



Temperature sensors  
Resistance thermometer

THTE-1AA541506MZ



**Model Name** > [THTE-1AA541506MZ](#)  
**Part No.** > [6047640](#)



**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 ≤ (L+ - 10 V)/0.023 A [Ohm]) |

**Performance**

|                             |   |
|-----------------------------|---|
| Accuracy of sensor element: | Class A according to IEC 60751  |
| Transmitter accuracy:       | ≤ ± 0.2 % of span   |
| Transmitter linearity:      | ≤ ± 0.1 % of span   |
| Response time:              | Response time t50: ≤ 4.7 s <sup>1)</sup><br>response time t90: ≤ 12.2 s |

<sup>1)</sup> 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: | 150 mm/6 mm                                       |
| Housing material:                   | Stainless steel 1.4571 (316Ti)                    |

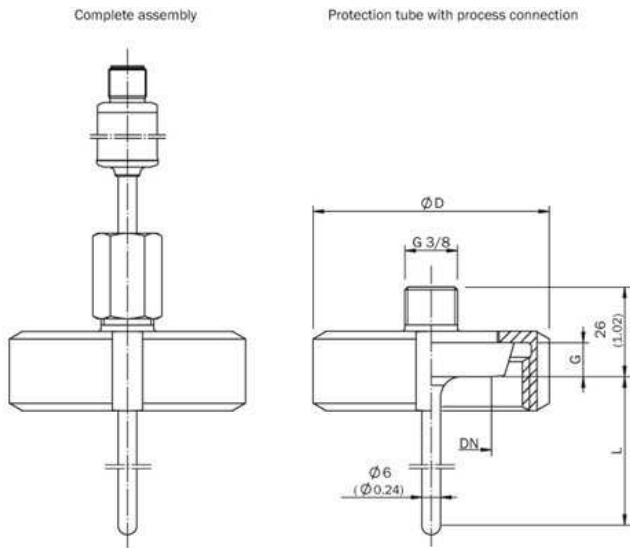
|  |   |
|--|---|
| Wetted parts:  | stainless steel 1.4435 (316L), Ra ≤ 0.8 μm  |
| Electrical connection/enclosure rating <sup>1)</sup> : | Round connector M12 x 1, 4-pin/IP 68 and IP 69K   |
| Electrical safety:                                     | Dielectric strength: 500 V AC<br>Protection class: III<br>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   |

<sup>1)</sup> 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:                           | ≤ 95 %                 |

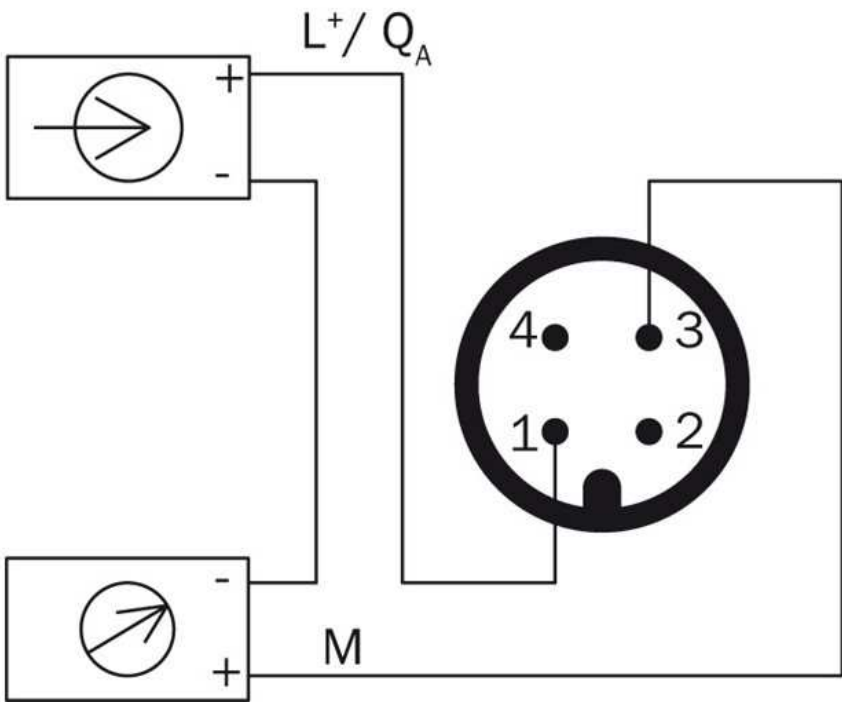
### Dimensional drawing process connection



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) |

Connection type



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