



## Pressure sensors

PBS-RB6X0SG1SSNBMA0Z



**Model Name** > **PBS-RB6X0SG1SSNBMA0Z**  
**Part No.** > **6041555**



Product may differ from illustration

### 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

- Compact size takes up less space
- Dual rotatable housing ensures flexible installation
- Quick and easy setup and operation due to three large buttons and bright display
- Wide range of applications
- Resistant against corrosive media due to circularly welded, hermetically sealed stainless steel membrane
- Available in a wide selection of configurations, enabling a perfect match to individual customer requirements
- IO-Link technology provides time and cost savings by enabling parameter adjustments, for example, upon product changeover to be performed remotely



### Features

|                      |                                                                                                                                                                |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pressure type:       | Gauge pressure                                                                                                                                                 |
| Measuring range:     | 0 bar ... 6 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:       | 1x PNP + 4...20 mA                                                                                                                                             |
| DIV09:               | Measuring ranges                                                                                                                                               |
| Rotatable housing:   | Display against housing with electrical connection: 330°. Housing against process connection: 320°                                                             |

### Performance

|                |                                                                               |
|----------------|-------------------------------------------------------------------------------|
| Non-linearity: | ≤ +/- 0.5 % (of span (Best Fit Straight Line, BFSL) according to IEC 61298-2) |
|----------------|-------------------------------------------------------------------------------|

|                                                     |                                                                             |
|-----------------------------------------------------|-----------------------------------------------------------------------------|
| Accuracy of sensor element:                         | ≤ +/- 1 % of span                                                           |
| Setting accuracy of switching outputs:              | ≤ ± 0.5 % of span                                                           |
| Response time:                                      | 3 ms                                                                        |
| Long-term drift/one-year stability:                 | ≤ 0.2 % of span                                                             |
| Temperature error:                                  | ≤ 1.0 % of span typ., ≤ 2.5 % of span max.                                  |
| 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

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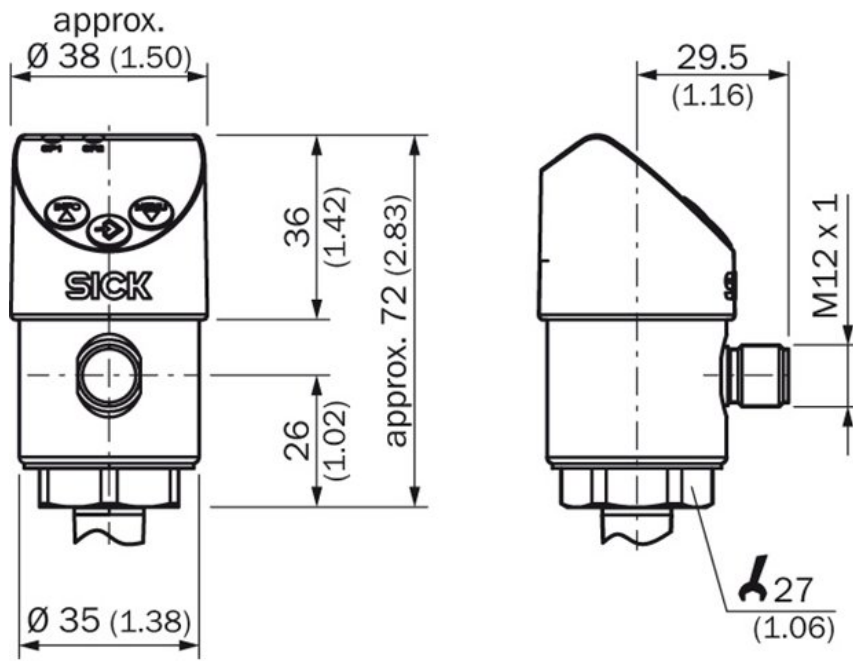
|                              |                                                                                                                                                       |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process connection:          | G 1/4 A according to DIN 3852-E                                                                                                                       |
| Wetted parts:                | Pressure Connection: 316L, Pressure sensor: 316L (for measurement ranges from 0 bar ... 10 bar rel: 13-8 PH)                                          |
| Seal:                        | NBR                                                                                                                                                   |
| 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                                                                                                                                                 |
| Internal transmission fluid: | Silicone oil (only with pressure ranges < 0 bar ... 10 bar and ≤ 0 bar abs ... 25 bar abs)                                                            |
| Pressure peak dampening:     | Through optional integrated pressure port 0.6 mm or 0.3 mm for process connector G 1/4 according to DIN 3852-E (0.3 mm from 10 bar)                   |
| 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

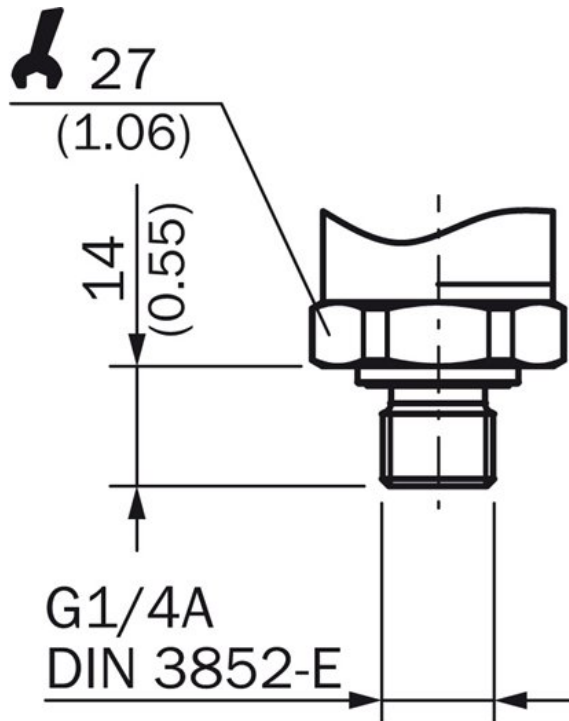
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|                      |                                                             |
|----------------------|-------------------------------------------------------------|
| Storage temperature: | -20 °C ... 80 °C                                            |
| 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



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