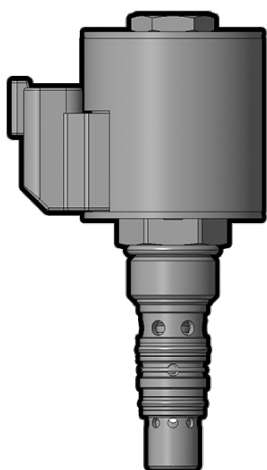




## Overview



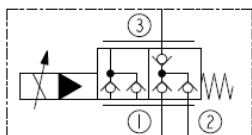
### Description

A solenoid-operated, 3 port, normally closed, poppet-type, proportional, screw-in hydraulic cartridge valve, designed for low leakage, blocking and load-holding applications. When energized, the poppet lifts to allow flow from port 3 to ports 1 and 2, flow at port 2 is typical for load sensing applications and includes a check valve for isolation.

### Features

- Continuous-duty rated coil.
- Efficient wet-armature construction.
- Optional waterproof E-Coils rated up to IP69K.
- Industry common cavity.
- Reduce manifold space claim.

### Symbol



## Ratings

### Pressure Ratings

Pressure rating	250 bar (3625 psi)
Proof pressure	345 bar (5000 psi)
Burst pressure	779 bar (11300 psi)

### Flow Ratings

Flow rating	See performance graphs	
Maximum internal leakage	5 drops/min	- <b>Note:</b> Ports 1 and 3 at 250 bar (3625 psi)
	15 drops/min	- <b>Note:</b> Port 2 at 250 bar (3625 psi)
Hysteresis percent	10 %	- <b>Note:</b> Of max flow (at max control current)

### Temperature Ratings

Operating fluid temperature	-40 to 100 °C (-40 to 212 °F)	- <b>Note:</b> With Buna N seals
	-26 to 204 °C (-15 to 400 °F)	- <b>Note:</b> With Viton seals
	-54 to 107 °C (-65 to 225 °F)	- <b>Note:</b> With polyurethane seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 70 °C (-40 to 160 °F)	

## 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	0.18 kg (0.40 lb)
Internal wetted surface area	166 cm <sup>2</sup> (25.73 in <sup>2</sup> )

