

# Ten-X<sup>®</sup>

## 10 mm switching solenoid valve

### FEATURES

- 3-way, 2 position (NO, NC & Distributor)
- Optional 'Hit and Hold' drive electronics using pulse width modulation (PWM) at 25-32 kHz
- Minimum flow of 8 lpm @ 6 psi and 22 lpm @ 30 psi
- 10 mm single piece body design
- Barbed pressure ports allow for direct tubing or manifold assemblies
- RoHS compliant

### MEDIA COMPATIBILITY

Non-reactive gases

### WETTED MATERIALS

PBT (polybutylene terephthalate) glass filled; 430FR series stainless steel; 302 series stainless steel; Viton (FKM) or silicone elastomer

### ELECTRICAL

Power	0.5 W
Voltage	5, 12, 24 V <sub>DC</sub>
Electrical connections	PC pins



### PHYSICAL PROPERTIES

Operating environment (continuous duty)	0 to 50 °C
Storage temperature	-40 to 70 °C
Spacing	10 mm (centerline)
Porting	Barbs for 1.98 mm (0.078 in) I.D. tubing or manifold mount with gasket
Weight	
without electronics	10.7 g
with electronics	12 g
Internal volume	0.131 cm <sup>3</sup> (0.0080 in <sup>3</sup> )

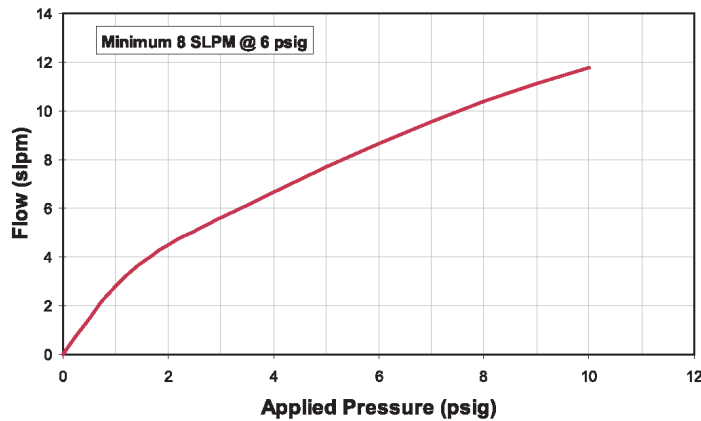
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**PERFORMANCE CHARACTERISTICS**

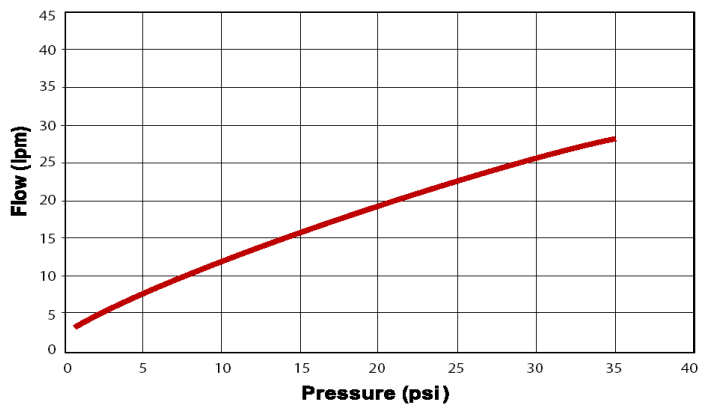
Part no.	Pressure	Minimum flow	Orifice sizes/ Equivalent $C_v$ <sup>1</sup>	Leak rate <sup>2</sup>	Response
914-1... (silicone elastomer)	0...6 psi	8 lpm @ 6 psi, 22 lpm @ 30 psi	0.060" (1.52 mm)/ 0.042 $C_v$	≤0.016 sccm	<5 ms cycling
914-2... (Viton elastomer)	0...6 psi, 0...20 psi, 0...30 psi			≤0.2 sccm	<20 ms cycling

