SV11-10-3/3M - Solenoid Valve

3-way, 2-position, spool type solenoid valve
Up to 23 L/min (6 USgpm) • 350 bar (5000 psi)

Operation
In the de-energized position this valve allows flow from port 2 to 1 while port 3 is blocked.
In the energized position flow is allowed from port 1 to port 3 while port 2 is blocked.

Features
Hardened, ground and honed working parts to limit leakage. IP69K Tough coil compatibility. Continuously rated. Compact design with low pressure drop. Rated pressure on all ports. Working pressure 350 bar.

Performance Data

Ratings and Specifications

| Performance data is typical with fluid at 21.8 cSt (105 SUS) and 49°C (120°F) |
|---------------------------------|-----------------|
| Typical Application pressure (all ports) | 350 bar (5000 psi) |
| Cartridge fatigue pressure (infinite life) | 310 bar (4500 psi) |
| Rated Flow | 23 L/min (6 USgpm) |
| Internal leakage, port 2 to port 1 | 164 cm³/min (10 in³/min) max at 350 bar (5000 psi) |
| Temperature range | -40° to 100°C (-40° to 212°F) |
| Coil Duty | Continuous from 85% to 110% of nominal voltage |
| Cavity | C-10-3 |
| Fluids | All general purpose hydraulics fluids such as: MIL-H-5606, SAE 10, SAE 20, etc. |
| Filtration | Cleanliness code 18/16/13 |
| Housing material (standard) | Steel |
| Weight cartridge only | 0.19 kg (0.42 lbs) |
| Seal kit | 889624 (Buna-N) 889688 (Viton®) |

Viton is a registered trademark of E.I. DuPont

Description
This is a 3-way 2-position, high pressure, direct acting, spool type solenoid valve. This valve can be used in applications requiring separate pressure and tank lines, such as a single acting cylinder or any other application where a three way two position solenoid valve is needed.

Pressure Drop
Cartridge only

<table>
<thead>
<tr>
<th>Flow - USgpm (0.05 SUS oil @ 120°F)</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Drop - psi</td>
<td>25</td>
<td>50</td>
<td>75</td>
<td>100</td>
<td>125</td>
<td>150</td>
<td>175</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flow - L/min (21.8 cSt oil @ 49°C)</th>
<th>0</th>
<th>8</th>
<th>15</th>
<th>23</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Drop - psi</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

Pressure Drop vs. Flow
A - Port 3 to port 1
B - Port 1 to port 2

Operating Limits
A - Normally open, normally closed
B - Selector 1 to 2

Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

SV11-10-3/3M - Solenoid Valve
3-way, 2-position, spool type solenoid valve
Up to 23 L/min (6 USgpm) • 350 bar (5000 psi)

Model Code

| Function | 1 | SV11 - Solenoid valve |
| Size | 2 | 10 - 10 size |
| Seal Material | 3 | Blank - Buna-N V - Viton® |
| Style | 4 | 3 - 3 way, 2 position |
| Manual Override Option | 5 | Blank - No manual override M - Manual override |
| Valve Housing Material | 6 | Blank - Cartridge only S - Steel |

Dimensions

mm (inch)

Torque cartridge in steel housing 68-75 Nm (50-55 ft. lbs)

Installation Drawing

WARNING
Maintain 5-8 Nm (4-6 ft. lbs) maximum torque on valve tube nut. Over tightening may cause valve failure.

Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.
SV11A/B-10-3 - Solenoid Valve
3-way, 2-position, spool type solenoid valve
Up to 23 L/min (6 USgpm) • 350 bar (5000 psi)

Description
This is a 3-way 2-position, high pressure, direct acting, spool type solenoid valve. This valve can be used in applications requiring separate pressure and tank lines, such as a single acting cylinder or any other application where a three way two position solenoid valve is needed.

Operation
In the de-energized position this valve allows flow from port 1 to 2 while port 3 is blocked.
In the energized position flow is allowed from port 3 to port 1 while port 2 is blocked.

