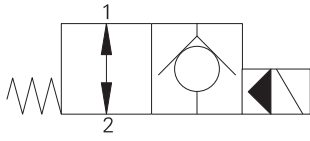


# SV13-12-O/OP/OS - Solenoid valve

Poppet type, normally open solenoid valve  
114 L/min (30 USgpm) • 350 bar (5000 psi)

A



## Operation

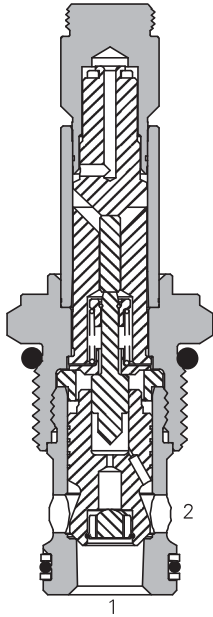
In the de-energized position the valve allows free flow in both directions.

When the solenoid is energized the pilot poppet closes the orifice and the valve closes blocking flow from port 2 to 1 while allowing free flow from port 1 to 2.

## Features

Hardened and ground working parts. Lapped seat for low leakage. IP69K Tough coil compatibility. Continuously rated. Compact design with low pressure drop. 350 bar working pressure.

## Sectional view



## Performance data

### Ratings and specifications

Performance data is typical with fluid at 21,8 cSt (105 SUS) and 49° C (120° F)

Typical application pressure (all ports)	350 bar (5000 psi)
Cartridge fatigue pressure (infinite life)	310 bar (4500 psi)
Rated flow	114 L/min (30 USgpm)
Internal leakage	less than 5 drops/min, max @ 350 bar (5000 psi)
Temperature range	-40° to 100°C (-40° to 212°F)
Coil duty	Continuous from 85% to 110% of nominal voltage
Cavity	C-12-2 or C-12-2U Add "U" after number if undercut is required. If undercut is not specified, expect 10 psi@15 USgpm and 20 psi @ 30 USgpm higher pressure drop.
Fluids	All general purpose hydraulics fluids such as: MIL-H-5606, SAE 10, SAE 20 etc.
Filtration	Cleanliness code 18/16/13
Housing material (standard)	Steel
Weight including coil	0,27 kg (0.59 lbs)
Seal kit	02-165889 (Buna-N), 02-165888 (Viton®)

Viton is a registered trademark of E.I. DuPont

## Description

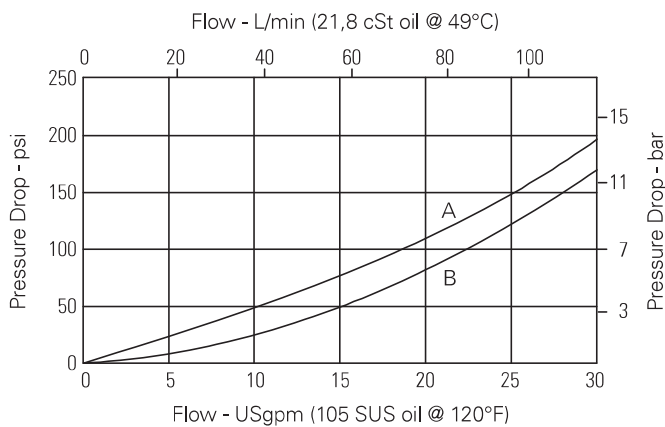
This is a 2-way, 2-position, poppet type, high pressure, pilot operated, normally open solenoid valve. This valve is used in applications requiring low leakage, such as load holding applications or as a general purpose diverter or dump valve.

### Application Note:

This valve is pilot operated and requires a minimum flow of 1-2 L/min (0.3-0.5 USgpm) in order to shift. For operation at very low flow conditions contact your Eaton representative.

## Pressure drop

Cartridge only



A - Port 1 to port 2 de-energized

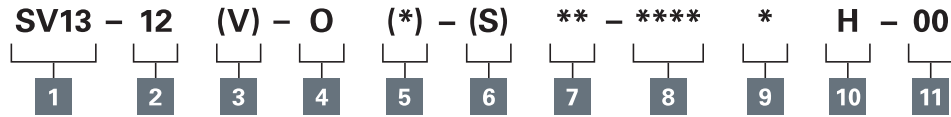
B - Port 2 to port 1 de-energized

Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

# SV13-12-O/OP/OS - Solenoid valve

Poppet type, normally open solenoid valve  
114 L/min (30 USgpm) • 350 bar (5000 psi)

## Model code



A

### 1 Function

SV13 - Solenoid valve

### 2 Size

12 - 12 size

### 3 Seal material

Blank - Buna-N

V - Viton®

### 4 Style

O - Normally open

### 5 Manual override option

Blank - No manual override

P - Push type

S - Screw type

For valve dimensions with manual override option installed see page A-980.

