

TBT-1AAZZ0253GZ

TEMPERATURE SENSORS





Ordering information

Туре	Part no.
TBT-1AAZZ0253GZ	6043038

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

Illustration may differ



Detailed technical data

Features

Measuring range	-50 °C +150 °C
Sensor element	Pt100
Output signal	4 mA 20 mA, 2-wire
Maximum ohmic load R _A	$R_A \le (L^+ - 10 \text{ V}) / 0.028 \text{ A [Ohm]}$

Mechanics/electronics

Process connection	Without process connection
Insertion length/diameter of probe	25 mm / 3 mm
Wetted parts	Stainless steel 1.4571
Housing material	Aluminum
Connection type	Cable gland M16 x 1.5 ¹⁾
Enclosure rating	IP65 ²⁾
Measuring current	0.3 mA 1 mA
Supply voltage	10 V DC 35 V DC
Maximum current consumption	Ca. 28 mA
Electrical safety	Protection class: III, insulation voltage: 100 V, reverse polarity protection of variant with measuring transducer 4 mA \dots 20 mA: L+ to M
Protection class III	✓
CE-conformity	2004/108/EC, EN 61326-2-3
RoHS certificate	√
Weight	Ca. 155 g (depending on configuration)
Initialization time	< 1 ms

¹⁾ The enclosure rating classes specified only apply while the thermometer is connected with female connectors that provide the corresponding enclosure rating.

Performance

Accuracy of sensor element	Class A according to IEC 60751
Transmitter accuracy	≤ ± 0.1 % of span

 $^{^{1)}}$ Depending on sensor configuration, according to IEC 60751.

²⁾ IP enclosure rating as per IEC 60529.

Transmitter linearity	≤ 0.1 % of span
Response time	Response time t_{50} : $\leq 5.8 \text{ s}^{-1}$ Response time t_{90} : $\leq 15.5 \text{ s}^{-1}$

 $^{^{1)}}$ Depending on sensor configuration, according to IEC 60751.

Ambient data

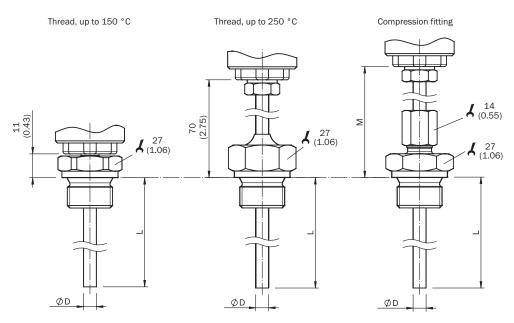
Ambient temperature	-40 °C +85 °C
Storage and transport temperature	-40 °C +60 °C
Shock resistance according to IEC 60751	500 g
Vibration resistance according to IEC 60751	3 g

Classifications

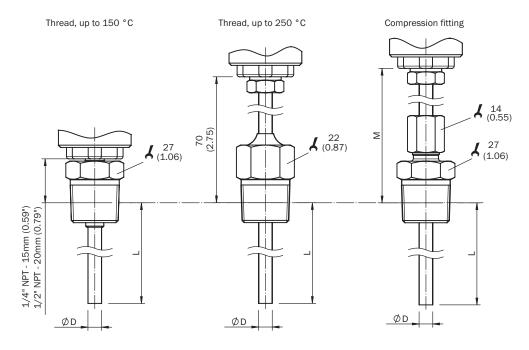
ECLASS 5.0	27200208
ECLASS 5.1.4	27200208
ECLASS 6.0	27200208
ECLASS 6.2	27200208
ECLASS 7.0	27200208
ECLASS 8.0	27200208
ECLASS 8.1	27200208
ECLASS 9.0	27200208
ECLASS 10.0	27200208
ECLASS 11.0	27200208
ECLASS 12.0	27200208
ETIM 5.0	EC002994
ETIM 6.0	EC002994
ETIM 7.0	EC002994
ETIM 8.0	EC002994
UNSPSC 16.0901	41112211

Dimensional drawing (Dimensions in mm (inch))

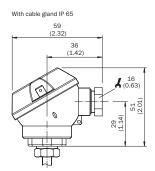
Dimensional drawing: zylindrical threads

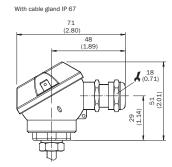


Dimensional drawing: conical threads



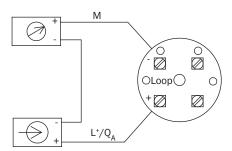
Dimensional drawing: housing, without process connection





Connection type

Cable entry M16 x 1.5, cable cross-section up to 0.75 mm2, output signal 4 mA \dots 20 mA



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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.

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For us, that is "Sensor Intelligence."

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