THERMASGARD® RTM1-Modbus

**Room operating temperature sensor, on-wall,
for temperature, dew point,
calibratable, with Modbus connection**

S+S REGELTECHNIK

The calibratable room temperature measuring transducer **THERM**ASGARD® **RTM1-Modbus**
with Modbus connection, in an elegant housing (Baldur 1) with snap-on lid, base with 4-hole
attachment, optionally with/without display, for detecting room temperature (0...+50 °C).
International system of units **SI** (default) can be changed to **imperial** (via Modbus).
The following parameters can be retrieved via Modbus: Temperature, dew point temperature.
Available as a room control unit in various type versions with setpoint potentiometer (%).

A long-term stable, **digital temperature sensor** guarantees exact measurement results.
The sensor is factory-calibrated; an environmental precision adjustment by an expert is
possible. **Modbus sensor** with galvanically separated RS485 Modbus interface, selectable
bus termination resistance, DIP switches for setting the bus parameters and bus address
in a currentless state, internal LEDs for telegram status display and two-line display
(illuminated, in the 7-segment and dot-matrix range, individually programmable).

RTM1-Modbus
Standard

TECHNICAL DATA

Voltage supply:	24 V AC (± 20 %) and 15…36 V DC
Power consumption:	< 1.0 W / 24 V DC; < 2.2 VA / 24 V AC
Sensor:	**digital temperature sensor,** low hysteresis, high long-term stability
System of units:	**SI** (default) or **imperial** (can be changed via Modbus)
Data points:	temperature [°C] [°F], dew point [°C] [°F], setpoint potentiometer
Measuring range:	0...+ 50 °C
Temperature deviation:	typically ± 0.2 K at +25 °C
Zero point offset:	± 10 °C adjustable by potentiometer
Ambient temperature:	storage −35...+85 °C; operation 0...+50 °C
Medium:	clean air and **non-aggressive**, non-combustible gases
Bus protocol:	Modbus (RTU mode), address range 0...**247** selectable
Baud rate:	9600, 19200, 38400 Baud
Signal filtering:	4 s / 32 s
Electrical connection:	0.2 - 1.5 mm² , via terminal screws
Housing:	plastic, material ABS, colour pure white (similar to RAL 9010)
Dimensions:	85 x 85 x 27 mm (Baldur 1)
Installation:	wall mounting or on in-wall flush box, Ø 55 mm, base with 4 holes, for attachment to vertically or horizontally installed in-wall flush boxes for rear cable entry, with predetermined breaking point for cable entry from top /bottom in case of plain on-wall installation
Long-term stability:	± 1 % per year
Permissible air humidity:	< 95 % RH, non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	**IP 30** (according to EN 60 529)
Standards:	CE conformity according to EMC Directive 2014 / 30 / EU, according to EN 61 326
Features:	**Display with illumination,** two-line, programmable, cutout approx. 36 x 15 mm (W x H), to display actual temperature or a selectable parameter or an individually programmable display value
ACCESSORIES	see table

