



# PBS-RB160SG1NSFAMA0Z

PBS

**PRESSURE SWITCH** 





#### Ordering information

| Туре                 | Part no. |
|----------------------|----------|
| PBS-RB160SG1NSFAMA0Z | 6048636  |

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

Illustration may differ



#### Detailed technical data

#### Features

| Medium                            | Liquid, gaseous  |
|-----------------------------------|--|
| Medialii                          | Liquid, gaseous  |
| Pressure type                     | Gauge pressure   |
| Pressure unit                     | bar  |
| Measuring range                   | 0 bar 160 bar  |
| 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                     | 2 x PNP  |
| Rotatable housing                 | Display against housing with electrical connection: 330 $^\circ$ Housing against process connection: 320 $^\circ$  |
| Display                           | 14-segment-LED, blue, 4-digits, height 9 mm, electronically turnable by 180° Accuracy: $\leq$ 1 % of span $\pm$ 1 digit 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               | 0.3 mm pressure port  |  |
| Housing material            | Lower body: stainless steel 304, Plastic head: PC + ABS, Buttons: TPE-E, Display window: PC   |  |
| 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. 350 mA / 570 mA (incl. 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   |
| <b>CE-conformity</b> | Pressure equipment directive: This instrument is a pressure accessory as defined by the directive 97/23/EC, EMC directive: 2004/108/EC, EN 61326-2-3 |
| Weight sensor        | Approx. 200 g  |
| Seal                 | FKM/FPM  |
| Enclosure rating     | IP67   |
| Protection class III | ✓  |
| MTTF                 | 349 years  |

#### Performance

| Non-linearity                                      | $\leq$ $\pm$ 0.5 %, of span (Best Fit Straight Line, BFSL) according to IEC 61298-2               |
|--|---|
| Accuracy   | $\leq$ ± 1 % of the span  |
| Setting accuracy of switching outputs              | ≤ ± 0.5 % of span   |
| Response time                                      | 3 ms  |
| Long-term drift/one-year stability                 | $\leq 0.2~\%$ of the span according to IEC 61298-2  |
| Temperature coefficient in rated temperature range | Mean TC of zero point: $\leq 0.2\%$ of span / 10 K<br>Mean TC of span $\leq 0.2\%$ of 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 +80 °C   |
| Relative humidity   | ≤ 90 %  |
| Shock load          | 50 g according to IEC 60068-2-27 (mechanical shock)         |
| Vibration load      | 10 g according to IEC 60068-2-6 (vibration under resonance) |

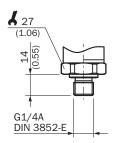
#### Classifications

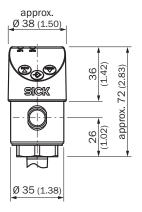
| eCl@ss 5.0   | 27200620 |
|--------------|----------|
| eCl@ss 5.1.4 | 27200620 |
| eCl@ss 6.0   | 27200620 |
| eCl@ss 6.2   | 27200620 |
| eCl@ss 7.0   | 27200620 |
| eCl@ss 8.0   | 27200620 |
| eCl@ss 8.1   | 27200620 |
| eCl@ss 9.0   | 27200620 |
| eCl@ss 10.0  | 27200620 |
| eCl@ss 11.0  | 27200620 |
| eCl@ss 12.0  | 27200620 |
| ETIM 5.0     | EC000243 |
| ETIM 6.0     | EC000243 |
| ETIM 7.0     | EC000243 |

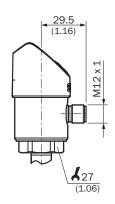
| ETIM 8.0       | EC000243 |
|----------------|----------|
| UNSPSC 16.0901 | 41112409 |

#### 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,  $Q_{1} = 4$ ,  $Q_{2} = 2$ ,  $Q_{A} = 5$  $C/Q_{1} = 4$ 

#### Recommended accessories

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

|               | Brief description   | Туре               | Part no. |
|---------------|---|--------------------|----------|
| Mounting brad | ckets and plates  |                    |          |
| · Fan         | Mounting bracket for simple and stable wall mounting of pressure sensors with 27 mm hexagon, Aluminum | BEF-FL-ALUPBS-HLDR | 5322501  |

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## **WORLDWIDE PRESENCE:**

Contacts and other locations -www.sick.com

