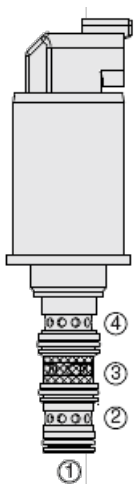




Overview



Description

The SV90-G40RX is a direct-acting, spool-type, 2-position, 4-way directional control valve. It is a drop-in, flange mounted, cartridge type valve for use with general purpose hydraulic fluids. The coil is an integral part of the valve and is not serviceable.

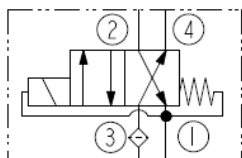
Operation

When de-energized, the SV90-G40RX allows flow from port 3 to port 4, and from port 2 to port 1. When energized, the spool shifts to allow flow from port 3 to port 2, and from port 4 to port 1.

Features

- Bi-directional operation.
- Reduced leakage.
- Low pressure drop
- Economical drop-in style.
- Fast response.
- Corrosion-resistant plating.
- Inlet port screen option for additional resistance to contamination.
- Higher flow capacity at lower temperatures.
- Integral waterproof coil standard. See page 3.400.1 for a description of tests conducted to verify coil waterproofing.
- Coil voltage range from 10 to 28 VDC.
- Top-mounted coil with several push-on termination options.
- Round flange with optional mounting plates provides more options for orientation.
- Retrofit mounting options also available.

Symbol



Ratings

Pressure Ratings

| | | |
|-----------------|--------------------|--|
| Pressure rating | 45 bar (650 psi) | - Note: Ports 2, 4, and 4 |
| | 35 bar (500 psi) | - Note: Port 1 |
| Proof pressure | 54 bar (780 psi) | - Note: Port 1 |
| | 207 bar (3000 psi) | - Note: Ports 2, 3, and 4 |
| Burst pressure | 165 bar (2400 psi) | - Note: All ports pressurized |
| | 275 bar (4000 psi) | - Note: Port 3 pressurized, ports 2 and 4 blocked |

Flow Ratings

| | | |
|--------------------------|---------------------------------------|------------------------------------|
| Flow rating | 30 lpm (8 gpm) | |
| Maximum internal leakage | 120 ml/min (7.3 in ³ /min) | - Note: At 45 bar (650 psi) |

Other Ratings

| | | |
|-------------------------|-----------------------------------|---|
| Cycle life | Ten million cycles | |
| Response | 30 ms | - Note: (pull-in) first indication of change of state with 100% voltage and flow rating |
| | 30 ms | - Note: (drop-out) first indication of change of state with 100% voltage and flow rating |
| Minimum pull-in voltage | 85% of nominal voltage | - Note: At 120 °C (248 °F) |
| Environmental rating | IP69k | |
| Corrosion protection | 960 hour salt spray per ASTM B117 | |

Temperature Ratings

| | | |
|-----------------------------|-------------------------------|--|
| Operating fluid temperature | -40 to 149 °C (-40 to 300 °F) | - Note: With HNBR seals |
| | -26 to 204 °C (-15 to 400 °F) | - Note: With fluorocarbon seals |
| Storage temperature | -40 to 70 °C (-40 to 160 °F) | |
| Ambient temperature | -40 to 120 °C (-40 to 248 °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 |

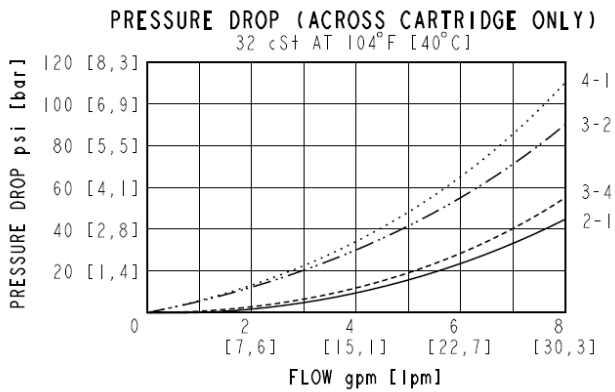
Properties

| | |
|------------------------------|---|
| Unit weight | 0.32 kg (0.70 lb) |
| Internal wetted surface area | 186 cm ² (28.9 in ²) |

