



PlantPAx Faceplates for Process Controller Instructions



Allen-Bradley

by ROCKWELL AUTOMATION

Reference Manual

Original Instructions

Important User Information

Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice.

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.



WARNING: Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.



ATTENTION: Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, and recognize the consequence.

IMPORTANT Identifies information that is critical for successful application and understanding of the product.

These labels may also be on or inside the equipment to provide specific precautions.



SHOCK HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.



BURN HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.



ARC FLASH HAZARD: Labels may be on or inside the equipment, for example, a motor control center, to alert people to potential Arc Flash. Arc Flash will cause severe injury or death. Wear proper Personal Protective Equipment (PPE). Follow ALL Regulatory requirements for safe work practices and for Personal Protective Equipment (PPE).

The following icon may appear in the text of this document.



Identifies information that is useful and can help to make a process easier to do or easier to understand.

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About This Publication

This publication provides the faceplate information for the embedded PlantPax® Instructions on the process controller (1756-L8xEP).

Summary of Changes

This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes.

Topic	Page
Added FactoryTalk Optix Faceplates chapter.	44
Added FactoryTalk Optix Faceplates and Graphic Symbols to Instructions.	throughout
Clarified the PMTR buttons for FactoryTalk View SE.	226

Download Firmware, Add-on Profiles, EDS, and Other Files

Download firmware, associated files, and access product release notes from the Product Compatibility and Download Center at rok.auto/pcdc.

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation. You can view or download publications at rok.auto/literature.

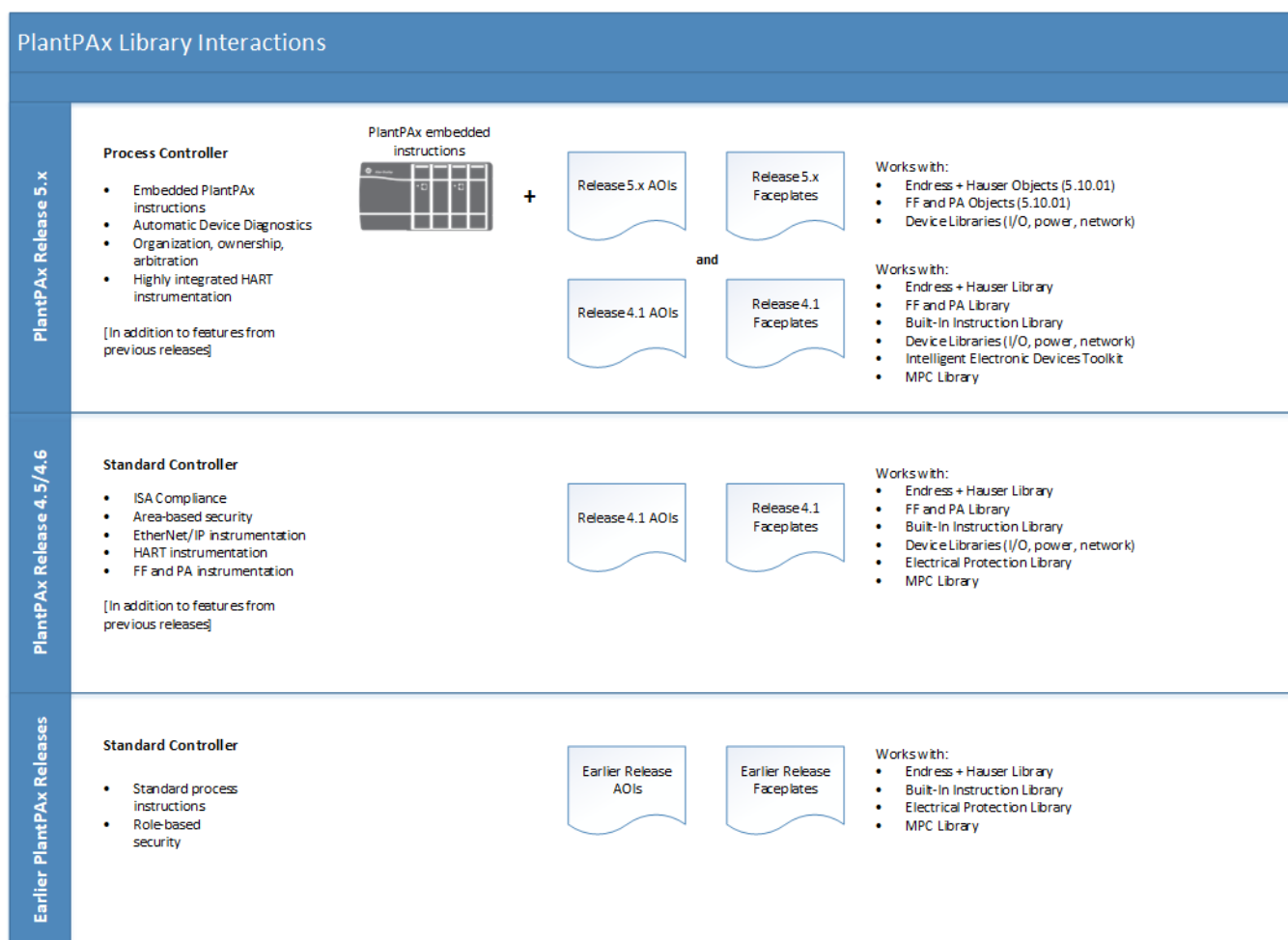
Resource	Description
Selection Guide, publication PROCES-SG001	Helps you understand the elements of the PlantPax system to make sure that you buy the proper components.
Template User Manual, publication 9528-UM001	Provides direction on how to install and deploy PlantPax virtual templates.
Configuration and Implementation User Manual, publication PROCES-UM100	Provides system guidelines and instructions to assist with the development of your PlantPax system.
Rockwell Automation Library of Process Objects, publication PROCES-RM200	Describes the use of the Library of Process Objects and the Add-On Instruction in the Library of Process Objects.
Process Object parameters Spreadsheet, publication, PROCES-RD200	Describes the PlantPax Process object parameters.
PlantPax Visualization Files, publication, PROCES-RD201	Describes the visualization files that are required for the Library of Process Objects.
PlantPax Process Control Instructions, publication PROCES-RM215	This manual provides a programmer with details about the available Process instruction set for a Logix-based Process controller.
EtherNet/IP Network Devices User Manual, ENET-UM006	Describes how to configure and use EtherNet/IP™ devices to communicate on the EtherNet/IP network.
Ethernet Reference Manual, ENET-RM002	Describes basic Ethernet concepts, infrastructure components, and infrastructure features.
System Security Design Guidelines Reference Manual, SECURE-RM001	Provides guidance on how to conduct security assessments, implement Rockwell Automation products in a secure system, harden the control system, manage user access, and dispose of equipment.
UL Standards Listing for Industrial Control Products, publication CMPNTS-SR002	Assists original equipment manufacturers (OEMs) with construction of panels, to help ensure that they conform to the requirements of Underwriters Laboratories.
American Standards, Configurations, and Ratings: Introduction to Motor Circuit Design, publication IC-AT001	Provides an overview of American motor circuit design based on methods that are outlined in the NEC.
Industrial Components Preventive Maintenance, Enclosures, and Contact Ratings Specifications, publication IC-TD002	Provides a quick reference tool for Allen-Bradley® industrial automation controls and assemblies.
Safety Guidelines for the Application, Installation, and Maintenance of Solid-state Control, publication SGI-1.1	Designed to harmonize with NEMA Standards Publication No. ICS 1.1-1987 and provides general guidelines for the application, installation, and maintenance of solid-state control in the form of individual devices or packaged assemblies incorporating solid-state components.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
ProposalWorks™ configuration software, rok.auto/systemtools	Helps configure complete, valid catalog numbers and build complete quotes based on detailed product information.
Rockwell Automation Global SCCR tool, rok.auto/sccr	Provides coordinated high-fault branch circuit solutions for motor starters, soft starters, and component drives.
Product Certifications website, rok.auto/certifications	Provides declarations of conformity, certificates, and other certification details.

Notes:

PlantPax Process Control Instructions

When you deploy the process controller in PlantPax® 5.0 and later, you gain access to additional PlantPax instructions. The PlantPax instructions on the process controller provide objects that are embedded in the controller firmware. The PlantPax library download contains the faceplates that are used for the embedded instructions.

See PlantPax Process Control Instructions, publication [PROCES-RM215](#) for more information.



PlantPax Instructions

In PlantPax 5.0 and later, Rockwell Automation offers process-specific instructions, called PlantPax instructions, which are embedded into the process controller. The following table outlines the PlantPax instructions in relation to previous releases of PlantPax Add-On Instructions. For more detailed information, see the online help section of the Studio 5000 Logix Designer® application.



Libraries noted in the following table:

GEMS - Global Engineering Modular Solutions

RAMS - Rockwell Automation Mining Solutions

PO - Process Objects

Input Processing

PlantPax Instruction	Previous Process Library Add-On Instruction	Instruction Description
Process Analog Input (PAI)	CM_AIN (GEMS) MSAinSiS (RAMS) P_AInChan (PO) P_AInAdv (PO) P_Ain (PO)	The Process Analog Input (PAI) instruction monitors an analog input and checks for alarm conditions. Use the PAI instruction to process a signal from a channel of an analog input module. Use the PAI instruction with any analog (REAL) signal.
Process Dual Sensor Analog Input (PAID)	P_AInDual (PO)	The Process Dual Sensor Analog Input (PAID) instruction evaluates one analog Process Variable (PV) by using two analog input signals, from sources such as dual sensors, dual transmitters, and dual-input channels. The PAID instruction monitors the conditions of the channels and reports configured PV quality. The PAID instruction has functions for input selection, averaging, and failure detection. Additional functions, such as for filtering and alarming, are done by a downstream PAI block.
Process Multi Sensor Analog Input (PAIM)	P_AInMulti (PO)	The Process Multi Sensor Analog Input (PAIM) instruction evaluates one analog process variable (PV) by using up to eight analog input signals from sources such as sensors, transmitters, and input channels. The PAIM instruction has functions for input selection, averaging, and failure detection. Additional functions, such as filtering and alarming, are done by a downstream PAI block.
Process Discrete Input (PDI)	CM_DIN (GEMS) MsDinSiS (RAMS) P_DIn (PO)	The Process Discrete Input (PDI) instruction monitors a discrete (true or false) input, and checks for alarm conditions. Use the PDI instruction to process a signal from a channel of a discrete input module. Use the PDI instruction with any discrete (BOOL) signal.
Process Pressure/Temperature Compensated Flow (PPTC)	P_PTComp (PO)	The Pressure/Temperature Compensated Flow (PPTC) instruction calculates a flow at standard temperature and pressure, essentially a mass flow rate, given a volumetric flow rate or differential pressure measurement. This instruction requires measurements of the actual temperature and pressure of the flowing gas.
Process Tank Strapping Table (PTST)	P_StrapTbl (PO) L_Chrcrtrzn (GEMS)	The Process Tank Strapping Table (PTST) instruction calculates the volume of product in an upright cylindrical tank, given the level of the product and the tank calibration table.
Process HART (PAH) (+ PAI or PAO)	P_AInHART (PO) P_AOutHART (PO)	The Process Analog HART (PAH) instruction is used to provide HART digital data for an intelligent analog device alongside the analog input (PAI) or analog output (PAO) instruction for that device.

Device Control

PlantPax Instruction	Previous Process Library Add-On Instruction	Instruction Description
Process Analog Output (PAO)	CM_AOUT (GEMS) MSAoSoS (RAMS) P_AOut (PO) P_ValveC (PO)	The Process Analog Output (PAO) instruction drives an analog output and checks for alarm conditions. Use the PAO instruction for a channel of an analog output module. Use the PAO instruction with any analog (REAL) signal. In addition, this object supports pulse outputs, position feedback input, and position deviation alarming for control valves.
Process Discrete Output (PDO)	CM_DOUT (GEMS) P_DOut (PO)	The Process Discrete Output (PDO) instruction drives a discrete (true / false) output, monitors discrete inputs serving as feedback from a device driven by the discrete output, and checks for alarm conditions. Use the PDO instruction for a channel of a discrete output module. Use the PDO instruction with any discrete (BOOL) signal.
Process Motor (Power Discrete)(PMTR)	CM_M2S (GEMS) MsMtrFrS (RAMS) P_Motor2Spd (PO) P_MotorHO (PO) P_MotorRev (PO) P_Motor (PO) P_SMC50 (PO) P_SMCFlex (PO)	The Process Motor (PMTR) instruction monitors and controls a fixed single-speed, two-speed, or reversing motor using a full-voltage contactor or intelligent motor controller (soft starter). The motor can be run or jogged, including jogging reverse or jogging fast, as configured by the user. The interface to the hardware motor controller can be through a Device Object Interface or through individual pins. The object is a configurable, built-in combination of the existing PlantPax P_Motor (single speed), P_Motor2Spd (two speed), P_MotorRev (reversing), and P_MotorHO (hand-operated or monitor-only) Add-On instructions in the Rockwell Automation Library of Process Objects.

Device Control

PlantPAx Instruction	Previous Process Library Add-On Instruction	Instruction Description
Process Valve Library (PVLV)	CM_V2S (GEMS) CM_V3S (GEMS) MsVlv2sS (RAMS) MsVlv3S (RAMS) P_ValveH0 (PO) P_ValveM0 (PO) P_ValveS0 (PO)	The Process Valve (PVLV) instruction operates a two-position, single-solenoid operated valve, a dual-solenoid operated valve, or a motor-operated valve in various modes, monitoring for fault conditions. It also monitors hand-operated two-position valves. It is a built-in analogy of the existing PlantPAx P_ValveS0, P_ValveM0, and P_ValveH0 Add-On instructions in the Rockwell Automation Library of Process Objects.
Process VSD (Power Velocity) (PVSD)	CM_VFD (GEMS) MsVsdFrs (RAMS) P_PF52x (PO) P_PF6000 (PO) P_PF7000 (PO) P_PF753 (PO) P_PF755 (PO) P_VSD (PO)	The Process Variable Speed Drive (PVSD) instruction monitors and controls a variable speed motor using an AC (variable frequency) or DC drive. Use the instruction to run or jog the motor, forward or reverse. The drive interface can be through a Device Object Interface or through individual pins. The object is a built-in version of the existing P_VSD Add-On Instruction in the Rockwell Automation Library of Process Objects.
Discrete 2-, 3-, 4-state Device (PD4SD)	raP_Dvc_D4SD	This instruction controls and monitors feedback from a discrete 2-state, 3-state, or 4-state device s, monitoring for fault conditions. These devices include multiple-speed motors or multiple position valves. Controls four discrete outputs and monitors four discrete feedback inputs. Each output and input has configurable states of each output in the various device states. The instruction also monitors permissive and interlock conditions; the latter returns the device to its default state.
n-Position Device (PNPOS)	raP_Dvc_nPos	This instruction controls a circular or linear discrete device with up to 30 positions. The instruction provides outputs to select an individual position.
Mix-proof Valve (PVLVMP)	raP_Dvc_VlvMP	This Instruction controls one mix-proof valve in various modes and states, and can check position feedback inputs to verify that the valve reached the commanded position. An alarm can be provided on failure to reach a target position.

Discrete Monitoring and Control

PlantPAx Instruction	Previous Process Library Add-On Instruction	Instruction Description
Process Boolean Logic (PBL)	P_Logic (PO)	The Process Boolean Logic with Snapshot (PBL) instruction executes up to eight gates of configurable Boolean logic. Gate types available include AND, OR, XOR (Exclusive-OR), Set/Reset, Select, and Majority. Each gate provides up to four input conditions that are individually invertible using a configuration setting.
Process Interlock (PINTLK)	P_Intlk (PO) P_IntlkAdv (PO) I_Multiplex_04 (GEMS) I_Multiplex_08 (GEMS) I_Multiplex_16 (GEMS) I_Multiplex_32 (GEMS) I_Protective (GEMS)	The Process Interlocks (PINTLK) instruction collects, or sums up, the interlock conditions that stop or de-energize a running or energized piece of equipment. This instruction can also help prevent equipment from starting or being energized. Interlocks are always evaluated to de-energize equipment. For permissive conditions that must be made to start the equipment, but are ignored once the equipment is running, use the Process Permissive (PPERM) instruction.
Process Lead/Lag/Standby Motor Group (PLLS)	P_LLS (PO) MsGrpM8S (RAMS)	The Process Lead Lag Standby Motor Group (PLLS) instruction provides control of a parallel group of motors, such as a set of pumps with a common intake source and discharge destination. The number of motors to run depends on the demand on the system. The group can be configured to consist of as few as two or as many as 30 motors. The minimum demand can be set as low as 0, so that all motors are stopped at minimum demand. The maximum demand can be set as high as the number of pumps in the group.
ProcessPermissive (PPERM)	P_Perm (PO) I_Multiplex_04 (GEMS) I_Multiplex_08 (GEMS) I_Multiplex_16 (GEMS) I_Multiplex_32 (GEMS)	The Process Permissives (PPERM) instruction collects, or sums up, the permissive conditions that allow a piece of equipment to energize. In most cases, permissive conditions must be true to energize equipment. Once the equipment is energized, permissives are ignored.

Discrete Monitoring and Control

PlantPAx Instruction	Previous Process Library Add-On Instruction	Instruction Description
Process Restart Inhibit (PRI)	P_ResInh (PO)	Use the Process Restart Inhibit instruction for Large Motor (PRI) instruction to help prevent large motors from starting repeatedly. The high starting current for a large motor causes heating. Continual starts or start attempts in a short period overheat the motor windings and damage the motor. The PRI instruction provides a rule-based state model for restarts. Do not use the instruction to model or monitor heating and replace sensor-based motor monitoring devices. Use the instruction to avoid over stressing a motor.
Process Run Time (PRT)	P_RunTime (PO)	The Process Run Time and Start Counter (PRT) instruction records the total run time and number of instances the motor or other equipment starts. The PRT is a software implementation of the mechanical hour meter that displays the total motor runtime. Maintenance personnel use the run time and equipment start variables to create a maintenance schedule for the applicable equipment.
Process Valve Stat (PVLVS)	P_ValveStats (PO)	The Process Valve Statistics Object (PVLVS) instruction monitors a two-state (open and close) valve and records statistics for stroke times and stroke counts to aid in planning maintenance or diagnosing valve and actuator problems. The PVLVS instruction is designed to work with the PVLV (solenoid, motor, and hand operated) valve instruction.

Ownership

PlantPAx Instruction	Previous Process Library Add-On Instruction	Instruction Description
Process Command Source (PCMDSRC)	P_CmdSrc (PO)	The Process Command Source (PCMDSRC) instruction selects the source of Commands and Settings for a device. Available command sources are Operator, Program, External, Override, Maintenance, Out of Service, and Hand.

Procedural Control

PlantPAx Instruction	Previous Process Library Add-On Instruction	Instruction Description
Process Dosing (PDOSE)	CM_TOT (GEMS) CM_WS (GEMS) MsTotSIS (RAMS) P_DoseFM (PO) P_DoseWS (PO)	The Process Dosing (PDOSE) instruction controls an ingredient addition or transfer, using a flowmeter or weigh scale to measure the quantity transferred. When using a flow measurement, the meter can be an analog flowmeter (signal proportional to flow), a pulse generating flowmeter (pulse count proportional to quantity delivered), or a digital flowmeter providing flow rate or quantity (totalized flow) information. The instruction also controls an ingredient addition that uses a weigh scale to measure the quantity (totalized flow) information. When using a weigh scale to measure the quantity transferred, the scale can be on the receiving vessel, indicating gain in weight, or on the sourcing vessel, indicating loss in weight. The weigh scale can be connected using an analog input, device network, or other connection.

Regulatory Control

PlantPAx Instruction	Previous Process Library Add-On Instruction	Instruction Description
Process Deadband Controller (PDBC)	P_DBC (PO)	<p>The Process Deadband Controller (PDBC) provides:</p> <ul style="list-style-type: none"> • A Raise output, which is activated when the PV is less than the entered Raise threshold, and a Lower output, which is activated when the PV is greater than the entered Lower threshold. • Q and Q-Not outputs. Q is set when the PV falls below the Raise threshold and cleared when the PV rises above the Lower threshold; Q-Not is the inverse of Q. • High and Low Deviation alarms with configurable thresholds and deadbands. These alarms can provide notification that the PV is approaching an out-of-control condition. • Alarms for High PV Rate of Change Increasing and High PV Rate of Change Decreasing. These alarms can provide notification that the PV is changing faster than expected. • Operation in Manual and Automatic Loop Modes. In Automatic Loop Mode, the outputs are triggered by the control algorithm to keep the PV within limits. In Manual Loop Mode, the operator directly manipulates the Raise and Lower outputs from the HMI. • Operation in Operator, Program, Override, and Maintenance command sources.
Process Analog Fanout (PFO)	P_Fanout (PO)	<p>The Analog Fanout (PFO) instruction sends one primary analog output signal to multiple secondary users or devices. Each secondary output has configurable gain, offset, and clamping limits.</p>
Process High or Low Selector (PHLS)	P_HiLoSel (PO)	<p>The Process High or Low Selector (PHLS) selects the highest or the lowest of up to six inputs. The instruction sends the selected value as output and feeds back flagged values for the unselected inputs for tracking.</p>
Process Regulatory Control (PPID)	CM_PIDE (GEMS) CM_PID (GEMS) MSPidBaS (RAMS) MsPidEns (RAMS) P_PIDE (PO)	<p>Use the Process Proportional + Integral + Derivative (PPID) instruction to manipulate the Control Variable (CV) in regulatory control loops in response to Process Variable (PV) readings and Setpoint (SP, the target PV) settings.</p> <p>The CV is typically used as a cascade setpoint for a secondary, or inner, control loop or is sent to an Analog Output channel on an I/O card.</p> <p>The PPID instruction integrates functions of the existing PID, PIDE, and P_PIDE Add-On Instruction into a single built-in instruction and adds additional features.</p>

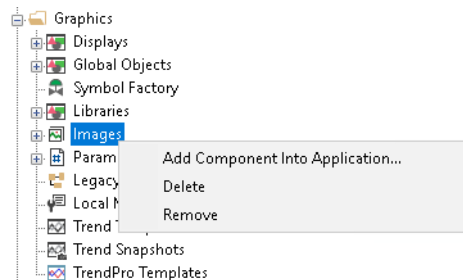
Incorporating the Library HMI Files into your Project

This section describes how to import visualization files for FactoryTalk View SE and View Designer. For this release of FactoryTalk Optix, the provided Optix project must be used as the starting project.

For the latest compatible software information and to download the Rockwell Automation Library, see the Product Compatibility and Download Center.

Import Visualization Files for FactoryTalk View SE

There are several components to import for the visualization files. You import files from the downloaded Rockwell Automation library files via FactoryTalk® View SE.



Import files in this order:

1. Import HMI Images files.
Select all images and Open.
2. Import Global Object files
Select the global object (.ggfx) files.
3. Import HMI Faceplates
Select the faceplate (.gfx) files.
4. Import Macros
Right-click Macro and select Add Component Into Application.
Select all macros and Open.
5. Import Local Message Files (.loc). These files are used with raP_Opr_EMGen, raP_Opr_EPGen, and raP_Opr_Unit.

Import HMI Tags

From the Tools dropdown menu, select Tag Import and Export Wizard. Use the following table to complete the wizard.

On this Dialog Box	Action
Select the operation that you would like to perform	Select 'Import FactoryTalk View tag CSV files'
Choose the FactoryTalk view project that you want to import into	Browse to the .sed project file that you want the HMI tags imported into
Choose the FactoryTalk View CSV files that you want to import	Select the .csv file that is contained within the downloaded Library zipped file
Choose the import options that you want	Select 'Skip existing (fastest)'

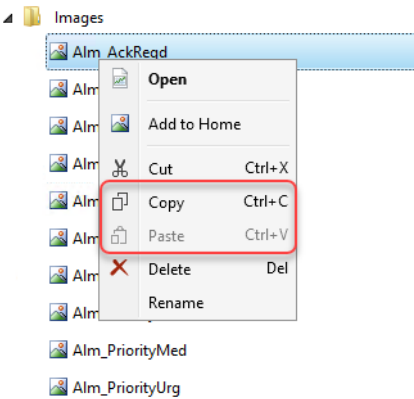
When you finish the wizard the FactoryTalk View - Database Import dialog box appears with the information that the import is complete.

Copy Visualization Files for Studio 5000 View Designer

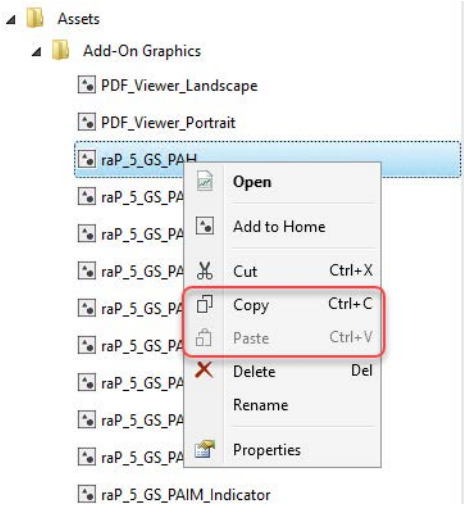
There are several components to import for use with Studio 5000 View Designer®. Files are copy and pasted from the provided template project to your working project.

Copy and paste the files in this order:

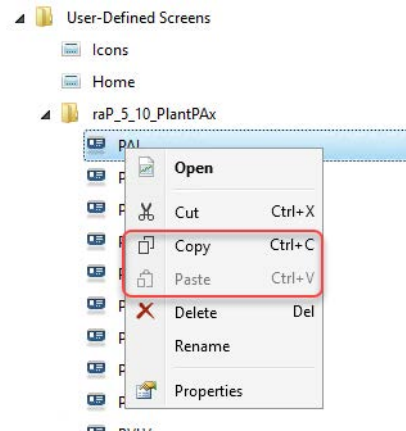
1. Copy / Paste Image files. Select all images and copy / paste.



2. Copy / Paste Add-On Graphic (AOG) files. Select ONLY the files to copy / paste that will be used in your project.



3. Copy / Paste User-Defined pop-up Screens. Select **ONLY** the files to copy / paste that will be used in your project.



FactoryTalk View SE Faceplates

The library comes with faceplates for use with FactoryTalk® View SE displays.

Faceplate Type	Description
Advanced	The Advanced faceplate has the remaining (less common) maintenance controls and ALL the engineering configuration items, such as scaling, clamping, and major device options (for example, motor-operated or solenoid-operated valve). It gets most of its use during commissioning or if a device is replaced and the replacement has another configuration
Faceplate	The basic faceplate has ALL the operator controls and the most common maintenance controls, such as diagnostics, bypassing interlocks, and adjusting failure times and analog alarm / control thresholds.
Quick	The Quick faceplate has the basic operator controls. It is "grid-able" - they are a consistent size, using a minimum of real estate. It's easy to dedicate a place on the screen for them to come up so operator can click a device graphic symbol and then operate the device.

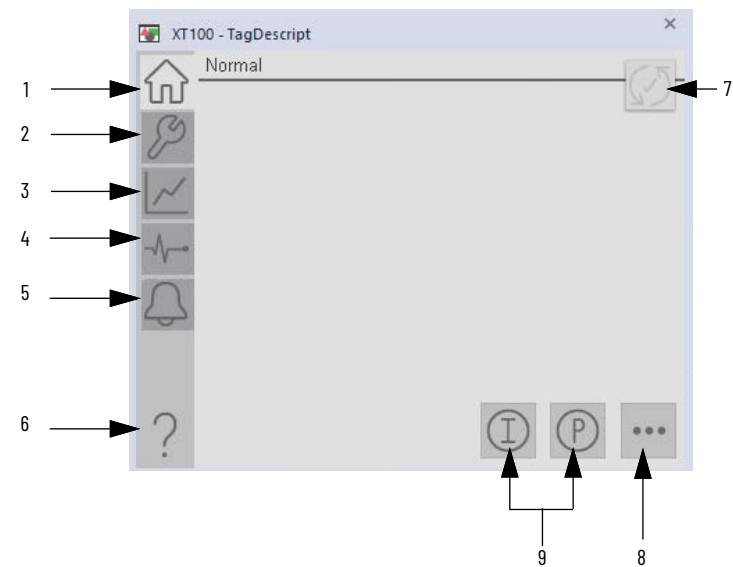
Before you work with faceplates, confirm you have the following:

- Controller project (If you use the library control strategies, there is some pre-built navigation available to use)
- Configured data server and controller shortcut
- Graphic framework - installed and used to create associated displays

Basic Faceplate Attributes

Faceplates consist of tabs, and each tab consists of one or more pages. The Operator (Home) tab is displayed when the faceplate is initially opened. The faceplate provides the means for operators, maintenance personnel, engineers, and others to interact with an instruction instance, which includes a view of its status and values. Faceplates also manipulate an instruction through its commands and settings. Select the appropriate icon on the left of the faceplate to access a specific tab. This section provides an overview of the faceplate attributes that are common across the objects. More details are supplied in the individual section for each object.

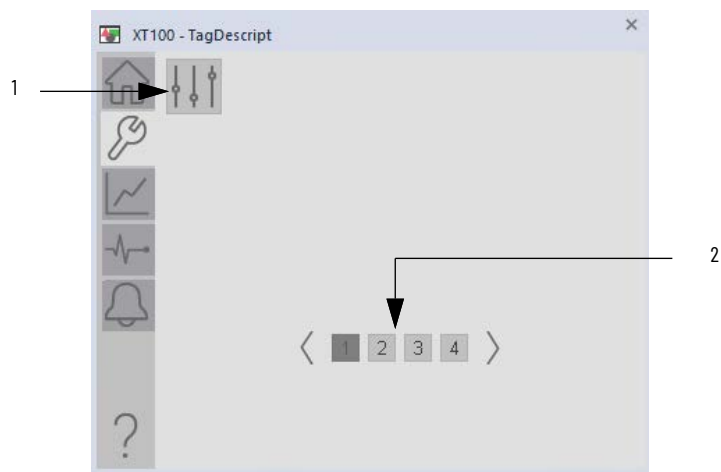
Operator (Home) Tab



Item	Action
1	Select to open the Operator tab.
2	Select to open the Maintenance tab.
3	Select to open the Trends tab.
4	Select to open the Diagnostics tab.
5	Select to open the Alarm tab.
6	Select to open the Help file.
7	Select to reset and acknowledge all alarms.
8	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) You configure the tag name of the object that you want to navigate to in the extended tag property "Cfg_HasMoreObj.@Navigation". It uses the <backing tag>.@Library and <backing tag>.@Instruction extended tag properties to display the object's faceplate.
9	If the object is configured to have permissive and interlock objects (for example, Cfg_HasPermObj (Fast or Slow) or Cfg_HasIntlkObj is true), the permissive and interlock indication become buttons. These buttons open the faceplates of the source objects that are used as a permissive or interlock. Often this is a PPERM or PINTLK instruction. If the object is not configured in this way, the permissive or interlock symbols are indicators only.

Maintenance Tab

In the maintenance tab, there is a button for Advanced properties. There are also page identifiers at the bottom if there are multiple configuration pages. See the following diagram for common attributes of the maintenance tab.

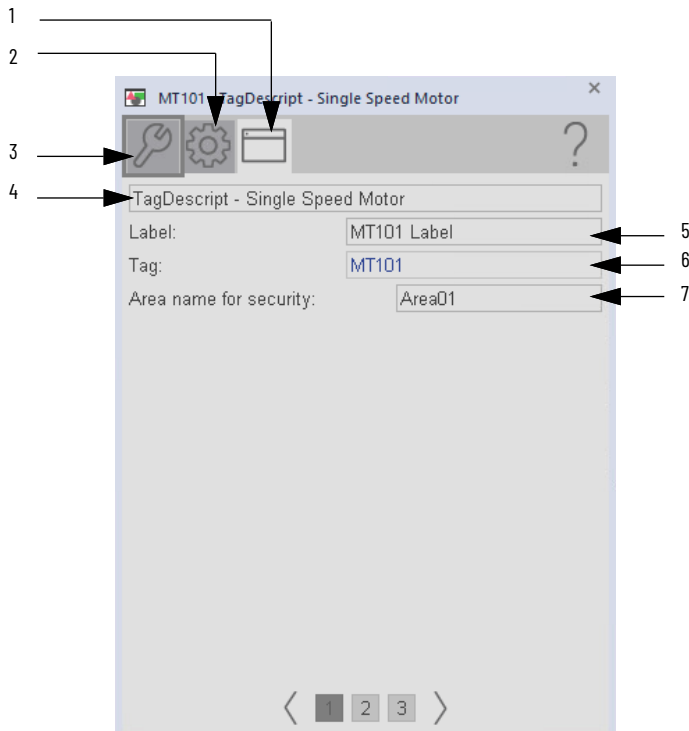


Item	Action
1	Select to open the Advanced Properties.
2	Page identifiers

Advanced Properties

The advanced maintenance, engineering, HMI configuration, Diagnostics, and Faults tabs for the objects are available in the advanced properties faceplate. The advanced maintenance and engineering tabs have object-specific configurations that are detailed for each object.

The HMI configuration tab has settings that are common to the objects. See the following diagram for common attributes of the HMI configuration tab.



Item	Action
1	Select to open the HMI Configuration tab.
2	Select to open the engineering tab.
3	Select to open the Advanced Maintenance tab.
4	Device description that shows on the faceplate title bar.
5	Label to show on the graphic symbol.
6	Tag name that shows on the faceplate and on the tooltip for graphic symbols.
7	Area name for security.

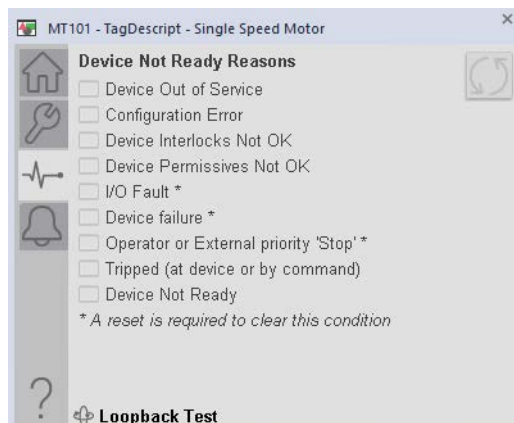


Hover the cursor over the tag name to see the actual network path and tag name that is associated with the object.

Diagnostics Tab

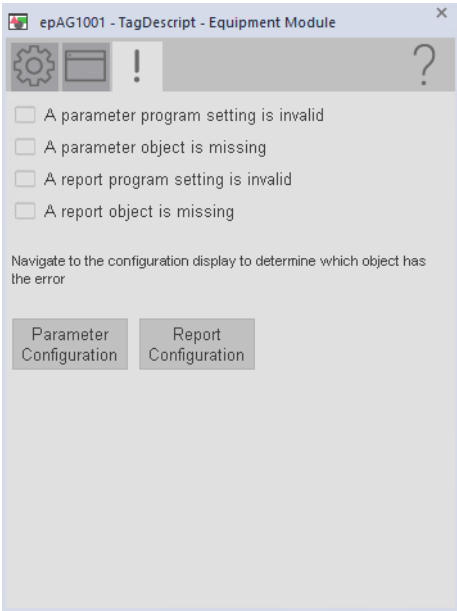
The Diagnostic tab provides indications that are helpful to diagnose or help prevent device problems. These problems can include specific reasons a device is 'Not Ready', device warnings and faults, warning and fault history, and predictive/preventive maintenance data.

The Diagnostics tab displays possible reasons for the device not being ready.



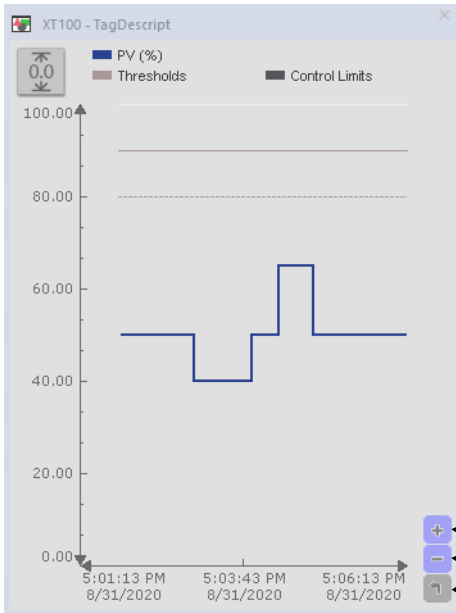
Faults Tab

The faults tab contains specific reasons that the device is not ready.



Trends Display

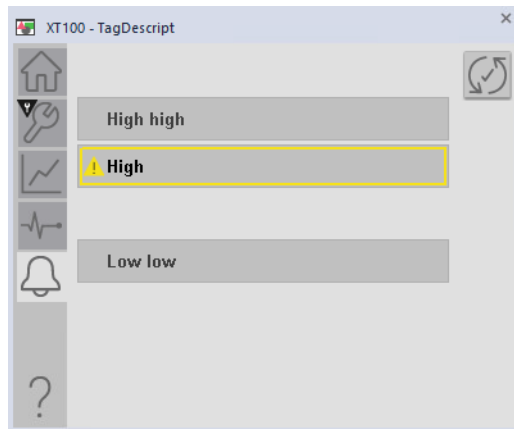
The Trends display shows trend charts of key device data over time. These faceplate trends provide a quick view of current device performance to supplement, but not replace, dedicated historical or live trend displays.



Item	Action
1	Select to zoom in
2	Select to zoom out
3	Select to reset view

Alarms Tab

The Alarms tab displays each configured alarm. The icon on the tab for the alarms page has an outline that changes color to show the current active alarm status.



Help Button

Press the help button on the faceplates to access help specific to that faceplate. The help file is in .pdf format and opens in a separate window. See the following example:

Variable Speed Drive Faceplate Help

Status Indicators

Invalid configuration

Data quality bad / failure

Data quality degraded / uncertain

Device not ready to operate

At target Speed

Speed reference limited

Alarm Inhibit (Shelved or Disabled)

Maintenance Bypass active

Virtual (Simulation or Test)

Accelerating

Decelerating

Command Source Indicators

Program

Operator

External

Maintenance

Hand (Local)

Program Locked

Operator Locked

Override

Out of Service

Source other than the normal Command Source selected

Interlocks and Permissives

One or more conditions not OK

Non-Bypassed conditions OK

All conditions OK, Bypass Active

All conditions OK

Alarm Commands

Acknowledge Alarm. This command acknowledges an alarm that has been configured with "Ack Required".

Acknowledge and Reset all alarms for an object. This acknowledges all active alarms and resets all alarms that have been configured with "Reset Required".

Alarm States

Alarm Suppressed (inhibited by logic)

Alarm Disabled (by user)

Alarm Shelved (logged but not annunciated)

Commands

Start Drive Forward. Available in Operator or Maintenance Command Source

Start Drive Reverse. Available in Operator or Maintenance Command Source

Jog Drive Reverse. Available in Operator or Maintenance Command Source

Stop Drive. Available in Operator or Maintenance Command Source

Jog Drive Forward. Available in Operator or Maintenance Command Source

Navigation

Show more information for this object

Restart inhibit display

Motor runtime display

Show device specific information

Alarms

I/O Fault Alarm

The I/O Fault Alarm is triggered when a controller hardware or communication fault is detected.

Interlock Trip Alarm

The Interlock Trip Alarm is triggered when an interlock condition causes the drive to stop.

Fail to Start and Fail to Stop Alarm

These alarms trigger when the drive fails to Start or Stop within the time specified on the Maintenance Configuration Tab.

Drive Fault Alarm

The Drive Fault Alarm occurs when a drive fault is received from the drive.

Alarm Icons

Urgent

High

Medium

Low

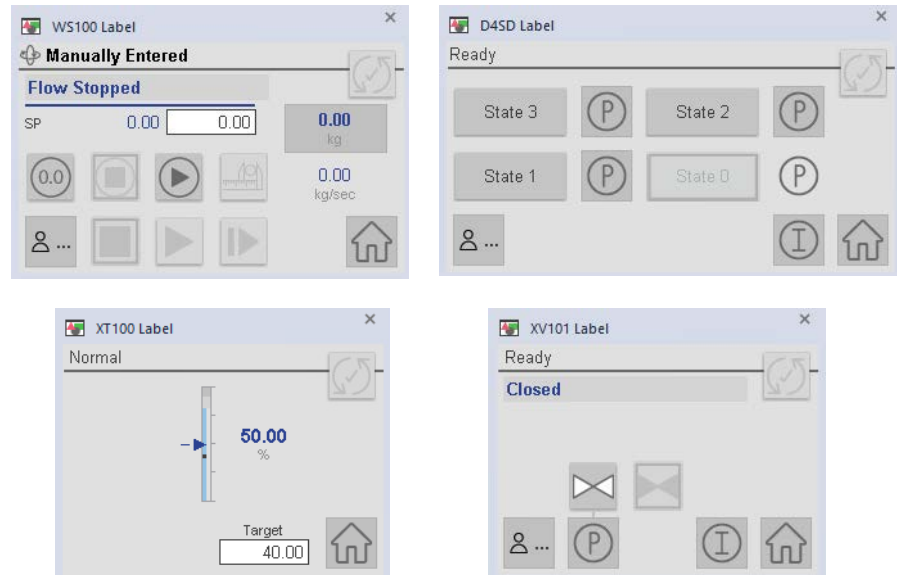
Out of Alarm Ack Required

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Quick Display Interaction

A Quick Display is a simplified faceplate that is designed for the Operator role and includes the most common actions that are required by an operator. From the Quick Display, Select the Home button to navigate to the faceplate for full access for operation, maintenance, and configuration. All other buttons function the same as on the main faceplate. The following figures show examples of quick displays.



Define Global Parameters

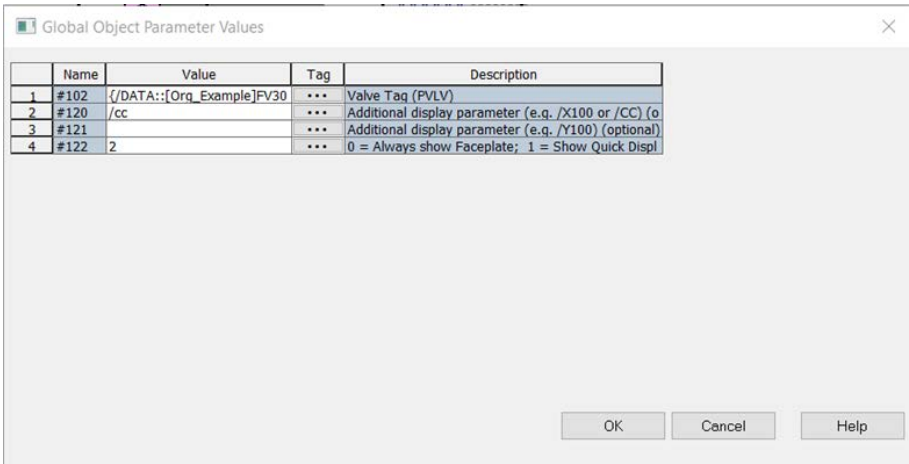
The global parameters position the faceplate display on the screen. When you add a global object to your display, you specify the tag and display characteristics in the Global Parameters Value dialog.

In the Graphics editor, on a graphic display, right-click a reference object and select Global Object Parameter Values. You can also select Edit > Global Object Parameter Values on the menu



The Global Object Parameter Values menu item is unavailable if:

- The object that is selected is not a reference object.
- The object that is selected is a reference object but its base object has no global object parameters defined.
- The object that is selected is part of a group reference object.



Row	Name	Value	Description
1	#102	Use ... to select the tag needed	Tag for the global object
2	#120	X-axis	Additional display parameter (for example, /X100 or /CC) (optional) /X100 (have to have a Y) /RP for relative position /CC for centered
3	#121	Y-axis	Additional display parameter (for example, /Y100) (optional) /Y100 Leave blank if use /RP or /CC in row 2
4	#122	Faceplate	0 = Always show Faceplate 1 = Show Quick Display for users without security codes that are specified in the HMI tag Security\ShowFaceplate This allows the developer to configure which display shows up depending on the user's security level. By default the value is "CDE" (meaning users with security code C, D, or E will see the full faceplate and all other users see the Quick Display.) 2 = Always Show Quick Display

You can enter any valid FactoryTalk View SE settings; see the display options online help for more information. There are more options than described above, such as a specific quadrant or /X and /Y coordinates.

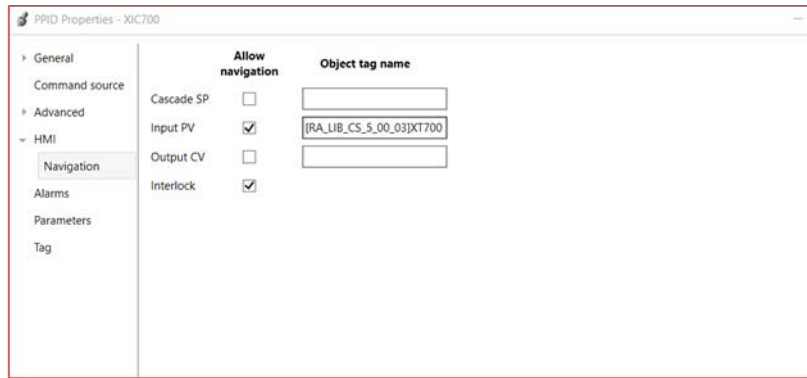
Define HMI Text

The HMI Text functions in the same way as in FactoryTalk View SE. See [Define HMI Text on page 34](#).This screen shows default values for a PPID instruction.

Define Navigation to Other Object Faceplates

Use the Navigation tab on the instruction Properties dialog box to configure navigation from the HMI to additional devices or destinations (only some instructions have this as an option).

This screen shows default values for a PPID instruction in the default PPID control strategy.

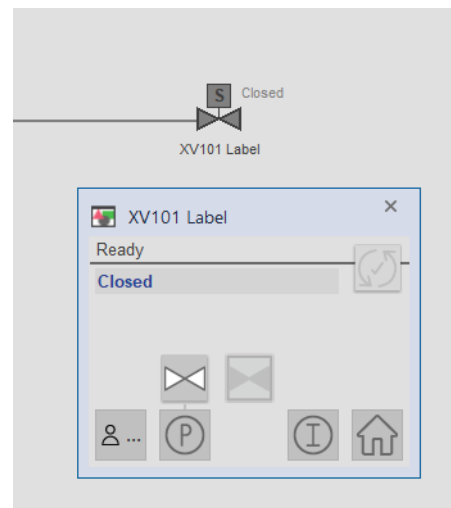


1. To allow navigation to a destination from the HMI faceplate, select Allow navigation for each destination.
2. In the Object tag name box, enter the controller path and the destination tag. For example, the object tag name for an Input PV object could be
/DataServer::[shortcut name]tag name

Configure Faceplate Behavior While Operating

On the FactoryTalk View SE Client Display:

1. From the display, select the object.



2. Select  >  >  > 
3. Define characteristics

Notes:

Studio 5000 View Designer Faceplates

The library comes with faceplates for use with Studio 5000 View Designer® displays. These displays are for use with PanelView™ 5000 series HMI Terminals.

Faceplate Type	Description
Faceplate	The basic faceplate has the operator controls and the most common maintenance controls, such as diagnostics, bypassing interlocks, and adjusting failure times and analog alarm / control thresholds.

Before you work with faceplates, confirm you have the following:

- Controller project
- Configured the controller references in the project properties
- The base project is configured and objects being used are copied into the target project

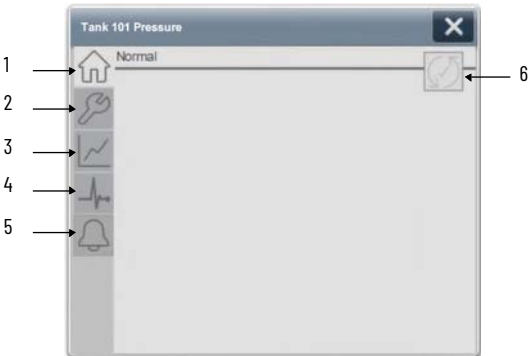
IMPORTANT	Advanced Properties are not accessible from the Studio 5000 View Designer faceplates. Access to Advanced Properties is only available in the Studio 5000 Logix Designer® application or with a parallel instantiation of the instruction in FactoryTalk View SE.
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IMPORTANT	PlantPAx faceplates in View Designer require the use of 2715P PanelView™ 5510 Terminals. The PanelView 5310 is not recommended.
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Basic Faceplate Attributes

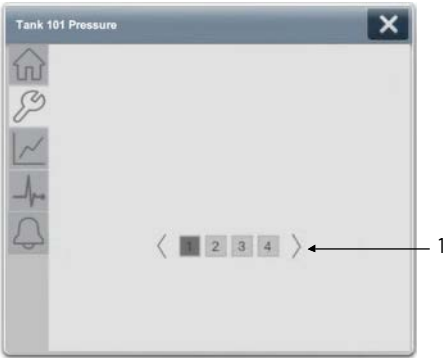
Faceplates consist of tabs, and each tab consists of one or more pages. The Operator (Home) tab is displayed when the faceplate is initially opened. The faceplate provides the means for operators, maintenance personnel, engineers, and others to interact with an instruction instance, which includes a view of its status and values. Faceplates also manipulate an instruction through its commands and settings. Select the appropriate icon on the left of the faceplate to access a specific tab. This section provides an overview of the faceplate attributes that are common across the objects. More details are supplied in the individual section for each object.

Operator Tab



Item	Action
1	Select to open the operator tab.
2	Select to open the maintenance tab.
3	Select to open the trends tab.
4	Select to open the diagnostics tab.
5	Select to open the alarm tab.
6	Select to reset and acknowledge all alarms.

Maintenance Tab

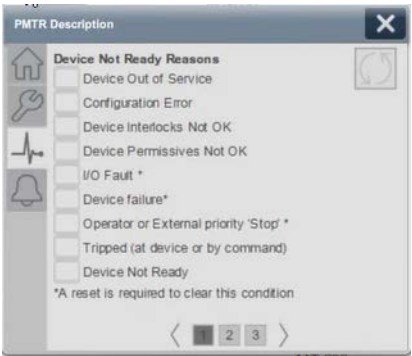


Item	Description
1	Page identifiers

Diagnostics Tab

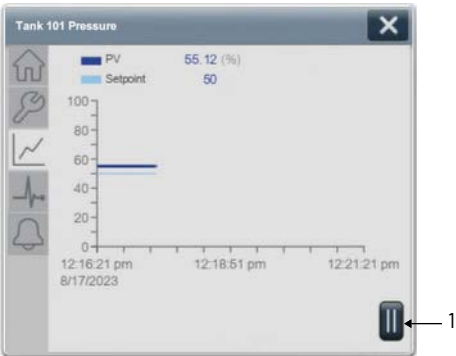
The Diagnostic tab provides indications that are helpful to diagnose or help prevent device problems. These problems can include specific reasons a device is 'Not Ready', device warnings and faults, warning and fault history, and predictive/preventive maintenance data.

The Diagnostics tab displays possible reasons for the device not being ready.



Trends Tab

The Trends display shows trend charts of key device data over time. These faceplate trends provide a quick view of current device performance to supplement, but not replace, dedicated historical or live trend displays.



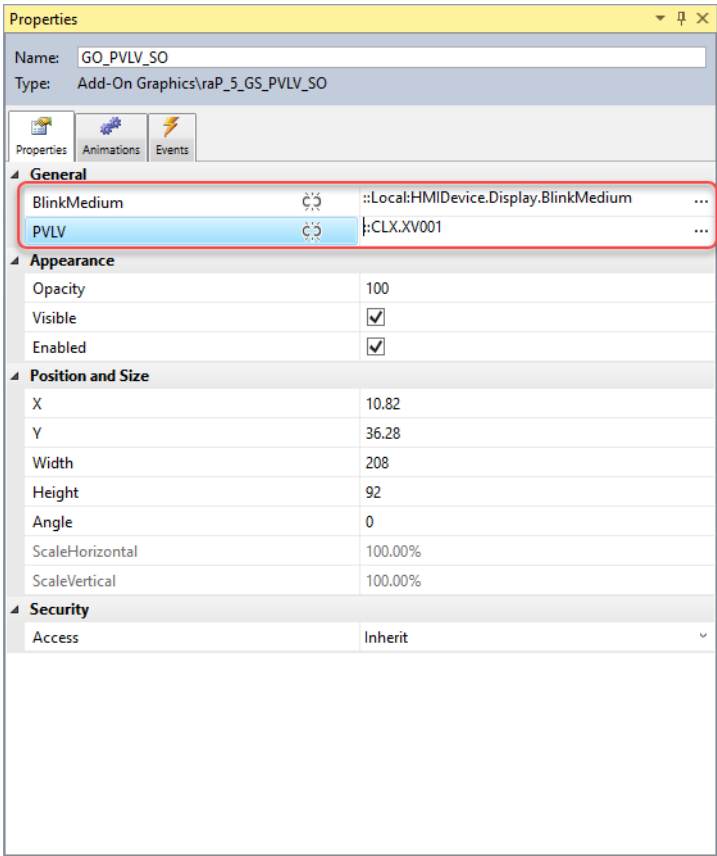
Item	Description
1	Select this to pause the trend display. Select again to resume the trend display at the current time.

Alarms Tab

The Alarms tab displays each configured alarm. The icon on the tab for the alarms page has an outline that changes color to show the current active alarm status.



The Add-on Graphic (AOG) binding parameters connect to controller instance and define the blink rate for alarm indication. When you add an AOG to your display, you specify the tags in the properties panel.



In the graphics editor, after adding the appropriate AOG, select the AOG object. Right-click a reference object and select Properties to edit the binding tags.

Row	Binding Name	Typical User Value	Description
1	BlinkMedium	::Local:HMIDevice.Display.BlinkMedium	Blink rate used for alarm animation.
2	ObjectName	::ControllerReference.ObjectTag	Process Library Object tag for the add-on graphic.

Define HMI Text

The HMI Text functions in the same way as in FactoryTalk View SE. See [Define HMI Text on page 34](#).

This screen shows default values for a PPID instruction.

The screenshot shows the 'PPID Properties - XIC700' dialog box. The left sidebar has tabs for General, Command source, Advanced, HMI (selected), Navigation, Alarms, Parameters, and Tag. The main area contains the following fields:

- Library name:
- Instruction name:
- Display label:
- Area name for security:
- Help button URL:
- ☐ Enable navigation to an object with more information:
- Number of decimal places for PV: PV units:
- Number of decimal places for CV: CV units:
- Number of decimal places for ratio:
- Historical trend:

Notes:

FactoryTalk Optix Faceplates

The library comes with faceplates for use with FactoryTalk® Optix™ for the following firmware instructions: PDI, PDO, PD4SD, PAI, PAID, PAO, PDBC, PDOSE, PHLS, PPID, PMTR, PRT, PVSD, PVLV, PVLVS, PINTLK, PPERM. FactoryTalk Optix content for other library instructions will be added in a future release.

Faceplate Type	Description
Faceplate	The basic faceplate has the operator controls and the most common maintenance controls, such as diagnostics, bypassing interlocks, and adjusting failure times and analog alarm / control thresholds.
Advanced	The Advanced faceplate has the remaining (less common) maintenance controls and ALL the engineering configuration items, such as scaling, clamping, and major device options (for example, motor-operated or solenoid-operated valve). It gets most of its use during commissioning or if a device is replaced and the replacement has a different configuration.

Before you work with faceplates, confirm you have the following:

- Controller project
- Configured the controller references in the project properties
- The base project is configured and objects being used are copied into the target project

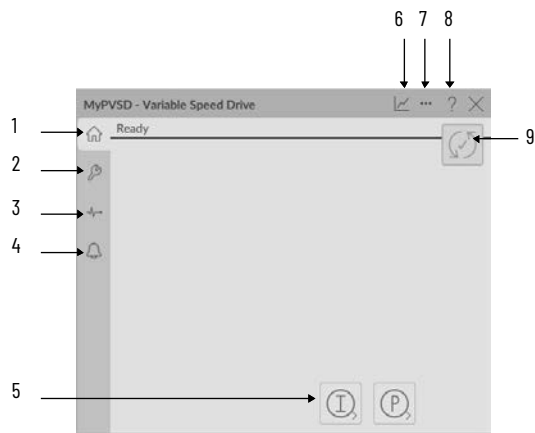
IMPORTANT PlantPAx® faceplates in FactoryTalk Optix require the use of a subset of OptixPanel™ hardware. Supported models are documented in the following table.

Optix Panel Type	Display Size	
OptixPanel Standard - Widescreen	10.1" W	1280x800
	12.1" W	1280x800
	15.6" W	1920x1080
	18.5" W	1920x1080
	21.5" W	1920x1080
OptixPanel Standard - 4:3	12.1" 4:3	1024x768
	15" 4:3	1024x768
ASEM 6300P Panel PC - Standard Bezel Aluminum	12.1"	1024x768
	15.0"	1024x768
	17"	1280x1024
	19"	1280x1024
ASEM 6300P Panel PC - Low Profile Bezel Aluminum and Aluminum Glass True Flat	12.1" W	1280x800
	15.6" W	1920x1080
	18.5" W	1920x1080
	21.5" W	1920x1080
	24" W	1920x1080

Basic Faceplate Attributes

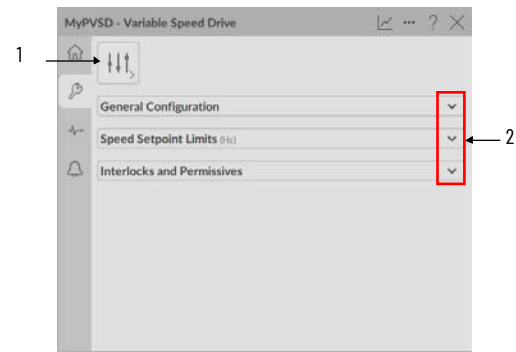
Faceplates consist of multiple tabs. The Operator (Home) tab is displayed when the faceplate is initially opened. The faceplate provides the means for operators, maintenance personnel, engineers, and others to interact with an instruction instance, which includes a view of its status and values. Faceplates also manipulate an instruction through its commands and settings. Select the appropriate icon on the left of the faceplate to access a specific tab. This section provides an overview of the faceplate attributes that are common across the objects. More details are supplied in the individual section for each object.

Operator Tab



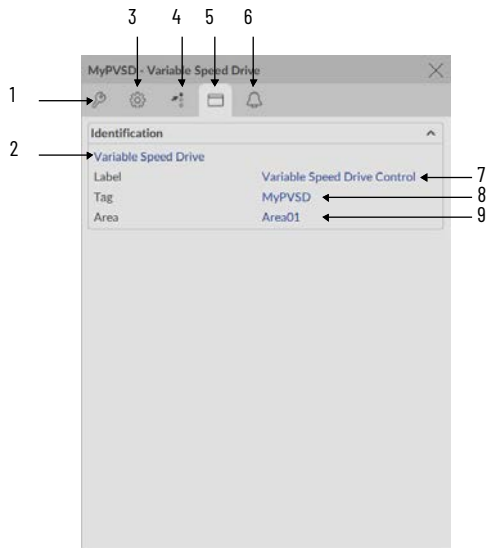
Item	Action
1	Select to open the operator tab.
2	Select to open the maintenance tab.
3	Select to open the diagnostics tab.
4	Select to open the alarm tab.
5	If the object is configured to have permissive and interlock objects (for example, Cfg_HasPermObj (Fast or Slow) or Cfg_HasIntlkObj is true), the permissive and interlock indication become buttons. These buttons open the faceplates of the source objects that are used as a permissive or interlock. Often this is a PPERM or PINTLK instruction. If the object is not configured in this way, the permissive or interlock symbols are indicators only.
6	Select to open the trends tab.
7	Select to navigate to an object with more information.
8	Select to open the Help file.
9	Select to reset and acknowledge all alarms.

Maintenance Tab



Item	Description
1	Select to open Advanced Properties.
2	Select the dropdown arrows to open content blocks.

Advanced Properties Tab

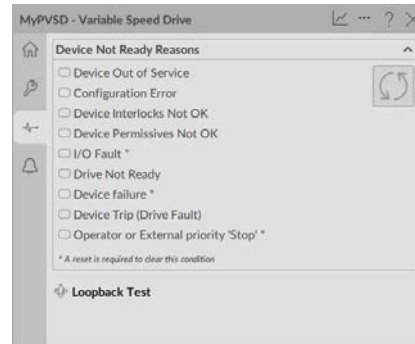


Item	Description
1	Select to open the Advanced Maintenance tab.
2	Device description that shows on the faceplate title bar.
3	Select to open the Advanced Engineering tab.
4	Select to open the Advanced Command Source tab.
5	Select to open the HMI Configuration tab.
6	Select to open the Advanced Alarm Configuration tab.
7	Label to show on the graphic symbol.
8	Tag name that shows on the faceplate.
9	Area name for security.

Diagnostics Tab

The Diagnostic tab provides indications that are helpful to diagnose or help prevent device problems. These problems can include specific reasons a device is 'Not Ready', device warnings and faults, warning and fault history, and predictive/preventive maintenance data.

The Diagnostics tab displays possible reasons for the device not being ready.



Trends Display

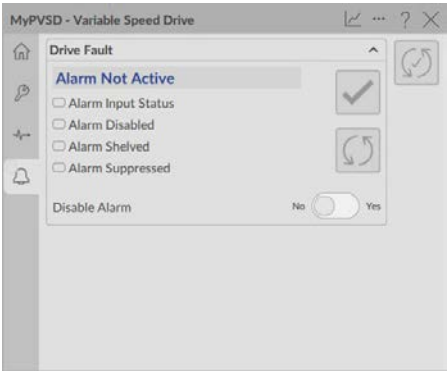
The Trends display shows trend charts of key device data over time. These faceplate trends provide a quick view of current device performance to supplement, but not replace, dedicated historical or live trend displays.



Item	Description
1	Select to zoom in/out.

Alarms Tab

The Alarms tab displays each configured alarm. The icon on the tab for the alarms page has an outline that changes color to show the current active alarm status.



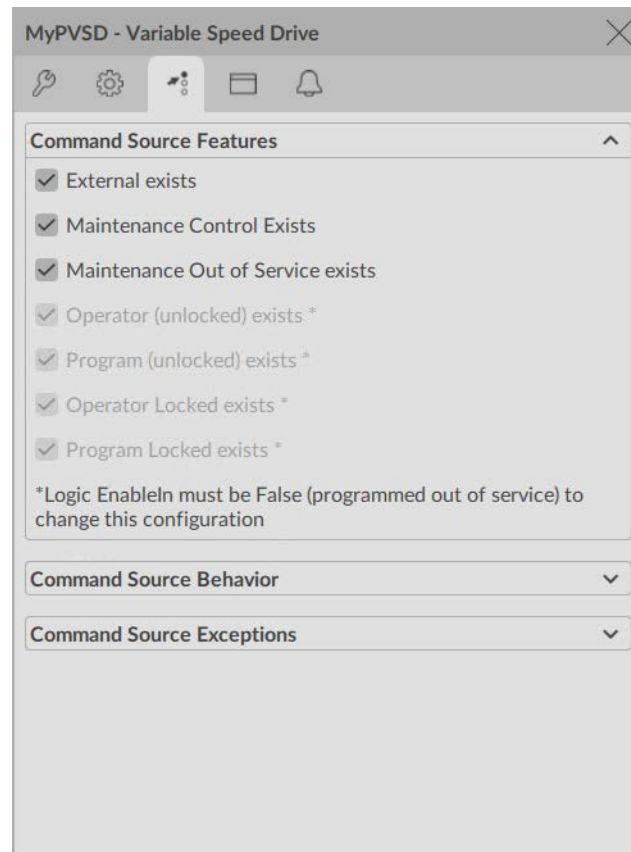
Advanced Alarms Tab

The Advanced Alarm Configuration tab has settings that are common for all objects with alarms. Each alarm instance uses a common configuration widget to configure the alarm.



Advanced Command Source Configuration Tab

The Command Source configuration tab has settings that are common for all objects with Command Source. The "Command Source Exceptions" area has different exceptions for each object that is specific to the objects commands and settings. See the following diagram for common attributes of the Command Source configuration tab.

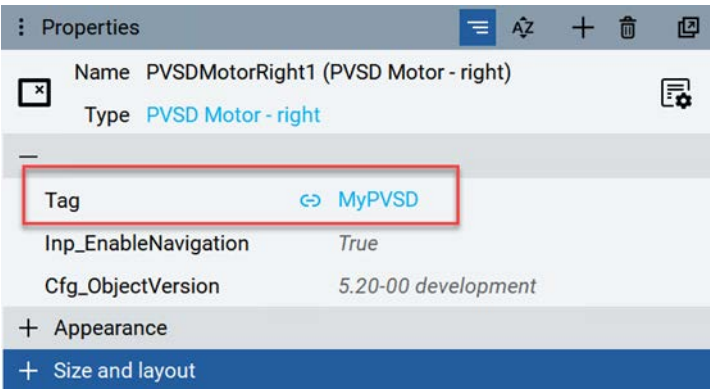


Help Button

The help button functions in the same way as in FactoryTalk View SE. See [Help Button on page 32](#).

Graphic Symbol Properties

The Graphic Symbol properties connect a graphic symbol instance to a controller instance and define the appearance of the symbol. When you add a graphic symbol to your display, you need to specify the tags in the properties panel.



Define HMI Text


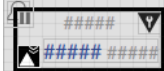
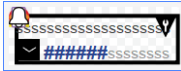

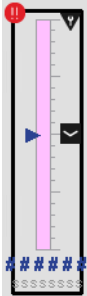

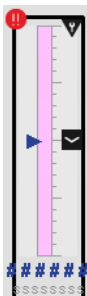

The HMI Text functions in the same way as in FactoryTalk View SE. See [Define HMI Text on page 34](#).



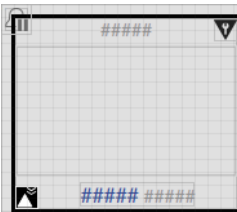
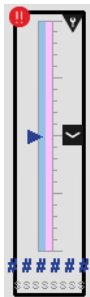
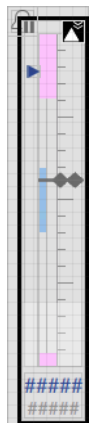
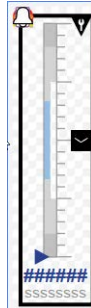
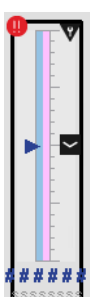
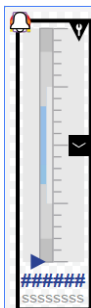



Define Navigation to Other Object Faceplates

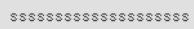
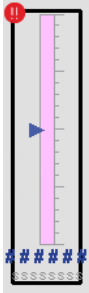
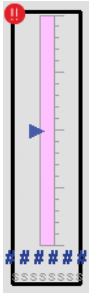
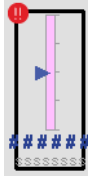
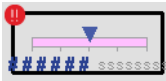
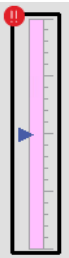
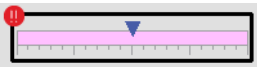
Navigation to other faceplates functions in the same way as in FactoryTalk View SE. See [Define Navigation to Other Object Faceplates on page 34](#).

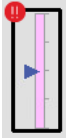
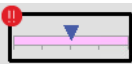
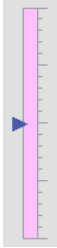
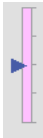


Process Analog Input (PAI)

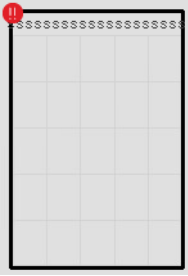
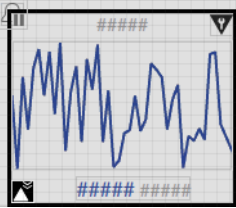
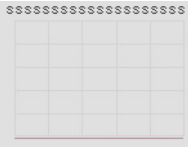
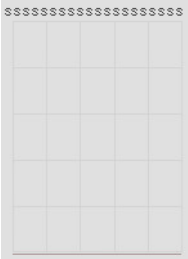
Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PAI 	PAI_GS 	GS_PAI 	Standard analog-input graphic symbol
GO_PAI_Trend 	—	—	Analog input with a trend of the Process Variable and limits (highhigh, high, low, and low-low).
GO_PAI_Indicator 	—	GS_PAI_Indicator 	Process Variable indicated by a moving triangle. The graphic display includes limits that are displayed with filled bars.
GO_PAI_IndicatorWCapture 	—	GS_PAI_IndicatorWCapture 	This object is the same as GO_PAI_Indicator plus a light gray minimum/maximum capture area.

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PAI_TrendWCCapture 	—	—	Analog Input with Trend of Process Variable and limits (high-high, high, low, and low-low) plus a light gray capture area.
GO_PAI_Adv_Trend 	PAI_GS_TrendWTarget 	—	This graphic symbol includes a trend with target lines.
GO_PAI_AdvIndicator 	PAI_GS_LinearGauge 	GS_PAI_AdvIndicator 	<p>A moving triangle indicates the process variable. The graphic display includes limits that are displayed with filled bars plus a cyan target range (for deviations).</p> <p>The FactoryTalk Optix graphic symbol has optional configuration to show or hide the target and the capture area</p>
GO_PAI_AdvIndicatorWCCapture 	—	GS_PAI_AdvIndicatorWCCapture 	<p>A moving triangle indicates the process variable. The graphic display includes limits that are displayed with filled bars plus a cyan target range (for deviations) and a light gray minimum/maximum capture area.</p>
GO_PAI_L1 	—	—	Displays the process variable value with alarm indication.
GO_PAI_L1.PV 	—	—	Displays the process variable value.
GO_PAI_L1.PV1 	—	—	Displays the process variable value.

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PA1_L1_Label 	—	—	Label only. This excludes the process variable value.
GO_PA1_L1_Indicator 	—	—	Process variable that is indicated by a moving triangle. The graphic display includes limits that are displayed with filled bar. Includes alarm indication.
GO_PA1_L1_HIndicator 	—	—	Process variable that is indicated by a moving triangle. The graphic display includes limits that are displayed with filled bar. Includes alarm indication.
GO_PA1_L1_IndicatorS 	—	—	Process variable that is indicated by a moving triangle. The graphic display includes limits that are displayed with filled bar. Includes alarm indication.
GO_PA1_L1_HIndicatorS 	—	—	Process variable that is indicated by a moving triangle. The graphic display includes limits that are displayed with filled bar. Includes alarm indication.
GO_PA1_L1_BarWAlm 	—	—	Process variable that is indicated by a moving triangle. The graphic display includes limits that are displayed with filled bar. The process variable value or EU are not displayed, but can be found in the tooltip. Includes alarm indication.
GO_PA1_L1_HBarWAlm 	—	—	Process variable that is indicated by a moving triangle. The graphic display includes limits that are displayed with filled bar. The process variable value or EU are not displayed, but can be found in the tooltip. Includes alarm indication.

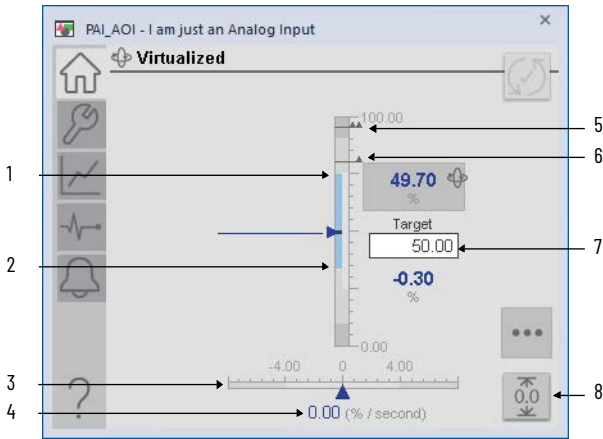
FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PA1_L1_BarWAlmS 	—	—	Process variable that is indicated by a moving triangle. The graphic display includes limits that are displayed with filled bar. The process variable value or EU are not displayed, but can be found in the tooltip. Includes alarm indication.
GO_PA1_L1_HBarWAlmS 	—	—	Process variable that is indicated by a moving triangle. The graphic display includes limits that are displayed with filled bar. The process variable value or EU are not displayed, but can be found in the tooltip. Includes alarm indication.
GO_PA1_L1_Bar 	—	—	Process variable that is indicated by a moving triangle. The graphic display includes limits that are displayed with filled bar. The process variable value or EU are not displayed, but can be found in the tooltip.
GO_PA1_L1_BarS 	—	—	Process variable that is indicated by a moving triangle. The graphic display includes limits that are displayed with filled bar. The process variable value or EU are not displayed, but can be found in the tooltip.
GO_PA1_L1_HBar 	—	—	Process variable that is indicated by a moving triangle. The graphic display includes limits that are displayed with filled bar. The process variable value or EU are not displayed, but can be found in the tooltip.
GO_PA1_L1_HBarS 	—	—	Process variable that is indicated by a moving triangle. The graphic display includes limits that are displayed with filled bar. The process variable value or EU are not displayed, but can be found in the tooltip.

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
<div>GO_PAI_Trend1</div> 	<div>PAI_GS_TrendWLimits</div> 	—	<p>Trend of process variable that includes limits (high-high, high, low, and low-low) plus a light gray capture area. Includes alarm indication.</p> <p>The FactoryTalk Optix graphic symbol includes optional configuration to show or hide the capture area.</p>
<div>GO_PAI_HistTrend</div> 	—	—	<p>Trend of historical process variable values. Analog limits are not included.</p>
<div>GO_PAI_HistTrend1</div> 	—	—	<p>Trend of historical process variable values. Analog limits are not included.</p>

FactoryTalk View SE Faceplates

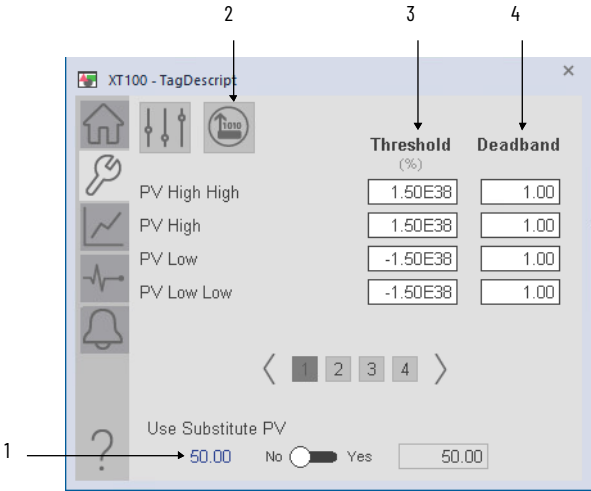
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab

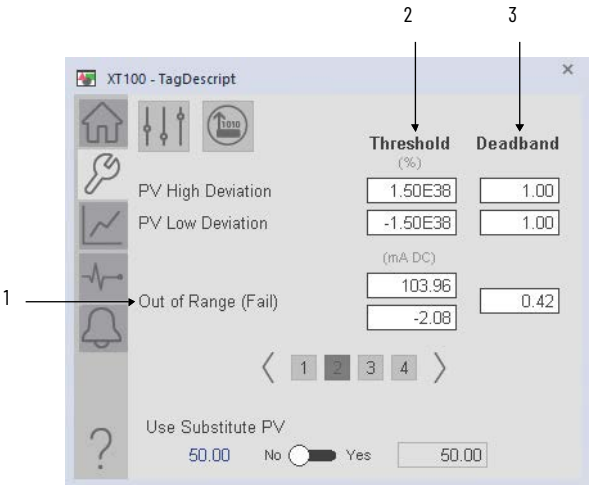


Item	Description
1	High Deviation limit: the label background that changes color based on alarm severity when exceeded.
2	Low Deviation limit: the label background that changes color based on alarm severity when exceeded.
3	The rate of change bar graph (visible if Rate of Change calculations is enabled on the engineering tab).
4	The rate of change value (visible if Rate of Change calculations is enabled on the engineering tab).
5	Control High-High limit
6	Control High limit
7	Process Variable target
8	Reset Rate of Change value to zero

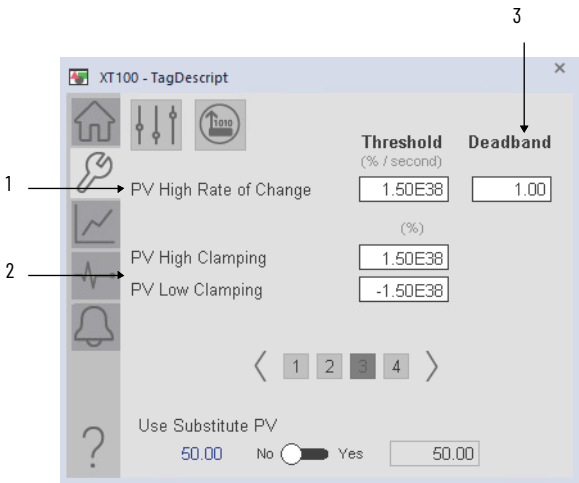
Maintenance Tab



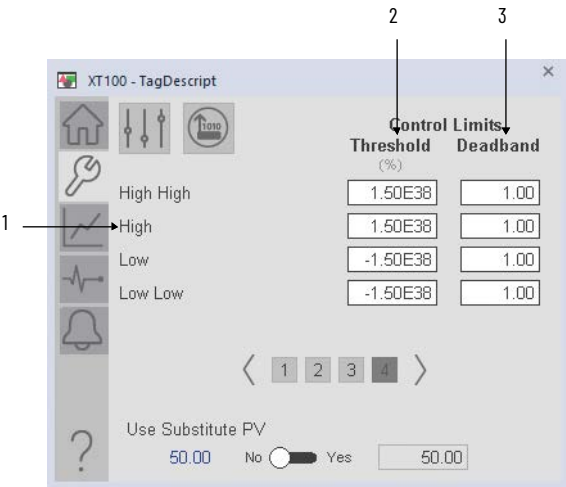
Item	Description
1	Use Substitute PV: Select to input a substitute process variable.
2	Select to display smart device object. See Process Analog HART (PAH) on page 73 .
3	Enter the threshold (trip point) for analog input alarms.
4	Enter the deadband (hysteresis) that applies to each alarm limit. Deadband helps prevent a noisy signal from generating numerous spurious alarms. Example: If the High alarm limit is 90.0 and the High alarm deadband is 5, once the signal rises above 90.0 and generates a High alarm. The signal must fall below 85.0 (90.0 minus 5.0) for the alarm to clear.



Item	Description
1	Out of Range (Fail) low and high threshold values.
2	Process variable deviation low and high threshold values.
3	Deadband associated with each threshold. Enter the deadband (hysteresis) that is applied to each limit.

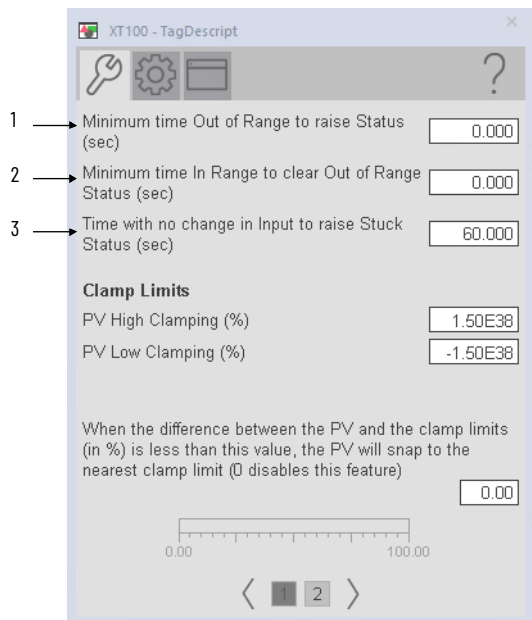


Item	Description
1	Process variable high rate of change threshold value. There is an alarm that is associated with this configuration. The deadband can be configured in the advanced maintenance settings.
2	Process variable clamping low and high threshold values. Any process variable below the low value or above the high value will be held at the low or high value respectively.
3	Deadband associated with each threshold. Enter the deadband (hysteresis) that is applied to each limit.

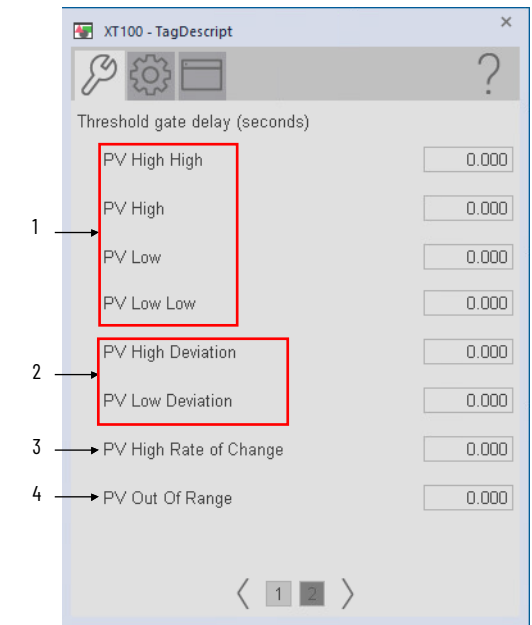


Item	Description
1	Process variable control condition high high, high, low, and low low threshold values.
2	Process variable deviation low and high threshold values.
3	Deadband associated with each threshold. Enter the deadband (hysteresis) that is applied to each limit.

Advanced Maintenance Tab

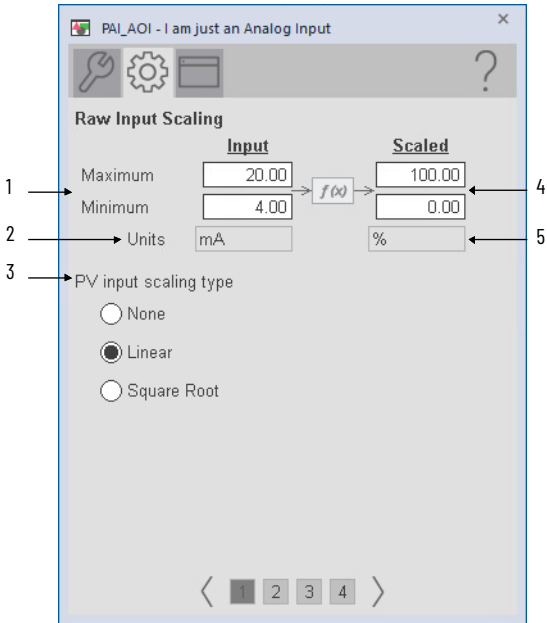


Item	Description
1	Enter the amount of time the input must stay within the range thresholds (with deadband) to clear the Out of Range (fail) condition. The off-delay time is used to help prevent a chattering fail detection on a noisy signal near a range threshold.
2	Enter the amount of time the input must stay beyond a range threshold to cause an Out of Range (fail) condition. The on-delay time is used to avoid an unnecessary fail detection when the input only momentarily exceeds the threshold.
3	Enter the amount of time the input must remain unchanged to trigger a stuck input condition. A value of zero means that the input must change every instruction scan to avoid a stuck input condition. Enter a large value to disable stuck input detection.
4	Process variable clamping configuration. This includes the clamping low and high threshold values and the clamping deadband.

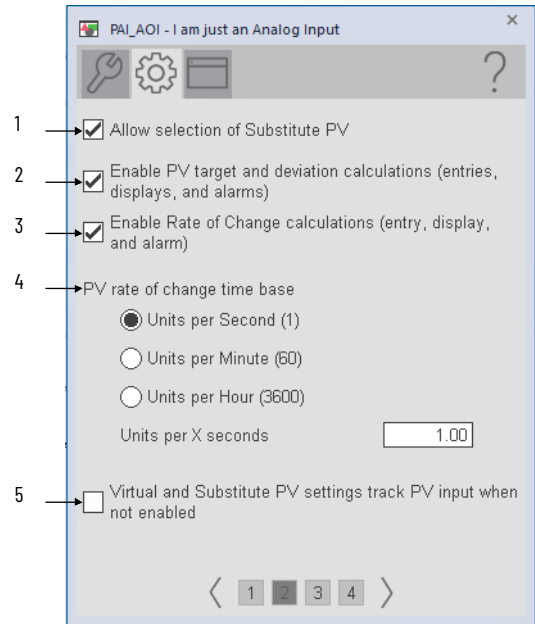


Item	Description
1	Process variable high high, high, low, and low low threshold gate delay (seconds).
2	Process variable high and low deviation threshold gate delay (seconds).
3	Process variable high rate of change threshold gate delay (seconds).
4	Process variable out of range threshold gate delay (seconds).

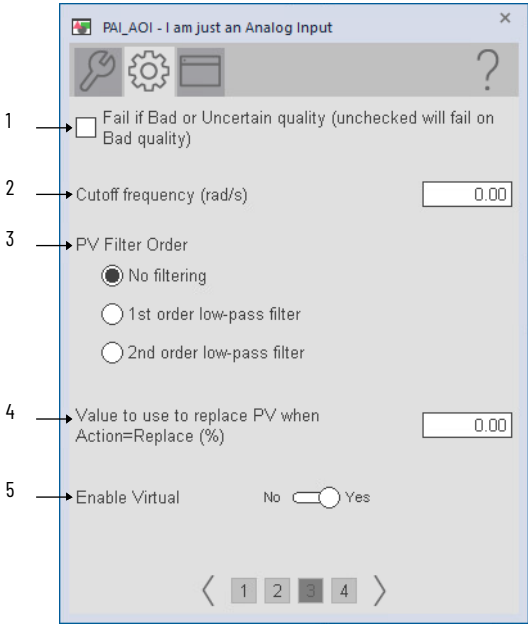
Engineering Tab



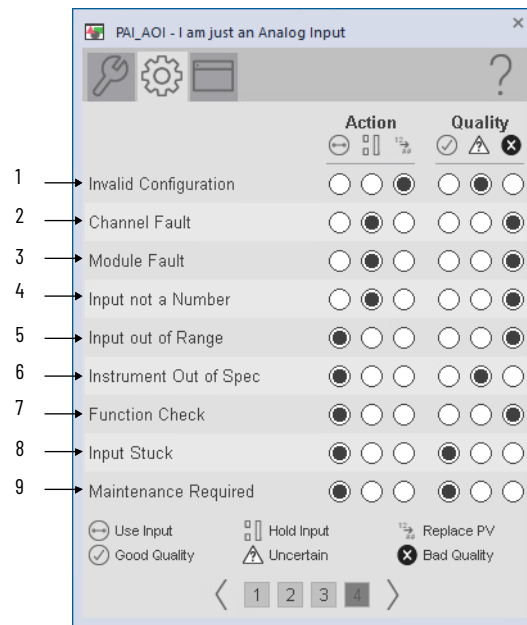
Item	Description
1	Input (unscaled) minimum and maximum These parameters must be set to the range of the signal that is connected to the Inp_Process Variable Input. The raw minimum default is 0.0 and the raw maximum default is 100.0. Example: If your input card provides a signal from 4.0...20.0mA, set Cfg_InpRawMin to 4.0 and Cfg_InpRawMax to 20.0. The raw minimum/maximum and engineering units minimum/maximum are used for scaling to engineering units.
2	Enter the Raw Input units to display on the HMI.
3	PV scaling type selection. Square root can be configured for differential pressure applications.
4	EU minimum and maximum for scaling These parameters must be set to match the Process Variable range of the input signal that is connected to Inp_PV. The Process Variable engineering units minimum default is 0.0 and the Process Variable engineering units maximum is 100.0. Example: If your input card provides a signal from 4...20 mA that represents -50...+250 °C, set Cfg_PVEUMIN to -50.0 and Cfg_PVEU maximum to 250.0. The raw minimum/maximum and Process Variable engineering units minimum/maximum are used for scaling to engineering units.
5	Enter engineering units for display on the HMI. Percent (%) is the default.



Item	Description
1	Process variable substitution is allowed or not allowed. The substitute PV allows for an entry of the PV from the HMI, which overrides the read PV.
2	Select to enable process variable target calculations, display, and alarms.
3	Select to enable Rate of Change target calculations, display, and alarms.
4	Process variable rate of change configuration.
5	Configure if the virtual and substitute process variables track the active process variable.



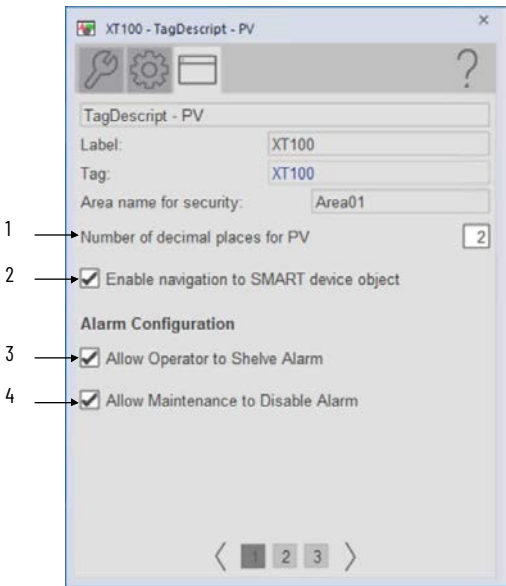
Item	Description
1	Configure if object fails on uncertain signal quality
2	Filter cutoff frequency. rad/s
3	Filter configuration: no filter, 1st order, 2nd order
4	Process variable replacement value for when the action is "Replace". There are multiple action configurations. For example, if the Channel Fault action is configured to "Replace", this replace value is used in the event of a channel fault.
5	Enable or disable virtual mode



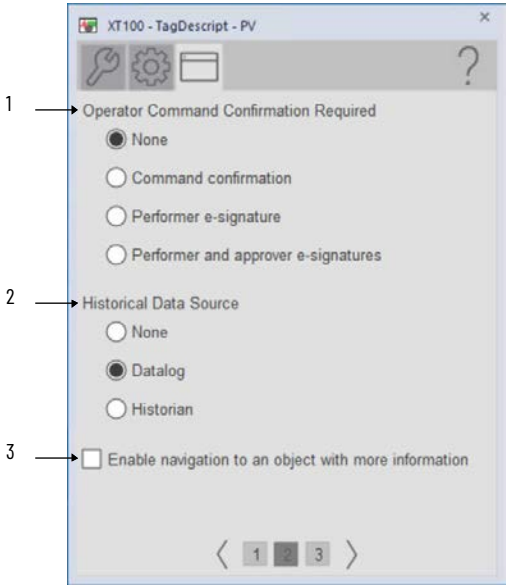
Item	Description	Item	Description
1	<p>Action: When the P_InChan configuration is not valid: Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal</p> <p>Quality: When the P_ configuration is not valid: Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad</p>	5	<p>Action: When the input is out of range: Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal</p> <p>Quality: When the input is out of range: Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad</p>
2	<p>Action: When there is a channel fault: Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal</p> <p>Quality: When there is a channel fault: Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad</p>	6	<p>Action: Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal</p> <p>Quality: When the input is out of spec: Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad</p>
3	<p>Action: When there is a module fault: Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal</p> <p>Quality: When there is a module fault: Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad</p>	7	<p>Action: When Inp_FuncCheck is set: Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal</p> <p>Quality: When Inp_FuncCheck is set: Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad</p>

Item	Description	Item	Description
4	Action: When the input is not a number: Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal Quality: When the input is not a number: Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad	8	Action: When the input is stuck (no change): Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal Quality: When the input is stuck (no change): Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad
9	Action: When Inp_MaintReqd is set: Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal Quality: When Inp_MaintReqd is set: Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad	N/A	N/A

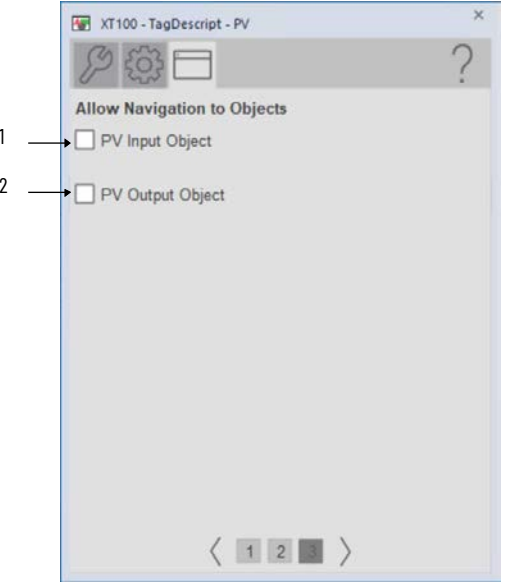
HMI Configuration Tab



Item	Description
1	Set the number of decimal places for the Process Variable.
2	Select to allow navigation to SMART device object.
3	Select to allow Operator to shelve alarm.
4	Select to allow Maintenance to disable alarm.



Item	Description
1	Select to configure operator command confirmation. This action would take place after an operator resets the captured minimum and maximum values.
2	Select to configure if a Historical data source will be used or not.
3	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.



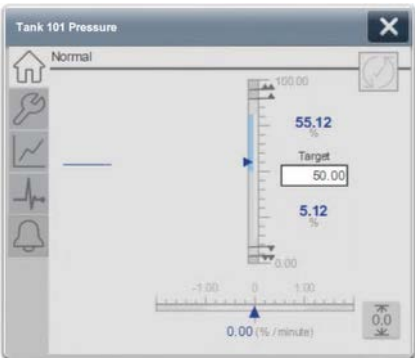
Item	Description
1	Select to enable navigation to an upstream analog input object.
2	Select to enable navigation to a downstream analog input object.

Studio 5000 View Designer Faceplates

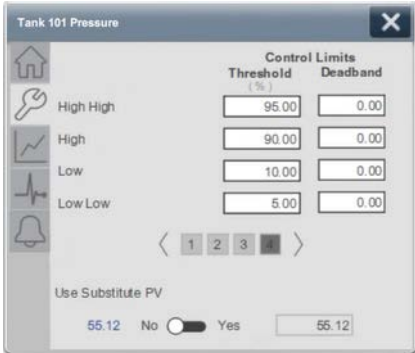
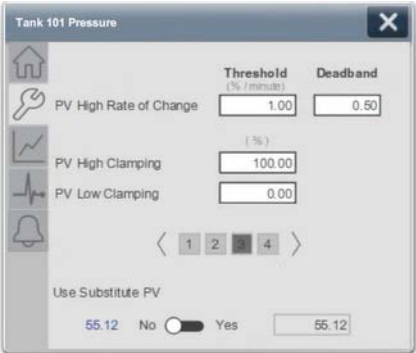
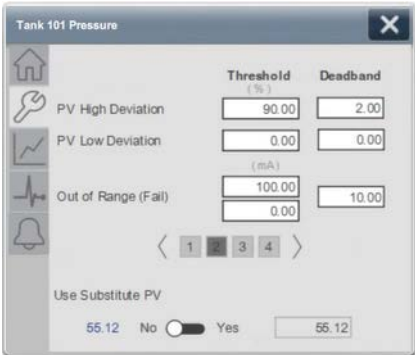
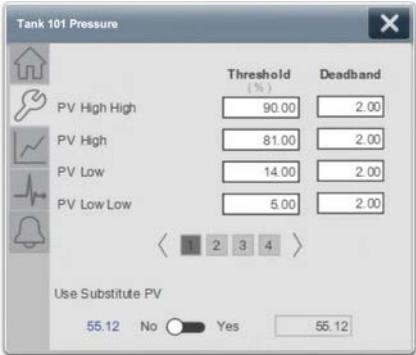
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Any feature that is contained in the Studio 5000 View Designer® faceplates has the same functionality as used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 54](#) for descriptions of the features.

Operator Tab



Maintenance Tab

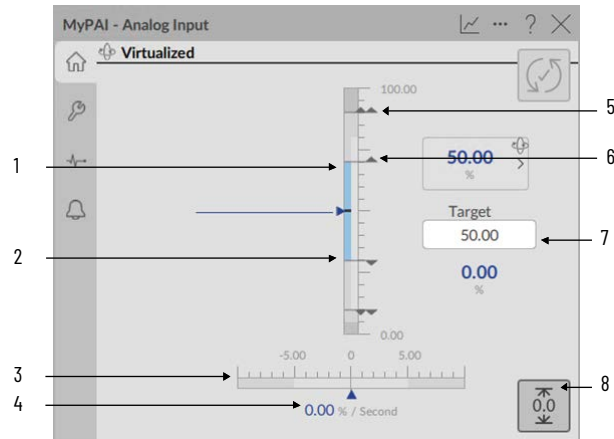


FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

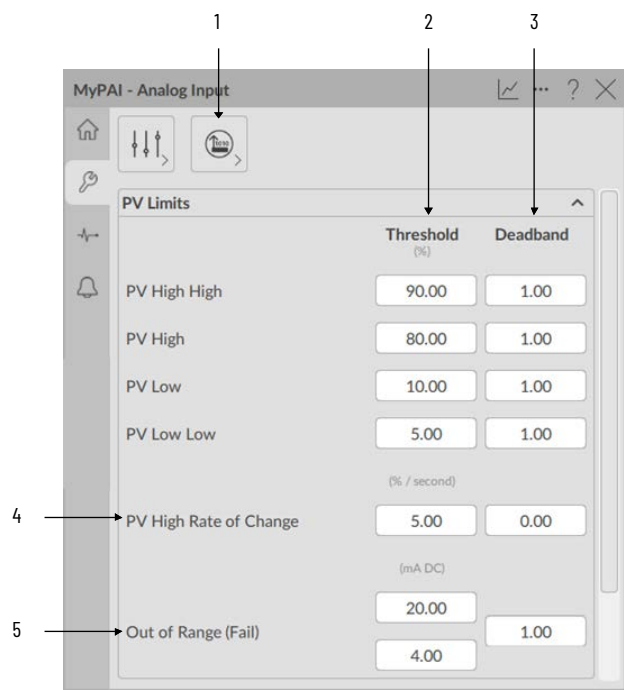
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [Basic Faceplate Attributes on page 44](#) for descriptions of the features.

