

# TBT-1AAPE0253GZ

TBT

**RESISTANCE THERMOMETER** 



## Ordering information

| Туре            | Part no. |
|-----------------|----------|
| TBT-1AAPE0253GZ | 6043090  |

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 <sub>A</sub> | $R_A \le (L^+ - 10 \text{ V}) / 0.028 \text{ A [Ohm]}$ |

#### Mechanics/electronics

| Process connection                 | Compression fitting G ½ B, PTFE ferrule  |
|------------------------------------|--|
| Insertion length/diameter of probe | 25 mm / 3 mm   |
| Wetted parts                       | Stainless steel 1.4571   |
| Pressure resistance                | Max. 40 bar with compression fitting with stainless steel ferrule included in scope of delivery  |
| Housing material                   | Aluminum   |
| Connection type                    | Cable gland M16 x 1.5 $^{1)}$  |
| Enclosure rating                   | IP65 <sup>2)</sup>   |
| 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                   | <b>√</b>   |
| Weight                             | Ca. 155 g (depending on configuration)   |
| Initialization time                | < 1 ms   |
|                                    |  |

<sup>1)</sup> 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 |
|----------------------------|--------------------------------|

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

<sup>&</sup>lt;sup>2)</sup> IP enclosure rating as per IEC 60529.

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

<sup>&</sup>lt;sup>1)</sup> Depending on sensor configuration, according to IEC 60751.

#### Ambient data

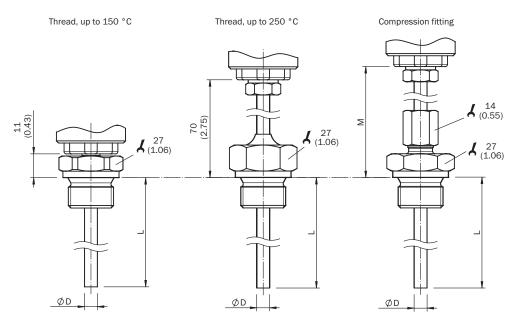
| Ambient temperature                         | -40 °C +85 °C |
|---|---------------|
| Storage and transport temperature           | -40 °C +60 °C |
| Shock resistance according to IEC 60751     | 500 g         |
| Vibration resistance according to IEC 60751 | 3 g           |

#### Classifications

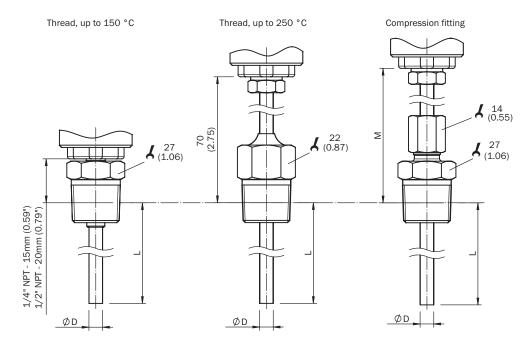
| eCl@ss 5.0     | 27200208 |
|----------------|----------|
| eCl@ss 5.1.4   | 27200208 |
| eCl@ss 6.0     | 27200208 |
| eCl@ss 6.2     | 27200208 |
| eCl@ss 7.0     | 27200208 |
| eCl@ss 8.0     | 27200208 |
| eCl@ss 8.1     | 27200208 |
| eCl@ss 9.0     | 27200208 |
| eCl@ss 10.0    | 27200208 |
| eCl@ss 11.0    | 27200208 |
| eCl@ss 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))

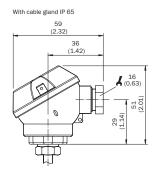
Dimensional drawing: zylindrical threads

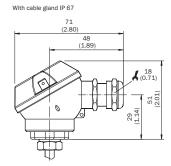


#### Dimensional drawing: conical threads



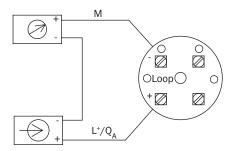
#### Dimensional drawing: housing, without process connection





# 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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