2/2 Directional Valve, Solenoid Operated, Poppet Type, Blocking, Direct Acting

SD1E-A2

3/4-16 UNF • Q_{max} 30 l/min (8 GPM) • p_{max} 350 bar (5100 PSI)

Technical Features

› Hardened precision parts
› High flow capacity and leak-free closing (up to 3 drops per minute)
› High transmitted hydraulic power up to 350 bar
› Normally open and normally closed version
› Wide range of manual overrides available
› All ports may be fully pressurized
› Coil interchangeability among SD*-A*/H product line
› In the standard version, the valve is zinc-coated for 240 h protection acc. to ISO 9227

Functional Description

2-way, 2 position high pressure direct acting 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 both directions.

Technical Data

Valve size / Cartridge cavity 3/4-16 UNF-2A / A2 (C-8-2)

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Symbol</th>
<th>2S5</th>
<th>2S6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><img src="image" alt="Symbol" /></td>
<td><img src="image" alt="Symbol" /></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid flow</td>
<td>30 l/min (7.9 GPM)</td>
</tr>
<tr>
<td>Max. operating pressure</td>
<td>350 bar (5080 PSI)</td>
</tr>
<tr>
<td>Fluid temperature range (NBR)</td>
<td>-30...80 (-22...176) °C (°F)</td>
</tr>
<tr>
<td>Fluid temperature range (FPM)</td>
<td>-20...80 (-4...176) °C (°F)</td>
</tr>
<tr>
<td>Ambient temperature range</td>
<td>-30...80 (-22...176) °C (°F)</td>
</tr>
<tr>
<td>Supply voltage tolerance</td>
<td>± 15</td>
</tr>
<tr>
<td>Max. switching frequency</td>
<td>15 000 1/h</td>
</tr>
<tr>
<td>Weight without coil</td>
<td>0.19 (0.42) kg (lbs)</td>
</tr>
</tbody>
</table>

Datasheet

<table>
<thead>
<tr>
<th>Type</th>
<th>General information</th>
<th>Coils</th>
<th>Valve bodies</th>
<th>Cavity details / Form tools</th>
<th>Spare parts</th>
</tr>
</thead>
<tbody>
<tr>
<td>GI_0060</td>
<td>C_8007</td>
<td>SB_0018</td>
<td>SB-04(06)_0028</td>
<td>SMT_0019</td>
<td>SP_8010</td>
</tr>
<tr>
<td>Products and operating conditions</td>
<td>C198*</td>
<td>SB-A2*</td>
<td>SB-<em>A2</em></td>
<td>SMF-A2*</td>
<td></td>
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</tbody>
</table>

Characteristics measured at v = 32 mm/s (156 SUS)

Operating limits

Oil 80 °C (176 °F) / Ambient temperature 50 °C (122 °F) / Voltage U_n -10% (21.6 V DC)

Pressure drop related to flow rate

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Model Code | Connection
---|---
1 | 2S5 1→2
2 | 2S5 2→1
3 | 2S6 2→1
4 | 2S6 1→2

Subject to change · SD1E-A2_4070_3en_02/2019

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**Dimensions** in millimeters (inches)

| 255, 256 |
|---|---|

**Manual Override** in millimeters (inches)

<table>
<thead>
<tr>
<th>No designation - standard</th>
<th>Designation M2 - rubber boot protected</th>
<th>Designation M4 - hand screw</th>
<th>Designation M5 - socket head screw, size 2.5</th>
<th>Designation M9 - without manual override</th>
</tr>
</thead>
</table>

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**

- **SD1E-A2** / **H**

2/2 directional valve, solenoid operated, poppet type, blocking, direct acting

Valve cavity

3/4-16 UNF (C-8-2)

High performance

Functional symbol

<table>
<thead>
<tr>
<th>2</th>
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<tbody>
<tr>
<td>M</td>
<td>1</td>
</tr>
</tbody>
</table>

**Surface treatment**

- A: zinc-coated (ZnCr-3), ISO 9227 (240 h)
- B: zinc-coated (ZnNi), ISO 9227 (520 h)

**Seals**

- No designation
- NBR
- FPM (Viton)

**Manual override**

- No designation
- standard
- M2
- M4
- M5
- M9

- rubber boot protected
- hand screw
- socket head screw
- without manual override