GE VERNOVA

PROFICY® SOFTWARE & SERVICES

CIMPLICITY

Process Systems with CIMPLICITY

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doc@ge.com

Contents

Chapter 1. Process Systems with CIMPLICITY

About Process Systems with CIMPLICITY

Welcome to Process Systems with CIMPLICITY.

This feature provides powerful functionality to download, monitor and act upon process data from a Process (EGD) Server.

Several of the available tools can be selected and customized for your system's requirements.

Step Number	Description
Step 1 *(on page 4)*	Enable Process Systems in CIMPLICITY.
Step 2 *(on page 6)*	Confirm that Process Systems is enabled.
Step 3 *(on page 12)*	Configure Process Systems roles.
Step 4 *(on page 16)*	Build objects from the EGD Server.
Step 5 *(on page 30)*	(Optional) Revise the global object/faceplate colors.
Step 6 *(on page 32)*	Configure and use function block objects.
Step 7 *(on page 375)*	Set up a PPS Alarm Viewer screen.

Step 1. Enable Process Systems in CIMPLICITY

This task describes how to open the Project Properties dialog box and enable Process Systems.

1. Do one of the following to open the Project Properties dialog box.
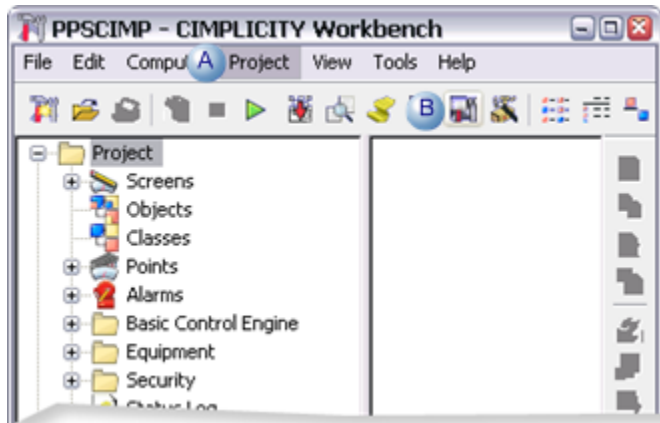
Item	Action
A	Click Project>Properties on the Workbench menu bar.
B	Click the Project Properties button on the Workbench tool-bar.

Result: The Project Properties dialog box opens when you use either method.

2. Select the General tab in the Project Properties dialog box.
3. Check the following.
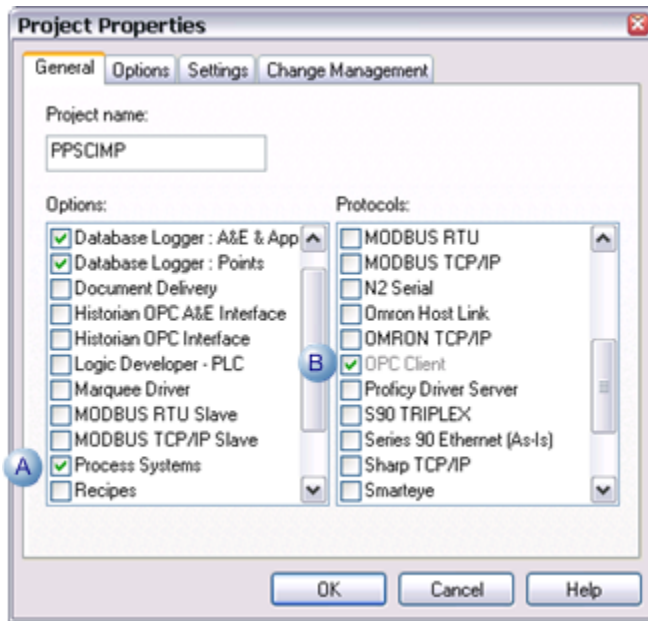
Item	Option	Description
A	Process Systems	Enables Proficy Process Systems integration.
B	OPC Client	When PPS Support is checked OPC Client is: ◦ Checked. ◦ Made read-only.

4. Make any other specifications for the project properties.
5. Click OK.

The Project Properties dialog box closes; Proficy Process Systems support is enabled. If you create a new project, Process Systems is automatically checked.

Step 2. Confirm that Process Systems is Enabled

Step 2. Confirm that Process Systems is Enabled

Review the features that are added when Process Systems is enabled.

Step 2.1 *(on page 6)*	Review extensive Proficy Systems additions.
Step 2.2 *(on page 10)*	Review the new Process Systems OPC port.

Step 2.1. Review Extensive Proficy Systems Additions

Process Systems adds the following to the CIMPLICITY project as soon as it is enabled.

- Classes.
- Object Builder
- Mimic objects.
- Faceplates.
- Roles.
- Process Systems OPC port.

Classes

Select **Project>Classes** in the Workbench left pane.

Process Systems classes are listed in the Workbench right pane.

A class is:

- Available for each Process System function block.
- Read-only.
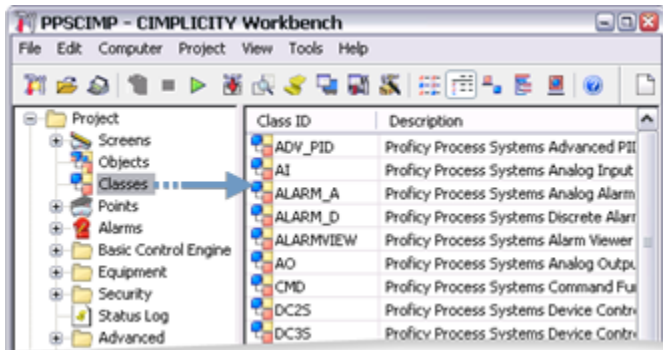
Object Builder

Expand the **Process Systems** folder in the Workbench left pane.

An Object Builder is available.

The Object Builder *(on page 16)* provides the tools to download objects from the EGD Server.

Note: If the Proficy Systems Engineering Workstation has been installed the following can also be opened through the Workbench.

- Engineering Workstation
- EGD Power Tool
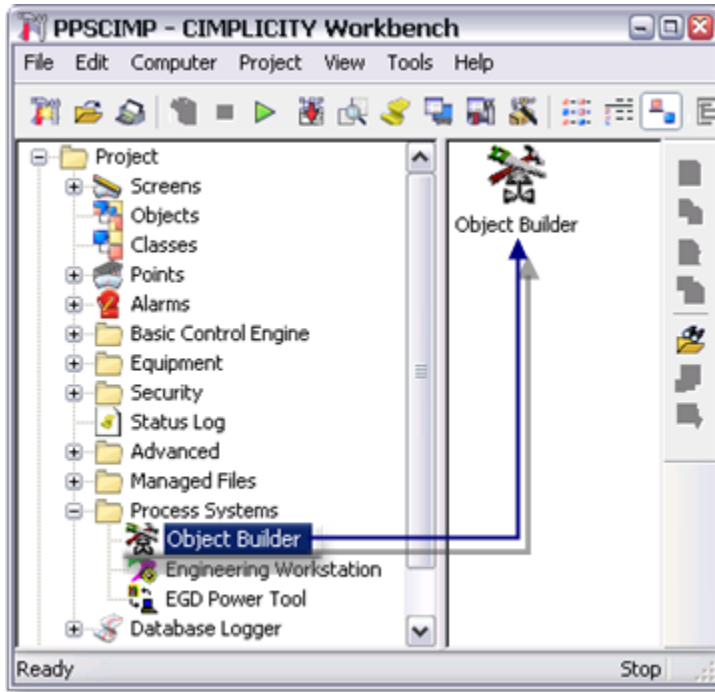
Mimic Objects

Select **Project>Screens>PPS** in the Workbench left pane.

A CimEdit screen:

- Is available for each CIMPLICITY class that corresponds to a Process System function block.
- Includes mimic objects that are available for the

Mimic objects:

- Are used on CIMPLICITY overview screens.
- Either mimic the functionality of the corresponding PPS function block or the device that the function block controls.
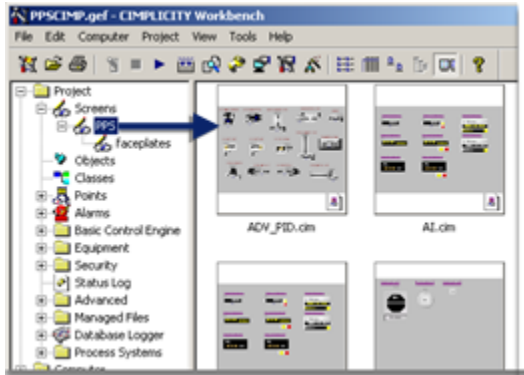
Faceplates

Select **Project>Screens>PPS>Faceplates** in the Workbench left pane.

A Faceplate is:

- Available for each Process System class (function block).
- Read-only.
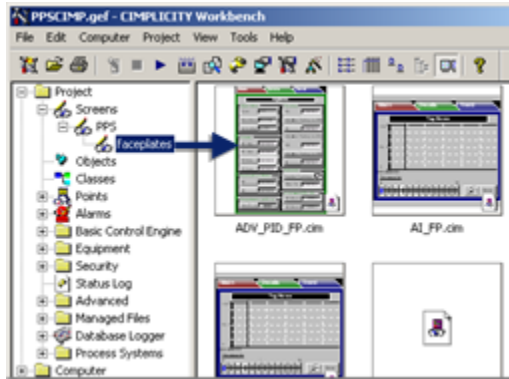
Roles

Select **Project>Security>Roles** in the Workbench left pane.

Process Systems adds two roles to the CIMPLICITY project.

They are:

- ENGINEER.
- GUEST.
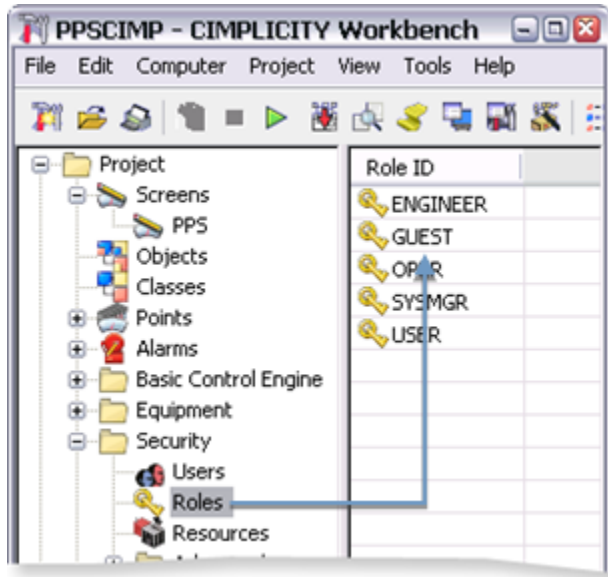
Step 2.2. Review Process Systems OPC Port

1. Select **Project>Equipment>Ports** in the Workbench left pane.

   If an OPC port has:

   - Already been installed, Process Systems installs a port with the next available index.
   - Not already been installed the Process Systems port will be MASTER_OPC_0.
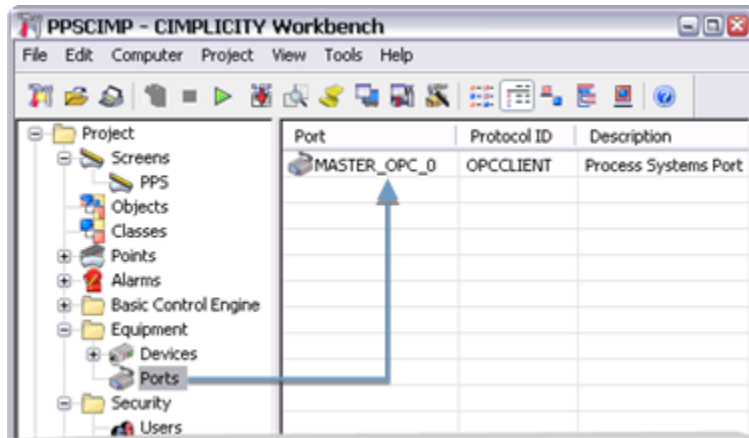
2. Double-click the Process Systems port in the Workbench right pane.

   The Process System's OPC Port Properties dialog box opens.

   - General tab
   - OPC port settings tab.

General tab: Process Systems OPC Port Properties dialog box

Some default values are different from the standard OPC port General default values.

Process Systems General default values are as follows.
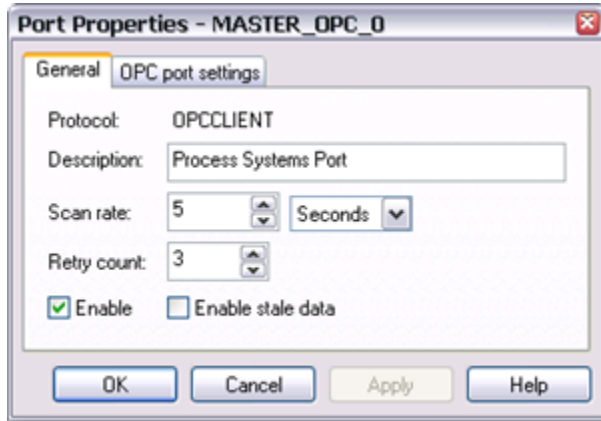
Feature	Default Value
Description	Process Systems Port
Scan rate	5 Seconds
Retry count	3
Enable	Checked
Enable stale data	Clear

OPC port settings tab: Process Systems OPC Port Properties dialog box

Select the OPC Port Settings tab.

Some default values are different from the standard OPC Port Settings default values.

Process Systems Port Settings default values are as follows.
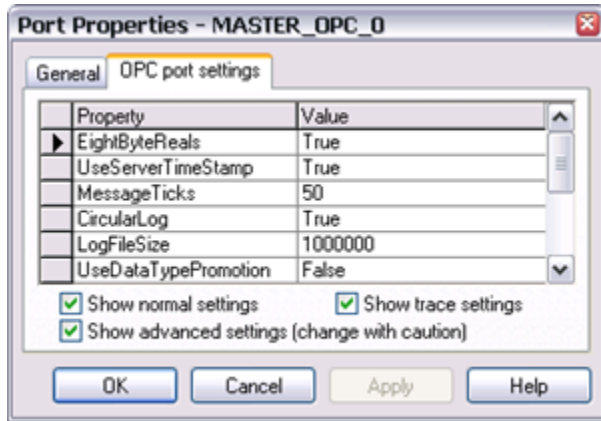
Feature	Default Value
EightByteReals	True
UserServerTimeStamp	True
MessageTicks	50
CircularLog	True
LogFileSize	1000000
UserDataTypePromotion	False
RefreshUnsoItems	True
BatchDynamicAdditions	True
BatchAddBatchSize	50
BatchTimeToLive	200
AddBoolAsBool	False
TraceLevel	1

Step 3. Configure Process Systems Roles

Two default roles are added to the project when Process Systems is enabled.

They are:
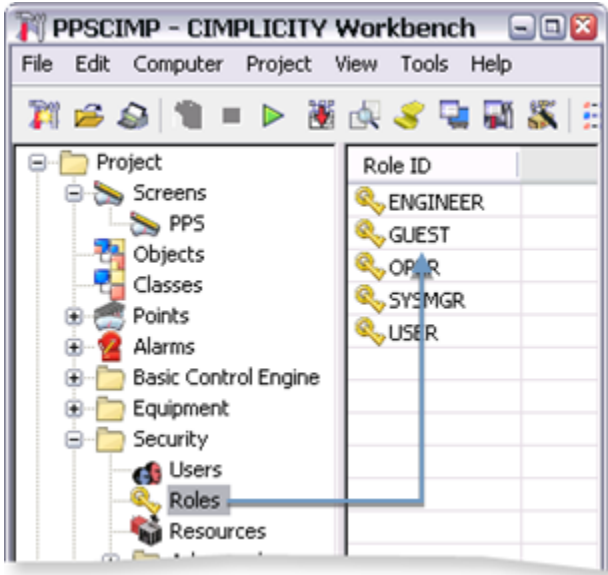
1. #unique_4_Connect_42_AENGINEER *(on page 13)*
2. #unique_4_Connect_42_BGUEST *(on page 14)*

A *(on page 13)*	ENGINEER role default.
B *(on page 14)*	GUEST role default.

> ⚠️ **Important:**
>
> If you already have either an ENGINEER and/or GUEST role defined in your system, it will be overwritten by the Proficy Process Systems ENGINEER and/or GUEST roles.

ENGINEER Role Default

The Engineer role, by default: is assigned the following.
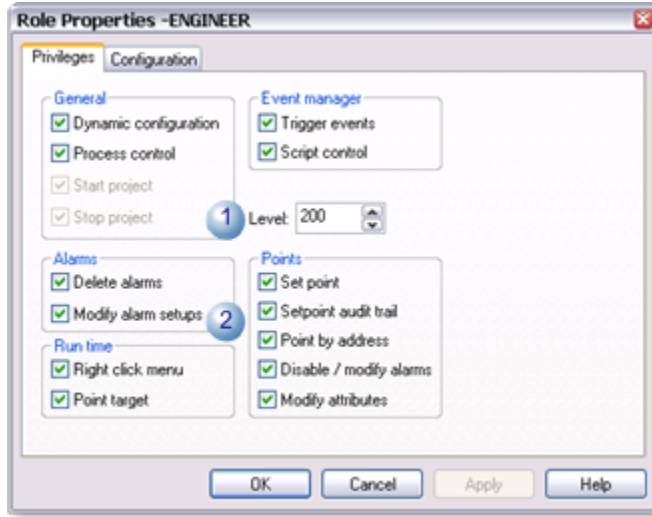
Privileges

1	Is assigned a Level of 200. A 200 Level is required to perform several faceplate functions.
2	Assigned all privileges.

Configuration

When Configuration Security is enabled, the Engineer role, by default, is assigned all configuration privileges.
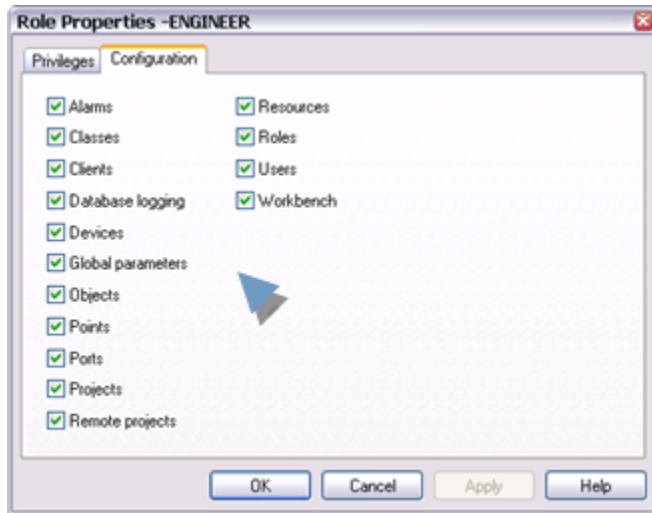
GUEST Role Default

The Guest role, by default, is assigned the following.
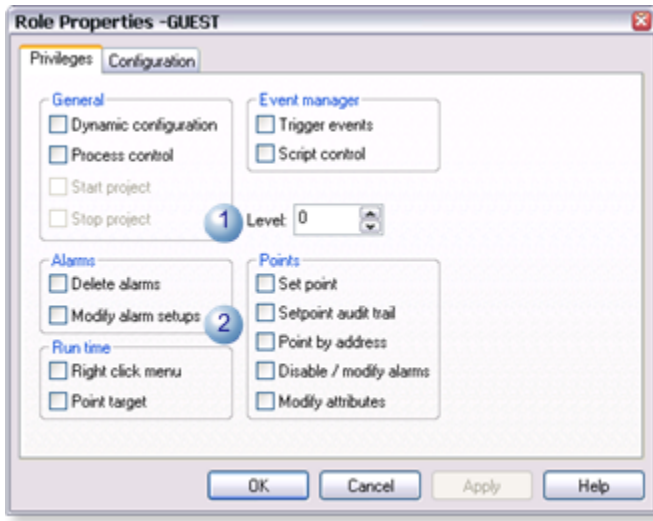
Privileges

1	Is assigned a Level of 0. A guest will be able to review the faceplate, but will not be able to affect it's function or status.
2	Assigned no privileges.

Configuration

> ⚠ **Important:**
>
> When Configuration Security is enabled, all roles, by default, are assigned all configuration privileges.

This means that the guest, by default, will have Objects checked which allows a guest to use the Object Builder *(on page 16)* to build objects from the EGD Server.

It is strongly recommended that you remove these privileges and use the guest role as a read-only role.

Recommended
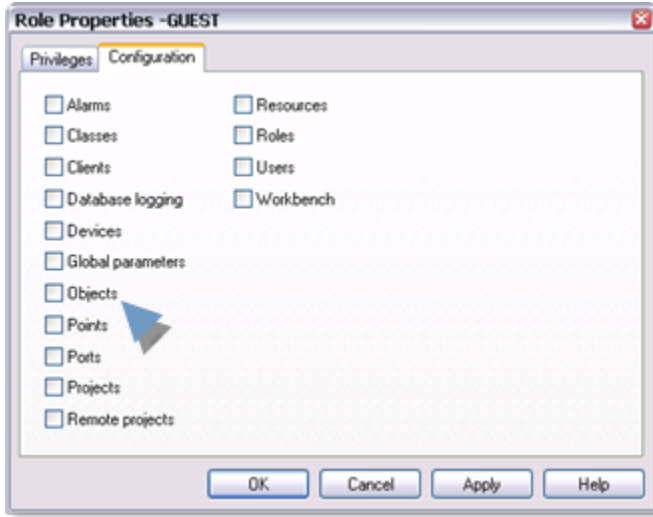
Step 4. Build Objects from the EGD Server

4.1 *(on page 16)*	Open the Object Builder - Select Producers window.
4.2 *(on page 18)*	Make selections in the Object Builder - Select Producers window.
4.3 *(on page 29)*	Review the Object builder results.

Step 4.1. Open the Object Builder - Select Producers Window

1. Select **Project**>**Process Systems**>**Object Builder** in the Workbench left pane.
2. Select **Object Builder** in the right pane.
3. Do one of the following.
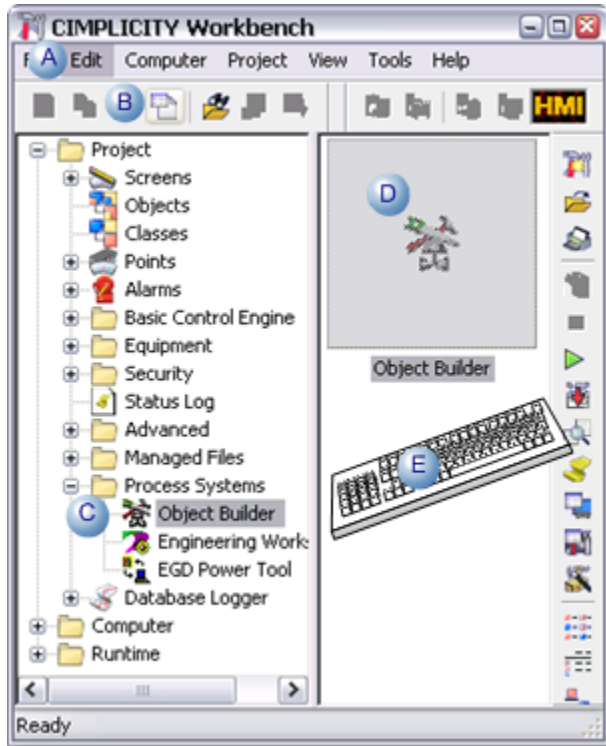
A	Click Edit>Properties on the Workbench menu bar.	
B	Click the Properties button on the Workbench toolbar.	
C	In the Workbench left pane:	
	Either	Or
	Double click **Object Builder**.	a. Right-click **Object Builder**. b. Select Properties on the Popup menu.
D	In the Workbench right pane:	
	Either	Or
	Double click **Object Builder**.	a. Right-click **Object Builder**. b. Select Properties on the Popup menu.
E	Press Alt+Enter on the keyboard.	

4. Right-click **Object Builder**.

5. Select Properties on the Popup menu.

6. Right-click **Object Builder**.

7. Select Properties on the Popup menu.

Step 4.2. Make Selections in the Object Builder - Select Producers Window

Use the Object Builder windows to build objects in CIMPLICITY from the EGD Server, as follows.
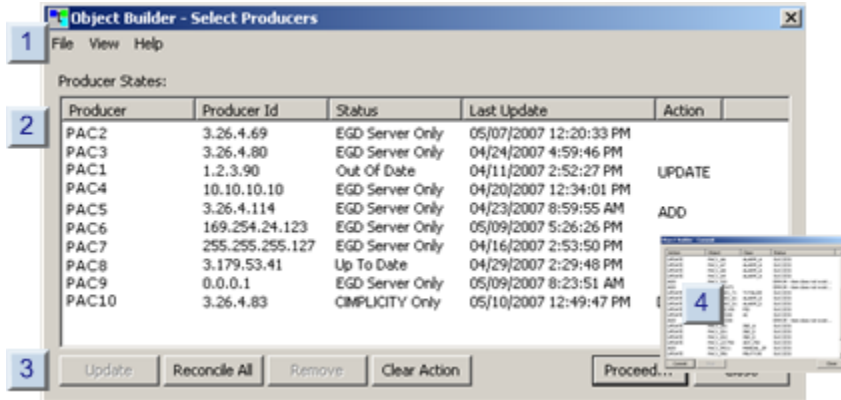
1. Step 4.2.1. Identify a Remote EGD Server *(on page 18)*
2. Step 4.2.2. Review Producer Status on the EGD Server vs. CIMPLICITY *(on page 21)*
3. Step 4.2.3. Select Producers and Actions *(on page 22)*
4. Step 4.2.4. Build the Selected Actions *(on page 26)*

Step 4.2.1 *(on page 18)*	Identify a remote EGD server.
Step 4.2.2 *(on page 21)*	Review producers that are on the EGD server.
Step 4.2.3 *(on page 22)*	Select producers and actions.
Step 4.2.4 *(on page 26)*	Build the selected actions.

Step 4.2.1. Identify a Remote EGD Server

The Object Builder provides a window to identify the EGD Configuration Server.

> ✏️ **Note:**
>
> When the EGD server is:

EGD Server is:	The Object Builder
Local	Will find the EGD server automatically.
Remote	Needs to have the name and location entered.

A *(on page 19)*	Open the EDG Config Server dialog box.
B *(on page 19)*	Enter specifications to identify the EDG server.

1. Open the EDG Config Server dialog box.

Click File>Options on the Object Builder - Select Producers menu bar.
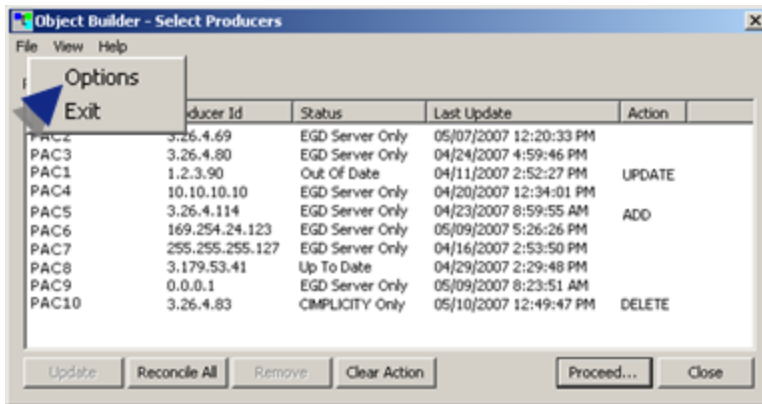
Result: The EDG Config Server window opens.

1. Enter specifications to identify the EDG server.

1. Enter the following specifications to change the EDG server.
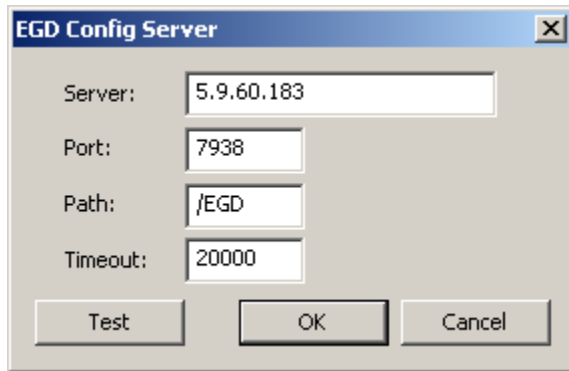
Serv-er	The name or IP address of the Server whose producers the Object Builder will compare to Process Systems objects in the CIMPLICITY project.	
Port	Port the Object Builder uses to connect to the EGD server.	
	Default	7938 **Important:** It is strongly recommended that the default port be used.
Path	(If the EGD server is remote) Specify either the server's IP address or URL.	
	Default	/EGD **Important:** Use the default if the EGD server is local.
Time-out	Length of time the Object Builder has to connect to the specified EGD Server.	
	Default	20000 milliseconds

2. Click Test to make sure that a connection can be made.

One of the following occurs.

- If a connection cannot be made a message box opens reporting that the connection cannot be resolved.

You will need to resolve the issues that may be causing the lack of communication, e.g. check the IP address, correct a network failure.

- If a connection is made, a Test Successful message opens.
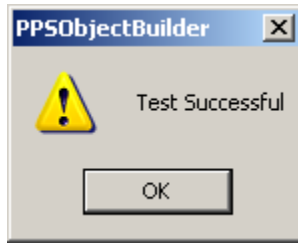
Click OK to close the message box.

3. Click OK to close the EGD Config Server dialog box.

The EDG Config Server window closes. The EGD server that was identified before the Object Builder - Select Producers window opened continues to be the selected EGD server.

1. Re-open the Object Builder - Select Producers window.

Click File>Exit on the Object Builder - Select Producers window menu bar.

The Object Builder - Select Producers window closes.

- When you re-open the Object Builder - Select Producers window, the identified EGD server will be the server the Object Builder connects to.
- If the Object Builder fails to find the EGD Server within the specified Timeout period, an error message will display.

1. Click OK to close the message box.

The Object Builder - Select Producers window will open.

1. Correct the EDG server configuration or specifications.
2. Close and re-open the Object Builder - Select Producers window when the corrections are made.

Step 4.2.2. Review Producer Status on the EGD Server vs. CIMPLICITY

The Object Builder - Select Producers window lists the following.
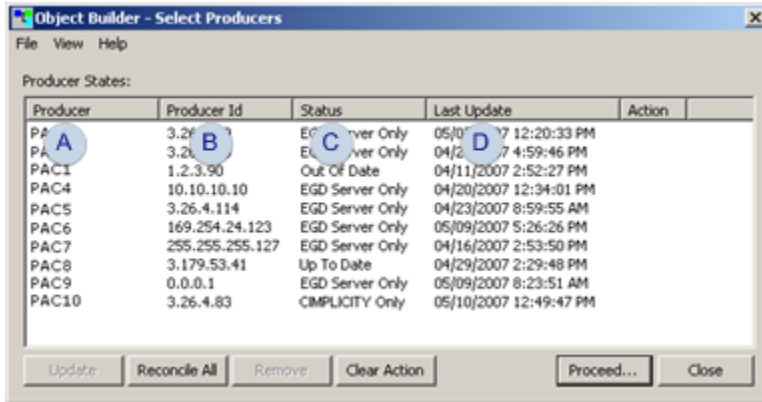
A	Pro-ducer	Producers found on the EGD server.	
B	Pro-ducer ID	Status of the producer's objects on the EGD server vs. the CIMPLICITY project. Options are:	
		Up to Date	The producer's newest Proficy System objects are in the CIMPLICITY project.
		Out of Date	The producer's Proficy System objects are in the CIMPLICITY project. However, the producer has newer versions and/or additional objects on the EGD server.
		EGD Server Only	The producers Proficy System objects are on the EGD Server only; they have not been added to the CIMPLICITY project.
		CIM-PLICITY Only	The producer has been removed from the EGD Server; the Proficy System objects are still in the CIMPLICITY project.
C	Sta-tus	The unique Producer ID assigned to a Producer on the EGD server. EGD Server documenta-tion provides detailed information about producer ID's.	
D	Last Up-date	The (local)date and time that one or more objects in the producer was last added or updated.	

Step 4.2.3. Select Producers and Actions

A *(on page 23)*	Select one or more Producers.
B *(on page 24)*	Click an action button for the selected Producers.
C *(on page 25)*	Proceed with the actions.

1. Select one or more Producers.

Do one of the following.

• Click the Reconcile All button.
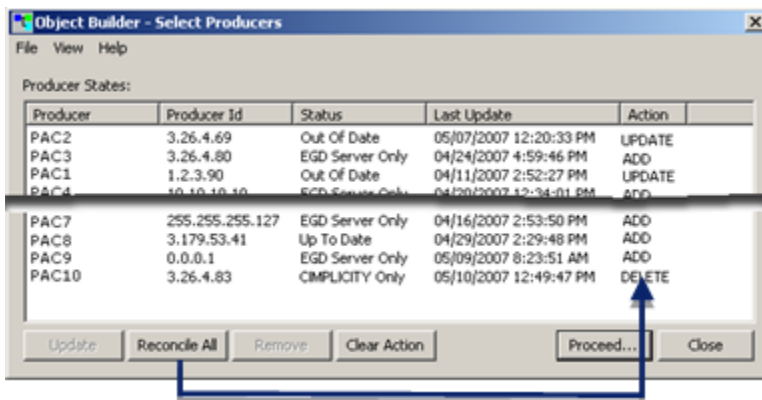
Result: The Object Builder lists the actions that will be taken based on the Producer's current status.

• Adds objects from all Producers that are only on the EGD Server.
• Updates (and adds) objects from all Producers that have newer versions than what is currently in the CIMPLICITY project.
• Use standard mouse/keyboard procedures to select Producers.

To Select	Action
Single Producer	Click the Producer.

Several Producers that may not be next to each other	1. Hold down the Ctrl key 2. Click the Producers.
A range of Producers.	1. Click one Producer to start the range. 2. Press and hold down the Shift key. 3. Click the Producer that is at the end of the range.

1. Click an Action button for the selected producers.

> **Note:**
>
> This is not required if Reconcile All was clicked.

Buttons that are available for the selections are enabled, as follows.
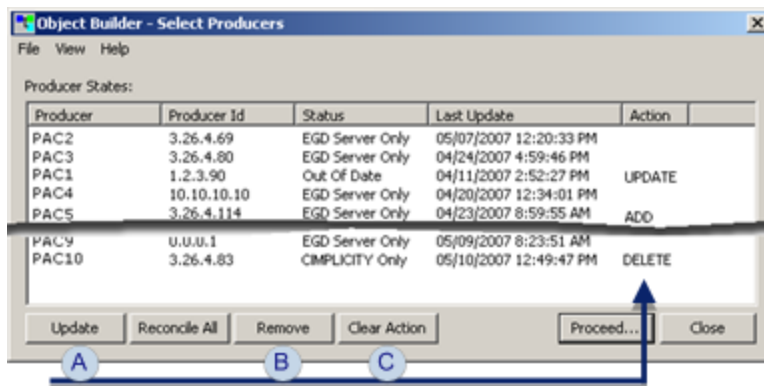
	But-ton	Is Enabled	Action
A	Up-date	Either or both (and only those) of the following are selected. Up to Date Out of Date	• Add objects from selected Producers that are only on the EGD Server. • Update (and add) objects from selected Producers that have newer versions than what is currently in the CIM-PLICITY project. **Note:** Because the status is based on the last update time-stamp, the Update button is enabled when the status is Up to Date to let you correct any out of sync issue that might occur.

B	Re-move	When a selected producer's objects are in the CIMPLICI-TY project.	Deletes the producer's Process System objects and all asso-ciated features, e.g. points, alarms. **Note:** A message box will open to confirm the removal action.
C	Clear Ac-tion	Always	Removes actions from the selected producers. When the se-lected actions are committed, producers with cleared (no) ac-tions will not be affected.

Continue to select as many Producers/Action buttons as are required.

1. Proceed with the actions.

Click one of the following buttons when all Producers/actions have been selected.
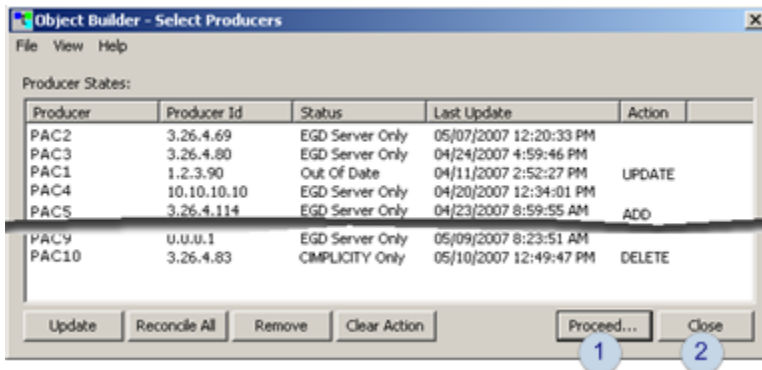
	Button	Action
A	Pro-ceed	Begin the action process.
B	Close	Close the Object Builder - Select Producers window without taking any ac-tion.

Result: The Object Builder - Commit window opens when Proceed is clicked.
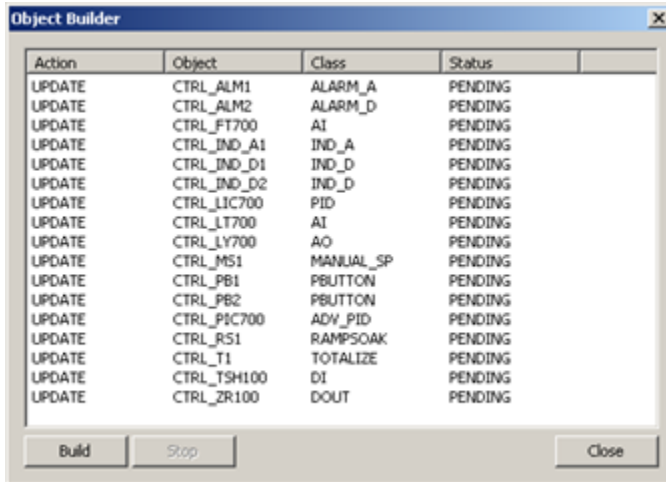
Step 4.2.4. Build the Selected Actions

> **Note:**
> If Configuration Security is enabled, the Build button will be enabled for users whose roles have Objects checked on the Configuration *(on page 12)* tab in the Roles Properties dialog box.

A *(on page 23)*	Review the detailed list of actions in the Object Builder - Commit window
B *(on page 27)*	Select how to proceed.
C *(on page 28)*	Complete object building.

1. Review the detailed list of actions in the Object Builder - Commit window.

The Object Builder - Commit window provides the following information for you to review while the actions are pending.
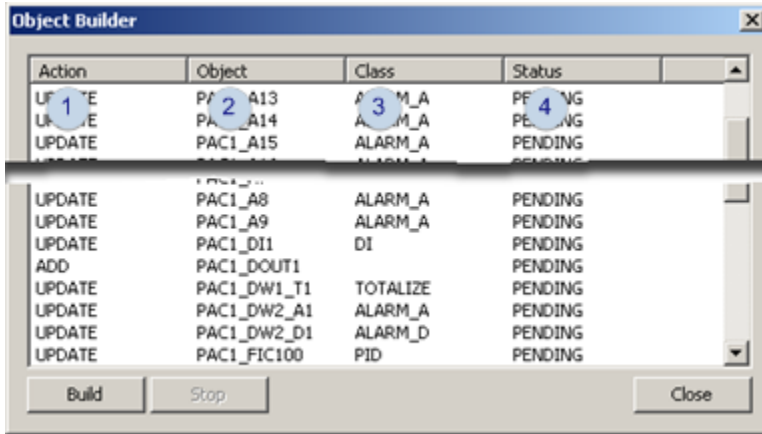
1	Action	Action that will be taken based what was specified in the Object Builder - Select Producers window.
2	Object	Process System object in the selected producer.
3	Class	Process System class that the object is associated with.
4	Status	Action status. **Note:** The status is Pending before the object is built.

1. Select how to proceed.

Click one of the following buttons to proceed (or continue).
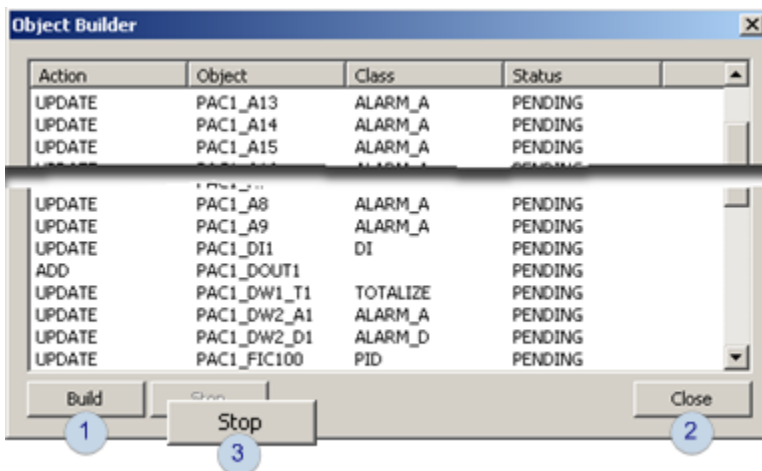
	Button	Enabled::	Action

1	Build	Both when:	
		• The Object Builder - Commit window opens.	Instructs the Object Builder to perform the selected actions.
		• The process is stopped.	Instructs the Object Builder to resume performing the selected actions.
2	Close	When the Object Builder - Commit window opens.	Closes the Object Builder - Commit window without performing the selected actions.
3	Stop	While the actions are in process.	Stops the process.

1. Complete object building.

Do the following when the Object Builder completes the selected actions.

1	The status reports SUCCESS when objects are built without errors.
2	(If there are errors) status messages report what caused the error. ⓘ **Tip:** **Tips** • The column widths can be changed to display the message text. • A horizontal scroll bar provides scroll functionality for longer messages.
3	Click Close to close the Object Builder - Commit window.

Result: The Object Builder - Select Producers window will remain open when the Object Builder - Commit window closes.

Review the new status summary and take new action or close the Object Builder - Select Producers window.

Step 4.3. Review the Object Builder Results

- Points
- Alarms
- Class objects

Points

Select **Project>Points** in the Workbench left pane.

The Object Builder downloaded read-only points that are associated with the downloaded objects.

The points are:
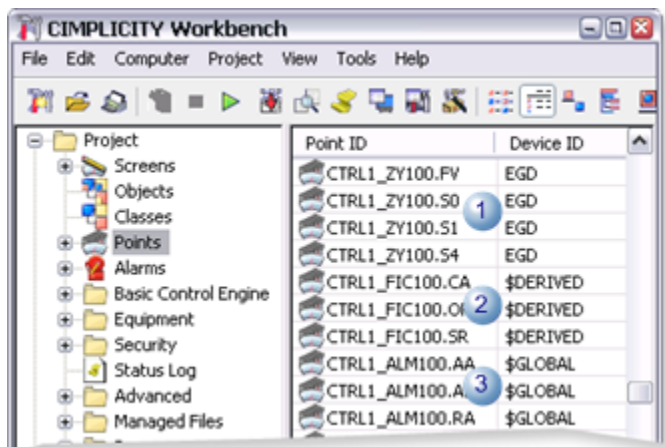
1	EGD device points.
2	$DERIVED points
3	$GLOBAL virtual points with associated alarms.

Alarms

Select **Project>Alarms** in the Workbench left pane.

The Object Builder downloaded read-only alarms that are associated with the downloaded objects.
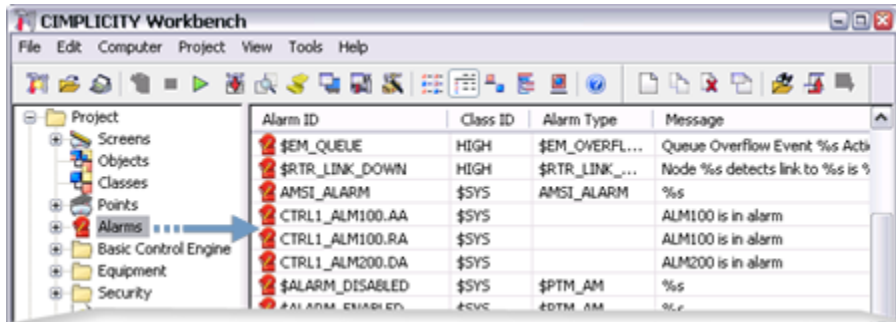
Class objects

Select **Project>Objects** in the Workbench left pane.

The Object Builder downloaded the latest objects from selected Producers *(on page 18)* .
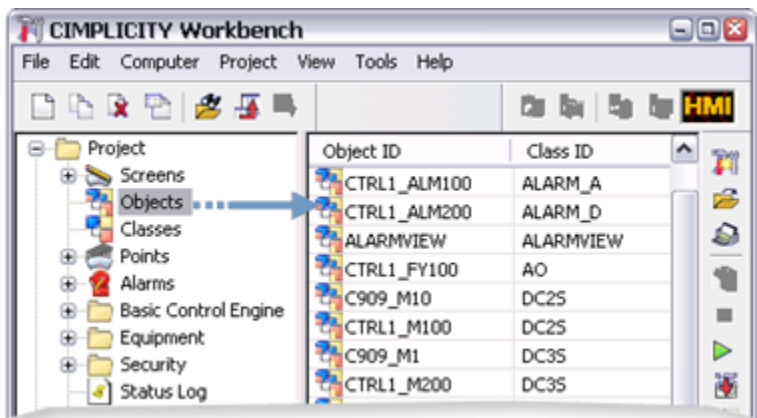
Step 5. Revise the Global Object/Faceplate Colors

The Proficy System Objects and faceplates have default colors. If the colors do not match your system's schema they can be changed globally in the RGB.dat file.

- Rgb.dat location.
- Default PPS global colors

Rgb.dat Location

1. Select C:\Program Files\Proficy\Proficy CIMPLICITY\data\

   Where

C:\Program Fies\Proficy\Proficy CIMPLICITY is the default location.

2. Open the rgb.dat file in a text editor, e.g. Notepad.
3. Edit the RGB index so the colors conform to your system's specifications.

> **Note:**
>
> If you do a search for rgb.dat in the Proficy CIMPLICITY directory, a file will be found that is located in the ...\classes\pps folder. This is not the copy that CIMPLICITY uses. Save this copy as a backup, in case you need to revert to the default.

Default PPS Global Colors

Mimic Object(s)	State	Default Color	Index #
ADV_PID\AO\PID			
	OP >= Color Animation Criterion	Green	100
	OP >= Color Animation Criterion - Shading	DarkGreen	101
	OP < Color Animation Criterion	Red	102
	OP < Color Animation Criterion - Shading	DarkRed	103
DC2S			
	State 0 Active	Red	110
	State 0 Active - Shading	DarkRed	111
	State 1 Active	Green	112
	State 1 Active - Shading	DarkGreen	113
	State 2 or 3 Active	Green	114
	State 2 or 3 Active - Shading	DarkGreen	115
	In Transition	White	116
	In Transition - Shading	DarkGrey	117
	Fault	Yellow	118
	Fault - Shading	Khaki	119
DI			

	Normal State	Red	120
	Normal State - Shading	DarkRed	121
	Indicative State	Green	122
	Indicative State - Shading	DarkGreen	123
DOUT			
	On State	Green	124
	On State - Shading	DarkGreen	125
	Off State	Red	126
	Off State - Shading	DarkRed	127
All Mimic Objects			
	TagName???	???	

Step 6. Configure and Use Function Block Objects

Step 6. Configure and Use Function Block Objects

- Object configuration and use
- General tab in a PPS Object dialog box.

Object Configuration and Use

Each PPS function block includes a faceplate and several mimic objects that are available for configuration and runtime use.

The function blocks are:

- ADV_PID
- Advanced PID
- AI
- Analog Input
- ALARM_A
- Analog Alarm
- ALARM_D
- Discrete Alarm

- AO
- Analog Output
- CTRL_STAT
- Control Status
- DC2S
- Device Control 2 State
- DC3S
- Device Control 3 State
- DI
- Discrete input
- DOUT
- Discrete Output
- IND_A
- HMI Analog Indication
- IND_D
- HMI Discrete Indication
- INTERLOCK
- INTERLOCK
- MANUAL_SP
- HMI Manual Setpoint
- PBUTTON
- HMI Discrete Pushbutton
- PID
- PID
- RAMPSOAK
- Ramp Soak Setpoint Generator
- TOTALIZE
- Totalized Flow Rate

General Tab in a PPS Object Dialog Box

The General tab in the Object dialog box for PPS objects provides

- Information about the class object on the EGD server.
- The same type of information for all of the function blocks.
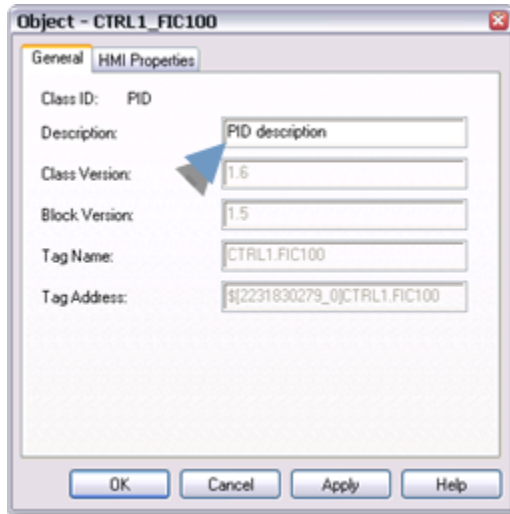
Field	Description
Class ID	Displays the name of the function block that is associated with the object.
Description	(Read-write) More information to help identify the object.
Class Version	Version of the CIMPLICITY class that defines the object to keep track of changes in classes.
Block Version	Version of actual function block (control logic) in the PPS library.
Tag Name	Given to the function block instance in the engineering workstation and carried through the PPS global name space
Tag Address	OPC address: [$<OPC group>]<tag name> Group tags together to insure data coherency among instance data.

ADV_PID: Object Configuration and Use

ADV_PID: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is from the EGD server.

1. ADV_PID: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS advanced PID block is as follows.

Global Data	Data Type	Description
FC	UINT	Faceplate Command
KD	REAL	Derivative Time
KI	REAL	Integral Reset
KP	REAL	Proportional Gain
ON	REAL	Minimum OP
OP	REAL	Controller Output
OX	REAL	Maximum OP
PI	REAL	Process Variable Indication
PN	REAL	Minimum PV

Global Data	Data Type	Description
PX	REAL	Maximum PV
SC	REAL	Controller Setpoint
SK	UINT	Setpoint Tracking Switch
ST	DWORD	HMI Status Word

2. ADV_PID: Object Properties

Open an Object Properties dialog box for an object with an ADV_PID class ID.

The tabs in the Object dialog box are:

- ADV_PID General.
- ADV_PID HMI Properties.

ADV_PID General

The Object dialog box General tab provides that precisely identifies the ADV_PID object.

> ✎ **Note:**
>
> The Description field is the only Read/Write field on the General tab.

ADV_PID HMI Properties

Each PPS function block has HMI properties.

When an Object dialog box is opened for a selected object, the values for these properties:

- Can be defined in the Object dialog box.
- Will display on the faceplate when it is first opened and as long as they are not changed.
- (Some properties) May be changed by faceplate users who have a role *(on page 12)* with the required level.

The HMI properties required for the PPS advanced PID block are as follows.
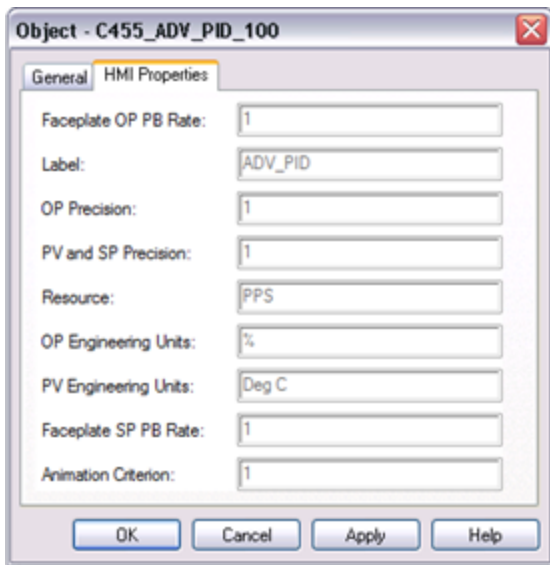
HMI Properties	Description	Data Type	Restrictions
Faceplate OP PB Rate	The Rate at which the output increments/decrements in Manual Mode when a mouse clicks on the Adjust OP buttons.	REAL	Greater than or equal to 0.0
Label	Object identification.	String	
OP Precision	Number of digits displayed to the right of the decimal point.	Integer	7 Digits
PV and SP Precision	Number of digits displayed to the right of the decimal point.	Integer	7 Digits

HMI Prop- erties	Description	Data Type	Restrictions
Resource	Resource.	String	16 Characters or less
OP Engi- neering Units	Output Variable Engineering units.	String	8 Characters or less
PV Engi- neering Units	Process Variable Engineering Units.	String	8 Characters or less
Faceplate SP PB Rate	The Rate at which the setpoint increments/decrements in Local Mode when a mouse clicks on the Adjust SP buttons.	REAL	Greater than or equal to 0.0
Animation Criterion	The percentage of the full range of OP that must be exceeded by OP to Indicate that the Valve/Damper is open.	Real	Greater than or equal to 0.0

3. ADV_PID: Mimic Objects

3. ADV_PID: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

3.1. ADV_PID: Mimic Object Selection in CimEdit

Place an ADV_PID mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.
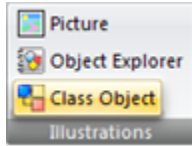
3. Select an ADV_PID object in the Select an Object browser.
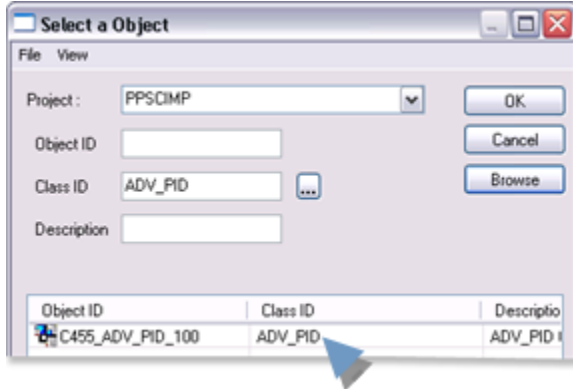
Result: The ADV_PID default mimic object displays on the CimEdit screen.

> **Note:**
> When you close and re-open CimEdit, the tag name will not display; the function block
> name, e.g. ADV_PID, will display. Simply double-click the object to re-display the tag name.

(Optional) Change the function block Object or mimic object. (Mimic object only)

4. Right-click the ADV_PID mimic object.
5. Select another object listed on the Popup menu.
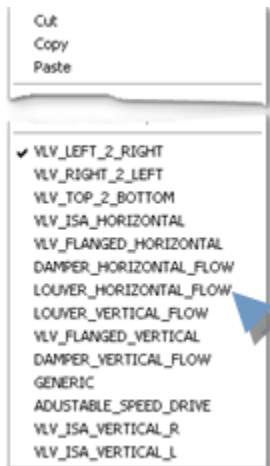
(Optional) Change the function block Object or mimic object. (Mimic object and/or function block object)

6. Right-click the ADV_PID mimic object.
7. Select Properties on the Popup menu.
8. Select the Class Object tab.
9. Enter the Object ID. Select from a list of available ADV_PID function block objects.
10. Enter the Graphic Name. Select from a list of available ADV_PID mimic objects.
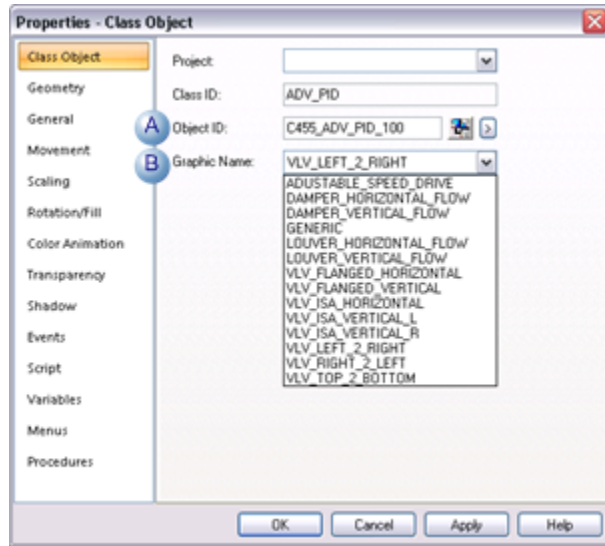
11. Click OK. The selected mimic object displays on the CimEdit screen when you use either method.
12. Configure the mimic object size and other objects, as required.

The mimic object is ready for runtime.

3.2. ADV_PID: Mimic Object Runtime Data

Mimic objects that are available for the PPS advanced PID block are as follows.

> **Note:**
> A runtime user can open the ADV_PID faceplate through any object. However, the exact data that the mimic object displays depends on which object is being used.

Adjustable Speed Drive
Damper Horizontal Flow
Damper Vertical Flow
Generic

Louver Horizontal Flow
Louver Vertical Flow
VLV Flanged Horizontal
VLV Flanged Vertical
VLV ISA Horizontal
VLV ISA Vertical_L
VLVISA Vertical_R
VLV Left 2 Right
VLV Right 2 Left
VLV Top 2 Bottom

VLV = Valve.

ADV_PID: Adjustable Speed Drive

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Tracking Active Indicator.

3	OP (controller output value). ADV_PID function block's OP value.
4	OP mode: M (Manual), A (Automatic).
5	OP (controller output) unit. The OP engineering unit is specified in the object definition (for example: PSI, SCF, DegF). The measurement unit must be specified with 8 characters or less.
6	SP Mode: L (Local) or R (Remote).
7	The function block name, ADV_PID. Displays at the top of the Popup menu.
8	Point View. Displays the ADV_PID points in the Point View window.
9	Point Control Panel. Displays the ADV_PID points in the Point Control Panel.
10	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: ADV_PID Hide Label: Hides the label for the selected mimic object.
11	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

ADV_PID: Damper Horizontal Flow

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Bar angle. Identifies the damper or louver percent open: 100% closed (open), 50% open, or 0% open (closed).
3	Tracking Active Indicator.
4	OP (controller output) value. ADV_PID function block's OP value.
5	OP mode: M (Manual), A (Automatic).
6	OP (controller output) unit. The OP engineering unit is specified in the object definition (for example: PSI, SCF, DegF). The measurement unit must be specified with 8 characters or less.
7	SP Mode: L (Local) or R (Remote).
8	The function block name, ADV_PID. Displays at the top of the Popup menu.
9	Point View. Displays the ADV_PID points in the Point View window.
10	Point Control Panel. Displays the ADV_PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: ADV_PID Hide Label: Hides the label for the selected mimic object.

| 12 | All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used. |

ADV_PID: Damper Vertical Flow

Refer to the following table for descriptions of the fields.

Area	Description
1	Tracking Active Indicator.
2	OP mode: M (Manual), A (Automatic).
3	Object Label.
4	Bar angle. Identifies the damper or louver percent open: 100% closed (open), 50% open, or 0% open (closed).
5	SP Mode: L (Local) or R (Remote).
6	OP (controller output) value. ADV_PID function block's OP value.
7	OP (controller output) unit. The OP engineering unit is specified in the object definition (for example: PSI, SCF, DegF). The measurement unit must be specified with 8 characters or less.

8	The function block name, ADV_PID. Displays at the top of the Popup menu.
9	Point View. Displays the ADV_PID points in the Point View window.
10	Point Control Panel. Displays the ADV_PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: ADV_PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

ADV_PID: Generic

Refer to the following table for descriptions of the fields.

Area	Description
1	Tracking Active Indicator.
2	OP mode: M (Manual), A (Automatic).
3	Object Label.
4	Bar angle. Identifies the damper or louver percent open: 100% closed (open), 50% open, or 0% open (closed).

5	SP Mode: L (Local) or R (Remote).
6	OP (controller output) value. ADV_PID function block's OP value.
7	OP (controller output) unit. The OP engineering unit is specified in the object definition (for example: PSI, SCF, DegF). The measurement unit must be specified with 8 characters or less.
8	The function block name, ADV_PID. Displays at the top of the Popup menu.
9	Point View. Displays the ADV_PID points in the Point View window.
10	Point Control Panel. Displays the ADV_PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: ADV_PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

ADV_PID: Louver Horizontal Flow

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Bar angle. Identifies the damper or louver percent open: 100% closed (open), 50% open, or 0% open (closed).
3	Tracking Active Indicator.
4	OP (controller output) value. ADV_PID function block's OP value.
5	OP mode: M (Manual), A (Automatic).
6	OP (controller output) unit. The OP engineering unit is specified in the object definition (for example: PSI, SCF, DegF). The measurement unit must be specified with 8 characters or less.
7	SP Mode: L (Local) or R (Remote).
8	The function block name, ADV_PID. Displays at the top of the Popup menu.
9	Point View. Displays the ADV_PID points in the Point View window.
10	Point Control Panel. Displays the ADV_PID points in the Point Control Panel.

11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: ADV_PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

ADV_PID: Louver Vertical Flow

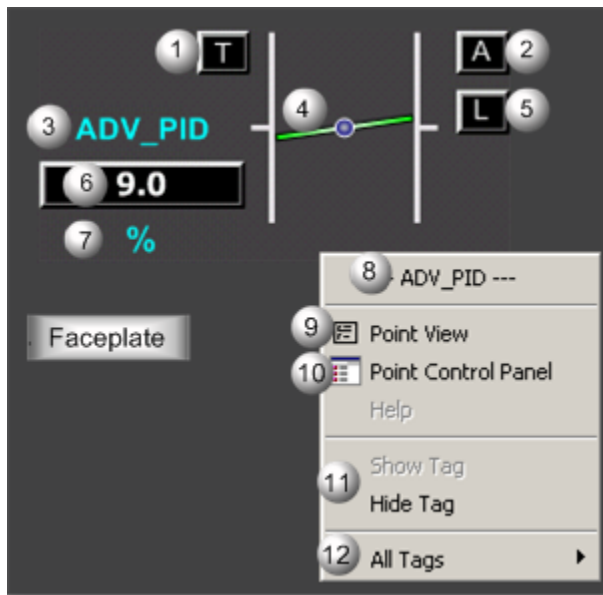Refer to the following table for descriptions of the fields.
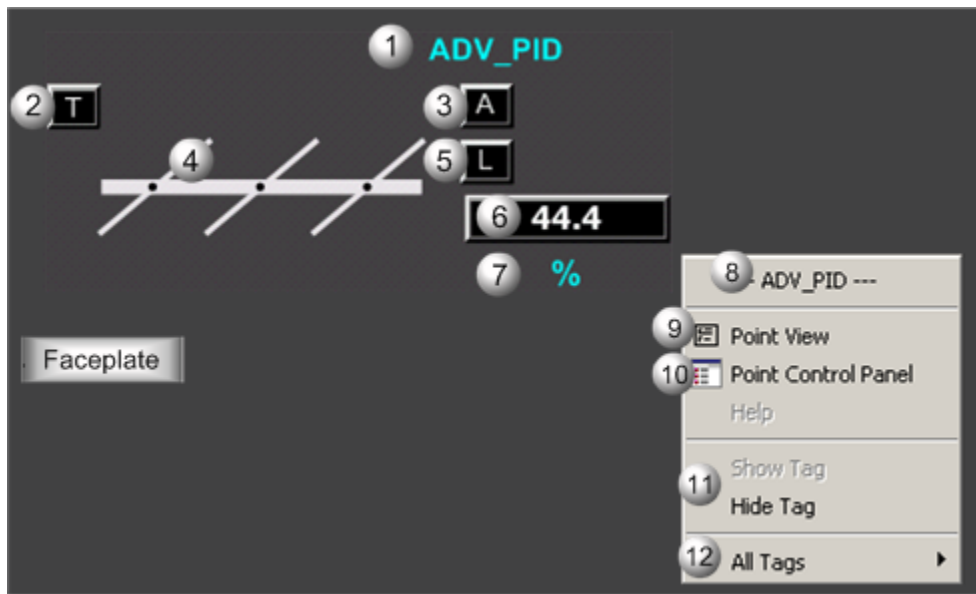
Area	Description
1	Object Label.
2	Tracking Active Indicator.
3	OP mode: M (Manual), A (Automatic).
4	Bar angle. Identifies the damper or louver percent open: 100% closed (open), 50% open, or 0% open (closed).
5	SP Mode: L (Local) or R (Remote).
6	OP (controller output) value. ADV_PID function block's OP value.

7	OP (controller output) unit. The OP engineering unit is specified in the object definition (for example: PSI, SCF, DegF). The measurement unit must be specified with 8 characters or less.
8	The function block name, ADV_PID. Displays at the top of the Popup menu.
9	Point View. Displays the ADV_PID points in the Point View window.
10	Point Control Panel. Displays the ADV_PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: ADV_PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

ADV_PID: VLV Flanged Horizontal

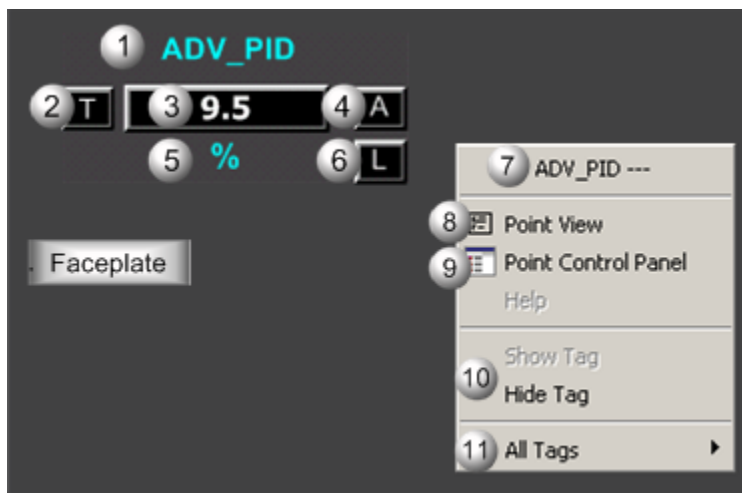Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.

