	RW	F004
R4X2F5FI	DEBNCE_TM_B_BRD_H	Debounce Time B_02	---	---	0 to 50	RW	F004
R4X2F60	INP_TYP_00_BRD_H	Input Type_00_00	---	---	--	RW	F012
R4X2F61	INP_TYP_01_BRD_H	Input Type_01_00	---	---	--	RW	F012
R4X2F62	INP_TYP_02_BRD_H	Input Type_02_00	---	---	--	RW	F012
R4X2F63	INP_TYP_03_BRD_H	Input Type_03_00	---	---	--	RW	F012
R4X2F64	INP_TYP_04_BRD_H	Input Type_04_00	---	---	--	RW	F012
R4X2F65	INP_TYP_05_BRD_H	Input Type_05_00	---	---	--	RW	F012
R4X2F66	INP_TYP_06_BRD_H	Input Type_06_00	---	---	--	RW	F012
R4X2F67	INP_TYP_07_BRD_H	Input Type_07_00	---	---	--	RW	F012
R4X2F68	INP_TYP_08_BRD_H	Input Type_08_00	---	---	--	RW	F012
R4X2F69	INP_TYP_09_BRD_H	Input Type_09_00	---	---	--	RW	F012
R4X2F6A	INP_TYP_10_BRD_H	Input Type_10_00	---	---	--	RW	F012
R4X2F6B	INP_TYP_11_BRD_H	Input Type_11_00	---	---	--	RW	F012
R4X2F6C	INP_TYP_12_BRD_H	Input Type_12_00	---	---	--	RW	F012
R4X2F6D	INP_TYP_13_BRD_H	Input Type_13_00	---	---	--	RW	F012
R4X2F6E	INP_TYP_14_BRD_H	Input Type_14_00	---	---	--	RW	F012
R4X2F6F	INP_TYP_15_BRD_H	Input Type_15_00	---	---	--	RW	F012
R4X2F70	INP_TYP_16_BRD_H	Input Type_16_00	---	---	--	RW	F012

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X2F71	INP_TYP_17_BRD_H	Input Type_17_00	---	---	--	RW	F012
R4X2F72	INP_TYP_18_BRD_H	Input Type_18_00	---	---	--	RW	F012
R4X2F73	INP_TYP_19_BRD_H	Input Type_19_00	---	---	--	RW	F012
R4X2F74	INP_TYP_20_BRD_H	Input Type_20_00	---	---	--	RW	F012
R4X2F75	INP_TYP_21_BRD_H	Input Type_21_00	---	---	--	RW	F012
R4X2F76	INP_TYP_22_BRD_H	Input Type_22_00	---	---	--	RW	F012
R4X2F77	INP_TYP_23_BRD_H	Input Type_23_00	---	---	--	RW	F012
R4X2F78	INP_TYP_24_BRD_H	Input Type_24_00	---	---	--	RW	F012
R4X2F79	INP_TYP_25_BRD_H	Input Type_25_00	---	---	--	RW	F012
R4X2F7A	INP_TYP_26_BRD_H	Input Type_26_00	---	---	--	RW	F012
R4X2F7B	INP_TYP_27_BRD_H	Input Type_27_00	---	---	--	RW	F012
R4X2F7C	INP_TYP_28_BRD_H	Input Type_28_00	---	---	--	RW	F012
R4X2F7D	INP_TYP_29_BRD_H	Input Type_29_00	---	---	--	RW	F012
R4X2F7E	INP_TYP_30_BRD_H	Input Type_30_00	---	---	--	RW	F012
R4X2F7F	INP_TYP_31_BRD_H	Input Type_31_00	---	---	--	RW	F012
R4X2F80L	DLY_INP_TM_00_BRD_H	Delay Input Time_02_00	---	--	0 to 60000	RW	F005
R4X2F82L	DLY_INP_TM_01_BRD_H	Delay Input Time_02_01	---	--	0 to 60000	RW	F005
R4X2F84L	DLY_INP_TM_02_BRD_H	Delay Input Time_02_02	---	--	0 to 60000	RW	F005
R4X2F86L	DLY_INP_TM_03_BRD_H	Delay Input Time_02_03	---	--	0 to 60000	RW	F005
R4X2F88L	DLY_INP_TM_04_BRD_H	Delay Input Time_02_04	---	--	0 to 60000	RW	F005
R4X2F8AL	DLY_INP_TM_05_BRD_H	Delay Input Time_02_05	---	--	0 to 60000	RW	F005
R4X2F8CL	DLY_INP_TM_06_BRD_H	Delay Input Time_02_06	---	--	0 to 60000	RW	F005
R4X2F8EL	DLY_INP_TM_07_BRD_H	Delay Input Time_02_07	---	--	0 to 60000	RW	F005
R4X2F90L	DLY_INP_TM_08_BRD_H	Delay Input Time_02_08	---	--	0 to 60000	RW	F005
R4X2F92L	DLY_INP_TM_09_BRD_H	Delay Input Time_02_09	---	--	0 to 60000	RW	F005
R4X2F94L	DLY_INP_TM_10_BRD_H	Delay Input Time_02_10	---	--	0 to 60000	RW	F005
R4X2F96L	DLY_INP_TM_11_BRD_H	Delay Input Time_02_11	---	--	0 to 60000	RW	F005
R4X2F98L	DLY_INP_TM_12_BRD_H	Delay Input Time_02_12	---	--	0 to 60000	RW	F005
R4X2F9AL	DLY_INP_TM_13_BRD_H	Delay Input Time_02_13	---	--	0 to 60000	RW	F005

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X2F9CL	DLY_INP_TM_14_BRD_H	Delay Input Time_02_14	---	--	0 to 60000	RW	F005
R4X2F9EL	DLY_INP_TM_15_BRD_H	Delay Input Time_02_15	---	--	0 to 60000	RW	F005
R4X2FA0L	DLY_INP_TM_16_BRD_H	Delay Input Time_02_16	---	--	0 to 60000	RW	F005
R4X2FA2L	DLY_INP_TM_17_BRD_H	Delay Input Time_02_17	---	--	0 to 60000	RW	F005
R4X2FA4L	DLY_INP_TM_18_BRD_H	Delay Input Time_02_18	---	--	0 to 60000	RW	F005
R4X2FA6L	DLY_INP_TM_19_BRD_H	Delay Input Time_02_19	---	--	0 to 60000	RW	F005
R4X2FA8L	DLY_INP_TM_20_BRD_H	Delay Input Time_02_20	---	--	0 to 60000	RW	F005
R4X2FAAL	DLY_INP_TM_21_BRD_H	Delay Input Time_02_21	---	--	0 to 60000	RW	F005
R4X2FACL	DLY_INP_TM_22_BRD_H	Delay Input Time_02_22	---	--	0 to 60000	RW	F005
R4X2FAEL	DLY_INP_TM_23_BRD_H	Delay Input Time_02_23	---	--	0 to 60000	RW	F005
R4X2FB0L	DLY_INP_TM_24_BRD_H	Delay Input Time_02_24	---	--	0 to 60000	RW	F005
R4X2FB2L	DLY_INP_TM_25_BRD_H	Delay Input Time_02_25	---	--	0 to 60000	RW	F005
R4X2FB4L	DLY_INP_TM_26_BRD_H	Delay Input Time_02_26	---	--	0 to 60000	RW	F005
R4X2FB6L	DLY_INP_TM_27_BRD_H	Delay Input Time_02_27	---	--	0 to 60000	RW	F005
R4X2FB8L	DLY_INP_TM_28_BRD_H	Delay Input Time_02_28	---	--	0 to 60000	RW	F005
R4X2FBAL	DLY_INP_TM_29_BRD_H	Delay Input Time_02_29	---	--	0 to 60000	RW	F005
R4X2FBCL	DLY_INP_TM_30_BRD_H	Delay Input Time_02_30	---	--	0 to 60000	RW	F005
R4X2FBEL	DLY_INP_TM_31_BRD_H	Delay Input Time_02_31	---	--	0 to 60000	RW	F005
R4X2FC0	OPT_LGC_00_BRD_H	Output Logic_02_00	---	---	--	RW	F012
R4X2FC1	OPT_LGC_01_BRD_H	Output Logic_02_01	---	---	--	RW	F012
R4X2FC2	OPT_LGC_02_BRD_H	Output Logic_02_02	---	---	--	RW	F012
R4X2FC3	OPT_LGC_03_BRD_H	Output Logic_02_03	---	---	--	RW	F012
R4X2FC4	OPT_LGC_04_BRD_H	Output Logic_02_04	---	---	--	RW	F012
R4X2FC5	OPT_LGC_05_BRD_H	Output Logic_02_05	---	---	--	RW	F012
R4X2FC6	OPT_LGC_06_BRD_H	Output Logic_02_06	---	---	--	RW	F012
R4X2FC7	OPT_LGC_07_BRD_H	Output Logic_02_07	---	---	--	RW	F012
R4X2FC8	OPT_LGC_08_BRD_H	Output Logic_02_08	---	---	--	RW	F012
R4X2FC9	OPT_LGC_09_BRD_H	Output Logic_02_09	---	---	--	RW	F012
R4X2FCA	OPT_LGC_10_BRD_H	Output Logic_02_10	---	---	--	RW	F012

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X2FCB	OPT_LGC_11_BRD_H	Output Logic_02_11	---	---	--	RW	F012
R4X2FCC	OPT_LGC_12_BRD_H	Output Logic_02_12	---	---	--	RW	F012
R4X2FCD	OPT_LGC_13_BRD_H	Output Logic_02_13	---	---	--	RW	F012
R4X2FCE	OPT_LGC_14_BRD_H	Output Logic_02_14	---	---	--	RW	F012
R4X2FCF	OPT_LGC_15_BRD_H	Output Logic_02_15	---	---	--	RW	F012
R4X2FD0	OPT_TYP_00_BRD_H	Output Type_02_00	---	---	--	RW	F012
R4X2FD1	OPT_TYP_01_BRD_H	Output Type_02_01	---	---	--	RW	F012
R4X2FD2	OPT_TYP_02_BRD_H	Output Type_02_02	---	---	--	RW	F012
R4X2FD3	OPT_TYP_03_BRD_H	Output Type_02_03	---	---	--	RW	F012
R4X2FD4	OPT_TYP_04_BRD_H	Output Type_02_04	---	---	--	RW	F012
R4X2FD5	OPT_TYP_05_BRD_H	Output Type_02_05	---	---	--	RW	F012
R4X2FD6	OPT_TYP_06_BRD_H	Output Type_02_06	---	---	--	RW	F012
R4X2FD7	OPT_TYP_07_BRD_H	Output Type_02_07	---	---	--	RW	F012
R4X2FD8	OPT_TYP_08_BRD_H	Output Type_02_08	---	---	--	RW	F012
R4X2FD9	OPT_TYP_09_BRD_H	Output Type_02_09	---	---	--	RW	F012
R4X2FDA	OPT_TYP_10_BRD_H	Output Type_02_10	---	---	--	RW	F012
R4X2FDB	OPT_TYP_11_BRD_H	Output Type_02_11	---	---	--	RW	F012
R4X2FDC	OPT_TYP_12_BRD_H	Output Type_02_12	---	---	--	RW	F012
R4X2FDD	OPT_TYP_13_BRD_H	Output Type_02_13	---	---	--	RW	F012
R4X2FDE	OPT_TYP_14_BRD_H	Output Type_02_14	---	---	--	RW	F012
R4X2FDF	OPT_TYP_15_BRD_H	Output Type_02_15	---	---	--	RW	F012
R4X2FE0L	PUL_OPT_TM_00_BRD_H	Pulse Output Time_02_00	---	--	0 to 60000	RW	F005
R4X2FE2L	PUL_OPT_TM_01_BRD_H	Pulse Output Time_02_01	---	--	0 to 60000	RW	F005
R4X2FE4L	PUL_OPT_TM_02_BRD_H	Pulse Output Time_02_02	---	--	0 to 60000	RW	F005
R4X2FE6L	PUL_OPT_TM_03_BRD_H	Pulse Output Time_02_03	---	--	0 to 60000	RW	F005
R4X2FE8L	PUL_OPT_TM_04_BRD_H	Pulse Output Time_02_04	---	--	0 to 60000	RW	F005
R4X2FEAL	PUL_OPT_TM_05_BRD_H	Pulse Output Time_02_05	---	--	0 to 60000	RW	F005
R4X2FECL	PUL_OPT_TM_06_BRD_H	Pulse Output Time_02_06	---	--	0 to 60000	RW	F005
R4X2FEEL	PUL_OPT_TM_07_BRD_H	Pulse Output Time_02_07	---	--	0 to 60000	RW	F005

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X2FF0L	PUL_OPT_TM_08_BRD_H	Pulse Output Time_02_08	---	--	0 to 60000	RW	F005
R4X2FF2L	PUL_OPT_TM_09_BRD_H	Pulse Output Time_02_09	---	--	0 to 60000	RW	F005
R4X2FF4L	PUL_OPT_TM_10_BRD_H	Pulse Output Time_02_10	---	--	0 to 60000	RW	F005
R4X2FF6L	PUL_OPT_TM_11_BRD_H	Pulse Output Time_02_11	---	--	0 to 60000	RW	F005
R4X2FF8L	PUL_OPT_TM_12_BRD_H	Pulse Output Time_02_12	---	--	0 to 60000	RW	F005
R4X2FFAL	PUL_OPT_TM_13_BRD_H	Pulse Output Time_02_13	---	--	0 to 60000	RW	F005
R4X2FFCL	PUL_OPT_TM_14_BRD_H	Pulse Output Time_02_14	---	--	0 to 60000	RW	F005
R4X2FFEL	PUL_OPT_TM_15_BRD_H	Pulse Output Time_02_15	---	--	0 to 60000	RW	F005
R4X30FF	CONFM_ADD_BRD_H	Confirmation address	---	--	--	WO	--
R4X3100	IO_TYP_BRD_J	I/O Board_03 Type	---	---	--	RW	F012
R4X3101I	VOLT_THRE_A_BRD_J	Voltage Threshold A_03	---	---	0 to 255	RW	F004
R4X3102I	VOLT_THRE_B_BRD_J	Voltage Threshold B_03	---	---	0 to 255	RW	F004
R4X3103I	DEBNCE_TM_A_BRD_J	Debounce Time A_03	---	---	0 to 50	RW	F004
R4X3104I	DEBNCE_TM_B_BRD_J	Debounce Time B_03	---	---	0 to 50	RW	F004
R4X3105	INP_TYP_00_BRD_J	Input Type_03_00	---	---	--	RW	F012
R4X3106	INP_TYP_01_BRD_J	Input Type_03_01	---	---	--	RW	F012
R4X3107	INP_TYP_02_BRD_J	Input Type_03_02	---	---	--	RW	F012
R4X3108	INP_TYP_03_BRD_J	Input Type_03_03	---	---	--	RW	F012
R4X3109	INP_TYP_04_BRD_J	Input Type_03_04	---	---	--	RW	F012
R4X310A	INP_TYP_05_BRD_J	Input Type_03_05	---	---	--	RW	F012
R4X310B	INP_TYP_06_BRD_J	Input Type_03_06	---	---	--	RW	F012
R4X310C	INP_TYP_07_BRD_J	Input Type_03_07	---	---	--	RW	F012
R4X310D	INP_TYP_08_BRD_J	Input Type_03_08	---	---	--	RW	F012
R4X310E	INP_TYP_09_BRD_J	Input Type_03_09	---	---	--	RW	F012
R4X310F	INP_TYP_10_BRD_J	Input Type_03_10	---	---	--	RW	F012
R4X3110	INP_TYP_11_BRD_J	Input Type_03_11	---	---	--	RW	F012
R4X3111	INP_TYP_12_BRD_J	Input Type_03_12	---	---	--	RW	F012
R4X3112	INP_TYP_13_BRD_J	Input Type_03_13	---	---	--	RW	F012
R4X3113	INP_TYP_14_BRD_J	Input Type_03_14	---	---	--	RW	F012

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X3114	INP_TYP_15_BRD_J	Input Type_03_15	---	---	--	RW	F012
R4X3115	INP_TYP_16_BRD_J	Input Type_03_16	---	---	--	RW	F012
R4X3116	INP_TYP_17_BRD_J	Input Type_03_17	---	---	--	RW	F012
R4X3117	INP_TYP_18_BRD_J	Input Type_03_18	---	---	--	RW	F012
R4X3118	INP_TYP_19_BRD_J	Input Type_03_19	---	---	--	RW	F012
R4X3119	INP_TYP_20_BRD_J	Input Type_03_20	---	---	--	RW	F012
R4X311A	INP_TYP_21_BRD_J	Input Type_03_21	---	---	--	RW	F012
R4X311B	INP_TYP_22_BRD_J	Input Type_03_22	---	---	--	RW	F012
R4X311C	INP_TYP_23_BRD_J	Input Type_03_23	---	---	--	RW	F012
R4X311D	INP_TYP_24_BRD_J	Input Type_03_24	---	---	--	RW	F012
R4X311E	INP_TYP_25_BRD_J	Input Type_03_25	---	---	--	RW	F012
R4X311F	INP_TYP_26_BRD_J	Input Type_03_26	---	---	--	RW	F012
R4X3120	INP_TYP_27_BRD_J	Input Type_03_27	---	---	--	RW	F012
R4X3121	INP_TYP_28_BRD_J	Input Type_03_28	---	---	--	RW	F012
R4X3122	INP_TYP_29_BRD_J	Input Type_03_29	---	---	--	RW	F012
R4X3123	INP_TYP_30_BRD_J	Input Type_03_30	---	---	--	RW	F012
R4X3124	INP_TYP_31_BRD_J	Input Type_03_31	---	---	--	RW	F012
R4X3125L	DLY_INP_TM_00_BRD_J	Delay Input Time_03_00	---	--	0 to 60000	RW	F005
R4X3127L	DLY_INP_TM_01_BRD_J	Delay Input Time_03_01	---	--	0 to 60000	RW	F005
R4X3129L	DLY_INP_TM_02_BRD_J	Delay Input Time_03_02	---	--	0 to 60000	RW	F005
R4X312BL	DLY_INP_TM_03_BRD_J	Delay Input Time_03_03	---	--	0 to 60000	RW	F005
R4X312DL	DLY_INP_TM_04_BRD_J	Delay Input Time_03_04	---	--	0 to 60000	RW	F005
R4X312FL	DLY_INP_TM_05_BRD_J	Delay Input Time_03_05	---	--	0 to 60000	RW	F005
R4X3131L	DLY_INP_TM_06_BRD_J	Delay Input Time_03_06	---	--	0 to 60000	RW	F005
R4X3133L	DLY_INP_TM_07_BRD_J	Delay Input Time_03_07	---	--	0 to 60000	RW	F005
R4X3135L	DLY_INP_TM_08_BRD_J	Delay Input Time_03_08	---	--	0 to 60000	RW	F005
R4X3137L	DLY_INP_TM_09_BRD_J	Delay Input Time_03_09	---	--	0 to 60000	RW	F005
R4X3139L	DLY_INP_TM_10_BRD_J	Delay Input Time_03_10	---	--	0 to 60000	RW	F005
R4X313BL	DLY_INP_TM_11_BRD_J	Delay Input Time_03_11	---	--	0 to 60000	RW	F005

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X313DL	DLY_INP_TM_12_BRD_J	Delay Input Time_03_12	---	--	0 to 60000	RW	F005
R4X313FL	DLY_INP_TM_13_BRD_J	Delay Input Time_03_13	---	--	0 to 60000	RW	F005
R4X3141L	DLY_INP_TM_14_BRD_J	Delay Input Time_03_14	---	--	0 to 60000	RW	F005
R4X3143L	DLY_INP_TM_15_BRD_J	Delay Input Time_03_15	---	--	0 to 60000	RW	F005
R4X3145L	DLY_INP_TM_16_BRD_J	Delay Input Time_03_16	---	--	0 to 60000	RW	F005
R4X3147L	DLY_INP_TM_17_BRD_J	Delay Input Time_03_17	---	--	0 to 60000	RW	F005
R4X3149L	DLY_INP_TM_18_BRD_J	Delay Input Time_03_18	---	--	0 to 60000	RW	F005
R4X314BL	DLY_INP_TM_19_BRD_J	Delay Input Time_03_19	---	--	0 to 60000	RW	F005
R4X314DL	DLY_INP_TM_20_BRD_J	Delay Input Time_03_20	---	--	0 to 60000	RW	F005
R4X314FL	DLY_INP_TM_21_BRD_J	Delay Input Time_03_21	---	--	0 to 60000	RW	F005
R4X3151L	DLY_INP_TM_22_BRD_J	Delay Input Time_03_22	---	--	0 to 60000	RW	F005
R4X3153L	DLY_INP_TM_23_BRD_J	Delay Input Time_03_23	---	--	0 to 60000	RW	F005
R4X3155L	DLY_INP_TM_24_BRD_J	Delay Input Time_03_24	---	--	0 to 60000	RW	F005
R4X3157L	DLY_INP_TM_25_BRD_J	Delay Input Time_03_25	---	--	0 to 60000	RW	F005
R4X3159L	DLY_INP_TM_26_BRD_J	Delay Input Time_03_26	---	--	0 to 60000	RW	F005
R4X315BL	DLY_INP_TM_27_BRD_J	Delay Input Time_03_27	---	--	0 to 60000	RW	F005
R4X315DL	DLY_INP_TM_28_BRD_J	Delay Input Time_03_28	---	--	0 to 60000	RW	F005
R4X315FL	DLY_INP_TM_29_BRD_J	Delay Input Time_03_29	---	--	0 to 60000	RW	F005
R4X3161L	DLY_INP_TM_30_BRD_J	Delay Input Time_03_30	---	--	0 to 60000	RW	F005
R4X3163L	DLY_INP_TM_31_BRD_J	Delay Input Time_03_31	---	--	0 to 60000	RW	F005
R4X3165	OPT_LGC_00_BRD_J	Output Logic_03_00	---	---	--	RW	F012
R4X3166	OPT_LGC_01_BRD_J	Output Logic_03_01	---	---	--	RW	F012
R4X3167	OPT_LGC_02_BRD_J	Output Logic_03_02	---	---	--	RW	F012
R4X3168	OPT_LGC_03_BRD_J	Output Logic_03_03	---	---	--	RW	F012
R4X3169	OPT_LGC_04_BRD_J	Output Logic_03_04	---	---	--	RW	F012
R4X316A	OPT_LGC_05_BRD_J	Output Logic_03_05	---	---	--	RW	F012
R4X316B	OPT_LGC_06_BRD_J	Output Logic_03_06	---	---	--	RW	F012
R4X316C	OPT_LGC_07_BRD_J	Output Logic_03_07	---	---	--	RW	F012
R4X316D	OPT_LGC_08_BRD_J	Output Logic_03_08	---	---	--	RW	F012

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X316E	OPT_LGC_09_BRD_J	Output Logic_03_09	---	---	--	RW	F012
R4X316F	OPT_LGC_10_BRD_J	Output Logic_03_10	---	---	--	RW	F012
R4X3170	OPT_LGC_11_BRD_J	Output Logic_03_11	---	---	--	RW	F012
R4X3171	OPT_LGC_12_BRD_J	Output Logic_03_12	---	---	--	RW	F012
R4X3172	OPT_LGC_13_BRD_J	Output Logic_03_13	---	---	--	RW	F012
R4X3173	OPT_LGC_14_BRD_J	Output Logic_03_14	---	---	--	RW	F012
R4X3174	OPT_LGC_15_BRD_J	Output Logic_03_15	---	---	--	RW	F012
R4X3175	OPT_TYP_00_BRD_J	Output Type_03_00	---	---	--	RW	F012
R4X3176	OPT_TYP_01_BRD_J	Output Type_03_01	---	---	--	RW	F012
R4X3177	OPT_TYP_02_BRD_J	Output Type_03_02	---	---	--	RW	F012
R4X3178	OPT_TYP_03_BRD_J	Output Type_03_03	---	---	--	RW	F012
R4X3179	OPT_TYP_04_BRD_J	Output Type_03_04	---	---	--	RW	F012
R4X317A	OPT_TYP_05_BRD_J	Output Type_03_05	---	---	--	RW	F012
R4X317B	OPT_TYP_06_BRD_J	Output Type_03_06	---	---	--	RW	F012
R4X317C	OPT_TYP_07_BRD_J	Output Type_03_07	---	---	--	RW	F012
R4X317D	OPT_TYP_08_BRD_J	Output Type_03_08	---	---	--	RW	F012
R4X317E	OPT_TYP_09_BRD_J	Output Type_03_09	---	---	--	RW	F012
R4X317F	OPT_TYP_10_BRD_J	Output Type_03_10	---	---	--	RW	F012
R4X3180	OPT_TYP_11_BRD_J	Output Type_03_11	---	---	--	RW	F012
R4X3181	OPT_TYP_12_BRD_J	Output Type_03_12	---	---	--	RW	F012
R4X3182	OPT_TYP_13_BRD_J	Output Type_03_13	---	---	--	RW	F012
R4X3183	OPT_TYP_14_BRD_J	Output Type_03_14	---	---	--	RW	F012
R4X3184	OPT_TYP_15_BRD_J	Output Type_03_15	---	---	--	RW	F012
R4X3185L	PUL_OPT_TM_00_BRD_J	Pulse Output Time_03_00	---	--	0 to 60000	RW	F005
R4X3187L	PUL_OPT_TM_01_BRD_J	Pulse Output Time_03_01	---	--	0 to 60000	RW	F005
R4X3189L	PUL_OPT_TM_02_BRD_J	Pulse Output Time_03_02	---	--	0 to 60000	RW	F005
R4X318BL	PUL_OPT_TM_03_BRD_J	Pulse Output Time_03_03	---	--	0 to 60000	RW	F005
R4X318DL	PUL_OPT_TM_04_BRD_J	Pulse Output Time_03_04	---	--	0 to 60000	RW	F005
R4X318FL	PUL_OPT_TM_05_BRD_J	Pulse Output Time_03_05	---	--	0 to 60000	RW	F005

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X3191L	PUL_OPT_TM_06_BRD_J	Pulse Output Time_03_06	---	--	0 to 60000	RW	F005
R4X3193L	PUL_OPT_TM_07_BRD_J	Pulse Output Time_03_07	---	--	0 to 60000	RW	F005
R4X3195L	PUL_OPT_TM_08_BRD_J	Pulse Output Time_03_08	---	--	0 to 60000	RW	F005
R4X3197L	PUL_OPT_TM_09_BRD_J	Pulse Output Time_03_09	---	--	0 to 60000	RW	F005
R4X3199L	PUL_OPT_TM_10_BRD_J	Pulse Output Time_03_10	---	--	0 to 60000	RW	F005
R4X319BL	PUL_OPT_TM_11_BRD_J	Pulse Output Time_03_11	---	--	0 to 60000	RW	F005
R4X319DL	PUL_OPT_TM_12_BRD_J	Pulse Output Time_03_12	---	--	0 to 60000	RW	F005
R4X319FL	PUL_OPT_TM_13_BRD_J	Pulse Output Time_03_13	---	--	0 to 60000	RW	F005
R4X31A1L	PUL_OPT_TM_14_BRD_J	Pulse Output Time_03_14	---	--	0 to 60000	RW	F005
R4X31A3L	PUL_OPT_TM_15_BRD_J	Pulse Output Time_03_15	---	--	0 to 60000	RW	F005
R4X32A4	CONFM_ADD_BRD_J	Confirmation address	---	---	---	WO	--
R4X32A5	PH_TOCLOW1_FUNC	Phase TOC Low 1 Function	---	---	--	RW	F012
R4X32A6	PH_TOCLOW1_INP	Input	---	---	--	RW	F012
R4X32A7F	PH_TOCLOW1_PKP_LVL	Pickup Level	---	---	3.4E +/- 38 (7 digits)	RW	F003
R4X32A9	PH_TOCLOW1_CURVE	Curve	---	---	--	RW	F012
R4X32AAF	PH_TOCLOW1_TD_MULP R	TD Multiplier	---	---	3.4E +/- 38 (7 digits)	RW	F003
R4X32AC	PH_TOCLOW1_RST	Reset	---	---	--	RW	F012
R4X32AD	PH_TOCLOW1_VOLT_RE ST	Voltage Restraint	---	---	--	RW	F012
R4X32C1	PH_TOCLOW1_CONFM_A DD	Confirmation address	---	---	---	WO	--
R4X32C2	PH_TOCLOW2_FUNC	Phase TOC Low 2 Function	---	---	--	RW	F012
R4X32C3	PH_TOCLOW2_INP	Input	---	---	--	RW	F012
R4X32C4F	PH_TOCLOW2_PKP_LVL	Pickup Level	---	---	3.4E +/- 38 (7 digits)	RW	F003
R4X32C6	PH_TOCLOW2_CURVE	Curve	---	---	--	RW	F012
R4X32C7F	PH_TOCLOW2_TD_MULP R	TD Multiplier	---	---	3.4E +/- 38 (7 digits)	RW	F003
R4X32C9	PH_TOCLOW2_RST	Reset	---	---	--	RW	F012
R4X32CA	PH_TOCLOW2_VOLT_RE ST	Voltage Restraint	---	---	--	RW	F012
R4X32DE	PH_TOCLOW2_CONFM_A DD	Confirmation address	---	---	---	WO	--
R4X32DF	PH_TOCLOW3_FUNC	Phase TOC Low 3 Function	---	---	--	RW	F012
R4X32E0	PH_TOCLOW3_INP	Input	---	---	--	RW	F012

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X32E1F	PH_TOCLOW3_PKP_LVL	Pickup Level	---	---	3.4E +/- 38 (7 digits)	RW	F003
R4X32E3	PH_TOCLOW3_CURVE	Curve	---	---	--	RW	F012
R4X32E4F	PH_TOCLOW3_TD_MULP R	TD Multiplier	---	---	3.4E +/- 38 (7 digits)	RW	F003
R4X32E6	PH_TOCLOW3_RST	Reset	---	---	--	RW	F012
R4X32E7	PH_TOCLOW3_VOLT_RE ST	Voltage Restraint	---	---	--	RW	F012
R4X32FB	PH_TOCLOW3_CONFM_A DD	Confirmation address	---	---	---	WO	--
R4X32FC	SWTCH_GR_CONT_TYP_ 00	CONTACTS TYPE_00	---	---	--	RW	F012
R4X32FD	SWTCH_GR_CONT_TYP_ 01	CONTACTS TYPE_01	---	---	--	RW	F012
R4X32FE	SWTCH_GR_CONT_TYP_ 02	CONTACTS TYPE_02	---	---	--	RW	F012
R4X32FF	SWTCH_GR_CONT_TYP_ 03	CONTACTS TYPE_03	---	---	--	RW	F012
R4X3300	SWTCH_GR_CONT_TYP_ 04	CONTACTS TYPE_04	---	---	--	RW	F012
R4X3301	SWTCH_GR_CONT_TYP_ 05	CONTACTS TYPE_05	---	---	--	RW	F012
R4X3302	SWTCH_GR_CONT_TYP_ 06	CONTACTS TYPE_06	---	---	--	RW	F012
R4X3303	SWTCH_GR_CONT_TYP_ 07	CONTACTS TYPE_07	---	---	--	RW	F012
R4X3304	SWTCH_GR_CONT_TYP_ 08	CONTACTS TYPE_08	---	---	--	RW	F012
R4X3305	SWTCH_GR_CONT_TYP_ 09	CONTACTS TYPE_09	---	---	--	RW	F012
R4X3306	SWTCH_GR_CONT_TYP_ 10	CONTACTS TYPE_10	---	---	--	RW	F012
R4X3307	SWTCH_GR_CONT_TYP_ 11	CONTACTS TYPE_11	---	---	--	RW	F012
R4X3308	SWTCH_GR_CONT_TYP_ 12	CONTACTS TYPE_12	---	---	--	RW	F012
R4X3309	SWTCH_GR_CONT_TYP_ 13	CONTACTS TYPE_13	---	---	--	RW	F012
R4X330A	SWTCH_GR_CONT_TYP_ 14	CONTACTS TYPE_14	---	---	--	RW	F012
R4X330B	SWTCH_GR_CONT_TYP_ 15	CONTACTS TYPE_15	---	---	--	RW	F012
R4X330CI	SWTCH_GR_FAL_OP_00T	FAIL TO OPEN00t	---	---	0 to 30000	RW	F004
R4X330DI	SWTCH_GR_FAL_OP_01T	FAIL TO OPEN01t	---	---	0 to 30000	RW	F004
R4X330EI	SWTCH_GR_FAL_OP_02T	FAIL TO OPEN02t	---	---	0 to 30000	RW	F004
R4X330FI	SWTCH_GR_FAL_OP_03T	FAIL TO OPEN03t	---	---	0 to 30000	RW	F004
R4X3310I	SWTCH_GR_FAL_OP_04T	FAIL TO OPEN04t	---	---	0 to 30000	RW	F004
R4X3311I	SWTCH_GR_FAL_OP_05T	FAIL TO OPEN05t	---	---	0 to 30000	RW	F004
R4X3312I	SWTCH_GR_FAL_OP_06T	FAIL TO OPEN06t	---	---	0 to 30000	RW	F004

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X3313I	SWTCH_GR_FAL_OP_07T	FAIL TO OPEN07t	---	---	0 to 30000	RW	F004
R4X3314I	SWTCH_GR_FAL_OP_08T	FAIL TO OPEN08t	---	---	0 to 30000	RW	F004
R4X3315I	SWTCH_GR_FAL_OP_09T	FAIL TO OPEN09t	---	---	0 to 30000	RW	F004
R4X3316I	SWTCH_GR_FAL_OP_10T	FAIL TO OPEN10t	---	---	0 to 30000	RW	F004
R4X3317I	SWTCH_GR_FAL_OP_11T	FAIL TO OPEN11t	---	---	0 to 30000	RW	F004
R4X3318I	SWTCH_GR_FAL_OP_12T	FAIL TO OPEN12t	---	---	0 to 30000	RW	F004
R4X3319I	SWTCH_GR_FAL_OP_13T	FAIL TO OPEN13t	---	---	0 to 30000	RW	F004
R4X331AI	SWTCH_GR_FAL_OP_14T	FAIL TO OPEN14t	---	---	0 to 30000	RW	F004
R4X331BI	SWTCH_GR_FAL_OP_15T	FAIL TO OPEN15t	---	---	0 to 30000	RW	F004
R4X331CI	SWTCH_GR_FAL_CL_00T	FAIL TO CLOSE 00t	---	---	0 to 30000	RW	F004
R4X331DI	SWTCH_GR_FAL_CL_01T	FAIL TO CLOSE 01t	---	---	0 to 30000	RW	F004
R4X331EI	SWTCH_GR_FAL_CL_02T	FAIL TO CLOSE 02t	---	---	0 to 30000	RW	F004
R4X331FI	SWTCH_GR_FAL_CL_03T	FAIL TO CLOSE 03t	---	---	0 to 30000	RW	F004
R4X3320I	SWTCH_GR_FAL_CL_04T	FAIL TO CLOSE 04t	---	---	0 to 30000	RW	F004
R4X3321I	SWTCH_GR_FAL_CL_05T	FAIL TO CLOSE 05t	---	---	0 to 30000	RW	F004
R4X3322I	SWTCH_GR_FAL_CL_06T	FAIL TO CLOSE 06t	---	---	0 to 30000	RW	F004
R4X3323I	SWTCH_GR_FAL_CL_07T	FAIL TO CLOSE 07t	---	---	0 to 30000	RW	F004
R4X3324I	SWTCH_GR_FAL_CL_08T	FAIL TO CLOSE 08t	---	---	0 to 30000	RW	F004
R4X3325I	SWTCH_GR_FAL_CL_09T	FAIL TO CLOSE 09t	---	---	0 to 30000	RW	F004
R4X3326I	SWTCH_GR_FAL_CL_10T	FAIL TO CLOSE 10t	---	---	0 to 30000	RW	F004
R4X3327I	SWTCH_GR_FAL_CL_11T	FAIL TO CLOSE 11t	---	---	0 to 30000	RW	F004
R4X3328I	SWTCH_GR_FAL_CL_12T	FAIL TO CLOSE 12t	---	---	0 to 30000	RW	F004
R4X3329I	SWTCH_GR_FAL_CL_13T	FAIL TO CLOSE 13t	---	---	0 to 30000	RW	F004
R4X332AI	SWTCH_GR_FAL_CL_14T	FAIL TO CLOSE 14t	---	---	0 to 30000	RW	F004
R4X332BI	SWTCH_GR_FAL_CL_15T	FAIL TO CLOSE 15t	---	---	0 to 30000	RW	F004
R4X334C	SWTCH_GR_CONFM_AD D	Confirmation address	---	---	---	WO	--
R4X334DI	BRKR_NO_OF_SWTCHGR	Breaker Settings Number of Switchgear	---	---	0 to 9999	RW	F004
R4X334EF	BRKR_MAX_KI2T	Maximum KI2t	---	---	3.4E +/- 38 (7 digits)	RW	F003
R4X3350F	BRKR_KIR2T_INTG_TM	KI2t Integ. Time	---	---	3.4E +/- 38 (7	RW	F003

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
					digits)		
R4X3352I	BRKR_MAX_OPENGS	Maximum Openings	---	---	0 to 9999	RW	F004
R4X3353I	BRKR_MAX_OPENGS1HR	Max.Openings 1 hour	---	---	0 to 9999	RW	F004
R4X3367	BRKR_CONFM_ADD	Confirmation address	---	---	---	WO	--
R4X3384I	MODBS_USR_MP_ADD_0 0	Address 00	--	--	0 to 65535	RW	F004
R4X3385I	MODBS_USR_MP_ADD_0 1	Address 01	--	--	0 to 65535	RW	F004
R4X3386I	MODBS_USR_MP_ADD_0 2	Address 02	--	--	0 to 65535	RW	F004
R4X3387I	MODBS_USR_MP_ADD_0 3	Address 03	--	--	0 to 65535	RW	F004
R4X3388I	MODBS_USR_MP_ADD_0 4	Address 04	--	--	0 to 65535	RW	F004
R4X3389I	MODBS_USR_MP_ADD_0 5	Address 05	--	--	0 to 65535	RW	F004
R4X338AI	MODBS_USR_MP_ADD_0 6	Address 06	--	--	0 to 65535	RW	F004
R4X338BI	MODBS_USR_MP_ADD_0 7	Address 07	--	--	0 to 65535	RW	F004
R4X338CI	MODBS_USR_MP_ADD_0 8	Address 08	--	--	0 to 65535	RW	F004
R4X338DI	MODBS_USR_MP_ADD_0 9	Address 09	--	--	0 to 65535	RW	F004
R4X338EI	MODBS_USR_MP_ADD_1 0	Address 10	--	--	0 to 65535	RW	F004
R4X338FI	MODBS_USR_MP_ADD_1 1	Address 11	--	--	0 to 65535	RW	F004
R4X3390I	MODBS_USR_MP_ADD_1 2	Address 12	--	--	0 to 65535	RW	F004
R4X3391I	MODBS_USR_MP_ADD_1 3	Address 13	--	--	0 to 65535	RW	F004
R4X3392I	MODBS_USR_MP_ADD_1 4	Address 14	--	--	0 to 65535	RW	F004
R4X3393I	MODBS_USR_MP_ADD_1 5	Address 15	--	--	0 to 65535	RW	F004
R4X3394I	MODBS_USR_MP_ADD_1 6	Address 16	--	--	0 to 65535	RW	F004
R4X3395I	MODBS_USR_MP_ADD_1 7	Address 17	--	--	0 to 65535	RW	F004
R4X3396I	MODBS_USR_MP_ADD_1 8	Address 18	--	--	0 to 65535	RW	F004
R4X3397I	MODBS_USR_MP_ADD_1 9	Address 19	--	--	0 to 65535	RW	F004
R4X3398I	MODBS_USR_MP_ADD_2 0	Address 20	--	--	0 to 65535	RW	F004
R4X3399I	MODBS_USR_MP_ADD_2 1	Address 21	--	--	0 to 65535	RW	F004
R4X339AI	MODBS_USR_MP_ADD_2 2	Address 22	--	--	0 to 65535	RW	F004
R4X339BI	MODBS_USR_MP_ADD_2 3	Address 23	--	--	0 to 65535	RW	F004
R4X339CI	MODBS_USR_MP_ADD_2 4	Address 24	--	--	0 to 65535	RW	F004

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X339DI	MODBS_USR_MP_ADD_2 5	Address 25	--	--	0 to 65535	RW	F004
R4X339EI	MODBS_USR_MP_ADD_2 6	Address 26	--	--	0 to 65535	RW	F004
R4X339FI	MODBS_USR_MP_ADD_2 7	Address 27	--	--	0 to 65535	RW	F004
R4X33A0I	MODBS_USR_MP_ADD_2 8	Address 28	--	--	0 to 65535	RW	F004
R4X33A1I	MODBS_USR_MP_ADD_2 9	Address 29	--	--	0 to 65535	RW	F004
R4X33A2I	MODBS_USR_MP_ADD_3 0	Address 30	--	--	0 to 65535	RW	F004
R4X33A3I	MODBS_USR_MP_ADD_3 1	Address 31	--	--	0 to 65535	RW	F004
R4X33A4I	MODBS_USR_MP_ADD_3 2	Address 32	--	--	0 to 65535	RW	F004
R4X33A5I	MODBS_USR_MP_ADD_3 3	Address 33	--	--	0 to 65535	RW	F004
R4X33A6I	MODBS_USR_MP_ADD_3 4	Address 34	--	--	0 to 65535	RW	F004
R4X33A7I	MODBS_USR_MP_ADD_3 5	Address 35	--	--	0 to 65535	RW	F004
R4X33A8I	MODBS_USR_MP_ADD_3 6	Address 36	--	--	0 to 65535	RW	F004
R4X33A9I	MODBS_USR_MP_ADD_3 7	Address 37	--	--	0 to 65535	RW	F004
R4X33AAI	MODBS_USR_MP_ADD_3 8	Address 38	--	--	0 to 65535	RW	F004
R4X33ABI	MODBS_USR_MP_ADD_3 9	Address 39	--	--	0 to 65535	RW	F004
R4X33ACI	MODBS_USR_MP_ADD_4 0	Address 40	--	--	0 to 65535	RW	F004
R4X33ADI	MODBS_USR_MP_ADD_4 1	Address 41	--	--	0 to 65535	RW	F004
R4X33AEI	MODBS_USR_MP_ADD_4 2	Address 42	--	--	0 to 65535	RW	F004
R4X33AFI	MODBS_USR_MP_ADD_4 3	Address 43	--	--	0 to 65535	RW	F004
R4X33B0I	MODBS_USR_MP_ADD_4 4	Address 44	--	--	0 to 65535	RW	F004
R4X33B1I	MODBS_USR_MP_ADD_4 5	Address 45	--	--	0 to 65535	RW	F004
R4X33B2I	MODBS_USR_MP_ADD_4 6	Address 46	--	--	0 to 65535	RW	F004
R4X33B3I	MODBS_USR_MP_ADD_4 7	Address 47	--	--	0 to 65535	RW	F004
R4X33B4I	MODBS_USR_MP_ADD_4 8	Address 48	--	--	0 to 65535	RW	F004
R4X33B5I	MODBS_USR_MP_ADD_4 9	Address 49	--	--	0 to 65535	RW	F004
R4X33B6I	MODBS_USR_MP_ADD_5 0	Address 50	--	--	0 to 65535	RW	F004
R4X33B7I	MODBS_USR_MP_ADD_5 1	Address 51	--	--	0 to 65535	RW	F004
R4X33B8I	MODBS_USR_MP_ADD_5 2	Address 52	--	--	0 to 65535	RW	F004
R4X33B9I	MODBS_USR_MP_ADD_5 3	Address 53	--	--	0 to 65535	RW	F004

