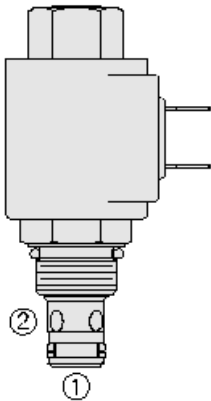
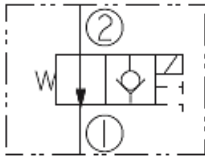




Overview



Symbol



Description

A solenoid-operated, 2 way, piloted, poppet-type, normally open, screw in hydraulic cartridge valve designed for low leakage in higher pressure load-holding applications.

Operation

When de-energized, the sf08-21xx allows flow from port 2 to port 1. Flow from port 1 to port 2 is severely restricted in this mode. When energized, the valves poppet closes on its seat, blocking flow from port 2 to port 1. In this mode the cartridge will allow port 1 to port 2 flow after overcoming the solenoid force (requires 50 to 150 psi [3,4 to 10,3 bar]).

Features

- Continuous-duty rated coil.
- Corrosion-resistant plating.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Industry common, compact size.

Ratings

Pressure Ratings

Pressure rating	350 bar (5000 psi)	
Proof pressure	385.5 bar (5200 psi)	- Note: Does not apply to MO Valve
Burst pressure	723.9 bar (10500 psi)	- Note: Does not apply to MO. Valve

Flow Ratings

Flow rating	See performance chart
Maximum internal leakage	3 drops/min - Note: Max at 350 bar (5000 psi)

Temperature Ratings

Operating fluid temperature	-40 to 100 °C (-40 to 212 °F)	- Note: With buna N seals
	-26 to 204 °C (-15 to 400 °F)	- Note: With fluorocarbon seals
	-54 to 107 °C (-65 to 225 °F)	- Note: With polyurethane seals

Other Ratings

Corrosion protection	Gsf08-21 960 hr salt spray per ASTM b117
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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

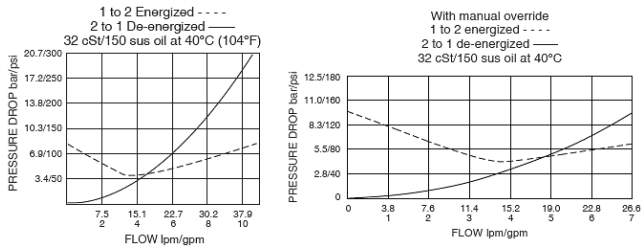
Unit weight	0.09 kg (0.20 lb)
Internal wetted surface area	103.9 cm ² (16.1 in ²)

Electrical Parameters

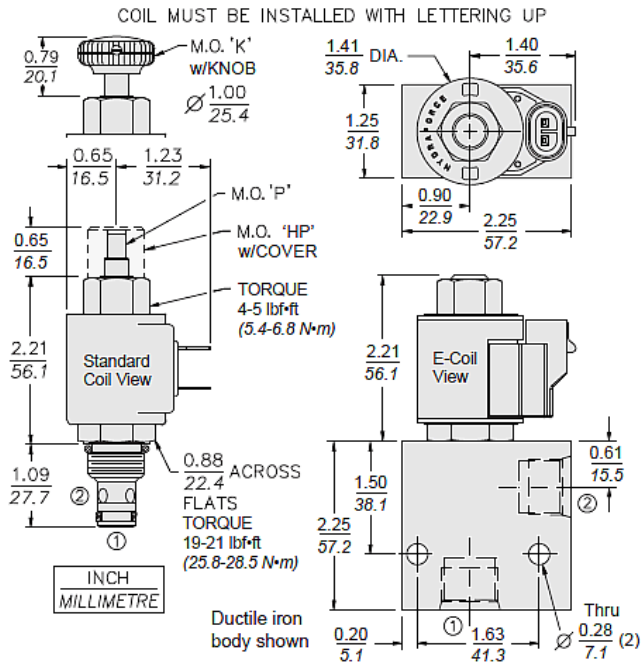
Minimum pull in voltage	10.2 Vdc - Note: 12 Vdc coil
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Performance



Dimensions



Installation Specifications

Cavity	VC08-2
Cartridge installation torque	25.8 to 28.5 N-m (19 to 21 ft-lb)
Coil nut torque	5.4 to 6.8 N-m (4 to 5 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK08-2HX-T	- Note: X = n, V seal options
	SK08-2P-T	- Note: P seal option
Housings		
Coils		

Order Code



SF08-21		
Option		
None (Blank)		
Manual Override	P	
Manual Override with Cover	HP	
Manual Override with Knob	K	
Porting		
Cartridge Only	0	
Aluminum		
SAE 8	8T	
3/8 in. BSP*	3B	
Ductile Iron		
SAE 8	8TD	
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.		

