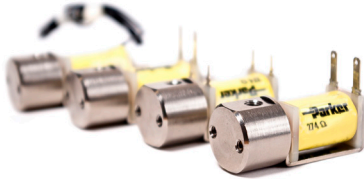


# Series 25 Miniature Pneumatic Solenoid Valve

## 15 mm Solenoid Valve




The Series 25 miniature pneumatic solenoid valve is a robust and proven product with a reputation for reliable and consistent performance. The Series 25 miniature solenoid valve is the preferred choice of major OEM's in the medical and analytical market. With valve bodies made from nickel-plated brass and multiple pneumatic and electrical interface options, the Series 25 miniature solenoid valve is the ideal solution for general purpose applications and those applications requiring low out-gassing and a bubble-tight seal.

### Applications

- Oxygen Conservers and Concentrators
- Sieve Bed Switching
- Anesthesia Delivery
- Compression Therapy
- Gas Chromatography
- Insufflators
- Flow Control/Shut-off

### Features

- Proven performance tested to 260 million life cycles
- Wide range of available electrical connections to simplify valve integration and control
- Manifold mount or barbed tube pneumatic configurations available or added system design flexibility
- Available Analytical and Oxygen Service Clean to minimize contamination
- RoHS compliant 

## Product Specifications

### Mechanical

<b>Valve Type:</b>
2/3 Port, Direct-acting poppet style
- Normally Closed (NC)
- Normally Open (NO)
- Distributor
<b>Media:</b>
Air, argon, helium, hydrogen, methane, nitrogen, oxygen, & other non-reacting gasses
<b>Operating Environment:</b>
32 to 158°F (0 to 70°C)
<b>Storage Temperature:</b>
-40 to 158°F (-40 to 70°C)
<b>Dimensions:</b>
- Length: 1.73 in (43.9 mm)
- Width: 0.63 in (15.8 mm)
- Height: 0.67 in (17.0 mm)
<b>Weight:</b>
2.1 oz (60 g)
<b>Internal Volume:</b>
0.026 in <sup>3</sup> (0.426 cm <sup>3</sup> )
<b>Filtration:</b>
40 micron (recommended)
<b>Oxygen Clean:</b>
Call For Details

### Electrical

<b>Power Options:</b>
0.5, 1.0 or 2.0 Watts
<b>Voltage Options:</b>
5, 12 or 24 VDC
Further power reduction may be achieved through the use of spike and hold or PWM electrical control.
<b>Electrical Connections:</b>
Wire Leads, PC Pins, Solder Tabs, Quick Disconnect Spade

### Wetted Materials

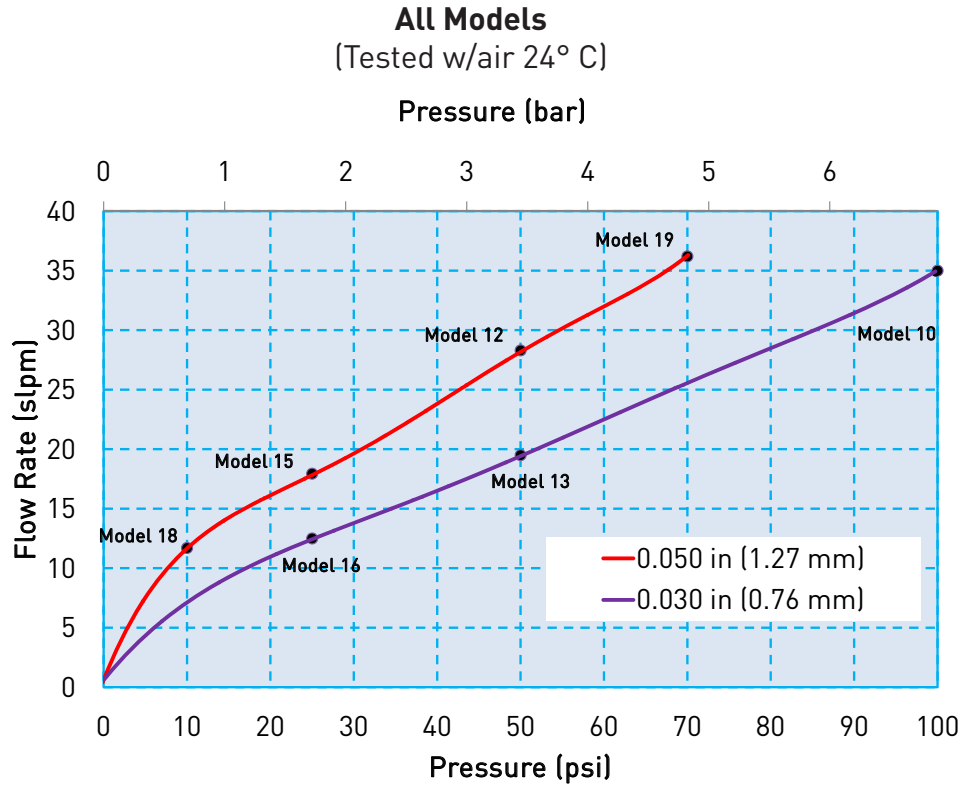
<b>Body:</b>
36000 HO2 Brass, Nickel Plated
<b>Stem Base:</b>
36000 HO2 Brass;
<b>Poppet Options:</b>
FKM
<b>All Others:</b>
430 FR Series Stainless Steel
302 Series Stainless Steel
36000 HO2 Brass, Nickel Plated

