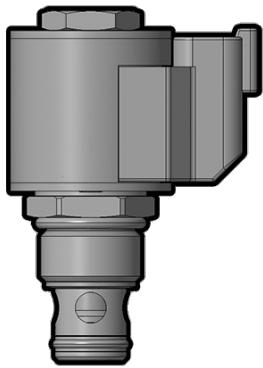




Overview



Description

A solenoid-operated, 2 way, normally closed, piloted poppet-type, screw-in hydraulic cartridge valve and intended to act as a blocking or load-holding device for applications requiring low internal leakage.

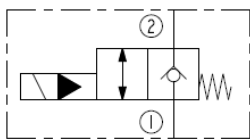
Operation

When de-energized, the SF80-22R acts as a check valve, allowing flow from port 2 to port 1, while blocking flow from port 1 to port 2. When energized, the valve will open to allow flow from port 1 to port 2 bi-directionally.

Features

- 280 bar (4000 psi) rating
- 10 size valve with 8 size coil reduces space claim and operating power
- Reverse operating logic, holds load at port 1
- Bi-directional flow when energized
- Hardened seat for long life and low leakage
- Waterproof continuous-duty E-coils rated up to IP69K with optional voltages and terminations
- Corrosion-resistant plating
- Industry common cavity

Symbol



Ratings

Pressure Ratings

Pressure rating	280 bar (4060 psi)
Proof pressure	483 bar (7000 psi)
Burst pressure	621 bar (9000 psi)

Flow Ratings

Flow rating	76 lpm (20 gpm)	- Note: At rated pressure
Maximum internal leakage	5 drops/min	- Note: at 280 bar (4060 psi) at port 1

Temperature Ratings

Operating fluid temperature	-40 to 100 °C (-40 to 212 °F)	- Note: Buna N
	-26 to 204 °C (-15 to 400 °F)	- Note: Fluorocarbon
	-57 to 107 °C (-65 to 225 °F)	- Note: Polyurethane
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 70 °C (-40 to 160 °F)	

Fluids

Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties.
Fluid viscosity	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

Properties

Minimum pull-in voltage	10.2 Vdc	- Note: 12 Vdc coil
Unit weight	0.12 kg (0.27 lb)	
Internal wetted surface area	99 cm ² (15.3 in ²)	

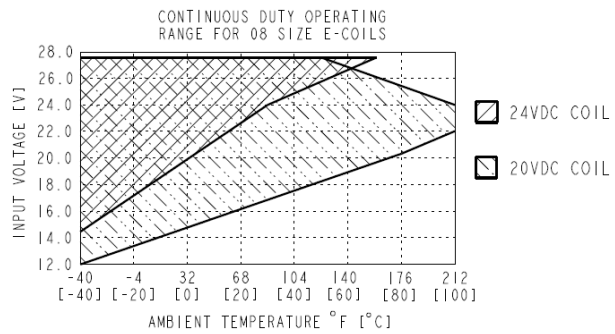
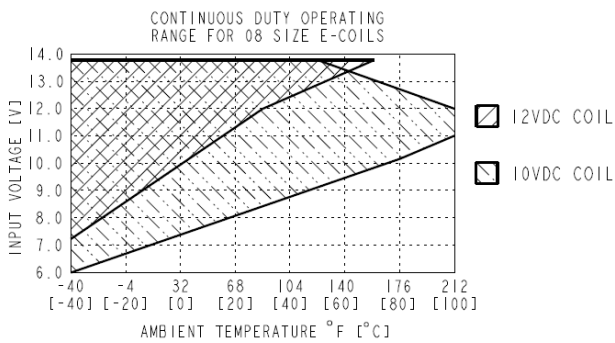
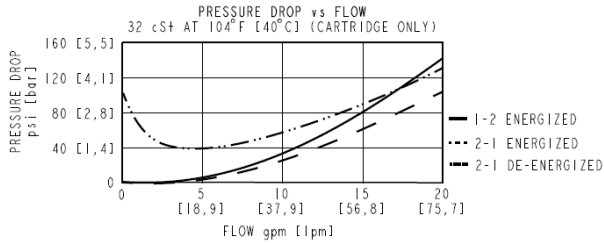
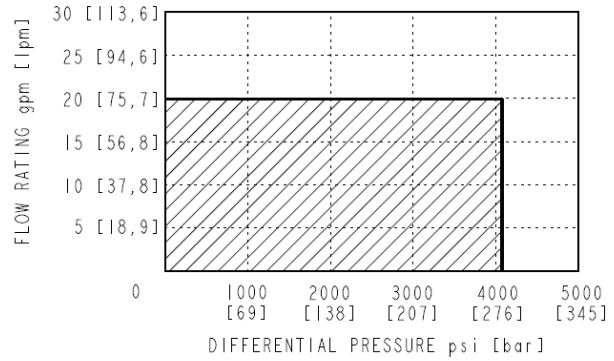


