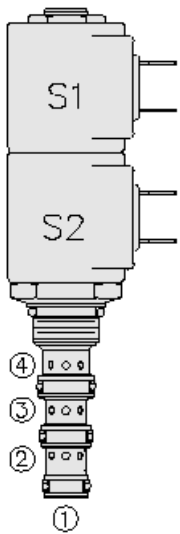




Overview



Description

DESCRIPTION: A solenoid operated, direct acting, 3 position, 4-way, motor spool, proportional directional control. It is a screw in hydraulic cartridge valve for use with general purpose hydraulic fluids. Manual override feature is available as an option.

Operation

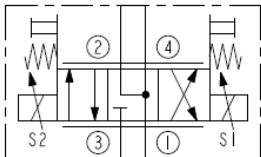
When de-energized, the SP08-47DX blocks flow to port 3, while allowing flow from port 2 to port 1 and port 4 to port 1. When coil #1 is energized, flow is allowed from port 3 to port 4, and from port 2 to port 1. When coil #2 is energized, flow is allowed from port 3 to port 2, and from port 4 to port 1.

Note: While port 1 may be fully pressurized, it is not intended for use as the valve's inlet.

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.
- Cartridges are voltage interchangeable.
- Industry-common cavity.

Symbol



Ratings

Pressure Ratings

Pressure rating	241 bar (3500 psi)	- Note: Per NFPA T2.6.1 R2-2000 using 99.9 assurance and 90% verification levels
Proof pressure	345 bar (5000 psi)	- Note: For SP08-47D only
Burst pressure	655 bar (9500 psi)	- Note: For SP08-47D only

Flow Ratings

Flow rating	See performance graphs	
Maximum internal leakage	164 ml/min (10 in ³ /min)	- Note: At 207 bar (3000 psi)
Hysteresis	Less than 0.8 lpm (0.2 gpm)	- Note: From threshold to max control current

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 158 °F)	
Ambient temperature	-40 to 70 °C (-40 to 158 °F)	

