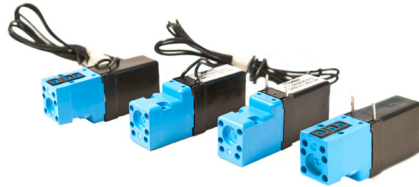



# SRS Miniature Pneumatic Solenoid Valve

## 10 mm Manifold Mount Solenoid Valve



The SRS miniature solenoid valve is a compact and lightweight 10 mm manifold mount solenoid valve designed for portable instruments and medical devices requiring minimal power consumption and quiet operation. Utilizing an integrated manifold seal design in combination with a variety of electrical termination options, the SRS miniature solenoid valve simplifies pneumatic and electronic integration. With flow rates of up to 18 slpm and inlet pressures of up to 85 psig, the SRS miniature solenoid valve is an ideal solution for demanding portable instruments and medical devices.

### Features

- Lightweight and compact to reduce system size and weight
- Integrated manifold seal and PC mount capability to simplify integration
- Hermetically-sealed coil protects the valve from accidental exposure to liquids
- Constructed of PBT and non-corrosive metal for use with non-reactive gases
- RoHS compliant 

### Typical Applications

- Medical & Analytical Gas Control
- Blood Pressure Monitoring
- Sensor Zeroing
- Patient Monitors
- Portable Medical Devices

## Product Specifications

### Mechanical

<b>Valve Type:</b>	3 Port, Direct-acting poppet style - Normally Closed - Normally Open - Distributor
<b>Media:</b>	Non-Reactive gases
<b>Operating Environment:</b>	32 to 131°F (0 to 55°C)
<b>Storage Temperature:</b>	-40 to 158°F (-40 to 70°C)
<b>Dimensions:</b>	- Length: 1.5 in (38.1 mm) - Width: 0.39 in (10.0 mm) - Height: 0.61 in (15.5 mm)
<b>Porting:</b>	Manifold mount; Gasket supplied
<b>Weight:</b>	0.23 oz (6.5 g)
<b>Internal Volume:</b>	0.0016 in <sup>3</sup> (0.027 cm <sup>3</sup> )
<b>Filtration:</b>	40 micron (recommended)

### Electrical

<b>Power Options:</b>	0.5 or 1.0 Watt
<b>Voltage Options: (±10%)</b>	5, 12 or 24 VDC Further power reduction may be achieved through the use of spike and hold or PWM electrical control.

### Wetted Materials

<b>Bobbin/Body:</b>	Glass Reinforced PBT (Polybutylene terephthalate)
<b>Pole &amp; Plunger:</b>	430 FR Stainless Steel
<b>Seal:</b>	FKM
<b>Other:</b>	300 Series Stainless Steel

### Performance Characteristics

<b>Leak Rate:</b>	<0.016 sccm of air
<b>Response:</b>	<30 ms cycling
<b>Pressure:</b>	0 to 85 psid (5.86 bar)
<b>Vacuum:</b>	0-27 in Hg (686 mm Hg)
<b>Burst Pressure:</b>	200 psig (13.7 bar)
<b>Orifice Sizes / Equivalent Cv:</b>	0.045" (1.14 mm) / 0.027 0.030" (0.76 mm) / 0.017 0.020" (0.51 mm) / 0.0075

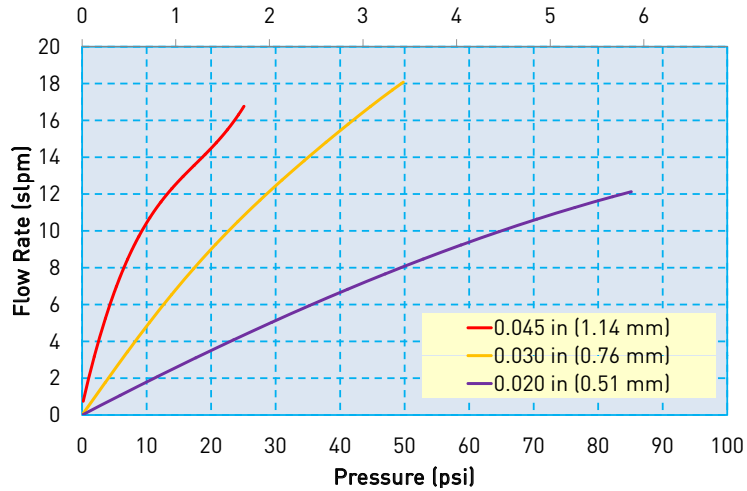
(See Life-cycle information in Performance Parameters section.)