Operator Tab



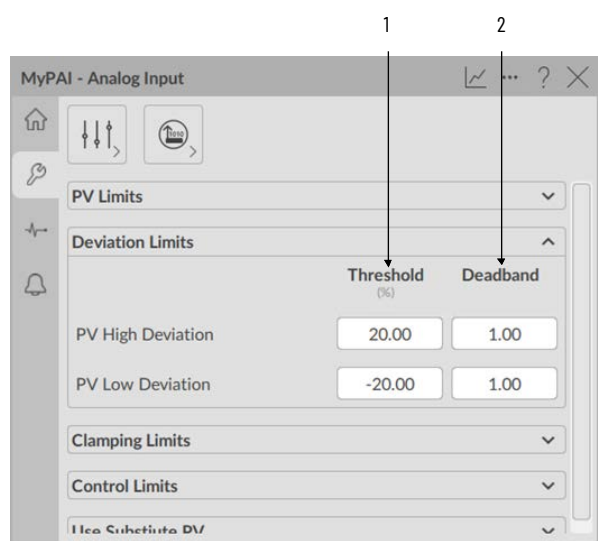
Item	Description
1	High Deviation limit: the label background that changes color based on alarm severity when exceeded.
2	Low Deviation limit: the label background that changes color based on alarm severity when exceeded.
3	The rate of change bar graph (visible if Rate of Change calculations is enabled on the engineering tab).
4	The rate of change value (visible if Rate of Change calculations is enabled on the engineering tab).
5	Control High-High limit
6	Control High limit
7	Process Variable target
8	Reset Rate of Change value to zero

Maintenance Tab - PV Limits



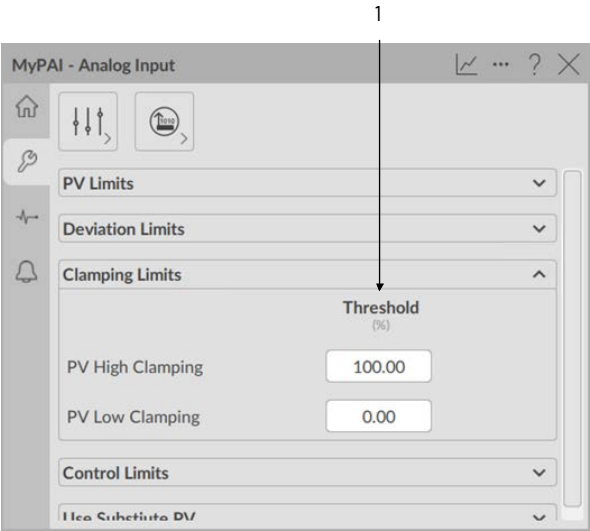
Item	Description
1	Select to display smart device object. Refer to Process Analog HART (PAH) section.
2	Enter the threshold (trip point) for analog input alarms.
3	Enter the deadband (hysteresis) that applies to each limit. Deadband helps prevent a noisy signal from generating numerous spurious alarms. Example: If the High alarm limit is 90.0 and the High alarm deadband is 5, once the signal rises above 90.0 and generates a High alarm. The signal must fall below 85.0 (90.0 minus 5.0) for the alarm to clear.
4	Process variable high rate of change threshold value. There is an alarm that is associated with this configuration. The deadband can be configured in the advanced maintenance settings.
5	Out of Range (Fail) low and high threshold values.

Maintenance Tab - Deviation Limits



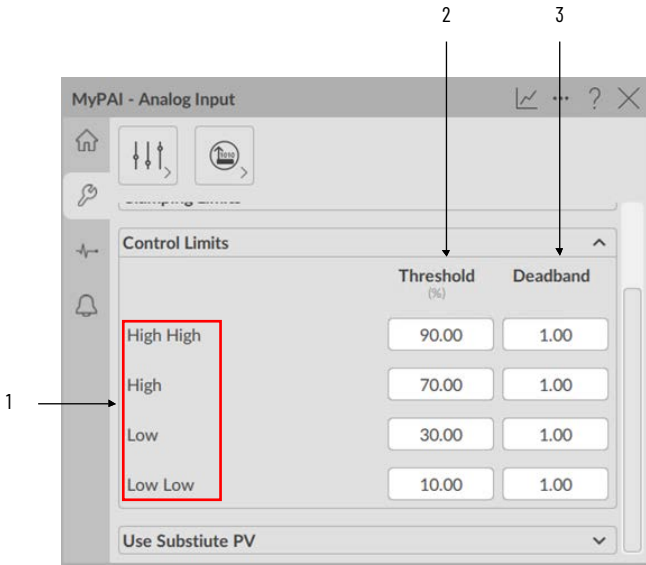
Item	Description
1	Process variable deviation low and high threshold values.
2	Deadband associated with each threshold. Enter the deadband (hysteresis) that is applied to each limit.

Maintenance Tab - Clamping Limits



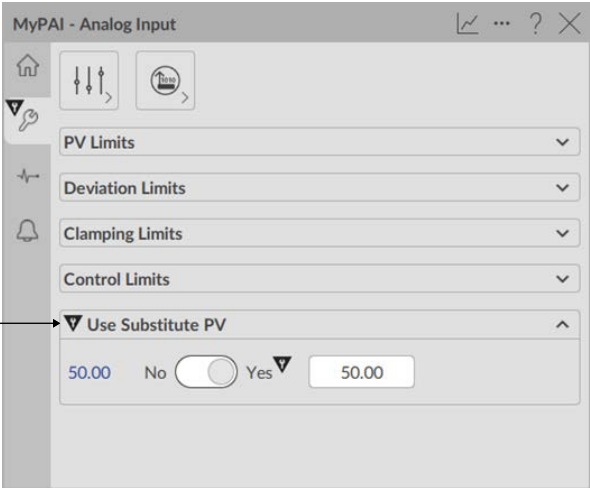
Item	Description
1	Process variable clamping low and high threshold values. Any process variable below the low value or above the high value will be held at the low or high value respectively.

Maintenance Tab - Control Limits



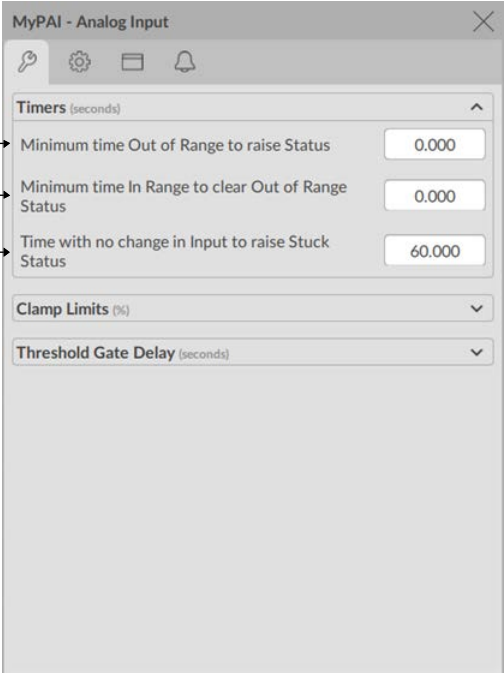
Item	Description
1	Process variable control condition high high, high, low, and low low threshold values.
2	Process variable deviation low and high threshold values.
3	Deadband associated with each threshold. Enter the deadband (hysteresis) that is applied to each limit.

Maintenance Tab - Use Substitute PV



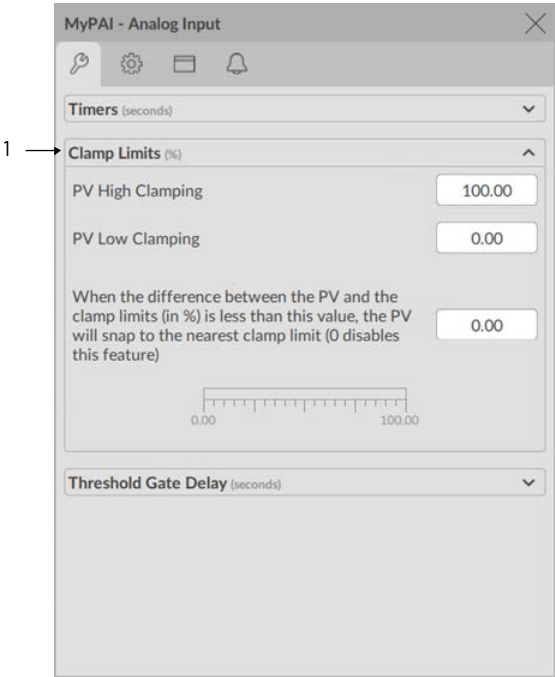
Item	Description
1	Use Substitute PV: Select to input a substitute process variable.

Advanced Maintenance Tab - Timers



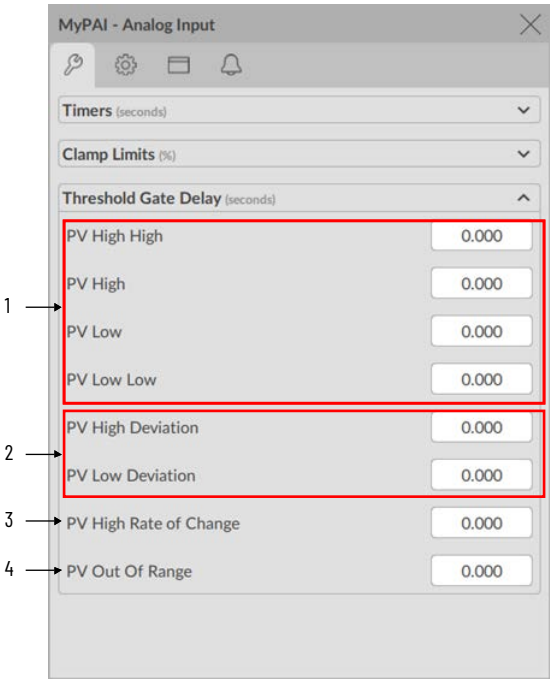
Item	Description
1	Enter the amount of time the input must stay within the range thresholds (with deadband) to clear the Out of Range (fail) condition. The off-delay time is used to help prevent a chattering fail detection on a noisy signal near a range threshold.
2	Enter the amount of time the input must stay beyond a range threshold to cause an Out of Range (fail) condition. The on-delay time is used to avoid an unnecessary fail detection when the input only momentarily exceeds the threshold.
3	Enter the amount of time the input must remain unchanged to trigger a stuck input condition. A value of zero means that the input must change every instruction scan to avoid a stuck input condition. Enter a large value to disable stuck input detection.

Advanced Maintenance Tab - Clamp Limits



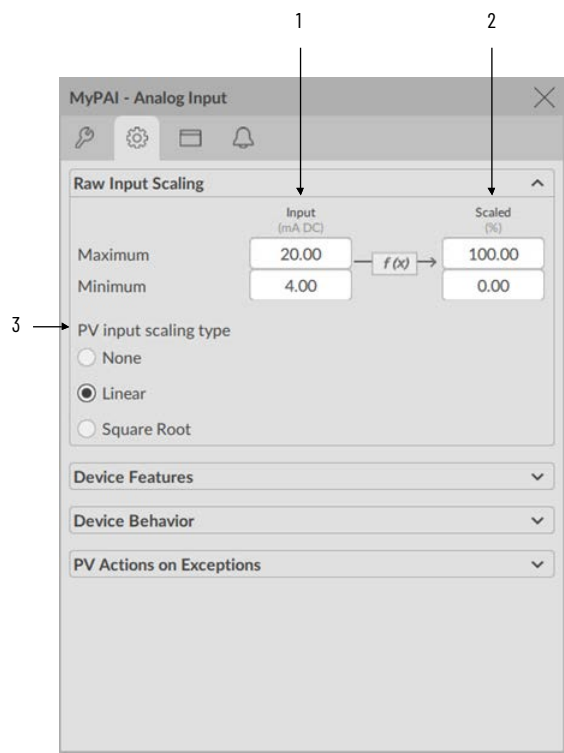
Item	Description
1	Process variable clamping configuration. This includes the clamping low and high threshold values and the clamping deadband.

Advanced Maintenance Tab - Threshold Gate Delay



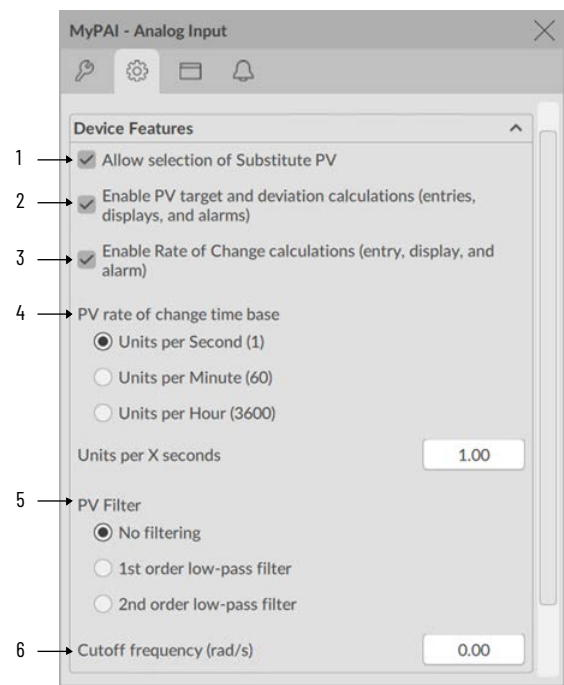
Item	Description
1	Process variable high high, high, low, and low low threshold gate delay (seconds).
2	Process variable high and low deviation threshold gate delay (seconds).
3	Process variable high rate of change threshold gate delay (seconds).
4	Process variable out of range threshold gate delay (seconds).

Advanced Engineering Tab - Raw Input Scaling



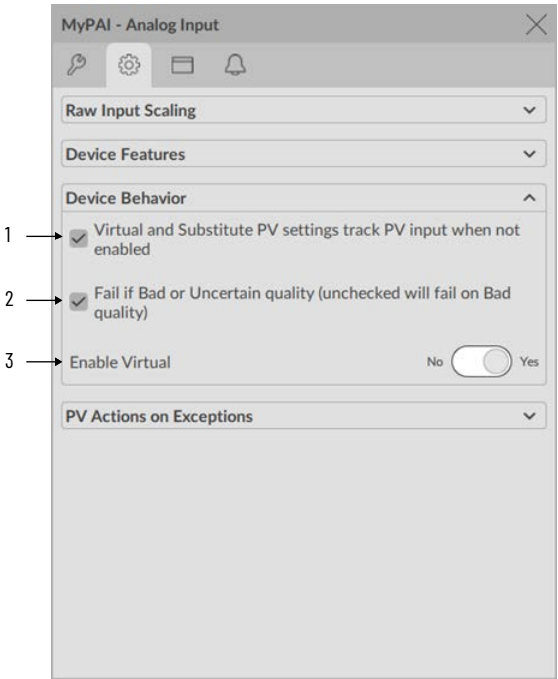
Item	Description
1	Input (unscaled) minimum and maximum. These parameters must be set to the range of the signal that is connected to the Process Variable Input. The raw minimum default is 0.0 and the raw maximum default is 100.0. Example: If your input card provides a signal from 4.0...20.0mA, set Cfg_InpRawMin to 4.0 and Cfg_InpRawMax to 20.0. The raw minimum/maximum and engineering units minimum/maximum are used for scaling to engineering units.
2	EU minimum and maximum for scaling. These parameters must be set to match the Process Variable range of the input signal that is connected to Inp_PV. The Process Variable engineering units minimum default is 0.0 and the Process Variable engineering units maximum is 100.0. Example: If your input card provides a signal from 4...20 mA that represents - 50...+250 °C, set Cfg_PVEUMIN to -50.0 and Cfg_PVEUMax to 250.0. The raw minimum/maximum and Process Variable engineering units minimum/ maximum are used for scaling to engineering units.
3	PV scaling type selection. Square root can be configured for differential pressure applications.

Advanced Engineering Tab - Device Features



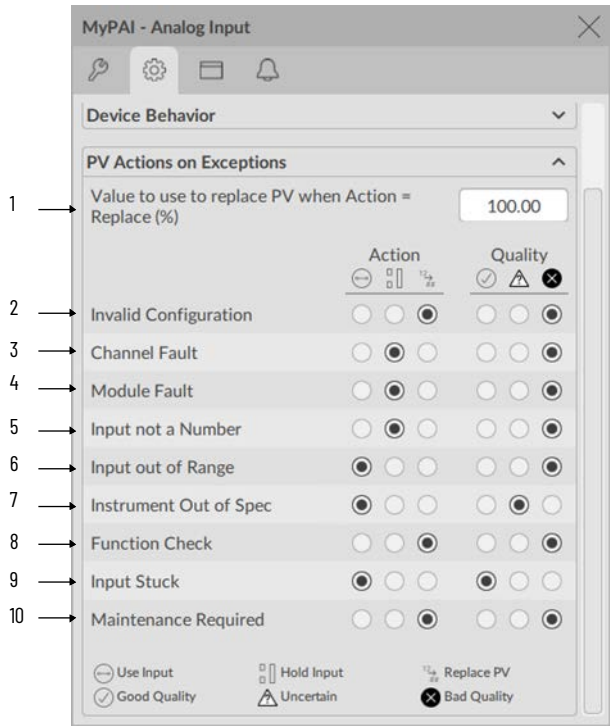
Item	Description
1	Process variable substitution is allowed or not allowed. The substitute PV allows for an entry of the PV from the HMI, which overrides the read PV.
2	Select to enable process variable target calculations, display, and alarms.
3	Select to enable Rate of Change target calculations, display, and alarms.
4	Process variable rate of change configuration.
5	Filter configuration: no filter, 1st order, 2nd order.
6	Filter cutoff frequency (rad/s).

Advanced Engineering Tab - Device Behavior



Item	Description
1	Configure if the virtual and substitute process variables track the active process variable.
2	Configure if object fails on uncertain signal quality.
3	Enable or disable virtual mode.

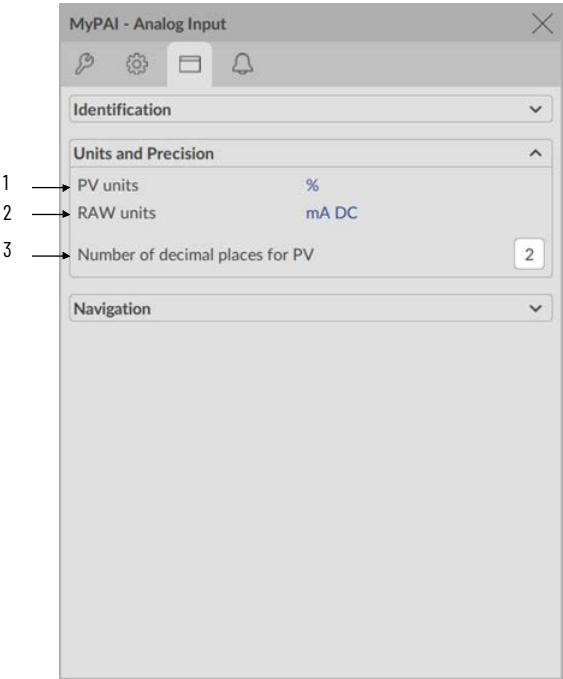
Advanced Engineering Tab - PV Actions on Exceptions



Item	Description	Item	Description
1	Process variable replacement value for when the action is "Replace". There are multiple action configurations. For example, if the Channel Fault action is configured to "Replace", this replace value is used in the event of a channel fault.	6	Action: When the input is out of range: Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal Quality: When the input is out of range: Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad
2	Action: When the configuration is not valid: Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal Quality: When the configuration is not valid: Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad	7	Action: When the input is out of spec: Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal Quality: When the input is out of spec: Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad
3	Action: When there is a channel fault: Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal Quality: When there is a channel fault: Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad	8	Action: When Inp_FuncCheck is set: Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal Quality: When Inp_FuncCheck is set: Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad

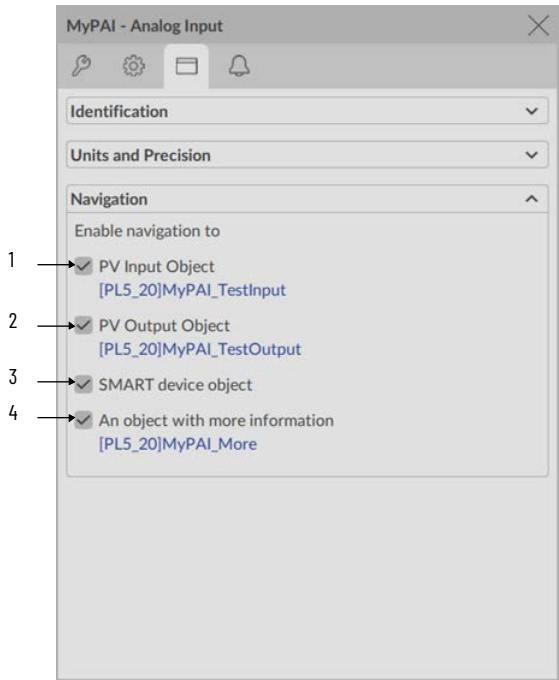
Item	Description	Item	Description
4	Action: When there is a module fault: Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal Quality: When there is a module fault: Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad	9	Action: When the input is stuck (no change): Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal Quality: When the input is stuck (no change): Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad
5	Action: When the input is not a number: Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal Quality: When the input is not a number: Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad	10	Action: When Inp_MaintReqd is set: Use the input to determine value Hold value at its last good value Set value by using Cfg_PVReplaceVal Quality: When Inp_MaintReqd is set: Set Sts_PVGood Set Sts_PVUncertain Set Sts_PVBad

Advanced HMI Configuration Tab - Units and Precision



Item	Description
1	Display the engineering units for PV values.
2	Display the engineering units for RAW values.
3	Set the number of decimal places for the Process Variable.




Advanced HMI Configuration Tab - Navigation



Item	Description
1	Select to enable navigation to an upstream analog input object.
2	Select to enable navigation to a downstream analog input object.
3	Select to allow navigation to SMART device object.
4	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.

Process Analog HART (PAH)

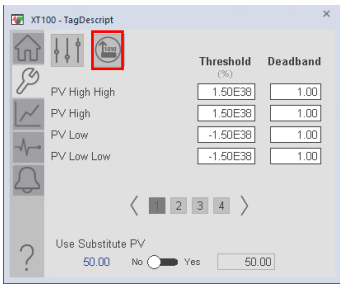
Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PAH	raP_5_20_GS_SmartDevice		
			

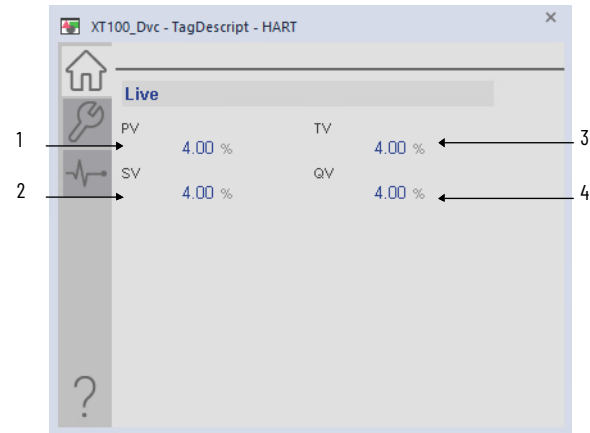
FactoryTalk View SE Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

PAH faceplates are accessed via the smart device button on the maintenance page of the PAI instruction.

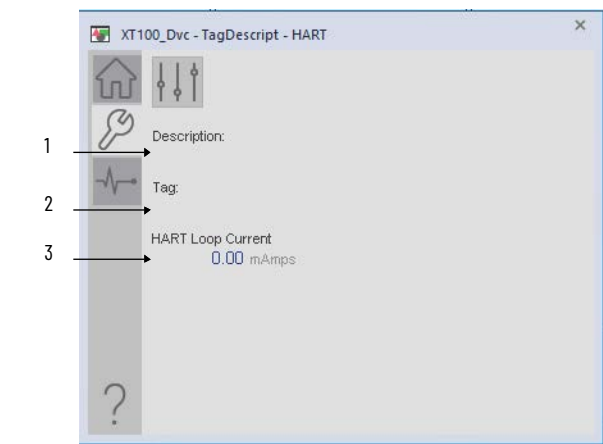


Smart Device Operator



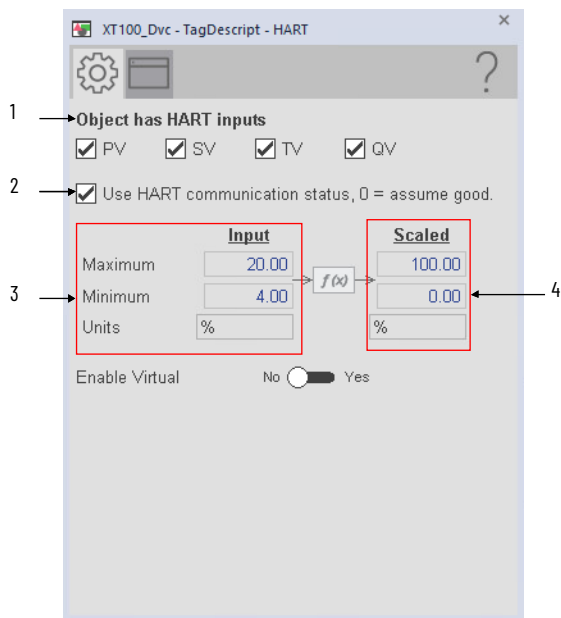
Item	Description
1	Show Process Variable for the HART PV.
2	Show Process Variable for the HART SV
3	Show Process Variable for the HART TV.
4	Show Process Variable for the HART QV.

Smart Device Maintenance Tab



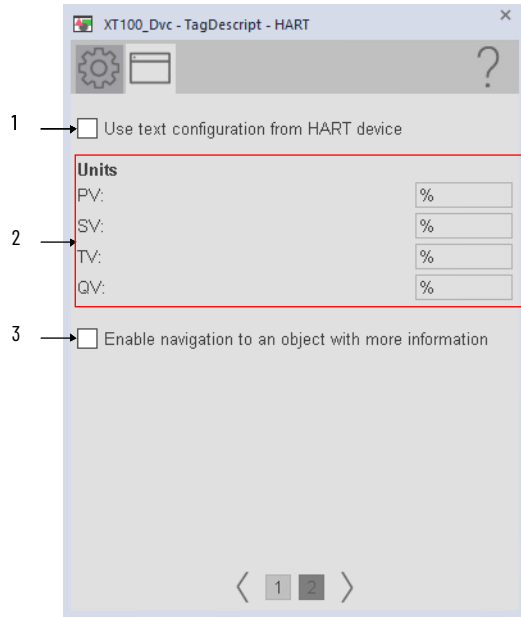
Item	Description
1	Display the description for the device.
2	Display the tag name for the device.
3	Display digital HART value for loop current in milliamps.

Smart Device Engineering Tab



Item	Description
1	Select to display the digital variables' (PV, SV, TV, FV) status as received via HART. Clear this checkbox to disable automatic updating of HART device information.
2	Select to use HART communication status to generate SrcQ, 0 - assume good.
3	Display analog input unscaled signal maximum, minimum, and units from HART module (in module units).
4	Display analog input scaled signal maximum, minimum, and units from HART module (in module units).

Smart Device HMI Configuration Tab

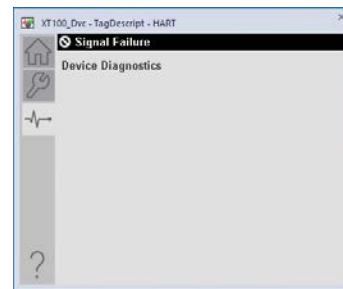


Item	Description
1	Select to display text received from HART device, 0 = use extended properties for text.
2	Display the text to display the units of measure for variable HART PV, SV, TV, and QV.
3	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.

Smart Device Diagnostics

The Diagnostic tab provides indications that are helpful to diagnose or help prevent device problems. These problems can include specific reasons a device is 'Not Ready', device warnings and faults, warning and fault history, and predictive/preventive maintenance data.

The Diagnostics tab displays possible reasons for the device not being ready.



Studio 5000 View Designer Graphic Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 73](#) for descriptions of the features.

Operator Tab



Maintenance Tab

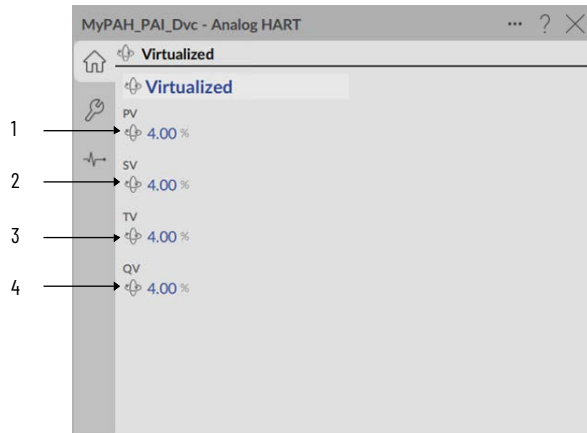


FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

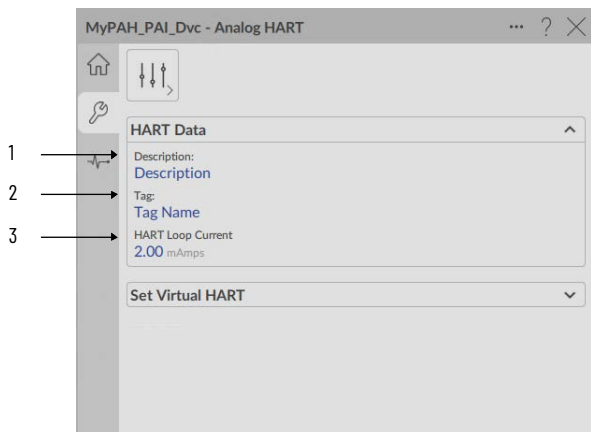
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [Basic Faceplate Attributes on page 44](#) for descriptions of the features.

Smart Device Operator



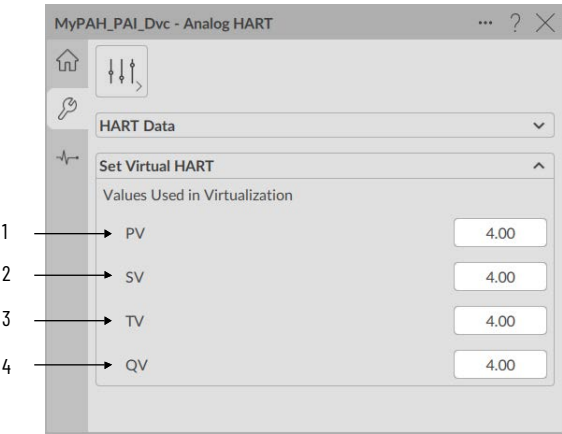
Item	Description
1	Show Process Variable for the HART PV.
2	Show Process Variable for the HART SV.
3	Show Process Variable for the HART TV.
4	Show Process Variable for the HART QV.

Smart Device Maintenance Tab - HART Data



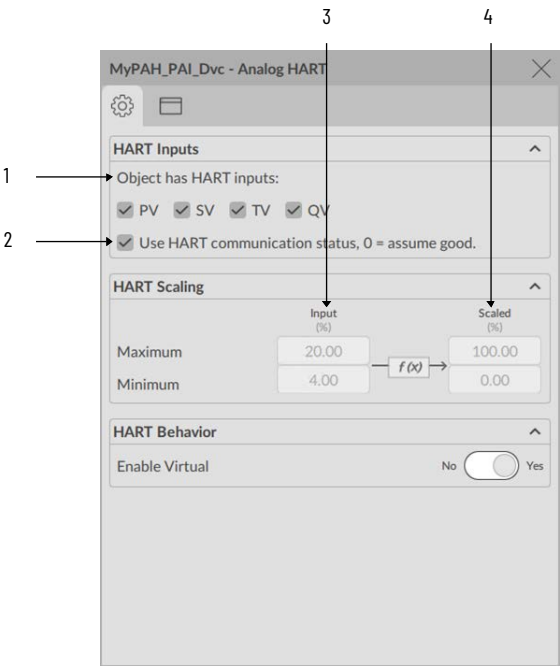
Item	Description
1	Display the description for the device.
2	Display the tag name for the device.
3	Display digital HART value for loop current in milliamps.

Smart Device Maintenance Tab - Set Virtual HART



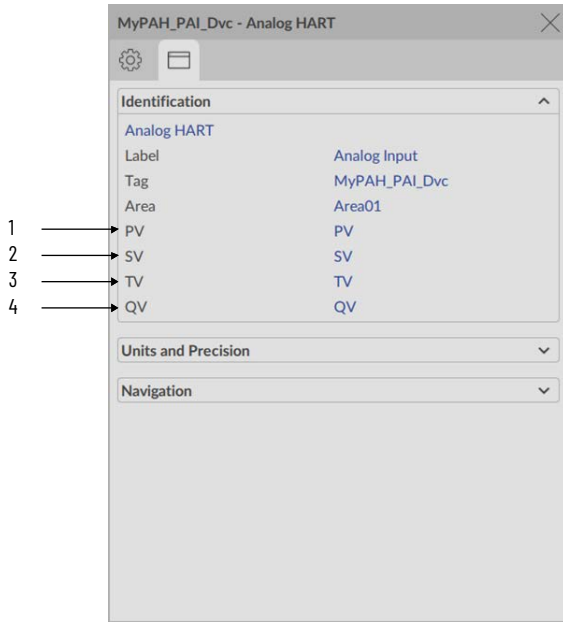
Item	Description
1	Input virtual Process Variable for the HART PV.
2	Input virtual Process Variable for the HART SV.
3	Input virtual Process Variable for the HART TV.
4	Input virtual Process Variable for the HART QV.

Smart Device Advanced Engineering Tab



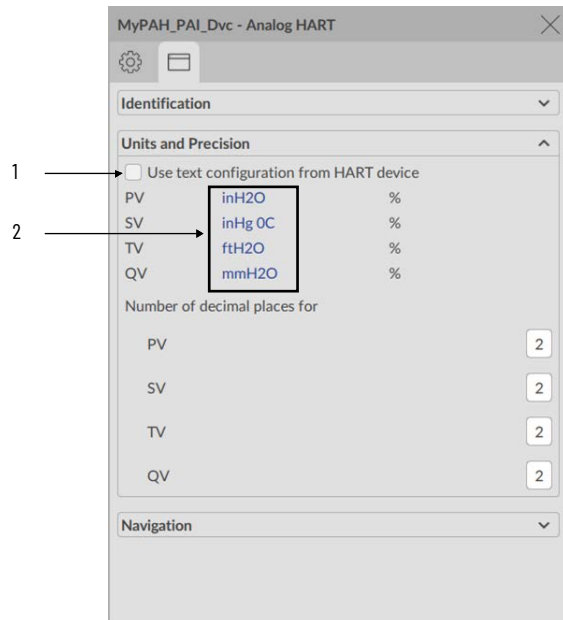
Item	Description
1	Select to display the digital variables' (PV, SV, TV, QV) status as received via HART. Clear this checkbox to disable automatic updating of HART device information.
2	Select to use HART communication status to generate SrcQ, 0 - assume good.
3	Display analog input unscaled signal maximum, minimum, and units from HART module (in module units).
4	Display analog input scaled signal maximum, minimum, and units from HART module (in module units).

Smart Device Advanced HMI Configuration Tab - Identification



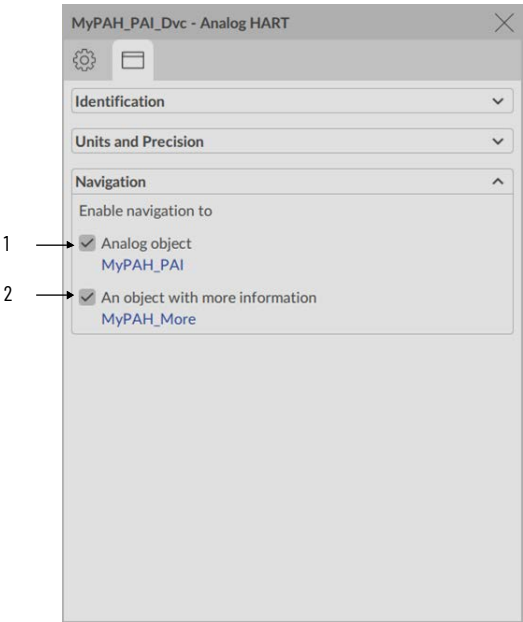
Item	Description
1	Display name for PV.
2	Display name for SV.
3	Display name for TV.
4	Display name for QV.

Smart Device Advanced HMI Configuration Tab - Units and Precision



Item	Description
1	Select to display text received from HART device, 0 = use extended properties for text.
2	Display the text to display the units of measure for variable HART PV, SV, TV, and QV.

Smart Device Advanced HMI Configuration Tab - Navigation

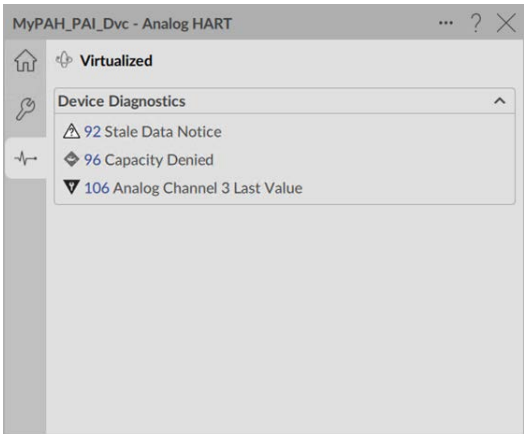


Item	Description
1	Select to enable navigation to an analog object (Cfg_HasNav is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.
2	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.

Smart Device Diagnostics



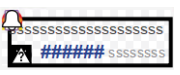
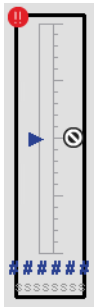
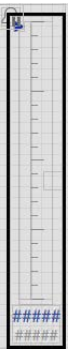
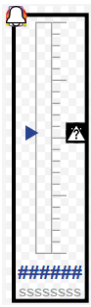

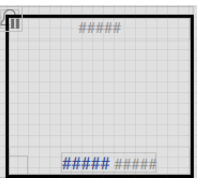
The Diagnostic tab provides indications that are helpful to diagnose or help prevent device problems. These problems can include specific reasons a device is 'Not Ready', device warnings and faults, warning and fault history, and predictive/preventive maintenance data.

The Diagnostics tab displays possible reasons for the device not being ready.



Process Dual Sensor Analog Input (PAID)

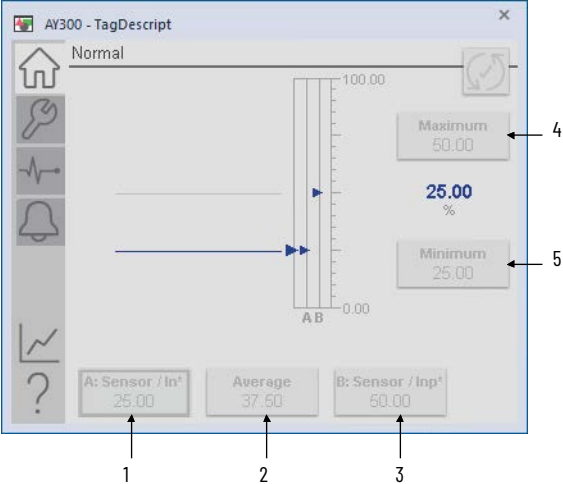
Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PAID 	PAID_GS 	GS_PAID 	Standard analog-input graphic symbol
GO_PAID_Indicator 	PAID_GS_Indicator 	GS_PAID_Indicator 	Process Variable indicated by a moving triangle. The graphic display includes limits that are displayed with filled bars.
GO_PAID_Trend 	PAID_GS_Trend 	—	Analog input with a trend of the Process Variable and limits (highhigh, high, low, and low-low).

FactoryTalk View SE Faceplates

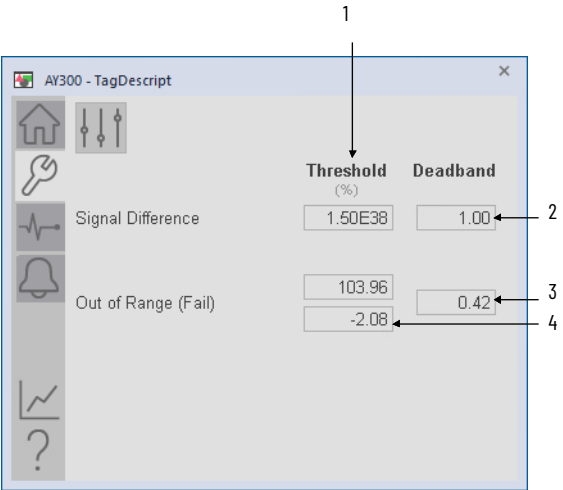
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



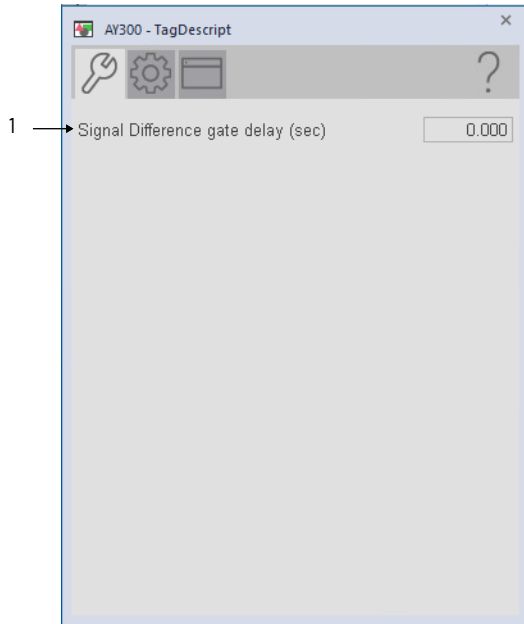
Item	Description
1	Select Sensor A Input Process Variable.
2	Select the average of Sensor A and Sensor B input Process Variables.
3	Select Sensor B Input Process Variable.
4	Select the maximum of Sensor A and Sensor B Input Process Variable.
5	Select the minimum of Sensor A and Sensor B Input Process Variable.

Maintenance Tab



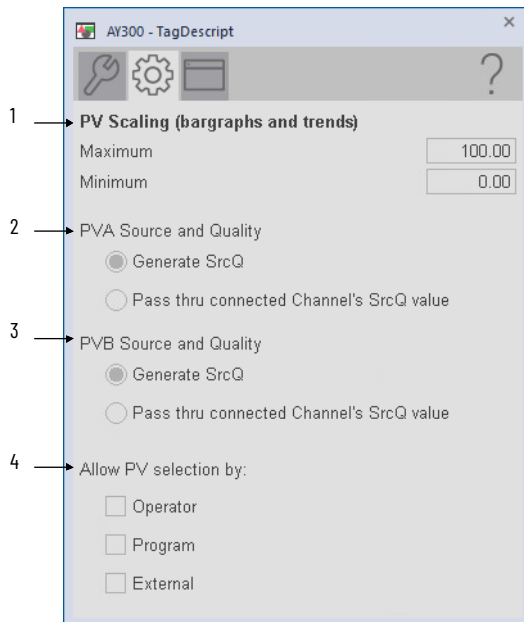
Item	Description
1	Process variable high/low signal difference threshold. Enter the threshold (trip point) for analog input alarms.
2	Process variable deadband. Enter the deadband (hysteresis) that is applied to the alarm limit. Deadband helps prevent a noisy signal from generating numerous spurious alarms. Example: If the High alarm limit is 90.0 and the High alarm deadband is 5, once the signal rises above 90.0 and generates a High alarm. The signal must fall below 85.0 (90.0 minus 5.0) for the alarm to clear.
3	Process variable fail deadband. Enter the deadband (hysteresis) that is applied to each alarm limit. Deadband helps prevent a noisy signal from generating numerous spurious alarms. Example: If the High alarm limit is 90.0 and the High alarm deadband is 5, once the signal rises above 90.0 and generates a High alarm. The signal must fall below 85.0 (90.0 minus 5.0) for the alarm to clear.
4	Process variable fail threshold in raw units.

Advanced Maintenance Tab



Item	Description
1	Configure the signal difference gate delay (seconds), which is the time after the gate input activates before the threshold detection is enabled

Engineering Tab



Item	Description
1	Minimum and maximum scale for the process variable on the trend.
2	PV Source and Quality Input A Generate SrcQ: This instruction determines the Process Variable quality using Inp_PVBad, Inp_PVUncertain, and the PV value (out of range, infinite or not a number) Pass thru connected Channel's SrcQ value: This instruction uses the Source and Quality (SrcQ) value that is provided by an upstream object (such as P_AIChan) via Inp_PVSrcQ to determine the PV source and quality.
3	PV Source and Quality Input B Generate SrcQ: This instruction determines the Process Variable quality using Inp_PVBad, Inp_PVUncertain, and the PV value (out of range, infinite or not a number) Pass thru connected Channel's SrcQ value: This instruction uses the Source and Quality (SrcQ) value that is provided by an upstream object (such as P_AIChan) via Inp_PVSrcQ to determine the PV source and quality.
4	Allows any combination of the operator, program, or external sources to select the active process variable.

HMI Configuration Tab

PAID_AOI - TagDescript

TagDescript

Label:

PAID_AOI Label

Tag:

PAID_AOI

Area name for security:

Area01

Units

%

1 → Input PV A

Sensor / Input A

2 → Input PV B

Sensor / Input B

3 → Number of decimal places for PV

2

Alarm Configuration

4 → ☒ Allow Operator to Shelve Alarm

5 → ☒ Allow Maintenance to Disable Alarm

6 → ☒ Enable navigation to an object with more information

[MyClix]MorePAIDInfo

< 1 2 >

Item	Description
1	Enter the name for Input Tag A to show on the faceplate and Tooltip. IMPORTANT: Hover the pointing device over the field to display a tool tip with the configured Logix tag/path.
2	Enter the name for Input Tag B to show on the faceplate and Tooltip. IMPORTANT: Hover the pointing device over the field to display a tool tip with the configured Logix tag/path.
3	Set the number of decimal places for the Process Variable.
4	Select to allow Operator to shelve alarm.
5	Select to allow Maintenance to disable alarm.
6	Select to enable navigation to an object with more information (Cfg.HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.

PAID_AOI - TagDescript

1 → Operator Command Confirmation Required

☒ None

☐ Command confirmation

☐ Performer e-signature

☐ Performer and approver e-signatures

2 → ☒ Enable Navigation to PV Objects

Input PV A

[NGL_BETA_2]PAID_PAIA_AOI

3 → ☒ Input PV B

[NGL_BETA_2]PAID_PAIB_AOI

4 → ☒ Output PV

[NGL_BETA_2]PVSD_AOI

< 1 2 >

Item	Description
1	Select to configure operator command confirmation. This action would take place after any operator command.
2	Select to enable navigation to an upstream analog input object. The tagname to navigate to is shown in the box under the checkbox label.
3	Select to enable navigation to an upstream analog input object. The tagname to navigate to is shown in the box under the checkbox label.
4	Select to enable to a downstream analog input object. The tagname to navigate to is shown in the box under the checkbox label.

Studio 5000 View Designer Faceplates

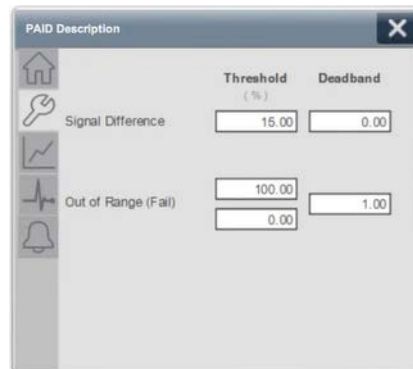
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 82](#) for descriptions of the features.

Operator Tab



Maintenance Tab

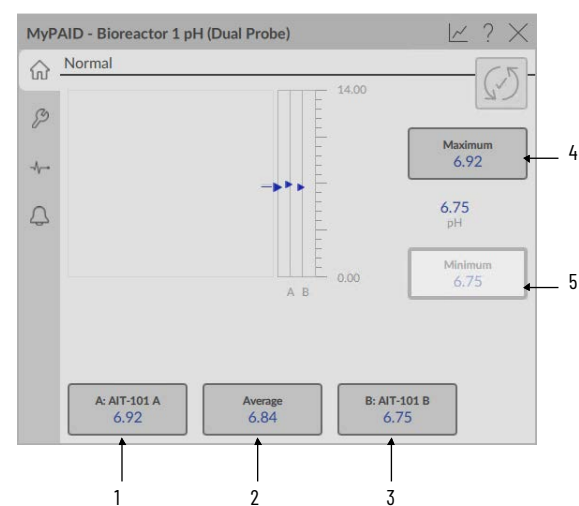


FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

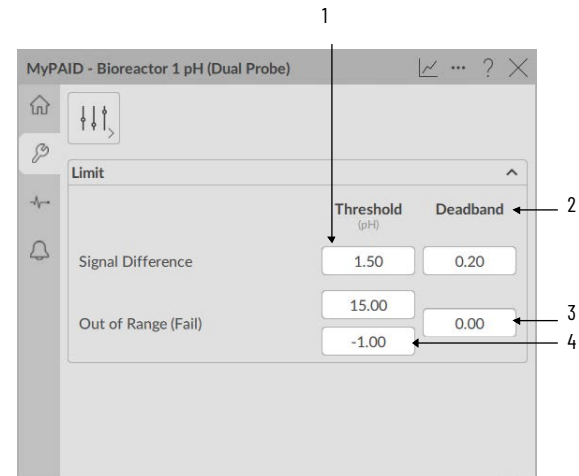
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates on page 82](#) for descriptions of the features.

Operator Tab



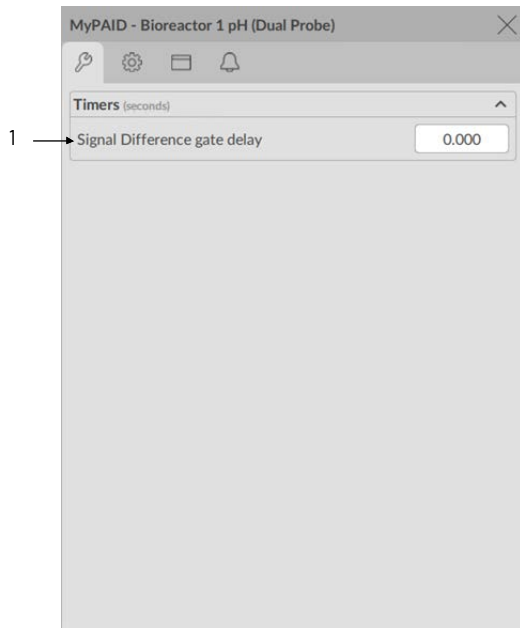
Item	Description
1	Select Sensor A Input Process Variable.
2	Select the average of Sensor A and Sensor B input Process Variables.
3	Select Sensor B Input Process Variable.
4	Select the maximum of Sensor A and Sensor B Input Process Variable.
5	Select the minimum of Sensor A and Sensor B Input Process Variable.

Maintenance Tab



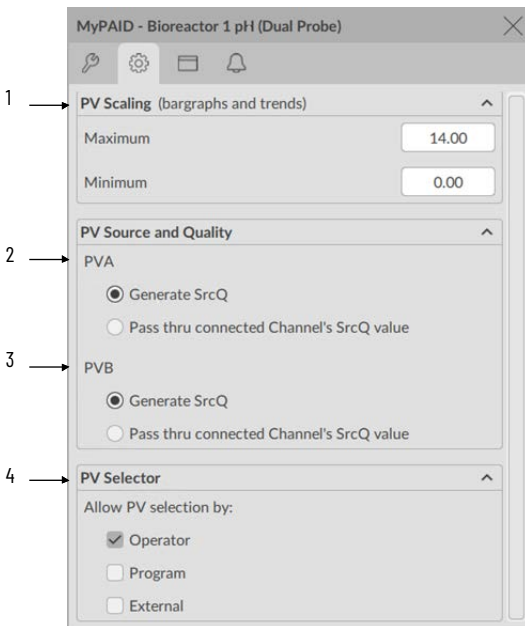
Item	Description
1	Process variable high/low signal difference threshold. Enter the threshold (trip point) for analog input alarms.
2	Process variable high/low signal difference deadband. Enter the deadband (hysteresis) that is applied to the alarm limit. Deadband helps prevent a noisy signal from generating numerous spurious alarms. Example: If the High alarm limit is 90.0 and the High alarm deadband is 5, once the signal rises above 90.0 and generates a High alarm. The signal must fall below 85.0 (90.0 minus 5.0) for the alarm to clear.
3	Process variable fail deadband. Enter the deadband (hysteresis) that is applied to each alarm limit. Deadband helps prevent a noisy signal from generating numerous spurious alarms. Example: If the High alarm limit is 90.0 and the High alarm deadband is 5, once the signal rises above 90.0 and generates a High alarm. The signal must fall below 85.0 (90.0 minus 5.0) for the alarm to clear.
4	Process variable fail threshold in raw units.

Advanced Maintenance Tab



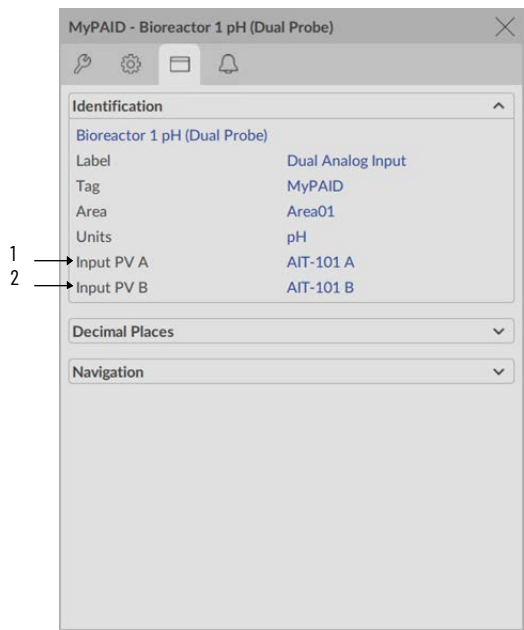
Item	Description
1	Configure the signal difference gate delay (seconds), which is the time after the gate input activates before the threshold detection is enabled

Advanced Engineering Tab



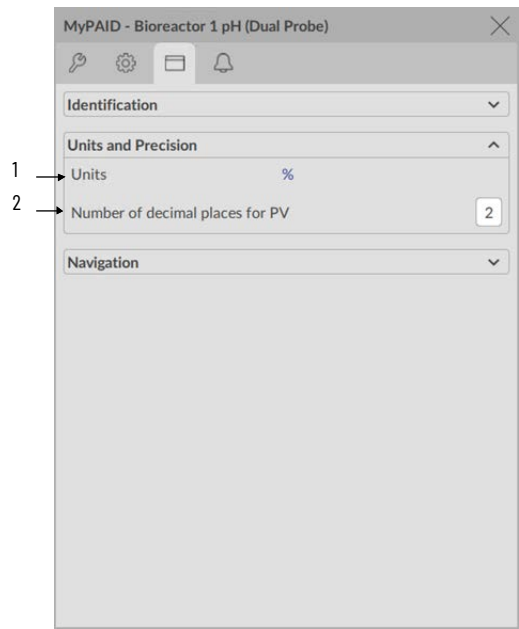
Item	Description
1	Minimum and maximum scale for the process variable on the trend.
2	<p>PV Source and Quality Input A</p> <p>Generate SrcQ: This instruction determines the Process Variable quality using Inp_PVBad, Inp_PVUncertain, and the PV value (out of range, infinite or not a number)</p> <p>Pass thru connected Channel's SrcQ value: This instruction uses the Source and Quality (SrcQ) value that is provided by an upstream object (such as PAI) via Inp_PVSrcQ to determine the PV source and quality.</p>
3	<p>PV Source and Quality Input B</p> <p>Generate SrcQ: This instruction determines the Process Variable quality using Inp_PVBad, Inp_PVUncertain, and the PV value (out of range, infinite or not a number)</p> <p>Pass thru connected Channel's SrcQ value: This instruction uses the Source and Quality (SrcQ) value that is provided by an upstream object (such as PAI) via Inp_PVSrcQ to determine the PV source and quality.</p>
4	Allows any combination of the operator, program, or external sources to select the active process variable.

HMI Configuration Tab - Identification



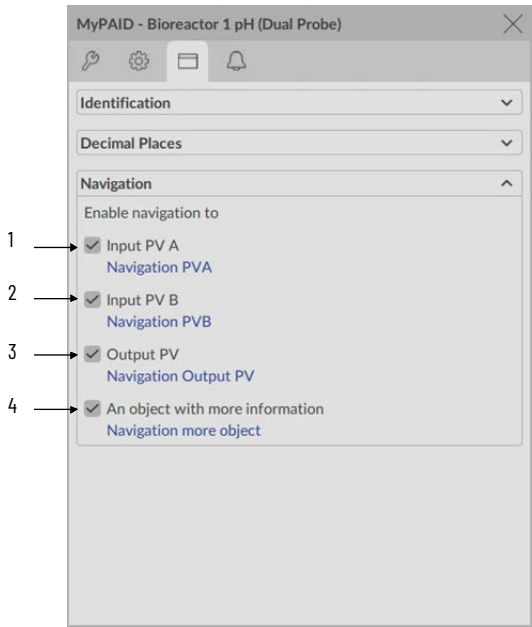
Item	Description
1	Name for Input Tag A to show on the faceplate.
2	Name for Input Tag B to show on the faceplate.

HMI Configuration Tab - Units and Precision



Item	Description
1	Display the text of the units for the Process Variable.
2	Set the number of decimal places for the Process Variable.

HMI Configuration Tab - Navigation


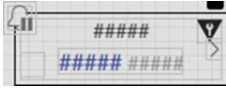

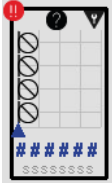
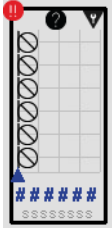
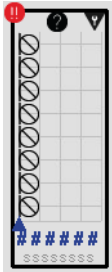



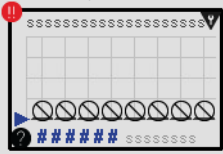
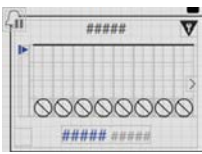





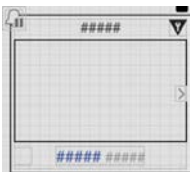

Item	Description
1	Select to enable navigation to an upstream analog input object. The tagname to navigate to is shown in the box under the label.
2	Select to enable navigation to an upstream analog input object. The tagname to navigate to is shown in the box under the label.
3	Select to enable to a downstream analog input object. The tagname to navigate to is shown in the box under the label.
4	Select to enable navigation to an object with more information (Cfg.HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.

Notes:

Process Multi Sensor Analog Input (PAIM)

Graphic Symbols

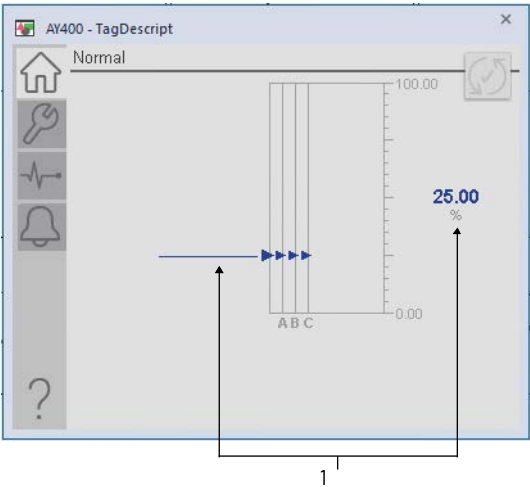
FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PAIM 	raP_5_20_PAIM_GS 		Standard analog-input graphic symbol.
GO_PAIM_4V 		—	The object displays four inputs (A-D), with each input a moving line on a horizontal axis. The graphic display includes indicators for disabled and rejected inputs.
GO_PAIM_6V 		—	The object displays six inputs (A-F), with each input a moving line on a horizontal axis. The graphic display includes indicators for disabled and rejected inputs.
GO_PAIM_8V 	raP_5_20_PAIM_GS_AH_Vertical 	—	The object displays eight inputs (A-H), with each input a moving line on a horizontal axis. The graphic display includes indicators for disabled and rejected inputs.

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
<div>GO_PAIM_8H</div> 	<div>raP_5_20_PAIM_GS_AH_Horizontal</div> 	<div></div> 	<div>The object displays eight inputs (A-H), with each input a moving line on a vertical axis. The graphic display includes indicators for disabled and rejected inputs.</div>
<div>GO_PAIM_Indicator</div> 	<div>raP_5_20_PAIM_GS_LinearGauge</div> 	<div></div> 	<div>Process Variable indicated by a moving triangle. The graphic display includes limits that are displayed with filled bars.</div>
<div>GO_PAIM_Trend</div> 	<div>raP_5_20_PAIM_GS_Trend</div> 	<div></div> 	<div>Analog input with a trend of the Process Variable and limits (highhigh, high, low, and low-low).</div>

FactoryTalk View SE Faceplates

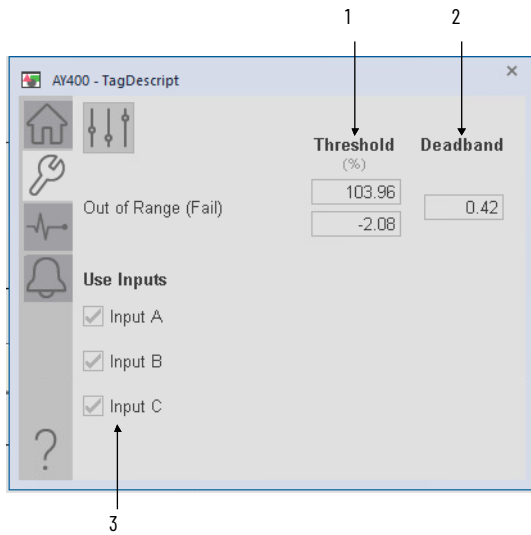
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



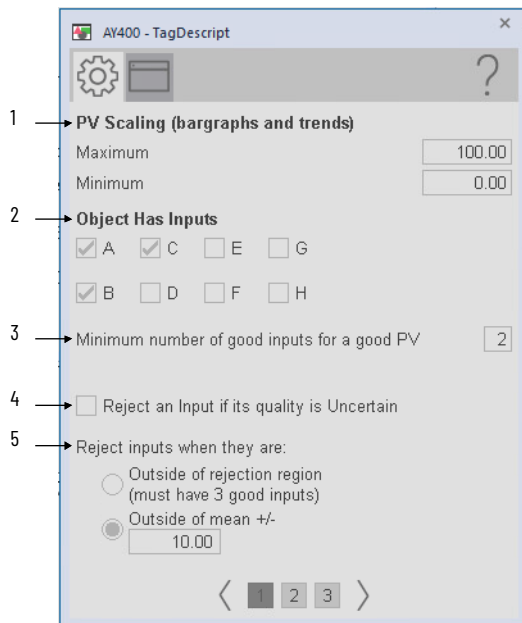
Item	Description
1	Process Variable

Maintenance Tab

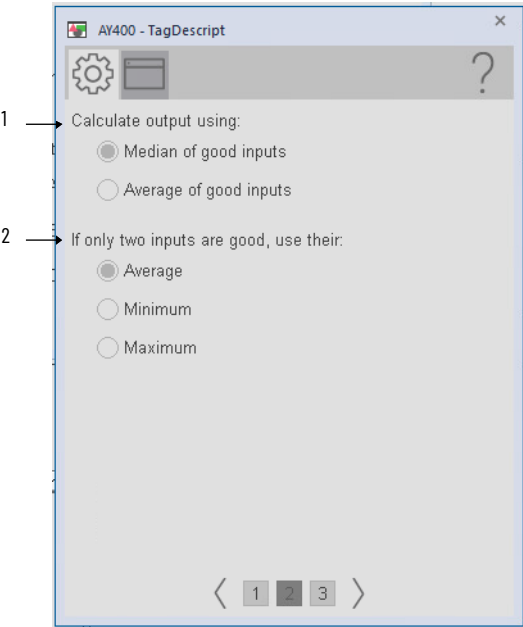


Item	Description
1	Failure status high/low threshold.
2	Failure status high/low threshold.
3	Sensor Inputs. Select: <ul style="list-style-type: none"> • ON if the corresponding input is to be used to calculate the final Process Variable (average or median). • OFF to exclude the corresponding input from the Process Variable calculation. This configuration is typically used to exclude a particular input when it is taken out of service for maintenance. If the P_AlnMulti instruction has a Process Variable but is not using it, the Maintenance Bypass Indicator is displayed.

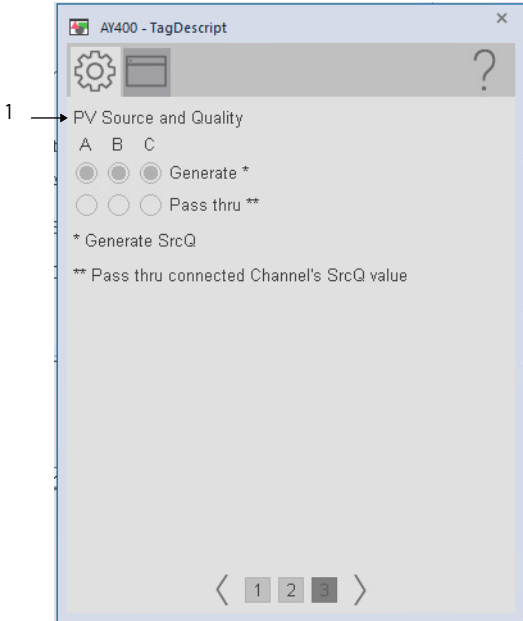
Engineering Tab



Item	Description
1	Minimum and maximum scale for the process variable on the trend.
2	Select to set this parameter: <ul style="list-style-type: none"> • ON, if the corresponding Process Variable Input is to be used to calculate final Process Variable (average or median) • OFF, to exclude the corresponding Process Variable Input from the Process Variable calculation TIP: This configuration determines whether a particular input is intended to be wired and used. See the Maintenance tab for functions to take an input out of service for maintenance temporarily.
3	Enter the number of selected inputs that must have a good source quality to result in a good Process Variable.
4	Select to set this parameter to one of the following: <ul style="list-style-type: none"> • ON, an input that is flagged as uncertain is rejected and not used to calculate the final Process Variable. • OFF, an input that is flagged as uncertain is not rejected and is still used to calculate the final Process Variable. The flag causes the final Process Variable to be flagged as uncertain (default).
5	Select: <ul style="list-style-type: none"> • 'Outside of rejection region' to reject an input that is more than two standard deviations from the mean. • 'Outside of mean +/-' to reject an input that deviates from the mean by more than the value entered. Value is in PV engineering units. IMPORTANT: At least four inputs must be used for the 'Outside of rejection region' selection to be meaningful.



Item	Description
1	Select: <ul style="list-style-type: none">'Average of good inputs' - the calculated final Process Variable is the average (arithmetic mean) of the good (non-rejected) Process Variable inputs.'Median of good inputs' - the calculated final Process Variable is the median (central value) of the good (non-rejected) Process Variable inputs (default). The average is the sum of values that are divided by the number of values. The median is the value of the item in the middle. If there are an even number of items, the median is the average of the two central values.
2	Select one of the options to determine the output calculation when there are only two unrejected inputs.



Item	Description
1	Select either generate or pass thru source quality for each channel. If the channel is configured to pass thru, the PV source quality will not be impacted by that channel source quality.

HMI Configuration Tab

AY400 - TagDescript

TagDescript

Label: AY400 Label

Tag: AY400

Area name for security: Area01

1 → Units: %

2 → Input PV A: Input A
Input PV B: Input B
Input PV C: Input C

3 → Number of decimal places for PV: 2

< 1 2 3 >

Item	Description
1	Enter the unit measurements.
2	Enter the Input tag names.
3	Enter the number of decimal places for the Process Variable.

AY400 - TagDescript

Alarm Configuration

1 → ☒ Allow Operator to Shelve Alarm

2 → ☒ Allow Maintenance to Disable Alarm

3 → Operator Command Confirmation Required

☒ None

☐ Command confirmation

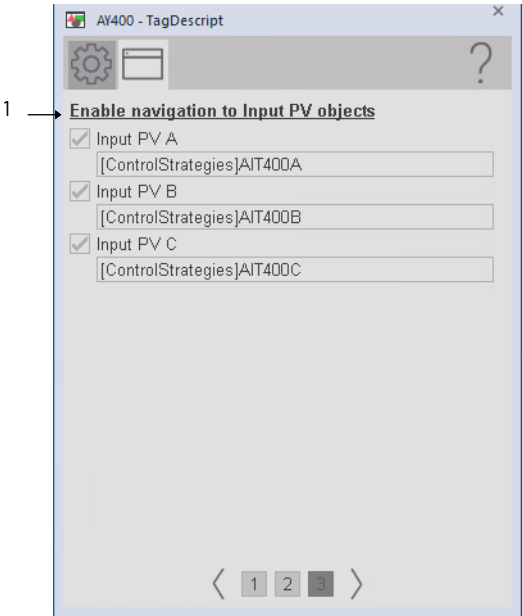
☐ Performer e-signature

☐ Performer and approver e-signatures

4 → ☐ Enable navigation to an object with more information

< 1 2 3 >

Item	Description
1	Select to allow Operator to shelve alarm.
2	Select to allow Maintenance to disable alarm.
3	Select to configure operator command confirmation. This action would take place after any operator command.
4	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.



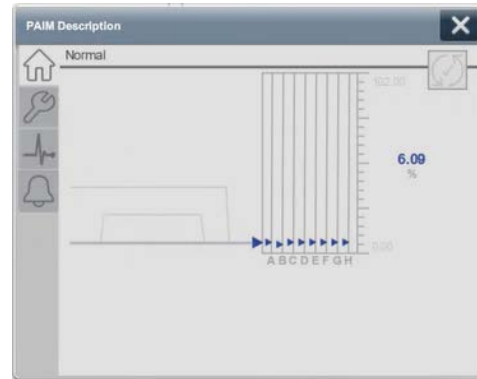
Item	Description
1	Enter the object to navigate to for each input.

Studio 5000 View Designer Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 92](#) for descriptions of the features.

Operator Tab



Maintenance Tab

The screenshot shows the 'PAIM Description' window with the 'Maintenance' tab selected. The window displays configuration settings for the PAIM instruction, including Threshold and Deadband values, and a list of inputs to use.

	Threshold (%)	Deadband
Out of Range (Fail)	103.00	0.42
	-2.08	

Use Inputs

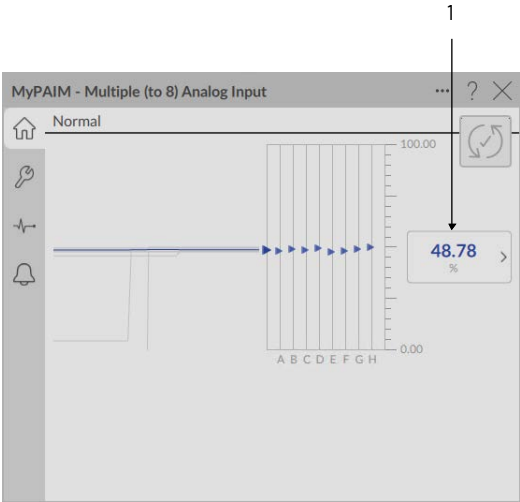
<input checked="" type="checkbox"/> Sensor/Input A	<input checked="" type="checkbox"/> Sensor/Input E
<input checked="" type="checkbox"/> Sensor/Input B	<input checked="" type="checkbox"/> Sensor/Input F
<input checked="" type="checkbox"/> Sensor/Input C	<input checked="" type="checkbox"/> Sensor/Input G
<input checked="" type="checkbox"/> Sensor/Input D	<input checked="" type="checkbox"/> Sensor/Input H

FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

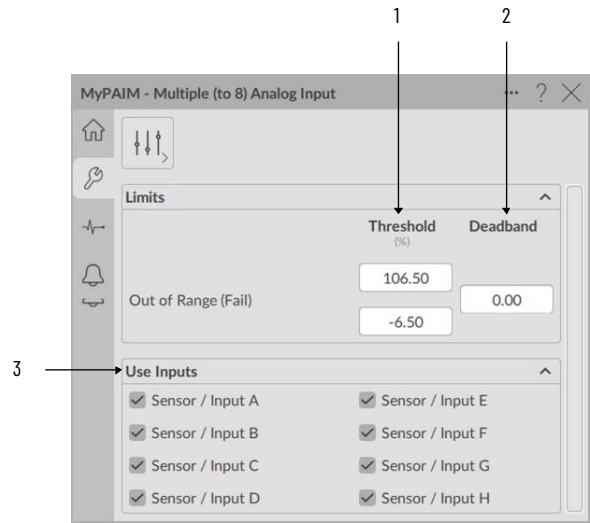
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [Basic Faceplate Attributes on page 44](#) for descriptions of the features.

Operator Tab



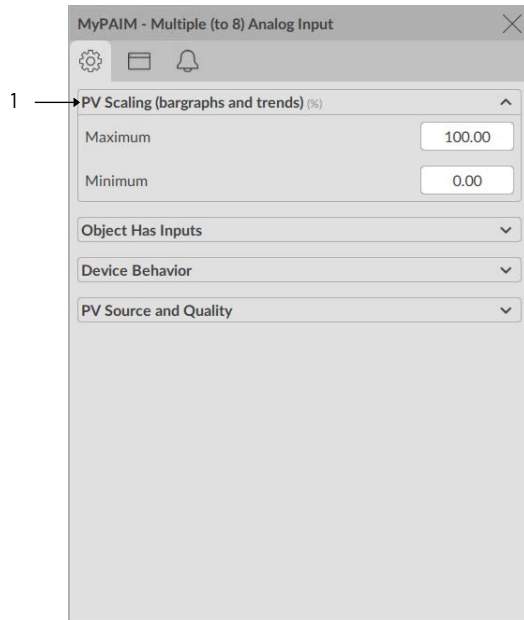
Item	Description
1	Process Variable

Maintenance Tab



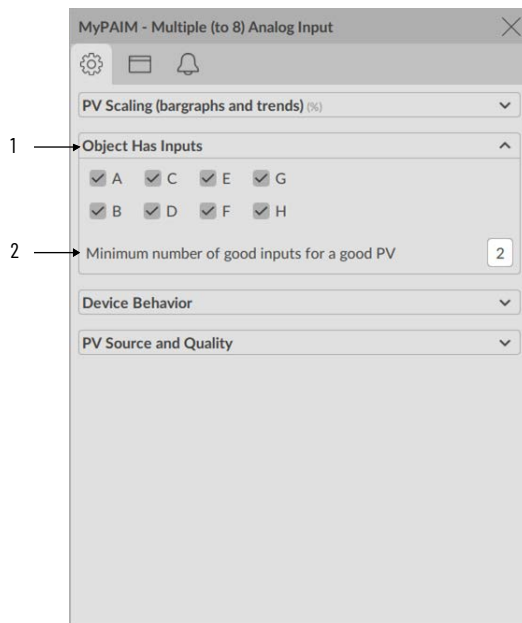
Item	Description
1	Failure status high/low threshold.
2	Failure status Deadband.
3	Sensor Inputs. Select: <ul style="list-style-type: none">• ON if the corresponding input is to be used to calculate the final Process Variable (average or median).• OFF to exclude the corresponding input from the Process Variable calculation. This configuration is typically used to exclude a particular input when it is taken out of service for maintenance. If the PAIM instruction has a Process Variable but is not using it, the Maintenance Bypass Indicator is displayed.

Advanced Engineering Tab - PV Scaling



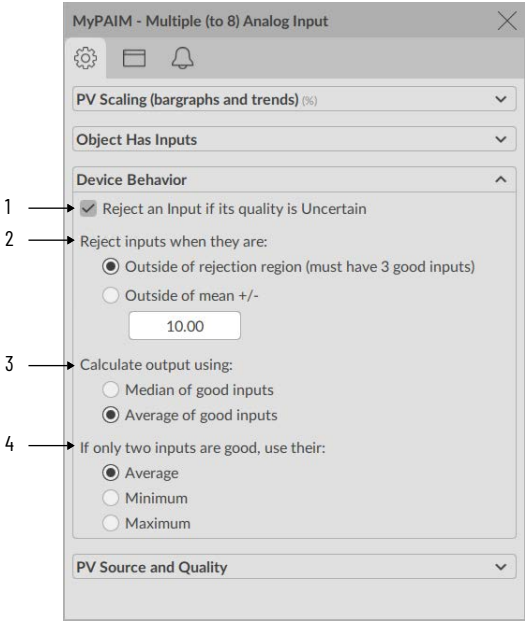
Item	Description
1	Minimum and maximum scale for the process variable on the trend.

Advanced Engineering Tab - Object Has Inputs



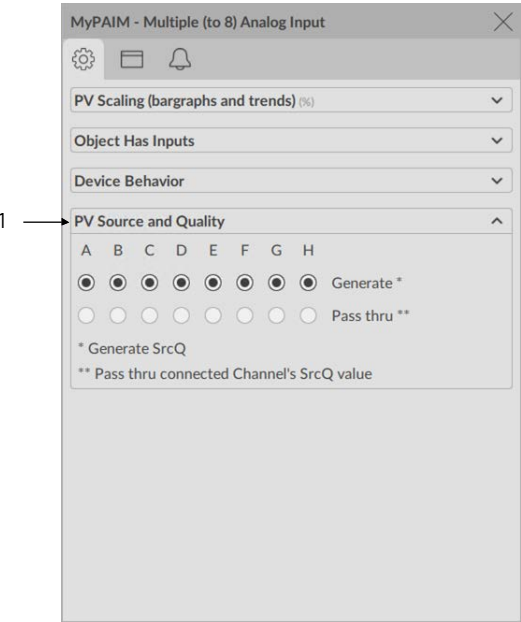
Item	Description
1	Select to set this parameter: <ul style="list-style-type: none"> ON, if the corresponding Process Variable Input is to be used to calculate final Process Variable (average or median) OFF, to exclude the corresponding Process Variable Input from the Process Variable calculation TIP: This configuration determines whether a particular input is intended to be wired and used. See the Maintenance tab for functions to take an input out of service for maintenance temporarily.
2	Enter the number of selected inputs that must have a good source quality to result in a good Process Variable.

Advanced Engineering Tab - Device Behavior



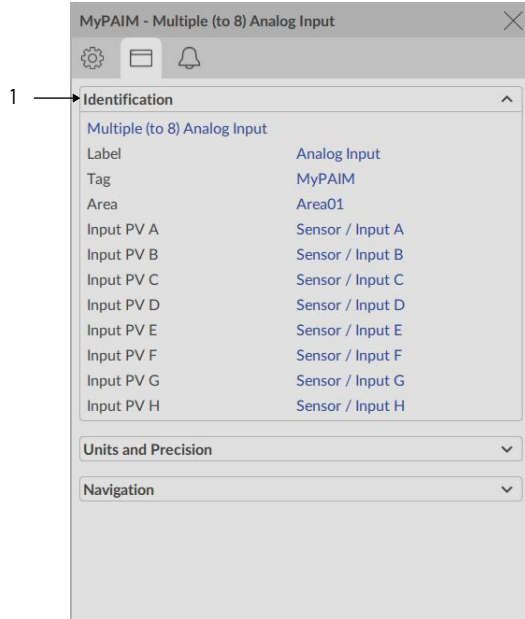
Item	Description
1	Select to set this parameter to one of the following: <ul style="list-style-type: none">• ON, an input that is flagged as uncertain is rejected and not used to calculate the final Process Variable.• OFF, an input that is flagged as uncertain is not rejected and is still used to calculate the final Process Variable. The flag causes the final Process Variable to be flagged as uncertain (default).
2	Select: <ul style="list-style-type: none">• 'Outside of rejection region' to reject an input that is more than two standard deviations from the mean.• 'Outside of mean +/-' to reject an input that deviates from the mean by more than the value entered. Value is in PV engineering units. IMPORTANT: At least four inputs must be used for the 'Outside of rejection region' selection to be meaningful.
3	Select: <ul style="list-style-type: none">• 'Average of good inputs' - the calculated final Process Variable is the average (arithmetic mean) of the good (non-rejected) Process Variable inputs.• 'Median of good inputs' - the calculated final Process Variable is the median (central value) of the good (non-rejected) Process Variable inputs (default). The average is the sum of values that are divided by the number of values. The median is the value of the item in the middle. If there are an even number of items, the median is the average of the two central values.
4	Select one of the options to determine the output calculation when there are only two unrejected inputs.

Advanced Engineering Tab - PV Source and Quality



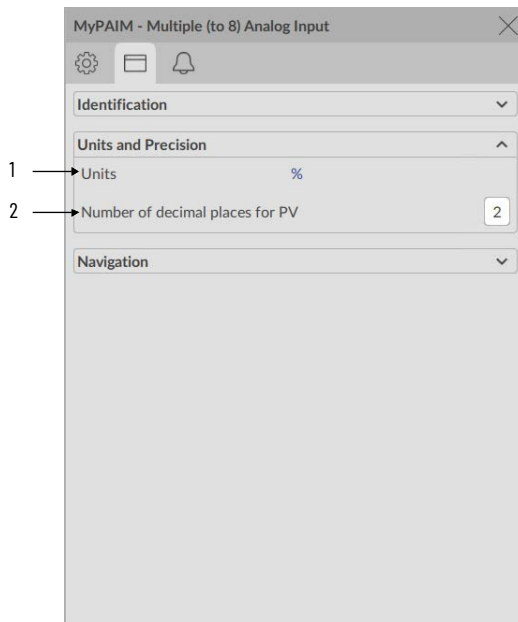
Item	Description
1	Select either generate or pass thru source quality for each channel. If the channel is configured to pass thru, the PV source quality will not be impacted by that channel source quality.

Advanced HMI Configuration Tab - Identification



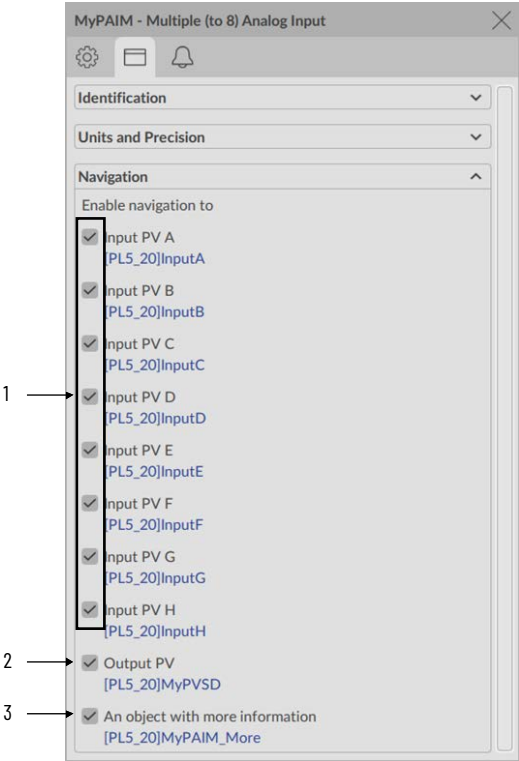
Item	Description
1	Display the Input tag names.

Advanced HMI Configuration Tab - Units and Precision



Item	Description
1	Display the unit measurements.
2	Enter the number of decimal places for the Process Variable.


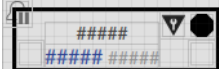

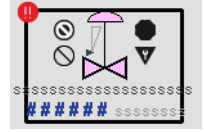






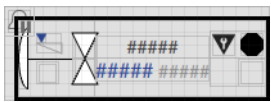
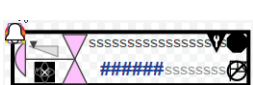

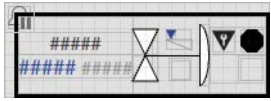
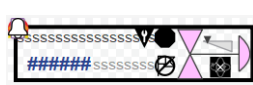
Advanced HMI Configuration Tab - Navigation



Item	Description
1	Select to enable navigation to the objects for each input.
2	Select to enable navigation to an output PV object.
3	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.

Process Analog Output (PAO)

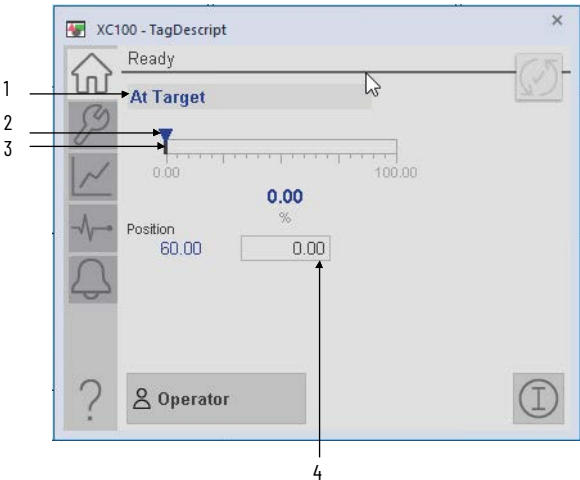
Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PAO 	PAO_GS_Analog_Output 	GS_PAO 	Standard analog-output graphic symbol.
GO_PAO_ControlValve 	PAO_GS_ControlValve 	GS_PAO_ControlValve 	Normal controlled valve symbol for horizontal pipe.
GO_PAO_ControlValve1 	PAO_GS_ControlValve_B 	GS_PAO_ControlValve2 	Inverted controlled valve symbol for horizontal pipe.
GO_PAO_ControlValve2 	PAO_GS_ControlValve_L 	GS_PAO_ControlValve3 	Controlled valve symbol for vertical pipe (pipe to the left.)
GO_PAO_ControlValve3 	PAO_GS_ControlValve_R 	GS_PAO_ControlValve4 	Controlled valve symbol for vertical pipe (pipe to the right.)

FactoryTalk View SE Faceplates

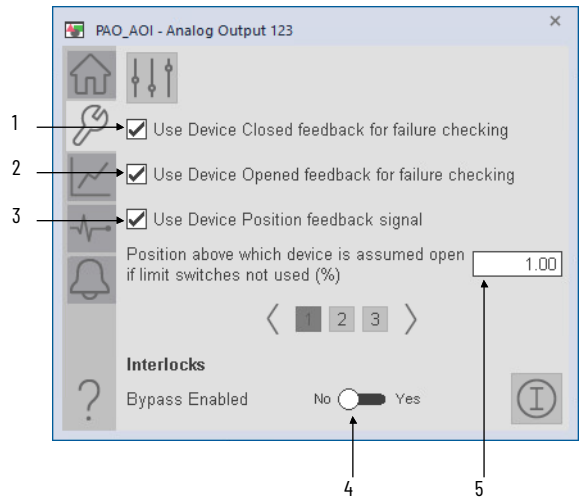
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



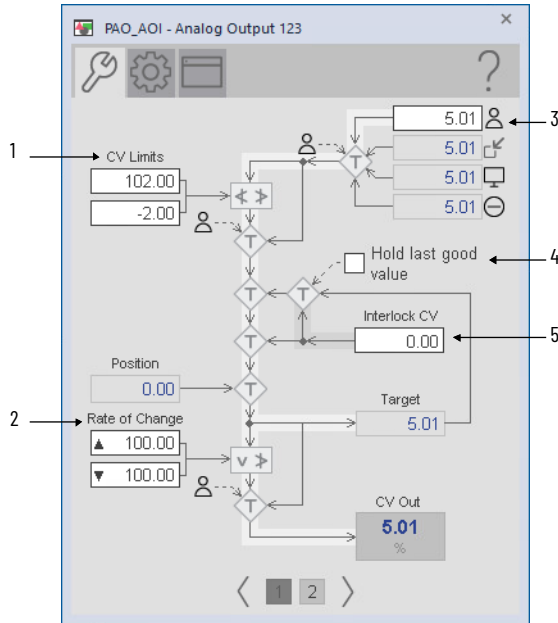
Item	Description
1	Analog Output State (At Target, Ramping Down, Ramping Up, Clamped at Min, Clamped at Max, or Disabled).
2	Control Variable.
3	Control Variable target.
4	Enter to change the Controlled Variable output value.

Maintenance Tab

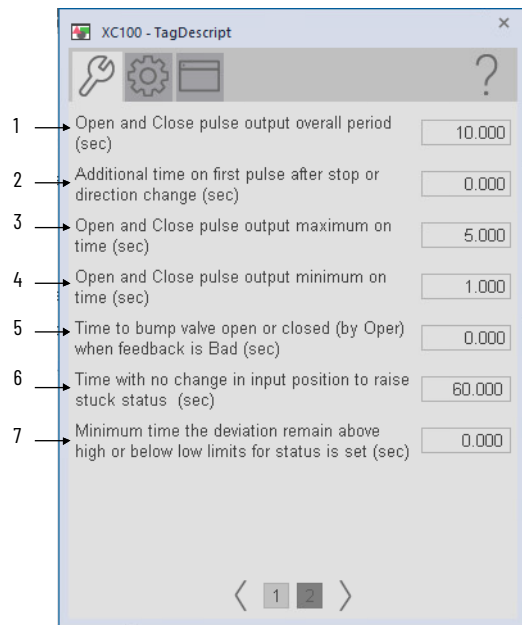


Item	Description
1	Select box to indicate that there is a closed limit switch feedback reference. Uncheck if a reference does not exist.
2	Select box to indicate that there is an opened limit switch feedback reference. Uncheck if a reference does not exist.
3	Select box to indicate that there is a feedback reference. Uncheck if a reference does not exist.
4	Select Yes to bypass checking of bypassable interlocks and permissives. Select No to enable checking of all interlocks and permissives.
5	Enter the position (PV value) above which the device (valve) is assumed to be open if the feedback from Opened limit switch is not used.

Advanced Maintenance Tab

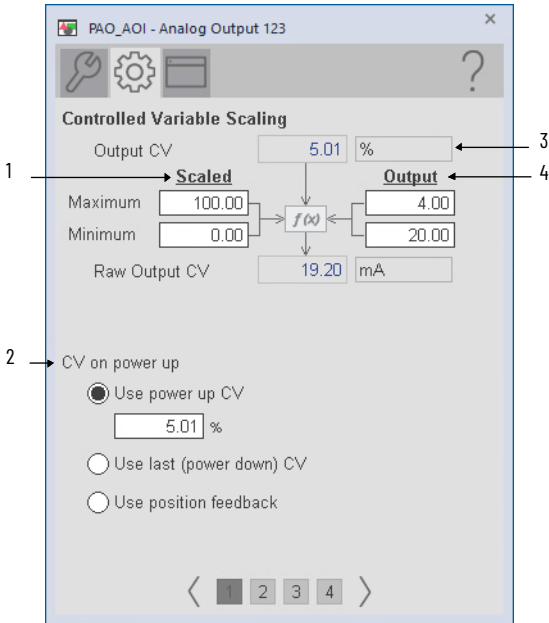


Item	Description
1	Controlled Variable clamp limits. Enter the clamping limits for the Controlled Variable in engineering units. Clamp limits are enforced in Operator and Program command sources only.
2	Enter the maximum allowed value for the Rate of Change Limit in engineering units per second. A value of zero allows any rate of change to be input by the Program or Operator.
3	Enter the Operator command source Controlled Variable Target in engineering units. This entry is available in Operator command source and Maintenance command source.
4	Select and the Controlled Variable holds at the last good value when an Interlock trips or an I/O Fault occurs. Clear this checkbox and the Controlled Variable goes to the Interlock Controlled Variable value when an Interlock trips or an I/O Fault occurs.
5	Enter the interlock target Controlled Variable in engineering units. This value is used for the Controlled Variable when interlocked or on an I/O Fault, but only if Hold Last Good Value is not selected.

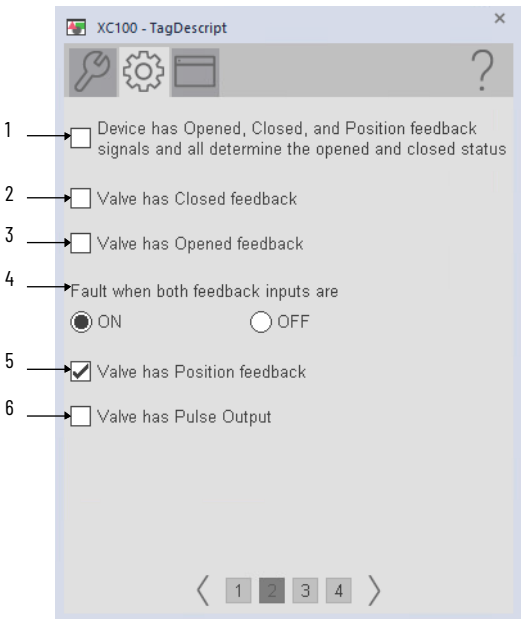


Item	Description
1	Enter the overall period for the open and close cycles. The open and close cycles consist of a pulsed output and an idle time. If the total cycle time is 10 seconds and the maximum output time is 5 seconds, the cycle is 5 seconds of pulsed output and 5 seconds of idle. The pulse cycles are only used if pulse outputs are enabled.
2	Enter the additional time to be added to the first pulse of an open or close action.
3	Maximum time the open or close pulse output is enabled during each cycle.
4	Minimum time the open or close pulse output is enabled during each cycle.
5	Enter the value for time the output is bumped for open or closed bump command by the operator. When enabled, this is a one-time bump of the requested output.
6	Enter the value for the stuck alarm. When this time is reached without position change, the status changes to stuck.
7	Enter value for the gate of the deviation alarm. If deviation is above the high limit or below the low limit for this time, the deviation status is raised.

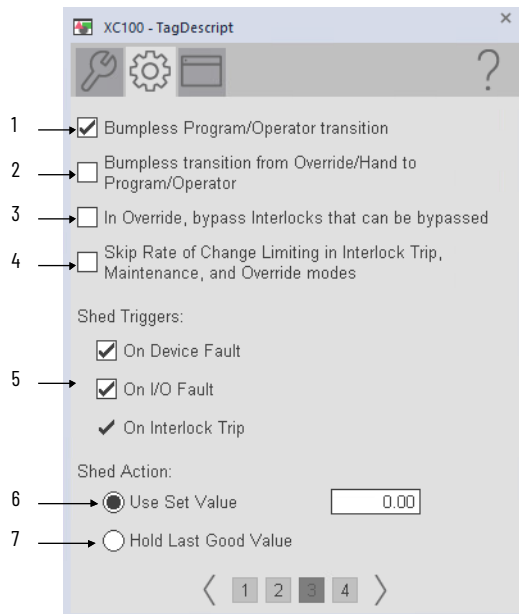
Engineering Tab



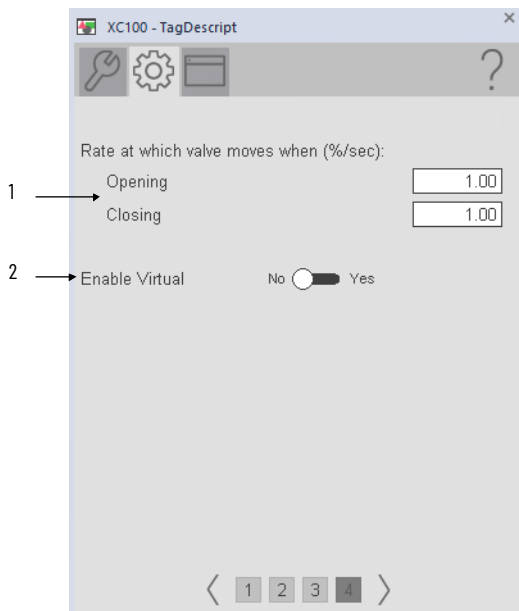
Item	Description
1	Enter values for the maximum and minimum scaled (engineering units) scaling ranges.
2	Select what method is used to determine the CV on power-up. If use power-up DV is selected, enter the value for the initial CV used on power-up. Position feedback must be enabled to use the position feedback power-up method.
3	Engineering Units label.
4	Enter values for the maximum and minimum output (Raw) scaling ranges.



Item	Description
1	Select whether this method is used for opened and closed status. This is a cross-check between the position and the opened/closed feedback.
2	Select whether the valve has closed feedback or not.
3	Select whether the valve has opened feedback or not.
4	Select whether the valve will fault when the opened and closed feedback inputs are both ON or when they are both off.
5	Select whether the valve has position feedback (%) or not.
6	Select whether the valve has a pulsed output for opening and closing.

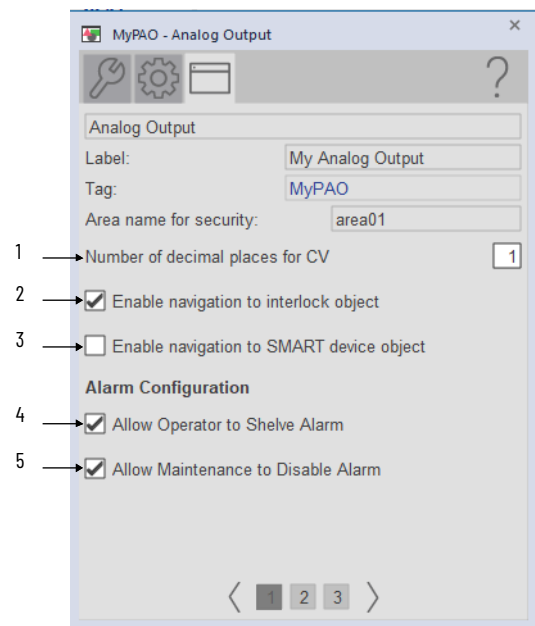


Item	Description
1	When selected, the operator settings track the program settings when the command source is Program, and program settings track the operator settings when the command source is Operator. Transition between command sources is bumpless. When not selected, the operator settings and program settings retain their values regardless of command source. When the command source is changed, the value of a limit can change, such as from the Program-set value to the Operator-set value.
2	When selected, the Program and Operator Settings of the CV track the output CV when the command source is Hand or Override.
3	Select while in Override command source to bypass Interlocks that can be bypassed.
4	Select to have the CV immediately go to its target value or configured Interlock CV value when an Interlock trips or the instruction is placed in Maintenance or Override command source. Clear this checkbox to have the CV always use rate of change limiting (ramping) of the CV output.
5	Select so that an I/O Fault triggers a shed of the output, to the configured shed set value or to hold last good output. The shed condition is latched internal to the Add-On Instruction. When the I/O Fault condition clears, a Reset command is required to return to normal operation. Clear this checkbox so that the I/O Fault condition does not affect operation (but can still generate an alarm). The configured shed action always takes place on an interlock trip. This selection cannot be changed.
6	Select this option to set the analog output to the configured shed set value when a condition configured as a shed trigger occurs.
7	Select this option to hold the analog output at its last good value when a condition configured as a shed trigger occurs.