### Performance Characteristics

<b>Leak Rate:</b>
<0.016 sccm of air (bubble tight)
<b>Response:</b>
<30 ms cycling
<b>Pressure:</b>
0 to 100 psig (6.9 bar)
<b>Vacuum:</b>
0-27 in Hg (686 mm Hg)
<b>Orifice Sizes:</b>
0.030" (0.76 mm)
0.050" (1.27 mm)

## Series 25 Miniature Pneumatic Solenoid Valve

### Typical Flow Curve



All models reflect typical flow output capability based on rated pressure

### Pressure and Flow Capabilities/Life Requirements

Model No.	Orifice Size	Nominal Cv	Maximum Supply Pressure	Power Consumption	Elastomer	Life Requirements (millions of cycles*)
10	0.030 in (0.76 mm)	0.017	100 psig (6.9 bar)	2 Watts	FKM	100
12	0.050 in (1.27 mm)	0.031	50 psig (3.5 bar)	2 Watts	FKM	100
13	0.030 in (0.76 mm)	0.017	50 psig (3.5 bar)	1 Watt	FKM	200
15	0.050 in (1.27 mm)	0.025	25 psig (1.7 bar)	1 Watt	FKM	200
16	0.030 in (0.76 mm)	0.017	25 psig (1.7 bar)	0.5 Watt	FKM	260
18	0.050 in (1.27 mm)	0.021	10 psig (0.7 bar)	0.5 Watt	FKM	260
19	0.050 in (1.27 mm)	0.025	70 psig (4.8 bar)	2 Watts	FKM	20

\*Life is dependent upon elastomeric material, duty cycle and pressures

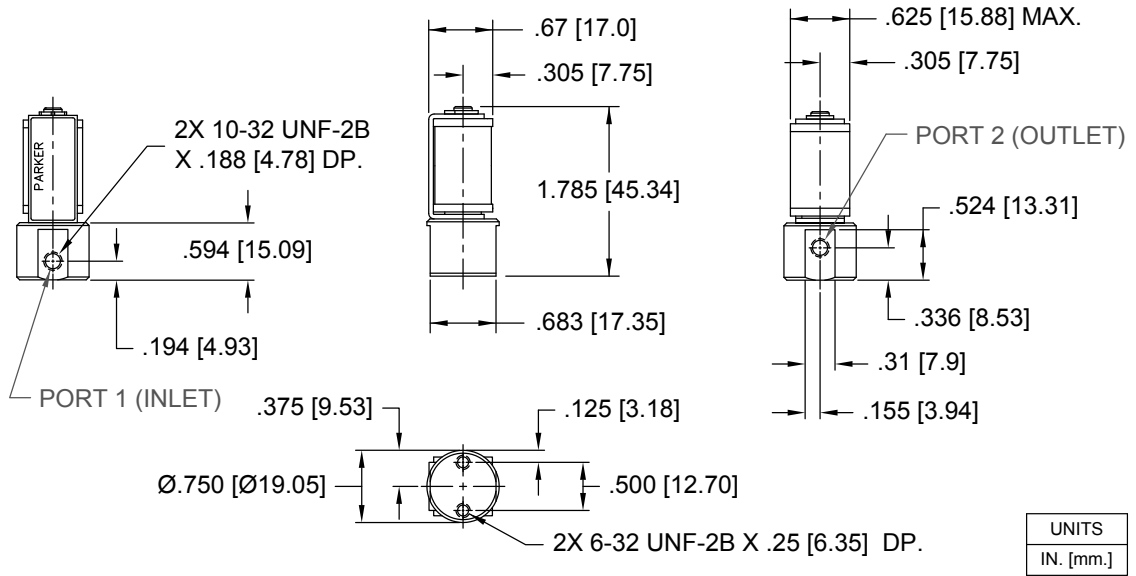
For custom requirements please contact Applications Engineering at 1-603-595-1500 or [ppfinfo@parker.com](mailto:ppfinfo@parker.com)



