

LMK 808



Separable Plastic Probe

Ceramic Sensor

accuracy according to IEC 60770:
standard: 0.35 % FSO
option: 0.25 % FSO

Nominal pressure

from 0 ... 1 mH₂O up to 0 ... 100 mH₂O

Output signals

2-wire: 4 ... 20 mA
others on request

Special characteristics

- ▶ diameter 35 mm
- ▶ diaphragm
ceramics 99.9% Al₂O₃
- ▶ cable assembly and
probe head separable
- ▶ good long-term stability
- ▶ especially for waste water

Optional versions

- ▶ different kinds of elastomer
- ▶ customer specific versions
e. g. special pressure ranges
- ▶ mounting accessories

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

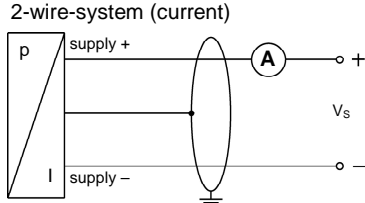
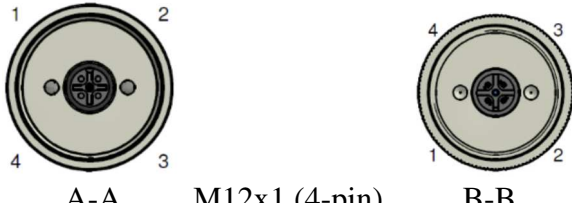
groundwater and level monitoring
sea water



