

X-Valve®

8 mm switching solenoid valves

FEATURES

- 3-way, 2 position valve (NO, NC & Distributor)
- Compact size, only 8 mm in width
- Meets pressure requirements including 6, 30 & 100 psi
- Excellent leakage specification for over 25 million cycles
- Ensures high reliability with its single piece body design
- Barbed pressure ports allow for direct tubing or manifold assemblies
- Non-elastomeric versions with enhanced media compatibility available on request



MEDIA COMPATIBILITY

Non-reactive gases and selected liquids

WETTED MATERIALS

PBT (polybutylene terephthalate); 430 series stainless steel; 302 series stainless steel (passivated); FKM (fluoroelastomer); EPDM (ethylene propylene diene monomer); silicone

ELECTRICAL

Power	
X1... (6 psi)	0.5 W
all other (30 psi, 100 psi)	1.0 W
Voltage	3, 5, 12, 24 V _{DC}
Electrical connections	PC pins, 4 mm centers

PHYSICAL PROPERTIES

Operating environment	
X5...	15 to 50 °C
all other	0 to 50 °C
Storage temperature	-40 to 70 °C
Length	24 mm (0.92 in)
Width	7.9 mm (0.31 in)
Height	9.5 mm (0.375 in)
Spacing	8 mm (centerline)
Porting	Universal barbs for 1/16 in I.D. tubing (1/32 in wall max.); manifold mount with X-seal
Weight	4.5 g (0.16 oz)
Internal volume	0.074 cm ³ (0.0045 in ³)

X-Valve is a registered trademark of Parker Hannifin Corporation.

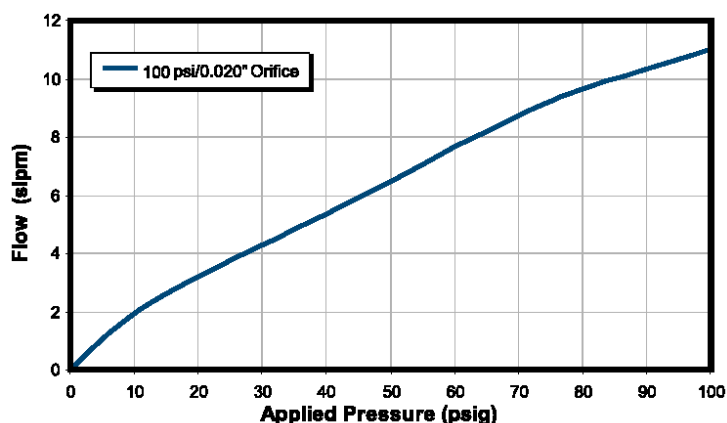
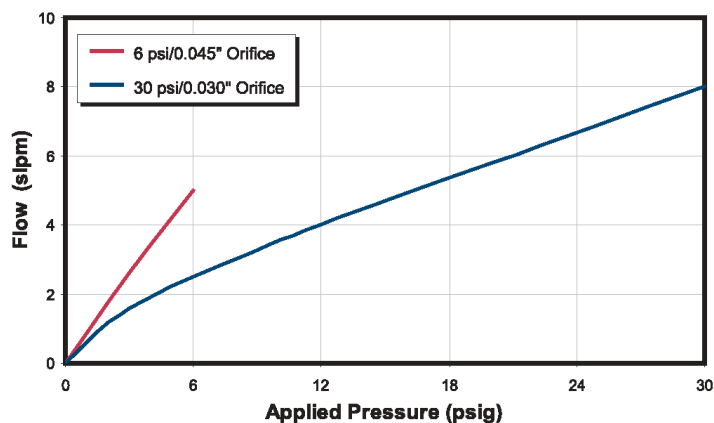
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PERFORMANCE CHARACTERISTICS

Part no.	Pressure	Minimum flow	Orifice sizes/ Equivalent C_v ¹	Leak rate ²	Response
X1...	0...6 psig	4 lpm @ 6 psi	0.045" (1.143 mm)/ 0.018 C_v	≤0.16 sccm (FKM, EPDM), ≤0.016 sccm (silicone)	<20 ms cycling
X2...	0...30 psig	6 lpm @ 30 psi	0.030" (0.762 mm)/ 0.010 C_v	≤0.16 sccm	
X5...	0...100 psig	9 lpm @ 100 psi	0.020" (0.510 mm)/ 0.005 C_v	≤0.2 sccm	

FLOW CURVES (typical air flow)³



Notes:

¹ The C_v value is the volume flow in US gallons/min under specific flow conditions and describes the relative flow capacity of a valve. If several valves with the same nominal diameter are compared, the valve with the highest C_v value has the best flow dynamics design. The equivalent european measure is the k_v value expressed in m^3/h ($k_v = 0.86 C_v$).

² sccm denotes Standard Cubic Centimeters per Minute. It is a unit for the flow rate at standard conditions of temperature and pressure. 1000 sccm = 1 slpm.

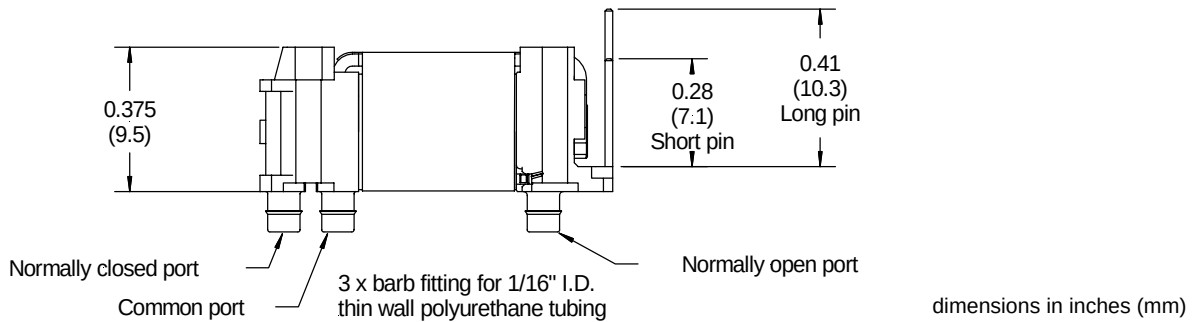
³ slpm denotes Standard Liters per Minute. It is a unit for the flow rate at standard conditions of temperature and pressure. 1 slpm = 1000 sccm.

