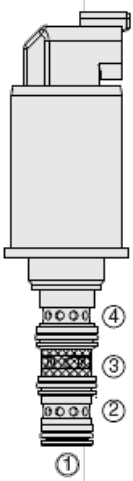




Overview



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.

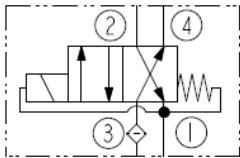
Operation

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

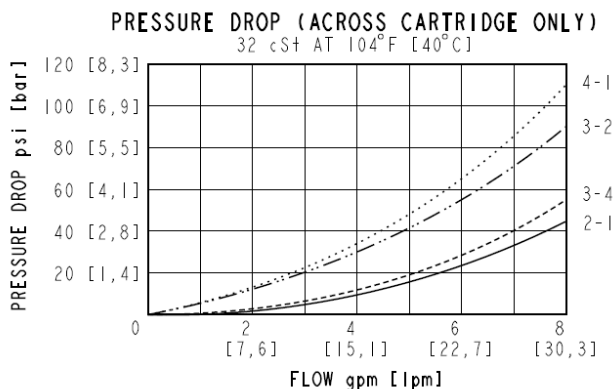
Properties

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

Electrical Parameters

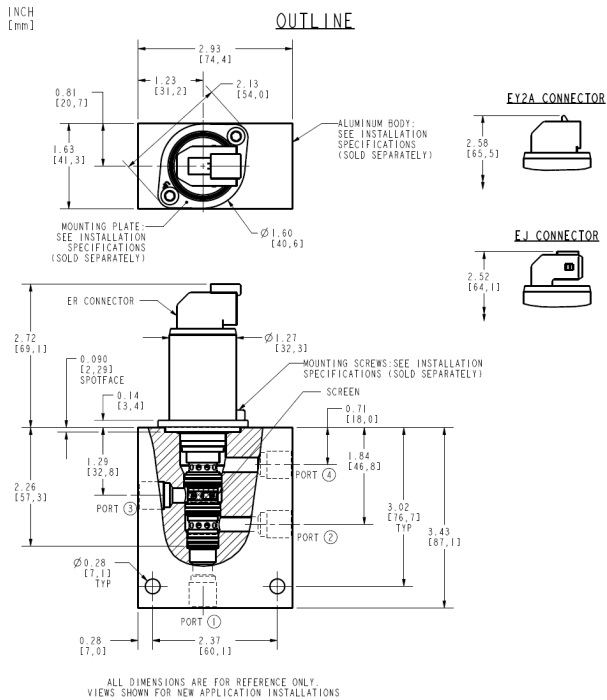
Coil resistance	4.83 ohms	- Note: Coil 10 Vdc
	7.28 ohms	- Note: Coil 12 Vdc
	10.05 ohms	- Note: Coil 14 Vdc
	18.35 ohms	- Note: Coil 20 Vdc
	29.54 ohms	- Note: Coil 24 Vdc
	40.36 ohms	- Note: Coil 28 Vdc
Valve inductance	65 mH	- Note: Coil 10 Vdc
	98 mH	- Note: Coil 12 Vdc
	146 mH	- Note: Coil 14 Vdc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

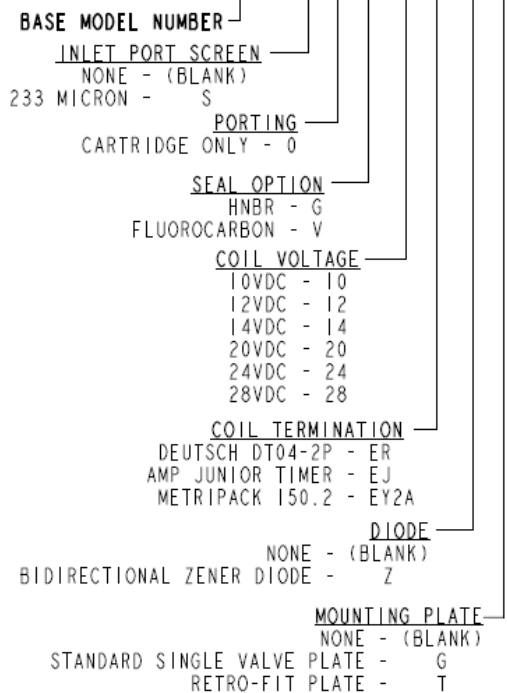
Mounting plate	HF P/N 4595096	- Note: Standard VC-G026 cavity
	HF P/N 4210236	- Note: Retrofit VC-T004 cavity
Mounting screw	M5 x 0,8 x 12 mm long, HF P/N: 4002609 (sold separately)	
Seal kit	SK-G027-X	- Note: X=seal option
Ported test body	HF P/N: 71610X0	

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