

PBT-RP1K5SN1SE0VMC0Z

PBT

PRESSURE TRANSMITTER





Ordering information

| Туре | Part no. |
|----------------------|----------|
| PBT-RP1K5SN1SE0VMC0Z | 6050458 |

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

Illustration may differ





Features

| Medium | Liquid, gaseous |
|-----------------------------------|---|
| Pressure type | Gauge pressure |
| Pressure unit | psi |
| Measuring range | 0 psi 1,500 psi |
| Process temperature | -30 °C +100 °C |
| Maximum ohmic load R _A | 4 mA 20 mA, 2-wire ($R_A \le (L^+ - 8 \text{ V}) / 0.02 \text{ A [Ohm]}$) 0 V 10 V, 3-wire ($R_A > 10 \text{ kOhm}$) 0 V 5 V, 3-wire ($R_A > 5 \text{ kOhm}$) |
| 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 stainless 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 | M12 round connector x 1, 4-pin |
| 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.

| 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 | ✓ |
| 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 classes.

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 | ≤ 0.16 % of the span |
| Non-repeatability | ≤ 0.1 % of the span |
| Response time | < 4 ms |
| Signal noise | ≤ 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 |

sure rating.

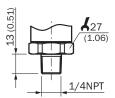
PBT-RP1K5SN1SE0VMC0Z | PBT

PRESSURE TRANSMITTER

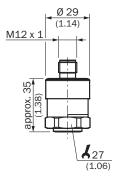
| ETIM 5.0 | EC011478 |
|----------------|----------|
| ETIM 6.0 | EC011478 |
| ETIM 7.0 | EC011478 |
| ETIM 8.0 | EC011478 |
| UNSPSC 16.0901 | 41112410 |

Dimensional drawing (Dimensions in mm (inch))

1/4" NPT



Housing with circular connector M12 x 1, IP67



Connection type



Recommended accessories

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

| | Brief description | Туре | Part no. | |
|---------------|--|------------------------|----------|--|
| Mounting brad | Mounting brackets and plates | | | |
| · Car | Mounting bracket for simple and stable wall mounting of pressure sensors with 27 mm hexagon, Aluminum | BEF-FL-ALUPBS-HLDR | 5322501 | |
| Plug connecto | ors and cables | | | |
| - | Head A: female connector, M12, 4-pin, angled Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m | DOL-1204-W05MD | 6020399 | |
| 1 | Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m | YF2A14- 020UB3XLEAX | 2095607 | |
| | Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m | YF2A14- 020VB3XLEAX | 2096234 | |
| | Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m | YF2A14- 050VB3XLEAX | 2096235 | |
| 1 | Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 10 m | YF2A14- 100UB3XLEAX | 2095609 | |

| | Brief description | Туре | Part no. |
|----------|--|------------------------|----------|
| P | Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 10 m | YF2A14- 100VB3XLEAX | 2096236 |
| | Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 15 m | YF2A14- 150UB3XLEAX | 2095610 |
| | Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 15 m | YF2A14- 150VB3XLEAX | 2096237 |
| | Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 20 m | YF2A14- 200UB3XLEAX | 2095611 |
| | Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 20 m | YF2A14- 200VB3XLEAX | 2096238 |
| 1 | Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 25 m | YF2A14- 250UB3XLEAX | 2095615 |
| - | Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m | YG2A14- 020UB3XLEAX | 2095766 |
| | Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m | YG2A14- 020VB3XLEAX | 2095895 |
| 3 | Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m | YG2A14- 050UB3XLEAX | 2095767 |
| | Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m | YG2A14- 050VB3XLEAX | 2095897 |
| > | Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 10 m | YG2A14- 100UB3XLEAX | 2095768 |
| 1 | Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 10 m | YG2A14- 100VB3XLEAX | 2095898 |
| | Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 15 m | YG2A14- 150UB3XLEAX | 2095769 |
| | Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 15 m | YG2A14- 150VB3XLEAX | 2096213 |
| | Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 20 m | YG2A14- 200UB3XLEAX | 2095770 |
| 3 | Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 20 m | YG2A14- 200VB3XLEAX | 2096214 |
| 1 | Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 25 m | YG2A14- 250UB3XLEAX | 2095771 |

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