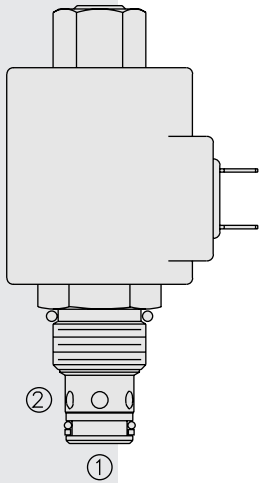


# SV10-21 Poppet, 2-Way, Normally Open



## DESCRIPTION

A solenoid-operated, 2-way, piloted, poppet-type, normally open, screw-in, hydraulic cartridge valve designed for low leakage in load-holding applications.

## OPERATION

When de-energized, the **SV10-21** allows flow from 2 to 1. Flow from 1 to 2 is severely restricted in this mode. If the 1 to 2 path is required, see model SV10-23, page 1.053.1.

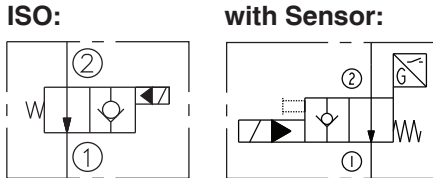
When energized, the valve's poppet closes on its seat, blocking flow in the 2 to 1 direction. In this mode the cartridge will allow 1 to 2 flow after overcoming the solenoid force (requires 3.4 to 10.3 bar / 50 to 150 psi).

**Operation of Manual Override Option:** To override, push and hold override button.

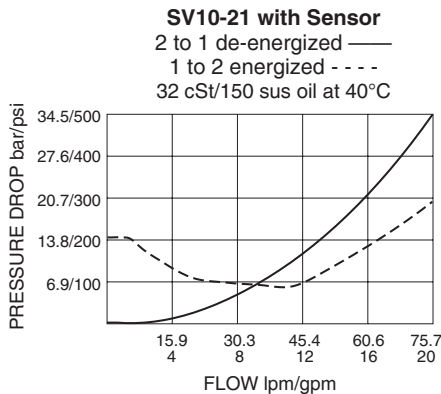
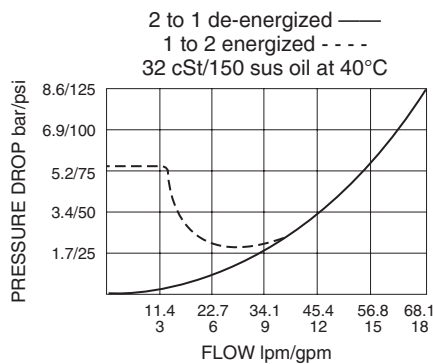
## FEATURES

- 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.
- Industry common cavity.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.

## SYMBOLS



## PERFORMANCE (Cartridge Only)



## RATINGS

**Operating Pressure:** 207 bar (3000 psi)

**Proof Pressure:** 345 bar (5000 psi)

**Flow:** 68.1 lpm (18 gpm); see performance chart

**Internal Leakage:** 0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 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: 80 msec.; De-energized: 30 msec.

**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 207 bar (3000 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