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X33BAI	MODBS_USR_MP_ADD_5 4	Address 54	--	--	0 to 65535	RW	F004
R4X33BBI	MODBS_USR_MP_ADD_5 5	Address 55	--	--	0 to 65535	RW	F004
R4X33BCI	MODBS_USR_MP_ADD_5 6	Address 56	--	--	0 to 65535	RW	F004
R4X33BDI	MODBS_USR_MP_ADD_5 7	Address 57	--	--	0 to 65535	RW	F004
R4X33BEI	MODBS_USR_MP_ADD_5 8	Address 58	--	--	0 to 65535	RW	F004
R4X33BFI	MODBS_USR_MP_ADD_5 9	Address 59	--	--	0 to 65535	RW	F004
R4X33C0I	MODBS_USR_MP_ADD_6 0	Address 60	--	--	0 to 65535	RW	F004
R4X33C1I	MODBS_USR_MP_ADD_6 1	Address 61	--	--	0 to 65535	RW	F004
R4X33C2I	MODBS_USR_MP_ADD_6 2	Address 62	--	--	0 to 65535	RW	F004
R4X33C3I	MODBS_USR_MP_ADD_6 3	Address 63	--	--	0 to 65535	RW	F004
R4X33C4I	MODBS_USR_MP_ADD_6 4	Address 64	--	--	0 to 65535	RW	F004
R4X33C5I	MODBS_USR_MP_ADD_6 5	Address 65	--	--	0 to 65535	RW	F004
R4X33C6I	MODBS_USR_MP_ADD_6 6	Address 66	--	--	0 to 65535	RW	F004
R4X33C7I	MODBS_USR_MP_ADD_6 7	Address 67	--	--	0 to 65535	RW	F004
R4X33C8I	MODBS_USR_MP_ADD_6 8	Address 68	--	--	0 to 65535	RW	F004
R4X33C9I	MODBS_USR_MP_ADD_6 9	Address 69	--	--	0 to 65535	RW	F004
R4X33CAI	MODBS_USR_MP_ADD_7 0	Address 70	--	--	0 to 65535	RW	F004
R4X33CBI	MODBS_USR_MP_ADD_7 1	Address 71	--	--	0 to 65535	RW	F004
R4X33CCI	MODBS_USR_MP_ADD_7 2	Address 72	--	--	0 to 65535	RW	F004
R4X33CDI	MODBS_USR_MP_ADD_7 3	Address 73	--	--	0 to 65535	RW	F004
R4X33CEI	MODBS_USR_MP_ADD_7 4	Address 74	--	--	0 to 65535	RW	F004
R4X33CFI	MODBS_USR_MP_ADD_7 5	Address 75	--	--	0 to 65535	RW	F004
R4X33D0I	MODBS_USR_MP_ADD_7 6	Address 76	--	--	0 to 65535	RW	F004
R4X33D1I	MODBS_USR_MP_ADD_7 7	Address 77	--	--	0 to 65535	RW	F004
R4X33D2I	MODBS_USR_MP_ADD_7 8	Address 78	--	--	0 to 65535	RW	F004
R4X33D3I	MODBS_USR_MP_ADD_7 9	Address 79	--	--	0 to 65535	RW	F004
R4X33D4I	MODBS_USR_MP_ADD_8 0	Address 80	--	--	0 to 65535	RW	F004
R4X33D5I	MODBS_USR_MP_ADD_8 1	Address 81	--	--	0 to 65535	RW	F004
R4X33D6I	MODBS_USR_MP_ADD_8 2	Address 82	--	--	0 to 65535	RW	F004

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X33D7I	MODBS_USR_MP_ADD_83	Address 83	--	--	0 to 65535	RW	F004
R4X33D8I	MODBS_USR_MP_ADD_84	Address 84	--	--	0 to 65535	RW	F004
R4X33D9I	MODBS_USR_MP_ADD_85	Address 85	--	--	0 to 65535	RW	F004
R4X33DAI	MODBS_USR_MP_ADD_86	Address 86	--	--	0 to 65535	RW	F004
R4X33DBI	MODBS_USR_MP_ADD_87	Address 87	--	--	0 to 65535	RW	F004
R4X33DCI	MODBS_USR_MP_ADD_88	Address 88	--	--	0 to 65535	RW	F004
R4X33DDI	MODBS_USR_MP_ADD_89	Address 89	--	--	0 to 65535	RW	F004
R4X33DEI	MODBS_USR_MP_ADD_90	Address 90	--	--	0 to 65535	RW	F004
R4X33DFI	MODBS_USR_MP_ADD_91	Address 91	--	--	0 to 65535	RW	F004
R4X33E0I	MODBS_USR_MP_ADD_92	Address 92	--	--	0 to 65535	RW	F004
R4X33E1I	MODBS_USR_MP_ADD_93	Address 93	--	--	0 to 65535	RW	F004
R4X33E2I	MODBS_USR_MP_ADD_94	Address 94	--	--	0 to 65535	RW	F004
R4X33E3I	MODBS_USR_MP_ADD_95	Address 95	--	--	0 to 65535	RW	F004
R4X33E4I	MODBS_USR_MP_ADD_96	Address 96	--	--	0 to 65535	RW	F004
R4X33E5I	MODBS_USR_MP_ADD_97	Address 97	--	--	0 to 65535	RW	F004
R4X33E6I	MODBS_USR_MP_ADD_98	Address 98	--	--	0 to 65535	RW	F004
R4X33E7I	MODBS_USR_MP_ADD_99	Address 99	--	--	0 to 65535	RW	F004
R4X33E8I	MODBS_USR_MP_ADD_100	Address 100	--	--	0 to 65535	RW	F004
R4X33E9I	MODBS_USR_MP_ADD_101	Address 101	--	--	0 to 65535	RW	F004
R4X33EAI	MODBS_USR_MP_ADD_102	Address 102	--	--	0 to 65535	RW	F004
R4X33EBI	MODBS_USR_MP_ADD_103	Address 103	--	--	0 to 65535	RW	F004
R4X33ECI	MODBS_USR_MP_ADD_104	Address 104	--	--	0 to 65535	RW	F004
R4X33EDI	MODBS_USR_MP_ADD_105	Address 105	--	--	0 to 65535	RW	F004
R4X33EEI	MODBS_USR_MP_ADD_106	Address 106	--	--	0 to 65535	RW	F004
R4X33EFI	MODBS_USR_MP_ADD_107	Address 107	--	--	0 to 65535	RW	F004
R4X33FOI	MODBS_USR_MP_ADD_108	Address 108	--	--	0 to 65535	RW	F004
R4X33F1I	MODBS_USR_MP_ADD_109	Address 109	--	--	0 to 65535	RW	F004
R4X33F2I	MODBS_USR_MP_ADD_110	Address 110	--	--	0 to 65535	RW	F004
R4X33F3I	MODBS_USR_MP_ADD_111	Address 111	--	--	0 to 65535	RW	F004

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X33F4I	MODBS_USR_MP_ADD_1 12	Address 112	--	--	0 to 65535	RW	F004
R4X33F5I	MODBS_USR_MP_ADD_1 13	Address 113	--	--	0 to 65535	RW	F004
R4X33F6I	MODBS_USR_MP_ADD_1 14	Address 114	--	--	0 to 65535	RW	F004
R4X33F7I	MODBS_USR_MP_ADD_1 15	Address 115	--	--	0 to 65535	RW	F004
R4X33F8I	MODBS_USR_MP_ADD_1 16	Address 116	--	--	0 to 65535	RW	F004
R4X33F9I	MODBS_USR_MP_ADD_1 17	Address 117	--	--	0 to 65535	RW	F004
R4X33FAI	MODBS_USR_MP_ADD_1 18	Address 118	--	--	0 to 65535	RW	F004
R4X33FBI	MODBS_USR_MP_ADD_1 19	Address 119	--	--	0 to 65535	RW	F004
R4X33FCI	MODBS_USR_MP_ADD_1 20	Address 120	--	--	0 to 65535	RW	F004
R4X33FDI	MODBS_USR_MP_ADD_1 21	Address 121	--	--	0 to 65535	RW	F004
R4X33FEI	MODBS_USR_MP_ADD_1 22	Address 122	--	--	0 to 65535	RW	F004
R4X33FFI	MODBS_USR_MP_ADD_1 23	Address 123	--	--	0 to 65535	RW	F004
R4X3400I	MODBS_USR_MP_ADD_1 24	Address 124	--	--	0 to 65535	RW	F004
R4X3401I	MODBS_USR_MP_ADD_1 25	Address 125	--	--	0 to 65535	RW	F004
R4X3402I	MODBS_USR_MP_ADD_1 26	Address 126	--	--	0 to 65535	RW	F004
R4X3403I	MODBS_USR_MP_ADD_1 27	Address 127	--	--	0 to 65535	RW	F004
R4X3404I	MODBS_USR_MP_ADD_1 28	Address 128	--	--	0 to 65535	RW	F004
R4X3405I	MODBS_USR_MP_ADD_1 29	Address 129	--	--	0 to 65535	RW	F004
R4X3406I	MODBS_USR_MP_ADD_1 30	Address 130	--	--	0 to 65535	RW	F004
R4X3407I	MODBS_USR_MP_ADD_1 31	Address 131	--	--	0 to 65535	RW	F004
R4X3408I	MODBS_USR_MP_ADD_1 32	Address 132	--	--	0 to 65535	RW	F004
R4X3409I	MODBS_USR_MP_ADD_1 33	Address 133	--	--	0 to 65535	RW	F004
R4X340AI	MODBS_USR_MP_ADD_1 34	Address 134	--	--	0 to 65535	RW	F004
R4X340BI	MODBS_USR_MP_ADD_1 35	Address 135	--	--	0 to 65535	RW	F004
R4X340CI	MODBS_USR_MP_ADD_1 36	Address 136	--	--	0 to 65535	RW	F004
R4X340DI	MODBS_USR_MP_ADD_1 37	Address 137	--	--	0 to 65535	RW	F004
R4X340EI	MODBS_USR_MP_ADD_1 38	Address 138	--	--	0 to 65535	RW	F004
R4X340FI	MODBS_USR_MP_ADD_1 39	Address 139	--	--	0 to 65535	RW	F004
R4X3410I	MODBS_USR_MP_ADD_1 40	Address 140	--	--	0 to 65535	RW	F004

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X3411I	MODBS_USR_MP_ADD_1 41	Address 141	--	--	0 to 65535	RW	F004
R4X3412I	MODBS_USR_MP_ADD_1 42	Address 142	--	--	0 to 65535	RW	F004
R4X3413I	MODBS_USR_MP_ADD_1 43	Address 143	--	--	0 to 65535	RW	F004
R4X3414I	MODBS_USR_MP_ADD_1 44	Address 144	--	--	0 to 65535	RW	F004
R4X3415I	MODBS_USR_MP_ADD_1 45	Address 145	--	--	0 to 65535	RW	F004
R4X3416I	MODBS_USR_MP_ADD_1 46	Address 146	--	--	0 to 65535	RW	F004
R4X3417I	MODBS_USR_MP_ADD_1 47	Address 147	--	--	0 to 65535	RW	F004
R4X3418I	MODBS_USR_MP_ADD_1 48	Address 148	--	--	0 to 65535	RW	F004
R4X3419I	MODBS_USR_MP_ADD_1 49	Address 149	--	--	0 to 65535	RW	F004
R4X341AI	MODBS_USR_MP_ADD_1 50	Address 150	--	--	0 to 65535	RW	F004
R4X341BI	MODBS_USR_MP_ADD_1 51	Address 151	--	--	0 to 65535	RW	F004
R4X341CI	MODBS_USR_MP_ADD_1 52	Address 152	--	--	0 to 65535	RW	F004
R4X341DI	MODBS_USR_MP_ADD_1 53	Address 153	--	--	0 to 65535	RW	F004
R4X341EI	MODBS_USR_MP_ADD_1 54	Address 154	--	--	0 to 65535	RW	F004
R4X341FI	MODBS_USR_MP_ADD_1 55	Address 155	--	--	0 to 65535	RW	F004
R4X3420I	MODBS_USR_MP_ADD_1 56	Address 156	--	--	0 to 65535	RW	F004
R4X3421I	MODBS_USR_MP_ADD_1 57	Address 157	--	--	0 to 65535	RW	F004
R4X3422I	MODBS_USR_MP_ADD_1 58	Address 158	--	--	0 to 65535	RW	F004
R4X3423I	MODBS_USR_MP_ADD_1 59	Address 159	--	--	0 to 65535	RW	F004
R4X3424I	MODBS_USR_MP_ADD_1 60	Address 160	--	--	0 to 65535	RW	F004
R4X3425I	MODBS_USR_MP_ADD_1 61	Address 161	--	--	0 to 65535	RW	F004
R4X3426I	MODBS_USR_MP_ADD_1 62	Address 162	--	--	0 to 65535	RW	F004
R4X3427I	MODBS_USR_MP_ADD_1 63	Address 163	--	--	0 to 65535	RW	F004
R4X3428I	MODBS_USR_MP_ADD_1 64	Address 164	--	--	0 to 65535	RW	F004
R4X3429I	MODBS_USR_MP_ADD_1 65	Address 165	--	--	0 to 65535	RW	F004
R4X342AI	MODBS_USR_MP_ADD_1 66	Address 166	--	--	0 to 65535	RW	F004
R4X342BI	MODBS_USR_MP_ADD_1 67	Address 167	--	--	0 to 65535	RW	F004
R4X342CI	MODBS_USR_MP_ADD_1 68	Address 168	--	--	0 to 65535	RW	F004
R4X342DI	MODBS_USR_MP_ADD_1 69	Address 169	--	--	0 to 65535	RW	F004

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X342EI	MODBS_USR_MP_ADD_1 70	Address 170	--	--	0 to 65535	RW	F004
R4X342FI	MODBS_USR_MP_ADD_1 71	Address 171	--	--	0 to 65535	RW	F004
R4X3430I	MODBS_USR_MP_ADD_1 72	Address 172	--	--	0 to 65535	RW	F004
R4X3431I	MODBS_USR_MP_ADD_1 73	Address 173	--	--	0 to 65535	RW	F004
R4X3432I	MODBS_USR_MP_ADD_1 74	Address 174	--	--	0 to 65535	RW	F004
R4X3433I	MODBS_USR_MP_ADD_1 75	Address 175	--	--	0 to 65535	RW	F004
R4X3434I	MODBS_USR_MP_ADD_1 76	Address 176	--	--	0 to 65535	RW	F004
R4X3435I	MODBS_USR_MP_ADD_1 77	Address 177	--	--	0 to 65535	RW	F004
R4X3436I	MODBS_USR_MP_ADD_1 78	Address 178	--	--	0 to 65535	RW	F004
R4X3437I	MODBS_USR_MP_ADD_1 79	Address 179	--	--	0 to 65535	RW	F004
R4X3438I	MODBS_USR_MP_ADD_1 80	Address 180	--	--	0 to 65535	RW	F004
R4X3439I	MODBS_USR_MP_ADD_1 81	Address 181	--	--	0 to 65535	RW	F004
R4X343AI	MODBS_USR_MP_ADD_1 82	Address 182	--	--	0 to 65535	RW	F004
R4X343BI	MODBS_USR_MP_ADD_1 83	Address 183	--	--	0 to 65535	RW	F004
R4X343CI	MODBS_USR_MP_ADD_1 84	Address 184	--	--	0 to 65535	RW	F004
R4X343DI	MODBS_USR_MP_ADD_1 85	Address 185	--	--	0 to 65535	RW	F004
R4X343EI	MODBS_USR_MP_ADD_1 86	Address 186	--	--	0 to 65535	RW	F004
R4X343FI	MODBS_USR_MP_ADD_1 87	Address 187	--	--	0 to 65535	RW	F004
R4X3440I	MODBS_USR_MP_ADD_1 88	Address 188	--	--	0 to 65535	RW	F004
R4X3441I	MODBS_USR_MP_ADD_1 89	Address 189	--	--	0 to 65535	RW	F004
R4X3442I	MODBS_USR_MP_ADD_1 90	Address 190	--	--	0 to 65535	RW	F004
R4X3443I	MODBS_USR_MP_ADD_1 91	Address 191	--	--	0 to 65535	RW	F004
R4X3444I	MODBS_USR_MP_ADD_1 92	Address 192	--	--	0 to 65535	RW	F004
R4X3445I	MODBS_USR_MP_ADD_1 93	Address 193	--	--	0 to 65535	RW	F004
R4X3446I	MODBS_USR_MP_ADD_1 94	Address 194	--	--	0 to 65535	RW	F004
R4X3447I	MODBS_USR_MP_ADD_1 95	Address 195	--	--	0 to 65535	RW	F004
R4X3448I	MODBS_USR_MP_ADD_1 96	Address 196	--	--	0 to 65535	RW	F004
R4X3449I	MODBS_USR_MP_ADD_1 97	Address 197	--	--	0 to 65535	RW	F004
R4X344AI	MODBS_USR_MP_ADD_1 98	Address 198	--	--	0 to 65535	RW	F004

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X344BI	MODBS_USR_MP_ADD_199	Address 199	--	--	0 to 65535	RW	F004
R4X344CI	MODBS_USR_MP_ADD_200	Address 200	--	--	0 to 65535	RW	F004
R4X344DI	MODBS_USR_MP_ADD_201	Address 201	--	--	0 to 65535	RW	F004
R4X344EI	MODBS_USR_MP_ADD_202	Address 202	--	--	0 to 65535	RW	F004
R4X344FI	MODBS_USR_MP_ADD_203	Address 203	--	--	0 to 65535	RW	F004
R4X3450I	MODBS_USR_MP_ADD_204	Address 204	--	--	0 to 65535	RW	F004
R4X3451I	MODBS_USR_MP_ADD_205	Address 205	--	--	0 to 65535	RW	F004
R4X3452I	MODBS_USR_MP_ADD_206	Address 206	--	--	0 to 65535	RW	F004
R4X3453I	MODBS_USR_MP_ADD_207	Address 207	--	--	0 to 65535	RW	F004
R4X3454I	MODBS_USR_MP_ADD_208	Address 208	--	--	0 to 65535	RW	F004
R4X3455I	MODBS_USR_MP_ADD_209	Address 209	--	--	0 to 65535	RW	F004
R4X3456I	MODBS_USR_MP_ADD_210	Address 210	--	--	0 to 65535	RW	F004
R4X3457I	MODBS_USR_MP_ADD_211	Address 211	--	--	0 to 65535	RW	F004
R4X3458I	MODBS_USR_MP_ADD_212	Address 212	--	--	0 to 65535	RW	F004
R4X3459I	MODBS_USR_MP_ADD_213	Address 213	--	--	0 to 65535	RW	F004
R4X345AI	MODBS_USR_MP_ADD_214	Address 214	--	--	0 to 65535	RW	F004
R4X345BI	MODBS_USR_MP_ADD_215	Address 215	--	--	0 to 65535	RW	F004
R4X345CI	MODBS_USR_MP_ADD_216	Address 216	--	--	0 to 65535	RW	F004
R4X345DI	MODBS_USR_MP_ADD_217	Address 217	--	--	0 to 65535	RW	F004
R4X345EI	MODBS_USR_MP_ADD_218	Address 218	--	--	0 to 65535	RW	F004
R4X345FI	MODBS_USR_MP_ADD_219	Address 219	--	--	0 to 65535	RW	F004
R4X3460I	MODBS_USR_MP_ADD_220	Address 220	--	--	0 to 65535	RW	F004
R4X3461I	MODBS_USR_MP_ADD_221	Address 221	--	--	0 to 65535	RW	F004
R4X3462I	MODBS_USR_MP_ADD_222	Address 222	--	--	0 to 65535	RW	F004
R4X3463I	MODBS_USR_MP_ADD_223	Address 223	--	--	0 to 65535	RW	F004
R4X3464I	MODBS_USR_MP_ADD_224	Address 224	--	--	0 to 65535	RW	F004
R4X3465I	MODBS_USR_MP_ADD_225	Address 225	--	--	0 to 65535	RW	F004
R4X3466I	MODBS_USR_MP_ADD_226	Address 226	--	--	0 to 65535	RW	F004
R4X3467I	MODBS_USR_MP_ADD_227	Address 227	--	--	0 to 65535	RW	F004

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4X3468I	MODBS_USR_MP_ADD_2 28	Address 228	--	--	0 to 65535	RW	F004
R4X3469I	MODBS_USR_MP_ADD_2 29	Address 229	--	--	0 to 65535	RW	F004
R4X346AI	MODBS_USR_MP_ADD_2 30	Address 230	--	--	0 to 65535	RW	F004
R4X346BI	MODBS_USR_MP_ADD_2 31	Address 231	--	--	0 to 65535	RW	F004
R4X346CI	MODBS_USR_MP_ADD_2 32	Address 232	--	--	0 to 65535	RW	F004
R4X346DI	MODBS_USR_MP_ADD_2 33	Address 233	--	--	0 to 65535	RW	F004
R4X346EI	MODBS_USR_MP_ADD_2 34	Address 234	--	--	0 to 65535	RW	F004
R4X346FI	MODBS_USR_MP_ADD_2 35	Address 235	--	--	0 to 65535	RW	F004
R4X3470I	MODBS_USR_MP_ADD_2 36	Address 236	--	--	0 to 65535	RW	F004
R4X3471I	MODBS_USR_MP_ADD_2 37	Address 237	--	--	0 to 65535	RW	F004
R4X3472I	MODBS_USR_MP_ADD_2 38	Address 238	--	--	0 to 65535	RW	F004
R4X3473I	MODBS_USR_MP_ADD_2 39	Address 239	--	--	0 to 65535	RW	F004
R4X3474I	MODBS_USR_MP_ADD_2 40	Address 240	--	--	0 to 65535	RW	F004
R4X3475I	MODBS_USR_MP_ADD_2 41	Address 241	--	--	0 to 65535	RW	F004
R4X3476I	MODBS_USR_MP_ADD_2 42	Address 242	--	--	0 to 65535	RW	F004
R4X3477I	MODBS_USR_MP_ADD_2 43	Address 243	--	--	0 to 65535	RW	F004
R4X3478I	MODBS_USR_MP_ADD_2 44	Address 244	--	--	0 to 65535	RW	F004
R4X3479I	MODBS_USR_MP_ADD_2 45	Address 245	--	--	0 to 65535	RW	F004
R4X347AI	MODBS_USR_MP_ADD_2 46	Address 246	--	--	0 to 65535	RW	F004
R4X347BI	MODBS_USR_MP_ADD_2 47	Address 247	--	--	0 to 65535	RW	F004
R4X347CI	MODBS_USR_MP_ADD_2 48	Address 248	--	--	0 to 65535	RW	F004
R4X347DI	MODBS_USR_MP_ADD_2 49	Address 249	--	--	0 to 65535	RW	F004
R4X347EI	MODBS_USR_MP_ADD_2 50	Address 250	--	--	0 to 65535	RW	F004
R4X347FI	MODBS_USR_MP_ADD_2 51	Address 251	--	--	0 to 65535	RW	F004
R4X3480I	MODBS_USR_MP_ADD_2 52	Address 252	--	--	0 to 65535	RW	F004
R4X3481I	MODBS_USR_MP_ADD_2 53	Address 253	--	--	0 to 65535	RW	F004
R4X3482I	MODBS_USR_MP_ADD_2 54	Address 254	--	--	0 to 65535	RW	F004
R4X3483I	MODBS_USR_MP_ADD_2 55	Address 255	--	--	0 to 65535	RW	F004
R4XFFF0	SYN0_MILL_SEC_2000	0xFFFF0	--	--	0 to	RW	F011

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Register Address	DDE Item Name (Mnemonic)	Contents	Units	Value	Range	RW	Data Type
R4XFFF1	SYN1_MILL_SEC_2000	Synchronization (milliseconds from 01/01/2000)			18446744073 709551614		
R4XFFF2	SYN2_MILL_SEC_2000						
R4XFFF3	SYN3_MILL_SEC_2000						

Notes

In the following notes, MSB or MSByte refers to the 'most significant byte'; LSB or LSByte refer to the 'least-significant byte'; MSb or MSbit refer to the 'most-significant bit'; LSb or LSbit refer to the 'least-significant bit'.

CODE	DEFINITION
F001	UNSIGNED INT 16 BIT(BITMASK)
F002	SIGNED INT 32 BIT
F003	FLOAT 32 BIT
F004	SIGNED INT 16 BIT
F005	SIGNED INT 32 BIT
F006	DOUBLE 64 BIT
F007	UNSIGNED INT 8 BIT
F008	SIGNED INT 8 BIT
F009	STRING
F011	UNSIGNED INT 64 BIT (MILLISECONDS FROM 01/01/2000)
F012	UNSIGNED INT 16 BIT (ENUMERATED)

EPM7430D/EPM7450D

ACTUAL REGISTERS

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
RDAF	VOLTS_AN_INS	Volts AN Instantaneous Value	V,0-4294967296,0	FLOAT	R
RDBF	VOLTS_BN_INS	Volts BN Instantaneous Value	V,0-4294967296,0	FLOAT	R
RDCF	VOLTS_CN_INS	Volts CN Instantaneous Value	V,0-4294967296,0	FLOAT	R
RDDF	VOLTS_AB_INS	Volts AB Instantaneous Value	V,0-4294967296,0	FLOAT	R
RDEF	VOLTS_BC_INS	Volts BC Instantaneous Value	V,0-4294967296,0	FLOAT	R
RDFE	VOLTS_CA_INS	Volts CA Instantaneous Value	V,0-4294967296,0	FLOAT	R
RDGF	AMPS_A_INS	Amps A Instantaneous Value	A,0-4294967296,0	FLOAT	R
RDHF	AMPS_B_INS	Amps B Instantaneous Value	A,0-4294967296,0	FLOAT	R
RDIF	AMPS_C_INS	Amps C Instantaneous Value	A,0-4294967296,0	FLOAT	R
RDJF	AMPS_N_INS	Amps N Instantaneous Value	A,0-4294967296,0	FLOAT	R
RDKF	KW_INS	KW Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RDLF	KVAR_INS	KVAR Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RDMF	KVA_INS	KVA Instantaneous Value	KV, -2147483648-2147483648,0	FLOAT	R
RDNF	PF_INS	Power Factor Instantaneous Value	,-1-1,0	FLOAT	R
RDOF	FREQ_INS	Frequency Instantaneous Value	Hz, -2147483648-2147483648,0	FLOAT	R
RDSF	K_FACTOR_INS	K Factor Instantaneous Value		FLOAT	R
RDS1F	VOLTS_AN_KF_INS	Volts AN K Factor Instantaneous Value	V,0-4294967296,0	FLOAT	R
RDS2F	VOLTS_BN_KF_INS	Volts BN K Factor Instantaneous Value	V,0-4294967296,0	FLOAT	R
RDS3F	VOLTS_CN_KF_INS	Volts CN K Factor Instantaneous Value	V,0-4294967296,0	FLOAT	R
RDS4F	AMPS_A_KF_INS	Amps A K Factor Instantaneous Value	A,0-4294967296,0	FLOAT	R
RDS5F	AMPS_B_KF_INS	Amps B K Factor Instantaneous Value	A,0-4294967296,0	FLOAT	R
RDS6F	AMPS_C_KF_INS	Amps C K Factor Instantaneous Value	A,0-4294967296,0	FLOAT	R
RDWF	WHOLE_GRP_INS	Whole Group Instantaneous Values		FLOAT	R
RDaF	KW_A_INS	KW A Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RDbF	KW_B_INS	KW B Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RDcF	KW_C_INS	KW C Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RDdF	KVAR_A_INS	KVAR A Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RDeF	KVAR_B_INS	KVAR B Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
RDfF	KVAR_C_INS	KVAR C Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RDgF	KVA_A_INS	KVA A Instantaneous Value	KV, -2147483648-2147483648,0	FLOAT	R
RDhF	KVA_B_INS	KVA B Instantaneous Value	KV, -2147483648-2147483648,0	FLOAT	R
RdiF	KVA_C_INS	KVA C Instantaneous Value	KV, -2147483648-2147483648,0	FLOAT	R
RDjF	PF_A_INS	Power Factor A Instantaneous Value	_,-1 - +1, 0	FLOAT	R
RDkF	PF_B_INS	Power Factor B Instantaneous Value	_,-1 - +1, 0	FLOAT	R
RDlF	PF_C_INS	Power Factor C Instantaneous Value	_,-1 - +1, 0	FLOAT	R
RDmF	THD_VOLT_AN_INS	THD Volts AN Instantaneous Value	V,0-4294967296,0	FLOAT	R
RDnF	THD_VOLT_BN_INS	THD Volts BN Instantaneous Value	V,0-4294967296,0	FLOAT	R
RdoF	THD_VOLT_CN_INS	THD Volts CN Instantaneous Value	V,0-4294967296,0	FLOAT	R
RDpF	THD_AMPS_A_INS	THD Amps A Instantaneous Value	A,0-4294967296,0	FLOAT	R
RDqF	THD_AMPS_B_INS	THD Amps B Instantaneous Value	A,0-4294967296,0	FLOAT	R
RDrF	THD_AMPS_C_INS	THD Amps C Instantaneous Value	A,0-4294967296,0	FLOAT	R
RDwF	PHASE_GRP_INS	Phase Group Instantaneous Values		FLOAT	R
RDw1F	KVAR_A_NEG_INS	Neg KVAR A Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RDw2F	KVAR_B_NEG_INS	Neg KVAR B Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RDw3F	KVAR_C_NEG_INS	Neg KVAR C Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RDw4F	PF_A_NEG_INS	Neg Power Factor A Instantaneous Value	_,-1 - +1, 0	FLOAT	R
RDw5F	PF_B_NEG_INS	Neg Power Factor B Instantaneous Value	_,-1 - +1, 0	FLOAT	R
RDw6F	PF_C_NEG_INS	Neg Power Factor C Instantaneous Value	_,-1 - +1, 0	FLOAT	R
RDw7F	KW_A_NEG_INS	Neg KW A Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RDw8F	KW_B_NEG_INS	Neg KW B Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RDw9F	KW_C_NEG_INS	Neg KW C Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RAAF	VOLTS_AN_AVG	Volts AN Average Value	V,0-4294967296,0	FLOAT	R
RABF	VOLTS_BN_AVG	Volts BN Average Value	V,0-4294967296,0	FLOAT	R
RACF	VOLTS_CN_AVG	Volts CN Average Value	V,0-4294967296,0	FLOAT	R
RADF	VOLTS_AB_AVG	Volts AB Average Value	V,0-4294967296,0	FLOAT	R
RAEF	VOLTS_BC_AVG	Volts BC Average Value	V,0-4294967296,0	FLOAT	R
RAFF	VOLTS_CA_AVG	Volts CA Average Value	V,0-4294967296,0	FLOAT	R
RAGF	AMPS_A_AVG	Amps A Average Value	A,0-4294967296,0	FLOAT	R
RAHF	AMPS_B_AVG	Amps B Average Value	A,0-4294967296,0	FLOAT	R
RAIF	AMPS_C_AVG	Amps C Average Value	A,0-4294967296,0	FLOAT	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
RAJF	AMPS_N_AVG	Amps N Average Value	A,0-4294967296,0	FLOAT	R
RAKF	KW_AVG	Average KW Value	KW, -2147483648-2147483648,0	FLOAT	R
RALF	KVAR_AVG	Average KVAR Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RAMF	KVA_AVG	Average KVA Value	KV, -2147483648-2147483648,0	FLOAT	R
RANF	PF_AVG	Average Power Factor Value	_, -1 - +1, 0	FLOAT	R
RAOF	FREQ_AVG	Average Frequency Value	Hz,-2147483648-214743648,0	FLOAT	R
RAWF	WHOLE_GRP_AVG	Whole Group Average Values		FLOAT	R
RAaF	KW_A_AVG	Average KW A Value	KW, -2147483648-2147483648,0	FLOAT	R
RAbF	KW_B_AVG	Average KW B Value	KW, -2147483648-2147483648,0	FLOAT	R
RAcF	KW_C_AVG	Average KW C Value	KW, -2147483648-2147483648,0	FLOAT	R
RAdF	KVAR_A_AVG	Average KVAR A Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RAeF	KVAR_B_AVG	Average KVAR B Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RAfF	KVAR_C_AVG	Average KVAR C Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RAgF	KVA_A_AVG	Average KVA A Value	KV, -2147483648-2147483648,0	FLOAT	R
RAhF	KVA_B_AVG	Average KVA B Value	KV, -2147483648-2147483648,0	FLOAT	R
RAiF	KVA_C_AVG	Average KVA C Value	KV, -2147483648-2147483648,0	FLOAT	R
RAjF	PF_A_AVG	Average Power Factor A Value	_, -1 - +1, 0	FLOAT	R
RAkF	PF_B_AVG	Average Power Factor B Value	_, -1 - +1, 0	FLOAT	R
RAlF	PF_C_AVG	Average Power Factor C Value	_, -1 - +1, 0	FLOAT	R
RAwF	PHASE_GRP_AVG	Phase Group Average Values		FLOAT	R
RAw1F	KVAR_A_NEG_AVG	Neg Average KVAR A Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RAw2F	KVAR_B_NEG_AVG	Neg Average KVAR B Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RAw3F	KVAR_C_NEG_AVG	Neg Average KVAR C Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RDw4F	PF_A_NEG_INS	Neg Power Factor A Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RDw5F	PF_B_NEG_INS	Neg Power Factor B Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RDw6F	PF_C_NEG_INS	Neg Power Factor C Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RDw7F	KW_A_NEG_INS	Neg KW A Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
RDw8F	KW_B_NEG_INS	Neg KW B Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RDw9F	KW_C_NEG_INS	Neg KW C Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RAAF	VOLTS_AN_AVG	Volts AN Average Value	V,0-4294967296,0	FLOAT	R
RABF	VOLTS_BN_AVG	Volts BN Average Value	V,0-4294967296,0	FLOAT	R
RACF	VOLTS_CN_AVG	Volts CN Average Value	V,0-4294967296,0	FLOAT	R
RADF	VOLTS_AB_AVG	Volts AB Average Value	V,0-4294967296,0	FLOAT	R
RAEF	VOLTS_BC_AVG	Volts BC Average Value	V,0-4294967296,0	FLOAT	R
RAFF	VOLTS_CA_AVG	Volts CA Average Value	V,0-4294967296,0	FLOAT	R
RAGF	AMPS_A_AVG	Amps A Average Value	A,0-4294967296,0	FLOAT	R
RAHF	AMPS_B_AVG	Amps B Average Value	A,0-4294967296,0	FLOAT	R
RAIF	AMPS_C_AVG	Amps C Average Value	A,0-4294967296,0	FLOAT	R
RAJF	AMPS_N_AVG	Amps N Average Value	A,0-4294967296,0	FLOAT	R
RAKF	KW_AVG	Average KW Value	KW, -2147483648-2147483648,0	FLOAT	R
RALF	KVAR_AVG	Average KVAR Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RAMF	KVA_AVG	Average KVA Value	KV, -2147483648-2147483648,0	FLOAT	R
RANF	PF_AVG	Average Power Factor Value	_,-1 - +1, 0	FLOAT	R
RAOF	FREQ_AVG	Average Frequency Value	Hz, -2147483648-2147483648,0	FLOAT	R
RAWF	WHOLE_GRP_AVG	Whole Group Average Values		FLOAT	R
RaaF	KW_A_AVG	Average KW A Value	KW, -2147483648-2147483648,0	FLOAT	R
RabF	KW_B_AVG	Average KW B Value	KW, -2147483648-2147483648,0	FLOAT	R
RacF	KW_C_AVG	Average KW C Value	KW, -2147483648-2147483648,0	FLOAT	R
RadF	KVAR_A_AVG	Average KVAR A Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RaeF	KVAR_B_AVG	Average KVAR B Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RafF	KVAR_C_AVG	Average KVAR C Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RagF	KVA_A_AVG	Average KVA A Value	KV, -2147483648-2147483648,0	FLOAT	R
RahF	KVA_B_AVG	Average KVA B Value	KV, -2147483648-2147483648,0	FLOAT	R
RaiF	KVA_C_AVG	Average KVA C Value	KV, -2147483648-2147483648,0	FLOAT	R
RajF	PF_A_AVG	Average Power Factor A Value	_,-1 - +1, 0	FLOAT	R
RakF	PF_B_AVG	Average Power Factor B Value	_,-1 - +1, 0	FLOAT	R
RalF	PF_C_AVG	Average Power Factor C Value	_,-1 - +1, 0	FLOAT	R
RawF	PHASE_GRP_AVG	Phase Group Average Values		FLOAT	R
Raw1F	KVAR_A_NEG_AVG	Neg Average KVAR A Value	KVAR, -2147483648-	FLOAT	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
			2147483648,0		
Raw2F	KVAR_B_NEG_AVG	Neg Average KVAR B Value	KVAR, - 2147483648- 2147483648,0	FLOAT	R
Raw3F	KVAR_C_NEG_AVG	Neg Average KVAR C Value	KVAR, - 2147483648- 2147483648,0	FLOAT	R
Raw4F	PF_A_NEG_AVG	Neg Average Power Factor A Value	_, -1 - +1, 0	FLOAT	R
Raw5F	PF_B_NEG_AVG	Neg Average Power Factor B Value	_, -1 - +1, 0	FLOAT	R
Raw6F	PF_C_NEG_AVG	Neg Average Power Factor C Value	_, -1 - +1, 0	FLOAT	R
Raw7F	KW_A_NEG_AVG	Neg Average KW A Value	KW, -2147483648- 2147483648,0	FLOAT	R
Raw8F	KW_B_NEG_AVG	Neg Average KW B Value	KW, -2147483648- 2147483648,0	FLOAT	R
Raw9F	KW_C_NEG_AVG	Neg Average KW C Value	KW, -2147483648- 2147483648,0	FLOAT	R
RXAF	VOLTS_AN_MAX_P	Volts AN Instantaneous Value Max	V,0-4294967296,0	FLOAT	R
RXBF	VOLTS_BN_MAX_P	Volts BN Instantaneous Value Max	V,0-4294967296,0	FLOAT	R
RXCF	VOLTS_CN_MAX_P	Volts CN Instantaneous Value Max	V,0-4294967296,0	FLOAT	R
RXDF	VOLTS_AB_MAX_P	Volts AB Instantaneous Value Max	V,0-4294967296,0	FLOAT	R
RXEF	VOLTS_BC_MAX_P	Volts BC Instantaneous Value Max	V,0-4294967296,0	FLOAT	R
RXFF	VOLTS_CA_MAX_P	Volts CA Instantaneous Value Max	V,0-4294967296,0	FLOAT	R
RXGF	AMPS_A_MAX_P	Amps A Instantaneous Value Max	A,0-4294967296,0	FLOAT	R
RXHF	AMPS_B_MAX_P	Amps B Instantaneous Value Max	A,0-4294967296,0	FLOAT	R
RXIF	AMPS_C_MAX_P	Amps C Instantaneous Value Max	A,0-4294967296,0	FLOAT	R
RXJF	AMPS_N_MAX_P	Amps N Instantaneous Value Max	A,0-4294967296,0	FLOAT	R
RXKF	KW_MAX_P	KW Instantaneous Value Max	KW, -2147483648- 2147483648,0	FLOAT	R
RXLF	KVAR_MAX_P	KVAR Instantaneous Value Max	KVAR, - 2147483648- 2147483648,0	FLOAT	R
RXMF	KVA_MAX_P	KVA Instantaneous Value Max	KV, -2147483648- 2147483648,0	FLOAT	R
RXNF	PF_MAX_P	Power Factor Instantaneous Value Max	_, -1 - +1, 0	FLOAT	R
RXOF	FREQ_MAX_P	Frequency Instantaneous Value Max	Hz, -2147483648- 2147483648,0	FLOAT	R
RXSF	K_FACTOR_MAX_P	Positive Max K Fctor		FLOAT	R
RXS1F	VOLTS_AN_KF_MAX_P	K-Factor Volts AN Instantaneous Value Max	V,0-4294967296,0	FLOAT	R
RXS2F	VOLTS_BN_KF_MAX_P	K-Factor Volts BN Instantaneous Value Max	V,0-4294967296,0	FLOAT	R
RXS3F	VOLTS_CN_KF_MAX_P	K-Factor Volts CN Instantaneous Value Max	V,0-4294967296,0	FLOAT	R
RXS4F	AMPS_A_KF_MAX_P	K-Factor Amps A Instantaneous Value Max	A,0-4294967296,0	FLOAT	R
RXS5F	AMPS_B_KF_MAX_P	K-Factor Amps B Instantaneous Value Max	A,0-4294967296,0	FLOAT	R
RXS6F	AMPS_C_KF_MAX_P	K-Factor Amps C Instantaneous Value Max	A,0-4294967296,0	FLOAT	R
RXWF	WHOLE_GRP_MAX_P			FLOAT	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
RXW1F	NEG_KVAR_MAX	KVAR NEG Max Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RXW2F	NEG_PF_MAX	Power Neg Max Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RXW3F	NEG_KW_MAX	KW Max Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RxaF	KW_A_MAX_P	KW A Max Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RxbF	KW_B_MAX_P	KW B Max Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RxcF	KW_C_MAX_P	KW C Max Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RXdF	KVAR_A_MAX_P	KVAR A Max Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RxeF	KVAR_B_MAX_P	KVAR B Max Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RxfF	KVAR_C_MAX_P	KVAR C Max Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RXgF	KVA_A_MAX_P	KVA A Instantaneous Value Max	KV, -2147483648-2147483648,0	FLOAT	R
RXhF	KVA_B_MAX_P	KVA B Instantaneous Value Max	KV, -2147483648-2147483648,0	FLOAT	R
RxiF	KVA_C_MAX_P	KVA C Instantaneous Value Max	KV, -2147483648-2147483648,0	FLOAT	R
RXjF	PF_A_MAX_P	Max Power Factor A Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RXkF	PF_B_MAX_P	Max Power Factor B Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RXlF	PF_C_MAX_P	Max Power Factor C Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RXmF	THD_VOLT_AN_MAX_P	THD Volts AN Instantaneous Value Max	V,0-4294967296,0	FLOAT	R
RXnF	THD_VOLT_BN_MAX_P	THD Volts BN Instantaneous Value Max	V,0-4294967296,0	FLOAT	R
RxoF	THD_VOLT_CN_MAX_P	THD Volts CN Instantaneous Value Max	V,0-4294967296,0	FLOAT	R
RXpF	THD_AMPS_A_MAX_P	THD Amps A Instantaneous Value Max	A,0-4294967296,0	FLOAT	R
RXqF	THD_AMPS_B_MAX_P	THD Amps B Instantaneous Value Max	A,0-4294967296,0	FLOAT	R
RXrF	THD_AMPS_C_MAX_P	THD Amps C Instantaneous Value Max	A,0-4294967296,0	FLOAT	R
RXwF	PHASE_GRP_MAX_P			FLOAT	R
RXw1F	KVAR_A_NEG_MAX	Neg KVAR A Max Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RXw2F	KVAR_B_NEG_MAX	Neg KVAR B Max Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RXw3F	KVAR_C_NEG_MAX	Neg KVAR C Max Instantaneous Value	KVAR, -2147483648-	FLOAT	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
			2147483648,0		
RXw4F	PF_A_NEG_MAX	Neg Max Power Factor A Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RXw5F	PF_B_NEG_MAX	Neg Max Power Factor B Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RXw6F	PF_C_NEG_MAX	Neg Max Power Factor C Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RXw7F	KW_A_NEG_MAX	Neg KW A Max Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RXw8F	KW_B_NEG_MAX	Neg KW B Max Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RXw9F	KW_C_NEG_MAX	Neg KW C Max Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RNAF	VOLTS_AN_MIN_P	Volts AN Instantaneous Value Min	V,0-4294967296,0	FLOAT	R
RNBF	VOLTS_BN_MIN_P	Volts BN Instantaneous Value Min	V,0-4294967296,0	FLOAT	R
RNCF	VOLTS_CN_MIN_P	Volts CN Instantaneous Value Min	V,0-4294967296,0	FLOAT	R
RNDF	VOLTS_AB_MIN_P	Volts AB Instantaneous Value Min	V,0-4294967296,0	FLOAT	R
RNEF	VOLTS_BC_MIN_P	Volts BC Instantaneous Value Min	V,0-4294967296,0	FLOAT	R
RNFF	VOLTS_CA_MIN_P	Volts CA Instantaneous Value Min	V,0-4294967296,0	FLOAT	R
RNGF	AMPS_A_MIN_P	Amps A Instantaneous Value Min	A,0-4294967296,0	FLOAT	R
RNHf	AMPS_B_MIN_P	Amps B Instantaneous Value Min	A,0-4294967296,0	FLOAT	R
RNIF	AMPS_C_MIN_P	Amps C Instantaneous Value Min	A,0-4294967296,0	FLOAT	R
RNJf	AMPS_N_MIN_P	Amps N Instantaneous Value Min	A,0-4294967296,0	FLOAT	R
RNKF	KW_MIN_P	KW Instantaneous Value Min	KW, -2147483648-2147483648,0	FLOAT	R
RNLF	KVAR_MIN_P	KVAR Instantaneous Value Min	KVAR, -2147483648-2147483648,0	FLOAT	R
RNMF	KVA_MIN_P	KVA Instantaneous Value Min	KV, -2147483648-2147483648,0	FLOAT	R
RNNF	PF_MIN_P	Power Factor Instantaneous Value Min	_, -1 - +1, 0	FLOAT	R
RNOF	FREQ_MIN_P	Frequency Instantaneous Value Min	Hz, -2147483648-2147483648,0	FLOAT	R
RNSF	K_FACTOR_MIN_P	Positive Min K Fctor		FLOAT	R
RNS1F	VOLTS_AN_KF_MIN_P	K-Factor Volts AN Instantaneous Value Min	V,0-4294967296,0	FLOAT	R
RNS2F	VOLTS_BN_KF_MIN_P	K-Factor Volts BN Instantaneous Value Min	V,0-4294967296,0	FLOAT	R
RNS3F	VOLTS_CN_KF_MIN_P	K-Factor Volts CN Instantaneous Value Min	V,0-4294967296,0	FLOAT	R
RNS4F	AMPS_A_KF_MIN_P	K-Factor Amps A Instantaneous Value Min	A,0-4294967296,0	FLOAT	R
RNS5F	AMPS_B_KF_MIN_P	K-Factor Amps B Instantaneous Value Min	A,0-4294967296,0	FLOAT	R
RNS6F	AMPS_C_KF_MIN_P	K-Factor Amps C Instantaneous Value Min	A,0-4294967296,0	FLOAT	R
RNWF	WHOLE_GRP_MIN_P			FLOAT	R
RNW1F	NEG_KVAR_MIN	Negative KVAR Instantaneous Value Min	KVAR, -2147483648-2147483648,0	FLOAT	R
RNW2F	NEG_PF_MIN	Negative Power Factor	_, -1 - +1, 0	FLOAT	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
		Instantaneous Value Min			
RNW3F	NEG_KW_MIN	Negative KW Instantaneous Value Min	KW, -2147483648-2147483648,0	FLOAT	R
RnaF	KW_A_MIN_P	KW A Min Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RNbF	KW_B_MIN_P	KW B Min Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RNcF	KW_C_MIN_P	KW C Min Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RNdF	KVAR_A_MIN_P	KVAR A Min Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RneF	KVAR_B_MIN_P	KVAR B Min Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RNfF	KVAR_C_MIN_P	KVAR C Min Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RNgF	KVA_A_MIN_P	KVA A Min Instantaneous Value	KV, -2147483648-2147483648,0	FLOAT	R
RNhF	KVA_B_MIN_P	KVA B Min Instantaneous Value	KV, -2147483648-2147483648,0	FLOAT	R
RniF	KVA_C_MIN_P	KVA C Min Instantaneous Value	KV, -2147483648-2147483648,0	FLOAT	R
RNjF	PF_A_MIN_P	Min Power Factor A Instantaneous Value	_,-1 - +1, 0	FLOAT	R
RNkF	PF_B_MIN_P	Min Power Factor B Instantaneous Value	_,-1 - +1, 0	FLOAT	R
RNlF	PF_C_MIN_P	Min Power Factor C Instantaneous Value	_,-1 - +1, 0	FLOAT	R
RNmF	THD_V0LT_AN_MIN_P	Min THD Volts AN Instantaneous Value	V,0-4294967296,0	FLOAT	R
RNnF	THD_V0LT_BN_MIN_P	Min THD Volts BN Instantaneous Value	V,0-4294967296,0	FLOAT	R
RnoF	THD_V0LT_CN_MIN_P	Min THD Volts CN Instantaneous Value	V,0-4294967296,0	FLOAT	R
RNpF	THD_AMPS_A_MIN_P	Min THD Amps A Instantaneous Value	A,0-4294967296,0	FLOAT	R
RNqF	THD_AMPS_B_MIN_P	Min THD Amps B Instantaneous Value	A,0-4294967296,0	FLOAT	R
RNrF	THD_AMPS_C_MIN_P	Min THD Amps C Instantaneous Value	A,0-4294967296,0	FLOAT	R
RNwF	PHASE_GRP_MIN_P			FLOAT	R
RNw1F	KVAR_A_NEG_MIN	Neg KVAR A Min Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RNw2F	KVAR_B_NEG_MIN	Neg KVAR B Min Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RNw3F	KVAR_C_NEG_MIN	Neg KVAR C Min Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RNw4F	PF_A_NEG_MIN	Neg Min Power Factor A Instantaneous Value	_,-1 - +1, 0	FLOAT	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
RNw5F	PF_B_NEG_MIN	Neg Min Power Factor B Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RNw6F	PF_C_NEG_MIN	Neg Min Power Factor C Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RNw7F	KW_A_NEG_MIN	Neg KW A Min Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RNw8F	KW_B_NEG_MIN	Neg KW B Min Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RNw9F	KW_C_NEG_MIN	Neg KW C Min Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RKPF	WATT_HOUR_TOTAL_P	Positive Watt Hour	KW, -2147483648-2147483648,0	FLOAT	R
RKQF	VA_HOUR_TOTAL_P	Positive VA Hour	KV, -2147483648-2147483648,0	FLOAT	R
RKRF	VAR_HOUR_TOTAL_P	Positive VAR Hour	KVAR, -2147483648-2147483648,0	FLOAT	R
RKWF	ENERGY_GRP			FLOAT	R
RLPF	WATT_HOUR_TOTAL_N	Negative Watt Hour	KW, -2147483648-2147483648,0	FLOAT	R
RLRF	VAR_HOUR_TOTAL_N	Negative VAR Hour	KVAR, -2147483648-2147483648,0	FLOAT	R
RUKF	KW_MAX_N	KW Max Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RULF	KVAR_MAX_N	KVAR NEG Max Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RUNF	PF_MAX_N	Power Neg Max Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RUaF	KW_A_MAX_N	Neg KW A Max Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RUbF	KW_B_MAX_N	Neg KW B Max Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RUcF	KW_C_MAX_N	Neg KW C Max Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RUdF	KVAR_A_MAX_N	Neg KVAR A Max Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RUeF	KVAR_B_MAX_N	Neg KVAR B Max Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RUfF	KVAR_C_MAX_N	Neg KVAR C Max Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RUjF	PF_A_MAX_N	Neg Max Power Factor A Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RUKF	PF_B_MAX_N	Neg Max Power Factor B Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RUIF	PF_C_MAX_N	Neg Max Power Factor C Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RVKF	KW_MIN_N	KW Max Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RVLF	KVAR_MIN_N	KVAR NEG Max Instantaneous Value	KVAR, -2147483648-	FLOAT	R

