

**Pendulum room temperature measuring transducers,
calibratable, with multi-range switching
and active output**

Calibratable resistance thermometer **THERMASGARD® RPTM 2** with eight switchable measuring ranges, continuous output, terminal box enclosure made of impact-resistant plastic and enclosure cover with quick-locking screws, with or without optional display (for displaying actual temperature). This room pendulum sensor is specifically designed for temperature detection in larger rooms and halls, as a dark radiation sensor for example. Due to the measuring method employed by this pendulum room temperature sensor in combination with its positioning in the room, excellent and room-representative measuring results are achieved. The globe thermometer RPTM2 determines the effective portion of active radiation or the effective radiant heat at the measured location. The globe temperature is determined to take heat radiation into consideration and to estimate thermal comfortableness (operative room temperature). The operative room temperature describes the coaction of heat radiation and heat convection (the ratio of globe temperature / air temperature is approx. 70 % / 30 %). These sensors are factory-calibrated. Adjustment / fine adjustment by the user is possible (range and zero point are adjustable).

TECHNICAL DATA

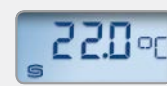
Power supply:	24 V AC / DC (± 10 %) for U variant 15...36 V DC for I variant, depending on working resistance, residual ripple stabilised ± 0.3 V
Working resistance:	$R_a(\text{ohm}) = (U_b - 14 \text{ V}) / 0.02 \text{ A}$ for I variant
Load resistance:	$R_L > 5 \text{ kOhm}$ for U variant
Power consumption:	< 1.0 VA / 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, 2 measuring ranges usable, see table (other ranges optional) $T_{\min} -5^\circ\text{C}$, $T_{\max} +60^\circ\text{C}$, with manual zero point correction (± 10 K)
Deviation, temperature:	± 0.2 K at +25 °C
Output:	0 - 10 V or 4...20 mA
Ambient temperature:	measuring transducer -5...+60 °C
Connection type:	2- or 3-wire connection
Enclosure:	plastic, UV-stabilised, material polyamide, 30 % glass-globe reinforced, with quick-locking screws (slotted / Phillips head combination), colour traffic white (similar to RAL 9016), enclosure cover for display is transparent!
Enclosure dimensions:	72 x 64 x 37.8 mm (Tyr 1 without display) 72 x 64 x 43.3 mm (Tyr 1 with display)
Cable gland:	M 16 x 1.5, including strain relief, exchangeable, max. inner diameter 10.4 mm
Electrical connection:	0.14 - 1.5 mm ² , via terminal screws
Connection cable:	PVC, H03VV-F, 2 x 0.5 mm ² , KL = approx. 1.5 m (other lengths optional)
Globe:	plastic, colour black, Ø = 50 mm
Humidity:	< 95 % r. H., non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	IP 65 (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 approx. 36 x 15 mm (W x H), for displaying the ACTUAL temperature and the internal diagnostics (measuring range exceeded, measuring range not reached, sensor breakage, sensor short circuit)



RPTM 2

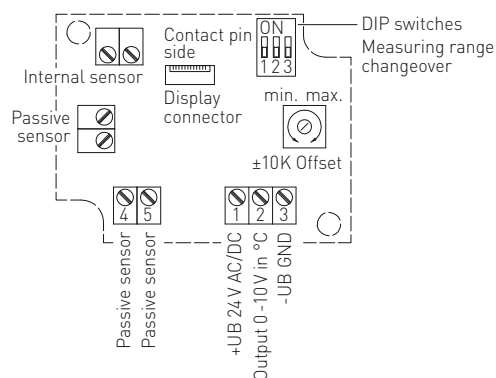
Display and internal diagnostics

THERMASGARD® Measuring transducer with display

	Standard
	Measuring range exceeded
	Measuring range not reached
	Sensor breakage
	Sensor short circuit

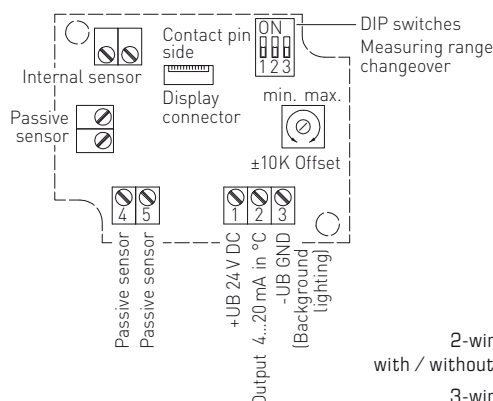
3-wire connection

RPTM 2-U



2- or 3-wire connection*

RPTM 2-I



Connection*:

