



Miniature Proportional Pinch Valve
MPPV-PS-EN Series

Proportional Pinch Valves with Position Sensing

Resolution Air, Ltd. expands its innovative portfolio of patented Proportional Pinch Valves with their MPPV-EN-PS Position Sensor Series. This advanced feature integrates a compact position sensor, offering precise linear position feedback for critical fluid handling applications. The new technology replaces traditional home sensors and encoder combinations, providing a streamlined solution with numerous benefits for industries requiring precision, reliability, and continuous position feedback.

Key Benefits of the Position Sensor Series

Real-Time Position Feedback

Gain enhanced monitoring capabilities for your valve and control system. Real-time data on valve position ensures that you can track and adjust performance instantly, leading to higher accuracy and control.

Optimized Valve Control and Performance

Positional accuracy feedback helps fine-tune the valve's operation, ensuring optimal performance and better management of fluid flow in any process.

Position Memory During Power Loss

One of the key innovations is the ability to retain position data even in the event of a power loss, removing the need for valve rehoming and ensuring smooth, uninterrupted operation.

Simplified System Integration

With a 4-20 mA output signal, integrating real-time position feedback into your control system is straightforward, eliminating the complex setup and maintenance associated with traditional home sensors and encoders.



Miniature Proportional Pinch Valve Advantages

- IP65 Rated
- Automated control
- No physical contact with process fluid
- High resolution flow control
- High repeatability
- Low power consumption
- Light weight, low profile design
- 5x pinch force of solenoid pinch valve
- Real time position feedback with position sensor

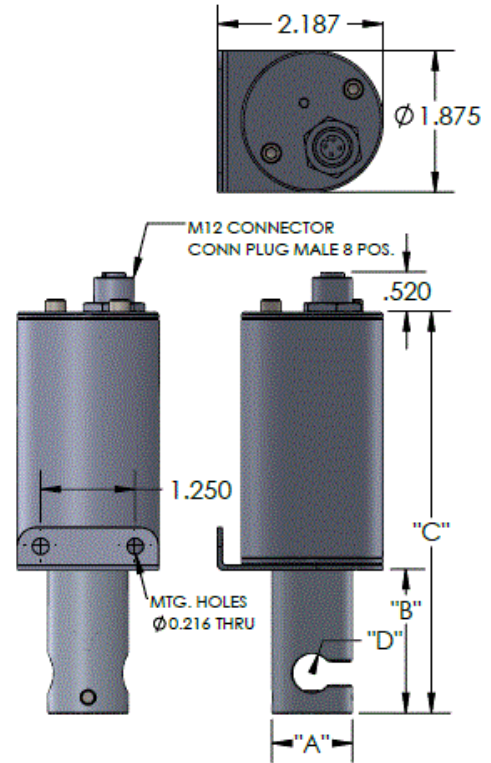
Applications Include

- Laboratory equipment
- Medical research
- Tangential flow filtration (TFF)
- Biopharmaceutical manufacturing
- Pharmaceutical manufacturing



Miniature Proportional Pinch Valve MPPV-PS-EN Series

VALVE DIMENSIONS				
	Dim. A (in.)	Dim. B (in.)	Dim. C (in.)	Dim. D (in.)
MPPV-2-PS-EN	0.875	1.424	4.836	0.125
MPPV-3-PS-EN	0.875	1.437	4.849	0.187
MPPV-4-PS-EN	0.875	1.521	4.933	0.250
MPPV-6-PS-EN	0.875	1.667	5.078	0.375
MPPV-8-PS-EN	1.063	1.902	5.314	0.500



PERFORMANCE CHARACTERISTICS	
Standard Tube Size	1/8", 3/16", 1/4", 3/8", 1/2"
Recommended Tubing Durometer	50-65 Shore A
Max. Temp.	180° F
Motor Type	Bi-Polar Stepper Motor
Position Resolution	0.0005"/Full Step
Max. Pinch Force	16.25 lbs. @ 100 steps/sec
Recommended Travel Rate	500 steps/sec
Power Consumption	3.85 Watts
Motor Voltage Supply Voltage	24-20 VDC Unregulated Power Supply
Max. Current/Phase	385 mA
Electrical Connection	M12 Conn. Plug Male 8 Pos.
Driver Requirement	Bi-Polar Chopper Drive
Certifications	RoHS, CE, IP65

POSITION SENSOR PERFORMANCE CHARACTERISTICS	
Supply Voltage	8-24 VDC
Output Smoothness	0.1% max. at 10" to 18" per minute
Backlash	0.003" maximum
Sensor Output	4-20 mA (2 wire)
Sensor Resolution	Essentially infinite
Valve Position Resolution	0.0005"/Full Step

CABLE TECHNICAL DATA		
Part Number	Cable-EN-R-(L)M	Cable-EN-S-(L)M
No. Conductors	8	8
Shield	85% Tinned Copper Braid	85% Tinned Copper Braid
Cord Configuration		
End 1	M12-A Female, 90 Degree	M12-A Female, Straight
End 2	Cut End	Cut End
Contact Material	Copper Alloy, Gold Plated	Copper Alloy, Gold Plated
O-Ring	FKM	FKM
Standard Lengths (L)	0.6, 1, 3, 5 Meters	0.6, 1, 3, 5 Meters
Environmental Compliance	CE, IP 67, REACH Regulation (EC 1907/2006)	CE, IP 67, REACH Regulation (EC 1907/2006)
Temperature Range	-25° to 60°C	-25° to 60°C
Bend Radius	5x Cable Diameter (static) 10X Cable Diameter (dynamic)	5x Cable Diameter (static) 10X Cable Diameter (dynamic)
Current Rating	1.1 Amps @ 50°C	1.1 Amps @ 50°C
Cable Length (L)	1,3,5 Meters	1,3,5 Meters