OEM Pressure sensor
Type 400

The type 400 pressure transmitter, with its proven ceramic lever technology, has adjusted temperature compensated sensor signals and is available with a voltage output. The voltage output (VDC) is an amplified, linear signal suitable for direct processing in electronic control systems. The sensors are ideal for continuous level measurement in washing machines, dishwashers etc.

Pressure range
0 ... 10 – 100 bar

+ Robust construction, sensor element has no contact with media
+ Special design developed for large scale manufacture at an attractive price
+ Fully automated manufacture, including in-line adjustment of zero point and full scale value
+ Special snap mounting bracket for easy single handed mounting in sheet steel of varying thicknesses
### Technical Overview

**Pressure range**
- Relative: 0 ... 10 ... 100 mbar

**Operating conditions**
- Medium: Liquids and neutral gases
- Temperature: Medium / ambient 0 ... +70 °C
- Storage: 10 ... +70 °C
- Tolerable overload: 200 mbar
- Rupture pressure: 500 mbar
- Leak rate: < 0.2 cm³/h (Air)

**Materials in contact with the medium**
- Cover: Polypropylene
- Diaphragm: Thermoplastic elastomer

**Electrical overview**
- Output / Power supply: ratiom. 10 ... 70% 5 VDC ±5%
- Load: > 50 kΩ / < 10 nF
- Current consumption: At nominal voltage with 50 kΩ load > 3 mA
- Polarity reversal protection: mechanically protected
- Electromagnetic compatibility: The product is designed exclusively for installation in equipment. The customer is responsible for CE conformity.

**Dynamical response**
- Response time: < 10 ms
- Load cycle: < 10 Hz

**Protection standard**
- Protection class: IP 60

**Electrical connections**
- 3 pole plug connector RAST 2.5

**Pressure connection**
- Pipe Ø 6.2 mm

**Mounting instruction**
- Diaphragm horizontal (Recommendation)
- Diaphragm vertical (on request)
- Pressure connection and electrical connections downward
- Snap mounting in sheet steel from 0.9 to 1.5 mm

**Weight**
- ~ 17 g

**Packaging**
- Cardboard boxes with blister pack inserts (35 pcs)

**Ordering batches quantities / Transport volumes**

<table>
<thead>
<tr>
<th>Pieces</th>
<th>Execution</th>
<th>Length (cm)</th>
<th>Width (cm)</th>
<th>Height (cm)</th>
<th>Weight (kg)</th>
<th>Blister (35 pcs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2520</td>
<td>12 boxes per Euro pallet</td>
<td>120</td>
<td>80</td>
<td>103</td>
<td>72</td>
<td>6</td>
</tr>
<tr>
<td>210</td>
<td>1 box</td>
<td>59</td>
<td>39</td>
<td>26</td>
<td>6.9</td>
<td>6</td>
</tr>
</tbody>
</table>

**Accuracy**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>10 mbar</th>
<th>20 mbar</th>
<th>30 mbar</th>
<th>50 mbar</th>
<th>100 mbar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolerance zero point</td>
<td>% fs</td>
<td>± 1.5</td>
<td>± 1.5</td>
<td>± 1.5</td>
<td>± 1.5</td>
<td></td>
</tr>
<tr>
<td>Tolerance at 0.3 mbar</td>
<td>% fs</td>
<td>± 1.5</td>
<td>± 1.5</td>
<td>± 1.5</td>
<td>± 1.5</td>
<td></td>
</tr>
<tr>
<td>Tolerance full scale</td>
<td>% fs</td>
<td>± 2.5</td>
<td>± 2.5</td>
<td>± 1.5</td>
<td>± 1.5</td>
<td></td>
</tr>
<tr>
<td>Resolution</td>
<td>% fs</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Total of linearity, hysteresis and repeatability</td>
<td>% fs</td>
<td>± 0.5</td>
<td>± 0.5</td>
<td>± 0.5</td>
<td>± 0.5</td>
<td>± 0.5</td>
</tr>
<tr>
<td>Long-term stability acc. to DIN IEC 66770</td>
<td>%</td>
<td>± 1.0</td>
<td>± 1.0</td>
<td>± 0.5</td>
<td>± 0.5</td>
<td>± 0.5</td>
</tr>
<tr>
<td>TC zero point</td>
<td>% fs/10K</td>
<td>± 0.2</td>
<td>± 0.2</td>
<td>± 0.2</td>
<td>± 0.2</td>
<td>± 0.2</td>
</tr>
<tr>
<td>TC zero point</td>
<td>% fs/10K</td>
<td>± 0.4</td>
<td>± 0.4</td>
<td>± 0.4</td>
<td>± 0.4</td>
<td></td>
</tr>
<tr>
<td>TC sensitivity</td>
<td>% fs/10K</td>
<td>± 0.2</td>
<td>± 0.2</td>
<td>± 0.2</td>
<td>± 0.2</td>
<td>± 0.4</td>
</tr>
<tr>
<td>Positional error</td>
<td>mbar</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Stiometric error</td>
<td>% fs</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Stiometric error</td>
<td>% fs</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Test conditions: 25 °C, 45% RH, Power supply 5 VDC
TK0 / TKE: 0 ... +70 °C

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1. Other pressure ranges on request
2. Other supply voltages and outputs on request
3. For changing diaphragm position from horizontal to vertical, approx. 0.3 mbar. 4. TC = Temperature coefficient
5. In case of condensed water, auto-zero significant.
<table>
<thead>
<tr>
<th>Pressure range</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ... 10 mbar</td>
<td>4 0 0 1 1 0 0</td>
</tr>
<tr>
<td>0 ... 20 mbar</td>
<td>4 0 0 2 1 0 0</td>
</tr>
<tr>
<td>0 ... 30 mbar</td>
<td>4 0 0 3 1 0 0</td>
</tr>
<tr>
<td>0 ... 50 mbar</td>
<td>4 0 0 5 1 0 0</td>
</tr>
<tr>
<td>0 ... 100 mbar</td>
<td>4 0 0 7 1 0 0</td>
</tr>
</tbody>
</table>

▲ Full scale signal at these pressure

### Accessories 1)

<table>
<thead>
<tr>
<th>Connector with cable</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAST 2.5 with cable 30 cm</td>
<td>111668</td>
</tr>
<tr>
<td>RAST 2.5 with cable 110 cm</td>
<td>101817</td>
</tr>
<tr>
<td>RAST 2.5 with cable 150 cm</td>
<td>112282</td>
</tr>
<tr>
<td>Calibration certificat</td>
<td>104551</td>
</tr>
</tbody>
</table>

### AMP Connectors 2)

<table>
<thead>
<tr>
<th>Manufacturer's Part No.</th>
<th>Colour</th>
<th>for flexible wire</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-829686-3</td>
<td>grey</td>
<td>7 x 0.20 mm = 0.22 mm² or 12 x 0.20 mm = 0.35 mm²</td>
</tr>
<tr>
<td>1-966194-3</td>
<td>beige</td>
<td>7 x 0.25 mm = 0.35 mm²</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Connector with cable</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IN = red</td>
<td></td>
</tr>
<tr>
<td>OUT = yellow</td>
<td></td>
</tr>
<tr>
<td>GND = black</td>
<td></td>
</tr>
</tbody>
</table>

### Dimensions in mm / Electrical connections

Hole pattern for mounting (supplied by the customer)
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