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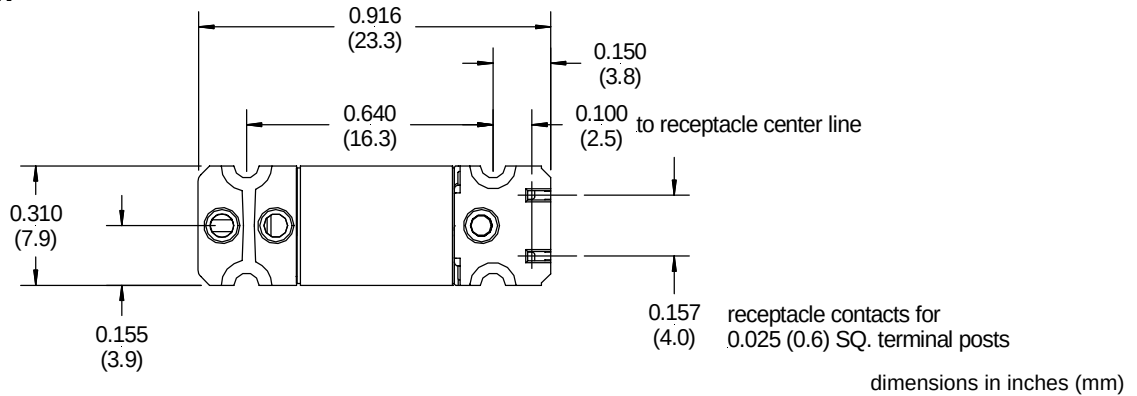
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OUTLINE DRAWING

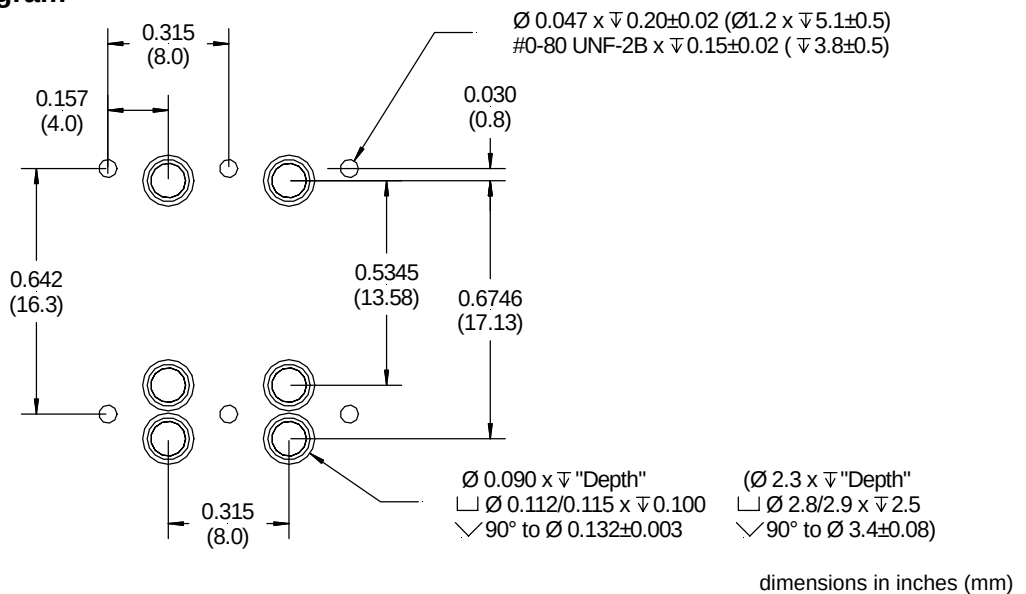
Side view



Bottom view



Manifold mount diagram



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ORDERING INFORMATION

Series		Model no.				Voltage		Electical connection		Elastomer		Optional accessories*		
		Pressure	Orifice	Coil wattage	Type									
Options	X	1	6 psi	0.045" (1.143 mm)	0.5 W	universal	03*	3 V _{DC} (6 & 30 psi only)	S	short pin	F	FKM	B	screw & gasket
		2	30 psi	0.030" (0.762 mm)	1 W	universal	05	5 V _{DC} (6 psi only)	L	long pin	E	EPDM (6 psi only)	0	no accessories
		5	100 psi	0.020" (0.510 mm)	1 W	NC	12	12 V _{DC}			S	silicone (6 psi only)		
							24	24 V _{DC}						

* accessory field not printed on valve

Sample order no:	X	1				05		L		F		B	
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Note: Not all combinations might be available.
Non-elastomeric versions with enhanced media compatibility are available on request.
Please contact your nearest Sensortechonics sales representative for further information.

Accessories (please order separately using the following order numbers)

Order No.	Description
ZK071248	Clear transparent polyurethane tubing, inner diameter 1/16 inch (1.6 mm), outer diameter: 1/8 inch (3.2 mm)
X-RETAINING CLIP	Solder clip for mounting
X-PORT PLUG	Port plug
X-CONNECTOR	12 " leads with connector

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October 2008 / 250

4/4

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