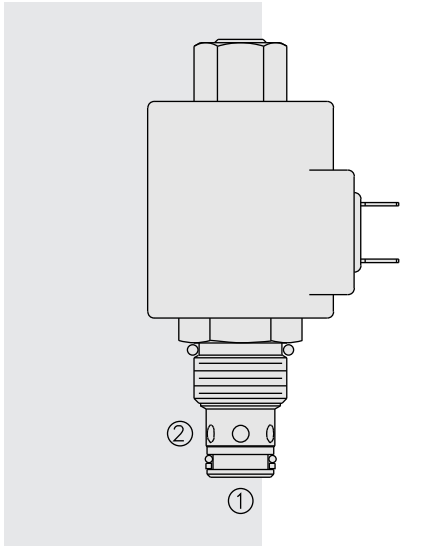


# SV10-23 Poppet, 2-Way, Normally Open



## DESCRIPTION

A solenoid-operated, two-way, poppet-type, normally open, screw-in, hydraulic cartridge valve.

## OPERATION

When de-energized, the **SV10-23** allows bidirectional flow from 2 to 1. With the sensor option, the neutral sensor will signal OFF or LOW.

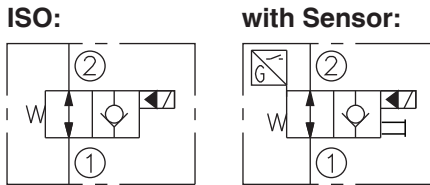
When energized, the valve's poppet closes to block flow from 2 to 1. In this mode, the cartridge allows free reverse flow from 1 to 2 after overcoming the solenoid force (requires 3.4 to 10.3 bar / 50 to 150 psi). With the sensor option, the neutral sensor will signal ON or HIGH.

**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.
- Optional waterproof E-Coils rated up to IP69K.
- Manual override option.
- Unitized, molded coil design.
- Industry common cavity.

## SYMBOLS



## RATINGS

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

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

**Flow:** See Performance Chart

**Internal Leakage:** 0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)

**Temperature:** with standard Buna N seals: -40 to 100°C (-40° to 212°F);  
with Fluorocarbon seals: -26 to 204°C (-15°F to 400°F);  
Sensor Option: -40°C to 110°C (-40°F to 230°F)

**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.  
**Response Time with Sensor:** 158 ms pull-in, 57 ms drop-out

**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

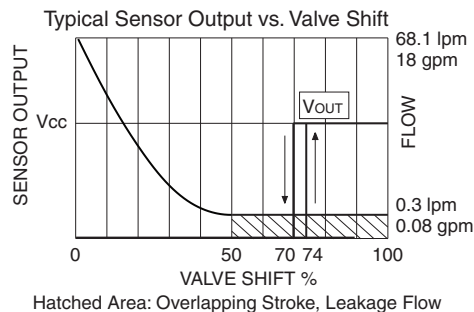
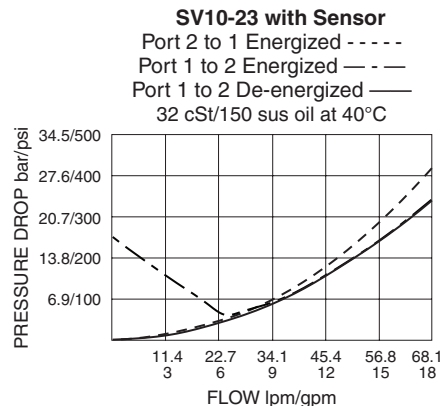
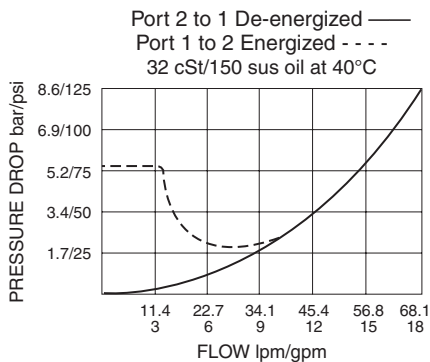
**Installation:** No restrictions; See page 9.020.1