**Display
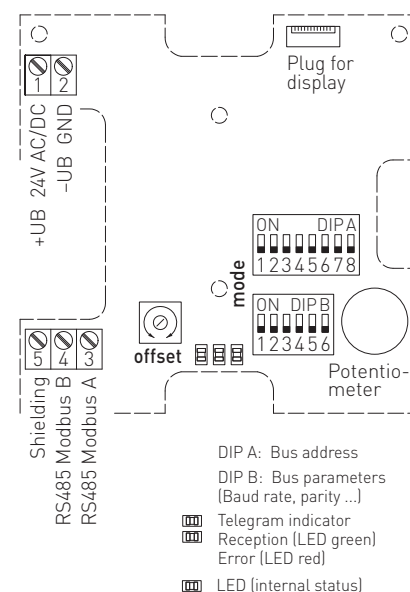Standard**   **RTM1-Modbus**

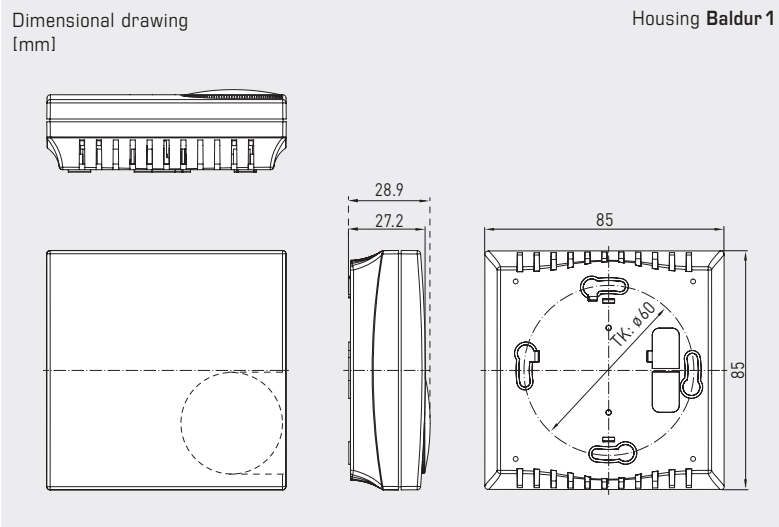Temperature [°C] [°F]

Programmable display screen

Schematic diagram   **RTM1-Modbus**

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

THERMASGARD® **RTM1-Modbus**

Room operating temperature sensor , on-wall,
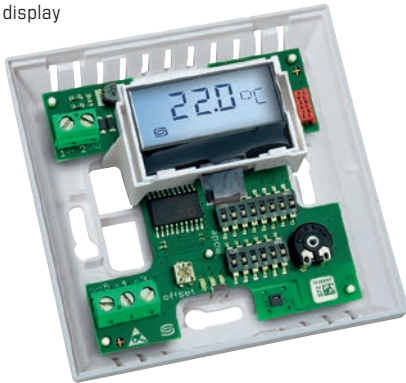for temperature, dew point,
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Dimensional drawing [mm]   Housing **Baldur 1**

28.9
27.2
85
TK: ø60
85

SI IMP

RTM1-Modbus
with display

RTM1-Modbus
with display

RTM1-Modbus-P
with display and
potentiometer

RTM1-Modbus
without display

RTM1-Modbus-P
with potentiometer
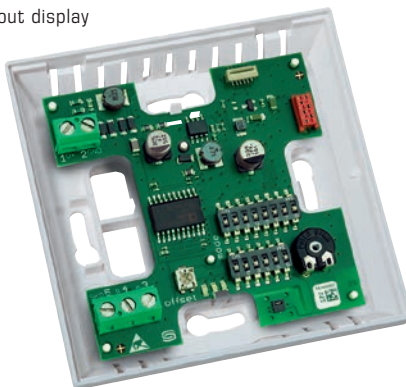
THERMASGARD® RTM 1 - Modbus   Room operating temperature sensor

Type / WG01	Measuring Range	Output	Equipment	Display	Item No.	Price
RTM 1 - Modbus					IP 30	
RTM1-Modbus	0...+50 °C	Modbus	–		1101-42A6-0000-000	**115,22 €**
RTM1-Modbus **LCD**	0...+50 °C	Modbus	–	■	1101-42A6-2000-000	**170,60 €**
RTM 1 - P - Modbus					IP 30	
RTM1-Modbus P	0...+50 °C	Modbus	potentiometer		1101-42A6-0001-005	**151,49 €**
RTM1-Modbus P **LCD**	0...+50 °C	Modbus	potentiometer	■	1101-42A6-2001-005	**272,82 €**
Note:	System of units **SI** (default) or **imperial** (can be changed via Modbus).					
ACCESSORIES						
KA2-Modbus	Communication adapter (USB/RS485) for system connection				1906-1200-0000-100	**213,99 €**
LA-Modbus	Line termination device (with terminating resistor) as an active bus termination				1906-1300-0000-100	**79,81 €**