

LMK 807

Plastic Probe for Aggressive Media

Ceramic Sensor

accuracy according to
IEC 60770: 0.5 % FSO



Nominal pressure

from 0 ... 4 mH₂O up to 0 ... 100 mH₂O

Output signals

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

Special characteristics

- ▶ diameter 35 mm
- ▶ excellent long term stability
- ▶ easy handling

Optional versions

- ▶ SIL 2 (Safety Integrity Level)
according to IEC 61508 / IEC 61511
- ▶ different kinds of cables and
elastomers
- ▶ customer specific version
e. g. special pressure ranges

The plastic submersible probe LMK 807 is designed for continuous level measurement for waste water or and different aggressive media.

Basic element of the plastic submersible probe is the flush mounted ceramic sensor, which makes cleaning easier when solid parts of the medium deposit on it. Different cable and elastomer materials are available in order to achieve maximum media compatibility.

Preferred areas of use are

Sewage



waste water treatment
water recycling
dumpsite



Aggressive media

level measurement in most of acids and lyes



| Input pressure range | | | | | | | | | |
|------------------------|---------------------|-----|-----|----|-----|-----|----|----|-----|
| Nominal pressure gauge | [bar] | 0.4 | 0.6 | 1 | 1.6 | 2.5 | 4 | 6 | 10 |
| Level | [mH ₂ O] | 4 | 6 | 10 | 16 | 25 | 40 | 60 | 100 |
| Overpressure | [bar] | 1 | 2 | 2 | 4 | 4 | 10 | 10 | 20 |
| Burst pressure ≥ | [bar] | 2 | 4 | 4 | 5 | 5 | 12 | 12 | 25 |

| Output signal / Supply | |
|------------------------|---|
| Standard | 2-wire: 4 ... 20 mA / V _S = 8 ... 32 V _{DC} |

| Performance | |
|-----------------------|--|
| Accuracy ¹ | ≤ ± 0.5 % FSO |
| Permissible load | R _{max} = [(V _S - V _{S.min}) / 0.02 A] Ω |
| Influence effects | supply: 0.05 % FSO / 10 V load: 0.05 % FSO / kΩ |
| Long term stability | ≤ ± 0.1 % FSO / year |
| Response time | < 10 msec |

¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)

| Thermal effects (Offset and Span) | |
|-----------------------------------|--|
| Thermal error | ≤ ± 0.2 % FSO / 10 K in compensated range -25 ... 70 °C |

| Permissible temperatures | |
|--------------------------|---|
| Permissible temperatures | medium: 0 ... 50 °C storage: -10 ... 50 °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

| Electrical connection | |
|---|--|
| Cable with sheath material ³ | PVC (0 ... 50 °C) grey PUR (0 ... 50 °C) black FEP (0 ... 50 °C) black |

³ cable with integrated air tube for atmospheric pressure reference

| Materials (media wetted) | |
|--------------------------|--|
| Housing | PVC grey |
| Seals | FKM / EPDM / FFKM |
| Diaphragm | ceramics Al ₂ O ₃ 96 % |

| Miscellaneous | |
|--------------------------------|---|
| Option SIL 2 application | according to IEC 61508 / IEC 61511 |
| Connecting cables (by factory) | 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/m |
| Current consumption | max. 25 mA |
| Weight | approx. 200 g (without cable) |
| Ingress protection | IP 68 |
| CE-conformity | EMC Directive: 2004/108/EC |

