



Temperature sensors  
Resistance thermometer

THTL-1PAAB0424MZ



**Model Name** > [THTL-1PAAB0424MZ](#)  
**Part No.** > [6047645](#)



#### 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 thermowell
- Wetted parts: Corrosion-resistant
- stainless steel 316L/1.4435, Ra 0.8 µm
- Pt100 (4-wire) or 4 mA ... 20 mA (2-wire)
- Round connector M12 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 easily cleaned and splash water proof
- 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
Output signal:	Pt100, 4-wire

#### 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: ≤ 3.2 s <sup>1)</sup> response time t90: ≤ 7.3 s

<sup>1)</sup> Depending on sensor configuration, according to IEC 60751

#### Mechanics/electronics

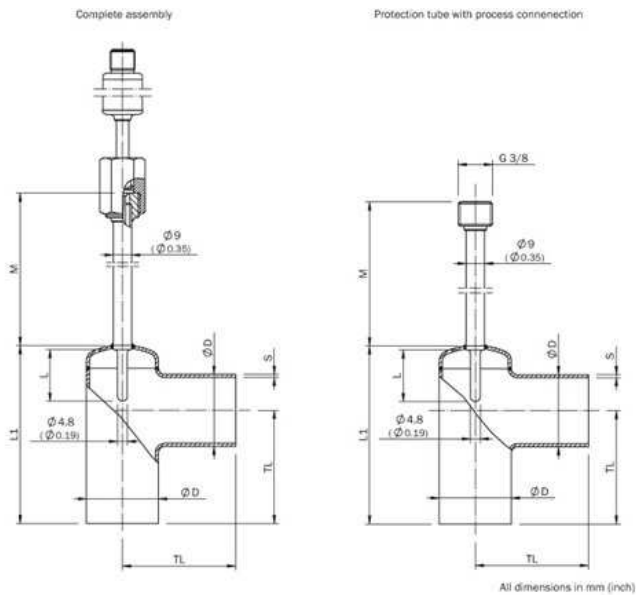
Process connection:	Angled pipe (DIN EN ISO 1127 and DIN 11866), row B, for welding
Nominal width:	NW 42.4
Housing material:	Stainless steel 1.4571 (316Ti)
Wetted parts:	stainless steel 1.4435 (316L), Ra ≤ 0.8 μm
Electrical connection/enclosure rating <sup>1)</sup> :	Round connector M12 x 1, 4-pin/IP 68 and IP 69K
Measuring current:	0.3 mA ... 1 mA
Electrical safety:	Dielectric strength: 500 V AC Protection class: III
Protection class III:	✓
Pressure resistance:	Max. 25 bar at room temperature

<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

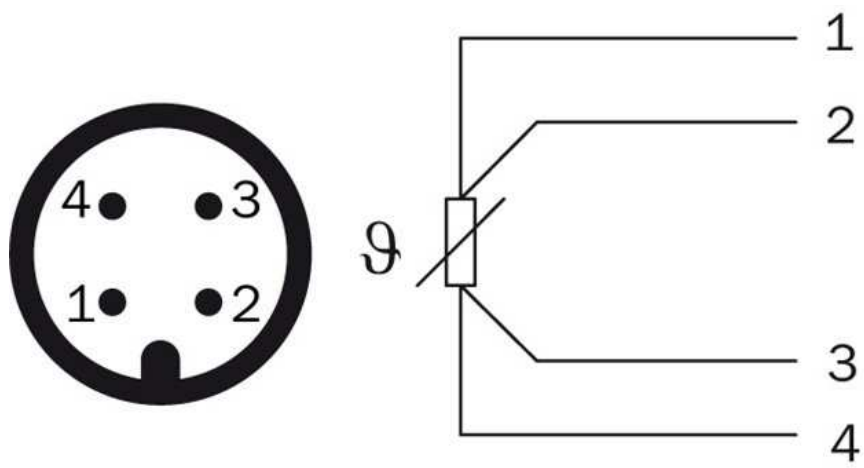
Ambient temperature:	-40 °C ... 85 °C
Storage and transport temperature:	-40 °C ... 85 °C
Vibration resistance according to IEC 60751:	3 g
Shock resistance:	According to IEC 60751
Relative humidity:	≤ 95 %

### Dimensional drawing process connection



All dimensions in mm (inch)

Design	Ø D	s	TL	L1	L	M
Angled pipe						
DN 17.2	17.2 (0.68)	1.6 (0.63)	34.0 (1.339)	55.0 (2.165)	16.0 (0.630)	41.0 (1.614)
DN 21.3	21.3 (0.84)	1.6 (0.63)	36.0 (1.417)	58.0 (2.283)	18.0 (0.709)	39.0 (1.535)
DN 26.9	26.9 (1.06)	1.6 (0.63)	55.0 (2.165)	81.0 (3.189)	30.0 (1.181)	27.0 (1.063)
DN 42.4	42.4 (1.17)	2.0 (0.79)	65.0 (2.559)	102.0 (4.016)	30.0 (1.181)	27.0 (1.063)



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