



# PBS2-RB6X0SG2SS0NMA0Z

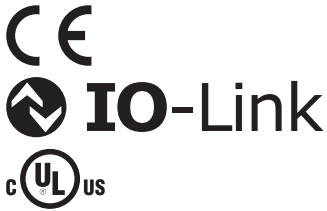
PBS plus

PRESSURE SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
PBS2-RB6X0SG2SS0NMA0Z	6073969

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### Detailed technical data

#### Features

<b>Medium</b>	Liquid, gaseous
<b>Pressure type</b>	Gauge pressure
<b>Pressure unit</b>	bar
<b>Measuring range</b>	0 bar ... 6 bar 0 psi ... 87 psi
<b>Process temperature</b>	-20 °C ... +85 °C
<b>Maximum ohmic load <math>R_A</math></b>	4 mA ... 20 mA ( $R_A \leq 0.5$ kOhm) 0 V ... 10 V, 3-wire ( $R_A > 10$ kOhm)
<b>Zero point adjustment</b>	Max. + 3 % of span
<b>Output signal</b>	IO-Link/PNP/NPN + 4 mA ... 20 mA / 0 V ... 10 V
<b>Rotatable housing</b>	Display against housing with electrical connection: 330 ° Housing against process connection: 320 °
<b>Display</b>	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

<b>Process connection</b>	G ¼ female
<b>Wetted parts</b>	Pressure connection: stainless steel 316L Pressure sensor: stainless steel 316L (for measurement ranges from 0 bar ... 10 bar rel stainless steel 13-8 PH)
<b>Internal transmission fluid</b>	Silicone oil (only with pressure ranges < 0 bar ... 10 bar and ≤ 0 bar abs ... 25 bar abs)
<b>Pressure port</b>	3.5 mm Standard
<b>Housing material</b>	Lower body: stainless steel 304, Plastic head: PC + ABS, Buttons: TPE-E, Display window: PC
<b>Connection type</b>	M12 round connector x 1, 4-pin
<b>Supply voltage</b>	15 V DC ... 35 V DC

<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.

<b>Power consumption</b>	45 mA (for configurations without analog output signal) 70 mA (for configurations with analog output signal)
<b>Total current consumption</b>	Max. 600 mA (including switching current)
<b>Electrical safety</b>	Protection class: III Overvoltage protection: 40 V DC Short-circuit protection: Q <sub>A</sub> , Q <sub>1</sub> , Q <sub>2</sub> towards M Reverse polarity protection: L <sup>+</sup> to M
<b>Isolation voltage</b>	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)
<b>Weight sensor</b>	Approx. 220 g
<b>Seal</b>	Without seal
<b>Enclosure rating</b>	IP67 <sup>1)</sup> IP67 <sup>1)</sup>
<b>Protection class III</b>	✓
<b>MTTF</b>	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

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

### Ambient data

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

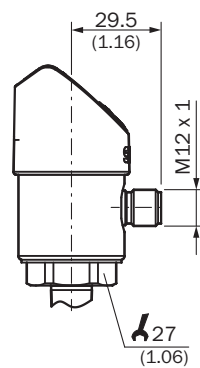
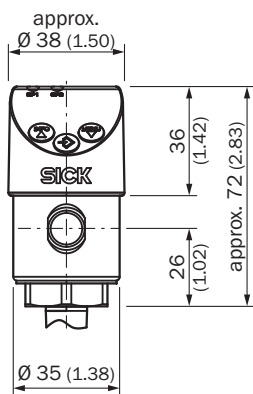
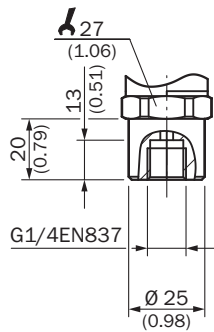
### Classifications

<b>ECLASS 5.0</b>	27200620
<b>ECLASS 5.1.4</b>	27200620
<b>ECLASS 6.0</b>	27200620
<b>ECLASS 6.2</b>	27200620
<b>ECLASS 7.0</b>	27200620
<b>ECLASS 8.0</b>	27200620
<b>ECLASS 8.1</b>	27200620

<b>ECLASS 9.0</b>	27200620
<b>ECLASS 10.0</b>	27200620
<b>ECLASS 11.0</b>	27200620
<b>ECLASS 12.0</b>	27200620
<b>ETIM 5.0</b>	EC000243
<b>ETIM 6.0</b>	EC000243
<b>ETIM 7.0</b>	EC000243
<b>ETIM 8.0</b>	EC000243
<b>UNSPSC 16.0901</b>	41112409

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

G ¼ female EN 837



### Connection type

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



L<sup>+</sup> = 1, M = 3, Q<sub>1</sub> = 4, Q<sub>2</sub> = 2  
C/Q<sub>1</sub> = 4, Q<sub>A</sub> = 2

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



L<sup>+</sup> = 1, M = 3, Q<sub>1</sub> = 4, Q<sub>2</sub> = 2, Q<sub>A</sub> = 5  
C/Q<sub>1</sub> = 4

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