



LFP2000-G3NMB

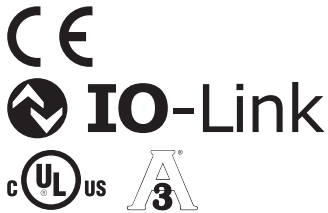
LFP Inox

LEVEL SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|---------------|----------|
| LFP2000-G3NMB | 1058592 |

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

Detailed technical data

Features

| | |
|----------------------------|--------------------|
| Medium | Fluids |
| Measurement | Switch, Continuous |
| Design | Standard |
| Probe length | 2,000 mm |
| Process pressure | -1 bar ... 16 bar |
| Process temperature | -20 °C ... +150 °C |
| UL approval | ✓ |
| RoHS certificate | ✓ |
| IO-Link | ✓ |
| EHEDG approval | ✓ |
| 3-A | ✓ |

Performance

| | |
|---|--|
| Accuracy of sensor element | ± 5 mm |
| Reproducibility | ≤ 2 mm |
| Resolution | < 2 mm |
| Response time | < 400 ms ¹⁾ |
| Dielectricity constant | ≥ 5 for rod probe ≥ 1.8 with coaxial tube |
| Conductivity | No limitation |
| Deactivated area at process connection | 25 mm ²⁾ |
| Deactivated area at end of probe | ≥ 10 mm ³⁾ |

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.

| | |
|-------------|------------------------------|
| MTTF | 194.3 years (EN ISO 13849-1) |
|-------------|------------------------------|

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

| | |
|----------------------------|---|
| 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 | Round connector M12 x 1, 5-pin |
| Output signal | 1 x PNP + 1 x PNP/NPN + 4 mA ... 20 mA / 0 V ... 10 V |
| Output load | 4 mA ... 20 mA < 500 Ohm at U _v > 13,5 V, 4 mA ... 20 mA < 400 Ohm at U _v > 12 V, 0 V ... 10 V > 750 Ohm at U _v 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 | IP67: EN 60529, IP69K: ISO 20653 |
| 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.

Mechanics

| | |
|---------------------------|--------------------------|
| Wetted parts | 316L (Ra ≤ 0,8 μm), PEEK |
| Process connection | G ¾ A |
| Housing material | 303 |
| Housing design | With closed cover |
| Max. probe load | ≤ 6 Nm |

Ambient data

| | |
|--------------------------------------|------------------------|
| Ambient operating temperature | -20 °C ... +60 °C |
| Ambient temperature, storage | -40 °C ... +80 °C |
| Outdoor use | Only with weather hood |

