Type 503 pressure transmitters, with their excellent price / performance ratio, are specially designed for industrial OEM applications. Partially automated production techniques allow us to produce high quantities, yet retaining the flexibility to offer different versions.

Pressure range
0 ... 2.5 – 25 bar

- Partial automatic production, giving ideal price / performance ratio.
- Ideal for use as a control element, owing as a result of a small hysteresis
- Incorporates all the benefits of ceramics technology for industrial applications
## Technical overview

### Accuracy

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolerance zero point</td>
<td>% fs</td>
<td>± 1.5</td>
</tr>
<tr>
<td>Tolerance full scale</td>
<td>% fs</td>
<td>± 1.5</td>
</tr>
<tr>
<td>Resolution</td>
<td>% fs</td>
<td>± 0.1</td>
</tr>
<tr>
<td>Total of linearity, hysteresis and repeatability</td>
<td>% fs</td>
<td>± 1.0</td>
</tr>
<tr>
<td>Long term stability acc. EN 60770</td>
<td>% fs</td>
<td>± 0.5</td>
</tr>
<tr>
<td>TC zero point</td>
<td>% fs/10K</td>
<td>± 0.6</td>
</tr>
<tr>
<td>TC sensitivity</td>
<td>% fs/10K</td>
<td>± 0.15</td>
</tr>
</tbody>
</table>

Test conditions: 25 ºC, 49% RH, power supply 24 VDC / 5 VDC

### Pressure range

Relative: 0 ... ± 25 bar

### Operating conditions

**Medium:** Liquids and neutral gases

**Temperature**
- Ambient: +10 ... +80 ºC
- Storage: -30 ... +85 ºC

### Overload admissible

2 x fs

### Materials

**Housing material**
- ABS for cover with connector RAST 2.5
- PA 6 for cover with connector DIN or cable

**Materials in contact with the medium**
- Sensor: Ceramic Al₂O₃ (96%)
- Pressure connector: Grivory GV 5H or Noryl GTX 20% GF
- Sealing material: FPM, EPDM, NBR

### Electrical overview

**Output**
- 2 wire: 4 ... 20 mA, 10.0 ... 33 VDC
- 3 wire: 0 ... 5 V, 9.0 ... 33 VDC
- 3 wire: 0 ... 10 V, 16.2 ... 33 VDC

**Supply voltage:**
- 2 wire: - 10 V
- 3 wire: > 10 kOhm / < 100 nF

**Current consumption:**
- 2 wire: < 20 mA
- 3 wire: < 5 mA

**Ratio:**
- 0 ... 10%: 5 VDC ± 5%< 10 kOhm / < 100 nF

**Polarity reversal protection:**
- Short circuit proof and protected against polarity reversal. For connector versions mechanical protection only. The correct wiring acc. to the scheme has to be guaranteed by the OEM-customer.

### Dynamic response

**Response time:** < 5 ms

**Load cycle:** < 50 Hz

### Electrical connections

**DIN connector EN 175301-803-A**
- IP 65

**Connector RAST 2.5**
- IP 65

**Pressure connections**
- Outside thread: G ¾ seal at front Grivory GV 5H
- Outside thread: G ¾ seal at back Grivory GV 5H
- Plug connector: (to max. 6 bar nominal pressure) Grivory GV 5H

### Mounting instructions

**Installation arrangement:** Unrestricted

**Starting torque G ¾:**
- min. 0.4 Nm / max. 0.8 Nm
- Destruction > 30 Nm

### Weight

- With connector RAST 2.5: ~ 41 g
- With connector DIN: ~ 55 g
- With cable: ~ 95 g

### Packaging

- Multiple packaging Cardboard boxes:
  - per 240 pcs.
  - per 600 pcs.
### Order code selection table

<table>
<thead>
<tr>
<th>Pressure range</th>
<th>0...2.5 bar</th>
<th>0...4 bar</th>
<th>0...6 bar</th>
<th>0...10 bar</th>
<th>0...16 bar</th>
<th>0...25 bar</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

### Pressure range

1. Other pressure ranges on request
2. According to ISO standard R 1629, other sealing materials on request
3. Delivery without female connector
4. To be ordered separately from original manufacturer. Further information can be found in the manufacturer specification No. 114-18049

### Sealing material

<table>
<thead>
<tr>
<th>Sealing material</th>
<th>FPM</th>
<th>EPDM</th>
<th>NBR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fluoro-elastomer</td>
<td>Ethylene propylene</td>
<td>Butadiene Acylonitrile</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

### Adjustment

<table>
<thead>
<tr>
<th>Factory</th>
<th>0</th>
</tr>
</thead>
</table>

### Output / power supply

<table>
<thead>
<tr>
<th>Voltage</th>
<th>0...5 V</th>
<th>9.0...33 VDC</th>
<th>16.2...33 VDC</th>
<th>10.0...33 VDC</th>
<th>5 VDC ±5%</th>
<th>ratio 10...90%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

### Electrical connection

<table>
<thead>
<tr>
<th>Connector</th>
<th>RAST 2.5</th>
<th>DIN EN 175301-803-A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

### Pressure connection

<table>
<thead>
<tr>
<th>Outside thread</th>
<th>G ¼, seal at front</th>
<th>Grivory GV SH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

### Pressure range variation (optional)

<table>
<thead>
<tr>
<th>Pressure range variation (optional)</th>
<th>Indicate W and state range on order (e.g., W0... + 9bar/OUT1...9V)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>W</td>
</tr>
</tbody>
</table>

### Accessories (supplied loose)

- Safety spring for plug connector: 105883
- Female connector DIN EN 175301-803-A with sealing: 103510
- Female connector RAST 2.5 with cable 1450 mm: 103167
- Calibration Certificate: 104551
- AMP connector: Manufacturer’s Part No. Colour For flexible wire
  - 3-829686-3: grey 7 x 0.20 mm = 0.22 mm² or 12 x 0.20 mm = 0.35 mm²
  - 1-966194-3: beige 7 x 0.25 mm = 0.35 mm²

Connector with cable:

- IN = red
- OUT = yellow
- GND = black
Dimensions in mm / Electrical connections

- **Detail X**: Counter part for plug connector

- **Counter part G 3/8 sealed at back**

- **Counter part G 3/8 sealed at front**

- **Detail Y**: O-Ring Ø 7.66 x 1.78

**Electrical connections**

- **3 wire**:
  - brown
  - white
  - green

- **2 wire**:
  - brown
  - green

**Dimensions**

- Ø 10.5 ± 0.05
- Ø 18
- Ø 20
- 0.5 x 4.9

**Notes**

1) Bottom variable!