ONLINE DATA SHEET
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Level sensors
TDR level sensor

LFP0900-A4NMB

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Model Name > LFP0900-A4NMB
Part No. > 1057080

Illustration may differ

At a glance

- No mechanical moving parts
- Manually cutable 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 cutable and exchangable 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

IO-Link

Features

Medium:	Fluids
Measurement:	Switch, Continuous
Probe length:	900 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)]

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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 ¾ 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

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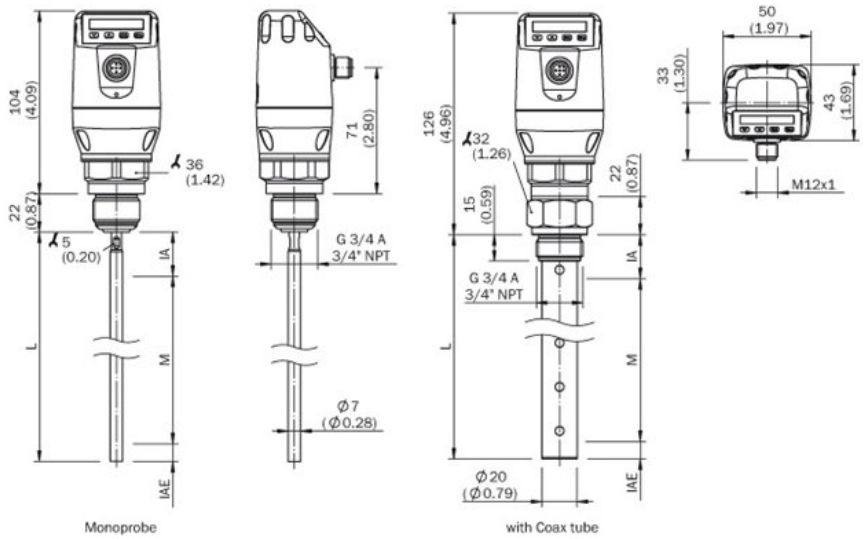
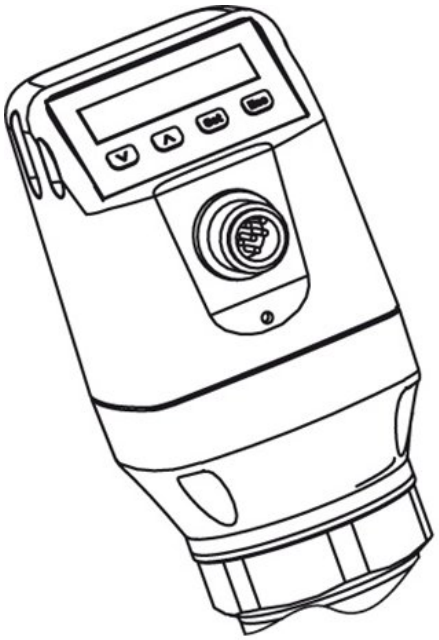
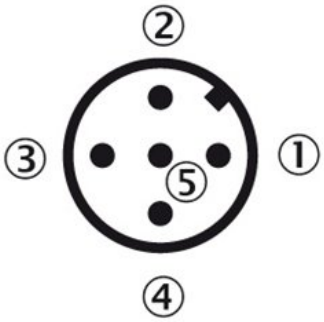
Dimensional drawing



|1| M: Measuring range
|2| L: Probe length
|3| IA: Inactive area at process connection 25 mm (0.98")
|4| IAE: Inactive area at probe end 10 mm (0.39")

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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