OCTOGON

MANUAL

TRMB

ROOM RESISTANCE THERMOMETER

Operating manual



Document	Version	Date	Applies to
Operating manual	V00x	11/2026	TRMB, Pt100 / Pt1000 / type K, transmitter as an option

This operating manual describes safety, connection without and with transmitter, mounting (hole pattern), technical data and dimensions of the TRMB room resistance thermometer.

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1 General

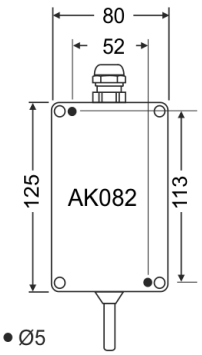
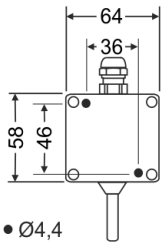
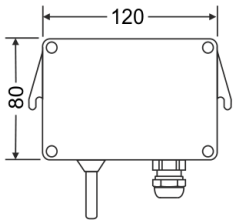
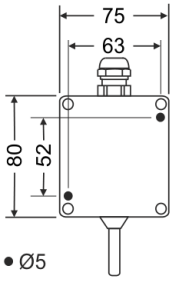
1.1 Safety instructions

Warning General: Comply with the safety instructions during mounting, start-up and operation of this resistance thermometer. Only staff with appropriate qualification may operate this resistance thermometer. Non-compliance of the safety instructions may cause serious injuries and / or damages. Before start-up, check the suitability of the resistance thermometer for this area of application. Please observe the technical data of this manual.

1.2 Device

Feature	Version
Design	room resistance thermometer
Sensor	1×/2× Pt100 · 1×/2× Pt1000 · 3× Pt100 · 1× type K · 1× other type
Output	resistance thermometer on terminals; with transmitter 4 ... 20 mA · 2 ... 10 V
Housing	cast aluminium AK082 · AK081 · AK061 · ABS 1503
Connection	screw terminals up to 2.5 mm²
Manufacturer type	RWT

2 Connection (without transmitter), hole pattern (mounting)

⑥ internal connection • mounting hole		Aluminum 80x125x57 	Aluminum 64x58x36 AK061 	ABS 120x80x58 1503 	Aluminum 75x80x57 AK081 
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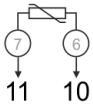
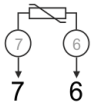
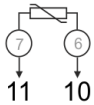
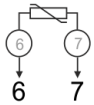
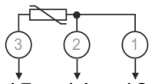
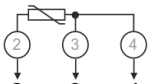
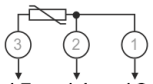
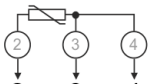
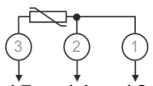
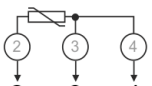
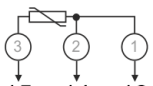
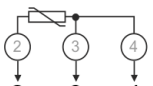
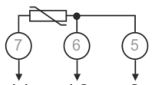
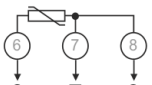
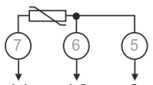
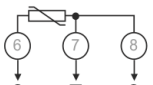
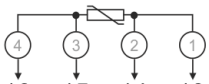
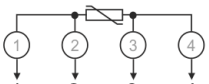
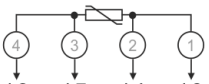
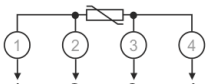
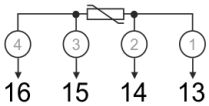
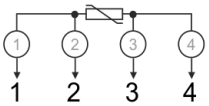
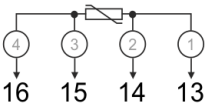
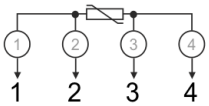
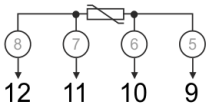
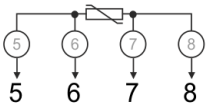
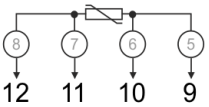
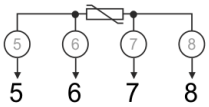
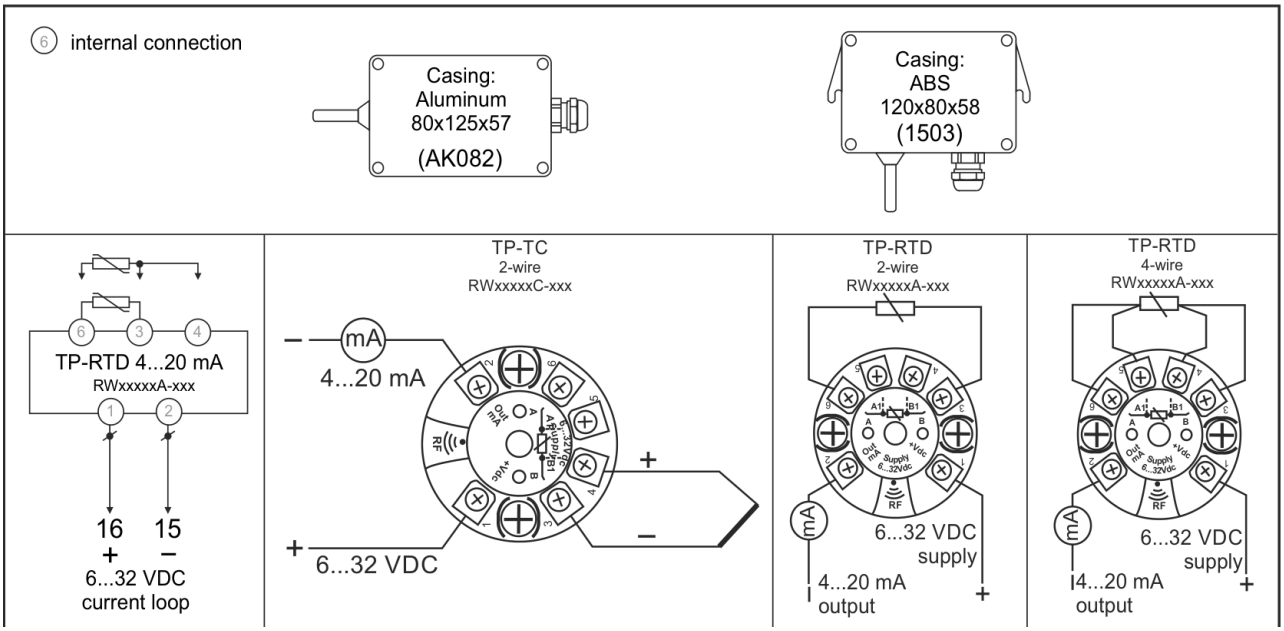
RW20... / RW30... RTD 2x Pt 100 / 1000 (2-wire)	out1				
	out2				
RW01... / RW11... RTD 1x Pt 100 / 1000 (3-wire)	out1				
RW21... / RW31... RTD 2x Pt 100 / 1000 (3-wire)	out1				
	out2				
RW02... / RW12... RTD 1x Pt 100 / 1000 (4-wire)	out1				
RW22... / RW32... RTD 2x Pt 100 / 1000 (4-wire)	out1				
	out2				

