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Product data sheet




# PBS2-RB016SN1SS0LMA0Z

## PBS plus

**PRESSURE SWITCH**

SICK
Sensor Intelligence.

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# PBS2-RB016SN1SS0LMA0Z | PBS plus

PRESSURE SWITCH




Illustration may differ

## Ordering information

| Type | Part no. |
|---|---|
| PBS2-RB016SN1SS0LMA0Z | 6073924 |

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

## Detailed technical data

### Features

| | |
|---|---|
| **Medium** | Liquid, gaseous |
| **Pressure type** | Gauge pressure |
| **Pressure unit** | bar |
| **Measuring range** | 0 bar ... 16 bar<br>0 psi ... 232 psi |
| **Process temperature** | –20 °C ... +85 °C |
| **Maximum ohmic load $R_A$** | 4 mA ... 20 mA ($R_A$ ≤ 0.5 kOhm)<br>0 V ... 10 V, 3-wire ($R_A$ > 10 kOhm) |
| **Zero point adjustment** | Max. + 3 % of span |
| **Output signal** | IO-Link/PNP/NPN + PNP/NPN |
| **Rotatable housing** | Display against housing with electrical connection: 330 °<br>Housing against process connection: 320 ° |
| **Display** | 14-Segment LED, red, 4-digit, character height 9 mm, can be rotated electronically by 180°<br>Update: 1,000, 500, 200, 100 ms (adjustable) |

### Mechanics/electronics

| | |
|---|---|
| **Process connection** | ¼" NPT |
| **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 ≤ 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.

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| | |
|---|---|
| **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)<br>70 mA (for configurations with analog output signal) |
| **Total current consumption** | Max. 600 mA (including switching current) |
| **Electrical safety** | Protection class: III<br>Overvoltage protection: 40 V DC<br>Short-circuit protection: $Q_A$, $Q_1$, $Q_2$ towards M<br>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)]<br>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** | ≤ ± 0.25 %, of span (Best Fit Straight Line, BFSL) according to IEC 61298-2 |
| **Accuracy** | ≤ ± 0.5 % of the span |
| **Setting accuracy of switching outputs** | ≤ ± 0.5 % of span |
| **Response time** | ≤ 5 ms |
| **Long-term drift/one-year stability** | ≤ ± 0.1 % of the span according to IEC 61298-2<br>≤ 0.2 % of the span According to IEC 61298-2 for measuring range ≤ 0.6 bar or flush-mounted membrane (0 psi ... 10 psi) |
| **Temperature coefficient in rated temperature range** | 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 |
| **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

| | |
|---|---|
| **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 |

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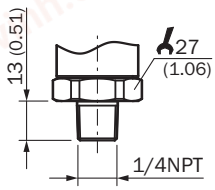
# PBS2-RB016SN1SS0LMA0Z | PBS plus

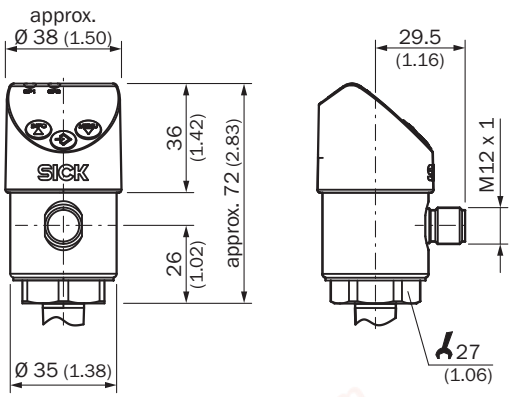
PRESSURE SWITCH

| | |
|---|---|
| **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))

¼" 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
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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Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

**For us, that is "Sensor Intelligence."**

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