

Room temperature measuring transducers, calibratable, with multi-range switching and active output

Calibratable room temperature measuring transducer **THERMASGARD® RTM 1** with continuous output, with or without optional display for displaying the actual temperature in an elegant housing made of plastic, with snap-on lid, base with 4-hole attachment for installation on vertically or horizontally installed in-wall flush boxes, with predetermined breaking point for on-wall cable entry, or in housing made of stainless steel (top and bottom part are of stainless steel, the lid is screwed on), vandal-proof version e.g. for schools, military barracks, and public buildings. This room temperature transmitter/residential room temperature sensor is used to detect/display temperatures in closed dry rooms, in apartments, in offices, supermarkets and business facilities.

RTM 1



TECHNICAL DATA

Power supply:	24 V AC / DC (± 10 %) for U variant 15...36 V DC for I variant, depending on working resistance, residual ripple stabilised ± 0.3 V
Working resistance:	$R_a \text{ (ohm)} = (U_b - 14 \text{ V}) / 0.02 \text{ A}$ for I variant
Load resistance:	$R_L > 5 \text{ kOhm}$ for U variant
Power consumption:	< 1.0 W / 24 V DC; < 2.2 VA / 24 V AC
Sensor:	Pt1000, DIN EN 60751, class B
Measuring ranges:	multi-range switching with 8 switchable measuring ranges, see table (other ranges optional) operating range -30...+70 °C with manual zero point correction (± 10 K)
Deviation, temperature:	typically ± 0.2 K at +25 °C
Output:	0 - 10 V or 4...20 mA
Ambient temperature:	measuring transducer -30...+70 °C
Connection type:	2- or 3-wire connection
Process connection:	by screws
Housing:	plastic, material ABS, colour pure white (similar to RAL 9010), (optional stainless steel) V2A (1.4301)
Dimensions:	85 x 85 x 27 mm (Baldur 1) 75 x 75 x 25 mm (stainless steel)
Electrical connection:	0.14 - 1.5 mm ² via terminal screws
Installation:	wall mounting or on in-wall flush box Ø55 mm, base with 4-hole for mounting on vertically or horizontally installed in-wall flush boxes for cable entry from the back, with predetermined breaking point for on-wall cable entry from top / bottom in case of plain on-wall installation
Humidity:	< 95 % RH, non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	IP 30 (according to EN 60 529)
Standards:	CE conformity, electromagnetic compatibility according to EN 61326, according to EMC directive 2014 / 30 / EU
Optional:	Two-line display with illumination , cutout 36 x 15 mm (W x H), for displaying the ACTUAL temperature and the internal diagnostics (sensor breakage, sensor short circuit) see beginning of this chapter!

Measuring ranges (adjustable)	DIP 1	DIP 2	DIP 3
-20 °C...+150 °C	ON	ON	ON
-50 °C... +50 °C	OFF	ON	ON
-20 °C... +80 °C	ON	OFF	ON
-30 °C... +60 °C	OFF	OFF	ON
0 °C... +40 °C	ON	ON	OFF
0 °C... +50 °C*	OFF	ON	OFF
0 °C...+100 °C	ON	OFF	OFF
0 °C...+150 °C	OFF	OFF	OFF

* (default / fixed with display)

Display and internal
diagnostics**RTM 1-U-Display**
RTM 1-I-Display

22.0 °C

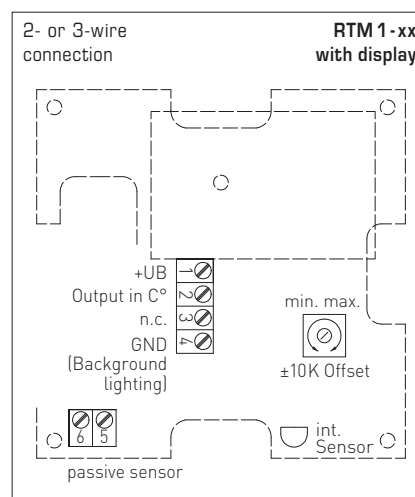
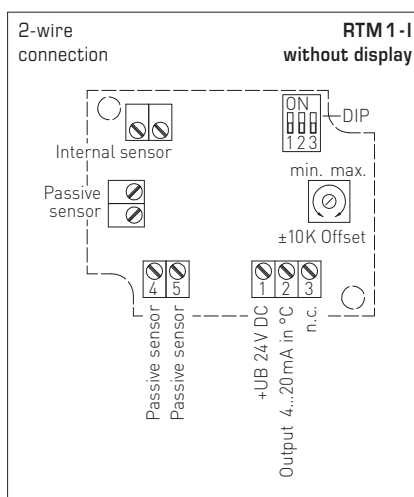
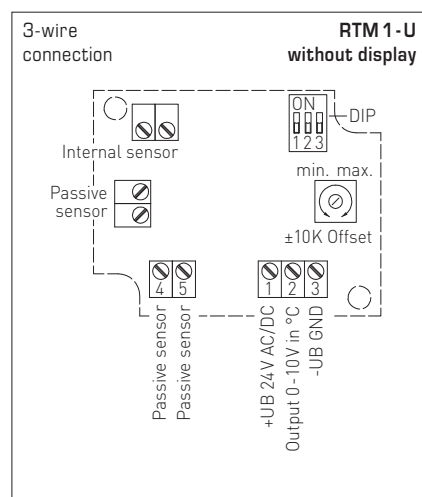
Standard

