Data sheet

LFP1900-A5NMC

LFP Cubic

LEVEL SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
LFP1900-A5NMC	1062262

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

Detailed technical data

Features

Medium	Fluids
Measurement	Switch, Continuous
Design	Standard amplifier
Probe type	Rod probe
Probe length	1,900 mm
Process pressure	–1 bar ... 10 bar
Process temperature	–20 °C ... +100 °C

Performance

Accuracy of sensor element	± 5 mm [1]
Reproducibility	≤ 2 mm
Resolution	< 2 mm
Response time	400 ms
Dielectricity constant	≥ 5 for rod probe / cable probe ≥ 1.8 with coaxial tube
Conductivity	No limitation
Maximum level change	≤ 500 mm/s
Deactivated area at process connection	25 mm [2]
Deactivated area at end of probe	≥ 10 mm [1]
MTTF	194.3 years (EN ISO 13849-1)
Display	✓

[1] With water under reference conditions.

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

Electronics

Communication interface	IO-Link
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
Connection type	M12 round connector x 1, 8-pin
Output signal	1 x PNP + 3 x PNP/NPN + 4 mA ... 20 mA / 0 V ... 10 V
Output load	4 mA ... 20 mA < 350 Ohm at Uv > 12 V, 0 V ... 10 V > 750 Ohm at Uv 14 ≥ V
Hysteresis	≥ 2 mm [2]
Output current	< 100 mA
Inductive load	< 1 H
Capacitive load	100 nF
Enclosure rating	IP67 (EN 60529)
Temperature drift	< 0.1 mm/K
Lower signal level	3.8 mA ... 4 mA
Upper signal level	20 mA ... 20.5 mA

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

Mechanics

Wetted parts	Stainless steel 1.4404 / 316L PTFE FKM
Process connection	G ¾ A
Housing material	Plastic PBT
Max. probe load	≤ 6 Nm

Ambient data

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

Certificates

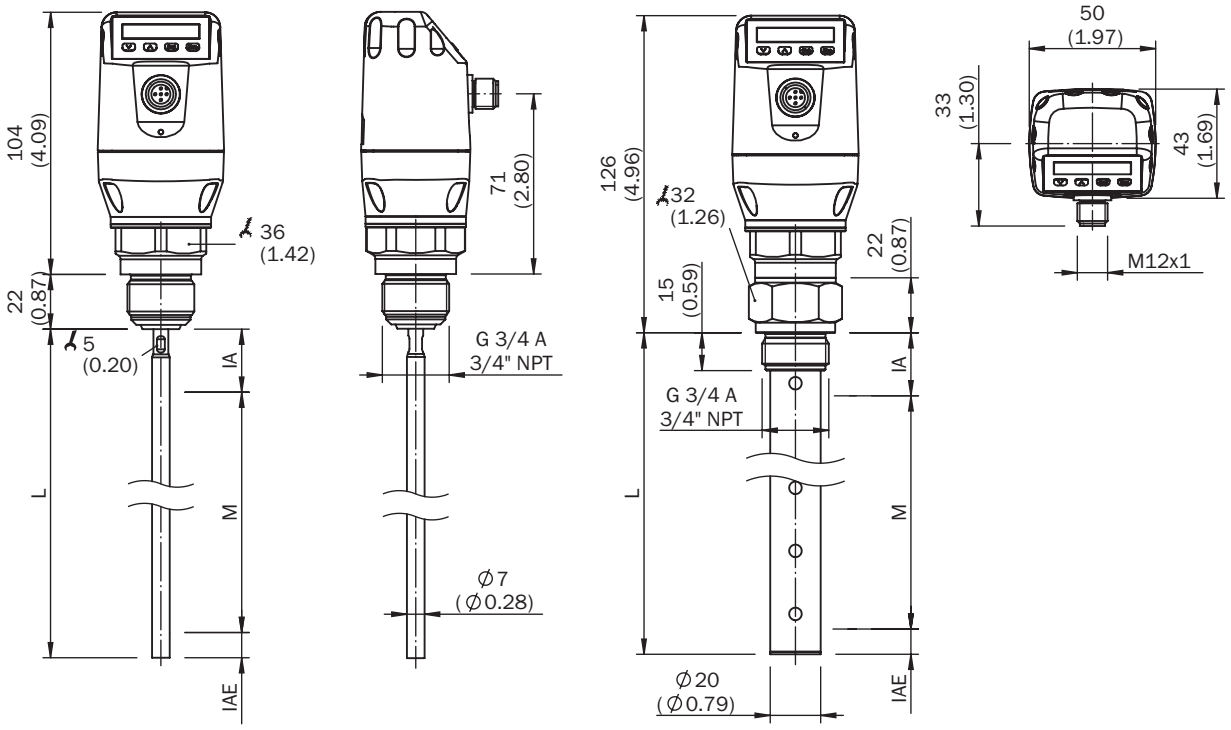
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
IO-Link	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

