THERMASGARD® RPTM1-Modbus-T3

**Pendulum room temperature measuring transducer,
(with stainless steel sleeve), calibratable,
with Modbus connection**

NEW

S+S REGELTECHNIK

Calibratable room pendulum temperature measuring transducer (with sleeve) **THERM**ASGARD® **RPTM1-Modbus-T3** with Modbus connection, in an impact-resistant plastic housing with quick-locking screws, optionally with/without display, cable sensor with stainless steel sleeve and plastic sinter filter (exchangeable).

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.

Innovative Modbus sensor with galvanically separated RS485 Modbus interface, selectable us termination resistance, DIP switch for setting the bus parameters and bus address in current-free state, LEDs for telegram status display, two separate push-in terminals and large three-line display (illuminated, with customised programming in the 7-segment range and dot-matrix range). Uses **internal diagnostics** to detect sensor breakage or sensor short circuit as errors. The error messages can be retrieved via Modbus and are shown on the display. The sensor is factory-calibrated; an environmental precision adjustment by an expert is possible.

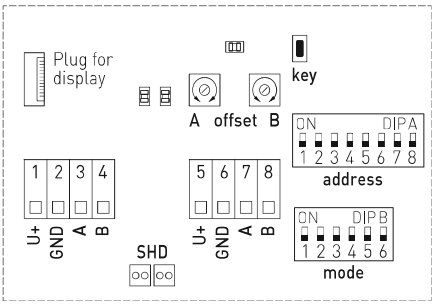
TECHNICAL DATA

Voltage supply:	24 V AC (±20 %) and 15...36 V DC
Power consumption:	< 1.2 W / 24 V DC; < 1.8 VA / 24 V AC
Sensor:	Pt1000, DIN EN 60751, class B
Sensor protection:	**plastic** sinter filter, Ø 16 mm, L = 35 mm, exchangeable (optional **metal** sinter filter, Ø 16 mm, L = 32 mm)
Measuring range:	–50...+150 °C
Temperature deviation:	typically ±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
Bus protocol:	Modbus (RTU mode), address range 0...**247** selectable
Signal filtering:	0.3 s / 1 s / 10 s
Housing:	plastic, UV-stabilised, 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:	108 x 78.5 x 43.3 mm (Tyr 3 without display) 108 x 78.5 x 45.8 mm (Tyr 3 with display)
Cable connection:	**cable gland**, plastic (2x M20 x 1.5; with strain relief, exchangeable, inner diameter 8 - 13 mm) **or** **M12 connector** according to DIN EN 61076-2-101 (optional on request)
Connection cable:	PVC, H03VV-F, 2 x 0.5 mm², cable length (KL) = approx. 1.5 m (other lengths optional)
Protective tube:	stainless steel **V2A** (1.4301), Ø=16 mm, NL = 142 mm
Electrical connection:	0.2 - 1.5 mm², using push-in terminals
Permissible air humidity:	< 95 % r. H., non-precipitating air
Protection class:	III (according to EN 60730)
Protection type:	**IP 65** (according to EN 60529)
Standards:	CE conformity, electromagnetic compatibility according to EN 61326, according to EMC Directive 2014 / 30 / EU
Equipment:	**Display with illumination**, three-line, programmable, cutout approx. 51 x 29 mm (W x H), for displaying the actual temperature, error message or an individually programmable display value
Internal diagnostics:	**Error 1** at sensor breakage **Error 2** at sensor short circuit
ACCESSORIES	see table

RPTM1-Modbus-T3

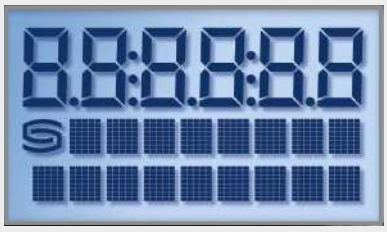
Device version
with **M12 connector**
(optional on request)