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
			2147483648,0		
RVNF	PF_MIN_N	Power Neg Max Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RvaF	KW_A_MIN_N	Neg KW A Min Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RVbF	KW_B_MIN_N	Neg KW B Min Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RVcF	KW_C_MIN_N	Neg KW C Min Instantaneous Value	KW, -2147483648-2147483648,0	FLOAT	R
RVdF	KVAR_A_MIN_N	Neg KVAR A Min Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RveF	KVAR_B_MIN_N	Neg KVAR B Min Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RVfF	KVAR_C_MIN_N	Neg KVAR C Min Instantaneous Value	KVAR, -2147483648-2147483648,0	FLOAT	R
RVjF	PF_A_MIN_N	Neg Min Power Factor A Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RVkF	PF_B_MIN_N	Neg Min Power Factor B Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RVIF	PF_C_MIN_N	Neg Min Power Factor C Instantaneous Value	_, -1 - +1, 0	FLOAT	R
RTAF	VOLTS_AN_HARM	Harmonic Volts AN	V,0-4294967296,0	FLOAT	R
RTBF	VOLTS_BN_HARM	Harmonic Volts BN	V,0-4294967296,0	FLOAT	R
RTCF	VOLTS_CN_HARM	Harmonic Volts CN	V,0-4294967296,0	FLOAT	R
RxA	VOLTS_AN_RSTMAX_P	Volts AN Max Reset	,0-1,0	UNSIGNED INT	W
RxB	VOLTS_BN_RSTMAX_P	Volts BN Max Reset	,0-1,0	UNSIGNED INT	W
RxC	VOLTS_CN_RSTMAX_P	Volts CN Max Reset	,0-1,0	UNSIGNED INT	W
RxD	VOLTS_AB_RSTMAX_P	Volts AB Max Reset	,0-1,0	UNSIGNED INT	W
RxE	VOLTS_BC_RSTMAX_P	Volts BC Max Reset	,0-1,0	UNSIGNED INT	W
RxF	VOLTS_CA_RSTMAX_P	Volts CA Max Reset	,0-1,0	UNSIGNED INT	W
RxG	AMPS_A_RSTMAX_P	Amps A Max Reset	,0-1,0	UNSIGNED INT	W
RxH	AMPS_B_RSTMAX_P	Amps B Max Reset	,0-1,0	UNSIGNED INT	W
RxI	AMPS_C_RSTMAX_P	Amps C Max Reset	,0-1,0	UNSIGNED INT	W
RxJ	AMPS_N_RSTMAX_P	Amps N Max Reset	,0-1,0	UNSIGNED INT	W
RxK	KW_RSTMAX_P	kw MaxReset	,0-1,0	UNSIGNED INT	W
RxL	KVAR_RSTMAX_P	kvar MaxReset	,0-1,0	UNSIGNED INT	W
RxM	KVA_RSTMAX_P	kva MaxReset	,0-1,0	UNSIGNED INT	W
RxN	PF_RSTMAX_P	PF MaxReset	,0-1,0	UNSIGNED INT	W

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
				N INT	
RxO	FREQ_RSTMAX_P	Frequency MaxReset	,0-1,0	UNSIG N INT	W
RxS	K_FACTOR_RSTMAX_P		,0-1,0	UNSIG N INT	W
Rxa	KW_A_RSTMAX_P	kw A MaxReset	,0-1,0	UNSIG N INT	W
Rxb	KW_B_RSTMAX_P	kw B MaxReset	,0-1,0	UNSIG N INT	W
Rxc	KW_C_RSTMAX_P	kw C MaxReset	,0-1,0	UNSIG N INT	W
Rxd	KVAR_A_RSTMAX_P	Kvar A MaxReset	,0-1,0	UNSIG N INT	W
Rxe	KVAR_B_RSTMAX_P	Kvar B MaxReset	,0-1,0	UNSIG N INT	W
Rxf	KVAR_C_RSTMAX_P	Kvar C MaxReset	,0-1,0	UNSIG N INT	W
Rxg	KVA_A_RSTMAX_P	kva A MaxReset	,0-1,0	UNSIG N INT	W
Rxh	KVA_B_RSTMAX_P	kva B MaxReset	,0-1,0	UNSIG N INT	W
Rxi	KVA_C_RSTMAX_P	kva C MaxReset	,0-1,0	UNSIG N INT	W
Rxj	PF_A_RSTMAX_P	PF A MaxReset	,0-1,0	UNSIG N INT	W
Rxk	PF_B_RSTMAX_P	PF B MaxReset	,0-1,0	UNSIG N INT	W
Rxl	PF_C_RSTMAX_P	PF C MaxReset	,0-1,0	UNSIG N INT	W
Rxm	THD_VOLT_AN_RSTMAX_P	THD Volts AN Max Reset	,0-1,0	UNSIG N INT	W
Rxn	THD_VOLT_BN_RSTMAX_P	THD Volts BN Max Reset	,0-1,0	UNSIG N INT	W
Rxo	THD_VOLT_CN_RSTMAX_P	THD Volts CN Max Reset	,0-1,0	UNSIG N INT	W
Rxp	THD_AMPS_A_RSTMAX_P	THD Amps AB Max Reset	,0-1,0	UNSIG N INT	W
Rxq	THD_AMPS_B_RSTMAX_P	THD Amps BC Max Reset	,0-1,0	UNSIG N INT	W
Rxr	THD_AMPS_C_RSTMAX_P	THD Amps CA Max Reset	,0-1,0	UNSIG N INT	W
RnA	VOLTS_AN_RSTMIN_P	Volts AN Min Reset	,0-1,0	UNSIG N INT	W
RnB	VOLTS_BN_RSTMIN_P	Volts BN Min Reset	,0-1,0	UNSIG N INT	W
RnC	VOLTS_CN_RSTMIN_P	Volts CN Min Reset	,0-1,0	UNSIG N INT	W
RnD	VOLTS_AB_RSTMIN_P	Volts AB Min Reset	,0-1,0	UNSIG N INT	W
RnE	VOLTS_BC_RSTMIN_P	Volts BC Min Reset	,0-1,0	UNSIG N INT	W
RnF	VOLTS_CA_RSTMIN_P	Volts CA Min Reset	,0-1,0	UNSIG N INT	W
RnG	AMPS_A_RSTMIN_P	Amps A Min Reset	,0-1,0	UNSIG N INT	W

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
RnH	AMPS_B_RSTMIN_P	Amps B Min Reset	,0-1,0	UNSIG N INT	W
RnI	AMPS_C_RSTMIN_P	Amps C Min Reset	,0-1,0	UNSIG N INT	W
RnJ	AMPS_N_RSTMIN_P	Amps N Min Reset	,0-1,0	UNSIG N INT	W
RnK	KW_RSTMIN_P	kw MinReset	,0-1,0	UNSIG N INT	W
RnL	KVAR_RSTMIN_P	kvar MinReset	,0-1,0	UNSIG N INT	W
RnM	KVA_RSTMIN_P	kva MinReset	,0-1,0	UNSIG N INT	W
RnN	PF_RSTMIN_P	PF MinReset	,0-1,0	UNSIG N INT	W
RnO	FREQ_RSTMIN_P	Frequency MinReset	,0-1,0	UNSIG N INT	W
RnS	K_FACTOR_RSTMIN_P	Positive Min K-Factor Reset	,0-1,0	UNSIG N INT	W
Rna	KW_A_RSTMIN_P	kw A MinReset	,0-1,0	UNSIG N INT	W
Rnb	KW_B_RSTMIN_P	kw B MinReset	,0-1,0	UNSIG N INT	W
Rnc	KW_C_RSTMIN_P	kw C MinReset	,0-1,0	UNSIG N INT	W
Rnd	KVAR_A_RSTMIN_P	Kvar A MinReset	,0-1,0	UNSIG N INT	W
Rne	KVAR_B_RSTMIN_P	Kvar B MinReset	,0-1,0	UNSIG N INT	W
Rnf	KVAR_C_RSTMIN_P	Kvar C MinReset	,0-1,0	UNSIG N INT	W
Rng	KVA_A_RSTMIN_P	kva A MinReset	,0-1,0	UNSIG N INT	W
Rnh	KVA_B_RSTMIN_P	kva B MinReset	,0-1,0	UNSIG N INT	W
Rni	KVA_C_RSTMIN_P	kva C MinReset	,0-1,0	UNSIG N INT	W
Rnj	PF_A_RSTMIN_P	PF A MinReset	,0-1,0	UNSIG N INT	W
Rnk	PF_B_RSTMIN_P	PF B MinReset	,0-1,0	UNSIG N INT	W
Rnl	PF_C_RSTMIN_P	PF C MinReset	,0-1,0	UNSIG N INT	W
Rnm	THD_VOLT_AN_RSTMIN_P	THD Volts AN Min Reset	,0-1,0	UNSIG N INT	W
Rnn	THD_VOLT_BN_RSTMIN_P	THD Volts BN Min Reset	,0-1,0	UNSIG N INT	W
Rno	THD_VOLT_CN_RSTMIN_P	THD Volts CN Min Reset	,0-1,0	UNSIG N INT	W
Rnp	THD_AMPS_A_RSTMIN_P	Phase A Thd Amp Reset	,0-1,0	UNSIG N INT	W
Rnq	THD_AMPS_B_RSTMIN_P	Phase B Thd Amp Reset	,0-1,0	UNSIG N INT	W
Rnr	THD_AMPS_C_RSTMIN_P	Phase C Thd Amp Reset	,0-1,0	UNSIG N INT	W
RuK	KW_RSTMAX_N	kw Neg MinReset	,0-1,0	UNSIG	W

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
				N INT	
RuL	KVAR_RSTMAX_N	Kvar Neg MinReset	,0-1,0	UNSIG N INT	W
RuN	PF_RSTMAX_N	PF Neg MinReset	,0-1,0	UNSIG N INT	W
Rua	KW_A_RSTMAX_N	kw Neg A MinReset	,0-1,0	UNSIG N INT	W
Rub	KW_B_RSTMAX_N	kw Neg B MinReset	,0-1,0	UNSIG N INT	W
Ruc	KW_C_RSTMAX_N	kw Neg C MinReset	,0-1,0	UNSIG N INT	W
Rud	KVAR_A_RSTMAX_N	kvar Neg A MinReset	,0-1,0	UNSIG N INT	W
Rue	KVAR_B_RSTMAX_N	kvar Neg B MinReset	,0-1,0	UNSIG N INT	W
Ruf	KVAR_C_RSTMAX_N	kvar Neg C MinReset	,0-1,0	UNSIG N INT	W
Ruj	PF_A_RSTMAX_N	PF Neg A MinReset	,0-1,0	UNSIG N INT	W
Ruk	PF_B_RSTMAX_N	PF Neg B MinReset	,0-1,0	UNSIG N INT	W
Rul	PF_C_RSTMAX_N	PF Neg C MinReset	,0-1,0	UNSIG N INT	W
RvK	KW_RSTMIN_N	kw Neg MaxReset	,0-1,0	UNSIG N INT	W
RvL	KVAR_RSTMIN_N	Kvar Neg MaxReset	,0-1,0	UNSIG N INT	W
RvN	PF_RSTMIN_N	PF Neg MaxReset	,0-1,0	UNSIG N INT	W
Rva	KW_A_RSTMIN_N	kw Neg A MaxReset	,0-1,0	UNSIG N INT	W
Rvb	KW_B_RSTMIN_N	kw Neg B MaxReset	,0-1,0	UNSIG N INT	W
Rvc	KW_C_RSTMIN_N	kw Neg C MaxReset	,0-1,0	UNSIG N INT	W
Rvd	KVAR_A_RSTMIN_N	Kvar Neg A MaxReset	,0-1,0	UNSIG N INT	W
Rve	KVAR_B_RSTMIN_N	Kvar Neg B MaxReset	,0-1,0	UNSIG N INT	W
Rvf	KVAR_C_RSTMIN_N	Kvar Neg C MaxReset	,0-1,0	UNSIG N INT	W
Rvj	PF_A_RSTMIN_N	PF Neg A MaxReset	,0-1,0	UNSIG N INT	W
Rvk	PF_B_RSTMIN_N	PF Neg B MaxReset	,0-1,0	UNSIG N INT	W
Rvl	PF_C_RSTMIN_N	PF Neg C MaxReset	,0-1,0	UNSIG N INT	W
RkP	WATT_HOUR_RST_P	Positive Watt Hour	KWh,0-65536,0	UNSIG N INT	W
RkQ	VA_HOUR_RST_P	Positive VA Hour	KVAh,0-65536,0	UNSIG N INT	W
RkR	VAR_HOUR_RST_P	Positive VAR Hour	KVARh,0-65536,0	UNSIG N INT	W
RIP	WATT_HOUR_RST_N	Negative Watt Hour	KWh,0-65536,0	UNSIG N INT	W

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
RIR	VAR_HOUR_RST_N	Negative VAR Hour	KVARh,0-65536,0	UNSIGN INT	W
R@TF	PH_IMBAL_REVRSL	Phase Imbalance		FLOAT	R
R@US	FIRMWARE_DAQ	FirmWare DAQ		STRING	R
R@VS	FIRMWARE_COM	FirmWare COM		STRING	R
R@QF	RELAY_LIM_ENABLES	Relay Limit Enables		FLOAT	R
RO*F	RELAY_INPUT_STATUS	Relay Limit Status		FLOAT	R
R@?1	INTERVAL	Interval	,0-65536,0	UNSIGN INT	R/W
R@?2	ADDRESS	Modbus Address	,0-65536,0	UNSIGN INT	R/W
R@?3	BAUD_RATE	Baud Rate	,0-65536,0	UNSIGN INT	R/W
R@?4	CONFIG	Configuration	,0-65536,0	UNSIGN INT	R/W
R@?5	SAB_LIMIT_1	Set Above/Below Limit1	,0-65536,0	UNSIGN INT	R/W
R@?6	SAB_LIMIT_2	Set Above/Below Limit2	,0-65536,0	UNSIGN INT	R/W
R@?7	VOLTS_AN_FS	Volts AN Full Scale Value	V,0-65536,0	UNSIGN INT	R/W
R@?8	AMPS_A_FS	Amps A Full Scale Value	A,0-65536,0	UNSIGN INT	R/W
R@?9	VOLTS_BN_FS	Volts BN Full Scale Value	V,0-65536,0	UNSIGN INT	R/W
R@?10	AMPS_B_FS	Amps B Full Scale value	A,0-65536,0	UNSIGN INT	R/W
R@?11	VOLTS_CN_FS	Volts CN Full Scale Value	V,0-65536,0	UNSIGN INT	R/W
R@?12	AMPS_C_FS	Amps C Full Scale Value	A,0-65536,0	UNSIGN INT	R/W
R@?13	STD_CORRECTION	Standard Correction		UNSIGN INT	R/W
R@?14	VOLTS_AN_HI_CAL	Volts AN HI CAL Value	V,0-65536,0	UNSIGN INT	R/W
R@?15	AMPS_A_HI_CAL	Amps A HI CAL Value	A,0-65536,0	UNSIGN INT	R/W
R@?16	VOLTS_BN_HI_CAL	Volts BN HI CAL Value	V,0-65536,0	UNSIGN INT	R/W
R@?17	AMPS_B_HI_CAL	Amps B HI CAL value	A,0-65536,0	UNSIGN INT	R/W
R@?18	VOLTS_CN_HI_CAL	Volts CN HI CAL Value	V,0-65536,0	UNSIGN INT	R/W
R@?19	AMPS_C_HI_CAL	Amps C HI CALValue	A,0-65536,0	UNSIGN INT	R/W
R@?20	VOLTS_AN_HI_CORR	Volts AN HI CORR Value	V,0-65536,0	UNSIGN INT	R/W
R@?21	AMPS_A_HI_CORR	Amps A HI CORR Value	A,0-65536,0	UNSIGN INT	R/W
R@?22	VOLTS_BN_HI_CORR	Volts BN HI CORR Value	V,0-65536,0	UNSIGN INT	R/W
R@?23	AMPS_B_HI_CORR	Amps B HI CORR value	A,0-65536,0	UNSIGN INT	R/W
R@?24	VOLTS_CN_HI_CORR	Volts CN HI CORR Value	V,0-65536,0	UNSIGN INT	R/W

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
				N INT	
R@?25	AMPS_C_HI_CORR	Amps C HI CORRValue	A,0-65536,0	UNSIG N INT	R/W
R@?26	VOLTS_AN_LIMIT1	Volts AN Limit1	V,0-65536,0	UNSIG N INT	R/W
R@?27	VOLTS_AN_LIMIT2	Volts AN Limit2	V,0-65536,0	UNSIG N INT	R/W
R@?28	AMPS_A_LIMIT1	Amps A Limit1	A,0-65536,0	UNSIG N INT	R/W
R@?29	AMPS_A_LIMIT2	Amps A Limit2	A,0-65536,0	UNSIG N INT	R/W
R@?30	VOLTS_BN_LIMIT1	Volts BN Limit1	V,0-65536,0	UNSIG N INT	R/W
R@?31	VOLTS_BN_LIMIT2	Volts BN Limit2	V,0-65536,0	UNSIG N INT	R/W
R@?32	AMPS_B_LIMIT1	Amps B Limit1	A,0-65536,0	UNSIG N INT	R/W
R@?33	AMPS_B_LIMIT2	Amps B Limit2	A,0-65536,0	UNSIG N INT	R/W
R@?34	VOLTS_CN_LIMIT1	Volts CN Limit1	V,0-65536,0	UNSIG N INT	R/W
R@?35	VOLTS_CN_LIMIT2	Volts CN Limit2	V,0-65536,0	UNSIG N INT	R/W
R@?36	AMPS_C_LIMIT1	Amps C Limit1	A,0-65536,0	UNSIG N INT	R/W
R@?37	AMPS_C_LIMIT2	Amps C Limit2	A,0-65536,0	UNSIG N INT	R/W
R@?38	VOLTS_AB_LIMIT1	Volts AB Limit1	V,0-65536,0	UNSIG N INT	R/W
R@?39	VOLTS_AB_LIMIT2	Volts AB Limit2	V,0-65536,0	UNSIG N INT	R/W
R@?40	VOLTS_BC_LIMIT1	Volts BC Limit1	V,0-65536,0	UNSIG N INT	R/W
R@?41	VOLTS_BC_LIMIT2	Volts BC Limit1	V,0-65536,0	UNSIG N INT	R/W
R@?42	VOLTS_CA_LIMIT1	Volts CA Limit1	V,0-65536,0	UNSIG N INT	R/W
R@?43	VOLTS_CA_LIMIT2	Volts CA Limit2	V,0-65536,0	UNSIG N INT	R/W
R@?44	AMPS_N_LIMIT1	Amps N Limit1	A,0-65536,0	UNSIG N INT	R/W
R@?45	AMPS_N_LIMIT2	Amps N Limit2	A,0-65536,0	UNSIG N INT	R/W
R@?46	KW_LIMIT1	Positive KW Limit1	KW, 0-65536,0	UNSIG N INT	R/W
R@?47	KW_LIMIT2	Positive KW Limit2	KW, 0-65536,0	UNSIG N INT	R/W
R@?48	KVAR_LIMIT1	Positive KVAR Limit1	KVAR, 0-65536,0	UNSIG N INT	R/W
R@?49	KVAR_LIMIT2	Positive KVAR Limit2	KVAR, 0-65536,0	UNSIG N INT	R/W
R@?50	KVA_LIMIT1	Positive KVA Limit1	KV, 0-65536,0	UNSIG N INT	R/W
R@?51	KVA_LIMIT2	Positive KVA Limit2	KV, 0-65536,0	UNSIG N INT	R/W

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
R@?52	PF_LIMIT1	PF limit1	_, -1 - +1, 0	UNSIGN INT	R/W
R@?53	PF_LIMIT2	PF limit2	_, -1 - +1, 0	UNSIGN INT	R/W
R@?54	FREQ_LIMIT1	Freq Limit1	Hz,0-65536,0	UNSIGN INT	R/W
R@?55	FREQ_LIMIT2	Freq Limit2	Hz,0-65536,0	UNSIGN INT	R/W
R@?56	NEG_KVAR_LIMIT1	Negative KVAR Limit1	KVAR, 0-65536,0	UNSIGN INT	R/W
R@?57	NEG_KVAR_LIMIT2	Negative KVAR Limit2	KVAR, 0-65536,0	UNSIGN INT	R/W
R@?58	NEG_PF_LIMIT1	Neg PF limit1	_, -1 - +1, 0	UNSIGN INT	R/W
R@?59	NEG_PF_LIMIT2	Neg PF limit2	_, -1 - +1, 0	UNSIGN INT	R/W
R@?60	CT_RATIO	CT Ratio	,0-65536,0	UNSIGN INT	R/W
R@?61	PT_RATIO	PT Ratio	,0-65536,0	UNSIGN INT	R/W
R@?62	KYZ_SCALE	KYZ Scale	,0-65536,0	UNSIGN INT	R/W
R@?63	KYZ_RELAY_MAP	KYZ Relay Map	,0-65536,0	UNSIGN INT	R/W
R@?64	RELAY_MODE	Relay Mode	,0-65536,0	UNSIGN INT	R/W
R@?65	COMM_DELAY	Communication Delay	,0-65536,0	UNSIGN INT	R/W
R@?66	DISPLAY_PHASES	Display Phases	,0-65536,0	UNSIGN INT	R/W
R@?67	VOLTS_DP	VOLTS Decimal Placement	V,0-65536,0	UNSIGN INT	R/W
R@?68	AMPS_DP	AMPS Decimal Placement	A,0-65536,0	UNSIGN INT	R/W
R@?69	POWER_DP	POWER Decimal Placement	,0-65536,0	UNSIGN INT	R/W
R@?70	NEG_KW_LIMIT1	Negative KW Limit1	KW, 0-65536,0	UNSIGN INT	R/W
R@?71	NEG_KW_LIMIT2	Negative KW Limit2	KW, 0-65536,0	UNSIGN INT	R/W
R@?72	AMPS_A_LO_CAL	Amps A LO CAL	A,0-65536,0	UNSIGN INT	R/W
R@?73	AMPS_B_LO_CAL	Amps B LO CAL	A,0-65536,0	UNSIGN INT	R/W
R@?74	AMPS_C_LO_CAL	Amps C LO CAL	A,0-65536,0	UNSIGN INT	R/W
R@?75	AMPS_A_LO_CORR	Amps A LO CORR	A,0-65536,0	UNSIGN INT	R/W
R@?76	AMPS_B_LO_CORR	Amps B LO CORR	A,0-65536,0	UNSIGN INT	R/W
R@?77	AMPS_C_LO_CORR	Amps C LO CORR	A,0-65536,0	UNSIGN INT	R/W
R@?78	RELAY1_LIMIT1	Relay1 Limit1	,0-65536,0	UNSIGN INT	R/W
R@?79	RELAY1_LIMIT2	Relay1 Limit2	,0-65536,0	UNSIGN INT	R/W

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
				N INT	
R@?80	RELAY2_LIMIT1	Relay2 Limit1	,0-65536,0	UNSIG N INT	R/W
R@?81	RELAY2_LIMIT2	Relay2 Limit2	,0-65536,0	UNSIG N INT	R/W
R@?82	RELAY1_DELAY	Delay On on Relay1	,0-65536,0	UNSIG N INT	R/W
R@?83	RELAY2_DELAY	Delay On on Relay2	,0-65536,0	UNSIG N INT	R/W
R@?84	SAB_LIMIT1_THD	THD Set Above/Below Limit1	,0-65536,0	UNSIG N INT	R/W
R@?85	SAB_LIMIT2_THD	THD Set Above/Below Limit2	,0-65536,0	UNSIG N INT	R/W
R@?86	RELAY1_LIMIT1_THD	THD Relay1 Limit1	,0-65536,0	UNSIG N INT	R/W
R@?87	RELAY1_LIMIT2_THD	THD Relay1 Limit2	A,0-65536,0	UNSIG N INT	R/W
R@?88	RELAY2_LIMIT1_THD	THD Relay2 Limit1	,0-65536,0	UNSIG N INT	R/W
R@?89	RELAY2_LIMIT2_THD	THD Relay2 Limit2	,0-65536,0	UNSIG N INT	R/W
R@?90	VOLTS_AN_THD_LIMIT1	THD Volts AN Limit1	V,0-65536,0	UNSIG N INT	R/W
R@?91	VOLTS_AN_THD_LIMIT2	THD Volts AN Limit2	V,0-65536,0	UNSIG N INT	R/W
R@?92	AMPS_A_THD_LIMIT1	THD Amps A Limit1	A,0-65536,0	UNSIG N INT	R/W
R@?93	AMPS_A_THD_LIMIT2	THD Amps A Limit2	A,0-65536,0	UNSIG N INT	R/W
R@?94	VOLTS_BN_THD_LIMIT1	THD Volts BN Limit1	V,0-65536,0	UNSIG N INT	R/W
R@?95	VOLTS_BN_THD_LIMIT2	THD Volts BN Limit2	V,0-65536,0	UNSIG N INT	R/W
R@?96	AMPS_B_THD_LIMIT1	THD Amps B Limit1	A,0-65536,0	UNSIG N INT	R/W
R@?97	AMPS_B_THD_LIMIT2	THD Amps B Limit2	A,0-65536,0	UNSIG N INT	R/W
R@?98	VOLTS_CN_THD_LIMIT1	THD Volts CN Limit1	V,0-65536,0	UNSIG N INT	R/W
R@?99	VOLTS_CN_THD_LIMIT2	THD Volts CN Limit2	V,0-65536,0	UNSIG N INT	R/W
R@?100	AMPS_C_THD_LIMIT1	THD Amps C Limit1	A,0-65536,0	UNSIG N INT	R/W
R@?101	AMPS_C_THD_LIMIT2	THD THD Amps C Limit2	A,0-65536,0	UNSIG N INT	R/W
R@?102	RELAY1_LIMIT1_IMB	Relay 1 Limit1 Imbalance	,0-65536,0	UNSIG N INT	R/W
R@?103	RELAY2_LIMIT1_IMB	Relay 2 Limit1 Imbalance	,0-65536,0	UNSIG N INT	R/W
R@?104	IMB_V_LIMIT1	Limit1 Imbalance	,0-65536,0	UNSIG N INT	R/W
R@?105	INTERVAL1	Interval1	,0-65536,0	UNSIG N INT	R/W
R@?106	RELAY1_MODE	Relay1 Mode	,0-65536,0	UNSIG N INT	R/W

Setpoint Registers					
Register Address	DDE Item Name (Mnemonic)	Contents	Units,Range,Factory Default	Data Type	R/W
R@?107	RELAY2_MODE	Relay2 Mode	,0-65536,0	UNSIGNED INT	R/W
R@?108	RELAY1_OFF_DELAY	Relay1 Delay Off	,0-65536,0	UNSIGNED INT	R/W
R@?109	RELAY2_OFF_DELAY	Relay2 Delay Off	,0-65536,0	UNSIGNED INT	R/W
R@?110	RELAY3_ON_DELAY	Delay On on Relay3	,0-65536,0	UNSIGNED INT	R/W
R@?111	RELAY3_OFF_DELAY	Delay Off on Relay3	,0-65536,0	UNSIGNED INT	R/W
R@?112	RELAY3_MODE	Relay3 Mode	,0-65536,0	UNSIGNED INT	R/W
R@?113	RELAY3_LIMIT1	Relay3 Limit1	,0-65536,0	UNSIGNED INT	R/W
R@?114	RELAY3_LIMIT2	Relay3 Limit2	,0-65536,0	UNSIGNED INT	R/W
R@?115	RELAY3_LIMIT1_THD	THD Relay3 Limit1	,0-65536,0	UNSIGNED INT	R/W
R@?116	RELAY3_LIMIT2_THD	THD Relay3 Limit2	,0-65536,0	UNSIGNED INT	R/W
R@?117	RELAY3_LIMIT1_IMB	Phase Imbalance for Limit1 Relay3	,0-65536,0	UNSIGNED INT	R/W
R@?118	RCONTROL	Relay Control	,0-65536,0	UNSIGNED INT	R/W
R\$?F	SNAPSHOT_INFO	SnapShot Info	, -2147483648-2147483648,0	FLOAT	W
R\$TF	TIMEDATE	Time Date		FLOAT	R/W
R\$RF	SNAPSHOT_LOGGING	SnapShot Logging		FLOAT	W
R\$dF	SNAPSHOT_RESET	SnapShot Reset		FLOAT	W
R\$PF	SNAPSHOT_PROFILE	SnapShot Profile		FLOAT	W
R\$DF	SNAPSHOT_DOWNLD	SnapShot DownLoad		FLOAT	W
R\$>F	SNAPSHOT_NXT_BLK	SnapShot Next Block		FLOAT	W
R\$<F	SNAPSHOT_NXT_BLK_RELAY	SnapShot Next Block Relay		FLOAT	W
RSIDF	SNAPSHOT_INFO_DATA	SnapShot Info Data		FLOAT	R
RSPDF	SNAPSHOT_PROF_DATA	SnapShot Profile Data		FLOAT	R/W
RSDDF	SNAPSHOT_DOWNLD_DATA	SnapShot DownLoad Data		FLOAT	R/W
RSCSF	SNAP_COMMAND_STATUS	SnapShot Command Status		FLOAT	R

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Entellisis LVS Modbus memory map

Addr	Register Name	Range	Units	Format	Number of 16 bit registers
Product Information (Read Only, Written by Factory)					
0000	Product Type	0 to 65535	---	F716	1
0001	CCPU Serial Number	---	---	F203	8
0009	External Communications Ethernet MAC Address	---	---	F072	3
000C	Data Acquisition Ethernet MAC Address	---	---	F072	3
000F	CCPU Hardware Version	0 to 655.35	---	F001	1
0010	CCPU Firmware Version	0 to 655.35	---	F001	1
0011	CCPU Firmware Boot Code Version	0 to 655.35	---	F001	1
0012	Build Date	---	---	F200	20
0026	Synchronizer Board Status	0 to 1	---	F102	1
0027	Synchronizer Board Frequency Setting	50 to 60	Hz	F001	1
0028	Last Energy Clear Date	0 to 4294967295	---	F050	2
002A	Last CCPU Commissioned Date	0 to 4294967295	---	F050	2
002C	Expected Node Protocol Version	0 to 255	---	F001	1
002D	Summary Number	---	---	F205	6
0033	Line Up	0 to 99	---	F001	1
0034	Flex Logic Active	0 to 1	---	F126	1
0035	Reserved				203
0100	(Next available address)				0
CCPU Settings (Read Write) (See Installation Module)					
0100	CCPU ID	0 to 1	---	F717	1
0101	CCPU Commissioned	0 to 1	---	F102	1
0102	CCPU Name	---	---	F200	20
0116	System Frequency	50 to 60	Hz	F001	1
0117	Phase Rotation	0 to 1	---	F106	1
0118	Reserved				232
0200	(Next available address)				0
Clock (Read Write)					
0200	RTC Set Time	0 to 4294967295	---	F050	2
0202	Date Time Changed	0 to 4294967295	---	F050	2
0204	Reserved (8 items)				8
020C	(Next available address)				0
Communications (Read Write)					
0210	External Ethernet IP Address	0 to 4294967295	---	F003	2

Entellisis LVS Modbus memory map

0212	External Ethernet Subnet IP Mask	0 to 4294967295	---	F003	2
0214	External Ethernet Gateway IP Address	0 to 4294967295	---	F003	2
0216	Modbus Slave Address	1 to 254	---	F001	1
0217	TCP Port Number for Modbus Protocol	1 to 65535	---	F001	1
0218	Main UDP Port Number for TFTP Protocol	1 to 65535	---	F001	1
0219	Data Transfer UDP Port Numbers for TFTP Protocol	0 to 65535	---	F001	2
021B	Reserved (200 items)				200
02E3	(Next available address)				0
Event Recorder (Read Only)					
0308	Events Since Last Clear	0 to 4294967295	---	F003	2
030A	Number of Available Events	0 to 4294967295	---	F003	2
030C	Event Recorder Last Cleared Date	0 to 4294967295	---	F050	2
030E	(Next available address)				0
Modbus File Transfer (Read/Write)					
030E	Name of file to read	---	---	F204	40
0336	(Next available address)				0
Modbus File Transfer (Read Only)					
0336	Character position of current block within file	0 to 4294967295	---	F003	2
0338	Size of currently-available data block	0 to 65535	---	F001	1
0339	Block of data from requested file (122 items)	0 to 65535	---	F001	122
03B3	(Next available address)				0
Modbus File Transfer Area 2 (Read/Write)					
03B3	Name of file to read	---	---	F204	40
03DB	(Next available address)				0
Modbus File Transfer Area 2 (Read Only)					
03DB	Character position of current block within file	0 to 4294967295	---	F003	2
03DD	Size of currently-available data block	0 to 65535	---	F001	1
03DE	Block of data from requested file (122 items)	0 to 65535	---	F001	122
0458	(Next available address)				0
Passwords (Read/Write Command)					
0458	Command Password Setting	0 to 4294967295	---	F003	2
045A	(Next available address)				0
Passwords (Read/Write Setting)					
045A	Setting Password Setting	0 to 4294967295	---	F003	2

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045C	(Next available address)				0
Passwords (Read/Write)					
045C	Command Password Entry	0 to 4294967295	---	F003	2
045E	Setting Password Entry	0 to 4294967295	---	F003	2
0460	(Next available address)				0
Passwords (Read Only)					
0460	Command Password Status	0 to 1	---	F102	1
0461	Setting Password Status	0 to 1	---	F102	1
0462	(Next available address)				0
Factory Service Password Protection (Read/Write)					
0462	Modbus Factory Password	0 to 4294967295	---	F003	2
0464	(Next available address)				0
Factory Service Password Protection (Read Only)					
0464	Factory Service Password Status	0 to 1	---	F102	1
0465	(Next available address)				0
Factory Service - Initialization					
0465	Load Default Settings	0 to 1	---	F126	1
0466	Reboot Relay	0 to 1	---	F126	1
0467	(Next available address)				0
Factory Service - Debug Data (Read Only -- Written by Factory)					
0467	Debug Data 16 (16 items)	-32767 to 32767	---	F002	16
0477	Debug Data 32 (16 items)	-2147483647 to 2147483647	---	F004	32
0497	(Next available address)				0
Settings Notification (Read/Write Setting)					
0497	Settings Notification Function	0 to 1	---	F102	1
0498	(Next available address)				0
Factory Service Software Revisions (Read Only)					
0499	Compile Date	0 to 4294967295	---	F050	2
049B	Boot Date	0 to 4294967295	---	F050	2
049D	(Next available address)				0
Factory Service CPU Diagnostics (Read Only Non-Volatile)					
049D	Operating Hours	0 to 4294967295	---	F003	2
049F	(Next available address)				0

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Factory Service CPU Diagnostics (Read Only -- Written by Factory)					
049F	Real Time Profiling	0 to 1	---	F102	1
04A0	Enable Windview	0 to 1	---	F102	1
04A1	Factory Reload Cause	---	---	F200	20
04B5	Clear Diagnostics	0 to 1	---	F126	1
04B6	Max Interrupt Jitter	0 to 65535	us	F001	1
04B7	Max Main Task Jitter	0 to 65535	us	F001	1
04B8	CCPU Diags RO reserved				14
04C6	(Next available address)				0
Factory Service CPU Diagnostics (Read/Write)					
04C6	Clear_Interrupt_Jitter	0 to 1	---	F126	1
04C7	Clear_Main_Task_Jitter	0 to 1	---	F126	1
04C8	Clear_Interrupt_Jiter_Timestamp	0 to 4294967295	---	F050	2
04CA	Clear_Main_Task_Jitter_Timestamp	0 to 4294967295	---	F050	2
04CC	CCPU Diags RW Reserved				11
04D7	(Next available address)				
Factory Service CPU Performance (Read Only)					
04D8	CPU Utilization	0 to 100	%	F001	1
04D9	(Next available address)				0
Factory Service CPU Performance (Read/Write)					
04D9	CPU Overload	0 to 6553.5	%	F001	1
04DA	(Next available address)				0
Factory Service CPU Performance (Read Only)					
04DA	Protection Pass Time	0 to 65535	us	F001	1
04DB	(Next available address)				0
Factory Service CPU Performance (Read/Write)					
04DB	Protection Pass Worst Time	0 to 65535	us	F001	1
04DC	(Next available address)				0
Factory Service - Debug Settings (Read Only -- Written by Factory)					
04DC	Debug Setting (8 items)	0 to 65535	---	F001	8
04E4	(Next available address)				0
Zone Manager					
04E4	Current Topology State	0 to 255	---	F722	1
04E5	Maintenance Mode	0 to 1	---	F102	1
04E6	Current Zone1_Topology	0 to 15	---	F001	1
04E7	Current Zone2_Topology	0 to 15	---	F001	1
04E8	Current Zone3_Topology	0 to 15	---	F001	1
04E9	Current Zone4_Topology	0 to 15	---	F001	1
04EA	Zone Manager Reserved				22
0500	(Next available address)				0

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	Event Recorder (Read/Write Command)				
0500	Event Recorder Clear Command	0 to 1	---	F126	1
0501	(Next available address)				0
	Energy Commands (Read/Write)				
0501	Clear All Energy Accumulators	0 to 1	---	F126	1
0502	(Next available address)				0
	Fault Report Commands (Read/Write)				
0503	Fault Report Trigger	0 to 1	---	F126	1
0504	(Next available address)				0
	Demand				
0504	Demand Subinterval Length	1 to 60	---	F001	1
0505	Demand Subintervals Per Interval	1 to 15	---	F001	1
0506	Demand Reset All Command	0 to 1	---	F126	1
0507	Number Of Demand Resets All	0 to 4294967295	---	F003	2
0509	Last Demand Reset All DateTime	0 to 4294967295	---	F050	2
050B	Demand Log Clear All Command	0 to 1	---	F126	1
050C	Demand Log Last Cleared All Date	0 to 4294967295	--	F050	2
050E	Demand Reserved				10
0518	(Next available address)				0
	Waveform Capture				
0518	Number WF Records Availabe	0 to 65535	---	F001	1
0519	Waveform Clear Command	---	---	F126	1
051A	Waveform Last Clear Date	0 to 4294967295	---	F050	2
051C	Waveform Trigger Command	---	---	F126	1
051D	Waveform Trigger Mode	---	---	F118	1
051E	Waveform Trigger Position	0 to 119	half cycles	F001	1
051F	Waveforms Since Last Clear	0 to 4294967295	---	F003	2
0521	WFC Buffers Free	0 to 65535	---	F001	1
0522	WFC Buffers Stored	0 to 65535	---	F001	1
0523	Waveform Reserved				8
052B	(Next available address)				0
	Preventive Maintenance (R/W)				
052B	Load Life Rating 800A	0 to 65535	---	F001	1
052C	Load Life Rating 1600A	0 to 65535	---	F001	1
052D	Load Life Rating 2000A	0 to 65535	---	F001	1

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052E	Load Life Rating 3200A	0 to 65535	---	F001	1
052F	Load Life Rating 4000A	0 to 65535	---	F001	1
0530	Load Life Rating 5000A	0 to 65535	---	F001	1
0531	Mechanical_Life_Rating_800A	0 to 65535	---	F001	1
0532	Mechanical_Life_Rating_1600A	0 to 65535	---	F001	1
0533	Mechanical_Life_Rating_2000A	0 to 65535	---	F001	1
0534	Mechanical_Life_Rating_3200A	0 to 65535	---	F001	1
0535	Mechanical_Life_Rating_4000A	0 to 65535	---	F001	1
0536	Mechanical_Life_Rating_5000A	0 to 65535	---	F001	1
0537	Load Life Max Current 800A	1 to 50	----	F001	1
0538	Load Life Max Current 1600A	1 to 50	----	F001	1
0539	Load Life Max Current 2000A	1 to 50	----	F001	1
053A	Load Life Max Current 3200A	1 to 50	----	F001	1
053B	Load Life Max Current 4000A	1 to 50	----	F001	1
053C	Load Life Max Current 5000A	1 to 50	----	F001	1
053D	(Next available address)				0
Hardware Information (Read Only)				B30 B90 C30 C60 D30 D60 F35 F60 G60 L60 L90 M60 R30 S35 T35 T60	
053D	Flash Lifetime	1 to 10	---	F001	1
53E	(Next Available Address)				
Node Bit Vectors (Read Only)					
0630	Nodes Communicating x State	0 to 4294967295	---	F722	2
0632	Nodes Commissioned x State	0 to 4294967295	---	F722	2
0634	Duplicate Nodes x State	0 to 4294967295	---	F722	2
0636	Node Internal Diagnostics x State	0 to 4294967295	---	F722	2
0638	Node System Diagnostics x State	0 to 4294967295	---	F722	2
063A	Node Hardware Diagnostics x State	0 to 4294967295	---	F722	2
063C	Node Reflected CCPU Diagnostics x State	0 to 4294967295	---	F722	2
063E	Breaker Contact Position x State	0 to 4294967295	---	F722	2
0640	Breaker Primary Connection x State	0 to 4294967295	---	F722	2
0642	Breaker Lockout x State	0 to 4294967295	---	F722	2
0644	Summations and Min/Max calculations suspended x State	0 to 4294967295	---	F722	2
0646	Breaker Tripped x State	0 to 4294967295	---	F722	2
Node Bit Vectors for Alarms					

