

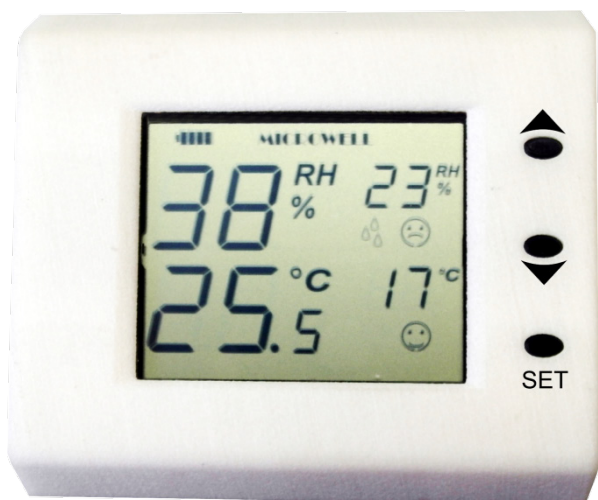
RHT-RX, RHT-TX | Wireless controller of dehumidification and heating

The control unit is divided into two parts - the base and controller. In the wireless controller is located humidity and temperature sensor, radio (hereinafter referred to as RF) transmitter, control elements and display. The base includes a RF receiver for receiving information from the controller, the microprocessor and the two switching relays.

Technical data

Parameter	Value	
Controller power	2x cell 1,5V AA	
battery life	cca 12 months with the recommended type	
Range	cca 100 m	in open space
Carrier frequency	868	MHz
Range of requied RH	15 % ~ 85%	RH
Range of requied T	5 ~ 40	°C
Base - power	230	VAC
Relay contacts	250/5	VAC/A
Working temperature	0 ~ 40	°C
Storage temperature	-20 ~ 50	°C
Control dimensions	90x80x31,5	mm
Base dimensions	81x81x38	mm

RC-RHT-ANT	Wireless control of dehumidification and heating - antenna
RC-RHT-RX	Wireless control of dehumidification and heating - receiver
RC-RHT-TX	Wireless control of dehumidification and heating - transmitter



Wireless communication

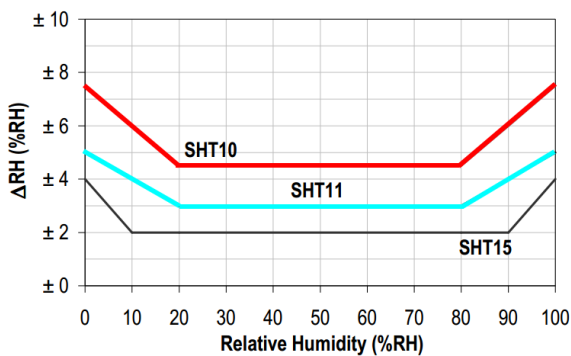
RF communication takes place in the 868 MHz band, where emphasis is placed on improving the reliability and reach of the controller. In the 868 MHz band is generally lower level of interference compared to the

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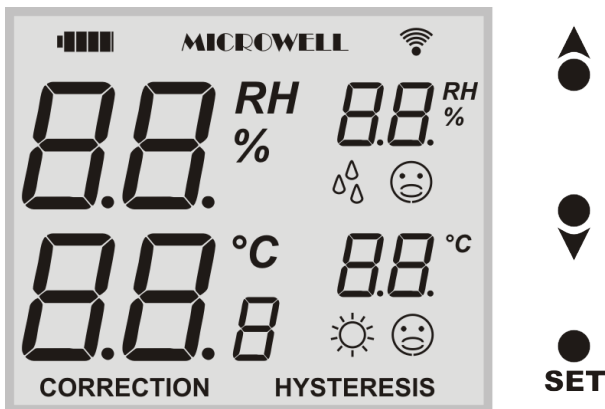
level 433 MHz, for receiver and transmitter are used fully customized antennas and for data transmission is used FSK modulation, which further increases the reliability of communication. Radio communication is secured by cyclical checksums.

RH sensor

To measure the humidity is used more accurate sensor that corresponds to the graph of SHT11 below.



Display of transmitter (controller)



The data displayed on the transmitter (controller)

- measured humidity
- measured temperature
- required humidity
- required temperature

8.8. RH %

8.8. °C

- humidity indication

- heating indication



- indication of achievement of desired humidity or lower level of humidity

- indication of achievement of desired temperature or higher level of humidity



- indication of nonachievement of desired humidity

- indication of nonachievement of desired temperature



- transmission indication



- the battery level indication



- bar graph, when the battery is completely discharged and has sufficient energy to displaying, the whole battery symbol flashes

- run up of controller and measuring - instead of a displayed data are dashes

- dashes can be displayed also in low battery condition, when there is not sufficient energy for the measuring sensor

Description of the control - edit mode

After pressing SET will flash the display in position of the desired humidity. Helped by buttons ▼ and ▲ value of humidity can be changed in the range from 15 % RH to 85 % RH.

After re-pressing the SET will flash the display in position of the desired temperature. Helped by buttons ▼ and ▲ value of temperature can be changed in the range from 5° C to 40 °C.

After pressing the SET button again, the display will flash in the position of desired humidity and lights up the notice **HYSTERESIS**.

Helped by buttons ▼ and ▲ can be changed desired

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value of hysteresis(*) of humidity in the range from 1 % RH to 9 % RH.

After pressing the SET button again, the display will flash in the position of desired temperature and lights up the notice **HYSTERESIS**.

Helped by buttons ▼ and ▲ can be changed desired value of hysteresis(*) of temperature in the range from 0,5 °C to 5 °C.

After pressing the SET button again, the display will flash in the position of measured humidity and lights up the notice **CORRECTION**.