**FLOW CURVES (typical air flow at 24 °C)<sup>3</sup>**

**6 psi devices**



**20 psi and 30 psi devices**

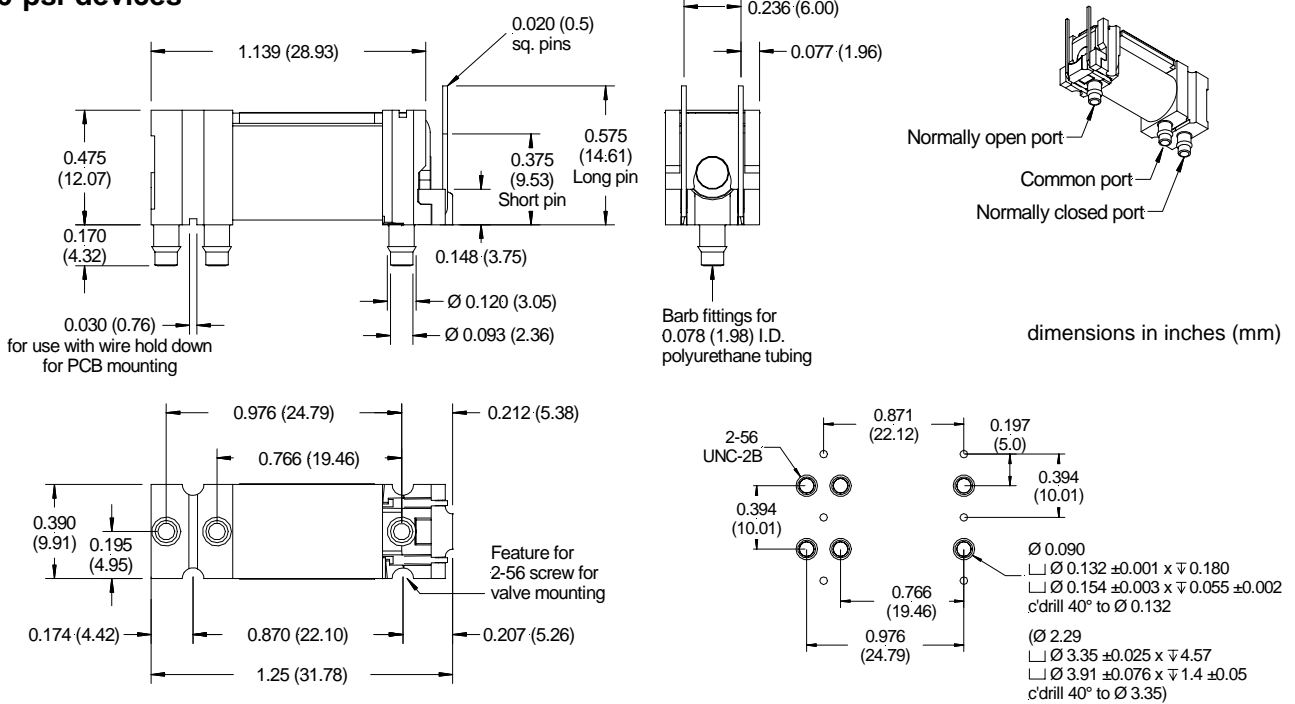


**Notes:**

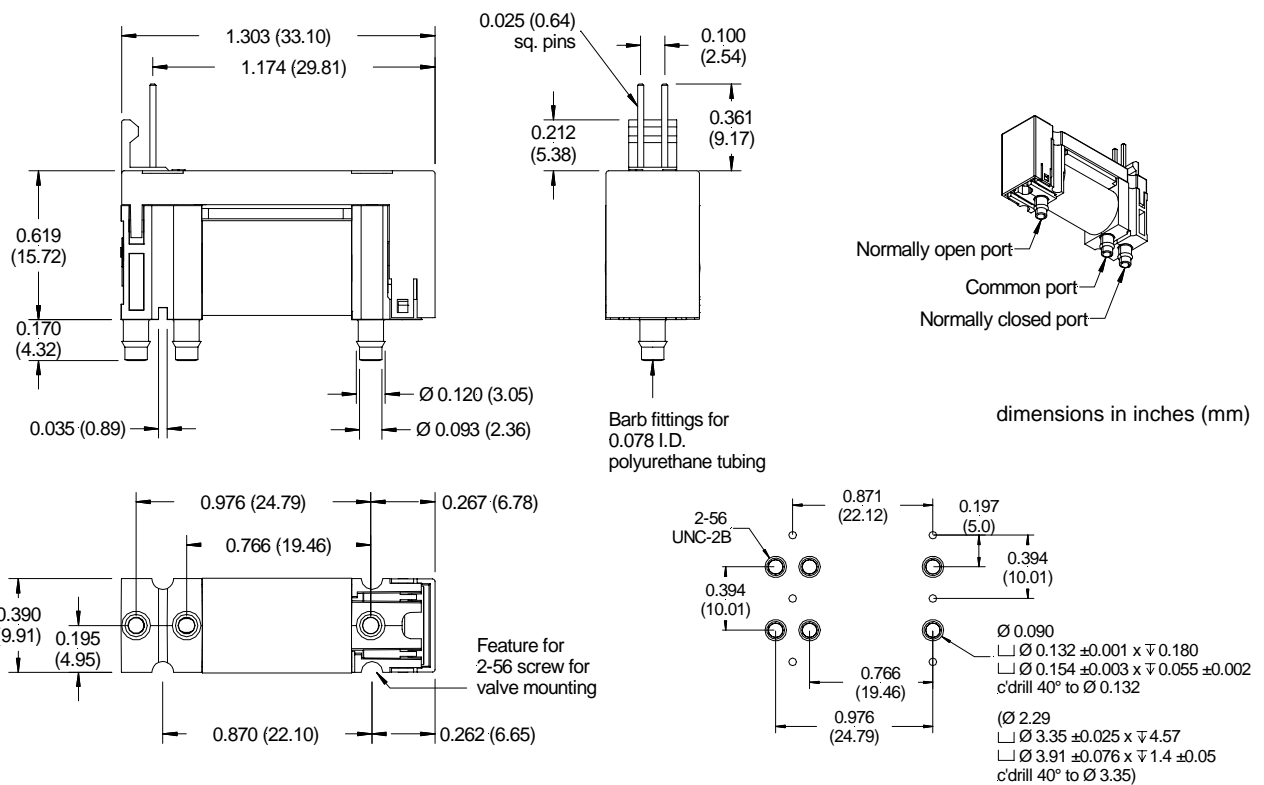
- <sup>1</sup> The  $C_v$  value is the volume flow in US gallons/min under specific flow conditions and describes the relative flow capacity of a valve. If several valves with the same nominal diameter are compared, the valve with the highest  $C_v$  value has the best flow dynamics design. The equivalent european measure is the  $k_v$  value expressed in  $m^3/h$  ( $k_v = 0.86 C_v$ ).
- <sup>2</sup> 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.
- <sup>3</sup> 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 AND MANIFOLD MOUNT DIAGRAM**

**6 psi devices**



**20 psi and 30 psi devices with electronics**



**ORDERING INFORMATION**

**6 psi devices**

Options	Series	Elastomer		Type		Model		Voltage		Electical		Accessories*	
		914	1	Silicone	1*	2/3 way, NO, 6 psi	1	Standard (without electronics)	05	5 V <sub>DC</sub>	1	Short pins	000
		2	Viton (FKM)	2**	2/3 way, NC, 6 psi			12	12 V <sub>DC</sub>	2	Long pins		
				6**	Distributor, 6 psi			24	24 V <sub>DC</sub>				
				* Silicone elastomer only ** Viton (FKM) elastomer only								* please order separately	
<b>Example:</b>	914	1		1		1		05		1		000	

