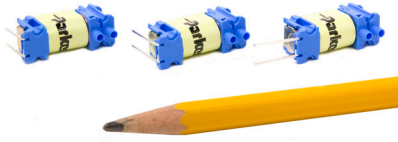


Series LX-Valve Miniature Latching Pneumatic Solenoid Valve

8 mm Latching Solenoid Valve



The Series LX-Valve is a miniature latching pneumatic solenoid valve measuring only 8 mm in width. The compact size, light weight, and power saving latching feature of the Series LX-Valve is the ideal solution for portable/battery powered applications. The body construction of the Series LX-Valve is suited for manifold or barbed-tube pneumatic connections and is available in a 2 way configuration.


Typical Markets

- Portable Medical Equipment
- Environmental Monitoring

Typical Applications

- Air & Oxygen Delivery

Features

- Internal latching mechanism enables continuous, power free, operation with minimal/momentary actuation power to change states
- High flow output capability, (11 slpm minimum @ 15 psid)
- Direct PC mounting and 11.2 mm valve mounting centers enables compact and lightweight system design
- RoHS and Reach compliant 

Product Specifications

Mechanical

Valve Type:
- 2-Way, 2-Position, Directional Flow , Latching
Media: Non-Reactive gases
Operating Environment:
32 to 122°F (0 to 50°C)
Storage Temperature:
-40 to 158°F (-40 to 70°C)
Dimensions:
- Length: 0.92 in (23.4 mm)
- Width: 0.31 in (7.9 mm)
- Height: 0.48 in (12.2 mm) to Barb End / 0.35 in (8.9 mm) to Manifold Face
Spacing: 0.440 in (11.2 mm) center (Minimum required to ensure proper latching operation)
Porting:
- Barbs for 1/16 in (1.5 mm) I. D. Tubing, (1/32 in Wall Max.)
- Manifold Mount (Gasket accessory required, see ordering info)
Weight: 0.16 oz (4.6 g)
Internal Volume:
0.0036 in ³ (0.060 cm ³)

Electrical

Power Options (Momentary):
0.52 Watt (6 psid model)
0.82 Watt (15 psid model)
Voltage Options:
3, 5, 12 or 24 VDC*
*minimum 20 millisecond pulse
Electrical Connections:
PC Pins, 4 mm centers (all models)
Lead Wire/Connector Assembly (Accessory, see ordering info)

Wetted Materials

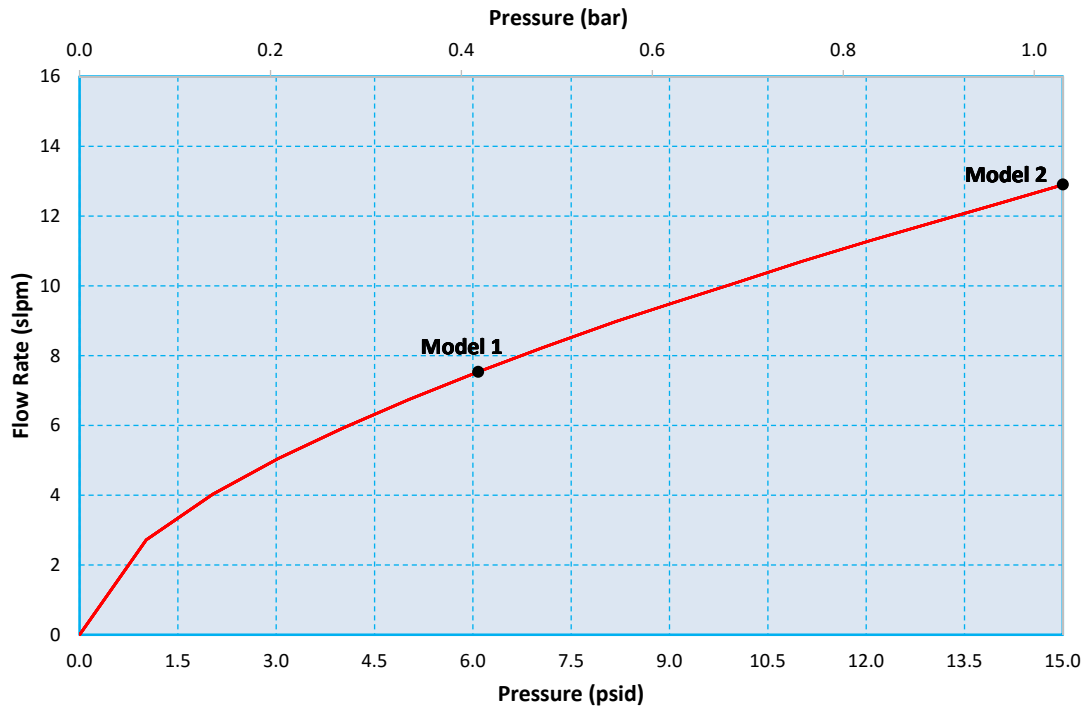
Bobbin/Body:
PBT (Polybutylene terephthalate)
Pole & Plunger:
430 FR Series Stainless Steel
Seal:
FKM
Other:
302 Series Stainless Steel