2	Tracking Active Indicator.
3	Animated color. Displays if the valve is open or closed.
4	OP mode: M (Manual), A (Automatic).
5	SP Mode: L (Local) or R (Remote).
6	OP (controller output) value. ADV_PID function block's OP value.
7	OP (controller output) unit. The OP engineering unit is specified in the object definition (for example: PSI, SCF, DegF). The measurement unit must be specified with 8 characters or less.
8	The function block name, ADV_PID. Displays at the top of the Popup menu.
9	Point View. Displays the ADV_PID points in the Point View window.
10	Point Control Panel. Displays the ADV_PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: ADV_PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

ADV_PID: VLV Flanged Vertical
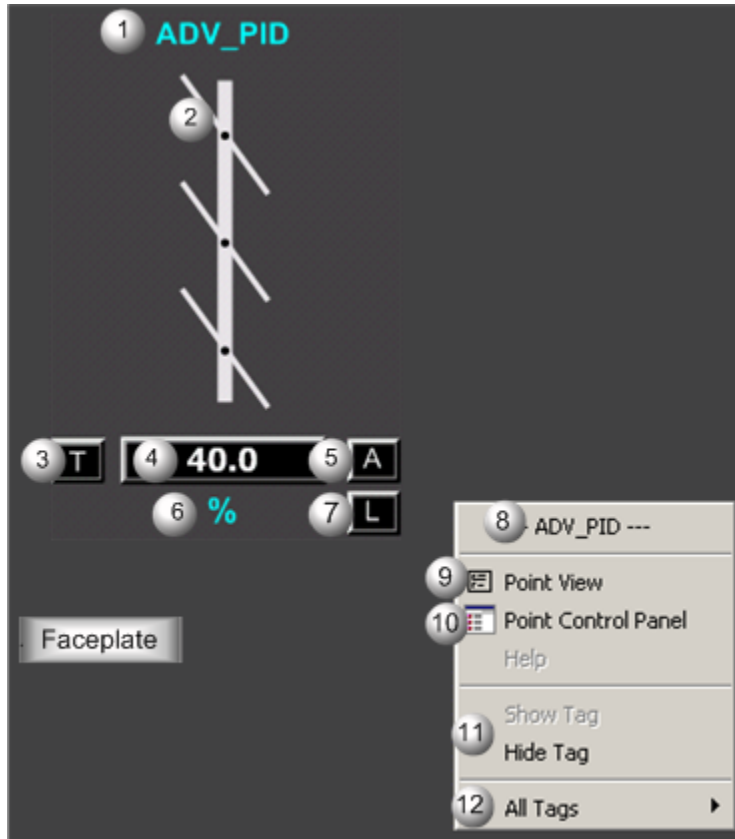
Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Tracking Active Indicator.
3	Animated color. Displays if the valve is open or closed.
4	OP mode: M (Manual), A (Automatic).
5	SP Mode: L (Local) or R (Remote).
6	OP (controller output) value. ADV_PID function block's OP value.
7	OP (controller output) unit. The OP engineering unit is specified in the object definition (for example: PSI, SCF, DegF). The measurement unit must be specified with 8 characters or less.
8	The function block name, ADV_PID. Displays at the top of the Popup menu.
9	Point View. Displays the ADV_PID points in the Point View window.
10	Point Control Panel. Displays the ADV_PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: ADV_PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Dis-

plays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

ADV_PID: VLV ISA Horizontal

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Animated color. Displays if the valve is open or closed.
3	Tracking Active Indicator.
4	OP (controller output) value. ADV_PID function block's OP value.
5	OP mode: M (Manual), A (Automatic).
6	OP (controller output) unit. The OP engineering unit is specified in the object definition (for example: PSI, SCF, DegF). The measurement unit must be specified with 8 characters or less.
7	SP Mode: L (Local) or R (Remote).
8	The function block name, ADV_PID. Displays at the top of the Popup menu.
9	Point View. Displays the ADV_PID points in the Point View window.
10	Point Control Panel. Displays the ADV_PID points in the Point Control Panel.

11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: ADV_PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

ADV_PID: VLV ISA Vertical_L

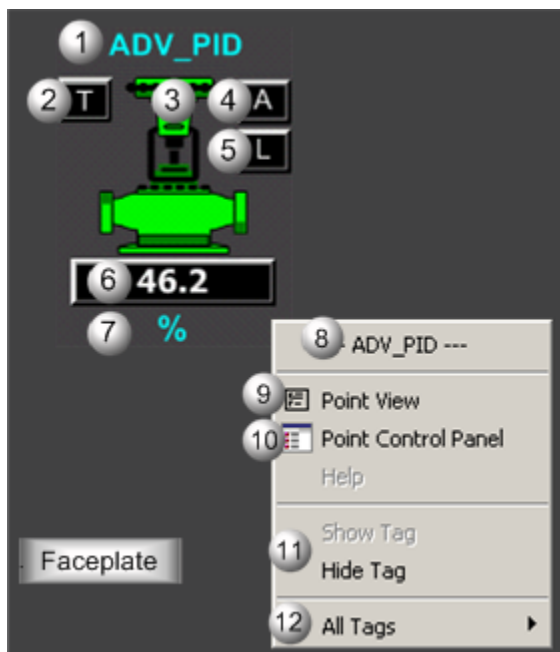Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Tracking Active Indicator.
3	OP (controller output) value. ADV_PID function block's OP value.
4	OP mode: M (Manual), A (Automatic).
5	Animated color. Displays if the valve is open or closed.
6	OP (controller output) unit. The OP engineering unit is specified in the object definition (for example: PSI, SCF, DegF). The measurement unit must be specified with 8 characters or less.
7	SP Mode: L (Local) or R (Remote).

8	The function block name, ADV_PID. Displays at the top of the Popup menu.
9	Point View. Displays the ADV_PID points in the Point View window.
10	Point Control Panel. Displays the ADV_PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: ADV_PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

ADV_PID: VLV ISA Vertical_R

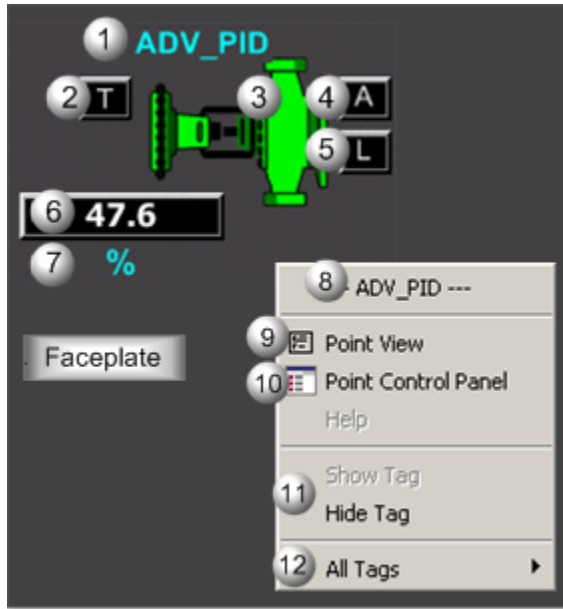Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Animated color. Displays if the valve is open or closed.
3	OP mode: M (Manual), A (Automatic).
4	OP (controller output) value. ADV_PID function block's OP value.
5	Tracking Active Indicator.

6	SP Mode: L (Local) or R (Remote).
7	OP (controller output) unit. The OP engineering unit is specified in the object definition (for example: PSI, SCF, DegF). The measurement unit must be specified with 8 characters or less.
8	The function block name, ADV_PID. Displays at the top of the Popup menu.
9	Point View. Displays the ADV_PID points in the Point View window.
10	Point Control Panel. Displays the ADV_PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: ADV_PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

ADV_PID: VLV Left 2 Right

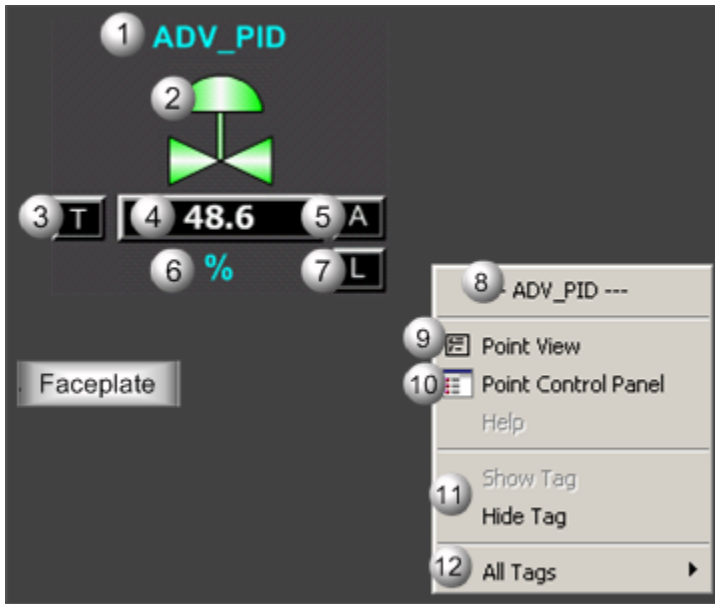Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.

2	Animated color. Displays if the valve is open or closed.
3	OP (controller output) value. ADV_PID function block's OP value.
4	OP (controller output) unit. The OP engineering unit is specified in the object definition (for example: PSI, SCF, DegF). The measurement unit must be specified with 8 characters or less.
5	OP mode: M (Manual), A (Automatic).
6	SP Mode: L (Local) or R (Remote).
7	Tracking Active Indicator.
8	The function block name, ADV_PID. Displays at the top of the Popup menu.
9	Point View. Displays the ADV_PID points in the Point View window.
10	Point Control Panel. Displays the ADV_PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: ADV_PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

ADV_PID: VLV Right 2 Left

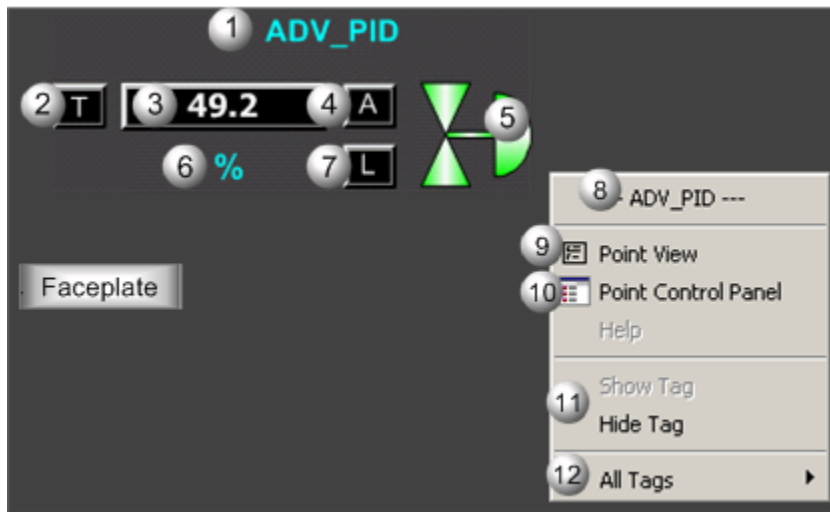Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	OP (controller output) value. ADV_PID function block's OP value.
3	OP (controller output) unit. The OP engineering unit is specified in the object definition (for example: PSI, SCF, DegF). The measurement unit must be specified with 8 characters or less.
4	Animated color. Displays if the valve is open or closed.
5	OP mode: M (Manual), A (Automatic).
6	SP Mode: L (Local) or R (Remote).
7	Tracking Active Indicator.
8	The function block name, ADV_PID. Displays at the top of the Popup menu.
9	Point View. Displays the ADV_PID points in the Point View window.
10	Point Control Panel. Displays the ADV_PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: ADV_PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Dis-

plays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

ADV_PID: VLV Top 2 Bottom

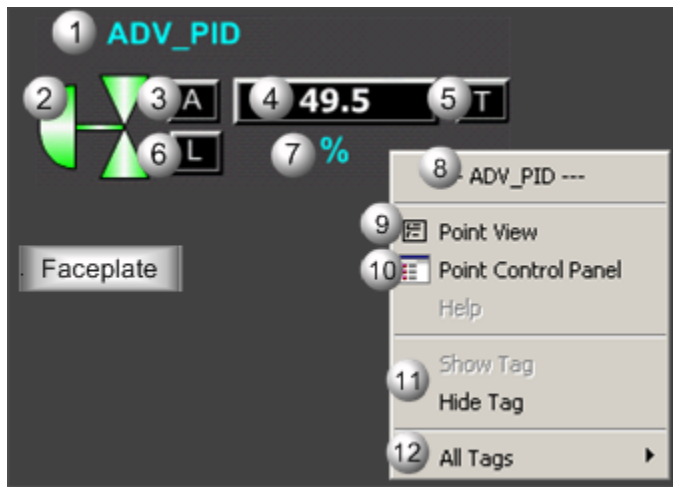Refer to the following table for descriptions of the fields.
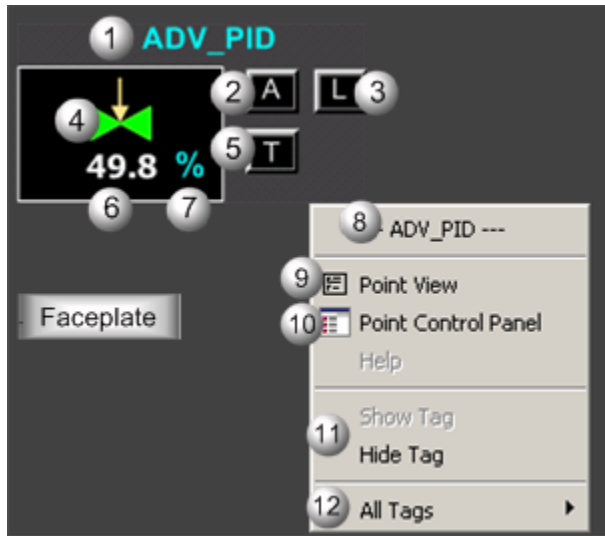
Area	Description
1	Object Label.
2	OP mode: M (Manual), A (Automatic).
3	SP Mode: L (Local) or R (Remote).
4	Animated color. Displays if the valve is open or closed.
5	Tracking Active Indicator.
6	OP (controller output) value. ADV_PID function block's OP value.
7	OP (controller output) unit. The OP engineering unit is specified in the object definition (for example: PSI, SCF, DegF). The measurement unit must be specified with 8 characters or less.
8	The function block name, ADV_PID. Displays at the top of the Popup menu.
9	Point View. Displays the ADV_PID points in the Point View window.
10	Point Control Panel. Displays the ADV_PID points in the Point Control Panel.

11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: ADV_PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

4. ADV_PID: Faceplate

4. ADV_PID: Faceplate

The ADV_PID function block provides feedback control by means of proportional plus integral plus derivative action.

Click a tab to display and review features for each ADV_PID faceplate frame.
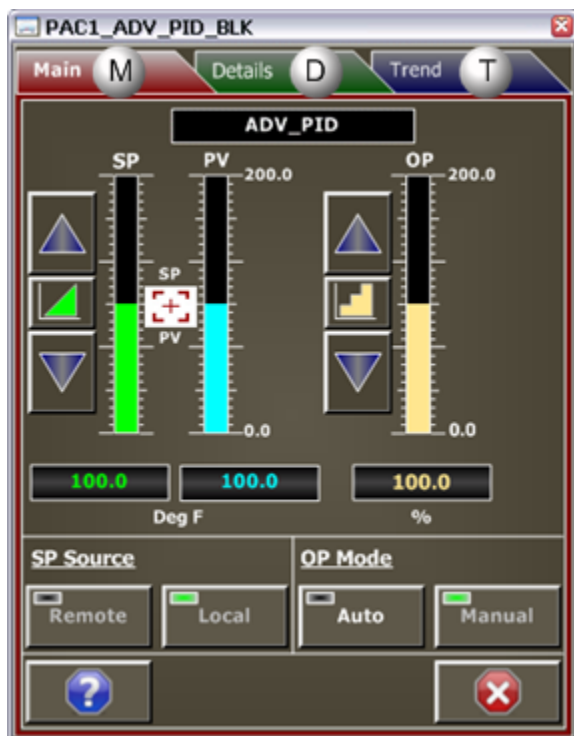
ADV_PID Faceplate: Main Frame

Refer to the following table for descriptions of the fields.
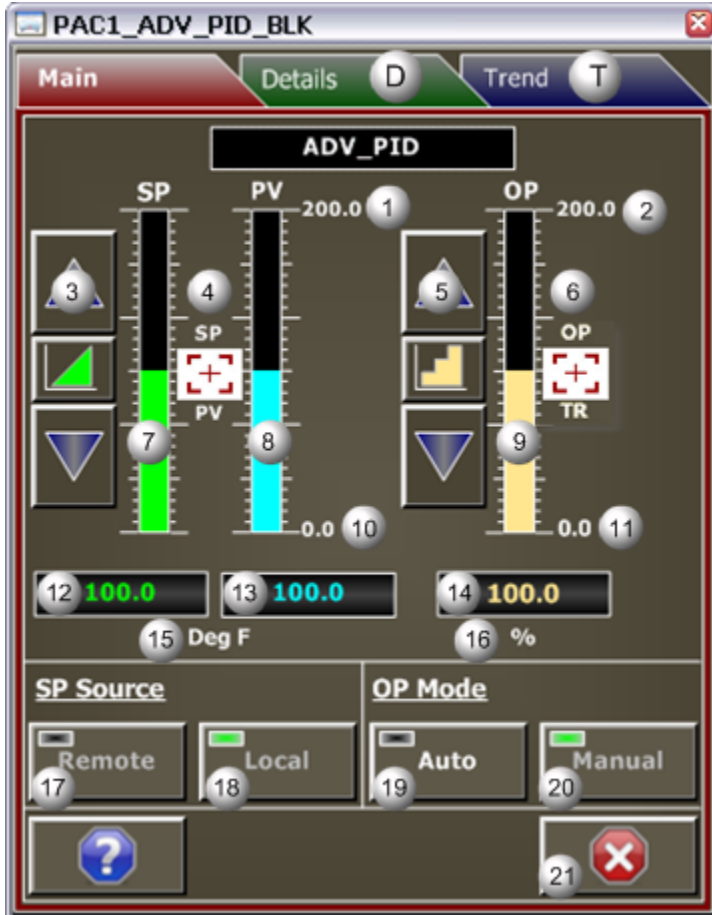
> ⚠️ **Important:**
> Data entry fields and button execution in this Main frame are enabled when a user Is associated with both the object's resource and a role that has at least a Level 100. If, after you log in, the data entry fields and buttons should be enabled and are not, consult your system administrator.

Area	Description
1	Maximum Value. Setpoint (SP) and Process Variable (PV) maximum value in Engineering units.
2	Maximum Value. Output (OP) maximum value in Engineering Units.
3	ADV_PID Setpoint (SP) Adjustment Buttons. Up Button: Each click increments the setpoint by an amount that is determined by SP PB Rate and the Push Button Rate Option. The button can only be clicked when the: SP Mode is Local, SP tracking is Inactive, or the User has adequate creden-

	tials. Push Button Rate Option (Fine Adjustment): When selected, each click increase/decreases the value by 1/10 of the SP PB Rate. Click the button to toggle between rate options. Push Button Rate Option (Coarse Adjustment): When selected, each click increase/decreases the value by the SP PB Rate. Click the button to toggle between rate options. Down button: Each click decrements the setpoint by an amount that is determined by SP PB Rate and the Push Button Rate Option. The button can only be clicked when the: SP Mode is Local, SP tracking is Inactive, or the User has adequate credentials.
4	Setpoint (SP) Tracking Icon. Displays when Setpoint Tracking is active. When Setpoint Tracking is active SP tracks PV. Setpoint Tracking is used to ensure that no errors exist when the ADV_PID returns to automatic mode. When the icon displays an operator cannot change the setpoint values from the faceplate. In order for setpoint tracking to be active: Setpoint Tracking must be enabled (see the Details Frame) and the ADV_PID must be in Output Tracking or Manual mode.
5	ADV_PID Output (OP) Adjustment Buttons. Up Button: Each click increments the output by an amount that is determined by the OP PB Rate and the Push Button Rate option. The button can be clicked only when the: OP mode is Manual, Output is not tracking the reference TR, or the User has adequate credentials. Push Button Rate Option: When selected, each click increase/decreases the value by 1/10 of the OP PB Rate. Click the button to toggle between rate options. Push Button Rate Option: When selected, each click increase/decreases the value by the OP PB Rate. Click the button to toggle between rate options. Down button: Each click decrements the output by an amount that is determined by the OP PB Rate and the Push Button Rate option. The button can only be clicked when the: OP Mode is Manual, Output is not tracking the reference TR, or the User has adequate credentials.
6	OP Tracking Icon. Displays when Output Tracking is active. When Output Tracking is active OP tracks TR (tracking reference). Output Tracking is used to override OP with a value fed to the ADV_PID block. When the icon displays an operator cannot change the OP value from the faceplate; Output Tracking overrides Manual Mode adjustments. In order for output tracking to be active both TSW and TR must be defined and TSW must be On.
7	SP Animation Bar. The animation bar displays the Setpoint value in relation to its range. The setpoint range is the same as the process variable's range and defined by PV Min/Max.
8	PV Animation Bar. The animation bar displays the PV value in relation to its range. PV range is defined by PV Min/Max.
9	ADV_PID Output (OP) Animation Bar. The animation bar displays the OP value in relation to its range. OP Range is defined by the OP Min/Max.
10	Minimum Value. Setpoint (SP) and Process Variable (PV) minimum value in Engineering Units.

11	Minimum Value. Output (OP) minimum value in Engineering Units.
12	ADV_PID SP Setpoint Command. To change the value, click the current value and enter a specific setpoint. The setpoint will adjust to the new value immediately. Stepwise changes to the ADV_PID setpoint can be filtered to smooth out the change in SP over time so bumps do not occur in the output. The value can be changed only when the: SP Mode is Local, SP tracking is Inactive, or the User has adequate credentials.
13	(Read-only) Process Variable Indication. Displays the PV value in Engineering Units.
14	ADV_PID Output (OP) Value. Current output value. When in Manual mode the desired output can be entered instead of clicking the Up or Down buttons. The value can be changed only when the: OP Mode is Manual, Output Tracking is Inactive, or the User has adequate credentials.
15	Process Variable (PV) Engineering Units Examples of engineering units are PSI, inches, volts, pounds per hour, standard cubic feet.
16	Output (OP) Engineering Units. Examples of engineering units are percent stroke on a valve or the units associated with the secondary loop's process variable in a cascade control strategy.
17	Remote Button Click the button, when it is enabled, to set the setpoint source for the PID to remote. When the setpoint source is Remote the ADV_PID setpoint is determined by external logic and fed to the ADV_PID block. Example: The secondary ADV_PID's setpoint in a cascade control strategy is remote because its source is the primary ADV_PID's output. If the text of the Remote button is White, it's enabled. If it is Silver, it's Disabled. Reasons the Remote Button may be Disabled include: the Remote setpoint source is active, RSP is not defined, SCW = 1 or SCW = 2, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Remote command. Actions to Determine why the Remote Button is Disabled: Check the button's indicator light to see if the source of the ADV_PID setpoint is remote, view the Details frame, or review the required user credentials. If the indicator light is Black, the setpoint source is Not Remote. If it is Green, it is Remote.
18	Local Button. Click the button, when it is enabled, to set the setpoint source for the ADV_PID to local. When the setpoint source is local the ADV_PID setpoint is set by the faceplate. If the text is White, the Local button is Enabled. If it is Silver, it is disabled. Reasons the Local Button may be Disabled include: the Local setpoint source is active, SCW = 1 or SCW = 2, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Local command. Actions to Determine why the Local Button is Disabled: Check the button's indicator light to see if the source of the ADV_PID setpoint is local, view the Details frame, or review the required user credentials. If the indicator light is Black, the setpoint source is Not Local. If it is Green, it is Local.

19	Auto Mode Button. Automatic mode means that OP is determined by the ADV_PID algorithm. Click the button, when it is enabled, to place the ADV_PID in automatic mode. If the text is White, the Auto Mode button is Enabled. If it is Silverm it is Disabled. Reasons the Auto Mode Button may be Disabled include: Automatic mode is active, MCW = 1 or MCW = 2, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Auto command. Actions to Determine why the Auto Mode Button is Disabled: check the button's indicator light to see if the device is in Auto mode, view the Details frame, or review required user credentials. If the Indicator light is Black, ADV_PID is in Manual Mode. If it is Green, it is in Auto Mode. The ADV_PID block ensures that when you switch from Auto mode to Manual mode and vice versa OP is bumpless.
20	Manual Mode Button. Manual mode means that OP is set by the operator using the faceplate. Click the button, when it is enabled, to place the ADV_PID in manual mode. If the text is White, the Manual Mode button is Enabled. If it is Silver, it's Disabled. Reasons the Manual Mode Button may be Disabled include: Manual mode is active, MCW = 1 or MCW = 2, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Manual command. Actions to Determine why the Manual Mode Button is Disabled: check the button's indicator light to see if the device is in Manual mode, view the Details frame, or review required user credentials. If the Indicator light is Black, ADV_PID is in Auto Mode. If it is Green, it's in Manual Mode. The ADV_PID block ensures that when you switch from Auto Mode to Manual Mode and vice versa OP is bumpless.
21	Exit Button. Click to close the faceplate.

ADV_PID: Faceplate Details Frame

Refer to the following table for descriptions of the fields.

> **Important:**
>
> Data entry fields in this Details frame are writable when a user Is associated with both the object's resource and a role that has at least a Level 200. If, after you log in, the data entry fields should be writable and are not, consult your system administrator.

Area	Description
1	Kp: Proportional gain. The Adapt indicator is: Green if Kp is set by logic using an adaptive tuning algorithm. Cannot be adjusted from the faceplate. Black if Kp is not adaptively tuned. Can be adjusted in the faceplate. The unit of measurement of Kp is the ratio of the output's engineering units to process variable's engineering units.
2	Ki: Integral reset. The Adapt indicator is: Green if Ki is set by logic using an adaptive tuning algorithm. Cannot be adjusted from the faceplate. Black if Ki is not adaptively tuned. Can be adjusted in the faceplate. The unit of measurement of Ki is repeats per minute.

3	Kd: Derivative time. The Adapt indicator is: Green if Kd is set by logic using an adaptive tuning algorithm. Cannot be adjusted from the faceplate. Black if Kd is not adaptively tuned. Can be adjusted in the faceplate. The unit of measurement of Kd is minutes.
4	OP Min: Output minimum value. This value is the minimum for OP animated fill on the Main frame.
5	OP Max: Output maximum value. This value is the maximum for OP animated fill on the Main frame.
6	PV minimum value. This value is the minimum for PV animated fill and SP animated fill on the Main frame.
7	PV maximum value. This value is the maximum for PV animated fill and SP animated fill on the Main frame.
8	SP Tracking. If SP tracking is enabled, the set point will track the process variable when the ADV_-PID controller is in Manual mode or OP Tracking mode. During this time the set point cannot be changed through the Main frame. Click to enable SP tracking. Clear to disable SP tracking.
9	The algorithm type that is being used: Series: Proportional, integral, and derivative terms are combined in a manner that makes them interacting. Parallel: Proportional, integral, and derivative terms are combined in a manner that makes them non-interacting. ???: Either of the following. Invalid or Communications have been lost with the PAC.
10	ADV_PID direction Direct: Error = PV - SP Reverse: Error = SP - PV IMPORTANT: The direction of the ADV_PID is given in reference to the controller an not the process. This convention follows the definition in ANSI/ISA 51.1 Standard where: A direct acting controller is defined as a controller in which the value of the output signal increases as the value of the input (measured variable) increases, and a reverse acting controller is defined as a controller in which the value of the output signal decreases as the value of the input (measured variable) increases.
11	D/dt: Derivative Term. Displays whether the derivative term is based on PV or Error.
12	MCW: The mode command word dictates the ADV_PID block's mode and selectability. No Input = Selectable from the faceplate 0 = Selectable from the faceplate 1 = Mode is locked in Manual Mode 2 = Mode is locked in Auto Mode
13	SCW: The setpoint command word dictates the ADV_PID setpoint's source and selectability. No Input = Selectable from the faceplate 0 = Selectable from the faceplate 1 = Mode is locked in Local 2 = Mode is locked in Remote The setpoint source can be remote only if the input RSP is defined with an argument.

14	RSP: Reports whether or not the remote setpoint input on the ADV_PID block is defined with an argument. The remote setpoint is determined in logic and passed to the ADV_PID block , such as in the case of cascade control. Defined = Defined with an argument. Undefined = Not defined with an argument. If the remote setpoint is not defined then the source of the ADV_PID's setpoint cannot be remote.
15	Exit Button: Click to close the faceplate.

ADV_PID: Faceplate Trend Frame

Refer to the following table for descriptions of the fields.

> **!** **Important:**
>
> Data entry fields in this Details frame are writable when a user Is associated with both the object's resource and a role that has at least a Level 200. If, after you log in, the data entry fields should be writable and are not, consult your system administrator.
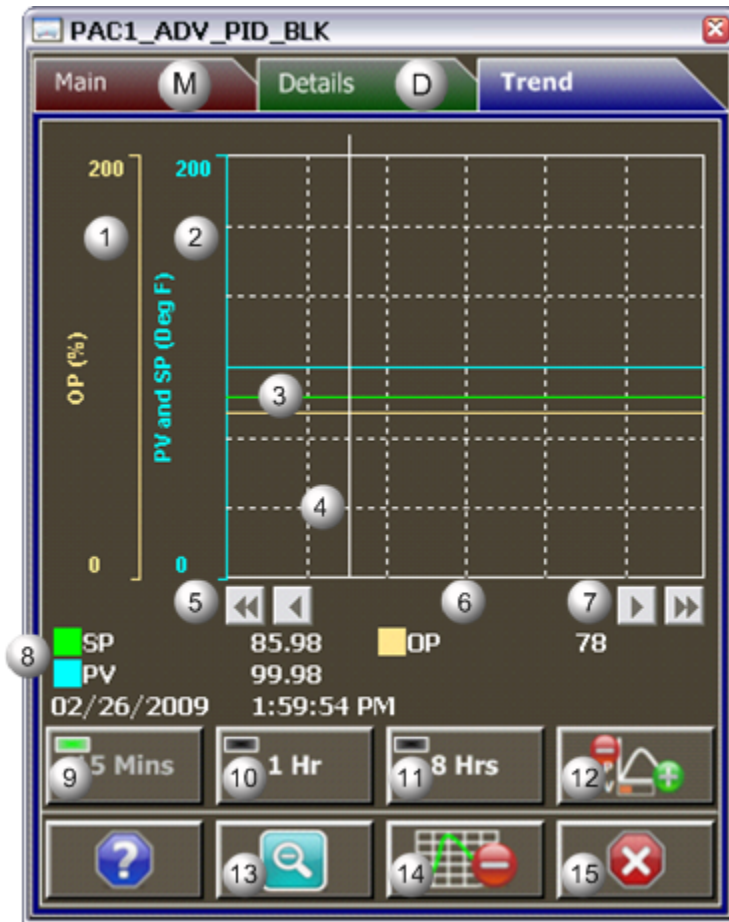
Area	Description
1	Y-axis: Output (OP) Operation (Percent).
2	Y-axis: Setpoint (SP) and Process Variable (PV). Engineering units specified in the object definition, e.g. Degrees Fahrenheit, PSI, inches, volts, pounds per hour, standard cubic feet.
3	Trend lines (default colors) are as follows. Lime = SP Aqua = PV Muted yellow = OP
4	Trend Slider. As the slider is moved, the following displays in the legend based on the slider position: Y-axis value, date, and time.
5	Trend Scroll Back Buttons. Click to scroll back in time. One page: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart back in time by the following increments. 15 Mins = 15 minutes 1 Hr = 1 hour 8 Hrs = 8 hours 50 percent: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart back in time by the following increments. 15 Mins = 7.5 minutes 1 Hr = 30 minutes 8 Hrs = 4 hours
6	X-axis: Local (PC) time.
7	Trend Scroll Forward Buttons. Click to scroll forward in time. One page: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will advance the trend chart forward in time by the following increments: 15 Mins = 15 minutes 1 Hr = 1 hour 8 Hrs =8 hours 50 percent: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will advance the trend chart forward in time by the following increments. 15 Mins = 7.5 minutes 1 Hr = 30 minutes 8 Hrs = 4 hours
8	Legend. Based on the slider's position, displays the: Y-axis value, date, and time.
9	15 Mins Button: The Trend chart time duration is 15 minutes. The button's indication light is green when this time span is selected
10	1 Hr Button: The Trend chart time duration is one hour. The button's indication light is green when this time span is selected.
11	8 Hrs Button: The Trend chart time duration is eight hours. The button's indication light is green when this time span is selected.
12	Chart Display Button: Display toggle button to maximize/minimize chart and information display. Clicking the button moves you to successive states. The date and time continue to display. The three states are: No Y-axis/No Legend, Y-axis/No Legend, and Y-axis and Full Legend. Y-axis displays engineering units specified in the object definition, e.g. PSI, inches, volts, pounds per hour, standard cubic feet.

13	Unzoom Button. Draw a box around the area to be zoomed. The Trend chart zooms to your selection. Click the Unzoom button to return the chart to its normal display size.
14	Grid Button: Click to display/hide the grid. Grid Button (Red Minus) means the grid displays. Click to hide. Grid Button (Green Plus) means the grid is hidden. Click to display. Default: The grid displays.
15	Exit Button: Click to close the faceplate.

AI: Object Configuration and Use

AI: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is built *(on page 16)* from the EGD server.

1 *(on page 69)*	AI: Ethernet global data
2 *(on page 70)*	AI: Object properties.
3 *(on page 72)*	AI: Mimic objects.
4 *(on page 83)*	AI: Faceplate.

1. AI: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS AI block is as follows.

Global Data	Data Type	Description

RC [0]	REAL	Raw Low
RC [1]	REAL	Raw High
RE [0]	REAL	Engineering Low
RE [1]	REAL	Engineering High
FV	REAL	Forced Value
TP	REAL	Transported Process Variable
TR	REAL	Transported Raw Input
FC	UINT	Faceplate Command
ST	UINT	HMI Status Word

2. AI: Object Properties

Open an Object Properties dialog box for an object with an AI class ID.

The tabs in the Object dialog box are:

- AI General.
- AI HMI Properties.

AI General

The Object dialog box General tab provides data *(on page 32)* that precisely identifies the AI object.

> **Note:**
> The **Description** field is the only Read/Write field on the General tab.
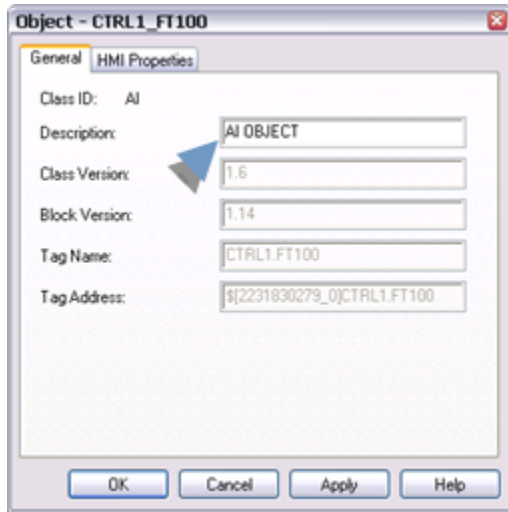
AI HMI Properties

Each PPS function block has HMI properties.

When an Object dialog box is opened for a selected object, the values for these properties:

- Can be defined in the Object dialog box.
- Will display on the faceplate when it is first opened and as long as they are not changed.
- (Some properties) May be changed by faceplate users who have a role *(on page 12)* with the required level.

The HMI properties required for the PPS Analog Input block are as follows.

Field	Description	Data Type	Restrictions
Label	Object identification.	String	
Precision	Number of digits displayed to the right of the decimal point.	Integer	7 Digits
Resource	CIMPLICITY resource.	String	16 Characters or less
Engineering Units	Analog Input Engineering Units.	String	8 Characters or less

3. AI: Mimic Objects

3. AI: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

3.1 (on page 72)	AI: Mimic object selection in CimEdit.
3.2 (on page 75)	AI: Mimic object runtime data.

3.1. AI: Mimic Object Selection in CimEdit

A (on page 72)	Place an AI mimic object on a CimEdit screen.
B (on page 73)	(Optional) Change the function block object or mimic object.

1. Place an AI mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.
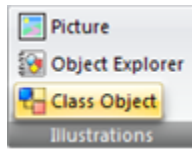
3. Select an AI object in the Select an Object browser.
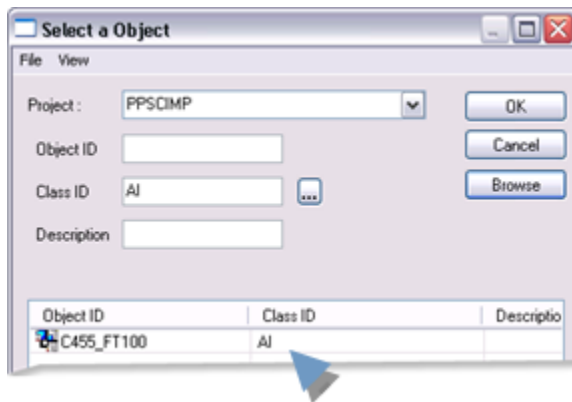
Result: The AI default mimic object displays on the CimEdit screen.

> **Note:**
> When you close and re-open CimEdit, the tag name will not display; the function block name, e.g. AI, will display. Simply double-click the object to re-display the tag name.

    a. (Optional) Change the function block Object or mimic object.

Mimic object only

4. Right-click the AI mimic object.
5. Select another object listed on the Popup menu.
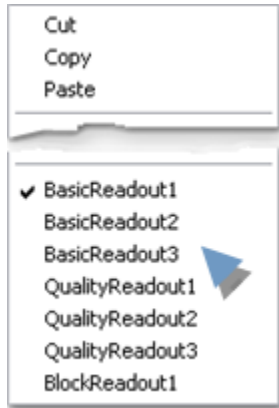
Mimic object and/or function block object.

6. Right-click the AI mimic object.
7. Select Properties on the Popup menu.
8. Select the Class Object tab.
9. Do one or both of the following.
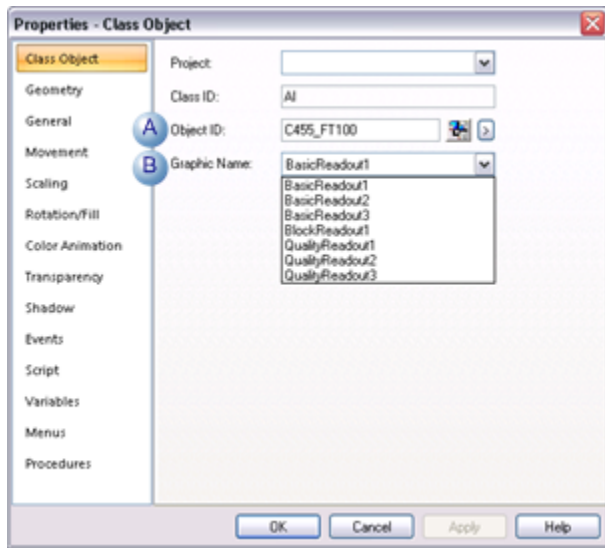
	Field	Select from a list of available AI:
1	Object ID	Function block objects.
2	Graphic Name	Mimic objects.

10. Click OK.

The selected mimic object displays on the CimEdit screen when you use either method.

11. Configure the mimic object size and other objects, as required.

The mimic object is ready for runtime.

3.2. AI: Mimic Object Runtime Data

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

1. AI: Quality Readout 3 *(on page 81)*
2. AI: Basic Readout 3 *(on page 78)*
3. AI: Quality Readout 2 *(on page 80)*
4. AI: Quality Readout 1 *(on page 79)*
5. AI: Basic Readout 2 *(on page 77)*
6. AI: Basic Readout 1 *(on page 76)*
7. AI: Block Readout 1 *(on page 82)*

BasicReadout1
BasicReadout2

| BasicReadout3 |
| QualityReadout1 |
| QualityReadout2 |
| QualityReadout3 |
| BlockReadout1 |

AI: Basic Readout 1

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	AI function block's analog value.
3	The measurement unit that is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
4	The function block name, AI. Displays at the top of the Popup menu.
5	Point View. Displays the AI points in the Point View window.
6	Point Control Panel. Displays the AI points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: AI Hide Label: Hides the label for the selected mimic object.

8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

AI: Basic Readout 2

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	AI function block's analog value.
3	The measurement unit that is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
4	The function block name, AI. Displays at the top of the Popup menu.
5	Point View. Displays the AI points in the Point View window.
6	Point Control Panel. Displays the AI points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: AI Hide Label: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView

screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Dis-

plays or hides the label for each mimic object based on the last selection made for that single ob-

ject. If no selection was made, the default is used.

AI: Basic Readout 3

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	AI function block's analog value.
3	The measurement unit that is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
4	The function block name, AI. Displays at the top of the Popup menu.
5	Point View. Displays the AI points in the Point View window.
6	Point Control Panel. Displays the AI points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: AI Hide Label: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Dis-

	plays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

AI: Quality Readout 1

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	AI function block's analog value.
3	F button. Displays when the analog value is forced by the user.
4	The measurement unit that is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
5	B Button. Displays when the data is bad.
6	The function block name, AI. Displays at the top of the Popup menu.
7	Point View. Displays the AI points in the Point View window.
8	Point Control Panel. Displays the AI points in the Point Control Panel.
9	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: AI Hide: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Dis-

	plays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

AI: Quality Readout 2

Refer to the following table for descriptions of the fields.
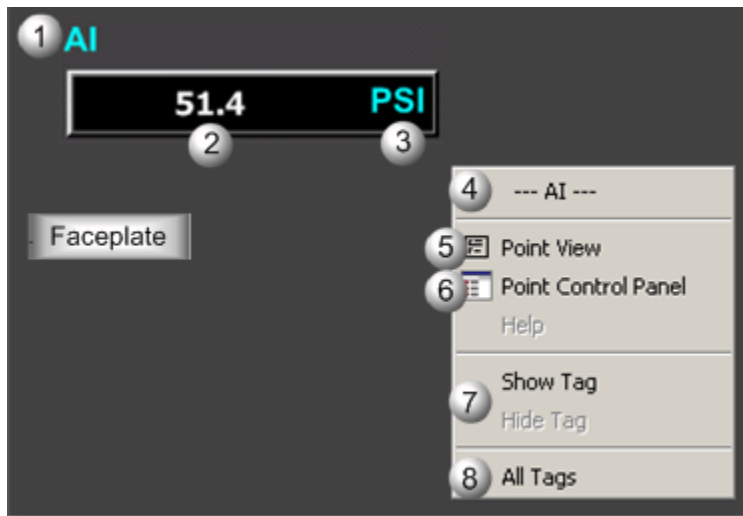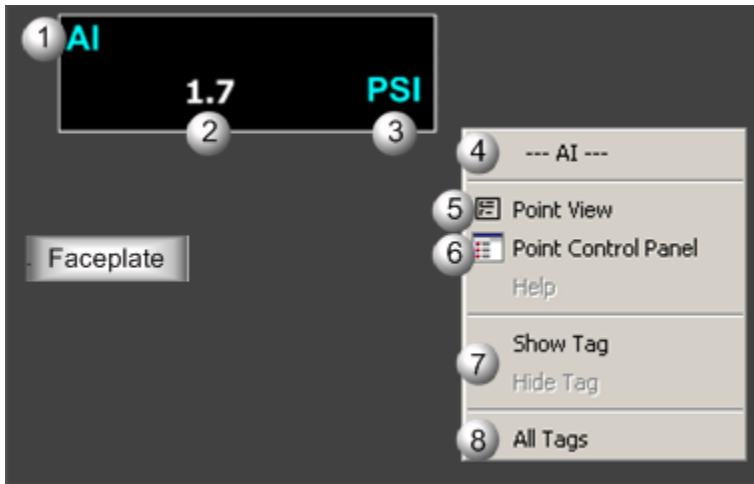

Area	Description
1	Object Label.
2	AI function block's analog value.
3	The measurement unit that is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
4	F button. Displays when the analog value is forced by the user.
5	B Button. Displays when the data is bad.
6	The function block name, AI. Displays at the top of the Popup menu.
7	Point View. Displays the AI points in the Point View window.
8	Point Control Panel. Displays the AI points in the Point Control Panel.
9	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: AI Hide: Hides the label for the selected mimic object.

10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

AI: Quality Readout 3

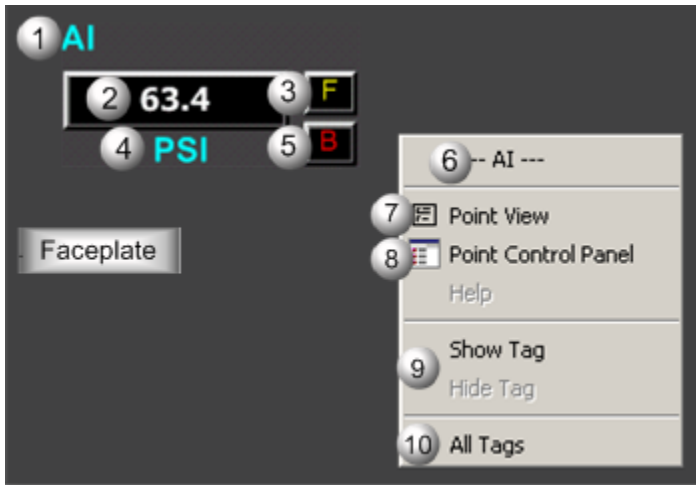Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	AI function block's analog value.
3	The measurement unit that is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
4	F button. Displays when the analog value is forced by the user.
5	B Button. Displays when the data is bad.
6	The function block name, AI. Displays at the top of the Popup menu.
7	Point View. Displays the AI points in the Point View window.
8	Point Control Panel. Displays the AI points in the Point Control Panel.

9	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: AI Hide: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

AI: Block Readout 1

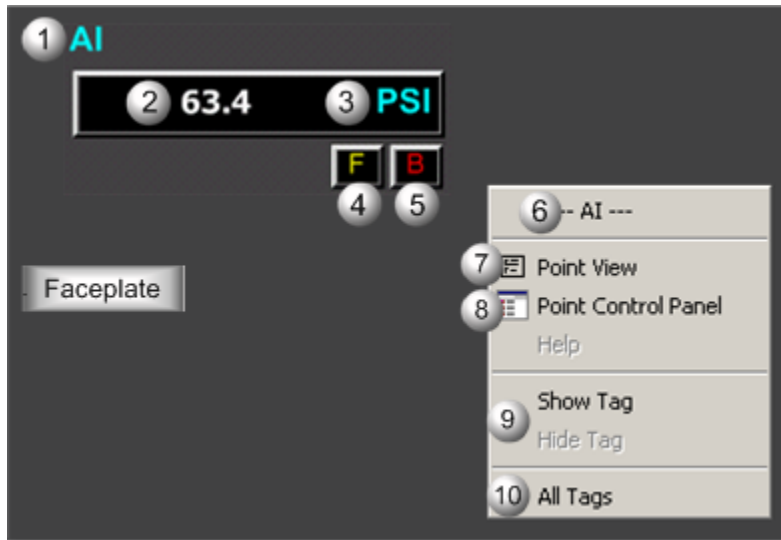Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	AI function block's analog value.
3	The measurement unit that is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
4	Quality displays one of the following based on the analog input's status: Good or Bad.
5	S button.
6	F button. Displays when the analog value is forced by the user.
7	The function block name, AI. Displays at the top of the Popup menu.

8	Point View. Displays the AI points in the Point View window.
9	Point Control Panel. Displays the AI points in the Point Control Panel.
10	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: AI Hide Label: Hides the label for the selected mimic object.
11	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

4. AI: Faceplate

4. AI: Faceplate

Click a tab button to display and review features for each AI faceplate frame.
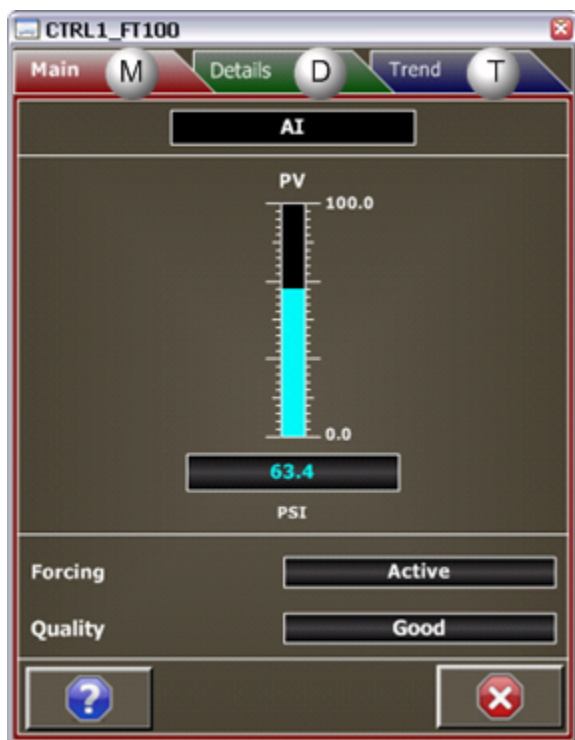
1. AI Faceplate: Main Frame *(on page 84)*
2. AI Faceplate: Details Frame *(on page 85)*
3. AI Faceplate: Trend Frame *(on page 87)*

AI Faceplate: Main Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	Process Variable (PV) high value in Engineering Units. Question marks display if invalid or no scaling is configured. To determine why question marks display, view the scaling parameters on the Details frame.
2	PV Fill Level: Animated fill level. Displays the PV engineering value in relation to its range. Will not display if invalid or no scaling is configured.
3	Process Variable (PV) low value in Engineering Units. Question marks display if invalid or no scaling is configured. To determine why question marks display, view the scaling parameters on the Details frame.

4	Process Variable (PV) value in Engineering Units. The displayed value is the current PV value. RAW is converted into PV based on the configured scaling. If no scaling is configured then PV is set equal to RAW.
5	Engineering Units. Examples of engineering units are PSI, inches, volts, pounds per hour, standard cubic feet.
6	Overrides the PV value with a user specified value. Active means the PV value is currently forced. Inactive means the PV value is based on RAW and the configured scaling. Forcing can be set to Active or Inactive on the Details frame.
7	Quality: Indicates the health of the analog input. Bad means the Analog input may be out of range or has a diagnostic fault. Good means that the Analog input is healthy. Out of range means that PV either exceeds PV Max or is less than PV Min. Quality checking can be enabled/disabled on the Details frame.
8	Exit button. Click to close the faceplate.

AI Faceplate: Details Frame

Refer to the following table for descriptions of the fields.

> **⚠ Important:**
> Data entry fields in this Details frame are writable when a user Is associated with both the object's resource and a role that has at least a Level 200. If, after you log in, the data entry fields should be writable and are not, consult your system administrator.

Area	Description
1	Click the Forcing check box to enable or disable forcing. Filtering is applied to the forced value if the Filter Time is appreciably larger than the block's execution period.
2	The Forced Value replaces the calculated PV value. Data entry is enabled only when forcing is enabled. When forcing is enabled, the forced value will be automatically set to the last PV value before forcing. The Forced Value is user-defined except on the first transition. Quality checking and filtering are performed on a Forced Value. If the quality of the forced process variable PV fails, the override quality value has no effect.

3	Raw low and raw high data types and values. Data types (read-only) include: UINT, INT, DINT, and REAL.The Value is read-write. In order to have scaling, the Raw High must be greater than the Raw Low.
4	PV low and PV high values and associated engineering units. In order to have scaling the PV High value must be greater than the PV Low value. Without scaling the Main frame will have no animated fill and the High and Low will be displayed as question marks.
5	Checks the analog input health. Display Options: Enabled or Disabled.
6	Raw analog input. If invalid or no scaling is configured, the RAW value is passed to the PV value.
7	The value RAW, scaled into engineering units. None means Invalid or no scaling configured. Linear means the PV is directly proportional to RAW. Sqrt ext (Square root extraction) means that the PV is proportional to the extracted square root of RAW.
8	Exit Button. Click to close the faceplate.

AI Faceplate: Trend Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	Y-Axis. Displays engineering units specified in the object definition, e.g. PSI, inches, volts, pounds per hour, standard cubic feet.
2	Trend line of the AI analog value.
3	Trend Slider. As the slider is moved, the following displays in the legend based on the slider position: Slider position, Y-axis value, Date, and Time.
4	Trend Scroll Back Buttons. Click to scroll back in time. One page: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart back in time by the following increments: 15 Minutes, 1 hour, or 8 hours. 50 percent: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart back in time by the following increments: 7.5 minutes, 30 minutes, 4 hours.
5	X-axis. Local (PC) time.

6	Trend Scroll Forward Buttons. Click to scroll forward in time. One page: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart forward in time by the following increments: 15 Minutes, 1 hour, or 8 hours. 50 percent: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart forward in time by the following increments: 7.5 minutes, 30 minutes, 4 hours.
7	The Trend chart legend displays the following based on the slider position: the Display line, the Line value at the slider, Date at the slider, and the Time at the slider.
8	15 Mins Button: The Trend chart time duration is 15 minutes. The button's indication light is green when this time span is selected.
9	1 Hr Button: the Trend chart time duration is one hour. The button's indication light is green when this time span is selected.
10	8 Hrs Button: The Trend chart time duration is eight hours. The button's indication light is green when this time span is selected.
11	Chart Display Button: Display toggle button to maximize/minimize chart and information display. Clicking the button moves you to successive states. The three states are: No Y-axis/No Legend, Y-axis/No Legend, and Y-axis and Full Legend. The Y-axis, when displayed, shows the engineering units specified in the object definition, e.g. PSI, inches, volts, pounds per hour, standard cubic feet. The date and time continue to display.
12	Unzoom Button. Draw a box around the area to be zoomed. The Trend chart zooms to your selection. Click the Unzoom button to return the chart to its normal display size.
13	Grid Button. Click to display/hide the grid. Default: The grid displays.
14	Exit Button. Click to close the faceplate.

ALARM_A: Object Configuration and Use

ALARM_A: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is built *(on page 16)* from the EGD server.

1 *(on page 90)*	ALARM_A: Ethernet global data

1. ALARM_A: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS ALARM_A block is as follows.

Global Data	Data Type	Description	
AS [0]	DWORD	Alarm State Information	
AS [1]	DWORD	Alarm State Information	
		Timestamp	The number of seconds since 1-1-1970
RS [0]	DWORD	Rate of Change Alarm State Information	
RS [1]	DWORD	Rate of Change Alarm State	
		Timestamp	The number of seconds since 1-1-1970
FC	UINT	Faceplate Command	
		1	Acknowledge Absolute Alarm

Glob-al Data	Data Type	Description	
		2	Acknowledge Rate of Change Alarm
		9	Suppress Alarm State LL
		10	Suppress Alarm State L
		11	Suppress Alarm State H
		12	Suppress Alarm State HH
		13	Suppress Alarm State -ROC
		14	Suppress Alarm State +ROC
		22	Deactivate Alarm Suppression on State LL
		23	Deactivate Alarm Suppression on State L
		24	Deactivate Alarm Suppression on State H
		25	Deactivate Alarm Suppression on State HH
		26	Deactivate Alarm Suppression on State -ROC
		27	Deactivate Alarm Suppression on State +ROC
ST	WORD	HMI Status Word	
PI	REAL	Current Value of Process Variable	
LS [0]	REAL	LL Setpoint	
LS [1]	REAL	L Setpoint	
LS [2]	REAL	H Setpoint	
LS [3]	REAL	HH Setpoint	
LS [4]	REAL	ROC Setpoint	

2. ALARM_A: Object Properties

- ALARM_A General
- ALARM_A HMI Properties tab
- ALARM_A Severity tab

- ALARM_A Static tab
- ALARM_A Alarm Routing tab

ALARM_A General

The Object dialog box General tab provides data *(on page 32)* that precisely identifies the ALARM_A object.

> ✎ **Note:**
> The **Description** field is the only Read/Write field on the General tab.
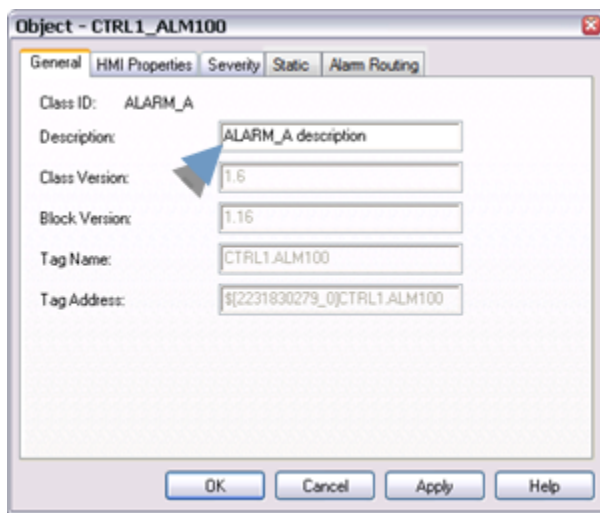
ALARM_A HMI Properties Tab

ALARM_A fields on the HMI Properties tab for an Analog Alarm (ALARM_A) object are read-only, except for the A**larm Class**.

The field descriptions are as follows.
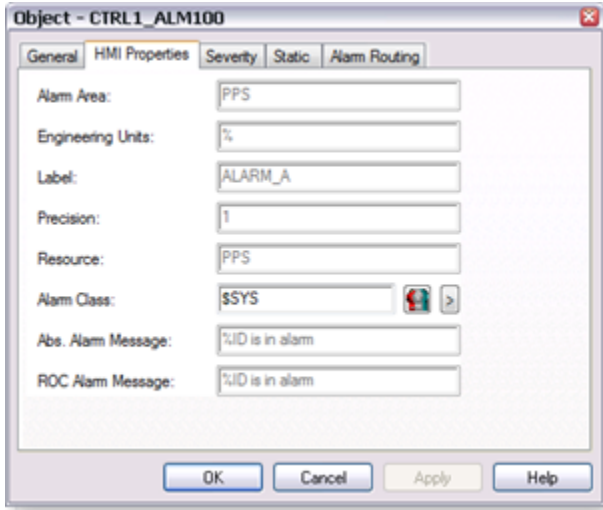
Field	Description	Data Type	Restrictions
Alarm Area	Physical or conceptual area that the alarm belongs to within the plant. **Note:** Alarm area is used for filtering alarms.	String	
Engineering Units	Engineering Units used by ALARM_A.	String	8 Characters or less
Label	Object identification.	String	
Precision	Number of digits displayed to the right of the decimal point.	Integer	7 Digits
Resource	(Read-only) CIMPLICITY resource ID.	String	
Alarm Class	CIMPLICITY alarm class.	String	
Abs. Alarm Message	(Read-only) Absolute alarm message that will display in the Alarm Viewer. **Note:** %STATE and/or %VAL can be used in the alarm message.	String	
ROC Alarm Message	(Read-only) Rate of change alarm message that will display in the Alarm Viewer. **Note:** Only %STATE can be used in the alarm message.	String	

ALARM_A Severity Tab

Fields on the Severity tab:

- Define the alarm levels.
- Are read-only.
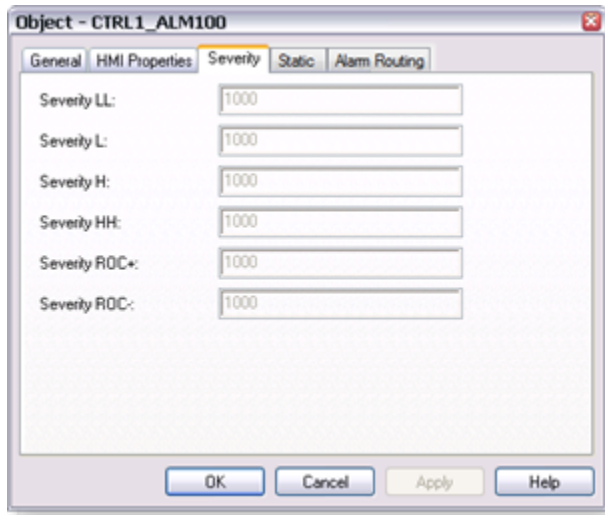
Field	Description	Data Type
Severity LL	Alarm low.	INT
Severity L	Warning low.	INT
Severity H	Warning high.	INT
Severity HH	Alarm high.	INT
Severity ROC +	Rate of change increasing alarm state severity.	INT
Severity ROC -	Rate of change decreasing alarm state severity.	INT

ALARM_A Static Tab

The Static tab defines the suffixes on the alarm tag.
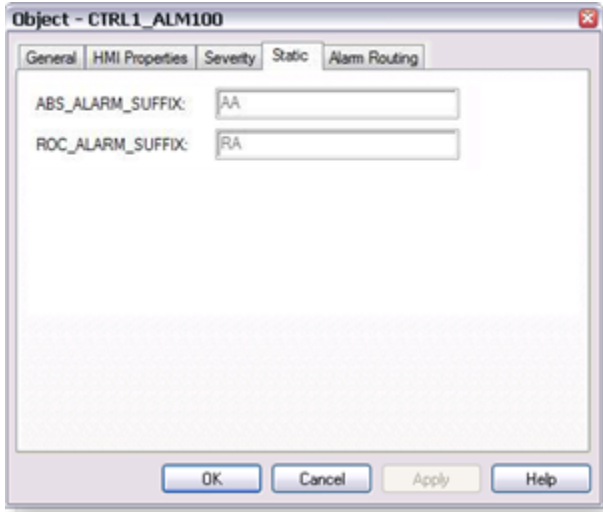
Field	Description
ABS_ALARM_SUF-FIX	Absolute alarm suffix. **Note:** Absolute alarms have an <object_name>.$_{AA}$ alarm ID.
ROC_ALARM_SUF-FIX	Rate of change alarm suffix. Note: Rate of change alarms have an <object_-name>.$_{RA}$ alarm ID.

ALARM_A Alarm Routing

The Alarm Routing tab defines what roles the alarms will be routed to.

By default, the alarms are routed to all roles.
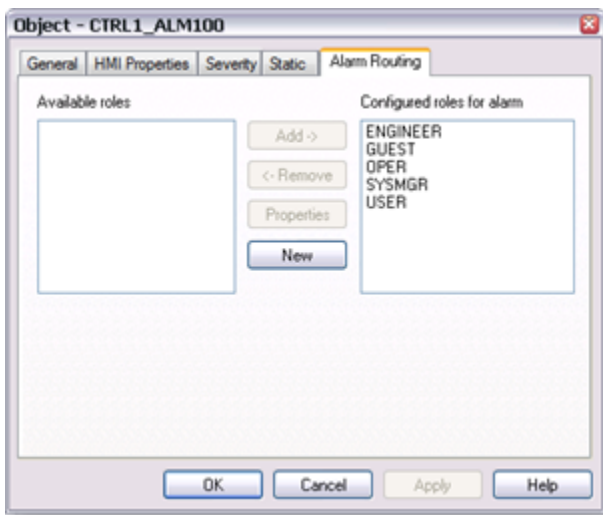
List Box	Description

Available roles	Roles that will not have alarms routed to them, but are available to be selected.
Configured roles for alarms	Roles that will have alarms routed to them.

3. Alarm_A: Alarm Properties

Three alarm properties can be set for a Process Systems ALARM_A point alarm.

- (Alarm Viewer) Help file.
- Printer repeat
- Maximum stacked

1. Select a Process Systems ALARM_A point alarm *(on page 29)* in the Workbench right pane.

   Note: An existing Process Systems alarm can also be modified through its Point Properties dialog box; however, an alarm cannot be created for a point that does not have one.

2. Open the Process Systems alarm's Alarm Definition dialog box.
3. Select the Alarm tab.

   The **Help** file field is available to enter a name of a customized Alarm Viewer help *(on page 381)* file.

Select the Alarm Options tab.

Values for the following features can be edited..
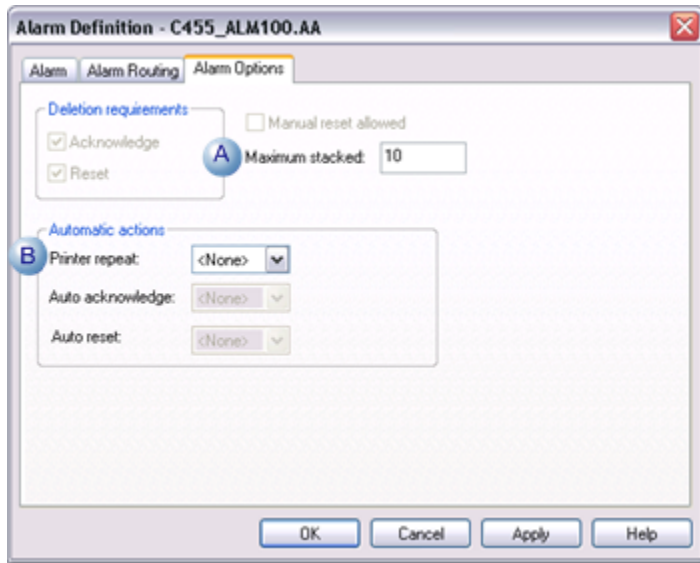
A	Maximum stacked.
B	Printer repeat.

4. ALARM_A: Mimic Objects

4. ALARM_A: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

4.1 *(on page 97)*	ALARM_A: Mimic object selection in CimEdit.
4.2 *(on page 100)*	ALARM_A: Mimic object runtime data.

4.1. ALARM_A: Mimic Object Selection in CimEdit

A *(on page 98)*	Place an ALARM_A mimic object on a CimEdit screen.
B *(on page 98)*	(Optional) Change the function block object or mimic object.

1. Place an ALARM_A mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.
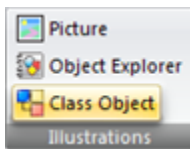
1. Select an ALARM_A object in the Select an Object browser.
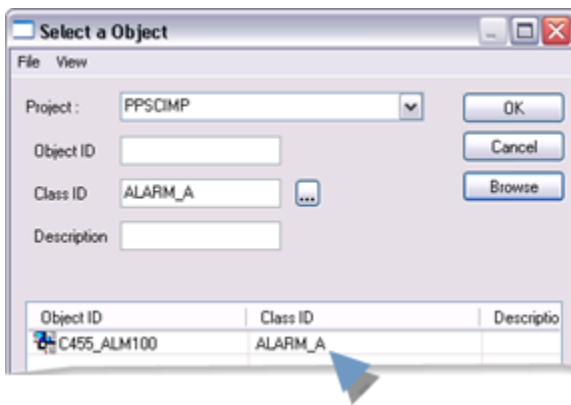
Result: The ALARM_A default mimic object displays on the CimEdit screen.

> **Note:**
> When you close and re-open CimEdit, the tag name will not display; the function block name, e.g. ALARM_A, will display. Simply double-click the object to re-display the tag name.

