

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

RPTM 2

Calibratable room pendulum temperature measuring transducer (with globe) **THERMASGARD® RPTM 2** with eight switchable measuring ranges, continuous output in an impact-resistant plastic housing with quick-locking screws, optionally with /without display, cable sensor with a black plastic globe.

The pendulum sensor has been specially designed to detect the temperature in larger rooms or halls. The resistance thermometer (globe thermometer) achieves a very good, representative measurement result due to its positioning in the room. The dark radiation sensor determines the effective radiation heat at the measured location. This is relevant for calculating the thermal comfort (operative room temperature) taking into account the co-action of thermal radiation and thermal convection. The ratio of globe temperature / air temperature is approx. 70% / 30%. The sensor is factory-calibrated; an environmental precision adjustment by an expert is possible.






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 see table (other ranges optional) T_{min} -5 °C, T_{max} +60 °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 -5...+60 °C
Connection type:	2- or 3-wire connection
Housing:	plastic, UV-resistant, material polyamide, 30 % glass-globe reinforced, with quick-locking screws (slotted / Phillips head combination), colour traffic white (similar to RAL 9016), housing cover for display is transparent!
Housing dimensions:	72 x 64 x 37.8 mm (Tyr 1 without display) 72 x 64 x 43.3 mm (Tyr 1 with display)
Cable connection:	cable gland , plastic (M 16 x 1.5; with strain relief, exchangeable, max. inner diameter 10.4 mm) or M12 connector according to DIN EN 61076-2-101 (on request)
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 % RH, non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	IP 65 (according to EN 60 529) Housing tested, TÜV SÜD, Report No. 713139052 (Tyr 1)
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)



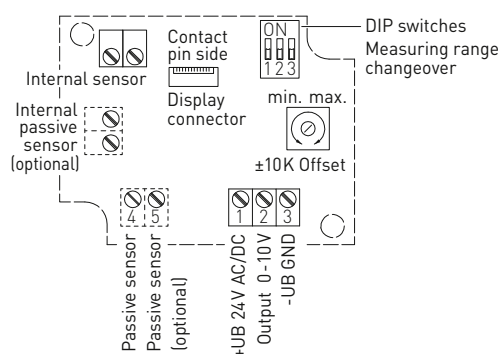
Display and internal diagnostics

THERMASGARD®
Measuring transducer with display

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

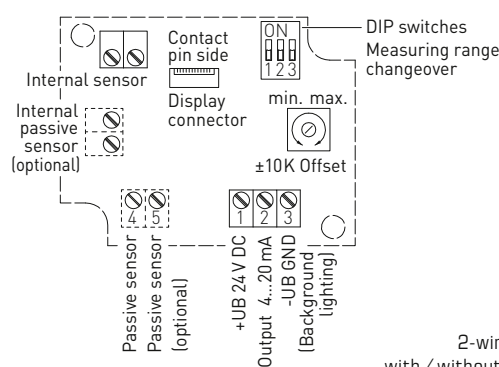
3-wire connection

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

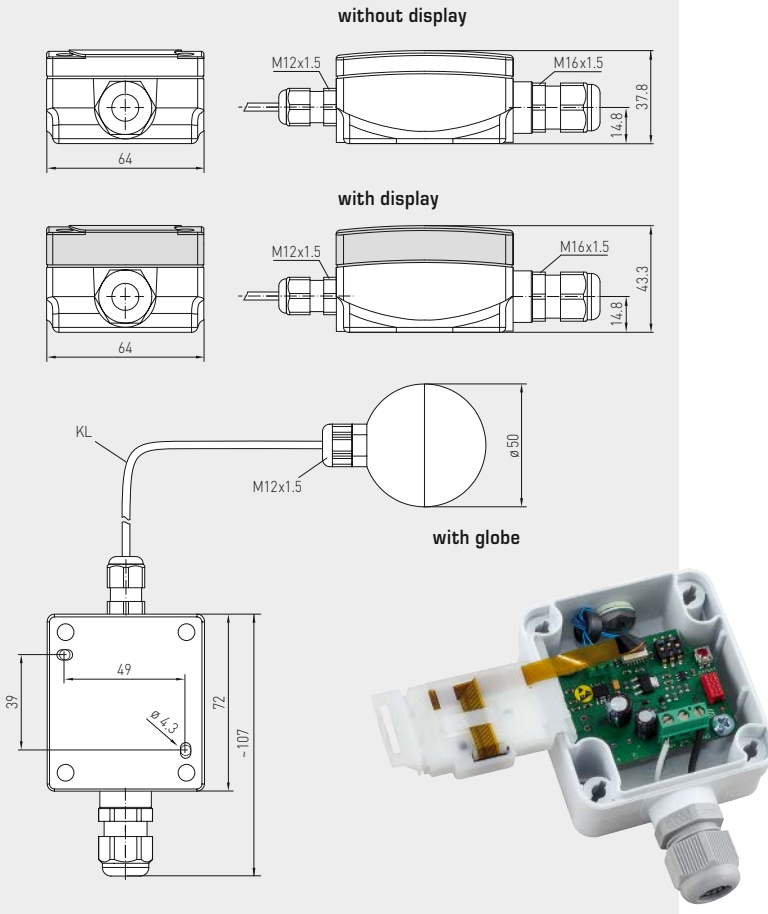
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Dimensional drawing

RPTM 2



RPTM 2
with display



M12 connector
(optional on request)

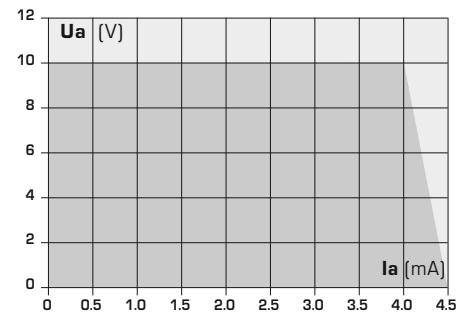


Measuring ranges (adjustable)	DIP 1	DIP 2	DIP 3
-20...+150 °C	ON	ON	ON
-50... +50 °C	OFF	ON	ON
-20... +80 °C	ON	OFF	ON
-30... +60 °C	OFF	OFF	ON
0... +40 °C	ON	ON	OFF
0... +50 °C (default)	OFF	ON	OFF
0...+100 °C	ON	OFF	OFF
0...+150 °C	OFF	OFF	OFF

(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	152,76 €
RPTM 2-U					IP65, U-variant
RPTM2-U	Pt1000	0-10 V	Remote sensor	1101-1171-0219-910	152,76 €
Extra charge:					25,40 €
Other ranges optional					49,83 €
Two-line display with illumination					on request
2-wire connecting leads, per running meter (PVC)					on request
Cable connection with M12 connector according to DIN EN 61076-2-101					on request