SICK.COM



DATA SHEET

LFP0700-A5DMC

LFP Cubic
Level sensors

SICK Sensor Intelligence



Illustration may differ

LEVEL SENSORS

LFP0700-A5DMC

ORDERING INFORMATION

Type	part no.
LFP0700-A5DMC	1071096

Further device versions and accessories at www.sick.com/LFP_Cubic

DETAILED TECHNICAL DATA

FEATURES

Medium	Fluids
Measurement	Switch, Continuous
Design	Remote amplifier
Probe type	Rod probe
Probe length	700 mm
Process pressure	–1 bar ... 10 bar
Process temperature	–20 °C ... +100 °C

PERFORMANCE

Accuracy of sensor element	± 5 mm
Reproducibility	≤ 2 mm
Resolution	1 mm
Response time	400 ms [1]
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 [3]
MTTF	194.3 years (EN ISO 13849-1)
Display	✓

[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

Communication interface	IO-Link
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	M12 round connector x 1, 8-pin
Length of cable	3.3 m
Output signal	1 x PNP + 3 x PNP/NPN + 4 mA ... 20 mA / 0 V ... 10 V
Output load	4 mA ... 20 mA < 500 Ohm at Uv > 13,5 V, 4 mA ... 20 mA < 400 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, 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.

[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
Material coaxial cable	PVC

AMBIENT DATA

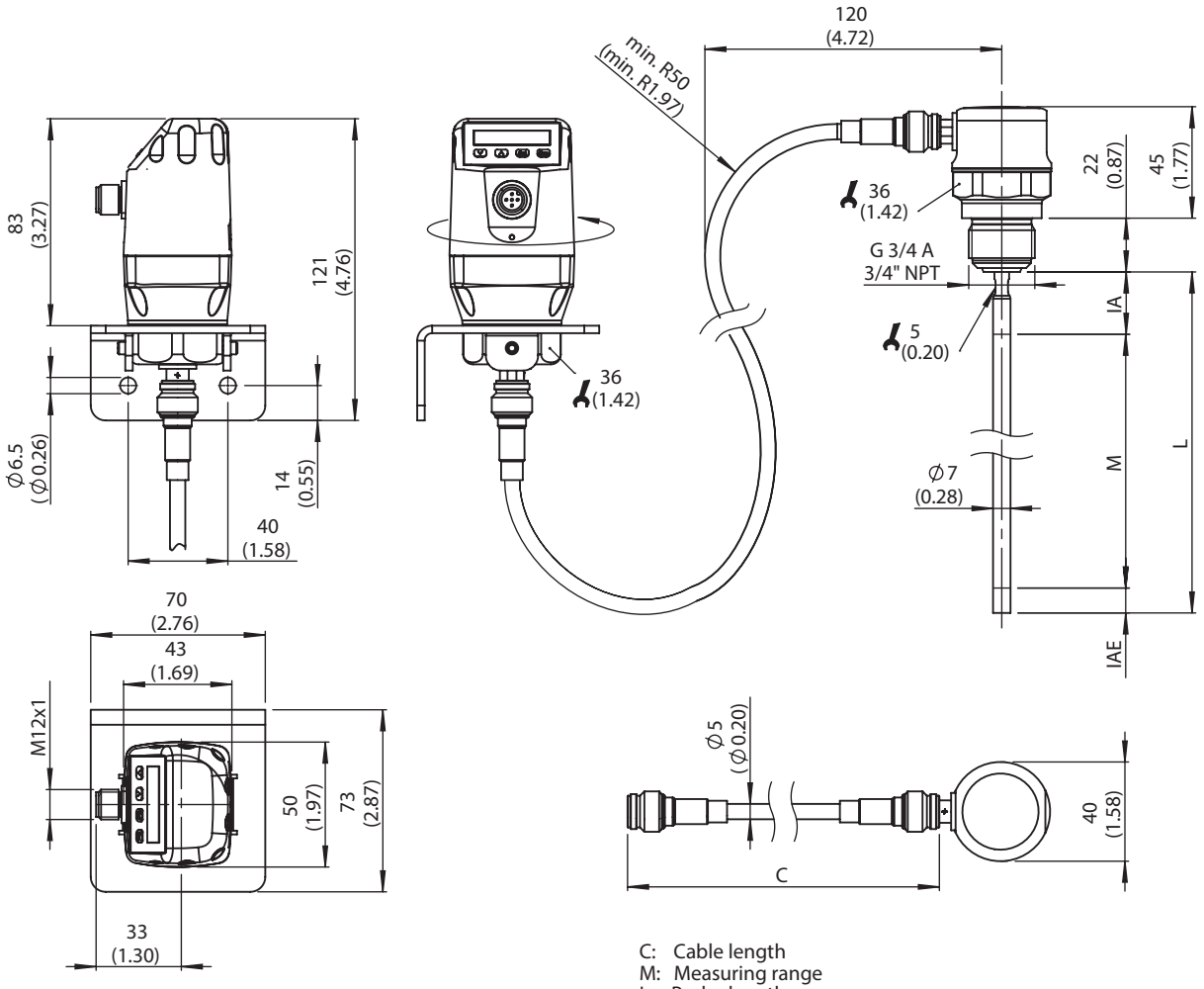
Ambient operating temperature	–20 °C ... +60 °C
Ambient temperature, storage	–40 °C ... +80 °C
Ambient temperature coaxial cable	–20 °C ... +60 °C
Outdoor use	Only with weather hood

CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
cULus certificate	✓
IO-Link certificate	✓

Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

DIMENSIONAL DRAWING

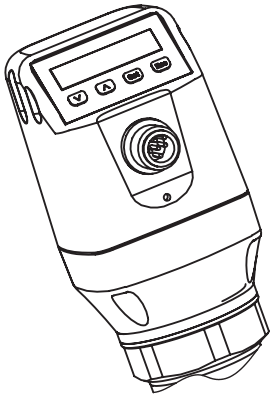


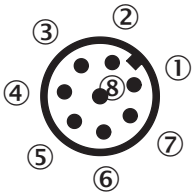
C: Cable length
M: Measuring range
L: Probe length
IA: Inactive area at process connection
20 mm (0.79") / 40 mm (1.58")
IAE: Inactive area at probe end 10 mm (0.39")

All dimensions in mm (inch)

Dimensions in mm (inch)

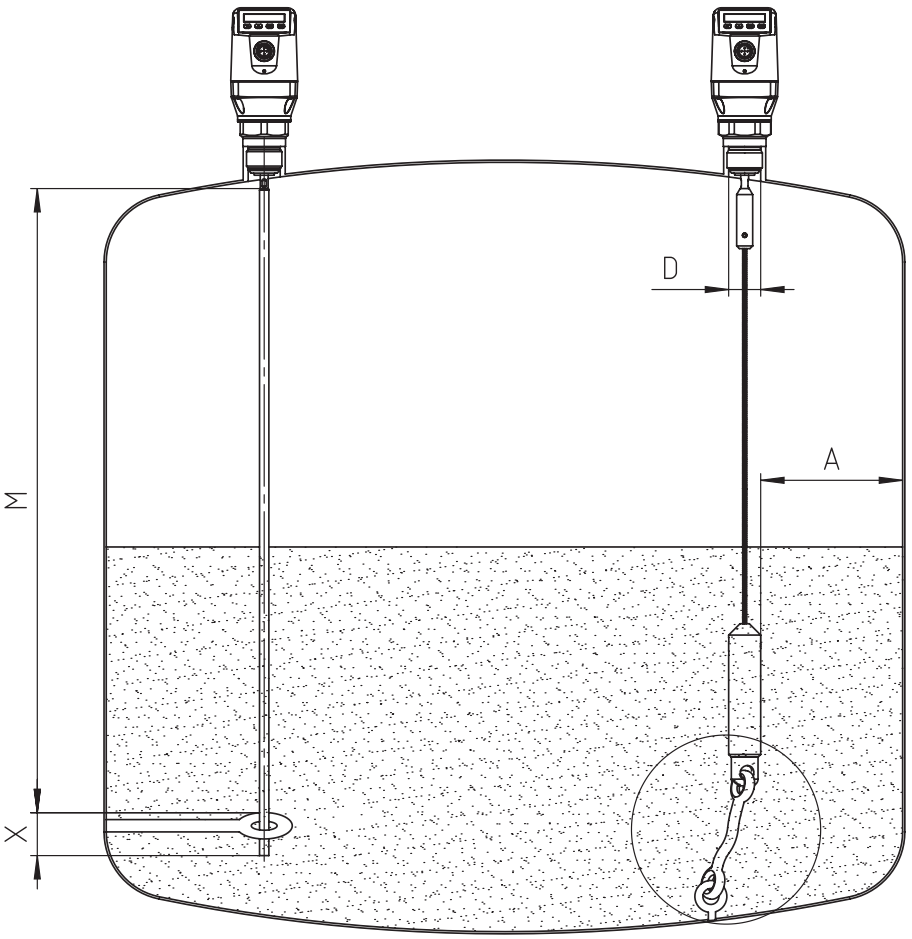