Other Ratings

Corrosion protection	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



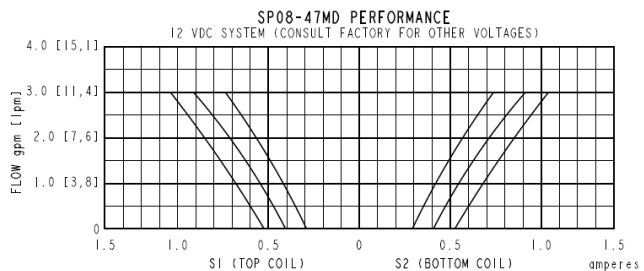
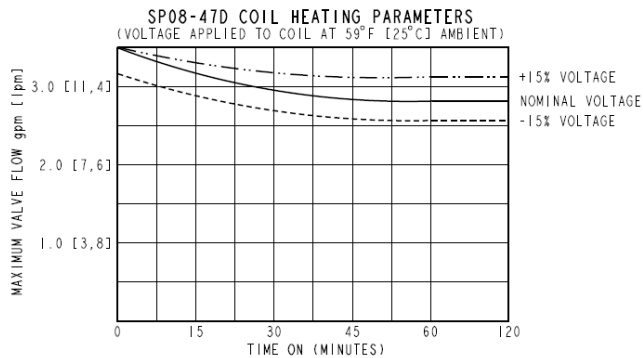
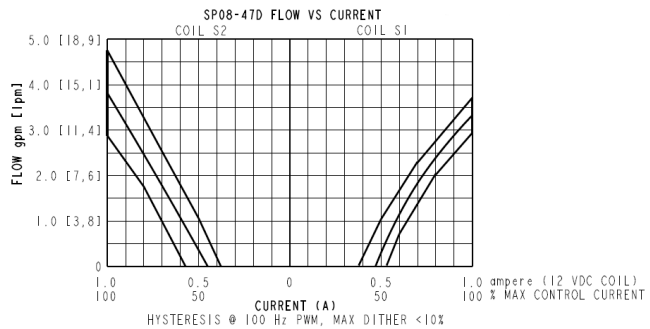
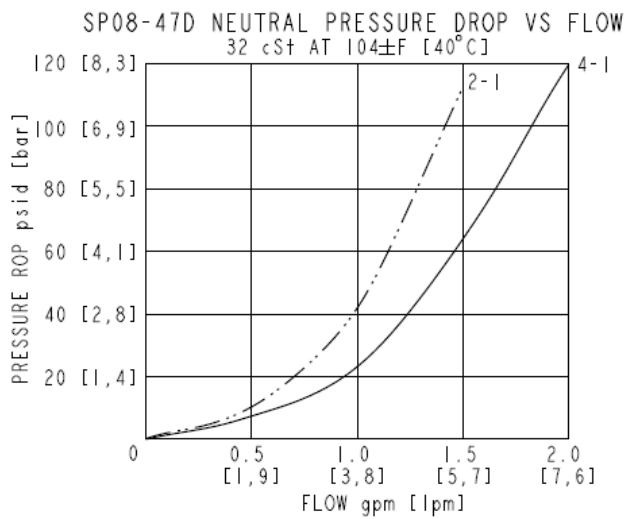
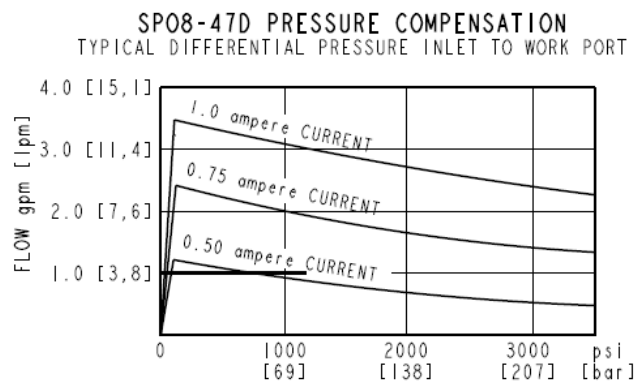
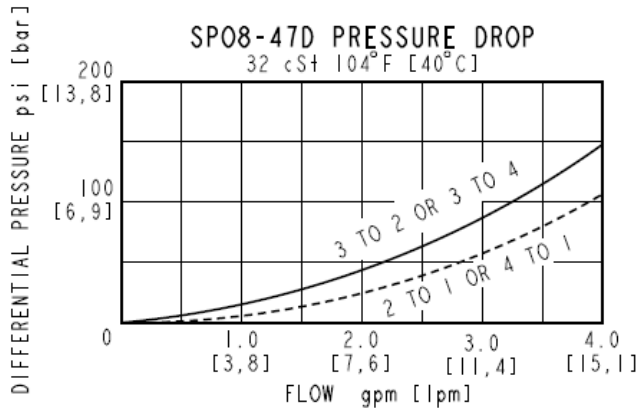
Properties

Maximum operating contamination 18/16/13 per ISO 4406 level
 Unit weight 0.14 kg (0.31 lb)
 Internal wetted surface area 158 cm² (24.5 in²)

Electrical Parameters

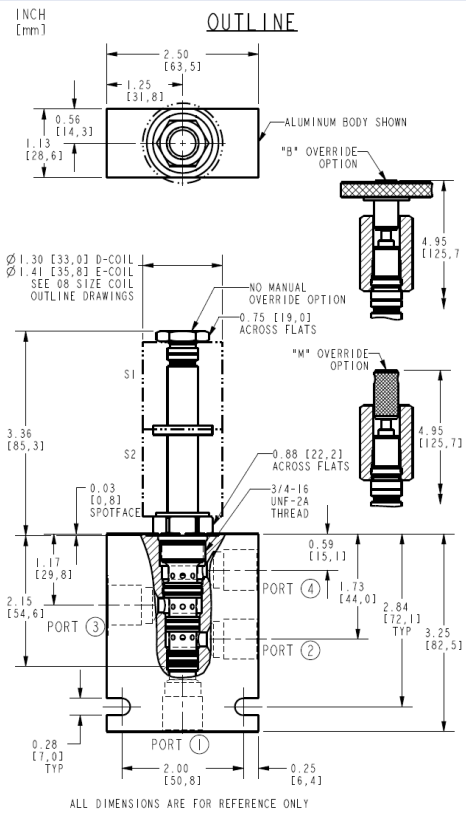
Valve inductance 124 mH - **Note: S1**
 97 mH - **Note: S2**
 Maximum control current 1.0 A - **Note: 12 V coil**
 Threshold current See performance graphs
 Dither PWM frequency 90 to 110 Hz