1. (Optional) Change the function block Object or mimic object.

Mimic object only

1. Right-click the ALARM_A mimic object.
2. Select another object listed on the Popup menu.
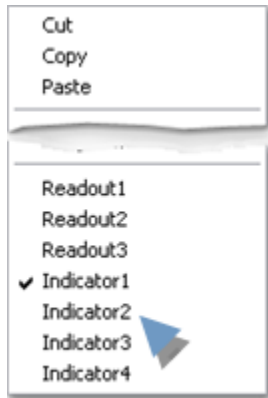
   Mimic object and/or function block object.

3. Right-click the ALARM_A mimic object.
4. Select Properties on the Popup menu.
5. Select the Class Object tab.
6. Do one or both of the following.
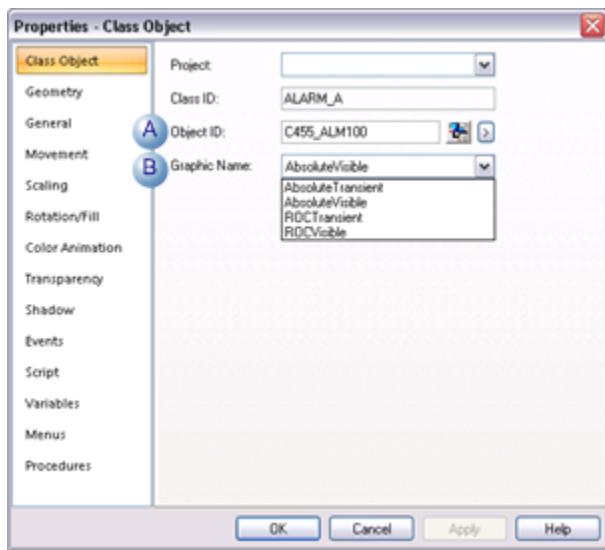
	Field	Select from a list of available ALARM_-A:
1	Object ID	Function block objects.
2	Graphic Name	Mimic objects.

7. Click OK.

The selected mimic object displays on the CimEdit screen when you use either method.

8. Configure the mimic object size and other objects, as required.

The mimic object is ready for runtime.

4.2. ALARM_A: Mimic Object Runtime Data

4.2. ALARM_A: Mimic Objects Runtime Data

Mimic objects that are available for the PPS ALARM_A block are as follows.

> 📝 **Note:**
> A runtime user can open the ALARM_A faceplate through any object. However, the exact data that the mimic object displays depends on which object is being used.
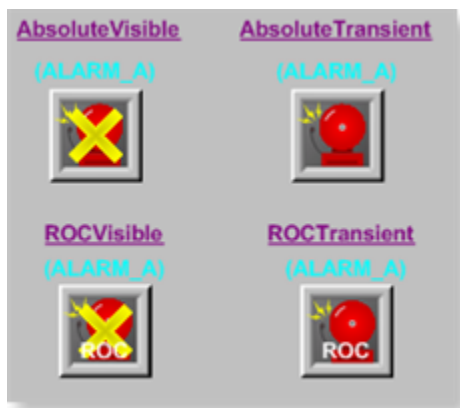
1. ALARM_A: ROC Transient *(on page 103)*
2. ALARM_A: ROC Visible *(on page 104)*
3. ALARM_A: Absolute Visible *(on page 102)*
4. ALARM_A: Absolute Transient *(on page 101)*

Absolute Transient
Absolute Visible
ROCTransient

ROCVisible

ALARM_A: Absolute Transient

Refer to the following table for descriptions of the fields.

Area	Description
1	Transient Alarm Label. The label is invisible if the alarm is suppressed.
2	Alarm Border. The border is animated for alarms. Default colors are as follows: Alarm=False, Acknowledged=False, Border=Static Yellow Alarm=False, Acknowledged=True, Border=Static Black Alarm=True, Acknowledged=False, Border=Blinking Red Alarm=True, Acknowledged=True, Border=Static Red
3	Transient Alarm. The alarm is invisible if the alarm is suppressed.
4	The function block name, ALARM_A. Displays at the top of the Popup menu.
5	Point View. Displays the ALARM_A points in the Point View window.
6	Point Control Panel. Displays the ALARM_A points in the Point Control Panel.
7	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: PAC1.almSlow Hide: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Dis-

plays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

ALARM_A: Absolute Visible

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Alarm Border. The border is animated for alarms. Default colors are as follows: Alarm=False, Acknowledged=False, Border=Static Yellow Alarm=False, Acknowledged=True, Border=Static Black Alarm=True, Acknowledged=False, Border=Blinking Red Alarm=True, Acknowledged=True, Border=Static Red
3	Alarm Absolute Visible. X displays if any alarm state is suppressed.
4	The function block name, ALARM_A. Displays at the top of the Popup menu.
5	Point View. Displays the ALARM_A points in the Point View window.
6	Point Control Panel. Displays the ALARM_A points in the Point Control Panel.
7	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: PAC1.almSlow Hide: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Dis-

plays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

ALARM_A: ROC Transient

Refer to the following table for descriptions of the fields.

Area	Description
1	Transient Alarm Label. The label is invisible if the alarm is suppressed.
2	Alarm Border. The border is animated for alarms. Default colors are as follows: Alarm=False, Acknowledged=False, Border=Static Yellow Alarm=False, Acknowledged=True, Border=Static Black Alarm=True, Acknowledged=False, Border=Blinking Red Alarm=True, Acknowledged=True, Border=Static Red
3	Transient Alarm. The alarm is invisible if the alarm is suppressed.
4	ROC Identifier. ROC displays for an alarm that is ROC Transient or Visible
5	The function block name, ALARM_A. Displays at the top of the Popup menu.
6	Point View. Displays the ALARM_A points in the Point View window.
7	Point Control Panel. Displays the ALARM_A points in the Point Control Panel.
8	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: PAC1.almSlow Hide: Hides the label for the selected mimic object.

9	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

ALARM_A: ROC Visible

Refer to the following table for descriptions of the fields.

Area	Description
1	Object label.
2	Alarm Border. The border is animated for alarms. Default colors are as follows: Alarm=False, Acknowledged=False, Border=Static Yellow Alarm=False, Acknowledged=True, Border=Static Black Alarm=True, Acknowledged=False, Border=Blinking Red Alarm=True, Acknowledged=True, Border=Static Red
3	Alarm Absolute Visible. X displays if any alarm state is suppressed.
4	ROC Identifier. ROC displays for an alarm that is ROC Transient or Visible
5	The function block name, ALARM_A. Displays at the top of the Popup menu.
6	Point View. Displays the ALARM_A points in the Point View window.
7	Point Control Panel. Displays the ALARM_A points in the Point Control Panel.

8	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: PAC1.almSlow Hide: Hides the label for the selected mimic object.
9	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

5. ALARM_A: Faceplate

5. ALARM_A: Faceplate

The ALARM_A faceplate enables operators to interface with alarms, by providing a means to adjust limits, acknowledge alarms, and suppress nuisance alarms in one graphical object.

Click a tab button to display and review features for each ALARM_A faceplate frame.
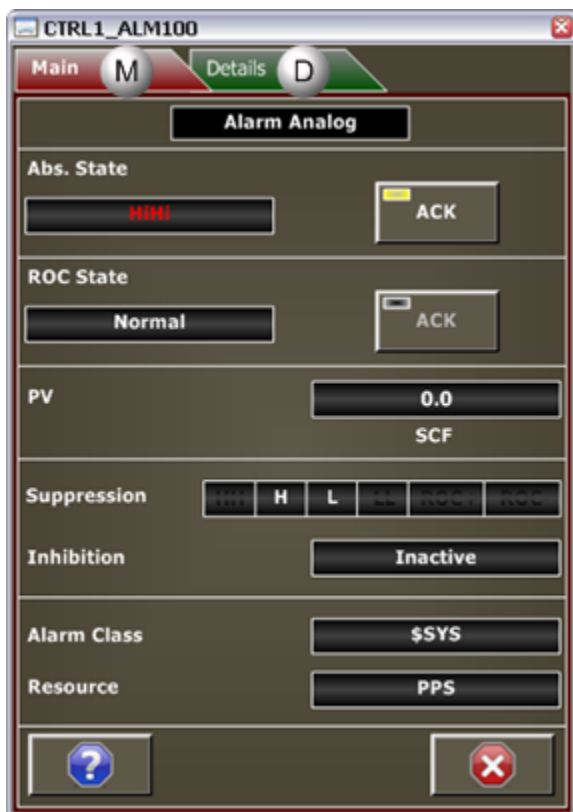
1. ALARM_A Faceplate: Main Frame *(on page 106)*
2. ALARM_A Faceplate: Details Frame *(on page 108)*

ALARM_A Faceplate: Main Frame

Refer to the following table for descriptions of the fields.

> ⚠️ **Important:**
> The ACK ABS and ACK ROC buttons in this Main frame are enabled when a user Is associated
> with both the object's resource and a role that has at least a Level 100. If, after you log in, the
> buttons should be enabled and are not, consult your system administrator.

Area	Description
1	Abs. State. Reports if the absolute alarm state is one of the five states, or unknown. The text display of ???=Unknown alarm state, Normal=Normal alarm state, LowLow=Low alarm state, Low=Warning Low alarm state, High=Warning High alarm state, and HighHigh=High alarm state.

	HighHigh has priority over High. LowLow has priority over Low. A state will be unknown if there is a loss of communication with the controller or an invalid configuration.
2	Abs Ack button. Click to acknowledge an absolute alarm. The Indication Light is Black, Blinking Black/Yellow, or Green. If the alarm state HighHigh has been acknowledged and then PV transitions from the HighHigh state to the High state, then the High state alarm will not require re-acknowledgement. The same is true for when a LowLow alarm is acknowledged and PV transitions from the LowLow state to the Low state. If the severity level associated with the alarm state is configured to automatically acknowledge the alarm, then operator acknowledgement is not required for those alarm states. For example, if the High alarm state has a Severity of 600 and this severity level is configured to self-acknowledge, when the High alarm state becomes active, the alarm will automatically be acknowledged.
3	ROC (Rate of Change) State. Reports if the ROC state is one of the three states, or unknown Text Displays: ???, Normal, ROC+, or ROC-. A state will be unknown if there is a loss of communication with the controller or an invalid configuration.
4	ROC Ack button. Click to acknowledge a ROC alarm. If the Indication Light is Black, no active alarms exist. If it is Blinking Black/Yellow, an alarm state is active and unacknowledged, if it is Green, an alarm is active and has been acknowledged.
5	PV (Process Variable). The value of the process variable in engineering units.
6	PV measurement unit. The PV engineering unit is assigned in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be entered with 8 characters or less.
7	Suppression. Reports if the alarms for an alarm state are suppressed. A suppressed alarm will not generate an alarm to the alarm viewer or faceplate. If the state is suppressed the State Label displays in its Suppression box. States include: HH=High, H=Warning High, L=Warning Low, LL=Low, ROC+=ROC increasing, ROC-=ROC decreasing. Alarm states can be enabled or suppressed on the Details frame. Alarms should not be suppressed if they are indicating actual process conditions that are abnormal. Use alarm suppression with caution.
8	Inhibition. Reports if the Inhibit input to the ALARM_A block is active or inactive. When active, no alarms will be generated. When inactive all alarm states that are not suppressed will generate an alarm if their associated state is achieved by PV. For example, if a pump that generates a flow and that flow is used as the PV to an ALARM_A block, then the Low and LowLow flow alarms should be inhibited by logic when the pump is off. Alarm inhibiting can only be driven by logic in the controller; inhibiting cannot be enabled/disabled from the faceplate.
9	CIMPLICITY Alarm Class.
10	CIMPLICITY Resource.

11	Exit Button. Click to close the faceplate.

ALARM_A Faceplate: Details Frame

Refer to the following table for descriptions of the fields.

> ⚠️ **Important:**
>
> Data entry fields in this Details frame are writable when a user Is associated with both the object's resource and a role that has at least a Level 200. If, after you log in, the data entry fields should be writable and are not, consult your system administrator
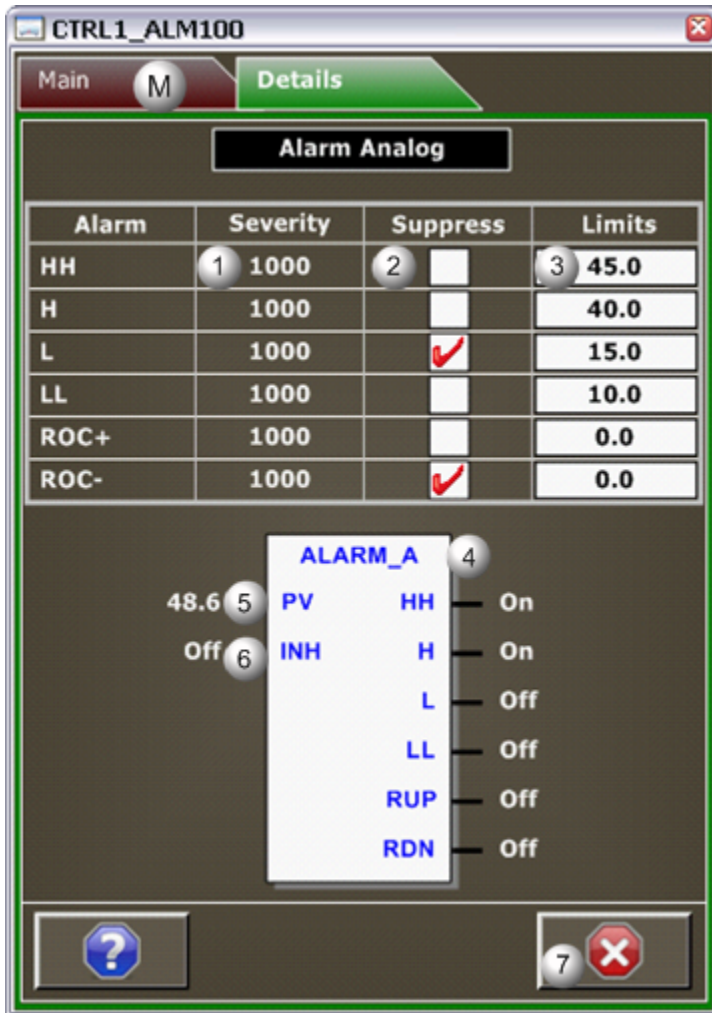
Area	Description

1	Severity. (Read-only) Displays the severity for each alarm state. The severity is one of the follow-ing numbers: 200, 400, 600, 800, 900, or 1000. Severities 200-900 can be configured to be self-ac-knowledging. Severity 1000 requires acknowledgement.
2	Suppress. Check or clear an alarm state's check box to suppress or enable its alarm. When se-lected, the alarm is suppressed. When cleared, the alarm will occur when the alarm state is true. States include: HH=High, H=Warning High, L=Warning Low, LL=Low, ROC+=ROC increasing, ROC-=ROC decreasing.
3	Limits. Alarm limit entries specify the point value or rate of change that will trigger an alarm for each alarm state.
4	States. Each alarm state is reported as On or Off if PV has achieved that state. When the state is On, the alarm is active; PV has achieved or surpassed the threshold to be in that state. An active state is reported as On even if the alarm is suppressed. State outputs are slightly different from alarm states because alarm states are mutually exclusive; state outputs are not. For example, if the HighHigh state is active, then both the High and HighHigh state outputs are On.
5	Process Variable (PV) value. (Read-only)
6	Input (INH). Inhibit Input State is On or Off. When INH is set to On, the ALARM_A block does not generate any alarms. When set to Off, the ALARM_A can have a single alarm state, active for ei-ther the rate of change (ROC) alarm or absolute (ABS) alarm. The highest priority alarm state is the active state. Alarm inhibiting can only be driven by logic in the controller; inhibiting cannot be enabled/disabled from the faceplate.
7	Exit Button. Click to close the faceplate.

ALARM_D: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is built *(on page 16)* from the EGD server.

1 *(on page 110)*	ALARM_D: Ethernet global data
2 *(on page 111)*	ALARM_D: Object properties.

	ALARM_D: Alarm properties
	ALARM_D: Mimic objects.
	ALARM_D: Faceplate.

1. ALARM_D: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS ALARM_D block is as follows.

Global Data	Data Type	Description	
AS [0]	DWORD	Alarm State Information	
AS [1]	DWORD	Alarm State Information	
		Timestamp	The number of seconds since 1-1-1970
FC	UINT	Faceplate Command	
		FC = 1	Set Acknowledgement
		FC = 2	Activate Alarm Suppression
		FC = 3	De-activate Alarm Suppression
		FC = 4	Alarm Setting = Alarm on 0
		FC = 5	Alarm Setting = Alarm on 1
		FC = 6	Alarm Setting = Alarm on Change
ST	WORD	HMI Status Word	

2. ALARM_D: Object Properties

- ALARM_D General
- ALARM_D HMI Properties tab
- ALARM_D Severity tab
- ALARM_D Alarm Routing tab

ALARM_D General

The Object dialog box General tab provides data *(on page 32)* that precisely identifies the ALARM_D object.

> ✏️ **Note:**
> The **Description** field is the only Read/Write field on the General tab.
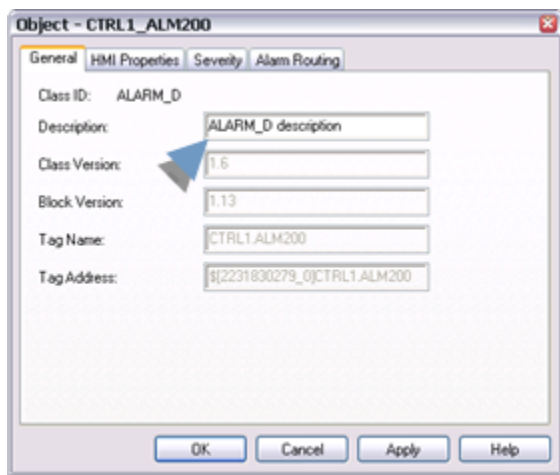
ALARM_D HMI Properties Tab

ALARM_D fields on the HMI Properties tab for a Discrete Alarm (ALARM_D) object are read-only, except for the A**larm Class**.

The field descriptions are as follows.
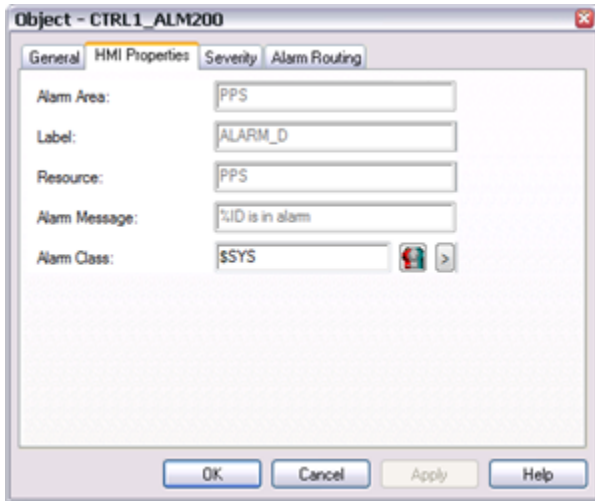
Field	Description	Data Type
Alarm Area	Physical or conceptual area that the alarm belongs to within the plant. **Note:** Alarm area is used for filtering alarms.	String
Label	Object identification.	String
Resource	(Read-only) CIMPLICITY resource ID.	String
Alarm Message	(Read-only) Alarm message that will display in the Alarm Viewer. **Note:** %STATE can be used in the alarm message.	String
Alarm Class	CIMPLICITY alarm class.	String

ALARM_D Severity Tab

The field on the Severity tab is read-only from the EGD Server.

Field	Description	Data Type
Severity	Identifies the alarm's severity level. > **Note:** > The higher the severity is, the more important the alarm is.	INT

ALARM_D Alarm Routing

The Alarm Routing tab defines what roles the alarms will be routed to.

By default, the alarms are routed to all roles.
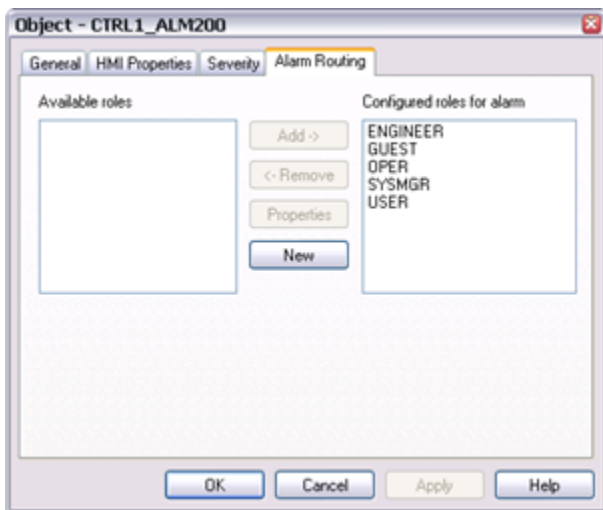
List Box	Description
Available roles	Roles that will not have alarms routed to them, but are available to be selected.
Configured roles for alarms	Roles that will have alarms routed to them.

3. ALARM_D: Alarm Properties

Three alarm properties can be set for a Process Systems ALARM_D point alarm.

- (Alarm Viewer) Help file.
- Printer repeat
- Maximum stacked

1. Select a Process Systems ALARM_D point alarm *(on page 29)* in the Workbench right pane.

   Note: An existing Process Systems alarm can also be modified through its Point Properties dialog box; however, an alarm cannot be created for a point that does not have one.

2. Open the Process Systems alarm's Alarm Definition dialog box.
3. Select the Alarm tab.

   The **Help** file field is available to enter a name of a customized Alarm Viewer help *(on page 381)* file.
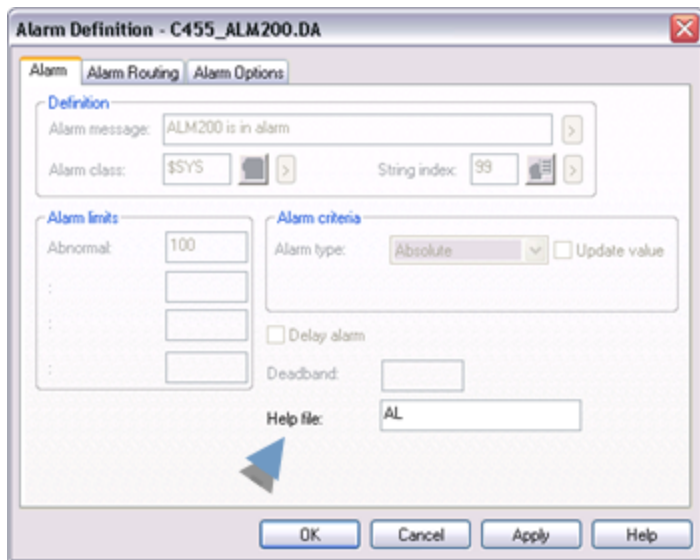
4. Select the Alarm Options tab.

Values for the following features can be edited..
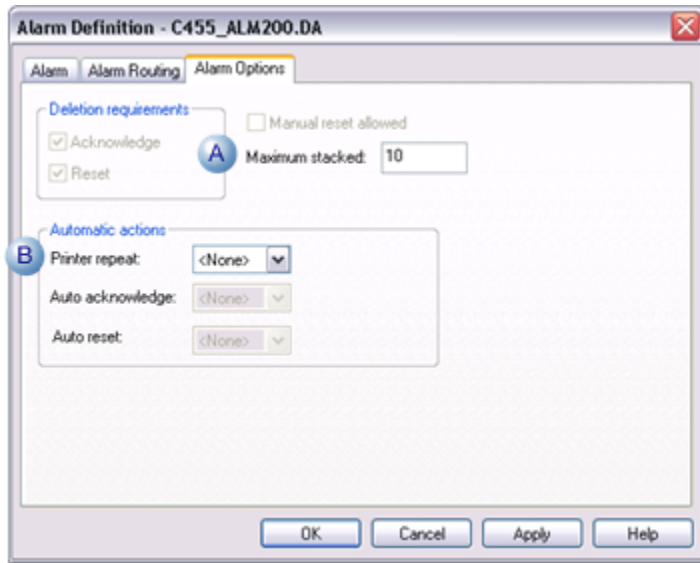
A	Maximum stacked.
B	Printer repeat.

4. ALARM_D: Mimic Objects

4. ALARM_D: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

4.1 *(on page 115)*	ALARM_D: Mimic object selection in CimEdit.
4.2 *(on page 118)*	ALARM_D: Mimic object runtime data.

4.1. ALARM_D: Mimic Object Selection in CimEdit

A *(on page 116)*	Place an ALARM_D mimic object on a CimEdit screen.
B *(on page 116)*	(Optional) Change the function block object or mimic object.

1. Place an ALARM_D mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.
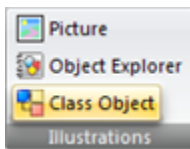
1. Select an ALARM_D object in the Select an Object browser.
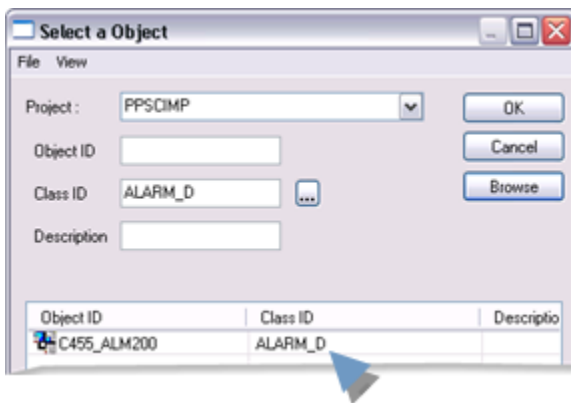
Result: The ALARM_D default mimic object displays on the CimEdit screen.

> **Note:**
> When you close and re-open CimEdit, the tag name will not display; the function block name, e.g. ALARM_D, will display. Simply double-click the object to re-display the tag name.

1. (Optional) Change the function block Object or mimic object.

Mimic object only

1. Right-click the ALARM_D mimic object.
2. Select another object listed on the Popup menu.

   Mimic object and/or function block object.

3. Right-click the ALARM_D mimic object.
4. Select Properties on the Popup menu.
5. Select the Class Object tab.
6. Do one or both of the following.
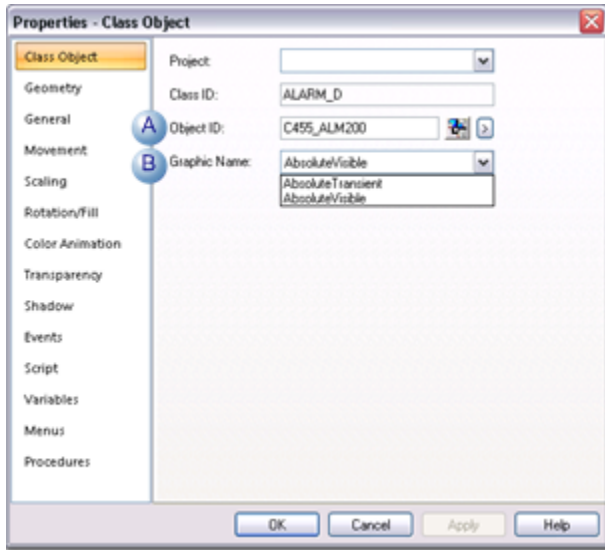
	Field	Select from a list of available ALARM_-D:
1	Object ID	Function block objects.
2	Graphic Name	Mimic objects.

7. Click OK.

The selected mimic object displays on the CimEdit screen when you use either method.

8. Configure the mimic object size and other objects, as required.

The mimic object is ready for runtime.

4.2. ALARM_D: Mimic Object Runtime Data

4.2. ALARM_D: Mimic Objects Runtime Data

Mimic objects that are available for the PPS ALARM_D block are as follows.

> ✎ **Note:**
>
> A runtime user can open the ALARM_D faceplate through any object. However, the exact data that the mimic object displays depends on which object is being used.

1. ALARM_D: Absolute Visible *(on page 119)*
2. ALARM_D: Absolute Transient *(on page 118)*

AbsoluteTran-sient
AbsoluteVisible

ALARM_D: Absolute Transient

Refer to the following table for descriptions of the fields.

Area	Description
1	Transient Alarm Label. The label is invisible if the alarm is suppressed.
2	Alarm Border. The border is animated for alarms. Default colors are as follows: Alarm=False, Acknowledged=False, Border=Static Yellow Alarm=False, Acknowledged=True, Border=Static Black Alarm=True, Acknowledged=False, Border=Blinking Red Alarm=True, Acknowledged=True, Border=Static Red
3	Transient Alarm. The alarm is invisible if the alarm is suppressed.
4	The function block name, ALARM_D. Displays at the top of the Popup menu.
5	Point View. Displays the ALARM_D points in the Point View window.
6	Point Control Panel. Displays the ALARM_D points in the Point Control Panel.
7	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: PAC1.almSlow Hide: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

ALARM_D: Absolute Visible

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Alarm Border. The border is animated for alarms. Default colors are as follows: Alarm=False, Acknowledged=False, Border=Static Yellow Alarm=False, Acknowledged=True, Border=Static Black Alarm=True, Acknowledged=False, Border=Blinking Red Alarm=True, Acknowledged=True, Border=Static Red
3	Alarm Absolute Visible. X displays if any alarm state is suppressed.
4	The function block name, ALARM_D. Displays at the top of the Popup menu.
5	Point View. Displays the ALARM_D points in the Point View window.
6	Point Control Panel. Displays the ALARM_D points in the Point Control Panel.
7	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: PAC1.almSlow Hide: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

5. ALARM_D: Faceplate

The ALARM_D (alarms generated from Discrete variables) faceplate enables operators to be notified of alarm conditions and to acknowledge alarms.

Click a tab button to display and review features for each ALARM_D faceplate frame.

1. ALARM_D Faceplate: Main Frame *(on page 121)*
2. ALARM_D Faceplate: Details Frame *(on page 123)*

ALARM_D Faceplate: Main Frame

Refer to the following table for descriptions of the fields.

> ⚠️ **Important:**
>
> The ACK button in this Main frame is enabled when a user Is associated with both the object's resource and a role that has at least a Level 100. If, after you log in, the button should be enabled and is not, consult your system administrator.

Area	Description
1	State. Reports if the point is in alarm state. When an alarm is "In Alarm and unacknowledged" the alarm displays in red and blinks. When an alarm is "In Alarm and acknowledged" the alarm displauys in red. When an alarm is an a "Normal" state, it displays in white.
2	ACK Button. Click to acknowledge the alarm. If the text is White, the alarm is enabled. If the text is silver, it is disabled. The Ack Button may be sisabled if the alarm state is normal and previous alarm, if existed, was acknowledged, or if the alarm is active and has been acknowledged. It may also be disabled if the user's credentials (user level or access to the object's resource) are inadequate to acknowledge the alarm. To determine why the Ack Button is disabled, check the button's indicator light to see if the alarm has been acknowledged. View the Details frame. And, review required user credentials. If the Indicator light is Black, the alarm state is normal; a previous alarm, if one existed, was acknowledged. If it is Green, an alarm is active and acknowledged. If it

	is Black/Yellow blinking, an alarm has been activated and is unacknowledged. The alarm can still be active or normal.
3	Suppression. Reports if Alarm suppression is active or inactive. Alarms should not be suppressed if they are indicating actual process conditions that are abnormal. Use alarm suppression with caution.
4	Inhibition. Reports if the Inhibit input to the ALARM_D block is active or inactive. For example, if a pump that generates a flow has a Low Flow switch that is fed to the ALARM_D block, it would be appropriate to inhibit the alarm when the pump is off. When inhibition is Active, no alarms will be generated. When Inactive, all alarms that are not suppressed will generate an alarm if there associated state is achieved by PV. Alarm inhibiting can only be driven by logic in the controller and cannot be enabled/disabled from the faceplate.
5	Alarm Class. Alarm class selected in the ALARM_D Object dialog box.
6	CIMPLICITY Resource.
7	Exit Button. Click to close the faceplate.

ALARM_D Faceplate: Details Frame

Refer to the following table for descriptions of the fields.

> ⚠️ **Important:**
> Data entry fields in this Details frame are writable when a user Is associated with both the object's resource and a role that has at least a Level 200. If, after you log in, the data entry fields should be writable and are not, consult your system administrator.

Area	Description
1	Select to Suppress the Alarm, or clear to enable the alarm.
2	Severity. (Read-only) Displays the severity for each alarm state. The severity is one of the following numbers: 200, 400, 600, 800, 900, or 1000. Severities 200-900 can be configured to be self-acknowledging. Severity 1000 requires acknowledgement.
3	Alarm Setting. The selected option determines what value will trigger the alarm. Selections to trigger the alarm are: Alarm on 0 when PV Equals 0, an alarm is generated. Alarm on 1 when PV Equals 1, an alarm is generated. Alarm on Change when PV changes value, an alarm is generated
4	Process Variable (PV) Input state. Options are: On or Off.

5	INH (Input). Inhibit Input State is On or Off. When INH is set to On, no alarm is generated. When set to Off, alarms are generated based on the value of PV. Alarm inhibiting can only be driven by logic in the controller; inhibiting cannot be enabled/disabled from the faceplate.
6	ALM. Alarm Output state. Options are: On or Off. When On, ALARM_D is in alarm state. When Off, ALARM_D is in normal state.
7	Exit Button. Click to close the faceplate.

AO: Object Configuration and Use

AO: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is built *(on page 16)* from the EGD server.

1 *(on page 125)*	AO: Ethernet global data
2 *(on page 126)*	AO: Object properties.
3 *(on page 128)*	AO: Mimic objects.
4 *(on page 138)*	AO: Faceplate.

1. AO: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS AO block is as follows.

Global Data	Data Item Name (CIMPLICITY)	Data Type	Description

SL [0]	RL	REAL	PV Low (Engineering Units)
SL [1]	RH	REAL	PV High (Engineering Units)
SL [2]	EL	REAL	Raw for PV Low
SL [3]	EH	REAL	Raw for PV High
FV	FV	REAL	Forced Value
PI	PI	REAL	Process Variable Indication
RI	RI	REAL	Raw Value Indication
FP [0]	ST	UINT	HMI Status Word
FP [1]	FC	UINT	Faceplate Command

2. AO: Object Properties

Open an Object Properties dialog box for an object with an AO class ID.

The tabs in the Object dialog box are:

- AO General.
- AO HMI Properties.

AO General

The Object dialog box General tab provides data *(on page 32)* that precisely identifies the AO object.

> ✎ **Note:**
> The **Description** field is the only Read/Write field on the General tab.

AO HMI Properties

Each PPS function block has HMI properties.

When an Object dialog box is opened for a selected object, the values for these properties:

- Can be defined in the Object dialog box.
- Will display on the faceplate when it is first opened and as long as they are not changed.
- (Some properties) May be changed by faceplate users who have a role *(on page 12)* with the required level.

The HMI properties required for the PPS Analog Output block are as follows.

Field	Description	Data Type	Restrictions
Label	Object identification.	String	
Precision	Number of digits displayed to the right of the decimal point.	Integer	7 Digits
Resource	CIMPLICITY resource.	String	16 Characters or less
Engineering Units	Analog Input Engineering Units.	String	8 Characters or less
Animation Criterion	The Percentage of the Full Range of TP that Must be exceeded by TP to Indicate that the Valve/Damper is Open.	REAL	Greater than zero.

3. AO: Mimic Objects

3. AO: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

3.1 *(on page 128)*	AO: Mimic object selection in CimEdit.
3.2 *(on page 131)*	AO: Mimic object runtime data.

3.1. AO: Mimic Object Selection in CimEdit

A *(on page 129)*	Place an AO mimic object on a CimEdit screen.
B *(on page 129)*	(Optional) Change the function block object or mimic object.

Place an AO mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.
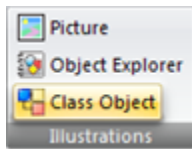
3. Select an AO object in the Select an Object browser.
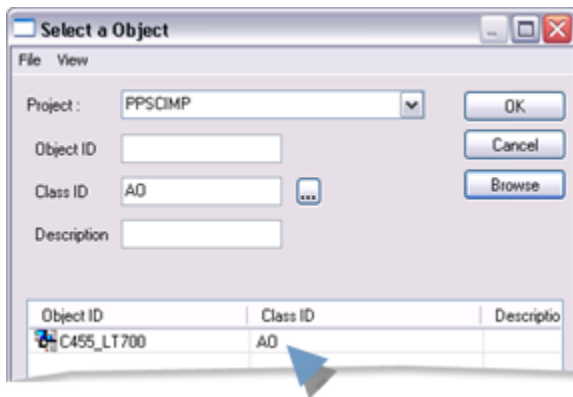
Result: The AO default mimic object displays on the CimEdit screen.

> ✏️ **Note:**
> When you close and re-open CimEdit, the tag name will not display; the function block
> name, e.g. AO, will display. Simply double-click the object to re-display the tag name.

(Optional) Change the function block Object or mimic object.

Mimic object only

4. Right-click the AO mimic object.
5. Select another object listed on the Popup menu.
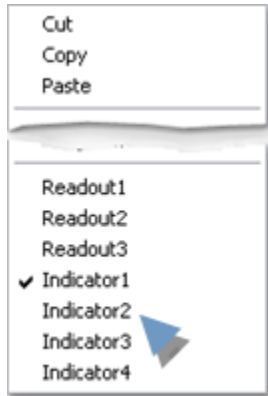
Mimic object and/or function block object.

6. Right-click the AO mimic object.
7. Select Properties on the Popup menu.
8. Select the Class Object tab.
9. Enter the Object ID. Select from a list of available ADV_PID function block objects.
10. Enter the Graphic Name. Select from a list of available ADV_PID mimic objects.
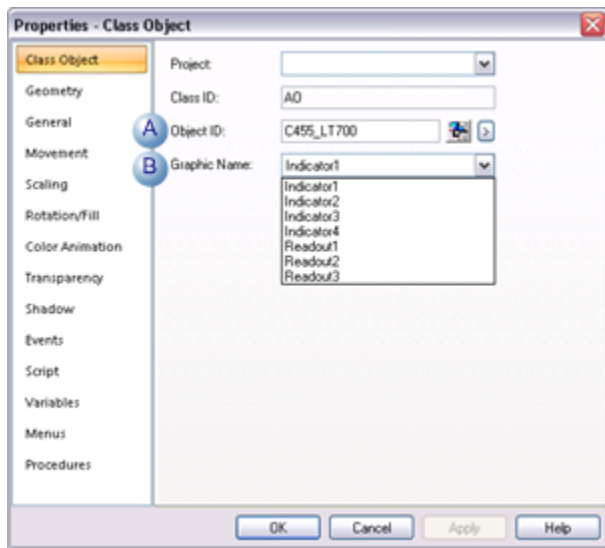
11. Click OK. The selected mimic object displays on the CimEdit screen when you use either method.
12. Configure the mimic object size and other objects, as required.

The mimic object is ready for runtime.

3.2. AO: Mimic Object Runtime Data

Mimic objects that are available for the PPS advanced PID block are as follows.

> **Note:**
>
> A runtime user can open the AO faceplate through any object. However, the exact data that the mimic object displays depends on which object is being used.

AO: Indicator 1

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Animated On/Off Color. If the condition is Open/On, the Open/On color is set to Green by default. If the condition is Closed/Off, the color is set to Red by default.
3	Displays Forced, if Forcing is active.
4	The function block name, AO. Displays at the top of the Popup menu.
5	Point View. Displays the AO points in the Point View window.
6	Point Control Panel. Displays the AO points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: AO Hide Label: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

AO: Indicator 2

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Animated On/Off Color. If the condition is Open/On, the Open/On color is set to Green by default. If the condition is Closed/Off, the color is set to Red by default.
3	The function block name, AO. Displays at the top of the Popup menu.
4	Point View. Displays the AO points in the Point View window.
5	Point Control Panel. Displays the AO points in the Point Control Panel.
6	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: AO Hide Label: Hides the label for the selected mimic object.
7	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

AO: Indicator 3

Refer to the following table for descriptions of the fields.

> **Note:**
> This object is designed to be "plugged" into another object; the other object will have a tag name.

Area	Description
1	Object Label.
2	Animated On/Off Color. If the condition is Open/On, the Open/On color is set to Green by default. If the condition is Closed/Off, the color is set to Red by default.
3	The function block name, AO. Displays at the top of the Popup menu.
4	Point View. Displays the AO points in the Point View window.
5	Point Control Panel. Displays the AO points in the Point Control Panel.
6	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: AO Hide Label: Hides the label for the selected mimic object.
7	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

AO: Indicator 4

> **Note:**
> This object is designed to be "plugged" into another object; the other object will have a tag name.

Area	Description
1	Object Label.
2	Animated On/Off Color. If the condition is Open/On, the Open/On color is set to Green by default. If the condition is Closed/Off, the color is set to Red by default.
3	The function block name, AO. Displays at the top of the Popup menu.
4	Point View. Displays the AO points in the Point View window.
5	Point Control Panel. Displays the AO points in the Point Control Panel.
6	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: AO Hide Label: Hides the label for the selected mimic object.
7	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

AO: Readout 1

Refer to the following table for descriptions of the fields.

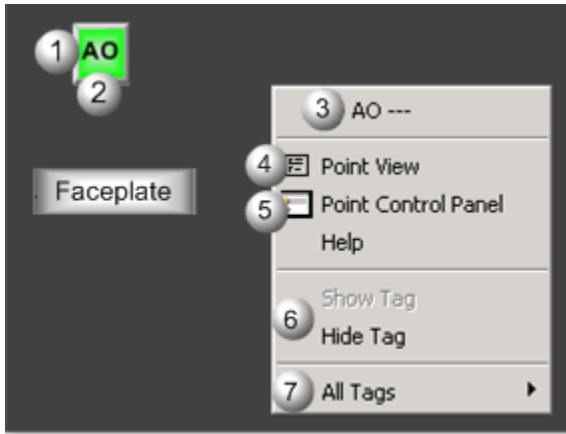| Area	Description
1	Object Label.
2	AO function block's analog value.
3	The measurement unit that is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
4	Displays F when forcing is active.
5	The function block name, AO. Displays at the top of the Popup menu.
6	Point View. Displays the AO points in the Point View window.
7	Point Control Panel. Displays the AO points in the Point Control Panel.
8	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: AO Hide: Hides the label for the selected mimic object.
9	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

AO: Readout 2

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	AO function block's analog value.
3	Displays F when forcing is active.
4	The measurement unit that is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
5	The function block name, AO. Displays at the top of the Popup menu.
6	Point View. Displays the AO points in the Point View window.
7	Point Control Panel. Displays the AO points in the Point Control Panel.
8	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: AO Hide: Hides the label for the selected mimic object.
9	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

AO: Readout 3

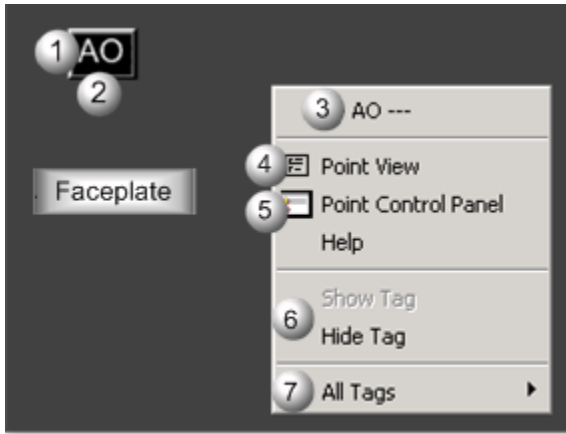Refer to the following table for descriptions of the fields.

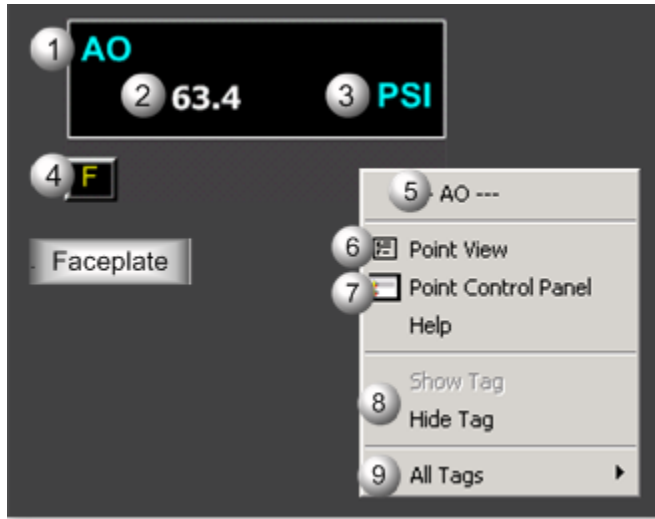| Area	Description
1	Object Label.
2	AO function block's analog value.
3	The measurement unit that is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
4	Displays F when forcing is active.
5	The function block name, AO. Displays at the top of the Popup menu.
6	Point View. Displays the AO points in the Point View window.
7	Point Control Panel. Displays the AO points in the Point Control Panel.
8	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: AO Hide: Hides the label for the selected mimic object.
9	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

4. AO: Faceplate

The analog output faceplate provides the operator with an interface to monitor, configure scaling, and view the forced state of an analog output point.

Click a tab to display and review features for each AO faceplate frame.
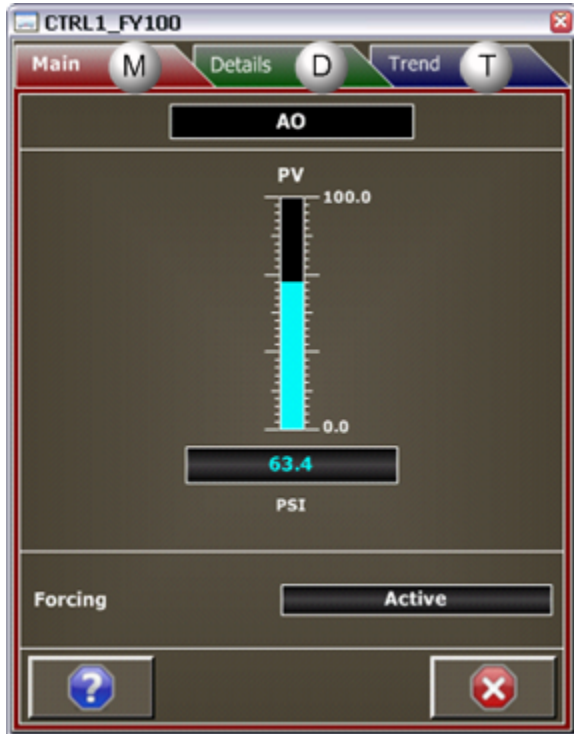
1. AO Faceplate: Main Frame *(on page 139)*
2. AO Faceplate: Details Frame *(on page 141)*
3. AO Faceplate: Trend Frame *(on page 142)*

AO Faceplate: Main Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	Process Variable (PV) high value in Engineering Units. Question marks display if invalid or no scaling is configured. To determine why question marks display, view the scaling parameters on the Details frame.
2	PV Fill Level: Animated fill level. Displays the PV engineering value in relation to its range. Will not display if invalid or no scaling is configured.
3	Process Variable (PV) low value in Engineering Units. Question marks display if invalid or no scaling is configured. To determine why question marks display, view the scaling parameters on the Details frame.
4	Process Variable (PV) value in Engineering Units. The displayed value is the current PV value. PV is converted into RAW based on the configured scaling. If no scaling is configured then RAW is set equal to PV.
5	Engineering Units. Examples of engineering units are PSI, inches, volts, pounds per hour, standard cubic feet.

6	Overrides the RAW value with a user specified value. Display options include: Active or Inactive. With Active, the RAW value is currently forced. With Inactive, the Forcing is inactive so the RAW value is based on PV and the configured scaling. Forcing can be set to Active or Inactive on the Details frame.
7	Exit button. Click to close the faceplate.

AO Faceplate: Details Frame

Refer to the following table for descriptions of the fields.

> **Note:**
>
> Data entry fields and button execution are enabled when a user Is associated with both the object's resource and a role that has at least a Level 200. Consult your system administrator if you should have data entry privileges and don't.

Area	Description
1	Click the Forcing check box to enable or disable forcing. Filtering is applied to the forced value if the Filter Time is appreciably larger than the block's execution period.
2	The Forced Value replaces the calculated RAW value. Data entry is enabled only when forcing is enabled. When forcing is enabled, the forced value will be automatically set to the last raw value before forcing. The Forced Value is user-defined except on the first transition.
3	PV low and PV high values and associated engineering units. In order to have scaling the PV High value must be greater than the PV Low value. Without scaling the Main frame will have no animated fill and the High and Low will be displayed as question marks.
4	Raw low and raw high data types and values. Data types (read-only) include: UINT, INT, DINT, and REAL.The Value is read-write. In order to have scaling the Raw High and Raw Low must be set to different values. To support inverted actuators the Raw High can be lower than the Raw Low.
5	Raw analog output. If invalid or no scaling is configured, the PV value is passed to the RAW value.
6	The method used to convert PV into the raw value. Display Options: Direct or Inverted. With Direct, the Raw High is greater than Raw Low; Raw is directly proportional to PV. With Inverted, the Raw High is less than Raw Low; Raw is inversely proportional to PV.
7	Exit Button. Click to close the faceplate.

AO Faceplate: Trend Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	Y-Axis. Displays engineering units specified in the object definition, e.g. PSI, inches, volts, pounds per hour, standard cubic feet.
2	Trend line of the AO analog value.
3	Trend Slider. As the slider is moved, the following displays in the legend based on the slider position: Slider position, Y-axis value, Date, and Time.
4	Trend Scroll Back Buttons. Click to scroll back in time. One page: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart back in time by the following increments: 15 Minutes, 1 hour, or 8 hours. 50 percent: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart back in time by the following increments: 7.5 minutes, 30 minutes, 4 hours.
5	X-axis. Local (PC) time.

6	Trend Scroll Forward Buttons. Click to scroll forward in time. One page: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart forward in time by the following increments: 15 Minutes, 1 hour, or 8 hours. 50 percent: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart forward in time by the following increments: 7.5 minutes, 30 minutes, 4 hours.
7	The Trend chart legend displays the following based on the slider position: the Display line, the Line value at the slider, Date at the slider, and the Time at the slider.
8	15 Mins Button: The Trend chart time duration is 15 minutes. The button's indication light is green when this time span is selected.
9	1 Hr Button: the Trend chart time duration is one hour. The button's indication light is green when this time span is selected.
10	8 Hrs Button: The Trend chart time duration is eight hours. The button's indication light is green when this time span is selected.
11	Chart Display Button: Display toggle button to maximize/minimize chart and information display. Clicking the button moves you to successive states. The three states are: No Y-axis/No Legend, Y-axis/No Legend, and Y-axis and Full Legend. The Y-axis, when displayed, shows the engineering units specified in the object definition, e.g. PSI, inches, volts, pounds per hour, standard cubic feet. The date and time continue to display.
12	Unzoom Button. Draw a box around the area to be zoomed. The Trend chart zooms to your selection. Click the Unzoom button to return the chart to its normal display size.
13	Grid Button. Click to display/hide the grid. Default: The grid displays.
14	Exit Button. Click to close the faceplate.

CTRL_STAT: Object Configuration and Use

CTRL_STAT: Object Configuration and Use

The CTRL_STAT function block collects Controller status values and sets them to word values.

1 *(on page 145)*	CTRL_STAT: Object properties.

1. CTRL_STAT: Object Properties

Open an Object Properties dialog box for an object with an CTRL_STAT class ID.

The tabs in the Object dialog box are:

- CTRL_STAT General.
- CTRL_STAT HMI Properties.

CTRL_STAT General

The Object dialog box General tab provides data that precisely identifies the CTRL_STAT object.

> **Note:**
> The **Description** field is the only Read/Write field on the General tab.
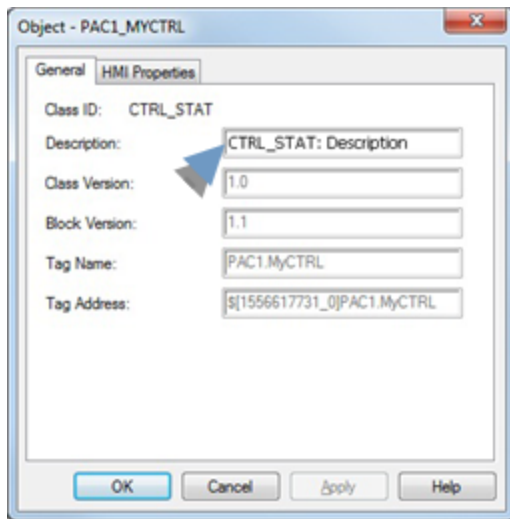
CTRL_STAT HMI Properties

Each PPS function block has HMI properties.

The HMI properties for the CTRL_STAT function block are read-only.
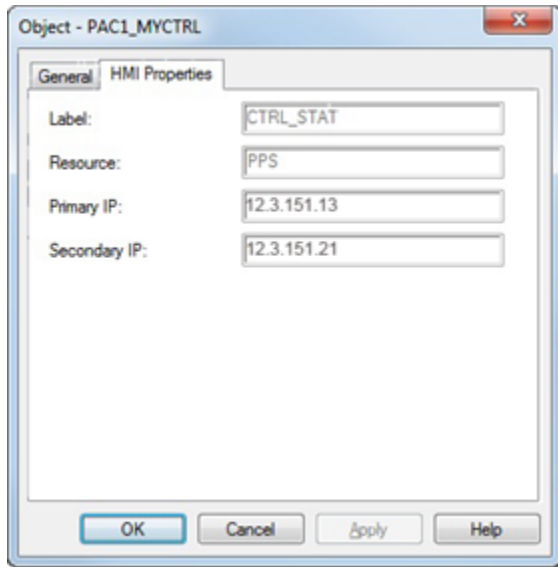
Field	Description	Data Type
Label	Object Identification.	String
Re-source	CIMPLICITY resource.	String
Primary IP	Primary controller IP address	String
Se-condary IP	Secondary controller IP address. Note: An IP address for a secondary controller displays if the system has a redundant configuration.	String

2. CTRL_STAT: Mimic Objects

2. CTRL_STAT: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

	CTRL_STAT: Mimic object selection in CimEdit.
	CTRL_STAT: Mimic object runtime data.

2.1. CTRL_STAT: Mimic Object Selection in CimEdit

Place the CTRL_STAT mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.
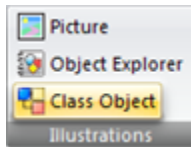
3. Select the CTRL_STAT object in the Select an Object browser.
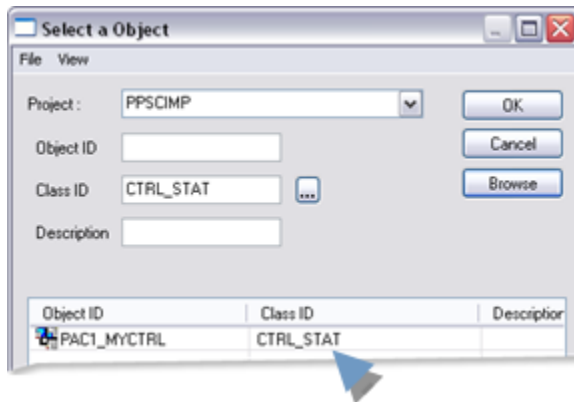
The CTRL_STAT mimic object displays on the CimEdit screen.

> **Note:**
> When you close and re-open CimEdit, the tag name will not display; the function block name, e.g. CTRL_STAT, will display. Simply double-click the object to re-display the tag name.

2.2. CTRL_STAT: Mimic Object Runtime Data

There is one mimic *(on page 148)* object available for the PPS CTRL_STAT block.

> ✏️ **Note:**
>
> A runtime user can open the CTRL_STAT faceplate through its mimic object.

CTRL_STAT: CTRL_STAT

Refer to the following table for descriptions of the fields.
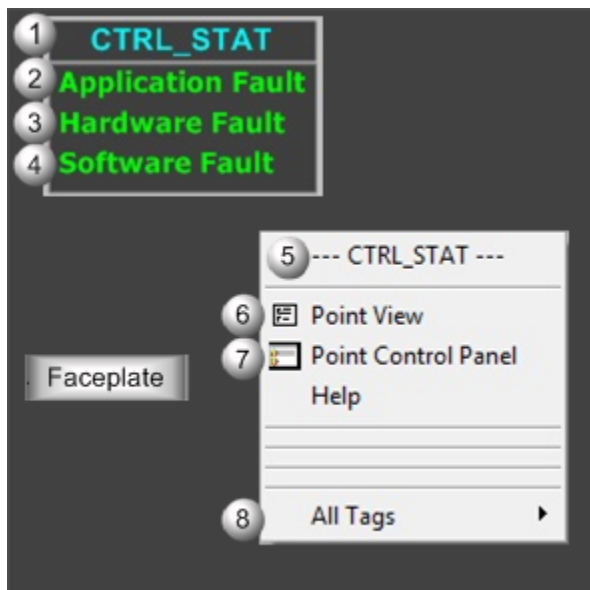
Area	Description
1	Object Label.
2	The color that displays is based on whether or not a fault is detected in the application. By default: Green displays if no fault is detected. Red displays if a fault is detected.
3	The color that displays is based on whether or not a fault is detected in the hardware. By default: Green displays if no fault is detected. Red displays if a fault is detected.
4	The color that displays is based on whether or not a fault is detected in the software. By default: Green displays if no fault is detected. Red displays if a fault is detected.

5	The function block name, CTRL_STAT. Displays at the top of the Popup menu.
6	Point View. Displays the CTRL_STAT points in the Point View window.
7	Point Control Panel. Displays the CTRL_STAT points in the Point Control Panel.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

3. CTRL_STAT: Faceplate

3. CTRL_STAT: Faceplate

The controller status faceplate provides the interface to monitor the controller fault tables and report any faults found with the software or hardware on both simplex and redundant systems.

Click a tab to display and review features for each CTRL_STAT faceplate frame.
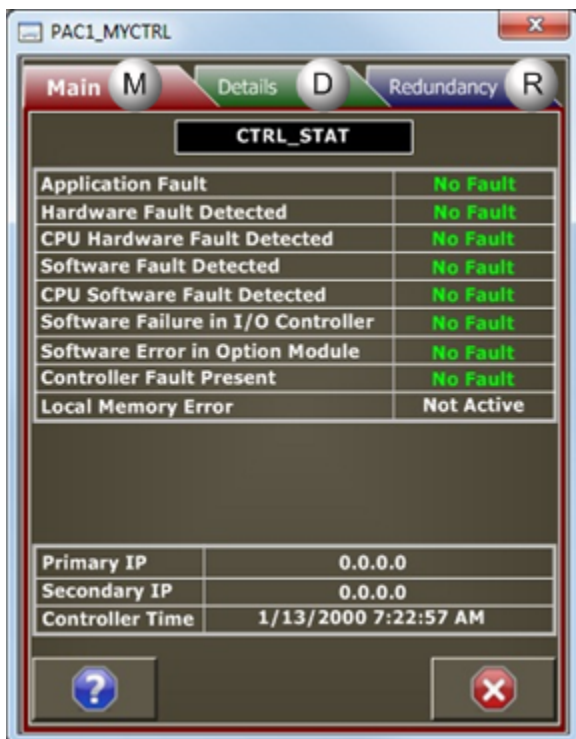
CTRL_STAT Faceplate: Main Frame

Refer to the following table for descriptions of the fields.
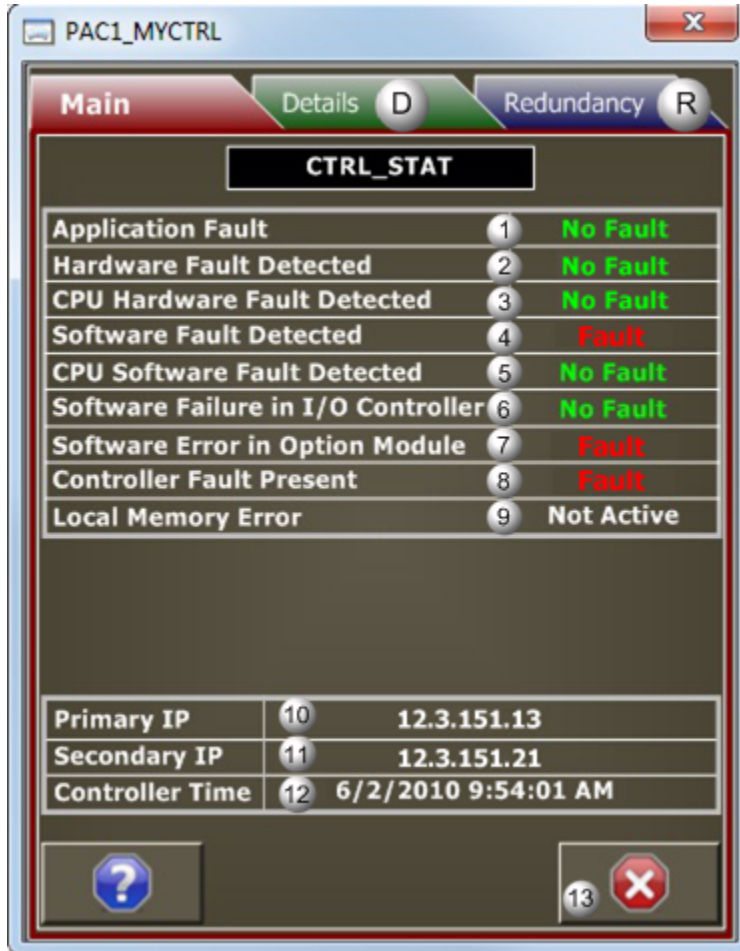
> **Note:**
>
> Faults on this Main frame are top level faults. If a fault displays on this frame, check the Details frame, which will most likely also display faults.

Faults on the Details frame provide more specific information.

Area	Description

1	Reports the application status in the controller. When Red, an application fault has occurred. When Green, the Controller Fault table has no entries (No Fault). Notify a system administrator if a fault is detected. Monitors the system variable (#APL_FLT), and the active controller in a redundant system.
2	Reports the hardware fault status in the controller. When Red, a hardware fault has occurred. When Green, the Hardware Fault tables have no entries (No Fault). Notify a system administrator if a fault is detected. Monitors the system variable (#HRD_FLT), and the active controller in a redundant system.
3	Reports the CPU hardware status in the controller. When Red, diagnostics have detected a problem with the CPU hardware (Fault). When Green, no problems are detected in the CPU hardware (No Fault). Notify a system administrator if a fault is detected. Monitors the system variable (#HRD_CPU), and the active controller in a redundant system.
4	Reports the software status in the controller. When Red, a software fault has occurred. When Green, the software Fault tables have no entries (No Fault). Notify a system administrator if a fault is detected. Monitors the system variable (#SFT_FLT), and the active controller in a redundant system.
5	Reports the CPU software status in the controller. When Red, there is an unrecoverable error in the CPU operating system software (Fault). When Green, the CPU software is operating successfully (No Fault). Notify a system administrator if a fault is detected. Monitors the system variable (#SFT_CPU), and the active controller in a redundant system.
6	Reports the software I/O controller failure status. When Red, there is a software failure in the I/O Controller (Fault). When Green, the I/O Controller software is operating successfully (No Fault). Notify a system administrator if a fault is detected. Monitors the system variable (#SFT_IOC), and the active controller in a redundant system.
7	Reports the software status in the controller. When Red, an unrecoverable software error is detected in an option module (Fault). When Green, the Option module software is operating successfully (No Fault). Notify a system administrator if a fault is detected. Monitors the system variable (#SFT_SIO), and the active controller in a redundant system.
8	Reports the fault status in the controller. When Red, there is at least one entry in the Controller Fault table (Fault). When Green, the Controller Fault table has no entries (No Fault). Notify a system administrator if a fault is detected. Monitors the system variable (#SY_PRES), and the active controller in a redundant system.
9	Reports if there is a memory error in the controller. When Active and Green, there is at least one entry in the Controller Fault table. When Not Active and White, no memory ECC error has been de-

	tected. Notify a system administrator if a fault is detected. Monitors the system variable (#LOC_-MEM_ERROR), and the active controller in a redundant system.
10	IP address or name of the primary controller in a redundant system or the only controller in a Simplex system.
11	IP address or name of the secondary controller in a redundant system.
12	Current date and time in the active controller.
13	Exit Button. Click to close the faceplate.

CTRL_STAT Faceplate: Details Frame

Refer to the following table for descriptions of the fields.
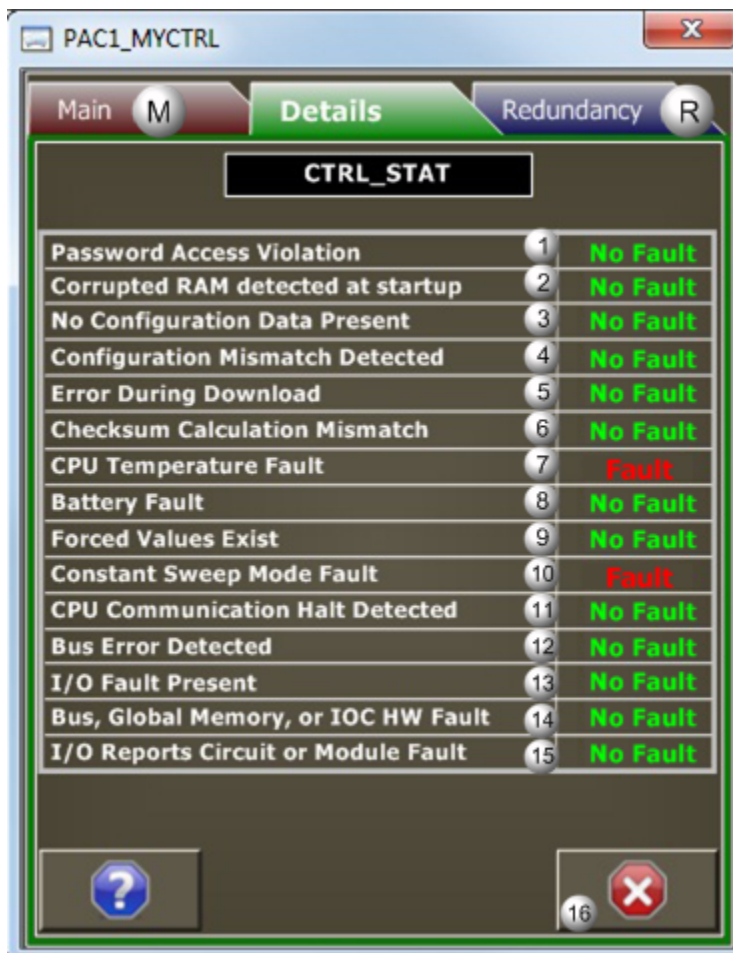
> **Note:**
>
> Faults on this Details frame point to specific information. If a fault displays on this frame, check the Main frame for higher level information.

