



# PBS-RB010SG1MSND5A0Z

PBS

**PRESSURE SWITCH** 





#### Ordering information

Туре	Part no.
PBS-RB010SG1MSND5A0Z	6048110

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 10 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	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

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	0.6 mm pressure port	
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: $40 \text{ V DC}$ 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	NBR
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)

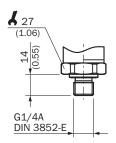
#### Classifications

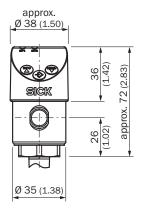
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eCl@ss 6.0	27200620
eCl@ss 6.2	27200620
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eCl@ss 8.0	27200620
eCl@ss 8.1	27200620
eCl@ss 9.0	27200620
eCl@ss 10.0	27200620
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ETIM 5.0	EC000243
ETIM 6.0	EC000243
ETIM 7.0	EC000243

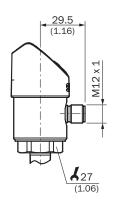
ETIM 8.0	EC000243
UNSPSC 16.0901	41112409

#### Dimensional drawing (Dimensions in mm (inch))

G 1/4 A DIN 3852-E

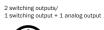






#### Connection type

M12 x 1, 4-pin



 $L^+ = 1$ , 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		
Ton Y	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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