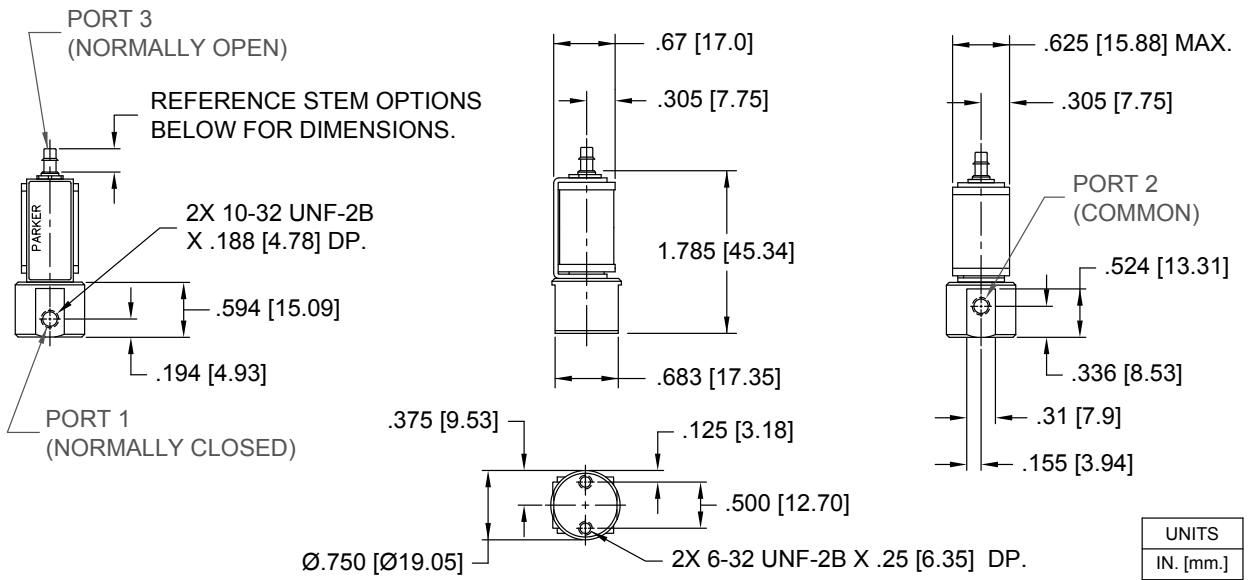
# Series 25 Miniature Pneumatic Solenoid Valve

## Mechanical Integration Dimensions

### Basic Dimensions, 2-Way Valve Configuration



### Basic Dimensions, 3-Way Valve Configuration

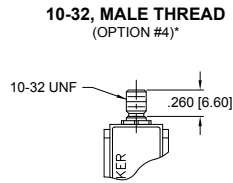


## Series 25 Miniature Pneumatic Solenoid Valve

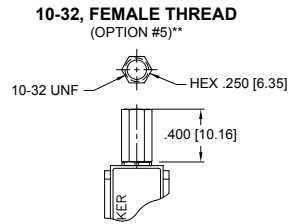
### Mechanical Integration

#### Dimensions

#### Stem Options



\*Torque applied to #10-32 male fitting not to exceed 0.5 in-oz (3.5 mN-m). Use Loctite 290 or compatible liquid-curing fastener to secure mating fitting in place.