Area	Description
1	Password Access Violation. Reports on the validity of password entries in the controller. If Red, a password violation occurred (in fault). If Green, valid passwords have been entered and the controller fault table is cleared (no fault). Be sure to notify a system administrator if a fault is detected. Monitors the System variable (#BAD_PWD) and the Active controller in a redundant system.
2	Reports the RAM status in the controller. When Red, the CPU has detected a corrupted RAM at startup (Fault). When Green, RAM memory was valid at power-up (No Fault). Be sure to notify a system administrator if a fault is detected. Monitors the System variable (#BAD_RAM), and the Active controller in a redundant system.
3	Reports whether or not there is configuration data in the controller. When Red, an attempt was made to put the controller in Run mode when there was no configuration data present (Fault). When Green, the controller is in Run mode and configuration data is present (No Fault). Be sure to notify a system administrator if a fault is detected. Monitors the System variable (#NUL_CFG), and the Active controller in a redundant system.
4	Reports the configuration match/mismatch status in the controller. When Red, a configuration mismatch was detected during system power-up or configuration download (Fault). When Green, no mismatches were detected at system power-up or configuration download (No Fault). Be sure to notify a system administrator if a fault is detected. Monitors the System variable (#CFG_MM), and the Active controller in a redundant system.
5	Reports whether or not there is an error during a download to the controller. as follows. When Red, an error has occurred during a download to the controller (Fault). When Green, downloads to the controller have been completed successfully (No Fault). Be sure to notify a system administrator if a fault is detected. Monitors the System variable (#STOR_ER), and the Active controller in a redundant system.
6	Reports the checksum calculation status in the controller. When Red, a checksum calculated on the application program did not match the reference checksum (Fault). When Green, checksum calculated on the application program matches the reference checksum (No Fault). Important: If the fault was due to a hard RAM failure, the CPU must be replaced. Be sure to notify a system administrator if a fault is detected. Monitors the System variable (#PB_SUM), and the Active controller in a redundant system.

7	Reports the CPU temperature status in the controller. When Red, the CPU has exceeded normal operating temperature (Fault). When Green, the Controller Fault table is cleared, the Controller was reset or the Temperature value was overwritten (No Fault). Be sure to notify a system administrator if a fault is detected. Monitors the System variable (#OVR_TMP), and the Active controller in a redundant system.
8	Reports the battery charge level and performance status in the controller. When Red, there is a low battery condition or the battery is bad (Fault). When Green, the controller can power up with adequate battery power and the battery status is acceptable (No Fault). Be sure to notify a system administrator if a fault is detected. Monitors the System variable (#LOW_BAT and #PLC_-BAT), and the Active controller in a redundant system.
9	Reports forced values status in the controller. When Red, a forced value exists in the following memory areas (%I, %Q, %M, or %G memory), in symbolic discrete memory (PACSystems firmware version 1.50 or later), or in I/O discrete memory. When Green, there are no forced values. Be sure to notify a system administrator if a fault is detected. Monitors the System variable (#OVR_PRE), and the Active controller in a redundant system.
10	Reports the battery charge level and performance status in the controller. When Red, the CPU detected that the previous scan took longer than the specified time or there is not enough time to start the Programmer Window in Constant Sweep mode (Fault). When Green, the Scan time is as specified and the Controller has detected that the previous sweep (scan) had enough time to perform the window. (No Fault). Be sure to notify a system administrator if a fault is detected. Monitors the System variable (#OV_SWP and #WIND_ER), and the Active controller in a redundant system.
11	Reports the CPU communication status in the controller. When Red, the Expansion rack has stopped communicating with the controller CPU, the I/O module has stopped communicating with the controller CPU, or the Option module has stopped communicating with the CPU. When Green, the expansion rack is communicating successfully with the CPU, the I/O modules are communicating successfully with the CPU, and all option modules are communicating successfully with the CPU. Be sure to notify a system administrator if a fault is detected. Monitors the System variable (#LOS_RCK, #LOS_IOM, and #LOS_SIO), and the Active controller in a redundant system.
12	Reports the bus status in the controller. When Red, a bus error has occurred on the VME bus backplane or the controller has failed to gain access to the bus (Fault). When Green, Power is cycling to the main rack (No Fault). Be sure to notify a system administrator if a fault is detected. Monitors the System variable (#SBUS_ER and #SBUS_FL), and the Active controller in a redundant system.

13	Reports the I/O status in the controller. When Red, there is at least one entry in the I/O fault table (Fault). When Green, the I/O fault table has no entries (No Fault). Be sure to notify a system administrator if a fault is detected. Monitors the System variable (#IO_PRES), and the Active controller in a redundant system.
14	Reports the Bus status in the controller. When Red, the Bus Controller reports faults in the Bus, Global memory, or the IOC hardware. When Green, Bus Controller does not detect errors in the Bus, Global memory, or the IOC hardware (No Fault). Be sure to notify a system administrator if a fault is detected. Monitors the System variable (#IOC_FLT), and the Active controller in a redundant system.
15	Reports the I/O Reports Circuit or Module fault status in the controller. When Red, an I/O module has reported a circuit or module fault (Fault). When Green, I/O modules have no detected circuit or module faults (No Fault). Be sure to notify a system administrator if a fault is detected. Monitors the System variable (#IOM_FLT), and the Active controller in a redundant system.
16	Exit Button. Click to close the faceplate.

CTRL_STAT Faceplate: Redundancy Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	Reports the active/inactive status of the local controller in a redundant system. When Active, the default color is Green and the local controller is currently the active unit in the redundant system. When Not Active, the default color is White and the local controller is currently the inactive unit in the redundant system. Monitors the System variable (#LOC_ACT), and the local controller in a redundant system.
2	Reports the single-bit memory Advanced Memory Error Checking and Correction (ECC) error status in the local controller. When Active, the default color is Green and a single-bit memory ECC error has been encountered and corrected. When Not Active, the default color is White and no ECC errors have been encountered. Notify a system administrator if an error is detected. Monitors the System variable (#LOC_MEM_ERROR), and the local controller in a redundant system.
3	Reports the local controller active/inactive status. When Active, the local controller is on standby, ready to become the active unit. When Not Active, the local controller is already the active unit

	or not ready to become the active unit. Monitors the System variable (#LOC_RDY), and the local controller in a redundant system.
4	Reports the redundancy system logic program comparison status. When Active, the logic program for both controllers in the redundancy system is the same. When Not Active, the logic program for both controllers in the redundancy system is not the same. Notify a system administrator if there if there is a problem detected during the logic program comparison. Monitors the System variable (#LOGICEQ), and both controllers in a redundant system.
5	Reports if the controller being monitored is configured to be the primary unit in the redundant system. When Active, the monitored controller is configured to be the primary unit. When Not Active, the monitored controller is not configured to be the primary unit. If Configured as Primary Unit is active, then Configured as Secondary Unit must be Inactive. Monitors the System variable (#PRI_UNT), and the local controller in a redundant system.
6	Reports if a redundancy error message has been logged and is pending. When Active, a redundancy information message has been logged. When Not Active, there are no active redundancy error messages. Notify a system administrator if an error message has been logged. Monitors the System variable (#RDN_MSG), and the active controller in a redundant system.
7	Reports if the remote server is the active server. When Active, the remote controller is the active unit. When Not Active, the remote controller is not the active unit. Monitors the System variable (#REM_ACT), and the remote controller in a redundant system.
8	Reports the remote controller active/inactive status. When Active, the remote controller is on standby, ready to become the active unit. When Not Active, the remote controller is already active or not ready to become the active unit. Monitors the System variable (#REM_RDY), and the remote controller in a redundant system.
9	Reports if the controller being monitored is configured to be the secondary unit in the redundant system. When Active, the local controller is configured to be the secondary unit. When Not Active, the local controller is not configured to be the secondary unit. Monitors the System variable (#SEC_UNT), and the local controller in a redundant system.
10	Exit Button. Click to close the faceplate.

DC2S: Object Configuration and Use

DC2S: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is built *(on page 16)* from the EGD server.

	DC2S: Ethernet global data
	DC2S: Object properties.
	DC2S: Mimic objects.
	DC2S: Faceplate.

1. DC2S: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS DC2S block is as follows.

Global Data	Data Item Name	Data Type	Description
FP[0]	ST	DWORD	HMI Status Word
FP[1]	FC	DWORD	Faceplate Command

2. DC2S: Object Properties

Open an Object Properties dialog box for an object with an DC2S class ID.

The tabs in the Object dialog box are:

- DC2S General.
- DC2S HMI Properties.

DC2S General

The Object dialog box General tab provides data *(on page 32)* that precisely identifies the DC2S object.

> **Note:**
>
> The **Description** field is the only Read/Write field on the General tab.
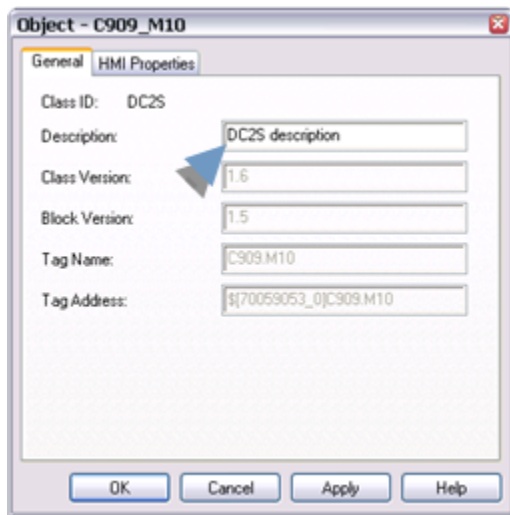
DC2S HMI Properties

Each PPS function block has HMI properties.

When an Object dialog box is opened for a selected object, the values for these properties:

- Can be defined in the Object dialog box.
- Will display on the faceplate when it is first opened and as long as they are not changed.
- (Some properties) May be changed by faceplate users who have a role *(on page 12)* with the required level.

The HMI properties required for the PPS Device Control 2 State block are as follows.
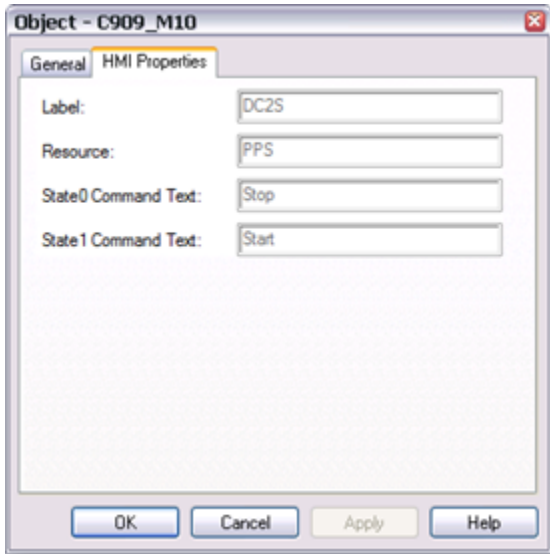
Field	Description		Data Type	Restrictions
Label	Object identification.		String	
Resource	CIMPLICITY resource.		String	16 Characters or less.
State0 Command Text	Text on Button used to Command the Device to State 0.		String	12 Characters or less.
	Default	Stop		
State1 Command Text	Text on Button used to Command the Device to State 1.		String	12 Characters or less.
	Default	Start		

3. DC2S: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

3.1. DC2S: Mimic Object Selection in CimEdit

1. Place an DC2S mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.
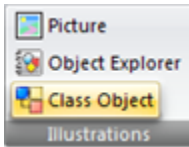
1. Select an DC2S object in the Select an Object browser.
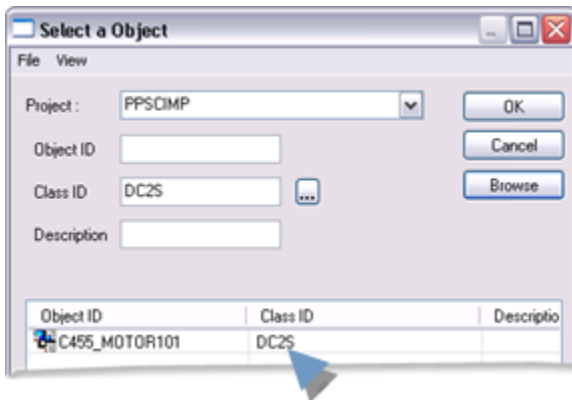
Result: The DC2S default mimic object displays on the CimEdit screen.

> **Note:**
>
> When you close and re-open CimEdit, the tag name will not display; the function block name, e.g. DC2S, will display. Simply double-click the object to re-display the tag name.

1. (Optional) Change the function block Object or mimic object.

Mimic object only

1. Right-click the DC2S mimic object.
2. Select another object listed on the Popup menu.
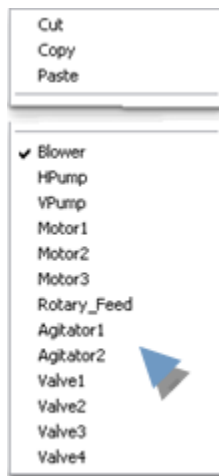
Mimic object and/or function block object.

3. Right-click the DC2S mimic object.
4. Select Properties on the Popup menu.
5. Select the Class Object tab.
6. Do one or both of the following.
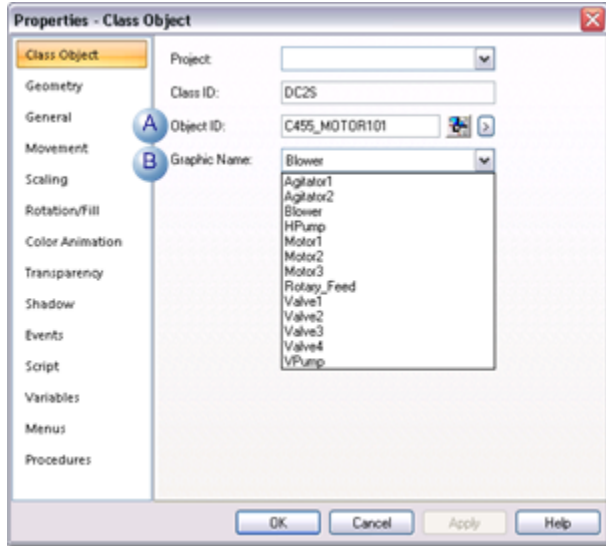
	Field	Select from a list of available DC2S:
1	Object ID	Function block objects.
2	Graphic Name	Mimic objects.

7. Click OK.

The selected mimic object displays on the CimEdit screen when you use either method.

8. Configure the mimic object size and other objects, as required.

The mimic object is ready for runtime.

3.2. DC2S: Mimic Object Runtime Data

Mimic objects that are available for the PPS DC2S block are as follows.

> **Note:**
> A runtime user can open the DC2S faceplate through any object. However, the exact data that the mimic object displays depends on which object is being used.
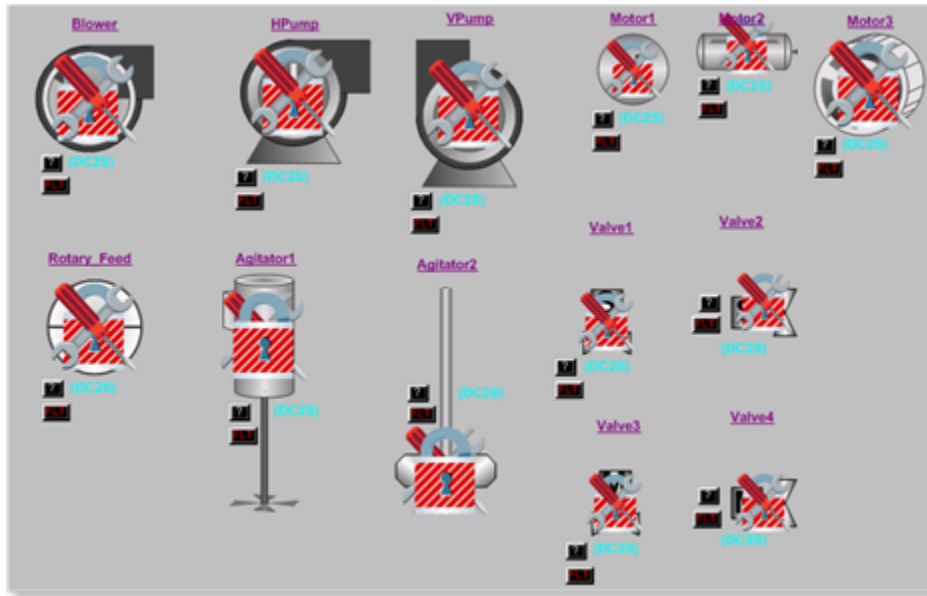
Agitator 1
Agitator 2
Blower
Horizontal Pump
Motor 1

Motor 2	
Motor 3	
Valve 1	
Valve 2	
Valve 3	
Valve 4	

DC2S: Agitator 1

Refer to the following table for descriptions of the fields.

| Area | Description |

1	Agitator Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is green. For State 1, it is red. For Transitioning to State 1 and Transitioning to State 0, the default color is grey.
2	Manual/Automatic Button. Displays the agitator mode: A=Automatic and M=Manual.
3	Object Label.
4	The Flt button displays when the agitator has failed.
5	The agitator blades rotate based on State 1. When State 1 is Active, the Agitator Blades rotate clockwise. When State 1 is Inactive, the Agitator Blades do not rotate.
6	The function block name, DC2S. Displays at the top of the Popup menu.
7	Point View. Displays the DC2S points in the Point View window.
8	Point Control Panel. Displays the DC2S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC2S Hide Label: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC2S: Agitator 2

Refer to the following table for descriptions of the fields.

Area	Description
1	Agitator Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is green. For State 1, it is red. For Transitioning to State 1 and Transitioning to State 0, the default color is grey.
2	Manual/Automatic Button. Displays the agitator mode: A=Automatic and M=Manual.
3	Object Label.
4	The Flt button displays when the agitator has failed.
5	The agitator blades rotate based on State 1. When State 1 is Active, the Agitator Blades rotate clockwise. When State 1 is Inactive, the Agitator Blades do not rotate.
6	The function block name, DC2S. Displays at the top of the Popup menu.
7	Point View. Displays the DC2S points in the Point View window.
8	Point Control Panel. Displays the DC2S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC2S Hide Label: Hides the label for the selected mimic object.

10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC2S: Blower

Refer to the following table for descriptions of the fields.

Area	Description
1	Blower Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is green. For State 1, it is red. For Transitioning to State 1 and Transitioning to State 0, the default color is grey.
2	Manual/Automatic Button. Displays the blower mode: A=Automatic and M=Manual.
3	Object Label.
4	The Flt button displays when the blower has failed.
5	The function block name, DC2S. Displays at the top of the Popup menu.

6	Point View. Displays the DC2S points in the Point View window.
7	Point Control Panel. Displays the DC2S points in the Point Control Panel.
8	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC2S Hide Label: Hides the label for the selected mimic object.
9	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC2S: Horizontal Pump

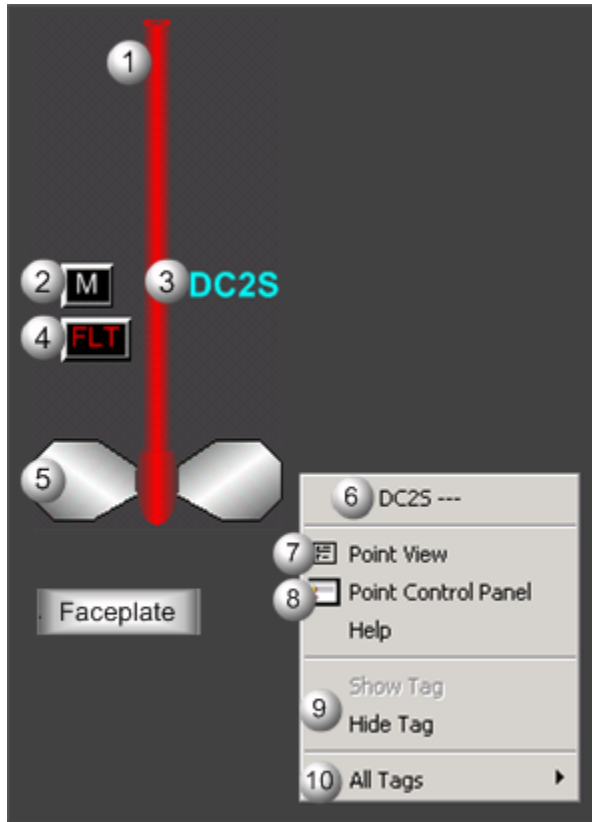Refer to the following table for descriptions of the fields.

Area	Description

1	Pump Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is green. For State 1, it is red. For Transitioning to State 1 and Transitioning to State 0, the default color is grey.
2	Manual/Automatic Button. Displays the pump mode: A=Automatic and M=Manual.
3	Object Label.
4	The Flt button displays when the pump has failed.
5	The function block name, DC2S. Displays at the top of the Popup menu.
6	Point View. Displays the DC2S points in the Point View window.
7	Point Control Panel. Displays the DC2S points in the Point Control Panel.
8	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC2S Hide Label: Hides the label for the selected mimic object.
9	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC2S: Motor 1

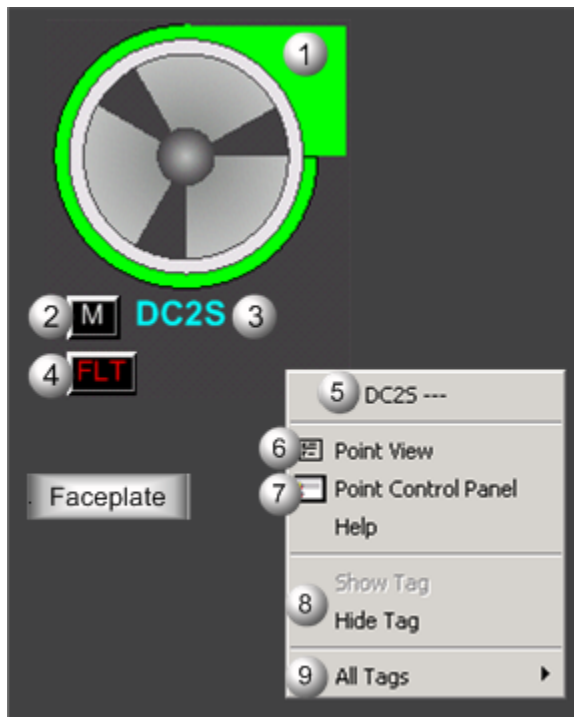Refer to the following table for descriptions of the fields.

Area	Description
1	Motor Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is green. For State 1, it is red. For Transitioning to State 1 and Transitioning to State 0, the default color is grey.
2	Manual/Automatic Button. Displays the motor mode: A=Automatic and M=Manual.
3	Object Label.
4	The Flt button displays when the motor has failed.
5	The function block name, DC2S. Displays at the top of the Popup menu.
6	Point View. Displays the DC2S points in the Point View window.
7	Point Control Panel. Displays the DC2S points in the Point Control Panel.
8	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC2S Hide Label: Hides the label for the selected mimic object.
9	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC2S: Motor 2

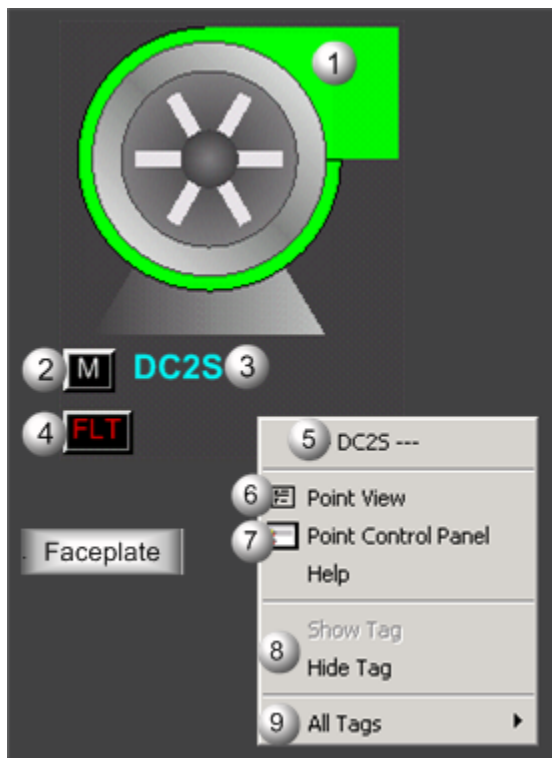Refer to the following table for descriptions of the fields.

Area	Description
1	Motor Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is green. For State 1, it is red. For Transitioning to State 1 and Transitioning to State 0, the default color is grey.
2	Manual/Automatic Button. Displays the motor mode: A=Automatic and M=Manual.
3	Object Label.
4	The Flt button displays when the motor has failed.
5	The function block name, DC2S. Displays at the top of the Popup menu.
6	Point View. Displays the DC2S points in the Point View window.
7	Point Control Panel. Displays the DC2S points in the Point Control Panel.
8	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC2S Hide Label: Hides the label for the selected mimic object.
9	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC2S: Motor 3

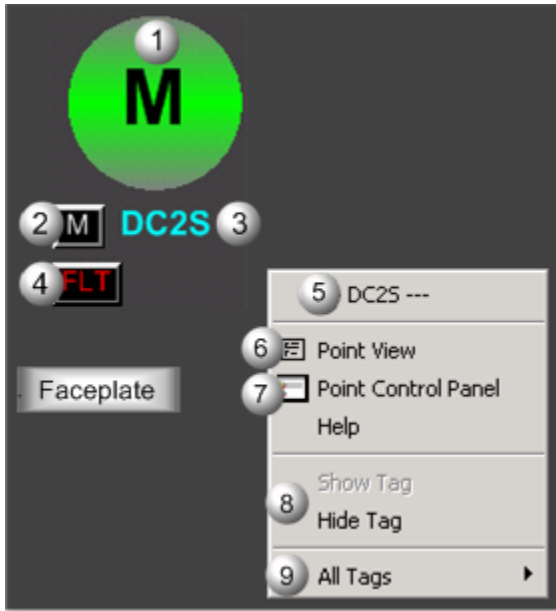Refer to the following table for descriptions of the fields.

Area	Description
1	Motor Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is green. For State 1, it is red. For Transitioning to State 1 and Transitioning to State 0, the default color is grey.
2	The impeller motor windings rotate based on State 1. When State 1 is Active, the motor windings rotate clockwise. When State 1 is Inactive, the motor windings do not rotate.
3	Manual/Automatic Button. Displays the motor mode: A=Automatic and M=Manual.
4	Object Label.
5	The Flt button displays when the motor has failed.
6	The function block name, DC2S. Displays at the top of the Popup menu.
7	Point View. Displays the DC2S points in the Point View window.
8	Point Control Panel. Displays the DC2S points in the Point Control Panel.

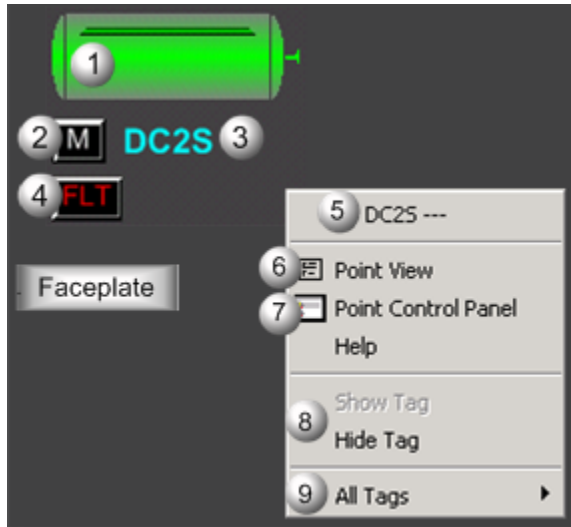|	
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC2S Hide Label: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC2S: Rotary Feeder

Refer to the following table for descriptions of the fields.
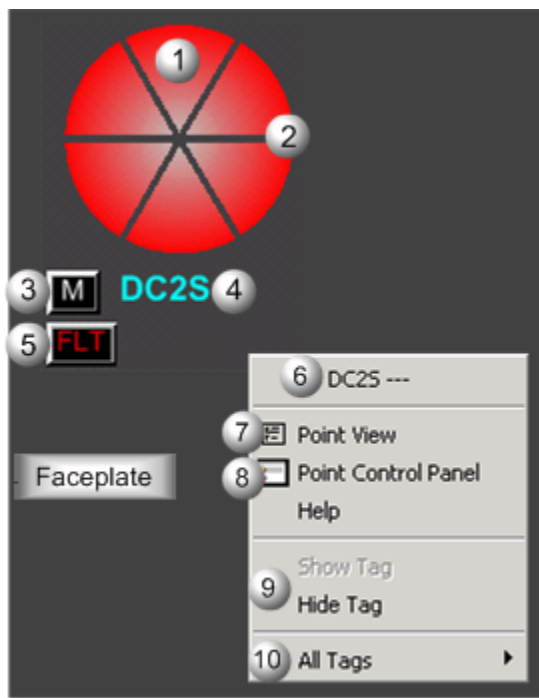
Area	Description
1	Rotary Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is green. For State 1, it is red. For State 2 and State 3, the default color is grey.
2	The feeder rotates based on State 1. When State 1 is Active, the motor windings rotate clockwise. When State 1 is Inactive, the motor windings do not rotate.
3	Manual/Automatic Button. Displays the rotary feeder mode: A=Automatic and M=Manual.

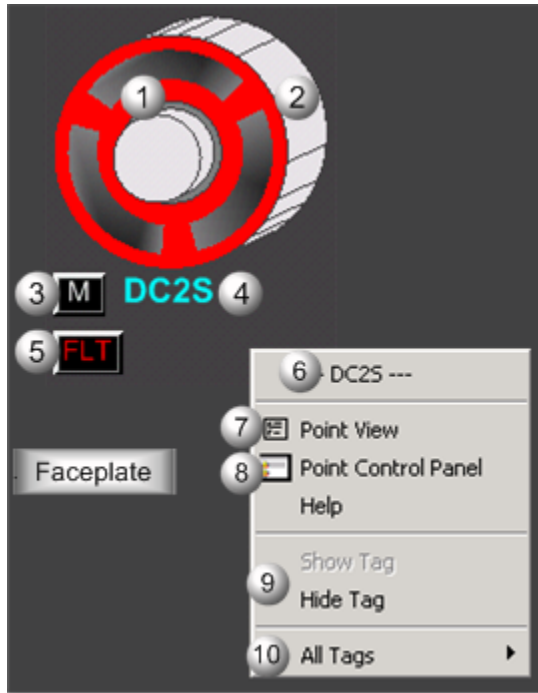| 4	Object Label.
5	The Flt button displays when the rotary feeder has failed.
6	The function block name, DC2S. Displays at the top of the Popup menu.
7	Point View. Displays the DC2S points in the Point View window.
8	Point Control Panel. Displays the DC2S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC2S Hide Label: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC2S: Valve 1

Refer to the following table for descriptions of the fields.

Area	Description
1	Actuator Identity. Letters that identify the actuator are as follows: Motorized = M, Solenoid = S.

2	Valve Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is green. For State 1, it is red. For Transitioning to State 1 and Transitioning to State 0, the default color is grey.
3	Manual/Automatic Button. Displays the valve mode: A=Automatic and M=Manual.
4	Object Label.
5	The Flt button displays when the valve has failed.
6	The function block name, DC2S. Displays at the top of the Popup menu.
7	Point View. Displays the DC2S points in the Point View window.
8	Point Control Panel. Displays the DC2S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC2S Hide Label: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC2S: Valve 2

Refer to the following table for descriptions of the fields.

Area	Description
1	Manual/Automatic Button. Displays the valve mode: A=Automatic and M=Manual.
2	Actuator Identity. Letters that identify the actuator are as follows: Motorized = M, Solenoid = S.
3	Valve Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is green. For State 1, it is red. For Transitioning to State 1 and Transitioning to State 0, the default color is grey.
4	The Flt button displays when the valve has failed.
5	Object Label.
6	The function block name, DC2S. Displays at the top of the Popup menu.
7	Point View. Displays the DC2S points in the Point View window.
8	Point Control Panel. Displays the DC2S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC2S Hide Label: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC2S: Valve 3

Refer to the following table for descriptions of the fields.

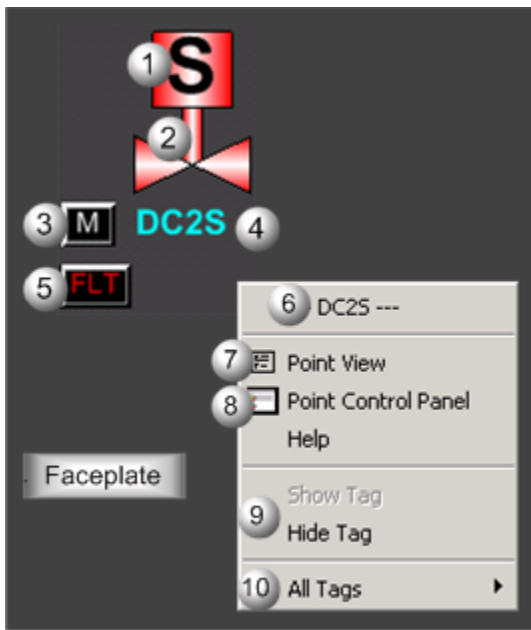| Area	Description
1	Actuator Identity. Letters that identify the actuator are as follows: Motorized = M, Solenoid = S.
2	Valve Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is green. For State 1, it is red. For Transitioning to State 1 and Transitioning to State 0, the default color is grey.
3	Manual/Automatic Button. Displays the valve mode: A=Automatic and M=Manual.
4	Object Label.
5	The Flt button displays when the valve has failed.
6	The function block name, DC2S. Displays at the top of the Popup menu.
7	Point View. Displays the DC2S points in the Point View window.
8	Point Control Panel. Displays the DC2S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC2S Hide Label: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC2S: Valve 4

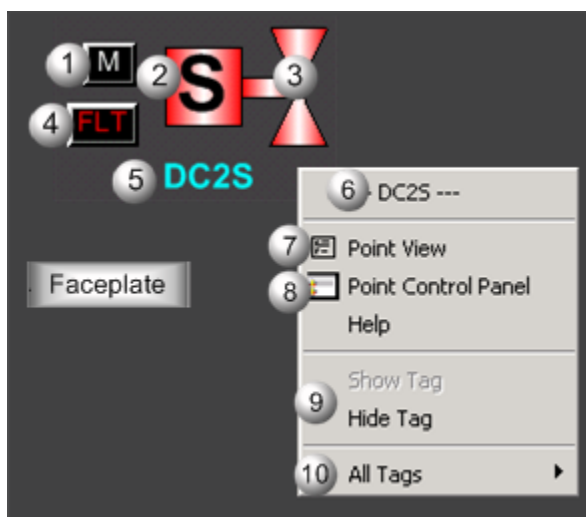Refer to the following table for descriptions of the fields.

Area	Description
1	Manual/Automatic Button. Displays the valve mode: A=Automatic and M=Manual.
2	Actuator Identity. Letters that identify the actuator are as follows: Motorized = M, Solenoid = S.
3	Valve Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is green. For State 1, it is red. For Transitioning to State 1 and Transitioning to State 0, the default color is grey.
4	Object Label.
5	The Flt button displays when the valve has failed.
6	The function block name, DC2S. Displays at the top of the Popup menu.
7	Point View. Displays the DC2S points in the Point View window.
8	Point Control Panel. Displays the DC2S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC2S Hide Label: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Dis-

plays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.
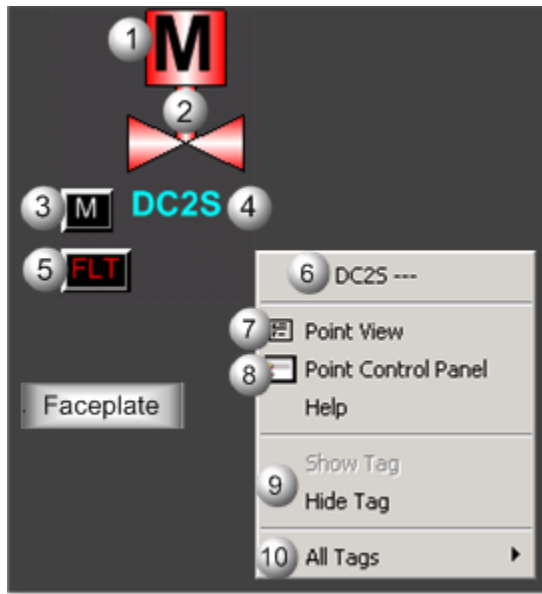
DC2S: Vertical Pump
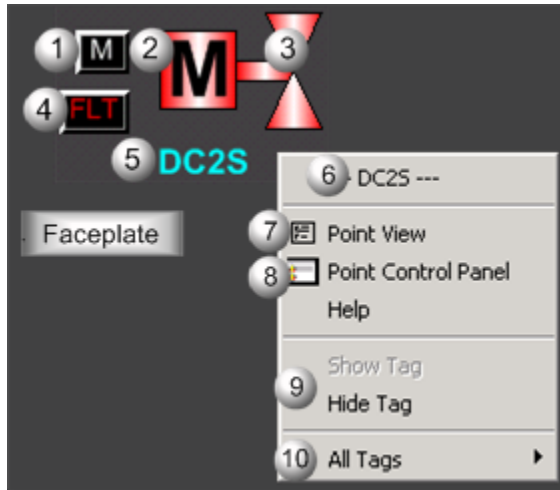
Refer to the following table for descriptions of the fields.

Area	Description
1	Pump Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is green. For State 1, it is red. For Transitioning to State 1 and Transitioning to State 0, the default color is grey.
2	Manual/Automatic Button. Displays the pump mode: A=Automatic and M=Manual.
3	Object Label.
4	The Flt button displays when the pump has failed.
5	The function block name, DC2S. Displays at the top of the Popup menu.
6	Point View. Displays the DC2S points in the Point View window.

7	Point Control Panel. Displays the DC2S points in the Point Control Panel.
8	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC2S Hide Label: Hides the label for the selected mimic object.
9	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

4. DC2S: Faceplate

4. DC2S: Faceplate

A DC2S function block controls and monitors a two state device, e.g., a pump, motor, or solenoid valve.

When the DC2S faceplate is in Manual mode an operator can control a two state device by issuing commands to the device to transition to one of the states:

- State 0
- State 1

Click a tab button to display and review features for each DC2S faceplate frame.

DC2S Faceplate: Main Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	The State 0 button label describes the state, e.g. Stop, Close, Off. Click the button, when it is enabled, to command the device to State 0. The State 0 button is enabled when its text is white, and disabled when its text is silver. The State 0 Button may be disabled if transitioning to state 0 is active, either by logic or by operator command. (Transition is timed; a fault occurs if the device takes more time to reach State 0 than the maximum allowable time specified.) The State 0 Button also may be disabled if State 0 is active, Automatic mode is active, Permissive for State 0 is off, or the user's credentials (user level or access to the object's resource) are inadequate to issue the State 0 command. To Determine why the State 0 Button is Disabled, check the button's indicator light to see if the device is in State 0, view the Details frame, or review required user credentials. If the Indication Light is black, the device is not in State 0. If it is blinking black/green, the device is transitioning to State 0. If it is green, the device is in State 0.

2	The State 1 button label describes the state, e.g. Start, Open, On. Click the button, when it is enabled, to command the device to State 1. The State 1 button is enabled when its text is white, and disabled when its text is silver. The State 1 Button may be disabled if transitioning to state 1 is active either by logic or by operator command. (Transition is timed; a fault occurs if the device takes more time to reach State 1 than the maximum allowable time specified.) The State 1 Button also may be disabled if State 1 is active, Automatic mode is active, an interlock is active, Permissive for State 1 is off, the device is locked out, the device is faulted and Failure Mode is configured to Force Device to State 0, or the user's credentials (user level or access to the object's resource) are inadequate to issue the State 1 command. To Determine why the State 1 Button is Disabled, check the button's indicator light to see if the device is in State 1, view the Details frame, or review required user credentials. If the Indication Light is black, the device is not in State 1. If it is blinking black/green, the device is transitioning to State 1. If it is green, the device is in State 1.
3	Automatic mode enables the device to be commanded from logic by means of the input ARQ (Automatic Request). Click Auto, when it is enabled, to place the device in automatic mode. The Auto button is enabled when its text is white, and disabled when its text is silver. The Auto Button may be disabled, when Automatic mode is active, the device is in Maintenance mode, the device is locked out, MCW (Mode Command Word) does not equal 0, the ARQ is not defined, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Auto command. To Determine why the Auto Button is disabled, check the button's indicator light to see if the device is in automatic mode, view the Details frame, and review required user credentials. If the Indication Light is black, the device is not in automatic mode. If it is green, the device is in automatic mode.
4	Manual mode enables the state transition commands to come from the faceplate or from Logic Developer. Click Manual, when it is enabled, to place the device in Manual mode. The Manual button is enabled when its text is white, and disabled when its text is silver. The Manual Button may be disabled when: Manual mode is active, the MCW (Mode Command Word) does not equal 0, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Manual command. To determine why the Manual Button is disabled, check the button's indicator light to see if the device is in Manual mode, view the Details frame, or review the user credentials. If the Indication Light is black, then the device is not in manual mode. If it is green, the device is in manual mode. Commands can be issued from Logic Developer through the Property Inspector when Logic Developer is online and in programmer mode.
5	Click Reset, when it is enabled, to reset a latched fault. The Reset button is enabled when its text is white, and disabled when its text is silver. The Reset Button may be disabled when a reset command is currently resetting an active fault, a latched fault does not exist, FFL is On, Maintenance mode is active, or the user's credentials (user level or access to the object's resource) are inade-

	quate to issue the Reset command. To determine why the Reset Button is disabled, check the button's indicator light to see if the device is faulted, view the Details frame, or review the user credentials. If the Indication Light is blinking black/yellow, the device is faulted. If the light is black, the device is not faulted.
6	Lockout prevents all state changes or other commands until the lockout is removed; the device is in State 0. Click Lockout, when it is enabled, to lockout the device. The Lockout button is enabled when the blue and white lock image button is outlined while the cursor hovers over it. It is disabled when the when the button is not outlined while the cursor hovers over it. The Lockout Button may be disabled if Lockout mode is active (the lock image is red and white), the device is in automatic mode, the State 0 is not active, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Auto command. To determine why the Lockout Button is disabled, check the button's indicator light to see if the device is in Lockout mode, view the Details frame, and review required user credentials. If the Indication Light is yellow, the device is locked out. If it is black, the device is not locked out.
7	Maintenance enables the device to be commanded to any state with all interlocks, permissives, and faults disabled. Click the Maintenance button, when it is enabled, to place the device in Maintenance mode. If Maintenance mode is not allowed the Maintenance button will be disabled. Allowing Maintenance Operation can only be set in the Logic Developer; it cannot be set in the Faceplate or anywhere in the SCADA system. In Maintenance Mode all interlocks and permissives are disabled. It is unsafe to leave this operational state active during normal operation. It should only be used to test the device. Maintenance Button may be disabled of the Maintenance mode is active, the device is in automatic mode, the State 0 is not active, Maintenance mode is not allowed, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Maintenance command. To determine why the Maintenance Button is disabled, check the button's indicator light to see if the device is in Maintenance mode, view the Details frame, and review required user credentials. If the Indication Light is black, the device is not in Maintenance mode. If it is yellow, the device is in Maintenance mode.
8	Click the Normal State button, when it is enabled, to command the device to its normal operational state. The Normal State Button may be disabled if the Normal State is active or the user's credentials (user level or access to the object's resource) are inadequate to issue the Normal State command. To determine why the Normal State Button is disabled, check the button's indicator light to see if the device is in Normal state, view the Details frame, or review required user credentials. If the Indication Light is black, the device is not in a Normal state. If it is green, the device is in a Normal state.
9	Exit Button. Click to close the faceplate.

DC2S Faceplate: Details Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	(Read only) Reports if maintenance can be activated in the faceplate. When Allowed, the Maintenance operational state is allowed to be activated in the faceplate. When Disallowed, the Maintenance operational stat is not allowed to be activated in the faceplate.
2	FB0/FB1 (Input). Device feedback states are as follows: When FB0 is On, State 0 is achieved. When FB0 is Off, State 0 is not achieved. When FB1 is On, State 1 is achieved. When FB1 is Off, State 1 is not achieved. If a parameter is not mapped to the input in logic, the faceplate will show the feedback calculated internally by the block.
3	PM0/PM1 (Input). Permissive states are as follows: When PM0 is On, State 1 to State 0 transition is permitted. When PM0 is Off, State 1 to State 0 transition is not permitted. When PM1 is On, State 0 to State 1 transition is permitted. When PM1 is Off, State 0 to State 1 transition is not permitted. If a fault occurs and Failure Mode is configured to force the device to State 0 upon a fault or an interlock is activated then PM0 is ignored and the device always goes to State 0, whether

	PM0 is On or Off. If a permissive (PM0 or PM1) is not defined with an argument it will be set internally to On. Failure Mode is configured in Logic Developer by means of the Property Inspector.
4	INL (Input). Interlock. When INL is On, a device is forced to State 0 (failsafe). When the Device is at State 1, the DC2S block commands the device to State 0. When the Device is at State 0, the DC2S block does not enable any transitions to State 1. When INL is Off, the Device operation and state are not forced to State 0.
5	FFL (Input). Field Fault. When On, the DC2S block is set to State 0 (failsafe). If Failure Mode is set to Force Device to State 0; FL is turned On. When Off, there are no active field faults in the device. If the FFL input is not defined with an argument, then FFL is set to Off internally in the DC2S block.
6	MCW (Input). Mode Command Word values are: 0, 1, 2. When the value is 0, the mode is selected from the faceplace. When the value is 1, the mode is locked into manual mode. When the value is 2, the mode is locked into automatic mode. In all cases, the device cannot enter automatic mode if one or more of the following occurs: there is no connection to the input ARQ, the device is locked out, or the device is under maintenance.
7	ARQ (Input). Automatic Request commands the state of the device to State 1 when the DC2S is in automatic mode. When On, the device is commanded to State 1. When Off, the device is commanded to State 0 (de-energized or failsafe state).
8	IFL (Input). Inhibit Fault. When On, Faults are inhibited in the DC2S block. This means that the device will not be commanded to State 0 upon a fault, and the Fault indication FL is Off. When Off, the fault output (FL) reports a fault when it occurs and the device is forced to State 0, if the Failure Mode is set to "Device Forced to State 0."
9	FL (Output). Device Fault. When Off, the device fault is False when there is not a fault. When On, the device fault is True when there is a fault. A fault can occur if IFL is Off and one of the following happens: - In a steady state, the corresponding input feedback is set to Off (False), e.g. State 1 is active and FB1 goes Off. - In a steady state, the other input feedbacks are set to On (True), e.g. State 1 is active and FB0 goes On. - In transition to a new state, the feedback signal for the new state is not set to On before the transition time elapses. - In transition to a new state, the feedback signals for the other states are not set to Off before the transition time elapses. - The Input Field Fault (FFL) is set to On. If a fault occurs, then the device output fault (FL) is set to On (True). When the Device Forced to State 0, the DC2S commands the device to its de-energized state or failsafe state. When the Device State not Forced, the DC2S remains in its current state. The device must be manually commanded to its de-energized state or failsafe state, State 0 before the fault can be reset.
10	A (Output Indicator). Automatic mode active.

11	OP. Sustained Output Command. When On, the device is commanded to State 1. When Off, the device is commanded to State 2.
12	OP0/OP1 (Output). Momentary Output Pulses. When On, the device is being commanded to transition OP0 to State 0 or OP1 to State 1. When Off, the device is not being commanded to transition OP0 to State 0 or OP1 to State 1. Momentary Pulses OP0 and OP1 are used for physical devices that need to be energized only during transition to a new state. They are also set to Off (False) on a fault condition to protect the physical device. Only one Momentary Output Pulse can be set to On at one time. After a command the pulse is On until either the device reaches the commanded state or the maximum allowable transition time expires.
13	Exit Button: Click to close the faceplate.

DC3S: Object Configuration and Use

DC3S: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is built *(on page 16)* from the EGD server.

1 *(on page 187)*	DC3S: Ethernet global data
2 *(on page 188)*	DC3S: Object properties.
3 *(on page 190)*	DC3S: Mimic objects.
4 *(on page 211)*	DC3S: Faceplate.

1. DC3S: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS DC3S block is as follows.

Global Data	Data Item Name	Data Type	Description
FP[0]	ST	DWORD	HMI Status Word
FP[1]	FC	DWORD	Faceplate Command

2. DC3S: Object Properties

Open an Object Properties dialog box for an object with an DC3S class ID.

The tabs in the Object dialog box are:

- DC3S General.
- DC3S HMI Properties.

DC3S General

The Object dialog box General tab provides data *(on page 32)* that precisely identifies the DC3S object.

> ✎ **Note:**
> The **Description** field is the only Read/Write field on the General tab.
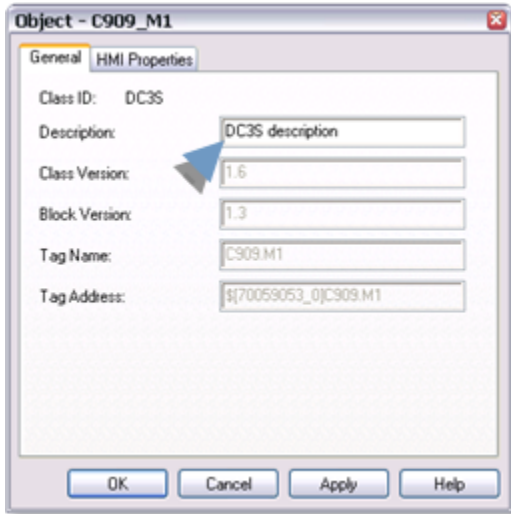
DC3S HMI Properties

Each PPS function block has HMI properties.

When an Object dialog box is opened for a selected object, the values for these properties:

- Can be defined in the Object dialog box.
- Will display on the faceplate when it is first opened and as long as they are not changed.
- (Some properties) May be changed by faceplate users who have a role *(on page 12)* with the required level.

The HMI properties required for the PPS Device Control 3 State block are as follows.
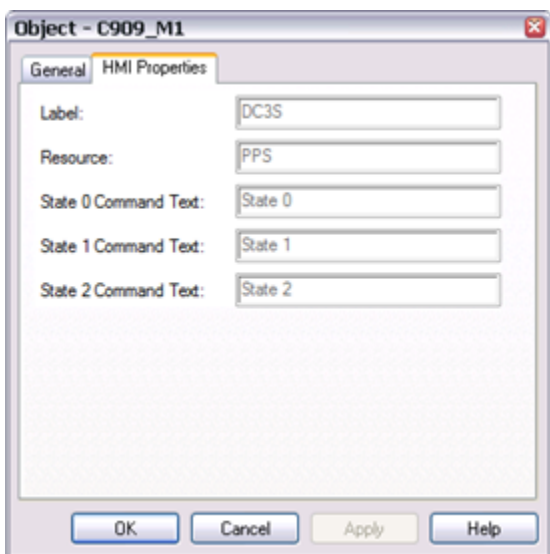
Field	Description	Data Type	Restrictions
Label	Object identification.	String	
Resource	CIMPLICITY resource.	String	16 Characters or less.
State0 Command Text	Text on Button used to Command the Device to State 0. Default: Stop.	String	12 Characters or less.
State1 Command Text	Text on Button used to Command the Device to State 1. Default: Slow.	String	12 Characters or less.
State 2 Command Text	Text on Button used to Command the Device to State 2. Default: Fast.	String	12 Characters or less

3. DC3S: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

	DC3S: Mimic object selection in CimEdit.
	DC3S: Mimic object runtime data.

3.1. DC3S: Mimic Object Selection in CimEdit

	Place an DC3S mimic object on a CimEdit screen.
	(Optional) Change the function block object or mimic object.

1. Place an DC3S mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.
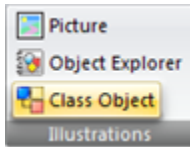
1. Select an DC3S object in the Select an Object browser.
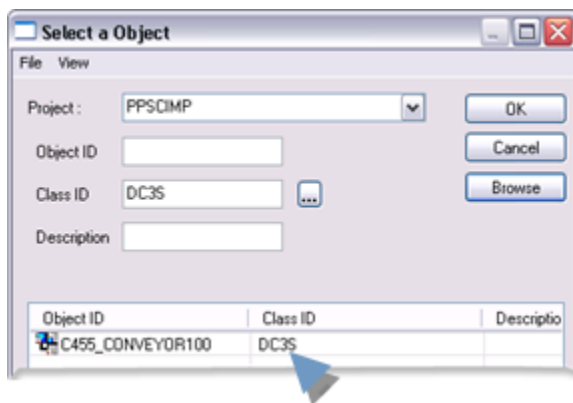
Result: The DC3S default mimic object displays on the CimEdit screen.

> ✏️ **Note:**
>
> When you close and re-open CimEdit, the tag name will not display; the function block name, e.g.
> DC3S, will display. Simply double-click the object to re-display the tag name.

1. (Optional) Change the function block Object or mimic object.

Mimic object only

1. Right-click the DC3S mimic object.
2. Select another object listed on the Popup menu.
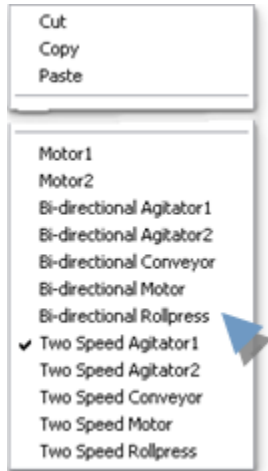
Mimic object and/or function block object.

3. Right-click the DC3S mimic object.

4. Select Properties on the Popup menu.

5. Select the Class Object tab.

6. Do one or both of the following.
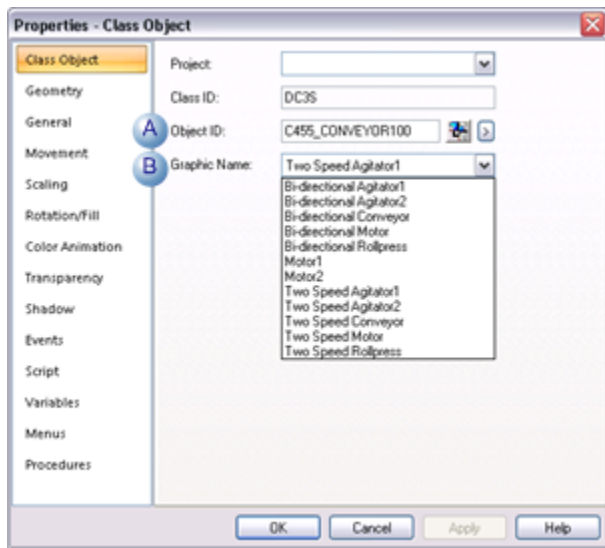
	Field	Select from a list of available DC3S:
1	Object ID	Function block objects.
2	Graphic Name	Mimic objects.

7. Click OK.

The selected mimic object displays on the CimEdit screen when you use either method.

8. Configure the mimic object size and other objects, as required.

The mimic object is ready for runtime.

3.2. DC3S: Mimic Object Runtime Data

Mimic objects that are available for the PPS DC3S block are as follows.

> **Note:**
>
> A runtime user can open the DC3S faceplate through any object. However, the exact data that the mimic object displays depends on which object is being used.
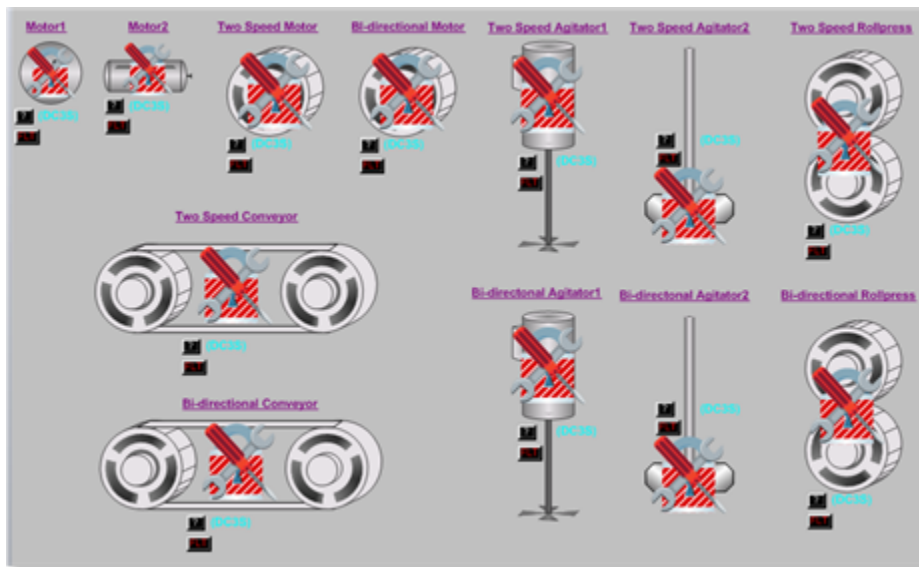
1. DC3S: Two-Speed Agitator 2 *(on page 199)*
2. DC3S: Two-Speed Agitator1 *(on page 197)*
3. DC3S: Two-Speed Conveyor *(on page 202)*
4. DC3S: Two-Speed Motor *(on page 207)*
5. DC3S: Two-Speed Rollerpress *(on page 210)*
6. DC3S: Motor 2 *(on page 204)*
7. DC3S: Motor 1 *(on page 203)*

Bidirectional Agitator 1
Bidirectional Agitator 2
Two-Speed Agitator 1
Two-Speed Agitator 2
Bidirectional Conveyor
Two-Speed Conveyor
Motor 1
Motor 2
Bidirectional Motor
Two-Speed Motor
Bidirectional Rollerpress
Two-Speed Rollerpress

DC3S: Bidirectional Agitator 1

Refer to the following table for descriptions of the fields.

Area	Description
1	Agitator Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is red. For State 1, it is green. For Transitioning to State 0/ State 1/State 2, the default color is grey.
2	Manual/Automatic Button. Displays the agitator mode: A=Automatic and M=Manual.
3	Object Label.
4	The Flt button displays when the agitator has failed.
5	Bi-Directional Agitator Blades. The agitator blades rotate based on State 1 and State 2. When the active state is State 0, the rotation is None - stopped. When the active state is State 1, the rotation is Clockwise. When the active state is State 0, the rotation is Counter clockwise.
6	The function block name, DC3S. Displays at the top of the Popup menu.
7	Point View. Displays the DC3S points in the Point View window.

8	Point Control Panel. Displays the DC3S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC3S Hide Label: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC3S: Bidirectional Agitator 2

Refer to the following table for descriptions of the fields.

Area	Description

1	Agitator Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is red. For State 1, it is green. For State 2, it is blue. For Transitioning to State 2/ State 1/State 0, the default color is grey.
2	Manual/Automatic Button. Displays the agitator mode: A=Automatic and M=Manual.
3	Object Label.
4	The Flt button displays when the agitator has failed.
5	Bi-Directional Agitator Blades. The agitator blades rotate based on State 1 and State 2. When the active state is State 0, the rotation is None - stopped. When the active state is State 1, the rotation is Clockwise. When the active state is State 0, the rotation is Counter clockwise.
6	The function block name, DC3S. Displays at the top of the Popup menu.
7	Point View. Displays the DC3S points in the Point View window.
8	Point Control Panel. Displays the DC3S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC3S Hide Label: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC3S: Two-Speed Agitator1

Refer to the following table for descriptions of the fields.

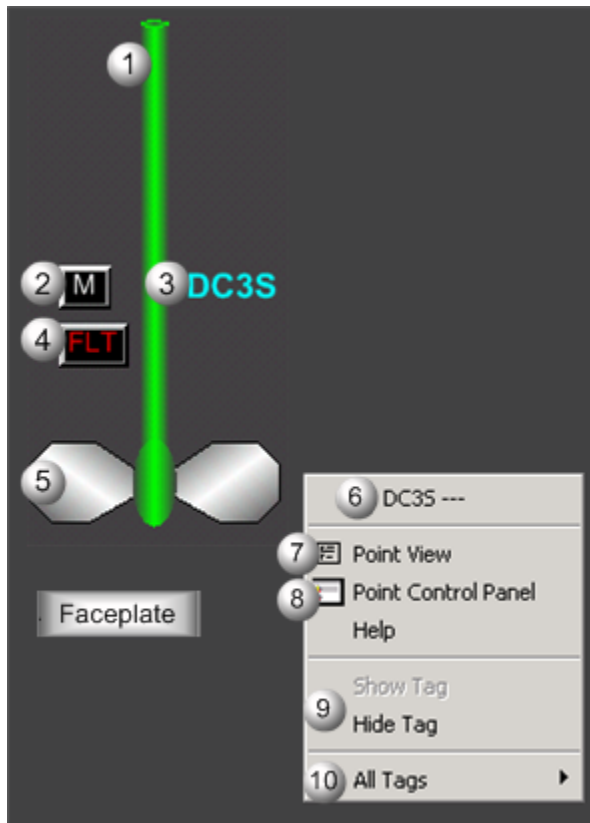| Area	Description
1	Agitator Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is red. For State 1, it is green. For State 2, it is blue. For Transitioning to State 2/ State 1/State 0, the default color is grey.
2	Manual/Automatic Button. Displays the agitator mode: A=Automatic and M=Manual.
3	Object Label.
4	The Flt button displays when the agitator has failed.
5	Two-Speed Agitator Blades. The agitator blades rotate based on State 1 and State 2. When the active state is State 0, the speed is None - stopped. When the active state is State 1, the speed is Slow Clockwise. When the active state is State 0, the speed is Fast Clockwise.
6	The function block name, DC3S. Displays at the top of the Popup menu.
7	Point View. Displays the DC3S points in the Point View window.

8	Point Control Panel. Displays the DC3S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC3S Hide Label: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC3S: Two-Speed Agitator 2

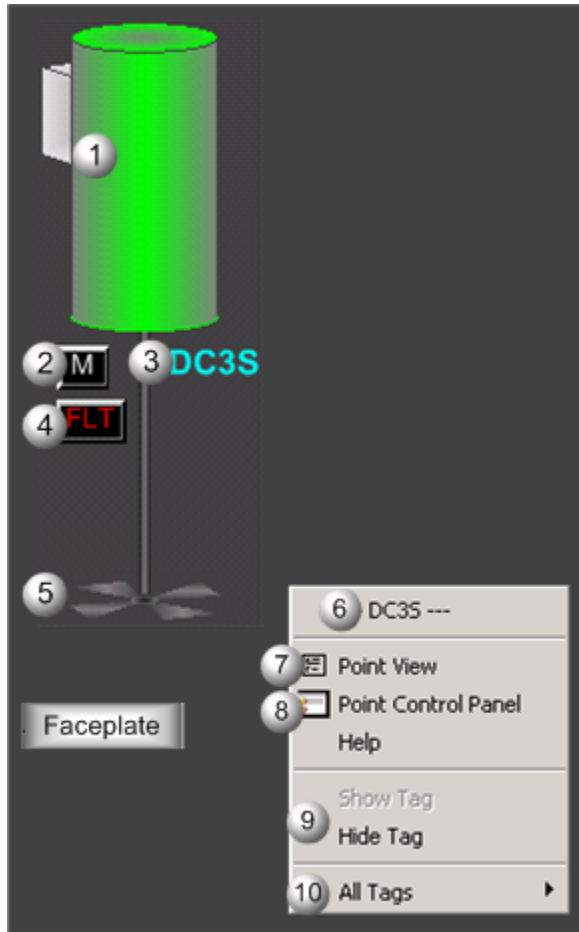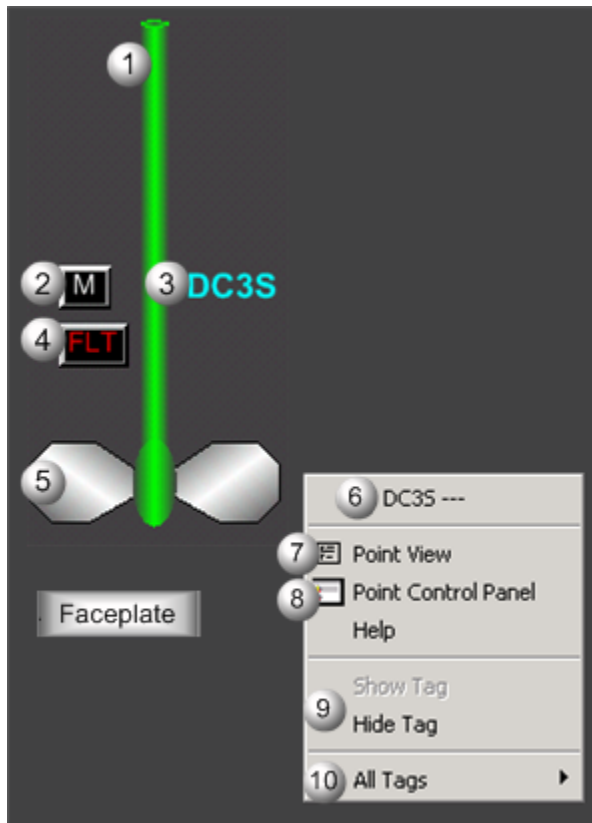Refer to the following table for descriptions of the fields.