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0648	Undervoltage Trip Alarm State	0 to 4294967295	---	F722	2
064A	Undervoltage Trip Alarm Ack	0 to 4294967295	---	F722	2
064C	Undervoltage Alarm State	0 to 4294967295	---	F722	2
064E	Undervoltage Alarm Ack	0 to 4294967295	---	F722	2
0650	Overvoltage Trip Alarm State	0 to 4294967295	---	F722	2
0652	Overvoltage Trip Alarm Ack	0 to 4294967295	---	F722	2
0654	Overvoltage Alarm State	0 to 4294967295	---	F722	2
0656	Overvoltage Alarm Ack	0 to 4294967295	---	F722	2
0658	Phase Loss Trip Alarm State	0 to 4294967295	---	F722	2
065A	Phase Loss Trip Alarm Ack	0 to 4294967295	---	F722	2
065C	Phase Loss Alarm State	0 to 4294967295	---	F722	2
065E	Phase Loss Alarm Ack	0 to 4294967295	---	F722	2
0660	Reverse Power Trip Alarm State	0 to 4294967295	---	F722	2
0662	Reverse Power Trip Alarm Ack	0 to 4294967295	---	F722	2
0664	Reverse Power Alarm State	0 to 4294967295	---	F722	2
0666	Reverse Power Alarm Ack	0 to 4294967295	---	F722	2
0668	High Current Alarm State	0 to 4294967295	---	F722	2
066A	High Current Alarm Ack	0 to 4294967295	---	F722	2
066C	Underfrequency Trip Alarm State	0 to 4294967295	---	F722	2
066E	Underfrequency Trip Alarm Ack	0 to 4294967295	---	F722	2
0670	Underfrequency Alarm State	0 to 4294967295	---	F722	2
0672	Underfrequency Alarm Ack	0 to 4294967295	---	F722	2
0674	Overfrequency Trip Alarm State	0 to 4294967295	---	F722	2
0676	Overfrequency Trip Alarm Ack	0 to 4294967295	---	F722	2
0678	Overfrequency Alarm State	0 to 4294967295	---	F722	2
067A	Overfrequency Alarm Ack	0 to 4294967295	---	F722	2
067C	High Resistance Ground Fault Alarm State	0 to 4294967295	---	F722	2
067E	High Resistance Ground Fault Alarm Ack	0 to 4294967295	---	F722	2

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0680	Breaker Open Failed Alarm State	0 to 4294967295	---	F722	2
0682	Breaker Open Failed Alarm Ack	0 to 4294967295	---	F722	2
0684	Long Time Overcurrent Trip Alarm State	0 to 4294967295	---	F722	2
0686	Long Time Overcurrent Trip Alarm Ack	0 to 4294967295	---	F722	2
0688	Short Time Overcurrent Trip Alarm State	0 to 4294967295	---	F722	2
068A	Short Time Overcurrent Trip Alarm Ack	0 to 4294967295	---	F722	2
068C	Ground Fault Trip Alarm State	0 to 4294967295	---	F722	2
068E	Ground Fault Trip Alarm Ack	0 to 4294967295	---	F722	2
0690	Ground Fault Alarm State	0 to 4294967295	---	F722	2
0692	Ground Fault Alarm Ack	0 to 4294967295	---	F722	2
0694	Analog IOC Trip Alarm State	0 to 4294967295	---	F722	2
0696	Analog IOC Trip Alarm Ack	0 to 4294967295	---	F722	2
0698	IOC Trip Alarm State	0 to 4294967295	---	F722	2
069A	IOC Trip Alarm Ack	0 to 4294967295	---	F722	2
069C	Node Control Power Lost State	0 to 4294967295	---	F722	2
069E	Node Control Power Lost Ack	0 to 4294967295	---	F722	2
06A0	Node Communication Lost State	0 to 4294967295	---	F722	2
06A2	Node Communication Lost Ack	0 to 4294967295	---	F722	2
06A4	Breaker Load Life 50 State	0 to 4294967295	---	F722	2
06A6	Breaker Load Life 50 Ack	0 to 4294967295	---	F722	2
06A8	Breaker Load Life 75 State	0 to 4294967295	---	F722	2
06AA	Breaker Load Life 75 Ack	0 to 4294967295	---	F722	2
06AC	Breaker Load Life 90 State	0 to 4294967295	---	F722	2
06AE	Breaker Load Life 90 Ack	0 to 4294967295	---	F722	2
06B0	Breaker Accum Service Alarm State	0 to 4294967295	---	F722	2
06B2	Breaker Accum Service Alarm Ack	0 to 4294967295	---	F722	2
06B4	Breaker Mechanical Life 12.5 State	0 to 4294967295	---	F722	2
06B6	Breaker Mechanical Life 12.5 Ack	0 to 4294967295	---	F722	2

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06B8	Breaker Mechanical Life 25 State	0 to 4294967295	---	F722	2
06BA	Breaker Mechanical Life 25 Ack	0 to 4294967295	---	F722	2
06BC	Breaker Mechanical Life 37 5 State	0 to 4294967295	---	F722	2
06BE	Breaker Mechanical Life 37 5 Ack	0 to 4294967295	---	F722	2
06C0	Breaker Mechanical Life 50 State	0 to 4294967295	---	F722	2
06C2	Breaker Mechanical Life 50 Ack	0 to 4294967295	---	F722	2
06C4	Breaker Mechanical Life 62 5 State	0 to 4294967295	---	F722	2
06C6	Breaker Mechanical Life 62 5 Ack	0 to 4294967295	---	F722	2
06C8	Breaker Mechanical Life 75 State	0 to 4294967295	---	F722	2
06CA	Breaker Mechanical Life 75 Ack	0 to 4294967295	---	F722	2
06CC	Breaker Mechanical Life 87 5 State	0 to 4294967295	---	F722	2
06CE	Breaker Mechanical Life 87 5 Ack	0 to 4294967295	---	F722	2
06D0	Breaker Mechanical Life 100 State	0 to 4294967295	---	F722	2
06D2	Breaker Mechanical Life 100 Ack	0 to 4294967295	---	F722	2
06D4	Bus Differential Trip Alarm State	0 to 4294967295	---	F722	2
06D6	Bus Differential Trip Alarm Ack	0 to 4294967295	---	F722	2
06D8	Bus Differential Alarm State	0 to 4294967295	---	F722	2
06DA	Bus Differential Alarm Ack	0 to 4294967295	---	F722	2
06DC	Multi Source Ground Fault Trip Alarm State	0 to 4294967295	---	F722	2
06DE	Multi Source Ground Fault Trip Alarm Ack	0 to 4294967295	---	F722	2
06E0	Multi Source Ground Fault Alarm State	0 to 4294967295	---	F722	2
06E2	Multi Source Ground Fault Alarm Ack	0 to 4294967295	---	F722	2
06E4	Hardware Synch Card Lost State	0 to 4294967295	---	F722	2
06E6	Hardware Synch Card Lost Ack	0 to 4294967295	---	F722	2
06E8	Compartment ID Button Replace Alarm State	0 to 4294967295	---	F722	2
06EA	Compartment ID Button Missing Alarm State	0 to 4294967295	---	F722	2
06EC	Compartment ID Button Replace Alarm Ack	0 to 4294967295	---	F722	2
06EE	Compartment ID Button Missing Alarm Ack	0 to 4294967295	---	F722	2

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06F0	Control Alarm State	0 to 4294967295	---	F722	2
06F2	Control Alarm Ack	0 to 4294967295	---	F722	2
06F4	Redundant CPU Node Comm Loss State	0 to 4294967295	---	F722	2
06F6	Redundant CPU Node Comm Loss Ack	0 to 4294967295	---	F722	2
06F8	Redundant CPU Hardware Synch Loss State	0 to 4294967295	---	F722	2
06FA	Redundant CPU Hardware Synch Loss Ack	0 to 4294967295	---	F722	2
06FC	Discrete IO Misconfigured State	0 to 4294967295	---	F722	2
06FE	Discrete IO Misconfigured Ack	0 to 4294967295	---	F722	2
0700	(Next available address)				0
Source Voltage (Read Only) (30 Modules)					
1000	SRCx Phase AN Voltage RMS	0 to 999999.999	V	F060	2
1002	SRCx Phase BN Voltage RMS	0 to 999999.999	V	F060	2
1004	SRCx Phase CN Voltage RMS	0 to 999999.999	V	F060	2
1006	SRCx Phase AB Voltage RMS	0 to 999999.999	V	F060	2
1008	SRCx Phase BC Voltage RMS	0 to 999999.999	V	F060	2
100A	SRCx Phase CA Voltage RMS	0 to 999999.999	V	F060	2
100C	SRCx Voltage Reserved				50
103E	...Repeated for Node 2				62
107C	...Repeated for Node 3				62
10BA	...Repeated for Node 4				62
10F8	...Repeated for Node 5				62
1136	...Repeated for Node 6				62
1174	...Repeated for Node 7				62
11B2	...Repeated for Node 8				62
11F0	...Repeated for Node 9				62
122E	...Repeated for Node 10				62
126C	...Repeated for Node 11				62
12AA	...Repeated for Node 12				62
12E8	...Repeated for Node 13				62
1326	...Repeated for Node 14				62
1364	...Repeated for Node 15				62
13A2	...Repeated for Node 16				62
13E0	...Repeated for Node 17				62
141E	...Repeated for Node 18				62
145C	...Repeated for Node 19				62
149A	...Repeated for Node 20				62
14D8	...Repeated for Node 21				62
1516	...Repeated for Node 22				62

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1554	...Repeated for Node 23				62
1592	...Repeated for Node 24				62
15D0	...Repeated for Node 25				62
160E	...Repeated for Node 26				62
164C	...Repeated for Node 27				62
168A	...Repeated for Node 28				62
16C8	...Repeated for Node 29				62
1706	...Repeated for Node 30				62
1744	(Next available address)				0
FBW Current (Read Only) (30 Modules)					
1800	SRCx Phase A Current RMS	0 to 999999.999	A	F060	2
1802	SRCx Phase B Current RMS	0 to 999999.999	A	F060	2
1804	SRCx Phase C Current RMS	0 to 999999.999	A	F060	2
1806	SRCx Phase N Current RMS	0 to 999999.999	A	F060	2
1808	SRCx Ground Current RMS	0 to 999999.999	A	F060	2
180A	SRCx Current Reserved				28
1826	...Repeated for Node 2				38
184C	...Repeated for Node 3				38
1872	...Repeated for Node 4				38
1898	...Repeated for Node 5				38
18BE	...Repeated for Node 6				38
18E4	...Repeated for Node 7				38
190A	...Repeated for Node 8				38
1930	...Repeated for Node 9				38
1956	...Repeated for Node 10				38
197C	...Repeated for Node 11				38
19A2	...Repeated for Node 12				38
19C8	...Repeated for Node 13				38
19EE	...Repeated for Node 14				38
1A14	...Repeated for Node 15				38
1A3A	...Repeated for Node 16				38
1A60	...Repeated for Node 17				38
1A86	...Repeated for Node 18				38
1AAC	...Repeated for Node 19				38
1AD2	...Repeated for Node 20				38
1AF8	...Repeated for Node 21				38
1B1E	...Repeated for Node 22				38
1B44	...Repeated for Node 23				38
1B6A	...Repeated for Node 24				38
1B90	...Repeated for Node 25				38
1BB6	...Repeated for Node 26				38
1BDC	...Repeated for Node 27				38
1C02	...Repeated for Node 28				38
1C28	...Repeated for Node 29				38

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1C4E	...Repeated for Node 30				38
1C74	(Next available address)				0
Source Power (Read Only) (30 Modules)					
1D00	SRCx Three Phase Real Power	- 1000000000000 to 1000000000000	W	F060	2
1D02	SRCx Phase A Real Power	- 1000000000000 to 1000000000000	W	F060	2
1D04	SRCx Phase B Real Power	- 1000000000000 to 1000000000000	W	F060	2
1D06	SRCx Phase C Real Power	- 1000000000000 to 1000000000000	W	F060	2
1D08	SRCx Three Phase Reactive Power	- 1000000000000 to 1000000000000	Var	F060	2
1D0A	SRCx Phase A Reactive Power	- 1000000000000 to 1000000000000	Var	F060	2
1D0C	SRCx Phase B Reactive Power	- 1000000000000 to 1000000000000	Var	F060	2
1D0E	SRCx Phase C Reactive Power	- 1000000000000 to 1000000000000	Var	F060	2
1D10	SRCx Three Phase Apparent Power	0 to 1000000000000	VA	F060	2
1D12	SRCx Phase A Apparent Power	0 to 1000000000000	VA	F060	2
1D14	SRCx Phase B Apparent Power	0 to 1000000000000	VA	F060	2

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1D16	SRCx Phase C Apparent Power	0 to 10000000000000	VA	F060	2
1D18	SRCx Three Phase Power Factor	-0.999 to 1	---	F013	1
1D19	SRCx Phase A Power Factor	-0.999 to 1	---	F013	1
1D1A	SRCx Phase B Power Factor	-0.999 to 1	---	F013	1
1D1B	SRCx Phase C Power Factor	-0.999 to 1	---	F013	1
1D1C	SRCx Power Reserved				4
1D20	...Repeated for Node 2				32
1D40	...Repeated for Node 3				32
1D60	...Repeated for Node 4				32
1D80	...Repeated for Node 5				32
1DA0	...Repeated for Node 6				32
1DC0	...Repeated for Node 7				32
1DE0	...Repeated for Node 8				32
1E00	...Repeated for Node 9				32
1E20	...Repeated for Node 10				32
1E40	...Repeated for Node 11				32
1E60	...Repeated for Node 12				32
1E80	...Repeated for Node 13				32
1EA0	...Repeated for Node 14				32
1EC0	...Repeated for Node 15				32
1EE0	...Repeated for Node 16				32
1F00	...Repeated for Node 17				32
1F20	...Repeated for Node 18				32
1F40	...Repeated for Node 19				32
1F60	...Repeated for Node 20				32
1F80	...Repeated for Node 21				32
1FA0	...Repeated for Node 22				32
1FC0	...Repeated for Node 23				32
1FE0	...Repeated for Node 24				32
2000	...Repeated for Node 25				32
2020	...Repeated for Node 26				32
2040	...Repeated for Node 27				32
2060	...Repeated for Node 28				32
2080	...Repeated for Node 29				32
20A0	...Repeated for Node 30				32
20C0	(Next available address)				0
Source Energy (Read Only) (30 Modules)					
2100	SRCx Positive Watthour	0 to 10000000000000	Wh	F060	2
2102	SRCx Phase A Positive Watthour	0 to 10000000000000	Wh	F060	2
2104	SRCx Phase B Positive Watthour	0 to 10000000000000	Wh	F060	2

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2106	SRCx Phase C Positive Watthour	0 to 1000000000000	Wh	F060	2
2108	SRCx Negative Watthour	0 to 1000000000000	Wh	F060	2
210A	SRCx Phase A Negative Watthour	0 to 1000000000000	Wh	F060	2
210C	SRCx Phase B Negative Watthour	0 to 1000000000000	Wh	F060	2
210E	SRCx Phase C Negative Watthour	0 to 1000000000000	Wh	F060	2
2110	SRCx Positive Varhour	0 to 1000000000000	Varh	F060	2
2112	SRCx Phase A Positive Varhour	0 to 1000000000000	Varh	F060	2
2114	SRCx Phase B Positive Varhour	0 to 1000000000000	Varh	F060	2
2116	SRCx Phase C Positive Varhour	0 to 1000000000000	Varh	F060	2
2118	SRCx Negative Varhour	0 to 1000000000000	Varh	F060	2
211A	SRCx Phase A Negative Varhour	0 to 1000000000000	Varh	F060	2
211C	SRCx Phase B Negative Varhour	0 to 1000000000000	Varh	F060	2
211E	SRCx Phase C Negative Varhour	0 to 1000000000000	Varh	F060	2
2120	SRCx Vahour	0 to 1000000000000	Vah	F060	2
2122	SRCx Phase A Vahour	0 to 1000000000000	Vah	F060	2
2124	SRCx Phase B Vahour	0 to 1000000000000	Vah	F060	2
2126	SRCx Phase C Vahour	0 to 1000000000000	Vah	F060	2
2128	SRCx Energy Reserved				8
2130	...Repeated for Node 2				48
2160	...Repeated for Node 3				48
2190	...Repeated for Node 4				48

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21C0	...Repeated for Node 5				48
21F0	...Repeated for Node 6				48
2220	...Repeated for Node 7				48
2250	...Repeated for Node 8				48
2280	...Repeated for Node 9				48
22B0	...Repeated for Node 10				48
22E0	...Repeated for Node 11				48
2310	...Repeated for Node 12				48
2340	...Repeated for Node 13				48
2370	...Repeated for Node 14				48
23A0	...Repeated for Node 15				48
23D0	...Repeated for Node 16				48
2400	...Repeated for Node 17				48
2430	...Repeated for Node 18				48
2460	...Repeated for Node 19				48
2490	...Repeated for Node 20				48
24C0	...Repeated for Node 21				48
24F0	...Repeated for Node 22				48
2520	...Repeated for Node 23				48
2550	...Repeated for Node 24				48
2580	...Repeated for Node 25				48
25B0	...Repeated for Node 26				48
25E0	...Repeated for Node 27				48
2610	...Repeated for Node 28				48
2640	...Repeated for Node 29				48
2670	...Repeated for Node 30				48
26A0	(Next available address)				0
	Source Harmonic Analysis				
	30 Modules (Read Only)				
26A0	SRC X Phase A Voltage THD	0 to 1.0	%	F001	1
26A1	SRC X Phase B Voltage THD	0 to 1.0	%	F001	1
26A2	SRC X Phase C Voltage THD	0 to 1.0	%	F001	1
26A3	SRC X Phase A Current THD	0 to 1.0	%	F001	1
26A4	SRC X Phase B Current THD	0 to 1.0	%	F001	1
26A5	SRC X Phase C Current THD	0 to 1.0	%	F001	1
26A6	SRC X Phase N Current THD	0 to 1.0	%	F001	1
26A7	SRC X Phase A K Factor	0 to 6553.5	---	F001	1
26A8	SRC X Phase B K Factor	0 to 6553.5	---	F001	1
26A9	SRC X Phase C K Factor	0 to 6553.5	---	F001	1
26AA	SRC X Phase N K Factor	0 to 6553.5	---	F001	1
26AB	SRC X Harmonic Analysis Reserved				5
26B0	...Repeated for Node 2				16
26C0	...Repeated for Node 3				16
26D0	...Repeated for Node 4				16
26E0	...Repeated for Node 5				16
26F0	...Repeated for Node 6				16
2700	...Repeated for Node 7				16

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2710	...Repeated for Node 8				16
2720	...Repeated for Node 9				16
2730	...Repeated for Node 10				16
2740	...Repeated for Node 11				16
2750	...Repeated for Node 12				16
2760	...Repeated for Node 13				16
2770	...Repeated for Node 14				16
2780	...Repeated for Node 15				16
2790	...Repeated for Node 16				16
27A0	...Repeated for Node 17				16
27B0	...Repeated for Node 18				16
27C0	...Repeated for Node 19				16
27D0	...Repeated for Node 20				16
27E0	...Repeated for Node 21				16
27F0	...Repeated for Node 22				16
2800	...Repeated for Node 23				16
2810	...Repeated for Node 24				16
2820	...Repeated for Node 25				16
2830	...Repeated for Node 26				16
2840	...Repeated for Node 27				16
2850	...Repeated for Node 28				16
2860	...Repeated for Node 29				16
2870	...Repeated for Node 30				16
2880	(Next available address)				0
Source Demand Peaks (Read Only) (30 Modules)					
2880	SRC X Maximum kW	- 1000000000000 to 1000000000000	W	F060	2
2882	SRC X Maximum kW DateTime	0 to 4294967295	---	F050	2
2884	SRC X Maximum kvar	- 1000000000000 to 1000000000000	var	F060	2
2886	SRC X Maximum kvar DateTime	0 to 4294967295	---	F050	2
2888	SRC X Maximum kVA	- 1000000000000 to 1000000000000	VA	F060	2
288A	SRC X Maximum kVA DateTime	0 to 4294967295	---	F050	2
288C	SRC X Source Demand Peaks Reserved				5
2891	...Repeated for Node 2				17
28A2	...Repeated for Node 3				17
28B3	...Repeated for Node 4				17
28C4	...Repeated for Node 5				17
28D5	...Repeated for Node 6				17
28E6	...Repeated for Node 7				17

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28F7	...Repeated for Node 8				17
2908	...Repeated for Node 9				17
2919	...Repeated for Node 10				17
292A	...Repeated for Node 11				17
293B	...Repeated for Node 12				17
294C	...Repeated for Node 13				17
295D	...Repeated for Node 14				17
296E	...Repeated for Node 15				17
297F	...Repeated for Node 16				17
2990	...Repeated for Node 17				17
29A1	...Repeated for Node 18				17
29B2	...Repeated for Node 19				17
29C3	...Repeated for Node 20				17
29D4	...Repeated for Node 21				17
29E5	...Repeated for Node 22				17
29F6	...Repeated for Node 23				17
2A07	...Repeated for Node 24				17
2A18	...Repeated for Node 25				17
2A29	...Repeated for Node 26				17
2A3A	...Repeated for Node 27				17
2A4B	...Repeated for Node 28				17
2A5C	...Repeated for Node 29				17
2A6D	...Repeated for Node 30				17
2A7E	(Next available address)				0
SRCx Node Metering Min Max Values (Read Only)					
2A80	SRCx Three Phase Power Factor Minimum	-0.999 to 1	---	F013	1
2A81	SRCx Three Phase Power Factor Minimum Date	0 to 4294967295	---	F050	2
2A83	SRCx Phase A Power Factor Minimum	-0.999 to 1	---	F013	1
2A84	SRCx Phase A Power Factor Minimum Date	0 to 4294967295	---	F050	2
2A86	SRCx Phase B Power Factor Minimum	-0.999 to 1	---	F013	1
2A87	SRCx Phase B Power Factor Minimum Date	0 to 4294967295	---	F050	2
2A89	SRCx Phase C Power Factor Minimum	-0.999 to 1	---	F013	1
2A8A	SRCx Phase C Power Factor Minimum Date	0 to 4294967295	---	F050	2
2A8C	SRCx Three Phase Power Factor Maximum	-0.999 to 1	---	F013	1
2A8D	SRCx Three Phase Power Factor Maximum Date	0 to 4294967295	---	F050	2
2A8F	SRCx Phase A Power Factor Maximum	-0.999 to 1	---	F013	1
2A90	SRCx Phase A Power Factor Maximum Date	0 to 4294967295	---	F050	2
2A92	SRCx Phase B Power Factor Maximum	-0.999 to 1	---	F013	1
2A93	SRCx Phase B Power Factor Maximum Date	0 to 4294967295	---	F050	2
2A95	SRCx Phase C Power Factor Maximum	-0.999 to 1	---	F013	1
2A96	SRCx Phase C Power Factor Maximum Date	0 to 4294967295	---	F050	2

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2A98	SRCx Last Clear Energy Date	0 to 4294967295	---	F050	2
2A9A	SRCx Last Commissioned Date	0 to 4294967295	---	F050	2
2A9C	SRCx Min Max Reserved				50
2ACE	...Repeated for Node 2				78
2B1C	...Repeated for Node 3				78
2B6A	...Repeated for Node 4				78
2BB8	...Repeated for Node 5				78
2C06	...Repeated for Node 6				78
2C54	...Repeated for Node 7				78
2CA2	...Repeated for Node 8				78
2CF0	...Repeated for Node 9				78
2D3E	...Repeated for Node 10				78
2D8C	...Repeated for Node 11				78
2DDA	...Repeated for Node 12				78
2E28	...Repeated for Node 13				78
2E76	...Repeated for Node 14				78
2EC4	...Repeated for Node 15				78
2F12	...Repeated for Node 16				78
2F60	...Repeated for Node 17				78
2FAE	...Repeated for Node 18				78
2FFC	...Repeated for Node 19				78
304A	...Repeated for Node 20				78
3098	...Repeated for Node 21				78
30E6	...Repeated for Node 22				78
3134	...Repeated for Node 23				78
3182	...Repeated for Node 24				78
31D0	...Repeated for Node 25				78
321E	...Repeated for Node 26				78
326C	...Repeated for Node 27				78
32BA	...Repeated for Node 28				78
3308	...Repeated for Node 29				78
3356	(Next available address)				0
Source Demand (30 Modules)					
35AC	SRC X Previous Interval kW	- 1000000000000 to 1000000000000	W	F060	2
35AE	SRC X Previous Interval kvar	- 1000000000000 to 1000000000000	var	F060	2
35B0	SRC X Previous Interval kVA	- 1000000000000 to 1000000000000	VA	F060	2
35B2	SRC X Last Reset DateTime	0 to 4294967295	---	F050	2
35B4	SRC X Number Of Demand Resets	0 to 4294967295	---	F003	2
35B6	SRC X Demand Reset	0 to 1	---	F126	1

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35B7	SRC X Demand Log Clear Command	0 to 1	---	F126	1
35B8	SRC X Demand Log Last Cleard Date	0 to 4294967295	---	F050	2
35BA	SRC X Demand Log Records Since Last Clear	0 to 4294967295	---	F003	2
35BC	SRC X Demand Log Interval Records Available	0 to 4294967295	---	F003	2
35BE	SRC X Source Demand Reserved				10
35C8	...Repeated for Node 2				28
35E4	...Repeated for Node 3				28
3600	...Repeated for Node 4				28
361C	...Repeated for Node 5				28
3638	...Repeated for Node 6				28
3654	...Repeated for Node 7				28
3670	...Repeated for Node 8				28
368C	...Repeated for Node 9				28
36A8	...Repeated for Node 10				28
36C4	...Repeated for Node 11				28
36E0	...Repeated for Node 12				28
36FC	...Repeated for Node 13				28
3718	...Repeated for Node 14				28
3734	...Repeated for Node 15				28
3750	...Repeated for Node 16				28
376C	...Repeated for Node 17				28
3788	...Repeated for Node 18				28
37A4	...Repeated for Node 19				28
37C0	...Repeated for Node 20				28
37DC	...Repeated for Node 21				28
37F8	...Repeated for Node 22				28
3814	...Repeated for Node 23				28
3830	...Repeated for Node 24				28
384C	...Repeated for Node 25				28
3868	...Repeated for Node 26				28
3884	...Repeated for Node 27				28
38A0	...Repeated for Node 28				28
38BC	...Repeated for Node 29				28
38D8	...Repeated for Node 30				28
38F4	(Next available address)				0
	SRCx As Reported At Node Status (Read Only)				
5000	SRCx Node ID	0 to 29	---	F001	1
5001	SRCx Node MAC Address	---	---	F072	3
5004	SRCx Frame Rating	0 to 65535	---	F001	1
5005	SRCx CT Rating	0 to 65535	---	F001	1
5006	SRCx Breaker Type	0 to 1	---	F715	1
5007	SRCx NodeProt Protection Function Configuration	0 to 255	---	F705	1
5008	SRCx Node Firmware Version	0 to 655.35	---	F001	1
5009	SRCx Hardware Version	0 to 255	---	F001	1
500A	SRCx Message Protocol Version	0 to 65535	---	F001	1

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500B	SRCx Product Type	0 to 65535	---	F716	1
500C	SRCx NodeProt Rating Switch	0 to 65535	---	F001	1
500D	SRCx NodeProt Long Time Setting Multiplier	0 to 655.35	---	F001	1
500E	SRCx NodeProt IOC Threshold Setting	0 to 655.35	---	F001	1
500F	SRCx NodeProt Ground Fault Setting	0 to 1	---	F102	1
5010	SRCx NodeProt Short Time Setting	0 to 1	---	F102	1
5011	SRCx Node Internal Diagnostics	0 to 65535	---	F701	1
5012	SRCx Node System Diagnostics 1	0 to 65535	---	F702	1
5013	SRCx Node System Diagnostics 2	0 to 65535	---	F703	1
5014	SRCx Node Hardware Diagnostics	0 to 65535	---	F704	1
5015	SRCx Node Physical Status	0 to 65535	---	F708	1
5016	SRCx Node Logic and Trip Status	0 to 65535	---	F709	1
5017	SRCx Node Last Trip Sequence Number	0 to 4294967295	---	F003	2
5019	SRCx Reflected CCPU Diagnostics	0 to 65535	---	F706	1
501A	SRCx Reflected CCPU 0 Command	0 to 65535	---	F707	1
501B	SRCx Reflected CCPU 1 Command	0 to 65535	---	F707	1
501C	SRCx Fan Status	0 to 1	---	F108	1
501D	SRCx CT Rating Node Report	0 to 65535	---	F001	1
501E	SRC X Node Serial Number	---	---	F205	6
5024	Reserved(43 Items per node)				43
504F	...Repeated for Node 2				79
509E	...Repeated for Node 3				79
50ED	...Repeated for Node 4				79
513C	...Repeated for Node 5				79
518B	...Repeated for Node 6				79
51DA	...Repeated for Node 7				79
5229	...Repeated for Node 8				79
5278	...Repeated for Node 9				79
52C7	...Repeated for Node 10				79
5316	...Repeated for Node 11				79
5365	...Repeated for Node 12				79
53B4	...Repeated for Node 13				79
5403	...Repeated for Node 14				79
5452	...Repeated for Node 15				79
54A1	...Repeated for Node 16				79
54F0	...Repeated for Node 17				79
553F	...Repeated for Node 18				79
558E	...Repeated for Node 19				79
55DD	...Repeated for Node 20				79
562C	...Repeated for Node 21				79
567B	...Repeated for Node 22				79
56CA	...Repeated for Node 23				79
5719	...Repeated for Node 24				79
5768	...Repeated for Node 25				79
57B7	...Repeated for Node 26				79
5806	...Repeated for Node 27				79
5855	...Repeated for Node 28				79
58A4	...Repeated for Node 29				79

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58F3	...Repeated for Node 30				79
5942	(Next available address)				0
					225
SRCx Node Counters (Read/Write) - Write a 0 to these to reset them					
5942	SRCx Node Reset Counter	0 to 65535	---	F001	1
5943	SRCx Invalid Data Detected Counter	0 to 65535	---	F001	1
5944	SRCx Jamb Sync Occurred Over Threshold Counter	0 to 65535	---	F001	1
5945	SRCx Invalid Command Received From CCPU 0 Counter	0 to 65535	---	F001	1
5946	SRCx Invalid Command Received From CCPU 1 Counter	0 to 65535	---	F001	1
5947	SRCx Unknown Message Received on Port 0 Counter	0 to 65535	---	F001	1
5948	SRCx Unknown Message Received on Port 1 Counter	0 to 65535	---	F001	1
5949	SRCx Data Out of Sequence Detected	0 to 65535	---	F001	1
594A	SRCx Missing Packet Counter	0 to 65535	---	F001	1
594B	SRCx Diagnostic Counter 1	0 to 65535	---	F001	1
594C	SRCx Diagnostic Counter 2	0 to 65535	---	F001	1
594D	SRCx Diagnostic Counter 3	0 to 65535	---	F001	1
594E	SRCx Diagnostic Counter 4	0 to 65535	---	F001	1
594F	SRCx Diagnostic Counter 5	0 to 65535	---	F001	1
5950	Reserved (14 Items per node)	0 to 65535	---	F001	14
595E	...Repeated for Node 2				28
597A	...Repeated for Node 3				28
5996	...Repeated for Node 4				28
59B2	...Repeated for Node 5				28
59CE	...Repeated for Node 6				28
59EA	...Repeated for Node 7				28
5A06	...Repeated for Node 8				28
5A22	...Repeated for Node 9				28
5A3E	...Repeated for Node 10				28
5A5A	...Repeated for Node 11				28
5A76	...Repeated for Node 12				28
5A92	...Repeated for Node 13				28
5AAE	...Repeated for Node 14				28
5ACA	...Repeated for Node 15				28
5AE6	...Repeated for Node 16				28
5B02	...Repeated for Node 17				28
5B1E	...Repeated for Node 18				28
5B3A	...Repeated for Node 19				28
5B56	...Repeated for Node 20				28
5B72	...Repeated for Node 21				28
5B8E	...Repeated for Node 22				28
5BAA	...Repeated for Node 23				28
5BC6	...Repeated for Node 24				28
5BE2	...Repeated for Node 25				28
5BFE	...Repeated for Node 26				28
5C1A	...Repeated for Node 27				28
5C36	...Repeated for Node 28				28
5C52	...Repeated for Node 29				28
5C6E	...Repeated for Node 30				28

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5C8A	(Next available address)				0
SRCx CCPU Settings (Read/Write)					
5C8A	SRC X Node Commissioned	0 to 1	---	F102	1
5C8B	SRC X PT Source Node Identifier	0 to 29	---	F001	1
5C8C	SRC X Breaker Connection (pwr flow)	0 to 1	---	F712	1
5C8D	SRC X IOC Enabled	0 to 1	---	F718	1
5C8E	SRC X IOC Pickup Setting Multiplier	1.5 - 15	---	F001	1
5C8F	SRC X Ground Fault Protection Switch	0 to 1	---	F102	1
5C90	SRC X Short Time Protection Switch	0 to 1	---	F102	1
5C91	SRC X Short Time Pickup Setting	1.5 to 9.0	---	F001	1
5C92	SRC X Short Time I2T Curve	0 to 1	---	F102	1
5C93	SRC X Short Time Delay Band Setting	1 to 6	---	F713	1
5C94	SRC X Long Time Delay Band Setting	1 to 4	---	F711	1
5C95	SRC X Ground Fault Protection or Alarm Select	0 to 1	---	F714	1
5C96	SRC X Ground Fault Protection I2T Curve	0 to 1	---	F102	1
5C97	SRC X Ground Fault Protection Pickup Setting	.2 to .6	---	F001	1
5C98	SRC X Ground Fault Protection Delay Band Setting	0 to 5	---	F713	1
5C99	SRC X PT Rating	0 to 6	---	F719	1
5C9A	SRC X UV Trip Enable	0 to 1	---	F102	1
5C9B	SRC X UV Trip Curve Type	0 to 1	---	F726	1
5C9C	SRC X UV Trip Pickup Setting	50 to 95	%	F001	1
5C9D	SRC X UV Trip Time Delay	0.5 to 600	S	F001	1
5C9E	SRC X UV Trip Phase Requirement	1 to 3	---	F001	1
5C9F	SRC X UV Trip Blocking Voltage Enable	0 to 1	---	F102	1
5CA0	SRC X UV Trip Blocking Voltage Setting	5 to 75	%	F001	1
5CA1	SRC X UV Trip or Open setting	0 to 1	---	F727	1
5CA2	SRC X UV Alarm Enable	0 to 1	---	F102	1
5CA3	SRC X UV Alarm Curve Type	0 to 1	---	F726	1
5CA4	SRC X UV Alarm Pickup Setting	50 to 95	%	F001	1
5CA5	SRC X UV Alarm Time Delay	0.5 to 600	---	F001	1
5CA6	SRC X UV Alarm Phase Requirement	1 to 3	---	F001	1
5CA7	SRC X UV Alarm Blocking Voltage Enable	0 to 1	---	F102	1
5CA8	SRC X UV Alarm Blocking Voltage Setting	5 to 75	%	F001	1
5CA9	Reserved1 (5 Items)				5
5CAE	(Next available address)				0
5CAE	SRC X OV Trip Enable	0 to 1	---	F102	1
5CAF	SRC X OV Trip Pickup Setting	105 to 125	%	F001	1
5CB0	SRC X OV Trip Time Delay	0.5 to 600	S	F001	1
5CB1	SRC X OV Trip Phase Requirement	1 to 3	---	F001	1
5CB2	SRC X OV Trip or Open setting	0 to 1	---	F727	1
5CB3	SRC X OV Alarm Enable	0 to 1	---	F102	1
5CB4	SRC X OV Alarm Pickup Threshold	105 to 125	%	F001	1
5CB5	SRC X OV Alarm Time Delay	0.5 to 600	---	F001	1
5CB6	SRC X OV Alarm Phase Requirement	1 to 3	---	F001	1
5CB7	Reserved2 (7 Items)				7
5CBE	(Next available address)				0
5CBE	SRC X PL Trip Enable	0 to 1	---	F102	1

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5CBF	SRC X PL Trip Pickup Setting	8 to 50	%	F001	1
5CC0	SRC X PL Trip Time Delay	0.5 to 600	S	F001	1
5CC1	SRC X PL Trip Blocking Voltage Enable	0 to 1	---	F102	1
5CC2	SRC X PL Trip or Open Setting	0 to 1	---	F727	1
5CC3	SRC X PL Alarm Enable	0 to 1	---	F102	1
5CC4	SRC X PL Alarm Pickup Setting	8 to 50	%	F001	1
5CC5	SRC X PL Alarm Time Delay	0.5 to 600	S	F001	1
5CC6	SRC X PL Alarm Blocking Voltage Enable	0 to 1	---	F102	1
5CC7	SRC X PL Trip Blocking Voltage Setting	5 to 5	%	F001	1
5CC8	SRC X PL Alarm Blocking Voltage Setting	5 to 5	%	F001	1
5CC9	Reserved3 (3 Items)				3
5CCC	(Next available address)				0
5CCC	SRC X Rev Power Trip Enable	0 to 1	---	F102	1
5CCD	SRC X Rev Power Trip Pickup Setting	10 to 990	kW	F001	1
5CCE	SRC X Rev Power Trip Time Delay	0.5 to 600	S	F001	1
5CCF	SRC X Rev Power Alarm Enable	0 to 1	---	F102	1
5CD0	SRC X Rev Power Alarm Pickup Setting	10 to 990	kW	F001	1
5CD1	SRC X Rev Power Alarm Time Delay	0.5 to 600	S	F001	1
5CD2	SRC X Rev Power Trip or Open	0 to 1	---	F727	1
5CD3	Reserved4 (4 Items)				4
5CD7	(Next Available Address)				0
5CD7	SRC X High Curr Alarm Enable	0 to 1	---	F102	1
5CD8	SRC X High Curr Alarm Pickup Setting	50 to 200	%	F001	1
5CD9	SRC X High Curr Alarm Time Delay	1 to 15	S	F001	1
5CDA	Reserved5 (5 Items)				5
5CDF	(Next Available Address)				0
5CDF	SRC X Total Breaker Operations	0 to 65535	---	F001	1
5CE0	SRC X Total Breaker No Load Operations	0 to 65535	---	F001	1
5CE1	SRC X Total Breaker Load Operations	0 to 65535	---	F001	1
5CE2	SRC X Total Breaker Fault Operations	0 to 65535	---	F001	1
5CE3	SRC X Breaker Percent Load Life	0 to 65535	---	F001	1
5CE4	SRC X Breaker Percent Mechanical Life	0 to 65535	---	F001	1
5CE5	SRC X Time Date Last Breaker Operation	0 to 4294967295	---	F050	2
5CE7	SRC X Time Date Initial Energization	0 to 4294967295	---	F050	2
5CE9	SRC_X_Breaker_Service_Hours	0 to 4294967295	---	F003	2
5CEB	Reserved6(5 items)				5
5CF0	(Next available address)				0
5CF0	SRC X UF Trip Enable	0 to 1	---	F102	1
5CF1	SRC X UF Trip Pickup Setting	45 to 60	Hz	F001	1
5CF2	SRC X UF Trip Time Delay	0.1 to 600	S	F001	1
5CF3	SRC X UF Trip Blocking Voltage Enable	0 to 1	---	F102	1
5CF4	SRC X UF Trip or Open setting	0 to 1	---	F727	1
5CF5	SRC X UF Alarm Enable	0 to 1	---	F102	1
5CF6	SRC X UF Alarm Pickup Setting	45 to 60	Hz	F001	1
5CF7	SRC X UF Alarm Time Delay	0.1 to 600	---	F001	1
5CF8	SRC X UF Alarm Blocking Voltage Enable	0 to 1	---	F102	1

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5CF9	SRC X OF Trip Enable	0 to 1	---	F102	1
5CFA	SRC X OF Trip Pickup Setting	50 to 70	Hz	F001	1
5CFB	SRC X OF Trip Time Delay	0.1 to 600	S	F001	1
5CFC	SRC X OF Trip Blocking Voltage Enable	0 to 1	---	F102	1
5CFD	SRC X OF Trip or Open setting	0 to 1	---	F727	1
5CFE	SRC X OF Alarm Enable	0 to 1	---	F102	1
5CFF	SRC X OF Alarm Pickup Setting	50 to 70	Hz	F001	1
5D00	SRC X OF Alarm Time Delay	0.1 to 600	---	F001	1
5D01	SRC X OF Alarm Blocking Voltage Enable	0 to 1	---	F102	1
5D02	SRC X HRGF Enable	0 to 1	---	F102	1
5D03	SRC X HRGF Pickup	20 to 100	---	F001	1
5D04	SRC X HRGF Delay	5 to 50	---	F001	1
5D05	SRC X HRGF Ground Resistance	5 to 500	---	F001	1
5D06	SRC X HRGF CT Rating	10 to 10	---	F001	1
5D07	Reserved(41 Items per node)				41
5D30	...Repeated for Node 2				166
5DD6	...Repeated for Node 3				166
5E7C	...Repeated for Node 4				166
5F22	...Repeated for Node 5				166
5FC8	...Repeated for Node 6				166
606E	...Repeated for Node 7				166
6114	...Repeated for Node 8				166
61BA	...Repeated for Node 9				166
6260	...Repeated for Node 10				166
6306	...Repeated for Node 11				166
63AC	...Repeated for Node 12				166
6452	...Repeated for Node 13				166
64F8	...Repeated for Node 14				166
659E	...Repeated for Node 15				166
6644	...Repeated for Node 16				166
66EA	...Repeated for Node 17				166
6790	...Repeated for Node 18				166
6836	...Repeated for Node 19				166
68DC	...Repeated for Node 20				166
6982	...Repeated for Node 21				166
6A28	...Repeated for Node 22				166
6ACE	...Repeated for Node 23				166
6B74	...Repeated for Node 24				166
6C1A	...Repeated for Node 25				166
6CC0	...Repeated for Node 26				166
6D66	...Repeated for Node 27				166
6E0C	...Repeated for Node 28				166
6EB2	...Repeated for Node 29				166
6F58	...Repeated for Node 30				166
6FFE	(Next available address)				0
SRC X Node Commands (Read / Write)					
7000	SRCx Open Breaker	0 to 1	---	F126	1

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7001	SRCx Close Breaker	0 to 1	---	F126	1
7002	SRCx Trip Breaker	0 to 1	---	F126	1
7003	SRCx Clear Energy	0 to 1	---	F126	1
7004	SRCx Delete Node	0 to 1	---	F126	1
7005	SRCx Remote Lockout Enable	0 to 1	---	F126	1
7006	SRC x Remote Lockout Reset	0 to 1	---	F126	1
7007	SRC x ATO Mode Enable	0 to 1	---	F126	1
7008	Reserved				42
7032	...Repeated for Node 2				50
7064	...Repeated for Node 3				50
7096	...Repeated for Node 4				50
70C8	...Repeated for Node 5				50
70FA	...Repeated for Node 6				50
712C	...Repeated for Node 7				50
715E	...Repeated for Node 8				50
7190	...Repeated for Node 9				50
71C2	...Repeated for Node 10				50
71F4	...Repeated for Node 11				50
7226	...Repeated for Node 12				50
7258	...Repeated for Node 13				50
728A	...Repeated for Node 14				50
72BC	...Repeated for Node 15				50
72EE	...Repeated for Node 16				50
7320	...Repeated for Node 17				50
7352	...Repeated for Node 18				50
7384	...Repeated for Node 19				50
73B6	...Repeated for Node 20				50
73E8	...Repeated for Node 21				50
741A	...Repeated for Node 22				50
744C	...Repeated for Node 23				50
747E	...Repeated for Node 24				50
74B0	...Repeated for Node 25				50
74E2	...Repeated for Node 26				50
7514	...Repeated for Node 27				50
7546	...Repeated for Node 28				50
7578	...Repeated for Node 29				50
75AA	...Repeated for Node 30				50
75DC	(Next available address)				0
	Contact Input Configuration (Read/Write Setting)(2 Modules)				
75DC	Board x I/O Direction High	0 to 4294967295	---	F737	2
75DE	Board x I/O Direction Low	0 to 4294967295	---	F736	2
75E0	Board x I/O Direction High	0 to 4294967295	---	F737	2
75E2	Board x I/O Direction Low	0 to 4294967295	---	F736	2

