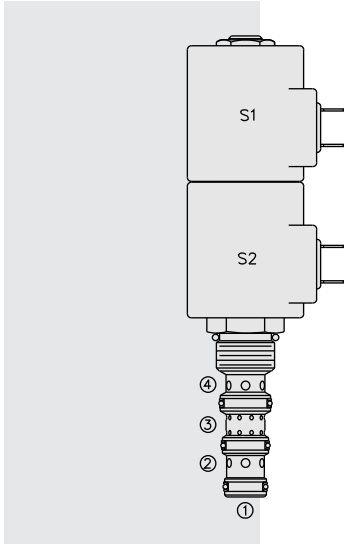


# SV10-47F Spool, 4-Way, 3-Position, Tandem Center



## DESCRIPTION

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

## OPERATION

When de-energized, the **SV10-47F** blocks cylinder ports, while allowing flow from 3 to 1. When coil #1 is energized, flow is allowed from 3 to 2, and from 4 to 1. When coil #2 is energized, flow is allowed from 2 to 3, while blocking flow to 1 and 4.

In circuits where work port flows are unequal due to cylinder ratios, the higher return flow should be directed to port 2.

**While 1 may be fully pressurized, it is not intended for use as the valve's inlet.**

**Operator 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 option.
- 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:** 15 lpm (4 gpm) max.

**Internal Leakage:** 328 cc/minute (20 cu. in./minute) max. at 207 bar (3000 psi)

**Temperature:** -40 to 120°C with standard Buna 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: 10 msec.

**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:** VC10-4; See page 9.110.1; **Cavity Tool:** CT10-4XX; See page 8.600.1

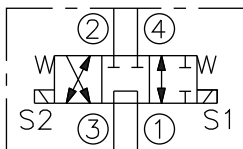
**Seal Kit:** SK10-4X-MMM; See page 8.650.1

**Coil Nut:** Part No. 7004400; **Manual Override Coil Nut:** Part No. 4528180

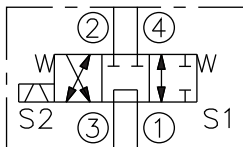
**Coil Spacer:** E-Coil Spacer Part No. 4539700; Std. D-Coil Spacer Part No. 7000280; If cartridge is ordered "Less Coil," D-Coil spacer will be provided.

## SYMBOLS

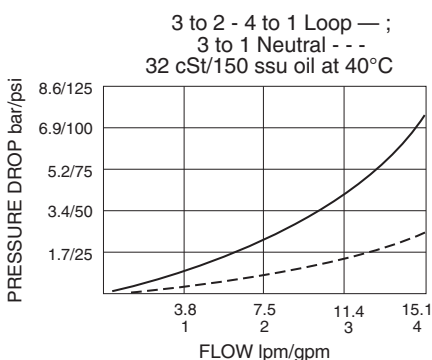
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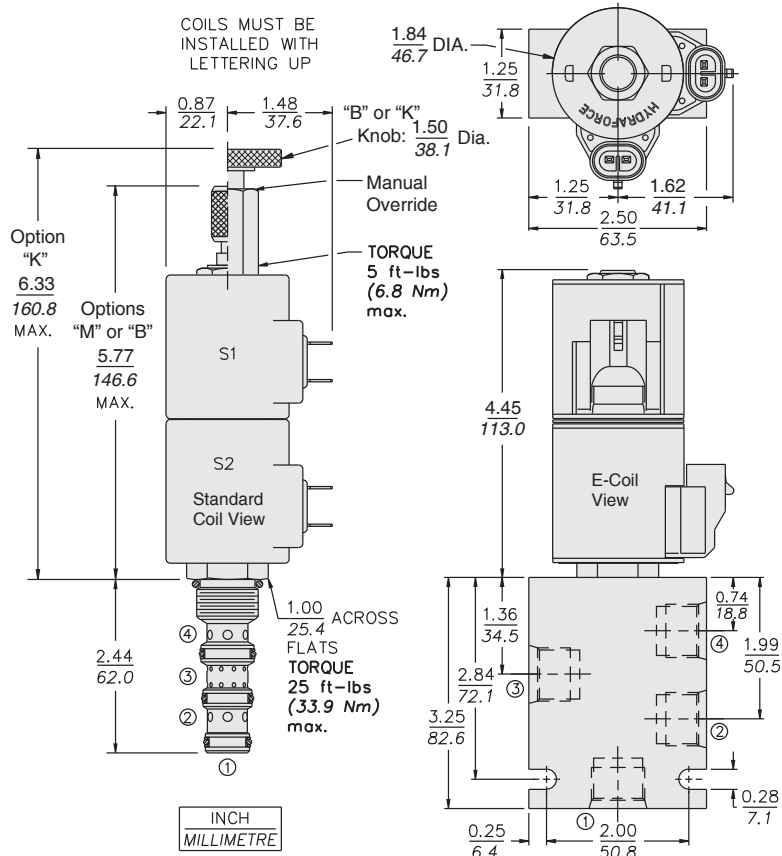
### ISO:



## PERFORMANCE (Cartridge Only)



**DIMENSIONS**



**MATERIALS**

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

**Standard Ported Body:** Weight: 0.36 kg. (0.80 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.

**Standard Coil:** Weight each: 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.); Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors. See page 3.400.1

**TO ORDER**

**SV10-47F**

<b>Option</b>	<b>Porting</b>	<b>Voltage</b>	<b>Coil Termination</b>	<b>E-Coil</b>	<b>D-Coil</b>
None (Blank)	Cartridge Only <b>0</b>	<b>Std. D-Coil</b>	Deutsch DT04-2P <b>ER</b> (IP69K)	<b>DR</b> (IP65)	
Manual Override <b>M</b>	SAE 6 <b>6T</b>	<b>0</b> Less Coil**	Metri-Pack® 150 <b>EY</b> (IP69K)	<b>DY</b> (IP65)	
Manual Override <b>B</b>	SAE 8 <b>8T</b>	<b>10</b> 10 VDC†	Dual Lead Wires <b>EL</b> (IP69K)	<b>DL</b> (IP65)	
Manual Override <b>K</b>	1/4 in. BSP* <b>2B</b>	<b>12</b> 12 VDC	Amp Jr. Timer <b>EJ</b> (IP67)	—	
For Manual Override options see page 1.001.1	3/8 in. BSP* <b>3B</b>	<b>20</b> 20 VDC	DIN 43650 <b>EG</b> (IP65)	<b>DG</b> (IP65)	
	*BSP Body; U.K. Mfr. Only	<b>24</b> 24 VDC	Dual Spades —	<b>DS</b> (IP65)	
		<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 and Spacer.			
		† DS, DW or DL terminations only.			
		<b>E-Coils:</b> 10, 12, 20, 24 VDC only.			
<b>Seals</b>	Buna N (Std.) <b>N</b>				
	Fluorocarbon <b>V</b>				

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