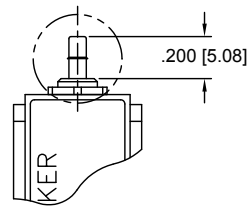
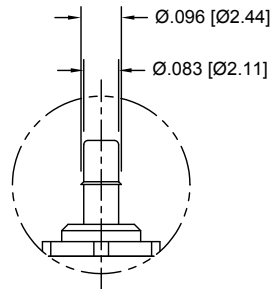


\*\*Torque applied to #10-32 Female fitting not to exceed 0.5 in-oz (3.5 mN-m). Use 1/4 inch hex wrench to support the fitting when installing a mating, #10-32 male fitting.

#### Barb Options

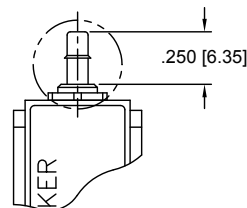
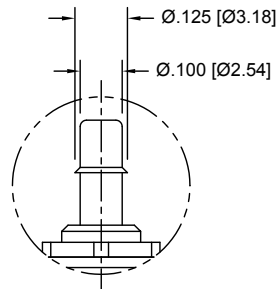
##### 1/16" (1.5 mm) Barb

( For 1/16" (1.5 mm) I.D. Tubing )  
(OPTION #6)



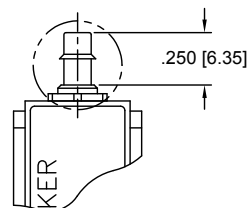
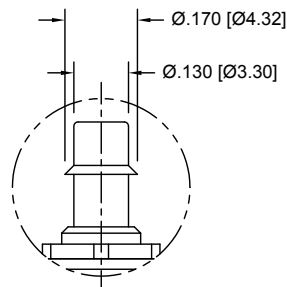
##### 5/64" (2 mm) Barb

( For 5/64" (2 mm) I.D. Tubing )  
(OPTION #7)



##### 1/8" (3 mm) Barb

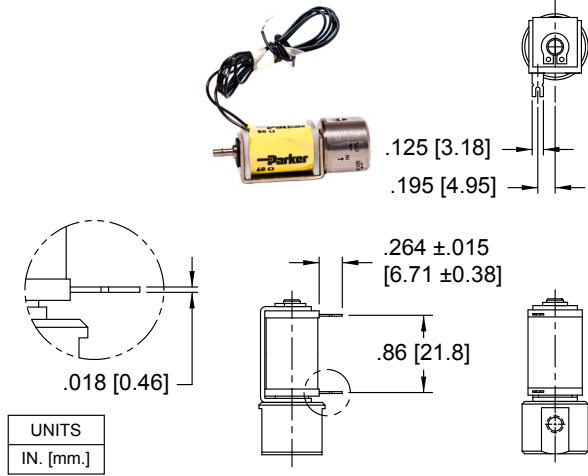
( For 1/8" (3 mm) I.D. Tubing )  
(OPTION #8)



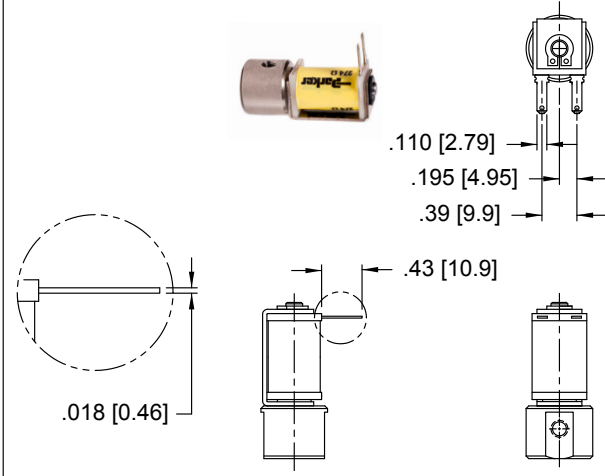
# Series 25 Miniature Pneumatic Solenoid Valve

