

6038116 20308158

de



**PRESSURE TRANSMITTER** 

PRESSURE TRANSMITTER



Illustration may differ

### Ordering information

Туре	Part no.
PBT-RB160AG1SENAMAOV	6041580

Other models and accessories -> www.sick.com/PBT



### Detailed technical data

#### Features

Medium	Liquid, gaseous	
Pressure type	Gauge pressure	
Pressure unit	bar	
Measuring range	0 bar 160 bar	
Process temperature	-30 °C +100 °C	
Maximum ohmic load R <sub>A</sub>	4 mA 20 mA, 2-wire ( $R_A \le (L^+ - 8 V) / 0.02 A$ [Ohm]) 0 V 10 V, 3-wire ( $R_A > 10 \text{ kOhm}$ ) 0 V 5 V, 3-wire ( $R_A > 5 \text{ kOhm}$ )	
Output signal	4 mA 20 mA, 2-wire	
Specialty	Shock resistance 20 g	
Mechanics/electronics		
Process connection	G ¼ A according to DIN 3852-E	
Wetted parts	Pressure Connection: stainless steel 316L Pressure sensor: stainless steel 316L (for measurement ranges from 0 bar 10 bar rel stain- less steel 13-8 PH)	
Internal transmission fluid	Silicone oil (only with pressure ranges < 0 bar 10 bar and $\leq$ 0 bar abs 25 bar abs)	
Pressure port	Standard	
Housing material	Stainless steel	
Connection type	M12 round connector x 1, 4-pin	
Supply voltage	8 V DC 30 V DC <sup>1)</sup>	
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 <sup>+</sup> to M Protection class: III	
Isolation voltage	500 V DC	

<sup>1)</sup> 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.

<sup>2)</sup> Enclosure rating IP per IEC 60529. The enclosure rating classes specified only apply when connected with female connectors that provide the corresponding enclosure rating.

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CE-conformity	Pressure equipment directive: 2014/68/EU EMC directive: 2014/30/EU, EN 61 326-2-3
Weight sensor	Approx. 80 g
Seal	NBR
Enclosure rating	IP67 <sup>2)</sup>
Protection class III	$\checkmark$
Reference conditions	Reference conditions: According to IEC 61298-1
MTTF	815 years

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### Performance

Non-linearity	$\leq$ $\pm$ 0.25 %, (Best Fit Straight Line, BFSL) according to IEC 61298-2
Accuracy	$\leq$ ± 0.5 % of the span
Adjustment accuracy of zero signal	$\leq 0.15$ % of span typ., $\leq 0.4$ % of span max. (with non-linerarity 0.25 %)
Hysteresis	$\leq$ 0.16 % of the span
Non-repeatability	≤ 0.1 % of the span
Response time	< 4 ms
Signal noise	$\leq$ 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

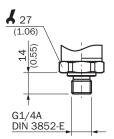
eCl@ss 5.0	27200614
eCl@ss 5.1.4	27200614
eCl@ss 6.0	27200614
eCl@ss 6.2	27200614
eCl@ss 7.0	27200614
eCl@ss 8.0	27200614
eCl@ss 8.1	27200614
eCl@ss 9.0	27200614
eCl@ss 10.0	27200614
eCl@ss 11.0	27200614
eCl@ss 12.0	27200614

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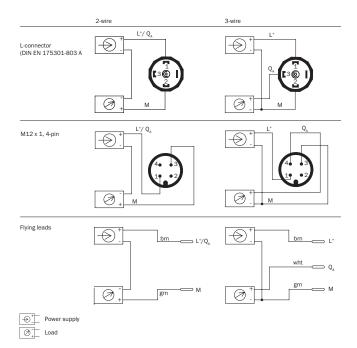
ETIM 5.0	EC011478
ETIM 6.0	EC011478
ETIM 7.0	EC011478
ETIM 8.0	EC011478
UNSPSC 16.0901	41112410

### Dimensional drawing (Dimensions in mm (inch))

G ¼ A DIN 3852-E



### Connection type



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### **Recommended accessories**

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

	Brief description	Туре	Part no.	
Mounting bra	Mounting brackets and plates			
- Car	Mounting bracket for simple and stable wall mounting of pressure sensors with 27 mm hexagon, Aluminum	BEF-FL-ALUPBS-HLDR	5322501	
Plug connect	tors and cables			
	Head A: female connector, M12, 4-pin, angled Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	DOL-1204-W05MD	6020399	
<b>N</b> o	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YF2A14- 020UB3XLEAX	2095607	
<b>N</b>	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YF2A14- 020VB3XLEAX	2096234	
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14- 050VB3XLEAX	2096235	
<b>No</b>	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 10 m	YF2A14- 100UB3XLEAX	2095609	
<b>N</b> O	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 10 m	YF2A14- 100VB3XLEAX	2096236	
<b>N</b>	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 15 m	YF2A14- 150UB3XLEAX	2095610	
<b>N</b>	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 15 m	YF2A14- 150VB3XLEAX	2096237	
<b>N</b> o	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 20 m	YF2A14- 200UB3XLEAX	2095611	
•	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 20 m	YF2A14- 200VB3XLEAX	2096238	
<b>N</b>	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 25 m	YF2A14- 250UB3XLEAX	2095615	
	Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YG2A14- 020UB3XLEAX	2095766	
	Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YG2A14- 020VB3XLEAX	2095895	
	Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m	YG2A14- 050UB3XLEAX	2095767	

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Brief description	Туре	Part no.
 Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YG2A14- 050VB3XLEAX	2095897
Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 10 m	YG2A14- 100UB3XLEAX	2095768
 Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 10 m	YG2A14- 100VB3XLEAX	2095898
Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 15 m	YG2A14- 150UB3XLEAX	2095769
Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 15 m	YG2A14- 150VB3XLEAX	2096213
Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 20 m	YG2A14- 200UB3XLEAX	2095770
Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 20 m	YG2A14- 200VB3XLEAX	2096214
Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 25 m	YG2A14- 250UB3XLEAX	2095771

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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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Online data sheet

