



DATA SHEET

THTE-1AA542006MZ

THTE
Temperature sensors



Illustration may differ

TEMPERATURE SENSORS

THTE-1AA542006MZ

ORDERING INFORMATION

Type	part no.
THTE-1AA542006MZ	6047641

Further device versions and accessories at www.sick.com/THTE

DETAILED TECHNICAL DATA

FEATURES

Measuring range	-50 °C ... +150 °C
Sensor element	Pt1000
Output signal	4 mA ... 20 mA, 2-wire
Maximum ohmic load R_A	$R_A \leq (U^+ - 10 \text{ V}) / 0.023 \text{ A [Ohm]}$

MECHANICS/ELECTRONICS

Communication interface	-
Process connection	Conical coupling (DIN 11851) DN 40 with union nut
Seal	Without seal
Insertion length/diameter of probe	200 mm / 6 mm
Wetted parts	Stainless steel 1.4435 / 316L, $R_a \leq 0.8 \mu\text{m}$
Maximum process pressure	$\leq 40 \text{ bar}^{1)}$
Pressure resistance	Max. 40 bar at room temperature
Housing material	Stainless steel (CrNi)
Connection type	M12 round connector x 1, 4-pin ²⁾
Enclosure rating	IP67 ³⁾ IP69 ³⁾
Supply voltage	15 V DC ... 35 V DC
Maximum current consumption	$\leq 30 \text{ mA}$
Electrical safety	Protection class: III, dielectric strength: 500 V AC, Reverse polarity protection: L^+ to M
Protection class III	✓

¹⁾ Pressure resistance at room temperature.

²⁾ The enclosure rating classes specified only apply while the thermometer is connected with female connectors that provide the corresponding enclosure rating.

³⁾ IP enclosure rating as per IEC 60529.

CE-conformity	2004/108/EC, EN 61326-2-3
Initialization time	Max. 4 s

¹⁾ Pressure resistance at room temperature.

²⁾ The enclosure rating classes specified only apply while the thermometer is connected with female connectors that provide the corresponding enclosure rating.

³⁾ IP enclosure rating as per IEC 60529.

PERFORMANCE

Accuracy of sensor element	Class A according to IEC 60751 ¹⁾
Response time	$t_{50} \leq 4.7 \text{ s}^{2)}$ $t_{90} \leq 12.2 \text{ s}^{2)}$

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

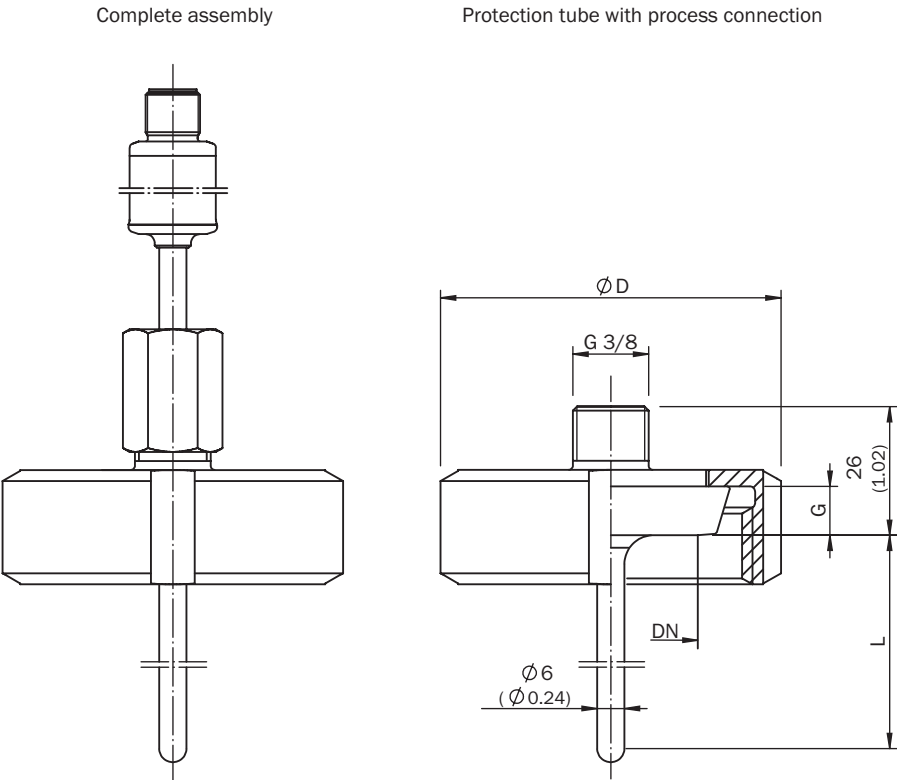
²⁾ Depending on sensor configuration, according to IEC 60751.

AMBIENT DATA

Ambient temperature	-40 °C ... +85 °C
Storage and transport temperature	-40 °C ... +85 °C
Shock resistance	50 g, 6ms (according to IEC 60068-2-27)
Relative humidity	$\leq 100 \%^{1)}$

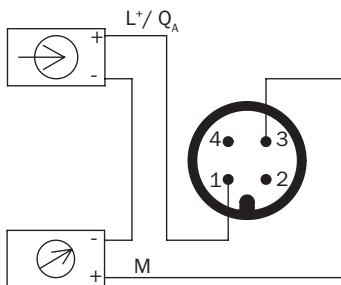
¹⁾ Condensation allowed.

DIMENSIONAL DRAWING



Design		Ø D	G
DIN 11851	DN 20	54.0 (2.13)	8.0 (0.31)
	DN 25	63.0 (2.48)	10.0 (0.39)
	DN 32	70.0 (2.76)	10.0 (0.39)
	DN 40	78.0 (3.07)	10.0 (0.39)
	DN 50	92.0 (3.62)	11.0 (0.43)

Dimensions in mm (inch)

APPLICATION**CONNECTION TYPE PLUG M12 X 1, OUTPUT SIGNAL 4 MA ... 20 MA**

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6047641



SICK AG
WALDKIRCH
GERMANY
SICK.COM

SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

SICK
Sensor Intelligence