## Electrical Interface

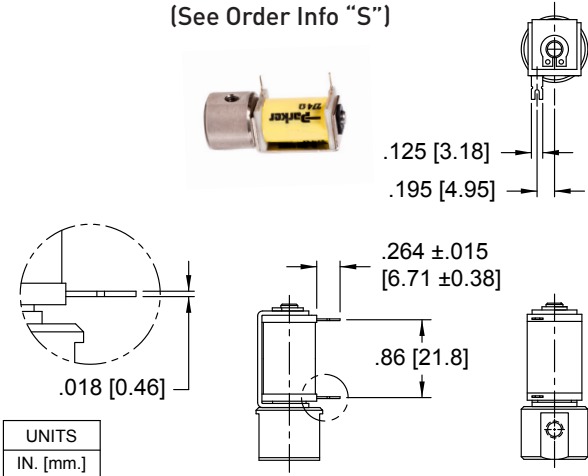
**Coil Type: Wire Leads**  
(See Order Info "F")



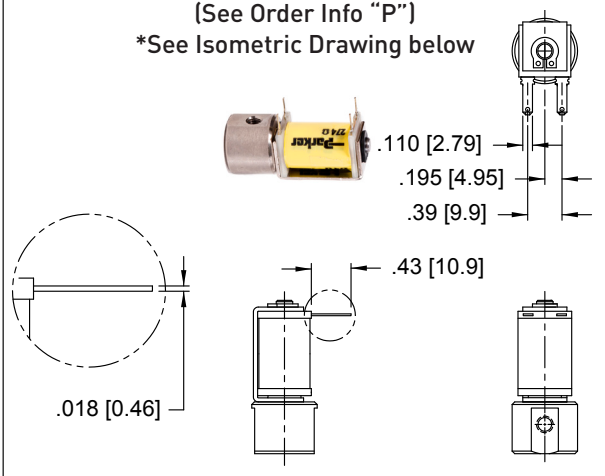
**Coil Type: Quick Connect Spade**  
(See Order Info "Q")



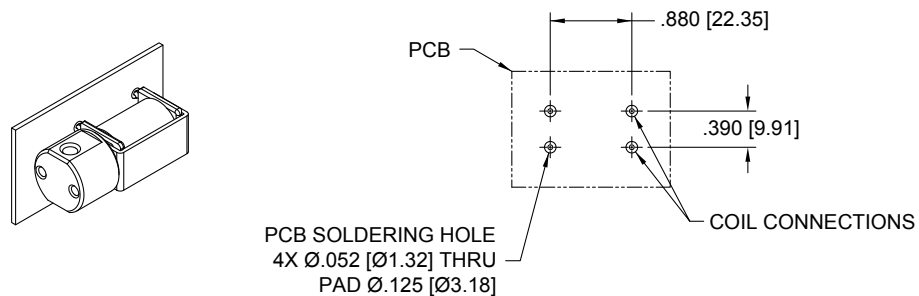
**Coil Type: Solder Tab**  
(See Order Info "S")