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75E4	(Next available address)				0
Mandatory (Read/Write Setting)					
7F00	Test Mode Function	0 to 1	---	F102	1
7F01	Test Mode Override	0 to 1	---	F102	1
7F02	Reserved				149
7F97	Next Available Address				0
Synch Check (Read/Write Setting (6 Modules))					
7F97	Synch Check Enable	0 to 1	---	F102	1
7F98	Synch Check V1 Source	0 to 29	---	F001	1
7F99	Synch Check V2 Source	0 to 29	---	F001	1
7F9A	Synch Check Max Volt Diff	0 to 90.0	V	F001	1
7F9B	Synch Check Max Phase Diff	0 to 60	degree	F001	1
7F9C	Synch Check Max Freq Diff	0 to 2.0	Hz	F001	1
7F9D	Synch Check DeadMax V1	5 to 50	%	F001	1
7F9E	Synch Check Live Min V1	50 to 100	%	F001	1
7F9F	Synch Check Dead Max V2	5 to 50	%	F001	1
7FA0	Synch Check Live Min V2	50 to 100	%	F001	1
7FA1	Synch Check Dead Source Select	0 to 5	---	F176	1
7FA2	SynchCheck Status	0 to 65535	---	F001	1
7FA3	Reserved				9
7FAC	...Repeated for Modue 1				21
7FC1	...Repeated for Modue 2				21
7FD6	...Repeated for Module 3				21
7FEB	...Repeated for Module 4				21
8000	...Repeated for Module 5				21
8015	Next Available Address				0
Discrete IO Configuration (Read Only)					
8015	Boards detected	0 to 8	---	F001	1
8016	Boards Used	0 to 8	---	F001	1
8017	Total I/O Points Available	0 to 65535	---	F001	1
8018	Contact Input Count	0 to 96	---	F001	1
8019	Contact Output Count	0 to 64	---	F001	1
801A	Boards Expected	0 to 2	---	F001	1
801B	Discrete IO Configuration Reserved	0 to 65535	---	F001	15
802A	Next Available Address				0
Force Contact Inputs (Read/Write Setting) (128 Modules)					

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8760	Force Contact Input x State, one per register	0 to 2	---	F144	1
8761	Force Contact Input x State, one per register	0 to 2	---	F144	1
8762	Force Contact Input x State, one per register	0 to 2	---	F144	1
8763	Force Contact Input x State, one per register	0 to 2	---	F144	1
8764	Force Contact Input x State, one per register	0 to 2	---	F144	1
8765	Force Contact Input x State, one per register	0 to 2	---	F144	1
8766	Force Contact Input x State, one per register	0 to 2	---	F144	1
8767	Force Contact Input x State, one per register	0 to 2	---	F144	1
8768	Force Contact Input x State, one per register	0 to 2	---	F144	1
8769	Force Contact Input x State, one per register	0 to 2	---	F144	1
876A	Force Contact Input x State, one per register	0 to 2	---	F144	1
876B	Force Contact Input x State, one per register	0 to 2	---	F144	1
876C	Force Contact Input x State, one per register	0 to 2	---	F144	1
876D	Force Contact Input x State, one per register	0 to 2	---	F144	1
876E	Force Contact Input x State, one per register	0 to 2	---	F144	1
876F	Force Contact Input x State, one per register	0 to 2	---	F144	1
8770	Force Contact Input x State, one per register	0 to 2	---	F144	1
8771	Force Contact Input x State, one per register	0 to 2	---	F144	1
8772	Force Contact Input x State, one per register	0 to 2	---	F144	1
8773	Force Contact Input x State, one per register	0 to 2	---	F144	1
8774	Force Contact Input x State, one per register	0 to 2	---	F144	1
8775	Force Contact Input x State, one per register	0 to 2	---	F144	1
8776	Force Contact Input x State, one per register	0 to 2	---	F144	1
8777	Force Contact Input x State, one per register	0 to 2	---	F144	1
8778	Force Contact Input x State, one per register	0 to 2	---	F144	1
8779	Force Contact Input x State, one per register	0 to 2	---	F144	1
877A	Force Contact Input x State, one per register	0 to 2	---	F144	1
877B	Force Contact Input x State, one per register	0 to 2	---	F144	1
877C	Force Contact Input x State, one per register	0 to 2	---	F144	1
877D	Force Contact Input x State, one per register	0 to 2	---	F144	1
877E	Force Contact Input x State, one per register	0 to 2	---	F144	1
877F	Force Contact Input x State, one per register	0 to 2	---	F144	1
8780	(Next Available Address)				0
	Force Contact Outputs (Read/Write Setting) (128 Modules)				
8780	Force Contact Output x State, one per register	0 to 3	---	F131	1
8781	Force Contact Output x State, one per register	0 to 3	---	F131	1
8782	Force Contact Output x State, one per register	0 to 3	---	F131	1
8783	Force Contact Output x State, one per register	0 to 3	---	F131	1
8784	Force Contact Output x State, one per register	0 to 3	---	F131	1
8785	Force Contact Output x State, one per register	0 to 3	---	F131	1
8786	Force Contact Output x State, one per register	0 to 3	---	F131	1
8787	Force Contact Output x State, one per register	0 to 3	---	F131	1
8788	Force Contact Output x State, one per register	0 to 3	---	F131	1
8789	Force Contact Output x State, one per register	0 to 3	---	F131	1
878A	Force Contact Output x State, one per register	0 to 3	---	F131	1
878B	Force Contact Output x State, one per register	0 to 3	---	F131	1
878C	Force Contact Output x State, one per register	0 to 3	---	F131	1

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87ED	Force Contact Output x State, one per register	0 to 3	---	F131	1
87EE	Force Contact Output x State, one per register	0 to 3	---	F131	1
87EF	Force Contact Output x State, one per register	0 to 3	---	F131	1
87F0	Force Contact Output x State, one per register	0 to 3	---	F131	1
87F1	Force Contact Output x State, one per register	0 to 3	---	F131	1
87F2	Force Contact Output x State, one per register	0 to 3	---	F131	1
87F3	Force Contact Output x State, one per register	0 to 3	---	F131	1
87F4	Force Contact Output x State, one per register	0 to 3	---	F131	1
87F5	Force Contact Output x State, one per register	0 to 3	---	F131	1
87F6	Force Contact Output x State, one per register	0 to 3	---	F131	1
87F7	Force Contact Output x State, one per register	0 to 3	---	F131	1
87F8	Force Contact Output x State, one per register	0 to 3	---	F131	1
87F9	Force Contact Output x State, one per register	0 to 3	---	F131	1
87FA	Force Contact Output x State, one per register	0 to 3	---	F131	1
87FB	Force Contact Output x State, one per register	0 to 3	---	F131	1
87FC	Force Contact Output x State, one per register	0 to 3	---	F131	1
87FD	Force Contact Output x State, one per register	0 to 3	---	F131	1
87FE	Force Contact Output x State, one per register	0 to 3	---	F131	1
87FF	Force Contact Output x State, one per register	0 to 3	---	F131	1
8800	(Next Available Address)				0
	Expanded Digital I/O states (Read Only) (128 modules)				
9100	Contact Input x State, one per register (128 Items)	0 to 1	---	F108	128
9180	Contact Output x State, one per register (128 Items)	0 to 1	---	F108	128
9200	(Next Available Address)				0
	Option Dispensing				
9300	Option String	---	---	F076	86
9356	Option String Reserved	---	---	F001	35
9379	Option String Authentication Status	0 to 2	---	F738	1
937A	Option String Timestamp	0 to 4294967295	---	F050	2
937C	Options Bit Vectors	0 to 65535	---	F728	1
937D	Option Expanded Metering Count	0 to 30	---	F001	1
937E	Option Expanded Metering Node x State Enable	0 to 4294967295	---	F722	2
9380	Option Demand Metering Count	0 to 30	---	F001	1
9381	Option Demand Metering Node x State Enable	0 to 4294967295	---	F722	2
9383	Option Advanced Metering Count	0 to 30	---	F001	1
9384	Option Advanced Metering Node x State Enable	0 to 4294967295	---	F722	2
9386	Option Voltage Relay Count	0 to 30	---	F001	1
9387	Option Voltage Relay Node x State Enable	0 to 4294967295	---	F722	2

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9389	Option High Current Relay Count	0 to 30	---	F001	1
938A	Option High Current Relay Node x State Enable	0 to 4294967295	---	F722	2
938C	Option Freq and Rev Power Relay Count	0 to 30	---	F001	1
938D	Option Freq Rev Pwr Relay Node x State Enable	0 to 4294967295	---	F722	2
938F	Option String Old	---	---	F076	86
93E5	Option String Old Reserved	---	---	F001	35
9408	Option Dispensing Reserved				18
941A	(Next available address)				0
941A					
Flexlogic Entry (Read/Write Setting) (32 modules)					
A000	FlexLogic Entry (2048 items)	0 to 65535	---	F300	2048
A800	(Next available address)				0
Flexlogic Timers (Read/Write Setting) (32 modules)					
A800	Timer x Type	0 to 2	---	F129	1
A801	Timer x Pickup Delay	0 to 60000	---	F001	1
A802	Timer x Dropout Delay	0 to 60000	---	F001	1
A803	Timer x Reserved (5 items)	0 to 65535	---	F001	5
A808	(Next Available Address)				0
A808	...Repeated for Next Item				8
A810	...Repeated for Next Item				8
A818	...Repeated for Next Item				8
A820	...Repeated for Next Item				8
A828	...Repeated for Next Item				8
A830	...Repeated for Next Item				8
A838	...Repeated for Next Item				8
A840	...Repeated for Next Item				8
A848	...Repeated for Next Item				8
A850	...Repeated for Next Item				8
A858	...Repeated for Next Item				8
A860	...Repeated for Next Item				8
A868	...Repeated for Next Item				8
A870	...Repeated for Next Item				8
A878	...Repeated for Next Item				8
A880	...Repeated for Next Item				8
A888	...Repeated for Next Item				8
A890	...Repeated for Next Item				8
A898	...Repeated for Next Item				8
A8A0	...Repeated for Next Item				8
A8A8	...Repeated for Next Item				8
A8B0	...Repeated for Next Item				8
A8B8	...Repeated for Next Item				8
A8C0	...Repeated for Next Item				8
A8C8	...Repeated for Next Item				8
A8D0	...Repeated for Next Item				8
A8D8	...Repeated for Next Item				8

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A8E0	...Repeated for Next Item				8
A8E8	...Repeated for Next Item				8
A8F0	...Repeated for Next Item				8
A8F8	...Repeated for Next Item				8
A900	...Repeated for Next Item				8
A908	...Repeated for Next Item				8
A910	...Repeated for Next Item				8
A918	...Repeated for Next Item				8
A920	...Repeated for Next Item				8
A928	...Repeated for Next Item				8
A930	...Repeated for Next Item				8
A938	...Repeated for Next Item				8
A940	...Repeated for Next Item				8
A948	...Repeated for Next Item				8
A950	...Repeated for Next Item				8
A958	...Repeated for Next Item				8
A960	...Repeated for Next Item				8
A968	...Repeated for Next Item				8
A970	...Repeated for Next Item				8
A978	...Repeated for Next Item				8
A980	...Repeated for Next Item				8
A988	...Repeated for Next Item				8
A990	...Repeated for Next Item				8
A998	...Repeated for Next Item				8
A9A0	...Repeated for Next Item				8
A9A8	...Repeated for Next Item				8
A9B0	...Repeated for Next Item				8
A9B8	...Repeated for Next Item				8
A9C0	...Repeated for Next Item				8
A9C8	...Repeated for Next Item				8
A9D0	...Repeated for Next Item				8
A9D8	...Repeated for Next Item				8
A9E0	...Repeated for Next Item				8
A9E8	...Repeated for Next Item				8
A9F0	...Repeated for Next Item				8
A9F8	...Repeated for Next Item				8
AA00	(Next available address)				0
				B30 B90 C30 C60 D30 D60 F35 F60 G60 L60 L90 M60 R30 S35 T35 T60	
Virtual Input Commands (Read/Write Command) (32 modules)					
AC00	Virtual Input x State	0 to 1	---	F108	1
AC01	Virtual Input x State	0 to 1	---	F108	1
AC02	Virtual Input x State	0 to 1	---	F108	1
AC03	Virtual Input x State	0 to 1	---	F108	1
AC04	Virtual Input x State	0 to 1	---	F108	1
AC05	Virtual Input x State	0 to 1	---	F108	1
AC06	Virtual Input x State	0 to 1	---	F108	1

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B320	Flexlogic Status Message	---	---	F200	20
B334	Next available address				0
	Flexlogic Breaker Control (Read/Write Setting) (30 modules)				
B400	Breaker Control x Open Flux Shifter	0 to 65535	---	F300	1
B401	Breaker Control x Open Shunt Trip	0 to 65535	---	F300	1
B402	Breaker Control x Trip Flux Shifter	0 to 65535	---	F300	1
B403	Breaker Control x Trip Shunt Trip	0 to 65535	---	F300	1
B404	Breaker Control x Close	0 to 65535	---	F300	1
B405	Breaker Control x Lockout	0 to 65535	---	F300	1
B406	Breaker Control x Lockout Reset	0 to 65535	---	F300	1
B407	Reserved (18 Items per breaker control)				18
B419	...Repeated for Breaker Control 2				25
B432	...Repeated for Breaker Control 3				25
B44B	...Repeated for Breaker Control 4				25
B464	...Repeated for Breaker Control 5				25
B47D	...Repeated for Breaker Control 6				25
B496	...Repeated for Breaker Control 7				25
B4AF	...Repeated for Breaker Control 8				25
B4C8	...Repeated for Breaker Control 9				25
B4E1	...Repeated for Breaker Control 10				25
B4FA	...Repeated for Breaker Control 11				25
B513	...Repeated for Breaker Control 12				25
B52C	...Repeated for Breaker Control 13				25
B545	...Repeated for Breaker Control 14				25
B55E	...Repeated for Breaker Control 15				25
B577	...Repeated for Breaker Control 16				25
B590	...Repeated for Breaker Control 17				25
B5A9	...Repeated for Breaker Control 18				25
B5C2	...Repeated for Breaker Control 19				25
B5DB	...Repeated for Breaker Control 20				25
B5F4	...Repeated for Breaker Control 21				25
B60D	...Repeated for Breaker Control 22				25
B626	...Repeated for Breaker Control 23				25
B63F	...Repeated for Breaker Control 24				25
B658	...Repeated for Breaker Control 25				25
B671	...Repeated for Breaker Control 26				25
B68A	...Repeated for Breaker Control 27				25
B6A3	...Repeated for Breaker Control 28				25
B6BC	...Repeated for Breaker Control 29				25
B6D5	...Repeated for Breaker Control 30				25
B6EE	(Next available address)				0
	ZSI Options Settings (Read/Write Setting)				
B784	ZSI Option	0 to 2	---	F732	1
B785	ZSI_Option_Reserved				1

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B785	(Next available address)				0
ZSI Zone Enables (Read/Write Setting) (4 Modules)					
B786	ZSI Zone X Enabled	0 to 1	---	F126	1
B787	ZSI Zone Enable Reserved				14
B795	...Repeated for Zone 2				15
B7A4	...Repeated for Zone 3				15
B7B3	...Repeated for Zone 4				15
B7C2	(Next available address)				
ZSI ST Tier Settings (Read/Write Setting) (30 Modules)					
B7C2	SRC X ST ZSI Zone 1 Tier Settings	0 to 3	---	F733	16
B7D2	SRC X ST ZSI Zone 2 Tier Settings	0 to 3	---	F733	16
B7E2	SRC X ST ZSI Zone 3 Tier Settings	0 to 3	---	F733	16
B7F2	SRC X ST ZSI Zone 4 Tier Settings	0 to 3	---	F733	16
B802	SRC X ST ZSI Tier Settings reserved				16
B812	...Repeated for Node 2				80
B862	...Repeated for Node 3				80
B8B2	...Repeated for Node 4				80
B902	...Repeated for Node 5				80
B952	...Repeated for Node 6				80
B9A2	...Repeated for Node 7				80
B9F2	...Repeated for Node 8				80
BA42	...Repeated for Node 9				80
BA92	...Repeated for Node 10				80
BAE2	...Repeated for Node 11				80
BB32	...Repeated for Node 12				80
BB82	...Repeated for Node 13				80
BBD2	...Repeated for Node 14				80
BC22	...Repeated for Node 15				80
BC72	...Repeated for Node 16				80
BCC2	...Repeated for Node 17				80
BD12	...Repeated for Node 18				80
BD62	...Repeated for Node 19				80
BDB2	...Repeated for Node 20				80
BE02	...Repeated for Node 21				80
BE52	...Repeated for Node 22				80
BEA2	...Repeated for Node 23				80
BEF2	...Repeated for Node 24				80
BF42	...Repeated for Node 25				80
BF92	...Repeated for Node 26				80
BFE2	...Repeated for Node 27				80
C032	...Repeated for Node 28				80
C082	...Repeated for Node 29				80
C0D2	...Repeated for Node 30				80
C122	(Next available address)				80

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ZSI GF Tier Settings (Read/Write Setting) (30 Modules)					
C122	SRC X GF ZSI Zone 1 Tier Settings	0 to 3	---	F733	16
C132	SRC X GF ZSI Zone 2 Tier Settings	0 to 3	---	F733	16
C142	SRC X GF ZSI Zone 3 Tier Settings	0 to 3	---	F733	16
C152	SRC X GF ZSI Zone 4 Tier Settings	0 to 3	---	F733	16
C162	SRC X GF ZSI Tier Settings reserved				16
C172	...Repeated for Node 2				80
C1C2	...Repeated for Node 3				80
C212	...Repeated for Node 4				80
C262	...Repeated for Node 5				80
C2B2	...Repeated for Node 6				80
C302	...Repeated for Node 7				80
C352	...Repeated for Node 8				80
C3A2	...Repeated for Node 9				80
C3F2	...Repeated for Node 10				80
C442	...Repeated for Node 11				80
C492	...Repeated for Node 12				80
C4E2	...Repeated for Node 13				80
C532	...Repeated for Node 14				80
C582	...Repeated for Node 15				80
C5D2	...Repeated for Node 16				80
C622	...Repeated for Node 17				80
C672	...Repeated for Node 18				80
C6C2	...Repeated for Node 19				80
C712	...Repeated for Node 20				80
C762	...Repeated for Node 21				80
C7B2	...Repeated for Node 22				80
C802	...Repeated for Node 23				80
C852	...Repeated for Node 24				80
C8A2	...Repeated for Node 25				80
C8F2	...Repeated for Node 26				80
C942	...Repeated for Node 27				80
C992	...Repeated for Node 28				80
C9E2	...Repeated for Node 29				80
CA32	...Repeated for Node 30				80
CA82	(Next available address)				0
ZSI MSGF Zone GRP X Tier Settings (Read/Write Setting) (4 Modules)					
CA82	MSGF ZSI Zone 1 GRP X Tier Settings	0 to 3	---	F733	16
CA92	MSGF ZSI Zone 2 GRP X Tier Settings	0 to 3	---	F733	16
CAA2	MSGF ZSI Zone 3 GRP X Tier Settings	0 to 3	---	F733	16
CAB2	MSGF ZSI Zone 4 GRP X Tier Settings	0 to 3	---	F733	16
CAC2	(MSGF ZSI Reserved)	---	---	F001	16
CAD2	...Repeated for Group 2				80
CB22	...Repeated for Group 3				80
CB72	...Repeated for Group 4				80

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CBC2	(Next available address)				
Zone X MSGF Module Settings					
(Read/Write Settings) (4 Modules)					
CBC2	Zone_X_MSGF_Trip_Pickup_Setting	30 to 1200	---	F001	16
CBD2	Zone_X_MSGF_Alarm_Pickup_Setting	30 to 1200	---	F001	16
CBE2	Zone_X_MSGF_Trip_Delay_Band_Setting	0 to 6	---	F713	16
CBF2	Zone_X_MSGF_Alarm_Delay_Band_Setting	0 to 6	---	F713	16
CC02	Zone_X_MSGF_Trip_I2T_Curve	0 to 1	---	F725	16
CC12	Zone_X_MSGF_Alarm_I2T_Curve	0 to 1	---	F725	16
CC22	Zone_X_MSGF_Trip_Enabled	0 to 1	---	F102	16
CC32	Zone_X_MSGF_Alarm_Enabled	0 to 1	---	F102	16
CC42	Zone_X_MSGF_Backup_Enabled	0 to 1	---	F102	16
CC52	Zone_X_MSGF_Backup_Time_Delta_Enabled	0 to 1	---	F102	16
CC62	Zone_X_MSGF_Trip_or_Open	0 to 1	---	F727	1
CC63	Zone X MSGF Reserved			F001	16
CC73	...Repeated for Zone 2				177
CD24	...Repeated for Zone 3				177
CDD5	...Repeated for Zone 4				177
CE86	(Next available address)				0
Zone X BD Module Settings					
(Read/Write Settings) (4 Modules)					
CE8A	Zone_X_BD_Trip_Pickup_Setting	30 to 1200	---	F001	16
CE9A	Zone_X_BD_Alarm_Pickup_Setting	30 to 1200	---	F001	16
CEAA	Zone_X_BD_Trip_Pickup_Setting2	30 to 1200	---	F001	16
CEBA	Zone_X_BD_Alarm_Pickup_Setting2	30 to 1200	---	F001	16
CECA	Zone_X_BD_Trip_Delay_Band_Setting	0 to 6	---	F713	16
CEDA	Zone_X_BD_Alarm_Delay_Band_Setting	0 to 6	---	F713	16
CEEA	Zone_X_BD_Trip_Delay_Band_Setting2	0 to 6	---	F713	16
CEFA	Zone_X_BD_Alarm_Delay_Band_Setting2	0 to 6	---	F713	16
CF0A	Zone_X_BD_Trip_Enabled	0 to 1	---	F102	16
CF1A	Zone_X_BD_Alarm_Enabled	0 to 1	---	F102	16
CF2A	Zone_X_BD_Backup_Enabled	0 to 1	---	F102	16
CF3A	Zone_X_BD_Backup_Time_Delta_Enabled	0 to 1	---	F102	16
CF4A	Zone_X_BD_Trip_or_Open	0 to 1	---	F727	1
CF4B	Zone X BD Reserved			F001	16
CF5B	...Repeated for Zone 2				209
D02C	...Repeated for Zone 3				209
D0FD	...Repeated for Zone 4				209
D1CE	(Next available address)				0
Zone X Summation Module Settings					
(2 Modules) (Read/Write)					
D1D2	Zone_X_Summation_MSGF_Trip_Delay_Band_Setting	0 to 6	---	F713	16
D1E2	Zone_X_Summation_MSGF_Alarm_Delay_Band_Setting	0 to 6	---	F713	16
D1F2	Zone_X_Summation_MSGF_Trip_I2T_Curve	0 to 1	---	F725	16
D202	Zone_X_Summation_MSGF_Alarm_I2T_Curve	0 to 1	---	F725	16

Entellisis LVS Modbus memory map

D212	Zone_X_Summmation_MSGF_Trip_Enabled	0 to 1	---	F102	16
D222	Zone_X_Summmation_MSGF_Alarm_Enabled	0 to 1	---	F102	16
D232	Zone_X_Summmation_MSGF_Trip_Pickup_Setting	30 to 1200	---	F001	16
D242	Zone_X_Summmation_MSGF_Alarm_Pickup_Setting	30 to 1200	---	F001	16
D252	Zone_X_Summmation_MSGF_Trip_or_Open	0 to 1	---	F727	1
D253	Zone X Summmation Module Reserved			F001	32
D273	...Repeated for Zone 2				161
D314	(Next available address)				0
	Control Alarm Settings				
D314	Alarm X Flex Logic	0 to 65365	---	F300	1
D315	Reserved	0 to 65535		F001	1
D316	...Repeated for Next Item	0 to 65365	---	F300	2
D318	...Repeated for Next Item	0 to 65365	---	F300	2
D31A	...Repeated for Next Item	0 to 65365	---	F300	2
D31C	...Repeated for Next Item	0 to 65365	---	F300	2
D31E	...Repeated for Next Item	0 to 65365	---	F300	2
D320	...Repeated for Next Item	0 to 65365	---	F300	2
D322	...Repeated for Next Item	0 to 65365	---	F300	2
D324	...Repeated for Next Item	0 to 65365	---	F300	2
D326	...Repeated for Next Item	0 to 65365	---	F300	2
D328	...Repeated for Next Item	0 to 65365	---	F300	2
D32A	...Repeated for Next Item	0 to 65365	---	F300	2
D32C	...Repeated for Next Item	0 to 65365	---	F300	2
D32E	...Repeated for Next Item	0 to 65365	---	F300	2
D330	...Repeated for Next Item	0 to 65365	---	F300	2
D332	...Repeated for Next Item	0 to 65365	---	F300	2
D334	(Next available address)				0
	Contact Inputs (Read/Write Setting) (128 modules)			Contact Inputs	
D334	Contact Input x Name	---	---	F200	20
D348	Contact Input x Events	0 to 1	---	F102	1
D349	Contact Input x Debounce Time	0 to 4	us	F734	1
D34A	Reserved				4
D34E	Repeated for next module...				26
D368	Repeated for next module...				26
D382	Repeated for next module...				26
D39C	Repeated for next module...				26
D3B6	Repeated for next module...				26
D3D0	Repeated for next module...				26
D3EA	Repeated for next module...				26
D404	Repeated for next module...				26
D41E	Repeated for next module...				26
D438	Repeated for next module...				26
D452	Repeated for next module...				26
D46C	Repeated for next module...				26

Entellisis LVS Modbus memory map

D486	Repeated for next module...				26
D4A0	Repeated for next module...				26
D4BA	Repeated for next module...				26
D4D4	Repeated for next module...				26
D4EE	Repeated for next module...				26
D508	Repeated for next module...				26
D522	Repeated for next module...				26
D53C	Repeated for next module...				26
D556	Repeated for next module...				26
D570	Repeated for next module...				26
D58A	Repeated for next module...				26
D5A4	Repeated for next module...				26
D5BE	Repeated for next module...				26
D5D8	Repeated for next module...				26
D5F2	Repeated for next module...				26
D60C	Repeated for next module...				26
D626	Repeated for next module...				26
D640	Repeated for next module...				26
D65A	Repeated for next module...				26
D674	Repeated for next module...				26
D68E	Repeated for next module...				26
D6A8	Repeated for next module...				26
D6C2	Repeated for next module...				26
D6DC	Repeated for next module...				26
D6F6	Repeated for next module...				26
D710	Repeated for next module...				26
D72A	Repeated for next module...				26
D744	Repeated for next module...				26
D75E	Repeated for next module...				26
D778	Repeated for next module...				26
D792	Repeated for next module...				26
D7AC	Repeated for next module...				26
D7C6	Repeated for next module...				26
D7E0	Repeated for next module...				26
D7FA	Repeated for next module...				26
D814	Repeated for next module...				26
D82E	Repeated for next module...				26
D848	Repeated for next module...				26
D862	Repeated for next module...				26
D87C	Repeated for next module...				26
D896	Repeated for next module...				26
D8B0	Repeated for next module...				26
D8CA	Repeated for next module...				26
D8E4	Repeated for next module...				26
D8FE	Repeated for next module...				26
D918	Repeated for next module...				26
D932	Repeated for next module...				26
D94C	Repeated for next module...				26

Entellisis LVS Modbus memory map

D966	Repeated for next module...				26
D980	Repeated for next module...				26
D99A	Repeated for next module...				26
D9B4	Repeated for next module...				26
D9CE	Repeated for next module...				26
D9E8	Repeated for next module...				26
DA02	Repeated for next module...				26
DA1C	Repeated for next module...				26
DA36	Repeated for next module...				26
DA50	Repeated for next module...				26
DA6A	Repeated for next module...				26
DA84	Repeated for next module...				26
DA9E	Repeated for next module...				26
DAB8	Repeated for next module...				26
DAD2	Repeated for next module...				26
DAEC	Repeated for next module...				26
DB06	Repeated for next module...				26
DB20	Repeated for next module...				26
DB3A	Repeated for next module...				26
DB54	Repeated for next module...				26
DB6E	Repeated for next module...				26
DB88	Repeated for next module...				26
DBA2	Repeated for next module...				26
DBBC	Repeated for next module...				26
DBD6	Repeated for next module...				26
DBF0	Repeated for next module...				26
DC0A	Repeated for next module...				26
DC24	Repeated for next module...				26
DC3E	Repeated for next module...				26
DC58	Repeated for next module...				26
DC72	Repeated for next module...				26
DC8C	Repeated for next module...				26
DCA6	Repeated for next module...				26
DCC0	Repeated for next module...				26
DCDA	Repeated for next module...				26
DCF4	Repeated for next module...				26
DD0E	Repeated for next module...				26
DD28	Repeated for next module...				26
DD42	Repeated for next module...				26
DD5C	Repeated for next module...				26
DD76	Repeated for next module...				26
DD90	Repeated for next module...				26
DDAA	Repeated for next module...				26
DDC4	Repeated for next module...				26
DDDE	Repeated for next module...				26
DDF8	Repeated for next module...				26
DE12	Repeated for next module...				26
DE2C	Repeated for next module...				26

Entellisis LVS Modbus memory map

E2AA	Repeated for next module...				30
E2C8	Repeated for next module...				30
E2E6	Repeated for next module...				30
E304	Repeated for next module...				30
E322	Repeated for next module...				30
E340	Repeated for next module...				30
E35E	Repeated for next module...				30
E37C	Repeated for next module...				30
E39A	Repeated for next module...				30
E3B8	Repeated for next module...				30
E3D6	Repeated for next module...				30
E3F4	Repeated for next module...				30
E412	Repeated for next module...				30
E430	Repeated for next module...				30
E44E	Repeated for next module...				30
E46C	Repeated for next module...				30
E48A	Repeated for next module...				30
E4A8	Repeated for next module...				30
E4C6	Repeated for next module...				30
E4E4	Repeated for next module...				30
E502	Repeated for next module...				30
E520	Repeated for next module...				30
E53E	Repeated for next module...				30
E55C	Repeated for next module...				30
E57A	Repeated for next module...				30
E598	Repeated for next module...				30
E5B6	Repeated for next module...				30
E5D4	Repeated for next module...				30
E5F2	Repeated for next module...				30
E610	Repeated for next module...				30
E62E	Repeated for next module...				30
E64C	Repeated for next module...				30
E66A	Repeated for next module...				30
E688	Repeated for next module...				30
E6A6	Repeated for next module...				30
E6C4	Repeated for next module...				30
E6E2	Repeated for next module...				30
E700	Repeated for next module...				30
E71E	Repeated for next module...				30
E73C	Repeated for next module...				30
E75A	Repeated for next module...				30
E778	Repeated for next module...				30
E796	Repeated for next module...				30
E7B4	Repeated for next module...				30
E7D2	Repeated for next module...				30
E7F0	Repeated for next module...				30
E80E	Repeated for next module...				30
E82C	Repeated for next module...				30

Entellisis LVS Modbus memory map

E84A	Repeated for next module...				30
E868	Repeated for next module...				30
E886	Repeated for next module...				30
E8A4	Repeated for next module...				30
E8C2	Repeated for next module...				30
E8E0	Repeated for next module...				30
E8FE	Repeated for next module...				30
E91C	Repeated for next module...				30
E93A	Repeated for next module...				30
E958	Repeated for next module...				30
E976	Repeated for next module...				30
E994	Repeated for next module...				30
E9B2	Repeated for next module...				30
E9D0	Repeated for next module...				30
E9EE	Repeated for next module...				30
EA0C	Repeated for next module...				30
EA2A	Repeated for next module...				30
EA48	Repeated for next module...				30
EA66	Repeated for next module...				30
EA84	Repeated for next module...				30
EAA2	Repeated for next module...				30
EAC0	Repeated for next module...				30
EADE	Repeated for next module...				30
E AFC	Repeated for next module...				30
EB1A	Repeated for next module...				30
EB38	Repeated for next module...				30
EB56	Repeated for next module...				30
EB74	Repeated for next module...				30
EB92	Repeated for next module...				30
EBB0	Repeated for next module...				30
EBCE	Repeated for next module...				30
EBEC	Repeated for next module...				30
EC0A	Repeated for next module...				30
EC28	Repeated for next module...				30
EC46	Repeated for next module...				30
EC64	Repeated for next module...				30
EC82	Repeated for next module...				30
ECA0	Repeated for next module...				30
ECBE	Repeated for next module...				30
ECDC	Repeated for next module...				30
ECFA	Repeated for next module...				30
ED18	Repeated for next module...				30
ED36	Repeated for next module...				30
ED54	Repeated for next module...				30
ED72	Repeated for next module...				30
ED90	Repeated for next module...				30
EDAE	Repeated for next module...				30
EDCC	Repeated for next module...				30

Entellisis LVS Modbus memory map

F1FD	Repeated for next module...				23
F214	Repeated for next module...				23
F22B	Repeated for next module...				23
F242	Repeated for next module...				23
F259	Repeated for next module...				23
F270	Repeated for next module...				23
F287	Repeated for next module...				23
F29E	Repeated for next module...				23
F2B5	Repeated for next module...				23
F2CC	Repeated for next module...				23
F2E3	Repeated for next module...				23
F2FA	Repeated for next module...				23
F311	Repeated for next module...				23
F328	Repeated for next module...				23
F33F	Repeated for next module...				23
F356	Repeated for next module...				23
F36D	Repeated for next module...				23
F384	Repeated for next module...				23
F39B	Repeated for next module...				23
F3B2	Repeated for next module...				23
F3C9	Repeated for next module...				23
F3E0	Repeated for next module...				23
F3F7	Repeated for next module...				23
F40E	Repeated for next module...				23
F425	Repeated for next module...				23
F43C	Repeated for next module...				23
F453	Repeated for next module...				23
F46A	Repeated for next module...				23
F481	Repeated for next module...				23
F498	Repeated for next module...				23
F4AF	Repeated for next module...				23
F4C6	Repeated for next module...				23
F4DD	Repeated for next module...				23
F4F4	Repeated for next module...				23
F50B	Repeated for next module...				23
F522	Repeated for next module...				23
F539	Repeated for next module...				23
F550	Repeated for next module...				23
F567	Repeated for next module...				23
F57E	Repeated for next module...				23
F595	Repeated for next module...				23
F5AC	Repeated for next module...				23
F5C3	Repeated for next module...				23
F5DA	Repeated for next module...				23
F5F1	Repeated for next module...				23
F608	Repeated for next module...				23
F61F	Repeated for next module...				23
F636	Repeated for next module...				23

Entellisis LVS Modbus memory map

F64D	Repeated for next module...				23
F664	Repeated for next module...				23
F67B	Repeated for next module...				23
F692	Repeated for next module...				23
F6A9	Repeated for next module...				23
F6C0	Repeated for next module...				23
F6D7	Repeated for next module...				23
F6EE	Repeated for next module...				23
F705	Repeated for next module...				23
F71C	Repeated for next module...				23
F733	Repeated for next module...				23
F74A	Repeated for next module...				23
F761	Repeated for next module...				23
F778	Repeated for next module...				23
F78F	Repeated for next module...				23
F7A6	Repeated for next module...				23
F7BD	Repeated for next module...				23
F7D4	Repeated for next module...				23
F7EB	Repeated for next module...				23
F802	Repeated for next module...				23
F819	Repeated for next module...				23
F830	Repeated for next module...				23
F847	Repeated for next module...				23
F85E	Repeated for next module...				23
F875	Repeated for next module...				23
F88C	Repeated for next module...				23
F8A3	Repeated for next module...				23
F8BA	Repeated for next module...				23
F8D1	Repeated for next module...				23
F8E8	Repeated for next module...				23
F8FF	Repeated for next module...				23
F916	Repeated for next module...				23
F92D	Repeated for next module...				23
F944	Repeated for next module...				23
F95B	Repeated for next module...				23
F972	Repeated for next module...				23
F989	Repeated for next module...				23
F9A0	Repeated for next module...				23
F9B7	Repeated for next module...				23
F9CE	Repeated for next module...				23
F9E5	Repeated for next module...				23
F9FC	Repeated for next module...				23
FA13	Repeated for next module...				23
FA2A	Repeated for next module...				23
FA41	Repeated for next module...				23
FA58	Repeated for next module...				23
FA6F	Repeated for next module...				23
FA86	Repeated for next module...				23

Entellisis LVS Modbus memory map

FA9D	Repeated for next module...				23
FAB4	Next available address				0
Virtual Inputs (Read/Write Setting) (32 modules)					
FAB4	Virtual Input x Function	0 to 1	---	F102	1
FAB5	Virtual Input x Name	---	---	F200	20
FAC9	Virtual Input x Programmed Type	0 to 1	---	F127	1
FACA	Virtual Input x Events	0 to 1	---	F102	1
FACB	Virtual Input x Reserved (3 items)	---	---	F001	3
FACE	Repeated for next module...				26
FAE8	Repeated for next module...				26
FB02	Repeated for next module...				26
FB1C	Repeated for next module...				26
FB36	Repeated for next module...				26
FB50	Repeated for next module...				26
FB6A	Repeated for next module...				26
FB84	Repeated for next module...				26
FB9E	Repeated for next module...				26
FBB8	Repeated for next module...				26
FBD2	Repeated for next module...				26
FBEC	Repeated for next module...				26
FC06	Repeated for next module...				26
FC20	Repeated for next module...				26
FC3A	Repeated for next module...				26
FC54	Repeated for next module...				26
FC6E	Repeated for next module...				26
FC88	Repeated for next module...				26
FCA2	Repeated for next module...				26
FCBC	Repeated for next module...				26
FCD6	Repeated for next module...				26
FCF0	Repeated for next module...				26
FD0A	Repeated for next module...				26
FD24	Repeated for next module...				26
FD3E	Repeated for next module...				26
FD58	Repeated for next module...				26
FD72	Repeated for next module...				26
FD8C	Repeated for next module...				26
FDA6	Repeated for next module...				26
FDC0	Repeated for next module...				26
FDDA	Repeated for next module...				26
FDF4	Next available address				0

MIF II Modbus Memory Map

MIF II Modbus Memory Map

MEM.	BIT	LENGTH	NAME	INTERNAL	FORMAT	TYPE	MIN	MAX	SCALE	UNIT
94		4	Phase CT Ratio	Phase CT Ratio	FLOAT32(INTEL)	RW	1	4000	1	
96		4	Ground CT Ratio	Ground CT Ratio	FLOAT32(INTEL)	RW	1	4000	1	
98		16	IDENTIFICATION	IDEN	BYTES ARRAY	RW				
00A0		4	Trip Min Time	Trip Min Time	FLOAT32(INTEL)	RW	50	300		ms
00A2		4	Delay	Delay	FLOAT32(INTEL)	RW	50	999		ms
00A4	0	2	Settings Group	Settings Group	BIT	RW				
00A5	0	2	Relay Operation	Relay Operation	BIT	RW				
00A5	1	2	Frequency	Frequency	BIT	RW				
00A6	0	2	Trip Enable 51P	Trip Enable 51P	BIT	RW				
00A6	1	2	Trip Enable 51G	Trip Enable 51G	BIT	RW				
00A6	2	2	Trip Enable 50P1	Trip Enable 50P1	BIT	RW				
00A6	3	2	Trip Enable 50P2	Trip Enable 50P2	BIT	RW				
00A6	4	2	Trip Enable 50G1	Trip Enable 50G1	BIT	RW				
00A6	5	2	Trip Enable 50G2	Trip Enable 50G2	BIT	RW				
00A6	6	2	Trip Enable 49	Trip Enable 49	BIT	RW				
00A7		4	Pickup 51P	Pickup 51P	FLOAT32(INTEL)	RW	0.1	2.4	100	In
00A9		2	Curve 51P	Curve 51P	(1)MOD INVERSE(2)VERY INVERSE(4)EXTR INVERSE(8)DEFINITE TIME(16)USER	RW				
00AA		4	TD Mult 51P	TD Mult 51P	FLOAT32(INTEL)	RW	0.5	20	100	
00AC		4	Def Time 51P	Def Time 51P	FLOAT32(INTEL)	RW	0	600	100	s
00AE		4	Pickup 51G	Pickup 51G	FLOAT32(INTEL)	RW	0.1	2.4	100	In
00B0		2	Curve 51G	Curve 51G	(1)MOD INVERSE(2)VERY INVERSE(4)EXTR INVERSE(8)DEFINITE TIME(16)USER	RW				
00B1		4	TD Mult 51G	TD Mult 51G	FLOAT32(INTEL)	RW	0.5	20	100	
00B3		4	Def Time 51G	Def Time 51G	FLOAT32(INTEL)	RW	0	600	100	s
00B5		4	Pickup 50P1	Pickup 50P1	FLOAT32(INTEL)	RW	0.1	30	10	In
00B7		4	Delay 50P1	Delay 50P1	FLOAT32(INTEL)	RW	0	600	100	s
00B9		4	Pickup 50P2	Pickup 50P2	FLOAT32(INTEL)	RW	0.1	30	10	In
00BB		4	Delay 50P2	Delay 50P2	FLOAT32(INTEL)	RW	0	600	100	s
00BD		4	Pickup 50G1	Pickup 50G1	FLOAT32(INTEL)	RW	0.1	30	10	In
00BF		4	Delay 50G1	Delay 50G1	FLOAT32(INTEL)	RW	0	600	100	s
00C1		4	Pickup 50G2	Pickup 50G2	FLOAT32(INTEL)	RW	0.1	30	10	In
00C3		4	Delay 50G2	Delay 50G2	FLOAT32(INTEL)	RW	0	600	100	s
00C5		4	Pickup 49	Pickup 49	FLOAT32(INTEL)	RW	0.1	2.4	100	In
00C7		4	Alarm Level 49	Alarm Level 49	FLOAT32(INTEL)	RW	70	100	1	%
00C9		4	Heat Time 49	Heat Time 49	FLOAT32(INTEL)	RW	3	600	1	min
00CB		4	Cool Time 49	Cool Time 49	FLOAT32(INTEL)	RW	1	6	1	T1
00CD		4	Number of Shots	AR Max Shots	FLOAT32(INTEL)	RW	1	4	1	
00CF		4	AR Dead time shot 1	AR Dead Time 1	FLOAT32(INTEL)	RW	0.1	600	100	s
00D1		4	AR Dead time shot 2	AR Dead Time 2	FLOAT32(INTEL)	RW	0.1	600	100	s

MIF II Modbus Memory Map

00D3		4	AR Dead time shot 3	AR Dead Time 3	FLOAT32(INTEL)	RW	0.1	600	100	s
00D5		4	AR Dead time shot 4	AR Dead Time 4	FLOAT32(INTEL)	RW	0.1	600	100	s
00D7		4	AR Reset Lockout Time	AR Rst LO Delay	FLOAT32(INTEL)	RW	0.1	600	100	s
00D9		4	AR Incomplete Sequence Time	AR Inc Seq Time	FLOAT32(INTEL)	RW	0.1	600	100	s
00DB		4	AR Reset time	AR Reset Time	FLOAT32(INTEL)	RW	0.1	600	100	s
00DD	0	2	Trip Enable 51P T2	Trip Enable 51P	BIT	RW				
00DD	1	2	Trip Enable 51G T2	Trip Enable 51G	BIT	RW				
00DD	2	2	Trip Enable 50P1 T2	Trip Enable 50P1	BIT	RW				
00DD	3	2	Trip Enable 50P2 T2	Trip Enable 50P2	BIT	RW				
00DD	4	2	Trip Enable 50G1 T2	Trip Enable 50G1	BIT	RW				
00DD	5	2	Trip Enable 50G2 T2	Trip Enable 50G2	BIT	RW				
00DD	6	2	Trip Enable 49	Trip Enable 49	BIT	RW				
00DE		4	Pickup 51P T2	Pickup 51P	FLOAT32(INTEL)	RW	0.1	2.4	100	In
00E0		2	Curve 51P T2	Curve 51P	(1)MOD INVERSE(2)VERY INVERSE(4)EXTR INVERSE(8)DEFINITE TIME(16)USER	RW				
00E1		4	TD Mult 51P T2	TD Mult 51P	FLOAT32(INTEL)	RW	0.5	20	100	
00E2		4	Def Time 51P T2	Def Time 51P	FLOAT32(INTEL)	RW	0	600	100	s
00E3		4	Pickup 51G T2	Pickup 51G	FLOAT32(INTEL)	RW	0.1	2.4	100	In
00E4		2	Curve 51G T2	Curve 51G	(1)MOD INVERSE(2)VERY INVERSE(4)EXTR INVERSE(8)DEFINITE TIME(16)USER	RW				
00E5		4	TD Mult 51G T2	TD Mult 51G	FLOAT32(INTEL)	RW	0.5	20	100	
00EA		4	Def Time 51G T2	Def Time 51G	FLOAT32(INTEL)	RW	0	600	100	s
00EC		4	Pickup 50P1 T2	Pickup 50P1	FLOAT32(INTEL)	RW	0.1	30	10	In
00EE		4	Delay 50P1 T2	Delay 50P1	FLOAT32(INTEL)	RW	0	600	100	s
00F0		4	Pickup 50P2 T2	Pickup 50P2	FLOAT32(INTEL)	RW	0.1	30	10	In
00F2		4	Delay 50P2 T2	Delay 50P2	FLOAT32(INTEL)	RW	0	600	100	s
00F4		4	Pickup 50G1 T2	Pickup 50G1	FLOAT32(INTEL)	RW	0.1	30	10	In
00F6		4	Delay 50G1 T2	Delay 50G1	FLOAT32(INTEL)	RW	0	600	100	s
00F8		4	Pickup 50G2 T2	Pickup 50G2	FLOAT32(INTEL)	RW	0.1	30	10	In
00FA		4	Delay 50G2 T2	Delay 50G2	FLOAT32(INTEL)	RW	0	600	100	s
00FC		4	Pickup 49 T2	Pickup 49	FLOAT32(INTEL)	RW	0.1	2.4	100	In
00FE		4	Alarm Level 49 T2	Alarm Level 49	FLOAT32(INTEL)	RW	70	100	1	%
100		4	Heat Time 49 T2	Heat Time 49	FLOAT32(INTEL)	RW	3	600	1	min
102		4	Cool Time 49 T2	Cool Time 49	FLOAT32(INTEL)	RW	1	6	1	T1
104		4	A Parameter	A Parameter	FLOAT32(INTEL)	RW	0	125	10000	s
106		4	B Parameter	B Parameter	FLOAT32(INTEL)	RW	0	3	10000	s
108		4	P Parameter	P Parameter	FLOAT32(INTEL)	RW	0	3	10000	
010A		4	Q Parameter	Q Parameter	FLOAT32(INTEL)	RW	0	2	10000	
010C		4	K Parameter	K Parameter	FLOAT32(INTEL)	RW	0	2	1000	s
112		4	I ² MAX Value	I ² MAX Value	FLOAT32(INTEL)	RW	0	999	1000	kA ²
114	0	2	Oscillo by communic.	O1	BIT	RW				
114	1	2	Oscillo by digital input	O2	BIT	RW				

