



THTE

Hygienic and flexible: Temperature sensor with protection tube

RESISTANCE THERMOMETER

SICK
Sensor Intelligence.



Technical data overview

Temperature measuring range	-50 °C +150 °C -50 °C +250 °C
Accuracy of sensor element	Class A according to IEC 60751 ¹⁾
Accuracy of the opt. measuring transducer	± 0,25 K
Output signals	Pt100, 4-wire / 4 mA ... 20 mA, 2-wire (depending on type)
Maximum ohmic load R_A	$R_A \leq (L^+ - 10 V) / 0.023 A [Ohm]$
Electrical connection	M12 round connector x 1, 4-pin

¹⁾ Class B (measuring range -50 °C ... -30 °C).

Product description

The THTE temperature sensor is a hygienically-graded Pt100 resistance thermometer for applications in the food and beverage, pharmaceutical, cosmetics, and biotechnology industries. With the help of a thermowell that protrudes into the process, the sensor can be exchanged “dry“. That means that the vessel remains closed and potential hygienic risks are minimized. The thermowell is available in multiple insertion lengths and is installed at the vessel by common hygienically-graded process connections. High-grade stainless steel and a gap- and crevice-free design enable safe and clean processing. The THTE is well suited for CIP and SIP-processes. This enables safe hygienic operation in conjunction with optimized equipment availability.

Besides its direct electrical connection to the Pt100 element, the THTE is available with an integrated transmitter with 4 mA ... 20 mA output signal.

At a glance

- Pt100, accuracy class A (IEC 60751)
- Measuring ranges -50 °C ... +150 °C and -50 °C ... +250 °C
- Sensor probe spring-loaded in protective pipe
- Wetted parts: corrosion-resistant stainless steel 316L/1.4435, R_a ≤ 0.8 µm
- Hygienic process connections
- Pt100 (4-conductor) or 4 mA ... 20 mA (2-conductor)
- M12 round connector x 1

Your benefits

- The sensor can be exchanged without opening the process, providing high equipment availability and minimizing hygienic risks
- Safe hygienic operation: Wetted parts are made from high-grade stainless steel, hygienically-graded surface finish, and a gap- and crevice-free design
- Rugged: Connection housing is easy to clean and splash water proof
- Quick and safe installation
- Very good long-term stability, accuracy and linearity
- Quick response time
- Optimal solutions for individual requirements due to versatile configurability

Fields of application

- Hygienic temperature measurement in vessels and pipes
- Temperature monitoring and control in the food and beverage industry
- Temperature measurement in the cosmetics, pharmaceutical and biotechnology industries
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Type code

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

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	
D2	Clamp (DIN 32676) DN 10 ... 20
D4	Clamp (DIN 32676) DN 25 ... 40
D5	Clamp (DIN 32676) DN 50
C2	Clamp (ISO 2852) DN 12 ... 21.3
C3	Clamp (ISO 2852) DN 25 ... 38
C5	Clamp (ISO 2852) DN 40 ... 51
T5	Tri-Clamp ½", ¾"
T1	Tri-Clamp 1", 1 ½"
T2	Tri-Clamp 2"
VB	Varivent connection, form B, DN 10, DN15
VF	Varivent connection, form F
VN	Varivent connection, form N
51	Conical coupling (DIN 11851) DN 20 with grooved cap nut
52	Conical coupling (DIN 11851) DN 25 with grooved cap nut
53	Conical coupling (DIN 11851) DN 32 with grooved cap nut
54	Conical coupling (DIN 11851) DN 40 with grooved cap nut
55	Conical coupling (DIN 11851) DN 50 with grooved cap nut
ZZ	Replacement sensor without process connection
Installation length / Diameter	
0256	25 mm / 6 mm
0506	50 mm / 6 mm
0756	75 mm / 6 mm
1006	100 mm / 6 mm
1506	150 mm / 6 mm
2006	200 mm / 6 mm
0256	Replacement sensor for installation length / diameter: 25 mm / 6 mm
0506	Replacement sensor for installation length / diameter: 50 mm / 6 mm
0756	Replacement sensor for installation length / diameter: 75 mm / 6 mm
1006	Replacement sensor for installation length / diameter: 100 mm / 6 mm
1506	Replacement sensor for installation length / diameter: 150 mm / 6 mm
2006	Replacement sensor for installation length / diameter: 200 mm / 6 mm

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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