Sewage

waste water treatment
water recycling

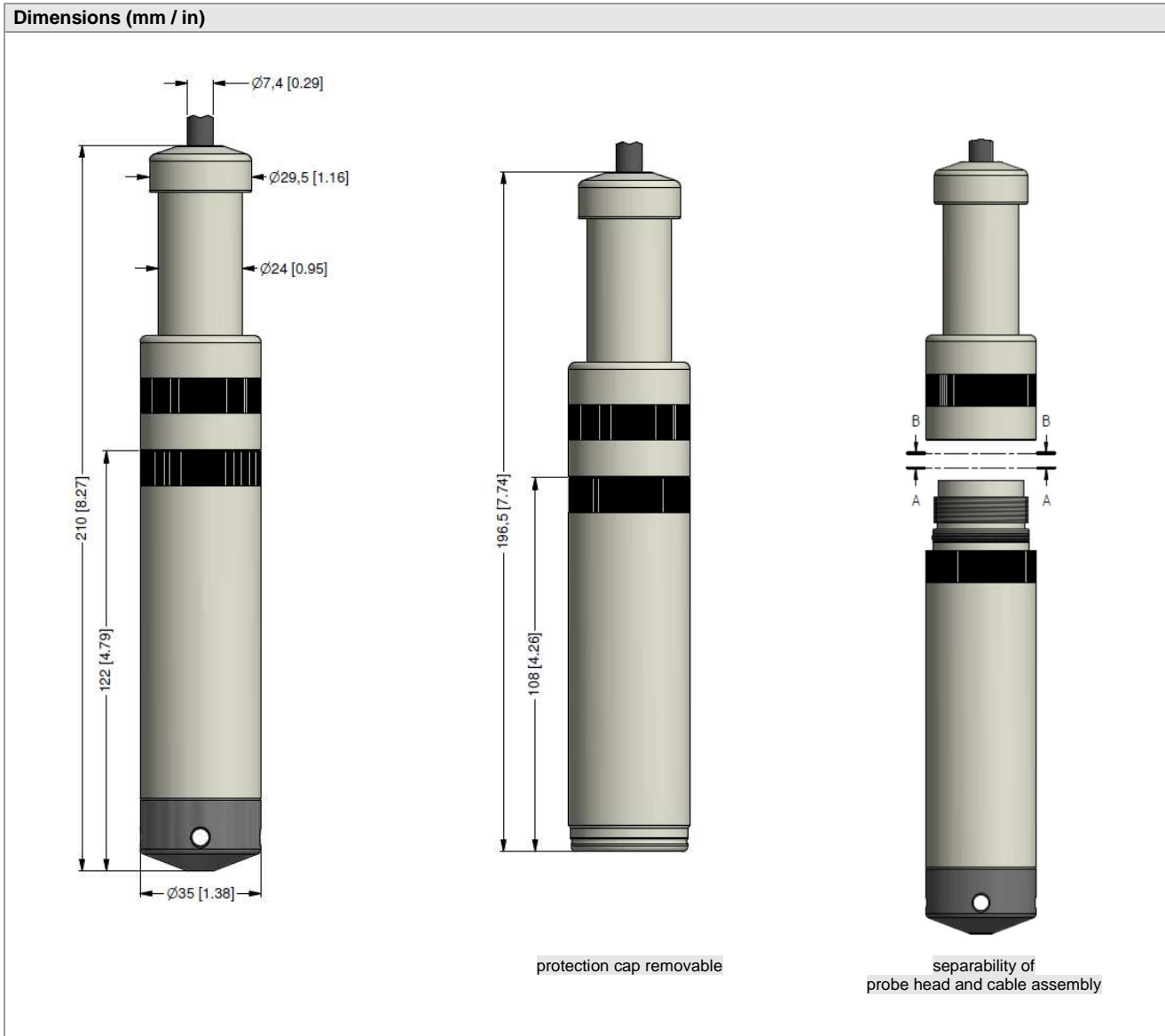


| Input pressure range | | | | | | | | | | | | |
|--|--|------|------|---|-----|-----|----|--|-----|----|----|-----|
| Nominal pressure gauge | [bar] | 0.1 | 0.16 | 0.25 | 0.4 | 0.6 | 1 | 1.6 | 2.5 | 4 | 6 | 10 |
| Level | [mH ₂ O] | 1 | 1.6 | 2.5 | 4 | 6 | 10 | 16 | 25 | 40 | 60 | 100 |
| Overpressure | [bar] | 3 | 4 | 5 | 5 | 7 | 7 | 12 | 20 | 20 | 20 | 20 |
| Burst pressure ≥ | [bar] | 4 | 6 | 8 | 8 | 9 | 9 | 18 | 25 | 25 | 30 | 30 |
| Permissible vacuum | [bar] | -0.2 | -0.3 | -0.5 | | | | -1 | | | | |
| Output signal / Supply | | | | | | | | | | | | |
| 2-wire | 4 ... 20 mA / V _S = 13 ... 30 V _{DC} | | | | | | | | | | | |
| Performance | | | | | | | | | | | | |
| Accuracy ¹ | standard: ≤ ± 0.35 % FSO option: ≤ ± 0.25 % FSO others on request | | | | | | | | | | | |
| Permissible load | R _{max} = [(V _S - V _{Smin}) / 0.02 A] Ω | | | | | | | | | | | |
| Influence effects | supply: 0.05 % FSO / 10 V load: 0.05 % FSO / kΩ | | | | | | | | | | | |
| Long term stability | ≤ ± 0.1 % FSO / year at reference conditions | | | | | | | | | | | |
| Turn-on time | up to 1.5 sec | | | | | | | | | | | |
| Mean response time | ≤ 20 ms | | | | | | | | | | | |
| Measuring rate | 200 Hz | | | | | | | | | | | |
| ¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability) | | | | | | | | | | | | |
| Thermal effects (Offset and Span) | | | | | | | | | | | | |
| Tolerance band | ≤ 1.0% FSO for nominal pressure ranges in compensated range: -20 ... 80 °C | | | | | | | | | | | |
| Permissible temperatures | | | | | | | | | | | | |
| Permissible temperatures | medium / electronics / environment / storage: -25 ... 80 °C | | | | | | | | | | | |
| Electrical protection ² | | | | | | | | | | | | |
| Short-circuit protection | permanent | | | | | | | | | | | |
| Reverse polarity protection | no damage, but also no function | | | | | | | | | | | |
| Electromagnetic compatibility | emission and immunity according to EN 61326 | | | | | | | | | | | |
| ² additional external overvoltage protection unit in terminal box KL 1 or KL 2 with atmospheric pressure reference available on request | | | | | | | | | | | | |
| Overvoltage protection | | | | | | | | | | | | |
| Series resistance | 9.4 Ω for each positive and negative wire | | | | | | | | | | | |
| Nominal discharge current | 8 kA (8/20 μs) | | | | | | | | | | | |
| Max. rated current | 30 mA | | | | | | | | | | | |
| Electrical connection | | | | | | | | | | | | |
| Cable with sheath material ³ | TPE-U blue Ø 7.4 mm (suitable for drinking water) others on request | | | | | | | | | | | |
| Cable capacitance | signal line/shield also signal line/signal line: 160 pF/m | | | | | | | | | | | |
| Cable inductance | signal line/shield also signal line/signal line: 1 μH/ | | | | | | | | | | | |
| Bending radius | static installation: 10-fold cable diameter dynamic application: 20-fold cable diameter | | | | | | | | | | | |
| ³ shielded cable with integrated air tube for atmospheric pressure reference | | | | | | | | | | | | |
| Materials (media wetted) | | | | | | | | | | | | |
| Housing | PP-HT others on request | | | | | | | | | | | |
| Seals (O-rings) | standard: FKM option: EPDM others on request | | | | | | | | | | | |
| Diaphragm | ceramics Al ₂ 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 | | | | | | | | | | | |
| CE-conformity | EMC Directive: 2014/30/EU | | | | | | | | | | | |
| Pin configuration | | | | | | | | | | | | |
| Electrical connection | cable colours (IEC 60757) | | | | | | | | | | | |
| Supply + | WH (white) | | | | | | | | | | | |
| Supply - | BN (brown) | | | | | | | | | | | |
| Shield | GNYE (green-yellow) | | | | | | | | | | | |
| Wiring diagram | | | | | | | | | | | | |
| 2-wire-system (current) | | | |  | | | |  | | | | |

LMK 808

Separable Plastic Probe

Technical Data



Accessories

Terminal clamp



Technical data

| Suitable for | all probes with cable \varnothing 5.5 ... 10.5 mm | |
|---|---|--|
| Material of housing | standard: steel, zinc plated | optionally: stainless steel 1.4301 (304) |
| Material of clamping jaws and positioning clips | PA (fibre-glass reinforced) | |
| Dimensions (mm) | 174 x 45 x 32 | |
| Hook diameter | 20 mm | |
| Ordering type | Ordering code | Weight |
| Terminal clamp, steel, zinc plated | Z100528 | approx. 160 g |
| Terminal clamp, stainless steel 1.4301 (304) | Z100527 | |

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