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114	2	2	Oscillo by tripping	O3	BIT	RW				
114	3	2	Oscillo by pickup	O4	BIT	RW				
115	0	2	Trip operation by command	sAPCOM	BIT	RW				
115	1	2	Reset latch aux	sRLATC	BIT	RW				
115	10	2	Close Breaker operation	sC INT	BIT	RW				
116	0	2	50P1 Pickup	A50PH	BIT	RW				
116	1	2	50G1 Pickup	A 50NH	BIT	RW				
116	2	2	51P Pickup	A51P	BIT	RW				
116	3	2	51G Pickup	A51N	BIT	RW				
116	4	2	50P2 Pickup	A 50PL	BIT	RW				
116	5	2	50G2 Pickup	A 50NL	BIT	RW				
116	6	2	49 Alarm	A 49	BIT	RW				
116	8	2	50P1 disabled (by DI)	IE50PH	BIT	RW				
116	9	2	50G1 disabled (by DI)	IE50NH	BIT	RW				
116	10	2	51P disabled (by DI)	I E51P	BIT	RW				
116	11	2	51G disabled (by DI)	I E51N	BIT	RW				
116	12	2	50P2 disabled (by DI)	IE50PL	BIT	RW				
116	13	2	50G2 disabled (by DI)	IE50NL	BIT	RW				
116	14	2	49 disabled (by DI)	I E49	BIT	RW				
116	15	2	Trip disabled (by DI)	D INH	BIT	RW				
117	0	2	50P1 Trip	D 50ph	BIT	RW				
117	1	2	50G1 Trip	D 50nh	BIT	RW				
117	2	2	51P Trip	D51p	BIT	RW				
117	3	2	51G Trip	D51n	BIT	RW				
117	4	2	50P2 Trip	D 50pl	BIT	RW				
117	5	2	50G2 Trip	D 50nl	BIT	RW				
117	6	2	49 Trip	D49	BIT	RW				
117	7	2	General trip	DISGEN	BIT	RW				
117	9	2	Protection status	E PROT	BIT	RW				
117	10	2	Output 1	aux1	BIT	RW				
117	11	2	Output 2	aux2	BIT	RW				
117	12	2	Output 3	aux3	BIT	RW				
117	13	2	Output 4	aux4	BIT	RW				
117	14	2	Digital Input 1	ENT 1	BIT	RW				
117	15	2	Digital Input 2	ENT 2	BIT	RW				
118	1	2	Sett. change disable	ihca	BIT	RW				
118	2	2	Trip operation by input	ORD D	BIT	RW				
118	6	2	Settings group change	C TAB	BIT	RW				
118	7	2	Oscillo trigg by DI	Gosc	BIT	RW				
118	10	2	Oscillo trigg by comm	STOC	BIT	RW				
118	13	2	Settings change	C AJUS	BIT	RW				
118	14	2	EEPROM Failure	SE2P	BIT	RW				
118	15	2	User settings	Adef	BIT	RW				
119	0	2	Function	Function	BIT	RW				
119	1	2	Function	Function	BIT	RW				
119	2	2	Autorecloser Function	AR Function	BIT	RW				
011A	0	2	AR 50P1 Permission Init	AR 50P1 Init	BIT	RW				

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011A	1	2	AR 50G1 Permission Init	AR 50G1 Init	BIT	RW				
011A	2	2	AR 51P Permission Init	AR 51P Init	BIT	RW				
011A	3	2	AR 51G Permission Init	AR 51G Init	BIT	RW				
011A	4	2	AR 50P2 Permission Init	AR 50P2 Init	BIT	RW				
011A	5	2	AR 50G2 Permission Init	AR 50G2 Init	BIT	RW				
011A	6	2	AR 49 Permission Init	AR 49 Init	BIT	RW				
011A	7	2	AR External Permission Init	AR EXTERN Init	BIT	RW				
011B	0	2	AR 50P1 Shot 1 Permission	AR 50P1 Shot 1	BIT	RW				
011B	1	2	AR 50G1 Shot 1 Permission	AR 50G1 Shot 1	BIT	RW				
011B	2	2	AR 51P Shot 1 Permission	AR 51P Shot 1	BIT	RW				
011B	3	2	AR 51G Shot 1 Permission	AR 51G Shot 1	BIT	RW				
011B	4	2	AR 50P2 Shot 1 Permission	AR 50P2 Shot 1	BIT	RW				
011B	5	2	AR 50G2 Shot 1 Permission	AR 50G2 Shot 1	BIT	RW				
011B	6	2	AR 49 Shot 1 Permission	AR 49 Shot 1	BIT	RW				
011C	0	2	AR 50P1 Shot 2 Permission	AR 50P1 Shot 2	BIT	RW				
011C	1	2	AR 50G1 Shot 2 Permission	AR 50G1 Shot 2	BIT	RW				
011C	2	2	AR 51P Shot 2 Permission	AR 51P Shot 2	BIT	RW				
011C	3	2	AR 51G Shot 2 Permission	AR 51G Shot 2	BIT	RW				
011C	4	2	AR 50P2 Shot 2 Permission	AR 50P2 Shot 2	BIT	RW				
011C	5	2	AR 50G2 Shot 2 Permission	AR 50G2 Shot 2	BIT	RW				
011C	6	2	AR 49 Shot 2 Permission	AR 49 Shot 2	BIT	RW				
011D	0	2	AR 50P1 Shot 3 Permission	AR 50P1 Shot 3	BIT	RW				
011D	1	2	AR 50G1 Shot 3 Permission	AR 50G1 Shot 3	BIT	RW				
011D	2	2	AR 51P Shot 3 Permission	AR 51P Shot 3	BIT	RW				
011D	3	2	AR 51G Shot 3 Permission	AR 51G Shot 3	BIT	RW				
011D	4	2	AR 50P2 Shot 3 Permission	AR 50P2 Shot 3	BIT	RW				
011D	5	2	AR 50G2 Shot 3 Permission	AR 50G2 Shot 3	BIT	RW				
011D	6	2	AR 49 Shot 3 Permission	AR 49 Shot 3	BIT	RW				
011E	0	2	AR 50P1 Shot 4 Permission	AR 50P1 Shot 4	BIT	RW				
011E	1	2	AR 50G1 Shot 4 Permission	AR 50G1 Shot 4	BIT	RW				
011E	2	2	AR 51P Shot 4 Permission	AR 51P Shot 4	BIT	RW				
011E	3	2	AR 51G Shot 4 Permission	AR 51G Shot 4	BIT	RW				
011E	4	2	AR 50P2 Shot 4 Permission	AR 50P2 Shot 4	BIT	RW				
011E	5	2	AR 50G2 Shot 4 Permission	AR 50G2 Shot 4	BIT	RW				
011E	6	2	AR 49 Shot 4 Permission	AR 49 Shot 4	BIT	RW				

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011F		4	Outage Time	Outage Time	FLOAT32(INTEL)	RW	0	60	1000	s
121		4	On Load Time	On Load Time	FLOAT32(INTEL)	RW	0	60	1000	s
123		4	Phase IOC Mult	Phase IOC Mult	FLOAT32(INTEL)	RW	1	5	100	
125		4	Phase TOC Mult	Phase TOC Mult	FLOAT32(INTEL)	RW	1	5	100	
260		6	Date & Time	Date & Time	DATE/TIME	RO	0	60	100	s
263		6	Firmware Rev	Firmware Rev	BYTES ARRAY	RO				
266		16	Order Code	Order Code	BYTES ARRAY	RO				
026E		16	Relay Name	Relay Name	BYTES ARRAY	RO				
027B		4	Last phase trip	Z2	BYTES ARRAY	RO				
027D		4	Last trip current	Z3	FLOAT32(INTEL)	RO				1 A
281		6	LTU Date & Time	f h	DATE/TIME	RO				
028A	0	2	Trip LED	LD	BIT	RO				
028A	1	2	READY	LR	BIT	RO				
028A	2	2	LED 1	L1	BIT	RO				
028A	3	2	LED 2	L2	BIT	RO				
028A	4	2	LED 3	L3	BIT	RO				
028A	5	2	LED 4	L4	BIT	RO				
028B	0	2	50P1a Pickup	a 50HA	BIT	RO				
028B	1	2	50P1b Pickup	a 50HB	BIT	RO				
028B	2	2	50P1c Pickup	a 50HC	BIT	RO				
028B	4	2	50P2a Pickup	a 50LA	BIT	RO				
028B	5	2	50P2b Pickup	a 50LB	BIT	RO				
028B	6	2	50P2c Pickup	a 50LC	BIT	RO				
028B	8	2	51Pa Pickup	a 51 A	BIT	RO				
028B	9	2	51Pb Pickup	a 51 B	BIT	RO				
028B	10	2	51Pc Pickup	a 51 C	BIT	RO				
028E	1	2	50G1 Pickup	a 50NH	BIT	RO				
028E	3	2	51G Pickup	a 51N	BIT	RO				
028E	5	2	50G2 Pickup	a 50NL	BIT	RO				
028E	6	2	49 Alarm	aa49	BIT	RO				
028E	7	2	Pickup	a GEN	BIT	RO				
028F	0	2	50P1 Trip	d 50PH	BIT	RO				
028F	1	2	50G1 Trip	d 50NH	BIT	RO				
028F	2	2	51P Trip	d 51P	BIT	RO				
028F	3	2	51G Trip	d 51N	BIT	RO				
028F	4	2	50P2 Trip	d 50PL	BIT	RO				
028F	5	2	50G2 Trip	d 50NL	BIT	RO				
028F	6	2	49 Trip	dd49	BIT	RO				
028F	8	2	TRIP	d	BIT	RO				
028F	9	2	ALARM	al	BIT	RO				
028F	10	2	Output 1	Output 1	BIT	RO				
028F	11	2	Output 2	Output 2	BIT	RO				
028F	12	2	Output 3	Output 3	BIT	RO				
028F	13	2	Output 4	Output 4	BIT	RO				
028F	14	2	Input 1	Input 1	BIT	RO				
028F	15	2	Input 2	Input 2	BIT	RO				
290	1	2	Sett. change disable	EDICAJ	BIT	RO				

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290	6	2	Group change	EDCTAB	BIT	RO				
290	9	2	Breaker Closed	EST52	BIT	RO				
290	14	2	EEPROM failure	F1	BIT	RO				
290	15	2	User Settings	AU	BIT	RO				
291	3	2	ACTIVE GROUP	T AC	BIT	RO				
291	4	2	Frequency	frec	BIT	RO				
291	5	2	Local	LOCREM	BIT	RO				
293	0	2	50 1a Trip	DIS 50HA	BIT	RO				
293	1	2	50 1b Trip	DIS 50HB	BIT	RO				
293	2	2	50 1c Trip	DIS 50HC	BIT	RO				
293	4	2	50 2a Trip	DIS 50LA	BIT	RO				
293	5	2	50 2b Trip	DIS 50LB	BIT	RO				
293	6	2	50 2c Trip	DIS 50LC	BIT	RO				
293	8	2	51a Trip	DIS 51A	BIT	RO				
293	9	2	51b Trip	DIS 51B	BIT	RO				
293	10	2	51c Trip	DIS 51C	BIT	RO				
295		4	Phase A Current	Phase A Current	FLOAT32(INTEL)	RO				1 A
297		4	Phase B Current	Phase B Current	FLOAT32(INTEL)	RO				1 A
299		4	Phase C Current	Phase C Current	FLOAT32(INTEL)	RO				1 A
029B		4	Ground Current	Ground Current	FLOAT32(INTEL)	RO				1 A
029D		4	TH Capacity Used	TH Capacity Used	FLOAT32(INTEL)	RO				1
02A3		2	OSC. NUMBER	OS	UINT16(INTEL)	RO				1
02A5		2	All events	St	UINT16(INTEL)	RO				1
02BF		1024	ALL EVENTS BUFFER	SUCt	BUFFER	RO				

Memory Map of EPM6000

The Modbus memory map is shown below. Additional notes indicated in the memory map (“See Note ...”) are located at the end of the table, as well as a description of the format codes.

Table 5-1: Modbus Memory Map

Addr	Size	Description	Format	Range	Units	Notes
Identification Block (read only; block size = 21 bytes)						
0001	8	Meter name	ASCII	---	---	16 ASCII characters
0009	8	Meter serial number	ASCII	---	---	16 ASCII characters
0017	1	Reserved	---	---	---	
0018	2	Firmware version	ASCII	---	---	4 ASCII characters
0020	1	Map version	UINT16	0 to 65535	---	
0021	1	Meter configuration	UINT16	50, 60		Bit mapped ----- --FFFFFF = calibration freq.
Primary Readings Block (read only; block size = 28 bytes)						
1000	2	Volts A-N	FLOAT	0 to 9999M	volts	
1002	2	Volts B-N	FLOAT	0 to 9999M	volts	
1004	2	Volts C-N	FLOAT	0 to 9999M	volts	
1006	2	Volts A-B	FLOAT	0 to 9999M	volts	
1008	2	Volts B-C	FLOAT	0 to 9999M	volts	
1010	2	Volts C-A	FLOAT	0 to 9999M	volts	
1012	2	Current phase A	FLOAT	0 to 9999M	amps	
1014	2	Current phase B	FLOAT	0 to 9999M	amps	
1016	2	Current phase C	FLOAT	0 to 9999M	amps	
1018	2	Real power, three-phase total	FLOAT	-9999M to 9999M	watts	
1020	2	Reactive power, three-phase total	FLOAT	-9999M to 9999M	vars	
1022	2	Apparent power, three-phase total	FLOAT	-9999M to 9999M	VA	
1024	2	Power factor, three-phase total	FLOAT	-1.0 to 1.0	---	
1026	2	Frequency	FLOAT		Hz	
Primary Energy Block (read only; block size = 18 bytes)						
1100	2	Received watt-hours	SINT32	0 to 99999999, 0 to - 99999999	Wh	See Notes 1, 2
1102	2	Delivered watt-hours	SINT32	0 to 99999999, 0 to - 99999999	Wh	See Notes 1, 2
1104	2	Net watt-hours	SINT32	-99999999 to 99999999		See Note 2
1106	2	Total watt-hours	SINT32	0 to 99999999		See Note 2
1108	2	Positive var-hours	SINT32	0 to 99999999		See Note 2

1110	2	Negative var-hours	SINT32	0 to 99999999		See Note 2
1112	2	Net var-hours	SINT32	-99999999 to 99999999		See Note 2
1114	2	Total var-hours	SINT32	0 to 99999999		See Note 2
1116	2	Total VA-hours	SINT32	0 to 99999999		See Note 2
Primary Demand Block (read only; block size = 20 bytes)						
2000	2	Average phase A current	FLOAT	0 to 9999M	amps	
2002	2	Average phase B current	FLOAT	0 to 9999M	amps	
2004		Average phase C current	FLOAT	0 to 9999M	amps	
2006		Average 3-phase positive real power	FLOAT	-9999M to 9999M	watts	
2008		Average 3-ph positive reactive power	FLOAT	-9999M to 9999M	vars	
2010		Average 3-phase negative real power	FLOAT	-9999M to 9999M	watts	
2012		Average 3-ph negative reactive power	FLOAT	-9999M to 9999M	vars	
2014	2	Average three-phase apparent power	FLOAT	-9999M to 9999M	VA	
2016	2	Average three-phase positive PF	FLOAT	-1.00 to 1.00	---	
2018	2	Average three-phase negative PF	FLOAT	-1.00 to 1.00	---	
Primary Minimum Block (read only; block size = 34 bytes)						
3000	2	Minimum phase A-N voltage	FLOAT	0 to 9999M	volts	
3002	2	Minimum phase B-N voltage	FLOAT	0 to 9999M	volts	
3004	2	Minimum phase C-N voltage	FLOAT	0 to 9999M	volts	
3006	2	Minimum phase A-B voltage	FLOAT	0 to 9999M	volts	
3008	2	Minimum phase B-C voltage	FLOAT	0 to 9999M	volts	
3010	2	Minimum phase C-A voltage	FLOAT	0 to 9999M	volts	
3012	2	Minimum average demand, phase A current	FLOAT	0 to 9999M	amps	
3014	2	Minimum average demand, phase B current	FLOAT	0 to 9999M	amps	
3016	2	Minimum average demand, phase C current	FLOAT	0 to 9999M	amps	
3018	2	Minimum average demand, three-phase positive real power	FLOAT	0 to 9999M	watts	
3020	2	Minimum average demand, three-phase positive reactive power	FLOAT	0 to 9999M	vars	
3022	2	Minimum average demand, three-phase negative real power	FLOAT	0 to 9999M	watts	
3024	2	Minimum average demand, three-phase negative reactive power	FLOAT	0 to 9999M	vars	
3026	2	Minimum average demand, three-phase apparent power	FLOAT	-9999M to 9999M	VA	
3028	2	Minimum average demand, three-phase positive power factor	FLOAT	-1.00 to 1.00	---	

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3030	2	Minimum average demand, three-phase negative power factor	FLOAT	-1.00 to 1.00	---	
3032	2	Minimum frequency	FLOAT	0 to 65.00	Hz	
Primary Maximum Block (read only; block size = 34 bytes)						
3100	2	Maximum phase A-N voltage	FLOAT	0 to 9999M	volts	
3102	2	Maximum phase B-N voltage	FLOAT	0 to 9999M	volts	
3104	2	Maximum phase C-N voltage	FLOAT	0 to 9999M	volts	
3106	2	Maximum phase A-B voltage	FLOAT	0 to 9999M	volts	
3108	2	Maximum phase B-C voltage	FLOAT	0 to 9999M	volts	
3110	2	Maximum phase C-A voltage	FLOAT	0 to 9999M	volts	
3112	2	Maximum average demand, phase A current	FLOAT	0 to 9999M	amps	
3114	2	Maximum average demand, phase B current	FLOAT	0 to 9999M	amps	
3116	2	Maximum average demand, phase C current	FLOAT	0 to 9999M	amps	
3118	2	Maximum average demand, three-phase positive real power	FLOAT	0 to 9999M	watts	
3120	2	Maximum average demand, three-phase positive reactive power	FLOAT	0 to 9999M	vars	
3122	2	Maximum average demand, three-phase negative real power	FLOAT	0 to 9999M	watts	
3124	2	Maximum average demand, three-phase negative reactive power	FLOAT	0 to 9999M	vars	
3126	2	Maximum average demand, three-phase apparent power	FLOAT	-9999M to 9999M	VA	
3128	2	Maximum average demand, three-phase positive power factor	FLOAT	-1.00 to 1.00	---	
3130	2	Maximum average demand, three-phase negative power factor	FLOAT	-1.00 to 1.00	---	
3132	2	Maximum frequency	FLOAT	0 to 65.00	Hz	
Phase Angle Block (read only; block size = 6 bytes)						
4100	1	Phase A current angle	SINT16	0 to 10000	degrees	
4101	1	Phase B current angle	SINT16	0 to 10000	degrees	
4102	1	Phase C current angle	SINT16	0 to 10000	degrees	
4103	1	Phase A-B voltage angle	SINT16	0 to 10000	degrees	
4104	1	Phase B-C voltage angle	SINT16	0 to 10000	degrees	
4105	1	Phase C-A voltage angle	SINT16	0 to 10000	degrees	
Status Block (read only; block size = 4 bytes)						
5000	1	Meter status	UINT16	bit-mapped	---	See Note 3
5001	1	Reserved	---	---	---	
5002	2	Time since reset	UINT32	0 to 4294967294	ms	In steps of 4 ms; counter wraps around after maximum count
Resets Block (write only; block size = 2 bytes)						
20000	1	Reset maximum/minimum blocks	UINT16	---	---	See Notes 4 and 5

20001	1	Reset energy accumulators	UINT16	---	---	See Notes 4 and 5
Meter Programming Block (read/conditional write; block size = 6 bytes)						
22000	1	Initiate programmable settings update	UINT16	---	---	Meter enters programmable settings update mode; see Note 5
22001	1	Terminate programmable settings update	UINT16	any value	---	Meter leaves programmable settings update mode via reset
22002	1	Calculate programmable settings checksum	UINT16	---	---	Meter calculates checksum on RAM copy of programmable settings block
2203	1	Programmable settings checksum	UINT16	---	---	See Note 6
23000	1	Initiate meter firmware	UINT16	---	---	Not valid in programmable settings update mode; see Note 5
Other Commands Block (read/write; block size = 1 byte)						
25000	1	Force meter restart	UINT16	---	---	Causes a watchdog reset, always reads zero; see Note 5
Encryption Block (read/write; block size = 12 bytes)						
26000	12	Perform a secure operation	UINT16	---	---	Encrypted command to read password or change meter type
Basic Setups Block (write only in programmable settings mode; block size = 27 bytes)						
30000	1	CT multiplier and denominator	2BYTE	high: 1, 5 low: 1, 10, 100	---	High byte is the denominator (read only); Low byte is the multiplier
30001	1	CT numerator	UINT16	1 to 9999		
30002	1	PT numerator	UINT16	1 to 9999		
30003	1	PT denominator	UINT16	1 to 9999		
30004	1	PT multiplier and hookup	2BYTE	high: 1, 10, 100 low: 0 to 3	---	See Note 7
30005	1	Averaging method	UINT16	bit-mapped	---	See Note 8
30006	1	Power and energy format	UINT16	bit-mapped	---	See Note 9
30007	1	Operating mode screen enabled	UINT16	bit-mapped	---	See Note 10
30008	7	Reserved	---	---	---	
30015	1	User setting flags	UINT16	bit-mapped		See Note 11
30016	1	Full-scale current (for load percentage of bar-graph)	UINT16	0 to 9999	---	If non-zero, this value replaces the CT numerator in the full-scale current calculation
30017	8	Meter designation	ASCII	---	---	16 ASCII characters
30025	1	COM1 setup	UINT16	bit-mapped	---	See Note 12
30026	1	COM2 setup	UINT16	bit-mapped	---	See Note 13

Memory Map Notes

The memory map notes are indicated by number below.

1. The Wh received and delivered values always have opposite signs. The Wh received value is positive for "view as load"; the Wh delivered value is positive for "view as generator".
2. All values are indicated as per power/energy formats, with the decimal point implied. The resolution of digits before the decimal point is unity, kilo, or mega, as per the power/energy format as defined in Note 9.

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3. The meter status bitmap is formatted as follows:

--EXNPCH SSSSSSSS

where the EXNPCH section of the bitmap represents the EEPROM block OK flags:

E = energy
 X = maximum
 N = minimum
 P = programmable settings
 C = calibration
 H = header

and the SSSSSSSS section of the bitmap represents the state, where:

1 = run
 2 = limp
 10 = programmable settings update via buttons
 11 = programmable settings update via IrDA
 12 = programmable settings update via COM2

4. Reset commands do not make sense if the meter is in the LIMP state. An illegal function exception will be returned.
5. A password is required. If the password is incorrect, a valid response is returned but the command is not executed. Use "5555" for the password if password protection is disabled.
6. Writing to this register causes data to be permanently saved in the EEPROM. If there is an error while saving, a slave device failure exception is returned and programmable settings mode automatically terminates via reset.
7. For the PT multiplier and hookup, the high byte is the PT multiplier, and the low byte represents the hookup numeration as follows:

0 = 3-element Wye (9S)
 1 = 2 CT Delta (5S)
 3 = 2.5-element Wye (6S)

8. The averaging method bitmap is formatted as follows:

--IIIIIII B----SSS

where IIIIII represents the rolling interval (5, 15, 30, or 60), B represents the rolling status (0 = block; 1 = rolling), and SSS represents the number of sub-intervals (1 to 4)

9. The power and energy format bitmap is formatted as follows:

PPPP--NN -EEE-DDD

The PPPP section of the bitmap represents the power scale, where:

0 = unitary
 3 = kilo
 6 = mega
 8 = auto

The NN section of the bitmap represents the number of energy digits, where:

0 = 5 units
 1 = 6 units
 2 = 7 units
 3 = 8 units

The EEE section of the bitmap represents the energy scale, where:

0 = unitary
 3 = kilo
 6 = mega

The DDD section of the bitmap represents the energy digits after the decimal point (0 to 6).

10. The operating mode screen enables bitmap is formatted as follows:

----- EEEEEEEE

where the EEEEEEEE section represents the on/off state of the operating mode screen rows. The top to bottom rows are represented by the low order to high order bits, respectively.

11. The operating mode screen enables bitmap is formatted as follows:

----- SRP--WF-

The S bit represents the scroll functionality, where:

- 0 = scroll on
- 1 = scroll off

The R bit represents whether the password for reset is in use, where:

- 0 = password is on
- 1 = password is off

The P bit represents whether the password for reset is in use, where:

- 0 = password is on
- 1 = password is off

The W bit represents the power direction, where:

- 0 = view as load
- 1 = view as generator

The F bit represents the flip power factor sign, where:

- 0 = yes
- 1 = no

12. The COM1 setup bitmap is formatted as follows:

----DDDD -0100110

The DDDD section of the bitmap represents the reply delay (multiplied by 50 ms)

13. The COM2 setup bitmap is formatted as follows:

----DDDD -PPP-BBB

The DDDD section of the bitmap represents the reply delay (multiplied by 50 ms)

The PPP section of the bitmap represents the protocol, where:

- 1 = Modbus RTU
- 2 = Modbus ASCII

The BBB section of the bitmap represents the baud rate, where:

- 1 = 9600 bps
- 2 = 19200 bps
- 4 = 38400 bps
- 6 = 57600 bps

Memory Map Data Formats

The data format codes indicated in the **Format** column of the Modbus memory map are described below.

- **ASCII**: ASCII characters packed 2 per register in high-low order and without any termination characters. For example, " EPM 6000 " would be four registers containing 0x4550, 0x4D20, 0x3630, 0x3030.
- **2BYTE**: 8-bit bytes packed 2 per register. See comments column for any additional details regarding the interpretation of each byte.

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- **UINT16**: 16-bit unsigned integer.
- **UINT32**: 32-bit unsigned integer. The lower addressed register is the high order half.
- **SINT16**: 16-bit signed integer.
- **SINT32**: 32-bit signed integer. The lower addressed register is the high order half.
- **FLOAT**: 32-bit IEEE floating-point number spanning two registers. The lower addressed register is the high order half (that is, it contains the exponent).

EPM4000 Modbus Memory Map

Address	Description	Units and Scales	Type	Data Type
0000	Meter Serial Number	Hex Digits (x2)	R	16 Bit Unsigned Integer
0002	Meter Serial Number Extension	Hex Digits (x2)	R	16 Bit Unsigned Integer
0004	Meter Version Number	Hex Digits (x2)	R	16 Bit Unsigned Integer
0006	Meter Version Number Extension	Hex Digits (x2)	R	16 Bit Unsigned Integer
0008	Meter Modbus Address		R	16 Bit Unsigned Integer
0009	Baud Rate		R	16 Bit Unsigned Integer
0012	Meter Status		R	16 Bit Unsigned Integer
0013	Meter Ready		R	16 Bit Unsigned Integer
0014	Number of Meters Configured		R	16 Bit Unsigned Integer
0015	Number of Real-Time Points Configured		R	16 Bit Unsigned Integer
0016	Number of Interval Points Configured		R	16 Bit Unsigned Integer
0017	Number of Max/Min Points Configured		R	16 Bit Unsigned Integer
0018	Maximum Number of Intervals That Can Be Recorded		R	16 Bit Unsigned Integer
0019	Number of slots configured for Scan Transponder		R	16 Bit Unsigned Integer
0020	Current slot being read in Scan Transponder		RW	16 Bit Unsigned Integer
0049	Store Interval Length	Minutes	R	16 Bit Unsigned Integer
0050	Internal Time - Hours/Minutes	Hours/Minutes	R	16 Bit Unsigned Integer
0051	Internal Time - Seconds	Seconds	R	16 Bit Unsigned Integer Seconds: 0-59

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0052	Internal Date - Month/Day	Month/Day	R	16 Bit Month: 1=Jan., 12=Dec. (bitmask = FF00) Day: 1-31 (bitmask = 00FF)
0053	Interval Date - Year	Year	R	16 Bit Unsigned Integer
0054	Internal Time - Hours/Minutes	Hours/Minutes	W	16 Bit Hours: 0-23 (bitmask = FF00) Minutes: 0-59 (bitmask = 00FF)
0055	Internal Time - Seconds	Month/Day	W	16 Bit Unsigned Integer Seconds: 0-59
0056	Internal Date - Month/Day	Year	W	16 Bit Month: 1=Jan., 12=Dec. (bitmask = FF00) Day: 1-31 (bitmask = 00FF)
0057	Interval Date - Year		W	16 Bit Unsigned Integer
0058	Date/Time of Oldest Interval - Hours/Minutes	Hours/Minutes	R	16 Bit Hours: 0-23 (bitmask = FF00) Minutes: 0-59 (bitmask = 00FF)
0059	Date/Time of Oldest Interval - Month/Day	Month/Day	R	16 Bit Unsigned Integer
0060	Date/Time of Oldest Interval - Year	Year	R	16 Bit Unsigned Integer
0061	Date/Time of Newest Interval - Hours/Minutes	Hours/Minutes	R	16 Bit Hours: 0-23 (bitmask = FF00) Minutes: 0-59 (bitmask = 00FF)
0062	Date/Time of Newest Interval - Month/Day	Month/Day	R	16 Bit Month: 1=Jan., 12=Dec. (bitmask = FF00) Day: 1-31 (bitmask = 00FF)
0063	Date/Time of Newest Interval - Year	Year	R	16 Bit Unsigned Integer
0064	Date/Time of Currently Selected Interval - Hours/Minutes	Hours/Minutes	RW	16 Bit Hours: 0-23 (bitmask = FF00) Minutes: 0-59 (bitmask = 00FF)
0065	Date/Time of Currently Selected Interval - Month/Day	Month/Day	RW	16 Bit Month: 1=Jan., 12=Dec. (bitmask = FF00) Day: 1-31 (bitmask = 00FF)
0066	Date/Time of Currently Selected Interval - Year	Year	RW	16 Bit Unsigned Integer

EPM4000 Modbus Memory Map

0067	Data Ready Flag		RW	16 Bits: Mask out/ignore Bit 15. 0=Data is ready for read 1=Populate Registers with data for Timestamp 2=Invalid Timestamp Requested
0099	Interval Data Qualifying Register		R	16 Bit Unsigned Integer
0100	Meter 1 3-Phase Totaled kW	kW	R	F1 (IEEE Float)
0102	Meter 1 3-Phase Totaled kVAR	kVAR	R	F1 (IEEE Float)
0104	Meter 1 3-Phase Totaled kVA	kVA	R	F1 (IEEE Float)
0106	Meter 1 3-Phase Totaled Power Factor	%	R	F1 (IEEE Float)
0108	Meter 2 3-Phase Totaled kW	kW	R	F1 (IEEE Float)
0110	Meter 2 3-Phase Totaled kVAR	kVAR	R	F1 (IEEE Float)
0112	Meter 2 3-Phase Totaled kVA	kVA	R	F1 (IEEE Float)
0114	Meter 2 3-Phase Totaled Power Factor	%	R	F1 (IEEE Float)
0116	Meter 3 3-Phase Totaled kW	kW	R	F1 (IEEE Float)
0118	Meter 3 3-Phase Totaled kVAR	kVAR	R	F1 (IEEE Float)
0120	Meter 3 3-Phase Totaled kVA	kVA	R	F1 (IEEE Float)
0122	Meter 3 3-Phase Totaled Power Factor	%	R	F1 (IEEE Float)
0124	Meter 4 3-Phase Totaled kW	kW	R	F1 (IEEE Float)
0126	Meter 4 3-Phase Totaled kVAR	kVAR	R	F1 (IEEE Float)
0128	Meter 4 3-Phase Totaled kVA	kVA	R	F1 (IEEE Float)
0130	Meter 4 3-Phase Totaled Power Factor	%	R	F1 (IEEE Float)
0132	Meter 5 3-Phase Totaled kW	kW	R	F1 (IEEE Float)
0134	Meter 5 3-Phase Totaled kVAR	kVAR	R	F1 (IEEE Float)
0136	Meter 5 3-Phase Totaled kVA	kVA	R	F1 (IEEE Float)
0138	Meter 5 3-Phase Totaled Power Factor	%	R	F1 (IEEE Float)
0140	Meter 6 3-Phase Totaled kW	kW	R	F1 (IEEE Float)
0142	Meter 6 3-Phase Totaled kVAR	kVAR	R	F1 (IEEE Float)
0144	Meter 6 3-Phase Totaled kVA	kVA	R	F1 (IEEE Float)
0146	Meter 6 3-Phase Totaled Power Factor	%	R	F1 (IEEE Float)
0148	Meter 7 3-Phase Totaled kW	kW	R	F1 (IEEE Float)
0150	Meter 7 3-Phase Totaled kVAR	kVAR	R	F1 (IEEE Float)
0152	Meter 7 3-Phase Totaled kVA	kVA	R	F1 (IEEE Float)
0154	Meter 7 3-Phase Totaled Power Factor	%	R	F1 (IEEE Float)
0156	Meter 8 3-Phase Totaled kW	kW	R	F1 (IEEE Float)
0158	Meter 8 3-Phase Totaled kVAR	kVAR	R	F1 (IEEE Float)
0160	Meter 8 3-Phase Totaled kVA	kVA	R	F1 (IEEE Float)
0162	Meter 8 3-Phase Totaled Power Factor	%	R	F1 (IEEE Float)
0354	Frequency (Phase A)	Hz	R	F1 (IEEE Float)
0362	Voltage (A-N)	V	R	F1 (IEEE Float)

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0364	Voltage (B-N)	V	R	F1 (IEEE Float)
0366	Voltage (C-N)	V	R	F1 (IEEE Float)
0368	Voltage (CT01)	V	R	F1 (IEEE Float)
0370	Amps (CT01)	A	R	F1 (IEEE Float)
0372	kW (CT01)	kW	R	F1 (IEEE Float)
0374	kVAR (CT01)	kVAR	R	F1 (IEEE Float)
0376	kVA (CT01)	kVA	R	F1 (IEEE Float)
0378	Voltage (CT02)	V	R	F1 (IEEE Float)
0380	Amps (CT02)	A	R	F1 (IEEE Float)
0382	kW (CT02)	kW	R	F1 (IEEE Float)
0384	kVAR (CT02)	kVAR	R	F1 (IEEE Float)
0386	kVA (CT02)	kVA	R	F1 (IEEE Float)
0388	Voltage (CT03)	V	R	F1 (IEEE Float)
0390	Amps (CT03)	A	R	F1 (IEEE Float)
0392	kW (CT03)	kW	R	F1 (IEEE Float)
0394	kVAR (CT03)	kVAR	R	F1 (IEEE Float)
0396	kVA (CT03)	kVA	R	F1 (IEEE Float)
0398	Voltage (CT04)	V	R	F1 (IEEE Float)
0400	Amps (CT04)	A	R	F1 (IEEE Float)
0402	kW (CT04)	kW	R	F1 (IEEE Float)
0404	kVAR (CT04)	kVAR	R	F1 (IEEE Float)
0406	kVA (CT04)	kVA	R	F1 (IEEE Float)
0408	Voltage (CT05)	V	R	F1 (IEEE Float)
0410	Amps (CT05)	A	R	F1 (IEEE Float)
0412	kW (CT05)	kW	R	F1 (IEEE Float)
0414	kVAR (CT05)	kVAR	R	F1 (IEEE Float)
0416	kVA (CT05)	kVA	R	F1 (IEEE Float)
0418	Voltage (CT06)	V	R	F1 (IEEE Float)
0420	Amps (CT06)	A	R	F1 (IEEE Float)
0422	kW (CT06)	kW	R	F1 (IEEE Float)
0424	kVAR (CT06)	kVAR	R	F1 (IEEE Float)
0426	kVA (CT06)	kVA	R	F1 (IEEE Float)
0428	Voltage (CT07)	V	R	F1 (IEEE Float)
0430	Amps (CT07)	A	R	F1 (IEEE Float)
0432	kW (CT07)	kW	R	F1 (IEEE Float)
0434	kVAR (CT07)	kVAR	R	F1 (IEEE Float)
0436	kVA (CT07)	kVA	R	F1 (IEEE Float)
0438	Voltage (CT08)	V	R	F1 (IEEE Float)
0440	Amps (CT08)	A	R	F1 (IEEE Float)
0442	kW (CT08)	kW	R	F1 (IEEE Float)
0444	kVAR (CT08)	kVAR	R	F1 (IEEE Float)
0446	kVA (CT08)	kVA	R	F1 (IEEE Float)
0448	Voltage (CT09)	V	R	F1 (IEEE Float)
0450	Amps (CT09)	A	R	F1 (IEEE Float)
0452	kW (CT09)	kW	R	F1 (IEEE Float)
0454	kVAR (CT09)	kVAR	R	F1 (IEEE Float)
0456	kVA (CT09)	kVA	R	F1 (IEEE Float)

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0458	Voltage (CT10)	V	R	F1 (IEEE Float)
0460	Amps (CT10)	A	R	F1 (IEEE Float)
0462	kW (CT10)	kW	R	F1 (IEEE Float)
0464	kVAR (CT10)	kVAR	R	F1 (IEEE Float)
0466	kVA (CT10)	kVA	R	F1 (IEEE Float)
0468	Voltage (CT11)	V	R	F1 (IEEE Float)
0470	Amps (CT11)	A	R	F1 (IEEE Float)
0472	kW (CT11)	kW	R	F1 (IEEE Float)
0474	kVAR (CT11)	kVAR	R	F1 (IEEE Float)
0476	kVA (CT11)	kVA	R	F1 (IEEE Float)
0478	Voltage (CT12)	V	R	F1 (IEEE Float)
0480	Amps (CT12)	A	R	F1 (IEEE Float)
0482	kW (CT12)	kW	R	F1 (IEEE Float)
0484	kVAR (CT12)	kVAR	R	F1 (IEEE Float)
0486	kVA (CT12)	kVA	R	F1 (IEEE Float)
0488	Voltage (CT13)	V	R	F1 (IEEE Float)
0490	Amps (CT13)	A	R	F1 (IEEE Float)
0492	kW (CT13)	kW	R	F1 (IEEE Float)
0494	kVAR (CT13)	kVAR	R	F1 (IEEE Float)
0496	kVA (CT13)	kVA	R	F1 (IEEE Float)
0498	Voltage (CT14)	V	R	F1 (IEEE Float)
0500	Amps (CT14)	A	R	F1 (IEEE Float)
0502	kW (CT14)	kW	R	F1 (IEEE Float)
0504	kVAR (CT14)	kVAR	R	F1 (IEEE Float)
0506	kVA (CT14)	kVA	R	F1 (IEEE Float)
0508	Voltage (CT15)	V	R	F1 (IEEE Float)
0510	Amps (CT15)	A	R	F1 (IEEE Float)
0512	kW (CT15)	kW	R	F1 (IEEE Float)
0514	kVAR (CT15)	kVAR	R	F1 (IEEE Float)
0516	kVA (CT15)	kVA	R	F1 (IEEE Float)
0518	Voltage (CT16)	V	R	F1 (IEEE Float)
0520	Amps (CT16)	A	R	F1 (IEEE Float)
0522	kW (CT16)	kW	R	F1 (IEEE Float)
0524	kVAR (CT16)	kVAR	R	F1 (IEEE Float)
0526	kVA (CT16)	kVA	R	F1 (IEEE Float)
0528	Voltage (CT17)	V	R	F1 (IEEE Float)
0530	Amps (CT17)	A	R	F1 (IEEE Float)
0532	kW (CT17)	kW	R	F1 (IEEE Float)
0534	kVAR (CT17)	kVAR	R	F1 (IEEE Float)
0536	kVA (CT17)	kVA	R	F1 (IEEE Float)
0538	Voltage (CT18)	V	R	F1 (IEEE Float)
0540	Amps (CT18)	A	R	F1 (IEEE Float)
0542	kW (CT18)	kW	R	F1 (IEEE Float)
0544	kVAR (CT18)	kVAR	R	F1 (IEEE Float)
0546	kVA (CT18)	kVA	R	F1 (IEEE Float)
0548	Voltage (CT19)	V	R	F1 (IEEE Float)
0550	Amps (CT19)	A	R	F1 (IEEE Float)

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0552	kW (CT19)	kW	R	F1 (IEEE Float)
0554	kVAR (CT19)	kVAR	R	F1 (IEEE Float)
0556	kVA (CT19)	kVA	R	F1 (IEEE Float)
0558	Voltage (CT20)	V	R	F1 (IEEE Float)
0560	Amps (CT20)	A	R	F1 (IEEE Float)
0562	kW (CT20)	kW	R	F1 (IEEE Float)
0564	kVAR (CT20)	kVAR	R	F1 (IEEE Float)
0566	kVA (CT20)	kVA	R	F1 (IEEE Float)
0568	Voltage (CT21)	V	R	F1 (IEEE Float)
0570	Amps (CT21)	A	R	F1 (IEEE Float)
0572	kW (CT21)	kW	R	F1 (IEEE Float)
0574	kVAR (CT21)	kVAR	R	F1 (IEEE Float)
0576	kVA (CT21)	kVA	R	F1 (IEEE Float)
0578	Voltage (CT22)	V	R	F1 (IEEE Float)
0580	Amps (CT22)	A	R	F1 (IEEE Float)
0582	kW (CT22)	kW	R	F1 (IEEE Float)
0584	kVAR (CT22)	kVAR	R	F1 (IEEE Float)
0586	kVA (CT22)	kVA	R	F1 (IEEE Float)
0588	Voltage (CT23)	V	R	F1 (IEEE Float)
0590	Amps (CT23)	A	R	F1 (IEEE Float)
0592	kW (CT23)	kW	R	F1 (IEEE Float)
0594	kVAR (CT23)	kVAR	R	F1 (IEEE Float)
0596	kVA (CT23)	kVA	R	F1 (IEEE Float)
0598	Voltage (CT24)	V	R	F1 (IEEE Float)
0600	Amps (CT24)	A	R	F1 (IEEE Float)
0602	kW (CT24)	kW	R	F1 (IEEE Float)
0604	kVAR (CT24)	kVAR	R	F1 (IEEE Float)
0606	kVA (CT24)	kVA	R	F1 (IEEE Float)
0648	Meter 1 3-Phase kWh	kWh	R	F1 (IEEE Float)
0650	Meter 1 3-Phase kVARh	kVARh	R	F1 (IEEE Float)
0652	Meter 1 3-Phase kW	kW	R	F1 (IEEE Float)
0654	Meter 1 3-Phase kVAR	kVAR	R	F1 (IEEE Float)
0656	Meter 1 3-Phase kVA	kVA	R	F1 (IEEE Float)
0658	Meter 1 3-Phase Power Factor	%	R	F1 (IEEE Float)
0660	Meter 2 3-Phase kWh	kWh	R	F1 (IEEE Float)
0662	Meter 2 3-Phase kVARh	kVARh	R	F1 (IEEE Float)
0664	Meter 2 3-Phase kW	kW	R	F1 (IEEE Float)
0666	Meter 2 3-Phase kVAR	kVAR	R	F1 (IEEE Float)
0668	Meter 2 3-Phase kVA	kVA	R	F1 (IEEE Float)
0670	Meter 2 3-Phase Power Factor	%	R	F1 (IEEE Float)
0672	Meter 3 3-Phase kWh	kWh	R	F1 (IEEE Float)
0674	Meter 3 3-Phase kVARh	kVARh	R	F1 (IEEE Float)
0676	Meter 3 3-Phase kW	kW	R	F1 (IEEE Float)
0678	Meter 3 3-Phase kVAR	kVAR	R	F1 (IEEE Float)
0680	Meter 3 3-Phase kVA	kVA	R	F1 (IEEE Float)

