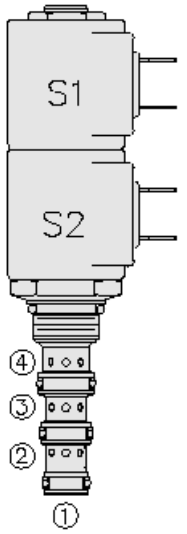
SOLENOID CARTRIDGE VALVE 3 POSITION, 4 PORT MOTOR CENTER

Overview



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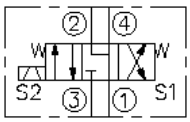

Description

A solenoid-operated, 4-port, 3-position, direct acting spool type screw-in hydraulic cartridge valve.

Operation

When de-energized, the SV08-47DX blocks inlet port 3, while allowing flow from 2 and 4 to 1. When coil 1 is energized, flow is allowed from 3 to 4, and from 2 to 1. When coil 2 is energized, flow is allowed from 3 to 2, and from 4 to 1.

Features

- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Efficient wet-armature construction.
- All ports may be fully pressurized.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Industry-common cavity – compact size.

Ratings

Pressure Ratings

Pressure rating: 240 bar (3500 psi) note: Sv08-47d/m/b/k

207 bar (3000 psi) note: SV08-47DT

Proof pressure: 344 bar (5000 psi)

Burst pressure: 779 bar (11300 psi)

Flow Ratings

Flow rating: 11.9 lpm (3 gpm)

Maximum internal leakage: 164 ml/min (10 in^3/min)

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

Storage temperature: -40 to 70 °C (-40 to 160 °F)

Ambient temperature: -40 to 70 °C (-40 to 160 °F)

Other Ratings

Corrosion protection: Gsv08-47dx 960 hr salt spray per ASTM b117

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

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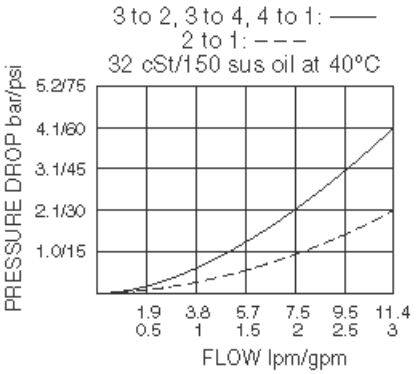
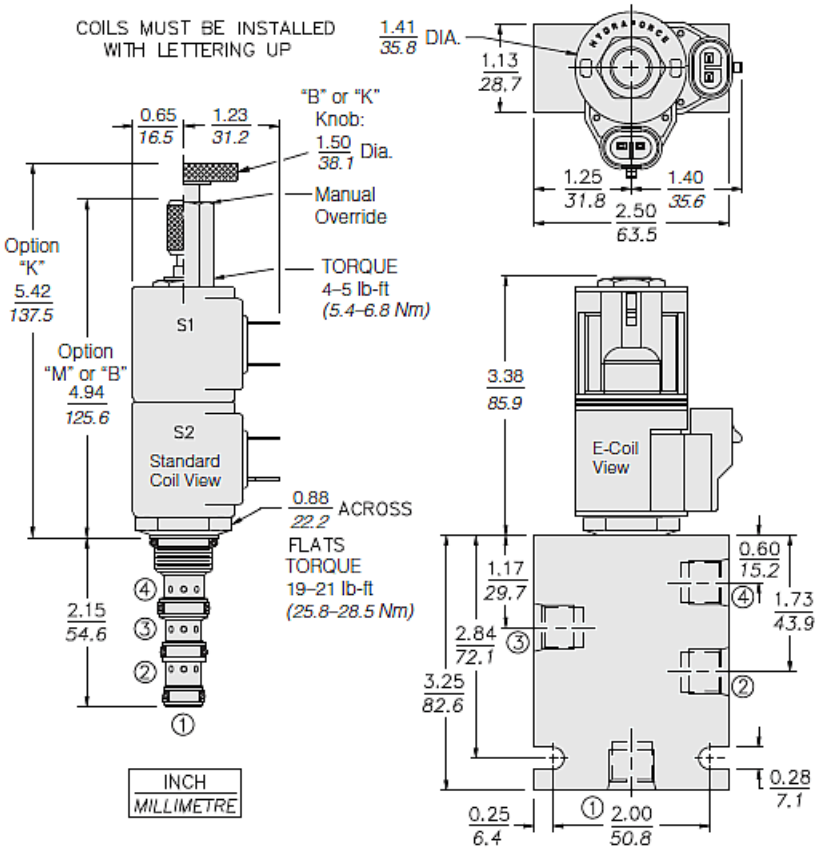
Properties