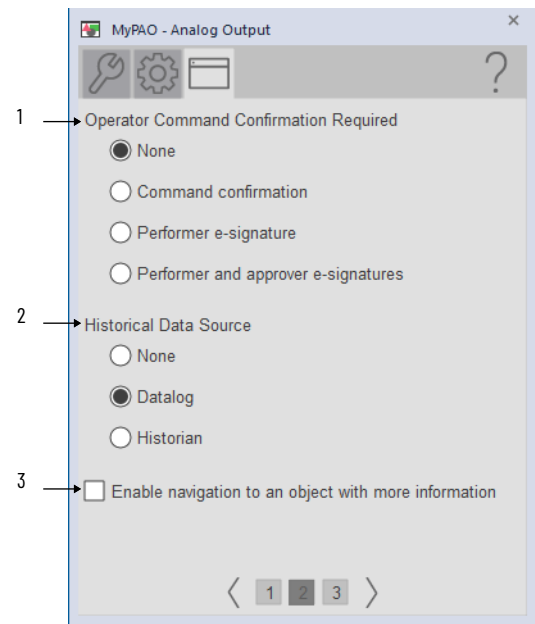


Item	Description
1	Enter the rate (%/sec) at which the the valve moves during opening and closing.
2	Select yes to enable Virtual.

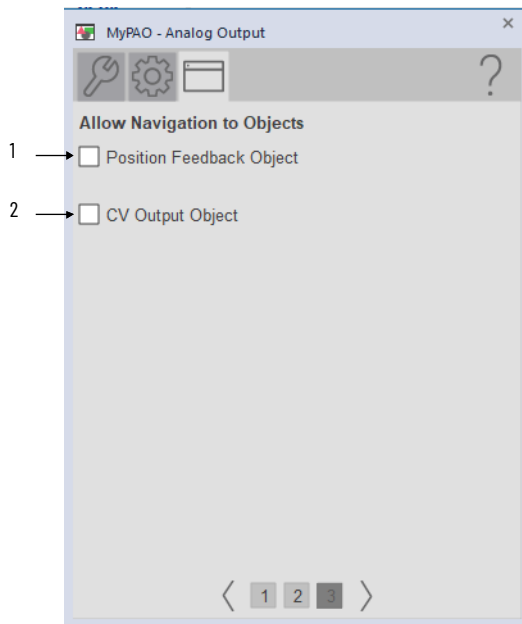
HMI Configuration Tab



Item	Description
1	Set the number of decimal places for the Control Variable.
2	Select if an interlock object is connected to Inp_IntlkOK. The Interlock indicator becomes a button that opens the P_Intlk faceplate. IMPORTANT: The name of the Interlock object in the controller must be the name of the object with the suffix '_Intlk_0'. For example, if your P_AOut object has the name 'AOut123', then its Interlock object must be named 'AOut123_Intlk_0'.
3	Select to enable navigation to a SMART device object.
4	Select to allow Operator to shelve the alarm.
5	Select to allow Maintenance to disable the alarm.



Item	Description
1	Select to configure operator command confirmation. This action would take place after any operator command.
2	Select to configure if a Historical data source will be used or not.
3	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.



Item	Description
1	Select to enable navigation to the faceplate for the PlantPAx® object that is providing the position feedback for this object. Inp_PosFdbk
2	Select to enable navigation to the faceplate for the PlantPAx object that is providing the CV for this object (PSet_CV).

Studio 5000 View Designer Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 104](#) for descriptions of the features.

Operator Tab



Maintenance Tab

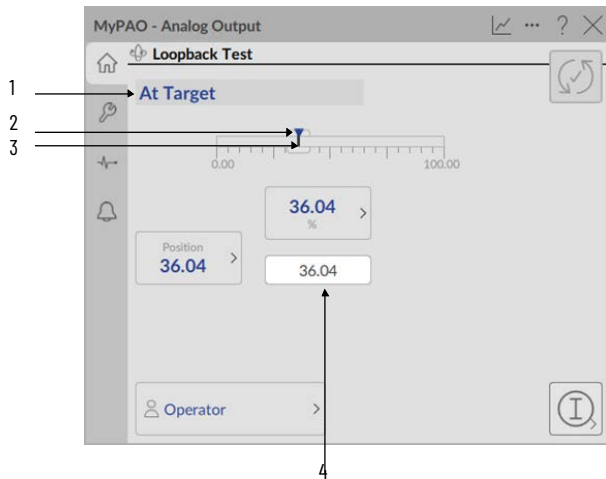


FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

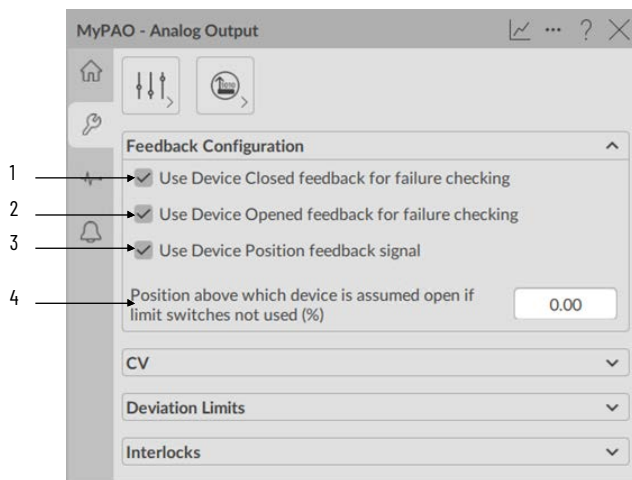
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates on page 104](#) for descriptions of the features.

Operator Tab



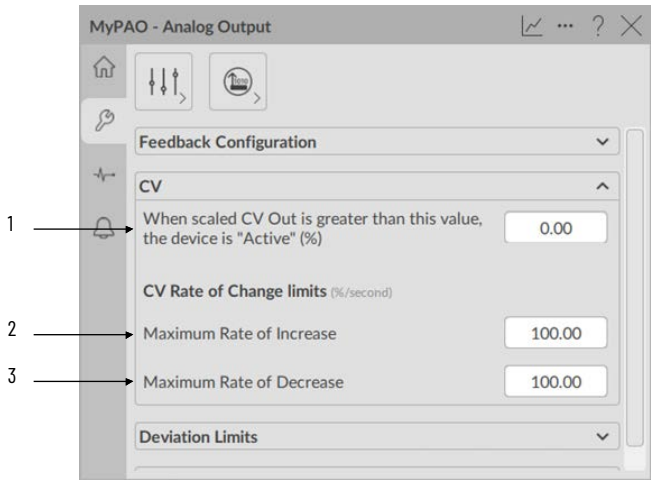
Item	Description
1	Analog Output State (At Target, Ramping Down, Ramping Up, Clamped at Min, Clamped at Max, or Disabled).
2	Control Variable.
3	Control Variable target.
4	Enter to change the Controlled Variable output value.

Maintenance Tab - Feedback Configuration



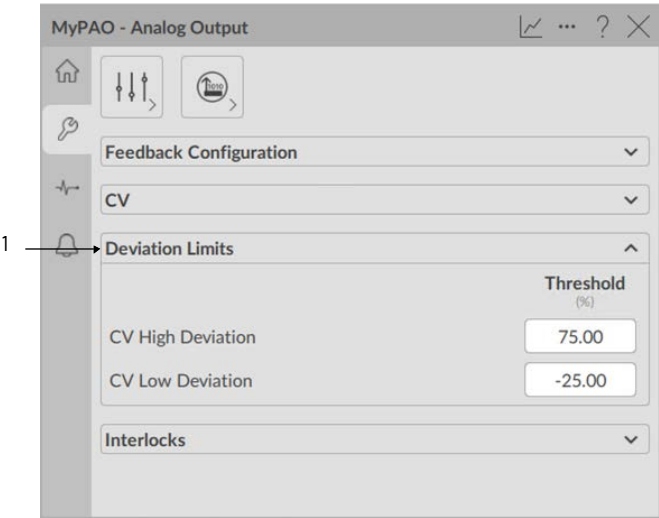
Item	Description
1	Select box to indicate that a closed limit switch will be used for feedback reference. Uncheck if a reference is not used.
2	Select box to indicate that an opened limit switch will be used for feedback reference. Uncheck if a reference is not used.
3	Select box to indicate that a position feedback will be used for feedback reference. Uncheck if a reference is not used.
4	Enter the position (PV value) above which the device (valve) is assumed to be open if the feedback from Opened limit switch is not used.

Maintenance Tab - CV



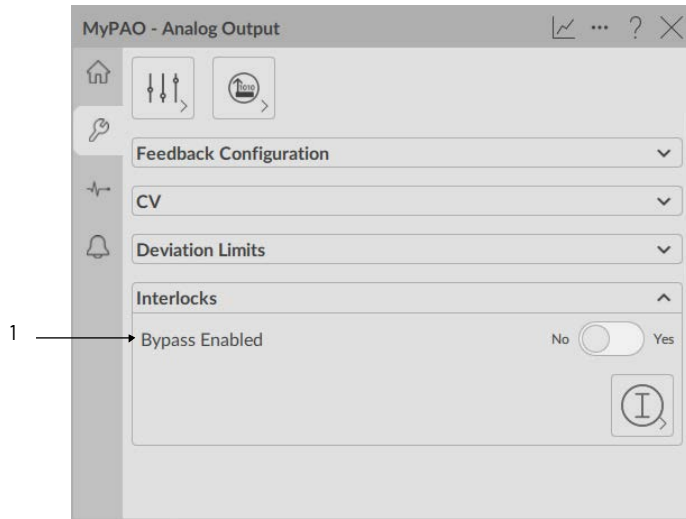
Item	Description
1	Enter the CV active value. When Val_CVOut is greater than this value (CV engineering units) set Sts_Active (for HMI).
2	Enter the values for the maximum rate of change for increasing CV.
3	Enter the values for the maximum rate of change for decreasing CV.

Maintenance Tab - Deviation Limits



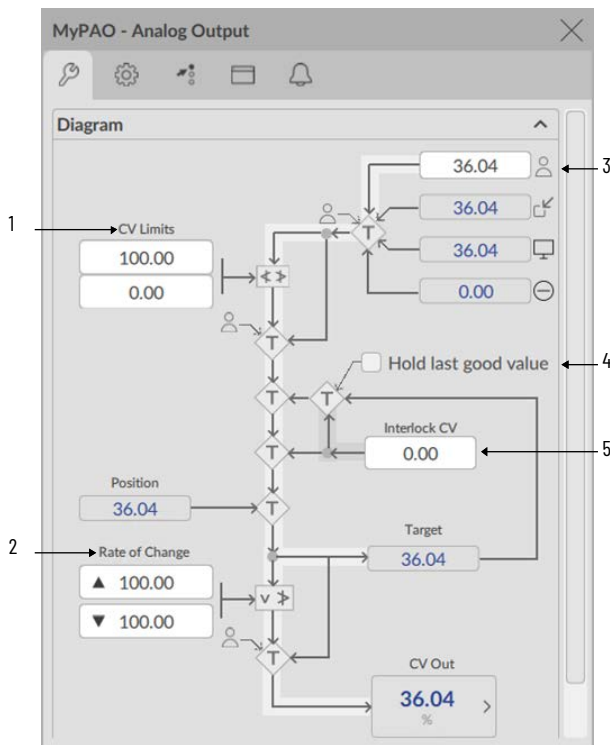
Item	Description
1	Enter the Control Variable deviation low and high threshold values.

Maintenance Tab - Interlocks



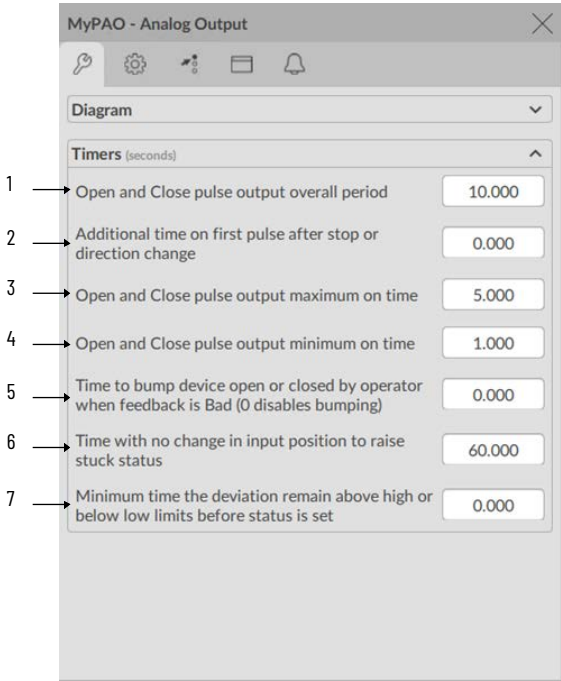
Item	Description
1	Select Yes to bypass checking of bypassable interlocks and permissives. Select No to enable checking of all interlocks and permissives.

Advanced Maintenance Tab - Diagram



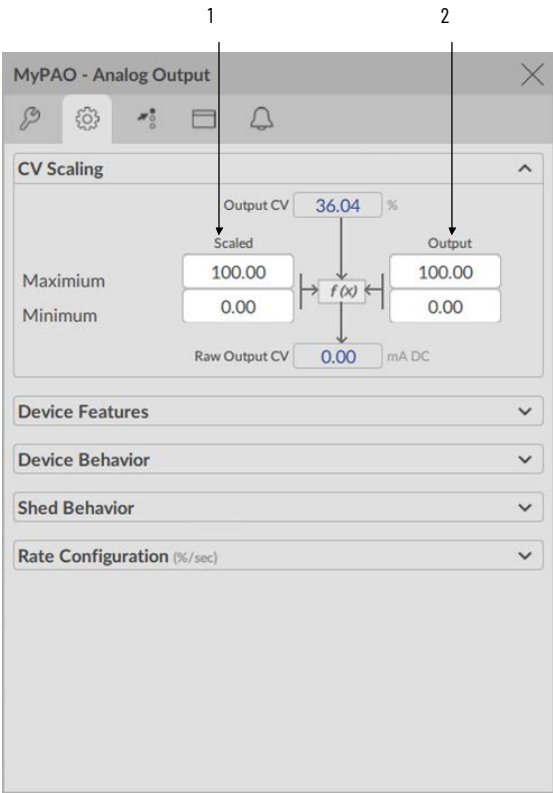
Item	Description
1	Controlled Variable clamp limits. Enter the clamping limits for the Controlled Variable in engineering units. Clamp limits are enforced in Operator and Program command sources only.
2	Enter the maximum allowed value for the Rate of Change Limit in engineering units per second. A value of zero allows any rate of change to be input by the Program or Operator.
3	Enter the Operator command source Controlled Variable Target in engineering units. This entry is available in Operator command source and Maintenance command source.
4	Select and the Controlled Variable holds at the last good value when an Interlock trips or an I/O Fault occurs. Clear this checkbox and the Controlled Variable goes to the Interlock Controlled Variable value when an Interlock trips or an I/O Fault occurs.
5	Enter the interlock target Controlled Variable in engineering units. This value is used for the Controlled Variable when interlocked or on an I/O Fault, but only if Hold Last Good Value is not selected.

Advanced Maintenance Tab - Timers



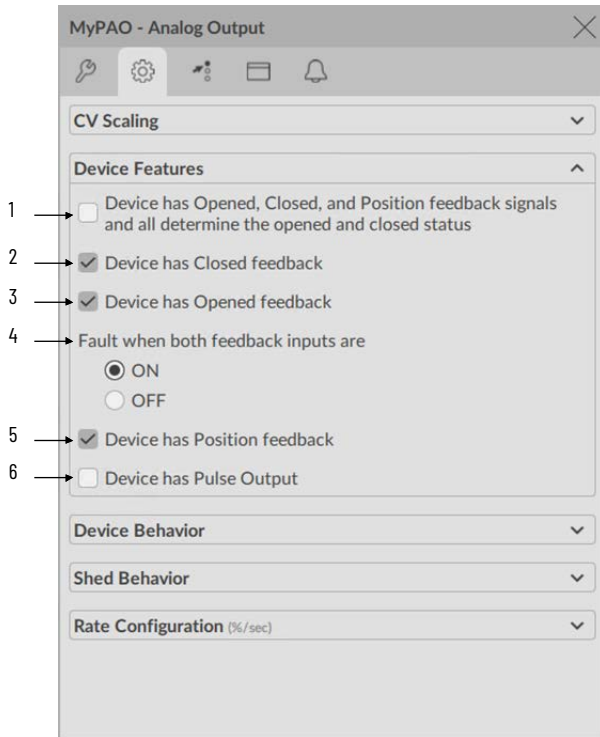
Item	Description
1	Enter the overall period for the open and close cycles. The open and close cycles consist of a pulsed output and an idle time. If the total cycle time is 10 seconds and the maximum output time is 5 seconds, the cycle is 5 seconds of pulsed output and 5 seconds of idle. The pulse cycles are only used if pulse outputs are enabled.
2	Enter the additional time to be added to the first pulse of an open or close action.
3	Maximum time the open or close pulse output is enabled during each cycle.
4	Minimum time the open or close pulse output is enabled during each cycle.
5	Enter the value for time the output is bumped for open or closed bump command by the operator. When enabled, this is a one-time bump of the requested output.
6	Enter the value for the stuck alarm. When this time is reached without position change, the status changes to stuck.
7	Enter value for the gate of the deviation alarm. If deviation is above the high limit or below the low limit for this time, the deviation status is raised.

Advanced Engineering Tab - CV Scaling



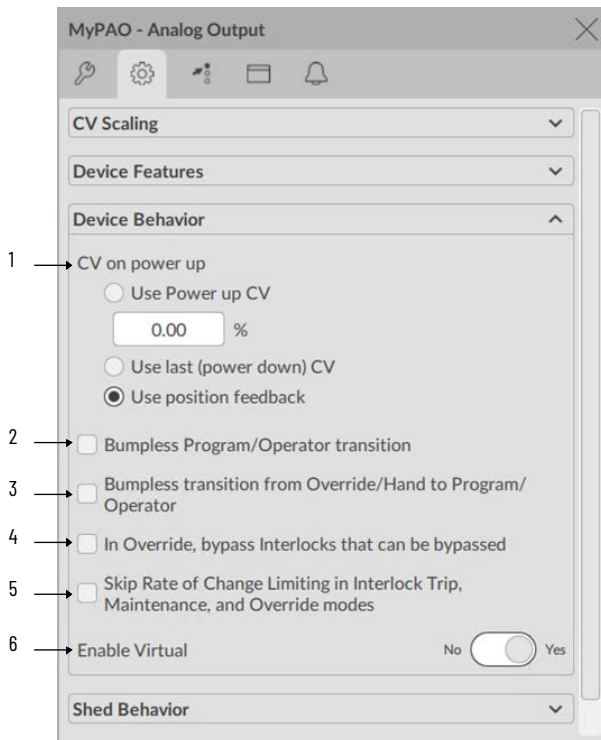
Item	Description
1	Enter values for the maximum and minimum scaled (engineering units) scaling ranges.
2	Enter values for the maximum and minimum output (Raw) scaling ranges.

Advanced Engineering Tab - Device Features



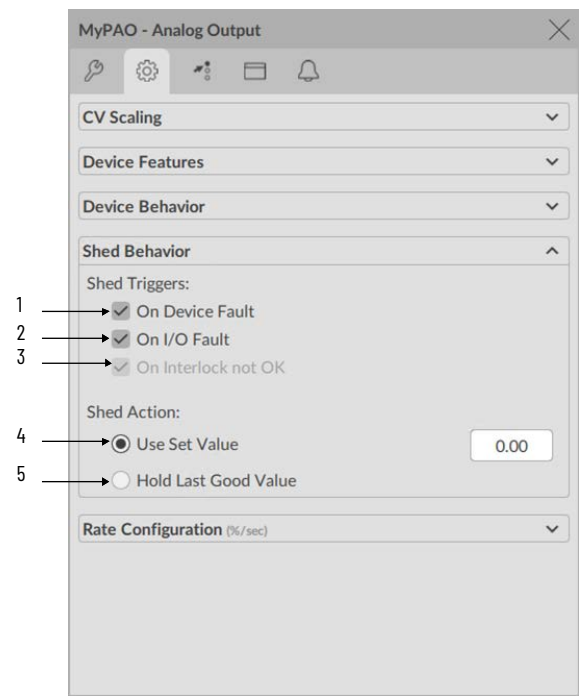
Item	Description
1	Select whether this method is used for opened and closed status. This is a cross-check between the position and the opened/closed feedback.
2	Select whether the valve has closed feedback or not.
3	Select whether the valve has opened feedback or not.
4	Select whether the valve will fault when the opened and closed feedback inputs are both ON or when they are both off.
5	Select whether the valve has position feedback (%) or not.
6	Select whether the valve has a pulsed output for opening and closing.

Advanced Engineering Tab - Device Behavior



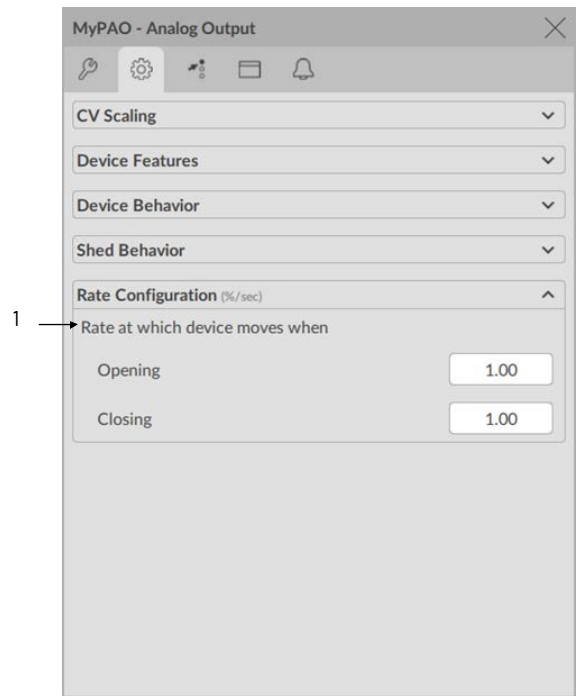
Item	Description
1	Select what method is used to determine the CV on power-up. If use power-up CV is selected, enter the value for the initial CV used on power-up. Position feedback must be enabled to use the position feedback power-up method.
2	When selected, the operator settings track the program settings when the command source is Program, and program settings track the operator settings when the command source is Operator. Transition between command sources is bumpless. When not selected, the operator settings and program settings retain their values regardless of command source. When the command source is changed, the value of a limit can change, such as from the Program-set value to the Operator-set value.
3	When selected, the Program and Operator Settings of the CV track the output CV when the command source is Hand or Override.
4	Select while in Override command source to bypass Interlocks that can be bypassed.
5	Select to have the CV immediately go to its target value or configured Interlock CV value when an Interlock trips or the instruction is placed in Maintenance or Override command source. Clear this checkbox to have the CV always use rate of change limiting (ramping) of the CV output.
6	Select yes to enable Virtual.

Advanced Engineering Tab - Shed Behavior



Item	Description
1	Select to shed if a Device Fault is detected.
2	Select to shed if an I/O Fault is detected.
3	The device always sheds on Interlock not OK. This item cannot be unchecked. It is displayed as a reminder that Interlock not OK always triggers a shed.
4	Select this option to set the analog output to the configured shed set value when a condition configured as a shed trigger occurs.
5	Select this option to hold the analog output at its last good value when a condition configured as a shed trigger occurs.

Advanced Engineering Tab - Rate Configuration



Item	Description
1	Enter the rate (%/sec) at which the valve moves during opening and closing.

Advanced HMI Configuration Tab

MyPAO - Analog Output

Identification

Units and Precision

1 → CV Units %

2 → Output raw units mA DC

3 → Number of decimal places for CV 2

Navigation

Enable navigation to

4 → ☒ Position Feedback Object
[PL5_20]MyPAO_PosFeedback

5 → ☒ CV Output Object
[PL5_20]MyPAO_Output

6 → ☒ Interlock object

7 → ☒ SMART device object





8 → ☒ An object with more information
[PL5_20]MyPAO_More

Item	Description
1	Display the engineering units for CV values.
2	Display the engineering units for Output raw values.
3	Set the number of decimal places for the Control Variable.
4	Select to enable navigation to the faceplate for the Process object that is providing the position feedback for this object (Inp_PosFdbk).
5	Select to enable navigation to the faceplate for the Process object that is providing the CV for this object (PSet_CV).
6	Select if an interlock object is connected to Inp_IntlkOK. The Interlock indicator becomes a button that opens the interlock faceplate. IMPORTANT: The name of the Interlock object in the controller must be the name of the object with the suffix '_Intlk_O'. For example, if your PAO object has the name 'AOut123', then its Interlock object must be named 'AOut123_Intlk_O'.
7	Select to enable navigation to a SMART device object.
8	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.

Notes:

Process Boolean Logic (PBL)

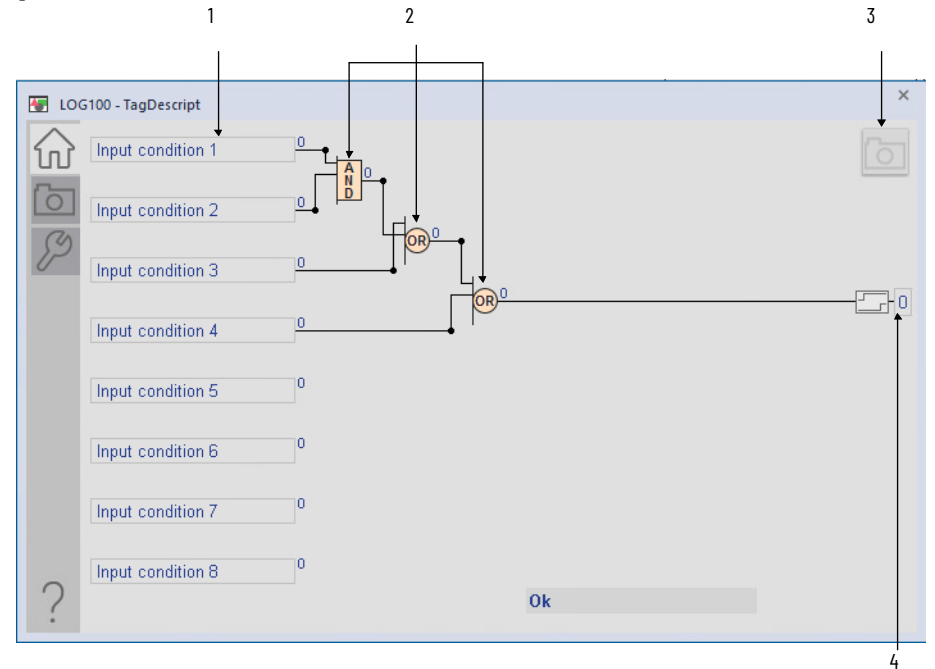
Graphic Symbols

Graphic Symbol Name	FactoryTalk View SE Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PBL			Standard PBL object. Displays Boolean output status and alarming. Opens faceplate.
GO_PBL1			Standard PBL object. Displays Boolean output status and alarming.

FactoryTalk View SE Faceplates

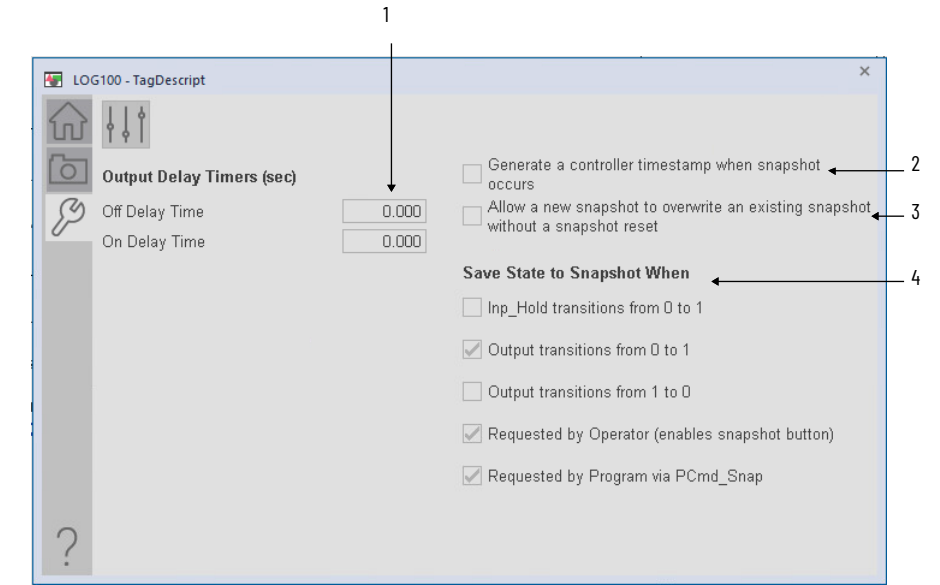
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



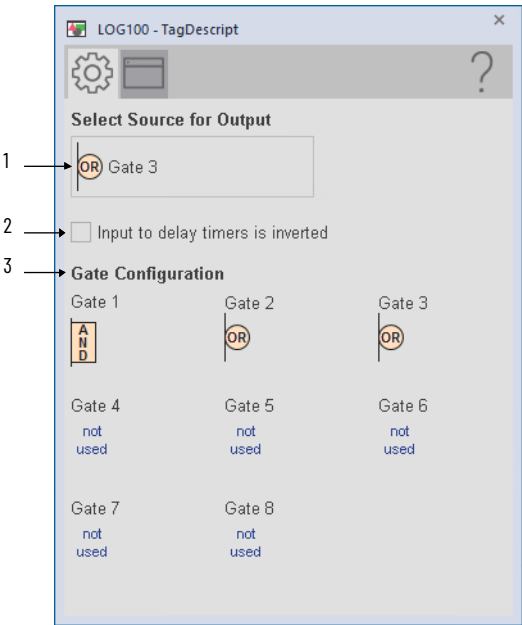
Item	Description
1	Input Name: Select to navigate to the Input object faceplate.
2	Gates: Select one of the gates to access the Gate Configuration display for that gate.
3	Select to take a snapshot of the current state. IMPORTANT: When you take a snapshot, the View Snapshot tab is automatically displayed.
4	Boolean value that displays the final output of the PBL object.

Maintenance Tab



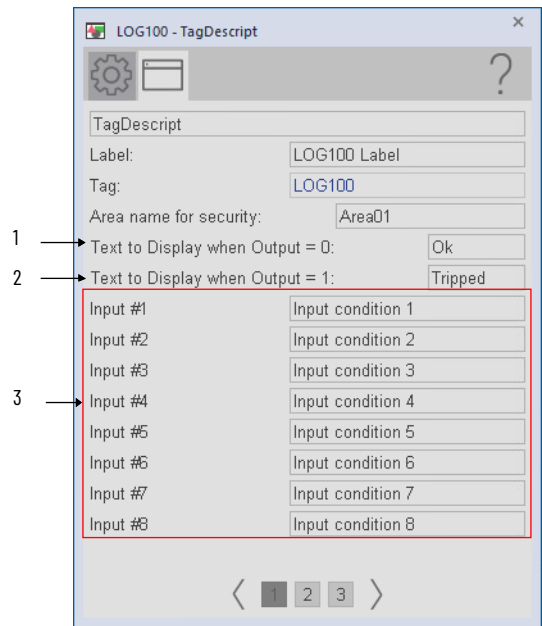
Item	Description
1	Enter a value for the off-delay time and the on-delay time.
2	Select to generate a time stamp whenever a snapshot triggers.
3	Select to allow a new snapshot to be triggered without a reset of the previous snapshot.
4	Select to trigger a snapshot when the designated condition is met.

Engineering Tab

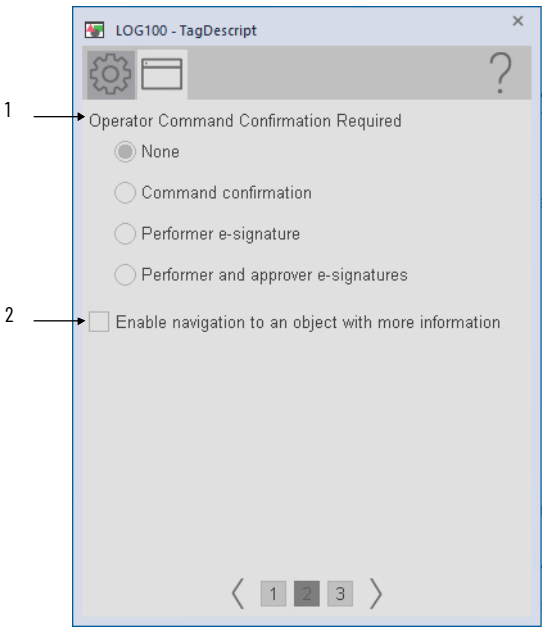


Item	Description
1	Select to open the faceplate to select the output source.
2	Select to invert the selected output before it is passed to the output delay timers
3	Select to open the Gate Configuration faceplate.

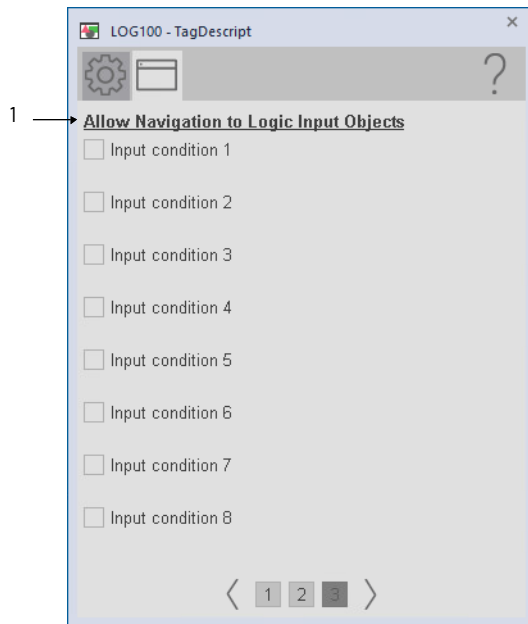
HMI Configuration Tab



Item	Description
1	Enter the text to display on the faceplate when output = 0
2	Enter the text to display on the faceplate when output = 1
3	Enter a description for each input.

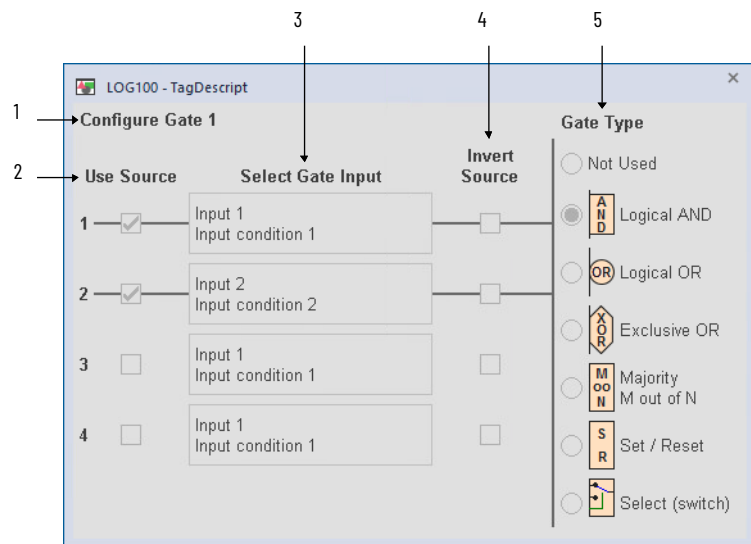


Item	Description
1	Select to configure operator command confirmation. This action would take place after any operator command.
2	Select to enable navigation to an object with more information.



Item	Description
1	Select to enable navigation to input object.

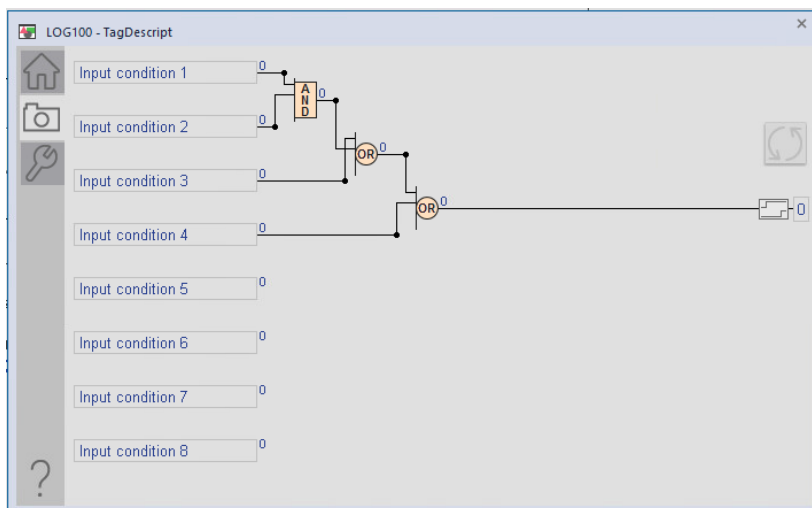
Logic Gate Configuration



Item	Description
1	Displays the gate being configured.
2	Select to select which inputs of the gate are enabled (1...4).
3	Select the inputs for the gate.
4	Select to invert the source that enters the gate.
5	Select to select a gate type.

View Snapshot

The View Snapshot tab shows an image of the Operator faceplate when the snapshot was taken. The background of the display turns from gray to white to indicate capture. The View Snapshot has the same functionality as the operator faceplate plus a Reset button.

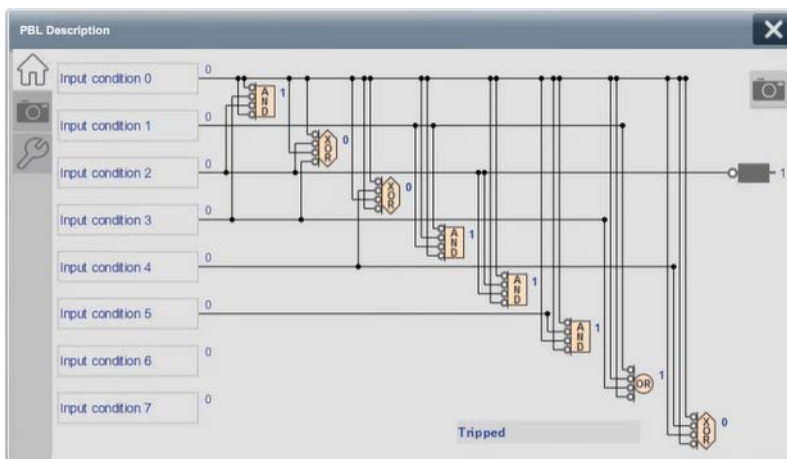


Studio 5000 View Designer Faceplates

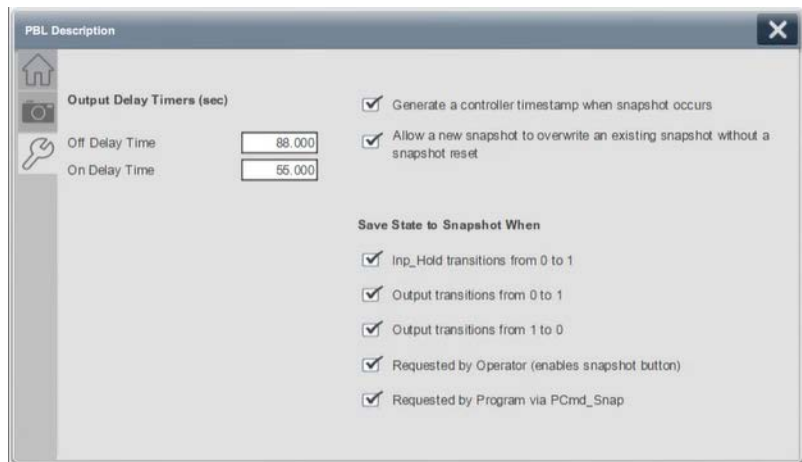
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 120](#) for descriptions of the features.

Operator Tab

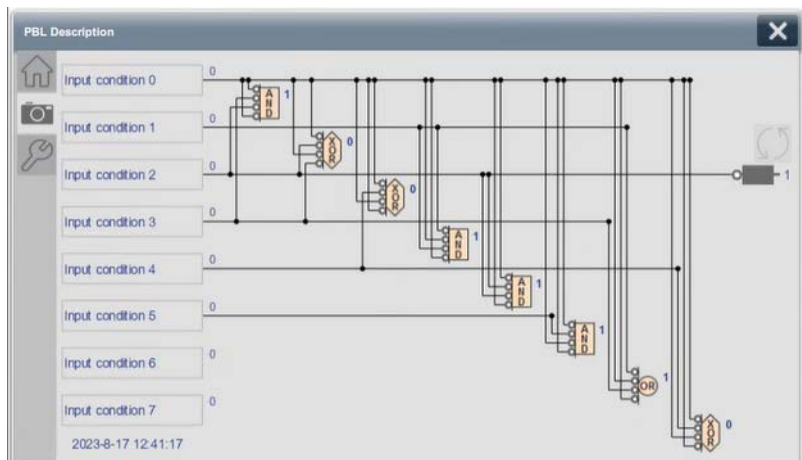


Maintenance Tab



View Snapshot

The View Snapshot tab shows an image of the Operator faceplate when the snapshot was taken. The View Snapshot has the same functionality as the operator faceplate plus a Reset button.











Notes:

Process Command Source (PCMDSRC)

The PCMDSRC (Command Source) Instruction is used to provide selection of the command source (owner) of an instruction or control strategy. This instruction excludes Graphic Symbols.

The command source indicator displays by exception only. For example, if the device is operating normally, there is not an indicator. If the device is out of service (OoS), then the OoS indicator is displayed.

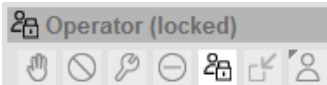
Command source indicators are not used for analog inputs.

Image	Description
	Device is out of service
	Device is not in normal command source operation
	Device is in program command source operation
	Device is in maintenance command source operation
	Device is in operator command source operation
	Device is in override command source operation
	Device is in local command source operation
	Device is in external command source operation

Command Source Hierarchy Bar




The Command Source Hierarchy Bar shows the sources that have been requested. These sources have a white background color. The leftmost source that is highlighted is the active command source.

In the example that follows, the current command source is Operator Locked. When Operator Locked is released, the default command source is Operator. The small black triangle, in the upper left corner of the operator indicator indicates the normal command source.



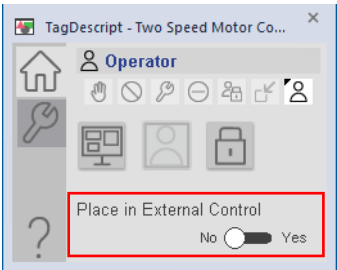
Operator Buttons

The Operator Lock buttons on device faceplates are used to lock and unlock Operator command source. The buttons also show the current command source status.

Image	Description
	Select to request Operator command source.
	Select to lock in Operator command source. The program cannot take control.
	Select to request Program command source.




External Control

There is a slider on the operator page that allows the operator to place the device in External Control.



Maintenance Buttons

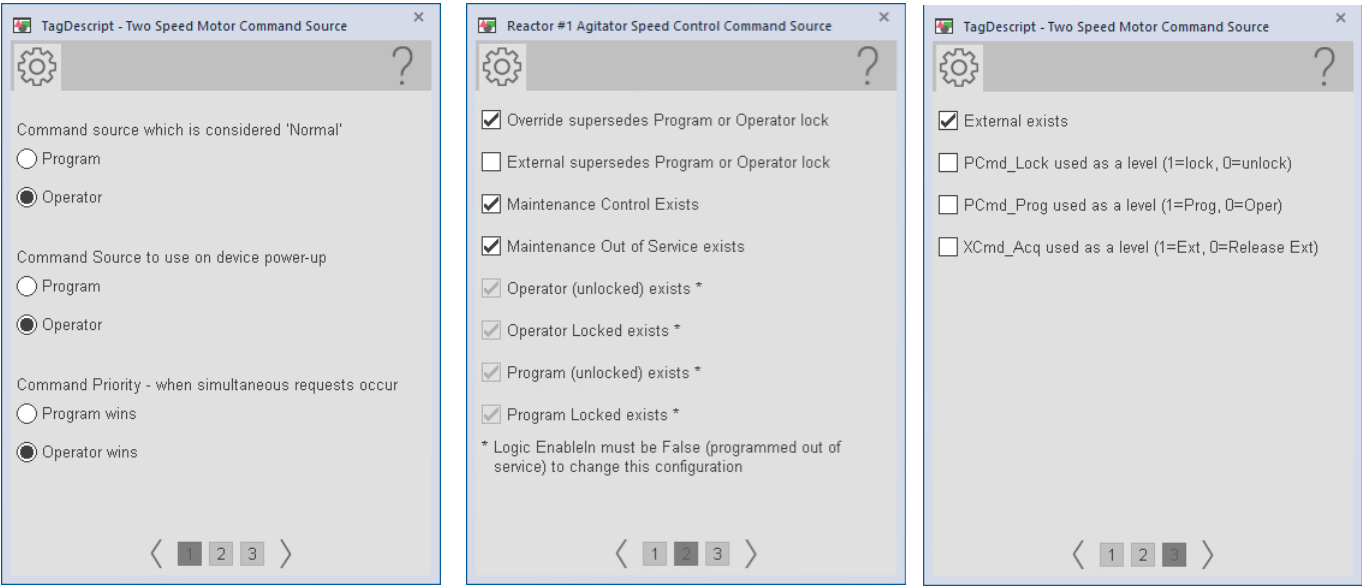
The maintenance buttons on device faceplates are used to request and release Maintenance command source.

Image	Description
	Select to acquire Maintenance command source.
	Select to release Maintenance command source.
	Select to display Advanced Properties command source.

Advanced Properties

Select the Advanced Properties button from the maintenance page to access the engineering tabs. There are three engineering tabs. The first page is the configuration for the Cfg_ProgDefault parameter for the object, which sets the default command source when no command source is being requested.

From the other pages, you can configure the settings for additional command sources.




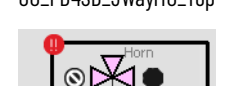




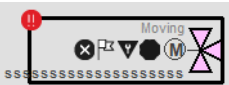
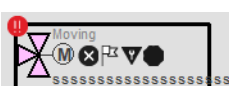
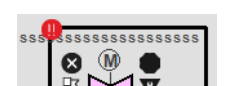
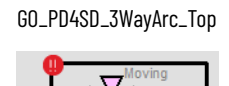



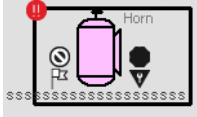


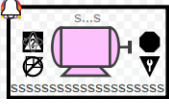

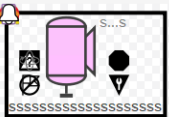
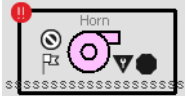



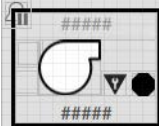

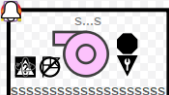


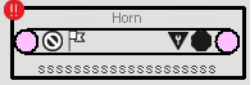
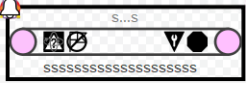
Notes:

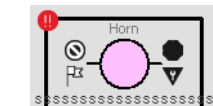
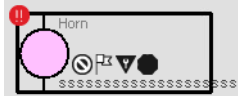
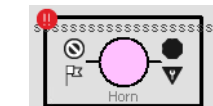
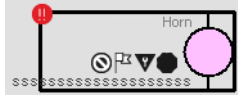
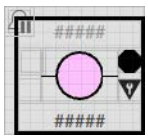
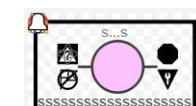



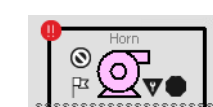
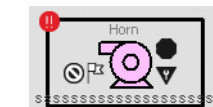
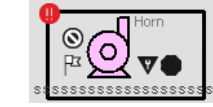
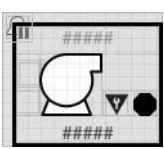



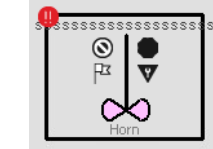
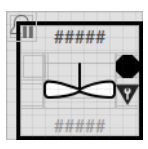
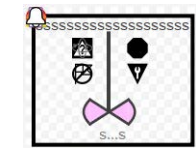
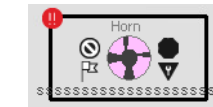
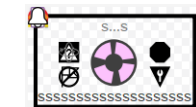
Discrete 2, 3, 4-state Device (PD4SD)


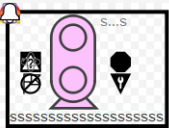


Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
<p>GO_PD4SD_4Way</p>	<p>PD4SD_GS_4Way</p>	<p>PD4SD_GS_4Way_Valve</p>	<p>Three/Four-Way Valve.</p> <p>The Three/Four-way Valve parameters define the inlet and output ports of the valve:</p> <ul style="list-style-type: none"> No. 110 - Top port open state No. 111 - Right port open state No. 112 - Bottom port open state No. 113 - Left port open state <ul style="list-style-type: none"> 0 = Inlet (always shown as open) 1 = Open when Val_Sts = 1 (state 0) 2 = Open when Val_Sts = 2 (state 1) 3 = Open when Val_Sts = 3 (state 2) 4 = Open when Val_Sts = 4 (state 3)
<p>GO_PD4SD_3Way_S0Rt</p> <p>GO_PD4SD_3Way_S0Lt</p> <p>GO_PD4SD_3Way_S0Btm</p> <p>GO_PD4SD_3Way_S0Top</p>	<p>PD4SD_GS_3Way_L</p> <p>PD4SD_GS_3Way_R</p> <p>PD4SD_GS_3Way_B</p> <p>PD4SD_GS_3Way_T</p>	<p>GS_PD4SD_3Way_S0_Rt</p> <p>GS_PD4SD_3Way_S0_Lt</p> <p>GS_PD4SD_3Way_S0_Btm</p> <p>GS_PD4SD_3Way_S0_Top</p>	<p>Two-Way Solenoid-operated Diverter Valve in different positions: right, left, bottom, and top.</p> <p>Parameters define the inlet and output ports of the Two-way Solenoid-operated Diverter Valve.</p> <p>The FactoryTalk Optix 3-way valve graphic symbols can be configured to have either a Solenoid Actuator or a Motor Operated Actuator. The ports are configurable to represent an arc valve or a diverter valve.</p>
<p>GO_PD4SD_Diverter</p> <p>GO_PD4SD_Diverter1</p>	<p>PD4SD_GS_Diverter_L</p> <p>PD4SD_GS_Diverter_R</p>	<p>GS_PD4SD_Diverter</p> <p>GS_PD4SD_Diverter</p>	<p>Two Way Diverter Valve in open top-left and open top-right positions.</p> <p>The Two-way Diverter Valve parameters define the state of the valve:</p> <ul style="list-style-type: none"> State 0: Open top-left State 1: Open top-right State 2: — State 3: —

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
<div>GO_PD4SD_3WayMO_Rt</div>  <div>GO_PD4SD_3WayMO_Lt</div>  <div>GO_PD4SD_3WayMO_Btm</div>  <div>GO_PD4SD_3WayMO_Top</div> 	<p>See the PD4SD_GS_3Way objects on the previous page. The FactoryTalk Optix graphic symbol can be configured to have either a Solenoid Actuator or a Motor Operated Actuator.</p>	<div>GS_PD4SD_3Way_MO_Rt</div>  <div>GS_PD4SD_3Way_MO_Lt</div>  <div>GS_PD4SD_3Way_MO_Btm</div>  <div>GS_PD4SD_3Way_MO_Top</div> 	<p>Two-Way Motor-operated Diverter Valve in different positions: right, left, bottom, and top. Parameters define the inlet and output ports of the Two-way Motor-operated Diverter Valve.</p>
<div>GO_PD4SD_3WayArc_Rt</div>  <div>GO_PD4SD_3WayArc_Lt</div>  <div>GO_PD4SD_3WayArc_Btm</div>  <div>GO_PD4SD_3WayArc_Top</div> 	<p>See the PD4SD_GS_3Way objects on the previous page. The FactoryTalk Optix graphic symbol can be configured to have either a Solenoid Actuator or a Motor Operated Actuator. The ports are configurable to represent an arc valve or a diverter valve.</p>	<div>—</div>	<p>Three-way arc valve in different positions: right, left, bottom, and top. Parameters define the closed state of each port of the three-way arc valve.</p>

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
<p>GO_PD4SD_R</p>  <p>GO_PD4SD_U</p>  <p>GO_PD4SD_D</p> 	<p>PD4SD_GS_Motor_Rt</p> 	<p>GS_PD4SD_R</p>  <p>GS_PD4SD_U</p>  <p>GS_PD4SD_D</p> 	Motors in different positions: right, up, and down.
<p>GO_PD4SD_Blower_R</p>  <p>GO_PD4SD_Blower_L</p>  <p>GO_PD4SD_Blower_U</p>  <p>GO_PD4SD_Blower_D</p> 	<p>PD4SD_GS_Blower_Rt</p> 	<p>GS_PD4SD_Blower_R</p>  <p>GS_PD4SD_Blower_L</p>  <p>GS_PD4SD_Blower_U</p>  <p>GS_PD4SD_Blower_D</p> 	Blowers in different positions: right, left, up, and down.
<p>GO_PD4SD_Conveyor_R</p> 	—	<p>GS_PD4SD_Conveyor_R</p> 	Conveyor

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
<p>GO_PD4SD_Inline_U</p>  <p>GO_PD4SD_Inline_L</p>  <p>GO_PD4SD_Inline_D</p>  <p>GO_PD4SD_Inline_R</p> 	<p>PD4SD_GS_Inline_Motor</p> 	<p>GS_PD4SD_Inline_U</p>  <p>GS_PD4SD_Inline_L</p>  <p>GS_PD4SD_Inline_D</p>  <p>GS_PD4SD_Inline_R</p> 	<p>Inline Motors in different positions: up, left, down, and right.</p>
<p>GO_PD4SD_Pump_R</p>  <p>GO_PD4SD_Pump_L</p>  <p>GO_PD4SD_Pump_U</p> 	<p>PD4SD_GS_Pumps_Rt</p> 	<p>GS_PD4SD_Pump_R</p>  <p>GS_PD4SD_Pump_L</p>  <p>GS_PD4SD_Pump_U</p> 	<p>Pumps in different positions: right, left, and up.</p>
<p>GO_PD4SD_Agitator_D</p> 	<p>PD4SD_GS_Agitator</p> 	<p>GS_PD4SD_Agitator_D</p> 	<p>Agitator in down position.</p>
<p>GO_PD4SD_Mixer_U</p> 	<p>—</p>	<p>GS_PD4SD_Mixer_U</p> 	<p>Mixer in up position.</p>

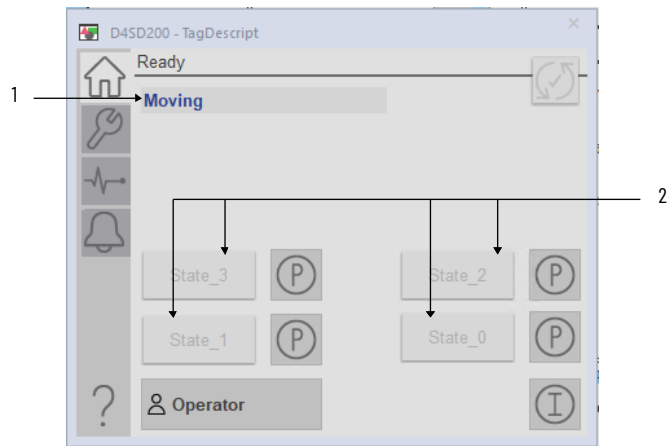
FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
<div>GO_PD4SD_RPump_U</div> 	—	<div>GS_PD4SD_RPump_U</div> 	Rotary Gear Pump in up position.
<div>GO_PD4SD_Fan_D</div> 	—	<div>GS_PD4SD_Fan_D</div> 	Fan in down position.

FactoryTalk View SE Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab

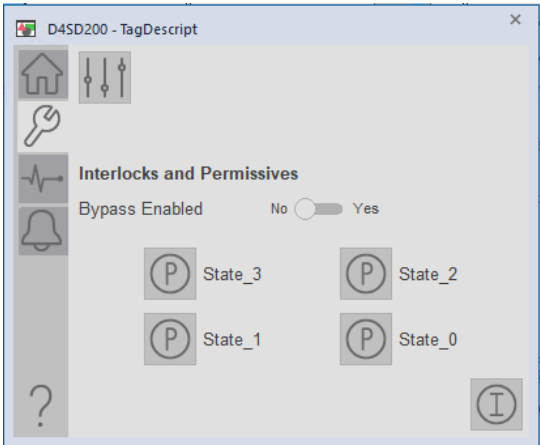
The Faceplate initially opens to the Operator (Home) tab. From here, an operator can monitor the device status and manually operate the device when it is in Operator command source.



Item	Description
1	Device state indicator
2	Move to state command buttons

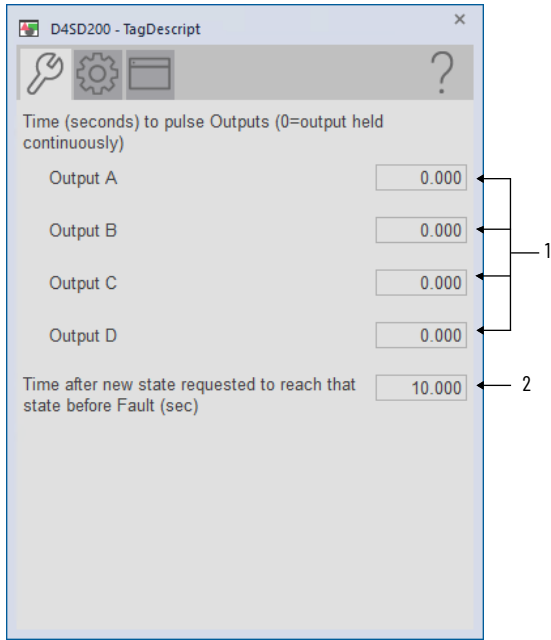
Maintenance Tab

Maintenance personnel use the information and controls on the Maintenance tab to adjust device parameters, troubleshoot, temporarily work around device problems, and disable the device for routine maintenance.



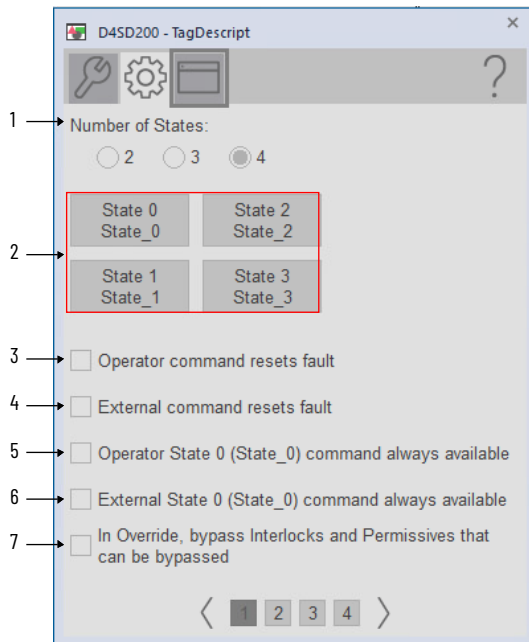
Advanced Maintenance Tab

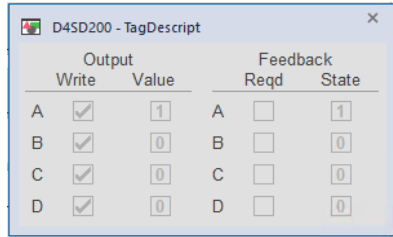
The Advanced Properties Display opens to the advanced maintenance settings. The Advanced Properties Display provides access to device configuration parameters and ranges, and options for device and I/O setup. This tab is used for initial system commissioning or later system changes.

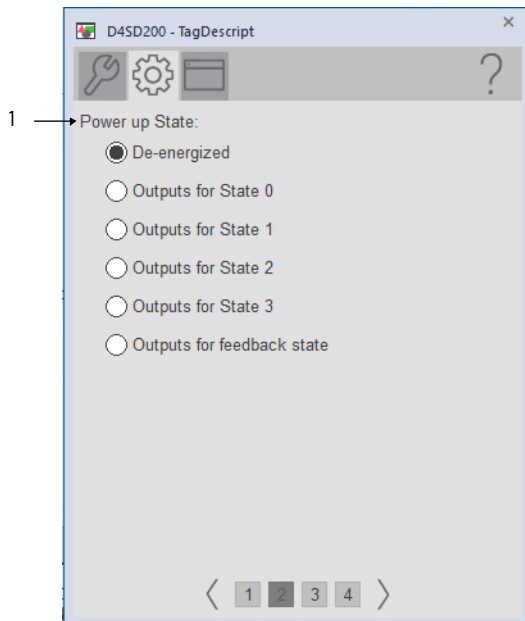


Item	Description
1	Enter a value (0...2,147,483.647) to indicate the time (seconds) to energize outputs to the device to be sure that they are latched in. (0 = output held continuously)
2	Enter a value (0...2,147,483.647) to indicate the time (seconds) to allow the device to reach the commanded state before issuing a fault.

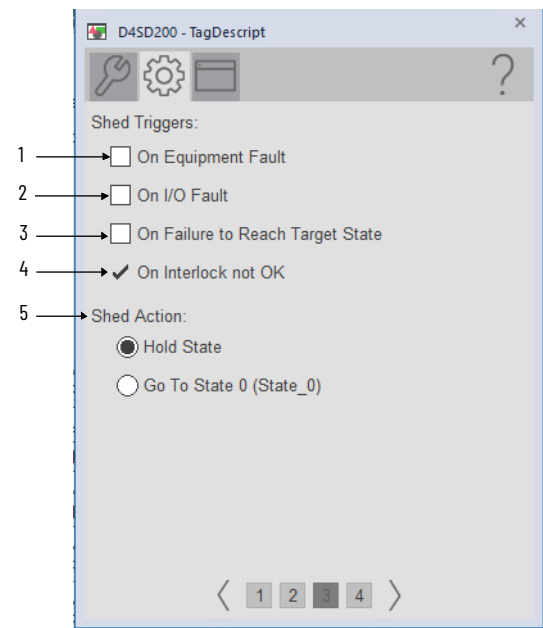
Engineering Tab



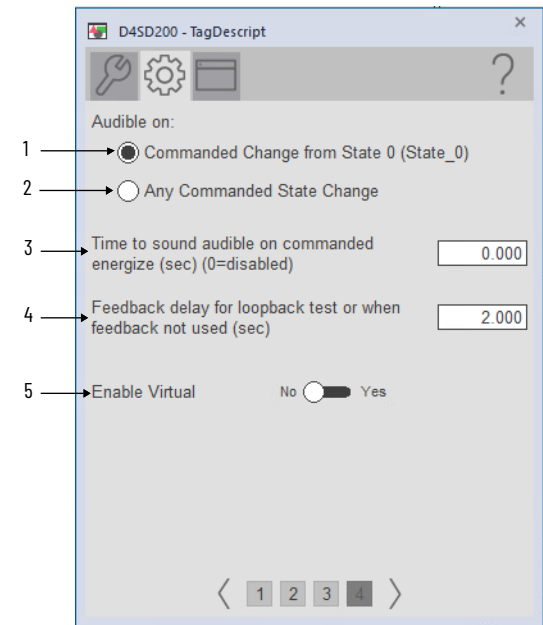
Item	Description
1	Select the number of states.
2	<p>Select a state to open the PD4SD State Configuration display for that state.</p>  <p>This display directs how the PD4SD instruction commands the device state via outputs and determines the actual device state via feedback inputs. The first two columns for output set parameters, Cfg_bSt[x]OutWrite, and Cfg_bSt[x]OutState, determine how outputs are written to command to a state. The second two columns for feedback set parameters, Cfg_bSt[x]FdbkCheck, and Cfg_bSt[x]FcbkState, determine how the state is interpreted from the input values.</p>
3	Select to reset a fault upon a new operator command.
4	Select to reset a fault upon a new external command.
5	Select (= 1) to make Operator State 0 (OCmd_St0) available in any command source. Clear this checkbox (= 0) to make Operator State 0 (OCmd_St0) available only in Operator or Maintenance command source.
6	Select (= 1) to make External State 0 (XCmd_St0) available in any command source. Clear this checkbox (= 0) to make External State 0 (XCmd_St0) available only in External command source.
7	Select to bypass permissives and interlocks in Override command source.



Item	Description
1	<p>Select the state that the instruction goes to on power-up or on controller PROG -> RUN transition:</p> <ul style="list-style-type: none"> • De-energized - Set all outputs off (de-energized); • Outputs for State 0 - Drive outputs to State 0 (as if a State 0 command had been issued); • Outputs for State 1 - Drive outputs to State 1 • Outputs for State 2 - Drive outputs to State 2 • Outputs for State 3 - Drive outputs to State 3 • Outputs for feedback state - Align the instruction state with the device feedbacks (as if the block were in Hand on first scan).



Item	Description
1	Select to shed if a Device Fault is detected.
2	Select to shed if an I/O Fault is detected.
3	Select to shed if target state is not reached.
4	The device always sheds on Interlock not OK. This item cannot be unchecked. It is displayed as a reminder that Interlock not OK always triggers a shed.
5	Select to determine whether you hold position or go to state 0 upon a shed condition.



Item	Description
1	Select to sound an audible on a commanded stage from State 0.
2	Select to sound an audible on a commanded stage from any State.
3	Enter the time (in seconds) that the audible sounds when there is a commanded State change.
4	Enter a value (seconds) to indicate the delay to echo back reaching the state when in virtual
5	Select yes to enable virtual

HMI Configuration Tab

D4SD200 - TagDescript

TagDescript

Label: D4SD200

Tag: D4SD200

Area name for security: Area01

State 0 Text: State_0

State 1 Text: State_1

State 2 Text: State_2

State 3 Text: State_3

☒ Enable navigation to State_0 permissive object

☒ Enable navigation to State_1 permissive object

☒ Enable navigation to State_2 permissive object

☒ Enable navigation to State_3 permissive object

< 1 2 >

D4SD200 - TagDescript

Enable navigation to interlock object

Alarm Configuration

☒ Allow Operator to Shelve Alarm

☒ Allow Maintenance to Disable Alarm

Operator Command Confirmation Required

☒ None

☐ Command confirmation

☐ Performer e-signature

☐ Performer and approver e-signatures

Enable navigation to an object with more information

< 1 2 >

Item	Description
1	Enter text to describe the state.
2	Check if the corresponding State object is used with this device. This check changes the Permissive Indicator to a button that accesses the Permissive faceplate. IMPORTANT: The name of the Permissives object in the controller must be the name of the object with the suffix '_Perm#', where '#' is the permissive number (0...3) For example, if your PD4SD object has the name 'D4SD123', then its Permissives object must be named 'D4SD123_Perm0'.

Item	Description
1	Select if an interlock object is connected to Inp_Intlk. This check changes the interlock indicator on the Operator tab to a button that opens the interlocks faceplate. IMPORTANT: The name of the Interlock object in the controller must be the name of the object with the suffix '_Intlk'. For example, if your PD4SD object has the name 'D4SD123', then its Interlock object must be named 'D4SD123_Intlk'.
2	Select to allow Operator to shelve alarm.
3	Select to allow Maintenance to disable alarm.
4	Select to configure operator command confirmation. This action would take place after any operator command.
5	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) You configure the tagname of the object that you want to navigate to in the extended tag property "Cfg_HasMoreObj.@Navigation". It uses the <backing tag>.@Library and <backing tag>.@Instruction extended tag properties to display the objects faceplate.

Studio 5000 View Designer Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 135](#) for descriptions of the features.

Operator Tab



Maintenance Tab

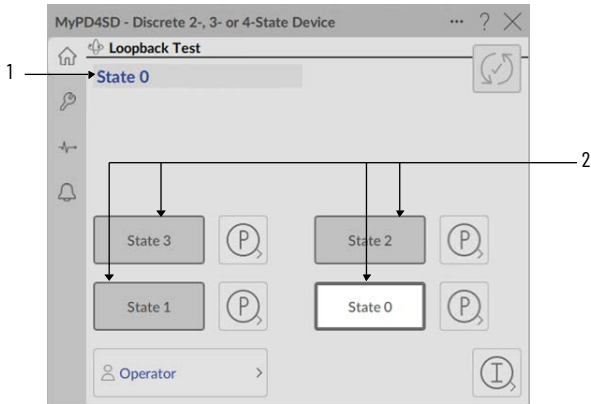


FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

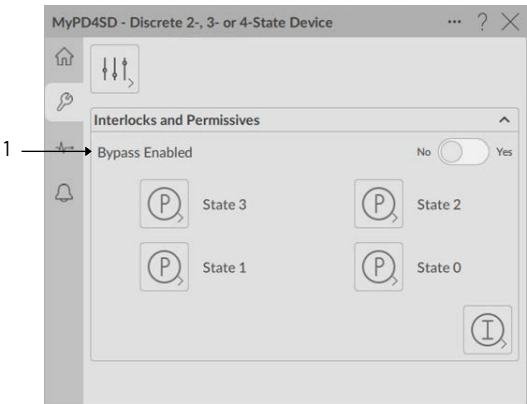
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates on page 135](#) for descriptions of the features.

Operator Tab



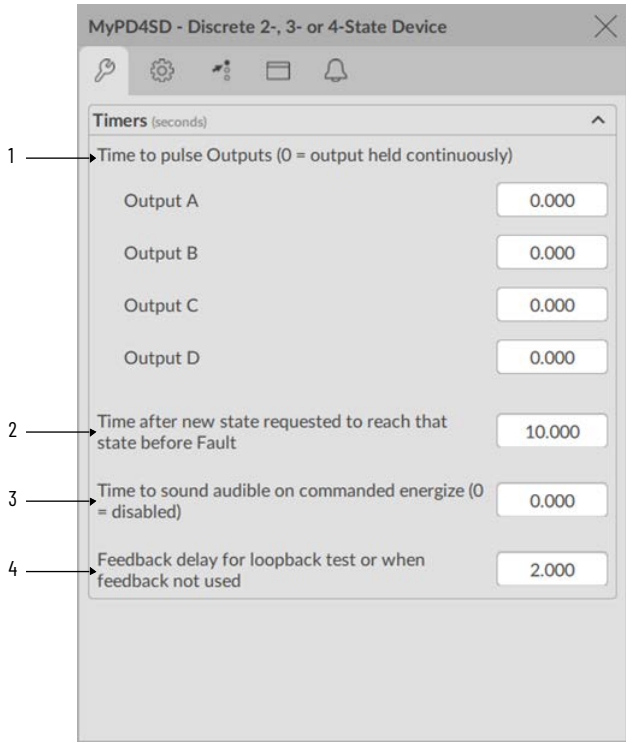
Item	Description
1	Device state indicator
2	Move to state command buttons

Maintenance Tab



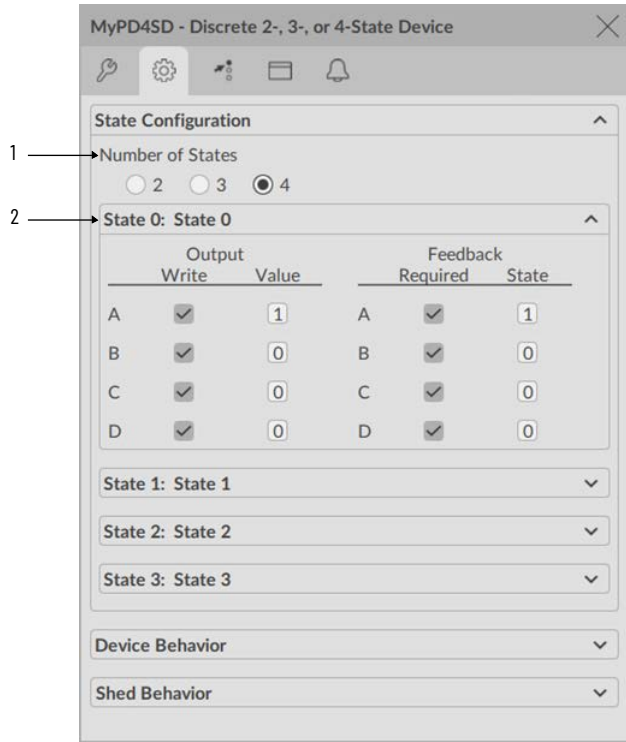
Item	Description
1	Select yes to bypass checking of interlocks and permissives that can be bypassed.

Advanced Maintenance Tab



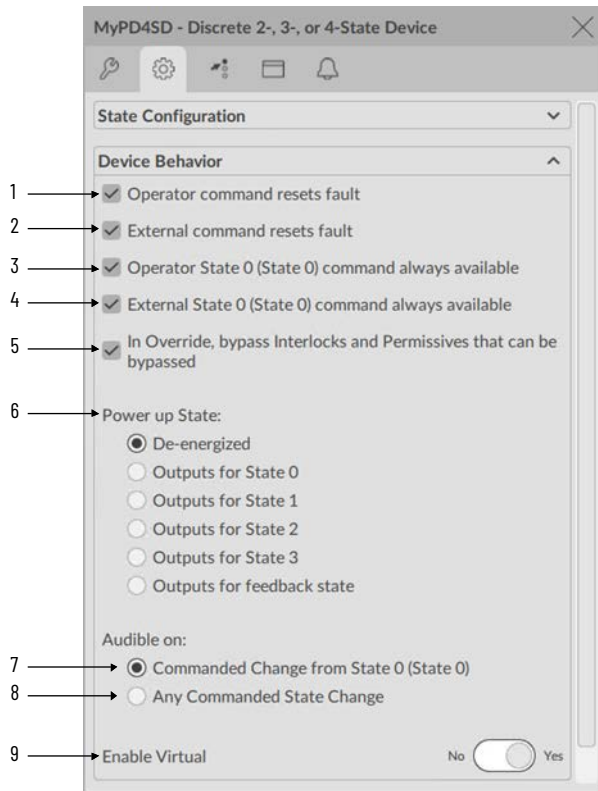
Item	Description
1	Enter a value (0...2,147,483.647) to indicate the time (seconds) to energize outputs to the device to be sure that they are latched in. (0 = output held continuously)
2	Enter a value (0...2,147,483.647) to indicate the time (seconds) to allow the device to reach the commanded state before issuing a fault.
3	Enter a value (0...2,147,483.647) to indicate the time (seconds) that the audible sounds when there is a commanded State change.
4	Enter a value (0...2,147,483.647) to indicate the time (seconds) to indicate the delay to echo back reaching the state when in virtual.

Advanced Engineering Tab - State Configuration



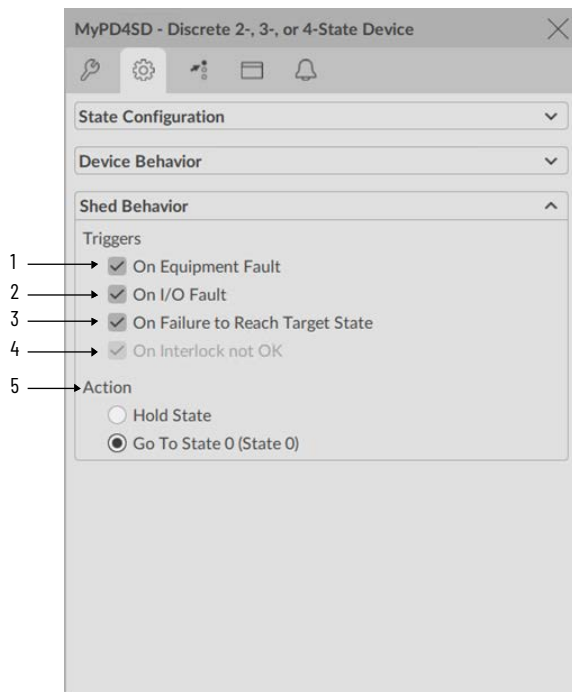
Item	Description
1	Select the number of states.
2	Left to Right: <ul style="list-style-type: none">Set output parameters for a state (Cfg_bSt[x]OutWrite, and Cfg_bSt[x]OutState). They determine how outputs are written to command to the state.Set feedback parameters for a state (Cfg_bSt[x]FdbkCheck, and Cfg_bSt[x]FcbkState). They determine how the state is interpreted from the input values.

Advanced Engineering Tab - Device Behavior



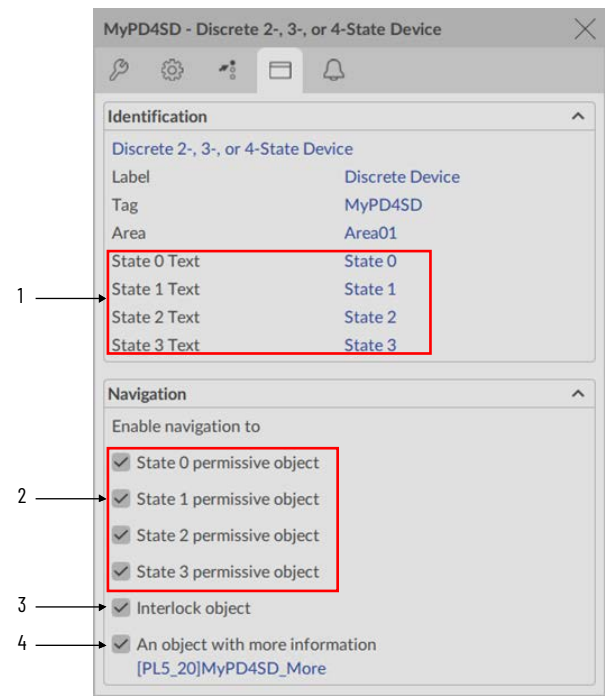
Item	Description
1	Select to reset a fault upon a new operator command.
2	Select to reset a fault upon a new external command.
3	Select (= 1) to make Operator State 0 (OCmd_St0) available in any command source. Clear this checkbox (= 0) to make Operator State 0 (OCmd_St0) available only in Operator or Maintenance command source.
4	Select (= 1) to make External State 0 (XCmd_St0) available in any command source. Clear this checkbox (= 0) to make External State 0 (XCmd_St0) available only in External command source.
5	Select to bypass permissives and interlocks in Override command source.
6	Select the state that the instruction goes to on power-up or on controller PROG → RUN transition: <ul style="list-style-type: none"> De-energized - Set all outputs off (de-energized); Outputs for State 0 - Drive outputs to State 0 (as if a State 0 command had been issued); Outputs for State 1 - Drive outputs to State 1 Outputs for State 2 - Drive outputs to State 2 Outputs for State 3 - Drive outputs to State 3 Outputs for feedback state - Align the instruction state with the device feedbacks (as if the block were in Hand on first scan).
7	Select to sound an audible on a commanded stage from State 0.
8	Select to sound an audible on a commanded stage from any State.
9	Select yes to enable virtual.

Advanced Engineering Tab - Shed Behavior



Item	Description
1	Select to shed if a Device Fault is detected.
2	Select to shed if an I/O Fault is detected.
3	Select to shed if target state is not reached.
4	The device always sheds on Interlock not OK. This item cannot be unchecked. It is displayed as a reminder that Interlock not OK always triggers a shed.
5	Select to determine whether you hold position or go to state 0 upon a shed condition.


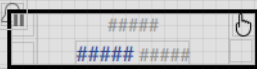

Advanced HMI Configuration Tab



Item	Description
1	Display the text to describe the state.
2	Check if the corresponding State object is used with this device. This check changes the Permissive Indicator to a button that accesses the Permissive faceplate. IMPORTANT: The name of the Permissives object in the controller must be the name of the object with the suffix '_Perm#', where '#' is the permissive number (0...3) For example, if your PD4SD object has the name 'D4SD123', then its Permissives object must be named 'D4SD123_Perm0'.
3	Select if an interlock object is connected to Inp_Intlk. This check changes the interlock indicator on the Operator tab to a button that opens the interlocks faceplate. IMPORTANT: The name of the Interlock object in the controller must be the name of the object with the suffix '_Intlk'. For example, if your PD4SD object has the name 'D4SD123', then its Interlock object must be named 'D4SD123_Intlk'.
4	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) You configure the tagname of the object that you want to navigate to in the extended tag property "Cfg_HasMoreObj.@Navigation". It uses the .@Library and .@Instruction extended tag properties to display the objects faceplate.

Process Deadband Controller (PDBC)

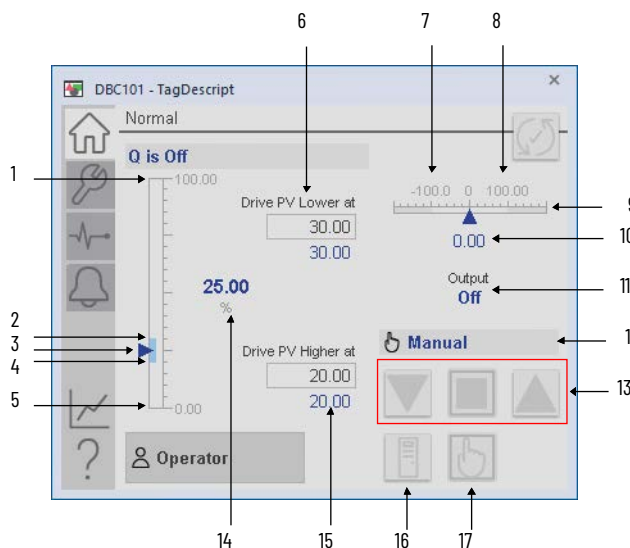
Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PDBC	PDBC_GS	GS_PDBC	Standard deadband controller graphic symbol.
			

FactoryTalk View SE Faceplates

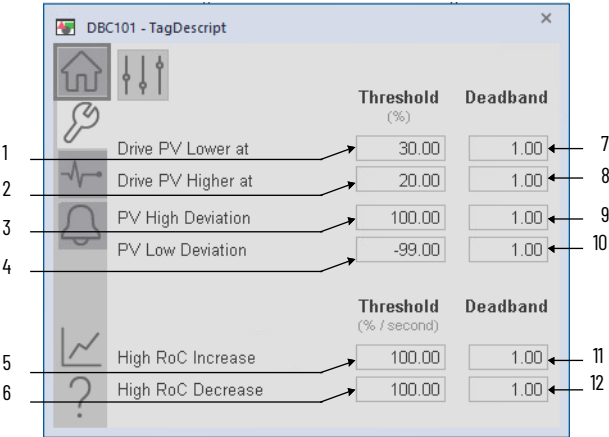
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



Item	Description
1	PV EU maximum
2	Drive PV Lower Value
3	Current PV Value
4	Drive PV Higher Value
5	PV EU minimum
6	Drive PV Lower Limit
7	High Rate of Change Decreasing Limit
8	High Rate of Change Increasing Limit
9	Rate of Change Indicator
10	Current Rate of Change
11	Controlled Variable Indicator
12	Auto/Manual Mode Indicator
13	Drive PV buttons. From left to right: drive PV lower, don't drive PV, drive PV higher
14	Current PV Value
15	Drive PV Higher Limit
16	Auto Mode Command Button
17	Manual Mode Command Button

Maintenance Tab



Item	Description
1	Enter the value of the PV at which the output turns off and PV starts to decrease.
2	Enter the value of the PV at which the output turns on and PV starts to increase.
3	Enter the number that is used to establish the high deviation limit. When the PV reaches this limit, a High Deviation alarm is generated. EXAMPLE: In the examples, the Lower setpoint is 67 and the PV Hi Dev Status is 5. We add 67 and 5 to get the high deviation limit of 72.
4	Enter the number that is used to establish the low deviation limit. When the PV reaches this limit, a Low Deviation alarm is generated. EXAMPLE: In the examples, the Raise setpoint is 30 and the PV Lo Dev Status is -5. We add 30 and -5 to get the low deviation limit of 25.
5	Enter the number to set the high Rate of Change (decrease) limit (83 in the example). When the Rate of Change reaches this level, a Hi Rate of Decrease alarm is generated.
6	Enter the number to set the high Rate of Change (increase) limit (17 in the example). When the Rate of Change reaches this level, a Hi Rate of Increase alarm is generated.
7	Enter a number that is the size of the deadband for the Lower output (below Lower limit)
8	Enter a number that is the size of the deadband for the Raise output (above Raise limit)
9	Enter the number that PV must decrease to reset a High Deviation alarm. EXAMPLE: The high deviation limit is 72 and the deadband is 1. The PV must decrease 1 unit to 71 to reset the High Deviation alarm. IMPORTANT: The deadband can be set so that the PV must decrease below the Lower setpoint before the High Deviation alarm is reset. For example, the deadband can be set to 10 so that the PV must decrease to 62 to reset the alarm.
10	Enter the number that PV must increase to reset a Low Deviation alarm. EXAMPLE: The low deviation limit is 30 and the deadband is 1. The PV must increase 1 unit to 26 to reset the Low Deviation alarm. IMPORTANT: The deadband can be set so that the PV must increase above the Raise setpoint before the Low Deviation alarm is reset. For example, the deadband can be set to 10 so that the PV must decrease to 35 to reset the alarm.
11	Enter the number that the Rate of Change must decrease to reset a Hi Rate of Decrease alarm.
12	Enter the number that the Rate of Change must increase to reset a Hi Rate of Increase alarm.

Advanced Maintenance Tab

DBC101 - TagDescript

Gate delay (seconds)

1 → PV High Deviation 0.000

2 → PV Low Deviation 0.000

3 → PV High Rate of Change increase 0.000

4 → PV High Rate of Change decrease 0.000

Item	Description
1	Enter the Process Variable high deviation gate delay (seconds).
2	Enter the Process Variable low deviation gate delay (seconds).
3	Enter the Process Variable high rate of change increase gate delays (seconds).
4	Enter the Process Variable high rate of change decrease gate delays (seconds).

Engineering Tab

DBC101 - TagDescript

☐ Bumpless Program/Operator transition

Setpoint Clamp Limits

2 → Maximum 100.00

3 → Minimum 0.00

Input PV Range

4 → Maximum 100.00

Minimum 0.00

5 → PV rate of change time base

☒ Units per Second (1)

☐ Units per Minute (60)

☐ Units per Hour (3600)

6 → Units per X seconds 1.00

Item	Description
1	Select, the operator settings track the program settings when mode is Program, and program settings track the operator settings when the mode is Operator. Transition between modes is bumpless. Clear the checkbox, this instruction does not modify the operator settings and program settings. The operator settings and program settings retain their values regardless of mode. When the mode is changed, the value of a limit can change, such as from the Program-set value to the Operator-set value.
2	Enter the lower limit for the Loop PV Higher point.
3	Enter the upper limit for the loop PV Lower point.
4	Minimum and maximum values for PV input. These values are reflected on the PV bar graph on the Operator tab and the graph on the Trends tab.
5	Select the PV rate of change time base used.
6	Enter the number of units per x seconds, where x equals the number of seconds selected for the PV rate of change time base.

HMI Configuration Tab

1 → Unit: %

2 → Number of decimal places for PV 2

Alarm Configuration

3 → ☒ Allow Operator to Shelve Alarm

4 → ☒ Allow Maintenance to Disable Alarm

Item	Description
1	Enter the text of the engineering units for the PV.
2	Enter the number of decimal places that are used for the PV.
3	Select to allow Operator to shelve alarm.
4	Select to allow Maintenance to disable alarm.

1 → Operator Command Confirmation Required

☒ None

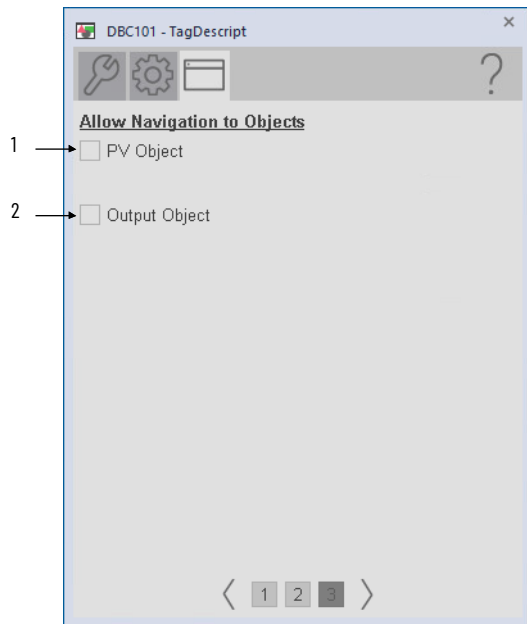
☐ Command confirmation

☐ Performer e-signature

☐ Performer and approver e-signatures

2 → ☐ Enable navigation to an object with more information

Item	Description
1	Select to configure operator command confirmation. This action would take place after any operator command.
2	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.



Item	Description
1	Select to enable navigation to the PV object.
2	Select to enable navigation to the output object.

Studio 5000 View Designer Faceplates

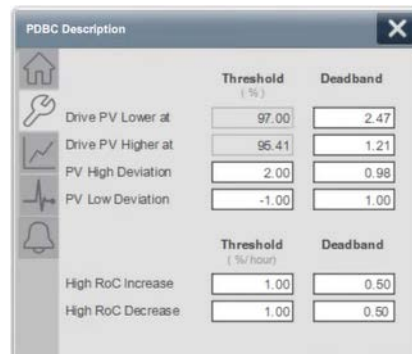
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 145](#) for descriptions of the features.

Operator Tab



Maintenance Tab

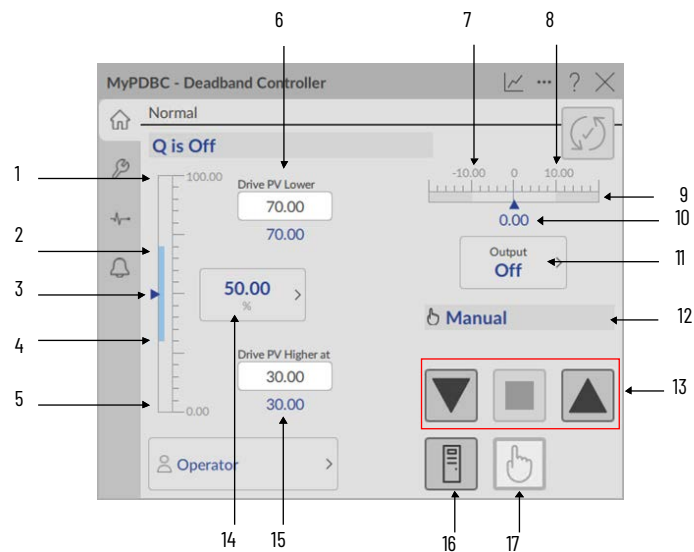


FactoryTalk Optix
 Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates on page 145](#) for descriptions of the features.

Operator Tab



Item	Description
1	PV EU maximum
2	Drive PV Lower Value
3	Current PV Value
4	Drive PV Higher Value
5	PV EU minimum
6	Drive PV Lower Limit
7	High Rate of Change Decreasing Limit
8	High Rate of Change Increasing Limit
9	Rate of Change Indicator
10	Current Rate of Change
11	Controlled Variable Indicator
12	Auto/Manual Mode Indicator
13	Drive PV buttons. From left to right: drive PV lower, don't drive PV, drive PV higher
14	Current PV Value
15	Drive PV Higher Limit
16	Auto Mode Command Button
17	Manual Mode Command Button

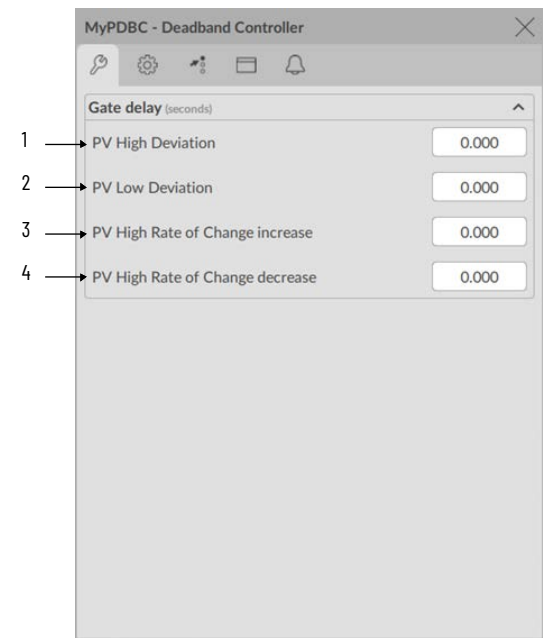
Maintenance Tab - PV Limits

Item	Description
1	Enter the value of the PV at which the output turns off and PV starts to decrease.
2	Enter the value of the PV at which the output turns on and PV starts to increase.
3	Enter the number that is used to establish the high deviation limit. When the PV reaches this limit, a High Deviation alarm is generated. EXAMPLE: In the examples, the Lower setpoint is 67 and the PV Hi Dev Status is 5. We add 67 and 5 to get the high deviation limit of 72.
4	Enter the number that is used to establish the low deviation limit. When the PV reaches this limit, a Low Deviation alarm is generated. EXAMPLE: In the examples, the Raise setpoint is 30 and the PV Lo Dev Status is - 5. We add 30 and -5 to get the low deviation limit of 25.
5	Enter a number that is the size of the deadband for the Lower output (below Lower limit).
6	Enter a number that is the size of the deadband for the Raise output (above Raise limit).
7	Enter the number that PV must decrease to reset a High Deviation alarm. EXAMPLE: The high deviation limit is 72 and the deadband is 1. The PV must decrease 1 unit to 71 to reset the High Deviation alarm. IMPORTANT: The deadband can be set so that the PV must decrease below the Lower setpoint before the High Deviation alarm is reset. For example, the deadband can be set to 10 so that the PV must decrease to 62 to reset the alarm.
8	Enter the number that PV must increase to reset a Low Deviation alarm. EXAMPLE: The low deviation limit is 30 and the deadband is 1. The PV must increase 1 unit to 26 to reset the Low Deviation alarm. IMPORTANT: The deadband can be set so that the PV must increase above the Raise setpoint before the Low Deviation alarm is reset. For example, the deadband can be set to 10 so that the PV must decrease to 35 to reset the alarm.

Maintenance Tab - RoC Limits

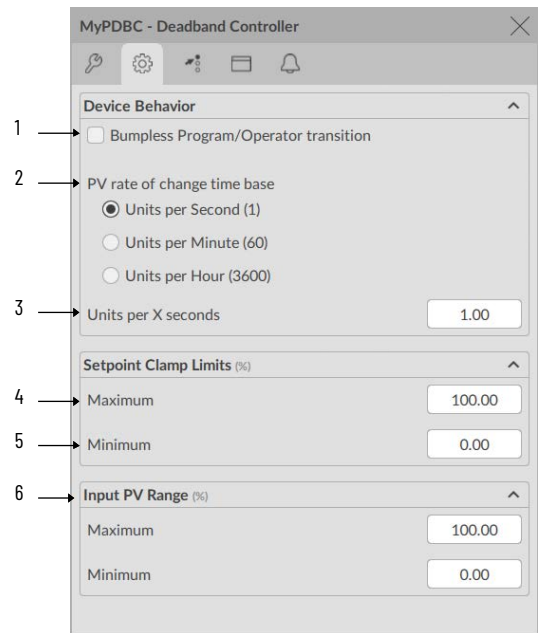
Item	Description
1	Enter the number to set the high Rate of Change (increase) limit. When the Rate of Change reaches this level, a Hi Rate of Increase alarm is generated.
2	Enter the number to set the high Rate of Change (decrease) limit. When the Rate of Change reaches this level, a Hi Rate of Decrease alarm is generated.
3	Enter the number that the Rate of Change must increase to reset a Hi Rate of Increase alarm.
4	Enter the number that the Rate of Change must decrease to reset a Hi Rate of Decrease alarm.

Advanced Maintenance Tab



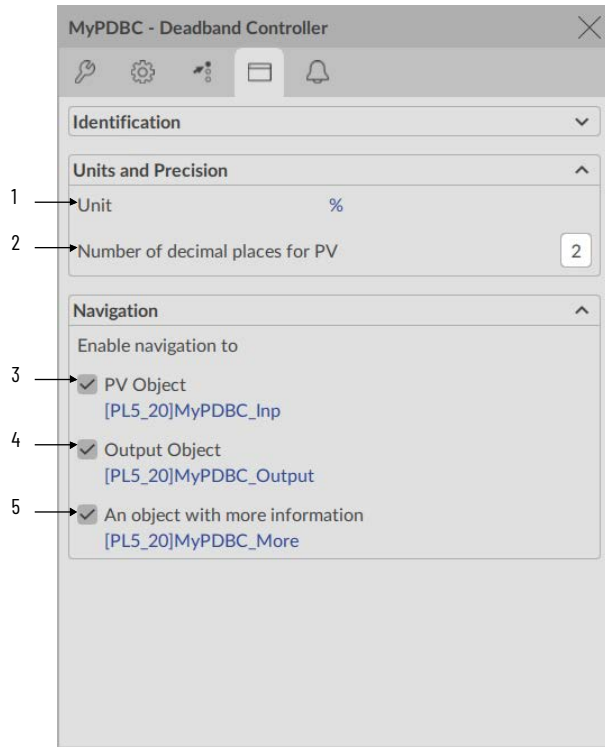
Item	Description
1	Enter the Process Variable high deviation gate delay (seconds).
2	Enter the Process Variable low deviation gate delay (seconds).
3	Enter the Process Variable high rate of change increase gate delays (seconds).
4	Enter the Process Variable high rate of change decrease gate delays (seconds).

