Proportional flow control valve, with on-board electronics (OBE) and inductive position transducer

Type 3FREEZ

Nominal size 6, 10
Unit series 1X
Maximum working pressure 250 bar
Nominal flow rate $Q_{\text{nom}}$ 10...70 l/min

Overview of Contents

<table>
<thead>
<tr>
<th>Contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Features</td>
<td>1</td>
</tr>
<tr>
<td>Ordering data</td>
<td>2</td>
</tr>
<tr>
<td>Preferred types</td>
<td>2</td>
</tr>
<tr>
<td>Symbols</td>
<td>3</td>
</tr>
<tr>
<td>Function, sectional diagram</td>
<td>4 and 5</td>
</tr>
<tr>
<td>Technical data</td>
<td>6 to 8</td>
</tr>
<tr>
<td>On-board trigger electronics</td>
<td>9 and 10</td>
</tr>
<tr>
<td>Characteristic curves</td>
<td>11 and 12</td>
</tr>
<tr>
<td>Unit dimensions</td>
<td>13 and 14</td>
</tr>
</tbody>
</table>

Features

- Directly controlled flow control valves NG6 and NG10 with on-board electronics and inductive position transducer
- With position control, minimal hysteresis < 1 %, see Technical Data
- The 3-way function is determined by how the hydraulic ports are assigned (residual flow runs through port P, 3rd way)
- Adjustable by means of the controlled solenoid position, the position transducer and the on-board electronics
- For subplate attachment, mounting hole configuration NG6 to ISO 4401-03-02-0-94, NG10 to ISO 4401-05-04-0-94
- Subplates as per catalog sheet, RE 45053 for NG6, RE 45055 for NG10 (order separately)
- Plug-in connector to DIN 43563-AM6, see catalog sheet RE 08008 (order separately)
- Data for the on-board trigger electronics
  - Complies with CE, EMC directives
    - EN 61000-6-2: 2002-08
    - EN 61000-6-3: 2002-08
  - $U_{\text{op}} = 24 V_{\text{nom}}$ DC
  - Electrical connection 6P+PE
  - Signal actuation
    - Standard 0...+10 V (A1)
  - Valve curve calibrated at the factory
Ordering data

| 3 | FRE | E | Z | B | L | 2 | G24 | K31 | A1 | M | M | *
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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>3-way</td>
<td>= 3</td>
<td>Proportional flow control valve, with position control</td>
<td>With on-board electronics</td>
<td>= E</td>
<td>With inductive position transducer</td>
<td>= Z</td>
<td>NG6</td>
<td>= 6</td>
<td>NG10</td>
<td>= 10</td>
<td>Without external closing fixture for pressure compensator</td>
<td>= B</td>
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</tbody>
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Unit series 10 to 19 = 1X
(10 to 19: installation and connection dimensions unchanged)

**Nominal flow rate**
- 10 l/min (Δp = 8 bar pressure drop) = 10
- 35 l/min (Δp = 8 bar pressure drop) = 35
- 70 l/min (Δp = 8 bar pressure drop) = 70

Flow characteristic (L = linear) = L

Setpoint input +10 V, Q = 0 l/min (NC) = 2

* Version “F1” (4...20 mA version) available on request

**Further information in plain text**
- M = NBR seals, suitable for mineral oils (HL, HLP) to DIN 51524
- M = Without non-return valve
- Interface for trigger electronics
  - A1 = Setpoint input 0...+10 V
  - K31 = Electrical connection without plug-in connector, with unit plug to DIN 43563-AM6
  - G24 = Voltage supply of trigger electronics

**Preferred types**

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<thead>
<tr>
<th>Type</th>
<th>Material Number</th>
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</tr>
</thead>
<tbody>
<tr>
<td>3FREEZ6B–1X/10L2G24–K31A1MM</td>
<td>0 811 403 150</td>
<td>3FREEZ10B–1X/70L2G24–K31A1MM</td>
<td>0 811 403 019</td>
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<tr>
<td>3FREEZ6B–1X/35L2G24–K31A1MM</td>
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</tbody>
</table>