



LFP2000-N1NMB

LFP Inox

TDR LEVEL SENSOR

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
LFP2000-N1NMB	1059425

Other models and accessories → www.sick.com/LFP_Inox

Detailed technical data

Features

Medium	Fluids
Measurement	Switch, Continuous
Design	Standard
Probe length	2,000 mm
Process pressure	-1 bar ... 16 bar
Process temperature	-20 °C ... +150 °C
UL approval	✓
RoHS certificate	✓
IO-Link	✓
EHEDG approval	✓

Performance

Accuracy of sensor element	± 5 mm
Reproducibility	≤ 2 mm
Resolution	1 mm
Response time	< 400 ms ¹⁾
Dielectricity constant	≥ 5 for rod probe ≥ 1.8 with coaxial tube
Conductivity	No limitation
Deactivated area at process connection	25 mm ²⁾
Deactivated area at end of probe	≥ 10 mm ³⁾
MTTF	194.3 years (EN ISO 13849-1)

¹⁾ Dependent on measuring mode (high speed < 400 ms, high accuracy < 2,800 ms).

²⁾ With parameterized container with water under reference conditions, otherwise 40 mm.

³⁾ With water under reference conditions.

Electronics

Supply voltage	12 V DC ... 30 V DC ¹⁾
Power consumption	≤ 75 mA at 24 V DC without output load
Initialization time	≤ 2 s
Protection class	III
Connection type	Round connector M12 x 1, 5-pin
Output signal	1 x PNP + 1 x PNP/NPN + 4 mA ... 20 mA / 0 V ... 10 V
Output load	4 mA ... 20 mA < 500 Ohm at U _v > 13,5 V, 4 mA ... 20 mA < 400 Ohm at U _v > 12 V, 0 V ... 10 V > 750 Ohm at U _v 14 ≥ V
Hysteresis	Min. 2 mm, free adjustable
Output current	< 100 mA
Inductive load	< 1 H
Capacitive load	< 100 nF
Enclosure rating	IP67: EN 60529, IP69K: ISO 20653
Temperature drift	< 0.1 mm/K
Lower signal level	3.8 mA ... 4 mA, 0 V
Upper signal level	20 mA ... 20.5 mA, 10.5 V
EMC	EN 61326-2-3, 2014/30/EU

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

Mechanics

Wetted parts	316L (Ra ≤ 0,8 μm), PEEK
Process connection	¾" NPT
Housing material	303
Housing design	With viewing window made from PMMA (acrylic glass)
Max. probe load	≤ 6 Nm

Ambient data

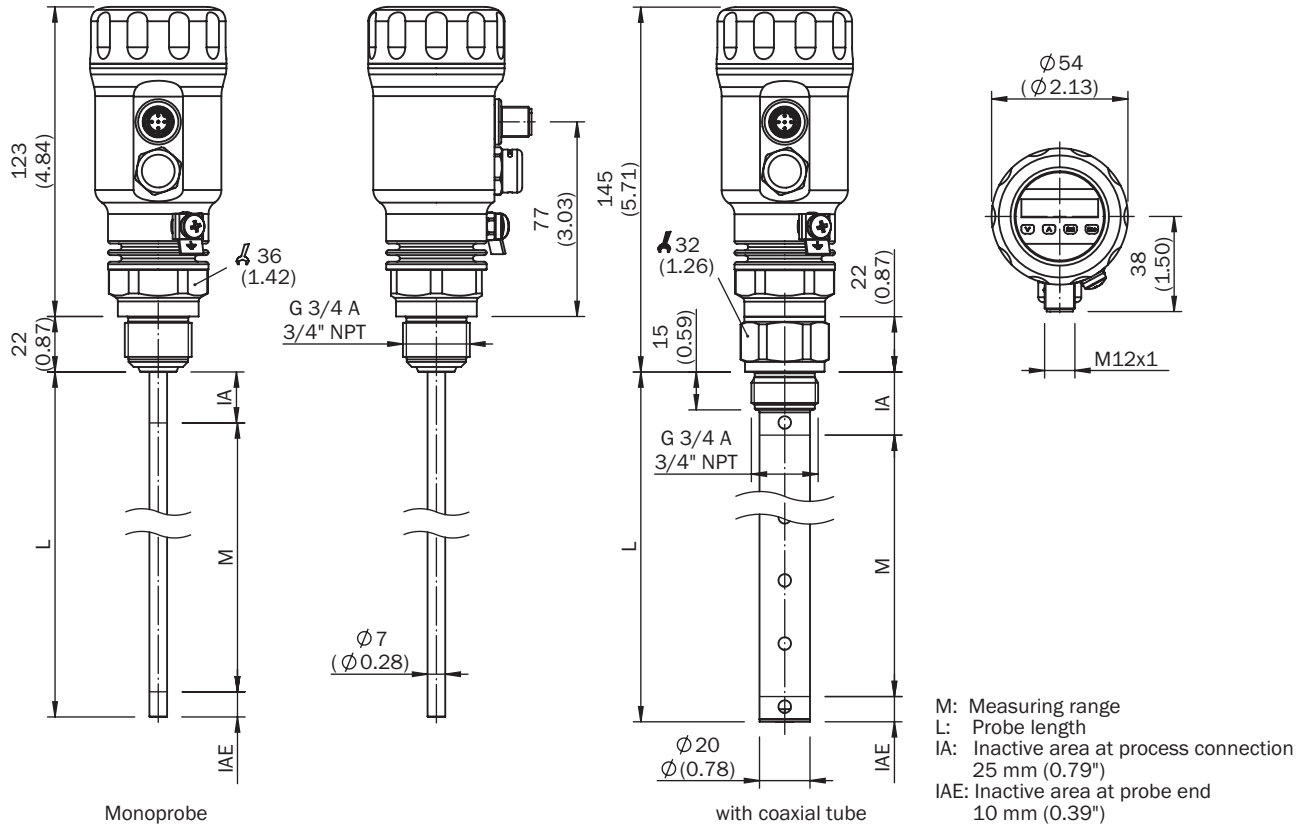
Ambient operating temperature	-20 °C ... +60 °C
Ambient temperature, storage	-40 °C ... +80 °C
Outdoor use	Only with weather hood

