

## INSV10-25 Spool, 2-Way, Normally Open

## INSV10-25

### DESCRIPTION

A solenoid-operated, two-way, normally open, direct-acting, spool-type, screw-in hydraulic cartridge valve, designed to function as a bidirectional blocking valve.

### OPERATION

When de-energized, INSV10-25 allows flow in both directions. When energized, the cartridge's spool shifts to close the bidirectional flow path.

Operation of Manual Override Option: The manual override feature is intended for emergency use, not continuous duty operation. To override, push button in and twist counterclockwise 180°. The internal spring will push the button out. In this position, the valve may be only partially shifted. To assure full override shift, pull the button out to its fullest extension and hold it in this position. To return to normal valve function, push button in, twist clockwise 180° and release. Override will be detented in this position..

### FEATURES

- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Both ports may be fully pressurized.
- 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:** Inlet at port 2: 18.9 lpm (5 gpm) max;  
Inlet at port 1: 22.7 lpm (6 gpm) max.

**Internal Leakage:** 82 cm<sup>3</sup>/minute (5 in<sup>3</sup>/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: 60 ms; De-energized: 60 ms

**Initial Coil Current Draw at 20°C :**

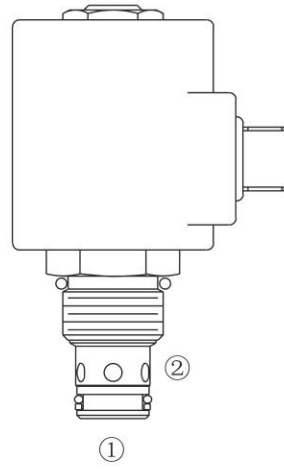
**Standard Coil:** Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).

**E-Coil:** 1.7 amps at 12 VDC; 0.85 amps at 24 VDC

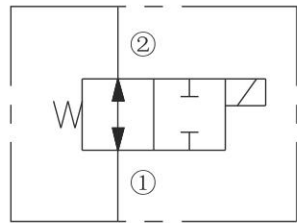
**Minimum Pull-in Voltage:** 85% of nominal at 207 bar (3000 psi)

**Fluids:** Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

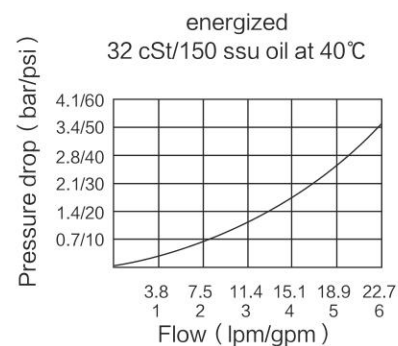
**Cavity:** T10-2B; See bottom of this catalog.



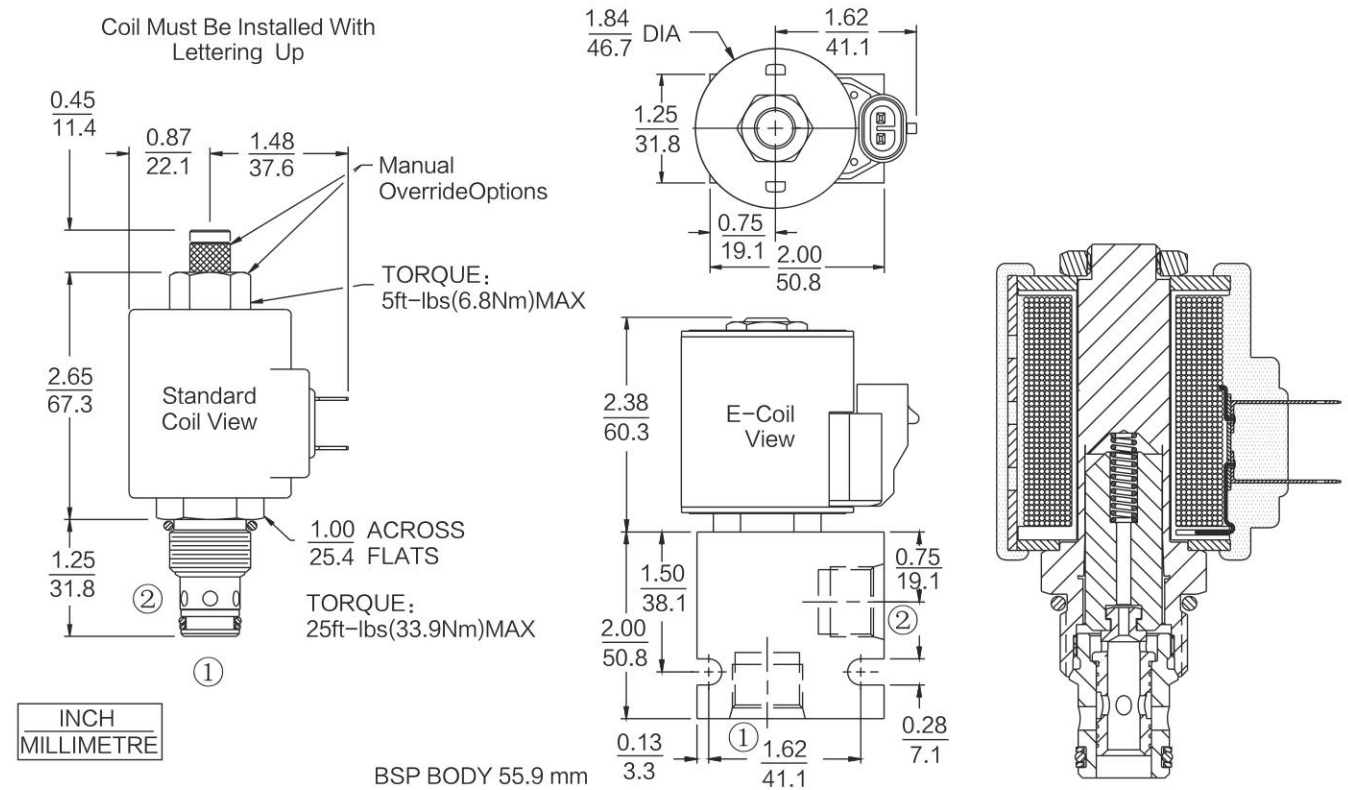
### ISO SYMBOL



### PERFORMANCE (Cartridge Only)



### DIMENSIONS



### MATERIALS

**Cartridge: Weight:** 0.16kg (0.35lbs) INSV10-25  
Steel with hardened work surfaces.  
Zinc-plated exposed surfaces;  
Buna N O-rings and back-ups 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.

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

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

### TO ORDER

Options	Voltage Std. Coil	Termination (VDC) Std. Coil
None (Blank)	0 Less Coil**	DS Dual Spades
Manual Override M	10 10 VDC†	DG DIN 43650
Manual Override Y	12 12 VDC	DL Leadwires (2)
Manual Override J	24 24 VDC	DLW Leads w/ Weatherpak® Connectors
	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