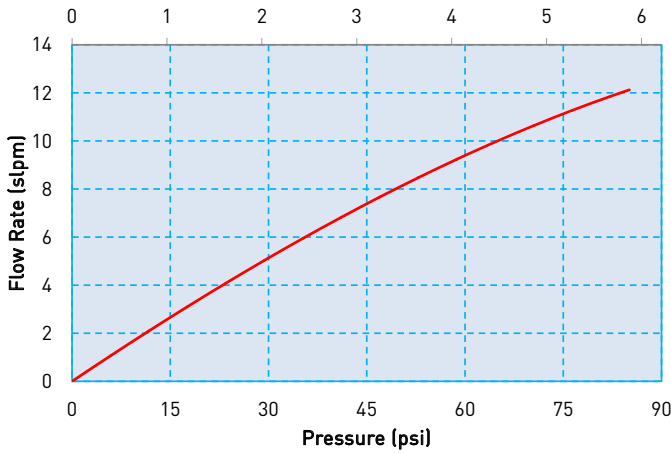
# SRS Miniature Pneumatic Solenoid Valve

## Typical Flow Curve

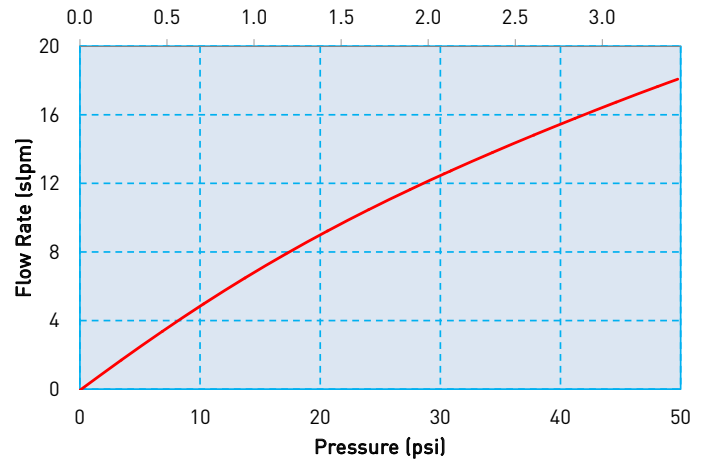
**All Models**  
 (Tested w/air 24° C)  
 Pressure (bar)



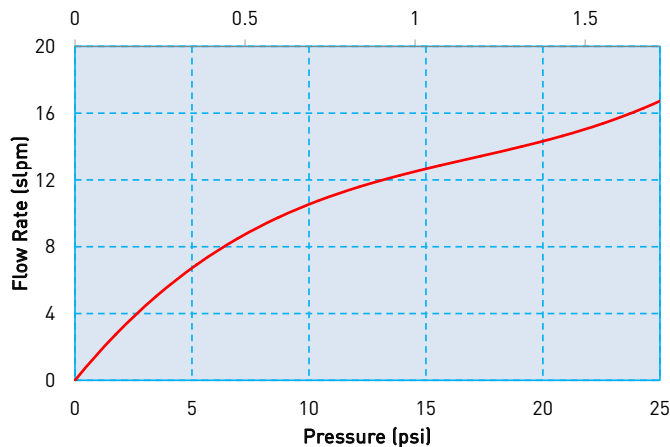
**Models 10 and 11 – 0.020" (0.51 mm) Orifice**  
 Pressure (bar)



