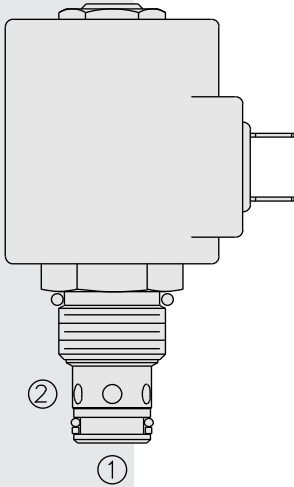


SV10-20 Poppet, 2-Way, Normally Closed



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 **SV10-20** acts as a check valve, allowing flow to pass from 1 to 2, while blocking flow in the reverse direction. With the sensor option, the neutral sensor will signal ON or HIGH.

When energized, the poppet lifts to open the 2 to 1 flow path. In this mode, flow from 1 to 2 is severely restricted. (If this path is required, see model SV10-22, page 1.044.1.) With the sensor option, the neutral sensor will signal LOW or OFF.

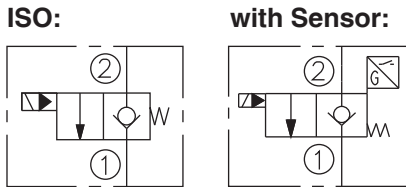
Operation of Manual Override Option: To override, push button in, twist counter-clockwise 180° and release. In this position, the valve will remain open.

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

FEATURES

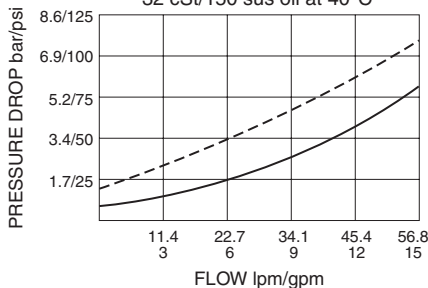
- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional waterproof E-Coils rated up to IP69K.
- Manual override option.
- Unitized, molded coil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

SYMBOLS

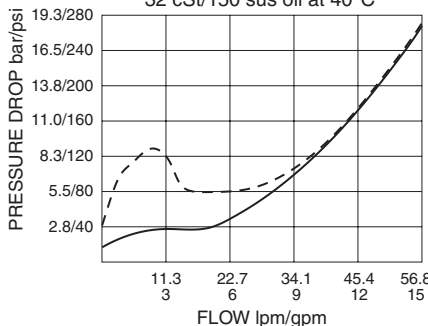


PERFORMANCE (Cartridge Only)

SV10-20 without Sensor
 2 to 1 energized ———
 1 to 2 de-energized - - - -
 32 cSt/150 sus oil at 40°C



SV10-20 with Sensor
 Port 2 to 1 Energized ———
 Port 1 to 2 De-energized - - - -
 32 cSt/150 sus oil at 40°C



RATINGS

Operating Pressure: 241 bar (3500 psi)

Proof Pressure: 345 bar (5000 psi)

Flow: Up to 56.8 lpm (15 gpm); see performance chart

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

Temperature: -40 to 100°C (-40° to 212°F) with standard Buna N seals
 -26 to 204°C (-15°F to 400°F) with Fluorocarbon seals
 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: 40 msec.; De-energized: 32 msec.
 Response Time with Sensor: 53 ms pull-in, 110 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

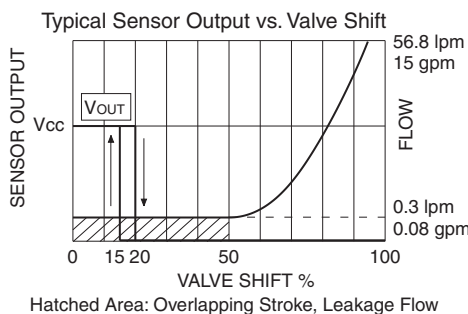
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