Performance

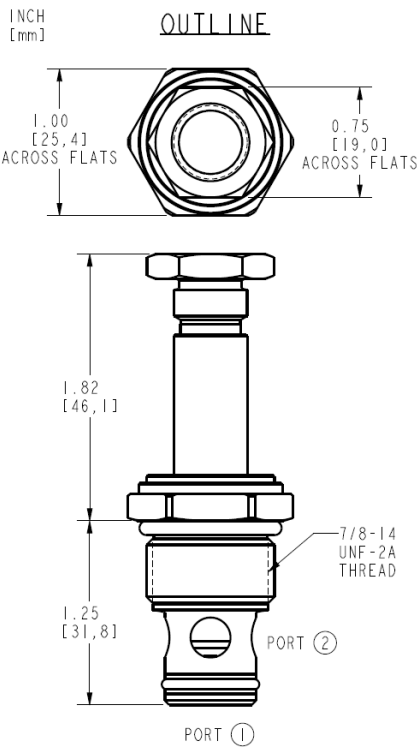
FLOW RATING VS DIFFERENTIAL PRESSURE

PULL IN: 85% OF NOMINAL VOLTAGE
DROP OUT: 5% OF NOMINAL VOLTAGE

INLET AT PORT 2 & TANK AT PORT 1



Dimensions



ALL DIMENSIONS ARE FOR REFERENCE ONLY.



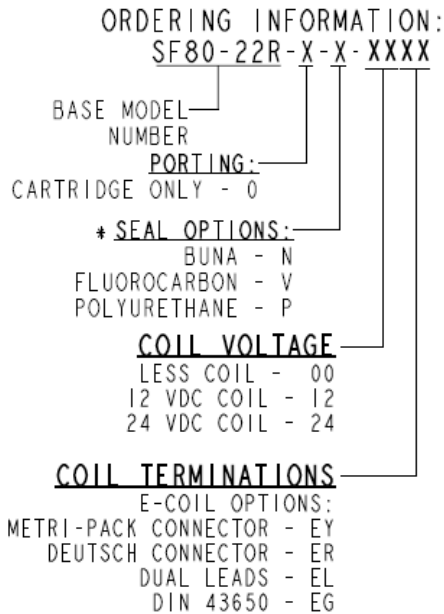
Installation Specifications

Cavity	VC10-2
Cartridge installation torque	22.9 to 55.6 N-m (39 to 41 ft-lb)
Coil nut torque	6.8 to 9.5 N-m (5 to 7 ft-lb)
Orientation restrictions	None

Accessories

Seal kit	SK10-2X-M (X = Seal option)
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Order Code



* POLYURETHANE SEALS RECOMMENDED
FOR OPERATING PRESSURES
ABOVE 3500 psi [241 bar]

Model Options

SF80-22R-H-J-L

H Line Body

CODE	DESCRIPTION
0	No Body
6T	Aluminum SAE 6
8T	Aluminum SAE 8
8TD	Ductile Iron SAE 8
4B	Aluminum BSPP 1/2" (3)
4BD	Ductile Iron BSPP 1/2" (3)

