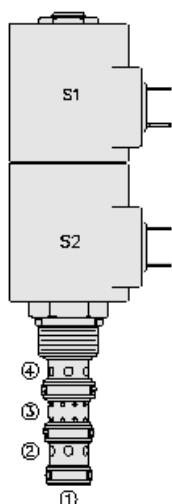




## Overview



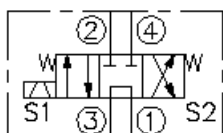
### Description

A solenoid-operated, 4-port, 3-position, direct acting spool type screw-in hydraulic cartridge valve. When de-energized, the SV10-47AX 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 3 to 4, and from 2 to 1. In circuits where work port flows are unequal due to cylinder ratios, the higher return flow should be directed to port 2.

### 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.

### Symbol



## Ratings

### Pressure Ratings

|                 |                      |
|-----------------|----------------------|
| Pressure rating | 250 bar (3625 psi)   |
| Proof pressure  | 344 bar (5000 psi)   |
| Burst pressure  | 779 bar (11.300 psi) |

### Flow Ratings

|                          |                                        |                                      |
|--------------------------|----------------------------------------|--------------------------------------|
| Flow rating              | <b>- Note:</b> See "performance range" |                                      |
| Maximum internal leakage | 328 ml/min (20 in <sup>3</sup> /min)   | <b>- Note:</b> At 207 bar (3000 psi) |

### Temperature Ratings

|                             |                               |                                        |
|-----------------------------|-------------------------------|----------------------------------------|
| Operating fluid temperature | -40 to 100 °C (-40 to 212 °F) | <b>- Note:</b> With buna N seals       |
|                             | -26 to 204 °C (-15 to 400 °F) | <b>- Note:</b> With fluorocarbon seals |
|                             | -54 to 107 °C (-65 to 225 °F) | <b>- Note:</b> With polyurethane seals |
| Storage temperature         | -40 to 70 °C (-40 to 160 °F)  |                                        |
| Ambient temperature         | -40 to 70 °C (-40 to 160 °F)  |                                        |

## Operating Parameters

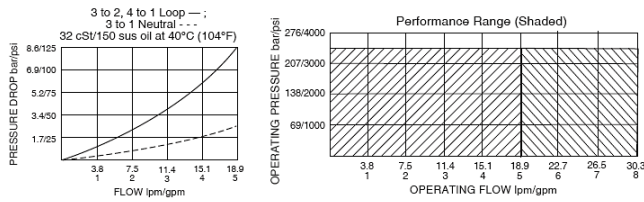
|                                       |                                                                        |
|---------------------------------------|------------------------------------------------------------------------|
| Fluids                                | Mineral based or synthetic hydraulic fluid with lubricating properties |
| Fluid viscosity range                 | 7.4 to 420 cSt                                                         |
| Maximum operating contamination level | 20/18/14 per ISO 4406                                                  |

## Properties

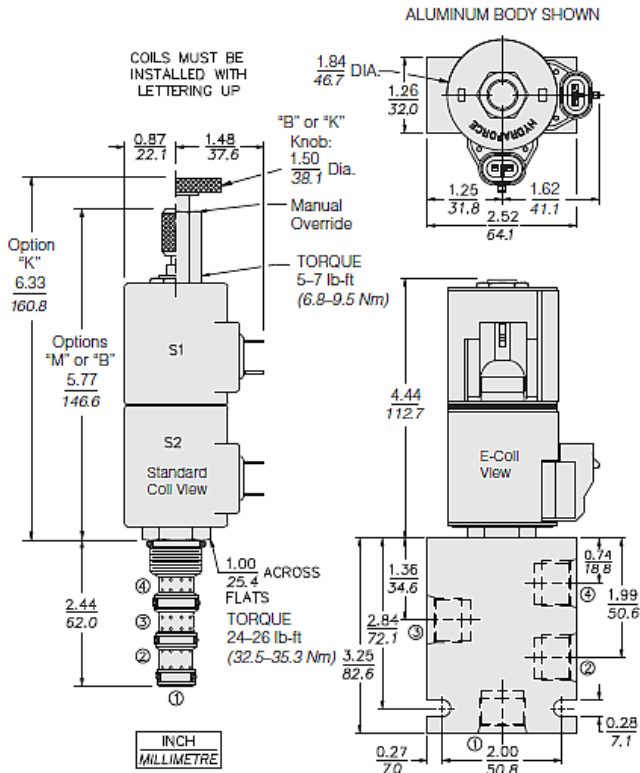
|                              |                                             |
|------------------------------|---------------------------------------------|
| Unit weight                  | 0.28 kg (0.61 lb)                           |
| Internal wetted surface area | 245 cm <sup>2</sup> (38.0 in <sup>2</sup> ) |



