



TX Series

8 mm switching solenoid valves

FEATURES

- 2-way or 3-way, 2 position (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
- RoHS compliant
- PRO services



MEDIA COMPATIBILITY

Non-reactive gases

WETTED MATERIALS

Bobbin/Body	PBT (polybutylene terephthalate)
Pole and plunger	430 FR series stainless steel
Seal (options)	FKM, EPDM, silicone
Other	302 series stainless steel

ELECTRICAL

Power		
TX...P006... (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	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	0.092 cm ³ (0.0056 in ³)



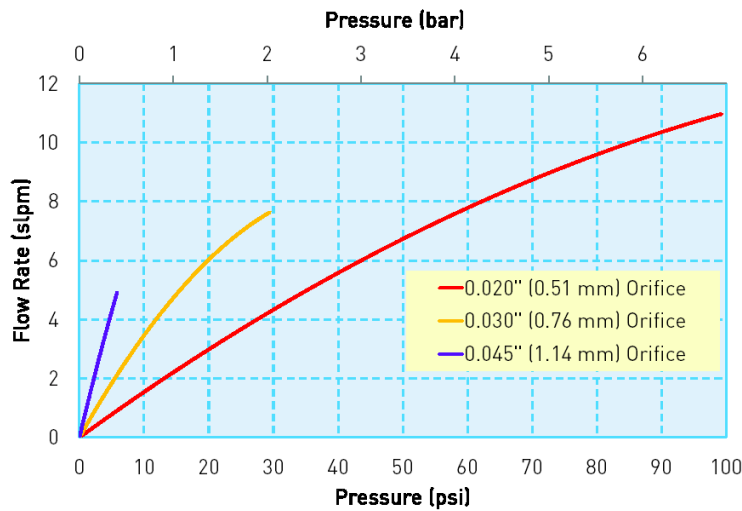
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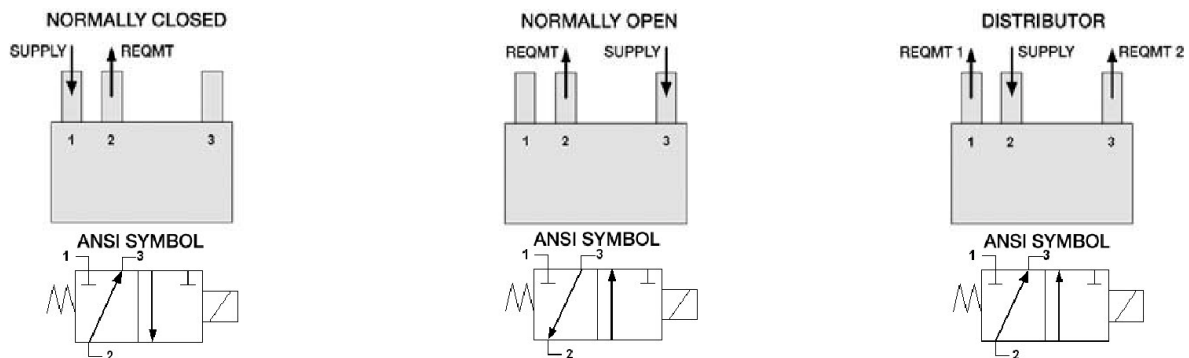
PERFORMANCE CHARACTERISTICS

Part no.	Pressure ⁴	Minimum flow	Orifice sizes/ Equivalent C_v ¹	Leak rate ²	Response
TX...P006...	0...6 psid	4 lpm @ 6 psid	0.045 in (1.143 mm)/ 0.018 C_v	≤ 0.16 sccm (FKM, EPDM), ≤ 0.016 sccm (silicone)	<20 ms cycling
TX...P030...	0...30 psid	6 lpm @ 30 psid	0.030 in (0.76 mm)/ 0.010 C_v	≤ 0.016 sccm	
TX...P100...	0...100 psid	9 lpm @ 100 psid	0.020 in (0.51 mm)/ 0.005 C_v	≤ 0.2 sccm	

FLOW CURVES (typ. air flow @ 24 °C)³



CONNECTION DIAGRAM



Notes:

- 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. The equivalent european measure is the k_v value expressed in m^3/h ($k_v = 0.86 C_v$).
- 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.
- 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.
- Proof pressure is 200 psig (13.7 bar)

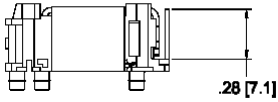


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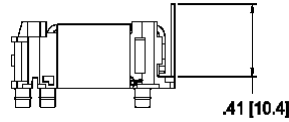
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ELECTRICAL CONNECTION

Short pin



Long pin



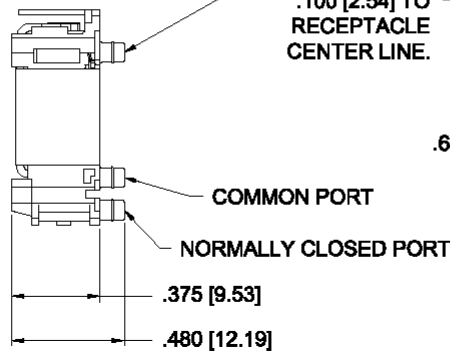
dimensions in inches (mm)

Electrical terminals compatible with Molex 51065 series connector or equivalent.

