THTL

Perfect fit: Hygienic temperature measurement in pipes

TEMPERATURE SENSORS

SICK
Sensor Intelligence.

THTL
TEMPERATURE SENSORS

Technical data overview

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
Signal outputs and maximum ohmic load R_A	Pt100, 4-wire, 4 mA ... 20 mA, 2-wire ($R_A \leq (L^+ - 10\,V)$ / 0.023 A [Ohm])
Electrical connection	M12 round connector x 1, 4-pin

[1] Class B (measuring range –50 ° C ... –30 ° C).

Product description

Designed as an in-line thermometer, the THTL temperature sensor is the preferred solution for hygienic temperature measurement in pipes. Typical applications are in the food and beverage, pharmaceutical, cosmetics and biotechnology industries. The THTL has an in-line housing that is fitted into the pipe. The Pt100 sensor is located inside a thermowell that is placed in the medium flow. It can easily and quickly be replaced for maintenance or calibration. This ensures safe hygienic operation.

The design of the wetted parts made from corrosion-resistant stainless steel complies with hygienic standards and enables quick response times.

The THTL 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 THTL 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
- In-line housing for orbital welding in pipe
- Sensor probe spring-loaded in protective pipe
- Wetted parts: corrosion-resistant stainless steel 316L/1.4435, $R_a \leq 0.8$ µm
- Pt100 (4-conductor) or 4 mA ... 20 mA (2-conductor)
- M12 round connector x 1

Your benefits

- Engineered for installation in a pipe, the integrated design provides the optimal solution to this type of measurement
- 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 design with minimum of dead space
- Rugged: Connection housing is easy to clean and splash water proof
- Very good long-term stability, accuracy and linearity
- Quick response time
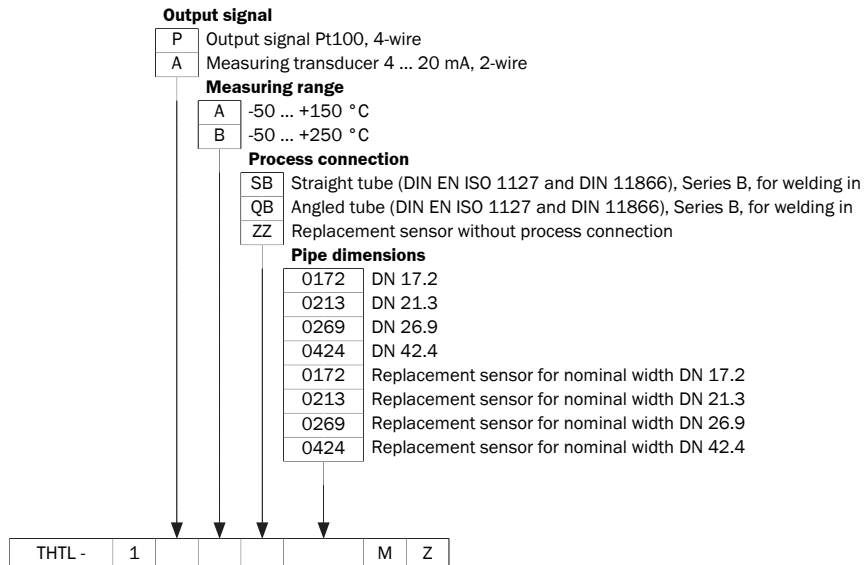- Optimal solutions for individual requirements due to versatile configurability
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Fields of application

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

Type code

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

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

SB	Straight tube (DIN EN ISO 1127 and DIN 11866), Series B, for welding in
QB	Angled tube (DIN EN ISO 1127 and DIN 11866), Series B, for welding in
ZZ	Replacement sensor without process connection

Pipe dimensions

0172	DN 17.2
0213	DN 21.3
0269	DN 26.9
0424	DN 42.4
0172	Replacement sensor for nominal width DN 17.2
0213	Replacement sensor for nominal width DN 21.3
0269	Replacement sensor for nominal width DN 26.9
0424	Replacement sensor for nominal width DN 42.4

THTL -	1					M	Z

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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