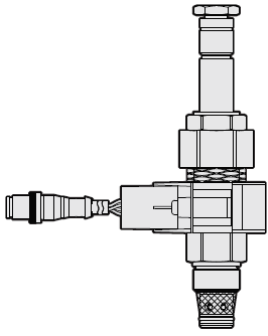




## Overview



### Description

A solenoid-operated, 2 port, normally closed, direct-acting, spool-type, screw in hydraulic cartridge valve, designed to operate as a bidirectional blocking valve.

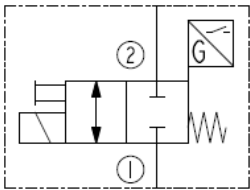
### Operation

When de-energized, the SV10-P24 blocks flow in both directions. When energized, the cartridge spool shifts to open the bidirectional flow path.

### Features

- Integral position sensor indicates when valve is shifted.
- 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.
- Waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- 960 hour salt-spray rated solenoid tubes and coils.

### Symbol



## Ratings

### Pressure Ratings

Pressure rating	207 bar (3000 psi)
Proof pressure	345 bar (5000 psi)
Burst pressure	827 bar (12000 psi)

### Flow Ratings

Flow rating	37.9 lpm (10 gpm)
Maximum internal leakage	82 ml/min (5 in <sup>3</sup> /min) - <b>Note:</b> At 207 bar (3000 psi) 0.1 lpm (0.02 gpm) - <b>Note:</b> Typical flow (leakage) in transition at 207 bar (3000 psi). (see "Flow vs % Valve Shift" graph for flow in transition from valve close to valve open).

### Other Ratings

Response	55 ms - <b>Note:</b> Pull-in. Response times measured per NFPA/T3.5.30-2008 *Inlet pressure at port 2 is 207 bar (3000 psi) *Valve oriented vertically and purged of air 46 sec - <b>Note:</b> Drop-out. Response times measured per NFPA/T3.5.30-2008 *Inlet pressure at port 2 is 207 bar (3000 psi) *Valve oriented vertically and purged of air
Minimum pull-in voltage	10.2 Vdc - <b>Note:</b> 12Vdc coil

### 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 fluorocarbon seals *See Position sensor operating temperature*
	-54 to 107 °C (-65 to 225 °F)	- <b>Note:</b> With urethane seals *See Position sensor operating temperature*
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 70 °C (-40 to 160 °F)	
Position sensor operating temperature	-40 to 110 °C (-40 to 230 °F)	- <b>Note:</b> Sensor element operating temperature limits the operating temperature of the entire assembly

## 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



## Position Sensor Specifications

### Electrical Parameters

Supply voltage	9 to 32 Vdc	- Note: Vcc
Output voltage with target present	Vcc	
Output clamp current	40 to 65 mA	- Note: For Vcc up to 32 Vdc

### Ratings

ESD	±8 kV	- Note: Air discharge
EMI	30 V/m	- Note: From 400 MHz to 2 GHz
IP rating	IP67	
Vibration	10 G	- Note: 10 to 2000 Hz sinusoidal
Mechanical shock	50 G	- Note: 11 ms, half-wave sinusoidal
Position sensor operating temperature	-40 to 110 °C (-40 to 230 °F)	- Note: Sensor element operating temperature limits the operating temperature of the entire assembly

