

PBT-RB1X0SG1SENAMA0Z

PBT

PRESSURE SENSORS





Ordering information

| Туре | Part no. |
|----------------------|----------|
| PBT-RB1X0SG1SENAMA0Z | 6039515 |

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

Illustration may differ



Detailed technical data

Features

| Medium | Liquid, gaseous |
|-----------------------------------|---|
| Pressure type | Gauge pressure |
| Pressure unit | bar |
| Measuring range | 0 bar 1 bar |
| 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 | 4 mA 20 mA, 2-wire |
| Specialty | Without |

Mechanics/electronics

| Process connection | G ¼ A according to DIN 3852-E |
|-----------------------------|--|
| 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 | 8 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 | NBR |
| Enclosure rating | IP67 ²⁾ |
| Protection class III | ✓ |
| Reference conditions | Reference conditions: According to IEC 61298-1 |
| MTTF | 815 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

| 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 |

sure rating.

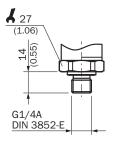
PBT-RB1X0SG1SENAMA0Z | PBT

PRESSURE SENSORS

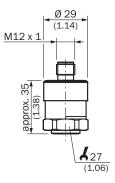
| ETIM 5.0 | EC011478 |
|----------------|----------|
| ETIM 6.0 | EC011478 |
| ETIM 7.0 | EC011478 |
| ETIM 8.0 | EC011478 |
| UNSPSC 16.0901 | 41112410 |

Dimensional drawing (Dimensions in mm (inch))

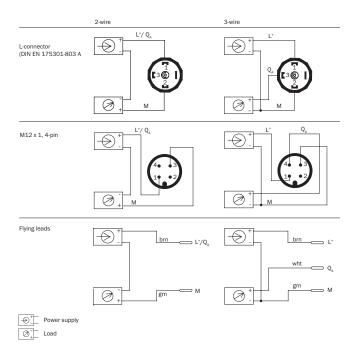
G 1/4 A DIN 3852-E



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 brackets and plates | | | |
| To the state of th | Mounting bracket for simple and stable wall mounting of pressure sensors with 27 mm hexagon, Aluminum | BEF-FL-ALUPBS-HLDR | 5322501 |
| Others | | | |
| 1 | Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 15 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot | YF2A14- 150UB3XLEAX | 2095610 |
| | Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 20 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot | YF2A14- 200UB3XLEAX | 2095611 |
| A. | Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 25 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot | YF2A14- 250UB3XLEAX | 2095615 |

| | Brief description | Туре | Part no. |
|----|---|------------------------|----------|
| 3 | Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 15 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot | YG2A14- 150UB3XLEAX | 2095769 |
| | Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 20 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot | YG2A14- 200UB3XLEAX | 2095770 |
| | Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 25 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot | YG2A14- 250UB3XLEAX | 2095771 |
| • | Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals | YF2A14- 100VB3XLEAX | 2096236 |
| 60 | Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals | YF2A14- 050VB3XLEAX | 2096235 |
| 3 | Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals | YG2A14- 020VB3XLEAX | 2095895 |
| • | Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 15 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals | YF2A14- 150VB3XLEAX | 2096237 |
| • | Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 20 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals | YF2A14- 200VB3XLEAX | 2096238 |
| A. | Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot | YF2A14- 100UB3XLEAX | 2095609 |
| 3 | Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot | YG2A14- O2OUB3XLEAX | 2095766 |

| | Brief description | Туре | Part no. |
|-----|--|------------------------|----------|
| 3 | Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot | YG2A14- 050UB3XLEAX | 2095767 |
| | Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot | YG2A14- 100UB3XLEAX | 2095768 |
| | Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot | YF2A14- 020UB3XLEAX | 2095607 |
| | Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals | YF2A14- 020VB3XLEAX | 2096234 |
| *** | Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals | YG2A14- 100VB3XLEAX | 2095898 |
| 5 | Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 15 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals | YG2A14- 150VB3XLEAX | 2096213 |
| 5 | Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 20 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals | YG2A14- 200VB3XLEAX | 2096214 |
| 5 | Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals | YG2A14- 050VB3XLEAX | 2095897 |

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

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For us, that is "Sensor Intelligence."

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