

Ten-X[®]

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 _{DC}
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 ³ (0.0080 in ³)

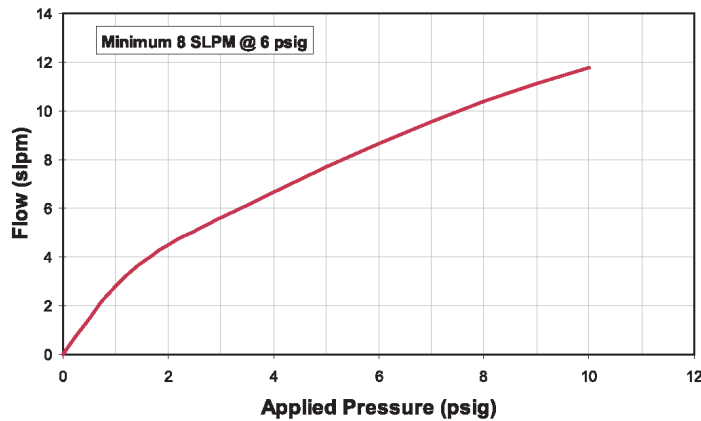
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PERFORMANCE CHARACTERISTICS

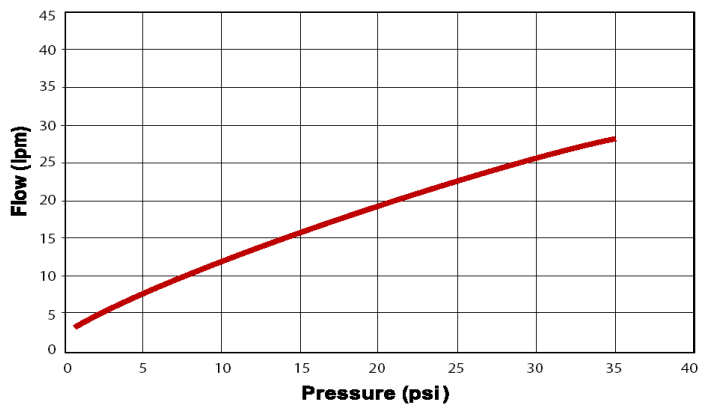
Part no.	Pressure	Minimum flow	Orifice sizes/ Equivalent C_v ¹	Leak rate ²	Response
914-1... (silicone elastomer)	0...6 psi	8 lpm @ 6 psi, 22 lpm @ 30 psi	0.060" (1.52 mm)/ 0.042 C_v	≤0.016 sccm	<5 ms cycling
914-2... (Viton elastomer)	0...6 psi, 0...20 psi, 0...30 psi			≤0.2 sccm	<20 ms cycling

FLOW CURVES (typical air flow at 24 °C)³

6 psi devices



20 psi and 30 psi devices

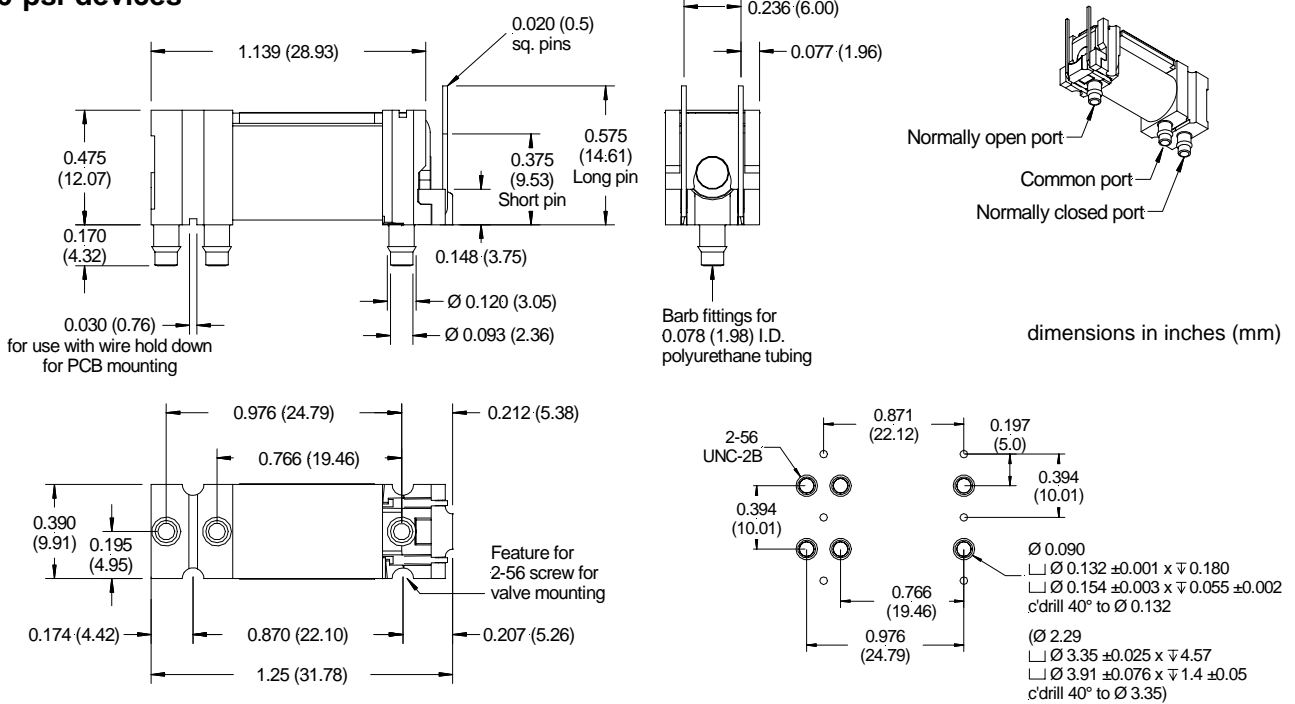


Notes:

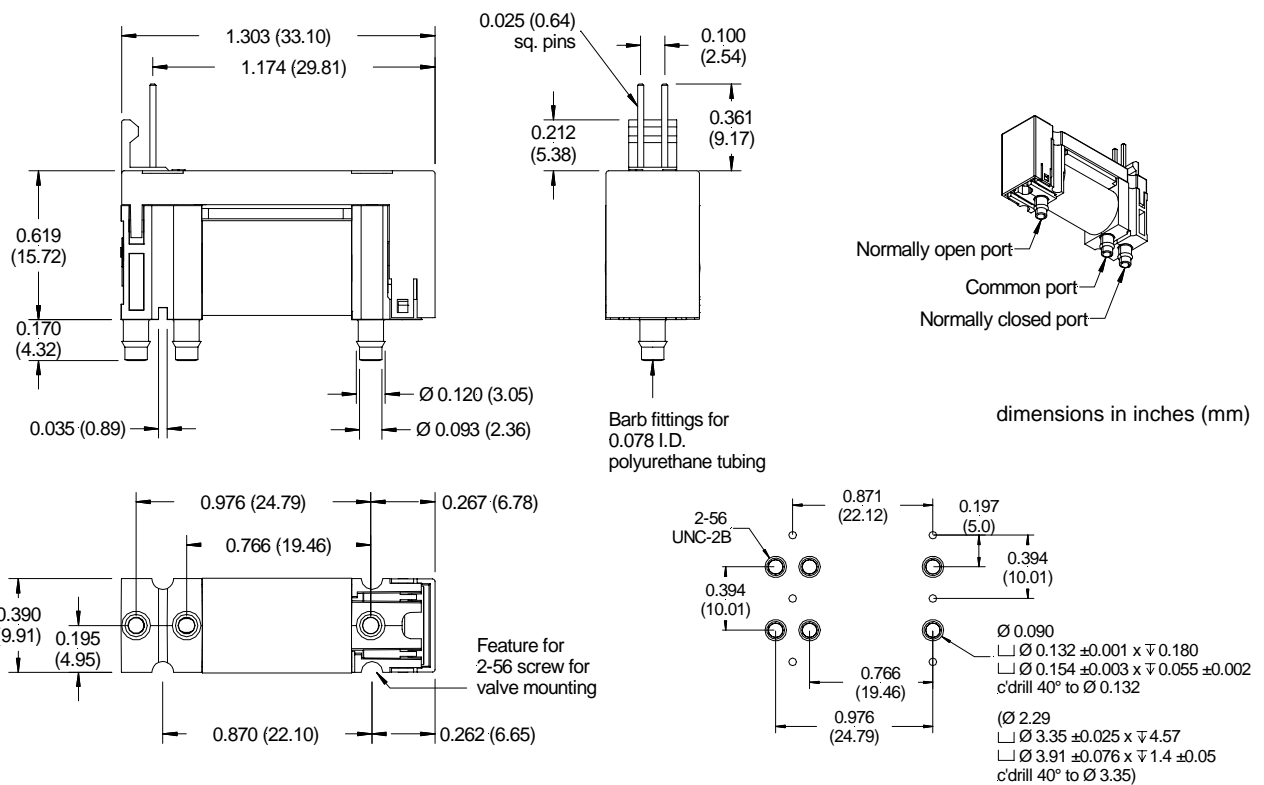
- ¹ The C_v value is the volume flow in US gallons/min under specific flow conditions and describes the relative flow capacity of a valve. If several valves with the same nominal diameter are compared, the valve with the highest C_v value has the best flow dynamics design. The equivalent european measure 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 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 _{DC}	1	Short pins	000	none
		2	Viton (FKM)	2**	2/3 way, NC, 6 psi			12	12 V _{DC}	2	Long pins		
				6**	Distributor, 6 psi			24	24 V _{DC}				
				* Silicone elastomer only ** Viton (FKM) elastomer only								* please order separately	
Example:	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 _{DC}	3	Pins (2.54 mm)	000	none
				4**	2/3 way, NO, 30 psi			12	12 V _{DC}				
				5**	Distributor, 20 psi			24	24 V _{DC}				
				* Silicone elastomer only ** Viton (FKM) elastomer only								* please order separately	
Example:	914	2		3		2		05		3		000	

Note: Not all combinations might be available. Please contact your nearest Sensortechincs 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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