Unit weight: 0.16 kg (0.35 lb) note: SV08-47D
0.25 kg (0.54 lb) note: Sv08-47db/k
0.23 kg (0.51 lb) note: SV08-47DM
0.25 kg (0.55 lb) note: SV08-47DT
Internal wetted surface area: 159 cm^2 (24.7 in^2) note: Sv08-47d/t
190 cm^2 (29.5 in^2) note: Sv08-47db/k/m

Performance



Dimensions



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Installation Specifications

Cavity: VC08-4
08-size-4-way Cavities
Cartridge installation torque: 25.8 to 28.5 N-m (19 to 21 ft-lb)
Maximum allowable torque: 47.5 N-m (35 ft-lb)
Coil nut torque: 5.4 to 6.8 N-m (4 to 5 ft-lb)
Orientation restriction: None

Accessories

Seal kit: SK08-4X-MMM
Seal kit installation instructions
Housings: Available 08-4w valve bodies
Coils: 08 size D coils; 08 size E coils

Order Code

__SV08-47D__ - __ __ __ - __ - __ __ __ __ __

1,000 Hour Salt Spray Coating: G

Option
None (Blank)
Manual Override: M
Manual Override: B
Manual Override: K
For Manual Override options see page 1.001.1

Porting
Cartridge Only: 0
SAE 6: 6T
3/8 in. BSP*: 3B
*BSP Body; U.K. Mfr. Only

Voltage Std. D-Coil
00 Less Coil**
10 10 Vdc†
12 12 Vdc
20 20 Vdc
24 24 Vdc
36 36 Vdc
48 48 Vdc
24 24 Vac††
115 115 Vac††
230 230 Vac††
**Includes D-Coil Nut and Spacer.
† DS, DW or DL terminations only.
††AC Volt Only
E-Coils: 10, 12, 20, 24 Vdc only.

Seals
Buna N (Std.): N
Fluorocarbon: V

Coil Termination	E-Coil	D-Coil
Less Coil w/Spacer	E	—
Deutsch DT04-2P	ER (IP69K)	DR (IP65)
Metri-Pack® 150	EY (IP69K)	DY (IP65)
Dual Lead Wires	EL (IP69K)	DL (IP65)
Amp Jr. Timer	EJ (IP67)	—
DIN 43650	EG (IP65)	DG (IP65)
Dual Spades	—	DS (IP65)
DIN 43650	—	AG (IP65)††
1/2" Conduit	—	AP (IP65)††

For Coils with Zener Diode, add "/Z" to option code. For example: "ER/Z". Not available on all models. See coil option info. on pages 3.200.1 & 3.400.1

Model Options

SV08-47DE-H-J-L

E Manual Override

CODE	DESCRIPTION
BLANK	NONE

H Line Body

CODE	DESCRIPTION
0	No Body
6T	Aluminum SAE 6
6TD	Ductile Iron SAE 6
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
U	PPDI Urethane

L Coil

CODE	DESCRIPTION
0	No Coil, D-Coil Spacer
0E	No Coil, E-Coil Spacer
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

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CODE	DESCRIPTION
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
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