**Coil Type: 4 PC Pins\***  
(See Order Info "P")  
\*See Isometric Drawing below



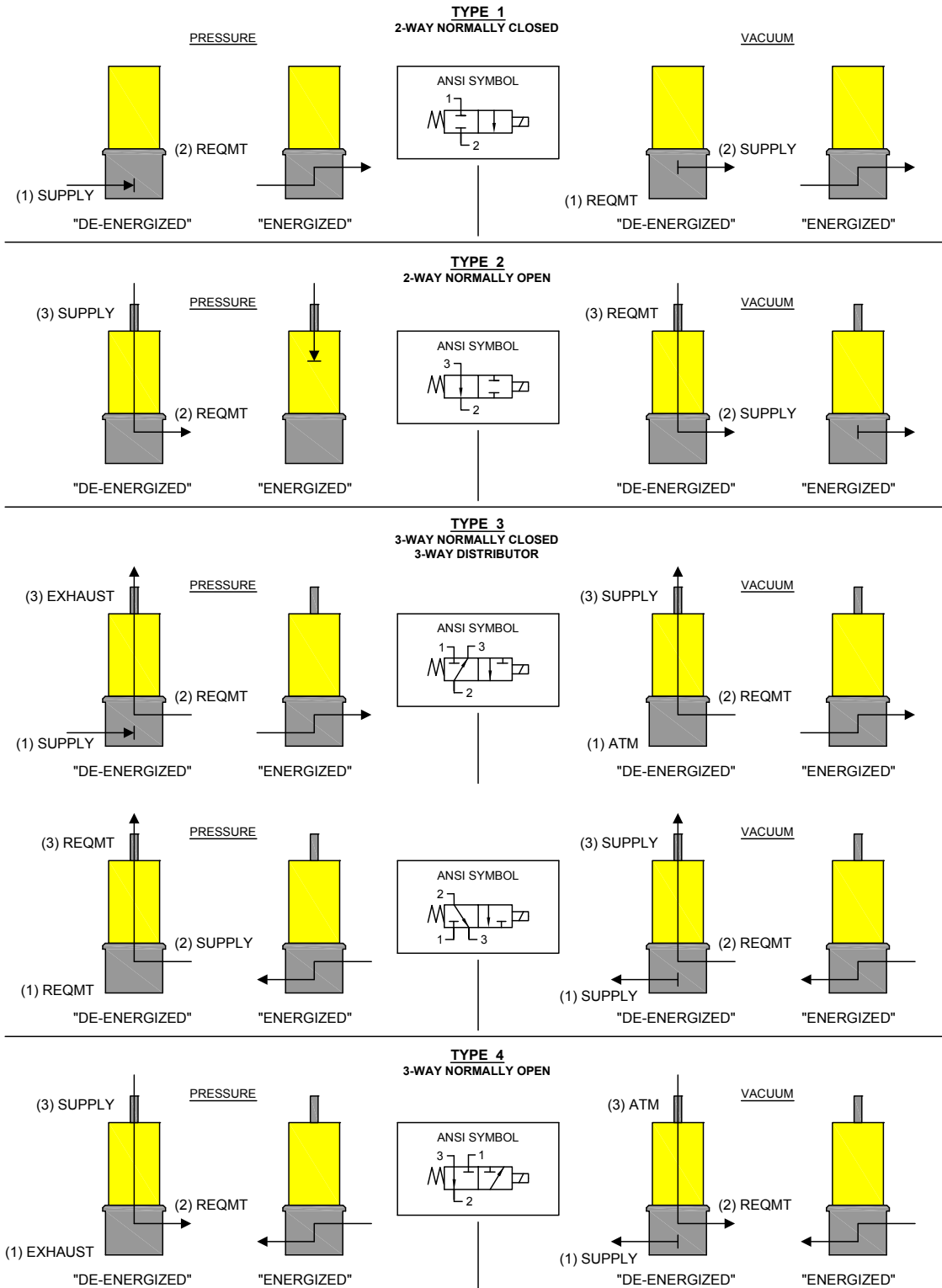
**\*4 PC PIN PCB Interface**



# Series 25 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



## Series 25 Miniature Pneumatic Solenoid Valve

### Ordering Information

Sample Part ID	25	10	3	NV	12	P	5	7
Description	Series	Model Number: Pressure / Orifice / Power	Type	Material XX: Body / Poppet & Seal	Voltage	Electrical Coil Selection	Pneumatic Connection Body	Pneumatic Connection Stem
Options	25	10: 0-100 psi / 0.030" orifice / 2 Watts 12: 0-50 psi / 0.050" orifice / 2 Watts 13: 0-50 psi / 0.030" orifice / 1 Watt 15: 0-25 psi / 0.050" orifice / 1 Watt 16: 0-25 psi / 0.030" orifice / 0.5 Watt 18: 0-10 psi / 0.050" orifice / 0.5 Watt 19: 0-70 psi / 0.050" orifice / 2 Watts	1: 2-Way NC 2: 2-Way NO 3: 3-Way NC or Distributor 4: 3-Way NO	NV: Nickel-plated Brass / FKM	5: 5 VDC 12: 12 VDC 24: 24 VDC	F: Wire Leads, 18", No Termination P: PC Mount, 4 PC Pins S: PC Mount, 2 Solder Tabs Q: Quick Connect Spade	5: 10-32 Female	D: Manifold Mount (2-Way NC Only) 4: 10-32 Male 5: 10-32 Female 6: 1/16" (1.5mm) Barbs* 7: 5/64" (2 mm) Barbs 8: 1/8" (3 mm) Barbs  *1/16" Barbs not available for 0.050" orifice valves

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/s11](http://www.parker.com/precisionfluidics/s11)) to configure your Series 25 Miniature Pneumatic Solenoid Valve. For more detailed information, visit us on the Web, or call and refer to Performance Spec. #790-002075-001 and Drawing #890-003016-001.

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)