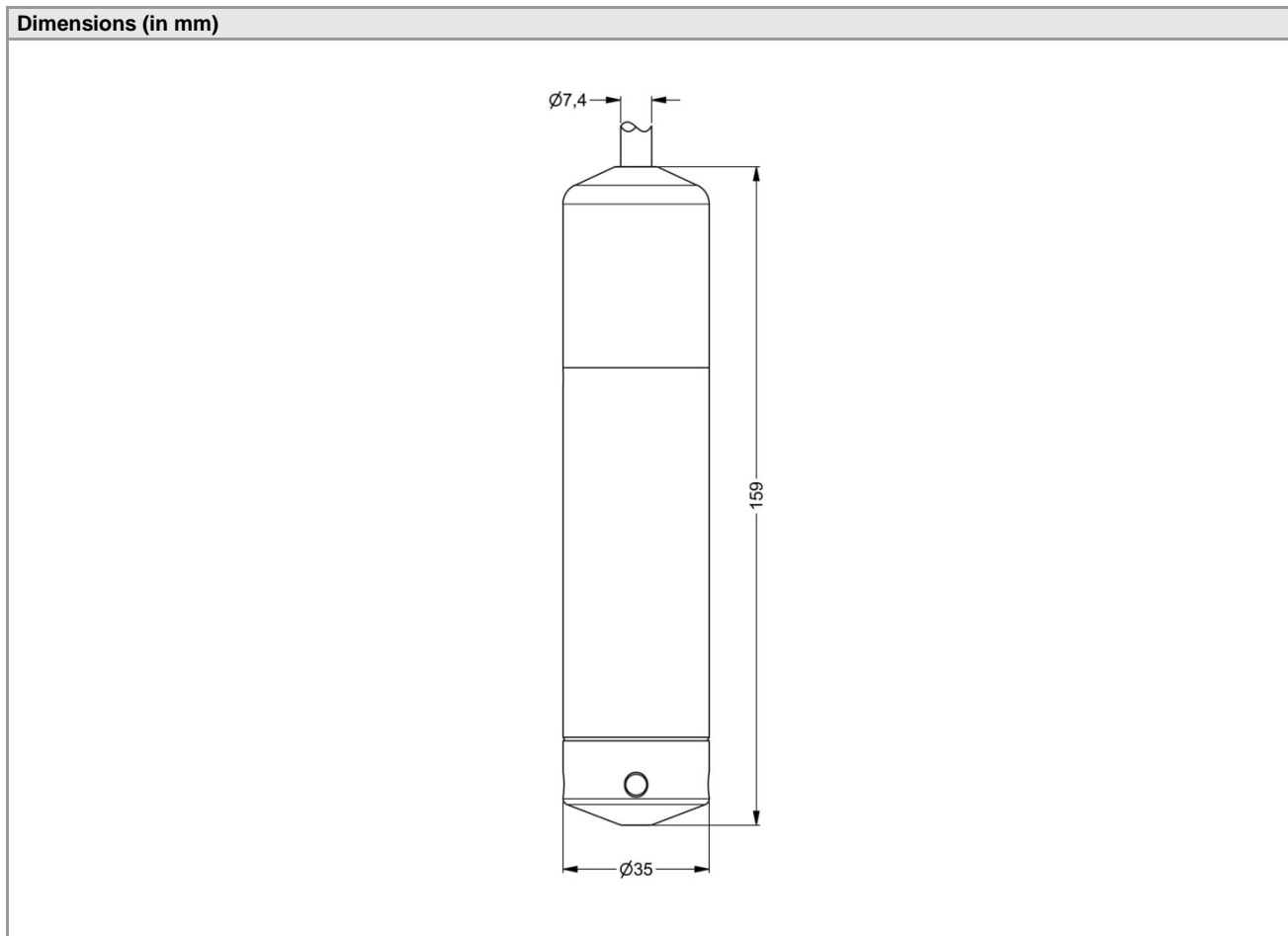
| Wiring diagram | |
|-------------------------|--|
| 2-wire-system (current) | |
| | |

| Pin configuration | |
|-----------------------|---------------------------|
| Electrical connection | cable colours (DIN 47100) |
| Supply + | wh (white) |
| Supply - | bn (brown) |
| Shield | gn/ye (green / yellow) |

LMK 807

Plastic Submersible Probe

Accessories



Accessories

| Terminal clamp | | |
|---|--|---------------|
| Technical Data | | |
| Suitable for | all probes with cable \varnothing 5.5 ... 10.5 mm | |
| Material | standard: steel, zinc plated optionally: stainless steel 1.4301 (304) | |
| Weight | approx. 160 g | |
| Ordering type | | Ordering code |
| Terminal clamp, of steel, zinc plated | | Z100528 |
| Terminal clamp, of stainless steel 1.4301 (304) | | Z100527 |

This data sheet contains product specification, properties are not guaranteed. Subject to change without notice.