Advanced Engineering Tab



Item	Description
1	Select, the operator settings track the program settings when mode is Program, and program settings track the operator settings when the mode is Operator. Transition between modes is bumpless. Clear the checkbox, this instruction does not modify the operator settings and program settings. The operator settings and program settings retain their values regardless of mode. When the mode is changed, the value of a limit can change, such as from the Program-set value to the Operator-set value.
2	Select the PV rate of change time base used.
3	Enter the number of units per x seconds, where x equals the number of seconds selected for the PV rate of change time base.
4	Enter the upper setpoint clamp limit.
5	Enter the lower setpoint clamp limit.
6	Minimum and maximum values for PV input. These values are reflected on the PV bar graph on the Operator tab and the graph on the Trends tab.

Advanced HMI Configuration Tab



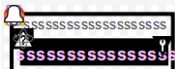

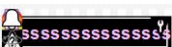


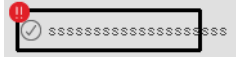
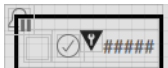
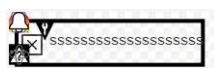



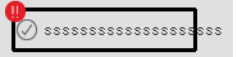


Item	Description
1	Display the text of the engineering units for the PV.
2	Enter the number of decimal places that are used for the PV.
3	Select to enable navigation to the PV object.
4	Select to enable navigation to the output object.
5	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.

Notes:

Process Discrete Input (PDI)

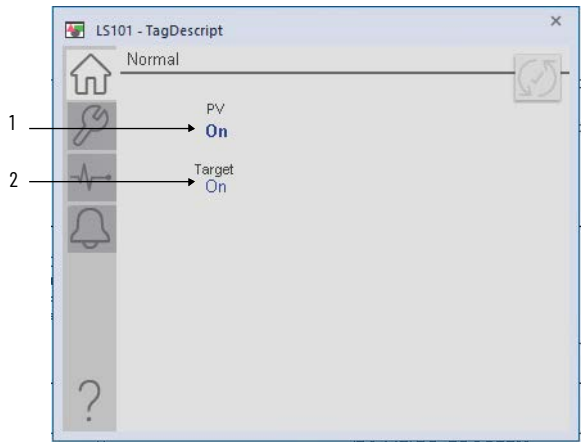
Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PDI 	PDI_GS 	GS_PDI 	Global object with label. In FactoryTalk Optix, this graphics symbol can be configured to show or hide the label.
GO_PDI1 	—	GS_PDI1 	Global object without label.
GO_PDI_Circle 	—	GS_PDI_Circle 	Global object with only indicator.
GO_PDI_CircleWLabel 	PDI_GS_CircleWLbl 	GS_PDI_CircleWLabel 	Global object with indicator and label. In FactoryTalk Optix, this graphics symbol can be configured to show or hide the label.
GO_PDI_L1 	—	—	Displays object status with label.
GO_PDI1_L1 	—	—	Displays object status without label.
GO_PDI_L1_Circle 	—	—	Displays object indicator.
GO_PDI_L1_CircleWLabel 	—	—	Displays object indicator with label.

FactoryTalk View SE Faceplates

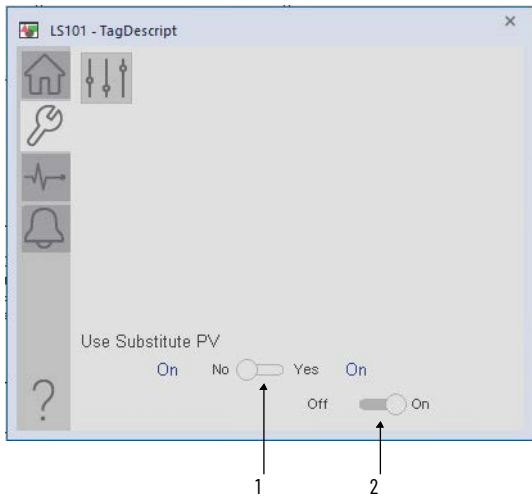
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



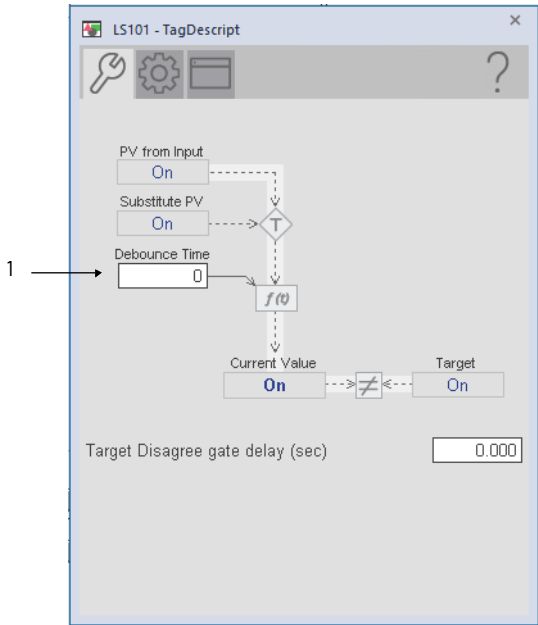
Item	Description
1	Current Process Variable
2	Target Process Variable

Maintenance Tab



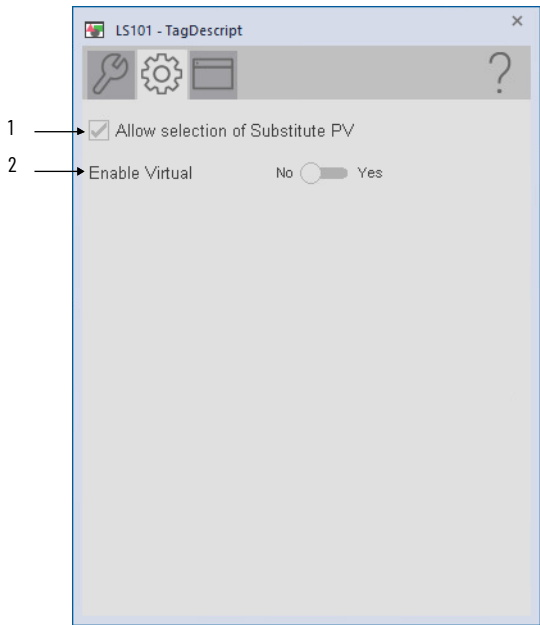
Item	Description
1	Select to enable the use of the Substitute Process Variable.
2	Select to choose Process Variable to be used.

Advanced Maintenance Tab



Item	Description
1	Minimum time the Process Variable must maintain the state, in seconds.

Engineering Tab



Item	Description
1	Select to enable the substitute Process Variable feature.
2	Select yes to enable Virtual.

HMI Configuration Tab

LS101 - TagDescript

TagDescript

Label:

Tag:

Area name for security:

1 → Text to Display in PV = 0 State:

2 → Text to Display in PV = 1 State:

3 → ☒ Display state text in "normal" state (= target)

Alarm Configuration

4 → ☒ Allow Operator to Shelve Alarm

5 → ☒ Allow Maintenance to Disable Alarm

< 1 2 >

Item	Description
1	Enter text to display in PV 0 State.
2	Enter text to display in PV 1 State.
3	Select to display state text in normal state
4	Select to allow Operator to shelve the alarm.
5	Select to allow Maintenance to disable the alarm.

LS101 - TagDescript

Operator Command Confirmation Required

☒ None

☐ Command confirmation

☐ Performer e-signature

☐ Performer and approver e-signatures

2 → ☐ Enable navigation to an object with more information

< 1 2 >

Item	Description
1	Select to configure operator command confirmation. This action would take place after any operator command.
2	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.

Studio 5000 View Designer Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 156](#) for descriptions of the features.

Operator Tab



Maintenance Tab

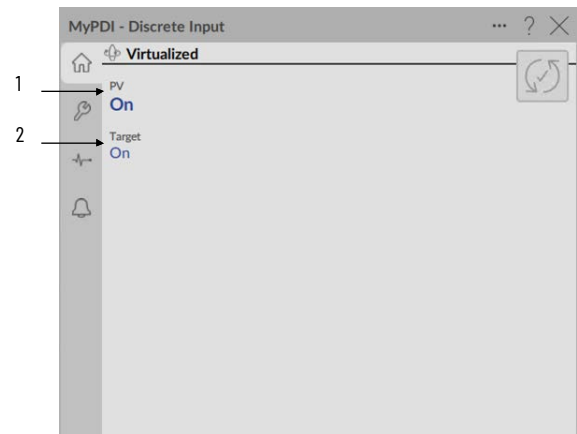


FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

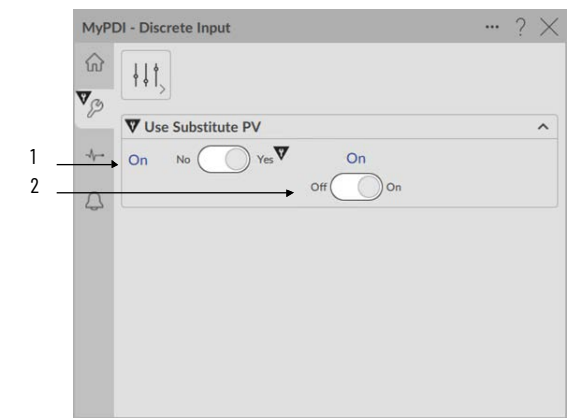
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates on page 156](#) for descriptions of the features.

Operator Tab



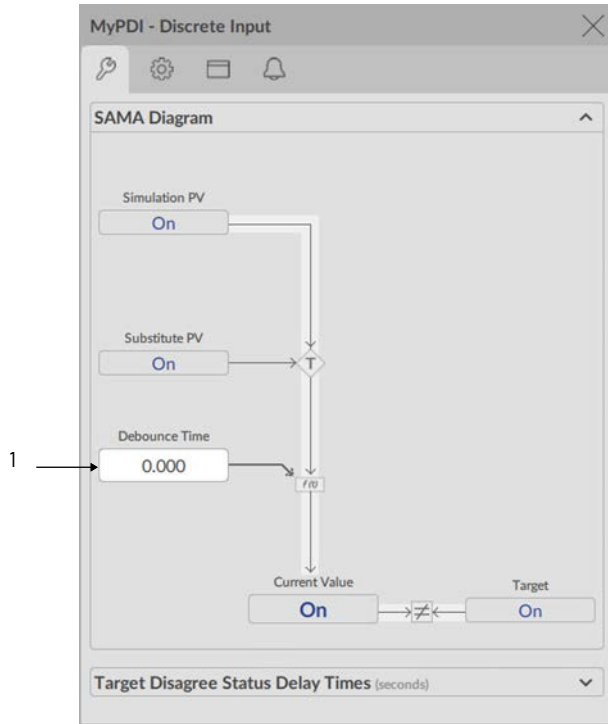
Item	Description
1	Current Process Variable
2	Target Process Variable

Maintenance Tab



Item	Description
1	Select to enable the use of the Substitute Process Variable.
2	Select to choose Process Variable to be used.

Advanced Maintenance Tab - SAMA Diagram



Item	Description
1	Minimum time the Process Variable must maintain the state, in seconds.

Advanced Maintenance Tab - Target Disagree Status Delay Timers

MyPDI - Discrete Input

SAMA Diagram

Target Disagree Status Delay Timers (seconds)

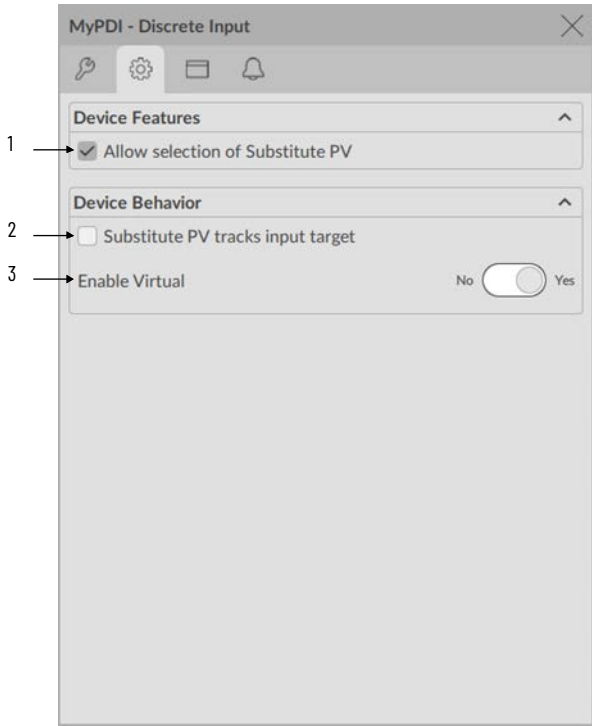
1 → Gate delay 0.000

2 → Off delay 0.000

3 → On delay 0.000

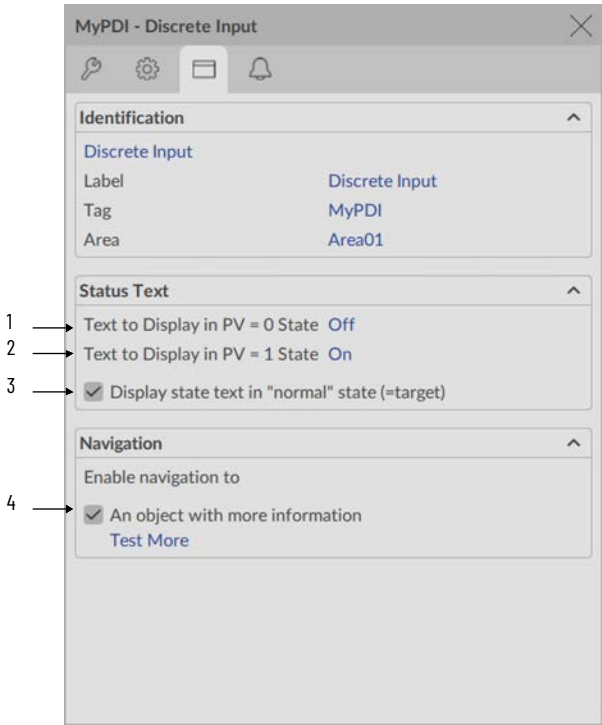
Item	Description
1	Enter a value of the target disagree gate delay time.
2	Enter the value of the target disagree off delay time.
3	Enter the value of the target disagree on delay time.

Advanced Engineering Tab



Item	Description
1	Select to enable the substitute Process Variable feature.
2	Select to allow the substitute PV to track the input target value, rather than using the maintenance substitute PV value.
3	Select yes to enable Virtual.

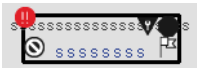

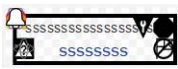
Advanced HMI Configuration Tab



Item	Description
1	Name for Text to display in PV 0 State.
2	Name for Text to display in PV 1 State.
3	Select to display state text in normal state
4	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.

Process Discrete Output (PDO)

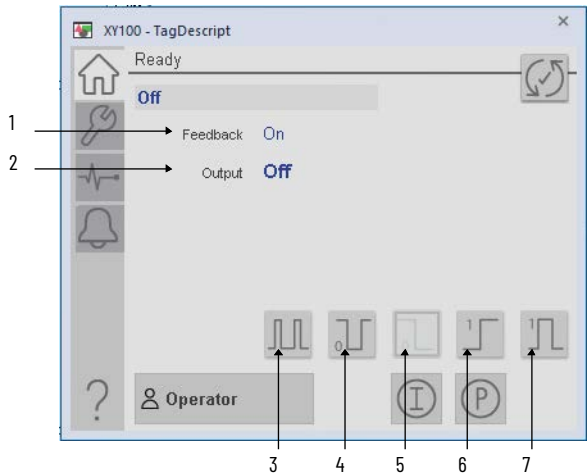
Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PDO	PDO_GS	GS_PDO	Digital (2-state) device Graphic Symbol for use on overview and detail displays.
			

FactoryTalk View SE Faceplates

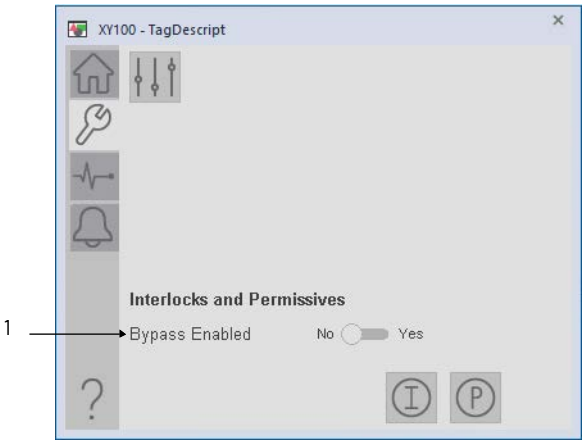
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



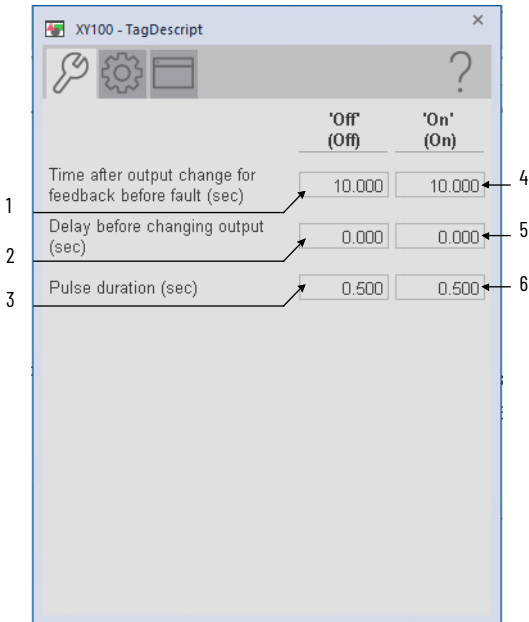
Item	Description
1	Feedback indicator
2	Discrete output indicator
3	Continuous Pulse Button
4	Single Pulse 'Off' Button
5	Output 'Off' Button
6	Output 'On' Button
7	Single Pulse 'On' Button

Maintenance Tab



Item	Description
1	Select if bypassable interlocks and permissives are bypassed.

Advanced Maintenance



Item	Description
1	Enter the amount of time to allow for the device to get feedback for the Off setting before setting a fault.
2	Enter the amount of time before the output deactivates.
3	Enter the amount of time to trigger a pulse when the device deactivates.
4	Enter the amount of time to allow for the device to get feedback for the On setting before setting a fault.
5	Enter the amount of time before the output activates.
6	Enter the amount of time to trigger a pulse when the device deactivates.

Engineering Tab

XY100 - TagDescript

1 → ☐ Device has 'Off' (Off) feedback

2 → ☐ Device has 'On' (On) feedback

3 → Fault when both feedback inputs are
☒ ON ☐ OFF

4 → ☐ Operator command resets fault

5 → ☐ External command resets fault

6 → ☐ Enable pulsing functions

7 → ☐ In Override, bypass Interlocks and Permissives that can be bypassed

8 → ☐ Operator 'Off' (Turn off) command always available

9 → ☐ External 'Off' (Turn off) command always available

< 1 2 >

Item	Description
1	Select to configure the instruction to use Off feedback signals from the device.
2	Select to configure the instruction to use On feedback signals from the device.
3	Select to Enable fault when both feedback inputs are either ON or OFF.
4	Select to reset a fault upon an operator command. Clear this checkbox to reset faults by using only the reset code.
5	Select to reset a fault upon an external command. Clear this checkbox to reset faults by using only the reset code.
6	Select to enable the pulsing functions.
7	Select if bypassable interlocks and permissives are bypassed in override command source.
8	Select to make the Operator Off command available in any command source. Clear this checkbox to make the Operator Off command available only in Operator or Maintenance command source.
9	Select to make the External Off command available in any command source. Clear this checkbox to make the External Off command available only in Operator or Maintenance command source.

XY100 - TagDescript

1 → ☐ Finish Pulse when commanded 'Off' (Off) or 'On' (On)

Deenergize Output:

2 → ☒ On I/O Fault

3 → ☒ On Failure to Reach Target State

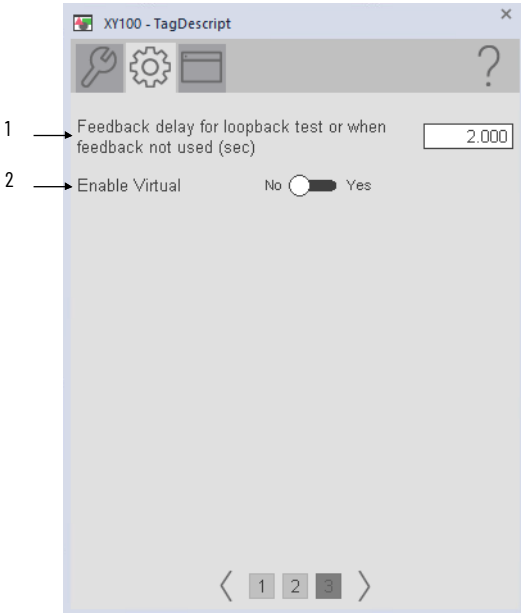
4 → ☒ On Interlock Trip

5 → Audible on:
☒ Device energize only
☐ Any Commanded State Change

6 → Time to sound audible on commanded energize (sec) (0=disabled)

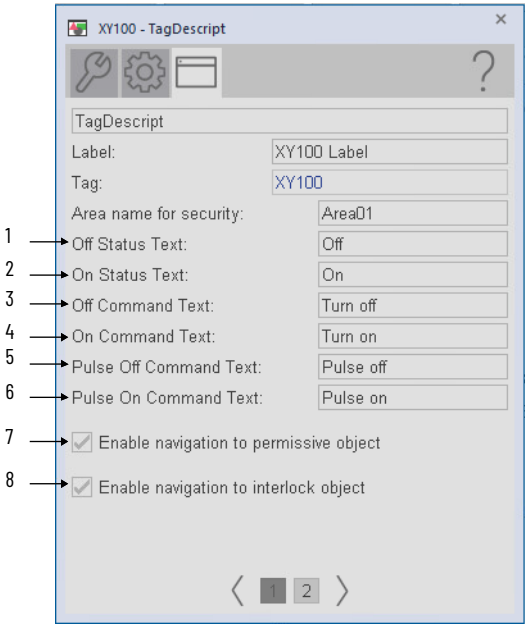
< 1 2 3 >

Item	Description
1	Select to finish pulse when commanded ON or OFF.
2	Select to de-energize the output to the device and return the device to its fail position, when an I/O Fault condition occurs. Clear this checkbox to keep the output to the device in its current stat on an I/O Fault condition. IMPORTANT: If a condition is configured to shed the device to the Off state on a fault, a reset is required to clear the shed fault. This reset commands the device to a state other than Off.
3	Select to de-energize the output to the device, return it to its fail position, when a Position Fail condition occurs. Clear this checkbox to keep the output to the device in its current state (keep trying) on a Position Fail condition. IMPORTANT: If a condition is configured to shed the device to the Off state on a fault, a reset is required to clear the shed fault. This reset commands the device to a state other than Off.
4	The device outputs are always de-energized on an Interlock Trip. This item cannot be unchecked. It is displayed as a reminder that the Interlock Trip function always de-energizes the device.
5	Select the setting for when the audible output of the object is on.
6	Enter the amount of time the audible output will be held on when enabled.

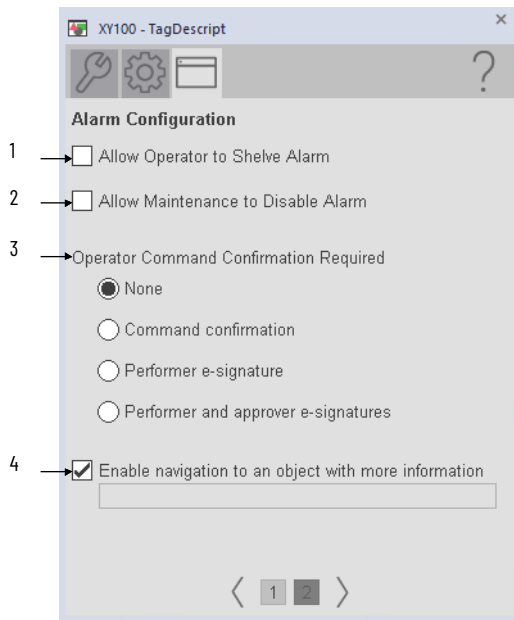


Item	Description
1	Sets the time delay (in seconds) for the On or Off status to be echoed back when Virtual is enabled or when On and Off feedback is not used.
2	Select yes to enable Virtual.

HMI Configuration Tab



Item	Description
1	Enter text to display when device is in Off (0) state.
2	Enter text to display when device is in On (1) state.
3	Enter text to display for the off command.
4	Enter text to display for the on command.
5	Enter text to display for the pulse off command.
6	Enter text to display for the pulse on command.
7	Select to enable navigation to the permissive object
8	Select to enable navigation to the interlock object



Item	Description
1	Select to allow Operator to shelve the alarm.
2	Select to allow Maintenance to disable the alarm.
3	Select to configure operator command confirmation. This action would take place after any operator command.
4	Select whether there is navigation to an additional object or not. If selected, enter the object name in the value.

Studio 5000 View Designer Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 163](#) for descriptions of the features.

Operator Tab



Maintenance Tab

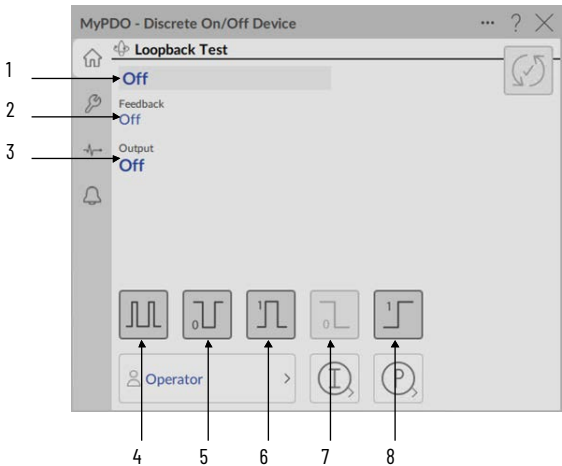


FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

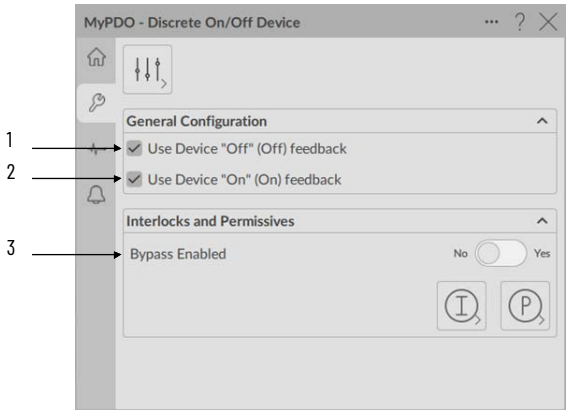
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates on page 163](#) for descriptions of the features.

Operator Tab



Item	Description
1	Device state indicator
2	Feedback indicator
3	Discrete output indicator
4	Continuous Pulse Button
5	Single Pulse 'Off' Button
6	Single Pulse 'On' Button
7	Output 'Off' Button
8	Output 'On' Button

Maintenance Tab



Item	Description
1	Select to inform the instruction that the Off feedback from the device should be used to verify that the device reached its target state when the output is off. If the command source is Hand and the instruction is in Physical, the Off feedback is tracked for bumpless transfer from Hand to another command source.
2	Select to inform the instruction that the On feedback from the device should be used to verify that the device reached its target state when the output is on. If the command source is Hand and the instruction is in Physical, the On feedback is tracked for bumpless transfer from Hand to another command source.
3	Select if bypassable interlocks and permissives are bypassed.

Advanced Maintenance Tab

MyPDO - Discrete On/Off Device

Timers (seconds)

	'Off' (Off)	'On' (On)
1 → Time after output change for feedback before fault	4.000	4.000
2 → Delay before changing output	0.000	0.000
3 → Pulse duration	0.500	0.500
4 → Feedback delay for loopback test or when feedback not used	2.000	
5 → Time to sound audible on commanded energize (0 = disabled)	0.000	

Item	Description
1	Left to Right: • Enter the amount of time to allow for the device to get feedback for the Off setting before setting a fault. • Enter the amount of time to allow for the device to get feedback for the On setting before setting a fault.
2	Left to Right: • Enter the amount of time before the output deactivates. • Enter the amount of time before the output activates.
3	Left to Right: • Enter the amount of time to trigger a pulse when the device deactivates. • Enter the amount of time to trigger a pulse when the device activates.
4	Sets the time delay (in seconds) for the On or Off status to be echoed back when Virtual is enabled or when On and Off feedback is not used.
5	Enter the amount of time the audible output will be held on when enabled.

Advanced Engineering Tab - Device Features

MyPDO - Discrete On/Off Device

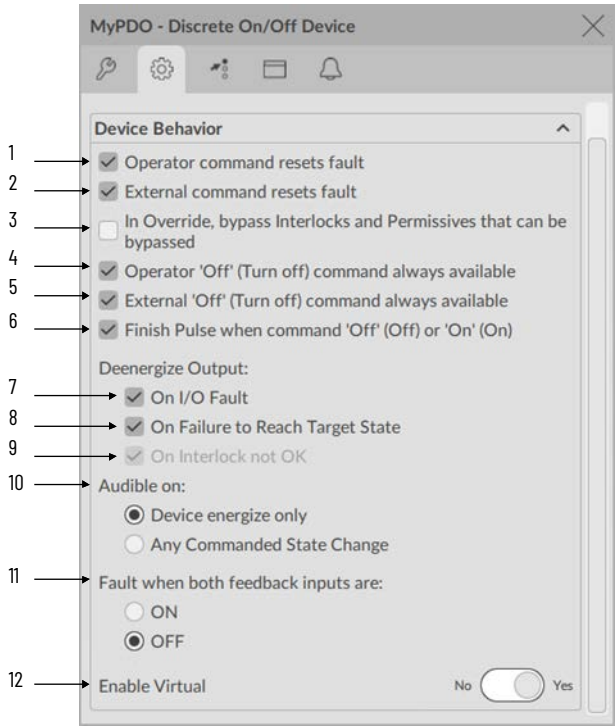
Device Features

- 1 → ☒ Device has 'Off' (Off) feedback
- 2 → ☒ Device has 'On' (On) feedback
- 3 → ☒ Enable pulsing functions

Device Behavior

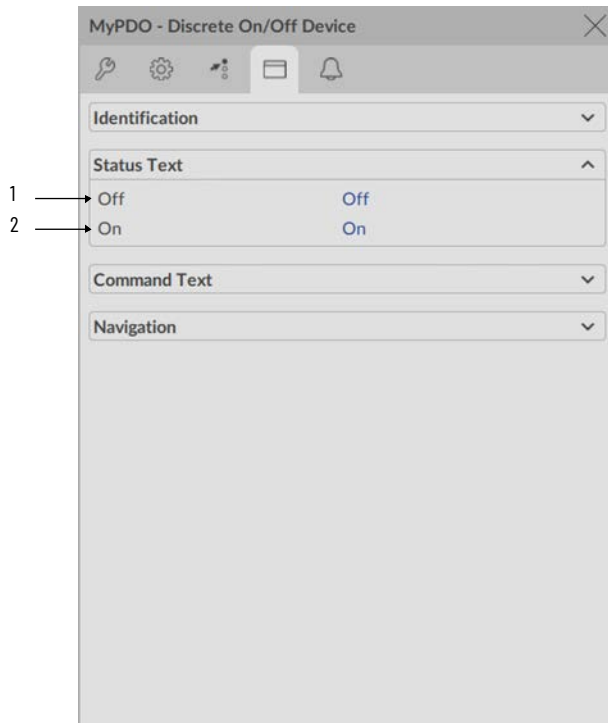
Item	Description
1	Select to configure the instruction to use Off feedback signals from the device.
2	Select to configure the instruction to use On feedback signals from the device.
3	Select to enable the pulsing functions.

Advanced Engineering Tab - Device Behavior



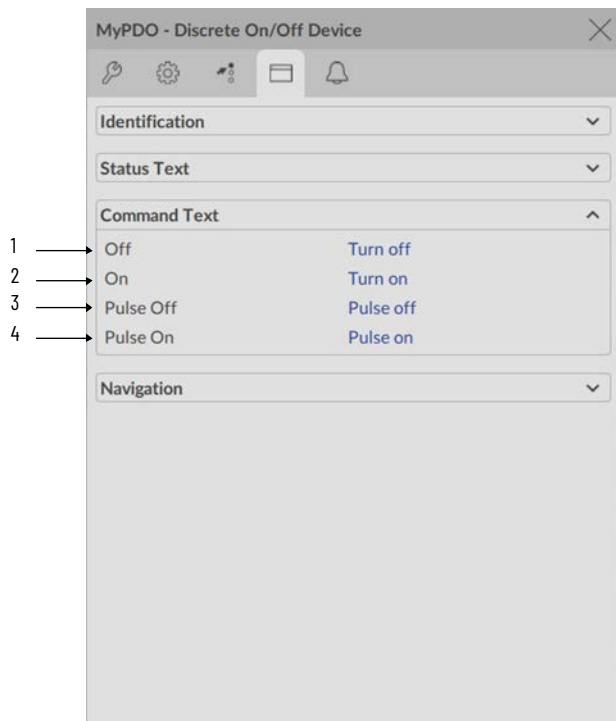
Item	Description
1	Select to reset a fault upon an operator command. Clear this checkbox to reset faults by using only the reset code.
2	Select to reset a fault upon an external command. Clear this checkbox to reset faults by using only the reset code.
3	Select if bypassable interlocks and permissives are bypassed in override command source.
4	Select to make the Operator Off command available in any command source. Clear this checkbox to make the Operator Off command available only in Operator or Maintenance command source.
5	Select to make the External Off command available in any command source. Clear this checkbox to make the External Off command available only in Operator or Maintenance command source.
6	Select to finish pulse when commanded ON or OFF
7	Select to de-energize the output to the device and return the device to its fail position, when an I/O Fault condition occurs. Clear this checkbox to keep the output to the device in its current stat on an I/O Fault condition. IMPORTANT: If a condition is configured to shed the device to the Off state on a fault, a reset is required to clear the shed fault. This reset commands the device to a state other than Off.
8	Select to de-energize the output to the device, return it to its fail position, when a Position Fail condition occurs. Clear this checkbox to keep the output to the device in its current state (keep trying) on a Position Fail condition. IMPORTANT: If a condition is configured to shed the device to the Off state on a fault, a reset is required to clear the shed fault. This reset commands the device to a state other than Off.
9	The device outputs are always de-energized on an Interlock Trip. This item cannot be unchecked. It is displayed as a reminder that the Interlock Trip function always de-energizes the device.
10	Select the setting for when the audible output of the object is on.
11	Select to Enable fault when both feedback inputs are either ON or OFF
12	Select yes to enable Virtual.

Advanced HMI Configuration Tab - Status Text



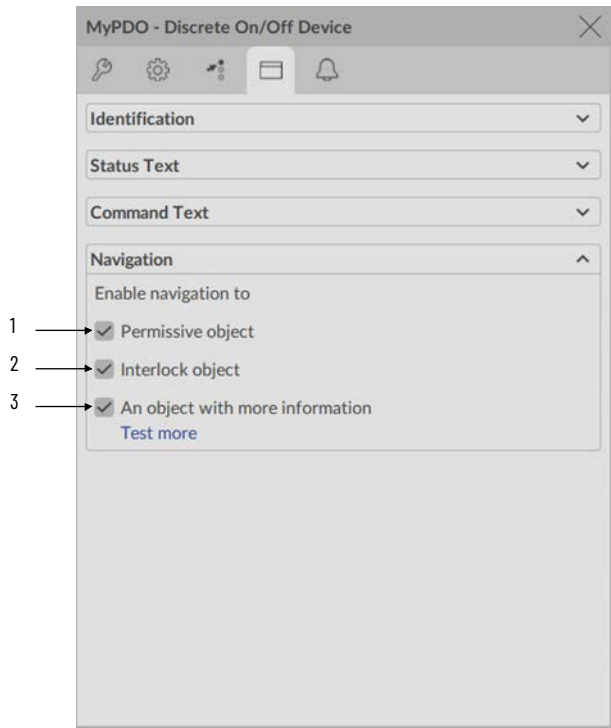
Item	Description
1	Display the text for Off (0) state.
2	Displays the text for On (1) state.

Advanced HMI Configuration Tab - Command Text



Item	Description
1	Name for text to display for the off command.
2	Name for text to display for the on command.
3	Name for text to display for the pulse off command.
4	Name for text to display for the pulse on command.

Advanced HMI Configuration Tab - Navigation

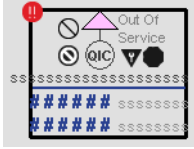
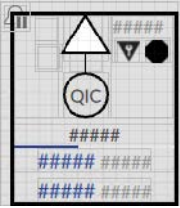
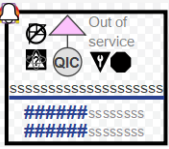
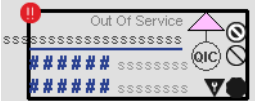
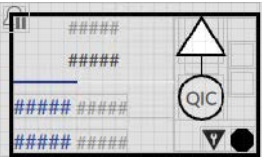
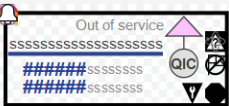

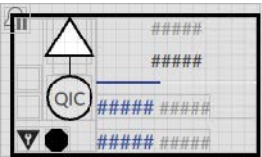
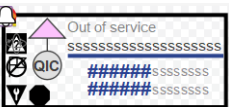


Item	Description
1	Select to enable navigation to the permissive object.
2	Select to enable navigation to the interlock object.
3	Select whether there is navigation to an additional object or not. If selected, enter the object name in the value. Navigation to an object with more information is enabled if Cfg_HasMoreObj is set to true. You configure the tag name of the object that you want to navigate to in the extended tag property "Cfg_HasMoreObj.@Navigation".

Process Dosing (PDOSE)

Graphic Symbols

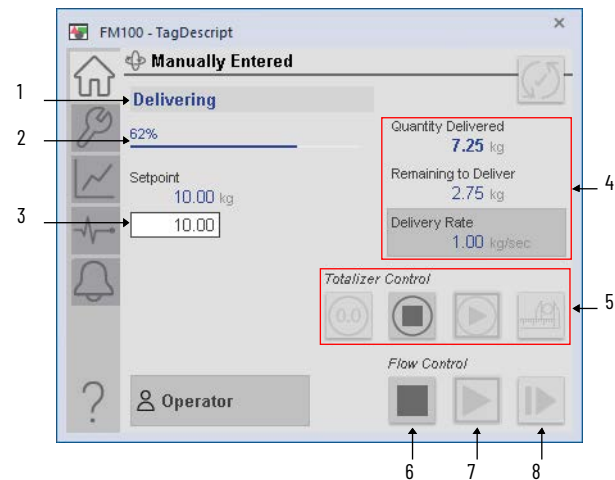
FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PDOSE_FM 	PDOSE_GS_FlowMeter_T 	GS_PDOSE_FM 	Vertical Orientation Top
GO_PDOSE_FM1 	PDOSE_GS_FlowMeter_B 	GS_PDOSE_FM1 	Vertical Orientation Bottom
GO_PDOSE_FM2 	PDOSE_GS_FlowMeter_R 	GS_PDOSE_FM2 	Horizontal Orientation Right
GO_PDOSE_FM3 	PDOSE_GS_FlowMeter_L 	GS_PDOSE_FM3 	Horizontal Orientation Left

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
<div>GO_PDOSE_WS</div> 	<div>PDOSE_GS_Weigh_Scale_T</div> 	<div>GS_PDOSE_WS</div> 	Vertical orientation up.
<div>GO_PDOSE_WS1</div> 	<div>PDOSE_GS_Weigh_R</div> 	<div>GS_PDOSE_WS2</div> 	Horizontal orientation right.
<div>GO_PDOSE_WS2</div> 	<div>PDOSE_GS_Weigh_L</div> 	<div>GS_PDOSE_WS3</div> 	Horizontal orientation left.

FactoryTalk View SE Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



Item	Description
1	Dosing Equipment Commanded State.
2	Delivery Progress Bar.
3	Configure the quantity to deliver.
4	Delivery progress.
5	Totalizer Control (from left to right) <ul style="list-style-type: none">Select to clear the totalized quantity.Select to stop the Totalizer.Select to start the Totalizer.Select to check tolerances.
6	Select to stop the Totalizer flow.
7	Select to start the Totalizer flow.
8	Select to bump the Totalizer flow.

Maintenance Tab

FM100 - TagDescript

1 → Dribble Quantity (kg) 0.05

2 → Preact Quantity (kg) 0.00

3 → Delivery Tolerance (kg) 0.00

4 → Over Setpoint 0.00

5 → Under Setpoint 0.00

☒ Use Equipment Feedback

Item	Description
1	Configure the quantity before the end of delivery, when a switch to a reduced flow rate (dribble) for finer control of the final quantity is made.
2	Configure the quantity before reaching the Setpoint Quantity when a command the delivery equipment to stop to allow equipment to react. The preact quantity helps prevent overshooting the delivery Setpoint.
3	Enter the quantity by which delivery can exceed the setpoint. If the delivered quantity is more than the setpoint plus this value, a tolerance check shows over tolerance.
4	Enter the quantity by which delivery can fall short of the setpoint. If the delivered quantity is less than the setpoint minus this value, a tolerance check shows under tolerance.
5	Select whether there is equipment feedback or not. The equipment provides run (dribble if used) and stop feedback.

Advanced Maintenance

FM100 - TagDescript

1 → Rate below which to report zero flow (kg/sec) 0.00

2 → Percentage of delivery error to auto-adjust Preact (%) 10.00

3 → Time to pulse Out_Clear to clear external totalizer (sec) 1.000

4 → Duration of flow when the Bump button is pressed (sec) (0 = maintained) 0.000

5 → Delay after flow stop before enabling tolerance check (sec) 1.000

6 → Time for Equipment Feedback before Fault (sec) 10.000

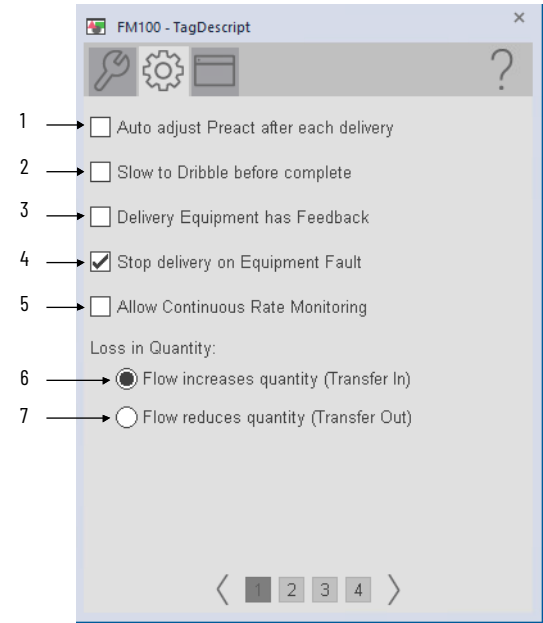
7 → Flow rate thresholds (kg/sec)

High threshold 3.40E38

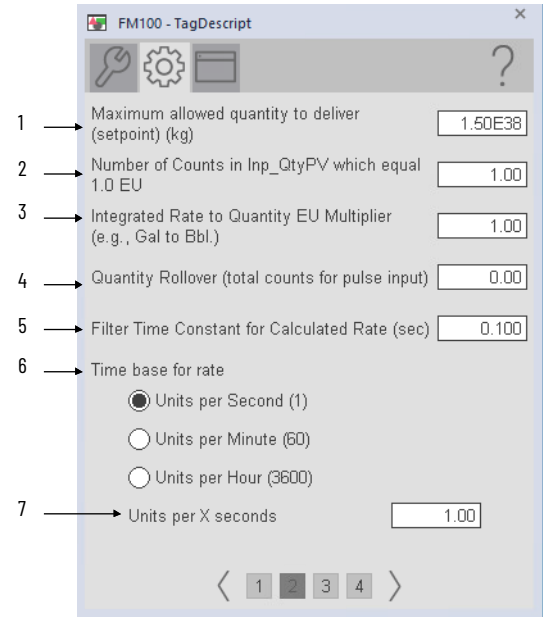
Low threshold 3.40E38

Item	Description
1	Enter a value so that when the flow rate is less than this value, it is treated as zero. This value helps prevent totalizing the transmitter error when flow is stopped.
2	Enter the percentage of delivery error. When the delivery tolerance is checked, if no bump has occurred and if the delivery is in tolerance, the error (difference between delivery setpoint and actual delivery) is multiplied by this percentage and applied to the preact. The preact self-tunes and learns the correct value of the preact over time.
3	Configure the Time (in seconds) to Pulse the Clear Output to clear an external totalizer, such as one in an intelligent flowmeter.
4	Enter the amount of time to command the controlled equipment to run flow when the bump command button is pressed. If this value is set to zero, Bump is treated like a Jog: flow starts when the button is pressed and stops when the button is released. If this value is greater than zero, flow is bumped for the configured time.
5	Enter the amount of time in seconds after flow is stopped for the scale reading to settle before a tolerance check can be commanded.
6	Enter the maximum allowed feedback time. If equipment feedback is being used, the instruction allows this much time after commanding the equipment for feedback to show the equipment in the commanded state before raising a fault status.
7	Enter the flow high threshold. This is the limit for flow alarming.
8	Enter the flow low threshold. This is the limit for flow alarming.

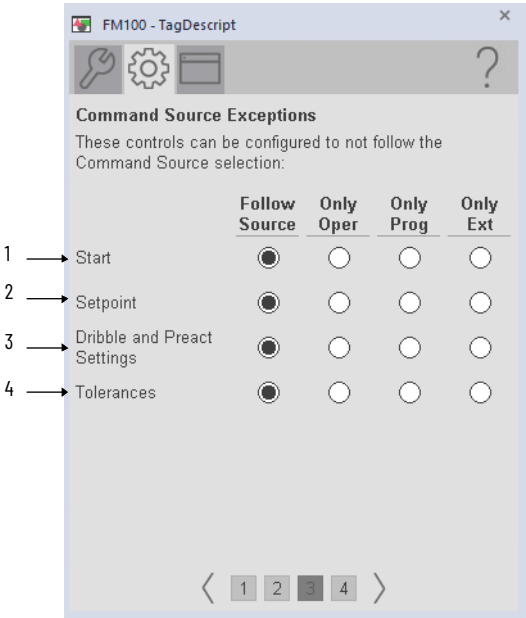
Engineering Tab



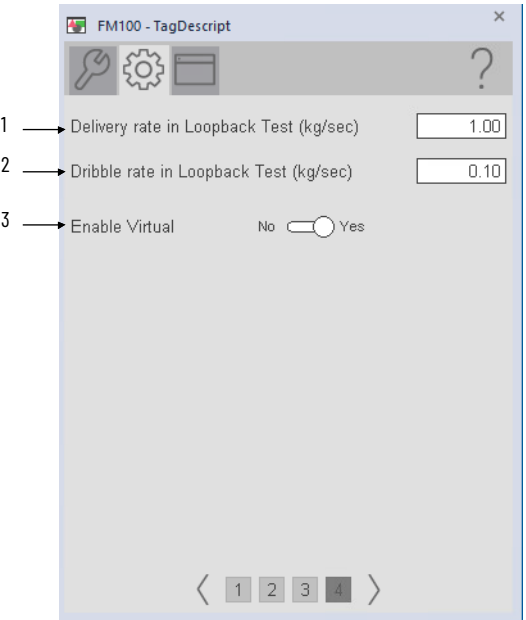
Item	Description
1	Select to adjust the Preact automatically based on the actual versus setpoint Quantity after each successful delivery. Clear this checkbox to leave the Preact as entered.
2	Select to command the equipment to a slower Dribble rate as delivery nears completion to improve the accuracy of Quantity delivered.
3	Select if the controlled equipment provides feedback of its running, dribbling, and stopped status to this instruction. This instruction checks that the equipment is performing the commanded function and provides a status (and optional alarm) if the equipment fails to respond as commanded within a configurable time. IMPORTANT: The feedback fault time is configured on the Advanced Maintenance tab. Clear this checkbox if the controlled equipment does not provide feedback of its status. The instruction assumes that the equipment is performing the commanded function and no equipment failure-to-respond checks occur.
4	Select if you want the dosing instruction to attempt to stop the controlled equipment if an equipment fault is reported (Inp_CtrldEqupFault) or detected (via feedbacks). Clear this checkbox if you want the dosing instruction to keep performing its current function, even if an equipment fault occurs.
5	Select to allow continuous rate monitoring.
6	Select to designate as a Transfer In instance.
7	Select to designate as a Transfer Out instance.



Item	Description
1	Enter the maximum allowed quantity to deliver. The quantity setpoint is clamped not to exceed this value.
2	Enter the number of counts in Inp_QtyPV that equal one engineering unit of quantity delivered. This value is used with pulse output flowmeters and a pulse input I/O card.
3	Enter the rate to quantity engineering units multiplier. This value is used if the input is in one unit of measure, such as gallons per minute, and the total is in another that requires conversion above and beyond time units, such as barrels.
4	Enter the quantity rollover. This value is used when a quantity or pulse count input rolls over to zero at some value, such as 999,999 counts.
5	Enter the filter time constant for calculated rate.
6	Select the time base for rate.
7	Enter the number of units per x seconds, where x equals the number of seconds selected for the time base for rate.



Item	Description
1	Select to keep control of dosing Start and Stop commands with the Operator, Program, External, or Follow the Source even if the instruction is in Program command source.
2	Select to keep control of the Setpoint quantity setting with the Operator, Program, External, or Follow the Source even if the instruction is in Program command source.
3	Select to keep control of the Dribble and Preact quantity settings with the Operator, Program, External, or Follow the Source even if the instruction is in Program command source.
4	Select to keep control of the high and low Tolerance settings with the Operator, Program, External, or Follow the Source even if the instruction is in Program command source.



Item	Description
1	Enter the normal running delivery rate that is used when the P_Dose instruction is in virtual (Inp_Sim = 1).
2	Enter the dribble (slow) delivery rate that is used when the P_Dose instruction is in virtual (Inp_Sim = 1).
3	Select yes to enable virtual.

HMI Configuration Tab

FM100 - TagDescript

?

TagDescript

Label: FM100 Label

Tag: FM100

Area name for security: Area01

1 → Quantity Unit: kg

2 → Rate Unit: kg/sec

3 → Number of decimal places for Quantity PV 2

4 → Number of decimal places for Rate PV 2

Alarm Configuration

5 → ☐ Allow Operator to Shelve Alarm

6 → ☐ Allow Maintenance to Disable Alarm

< 1 2 3 >

Item	Description
1	Enter the units of measure descriptor for the Quantity delivered.
2	Enter the units of measure descriptor for the Rate of delivery.
3	Enter in the number of decimal places that are displayed for the Quantity Process Variable
4	Enter in the number of decimal places that are displayed for the Rate Process Variable
5	Select to allow Operator to shelve the alarm.
6	Select to allow Maintenance to disable the alarm.

MyPDOSE_F - Dosing with Flowmeter

?

1 → Operator Command Confirmation Required

☒ None

☐ Command confirmation

☐ Performer e-signature

☐ Performer and approver e-signatures

2 → Historical Data Source

☐ None

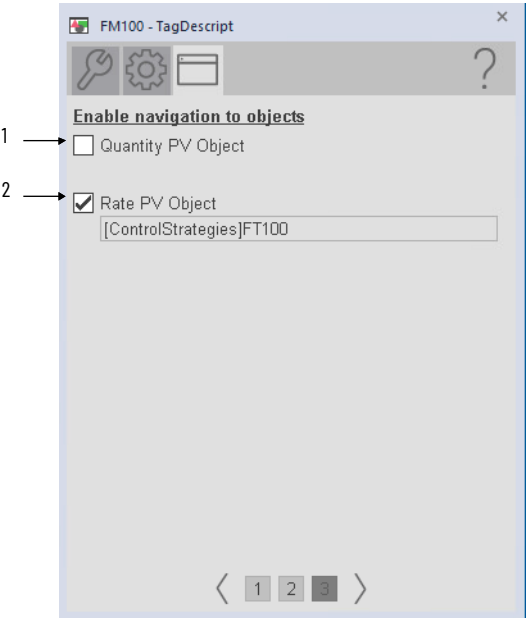
☒ Datalog

☐ Historian

3 → ☐ Enable navigation to an object with more information

< 1 2 3 >

Item	Description
1	Select to configure operator command confirmation. This action would take place after any operator command.
2	Select to configure if a Historical data source will be used or not.
3	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.



Item	Description
1	Select to enable navigation to a Quantity PV object
2	Select to enable navigation to a Rate PV object

Studio 5000 View Designer
Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 174](#) for descriptions of the features.

Operator Tab



Maintenance Tab

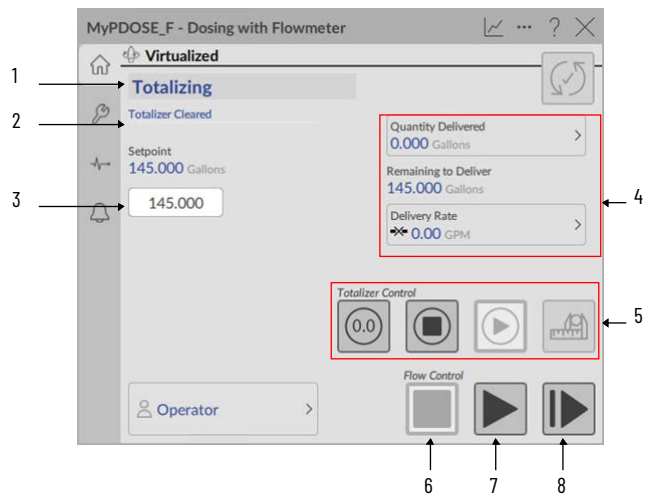


FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

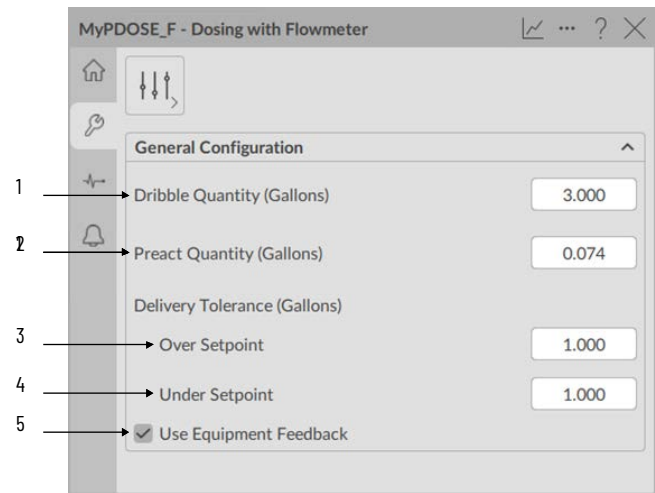
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates on page 174](#) for descriptions of the features.

Operator Tab



Item	Description
1	Dosing Equipment Commanded State.
2	Delivery Progress Bar.
3	Configure the quantity to deliver.
4	Delivery progress.
5	Totalizer Control (from left to right) <ul style="list-style-type: none">• Select to clear the totalized quantity.• Select to stop the Totalizer.• Select to start the Totalizer.• Select to check tolerances.
6	Select to stop the Totalizer flow.
7	Select to start the Totalizer flow.
8	Select to bump the Totalizer flow.

Maintenance Tab



Item	Description
1	Configure the quantity before the end of delivery, when a switch to a reduced flow rate (dribble) for finer control of the final quantity is made.
2	Configure the quantity before reaching the Setpoint Quantity when a command the delivery equipment to stop to allow equipment to react. The preact quantity helps prevent overshooting the delivery Setpoint.
3	Enter the quantity by which delivery can exceed the setpoint. If the delivered quantity is more than the setpoint plus this value, a tolerance check shows over tolerance.
4	Enter the quantity by which delivery can fall short of the setpoint. If the delivered quantity is less than the setpoint minus this value, a tolerance check shows under tolerance.
5	Select whether there is equipment feedback or not. The equipment provides run (dribble if used) and stop feedback.

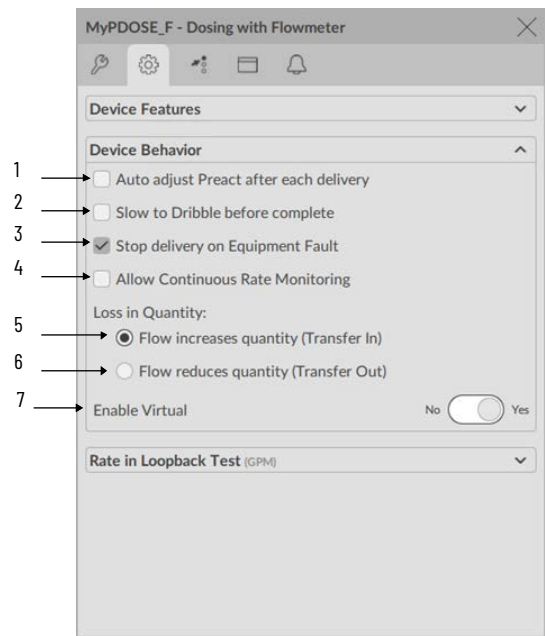
Advanced Maintenance Tab

Item	Description
1	Enter a value so that when the flow rate is less than this value, it is treated as zero. This value helps prevent totalizing the transmitter error when flow is stopped.
2	Enter the percentage of delivery error. When the delivery tolerance is checked, if no bump has occurred and if the delivery is in tolerance, the error (difference between delivery setpoint and actual delivery) is multiplied by this percentage and applied to the preact. The preact self-tunes and learns the correct value of the preact over time.
3	Configure the Time (in seconds) to Pulse the Clear Output to clear an external totalizer, such as one in an intelligent flowmeter.
4	Enter the amount of time to command the controlled equipment to run flow when the bump command button is pressed. If this value is set to zero, Bump is treated like a Jog: flow starts when the button is pressed and stops when the button is released. If this value is greater than zero, flow is bumped for the configured time.
5	Enter the amount of time in seconds after flow is stopped for the scale reading to settle before a tolerance check can be commanded.
6	Enter the maximum allowed feedback time. If equipment feedback is being used, the instruction allows this much time after commanding the equipment for feedback to show the equipment in the commanded state before raising a fault status.
7	Enter the flow high threshold. This is the limit for flow alarming.
8	Enter the flow low threshold. This is the limit for flow alarming.

Advanced Engineering Tab - Device Features

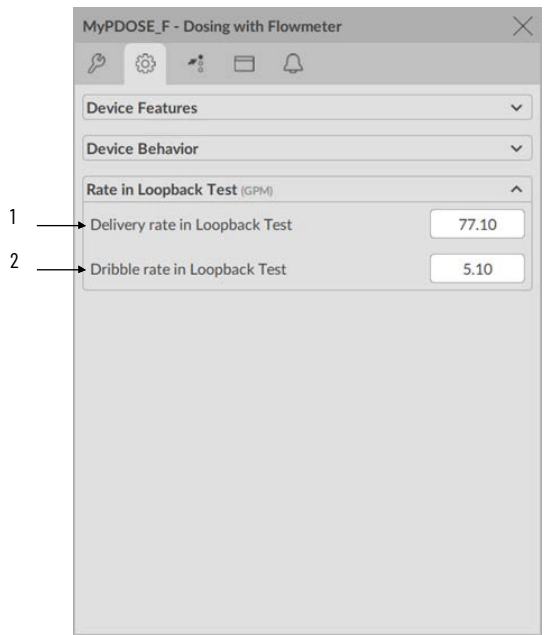
Item	Description
1	Select if the controlled equipment provides feedback of its running, dribbling, and stopped status to this instruction. This instruction checks that the equipment is performing the commanded function and provides a status (and optional alarm) if the equipment fails to respond as commanded within a configurable time. IMPORTANT: The feedback fault time is configured on the Advanced Maintenance tab. Clear this checkbox if the controlled equipment does not provide feedback of its status. The instruction assumes that the equipment is performing the commanded function and no equipment failure-to-respond checks occur.
2	Enter the maximum allowed quantity to deliver. The quantity setpoint is clamped not to exceed this value.
3	Enter the number of counts in Inp_QtyPV that equal one engineering unit of quantity delivered. This value is used with pulse output flowmeters and a pulse input I/O card.
4	Enter the rate to quantity engineering units multiplier. This value is used if the input is in one unit of measure, such as gallons per minute, and the total is in another that requires conversion above and beyond time units, such as barrels.
5	Enter the quantity rollover. This value is used when a quantity or pulse count input rolls over to zero at some value, such as 999,999 counts.
6	Enter the filter time constant for calculated rate.
7	Select the time base for rate.
8	Enter the number of units per x seconds, where x equals the number of seconds selected for the time base for rate.

Advanced Engineering Tab - Device Behavior



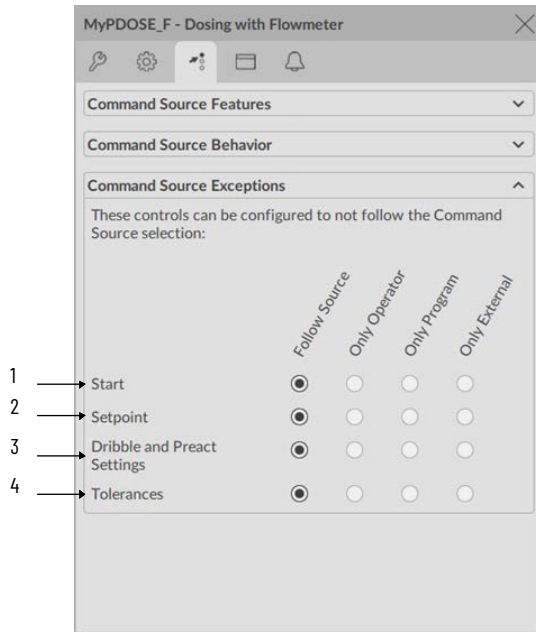
Item	Description
1	Select to adjust the Preact automatically based on the actual versus setpoint Quantity after each successful delivery. Clear this checkbox to leave the Preact as entered.
2	Select to command the equipment to a slower Dribble rate as delivery nears completion to improve the accuracy of Quantity delivered.
3	Select if you want the dosing instruction to attempt to stop the controlled equipment if an equipment fault is reported (Inp_CtrldEquipFault) or detected (via feedbacks). Clear this checkbox if you want the dosing instruction to keep performing its current function, even if an equipment fault occurs.
4	Select to allow continuous rate monitoring.
5	Select to designate as a Transfer In instance.
6	Select to designate as a Transfer Out instance.
7	Select yes to enable virtual.

Advanced Engineering Tab - Rate in Loopback Test



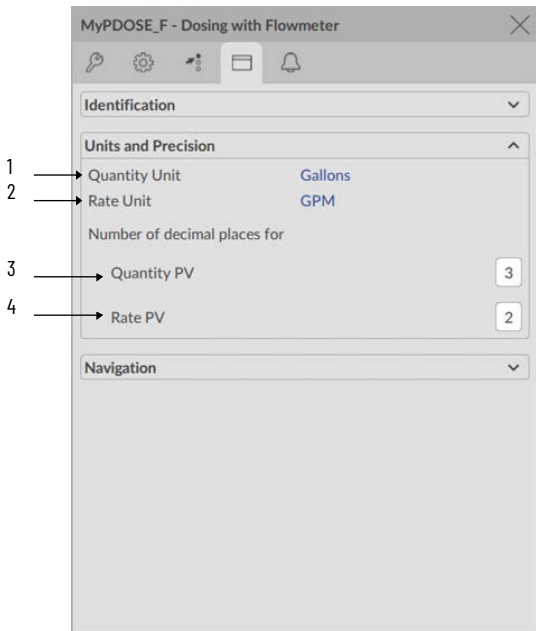
Item	Description
1	Enter the normal running delivery rate that is used when the instruction is in virtual.
2	Enter the dribble (slow) delivery rate that is used when the instruction is in virtual.

Advanced CmdSrc Tab - Command Source Exceptions



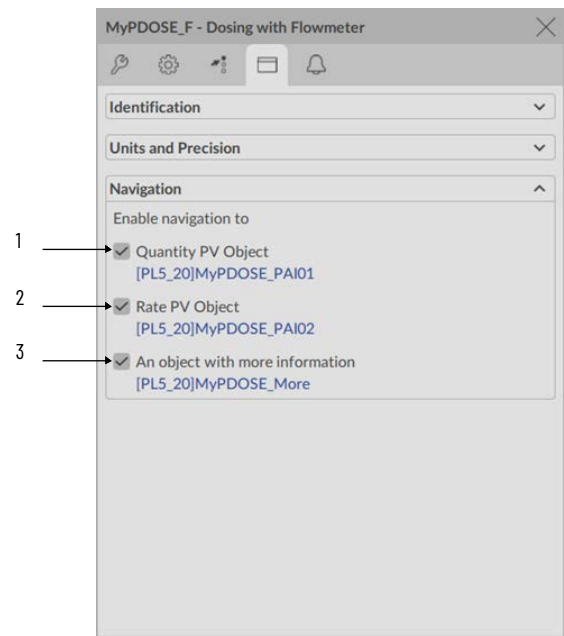
Item	Description
1	Select to keep control of dosing Start and Stop commands with the Operator, Program, External, or Follow the Source.
2	Select to keep control of the Setpoint quantity setting with the Operator, Program, External, or Follow the Source.
3	Select to keep control of the Dribble and Preact quantity settings with the Operator, Program, External, or Follow the Source.
4	Select to keep control of the high and low Tolerance settings with the Operator, Program, External, or Follow the Source.

Advanced HMI Configuration Tab - Units and Precision



Item	Description
1	Display unit for Quantity delivered.
2	Display unit for Rate of delivery.
3	Enter in the number of decimal places that are displayed for the Quantity Process Variable.
4	Enter in the number of decimal places that are displayed for the Rate Process Variable.

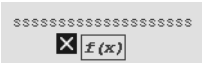


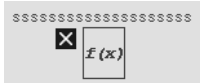


Advanced HMI Configuration Tab - Navigation



Item	Description
1	Select to enable navigation to a Quantity PV object.
2	Select to enable navigation to a Rate PV object.
3	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.

Process Analog Fanout (PFO)

Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PFO 	raP_5_20_PFO_GS 		PFO graphic symbol
GO_PFO1 	raP_5_20_PFO_GS_Large 		PFO graphic symbol (Large)

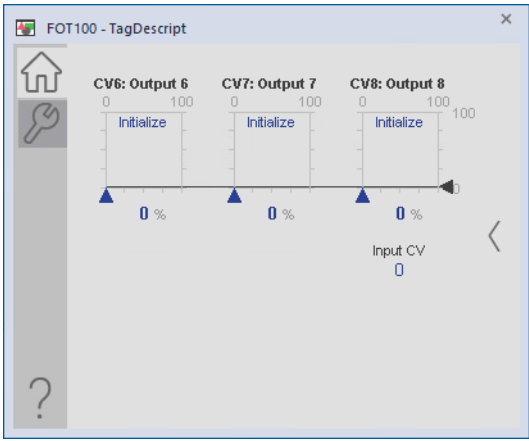
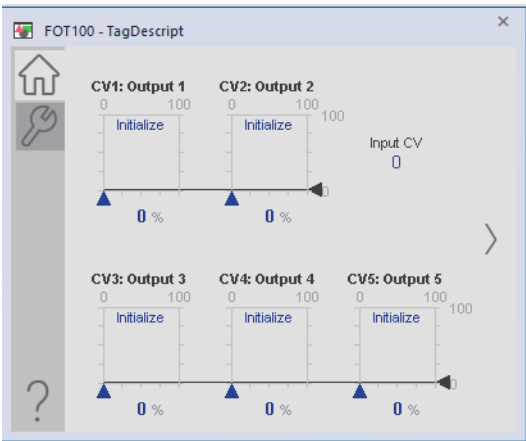
FactoryTalk View SE
Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab

The Faceplate initially opens to the Operator (Home) tab. From here, an operator can monitor the device status and manually operate the device when it is in Operator mode.

If outputs 6, 7, and 8 are used by the instruction (in other words, if Cfg_HasCV6... Cfg_HasCV8 are 1), the Home tab has a second page that displays the information.



Maintenance Tab

1 2 3

FOT100 - TagDescription

Rate of Change Limit (%/sec)

	Ratio	Offset
CV1	-2	100
CV2	2	-100
CV3	1	0
CV4	1	0
CV5	1	0
CV6	1	0
CV7	1	0
CV8	1	0

Item	Description
1	Enter a value that sets the ratio to calculate each individual output. This value either sets the operator ratio (for example, OSet_CV1Ratio) or the configuration ratio (for example, Cfg_CV1Ratio) depending on the ratio source selection.
2	Enter a value that sets the offset to calculate each individual output. This value either sets the operator offset (for example, OSet_CV1Offset) or the configuration offset (for example, Cfg_CV1Offset) depending on the ratio source selection.
3	Operator setting for the Input CV rate of change limit (increasing or decreasing). If Cfg_MaxCVRoC = 0.0, then this parameter can be set to zero, which means the rate of change is not limited.

Engineering Tab

The screenshot shows the 'FDT100 - TagDescriptor' window. At the top, there is a title bar with a close button. Below it is a toolbar with a settings gear icon (arrow 1), a tag icon (arrow 2), and a help question mark icon (arrow 4). The main area contains a table with four columns: 'Has CV', 'Minimum (EU)', 'Maximum (EU)', and 'Takeup Rate (EU/sec)' (arrow 3 points to the 'Maximum (EU)' column). The table lists eight CVs (CV1 to CV8), each with a checked checkbox in the 'Has CV' column and numerical values in the other columns. At the bottom, there are navigation arrows and two buttons labeled '1' and '2'.

Has CV	Minimum (EU)	Maximum (EU)	Takeup Rate (EU/sec)
<input type="checkbox"/> CV1	0	100	1
<input checked="" type="checkbox"/> CV2	0	100	1
<input checked="" type="checkbox"/> CV3	0	100	1
<input checked="" type="checkbox"/> CV4	0	100	1
<input checked="" type="checkbox"/> CV5	0	100	1
<input checked="" type="checkbox"/> CV6	0	100	1
<input checked="" type="checkbox"/> CV7	0	100	1
<input checked="" type="checkbox"/> CV8	0	100	1

Item	Description
1	Select to enable use of the corresponding output.
2	Enter a value for the minimum value to be used to clamp CV (in engineering units).
3	Enter a value for the maximum value to be used to clamp CV (in engineering units).
4	Enter a rate that the CV is to change to a calculated value after initialization to provide bumpless transfer from initialization.

FOT100 - TagDescript

Clamp Limits

Maximum: 100

Minimum: 0

Display Limits

Maximum: 100

Minimum: 0

Initialize Primary Using:

☒ CV1 Initial Value

☐ Fixed Value (%)

0

On Bad Input CV:

☒ Copy Bad Value to Outputs

☐ Hold Last Good Value

< 1 2 >

Item	Description
1	Enter values to set the limits to use to clamp the CV.
2	Enter values to set the limits to display for the CV.
3	Select to use the CV1 initialization value (Inp_CV1InitVal) to set the initialization output (Out_CV_InitVal) when initialization is requested.
4	Select to use a fixed value (Cfg_FixedInitVal) to set the initialization output (Out_CV_InitVal) when initialization is requested. Enter a value to set the initialization value (Out_CVInitVal) if initialization is requested and a fixed value option is selected.
5	Select to pass through the bad value.
6	Select to hold last good value.

HMI Configuration Tab

FOT100 - TagDescript

TagDescript

Label: FOT100 Label

Tag: FOT100

Area name for security: Area01

CV Unit: %

Output CV Label EU

CV1: Output 1 %

CV2: Output 2 %

CV3: Output 3 %

CV4: Output 4 %

CV5: Output 5 %

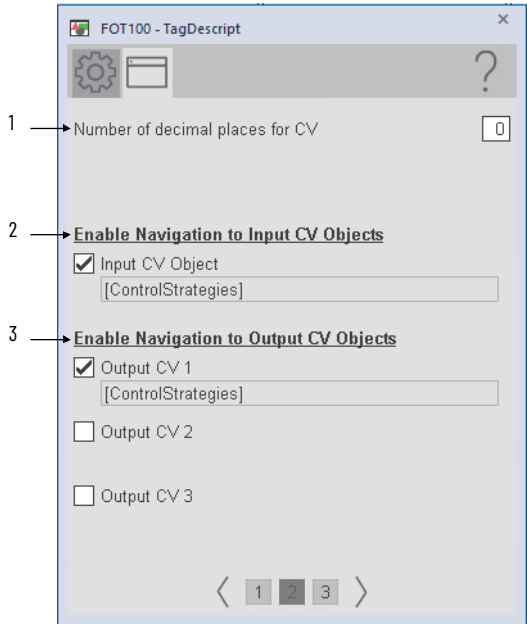
CV6: Output 6 %

CV7: Output 7 %

CV8: Output 8 %

< 1 2 3 >

Item	Description
1	Enter the description of the output name.
2	Enter the units that are used with the CV.
3	Sets the CV engineering units to use for display.



Item	Description
1	Enter the number of decimal places to be shown for CV.
2	Select to permit navigation to an input CV object faceplate for which you typed a tag name.
3	Select to permit navigation to an output CV object faceplate for which you typed a tag name.

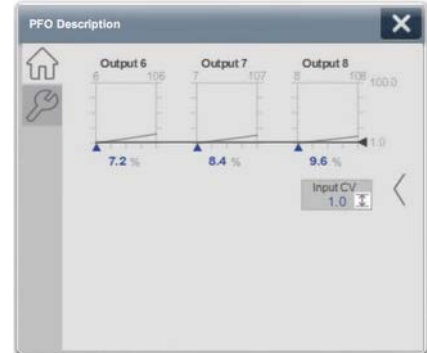
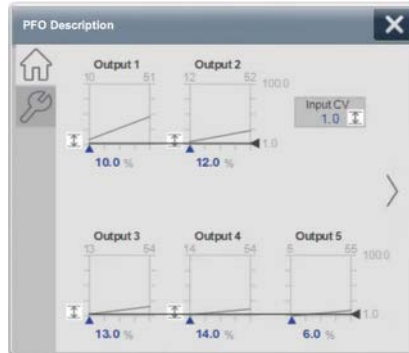
Studio 5000 View Designer Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 185](#) for descriptions of the features.

Operator Tab

If outputs 6, 7, and 8 are used by the instruction (in other words, if Cfg_HasCV6... Cfg_HasCV8 are 1), the Home tab has a second page that displays the information.



Maintenance Tab

PFO Description					
Rate of Change Limit (% /sec) 0.5					
	Ratio		Offset		
CV1	1.1	x	1.0	+	0.1 = 1.2
CV2	2.2	x	1.0	+	0.2 = 2.4
CV3	3.3	x	1.0	+	0.3 = 3.6
CV4	4.4	x	1.0	+	0.4 = 4.8
CV5	5.5	x	1.0	+	0.5 = 6.0
CV6	6.6	x	1.0	+	0.6 = 7.2
CV7	7.7	x	1.0	+	0.7 = 8.4
CV8	8.8	x	1.0	+	0.8 = 9.6

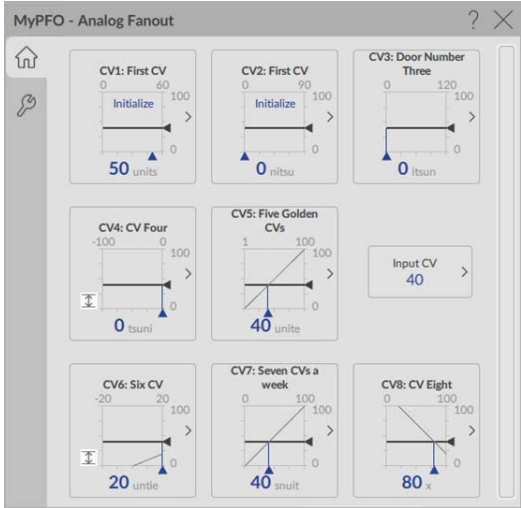
FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

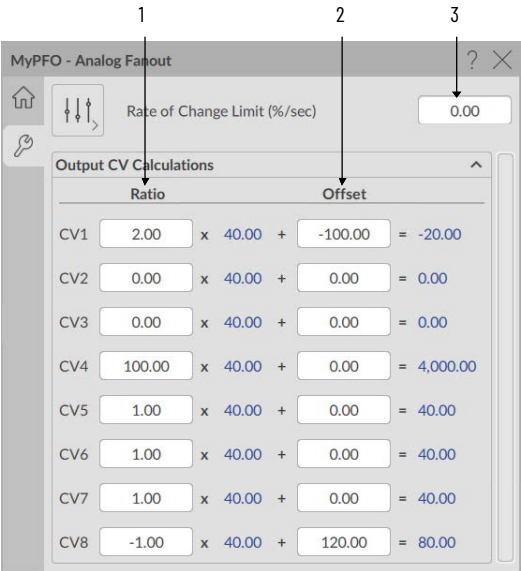
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [Basic Faceplate Attributes on page 44](#) for descriptions of the features.

Operator Tab

The Faceplate initially opens to the Operator (Home) tab. From here, an operator can monitor the device status and manually operate the device when it is in Operator mode. If outputs 6, 7, and 8 are used by the instruction (in other words, if Cfg_HasCV6... Cfg_HasCV8 are 1), the Home tab has a second page that displays the information



Maintenance Tab



Item	Description
1	Enter a value that sets the ratio to calculate each individual output. This value either sets the operator ratio (for example, OSet_CV1Ratio) or the configuration ratio (for example, Cfg_CV1Ratio) depending on the ratio source selection.
2	Enter a value that sets the offset to calculate each individual output. This value either sets the operator offset (for example, OSet_CV1Offset) or the configuration offset (for example, Cfg_CV1Offset) depending on the ratio source selection.
3	Operator setting for the Input CV rate of change limit (increasing or decreasing). If Cfg_MaxCVRoC = 0.0, then this parameter can be set to zero, which means the rate of change is not limited.

Advanced Engineering Tab - Output CV Configuration

Has CV	Minimum (EU)	Maximum (EU)	TakeupRate (EU/sec)
<input type="checkbox"/>	0.00	60.00	0.00
<input checked="" type="checkbox"/>	0.00	90.00	0.00
<input checked="" type="checkbox"/>	0.00	120.00	0.00
<input checked="" type="checkbox"/>	-100.00	0.00	100.00
<input checked="" type="checkbox"/>	1.00	100.00	0.50
<input checked="" type="checkbox"/>	-20.00	20.00	0.00
<input checked="" type="checkbox"/>	0.00	100.00	1.00
<input checked="" type="checkbox"/>	0.00	100.00	1.00

Clamp Limits (%)

Display Limits (%)

Item	Description
1	Select to enable use of the corresponding output.
2	Enter a value for the minimum value to be used to clamp CV (in engineering units).
3	Enter a value for the maximum value to be used to clamp CV (in engineering units).
4	Enter a rate that the CV is to change to a calculated value after initialization to provide bumpless transfer from initialization.

Advanced Engineering Tab - Clamp Limits

Clamp Limits (%)

Maximum 100.00

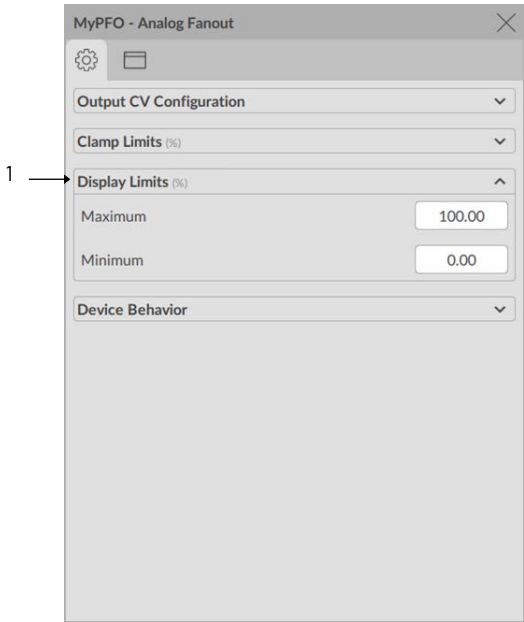
Minimum 0.00

Display Limits (%)

Device Behavior

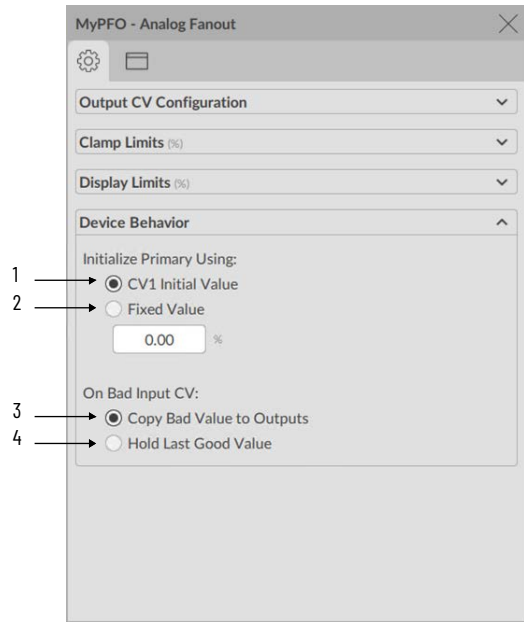
Item	Description
1	Enter values to set the limits to use to clamp the CV.

Advanced Engineering Tab - Display Limits



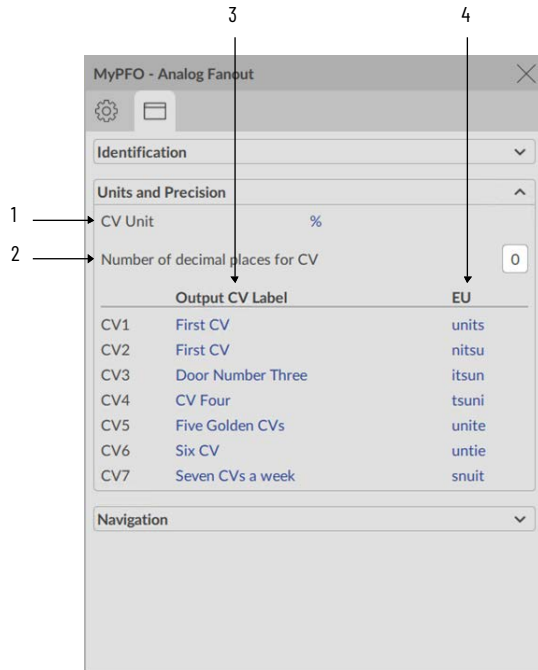
Item	Description
1	Enter values to set the limits to display for the CV.

Advanced Engineering Tab - Device Behavior



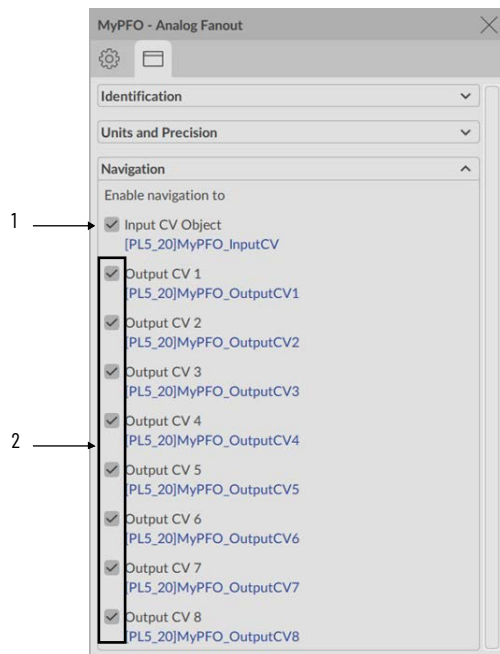
Item	Description
1	Select to use the CV1 initialization value (Inp_CV1InitVal) to set the initialization output (Out_CVInitializationVal) when initialization is requested.
2	Select to use a fixed value (Cfg_FixedInitVal) to set the initialization output (Out_CVInitializationVal) when initialization is requested. Enter a value to set the initialization value (Out_CVInitializationVal) if initialization is requested and a fixed value option is selected.
3	Select to pass through the bad value.
4	Select to hold last good value.

Advanced HMI Configuration Tab - Units and Precision



Item	Description
1	Display the units that are used with the CV.
2	Enter the number of decimal places to be shown for CV.
3	Display the description of the output name.
4	Display the CV engineering units to use for display.

Advanced HMI Configuration Tab - Navigation






Item	Description
1	Select to permit navigation to an input CV object faceplate for which you typed a tag name.
2	Select to permit navigation to an output CV object faceplate for which you typed a tag name.

Notes:

Process High or Low Selector (PHLS)

Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PHLs 	PHLS_GS 	GS_PHLs 	Standard High or Low Selector graphic symbol.

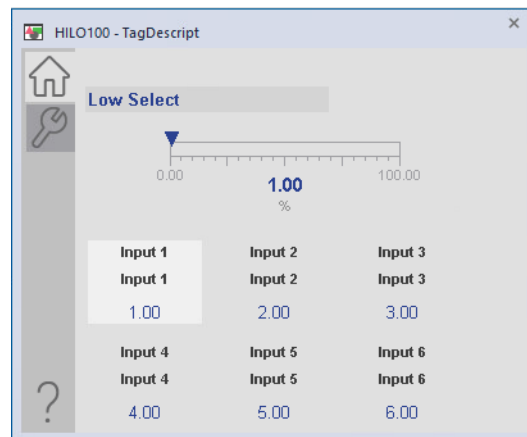
FactoryTalk View SE Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

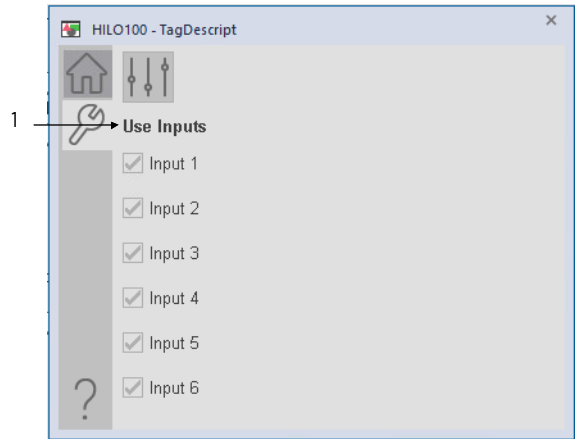
Operator Tab

The Operator tab shows the following information:

- Current operation (High or Low Select)
- Currently selected input (white highlight)
- Bar graph for clamp limits from minimum to maximum plus Output CV indicator
- Input CV values and Output CV value

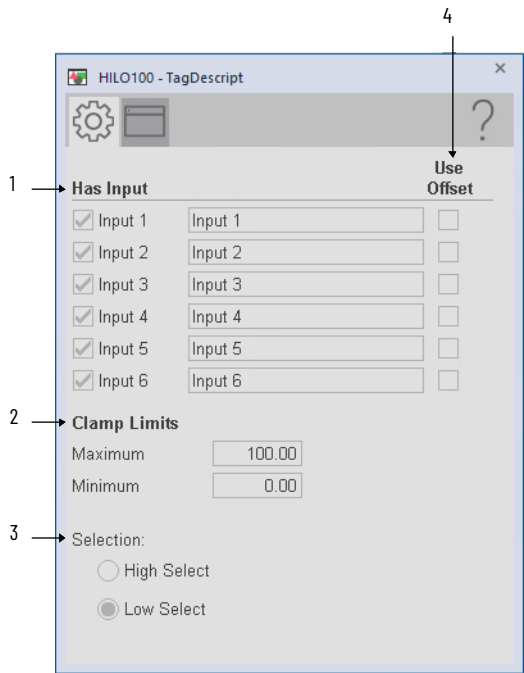


Maintenance Tab



Item	Description
1	Select to use a CV input. Clear a checkbox not to use the input and put the instruction in Maintenance Bypass.

Engineering Tab



Item	Description
1	Select 'Has Input' (CV1...CV6) where an input is connected.
2	Enter in the minimum and maximum to set the range for the selected input CV. If the selected input CV is below the minimum, it is clamped to the minimum value. If the selected input CV is above the maximum, it is clamped to the maximum value.
3	Select High Select to select the highest input CV value to pass to the output. Select Low Select to select the lowest input CV value to pass to the output.
4	Select a 'Use Offset' (CV1...CV6) to include the Kp*E offset in initialization calculation.

HMI Configuration Tab

HILO100 - TagDescript

TagDescript

Label: HILO100 Label

Tag: HILO100

Area name for security: Area01

Unit: %

Number of decimal places: 2

☐ Enable navigation to an object with more information

Enable Navigation to Output Object

☐ Output Object

< 1 2 >

Item	Description
1	Enter the engineering units for display on the HMI. Percent (%) is the default.
2	Enter in the number of decimal places that are displayed for the CV.
3	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.
4	Select to enable navigation to an output object.

HILO100 - TagDescript

Enable Navigation to Input Objects

☒ Input 1
[ControlStrategies]

☒ Input 2
[ControlStrategies]

☐ Input 3

☐ Input 4

☐ Input 5

☐ Input 6

< 1 2 >

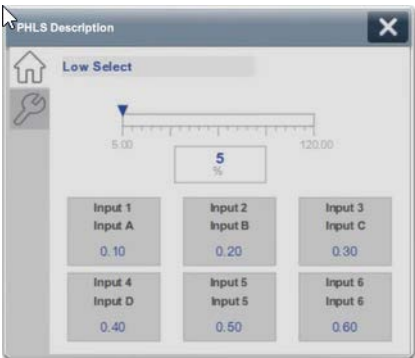
Item	Description
1	Select an input (CV1...CV6) or the Output CV to allow navigation to a specified object.
2	Enter the tag name for the corresponding input (CV1...CV6) or Output CV.

Studio 5000 View Designer Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 195](#) for descriptions of the features.

Operator Tab



Maintenance Tab



FactoryTalk Optix Faceplates

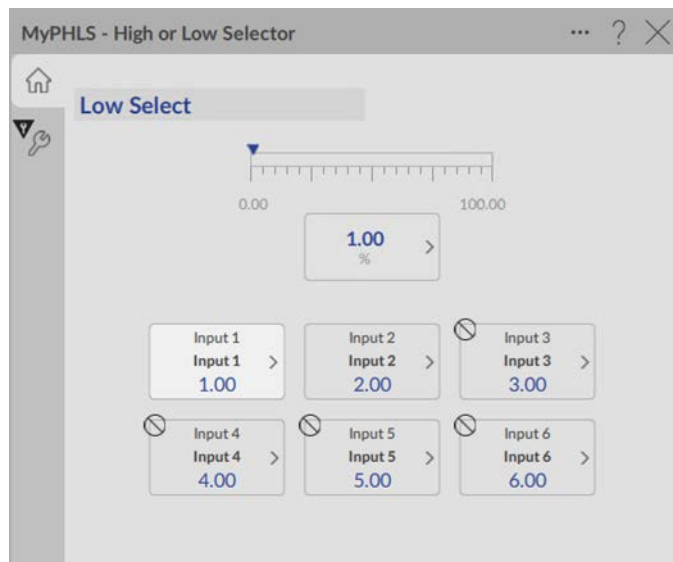
There are basic faceplate attributes that are common across all instructions. This object has no Trends, Diagnostics, or Alarms tabs.

FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates on page 195](#) for descriptions of the features.

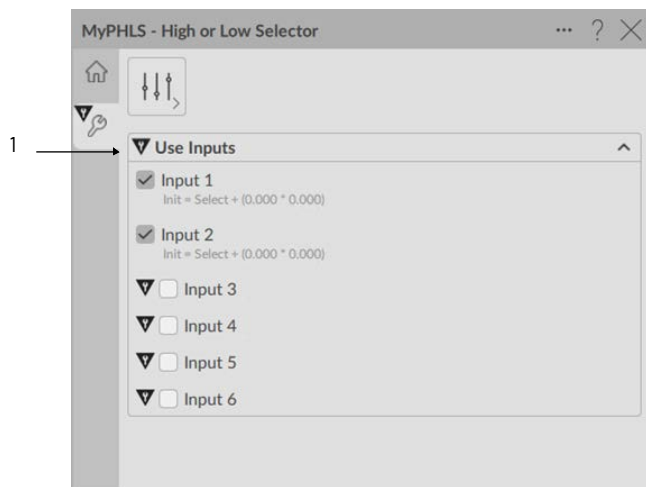
Operator Tab

The Operator tab shows the following information:

- Current operation (High or Low Select)
- Currently selected input (white highlight)
- Bar graph for clamp limits from minimum to maximum plus Output CV indicator
- Input CV values and Output CV value

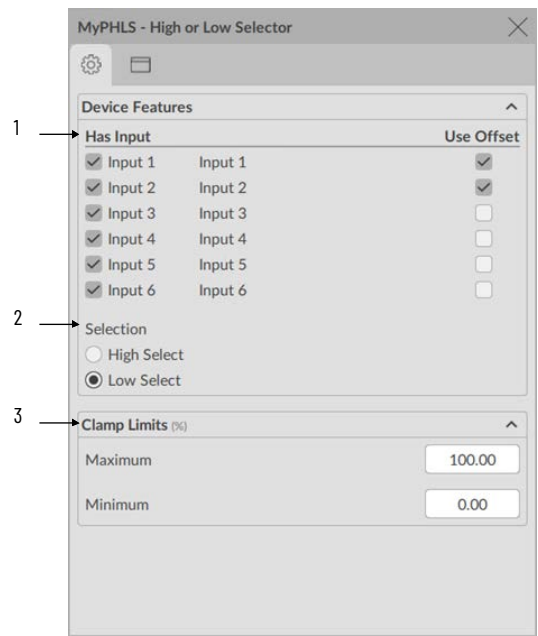


Maintenance Tab



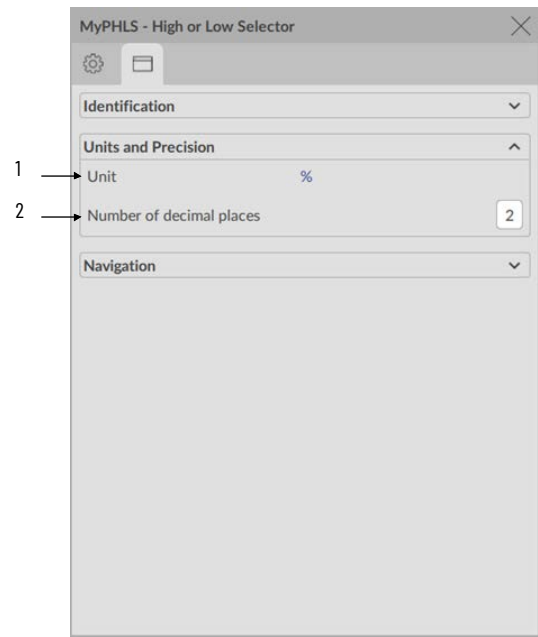
Item	Description
1	Select to use a CV input. Clear a checkbox not to use the input and put the instruction in Maintenance Bypass.

Advanced Engineering Tab



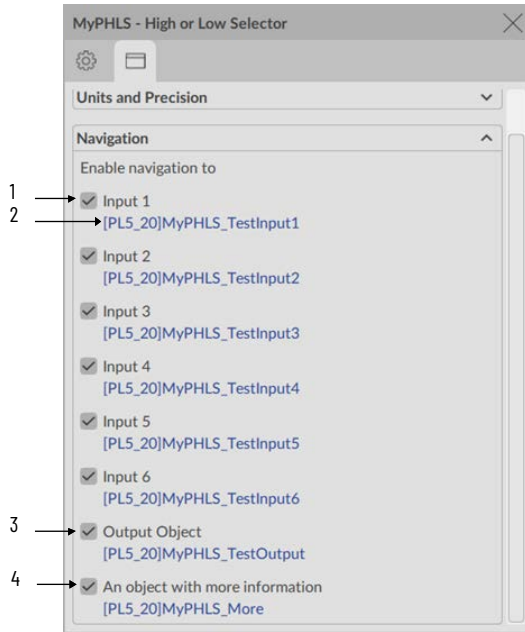
Item	Description
1	Left to Right: <ul style="list-style-type: none">Select 'Has Input' (CV1...CV6) where an input is connected.Select a 'Use Offset' (CV1...CV6) to include the Kp*E offset in initialization calculation.
2	Select High Select to select the highest input CV value to pass to the output. Select Low Select to select the lowest input CV value to pass to the output.
3	Enter in the minimum and maximum to set the range for the selected input CV. If the selected input CV is below the minimum, it is clamped to the minimum value. If the selected input CV is above the maximum, it is clamped to the maximum value.

Advanced HMI Configuration Tab - Units and Precision



Item	Description
1	The engineering units for display on the HMI. Percent (%) is the default.
2	Enter in the number of decimal places that are displayed for the CV.

Advanced HMI Configuration Tab - Navigation






Item	Description
1	Select an input (CV1...CV6) or the Output CV to allow navigation to a specified object.
2	Display the tag name for the corresponding input (CV1...CV6) or Output CV.
3	Select to enable navigation to an output object.
4	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.





Notes:

Process Interlock (PINTLK)

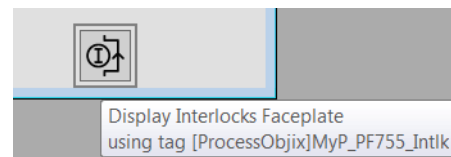
Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PINTLK 	raP_5_20_PINTLK_GS 	GS_PINTLK 	Standard Interlock Graphic Symbol.