CONNECTION TYPE





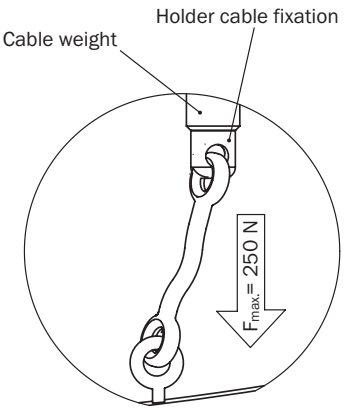
① L^+: Supply voltage
② Q_2: Switching output 2, PNP/NPN
③ M: Ground, reference ground for current-/voltage output
④ C/Q_1: Switching output 1, PNP/IO-Link-communication
⑤ Q_3: Switching output 3, PNP/NPN
⑥ Q_4: Switching output 4, PNP/NPN
⑦ Q_A: Analog current-/voltage output
⑧ No function

INSTRUCTION FOR INSTALLATION

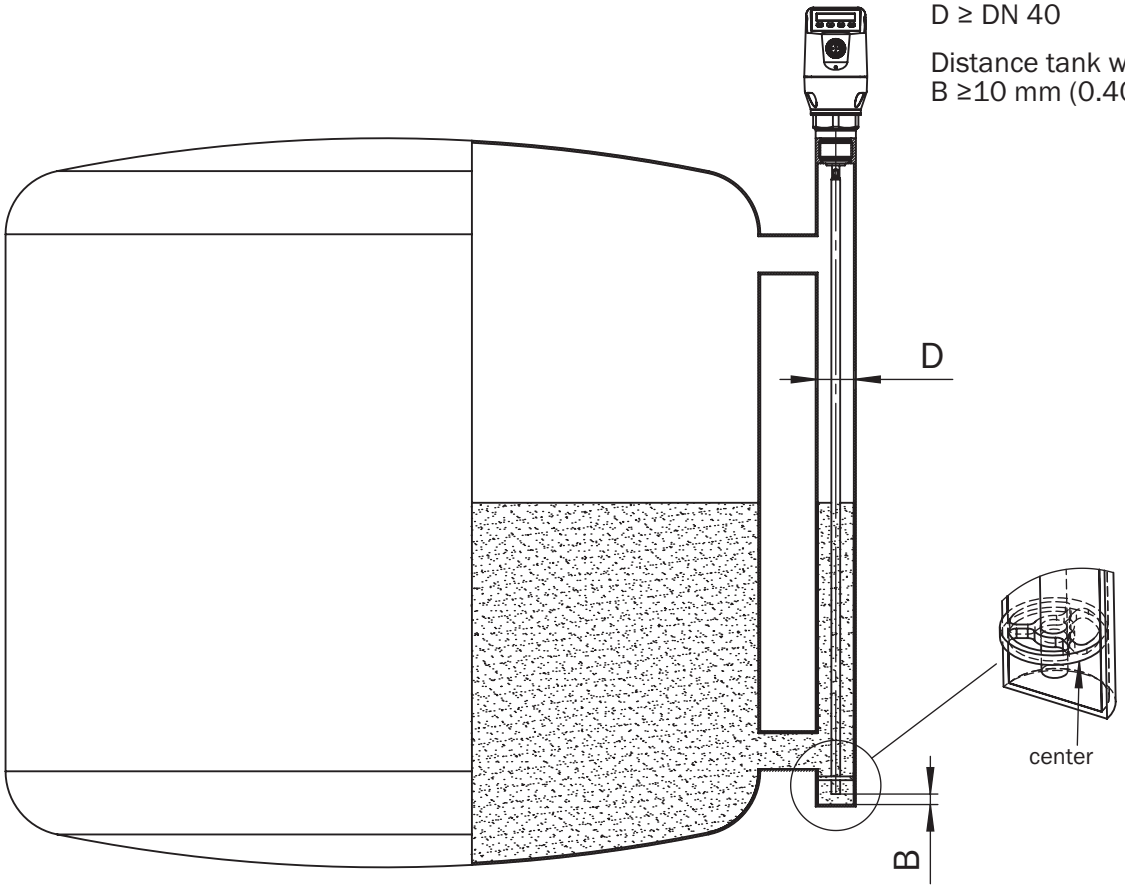


Mono rod probe mounted in metal tank
M = Measuring range
X = Inactive area at probe end
No measurement possible

