Data sheet

# PAC50-BGA

## PAC50

**PRESSURE SENSORS**

SICK
Sensor Intelligence.

Illustration may differ

## Ordering information

| Type | part no. |
|---|---|
| PAC50-BGA | 1062958 |

Other models and accessories → www.sick.com/PAC50

## Detailed technical data

### Features

| | |
|---|---|
| **Medium** | Dry compressed air |
| **Pressure type** | Gauge pressure |
| **Pressure unit** | bar |
| **Measuring range** | –1 bar ... 1 bar |
| **Overpressure safety** | 5 bar |
| **Process temperature** | 0 °C ... +60 °C |
| **Maximum ohmic load $R_A$** | Optional, 4 mA ... 20 mA / 0 V... 10 V. Automatic detection depending on connected load or programmable. Output signals can be inverted: 20 mA ... 4 mA / 10 V ... 0 V, Load resistance for current output < 600 Ohm, Load resistance with current output > 3 kOhm |
| **Zero point adjustment** | Max. + 5 % of span |
| **Output signal** | 2 x PNP/NPN/Push-Pull |
| **Diagnostics output** | Switching output 2 can be set as diagnostics output |
| **Display** | LCD with LED backlight (green/red), can be rotated electronically by 180°<br>Pressure display: 4 digits, 16 segments<br>Pressure unit in display can be switched: bar, MPa, kPa, psi and inHg<br>Update: 1,000, 500, 200, 100 ms (adjustable) |
| **Initialization time** | 300 ms |

### Mechanics/electronics

| | |
|---|---|
| **Communication interface** | - |
| **Process connection** | 2 x G ¼ [1] |
| **Housing material** | Housing: polycarbonate, Buttons: TPE, DIN rail mounting: POM, seals: NBR |
| **Connection type** | M12 round connector x 1, 4-pin |
| **Supply voltage** | 17 V DC ... 30 V DC |
| **Power consumption** | Max. 40 mA at $L^+$ = 24 VDC |

[1] Bottom side: thread G ¼ female, back side: thread G ¼ female, both according to DIN ISO 1630.
[2] Enclosure rating IP per IEC 60529. The enclosure rating classes specified only apply when connected with female connectors that provide the corresponding enclosure rating.

| | |
|---|---|
| **Electrical safety** | Protection class: III<br>Overvoltage protection: 32 V DC<br>Short-circuit protection: $Q_A$, $Q_1$, $Q_2$ towards M and $L^+$<br>Reverse polarity protection: $L^+$ to M |
| **CE-conformity** | EMC directive: 2004/108/EC, EN 61326-2-3 |
| **Weight sensor** | Approx. 40 g |
| **Enclosure rating** | IP65 [2]<br>IP67 [2] |
| **Protection class III** | ✓ |
| **MTTF** | 261.31 years |

[1] Bottom side: thread G ¼ female, back side: thread G ¼ female, both according to DIN ISO 1630.

[2] Enclosure rating IP per IEC 60529. The enclosure rating classes specified only apply when connected with female connectors that provide the corresponding enclosure rating.

## Performance

| | |
|---|---|
| **Non-linearity** | ≤ ± 0.5 %, of span (Best Fit Straight Line, BFSL) according to IEC 61298-2 |
| **Accuracy** | ≤ ± 1.5 %, of the span (including non-linearity, hysteresis, zero point and full scale error (corresponds to error of measurement as per IEC 61298-2)) |
| **Setting accuracy of switching outputs** | ≤ ± 0.2 % of span |
| **Non-repeatability** | ≤ ± 0.2 % of the span |
| **Rated temperature range** | +10 °C ... +60 °C |

## Ambient data

| | |
|---|---|
| **Ambient temperature, operation** | 0 °C ... +60 °C |
| **Storage temperature** | –20 °C ... +80 °C |
| **Relative humidity** | ≤ 90 % |
| **Shock load** | Max. 30 g, xyz according to IEC 60068-2-27 (11 ms, mechanical shock) |
| **Vibration load** | Max. 5 g (10 ... 150 Hz), xyz, to DIN EN 60068-2-6 |

## Certificates

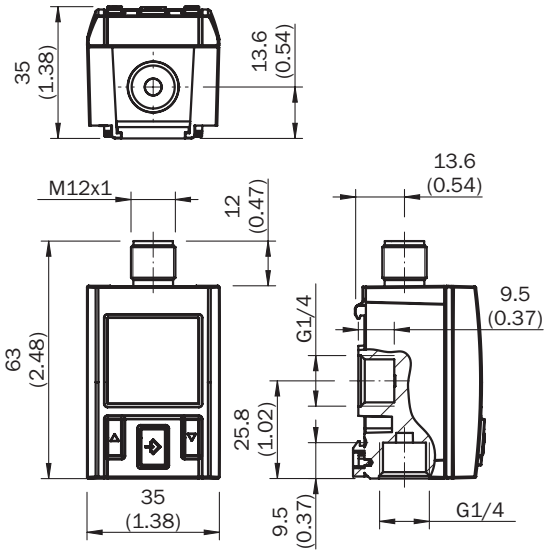
| | |
|---|---|
| **EU declaration of conformity** | ✓ |
| **UK declaration of conformity** | ✓ |
| **ACMA declaration of conformity** | ✓ |
| **China RoHS** | ✓ |

