

Pendulum room temperature measuring transducers, calibratable, with multi-range switching and active output (Automatic Output Switching)

Patented quality product (patent no. DE 10 2015 015 941 B4)

Calibratable room pendulum temperature measuring transducer (with sleeve) **THERMASGARD® RPTM 1**, with eight switchable measuring ranges (max. -20...+150 °C), active output, cable sensor with stainless steel sleeve and plastic sinter filter (exchangeable), housing made from impact-resistant plastic with quick-release screws, with cable gland or M12 connector according to DIN EN 61076-2-101, optionally with /without display. The standard display can be changed from SI [°C] to imperial [°F] units via DIP switch.

The measuring transducer converts the measured variables into a standard signal of 0- 10 V or 4...20 mA. The unit with **Automatic Output Switching** (AOS variant) detects the required output type and automatically switches to U or I output. Alternatively, a **type version** (2-wire I variant) with 2-wire connection and I output is available.

The pendulum sensor has been specially designed to detect the temperature in larger rooms or halls. The resistance thermometer achieves a very good representative measurement result due to its positioning in the room. The sensor is factory-calibrated; an environmental precision adjustment by an expert is possible.

RPTM 1
with cable gland



TECHNICAL DATA

RPTM 1 - I

Power supply:	15...36 V DC, depending on working resistance, residual ripple stabilised ± 0.3 V
Working resistance:	R_b (Ohm) = $(U_b - 14 V) / 0.02 A$
Connection type:	2-wire connection
Output:	4...20 mA

RPTM 1 - A (AOS)

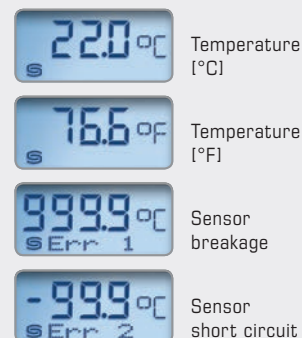
Power supply:	24 V AC / DC (± 10%)
Load resistance:	$R_L = 25...450$ Ohm with AOS I variant $R_L > 15$ kOhm with AOS U variant
Connection type:	3-wire connection
Output:	automatic 0-10 V / 4...20 mA (via Automatic Output Switching – the unit detects the required output type and automatically switches to U or I output)

GENERAL

Power consumption:	< 1.0 VA / 24 V DC; < 2.2 VA / 24 V AC
System of units:	SI (default) or Imperial (switchable via DIP switch)
Data points:	Temperature [°C] [°F]
Measuring ranges:	multi-range switching with 8 measuring ranges , see table (other ranges optional) T_{min} -5 °C, T_{max} +60 °C, with manual zero point correction (± 10 K)
Sensor:	Pt1000, DIN EN 60751, class B
Accuracy, temperature:	typically ± 0.2 K at +25 °C
Sensor protection:	plastic sinter filter, Ø 16 mm, L = 35 mm, exchangeable (optional metal sinter filter, Ø 16 mm, L = 32 mm)
Protective tube:	stainless steel V2A (1.4301), Ø = 16 mm, NL = 142 mm
Sensor cable:	PVC, H03VV-F, 2 x 0.5 mm ² , KL = approx. 1.5 m (other lengths optional)
Housing:	plastic, UV-resistant, material polyamide, 30% glass-globe reinforced, with quick-release screws (slotted / Phillips head combination), colour traffic white (similar to RAL 9016), cover for display is transparent!
Housing dimension:	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 (male, 5-pin, A-code) according to DIN EN 61076-2-101
Electrical connection:	0.14 - 1.5 mm ² , via terminal screws
Ambient temperature:	measuring transducer -30...+70 °C
Permissible humidity:	< 95% RH, non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	IP65 (according to EN 60 529) Housing tested, TÜV SÜD, Report No.713139052 (Tyr 1)
Standards:	CE conformity 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 (sensor breakage, sensor short circuit)

ACCESSORIES (see table)