Installation: No restrictions; See page 9.020.1

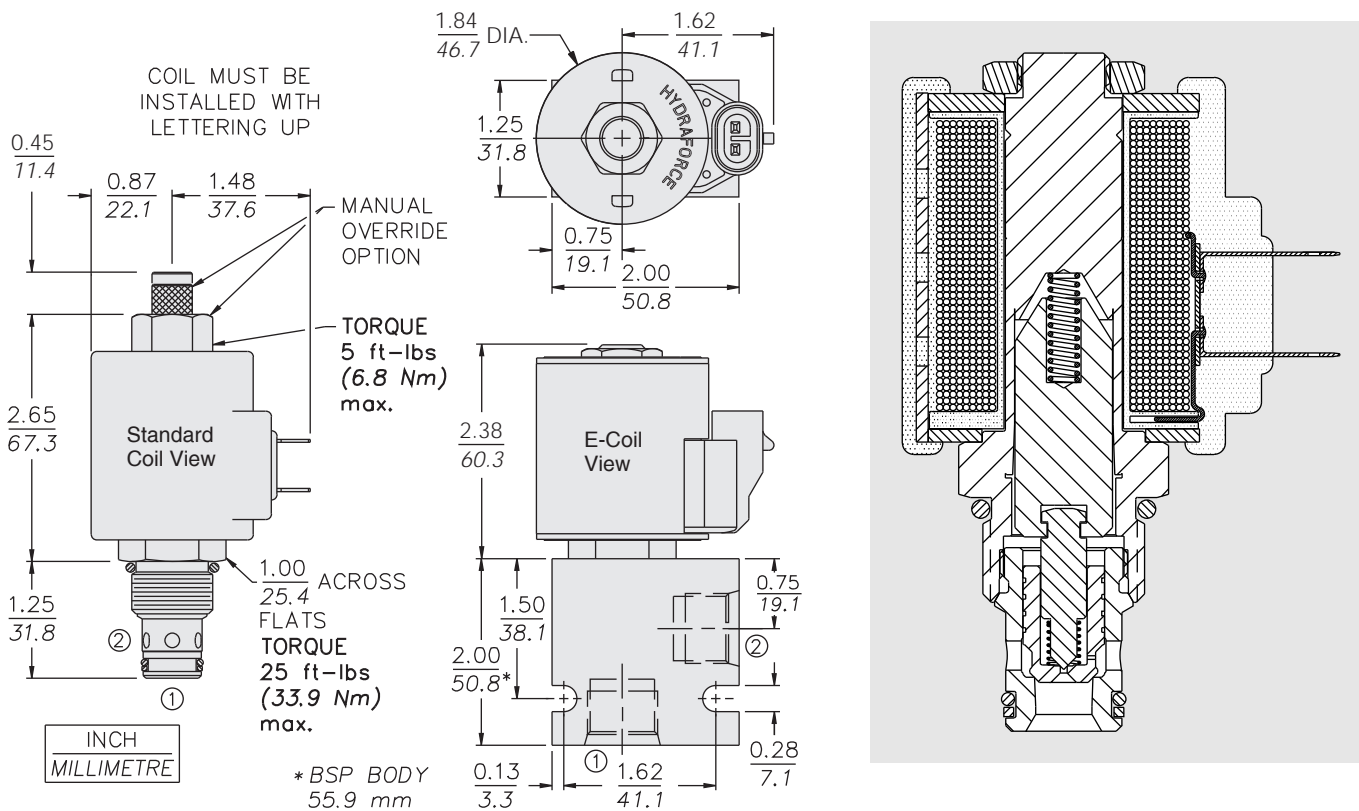
Cavity: VC10-2; See page 9.110.1; **Cavity Tool:** CT10-2XX; See page 8.600.1

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

Coil Nut: Part No. 7004400



DIMENSIONS



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 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)20(A)

With sensor option, use model code SV10-P20A . . . See page 3.010.1

Without sensor option, use model code SV10-20 . . .

- Option**
- None (Blank)
 - Screen **S**
 - Manual Override **M**
 - Manual Override **Y**
 - Manual Override **J**

For Manual Override options see page 1.001.1

- Porting**
- Cartridge Only **0**
 - SAE 6 **6T**
 - SAE 8 **8T**
 - 1/4 in. BSP* **2B**
 - 3/8 in. BSP* **3B**
 - 1/2 in. BSP* **4B**

*BSP Body; U.K. Mfr. Only

Voltage Std. Coil

- 0** Less Coil**
- 10** 10 VDC†
- 12** 12 VDC
- 24** 24 VDC
- 36** 36 VDC
- 48** 48 VDC
- 24** 24 VAC
- 115** 115 VAC
- 230** 230 VAC

**Includes D-Coil Nut

† DS, DW or DL terminations only

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

- Seals**
- N** Buna N (Std.)
 - V** Fluorocarbon

- Sensor Option: See page 3.010.1

Sensor Type

- 1** High to Low

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 or www.binder-usa.com

- | Coil Termination | E-Coil | D-Coil |
|-------------------------|-------------------|------------------|
| Deutsch DT04-2P | ER (IP69K) | DR (IP65) |
| Metri-Pack® 150 | EY (IP69K) | DY (IP65) |
| Dual Lead Wires | EL (IP69K) | DL (IP65) |
| Amp Jr. Timer | EJ (IP67) | — |
| DIN 43650 | EG (IP65) | DG (IP65) |
| Dual Spades | — | DS (IP65) |

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