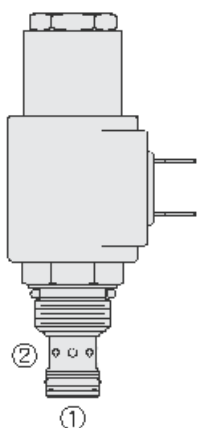




## Overview



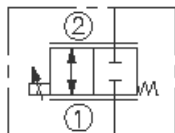
### Description

A solenoid-operated, 2 port, normally closed, direct acting spool type proportional, screw in hydraulic cartridge valve designed to operate as a bi-directional metering valve. When de-energized, the sp08-24xx blocks flow in both directions. When the valve is partially energized (see performance curve) the valve begins to throttle flow. When fully energized, the spool opens to allow bi-directional flow.

### Features

- Industry-common cavity.
- Continuous-duty rated coils.
- Efficient wet-armature construction.
- Allow bi-directional flow when fully energized.
- Optional waterproof E-Coils rated up to IP69K.

### Symbol



## Ratings

### Pressure Ratings

|                 |                    |
|-----------------|--------------------|
| Pressure rating | 207 bar (3000 psi) |
| Proof pressure  | 345 bar (5000 psi) |
| Burst pressure  | 552 bar (8000 psi) |

### Flow Ratings

|                          |                                     |                                      |
|--------------------------|-------------------------------------|--------------------------------------|
| Flow rating              | See performance graphics on sheet 4 |                                      |
| Maximum internal leakage | 10 in <sup>3</sup> /min             | - <b>Note:</b> At 207 bar (3000 psi) |
| Hysteresis per cent      | 10 %                                | - <b>Note:</b> Maximum               |

### 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                                                  |

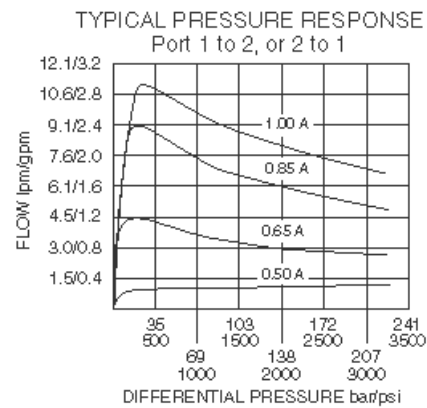
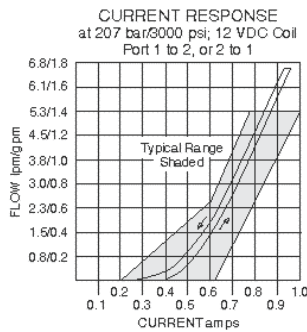
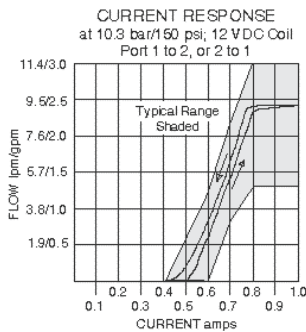
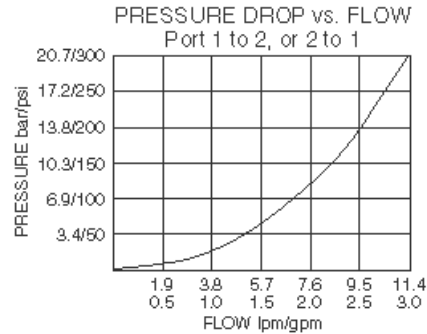
## Properties

|                              |                                             |
|------------------------------|---------------------------------------------|
| Unit weight                  | 0.11 kg (0.25 lb)                           |
| Internal wetted surface area | 111 cm <sup>2</sup> (17.2 in <sup>2</sup> ) |

