Level sensing pressure transmitter
Type 711

The level sensing pressure transmitters of type 711 with a relative pressure measuring cell have an adjusted and amplified sensor signal. Cable length from 3 to 300 meters as well as ex-versions and versions with drinking water approval are available.

Pressure range
0 ... 0.1 - 16 bar

- Ex-version available
- Sea water resistant
- High accuracy
- Large variety of cable length (3 to 300 m)
- Low pressure ranges
Technical overview

Pressure range
Relative 0 ... 0.1 ... 16 bar

Operating conditions
Fuel oil, ultra light \textsuperscript{1)} SN 181 160-2
Fuel oil, heavy \textsuperscript{1)} SN 181 160-2

Medium
ULM oil \textsuperscript{2)}
Benzine \textsuperscript{2)}
Sea water
Water
Drinking water (with EPDM O-ring)

Temperature
Medium and ambient \textsuperscript{1,2)}
Storage -10 ... +80 °C

Overload
See order code selection table

Materials in contact with medium
Case Stainless steel 1.4404 / AISI 316L
Sensor Stainless steel 1.4539 / AISI 904L
Cable Ceramic Al\textsubscript{2}O\textsubscript{3} (99.6%)
Cable grommet PE / FEP
Protection cover PPE / ETFE
Sealing material FPM / EPDM

Electrical overview
2 wire Output Power supply Load Current consumption
4 ... 20 mA 10 ... 33 VDC (with Ex - 10 ... 30 VDC) \textsuperscript{< 22 mA}

Dynamic response
Response time \( < 0.1 \text{s} \)
Runtime
Time starts at the moment of application of minimal supply voltage \( < 1 \text{s} \)

Electrical connection
Protection standard
Protection class
Cable length 3 ... 300 m P 68, continuous immersion at max. overload (see order code selection table) III

Test / Admissions
Electromagnetic compatibility CE conform acc. EN 61326-2-3
Drinking water approval \textsuperscript{3)}

Electrical connection
Protection standard
Protection class
Cable length 3 ... 300 m P 68, continuous immersion at max. overload (see order code selection table) III

Ex-protection
Ex conform acc. EN 61326-2-3
Ex ia IIC T4 Ga
SEV 12 ATEX 0138

Weight
Niveau transmitter ~ 375 g
Cable ~ 80 g/m

Packaging
Simple packaging

Accuracy

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristic line \textsuperscript{4)} (at 25 °C)</td>
<td>% fs</td>
<td>( \pm 0.35 )</td>
</tr>
<tr>
<td>Resolution</td>
<td>% fs</td>
<td>( &lt; 0.1 )</td>
</tr>
<tr>
<td>Long term stability acc. IEC EN 60770-1 max.</td>
<td>% fs</td>
<td>( \pm 0.25 )</td>
</tr>
<tr>
<td>Thermal characteristic \textsuperscript{5)}</td>
<td>% fs/10K</td>
<td>( \pm 0.07 )</td>
</tr>
</tbody>
</table>

\textsuperscript{1)} Check Ex Zone for your application  \textsuperscript{2)} non-congealing media  \textsuperscript{3)} Admissions provided  \textsuperscript{4)} incl. zero point, full scale, linearity, hysteresis and repeatability  \textsuperscript{5)} at -10 ... +80 °C
# Pressure and flow

## Pressure range

<table>
<thead>
<tr>
<th>Pressure Range</th>
<th>Sealing Material</th>
<th>Full Scale Signal at These Pressures</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ... 0.1 bar</td>
<td>FPM Fluoro-elastomer</td>
<td>▲</td>
</tr>
<tr>
<td>0 ... 0.2 bar</td>
<td>EPDM Ethylene propylene (for drinking water)</td>
<td></td>
</tr>
<tr>
<td>0 ... 0.3 bar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 ... 0.4 bar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 ... 0.5 bar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 ... 0.6 bar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 ... 1.0 bar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 ... 2.0 bar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 ... 4.0 bar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 ... 6.0 bar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 ... 10.0 bar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 ... 16.0 bar</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Sealing material

- FPM Fluoro-elastomer
- EPDM Ethylene propylene (for drinking water)

