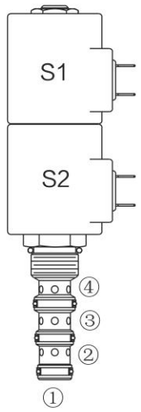
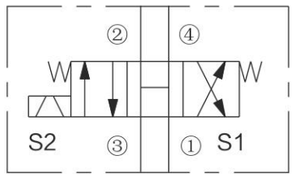
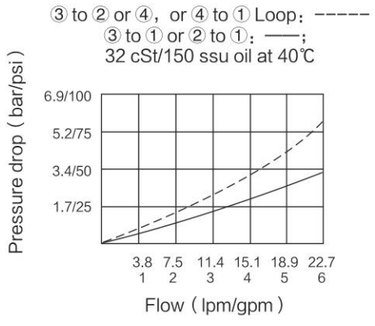


ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 4-way, 3-position, direct-acting, spool-type, open center, screw-in hydraulic cartridge valve.

OPERATION

When de-energized, INSV10-47B cylinder ports are open and common to 3 and 1. When coil #1 is energized, flow is allowed from 3 to 4, and from 2 to 1. When coil #2 is energized,flow is allowed from 3 to 2, and from 4 to 1. In circuits where work port flows are unequal due to cylinder ratios, the higher return flow should be directed to port 2.

NOTE: While 1 may be fully pressurized, it is not intended for use as the valve's inlet.Operation of Manual Override Option: To override, push the knurled button to activate the coil #2 (S2) function, or pull the knob to activate the coil #1 (S1) function.

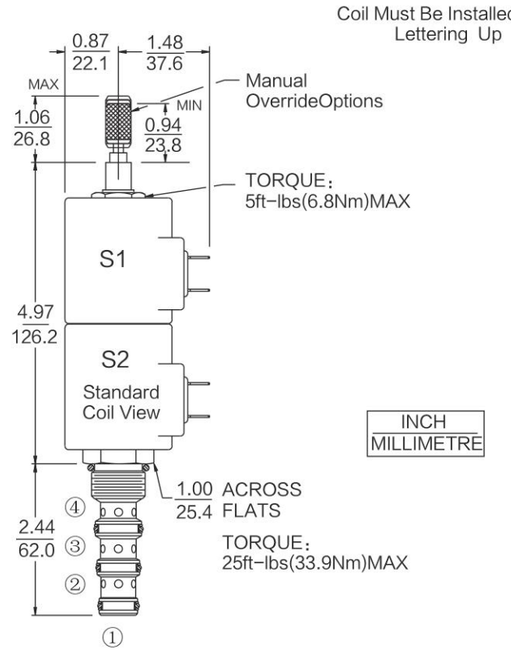
FEATURES

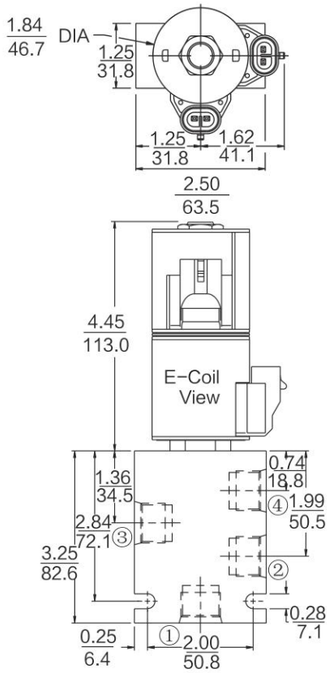
- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Manual Override Options.
- Optional waterproof E-Coils rated up to IP69K.
- Efficient wet-armature construction.
- All ports may be fully pressurized.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Industry common cavity.

RATINGS

Operating Pressure:240 bar (3500 psi)
Proof Pressure: 390 bar (5700 psi)
Flow:MAX 22.7 lpm (6 gpm)
Internal Leakage:
328 ml/minute (20 cu. in./minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃, 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: 30 ms; De-energized: 10 ms
Initial Coil Current Draw at 20℃:
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:T10-4A; See bottom of this catalog.

DIMENSIONS





MATERIALS

Cartridge: Weight:0.30kg (0.65lbs) Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.

Standard Ported Body:Weight: 0.36kg (0.80lbs); Anodized highstrength 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

INSV10-47B - - - -

Options

None	(Blank)
Manual Override	M
Manual Override	T

Porting

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

Seals

Buna N (Std.)	N
Fluorocarbon	V

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

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std. Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

AG	DIN 43650
AP	1/2 in.Conduit

Termination (VDC) E-Coil

ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.