PROPORTIONATING ELECTROMAGNETIC VALVES

For added safety valves are normally closed (NC) when deenergized. They can also serve as “ON-OFF” valves. For control functions see the Driver Module.

### TABLE 55 PROPORTIONATING ELECTROMAGNETIC VALVE

<table>
<thead>
<tr>
<th>MODEL</th>
<th>MATERIAL</th>
<th>AIR *MAXIMUM FLOW RATE (mL/min)</th>
<th>WATER *MAXIMUM FLOW RATE (mL/min)</th>
<th>ORIFICE SIZE</th>
<th>CV</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>6APSV0101</td>
<td>Stainless Steel</td>
<td>3500</td>
<td>125</td>
<td>0.02</td>
<td>0.51</td>
<td>0.009</td>
</tr>
<tr>
<td>6APSV0102</td>
<td>Stainless Steel</td>
<td>13000</td>
<td>400</td>
<td>0.04</td>
<td>1.02</td>
<td>0.033</td>
</tr>
<tr>
<td>6APSV0103</td>
<td>Stainless Steel</td>
<td>21500</td>
<td>700</td>
<td>0.065</td>
<td>1.4</td>
<td>0.065</td>
</tr>
<tr>
<td>6APSV0104</td>
<td>Stainless Steel</td>
<td>25000</td>
<td>850</td>
<td>0.063</td>
<td>1.6</td>
<td>0.068</td>
</tr>
<tr>
<td>6APSV0105</td>
<td>Stainless Steel</td>
<td>100000</td>
<td>2850</td>
<td>0.125</td>
<td>3.18</td>
<td>0.24</td>
</tr>
<tr>
<td>6APSD0101</td>
<td>Proportionating</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$187.00</td>
</tr>
</tbody>
</table>

### SPECIFICATIONS FOR PROPORTIONATING ELECTROMAGNETIC VALVES

**POWER INPUT:** 0-30 Vdc.

**MAXIMUM POWER REQUIRED:** 400 mA.

**TYPE OF OPERATION:** Normally closed (NC) when de-energized.

**CONNECTIONS:**
- 1/4" Compression fittings optional 3/8" (1/8" with 6APSV0101, 6APSV0102 or 6APSV0103), (including compression fittings) x 1.00" (25.4mm) deep.

**MATERIALS IN FLUID CONTACT:**
- Leak Integrity 1 x 10⁻⁹ sec.
- Max pressure of 500 psig (34.8 bars).

**MAXIMUM PRESSURE:** 1000 psig (6897 kPa).
**MAX. DIFFERENTIAL PRESSURE:** 50 psid (345 kPa).
**LEAK INTEGRITY:** 1 x 10⁻⁹ sec L/sec Helium individually tested.
**FLUID TEMPERATURE:** 14 °F to 122 °F (-10 °C to 50 °C).
**MAXIMUM TEMPERATURE (typical):** 174 °F (79 °C) inside, 130 °F (54 °C) outside surface at 24Vdc.

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**TABLE 55-1 PROPORTIONATING SOLENOID DRIVER ACCESSORIES**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DESCRIPTION</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>6APSSDNA-24</td>
<td>Power Supply, 110 vac/24 Vdc (North America)</td>
<td>$80.00</td>
</tr>
<tr>
<td>6APSSD2U-24</td>
<td>Power Supply, 230 vac/24 Vdc (Europe)</td>
<td>$80.00</td>
</tr>
<tr>
<td>6APSSDAU-24</td>
<td>Power Supply, 240 vac/24 Vdc (Australia)</td>
<td>$80.00</td>
</tr>
<tr>
<td>6APSSDUK-24</td>
<td>Power Supply, 240 vac/24 Vdc (United Kingdom)</td>
<td>$80.00</td>
</tr>
<tr>
<td>6ACBLDP9-6</td>
<td>Female 9 Pin D Connector 6 foot cable</td>
<td>$39.00</td>
</tr>
</tbody>
</table>

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**SPECIFICATIONS FOR 6APSD0101 PSV DRIVER MODULE**

**CONNECTION:** 9-pin male “D” subconnector for input/output signals.

**POWER INPUT REQUIRED:** +12 to 30 Vdc 1A @ 12 Vdc, 0.5A (not supplied) @ 24 Vdc via 9-pin “D” connector or DC power jack (center positive).

**INPUT SIGNAL:** Auto-Select feature allows circuit to recognize which analog input reference (0 to 5 Vdc or 4-20 mA) signal is provided.

**TTL ON/OFF:** Jumper selectable LOW (0 Vdc) OFF-HIGH (5 Vdc) on, or reverse, to select valve ON/OFF status.

**VALVE OUTPUT POWER:** Jumper selectable to +15, +22, and +29 Vdc with adjacent potentiometer to obtain ±2 Vdc.

**FUSE RATING:** An internal resettable 1.6A fuse protects the electronics on the power input.

**POLARITY PROTECTION:** Internal rectifier circuit protects from reversed polarity on the power input.

**OPERATING TEMPERATURE:** 32 °F (0 °C) to 122 °F (50 °C).

**DIMENSIONS:** 3" (7.62mm) wide x 3" (7.62mm) deep x 1" (25.4mm) high.


**PRINCIPLE OF OPERATION**

A variable stroke electromagnetic valve featuring a valve seat design which permits increasing or decreasing flow rates of liquids or gases through it in proportion to variable input power.

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**REGULATOR SYSTEMS**

Complete flow regulating systems includes an electromagnetic valve connected to a pulse width modulated Driver Module.

For details see Driver Module description. Optional external RS-232 or RS-485 modules are available.

**6APSD0101 Pulse Width Modulated Driver Module**

Pulse width modulated 6APSD0101 Driver Modules regulate the power supplied to PSV Regulating valves based on a reference signal.

Set-point signals, 0-5 Vdc or 4-20 mA, input are employed to control the output pulse width modulated voltage at a fixed frequency (~30KHz) and amplitude. Incoming power to the valve coil is applied and discontinued for predetermined periods of time by a low loss solid state switching element.

The wide range of power input features conveniently accommodates 12 to 32 Vdc sources.

The Auto-Select feature of the Driver Module recognizes the type of reference signal received and defaults to 0 - 5 Vdc if both signals are provided.