



# PBS-RB040SGESSCAMA0Z

PBS

PRESSURE SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
PBS-RB040SGESSCAMA0Z	6038852

Other models and accessories → [www.sick.com/PBS](http://www.sick.com/PBS)

### Detailed technical data

#### Features

Medium	Liquid, gaseous
Pressure type	Gauge pressure
Pressure unit	bar
Measuring range	0 bar ... 40 bar
Process temperature	-20 °C ... +85 °C
Maximum ohmic load $R_A$	4 mA ... 20 mA ( $R_A \leq 0.5 \text{ k}\Omega$ ) 0 V ... 10 V, 3-wire ( $R_A > 10 \text{ k}\Omega$ )
Zero point adjustment	Max. + 3 % of span
Output signal	2 x PNP
Rotatable housing	Display against housing with electrical connection: 330 ° Housing against process connection: 320 °
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 ½ B according to EN 837
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
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 <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>	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
<b>Weight sensor</b>	Approx. 200 g
<b>Seal</b>	Copper
<b>Enclosure rating</b>	IP67
<b>Protection class III</b>	✓
<b>MTTF</b>	349 years

## Performance

<b>Non-linearity</b>	≤ ± 0.5 %, of span (Best Fit Straight Line, BFSL) according to IEC 61298-2
<b>Accuracy</b>	≤ ± 1 % of the span
<b>Setting accuracy of switching outputs</b>	≤ ± 0.5 % of span
<b>Response time</b>	3 ms
<b>Long-term drift/one-year stability</b>	≤ 0.2 % of the span according to IEC 61298-2
<b>Temperature coefficient in rated temperature range</b>	Mean TC of zero point: ≤ 0.2% of span / 10 K Mean TC of span ≤ 0.2 % of span / 10 K
<b>Rated temperature range</b>	0 °C ... +80 °C
<b>Service life</b>	Minimum 100 Mio. load cycles

## Ambient data

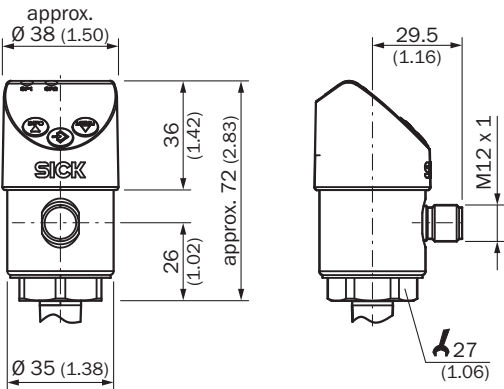
<b>Ambient temperature</b>	-20 °C ... +80 °C
<b>Storage temperature</b>	-20 °C ... +80 °C
<b>Relative humidity</b>	≤ 90 %
<b>Shock load</b>	50 g according to IEC 60068-2-27 (mechanical shock)
<b>Vibration load</b>	10 g according to IEC 60068-2-6 (vibration under resonance)

## Classifications

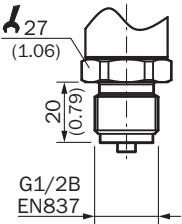
<b>ECLASS 5.0</b>	27200620
<b>ECLASS 5.1.4</b>	27200620
<b>ECLASS 6.0</b>	27200620
<b>ECLASS 6.2</b>	27200620
<b>ECLASS 7.0</b>	27200620
<b>ECLASS 8.0</b>	27200620
<b>ECLASS 8.1</b>	27200620
<b>ECLASS 9.0</b>	27200620
<b>ECLASS 10.0</b>	27200620
<b>ECLASS 11.0</b>	27200620
<b>ECLASS 12.0</b>	27200620
<b>ETIM 5.0</b>	EC000243
<b>ETIM 6.0</b>	EC000243
<b>ETIM 7.0</b>	EC000243
<b>ETIM 8.0</b>	EC000243

UNSPSC 16.0901	41112409
----------------	----------

Dimensional drawing (Dimensions in mm (inch))



G ½ B according to EN 837



Connection type

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



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

Recommended accessories

Other models and accessories → [www.sick.com/PBS](http://www.sick.com/PBS)

	Brief description	Type	Part no.
Heating and cooling devices			
	Cooling element, extension of the process temperature up to 150 °C. Maximum ambient temperature 30 °C. Max. process pressure 200 bar. Not suitable for pressure measurement in steam. Outer thread G 1/2, inner thread G 1/2.	BEF-CE-G12G12-150C	5324393

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket for simple and stable wall mounting of pressure sensors with 27 mm hexagon, Aluminum	BEF-FL-ALUPBS-HLDR	5322501

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

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.”**

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)