



# PBS2-RB010SG1SSDNMA0Z

PBS plus

**PRESSURE SENSORS** 





### Ordering information

| Туре                  | Part no. |
|-----------------------|----------|
| PBS2-RB010SG1SSDNMA0Z | 6073951  |

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 10 bar<br>0 psi 145 psi  |
| Process temperature               | -20 °C +85 °C  |
| Maximum ohmic load R <sub>A</sub> | 4 mA 20 mA ( $R_A \le 0.5 \text{ kOhm}$ )<br>0 V 10 V, 3-wire ( $R_A > 10 \text{ kOhm}$ )  |
| Zero point adjustment             | Max. + 3 % of span   |
| Output signal                     | IO-Link/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 $180^\circ$ Update: 1,000, 500, 200, 100 ms (adjustable) |

### Mechanics/electronics

| Process connection          | G ¼ A according to DIN 3852-E   |
|-----------------------------|---|
| Wetted parts                | Pressure connection: stainless steel 316L<br>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   |

<sup>1)</sup> 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           | M12 round connector x 1, 4-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: $40 \text{ V DC}$ Short-circuit protection: $Q_A$ , $Q_1$ , $Q_2$ towards M  Reverse polarity protection: $L^+$ to M          |
| Isolation voltage         | 500 V DC   |
| <b>CE-conformity</b>      | 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                      | NBR seal installed, FPM/FKM seal included  |
| Enclosure rating          | IP67 <sup>1)</sup> IP67 <sup>1)</sup>  |
| Protection class III      | <b>√</b>   |
| MTTF                      | 104 years  |

<sup>1)</sup> 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: $\leq$ ± 0.16% of the span / 10 K Average TC of the span $\leq$ ± 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 |

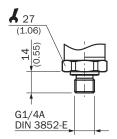
## PBS2-RB010SG1SSDNMA0Z | PBS plus

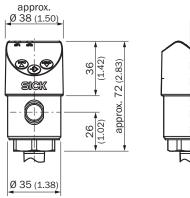
PRESSURE SENSORS

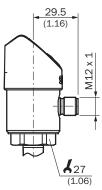
| ECLASS 8.0     | 27200620 |
|----------------|----------|
| ECLASS 8.1     | 27200620 |
| ECLASS 9.0     | 27200620 |
| ECLASS 10.0    | 27200620 |
| ECLASS 11.0    | 27200620 |
| ECLASS 12.0    | 27200620 |
| ETIM 5.0       | EC000243 |
| ETIM 6.0       | EC000243 |
| ETIM 7.0       | EC000243 |
|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

### Dimensional drawing (Dimensions in mm (inch))

G 1/4 A DIN 3852-E







#### Connection type

M12 x 1, 4-pin

2 switching outputs/ 1 switching output + 1 analog output



 $L^{+} = 1$ , M = 3,  $Q_{1} = 4$ ,  $Q_{2} = 2$  $C/Q_{1} = 4$ ,  $Q_{A} = 2$  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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