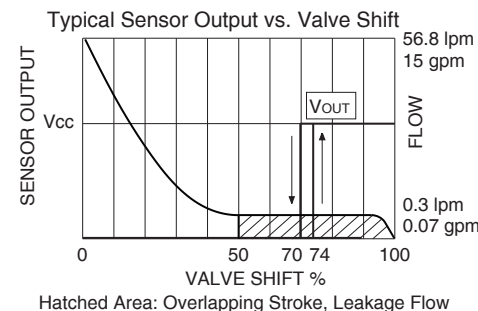
**Cavity:** VC10-2; See page 9.110.1

**Cavity Tool:** CT10-2XX; See page 8.600.1

**Seal Kit:** SK10-2X-T; See page 8.650.1

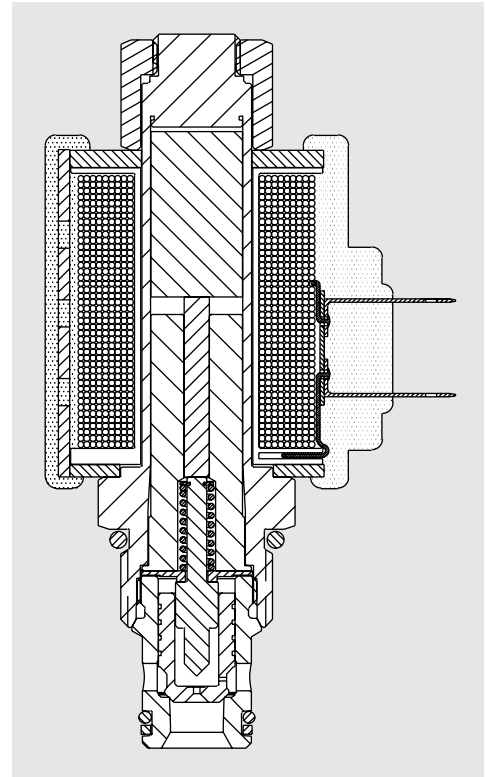
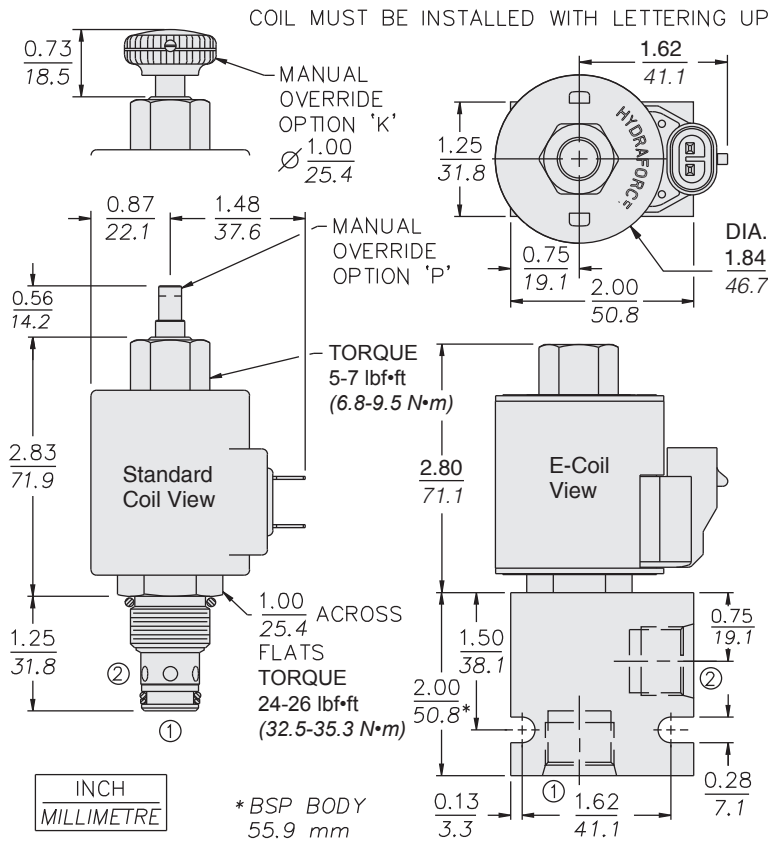
**Coil Nut:** Part No. 7004420;

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



**SV10-21**

**DIMENSIONS**



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

**MATERIALS**

**Cartridge:** Weight: 0.16 kg. (0.35 lbs.) Weight with Sensor option: 0.52 kg. (1.14 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.

**Standard Ported Body:** Weight: 0.16 kg. (0.35 lbs.) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.010.1

**Standard Coil:** Weight: 0.27 kg. (0.60 lbs.) Unitized thermoplastic encapsulated, Class H high temperature magnetwire. See page 3.200.1

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

**TO ORDER**

**SV10-(P)21(A)**

- Sensor Option: See page 3.010.1

<b>Position Indicator</b>	<b>Voltage Std. Coil</b>	<b>Sensor Type</b>
None (Blank)	<b>0</b> Less Coil**	(Blank) None
Switch <b>P</b>	<b>10</b> 10 VDC†	<b>3</b> Dual Output, N.C./N.O.
Restricted Flow <b>A</b>	<b>12</b> 12 VDC	<b>Sensor/Connector</b>
	<b>24</b> 24 VDC	(Blank) None
<b>Option</b>	<b>36</b> 36 VDC	<b>N</b> Neutral Sense/DT04-4P
None (Blank)	<b>48</b> 48 VDC	<b>M</b> Neutral Sense/M12-4P
152µ Screen <b>S</b>	<b>24</b> 24 VAC	<b>Mating Connectors:</b>
Manual Override <b>P</b>	<b>115</b> 115 VAC	DT06-4S: Part No. 4001953
Manual Override <b>K</b>	<b>230</b> 230 VAC	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>
For Manual Override options see page 1.001.1	**Includes Coil Nut	
<b>Porting</b>	† DS, DW or DL terminations only	<b>Coil Termination</b>
Cartridge Only <b>0</b>	<b>E-Coils:</b> 10,12,20 or 24 VDC only.	<b>E-Coil</b>
SAE 8 <b>8T</b>		<b>D-Coil</b>
3/8 in. BSP* <b>3B</b>		Deutsch DT04-2P <b>ER</b> (IP69K) <b>DR</b> (IP65)
*BSP Body; U.K. Mfr. Only		Metri-Pack® 150 <b>EY</b> (IP69K) <b>DY</b> (IP65)
		Dual Lead Wires <b>EL</b> (IP69K) <b>DL</b> (IP65)
		Amp Jr. Timer <b>EJ</b> (IP67) —
		DIN 43650 <b>EG</b> (IP65) <b>DG</b> (IP65)
		Dual Spades — <b>DS</b> (IP65)
	<b>Seals</b>	
	<b>N</b> Buna N (Std.)	
	<b>V</b> Fluorocarbon	

For Coils with Zener Diode, add "Z" to option code. For example: "ERZ". Not available on all models. See coil option info. on pages 3.200.1 & 3.400.1