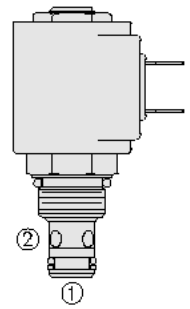
NORMALLY CLOSED SOLENOID CARTRIDGE

Overview



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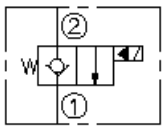

Description

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 low flow circuits.

Operation

When de-energized, the sf08-20x acts as a check valve, allowing flow from port 1 to port 2, while blocking flow from port 2 to port 1. When energized, the cartridge's poppet lifts to open the port 2 to port 1 flow path. In this mode, flow from port 1 to port 2 is severely restricted.

Features

- Continuous-duty rated coil.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Optional waterproof E-Coils rated up to IP69K.
- Corrosion-resistant plating to 960 hr. salt spray per ASTM B117.
- Industry common cavity.
- Compact size.

Ratings

Pressure Ratings

Pressure rating: 350 bar (5000 psi)

Proof pressure: 483 bar (7000 psi)

Burst pressure: 965 bar (14000 psi)

Flow Ratings

Flow rating: See performance graph

Maximum internal leakage: 3 drops/min

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

-54 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)

Operating Parameters

Fluids: Mineral based or synthetic hydraulic fluid with lubricating properties.

Fluid viscosity range: 7.4 to 420 cSt

Maximum operating contamination level: 18/16/13 PER ISO 4406

Properties

Cartridge weight: 0.1 kg (0.22 lb)

Internal wetted surface area: 80 cm^2 (12.47 in^2)

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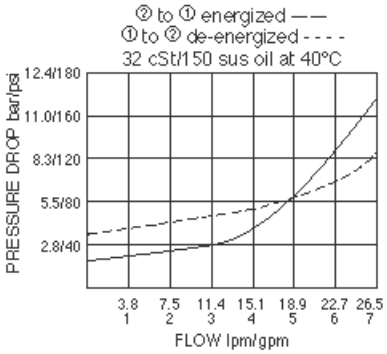
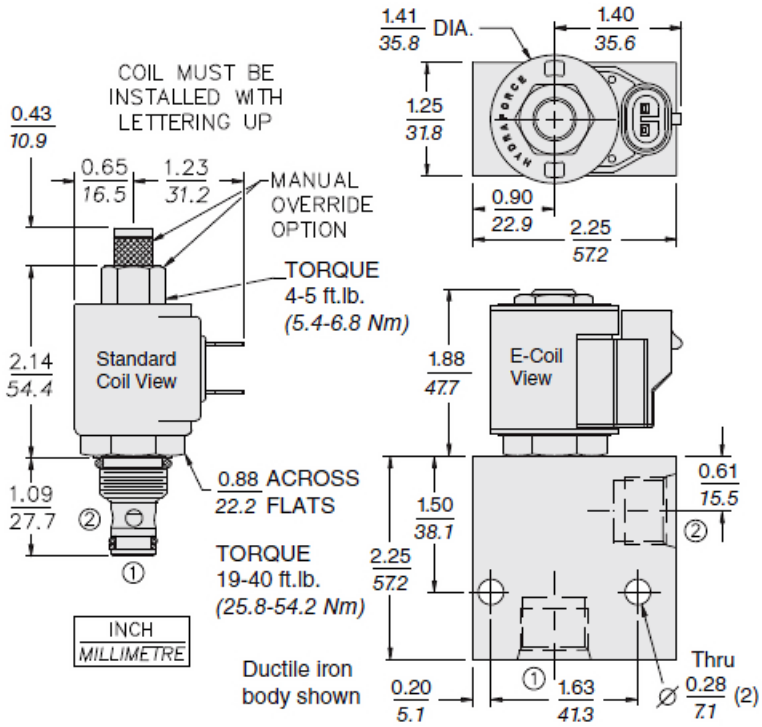
Environmental

Corrosion protection: 960 hr salt spray per ASTM B117

Performance



Dimensions



Installation Specifications

Cavity: VC08-2

08-size-3-way Cavities

Cartridge installation torque: 25.8 to 28.5 N-m (19 to 21 ft-lb

Maximum allowable torque: 54.2 N-m (40 ft-lb)

Coil nut torque: 5.4 to 6.8 N-m (4 to 5 ft-lb)

Orientation restriction: None

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Accessories

Seal kit: Seal kit installation instructions
Housings: Available 08-2w valve bodies
Coils: 08 size D coils; 08 size E coils

Order Code

SF08-20__ - __ __ __ - __ - __ __ __ __ __

Option
None (Blank)
Manual Override M

Porting
Cartridge Only 0
Aluminum
SAE 8 8T
3/8 in. BSP* 3B
Ductile Iron
SAE 6 6TD
3/8 in. BSP* 3BD
*BSP Body; U.K. Mfr. Only

Seals
Polyurethane (Std.) P
Polyurethane seals recommended for 345 bar (5000 psi) operation. Contact factory for additional seal options.

Voltage
Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC
**Includes Std. Coil Nut
† DS, DW or DL terminations only

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

Termination (VDC)
Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/Weatherpak® Connectors
DR Deutsch DT04-2P
Termination (VAC)
Std. Coil
AG DIN 43650
AP 1/2 in. Conduit
Termination (VDC)
E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

Model Options

SF08-20EG-H-J-L

E Manual Override

CODE	DESCRIPTION
BLANK	NONE
M	Two Position Override, Red Knurled Knob

G Screen

CODE	DESCRIPTION
BLANK	NONE
S	100 Mesh Screen

H Line Body

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

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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

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CODE	DESCRIPTION
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
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