## 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 |

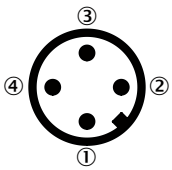
| | |
|---|---|
| **ECLASS 12.0** | 27200620 |
| **ETIM 5.0** | EC000243 |
| **ETIM 6.0** | EC000243 |
| **ETIM 7.0** | EC000243 |
| **ETIM 8.0** | EC000243 |
| **UNSPSC 16.0901** | 41112409 |

## Dimensional drawing Bottom side: thread G ¼ female, back side: thread G ¼ female



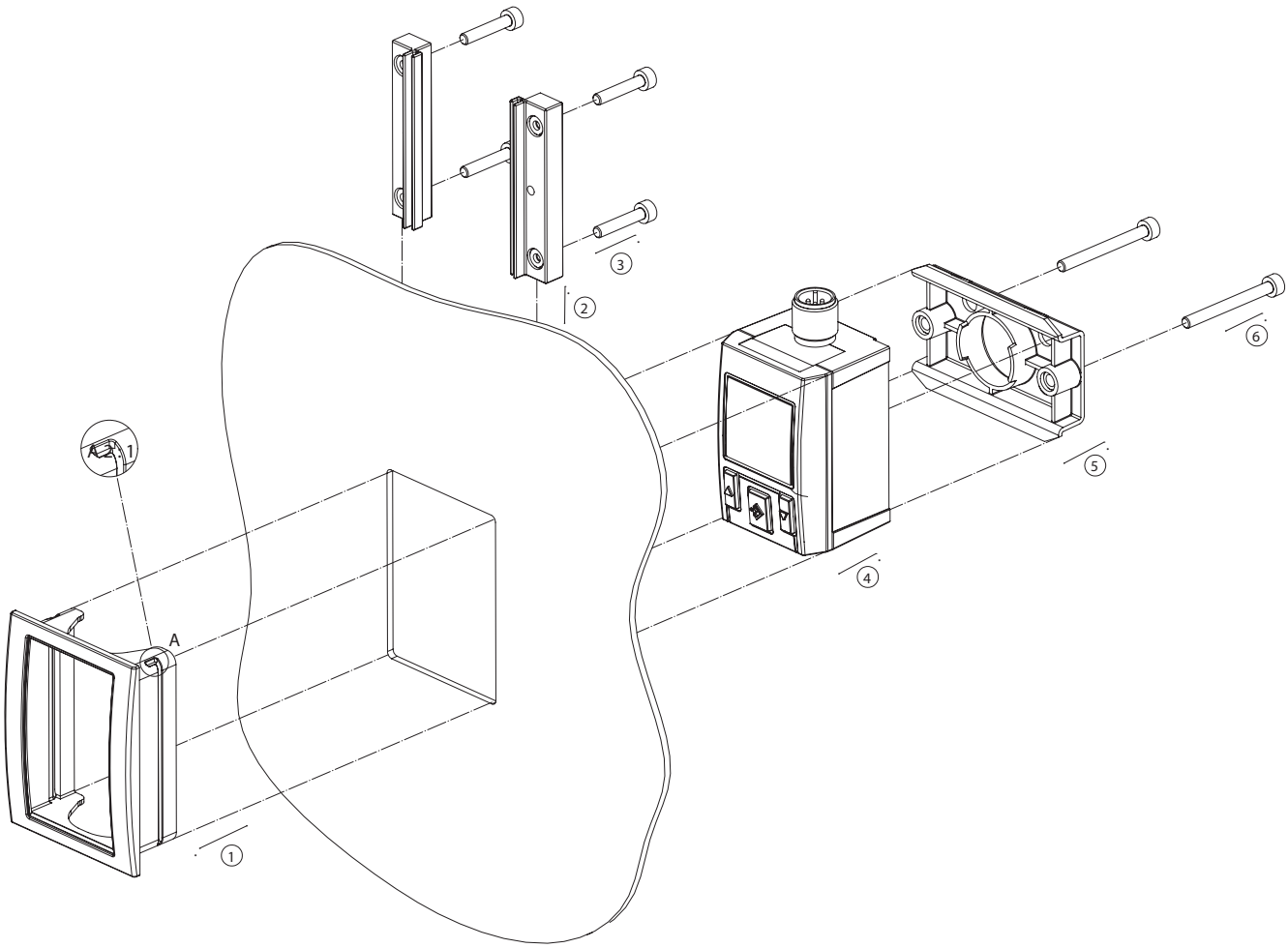

Dimensions in mm (inch)