POSITION	CODE	DESCRIPTION
		SF08-21EG-H-J-L
E		Manual Override
E	BLANK	NONE
E	HP	Momentary Push Override, Button with Protective Nut
E	K	Momentary Push Override, Knob
E	P	Momentary Push Override, Button
G		Screen
G	BLANK	NONE
G	S	100 Mesh Screen
H		Line Body
H	0	No Body
H	4T	Aluminum SAE 4
H	6T	Aluminum SAE 6
H	8T	Aluminum SAE 8
H	6TD	Ductile Iron SAE 6
H	8TD	Ductile Iron SAE 8
H	2B	Aluminum BSPP 1/4" (2)
H	3B	Aluminum BSPP 3/8" (3)
H	3BD	Ductile Iron BSPP 3/8" (3)
J		Seal
J	N	Buna-N
J	V	Fluorocarbon
J	P	Polyurethane
L		Coil
L	0	No Coil
L	10DL	10 VDC, D-Coil, Dual Lead Wires
L	10DR/D	10 VDC, D-Coil, Deutsch with Diode
L	10DS	10 VDC, D-Coil, Dual Spade
L	10EL	10 VDC, E-Coil, Dual Lead Wires, 18 inches long
L	10EL/36	10 VDC, E-Coil, Dual Lead Wires, 36 inches long
L	10ER	10 VDC, E-Coil, Deutsch
L	10ER/Z	10 VDC, E-Coil, Deutsch with Zener Diode



POSITION	CODE	DESCRIPTION
L	12DG	12 VDC, D-Coil, DIN 43650
L	12DL	12 VDC, D-Coil, Dual Lead Wires, 18 inches long
L	12DL/36	12 VDC, D-Coil, Dual Lead Wires, 36 inches long
L	12DL/W	12 VDC, D-Coil, Dual Lead Wires with Weatherpak
L	12DL/W/D	12 VDC, D-Coil, Dual Lead Wires with Weatherpak with Diode
L	12DR	12 VDC, D-Coil, Deutsch
L	12DR/D	12 VDC, D-Coil, Deutsch with Diode
L	12DR/Z	12 VDC, D-Coil, Deutsch with Zener Diode
L	12DS	12 VDC, D-Coil, Dual Spade
L	12EG	12 VDC, E-Coil, DIN 43650
L	12EG/Z	12 VDC, E-Coil, DIN 43650 with Zener Diode
L	12EJ	12 VDC, E-Coil, AMP Jr.
L	12EJ/Z	12 VDC, E-Coil, AMP Jr. with Zener Diode
L	12EL	12 VDC, E-Coil, Dual Lead Wires, 18 inches long
L	12EL/36	12 VDC, E-Coil, Dual Lead Wires, 36 inches long
L	12EL/Z	12 VDC, E-Coil, Dual Lead Wires with Zener Diode
L	12ER	12 VDC, E-Coil, Deutsch
L	12ER/Z	12 VDC, E-Coil, Deutsch with Zener Diode
L	12EY	12 VDC, E-Coil, Metri-Pack 150
L	12EY/Z	12 VDC, E-Coil, Metri-Pack 150 with Zener Diode
L	20DG	20 VDC, D-Coil, DIN 43650
L	20DS	20 VDC, D-Coil, Dual Spade
L	20ER	20 VDC, E-Coil, Deutsch
L	20ER/Z	20 VDC, E-Coil, Deutsch with Zener Diode
L	24AG	24 VDC, D-Coil, DIN 43650
L	24AP	24 VDC, D-Coil, 1/2" Conduit and Dual Lead Wires
L	24DG	24 VDC, D-Coil, DIN 43650
L	24DL	24 VDC, D-Coil, Dual Lead Wires, 18 inches long
L	24DL/36	24 VDC, D-Coil, Dual Lead Wires, 36 inches long
L	24DL/W	24 VDC, D-Coil, Dual Lead Wires with Weatherpak
L	24DR	24 VDC, D-Coil, Deutsch
L	24DR/D	24 VDC, D-Coil, Deutsch with Diode
L	24DR/Z	24 VDC, D-Coil, Deutsch with Zener Diode
L	24DS	24 VDC, D-Coil, Dual Spade
L	24EG	24 VDC, E-Coil, DIN 43650
L	24EG/Z	24 VDC, E-Coil, DIN 43650 with Zener Diode
L	24EJ	24 VDC, E-Coil, AMP Jr.
L	24EL/D	24 VDC, E-Coil, Dual Lead Wires with Diode
L	24ER	24 VDC, E-Coil, Deutsch
L	24ER/Z	24 VDC, E-Coil, Deutsch with Zener Diode
L	24EY	24 VDC, E-Coil, Metri-Pack 150
L	24EY/Z	24 VDC, E-Coil, Metri-Pack 150 with Zener Diode
L	36DG	36 VDC, D-Coil, DIN 43650



POSITION	CODE	DESCRIPTION
L	36DS	36 VDC, D-Coil, Dual Spade
L	115AG	115 VAC, D-Coil, DIN 43650
L	115AP	115 VAC, D-Coil, 1/2" Conduit and Dual Lead Wires
L	230AG	230 VAC, D-Coil, DIN 43650
L	230AP	230 VAC, D-Coil, 1/2" Conduit and Dual Lead Wires