



Level sensors
TDR level sensor

LFP1700-A4NMB



Model Name > [LFP1700-A4NMB](#)
Part No. > [1057088](#)



Illustration may differ

At a glance

- No mechanical moving parts
- Manually cuttable and exchangeable monoprobe with lengths from 200 mm up to 2,000 mm
- Immune to deposit formation
- Process temperature up to 100 °C; process pressure up to 10 bar
- Small inactive areas, ideal for small containers
- Accurate measurement, even when liquid type changes
- 3-in-1: combined display, analog output (acc. NAMUR NE 43) and binary output
- High enclosure rating of IP 67, rotatable housing

Your benefits

- Rugged design increases service life
- High flexibility due to cuttable and exchangeable monoprobe
- Cost savings due to multiple output signals: one system for both level detection and continuous level monitoring
- Time and cost savings due to low maintenance and quick commissioning
- No calibration or recalibration required for commissioning, thus saving time and costs
- Compact and rotatable housing ensures flexible installation
- No crosstalk when several sensors are mounted next to each other
- Advanced technology enables adjustment-free measurement of oil- and water-based liquids



Features

| | |
|----------------------|--------------------|
| Medium: | Fluids |
| Measurement: | Switch, Continuous |
| Probe length: | 1,700 mm |
| Process pressure: | -1 bar ... 10 bar |
| Process temperature: | -20 °C ... 100 °C |
| GOST approval: | ✓ |
| RoHS certificate: | ✓ |
| IO-Link: | ✓ |

Performance

| | |
|-----------------------------|----------------------|
| Maximum level change: | 500 mm/s |
| Resolution: | < 2 mm |
| Accuracy of sensor element: | ± 5 mm ¹⁾ |

| | |
|-------------------------------------|---|
| Repeatability: | ≤ 2 mm |
| Dielectricity constant: | ≥ 1.8 with coaxial tube, ≥ 5 for mono probe |
| Inactive area at process connector: | 25 mm ²⁾ |
| Inactive area at probe end: | 10 mm ³⁾ |
| Conductivity: | No limitation |
| Response time: | < 400 ms |

1) ³⁾ With water under reference conditions 2) With parameterized tank with water under reference conditions, otherwise 40 mm

Mechanical data

| | |
|---------------------|--------------|
| Housing material: | Plastic PBT |
| Max.probe load: | 6 Nm |
| Process connection: | G ¼ A |
| Wetted parts: | 1.4404, PTFE |

