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de



PRESSURE TRANSMITTER

PRESSURE TRANSMITTER



Ordering information

| Туре | Part no. |
|----------------------|----------|
| PBT-RP100SN1SS0V5C0Z | 6048103 |

Other models and accessories -> www.sick.com/PBT



Detailed technical data

Features

| Medium | Liquid, gaseous | |
|-----------------------------------|--|--|
| Pressure type | Gauge pressure | |
| Pressure unit | psi | |
| Measuring range | 0 psi 100 psi | |
| Process temperature | 0 °C +80 °C | |
| Maximum ohmic load R _A | 4 mA 20 mA, 2-wire ($R_A \le (L^+ - 8 V) / 0.02 A$ [Ohm]) 0 V 10 V, 3-wire ($R_A > 10$ kOhm) 0 V 5 V, 3-wire ($R_A > 5$ kOhm) | |
| Output signal | 0 V 10 V, 3-wire | |
| Specialty | Without | |
| Mechanics/electronics | | |
| Process connection | 1⁄4" NPT | |
| Wetted parts | Pressure Connection: stainless steel 316L Pressure sensor: stainless steel 316L (for measurement ranges from 0 bar 10 bar rel stain- less steel 13-8 PH) | |
| Internal transmission fluid | Silicone oil (only with pressure ranges < 0 bar 10 bar and \leq 0 bar abs 25 bar abs) | |
| Pressure port | Standard | |
| Housing material | Stainless steel | |
| Connection type | Flying leads, 5 m | |
| Supply voltage | 14 V DC 30 V DC ¹⁾ | |
| Power consumption | Signal current (max. 25 mA) for current output Max. 8 mA for voltage output signal | |
| Electrical safety | Overvoltage protection: 32 V DC, 36 V DC with 4 mA 20 mA Short-circuit protection: Q_A towards M | |
| | Reverse polarity protection: L ⁺ to M Protection class: III | |
| Isolation voltage | 500 V DC | |

¹⁾ The pressure transmitter must be supplied with power by a limited energy circuit compliant with 9.3 of UL/EN/IEC 601010-1 or LPS to UL/EN/IEC 60950-1 or Class 2 to UL 1310/UL1585 (NEC or CEC). The power supply must be suitable for operation above 2,000 m if the pressure transmitter is used above this altitude.

²⁾ Enclosure rating IP per IEC 60529. The enclosure rating classes specified only apply when connected with female connectors that provide the corresponding enclosure rating.

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| CE-conformity | Pressure equipment directive: 2014/68/EU EMC directive: 2014/30/EU, EN 61 326-2-3 |
|----------------------|--|
| Weight sensor | Approx. 80 g |
| Seal | Without seal |
| Enclosure rating | IP67 ²⁾ |
| Protection class III | \checkmark |
| Reference conditions | Reference conditions: According to IEC 61298-1 |
| MTTF | 1,176 years |

¹⁾ The pressure transmitter must be supplied with power by a limited energy circuit compliant with 9.3 of UL/EN/IEC 601010-1 or LPS to UL/EN/IEC 60950-1 or Class 2 to UL 1310/UL1585 (NEC or CEC). The power supply must be suitable for operation above 2,000 m if the pressure transmitter is used above this altitude. ²⁾ 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 | \leq \pm 0.5 %, (Best Fit Straight Line, BFSL) according to IEC 61298-2 |
|------------------------------------|--|
| Accuracy | ≤ ± 1 % of the span |
| Adjustment accuracy of zero signal | $\leq 0.5~\%$ of span typ., $\leq 0.8~\%$ of span max. (with non-linerarity 0.5 %) |
| Hysteresis | \leq 0.16 % of the span |
| Non-repeatability | \leq 0.1 % of the span |
| Response time | < 4 ms |
| Signal noise | \leq 0.3 % of the span |
| Long-term drift/one-year stability | ≤ 0.1 % of span to IEC 61298-2 |
| Rated temperature range | 0 °C +80 °C |
| Service life | Minimum 100 Mio. load cycles |

Ambient data

| Ambient temperature | 0 °C +80 °C |
|---------------------|--|
| Storage temperature | -40 °C +70 °C |
| Relative humidity | 45 % 75 % |
| Shock load | 500 g according to IEC 60068-2-27 (mechanical shock) |
| Vibration load | 10 g according to IEC 60068-2-6 (vibration under resonance) 20 g optional |

Classifications

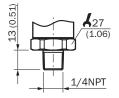
| eCl@ss 5.0 | 27200614 |
|--------------|----------|
| eCl@ss 5.1.4 | 27200614 |
| eCl@ss 6.0 | 27200614 |
| eCl@ss 6.2 | 27200614 |
| eCl@ss 7.0 | 27200614 |
| eCl@ss 8.0 | 27200614 |
| eCl@ss 8.1 | 27200614 |
| eCl@ss 9.0 | 27200614 |
| eCl@ss 10.0 | 27200614 |
| eCl@ss 11.0 | 27200614 |
| eCl@ss 12.0 | 27200614 |

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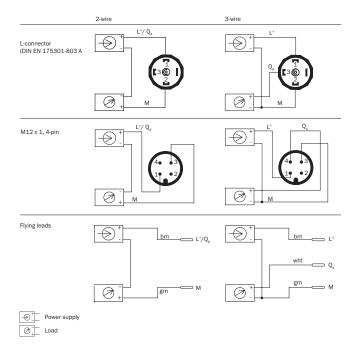
| ETIM 5.0 | EC011478 |
|----------------|----------|
| ETIM 6.0 | EC011478 |
| ETIM 7.0 | EC011478 |
| ETIM 8.0 | EC011478 |
| UNSPSC 16.0901 | 41112410 |

Dimensional drawing (Dimensions in mm (inch))

1⁄4" NPT



Connection type



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Recommended accessories

Other models and accessories -> www.sick.com/PBT

| | Brief description | Туре | Part no. |
|---------------|---|--------------------|----------|
| Mounting brac | kets and plates | | |
| Fait | Mounting bracket for simple and stable wall mounting of pressure sensors with 27 mm hexagon, Aluminum | BEF-FL-ALUPBS-HLDR | 5322501 |

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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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