



PBS2-AB010SF2FSDQ5A0Z

PBS plus

PRESSURE SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | part no. |
|-----------------------|----------|
| PBS2-AB010SF2FSDQ5A0Z | 6074176 |

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

Detailed technical data

Features

| | |
|--|---|
| Medium | Liquid, gaseous |
| Pressure type | Absolute pressure |
| Pressure unit | bar psi |
| Measuring range | 0 bar ... 10 bar 0 psi ... 145 psi |
| Process temperature | -20 °C ... +85 °C |
| Maximum ohmic load R_A | 4 mA ... 20 mA ($R_A \leq 0.5 \text{ k}\Omega$), 0 V ... 10 V, 3-wire ($R_A > 10 \text{ k}\Omega$) |
| Zero point adjustment | Max. + 3 % of span |
| Output signal | IO-Link/PNP/NPN + PNP/NPN + 4 mA ... 20 mA / 0 V ... 10 V |
| Rotatable housing | Display against housing with electrical connection: 330 ° Housing against process connection: 320 ° |
| Display | 14-Segment LED, red, 4-digit, character height 9 mm, can be rotated electronically by 180 ° Update: 1,000, 500, 200, 100 ms (adjustable) |

Mechanics/electronics

| | |
|---------------------------------------|---|
| Communication interface | IO-Link |
| Communication Interface detail | IO-Link V1.1 |
| Process connection | G ½ B flush mounted |
| Wetted parts | Process connection: 316L stainless steel Measuring chamber: stainless steel 316L |

¹⁾ NBR seal installed, FPM/FKM seal included.

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.

³⁾ Available on request for process connections G ¼ A according to DIN 3852-E, ¼" NPT.

| | |
|------------------------------------|--|
| Internal transmission fluid | Silicone oil (only with pressure ranges < 0 bar ... 10 bar and ≤ 0 bar abs ... 25 bar abs) |
| Pressure port | Front-flush membrane |
| 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. 600 mA (including 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 | EMC Directive: 2014/30 / EU (EN 61326-1:2013; EN 61326-2-3:2013) |
| Ex-approvals | Pressure equipment directive: 2014/68 / EU, Hazardous materials (RoHS): 2011/65 / EU (EN 50581:2012) |
| Weight sensor | Approx. 220 g |
| Seal | NBR ¹⁾ |
| Enclosure rating | IP67 ²⁾ |
| Protection class III | ✓ |
| MTTF | 104 years |
| Pressure peak dampening | Through integrated pressure port 0.6 mm or 0.3 mm for process connection G ¼ according to DIN 3852-E (0.3 mm at and above 10 bar) ³⁾ |

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³⁾ Available on request for process connections G ¼ A according to DIN 3852-E, ¼" NPT.

Performance

| | |
|---|---|
| Non-linearity | ≤ ± 0.25 %, of span (Best Fit Straight Line, BFSL) according to IEC 61298-2 |
| Accuracy | ≤ ± 0.5 %, 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 | ≤ ± 0.5 % of span |
| Response time | ≤ 5 ms |
| Long-term drift/one-year stability | ≤ ± 0.1 % of span to IEC 61298-2 ≤ 0.2 % of the span according to IEC 61298-2 for measuring range ≤ 0.6 bar or flush-mounted membrane (0 psi ... 10 psi) |
| Temperature coefficient in rated temperature range | Average TC of the zero point: ≤ ± 0.16% of the span / 10 K Average TC of the span ≤ ± 0.16% of the span / 10 K |
| Rated temperature range | 0 °C ... +80 °C |
| Service life | Minimum 100 Mio. load cycles |
| Temperature error | ≤ ± 1.0% of the range, typ., ≤ ± 2.5% of the range max. |

Ambient data

| | |
|---------------------------------------|-------------------|
| Ambient temperature, operation | -20 °C ... +80 °C |
| Storage temperature | -20 °C ... +70 °C |
| Relative humidity | ≤ 75 % |

| | |
|-----------------------|---|
| Shock load | 50 g, 6 ms according to IEC 60068-2-27 (mechanical shock) |
| Vibration load | 20 g, 10 Hz ... 2,000 Hz (IEC 60068-2-6, at resonance) |

Certificates

| | |
|--|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| China RoHS | ✓ |
| cULus certificate | ✓ |
| IO-Link certificate | ✓ |
| Information according to Art. 3 of Data Act (Regulation EU 2023/2854) | ✓ |

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 G 1/2 B flush mounted



Dimensions in mm (inch)

Dimensional drawing



Dimensions in mm (inch)

Connection type

M12 x 1, 4-pin 2 switching outputs/
1 switching output + 1 analog output



$L^+ = 1$, $M = 3$, $Q_1 = 4$, $Q_2 = 2$
 $C/Q_1 = 4$, $Q_A = 2$

M12 x 1, 5-pin 2 switching outputs + 1 analog output



$L^+ = 1$, $M = 3$, $Q_1 = 4$, $Q_2 = 2$, $Q_A = 5$
 $C/Q_1 = 4$

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