Display and internal diagnostics
THERMASGARD®
Measuring transducer with display





NEW

S+S REGELTECHNIK

THERMASGARD® RPTM 1

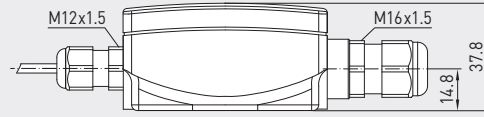
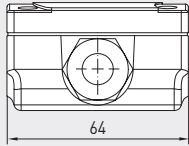
Pendulum room temperature measuring transducers, calibratable, with multi-range switching and active output (Automatic Output Switching)



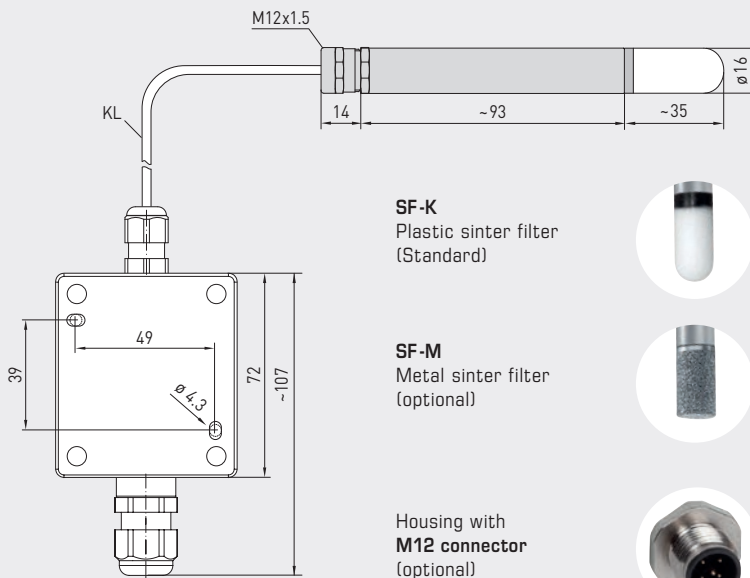
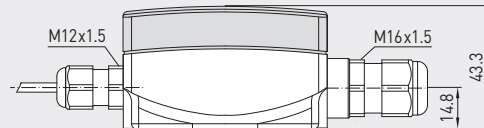
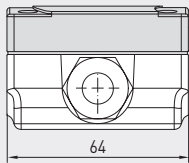
Dimensional drawing [mm]

RPTM 1

without display



with display



SF-K
Plastic sinter filter (Standard)



SF-M
Metal sinter filter (optional)



Housing with **M12 connector** (optional)



RPTM 1 with cable gland and display



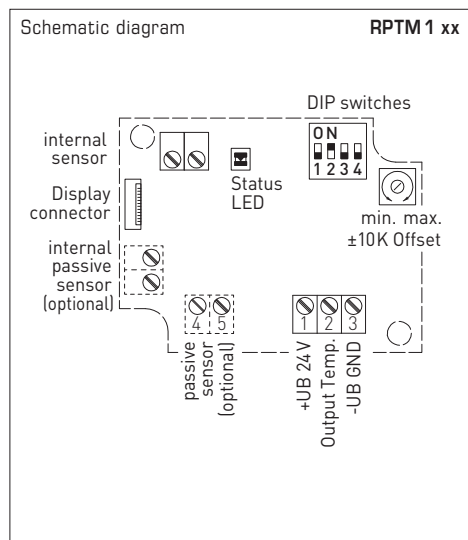
Automatic detection and switching to standard signal 0...10V or 4...20mA



AOS-PATENTED

AUTOMATIC OUTPUT SWITCHING

Pendulum room temperature measuring transducers, calibratable, with multi-range switching and active output (Automatic Output Switching)