Terminal assignment per version and hole pattern of the four housings (dimensions in mm)

3 Connection (with transmitter)

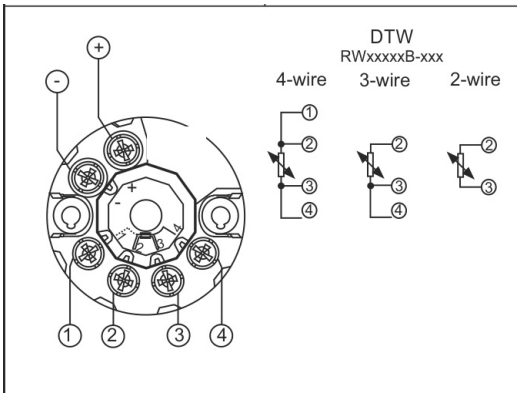
Information Observe the appropriate data sheet and manual for the selected transmitter!

3.1 Transmitters TP-RTD and TP-TC



Housings with transmitter (AK082, 1503) and connection TP-RTD / TP-TC

3.2 Transmitter DTW



Connection transmitter DTW (4-, 3-, 2-wire)

3.3 Connection (examples)

Output	from	to
4 ... 20 mA	TRMB terminal 16 (+)	power +
4 ... 20 mA	power –	controller –
4 ... 20 mA	controller +	TRMB terminal 15 (–)
2 ... 10 V	TRMB terminal 13 (–)	controller –
2 ... 10 V	TRMB terminal 14 (+)	controller +
2 ... 10 V	TRMB terminal 15 (–)	power –
2 ... 10 V	TRMB terminal 16 (+)	power +

The transmitters with 4 ... 20 mA are supplied out of current loop.

4 Technical data

4.1 Input and output

Feature	Value
Sensor	1×/2× Pt100 · 1×/2× Pt1000 · 3× Pt100
Thermocouple	1× type K · 1× other type
Connection	2-, 3- or 4-wire
Classes	A · B · AA (B1/3 DIN)
Range	-50 … +100 °C
Standard output	resistance thermometer on terminals
Output with transmitter	4 … 20 mA · 2 … 10 V (2)
Transmitter TH-RTD HART	0.3 % of span, 12 … 40 VDC
Transmitter TP-RTD · TP-TC	±0.1 % of full scale or 0.2 °C, 6 … 32 VDC
Transmitter DTW · DTW Ex	±0.1 % of full scale or 0.2 °C, 8 … 35 / 8 … 30 VDC

