



Pressure sensors

PBS-RB010SG2SS0LMA0Z



Model Name > **PBS-RB010SG2SS0LMA0Z**
Part No. > **6041418**



Illustration may differ

At a glance

- Gauge measurement ranges from 0 ... 1 bar up to 0 ... 600 bar
- No moving parts: No mechanical wear, fatigue-proof, maintenance-free
- Stainless steel membrane
- Various programmable switching functions
- Digital outputs PNP or NPN, Analog output signal 4 ... 20 mA or 0 ... 10 V
- Min/max pressure memory
- Password protection
- Selection of different pressure units for the display
- IO-Link optional

Your benefits

- Quick and easy setup and operation due to three large pushbuttons and clear display
- Perfect display readability and optimal cable routing due to rotatable housing
- No compromises: Individual solutions through a variety of configurations
- Universal application due to fully welded, highly durable stainless steel membrane
- Saves space and costs: no adapters required due to broad range of standard process connections
- Highly reliable due to application of proven technologies and high-quality materials, water resistance according to IP 65 and IP 67 as well as excellent overpressure safety
- Ultimate system availability: IO-Link enables fast, reliable parameter setting when changing over products



Features

Pressure type:	Gauge pressure
Measuring range:	0 bar ... 10 bar
Process temperature:	-20 °C ... 85 °C
CE-conformity:	✓
Display:	14-segment-LED, blue, 4-digits, height 9 mm, electronically turnable by 180°, Update: 1000, 500, 200, 100 ms (adjustable), accuracy: ≤ 1.0 % of span ± 1 digit
Output signal:	IO-Link, 2x PNP
Rotatable housing:	Display against housing with electrical connection: 330°. Housing against process connection: 320°

Performance

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

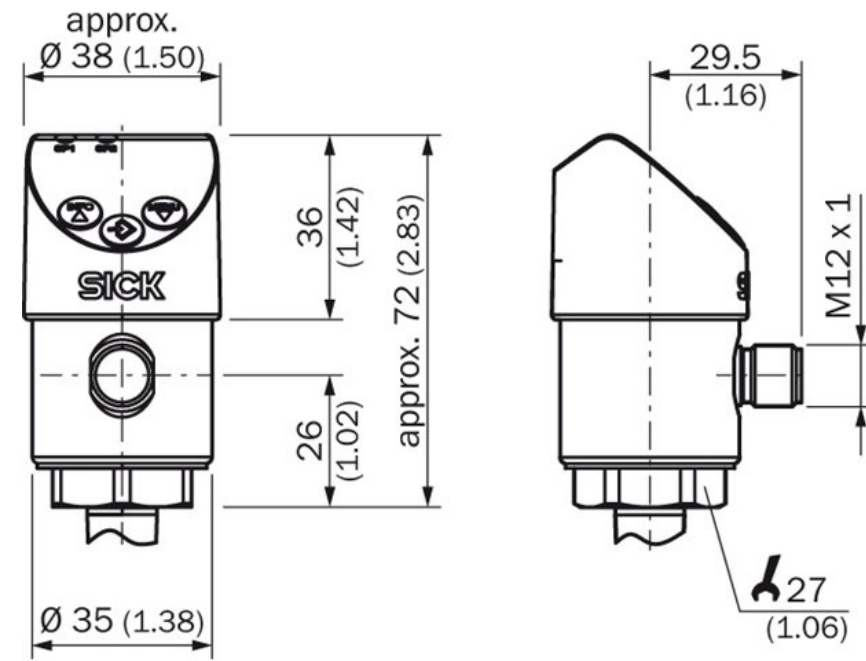
Mechanics/electronics

Process connection:	G 1/4 female
Wetted parts:	Pressure Connection: 316L, Pressure sensor: 316L (for measurement ranges from 0 bar ... 10 bar rel: 13-8 PH)
Seal:	Without seal
Housing material:	Display window: PC, Plastic head: PC + ABS, Buttons: TPE-E, Lower body: 316L
Enclosure rating:	IP 67
Connection type:	Plug M12 x 1, 4-pin, IP 67
Supply voltage:	15 V DC ... 35 V DC
Power consumption:	100 mA
Electrical safety:	Short-circuit protection: QA, Q1, Q2 towards M, Protection class: III, Overvoltage protection: 40 V DC, Reverse polarity protection: L+ towards M
Protection class III:	✓
Weight sensor:	200 g
Total current consumption:	Max. 350 mA/600 mA (incl. switching current)
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/EEC, EN 61326-2-3

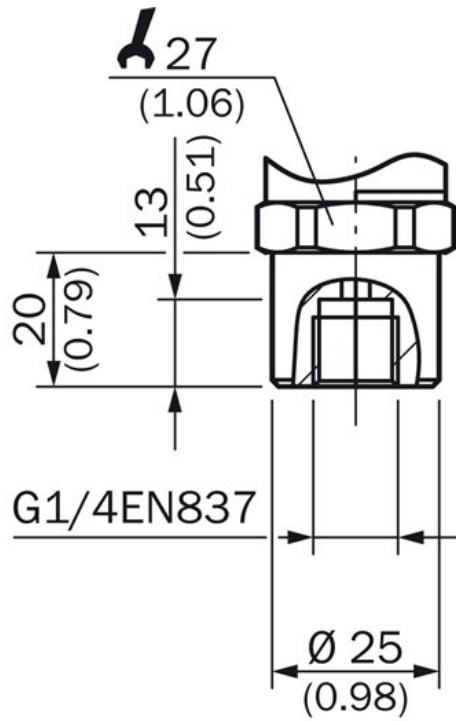
Ambient data

Storage temperature:	-20 °C ... 80 °C
Ambient temperature:	-20 °C ... 80 °C
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)
Relative humidity:	90 %

Dimensional drawing housing



Dimensional drawing process connection



Connection type

M12 x 1, 4-pin	2 switching outputs/ 1 switching output + 1 analog output	M12 x 1, 5-pin	2 switching outputs + 1 analog output	
				1 L+: Positive supply connection 2 M: Negative supply connection 3 Q1: Switching output 1 4 C/Q1: With IO-Link: Communication/ switching output 1 5 Q2: Switching output 2 6 QA: Analog output
L ⁺ = 1, M = 3, Q ₁ = 4, Q _A = 2 C/Q ₁ = 4, Q _A = 2		L ⁺ = 1, M = 3, Q ₁ = 4, Q ₂ = 2, Q _A = 5 C/Q ₁ = 4		

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