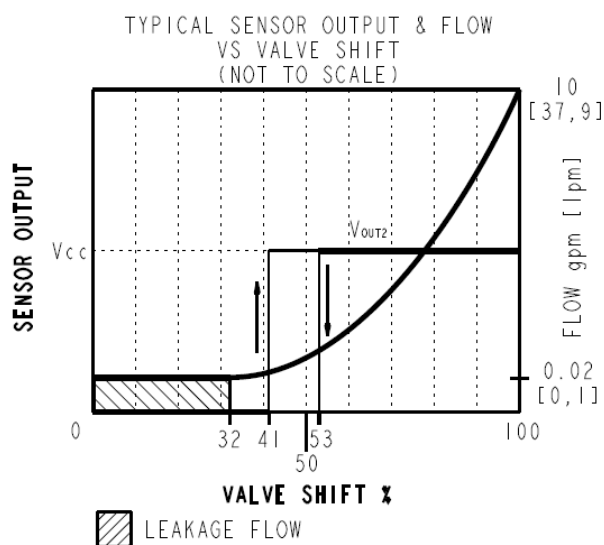
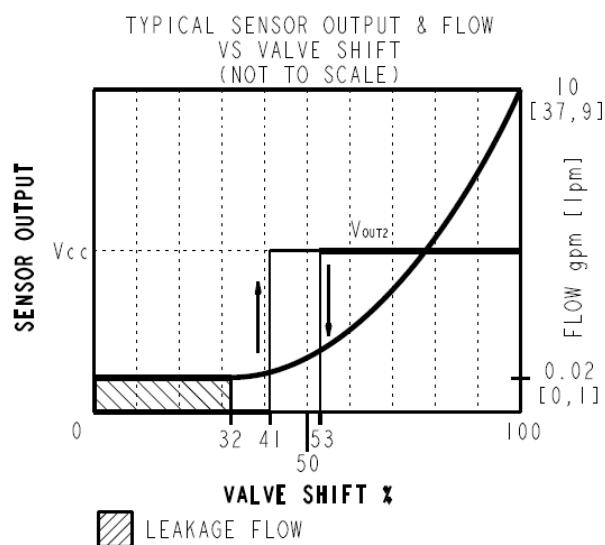
### Properties

Connector	Deutsch DT04-4P	- Note: Option N3 (dual output)
	M12	- Note: Option M3 (dual output)

## Properties

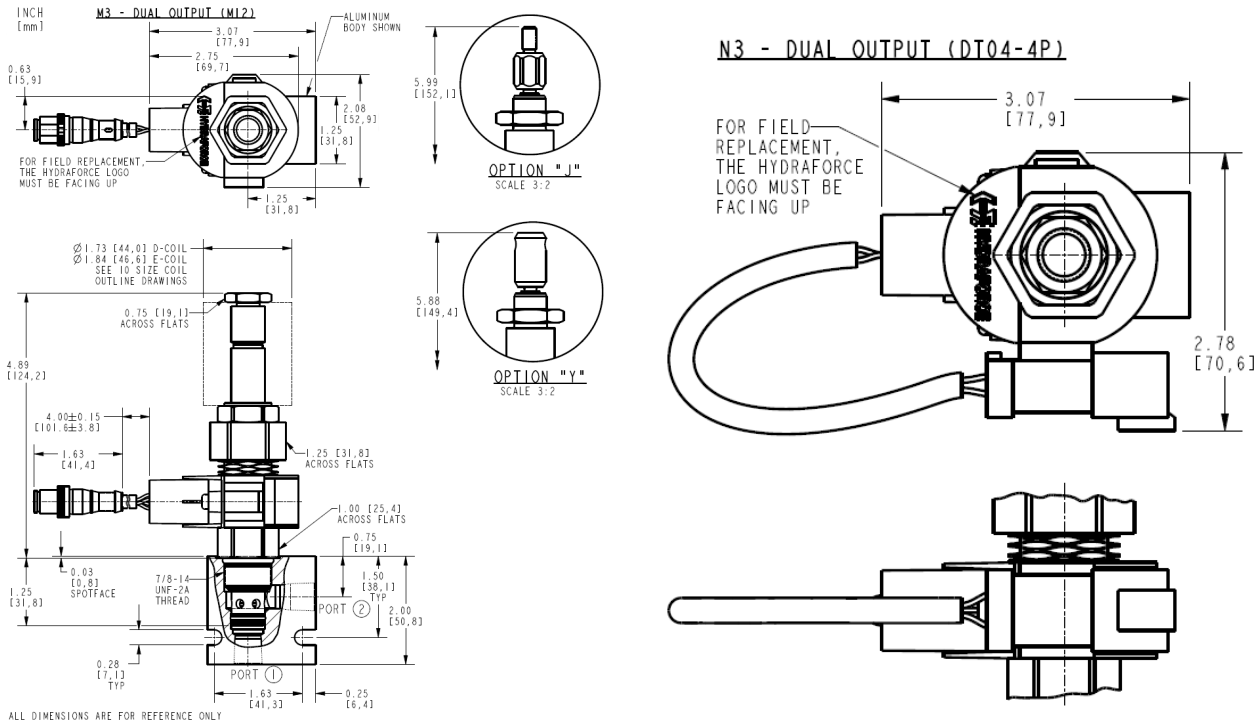
Unit weight	0.49 kg (1.08 lb)	- Note: Cartridge
Internal wetted surface area	215 cm <sup>2</sup> (34.4 in <sup>2</sup> )	