**Models 13 and 14 – 0.030" (0.76 mm) Orifice**  
 Pressure (bar)



**Models 16 and 17 – 0.045" (1.14 mm) Orifice**  
 Pressure (bar)



# SRS Miniature Pneumatic Solenoid Valve

## Performance Parameters

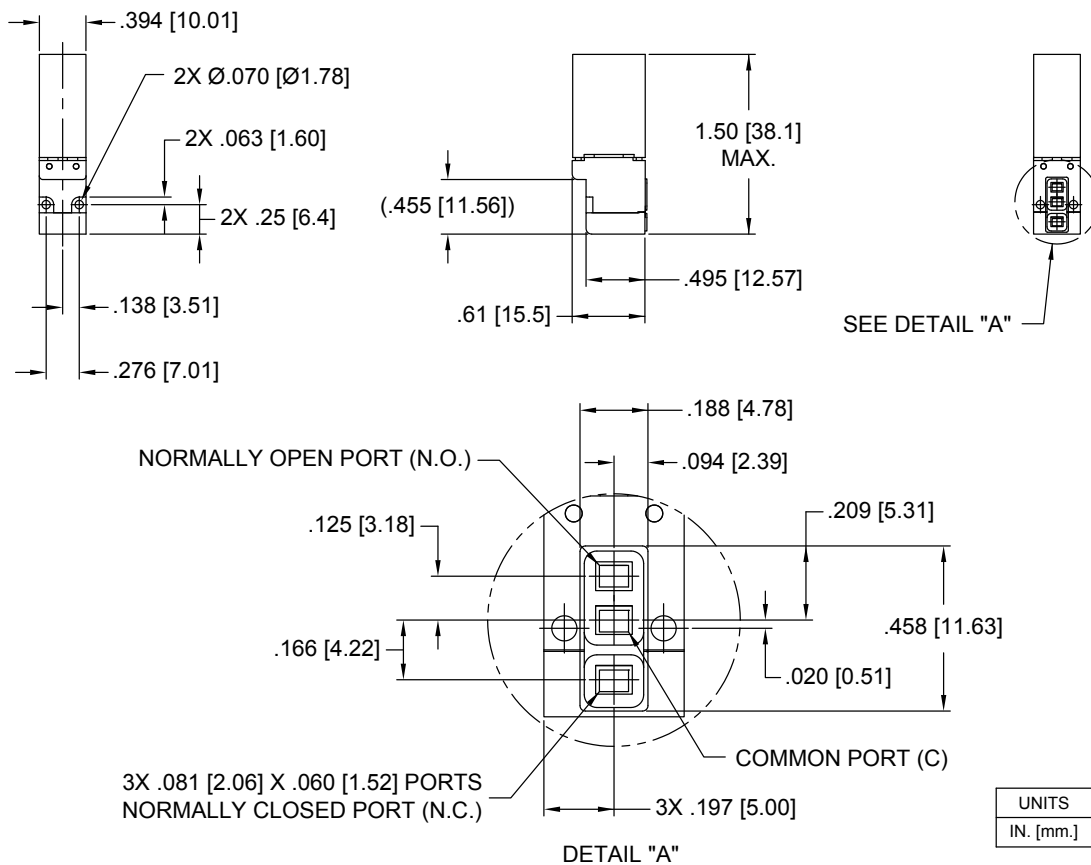
Model No.	Orifice Size	Maximum Supply Pressure	Maximum Supply Vacuum	Power Consumption	Life Requirements (millions of cycles)
10	0.020 in (0.51 mm)	35 psi (2.41 bar)	27 in Hg (686 mm Hg)	0.5 Watt	175
11	0.020 in (0.51 mm)	85 psi (5.86 bar)	27 in Hg (686 mm Hg)	1 Watt	50
13	0.030 in (0.76 mm)	20 psi (1.37 bar)	27 in Hg (686 mm Hg)	0.5 Watt	200
14	0.030 in (0.76 mm)	50 psi (3.44 bar)	27 in Hg (686 mm Hg)	1 Watt	25
16	0.045 in (1.14 mm)	10 psi (0.68 bar)	20 in Hg (508 mm Hg)	0.5 Watt	100
17	0.045 in (1.14 mm)	20 psi (1.37 bar)	27 in Hg (686 mm Hg)	1 Watt	25