Interlock States

Item	Description
	Not ready to run or energize. One or more interlock conditions are not OK.
	Ready to run or energize. One or more conditions that can be bypassed are not OK, but these conditions are bypassed. All conditions that cannot be bypassed are OK.
	Ready to run or energize. All interlock conditions are OK.
	Ready to run or energize, and all interlock conditions are OK, conditions that can be bypassed are being bypassed and the equipment is not shut down.

The overall graphic symbol includes a touch field that opens the faceplate. Hover the pointing device over the graphic symbol to display a tooltip that describes the function of the symbol (FactoryTalk View SE).



FactoryTalk View SE Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab

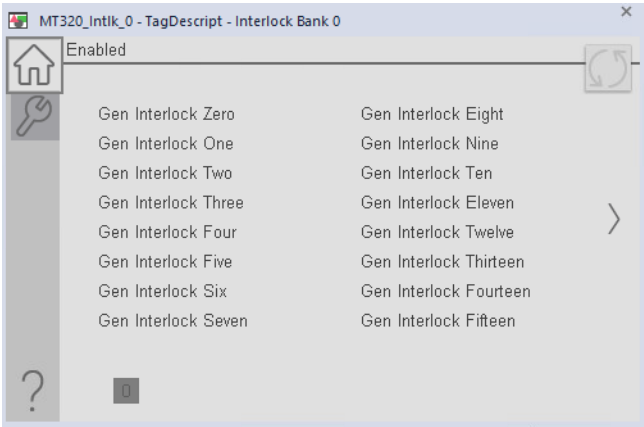
The Faceplate initially opens to the Operator (Home) Tab. From here, an operator can monitor the device status.

The Operator tab shows the following information:

- Interlock bypass status indicator (Enabled, Bypassed)
- Each configured interlock along with the current state of the interlock

If navigation is enabled, Select a condition to open the faceplate of the object that is associated with the condition.

The following figure shows the Operator tab in a non-bypassed condition with no faults.

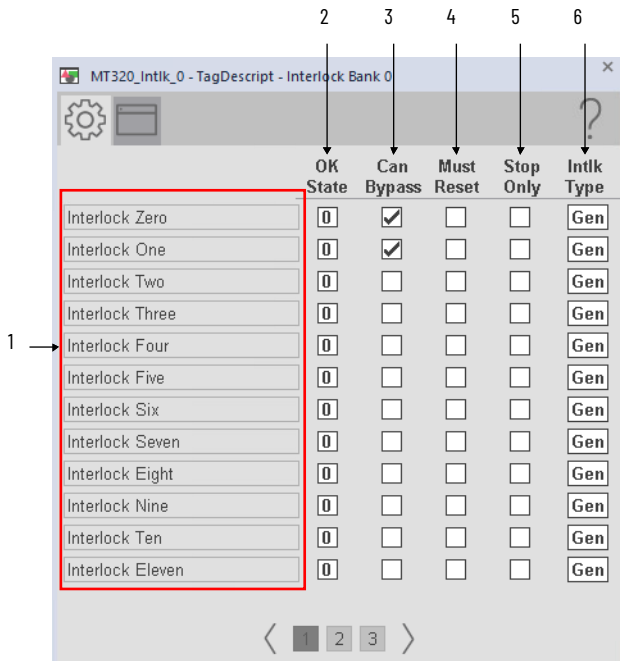


Maintenance Tab



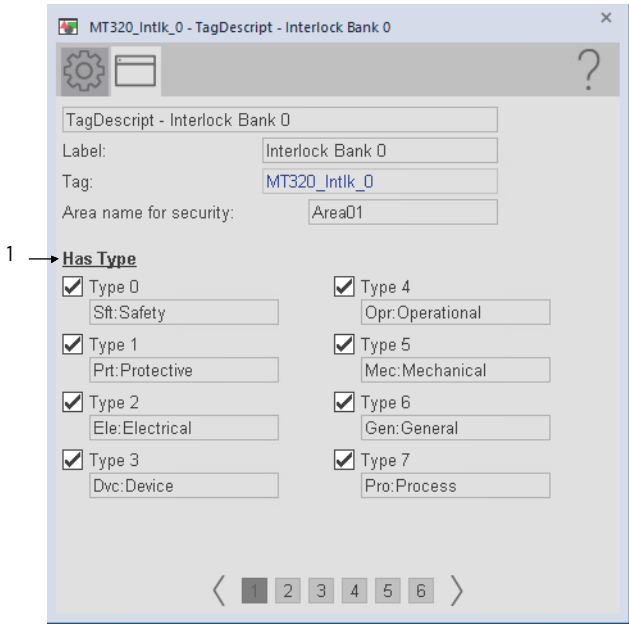
Item	Description
1	Select an interlock condition that can be bypassed, one that has a white checkbox, to enable bypass of that individual interlock.

Engineering Tab

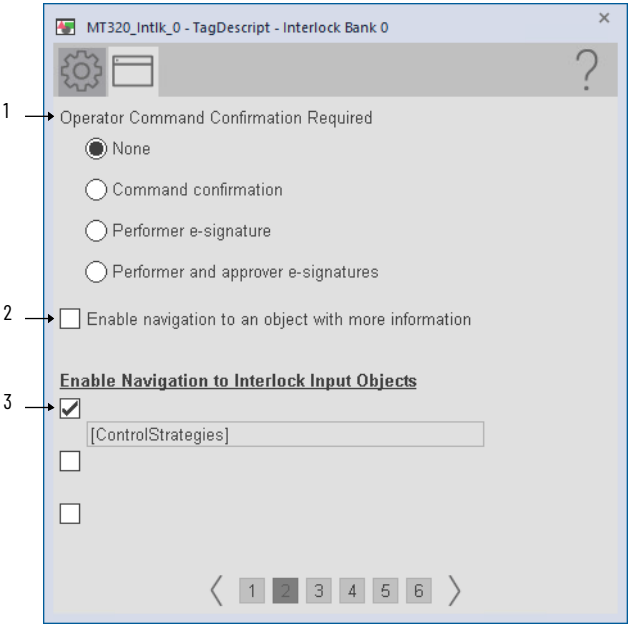


Item	Description
1	Enter the text description of each interlock condition used. Only the interlocks with text entered appear on the Operator tab of the faceplate.
2	Selects the state of the corresponding interlock that is the OK to Run state.
3	Select to indicate that the corresponding interlock can be bypassed.
4	Select to indicate that the corresponding interlock is latched and must be reset.
5	Select to configure the interlock for stop only. The object (motor) the interlock object is associated will trip when if this specific interlock is not OK, but it will not alarm.
6	Select to define the interlock type. The display opens to select an available interlock type that was defined in the HMI Configuration. <div></div>

HMI Configuration Tab



Item	Description
1	Select to enable the interlock type that can be defined in the Engineering tab. There are eight types that are configurable. The first three letters define the short name type followed by ':' and then the full type description.



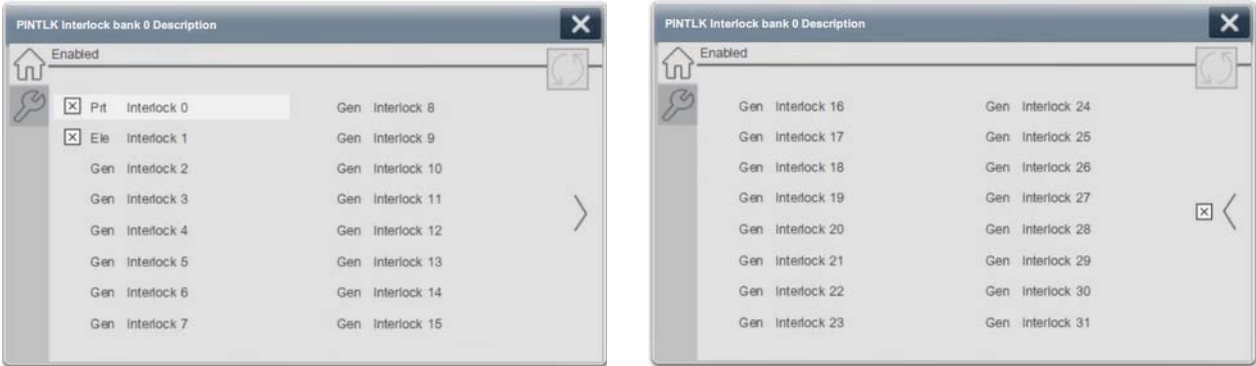
Item	Description
1	Select to configure operator command confirmation. This action would take place after any operator command.
2	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.
3	Select to allow navigation to interlock input objects.

Studio 5000 View Designer Faceplates

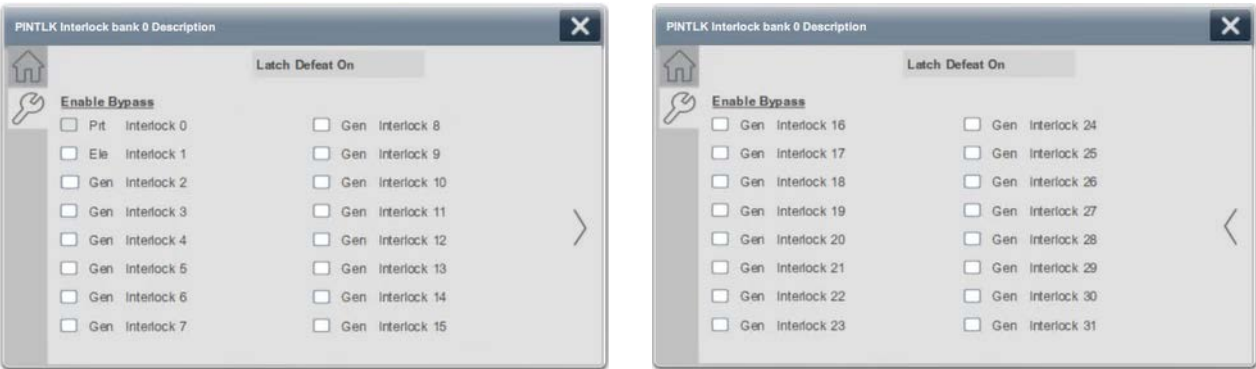
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 203](#) for descriptions of the features.

Operator Tab



Maintenance Tab



FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. This object has no Trends, Diagnostics, or Alarms tabs.

FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates on page 203](#) for descriptions of the features.

If Interlock Banks are used, all interlock banks will be shown on a single faceplate.

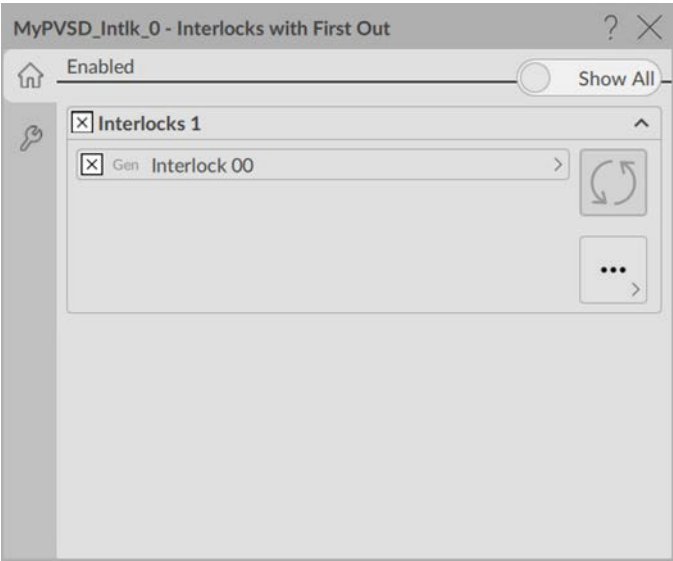
Operator Tab

The Faceplate initially opens to the Operator (Home) Tab. From here, an operator can monitor the device status.

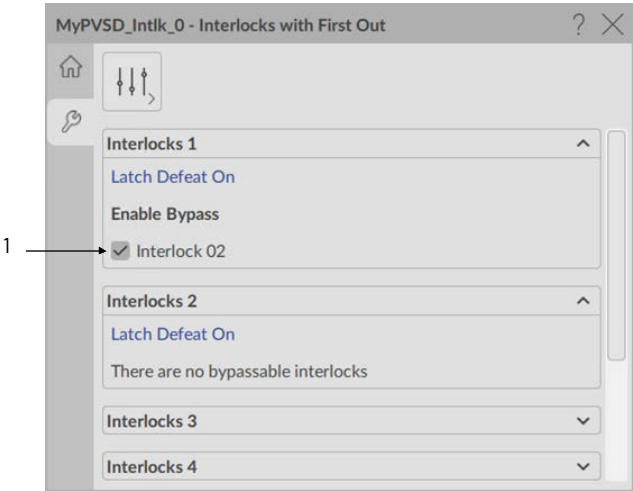
The Operator tab shows the following information:

- Interlock bypass status indicator (Enabled, Bypassed)
- Each configured interlock along with the current state of the interlock

If navigation is enabled, Select a condition to open the faceplate of the object that is associated with the condition.

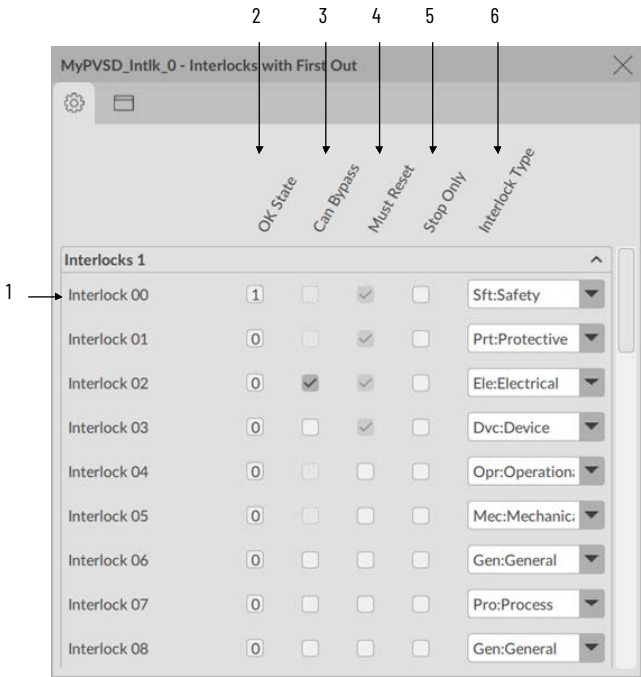


Maintenance Tab



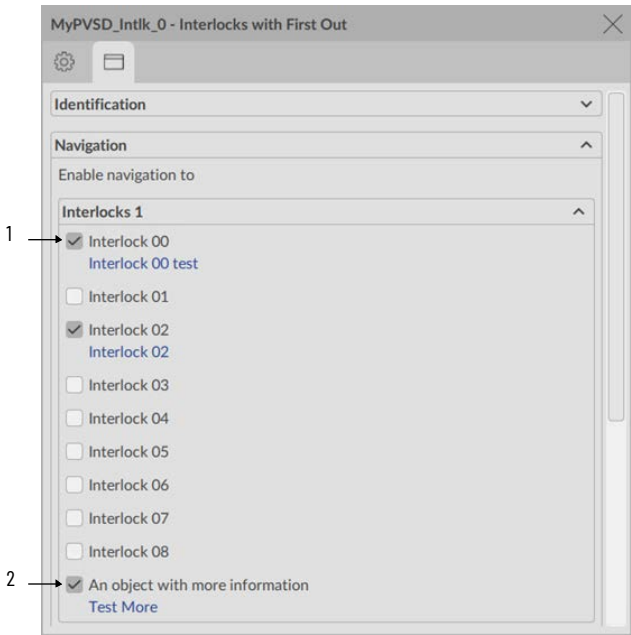
Item	Description
1	Select an interlock condition that can be bypassed, one that has a white checkbox, to enable bypass of that individual interlock.

Advanced Engineering Tab



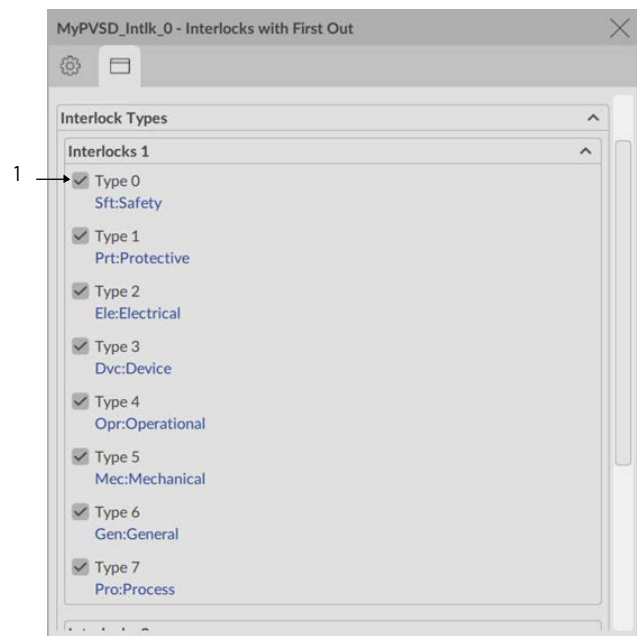
Item	Description
1	The text description of each interlock condition used. Only the interlocks with text entered appear on the Operator tab of the faceplate.
2	Selects the state of the corresponding interlock that is the OK to Run state.
3	Select to indicate that the corresponding interlock can be bypassed.
4	Select to indicate that the corresponding interlock is latched and must be reset.
5	Select to configure the interlock for stop only. The object (motor) the interlock object is associated will trip when if this specific interlock is not OK, but it will not alarm.
6	Select to define the interlock type. The display opens to select an available interlock type that was defined in the HMI Configuration. <div></div>

Advanced HMI Configuration Tab - Navigation



Item	Description
1	Select to allow navigation to interlock input objects.
2	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.

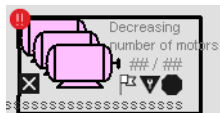

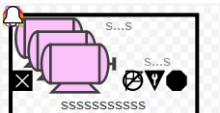
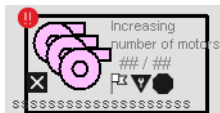
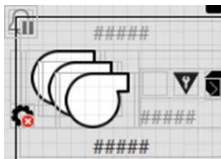
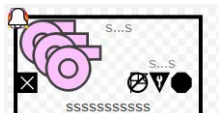



Advanced HMI Configuration Tab - Interlock Types



Item	Description
1	Select to enable the interlock type that can be defined in the Engineering tab. There are eight types that are configurable. The first three letters define the short name type followed by ':' and then the full type description.

Process Lead/Lag/Standby Motor Group (PLLS)

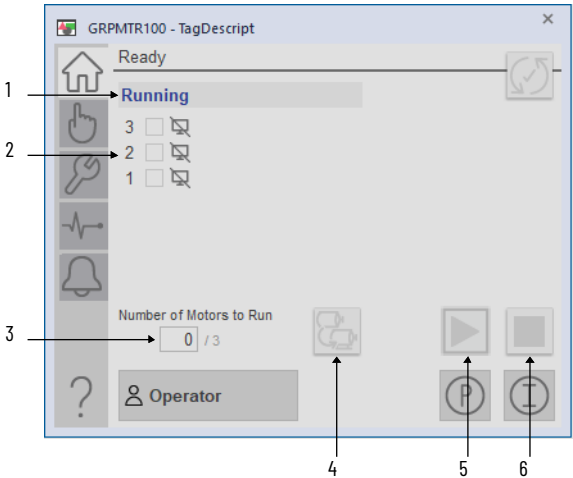
Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
<p>GO_PLLS_Motors</p> 	<p>raP_5_20_PLLS_GS_Motors</p> 		A group of motors.
<p>GO_PLLS_Blowers</p> 	<p>raP_5_20_PLLS_GS_Blowers</p> 		A group of blowers.
<p>GO_PLLS_Pumps</p> 	<p>raP_5_20_PLLS_GS_Pumps</p> 		A group of pumps

FactoryTalk View SE
Faceplates

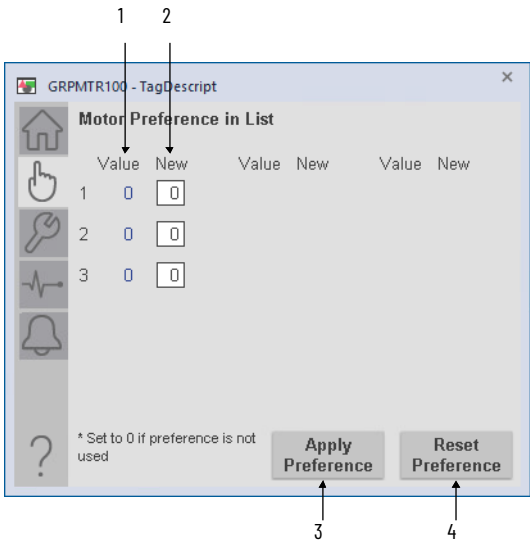
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



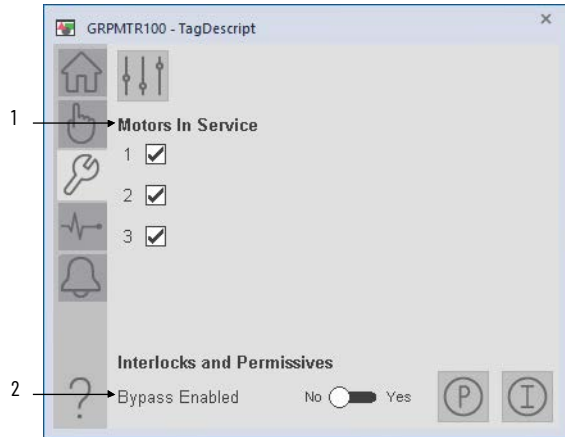
Item	Description
1	Motor state indicator.
2	Individual motor state indicators.
3	Enter a number between 0 and the maximum demand to indicate the number of motors to run.
4	Select to rotate motor assignments. The lead motor is demoted to the end of the list. Motors are started or stopped to satisfy Number of Motors to Run.
5	Select to start group.
6	Select to stop group. IMPORTANT: Motors stop in reverse order of starting unless First Started is First Stopped on the engineering tab is checked.

Manual Mode Tab



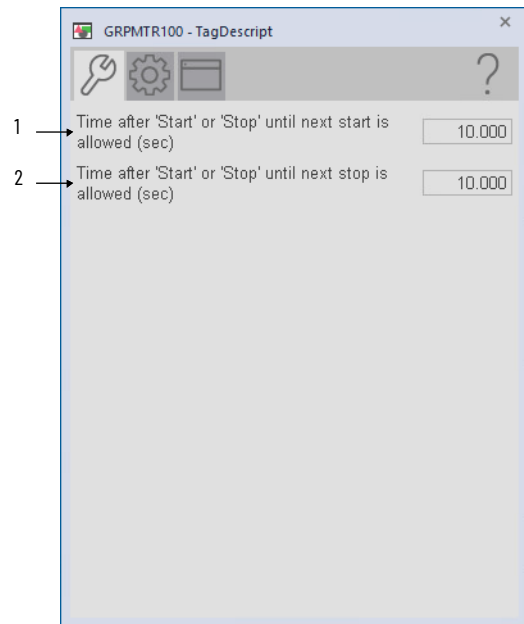
Item	Description
1	Displays the current preference for a motor.
2	Enter new preference value. The preference value determines the precedence when starting motors.
3	Apply the values in the new column to the preference values.
4	Reset preferences to previous.

Maintenance Tab



Item	Description
1	Select to place a motor in service (not in maintenance bypass). Clear the checkbox to place a motor out of service (maintenance bypass)
2	Select Yes to bypass checking of bypassable interlocks and permissives. Select No to enable checking of all interlocks and permissives.

Advanced Maintenance Tab



Item	Description
1	Enter the number of seconds after a start or stop that the next start is allowed.
2	Enter the number of seconds after a start or stop that the next stop is allowed.

Engineering Tab

GRPMTR100 - TagDescript

Number Of Motors

- 1 → Number of motors (pumps) in this Lead / Standby Group 3
- 2 → Maximum demand 2
- 3 → Minimum demand 0
- 4 → ☒ Allow 'Rotate' (demote lead) command
- 5 → ☒ Rotate assignments upon stopping all motors
- 6 → ☐ First started is first stopped
- 7 → ☐ Operator command resets fault
- 8 → ☐ External command resets fault
- 9 → ☐ In Override, bypass Interlocks and Permissives that can be bypassed

< 2 >

Item	Description
1	Enter the number of motors (2...30) in the group.
2	Enter the highest number of motors that can be running.
3	Enter the lowest number of motors that can be running.
4	Select to allow the Rotate command to rotate motor assignments.
5	Select to rotate the lead motor to the end of list upon stopping all motors.
6	Select so that the first motor that is started is the first motor that is stopped.
7	Select to allow the Operator Start or Stop command to reset any previous faults (Interlock Trip), then start or stop the group. Clear this checkbox to reset faults by using only the reset commands.
8	Select to allow the External Start or Stop command to reset any previous faults (Interlock Trip), then start or stop the group. Clear this checkbox to reset faults by using only the reset commands.
9	Select to bypass interlocks and permissives that are bypassable when in Override command source.

GRPMTR100 - TagDescript

1 ☐ Operator 'Stop' command always available

2 ☐ External 'Stop' command always available

3 ☒ Bumpless Program/Operator transition

4 ☐ Bumpless transition from Override/Hand to Program/Operator

5 ☒ **Motor Priority in list**
 set to 0 if priority is not used

1 ☐ 2 ☐ 3 ☐

Item	Description
1	Select (= 1) so that the OCmd_Stop has priority and is accepted at any time. If the Command Source is not Operator or Maintenance, the motor or drive requires a reset. Clear this checkbox (= 0) so that the OCmd_Stop works only in Operator or Maintenance command source.
2	Select (= 1) so that the XCmd_Stop has priority and is accepted at any time. If the Command Source is not External, the motor or drive requires a reset. Clear this checkbox (= 0) so that the XCmd_Stop only works when the command source is External.
3	Select to have Program settings (such as Speed Reference) track Operator settings in Operator command source, and have Operator settings track Program settings in Program command source.
4	Select to have Program and Operator Speed Reference track the Override Speed Reference in Override command source or the actual speed in Hand command source.
5	Enter the start priority within the list of the motors selected. Motors start in order of priority (0...31) and the higher numbers start first.

HMI Configuration Tab

GRPMTR100 - TagDescript

TagDescript

Label: GRPMTR100 Label

Tag: GRPMTR100

Area name for security: Area01

1 ☒ Enable navigation to permissive object

2 ☒ Enable navigation to interlock object

Alarm Configuration

3 ☒ Allow Operator to Shelve Alarm

4 ☒ Allow Maintenance to Disable Alarm

< 1 2 3 4 5 6 >

Item	Description
1	Select if a Permissive object is used with this motor. This check changes the Permissive indicator to a clickable button to open the Permissive faceplate. IMPORTANT: The name of the Permissive object in the controller must be the name of the object with the suffix '_Perm'. For example, if your P_LLS object has the name 'LLS123', then its Permissive object must be named 'LLS123_Perm'.
2	Select if an Interlock object is used with this group. Checking this box changes the Interlock indicator to a clickable button to open the Interlock faceplate. IMPORTANT: The name of the Interlock object in the controller must be the object name with the suffix '_Intlk'. For example, if your P_LLS object has the name 'LLS123', then its Interlock object must be named 'LLS123_Intlk'.
3	Select to allow Operator to shelve the alarm.
4	Select to allow Maintenance to disable the alarm.

GRPMTR100 - TagDescript

Operator Command Confirmation Required

1 ☒ None

☐ Command confirmation

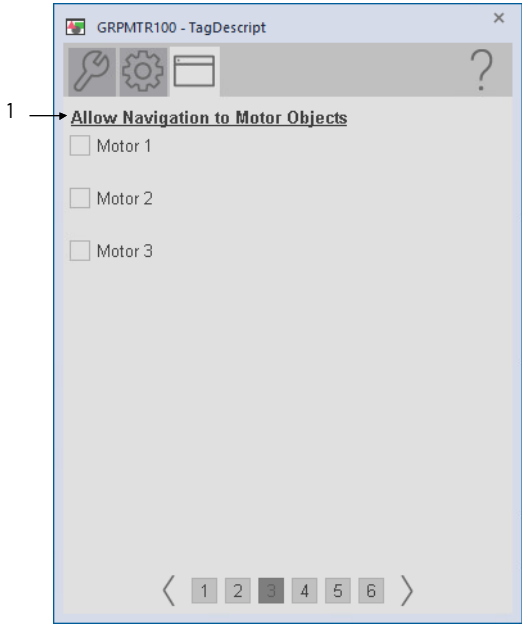
☐ Performer e-signature

☐ Performer and approver e-signatures

2 ☐ Enable navigation to an object with more information

< 1 2 3 4 5 6 >

Item	Description
1	Select to configure operator command confirmation. This action would take place after any operator command.
2	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.



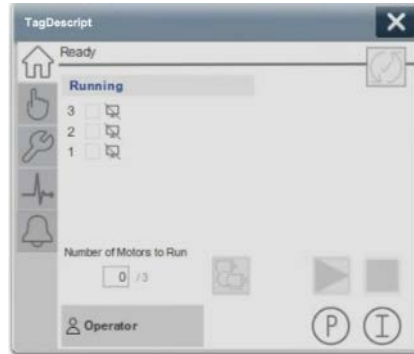
Item	Description
1	Select to allow navigation to motor objects. Additional pages are available if configured for more than 8 motors.

Studio 5000 View Designer Faceplates

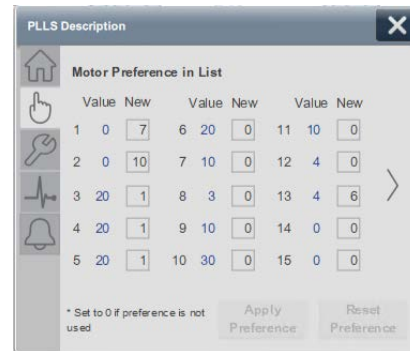
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 212](#) for descriptions of the features.

Operator Tab



Manual Mode



Maintenance Tab

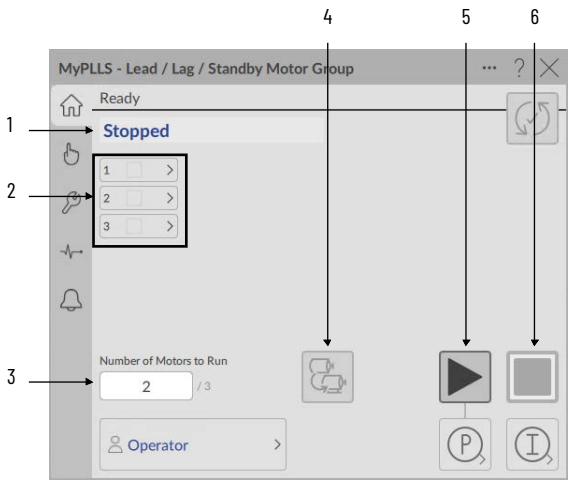


FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

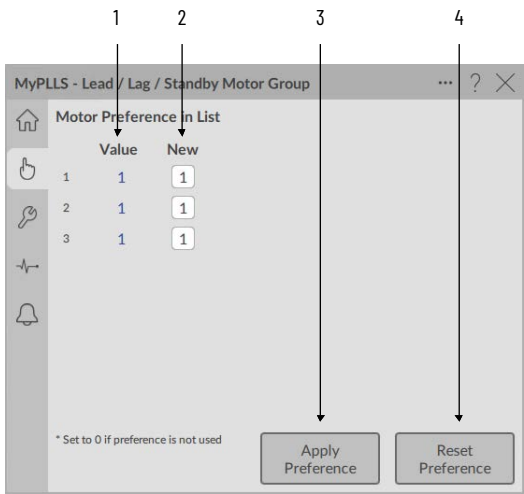
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [Basic Faceplate Attributes on page 44](#) for descriptions of the features.

Operator Tab



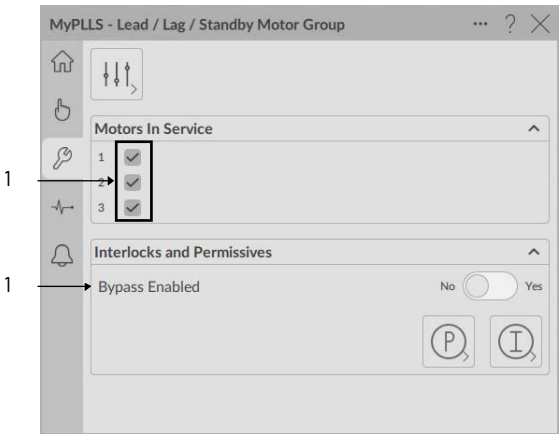
Item	Description
1	Motor state indicator.
2	Individual motor state indicators.
3	Enter a number between 0 and the maximum demand to indicate the number of motors to run.
4	Select to rotate motor assignments. The lead motor is demoted to the end of the list. Motors are started or stopped to satisfy Number of Motors to Run.
5	Select to start group.
6	Select to stop group. IMPORTANT: Motors stop in reverse order of starting unless First Started is First Stopped on the engineering tab is checked.

Manual Mode



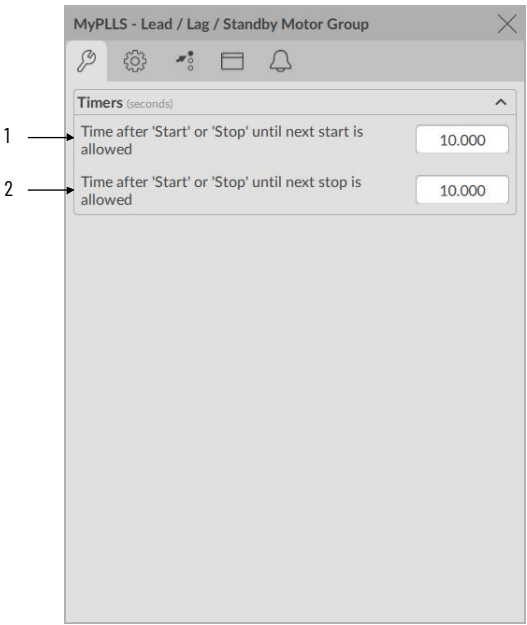
Item	Description
1	Displays the current preference for a motor.
2	Enter new preference value. The preference value determines the precedence when starting motors.
3	Apply the values in the new column to the preference values.
4	Reset preferences to previous.

Maintenance Tab



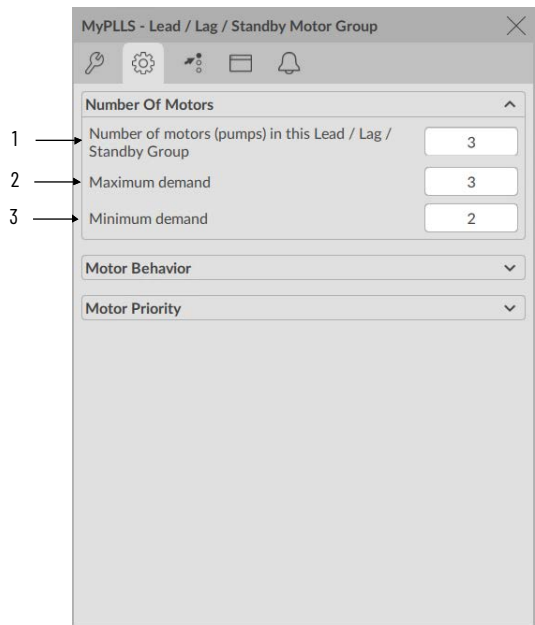
Item	Description
1	Select to place a motor in service (not in maintenance bypass). Clear the checkbox to place a motor out of service (maintenance bypass)
2	Select Yes to bypass checking of bypassable interlocks and permissives. Select No to enable checking of all interlocks and permissives.

Advanced Maintenance Tab



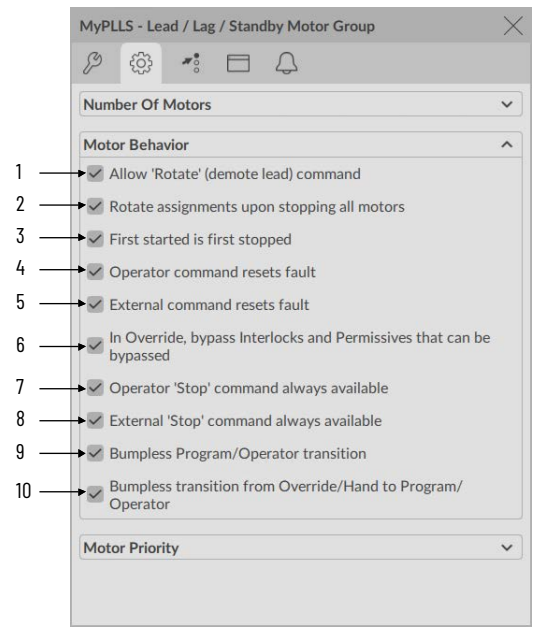
Item	Description
1	Enter the number of seconds after a start or stop that the next start is allowed.
2	Enter the number of seconds after a start or stop that the next stop is allowed.

Advanced Engineering Tab - Number Of Motors



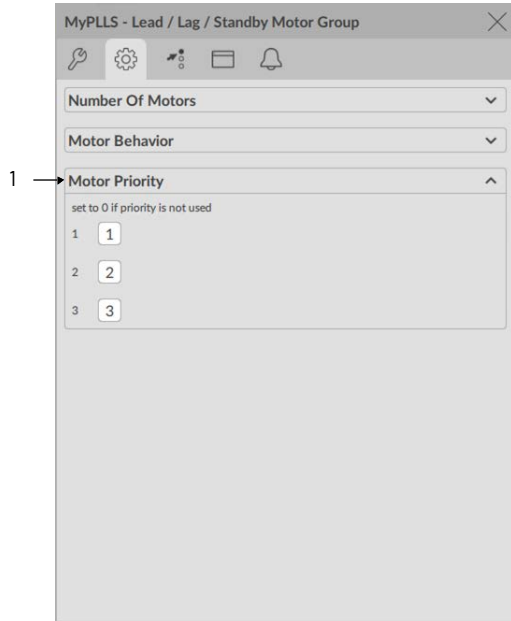
Item	Description
1	Enter the number of motors (2...30) in the group.
2	Enter the highest number of motors that can be running.
3	Enter the lowest number of motors that can be running.

Advanced Engineering Tab - Motor Behavior



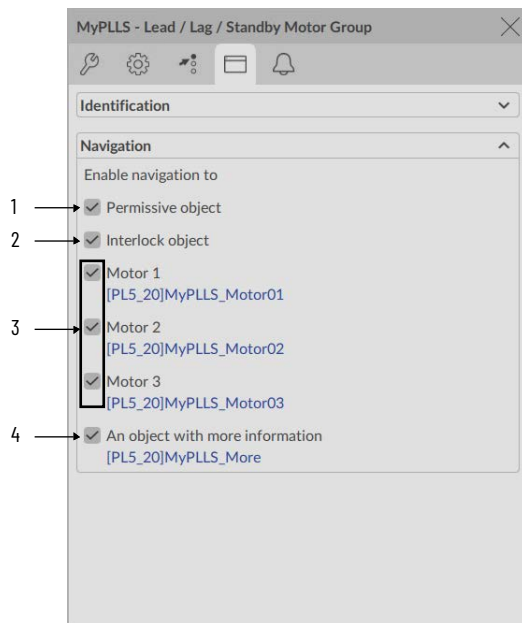
Item	Description
1	Select to allow the Rotate command to rotate motor assignments.
2	Select to rotate the lead motor to the end of list upon stopping all motors.
3	Select so that the first motor that is started is the first motor that is stopped.
4	Select to allow the Operator Start or Stop command to reset any previous faults (Interlock Trip), then start or stop the group. Clear this checkbox to reset faults by using only the reset commands.
5	Select to allow the External Start or Stop command to reset any previous faults (Interlock Trip), then start or stop the group. Clear this checkbox to reset faults by using only the reset commands.
6	Select to bypass interlocks and permissives that are bypassable when in Override command source.
7	Select (= 1) so that the OCmd.Stop has priority and is accepted at any time. If the Command Source is not Operator or Maintenance, the motor or drive requires a reset. Clear this checkbox (= 0) so that the OCmd.Stop works only in Operator or Maintenance command source.
8	Select (= 1) so that the XCmd.Stop has priority and is accepted at any time. If the Command Source is not External, the motor or drive requires a reset. Clear this checkbox (= 0) so that the XCmd.Stop only works when the command source is External.
9	Select to have Program settings (such as Speed Reference) track Operator settings in Operator command source, and have Operator settings track Program settings in Program command source.
10	Select to have Program and Operator Speed Reference track the Override Speed Reference in Override command source or the actual speed in Hand command source.

Advanced Engineering Tab - Motor Priority



Item	Description
1	Enter the start priority within the list of the motors selected. Motors start in order of priority (0...31) and the higher numbers start first.

Advanced HMI Configuration Tab

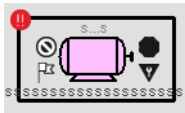
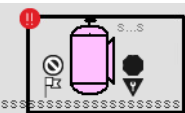
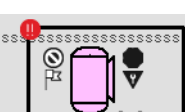
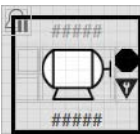
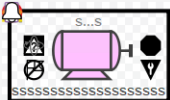
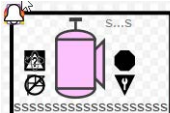


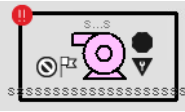

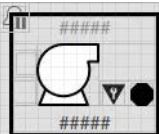

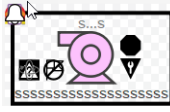



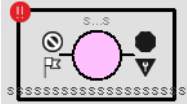



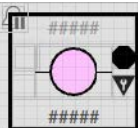
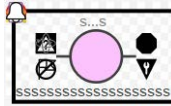

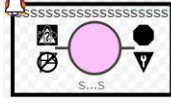





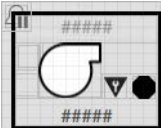

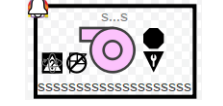


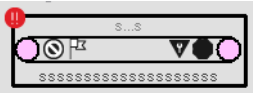
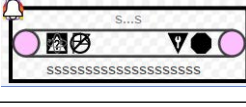
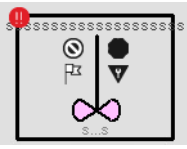

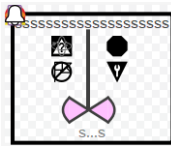
Item	Description
1	Select if a Permissive object is used with this motor. This check changes the Permissive indicator to a clickable button to open the Permissive faceplate. IMPORTANT: The name of the Permissive object in the controller must be the name of the object with the suffix '_Perm'. For example, if your PLLS object has the name 'LLS123', then its Permissive object must be named 'LLS123_Perm'.
2	Select if an Interlock object is used with this group. Checking this box changes the Interlock indicator to a clickable button to open the Interlock faceplate. IMPORTANT: The name of the Interlock object in the controller must be the object name with the suffix '_Intlk'. For example, if your PLLS object has the name 'LLS123', then its Interlock object must be named 'LLS123_Intlk'.
3	Select to allow navigation to motor objects. Additional pages are available if configured for more than 8 motors.
4	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.



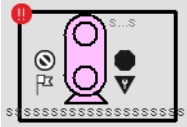
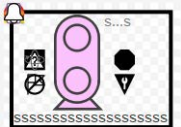


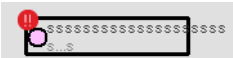



Notes:

Process Motor (Power Discrete) (PMTR)

Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
<p>GO_PMTR_R</p>  <p>GO_PMTR_U</p>  <p>GO_PMTR_D</p> 	<p>PMTR_GS_Motor_R</p> 	<p>GS_PMTR_R</p>  <p>GS_PMTR_U</p>  <p>GS_PMTR_D</p> 	<p>Motors operate in different positions: right, up, and down.</p>
<p>GO_PMTR_Pump_R</p>  <p>GO_PMTR_Pump_L</p>  <p>GO_PMTR_Pump_U</p> 	<p>PMTR_GS_Pumps</p> 	<p>GS_PMTR_Pump_R</p>  <p>GS_PMTR_Pump_L</p>  <p>GS_PMTR_Pump_U</p> 	<p>Pumps operate in several positions: right, left, and up</p>

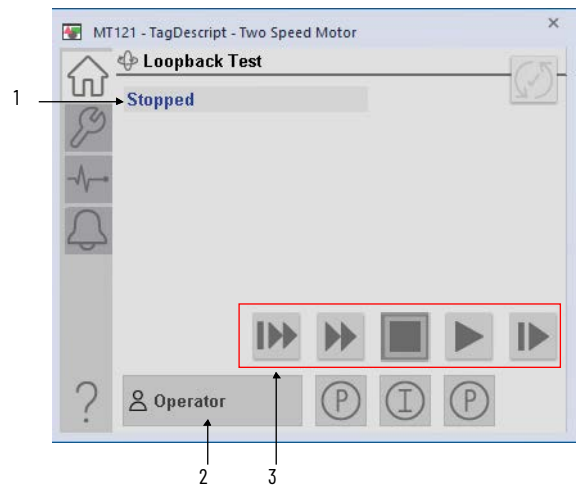
FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
<p>GO_PMTR_Inline_U</p>  <p>GO_PMTR_Inline_L</p>  <p>GO_PMTR_Inline_D</p>  <p>GO_PMTR_Inline_R</p> 	<p>PMTR_GS_Inline_Motor</p> 	<p>GS_PMTR_Inline_U</p>  <p>GS_PMTR_Inline_L</p>  <p>GS_PMTR_Inline_D</p>  <p>GS_PMTR_Inline_R</p> 	<p>Inline motors operate in several positions: up, left, down, and right.</p>
<p>GO_PMTR_Blower_R</p>  <p>GO_PMTR_Blower_L</p>  <p>GO_PMTR_Blower_U</p>  <p>GO_PMTR_Blower_D</p> 	<p>PMTR_GS_Blowers</p> 	<p>GS_PMTR_Blower_R</p>  <p>GS_PMTR_Blower_L</p>  <p>GS_PMTR_Blower_U</p>  <p>GS_PMTR_Blower_D</p> 	<p>Blowers operate in different positions: right, left, up, and down.</p>
<p>GO_PMTR_Conveyor_R</p> 	<p>—</p>	<p>GS_PMTR_Conveyor_R</p> 	<p>Conveyor that is shown as a Graphic Symbol.</p>
<p>GO_PMTR_Agitator_D</p> 	<p>PMTR_GS_Agitator</p> 	<p>GS_PMTR_Agitator_D</p> 	<p>Agitator that is shown as a Graphic Symbol</p>

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PMTR_Mixer_U 	—	GS_PMTR_Mixer_U 	Mixer that is shown as a Graphic Symbol.
GO_PMTR_RPump_U 	—	GS_PMTR_RotaryPump_U 	Rotary gear pump that is shown as a Graphic Symbol.
GO_PMTR_Fan_D 	—	GS_PMTR_Fan_D 	Fan that is shown as a Graphic Symbol.
GO_PMTR_L1 	—	—	Indicator with label.
GO_PMTR_L1_Motor 	—	—	Motor indicator
GO_PMTR_L1_Pump 	—	—	Pump indicator
GO_PMTR_L1_Blower 	—	—	Blower indicator

FactoryTalk View SE
 Faceplates

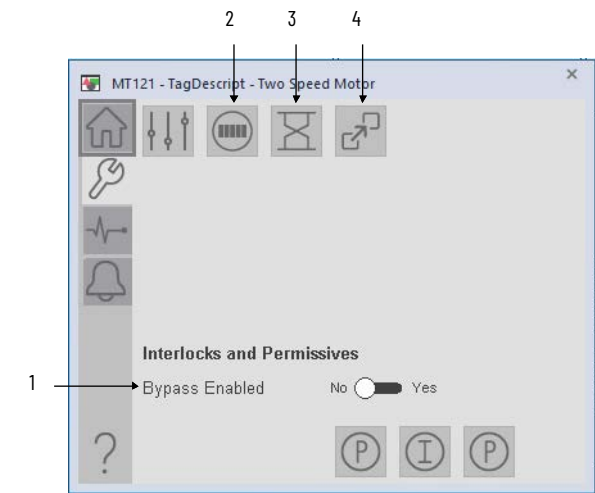
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



Item	Description
1	Motor state (stopping, stopped, starting, or running)
2	Current command source (Program, Operator, Override, Maintenance, or Hand)
3	Motor command buttons. The buttons change based on the motor configuration.
	Start Forward Speed 1
	Start Forward Speed 2
	Jog Forward Speed 1
	Jog Forward Speed 2
	Stop
	Start Reverse
	Jog Reverse

Maintenance Tab



Item	Description
1	Select Yes to bypass checking of bypassable interlocks and permissives. Select No to enable checking of all interlocks and permissives.
2	Select to open the runtime faceplate. IMPORTANT: This option is only available if 'Enable navigation to run time object' on the HMI Configuration tab is checked.
3	Select to open the Restart Inhibit faceplate. IMPORTANT: This option is only available if 'Enable navigation to restart inhibit object' on the HMI Configuration tab is checked.
4	Select to open the device object faceplate. IMPORTANT: This option is only available if 'Enable navigation to device object' on the HMI Configuration tab is checked.

Advanced Maintenance Tab

MT121 - TagDescript - Two Speed Motor

1 → Time to pulse Out_Reset to clear fault (sec) 2.000

2 → Time after 'Start' for feedback before fault (sec) 15.000

3 → Time after 'Stop' for feedback before fault (sec) 15.000

4 → Maximum jog time (sec) 0.000
0=unlimited

Item	Description
1	Enter the time for the reset output to be pulsed.
2	Enter the time to allow the run feedback to show that the motor has started before raising a fail to start alarm.
3	Enter the time to allow the run feedback to show that the motor has stopped before raising a Fail to Stop alarm.
4	Enter the maximum time to allow the motor to jog. Enter zero to allow unlimited jog time.

Engineering Tab

MT121 - TagDescript - Two Speed Motor

1 → Motor Type
☐ Single Speed Motor
☐ Reversing Motor
☒ Two Speed Motor

2 → ☐ Motor has Run Feedback

3 → ☒ Motor can Start speed 1

4 → ☒ Motor can Start speed 2

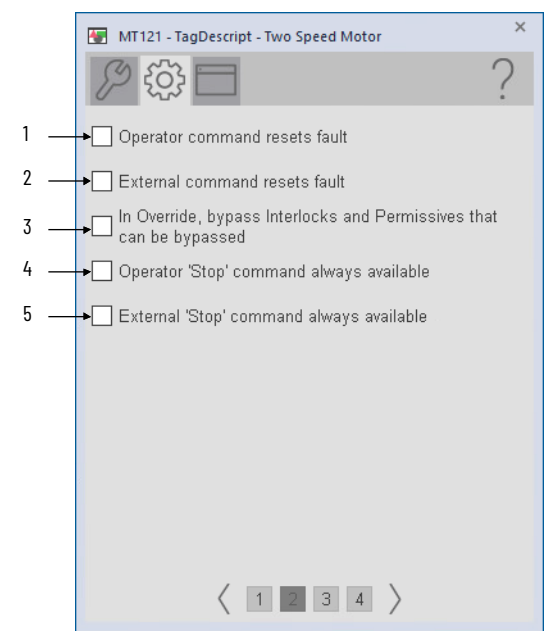
5 → ☒ Motor can Jog

6 → ☒ Motor can Jog speed 2

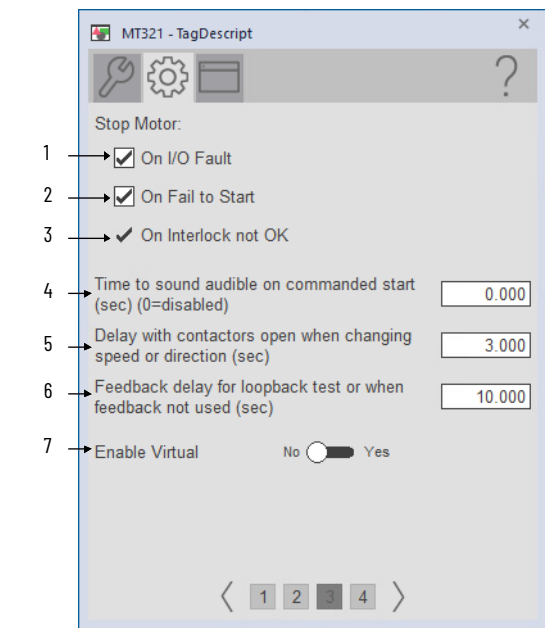
7 → ☒ Motor can be stopped

< 1 2 3 4 >

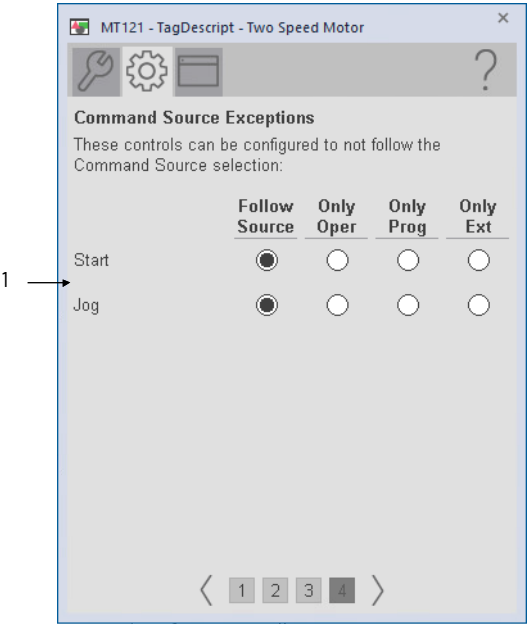
Item	Description
1	Select the motor type.
2	Select if the motor provides run feedback to Inp_SlowRunFdbk and Inp_FastRunFdbk. Clear this checkbox if there is no run feedback. IMPORTANT: This check places the device in Maintenance Bypass unless 'Use Run Feedback' on the Maintenance tab is checked.
3	Select to allow the motor to start at speed 1.
4	Select to allow the motor to start at speed 2.
5	Select to allow the motor to be jogged.
6	Select to allow the motor to jog at speed 2.
7	Select to allow the motor to be stopped.



Item	Description
1	Select to allow the Operator commands for Start Slow, Start Fast, or Stop to reset any previous faults (I/O fault, Fail to Start, Fail to Stop, Interlock Trip). Then start or stop motor. Clear this checkbox to reset faults only using the reset commands.
2	Select to allow the External commands for Start Slow, Start Fast, or Stop to reset any previous faults (I/O fault, Fail to Start, Fail to Stop, Interlock Trip). Then start or stop motor. Clear this checkbox to reset faults only using the reset commands.
3	Select to bypass bypassable interlocks and permissives in Override command source.
4	Select to have the Operator Stop command available in any command source. Clear this checkbox to have the Operator Stop command available only in the Operator and Maintenance command sources.
5	Select to have the External Stop command available in any command source. Clear this checkbox to have the External Stop command available only in the Operator and Maintenance command sources.

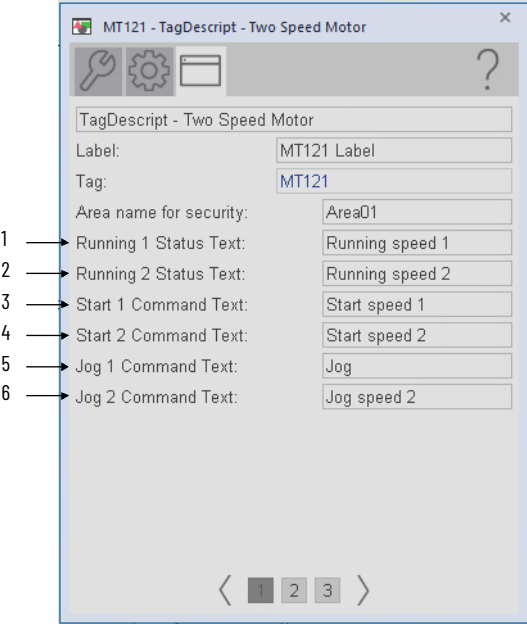


Item	Description
1	Select to stop the motor if an I/O fault is detected. Clear this checkbox to show only the I/O fault status/alarm and not stop the motor if an I/O fault is detected.
2	Select to stop the motor if a fail to Start fault is detected. Clear this checkbox to show only the Fail to Start status/alarm and not stop the motor if a fail to Start fault is detected.
3	The motor always stops on interlock not OK. This item cannot be cleared. It is displayed as a reminder that the interlock function always stops the motor.
4	Enter the amount of time to sound the audible alarm when the motor starts.
5	Enter the time delay between when the run output has turned off for one speed and when it is turned on for the other speed.
6	Enter the time delay (in seconds) for the running or stopped status to be echoed back when the virtual is enabled or when run feedback is not used.
7	Select yes to enable virtual.

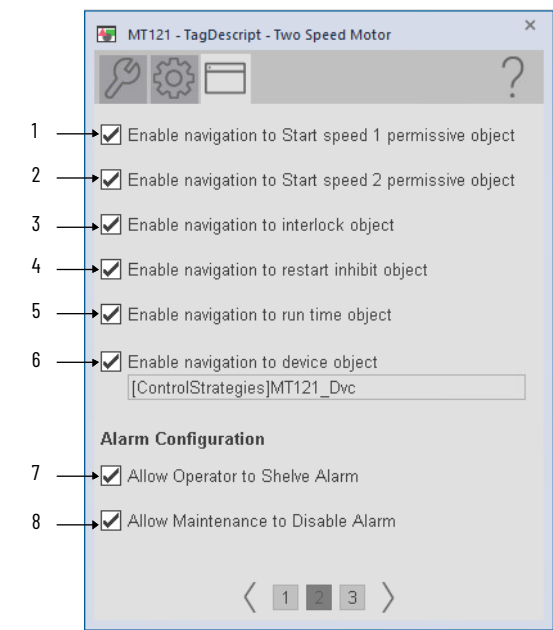


Item	Description
1	Select one of the four options to determine the source of each command (start and jog). If any option but “Follow Source” is selected, then that source will be the only source allowed for that command.

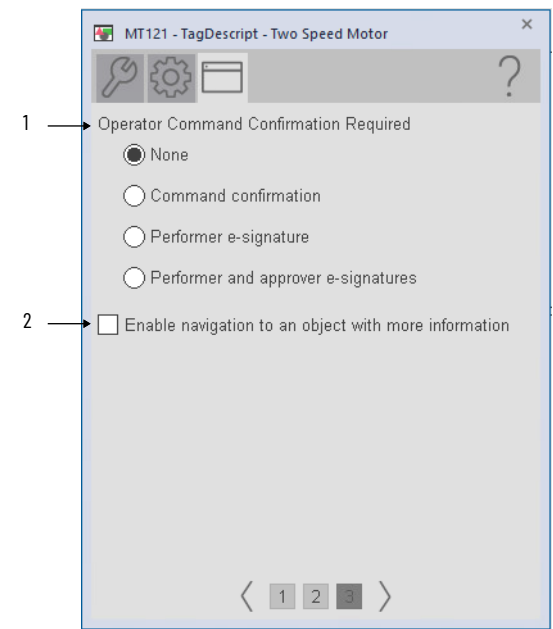
HMI Configuration Tab



Item	Description
1	Enter the text to display when the motor is running at speed 1.
2	Enter the text to display when the motor is running at speed 2.
3	Enter the text to display when the motor is starting at speed 1.
4	Enter the text to display when the motor is starting at speed 2.
5	Enter the text to display when the motor is jogging at speed 1.
6	Enter the text to display when the motor is jogging at speed 2.



Item	Description
1	Select if Start Speed 1 permissive object is used with this motor. <ul style="list-style-type: none"> For 2 Speed Motors, speed 1 is Slow and Speed 2 is Fast. For Reversing Motors, speed 1 is Forward and Speed 2 is Reverse. <p>IMPORTANT: The name of the Permissive object in the controller must be the name of the object with the suffix '_1Perm'. For example, if your PMTR object has the name 'Motor123', then its Start Speed 1 object must be named 'Motor123_1Perm'.</p>
2	Select if Start Speed 2 permissive object is used with this motor. <ul style="list-style-type: none"> For 2 Speed Motors, speed 1 is Slow and Speed 2 is Fast. For Reversing Motors, speed 1 is Forward and Speed 2 is Reverse. <p>IMPORTANT: The name of the Permissive object in the controller must be the name of the object with the suffix '_2Perm'. For example, if your PMTR object has the name 'Motor123', then its Permissive object must be named 'Motor123_2Perm'.</p>
3	Select if an interlock object is used with this motor. <p>IMPORTANT: The name of the Interlock object in the controller must be the name of the object with the suffix '_Intlk_0'. For example, if your PMTR object has the name 'Motor123', then its Interlock object must be named 'Motor123_Intlk_0'.</p>
4	Select if a restart inhibit object is used with this motor. <p>IMPORTANT: The name of the Restart Inhibit object in the controller must be the name of the object with the suffix '_Reslnh'. For example, if your PMTR object has the name 'Motor123', then its Restart Inhibit object must be named 'Motor123_Reslnh'.</p>
5	Select if a run time object is used with this motor. <p>IMPORTANT: The name of the Run Time object in the controller must be the name of the object with the suffix '_RunTime'. For example, if your PMTR object has the name 'Motor123', then its Run Time object must be named 'Motor123_RunTime'.</p>
6	Select to allow navigation to the device object.
7	Select to allow Operator to shelve the alarm.
8	Select to allow Maintenance to disable the alarm.



Item	Description
1	Select to configure operator command confirmation. This action would take place after any operator command.
2	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.

Studio 5000 View Designer Faceplates

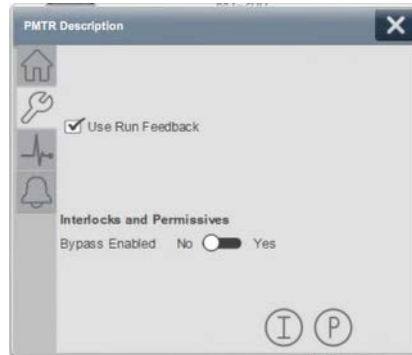
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 226](#) for descriptions of the features.

Operator Tab



Maintenance Tab

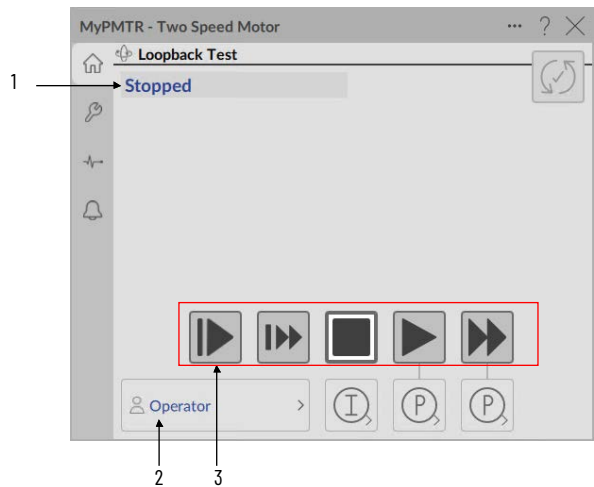


FactoryTalk Optix
Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

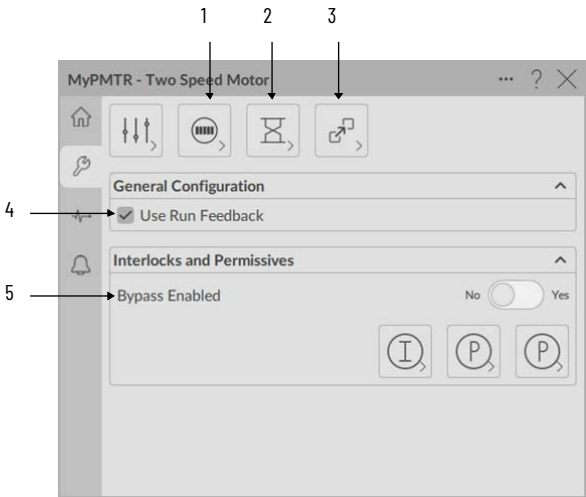
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates on page 226](#) for descriptions of the features.

Operator Tab



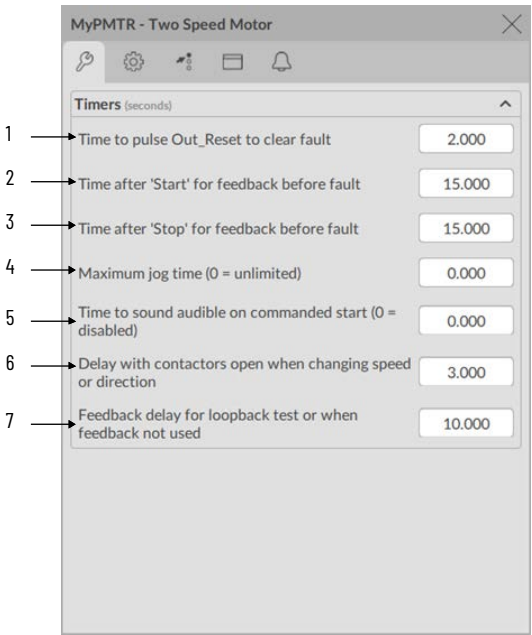
Item	Description
1	Motor state (stopping, stopped, starting, or running)
2	Current command source (Program, Operator, Override, Maintenance, or Hand)
3	Motor command buttons. The buttons and locations change based on the motor configuration.
	Start Forward Speed 1
	Start Forward Speed 2
	Jog Forward Speed 1
	Jog Forward Speed 2
	Stop
	Start Reverse.
	Jog Reverse.

Maintenance Tab



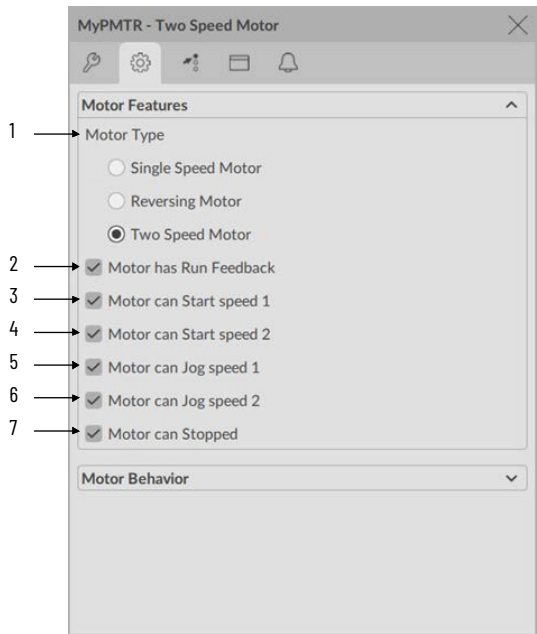
Item	Description
1	Select to open the runtime faceplate. IMPORTANT: This option is only available if 'Enable navigation to run time object' on the HMI Configuration tab is checked.
2	Select to open the Restart Inhibit faceplate. IMPORTANT: This option is only available if 'Enable navigation to restart inhibit object' on the HMI Configuration tab is checked.
3	Select to open the device object faceplate. IMPORTANT: This option is only available if 'Enable navigation to device object' on the HMI Configuration tab is checked.
4	Select to use Run Feedback.
5	Select Yes to bypass checking of bypassable interlocks and permissives. Select No to enable checking of all interlocks and permissives.

Advanced Maintenance Tab



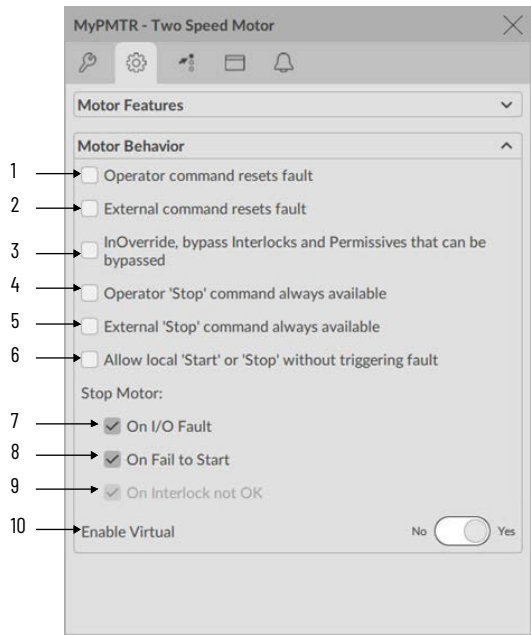
Item	Description
1	Enter the time for the reset output to be pulsed.
2	Enter the time to allow the run feedback to show that the motor has started before raising a fail to start alarm.
3	Enter the time to allow the run feedback to show that the motor has stopped before raising a Fail to Stop alarm.
4	Enter the maximum time to allow the motor to jog. Enter zero to allow unlimited jog time.
5	Enter the amount of time to sound the audible alarm when the motor starts.
6	Enter the time delay between when the run output has turned off for one speed and when it is turned on for the other speed.
7	Enter the time delay (in seconds) for the running or stopped status to be echoed back when the virtual is enabled or when run feedback is not used.

Advanced Engineering Tab - Motor Features



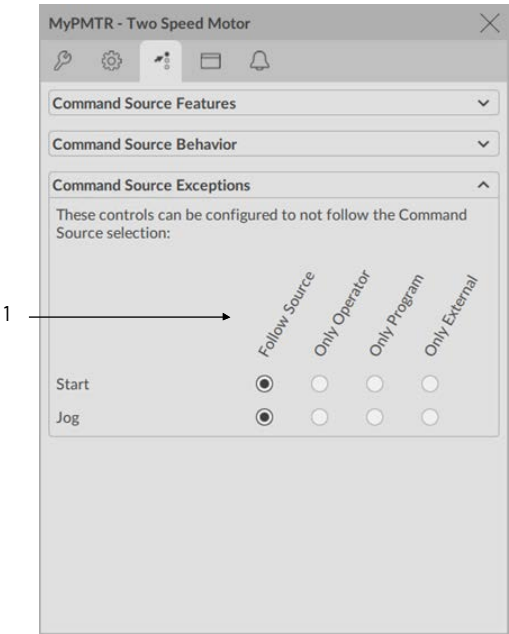
Item	Description
1	Select the motor type.
2	Select if the motor provides run feedback to Inp_1RunFdbkData and Inp_2RunFdbkData. Clear this checkbox if there is no run feedback. IMPORTANT: This check places the device in Maintenance Bypass unless 'Use Run Feedback' on the Maintenance tab is checked.
3	Select to allow the motor to start at speed 1.
4	Select to allow the motor to start at speed 2.
5	Select to allow the motor to be jogged.
6	Select to allow the motor to jog at speed 2.
7	Select to allow the motor to be stopped.

Advanced Engineering Tab - Motor Behavior



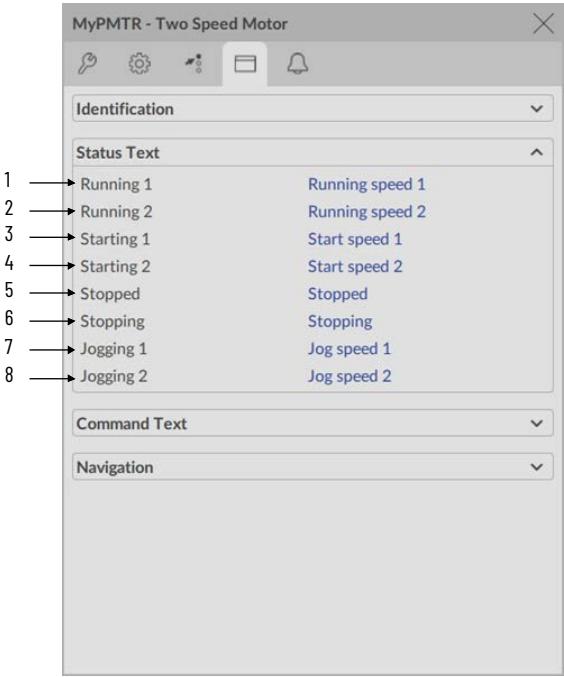
Item	Description
1	Select to allow the Operator commands for Start or Stop to reset any previous faults (I/O fault, Fail to Start, Fail to Stop, Interlock Trip). Then start or stop motor. Clear this checkbox to reset faults only using the reset commands.
2	Select to allow the External commands for Start or Stop to reset any previous faults (I/O fault, Fail to Start, Fail to Stop, Interlock Trip). Then start or stop motor. Clear this checkbox to reset faults only using the reset commands.
3	Select to bypass bypassable interlocks and permissives in Override command source.
4	Select to have the Operator Stop command available in any command source. Clear this checkbox to have the Operator Stop command available only in the Operator and Maintenance command sources.
5	Select to have the External Stop command available in any command source. Clear this checkbox to have the External Stop command available only in the Operator and Maintenance command sources.
6	Select to allow the motor to be started or stopped locally without triggering a Fail to start or Fail to stop when not executing a start or stop command. Clear this checkbox to raise a Fail to start or Fail to stop status on an uncommanded start or stop.
7	Select to stop the motor if an I/O fault is detected. Clear this checkbox to show only the I/O fault status/alarm and not stop the motor if an I/O fault is detected.
8	Select to stop the motor if a fail to Start fault is detected. Clear this checkbox to show only the Fail to Start status/alarm and not stop the motor if a fail to Start fault is detected.
9	The motor always stops on interlock not OK. This item cannot be cleared. It is displayed as a reminder that the interlock function always stops the motor.
10	Select 'Yes' to enable virtual.

Advanced Command SourceTab - Command Source Exceptions



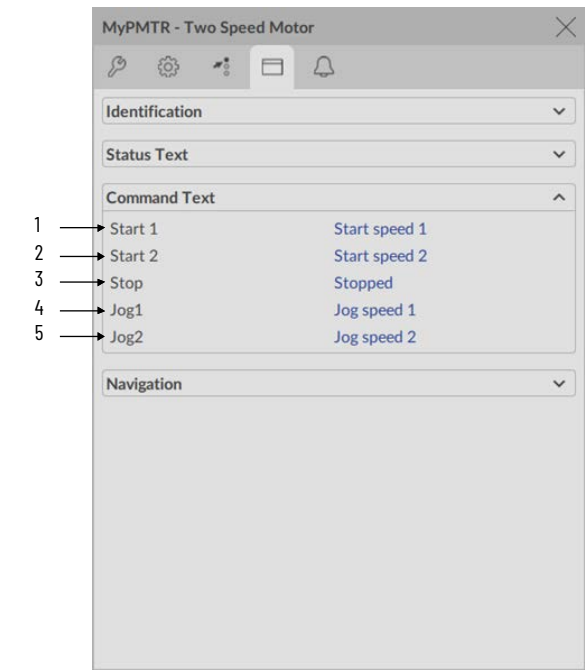
Item	Description
1	Select one of the four options to determine the source of each command (start and jog). If any option but "Follow Source" is selected, then that source will be the only source allowed for that command.

Advanced HMI Configuration Tab - Status Text



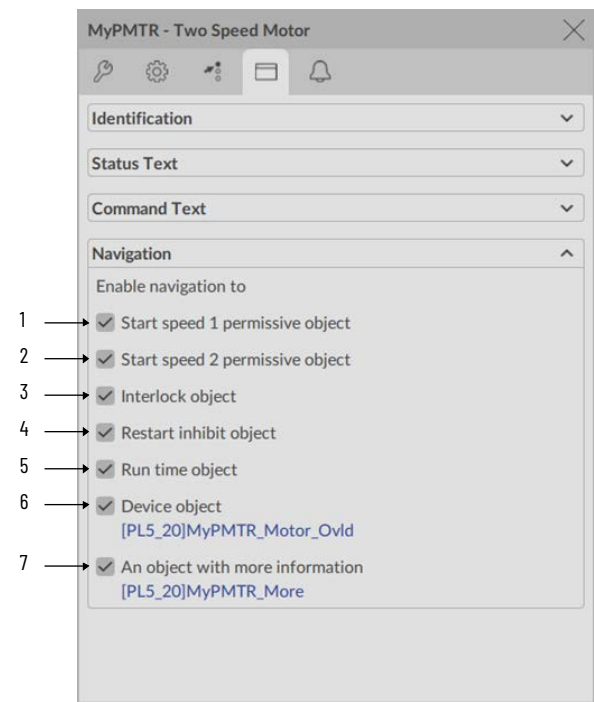
Item	Description
1	Display the text when the motor is running at speed 1.
2	Display the text when the motor is running at speed 2.
3	Display the text when the motor is starting at speed 1.
4	Display the text when the motor is starting at speed 2.
5	Display the text when the motor is stopped.
6	Display the text when the motor is stopping.
7	Display the text when the motor is jogging at speed 1.
8	Display the text when the motor is jogging at speed 2.

Advanced HMI Configuration Tab - Command Text



Item	Description
1	Display the label for the command of starting at speed 1.
2	Display the label for the command of starting at speed 2.
3	Display the label for the command of stopping.
4	Display the label for the command of jogging at speed 1.
5	Display the label for the command of jogging at speed 2.

Advanced HMI Configuration Tab - Navigation



Item	Description
1	Select if Start Speed 1 permissive object is used with this motor. For 2 Speed Motors, speed 1 is Slow and Speed 2 is Fast. For Reversing Motors, speed 1 is Forward and Speed 2 is Reverse. IMPORTANT: The name of the Permissive object in the controller must be the name of the object with the suffix '_1Perm'. For example, if your PMTR object has the name 'Motor123', then its Start Speed 1 object must be named 'Motor123_1Perm'.
2	Select if Start Speed 2 permissive object is used with this motor. For 2 Speed Motors, speed 1 is Slow and Speed 2 is Fast. For Reversing Motors, speed 1 is Forward and Speed 2 is Reverse. IMPORTANT: The name of the Permissive object in the controller must be the name of the object with the suffix '_2Perm'. For example, if your PMTR object has the name 'Motor123', then its Permissive object must be named 'Motor123_2Perm'.
3	Select if an interlock object is used with this motor. IMPORTANT: The name of the Interlock object in the controller must be the name of the object with the suffix '_Intlk_0'. For example, if your PMTR object has the name 'Motor123', then its Interlock object must be named 'Motor123_Intlk_0'.
4	Select if a restart inhibit object is used with this motor. IMPORTANT: The name of the Restart Inhibit object in the controller must be the name of the object with the suffix '_ResInh'. For example, if your PMTR object has the name 'Motor123', then its Restart Inhibit object must be named 'Motor123_ResInh'.
5	Select if a run time object is used with this motor. IMPORTANT: The name of the Run Time object in the controller must be the name of the object with the suffix '_RunTime'. For example, if your PMTR object has the name 'Motor123', then its Run Time object must be named 'Motor123_RunTime'.
6	Select to allow navigation to the device object.
7	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.

n-Position Device (PNPOS)

Graphic Symbols

FactoryTalk View SE Graphic Symbol Name	FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PnPos_8SelValve GO_PnPos_8SelValve1 GO_PnPos_6SelValve GO_PnPos_6SelValve1 GO_PnPos_4SelValve GO_PnPos_4SelValve1 GO_PnPos_3SelValve GO_PnPos_3SelValve1				<p>These Graphic Symbols are used for routing one flow path to many vertically. These elements show all 3, 4, 6, or 8 ports and unused ports are not hidden.</p> <p>For FactoryTalk Optix, there is only one graphic symbol. The number of ports shown will change dynamically based on the configuration in the controller.</p>
GO_PnPOS_8PosRotary GO_PnPOS_6PosRotary GO_PnPOS_4PosRotary				<p>These Graphic Symbols are used for rotary selection from one port to many ports. Only the ports that are enabled are displayed. For example, if you configure the PnPos instruction with five positions, ports 6, 7, and 8 are not displayed.</p> <p>For FactoryTalk Optix, there is only one graphic symbol. The number of ports shown will change dynamically based on the configuration in the controller.</p>

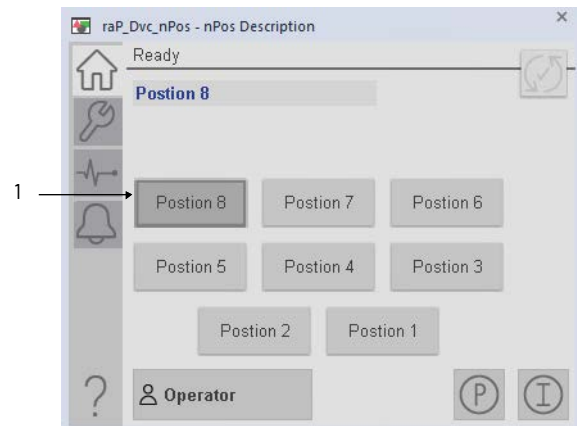
FactoryTalk View SE Graphic Symbol Name	FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PnPOS_SlideGate		raP_5_20_GS_SlideGate_H raP_5_20_GS_SlideGate_V 		These Graphic Symbols show a linear multi-position device. The symbol is animated to show the position that is based on the number of positions configured.
GO_PnPOS_SlideGate1				
GO_PnPos		raP_5_20_GS_nPosValve 		These Graphic Symbols are similar to those elements shown on the first page of this table, but ports that aren't configured are not displayed. For FactoryTalk Optix, there is only one graphic symbol. The number of ports shown will change dynamically based on the configuration in the controller.
GO_PnPos1				
GO_PnPos2		raP_5_20_GS_GeneralStatus 		

FactoryTalk View SE Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab

The Faceplate initially opens to the Operator (Home) tab. From here, an operator can monitor the device status and manually operate the device when it is in Operator command source.



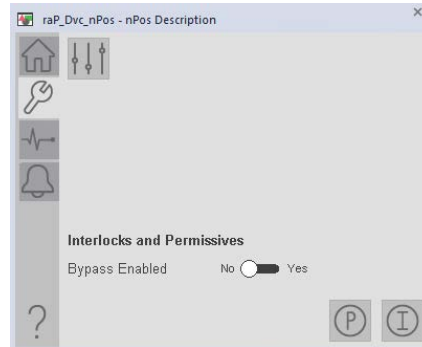
Item	Description
1	Current device position



There is a larger faceplate available that supports 30 positions.

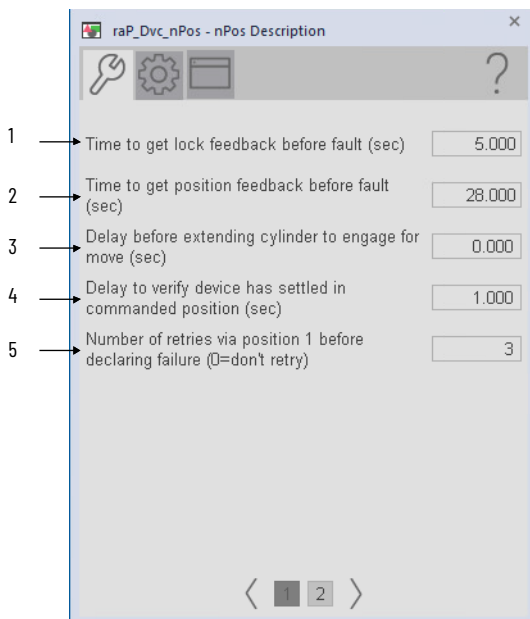
Maintenance Tab

Maintenance personnel use the information and controls on the Maintenance tab to adjust device parameters, troubleshoot, temporarily work around device problems, and disable the device for routine maintenance.

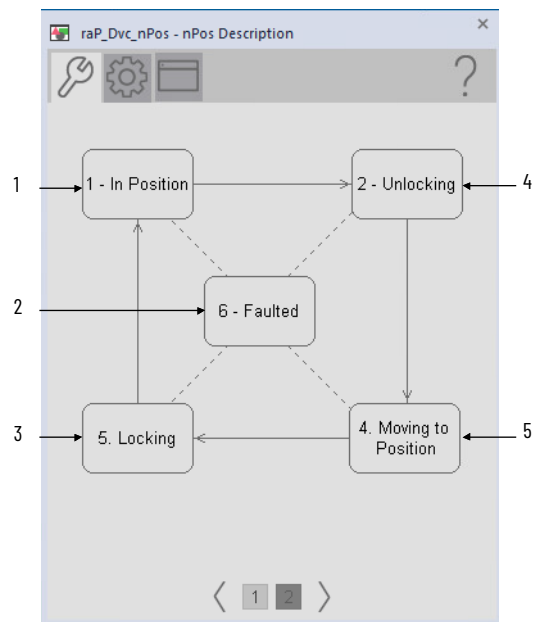


Advanced Maintenance Tab

The Advanced Properties Display opens to the advanced maintenance settings. The Advanced Properties Display provides access to device configuration parameters and ranges, and options for device and I/O setup. This tab is used for initial system commissioning or later system changes.

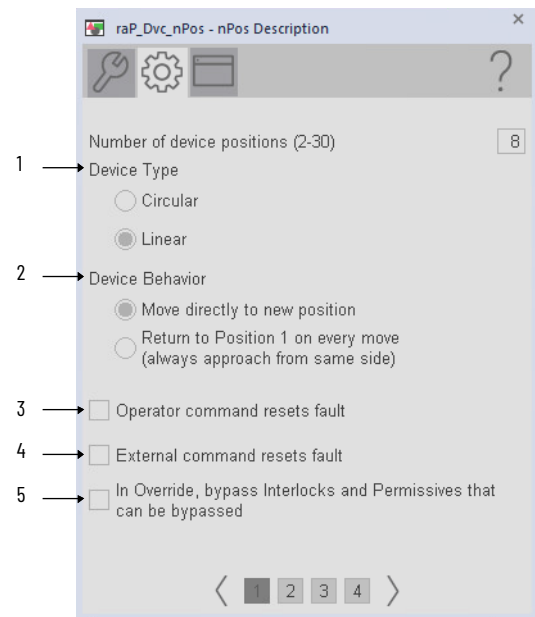


Item	Description
1	Enter a value (0...2,147,483) that indicates the maximum time that is allowed for lock feedback before a fault.
2	Enter a value (0...2,147,483) that indicates the maximum time that is allowed for the device to be in position before a fault.
3	Enter a value (0...2,147,483) that indicates the time delay before engaging a cylinder move.
4	Enter a value (0...2,147,483) that indicates the delay time to verify that a device is in a commanded position.
5	Enter a value (0...2,147,483) to indicate the number of retries for a device in Position 1 before a fault is set.

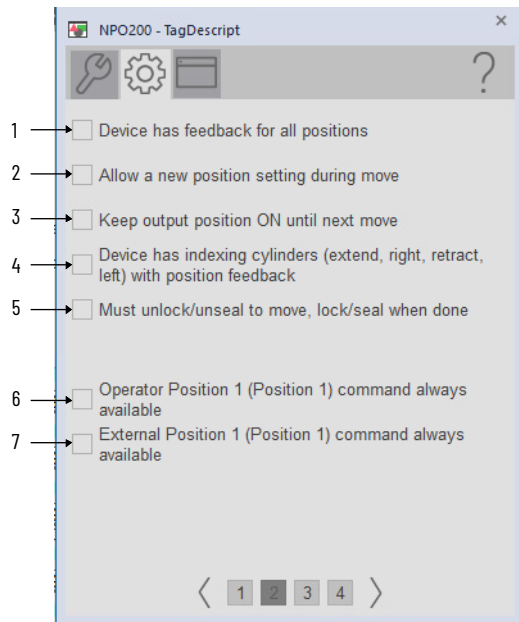


Item	Description
1	This state is highlighted whenever the device is in the position that it was last commanded.
2	This state is highlighted if the device feedback fails to confirm that the device is unlocked, moved to position, or locked as requested within the configured failure times.
3	This state is displayed only if the device is configured with a lock or seal that must be unlocked or unsealed to move. This state is highlighted when the device has reached its commanded position and has been commanded to lock, but locked feedback has not been received yet.
4	This state is displayed only if the device is configured with a lock or seal that must be unlocked or unsealed to move. This state is highlighted when the device has been commanded to unlock, but unlocked feedback has not been received yet.
5	This state is highlighted when the device is being moved to its commanded position, but that position feedback has not been received yet.

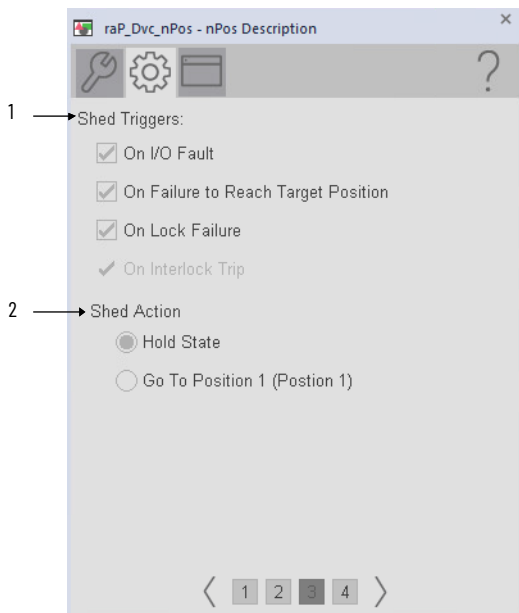
Engineering Tabs



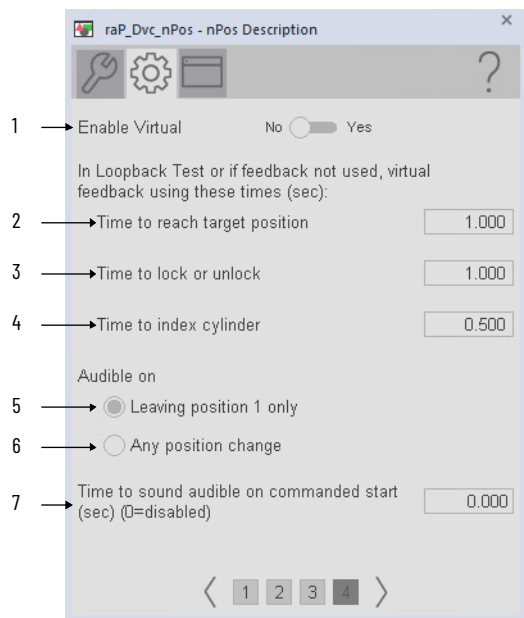
Item	Description
1	Select circular or linear for the device type
2	For Circular, select either clockwise only or clockwise or counterclockwise.
3	Select to reset a fault on a new Operator command.
4	Select to reset a fault on a new External command.
5	Select to bypass permissives and interlocks in Override command source.



Item	Description
1	Select to enable device feedback for all positions.
2	Select to enable a new position command to be received and processed while a move is in progress.
3	Select to keep a position output On until the next move.
4	Select to enable indexing cylinders with position feedback.
5	Select if the device must be unlocked to move and locked when the move is complete.
6	Select to have Position 1 command always available to Operator control.
7	Select to have Position 1 command always available to External control.



Item	Description
1	Select to enable whether an I/O Fault, Failure to Reach Position, or Lock Failure is considered a shed condition. The device always sheds on an Interlock Trip. This item cannot be unchecked. It is displayed as a reminder that the Interlock Trip function always triggers a shed. If a condition causes the device to shed, a reset is required to operate the device.
2	Select to determine whether the device holds the hold position or goes to position 1 upon a shed condition.



Item	Description
1	Select yes to enable virtual.
2	Enter the time (0...2,147,483) to reach a target position in virtual.
3	Enter the time (0...2,147,483) to lock/unlock with the device in virtual.
4	Enter the time (0...2,147,483) to simulate index cylinder feedback in virtual.
5	Select to sound an audible on a commanded move from Position 1.
6	Select to sound an audible on a commanded move from any State.
7	Enter the time (in seconds) that the audible sounds when there is a commanded State change.

HMI Configuration Tab

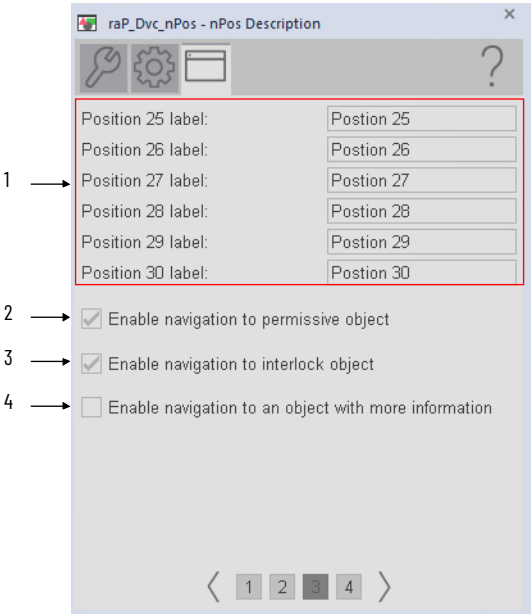
The HMI configuration tab provides access to displayed text, and faceplate-to-faceplate navigation settings. View the description, label, tag, and security area for the device.

The screenshot shows the 'raP_Dvc_nPos - nPos Description' window. It has a toolbar with a wrench, gear, and a question mark. Below the toolbar, there are input fields for 'Label' (nPos Label), 'Tag' (raP_Dvc_nPos), and 'Area name for security' (Area01). A red box highlights a list of position labels from 'Position 01 label' to 'Position 10 label', each with a corresponding text box containing 'Postion 1' through 'Postion 10'. A red arrow labeled '1' points to the 'Position 01 label' text. At the bottom, there are navigation buttons: '< 1 2 3 4 >'. The '1' button is highlighted.

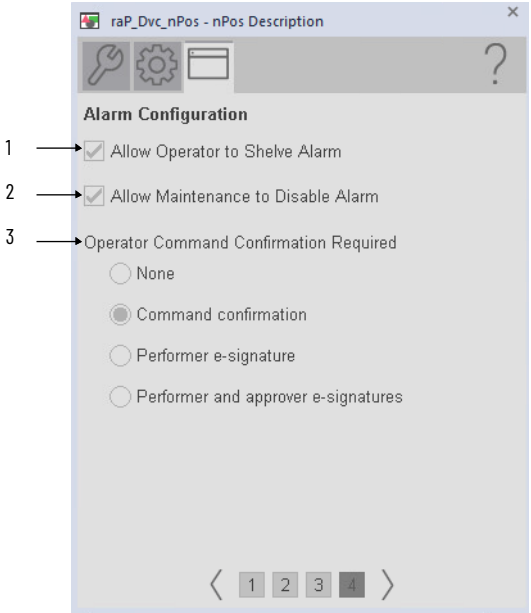
Item	Description
1	Name is displayed for each device position that is based on the number of positions.

The screenshot shows the 'raP_Dvc_nPos - nPos Description' window. It has a toolbar with a wrench, gear, and a question mark. Below the toolbar, there are input fields for 'Label' (nPos Label), 'Tag' (raP_Dvc_nPos), and 'Area name for security' (Area01). A red box highlights a list of position labels from 'Position 11 label' to 'Position 24 label', each with a corresponding text box containing 'Postion 11' through 'Postion 24'. A red arrow labeled '1' points to the 'Position 17 label' text. At the bottom, there are navigation buttons: '< 1 2 3 4 >'. The '2' button is highlighted.

Item	Description
1	Name is displayed for each device position that is based on the number of positions.



Item	Description
1	Name is displayed for each device position that is based on the number of positions.
2	Select to indicate that a permissive object is connected to the permissive inputs of this object. IMPORTANT: The name of the Permissives object in the controller must be the name of the object with the suffix '_Perm'. For example, if your raP_Dvc_nPos object has the name 'nPos123', then its Permissives object must be named 'nPos123_Perm'.
3	Select to indicate that an interlock object is connected to the interlock inputs of this object. IMPORTANT: The name of the Interlock object in the controller must be the name of the object with the suffix '_Intlk'. For example, if your raP_Dvc_nPos object has the name 'nPos123', then its Interlock object must be named 'nPos123_Intlk'.
4	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) You configure the tagname of the object that you want to navigate to in the extended tag property "Cfg_HasMoreObj.@Navigation". It uses the <backing tag>.@Library and <backing tag>.@Instruction extended tag properties to display the objects faceplate.



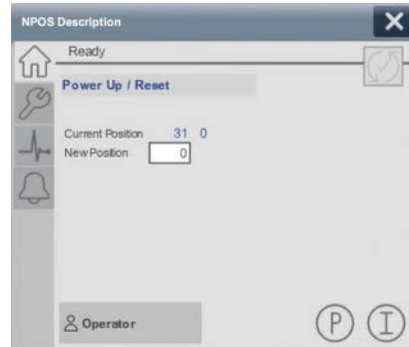
Item	Description
1	Select to allow Operator to shelve alarm.
2	Select to allow Maintenance to disable alarm.
3	Select to configure operator command confirmation. This action would take place after any operator command.

Studio 5000 View Designer Faceplates

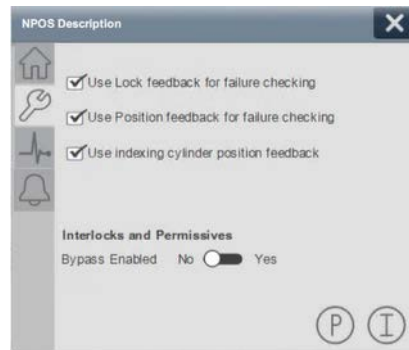
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 238](#) for descriptions of the features.

Operator Tab



Maintenance Tab



FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

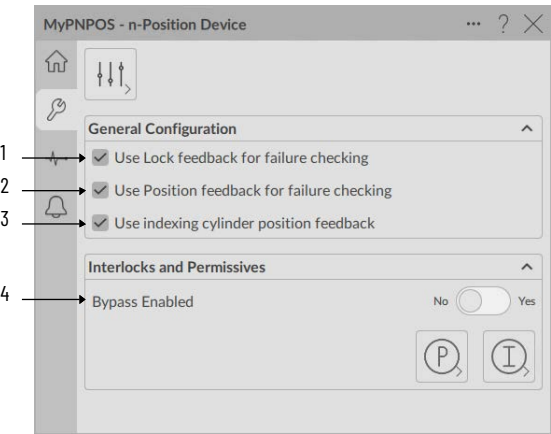
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [Basic Faceplate Attributes on page 44](#) for descriptions of the features.

