Online data sheet

LFP1300-A5NMC

LFP Cubic

LEVEL SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
LFP1300-A5NMC	1062256

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

Detailed technical data

Features

Medium	Fluids
Measurement	Switch, Continuous
Design	Standard
Probe type	Mono rod probe
Probe length	1,300 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
Deactivated area at end of probe	10 mm [1)]

[1)] With water under reference conditions.

MTTF	194.3 years (EN ISO 13849-1)

[1] With water under reference conditions.

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	M12 round connector x 1, 8-pin
Output signal	4 mA ... 20 mA, 0 V ... 10 V automatic switching depending on the load., 1 PNP transistor output (Q1) and 3 PNP/NPN transistor outputs (Q2 to Q4) 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 61326-2-3, 2014/30/EU

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

Mechanics

Wetted parts	1.4404, PTFE
Process connection	G ¾ A
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

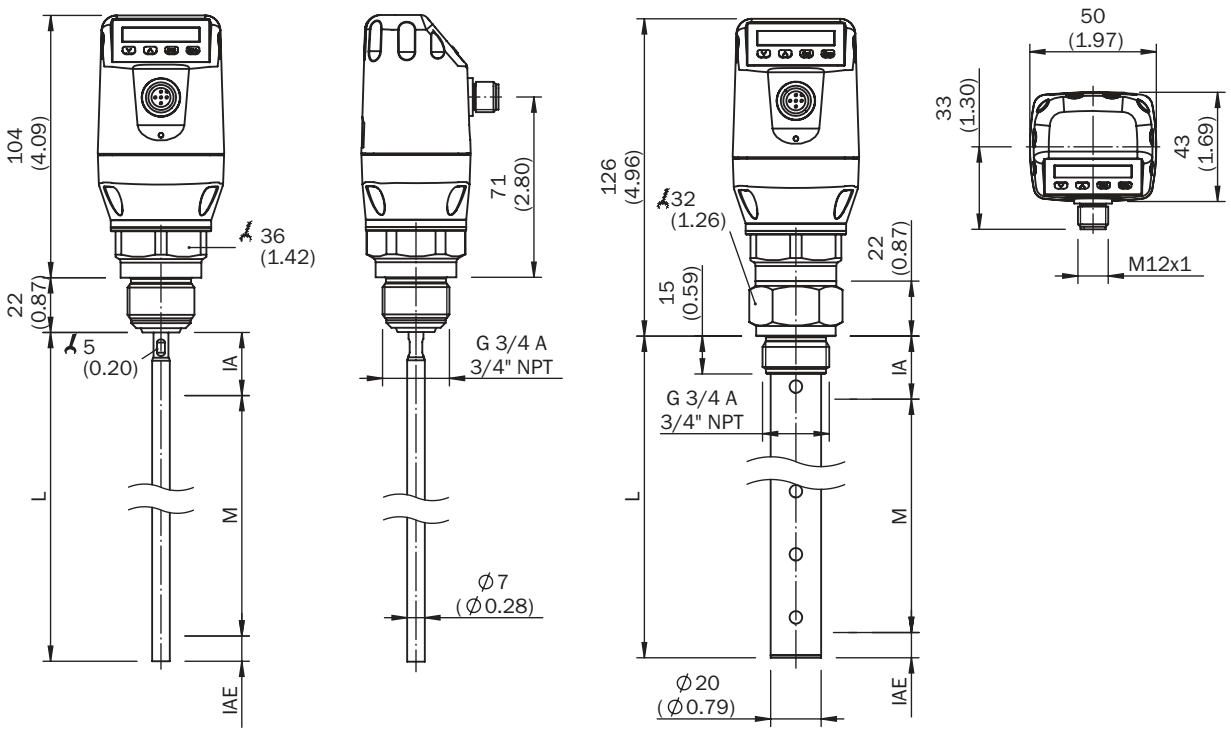
Classifications

ECl@ss 5.0	27371813
ECl@ss 5.1.4	27371813
ECl@ss 6.0	27371813
ECl@ss 6.2	27371813
ECl@ss 7.0	27371813
ECl@ss 8.0	27371813
ECl@ss 8.1	27371813
ECl@ss 9.0	27371813

ETIM 5.0	EC001447
ETIM 6.0	EC001447
UNSPSC 16.0901	41113710

Dimensional drawing (Dimensions in mm (inch))