Classifications

ECLASS 5.0	27200513

ECLASS 5.1.4	27200513
ECLASS 6.0	27200513
ECLASS 6.2	27200513
ECLASS 7.0	27200513
ECLASS 8.0	27200513
ECLASS 8.1	27200513
ECLASS 9.0	27200513
ECLASS 10.0	27200513
ECLASS 11.0	27200513
ECLASS 12.0	27200513
ETIM 5.0	EC001447
ETIM 6.0	EC001447
ETIM 7.0	EC001447
ETIM 8.0	EC001447
UNSPSC 16.0901	41113710

Dimensional drawing: rod probe

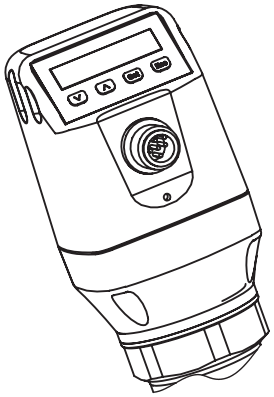


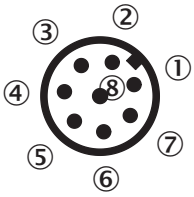
monoprobe

with coaxial tube

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")

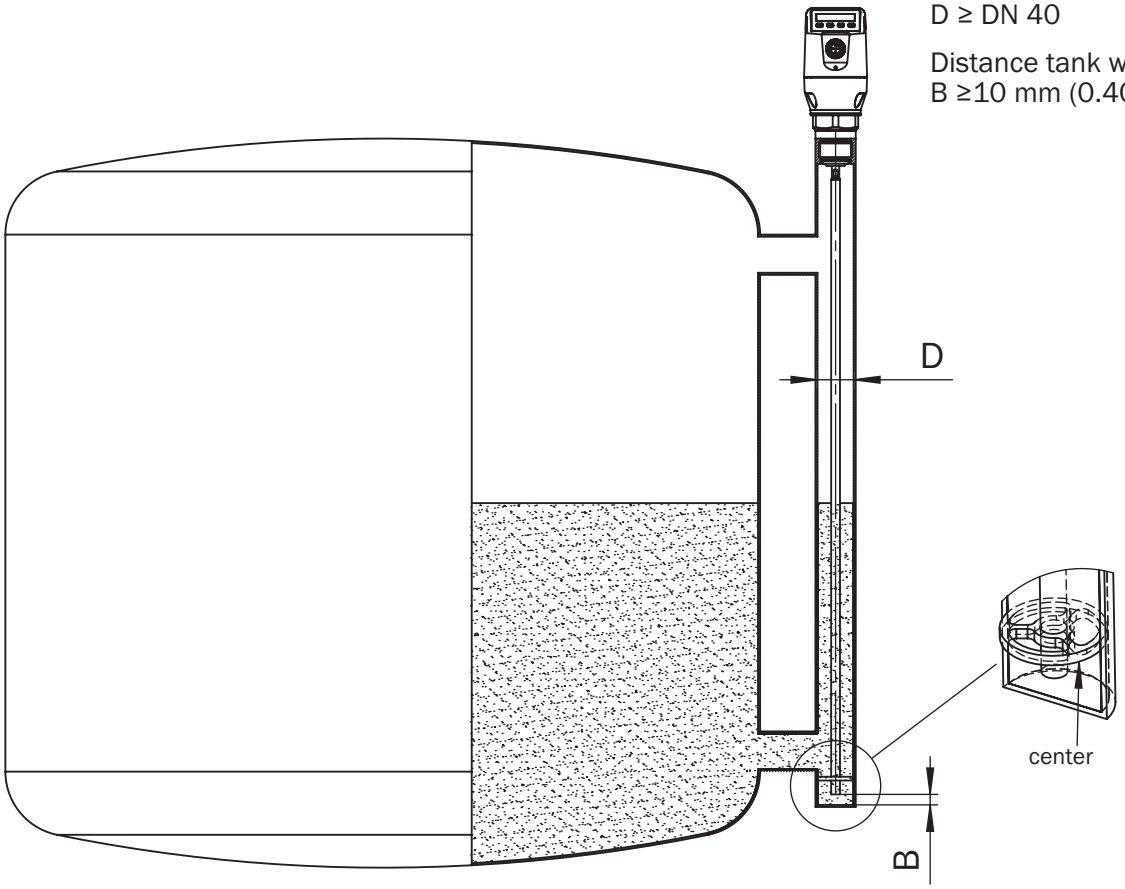
Connection type



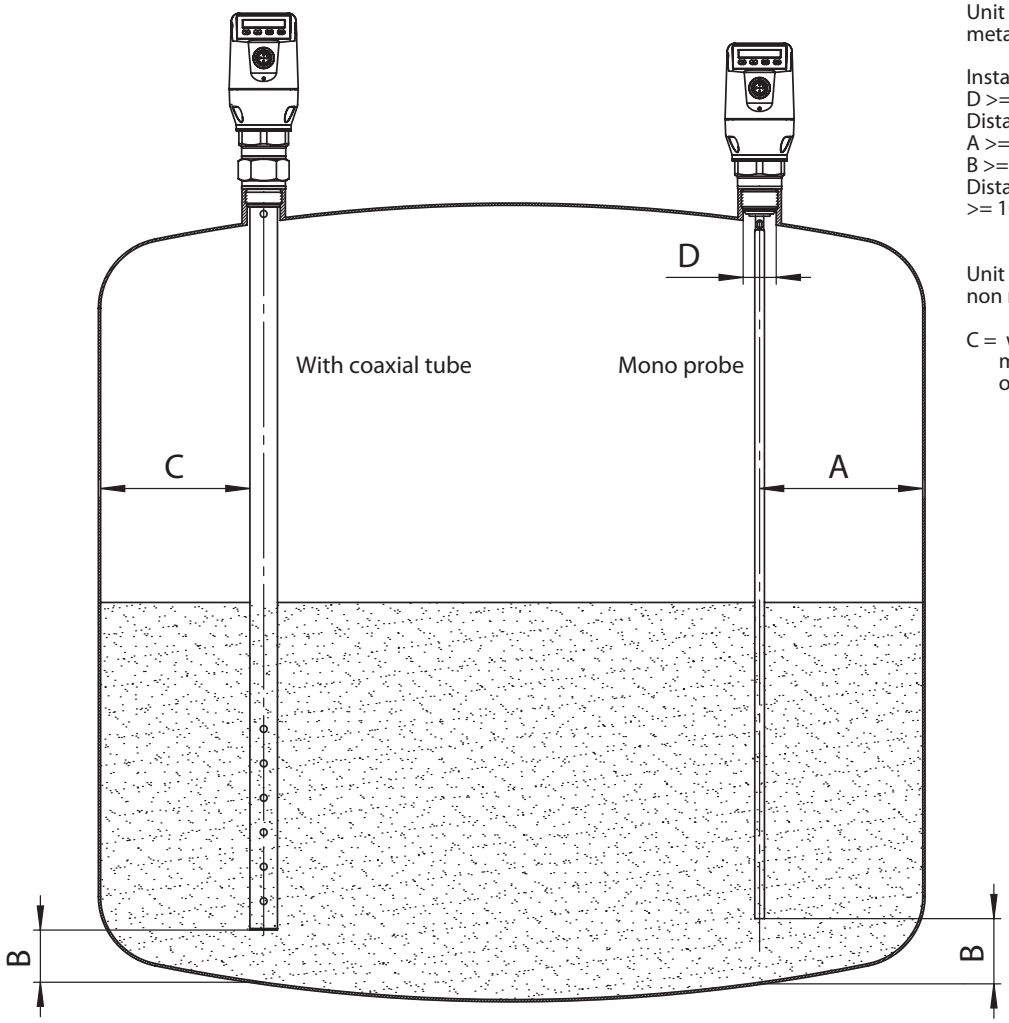


① L^+: Supply voltage
② Q_2: Switching output 2, PNP/NPN
③ M: Ground, reference ground for current-/voltage output
