



LFP4000-F4NMB

LFP Cubic

LEVEL SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Model name	Part no.
LFP4000-F4NMB	1066789

Other models and accessories → www.sick.de/LFP_Cubic

Detailed technical data

Features

Medium	Fluids
Measurement	Switch, continuous
Probe type	Rope probe
Probe length	4,000 mm
Process pressure	-1 bar ... 10 bar
Process temperature	-20 °C ... +100 °C
GOST approval	✓
RoHS certificate	✓
IO-Link	✓
CULus certificate	✓

Performance

Accuracy of sensor element	± 5 mm ¹⁾
Repeatability	≤ 2 mm
Resolution	< 2 mm
Response time	< 400 ms
Dielectricity constant	≥ 5 for mono rod probe / rope probe ≥ 1.8 with coaxial tube
Conductivity	No limitation
Maximum level change	≤ 500 mm/s
Inactive area at process connector	25 mm ²⁾
Inactive area at probe end	10 mm ¹⁾
MTTF	194.3 years (EN ISO 13849-1)

¹⁾ With water under reference conditions.

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

Electronics

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

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

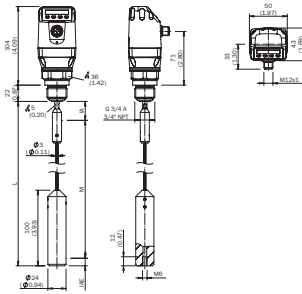
Mechanics

Wetted parts	1.4404, PTFE
Process connection	¾" NPT
Housing material	Plastic PBT
Max.probe load	≤ 6 Nm

Ambient data

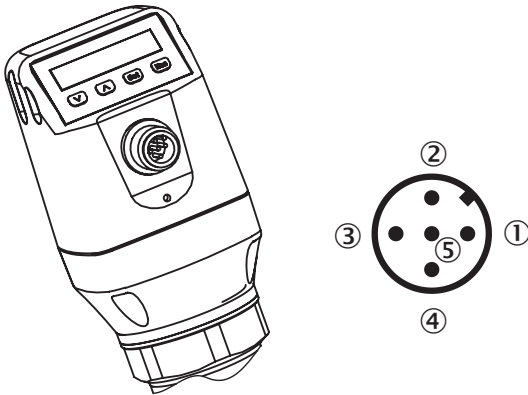
Ambient operating temperature	-20 °C ... +60 °C
Ambient storage temperature	-40 °C ... +80 °C

Dimensional drawing (Dimensions in mm (inch))



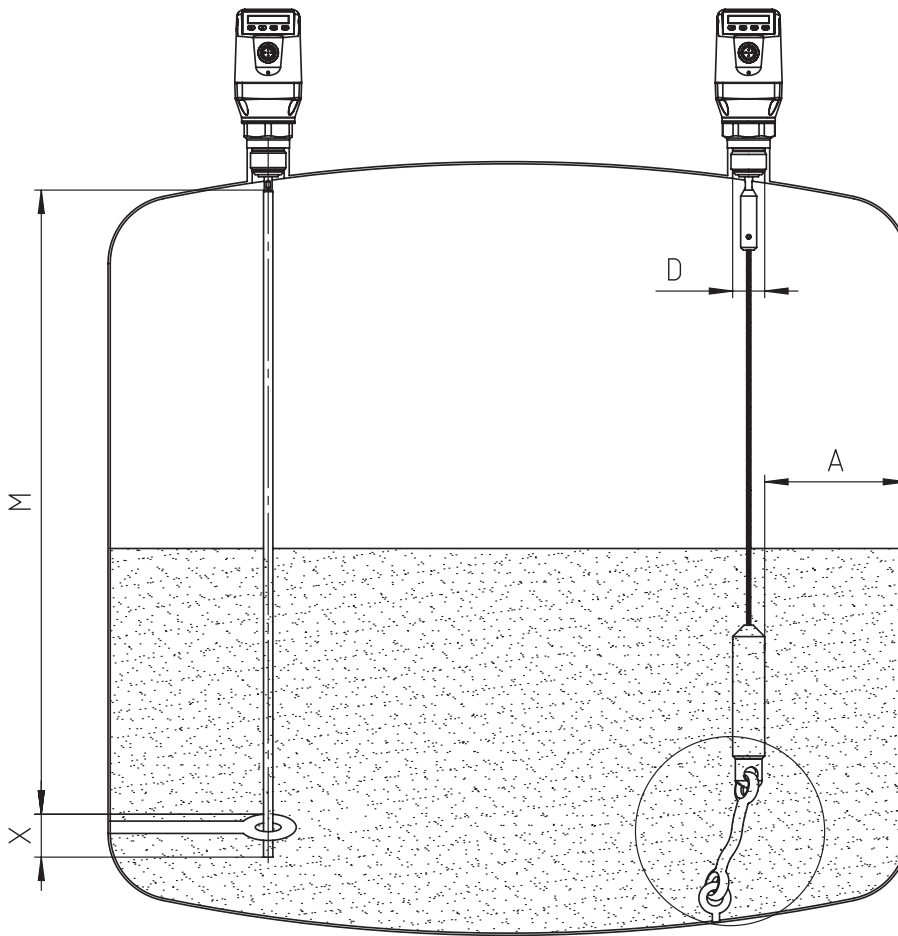
- ① M: Measuring range
- ② L: Probe length
- ③ IA: Inactive area at process connection 25 mm (0.98")
- ④ IAE: Inactive area at probe end 10 mm (0.39")

Connection type



- ① L⁺: Supply voltage, brown
- ② 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

Instruction for installation

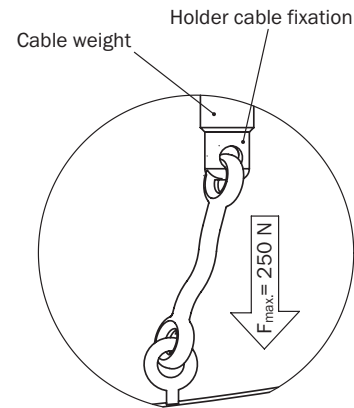


Mono rod probe mounted in metal tank

M = Measuring range
X = Inactive area at probe end
No measurement possible

Rope probe mounted in metal tank

Installation in nozzle:
D ≥ DN 25 (1")
Distance tank wall/tank bottom:
A ≥ 50 mm (1.97")
Distance to other tank fittings:
≥ 100mm (3.94")



Recommended accessories

Other models and accessories → www.sick.de/LFP_Cubic

	Brief description	Model name	Part no.
Mounting brackets and mounting plates			
	Monting ring for rope fixing, material PTFE, PTFE	BEF-CC-LF-PHSS-0001	2074575
Modules and gateways			
	Number of IO-Link ports: 4; Communication mode: COM1/COM2/COM3; Switching input: PNP; Supply voltage Vs, IO-Link ports: DC 24 V; Current loading: 800 mA; Data transmission rate: Max. 12 MBaud, Autobaud; Address space occupation: 1 bis 126; Connection type: Connector M12; Connection type, IO-Link ports: Connector M12, 5-pin; Supply voltage Vs, module: DC 18 ... 30 V; Power consumption: Typ. 75 mA / max. 100 mA (at UL with DC 24 V), Typ. 25 mA + sensor current / max. 800 mA (at Us with DC 24 V)	IOLSHPB-P3104R01	6039728

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