Classifications

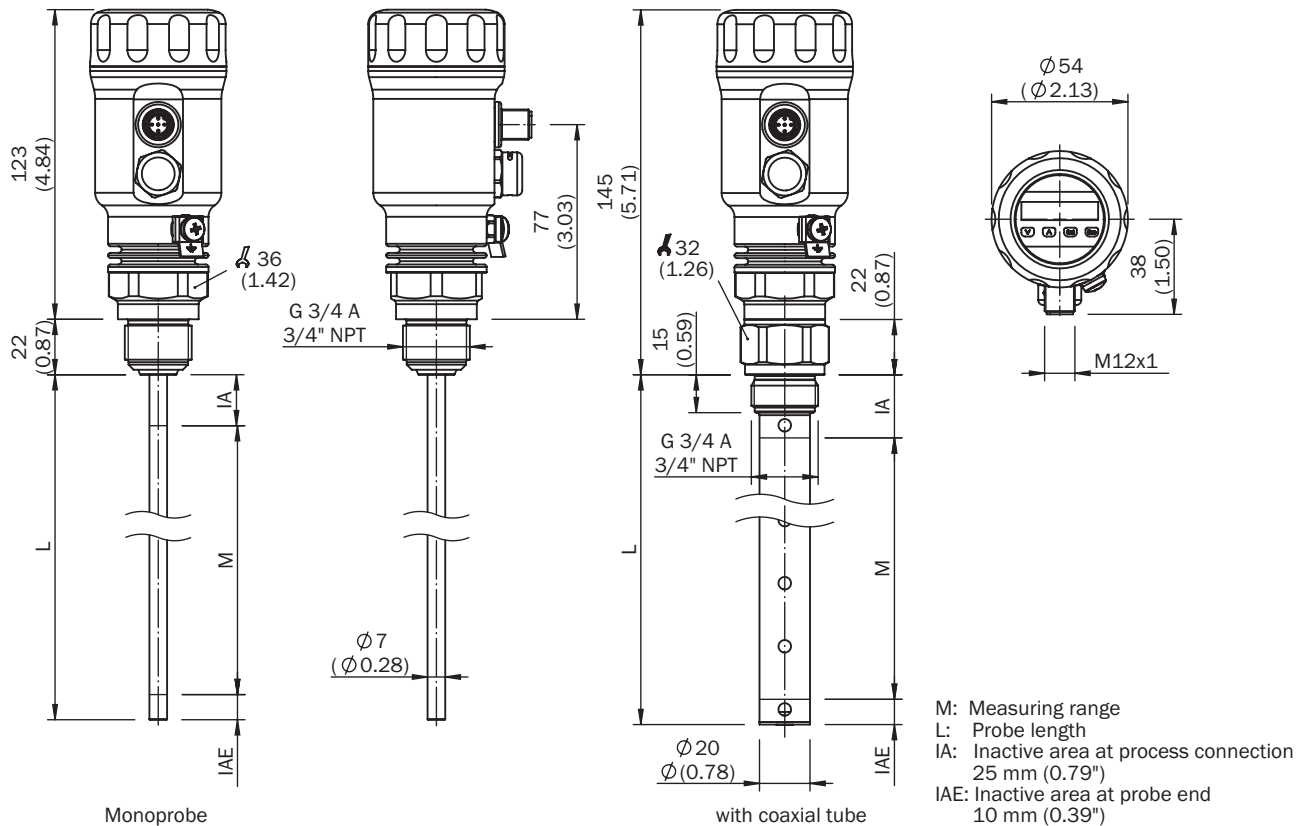
| | |
|---------------------|----------|
| eCl@ss 5.0 | 27200513 |
| eCl@ss 5.1.4 | 27200513 |
| eCl@ss 6.0 | 27200513 |
| eCl@ss 6.2 | 27200513 |
| eCl@ss 7.0 | 27200513 |

Not all variants of the type code can be combined!

Dependence between length of coaxial cable and probe length

| Length of coaxial cable (mm) | Max. probe length (mm) - foam mode deactivated | Max. probe length (mm) - foam mode active |
|------------------------------|--|---|
| 1000 | 4,000 | 2000 |
| 2000 | 3,000 | 1500 |
| 3300 | 1,000 | 500 |

Dimensional drawing (Dimensions in mm (inch))



Connection type





5-pole M12 Connector














- 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

Recommended accessories

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

| | Brief description | Type | Part no. |
|---|--|-------------------------|----------|
| Hardware | | | |
|  | Weather protection cover for LFP Inox, material: 304 | APR-WP-LFP001-0001 | 2069530 |
| Spare parts | | | |
|  | Cover closed, material 1.4305 | Cover closed | 2067269 |
|  | Cover for LFP Inox with inspection window, material 1.4305 and PMMA | Cover with front screen | 2067267 |
| Device protection (mechanical) | | | |
|  | 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 200 mm | LFPCT-0200G1 | 2068141 |
| | 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 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 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 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 G 3/4, material 1.4571/316TI, for probe length 700 mm | LFPCT-0700G1 | 2068146 |