## Pneumatic Interface



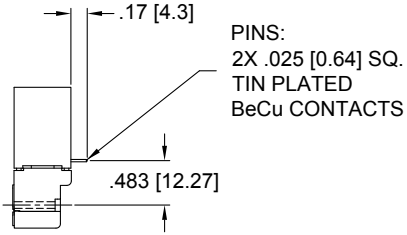
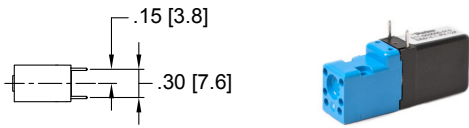
## Mechanical Integration Dimensions

### SRS Basic Valve Dimensions

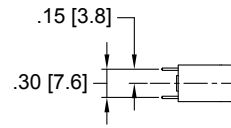


# SRS Miniature Pneumatic Solenoid Valve

## Electrical Interface

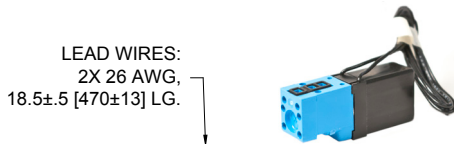


"F" - TYPE  
ELECTRICAL CONNECTION  
(.025 [0.64] SQUARE PINS, FRONT)

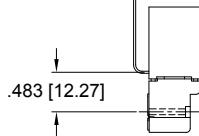


PINS:  
2X .025 [0.64] SQ.  
TIN PLATED  
BeCu CONTACTS

"M" - TYPE  
ELECTRICAL CONNECTION  
(.025 [0.64] SQUARE PINS,  
MANIFOLD INTERFACE)



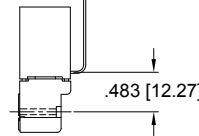
LEAD WIRES:  
2X 26 AWG,  
18.5±.5 [470±13] LG.



"R" - TYPE  
ELECTRICAL CONNECTION  
(INSULATED WIRE LEADS, 18" [457.2]  
MANIFOLD INTERFACE)



LEAD WIRES:  
2X 26 AWG,  
18.5±.5 [470±13] LG.



"L" - TYPE  
ELECTRICAL CONNECTION  
(INSULATED WIRE LEADS,  
18" [457.2] FRONT)

