THERMASGARD® RTM 1

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

S+S REGELTECHNIK

Calibratable room temperature measuring transducer **THERM**ASGARD® **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 (ohm) = (U_b -14 V) / 0.02 A for I variant
Load resistance:	R_L > 5 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 mm² via terminal screws
Installation:	wall mounting or on in-wall flush box Ø 55 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**



Standard

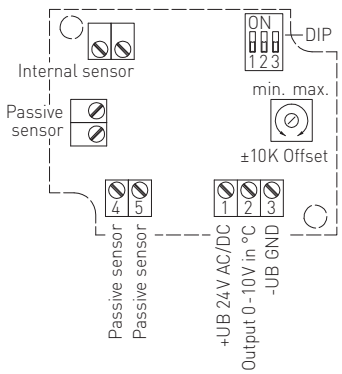


Sensor breakage

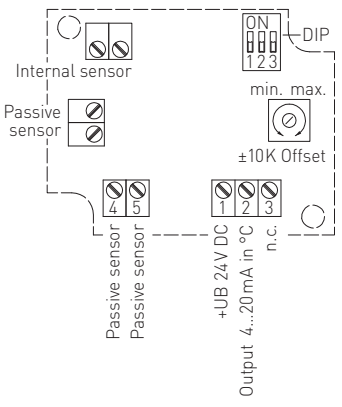


Sensor short circuit

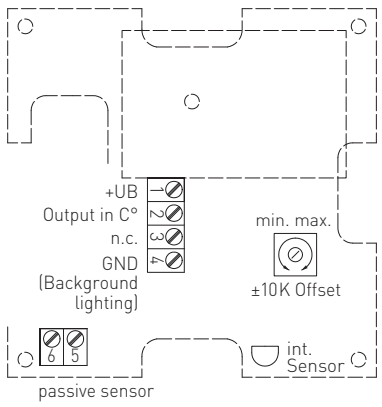
3-wire connection — **RTM 1 - U without display**



2-wire connection — **RTM 1 - I without display**

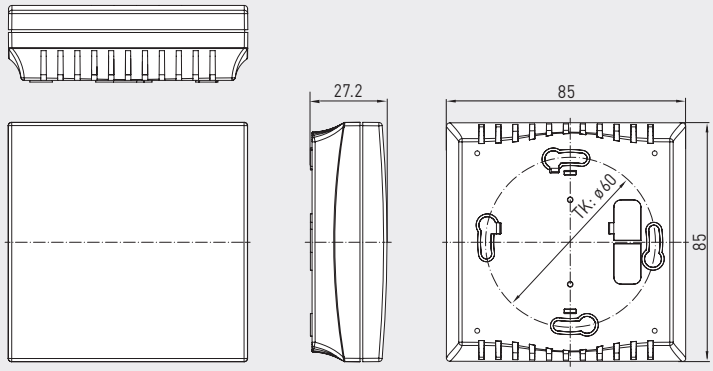


2- or 3-wire connection — **RTM 1 - xx with display**



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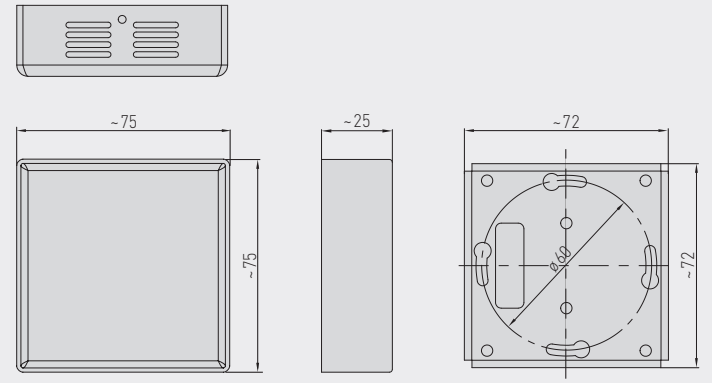
Dimensional drawing — Housing **Baldur 1**



RTM 1
with display



Dimensional drawing — Housing **stainless steel**



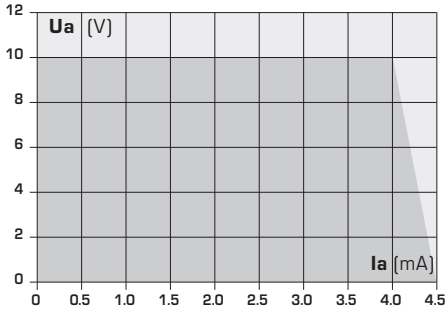
RTM 1
(stainless steel)







Dependency of output voltage on output current



THERMASGARD® RTM 1 Room temperature measuring transducers

Type / WG01	Sensor	Output	Features	Display	Item No.	Price
RTM1-U					**IP30, U-variant**	
RTM1-U	Pt1000	0-10 V	–		1101-41A1-0000-200	**76,59 €**
RTM1-U **LCD**	Pt1000	0-10 V	Display*	■	1101-41A1-2000-200	**120,81 €**
RTM1-U VA	Pt1000	0-10 V	Stainless steel housing **V2A** (1.4301)		1101-4151-0000-200	**199,25 €**
RTM1-I					**IP30, I-variant**	
RTM1-I	Pt1000	4...20 mA	–		1101-41A2-0000-200	**76,59 €**
RTM1-I **LCD**	Pt1000	4...20 mA	Display*	■	1101-41A2-2000-200	**120,81 €**
RTM1-I VA	Pt1000	4...20 mA	Stainless steel housing **V2A** (1.4301)		1101-4152-0000-200	**199,25 €**
Extra charge:	Other ranges optional					**25,40 €**
Note:	* When equipped with display, the measuring range of 0...+50 °C is fixed.					