Operator Tab



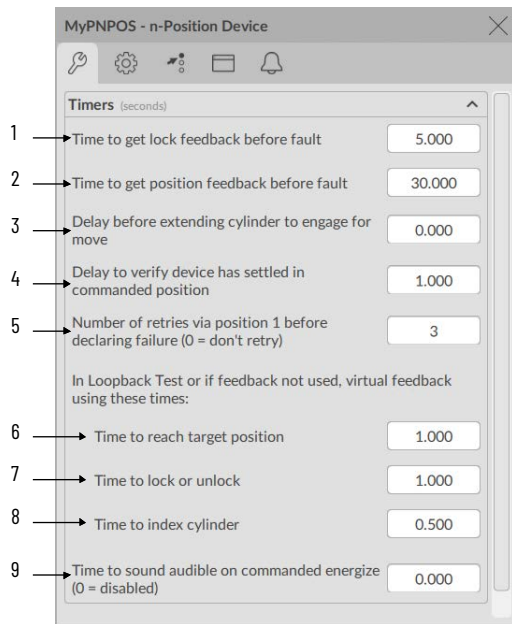
Item	Description
1	Current device position

Maintenance Tab



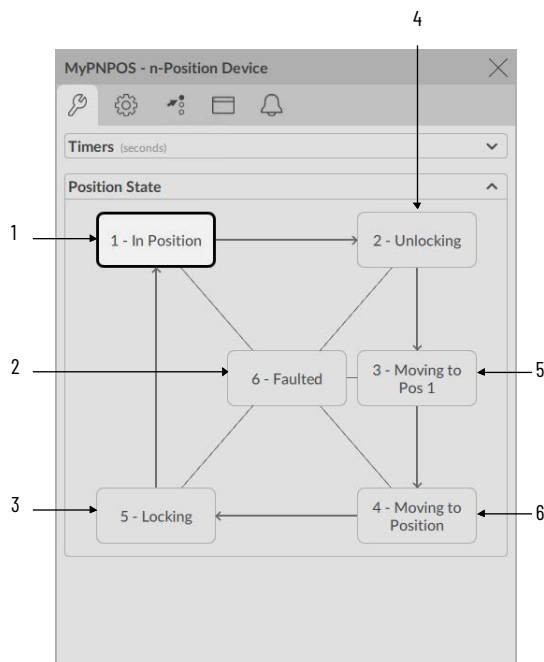
Item	Description
1	Select to use Lock feedback for failure checking.
2	Select to use Position feedback for failure checking.
3	Select to use indexing cylinder position feedback.
4	Select yes to bypass checking of interlocks and permissives that can be bypassed.

Advanced Maintenance Tab - Timers



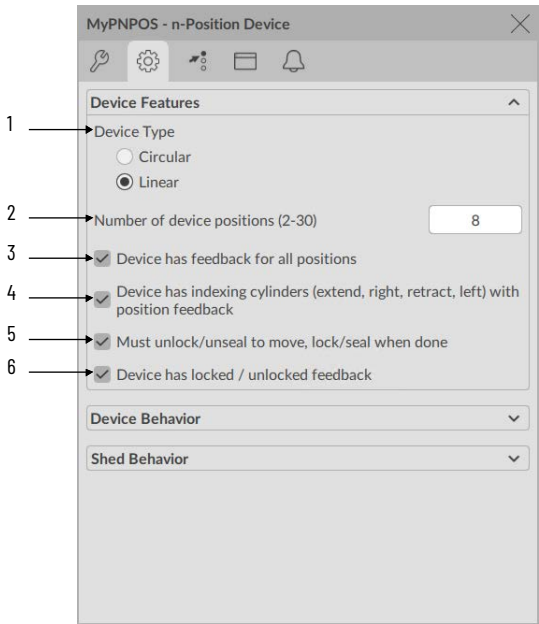
Item	Description
1	Enter a value (0...2,147,483) that indicates the maximum time that is allowed for lock feedback before a fault.
2	Enter a value (0...2,147,483) that indicates the maximum time that is allowed for the device to be in position before a fault.
3	Enter a value (0...2,147,483) that indicates the time delay before engaging a cylinder move.
4	Enter a value (0...2,147,483) that indicates the delay time to verify that a device is in a commanded position.
5	Enter a value (0...2,147,483) to indicate the number of retries for a device in Position 1 before a fault is set.
6	Enter the time (0...2,147,483) to reach a target position in virtual.
7	Enter the time (0...2,147,483) to lock/unlock with the device in virtual.
8	Enter the time (0...2,147,483) to simulate index cylinder feedback in virtual.
9	Enter the time (in seconds) that the audible sounds when there is a commanded State change.

Advanced Maintenance Tab - Position State



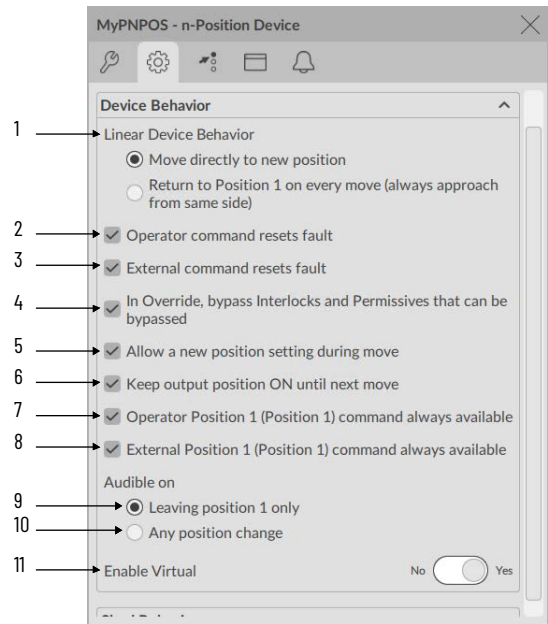
Item	Description
1	This state is highlighted whenever the device is in the position that it was last commanded.
2	This state is highlighted if the device feedback fails to confirm that the device is unlocked, moved to position, or locked as requested within the configured failure times.
3	This state is displayed only if the device is configured with a lock or seal that must be unlocked or unsealed to move. This state is highlighted when the device has reached its commanded position and has been commanded to lock, but locked feedback has not been received yet.
4	This state is displayed only if the device is configured with a lock or seal that must be unlocked or unsealed to move. This state is highlighted when the device has been commanded to unlock, but unlocked feedback has not been received yet.
5	When the Cfg_ViaPos01 is True. This state is highlighted when the device is being moved to its commanded position, but that position feedback has not been received yet.
6	This state is highlighted when the device is being moved to its commanded position, but that position feedback has not been received yet.

Advanced Engineering Tab - Device Features



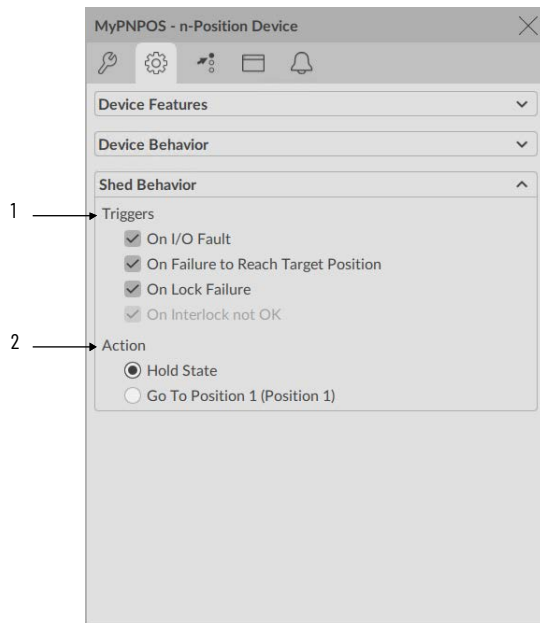
Item	Description
1	Select circular or linear for the device type
2	Enter the number of device positions (2-30).
3	Select to enable device feedback for all positions.
4	Select to enable indexing cylinders with position feedback.
5	Select if the device must be unlocked to move and locked when the move is complete.
6	Select if the device has locked / unlocked feedback

Advanced Engineer Tab - Device Behavior



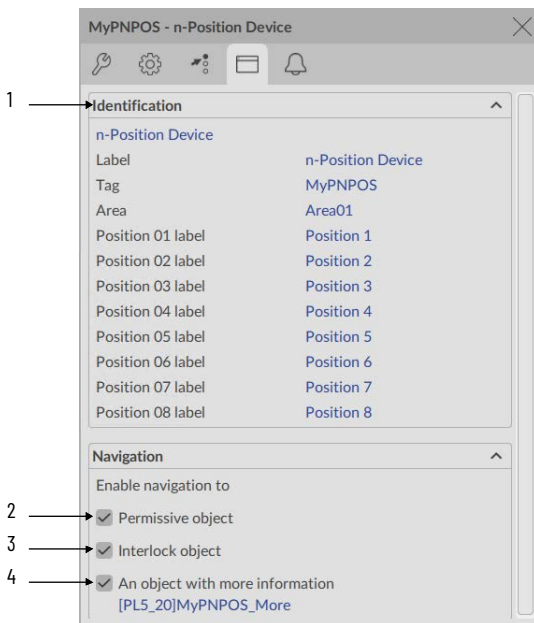
Item	Description
1	For Circular, select either clockwise only or clockwise or counterclockwise. For Linear, select whether the device returns to Position 1 for every move or moves directly to the target position.
2	Select to reset a fault on a new Operator command.
3	Select to reset a fault on a new External command.
4	Select to bypass permissives and interlocks in Override command source.
5	Select to enable a new position command to be received and processed while a move is in progress.
6	Select to keep a position output On until the next move.
7	Select to have Position 1 command always available to Operator control.
8	Select to have Position 1 command always available to External control.
9	Select to sound an audible on a commanded move from Position 1.
10	Select to sound an audible on a commanded move from any State.
11	Select yes to enable virtual

Advanced Engineering Tab - Shed Behavior



Item	Description
1	Select to enable whether an I/O Fault, Failure to Reach Position, or Lock Failure is considered a shed condition. The device always sheds on an Interlock Trip. This item cannot be unchecked. It is displayed as a reminder that the Interlock Trip function always triggers a shed. If a condition causes the device to shed, a reset is required to operate the device.
2	Select to determine whether the device holds the hold position or goes to position 1 upon a shed condition.

Advanced HMI Configuration Tab


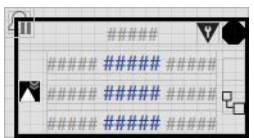

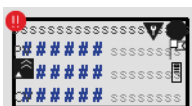



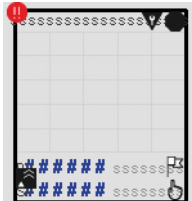
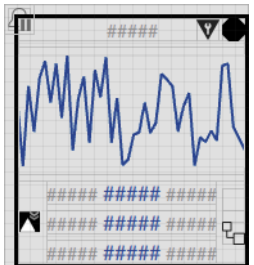
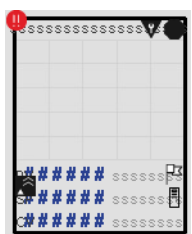



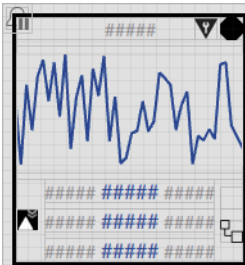

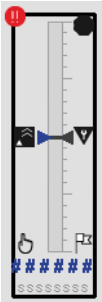
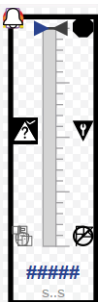
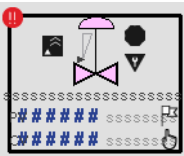
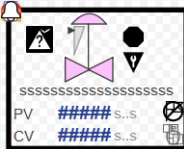
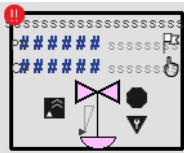
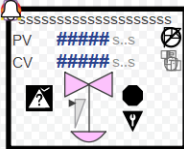




Item	Description
1	Name is displayed for each device position that is based on the number of positions.
2	Select to indicate that a permissive object is connected to the permissive inputs of this object. IMPORTANT: The name of the Permissives object in the controller must be the name of the object with the suffix '_Perm'. For example, if your PNPOS object has the name 'nPos123', then its Permissives object must be named 'nPos123_Perm'
3	Select to indicate that an interlock object is connected to the interlock inputs of this object. IMPORTANT: The name of the Interlock object in the controller must be the name of the object with the suffix '_Intlk'. For example, if your PNPOS object has the name 'nPos123', then its Interlock object must be named 'nPos123_Intlk'
4	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) You configure the tag name of the object that you want to navigate to in the extended tag property "Cfg_HasMoreObj.@Navigation". It uses the .@Library and .@Instruction extended tag properties to display the objects faceplate.

Notes:





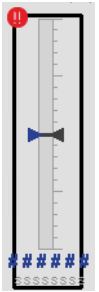
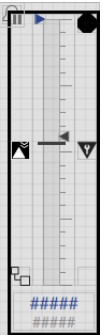
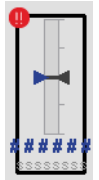
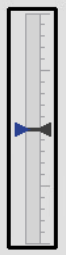
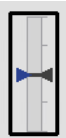
Process Proportional + Integral + Derivative (PPID)

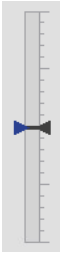


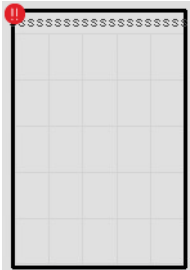
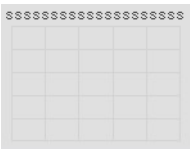
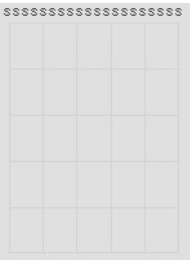
Graphic Symbols

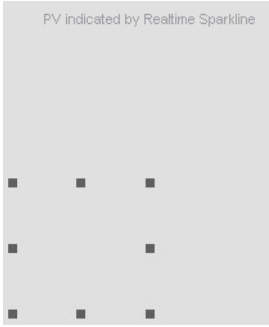


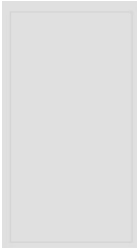
FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PPID 	PPID_GS 	GS_PPID 	Graphic Symbol with PV and CV numeric displays. The FactoryTalk Optix graphic symbol can be configured to show or hide the SP, PV, or CV.
GO_PPID1 	—	GS_PPID1 	Graphic Symbol with PV, SP, and CV numeric displays.
GO_PPID2 	—	GS_PPID2 	Graphic Symbol with SP and CV numeric displays
GO_PPID_Trend 	PPID_GS_TrendScaledByPV 	—	Graphic Symbol with PV and CV numeric displays and a trend display that plots SP, PV, High, and Low Deviations. The trend is scaled to PV EU Min and Max. The FactoryTalk Optix graphic symbol can be configured to show or hide the SP, PV, or CV.
GO_PPID_Trend1 	—	—	Graphic Symbol with PV, SP, and CV numeric displays and a trend display that plots SP, PV, High, and Low Deviations. The trend is scaled to PV EU Min and Max.

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PPID_TrendWTarget 	PPID_GS_TrendWTarget 	—	<p>Graphic Symbol with PV and CV numeric displays and a trend display that plots SP, PV, High, and Low Deviations. The trend is scaled by using the High and Low Deviations.</p> <p>The FactoryTalk Optix graphic symbol can be configured to show or hide the SP, PV, or CV.</p>
GO_PPID_TrendWTarget1 	—	—	<p>Graphic Symbol with PV, SP, and CV numeric displays and a trend display that plots SP, PV, High, and Low Deviations. The trend is scaled by using the High and Low Deviations.</p>
GO_PPID_Indicator 	—	GS_PPID_Indicator 	<p>Bar graph with SP on the left and PV on the right that is scaled by PV EU minimum and maximum.</p>
GO_PPID_Valve 	—	GS_PPID_Valve 	<p>Proportional Valve Graphic Symbol with PV and CV numeric displays.</p>
GO_PPID_Valve1 	—	GS_PPID_Valve1 	
GO_PPID_Valve2 	—	GS_PPID_Valve2 	
GO_PPID_Valve3 	—	GS_PPID_Valve3 	

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PPID_Valve4 	PPID_GS_ControlValve4 	GS_PPID_Valve4 	Proportional Valve Graphic Symbol with PV, CV, and Setpoint numeric displays. The Optix graphic symbol can be configured to show or hide the SP, PV, or CV.
GO_PPID_Valve5 	PPID_GS_ControlValve5 	GS_PPID_Valve5 	
GO_PPID_Valve6 	PPID_GS_ControlValve6 	GS_PPID_Valve6 	
GO_PPID_Valve7 	PPID_GS_ControlValve7 	GS_PPID_Valve7 	
GO_PPID_Valve8 	—	GS_PPID_Valve8 	Proportional Valve Graphic Symbol with SP, CV, and Setpoint numeric displays.
GO_PPID_Valve9 	—	GS_PPID_Valve9 	
GO_PPID_Valve10 	—	GS_PPID_Valve10 	
GO_PPID_Valve11 	—	GS_PPID_Valve11 	

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PPID_Val_PV 	—	—	PV indicator with label.
GO_PPID_PV1 	—	—	PV indicator with label.
GO_PPID_PVSP 	—	—	Indicator with PV and SP.
GO_PPID_Label 	—	—	Label only
GO_PPID_Indicator 	PPID_GS_LinearGauge 	—	Bar indicator with PV and SP moving triangles. Includes displayed limits. Alarm indication.
GO_PPID_Indicator1 	—	—	Bar indicator with PV and SP moving triangles. Includes displayed limits. Alarm indication.
GO_PPID_Indicator2 	—	—	Bar indicator with PV and SP moving triangles. Includes displayed limits. Alarm indication and PV value in tooltip.
GO_PPID_Indicator3 	—	—	Bar indicator with PV and SP moving triangles. Includes displayed limits. Alarm indication and PV value in tooltip.

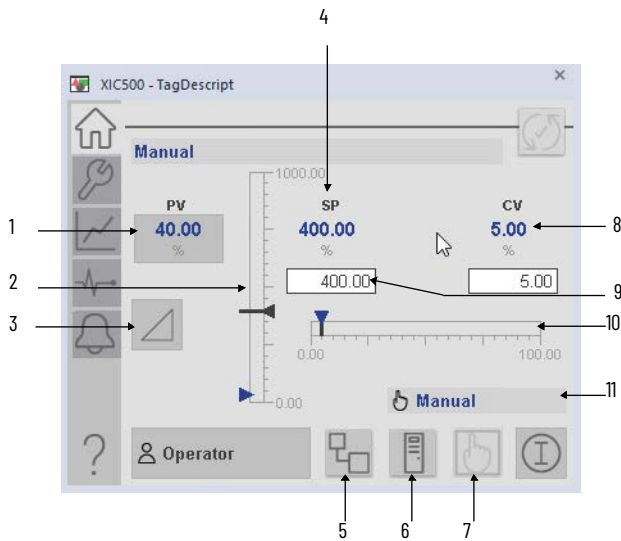
FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PPID_Indicator4 	—	—	Bar indicator with PV and SP moving triangles. Includes displayed limits. PV value in tooltip.
GO_PPID_Indicator5 	—	—	Bar indicator with PV and SP moving triangles. Includes displayed limits. PV value in tooltip.
GO_PPID_Trend_L1 	—	—	Trend with PV and SP values.
GO_PPID_Trend1_L1 	—	—	Trend with PV and SP values.
GO_PPID_HistTrend1 	—	—	Trend with PV and SP historical values.
GO_PPID_HistTrend2 	—	—	Trend with PV and SP historical values.

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
<div>GO_PPID_Sparkline</div> <div></div>	—	—	PV indicated by real-time Sparkline
<div>GO_PPID_Sparkline1</div> <div></div>	—	—	PV indicated by real-time Sparkline
<div>GO_PPID_HistTrend3</div> <div></div>	—	—	PV indicated by Historical Sparkline
<div>GO_PPID_HistTrend4</div> <div></div>	—	—	PV indicated by Historical Sparkline

FactoryTalk View SE Faceplates

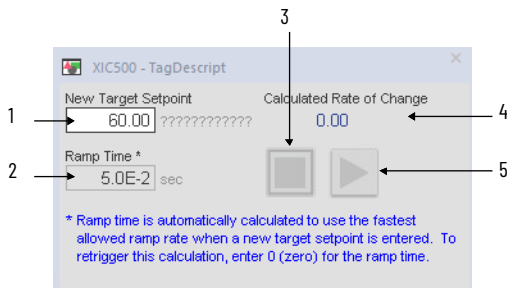
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



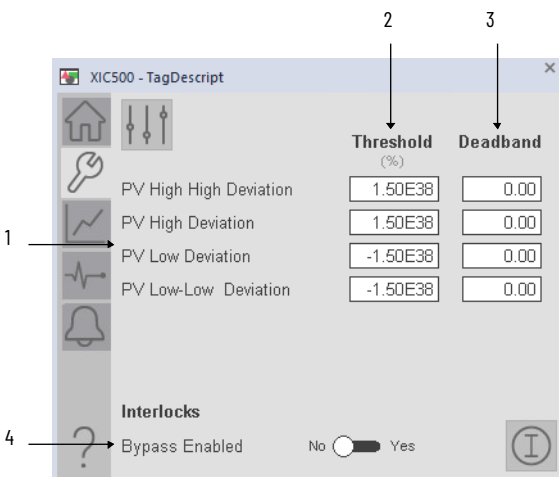
Item	Description
1	Current Process Variable (PV).
2	Bar graph for the current Process Variable.
3	Select to open the ramp wizard display.
4	Current Setpoint (SP).
5	Cascade loop mode.
6	Auto loop mode.
7	Manual loop mode
8	Current Control Variable (CV).
9	Enter a value for the loop setpoint. IMPORTANT: This value can be entered only when the instruction command source is Operator and the Loop mode is Automatic or Manual.
10	Bar graph for the current Control Variable.
11	Loop mode indicator.

Ramp Wizard Display



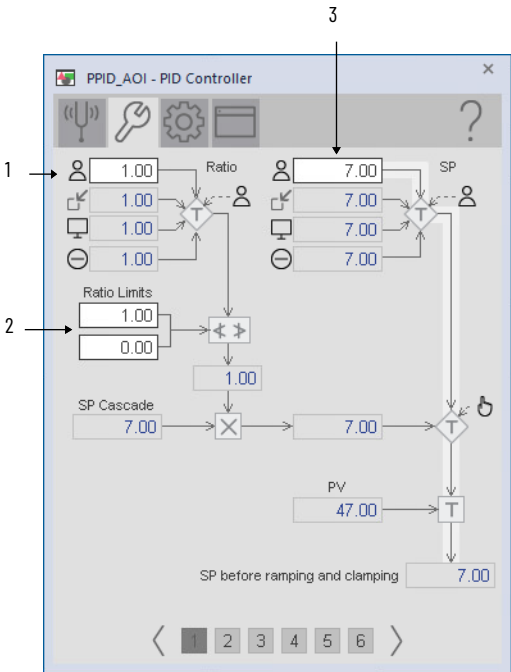
Item	Description
1	Enter new target setpoint.
2	Ramp Time
3	Stop setpoint ramping.
4	Calculated rate of change.
5	Start setpoint ramping.

Maintenance Tab

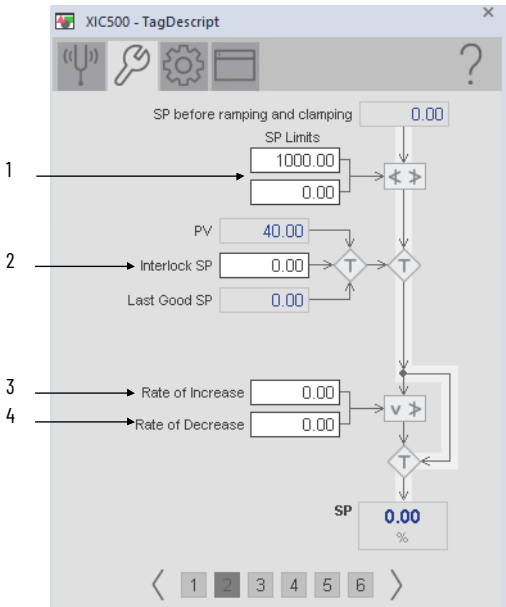


Item	Description
1	Threshold Name
2	Enter the threshold (trip point) for analog input alarms.
3	Enter the deadband (hysteresis) that applies to each alarm limit. Deadband helps prevent a noisy signal from generating numerous spurious alarms. Example: If the High alarm limit is 90.0 and the High alarm deadband is 5, once the signal rises above 90.0 and generates a High alarm. The signal must fall below 85.0 (90.0 minus 5.0) for the alarm to clear.
4	Select Yes to bypass checking of bypassable interlocks and permissives. Select No to enable checking of all interlocks and permissives.

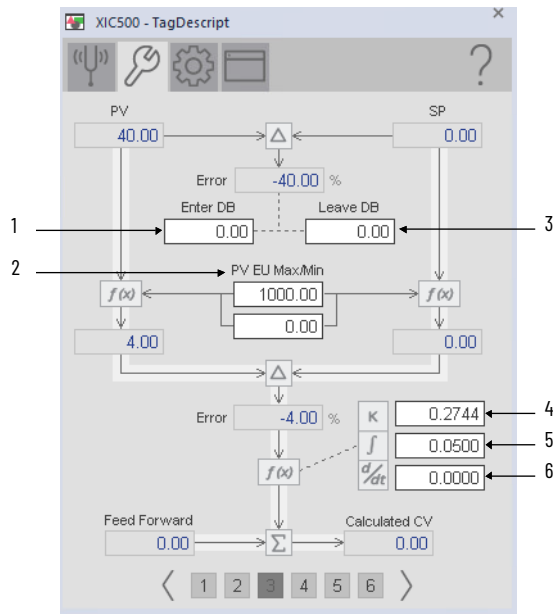
Advanced Maintenance Tab



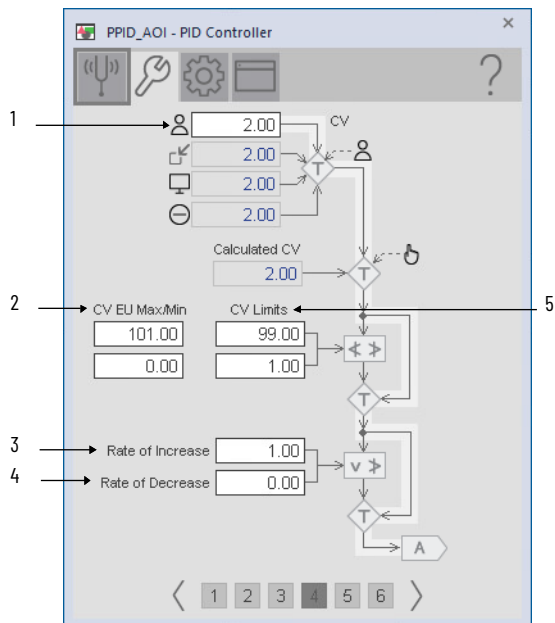
Item	Description
1	Enter the Operator ratio.
2	Enter the maximum and minimum limits for the ratio.
3	Enter the Operator Setpoint for the Operator Loop mode.



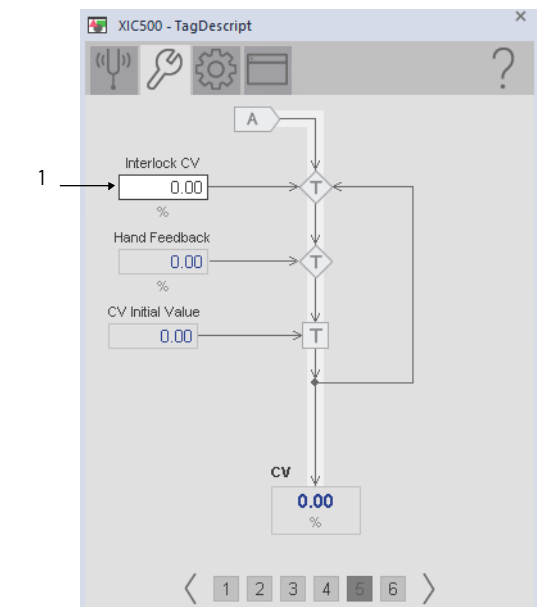
Item	Description
1	Enter the minimum and maximum limits for the setpoint
2	Enter the interlock setpoint.
3	Enter the setpoint rate of increase.
4	Enter the setpoint rate of decrease.



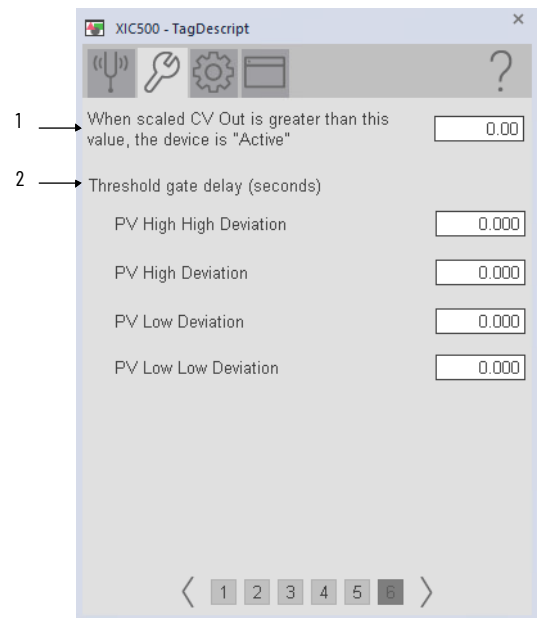
Item	Description
1	Enter the value for the zero-crossing deadband (in PV engineering units). When the loop error is less than the zero-crossing deadband, the loop output does not change.
2	Enter the maximum and minimum values of the PV range (span) (in PV engineering units). The maximum value must be greater than the minimum.
3	
4	<p>Gains: Proportional</p> <p>This value depends on the setting of Cfg_Depend. If Cfg_Depend = 1 (dependent gains, the default), Enter the Controller Gain (unitless). This gain is applied to the Proportional, Integral, and Derivative terms. If Cfg_Depend = 0 (independent gains), Enter the Proportional Gain (unitless). This gain is applied to the Proportional term only. A value of zero in either case disables the Proportional term of the controller. Negative values are not valid.</p>
5	<p>Gains: Integral</p> <p>This value depends on the setting of Cfg_Depend. If Cfg_Depend = 1 (dependent gains, the default), Enter the Integral Time Constant (minutes pre-repeat). If Cfg_Depend = 0 (independent gains), Enter the Integral Gain (1/minutes). A value of zero in either case disables the Integral term of the controller. Negative values are not valid.</p>
6	<p>Gains: Derivative</p> <p>This value depends on the setting of Cfg_Depend. If Cfg_Depend = 1 (dependent gains, the default), Enter the Derivative Time Constant (minutes). If Cfg_Depend = 0 (independent gains), Enter the Derivative Gain (minutes). A value of zero in either case disables the Derivative term of the controller. Negative values are not valid.</p>



Item	Description
1	Enter the operator CV (when the PID is in manual mode).
2	Enter the minimum and maximum CV engineering units. These are used for scaling the output.
3	Enter the values for the maximum rate of change for increasing CV.
4	Enter the values for the maximum rate of change for decreasing CV.
5	<p>Enter the maximum allowed value of the CV in percent. The CV output is clamped not to exceed the entered value. This value must be less than or equal to 100.0 and greater than the CV Low Limit.</p> <p>Enter the minimum allowed value of the CV in percent. The CV output is clamped not to go below the entered value. This value must be greater than or equal to 0.0 and less than the CV High Limit.</p>

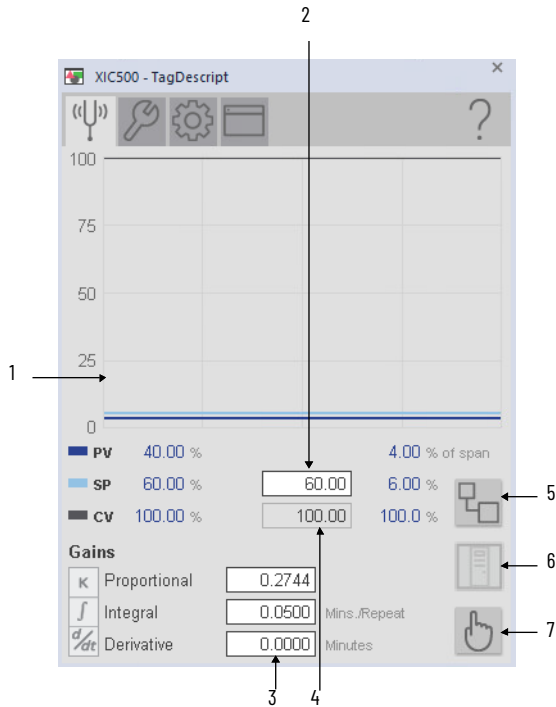


Item	Description
1	Enter the value in percent to output as the CV when an Interlock input is not OK. The CV is held at this value until the interlock inputs are OK (subject to interlock bypassing).



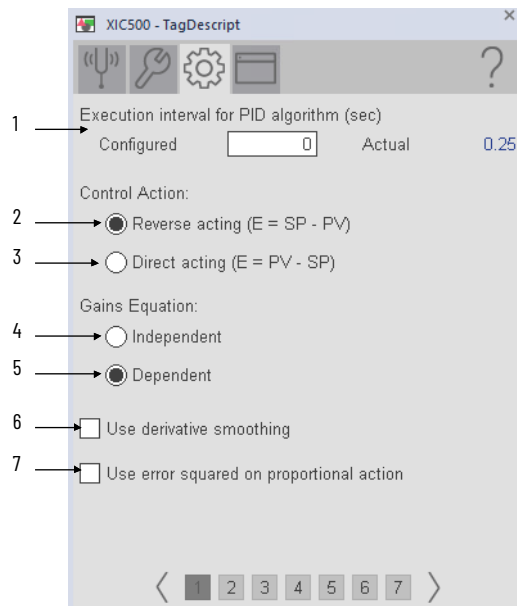
Item	Description
1	Enter the CV active threshold.
2	Process variable high high, high, low, and low low deviation threshold gate delay (seconds).

Tuning Tab

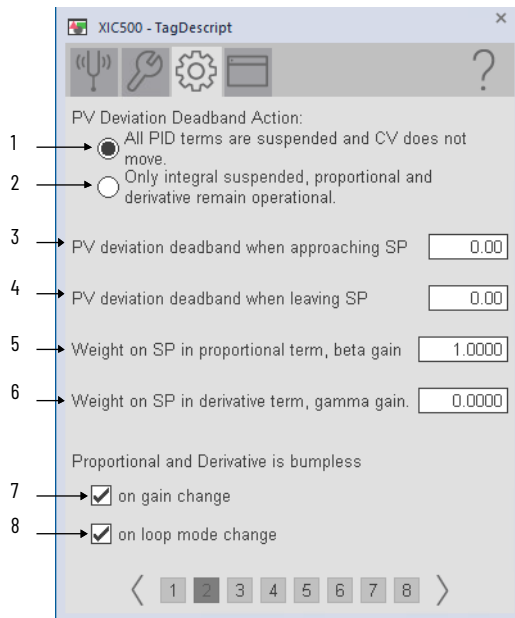


Item	Description
1	Trend display for Process Variable, Setpoint, and Controlled Variable.
2	Setpoint data entry.
3	Tuning constant entries.
4	Process variable data entry
5	Cascade loop mode.
6	Auto loop mode.
7	Manual loop mode.

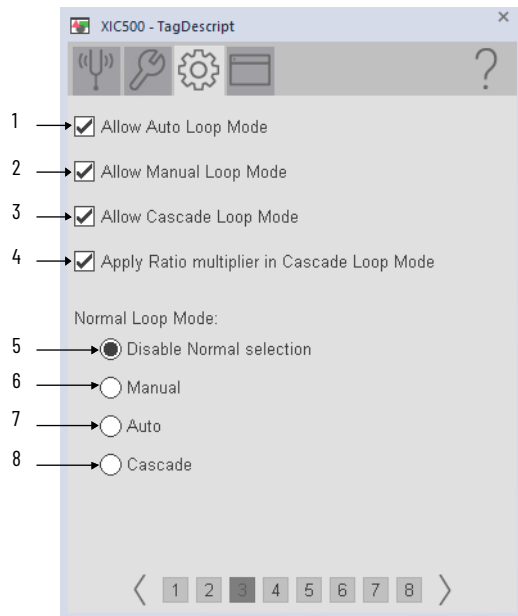
Engineering Tabs



Item	Description
1	Enter the interval (in seconds) to execute the PID algorithm.
2	Select for reverse-acting loop response (default). When the PV increases, the CV (output) decreases.
3	Select for direct-acting loop response. When the PV increases, the CV (output) increases.
4	Select to use the Independent Gains form of the PID algorithm. Changes to the proportional gain do not affect integral or derivative response.
5	Select to use the Dependent Gains form of the PID algorithm (default). Changes to Cfg_PGain are applied as loop gain changes and affect proportional, integral, and derivative responses.
6	Select to enable derivative smoothing. Derivative smoothing can help reduce output jitter due to noise on the PV signal. Clear this checkbox to disable derivative smoothing. When derivative smoothing is disabled, it can result in quicker loop response at high derivative gain.
7	Select whether the error is squared on proportional action or not. Squaring the error minimizes the effect of a small error on the output.



Item	Description
1	If the PV derivative deadband is exceeded, PID stops processing the error calculation and the CV freezes.
2	If the PV derivative deadband is exceeded, the integral portion of the error calculation will be suspended. The error calculation continues and the CV is updated.
3	Enter the value for PV deviation when the CV is approaching SP. A lower deadband allows for less deviation in the PV. If the deviation deadband is reached, action is taken according to items #1 or #2.
4	Enter the value for PV deviation when the CV is leaving the SP. A lower deadband allows for less deviation in the PV. If the deviation deadband is reached, action is taken according to items #1 or #2.
5	Enter value for beta gain. This is the weight (multiplier) of the proportional gain. If beta is set to 0.0, the proportional gain has value. If beta is set to 1.0, the proportional gain has full effect. This is configurable from 0.0 to 1.5.
6	Enter value for gamma gain. This is the weight (multiplier) of the derivative gain. If gamma is set to 0.0, the derivative gain has value. If gamma is set to 1.0, the derivative gain has full effect. This is configurable from 0.0 to 1.5.
7	Select whether the CV response to the proportional and derivative gains is bumpless or not.
8	Select if the proportional and derivative is bumpless during a loop mode change. This is only enabled when the integral gain is set to 0



Item	Description
1	Select to enable Auto Loop mode.
2	Select to enable Manual Loop mode.
3	Select to enable Cascade Loop mode.
4	Select to enable ratio multiplier in Cascade mode.
5	Select to disable normal loop mode selection
6	Select to choose manual as the normal loop mode
7	Select to choose auto as the normal loop mode
8	Select to choose cascade as the normal loop mode.

XIC500 - TagDescript

Power up Loop Mode:

- 1 → ☐ No Change (use last mode)
- 2 → ☒ Manual
- 3 → ☐ Auto
- 4 → ☐ Cascade

5 → Loop SP on power up

6 → Loop CV on power up

Power up CV in Auto or Cascade:

- 7 → ☒ Use Power up CV
- 8 → ☐ CV tracks value from inner loop

< 1 2 3 4 5 6 7 8 >






Item	Description
1	Select to keep the Loop mode what it was at powerdown.
2	Select to set the Loop mode to Manual on powerup.
3	Select to set the Loop mode to Auto on powerup.
4	Select to set the loop mode to Cascade on powerup.
5	Enter a value to apply to the loop CV (in percent) on controller powerup. The CV is set to this value on controller powerup in Run mode and on controller transition from Program mode to Run mode.
6	Enter a value to apply to the loop setpoint (in PV engineering units) on controller powerup. The setpoint is set to this value on controller powerup in Run mode and on controller transition from Program mode to Run mode.
7	Select to set the loop mode to the Normal loop mode on powerup.

XIC500 - TagDescript

- 1 → ☒ Go to Manual Loop Mode when an init request is seen
- 2 → ☒ SP tracks PV in Manual Loop Mode
- 3 → ☒ Skip Setpoint Rate of Change limiting in Interlock Trip, Maintenance or Override
- 4 → ☒ Enable the Setpoint Ramp 'Wizard' function
- 5 → If deviation exceeds this value, pause SP ramp (0.0=never pause)
- 6 → ☒ Skip CV clamping in Manual loop mode
- 7 → ☒ Skip CV rate of change limiting in Manual loop mode
- 8 → ☒ Use CV reset feedback in tracking, e.g. if output is significantly faster than actuator or inner loop.

< 1 2 3 4 5 6 7 8 >

Item	Description
1	Select to set the Loop mode to Manual when the Use CVInit Value input is true. The loop is left in manual with the CV at the initialization value when the initialization request clears. Clear this checkbox to leave the loop in its current mode on an initialization request. When the initialization request clears, the loop resumes controlling in its previous mode.
2	Select to have the current PV copied to the SP (track) whenever the loop is in Manual mode.
3	Select to skip the setpoint rate of change limiting in Interlock Trip, Maintenance, or Override.
4	Select to allow navigation to the setpoint Ramp Wizard Display from the Operator tab.
5	Enter a value for maximum deviation between SP and PV. If the deviation exceeds this value, the SP ramp pauses until the PV returns to a value within the set deviation.
6	Select to disable CV clamping during Manual mode.
7	Select to disable CV rate of change during Manual mode.
8	Select to enable CV reset feedback tracking. This keeps the CV from ramping if the output device or inner loop is significantly slower.

1
→
CV Tracking time constant Tt (minutes)

2
→
☒ Bumpless Program/Operator transition

3
→
☐ Bumpless transition from Override/Hand to Program/Operator






4
→
☐ In Override, bypass Interlocks that can be bypassed

5
→
PV failure trigger

☒ PV is Bad
☐ PV is Bad or Substituted
☐ PV is Bad, Substituted, or Uncertain

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>

Item	Description
1	Enter gain for CV tracking.
2	Select so that when this parameter is: <ul style="list-style-type: none"> On, the operator settings track the program settings when command source is Program, and program settings track the operator settings when the command source is Operator. Transition between command sources is bumpless. Off, the operator settings and program settings retain their values regardless of command source. When the command source is changed, the value of a limit can change, such as from the Programset value to the Operator-set value.
3	Select so that Program and operator settings track when the command source is Hand or Override.
4	Select to bypass Interlocks that can be bypassed while in Override command source.
5	Select the PV failure trigger.

1
→
Interlock not OK
☐

2
→
CV Fail
☐

3
→
PV Fail
☐

4
→
SP Fail
☐

5
→
Latch shed action until reset

6
→
CV Action

None
☐
Hold CV
☐
Use
☐

7
→
SP Action

8
→
None
☒
Hold SP
☐
Use
☐

9
→
Set SP to current PV
☐

10
→
Loop Mode Action

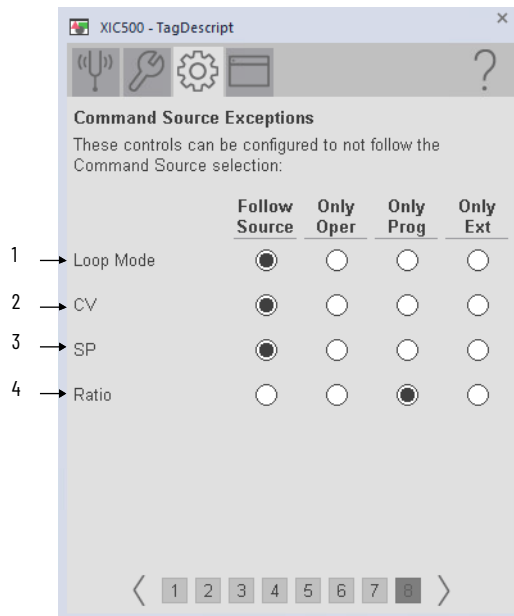
11
→
None
☒
Manual Only
☐
Auto or Manual Only
☐

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>

Item	Description
1	Possible Failures
2	For the given failure, do not change the CV operation, keep controlling.
3	For the given failure, hold the CV at the current value.
4	For the given failure, set the CV to the configured value.
5	For the given failure, do not change the SP operation.
6	For the given failure, hold the SP at the current value.
7	For the given failure, set the SP to the configured value.
8	For the given failure, have SP track the current PV value.
9	For the given failure, keep current loop mode.
10	For the given failure, set the loop mode to manual.
11	For the given failure, If loop made is cascade set to auto.

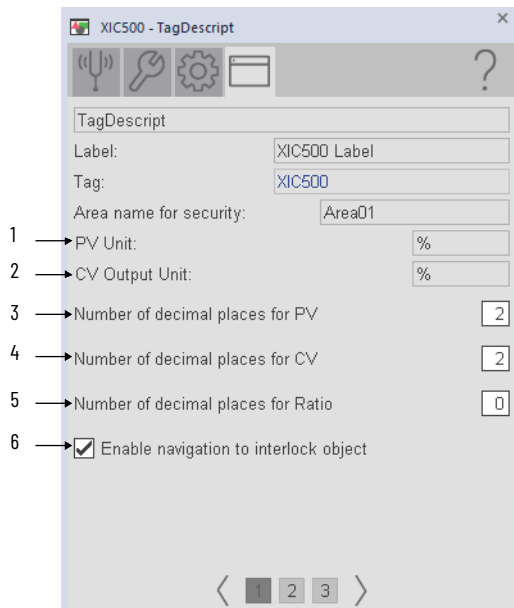
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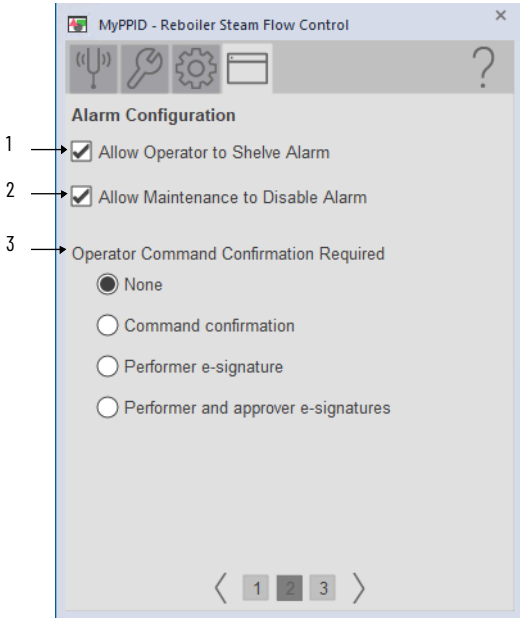


Item	Description
1	Select to keep control of loop mode commands with the Operator, Program, External, or Follow the Source even if the instruction is in Program mode.
2	Select to keep control of the controlled variable quantity setting with the Operator, Program, External, or Follow the Source even if the instruction is in Program mode.
3	Select to keep control of the setpoint settings with the Operator, Program, External, or Follow the Source even if the instruction is in Program mode.
4	Select to keep control of the ratio settings with the Operator, Program, External, or Follow the Source even if the instruction is in Program mode.

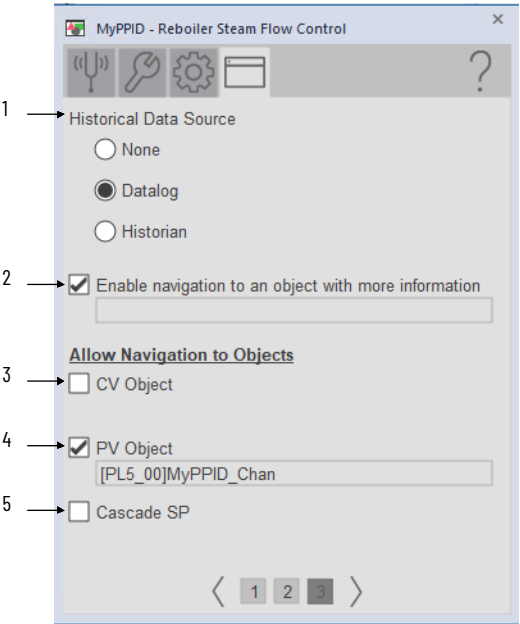
HMI Configuration Tab



Item	Description
1	Enter the PV engineering units for display on the HMI.
2	Enter the CV engineering units for display on the HMI. Percent (%) is the default
3	Enter in the number of decimal places that are displayed for the Process Variable
4	Enter in the number of decimal places that are displayed for the Control Variable
5	Enter the number of decimal places that are displayed for the ratio (cascade)
6	Select to enable navigation to the Interlock object.



Item	Description
1	Select to allow Operator to shelf alarm.
2	Select to allow Maintenance to disable alarm.
3	Select to configure operator command confirmation. This action would take place after any operator command.



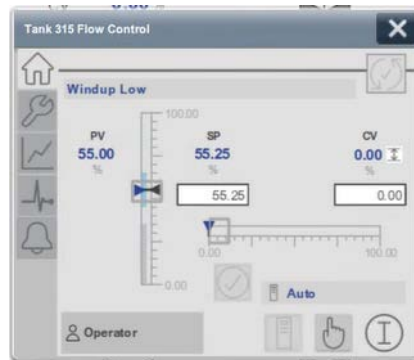
Item	Description
1	Select to configure if a Historical data source will be used or not.
2	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.
3	Select to enable navigation to the CV object.
4	Select to enable navigation to the PV object.
5	Select to enable navigation to Cascade SP object.

Studio 5000 View Designer Faceplates

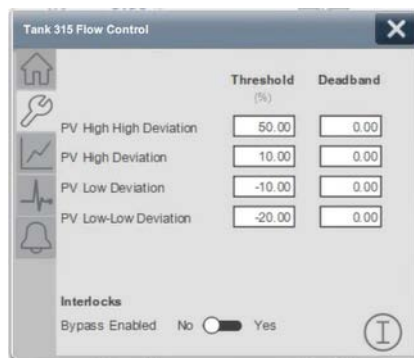
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 257](#) for descriptions of the features.

Operator Tab



Maintenance Tab

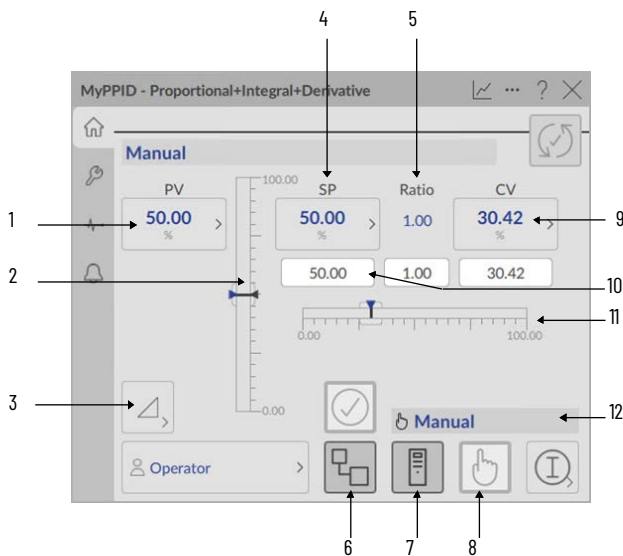


FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

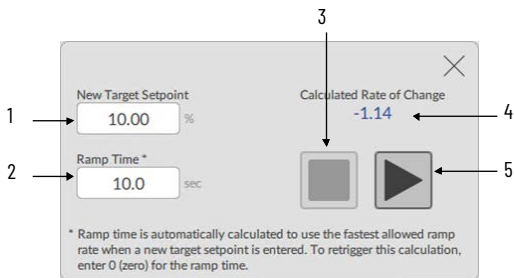
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates on page 257](#) for descriptions of the features.

Operator Tab



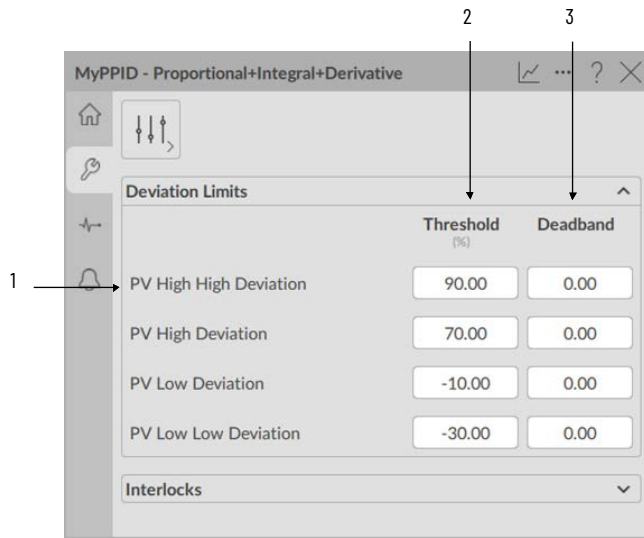
Item	Description
1	Current Process Variable (PV).
2	Bar graph for the current Process Variable.
3	Select to open the ramp wizard display.
4	Current Setpoint (SP).
5	Current Ratio (Ratio) if Cfg_HasCasc is true and Cfg_HasRatio is true.
6	Cascade loop mode.
7	Auto loop mode.
8	Manual loop mode
9	Current Control Variable (CV).
10	Enter a value for the loop setpoint. IMPORTANT: This value can be entered only when the instruction command source is Operator and the Loop mode is Automatic or Manual.
11	Bar graph for the current Control Variable.
12	Loop mode indicator.

Ramp Wizard



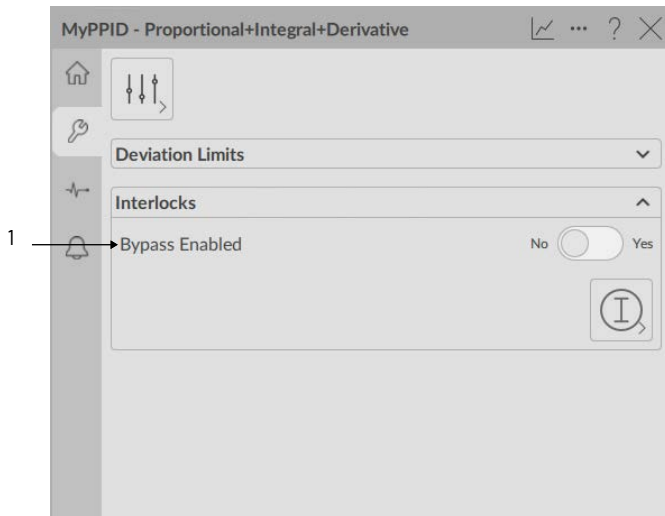
Item	Description
1	Enter new target setpoint.
2	Ramp Time
3	Stop setpoint ramping.
4	Calculated rate of change.
5	Start setpoint ramping.

Maintenance Tab - Deviation Limits



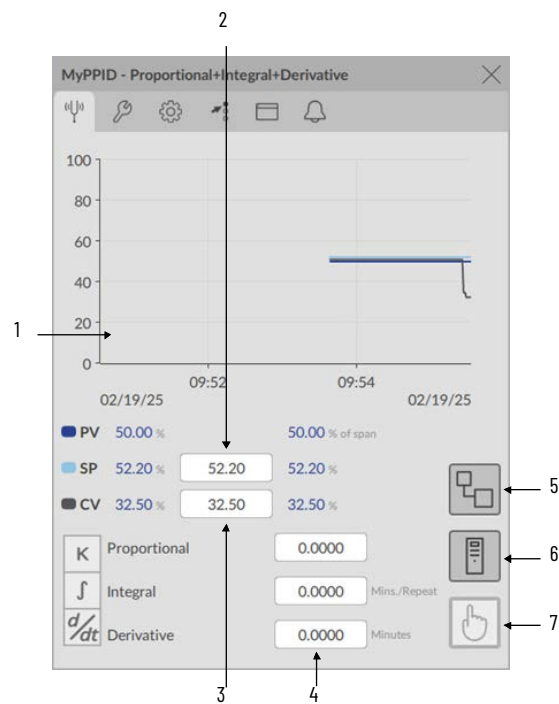
Item	Description
1	Threshold Name
2	Enter the threshold (trip point) for analog input alarms.
3	Enter the deadband (hysteresis) that applies to each alarm limit. Deadband helps prevent a noisy signal from generating numerous spurious alarms. Example: If the High alarm limit is 90.0 and the High alarm deadband is 5, once the signal rises above 90.0 and generates a High alarm. The signal must fall below 85.0 (90.0 minus 5.0) for the alarm to clear.

Maintenance Tab - Interlocks



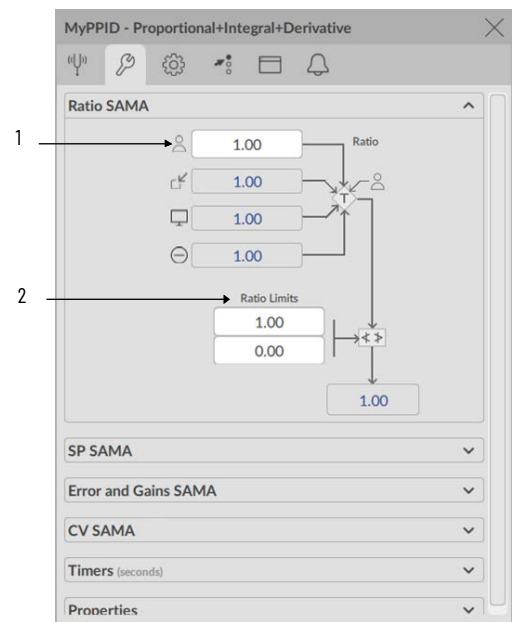
Item	Description
1	Select Yes to bypass checking of bypassable interlocks and permissives. Select No to enable checking of all interlocks and permissives.

Advanced Tuning Tab



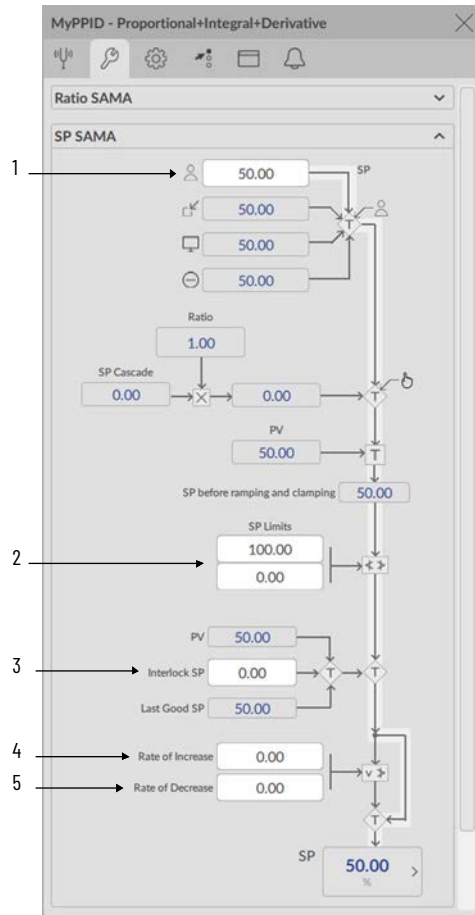
Item	Description
1	Trend display for Process Variable, Setpoint, and Controlled Variable.
2	Setpoint data entry.
3	Control variable data entry.
4	Tuning constant entries.
5	Cascade loop mode.
6	Auto loop mode.
7	Manual loop mode.

Advanced Maintenance Tab - Ratio SAMA



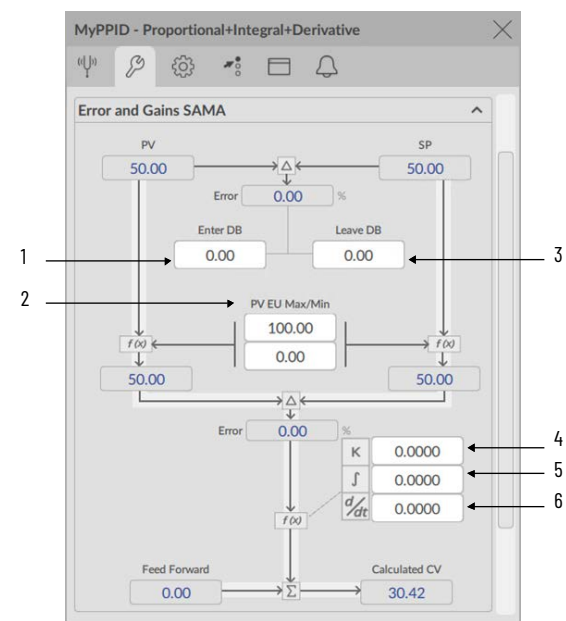
Item	Description
1	Enter the Operator ratio.
2	Enter the maximum and minimum limits for the ratio.

Advanced Maintenance Tab - SP SAMA



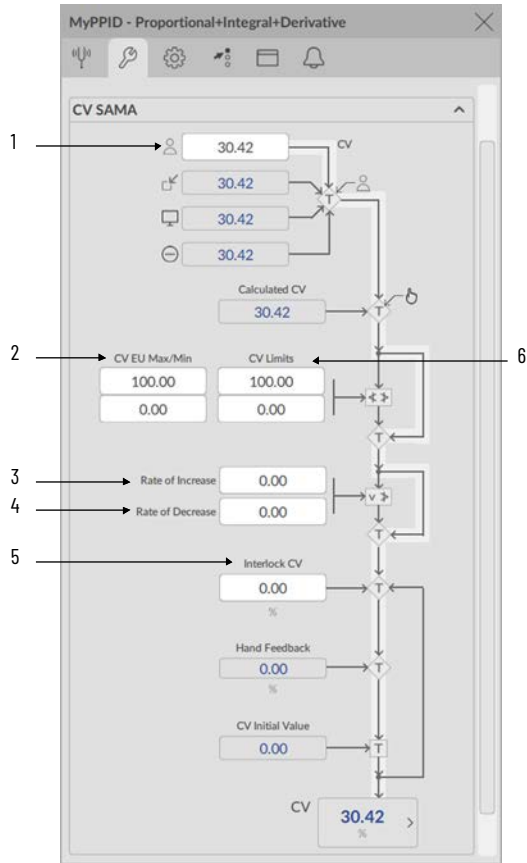
Item	Description
1	Enter the Operator Setpoint for the Operator Loop mode.
2	Enter the minimum and maximum limits for the setpoint.
3	Enter the interlock setpoint.
4	Enter the setpoint rate of increase.
5	Enter the setpoint rate of decrease.

Advanced Maintenance Tab - Error and Gains SAMA



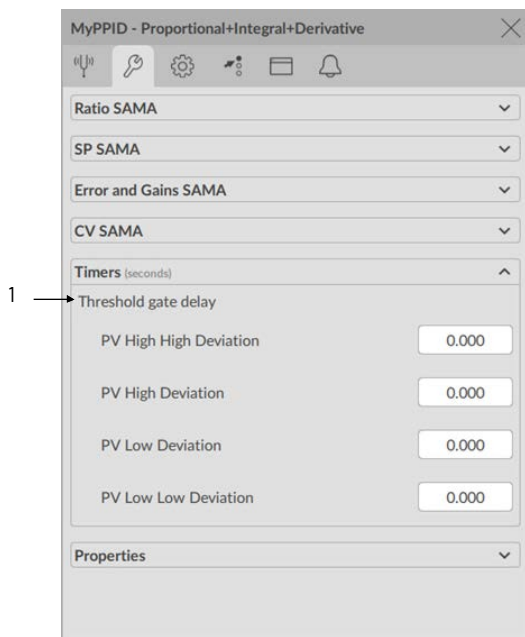
Item	Description
1	Enter the value for the zero-crossing deadband (in PV engineering units). When the loop error is less than the zero-crossing deadband, the loop output does not change.
2	Enter the maximum and minimum values of the PV range (span)(in PV engineering units). The maximum value must be greater than the minimum.
3	Enter the value for the deviation deadband threshold for the PV going away from the setpoint. The PID continues updating the CV when the PV leaves deadband.
4	Gains: Proportional This value depends on the setting of Cfg_Dependent. If Cfg_Dependent = 1 (dependent gains, the default), Enter the Controller Gain (unitless). This gain is applied to the Proportional, Integral, and Derivative terms. If Cfg_Dependent = 0 (independent gains), Enter the Proportional Gain (unitless). This gain is applied to the Proportional term only. A value of zero in either case disables the Proportional term of the controller. Negative values are not valid.
5	Gains: Integral This value depends on the setting of Cfg_Dependent. If Cfg_Dependent = 1 (dependent gains, the default), Enter the Integral Time Constant (minutes pre-repeat). If Cfg_Dependent = 0 (independent gains), Enter the Integral Gain (1/minutes). A value of zero in either case disables the Integral term of the controller. Negative values are not valid.
6	Gains: Derivative This value depends on the setting of Cfg_Dependent. If Cfg_Dependent = 1 (dependent gains, the default), Enter the Derivative Time Constant (minutes). If Cfg_Dependent = 0 (independent gains), Enter the Derivative Gain (minutes). A value of zero in either case disables the Derivative term of the controller. Negative values are not valid.

Advanced Maintenance Tab - CV SAMA



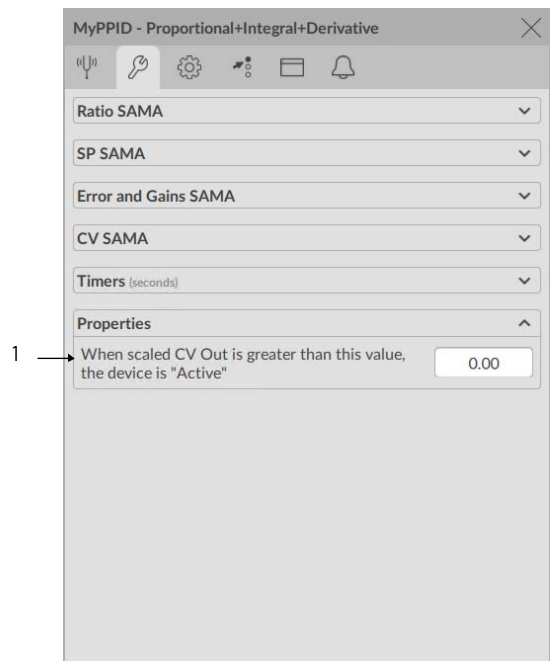
Item	Description
1	Enter the operator CV (when the PID is in manual mode).
2	Enter the minimum and maximum CV engineering units. These are used for scaling the output.
3	Enter the values for the maximum rate of change for increasing CV.
4	Enter the values for the maximum rate of change for decreasing CV.
5	Enter the value in percent to output as the CV when an Interlock input is not OK. The CV is held at this value until the interlock inputs are OK (subject to interlock bypassing).
6	Enter the maximum allowed value of the CV in percent. The CV output is clamped not to exceed the entered value. This value must be less than or equal to 100.0 and greater than the CV Low Limit. Enter the minimum allowed value of the CV in percent. The CV output is clamped not to go below the entered value. This value must be greater than or equal to 0.0 and less than the CV High Limit.

Advanced Maintenance Tab - Timers



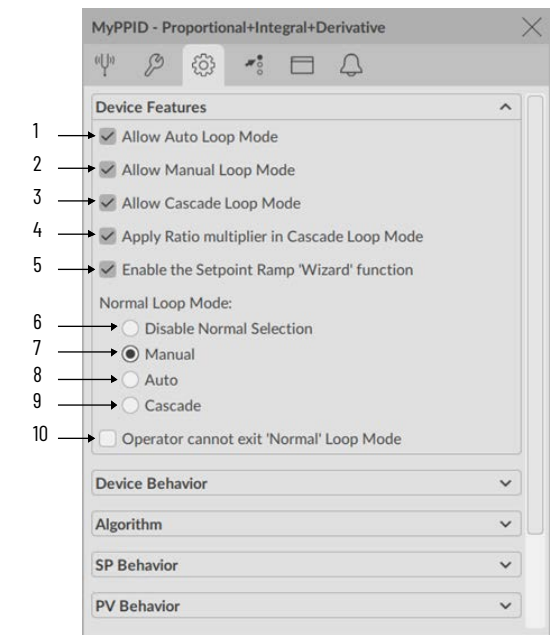
Item	Description
1	Process variable high high, high, low, and low low deviation threshold gate delay (seconds).

Advanced Maintenance Tab - Properties



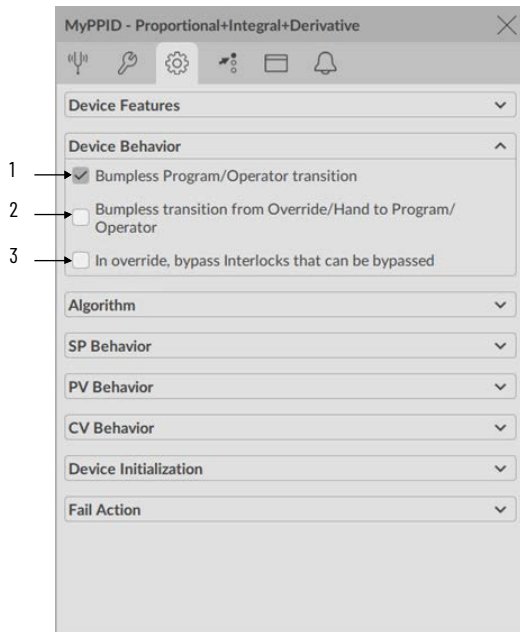
Item	Description
1	Enter the CV active threshold.

Advanced Engineering Tab - Device Features



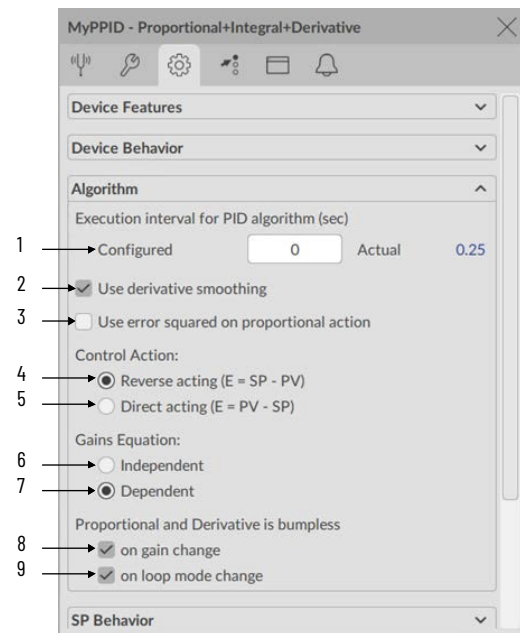
Item	Description
1	Select to enable Auto Loop mode.
2	Select to enable Manual Loop mode.
3	Select to enable Cascade Loop mode.
4	Select to enable ratio multiplier in Cascade mode.
5	Select to allow navigation to the setpoint Ramp Wizard Display from the Operator tab.
6	Select to disable normal loop mode selection.
7	Select to choose manual as the normal loop mode.
8	Select to choose auto as the normal loop mode.
9	Select to choose cascade as the normal loop mode.
10	Select to lock the loop in the mode configured as Normal.

Advanced Engineering Tab - Device Behavior



Item	Description
1	Select so that when this parameter is: <ul style="list-style-type: none"> On, the operator settings track the program settings when command source is Program, and program settings track the operator settings when the command source is Operator. Transition between command sources is bumpless. Off, the operator settings and program settings retain their values regardless of command source. When the command source is changed, the value of a limit can change, such as from the Programset value to the Operator-set value.
2	Select so that Program and operator settings track when the command source is Hand or Override.
3	Select to bypass Interlocks that can be bypassed while in Override command source.

Advanced Engineering Tab - Algorithm



Item	Description
1	Enter the interval (in seconds) to execute the PID algorithm.
2	Select to enable derivative smoothing. Derivative smoothing can help reduce output jitter due to noise on the PV signal. Clear this checkbox to disable derivative smoothing. When derivative smoothing is disabled, it can result in quicker loop response at high derivative gain.
3	Select whether the error is squared on proportional action or not. Squaring the error minimizes the effect of a small error on the output.
4	Select for reverse-acting loop response (default). When the PV increases, the CV (output) decreases.
5	Select for direct-acting loop response. When the PV increases, the CV (output) increases.
6	Select to use the Independent Gains form of the PID algorithm. Changes to the proportional gain do not affect integral or derivative response.
7	Select to use the Dependent Gains form of the PID algorithm (default). Changes to Cfg_PGain are applied as loop gain changes and affect proportional, integral, and derivative responses.
8	Select whether the CV response to the proportional and derivative gains is bumpless or not.
9	Select if the proportional and derivative is bumpless during a loop mode change. This is only enabled when the integral gain is set to 0

Advanced Engineering Tab - SP Behavior

MyPPID - Proportional+Integral+Derivative

Device Features

Device Behavior

Algorithm

SP Behavior

1 ☐ SP tracks PV in Manual Loop Mode

2 ☐ Skip Setpoint rate of change limiting in Interlock Trip, Maintenance or Override

3 Weight on SP in proportional term, beta gain 1.0000

4 Weight on SP in derivative term, gamma gain 0.0000

5 If deviation exceeds this value pause SP ramp (0.0 = never pause): 0.00

PV Behavior

CV Behavior

Device Initialization

Fail Action

Item	Description
1	Select to have the current PV copied to the SP (track) whenever the loop is in Manual mode.
2	Select to skip the setpoint rate of change limiting in Interlock Trip, Maintenance, or Override.
3	Enter value for beta gain. This is the weight (multiplier) of the proportional gain. If beta is set to 0.0, the proportional gain has value. If beta is set to 1.0, the proportional gain has full effect. This is configurable from 0.0 to 1.5.
4	Enter value for gamma gain. This is the weight (multiplier) of the derivative gain. If gamma is set to 0.0, the derivative gain has value. If beta is set to 1.0, the derivative gain has full effect. This is configurable from 0.0 to 1.5.
5	Enter a value for maximum deviation between SP and PV. If the deviation exceeds this value, the SP ramp pauses until the PV returns to a value within the set deviation.

Advanced Engineering Tab - PV Behavior

MyPPID - Proportional+Integral+Derivative

Algorithm

SP Behavior

PV Behavior

PV Deviation Deadband Action:

1 ☒ All PID terms are suspended and CV does not move

2 ☐ Only integral suspended, proportional and derivative remain operational

3 PV deviation deadband when approaching SP 0.00

4 PV deviation deadband when leaving SP 0.00

5 PV failure trigger

☐ PV is Bad

☒ PV is Bad or Substituted

☐ PV is Bad, Substituted, or Uncertain

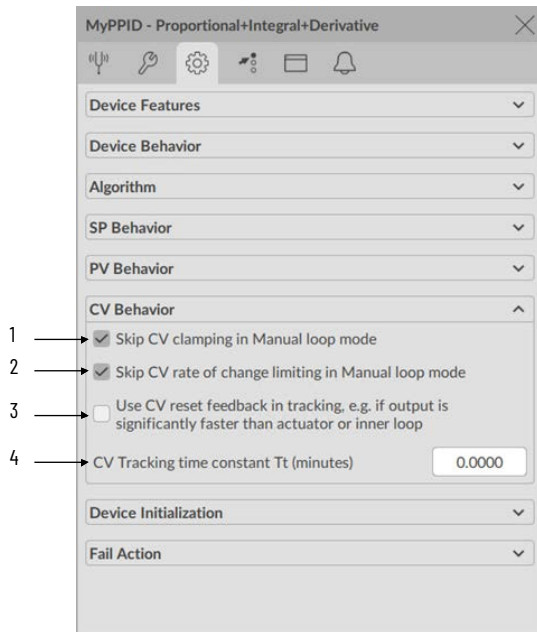
CV Behavior

Device Initialization

Fail Action

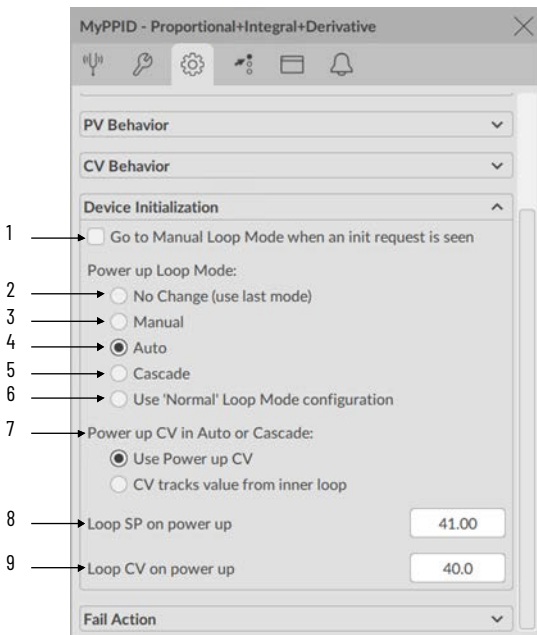
Item	Description
1	If the PV derivative deadband is exceeded, PID stops processing the error calculation and the CV freezes.
2	If the PV derivative deadband is exceeded, the integral portion of the error calculation will be suspended. The error calculation continues and the CV is updated.
3	Enter the value for PV deviation when the CV is approaching SP. A lower deadband allows for less deviation in the PV. If the deviation deadband is reached, action is taken according to items #1 or #2.
4	Enter the value for PV deviation when the CV is leaving the SP. A lower deadband allows for less deviation in the PV. If the deviation deadband is reached, action is taken according to items #1 or #2.
5	Select the PV failure trigger.

Advanced Engineering Tab - CV Behavior



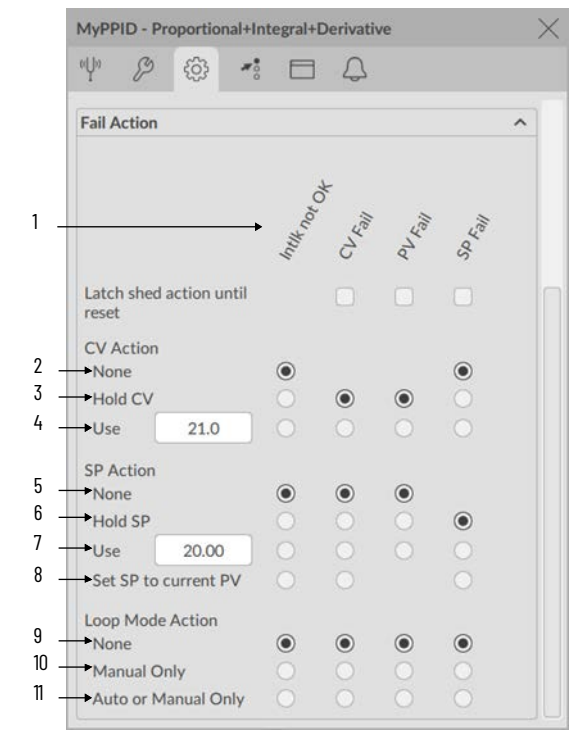
Item	Description
1	Select to disable CV clamping during Manual mode.
2	Select to disable CV rate of change during Manual mode.
3	Select to enable CV reset feedback tracking. This keeps the CV from ramping if the output device or inner loop is significantly slower.
4	Enter gain for CV tracking.

Advanced Engineering Tab - Device Initialization



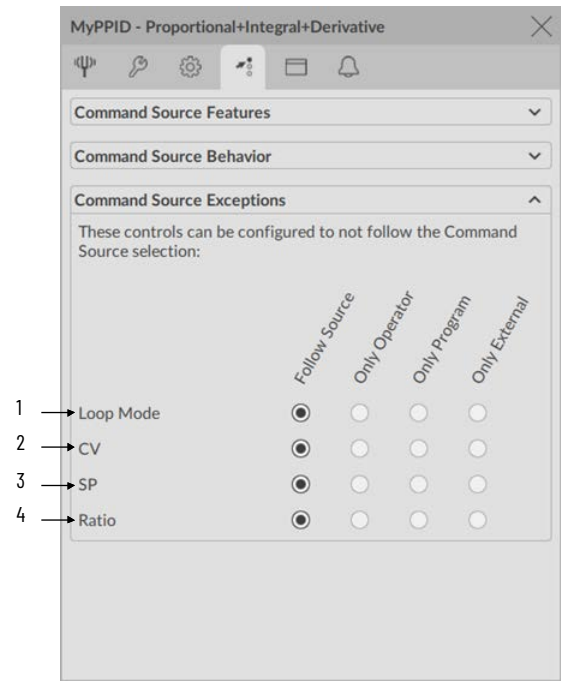
Item	Description
1	Select to set the Loop mode to Manual when the Use CVInit Value input is true. The loop is left in manual with the CV at the initialization value when the initialization request clears. Clear this checkbox to leave the loop in its current mode on an initialization request. When the initialization request clears, the loop resumes controlling in its previous mode.
2	Select to keep the Loop mode what it was at powerdown.
3	Select to set the Loop mode to Manual on powerup.
4	Select to set the Loop mode to Auto on powerup.
5	Select to set the Loop mode to Cascade on powerup.
6	Select to use the Normal loop mode configuration on powerup.
7	Selection of Powerup (first run) CV in Auto or Cascade. 0 = Ignore Inp_InnerAvailable and always use Cfg_CVPwrUp or last (Powerdown) CV (if Cfg_PwrUpLM = 0), 1 = Process Inp_InnerAvailable.
8	Enter a value to apply to the loop setpoint (in PV engineering units) on controller powerup. The setpoint is set to this value on controller powerup in Run mode and on controller transition from Program mode to Run mode.
9	Enter a value to apply to the loop CV (in percent) on controller powerup. The CV is set to this value on controller powerup in Run mode and on controller transition from Program mode to Run mode.

Advanced Engineering Tab - Fail Action



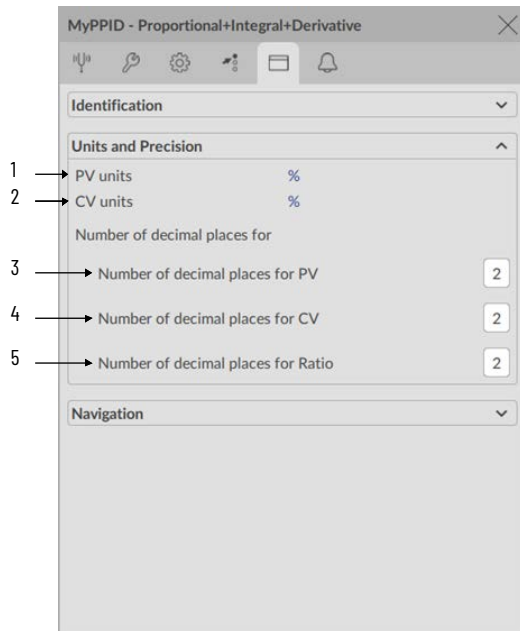
Item	Description
1	Possible Failures.
2	For the given failure, do not change the CV operation, keep controlling.
3	For the given failure, hold the CV at the current value.
4	For the given failure, set the CV to the configured value.
5	For the given failure, do not change the SP operation.
6	For the given failure, hold the SP at the current value.
7	For the given failure, set the SP to the configured value.
8	For the given failure, have SP track the current PV value.
9	For the given failure, keep current loop mode.
10	For the given failure, set the loop mode to manual.
11	For the given failure, If loop made is cascade set to auto.

Advanced Command Source Tab - Command Source Exceptions



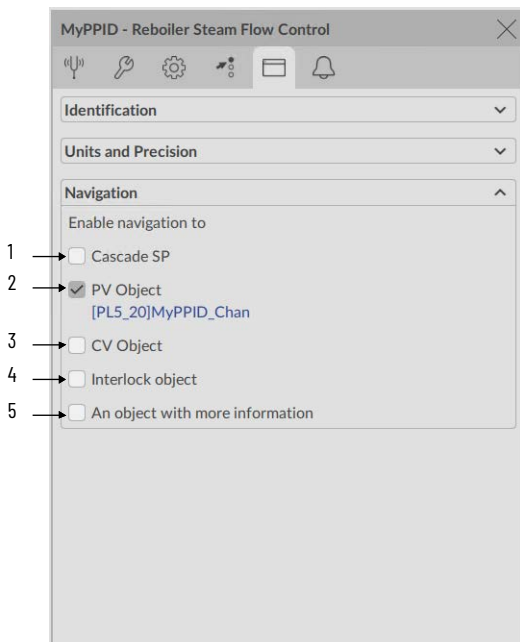
Item	Description
1	Select to keep control of loop mode commands with the Operator, Program, External, or Follow the Source.
2	Select to keep control of the controlled variable quantity setting with the Operator, Program, External, or Follow the Source.
3	Select to keep control of the setpoint settings with the Operator, Program, External, or Follow the Source.
4	Select to keep control of the ratio settings with the Operator, Program, External, or Follow the Source.

Advanced HMI Configuration Tab - Units and Precision



Item	Description
1	Display the PV engineering units.
2	Display the CV engineering units. Percent (%) is the default.
3	Enter in the number of decimal places that are displayed for the Process Variable.
4	Enter in the number of decimal places that are displayed for the Control Variable.
5	Enter the number of decimal places that are displayed for the ratio (cascade).

Advanced HMI Configuration Tab - Navigation






Item	Description
1	Select to enable navigation to Cascade SP object.
2	Select to enable navigation to the PV object.
3	Select to enable navigation to the CV object.
4	Select to enable navigation to the Interlock object.
5	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.





Notes:

Process Permissive (PPERM)

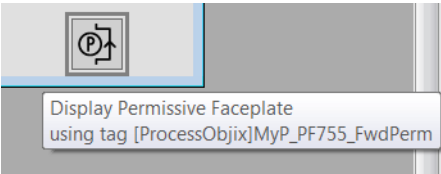
Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PPERM 	PPERM_GS 	GS_PPERM 	Standard Permissive Global Object.

Permissive States

Image	Description
	Not ready to run or energize. One or more permissive conditions are not OK.
	Ready to run or energize. One or more conditions that can be bypassed are not OK, but these conditions are bypassed. All conditions that cannot be bypassed are OK.
	Ready to run or energize. All permissive conditions are OK.
	Ready to run or energize, and all permissive conditions are OK, conditions that can be bypassed are being bypassed and the equipment is not shut down.

The overall graphic symbol includes a touch field over it that opens the faceplate. Hover the pointing device over the graphic symbol to display a tooltip that describes the function of the symbol.



FactoryTalk View SE Faceplates

There are basic faceplate attributes that are common across all instructions. This object has no Trends, Diagnostics, or Alarms tabs.

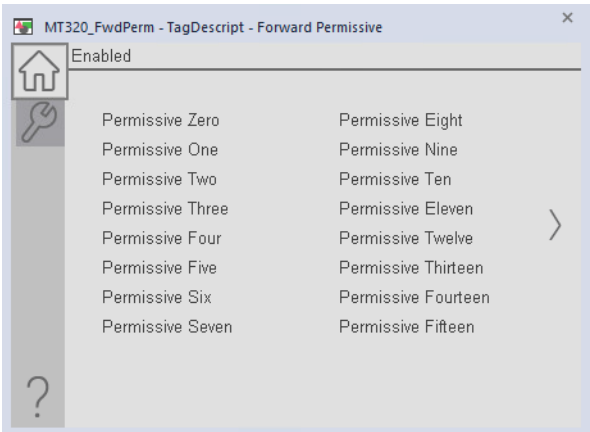
Operator Tab

The Faceplate initially opens to the Operator (Home) tab. From here, an operator can monitor the device status.

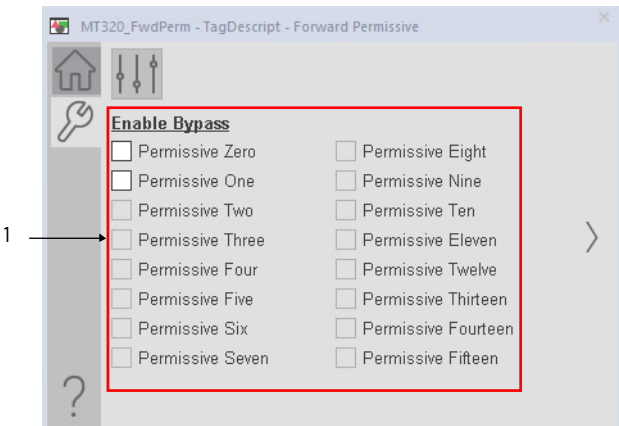
The Operator tab shows the following information:

- Permissive bypass status indicator (Enabled, Bypassed)
- Each configured permissive along with the current state of the permissive

If navigation is enabled, Select the condition to open the faceplate of the object that is associated with the condition.

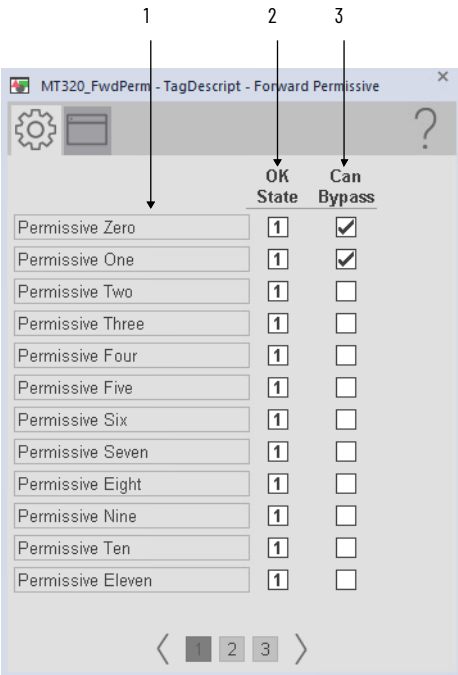


Maintenance Tab



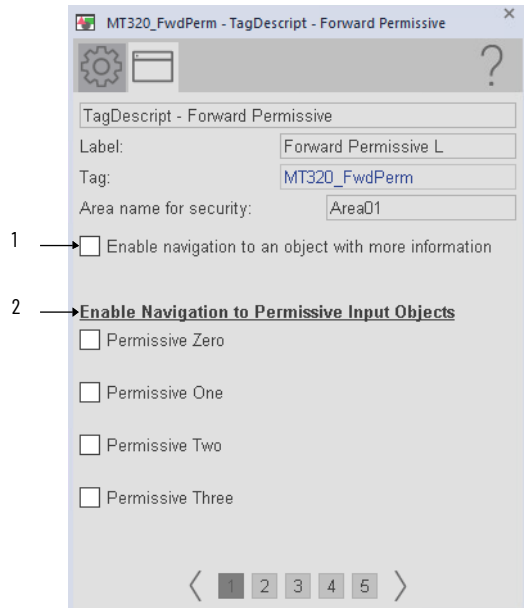
Item	Description
1	Select an active permissive, one that has a white checkbox, to enable bypass of that individual permissive.

Engineering Tabs



Item	Description
1	Enter the text description of each permissive condition used. Only the permissives with text entered appear on the Operator tab of the faceplate.
2	Selects the state of the corresponding permissive that is the OK to Run state.
3	Select to indicate that the corresponding permissive can be bypassed.

HMI Configuration Tab



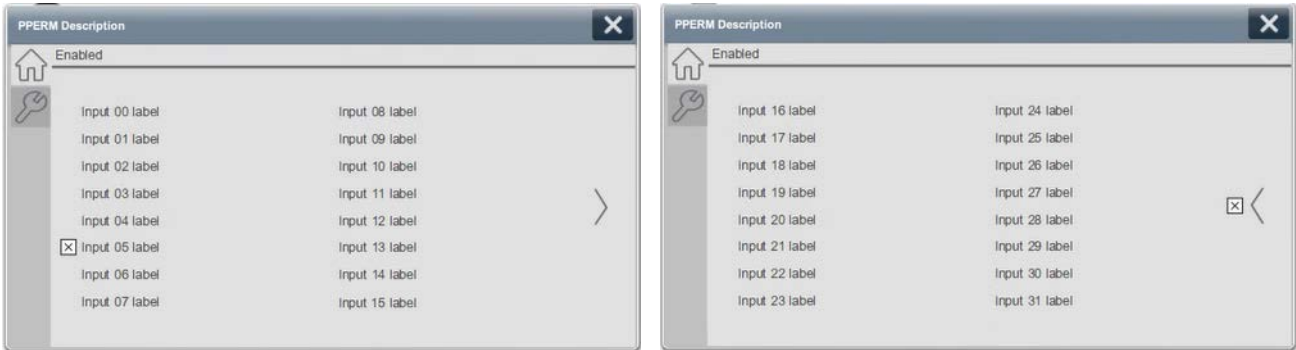
Item	Description
1	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.
2	Select to allow navigation to Permissive Input objects.

Studio 5000 View Designer Faceplates

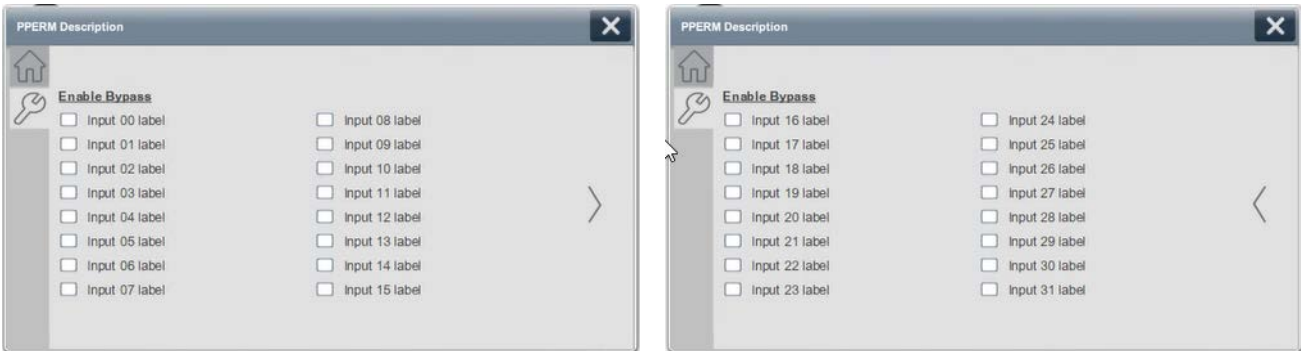
There are basic faceplate attributes that are common across all instructions. This object has no Trends, Diagnostics, or Alarms tabs.

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 282](#) for descriptions of the features.

Operator Tab



Maintenance Tab



FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. This object has no Trends, Diagnostics, or Alarms tabs.

FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates on page 282](#) for descriptions of the features.

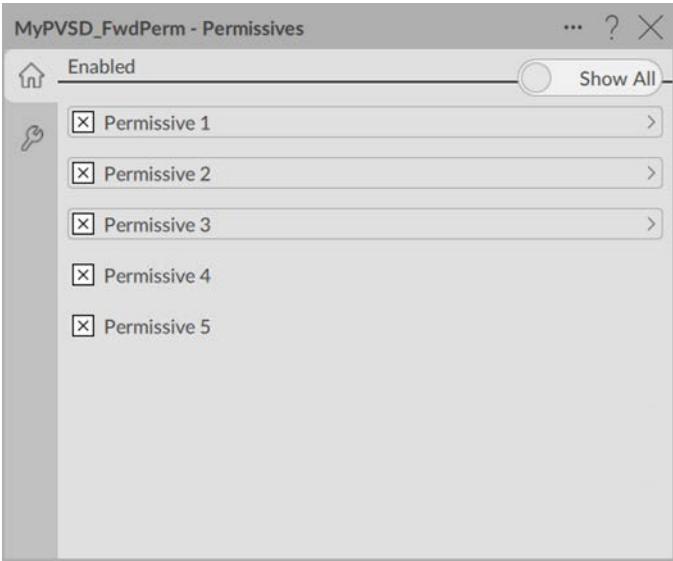
Operator Tab

The Faceplate initially opens to the Operator (Home) tab. From here, an operator can monitor the device status.

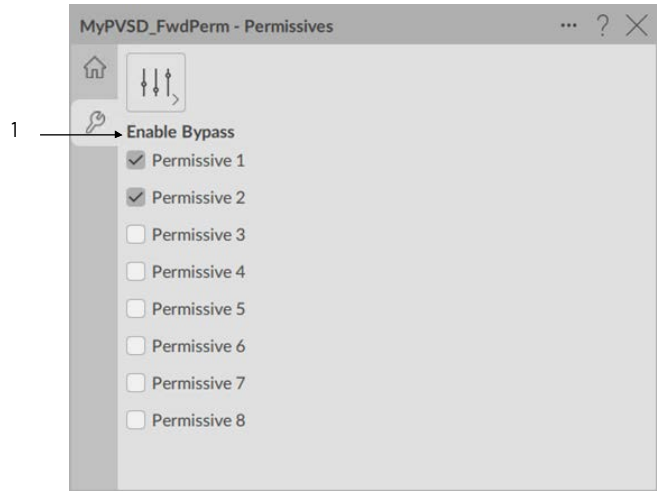
The Operator tab shows the following information:

- Permissive bypass status indicator (Enabled, Bypassed)
- Each configured permissive along with the current state of the permissive

If navigation is enabled, Select the condition to open the faceplate of the object that is associated with the condition.

