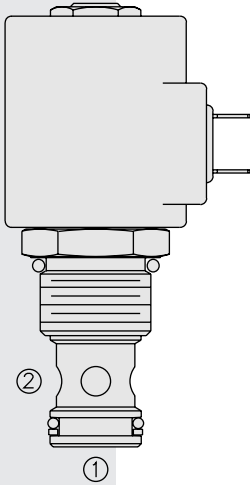


# SV12-22 Poppet, 2-Way, Normally Closed



## DESCRIPTION

A solenoid-operated, 2-way, normally closed, poppet-type, screw-in hydraulic cartridge valve, designed to function as a load-holding or blocking valve in applications requiring low internal leakage.

## OPERATION

When de-energized, the **SV12-22** acts as a check valve, allowing flow to pass from 1 to 2, while blocking flow in the reverse direction.

When energized, the poppet lifts to open the 2 to 1 flow path. In this mode, flow is also allowed from 1 to 2.

**Operation of Manual Override Option:** To override, push button in, twist counter-clockwise 180° and release. In this position, the valve will remain open.

To return to normal operation, push button in, twist clockwise 180° and release. Override will be detented in this position.

## FEATURES

- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Cost effective cavity.

## RATINGS

**Operating Pressure:** 240 bar (3500 psi)

**Proof Pressure:** 390 bar (5700 psi)

**Flow:** 114 lpm (30 gpm); see performance chart

**Internal Leakage:** 0.15 cc/minute (3 drops/minute) max. at 240 bar (3500 psi)

**Temperature:** -40 to 120 °C with standard Buna seals

**Coil Duty Rating:** Continuous from 85% to 115% of nominal voltage

**Response Time:** First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 40 ms; De-energized: 80 ms

**Initial Coil Current Draw at 20 °C:** Standard Coil: 1.67 amps at 12 Vdc;

0.18 amps at 115 Vac (full wave rectified).

E-Coil: 1.7 amps at 12 Vdc; 0.85 amps at 24 Vdc

**Minimum Pull-in Voltage:** 85% of nominal at 240 bar (3500 psi)

**Filtration:** See page 9.010.1

**Fluids:** Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

**Installation:** No restrictions; See page 9.020.1

**Cavity:** VC12-2; See page 9.112.1

**Cavity Tool:** CT12-2XX; See page 8.600.1

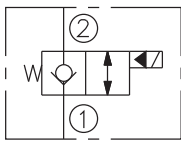
**Seal Kit:** SK12-2X-T; See page 8.650.1

**Coil Nut:** Part No. 7004400;

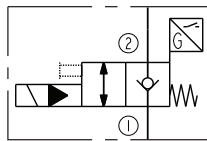
For E-coils manufactured prior to 1-1-04, see page 3.400.1 for coil nut info.

## SYMBOLS

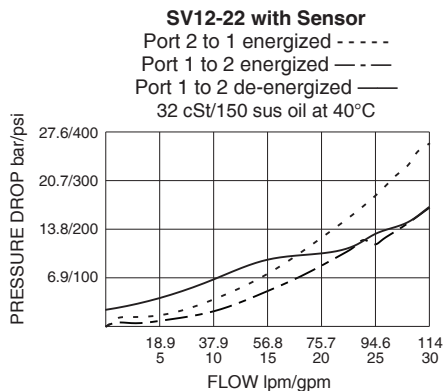
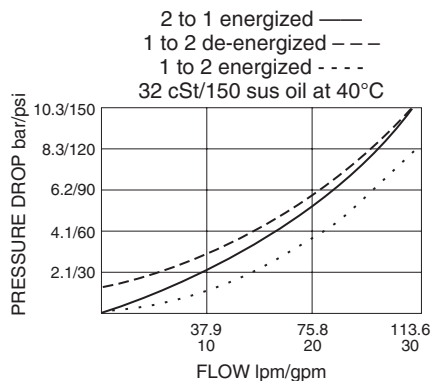
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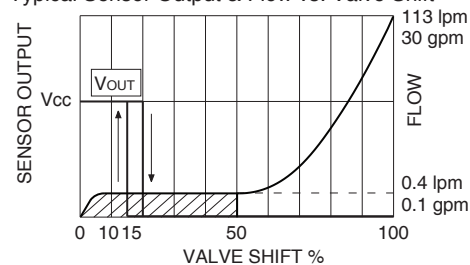
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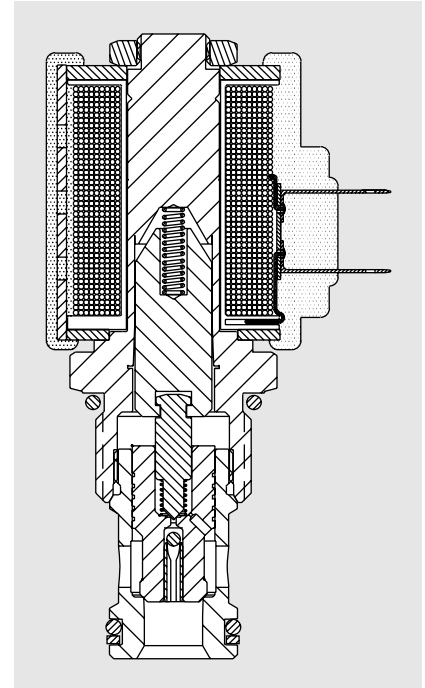
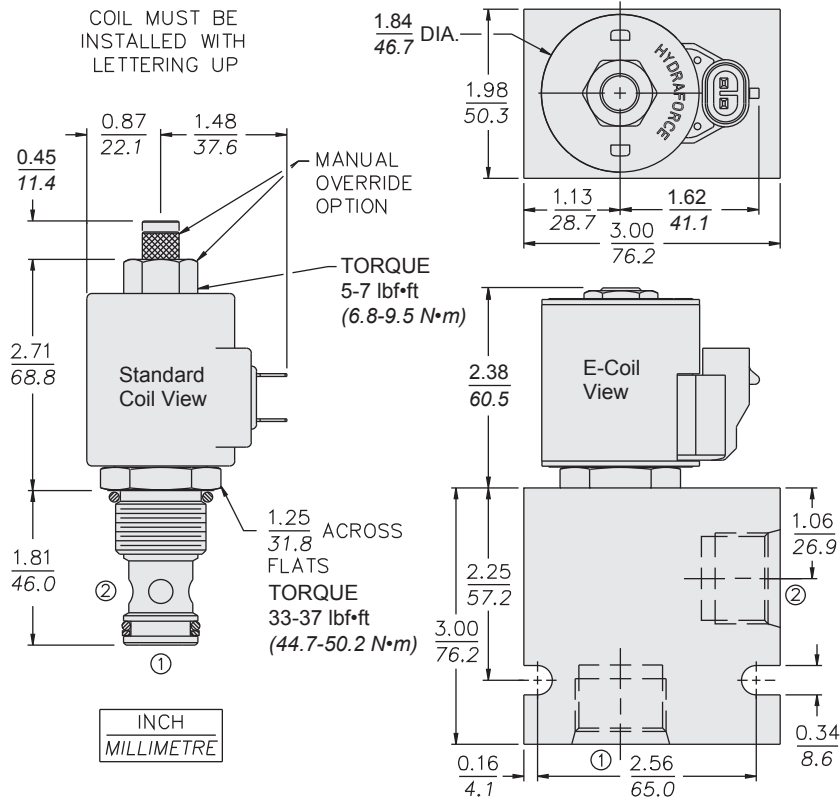
## PERFORMANCE (Cartridge Only)