**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

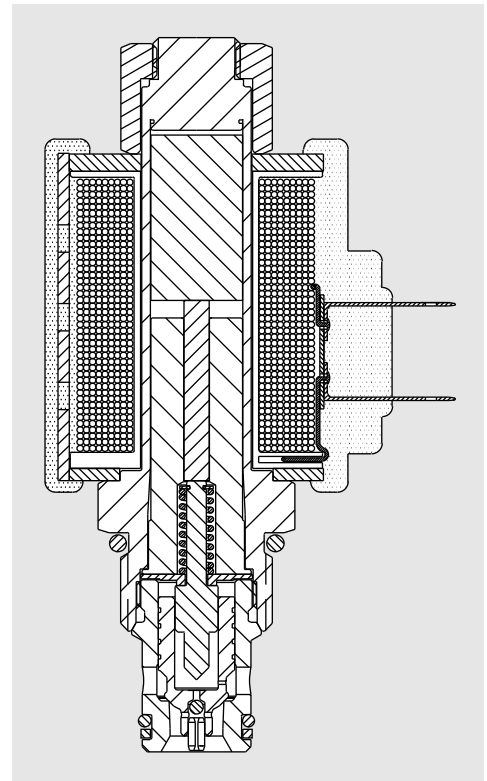
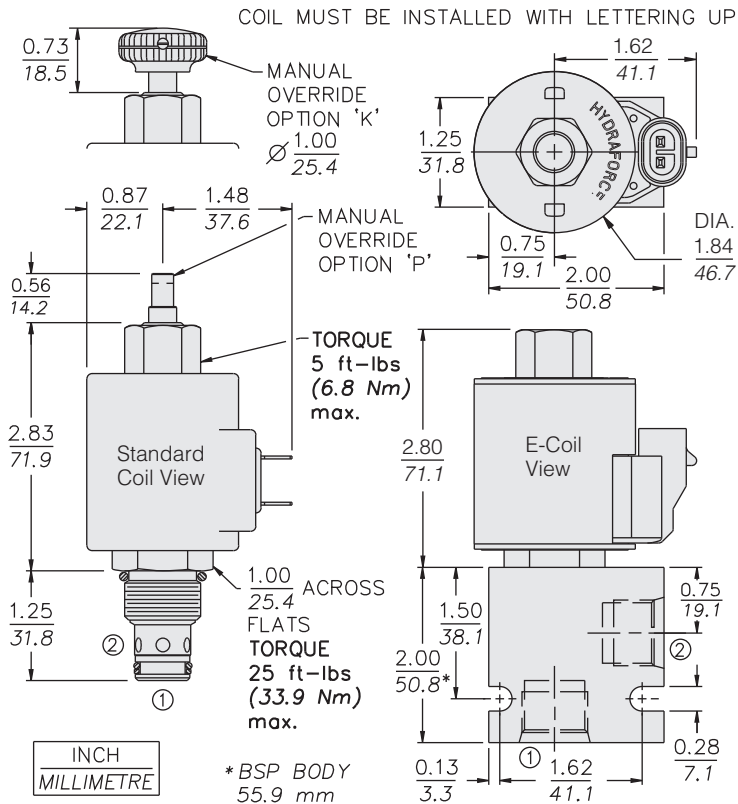
**Coil Nut:** Part No. 7004420

## PERFORMANCE (Cartridge Only)



# SV10-23

## 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: 0.45 kg. (1.0 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.

**D-Coil:** Weight: 0.27 kg. (0.60 lbs.); Unitized thermo-plastic 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)23(A)** - - - - - Sensor Option: See page 3.010.1

With sensor option, use model code SV10-P23A . . . See page 3.010.1

Without sensor option, use model code SV10-23 . . .

<b>Option</b>	None (Blank)	
	152µ Screen	<b>S</b>
	Manual Override	<b>P</b>
	Manual Override	<b>K</b>
For Manual Override options see page 1.001.1		
<b>Porting</b>	Cartridge Only	<b>0</b>
	SAE 6	<b>6T</b>
	SAE 8	<b>8T</b>
	1/4 in. BSP*	<b>2B</b>
	3/8 in. BSP*	<b>3B</b>
	1/2 in. BSP*	<b>4B</b>

<b>Voltage</b>	<b>Std. Coil</b>
<b>0</b>	Less Coil**
<b>10</b>	10 VDC†
<b>12</b>	12 VDC
<b>24</b>	24 VDC
<b>36</b>	36 VDC
<b>48</b>	48 VDC
<b>24</b>	24 VAC
<b>115</b>	115 VAC
<b>230</b>	230 VAC

\*\*Includes D-Coil Nut

† DS, DW or DL terminations only

**E-Coils:** 10,12,20 or 24 VDC only.

<b>Seals</b>	<b>N</b>	Buna N (Std.)
	<b>V</b>	Fluorocarbon

**Sensor Type**

**2** Low to High

**Sensor/Connector**

**N** Neutral Sense/DT04-4P

**M** Neutral Sense/M12-4P

**Mating Connectors:**

DT06-4S: Part No. 4001953

M12-4S: available at [www.turck.com](http://www.turck.com) or [www.binder-usa.com](http://www.binder-usa.com)

<b>Coil Termination</b>	<b>E-Coil</b>	<b>D-Coil</b>
Deutsch DT04-2P	<b>ER</b> (IP69K)	<b>DR</b> (IP65)
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)

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 & 3.400.1