OEM Relative and absolute pressure transmitter
Type 516

Used in combination with a unique integrated electronic design the type 516 gives a high degree of accuracy for all temperature ranges.

This technology, with its amplified ratiometric output signal, allows direct assembly without the need of user temperature or pressure adjustment.

Pressure range
-1 ... 0 – 16 bar

+ Integrated amplifier electronics
+ No customer specific adjustment necessary
+ Excellent EMC capacity by reinforcement on measuring cell
+ Easy and quick fitting on PCB
+ Negligible temperature influence on accuracy
## Technical overview

### Pressure range
- **Relative**: -1 ... 0 – 16 bar
- **Absolute**: 0 ... 0 – 16 bar
- **Barometric sensor**: 0.8 ... 1.4 bar

### Operating conditions

<table>
<thead>
<tr>
<th>Medium</th>
<th>Temperature/ambient</th>
<th>Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>NBR</td>
<td>NBR</td>
</tr>
<tr>
<td></td>
<td>-25 ... +80 ºC</td>
<td>-40 ... +80 ºC</td>
</tr>
<tr>
<td>Tube</td>
<td>FPM spec.</td>
<td>-40 ... +80 ºC</td>
</tr>
<tr>
<td></td>
<td>-30 ... +80 ºC</td>
<td></td>
</tr>
</tbody>
</table>

### Overload / rupture pressure
- < 6 bar: 3.0 x fs
- > 6 bar: 2.5 x fs

### Materials
- **Case**: PA
- **Materials in contact with medium**
  - Pressure connection: PA / Stainless steel 1.4305
  - Sensor: Ceramic Al₂O₃ (96%)
  - Sealing material: NBR, FPM spec.

### Electrical overview

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>1 ... 0 – 16 bar</th>
<th>0 – 16 bar</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With full scale adjustment</td>
<td>mV</td>
<td>± 100 mV</td>
<td>± 100 mV</td>
</tr>
<tr>
<td>Without full scale adjustment</td>
<td>mV</td>
<td>± 100 mV</td>
<td>± 100 mV</td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>VDC</td>
<td>± 5%</td>
<td>± 5%</td>
</tr>
<tr>
<td><strong>Load</strong></td>
<td>kOhm</td>
<td>&gt; 10 kOhm / &lt; 100 nF</td>
<td>&lt; 4 mA</td>
</tr>
<tr>
<td><strong>Current consumption</strong></td>
<td>mA</td>
<td>&lt; 4 mA</td>
<td></td>
</tr>
</tbody>
</table>

### Dynamic response
- **Response time**: < 2 ms, typ. 1 ms
- **Load cycle**: < 100 Hz

### Protection standard
- **IP** 66

### Electrical connection
- Flexible connector (prevent repeated bending)
- Contact spacing Rast 2.54 (100 mil)

### Pressure connection
- Plastic quick fitting
- Metal quick fitting

### Installation arrangement
- Unrestricted

### Tests / Admissions
- Vibration acc. DIN IEC 600-68-2-6
  - 20 g, 2 ... 2000 Hz with amplitude x 15 mm, 10 Octave/min, all 3 directions, 3 constant load.

### Weight
- With plastic quick fitting: ~ 15 g
- With metal quick fitting: ~ 25 g

### Packaging
- Multiple packaging: 4 blisters in covering box (140 pcs)

### Please note:
Max. admissible pressure and temperature can be limited with the applied tube (see diagram). It is essential to consider the manufacturers’ instruction for the tube.

### Tube for plastic quick fitting
- Material: Polyamid
- Ø inside: 2.9 mm
- Ø outside: 4 mm

### Tube for metal quick fitting
- Material: Polyamid
- Ø inside: 2 mm
- Ø outside: 4 mm

### Accuracy

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>1 ... 0 – 16 bar</th>
<th>Barometric sensor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolerance zero point</td>
<td>% fs</td>
<td>± 0.5</td>
<td>± 0.3</td>
</tr>
<tr>
<td>Tolerance full scale</td>
<td>% fs</td>
<td>± 0.5</td>
<td>± 0.5</td>
</tr>
<tr>
<td>Resolution</td>
<td>% fs</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Total of linearity, hysteresis and repeatability</td>
<td>% fs</td>
<td>± 0.5</td>
<td>± 0.8</td>
</tr>
<tr>
<td>Long term stability acc. to DIN EN 60770</td>
<td>% fs</td>
<td>± 0.5</td>
<td>± 0.5</td>
</tr>
<tr>
<td>TC zero point</td>
<td>% fs/10K</td>
<td>± 0.3</td>
<td>± 0.3</td>
</tr>
<tr>
<td>TC sensitivity</td>
<td>% fs/10K</td>
<td>± 0.2</td>
<td>± 0.2</td>
</tr>
</tbody>
</table>

Test conditions:
- 25 ºC, 45% RH, Power supply 24 VDC
- TC z.p. / TC s. -15 ... +80 ºC

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1) Versions with full scale adjustment, only
2) TC = Temperature coefficient

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Huba Control Type 516 | Technical data subject to change | Edition 09/2020
Order code selection table

| Pressure mode | | |
|---------------|---|---|---|---|---|---|---|---|---|---|
| Relative      | 6 | 8 | 10 | 12 | 14 | 16 | 18 |
| Absolute      | 8 | 10 | 12 | 14 | 16 | 18 | 20 |
| Pressure range | | |
| -1 … 0 bar    | 9 | 0 | 0 |
| 0.8 … 1.4 bar | 8 | 1 | 0 |
| 0 … 1 bar     | 1 | 1 |
| 0 … 1.6 bar   | 1 | 2 |
| 0 … 2.5 bar   | 1 | 4 |
| 0 … 4 bar     | 1 | 5 |
| 0 … 6 bar     | 1 | 7 |
| 0 … 10 bar    | 3 | 0 |
| 0 … 16 bar    | 3 | 1 |

Sealing material / Pressure connection

- O-Ring NBR Plastic quick fitting
- Metal quick fitting
- O-Ring FPM spec. Plastic quick fitting
- Metal quick fitting

Adjustment / Output

- Factory adjustment zero point and fullscale
  - ration 10 … 90% at 5 VDC power supply
  - 0 4
- Factory adjustment zero point only
  - ration 10 … 60% ± 1.2V at 5 VDC power supply
  - 9 1 8
- Pressure range variation (Optional)
  - Indicate W and state range on order (e.g.: W0… + 8 bar/OUT0.5… 4.5V)
  - 0 4 W

Accessories (supplied loose)

- Self tapping filister head screw WN 1412 KA22x8 108436
- Mounting set for 35 pieces (screws, serrated lock washers, nuts) M2.5x10 111423
- Calibration certificate 104551

Dimensions in mm / Electrical connections

Drilling plan for print

Installation advice for metal screwing

1. The space at the flex cable open for relative pressure for the pressure compensation. Do not seal or cover it.
2. Securing holes
   - For self tapping screw K22 ø 1.75 mm
   - For metric screw M4X1.5 ø 2.7 mm
   We recommend metric screws with nut instead of self tapping screws for higher pressure or eventual mechanical loads (see accessories mounting set)
3. Positioning holes

Pressure connection: Plastic quick fitting (standard)

Pressure connection: Metal quick fitting for higher pressure / higher temperature