Dimensional drawing: mono rod probe

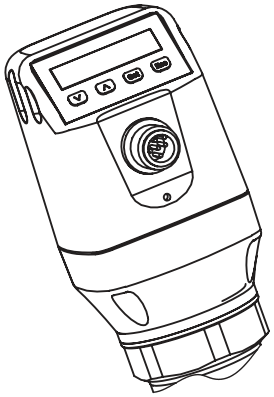


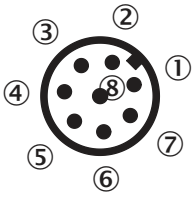
monoprobe

with coaxial tube

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")

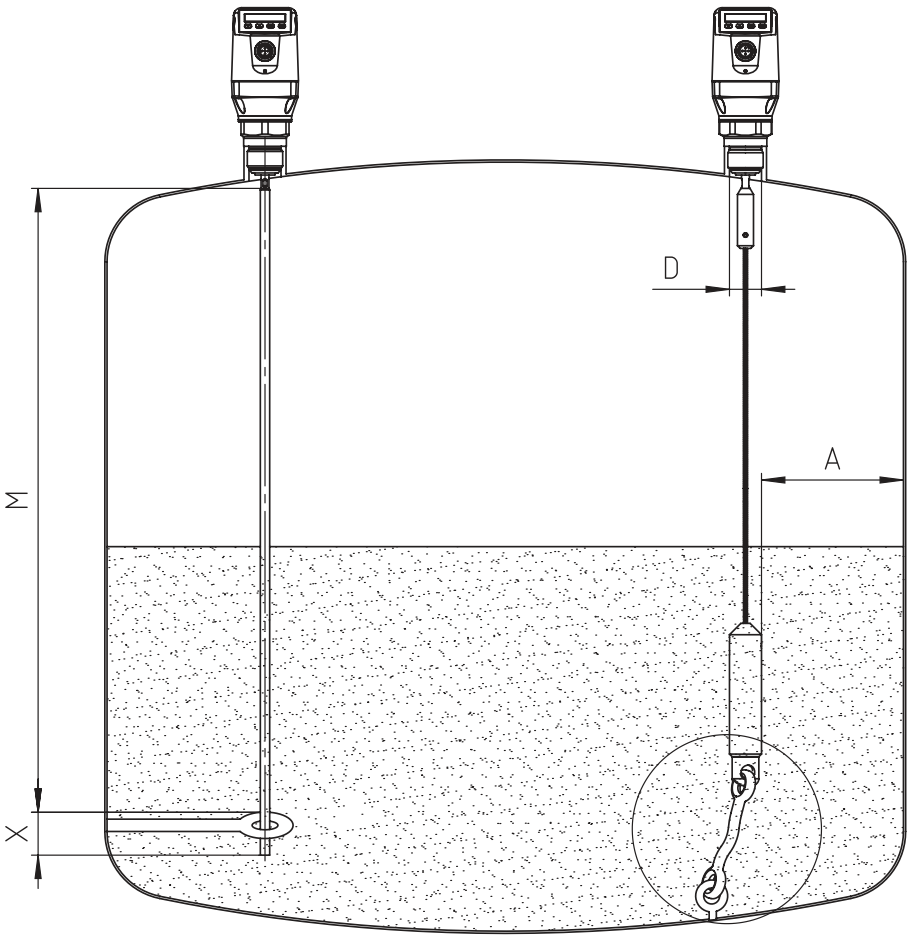
Connection type





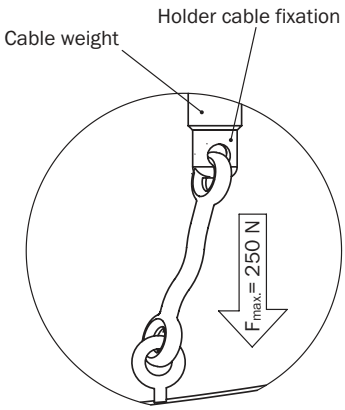
① L^+: Supply voltage
② Q_2: Switching output 2, PNP/NPN
③ M: Ground, reference ground for current-/voltage output
④ C/Q_1: Switching output 1, PNP/IO-Link-communication
⑤ Q_3: Switching output 3, PNP/NPN
⑥ Q_4: Switching output 4, PNP/NPN
⑦ Q_A: Analog current-/voltage output
⑧ No function

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")

