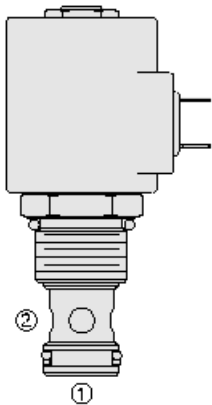
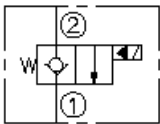




Overview



Symbol



Description

A solenoid-operated, 2 way, normally closed, poppet-type, screw-in hydraulic cartridge valve, designed to function as a load holding or blocking valve in applications requiring low internal leakage

Operation

When de-energized, the SV12-20X acts as a check valve, allowing flow to pass from port 1 to port 2, while blocking flow in the reverse direction. When energized, the poppet lifts to the port 2 to port 1 flow path. In this mode, flow from 1 to 2 is severely restricted

Features

- Continuous-duty rated coil.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Cost-effective cavity.

Ratings

Pressure Ratings

Pressure rating	240 bar (3500 psi)
Proof pressure	345 bar (5000 psi)
Burst pressure	827 bar (12000 psi)

Flow Ratings

Flow rating	See performance chart
Maximum internal leakage	3 drops/min - Note: Max at 240 bar (3500 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)	

Other Ratings

Corrosion protection	960 hr salt spray per ASTM b117 (gsv12-20x)
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Operating Parameters

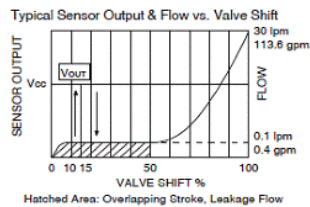
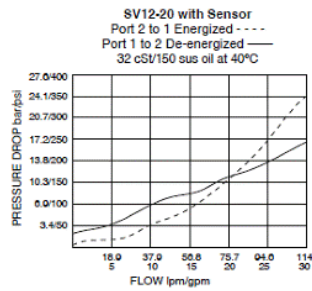
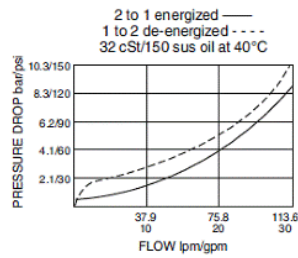
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

Properties

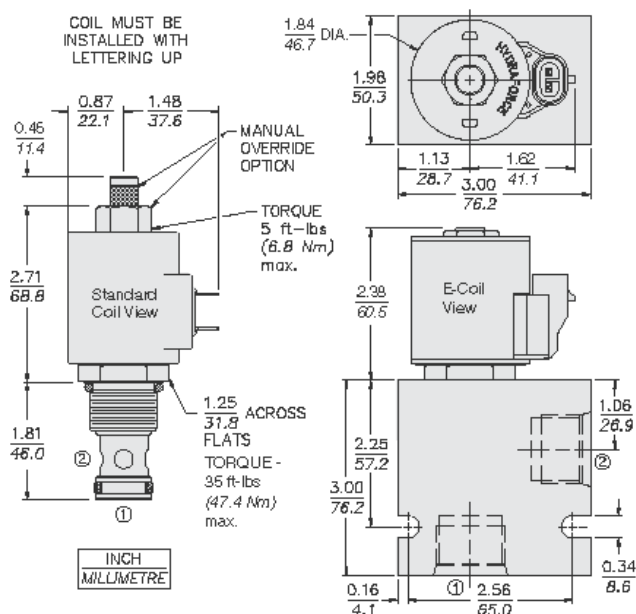
Unit weight	0.25 kg (0.54 lb)	- Note: Blank
	0.26 kg (0.57 lb)	- Note: M j y
	0.67 kg (1.48 lb)	- Note: Including coil
Internal wetted surface area	155 cm ² (24.0 in ²)	- Note: Blank
	166 cm ² (25.7 in ²)	- Note: M j y



Performance



Dimensions



Materials

Materials

Cartridge: Weight: 0.33 kg. (0.72 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and polyester elastomer back-up standard.

Standard Ported Body: Weight: 0.57 kg. (1.25 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi); Ductile iron bodies available; dimensions may differ.

Standard D-Coil: Weight each: 0.27 kg. (0.60 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnet wire.

E-Coil: Weight: 0.41 kg. (0.9 lbs.); Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.



Installation Specifications

Cavity	VC12-2
Cartridge installation torque	44.8 to 50.2 N-m (33 to 37 ft-lb)
Maximum allowable torque	102 N-m (75 ft-lb)
Coil nut torque	6.8 to 9.5 N-m (5 to 7 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK12-2X-T	- Note: X = seal option
Housings		
Coils		

Order Code

POSITION	CODE	DESCRIPTION
		SV12-A20AE-H-J-L-M
A		Position Sensor Option
A	20	Standard
A	P20A	Position Indicator Switch with Restricted Flow
E		Manual Override
E	BLANK	NONE
E	J	Momentary Pull Override, #10-32 threads
E	M	Two Position Override, Red Knurled Knob
E	Y	Momentary Pull Override, Red Knurled Knob
H		Line Body
H	0	No Body
H	10T	Aluminum SAE 10
H	12T	Aluminum SAE 12
H	16T	Aluminum SAE 16
H	12TD	Ductile Iron SAE 12
H	16TD	Ductile Iron SAE 16
H	8B	Aluminum BSPP 1" (8)
H	8BD	Ductile Iron BSPP 1" (8)
J		Seal
J	N	Buna-N
J	V	Fluorocarbon
J	P	Polyurethane
J	U	PPDI Urethane
L		Coil
L	0	No Coil
L	10DG	10 VDC, D-Coil, DIN 43650
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
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	12EJ	12 VDC, E-Coil, AMP Jr.
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/W/Z	12 VDC, E-Coil, Dual Lead Wires with WeatherPak and Zener Diode
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	20DR/D	20 VDC, D-Coil, Deutsch with Diode
L	20DS	20 VDC, D-Coil, Dual Spade
L	20ER	20 VDC, E-Coil, Deutsch
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
L	24DL/W	24 VDC, D-Coil, Dual Lead Wires with Weatherpak
L	24DL/W/D	24 VDC, D-Coil, Dual Lead Wires with Weatherpak with Diode
L	24DP	24 VDC, D-Coil, 1/2" Conduit and Dual Lead Wires
L	24DR	24 VDC, D-Coil, Deutsch
L	24DR/D	24 VDC, D-Coil, Deutsch with Diode
L	24DS	24 VDC, D-Coil, Dual Spade
L	24EG	24 VDC, E-Coil, DIN 43650
L	24EJ	24 VDC, E-Coil, AMP Jr.
L	24EL	24 VDC, E-Coil, Dual Lead Wires, 18 inches long
L	24EL/36	24 VDC, E-Coil, Dual Lead Wires, 36 inches long
L	24EL/W/Z	24 VDC, E-Coil, Dual Lead Wires with WeatherPak and Zener 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	36DS	36 VDC, D-Coil, Dual Spade
L	115AG	115 VAC, D-Coil, DIN 43650



POSITION	CODE	DESCRIPTION
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
M		Position Sensor Termination
M	BLANK	No Position Sensor
M	M3	Neutral Sense, M12-4P, Dual Output NC/NO
M	N3	Neutral Sense, DT04-4P, Dual Output NC/NO

