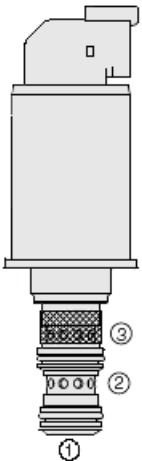




## Overview



### Description

The SV90-G39X is a direct-acting, spool-type, 2-position, 3-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.

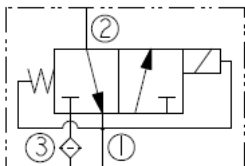
### Operation

When de-energized, the SV90-G39X allows flow from port 2 to port 1, while blocking flow at port 3. When energized, the spool shifts to open from port 3 to port 2, while blocking flow at 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	35 bar (500 psi)	- <b>Note:</b> Port 1
	45 bar (650 psi)	- <b>Note:</b> Ports 2, 3
Proof pressure	54 bar (780 psi)	- <b>Note:</b> Port 1
	207 bar (3000 psi)	- <b>Note:</b> Ports 2, 3
Burst pressure	165 bar (2400 psi)	- <b>Note:</b> All ports pressurized
	275 bar (4000 psi)	- <b>Note:</b> Ports 2 and 3 pressurized

### Flow Ratings

Flow rating	30 lpm (8 gpm)	
Maximum internal leakage	90 ml/min (5.5 in <sup>3</sup> /min)	- <b>Note:</b> At 45 bar (650 psi)

### Other Ratings

Cycle life	Ten million cycles	
Response	25 ms	- <b>Note:</b> (pull-in) first indication of change of state with 100% voltage and flow rating
	25 ms	- <b>Note:</b> (drop-out) first indication of change of state with 100% voltage and flow rating
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)	- <b>Note:</b> With HNBR seals
	-26 to 204 °C (-15 to 400 °F)	- <b>Note:</b> 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

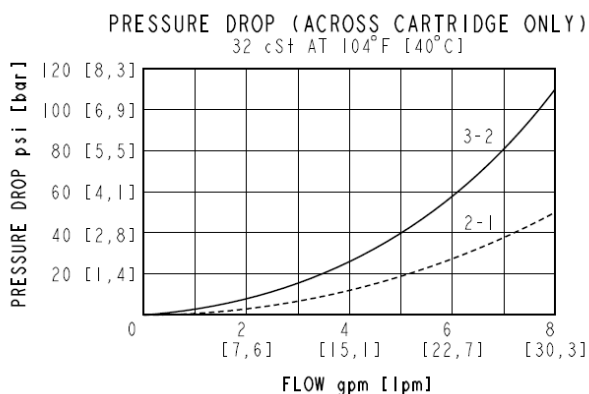
## Properties

Unit weight	0.29 kg (0.65 lb)
Internal wetted surface area	314 cm <sup>2</sup> (48.6 in <sup>2</sup> )

## Electrical Parameters

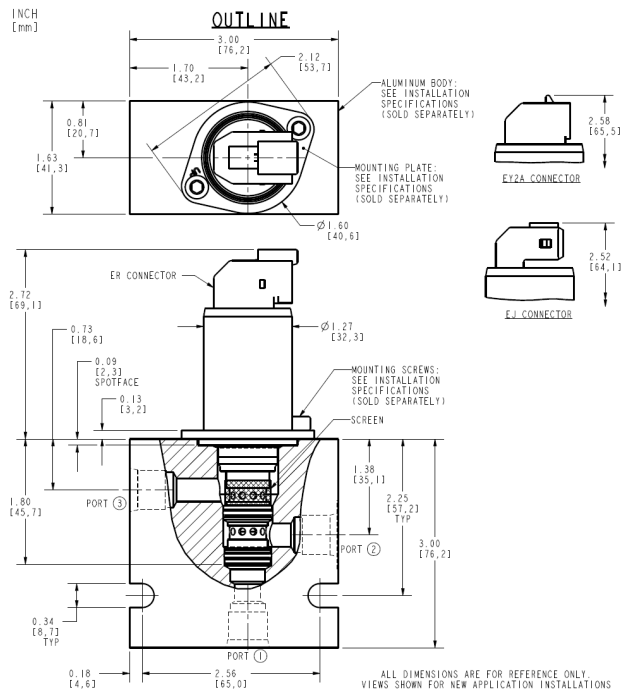
Coil resistance	4.83 ohms	- <b>Note:</b> Coil 10 Vdc
	7.28 ohms	- <b>Note:</b> Coil 12 Vdc
	10.05 ohms	- <b>Note:</b> Coil 14 Vdc
	18.35 ohms	- <b>Note:</b> Coil 20 Vdc
	29.54 ohms	- <b>Note:</b> Coil 24 Vdc
Valve inductance	40.36 ohms	- <b>Note:</b> Coil 28 Vdc
	65 mH	- <b>Note:</b> Coil 10 Vdc
	98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

## Performance





## Dimensions



## Installation Specifications

Cavity	VC-G024	- <b>Note:</b> Standard configuration
Installation type	Flange mounted	
Orientation restriction	None	
Mounting screw torque	3 to 4 N-m (2.2 to 3.0 ft-lb)	- <b>Note:</b> For standard VC-G024 Cavity
Note	For retro-fitting into older drop-in cavities and other mounting options, see "Mounting-options-for-G3-valves" technical reference	

## Accessories

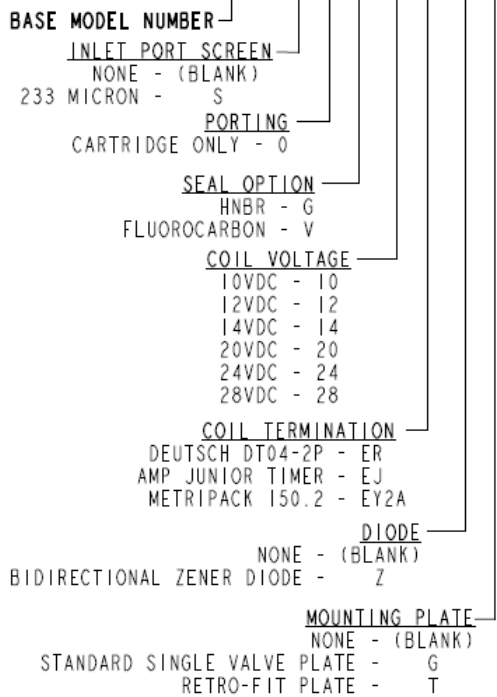
Mounting plate	HF P/N 4595096	- <b>Note:</b> Use with standard VC-G024 cavity
	HF P/N 4210236	- <b>Note:</b> Use with retrofit VC-T001 cavity
Mounting screw	M5 x 0,8 x 12 mm long, HF P/N: 4002609 (sold separately)	
Seal kit	SK-G027-X	- <b>Note:</b> X=seal option
Ported test body	HF P/N: 71607X0	

## Order Code



### ORDERING INFORMATION

SV90-G39X-0-X-XXXX/X-X



### Model Options

#### SV90-G39G-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