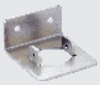


Recommended accessories

Other models and accessories ➜ www.sick.com/LFP_Cubic

	Brief description	Type	Part no.
Device protection (mechanical)			
	Coaxial tube for LFP with process connection G ¾, process connection of coaxial tube G ¾, material 1.4571/316TI, for probe length 200 mm	LFPCT-0200G1	2068141
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 200 mm	LFPCT-0200N1	2068165
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube G 3/4, material 1.4571/316TI, for probe length 300 mm	LFPCT-0300G1	2068142
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 300 mm	LFPCT-0300N1	2068166
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube G 3/4, material 1.4571/316TI, for probe length 400 mm	LFPCT-0400G1	2068143
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 400 mm	LFPCT-0400N1	2068167

	Brief description	Type	Part no.
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube G 3/4, material 1.4571/316TI, for probe length 500 mm	LFPCT-0500G1	2068144
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 500 mm	LFPCT-0500N1	2068168
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube G 3/4, material 1.4571/316TI, for probe length 600 mm	LFPCT-0600G1	2068145
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 600 mm	LFPCT-0600N1	2068169
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube G 3/4, material 1.4571/316TI, for probe length 700 mm	LFPCT-0700G1	2068146
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 700 mm	LFPCT-0700N1	2068170
	Coaxial tube for LFP with process connection G 3/4, process connection of coax probe G 3/4, material 1.4571/316TI, for probe length 800 mm	LFPCT-0800G1	2068147
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 800 mm	LFPCT-0800N1	2068171
	Coaxial probe for LFP with process connection G 3/4, process connection of coaxial tube G 3/4, material 1.4571/316TI, for probe length 900 mm	LFPCT-0900G1	2067507
	Coaxial probe for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 900 mm	LFPCT-0900N1	2068172
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube G 3/4, material 1.4571/316TI, for probe length 1000 mm	LFPCT-1000G1	2065702
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 1000 mm	LFPCT-1000N1	2068173
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube G 3/4, material 1.4571/316TI, for probe length 1100 mm	LFPCT-1100G1	2068148
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 1100 mm	LFPCT-1100N1	2068174
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube G 3/4, material 1.4571/316TI, for probe length 1200 mm	LFPCT-1200G1	2068149
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 1200 mm	LFPCT-1200N1	2068175
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube G 3/4, material 1.4571/316TI, for probe length 1300 mm	LFPCT-1300G1	2068150
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 1300 mm	LFPCT-1300N1	2068176
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube G 3/4, material 1.4571/316TI, for probe length 1400 mm	LFPCT-1400G1	2068151
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 1400 mm	LFPCT-1400N1	2068177
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube G 3/4, material 1.4571/316TI, for probe length 1500 mm	LFPCT-1500G1	2068152
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 1500 mm	LFPCT-1500N1	2068178
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube G 3/4, material 1.4571/316TI, for probe length 1600 mm	LFPCT-1600G1	2068153
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 1600 mm	LFPCT-1600N1	2068179
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube G 3/4, material 1.4571/316TI, for probe length 1700 mm	LFPCT-1700G1	2068154
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 1700 mm	LFPCT-1700N1	2068180

	Brief description	Type	Part no.
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube G 3/4, material 1.4571/316TI, for probe length 1500 mm	LFPCT-1800G1	2068155
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 1800 mm	LFPCT-1800N1	2068181
	Coaxial tube for LFP with process connection G 3/4, process connection of coax probe G 3/4, material 1.4571/316TI, for probe length 1900 mm	LFPCT-1900G1	2068156
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 1900 mm	LFPCT-1900N1	2068182
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube G 3/4, material 1.4571/316TI, for probe length 2000 mm	LFPCT-2000G1	2065703
	Coaxial tube for LFP with process connection G 3/4, process connection of coaxial tube 3/4" NPT, material 1.4571/316TI, for probe length 2000 mm	LFPCT-2000N1	2068183
Flanges			
	Process connection adapter G ¾ to G1	BEF-HA-G1BSP1-LFP1	2067603
	Weld-in flange G 3/4"	BEF-FL-GEWG34-LFP1	2082150
Mounting brackets and mounting plates			
	Mounting bracket, mounting hardware included	BEF-FL-304LFP-HLDR	2077391
Plug connectors and cables			
	Head A: female connector, M12, 8-pin, straight Head B: cable Cable: PVC, shielded, 2 m	DOL-1208-G02MA	6020633
Spare parts			
	Spare probe for LFP Cubic, probe length 1000 mm, material 1.4404/316L, diameter 7 mm	BEF-ER-SN1000-LFPC	2065700
	Spare probe for LFP Cubic, probe length 2000 mm, material 1.4404/316L, diameter 7 mm	BEF-ER-SN2000-LFPC	2065701

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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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