| | Brief description | Type | Part no. |
|---|--|--------------------|----------|
| | 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 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 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 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 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 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 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 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 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 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 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 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 G 3/4, material 1.4571/316TI, for probe length 2000 mm | LFPCT-2000G1 | 2065703 |
| Flanges | | | |
|  | Hygienic process connection adapter, coupling (DIN 11864-1) DN 25 form A with union nut; hygienic in accordance with EHEDG | BEF-HA-641D25-LFP1 | 2058795 |
|  | Hygienic process connection adapter, coupling (DIN 11864-2) DN 25 form A; hygienic in accordance with EHEDG | BEF-HA-642D25-LFP1 | 2058823 |
|  | Hygienic process connection adapter, clamp coupling (DIN 11864-3) BKS DN 25 form A, hygienic in accordance with EHEDG | BEF-HA-643D25-LFP1 | 2058821 |
|  | Hygienic process connection adapter, conical coupling (DIN 11851), DN 25 with grooved cap nut; hygienic in accordance with EHEDG in combination with ASEPTO-STAR k-flex upgrade gaskets from Kieselmann GmbH or SKS gasket set DIN 11851 EHEDG with EPDM or FKM inner gasket from Siersema Komponenten Service (S.K.S.) B.V | BEF-HA-851D25-LFP1 | 2058138 |
|  | Hygienic process connection adapter, conical coupling (DIN 11851), DN 40 with grooved cap nut, material 1.4404 (Ra ≤ 0.8 μm); hygienic in accordance with EHEDG in combination with ASEPTO-STAR k-flex upgrade gaskets from Kieselmann GmbH or SKS gasket set DIN 11851 EHEDG with EPDM or FKM inner gasket from Siersema Komponenten Service (S.K.S.) B.V | BEF-HA-851D40-LFP1 | 2058139 |
|  | Hygienic process connection adapter, conical coupling (DIN 11851), DN 50 with grooved cap nut; hygienic in accordance with EHEDG in combination with ASEPTO-STAR k-flex upgrade gaskets from Kieselmann GmbH or SKS gasket set DIN 11851 EHEDG with EPDM or FKM inner gasket from Siersema Komponenten Service (S.K.S.) B.V | BEF-HA-851D50-LFP1 | 2058141 |
|  | Hygienic process connection adapter, conical coupling (DIN 11851), DN 65 with grooved cap nut; hygienic in accordance with EHEDG in combination with ASEPTO-STAR k-flex upgrade gaskets from Kieselmann GmbH or SKS gasket set DIN 11851 EHEDG with EPDM or FKM inner gasket from Siersema Komponenten Service (S.K.S.) B.V | BEF-HA-851D65-LFP1 | 2063328 |

| | Brief description | Type | Part no. |
|---|---|---------------------|----------|
|  | Hygienic process connection adapter, Tri-Clamp 1" and 1 1/2"; hygienic in accordance with EHEDG in combination with T-seals or Tri-Clamp seals from Combifit International B.V. | BEF-HA-TCLI10-LFP1 | 2058808 |
| | Hygienic process connection adapter, Tri-Clamp 1" and 1 1/2" with leakage indication port according to 3-A guidelines | BEF-HA-TCLI10-LFP3 | 2058851 |
|  | Hygienic process connection adapter, Tri-Clamp 2"; hygienic in accordance with EHEDG in combination with T-seals or Tri-Clamp seals from Combifit International B.V. | BEF-HA-TCLI20-LFP1 | 2058824 |
| | Hygienic process connection adapter, Tri-Clamp 2 1/2"; hygienic in accordance with EHEDG in combination with T-seals or Tri-Clamp seals from Combifit International B.V. | BEF-HA-TCLI25-LFP1 | 2069518 |
|  | Hygienic process connection adapter, Varivent connection form N; hygienic in accordance with EHEDG in combination with EPDM O-ring | BEF-HA-VAR-TYN-LFP1 | 2058822 |
| Terminal and alignment brackets | | | |
|  | 1 piece, Centering for bypass- and immersion tube installation with diameter 40 mm ... 100 mm, PTFE | BEF-FL-BYRD40-LFP1 | 2059612 |

Recommended services

Additional services → www.sick.com/LFP_Inox

| | Type | Part no. |
|--|------------------------|------------|
| Function Block Factory | | |
| <ul style="list-style-type: none"> Description: The Function Block Factory supports common programmable logic controllers (PLCs) from various manufacturers, such as Siemens, Beckhoff, Rockwell Automation and B&R. More information on the FBF can be found here. | Function Block Factory | On request |

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