Position sensors

No detours: Valve sensor directly connected to control valve

Feedback systems for valves and valve actuators

- Less networking complexity due to direct control of the control valve
- Self-diagnostics regarding wear, blockages or deposits, for maintenance tailored to your needs
- LED flash mode for quick visual sensor localisation
- End position setting with just one click for even quicker set-up

Direct connection reduces wiring
The MVQ201 continuously monitors the position of the valve to the nearest degree. Via the “Auto teach” function, the end positions are automatically approached and taught. The control valve can be easily connected via the separate M12 connection and be controlled via IO-Link. This reduces wiring and installation complexity – reducing possible sources of error.

User-friendly status query, maintenance information in good time
The defined valve positions are signalled via two switching outputs as well as via the clearly visible status LED. The sensor also detects altered closing durations, which suggest wear, deposits or blockages due to foreign bodies, and signals them via IO-Link. This allows for demand-oriented maintenance planning or immediate troubleshooting, which help avoid longer and costly plant downtimes. To simplify localisation, the selected device flashes green in flash mode.
**Smart valve sensor · M12 connector · control valve output**

<table>
<thead>
<tr>
<th>Mounting dimensions [VDI/VDE 3845]</th>
<th>Shaft height [mm]</th>
<th>Shaft diameter [mm]</th>
<th>Input function / output function</th>
<th>Accuracy / resolution [°]</th>
<th>Order no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 x 30</td>
<td>20</td>
<td>&lt; 38</td>
<td>2 x NC / NO (selectable), 2 x NO for valve control</td>
<td>± 1 / 0.1</td>
<td>MVQ201</td>
</tr>
</tbody>
</table>

**Accessories**

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation</td>
<td>Mounting adapter, 80 x 30 mm (VDI/VDE 3845) Shaft height: 30 mm, Ø &lt; 38 mm</td>
<td>E12569</td>
</tr>
<tr>
<td></td>
<td>Mounting adapter, 130 x 30 mm (VDI/VDE 3845) Shaft height: 30 mm, Ø &lt; 38 mm</td>
<td>E12573</td>
</tr>
<tr>
<td></td>
<td>Mounting bridge, 80 x 30 / 130 x 30 mm (VDI/VDE 3845) Shaft height: 20...40 mm, Ø &gt; 38 mm</td>
<td>E12674</td>
</tr>
<tr>
<td></td>
<td>Mounting bridge, 80 x 30 / 130 x 30 mm (VDI/VDE 3845) Shaft height: 30...50 mm, Ø &gt; 38 mm</td>
<td>E12628</td>
</tr>
</tbody>
</table>

**IO-Link**

<table>
<thead>
<tr>
<th>Description</th>
<th>Order no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LR DEVICE (supplied on USB flash drive) Software for online and offline parameter setting of IO-Link sensors and actuators</td>
<td>QA0011</td>
</tr>
<tr>
<td>IO-Link master with PROFINET interface</td>
<td>AL1100</td>
</tr>
</tbody>
</table>

**Further technical data**

- Operating voltage [V DC]: 10...30
- Current rating [mA]: 2 x 100, 2 x 200 (valve control)
- Detection range [°]: 360
- Reverse polarity protection
- Short-circuit protection
- Protection rating [°C]: IP 65 / IP 67
- Ambient temperature [°C]: -25...70
- Tolerance [°]: ± 0.1...15
- Repeatability [°]: 0.1
- Type of transmission: COM2 (38.4 kbAud)
- IO-Link revision: 1.1
- Min. process cycle time [ms]: 4
- Required master port class: A
- SIO mode

**Profiles**

- Smart sensor: Device identification; Device diagnosis; Device teach channel; Binary data channel; Process data variable; Measurement data channel

**Housing materials**

- PA; stainless steel plug

- Dimensions [mm]: 95 x 50 x 57

**Directly connected to the control valve**

The MVQ201 has a separate M12 connection for direct connection to the control valve, which can then be easily controlled via IO-Link. The short cable path simplifies installation and reduces data transmission’s susceptibility to failure.

Moreover, additional information, e.g. altered closing and opening durations of the valve, due to deposits or wear, is provided via IO-Link and can then be further processed either in the SMART OBSERVER or in the controller.

This allows for condition-based maintenance and cleaning of the plant as well as for prevention of unplanned and costly downtime.

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For further technical details please visit: ifm.com