Performance





Dimensions



Installation Specifications

Cavity	VC08-4	
Cartridge installation torque	25.8 to 28.5 N-m (19 to 21 ft-lb)	- Note: Up to maximum of 40.7 N-m (30 ft-lb)
Coil nut torque	5.4 to 6.8 N-m (4 to 5 ft-lb)	
Orientation restriction	None	

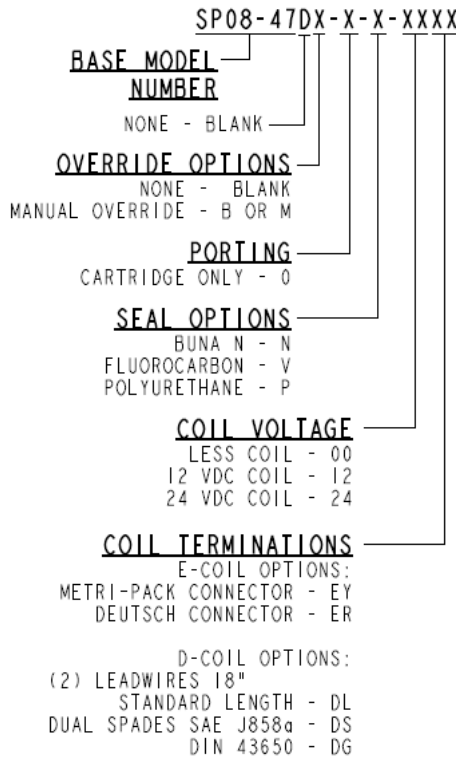
Accessories

Seal kit	SK08-4X-MMM	- Note: X = Seal option
----------	-------------	--------------------------------

Order Code



ORDERING INFORMATION



Model Options

SP08-47DE-H-J-L

E Manual Override

CODE	DESCRIPTION
BLANK	NONE
B	Momentary PushPull Override, 1.5" Diameter Aluminum Knob
M	Momentary Push/Pull Override, Red Knurled Knob

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)

J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
P	Polyurethane

L Coil

CODE	DESCRIPTION
0	No Coil, D-Coil Spacer
0E	No Coil, E-Coil Spacer
10DL	10 VDC, D-Coil, Dual Lead Wires
10DS	10 VDC, D-Coil, Dual Spade



CODE	DESCRIPTION
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
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
12DR	12 VDC, D-Coil, Deutsch
12DS	12 VDC, D-Coil, Dual Spade
12EG	12 VDC, E-Coil, DIN 43650
12EJ	12 VDC, E-Coil, AMP Jr.
12EL	12 VDC, E-Coil, Dual Lead Wires, 18 inches long
12EL/36	12 VDC, E-Coil, Dual Lead Wires, 36 inches long
12ER	12 VDC, E-Coil, Deutsch
12EY	12 VDC, E-Coil, Metri-Pack 150
20DG	20 VDC, D-Coil, DIN 43650
20DS	20 VDC, D-Coil, Dual Spade
20ER	20 VDC, E-Coil, Deutsch
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
24DS	24 VDC, D-Coil, Dual Spade
24EG	24 VDC, E-Coil, DIN 43650
24EJ	24 VDC, E-Coil, AMP Jr.
24ER	24 VDC, E-Coil, Deutsch
24EY	24 VDC, E-Coil, Metri-Pack 150
36DG	36 VDC, D-Coil, DIN 43650
36DS	36 VDC, D-Coil, Dual Spade