

Ordering information

Pneumatic positioner type AV1

The AV1 pneumatic positioner accepts linear or non-linear pneumatic input signal ranges to provide sensitive, accurate positioning of a pneumatic final control element.

A feedback cam in the positioner establishes the actual position of the final control element and can be characterized to provide a square root, square or linear relationship to the input signal.

Split range signal – can be field calibrated for 100 % stroke for 50 % signal span or 50 % stroke for 100 % signal span.

The optional manifold / gage block provides gage ports – one for instrument (internal input signal) and two for positioner output.

A supply gage can be installed in the supply line (piping by customer).

When converting a 3 to 15 psig positioner to a 3 to 27 input positioner, or vice versa, both the diaphragm assembly kit and the appropriate diaphragm cover are required.

Refer to Note 4 for AV1 application details.

	AV1	X	X	X	X	X	X
Input signal							
0.2 to 1 bar (3 to 15 psi), standard temperature range –40 to 82 °C (–40 to 180 °F)		1					
0.2 to 1.86 bar (3 to 27 psi), standard temperature range –40 to 82 °C (–40 to 180 °F)		2					
0.2 to 1 bar (3 to 15 psi), extended temperature range –20 to 121 °C (–4 to 250 °F)		5					
0.2 to 1.86 bar (3 to 27 psi), extended temperature range –20 to 121 °C (–4 to 250 °F)		6					
Stroke or rotary motion							
12.7 to 50.8 mm (0.5 to 2.0 in.) or 45° rotation						1	
25.4 to 101.6 mm (1.0 to 4.0 in.) or 90° rotation						2	
Manifold / gage block							
No manifold							0
Manifold with equalizing valve, filters and gage ports (see Notes 1 and 2)							1
Gage block, gage ports only							3
Position transmitter							
No position transmitter							0
Potentiometric resistive transmitter (see Note 2)							1
4 to 20 mA output (see Note 2)							2
Drive shaft							
Standard with drive arm (for linear actuators) and UP3 / 4 / 5 / 6							0
12.7 mm (0.500 in.) square end (most common for 90° actuators)							1
8.69 mm (0.342 in.) square end (older DeZurik / K&M actuators)							2
6.35 mm (0.250 in.) flats (UP1 / UP2 manufactured after August, 1995)							3
9.525 mm (0.375 in.) square end (for DeZurik PowerRac actuators)							4
4 mm (0.157 in.) flats (for NAMUR rotary mounting)							5
Options							
No options							0
NEMA 4X enclosure rating (must be installed in accordance with drawing 258567)							N
Performance series, high pneumatic gain							P

Notes.

1. Required for double acting actuators with manual override (for example, UP or AC actuators)
2. Not available with input signal codes 5 and 6
3. This optional manifold is recommended on all AC and UP Drives. Not available for AV15_ _ _ _ _ and AV16_ _ _ _ _
4. From 1st June 2014, AV1 is approved only for general purpose and non-incendive installations.

Series AV1 / 2 / 4

Characterizable pneumatic positioners

Electropneumatic positioner type AV2

The AV2 electropneumatic positioner receives a 4 to 20 mA input from a controller and converts the signal via an I/P converter to a pneumatic output that positions a power actuator.

The AV2 can be adjusted by the user to default automatically to either the fully open or fully closed position in the event of input signal loss.

The optional manifold / gage block provides gage ports – one for instrument (internal input signal) and two for positioner output. A supply gage can be installed in the supply line (piping by customer).

	AV2	X	X	X	X	X	X
Intrinsically safe / explosion-proof design							
Non-incendive design cFMus (see Note 1)		3					
Explosion-proof and intrinsically safe design FM/CSA (see Note 2)		7					
Stroke or rotary motion							
4 to 20 mA input, 12.7 to 50.8 mm (0.5 to 2.0 in.) or 45° rotation			1				
4 to 20 mA input, 25.4 to 101.6 mm (1.0 to 4.0 in.) or 90° rotation			2				
Manifold / gage block							
No manifold				0			
Manifold with equalizing valve, filters and gage ports (see Notes 3 and 4)				1			
Gage block, gage ports only (see Note 4)				3			
Position transmitter							
No position transmitter					0		
Potentiometric resistive transmitter (see Note 3)					1		
4 to 20 mA output (see Note 3)					2		
Drive shaft							
Standard with drive arm (for linear actuators) and UP3 / 4 / 5 / 6							0
12.7 mm (0.500 in.) square end (most common for 90° actuators)							1
8.69 mm (0.342 in.) square end (older DeZurik / K&M actuators)							2
6.35 mm (0.250 in.) flats (UP1 / UP2 manufactured after August, 1995)							3
9.525 mm (0.375 in.) square end (for DeZurik PowerRac actuators)							4
4 mm (0.157 in.) flats (for NAMUR rotary mounting)							5
Options							
No options							0
NEMA 4X enclosure rating (must be installed in accordance with drawing 258567) (see Note 4)							N
Performance series, high pneumatic gain							P

Notes.

1. From 1st June 2014, AV23 _ _ _ _ _ is approved only for general purpose and non-incendive applications
2. AV27 _ _ _ _ _ is FM/CSA approved (explosion-proof or intrinsically safe) for Class I, Division 1 applications.
3. Required for double acting actuators with manual override (for example, UP or AC actuators)
4. Not available with intrinsically safe / explosion-proof design code 7

Electropneumatic pulse input positioner type AV4

The AV4 electronic input positioner operates with a contact signal for jogging the final control element. This enables operation of pneumatic valves in a jog mode similar to electronic valve operation.

Designed to meet the special requirements of interfacing with state-of-the-art computer and microprocessor-based control systems, the AV4 utilizes an advanced, pneumatic motor-to-pneumatic signal converter.

In one compact package, it replaces three separate components: a motor-to-motor pneumatic converter, a pneumatic positioner, and a position transmitter.

	AV4	X	X	X	X	X	X
Input signal							
24 V DC pulse (see Note 1)	4						
Stroke or rotary motion							
12.7 to 50.8 mm (0.5 to 2.0 in.) or 45° rotation			1				
25.4 to 101.6 mm (1.0 to 4.0 in.) or 90° rotation			2				
Manifold / gage block							
No manifold				0			
Manifold with equalizing valve, filters and gage ports (see Note 2)				1			
Gage block, gage ports only				3			
Position transmitter (see Note 3)							
4 to 20 mA output					0		
Drive shaft							
Standard with drive arm (for linear actuators and UP3 / 4 / 5 / 6)						0	
12.7 mm (0.500 in.) square end (most common for 90° actuators)						1	
8.69 mm (0.342 in.) square end (older DeZurik / K&M actuators)						2	
6.35 mm (0.250 in.) flats (UP1 / UP2 manufactured after August, 1995)						3	
9.525 mm (0.375 in.) square end (for DeZurik PowerRac actuators)						4	
4 mm (0.157 in.) flats (for NAMUR rotary mounting)						5	
Options							
No options							0
NEMA 4X enclosure rating (must be installed in accordance with drawing 258567)							N
Performance series, high pneumatic gain							P

Notes.

1. From 1st April 2012, AV4 is approved only for general purpose and non-incendive applications
2. Required for double acting actuators with manual override (for example, UP or AC actuators)
3. The 4 to 20 mA output position transmitter is a standard feature of the AV4 positioner