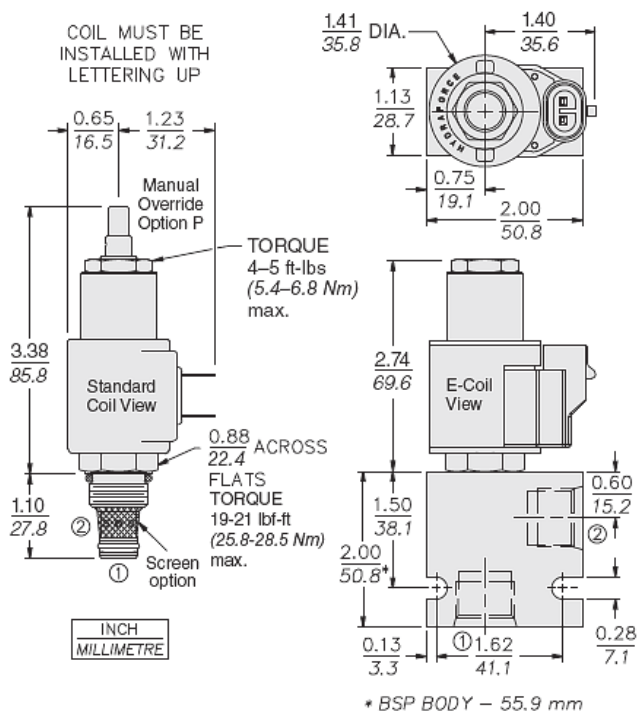
## Electrical Parameters

|                         |         |                            |
|-------------------------|---------|----------------------------|
| Maximum control current | 1000 mA | - <b>Note:</b> Coil 12 Vdc |
| Threshold current       | 400 mA  | - <b>Note:</b> At 12 Vdc   |
| Dither PWM frequency    | 70 Hz   | - <b>Note:</b> Min         |

## Performance



## Dimensions





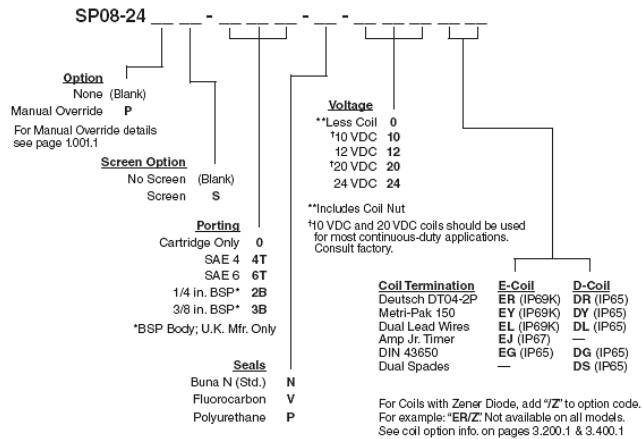
## Installation Specifications

|                               |                                   |
|-------------------------------|-----------------------------------|
| Cavity                        | VC08-2                            |
| Cartridge installation torque | 25.8 to 28.5 N-m (19 to 21 ft-lb) |
| Coil nut torque               | 5.4 to 6.8 N-m (4 to 5 ft-lb)     |
| Orientation restriction       | None                              |

## Accessories

|          |           |                                |
|----------|-----------|--------------------------------|
| Seal kit | SK08-2X-M | - <b>Note:</b> X = seal option |
|----------|-----------|--------------------------------|

## Order Code



### Model Options

#### SP08-24EG-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                    |
| 4T   | Aluminum SAE 4             |
| 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)     |
| 3BD  | Ductile Iron BSPP 3/8" (3) |

#### J Seal



| CODE | DESCRIPTION      |
|------|------------------|
| N    | Buna-N           |
| V    | Fluorocarbon     |
| P    | Polyurethane     |
| U    | PPDI<br>Urethane |

## L Coil

| CODE    | DESCRIPTION                                         |
|---------|-----------------------------------------------------|
| 0       | No Coil                                             |
| 10DL    | 10 VDC, D-Coil, Dual Lead Wires                     |
| 10DS    | 10 VDC, D-Coil, Dual Spade                          |
| 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<br>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<br>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<br>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                          |