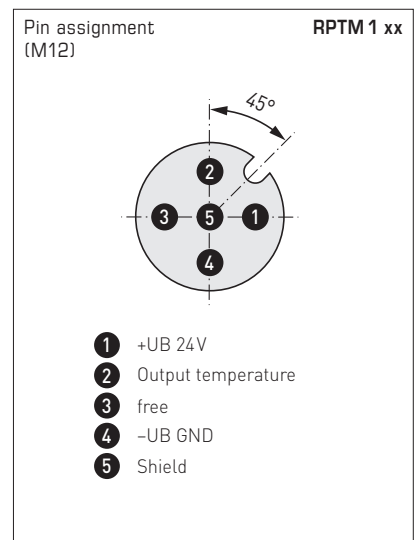
2-wire connection* **RPTM 1 - I**

- 1 +UB 24V DC
- 2 Output Temp. 4...20mA
- 3 -UB GND (optional for backlighting)

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

3-wire connection (AOS) **RPTM 1 - A**

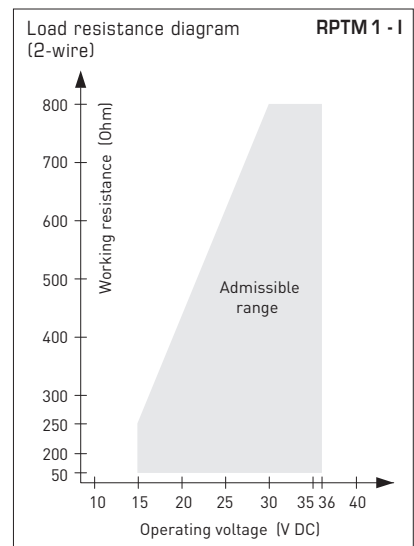
- 1 +UB 24V AC/DC
- 2 Output Temp. 0-10V / 4...20mA
- 3 -UB GND



Measuring ranges [°C]	DIP 1	DIP 2	DIP 3	Measuring ranges [°F]
-20...+150 °C	ON	ON	ON	-4...+302 °F
-50... +50 °C	OFF	ON	ON	-58...+122 °F
-20... +80 °C	ON	OFF	ON	-4...+176 °F
-30... +60 °C	OFF	OFF	ON	-22...+140 °F
0... +40 °C	ON	ON	OFF	32...+104 °F
0... +50 °C*	OFF	ON	OFF	32...+122 °F*
0...+100 °C	ON	OFF	OFF	32...+212 °F
0...+150 °C	OFF	OFF	OFF	32...+302 °F

Display [°C] / [°F]	DIP 4
Imperial [°F]	ON
SI (default) [°C]	OFF

Display switchable
Temperature [°C] → [°F]
The display value depends on the set unit system (**DIP 4**).



For further technical information, see the operating instructions





NEW

Pendulum room temperature measuring transducers, calibratable, with multi-range switching and active output (Automatic Output Switching)

RPTM 1-Q with M12 connector (on request)



RPTM 1 with cable gland

THERMASGARD® RPTM 1		Pendulum room temperature measuring transducer (with stainless steel sleeve)			
Type / WG01	Output	Type	Display	Item No.	Price
RPTM 1 - I (2-wire)					
RPTM1-I	4...20 mA	Remote sensor		1101-1162-0219-910	167,44 €
RPTM1-I LCD	4...20 mA	Remote sensor	■	1101-1162-2219-910	222,42 €
RPTM 1 - A (3-wire AOS)					
RPTM1-A	0-10V / 4...20 mA	Remote sensor		1101-116E-0219-910	167,44 €
RPTM1-A LCD	0-10V / 4...20 mA	Remote sensor	■	1101-116E-2219-910	222,42 €
Automatic Output Switching (AOS):	Patented analogue interface (patent no. DE 10 2015 015 941 B4) Unit automatically detects the required output type 0-10V or 4...20 mA.				
Extra charge:	other measuring ranges optional 2-wire connecting leads, per running meter (PVC) Cable connection with M12 connector according to DIN EN 61076-2-101				28,03 € on request on request

ACCESSOIRES			
SF-M	Metal sinter filter, Ø 16 mm, L = 32 mm, exchangeable, stainless steel V4A (1.4404)	7000-0050-2200-100	46,70 €