J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
P	Polyurethane

L Coil



CODE	DESCRIPTION
0	No Coil
10DL	10 VDC, D-Coil, Dual Lead Wires
10DR/D	10 VDC, D-Coil, Deutsch with Diode
10DS	10 VDC, D-Coil, Dual Spade
10EL	10 VDC, E-Coil, Dual Lead Wires, 18 inches long
10EL/36	10 VDC, E-Coil, Dual Lead Wires, 36 inches long
10ER	10 VDC, E-Coil, Deutsch
10ER/Z	10 VDC, E-Coil, Deutsch with Zener Diode
12DG	12 VDC, D-Coil, DIN 43650
12DL	12 VDC, D-Coil, Dual Lead Wires, 18 inches long
12DL/36	12 VDC, D-Coil, Dual Lead Wires, 36 inches long
12DL/W	12 VDC, D-Coil, Dual Lead Wires with Weatherpak
12DL/W/D	12 VDC, D-Coil, Dual Lead Wires with Weatherpak with Diode
12DR	12 VDC, D-Coil, Deutsch
12DR/D	12 VDC, D-Coil, Deutsch with Diode
12DR/Z	12 VDC, D-Coil, Deutsch with Zener Diode
12DS	12 VDC, D-Coil, Dual Spade
12EG	12 VDC, E-Coil, DIN 43650
12EG/Z	12 VDC, E-Coil, DIN 43650 with Zener Diode
12EJ	12 VDC, E-Coil, AMP Jr.
12EJ/Z	12 VDC, E-Coil, AMP Jr. with Zener Diode
12EL	12 VDC, E-Coil, Dual Lead Wires, 18 inches long
12EL/36	12 VDC, E-Coil, Dual Lead Wires, 36 inches long
12EL/Z	12 VDC, E-Coil, Dual Lead Wires with Zener Diode
12ER	12 VDC, E-Coil, Deutsch
12ER/Z	12 VDC, E-Coil, Deutsch with Zener Diode
12EY	12 VDC, E-Coil, Metri-Pack 150
12EY/Z	12 VDC, E-Coil, Metri-Pack 150 with Zener Diode
20DG	20 VDC, D-Coil, DIN 43650
20DS	20 VDC, D-Coil, Dual Spade
20ER	20 VDC, E-Coil, Deutsch
20ER/Z	20 VDC, E-Coil, Deutsch with Zener Diode
24AG	24 VDC, D-Coil, DIN 43650
24AP	24 VDC, D-Coil, 1/2" Conduit and Dual Lead Wires
24DG	24 VDC, D-Coil, DIN 43650
24DL	24 VDC, D-Coil, Dual Lead Wires, 18 inches long
24DL/36	24 VDC, D-Coil, Dual Lead Wires, 36 inches long
24DL/W	24 VDC, D-Coil, Dual Lead Wires with Weatherpak
24DR	24 VDC, D-Coil, Deutsch
24DR/D	24 VDC, D-Coil, Deutsch with Diode
24DR/Z	24 VDC, D-Coil, Deutsch with Zener Diode
24DS	24 VDC, D-Coil, Dual Spade
24EG	24 VDC, E-Coil, DIN 43650



CODE	DESCRIPTION
24EG/Z	24 VDC, E-Coil, DIN 43650 with Zener Diode
24EJ	24 VDC, E-Coil, AMP Jr.
24EL/D	24 VDC, E-Coil, Dual Lead Wires with Diode
24ER	24 VDC, E-Coil, Deutsch
24ER/Z	24 VDC, E-Coil, Deutsch with Zener Diode
24EY	24 VDC, E-Coil, Metri-Pack 150
24EY/Z	24 VDC, E-Coil, Metri-Pack 150 with Zener Diode
36DG	36 VDC, D-Coil, DIN 43650
36DS	36 VDC, D-Coil, Dual Spade
115AG	115 VAC, D-Coil, DIN 43650
115AP	115 VAC, D-Coil, 1/2" Conduit and Dual Lead Wires
230AG	230 VAC, D-Coil, DIN 43650
230AP	230 VAC, D-Coil, 1/2" Conduit and Dual Lead Wires