9999 °C
sErr 1

Sensor breakage

-999 °C
sErr 2

Sensor short circuit





S+S REGELTECHNIK

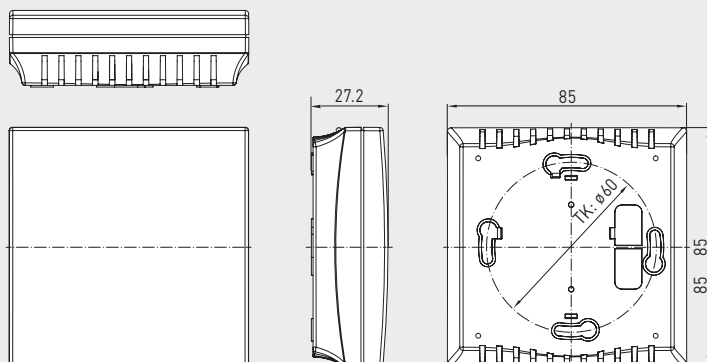
THERMASGARD® RTM 1

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Dimensional drawing

Housing **Baldur 1**

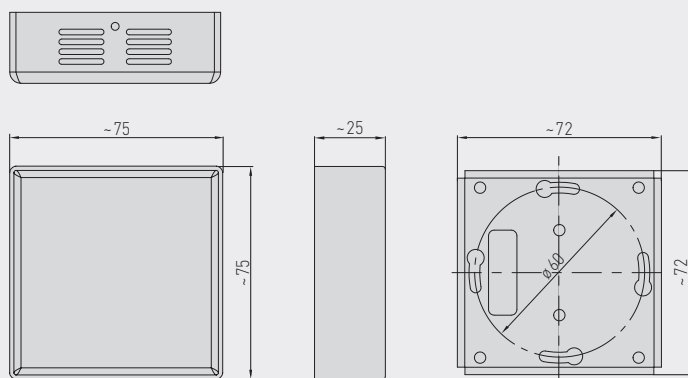


RTM 1
with display

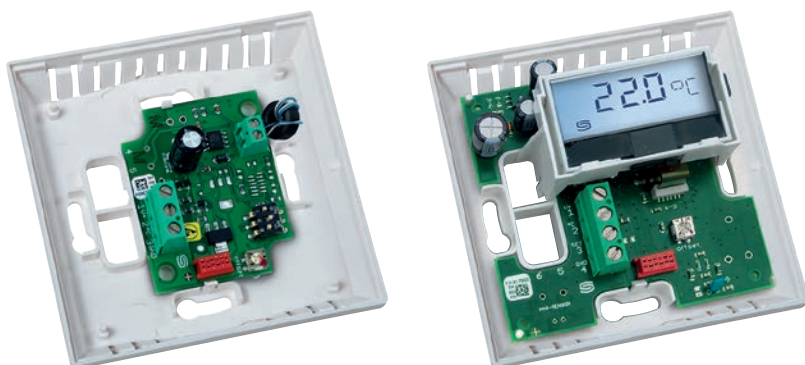


Dimensional drawing

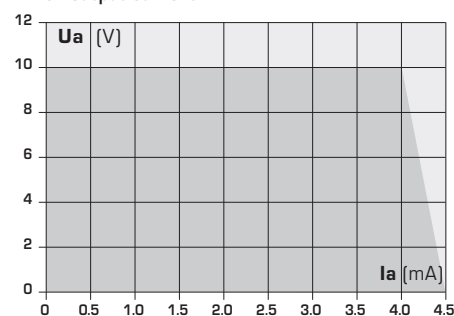
Housing **stainless steel**



RTM 1
(stainless steel)



Dependency of output voltage
on output current



THERMASGARD® RTM 1 Room temperature measuring transducers

Type / WG01	Sensor	Output	Features	Display	Item No.
RTM1-U					IP30, U-variant
RTM1-U	Pt1000	0 - 10 V	–		1101-41A1-0000-200
RTM1-U LCD	Pt1000	0 - 10 V	Display*	■	1101-41A1-2000-200
RTM1-U VA	Pt1000	0 - 10 V	Stainless steel housing V2A (1.4301)		1101-4151-0000-200
RTM1-I					IP30, I-variant
RTM1-I	Pt1000	4...20 mA	–		1101-41A2-0000-200
RTM1-I LCD	Pt1000	4...20 mA	Display*	■	1101-41A2-2000-200
RTM1-I VA	Pt1000	4...20 mA	Stainless steel housing V2A (1.4301)		1101-4152-0000-200
Extra charge:		Other ranges optional			
Note:		* When equipped with display, the measuring range of 0...+50 °C is fixed.			