Ordering code LMK 807

LMK 807

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| □ | □ | □ | - | □ | □ | □ | □ | - | □ | - | □ | - | □ | - | □ | - | □ | □ | □ | - | □ | □ | □ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|--|---|---|---|---|--|--|--|--|--|--|--|---|--|--|--|----|---|---------|
| Pressure | | | | | | | | | | | | | | | | | | | | | | | |
| | in bar | 3 | 9 | 0 | | | | | | | | | | | | | | | | | | | |
| | in mH ₂ O | 3 | 9 | 1 | | | | | | | | | | | | | | | | | | | |
| Input | | | | | | | | | | | | | | | | | | | | | | | |
| | [mH ₂ O] | | | | | | | | | | | | | | | | | | | | | | |
| | [bar] | | | | | | | | | | | | | | | | | | | | | | |
| | 4.0 | | | | | 4 | 0 | 0 | 0 | | | | | | | | | | | | | | |
| | 6.0 | | | | | 6 | 0 | 0 | 0 | | | | | | | | | | | | | | |
| | 10 | | | | | 1 | 0 | 0 | 1 | | | | | | | | | | | | | | |
| | 16 | | | | | 1 | 6 | 0 | 1 | | | | | | | | | | | | | | |
| | 25 | | | | | 2 | 5 | 0 | 1 | | | | | | | | | | | | | | |
| | 40 | | | | | 4 | 0 | 0 | 1 | | | | | | | | | | | | | | |
| | 60 | | | | | 6 | 0 | 0 | 1 | | | | | | | | | | | | | | |
| | 100 | | | | | 1 | 0 | 0 | 2 | | | | | | | | | | | | | | |
| | customer | | | | | 9 | 9 | 9 | 9 | | | | | | | | | | | | | | consult |
| Housing | | | | | | | | | | | | | | | | | | | | | | | |
| | PVC | | | | | | | | | | | | | | | | A | | | | | | |
| | customer | | | | | | | | | | | | | | | | 9 | | | | | | consult |
| Diaphragm | | | | | | | | | | | | | | | | | | | | | | | |
| | Ceramics Al ₂ O ₃ 96% | | | | | | | | | | | | | | | | 2 | | | | | | |
| | customer | | | | | | | | | | | | | | | | 9 | | | | | | consult |
| Output | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 ... 20 mA / 2-wire | | | | | | | | | | | | | | | | | | | | 1 | | |
| | SIL2 4 ... 20 mA / 2-wire | | | | | | | | | | | | | | | | | | | | 1S | | |
| | customer | | | | | | | | | | | | | | | | | | | | 9 | | consult |
| Seals | | | | | | | | | | | | | | | | | | | | | | | |
| | FKM | | | | | | | | | | | | | | | | | | | | 1 | | |
| | EPDM | | | | | | | | | | | | | | | | | | | | 3 | | |
| | FFKM | | | | | | | | | | | | | | | | | | | | 7 | | |
| | customer | | | | | | | | | | | | | | | | | | | | 9 | | consult |
| Accuracy | | | | | | | | | | | | | | | | | | | | | | | |
| | 0.5 % | | | | | | | | | | | | | | | | | | | | 5 | | |
| | customer | | | | | | | | | | | | | | | | | | | | 9 | | consult |
| Electrical connection | | | | | | | | | | | | | | | | | | | | | | | |
| | PVC-cable ¹ | | | | | | | | | | | | | | | | | | | | 1 | | |
| | PUR-cable ¹ | | | | | | | | | | | | | | | | | | | | 2 | | |
| | FEP-cable ¹ | | | | | | | | | | | | | | | | | | | | 3 | | |
| | customer | | | | | | | | | | | | | | | | | | | | 9 | | consult |
| Cable length | | | | | | | | | | | | | | | | | | | | | | | |
| | in m | | | | | | | | | | | | | | | | | | | | 9 | 9 | 9 |
| Special version | | | | | | | | | | | | | | | | | | | | | | | |
| | standard | | | | | | | | | | | | | | | | | | | | | | 0 0 0 |
| | customer | | | | | | | | | | | | | | | | | | | | | | 9 9 9 |
| | | | | | | | | | | | | | | | | | | | | | | | consult |

¹ cable with integrated air tube for atmospheric pressure reference

This price list contains product specification; properties are not guaranteed. Detailed information about options are defined in the datasheet. Subject to change without notice.

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