

DeZURIK P36C, P41C & P41D ANALOG POSITIONERS

Critical Performance

P36C/P41C and P41D positioners are available on valves with double-acting or DR rotary diaphragm actuators.

Span and Zero Adjustment

Calibration knobs for zero and span adjustments are color coded and marked \pm for ease of use. They're also conveniently located for easy calibration.

Split Range Output/Field Reversible

The standard cam is stainless steel. P36C/P41C positioners have one lobe for 90° full scale operation and one lobe for 90° split range or 180° full scale operation. The P41D positioner uses a three lobe cam (0-100%, 0-50% and 50-100%). Fifteen other cam options are available on request. Positioner operation can be reversed in the field by flipping the cam and reversing the ports on double-acting cylinders, and simply flipping the cam on spring-return actuators.

Sealed Housing

Both the P36C/P41C units are sealed and vented through a tapped exhaust port. The housing can easily be modified at any time for liquid drainage. Housing is die cast aluminum coated with black epoxy paint. The P41D housing is black anodized aluminum and meets NEMA 4, 4X.

Approvals

The electronic P41C unit carries the following ratings (on application):

- Cenelec – NEMA 7, 9 explosion-proof EEXd11C T4-T6
- FM – NEMA 7, 9 explosion-proof Div. 1, Class 1 Groups B-D
- CSA – explosion-proof Div. 1, Class 1, 2, 3 Groups B-G



I/P Conversion

Pneumatic P36C positioners can be converted in the field to electronic P41C versions with the compact I/P converter module. The converter and cover are easily coupled to the positioner in minutes. The built-in 5 micron filter is easily accessible and can be changed externally.

Positioner Specifications

Order Code	P36C	P41C	P41D
Air Supply (psi)*	21-150 psi (150-1035 kPa)	21-150 psi (150-1035 kPa)	29-105 psi (200-730 kPa)
Linearity	< 0.50% of full scale	< 1% of full scale	< 1% of full scale
Hysteresis	< 0.50% of full scale	< .75% of full scale	< 0.4% of full scale
Repeatability	< 0.5% of full scale	< 0.5% of full scale	< 0.5% of full scale
Accuracy	0.25% of full scale	0.25% of full scale	0.2% of full scale
Air Consumption	0.71 SCFM @ 87 psi (20 nl/min @ 600 kPa)	0.78 SCFM @ 87 psi (22 nl/min @ 600 kPa)	0.71 SCFM @ 87 psi (20 nl/min @ 600 kPa)
Air Delivery	18.8 SCFM @ 87 psi (540 nl/min @ 600 kPa)	18.8 SCFM @ 87 psi (540 nl/min @ 600 kPa)	13.8 SCFM @ 87 psi (395 nl/min @ 600 kPa)
Input Impedance	-	260 ohms	240 ohms
Temperature Range	-5° to 185°F (-20° to 85°C)	-5° to 185°F (-20° to 85°C)	14° to 150°F (-10° to 65°C)
Weight	2.4 lbs (1.1 kg)	3.4 lbs (1.5 kg)	6.6 lbs. (3.0 kg)

* Check maximum pressure of actuator; regulator may be required.

Ordering

P36C, P41C and P41D positioners can be used with pneumatic double-acting or spring-return cylinder or diaphragm actuators. They are not available with hydraulic actuators. To order, add the order code from the table to the valve and actuator code.

Positioners

PMV Positioners	Order Code
P36C, 4-Way Pneumatic Direct or Reverse Acting Signal range: 3-15, 3-9 or 9-15 psi	P36C
P41C, 4-Way Electronic Direct or Reverse Acting Signal range: 4-20, 4-12 or 12-20 mA	P41C
P41C-EX4, Explosion proof - Cenelec Signal range: 4-20, 4-12 or 12-20 mA	P41C-EX4
P41C-EX7, Explosion proof - FM & CSA Signal range: 4-20, 4-12 or 12-20 mA	P41C-EX7
P41D, 4-Way Electronic Direct or Reverse Acting Signal range: 4-20, 4-12 or 12-20 mA	P41D

Air Filters for Positioners

An air filter is required in the air supply line of every P36C, P41C and P41 D positioner as a primary dirt filter.

Filter	Order Code
Air Filter	AFR2

Positioner Gauges

Positioner Type	Usage	Order Code
Pneumatic Positioners- Single Acting Actuator- 2 Gages mounted, 1 is 0-100 psi, 1 is 0-30 psi Double Acting Positioner- 3 Gages mounted, 2 are 0-100 psi, 1 is 0-30 psi"	P36C	G
Electronic Positioners- Single Acting Actuator- 1 Gauge mounted, 0-100 psi Double Acting Positioner- 2 Gauges mounted, 0-100 psi	P41C/P41D/ P41C-EX4/ P41C-EX7	G

ORDERING EXAMPLE:

VPB,6,F1L,S2,TC,S2H-S2-S2-FT*PR-R1A-PC6,P41C-AFR2
4-20 mA signal, Increasing signal to open valve

NOTES:

- Positioners are not recommended with C4 cylinders.
- Positioners can be used as a single acting by plugging one port. Provided with Linear Cam.
- Include "(4-20/4-12/12-20) mA signal range" and positioner action as "increasing signal to open" or "increasing signal to close" as second line information. The standard positioner setup for "spring to close" actuators is "increasing signal to open". The standard positioner setup for "spring to open" actuators is "increasing signal to close". Contact application engineering for non-standard positioner setup.
- Valve, Actuator, Positioner assemblies with P36C, P41C and P41D analog positioners will not be tested for control valve response performance. If required, order the valve assembly with a VAC Analog or a Digital Positioner.

Sales and Service

For information about our worldwide locations, approvals, certifications and local representative:

Web Site: www.dezurik.com E-Mail: info@dezurik.com



250 Riverside Ave. N. Sartell, Minnesota 56377 • Phone: 320-259-2000 • Fax: 320-259-2227

DeZURIK, Inc. reserves the right to incorporate our latest design and material changes without notice or obligation. Design features, materials of construction and dimensional data, as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing by DeZURIK, Inc. Certified drawings are available upon request.