Performance Characteristics

Leak Rate: Tested with Air
< 0.20 sccm Internal
< 0.016 sccm External
Response:
< 20 ms
Pressure/Vacuum:
0 to 6 psid (0.4 bar differential)
0 to 15 psid (1.03 bar differential)
Proof Pressure:
200 psig (13.79 bar)
Minimum Flow:
6.0 slpm @ 6 psid (0.4 bar differential)
11.0 slpm @ 15 psid (1.03 bar differential)
Orifice Size/Nominal Cv:
0.045" (1.14 mm) / 0.028
Reliability:
Life Cycle rating of 10 million
Reliability 0.95 at 95% CI

Series LX-Valve Miniature Latching Pneumatic Solenoid Valve Typical Flow Curve

All Models
(Tested w/air 24° C)




Series LX-Valve Miniature Latching Pneumatic Solenoid Valve

Pressure and Flow Capabilities

Model No.	Orifice Size	Nominal Cv	Maximum Operating Pressure Differential	Momentary Power (50 milliseconds)
1	0.045 in (1.14 mm)	0.028	6 psid (0.4 bar differential)	0.52 Watt
2	0.045 in (1.14 mm)	0.028	15 psid (1.03 bar differential)	0.82 Watt

* Proof pressure is 200 psig (13.79 bar)

Safety: Proof Pressure: 200 PSIG (13.79 bar). Tests conducted at this pressure demonstrate that no loss of function or permanent damage occurs when returned within the specified operating pressure range.

 **Caution:** Shock Resistance: This valve may change states when subjected to high shock conditions. (Contact application for more details). Validation testing should be conducted to ensure proper operation in the application.

Electrical Interface

Short Pin

(For Pin/Wire Lead or PCB Terminal Housing Connection)
[Reference Accessories section]

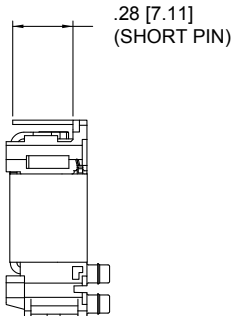


Long Pin

(For Pin/PCB solder mount connection)

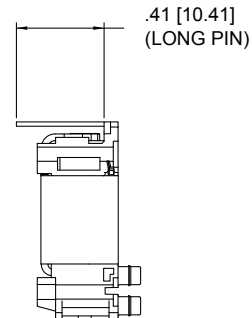


Latching X-Valve Coil Connection



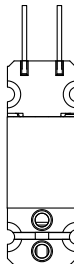
Electrical Connection Options:

Electrical terminals compatible with Molex 51065 series connector or equivalent.



