



LFP3000-F4CMB

LFP Cubic

LEVEL SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | part no. |
|---------------|----------|
| LFP3000-F4CMB | 1072026 |

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

Illustration may differ



Detailed technical data

Features

| | |
|----------------------------|--------------------|
| Medium | Fluids |
| Measurement | Switch, Continuous |
| Design | Remote amplifier |
| Probe type | Cable probe |
| Probe length | 3,000 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 | Round connector M12 x 1, 5-pin |
| Length of cable | 2 m |
| Output signal | 1 x PNP + 1 x PNP/NPN + 4 mA ... 20 mA / 0 V ... 10 V |
| Output load | 4 mA ... 20 mA < 350 Ohm at U _v > 12 V, 0 V ... 10 V > 750 Ohm at U _v 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 |
| 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 | ¾" NPT |
| 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 |

Certificates

| | |
|---|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| cULus certificate | ✓ |
| IO-Link certificate | ✓ |

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

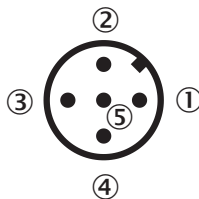
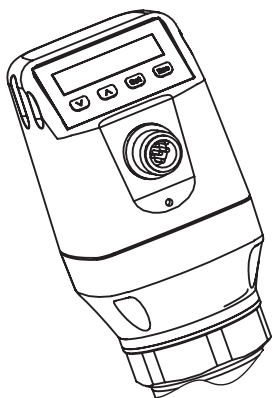


All dimensions in mm (inch)

Dimensions in mm (inch)

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")

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

$D \geq DN 25 (1")$

Distance tank wall/tank bottom:

$A \geq 50 \text{ mm } (1.97")$

$B \geq 10 \text{ mm } (0.40")$

Distance to other tank fittings


$\geq 100 \text{ mm } (3.94")$

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

Recommended accessories

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

| | Brief description | Type | part no. |
|---|--|--------------------|----------|
| Mounting systems | | | |
|  | <ul style="list-style-type: none"> Description: Mounting bracket Material: Stainless steel Details: Stainless steel 1.4301 (AISI 304) Items supplied: Mounting hardware included | BEF-FL-304LFP-HLDR | 2077391 |
| | <ul style="list-style-type: none"> Description: Spare cable probe for LFP Cubic, length 2 m | BEF-ER-SS2000-LFPC | 2078194 |
| | <ul style="list-style-type: none"> Description: Spare cable probe for LFP Cubic, length 4 m | BEF-ER-SS4000-LFPC | 2078195 |
| | <ul style="list-style-type: none"> Description: Spare cable probe for LFP Cubic, length 6 m | BEF-ER-SS6000-LFPC | 2082147 |

| | Brief description | Type | part no. |
|---|-------------------|--------------------|----------|
| connectors and cables | | | |
|  | | CBL-CX-002000-LFPC | 2077793 |

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