④ C/Q_1: Switching output 1, PNP/IO-Link-communication
⑤ Q_3: Switching output 3, PNP/NPN
⑥ Q_4: Switching output 4, PNP/NPN
⑦ Q_A: Analog current-/voltage output
⑧ No function

Instruction for installation Installation in a metal immersion tube or metal bypass



Instruction for installation Installation in a metal tank



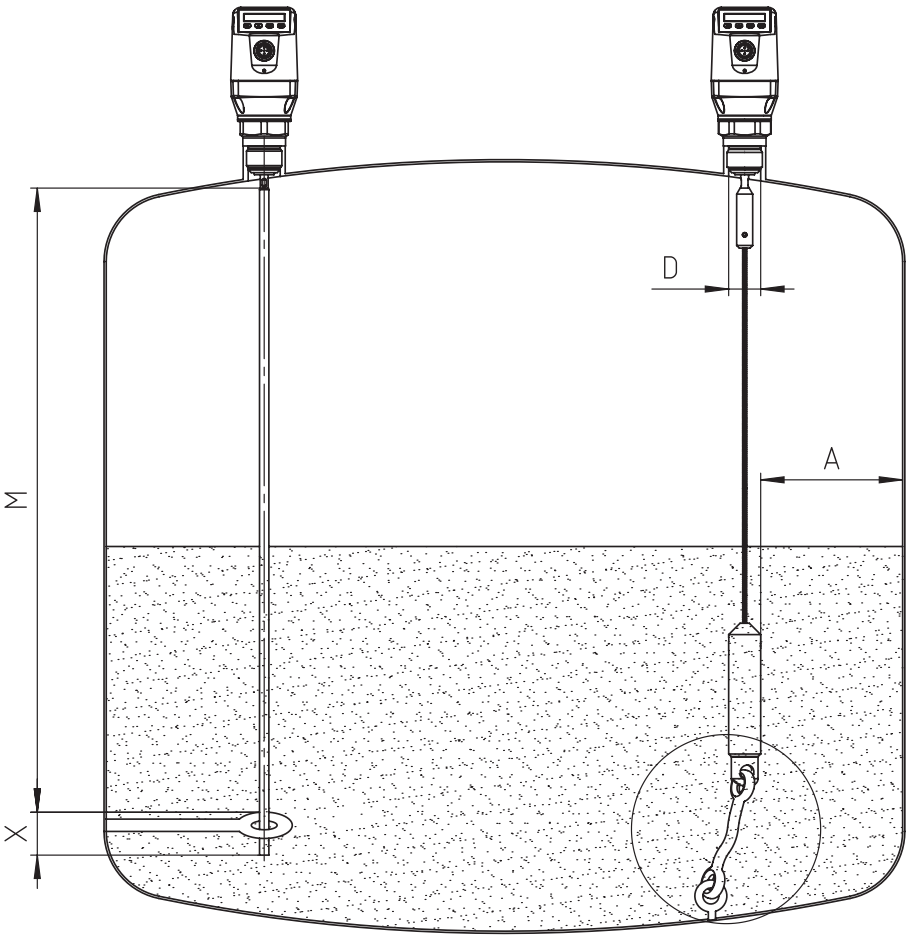
Unit with mono probe mounted in metal tank