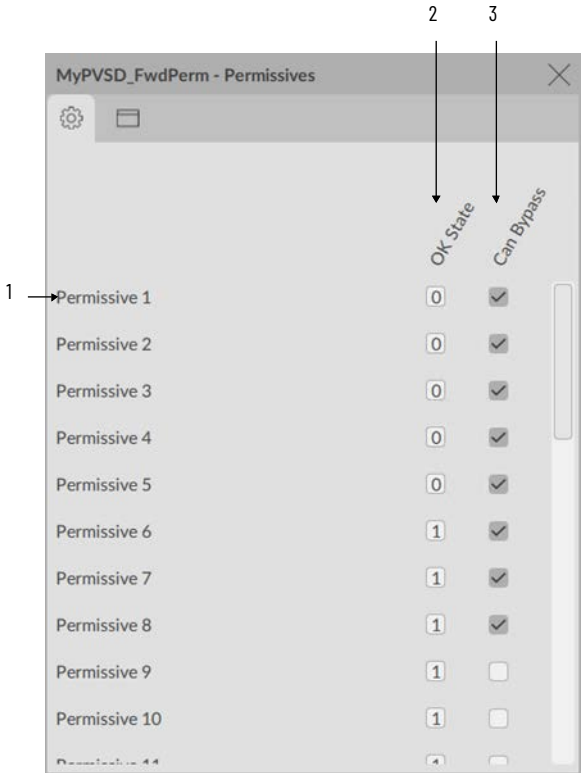


Maintenance Tab



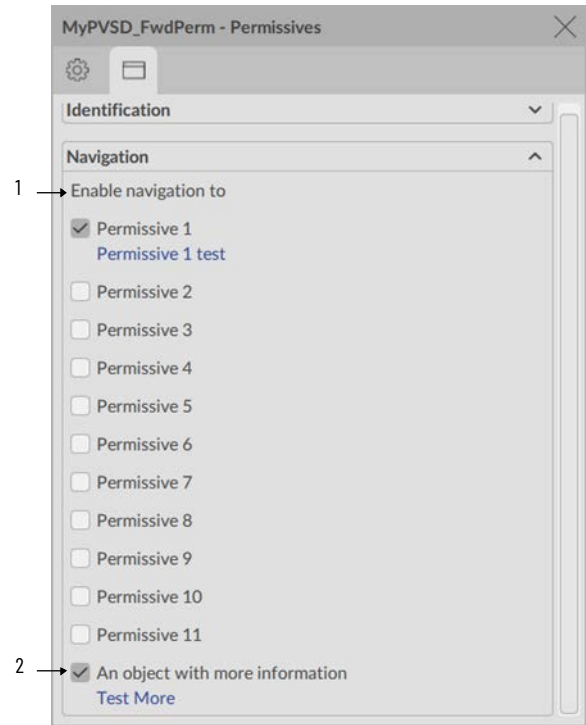
Item	Description
1	Select an active permissive, one that has a white checkbox, to enable bypass of that individual permissive.

Advanced Engineering Tab



Item	Description
1	The text description of each permissive condition used. Only the permissives with text entered appear on the Operator tab of the faceplate.
2	Selects the state of the corresponding permissive that is the OK to Run state.
3	Select to indicate that the corresponding permissive can be bypassed.

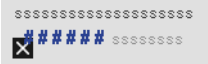

Advanced HMI Configuration Tab



Item	Description
1	Select to allow navigation to Permissive Input objects.
2	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an object backing tag or a UDT tag that has Instruction and Library defined.

Process Pressure/Temperature Compensated Flow (PPTC)

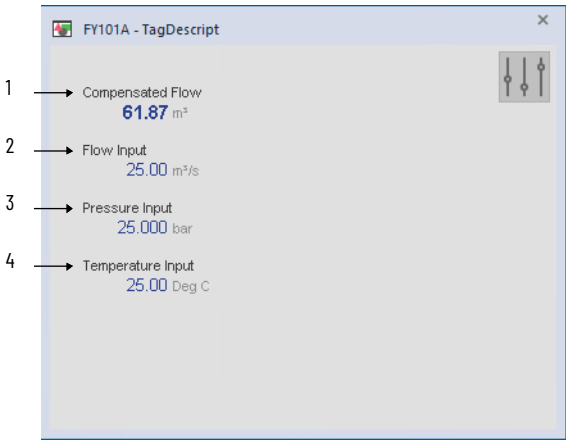
Graphic Symbols

Graphic Symbol Name	FactoryTalk View SE Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PPTC			Standard pressure / temperature compensated flow graphic symbol

FactoryTalk View SE Faceplates

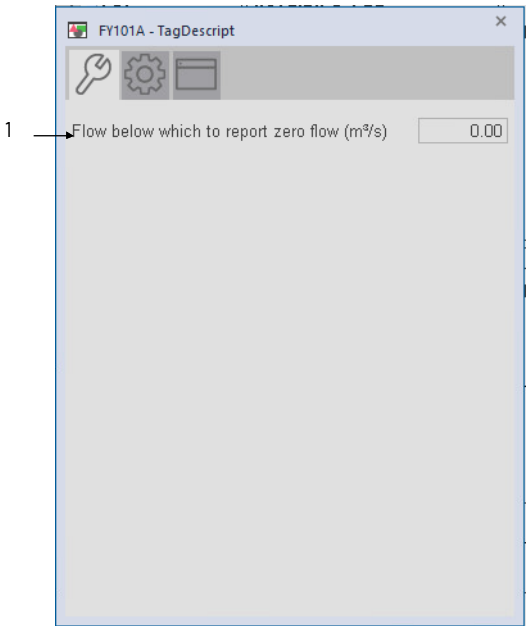
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



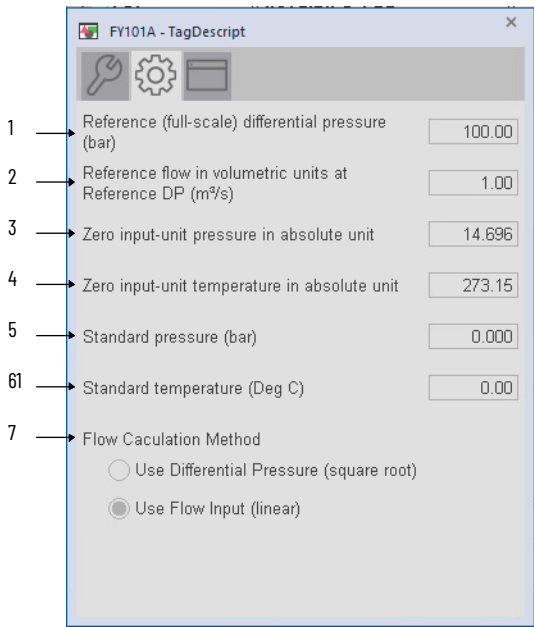
Item	Description
1	The compensated flow (at standard temperature and pressure).
2	Actual (measured) uncompensated flow in volumetric units.
3	The actual (measured) pressure. Can be absolute or common units.
4	The actual (measured) temperature.

Advanced Maintenance Tab



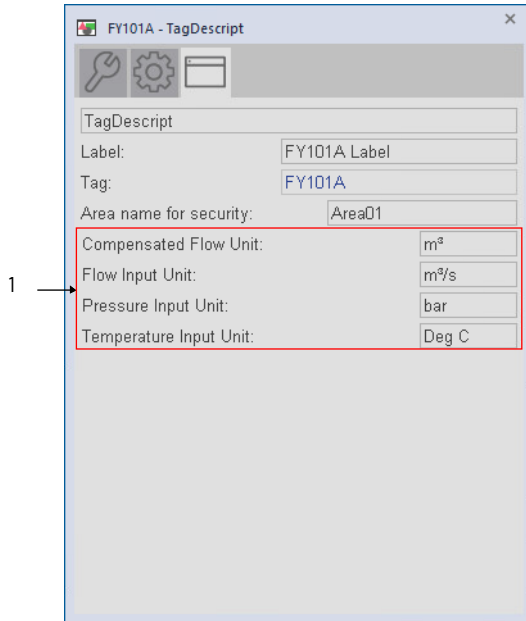
Item	Description
1	Enter the flow value. Any flow below this value will be reported as 0.

Engineering Tab



Item	Description
1	Enter the full-scale differential pressure reference.
2	Enter the flow at the reference differential pressure.
3	Enter the zero input-unit pressure. This is the pressure offset (usually 14.696 PSIA).
4	Enter the zero input-unit temperature. This is the temperature offset (usually 273.15 K or 459.67 Rankine).
5	Enter the standard pressure value.
6	Enter the standard temperature value.
7	Select the flow calculation method.

HMI Configuration Tab



Item	Description
1	Displays units

Studio 5000 View Designer Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 287](#) for descriptions of the features.




Operator Tab



Notes:

Process Restart Inhibit (PRI)

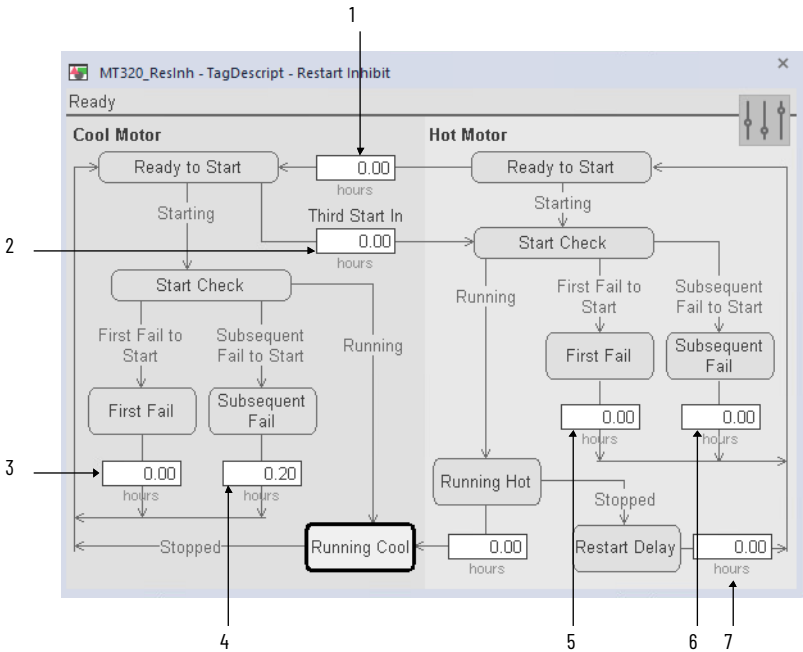
Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PRI 	raP_5_20_PRI_GS 		Standard Restart Inhibit Graphic Symbol.

FactoryTalk View SE Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



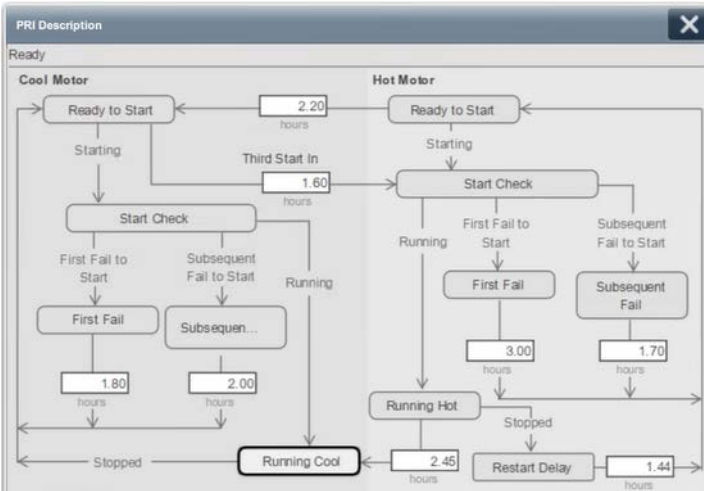
Item	Description
1	Enter the time, in hours, for a stopped hot motor to cool.
2	Enter the time, in hours, during which three motor starts turn a cold motor to hot.
3	Enter the time, in hours, to wait after failing to start a cold motor the first time.
4	Enter the time, in hours, to wait after failing to start a cold motor two or more times.
5	Enter the time, in hours, to wait after failing to start a hot motor the first time.
6	Enter the time, in hours, to wait after failing to start a hot motor two or more times.
7	Enter the time, in hours, to wait after stopping a running hot motor.

Studio 5000 View Designer Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 291](#) for descriptions of the features.

Operator Tab

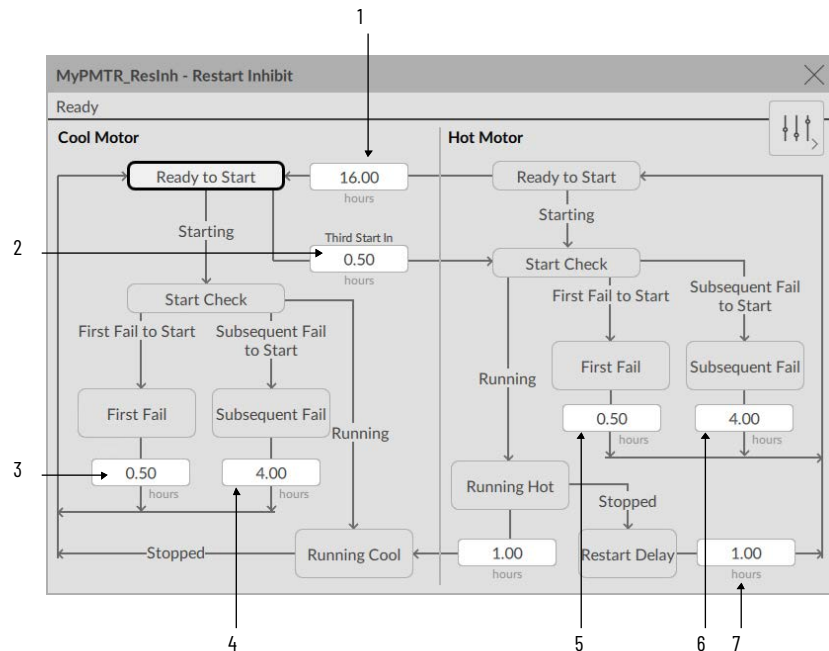


FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [Basic Faceplate Attributes on page 44](#) for descriptions of the features.

Operator Tab






Item	Description
1	Enter the time, in hours, for a stopped hot motor to cool.
2	Enter the time, in hours, during which three motor starts turn a cold motor to hot.
3	Enter the time, in hours, to wait after failing to start a cold motor the first time.
4	Enter the time, in hours, to wait after failing to start a cold motor two or more times.
5	Enter the time, in hours, to wait after failing to start a hot motor the first time.
6	Enter the time, in hours, to wait after failing to start a hot motor two or more times.
7	Enter the time, in hours, to wait after stopping a running hot motor.

Notes:

Process Run Time (PRT)

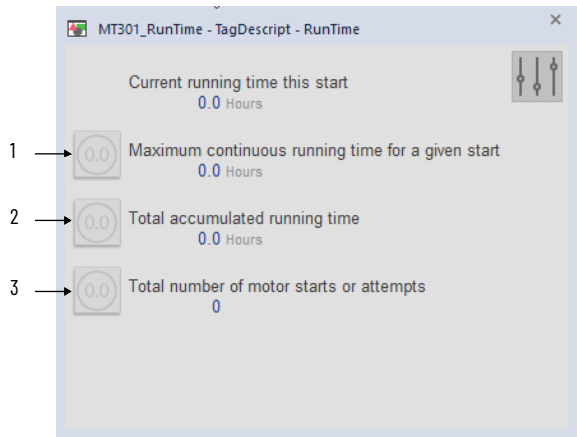
Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PRT 	PRT_GS 	GS_PRT 	Standard Run Time Graphic Symbol.

FactoryTalk View SE Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

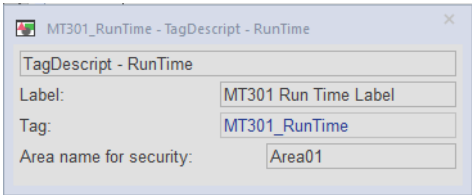
Operator Tab



Item	Description
1	Select to clear maximum continuous running time for any given start.
2	Select to clear total running time.
3	Select to clear total number of motor starts or start attempts.

Advanced Tab

The Advanced Tab shows the HMI text that has been configured.

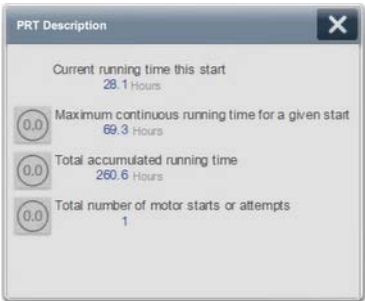


Studio 5000 View Designer Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 295](#) for descriptions of the features.

Operator Tab

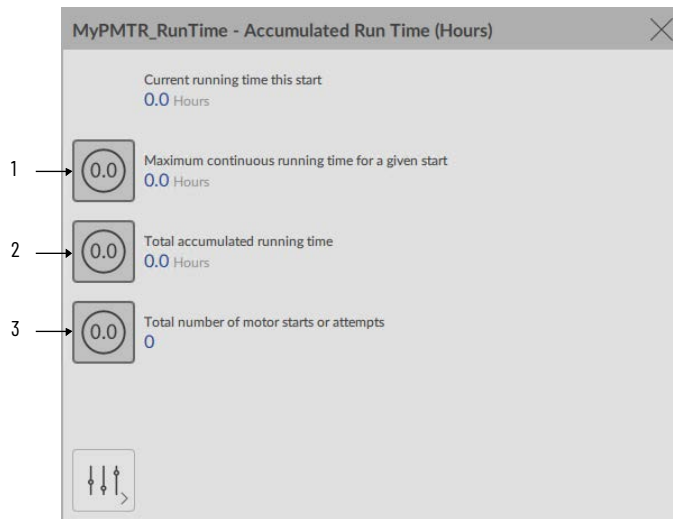


FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

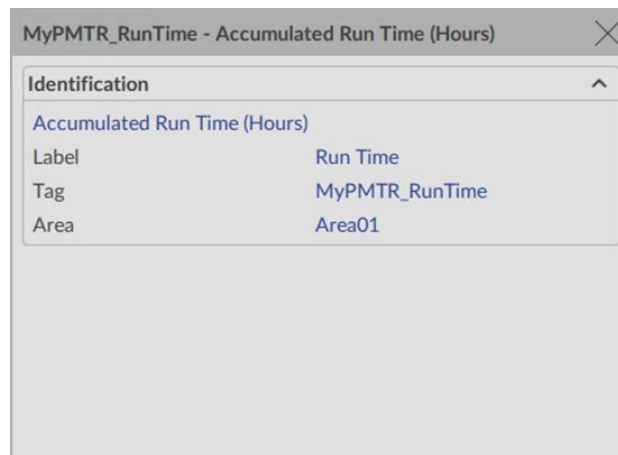
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 295](#) for descriptions of the features.

Operator Tab



Item	Description
1	Select to clear maximum continuous running time for any given start.
2	Select to clear total running time.
3	Select to clear total number of motor starts or start attempts.

Advanced Tab



Notes:

Process Tank Strapping Table (PTST)

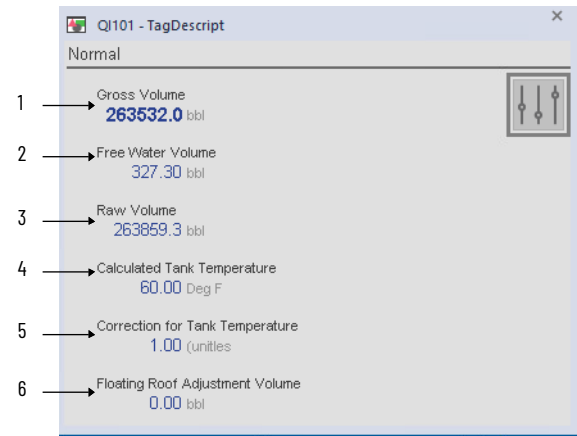
Graphic Symbols

Graphic Symbol Name	FactoryTalk View SE Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PTST			Standard tank strapping table graphic symbol

FactoryTalk View SE Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



Item	Description
1	Displays gross tank volume.
2	Displays free water volume.
3	Displays raw (observed) volume.
4	Displays calculated tank temperature.
5	Displays correction for tank temperature
6	Displays floating roof adjustment volume

Engineering Tab

QI102 - TagDescript

1 → Tank calibration temperature (Deg F) 60.00

2 → Degrees API for which table includes floating roof data 30.50

3 → Lowest level at which to add/subtract floating roof compensation (feet) 0.00

4 → Adjustment to table values for API <> CalAPI (bbl/Degree API) -2.50

5 → Temperature weighting (0.0 for insulated tank) 7.0

6 → Table minor units per major unit 12.0

7 → Tank shell linear coefficient of thermal expansion (1/Deg F) 0.0000062

< 1 2 >

Item	Description
1	Enter temperature of tank calibration (typically 60 F or 15 C)
2	Enter degrees API for which the table includes floating roof data.
3	Enter the lowest level at which to add or subtract floating roof compensation.
4	Enter adjustment to table values for API <> CalAPI (volume/degrees API, typically a negative number).
5	Enter temperature weighting (0.0 for insulated tank). See API MPMS 2.2A Appendix D.
6	Enter table minor units in inches, cm, mm, per major unit (feet or meters). Enter 0.0 if minor units are not used.
7	Enter tank shell linear coefficient of thermal expansion (1 per degree Fahrenheit or 1 per Celsius).

QI101 - TagDescript

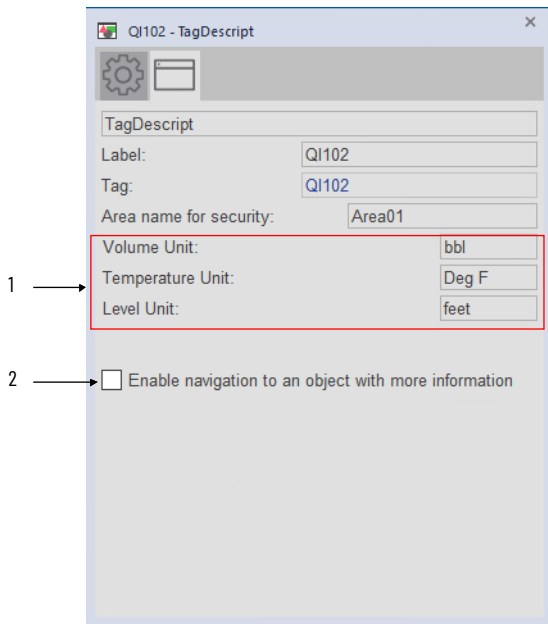
1 → ☐ Include correction for temperature of tank shell.

2 → ☐ Include floating roof adjustment for displacement of fluid level.

< 1 2 >

Item	Description
1	Select to include the tank shell temperature correction.
2	Select to include the floating roof adjustment for calculating fluid level.

HMI Configuration Tab



Item	Description
1	Display units
2	Select to enable navigation to another object as a reference.

Studio 5000 View Designer Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 299](#) for descriptions of the features.

Operator Tab


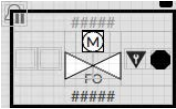
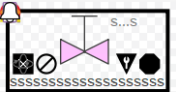







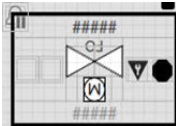

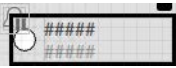



Notes:

Process Valve (PVLV)

The PVLV Add-On Instruction can be configured to be a Hand Operated, Motor Operated, or Solenoid Operated valve.

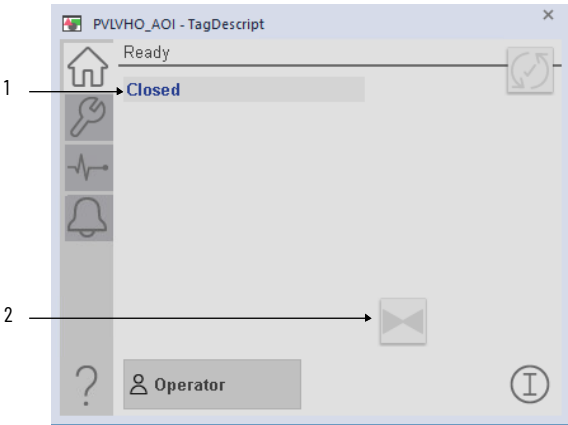
Graphic Symbols
(Configured as Hand
Operated Valve)

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
<div>GO_PVLV_H0</div> 	<div>PVLV_GS_Valve</div> 	<div>GS_PVLV_H0</div> 	<p>Hand-operated Valves that are shown in various orientations.</p> <p>The FactoryTalk Optix PVLV graphic symbols have configurable actuator that can show either a Motor Operated, Solenoid Operated, or Hand Operated Actuator.</p>
<div>GO_PVLV_H01</div> 	<div>PVLV_GS_Valve_L</div> 	<div>GS_PVLV_H01</div> 	
<div>GO_PVLV_H02</div> 	<div>PVLV_GS_Valve_R</div> 	<div>GS_PVLV_H02</div> 	
<div>GO_PVLV_H03</div> 	<div>PVLV_GS_Valve_B</div> 	<div>GS_PVLV_H03</div> 	
	<div>PVLV_GS_Text</div> 		
	<div>PVLV_GS_Symbol</div> 		

FactoryTalk View SE Faceplates (Configured as Hand Operated Valve)

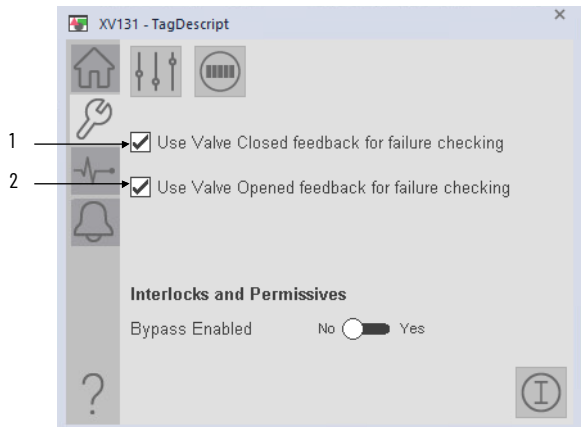
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



Item	Description
1	Valve state indicator.
2	Select to trip the valve “Open” or “Closed” depending on the valve configuration.

Maintenance Tab



Item	Description
1	Select to configure the valve to use the closed limit switch. Clear the checkbox to bypass the closed limit switch temporarily.
2	Select to configure the valve to use the open limit switch. Clear the checkbox to bypass the closed limit switch temporarily.

Advanced Maintenance Tab

1 → Time after command with no motion before Full Stall fault (sec) 15.000

2 → Time after command to reach position before Transit Stall fault (sec) 60.000

3 → Time after 'Trip' to reach trip position before Trip Fail fault (sec) 10.000

4 → Delay before changing output (sec) Close 2.000 Open 2.000

Item	Description
1	Enter the amount of time with no motion after a command for an alarm to occur.
2	Enter the amount of time that the valve is not confirmed open or closed before a Transit Stall.
3	Enter the amount of time to allow the valve to reach its trip position after a trip command is received before raising a trip fail alarm.
4	Enter the amount of time after receiving a command to open or close the valve before changing the outputs to actually move the valve (command delay).

Engineering Tab

1 → Valve Type

☐ Solenoid Valve (SO)

☐ Motorized Valve (MO)

☒ Hand Valve (HO)

2 → ☒ Valve has Closed feedback

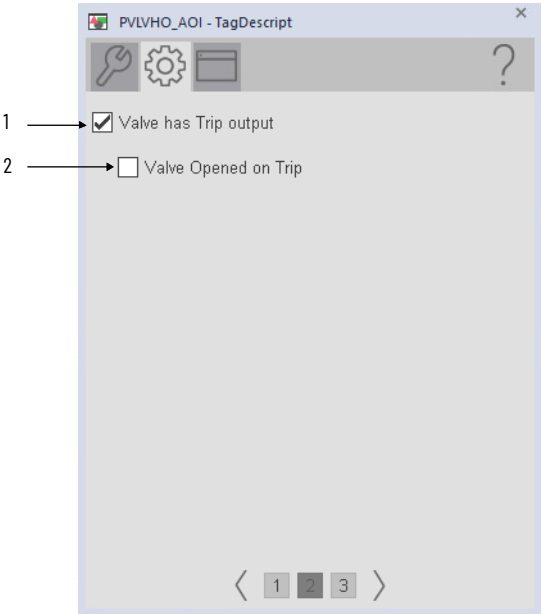
3 → ☒ Valve has Opened feedback

4 → Fault when both feedback inputs are

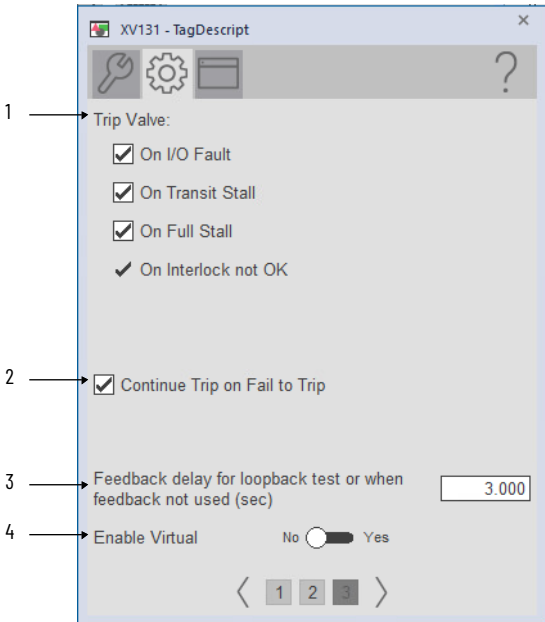
☒ ON ☐ OFF

5 → ☐ Operator command resets fault

Item	Description
1	Select the Valve type.
2	Select if the valve has Closed feedback.
3	Select if the valve has Open feedback.
4	Select 'ON' if both limit switches are OFF when the valve is moving in normal operation. Select 'OFF' if both limit switches are ON when the valve is moving in normal operation. This selection determines which limit switch combination indicates abnormal operation.
5	Select to allow the operator trip command to reset any previous faults (I/O fault, fail to trip, interlock trip), then trip the valve. Clear this checkbox to reset faults with only the reset command.



Item	Description
1	Select if a trip output is connected to the PVLV instruction to trip the valve on an interlock or trip command. This selection makes the trip command button visible on the operator tab.
2	Select if triggering the trip output causes the valve to open. Clear the checkbox (default) if triggering the trip output causes the valve to close. Note: This generally corresponds to the “fail” or “spring return” position of the valve. selected for a “fail open” valve or cleared for a “fail closed” valve.



Item	Description
1	Select the options for when to send the trip output to the valve if a fault is detected. Clear this checkbox to show only the fault status/alarm and not trip the valve if a fault is detected. The valve always stops on interlock not OK. This item cannot be cleared. It is displayed as a reminder that the interlock function always stops the valve.
2	Select to keep sending the trip output to the valve on a trip, even if position feedback does not confirm the valve reached the trip position. Clear this checkbox to stop sending the trip output to the valve when the valve trip times out and the fail to trip status is set.
3	Configure the amount of time the valve status shows ‘tripping’ before showing an opened or closed status when the valve is tripped and I/O are being simulated.
4	Enable or disable virtual mode.

HMI Configuration Tab

1 → Position 1 status text: Closed

2 → Position 2 status text: Opened

3 → ☒ Allow Operator to Shelve Alarm

4 → ☒ Allow Maintenance to Disable Alarm

Item	Description
1	Displays the text for Position 1.
2	Displays the text for Position 2.
3	Select to allow Operator to shelve alarm.
4	Select to allow Maintenance to disable alarm.

1 → ☒ Enable navigation to valve statistics object

2 → ☒ Enable navigation to interlock object

3 → Operator Command Confirmation Required

☒ None

☐ Command confirmation

☐ Performer e-signature

☐ Performer and approver e-signatures

4 → ☐ Enable navigation to an object with more information

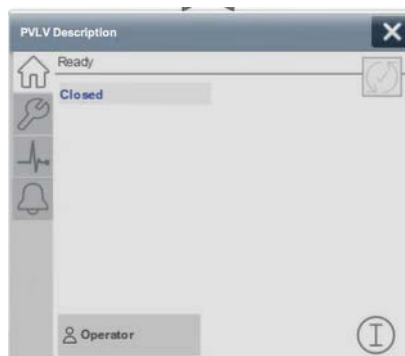
Item	Description
1	Select if the Valve Stats instruction. For example, PVLVS is used with this device. This check adds a button to the faceplate that opens the Valve Stats faceplate. IMPORTANT: The name of the Valve Statistics object in the controller must be the name of the object with the suffix '_ValveStats'. For example, if your PVLV object has the name 'ValveH0123', then its valve statistics object must be named 'ValveH0123_ValveStats'.
2	Select if an Interlock object is used with this valve. This check changes the Interlock indicator to a clickable button to open the Interlock faceplate. IMPORTANT: The name of the interlock object in the controller must be the name of the object with the suffix '_Intlk'. For example, if your PVLV object has the name 'ValveH0123', then its interlock object must be named 'ValveH0123_Intlk'.
3	Select to configure operator command confirmation. This action would take place after any operator command.
4	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) You configure the tagname of the object that you want to navigate to in the extended tag property "Cfg_HasMoreObj.@Navigation". It uses the <backing tag>.@Library and <backing tag>.@Instruction extended tag properties to display the objects faceplate.

Studio 5000 View Designer Faceplates (Configured as Hand Operated Valve)

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates \(Configured as Hand Operated Valve\) on page 304](#) for descriptions of the features.

Operator Tab



Maintenance Tab

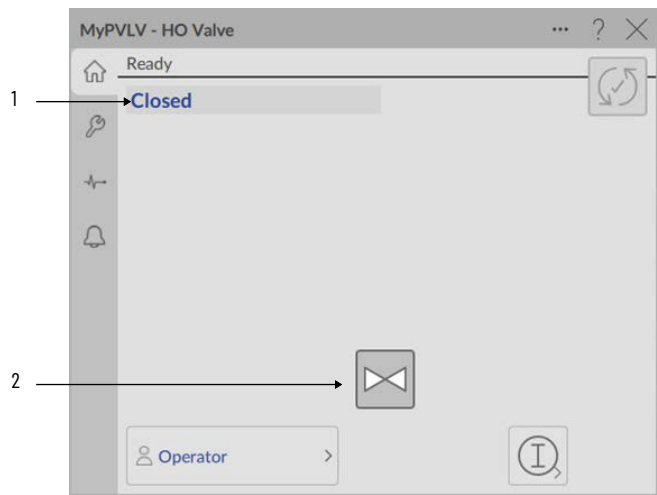


FactoryTalk Optix Faceplates (Configured as Hand Operated Valve)

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

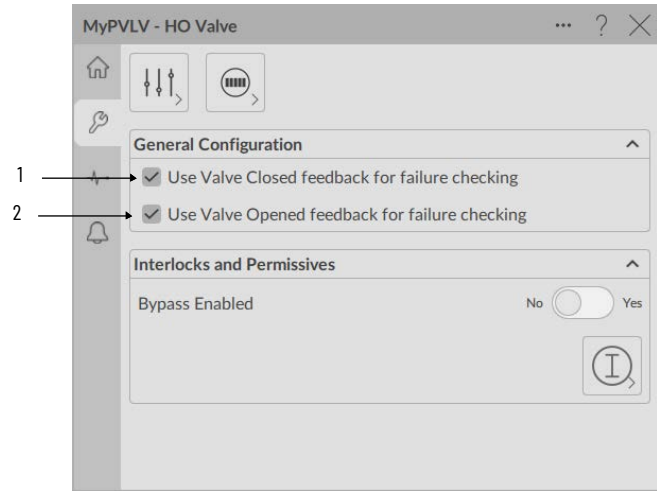
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates \(Configured as Hand Operated Valve\) on page 304](#) for descriptions of the features.

Operator Tab



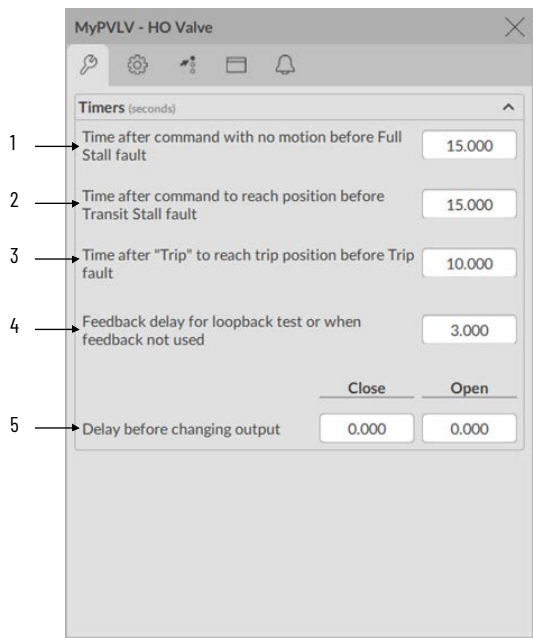
Item	Description
1	Valve state indicator.
2	Select to trip the valve "Open" or "Closed" depending on the valve configuration.

Maintenance Tab



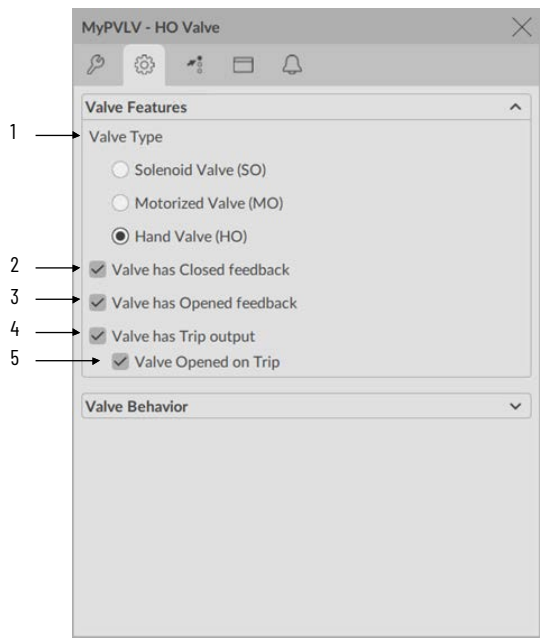
Item	Description
1	Select to configure the valve to use the closed limit switch. Clear the checkbox to bypass the closed limit switch temporarily.
2	Select to configure the valve to use the open limit switch. Clear the checkbox to bypass the closed limit switch temporarily.

Advanced Maintenance Tab



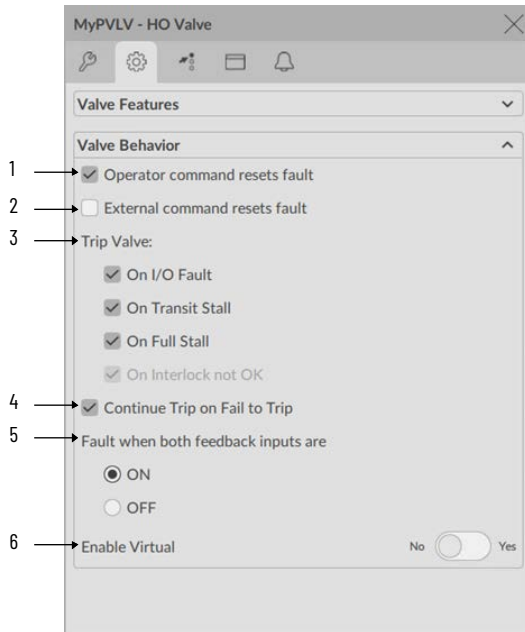
Item	Description
1	Enter the amount of time with no motion after a command for an alarm to occur.
2	Enter the amount of time that the valve is not confirmed open or closed before a Transit Stall.
3	Enter the amount of time to allow the valve to reach its trip position after a trip command is received before raising a trip fail alarm.
4	Configure the amount of time the valve status shows 'tripping' before showing an opened or closed status when the valve is tripped and I/O are being simulated.
5	Enter the amount of time after receiving a command to open or close the valve before changing the outputs to actually move the valve (command delay).

Advanced Engineering Tab - Valve Features



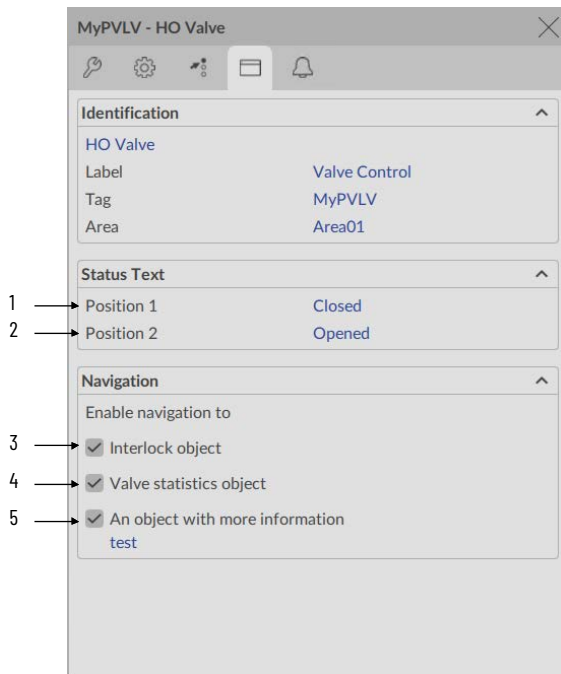
Item	Description
1	Select the Valve type.
2	Select if the valve has Closed feedback.
3	Select if the valve has Open feedback.
4	Select if a trip output is connected to the PVLV instruction to trip the valve on an interlock or trip command. This selection makes the trip command button visible on the operator tab.
5	Select if triggering the trip output causes the valve to open. Clear the checkbox (default) if triggering the trip output causes the valve to close. Note: This generally corresponds to the "fail" or "spring return" position of the valve. selected for a "fail open" valve or cleared for a "fail closed" valve.

Advanced Engineering Tab - Valve Behavior



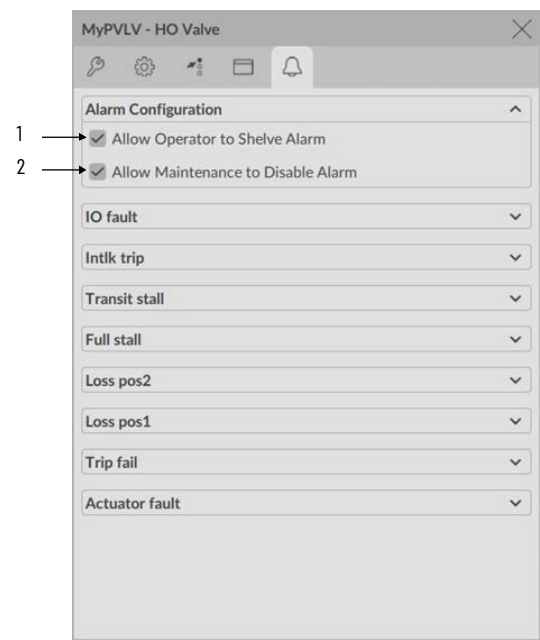
Item	Description
1	Select to allow the operator trip command to reset any previous faults (I/O fault, fail to trip, interlock trip), then trip the valve. Clear this checkbox to reset faults with only the reset command.
2	Select to allow External commands to reset any previous faults (I/O fault, transit stall, full stall, interlock trip), then move the valve. Clear this checkbox to reset faults by using only the reset command.
3	Select the options for when to send the trip output to the valve if a fault is detected. Clear this checkbox to show only the fault status/alarm and not trip the valve if a fault is detected. The valve always stops on interlock not OK. This item cannot be cleared. It is displayed as a reminder that the interlock function always stops the valve.
4	Select to keep sending the trip output to the valve on a trip, even if position feedback does not confirm the valve reached the trip position. Clear this checkbox to stop sending the trip output to the valve when the valve trip times out and the fail to trip status is set.
5	Select 'ON' if both limit switches are OFF when the valve is moving in normal operation. Select 'OFF' if both limit switches are ON when the valve is moving in normal operation. This selection determines which limit switch combination indicates abnormal operation.
6	Enable or disable virtual mode.

Advanced HMI Configuration Tab




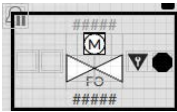
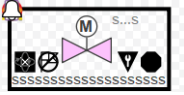



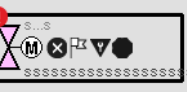

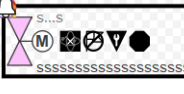
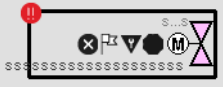
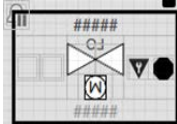

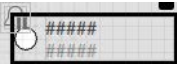

Item	Description
1	Displays the text for Position 1.
2	Displays the text for Position 2.
3	Select if an Interlock object is used with this valve. This check changes the Interlock indicator to a clickable button to open the Interlock faceplate. IMPORTANT: The name of the interlock object in the controller must be the name of the object with the suffix '_Intlk'. For example, if your PVLV object has the name 'ValveH0123', then its interlock object must be named 'ValveH0123_Intlk'.
4	Select if the Valve Stats instruction. For example, PVLVS is used with this device. This check adds a button to the faceplate that opens the Valve Stats faceplate. IMPORTANT: The name of the Valve Statistics object in the controller must be the name of the object with the suffix '_ValveStats'. For example, if your PVLV object has the name 'ValveH0123', then its valve statistics object must be named 'ValveH0123_ValveStats'.
5	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) You configure the tagname of the object that you want to navigate to in the extended tag property "Cfg_HasMoreObj.@Navigation". It uses the .@Library and .@Instruction extended tag properties to display the objects faceplate.

Advanced Alarm Configuration Tab



Item	Description
1	Select to allow Operator to shelve alarm.
2	Select to allow Maintenance to disable alarm.

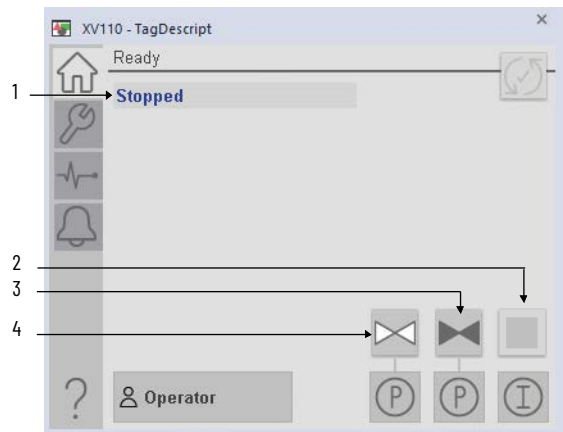
Graphic Symbols (Configured as Motorized Valve)

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
<p>GO_PVLV_M0</p> 	<p>PVLV_GS_Valve</p> 	<p>GS_PVLV_M0</p> 	<p>Standard motor-operated valves that are shown in various orientations.</p> <p>The FactoryTalk Optix PVLV graphic symbols have configurable actuator that can show either a Motor Operated, Solenoid Operated, or Hand Operated Actuator.</p>
<p>GO_PVLV_M01</p> 	<p>PVLV_GS_Valve_L</p> 	<p>GS_PVLV_M01</p> 	
<p>GO_PVLV_M02</p> 	<p>PVLV_GS_Valve_R</p> 	<p>GS_PVLV_M02</p> 	
<p>GO_PVLV_M03</p> 	<p>PVLV_GS_Valve_B</p> 	<p>GS_PVLV_M03</p> 	
	<p>PVLV_GS_Text</p> 		
	<p>PVLV_GS_Symbol</p> 		

FactoryTalk View SE Faceplates (Configured as Motorized Valve)

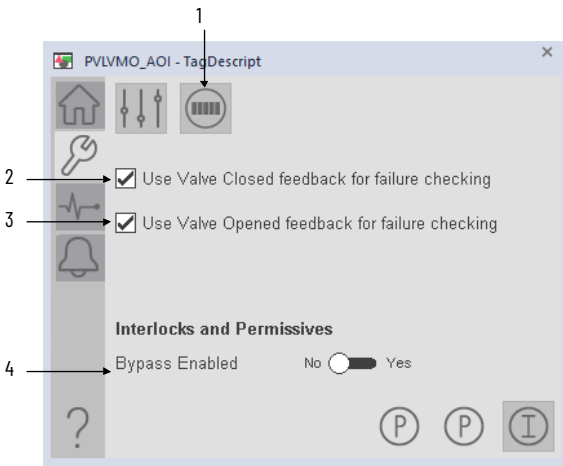
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



Item	Description
1	Valve state indicator.
2	Select to issue the valve Stop command.
3	Select to open valve.
4	Select to close valve.

Maintenance Tab



Item	Description
1	Select to open the Valve Statistics faceplate.
2	Select to use Valve Closed feedback for failure checking.
3	Select to use Valve Opened feedback for failure checking.
4	Select yes to bypass checking of interlocks and permissives that can be bypassed.

Advanced Maintenance Tab

PVLMO_AOI - TagDescript

1 → Time after command with no motion before Full Stall fault (sec) 15.000

2 → Time after command to reach position before Transit Stall fault (sec) 60.000

3 → Delay before changing output (sec)

	Close	Open
	2.000	2.000

Item	Description
1	Enter the amount of time with no motion after a command for an alarm to occur.
2	Enter the amount of time (in seconds) that the valve is not confirmed open or closed before a Transit Stall.
3	Enter the amount of time after receiving a command to open or close the valve before changing the outputs to actually move the valve (command delay).

Engineering Tab

XV110 - TagDescript

1 → Valve Type

☐ Solenoid Valve (SO)

☒ Motorized Valve (MO)

☐ Hand Valve (HO)

2 → ☐ Valve has Closed feedback

3 → ☐ Valve has Opened feedback

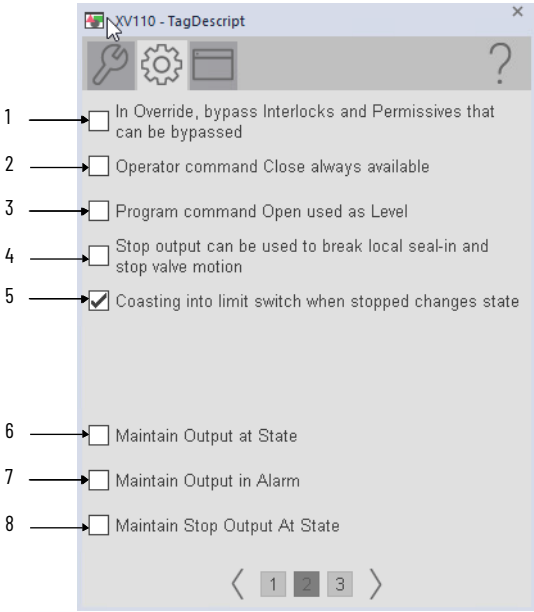
4 → Fault when both feedback inputs are

☒ ON ☐ OFF

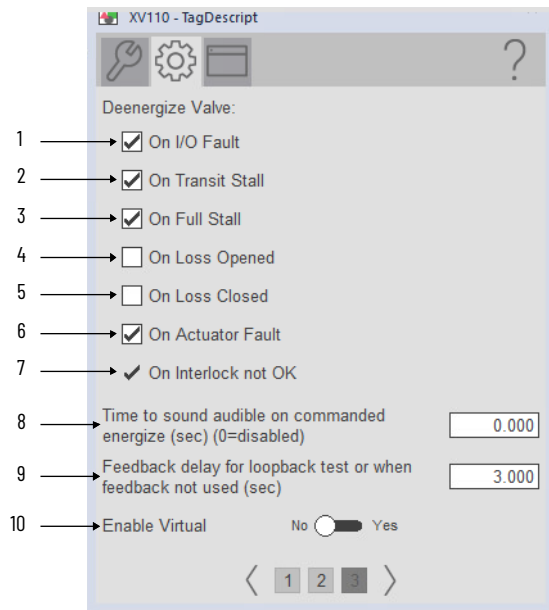
5 → ☐ Operator command resets fault

6 → ☐ External command resets fault

Item	Description
1	Select the Valve type.
2	Select if the valve has Closed feedback.
3	Select if the valve has Opened feedback.
4	Select 'ON' if both limit switches are OFF when the valve is moving in normal operation. Select 'OFF' if both limit switches are ON when the valve is moving in normal operation. This selection determines which limit switch combination indicates abnormal operation.
5	Select to allow operator commands to reset any previous faults (I/O fault, fail to trip, interlock trip), then move the valve. Clear this checkbox to reset faults with only the reset command.
6	Select to allow External commands to reset any previous faults (I/O fault, transit stall, full stall, interlock trip), then move the valve. Clear this checkbox to reset faults by using only the reset command



Item	Description
1	When selected, the bypassable interlocks and permissives are bypassed when Override command source is selected. When the checkbox is cleared, the bypassable interlocks and permissives are enforced in Override.
2	When selected, the Operator command button to close the valve is available even when a command source other than Operator or Maintenance is selected. When the checkbox is cleared, the Operator close command button is only enabled in Operator or Maintenance command source.
3	When selected, the Program open command pin is treated as a level input: when 1, the valve is commanded to open, and when 0 the valve is commanded to close. When the checkbox is cleared, the Program commands follow the normal command convention: write a 1 to the Program open command to open the valve, and write a 1 to the Program close command to close the valve
4	When selected, the valve Stop command is enabled and commanding the valve in the opposite direction while moving is permitted. When the checkbox is cleared, the valve Stop command is hidden, and a valve command to the opposite direction is not accepted while the initial move is in progress.
5	When selected, if the valve is stopped and limit switches then indicate the valve has reached the opened or closed position, the valve state changes to opened or closed, as appropriate. When the checkbox is cleared, if the valve is stopped, the state shows stopped until the valve is commanded to a position, even if limit switch inputs change state.
6	When selected, outputs are maintained on, even when the valve reaches the target position. When the checkbox is cleared, outputs are turned off once the valve reaches the target position.
7	When selected, outputs are maintained on when a valve has a full stall (failed to move) or transit stall (failed to reach target position). When the checkbox is cleared, outputs are turned off when a valve stall occurs.
8	When selected, the stop output is maintained, even if the valve coasts into the opened or closed position. When the checkbox is cleared, the stop output is cleared if the valve coasts into the opened or closed position after a stop is commanded.



Item	Description
1	Select to send a stop output to the valve and clear the Open and Close outputs when an I/O Fault condition occurs. Clear this checkbox to keep the outputs to the valve in their current state on an I/O Fault condition. IMPORTANT: When this checkbox is selected and an I/O Fault condition occurs, a reset is required before the valve can be energized.
2	Select to send a stop output to the valve and clear the Open and Close outputs when a Transit Stall condition occurs. Clear this checkbox to keep the outputs to the valve in their current state (keep trying) on a Transit Stall condition. (A Transit Stall means the valve, when commanded to move, moved off its original position, but did not reach its commanded position before the Transit Stall time expired.) IMPORTANT: When this checkbox is selected and a Transit Stall condition occurs, a reset is required before the valve can be energized.
3	Select to send a stop output to the valve and clear the Open and Close outputs when a Full Stall condition occurs. Clear this checkbox to keep the outputs to the valve in their current state (keep trying) on a Full Stall condition. (A Full Stall means the valve, when commanded to move, did not move off its original position before the Full Stall time expired.) IMPORTANT: When this checkbox is selected and a Full Stall condition occurs, a reset is required before the valve can be energized.
4	Select to send a stop output to the valve and clear the Open and Close outputs when a Loss of Open Position condition occurs. Clear this checkbox to keep the outputs to the valve in their current state (keep trying) on a Loss of Open Position condition. (A Loss of Open Position means that the valve was commanded to open, reached the open position as confirmed by the limit switches, and then moved off the open position.) IMPORTANT: When this checkbox is selected and a Loss of Open Position condition occurs, a reset is required before the valve can be energized.
5	Select to send a stop output to the valve and clear the Open and Close outputs when a Loss of Closed Position condition occurs. Clear this checkbox to keep the outputs to the valve in their current state (keep trying) on a Loss of Closed Position condition. (A Loss of Closed Position means that the valve was commanded to close, reached the closed position as confirmed by the limit switches, and then moved off the closed position.) IMPORTANT: When this checkbox is selected and a Loss of Closed Position condition occurs, a reset is required before the valve can be energized.
6	Check to send a stop output to the valve and clear the Open and Close outputs when an Actuator Fault condition occurs. Clear this checkbox to keep the outputs to the valve in their current state on an Actuator Fault condition. IMPORTANT: When this checkbox is selected and an Actuator Fault condition occurs, a reset is required before the valve can be energized.
7	The device always de-energizes on interlock not OK. This item cannot be cleared. It is displayed as a reminder that the interlock function always de-energizes the valve.
8	Enter the seconds to sound an audible alarm when the valve energizes.
9	Enter the time delay (in seconds) for the opened or closed status to be echoed back when Simulation is enabled or when limit switch feedback is not used.
10	Enable or disable virtual mode.

HMI Configuration Tab

XV110 - TagDescript

TagDescript

Label:

XV110 Label

Tag:

XV110

Area name for security:

Area01

1

Position 1 status text:

Closed

2

Position 2 status text:

Opened

3

Position 1 command text:

Close

4

Position 2 command text:

Open

Alarm Configuration

5

☒ Allow Operator to Shelve Alarm

6

☒ Allow Maintenance to Disable Alarm

<

1

2

>

Item	Description
1	Displays the text for Position 1.
2	Displays the text for Position 2.
3	Displays the command text for Position 1.
4	Displays the command text for Position 2.
5	Select to allow Operator to shelve alarm.
6	Select to allow Maintenance to disable alarm.

XV110 - TagDescript

☒ Enable navigation to valve statistics object

☒ Enable navigation to interlock object

☒ Enable navigation to Open permissive object

☒ Enable navigation to Close permissive object

5

Operator Command Confirmation Required

☒ None

☐ Command confirmation

☐ Performer e-signature

☐ Performer and approver e-signatures

6

☐ Enable navigation to an object with more information

<

1

2

>

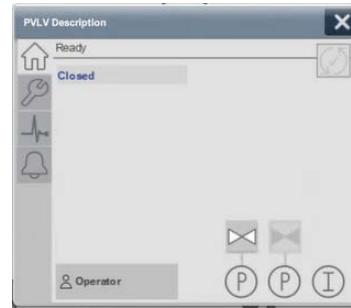
Item	Description
1	Check if a Valve Stats object is used with this valve. This action makes the Valve Statistics button visible on the Maintenance faceplate; Select this button to open the Valve Statistics faceplate for this valve. IMPORTANT: The name of the ValveStats object in the controller must be the name of the object with the suffix '_ValveStats'. For example, if your PVLV object has the name 'ValveM0123', then its Valve Stats object must be named 'ValveM0123_ValveStats'.
2	Select if an interlock instruction is used with this output. IMPORTANT: The name of the Interlock object in the controller must be the name of the object with the suffix '_Intlk'. For example, if your PVLV object has the name 'ValveM0123', then its Interlock object must be named 'ValveM0123_Intlk'.
3	Select if you have a PPERM instruction that is used with this valve for Open Permissives. This action changes the Permissive indicator to a clickable button to open the Permissive faceplate. IMPORTANT: The name of the Permissive object in the controller must be the name of the object with the suffix '_Pos2Perm'. For example, if your PVLV object has the name 'ValveM0123', then its Permissive object must be named 'ValveM0123_Pos2Perm'.
4	Select if you have a PPERM instruction that is used with this valve for Close Permissives. This action changes the Permissive indicator to a clickable button to open the Permissive faceplate. IMPORTANT: The name of the Permissive object in the controller must be the name of the object with the suffix '_Pos1Perm'. For example, if your PVLV object has the name 'ValveM0123', then its Permissive object must be named 'ValveM0123_Pos1Perm'.
5	Select to configure operator command confirmation. This action would take place after any operator command.
6	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) You configure the tagname of the object that you want to navigate to in the extended tag property "Cfg_HasMoreObj.@Navigation". It uses the <backing tag>.@Library and <backing tag>.@Instruction extended tag properties to display the objects faceplate.

Studio 5000 View Designer Faceplates (Configured as Motorized Valve)

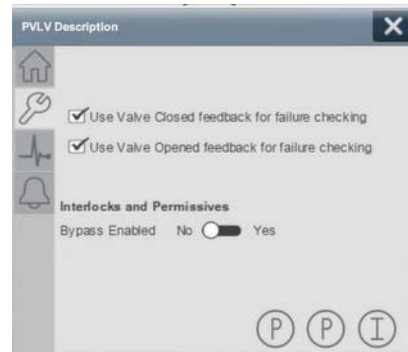
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates \(Configured as Motorized Valve\) on page 314](#) for descriptions of the features.

Operator Tab



Maintenance Tab

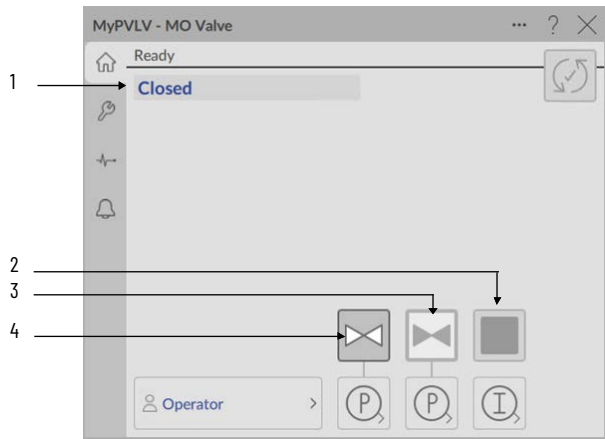


FactoryTalk Optix Faceplates (Configured as Motorized Valve)

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

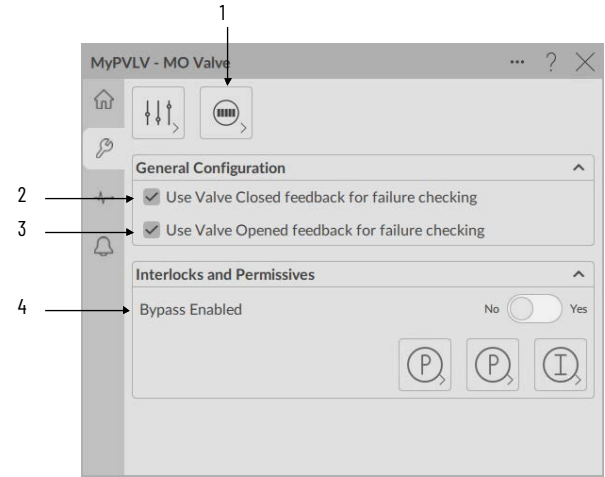
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates \(Configured as Motorized Valve\) on page 314](#) for descriptions of the features.

Operator Tab



Item	Description
1	Valve state indicator.
2	Select to issue the valve Stop command.
3	Select to open valve.
4	Select to close valve.

Maintenance Tab



Item	Description
1	Select to open the Valve Statistics faceplate.
2	Select to use Valve Closed feedback for failure checking.
3	Select to use Valve Opened feedback for failure checking.
4	Select yes to bypass checking of interlocks and permissives that can be bypassed.

Advanced Maintenance Tab

MyPVLV - MO Valve

Timers (seconds)

1 → Time after command with no motion before Full Stall fault 15.000

2 → Time after command to reach position before Transit Stall fault 15.000

3 → Time to sound audible on commanded energize (0 = disabled) 0.000

4 → Feedback delay for loopback test or when feedback not used 3.000

5 → Delay before changing output

Close 0.000 Open 0.000

Item	Description
1	Enter the amount of time with no motion after a command for an alarm to occur.
2	Enter the amount of time that the valve is not confirmed open or closed before a Transit Stall.
3	Enter the seconds to sound an audible alarm when the valve energizes.
4	Enter the time delay (in seconds) for the opened or closed status to be echoed back when Simulation is enabled or when limit switch feedback is not used.
5	Enter the amount of time after receiving a command to open or close the valve before changing the outputs to actually move the valve (command delay).

Advanced Engineering Tab - Valve Features

MyPVLV - MO Valve

Valve Features

1 → Valve Type

☐ Solenoid Valve (SO)

☒ Motorized Valve (MO)

☐ Hand Valve (HO)

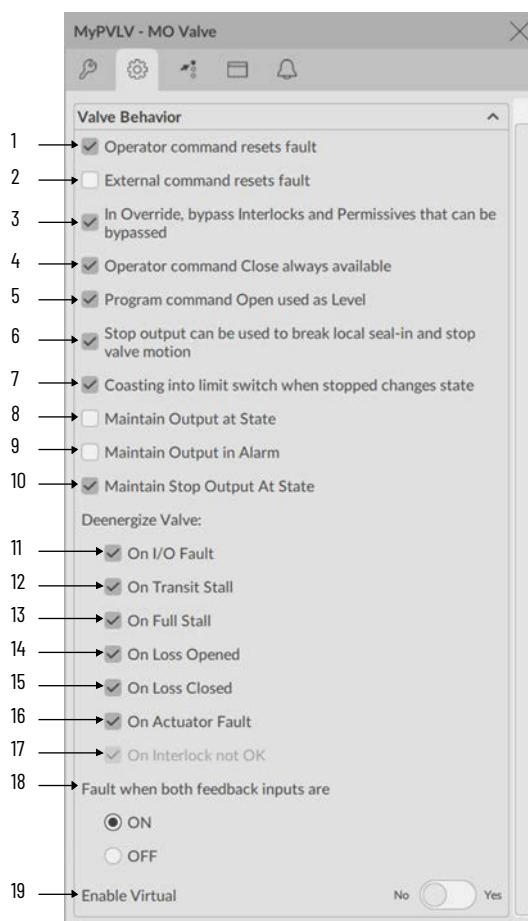
2 → ☒ Valve has Closed feedback

3 → ☒ Valve has Opened feedback

Valve Behavior

Item	Description
1	Select the Valve type.
2	Select if the valve has Closed feedback.
3	Select if the valve has Open feedback.

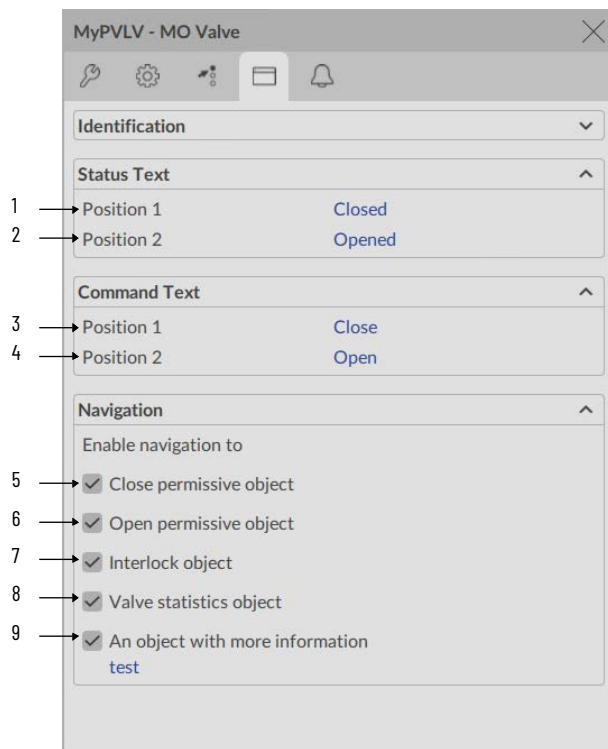
Advanced Engineering Tab - Valve Behavior



Item	Description
1	Select to allow operator commands to reset any previous faults (I/O fault, fail to trip, interlock trip), then move the valve. Clear this checkbox to reset faults with only the reset command.
2	Select to allow External commands to reset any previous faults (I/O fault, transit stall, full stall, interlock trip), then move the valve. Clear this checkbox to reset faults by using only the reset command.
3	When selected, the bypassable interlocks and permissives are bypassed when Override command source is selected. When the checkbox is cleared, the bypassable interlocks and permissives are enforced in Override.
4	When selected, the Operator command button to close the valve is available even when a command source other than Operator or Maintenance is selected. When the checkbox is cleared, the Operator close command button is only enabled in Operator or Maintenance command source.
5	When selected, the Program open command pin is treated as a level input: when 1, the valve is commanded to open, and when 0 the valve is commanded to close. When the checkbox is cleared, the Program commands follow the normal command convention: write a 1 to the Program open command to open the valve, and write a 1 to the Program close command to close the valve.
6	When selected, the valve Stop command is enabled and commanding the valve in the opposite direction while moving is permitted. When the checkbox is cleared, the valve Stop command is hidden, and a valve command to the opposite direction is not accepted while the initial move is in progress.
7	When selected, if the valve is stopped and limit switches then indicate the valve has reached the opened or closed position, the valve state changes to opened or closed, as appropriate. When the checkbox is cleared, if the valve is stopped, the state shows stopped until the valve is commanded to a position, even if limit switch inputs change state.
8	When selected, outputs are maintained on, even when the valve reaches the target position. When the checkbox is cleared, outputs are turned off once the valve reaches the target position.
9	When selected, outputs are maintained on when a valve has a full stall (failed to move) or transit stall (failed to reach target position). When the checkbox is cleared, outputs are turned off when a valve stall occurs.
10	When selected, the stop output is maintained, even if the valve coasts into the opened or closed position. When the checkbox is cleared, the stop output is cleared if the valve coasts into the opened or closed position after a stop is commanded.
11	Select to send a stop output to the valve and clear the Open and Close outputs when an I/O Fault condition occurs. Clear this checkbox to keep the outputs to the valve in their current state on an I/O Fault condition. IMPORTANT: When this checkbox is selected and an I/O Fault condition occurs, a reset is required before the valve can be energized.
12	Select to send a stop output to the valve and clear the Open and Close outputs when a Transit Stall condition occurs. Clear this checkbox to keep the outputs to the valve in their current state (keep trying) on a Transit Stall condition. (A Transit Stall means the valve, when commanded to move, moved off its original position, but did not reach its commanded position before the Transit Stall time expired.) IMPORTANT: When this checkbox is selected and a Transit Stall condition occurs, a reset is required before the valve can be energized.

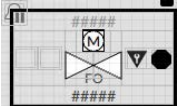
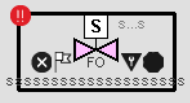
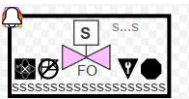

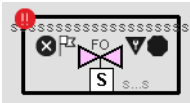
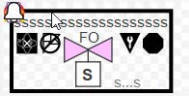

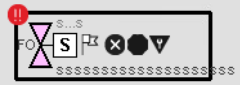

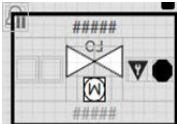
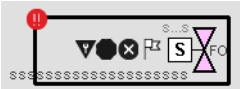


Item	Description
13	Select to send a stop output to the valve and clear the Open and Close outputs when a Full Stall condition occurs. Clear this checkbox to keep the outputs to the valve in their current state (keep trying) on a Full Stall condition. (A Full Stall means the valve, when commanded to move, did not move off its original position before the Full Stall time expired.) IMPORTANT: When this checkbox is selected and a Full Stall condition occurs, a reset is required before the valve can be energized.
14	Select to send a stop output to the valve and clear the Open and Close outputs when a Loss of Open Position condition occurs. Clear this checkbox to keep the outputs to the valve in their current state (keep trying) on a Loss of Open Position condition. (A Loss of Open Position means that the valve was commanded to open, reached the open position as confirmed by the limit switches, and then moved off the open position.) IMPORTANT: When this checkbox is selected and a Loss of Open Position condition occurs, a reset is required before the valve can be energized.
15	Select to send a stop output to the valve and clear the Open and Close outputs when a Loss of Closed Position condition occurs. Clear this checkbox to keep the outputs to the valve in their current state (keep trying) on a Loss of Closed Position condition. (A Loss of Closed Position means that the valve was commanded to close, reached the closed position as confirmed by the limit switches, and then moved off the closed position.) IMPORTANT: When this checkbox is selected and a Loss of Closed Position condition occurs, a reset is required before the valve can be energized.
16	Check to send a stop output to the valve and clear the Open and Close outputs when an Actuator Fault condition occurs. Clear this checkbox to keep the outputs to the valve in their current state on an Actuator Fault condition. IMPORTANT: When this checkbox is selected and an Actuator Fault condition occurs, a reset is required before the valve can be energized.
17	The device always de-energizes on interlock not OK. This item cannot be cleared. It is displayed as a reminder that the interlock function always de-energizes the valve.
18	Select 'ON' if both limit switches are OFF when the valve is moving in normal operation. Select 'OFF' if both limit switches are ON when the valve is moving in normal operation. This selection determines which limit switch combination indicates abnormal operation.
19	Enable or disable virtual mode.

Advanced HMI Configuration Tab



Item	Description
1	Displays the text for Position 1.
2	Displays the text for Position 2.
3	Displays the command text for Position 1.
4	Displays the command text for Position 2.
5	Select if you have a PPERM instruction that is used with this valve for Close Permissives. This action changes the Permissive indicator to a clickable button to open the Permissive faceplate. IMPORTANT: The name of the Permissive object in the controller must be the name of the object with the suffix '_Pos1Perm'. For example, if your PVLV object has the name 'ValveM0123', then its Permissive object must be named 'ValveM0123_Pos1Perm'.
6	Select if you have a PPERM instruction that is used with this valve for Open Permissives. This action changes the Permissive indicator to a clickable button to open the Permissive faceplate. IMPORTANT: The name of the Permissive object in the controller must be the name of the object with the suffix '_Pos2Perm'. For example, if your PVLV object has the name 'ValveM0123', then its Permissive object must be named 'ValveM0123_Pos2Perm'.
7	Select if an interlock instruction is used with this output. IMPORTANT: The name of the Interlock object in the controller must be the name of the object with the suffix '_Intlk'. For example, if your PVLV object has the name 'ValveM0123', then its Interlock object must be named 'ValveM0123_Intlk'.
8	Check if a Valve Stats object is used with this valve. This action makes the Valve Statistics button visible on the Maintenance faceplate; Select this button to open the Valve Statistics faceplate for this valve. IMPORTANT: The name of the ValveStats object in the controller must be the name of the object with the suffix '_ValveStats'. For example, if your PVLV object has the name 'ValveM0123', then its Valve Stats object must be named 'ValveM0123_ValveStats'.
9	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) You configure the tagname of the object that you want to navigate to in the extended tag property "Cfg_HasMoreObj.@Navigation". It uses the .@Library and .@Instruction extended tag properties to display the objects faceplate.

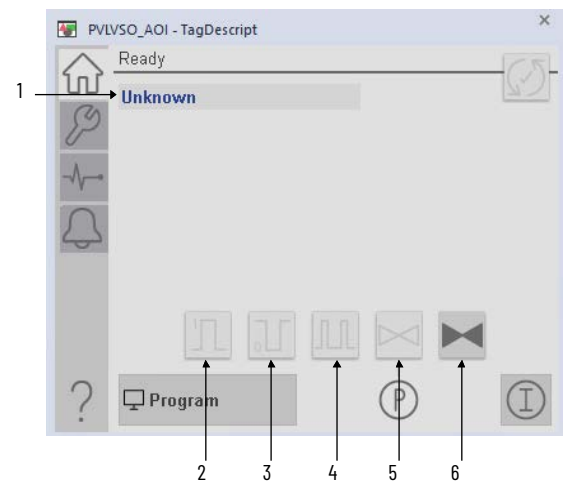
Graphic Symbols (Configured as Solenoid Operated Valve)

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	PV5000 Graphic Symbol	Description
	PVLV_GS_Valve		
GO_PVLV_S0		GS_PVLV_S0	
	PVLV_GS_Valve_L		
GO_PVLV_S01		GS_PVLV_S01	
	PVLV_GS_Valve_R		
GO_PVLV_S02		GS_PVLV_S02	<p>Standard solenoid-operated valves that are shown in various orientations.</p> <p>The FactoryTalk Optix PVLV graphic symbols have configurable actuator that can show either a Motor Operated, Solenoid Operated, or Hand Operated Actuator.</p>
	PVLV_GS_Valve_B		
GO_PVLV_S03		GS_PVLV_S03	
	PVLV_GS_Text		
	PVLV_GS_Symbol		
			

FactoryTalk View SE Faceplates (Configured as Solenoid Operated Valve)

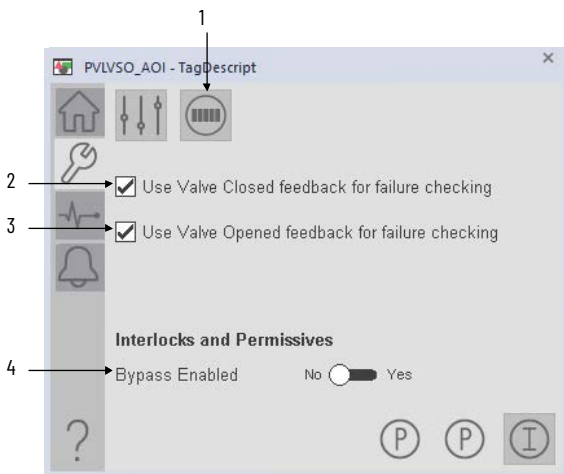
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



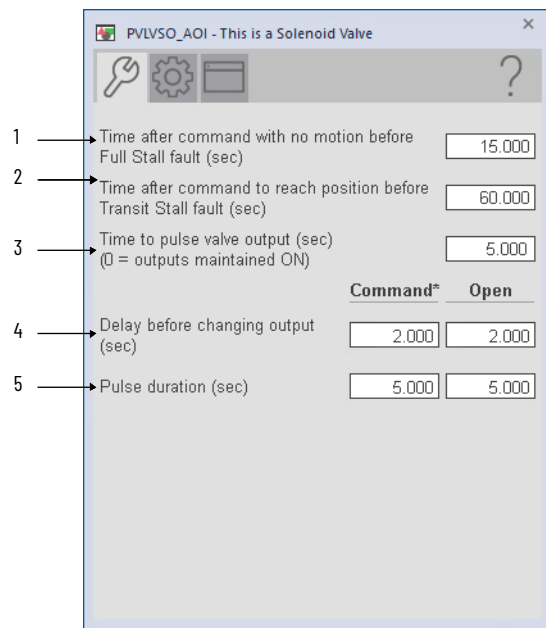
Item	Description
1	Valve state indicator.
2	Select to have the valve pulse open.
3	Select to have the valve pulse closed.
4	Select to have the valve pulse continuously.
5	Select to open valve.
6	Select to close valve.

Maintenance Tab



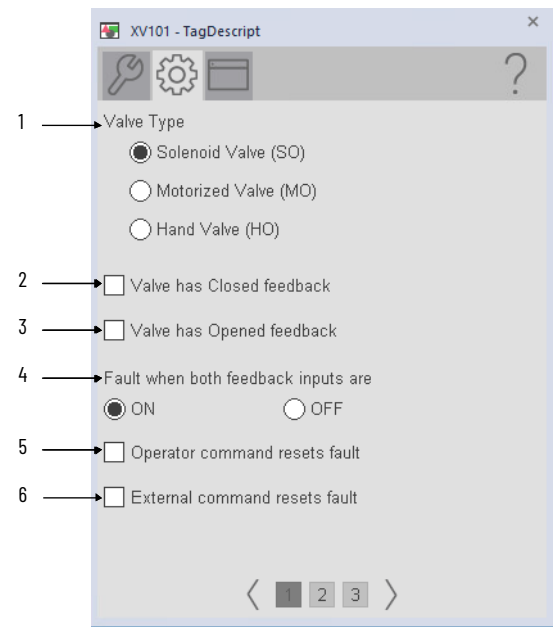
Item	Description
1	Select to open the Valve Statistics faceplate.
2	Select to use Valve Closed feedback for failure checking.
3	Select to use Valve Opened feedback for failure checking.
4	Select yes to bypass checking of interlocks and permissives that can be bypassed.

Advanced Maintenance Tab

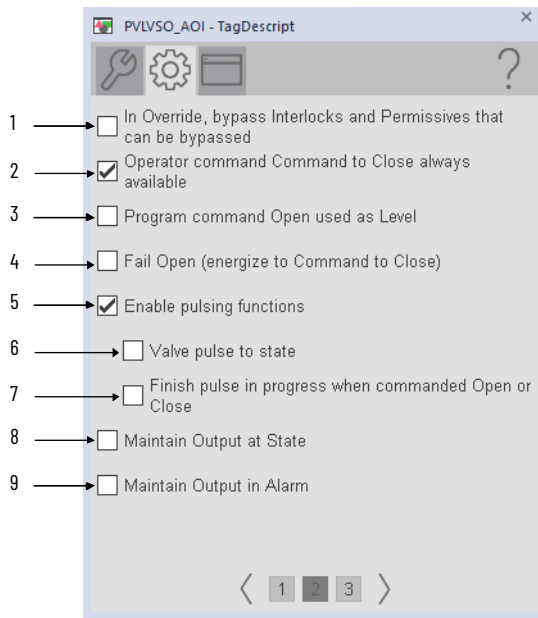


Item	Description
1	Enter the amount of time with no motion after a command for an alarm to occur.
2	Enter the amount of time (in seconds) that the valve is not confirmed open or closed before a Transit Stall.
3	Enter the amount of time to pulse outputs to the valve (in seconds). Enter 0 if outputs to the valve should be maintained on indefinitely once energized.
4	Enter the amount of time after receiving a command to open or close the valve before changing the outputs to actually move the valve (command delay).
5	Enter the amount of time to pulse the open and close outputs when commanding the valve. Enter zero if the outputs are to be maintained until the valve reaches the target position.

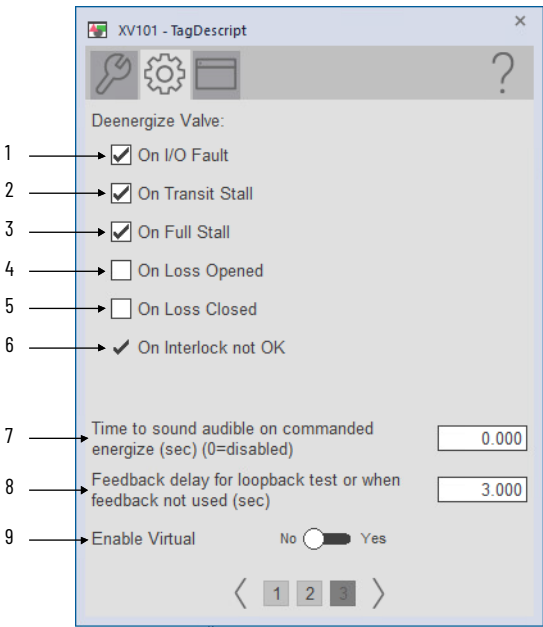
Engineering Tab



Item	Description
1	Select the Valve type.
2	Select if the valve has Closed feedback.
3	Select if the valve has Opened feedback.
4	Select 'ON' if both limit switches are OFF when the valve is moving in normal operation. Select 'OFF' if both limit switches are ON when the valve is moving in normal operation. This selection determines which limit switch combination indicates abnormal operation.
5	Select to allow operator commands to reset any previous faults (I/O fault, fail to trip, interlock trip), then move the valve. Clear this checkbox to reset faults with only the reset command.
6	Select to allow External commands to reset any previous faults (I/O fault, transit stall, full stall, interlock trip), then move the valve. Clear this checkbox to reset faults by using only the reset command



Item	Description
1	When selected, the bypassable interlocks and permissives are bypassed when Override command source is selected. When the checkbox is cleared, the bypassable interlocks and permissives are enforced in Override.
2	When selected, the Operator command button to close the valve is available even when a command source other than Operator or Maintenance is selected. When the checkbox is cleared, the Operator close command button is only enabled in Operator or Maintenance command source.
3	When selected, the Program open command is pin is treated as a level input: when 1, the valve is commanded to open, and when 0 the valve is commanded to close. When the checkbox is cleared, the Program commands follow the normal command convention: write a 1 to the Program open command to open the valve, and write a 1 to the Program close command to close the valve
4	When selected, the valve is spring-return (fail) to the open position (energize to close). Leave the box unchecked if the valve is spring-return (fail) to the closed position (energize to open).
5	Select to enable pulsing functions.
6	Select to allow the valve to pulse to the desired state.
7	When selected, the valve will finish pulsing to the desired state before executing a command to open or close.
8	When selected, outputs are maintained on, even when the valve reaches the target position. When the checkbox is cleared, outputs are turned off once the valve reaches the target position.
9	When selected, outputs are maintained on when a valve has a full stall (failed to move) or transit stall (failed to reach target position). When the checkbox is cleared, outputs are turned off when a valve stall occurs.



Item	Description
1	Select to send a stop output to the valve and clear the Open and Close outputs when an I/O Fault condition occurs. Clear this checkbox to keep the outputs to the valve in their current state on an I/O Fault condition. IMPORTANT: When this checkbox is checked and an I/O Fault condition occurs, a reset is required before the valve can be energized.
2	Select to send a stop output to the valve and clear the Open and Close outputs when a Transit Stall condition occurs. Clear this checkbox to keep the outputs to the valve in their current state (keep trying) on a Transit Stall condition. (A Transit Stall means the valve, when commanded to move, moved off its original position, but did not reach its commanded position before the Transit Stall time expired.) IMPORTANT: When this checkbox is checked and a Transit Stall condition occurs, a reset is required before the valve can be energized.
3	Select to send a stop output to the valve and clear the Open and Close outputs when a Full Stall condition occurs. Clear this checkbox to keep the outputs to the valve in their current state (keep trying) on a Full Stall condition. (A Full Stall means the valve, when commanded to move, did not move off its original position before the Full Stall time expired.) IMPORTANT: When this checkbox is checked and a Full Stall condition occurs, a reset is required before the valve can be energized.
4	Select to send a stop output to the valve and clear the Open and Close outputs when a Loss of Open Position condition occurs. Clear this checkbox to keep the outputs to the valve in their current state (keep trying) on a Loss of Open Position condition. (A Loss of Open Position means that the valve was commanded to open, reached the open position as confirmed by the limit switches, and then moved off the open position.) IMPORTANT: When this checkbox is selected and a Loss of Open Position condition occurs, a reset is required before the valve can be energized.
5	Select to send a stop output to the valve and clear the Open and Close outputs when a Loss of Closed Position condition occurs. Clear this checkbox to keep the outputs to the valve in their current state (keep trying) on a Loss of Closed Position condition. (A Loss of Closed Position means that the valve was commanded to close, reached the closed position as confirmed by the limit switches, and then moved off the closed position.) IMPORTANT: When this checkbox is selected and a Loss of Closed Position condition occurs, a reset is required before the valve can be energized.
6	The device always de-energizes on interlock not OK. This item cannot be cleared. It is displayed as a reminder that the interlock function always de-energizes the valve.
7	Enter the seconds to sound an audible alarm when the valve energizes.
8	Enter the time delay (in seconds) for the opened or closed status to be echoed back when Simulation is enabled or when limit switch feedback is not used.
9	Enable or disable virtual mode.

HMI Configuration Tab

XV101 - TagDescript

TagDescript

Label: XV101 Label

Tag: XV101

Area name for security: Area01

1 → Position 1 status text: Closed

2 → Position 2 status text: Opened

3 → Position 1 command text: Close

4 → Position 2 command text: Open

5 → Pulse Position 1 command text: Pulse close

6 → Pulse Position 2 command text: Pulse open

Alarm Configuration

7 → ☒ Allow Operator to Shelf Alarm

8 → ☒ Allow Maintenance to Disable Alarm

< 1 2 >

Item	Description
1	Displays the text for Position 1.
2	Displays the text for Position 2.
3	Displays the command text for Position 1.
4	Displays the command text for Position 2.
5	Displays the command text for Pulse Position 1.
6	Displays the command text for Pulse Position 2.
7	Select to allow Operator to shelf alarm.
8	Select to allow Maintenance to disable alarm.

XV101 - TagDescript

1 → ☒ Enable navigation to valve statistics object

2 → ☒ Enable navigation to interlock object

3 → ☒ Enable navigation to Open permissive object

4 → Operator Command Confirmation Required

☒ None

☐ Command confirmation

☐ Performer e-signature

☐ Performer and approver e-signatures

5 → ☐ Enable navigation to an object with more information

< 1 2 >

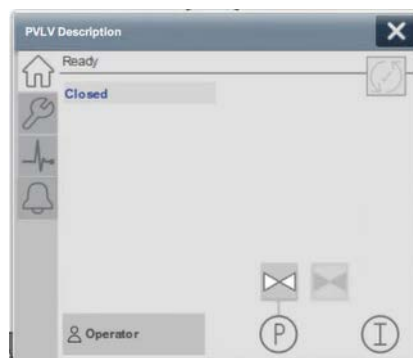
Item	Description
1	Check if a Valve Stats object is used with this valve. This action makes the Valve Statistics button visible on the Maintenance faceplate; Select this button to open the Valve Statistics faceplate for this valve. IMPORTANT: The name of the ValveStats object in the controller must be the name of the object with the suffix '_ValveStats'. For example, if your PVLV object has the name 'ValveM0123', then its Valve Stats object must be named 'ValveM0123_ValveStats'.
2	Select if an interlock instruction is used with this output. IMPORTANT: The name of the Interlock object in the controller must be the name of the object with the suffix '_Intlk'. For example, if your PVLV object has the name 'ValveM0123', then its Interlock object must be named 'ValveM0123_Intlk'.
3	Select if you have a PPERM instruction that is used with this valve for Open Permissives. This action changes the Permissive indicator to a clickable button to open the Permissive faceplate. IMPORTANT: The name of the Permissive object in the controller must be the name of the object with the suffix '_Pos2Perm'. For example, if your PVLV object has the name 'ValveM0123', then its Permissive object must be named 'ValveM0123_Pos2Perm'.
4	Select to configure operator command confirmation. This action would take place after any operator command.
5	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) You configure the tagname of the object that you want to navigate to in the extended tag property "Cfg_HasMoreObj.@Navigation". It uses the <backing tag>.@Library and <backing tag>.@Instruction extended tag properties to display the objects faceplate.

Studio 5000 View Designer Faceplates (Configured as Solenoid Operated Valve)

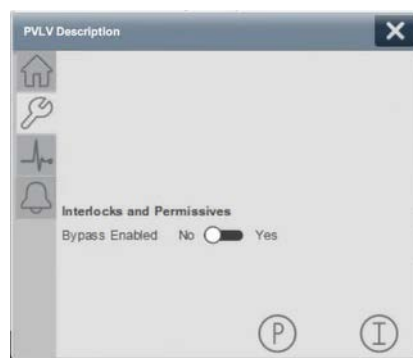
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates \(Configured as Solenoid Operated Valve\) on page 325](#) for descriptions of the features.

Operator Tab



Maintenance Tab

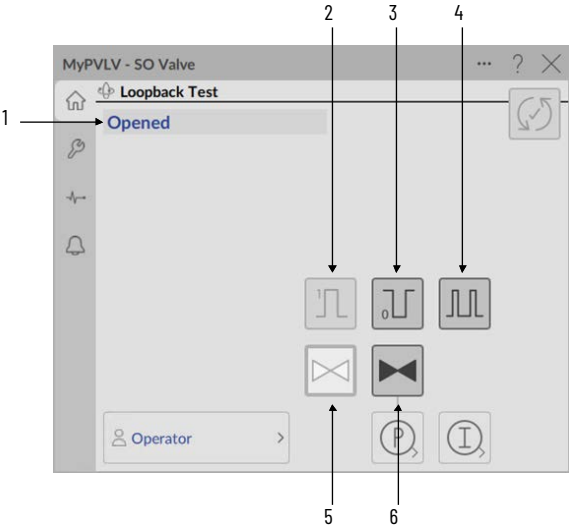


FactoryTalk Optix Faceplates (Configured as Solenoid Operated Valve)

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

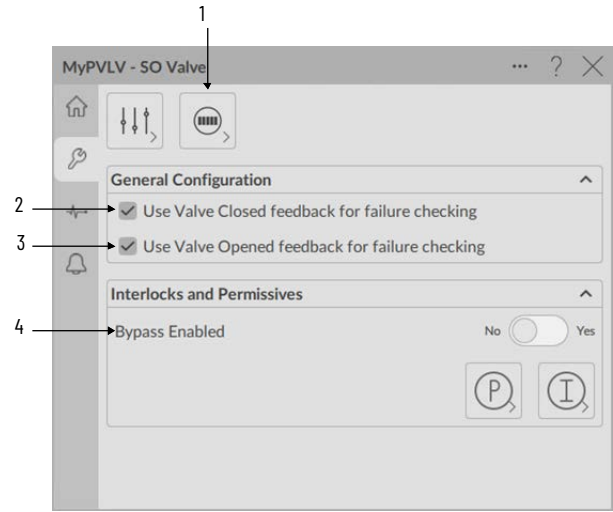
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates \(Configured as Solenoid Operated Valve\) on page 325](#) for descriptions of the features.

Operator Tab



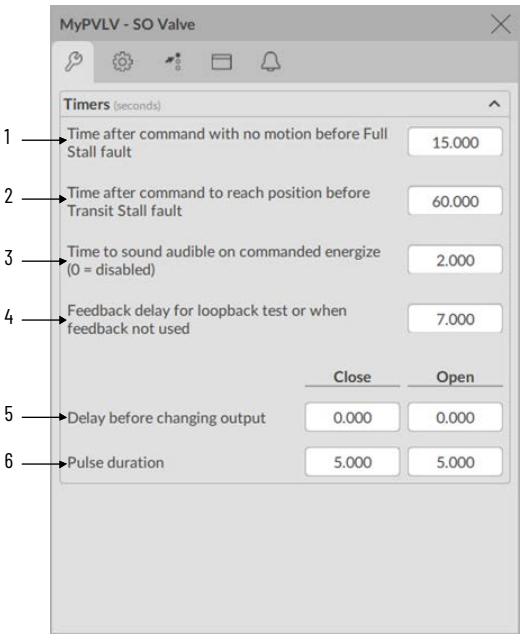
Item	Description
1	Valve state indicator.
2	Select to have the valve pulse open.
3	Select to have the valve pulse closed.
4	Select to have the valve pulse continuously.
5	Select to open valve.
6	Select to close valve.

Maintenance Tab



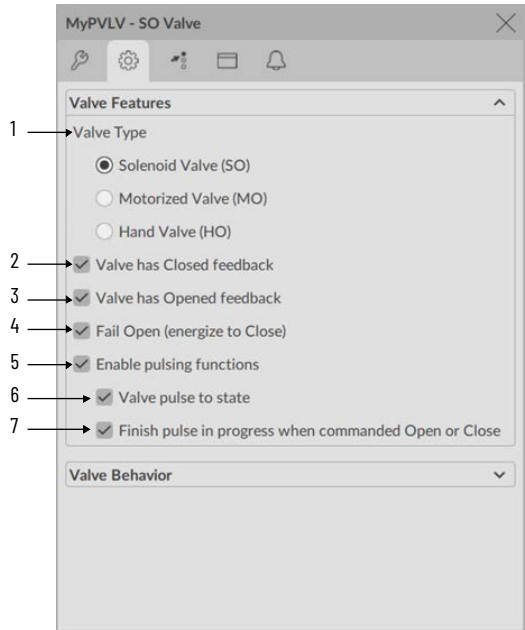
Item	Description
1	Select to open the Valve Statistics faceplate.
2	Select to use Valve Closed feedback for failure checking.
3	Select to use Valve Opened feedback for failure checking.
4	Select yes to bypass checking of interlocks and permissives that can be bypassed.

Advanced Maintenance Tab



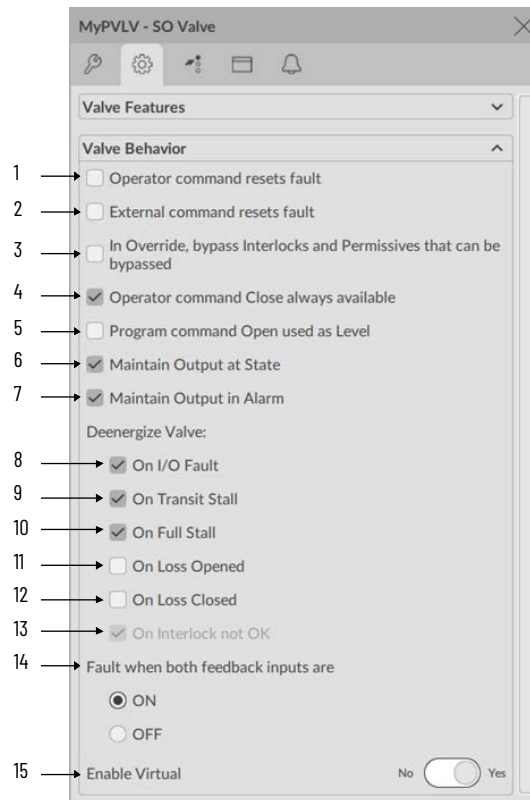
Item	Description
1	Enter the amount of time with no motion after a command for an alarm to occur.
2	Enter the amount of time that the valve is not confirmed open or closed before a Transit Stall.
3	Enter the seconds to sound an audible alarm when the valve energizes.
4	Enter the time delay (in seconds) for the opened or closed status to be echoed back when Simulation is enabled or when limit switch feedback is not used.
5	Enter the amount of time after receiving a command to open or close the valve before changing the outputs to actually move the valve (command delay).
6	Enter the amount of time to pulse the open and close outputs when commanding the valve. Enter zero if the outputs are to be maintained until the valve reaches the target position.

Advanced Engineering Tab - Valve Features



Item	Description
1	Select the Valve type.
2	Select if the valve has Closed feedback.
3	Select if the valve has Open feedback.
4	When selected, the valve is spring-return (fail) to the open position (energize to close). Leave the box unchecked if the valve is spring-return (fail) to the closed position (energize to open).
5	Select to enable pulsing functions.
6	Select to allow the valve to pulse to the desired state.
7	When selected, the valve will finish pulsing to the desired state before executing a command to open or close.