Area	Description

1	Agitator Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is red. For State 1, it is green. For State 2, it is blue. For Transitioning to State 2/ State 1/State 0, the default color is grey.
2	Manual/Automatic Button. Displays the agitator mode: A=Automatic and M=Manual.
3	Object Label.
4	The Flt button displays when the agitator has failed.
5	Two-Speed Agitator Blades. The agitator blades rotate based on State 1 and State 2. When the active state is State 0, the speed is None - stopped. When the active state is State 1, the speed is Slow Clockwise. When the active state is State 0, the speed is Fast Clockwise.
6	The function block name, DC3S. Displays at the top of the Popup menu.
7	Point View. Displays the DC3S points in the Point View window.
8	Point Control Panel. Displays the DC3S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC3S Hide Label: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC3S: Bidirectional Conveyor

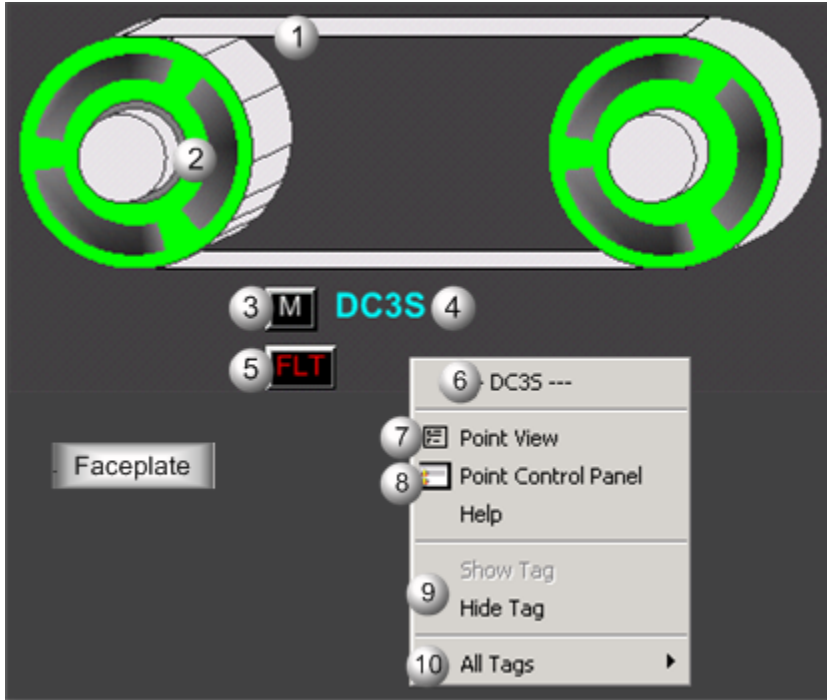Refer to the following table for descriptions of the fields.

Area	Description
1	Bi-directional Conveyor Motor. The conveyor's motor rotates in State 1 and State 2. When the active state is State 0, the rotation is None - stopped. When the active state is State 1, the rotation is Clockwise. When the active state is State 2, the rotation is Counter Clockwise.
2	Conveyor Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is red. For State 1, it is green. For State 2, it is blue. For Transitioning to State 2/ State 1/State 0, the default color is grey.
3	Manual/Automatic Button. Displays the conveyor mode: A=Automatic and M=Manual.
4	Object Label.
5	The Flt button displays when the conveyor has failed.
6	The function block name, DC3S. Displays at the top of the Popup menu.
7	Point View. Displays the DC3S points in the Point View window.
8	Point Control Panel. Displays the DC3S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC3S Hide Label: Hides the label for the selected mimic object.

10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC3S: Two-Speed Conveyor

Refer to the following table for descriptions of the fields.

Area	Description
1	Two-Speed Conveyor Motor. The conveyor's motor rotates in State 1 and State 2. When the active state is State 0, the rotation is None - stopped. When the active state is State 1, the rotation is Slow Clockwise. When the active state is State 2, the rotation is Fast Clockwise.
2	Conveyor Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is red. For State 1, it is green. For State 2, it is blue. For Transitioning to State 2/ State 1/State 0, the default color is grey.
3	Manual/Automatic Button. Displays the conveyor mode: A=Automatic and M=Manual.
4	Object Label.

5	The Flt button displays when the conveyor has failed.
6	The function block name, DC3S. Displays at the top of the Popup menu.
7	Point View. Displays the DC3S points in the Point View window.
8	Point Control Panel. Displays the DC3S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC3S Hide Label: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC3S: Motor 1

Refer to the following table for descriptions of the fields.

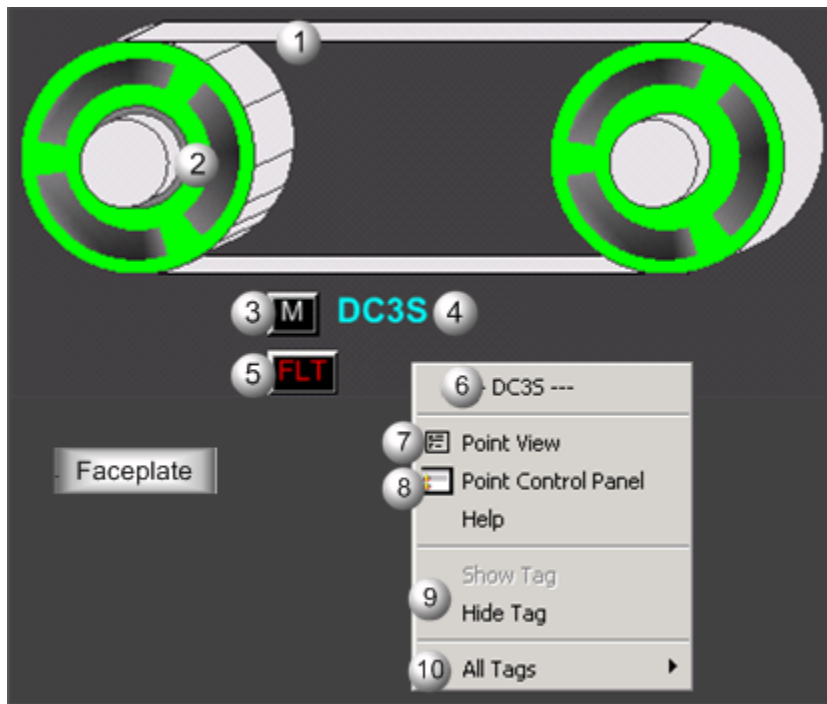| Area	Description
1	Motor Animation. The animation color is based on which one of the mutually exclusive states is active for bidirectional or two-speed action. The default color when active for State 0 is red. For

	State 1, it is green. For State 2, it is blue. For Transitioning to State 2/State 1/State 0, the default color is grey.
2	Manual/Automatic Button. Displays the motor mode: A=Automatic and M=Manual.
3	Object Label.
4	The Flt button displays when the motor has failed.
5	The function block name, DC3S. Displays at the top of the Popup menu.
6	Point View. Displays the D3CS points in the Point View window.
7	Point Control Panel. Displays the DC3S points in the Point Control Panel.
8	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC3S Hide Label: Hides the label for the selected mimic object.
9	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC3S: Motor 2
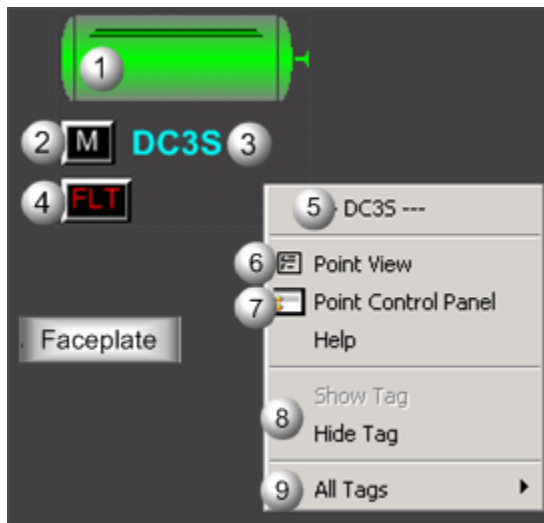
Refer to the following table for descriptions of the fields.

Area	Description

1	Motor Animation. The animation color is based on which one of the mutually exclusive states is active for bidirectional or two-speed action. The default color when active for State 0 is red. For State 1, it is green. For State 2, it is blue. For Transitioning to State 2/State 1/State 0, the default color is grey.
2	Manual/Automatic Button. Displays the motor mode: A=Automatic and M=Manual.
3	Object Label.
4	The Flt button displays when the motor has failed.
5	The function block name, DC3S. Displays at the top of the Popup menu.
6	Point View. Displays the D3CS points in the Point View window.
7	Point Control Panel. Displays the DC3S points in the Point Control Panel.
8	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC3S Hide Label: Hides the label for the selected mimic object.
9	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC3S: Bidirectional Motor

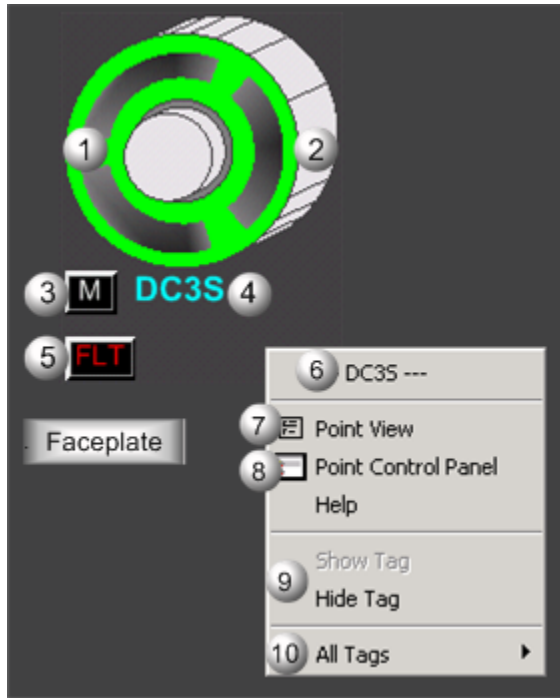Refer to the following table for descriptions of the fields.

Area	Description
1	Motor Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is red. For State 1, it is green. For State 2, it is blue. For Transitioning to State 2/ State 1/State 0, the default color is grey.
2	Bi-directional Motor. The motor rotates in State 1 and State 2. When the active state is State 0, the rotation is None - stopped. When the active state is State 1, the rotation is Clockwise. When the active state is State 2, the rotation is Counter Clockwise.
3	Manual/Automatic Button. Displays the motor mode: A=Automatic and M=Manual.
4	Object Label.
5	The Flt button displays when the conveyor has failed.
6	The function block name, DC3S. Displays at the top of the Popup menu.
7	Point View. Displays the DC3S points in the Point View window.
8	Point Control Panel. Displays the DC3S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC3S Hide Label: Hides the label for the selected mimic object.

10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC3S: Two-Speed Motor

Refer to the following table for descriptions of the fields.

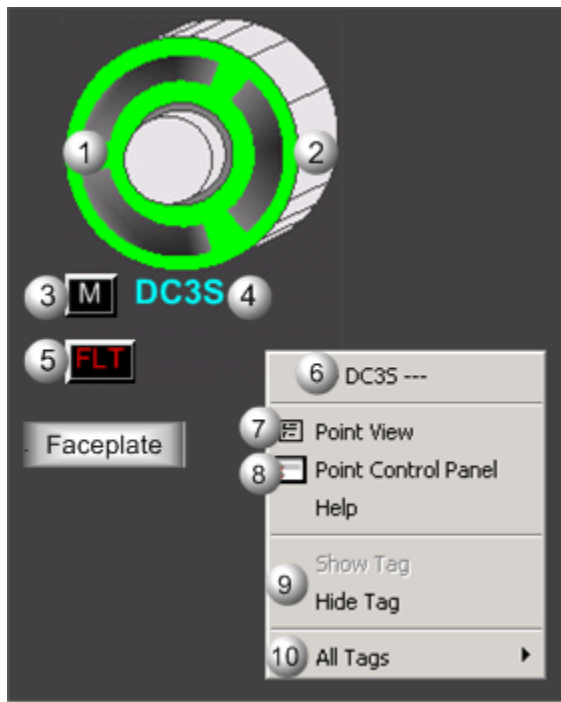| Area	Description
1	Motor Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is red. For State 1, it is green. For State 2, it is blue. For Transitioning to State 2/ State 1/State 0, the default color is grey.
2	Two-speed Motor. The motor rotates in State 1 and State 2. When the active state is State 0, the rotation is None - stopped. When the active state is State 1, the rotation is Slow Clockwise. When the active state is State 2, the rotation is Fast Clockwise.
3	Manual/Automatic Button. Displays the motor mode: A=Automatic and M=Manual.
4	Object Label.

5	The Flt button displays when the motor has failed.
6	The function block name, DC3S. Displays at the top of the Popup menu.
7	Point View. Displays the DC3S points in the Point View window.
8	Point Control Panel. Displays the DC3S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC3S Hide Label: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC3S: Bidirectional Rollerpress

Refer to the following table for descriptions of the fields.

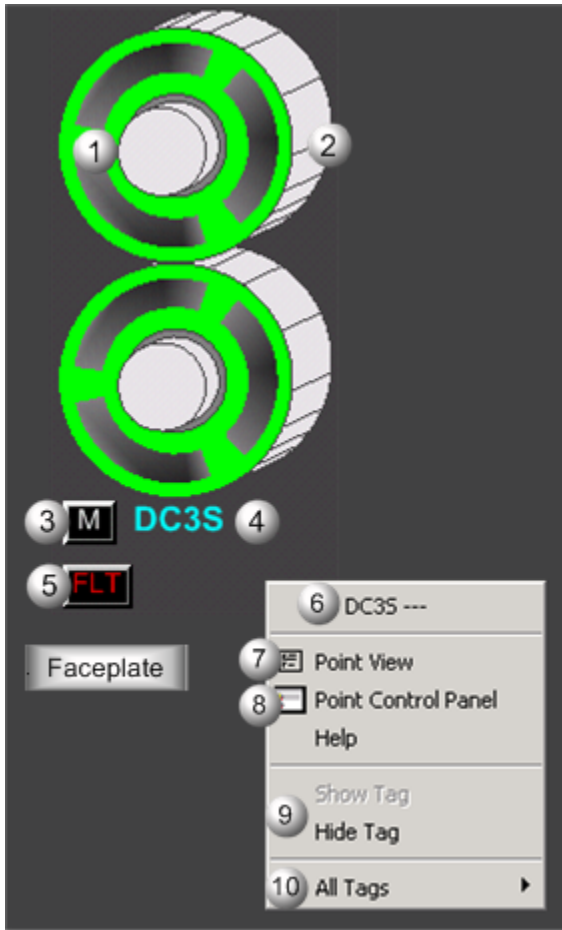| Area	Description
1	Rollerpress Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is red. For State 1, it is green. For State 2, it is blue. For Transitioning to State 2/ State 1/State 0, the default color is grey.
2	Bi-directional Rollerpress Motor. The rollerpress motor rotates in State 1 and State 2. When the active state is State 0, the rotation is None - stopped. When the active state is State 1, the rotation is Clockwise. When the active state is State 2, the rotation is Counter Clockwise.
3	Manual/Automatic Button. Displays the rollerpress mode: A=Automatic and M=Manual.
4	Object Label.
5	The Flt button displays when the rollerpress has failed.
6	The function block name, DC3S. Displays at the top of the Popup menu.
7	Point View. Displays the DC3S points in the Point View window.

8	Point Control Panel. Displays the DC3S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC3S Hide Label: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DC3S: Two-Speed Rollerpress

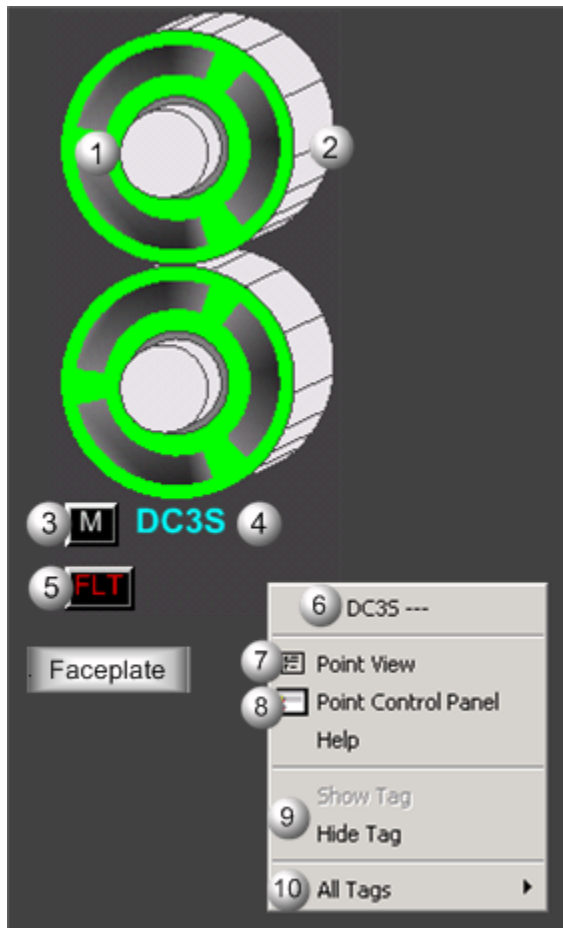Refer to the following table for descriptions of the fields.

Area	Description

1	Rollerpress Animation. The animation color is based on which one of the mutually exclusive states is active. The default color when active for State 0 is red. For State 1, it is green. For State 2, it is blue. For Transitioning to State 2/ State 1/State 0, the default color is grey.
2	Two-speed Rollerpress Motor. The rollerpress motor rotates in State 1 and State 2. When the active state is State 0, the rotation is None - stopped. When the active state is State 1, the rotation is Slow Clockwise. When the active state is State 2, the rotation is Fast Clockwise.
3	Manual/Automatic Button. Displays the rollerpress mode: A=Automatic and M=Manual.
4	Object Label.
5	The Flt button displays when the rollerpress has failed.
6	The function block name, DC3S. Displays at the top of the Popup menu.
7	Point View. Displays the DC3S points in the Point View window.
8	Point Control Panel. Displays the DC3S points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DC3S Hide Label: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

4. DC3S Faceplate: Main Frame

4. DC3S: Faceplate

A DC3S (Device Control-Three State) function block controls and monitors a three state device, e.g., a bidirectional motor, a two-speed motor, a bidirectional agitator, a conveyor, a roll press, or a similar device.

When the DC3S faceplate is in Manual mode an operator can control a three state device by commanding it to one of the following three states.

- State 0
- State 1
- State 2

Click a tab button to display and review features for each DC3S faceplate frame.

DC3S Faceplate: Main Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	The State 0 button label describes the state, e.g. Stop, Close, Off. Click the button, when it is enabled, to command the device to State 0. The State 0 button is enabled when its text is white, and disabled when its text is silver. The State 0 Button may be disabled if transitioning to state 0 is active, either by logic or by operator command. (Transition is timed; a fault occurs if the device takes more time to reach State 0 than the maximum allowable time specified.) The State 0 Button also may be disabled if State 0 is active, Automatic mode is active, Permissive for State 0 is off, or the user's credentials (user level or access to the object's resource) are inadequate to issue the State 0 command. To Determine why the State 0 Button is Disabled, check the button's indicator light to see if the device is in State 0, view the Details frame, or review required user credentials. If the Indication Light is black, the device is not in State 0. If it is blinking black/green, the device is transitioning to State 0. If it is green, the device is in State 0.
2	The State 1 button label describes the state, e.g. Slow, Backwards, and Clockwise. Click the button, when it is enabled, to command the device to State 1. The State 1 button is enabled when its text is white, and disabled when its text is silver. The State 1 Button may be disabled if transitioning to state 1 is active either by logic or by operator command. (Transition is timed; a fault occurs if the device takes more time to reach State 1 than the maximum allowable time specified.) The State 1 Button also may be disabled if State 1 is active, Automatic mode is active, an interlock is

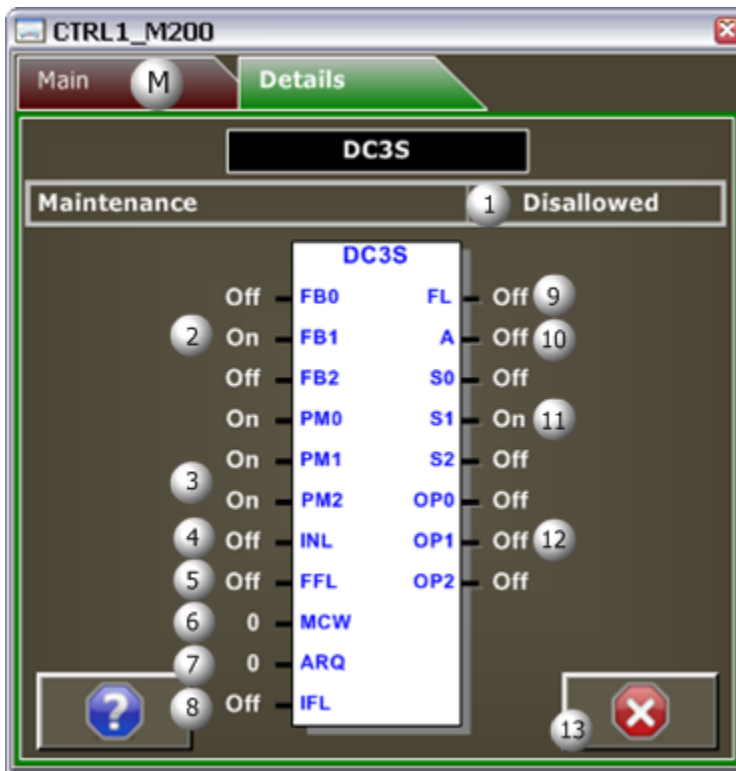|	
	active, Permissive for State 1 is off, or the user's credentials (user level or access to the object's resource) are inadequate to issue the State 1 command. To Determine why the State 1 Button is Disabled, check the button's indicator light to see if the device is in State 1, view the Details frame, or review required user credentials. If the Indication Light is black, the device is not in State 1. If it is blinking black/green, the device is transitioning to State 1. If it is green, the device is in State 1.
3	The State 2 button label describes the state, e.g. Fast, Forward, and Counterclockwise. Click the button, when it is enabled, to command the device to State 2. The State 2 button is enabled when its text is white. It is disabled when its text is silver. The State 2 Button may be disabled, if transitioning to State 2 is active, either by logic or by operator command. Transition is timed; a fault occurs if the device takes more time to reach State 2 than the maximum allowable time specified. The State 2 Button also may be disabled, if State 2 is active, Automatic mode is active, an interlock is active, Permissive for State 2 is off, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Reset command. To determine why the State 2 Button is disabled, check the button's indicator light to see if the device is in State 2, view the Details frame, or review required user credentials. If the Indication Light is black, the device is not in State 2. If the Indication Light is Blinking black/green, the device is transitioning to State 2. If it is green, the device is in State 2.
4	Automatic mode enables the device to be commanded from logic by means of the input ARQ (Automatic Request). Click Auto, when it is enabled, to place the device in automatic mode. The Auto button is enabled when its text is white, and disabled when its text is silver. The Auto Button may be disabled, when Automatic mode is active, the device is in Maintenance mode, the device is locked out, the device is faulted, MCW (Mode Command Word) does not equal 0, the ARQ is not defined, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Auto command. To Determine why the Auto Button is disabled, check the button's indicator light to see if the device is in automatic mode, view the Details frame, and review required user credentials. If the Indication Light is black, the device is not in automatic mode. If it is green, the device is in automatic mode.
5	Manual mode enables the state transition commands to come from the faceplate or from Logic Developer. Click Manual, when it is enabled, to place the device in Manual mode. The Manual button is enabled when its text is white, and disabled when its text is silver. The Manual Button may be disabled when: Manual mode is active, the MCW (Mode Command Word) does not equal 0, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Manual command. To determine why the Manual Button is disabled, check the button's indicator light to see if the device is in Manual mode, view the Details frame, or review the user credentials. If the Indication Light is black, then the device is not in manual mode. If it is green, the device is

	in manual mode. Commands can be issued from Logic Developer through the Property Inspector when Logic Developer is online and in programmer mode.
6	Click Reset, when it is enabled, to reset a latched fault. The Reset button is enabled when its text is white, and disabled when its text is silver. The Reset Button may be disabled when a reset command is currently resetting an active fault, a latched fault is not active, Maintenance mode is active, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Reset command. To determine why the Reset Button is disabled, check the button's indicator light to see if the device is faulted, view the Details frame, or review the user credentials. If the Indication Light is blinking black/yellow, the device is faulted. If the light is black, the device is not faulted.
7	Lockout prevents all state changes or other commands until the lockout is removed; the device is in State 0. Click Lockout, when it is enabled, to lockout the device. The Lockout button is enabled when the blue and white lock image button is outlined while the cursor hovers over it. It is disabled when the when the button is not outlined while the cursor hovers over it. The Lockout Button may be disabled if Lockout mode is active (the lock image is red and white), the device is in automatic mode, the State 0 is not active, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Auto command. To determine why the Lockout Button is disabled, check the button's indicator light to see if the device is in Lockout mode, view the Details frame, and review required user credentials. If the Indication Light is yellow, the device is locked out. If it is black, the device is not locked out.
8	Maintenance enables the device to be commanded to any state. Click the Maintenance button, when it is enabled, to place the device in Maintenance mode. If Maintenance mode is not allowed the Maintenance button will be disabled. Allowing Maintenance Operation can only be set in the Logic Developer; it cannot be set in the Faceplate or anywhere in the SCADA system. In Maintenance Mode all interlocks and permissives are disabled. It is unsafe to leave this operational state active during normal operation. It should only be used to test the device. Maintenance Button may be disabled of the Maintenance mode is active, the device is in automatic mode, the State 0 is not active, Maintenance mode is not allowed, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Maintenance command. To determine why the Maintenance Button is disabled, check the button's indicator light to see if the device is in Maintenance mode, view the Details frame, and review required user credentials. If the Indication Light is black, the device is not in Maintenance mode. If it is yellow, the device is in Maintenance mode.
9	Click the Normal State button, when it is enabled, to command the device to its normal operational state. The Normal State Button may be disabled if the Normal State is active or the user's credentials (user level or access to the object's resource) are inadequate to issue the Normal

	State command. To determine why the Normal State Button is disabled, check the button's indicator light to see if the device is in Normal state, view the Details frame, or review required user credentials. If the Indication Light is black, the device is not in a Normal state. If it is green, the device is in a Normal state.
10	Exit Button. Click to close the faceplate.

DC3S Faceplate: Details Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	(Read only) Reports if maintenance can be activated in the faceplate. When Allowed, the Maintenance operational state is allowed to be activated in the faceplate. When Disallowed, the Maintenance operational stat is not allowed to be activated in the faceplate.
2	FB0/FB1 (Input). Device feedback states are as follows: When FB0 is On, State 0 is achieved. When FB0 is Off, State 0 is not achieved. When FB1 is On, State 1 is achieved. When FB1 is Off, State 1 is not achieved. If a parameter is not mapped to the input in logic, the faceplate will show the feedback calculated internally by the block.

3	PM0/PM1/PM2 (Input). Permissive states are as follows: When PM0 is On, transition to State 0 is permitted. When PM0 is Off, transition to State 0 is not permitted. When PM1 is On, transition to State 1 is permitted. When PM1 is Off, transition to State 1 is not permitted. When PM2 is On, transition to State 2 is permitted. When PM2 is Off, transition to State 2 is not permitted. If a fault occurs and Failure Mode is configured to force the device to State 0 upon a fault or an interlock is activated then PM0 is ignored and the device always goes to State 0, whether PM0 is On or Off. If a permissive (PM0, PM1, or PM2) is not defined with an argument it will be set internally to On. Failure Mode is configured in Logic Developer by means of the Property Inspector.
4	INL (Input). Interlock. When INL is On, a device is forced to State 0 (failsafe). When the Device is at State 1 or State 2, the DC3S block commands the device to State 0. When the Device is at State 0, the DC3S block cannot be commanded to another state until INL goes Off. When INL is Off, the Device operation and state are not forced to State 0.
5	FFL (Input). Field Fault. When On, the DC3S block is set to State 0 (failsafe) and FL is turned On. When FFL is Off, there are no active field faults in the device. If the device does not have a field fault signal wired back to the control system, then FFL is set to off internally in the DC3S block.
6	MCW (Input). Mode Command Word values are: 0, 1, 2. When the value is 0, the mode is selected from the faceplace. When the value is 1, the mode is locked into manual mode. When the value is 2, the mode is locked into automatic mode. In all cases, the device cannot enter automatic mode if one or more of the following occurs: there is no connection to the input ARQ, the device is locked out, or the device is under maintenance.
7	ARQ (Input). Automatic Request commands the state of the device to State 0, State 1, or State 2 when the DC3S is in automatic mode. When the value is 1, the device is commanded to State 0 (de-energized or failsafe state). When the value is 2, the device is commanded to State 1. When the value is 3, the device is commanded to State 2.
8	IFL (Input). Inhibit Fault. When On, Faults are inhibited in the DC3S block. This means that the device will not be commanded to State 0 upon a fault, and the Fault indication FL is Off. When Off, the fault output (FL) reports a fault when it occurs and the device is forced to State 0, if the Failure Mode is set to "Device Forced to State 0."
9	FL (Output). Device Fault. When Off, the device fault is False when there is not a fault. When On, the device fault is True when there is a fault. A fault can occur if IFL is Off and one of the following happens: - In a steady state, the corresponding input feedback is set to Off (False), e.g. State 1 is active and FB1 goes Off. - In a steady state, the other input feedbacks are set to On (True), e.g. State 1 is active and FB0 goes On. - In transition to a new state, the feedback signal for the new state is not set to On before the transition time elapses. - In transition to a new state, the feedback signals for the other states are not set to Off before the transition time elapses. - The Input

	Field Fault (FFL) is set to On. - The Input Inhibit Fault (IFL) is set to Off. If a fault occurs, then the device output fault (FL) is set to On (True). When the Device Forced to State 0, the DC3S commands the device to its de-energized state or failsafe state. When the Device State not Forced, the DC3S remains in its current state. The device must be manually commanded to its de-energized state or failsafe state, State 0 before the fault can be reset.
10	A (Output Indicator). Automatic mode active. When On, the device is in automatic mode. When Off, the device is in manual mode.
11	S0/S1/S2 (Output). Sustained Output Commands. When S0 is On, the device is commanded to State 0. When S0 is Off, the device is not commanded to State 0. When S1 is On, the device is commanded to State 1. When S1 is Off, the device is not commanded to State 1. When S2 is On, the device is commanded to State 2. When S2 is Off, the device is not commanded to State 2.
12	OP0/OP1/OP2 (Output). Momentary Output Pulses. When OP0/OP1/OP2 is On, the device is being commanded to transition. When OP0/OP1/OP2 is off, the device is not being commanded to transition. OP outputs are used for physical devices that need to be energized only during transition to a new state. Set to Off (False) on a fault condition to protect the physical device. Only one Momentary Output Pulse state output can be set to On at one time. After a command the pulse is On until either the device reaches the commanded state or the maximum allowable transition time expires.
13	Exit Button: Click to close the faceplate.

DI: Object Configuration and Use

DI: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is built *(on page 16)* from the EGD server.

1 *(on page 219)*	DI: Ethernet global data
2 *(on page 219)*	DI: Object properties.

	DI: Mimic objects.
	DI: Faceplate.

1. DI: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS DI block is as follows.

Global Data	Data Type	Description	
PI	BOOL[16]	Status	
FC	UINT	Faceplate Command	
		FC = 1	Activate Forcing
		FC = 2	De-activate Forcing
FV	UINT	Forced Value	

2. DI: Object Properties

Open an Object Properties dialog box for an object with an DI class ID.

The tabs in the Object dialog box are:
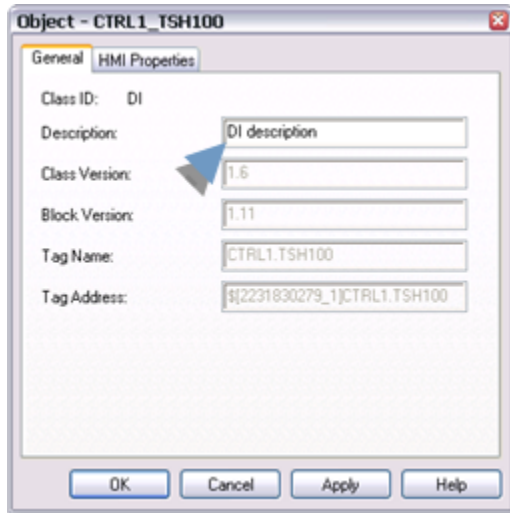
- DI General.
- DI HMI Properties.

DI General

The Object dialog box General tab provides data that precisely identifies the DI object.

> ✏️ **Note:**
>
> The **Description** field is the only Read/Write field on the General tab.

DI HMI Properties

Each PPS function block has HMI properties.

When an Object dialog box is opened for a selected object, the values for these properties:

- Can be defined in the Object dialog box.
- Will display on the faceplate when it is first opened and as long as they are not changed.
- (Some properties) May be changed by faceplate users who have a role *(on page 12)* with the required level.

The HMI properties required for the PPS Discrete Input block are as follows.
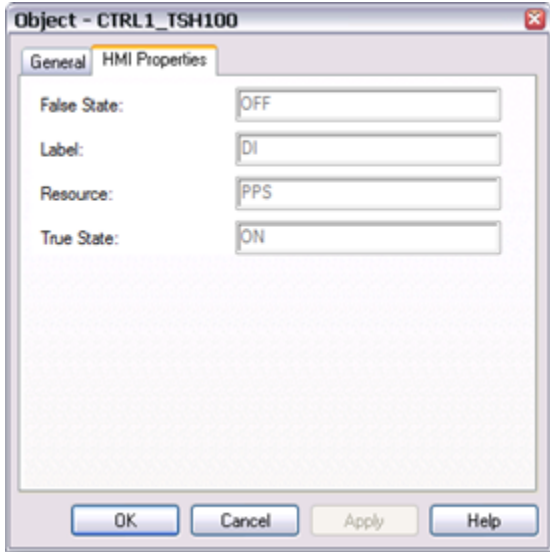
Field	Description	Data Type	Restrictions
False State	Text displayed when ST = 0.	String	
Label	Object Identification.	String	
Resource	CIMPLICITY resource.	String	16 Characters or less
True State	Text displayed when ST = 1.	String	

3. DI: Mimic Objects

3. DI: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

|	
3.1 *(on page 222)*	DI: Mimic object selection in CimEdit.
3.2 *(on page 224)*	DI: Mimic object runtime data.

3.1. DI: Mimic Object Selection in CimEdit

A *(on page 222)*	Place an DI mimic object on a CimEdit screen.
B *(on page 222)*	(Optional) Change the function block object or mimic object.

1. Place an DI mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.
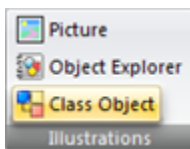
1. Select an DI object in the Select an Object browser.
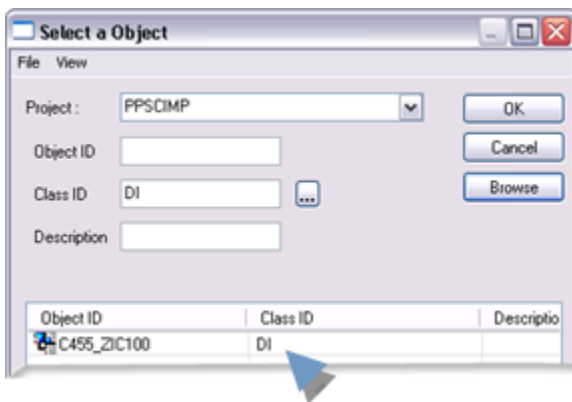
Result: The DI default mimic object displays on the CimEdit screen.

> **Note:**
> When you close and re-open CimEdit, the tag name will not display; the function block name, e.g. DI, will display. Simply double-click the object to re-display the tag name.

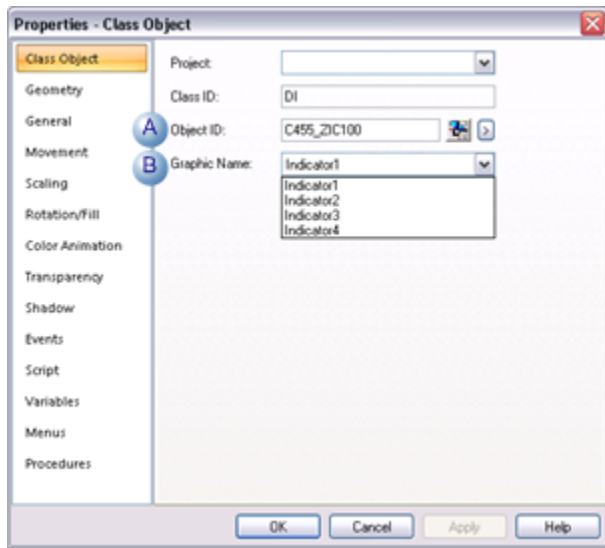1. (Optional) Change the function block Object or mimic object.

Mimic object only

1. Right-click the DI mimic object.
2. Select another object listed on the Popup menu.

Mimic object and/or function block object.

3. Right-click the DI mimic object.
4. Select Properties on the Popup menu.
5. Select the Class Object tab.
6. Do one or both of the following.

	Field	Select from a list of available DI:
1	Object ID	Function block objects.
2	Graphic Name	Mimic objects.

7. Click OK.

The selected mimic object displays on the CimEdit screen when you use either method.

8. Configure the mimic object size and other objects, as required.

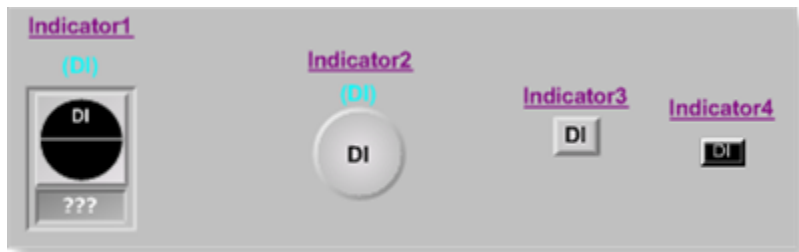The mimic object is ready for runtime.

3.2. DI: Mimic Object Runtime Data

Mimic objects that are available for the PPS DI block are as follows.

> **Note:**
> A runtime user can open the DI faceplate through any object. However, the exact data that the mimic object displays depends on which object is being used
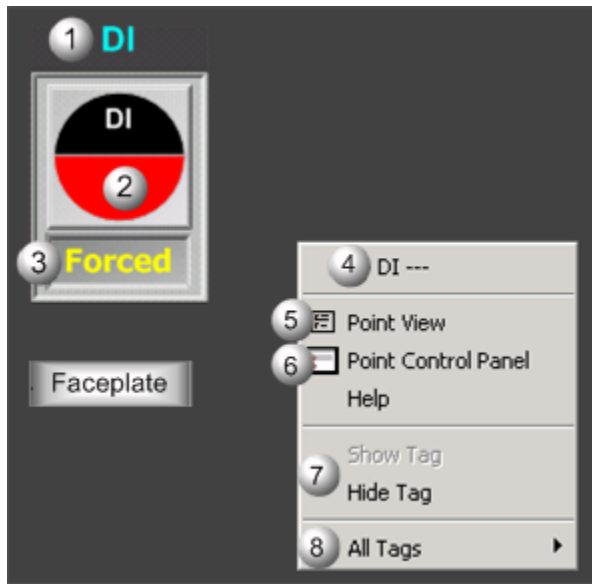
Indica-tor1
Indica-tor2
Indica-tor3

Indica-tor4

DI: Indicator 1

Refer to the following table for descriptions of the fields.

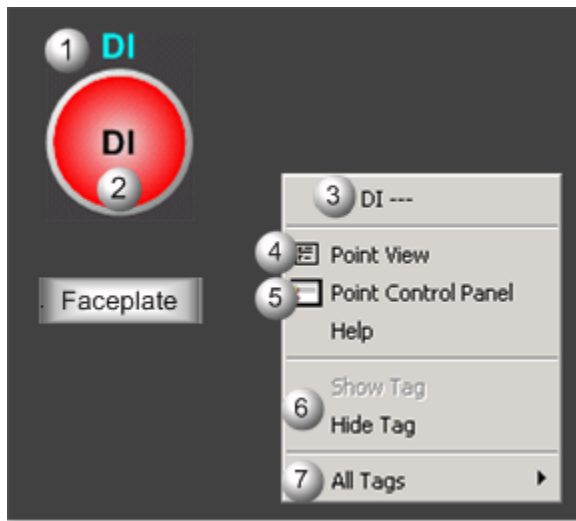| Area	Description
1	Object Label.
2	PV State. The color that displays is based on the following conditions: When PV State = Normal State, the color is the Normal state color, which is red by default. When PV State <> Normal State, the color reports an Indicative state, which is green by default. Normal State is configured in the Engineering Workstation Inspector as either Normally Open or Normally Closed.
3	Displays Forced, if Forcing is active. Forcing overrides the PV value with a user specified value.
4	The function block name, DI. Displays at the top of the Popup menu.
5	Point View. Displays the DI points in the Point View window.
6	Point Control Panel. Displays the DI points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DI Hide Label: Hides the label for the selected mimic object.

| 8 | All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used. |

DI: Indicator 2

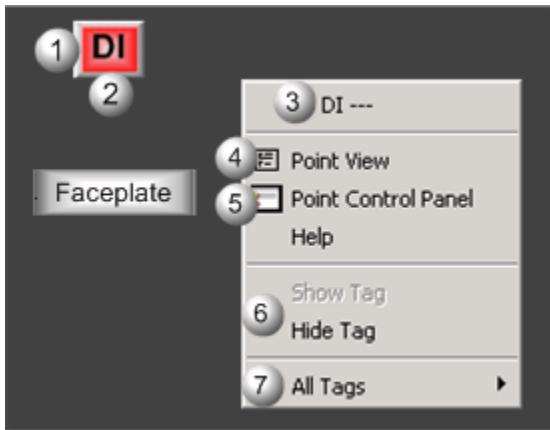Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	PV State. The color that displays is based on the following conditions: When PV State = Normal State, the color is the Normal state color, which is red by default. When PV State <> Normal State, the color reports an Indicative state, which is green by default. Normal State is configured in the Engineering Workstation Inspector as either Normally Open or Normally Closed.
3	The function block name, DI. Displays at the top of the Popup menu.
4	Point View. Displays the DI points in the Point View window.
5	Point Control Panel. Displays the DI points in the Point Control Panel.
6	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DI Hide Label: Hides the label for the selected mimic object.

| 7 | All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used. |

DI: Indicator 3

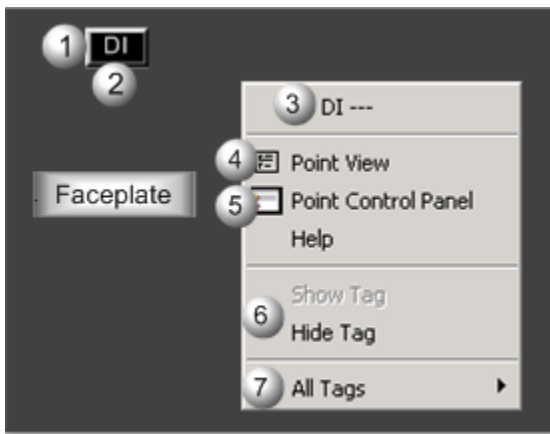Refer to the following table for descriptions of the fields.

> **Note:**
> This object is designed to be "plugged" into another object; the other object will have a tag name.

Area	Description
1	Object Label.
2	PV State. The color that displays is based on the following conditions: When PV State = Normal State, the color is the Normal state color, which is red by default. When PV State <> Normal State, the color reports an Indicative state, which is green by default. Normal State is configured in the Engineering Workstation Inspector as either Normally Open or Normally Closed.
3	The function block name, DI. Displays at the top of the Popup menu.
4	Point View. Displays the DI points in the Point View window.
5	Point Control Panel. Displays the DI points in the Point Control Panel.

6	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DI Hide Label: Hides the label for the selected mimic object.
7	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DI: Indicator 4

Refer to the following table for descriptions of the fields.

> ✎ **Note:**
> This object is designed to be "plugged" into another object; the other object will have a tag name.

Area	Description
1	Object Label.
2	PV State. The color that displays is based on the following conditions: When PV State = Normal State, the color is the Normal state color, which is red by default. When PV State <> Normal State, the color reports an Indicative state, which is green by default. Normal State is configured in the Engineering Workstation Inspector as either Normally Open or Normally Closed.
3	The function block name, DI. Displays at the top of the Popup menu.
4	Point View. Displays the DI points in the Point View window.

5	Point Control Panel. Displays the DI points in the Point Control Panel.
6	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DI Hide Label: Hides the label for the selected mimic object.
7	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

4. DI: Faceplate

4. DI: Faceplate

Discrete inputs have two states.

The DI faceplate reflects the current state of the discrete input (DI) and allows operators to force the DI state to one of the two states. It also indicates the health of the input.

Click a tab button to display and review features for each DI faceplate frame.

1. DI Faceplate: Main Frame *(on page 230)*
2. DI Faceplate: Details Frame *(on page 230)*

DI Faceplate: Main Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	The description of the current DI state. The default descriptions are: Off, On. More descriptive state definitions, which can be entered in the DI object's Properties dialog box, may display instead of On/Off. Example: Inlet Temperature High may display instead of Off. Inlet Temperature Normal may display instead of On.
2	Forcing is Active if the PV value is forced. Forcing is Inactive if the PV value is not forced. Forcing can be set to Active or Inactive on the Details frame.
3	Quality is Bad if the discrete input has a diagnostic fault. The PV state is set based on a configured response to bad quality, e.g. Bad Quality PV is set to 0 or 1 or last good value. Quality is Good if the discrete input is healthy.
4	Exit Button. Click to close the faceplate.

DI Faceplate: Details Frame

Refer to the following table for descriptions of the fields.

> ⚠ **Important:**
>
> Data entry fields in this Details frame are writable when a user Is associated with both the object's resource and a role that has at least a Level 200. If, after you log in, the data entry fields should be writable and are not, consult your system administrator.

Area	Description
1	Click the Forcing check box to enable or disable forcing.
2	Value. Click to force an On or Off state. On means that the PV is forced to the On state. Off means that the PV is forced to the Off state. If Forcing is active, On can be clicked to Off; Off can be clicked to On.
3	Quality. Checking discrete input quality is either Enabled or Disabled. Quality on the Main frame will always display Good if checking is disabled.
4	De-bouncing states are: Active or Inactive. De-bouncing prevents signal noise and transitory cycling from being reflected in the DI state. For example, if a signal spikes for a brief moment, due to noise, and causes a state change to occur, de-bouncing will prevent that state change to be passed to the PV.
5	Raw Input State; the hardwired input. On displays when the energized state is achieved. Off displays when the de-energized state is achieved.

6	The conditioned value of RAW. On displays when the energized state is achieved. Off displays when the de-energized state is achieved.
7	The bad quality indication: On or Off. On displays when the discrete input has bad quality. Off displays when the discrete input is healthy.
8	Exit Button. Click to close the faceplate.

DOUT: Object Configuration and Use

DOUT: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is built *(on page 16)* from the EGD server.

1 *(on page 232)*	DOUT: Ethernet global data
2 *(on page 233)*	DOUT: Object properties.
3 *(on page 234)*	DOUT: Mimic objects.
4 *(on page 242)*	DOUT: Faceplate.

1. DOUT: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS DOUT block is as follows.

Global Data	Data Type	Description
ST	BOOL[16]	HMI Status

FC	UINT	Faceplate Command	
		FC = 1	Activate Forcing
		FC = 2	De-activate Forcing
FV	UINT	Forced Value	

2. DOUT: Object Properties

Open an Object Properties dialog box for an object with an DOUT class ID.

The tabs in the Object dialog box are:
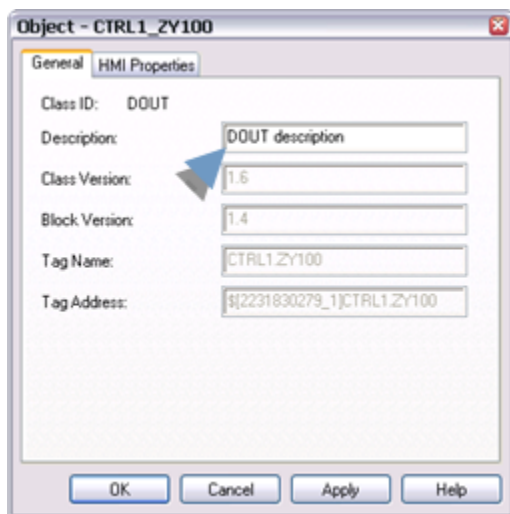
- DOUT General.
- DOUT HMI Properties.

DOUT General

The Object dialog box General tab provides data *(on page 32)* that precisely identifies the DOUT object.

> **Note:**
> The **Description** field is the only Read/Write field on the General tab.
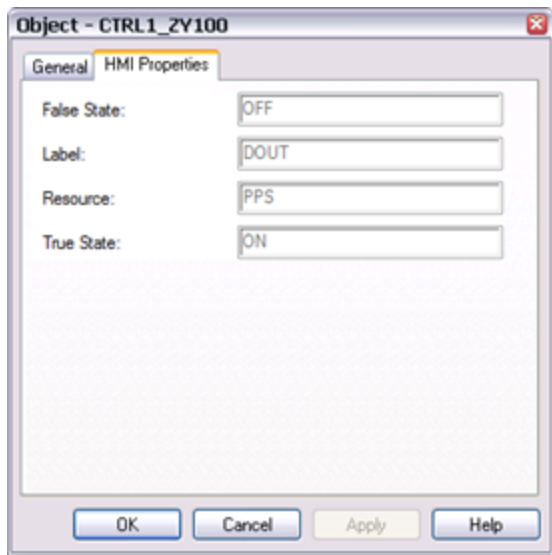

DOUT HMI Properties

Each PPS function block has HMI properties.

When an Object dialog box is opened for a selected object, the values for these properties:

- Can be defined in the Object dialog box.
- Will display on the faceplate when it is first opened and as long as they are not changed.
- (Some properties) May be changed by faceplate users who have a role *(on page 12)* with the required level.

The HMI properties required for the PPS Discrete utput block are as follows.

Field	Description	Data Type	Restrictions
False State	Text displayed when ST = 0.	String	
Label	Object Identification.	String	
Resource	CIMPLICITY resource.	String	16 Characters or less
True State	Text displayed when ST = 1.	String	

3. DOUT: Mimic Objects
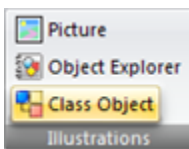
3. DOUT: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

| 3.1 (on page 235)	DOUT: Mimic object selection in CimEdit.
3.2 (on page 237)	DOUT: Mimic object runtime data.

3.1. DOUT: Mimic Object Selection in CimEdit

A (on page 235)	Place an DOUT mimic object on a CimEdit screen.
B (on page 236)	(Optional) Change the function block object or mimic object.

1. Place an DOUT mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.

1. Select an DOUT object in the Select an Object browser.
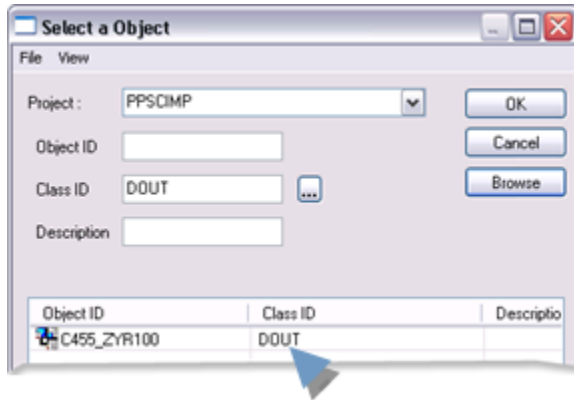
Result: The DOUT default mimic object displays on the CimEdit screen.

> **Note:**
>
> When you close and re-open CimEdit, the tag name will not display; the function block name, e.g. DOUT, will display. Simply double-click the object to re-display the tag name.

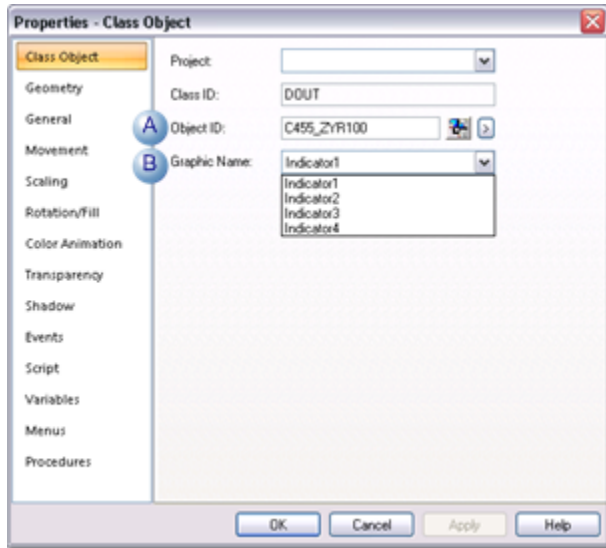1. (Optional) Change the function block Object or mimic object.

Mimic object only

1. Right-click the DOUT mimic object.
2. Select another object listed on the Popup menu.

Mimic object and/or function block object.

3. Right-click the DOUT mimic object.
4. Select Properties on the Popup menu.
5. Select the Class Object tab.
6. Do one or both of the following.

	Field	Select from a list of available DOUT:
1	Object ID	Function block objects.
2	Graphic Name	Mimic objects.

7. Click OK.

The selected mimic object displays on the CimEdit screen when you use either method.

8. Configure the mimic object size and other objects, as required.

The mimic object is ready for runtime.
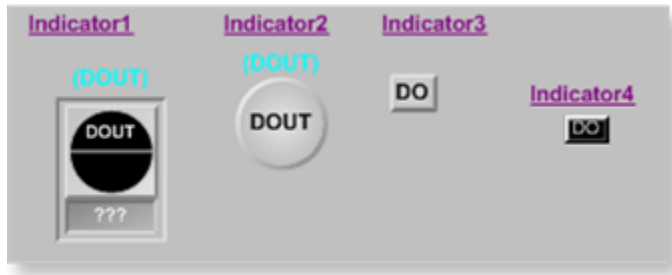
3.2. DOUT: Mimic Object Runtime Data

Mimic objects that are available for the PPS DOUT block are as follows.

> **Note:**
> A runtime user can open the DOUT faceplate through any object. However, the exact data that the mimic object displays depends on which object is being used
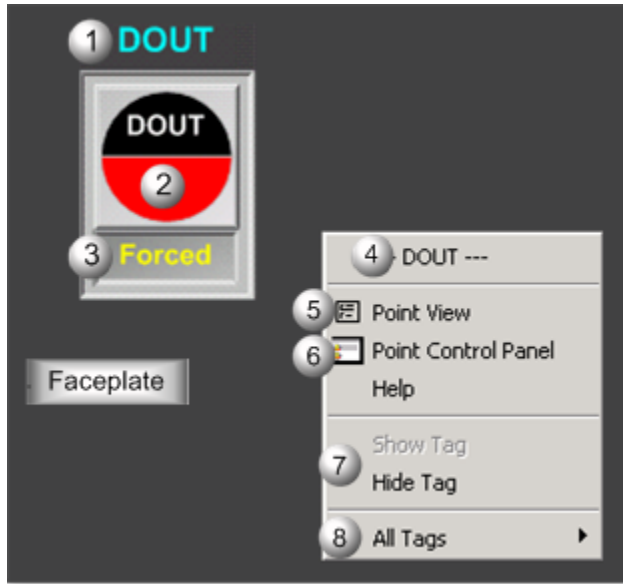
indicator1
Indica-tor2
Indica-tor3
Indica-tor4

DOUT: Indicator 1

Refer to the following table for descriptions of the fields.

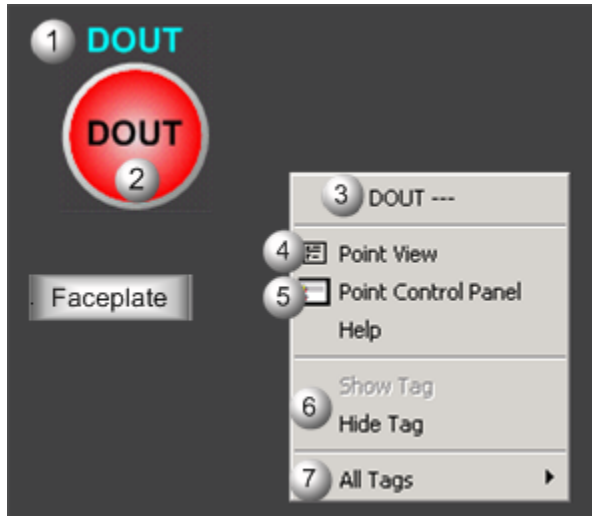| Area	Description
1	Object Label.
2	PV State. The color that displays is based on the following conditions: When PV State = On, the On state color is green by default. When PV State= Off, the Off state color is red by default.
3	Displays Forced, if Forcing is active. Forcing overrides the PV value with a user specified value.
4	The function block name, DOUT. Displays at the top of the Popup menu.
5	Point View. Displays the DOUT points in the Point View window.
6	Point Control Panel. Displays the DOUT points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DOUT Hide Label: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DOUT: Indicator 2

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	PV State. The color that displays is based on the following conditions: When PV State = On, the On state color is green by default. When PV State= Off, the Off state color is red by default.
3	The function block name, DOUT. Displays at the top of the Popup menu.
4	Point View. Displays the DOUT points in the Point View window.
5	Point Control Panel. Displays the DOUT points in the Point Control Panel.
6	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DOUT Hide Label: Hides the label for the selected mimic object.
7	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DOUT: Indicator 3

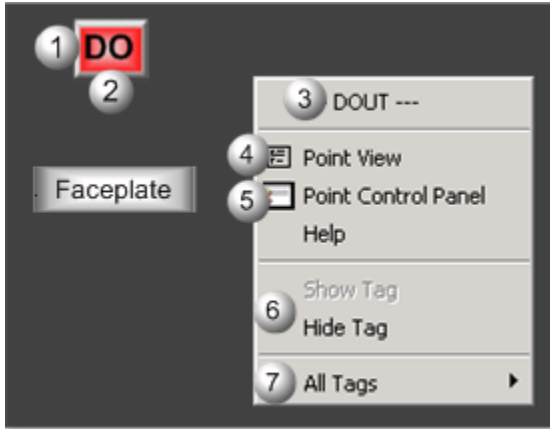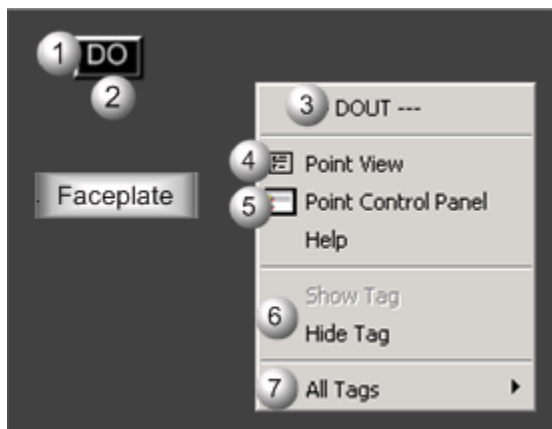Refer to the following table for descriptions of the fields.

> **✎ Note:**
>
> This object is designed to be "plugged" into another object; the other object will have a tag name.

Area	Description
1	Object Label.
2	PV State. The color that displays is based on the following conditions: When PV State = On, the On state color is green by default. When PV State= Off, the Off state color is red by default.
3	The function block name, DOUT. Displays at the top of the Popup menu.
4	Point View. Displays the DOUT points in the Point View window.
5	Point Control Panel. Displays the DOUT points in the Point Control Panel.
6	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DOUT Hide Label: Hides the label for the selected mimic object.
7	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

DOUT: Indicator 4

Area	Description
1	Object Label.
2	PV State. The color that displays is based on the following conditions: When PV State = On, the On state color is green by default. When PV State= Off, the Off state color is red by default.
3	The function block name, DOUT. Displays at the top of the Popup menu.
4	Point View. Displays the DOUT points in the Point View window.
5	Point Control Panel. Displays the DOUT points in the Point Control Panel.
6	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: DOUT Hide Label: Hides the label for the selected mimic object.
7	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

4. DOUT: Faceplate

4. DOUT: Faceplate

Discrete outputs have two states.

The DOUT faceplate reflects the current state of the discrete output (DOUT) and allows operators to force the DOUT state to one of the two states.

Click a tab button to display and review features for each DOUT faceplate frame.

1. DOUT Faceplate: Main Frame *(on page 243)*
2. DOUT Faceplate: Details Frame *(on page 244)*

DOUT Faceplate: Main Frame

Refer to the following table for descriptions of the fields.

Area	Description

1	The description of the current DOUT state. Default descriptions are: Off, On. More descriptive state definitions, which can be entered in the DOUT object's Properties dialog box, may display instead of On/Off. For example: Open Valve may display instead of Off. Close Valve may display instead of On.
2	Forcing is Active when the RAW value is forced. Forcing is Inactive RAW value is not forced. Forcing can be set to Active or Inactive on the Details frame.
3	Exit Button. Click to close the faceplate.

DOUT Faceplate: Details Frame

Refer to the following table for descriptions of the fields.

> **Note:**
>
> Data entry fields in this Details frame are writable when a user Is associated with both the object's resource and a role that has at least a Level 200. If, after you log in, the data entry fields should be writable and are not, consult your system administrator.

Area	Description
1	Click the Forcing check box to enable or disable forcing.
2	Click to force an On or Off state. When On, Raw is forced to the On state. When Off, Raw is forced to the Off state. If Forcing is active, On can be clicked to Off; Off can be clicked to On.

3	The discrete state passed into the DOUT block which determines the RAW state. On displays when the energized state is achieved. Off displays when the de-energized state is achieved.
4	Raw Output State; the hardwired output. On displays when the energized state is achieved. Off displays when the de-energized state is achieved.
5	Exit Button. Click to close the faceplate.

IND_A: Object Configuration and Use

IND_A: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is built *(on page 16)* from the EGD server.

1 *(on page 245)*	IND_A: Ethernet global data
2 *(on page 246)*	IND_A: Object properties.
3 *(on page 247)*	IND_A: Mimic objects.
4 *(on page 256)*	IND_A: Faceplate.

1. IND_A: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS IND_A block is as follows.

Global Data	Data Type	Description
CB	UINT	Clamp Type.

CV [0]	REAL	Minimum Clamp.
CV [1]	REAL	Maximum Clamp.
ST	REAL	Analog Indication.

2. IND_A: Object Properties

Open an Object Properties dialog box for an object with an IND_A class ID.

The tabs in the Object dialog box are:
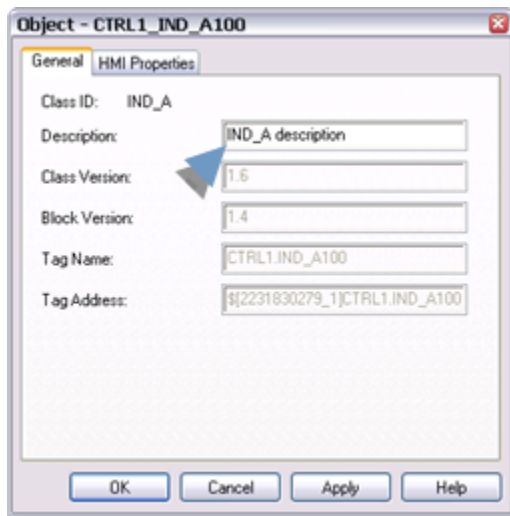
- IND_A General.
- IND_A HMI Properties.

IND_A General

The Object dialog box General tab provides data *(on page 32)* that precisely identifies the IND_A object.

> **Note:**
> The **Description** field is the only Read/Write field on the General tab.

IND_A HMI Properties

Each PPS function block has HMI properties.

When an Object dialog box is opened for a selected object, the values for these properties:

- Can be defined in the Object dialog box.
- Will display on the faceplate when it is first opened and as long as they are not changed.
- (Some properties) May be changed by faceplate users who have a role *(on page 12)* with the required level.

The HMI properties required for the HMI Analog Indication block are as follows.
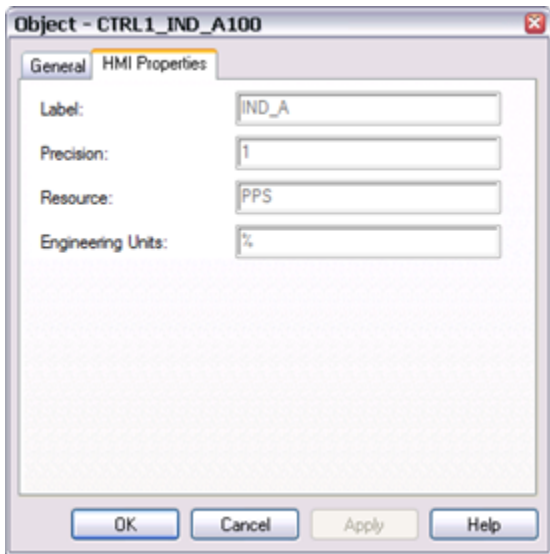
HMI Properties	Description	Data Type	Restrictions
Label	Object identification.	String	
Precision	Number of digits displayed to the right of the decimal point.	Integer	7 Digits
Resource	Resource.	String	16 Characters or less
Engineering Units	Analog Indication Engineering units.	String	8 Characters or less

3. IND_A: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.
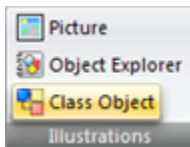
3.1. IND_A: Mimic Object Selection in CimEdit

1. Place an IND_A mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.

1. Select an IND_A object in the Select an Object browser.
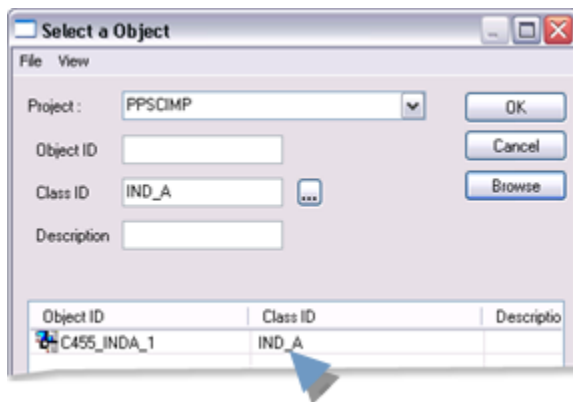
Result: The IND_A default mimic object displays on the CimEdit screen.

> ✎ **Note:**
>
> When you close and re-open CimEdit, the tag name will not display; the function block name, e.g.
> IND_A, will display. Simply double-click the object to re-display the tag name.

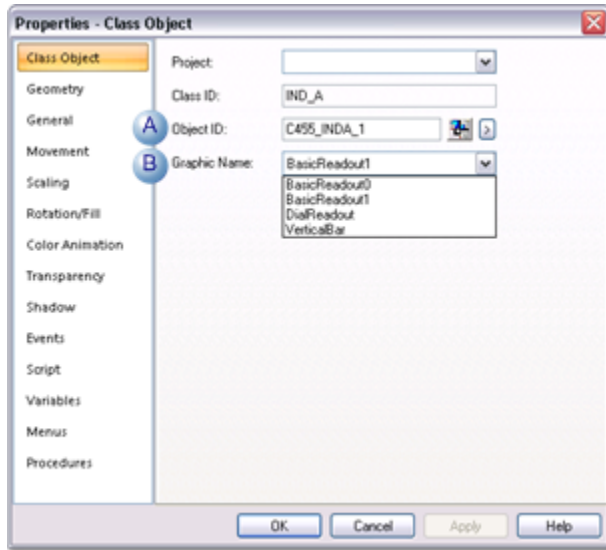1. (Optional) Change the function block Object or mimic object.