## Performance



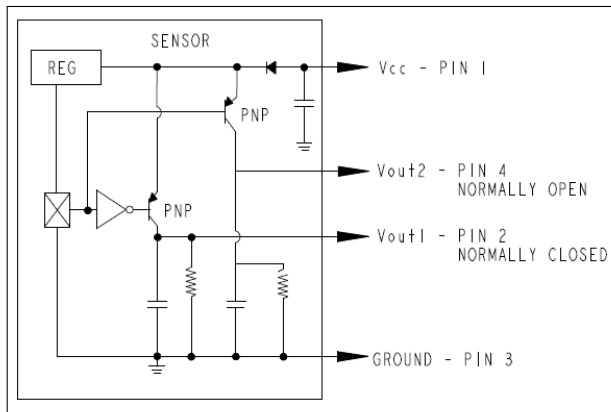


## Dimensions

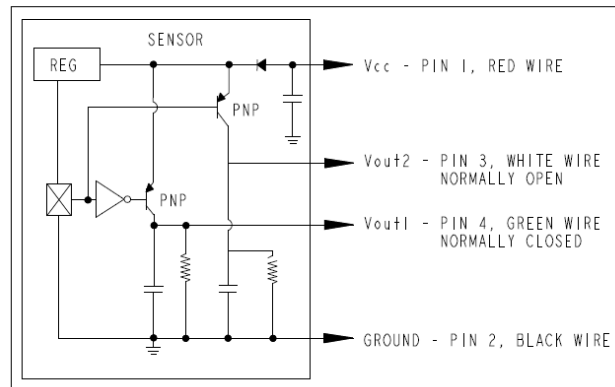


## Wiring Diagrams

M3 SENSOR WIRING DIAGRAM



N3 SENSOR WIRING DIAGRAM



## Installation Specifications

Cavity	VC10-2
Cartridge installation torque	32.5 to 35.3 N-m (24 to 26 ft-lb)
Coil nut torque	6.8 to 9.5 N-m (5 to 7 ft-lb)
Orientation restriction	None

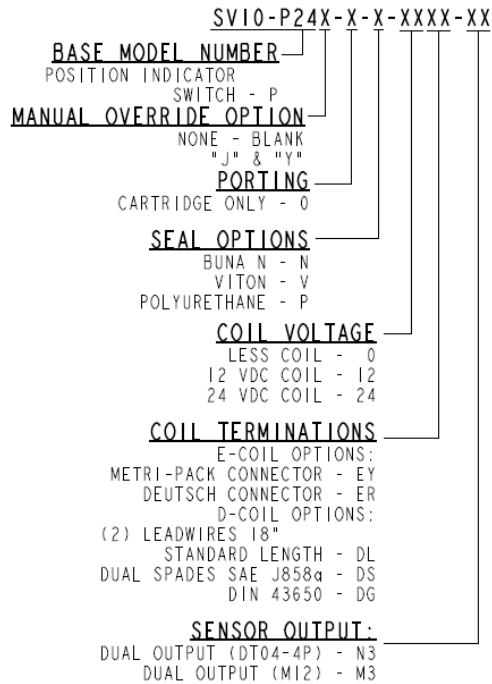
## Accessories

Seal kit	SK10-2X-M	- Note: X = Seal option
Housings		
Coils		

## Order Code



## ORDERING INFORMATION



POSITION	CODE	DESCRIPTION
		SV10-P24EG-H-J-L-M
E		Manual Override
E	BLANK	NONE
E	M	Two Position Override, Red Knurled Knob
G		Screen
G	BLANK	NONE
G	S	100 Mesh Screen
H		Line Body
H	0	No Body
H	6T	Aluminum SAE 6
H	8T	Aluminum SAE 8
H	6TD	Ductile Iron SAE 6
H	8TD	Ductile Iron SAE 8
H	2B	Aluminum BSPP 1/4" (2)
H	3B	Aluminum BSPP 3/8" (3)
H	4B	Aluminum BSPP 1/2" (4)
H	4BD	Ductile Iron BSPP 1/2" (4)
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



POSITION	CODE	DESCRIPTION
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
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



POSITION	CODE	DESCRIPTION
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
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