**SP08-24 Spool, 2-Way, Normally Closed**

**DESCRIPTION**
A proportional solenoid-operated, 2-way, spool-type, normally closed, screw-in hydraulic cartridge valve designed to operate as a bi-directional metering valve.

**OPERATION**
When de-energized, the SP08-24 blocks flow in both directions. When the coil is partially energized, the valve begins to throttle flow. When fully energized, the valve opens to allow full, bi-directional flow.

Note: If low voltage is expected on the machine, 12 or 24 volt systems will require the use of 10 volt or 20 volt coils respectively. See “SP Valves and Coil Operating Parameters,” page 2.002.1.

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

**RATINGS**
- Operating Pressure: 207 bar (3000 psi)
- Operating Voltage: See Performance Chart
- Flow: up to 11.4 lpm (3 gpm)
- Max. Internal Leakage: 164 cc (10 cu. in.) per minute at 207 bar (3000 psi)
- Maximum Control Current: 1000 mA (12 VDC coil)
- Minimum Control Current: 400 mA (12 VDC coil)
- Threshold Current: 400 mA (12 VDC coil)
- Hysteresis: < 10% full flow
- Dither/PWM Frequency Range: 70 Hz min.
- Operating Temperature: -40 to 100°C (-40° to 212°F) with standard Buna N seals
  
  -26 to 204°C (-15° to 400°F) with Fluorocarbon seals
  
  -54 to 107°C (-65° to 225°F) with Polyurethane seals
- Filtration: See page 9.010.1
- Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1
- Installation: No Restrictions; See page 9.020.1
- Cavity: VC08-2; See page 9.108.1
- Cavity Tool: CT08-2XX; See page 8.600.1
- Seal Kit: SK08-2X-M; See page 8.650.1
- Coil Nut: Part No. 7004400

**Recommended Electronic Controllers:**
See page 2.001.1 or our Electronics catalog.
DIMENSIONS

**DIMENSIONS**

COIL MUST BE INSTALLED WITH LETTERING UP

TORQUE 4–5 ft-lbs (5.4–6.8 Nm) max.

**MATERIALS**

Cartridge: Weight: 0.11 kg (0.25 lb) Steel with hardened work surfaces. Zinc-plated exposed surfaces Buna N O-rings and back-ups standard.

Standard Ported Body: Weight: 0.16 kg (0.35 lb) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.008.1

Standard Coil: Weight: 0.11 kg (0.25 lb) Unitized thermoplastic encapsulated, Class H high temperature magnetwire. See page 3.200.1

E-Coil: Weight: 0.14 kg (0.3 lb) Perfect wound, fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors. See page 3.400.1

**TO ORDER**

SP08-24

<table>
<thead>
<tr>
<th>Option</th>
<th>Voltage</th>
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<tbody>
<tr>
<td>None (Blank)</td>
<td><strong>0</strong></td>
</tr>
<tr>
<td>P Manual Override</td>
<td>†10 VDC</td>
</tr>
<tr>
<td></td>
<td>12 VDC</td>
</tr>
<tr>
<td></td>
<td>20 VDC</td>
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<tr>
<td></td>
<td>24 VDC</td>
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</tbody>
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**Voltage**

For Manual Override details see page 1.001.1

**Coil Termination**

DEUTCH DT04-2P ER (IP69K) EY (IP69K) FY (IP65) DL (IP65)

METRI-PACK 150 EL (IP69K) EJ (IP67) — DL (IP65)

AMP JR. TIMER — — — —

DIN 43650 EG (IP65) — DS (IP65)

**Screen Option**

No Screen (Blank)

**Seals**

Buna N (Std.) N

Fluorocarbon V

Polyurethane P

For Coils with Zener Diode, add ‘/Z’ to option code. For example: “ER/Z” Not available on all models. See coil option info. on pages 3.200.1 & 3.400.1