## Order code selection table

<table>
<thead>
<tr>
<th>Pressure Range</th>
<th>Output / Power Supply</th>
<th>Electrical Connection</th>
<th>Cable</th>
<th>Case Material</th>
<th>Admission</th>
<th>Pressure Range Variation (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ... 0.1 bar</td>
<td>4 ... 20 mA</td>
<td>0</td>
<td>3 m</td>
<td>FEP PE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 0.2 bar</td>
<td>0</td>
<td>1</td>
<td>5 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 0.3 bar</td>
<td>0</td>
<td>2</td>
<td>7 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 0.4 bar</td>
<td>0</td>
<td>3</td>
<td>10 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 0.5 bar</td>
<td>0</td>
<td>4</td>
<td>15 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 0.6 bar</td>
<td>0</td>
<td>5</td>
<td>20 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 1.0 bar</td>
<td>0</td>
<td>6</td>
<td>25 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 2.0 bar</td>
<td>0</td>
<td>7</td>
<td>30 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 4.0 bar</td>
<td>0</td>
<td>8</td>
<td>40 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 6.0 bar</td>
<td>0</td>
<td>9</td>
<td>50 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 10.0 bar</td>
<td>0</td>
<td>10</td>
<td>60 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 16.0 bar</td>
<td>0</td>
<td>11</td>
<td>80 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 20.0 bar</td>
<td>0</td>
<td>12</td>
<td>100 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 24.0 bar</td>
<td>0</td>
<td>13</td>
<td>125 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 20.0 bar</td>
<td>0</td>
<td>14</td>
<td>150 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 20.0 bar</td>
<td>0</td>
<td>15</td>
<td>175 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 20.0 bar</td>
<td>0</td>
<td>16</td>
<td>200 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 20.0 bar</td>
<td>0</td>
<td>17</td>
<td>225 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 20.0 bar</td>
<td>0</td>
<td>18</td>
<td>250 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 20.0 bar</td>
<td>0</td>
<td>19</td>
<td>275 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 ... 20.0 bar</td>
<td>0</td>
<td>20</td>
<td>300 m</td>
<td>Stainless steel</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

## Accessories

- Cable hanger: 118835
- Connection box: 118836
- Protection cage stainless steel 1.4404 / AISI 316L: 118837
- Protection cage stainless steel 1.4539 / AISI 904L: 119688
- Protection cover PPE for PE cable (pack of 10): 118838
- Protection cover ETFE for FEP cable (pack of 10): 118839
- Humidity protection element (pack of 10): 119217
- Calibration certificate: 104551
**Pressure and flow**

**Electrical connections / Dimensions in mm**

**Connection box**

- Measurement reference height

**Sensor with protection cover**

- **Sensor with metal protection cage**

**Device design with explosion protection:**

- 4 ... 20 mA

- The grounding connection is conductively connected to the level transmitter housing. The ground conductor of level transmitter must be connected to the equipotential bonding system of the plant.

**Connection box**

- Brown
- Black
- Blue

**Housing**

- PG 13.5
- PG 64 (2.52)

**Connection points**

- (1) Mounting hole
- (2) Vent valve

**Cable Ø 5.5 ... 9.5**

**Cable hanger**

- Hot-dip galvanized steel – PA6 glass fibre reinforced

**Electrical connections**

- 4 ... 20 mA

**Connection box**

- Sensor with protection cover
- Sensor with metal protection cage
Huba Control AG
Headquarters Schweiz
Industriestrasse 17
CH-5436 Würenlos
Telefon +41 56 436 82 00
Fax +41 56 436 82 82
info.ch@hubacontrol.com

Huba Control AG
Vestiging Nederland
Hamseweg 20A
NL-3828 AD-Hoogland
Telefoon +31 33 433 03 66
Telefax +31 33 433 03 77
info.nl@hubacontrol.com

Huba Control AG
Branch Office United Kingdom
Unit 13 Berkshire House, County Park
Business Centre, Shivenham Road
Swindon - Wiltshire SN1 2NR
Phone +44 1993 77 66 67
Fax +44 1993 77 66 71
info.uk@hubacontrol.com

Huba Control SA
Succursale France
Rue Lavoisier
Technopôle Forbach-Sud
F-57602 Forbach Cedex
 Téléphone +33 3 87 84 73 00
Télécopieur +33 3 87 84 73 01
info.fr@hubacontrol.com

Huba Control AG
Niederlassung Deutschland
Schlattgrabenstrasse 24
D-72141 Walddorfhäslach
Telefon +49 7127 2393 00
Fax +49 7127 2393 20
info.de@hubacontrol.com

www.hubacontrol.com