



PBS2-RB025SN1SS0Q5A0Z

PBS plus

PRESSURE SENSORS





Ordering information

| Туре | Part no. |
|-----------------------|----------|
| PBS2-RB025SN1SS0Q5A0Z | 6074050 |

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

Illustration may differ



Detailed technical data

Features

| Medium | Liquid, gaseous |
|-----------------------------------|--|
| Pressure type | Gauge pressure |
| Pressure unit | bar |
| Measuring range | 0 bar 25 bar 0 psi 363 psi |
| Process temperature | -20 °C +85 °C |
| Maximum ohmic load R _A | 4 mA 20 mA ($R_A \le 0.5 \text{ kOhm}$) 0 V 10 V, 3-wire ($R_A > 10 \text{ kOhm}$) |
| Zero point adjustment | Max. + 3 % of span |
| Output signal | IO-Link/PNP/NPN + PNP/NPN + 4 mA 20 mA / 0 V 10 V |
| Rotatable housing | Display against housing with electrical connection: 330 ° Housing against process connection: 320 ° |
| Display | 14-Segment LED, red, 4-digit, character height 9 mm, can be rotated electronically by 180° Update: 1,000, 500, 200, 100 ms (adjustable) |

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 | 3.5 mm Standard |
| Housing material | Lower body: stainless steel 304, Plastic head: PC + ABS, Buttons: TPE-E, Display window: PC |

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.

| Connection type | Round connector M12 x 1, 5-pin |
|---------------------------|--|
| Supply voltage | 15 V DC 35 V DC |
| Power consumption | 45 mA (for configurations without analog output signal) 70 mA (for configurations with analog output signal) |
| Total current consumption | Max. 600 mA (including switching current) |
| Electrical safety | Protection class: III Overvoltage protection: 40 V DC Short-circuit protection: Q_A , Q_1 , Q_2 towards M Reverse polarity protection: L^+ to M |
| Isolation voltage | 500 V DC |
| CE-conformity | EMC Directive: $2014/30$ / EU (EN 61326-1:2013; EN 61326-2-3:2013), Pressure equipment directive: $2014/68$ / EU, Hazardous materials (RoHS): $2011/65$ / EU (EN 50581:2012) |
| Weight sensor | Approx. 220 g |
| Seal | Without seal |
| Enclosure rating | IP67 ¹⁾ IP67 ¹⁾ |
| Protection class III | √ |
| MTTF | 104 years |

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 | \leq \pm 0.25 %, of span (Best Fit Straight Line, BFSL) according to IEC 61298-2 |
|--|---|
| Accuracy | \leq ± 0.5 % of the span |
| Setting accuracy of switching outputs | ≤ ± 0.5 % of span |
| Response time | ≤ 5 ms |
| Long-term drift/one-year stability | \leq \pm 0.1 % of the span according to IEC 61298-2 \leq 0.2 % of the span According to IEC 61298-2 for measuring range \leq 0.6 bar or flush-mounted membrane (0 psi 10 psi) |
| Temperature coefficient in rated temperature range | Average TC of the zero point: $\leq \pm$ 0.16% of the span / 10 K Average TC of the span $\leq \pm$ 0.16% of the span / 10 K |
| Rated temperature range | 0 °C +80 °C |
| Service life | Minimum 100 Mio. load cycles |

Ambient data

| Ambient temperature | -20 °C +80 °C |
|---------------------|---|
| Storage temperature | -20 °C +70 °C |
| Relative humidity | ≤ 75 % |
| Shock load | 50 g, 6 ms according to IEC 60068-2-27 (mechanical shock) |
| Vibration load | 20 g, 10 Hz 2,000 Hz (IEC 60068-2-6, at resonance) |

Classifications

| ECLASS 5.0 | 27200620 |
|--------------|----------|
| ECLASS 5.1.4 | 27200620 |
| ECLASS 6.0 | 27200620 |
| ECLASS 6.2 | 27200620 |
| ECLASS 7.0 | 27200620 |

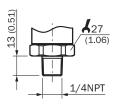
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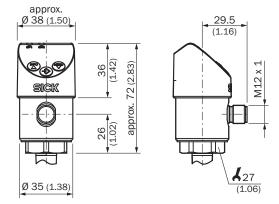
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| ECLASS 8.0 | 27200620 |
|----------------|----------|
| ECLASS 8.1 | 27200620 |
| ECLASS 9.0 | 27200620 |
| ECLASS 9.0 | 21200020 |
| ECLASS 10.0 | 27200620 |
| ECLASS 11.0 | 27200620 |
| ECLASS 12.0 | 27200620 |
| | |
| ETIM 5.0 | EC000243 |
| ETIM 6.0 | EC000243 |
| ETIM 7.0 | EC000243 |
| ETIM 8.0 | EC000243 |
| | |
| UNSPSC 16.0901 | 41112409 |

Dimensional drawing (Dimensions in mm (inch))

1/4" NPT





Connection type

M12 x 1, 4-pin 2 switching outputs/ 1 switching output + 1 analog output



 $L^+ = 1$, M = 3, $Q_1 = 4$, $Q_2 = 2$

M12 x 1, 5-pin 2 switching outputs + 1 analog output



 $L^+ = 1$, M = 3, $Q_1 = 4$, $Q_2 = 2$, $Q_A = 5$ $C/Q_1 = 4$

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