Solenoid operated spool valve with inductive switching position monitoring

**Flange construction**
- 4/2-way impulse execution, dentented
- 4/3-way with spring centered mid position
- 4/2-way with spring reset
- $Q_{\text{max}} = 80 \text{ l/min}$
- $P_{\text{max}} = 350 \text{ bar}$

**DESCRIPTION**
Spool valve according to data sheet 1.2-59 with additional inductive switching position monitoring. The contactless sensor transmits the spool position to a step signal.

**TYPE CODE**

<table>
<thead>
<tr>
<th>Spool valve, direct operated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slip-on coil Medium</td>
</tr>
<tr>
<td>Flange construction</td>
</tr>
<tr>
<td>International standard interface ISO NG6</td>
</tr>
<tr>
<td>Other type designation according to type code data sheet 1.2-59</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Polarity / Signal output / Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNP / NO / Single</td>
</tr>
<tr>
<td>PNP / NC / Single</td>
</tr>
<tr>
<td>NPN / NO / Single</td>
</tr>
<tr>
<td>PNP / NO / Double*</td>
</tr>
<tr>
<td>PNP / NC / Double*</td>
</tr>
<tr>
<td>NPN / NO / Double*</td>
</tr>
</tbody>
</table>

*not in combination with 4/3-way (spring centred)
## General Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>0,5 kg single flange</td>
</tr>
<tr>
<td></td>
<td>1,0 kg double flange</td>
</tr>
</tbody>
</table>

**Sensor Specifications:**

- **Nominal voltage:** 24 VDC
- **Operating voltage:** 10…30 VDC
- **Signal current:** max. 200 mA
- **Switching frequency:** 2000 Hz
- **Protection class:** IP 68

According to the connection type, the protection class of the valve can be lower, see data sheet 1.2-59

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>M12 x 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient temperature</td>
<td>-25…50 °C</td>
</tr>
<tr>
<td>Fastening torque</td>
<td>15 Nm</td>
</tr>
<tr>
<td>Peak pressure</td>
<td>500 bar</td>
</tr>
</tbody>
</table>

**Note:** Other specifications see data sheet 1.2-59

## Electrical Connection

### PNP, NO (Normally open)

- **Type:** Designation: Z603
- **Article no.:** 205.5024
- **Device receptacle:** M12, 4 pole male
- **Mating connector:** M12, 4 pole female

- 1 = Supply voltage +
- 2 = Reserved for extensions
- 3 = Supply voltage 0 VDC
- 4 = Signal

**Mating connector not included in delivery**

### PNP, NC (Normally closed)

- **Type:** Designation: Z482
- **Article no.:** 205.5023
- **Device receptacle:** M12, 4 pole male
- **Mating connector:** M12, 4 pole female

- 1 = Supply voltage +
- 2 = Signal
- 3 = Supply voltage 0 VDC
- 4 = Reserved for extensions

**Mating connector not included in delivery**

### NPN, NO (Normally open)

- **Type:** Designation: Z680
- **Article no.:** 205.5026
- **Device receptacle:** M12, 4 pole male
- **Mating connector:** M12, 4 pole female

- 1 = Supply voltage +
- 2 = Reserved for extensions
- 3 = Supply voltage 0 VDC
- 4 = Signal

**Minus switched**

**Mating connector not included in delivery**

### Signal Characteristics

<table>
<thead>
<tr>
<th>Signal of the actuator</th>
<th>Signal of the sensor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>0*</td>
<td>0*</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

*Middle position 4/3-way

## Accessories

- **Mating connector (plug female)**
  - straight, screw terminal | Article no. 219.2978
  - 90°, screw terminal | Article no. 219.3003

## Surface Treatment

- The valve body is painted with a two component paint
- All the other parts are zinc-nickel coated

## General Specifications

- Weight: 0.5 kg single flange
- Weight: 1.0 kg double flange

**Sensor Specifications:**

- Nominal voltage: 24 VDC
- Operating voltage: 10…30 VDC
- Signal current: max. 200 mA
- Switching frequency: 2000 Hz
- Protection class: IP 68

According to the connection type, the protection class of the valve can be lower, see data sheet 1.2-59

- Dimensions: M12 x 1
- Ambient temperature: -25…50 °C
- Fastening torque: 15 Nm
- Peak pressure: 500 bar

**Note:** Other specifications see data sheet 1.2-59
Solenoid operated spool valve

DIMENSIONS / SINGLE MONITORING
4/3-way spool valve (spring centred)

4/2-way spool valve (spring reset) operation A-side

DIMENSIONS / DOUBLE MONITORING
4/2-way spool valve (spring reset) operation A-side

4/2-way spool valve (spring reset) operation B-side

4/2-way spool valve (impulse)

4/2-way spool valve (spring reset) operation B-side