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**TEMPERATURE SENSORS** 



## TBT-1AASE1006GZ | TBT

TEMPERATURE SENSORS



## 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, stainless steel ferrule
Insertion length/diameter of probe	100 mm / 6 mm
Wetted parts	Stainless steel 1.4571
Pressure resistance	Max. 100 bar with supplied compression fitting with stainless steel ferrule
Housing material	Aluminum
Connection type	Cable gland M16 x 1.5 <sup>1)</sup>
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 20 mA: L+ to M $$
Protection class III	1
CE-conformity	2004/108/EC, EN 61326-2-3
RoHS certificate	✓
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. <sup>2)</sup> IP enclosure rating as per IEC 60529.

## Performance

Accuracy of sensor element Class A according to IEC 60751
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 $^{1)}$  Depending on sensor configuration, according to IEC 60751.

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

 $^{\mbox{\ 1)}}$  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

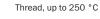
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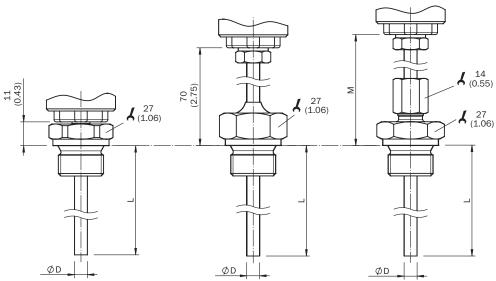
## Dimensional drawing (Dimensions in mm (inch))

## Dimensional drawing: zylindrical threads

#### Thread, up to 150 °C



Compression fitting



Dimensional drawing: conical threads

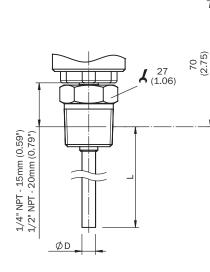
Thread, up to 150 °C

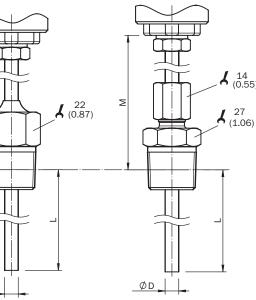
Thread, up to 250 °C

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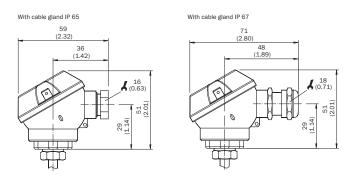
Compression fitting

**Å** <sup>14</sup> (0.55)



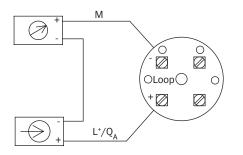


Dimensional drawing: housing, without process connection



## 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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