Schematic diagram **Modbus Tyr 3**



DIP A: Bus address
DIP B: Bus parameters (Baud rate, parity...)
Telegram indicator Reception (LED green) Error (LED red)
LED (internal status)
Offset correction
Reset button
Shielding

Programmable display screen **Modbus Tyr 3**



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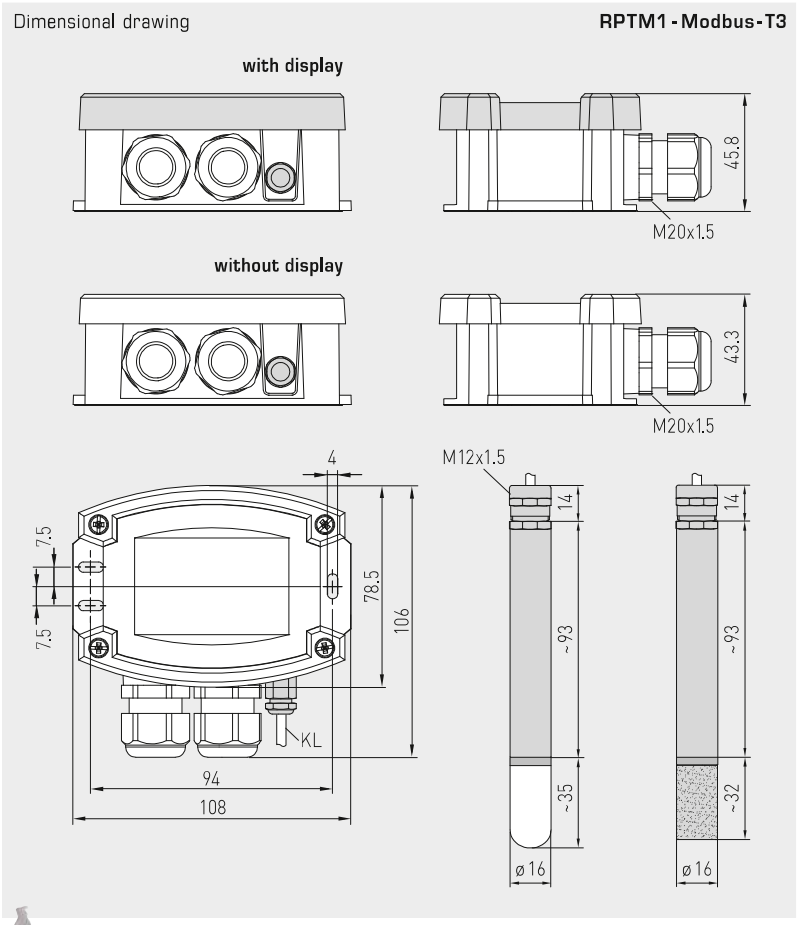
Dimensional drawing — **RPTM1 - Modbus-T3**



RPTM1 - Modbus-T3
with display

MF-16-K
Mounting flange, plastic (optional)

SF-K
with plastic sinter filter (standard)

SF-M
with metal sinter filter (optional)

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Type / WG01	Sensor	Output	Type	Display	Item No.
RPTM 1 - Modbus - T3					
RPTM1-MODBUS-T3	Pt1000	Modbus	Remote sensor		1101-6286-0210-000
RPTM1-MODBUS-T3 LCD	Pt1000	Modbus	Remote sensor	■	1101-6286-4210-000
Extra charge:	per running metre of connecting lead (**PVC**)				on request
	Cable connection with **M12 connector** according to DIN EN 61076-2-101				on request

ACCESSORIES		
KA2-Modbus	**Communication adapter** (USB/RS485) for system connection	1906-1200-0000-100
LA-Modbus	**Line termination device** (with terminating resistor) as an active bus termination	1906-1300-0000-100
SF-M	**Metal** sinter filter, Ø 16 mm, L = 32 mm, exchangeable stainless steel **V4A** (1.4404)	7000-0050-2200-100
MF-16-K	**Mounting flange** plastic (optional)	7100-0030-0000-000
	For further information, see last chapter Accessories!	