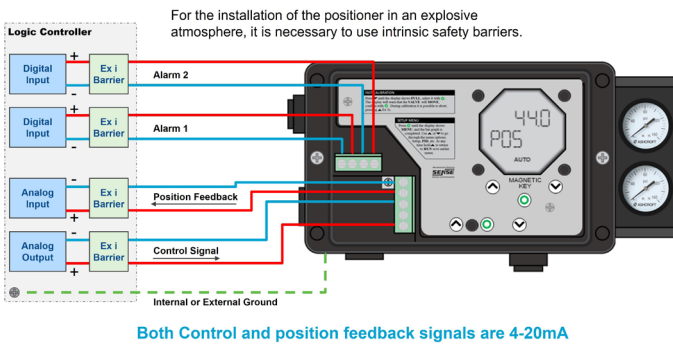


PD200 Smart Valve Positioner Quick Start Guide

Environmental Certifications

UL Listed General Purpose E359150
 Ingress Protection Rating: Type 4X
 UL Listed Intrinsically Safe E125326
 Ingress Protection rating: Type 4X, IP66

Wiring Diagram



Easy Setup (Auto-Calibration)

The PD200 can perform auto-calibration to determine all the parameters of the valve, such as the open and closed positions and the PID values.

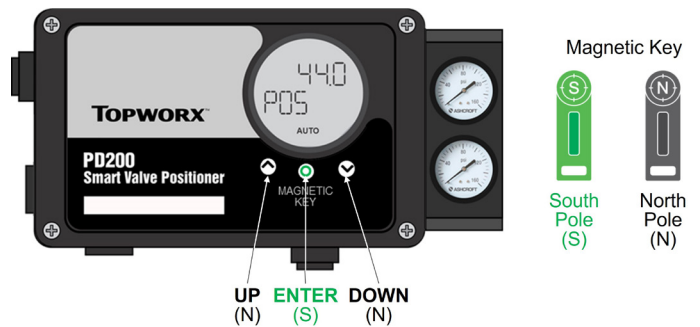
After removing the outer cover, auto-calibration is performed in three easy steps:

1. Press and hold the DOWN arrow key for 5 seconds. The display will show "FAST PID" then "FULL".
2. Press the ENTER key and the display will change to "SURE SETUP".
3. Press the ENTER key again to start the auto-calibration process.

Magnetic Key

The PD200 includes the ability to use a magnetic key to operate the device locally for convenience or when it is undesirable to remove the outer cover.

The included magnetic key has two sides matching to the North and South poles of the embedded magnet. Place the black side (North Pole) of the key against the unit when operating the UP and DOWN arrow selections and place the green side (South Pole) against the unit when operating the ENTER selection.



WARNING

To reduce risk of death, serious injury or property damage:

- Personnel installing, maintaining, or operating this equipment must be qualified, must read, understand, and follow these instructions before proceeding.
- This document must be retained for future reference.
- Please contact local TopWorx representative for questions, clarifications, or comments.

Storage

Store the Positioner in a dry indoor environment within a relative humidity range of 10% to 95% and within a temperature range of -40°F to 149°F (-40°C to 65°C). The Positioner will only support its IP/NEMA ratings when fully installed with Conduit, conduit plugs and any applicable pneumatic port connections.

Installation Notes

The PD200 is suitable for use with rotary or linear, single, or double, direct, or reverse action valve actuators. Depending on the model, the Positioner will be supplied with a rotary NAMUR adaptor or linkages for linear valve actuators. Always use sound mechanical practices when mounting the Positioner.

When fastening the unit to the bracket on the actuator, tighten the fasteners to a minimum of 11 ft·lbs (15 Nm) of torque after cycling the valve a couple of times. This allows the shaft to self-center in the pinion slot, or coupler. Be cautious not to allow undue axial (thrust) load on the shaft.