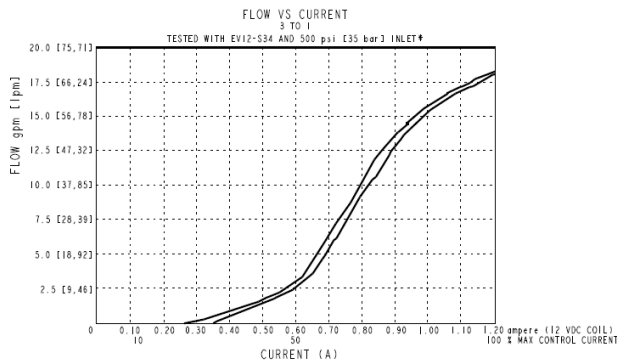
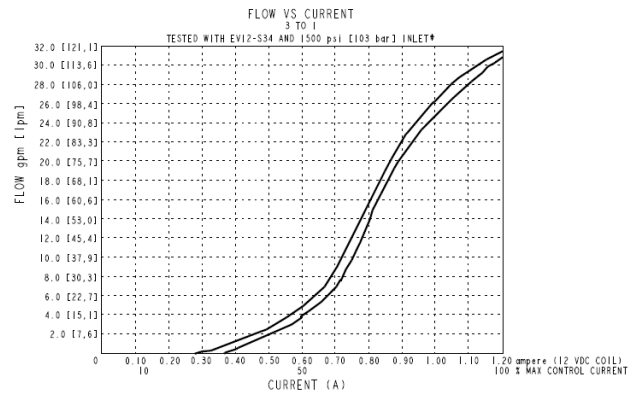
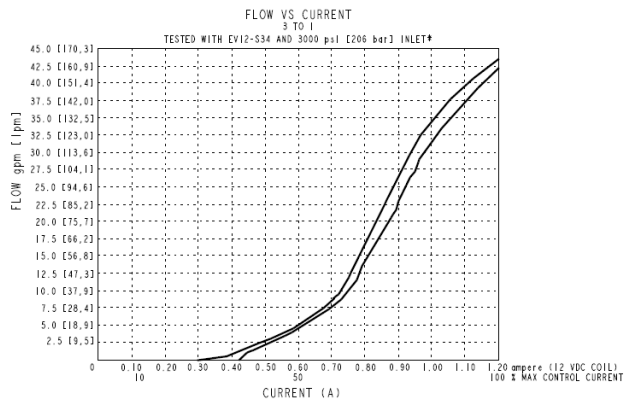
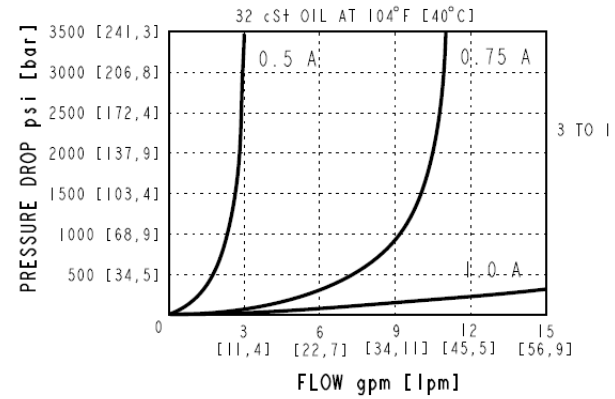
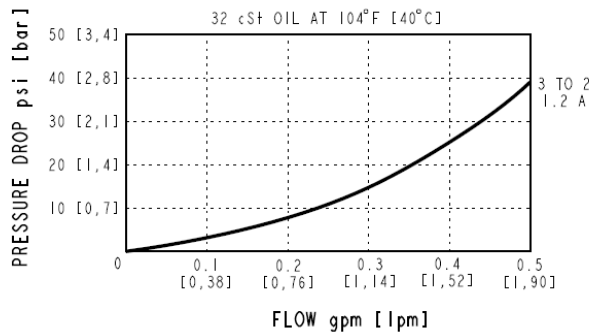
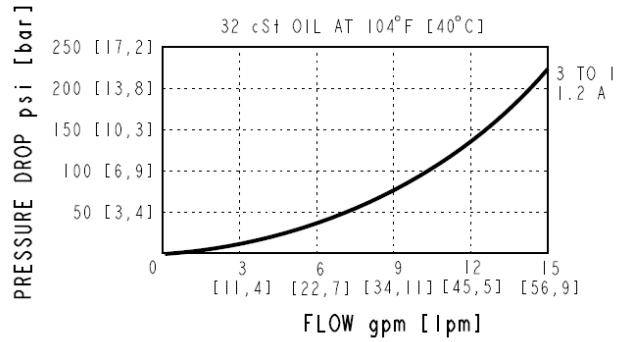
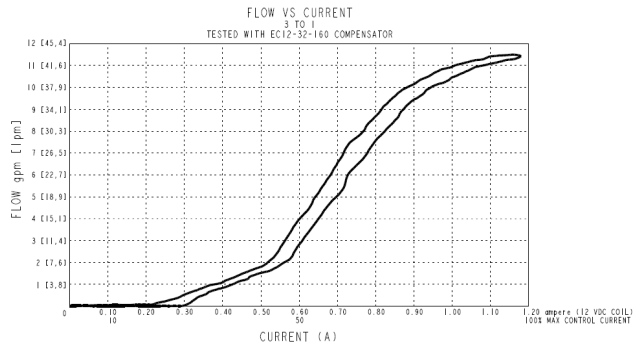