Features
Hardened, ground and honed working parts to limit leakage.
IP69K Tough coil compatibility.
Continuously rated. Compact design with low pressure drop.
Rated pressure on all ports.
Working pressure 350 bar.

Pressure Drop
Cartridge only

Pressure Drop vs. Flow
A - Port 1 to port 2
B - Port 3 to port 1

Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

A-570.A
EATON Screw-In Cartridge Valves E-VLSC-MC001-E December 2009
**SV11A/B-10-3 - Solenoid Valve**

3-way, 2-position, spool type solenoid valve  
Up to 23 L/min (6 USgpm) • 350 bar (5000 psi)

### Model Code

<table>
<thead>
<tr>
<th>SV11</th>
<th>* - 10</th>
<th>*</th>
<th>3P - **** - **** - *</th>
<th>*</th>
<th>** - **</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

#### Dimensions

**mm (inch)**  
Cartridge Only

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**Function**  
SV11 - Solenoid valve

**Max Flow**  
A - 17 L/min (5 USgpm)  
B - 23 L/min (6 USgpm)

**Size**  
10 - 10 Size

**Seal Material**  
Blank - Buna-N  
V - Viton®

**Syle**  
3P - 3 way push type manual override

Forvalvedimensionswithmanualover-ride option installed see page A-980.

**Port Size**

<table>
<thead>
<tr>
<th>Code</th>
<th>Port Size</th>
<th>Housing Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Cartridge only</td>
<td></td>
</tr>
<tr>
<td>A2G</td>
<td>1/4&quot; BSPP</td>
<td>876705</td>
</tr>
<tr>
<td>A3G</td>
<td>3/8&quot; BSPP</td>
<td>876710</td>
</tr>
<tr>
<td>A6H</td>
<td>SAE 6</td>
<td>876704</td>
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<tr>
<td>A8H</td>
<td>SAE 8</td>
<td>876711</td>
</tr>
<tr>
<td>S2G</td>
<td>1/4&quot; BSPP</td>
<td>02-175127</td>
</tr>
<tr>
<td>S3G</td>
<td>1/3&quot; BSPP</td>
<td>02-175128</td>
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<tr>
<td>S6T</td>
<td>SAE 6</td>
<td>02-175124</td>
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<tr>
<td>S8T</td>
<td>SAE 8</td>
<td>02-175125</td>
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</table>

See section J for housing details.

**Voltage Rating**

<table>
<thead>
<tr>
<th>Code</th>
<th>Voltage Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>No coil</td>
</tr>
<tr>
<td>12D</td>
<td>12VDC/w diode*</td>
</tr>
<tr>
<td>24D</td>
<td>24VDC/w diode*</td>
</tr>
</tbody>
</table>

*Optional arc suppression diode

**Connector Types**

Blank - No coil  
G - ISO 440 DIN 43650  
W - Flying lead  
C - Deutsch on Leads  
H - Metripak 150 on Leads  
F - Weatherpak Male on Leads

For coil dimensions see section C.

**Coil Types**

Blank - No coil  
L - L series, (30W EN 490) used for SV11A  
R - R series, (30W) used for SV11B-10

**Coil Special Features**

Blank - No coil  
00 - No special feature

**Special Features**

00 - None  
(Only required if valve has special features, omitted if "00")

Torque cartridge in aluminum housing 47-54 Nm (35-40 ft. lbs)  
Torque cartridge in steel housing 68-75 Nm (50-55 ft. lbs)

Installation Drawing (Steel)

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**WARNING**

Aluminum housings can be used for pressures up to 210 bar (3000 psi).  
Steel housings must be used for operating pressures above 210 bar (3000 psi).

**WARNING**

Maintain 2.5-3 Nm (1.8-2.2 ft. lbs) maximum torque on valve tube nut.  
Over tightening may cause valve failure.

Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.