This product ships with plastic covers installed in the conduit and pneumatic connection holes to protect the internal components from debris during shipment and handling. It is the responsibility of the receiving and/or installation personnel to provide appropriate permanent sealing devices to prevent the intrusion of debris, or moisture, when stored outdoors or when installed. It is the responsibility of the installer, or end user, to install this product in accordance with the National Electrical Code (NFPA 70 or any other national or regional code defining proper practices.)

Internal Limit Switch Calibration

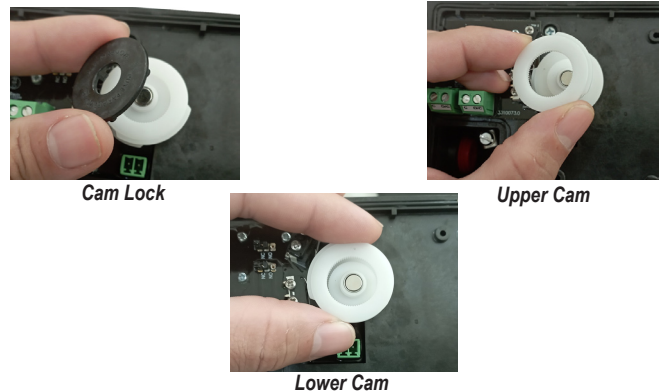
The PD200 allows for the setting of Alarm Limit Switches, which are adjusted by manipulating internal cams to trigger the switch at the specified position. To adjust these internal cams, first remove the outer cover by removing the four corner screws that hold it in place on the positioner body. Once removed, locate the two screws that fasten the inner cover which includes the display and control buttons.



Remove Outer Cover

Remove Inner Cover

Next, remove the black cam lock by pulling on it. Pull off the two cams and replace them in the desired positions to operate the micro switches. After repositioning the cams, replace all the covers in reverse order from removal.



Cam Lock

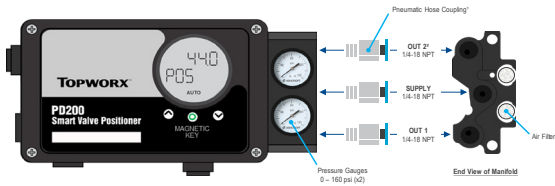
Upper Cam

Lower Cam

The internal limit switches may be modified to act as N/C or N/O by use of a jumper that is to the left of the left most internal limit switch. Simply position the jumper to jump either C and N/C or C and N/O, whatever configuration is desired.

Pneumatic Connection Procedure

Prior to connecting the supply air to the spool valve, flush the system to remove debris or contaminants. Galvanized pipe can easily flake and contaminate the system and therefore is not recommended for use with the PD200. A 50 micron point of use filter is recommended for use with every device an installation.



- Notes
1. Pneumatic hose couplings are not supplied with the positioner.
 2. The second OUT port is normally supplied plugged.

NOTICE

Special Conditions of Safe Use

Clean only with a damp cloth to prevent the possibility of electrostatic discharge. Grounding the positioner is extremely important and highly recommended. Two grounding points are provided, one internal and one external. If a shielded cable is utilized, it is recommended to ground the shield at one end only. The non-earthed end must be carefully insulated.

Connection Specifications

Electrical Connections	
Number of Entry Ports	1
Cable Gland Entry Ports	1/2 inch NPT female
Pneumatic Connections	
Medium	Dried, filtered air
Filter Size	50 microns
Operating Pressure	40 to 116 psi (2.8 to 8 bar)
Pneumatic Ports	1/4 inch NPT Female

About Emerson-TopWorx

Emerson TopWorx is the global leader in valve control and position sensing for the process industries. Our product solutions manage and control operations more intelligently and efficiently under the most demanding and extreme industry conditions. The TopWorx portfolio of proximity sensors, discrete valve controllers, and smart valve positioners enable automated valve feedback and control and communication via FOUNDATION Fieldbus, Profibus, DeviceNet, AS-Interface, and HART protocols. They attach to all rotary and linear valves and actuators and carry a variety of global certifications. For more information, please visit www.topworx.com

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