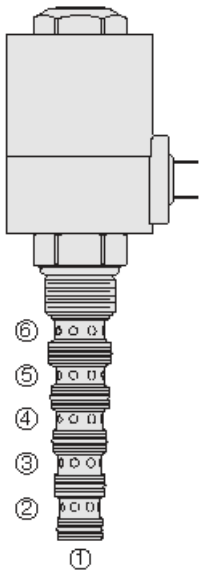




Overview



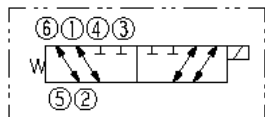
Description

A solenoid-operated, 2 position, 6 way, direct-acting spool-type, screw-in hydraulic cartridge valve. It is intended for use as a selector valve in selector or series/parallel drive circuits. When de-energized, the SV12-60X allows bidirectional flow between port 5 and port 6, and between port 1 and port 2, while blocking flow at port 3 and port 4. When energized, the spool shifts to allow bidirectional flow between port 4 and port 5 and between port 3 and port 2, while blocking flow at port 1 and port 6

Features

- Bi-directional flow.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- All ports may be fully pressurized.
- Heavy-duty waterproof E&C Coils rated up to IP69K.
- External metal-shell coil design.

Symbol



Ratings

Pressure Ratings

| | |
|-----------------|---------------------|
| Pressure rating | 240 bar (3500 psi) |
| Proof pressure | 483 bar (7000 psi) |
| Burst pressure | 690 bar (10000 psi) |

Flow Ratings

| | | |
|--------------------------|--|--|
| Flow rating | - Note: See table (sheet 3) for specific circuit type | |
| Maximum internal leakage | 295 ml/min (18 in ³ /min) | - Note: Max at 240 bar (3500 psi) |

Temperature Ratings

| | | |
|-----------------------------|-------------------------------|----------------------------------|
| Operating fluid temperature | -40 to 100 °C (-40 to 212 °F) | - Note: With buna N seals |
| | -26 to 204 °C (-15 to 400 °F) | - Note: With viton seals |
| Storage temperature | -40 to 70 °C (-40 to 160 °F) | |
| Ambient temperature | -40 to 70 °C (-40 to 160 °F) | |

Other Ratings

| | | |
|----------------------|---|---|
| Cycle life | 1 million cycles at rated pressure and flow | |
| Response | 135 ms | - Note: Pull-in, indication of shift with nominal voltage |
| | 30 ms | - Note: Drop-out, indication of shift with nominal voltage |
| | 140 ms | - Note: Pull-in, per NFPA/T3.5.30-19XX |
| | 60 ms | - Note: Drop-out, per NFPA/T3.5.30-19XX |
| Environmental rating | Ip67 (with integral connectors) | |

Operating Parameters

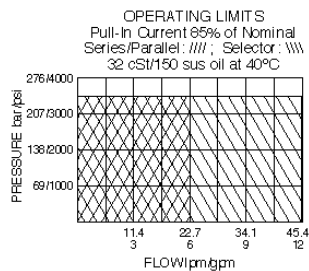
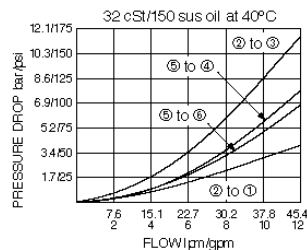
| | |
|---------------------------------------|--|
| Fluids | Mineral based or synthetic hydraulic fluid with lubricating properties |
| Fluid viscosity range | 7.4 to 420 cSt |
| Maximum operating contamination level | 20/18/14 per ISO 4406 |



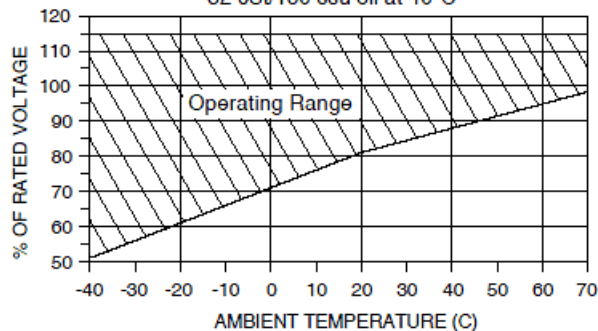
Properties

| | |
|------------------------------|---|
| Unit weight | 0.54 kg (1.20 lb) |
| Internal wetted surface area | 423 cm ² (65.6 in ²) |

