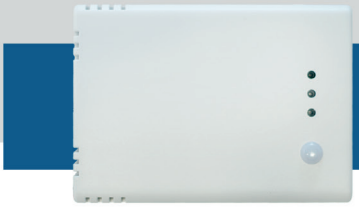


RSTHH-3

Temperature and humidity room transmitter

The RSTHH-3 series are room sensors which measure temperature, relative humidity and ambient light. They feature 24 VDC power supply (Power over Modbus) and 3 analogue / modulating outputs. All parameters are accessible via Modbus RTU.

Key features

- Spring contact terminal block or RJ45 connections
- Selectable temperature and relative humidity ranges
- 3 selectable analogue / modulating outputs - temperature, relative humidity and selectable temperature or relative humidity
- Ambient light sensor with adjustable 'active' and 'standby' level
- Modbus RTU (RS485)
- 3 LEDs with adjustable light intensity for status indication
- Long-term stability and accuracy

Technical specifications

Analogue / modulating outputs	0—10 VDC mode: $R_L \geq 50$ kΩ	
	0—20 mA mode: $R_L \leq 500$ Ω	
	PWM (open-collector type) mode: 1 kHz, $R_L \geq 50$ kΩ, PWM voltage level: 3,3 VDC or 12 VDC	
Typical range of use	Temperature range	0—50 °C
	Relative humidity range	0—95 % rH (non-condensing)
Accuracy	± 0,4 °C (range 0—50 °C)	
	± 3% rH (range 0—100 %)	
Protection standard	IP30 (according to EN 60529)	

Article codes

Article code	Supply	Connection type	Imax
RSTHH-3	24 VDC, PoM	RJ45 or terminal block	75 mA

Area of use

- Monitoring indoor temperature and relative humidity in HVAC applications
- Suitable for residential and commercial buildings
- For indoor use only

Standards

- Low Voltage Directive 2014/35/EC
  - EN 60529:1991 Degrees of protection provided by enclosures (IP Code) Amendment AC:1993 to EN 60529
  - EN 60730-1:2011 Automatic electrical controls for household and similar use - Part 1: General requirements
- EMC directive 2014/30/EU:
  - EN 60730-1:2011 Automatic electrical controls for household and similar use - Part 1: General requirements
  - EN 61000-6-1:2007 Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments
  - EN 61000-6-3:2007 Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments Amendments A1:2011 and AC:2012 to EN 61000-6-3
  - EN 61326-1:2013 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements
  - EN 61326-2-3:2013 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3: Particular requirements. Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning.
- WEEE 2012/19/EC
- RoHs Directive 2011/65/EC

Wiring diagram

RJ45 sockets (Power over Modbus)

Pin 1	24 VDC	Supply voltage
Pin 2		
Pin 3	A	Modbus RTU communication, signal A
Pin 4		
Pin 5	/B	Modbus RTU communication, signal /B
Pin 6		
Pin 7	GND	Ground, supply voltage
Pin 8		

Input terminal block

VIN	Supply voltage 24 VDC
GND	Supply voltage, ground
A	Modbus RTU communication, signal A
/B	Modbus RTU communication, signal /B

Output terminal block

AO1	Analogue / modulating output 1 for temperature measurement (0—10 VDC / 0—20 mA / PWM)
GND	Ground AO1
AO2	Analogue / modulating output 2 for relative humidity measurement (0—10 VDC / 0—20 mA / PWM)
GND	Ground AO2
AO3	Analogue / modulating output 3 for temperature or relative humidity measurement (0—10 VDC / 0—20 mA / PWM)
GND	Ground AO3

Attention! *The unit needs to be supplied via the RJ45 connector or via the Input Terminal Block. Do not use them simultaneously!*

Modbus registers

The Sensistant Modbus configurator allows you to easily monitor and/or configure Modbus parameters.

The parameters of the unit can be monitored / configured through the 3SModbus software platform. You can download it from the following link:
https://www.sentera.eu/en/3SMCenter

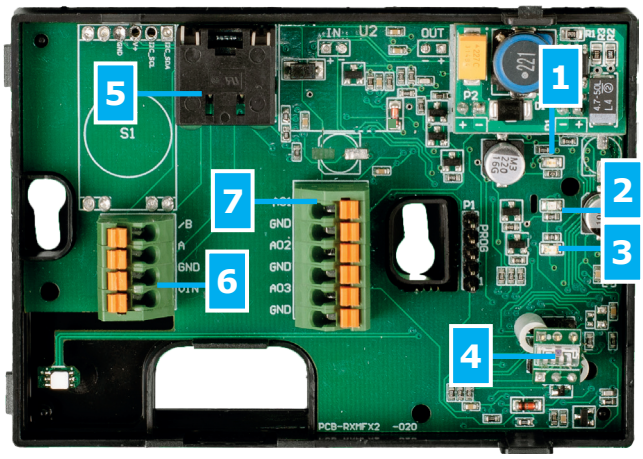
For more information about the Modbus registers, please refer to the product Modbus Register Map.