4.2 Supply and environment

Feature	Value
Supply	none without a transmitter
Supply with transmitter	6 … 40 VDC, depending on the type (2)
Ambient cast aluminium	-50 … +100 °C (1)
Ambient plastic	-50 … +85 °C (1)
Ambient with transmitter	-40 … +85 °C
Storage cast aluminium	-50 … +100 °C
Storage plastic	-50 … +85 °C
Protection	at least IP 66

4.3 Housings and performance

Feature	Value
Housing AK082	80 × 125 × 57 mm, cast alu, approx. 500 g
Housing AK081	75 × 80 × 57 mm, cast alu, approx. 400 g
Housing AK061	64 × 58 × 36 mm, cast alu, approx. 225 g
Housing 1503	120 × 80 × 58 mm, ABS, approx. 275 g
Colour aluminium	grey RAL 7032
Colour plastic	base black, cover light grey
Transmitter possible	in AK082 and 1503 only (3)
Cable gland	M12 · M16 · M20x1.5 as specified
Gland position	side A to F, as specified
Protection	at least IP 66

4.4 Mechanics

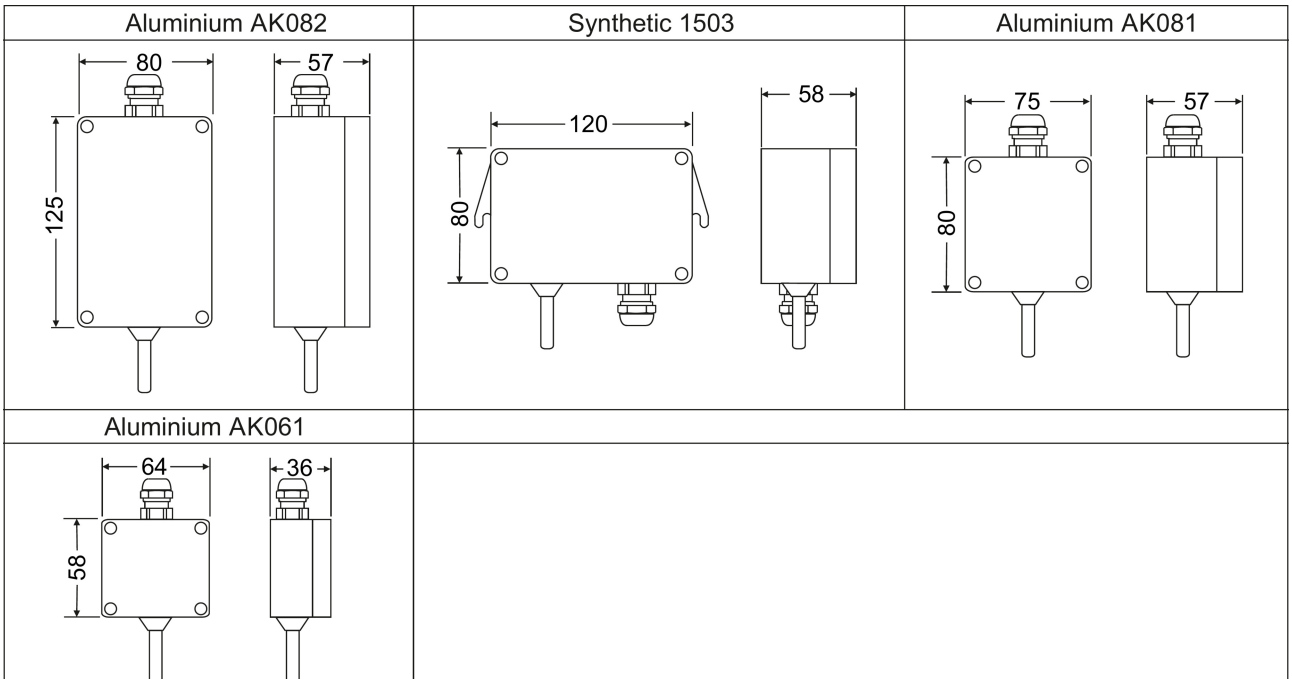
Feature	Value
Housing	cast aluminium alloy or ABS plastic
Probe material	stainless steel 1.4571 or Delrin POM
Electrical connection	screw terminals up to 2.5 mm²
Cable entry	gland as specified by the customer
Probe position	side A to F, as specified
Mounting position	any
Protection	at least IP 66

(1) The permitted ambient temperature depends on the housing and on the transmitter: cast aluminium -50…+100 °C, plastic -50…+85 °C, with a transmitter only -40…+85 °C in both cases.

(2) The transmitter is a product of its own with a data sheet of its own. TP-RTD, DTW, TH-RTD and DTW Ex work with resistance thermometers only, TP-TC with thermocouples only.

(3) The housings AK061 and AK081 are not intended for operation with transmitters.

5 Dimensions



Dimensions in mm.