The separable plastic submersible probe LMK 808 was developed for level measurement in water and wastewater. The basis of the probe is an extremely robust, almost maintenance-free capacitive ceramic sensor.

In addition, an overvoltage protection was integrated into the separable probe head and an effective protection against damage to the cable developed by rodents.

In order to facilitate stock-keeping and maintenance the probe head is plugged to the cable assembly with a connector and can be changed easily.

**Preferred areas of use**

- **Water**
  - groundwater and level monitoring
  - sea water
- **Sewage**
  - waste water treatment
  - water recycling
### Input Pressure Range

<table>
<thead>
<tr>
<th>Property</th>
<th>Nominal Pressure Gauge [bar]</th>
<th>0.1</th>
<th>0.16</th>
<th>0.25</th>
<th>0.4</th>
<th>0.6</th>
<th>1</th>
<th>1.6</th>
<th>2.5</th>
<th>4</th>
<th>6</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overpressure</td>
<td>[bar]</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>12</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Burst Pressure</td>
<td>≥ [bar]</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>8</td>
<td>9</td>
<td>9</td>
<td>18</td>
<td>25</td>
<td>25</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Permissible Vacuum</td>
<td>[bar]</td>
<td>-0.2</td>
<td>-0.3</td>
<td>-0.3</td>
<td>-0.5</td>
<td>-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Output Signal / Supply

2-wire: 4 ... 20 mA / \( V_S = 13 \ldots 30 \text{ VDC} \)

### Performance

#### Accuracy
- Standard: \( \leq 0.35\% \text{ FSO} \)
- Option: \( \leq 0.25\% \text{ FSO} \)

#### Permissible Load
\( R_{\text{max}} = \frac{(V_S - V_{\text{min}})}{0.02 A} \Omega \)

### Thermal Effects (Offset and Span)

- Tolerance Band: \( \leq 1.0\% \text{ FSO} \) for nominal pressure ranges
- Permissible temperatures: medium / electronics / environment / storage: \(-25 \ldots 80 \degree C\)

### Electrical Protection

- Short-circuit protection: permanent
- Reverse polarity protection: no damage, but also no function
- Electromagnetic compatibility: emission and immunity according to EN 61326

### Overvoltage Protection

- Series resistance: 9.4 \( \Omega \) for each positive and negative wire
- Nominal discharge current: 8 kA (8/20 \( \mu \text{s} \))
- Max. rated current: 30 mA

### Electrical Connection

- Cable with sheath material: TPE-U blue \( \varnothing \, 7.4 \text{ mm} \) (suitable for drinking water)
- Cable capacitance: signal line/shield also signal line/signal line: 160 pF/m
- Cable inductance: signal line/shield also signal line/signal line: 1 \( \mu \text{H} \)

### Materials (Media Wetted)

- Housing: PP-HT
- Seals (O-rings): standard: FKM, option: EPDM
- Diaphragm: ceramics \( \text{Al}_2\text{O}_3 \) 99.9%
- Protection cap: POM-C
- Cable sheath: TPE-U

### Miscellaneous

- Current consumption: max. 22 mA
- Weight: approx. 300 g (without cable)
- Ingress Protection: IP 68

### Wiring Diagram

- **2-wire-system (current)**
- **Electrical connection**
  - M12x1 (4-pin)
  - Cable colours (IEC 60757)
    - Supply +: 3
    - Supply −: 4
    - Shield: 2
      - WH (white)
      - BN (brown)
    - GNYE (green-yellow)
**LMK 808**

Separable Plastic Probe

**Technical Data**

### Dimensions (mm / in)

<table>
<thead>
<tr>
<th>Protection cap</th>
<th>Separability of probe head and cable assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø7.4 [0.29]</td>
<td></td>
</tr>
<tr>
<td>Ø29.5 [1.16]</td>
<td></td>
</tr>
<tr>
<td>Ø24 [0.95]</td>
<td></td>
</tr>
<tr>
<td>Ø35 [1.38]</td>
<td></td>
</tr>
</tbody>
</table>

### Accessories

**Terminal clamp**

**Technical data**

<table>
<thead>
<tr>
<th>Suitable for</th>
<th>all probes with cable Ø 5.5 ... 10.5 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material of housing</td>
<td>standard: steel, zinc plated  optionally: stainless steel 1.4301 (304)</td>
</tr>
<tr>
<td>Material of clamping jaws and positioning clips</td>
<td>PA (fibre-glass reinforced)</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>174 x 45 x 32</td>
</tr>
<tr>
<td>Hook diameter</td>
<td>20 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ordering type</th>
<th>Ordering code</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminal clamp, steel, zinc plated</td>
<td>Z100528</td>
<td>approx. 160 g</td>
</tr>
<tr>
<td>Terminal clamp, stainless steel 1.4301 (304)</td>
<td>Z100527</td>
<td></td>
</tr>
</tbody>
</table>
### LMK 808

<table>
<thead>
<tr>
<th>Pressure</th>
<th>in bar</th>
<th>in mH₂O</th>
<th>Input [mH₂O] [bar]</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>0.10</td>
<td>1000</td>
<td>1.0 0.10 1000</td>
<td>1</td>
</tr>
<tr>
<td>1.6</td>
<td>0.16</td>
<td>1600</td>
<td>1.6 0.16 1600</td>
<td>1</td>
</tr>
<tr>
<td>2.5</td>
<td>0.25</td>
<td>2500</td>
<td>2.5 0.25 2500</td>
<td>1</td>
</tr>
<tr>
<td>4.0</td>
<td>0.40</td>
<td>4000</td>
<td>4.0 0.40 4000</td>
<td>1</td>
</tr>
<tr>
<td>6.0</td>
<td>0.60</td>
<td>6000</td>
<td>6.0 0.60 6000</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>1.0</td>
<td>10000</td>
<td>10 1.0 10000</td>
<td>1</td>
</tr>
<tr>
<td>16</td>
<td>1.6</td>
<td>16000</td>
<td>16 1.6 16000</td>
<td>1</td>
</tr>
<tr>
<td>25</td>
<td>2.5</td>
<td>25000</td>
<td>25 2.5 25000</td>
<td>1</td>
</tr>
<tr>
<td>40</td>
<td>4.0</td>
<td>40000</td>
<td>40 4.0 40000</td>
<td>1</td>
</tr>
<tr>
<td>60</td>
<td>6.0</td>
<td>60000</td>
<td>60 6.0 60000</td>
<td>1</td>
</tr>
<tr>
<td>100</td>
<td>10</td>
<td>100000</td>
<td>100 10 100000</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Housing
- PP-HT R consult
- customer consult

#### Diaphragm
- ceramic Al₂O₃ 99.9 % C consult
- customer consult

#### Output
- 4 … 20 mA / 2-wire 1 consult
- customer consult

#### Seals
- FKM 1 consult
- EPDM 3 consult
- customer consult

#### Electrical connection
- TPE-U-cable (blue, Ø 7.4 mm) 1 consult
- customer consult

#### Accuracy
- standard 0.35 % FSO 3 consult
- option 0.25 % FSO 2 consult
- customer consult

#### Cable length
- in m 999 consult

#### Special version
- standard 000 consult
- customer 999 consult

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1. shielded cable, drinking water suitable, with integrated ventilation tube for atmospheric pressure reference