



# PBS-RB250SG1SSFBMA0Z

PBS

**PRESSURE SENSORS** 





#### Ordering information

Туре	Part no.
PBS-RB250SG1SSFBMA0Z	6040960

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

Illustration may differ



#### Detailed technical data

#### Features

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Medium	Liquid, gaseous
Pressure type	Gauge pressure
Pressure unit	bar
Measuring range	0 bar 250 bar
Process temperature	-20 °C +85 °C
Maximum ohmic load R <sub>A</sub>	4 mA 20 mA ( $R_A \le 0.5 \text{ kOhm}$ ) 0 V 10 V, 3-wire ( $R_A > 10 \text{ kOhm}$ )
Zero point adjustment	Max. + 3 % of span
Output signal	1 x PNP + 4 mA 20 mA
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 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: $40 \text{ V DC}$ Short-circuit protection: $Q_A$ , $Q_1$ , $Q_2$ towards M Reverse polarity protection: $L^+$ to M
Isolation voltage	500 V DC
CE-conformity	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	✓
МТТБ	202 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 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)

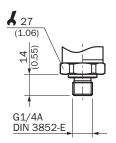
#### Classifications

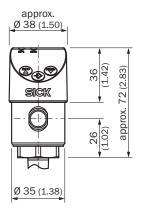
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ECLASS 5.1.4	27200620
ECLASS 6.0	27200620
ECLASS 6.2	27200620
ECLASS 7.0	27200620
ECLASS 8.0	27200620
ECLASS 8.1	27200620
ECLASS 9.0	27200620
ECLASS 10.0	27200620
ECLASS 11.0	27200620
ECLASS 12.0	27200620
ETIM 5.0	EC000243
ETIM 6.0	EC000243
ETIM 7.0	EC000243

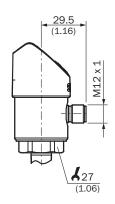
ETIM 8.0	EC000243
UNSPSC 16.0901	41112409

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

#### Recommended accessories

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

	Brief description	Туре	Part no.
Mounting brad	ckets and plates		
6	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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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

