PBT-RP100SGESESALA0Z

PBT

PRESSURE SENSORS

PBT-RP100SGESESALA0Z | PBT

PRESSURE SENSORS

Ordering information

Type	Part no.
PBT-RP100SGESESALA0Z	6048308

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

Illustration may differ

Detailed technical data

Features

Medium	Liquid, gaseous
Pressure type	Gauge pressure
Pressure unit	psi
Measuring range	0 psi ... 100 psi
Process temperature	−30 °C ... +100 °C
Maximum ohmic load R_A	4 mA ... 20 mA, 2-wire ($R_A \leq (L^+ - 8\ V) / 0.02\ A$ [Ohm]) 0 V ... 10 V, 3-wire ($R_A > 10$ kOhm) 0 V ... 5 V, 3-wire ($R_A > 5$ kOhm)
Output signal	4 mA ... 20 mA, 2-wire
Specialty	Without

Mechanics/electronics

Process connection	G ½ B according to EN 837
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 ≤ 0 bar abs ... 25 bar abs)
Pressure port	Standard
Housing material	Stainless steel
Connection type	L-connector acc. to DIN 175301-803 A
Supply voltage	8 V DC ... 30 V DC [1]
Power consumption	Signal current (max. 25 mA) for current output Max. 8 mA for voltage output signal
Electrical safety	Overvoltage protection: 32 V DC, 36 V DC with 4 mA ... 20 mA Short-circuit protection: Q_A towards M Reverse polarity protection: L^+ to M Protection class: III
Isolation voltage	500 V DC

[1] The pressure transmitter must be supplied with power by a limited energy circuit compliant with 9.3 of UL/EN/IEC 601010-1 or LPS to UL/EN/IEC 60950-1 or Class 2 to UL 1310/UL1585 (NEC or CEC). The power supply must be suitable for operation above 2,000 m if the pressure transmitter is used above this altitude.

[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.

CE-conformity	Pressure equipment directive: 2014/68/EU EMC directive: 2014/30/EU, EN 61 326-2-3
Weight sensor	Approx. 80 g
Seal	Stainless steel
Enclosure rating	IP65 [2)
Protection class III	✓
Reference conditions	Reference conditions: According to IEC 61298-1
MTTF	815 years

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Performance

Non-linearity	≤ ± 0.5 %, (Best Fit Straight Line, BFSL) according to IEC 61298-2
Accuracy	≤ ± 1 % of the span
Adjustment accuracy of zero signal	≤ 0.5 % of span typ., ≤ 0.8 % of span max. (with non-linerarity 0.5 %)
Hysteresis	≤ 0.16 % of the span
Non-repeatability	≤ 0.1 % of the span
Response time	< 4 ms
Signal noise	≤ 0.3 % of the span
Long-term drift/one-year stability	≤ 0.1 % of span to IEC 61298-2
Rated temperature range	0 °C ... +80 °C
Service life	Minimum 100 Mio. load cycles

Ambient data

Ambient temperature	0 °C ... +80 °C
Storage temperature	–40 °C ... +70 °C
Relative humidity	45 % ... 75 %
Shock load	500 g according to IEC 60068-2-27 (mechanical shock)
Vibration load	10 g according to IEC 60068-2-6 (vibration under resonance) 20 g optional

Classifications

ECLASS 5.0	27200614
ECLASS 5.1.4	27200614
ECLASS 6.0	27200614
ECLASS 6.2	27200614
ECLASS 7.0	27200614
ECLASS 8.0	27200614
ECLASS 8.1	27200614
ECLASS 9.0	27200614
ECLASS 10.0	27200614
ECLASS 11.0	27200614
ECLASS 12.0	27200614

ETIM 5.0	EC011478
ETIM 6.0	EC011478
ETIM 7.0	EC011478
ETIM 8.0	EC011478
UNSPSC 16.0901	41112410

Dimensional drawing (Dimensions in mm (inch))

Housing with L-connector (DIN 175301-803 A), IP65

Connection type

Recommended accessories

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

	Brief description	Type	Part no.
Heating and cooling devices			
	Cooling element, extension of the process temperature up to 200 ℃. Maximum ambient temperature 30 °C. Max. process pressure 200 bar. Not suitable for pressure measurement in steam. Outer thread G 1/2, inner thread G 1/2.	BEF-CE-G12G12-200C	5324394
	Cooling element, extension of the process temperature up to 150 ℃. Maximum ambient temperature 30 °C. Max. process pressure 200 bar. Not suitable for pressure measurement in steam. Outer thread G 1/4, inner thread G 1/2.	BEF-CE-G12G14-150C	5332155
	Cooling element, extension of the process temperature up to 200 ℃. Maximum ambient temperature 30 °C. Max. process pressure 200 bar. Not suitable for pressure measurement in steam. Outer thread G 1/4, inner thread G 1/2.	BEF-CE-G12G14-200C	5336706
Mounting brackets and plates			
	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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