Mimic object only

1. Right-click the IND_A mimic object.
2. Select another object listed on the Popup menu.

Mimic object and/or function block object.

3. Right-click the IND_A mimic object.
4. Select Properties on the Popup menu.
5. Select the Class Object tab.
6. Do one or both of the following.

	Field	Select from a list of available IND_-A:
1	Object ID	Function block objects.
2	Graphic Name	Mimic objects.

7. Click OK.

The selected mimic object displays on the CimEdit screen when you use either method.

8. Configure the mimic object size and other objects, as required.

The mimic object is ready for runtime.

3.2. IND_A: Mimic Object Runtime Data

Mimic objects that are available for the PPS IND_A block are as follows.

> **Note:**
> A runtime user can open the IND_A faceplate through any object. However, the exact data that the mimic object displays depends on which object is being used.
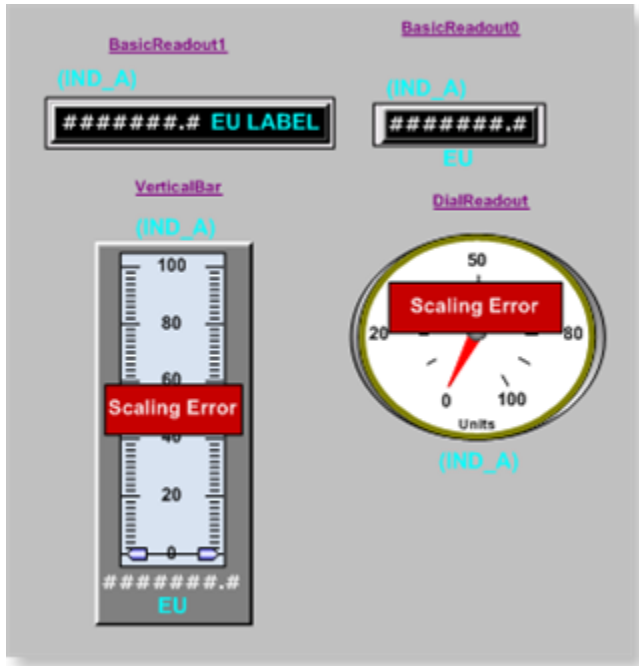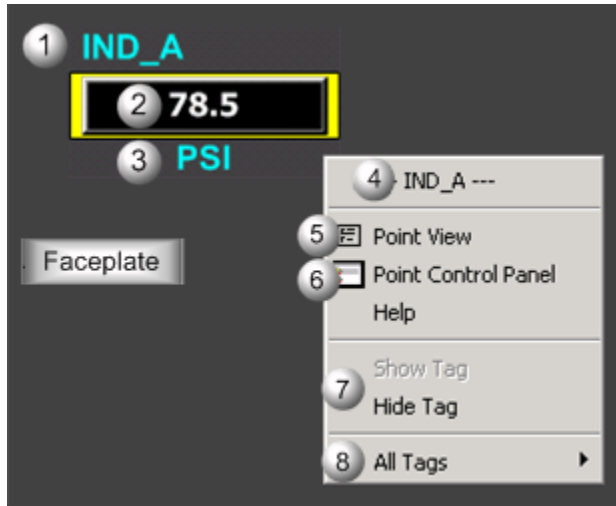
Basic Readout 0
Basic Readout 1
Dial Readout
Vertical Bar

IND_A: Basic Readout 0

Refer to the following table for descriptions of the fields.

Area	Description
1	Object label.
2	IND_A function block's analog value.
3	The measurement unit that is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
4	The function block name, IND_A. Displays at the top of the Popup menu.
5	Point View. Displays the IND_A points in the Point View window.
6	Point Control Panel. Displays the IND_A points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: IND_A Hide Label: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

IND_A: Basic Readout 1

Refer to the following table for descriptions of the fields.

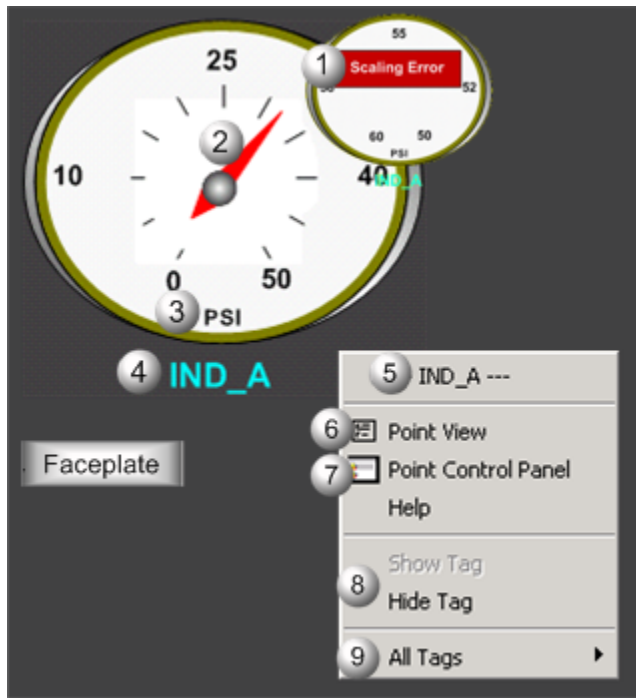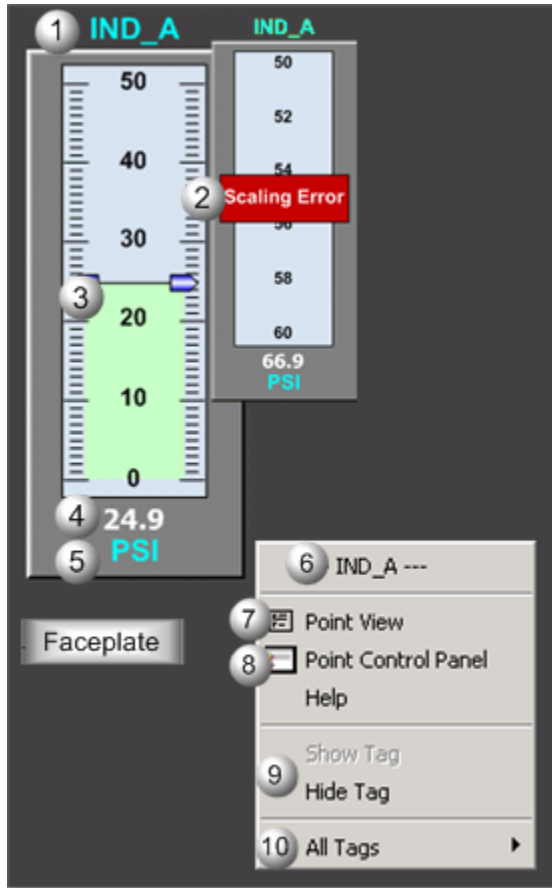| Area	Description
1	Object label.
2	IND_A function block's analog value.
3	The measurement unit that is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
4	The function block name, IND_A. Displays at the top of the Popup menu.
5	Point View. Displays the IND_A points in the Point View window.
6	Point Control Panel. Displays the IND_A points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: IND_A Hide Label: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

IND_A: Dial Readout

Refer to the following table for descriptions of the fields.

Area	Description
1	Scaling Error displays if a scaling error is detected.
2	Dial Readout. IND_A function block's analog value.
3	The measurement unit that is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
4	Object label.
5	The function block name, IND_A. Displays at the top of the Popup menu.
6	Point View. Displays the IND_A points in the Point View window.
7	Point Control Panel. Displays the IND_A points in the Point Control Panel.
8	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: IND_A Hide Label: Hides the label for the selected mimic object.
9	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

IND_A: Vertical Bar

Refer to the following table for descriptions of the fields.

Area	Description
1	Object label.
2	Scaling Error displays if a scaling error is detected.
3	IND_A function block's analog value. The bar over an animated fill moves up and down to reflect the analog value.
4	IND_A function block's analog value.
5	The measurement unit that is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
6	The function block name, IND_A. Displays at the top of the Popup menu.

7	Point View. Displays the IND_A points in the Point View window.
8	Point Control Panel. Displays the IND_A points in the Point Control Panel.
9	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: IND_A Hide Label: Hides the label for the selected mimic object.
10	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

4. IND_A: Faceplate

4. IND_A: Faceplate

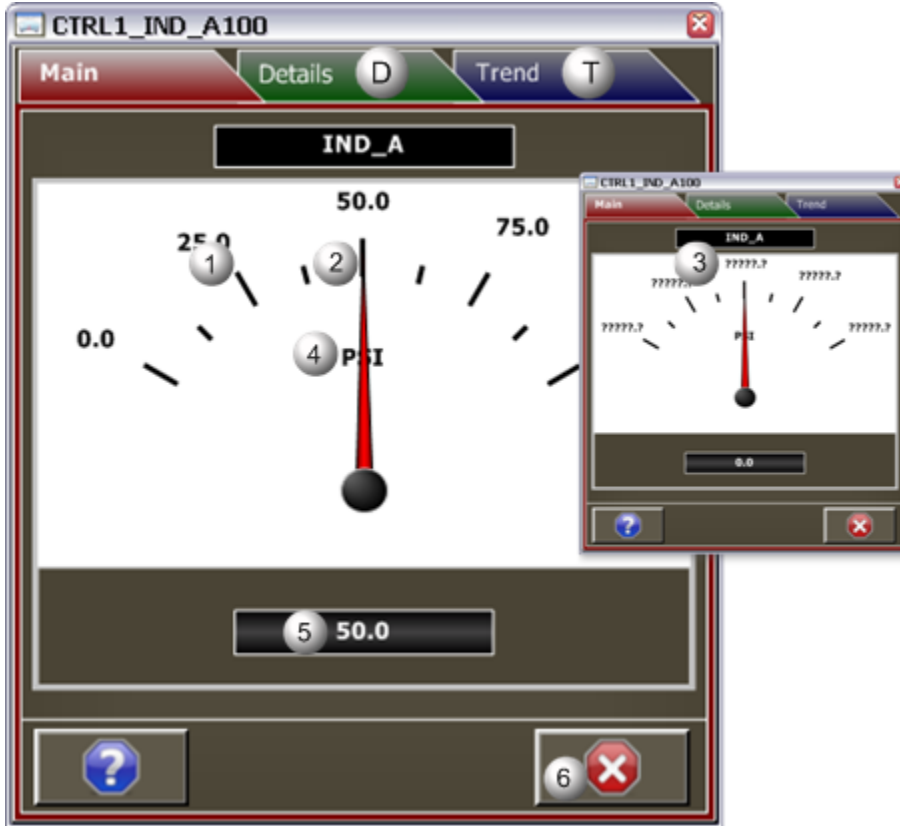Click a tab button to display and review features for each AI faceplate frame.

1. IND_A Faceplate: Main Frame *(on page 257)*
2. IND_A Faceplate: Details Frame *(on page 258)*
3. IND_A Faceplate: Trend Frame *(on page 258)*

IND_A Faceplate: Main Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	Analog Value Scale. The half circle, with scaling, represents the INDA_A function block's analog value scale. The range of the scale is defined on the Details frame.
2	Dial Readout. Needle movement is based on the analog indication value.
3	Scaling Error. The scaling values display is ?????.? when there is a scaling error or no scaling configured. To determine why question marks display, view the scaling parameters on the Details frame.
4	Measurement unit that is specified in the object definition, e.g. PSI, inches, volts, pounds per hour, standard cubic feet. The measurement unit must be defined with 8 characters or less.
5	IND_A function block's analog value. The value is in measurement units specified in the object definition. The value will display even if there is a scaling error or no scaling configured.
6	Exit button. Click to close the faceplate.

IND_A Faceplate: Details Frame

Refer to the following table for descriptions of the fields.

> ⚠️ **Important:**
>
> Data entry fields in this Details frame are writable when a user Is associated with both the object's resource and a role that has at least a Level 200. If, after you log in, the data entry fields should be writable and are not, consult your system administrator.

Area	Description
1	Maximum and minimum values in associated engineering units. In order to have scaling the maximum value must be greater than the minimum value. Without scaling, the Main frame dial will not function and the scaling values will be displayed as question marks.
2	Exit button. Click to close the faceplate.

IND_A Faceplate: Trend Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	Y-Axis. Displays engineering units specified in the object definition, e.g. PSI, inches, volts, pounds per hour, standard cubic feet.
2	Trend line of the IND_A analog value.
3	Trend Slider. As the slider is moved, the following displays in the legend based on the slider position: Slider position, Y-axis value, Date, and Time.
4	Trend Scroll Back Buttons. Click to scroll back in time. One page: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart back in time by the following increments: 15 Minutes, 1 hour, or 8 hours. 50 percent: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart back in time by the following increments: 7.5 minutes, 30 minutes, 4 hours.
5	X-axis. Local (PC) time.
6	Trend Scroll Forward Buttons. Click to scroll forward in time. One page: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart

	forward in time by the following increments: 15 Minutes, 1 hour, or 8 hours. 50 percent: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart forward in time by the following increments: 7.5 minutes, 30 minutes, 4 hours.
7	The Trend chart legend displays the following based on the slider position: the Display line, the Line value at the slider, Date at the slider, and the Time at the slider.
8	15 Mins Button: The Trend chart time duration is 15 minutes. The button's indication light is green when this time span is selected.
9	1 Hr Button: the Trend chart time duration is one hour. The button's indication light is green when this time span is selected.
10	8 Hrs Button: The Trend chart time duration is eight hours. The button's indication light is green when this time span is selected.
11	Chart Display Button: Display toggle button to maximize/minimize chart and information display. Clicking the button moves you to successive states. The three states are: No Y-axis/No Legend, Y-axis/No Legend, and Y-axis and Full Legend. The Y-axis, when displayed, shows the engineering units specified in the object definition, e.g. PSI, inches, volts, pounds per hour, standard cubic feet. The date and time continue to display.
12	Unzoom Button. Draw a box around the area to be zoomed. The Trend chart zooms to your selection. Click the Unzoom button to return the chart to its normal display size.
13	Grid Button. Click to display/hide the grid. Default: The grid displays.
14	Exit Button. Click to close the faceplate.

IND_D: Object Configuration and Use

IND_D: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is built *(on page 16)* from the EGD server.

1 *(on page 261)*	IND_D: Ethernet global data
2 *(on page 261)*	IND_D: Object properties.

	IND_D: Mimic objects.

1. IND_D: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS IND_D block is as follows.

Global Data	Data Type	Description
ST	UINT	Discrete Indication State

2. IND_D: Object Properties

Open an Object Properties dialog box for an object with an IND_D class ID.

The tabs in the Object dialog box are:
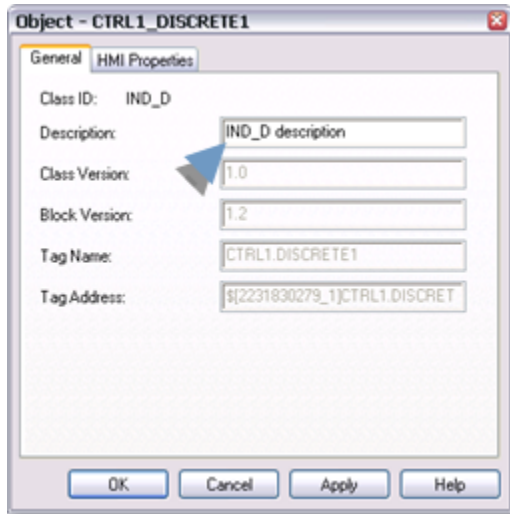
- IND_D General.
- IND_D HMI Properties.

IND_D General

The Object dialog box General tab provides data that precisely identifies the IND_D object.

> **Note:**
> The **Description** field is the only Read/Write field on the General tab.

IND_D HMI Properties

Each PPS function block has HMI properties.

When an Object dialog box is opened for a selected object, the values for these properties:

- Can be defined in the Object dialog box.
- Will display on the faceplate when it is first opened and as long as they are not changed.
- (Some properties) May be changed by faceplate users who have a role *(on page 12)* with the required level.

The HMI properties required for the HMI Discrete Indication block are as follows.
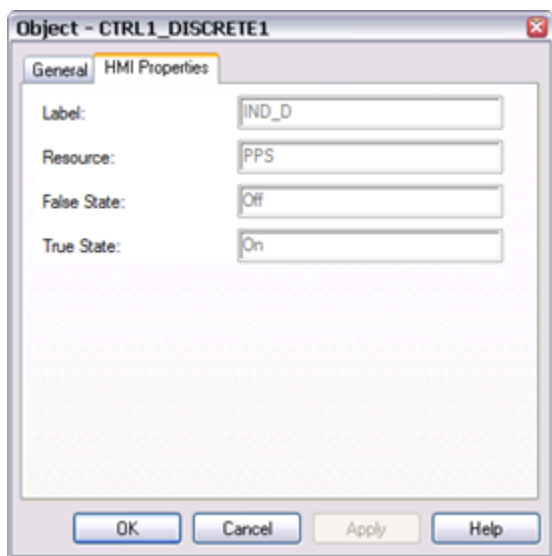
HMI Properties	Description	Data Type	Restrictions
Label	Object identification	String	
Resource	CIMPLICITY Resource.	String	16 Characters or less
False State	Text displayed when ST = 0.	String	10 Characters or less
True State	Text displayed when ST = 1.	String	10 Characters or less

3. IND_D: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

3.1. IND_D: Mimic Object Selection in CimEdit

1. Place an IND_D mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.
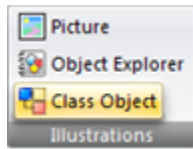
3. Select an IND_D object in the Select an Object browser.
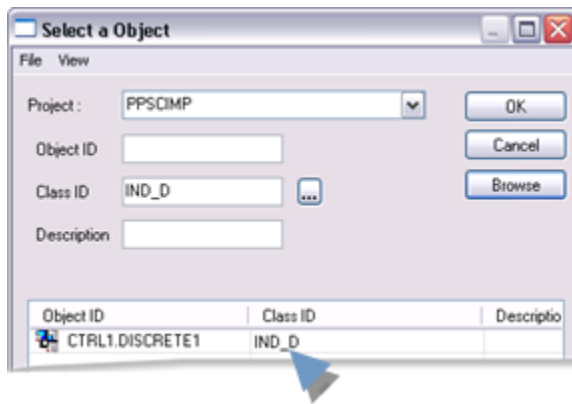
Result: The IND_D default mimic object displays on the CimEdit screen.

> **Note:**
> When you close and re-open CimEdit, the tag name will not display; the function block
> name, e.g. IND_D, will display. Simply double-click the object to re-display the tag name.

    a. (Optional) Change the function block Object or mimic object.

Mimic object only

4. Right-click the IND_D mimic object.
5. Select another object listed on the Popup menu.

Mimic object and/or function block object.

6. Right-click the IND_D mimic object.

7. Select Properties on the Popup menu.

8. Select the Class Object tab.

9. Do one or both of the following.
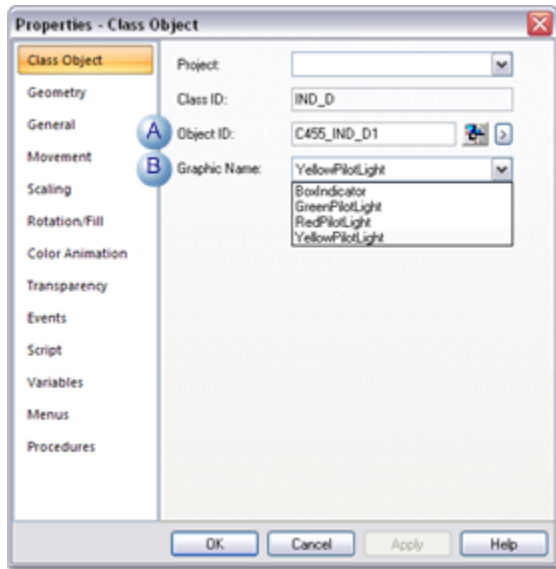
	Field	Select from a list of available IND_-D:
1	Object ID	Function block objects.
2	Graphic Name	Mimic objects.

10. Click OK.

The selected mimic object displays on the CimEdit screen when you use either method.

11. Configure the mimic object size and other objects, as required.

The mimic object is ready for runtime.

3.2. IND_D: Mimic Object Runtime Data

3.2. IND_D: Mimic Object Runtime Data

Mimic objects that are available for the PPS IND_D block are as follows.

> ✏️ **Note:**
> A runtime user can open the IND_D faceplate through any object. However, the exact data that the mimic object displays depends on which object is being used.
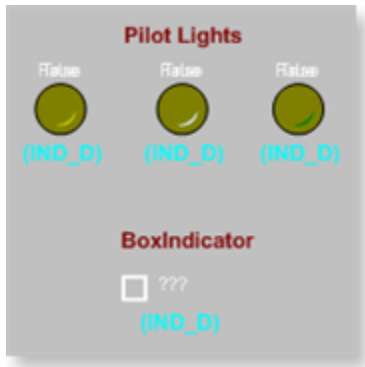
1. IND_D: Box Indicator *(on page 266)*
2. IND_D: Yellow Pilot Light *(on page 270)*
3. IND_D: Red Pilot Light *(on page 269)*
4. IND_D: Green Pilot Light *(on page 268)*

Box Indicator
Green Pilot Light
Red Pilot Light
Yellow Pilot Light

IND_D: Box Indicator

Refer to the following table for descriptions of the fields.

> **Note:**
> There are no faceplates associated with this object.

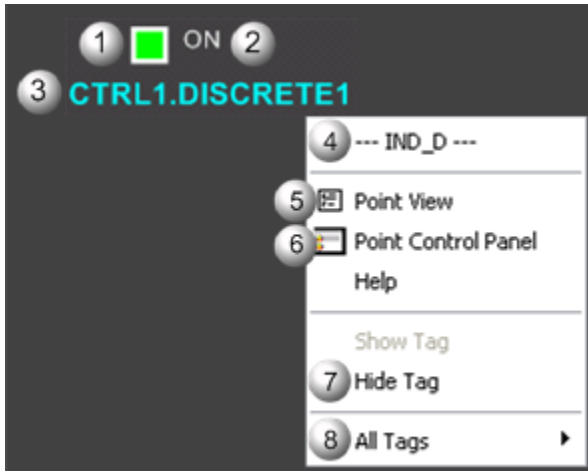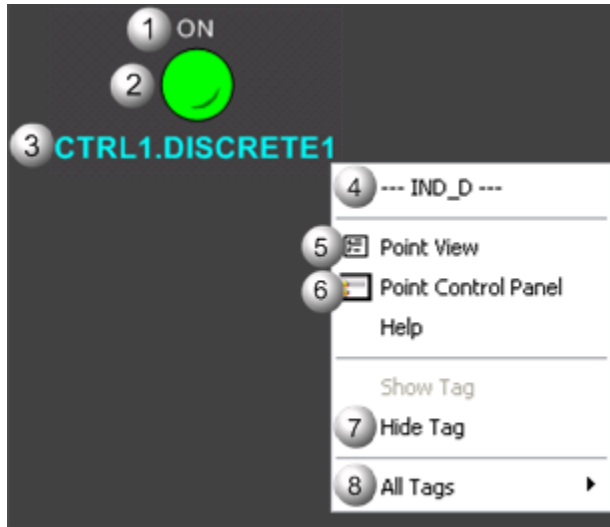| Area	Description
1	Output Value. IND_D function block's output value is either Text for a True state, or Text for a False state. Note: The text for the True state and False state are customized for your system's needs. The default text is: On, Off
2	Pilot Light. The box or pilot light's color changes to indicate the True or False condition. The default values are On and Off. When On, the color is green, red, or yellow, depending on the selected mimic object. When Off, the color is black (the default).
3	Object label.
4	The function block name, IND_D. Displays at the top of the Popup menu.
5	Point View. Displays the IND_D points in the Point View window.
6	Point Control Panel. Displays the IND_D points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: IND_D Hide Label: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

IND_D: Green Pilot Light

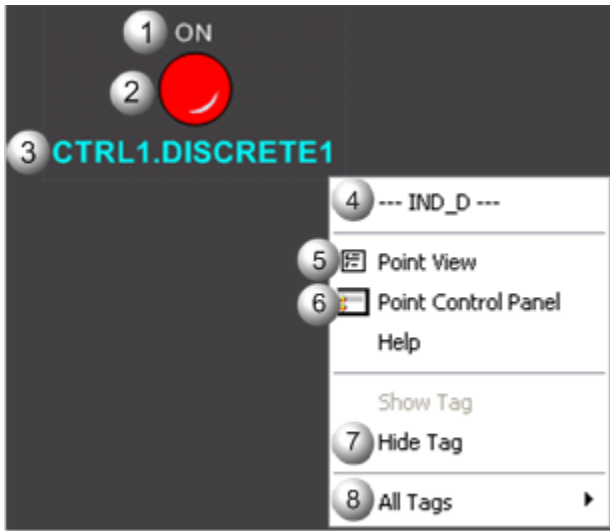Refer to the following table for descriptions of the fields.

> **Note:**
> There are no faceplates associated with this object.

Area	Description
1	Output Value. IND_D function block's output value is either Text for a True state, or Text for a False state. Note: The text for the True state and False state are customized for your system's needs. The default text is: On, Off
2	Pilot Light. The box or pilot light's color changes to indicate the True or False condition. The default values are On and Off. When On, the color is green, red, or yellow, depending on the selected mimic object. When Off, the color is black (the default).
3	Object label.
4	The function block name, IND_D. Displays at the top of the Popup menu.
5	Point View. Displays the IND_D points in the Point View window.
6	Point Control Panel. Displays the IND_D points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: IND_D Hide Label: Hides the label for the selected mimic object.

| 8 | All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used. |

IND_D: Red Pilot Light

Refer to the following table for descriptions of the fields.

> **Note:**
> There are no faceplates associated with this object.

Area	Description
1	Output Value. IND_D function block's output value is either Text for a True state, or Text for a False state. Note: The text for the True state and False state are customized for your system's needs. The default text is: On, Off
2	Pilot Light. The box or pilot light's color changes to indicate the True or False condition. The default values are On and Off. When On, the color is green, red, or yellow, depending on the selected mimic object. When Off, the color is black (the default).
3	Object label.
4	The function block name, IND_D. Displays at the top of the Popup menu.

5	Point View. Displays the IND_D points in the Point View window.
6	Point Control Panel. Displays the IND_D points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: IND_D Hide Label: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

IND_D: Yellow Pilot Light

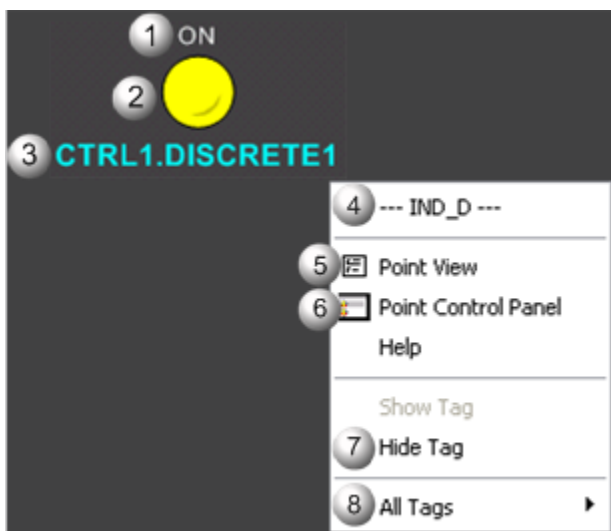Refer to the following table for descriptions of the fields.

> **Note:**
> There are no faceplates associated with this object.

Area	Description
1	Output Value. IND_D function block's output value is either Text for a True state, or Text for a False state. Note: The text for the True state and False state are customized for your system's needs. The default text is: On, Off

2	Pilot Light. The box or pilot light's color changes to indicate the True or False condition. The default values are On and Off. When On, the color is green, red, or yellow, depending on the selected mimic object. When Off, the color is black (the default).
3	Object label.
4	The function block name, IND_D. Displays at the top of the Popup menu.
5	Point View. Displays the IND_D points in the Point View window.
6	Point Control Panel. Displays the IND_D points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: IND_D Hide Label: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

INTERLOCK: Object Configuration and Use

INTERLOCK: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is built from the EGD server.

1 *(on page 272)*	INTERLOCK: Ethernet global data
2 *(on page 272)*	INTERLOCK: Object properties.
3 *(on page 274)*	INTERLOCK: Mimic objects.
4 *(on page 276)*	INTERLOCK: Faceplate.

1. INTERLOCK: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS INTERLOCK block is as follows.

Global Data	Data Item Name (CIMPLICITY)	Data Type	Description
ST[0]	ST0	DWORD	Status word
ST[1]	ST1	DWORD	Status word
TS	TS	DINT	Timestamp

2. INTERLOCK: Object Properties

Open an Object Properties dialog box for an object with an INTERLOCK class ID.

The tabs in the Object dialog box are:

- INTERLOCK General.
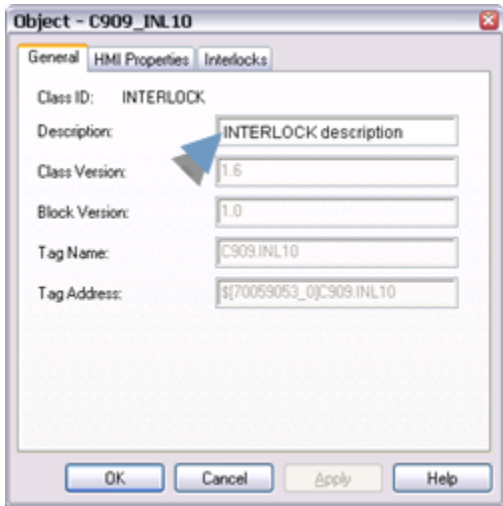- INTERLOCK HMI Properties.

INTERLOCK General

The Object dialog box General tab provides data *(on page 32)* that precisely identifies the INTERLOCK object.

> **Note:**
> The **Description** field is the only Read/Write field on the General tab.

INTERLOCK HMI Properties

Each PPS function block has HMI properties.

When an Object dialog box is opened for a selected object, the values for these properties:

- Can be defined in the Object dialog box.
- Will display on the faceplate when it is first opened and as long as they are not changed.
- (Some properties) May be changed by faceplate users who have a role *(on page 12)* with the required level.

The HMI properties required for the PPS Analog Output block are as follows.

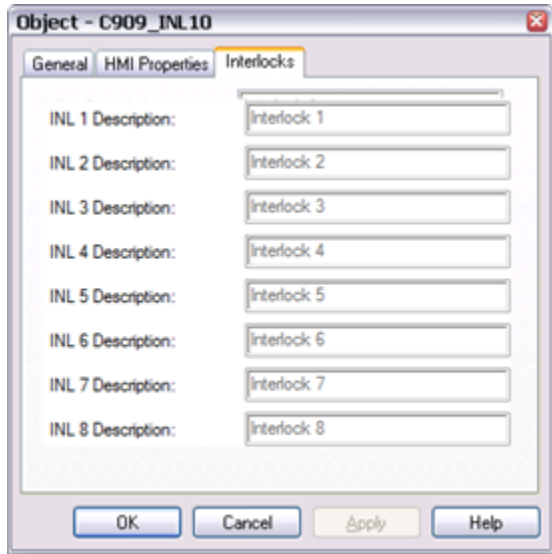| Field	Description	Data Type	Restrictions
Label	Object identification.	String	
Re-source	CIMPLICITY re-source.	String	16 characters or less

INTERLOCK Interlocks

Field	Description	Data Type	Restrictions
INL 1 - INL 8 De-scriptions	Describes the Interlock so a user can iden-tify it easily.	String	Up to 27 characters recom-mended.

3. INTERLOCK: Mimic Objects

3. INTERLOCK: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

3.1 *(on page 275)*	INTERLOCK: Mimic object selection in CimEd-it.

3.2 *(on page 275)*	INTERLOCK: Mimic object runtime data.

3.1. INTERLOCK: Mimic Object Selection in CimEdit

Place the INTERLOCK mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.
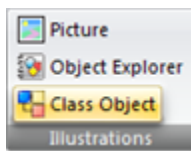
3. Select the INTERLOCK object in the Select an Object browser.
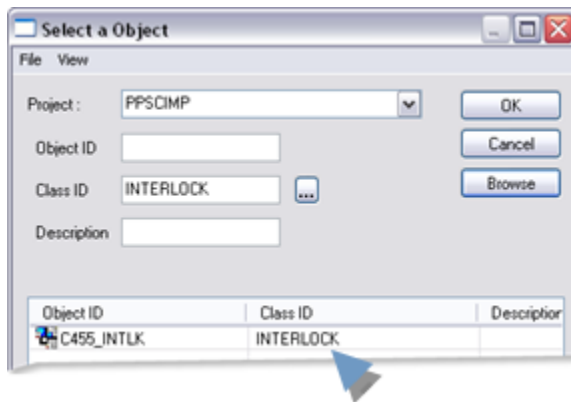
The INTERLOCK mimic object displays on the CimEdit screen.

> **Note:**
> When you close and re-open CimEdit, the tag name will not display; the function block name, e.g. INTERLOCK, will display. Simply double-click the object to re-display the tag name.

3.2. INTERLOCK: Mimic Object Runtime Data

There is one mimic object *(on page 276)* available for the PPS INTERLOCK block.

> ✏️ **Note:**
>
> A runtime user can open the INTERLOCK faceplate through its mimic object.

INTERLOCK: Diamond Shaped Object

Refer to the following table for descriptions of the fields.

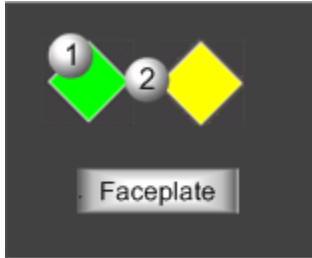| Area	Description
1	Object Shape. The Interlock object's diamond shape mimics how an interlock is displayed on a piping and instrumentation drawing. The mimic can be placed next to the associated device mimic on process overview screens.
2	Color. The default color animation displays yellow if any interlock conditions exist. It displays green if no interlock conditions exists.

4. INTERLOCK: Faceplate

4. INTERLOCK: Faceplate

Interlocks prevent devices from operating under unsafe conditions by either preventing the device from being started or by stopping the device when such a condition exists.

The INTERLOCK faceplate:

- Provides operators with the necessary information to know what interlock or permissive maybe preventing a device from starting or why a device stopped operating unexpectedly.
- Is a read-only faceplate; no commands or setpoint entries are available.

Click a tab button to display and review features for each INTERLOCK faceplate frame.

INTERLOCK Faceplate: Main Frame

Refer to the following table for descriptions of the fields.

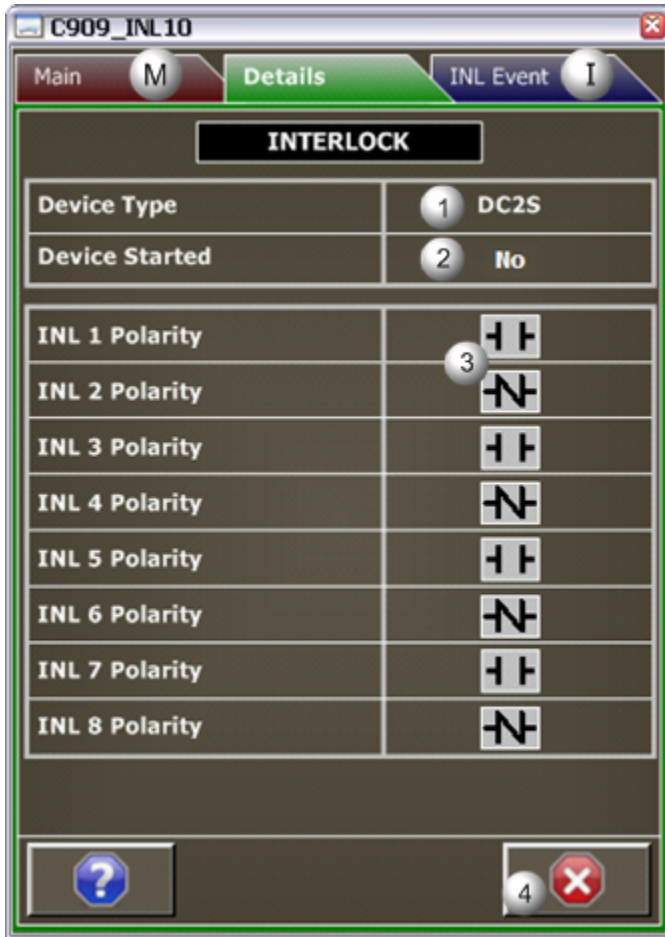| Area	Description
1	INL Rows. Each INL row can define one interlocking condition. Up to 8 INL Rows can be defined.
2	An empty box displays if the interlock condition is not defined. It displays green with a check mark, if the interlock condition is both not active and not defined. It displays a yellow triangle with an exclamation point if the interlock condition is both active and defined.
3	Interlock Condition Status. A description for the interlock. The description always displays the same text regardless of the interlock state. The fields are dark if there is a communication failure on loss of data or invalid data.
4	Permissive states are indicated in case a permissive is the overriding reason why a device cannot be shut off or turned on. When the state is set to True a green box with a check mark appears. When set to Not True, yellow triangle with an exclamation point appears. The PM0 is Permissive to go to State 0. The PM1 is Permissive to go to State 1 The PM2 state applies to DC3S only. The PM2 is Permissive to go to State 2. A permissive is different from an interlock in that it is the permissive to transition to a state, whereas the interlock will always command the device to the fail

	safe state (State 0). Permissive states do not display if there is a communication failure on loss of data or invalid data.
5	Exit button. Click to close the faceplate.

INTERLOCK Faceplate: Details Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	Type of device associated with the INTERLOCK block. Can either be 3-state (DC3S) or 2-state (DC2S) device. Question marks display if there is a communication failure on loss of data or invalid data.

2	Reports whether or not the device type that is associated with the INTERLOCK block is started. When Yes, the device is started. When No, the device is not started. Question marks display if there is a communication failure on loss of data or invalid data.
3	Interlock Polarity Normally Open/Closed. The symbols indicate the interlock's normal state: Normally Open or Normally Closed. It is configured in the Logic Developer's Property Inspector. Question marks display if there is a communication failure on loss of data or invalid data.
4	Exit button. Click to close the faceplate.

INTERLOCK Faceplate: INL Event

Refer to the following table for descriptions of the fields.

Area	Description

1	First Out. The symbol column shows which interlock condition activated first after a device start. The INTERLOCK block can detect if multiple interlocks activate simultaneously after a device start. When the symbol shows a blank box, the interlock did not activate first after the last device start attempt. If the symbols shows an X, the interlock condition is active. When a device transitions out of State 0, the First Out indication is cleared.
2	Event Timestamp. A timestamp shows the date and time that an interlock condition was activated after a device start. The block supports detecting interlocks that may drop out simultaneously (i.e. during the same execution of the interlock block). For each interlock marked as the first to drop out a timestamp is provided when the event took place. When a device transitions out of State 0, the Event Timestamp is cleared. The fields are dark if there is a communication failure on loss of data or invalid data.
3	Exit button. Click to close the faceplate.

MANUAL_SP: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is built from the EGD server.

1 *(on page 281)*	MANUAL_SP: Ethernet global data
2 *(on page 282)*	MANUAL_SP: Object properties.
3 *(on page 284)*	MANUAL_SP: Mimic objects.
4 *(on page 296)*	MANUAL_SP: Faceplate.

1. MANUAL_SP: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS MANUAL_SP block is as follows.

Global Data	Data Type	Description
OP	REAL	Setpoint Value from HMI
SL [0]	REAL	OP Minimum
SL [1]	REAL	OP Maximum
ST	BOOL[16]	HMI Status Bits

2. MANUAL_SP: Object Properties

Open an Object Properties dialog box for an object with an MANUAL_SP class ID.

The tabs in the Object dialog box are:

- MANUAL_SP General.
- MANUAL_SP HMI Properties.

MANUAL_SP General

The Object dialog box General tab provides data *(on page 32)* that precisely identifies the MANUAL_SP object.

> **Note:**
> The **Description** field is the only Read/Write field on the General tab.
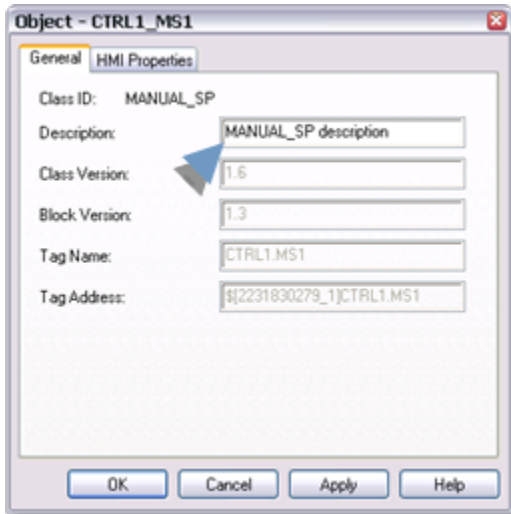
MANUAL_SP HMI Properties

Each PPS function block has HMI properties.

When an Object dialog box is opened for a selected object, the values for these properties:

- Can be defined in the Object dialog box.
- Will display on the faceplate when it is first opened and as long as they are not changed.
- (Some properties) May be changed by faceplate users who have a role *(on page 12)* with the required level.

The HMI properties required for the HMI Manual Setpoint block are as follows.

Field	Description	Data Type	Restrictions
Label	Object identification.	String	
Precision	Number of digits displayed to the right of the decimal point.	Integer	7 Digits
Resource	CIMPLICITY resource.	String	16 Characters or less
Engineering Units	Manual Setpoint's Engineering Units.	String	8 Characters or less
Pushbutton Rate	The rate at which the output (OP) is incremented or decremented when a mimic object or faceplate button is clicked.	REAL	Greater than zero.

3. MANUAL_SP: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.
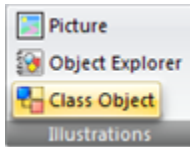
	MANUAL_SP: Mimic object selection in CimEdit.
	MANUAL_SP: Mimic object runtime data.

3.1. MANUAL_SP: Mimic Object Selection in CimEdit

	Place an MANUAL_SP mimic object on a CimEdit screen.
	(Optional) Change the function block object or mimic object.

1. Place an MANUAL_SP mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.

1. Select an MANUAL_SP object in the Select an Object browser.
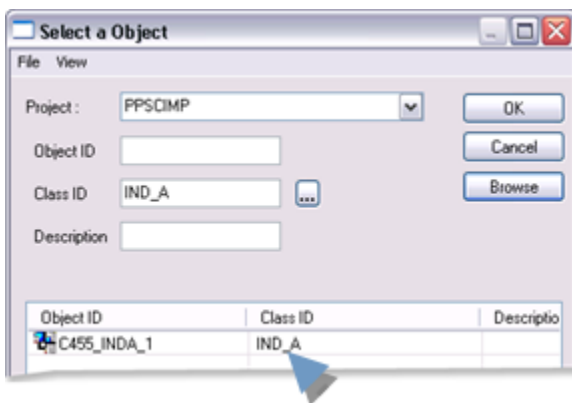
Result: The MANUAL_SP default mimic object displays on the CimEdit screen.

> **Note:**
> When you close and re-open CimEdit, the tag name will not display; the function block name, e.g.
> MANUAL_SP, will display. Simply double-click the object to re-display the tag name.

1. (Optional) Change the function block Object or mimic object.

Mimic object only

1. Right-click the MANUAL_SP mimic object.
2. Select another object listed on the Popup menu.
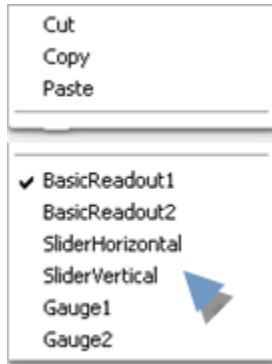
Mimic object and/or function block object.

3. Right-click the MANUAL_SP mimic object.

4. Select Properties on the Popup menu.

5. Select the Class Object tab.

6. Do one or both of the following.
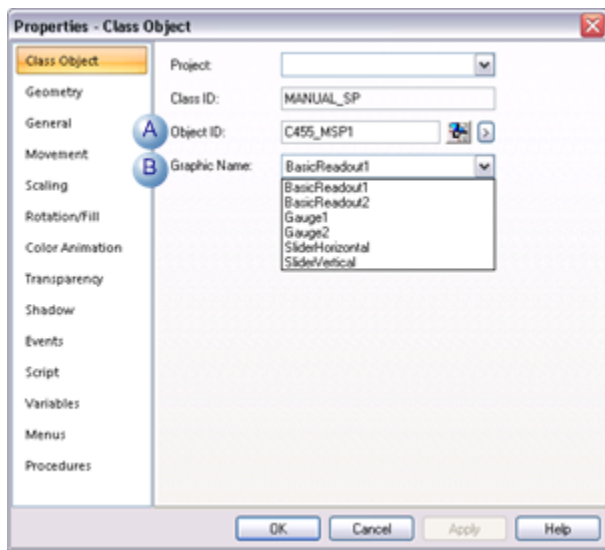
	Field	Select from a list of available MANUAL_-SP:
1	Object ID	Function block objects.
2	Graphic Name	Mimic objects.

7. Click OK.

The selected mimic object displays on the CimEdit screen when you use either method.

8. Configure the mimic object size and other objects, as required.

The mimic object is ready for runtime.

3.2. MANUAL_SP: Mimic Object Runtime Data

Mimic objects that are available for the PPS MANUAL_SP block are as follows.

> **Note:**
>
> A runtime user can open the MANUAL_SP faceplate through any object. However, the exact data that the mimic object displays depends on which object is being used.
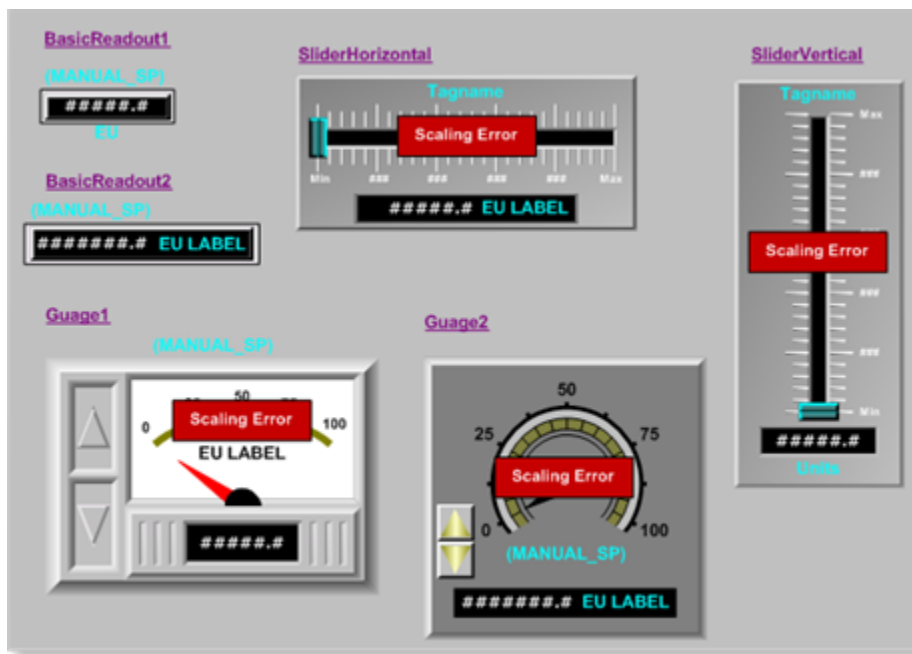
Basic Readout 1
Basic Readout 2
Gauge 1
Gauge 2
Slider Horizontal
Slider Vertical

MANUAL_SP: Basic Readout 1

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	(Read/Write) MANUAL_SP function block's output value.
3	Measurement unit that is specified in the object definition, e.g. PSI, inches, volts, PSI, SCF, DegF. The measurement unit must be defined with 8 characters or less.
4	The function block name, MANUAL_SP. Displays at the top of the Popup menu.

5	Point View. Displays the MANUAL_SP points in the Point View window.
6	Point Control Panel. Displays the MANUAL_SP points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PAC1.FT200 Hide Label: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

MANUAL_SP: Basic Readout 2

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	(Read/Write) MANUAL_SP function block's output value.
3	Measurement unit that is specified in the object definition, e.g. PSI, inches, volts, PSI, SCF, DegF. The measurement unit must be defined with 8 characters or less.
4	The function block name, MANUAL_SP. Displays at the top of the Popup menu.
5	Point View. Displays the MANUAL_SP points in the Point View window.
6	Point Control Panel. Displays the MANUAL_SP points in the Point Control Panel.

7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PAC1.FT200 Hide Label: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

MANUAL_SP: Gauge 1

Refer to the following table for descriptions of the fields.
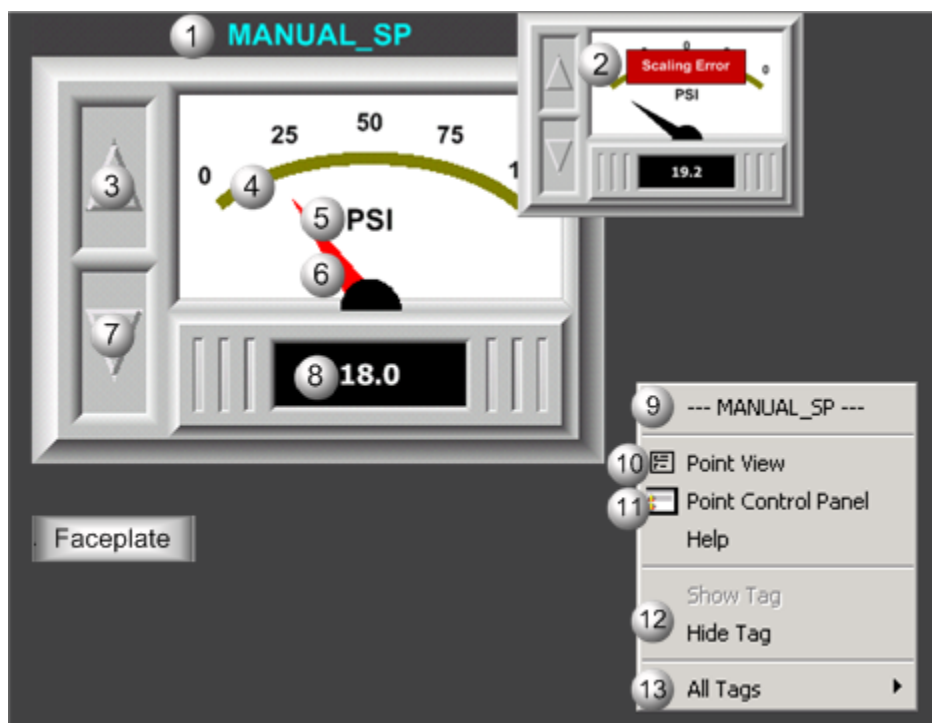
Area	Description
1	Object Label.
2	Scaling Error displays if a scaling error is detected. The faceplate displays no data when there is a scaling error.
3	Up Button. Click the Up button to increase the manual setpoint by the amount specified by the attribute OP push button rate.

4	Scaling that represents the manual setpoint function block's output value scale.
5	Measurement unit that is specified in the object definition, e.g. PSI, inches, volts, PSI, SCF, DegF. The measurement unit must be defined with 8 characters or less.
6	Needle movement is based on the manual setpoint's value.
7	Down Button. Click the Down button to decrease the manual setpoint by the amount specified by the attribute OP push button rate.
8	(Read/Write) MANUAL_SP function block's output value.
9	The function block name, MANUAL_SP. Displays at the top of the Popup menu.
10	Point View. Displays the MANUAL_SP points in the Point View window.
11	Point Control Panel. Displays the MANUAL_SP points in the Point Control Panel.
12	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PAC1.FT200 Hide Label: Hides the label for the selected mimic object.
13	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

MANUAL_SP: Gauge 2

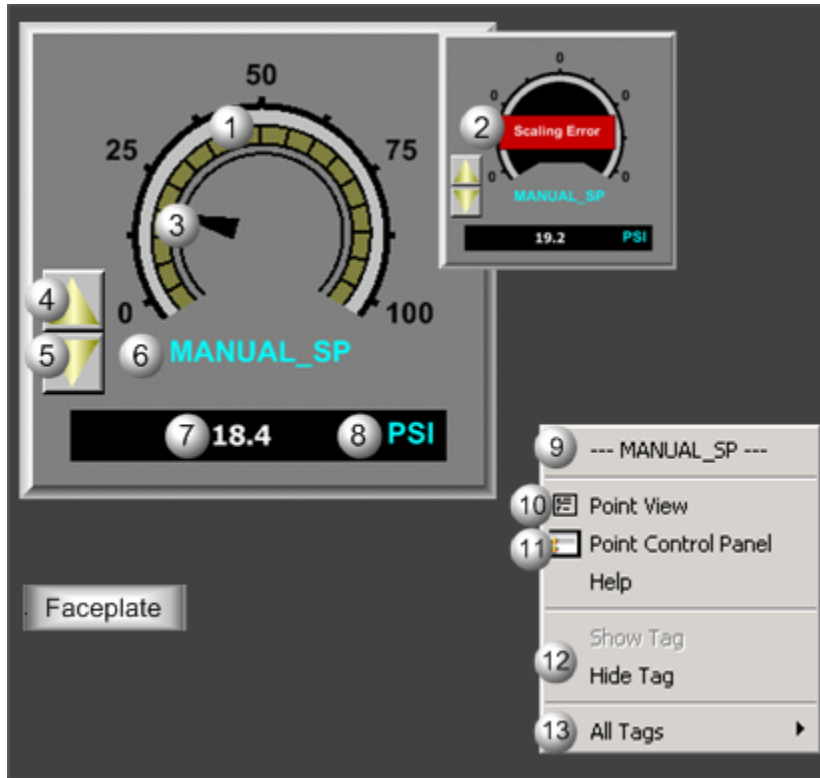Refer to the following table for descriptions of the fields.

Area	Description
1	Scaling that represents the manual setpoint function block's output value scale.
2	Scaling Error displays if a scaling error is detected. The faceplate displays no data when there is a scaling error.
3	Needle movement is based on the manual setpoint's value.
4	Up Button. Click the Up button to increase the manual setpoint by the amount specified by the attribute OP push button rate.
5	Down Button. Click the Down button to decrease the manual setpoint by the amount specified by the attribute OP push button rate.
6	Object Label.
7	(Read/Write) MANUAL_SP function block's output value.
8	Measurement unit that is specified in the object definition, e.g. PSI, inches, volts, PSI, SCF, DegF. The measurement unit must be defined with 8 characters or less.
9	The function block name, MANUAL_SP. Displays at the top of the Popup menu.

10	Point View. Displays the MANUAL_SP points in the Point View window.
11	Point Control Panel. Displays the MANUAL_SP points in the Point Control Panel.
12	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PAC1.FT200 Hide Label: Hides the label for the selected mimic object.
13	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

MANUAL_SP: Horizontal Slider

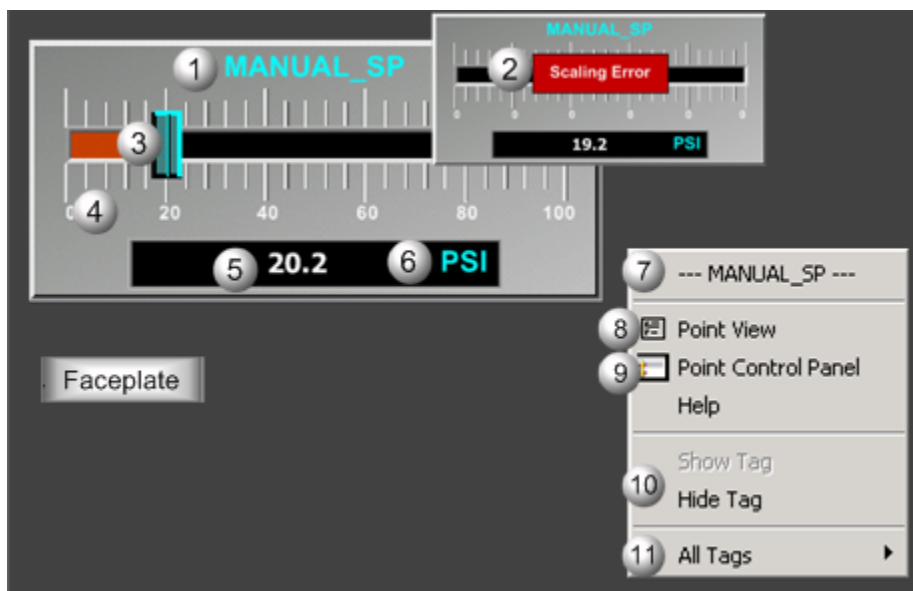Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Scaling Error displays if a scaling error is detected. The faceplate displays no data when there is a scaling error.
3	Slider for the manual setpoint value.
4	Scaling that represents the manual setpoint function block's output value scale.

5	(Read/Write) MANUAL_SP function block's output value.
6	Measurement unit that is specified in the object definition, e.g. PSI, inches, volts, PSI, SCF, DegF. The measurement unit must be defined with 8 characters or less.
7	The function block name, MANUAL_SP. Displays at the top of the Popup menu.
8	Point View. Displays the MANUAL_SP points in the Point View window.
9	Point Control Panel. Displays the MANUAL_SP points in the Point Control Panel.
10	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PAC1.FT200 Hide Label: Hides the label for the selected mimic object.
11	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

MANUAL_SP: Vertical Slider

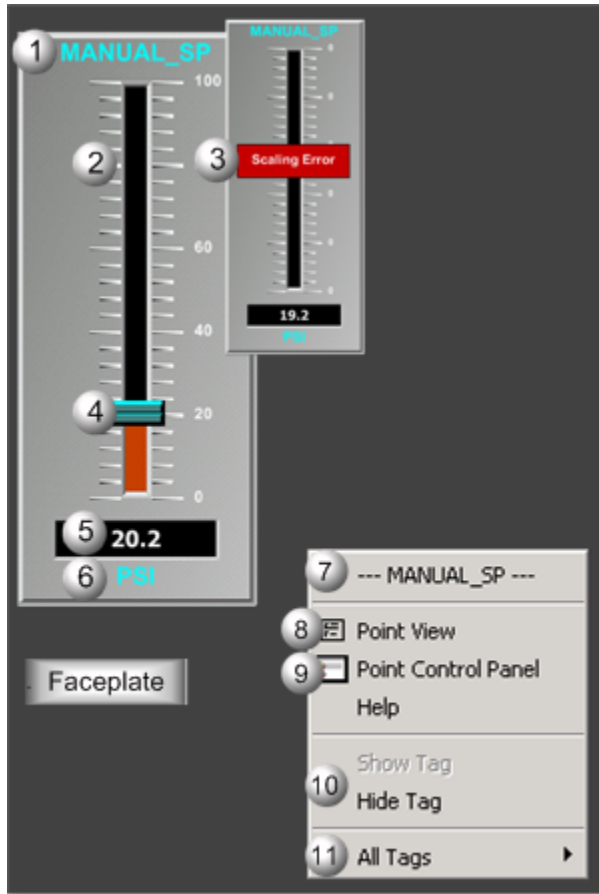Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Scaling that represents the manual setpoint function block's output value scale.
3	Scaling Error displays if a scaling error is detected. The faceplate displays no data when there is a scaling error.
4	Slider for the manual setpoint value.
5	(Read/Write) MANUAL_SP function block's output value.
6	Measurement unit that is specified in the object definition, e.g. PSI, inches, volts, PSI, SCF, DegF. The measurement unit must be defined with 8 characters or less.
7	The function block name, MANUAL_SP. Displays at the top of the Popup menu.
8	Point View. Displays the MANUAL_SP points in the Point View window.
9	Point Control Panel. Displays the MANUAL_SP points in the Point Control Panel.

10	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PAC1.FT200 Hide Label: Hides the label for the selected mimic object.
11	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

4. MANUAL_SP: Faceplate

4. MANUAL_SP: Faceplate

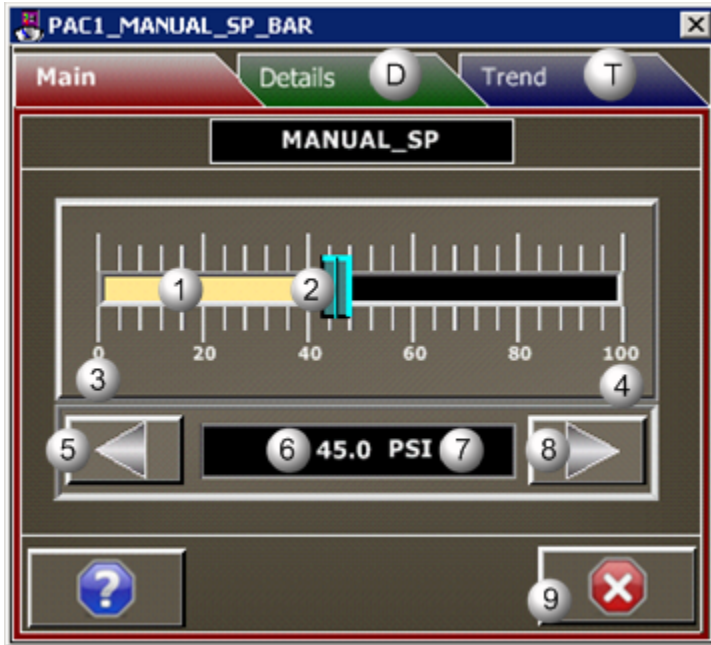The MANUAL_SP faceplate allows operators to write a setpoint to a programmable automation controller (PAC).

Click a tab button to display and review features for each MANUAL_SP faceplate frame.

MANUAL_SP Faceplate: Main Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	Animated fill level displays the manual setpoint value in relation to its range. Animated fill will not display if invalid or no scaling is configured.
2	Slider action for the manual setpoint. Select and drag the slider handle to the desired setpoint value. It will not display if invalid or no scaling is configured.
3	Manual setpoint minimum value in Engineering units. Question marks display if invalid or no scaling is configured. To determine why question marks display, view the scaling parameters on the Details frame.
4	Manual setpoint maximum value in Engineering units. Question marks display if invalid or no scaling is configured. To determine why question marks display, view the scaling parameters on the Details frame.
5	Down Button. Click to decrement the manual setpoint by the amount given by the Pushbutton Rate. Use push buttons to decrease/increase the setpoint in a more gradual manner than can be achieved by using the slider action or direct entry of the setpoint.
6	Current manual setpoint value. To change the value, click the current value and enter a specific setpoint. The setpoint will adjust to the new value immediately.
7	Measurement unit that is specified in the object definition, e.g. PSI, inches, volts, PSI, SCF, DegF. The measurement unit must be defined with 8 characters or less.

| 8 | Up Button. Click to increment the manual setpoint by the amount given by the Pushbutton Rate. Use push buttons to decrease/increase the setpoint in a more gradual manner than can be achieved by using the slider action or direct entry of the setpoint. |
| 9 | Exit button. Click to close the faceplate. |

MANUAL_SP Faceplate: Details Frame
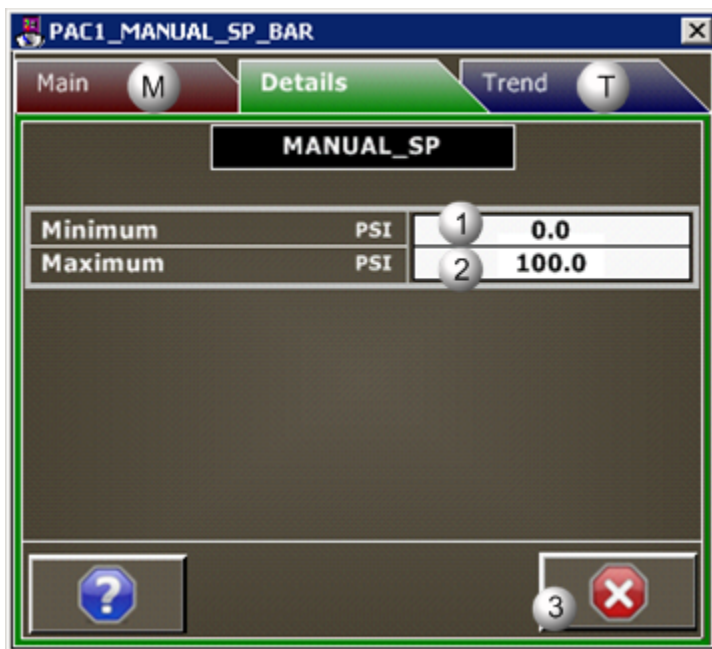
Refer to the following table for descriptions of the fields.

> **Note:**
> Data entry fields in this Details frame are writable when a user Is associated with both the object's resource and a role that has at least a Level 200. If, after you log in, the data entry fields should be writable and are not, consult your system administrator.

Area	Description
1	Manual setpoint minimum value. In order to have scaling, the minimum value must be lower than the maximum value.
2	Manual setpoint maximum value. In order to have scaling, the maximum value must be greater than the minimum value.
3	Exit Button. Click to close the faceplate.

MANUAL_SP Faceplate: Trend Frame

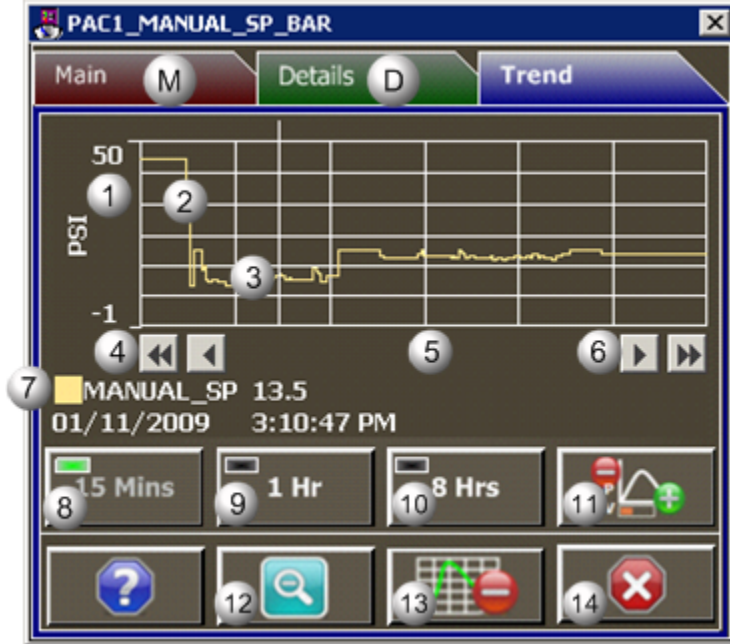Refer to the following table for descriptions of the fields.

