TBT
Well-proven temperature measurement

TEMPERATURE SENSORS

SICK
Sensor Intelligence.

Technical data overview

Measuring range	–50 °C +150 °C –50 °C +250 °C
Accuracy of sensor element	Class A according to IEC 60751
Accuracy of the opt. measuring transducer	≤ ± 0.1 % of span
Signal outputs and maximum ohmic load R_A	Pt100, 4-wire, 4 mA ... 20 mA, 2-wire ($R_A ≤ (L^+ – 10\ V) / 0.028\ A$ [Ohm])
Electrical connection	Cable gland M16 x 1.5, IP65 [1] Cable gland M16 x 1.5, IP67

[1] Enclosure rating IP per IEC 60529. The enclosure rating classes specified only apply when connected with female connectors that provide the corresponding enclosure rating.

Product description

The TBT is a universal purpose Pt100 resistance thermometer with a splash-proof die-cast aluminum housing for the temperature measurement in liquids and gases. It can be adapted to specific applications through its various available process connections and insertion lengths. The TBT is available with various connection threads, with or without compression fittings. Wetted parts are made from high-grade stainless steel 1.4571. Besides its Pt100 output signal, the TBT is available with an integrated transmitter with output signal 4 mA ... 20 mA.

At a glance

- Pt100 element, accuracy class A according to IEC 60751
- Measuring ranges –50 °C ... +150 °C and –50 °C ... +250 °C
- Wetted parts made from corrosion resistant stainless steel 1.4571
- Various mechanical adaptations and insertion lengths
- Pt100 (4-wire) or 4 mA ... 20 mA (2-wire)
- Cable gland M16 x 1.5

Your benefits

- Reliable operation through rugged design and high-quality materials
- Very good long-term stability, accuracy and linearity
- Quick and safe installation
- Convenient system integration even in narrow installation spaces
- Optimal solutions for individual requirements due to versatile configurability
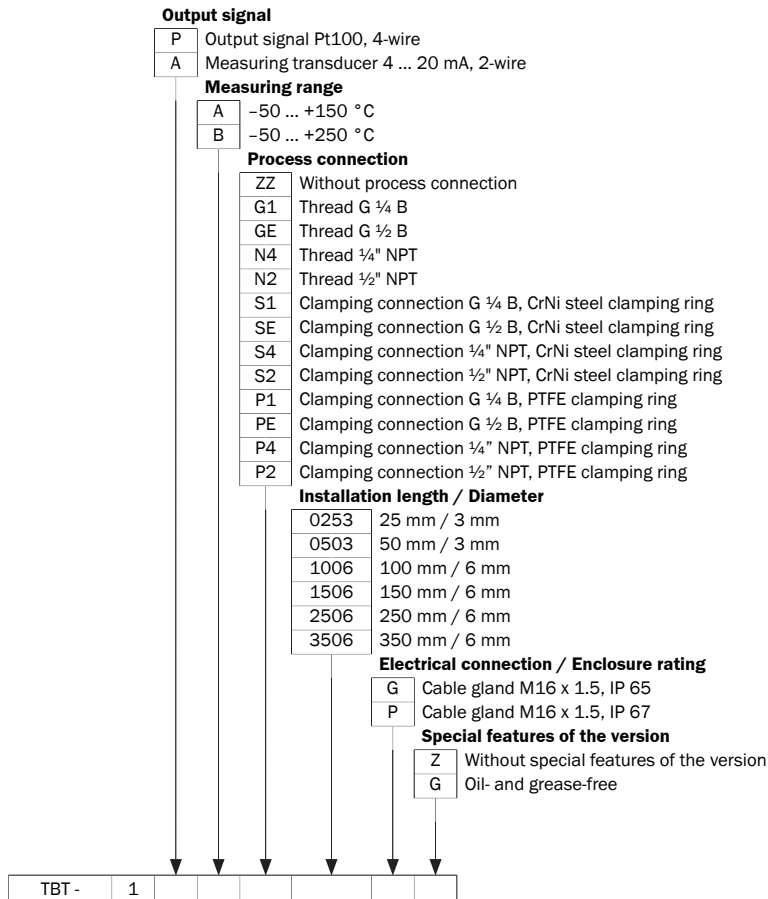
Fields of application

- Temperature measurement of liquids and gases in industrial applications
- Monitoring of operating conditions (e.g., temperature of cooling water or hydraulic fluids)
- Tank construction
- Plant engineering
- Heating systems

Type code

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

Type code

Output signal
P	Output signal Pt100, 4-wire
A	Measuring transducer 4 ... 20 mA, 2-wire

Measuring range
A	–50 ... +150 °C
B	–50 ... +250 °C

Process connection
ZZ	Without process connection
G1	Thread G ¼ B
GE	Thread G ½ B
N4	Thread ¼" NPT
N2	Thread ½" NPT
S1	Clamping connection G ¼ B, CrNi steel clamping ring
SE	Clamping connection G ½ B, CrNi steel clamping ring
S4	Clamping connection ¼" NPT, CrNi steel clamping ring
S2	Clamping connection ½" NPT, CrNi steel clamping ring
P1	Clamping connection G ¼ B, PTFE clamping ring
PE	Clamping connection G ½ B, PTFE clamping ring
P4	Clamping connection ¼" NPT, PTFE clamping ring
P2	Clamping connection ½" NPT, PTFE clamping ring

Installation length / Diameter
0253	25 mm / 3 mm
0503	50 mm / 3 mm
1006	100 mm / 6 mm
1506	150 mm / 6 mm
2506	250 mm / 6 mm
3506	350 mm / 6 mm

Electrical connection / Enclosure rating
G	Cable gland M16 x 1.5, IP 65
P	Cable gland M16 x 1.5, IP 67

Special features of the version
Z	Without special features of the version
G	Oil- and grease-free

TBT -	1						

Not all variants of the type code can be combined!

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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.

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."

WORLDWIDE PRESENCE:

Contacts and other locations –**www.sick.com**

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