Helped by buttons ▼ and ▲ can be changed desired value of correction of humidity in the range from -9 % RH to 9 % RH.

After pressing the SET button again, the display will flash in the position of measured temperature and lights up the notice **CORRECTION**.

Helped by buttons ▼ and ▲ can be changed desired value of correction of temperature in the range from -9,9 °C do + 9,9 °C.

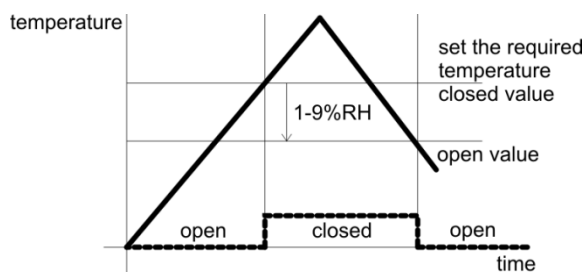
After pressing the SET button again, the setting is finished and the display will light up in the basic operating mode.

After pressing the SET button again, display flashes and you get into edit mode again.

If the button is not pressed for about 30 seconds, the controller saves the setting value and returns to the main screen.

(*) **Hysteresis** = dependence of the output value to a variable input quantity, but also on the previous state of the system. It is used to prevent quick switching of the relay around the desired value.

Relay closes and opens according to the following chart:



Pairing of transmitter (control) and receiver (base)

One receiver:

- press the pairing button on the receiver (see. fig. base) - all three LEDs will flash on them. The

receivers are ready to be paired with the transmitter.

- Press the button ▼ and ▲ on the transmitter simultaneously until the display shows notice PA (Pairing) – at that moment you release the button.
- If the pairing is successful, the LEDs on the receiver will stop flashing. If the LEDs remain flashing, pairing did not go correctly and the whole procedure has to be repeated from the beginning.

More receivers:

- press the pairing button on the receivers (see. fig. base) - all three LEDs will flash on them. The receivers are ready to be paired with the transmitter.
- Press the button ▼ and ▲ on the transmitters simultaneously until the displays show notice PA (Pairing) – at that moment you release the button.
- If the pairing is successful, the LEDs on the receivers will stop flashing. If the LEDs remain flashing, pairing did not go correctly and the whole procedure has to be repeated from the beginning on **all** receivers.

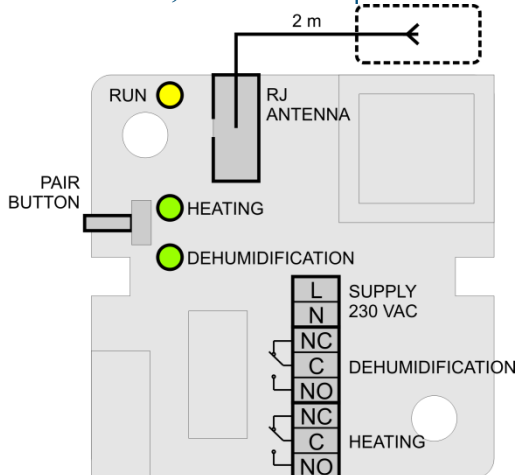
Receiver - base

Indication:

- green **dehumidification** LED shines, if the relay that controls dehumidification is closed
- green **heating** LED shines, if the relay that controls heating is closed
- yellow **operating** LED flashes periodically during normal operation, when receiving a signal, permanently lit
- Description of control see description for pairing driver

Pic. Base:

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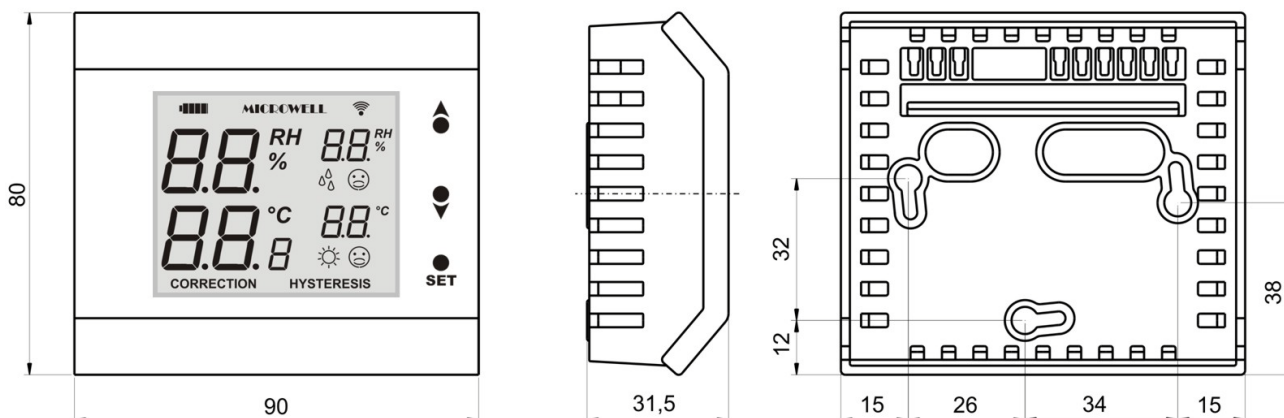
End of product life

Discard the product in according to the electronic waste law and the EU directives.

CAUTION:

It is necessary to avoid severe mechanical shock of the sensor.

Drawing of transmitter (control)



The producer reserves the right of technical changes in order to product improvements its properties and functions without previous notice.

Way to use

The product is designed for indoor use.

Method of mounting

The recommended method of installation on the wall is in a high-level of switches, because of the best viewing angle on the display.

Recommended battery type for controller

The manufacturer recommends using of alkaline batteries by renowned brands.