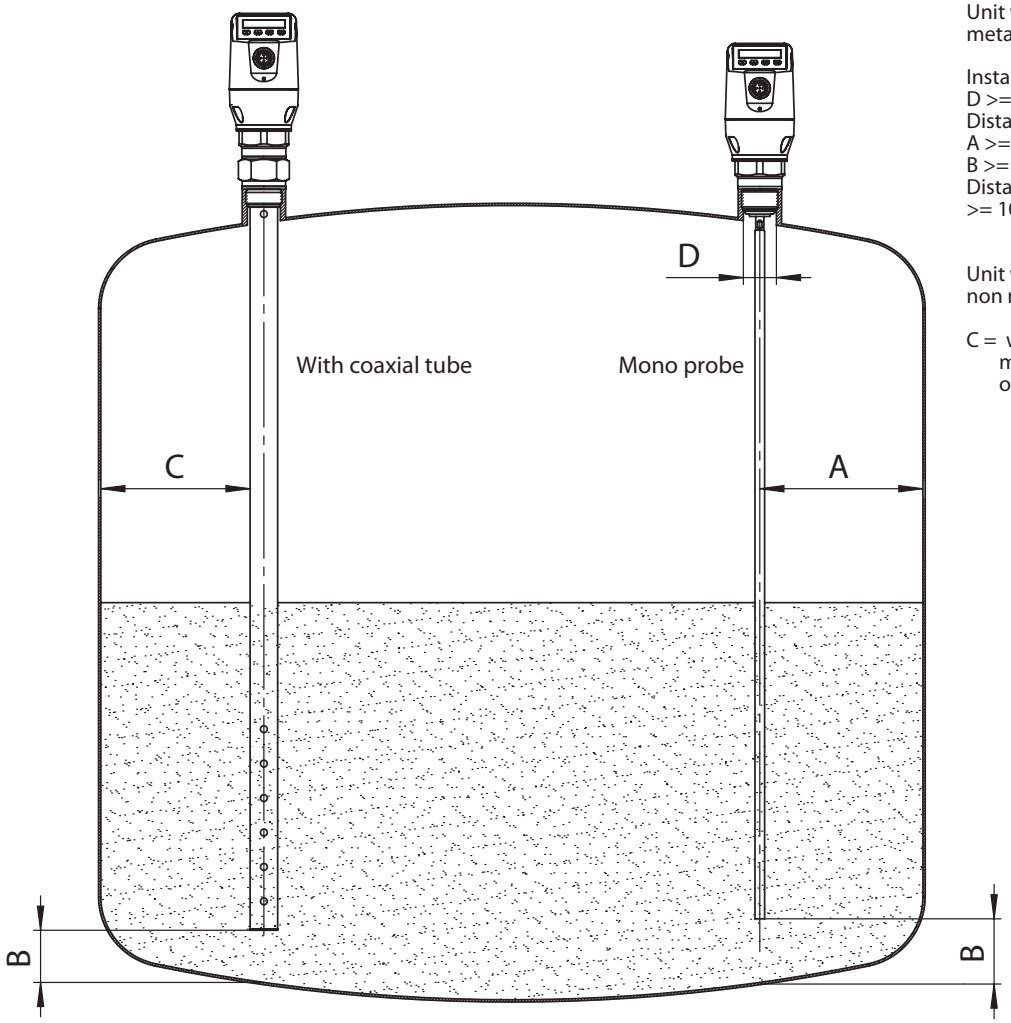
Rope probe mounted in metal tank
Installation in nozzle:
D ≥ DN 25 (1")
Distance tank wall/tank bottom:
A ≥ 50 mm (1.97")
Distance to other tank fittings:
≥ 100mm (3.94")



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

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1071096

SICK AG
WALDKIRCH
GERMANY
SICK.COM

SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

SICK

Sensor Intelligence