



# LFP0900-B4NMB

LFP Cubic



**THORNE &  
DERRICK  
INTERNATIONAL**

LEVEL SENSORS

Thorne & Derrick  
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[www.heatingandprocess.com](http://www.heatingandprocess.com)

**SICK**  
Sensor Intelligence.



Illustration may differ



IO-Link



## Ordering information

Type	Part no.
LFP0900-B4NMB	1057099

Other models and accessories → [www.sick.com/LFP\\_Cubic](http://www.sick.com/LFP_Cubic)

## Detailed technical data

### Features

<b>Medium</b>	Fluids
<b>Measurement</b>	Switch, Continuous
<b>Design</b>	Standard
<b>Probe type</b>	Mono rod probe
<b>Probe length</b>	900 mm
<b>Process pressure</b>	-1 bar ... 10 bar
<b>Process temperature</b>	-20 °C ... +100 °C
<b>GOST approval</b>	✓
<b>RoHS certificate</b>	✓
<b>IO-Link</b>	✓
<b>CULus certificate</b>	✓

### Performance

<b>Accuracy of sensor element</b>	± 5 mm <sup>1)</sup>
<b>Repeatability</b>	≤ 2 mm
<b>Resolution</b>	< 2 mm
<b>Response time</b>	< 400 ms
<b>Dielectricity constant</b>	≥ 5 for mono rod probe / rope probe ≥ 1.8 with coaxial tube
<b>Conductivity</b>	No limitation
<b>Maximum level change</b>	≤ 500 mm/s
<b>Deactivated area at end of probe</b>	10 mm <sup>1)</sup>

<sup>1)</sup> With water under reference conditions.

<b>MTTF</b>	194.3 years (EN ISO 13849-1)
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<sup>1)</sup> With water under reference conditions.

## Electronics

<b>Supply voltage</b>	12 V DC ... 30 V DC <sup>1)</sup>
<b>Power consumption</b>	≤ 100 mA at 24 V DC without output load
<b>Initialization time</b>	≤ 5 s
<b>Protection class</b>	III
<b>Electrical connection</b>	Round connector M12 x 1, 5-pin
<b>Output signal</b>	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
<b>Output load</b>	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
<b>Hysteresis</b>	Min. 2 mm, free adjustable
<b>Signal voltage HIGH</b>	V <sub>s</sub> - 2 V
<b>Signal voltage LOW</b>	≤ 2 V
<b>Output current</b>	< 100 mA
<b>Inductive load</b>	< 1 H
<b>Capacitive load</b>	100 nF
<b>Enclosure rating</b>	IP 67: EN 60529
<b>Temperature drift</b>	< 0.1 mm/K
<b>Lower signal level</b>	3.8 mA ... 4 mA
<b>Upper signal level</b>	20 mA ... 20.5 mA
<b>EMC</b>	EN 61326-2-3, 2014/30/EU

<sup>1)</sup> All connections are polarity protected. All outputs are overload and short-circuit protected.

## Mechanics

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

## Ambient data

<b>Ambient operating temperature</b>	-20 °C ... +60 °C
<b>Ambient storage temperature</b>	-40 °C ... +80 °C