Typical Sensor Output & Flow vs. Valve Shift



**DIMENSIONS**



Dimensions will differ significantly with Sensor Option; see page 3.010.1.

**MATERIALS**

**Cartridge:** Weight: 0.25 kg (0.55 lb) Weight with sensor option: 0.58 kg (1.28 lb); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.

**Standard Ported Body:** Weight: 0.57 kg (1.25 lb) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.012.1.

**Standard Coil:** Weight: 0.27 kg (0.60 lb); Unitized thermoplastic encapsulated, Class H high temperature magnet wire; See page 3.200.1.

**E-Coil:** Weight: 0.41 kg (0.9 lb); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors. See page 3.400.1.

**TO ORDER**

**SV12-(P)22(A)** - - - - - Sensor Option: See page 3.010.1

<p><b>Position Indicator</b></p> <p>None (Blank)</p> <p>Switch <b>P</b></p> <p>Restricted Flow <b>A</b></p> <p>with sensor, valve is rated 3000 psi (207 bar)</p> <p><b>Option</b></p> <p>None (Blank)</p> <p>Manual Override <b>M</b></p> <p>Manual Override <b>Y</b></p> <p>Manual Override <b>J</b></p> <p>For Manual Override options see page 1.001.1</p> <p><b>Porting</b></p> <p>Cartridge Only <b>0</b></p> <p>SAE 12 <b>12T</b></p>	<p><b>Voltage Std. Coil</b></p> <p><b>0</b> Less Coil**</p> <p><b>10</b> 10 Vdc†</p> <p><b>12</b> 12 Vdc</p> <p><b>24</b> 24 Vdc</p> <p><b>36</b> 36 Vdc</p> <p><b>48</b> 48 Vdc</p> <p><b>24</b> 24 Vac</p> <p><b>115</b> 115 Vac</p> <p><b>230</b> 230 Vac</p> <p>**Includes Coil Nut</p> <p>† DS, DW or DL terminations only</p> <p><b>E-Coils:</b> 10,12,20 or 24 Vdc only.</p> <p><b>Seals</b></p> <p><b>N</b> Buna N (Std.)</p> <p><b>V</b> Fluorocarbon</p>	<p><b>Sensor Type</b></p> <p>(Blank) None</p> <p><b>3</b> Dual Output, N.C./N.O.</p> <p><b>Sensor/Connector</b></p> <p>(Blank) None</p> <p><b>N</b> Neutral Sense/DT04-4P</p> <p><b>M</b> Neutral Sense/M12-4P</p> <p><b>Mating Connectors:</b></p> <p>DT06-4S: Part No. 4001953</p> <p>M12-4S: available at <a href="http://www.turck.com">www.turck.com</a> or <a href="http://www.binder-usa.com">www.binder-usa.com</a></p> <p><b>Coil Termination</b></p> <p>Deutsch DT04-2P</p> <p>Metri-Pack® 150</p> <p>Dual Lead Wires</p> <p>Amp Jr. Timer</p> <p>DIN 43650</p> <p>Dual Spades</p> <p><b>E-Coil</b></p> <p><b>ER</b> (IP69K)</p> <p><b>EY</b> (IP69K)</p> <p><b>EL</b> (IP69K)</p> <p><b>EJ</b> (IP67)</p> <p><b>EG</b> (IP65)</p> <p><b>D-Coil</b></p> <p><b>DR</b> (IP65)</p> <p><b>DY</b> (IP65)</p> <p><b>DL</b> (IP65)</p> <p><b>—</b></p> <p><b>DG</b> (IP65)</p> <p><b>DS</b> (IP65)</p> <p>For Coils with Zener Diode, add "Z" to option code. For example: "ER/Z". Not available on all models. See coil option info. on pages 3.200.1 &amp; 3.400.1</p>
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