## Connection type M12 round connector x 1, 4-pin

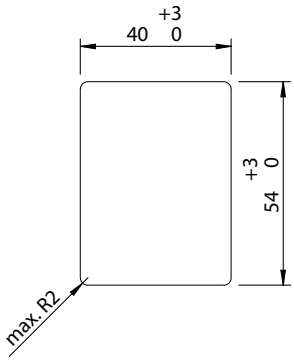



| Output signals | Type code | Electrical connection | Pin assignment |
|---|---|---|---|
| 2 x digital | PAC50-xxA | M12 x 1, 4 pins | L+ = 1, M = 3, Q1 = 4, Q2 = 2 |
| 1 x digital + analog | PAC50-xxB | M12 x 1, 4 pins | L+ = 1, M = 3, Q1 = 4, QA = 2 |
| 1 x IO-Link/digital + digital | PAC50-xxD | M12 x 1, 4 pins | L+ = 1, M = 3, C/Q1 = 4, Q2 = 2 |

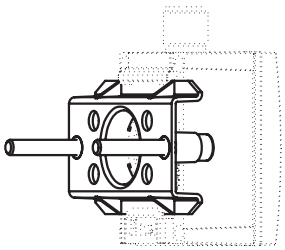
## Instruction for installation



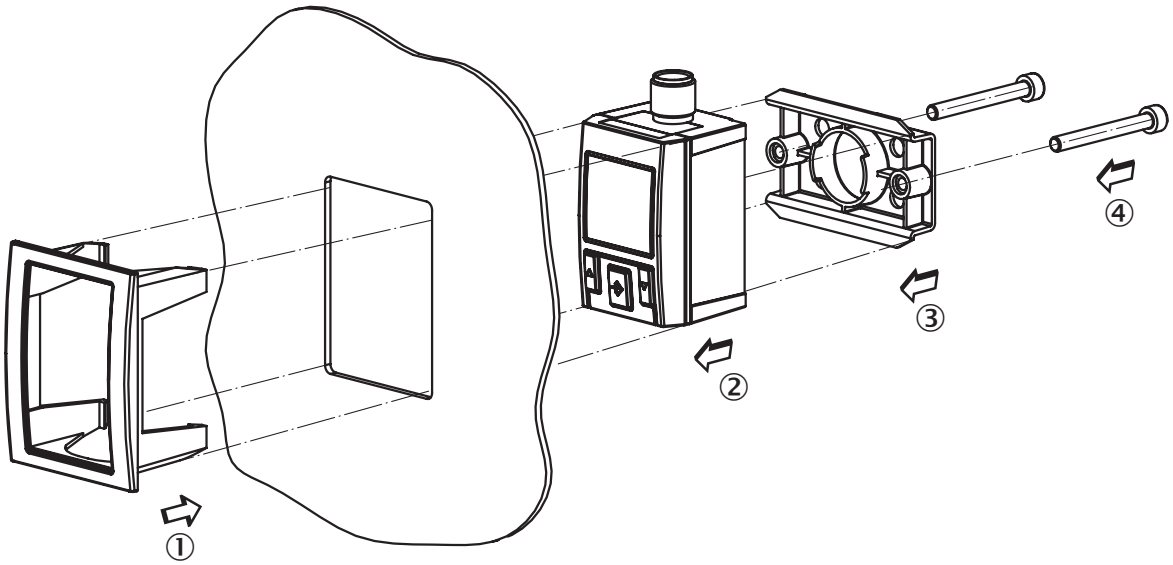

## Opening in the switch panel



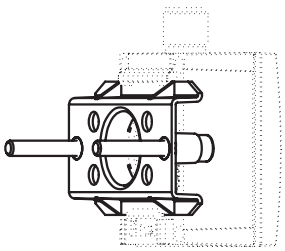
## Instruction for installation



## Instruction for installation




## Instruction for installation Mounting bracket



## Recommended accessories

Other models and accessories ➜ www.sick.com/PAC50

| | Brief description | Type | part no. |
|---|---|---|---|
| Mounting systems | | | |
| | • **Description:** Wall-mounting kit; mounting element for wall-mounting of pressure switch PAC50<br>• **Material:** Plastic, steel<br>• **Details:** Mounting element: polycarbonate, screws: steel, zinc-coated | BEF-MA-WLM-NTS-PAC5 | 2069198 |
| | • **Description:** Switch panel installation set for rugged applications (shock, vibration) for installing the PAC50 pressure switch. Maximum switch panel thickness: 5 mm<br>• **Material:** Stainless steel<br>• **Details:** Stainless steel, aluminum, plastic | BEF-MA-CTRLPX-PAC5 | 2099916 |

# SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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.”**

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