



PBS-RB250SGESSCD5A0Z

PBS

PRESSURE SENSORS





Ordering information

Туре	Part no.
PBS-RB250SGESSCD5A0Z	6038906

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

Illustration may differ



Detailed technical data

Features

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 _A	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	2 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

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	Round connector M12 x 1, 5-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
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	Copper
Enclosure rating	IP67
Protection class III	✓
MTTF	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)

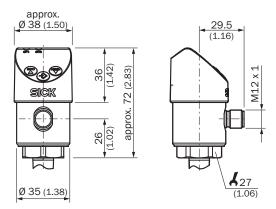
Classifications

ECLASS 5.0	27200620
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

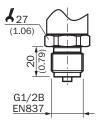
UNSPSC 16.0901

41112409

Dimensional drawing (Dimensions in mm (inch))



G $\frac{1}{2}$ 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, $Q_1 = 4$, $Q_2 = 2$

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.
Heating and o	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

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	Brief description	Туре	Part no.
Mounting brad	ckets and plates		
Par 1	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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