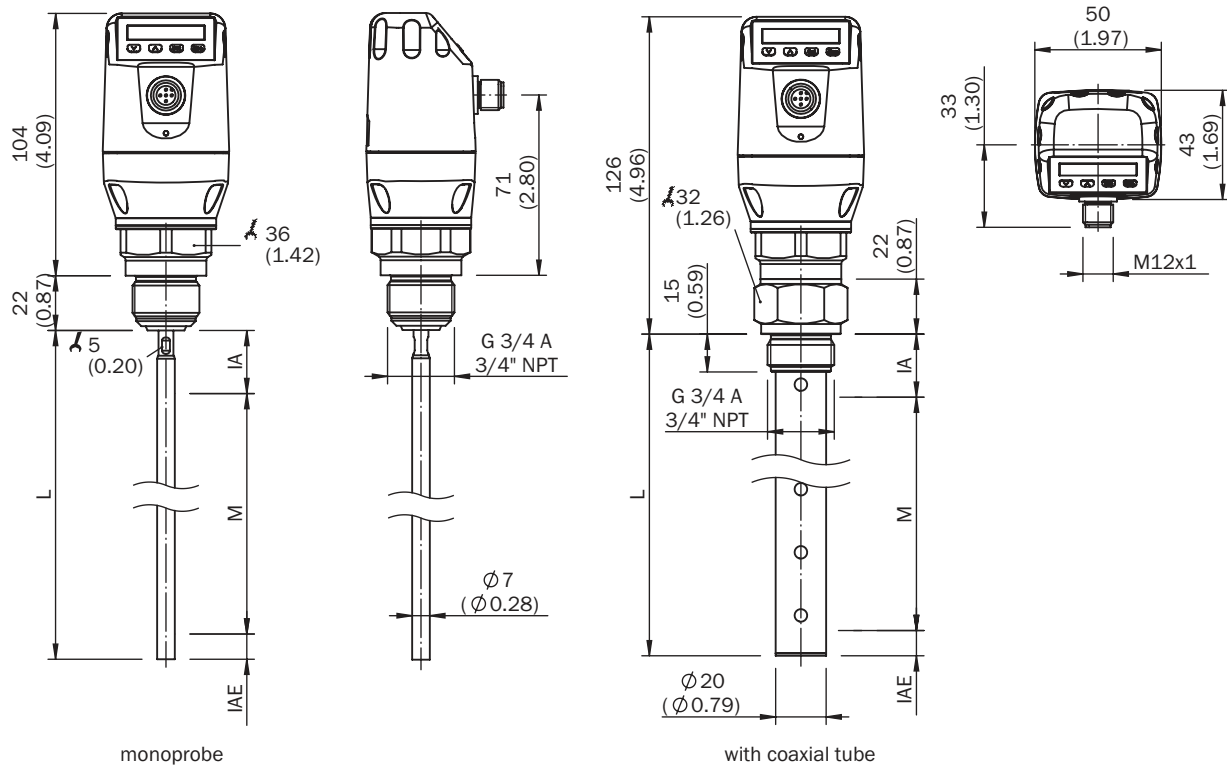
## Classifications

<b>ECI@ss 5.0</b>	27371813
<b>ECI@ss 5.1.4</b>	27371813
<b>ECI@ss 6.0</b>	27371813
<b>ECI@ss 6.2</b>	27371813
<b>ECI@ss 7.0</b>	27371813
<b>ECI@ss 8.0</b>	27371813
<b>ECI@ss 8.1</b>	27371813
<b>ECI@ss 9.0</b>	27371813

<b>ETIM 5.0</b>	EC001447
<b>ETIM 6.0</b>	EC001447
<b>UNSPSC 16.0901</b>	41113710

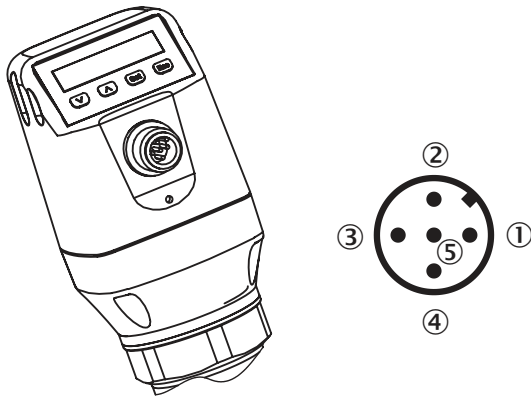
### Dimensional drawing (Dimensions in mm (inch))

Dimensional drawing: mono rod probe



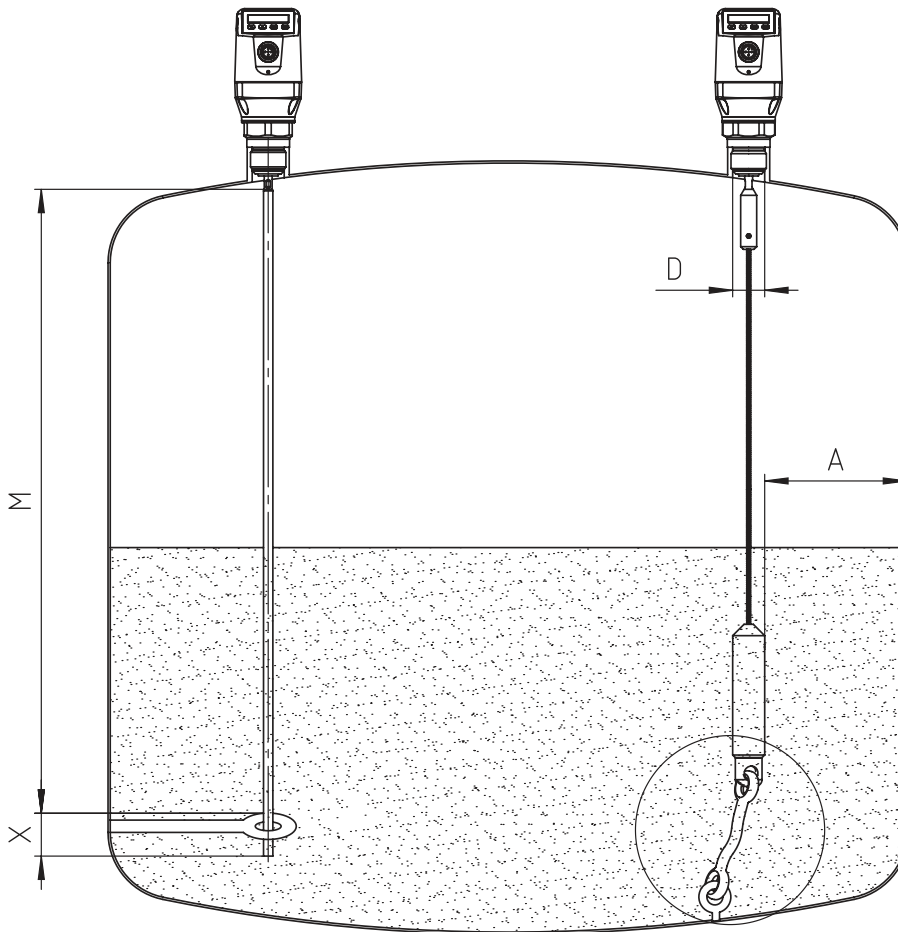
- ① M: measuring range
- ② L: Probe length
- ③ IA: Inactive area at process connection 25 mm (0.98")
- ④ IAE: Inactive area at probe end 10 mm (0.39")