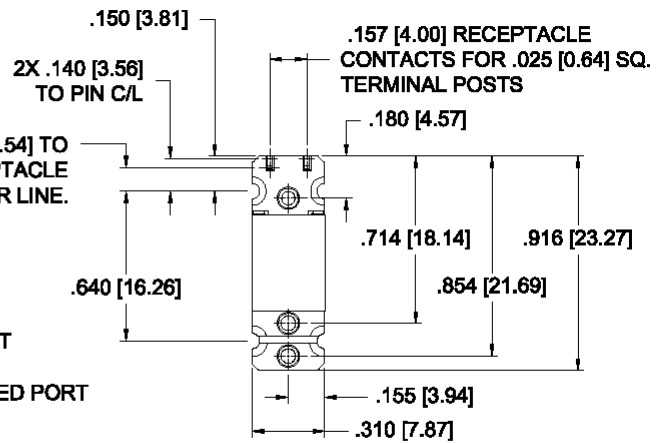
OUTLINE DRAWING

Side view

3-WAY UNIVERSAL, NORMALLY OPEN PORT
2-WAY NORMALLY CLOSED, BLOCKED PORT (NOT USED)

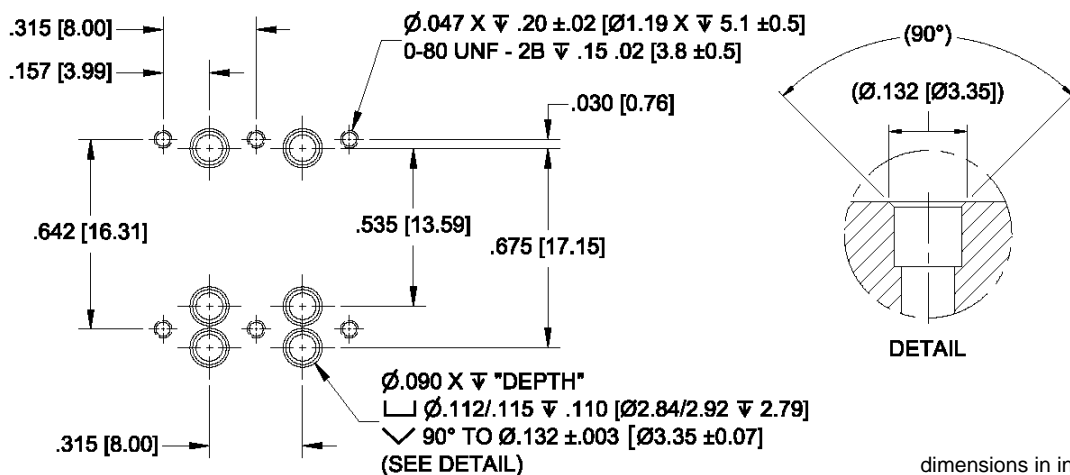


Bottom view



dimensions in inches (mm)

Manifold mount diagram



dimensions in inches (mm)



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ORDERING INFORMATION

Options	Series	Ways		Pressure / Function		Elastomer		Voltage		Electical		Accessories	
	TX	3	3 way	P006L	6 psi, Universal	V	Viton (FKM)	03	3 V _{DC}	S	Short pins	B	Screws and gasket
		2*	2 way	P030L	30 psi, Universal	S	Silicone (6 psi only)	05	5 V _{DC}	L	Long pins	N	No accessories
				P100C	100 psi, NC	E	EPDM (6 psi only)	12	12 V _{DC}				
								24	24 V _{DC}				
* only with FKM Port 3 internally blocked.													
Example:	TX	3		P006L		V		05		S		B	

Note: Not all combinations might be available. Please contact First Sensor.

Accessories (please order separately using the following order numbers)

Order No.	Description
ZK071248	Clear transparent polyurethane tubing, ID 1/16 in (1.6 mm), OD 1/8 in (3.2 mm)
X-RETAINING CLIP	Solder clip for mounting
X-CONNECTOR	12 in (30.5 cm) leads with connector

PRO services:

- Extended warranty period of 2 years
- Advanced logistics models for supply inventory and short delivery times
- Technical support through application engineers on the phone or at your site
- Fastest possible technical response for design and QA engineers
- ... plus other services on request

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