

**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**

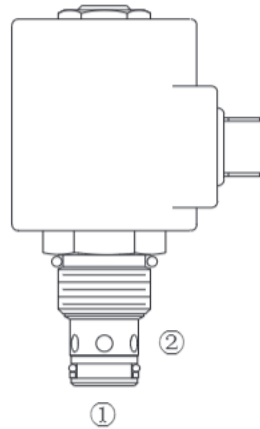
When de-energized, INSV10-20 acts as a check valve, allowing flow to pass from ① to ②, while blocking flow in the reverse direction. With the sensor option, the neutral sensor will signal ON or HIGH. When energized, the poppet lifts to open the ② to ① flow path. In this mode, flow from ① to ② is severely restricted. (If this path is required, see model INSV10-22, With the sensor option, the neutral sensor will signal LOW or OFF. Operation of Manual Override Option: To override, push button in, twist counterclockwise 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**

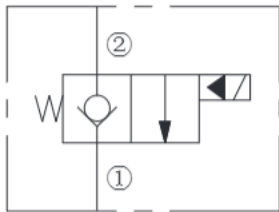
- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Manual Override Options.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil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

**RATINGS**

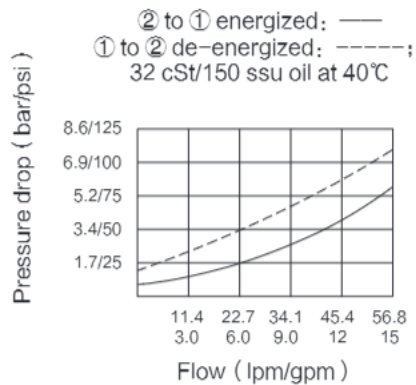
**Operating Pressure:** 207 bar (3000 psi)  
**Proof Pressure:** 350 bar (5075 psi)  
**Flow:** See Performance Chart  
**Internal Leakage:** 0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)  
**Temperature:** -40°C to 120°C, with Buna N seals  
**Coil Duty Rating:** Continuous from 85% to 115% of nominal voltage  
**Response Time:** First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 40 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:** 121.67 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)  
**Fluids:** Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)  
**Cavity:** T10-2B; See bottom of this catalog.



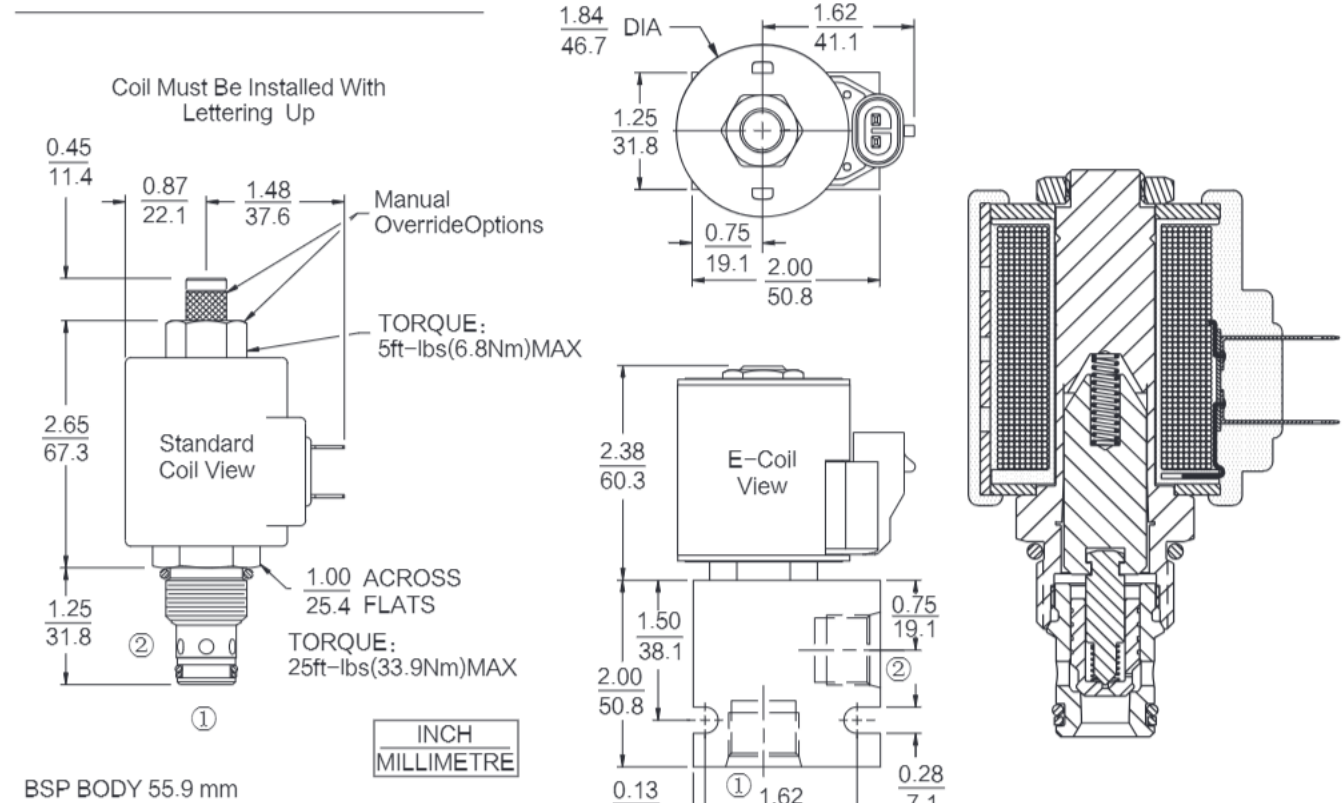
**ISO SYMBOL**



**PERFORMANCE (Cartridge Only)**



**DIMENSIONS**



**MATERIALS**

**Cartridge:** Weight: 0.16kg (0.35lbs) INSV10-20  
 Steel with hardened worksurfaces.  
 Zinc-plated exposed surfaces;  
 Buna N O-rings and back-up standard.

**Standard Ported Body:** Weight: 0.16kg (0.35lbs); Anodized high strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.

**TO ORDER**

Options	Voltage Std. Coil	Termination (VDC) Std. Coil
None (Blank) S	0 Less Coil**	DS Dual Spades
Screen S	10 10 VDC†	DG DIN 43650
Manual Override M	12 12 VDC	DL Leadwires (2)
Manual Override Y	24 24 VDC	DL/W Leads w/ Weatherpak® Connectors
Manual Override J	36 36 VDC	DR Deutsch DT04-2P
	48 48 VDC	
	24 24 VAC	<b>Termination (VAC) Std. Coil</b>
	115 115 VAC	AG DIN 43650
	230 230 VAC	AP 1/2 in. Conduit
		<b>Termination (VDC) E-Coil</b>
		ER Deutsch DT04-2P (IP69K Rated)
		EL Leadwires (2)
		EY Metri-Pack® 150 (IP69K Rated)

\*\*Includes Std. Coil Nut †DS, DW or DL terminations only.

Coils with internal diode are