## Performance



## Dimensions



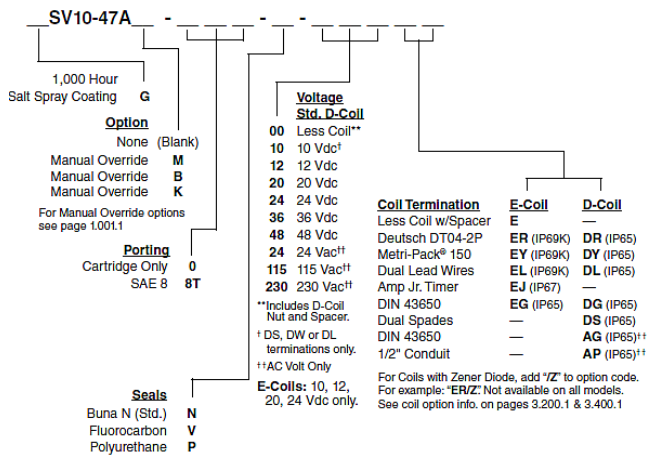
## Installation Specifications

|                               |                                   |
|-------------------------------|-----------------------------------|
| Cavity                        | VC10-4                            |
| Cartridge installation torque | 32.5 to 35.3 N-m (24 to 26 ft-lb) |
| Maximum allowable torque      | 67.8 N-m (50 ft-lb)               |
| Coil nut torque               | 6.8 to 9.5 N-m (5 to 7 ft-lb)     |
| Orientation restriction       | None                              |

## Accessories

|          |             |                                |
|----------|-------------|--------------------------------|
| Seal kit | SK10-4X-MMM | - <b>Note:</b> X = seal option |
|----------|-------------|--------------------------------|

## Order Code



## Model Options

### SV10-47AE-H-J-L

#### E Manual Override

| CODE  | DESCRIPTION                                               |
|-------|-----------------------------------------------------------|
| B     | Momentary Push/Pull Override, 1.5" Diameter Aluminum Knob |
| BLANK | NONE                                                      |
| K     | Three Position Override, 1.5" Diameter Aluminum Knob      |
| M     | Momentary Push/Pull Override, Red Knurled Knob            |

#### H Line Body

| CODE | DESCRIPTION        |
|------|--------------------|
| 0    | No Body            |
| 6T   | Aluminum SAE 6     |
| 8T   | Aluminum SAE 8     |
| 6TD  | Ductile Iron SAE 6 |

#### J Seal

| CODE | DESCRIPTION   |
|------|---------------|
| N    | Buna-N        |
| V    | Fluorocarbon  |
| P    | Polyurethane  |
| U    | PPDI Urethane |

#### L Coil

| CODE   | DESCRIPTION                              |
|--------|------------------------------------------|
| 0      | No Coil, D-Coil Spacer                   |
| 0E     | No Coil, E-Coil Spacer                   |
| 10DG   | 10 VDC, D-Coil, DIN 43650                |
| 10DL   | 10 VDC, D-Coil, Dual Lead Wires          |
| 10DR/D | 10 VDC, D-Coil, Deutsch with Diode       |
| 10DS   | 10 VDC, D-Coil, Dual Spade               |
| 10EL   | 10 VDC, E-Coil, Dual Lead Wires          |
| 10ER   | 10 VDC, E-Coil, Deutsch                  |
| 10ER/Z | 10 VDC, E-Coil, Deutsch with Zener Diode |
| 12DG   | 12 VDC, D-Coil, DIN 43650                |



