2/2 Directional Valve, Solenoid Operated, Poppet Type, Piloted

SD3E-A2

3/4-16 UNF • Q_{\text{max}} 30 l/min (8 GPM) • p_{\text{max}} 420 bar (6100 PSI)

Technical Features

› Hardened precision parts
› High flow capacity and leak-free closing
› High transmitted hydraulic power up to 420 bar
› Lightline design 250 bar with reduced solenoid power for production cost saving
› Normally open and normally closed version
› Wide range of manual overrides available
› All ports may be fully pressurized
› Coil interchangeability among SD*- A* product line
› Standard version zinc-coated with surface protection acc. to ISO 9227 (240 h salt spray)

Functional Description

2-way, 2-position high pressure, pilot operated poppet valve in form of a screw-in cartridge. The valve is used mainly for on-off bi-directional control of flow to actuators with leak-free closing in one direction.

Technical Data

<table>
<thead>
<tr>
<th>Valve size / Cartridge cavity</th>
<th>3/4-16 UNF-2A / A2 (C-8-2)</th>
</tr>
</thead>
</table>

- Lightline
  - Max. flow: Q \text{[l/min (GPM)]}
  - Max. operating pressure: \text{bar (PSI)}
  - Fluid temperature range (NBR) \text{°C (°F)}
  - Fluid temperature range (FPM) \text{°C (°F)}
  - Ambient temperature range \text{°C (°F)}
  - Supply voltage tolerance \text{%}

- High performance
  - Max. flow: Q \text{[l/min (GPM)]}
  - Max. operating pressure: \text{bar (PSI)}
  - Fluid temperature range (NBR) \text{°C (°F)}
  - Fluid temperature range (FPM) \text{°C (°F)}
  - Ambient temperature range \text{°C (°F)}
  - Supply voltage tolerance \text{%}

Flow Q \text{[l/min (GPM)]} vs. Operating pressure p \text{[bar (PSI)]}

Pressure drop related to flow rate - Lightline

Pressure drop related to flow rate - High performance

Characteristics measured at v = 32 \text{ mm/s} (156 SUS)

For operating limits under conditions and flow directions other than shown contact our technical support.

Datasheet

Type

General information

Coil types

Valve bodies

Cavity details / Form tools

Spare parts

- In-line mounted
- Sandwich mounted

- \text{C_8007}
- \text{SB-04(06)_0028}

- \text{SMT-0019}
- \text{SP_8010}

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## Dimensions in millimeters (inches)

### Lightline L2

<table>
<thead>
<tr>
<th>Functional symbol</th>
<th>Surface treatment</th>
<th>Seals</th>
<th>Manual override</th>
</tr>
</thead>
<tbody>
<tr>
<td>M2</td>
<td>zinc-coated (ZnCr-3), ISO 9227 (240 h)</td>
<td>NBR</td>
<td>standard for 2O2*</td>
</tr>
<tr>
<td>M4</td>
<td>zinc-coated (ZnNi), ISO 9227 (520 h)*</td>
<td>FPM (Viton)*</td>
<td>rubber boot protected*</td>
</tr>
</tbody>
</table>

### High performance L2 (O2)

<table>
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<tr>
<th>Functional symbol</th>
<th>Surface treatment</th>
<th>Seals</th>
<th>Manual override</th>
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<tr>
<td>M2</td>
<td></td>
<td>NBR</td>
<td>standard for 2O2*</td>
</tr>
<tr>
<td>M4</td>
<td></td>
<td>FPM (Viton)*</td>
<td>rubber boot protected*</td>
</tr>
</tbody>
</table>


## Manual Override in millimeters (inches)

### No designation *
- standard for 2O2
- rubber boot protected
- socket head screw, size 2.5
- without manual override

### Designation M2 for 2O2 *
- hand screw
- socket head screw
- without manual override

### Designation M5 for 2O2 *
- hand screw
- socket head screw
- without manual override

### Designation M9 for 2O2 *
- hand screw
- socket head screw
- without manual override

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In case of solenoid malfunction or power failure, the spool of the valve can be shifted by manual override as long as the pressure in port T does not exceed 25 bar (363 PSI). For alternative manual overrides contact our technical support.

## Ordering Code

<table>
<thead>
<tr>
<th>Lightline L2</th>
<th>High performance L2 (O2)</th>
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<tbody>
<tr>
<td>2/2 directional valve, solenoid operated, poppet type, piloted</td>
<td>No designation *</td>
</tr>
<tr>
<td>Valve cavity 3/4-16 UNF (C-8-2)</td>
<td>Designation M2 for 2O2 *</td>
</tr>
<tr>
<td>Lightline L</td>
<td>Designation M5 for 2O2 *</td>
</tr>
<tr>
<td>High performance H</td>
<td>Designation M9 for 2O2</td>
</tr>
</tbody>
</table>

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