# PFT-FRB1X0SF10HCVLSSZ

PFT

**PRESSURE SENSORS**

Illustration may differ

## Ordering information

| Type | part no. |
|---|---|
| PFT-FRB1X0SF10HCVLSSZ | 6077761 |

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

## Detailed technical data

### Features

| | |
|---|---|
| **Medium** | Liquid, gaseous |
| **Pressure type** | Gauge pressure |
| **Pressure unit** | bar |
| **Measuring range** | 0 bar ... 1 bar |
| **Process temperature** | −20 °C ... +150 °C |
| **Maximum ohmic load $R_A$** | 4 mA ... 20 mA, 2-wire ($R_A \leq (L^+ - 10\ V) / 0.02\ A$ [Ohm]) , 0 V ... 5 V, 3-wire ($R_A > 5$ kOhm), 0 V ... 10 V, 3-wire ($R_A > 10$ kOhm) |
| **Output signal** | 0 V ... 10 V, 3-wire |

### Mechanics/electronics

| | |
|---|---|
| **Communication interface** | - |
| **Process connection** | G 1 B flush-mounted |
| **Wetted parts** | Flush-mounted membrane: Stainless steel 316Ti<br>Seals: FKM |
| **Internal transmission fluid** | Synthetic oil (Not available for version with standard membrane for pressure ranges > 25 bar) |
| **Pressure port** | Front-flush membrane |
| **Housing material** | Stainless steel 1.4571 |
| **Connection type** | L-connector (DIN EN 175301-803 A) |
| **Supply voltage** | 14 V DC ... 30 V DC |
| **Electrical safety** | Overvoltage protection: 36 V DC<br>Short-circuit protection: $Q_A$ towards M<br><br>Reverse polarity protection: $L^+$ to M<br>Protection class: III |
| **Dielectric strength** | 500 V DC, NEC Class 02 power supply (low voltage and low current max. 100 VA even in the event of a fault) |
| **CE-conformity** | Pressure equipment directive: 2014/68/EU<br>EMC directive: 2004/108/EC, EN 61326-2-3 |
| **Weight sensor** | Approx. 200 g |

[1] Enclosure rating IP per IEC 60529. The enclosure rating classes specified only apply when connected with female connectors that provide the corresponding enclosure rating.

| Seal | FKM |
|---|---|
| Enclosure rating | IP65 [1] |
| Protection class III | ✓ |
| MTTF | 452 years |
| Pressure peak dampening | Through optional integrated pressure port 0.6 mm or 0.3 mm for process connector G ¼ according to DIN 3852-E |

[1] Enclosure rating IP per IEC 60529. The enclosure rating classes specified only apply when connected with female connectors that provide the corresponding enclosure rating.

## Performance

| Non-linearity | ≤ ± 0.2 %, of span (Best Fit Straight Line, BFSL) according to IEC 61298-2 |
|---|---|
| Accuracy | ≤ ± 0.5 %, of the span |
| Non-repeatability | ≤ ± 0.1 % of the span |
| Response time (10 % ... 90 %) | ≤ 1 ms ≤ 10 ms at medium temperatures below < −30 °C for pressure ranges up to 25 bar or with flush-mounted membrane |
| Long-term drift/one-year stability | ≤ ± 0.2 % of span (at reference conditions) |
| Temperature coefficient in rated temperature range | Mean TC of zero: ≤ 0.2 % of span / 10 K (< 0.4 % for pressure ranges ≤ 0.25 bar)<br>Mean TC of span ≤ 0.2 % of span / 10 K |
| Rated temperature range | 0 °C ... +80 °C |
| Service life | Minimum 10 Mio. load cycles |

## Ambient data

| Ambient temperature, operation | −20 °C ... +80 °C |
|---|---|
| Storage temperature | −20 °C ... +100 °C, with flush-mounted membrane and cooling element −20 °C ... +100 °C |
| Shock load | 1000 g according to IEC 60068-2-27 (mechanical shock)<br>400 g according to IEC 60068-2-27 (mechanical shock) for version with integrated cooling element |
| Vibration load | 20 g according to IEC 60068-2-6 (vibration under resonance)<br>10 g according to IEC 60068-2-6 (vibration undencr resonae) for version with integrated cooling element |

## Certificates

| EU declaration of conformity | ✓ |
|---|---|
| UK declaration of conformity | ✓ |
| China RoHS | ✓ |

## Classifications

| ECLASS 5.0 | 27200614 |
|---|---|
| ECLASS 5.1.4 | 27200614 |
| ECLASS 6.0 | 27200614 |
| ECLASS 6.2 | 27200614 |
| ECLASS 7.0 | 27200614 |
| ECLASS 8.0 | 27200614 |
| ECLASS 8.1 | 27200614 |
| ECLASS 9.0 | 27200614 |
| ECLASS 10.0 | 27200614 |
| ECLASS 11.0 | 27200614 |

| ECLASS 12.0 | 27200614 |
|---|---|
| ETIM 5.0 | EC011478 |
| ETIM 6.0 | EC011478 |
| ETIM 7.0 | EC011478 |
| ETIM 8.0 | EC011478 |
| UNSPSC 16.0901 | 41112410 |

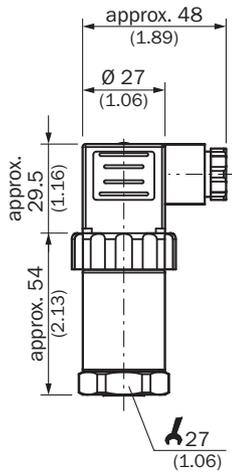## Dimensional drawing G 1 B with cooling section
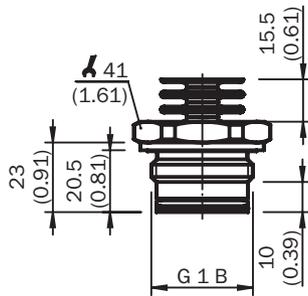
Dimensions in mm (inch)

