

Features

- Digital positioner for 5610/5615/5616 series electric actuators
- 4-20mA or 0-10v input control signal
- Output monitoring signal
- Auto-calibration
- Digital design virtually eliminates hunting
- Economically priced

Applications

The DPS Digital Positioner System is available as a factory pre-installed option for Valworx 5610, 5615 or 5616 series electric actuators. Installing the DPS kit will convert a standard On-Off type electric actuator to modulating or proportional control. This will allow positioning of the actuator output drive anywhere between 0 and 90° using either a 4-20mA or 0-10vdc input command signal. When using an electric actuated valve with DPS option, the output flow can be adjusted anywhere between 0-100%.



5610/5615 series



5616 series

Rotation	0-90°
Input Signal	4-20mA or 0-10vdc
Output Signal	4-20mA or 0-10vdc
Accuracy	3% Full Scale
Linearity	2% Full Scale
Hysteresis	3% Full Scale
Steps	4/20mA: Min. 150 steps, 0-10V: Min. 98 steps/ 90°
Impedance 4-20mA	100 Ohms
Impedance 0-10vdc	25K Ohms

Note: Overall accuracy of a valve assembly will vary depending on the type of valve selected and how the valve is mounted to the actuator. Output signals will be in the same format as input signal (ex: 4-20mA input, 4-20mA output).



Description

The DPS kit contains a microprocessor based control board and mounting hardware. The control board continuously monitors the analog input and output signals and compares them to the actual physical position of the output drive. An electric motor/gear drive moves the actuator output drive as required to balance the signals and find the desired position. The digital microprocessor ensures highly sensitive and repeatable control. The DPS is installed inside the actuator.

Operation

The DPS system provides an accurate valve positioning function whereby the movement of the actuator is controlled by either a 4-20mA or 0-10vdc control signal. Any change in the control input signal results in a corresponding and proportional change in the position of the actuator (valve).

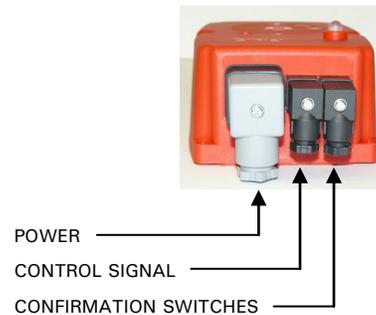
DPS positioner has auto-calibration for zero and span settings. An output monitoring signal, in the same format as the input signal (ex: 4-20mA input, 4-20mA output) is also provided to confirm the output drive position.

The standard DPS actuator will fail closed with loss of a control signal. Actuator can also be setup reverse-acting (4ma or 0v = open) and fail open with loss of a control signal. The actuator will fail in place with loss of external power.

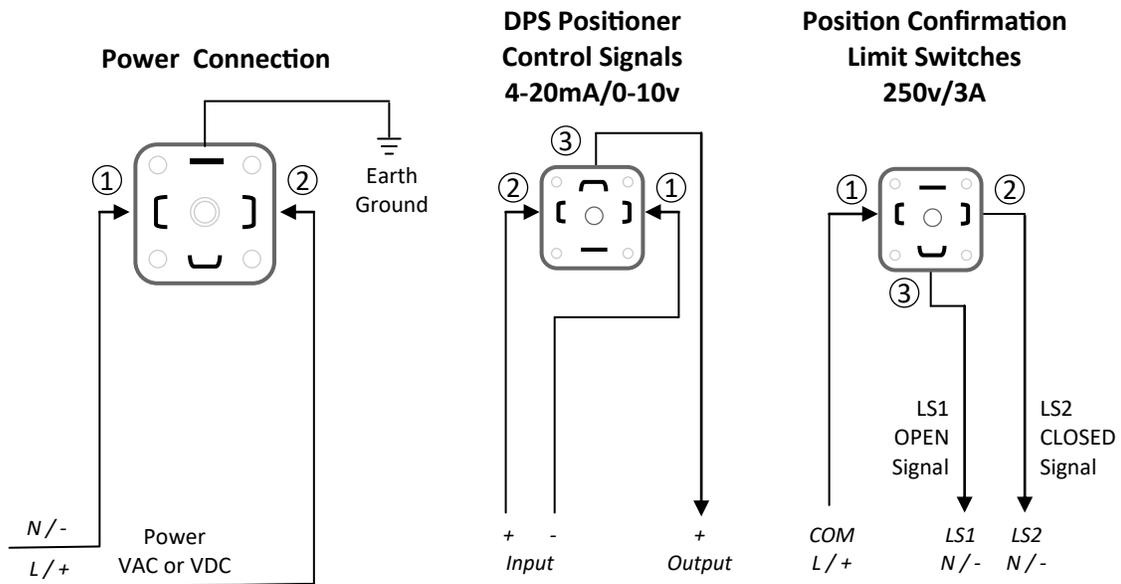
DPS - Digital Positioner System Kits

Stock Number	Description	Used with Valworx Electric Actuators
561101E	5610E DPS Positioner 4-20mA Input—Installed	561020E, 561055E, 561085E, 561520, 561555, 561585
561102E	5610E DPS Positioner 0-10vdc Input—Installed	561020E, 561055E, 561085E, 561520, 561555, 561585
561108C	5616C DPS Positioner 4-20mA Input—Installed	561604C
561109C	5616C DPS Positioner 0-10vdc Input—Installed	561604C

Note: The DPS kit is a factory installed option. The DPS positioner is pre-installed at the factory when ordered as an option for the 5610 or 5616 series electric actuator or an electric actuated valve assembly.



Wiring Diagram



Note: All electrical connections to the 5610/5615/5616 series actuators are made externally using screw terminals located inside the supplied DIN plug connectors. There is no need to remove the actuator cover.