Area	Description
1	Y-Axis. Displays engineering units specified in the object definition, e.g. PSI, inches, volts, pounds per hour, standard cubic feet.
2	Trend line of the MANUAL_ SP analog value.
3	Trend Slider. As the slider is moved, the following displays in the legend based on the slider position: Slider position, Y-axis value, Date, and Time.
4	Trend Scroll Back Buttons. Click to scroll back in time. One page: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart back in time by the following increments: 15 Minutes, 1 hour, or 8 hours. 50 percent: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart back in time by the following increments: 7.5 minutes, 30 minutes, 4 hours.
5	X-axis. Local (PC) time.
6	Trend Scroll Forward Buttons. Click to scroll forward in time. One page: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart forward in time by the following increments: 15 Minutes, 1 hour, or 8 hours. 50 percent: Depend-

	ing on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart forward in time by the following increments: 7.5 minutes, 30 minutes, 4 hours.
7	The Trend chart legend displays the following based on the slider position: the Display line, the Line value at the slider, Date at the slider, and the Time at the slider.
8	15 Mins Button: The Trend chart time duration is 15 minutes. The button's indication light is green when this time span is selected.
9	1 Hr Button: the Trend chart time duration is one hour. The button's indication light is green when this time span is selected.
10	8 Hrs Button: The Trend chart time duration is eight hours. The button's indication light is green when this time span is selected.
11	Chart Display Button: Display toggle button to maximize/minimize chart and information display. Clicking the button moves you to successive states. The three states are: No Y-axis/No Legend, Y-axis/No Legend, and Y-axis and Full Legend. The Y-axis, when displayed, shows the engineering units specified in the object definition, e.g. PSI, inches, volts, pounds per hour, standard cubic feet. The date and time continue to display.
12	Unzoom Button. Draw a box around the area to be zoomed. The Trend chart zooms to your selection. Click the Unzoom button to return the chart to its normal display size.
13	Grid Button. Click to display/hide the grid. Default: The grid displays.
14	Exit Button. Click to close the faceplate.

PBUTTON: Object Configuration and Use

PBUTTON: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is built from the EGD server.

	PBUTTON: Ethernet global data
	PBUTTON: Object properties.

	PBUTTON: Mimic objects.

1. PBUTTON: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS PBUTTON block is as follows.

Global Data	Data Type	Description
PB	UINT	Pushbutton Event
ST	UINT	Pushbutton Status

2. PBUTTON: Object Properties

Open an Object Properties dialog box for an object with an PBUTTON class ID.

The tabs in the Object dialog box are:

- PBUTTON General.
- PBUTTON HMI Properties.

PBUTTON General

The Object dialog box General tab provides data that precisely identifies the PBUTTON object.

> 📝 **Note:**
> The **Description** field is the only Read/Write field on the General tab.
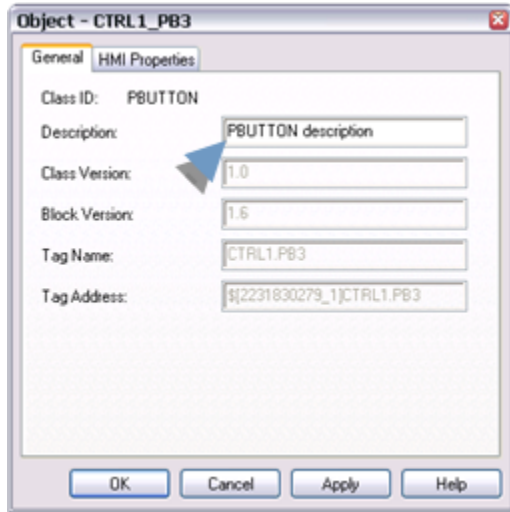
PBUTTON HMI Properties

Each PPS function block has HMI properties.

When an Object dialog box is opened for a selected object, the values for these properties:

- Can be defined in the Object dialog box.
- Will display on the faceplate when it is first opened and as long as they are not changed.
- (Some properties) May be changed by faceplate users who have a role *(on page 12)* with the required level.

The HMI properties required for the HMI Discrete Pushbutton block are as follows.
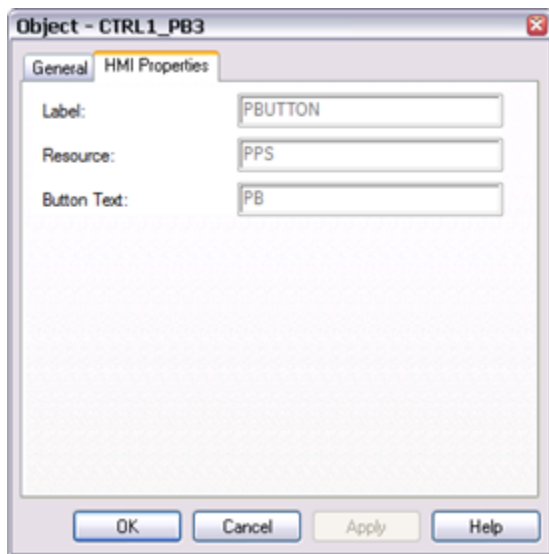
HMI Properties	Description	Data Type	Restrictions
Label	Object identification	String	
Resource	Resource.	String	16 Characters or less
Button Text	Text displayed on button.	String	10 Characters or less

3. PBUTTON: Mimic Objects

3. PBUTTON: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

3.1 *(on page 303)*	PBUTTON: Mimic object selection in CimEdit.
3.2 *(on page 305)*	PBUTTON: Mimic object runtime data.

3.1. PBUTTON: Mimic Object Selection in CimEdit

A *(on page 303)*	Place an PBUTTON mimic object on a CimEdit screen.
B *(on page 304)*	(Optional) Change the function block object or mimic object.

1. Place an PBUTTON mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.
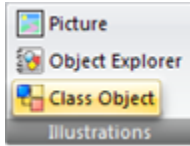
1. Select an PBUTTON object in the Select an Object browser.
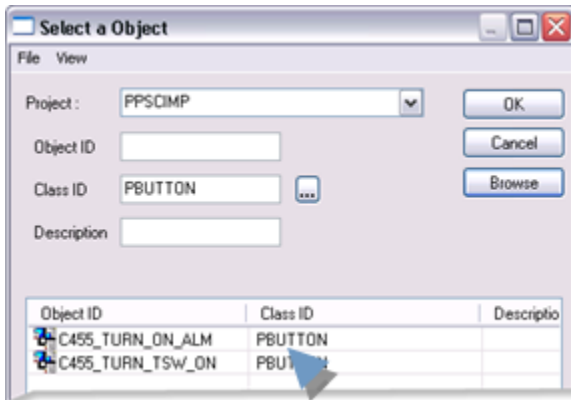
Result: The PBUTTON default mimic object displays on the CimEdit screen.

> **Note:**
> When you close and re-open CimEdit, the tag name will not display; the function block name, e.g.
> PBUTTON, will display. Simply double-click the object to re-display the tag name.

1. (Optional) Change the function block Object or mimic object.

Mimic object only

1. Right-click the PBUTTON mimic object.
2. Select another object listed on the Popup menu.

Mimic object and/or function block object.

3. Right-click the PBUTTON mimic object.

4. Select Properties on the Popup menu.

5. Select the Class Object tab.

6. Do one or both of the following.
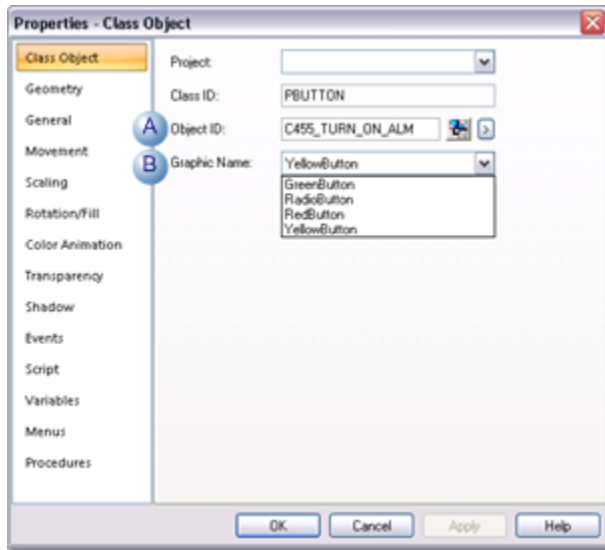
	Field	Select from a list of available PBUT-TON:
1	Object ID	Function block objects.
2	Graphic Name	Mimic objects.

7. Click OK.

The selected mimic object displays on the CimEdit screen when you use either method.

8. Configure the mimic object size and other objects, as required.

The mimic object is ready for runtime.

3.2. PBUTTON: Mimic Object Runtime Data

3.2. PBUTTON: Mimic Object Runtime Data

Mimic objects that are available for the PPS PBUTTON block are as follows.

> **Note:**
>
> A runtime user can open the PBUTTON faceplate through any object. However, the exact data that the mimic object displays depends on which object is being used.
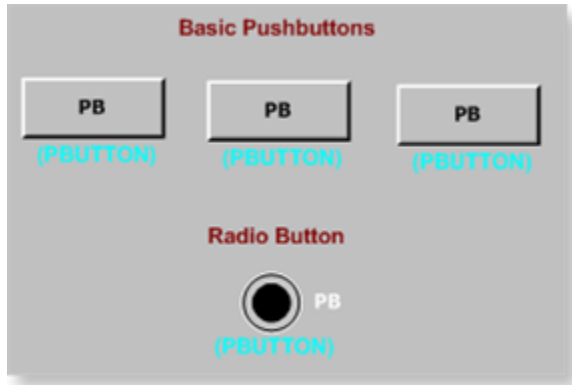
Green Button
Radio Button
Red Button
Yellow But-ton

PBUTTON: Green Button

Refer to the following table for descriptions of the fields.

Area	Description
1	Button Label. The label on your selected button was entered by your system's applications engineer. PB is the default.
2	Button Color. The pushbutton, when pressed, sets a momentary Boolean variable in the controller. When Enabled, it displays green, red, yellow, or white depending on the selected mimic object, indicating the associated point is available (the momentary PB variable is on). When Off, it displays black (the default).
3	Object Label.
4	The function block name, PBUTTON. Displays at the top of the Popup menu.
5	Point View. Displays the PBUTTON points in the Point View window.
6	Point Control Panel. Displays the PBUTTON points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PBUTTON Hide Label: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

PBUTTON: Radio Button

Refer to the following table for descriptions of the fields.

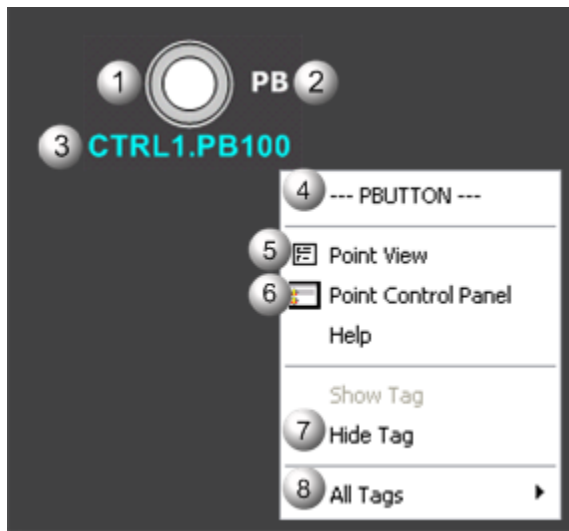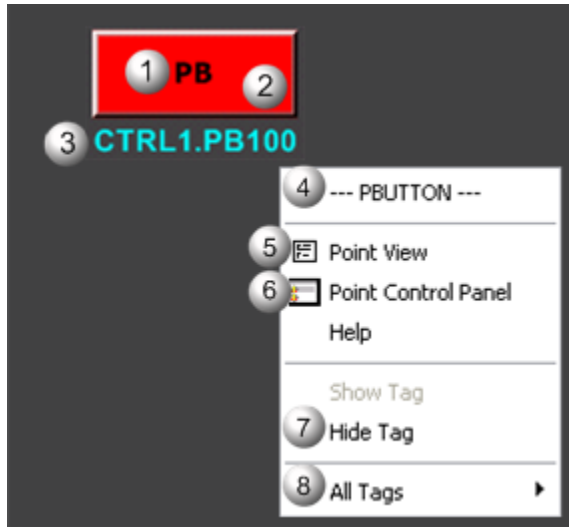| Area	Description
1	Button Color. The pushbutton, when pressed, sets a momentary Boolean variable in the controller. When Enabled, it displays green, red, yellow, or white depending on the selected mimic object, indicating the associated point is available (the momentary PB variable is on). When Off, it displays black (the default).
2	Button Label. The label on your selected button was entered by your system's applications engineer. PB is the default.
3	Object Label.
4	The function block name, PBUTTON. Displays at the top of the Popup menu.
5	Point View. Displays the PBUTTON points in the Point View window.
6	Point Control Panel. Displays the PBUTTON points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PBUTTON Hide Label: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

PBUTTON: Red Button

Refer to the following table for descriptions of the fields.

Area	Description
1	Button Label. The label on your selected button was entered by your system's applications engineer. PB is the default.
2	Button Color. The pushbutton, when pressed, sets a momentary Boolean variable in the controller. When Enabled, it displays green, red, yellow, or white depending on the selected mimic object, indicating the associated point is available (the momentary PB variable is on). When Off, it displays black (the default).
3	Object Label.
4	The function block name, PBUTTON. Displays at the top of the Popup menu.
5	Point View. Displays the PBUTTON points in the Point View window.
6	Point Control Panel. Displays the PBUTTON points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PBUTTON Hide Label: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Dis-

	plays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

PBUTTON: Yellow Button

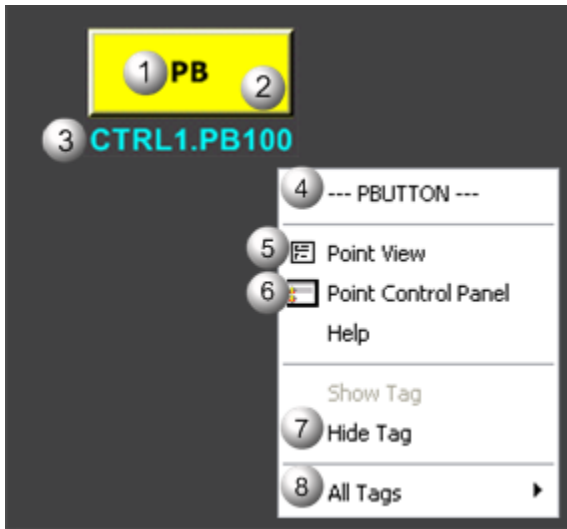Refer to the following table for descriptions of the fields.

Area	Description
1	Button Label. The label on your selected button was entered by your system's applications engineer. PB is the default.
2	Button Color. The pushbutton, when pressed, sets a momentary Boolean variable in the controller. When Enabled, it displays green, red, yellow, or white depending on the selected mimic object, indicating the associated point is available (the momentary PB variable is on). When Off, it displays black (the default).
3	Object Label.
4	The function block name, PBUTTON. Displays at the top of the Popup menu.
5	Point View. Displays the PBUTTON points in the Point View window.
6	Point Control Panel. Displays the PBUTTON points in the Point Control Panel.
7	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PBUTTON Hide Label: Hides the label for the selected mimic object.

8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

PID: Object Configuration and Use

PID: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is built from the EGD server.

1. PID: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS PID block is as follows.

Global Data	Data Type	Description
FC	UINT	Faceplate Command

KD	REAL	Derivative Time
KI	REAL	Integral Reset
KP	REAL	Proportional Gain
ON	REAL	Minimum OP
OP	REAL	Controller Output
OX	REAL	Maximum OP
PI	REAL	Process Variable Indication
PN	REAL	Minimum PV
PV		Process Variable
PX	REAL	Maximum PV
SC	REAL	Controller Setpoint
SK	UINT	Setpoint Tracking Switch
SP		Setpoint
ST	DWORD	HMI Status Word

2. PID: Object Properties

Open an Object Properties dialog box for an object with an PID class ID.

The tabs in the Object dialog box are:

- PID General.
- PID HMI Properties.

PID General

The Object dialog box General tab provides data *(on page 32)* that precisely identifies the PID object.

> **Note:**
> The **Description** field is the only Read/Write field on the General tab.
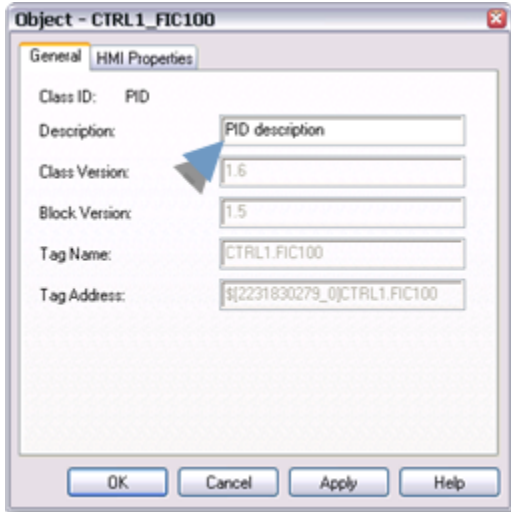
PID HMI Properties

Each PPS function block has HMI properties.

When an Object dialog box is opened for a selected object, the values for these properties:

- Can be defined in the Object dialog box.
- Will display on the faceplate when it is first opened and as long as they are not changed.
- (Some properties) May be changed by faceplate users who have a role *(on page 12)* with the required level.

The HMI properties required for the PID block are as follows.
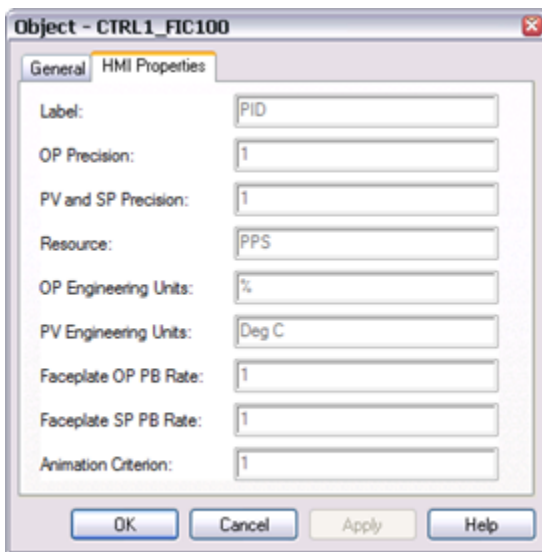
HMI Properties	Description	Data Type	Restrictions
Label	Object description.	String	
OP Precision	Number of digits displayed to the right of the decimal point.	Integer	7 Digits
PV and SP Precision	Number of digits displayed to the right of the decimal point.	Integer	7 Digits
Resource	CIMPLICITY resource.	String	16 Characters or less
OP Engineering Units	Output Variable Engineering units.	String	8 Characters or less
PV Engineering Units	Process Variable Engineering units.	String	8 Characters or less
Faceplate OP PB Rate	The rate at which the output increments/decrements in Manual Mode when a mouse clicks on the Adjust OP buttons.	REAL	Greater than or equal to 0.0
Faceplate SP PB Rate	The rate at which the setpoint increments/decrements in Local Mode when a mouse clicks on the Adjust SP buttons.	REAL	Greater than or equal to 0.0
Animation Criterion	The percentage of the full range of OP that must be exceeded by OP to Indicate that the Valve/Damper is open.	Real	Greater than or equal to 0.0

3. PID: Mimic Objects

3. PID: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

	PID: Mimic object selection in CimEdit.

| 3.2 *(on page 317)* | PID: Mimic object runtime data. |

3.1. PID: Mimic Object Selection in CimEdit

A *(on page 315)*	Place an PID mimic object on a CimEdit screen.
B *(on page 316)*	(Optional) Change the function block object or mimic object.

1. Place an PID mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.
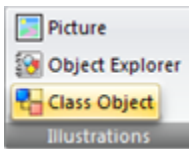
1. Select an PID object in the Select an Object browser.
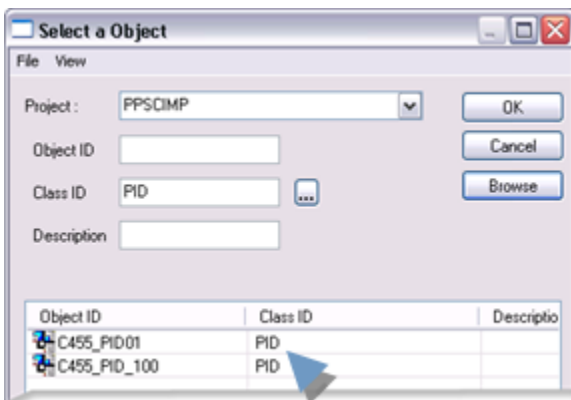
Result: The PID default mimic object displays on the CimEdit screen.

> **Note:**
>
> When you close and re-open CimEdit, the tag name will not display; the function block name, e.g. PID, will display. Simply double-click the object to re-display the tag name.

1. (Optional) Change the function block Object or mimic object.

Mimic object only

1. Right-click the PID mimic object.
2. Select another object listed on the Popup menu.
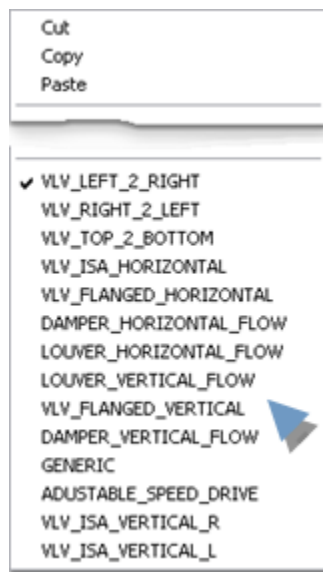
Mimic object and/or function block object.

3. Right-click the PID mimic object.
4. Select Properties on the Popup menu.
5. Select the Class Object tab.
6. Do one or both of the following.
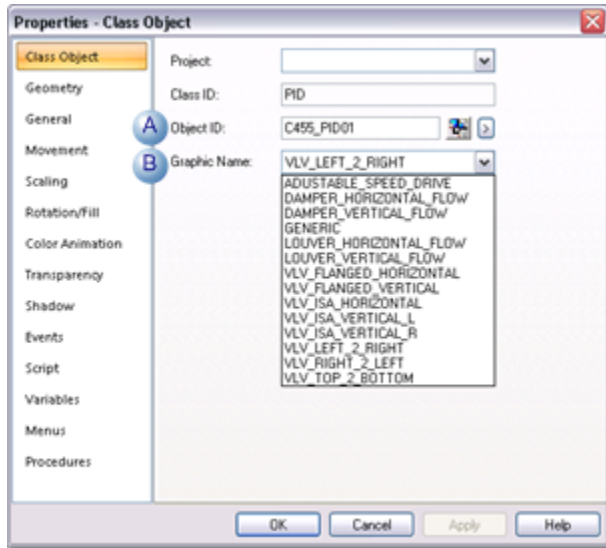
	Field	Select from a list of available PID:
1	Object ID	Function block objects.
2	Graphic Name	Mimic objects.

7. Click OK.

The selected mimic object displays on the CimEdit screen when you use either method.

8. Configure the mimic object size and other objects, as required.

The mimic object is ready for runtime.

3.2. PID: Mimic Object Runtime Data

Mimic objects that are available for the PPS PID block are as follows.

> **Note:**
> A runtime user can open the PID faceplate through any object. However, the exact data that the mimic object displays depends on which object is being used.

Adjustable Speed Drive
Damper Horizontal Flow
Damper Vertical Flow
Generic

Louver Horizontal Flow
Louver Vertical Flow
VLV Flanged Horizontal
VLV Flanged Vertical
VLV ISA Horizontal
VLV ISA Vertical_L
VLVISA Vertical_R
VLV Left 2 Right
VLV Right 2 Left
VLV Top 2 Bottom

PID: Adjustable Speed Drive

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Tracking Active Indicator.
3	PID function block's OP (controller output) value.

4	OP Mode: M for Manual, or A for Automatic.
5	The OP engineering unit is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
6	SP Mode: L for Local, or R for Remote.
7	The function block name, PID. Displays at the top of the Popup menu.
8	Point View. Displays the PID points in the Point View window.
9	Point Control Panel. Displays the PID points in the Point Control Panel.
10	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PID Hide Label: Hides the label for the selected mimic object.
11	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

PID: Damper Horizontal Flow

Refer to the following table for descriptions of the fields.

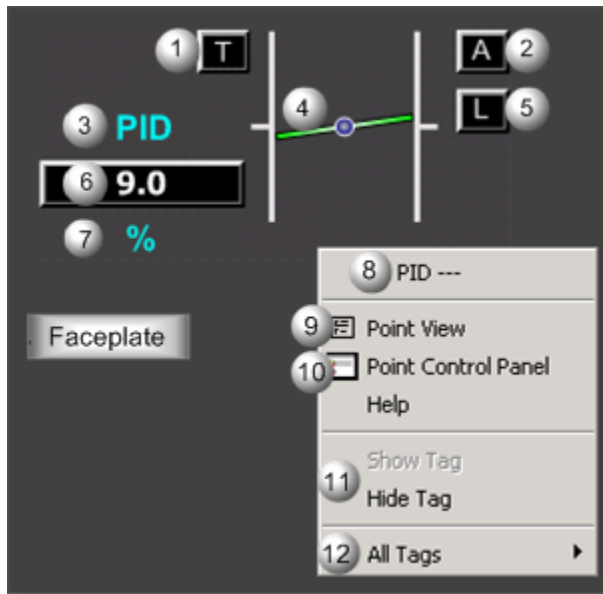| Area	Description
1	Object Label.
2	Bar angle. Identifies the damper or louver percent open: 100% closed (open), 50% open, or 0% open (closed).
3	Tracking Active Indicator.
4	PID function block's OP (controller output) value.
5	OP Mode: M for Manual, or A for Automatic.
6	The OP engineering unit is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
7	SP Mode: L for Local, or R for Remote.
8	The function block name, PID. Displays at the top of the Popup menu.
9	Point View. Displays the PID points in the Point View window.
10	Point Control Panel. Displays the PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

PID: Damper Vertical Flow

Refer to the following table for descriptions of the fields.

Area	Description
1	Tracking Active Indicator.
2	OP Mode: M for Manual, or A for Automatic.
3	Object Label.
4	Bar angle. Identifies the damper or louver percent open: 100% closed (open), 50% open, or 0% open (closed).
5	SP Mode: L for Local, or R for Remote.
6	PID function block's OP (controller output) value.
7	The OP engineering unit is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
8	The function block name, PID. Displays at the top of the Popup menu.
9	Point View. Displays the PID points in the Point View window.
10	Point Control Panel. Displays the PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Dis-

plays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

PID: Generic

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Tracking Active Indicator.
3	PID function block's OP (controller output) value.
4	OP Mode: M for Manual, or A for Automatic.
5	The OP engineering unit is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
6	SP Mode: L for Local, or R for Remote.
7	The function block name, PID. Displays at the top of the Popup menu.
8	Point View. Displays the PID points in the Point View window.
9	Point Control Panel. Displays the PID points in the Point Control Panel.
10	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PID Hide Label: Hides the label for the selected mimic object.

| 11 | All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used. |

PID: Louver Horizontal Flow

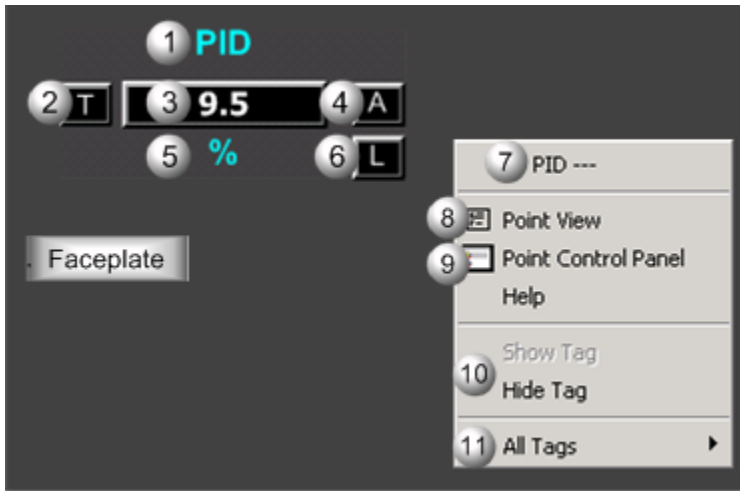Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Bar angle. Identifies the damper or louver percent open: 100% closed (open), 50% open, or 0% open (closed).
3	Tracking Active Indicator.

4	PID function block's OP (controller output) value.
5	OP Mode: M for Manual, or A for Automatic.
6	The OP engineering unit is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
7	SP Mode: L for Local, or R for Remote.
8	The function block name, PID. Displays at the top of the Popup menu.
9	Point View. Displays the PID points in the Point View window.
10	Point Control Panel. Displays the PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

PID: Louver Vertical Flow
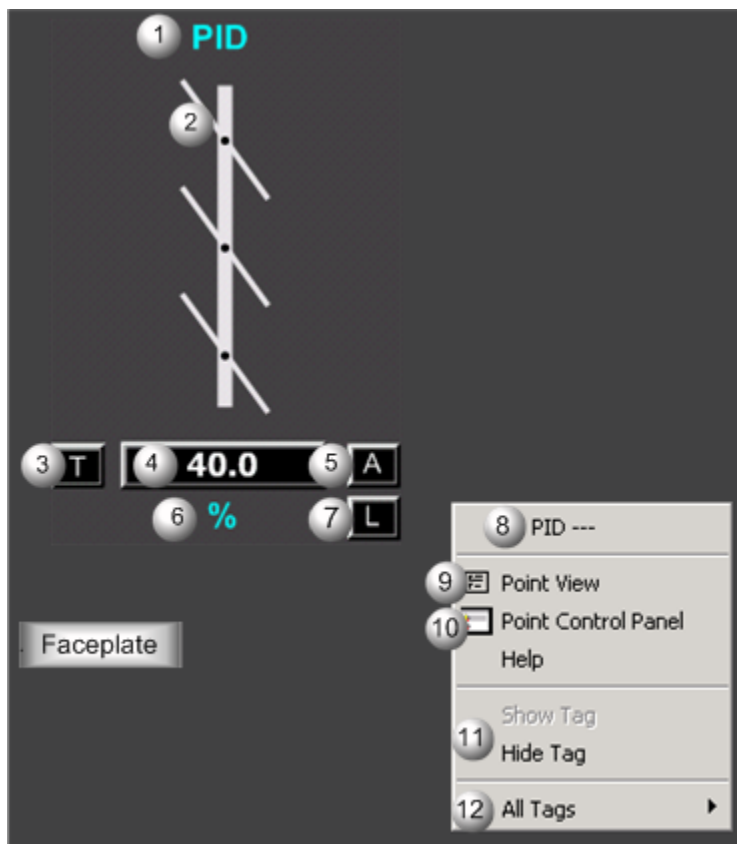
Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Tracking Active Indicator.
3	OP Mode: M for Manual, or A for Automatic.
4	Bar angle. Identifies the damper or louver percent open: 100% closed (open), 50% open, or 0% open (closed).
5	SP Mode: L for Local, or R for Remote.
6	PID function block's OP (controller output) value.
7	The OP engineering unit is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
8	The function block name, PID. Displays at the top of the Popup menu.
9	Point View. Displays the PID points in the Point View window.
10	Point Control Panel. Displays the PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

PID: VLV Flanged Horizontal

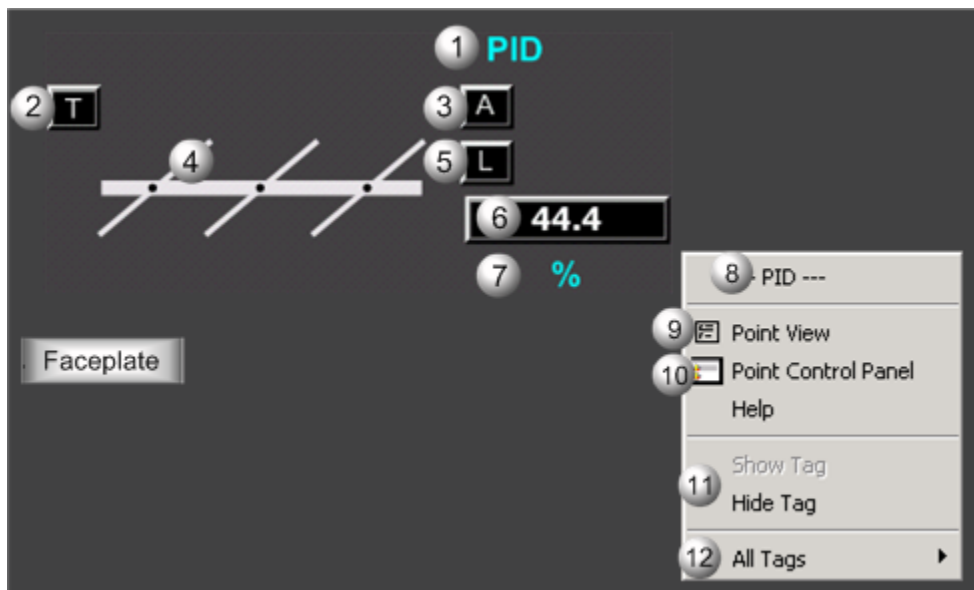Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Tracking Active Indicator.
3	Animated color. Displays if the valve is open or closed.
4	OP Mode: M for Manual, or A for Automatic.
5	SP Mode: L for Local, or R for Remote.
6	PID function block's OP (controller output) value.
7	The OP engineering unit is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
8	The function block name, PID. Displays at the top of the Popup menu.
9	Point View. Displays the PID points in the Point View window.
10	Point Control Panel. Displays the PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Dis-

plays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.
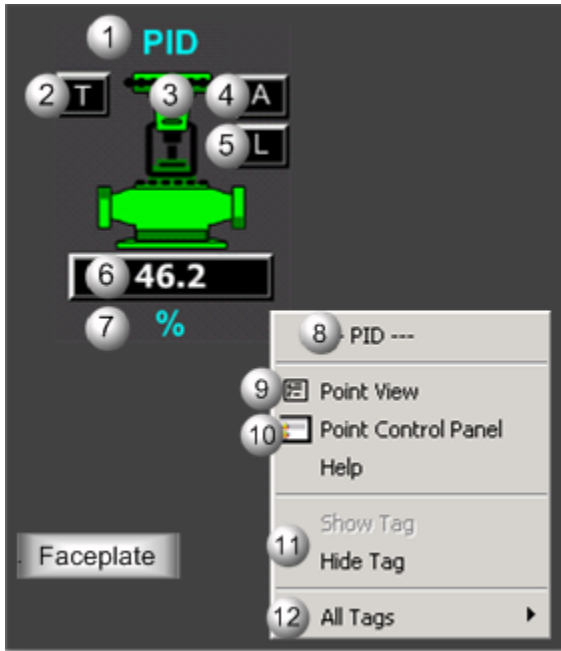
PID: VLV Flanged Vertical

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Tracking Active Indicator.
3	Animated color. Displays if the valve is open or closed.
4	OP Mode: M for Manual, or A for Automatic.
5	SP Mode: L for Local, or R for Remote.
6	PID function block's OP (controller output) value.
7	The OP engineering unit is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
8	The function block name, PID. Displays at the top of the Popup menu.
9	Point View. Displays the PID points in the Point View window.
10	Point Control Panel. Displays the PID points in the Point Control Panel.

11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

PID: VLV ISA Horizontal

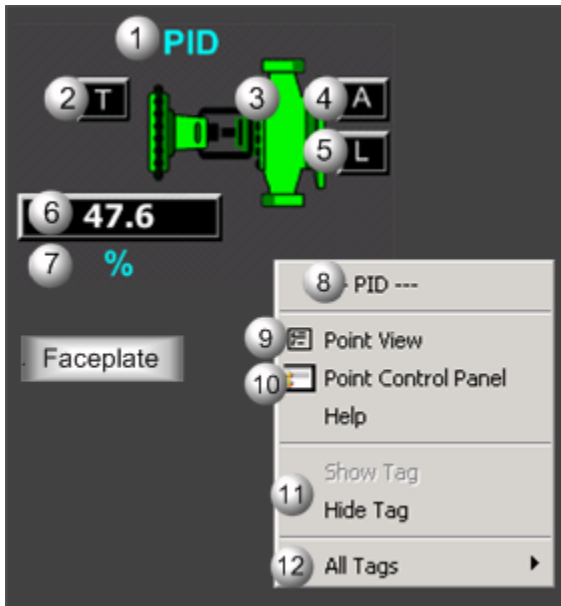Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Animated color. Displays if the valve is open or closed.
3	Tracking Active Indicator.
4	PID function block's OP (controller output) value.
5	OP Mode: M for Manual, or A for Automatic.
6	The OP engineering unit is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.

7	SP Mode: L for Local, or R for Remote.
8	The function block name, PID. Displays at the top of the Popup menu.
9	Point View. Displays the PID points in the Point View window.
10	Point Control Panel. Displays the PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

PID: VLV ISA Vertical_L

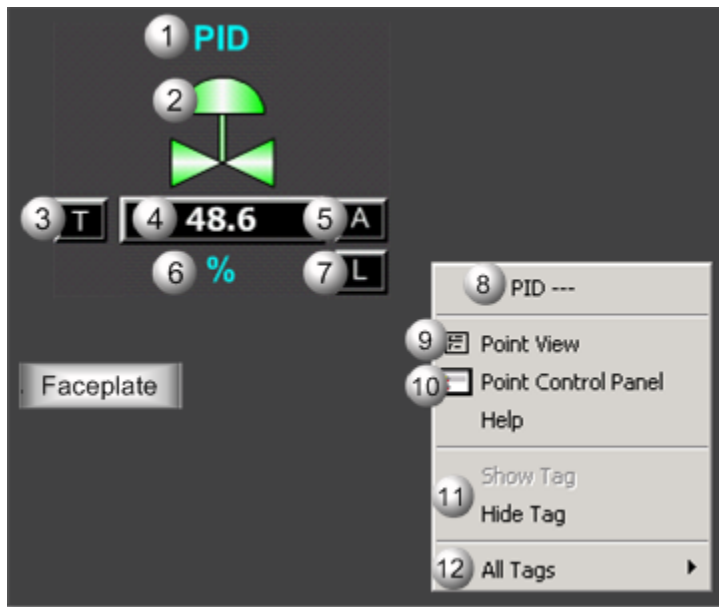Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Tracking Active Indicator.
3	PID function block's OP (controller output) value.
4	OP Mode: M for Manual, or A for Automatic.

5	Animated color. Displays if the valve is open or closed.
6	The OP engineering unit is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
7	SP Mode: L for Local, or R for Remote.
8	The function block name, PID. Displays at the top of the Popup menu.
9	Point View. Displays the PID points in the Point View window.
10	Point Control Panel. Displays the PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

PID: VLV ISA Vertical_R

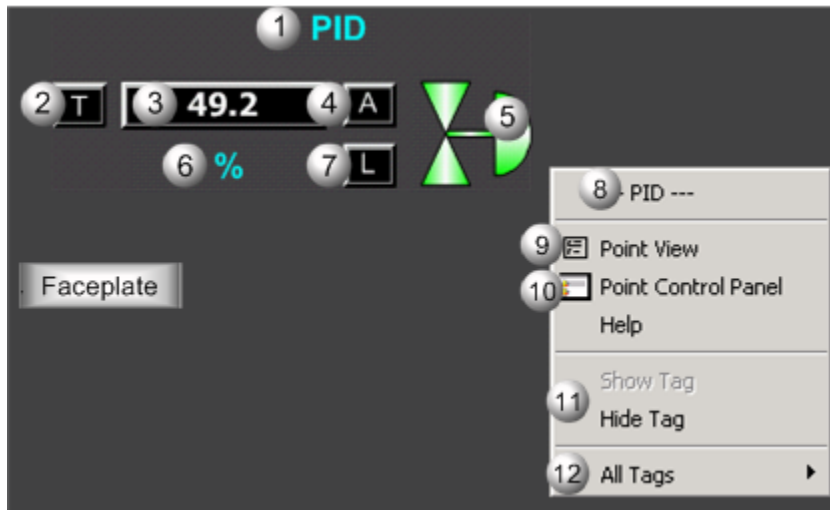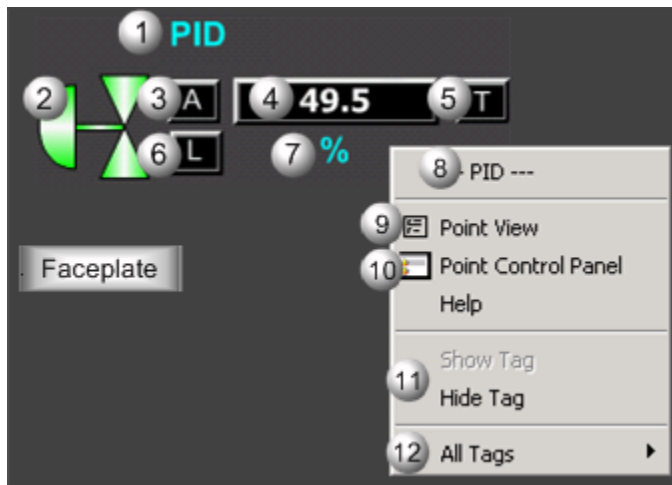Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Animated color. Displays if the valve is open or closed.

3	OP Mode: M for Manual, or A for Automatic.
4	PID function block's OP (controller output) value.
5	Tracking Active Indicator.
6	SP Mode: L for Local, or R for Remote.
7	The OP engineering unit is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
8	The function block name, PID. Displays at the top of the Popup menu.
9	Point View. Displays the PID points in the Point View window.
10	Point Control Panel. Displays the PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

PID: VLV Left 2 Right

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Animated color. Displays if the valve is open or closed.
3	PID function block's OP (controller output) value.
4	The OP engineering unit is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
5	OP Mode: M for Manual, or A for Automatic.
6	SP Mode: L for Local, or R for Remote.
7	Tracking Active Indicator.
8	The function block name, PID. Displays at the top of the Popup menu.
9	Point View. Displays the PID points in the Point View window.
10	Point Control Panel. Displays the PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Dis-

	plays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

PID: VLV Right 2 Left

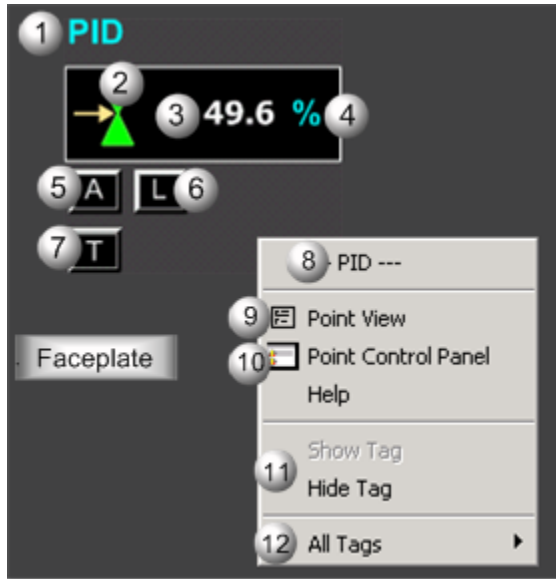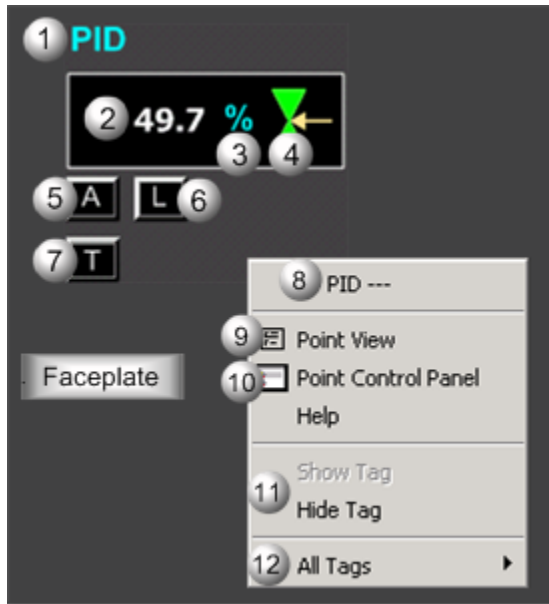Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	PID function block's OP (controller output) value.
3	The OP engineering unit is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.
4	Animated color. Displays if the valve is open or closed.
5	OP Mode: M for Manual, or A for Automatic.
6	SP Mode: L for Local, or R for Remote.
7	Tracking Active Indicator.
8	The function block name, PID. Displays at the top of the Popup menu.
9	Point View. Displays the PID points in the Point View window.
10	Point Control Panel. Displays the PID points in the Point Control Panel.

11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

PID: VLV Top 2 Bottom

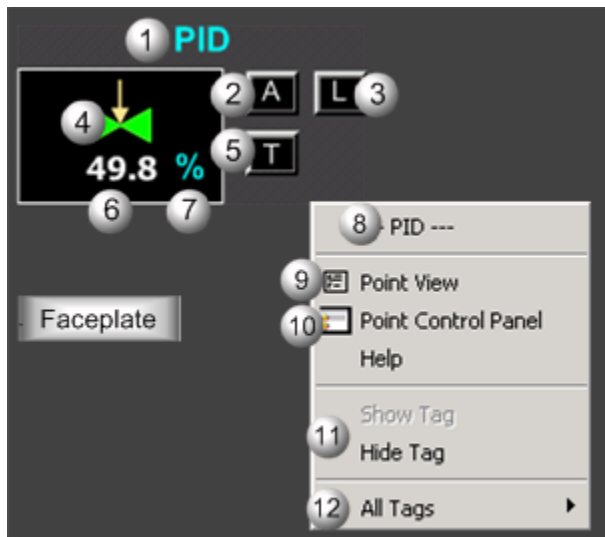Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	OP Mode: M for Manual, or A for Automatic.
3	SP Mode: L for Local, or R for Remote.
4	Animated color. Displays if the valve is open or closed.
5	Tracking Active Indicator.
6	PID function block's OP (controller output) value.
7	The OP engineering unit is specified in the object definition, e.g. PSI, SCF, DegF. The measurement unit must be specified with 8 characters or less.

8	The function block name, PID. Displays at the top of the Popup menu.
9	Point View. Displays the PID points in the Point View window.
10	Point Control Panel. Displays the PID points in the Point Control Panel.
11	Show Label/Hide Label. Show Label: (Default) Displays a descriptive label for the selected mimic object. For example: PID Hide Label: Hides the label for the selected mimic object.
12	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

4. PID: Faceplate

4. PID: Faceplate

The PID function block provides feedback control by means of proportional plus integral plus derivative action.

Click a tab to display and review features for each PID faceplate frame.

PID Faceplate Main Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	Maximum Value. Setpoint (SP) and Process Variable (PV) maximum value in Engineering units.
2	Maximum Value. Output (OP) maximum value in Engineering Units.
3	PID Setpoint (SP) Adjustment Buttons. Up Button: Each click increments the setpoint by an amount that is determined by SP PB Rate and the Push Button Rate Option. The button can only be clicked when the: SP Mode is Local, SP tracking is Inactive, or the User has adequate credentials. Push Button Rate Option (Fine Adjustment): When selected, each click increase/decreases

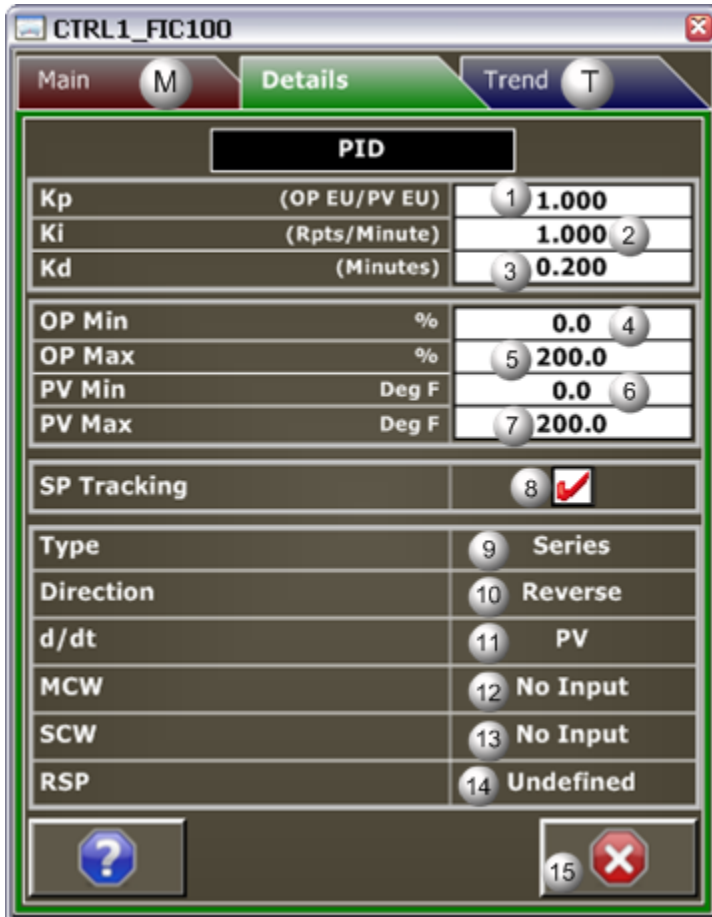|	
	the value by 1/10 of the SP PB Rate. Click the button to toggle between rate options. Push Button Rate Option (Coarse Adjustment): When selected, each click increase/decreases the value by the SP PB Rate. Click the button to toggle between rate options. Down button: Each click decrements the setpoint by an amount that is determined by SP PB Rate and the Push Button Rate Option. The button can only be clicked when the: SP Mode is Local, SP tracking is Inactive, or the User has adequate credentials.
4	Setpoint (SP) Tracking Icon. Displays when Setpoint Tracking is active. When Setpoint Tracking is active, SP tracks PV. Setpoint Tracking is used to ensure that no errors exist when the PID returns to automatic mode. When the icon displays an operator cannot change the setpoint values from the faceplate. In order for setpoint tracking to be active: Setpoint Tracking must be enabled (see the Details Frame) and the PID must be in Output Tracking or Manual mode.
5	PID Output (OP) Adjustment Buttons. Up Button: Each click increments the output by an amount that is determined by the OP PB Rate and the Push Button Rate option. The button can be clicked only when the: OP mode is Manual, Output is not tracking the reference TR, or the User has adequate credentials. Push Button Rate Option: When selected, each click increase/decreases the value by 1/10 of the OP PB Rate. Click the button to toggle between rate options. Push Button Rate Option: When selected, each click increase/decreases the value by the OP PB Rate. Click the button to toggle between rate options. Down button: Each click decrements the output by an amount that is determined by the OP PB Rate and the Push Button Rate option. The button can only be clicked when the: OP Mode is Manual, Output is not tracking the reference TR, or the User has adequate credentials.
6	OP Tracking Icon. Displays when Output Tracking is active. When Output Tracking is active OP tracks TR (tracking reference). Output Tracking is used to override OP with a value fed to the PID block. When the icon displays an operator cannot change the OP value from the faceplate; Output Tracking overrides Manual Mode adjustments. In order for output tracking to be active both TSW and TR must be defined and TSW must be On.
7	SP Animation Bar. The animation bar displays the Setpoint value in relation to its range. The setpoint range is the same as the process variable's range and defined by PV Min/Max.
8	PV Animation Bar. The animation bar displays the PV value in relation to its range. PV range is defined by PV Min/Max.
9	PID Output (OP) Animation Bar. The animation bar displays the OP value in relation to its range. OP Range is defined by the OP Min/Max.
10	Minimum Value. Setpoint (SP) and Process Variable (PV) minimum value in Engineering Units.
11	Minimum Value. Output (OP) minimum value in Engineering Units.

12	PID SP Setpoint Command. To change the value, click the current value and enter a specific set-point. The setpoint will adjust to the new value immediately. Stepwise changes to the PID setpoint can be filtered to smooth out the change in SP over time so bumps do not occur in the output. The value can be changed only when the: SP Mode is Local, SP tracking is Inactive, or the User has adequate credentials.
13	(Read-only) Process Variable Indication. Displays the PV value in Engineering Units.
14	PID Output (OP) Value. Current output value. When in Manual mode the desired output can be entered instead of clicking the Up or Down buttons. The value can be changed only when the: OP Mode is Manual, Output Tracking is Inactive, or the User has adequate credentials.
15	Process Variable (PV) Engineering Units Examples of engineering units are PSI, inches, volts, pounds per hour, standard cubic feet.
16	Output (OP) Engineering Units. Examples of engineering units are percent stroke on a valve or the units associated with the secondary loop's process variable in a cascade control strategy.
17	Remote Button Click the button, when it is enabled, to set the setpoint source for the PID to remote. When the setpoint source is Remote the PID setpoint is determined by external logic and fed to the PID block. Example: The secondary PID's setpoint in a cascade control strategy is remote because its source is the primary PID's output. If the text of the Remote button is White, it's enabled. If it is Silver, it's Disabled. Reasons the Remote Button may be Disabled include: the Remote setpoint source is active, RSP is not defined, SCW = 1 or SCW = 2, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Remote command. Actions to Determine why the Remote Button is Disabled: Check the button's indicator light to see if the source of the PID setpoint is remote, view the Details frame, or review the required user credentials. If the indicator light is Black, the setpoint source is Not Remote. If it is Green, it is Remote.
18	Local Button. Click the button, when it is enabled, to set the setpoint source for the PID to local. When the setpoint source is local the PID setpoint is set by the faceplate. If the text is White, the Local button is Enabled. If it is Silver, it is disabled. Reasons the Local Button may be Disabled include: the Local setpoint source is active, SCW = 1 or SCW = 2, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Local command. Actions to Determine why the Local Button is Disabled: Check the button's indicator light to see if the source of the PID setpoint is local, view the Details frame, or review the required user credentials. If the indicator light is Black, the setpoint source is Not Local. If it is Green, it is Local.
19	Auto Mode Button. Automatic mode means that OP is determined by the PID algorithm. Click the button, when it is enabled, to place the PID in automatic mode. If the text is White, the Auto Mode

	button is Enabled. If it is Silverm it is Disabled. Reasons the Auto Mode Button may be Disabled include: Automatic mode is active, MCW = 1 or MCW = 2, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Auto command. Actions to Determine why the Auto Mode Button is Disabled: check the button's indicator light to see if the device is in Auto mode, view the Details frame, or review required user credentials. If the Indicator light is Black, PID is in Manual Mode. If it is Green, it is in Auto Mode. The PID block ensures that when you switch from Auto mode to Manual mode and vice versa OP is bumpless.
20	Manual Mode Button. Manual mode means that OP is set by the operator using the faceplate. Click the button, when it is enabled, to place the PID in manual mode. If the text is White, the Manual Mode button is Enabled. If it is Silver, it's Disabled. Reasons the Manual Mode Button may be Disabled include: Manual mode is active, MCW = 1 or MCW = 2, or the user's credentials (user level or access to the object's resource) are inadequate to issue the Manual command. Actions to Determine why the Manual Mode Button is Disabled: check the button's indicator light to see if the device is in Manual mode, view the Details frame, or review required user credentials. If the Indicator light is Black, PID is in Auto Mode. If it is Green, it's in Manual Mode. The PID block ensures that when you switch from Auto Mode to Manual Mode and vice versa OP is bumpless.
21	Exit Button. Click to close the faceplate.

PID: Faceplate Details Frame

Refer to the following table for descriptions of the fields.

Important:

Data entry fields in this Details frame are writable when a user Is associated with both the object's resource and a role that has at least a Level 200. If, after you log in, the data entry fields should be writable and are not, consult your system administrator.

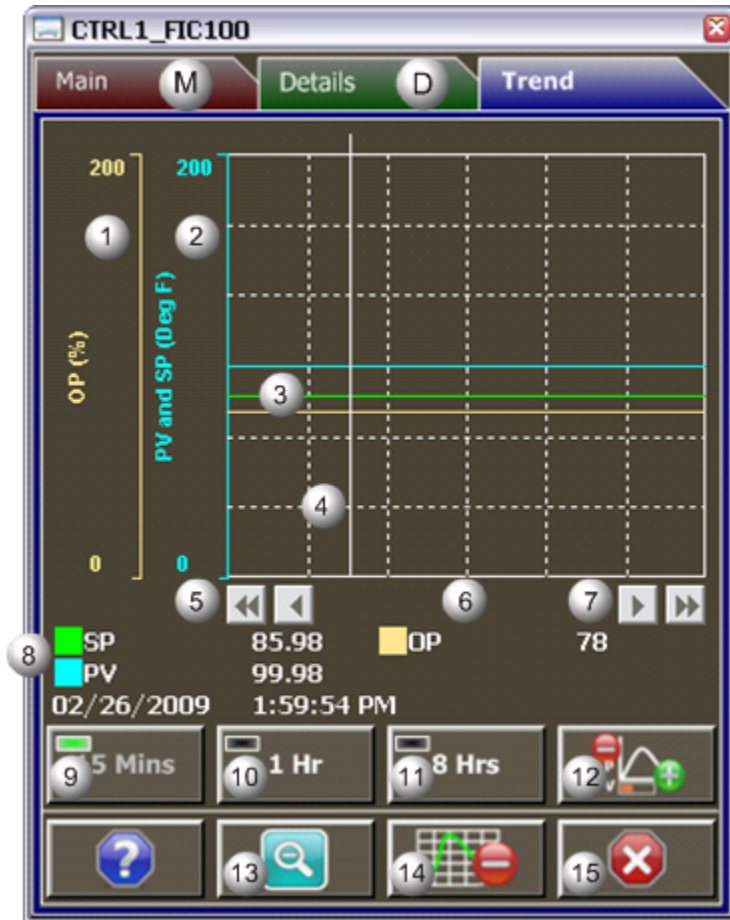| Area	Description
1	Kp: Proportional gain. The unit of measurement of Kp is the ratio of the output's engineering units to process variable's engineering units.
2	Ki: Integral reset. The unit of measurement of Ki is repeats per minute.
3	Kd: Derivative time. The unit of measurement of Kd is minutes.
4	OP Min: Output minimum value. This value is the minimum for OP animated fill on the Main frame.

5	OP Max: Output maximum value. This value is the maximum for OP animated fill on the Main frame.
6	PV minimum value. This value is the minimum for PV animated fill and SP animated fill on the Main frame.
7	PV maximum value. This value is the maximum for PV animated fill and SP animated fill on the Main frame.
8	SP Tracking. If SP tracking is enabled, the set point will track the process variable when the PID controller is in Manual mode or OP Tracking mode. During this time the set point cannot be changed through the Main frame. Click to enable SP tracking. Clear to disable SP tracking.
9	The algorithm type that is being used: Series: Proportional, integral, and derivative terms are combined in a manner that makes them interacting. Parallel: Proportional, integral, and derivative terms are combined in a manner that makes them non-interacting. ???: Either of the following. Invalid or Communications have been lost with the PAC.
10	PID direction Direct: Error = PV - SP Reverse: Error = SP - PV IMPORTANT: The direction of the PID is given in reference to the controller an not the process. This convention follows the definition in ANSI/ISA 51.1 Standard where: A direct acting controller is defined as a controller in which the value of the output signal increases as the value of the input (measured variable) increases, and a reverse acting controller is defined as a controller in which the value of the output signal decreases as the value of the input (measured variable) increases.
11	D/dt: Derivative Term. Displays whether the derivative term is based on PV or Error. For the PID, the derivative is always based on the PV.
12	MCW: The mode command word dictates the PID block's mode and selectability. No Input = Selectable from the faceplate 0 = Selectable from the faceplate 1 = Mode is locked in Manual Mode 2 = Mode is locked in Auto Mode
13	SCW: The setpoint command word dictates the PID setpoint's source and selectability. No Input = Selectable from the faceplate 0 = Selectable from the faceplate 1 = Mode is locked in Local 2 = Mode is locked in Remote The setpoint source can be remote only if the input RSP is defined with an argument.
14	RSP: Reports whether or not the remote setpoint input on the PID block is defined with an argument. The remote setpoint is determined in logic and passed to the PID block , such as in the case of cascade control. Defined = Defined with an argument. Undefined = Not defined with an argument. If the remote setpoint is not defined then the source of the PID's setpoint cannot be remote.

| 15 | Exit Button: Click to close the faceplate. |

PID: Faceplate Trend Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	Y-axis: Output (OP) Operation. Displays a percentage.
2	Y-axis: Setpoint (SP) and Process Variable (PV). Displays engineering units specified in the object definition, e.g. Degrees Fahrenheit, PSI, inches, volts, pounds per hour, standard cubic feet.
3	Trend lines. The default color for the Setpoint (SP) line is Lime. For the Process Variable (PV) line, the color is Aqua. For the Output (OP) Operation line, the color is Muted Yellow.
4	Trend Slider. As the slider is moved, the following displays in the legend based on the slider position: Slider position, Y-axis value, Date, and Time.

5	Trend Scroll Back Buttons. Click to scroll back in time. One page: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart back in time by the following increments: 15 Minutes, 1 hour, or 8 hours. 50 percent: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart back in time by the following increments: 7.5 minutes, 30 minutes, 4 hours.
6	X-axis. Local (PC) time.
7	Trend Scroll Forward Buttons. Click to scroll forward in time. One page: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart forward in time by the following increments: 15 Minutes, 1 hour, or 8 hours. 50 percent: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart forward in time by the following increments: 7.5 minutes, 30 minutes, 4 hours.
8	The Trend chart legend displays the following based on the slider position: the Display line, the Line value at the slider, Date at the slider, and the Time at the slider.
9	15 Mins Button: The Trend chart time duration is 15 minutes. The button's indication light is green when this time span is selected.
10	1 Hr Button: the Trend chart time duration is one hour. The button's indication light is green when this time span is selected.
11	8 Hrs Button: The Trend chart time duration is eight hours. The button's indication light is green when this time span is selected.
12	Chart Display Button: Display toggle button to maximize/minimize chart and information display. Clicking the button moves you to successive states. The three states are: No Y-axis/No Legend, Y-axis/No Legend, and Y-axis and Full Legend. The Y-axis, when displayed, shows the engineering units specified in the object definition, e.g. PSI, inches, volts, pounds per hour, standard cubic feet. The date and time continue to display.
13	Unzoom Button. Draw a box around the area to be zoomed. The Trend chart zooms to your selection. Click the Unzoom button to return the chart to its normal display size.
14	Grid Button. Click to display/hide the grid. Default: The grid displays.
15	Exit Button. Click to close the faceplate.

RAMPSOAK: Object Configuration and Use

RAMPSOAK: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is built from the EGD server.

1 (on page 345)	RAMPSOAK: Ethernet global data
2 (on page 346)	RAMPSOAK: Object properties.
3 (on page 348)	RAMPSOAK: Mimic objects.
4 (on page 353)	RAMPSOAK: Faceplate.

1. RAMPSOAK: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS RAMPSOAK block is as follows.

Global Data	Data Type	Description	
FC	UINT	Faceplate Command	
		0	No Action
		1	Start
		2	Abort
		3	Pause
		4	Resume
ET	REAL	Equilibration Time	
EV	REAL	Equilibration Value	

OP	REAL	Ramp/Soak Setpoint
RR	REAL[10]	(Array with 10 elements) Ramp Rate
SK	REAL[10]	(Array with 10 elements) Soak Time
ST	UINT	HMI Status Word
SV	REAL[10]	(Array with 10 elements) Soak Value

2. RAMPSOAK: Object Properties

Open an Object Properties dialog box for an object with an RAMPSOAK class ID.

The tabs in the Object dialog box are:

- RAMPSOAK General.
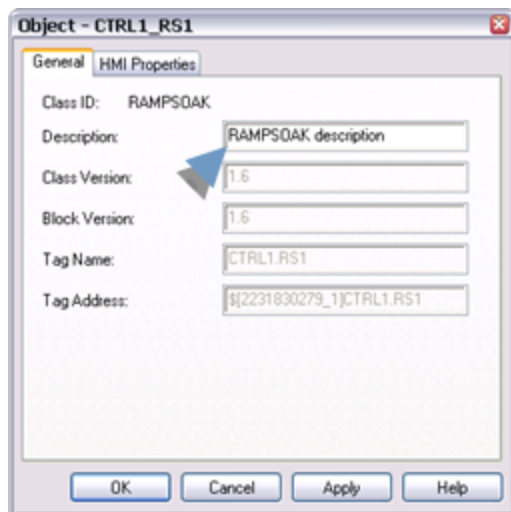- RAMPSOAK HMI Properties.

RAMPSOAK General

The Object dialog box General tab provides data *(on page 32)* that precisely identifies the RAMPSOAK object.

> **Note:**
> The **Description** field is the only Read/Write field on the General tab.

RAMPSOAK HMI Properties

Each PPS function block has HMI properties.

When an Object dialog box is opened for a selected object, the values for these properties:

- Can be defined in the Object dialog box.
- Will display on the faceplate when it is first opened and as long as they are not changed.
- (Some properties) May be changed by faceplate users who have a role *(on page 12)* with the required level.

The HMI properties required for the RAMPSOAK block are as follows.
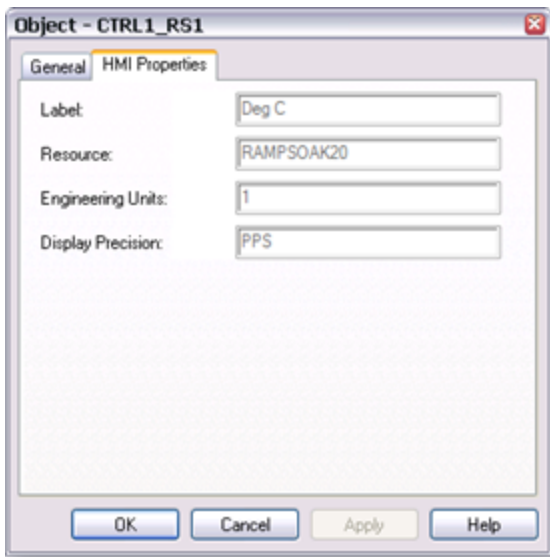
| Field	Description	Data Type	Restrictions
Label	Object identification	String	
Resource	CIMPLICITY resource	String	16 Characters or less
Engineering Units	RAMPSOAK setpoint's engineering units.	String	8 Characters or less
Display Precision	Number of digits displayed to the right of the decimal point.	Integer	7 Digits

3. RAMPSOAK: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

3.1 *(on page 348)*	RAMPSOAK: Mimic object selection in CimEdit.
3.2 *(on page 350)*	RAMPSOAK: Mimic object runtime data.

