



**Insertion Resistance  
Thermometers with Plug-and-Socket  
Connection according to DIN 43650  
and Integrated Transmitter**



measuring  
•  
monitoring  
•  
analysing



- Economically-priced digital thermometers with optional plug-on display
- Compact construction with integrated transmitter  
4 - 20 mA output
- Measuring ranges:  
-200 ... +600 °C
- Material: stainless steel
- Connector DIN 43 650
- Good immunity to vibration



T2

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**Model:**  
TMA

## Insertion Resistance Thermometers

with Plug-and-Socket Connection according to DIN 43 650 and Integrated Transmitter



### Description

The screw-in temperature sensors with integrated transmitter are used with the plug-on display model AUF... as economical digital thermometers with analogue output (4-20 mA). The plug-on display is available with limit contact as an option.

The model TMA-... temperature sensors comprise a rugged sensor made of stainless steel with fixed G 1/2 or 1/2 NPT external thread. The bulbs have been designed for pressures up to 36 bar, depending on the process conditions.

A connector according to DIN 43 650 allows the transmitter to be easily connected electrically or retrofitted with the plug-on display.

The temperature sensor is equipped with a stand-off for process temperatures > 150 °C.

A Pt 100 temperature sensor according to IEC 751, category B is fitted in the measuring insert as standard.

### Transmitter

Temperature sensors with transmitter are used to transmit measuring signals noise-free over long distances.

The two-wire transmitter is integrated in the resistance thermometer and outputs a temperature linear output signal of 4-20 mA.

### Applications

- Heating installation, furnace and apparatus construction
- Machine construction and building installations
- Marine engineering
- General industrial

### Technical Details

#### Temperature sensor

Bulb:	stainless steel 1.4571
Thread:	stainless steel 1.4571, G 1/4, G 1/2, 1/2 NPT
Transmitter housing:	stainless steel
$p_{max}$ :	36 bar
Sensor element:	Pt 100/2-wire, category B
Connector:	DIN 43 650
Protection:	IP 65

#### Transmitter

Output:	4-20 mA
Supply voltage:	12...30 V <sub>DC</sub>
Min. measuring span:	50 K
Ambient temperature:	-40 to +85 °C
Measuring range:	-50...+200 °C (TMA-0/TMA-V) -200...+600 °C (TMA-H/TMA-A)

#### Plug-on display

Display:	4-segment, red LED Height of digits 7.62 mm
Indicating range:	-1999...+9999
Voltage drop:	≤ 5 V <sub>DC</sub>
Programming:	with 2 buttons, menu-assisted scaling of indicating range decimal point, damping, fault indication, switch point (optional)
Protection:	IP 65
Ambient temperature:	0...+60 °C

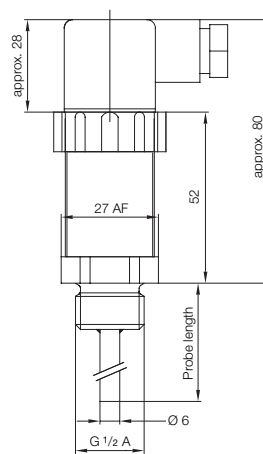
### Order Details Sensor (Example: TMA-064 03 1 05)

Model screw connection	Model relocatable screw conn.	Immersion length [mm]	Connection	Transmitter measuring range
TMA-06403..	TMA-V6403..	25 mm*	..1.. = G 1/4 ..2.. = G 1/2 ..8.. = 1/2 NPT	..05 = 0...50 °C ..10 = 0...100 °C ..12 = 0...120 °C ..xx = others**
TMA-06405..	TMA-V6405..	50 mm		
TMA-06410..	TMA-V6410..	100 mm		
TMA-06416..	TMA-V6416..	160 mm		
TMA-06420..	TMA-V6420..	200 mm		
TMA-064xx..	TMA-V64xx..	Spec. lengths**		
TMA-H6405..		50 mm	..1.. = G 1/4 ..2.. = G 1/2 ..8.. = 1/2 NPT	..24 = -200...+400 °C ..26 = -200...+600 °C ..20 = 0...+200 °C ..40 = 0...+400 °C ..60 = 0...+600 °C ..xx = others
TMA-H6410..		100 mm		
TMA-H6416..		160 mm		
TMA-H6420..		200 mm		
TMA-H64xx..		Spec. lengths**		

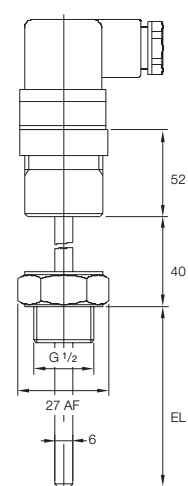
\* By temperature deduction limited accuracy

\*\*Please specify in writing special measuring range for transmitter (min. measuring span: 50 K) and special lengths for sensor

TMA-0  
Standard



TMA-H  
Stand-off



### Order Details for plug-on display

Model	Description
AUF-1000	Standard plug-on display
AUF-1001	Plug-on display with open collector switch