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0682	Meter 3 3-Phase Power Factor	%	R	F1 (IEEE Float)
0684	Meter 4 3-Phase kWh	kWh	R	F1 (IEEE Float)
0686	Meter 4 3-Phase kVARH	kVARh	R	F1 (IEEE Float)
0688	Meter 4 3-Phase kW	kW	R	F1 (IEEE Float)
0690	Meter 4 3-Phase kVAR	kVAR	R	F1 (IEEE Float)
0692	Meter 4 3-Phase kVA	kVA	R	F1 (IEEE Float)
0694	Meter 4 3-Phase Power Factor	%	R	F1 (IEEE Float)
0696	Meter 5 3-Phase kWh	kWh	R	F1 (IEEE Float)
0698	Meter 5 3-Phase kVARH	kVARh	R	F1 (IEEE Float)
0700	Meter 5 3-Phase kW	kW	R	F1 (IEEE Float)
0702	Meter 5 3-Phase kVAR	kVAR	R	F1 (IEEE Float)
0704	Meter 5 3-Phase kVA	kVA	R	F1 (IEEE Float)
0706	Meter 5 3-Phase Power Factor	%	R	F1 (IEEE Float)
0708	Meter 6 3-Phase kWh	kWh	R	F1 (IEEE Float)
0710	Meter 6 3-Phase kVARH	kVARh	R	F1 (IEEE Float)
0712	Meter 6 3-Phase kW	kW	R	F1 (IEEE Float)
0714	Meter 6 3-Phase kVAR	kVAR	R	F1 (IEEE Float)
0716	Meter 6 3-Phase kVA	kVA	R	F1 (IEEE Float)
0718	Meter 6 3-Phase Power Factor	%	R	F1 (IEEE Float)
0720	Meter 7 3-Phase kWh	kWh	R	F1 (IEEE Float)
0722	Meter 7 3-Phase kVARH	kVARh	R	F1 (IEEE Float)
0724	Meter 7 3-Phase kW	kW	R	F1 (IEEE Float)
0726	Meter 7 3-Phase kVAR	kVAR	R	F1 (IEEE Float)
0728	Meter 7 3-Phase kVA	kVA	R	F1 (IEEE Float)
0730	Meter 7 3-Phase Power Factor	%	R	F1 (IEEE Float)
0732	Meter 8 3-Phase kWh	kWh	R	F1 (IEEE Float)
0734	Meter 8 3-Phase kVARH	kVARh	R	F1 (IEEE Float)
0736	Meter 8 3-Phase kW	kW	R	F1 (IEEE Float)
0738	Meter 8 3-Phase kVAR	kVAR	R	F1 (IEEE Float)
0740	Meter 8 3-Phase kVA	kVA	R	F1 (IEEE Float)
0742	Meter 8 3-Phase Power Factor	%	R	F1 (IEEE Float)
1000	Meter 1 THD Phase A	%	R	F1 (IEEE Float)
1002	Meter 1 Phase Angle A	Deg	R	F1 (IEEE Float)
1004	Meter 1 Phase-to-Phase Voltage A	V	R	F1 (IEEE Float)
1006	Meter 1 THD Phase B	%	R	F1 (IEEE Float)
1008	Meter 1 Phase Angle B	Deg	R	F1 (IEEE Float)
1010	Meter 1 Phase-to-Phase Voltage B	V	R	F1 (IEEE Float)
1012	Meter 1 THD Phase C	%	R	F1 (IEEE Float)
1014	Meter 1 Phase Angle C	Deg	R	F1 (IEEE Float)
1016	Meter 1 Phase-to-Phase Voltage C	V	R	F1 (IEEE Float)
1018	Meter 2 THD Phase A	%	R	F1 (IEEE Float)
1020	Meter 2 Phase Angle A	Deg	R	F1 (IEEE Float)
1022	Meter 2 Phase-to-Phase Voltage A	V	R	F1 (IEEE Float)
1024	Meter 2 THD Phase B	%	R	F1 (IEEE Float)
1026	Meter 2 Phase Angle B	Deg	R	F1 (IEEE Float)

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1028	Meter 2 Phase-to-Phase Voltage B	V	R	F1 (IEEE Float)
1030	Meter 2 THD Phase C	%	R	F1 (IEEE Float)
1032	Meter 2 Phase Angle C	Deg	R	F1 (IEEE Float)
1034	Meter 2 Phase-to-Phase Voltage C	V	R	F1 (IEEE Float)
1036	Meter 3 THD Phase A	%	R	F1 (IEEE Float)
1038	Meter 3 Phase Angle A	Deg	R	F1 (IEEE Float)
1040	Meter 3 Phase-to-Phase Voltage A	V	R	F1 (IEEE Float)
1042	Meter 3 THD Phase B	%	R	F1 (IEEE Float)
1044	Meter 3 Phase Angle B	Deg	R	F1 (IEEE Float)
1046	Meter 3 Phase-to-Phase Voltage B	V	R	F1 (IEEE Float)
1048	Meter 3 THD Phase C	%	R	F1 (IEEE Float)
1050	Meter 3 Phase Angle C	Deg	R	F1 (IEEE Float)
1052	Meter 3 Phase-to-Phase Voltage C	V	R	F1 (IEEE Float)
1054	Meter 4 THD Phase A	%	R	F1 (IEEE Float)
1056	Meter 4 Phase Angle A	Deg	R	F1 (IEEE Float)
1058	Meter 4 Phase-to-Phase Voltage A	V	R	F1 (IEEE Float)
1060	Meter 4 THD Phase B	%	R	F1 (IEEE Float)
1062	Meter 4 Phase Angle B	Deg	R	F1 (IEEE Float)
1064	Meter 4 Phase-to-Phase Voltage B	V	R	F1 (IEEE Float)
1066	Meter 4 THD Phase C	%	R	F1 (IEEE Float)
1068	Meter 4 Phase Angle C	Deg	R	F1 (IEEE Float)
1070	Meter 4 Phase-to-Phase Voltage C	V	R	F1 (IEEE Float)
1072	Meter 5 THD Phase A	%	R	F1 (IEEE Float)
1074	Meter 5 Phase Angle A	Deg	R	F1 (IEEE Float)
1076	Meter 5 Phase-to-Phase Voltage A	V	R	F1 (IEEE Float)
1078	Meter 5 THD Phase B	%	R	F1 (IEEE Float)
1080	Meter 5 Phase Angle B	Deg	R	F1 (IEEE Float)
1082	Meter 5 Phase-to-Phase Voltage B	V	R	F1 (IEEE Float)
1084	Meter 5 THD Phase C	%	R	F1 (IEEE Float)
1086	Meter 5 Phase Angle C	Deg	R	F1 (IEEE Float)
1088	Meter 5 Phase-to-Phase Voltage C	V	R	F1 (IEEE Float)
1090	Meter 6 THD Phase A	%	R	F1 (IEEE Float)
1092	Meter 6 Phase Angle A	Deg	R	F1 (IEEE Float)
1094	Meter 6 Phase-to-Phase Voltage A	V	R	F1 (IEEE Float)
1096	Meter 6 THD Phase B	%	R	F1 (IEEE Float)
1098	Meter 6 Phase Angle B	Deg	R	F1 (IEEE Float)
1100	Meter 6 Phase-to-Phase Voltage B	V	R	F1 (IEEE Float)
1102	Meter 6 THD Phase C	%	R	F1 (IEEE Float)
1104	Meter 6 Phase Angle C	Deg	R	F1 (IEEE Float)
1106	Meter 6 Phase-to-Phase Voltage C	V	R	F1 (IEEE Float)
1108	Meter 7 THD Phase A	%	R	F1 (IEEE Float)
1110	Meter 7 Phase Angle A	Deg	R	F1 (IEEE Float)
1112	Meter 7 Phase-to-Phase Voltage A	V	R	F1 (IEEE Float)
1114	Meter 7 THD Phase B	%	R	F1 (IEEE Float)
1116	Meter 7 Phase Angle B	Deg	R	F1 (IEEE Float)
1118	Meter 7 Phase-to-Phase Voltage B	V	R	F1 (IEEE Float)
1120	Meter 7 THD Phase C	%	R	F1 (IEEE Float)

EPM4000 Modbus Memory Map

1122	Meter 7 Phase Angle C	Deg	R	F1 (IEEE Float)
1124	Meter 7 Phase-to-Phase Voltage C	V	R	F1 (IEEE Float)
1126	Meter 8 THD Phase A	%	R	F1 (IEEE Float)
1128	Meter 8 Phase Angle A	Deg	R	F1 (IEEE Float)
1130	Meter 8 Phase-to-Phase Voltage A	V	R	F1 (IEEE Float)
1132	Meter 8 THD Phase B	%	R	F1 (IEEE Float)
1134	Meter 8 Phase Angle B	Deg	R	F1 (IEEE Float)
1136	Meter 8 Phase-to-Phase Voltage B	V	R	F1 (IEEE Float)
1138	Meter 8 THD Phase C	%	R	F1 (IEEE Float)
1140	Meter 8 Phase Angle C	Deg	R	F1 (IEEE Float)
1142	Meter 8 Phase-to-Phase Voltage C	V	R	F1 (IEEE Float)
2000	NUMPH_OFFSET		R	16 Bit Unsigned Integer
2001	DEMAND_WINDOW_OFFSET		R	16 Bit Unsigned Integer
2002	I_MULTIPLIER_TYPE_OFFSET		R	16 Bit Unsigned Integer
2003	NUM_PULSE_CTRS_OFFSET		R	16 Bit Unsigned Integer
2004	OVERLAP_OFFSET		R	16 Bit Unsigned Integer
2005	NUM_TOUS_OFFSET		R	16 Bit Unsigned Integer
2006	MDT_M_TABLE_REG_START		R	16 Bit Unsigned Integer
2007	NUM_MDT_M_TABLE_COLUMNS		R	16 Bit Unsigned Integer
2008	NUM_MDT_M_TABLE_REGS		R	16 Bit Unsigned Integer
2009	MDT_M_TABLE_REG_END		R	16 Bit Unsigned Integer

EPM2000 Modbus Memory Map

Address map for EPM2000			
for version 02.03.01 and above			
Communication setting Default :9600,Even, 1 stopbit			
Function Code		3	
Data format : MeterID+ Function code + Starting physical address + Address Length + CRC calculation			
Ex: 010339000002crc where crc will be calculated by SCADA			
Parameter	Register	Datatype	Physical address
max 50 parameter and min 1 parameter			
VA - Apparent Power - avg	43901	32 bit Float	3900
W - Active Power -avg	43903	32 bit Float	3902
VAR - Reactive Power - avg	43905	32 bit Float	3904
PF -Avg PF	43907	32 bit Float	3906
VLL - Line to Line avg Voltage	43909	32 bit Float	3908
VLN - Line to Neutral Voltage	43911	32 bit Float	3910
Amps- Avg Current	43913	32 bit Float	3912
Hz- Frequency	43915	32 bit Float	3914
R-phase Apparent Power	43917	32 bit Float	3916
W_r R-phase Active Power	43919	32 bit Float	3918
VAR_r R-phase Reactive Power	43921	32 bit Float	3920
PF_r R-phase PF	43923	32 bit Float	3922
VLLrY R-Y phase Voltage	43925	32 bit Float	3924
VLNr R-phase to Neutral Voltage	43927	32 bit Float	3926
A_r R-phase Current	43929	32 bit Float	3928
VA_y Y-phase Apparent Power	43931	32 bit Float	3930
W_y Y-phase Active Power	43933	32 bit Float	3932
VAR_y Y_phase Reactive Power	43935	32 bit Float	3934
PF_y Y_phase PF	43937	32 bit Float	3936
VLLyb Y_B phase Voltage	43939	32 bit Float	3938
VLNy Y_phase to Neutral Voltage	43941	32 bit Float	3940
A_y Y-phase Current	43943	32 bit Float	3942
VA_b B_phase Apparent Power	43945	32 bit Float	3944
W_b B_phase Active power	43947	32 bit Float	3946
VAR_b B_phase Reactive power	43949	32 bit Float	3948
PF_b B_phase PF	43951	32 bit Float	3950
VLLbr B_R phase voltage	43953	32 bit Float	3952
VLNb B_phase to Neutral Voltage	43955	32 bit Float	3954
A_b B_phase Current	43957	32 bit Float	3956
Fwd_VAh Forward Apparent Energy	43959	32 bit Float	3958
Fwd_Wh Forward Active Energy	43961	32 bit Float	3960
Fwd_VARh Inductive Forward ReActive Inductive Energy	43963	32 bit Float	3962
Fwd_VARh Capacitive Forward ReActive Capacitive Energy	43965	32 bit Float	3964
Rev_VAh Reverse Apparent Energy	43967	32 bit Float	3966
Rev_Wh Reverse Active Energy	43969	32 bit Float	3968
Rev_VARh Inductive Reverse Active Energy	43971	32 bit Float	3970
Rev_VARh Capacitive Reverse Active Energy	43973	32 bit Float	3972
PresentDemand Present Demand	43975	32 bit Float	3974

EPM2000 Modbus Memory Map

RisingDemand Rising Demand	43977	32 bit Float	3976
MaxDM Maximum Demand	43979	32 bit Float	3978
Reserved 40	43981	32 bit Float	3980
Reserved 41	43983	32 bit Float	3982
Reserved 42	43985	32 bit Float	3984
Reserved 43	43987	32 bit Float	3986
Reserved 44	43989	32 bit Float	3988
Reserved 45	43991	32 bit Float	3990
MaxDMTime Maximum Demand Occurence Time	43993	32-bit Long	3992
Fwd_Runsecs Forward Runseconds	43995	32-bit Long	3994
Rev_Runsecs Forward Runseconds	43997	32-bit Long	3996
Intr Number of Power Interruptions	43999	32-bit Long	3998

EPM1000 Modbus memory map

Decimal Address (R4 Type Registers)	Description	Units and Scales	Type	Data Type
0000	Meter Serial Number	Hex Digits (x2)	R	16 Bit Unsigned Integer
0002	Meter Serial Number Extension	Hex Digits (x2)	R	16 Bit Unsigned Integer
0004	Meter Version Number	Hex Digits (x2)	R	16 Bit Unsigned Integer
0006	Meter Version Number Extension	Hex Digits (x2)	R	16 Bit Unsigned Integer
0008	Meter Modbus Address		R	16 Bit Unsigned Integer
0009	Baud Rate		R	16 Bit Unsigned Integer
0012	Meter Status		R	16 Bit Unsigned Integer
0013	Meter Ready		R	16 Bit Unsigned Integer
0014	Number of Meters Configured		R	16 Bit Unsigned Integer
0015	Number of Real-Time Points Configured		R	16 Bit Unsigned Integer
0016	Number of Interval Points Configured		R	16 Bit Unsigned Integer
0017	Number of Max/Min Points Configured		R	16 Bit Unsigned Integer
0018	Maximum Number of Intervals That Can Be Recorded		R	16 Bit Unsigned Integer
0019	Number of slots configured for Scan Transponder		R	16 Bit Unsigned Integer
0020	Current slot being read in Scan Transponder		RW	16 Bit Unsigned Integer
0049	Store Interval Length	Minutes	R	16 Bit Unsigned Integer
0050	Internal Time - Hours/Minutes	Hours/Minutes	R	16 Bit Unsigned Integer
0051	Internal Time - Seconds	Seconds	R	16 Bit Unsigned Integer Seconds: 0-59

EPM1000 Modbus memory map

0052	Internal Date - Month/Day	Month/Day	R	16 Bit Month: 1=Jan., 12=Dec. (bitmask = FF00) Day: 1-31 (bitmask = 00FF)
0053	Interval Date - Year	Year	R	16 Bit Unsigned Integer
0054	Internal Time - Hours/Minutes	Hours/Minutes	W	16 Bit Hours: 0-23 (bitmask = FF00) Minutes: 0-59 (bitmask = 00FF)
0055	Internal Time - Seconds	Month/Day	W	16 Bit Unsigned Integer Seconds: 0-59
0056	Internal Date - Month/Day	Year	W	16 Bit Month: 1=Jan., 12=Dec. (bitmask = FF00) Day: 1-31 (bitmask = 00FF)
0057	Interval Date - Year		W	16 Bit Unsigned Integer
0058	Date/Time of Oldest Interval - Hours/Minutes	Hours/Minutes	R	16 Bit Hours: 0-23 (bitmask = FF00) Minutes: 0-59 (bitmask = 00FF)
0059	Date/Time of Oldest Interval - Month/Day	Month/Day	R	16 Bit Unsigned Integer
0060	Date/Time of Oldest Interval - Year	Year	R	16 Bit Unsigned Integer
0061	Date/Time of Newest Interval - Hours/Minutes	Hours/Minutes	R	16 Bit Hours: 0-23 (bitmask = FF00) Minutes: 0-59 (bitmask = 00FF)
0062	Date/Time of Newest Interval - Month/Day	Month/Day	R	16 Bit Month: 1=Jan., 12=Dec. (bitmask = FF00) Day: 1-31 (bitmask = 00FF)
0063	Date/Time of Newest Interval - Year	Year	R	16 Bit Unsigned Integer
0064	Date/Time of Currently Selected Interval - Hours/Minutes	Hours/Minutes	RW	16 Bit Hours: 0-23 (bitmask = FF00) Minutes: 0-59 (bitmask = 00FF)
0065	Date/Time of Currently Selected Interval - Month/Day	Month/Day	RW	16 Bit Month: 1=Jan., 12=Dec. (bitmask = FF00) Day: 1-31 (bitmask = 00FF)
0066	Date/Time of Currently Selected Interval - Year	Year	RW	16 Bit Unsigned Integer

EPM1000 Modbus memory map

0067	Data Ready Flag		RW	16 Bits: Mask out/ignore Bit 15. 0=Data is ready for read 1=Populate Registers with data for Timestamp 2=Invalid Timestamp Requested
0099	Interval Data Qualifying Register		R	16 Bit Unsigned Integer
0100	3-Phase Totaled kW	kW	R	F1 (IEEE Float)
0102	3-Phase Totaled kVAR	kVAR	R	F1 (IEEE Float)
0104	3-Phase Totaled kVA	kVA	R	F1 (IEEE Float)
0106	3-Phase Totaled Power Factor	%	R	F1 (IEEE Float)
0354	Frequency (Phase A)	Hz	R	F1 (IEEE Float)
0356	THD (Phase B Volt)	%	R	F1 (IEEE Float)
0358	THD (Phase C Volt)	%	R	F1 (IEEE Float)
0360	THD (Phase A Volt)	%	R	F1 (IEEE Float)
0362	Voltage (A-N)	V	R	F1 (IEEE Float)
0364	Voltage (B-N)	V	R	F1 (IEEE Float)
0366	Voltage (C-N)	V	R	F1 (IEEE Float)
0368	Voltage (CT01)	V	R	F1 (IEEE Float)
0370	Amps (CT01)	A	R	F1 (IEEE Float)
0372	kW (CT01)	kW	R	F1 (IEEE Float)
0374	kVAR (CT01)	kVAR	R	F1 (IEEE Float)
0376	kVA (CT01)	kVA	R	F1 (IEEE Float)
0378	Voltage (CT02)	V	R	F1 (IEEE Float)
0380	Amps (CT02)	A	R	F1 (IEEE Float)
0382	kW (CT02)	kW	R	F1 (IEEE Float)
0384	kVAR (CT02)	kVAR	R	F1 (IEEE Float)
0386	kVA (CT02)	kVA	R	F1 (IEEE Float)
0388	Voltage (CT03)	V	R	F1 (IEEE Float)
0390	Amps (CT03)	A	R	F1 (IEEE Float)
0392	kW (CT03)	kW	R	F1 (IEEE Float)
0394	kVAR (CT03)	kVAR	R	F1 (IEEE Float)
0396	kVA (CT03)	kVA	R	F1 (IEEE Float)
0648	3-Phase kWh	kWh	R	F1 (IEEE Float)
0650	3-Phase kVARh	kVARh	R	F1 (IEEE Float)
0652	3-Phase kW	kW	R	F1 (IEEE Float)
0654	3-Phase kVAR	kVAR	R	F1 (IEEE Float)
0656	3-Phase kVA	kVA	R	F1 (IEEE Float)
0658	3-Phase Power Factor	%	R	F1 (IEEE Float)

EPM1000 Modbus memory map

1000	THD Phase A	%	R	F1 (IEEE Float)
1002	Phase Angle A	Deg	R	F1 (IEEE Float)
1004	Phase-to-Phase Voltage A	V	R	F1 (IEEE Float)
1006	THD Phase B	%	R	F1 (IEEE Float)
1008	Phase Angle B	Deg	R	F1 (IEEE Float)
1010	Phase-to-Phase Voltage B	V	R	F1 (IEEE Float)
1012	THD Phase C	%	R	F1 (IEEE Float)
1014	Phase Angle C	Deg	R	F1 (IEEE Float)
1016	Phase-to-Phase Voltage C	V	R	F1 (IEEE Float)
2000	NUMPH_OFFSET			16 Bit Unsigned Integer
2001	DEMAND_WINDOW_OFFSET			16 Bit Unsigned Integer
2002	I_MULTIPLIER_TYPE_OFFSET			16 Bit Unsigned Integer
2003	NUM_PULSE_CTRS_OFFSET			16 Bit Unsigned Integer
2004	OVERLAP_OFFSET			16 Bit Unsigned Integer
2005	NUM_TOUS_OFFSET			16 Bit Unsigned Integer
2006	MDT_M_TABLE_REG_START			16 Bit Unsigned Integer
2007	NUM_MDT_M_TABLE_COLUMNS			16 Bit Unsigned Integer
2008	NUM_MDT_M_TABLE_REGS			16 Bit Unsigned Integer
2009	MDT_M_TABLE_REG_END			16 Bit Unsigned Integer

Appendix A: Events

DDE SERVER EVENT PROCESSING

The GE DDE Server supports event processing for the following GE devices:

• Spectra MicroVersaTrip (RMS 6) Trip Unit	• SR745 Transformer Management Relay
• Enhanced MicroVersaTrip- C/ D Trip Unit (RMS 9C/ RMS- 9D)	• SR750, MIF II Feeder Management Relay
• MDP Overcurrent Relay	• SR760 Feeder Management Relay
• EPM 3710 Electronic Power Meter	• Spectra ECM Electronic Control Module
• EPM 3720 Electronic Power Meter	• 565 Feeder Management Relay
• POWER LEADER Electronic Power Meter	• EPM 7500, 7600 Electronic Power Meter
• POWER LEADER Meter	• F650 Bay Controller
• PQM, PQM II (Power Quality Meter)	• EPM 7700 Electronic Power Meter
• SR 369, 469 Motor Management Relay	• Universal Relay
• Entellisys Low Voltage Switch Gear	• EPM9450Q/EPM9650Q Electronic Power Meter
• SR489 Generator Management Relay	

Events require special processing from the server. For each topic name (where both the device and the Server support events), there is a built-in EVENT item that can be used to monitor events for a device. When the client establishes a link using the EVENT item, the Server polls that device for any events and updates clients whenever new events occur.

Each event is stored in a group of registers that contain event code, time of occurrence, and additional information relevant for that event.

Notes:

1. Events are not supported for the 239 Motor Protection Relay, 269+ Motor Relay, 735 Feeder Relay, PLC 90/30, PLC 90/70, Modbus Concentrator or user-defined (generic) devices. The DDE Server will not allow a DDE link to the EVENT item for these devices and will return a NACK to the client. The logic for handling the events for these devices will be the responsibility of the DDE client, and custom solutions may be designed and implemented by the user.
2. The server does not prevent a client from directly accessing the event registers.

Format

Each event is formatted as an ASCII String format item with maximum 132 characters including the NULL terminator. The EVENT item is a ASCII String format item consisting of concatenated event strings <cr><lf> separated.

The general format of a specific event in the EVENT Item string is across the devices is

```
MM/DD/YY HH:MM:SS.SSS DeviceName EventCode EventDescription FirstData SecondData ThirdData FourthData FifthData
```

All the fields are separated by a space character in EVENT item ASCII string.

The first two fields are Date and Time stamps of the event. The time stamp may or may not include milliseconds, depending upon the precision of the device.

Device Name is a Maximum 20 character string. It does not contain any white spaces.

Event Code is the code that describes event for the type of device being referred to. The field is a maximum 4 digit hexadecimal number, "FFFF".

Event Description is the string being attached by DDE Server for the event reported by field device. This is a fixed 50 character long string. This may contain white space characters within it but length of this field is always 50 characters. If the description is shorter than 50 characters than it will be padded with space characters.

Multiple events will be retrieved at one time by the server, formatted into the event string, concatenated together and separated by <cr><lf>:

```
"event1<cr><lf>event2<cr><lf>event3<cr><lf>...eventx"
```

Example:

To monitor the events for "Front_Panel_MVT" device in Excel, enter the following formula in a spreadsheet cell:

```
=GE32MODB|Front_Panel_MVT!EVENT
```

A single event will appear similar to the following string:

```
04/08/98 12:35:01.50 Front_Panel_MVT 648 IPC failure on metering board 0 0 0 02 0
```

Strings of multiple events are placed in contiguous cells in a column in the spreadsheet, one event per cell.

POWER LEADER DEVICES SUPPORTED BY THE DDE SERVER

This section lists all the event codes for POWER LEADER devices supported by the GE DDE Server, along with the Event Specific Data register content for each. The following devices are described:

- Spectra MicroVersaTrip (RMS 6) Trip Unit
- Enhanced MicroVersaTrip-C/D Trip Unit(RMS 9C/RMS-9D)
- MDP Overcurrent Relay
- POWER LEADER Electronic Power Meter
- POWER LEADER Meter
- Spectra ECM Electronic Control

Format

Eight events are stored at a time. The Event Log register format for these devices is:

- Event time
- Event code
- Event phase (not available for all devices and all events)
- Event fault current (not available for all devices and all events)
- Event specific data register 4
- Event specific data register 5
- Event specific data register 6

The format of the EVENT item string is :

MM/DD/YY HH:MM:SS.SS DeviceName EventCode EventDescription PhaseCode FaultCurrent NNNN NNNN NNNN

Time stamp — Date and time of the event to millisecond precision.

EventCode — A hexadecimal number corresponding to the type of event.

PhaseCode — A hexadecimal number representing faulted-phase information.

FaultCurrent — Value of fault current (event-specific data registers 2 and 3), formatted as a floating-point number with a **10.2f** format character string.

Last 3 fields — Event-specific data registers 4 through 6, provided as a four-digit hexadecimal number.

Refer to the Modbus Protocol Guide, GEH-6508, for tables regarding the above fields for individual POWER LEADER devices.

EPM 3710

The EPM 3710 event log records events such as power up, parameter changes, alarm conditions, relay changes, and status input changes. The 50 most recent events are available through a total of 250 registers (five registers associated with each event). The EPM 3710 does not have a pending event count register, nor does the EPM 3710 allow clearing of the events buffers. To make the interface consistent and easy for the client application, the server does all the events-related processing for the EPM 3710 and provides the events to the client through the EVENT DDE item.

The EPM 3710 event string is formatted as follows:

```
MM/DD/YY HH:MM:SS DeviceName EventCode EventDescription X X NN NNNNNNNN X
```

Time stamp — EPM 3710 timestamp does not include milliseconds.

EventCode — The value is in “NNNN” format.

First Data field — Always filled with an ‘X’ character

Second Data field — Filled with an ‘X’ character

Third Data field — Contains **Event Flag** in “NN” format.

Fourth Data field — Contains **Event Log Value** in “NNNNNNNN” format, a long integer represented as a hexadecimal string. This usually represents the value of a parameter that caused an event.

Fifth Data field — Filled with an ‘X’ character.

Refer to **PML 3710 ACM Modbus Protocol Manual** for a complete description of Event Codes and Event Flags.

EPM 3720

The EPM 3720 event log records events such as power up, parameter changes, alarm conditions, relay changes, and status input changes. The 100 most recent events are available through a total of 1000 registers (10 registers per event). The EPM 3720 does not allow resetting the event log. To make the interface consistent and easy for the client application, the server does all the events-related processing for the EPM 3720 meter and provides the events to the client through the “EVENT” DDE item.

NOTE: For detailed information, refer to the ACM Modbus Protocol and 3720 Serial Communication Protocol documentation. Refer to “3720 ACM Modbus Protocol and Register Map” for device event log registers.

Format

EPM 3720 event strings are formatted as follows:

MM/DD/YY HH:MM:SS.SS DeviceName EventCode EventDescription X X X NNNNNNNN NNNNNNNN

Time stamp — Date & time of the event including milliseconds.

EventCode — Hexadecimal code representing Event Effect Key value.

EventDescription — Formed based on Effect Key Code and Cause Key Code description. Usually this string is formatted by concatenating description strings for Effect Key and Cause Key, in that order.

NOTE: For more information on how to generate event descriptions for EPM 3720, refer to the ACM Serial Communications Protocol documentation

First, Second and Third Data fields — Filled with an ‘X’ character.

Fourth Data field — Effect value; long integer represented as an eight-character hexadecimal string.

Fifth Data field — Cause value; long integer represented as an eight-character hexadecimal string.

POWER QUALITY METER (PQM)

The PQM stores the 40 most recent events. The log may be cleared by the user. All additional event data, such as date and time of occurrence, and phase current or voltage (as applicable), is available. The Server performs all the events-related special processing and passes the events to the clients.

NOTE: For detailed information, refer to:

- Multilin User's Manual with the Addendum for PQM.
- Power Quality Meter Instruction manual.

Format

The PQM event string is formatted as follows:

```
MM/DD/YY HH:MM:SS.xxx DeviceName EventCode EventDescription NNNNN NNNNN NNNNN NNNNN FFFF
```

Time stamp — PQM timestamp to milliseconds precision.

EventCode — Cause of event code; two characters in “NN” format.

EventDescription — filled by the DDE Server based on the description associated with Cause of Event codes.

First Data field — contains I_a for the event, an unsigned integer value: “NNNNN”.

Second Data field — contains I_b for the event, an unsigned integer value: “NNNNN”.

Third Data field — contains I_c for the event, an unsigned integer value: “NNNNN”.

Fourth Data field — contains I_n for the event, an unsigned integer value: “NNNNN”.

Fifth Data field is the event's switches and relay states with a format of “FFFF”.

Event Logging can be enabled or disabled by writing 0 (enable) or 1 (disable) to register 0x12C1. Also, each event can be programmed to be logged or not by enabling or disabling specific bits in registers 0x12C2 through 0x12C5. The DDE Server will not provide any special handling to these registers; they are handled as any normal Modbus write.

For event fetch, register 0x0AD0 gives the total number of events present at the PQM. The event counter has a range of 0–65535, after which the counter rolls over to 0. The event counter corresponds to the event number.

Events are retrieved one at a time by writing the event number of interest into address 0x12C0. The event can then be retrieved from registers 0x0AE0 to 0x0B34. The contents of register 0x0AE0 give the event number and should be compared to the event number requested. If the two numbers do not match, the event corresponding to the number requested does not exist. The event code is present in register 0x0AE1.

SR469

The SR469 stores the 40 most recent events. The user may clear the log. All additional event data such as date and time of occurrence, phase current or voltage (as applicable) is available. The Server performs all the events-related special processing and passes the events to the clients.

NOTE: For detailed information, refer to:

Multilin User's Manual with the Addendum for SR469.SR469 Feeder Management Relay Instruction manual.

Format

The SR469 event string is formatted as follows:

MM/DD/YY HH:MM:SS.HH DeviceName EventCode

Time stamp — SR469 timestamp includes hundredths of a second.

Event Code — Cause of event code in “NNN” format.

This device has an event counter, address 3002h. The counter's range is 0–65535, the counter resets or roll over to 0. Device can store at most 40 events. EVENT 01 is the most recent event, and EVENT 40 will be the oldest event. Each new event bumps the other event records up one until EVENT 40 is reached. The event record in EVENT 40 is lost when a new event occurs. Events are retrieved one at a time by writing in the event number of interest into address 3003h. Event number 01 retrieves most recent event and event number 40 retrieves oldest event from the device. The event can then be retrieved in registers starting at address 3004h.

SR369

The SR369 stores the 40 most recent events. The user may clear the log. All additional event data such as date and time of occurrence, event code is available. The Server performs all the events-related special processing and passes the events to the clients.

NOTE: For detailed information, refer to:
369 Motor Management Relay Instruction Manual.

Format

The SR369 event string is formatted as follows:

MM/DD/YY HH:MM:SS.HH DeviceName EventCode

Time stamp — SR469 timestamp includes hundredths of a second.

Event Code — Cause of event code in “NNN” format.

This device has an event counter, address 3002h. The counter’s range is 0–65535, the counter resets or roll over to 0. The 369PC software can be used to view the 369 Event Recorder. The Event Recorder stores motor and system information each time an event occurs (i.e. motor trip). The Event Recorder stores up to 40 events, where EVENT01 is the oldest event. Events stored in cyclic order. EVENT01 is overwritten when the number of events exceeds 40. Events are retrieved one at a time by writing in the event number of interest into address 3003h. The event can then be retrieved in registers starting at address 3004h.

SR489

The SR489 stores the 40 most recent events. The log may be cleared by the user. All additional event data such as date and time of occurrence, phase current or voltage (as applicable) is available. The Server performs all the events-related special processing and passes the events to the clients.

NOTE: For detailed information, refer to:

- Multilin User’s Manual with the Addendum for SR489.
- SR489 Feeder Management Relay Instruction manual.

Format

The SR489 event string is formatted as follows:

MM/DD/YY HH:MM:SS.xx DeviceName EventCode EventDescription NNNNNN NNNNNN NNNNNN +NNNN.NNN

Time stamp — SR489 timestamp includes hundredths of a second.

EventCode — Cause of event code in “NNN” format.

EventDescription — filled by the DDE Server based on the description associated with Cause of Event codes.

First Data field contains I_a for the event, an unsigned long integer value: “NNNNNN”.

Second Data field contains I_b for the event, an unsigned long integer value: “NNNNNN”.

Third Data field contains I_c for the event, an unsigned long integer value: “NNNNNN”.

Fourth Data field contains Real Power (MW), an F13-formatted value truncated to display the sign, “+NNNN.NNN”.

This device has an event counter, address 3002h. The counter’s range is 0–65535, after which the counter rolls over to 0. The event counter’s value corresponds to the event number.

Events are retrieved one at a time by writing the event number of interest into address 3003h. This number is the number retrieved from address 3002h (or within a range of 40 because device stores 40 events). The event can then be retrieved in registers starting at address 3004h.

Cycling device control power does not affect the event data.

565

The 565 stores the 40 most recent events. The log may be cleared by the user. All additional event data, such as date and time of occurrence and phase current or voltage (as applicable), is available. The Server performs all the events-related special processing and passes the events to the clients.

NOTE: For detailed information, refer to:

- Multilin User's Manual with the Addendum for 565.
- 565 Feeder Management Relay Instruction manual.

Format

The 565 event string is formatted as follows:

```
MM/DD/YY HH:MM:SS DeviceName EventCode EventDescription NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN
```

Time stamp — 565 timestamp to the nearest second.

EventCode — Cause of event code in “NN” format.

NOTE: If event code 14hex occurs, only the cause and time-date stamp registers will be valid.

EventDescription — filled by the DDE Server based on the description associated with the Cause of Event codes.

The data associated with the event code is dependent upon the event. Only event codes 01h thru 12h have data (9h – 10h are unused in the 565). Depending on the event code, the appropriate data will be concatenated to the string. All the data values are hex-format strings of eight characters.

The first four data registers, current data, are related to Events 01h - 08h.

- First Data field, Phase A current.
- Second Data field, Phase B current.
- Third Data field, Phase C current.
- Fourth Data field format, Ground current.

The last three data registers, voltage data, are related to events 11h and 12h.

- First Data field, Voltage A.
- Second Data field, Voltage B.
- Third Data field, Voltage C.

SR745

The SR745 stores the 40 most recent events. The log may be cleared by the user. All additional event data, such as date and time of occurrence and phase current or voltage (as applicable), is available. The Server performs all the events-related special processing and passes the events to the clients.

NOTE: For detailed information, refer to:

- Multilin User’s Manual with the Addendum for SR745.
- SR745 Feeder Management Relay Instruction manual.

Format

The SR745 event string is formatted as follows:

MM/DD/YY HH:MM:SS.xxx DeviceName EventCode EventDescription NNN NNN NNN NNN NNN

Time stamp — SR745 timestamp to millisecond precision.

EventCode — Cause of event code; four characters in “NNNN” format.

EventDescription — filled by the DDE Server based on the description associated with the Cause of Event code.

First Data field contains Differential Phase A current, an F3 formatted value, truncated to display the mantissa: “NNN.”

Second Data field contains Differential Phase B current, an F3 formatted value, truncated to display the mantissa: “NNN.”

Third Data field contains Differential Phase C current, an F3 formatted value, truncated to display the mantissa: “NNN.”

Fourth Data field contains Restraint Phase A current, an F3 formatted value truncated to display the mantissa: “NNN”.

Sixth Data field contains Restraint Phase B current, an F3 formatted value truncated to display the mantissa: “NNN”.

Fifth Data field contains Restraint Phase C current, an F3 formatted value truncated to display the mantissa: “NNN”.

The SR745 has an event counter, address 0804h. The counter’s range is 0–65535, after which the counter rolls over to 0. The event counter value corresponds to the event number. Events are retrieved one at a time by writing the event number of interest into address 0805h. This number is then retrieved from address 0804h (or within a range of 40, since the device stores 40 events). The event can then be retrieved in registers starting at address 0810h.

Cycling device control power does not affect the event data. The event recorder may be cleared by forcing a coil command to register address 0080h.

SR750

The SR750 stores the 40 most recent events. The log may be cleared by the user. All additional event data, such as date and time of occurrence and phase current or voltage (as applicable), is available. The Server performs all the events-related special processing and passes the events to the clients.

NOTE: For detailed information, refer to:

- Multilin User’s Manual with the Addendum for SR750.
- SR750 Feeder Management Relay Instruction manual.

Format

The SR750 event string is formatted as follows:

```
MM/DD/YY HH:MM:SS.xxx DeviceName EventCode EventDescription NNNNN NNNNN NNNNN NNN NNN NNN NN
```

Time stamp — SR750 timestamp to millisecond precision.

EventCode — Cause of event code; four characters in “NNNN” format.

EventDescription — filled by DDE Server based on the description associated with Cause of Event codes.

First Data field contains I_a for the event, an unsigned integer value “NNNNN”.

Second Data field contains I_b for the event, an unsigned integer value: “NNNNN”.

Third Data field contains I_c for the event, an unsigned integer value: “NNNNN”.

Fourth Data field contains V_a for the event, a float value truncated to display the mantissa: “NNN”.

Fifth Data field contains V_b for the event, a float value truncated to display the mantissa: “NNN”.

Sixth Data field contains V_c for the event, a float value truncated to display the mantissa: “NNN”.

Seventh Data field contains Frequency for the event, a float value truncated to display the mantissa: “NN”.

All event recorder data can be read from registers in the address range 2000h – 20FFh.

The **Number of Events Since Last Clear** register at address 2001h is incremented by one every time a new event occurs. The register is cleared to zero when the event recorder is cleared.

When a new event occurs it is assigned an event number equal to the incremented value of this register; the newest event is given an event number equal to the **Number of Events**. This register can be used to determine if any new events have occurred by periodically reading the register to see if the value has changed. If the **Number of Events** has increased, then there are new events available. Cycling device control power does not affect the event data; however, cycling power does generate an event itself.

Only the data for a single event can be read from the memory map in a single data packet. The **Event Number Selector** register (address 2000h) selects the event number for which data can be read from the memory map. For example, to read the data for event number 123, the value 123 must first be written to the **Event Number Selector** register. All the data for event number 123 can then be read from the **Event Record Data** registers at addresses 2010h to 201Dh. The last 128 events are stored in the relay’s memory.

Attempting to retrieve data for older events not stored in memory will result in a Modbus exception response when writing to the **Event Number Selector**.

SR760

The SR760 stores the 40 most recent events. The log may be cleared by the user. All additional event data, such as date and time of occurrence and phase current or voltage (as applicable), is available. The Server performs all the events- related special processing and passes the events to the clients.

NOTE : For detailed information, refer to:

- Multilin User’s Manual with the Addendum for SR760.
- SR760 Feeder Management Relay Instruction manual.

Format

The SR760 event string is formatted as follows:

MM/DD/YY HH:MM:SS.xxx DeviceName EventCode EventDescription NNNNN NNNNN NNNNN NNN NNN NNN NN

Time stamp — SR760 timestamp to millisecond precision.

EventCode — Cause of event code; four characters in “NNNN” format.

EventDescription — filled by DDE Server based on the description associated with Cause of Event codes.

First Data field contains I_a for the event, an unsigned integer value “NNNNN”.

Second Data field contains I_b for the event, an unsigned integer value: “NNNNN”.

Third Data field contains I_c for the event, an unsigned integer value: “NNNNN”.

Fourth Data field contains V_a for the event, a float value truncated to display the mantissa: “NNN”.

Fifth Data field contains V_b for the event, a float value truncated to display the mantissa: “NNN”.

Sixth Data field contains V_c for the event, a float value truncated to display the mantissa: “NNN”.

Seventh Data field contains Frequency for the event, a float value truncated to display the mantissa: “NN”.

All event recorder data can be read from registers in the address range 2000h – 20FFh.

The **Number of Events Since Last Clear** register at address 2001h is incremented by one every time a new event occurs. The register is cleared to zero when the event recorder is cleared.

When a new event occurs it is assigned an event number equal to the incremented value of this register; the newest event is given an event number equal to the **Number of Events**. This register can be used to determine if any new events have occurred by periodically reading the register to see if the value has changed. If the **Number of Events** has increased, then there are new events available. Cycling device control power does not affect the event data; however, cycling power does generate an event itself.

Only the data for a single event can be read from the memory map in a single data packet. The **Event Number Selector** register (address 2000h) selects the event number for which data can be read from the memory map. For example, to read the data for event number 123, the value 123 must first be written to the **Event Number Selector** register. All the data for event number 123 can then be read from the **Event Record Data** registers at addresses 2010h to 201Dh. The last 128 events are stored in the relay’s memory.

Attempting to retrieve data for older events not stored in memory will result in a Modbus exception response when writing to the **Event Number Selector**.

EPM 7500/7600/7700

EPM 7500/7600/7700 stores events in same format. The Server performs all the events- related special processing and passes the events to the clients.

NOTE : For detailed information, refer to:

- 7500/7600 users guide.pdf
- 7700 users guide.pdf

Format

EPM 7500/7600/7700 event string is formatted as follows:

MM/DD/YY HH:MM:SS.xx DeviceName EventCode EventType EventDescription

Time stamp has up to millisecond resolution. Total event construction done in GE77GTWY.

UR

UR stores most recent 1024 events, listed in chronological order from most recent to oldest. The Server performs all the events- related special processing and passes the events to the clients.

NOTE : For detailed information, refer to:

- L90 manual.pdf

Format

UR event string is formatted as follows:

MM/DD/YY HH:MM:SS.xxx DeviceName EventCode

To read UR events from the device, write EVTnnn.TXT file into "Name of file to read" register. nnn is the desired starting record number. Event data can be read from "Modbus File Transfer (Read Only)" registers till end of the file.

EPM 9450Q/EPM 9650Q

EPM 9450Q / EPM 9650Q stores events in log files. The data from this files used to construct the event. The Server performs all the events- related special processing and passes the events to the clients.

NOTE: For detailed information, refer to:

Nexus Modbus Protocol & Register Map Rev_1.17.PDF

- E-107-9-7-124-8-19-2.pdf
- E-107-9-7-133-8-18-5.pdf

EPM 9450Q / EPM 9650Q event string is formatted as follows:

MM/DD/YY HH:MM:SS.xxx DeviceName EventCode

EPM 9450Q / EPM 9650Q has three types of event logs.

Events log: Events log events are derived from Sequence of Events Snapshot Log and Sequence of Events States Log. The variation in states bits in these logs identifies event information.

Digital input Events: Digital input Events are derived from Digital Input States log.

Digital output Events: Digital output Events are derived from Digital Output States log.

Appendix A. Events

ENTELLISYSLVS

ENTELLISYSLVS stores most recent 1024 events, listed in chronological order from most recent to oldest. The Server performs all the events- related special processing and passes the events to the clients.

Format

ENTELLISYSLVS event string is formatted as follows:

MM/DD/YY HH:MM:SS.xxx DeviceName EventCode

To read ENTELLISYSLVS events from the device, write EVTnnn.TXT file into "Name of file to read" register. nnn is the desired starting record number. Event data can be read from "Modbus File Transfer (Read Only)" registers till end of the file.

Appendix A. Events

MIFII

MIFII stores most recent 32 events, listed in chronological order from most recent to oldest. The Server performs all the events- related special processing and passes the events to the clients.

Format

MIFII event string is formatted as follows:

MM/DD/YY HH:MM:SS.xxx DeviceName EventCode

To read MIFII events from the device, write the Open Events Command. Data can be read from the starting of the Event Buffer till end. Finally, the event window is closed by, issuing the Closed Events Command.