Electrical data

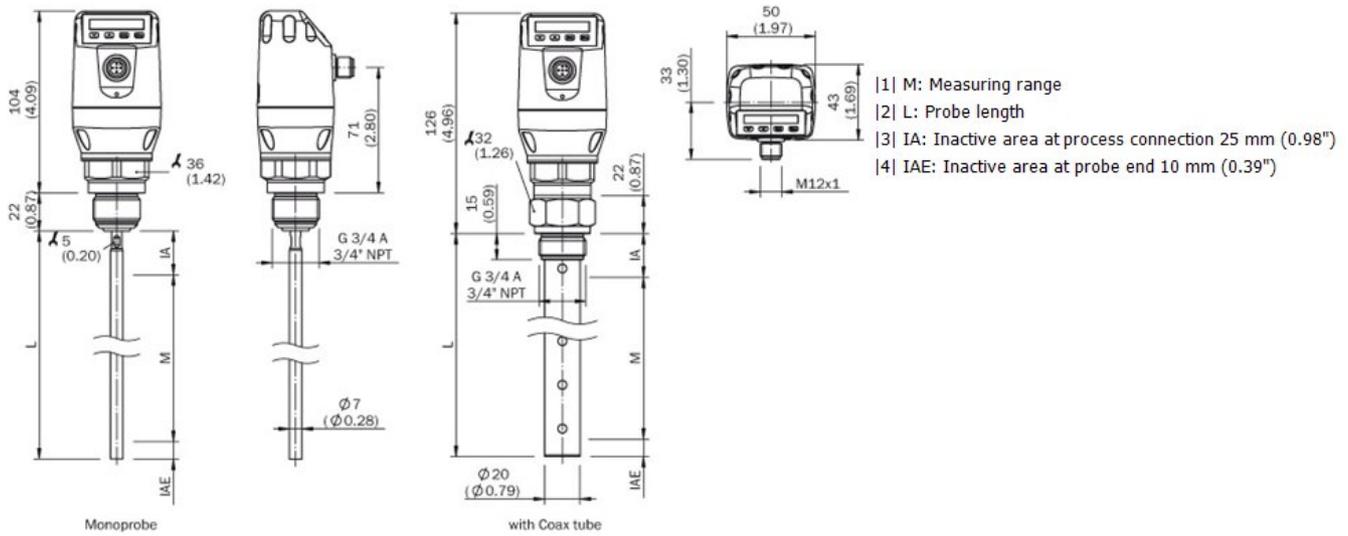
| | |
|----------------------|--|
| Temperature drift: | < 0.1 mm/K |
| Enclosure rating: | IP 67: EN 60529 |
| Supply voltage: | 12 V DC ... 30 V DC ¹⁾ |
| Power consumption: | ≤ 100 mA at 24 V DC without output load |
| Protection class: | III |
| Initialization time: | ≤ 5 s |
| Output signal: | 1 PNP transistor output (Q1) and 1 PNP/NPN transistor output (Q2) switchable, Analog output 4 mA ... 20 mA, 0 V ... 10 V automatic switching to a current or voltage output depending on the load. |
| Output load: | 0 V ... 10 V > 750 Ohm at Uv ≥ 14 V, 4 mA ... 20 mA < 350 Ohm at Uv > 12 V, 4 mA ... 20 mA < 500 Ohm at Uv > 15 V |
| Upper signal level: | 20 mA ... 20.5 mA |
| Lower signal level: | 3.8 mA ... 4 mA |
| Hysteresis: | Min. 2 mm, free adjustable |
| Output current: | < 100 mA |
| Signal voltage HIGH: | Vs - 2 V |
| Signal voltage LOW: | ≤ 2 V |
| Capacitive load: | 100 nF |
| Inductive load: | < 1 H |
| Connection type: | Round connector M12 x 1, 5-pin |
| EMC: | EN 61326-1:2006, 2004/108/EG |

¹⁾ All connections are polarity protected. All outputs are overload and short-circuit protected.

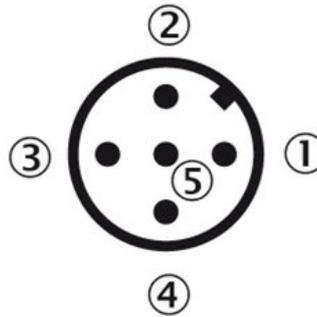
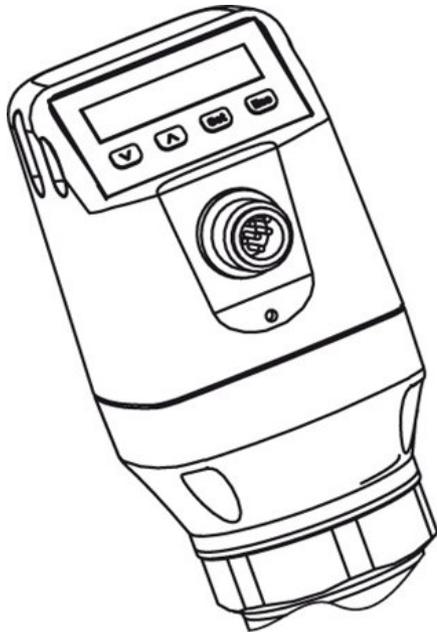
Ambient data

| | |
|--------------------------------|------------------|
| Ambient operating temperature: | -20 °C ... 60 °C |
| Ambient storage temperature: | -40 °C ... 80 °C |

Dimensional drawing



Connection type



- [1] L+: Supply voltage, brown
- [2] QA: Analog current-/voltage output, white
- [3] M: Ground, reference ground
for current-/voltage output, blue
- [4] C/Q1: Switching output 1,
PNP/IO-Link-communication, black
- [5] Q2: Switching output 2, PNP/NPN, grey

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