

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

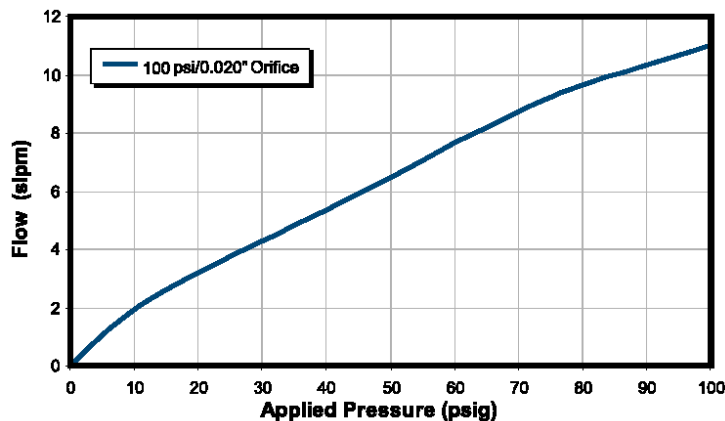
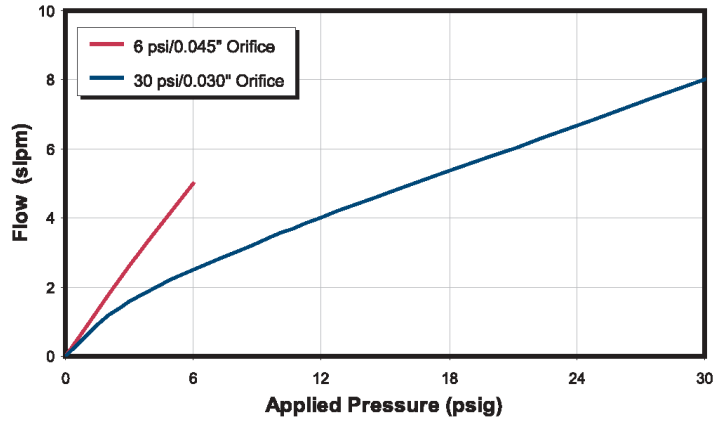
| | |
|-----------------------|---|
| Operating environment | |
| X5... | 15 to 50 °C |
| all other | 0 to 50 °C |
| Storage temperature | -40 to 70 °C |
| Length | 24 mm (0.92 in) |
| Width | 7.9 mm (0.31 in) |
| Height | 9.5 mm (0.375 in) |
| Spacing | 8 mm (centerline) |
| Porting | Universal barbs 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.

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

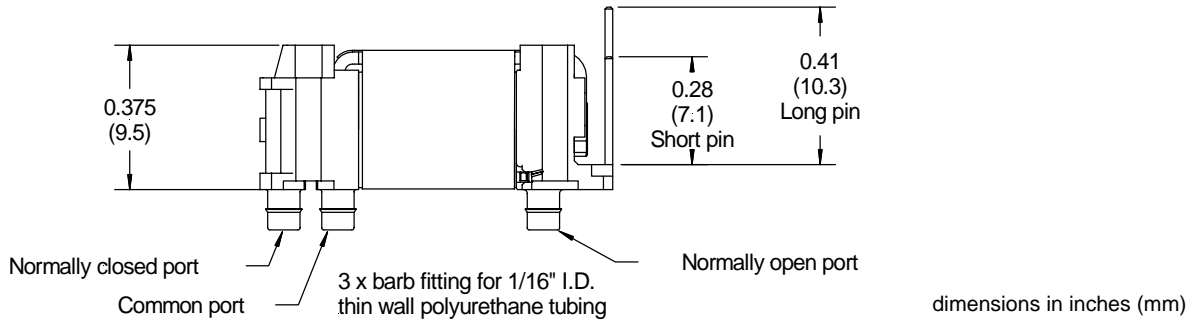


Notes:

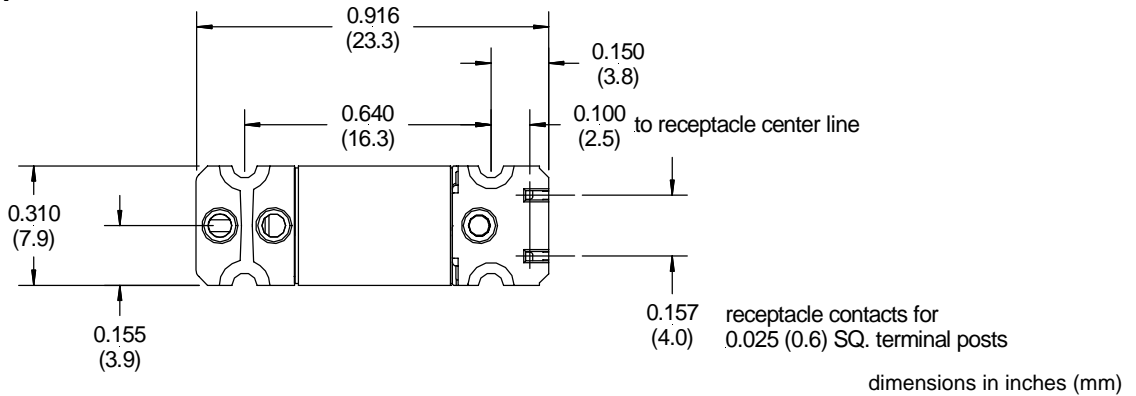
- ¹ The C_v value is the volume flow in US gallons/min under specific flow conditions and describes the relative flow capacity of a valve. If several valves with the same nominal diameter are compared, the valve with the highest C_v value has the best flow dynamics design. The equivalent european measure 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.

OUTLINE DRAWING

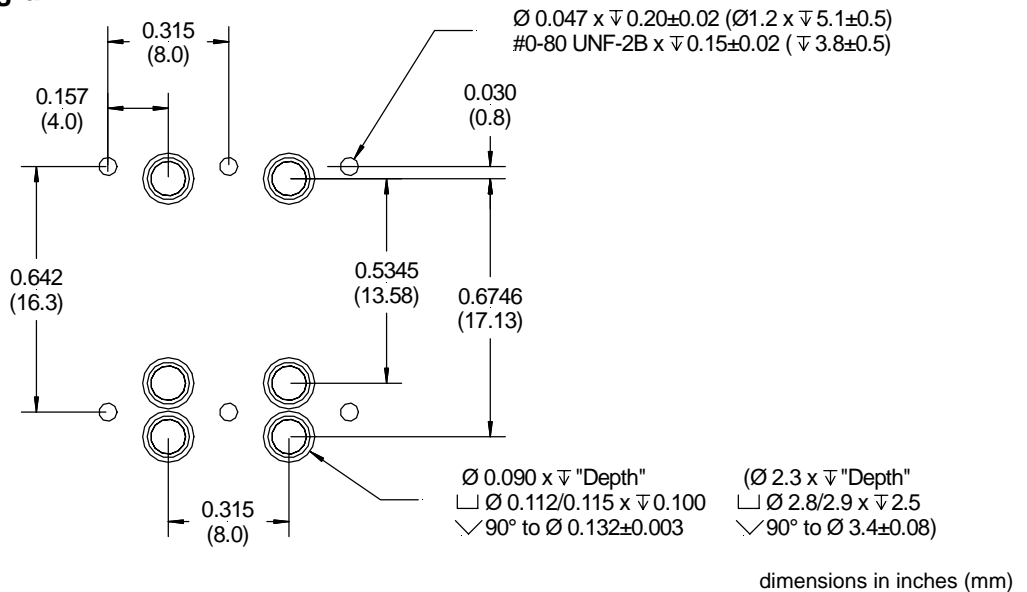
Side view



Bottom view



Manifold mount diagram



X-Valve®

8 mm switching solenoid valves

ORDERING INFORMATION

| Options | Series | Model no. | | | | Voltage | Electrical connection | Elastomer | | Optional accessories* | | | | | |
|---------|--------|-----------|---------|----------------------|-------|-----------|-----------------------|--|---|-----------------------|----|-----------------------------------|--------------------------|----------------|---|
| | | Pressure | Orifice | Coil wattage | Type | | | | | | | | | | |
| | 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 |
| | | 5 | 100 psi | 0.020" (0.510 mm) | 1 W | NC | 12 | 12 V _{DC} | | | | S | silicone (6 psi only) | | |
| | | | | | | | | | | | | | | | |

* accessory field not printed on valve

| | | | | | | |
|------------------|---|---|----|---|---|---|
| Sample order no: | X | 1 | 05 | L | F | B |
|------------------|---|---|----|---|---|---|

**Note: Not all combinations might be available.
Non-elastomeric versions with enhanced media compatibility are available on request.
Please contact your nearest Sensortech 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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