Electrical Parameters

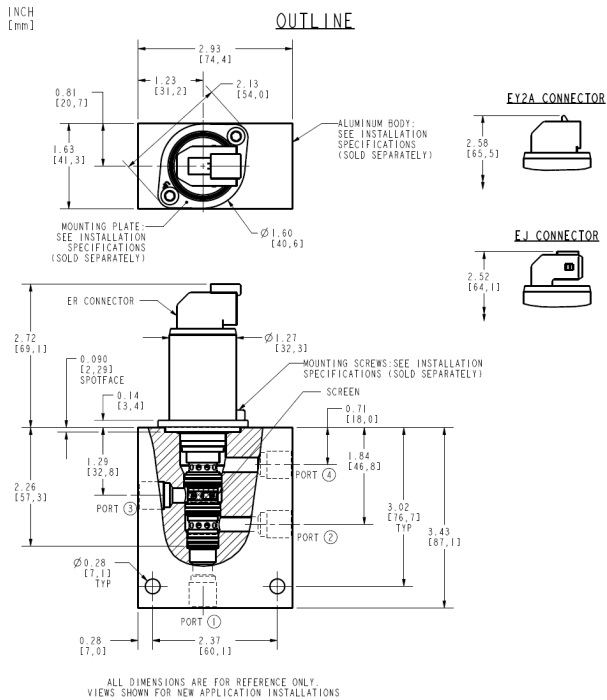
| | | |
|------------------|------------|----------------------------|
| Coil resistance | 4.83 ohms | - Note: Coil 10 Vdc |
| | 7.28 ohms | - Note: Coil 12 Vdc |
| | 10.05 ohms | - Note: Coil 14 Vdc |
| | 18.35 ohms | - Note: Coil 20 Vdc |
| | 29.54 ohms | - Note: Coil 24 Vdc |
| | 40.36 ohms | - Note: Coil 28 Vdc |
| Valve inductance | 65 mH | - Note: Coil 10 Vdc |
| | 98 mH | - Note: Coil 12 Vdc |
| | 146 mH | - Note: Coil 14 Vdc |
| | 273 mH | - Note: Coil 20 Vdc |
| | 418 mH | - Note: Coil 24 Vdc |
| | 620 mH | - Note: Coil 28 Vdc |

Performance





Dimensions



Installation Specifications

| | |
|-------------------------|--|
| Cavity | VC-G026 |
| Installation type | Flange mounted |
| Orientation restriction | None |
| Mounting screw torque | 3 to 4 N-m (2.2 to 3.0 ft-lb) |
| Note | For other mounting options, see "Mounting-options-for-G3-valves" technical reference |

Accessories

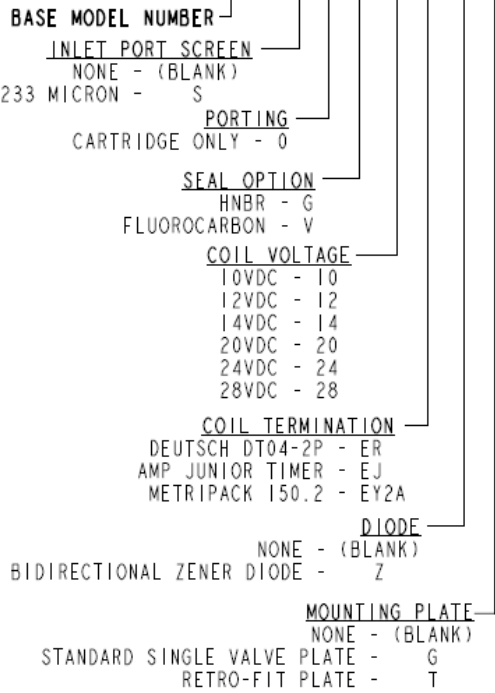
| | | |
|------------------|--|--|
| Mounting plate | HF P/N 4595096 | - Note: Standard VC-G026 cavity |
| | HF P/N 4210236 | - Note: Retrofit VC-T004 cavity |
| Mounting screw | M5 x 0,8 x 12 mm long, HF P/N: 4002609 (sold separately) | |
| Seal kit | SK-G027-X | - Note: X=seal option |
| Ported test body | HF P/N: 71610X0 | |

Order Code



ORDERING INFORMATION

SV90-G40RX-0-X-XXXX/X-X



Model Options

SV90-G40RG-H-J-KL-U

G Screen

| CODE | DESCRIPTION |
|-------|----------------|
| BLANK | NONE |
| S | 60 Mesh Screen |

H Line Body

| CODE | DESCRIPTION |
|------|----------------|
| 0 | No Body |
| 6T | Aluminum SAE 6 |

J Seal

| CODE | DESCRIPTION |
|------|--|
| G | HNBR (Hydrogenated Nitrile Butadiene Rubber) |
| V | Fluorocarbon |
| P | Polyurethane |

K Coil Voltage

| CODE | DESCRIPTION |
|------|-------------|
| 10 | 10 VDC |
| 12 | 12 VDC |
| 14 | 14 VDC |
| 20 | 20 VDC |
| 24 | 24 VDC |
| 28 | 28 VDC |

L Coil Termination



| CODE | DESCRIPTION |
|------|-----------------------------|
| EJ | E-Coil, AMP Jr. |
| ER | E-Coil, Deutsch |
| EY2A | E-Coil, Metri-Pack 150.2 |

U Mounting Plate

| CODE | DESCRIPTION |
|-------|--------------------------------|
| BLANK | None |
| G | Standard Single Valve Plate |
| T | Retro-Fit Plate |