## Electrical Parameters

Valve inductance	173.3 mH	- <b>Note:</b> At 1.2 A
Typical control current limits	0.36 to 1.44 A	- <b>Note:</b> 10D coil
	0.30 to 1.20 A	- <b>Note:</b> 12D coil
	0.30 to 1.40 A	- <b>Note:</b> 12E coil
	0.18 to 0.74 A	- <b>Note:</b> 20D coil
	0.15 to 0.60 A	- <b>Note:</b> 24D coil
	0.15 to 0.70 A	- <b>Note:</b> 24E coil
Threshold current	0.30 to 0.45 A	
Dither PWM frequency	100 Hz	

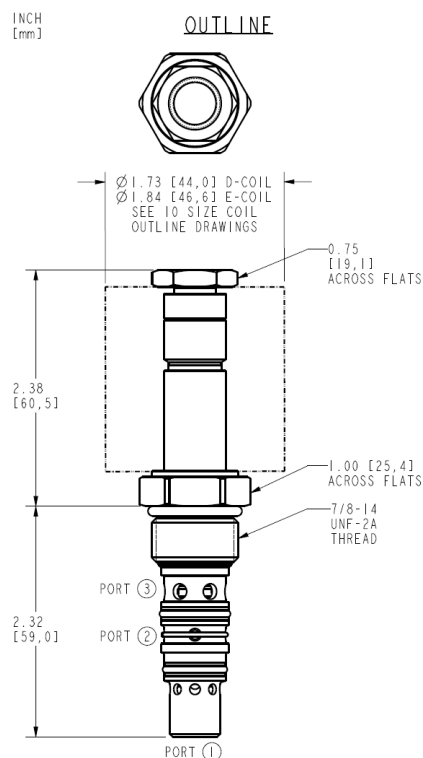


## Performance





## Dimensions



ALL DIMENSIONS ARE FOR REFERENCE ONLY

## Installation Specifications

Cavity	VC10-3B
Cartridge installation torque	44.7 to 50.2 N-m (33 to 37 ft-lb)
Coil nut torque	6.8 to 9.5 N-m (5 to 7 ft-lb)
Orientation restriction	None

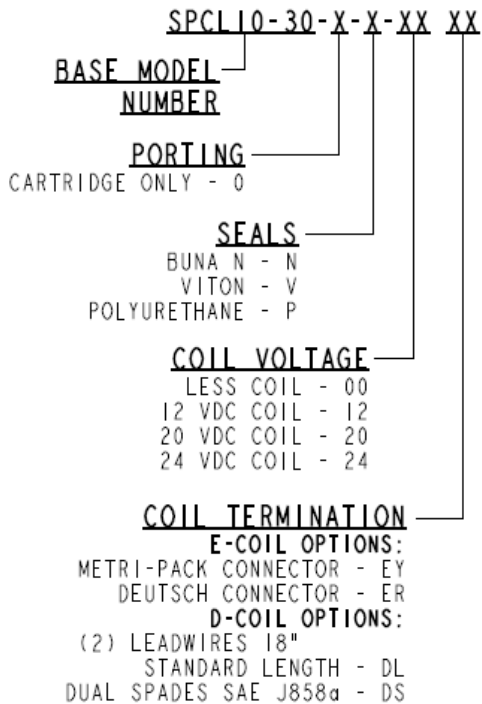
## Accessories

Seal kit	SK10-3X-MM	- <b>Note:</b> X = seal option
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## Order Code



## ORDERING INFORMATION



## **Model Options**

### **SPCL10-30E-H-J-L**

#### **E Manual Override**

CODE	DESCRIPTION
BLANK	NONE
J	Momentary Pull Override, #10-32 threads
M	Two Position Override, Red Knurled Knob
T	Variable Position Override, Red Knurled Knob
Y	Momentary Pull Override, Red Knurled Knob

#### **H Line Body**

CODE	DESCRIPTION
0	No Body

#### **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



CODE	DESCRIPTION
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