Installation in nozzle:
D >= DN 25 (1")
Distance tank wall/tank bottom:
A >= 50 mm (1.97")
B >= 10 mm (0.40")
Distance to other tank fittings >= 100mm (3.94")

Unit with coaxial tube for metal and non metal tank

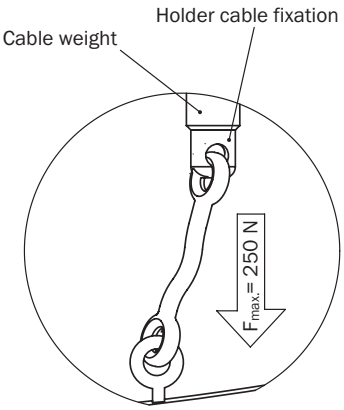
C = with a coaxial tube there are no minimum distances to the tank wall or to other tank fittings required

Instruction for installation



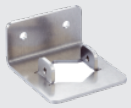
Mono rod probe mounted in metal tank
M = Measuring range
X = Inactive area at probe end
No measurement possible

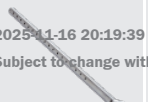
Rope probe mounted in metal tank
Installation in nozzle:
D ≥ DN 25 (1")
Distance tank wall/tank bottom:
A ≥ 50 mm (1.97")
Distance to other tank fittings:
≥ 100mm (3.94")



Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	• **Description:** Mounting bracket • **Material:** Stainless steel • **Details:** Stainless steel 1.4301 (AISI 304) • **Items supplied:** Mounting hardware included	BEF-FL-304LFP-HLDR	2077391
	• **Description:** Spare probe for LFP Cubic, probe length 1000 mm, material 1.4404/316L, diameter 7 mm	BEF-ER-SN1000-LFPC	2065700
	• **Description:** Spare probe for LFP Cubic, probe length 2000 mm, material 1.4404/316L, diameter 7 mm	BEF-ER-SN2000-LFPC	2065701
	• **Description:** Process connection adapter G ¾ to G1	BEF-HA-G1BSP1-LFP1	2067603
	• **Description:** Weld-in flange G 3/4"	BEF-FL-GEWG34-LFP1	2082150

	Brief description	Type	part no.
device protection and care			
	• **Description:** 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
	• **Description:** 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
	• **Description:** 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
	• **Description:** 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
	• **Description:** 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
	• **Description:** 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
	• **Description:** 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
	• **Description:** 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
	• **Description:** 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
	• **Description:** 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 1800 mm	LFPCT-1800G1	2068155
	• **Description:** 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
	• **Description:** 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
	• **Description:** 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
	• **Description:** 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

	Brief description	Type	part no.
connectors and cables			
	• **Connection type head A:** Female connector, M12, 8-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 8-wire, PVC • **Description:** Sensor/actuator cable, shielded • **Application:** Zones with chemicals, Uncontaminated zones	YF2A28-020VA6XLEAX	2096243
	• **Connection type head A:** Female connector, M12, 8-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 3 m, 8-wire, PVC • **Description:** Sensor/actuator cable, shielded • **Application:** Zones with chemicals, Uncontaminated zones	YF2A28-030VA6XLEAX	2145695
	• **Connection type head A:** Female connector, M12, 8-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 0.6 m, 8-wire, PVC • **Description:** Sensor/actuator cable, shielded • **Application:** Zones with chemicals, Uncontaminated zones	YF2A28-C60VA6XLEAX	2145385
	• **Connection type head A:** Female connector, M12, 8-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 1 m, 8-wire, PVC • **Description:** Sensor/actuator cable, shielded • **Application:** Zones with chemicals, Uncontaminated zones	YF2A28-010VA6XLEAX	2145386

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