THERMASGARD® RPTM2 - Modbus

**Pendulum room temperature measuring transducer,
(with globe), calibratable,
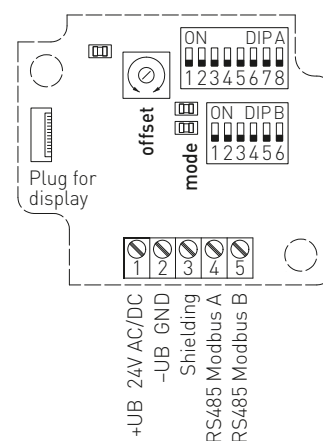with Modbus connection**

S+S REGELTECHNIK

Calibratable resistance thermometer with globe **THERMASGARD® RPTM 2 - Modbus** with Modbus connection, enclosure made from impact-resistant plastic with quick-locking screws, with /without optional display for displaying actual temperature.

The room pendulum sensor is specifically designed for temperature detection in larger rooms or halls, for example, as a dark radiation sensor. Due to the measuring method employed by this room pendulum sensor in combination with its positioning in the room, an excellent measuring result that is representative of the room is achieved. The globe thermometer 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 the degree of thermal comfort (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 % to 30 %). The sensors are factory-calibrated. Adjustment / fine adjustment by the user is possible (zero point offset is adjustable).

RPTM 2 - Modbus

TECHNICAL DATA

Voltage supply:	24 V AC (± 20 %) and 15...36 V DC
Power consumption:	< 1.0 VA / 24 V DC < 2.2 VA / 24 V AC
Sensor:	Pt1000, DIN EN 60751, class B
Measuring range:	−50...+150 °C T_{min} **−50 °C**, T_{max} **+ 80 °C**
Temperature deviation:	± 0.2 K at +25 °C
Zero point offset:	± 10 °C
Ambient temperature:	Measuring transducer −30...+70 °C
Medium:	clean air and non-aggressive, non-combustible gases
Error detection:	sensor breakage, sensor short circuit
Bus protocol:	Modbus (RTU mode), address range 0...**247** selectable
Signal filtering:	0.3 s / 1 s / 10 s
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:	2x M 12 x 1.5 (Y-adapter); with strain relief, exchangeable, max. inner diameter 6 mm
Connection cable:	PVC, H03VV-F, 2 x 0.5 mm², cable length (KL) = approx. 1.5 m (other lengths optional)
Globe:	plastic, colour black, Ø = 50 mm
Permissible air 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,** programmable, cutout approx. 36 x 15 mm (W x H), for displaying the actual temperature or an individually programmable display value (The Modbus interface allows the display to be individually configured in the 7-segment area and in the dot-matrix area.)
ACCESSORIES	see table
MODBUS - Y	**Y-adapter** for cable gland M16x1.5 (on 2x M12x1.5), plastic (included in the scope of delivery)

Schematic diagram **THERMASGARD® MODBUS**

DIP A: Bus address
DIP B: Bus parameters (Baud rate, parity ...)
Telegram indicator Reception (LED green) Error (LED red)
LED (internal status)
Offset correction temperature: ± 10°C
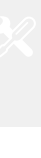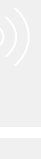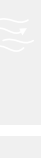Plug for display contact is on the right side
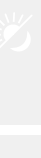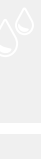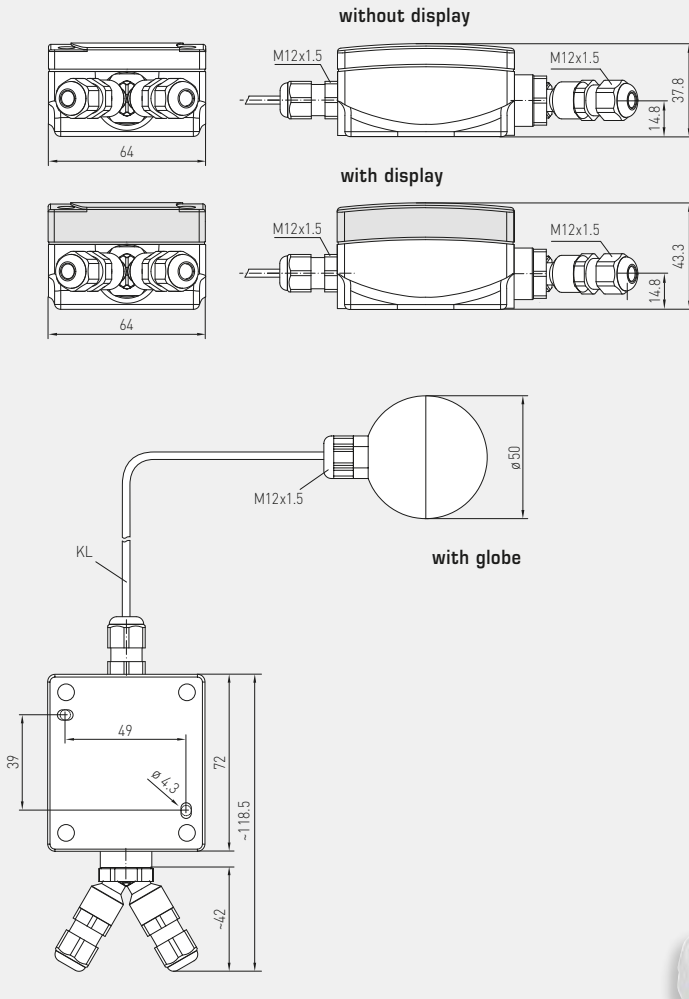
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with Modbus connection

Dimensional drawing   **RPTM 1- Modbus**

without display

M12x1.5   M12x1.5

37.8
14.8
64

with display

M12x1.5   M12x1.5

43.3
14.8
64

M12x1.5

ø 50

with globe

KL

49
39
ø 4.3
72
~118.5
~42

RPTM 2 - Modbus
with display

THERMASGARD® RPTM 2 - Modbus – Pendulum room temperature measuring transducer (with globe)

Type / WG01	Sensor	Output	Type	Display	Item No.	Price
RPTM 2 - Modbus						
RPTM2-MODBUS	Pt1000	Modbus	Remote sensor		1101-1276-0210-000	
RPTM2-MODBUS DISPLAY	Pt1000	Modbus	Remote sensor	■	1101-1276-2210-000	
Extra charge:	per running metre of connecting lead (**PVC**)					on request

Accessories		
KA-2	**Modbus communication adapter** with USB/RS485 interface for system connection or/and as an active bus termination resistance	on request