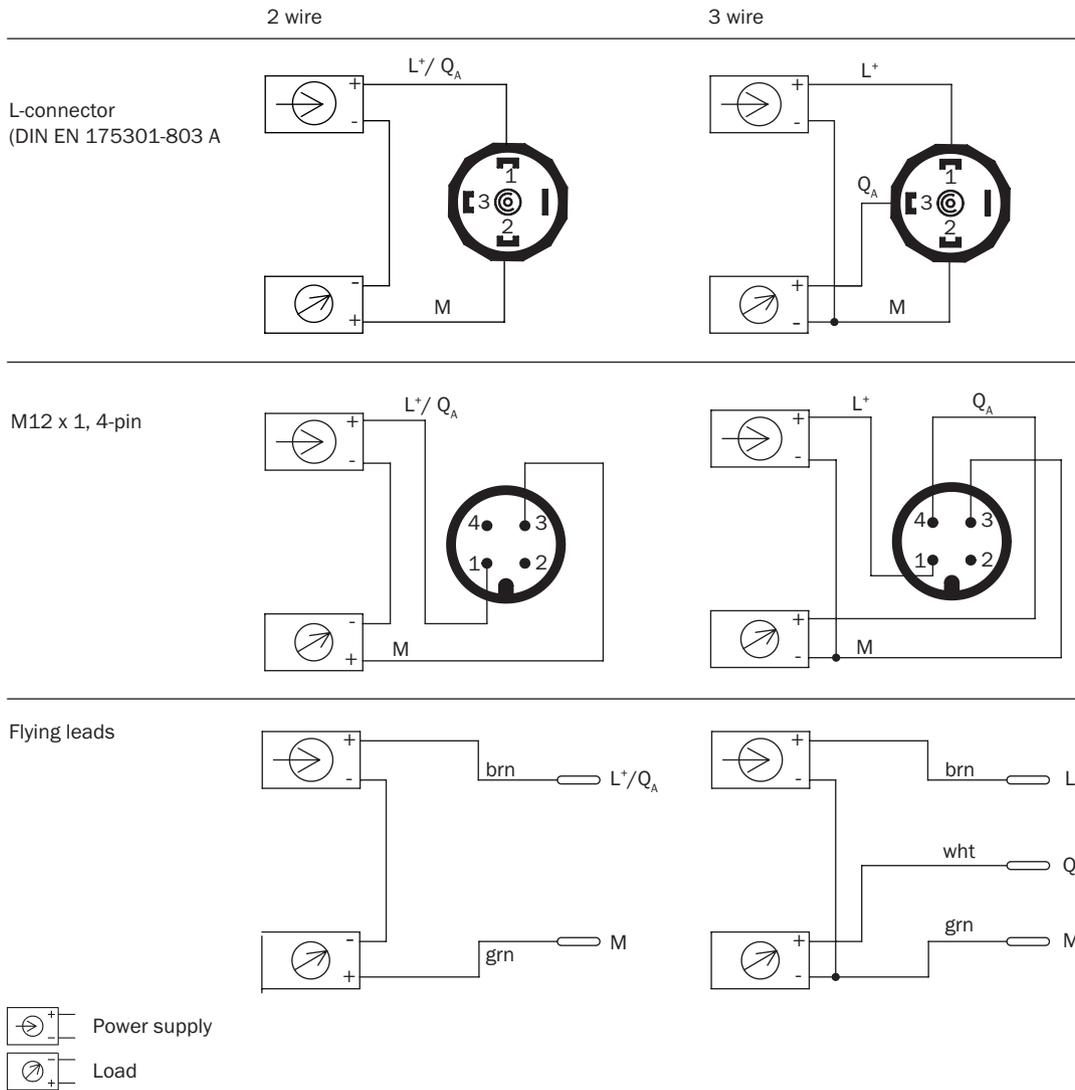## Dimensional drawing G 1 B without cooling section
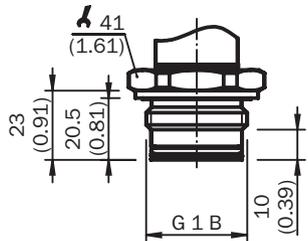
Dimensions in mm (inch)

## Dimensional drawing Housing with L-connector (DIN EN 175301-803 A)

approx. 48
(1.89)

Ø 27
(1.06)

approx. 29.5
(1.16)

approx. 54
(2.13)

27
(1.06)

Dimensions in mm (inch)

## Connection type

|  | 2 wire | 3 wire |
|---|---|---|

L-connector (DIN EN 175301-803 A)

L$^+$/ Q$_A$       L$^+$

M       Q$_A$    M

M12 x 1, 4-pin

L$^+$/ Q$_A$       L$^+$      Q$_A$

M       M

Flying leads

brn   L$^+$/Q$_A$     brn   L$^+$

wht   Q$_A$

grn   M     grn   M

Power supply

Load

## Recommended accessories

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

| Brief description | Type | part no. |
|---|---|---|
| **Mounting systems** | | |
| • **Description:** Mounting bracket for simple and stable wall mounting of pressure sensors with 27 mm hexagon <br> • **Material:** Aluminum <br> • **Details:** Aluminum | BEF-FL-ALUPBS-HLDR | 5322501 |
| • **Description:** Weld-in flange/weld-in socket for articles with flush-mounted membrane, process connection G 1 B <br> • **Material:** Stainless steel <br> • **Details:** Stainless steel 1.4571 | BEF-FL-316G10-B0PH | 5322450 |

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