## Connection type



- ① L<sup>+</sup>: Supply voltage, brown
- ② Q<sub>A</sub>: Analog current/voltage output, white
- ③ M: Ground, reference ground for current-/voltage output, blue
- ④ C/Q<sub>1</sub>: Switching output 1, PNP/IO-Link-communication, black
- ⑤ Q<sub>2</sub>: Switching output 2, PNP/NPN, grey

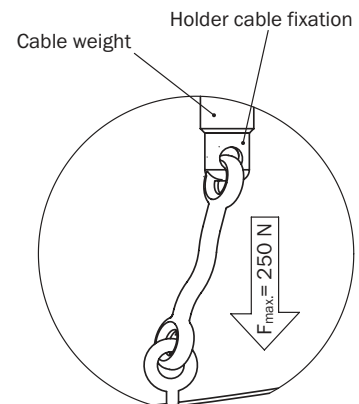
## Instruction for installation

**Mono rod probe mounted in metal tank**

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



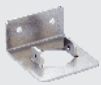





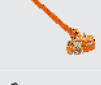
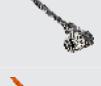
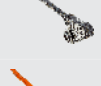
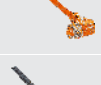

**Rope probe mounted in metal tank**


Installation in nozzle:  
 $D \geq \text{DN } 25 \text{ (1")}$   
 Distance tank wall/tank bottom:  
 $A \geq 50 \text{ mm (1.97")}$   
 Distance to other tank fittings:  
 $\geq 100 \text{ mm (3.94")}$



### Recommended accessories

Other models and accessories → [www.sick.com/LFP\\_Cubic](http://www.sick.com/LFP_Cubic)

	Brief description	Type	Part no.
Flanges			
	Process connection adapter G 3/4 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, 5-pin, straight Head B: cable Cable: PVC, unshielded, 2 m	DOL-1205-G02M	6008899
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: drag chain use, PUR, halogen-free, unshielded, 2 m	DOL-1205-G02MC	6025906
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: PVC, unshielded, 5 m	DOL-1205-G05M	6009868
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: drag chain use, PUR, halogen-free, unshielded, 5 m	DOL-1205-G05MC	6025907
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: PVC, unshielded, 10 m	DOL-1205-G10M	6010544
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: drag chain use, PUR, halogen-free, unshielded, 10 m	DOL-1205-G10MC	6025908
	Head A: female connector, M12, 5-pin, angled Head B: cable Cable: PVC, unshielded, 2 m	DOL-1205-W02M	6008900
	Head A: female connector, M12, 5-pin, angled Head B: cable Cable: drag chain use, PUR, halogen-free, unshielded, 2 m	DOL-1205-W02MC	6025909
	Head A: female connector, M12, 5-pin, angled Head B: cable Cable: PVC, unshielded, 5 m	DOL-1205-W05M	6009869
	Head A: female connector, M12, 5-pin, angled Head B: cable Cable: drag chain use, PUR, halogen-free, unshielded, 5 m	DOL-1205-W05MC	6025910
	Head A: female connector, M12, 5-pin, angled Head B: cable Cable: PVC, unshielded, 10 m	DOL-1205-W10M	6010542
	Head A: female connector, M12, 5-pin, angled Head B: cable Cable: drag chain use, PUR, halogen-free, unshielded, 10 m	DOL-1205-W10MC	6025911

	Brief description	Type	Part no.
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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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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