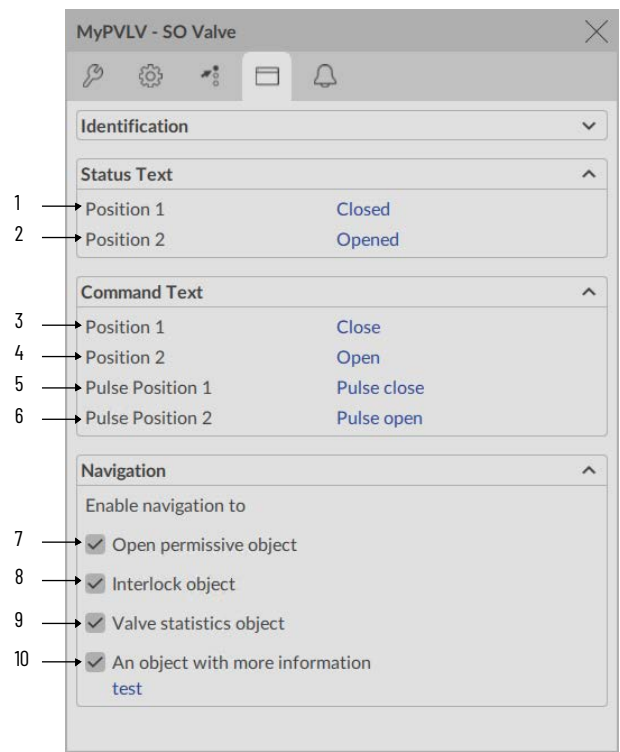
Advanced Engineering Tab - Valve Behavior



Item	Description
1	Select to allow operator commands to reset any previous faults (I/O fault, fail to trip, interlock trip), then move the valve. Clear this checkbox to reset faults with only the reset command.
2	Select to allow External commands to reset any previous faults (I/O fault, transit stall, full stall, interlock trip), then move the valve. Clear this checkbox to reset faults by using only the reset command
3	When selected, the bypassable interlocks and permissives are bypassed when Override command source is selected. When the checkbox is cleared, the bypassable interlocks and permissives are enforced in Override.
4	When selected, the Operator command button to close the valve is available even when a command source other than Operator or Maintenance is selected. When the checkbox is cleared, the Operator close command button is only enabled in Operator or Maintenance command source.
5	When selected, the Program open command pin is treated as a level input: when 1, the valve is commanded to open, and when 0 the valve is commanded to close. When the checkbox is cleared, the Program commands follow the normal command convention: write a 1 to the Program open command to open the valve, and write a 1 to the Program close command to close the valve.
6	When selected, outputs are maintained on, even when the valve reaches the target position. When the checkbox is cleared, outputs are turned off once the valve reaches the target position.
7	When selected, outputs are maintained on when a valve has a full stall (failed to move) or transit stall (failed to reach target position). When the checkbox is cleared, outputs are turned off when a valve stall occurs.
8	Select to send a stop output to the valve and clear the Open and Close outputs when an I/O Fault condition occurs. Clear this checkbox to keep the outputs to the valve in their current state on an I/O Fault condition. IMPORTANT: When this checkbox is selected and an I/O Fault condition occurs, a reset is required before the valve can be energized.
9	Select to send a stop output to the valve and clear the Open and Close outputs when a Transit Stall condition occurs. Clear this checkbox to keep the outputs to the valve in their current state (keep trying) on a Transit Stall condition. (A Transit Stall means the valve, when commanded to move, moved off its original position, but did not reach its commanded position before the Transit Stall time expired.) IMPORTANT: When this checkbox is selected and a Transit Stall condition occurs, a reset is required before the valve can be energized.
10	Select to send a stop output to the valve and clear the Open and Close outputs when a Full Stall condition occurs. Clear this checkbox to keep the outputs to the valve in their current state (keep trying) on a Full Stall condition. (A Full Stall means the valve, when commanded to move, did not move off its original position before the Full Stall time expired.) IMPORTANT: When this checkbox is selected and a Full Stall condition occurs, a reset is required before the valve can be energized.
11	Select to send a stop output to the valve and clear the Open and Close outputs when a Loss of Open Position condition occurs. Clear this checkbox to keep the outputs to the valve in their current state (keep trying) on a Loss of Open Position condition. (A Loss of Open Position means that the valve was commanded to open, reached the open position as confirmed by the limit switches, and then moved off the open position.) IMPORTANT: When this checkbox is selected and a Loss of Open Position condition occurs, a reset is required before the valve can be energized.

Item	Description
12	Select to send a stop output to the valve and clear the Open and Close outputs when a Loss of Closed Position condition occurs. Clear this checkbox to keep the outputs to the valve in their current state (keep trying) on a Loss of Closed Position condition. (A Loss of Closed Position means that the valve was commanded to close, reached the closed position as confirmed by the limit switches, and then moved off the closed position.) IMPORTANT: When this checkbox is selected and a Loss of Closed Position condition occurs, a reset is required before the valve can be energized.
13	The device always de-energizes on interlock not OK. This item cannot be cleared. It is displayed as a reminder that the interlock function always de-energizes the valve.
14	Select 'ON' if both limit switches are OFF when the valve is moving in normal operation. Select 'OFF' if both limit switches are ON when the valve is moving in normal operation. This selection determines which limit switch combination indicates abnormal operation.
15	Enable or disable virtual mode.

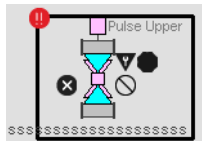
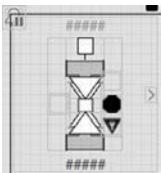
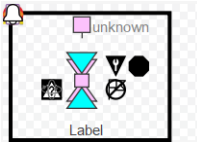
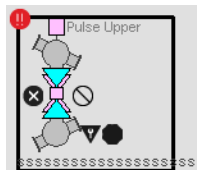
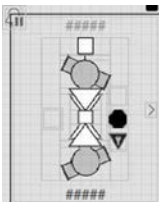
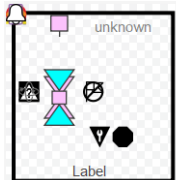
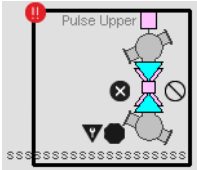
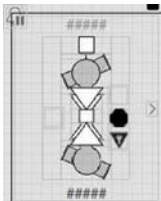
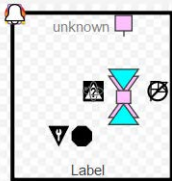
Advanced HMI Configuration Tab



Item	Description
1	Displays the text for Position 1.
2	Displays the text for Position 2.
3	Displays the command text for Position 1.
4	Displays the command text for Position 2.
5	Displays the command text for Pulse Position 1.
6	Displays the command text for Pulse Position 2.
7	Select if you have a PPERM instruction that is used with this valve for Open Permissives. This action changes the Permissive indicator to a clickable button to open the Permissive faceplate. IMPORTANT: The name of the Permissive object in the controller must be the name of the object with the suffix '_Pos2Perm'. For example, if your PVLV object has the name 'ValveM0123', then its Permissive object must be named 'ValveM0123_Pos2Perm'.
8	Select if an interlock instruction is used with this output. IMPORTANT: The name of the Interlock object in the controller must be the name of the object with the suffix '_Intlk'. For example, if your PVLV object has the name 'ValveM0123', then its Interlock object must be named 'ValveM0123_Intlk'.
9	Check if a Valve Stats object is used with this valve. This action makes the Valve Statistics button visible on the Maintenance faceplate; Select this button to open the Valve Statistics faceplate for this valve. IMPORTANT: The name of the ValveStats object in the controller must be the name of the object with the suffix '_ValveStats'. For example, if your PVLV object has the name 'ValveM0123', then its Valve Stats object must be named 'ValveM0123_ValveStats'.
10	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) You configure the tagname of the object that you want to navigate to in the extended tag property "Cfg_HasMoreObj.@Navigation". It uses the .@Library and .@Instruction extended tag properties to display the objects faceplate.

Mix-proof Valve (PVLVMP)

Graphic Symbols

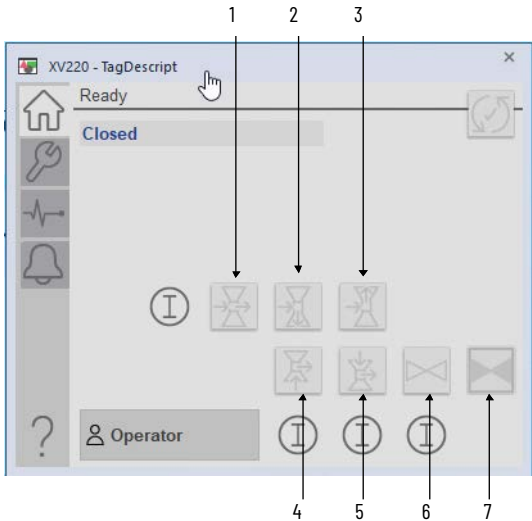
FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PVLVMP2D 	raP_5_20_PVLVMP_GS_2D_MixProofValve 		This Mix-proof Valve graphic object allows for numerous orientations on displays
GO_PVLVMP_Orth 	raP_5_20_PVLVMP_GS_Orth_MixProofValveLtTp 		This 3-D orthogonal Mix-proof Valve graphic object provides different valve angle positions on displays.
GO_PVLVMP_Orth1 	raP_5_20_PVLVMP_GS_Orth_MixProofValveRtTp 		This 3-D orthogonal Mix-proof Valve graphic object provides different valve angle positions on displays.

FactoryTalk View SE Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab

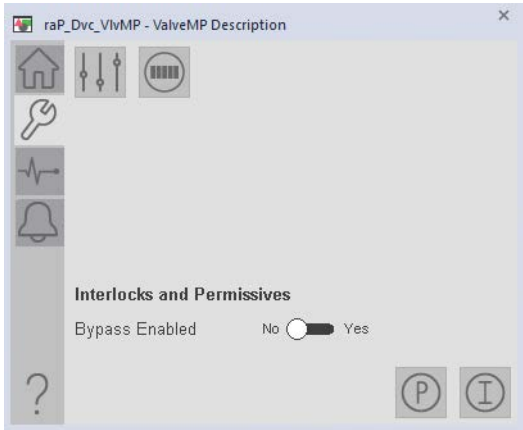
The Faceplate initially opens to the Operator (Home) tab. From here, an operator can monitor the device status and manually operate the device when it is in Operator command source.



Item	Description
1	Select to go to the CIP/SIP Valve Cavity state.
2	Select to go to the CIP/SIP Valve Lower Seat state.
3	Select to go to the CIP/SIP Valve Upper Seat state.
4	Select to go to the Lift Valve Lower Seat state.
5	Select to go to the Lift Valve Upper Seat state.
6	Select to open valve.
7	Select to close valve.

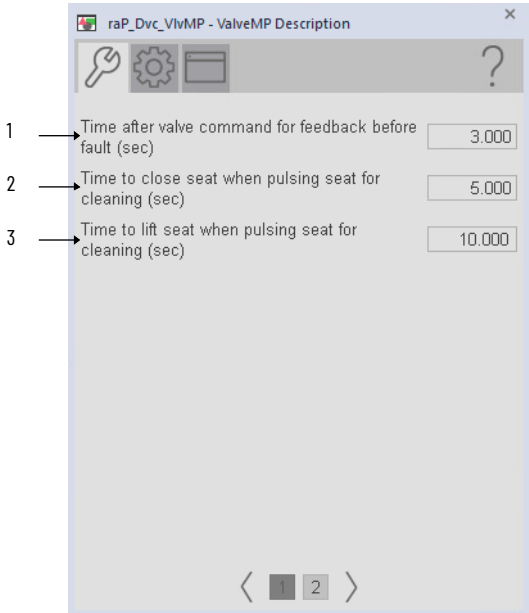
Maintenance Tab

Maintenance personnel use the information and controls on the Maintenance tab to adjust device parameters, troubleshoot, temporarily work around device problems, and disable the device for routine maintenance.

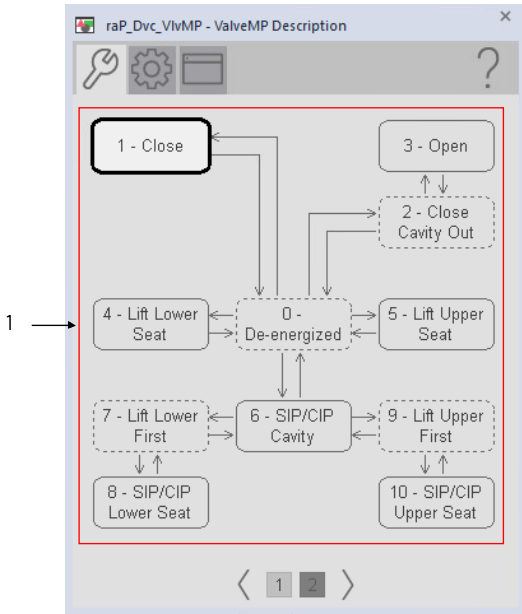


Advanced Maintenance Tab

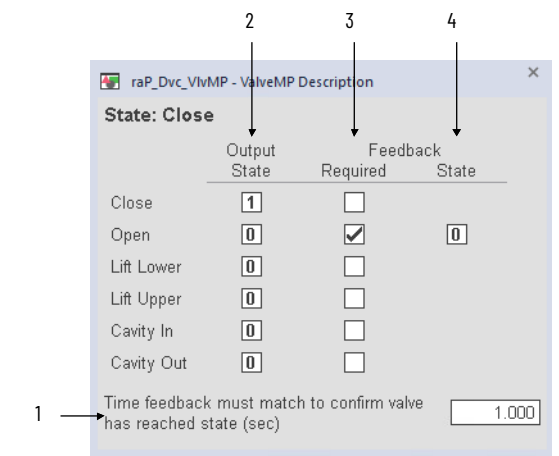
The Advanced Properties Display opens to the advanced maintenance settings. The Advanced Properties Display provides access to device configuration parameters and ranges, and options for device and I/O setup. This tab is used for initial system commissioning or later system changes.



Item	Description
1	Enter a value (seconds) that gives the valve time to achieve state before triggering a valve failure fault.
2	Enter a value (seconds) that the valve seat is held closed when pulsing for cleaning.
3	Enter a value (seconds) that the valve seat is held open when pulsing for cleaning.

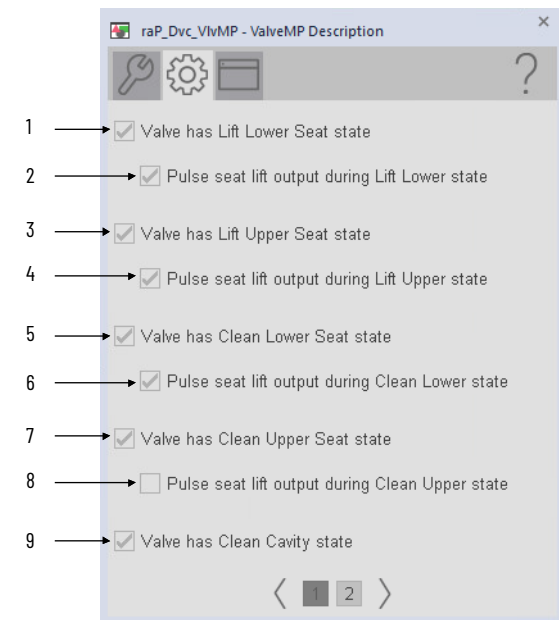


Item	Description
1	Select a state box to open the State Configuration display to access configuration parameters for the valve state

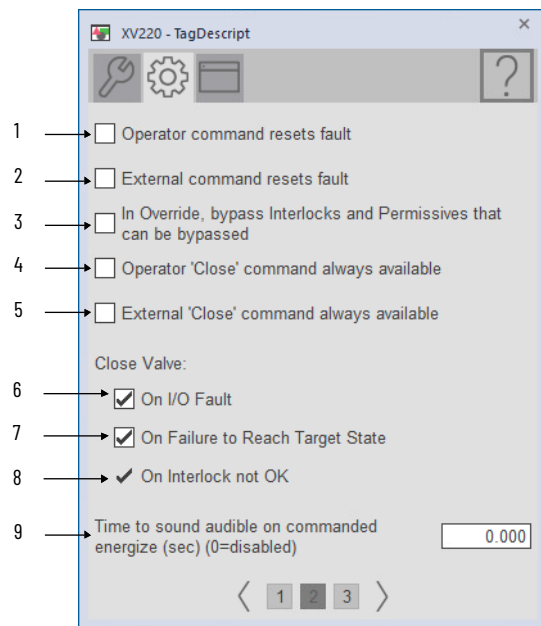


Item	Description
1	Enter a value (seconds) the feedback must match for the valve to achieve the selected state.
2	Set State of each Output in the selected valve state.
3	Select to require a feedback signal for the selected valve state.
4	Sets the desired value of the feedback signals for the selected valve state.

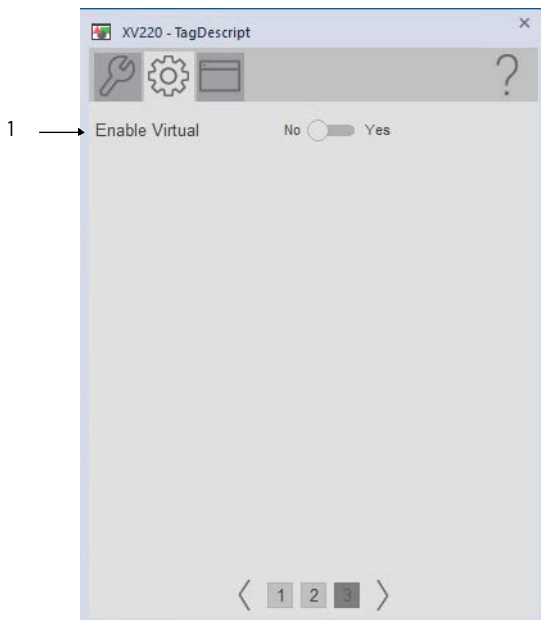
Engineering Tab



Item	Description
1	Select to enable the lift lower seat state for the valve.
2	Select to enable pulsing in the lift lower state.
3	Select to enable the lift upper seat state for the valve.
4	Select to enable pulsing in the lift upper state.
5	Select to enable the clean lower seat state.
6	Select to enable pulsing in the clean lower seat state
7	Select to enable the clean upper seat state.
8	Select to enable pulsing in the clean upper seat state.
9	Select to enable the clean cavity state.

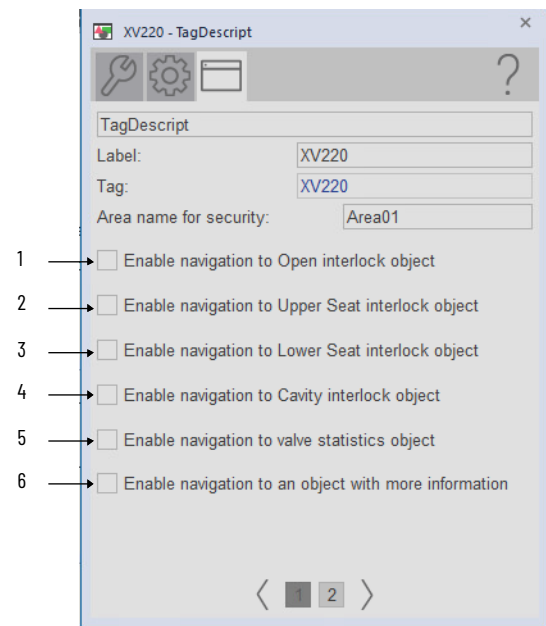


Item	Description
1	Select to reset a fault on a new Operator command.
2	Select to reset a fault on a new External command.
3	Select to bypass permissives and interlocks in Override command source.
4	Select to have Close command always available to Operator control.
5	Select to have Close command always available to External control.
6	Select to close the valve when an I/O Fault occurs. A reset is required to clear this latched shed condition. Clear this checkbox to show only the I/O fault status/alarm and not trip the valve if an I/O fault is detected.
7	Select to close the valve when a Position Fail occurs. A reset is required to clear this latched shed condition. Clear this checkbox to show only the Position Fail status/alarm and not trip the valve if a Position Fail is detected
8	The device always sheds (closes) on interlock not OK. This item cannot be unchecked. It is displayed as a reminder that the interlock function always triggers a shed.
9	Enter the time (in seconds) that the audible sounds when there is a commanded State change.

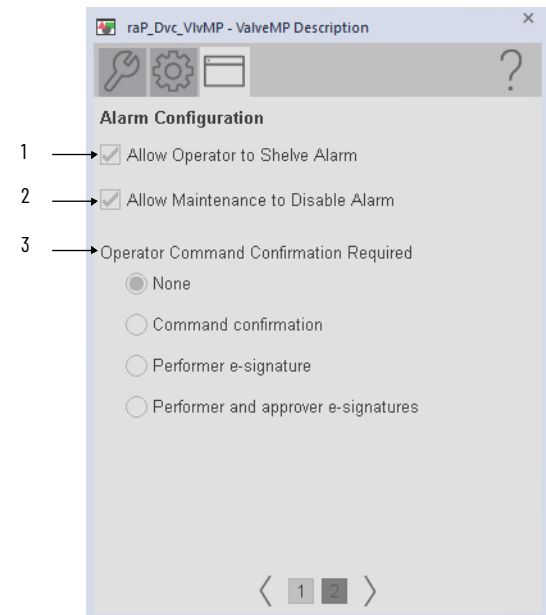


Item	Description
1	Select yes to enable virtual.

HMI Configuration Tab



Item	Description
1	Select if an interlock object is connected to Inp_OpenIntlkOK. The Open Interlock indicator becomes a button that opens the interlock faceplate.
2	Select if an interlock object is connected to Inp_UpperSeatIntlkOK. The Upper Seat Interlock indicator becomes a button that opens the interlock faceplate.
3	Select if an interlock object is connected to Inp_LowerSeatIntlkOK. The Lower Seat Interlock indicator becomes a button that opens the interlock faceplate.
4	Select if an interlock object is connected to Inp_CavityIntlkOK. The Cavity Interlock indicator becomes a button that opens the interlock faceplate.
5	Select if the Valve Stats instruction (for example, P_ValveStats) is used with this device. This check adds a button to the faceplate that opens the Valve Stats faceplate. IMPORTANT: The name of the Valve Statistics object in the controller must be the name of the object with the suffix '_ValveStats'. For example, if your raP_Dvc_VlvMP object has the name 'ValveMP123', then its Interlock object must be named 'ValveMP123_ValveStats'.
6	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) You configure the tagname of the object that you want to navigate to in the extended tag property "Cfg_HasMoreObj.@Navigation". It uses the <backing tag>.@Library and <backing tag>.@Instruction extended tag properties to display the objects faceplate.



Item	Description
1	Select to allow Operator to shelve alarm.
2	Select to allow Maintenance to disable alarm.
3	Select to configure operator command confirmation. This action would take place after any operator command.

Studio 5000 View Designer Faceplates

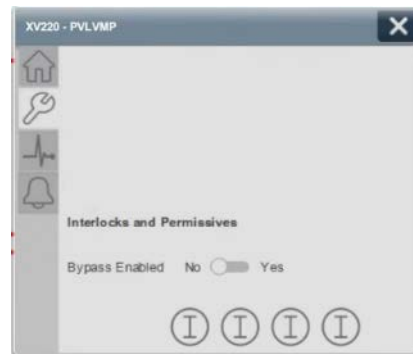
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 336](#) for descriptions of the features.

Operator Tab



Maintenance

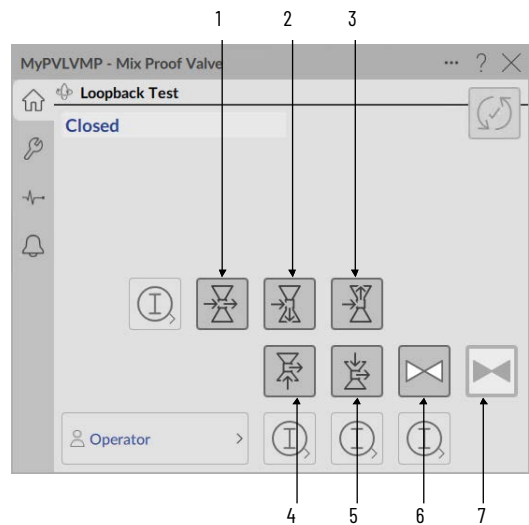


FactoryTalk Optix Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

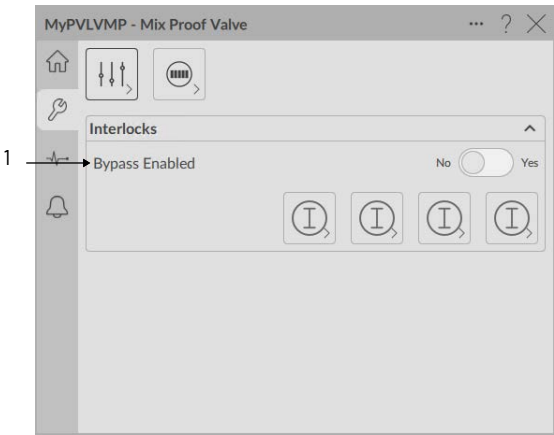
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [Basic Faceplate Attributes on page 44](#) for descriptions of the features.

Operator Tab



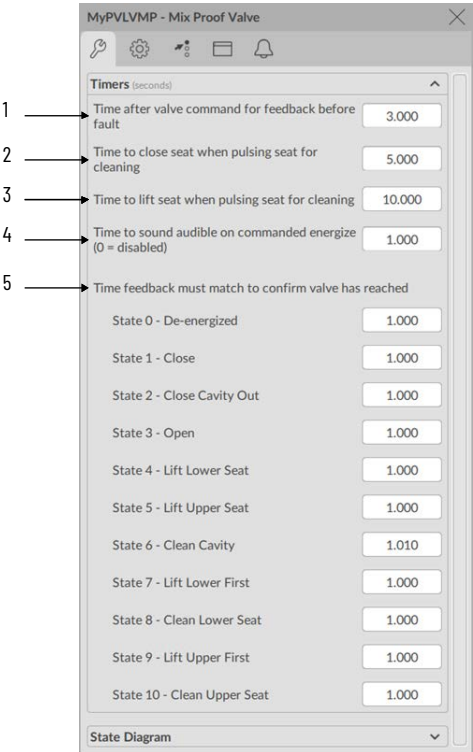
Item	Description
1	Select to go to the CIP/SIP Valve Cavity state.
2	Select to go to the CIP/SIP Valve Lower Seat state.
3	Select to go to the CIP/SIP Valve Upper Seat state.
4	Select to go to the Lift Valve Lower Seat state.
5	Select to go to the Lift Valve Upper Seat state.
6	Select to open valve.
7	Select to close valve.

Maintenance Tab



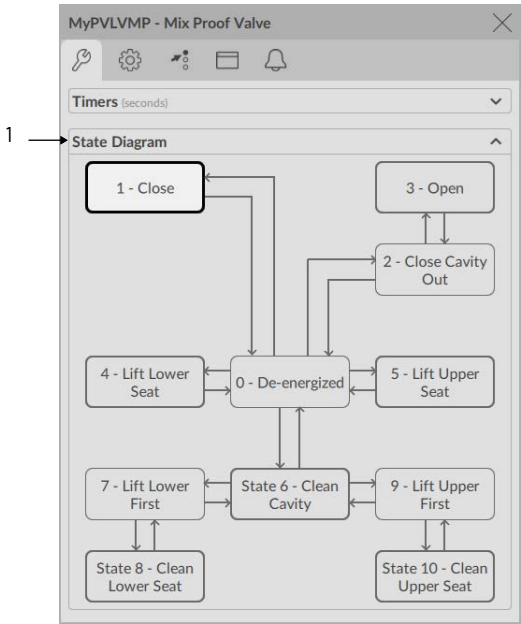
Item	Description
1	Select Yes to bypass checking of bypassable interlocks. Select No to enable checking of all interlocks.

Advanced Maintenance Tab - Timers



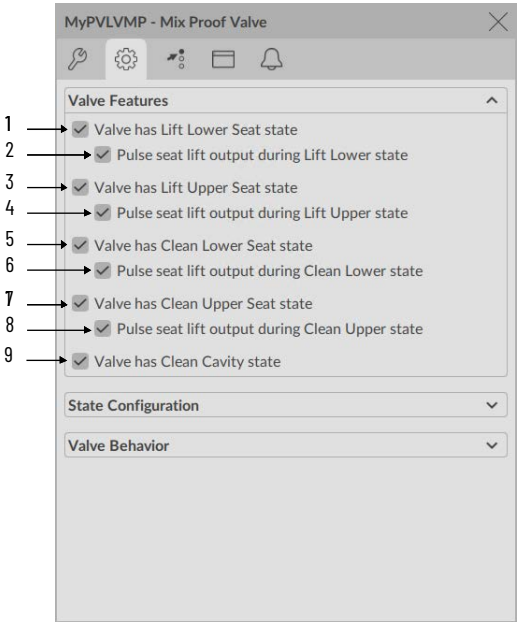
Item	Description
1	Enter a value (seconds) that gives the valve time to achieve state before triggering a valve failure fault.
2	Enter a value (seconds) that the valve seat is held closed when pulsing for cleaning.
3	Enter a value (seconds) that the valve seat is held open when pulsing for cleaning
4	Enter the time (in seconds) that the audible sounds when there is a commanded State change.
5	Enter a value (seconds) the feedback must match for the valve to achieve the selected state.

Advanced Maintenance Tab - State Diagram



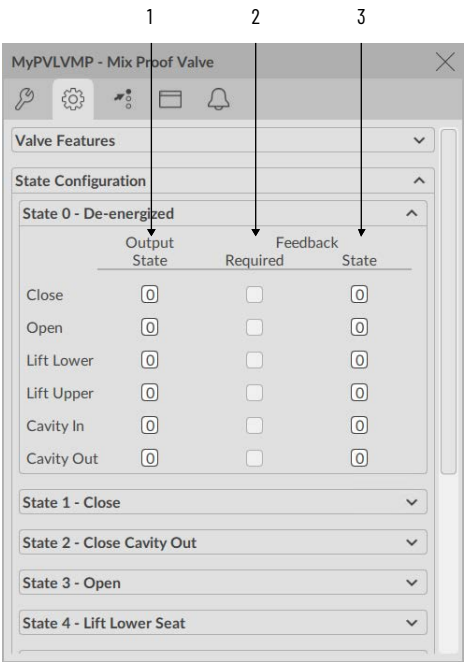
Item	Description
1	Select a state box to open the State Configuration display to access configuration parameters for the valve state.

Advanced Engineering Tab - Valve Features



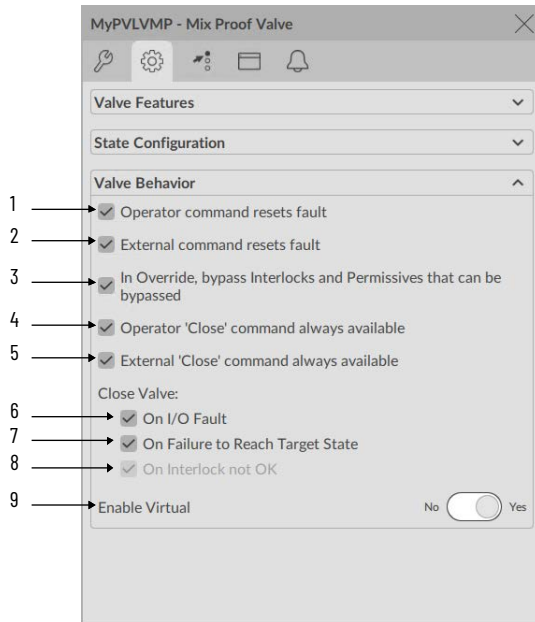
Item	Description
1	Select to enable the lift lower seat state for the valve.
2	Select to enable pulsing in the lift lower state.
3	Select to enable the lift upper seat state for the valve.
4	Select to enable pulsing in the lift upper state.
5	Select to enable the clean lower seat state.
6	Select to enable pulsing in the clean lower seat state.
7	Select to enable the clean upper seat state.
8	Select to enable pulsing in the clean upper seat state.
9	Select to enable the clean cavity state.

Advanced Engineering Tab - State Configuration



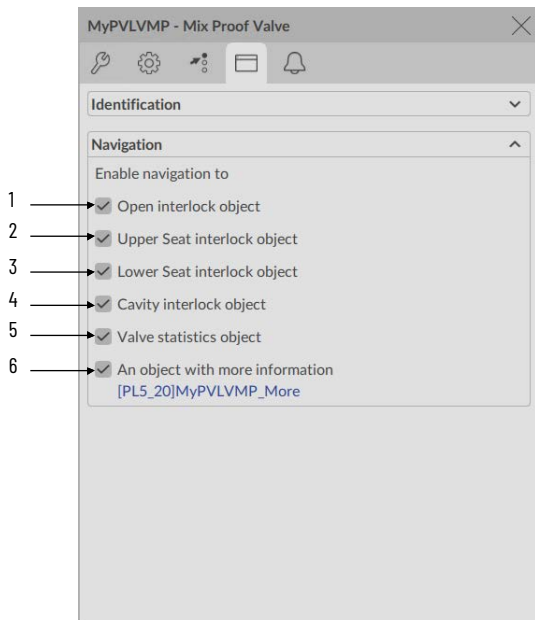
Item	Description
1	Set State of each Output in the selected valve state.
2	Select to require a feedback signal for the selected valve state.
3	Set the desired value of the feedback signals for the selected valve state.

Advanced Engineering Tab - Valve Behavior



Item	Description
1	Select to reset a fault on a new Operator command.
2	Select to reset a fault on a new External command.
3	Select to bypass permissives and interlocks in Override command source
4	Select to have Close command always available to Operator control.
5	Select to have Close command always available to External control.
6	Select to close the valve when an I/O Fault occurs. A reset is required to clear this latched shed condition. Clear this checkbox to show only the I/O fault status/ alarm and not trip the valve if an I/O fault is detected.
7	Select to close the valve when a Position Fail occurs. A reset is required to clear this latched shed condition. Clear this checkbox to show only the Position Fail status/alarm and not trip the valve if a Position Fail is detected
8	The device always sheds (closes) on interlock not OK. This item cannot be unchecked. It is displayed as a reminder that the interlock function always triggers a shed.
9	Select yes to enable virtual.

Advanced HMI Configuration Tab - Navigation






Item	Description
1	Select if an interlock object is connected to Inp_OpenIntlkOK. The Open Interlock indicator becomes a button that opens the interlock faceplate.
2	Select if an interlock object is connected to Inp_UpperSeatIntlkOK. The Upper Seat Interlock indicator becomes a button that opens the interlock faceplate.
3	Select if an interlock object is connected to Inp_LowerSeatIntlkOK. The Lower Seat Interlock indicator becomes a button that opens the interlock faceplate.
4	Select if an interlock object is connected to Inp_CavityIntlkOK. The Cavity Interlock indicator becomes a button that opens the interlock faceplate.
5	Select if the Valve Stats instruction (for example, PVLVS) is used with this device. This check adds a button to the faceplate that opens the Valve Stats faceplate. IMPORTANT: The name of the Valve Statistics object in the controller must be the name of the object with the suffix '_ValveStats'. For example, if your PVLVMP object has the name 'ValveMP123', then its Interlock object must be named 'ValveMP123_ValveStats'
6	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) You configure the tag name of the object that you want to navigate to in the extended tag property "Cfg_HasMoreObj.@Navigation". It uses the .@Library and .@Instruction extended tag properties to display the objects faceplate.

Notes:

Process Valve Statistics (PVLVS)

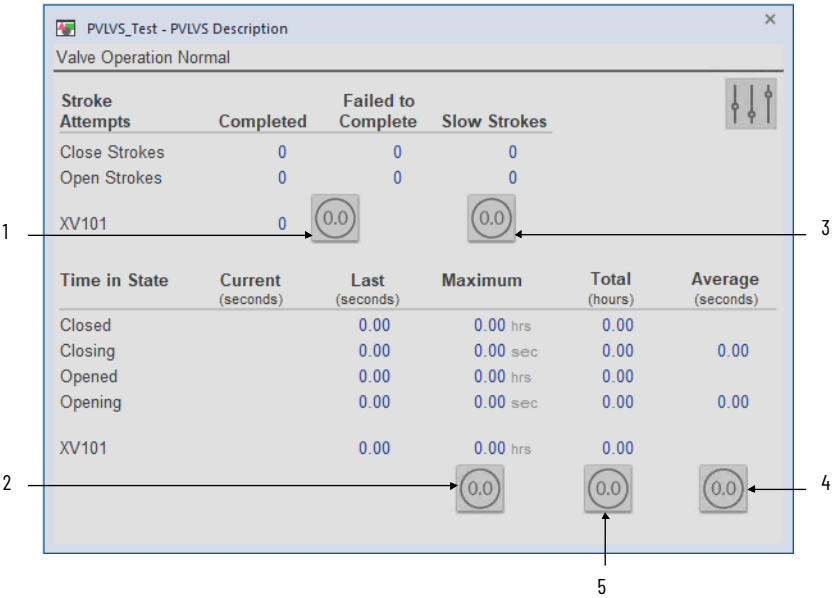
Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	Studio 5000 View Designer Graphic Symbol	Description
GO_PVLVS 	PVLVS_GS 	GS_PVLVS 	Graphic symbol which launches the faceplate for the Valve Statistics device.

FactoryTalk View SE Faceplates

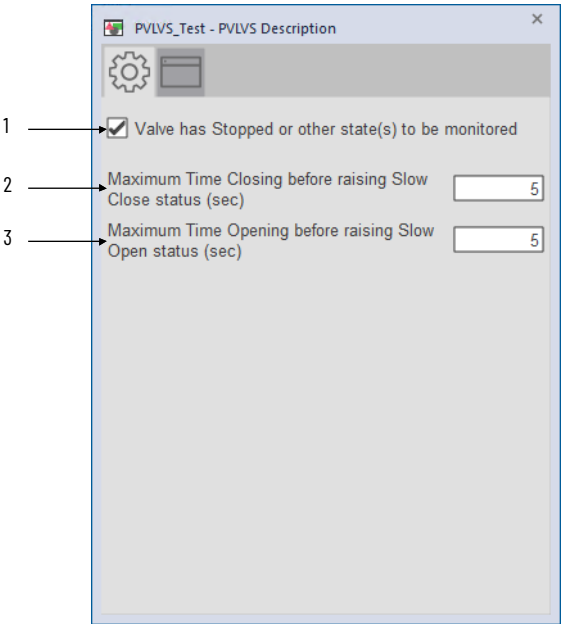
There are basic faceplate attributes that are common across all instructions. This object has no Trends, Diagnostics, or Alarms tabs.

Operator



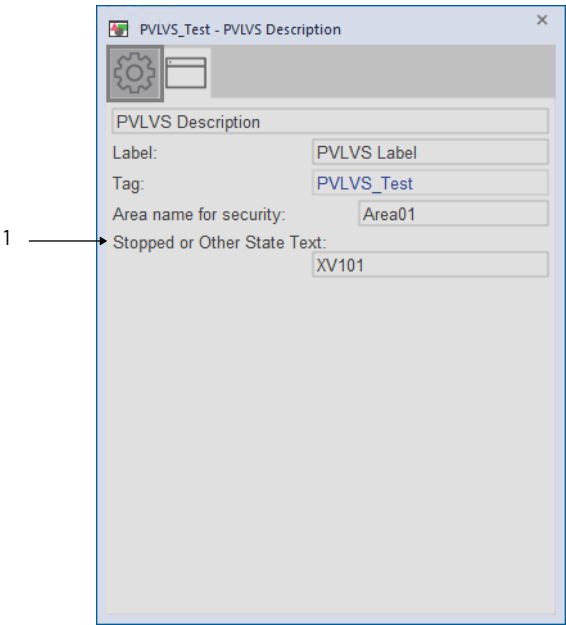
Item	Description
1	Select to clear Failed to Complete stroke counts.
2	Select to clear Maximum time.
3	Select to clear Slow Stroke counts.
4	Select to clear Average time.
5	Select to clear Total time

Advanced Engineering



Item	Description
1	Select if valve has Stopped or other states to be monitored.
2	Enter the maximum time for valve to be in the closing state before indicating that the valve closed slower than expected.
3	Enter the maximum time for valve to be in the opening state before indicating that valve opened slower than expected.

Advanced HMI



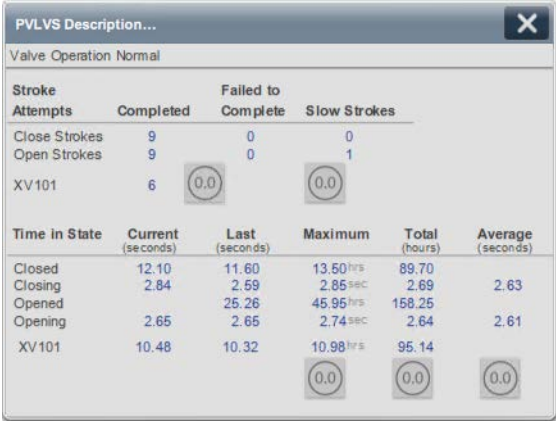
Item	Description
1	The text for Stopped or Other State to be displayed in HMI.

Studio 5000 View Designer Faceplates

There are basic faceplate attributes that are common across all instructions. This object has no Trends, Diagnostics, or Alarms tabs.

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 347](#) for descriptions of the features.

Operator

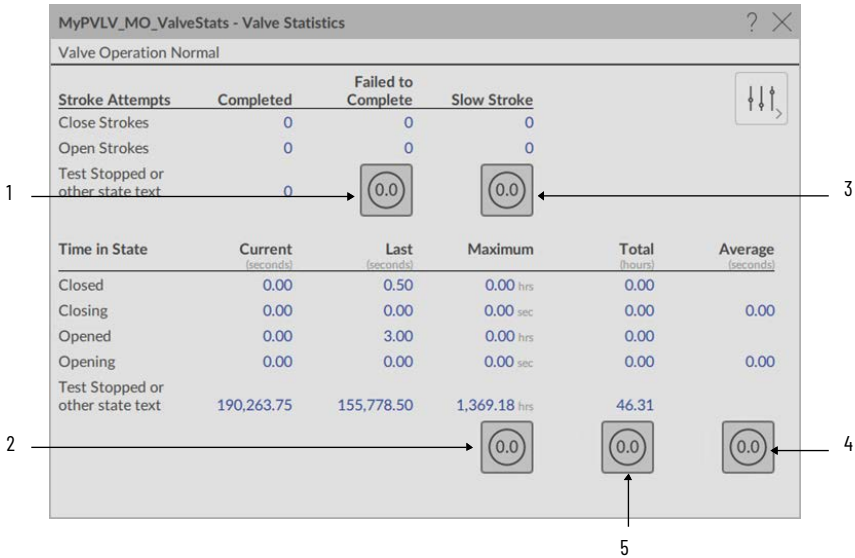


FactoryTalk Optix
Faceplates

There are basic faceplate attributes that are common across all instructions. This object has no Trends, Diagnostics, or Alarms tabs.

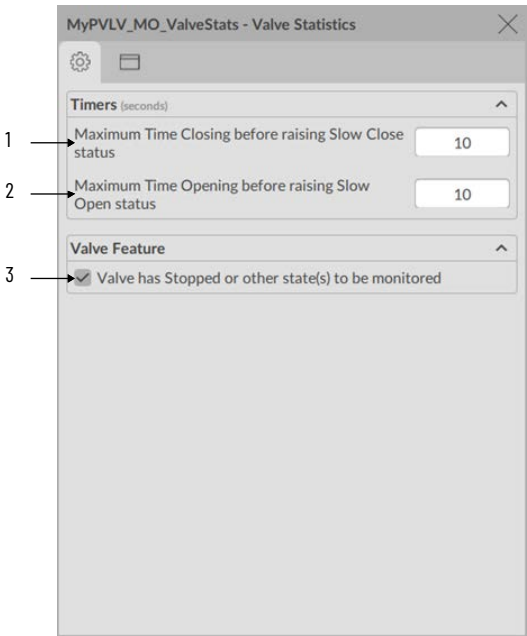
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates on page 347](#) for descriptions of the features.

Operator



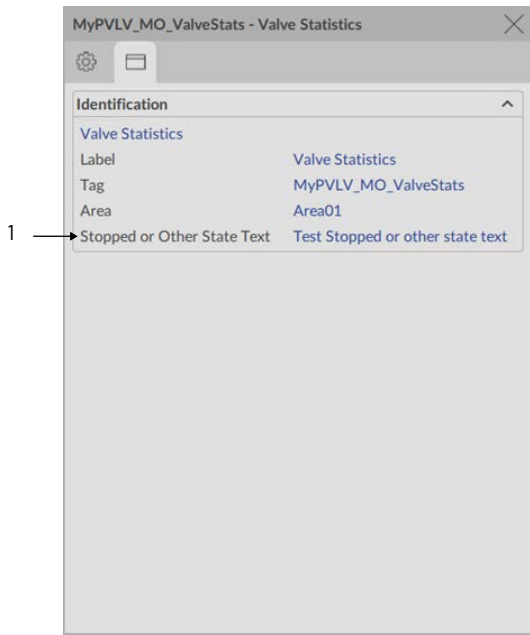
Item	Description
1	Select to clear Failed to Complete stroke counts.
2	Select to clear Maximum time.
3	Select to clear Slow Stroke counts.
4	Select to clear Average time.
5	Select to clear Total time

Advanced Engineering



Item	Description
1	Enter the maximum time for valve to be in the closing state before indicating that the valve closed slower than expected.
2	Enter the maximum time for valve to be in the opening state before indicating that valve opened slower than expected.
3	Select if valve has Stopped or other state(s) to be monitored.

Advanced HMI

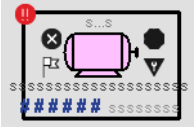
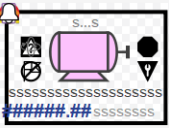
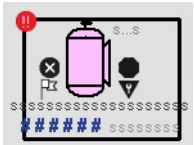

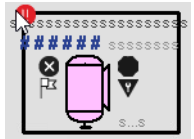



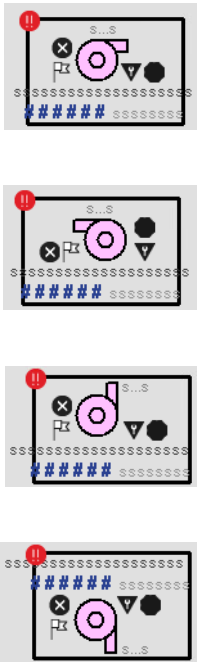
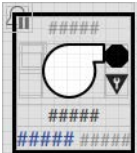

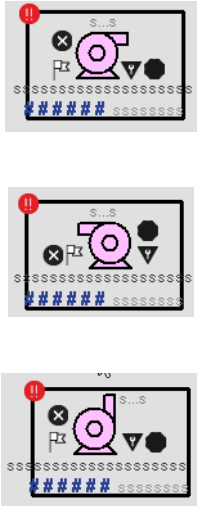
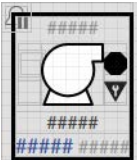

Item	Description
1	The text for Stopped or Other State to be displayed in HMI.

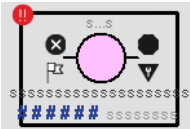
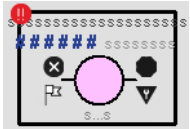


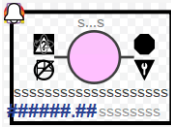



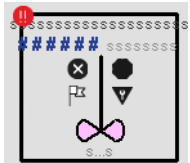
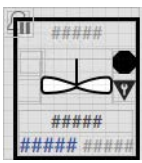



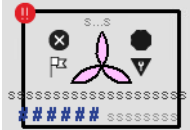
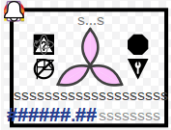


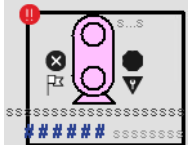

Notes:

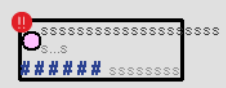



Variable Speed Drive (PVSD)

Graphic Symbols

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	PV5000 Graphic Symbol	Description
GO_PVSD	GS_Motor_R	GS_PVSD	Motors operate in different positions: right, up, and down.
			
GO_PVSD1		GS_PVSD1	
			
GO_PVSD4		GS_PVSD4	
			

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	PV5000 Graphic Symbol	Description
	<p>GS_Blower_R</p> 		<p>Blowers operate in different positions: right, left, up, and down.</p>
	<p>GS_Pump_R</p> 		<p>Pumps operate in several positions: right, left, and up</p>

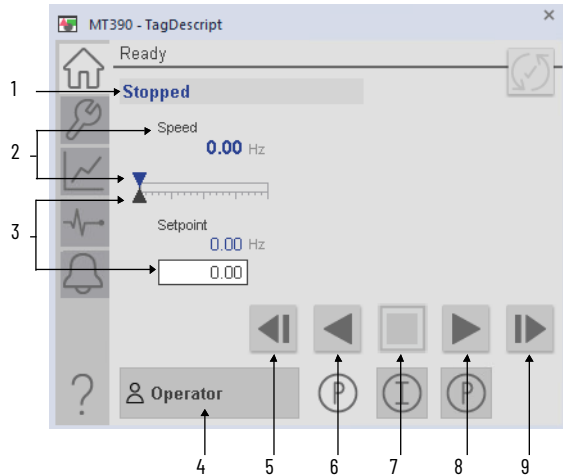
FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	PV5000 Graphic Symbol	Description
   	—	   	Inline motors operate in several positions: up, left, down, and right.
	GS_Agitator 		Agitator that is shown as a Graphic Symbol.
	—		Conveyor that is shown as a Graphic Symbol.
	—		Fan that is shown as a Graphic Symbol.
	—		Mixer that is shown as a Graphic Symbol
	—		Rotary Pump that is shown as a Graphic Symbol

FactoryTalk View SE Graphic Symbol	FactoryTalk Optix Graphic Symbol	PV5000 Graphic Symbol	Description
	—	—	Indicator with label.
	—	—	Blower indicator
	—	—	Motor indicator
	—	—	Pump indicator

FactoryTalk View SE Faceplates

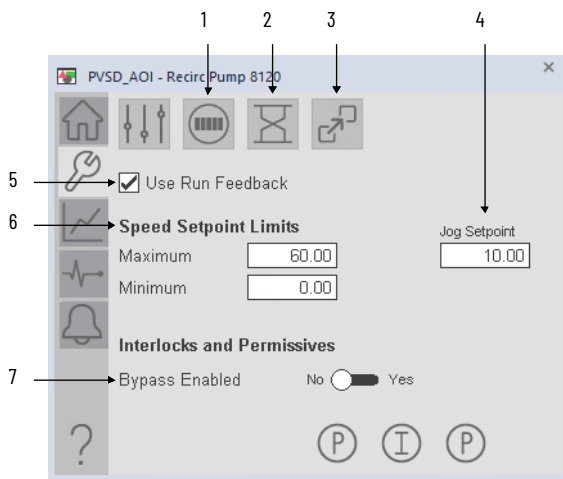
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 27](#).

Operator Tab



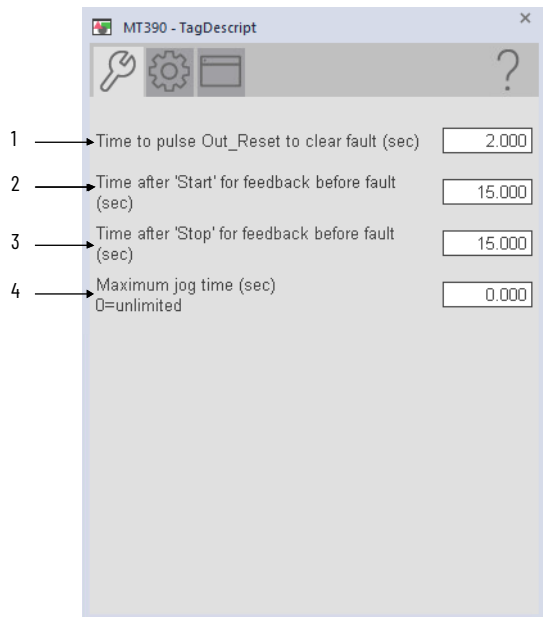
Item	Description
1	Drive state indicator.
2	Current speed of the drive.
3	Setpoint for the speed of the drive.
4	Current command source (Program, Operator, Override, Maintenance, or Hand)
5	Jog drive in reverse.
6	Start drive in reverse.
7	Stop drive.
8	Start drive forward.
9	Jog drive forward.

Maintenance Tab



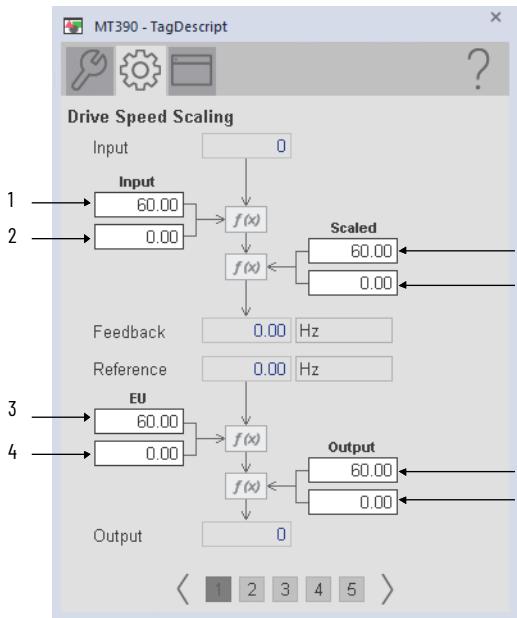
Item	Description
1	Display Runtime Accumulator Faceplate.
2	Display Restart Inhibit Faceplate.
3	Display Device Faceplate.
4	Enter the Jog Setpoint.
5	Select to use Run Feedback.
6	Enter the clamping limits for the speed setpoint. If a speed setpoint outside this range is entered, the speed is clamped at these limits and Sts_SpeedLimited is asserted.
7	Select yes to bypass checking of interlocks and permissives that can be bypassed.

Advanced Maintenance Tab

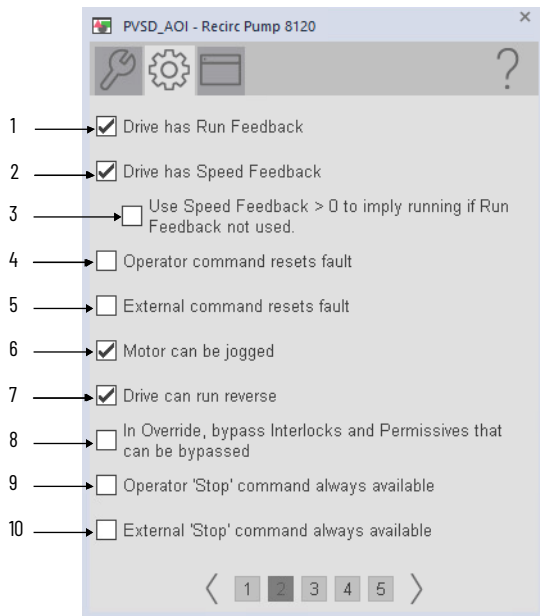


Item	Description
1	Enter the amount of time to hold Out_Reset true to reset a drive fault when a reset command is received.
2	Enter the amount of time to allow for the run feedback on the drive to confirm that the drive has started before raising a Fail to Start alarm.
3	Enter the amount of time to allow for the run feedback on the drive to confirm that the drive has stopped before raising a Fail to Stop alarm. TIP: Allow extra time for the drive to decelerate or coast to zero speed before it returns a confirmed Stopped status.
4	Enter the maximum amount of time allowed to jog the motor.

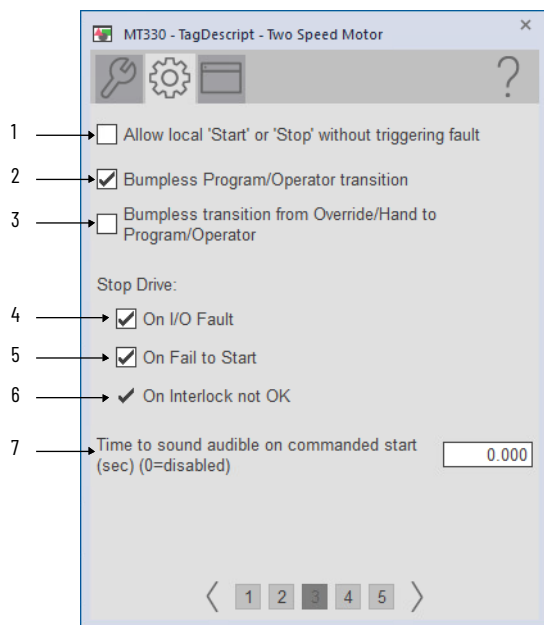
Engineering Tab



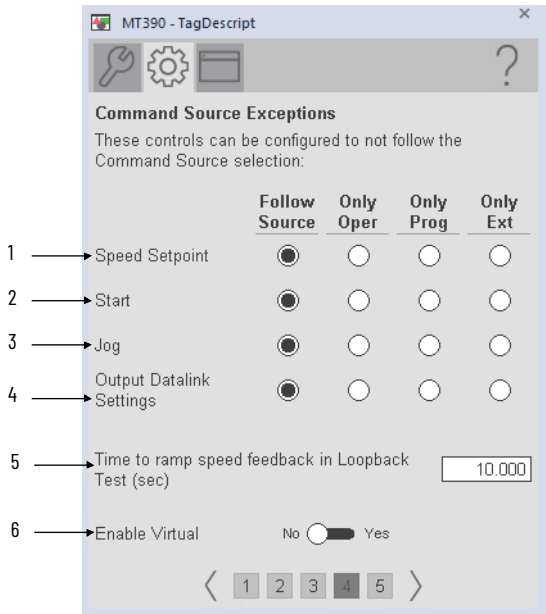
Item	Description
1	Enter the raw input count that corresponds to the maximum speed feedback from the drive.
2	Enter the raw input count that corresponds to the minimum speed feedback from the drive. (This value is usually zero.)
3	Enter the engineering unit value for the maximum speed reference that is sent to the drive.
4	Enter the engineering unit value for the minimum speed reference that is sent to the drive. (This value is usually zero. Do not enter a negative value for reversing drives. Reversing is handled separately.)
5	Enter the engineering unit value for the maximum speed feedback from the drive.
6	Enter the engineering unit value for the minimum speed feedback from the drive. (This value is usually zero. Do not enter a negative value for reversing drives. Reversing is handled separately.)
7	Enter the raw output count that corresponds to the maximum speed reference sent to the drive.
8	Enter the raw output count that corresponds to the minimum speed reference sent to the drive. (This value is usually zero.)



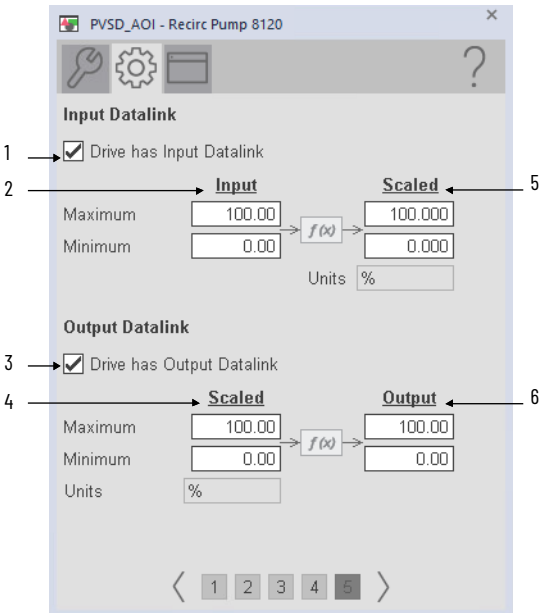
Item	Description
1	Select if the drive provides a run feedback signal. This check enables feedback checking for Fail to Start and Fail to Stop. Clear this checkbox if there is no run feedback.
2	Select if the drive provides a speed feedback signal. Clear this checkbox if there is no speed feedback.
3	Select if Speed feedback greater than zero is used to signify the drive is running. IMPORTANT: This configuration setting is available only if the previous configuration setting is checked.
4	Select to reset faults when a new operator drive command, such as start or stop, is issued. Clear this checkbox to require an explicit reset command to clear faults.
5	Select to reset faults when a new external drive command, such as start or stop, is issued. Clear this checkbox to require an explicit reset command to clear faults.
6	Select to make the Jog command button visible on the Operator tab and enable the drive to be jogged from the faceplate.
7	Select to make the forward and reverse direction command buttons visible on the Operator tab and enable the drive to run forward or reverse.
8	Select to have the interlocks and permissives that can be bypassed, bypassed in Override command source.
9	Select (= 1) so that the OCmd.Stop has priority and is accepted at any time. If the Command Source is not Operator or Maintenance, the motor or drive requires a reset. Clear this checkbox (= 0) so that the OCmd.Stop works only in Operator or Maintenance command source.
10	Select (= 1) so that the XCmd.Stop has priority and is accepted at any time. If the Command Source is not External, the motor or drive requires a reset. Clear this checkbox (= 0) so that the XCmd.Stop only works when the command source is External.



Item	Description
1	Select to allow for local command source start and stop without triggering a fault.
2	Select to have Program settings, such as Speed Reference, track Operator settings in Operator command source, and have Operator settings track Program settings in Program command source.
3	Select to have Program and Operator Speed Reference track the Override Speed Reference in Override command source or the actual speed in Hand command source.
4	Select to stop the drive if an I/O Fault is detected. Clear this checkbox show the I/O Fault Status/Alarm only and not stop the drive if an I/O Fault is detected.
5	When the bit is on and a motor Fail to Start is detected, the drive is stopped. A reset is required before another start can be attempted. If the bit is off and a drive Fail to Start is detected, the instruction sets only the Sts.FailToStart status (and the Alm.FailToStart alarm, if so configured). The outputs are not changed, so the instruction continues to start the drive.
6	The drive always stops on interlock not OK. This item cannot be cleared. It is displayed as a reminder that the interlock function always stops the drive.
7	Enter the time (in seconds) that the audible sounds when there is a commanded State change.



Item	Description
1	This selection determines whether control of the drive speed reference follows the command source that is selected for the instruction, stays with the operator, stays with the program, or stays with the external command source.
2	This selection determines whether control of the drive starting and stopping follows the command source that is selected for the instruction, stays with the operator, stays with the program, or stays with the external command source.
3	This selection determines whether control of the drive jogging follows the command source that is selected for the instruction, stays with the operator, stays with the program, or stays with the external command source.
4	This selection determines whether control of the output datalink value follows the command source that is selected for the instruction, stays with the operator, stays with the program, or stays with the external command source.
5	Enter the time, in seconds, to ramp speed feedback when in Virtual.
6	Enable or disable virtual mode.



Item	Description
1	Select to make the Input Datalink configuration and operation functions visible.
2	Enter the minimum and maximum raw (from the drive) units for the Input Datalink.
3	Select to make the Output Datalink configuration and operation functions visible.
4	Enter the minimum and maximum scaled values for the Output Datalink in Engineering Units.
5	Enter the minimum and maximum scaled values for the Input Datalink in Engineering Units.
6	Enter the minimum and maximum scaled values for the Output Datalink in Raw (to the drive) Units. Enter the text to display for the label and units of measure of the Output Datalink.

HMI Configuration Tab

MyPVSD - Variable Speed Drive

Variable Speed Drive

Label: MY PVSD DRIVE

Tag: MyPVSD

Area name for security: Area01

1 → Running Forward status text: Going This Way

2 → Running Reverse status text: Going Other Way

3 → Starting Forward Status Text: Starting forward

4 → Starting Reverse Status Text: Starting reverse

5 → Stopped Status Text: Not Running

6 → Stopping Status Text: Stopping

7 → Jogging Forward Status Text: Jogging This Way

8 → Jogging Reverse Status Text: Jogging Other Wa

< 1 2 3 4 >

Item	Description
1	Display name for running forward direction.
2	Display name for running reverse direction.
3	Display name for starting forward direction.
4	Display name for starting reverse direction.
5	Display name for Stopped status.
6	Display name for Stopping status.
7	Display name for jogging forward direction.
8	Display name for jogging reverse direction.

MyPVSD - Variable Speed Drive

1 → Start Forward command text: Run This Way

2 → Start Reverse command text: Run Other Way

3 → Stop Command Text: Stop

4 → Jog Forward command text: Jog This Way

5 → Jog Reverse command text: Jog Other Way

6 → Input Datalink label: Tremie pipe voltage

7 → Output Datalink label: Sinusoidal replenera

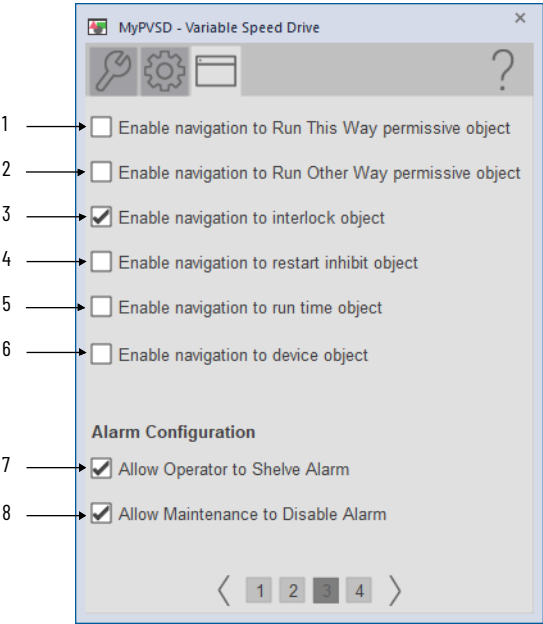
8 → Number of decimal places for Actual Speed: 2

9 → Number of decimal places for Input Datalink: 2

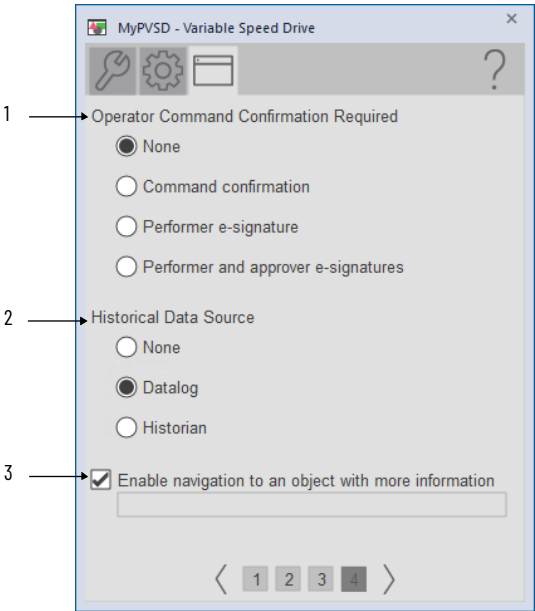
Number of decimal places for Output Datalink: 2

< 1 2 3 4 >

Item	Description
1	Display name for start forward direction.
2	Display name for start reverse direction.
3	Display name for Stop
4	Display name for jog forward direction.
5	Display name for jog reverse direction.
6	Display name for input Datalink.
7	Display name for output Datalink.
8	Enter the decimal places to display for actual speed.
9	Enter the decimal places to display for Input Datalink.



Item	Description
1	Select if a permissive object is connected to Inp_FwdPermOK. The permissive indicator becomes a button that opens the permissive faceplate. IMPORTANT: The name of the permissive object in the controller must be the name of the object with the suffix "_FwdPerm".
2	Select if a permissive object is connected to Inp_RevPermOK. The permissive indicator becomes a button that opens the permissive faceplate. IMPORTANT: The name of the permissive object in the controller must be the name of the object with the suffix "_RevPerm".
3	Select if an interlock object is connected to Inp_IntlkOK. The Interlock indicator becomes a button that opens the interlock faceplate. IMPORTANT: The name of the Interlock object in the controller must be the name of the object with the suffix '_Intlk_0'. For example, if your PVSD object has the name 'Drive123', then its Interlock object must be named 'Drive123_Intlk'
4	Select if a restart inhibit object is connected. The button that opens the Restart Inhibit faceplate appears. IMPORTANT: The name of the Restart Inhibit object in the controller must be the name of the object with the suffix '_Reslnh'. For example, if your PVSD object has the name 'Drive123', then its Restart Inhibit object must be named 'Drive123_Reslnh'
5	Select if a runtime object is connected. The button that opens the runtime faceplate appears. IMPORTANT: The name of the runtime object in the controller must be the name of the object with the suffix '_RunTime'. For example, if your PVSD object has the name 'Drive123', then its runtime object must be named 'Drive123_RunTime'.
6	Select to allow navigation to the device object.
7	Select to allow Operator to shelve alarm.
8	Select to allow Maintenance to disable alarm.



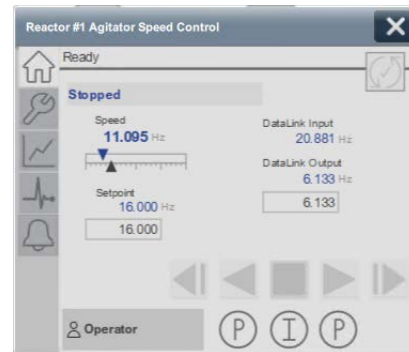
Item	Description
1	Select to configure operator command confirmation. This action would take place after any operator command.
2	Select to configure if a Historical data source will be used or not.
3	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) This can be configured to navigate to an Add-On Instruction backing tag or a UDT tag that has HMI_Type and HMI_Lib defined. For example, there is a motor with the tag name P_101 and there is a need to have the more information button navigate to the parent P_LLS object. A tag is created for the P_LLS object that is given the alias P101_More. When the more information button is pressed on the motor, it links to P101_More. This opens the faceplate for the LLS object.

Studio 5000 View Designer Faceplates

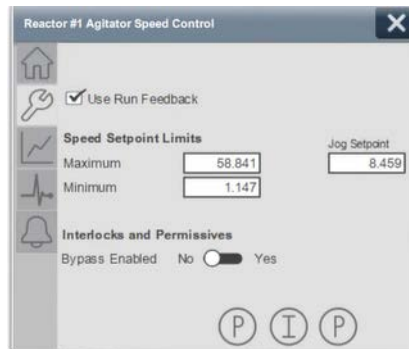
There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

Studio 5000 View Designer® faceplates contain features that are used in the FactoryTalk® View SE faceplates. See [FactoryTalk View SE Faceplates on page 357](#) for descriptions of the features.

Operator Tab



Maintenance Tab

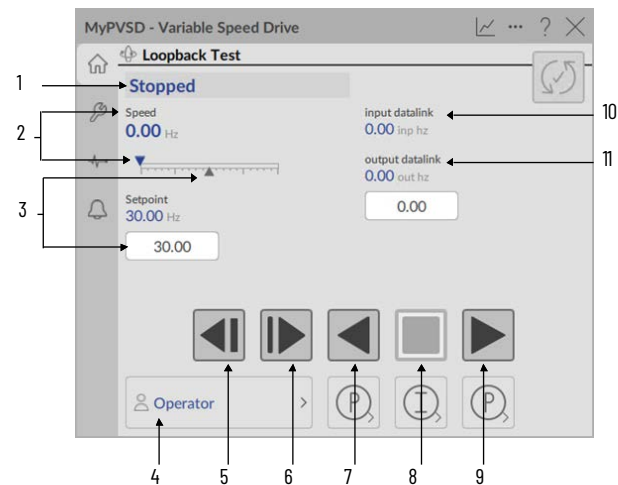


FactoryTalk Optix
Faceplates

There are basic faceplate attributes that are common across all instructions. The Trends tab, Diagnostics tab, and Alarms tab all have the same basic functionality and are not described in this section. See [Basic Faceplate Attributes on page 37](#).

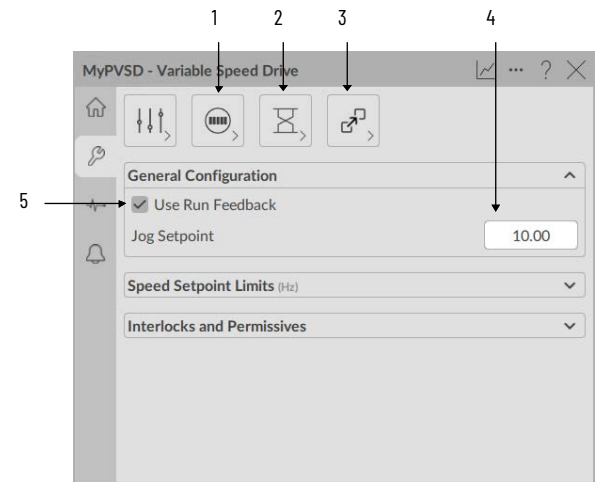
FactoryTalk® Optix™ faceplates contain features that are used in the FactoryTalk View SE faceplates. See [FactoryTalk View SE Faceplates on page 357](#) for descriptions of the features.

Operator Tab



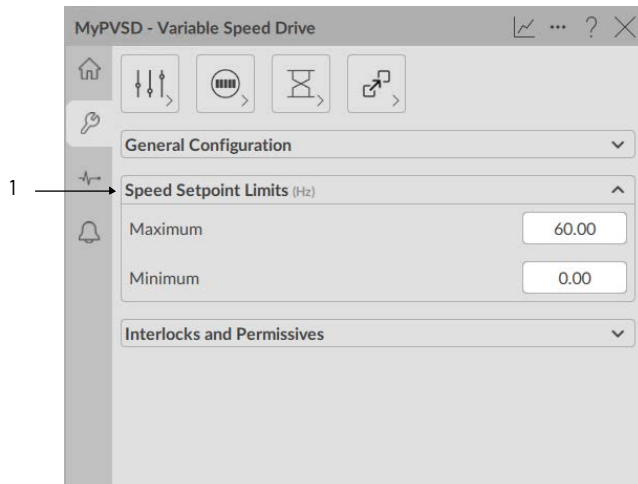
Item	Description
1	Drive state indicator.
2	Current speed of the drive.
3	Setpoint for the speed of the drive.
4	Current command source (Program, Operator, Override, Maintenance, or Hand)
5	Jog drive in reverse.
6	Jog drive forward
7	Start drive in reverse.
8	Stop drive.
9	Start drive forward.
10	Input datalink (if used).
11	Output datalink (if used).

Maintenance Tab - General Configuration



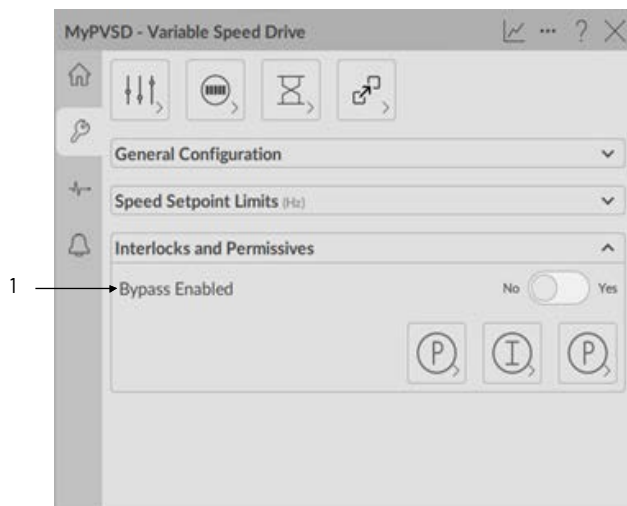
Item	Description
1	Display Runtime Accumulator Faceplate.
2	Display Restart Inhibit Faceplate.
3	Display Device Faceplate.
4	Enter the Jog Setpoint.
5	Select to use Run Feedback.

Maintenance Tab - Speed Setpoint Limits



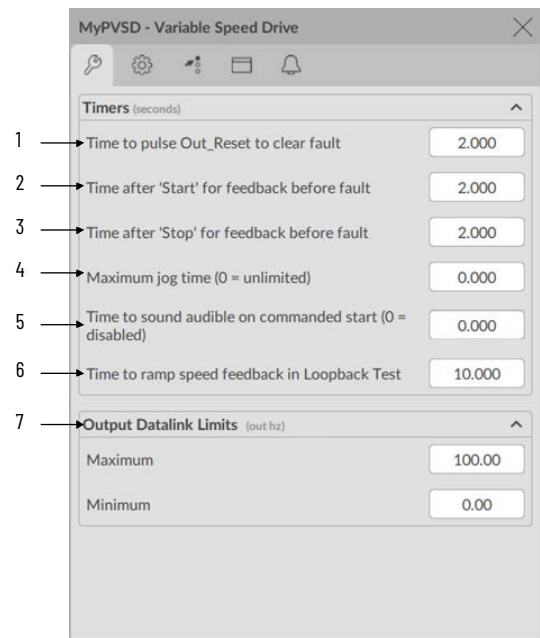
Item	Description
1	Enter the clamping limits for the speed setpoint. If a speed setpoint outside this range is entered, the speed is clamped at these limits and Sts_SpeedLimited is asserted.

Maintenance Tab - Interlocks and Permissives



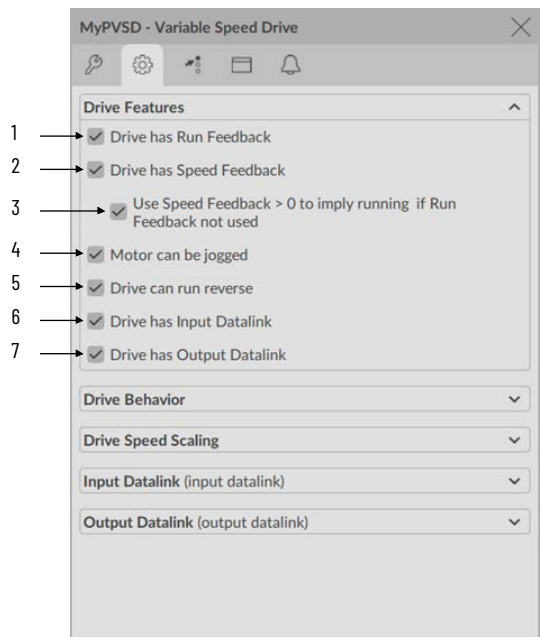
Item	Description
1	Select yes to bypass checking of interlocks and permissives that can be bypassed.

Advanced Maintenance Tab



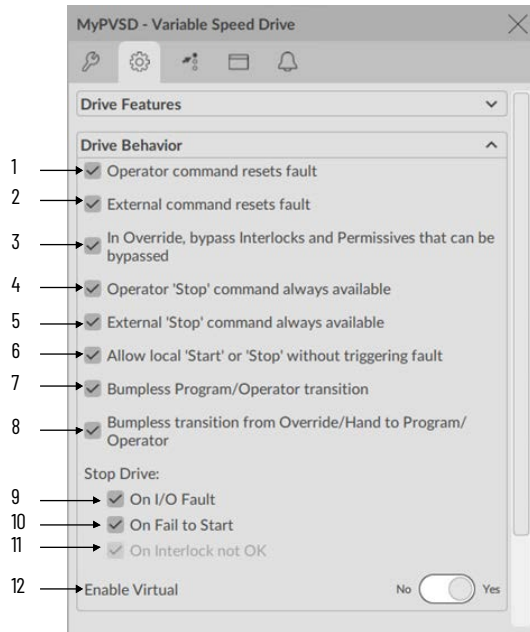
Item	Description
1	Enter the amount of time to hold Out_Reset true to reset a drive fault when a reset command is received.
2	Enter the amount of time to allow for the run feedback on the drive to confirm that the drive has started before raising a Fail to Start alarm.
3	Enter the amount of time to allow for the run feedback on the drive to confirm that the drive has stopped before raising a Fail to Stop alarm. TIP: Allow extra time for the drive to decelerate or coast to zero speed before it returns a confirmed Stopped status.
4	Enter the maximum amount of time allowed to jog the motor.
5	Enter the time (in seconds) that the audible sounds when there is a commanded State change.
6	Enter the time, in seconds, to ramp speed feedback when in Virtual.
7	Enter values for the maximum and minimum Output Datalink clamping limits, in engineering (display) units. The Output Datalink is clamped to keep it within these limits when sending to the drive. These entries are disabled if the 'Drive has output datalink' check box is clear on Advanced Engineering Tab.

Advanced Engineering Tab - Drive Features



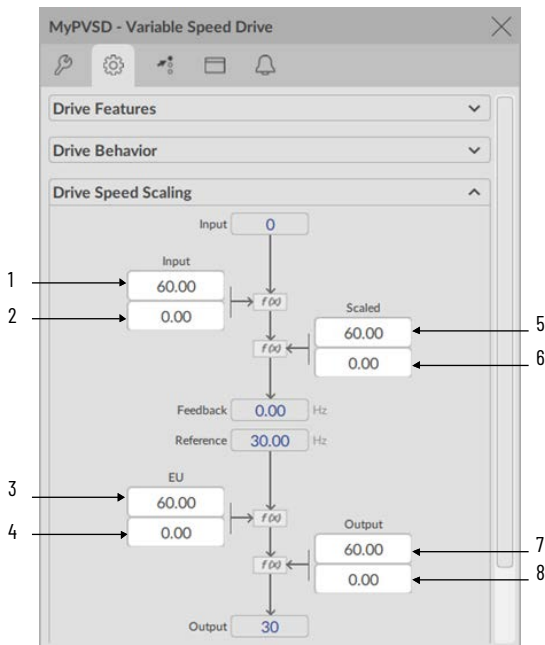
Item	Description
1	Select if the drive provides a run feedback signal. This check enables feedback checking for Fail to Start and Fail to Stop. Clear this checkbox if there is no run feedback.
2	Select if the drive provides a speed feedback signal. Clear this checkbox if there is no speed feedback.
3	Select if Speed feedback greater than zero is used to signify the drive is running. IMPORTANT: This configuration setting is available only if the previous configuration setting is checked.
4	Select to make the Jog command button visible on the Operator tab and enable the drive to be jogged from the faceplate.
5	Select to make the forward and reverse direction command buttons visible on the Operator tab and enable the drive to run forward or reverse.
6	Select to make the Input Datalink configuration and operation functions visible.
7	Select to make the Output Datalink configuration and operation functions visible.

Advanced Engineering Tab - Drive Behavior



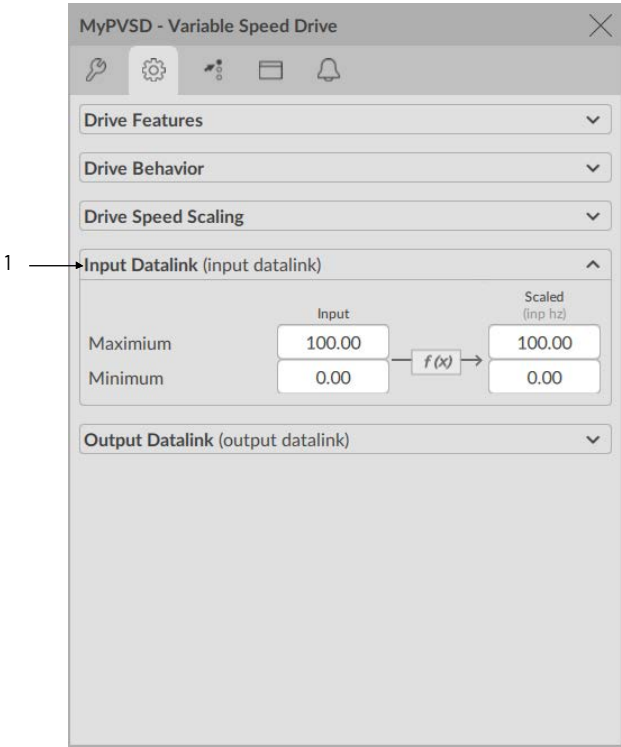
Item	Description
1	Select to reset faults when a new operator drive command, such as start or stop, is issued. Clear this checkbox to require an explicit reset command to clear faults.
2	Select to reset faults when a new external drive command, such as start or stop, is issued. Clear this checkbox to require an explicit reset command to clear faults.
3	Select to have the interlocks and permissives that can be bypassed, bypassed in Override command source.
4	Select (= 1) so that the OCmd.Stop has priority and is accepted at any time. If the Command Source is not Operator or Maintenance, the motor or drive requires a reset. Clear this checkbox (= 0) so that the OCmd.Stop works only in Operator or Maintenance command source.
5	Select (= 1) so that the XCmd.Stop has priority and is accepted at any time. If the Command Source is not External, the motor or drive requires a reset. Clear this checkbox (= 0) so that the XCmd.Stop only works when the command source is External.
6	Select to allow for local command source start and stop without triggering a fault.
7	Select to have Program settings, such as Speed Reference, track Operator settings in Operator command source, and have Operator settings track Program settings in Program command source.
8	Select to have Program and Operator Speed Reference track the Override Speed Reference in Override command source or the actual speed in Hand command source.
9	Select to stop the drive if an I/O Fault is detected. Clear this checkbox show the I/O Fault Status/Alarm only and not stop the drive if an I/O Fault is detected.
10	When the bit is on and a motor Fail to Start is detected, the drive is stopped. A reset is required before another start can be attempted. If the bit is off and a drive Fail to Start is detected, the instruction sets only the Sts.FailToStart status (and the Alm.FailToStart alarm, if so configured). The outputs are not changed, so the instruction continues to start the drive.
11	The drive always stops on interlock not OK. This item cannot be cleared. It is displayed as a reminder that the interlock function always stops the drive.
12	Enable or disable virtual mode.

Advanced Engineering Tab - Drive Speed Scaling



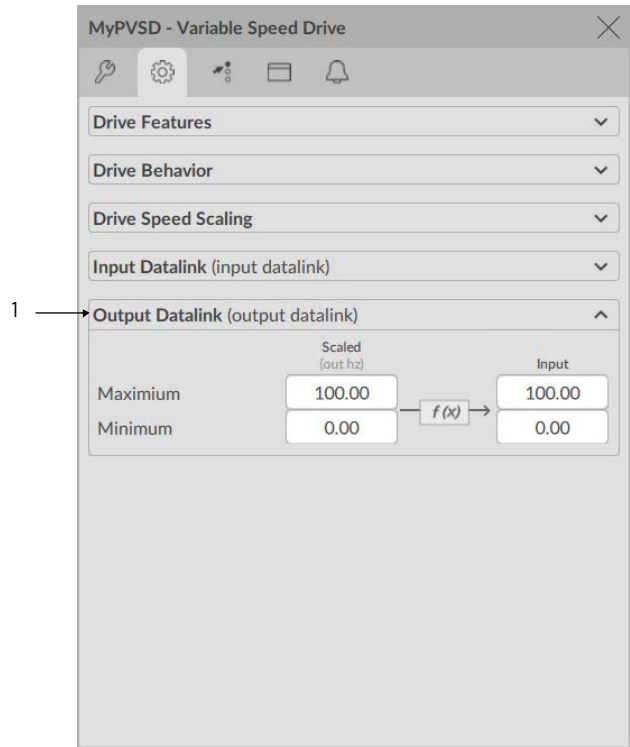
Item	Description
1	Enter the raw input count that corresponds to the maximum speed feedback from the drive.
2	Enter the raw input count that corresponds to the minimum speed feedback from the drive. (This value is usually zero.)
3	Enter the engineering unit value for the maximum speed reference that is sent to the drive.
4	Enter the engineering unit value for the minimum speed reference that is sent to the drive. (This value is usually zero. Do not enter a negative value for reversing drives. Reversing is handled separately.)
5	Enter the engineering unit value for the maximum speed feedback from the drive.
6	Enter the engineering unit value for the minimum speed feedback from the drive. (This value is usually zero. Do not enter a negative value for reversing drives. Reversing is handled separately.)
7	Enter the raw output count that corresponds to the maximum speed reference sent to the drive.
8	Enter the raw output count that corresponds to the minimum speed reference sent to the drive. (This value is usually zero.)

Advanced Engineering Tab - Input Datalink



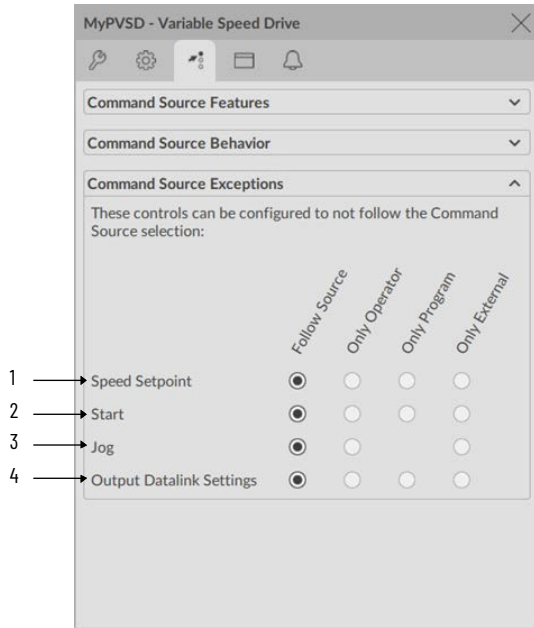
Item	Description
1	Left to Right: <ul style="list-style-type: none">• Enter the minimum and maximum raw (from the drive) values for the Input Datalink.• Enter the minimum and maximum scaled values for the Input Datalink in Engineering Units.

Advanced Engineering Tab - Output Datalink



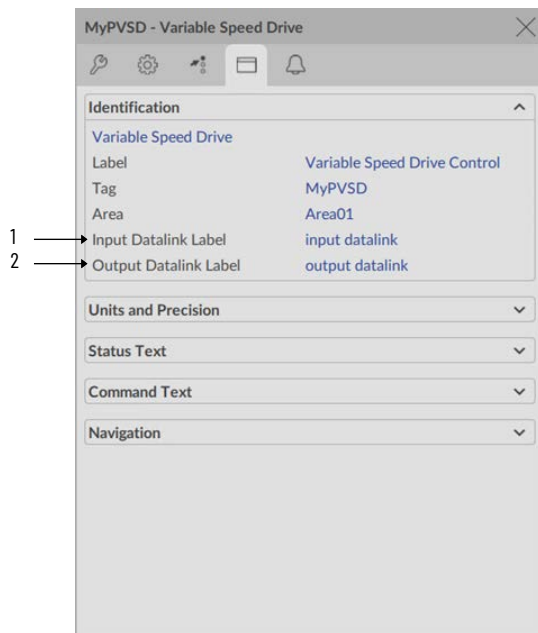
Item	Description
1	Left to Right: <ul style="list-style-type: none">• Enter the minimum and maximum scaled values for the Output Datalink in Engineering Units.• Enter the minimum and maximum scaled values for the Output Datalink in Raw (to the drive) Units. Enter the text to display for the label and units of measure of the Output Datalink.

Advanced Command SourceTab - Command Source Exceptions



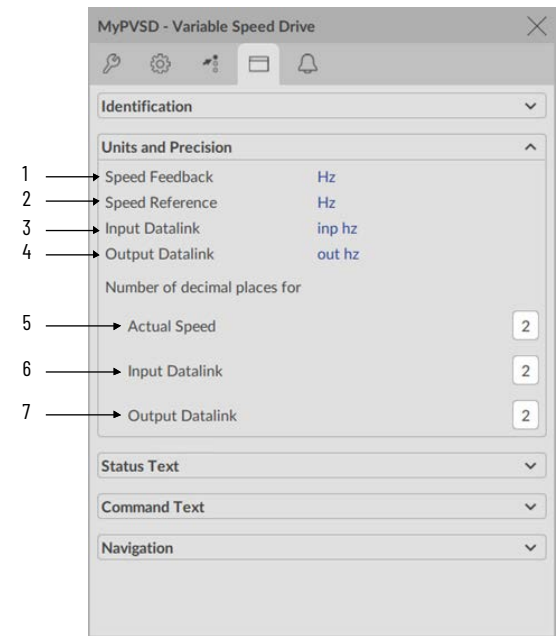
Item	Description
1	This selection determines whether control of the drive speed reference follows the command source that is selected for the instruction, stays with the operator, stays with the program, or stays with the external command source.
2	This selection determines whether control of the drive starting and stopping follows the command source that is selected for the instruction, stays with the operator, stays with the program, or stays with the external command source.
3	This selection determines whether control of the drive jogging follows the command source that is selected for the instruction, stays with the operator, stays with the program, or stays with the external command source.
4	This selection determines whether control of the output datalink value follows the command source that is selected for the instruction, stays with the operator, stays with the program, or stays with the external command source.

Advanced HMI Configuration Tab - Identification



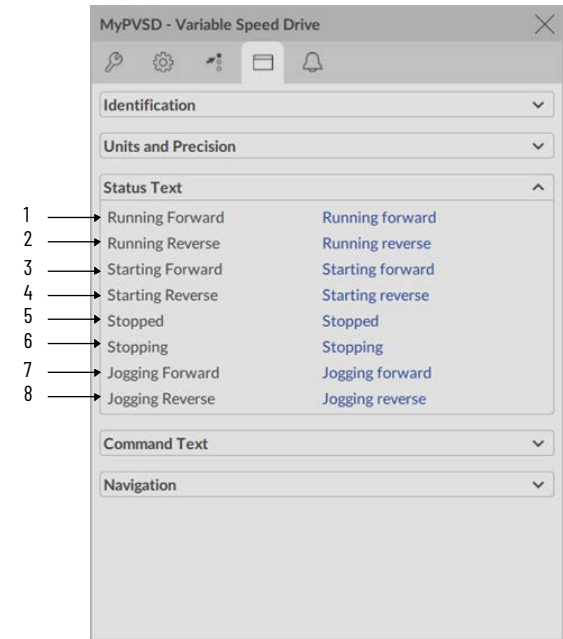
Item	Description
1	Display name for input Datalink.
2	Display name for output Datalink.

Advanced HMI Configuration Tab - Units and Precision



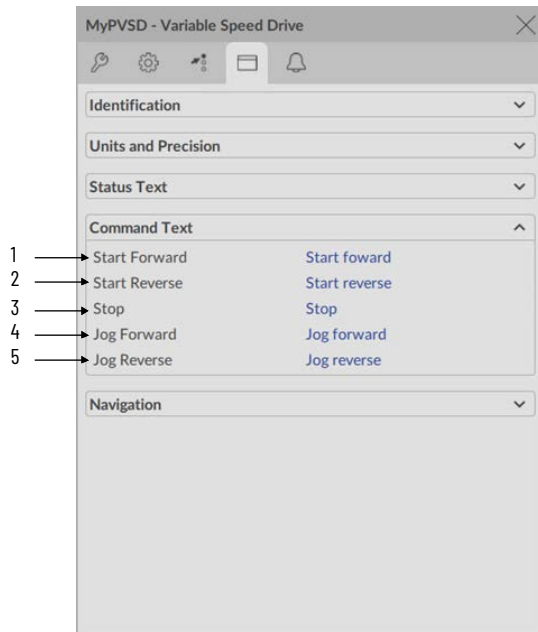
Item	Description
1	Units of measure to display for the speed feedback value.
2	Units of measure to display for the speed reference value.
3	Units of measure to display for the input datalink value.
4	Units of measure to display for the output datalink value.
5	Enter the decimal places to display for actual speed.
6	Enter the decimal places to display for Input Datalink.
7	Enter the decimal places to display for Output Datalink.

Advanced HMI Configuration Tab - Status Text



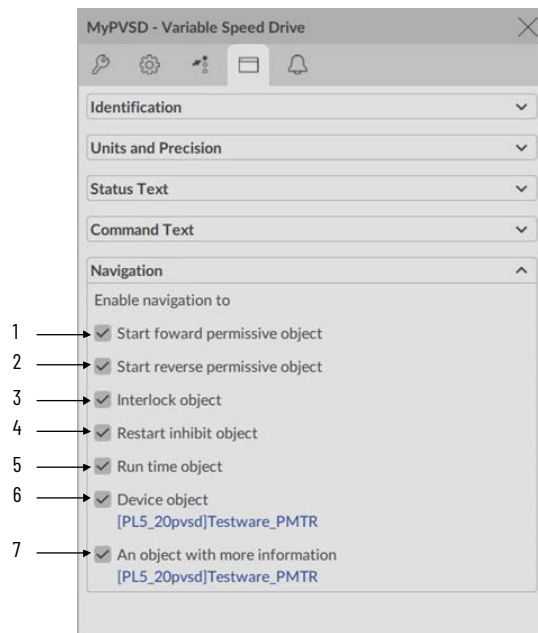
Item	Description
1	Display name for running forward direction.
2	Display name for running reverse direction.
3	Display name for starting forward direction.
4	Display name for starting reverse direction.
5	Display name for Stopped status.
6	Display name for Stopping status.
7	Display name for jogging forward direction.
8	Display name for jogging reverse direction.

Advanced HMI Configuration Tab - Command Text



Item	Description
1	Display name for start forward direction
2	Display name for start reverse direction.
3	Display name for Stop.
4	Display name for jog forward direction.
5	Display name for jog reverse direction.

Advanced HMI Configuration Tab - Navigation



Item	Description
1	Select if a permissive object is connected to Inp_FwdPermOK. The permissive indicator becomes a button that opens the permissive faceplate. IMPORTANT: The name of the permissive object in the controller must be the name of the object with the suffix "_FwdPerm".
2	Select if a permissive object is connected to Inp_RevPermOK. The permissive indicator becomes a button that opens the permissive faceplate. IMPORTANT: The name of the permissive object in the controller must be the name of the object with the suffix "_RevPerm".
3	Select if an interlock object is connected to Inp_IntlkOK. The Interlock indicator becomes a button that opens the interlock faceplate. IMPORTANT: The name of the Interlock object in the controller must be the name of the object with the suffix '_Intlk_0'. For example, if your PVSD object has the name 'Drive123', then its Interlock object must be named 'Drive123_Intlk'.
4	Select if a restart inhibit object is connected. The button that opens the Restart Inhibit faceplate appears. IMPORTANT: The name of the Restart Inhibit object in the controller must be the name of the object with the suffix '_ResInh'. For example, if your PVSD object has the name 'Drive123', then its Restart Inhibit object must be named 'Drive123_ResInh'.
5	Select if a runtime object is connected. The button that opens the runtime faceplate appears. IMPORTANT: The name of the runtime object in the controller must be the name of the object with the suffix '_RunTime'. For example, if your PVSD object has the name 'Drive123', then its runtime object must be named 'Drive123_RunTime'.
6	Select to allow navigation to the device object.
7	Select to enable navigation to an object with more information (Cfg_HasMoreObj is set to true.) You configure the tag name of the object that you want to navigate to in the extended tag property "Cfg_HasMoreObj.@Navigation". It uses the <backing tag>.@Library and <backing tag>.@Instruction extended tag properties to display the object's faceplate.

Notes:

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, Knowledgebase, and product notification updates.	rok.auto/support
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Technical Documentation Center	Quickly access and download technical specifications, installation instructions, and user manuals.	rok.auto/techdocs
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	rok.auto/pcdc

Documentation Feedback

Your comments help us serve your documentation needs better. If you have any suggestions on how to improve our content, complete the form at rok.auto/docfeedback.

Waste Electrical and Electronic Equipment (WEEE)



At the end of life, this equipment should be collected separately from any unsorted municipal waste.





Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

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