### 6 Valve housing material

Blank - Cartridge only

S - Steel

### 7 Port size

Code	Port size	Housing number
0	Cartridge only	
4G	1/2" BSPP	02-175062
4GU	1/2" BSPP	02-172512
6G	3/4" BSPP	02-169665
6GU	3/4" BSPP	02-162922
10T	SAE 10	02-169744
10TU	SAE 10	02-169817
12T	SAE 12	02-169782
12TU	SAE 12	02-169790

See section J for housings.

### 8 Voltage rating

00 - No coil

12D - 12VDC

24D - 24VDC

36D - 36VDC

24A - 24VAC

115A - 115VAC

230A - 230VAC

12B - 12VDC/w diode\*

24B - 24VDC/w diode\*

\*Optional arc suppression diode.

### 9 Connector types

Blank - No coil

G - ISO 4400 DIN 43650

Q - Spade terminals

W - Flying lead

N - Deutsch (DC only)

Y - Amp JR (DC only)

D - Metripack 150 male (DC only)

J - Metripack 280 male (DC only)

### 10 Coil series

H - 10 series, 29 W

For coil dimensions see section C.

### 11 Special features

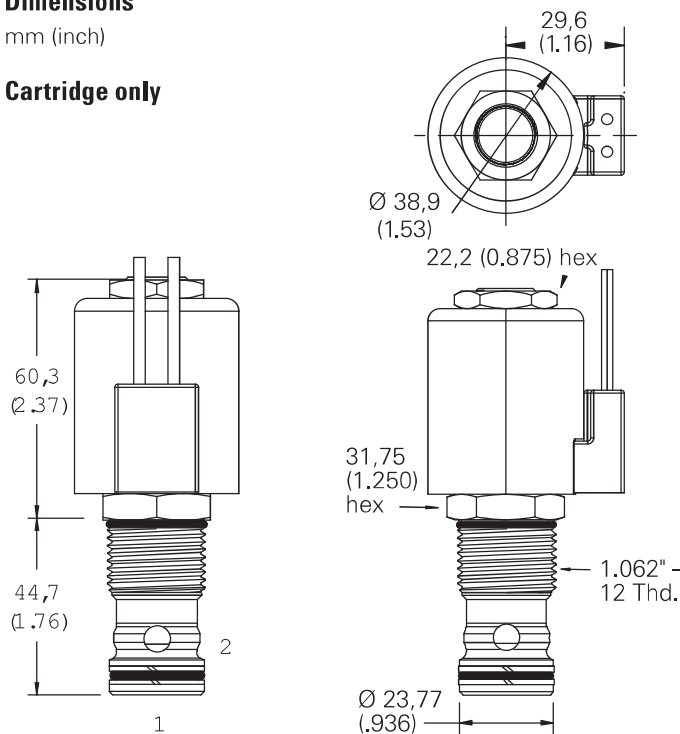
00 - None

(Only required if valve has special features, omitted if "00.")

## Dimensions

mm (inch)

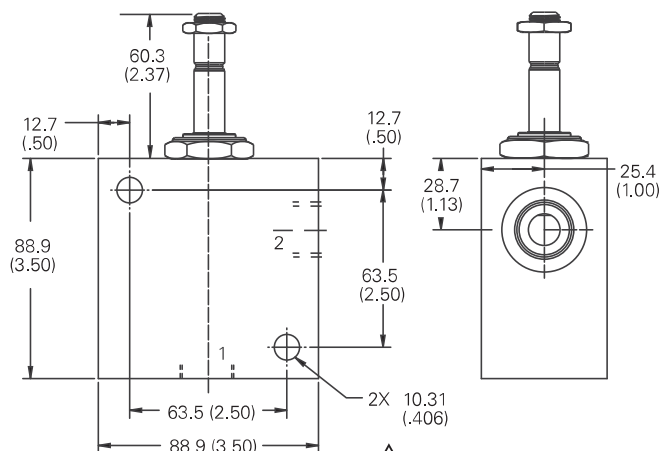
### Cartridge only



Torque cartridge in steel housing  
102-115 Nm (75-85 ft lbs)

**Note:** When solenoid valve is ordered as cartridge only, coil nut is included.

### Installation drawing



### Warning

Maintain 5-8 Nm (4-6 ft lbs) maximum torque on valve tube nut.

Over tightening may cause valve failure.

Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.