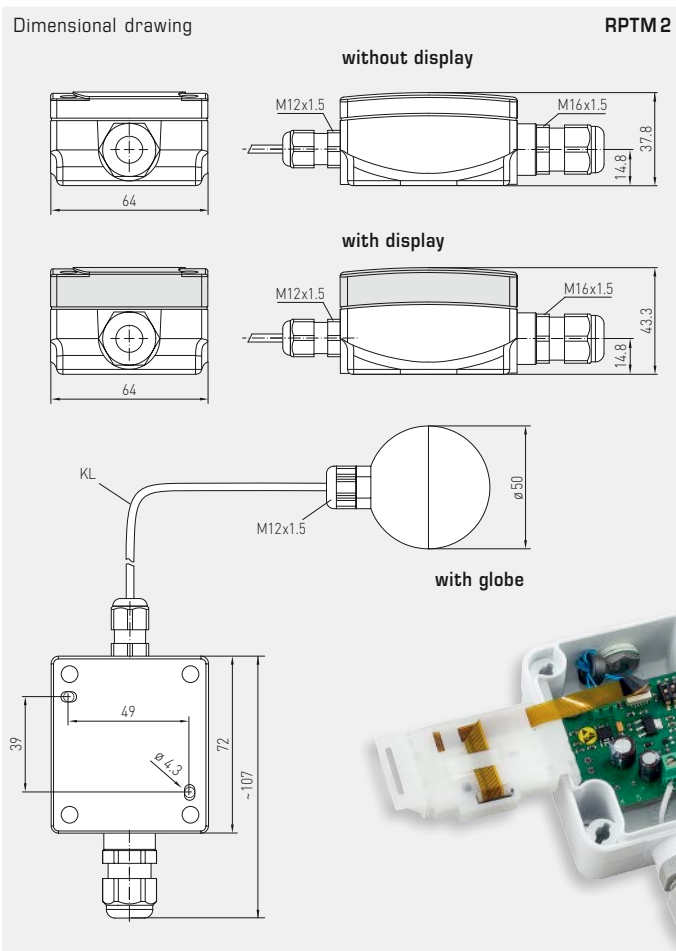
- 2-wire connection for devices with / without display (not illuminated)
- 3-wire connection for devices with illuminated display



S+S REGELTECHNIK

THERMASGARD® RPTM 2

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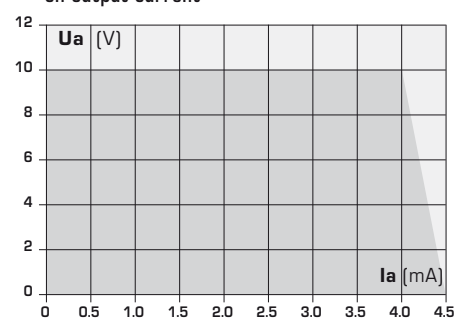


Measuring ranges (adjustable)	DIP 1	DIP 2	DIP 3
-20...+150 °C	ON	ON	ON
-50... +50 °C	OFF	ON	ON
-20... +80 °C	ON	OFF	ON
-30... +60 °C	OFF	OFF	ON
0... +40 °C	ON	ON	OFF
0... +50 °C	OFF	ON	OFF
0...+100 °C	ON	OFF	OFF
0...+150 °C	OFF	OFF	OFF

(observe max. permissible temperature ranges!)



Dependency of output voltage
on output current



THERMASGARD® RPTM 2 – Pendulum room temperature measuring transducers (with globe)

Type / WG01	Sensor	Output	Type	Item No.	Price
RPTM 2-I					IP65, I-variant
RPTM2-I	Pt1000	4...20 mA	Remote sensor	1101-1172-0219-910	128,85 €
RPTM 2-U					IP65, U-variant
RPTM2-U	Pt1000	0 - 10 V	Remote sensor	1101-1171-0219-910	128,85 €
Extra charge:					
Other ranges optional					21,42 €
Two-line display with illumination					42,02 €
2-wire connecting leads, per running meter (PVC)					on request