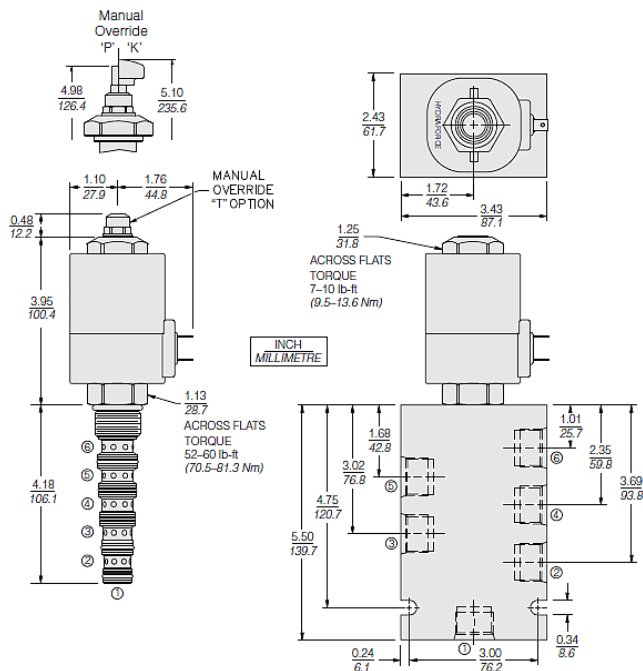
Performance



CONTINUOUS DUTY OPERATING RANGE
Minimum Voltage at the Coil Required for Pull-In
32 cSt/150 ssu oil at 40°C



Dimensions



Materials

Materials

Cartridge: Weight: 0.54 kg (1.2 lb); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and TFE back-ups standard.

Standard Ported Body: Anodized high-strength aluminum alloy, rated to 207 bar (3000 psi);

Coil: Weight: 1.36 kg (3.0 lb); Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

Installation Specifications

| | |
|-------------------------------|-----------------------------------|
| Cavity | VC12-6 |
| Cartridge installation torque | 70.5 to 81.4 N-m (52 to 60 ft-lb) |
| Maximum allowable torque | 122 N-m (90 ft-lb) |
| Coil nut torque | 9.5 to 13.6 N-m (7 to 10 ft-lb) |
| Orientation restriction | None |



Accessories

Seal kit SK12-6X-MMMMM - **Note:** X = seal option
 Housings
 Coils

Order Code

| POSITION | CODE | DESCRIPTION |
|----------|--------|---|
| | | SV12-60E-H-J-L |
| E | | Manual Override |
| E | BLANK | NONE |
| E | K | Momentary Push Override, Knob |
| E | P | Momentary Push Override, Button |
| E | T | Variable Position Override, Slotted Screw |
| H | | Line Body |
| H | 0 | No Body |
| H | 8T | Aluminum SAE 8 |
| H | 10T | Aluminum SAE 10 |
| J | | Seal |
| J | N | Buna-N |
| J | V | Fluorocarbon |
| J | P | Polyurethane |
| J | U | PPDI Urethane |
| L | | Coil |
| L | 0 | No Coil |
| L | 12EG | 12 VDC, E-Coil, DIN 43650 |
| L | 12EL | 12 VDC, E-Coil, Dual Lead Wires |
| L | 12EL/W | 12 VDC, E-Coil, Dual Lead Wires with WeatherPak |
| L | 12ER | 12 VDC, E-Coil, Deutsch |
| L | 12ER/Z | 12 VDC, E-Coil, Deutsch with Zener Diode |
| L | 12ES | 12 VDC, E-Coil, Dual Spade |
| L | 12EY | 12 VDC, E-Coil, Metri-Pack 150 |
| L | 24EG | 24 VDC, E-Coil, DIN 43650 |
| L | 24ER | 24 VDC, E-Coil, Deutsch |
| L | 24ER/Z | 24 VDC, E-Coil, Deutsch with Zener Diode |
| L | 24ES | 24 VDC, E-Coil, Dual Spade |

