RPTM — Pendulum room temperature sensors, active

RPTM1   **RPTM2**

Summary

The RPTM1 and 2 temperature sensors are active analog room temperature sensors. It is used for temperature measuring in larger rooms, production halls, etc. Due to the measuring method applied with the pendulum room sensor in combination with its positioning within the room, excellent and room-representative measuring results are achieved. RPTM2- the pendulum room sensor (globe thermometer) determines the effective active portion of radiation or the radiant heat at the measured location.

Application

- **HVAC systems – temperature measuring and control in rooms, stores, halls etc.**
- **monitoring and recording of room temperature in large interiors**

Function

The sensor uses a Pt1000 sensing element, the signal of which is electronically processed and available at the screw terminals. Temperature range is -30 to +70 °C. Other temperature ranges are optional (see table). Do not exceed maximum environment temperature!

The units are intended for operating in a normal, chemically non-aggressive environment. They do not need any servicing or maintenance and shall be mounted so as the cable gland faces the floor, and the measuring ball is hanging in the room.
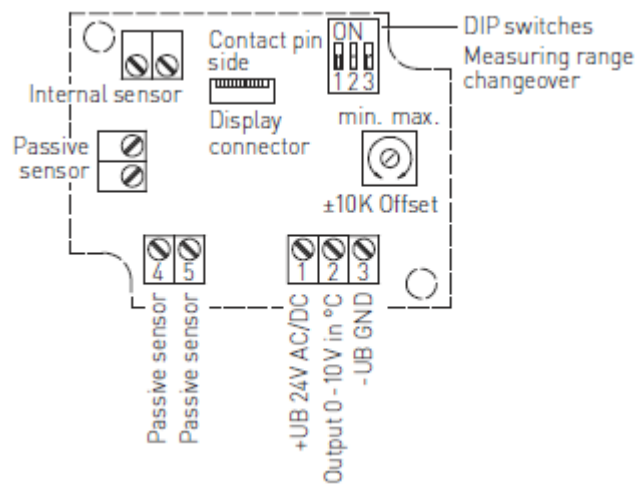
The sensors are mounted by 2 or 4 screws at any flat surface.

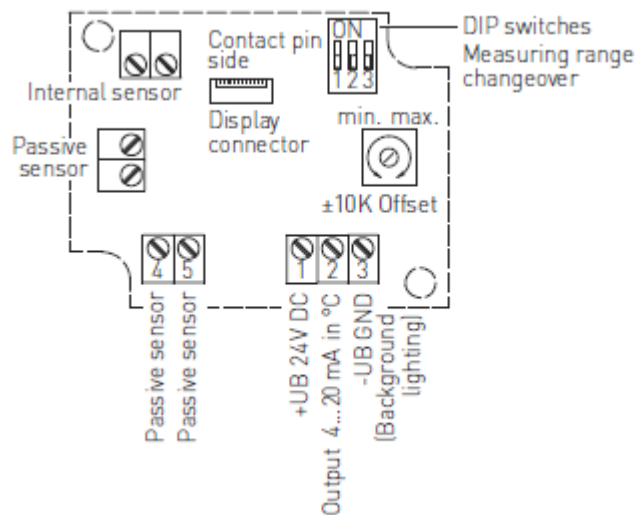|	
Power	24 V AC / DC ±10% for output 0 …10 V 15 …36 V DC for output 4 …20mA (depending on working resistance)
Measuring range	see table below
Load	-U: min. 5 kΩ -I: max. 500 Ω (at 24V; R=(U-14 V)/0.02 A)
Sensor	Pt1000, EN 60751, class B
Outside temperature	-30...70 °C
RPTM1 - Tube	stainless steel, 1,4571, V4A, $\varnothing$ 15 mm, nominal length NL=100 mm
RPTM2 - Globe	plastic, colour black, $\varnothing$ 50 mm

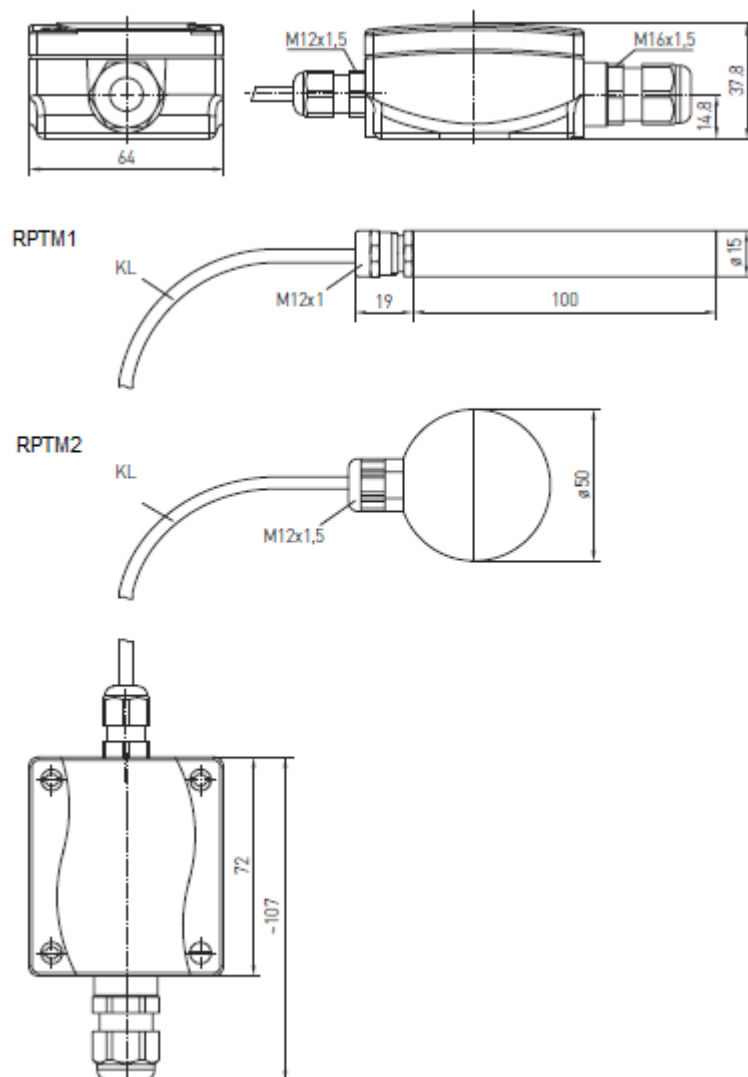|	
Sensor cable	PVC, LiYY, KL= 1.5 m, other lengths (3 m, 6 m etc.) on demand
Protection degree	IP65 (according to EN 60 529)
Protection class	III (according to EN 60730)
Electrical connections	Screw terminals for wires 0.14 ... 1.5 mm^2
Cover	polyamid, 30% glass fibre reinforced, with quick locking screws, colour white, similar to RAL 9010; cover for display is transparent
Cable gland	M16 x 1,5; strain relief
Humidity	max. 95 % r.H., non-precipitating air
Optional	illuminated single line display 36 x 15 mm
Dimensions	electronics: 72 x 64 x 37,8 mm without display 72 x 64 x 43,3 mm with display

Terminals

RPTM-U

RPTM-I

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

Sensor types

Type	Sensor	Output signal
RPTMxx-U	Pt 1000 (EN 60751, class B)	0...10 V
RPTMxx-I	Pt 1000 (EN 60751, class B)	4…20 mA

Optional:
RPTMxx- Display   illuminated single line display

Dimensions