

**Room operating temperature sensor ($\pm 2.0\%$), on-wall,
for temperature, relative humidity, dew point,
calibratable, with Modbus connection**

Calibratable room temperature measuring transducer **THERMASGARD® RTM1-Modbus** with Modbus connection, with/without optional display for displaying the actual temperature, in an elegant housing made of plastic, with snap-on lid, base with 4-hole attachment, for installation on vertically or horizontally installed in-wall flush boxes, with predetermined breaking point for on-wall cable entry.

The calibrateable room operating sensor measures the temperature of non-aggressive gases, particularly air. In this case, a setpoint potentiometer is available as an operating element. For temperature/humidity/dew point or setpoint readings, optional devices with LCD displays for displaying readings are available. The displays (LCD), as well as the retrieval of measurement and control values, are triggered via the Modbus interface.

TECHNICAL DATA

Voltage supply:	24 V AC ($\pm 20\%$) and 15...36 V DC
Power consumption:	< 1.0 VA / 24 V DC < 2.2 VA / 24 V AC
Sensor:	digital humidity sensor with integrated temperature sensor, low hysteresis, high long-term stability
Data points:	temperature, relative humidity, dew point, setpoint potentiometer
Measuring range:	0...+50 °C
Deviation, humidity:	typically $\pm 2.0\%$ (20...80 % r. H.) at +25 °C, otherwise $\pm 3.0\%$
Temperature deviation:	typically $\pm 0.2\text{ K}$ at +25 °C
Zero point offset:	$\pm 10\text{ °C}$, 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
Signal filtering:	4 s / 32 s
Process connection:	by 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, $\varnothing$ 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
Permissible air humidity:	< 95 % r. H., non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	IP 30 (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

RTM1-Modbus
Standard



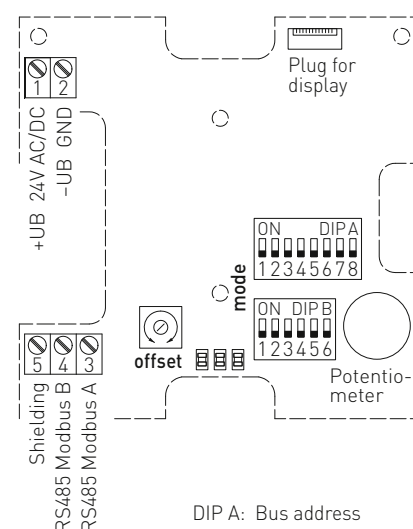
Programmable
display

RTM1-Modbus



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)

Offset correction
temperature: $\pm 10\text{ °C}$

Plug for display
contact is
on the right side



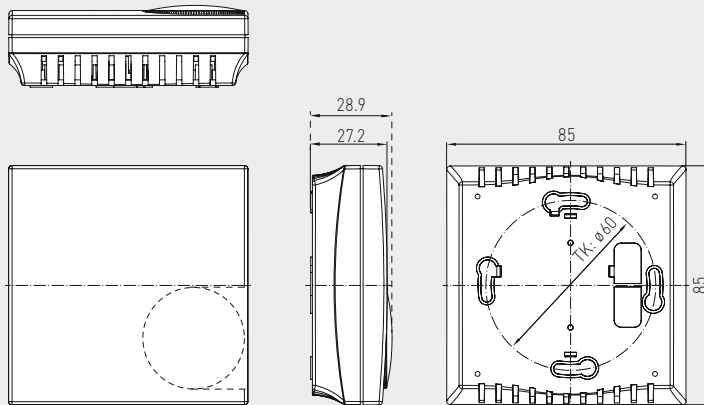
S+S REGELTECHNIK

THERMASGARD® RTM1-Modbus

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Dimensional drawing

Housing Baldur1



RTM1-Modbus
with display



RTM1-Modbus-P
with display and
potentiometer



RTM1-Modbus-P
with potentiometer



RTM1-Modbus
with display



RTM1-Modbus
without display



THERMASGARD® RTM 1-Modbus Room operating temperature sensor

Type / WG01	Sensor	Output	Equipment	Display	Item No.
RTM 1-Modbus					IP30
RTM1-Modbus	digital	Modbus	–		1101-42A6-0000-000
RTM1-Modbus LCD	digital	Modbus	–	■	1101-42A6-2000-000
RTM 1-P-Modbus					IP30
RTM1-Modbus P	digital	Modbus	potentiometer		1101-42A6-0001-005
RTM1-Modbus P LCD	digital	Modbus	potentiometer	■	1101-42A6-2001-005
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