**20 psi and 30 psi devices with electronics**

Options	Series	Elastomer		Type		Model		Voltage		Electical		Accessories*	
		914	2	Viton (FKM)	3*	2/3 way, NC, 30 psi	2	Integrated electronics	05	5 V <sub>DC</sub>	3	Pins (2.54 mm)	000
				4**	2/3 way, NO, 30 psi			12	12 V <sub>DC</sub>				
				5**	Distributor, 20 psi			24	24 V <sub>DC</sub>				
				* Silicone elastomer only ** Viton (FKM) elastomer only								* please order separately	
<b>Example:</b>	914	2		3		2		05		3		000	

**Note: Not all combinations might be available. Please contact your nearest Sensortechinics sales representative for further information.**

**Accessories** (please order separately using the following order numbers)

Order No.	Description
191-000112-010 ( <i>free of charge</i> )	Mounting screws for 6 psi devices (2 screws per valve)
191-000112-012 ( <i>free of charge</i> )	Mounting screw for 20 psi and 30 psi devices (2 screws per valve)
195-000211-001 ( <i>free of charge</i> )	Manifold gasket (FKM) for 6 psi devices (1 gasket per valve)
195-000242-001 ( <i>free of charge</i> )	Manifold gasket (FKM) for 20 psi and 30 psi devices (1 gasket per valve)
590-000073-001 ( <i>extra charge</i> )	18 " leads w/ connector (only for devices with integrated electronics)

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