DGP, To **G60, G30, 489** or **G650** Replacement

DGP DIGITAL GENERATOR PROTECTION

The DGP is a digital system, which provides protection, monitoring, control and recording functions for AC generators. It has been used on generators driven by steam, gas and hydraulic turbines. All sizes of generators has been protected with the DGP.

To take advantage of the latest in technology and the new developments for Generator Protection consider the DGP replacements, depending on the specific application needs.

UR FAMILY

- G60 Generator Protection System for Generators of any size
- G30 Generator Protection System for small to medium generators or for applications needing in-zone transformer protection

KEY BENEFITS

- Flash memory for product field upgrade
- Multiple breaker support
- Multiple communication options and protocols
- Exchange inputs and outputs between relays via high speed communications
- Incorporates protection and control functions, programmable pushbuttons, programmable status LEDs, and communication interfaces
- Modular construction simplifying and reducing the stock of spare parts
- Multiple I/O options
- Embedded IEC61850 Protocol - No external protocol converters required
- Rich Metering - current, voltage, power, energy, frequency

- Front panel display and keypad for local direct access, with an RS232 port for local PC access
- Customize protection and control functions with Programmable logic (FlexLogic™), custom time-current curves (FlexCurves™), and custom built protection and control functions (FlexElements™)
- Multi-language support - French, Chinese, Russian option
- Networking options - Ethernet-fiber (optional redundancy), RS485
- Pilot channel options - Direct fiber for up to 150 km, RS422, G.703, direct to multiplexer fiber C37.94
- Multiple protocols - IEC61850, DNP 3.0 Level 2, Modbus RTU, Modbus TCP/IP, IEC 60870-5-104
- Direct exchange of Inputs/Outputs - exchange of binary data between peer G60s via communication link

GE Multilin

SR FAMILY

- 489 Generator Protection
  System Primary, backup and co-generator applications with 25, 50 or 60 Hz synchronous or induction generators

Key Benefits

- Multiple RTD inputs for stator thermal protection
- Advanced monitoring functions - vibration, bearing temperature through Analogue I/O
- Large backlit display with 40 characters to view relay information and settings in direct sunlight, full numerical keypad, and setpoint navigation keys.
- Accurate metering during start up and system disturbances - Tracks power system frequency and adjusts sampling rate accordingly
- Built in inductive hall effect sensor for speed monitoring
- Flash memory for product field upgrade
- Draw-out construction

- IRIG-B time synchronization, event reports, waveform capture, data logger, learned data
- Built in simulation features for setpoint verification
- Multiple communication ports and protocols -Via Modbus RTU and DNP3.0 Level 2 protocols, through standard RS232 & RS485 serial ports, optional Modbus TCP/IP through embedded Ethernet Port
- Optional conformal coating for application in chemically corrosive and humid environments
- Rich metering: A, V, W, VAR, VA, Wh, VARh, PF, Hz, demand A, W, VAR, VA
- RS232 and RS485 ports - up to 19,200 bps, Ethernet port

650 FAMILY

- G650 Machine Controller
  Distributed generation management, primary protection and control where distributed I/O is a requirement to interact with prime mover control system

Key Benefits

- Reliable Distributed Generation interconnection protection
- A multifunction device that incorporates protection and control functions, programmable pushbuttons, programmable status LEDs, and communication interfaces
- Modular construction simplifying and reducing the stock of spare parts to plug & play modules instead of complete relays
- Flexible and cost effective control for complex systems with IEC compatible programmable logic to customize the functionality to address unique, site specific applications
- Standard backlit LCD display with 4 x 20 characters, optional 16 x 40 (240 x 128 pixels) graphical LCD, programmable buttons, and rotary knob for selecting setting menus, and submenus.
- Multiple protocols, through standard RS232 & RS485, Ethernet Ports - Modbus RTU, Modbus TCP/IP, DNP 3.0 Level 2, IEC 60870-5-104, IEC61850, CAN BUS

- Compatible with standard internet browsers - Via protocols such as Http, ftp, and tftp
- Reliable redundant Ethernet Communication ports
- Basic generator condition monitoring - Full metering including demand & energy, analog I/O, breaker arcing current monitoring
- Rich Metering - Current, voltage, power, power factor, frequency metering, Demand: Ia , Ib , Ic , Ig, Isg, I2, MW, MVA
- Vector Shift Monitoring
- Optional Power Surge Monitoring, and Reactive Power Limiting
- User programmable local display, LEDs and pushbuttons
- Customize protection and control functions with programmable logic and FlexCurves™