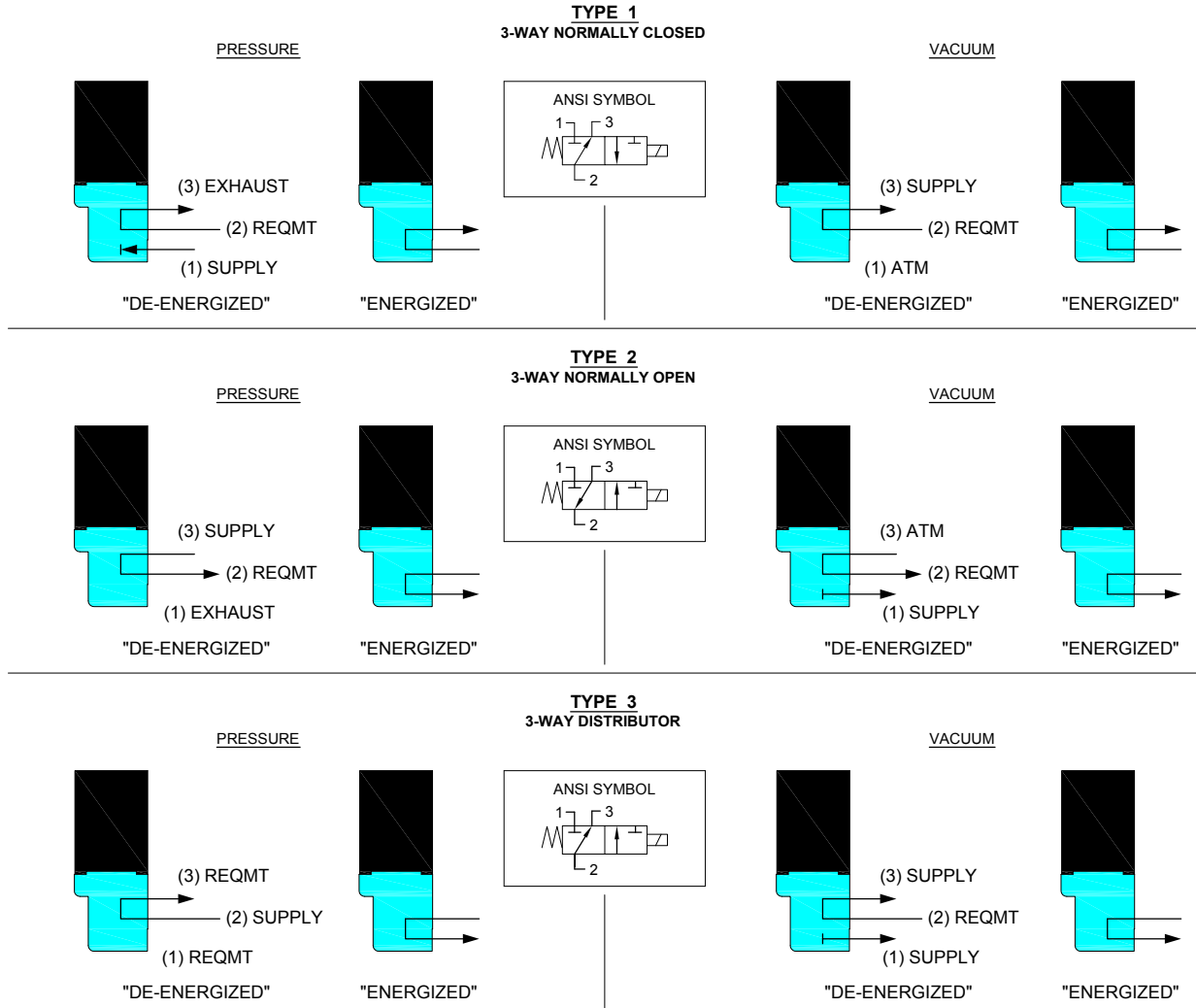
UNITS
IN. [mm.]

# SRS Miniature Pneumatic Solenoid Valve

## ANSI Symbols

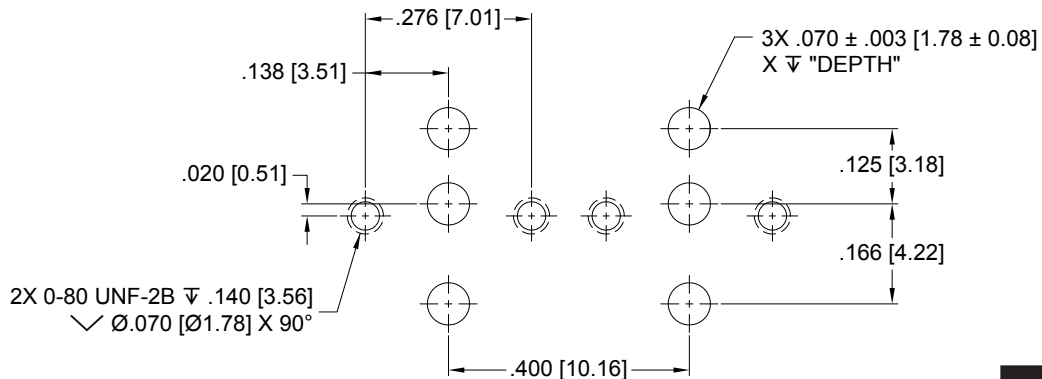
LEGEND:	
SUPPLY:	Pneumatic Source or Supply Pressure
EXHAUST:	Exhaust to Atmospheric Pressure
REQMT:	Customer Requirement or Application
ATM:	Atmospheric Pressure