SENTERA CONTROLS

RSTHH-3

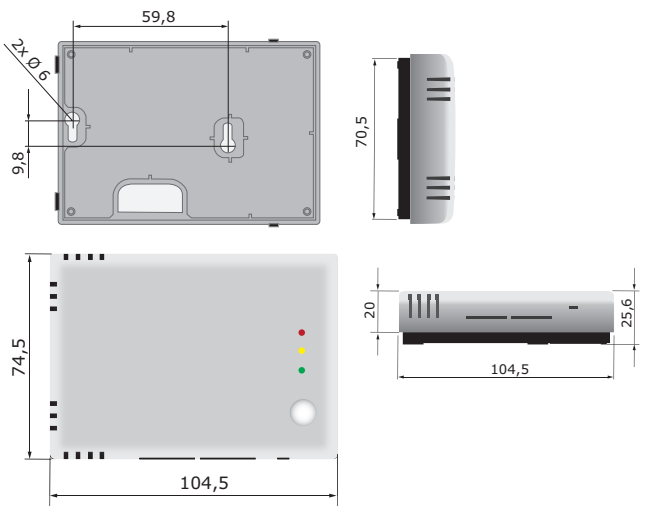
Temperature and humidity room transmitter

Connections and indications

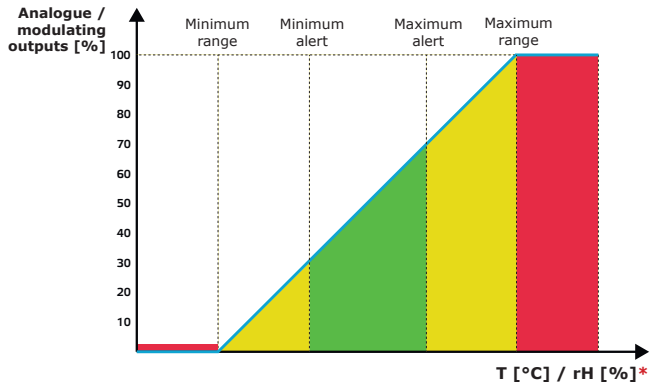


1 - Red LED	Continuous	Measured temperature or relative humidity are out of range
	Blinking	Communication with one of the sensors fails
2 - Yellow LED	On	Measured temperature or relative humidity are in the alert range
3 - Green LED	On	Measured temperature or relative humidity are within range
4 - Ambient light sensor		Low light intensity / Active / Standby
5 - RJ45 socket		Modbus communication with connected Master devices and PoM-voltage supply (24 VDC)
		Blinking LEDs indicate that packages are transmitted via Modbus RTU communication
6 - Input terminal block		Modbus communication with connected Master devices and PoM-voltage supply (24 VDC)
7 - Output terminal block		Analogue / modulating outputs

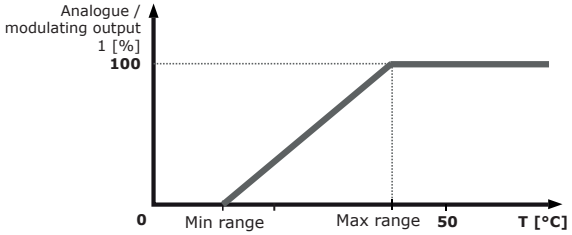
Fixing and dimensions

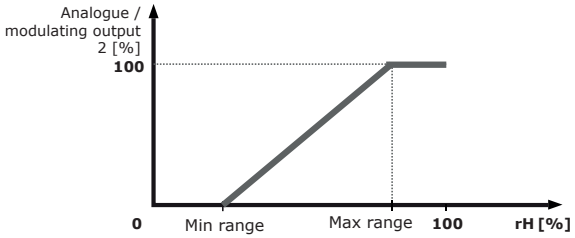


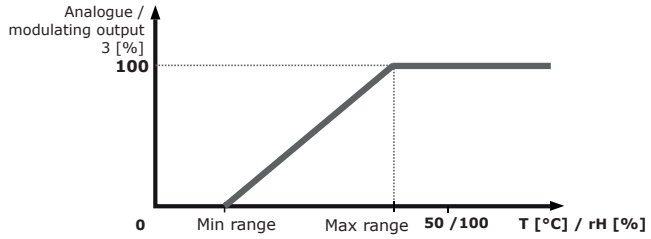
Operational diagram(s)



* LED indications - T (default) / rH

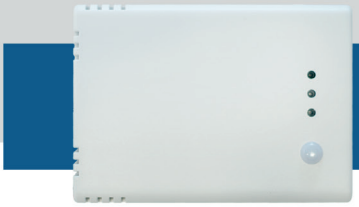






Global trade item numbers (GTIN)

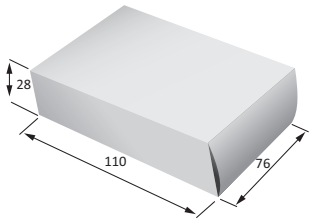
Packaging	RSTHH-3
Unit	05401003017722
Carton	05401003302392
Box	05401003503508



RSTHH-3

Temperature and humidity room transmitter

Packaging



Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
RSTHH-3	Unit (1 pc.)	110	76	28	0,08 kg	0,092 kg
	Carton (24 pcs.)	492	182	84	1,92 kg	2,34 kg
	Box (144 pcs.)	510	410	270	11,52 kg	14,065 kg