Classifications

eCl@ss 5.0	27200513
eCl@ss 5.1.4	27200513
eCl@ss 6.0	27200513
eCl@ss 6.2	27200513
eCl@ss 7.0	27200513
eCl@ss 8.0	27200513
eCl@ss 8.1	27200513
eCl@ss 9.0	27200513
eCl@ss 10.0	27200513
eCl@ss 11.0	27200513

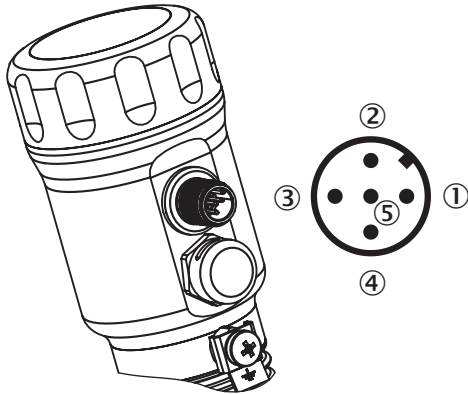
Length of coaxial cable (mm)	Max. probe length (mm) - foam mode deactivated	Max. probe length (mm) - foam mode active
2000	3,000	1500
3300	1,000	500

Dimensional drawing (Dimensions in mm (inch))



Connection type







5-pole M12 Connector




- ① L⁺: Supply voltage, brown
- ② Q_A: 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

Recommended accessories

Other models and accessories → www.sick.com/LFP_Inox

	Brief description	Type	Part no.
Hardware			
	Weather protection cover for LFP Inox, material: 304	APR-WP-LFP001-0001	2069530
Spare parts			
	Cover closed, material 1.4305	Cover closed	2067269
	Cover for LFP Inox with inspection window, material 1.4305 and PMMA	Cover with front screen	2067267
Flanges			
	Hygienic process connection adapter, Tri-Clamp 1" and 1 1/2", including acceptance test certificate 3.1; Ra ≤ 0.4 μm, hygienic in accordance with EHEDG in combination with T-seals or Tri-Clamp seals from Combifit International B.V.	BEF-HA-TCLI10-LFP2	2126242
	Hygienic process connection adapter, Tri-Clamp 2"; including acceptance test certificate 3.1; Ra ≤ 0.4 μm, hygienic in accordance with EHEDG in combination with T-seals or Tri-Clamp seals from Combifit International B.V.	BEF-HA-TCLI20-LFP2	2126243
	Weld-in flange, hygienic, G 3/4" including acceptance test certificate 3.1, Ra ≤ 0.4 μm, Stainless steel 1.4404	BEF-HA-SWFL54-LFP2	2122489

	Brief description	Type	Part no.
Terminal and alignment brackets			
	1 piece, Centering for bypass- and immersion tube installation with diameter 40 mm ... 100 mm, PTFE	BEF-FL-BYRD40-LFP1	2059612

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SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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