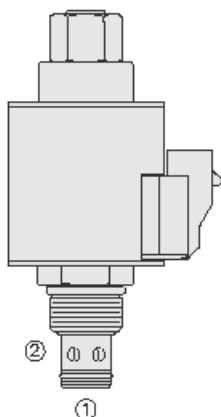




Overview



Description

A solenoid-operated, 2-port, normally closed, direct-acting, bi-directional spool-type, proportional, screw-in hydraulic cartridge valve.

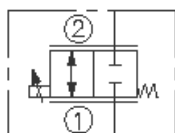
Operation

When energized, the sp10-24xx act as a bi-directional metering valve. When de-energized, flow in both directions is blocked.

Features

- Continuous-duty rated coil.
- Efficient wet-armature construction.
- Optional waterproof E-Coils rated up to IP69K.
- Manual override option.
- Industry common cavity.

Symbol



Ratings

Pressure Ratings

Pressure rating 207 bar (3000 psi)

Flow Ratings

Maximum internal leakage 20 in³/min - **Note:** At 207 bar (3000 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
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 90 °C (-40 to 194 °F)	

Operating Parameters

Operating viscosity 10 to 420 cSt - **Note:** Operating temperature must not exceed limits of fluid viscosity or limits of seal storage temperature

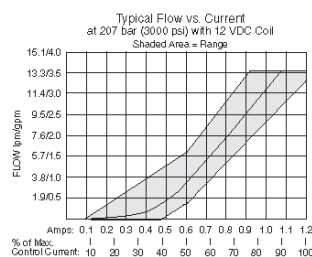
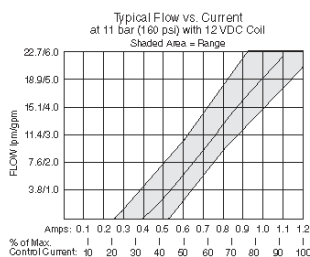
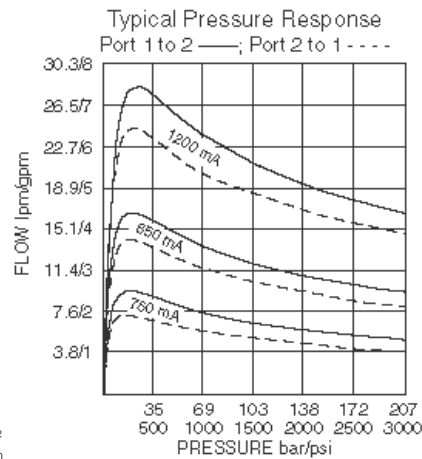
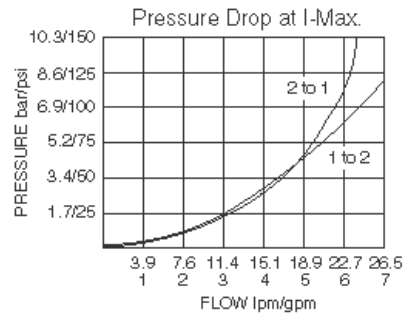
Properties

Materials	Steel with hardened work surfaces zinc-plated exposed surfaces	
Unit weight	0.25 kg (0.56 lb)	- Note: Cartridge only: blank, P
	0.26 kg (0.58 lb)	- Note: Cartridge only: k
	0.68 kg (1.49 lb)	- Note: With e-coil: blank, P
	0.69 kg (1.51 lb)	- Note: With e-coil:k
Internal wetted surface area	152.9 cm ² (23.7 in ²)	- Note: Blank
	172.9 cm ² (26.8 in ²)	- Note: P k

