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

Mechanical
- Valve Type: 3 Port, Direct-acting poppet style
  - Normally Closed
  - Normally Open
  - Distributor
- Media: Non-Reactive gases
- Operating Environment: 32 to 131°F (0 to 55°C)
- Storage Temperature: -40 to 158°F (-40 to 70°C)
- Dimensions:
  - Length: 1.5 in (38.1 mm)
  - Width: 0.39 in (10.0 mm)
  - Height: 0.61 in (15.5 mm)
- Porting: Manifold mount; Gasket supplied
- Weight: 0.23 oz (6.5 g)
- Internal Volume: 0.0016 in³ (0.027 cm³)
- Filtration: 40 micron (recommended)

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

Wetted Materials
- Bobbin/Body:
  Glass Reinforced PBT (Polybutylene terephthalate)
- Pole & Plunger:
  430 FR Stainless Steel
- Seal:
  FKM
- Other:
  300 Series Stainless Steel

Performance Characteristics
- Leak Rate: <0.016 sccm of air
- Response: <30 ms cycling
- Pressure: 0 to 85 psid (5.86 bar)
- Vacuum: 0-27 in Hg (686 mm Hg)
- Burst Pressure: 200 psig (13.7 bar)
- Orifice Sizes / Equivalent Cv:
  - 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 (Tested w/ air 24°C)
All Models

Pressure [bar]

Flow Rate [slpm]

- 0.045 in (1.14 mm)
- 0.030 in (0.76 mm)
- 0.020 in (0.51 mm)

Models 10 and 11 – 0.020” (0.51 mm) Orifice

Models 13 and 14 – 0.030” (0.76 mm) Orifice

Models 16 and 17 – 0.045” (1.14 mm) Orifice

Parker
**SRS Miniature Pneumatic Solenoid Valve**

**Performance Parameters**

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

**Pneumatic Interface**

**SRS Basic Valve Dimensions**

**Units**

- IN. [mm.]

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**Miniature Solenoid Valves**

**Parker**
SRS Miniature Pneumatic Solenoid Valve

**SRS Manifold Mount Diagram**

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

**Electrical Interface**

- **R** - TYPE ELECTRICAL CONNECTION (INSLATED WIRE LEADS, 18" [457.2] MANIFOLD INTERFACE)
- **L** - TYPE ELECTRICAL CONNECTION (INSLATED WIRE LEADS, 18" [457.2] FRONT)
ANSI Pneumatic Schematics by Valve Types

**TYPE 1**
3-WAY NORMALLY CLOSED

**PRESSURE**
- (3) EXHAUST
- (2) REQMT
- (1) SUPPLY

**VACUUM**
- (3) SUPPLY
- (2) REQMT
- (1) ATM

**TYPE 2**
3-WAY NORMALLY OPEN

**PRESSURE**
- (3) SUPPLY
- (2) REQMT
- (1) EXHAUST

**VACUUM**
- (3) ATM
- (2) REQMT
- (1) SUPPLY

**TYPE 3**
3-WAY DISTRIBUTOR

**PRESSURE**
- (3) REQMT
- (2) SUPPLY
- (1) REQMT

**VACUUM**
- (3) SUPPLY
- (2) REQMT
- (1) SUPPLY

**LEGEND:**
- **SUPPLY:** Pneumatic Source or Supply Pressure
- **EXHAUST:** Exhaust to Atmospheric Pressure
- **REQMT:** Customer Requirement or Application
- **ATM:** Atmospheric Pressure
Miniature Pneumatic Solenoid Valve

SRS

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

ORDER ON-LINE

Ordering Information

Sample Part ID | SRS | 10 | 2 | V | 12 | M
--- | --- | --- | --- | --- | --- | ---
**Options**
195-000139-001: Seal, Valve Manifold, SRS *
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] 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.

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

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