Latching X-Valve Polarity View

OPEN + -
CLOSE - +



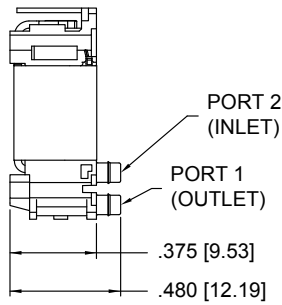
UNITS
IN [MM]



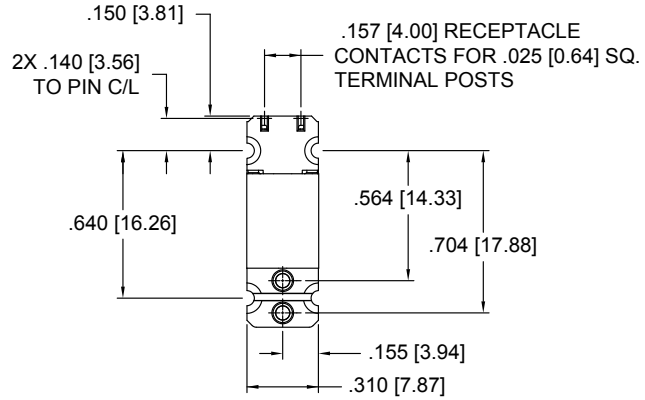
Series LX-Valve Miniature Latching Pneumatic Solenoid Valve

Pneumatic Interface/Mechanical Integration Dimensions

SIDE VIEW



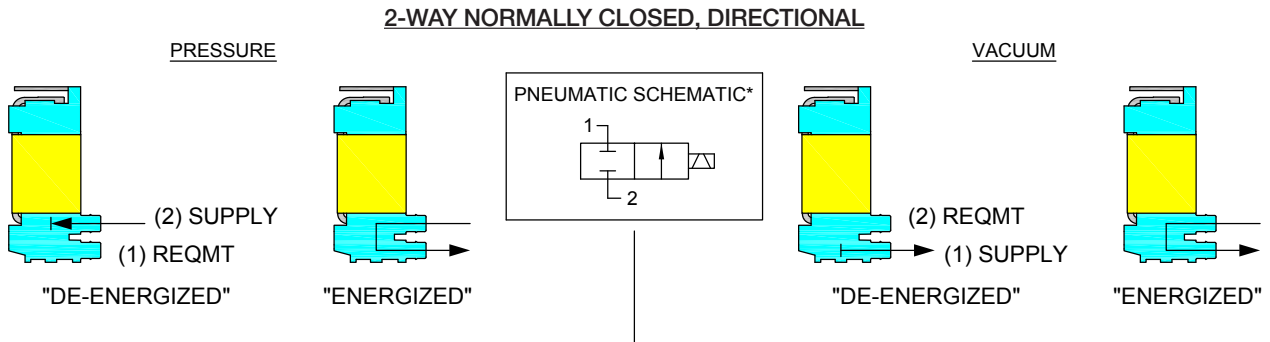
BOTTOM VIEW



UNITS
IN [MM]

ANSI Symbols

Pneumatic Schematics by Valve Types



* THE COIL SYMBOL, \square , REPRESENTS A SINGLE VALVE COIL WITH (2) POLARITY OPTIONS. REFERENCE THE "LATCHING X-VALVE POLARITY VIEW" SECTION, OF THIS DOCUMENT, FOR INFORMATION ON POLARITY ORIENTATION RELATIVE TO VALVE STATE.

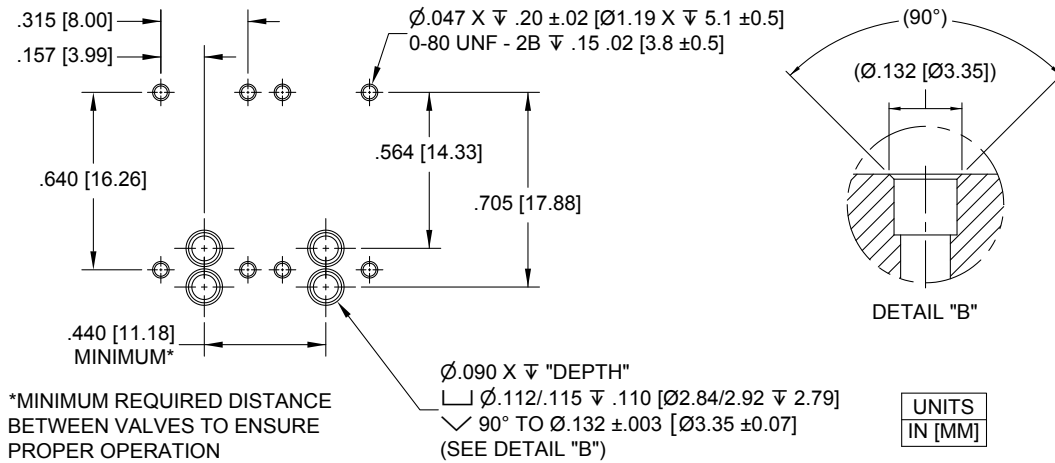
LEGEND:	
SUPPLY:	Pneumatic Source or Supply Pressure
REQMT:	Customer Requirement or Application