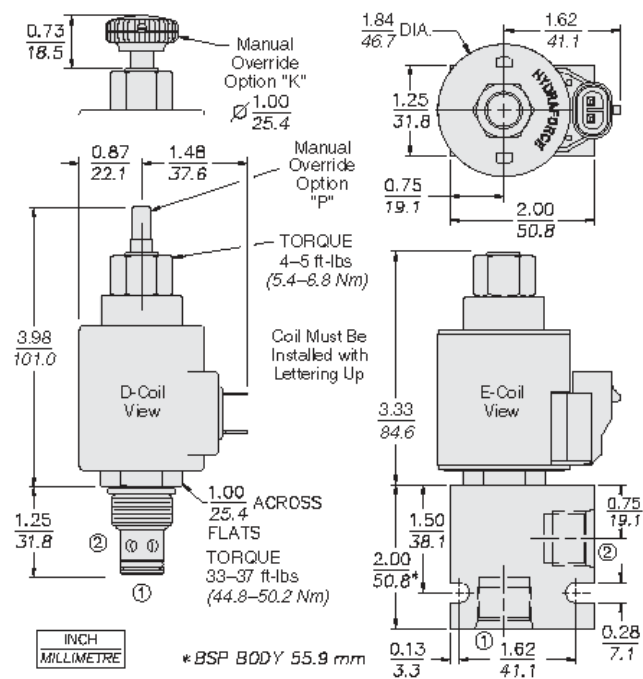
Electrical Parameters

Minimum operating PWM dither frequency 70 Hz

Performance



Dimensions



Installation Specifications

Cavity	VC10-2
Cartridge installation torque	44.8 to 50.2 N-m (33 to 37 ft-lb) 68 N-m (50 ft-lb)
Coil nut torque	5.4 to 6.8 N-m (4 to 5 ft-lb)
Orientation restriction	None

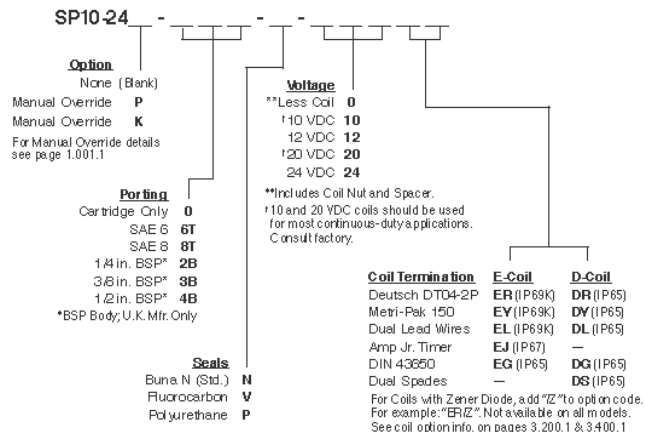


Accessories

Seal kit

SK10-2X-M

Order Code



Model Options

SP10-24EG-H-J-L

E Manual Override

CODE	DESCRIPTION
BLANK	NONE
K	Momentary Push Override, Knob
P	Momentary Push Override, Button

G Screen

CODE	DESCRIPTION
BLANK	NONE
S	100 Mesh Screen

H Line Body

CODE	DESCRIPTION
0	No Body
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)
4B	Aluminum BSPP 1/2" (4)
4BD	Ductile Iron BSPP 1/2" (4)

J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
P	Polyurethane
U	PPDI Urethane

L Coil



CODE	DESCRIPTION
0	No Coil
10DG	10 VDC, D-Coil, DIN 43650
10DL	10 VDC, D-Coil, Dual Lead Wires
10DS	10 VDC, D-Coil, Dual Spade
10EL	10 VDC, E-Coil, Dual Lead Wires
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
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
24DL/W	24 VDC, D-Coil, Dual Lead Wires with Weatherpak
24DP	24 VDC, D-Coil, 1/2" Conduit and Dual Lead Wires
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.
24EL	24 VDC, E-Coil, Dual Lead Wires, 18 inches long
24EL/36	24 VDC, E-Coil, Dual Lead Wires, 36 inches long
24ER	24 VDC, E-Coil, Deutsch
24EY	24 VDC, E-Coil, Metri-Pack 150
36DS	36 VDC, D-Coil, Dual Spade