



Temperature sensors Resistance thermometer

THTE-1AA541006MZ



Model Name > [THTE-1AA541006MZ](#)
Part No. > [6047639](#)



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 thermowell
- Wetted parts: Corrosion-resistant stainless steel 316L/1.4435, Ra 0.8 µm
- Hygienic process connections
- Pt100 (4-wire) or 4 mA ... 20 mA (2-wire)
- Round connector M12 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 easily cleaned 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



Features

Measuring range:	-50 °C ... 150 °C
Sensor element:	Pt100
Signal output and maximum ohmic load RA:	4 mA ... 20 mA, 2-wire ($RA \leq (L + 10 \text{ V}) / 0.023 \text{ A [Ohm]}$)

Performance

Accuracy of sensor element:	Class A according to IEC 60751
Transmitter accuracy:	$\leq \pm 0.2 \text{ \% of span}$
Transmitter linearity:	$\leq \pm 0.1 \text{ \% of span}$
Response time:	Response time t_{50} : $\leq 4.7 \text{ s}$ ¹⁾ response time t_{90} : $\leq 12.2 \text{ s}$ ¹⁾

¹⁾ Depending on sensor configuration, according to IEC 60751

Mechanics/electronics

Process connection:	Conical coupling (DIN 11851) DN 40 with union nut
Insertion length/diameter of probe:	100 mm/6 mm
Housing material:	Stainless steel 1.4571 (316Ti)

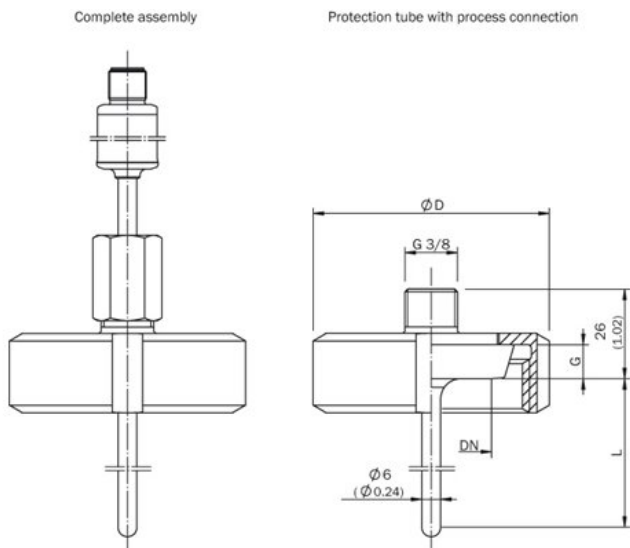
Wetted parts:	stainless steel 1.4435 (316L), $Ra \leq 0.8 \mu m$
Electrical connection/enclosure rating ¹⁾ :	Round connector M12 x 1, 4-pin/IP 68 and IP 69K
Electrical safety:	Dielectric strength: 500 V AC Protection class: III Reverse polarity protection: L+ towards M
Supply voltage:	10 V DC ... 35 V DC
Protection class III:	✓
CE-conformity:	2004/108/EC, EN 61326-2-3
Pressure resistance:	Max. 40 bar at room temperature
Maximum power consumption:	Ca. 30 mA

¹⁾ Enclosure rating IP per IEC 60529. The enclosure rating classes specified only apply while the pressure transmitter is connected with female connectors that provide the corresponding enclosure rating.

Ambient data

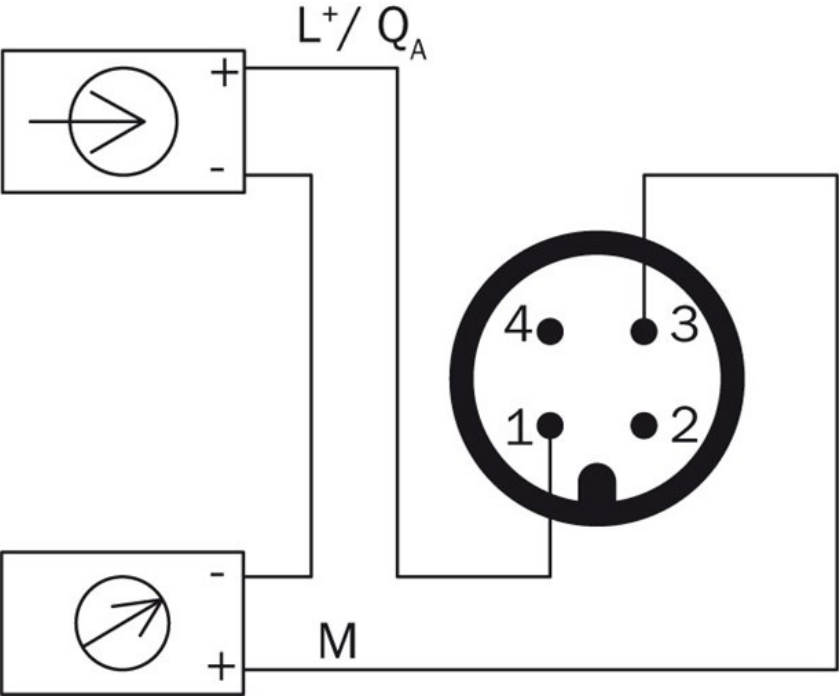
Ambient temperature:	-40 °C ... 85 °C
Storage and transport temperature:	-40 °C ... 85 °C
Vibration resistance according to IEC 60751:	3 g
Shock resistance:	According to IEC 60751
Relative humidity:	$\leq 95 \%$

Dimensional drawing process connection



All dimensions in mm (inch)

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)



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