Series LX-Valve Miniature Latching Pneumatic Solenoid Valve

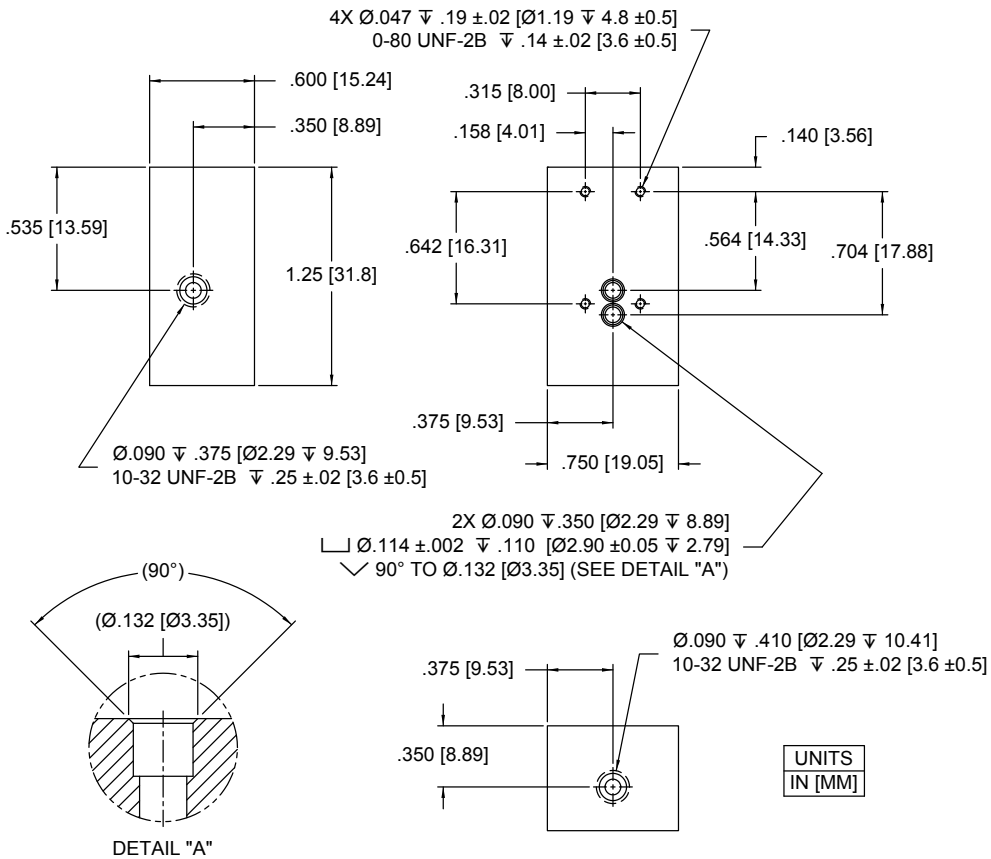
Installation and Use

LX-Valve Manifold Mount Diagram

Parker Precision Fluidics recommends 3-5 in-oz of torque for the screws



Recommended LX-Valve Manifold Dimensions



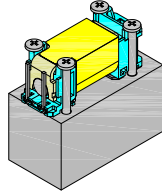
Series LX-Valve Miniature Latching Pneumatic Solenoid Valve

Installation and Use

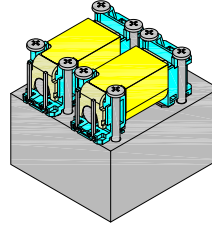
Recommended LX-Valve Mounting

(4) MOUNTING SCREWS
REQUIRED FOR VALVE
INSTALLATION

.440 [11.18] MINIMUM
VALVE SPACING
REQUIREMENT.



