HazEx™ Piezo Operated NAMUR Solenoid Valve – Pneumatic

Intrinsically Safe, DIV 1, 2, T6, Class I/Group A

Type 6520

Advantages/Benefits

- PTB EEx ia IIC T6 approved
- FM IS / I, II, III / ABCDEFG approved
- Low power consumption
- 3/2- and 5/2-way
- High flow rates
- Long service life

Applications

Target markets:
- Chemical industry
- Pharmaceutical processing equipment
- Industrial waste water treatment
- Oil and gas industry

Process Specification

Nominal voltage 24 V/DC, ± 10%
Switching current 4.5 mA
Power consumption 0.11 W
Closed circuit ≤ 0.1 mA at 24 V
Electrical connection 1 x PG9
Duty cycle 100% continuously rated

Pneumatic connections
Supply port 1, 3 and 5: G 1/4
Service port 2 and 4: NAMUR flange
Protection class IP 65 with cable plug

Materials
Pilot valve Aluminum, anodized
Body PA
Supply ports Brass, nickel-plated or stainless steel
Seal NBR, FKM, PUR

Fluids
Unlubricated instrument air, neutral gases

Media temperatures -4°F to 122°F
Ambient temperatures -4°F to 131°F
Mounting position Any, preferably solenoid system upright

The Type 6520 intrinsically safe valves are used for process actuation in hazardous areas. Thanks to the intrinsically safe design and the choice of corrosion resistant materials, the valves can be used in a wide variety of demanding applications. The NAMUR flange allows easy mounting directly to process valves. Due to the low power consumption, up to 4 valves can be connected to the Profibus PA I/O-Box Type 8642. The circuit function of the Type 6520 can easily be changed from H (5/2-way) to C (3/2-way) simply by changing the adapter plate, which is within scope of supply.
**Technical Data**

**Circuit Function**

C 3/2-way valve, servo-assisted, in de-energized position, port 2 connected to port 4

H 5/2-way valve, servo-assisted, in de-energized position, port 2 pressurized and port 4 exhausted

<table>
<thead>
<tr>
<th>Type</th>
<th>Circuit function</th>
<th>Orifice [inch]</th>
<th>Qn-Value (air) [l/min]</th>
<th>Pressure range [PSI]</th>
<th>Response times [ms]</th>
<th>Weight [lb.]</th>
</tr>
</thead>
<tbody>
<tr>
<td>6520</td>
<td>H or C</td>
<td>1/4</td>
<td>380**</td>
<td>36.25 – 101.5</td>
<td>250</td>
<td>1.32</td>
</tr>
<tr>
<td>6520</td>
<td>H or C</td>
<td>1/4</td>
<td>900</td>
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<td>1.32</td>
</tr>
</tbody>
</table>

**Flow rate: Qn-value air [l/min]**

Measured at 68°F, 87 PSI pressure at valve inlet and 14.5 PSI pressure difference

**Pressure ranges [PSI]**

Gauge measurements

**Response times [ms]**

Opening Pressure rise from 0 to 90%

Closing Pressure drop from 100 to 10%

**Specifications - Ordering Chart (Other Versions on Request)**

<table>
<thead>
<tr>
<th>Type</th>
<th>Circuit function</th>
<th>Supply port material</th>
<th>Port connection 2 and 4</th>
<th>Port connection 1, 3 and 5</th>
<th>Orifice [inch]</th>
<th>Min. air flow supply [l/min]</th>
<th>Qn-Value (air) [l/min]</th>
<th>Pressure range [PSI]</th>
<th>Item-No.</th>
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<tbody>
<tr>
<td>6520</td>
<td>H or C</td>
<td>Brass, nickel-plated</td>
<td>NAMUR G 1/4</td>
<td>1/4</td>
<td>150</td>
<td>380**</td>
<td>36.25 – 101.5</td>
<td>141 722 S</td>
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<tr>
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<td>Brass, nickel-plated</td>
<td>NAMUR G 1/4</td>
<td>1/4</td>
<td>270</td>
<td>900</td>
<td>36.25 – 101.5</td>
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<td>Stainless steel</td>
<td>NAMUR G 1/4</td>
<td>1/4</td>
<td>150</td>
<td>380**</td>
<td>36.25 – 101.5</td>
<td>141 721 Z</td>
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<td>139 374 B</td>
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</tbody>
</table>

* For versions with stainless steel supply port, fixing and connection screws are as well made of stainless steel

**Dimensions [mm]**

Flange pattern acc. to NAMUR VDI/VDE 3845

<table>
<thead>
<tr>
<th>Flange Dimension</th>
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<tbody>
<tr>
<td></td>
<td>58</td>
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In case of special requirements please consult for advice. We reserve the right to make technical changes without notice.