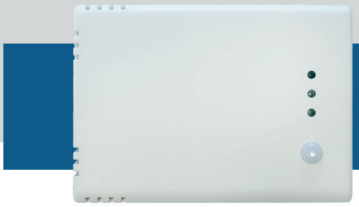


RWTHM-2

Combined T and rH room transmitter

The RWTHM-2 series are combined indoor transmitters which measure indoor temperature, relative humidity and ambient light. Based on these measurements, the dew point can be calculated. They are equipped with a second temperature sensor located on an aluminium plate on the backside of the device enclosure in order to measure the temperature of the surface onto which it is mounted. The series are Power over Modbus supplied and all the parameters are accessible via Modbus RTU.

Key features

- Selectable temperature and relative humidity ranges
- 24 VDC Power over Modbus supply
- Bootloader for updating the firmware via Modbus RTU communication
- Ambient light sensor with adjustable 'active' and 'standby' level
- Modbus RTU (RS485)
- 3 LEDs for status indication with adjustable light intensity
- Long-term stability and accuracy

Article codes

	Supply	Connection
RWTHM-2	24 VDC, Power over Modbus,	RJ45

Technical specifications

Supply voltage		24 VDC, Power over Modbus
Maximum power consumption		1,2 W
Nominal or average power consumption in normal operation		0,9 W
Imax		50 mA
Selectable temperature range		0—50 °C via Modbus RTU
Selectable relative humidity range		0—100 % rH via Modbus RTU
Accuracy		±0,4 °C (0—50 °C)
		±3 % rH (0—100 % rH)
Protection standard		IP30 (according to EN 60529)
Ambient conditions	Temperature	0—50 °C
	Rel. humidity	0—100 % rH (non-condensing)

Area of use

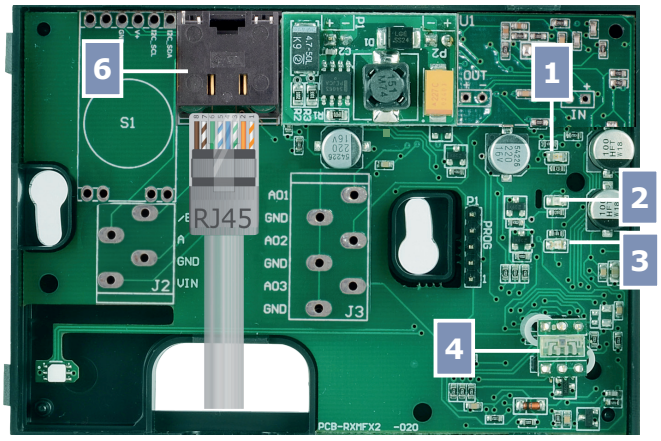
- Monitoring indoor temperature and relative humidity in HVAC applications
- Suitable for residential and commercial buildings
- For indoor use only

Wiring diagram

RJ45 socket (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		

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 - PROG header, P1	1 2 3 4 5	Put a jumper onto pins 1 and 2 and wait for at least 5 seconds to reset the Modbus communication parameters
	1 2 3 4 5	Put a jumper onto pins 3 and 4 and restart the supply to enter bootloader mode
Bootloader mode		When bootloader mode is activated, the green and yellow LEDs flash alternately
		After starting the bootloader application, the red LED starts blinking
6 - 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

Modbus registers

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

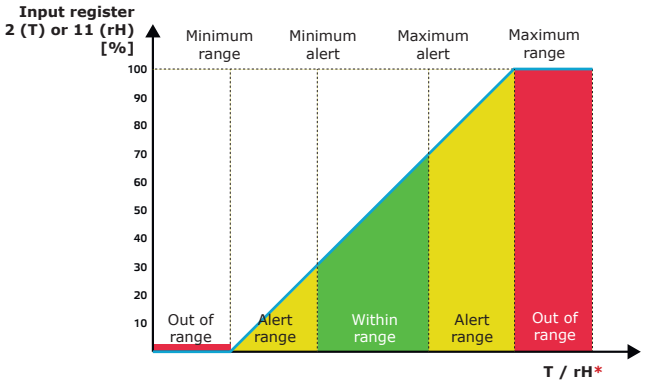
The parameters of the unit can be monitored / configured through the 3SModbus software platform. You can download it from the following link:
https://www.sentera.eu/en/3SMCenter

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

RWTHM-2

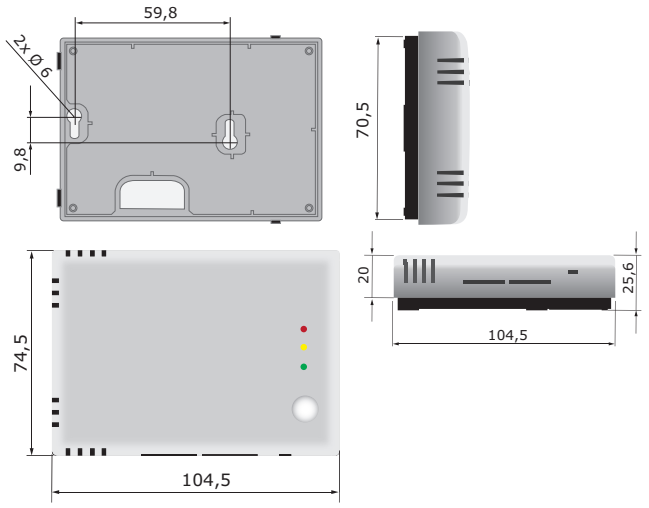
Combined T and rH room transmitter

Operational diagram(s)



* LED indications - T (default) and rH

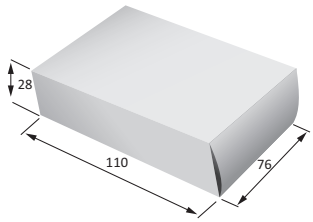
Fixing and dimensions



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/EC:
  - 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

Packaging



Article code	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
RWTHM-2	Unit (1 pc.)	110	76	28	0,08 kg	0,102 kg
	Carton (24 pcs.)	492	182	84	1,92 kg	2,588 kg
	Box (144 pcs.)	510	410	270	11,52 kg	16,76 kg

RWTHM-2

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Application example