| CODE     | DESCRIPTION                                                     |
|----------|-----------------------------------------------------------------|
| 12DL     | 12 VDC, D-Coil, Dual Lead Wires, 18 inches long                 |
| 12DL/36  | 12 VDC, D-Coil, Dual Lead Wires, 36 inches long                 |
| 12DL/W   | 12 VDC, D-Coil, Dual Lead Wires with Weatherpak                 |
| 12DL/W/D | 12 VDC, D-Coil, Dual Lead Wires with Weatherpak with Diode      |
| 12DR     | 12 VDC, D-Coil, Deutsch                                         |
| 12DR/D   | 12 VDC, D-Coil, Deutsch with Diode                              |
| 12DR/Z   | 12 VDC, D-Coil, Deutsch with Zener Diode                        |
| 12DS     | 12 VDC, D-Coil, Dual Spade                                      |
| 12EG     | 12 VDC, E-Coil, DIN 43650                                       |
| 12EJ     | 12 VDC, E-Coil, AMP Jr.                                         |
| 12EL     | 12 VDC, E-Coil, Dual Lead Wires, 18 inches long                 |
| 12EL/36  | 12 VDC, E-Coil, Dual Lead Wires, 36 inches long                 |
| 12EL/W/Z | 12 VDC, E-Coil, Dual Lead Wires with WeatherPak and Zener Diode |
| 12EL/Z   | 12 VDC, E-Coil, Dual Lead Wires with Zener Diode                |
| 12ER     | 12 VDC, E-Coil, Deutsch                                         |
| 12ER/Z   | 12 VDC, E-Coil, Deutsch with Zener Diode                        |
| 12EY     | 12 VDC, E-Coil, Metri-Pack 150                                  |
| 12EY/Z   | 12 VDC, E-Coil, Metri-Pack 150 with Zener Diode                 |
| 20DR/D   | 20 VDC, D-Coil, Deutsch with Diode                              |
| 20DS     | 20 VDC, D-Coil, Dual Spade                                      |
| 20ER     | 20 VDC, E-Coil, Deutsch                                         |
| 24AG     | 24 VDC, D-Coil, DIN 43650                                       |
| 24AP     | 24 VDC, D-Coil, 1/2" Conduit and Dual Lead Wires                |
| 24DG     | 24 VDC, D-Coil, DIN 43650                                       |
| 24DL     | 24 VDC, D-Coil, Dual Lead Wires                                 |
| 24DL/W   | 24 VDC, D-Coil, Dual Lead Wires with Weatherpak                 |
| 24DL/W/D | 24 VDC, D-Coil, Dual Lead Wires with Weatherpak with Diode      |
| 24DP     | 24 VDC, D-Coil, 1/2" Conduit and Dual Lead Wires                |
| 24DR     | 24 VDC, D-Coil, Deutsch                                         |
| 24DR/D   | 24 VDC, D-Coil, Deutsch with Diode                              |
| 24DS     | 24 VDC, D-Coil, Dual Spade                                      |
| 24EG     | 24 VDC, E-Coil, DIN 43650                                       |
| 24EJ     | 24 VDC, E-Coil, AMP Jr.                                         |
| 24EL     | 24 VDC, E-Coil, Dual Lead Wires, 18 inches long                 |
| 24EL/36  | 24 VDC, E-Coil, Dual Lead Wires, 36 inches long                 |
| 24EL/W/Z | 24 VDC, E-Coil, Dual Lead Wires with WeatherPak and Zener Diode |
| 24ER     | 24 VDC, E-Coil, Deutsch                                         |
| 24ER/Z   | 24 VDC, E-Coil, Deutsch with Zener Diode                        |
| 24EY     | 24 VDC, E-Coil, Metri-Pack 150                                  |
| 24EY/Z   | 24 VDC, E-Coil, Metri-Pack 150 with Zener Diode                 |
| 36DS     | 36 VDC, D-Coil, Dual Spade                                      |
| 115AG    | 115 VAC, D-Coil, DIN 43650                                      |



| CODE  | DESCRIPTION                                       |
|-------|---------------------------------------------------|
| 115AP | 115 VAC, D-Coil, 1/2" Conduit and Dual Lead Wires |
| 230AG | 230 VAC, D-Coil, DIN 43650                        |
| 230AP | 230 VAC, D-Coil, 1/2" Conduit and Dual Lead Wires |