### Pneumatic Schematics by Valve Types



## Installation and Use

### SRS Manifold Mount Diagram



# SRS Miniature Pneumatic Solenoid Valve

## Accessories

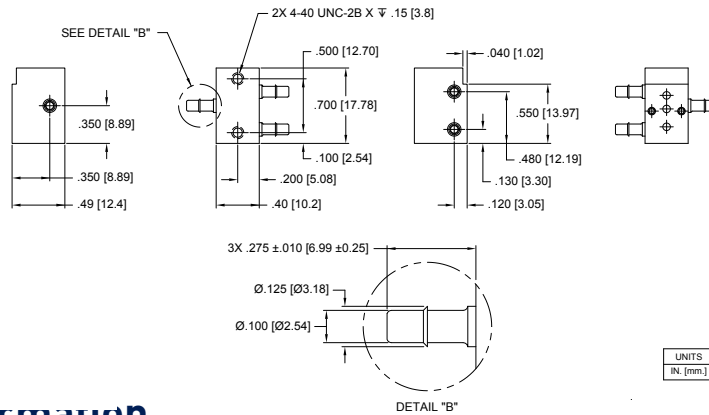
**Seal, Valve Manifold, SRS**  
195-000139-001



**Screw 0-80 x 9/16" Pan Head, Phillips**  
191-000100-009  
(2 required for each valve)



**Test Manifold, Single Station, SRS**  
990-001362-001



## Ordering Information

Sample Part ID	SRS	10	2	P	V	12	M
Description	Series	Model Number: Pressure / Orifice	Type	Material	Seal Material	Voltage	Electrical Connection
Options	SRS	10: 0-35 psi / 0.020" 11: 0-85 psi / 0.020" 13: 0-20 psi / 0.030" 14: 0-50 psi / 0.030" 16: 0-10 psi / 0.045" 17: 0-20 psi / 0.045"	1: 3-Way NC 2: 3-Way NO 3: 3-Way NC or Distributor	P: Engineering Plastic	V: FKM	5: 5 VDC 12: 12 VDC 24: 24 VDC	F: 0.025" Square Pins, Front M: 0.025" Square Pins, Manifold Interface L: Insulated Wire Leads, 18", Front R: Insulated Wire Leads, 18", Manifold Interface
<b>Accessories</b>							
195-000139-001: Seal, Valve Manifold, SRS *					* Used as seal between manifold and valve body		
191-000100-009: Screw 0-80 x 9/16", Pan Head, Phillips (2 required for each valve)							
990-001362-001: Test Manifold, Single Station, SRS							

NOTE: In order to provide the best possible solution for your application, please provide the following requirements when contacting Applications Engineering:

- Media, Inlet & Outlet Pressures
- Minimum Required Flow Rate
- System Supply Voltage
- Media
- Ambient Temperature Range



Please click on the Order On-line button (or go to [www.parker.com/precisionfluidics/srs](http://www.parker.com/precisionfluidics/srs)) to configure your SRS Miniature Pneumatic Solenoid Valve. For more detailed information, visit us on the Web, or call and refer to Performance Spec. #790-002090-001 and Drawing #890-003061-001.

PPF-MSV-002/US January 2015

For more information call +1 603 595 1500 or email [ppfinfo@parker.com](mailto:ppfinfo@parker.com)  
Visit [www.parker.com/precisionfluidics](http://www.parker.com/precisionfluidics)