**Single Station
Manifold Mounting**



**Multiple Station
Manifold Mounting**

Accessories

Mounting Options

Gasket, Manifold Mount (FKM)

195-000277-001

(required for manifold mounting)



12" Wire Leads

290-006061-001

(for use with Short Pin valve configuration)



Screw 0-80 x 1/2" Binding Head, Phillips

191-000100-208

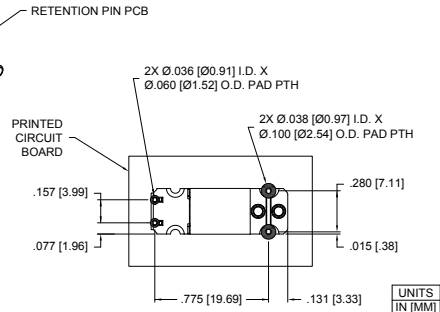
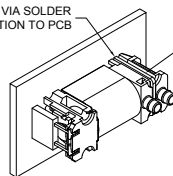


Retention Pin PCB

190-006020-001



PIN SECURED VIA SOLDER CONNECTION TO PCB



Series LX-Valve Miniature Latching Pneumatic Solenoid Valve

Ordering Information

Sample Product ID	LX	1	05	L	F	
Description	Series	Model Number: Pressure / Orifice / Type		Voltage ⁽¹⁾	Electrical Coil Connection	Elastomer
Options	LX	1: 6 psid / 0.045" / 2-Way Directional 2: 15 psid / 0.045" / 2-Way Directional		03: 3 VDC 05: 5 VDC 12: 12 VDC 24: 24 VDC ⁽¹⁾ Warning: The valve may change states when subjected to high shock conditions. Validation testing should be conducted to ensure proper operation in the application. Contact applications for more details.	S: Short Pins ⁽²⁾ L: Long Pins ⁽³⁾ ⁽²⁾ For Pin/Wire Lead or PCB Terminal Housing Connection ⁽³⁾ For Pin/PCB solder mount connection	F: FKM

Product ID Reference	Order Part Number	Product ID Reference	Order Part Number	Product ID Reference	Order Part Number
LX-1-03-L-F	915-000001-001	LX-1-12-S-F	915-000001-007	LX-2-03-S-F	915-000001-013
LX-1-05-L-F	915-000001-002	LX-1-24-S-F	915-000001-008	LX-2-05-S-F	915-000001-014
LX-1-12-L-F	915-000001-003	LX-2-03-L-F	915-000001-009	LX-2-12-S-F	915-000001-015
LX-1-24-L-F	915-000001-004	LX-2-05-L-F	915-000001-010	LX-2-24-S-F	915-000001-016
LX-1-03-S-F	915-000001-005	LX-2-12-L-F	915-000001-011		
LX-1-05-S-F	915-000001-006	LX-2-24-L-F	915-000001-012		

Accessories	
195-000277-001: Gasket, Manifold Mount (FKM) ⁽¹⁾	⁽¹⁾ Not supplied with the valve. Used as a seal between the valve ports and manifold.
290-006061-001: 12" (30.5 cm) Wire Leads ⁽²⁾	⁽²⁾ Not supplied with the valve. Used to electrically interface with the valve.
190-006020-001: Retention Pin, PCB ⁽³⁾	⁽³⁾ Not supplied with the valve. Used to secure the valve for printed circuit board solder mounting.
191-000100-208: Screw, 0-80 x 1/2", Binding Head, Phillips ⁽⁴⁾	⁽⁴⁾ Not supplied with the valve. Four (4) screws are required for single station manifold valve mounting. See Recommended LX-Valve Mounting for multiple station mounting screw requirements.

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/lxvalve) to configure your LX-Valve Miniature Latching Pneumatic Solenoid Valve. For more detailed information, visit us on the Web, or call and refer to Performance Specification #790-002454-001, Outline Drawing #890-003377-001 (Short Pin), Outline Drawing #890-003377-002 (Long Pin).

PPF-MSV-002/US March 2016

For more information call +1 603 595 1500 or email ppfinfo@parker.com
Visit www.parker.com/precisionfluidics



NOTES