3.1. RAMPSOAK: Mimic Object Selection in CimEdit

A *(on page 348)*	Place an RAMPSOAK mimic object on a CimEdit screen.
B *(on page 349)*	(Optional) Change the function block object or mimic object.

1. Place an RAMPSOAK mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.
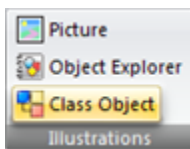
1. Select an RAMPSOAK object in the Select an Object browser.
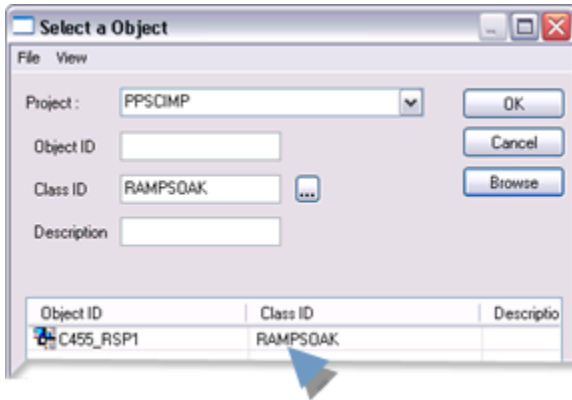
Result: The RAMPSOAK default mimic object displays on the CimEdit screen.

> **Note:**
>
> When you close and re-open CimEdit, the tag name will not display; the function block name, e.g.
> RAMPSOAK, will display. Simply double-click the object to re-display the tag name.

1. (Optional) Change the function block Object or mimic object.
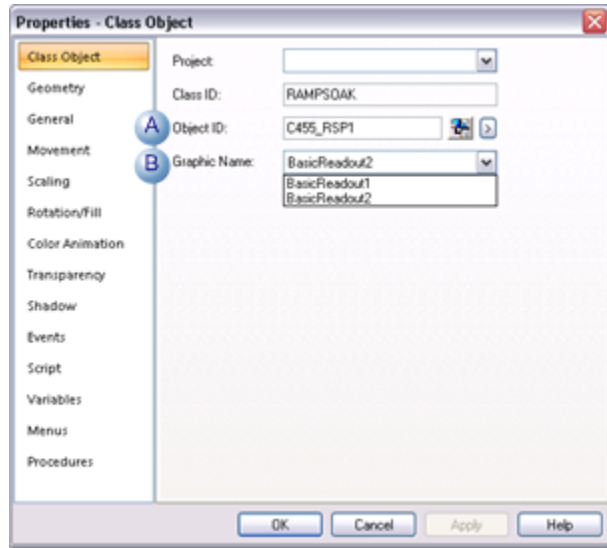
Mimic object only

1. Right-click the RAMPSOAK mimic object.
2. Select another object listed on the Popup menu.

Mimic object and/or function block object.

3. Right-click the RAMPSOAK mimic object.
4. Select Properties on the Popup menu.
5. Select the Class Object tab.
6. Do one or both of the following.

	Field	Select from a list of available RAMPSOAK:
1	Object ID	Function block objects.
2	Graphic Name	Mimic objects.

7. Click OK.

The selected mimic object displays on the CimEdit screen when you use either method.

8. Configure the mimic object size and other objects, as required.

The mimic object is ready for runtime.

3.2. RAMPSOAK: Mimic Object Runtime Data

Mimic objects that are available for the PPS RAMPSOAK block are as follows.

> **Note:**
> A runtime user can open the RAMPSOAK faceplate through any object. However, the exact data that the mimic object displays depends on which object is being used.

1.
2.

| BasicReadout1 |
| BasicReadout2 |

RAMPSOAK: Basic Readout 1

Refer to the following table for descriptions of the fields.

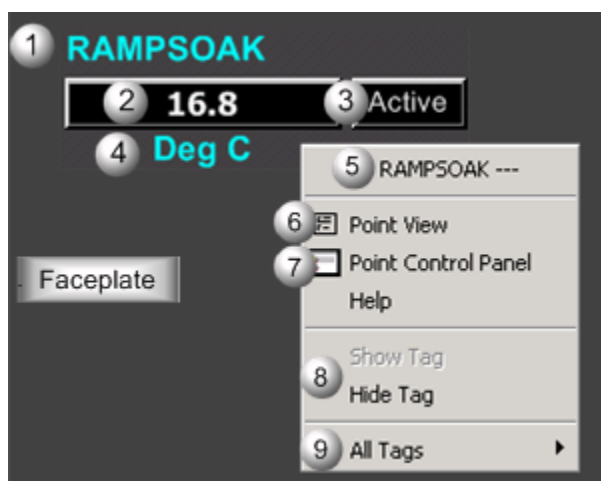| Area	Description
1	Object Label.
2	RAMPSOAK setpoint value.
3	Measurement unit that is specified in the object definition, e.g. Deg C, PSI, inches, volts, pounds per hour, standard cubic feet.
4	The function block name, RAMPSOAK. Displays at the top of the Popup menu.

5	Point View. Displays the RAMPSOAK points in the Point View window.
6	Point Control Panel. Displays the RAMPSOAK points in the Point Control Panel.
7	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: PAC1.almSlow Hide: Hides the label for the selected mimic object.
8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

RAMPSOAK: Basic Readout 2

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	RAMPSOAK setpoint value.
3	Object Status. Displays one of the following based on the function block's state: Active or Idle.
4	Measurement unit that is specified in the object definition, e.g. Deg C, PSI, inches, volts, pounds per hour, standard cubic feet.
5	The function block name, RAMPSOAK. Displays at the top of the Popup menu.
6	Point View. Displays the RAMPSOAK points in the Point View window.

7	Point Control Panel. Displays the RAMPSOAK points in the Point Control Panel.
8	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: PAC1.almSlow Hide: Hides the label for the selected mimic object.
9	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

4. RAMPSOAK: Faceplate

4. RAMPSOAK: Faceplate

A Ramp/Soak function block generates an output over time, based on a user-specified profile.

The profile consists of ten ramp/soak segments.

Each segment consists of a:

1. Soak value (target)
2. Ramp rate
3. Soak-time

The output of the ramp/soak block is typically a temperature setpoint for a process.

The RAMPSOAK faceplate allows operators to interface with the profile and, if necessary, modify it.
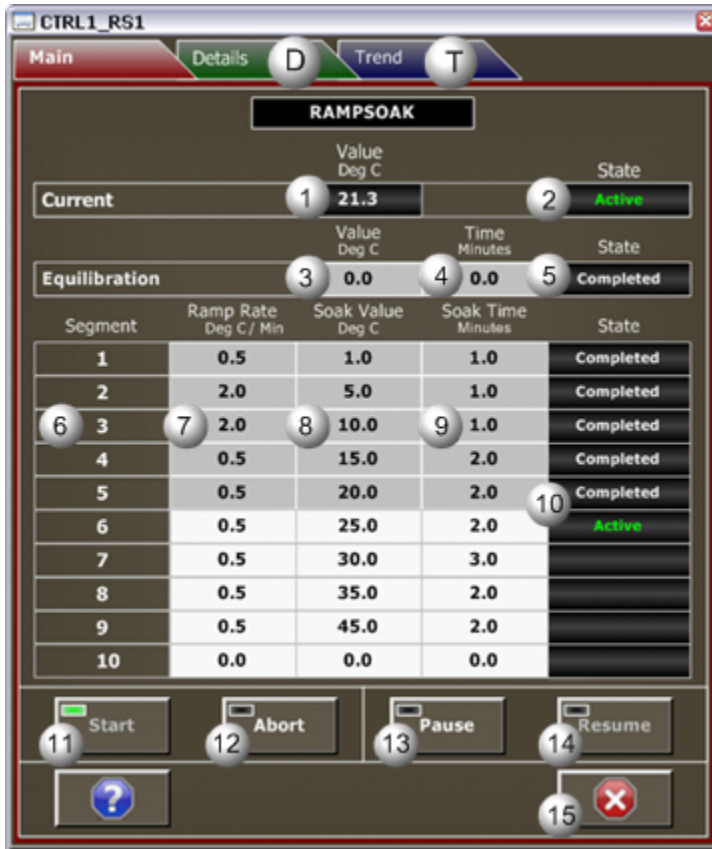
Click a tab button to display and review features for each RAMPSOAK faceplate frame.

1. RAMPSOAK Faceplate: Main Frame *(on page 354)*
2. RAMPSOAK Faceplate: Details Frame *(on page 357)*
3. RAMPSOAK Faceplate: Trend Frame *(on page 358)*

RAMPSOAK Faceplate: Main Frame

The RAMPSOAK faceplate's Main frame provides the following information and functionality.

! **Important:**

Data entry fields in this Main frame are writable when a user Is associated with both the object's resource and a role that has at least a Level 100. If, after you log in, the data entry fields should be writable and are not, consult your system administrator.
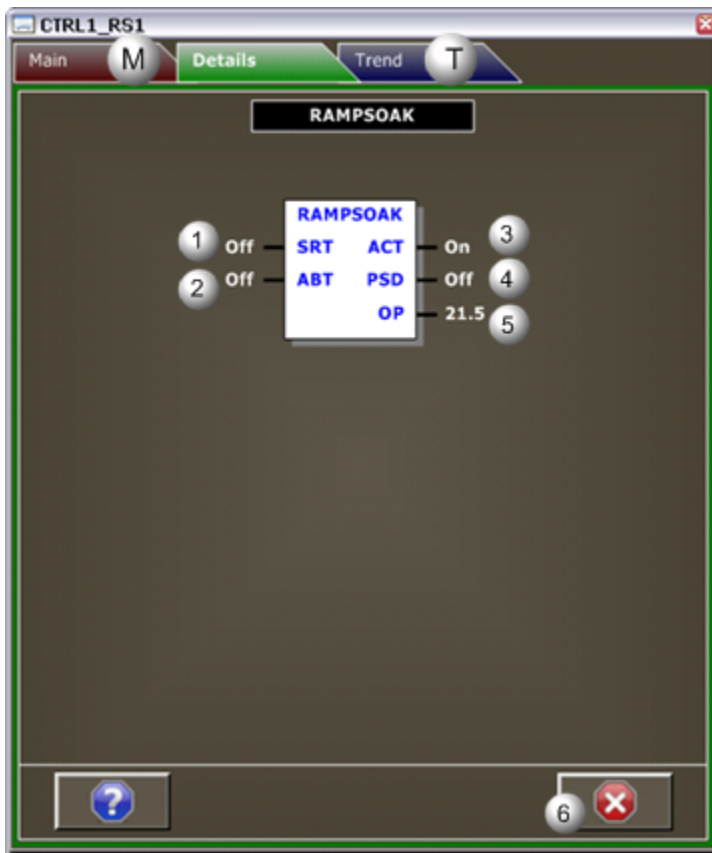
Area	Description
1	Current Value. (Read-only) Current ramp/soak setpoint.
2	RAMPSOAK State. Displays one of the following based on the function block's state: Active or Idle. Active means that the block is currently ramping or soaking the setpoint based on the specified profile. Idle means that the block's output remains static until the next activation of the ramp/soak profile.
3	Equilibration Value. Value that the process variable must equilibrate to before starting the ramp/soak profile.
4	Equilibration Time. Number of minutes it will take for the process to reach equilibrium.

5	Function Block Equilibration State. The value in the function block's state displays as follows: Active, Completed, or (No Display). Active means that Equilibrating is in process. Completed means that Equilibrating is completed. And, (No Display) means that the function block state is idle.
6	Segments in the ramp/soak profile. Each segment ramps the setpoint to a new value and then holds the setpoint at that value in order for the process to soak. Field values can be modified up until the time that they are completed.
7	Ramp Rate. Specified Engineering Units divided by minutes for the segment. The setpoint will ramp up or down at this rate in order to reach the specified soak value.
8	Soak Value. The target value for soaking.
9	Soak Time. The time (minutes) to spend soaking.
10	Ramp/Soak Segment Status. The segment status displays: Active, Completed, or (No Display). Active means the setpoint is ramping or soaking currently within this segment. Completed means the setpoint has completed this segment of the profile. (No display) means that the setpoint has not been reached.
11	Click the Start button, when it is enabled, to start Ramp/Soak. The Start button is enabled when its text is white. The Start button is Disabled when its text is silver. The Start button may be disabled because the Ramp/soak is active. It could also be disabled if the user's credentials are inadequate to issue the Start command. To determine why the Start Button is Disabled, check the button's indicator light to see if ramp/soak is active. Review required user credentials. If the Indication Light is Black, Ramp/soak is Idle. If it is Green, Ramp/soak is Active.
12	Click the Abort button, to stop the ramp/soak. The Abort button is Enabled when its text is white. It is Disabled when its text is silver. The Abort button may be disabled if Ramp/soak is not running or paused. It could also be disabled if the user's credentials are inadequate to issue the Abort command. To determine why the Abort Button is Disabled, check the button's indicator light to see if aborting ramp/soak is active. Review required user credentials. If the Indication Light is Black, Ramp/soak is not being aborted. If it is Green, Ramp/soak is being aborted.
13	The Pause button allows an operator to hold the ramp/soak profile at its current state until a process event occurs, e.g. crystallization in a chemical reactor. The Pause button is Enabled when its text is white. It is Disabled when its text is silver. The Pause button may be disabled because Ramp/soak is not running. It could also be disabled because Ramp/soak is paused, or the user's credentials are inadequate to issue the Pause command. To determine why the Pause Button is Disabled, check the button's indicator light to see if ramp/soak is paused or not active. Review required user credentials. If the Indication Light is Black, Ramp/soak is Not paused. If it is Green, Ramp/Soak is Paused.

14	Click the Resume button, when it is enabled, to resume Ramp/Soak. The Resume button is En-abled when its text is white. It is Disabled when its text is silver. The Resume button may be dis-abled if Ramp/soak is not paused. It could also be disabled if the user's credentials are inade-quate to issue the Resume command. To Determine why the Resume Button is Disabled, check the button's indicator light to see if ramp/soak is paused. Review required user credentials. If the Indication Light is Black, Ramp/soak is Not being resumed. If it is Green, Ramp/soak is being re-sumed.
15	Exit Button. Click to close the faceplate.

RAMPSOAK Faceplate: Details Frame

The RAM PSOAK faceplate's Details frame provides the following information and functionality.
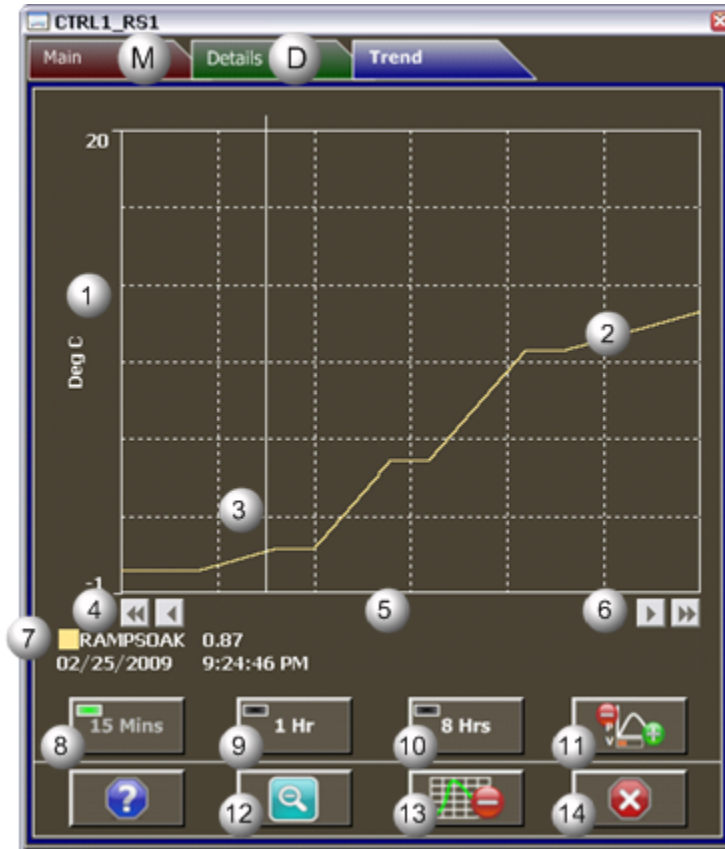

Area	Description
1	SRT (Start Sequence, Input) is one of the following: On, Off, of ???. When set to On, the logic is commanding the ramp/soak profile to start. When Off, there are no active commands from the logic to start the profile. ??? means it is Unavailable. When the profile generation is started (ei-

	ther by the faceplate command or by a pulse on the SRT), the value of the output parameter (OP) is immediately set to the value of the configuration parameter's Equilibration value. The SRT input should be a pulse to have the ramp/soak block function properly.
2	ABT (Abort Sequence, Input) is one of the following: On, Off, or ???. On means that the logic is commanding the ramp/soak profile to abort. Off means that there are no active commands from logic to abort profile. ??? means unavailable. If the profile is aborted, the Ramp/Soak profile goes to the idle state and the output (OP) retains its last active value. The ABT input should be a pulse to have the ramp/soak block function properly.
3	ACT (Active state, Output) is one of the following: On, Off, or ???. On means that Ramp/soak is running or paused. Off means that Ramp/soak is idle. While ??? means it is Unavailable.
4	PSD (Paused, Output) is one of the following: On, Off, or ???. On means that Ramp/soak is paused. Off means that Ramp/soak is not paused. ??? means it is Unavailable. When ramp/soak is paused, the output parameter (OP) value remains constant. If the profile is soaking, the soak timer halts.
5	The OP value is constant until the Equilibration Time elapses. This enables the process under control to reach equilibrium before starting the profile generation. After the process is equilibrated, the OP value moves towards the Soak value at a rate given by the Ramp Rate. Once the OP value reaches the Soak value, OP remains at this value until the Soak Time elapses. This process continues until the end of the profile or until the abort command is issued (ABT is set to Yes).
6	Exit Button. Click to close the faceplate.

RAMPSOAK Faceplate: Trend Frame

The RAMPSOAK faceplate's Trend frame provides the following information and functionality.

Area	Description
1	Y-Axis. Displays engineering units specified in the object definition, e.g. Degrees Celsius, PSI, inches, volts, pounds per hour, standard cubic feet.
2	Trend line of the RAMPSOAK analog value.
3	Trend Slider. As the slider is moved, the following displays in the legend based on the slider position: Slider position, Y-axis value, Date, and Time.
4	Trend Scroll Back Buttons. Click to scroll back in time. One page: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart back in time by the following increments: 15 Minutes, 1 hour, or 8 hours. 50 percent: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart back in time by the following increments: 7.5 minutes, 30 minutes, 4 hours.
5	X-axis. Local (PC) time.
6	Trend Scroll Forward Buttons. Click to scroll forward in time. One page: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart forward in time by the following increments: 15 Minutes, 1 hour, or 8 hours. 50 percent: Depend-

	ing on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart forward in time by the following increments: 7.5 minutes, 30 minutes, 4 hours.
7	The Trend chart legend displays the following based on the slider position: the Display line, the Line value at the slider, Date at the slider, and the Time at the slider.
8	15 Mins Button: The Trend chart time duration is 15 minutes. The button's indication light is green when this time span is selected.
9	1 Hr Button: the Trend chart time duration is one hour. The button's indication light is green when this time span is selected.
10	8 Hrs Button: The Trend chart time duration is eight hours. The button's indication light is green-when this time span is selected.
11	Chart Display Button: Display toggle button to maximize/minimize chart and information display. Clicking the button moves you to successive states. The three states are: No Y-axis/No Legend, Y-axis/No Legend, and Y-axis and Full Legend. The Y-axis, when displayed, shows the engineering units specified in the object definition, e.g. PSI, inches, volts, pounds per hour, standard cubic feet. The date and time continue to display.
12	Unzoom Button. Draw a box around the area to be zoomed. The Trend chart zooms to your selection. Click the Unzoom button to return the chart to its normal display size.
13	Grid Button. Click to display/hide the grid. Default: The grid displays.
14	Exit Button. Click to close the faceplate.

TOTALIZE: Object Configuration and Use

TOTALIZE: Object Configuration and Use

The following configuration, mimic object selection and runtime use are available for any Analog Input object that is built from the EGD server.

1 *(on page 361)*	TOTALIZE: Ethernet global data
2 *(on page 361)*	TOTALIZE: Object properties.

	TOTALIZE: Mimic objects.
	TOTALIZE: Faceplate.

1. Totalize: Ethernet Global Data

Each system wide PPS function block broadcasts a portion of its instance data onto the Ethernet global data highway. This data is used to interface with the function block from an HMI station in order to monitor and control a process system.

The Ethernet global data for the PPS Totalize block is as follows.

Global Data	Data Type	Description	
FC	INT	Faceplate Command	
		0	No Action
		1	Reset
		2	Start Hold
		3	End Hold
NR	REAL	Non-resettable Total	
R	REAL	Resettable Total	
ST	BOOL[16]	HMI Status Bits	

2. TOTALIZE: Object Properties

Open an Object Properties dialog box for an object with an TOTALIZE class ID.

The tabs in the Object dialog box are:
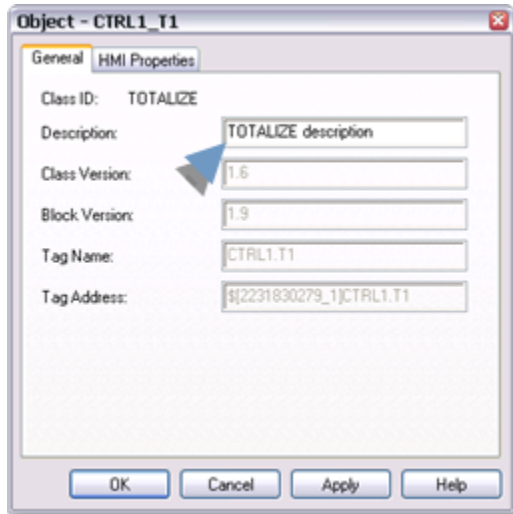
- TOTALIZE General.
- TOTALIZE HMI Properties.

TOTALIZE General

The Object dialog box General tab provides data *(on page 32)* that precisely identifies the TOTALIZE object.

> ✎ **Note:**
> The **Description** field is the only Read/Write field on the General tab.

TOTALIZE HMI Properties

Each PPS function block has HMI properties.

When an Object dialog box is opened for a selected object, the values for these properties:

- Can be defined in the Object dialog box.
- Will display on the faceplate when it is first opened and as long as they are not changed.
- (Some properties) May be changed by faceplate users who have a role *(on page 12)* with the required level.

The HMI properties required for the TOTALIZE block are as follows.
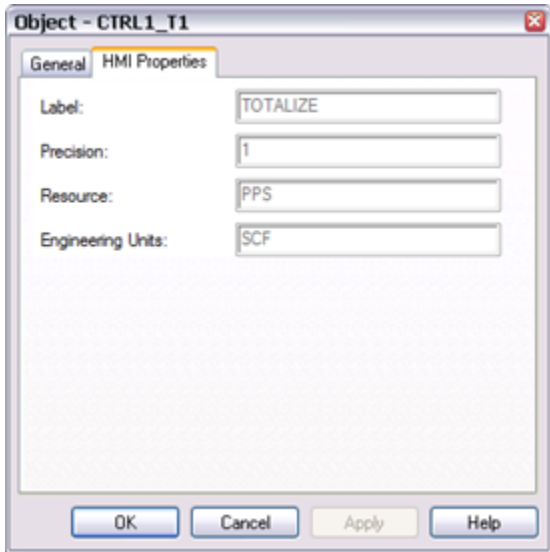
Field	Description	Data Type	Restrictions
Label	Object identification	String	
Precision	Number of digits displayed to the right of the decimal point.	Integer	7 Digits
Resource	CIMPLICITY resource	String	16 Characters or less
Engineering Units	Total's engineering units.	String	8 Characters or less

3. TOTALIZE: Mimic Objects

3. TOTALIZE: Mimic Objects

Mimic objects, which are used on overview screens, mimic the functionality or the device that the corresponding PPS function controls or monitors.

3.1 *(on page 364)*	TOTALIZE: Mimic object selection in CimEdit.

	TOTALIZE: Mimic object runtime data.

3.1. TOTALIZE: Mimic Object Selection in CimEdit

	Place an TOTALIZE mimic object on a CimEdit screen.
	(Optional) Change the function block object or mimic object.

1. Place an TOTALIZE mimic object on a CimEdit screen.

1. Create or open an existing CimEdit screen.
2. Click Class Object in the Illustrations group on the CimEdit Ribbon bar.
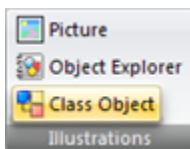
1. Select an TOTALIZE object in the Select an Object browser.
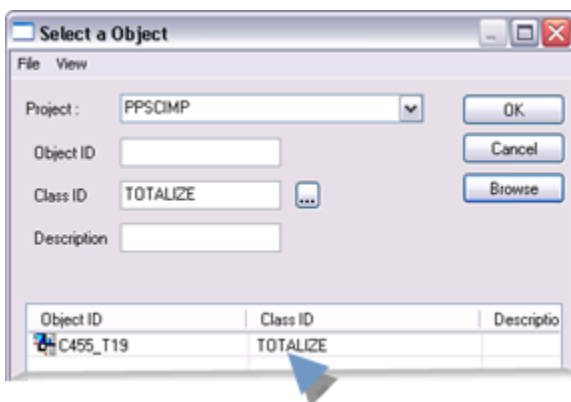
Result: The TOTALIZE default mimic object displays on the CimEdit screen.

> **Note:**
>
> When you close and re-open CimEdit, the tag name will not display; the function block name, e.g. TOTALIZE, will display. Simply double-click the object to re-display the tag name.

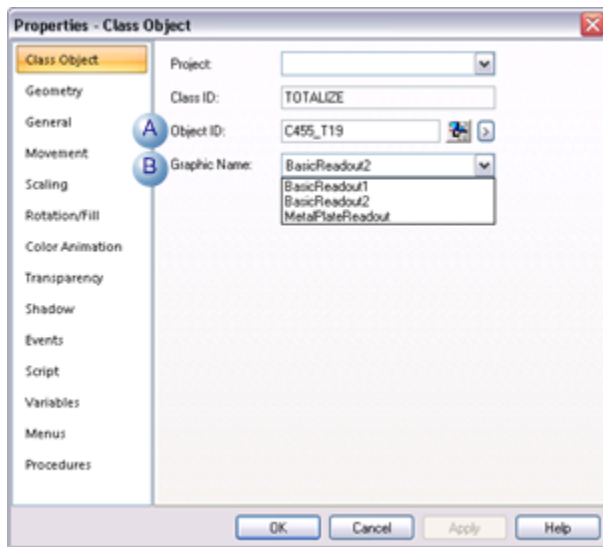1. (Optional) Change the function block Object or mimic object.

Mimic object only

1. Right-click the TOTALIZE mimic object.
2. Select another object listed on the Popup menu.

Mimic object and/or function block object.

3. Right-click the TOTALIZE mimic object.
4. Select Properties on the Popup menu.
5. Select the Class Object tab.
6. Do one or both of the following.

	Field	Select from a list of available TO-TALIZE:
1	Object ID	Function block objects.
2	Graphic Name	Mimic objects.

7. Click OK.

   The selected mimic object displays on the CimEdit screen when you use either method.

8. Configure the mimic object size and other objects, as required.

The mimic object is ready for runtime.
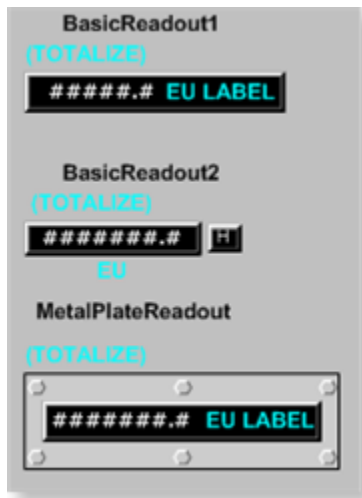
3.2. TOTALIZE: Mimic Object Runtime Data

Mimic objects that are available for the PPS TOTALIZE block are as follows.

> **Note:**
> A runtime user can open the TOTALIZE faceplate through any object. However, the exact data that the mimic object displays depends on which object is being used.
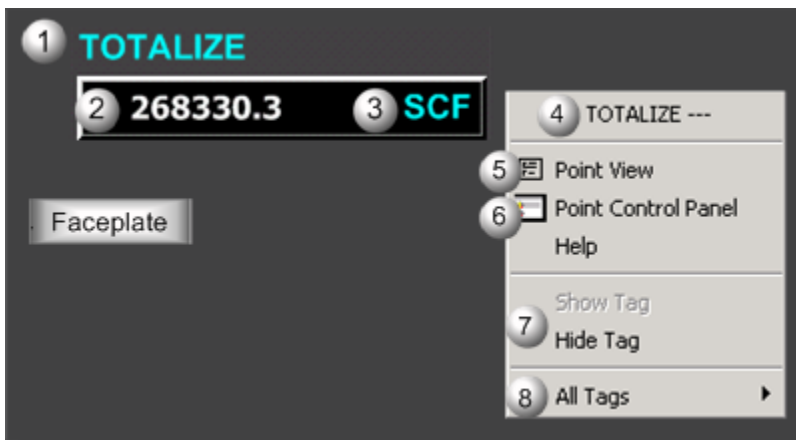
BasicReadout1
BasicReadout2
MetalPlateReadout

TOTALIZE: Basic Readout 1

Refer to the following table for descriptions of the fields.
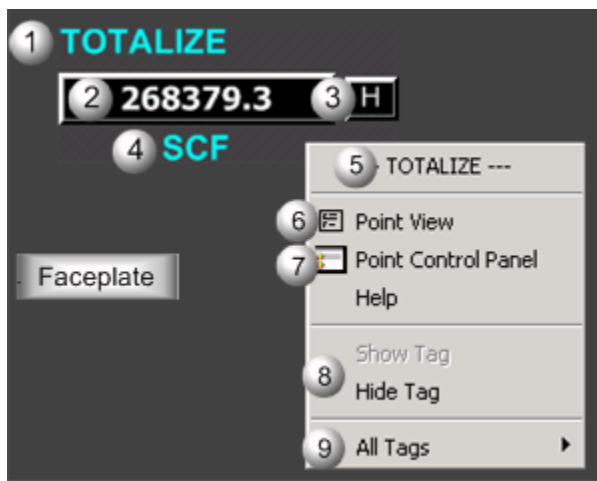

Area	Description
1	Object Label.
2	Resettable Total display.
3	Measurement unit that is specified in the object definition, e.g. Inches, volts, Deg F. The measurement unit must be defined with 8 characters or less.
4	The function block name, TOTALIZE. Displays at the top of the Popup menu.
5	Point View. Displays the TOTALIZE points in the Point View window.
6	Point Control Panel. Displays the TOTALIZE points in the Point Control Panel.
7	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: TOTALIZE Hide: Hides the label for the selected mimic object.

| 8 | All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used. |

TOTALIZE: Basic Readout 2

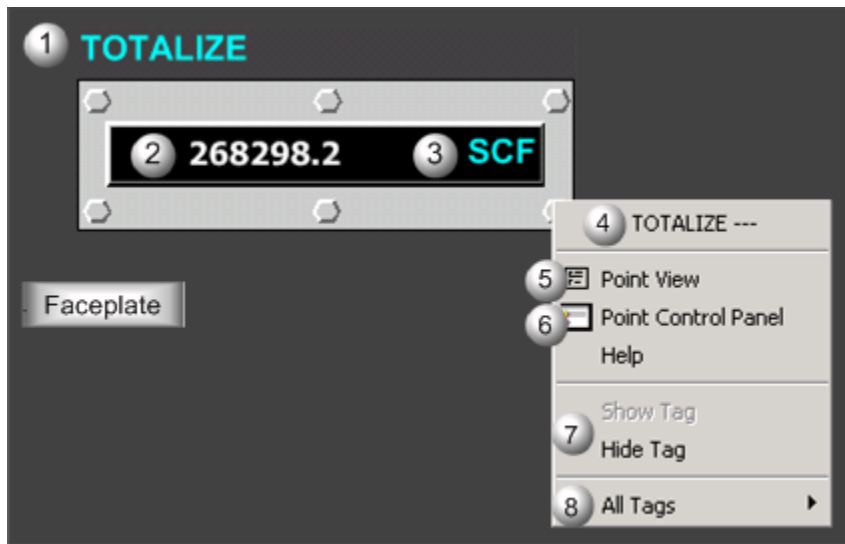Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Resettable Total display.
3	Displays when Hold is enabled.
4	Measurement unit that is specified in the object definition, e.g. Inches, volts, Deg F. The measurement unit must be defined with 8 characters or less.
5	The function block name, TOTALIZE. Displays at the top of the Popup menu.
6	Point View. Displays the TOTALIZE points in the Point View window.
7	Point Control Panel. Displays the TOTALIZE points in the Point Control Panel.
8	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: TOTALIZE Hide: Hides the label for the selected mimic object.

9	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

TOTALIZE: Metal Plate Readout

Refer to the following table for descriptions of the fields.

Area	Description
1	Object Label.
2	Resettable Total display.
3	Measurement unit that is specified in the object definition, e.g. Inches, volts, Deg F. The measurement unit must be defined with 8 characters or less.
4	The function block name, TOTALIZE. Displays at the top of the Popup menu.
5	Point View. Displays the TOTALIZE points in the Point View window.
6	Point Control Panel. Displays the TOTALIZE points in the Point Control Panel.
7	Show Tag/Hide Tag. Show: (Default) Displays a descriptive label for the selected mimic object. For example: TOTALIZE Hide: Hides the label for the selected mimic object.

8	All Tags. Opens an extended menu with options to display or hide the label for all of the mimic objects on the CimView screen. Show: Displays the label for all the mimic objects on the CimView screen. Hide: Hides the label for all the mimic objects on the CimView screen. Local Settings: Displays or hides the label for each mimic object based on the last selection made for that single object. If no selection was made, the default is used.

4. TOTALIZE: Faceplate

4. TOTALIZE: Faceplate

The Totalize block calculates the amount of something produced based on the rate at which that something is produced.

For example, a process may produce widgets at a rate that is measured in widgets per hour. The Totalize block calculates the number of widgets produced over time based on the measured rate.

Click a tab button to display and review features for each AI faceplate frame.

1. TOTALIZE Faceplate: Main Frame *(on page 370)*
2. Totalize Faceplate: Details Frame *(on page 372)*
3. TOTALIZE Faceplate: Trend Frame *(on page 374)*

TOTALIZE Faceplate: Main Frame

Refer to the following table for descriptions of the fields.

> ⚠️ **Important:**
>
> Command button execution in this Main frame is enabled when a user Is associated with both the object's resource and a role that has at least a Level 100. If, after you log in, the buttons should be enabled and are not, consult your system administrator.

Area	Description
1	Resettable Total. (Read-only) Value equals a resettable Total in engineer units. The total typically represents the integral, with respect to time, of a flow-rate signal. Click the Reset button to reset the total.
2	Total's engineering units. Examples are volts, pounds and standard cubic feet.
3	Non-resettable Total. (Read-only) Value equals a non-resettable Total in engineering units. The non-resettable total automatically rolls over to 0 after to reaches its maximum possible value.
4	Total's engineering units. Examples are volts, pounds and standard cubic feet.

5	Reset Button. Click the Reset button, when it is enabled, to reset the resettable total to 0. The Reset button is Enabled when its text is white. It is Disabled when its text is silver. The Reset button may be disabled if the Commands are disabled in the function block properties. It may also be disabled if the total is being reset either by logic or by operator command, or the total is being held by logic or by operator command. It can be disabled if the user's credentials are inadequate to issue the Reset command. If the Indication Light is Black, the resettable total is not being reset. If it is Green, it is being reset. When the button is disabled, the causes may be determined by viewing the Details frame or reviewing the user's credentials.
6	Hold button. Click the Hold button when it is enabled to hold both the resettable and non-resettable totals. The Hold button is Enabled when its text is white. It is Disabled when its text is silver. The Hold button may be disabled if the commands are disabled in the function block properties, the total is being held by logic or by operator command, the HL input on the function block has an argument present, or the user's credentials are inadequate to issue the Hold. If the Indication Light is Black, the resettable total is Not being held. If is is Green, it is being held. When the button is disabled, the causes may be determined by viewing the Details frame and reviewing the user's credentials. The Hold and Run buttons are mutually exclusive.
7	Run button. Click the Run button when it is enabled to release both the resettable and non-resettable totals to accumulate. The Run button is Enabled when its text is white. It is Disabled when its text is silver. The Run button may be disabled if commands are disabled in the function block properties, the total is being held by logic, or the user's credentials are inadequate to issue the Run command. If the Indication Light is Black, the totals are not released and accumulating. If it is Green, the totals are released and accumulating. When the button is disabled, the causes may be determined by viewing the Details frame or reviewing the user's credentials. The Hold and Run buttons are mutually exclusive.
8	Exit Button. Click to close the faceplate.

Totalize Faceplate: Details Frame

Refer to the following table for descriptions of the fields.

Area	Description
1	HL Input. The Hold Input displays one of the following: Argument Not Present or Argument Present. When Argument Not Present, the argument on the pin of the input to the block is not present. When Argument Present, the argument on the pin of the input to the block is present. If an argument is present on the HL pin, Logic dictates whether the total is released to run or is held. The Hold and Run buttons on the Main frame are also disabled.
2	RS Input. The Reset Input displays one of the following: Argument Not Present or Argument Present. When Argument Not Present, the argument on the pin of the input to the block is not present. When Argument Present, the argument on the pin of the input to the block is present. When an argument is present on the RS pin, the logic can reset the resettable total. When an argument is set to True, the resettable total will reset every execution of the Totalize block.
3	The Hold status for the total displays one of the following: Not Held or Held. Both the resettable and non-resettable totals are held if an argument is either present on the HL pin and True, or not present on the HL pin and the Hold button has been activated on the Main frame.
4	The reset status for the total displays one of the following: Not Resetting or Resetting. When an argument on the RS pin is present and True, the resettable total will be reset every execution of

the totalized block. The resetable total is also reset by pressing the Reset button on the Main Frame.

| 5 | Indicates if faceplate commands are enabled or disabled. Disabled is displayed if an operator cannot reset or hold from the faceplate. Enabled is displayed if an operator can reset or hold from the faceplate. |
| 6 | Exit Button. Click to close the faceplate. |

TOTALIZE Faceplate: Trend Frame

Refer to the following table for descriptions of the fields.
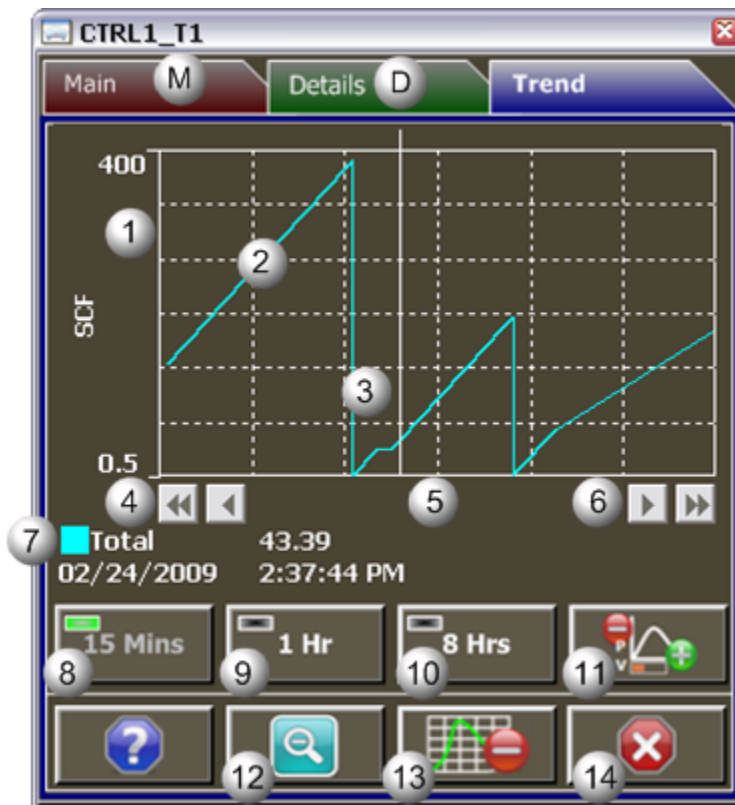
| Area	Description
1	Y-Axis. Displays engineering units specified in the object definition, e.g. PSI, inches, volts, pounds per hour, standard cubic feet.
2	Trend line of the TOTALIZE analog value.
3	Trend Slider. As the slider is moved, the following displays in the legend based on the slider position: Slider position, Y-axis value, Date, and Time.

4	Trend Scroll Back Buttons. Click to scroll back in time. One page: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart back in time by the following increments: 15 Minutes, 1 hour, or 8 hours. 50 percent: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart back in time by the following increments: 7.5 minutes, 30 minutes, 4 hours.
5	X-axis. Local (PC) time.
6	Trend Scroll Forward Buttons. Click to scroll forward in time. One page: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart forward in time by the following increments: 15 Minutes, 1 hour, or 8 hours. 50 percent: Depending on time duration selected (15 Mins, 1 Hr, or 8 Hrs) each click on the Scroll button will send the trend chart forward in time by the following increments: 7.5 minutes, 30 minutes, 4 hours.
7	The Trend chart legend displays the following based on the slider position: the Display line, the Line value at the slider, Date at the slider, and the Time at the slider.
8	15 Mins Button: The Trend chart time duration is 15 minutes. The button's indication light is green when this time span is selected.
9	1 Hr Button: the Trend chart time duration is one hour. The button's indication light is green when this time span is selected.
10	8 Hrs Button: The Trend chart time duration is eight hours. The button's indication light is green when this time span is selected.
11	Chart Display Button: Display toggle button to maximize/minimize chart and information display. Clicking the button moves you to successive states. The three states are: No Y-axis/No Legend, Y-axis/No Legend, and Y-axis and Full Legend. The Y-axis, when displayed, shows the engineering units specified in the object definition, e.g. PSI, inches, volts, pounds per hour, standard cubic feet. The date and time continue to display.
12	Unzoom Button. Draw a box around the area to be zoomed. The Trend chart zooms to your selection. Click the Unzoom button to return the chart to its normal display size.
13	Grid Button. Click to display/hide the grid. Default: The grid displays.
14	Exit Button. Click to close the faceplate.

Step 7. Set up a PPS Alarm Viewer Screen

Step 7. PPS Alarm Viewer

CIMPLICITY provides a customized PPS Alarm Viewer, which displays all or selected alarms and provides the capability to directly open the faceplate for a selected PPS alarm.
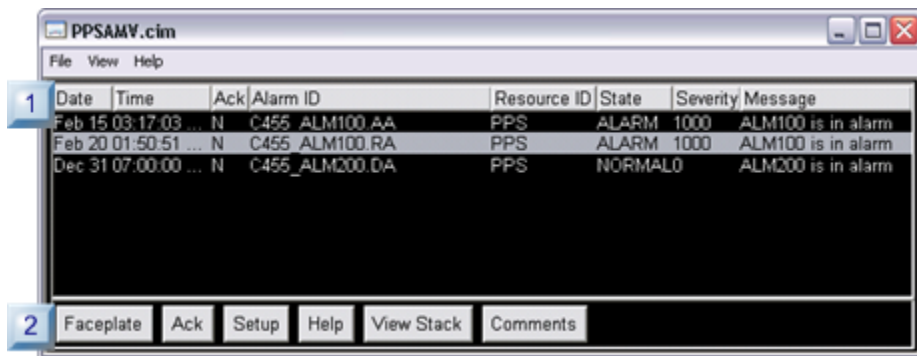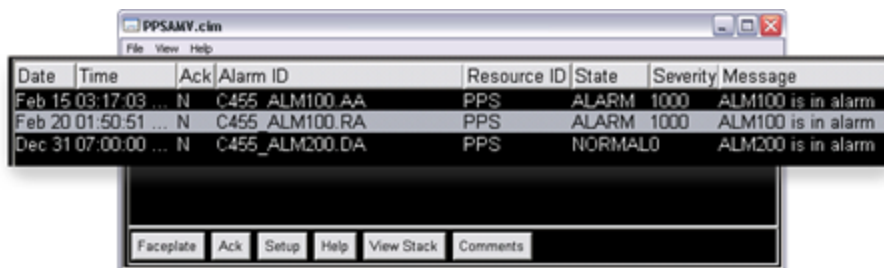
1 *(on page 376)*	PPS Alarm Viewer data.
2 *(on page 378)*	PPS Alarm Viewer buttons.

1. PPS Alarm Viewer Data

The PPS Alarm Viewer displays the following information about the listed alarms.

Field	Description	
Date	Date the alarm was triggered.	
	Default	MMM DD

| Time	Time the alarm was triggered.		
	Default		HH:MM:SS AM/PM
Ack	Y	The alarm has been acknowledged.	
	N	The alarm is not acknowledged.	
	⚠ **Important:** When an acknowledged PPS alarm is logged, the user name, AMGEN, will always be logged, not the actual CIMPLICITY user who acknowledged the alarm.		
Alarm ID	Alarm ID		
Re-source ID	CIMPLICITY resource		
State	States are one of the following. • Normal. • Alarm.		
Sever-ity	A number: • Is assigned to each of the alarm's states, e.g. High, Warning High, Warning Low and Low. • Indicates the alarm's severity • Establishes a priority for the listed alarms. Alarms with a higher severity number have a higher priority, unless there is a special circumstance that overrides the default priority.		
Mes-sage	Message that was assigned to the alarm during configuration.		

> ✏️ **Note:**

- Since the PPS Alarm Viewer is a customized CIMPLICITY Alarm Viewer control, it can display different language and fonts. Font selection is the same as it is for the CIMPLICITY Alarm Viewer control.
- The columns that are described are the default columns provided with the PPS Alarm Viewer. If the columns in your PPS Alarm Viewer are different consult your system administrator for more details.

2. PPS Alarm Viewer Buttons

2. PPS Alarm Viewer Buttons

The PPS Alarm Viewer provides a customized Faceplate button as well as several standard CIMPLICITY Alarm Viewer buttons.
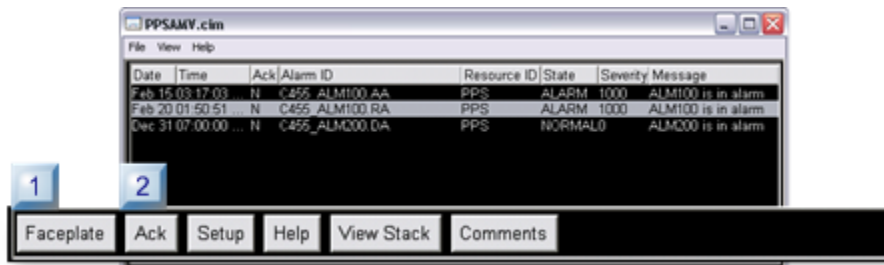
1. 2.1. PPS Alarm Viewer Faceplate Button *(on page 379)*
2. 2.2. PPS Alarm Viewer Standard CIMPLICITY Buttons *(on page 380)*

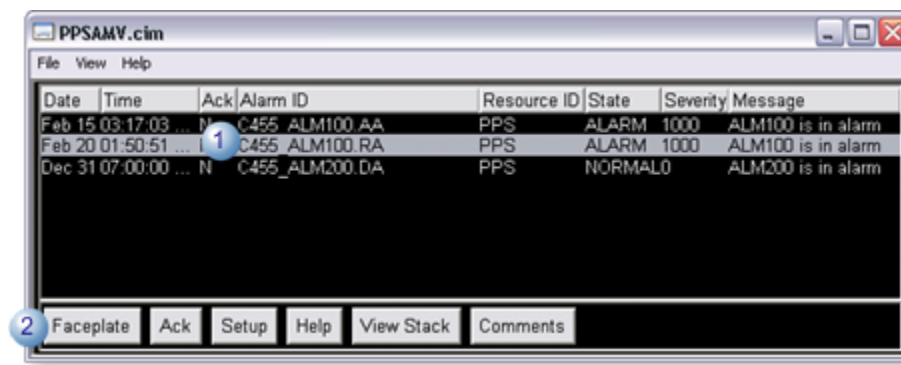| 2.1 *(on page 379)*	PPS Alarm Viewer Faceplate button
2.2 *(on page 380)*	PPS Alarm Viewer standard buttons.

> **✎ Note:**
>
> The buttons that are described are the default buttons provided with the PPS Alarm Viewer. If the buttons in your PPS Alarm Viewer are different consult your system administrator for more details.
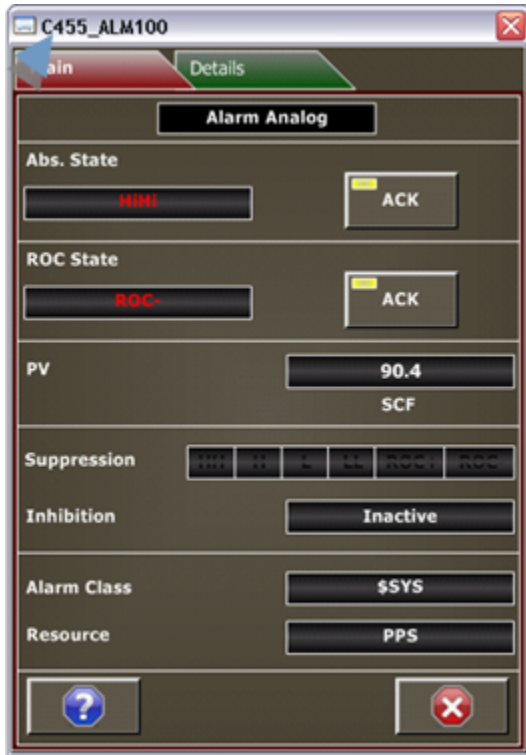
2.1. PPS Alarm Viewer Faceplate Button

You can open any PPS alarm's faceplate directly through the PPS Alarm Viewer.

Do the following.

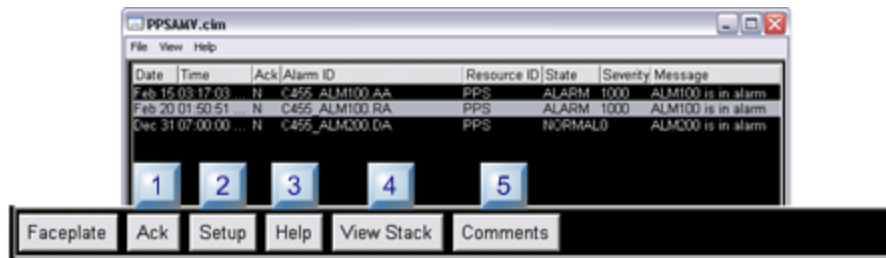| A	Select an alarm.
B	Click the Faceplate button.

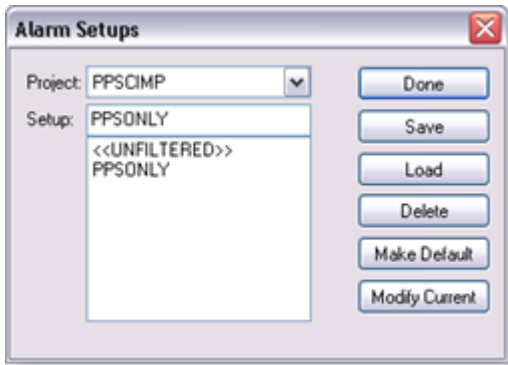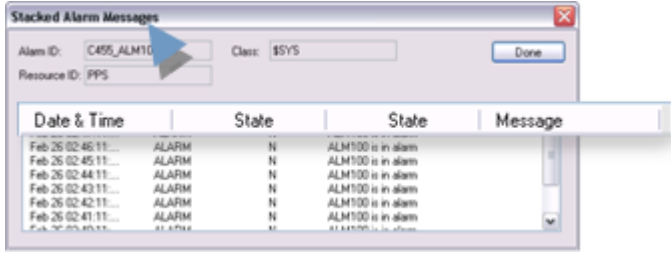Result: The faceplate for the selected alarm opens.

2.2. PPS Alarm Viewer Standard CIMPLICITY Buttons

1. Select an alarm.
2. Click one of the following buttons.

The button's action is triggered, as follows.

1. #unique_65_Connect_42_i1Ack *(on page 381)*
2. #unique_65_Connect_42_i2Setup *(on page 381)*
3. #unique_65_Connect_42_i5Comments *(on page 381)*
4. #unique_65_Connect_42_i4ViewStack *(on page 381)*
5. #unique_65_Connect_42_i3Help *(on page 381)*

	But-ton	Click to:
1	Ack	Acknowledge an alarm. Ack changes from N to Y when the alarm is acknowledged. Whether or not the alarm remains in the list or is removed depends on what it was configured to do.
2	Setup	Open the Setup dialog box. Alarms can be filtered by selecting a setup in the Setup list and clicking Load. Detailed information about alarm setups, including how to create and modify setups is available in the CIMPLICITY Alarm Viewer documentation.
3	Help	Opens an .hlp file that was named in the alarm's Alarm Properties dialog box.
4	View Stack	Open a Stacked Alarm Message window. The Stacked Alarm Message window lists the date, time, state, message, and acknowledged state of each alarm, for the selected alarm.
5	Com-ments	Open an Alarm Comments window The Alarm Comments window lists comments that have been entered about the selected alarm. **To add a comment:** Click Add Comment to open an Add Comment text box.
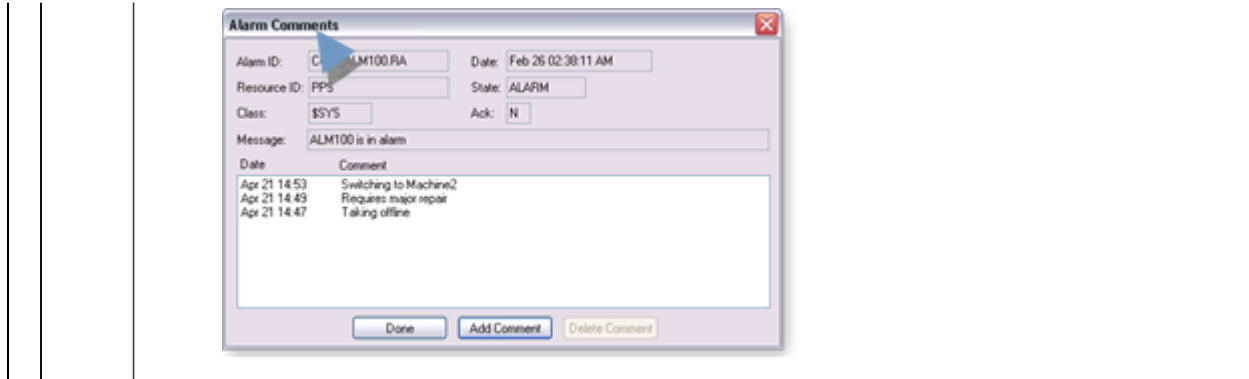
> **Note:**
> The buttons that are described are the default buttons provided with the PPS Alarm Viewer. If the buttons in your PPS Alarm Viewer are different consult your system administrator for more details.

Technical Reference

Technical Reference

- Glossary of Terms
- PPS required files location
- Faceplate translation
- EGD Engineering Workstation and EGD Power Tool

Glossary of Terms

Term	Definition
Abs. Error	Absolute magnitude of the difference between the PID setpoint and process variable.
ADV_PID	Advanced PID
AI	Analog Input
ALARM_A	Analog alarm
ALARM_D	Discrete Alarm
Algorithm	A step-by-step problem-solving procedure, especially an established, recursive computational procedure for solving a problem in a finite number of steps.

Term	Definition
AO	Analog Output
Auto mode	Enables the device to be commanded from logic. **Note:** The mode can be changed while the Controller runs.
DC2S	Device Control 2 State
DC3S	Device Control 3 State
Debouncing	Ensures that only a single signal will be acted upon for a single opening or closing of a contact.
DI	Discrete Input
DO	Discrete Output
Forced data	Overrides the PV value with a user specified value.
IND_A	HMI Analog Indication
IND_D	HMI Discrete Indication
Inhibition	Logic within the control program to suppress faults or alarms automatically.
Interlock	Prevents the device from running; high temperature interlock for a motor.
Local set-point mode	The PID setpoint can be changed from HMI faceplate only.
Locked mode	The logic has locked the mode into either manual or automatic. It cannot be changed through the faceplate.
Lock out	The device is being serviced and is unsafe for operation.
Magnitude of Error	Absolute magnitude of the difference between the PID setpoint and process variable.
Manual mode	Enables the state transition commands to come from the operator SCADA or Engineering Workstation when online to the Controller.
MANUAL_-SP	HMI Manual Setpoint
OP	Output.
Parallel (Algorithm)	PID terms are calculated independently in parallel to one another.

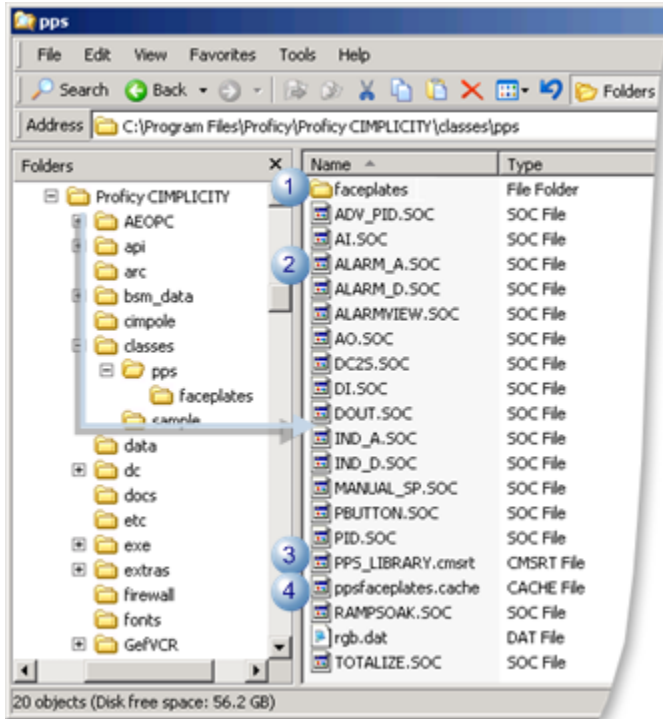| Term	Definition
PBUTTON	HMI Discrete Pushbutton
Pct. Error	Absolute value of the ratio of the error to the span of the process variable. (ABS(SP-PV)/PX-PN)*100.0)
PID	PID
PV	Process variable.
RAMPSOAK	Ramp Soak Setpoint Generator.
Remote set-point mode	The PID setpoint is generated in logic and cannot be changed in the faceplate.
ROC	Rate of change.
Selectable mode	The mode (manual or auto) can be changed through the faceplate.
Series (Algorithm)	The PID terms are dependent on one another and combined in series.
SP	PID setpoint
Suppressed	The user suppresses the alarm generation within the HMI system.
TOTALIZE	Totalized Flow Rate

Required Files Location for Process Systems with CIMPLICITY

CIMPLICITY installs the following required Process Systems files in the following Installation folder.

...Program Files\Proficy\Proficy CIMPLICITY\Classes\PPS

| Item	Folder/File	Description
1	Faceplate folder	Contains runtime only CimView files that contain Mimic object definitions.
2	*.soc files.	Function block class files
3	PPS_-LIBRARY.cm-srt	PPS runtime-only CimEdit scripts. **Note:** By default, the GSM_GLOBAL_SCRIPT global parameter will point to the PPS_LIBRARY.cmsrt for the Process Systems installation.
4	ppsface-plates.cache	A cache file that is used with the /loadcache command line option of CimView. PPSfaceplates.cache contains all the faceplates file names and locks them in the cache. It is a plain text file may speed performance when working with the PPS faceplates. However, it is not required.

Faceplate Translation

CIMPLICITY's Process Systems faceplate user interfaces can be translated, using the CIMPLICITY Language Mapper and an automatically created translation file Faceplates.clm.
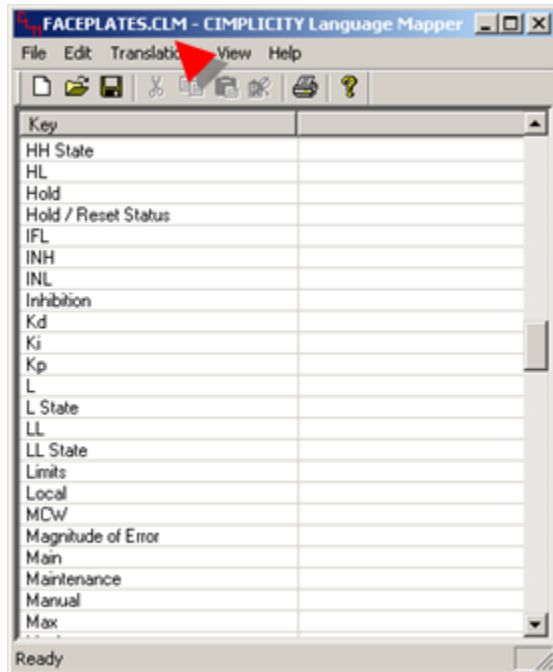
- Faceplate translation.
- Faceplates.clm location.
- Faceplate translation guidelines.

Faceplate Translation

1. Open the CIMPLICITY Workbench.
2. Select **Computer>Managed Files** in the Workbench left-pane.
3. Double-click **classes\pps\faceplates\FACEPLATES.CLM**.
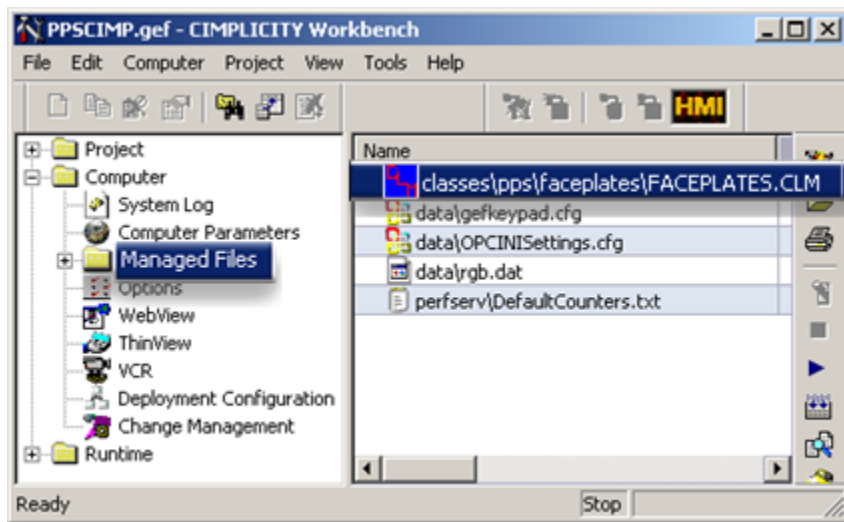
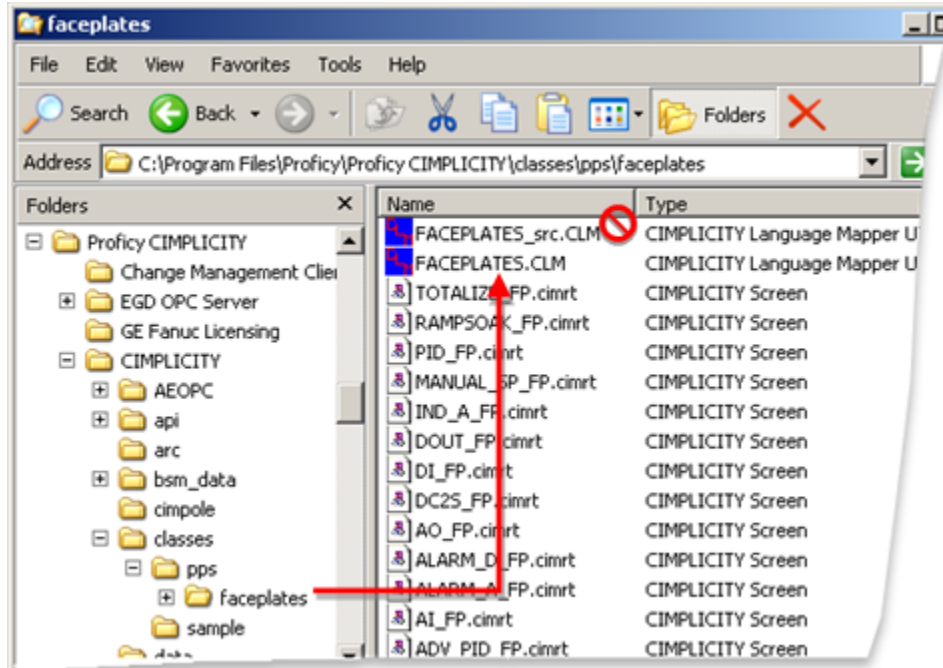Result: The faceplate keys are listed in the file.

4. Translate the keys the same as you would do for any translation in CIMPLICITY.

   Faceplates.clm Location

   Open the CIMPLICITY installation folder that holds the faceplates files; the path is:

   ...\Program Files\Proficy\Proficy CIMPLICITY\classes\pps\faceplates

   The file, Faceplates.clm, is located in the \faceplates folder.

> ✏️ **guide:**
> Faceplate Translation Guidelines

- During a CIMPLICITY installation that is an upgrade, CIMPLICITY checks to see if faceplates.clm exists. If it does, CIMPLICITY will not overwrite it; if it does not, CIMPLICITY will create it.
- A file Faceplates_src.clm is also located in the faceplates folder. Do not use the Faceplates_src.clm file. Faceplates_src.clm will be overwritten when CIMPLICITY is re-installed or upgraded.

When CIMPLICITY is upgraded, Faceplates_src.clm may have some new translation keys. These keys will have to be merged into an existing Faceplates.clm in order to make them available for translation.

- If you want to create a new Faceplates.clm, copy and paste Faceplates_src.clm into the \faceplates folder and rename the copy Faceplates.clm.

EGD Engineering Workstation and EGD Power Tool

The Engineering Workstation and EGD Power Tool can be opened through the CIMPLICITY Workbench.

Select Project>Process Systems in the Workbench left-pane.

The Engineering Workstation and EGD Power Tool are available in the Process Systems folder.

Review Process Systems documentation for details about using both.