Appendix B: Waveform Capture

WAVEFORM CAPTURE

Waveform Capture includes the ability to collect, store, and analyze waveform and harmonic data from devices on the network. Nineteen PMCS devices have built-in Waveform Capture capability:

GE32MTCP/GE32MODB Devices

- POWER LEADER Meter (PLM)
- Electronic Power Meter 3710 (EPM 3710)
- Electronic Power Meter 3720 (EPM 3720)
- Multilin Power Quality Meter (PQM, PQMII)
- SR369
- SR469
- SR489
- SR745
- SR750
- SR760
- UR, ENTELLISYSLVS
- Electronic Power Meter 9650Q (EPM 9650Q)
- F650, MIFII

GE77GTWY Devices

- E7500
- E7600
- E770

There are three types of Waveform Capture, automatic, manual and upload.

Automatic

Automatic Waveform Capture is used to analyze waveforms captured when a signal crosses a user-defined threshold. The PLM and the EPM 3720 support automatic Waveform Capture.

Manual

- Manual Waveform Capture is initiated from either the host PC or the faceplate of the device. The PLM, the EPM 3710, and the EPM 3720 all support manual Waveform Capture.

Upload

- Upload Waveform is used to upload the last waveform captured by a PQM device.

PMCS WAVEFORM CAPTURE MODULE

A specialized client application, the PMCS Waveform Capture module, is available to make accessing waveform data quick and easy. It is part of the PMCS family of products and provides a friendly, intuitive interface with the PMCS DDE Server. It is strongly recommended that the PMCS Waveform Capture module be used to satisfy waveform-capture requirements.

POWER LEADER METER

The POWER LEADER Meter (PLM) supports both automatic and manual Waveform Capture. Follow the procedures below to view PLM waveform data.

Automatic Waveform Capture Procedure

The PLM captures eight cycles (16 samples per cycle) of the current phase that exceeds the overcurrent threshold.

NOTE: Automatic Capture and overcurrent thresholds must first be set at the faceplate of the PLM (see GEH-5892).

To implement Automatic Waveform Capture from your PC, complete the following steps:

1. To clear any waveform in the PLM meter memory, set the coil CLR_WF_CAPTURE (**R00004**) to **ON**.
2. Open DDE links with WF_AVAIL (**R31089**) and WF_CHANNEL (**R31090**) to monitor if the meter has captured a waveform.
 - A value of 1 in WF_AVAIL indicates that a waveform has been automatically captured.
 - WF_CHANNEL then indicates the phase that has exceeded the overcurrent threshold.
3. When WF_AVAIL becomes 1, open a DDE link with WF_DATA.
4. Send a DDE Execute command [**RetrieveWFC(TopicName)**] to retrieve the data from the device.
5. The DDE Server reads all the data from the meter and updates WF_DATA. This data is returned in an array containing 128 points of data, delimited by (cr)(lf), as shown below:

```
0.0<cr><lf>0.5<cr><lf>1.0<cr><lf>.....<cr><lf>0.0<cr><lf>
```

Manual Waveform Capture Procedure

Manual Waveform Capture returns one full cycle (128 samples) of phase A current. Other phases are not available.

1. Trigger the waveform capture by setting the TRIGGER_WF_CAPTURE (R00003) coil to ON (1).
2. Follow steps 2 – 5 of the Automatic Waveform Capture procedure.

Creating a Waveform Capture Link in Excel

The following is an example of a macro written in Excel to open a DDE link to a specific PMCS register.

The screenshot shows the Microsoft Excel interface with the following macro code in cell A10:

	A	B
1	PokeMacro - Ctrl a	
2	=INITIATE("GE32MODB","PLM_1")	2048
3	=POKE(A2,"WF_SETPT",B2)	
4	=EXECUTE(A2,"RetrieveWFC(PLM_1,1)")	
5	ON.TIME(NOW()+0.00002,"TerminateDDEChannel")	
6	=RETURN()	
7		
8	TerminateDDEChannel	
9	=TERMINATE(A2)	
10	=RETURN()	
11		
12		
13		

EPM 3710

The EPM 3710 supports Manual Waveform Capture only. The captured waveform is returned in 128 data samples over one cycle.

Any of the following input channels may be sampled:

- V_1
- V_2
- V_3
- V_{aux}
- I_1
- I_2
- I_3
- $I_{neutral}$

Manual Waveform Capture Procedure

To initiate a Waveform Capture on the EPM 3710, follow these steps from the host PC:

1. Open a DDE link to PML_WFC.
2. Send a trigger command: **[TriggerWFC(TOPIC, channel #)]**
(For **channel #**, choose one of the following: V1, V2, V3, VAUX, I1, I2, I3, IN)
3. Send a retrieve command: **[RetrieveWFC(TOPIC)]**
4. The DDE Server reads all the data from the meter and updates PML_WFC. This data is returned in an array containing 128 points of data, delimited by (cr)(lf), as shown below:

0.0<cr><lf>0.5<cr><lf>1.0<cr><lf>.....<cr><lf>0.0<cr><lf>

EPM 3720

The EPM 3720 supports the following Waveform functions:

- Automatic Waveform Capture
- Manual Waveform Capture
- Waveform Recording

Automatic Waveform Capture Procedure

1. Open a DDE link to PML_WFC_AVAIL. When this register is set to 1, go to the next step.
2. Follow all of the steps of the Manual Waveform Capture procedure for the EPM 3710.

Manual Waveform Capture

Follow the Manual Waveform Capture procedure outlined for the EPM 3710.

Waveform Recording

Waveform recording is considerably more complicated than waveform capture. We recommend you use the GE PMCS Waveform Capture application, which has integrated, comprehensive waveform-recording and analysis tools.

For custom systems that require this function, refer to the EPM 3720 user manual and contact GE Technical Support for additional information and assistance.

PQM, SR369, SR469, SR489, SR745, SR750, SR760, UR AND EPM9650Q

The above devices that offer waveform capture do not require any special handling for waveform capture. Use standard DDE procedures, referring to the register maps provided in this manual for the appropriate register addresses, and to the instruction manual for each device for procedures to access those registers.

E7500, E7600 AND E7700

These devices support Auto Capture and Manual trigger only, these devices also does not require any special handling of waveform. While the rest of the Devices communicate through GE32MTCP or GE32MODB DDE Servers, these three communicate through GE77GTWY server.

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Appendix C: DDE Topics and Items

DDE SERVER/ETHERNET SERVER

DDE Item Name	R/W	Description
Application Name: GE32MODB or GE32MTCP Topic Name: SYSTEM		
ACTIVEPORTS	RO	Returns all of currently active ports. Port is active means there is communication with some device using this port.
CONFIGURED_DEVICES	RO	All connected devices and configuration. Format: <Device type>:<Device name> <Comm port number> <Slave Id>,<Device name> <Com port number> <Slave Id><new line (\n)> <Device type (next one)>:<Device name> <Com port number> <Slave Id><new line (\n)> <Device type(next one)>:<Device name> <Com port number> <Slave Id>
DATE_AND_TIME	RO	Returns current system's date and time.
DEVICETYPES	RO	Returns all types of supported devices.
PORTSTATx Where x is the port number 1 – 256	RO	Returns statistic information together with configuration parameters for a given port.
SUS_RES_COMMUNICATION	R/W	Suspend/Resume or get status of communication protocol. 0 – Suspend (W)/Suspended (R) 1 – Resume (W)/Running (R)
SUS_RES_PORTx Where x is the port number 1 – 256	R/W	Suspend/Resume or get status of a particular communication port. 0 – Suspend (W)/Suspended (R) 1 – Resume (W)/Running (R)
SYSTEM_DIAGNOSTICS	RO	Returns system diagnostic data like whenever the DDE Server was able to connect to a device, etc.
TICK_COUNT	RO	Returns current timer tick value, which is updated every second.
VERSION_NO	RO	Returns the version number of the DDE Server.

EVENT SERVER

DDE Item Name	R/W	Description
Application Name: EVENTLOG Topic Name: SYSTEM		
CUREVENTCNT	RO	Current Event Count.
LASTALARM	RO	Last Alarm received by Event Server.
LASTEVENT	RO	Last Event received by Event Server.
LOGGERMODE	R/W	Provides means to change the Event Server Operation Mode over DDE. The possible values are: 0 – Primary mode without data logging 1 – Primary mode with data logging 2 – Backup mode

EVENT LOGGER

DDE Item Name	R/W	Description
DDE Queries Application Name: EVENTVIEWER Topic Name: SYSTEM Item Name: QUERY	R/W	<p>The query string is passed to Event Logger through a DDE POKE transaction. The Query received through DDE is parsed initially for validity. If the query received is a valid one, then the records, which satisfy the criteria, are placed into the view. The Query Parser developed for this purpose follows certain specific grammar.</p> <p>Query Parser Grammar:</p> <p>The Query Parser acknowledges only certain types of Field names, Relational Operators and Logical Operators. The Field names include DeviceName, DeviceType, TimeStamp, EventCode, and EventString. There should not be any spaces in between the field names. Logger recognizes only 'And' and 'Or' as Logical Operators. The Relational Operators include '=' (Equal To), '<>' (Not Equal To), '>' (Greater Than), '<' (Less Than).</p> <p>There should not be any space in either field names or in relational operators. The Parser is Case-insensitive. The Logical operators and field names can be in any case. At least one space should be between a field name and a relational operator. Similarly, at least one space should precede and succeed a logical operator. The Parser supports up to 4 continuous conditions connected with logical operators. The Field Values of a type for which the search is made should be embedded within Single Quotes.</p> <p>Examples for Valid SQL Query Conditions over DDE:</p> <p>Simple Conditions:</p> <ol style="list-style-type: none"> 1. (a) devicename = 'ML745_1' (b) DEVICENAME = 'ML745_1' (c) DeviceName = 'ML745_1' 2. (a) devicetype = 'ML745' (b) DEVICETYPE = 'ML745' (c) DeviceType = 'ML745'. 3. (a) eventcode = '48' (b) EVENTCODE = '48' (c) EventCode = '48' 4. (a) eventstring = 'Overfrequency' (b) EVENTSTRING = 'Overfrequency' (c) EventString = 'Overfrequency' 5. (a) timestamp = '19990324024515' (b) TIMESTAMP = '19990324024515' (c) TimeStamp = '19990324024515' <p>Note 1: TimeStamp value should contain 14 digits. This TimeStamp value follows Significant Digit Subset Code Method. The TimeStamp value is a combination of Date and Time. The first 8 digits represent the Date and the next 6 digits represent the Time. The First four digits represent Year, the next two digits represent Month, and the next two digits represent Day of the Month. The next 2 digits represent the Hour, the next 2 represent the Minute and the next 2 represent Seconds. Here, 1999 – year, 03 - Month, 24 - Day, 02 - Hour, 45 –</p>

DDE Item Name	R/W	Description
		<p>Minutes, 15 - Seconds.</p> <p>Note 2: The Relational Operators '>' and '<' are applicable only to the Timestamp and not for other field names.</p> <p>Note 3: Here DeviceName corresponds to SourceName, DeviceType corresponds to SourceType and EventString corresponds to Event in the Event Logger GUI.</p> <p>Compound Conditions:</p> <ol style="list-style-type: none"> 1. DeviceName = 'UR_1' and DeviceType = 'UR' 2. DeviceType = 'UR' or DeviceType = 'ML745' 3. TimeStamp > '19990322100545' and TimeStamp < '19990322101545' 4. TimeStamp = '19990324100545' and EventString = 'Logout' 5. DeviceName = 'UR_1' and TimeStamp > '19990324100545' and TimeStamp < '19990324101545' and EventCode = '99' <p>Invalid SQL Query Conditions over DDE:</p> <ol style="list-style-type: none"> 1. Misspelled or unrecognized fieldnames, Relational Operators, Logical Operators results in invalidity of the SQL Query Condition. 2. At least one space should be prefixed and suffixed for the fieldnames, Relational Operators, and Logical Operators. If the minimal space requirement is not provided, then the query may be considered invalid. 3. Incomplete conditions are also considered as Invalid SQL statements. 4. Field values not enclosed in Single Quotes are treated as Invalid SQL query statements. 5. If more than four conditions are given as a SQL Statement or if the TimeStamp value given is an Invalid Value then these conditions are treated as Invalid Conditions. <p>After the completion of Parsing, the Query over DDE is built and submitted to the Database if the views are from the Database. Otherwise, if the views are from CSV, then Query is processed to get the records, which satisfy the given criterion.</p>

WAVEFORM SERVER

DDE Item Name	R/W	Description
<p><i>Interface with Waveform Client on Topic Name = WFSERVER</i></p> <p><i>The application name is the application name of the waveform server, (e.g. 'WFSERVER')</i></p>		
CONFIGURED_DEVICES	RO	<p>All connected devices list and configuration is sent to the WaveForm client in a comma-separated string.</p> <p>The format of this item is as follows: <Device name> <Device type> <Upload flag> <Trigger flag></p> <p>Each set is separated by ';'. Flag values: 0 – Disabled 1 – Enabled Example: "ml745 ML745 1 1,ml760 ML760 1 1"</p>
WAVEFORMS_PATH	RO	<p>A string containing the directory path of the CSV/COMTRADE directories where the waveforms are stored, excluding 'Waveforms\CSVFile' sub-directory. Ex: If the waveforms are stored in 'C:\GEPMCS\WFServer\Waveforms\CSVFiles' directory, WFS sends 'C:\GEPMCS\WFServer' string on this item.</p>
WFS_START	R/W	Value "1" is POKED on this item for WFS to enable it's DDE links with the DDE Server.
WFS_STOP	R/W	Value "1" is POKED on this item for WFS to disconnect it's DDE links with the DDE Server.
<p><i>Interface with Waveform Client on Topic Name = SYSTEM</i></p> <p><i>The application name is the application name of the waveform server, (e.g. 'WFSERVER')</i></p>		
SERVERMODE	R/W	Starts/Stops or get status of the Waveform Server. 0 – Stops (W)/Stopped (R) 1 – Starts (W)/Running (R)
<p><i>Interface with Waveform Client on TopicName = <Device Name></i></p>		
DATA_FILE	RO	The filename is sent to the client with the absolute path name. The file-name format is as follows: <Directory path(excluding logical drive name)>\TopicName-yyyymmdd-hhmmss-RepType.csv
DEVICE_STATUS	RO	Provides device's communication status as returned by the DDE Server. This is an integer status item. It provides values, 0 – DEAD 1 – ALIVE 2 – UNKNOWN 3 - SETUP_IN_PROGRESS
TRIGGER	R/W	Triggers a Manual Capture. Command string is sent to WFS on this item for Trigger and Upload requests.

DDE Item Name	R/W	Description
		<p>Command string consists of 3 values separated by commas.</p> <p>First value is Trigger/Upload constant + Mode. Second value is the selected channel number. -1 is used to get the data from all channels. Third value is the selected waveform number. This is applicable to Upload only.</p> <p>Following are the Trigger/Upload constants for the supported devices:</p> <p>ML 369 Trigger = 1400 Upload = 1450 Modes : Single Mode.</p> <p>ML 469 Trigger = 500; Upload = 550; Modes: 1 – 16</p> <p>ML 489 Trigger = 600 ; Upload = 650; Modes : 1 – 16</p> <p>ML 745 Trigger = 700 ; Upload = 750; As there is only one mode, it's value is ignored.</p> <p>ML 750 Trigger = 800 ; Upload = 850; Modes : 0 – 3</p> <p>ML 760 Trigger = 900 ; Upload = 950; Modes : 0 – 3</p> <p>ML PQM Trigger = 1000 ; Upload = 1050; Modes : 0 – 7 (Though there are only 3 modes really, for one shot, re trigger and PQM capture, these mode numbers are used. These are NOT written into the device.)</p> <p>EPM 3720 Trigger = 1100 ; Upload = 1150; Modes : 0 – 3</p> <p>Ex: If we Trigger ML 469 in 4X25 mode, the string would be: "504,-1,0".</p> <p>Only one value is sent for the below devices on this item for Trigger/Upload:</p> <p><u>PLM</u></p> <p>Trigger (PLM_WFC) = 1 ;</p>

DDE Item Name	R/W	Description
		<p><u>EPM 3710</u></p> <p>Trigger (For different channels):</p> <p>E3710_V1_WFC 20 E3710_I1_WFC21 E3710_V2_WFC 22 E3710_I2_WFC23 E3710_V3_WFC 24 E3710_I3_WFC25 E3710_I4_WFC26 E3710_VAUX_WFC 27 (Note: WFC reverses VAUX with I4, and uses V4 rather than VAUX)</p> <p><u>EPM9650Q</u></p> <p>Trigger = 1300 Upload = 1350 Modes: Single Mode.</p> <p><u>URL90</u></p> <p style="text-align: right;"><i>Upload: 0 to 65535</i></p> <p>Modes: Single Mode.</p>
COMMAND_STATUS	RO	<p>Provides status of the last command issued by the waveform client. Values returned are</p> <p>0 – DONE 1 – COMMAND_IN_PROGRESS 2 – TIMEOUT 3 – ABORTED_DUE_TO_ERROR 4 – NOT_AVAILABLE (when an auto capture is in progress) 5 – AUTO_WFC_IN_PROGRESS (an automatic capture is in progress)</p>
WF_SERVER_STATUS	RO	String representing the status of the Waveform Server. This is displayed on the bottom of the WFC.
DEVICE_MODE	R/W	The current mode of the selected device by WFC. When the device mode is changed, WFC is informed of the new mode on this item. When the mode is changed in WFC, the new mode is POKED to WFS on this item. Data is an integer.
TRACE_COUNT	RO	Total number of traces that are stored in the device. When the trace count of the device is changed, WFC is informed of the new trace count on this item. Data is an integer.
		<p><i>Interface with Event Server on Topic Name = WFSERVER</i></p> <p><i>The application name is the application name of the waveform server, (i.e. 'WFSERVER')</i></p>
EVENT	RO	An event string will be sent to the Event Server whenever a waveform file is prepared or any error occurred in preparing the file.

Appendix D: Registry

Notes: - All numeric values are decimals.

- The “Possible Values” column includes all possible values for those items which have a limited number of possibilities and formats for string type values.
- The “Default Value” column indicates the value at the time of installation.

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DATABASE

Key: \\HKEY_LOCAL_MACHINE\Software\GE\PMCS\6.0\Database

Registry Value Name	Description	Possible Values	Default Value
BackUpDSN	Backup data source name used for redundancy.		Null
DataSourceName	Data source used by Event Server for logging and by Event Logger for viewing.		"pmcs65"
RemoteMachine	Remote machine name used for redundancy.		Null
Admin\AckEvents	Enable/Disable password protection when Acknowledging Events	“0” – Disable “1” – Enable	“0”
Admin\CloseEventLogger	Enable/Disable password protection when closing Event Server	“0” – Disable “1” – Enable	“0”
Admin\DelEvents	Enable/Disable password protection when Deleting Events	“0” – Disable “1” – Enable	“0”
Admin\ELPassword	Password for Event Server		Null
Admin\EVPassword	Password for Event Logger		Null

EVENT SERVER

Key: \\HKEY_LOCAL_MACHINE\Software\GE\PMCS\6.0\Eventlogger

Registry Value Name	Description	Possible Values	Default Value
BackupTimeInterval	Time interval after which backup thread runs. This is used in redundancy configurations to determine how often the backup server reads the following tables from the primary server: ANNUNCIATORACTI ONCONFIG ANNUNCIATORLAB ELSCONFIG DUPLICATELOOKUP SEQUENCEOFEVEN TS URL90FAULT	(seconds)	16
DBEvents	NO LONGER USED.		100
Demo	Demo mode.	0 – Disable 1 – Enable	0
DeviceNames	NO LONGER USED		Null
DeviceSetting	The device settings for Event Server.	The format of the key values is as follows: <Server name>,<Device name> <Device type> <Enabled flag> [<Custom device name>],[next device];[next server's devices] Example: "GE32MODB,PLM_1 PLM 1 D20002" Flag values: 0 – Disable 1 – Enable	Null
DeviceTypes	All supported device types		(All GE Device Types) "ECM EMVTC

Appendix C. Registry

Registry Value Name	Description	Possible Values	Default Value
			EMVTD E3710 E3720 E7500 E7600 E7700 MDP ML369 ML469 ML489 ML565 ML745 ML750 ML760 MLPQM MVT PLEPM PLM UR EPM9650Q EPM9450Q"
GlobalQSize	Maximum queue size for storage of incoming events.		10000
LinesPerPage	The number of lines per page when printing with a line printer.		31
Primary	The mode the Event Server should start in.	"0" – Primary Stopped Logging "1" – Primary Started Logging "2" – Backup	"0"
Print	Enable/Disable line printing of incoming events.	0 – Disable 1 – Enable	0
RetryIntervalSec	Time interval after which to retry failed communication connections (e.g. DDE).	(seconds)	30
Servers	The Servers (DDE, etc.) with which the Event Server communicates to retrieve events.	The format of the key values is as follows: <Server name>,<Enabled flag>,<Server type>,<MMS Flag>; Each set is separated by ';'. Example: "GE32MODB,1,GEDD E,0" Flag values: 0 – Disable 1 – Enable	Null
ExitDisable	Disables the Exit button on the Window.	Enable Disable	Enable
StorageQSize	Number of events stored to database from		1000

Registry Value Name	Description	Possible Values	Default Value
	Global Queue each Storage Interval.		
StorageTimeInterval	Time interval after which logger thread runs. This stores StorageQSize records into the database from the global queue.	(seconds)	1
UIStatus	Hides the User Interface of NT services.	Unhide/Hide	Unhide
Archival\ApplicationDir	Primary directory for storing archive files.		(Based on installation – Normally: "C:\GE_PMCS\Archive")
Archival\ArchivalInterval Min	Time interval after which the timer thread checks for running archival thread.	(minutes)	1
Archival\HMIEvents	The number of HMI events kept in the database during the archive process (these are not deleted).		100
Archival\LastArchiveDate	The date the last archive was done.	(date: "MMDDYYYY")	Null
Archival\OtherEvents	The number of non-HMI events kept in the database during the archive process (these are not deleted).		100
Archival\SecondaryDir	Secondary directory for storing archive files.		Null
Configuration\ALPS_DATA_WAIT_TIMER	ALPS Data Wait Timer	(msec)	"20000"
Configuration\ALPS_EXCEPTION_ITEM_WAIT_TIMER	ALPS Exception Item Wait Timer	(msec)	"10000"
Configuration\ALPS_FAST_POLL_TIMER	ALPS Fast Poll Timer	(msec)	"1000"
Configuration\ALPS_MONITOR_ITEM_WAIT_TIMER	ALPS Monitor Item Wait Timer	(msec)	"10000"
Configuration\ALPS_PACKET_READY_WAIT_TIMER	ALPS Packet Ready Wait Timer	(msec)	"120000"

Appendix C. Registry

Registry Value Name	Description	Possible Values	Default Value
Configuration\ALPS_REPORT_TYPE_WAIT_TIMER	ALPS Report Type Wait Timer	(msec)	"300000"
Configuration\ALPS_RESET_DELAY_TIMER	ALPS Reset Delay Timer	(msec)	"135000"
Configuration\ALPS_STARTUP_WAIT_TIMER	ALPS Startup Wait Timer	(msec)	"60000"
Configuration\DFP100_DATA_WAIT_TIMER	DFP100 Data Wait Timer	(msec)	"20000"
Configuration\DFP100_EXCEPTION_ITEM_WAIT_TIMER	DFP100 Exception Item Wait Timer	(msec)	"10000"
Configuration\DFP100_FAST_POLL_TIMER	DFP100 Fast Poll Timer	(msec)	"1000"
Configuration\DFP100_MONITOR_ITEM_WAIT_TIMER	DFP100 Monitor Item Wait Timer	(msec)	"10000"
Configuration\DFP100_PACKET_READY_WAIT_TIMER	DFP100 Packet Ready Wait Timer	(msec)	"120000"
Configuration\DFP100_REPORT_TYPE_WAIT_TIMER	DFP100 Report Type Wait Timer	(msec)	"45000"
Configuration\DFP100_RESET_DELAY_TIMER	DFP100 Reset Delay Timer	(msec)	"45000"
Configuration\DFP100_STARTUP_WAIT_TIMER	DFP100 Startup Wait Timer	(msec)	"60000"
Configuration\DFP200_DATA_WAIT_TIMER	DFP200 Data Wait Timer	(msec)	"20000"
Configuration\DFP200_EXCEPTION_ITEM_WAIT_TIMER	DFP200 Exception Item Wait Timer	(msec)	"10000"
Configuration\DFP200_FAST_POLL_TIMER	DFP200 Fast Poll Timer	(msec)	"1000"
Configuration\DFP200_MONITOR_ITEM_WAIT_TIMER	DFP200 Monitor Item Wait Timer	(msec)	"10000"
Configuration\DFP200_PACKET_READY_WAIT_TIMER	DFP200 Packet Ready Wait Timer	(msec)	"120000"
Configuration\DFP200_REPORT_TYPE_WAIT_TIMER	DFP200 Report Type Wait Timer	(msec)	"300000"
Configuration\DFP200_RESET_DELAY_TIMER	DFP200 Reset Delay Timer	(msec)	"135000"

Registry Value Name	Description	Possible Values	Default Value
Configuration\DFP200_STARTUP_WAIT_TIMER	DFP200 Startup Wait Timer	(msec)	"60000"
Configuration\MOST_RECENT_ALARM	Most Recent Alarm Received by the Event Server.		Null
Configuration\MOST_RECENT_EVENT	Most Recent Event Received by the Event Server.		Null
Configuration\MOST_RECENT_UNACK	Most Recent Unacknowledged Alarm Received by the Event Server.		Null
EventCodeMapping\	Values needed for event code to event type mapping for each device type (not shown here).		

EVENT LOGGER

Key: \\HKEY_LOCAL_MACHINE\Software\GE\PMCS\6.0\EventViewer

Registry Value Name	Description	Possible Values	Default Value
ACKCOLOR	Color for Acknowledged Alarms. (NO LONGER USED.)		"4227072"
ACKNOWLEDGECOL	Column width for the Acknowledge Column.		"3000"
ALRMACKCOLOR	Color for Acknowledgeable Alarms.		"16711680"
ALRMINFOACKCOLOR	Color for Not Acknowledgeable Information Alarms.		"32896"
ALRMNOTACKCOLOR	Color for Not Acknowledgeable Alarms.		"8404992"
ALRMURGTACKCOLOR	Color for Acknowledgeable Urgent Alarms.		"255"
ALRMWARNACKCOLOR	Color for Acknowledgeable Warning Alarms.		"8404992"
ANNEVTCOLOR	Color for Annunciator Events.		"8421376"
CMDSNOTACKCOLOR	Color for Not Acknowledgeable Commands.		"8388736"
CREATEDTIMECOL	Column width for the Created Time Column.		"2790"
DATEFORMAT	Current user-selected date setting.	"DD/MM/YY" "DD/MM/YYYY" "MM/DD/YY" "MM/DD/YYYY" "MM/YY" "MM/YYYY"	"MM/DD/YY"
DISPLAYNAMECOL	Column width for the Display Name Column.		"1680"
DUMMYCOL	Column width for the dummy column (used internally by Event Logger).		"0"
EVENTCODECOL	Column width for the Event Code Column.		"1500"
EVENTDESCCOL	Column width for the		"3495"

Registry Value Name	Description	Possible Values	Default Value
	Event Description Column.		
EVENTIDCOL	Column width for the Event ID Column (used for testing).		"0"
EVENTTYPECOL	Column width for the Event Type Column.		"2115"
EVTCOLOR	Color for Events.		"16711680"
FIRSTINSTANCE	NO LONGER USED	"FALSE" – Disable "TRUE" – Enable	"TRUE"
INITIALVIEW	The default view to be shown when Event Logger is started.	"0" - SOE window "1" – Device Events window "2" – Device Alarms window "3" – System Events window "4" – Waveform Events window "5" – Annunciator Events window "6" – Fault Reports window "7" – HMI Events window "8" – Acknowledgeable Alarms window "9" – Expression Events window	"0"
MAX_REFRESH_COUNT	Number of times an incremental refresh is done before a full refresh is performed.		"10"
MAXGRIDRECORDS	The number of rows shown in the view.		"200"
NACOLOR	Color for Not Acknowledgeable Alarms. (NO LONGER USED.)		"32896"
NEEDTOREFRESH	Enable/Disable Event Logger Refreshing.	"FALSE" – Disable "TRUE" – Enable	"TRUE"
PRINTERFONTSIZE	The font size used in printing the events in the active view.		"4"
REFRESHINTERVAL	Refresh time interval.	(seconds)	"3"
REPORTCOLOR	Color for Fault		"255"

Appendix C. Registry

Registry Value Name	Description	Possible Values	Default Value
	Reports.		
SORTSTRING	Sort order for displaying events/alarms in the view.	“CREATETIME DESC” “CREATETIME ASC”	"CREATETIME DESC"
SOURCENAMECOL	Column width for the Source (Device) Name Column.		"1995"
SOURCETYPECOL	Column width for the Source (Device) Type Column.		"1500"
SYSEVTCOLOR	Color for System Events.		"8388608"
TIMEFORMAT	Current user-selected time setting.	For 6.5.015 and above: “HH:NN” “HH:NN:SS” “HH:NN:SS ’)”	Depends on Event Logger version: <= EL 6.5.013: “HH:NN:SS .’) + Right('000' + Format(TIMESTAMP USEC/1000000), 3)” = EL 6.5.014: “HH:NN:SS .’) + Right('000' & Int(TIMESTAMP USEC/1000), 3)” >= EL 6.5.015: "HH:NN:SS ’)”
TIMEMSECSETFLAG	Enable/Disable display of microseconds.	“FALSE” – Disable “TRUE” – Enable	"TRUE"
UNACKCOLOR	Color for Unacknowledged Alarms. (NO LONGER USED.)		"255"
WFEVTCOLOR	Color for Waveform Events.		"8421440"
WNDSETTINGS	Window settings including position and size.		"0 1 -1 -1 -1 -1 57 925 36 521"

WAVEFORM CLIENT

Key: \\HKEY_LOCAL_MACHINE\Software\GE\PMCS\6.0\WFClient

Registry Value Name	Description	Possible Values	Default Value
GE77GTWY_INI_PATH	Path of the GE77GTWY INI Files.		(Based on installation – Normally: "C:\ge_pmcs\ge77gtwy\ ")
GE77GTWY_WAVEFORMS_PATH	Path of the GE77GTWY Waveform CSV Files.		(Based on installation – Normally: "C:\ge_pmcs\ge77gtwy\ ")
WaitInterval & TryConnectTimes	Connection retry time-out & retry-count. When WFC has failed to connect to WFS, after this time-out value it retries the connection. Maximum number of attempts to connect to a particular WFS is the retry-count.	(seconds,number)	"3,1"
WFModeChangePassword	The password required by the user to change a device mode from WFC UI.		Null
WFServers	The waveform servers to which waveform clients should be connected.	The format of the key values is as follows: <Machine name { 'C:\' if it is local, '\\<machine name>\' if it is remote }>,<Working Directory {excluding the root directory or the machine name }>,<Server name { WFSERVER }>,<Enable/Disable { 1/0 }>; Each set is separated by ';'. Example: "C:\,GE_PMCS\WFSERVER,WFSERVER,1; "	Null

Appendix C. Registry

Registry Value Name	Description	Possible Values	Default Value
WindowPosition	Position of the window when the WFC is closed.	1 – Minimized 2 – Maximized 3 - Normal	Null
WindowSize	Size of the window when the WFC is closed.		Null

WAVEFORM SERVER

Key: \\HKEY_LOCAL_MACHINE\Software\GE\PMCS\6.0\WFServer

Registry Value Name	Description	Possible Values	Default Value
Connected Devices	The devices with which the WFS is connected (dynamic).	The format of the key values is as follows: <device name> <device type> <upload flag> <trigger flag> <auto capture flag> <COMTRADE support flag> <device timeout (msec)> <device latency (msec)> Each set is separated by ' ; '. Flag Values: 0 – Disabled 1 – Enabled	Null
DDE Servers	The DDE Servers with which the WFS communicates.	The format of the key values is as follows: <DDE Server> <Enabled Flag> Each set is separated by ' ; '. Flag Values: 0 – Disabled 1 – Enabled	Null
Delaytime	--	--	1000
Device Settings	The device settings for both current and previously connected devices.	The format of the key values is as follows: <device name> <device type> <upload flag> <trigger flag> <auto capture flag> <COMTRADE support flag> <device timeout (msec)> <device latency (msec)> Each set is separated by ' ; '. Flag Values: 0 – Disabled	Null

Appendix C. Registry

Registry Value Name	Description	Possible Values	Default Value
		1 – Enabled	
ExitDisable	Disables the Exit button on the Window.	Enable Disable	Enable
FastPollSleepTime	Fast Poll Sleep Time (NO LONGER USED)	(milliseconds)	2000
Frequency	Frequency (used in both CSV and COMTRADE file preparation).	(hertz)	50
Station Name	Station Name (used in COMTRADE file preparation)		"PMCS"
Supported DeviceTypes	Supported device types for the WFS.	The format of the key values is as follows: <device type> <upload flag> <trigger flag> <auto capture flag> <COMTRADE support flag> Each set is separated by ‘;’. Flag Values: 0 – Not Supported 1 – Supported	"PLM 0 1 1 1,E3710 0 1 1 1,E3720 1 1 1 1,MLPQM 1 1 1 1,ML369 1 1 1 1,ML469 1 1 1 1,ML489 1 1 1 1,ML745 1 1 1 1,ML750 1 1 1 1,ML760 1 1 1 1,UR 1 0 1 1,EPM9650Q 1 1 1 1"
UIStatus	Hides the User Interface of NT services.	Unhide/Hide	Unhide
WaveformsBackupPath	Backup directory under which the waveforms are stored (both CSV and COMTRADE). This contains complete copies of those stored in the WaveFormsPath location.		(Based on installation – Normally: "C:\Ge_pmcs\Backup")
WaveFormsPath	Directory under which the waveforms are stored (both CSV and COMTRADE).		(Based on installation – Normally: "C:\GE_PMCS\WFServer")
WindowPosition	Position of the window when the WFS is closed.	1 – Minimized 2 – Maximized 3 - Normal	3
WindowSize	Size of the window when the WFS is closed.		Null

Registry Value Name	Description	Possible Values	Default Value
DeviceTimeOutValues\CommCardDeviceDataTimeOut	Comm Card Device - Data Timeout	(msec)	"20000"
DeviceTimeOutValues\CommCardDeviceExceptionItemTimeOut	Comm Card Device - Exception Item Timeout	(msec)	"10000"
DeviceTimeOutValues\CommCardDeviceFastPollDelay	Comm Card Device - Fast Poll Delay	(msec)	"1000"
DeviceTimeOutValues\CommCardDeviceMonitorItemTimeOut	Comm Card Device - Monitor Item Timeout	(msec)	"10000"
DeviceTimeOutValues\CommCardDevicePacketReadyTimeout	Comm Card Device – Packet Ready Timeout	(msec)	"120000"
DeviceTimeOutValues\CommCardDeviceReportTypeTimeOut	Comm Card Device – Report Type Timeout	(msec)	"45000"
DeviceTimeOutValues\CommCardDeviceResetDelay	Comm Card Device – Reset Delay	(msec)	"135000"
DeviceTimeOutValues\CommCardDeviceTriggerTimeout	Comm Card Device – Trigger Timeout	(msec)	"600000"
DeviceTimeOutValues\CommCardDeviceWaveformDelay	Comm Card Device – Waveform Delay	(msec)	"30000"
DeviceTimeOutValues\CommCardStartUpTimeout	Comm Card Startup Timeout	(msec)	"60000"
EPM9650QDeviceDataTimeOut	Timeout for a data packet.	m sec	10000
EPM9650QPacketRetryDelay	Delay before next packet.	m sec	1000
EPM9650QRetrievalRetryDelay	Delay for next packet	m sec	600
EPM9650QRetryCount	No of retries made for a data packet when time out occurs	m sec	5
EPM9650QRetryDelay	Delay for next data retry.	m sec	10000
EPM9650QStartUpTimeout	Time out for start-up.	m sec	60000
ML369DataRequestInterval	The delay in between a data reception and next data request	m sec	1000
ML369DataWait	The time out for a data	m sec	2000

Appendix C. Registry

Registry Value Name	Description	Possible Values	Default Value
	packet		
ML369PacketWait	The time out for waveform data packet.	m sec	5000
ML369RetryCount	The number of retries for a waveform retrieval.	m sec	3
ML369StartUpWait	The time out for start-up.	m sec	120000
URDeviceDataTimeOut	Timeout for a data packet.	m sec	10000
URPacketRetryDelay	Delay before next packet.	m sec	1000
URRequestPacketDelay	Delay for next packet	m sec	600
URRetrievalRetryDelay	Delay for next Waveform retry.	m sec	3000
URRetryDelay	Delay for next data retry.	m sec	10000
URStartUpTimeout	The time out for start-up.	m sec	60000

GLOSSARY

actual value — A metered value.

application name — In DDE protocol, the name of the DDE server that is the source of the data to be transferred.

array — A block of registers whose contents are read or written together.

bit — One of the data elements, represented by either a 0 or 1, comprising a byte of data.

carriage return — The Enter key on the computer keyboard sends a character usually representing the end of a data element.

client — A program that obtains data from a server to use in a software application.

command coil — A register which contains commands issued to network devices.

commnet — A GE-proprietary communications network standard.

commnet segment — A group of one to four commnet-compatible devices (including at most one waveform-capturing meter) with all communication ports wired to a single Concentrator commnet port.

commnet-compatible device — Any meter, relay, trip unit, or other device equipped with a commnet communications port.

communications protocol — A formal set of conventions governing the control of inputs and outputs between two communicating processes.

concatenated — Chained, linked together, connected.

Concentrator Box — GE microprocessor-based device that provides connections for up to 32 commnet devices to the industry-standard Modbus RTU network.

Data Concentrator — A physical device that translates metering, status, and protection information from attached GE POWER LEADER commnet devices (trip units, meters, relays) to RS485 Modbus RTU.

data link — See item.

data point — A data value, the contents of an individual register.

DDE — Dynamic Data Exchange. One method of inter-application communication supported under Microsoft Windows. Based on a messaging system, two Windows programs carry on a DDE conversation by posting messages to each other. For any given message, the program asking for useful information is called the client, and the program providing useful information is called the server.

DDE client — A Windows program that gets data from a DDE server and may perform calculations and/or display the data.

DDE link — A register name or number requested by the client and provided by the server. PMCS supports many simultaneous links.

DDE Server — A Windows program that automatically gathers, formats, and organizes data and makes it available to DDE clients. In PMCS, a DDE server is optimized for use with Modbus or Ethernet power management networks.

device name — The name of one of the PMCS system devices, such as a meter, created by the user, which must be no more than 8 characters long, with no spaces. It must be unique for each device. Synonymous with topic.

discrete — A number that may take on a finite number of values, usually 0 or 1.

Ethernet — An open, industry-standard, high-performance communications network protocol that operates on 10BaseT or 10Base2 transport media and yields communications rates up to 10 megabits per second.

Ethernet Gateway — A physical device that translates information between RS485 Modbus RTU and Ethernet TCP/IP communications protocols.

event — A classification of unusual or atypical activity within the power management network. Usually a reported status change.

event code — A unique number associated with an event description.

GE device — Devices manufactured by GE, designed for use in POWER LEADER PMCS. All supported devices in the interface document.

GE32ENET — Application name for the PMCS DDE Server, Ethernet TCP/IP version.

GE32MODB — Application name for the PMCS DDE Server, RS485 Modbus version.

generic device — A device that supports the Modbus RTU protocol, but is not included explicitly in the register maps of this document.

input register — A register which contains dynamic value data—such as current/voltage.

item — A name to identify the desired data point.

Local Area Network — A data communications network that spans a physically limited area (generally less than a mile or two), provides high-bandwidth communication over inexpensive media (generally coaxial cable or twisted pair), provides a switching capability, and is usually owned by the user (i.e., not provided by a common carrier).

mnemonic — A name representing the item register address. Mnemonics are more convenient to use than register addresses.

Modbus RTU (Remote Terminal Unit) — An open, industry-standard, high-performance network communications protocol developed by Modicon/AEG Schneider Automation that typically operates on an RS485 network.

Modbus-compatible device — Any device equipped with a Modbus RTU communications port.

null character/terminator — ASCII 0, used to signify the end of a data string.

PMCS — Power Management Control System.

polling — Continuous acquisition of device register values at a fixed interval.

POWER LEADER — The GE family of comprehensive power management devices and system software used to minimize downtime and overall power cost.

protocol — See communications protocol.

protocol timer tick — The time interval at which server protocol is activated.

read-only — Data that the system can change, but not the user.

read/write — Data that both the system and user can change.

reals — A single precision floating point number, IEEE 32-bit.

register — A unit for binary data that has to be acquired from device. A register value can be accessed by specifying its address.

register array — A block of registers written and read together.

register contents — A numeric value contained within a register.

register map — A list of all registers available in a particular device.

register number — The assigned designator of a specific register which holds data.

RS485/EIA485 — A physical standard for multi-drop, high-speed, noise-tolerant communications over a twisted pair network; often used with the Modbus RTU protocol.

SCADA (supervisory control and data acquisition) — A group of systems including power management and control systems.

scan interval — The minimum time interval during which a device should be scanned once.

server — A software application that responds to requests by providing data or services to a client.

server timer tick — Time interval at which a DDE server does DDE protocol management.

setpoint — A threshold value at which an event is generated or a waveform capture triggered.

signed integers — Whole numbers, not fractions, with positive or negative values.

slave address — The value assigned to a device to identify it uniquely in a single port.

string — A series of eight-bit characters terminated with a null (0).

tag — See item.

Glossary of Terms

TCP/IP — Transmission Control Protocol/Internet Protocol, a combination of transport and network level protocols frequently used on Ethernet networks.

time stamp — The hour-minute-second information attached to an event to indicate the time it occurred.

time-out — The maximum time to wait for a response from a device after a server has transmitted its data, after which the server decides a response to the transmitted packet will never come from device.

topic — Any of a list of items that an application can support at this time. This may change, depending on what activity the application is doing. For a DDE server, the topic name is the logical device configured in the server.

transaction — A client application's request for data or services or the server's reply.

trip unit — A circuit breaker component device or integral electronics for circuit protection using microprocessor technology and capable of metering.

twisted pair — Two insulated wires twisted together uniformly so that each is equally exposed to electrical signals from the environment. The pair of wires may be surrounded by a shield, a jacket of additional insulation, or similar pairs of wires.

valid data time-out — The maximum time for which a server will wait for a requested data item to be retrieved from a device. If this time expires, the server assumes data cannot be acquired and so informs the client.

valid string — A string of characters containing no special characters.

waveform — A periodic variation of electric current or voltage as displayed graphically.

write-only — Data that can be written by the user, but not read back.

Registr Value Name	Description	Possible Values	Deafault
ELVSCmdPwdStatusRetrievalDelay	Time after which the status of the password command will be checked in the device.	millisecond	500
ELVSCSVFileWritingSteps	Number of samples of data written to disk in between interleaving.		100
ELVSDatFileReadingSteps	Number of bytes of data read from disk in between interleaving.		5000
ELVSDeviceDataTimeOut	Time out for the response to a Data Item request.	millisecond	10000
ELVSPacketRetryDelay	Not used.	millisecond	1000
ELVSProcessingPace	Number of requests to ignore for interleaving during preparing data.		3
ELVSRequestPacketDelay	Not used.	millisecond	600
ELVSRetrievalRetryDelay	Time after which the request will be re-sent to device if not responded.	millisecond	3000
ELVSRetryDelay	Used for MMS states.	millisecond	10000
ELVSStartUpTimeout	Time out for the response to the request for intialization data.	millisecond	60000
ELVSTriggerCmdDelay	Time out for the detection of new waveform for succesful trigger command.	millisecond	10000
MIFIIDeviceDataTimeOut	Time out for the response to a Data Item request.	millisecond	10000
MIFIIPacketRetryDelay	Time after which the Data Item request will be re-sent to device if not responded.	millisecond	1000
MIFIIRequestPacketDelay	Time after which the Data Item request will be re-sent to device if not responded - Used for File position.	millisecond	600
MIFIIRetrievalRetryDelay	Time after which the complete request will be re-sent to device if not responded.	millisecond	3000
MIFIIRetryDelay	Used for MMS states.	millisecond	10000
MIFIIStartUpTimeout	Time out for the response to the request for intialization data.	millisecond	60000
MIFIITriggerCmdDelay	Time out for the detection of new waveform for succesful trigger command.	millisecond	5000
F650DeviceDataTimeOut	Time out for the response to a Data Item request.	millisecond	10000
F650PacketRetryDelay	Time after which the Data Item request will be re-sent to device if not responded.	millisecond	1000
F650RequestPacketDelay	Time after which the Data Item request will be re-sent to device if not responded - Used for File position.	millisecond	600
F650RetrievalRetryDelay	Time after which the complete request will be re-sent to device if not responded.	millisecond	3000
F650RetryDelay	Used for MMS states.	millisecond	10000
F650StartUpTimeout	Time out for the response to the request for intialization data.	millisecond	60000