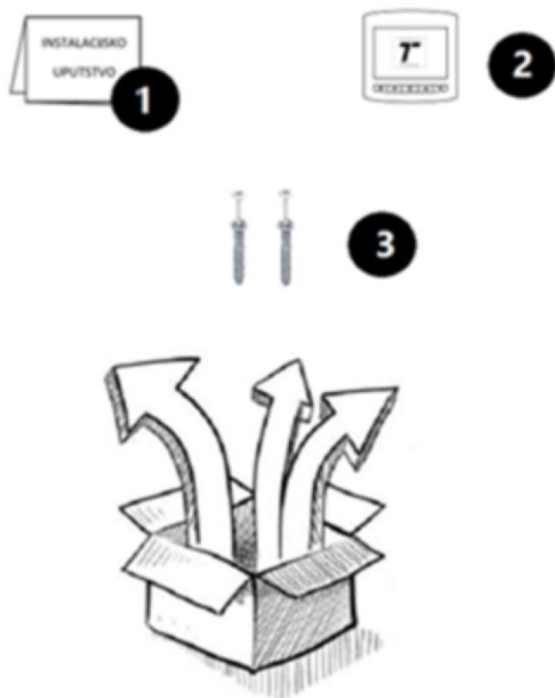## BASIC INFORMATION / PRODUCT DESCRIPTION

Wireless Thermostat is a device designed to control the heating system. Paired with the Relay Box, which is directly connected to the heating system, and based on the data obtained from the server, it regulates the heating system by switching the relay on or off. The data obtained by the Relay Box from the server is actually directly connected to the Wireless Thermostat.

Advantages and main characteristics of Wireless Thermostat:

- The device is a small energy consumer

- The device can change the location (room) of the temperature reading

- The device shows the current temperature and the set temperature on the display

- The device displays an indicator of communication with the server

- The device can communicate over long distances

- Easy device installation
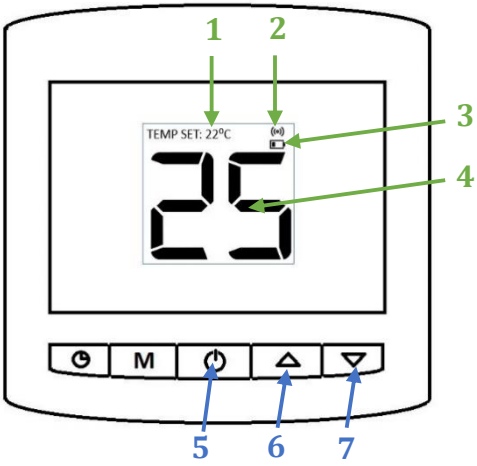
- Easy operation of the device

CONTENT OF THE BOX

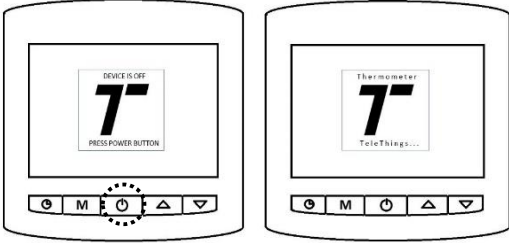The picture (Picture 1.) shows the content of the box. Small deviations in appearance are possible.

1. Installation manual

2. Wireless Thermostat

3. 2x screw i 2x dowels

Picture 1. Content of the box

Picture 2. Wireless Thermostat

1 - Set temperature

2 - Radio connection indicator

3 - Low battery indicator

4 - Current room temperature (°C)

5 - Up / Down key

6 - "Up" button, increases the temperature by 1 ° C

7 - "Down" button lowers the temperature by 1 ° C

The device can be switched on / off by pressing and holding the "Power" button for 1 second. If the device has been turned off, the display will look like in the picture (Picture 3. - left), and when you hold down the button for 1 second, the device will turn on. When the device is turned on, the display will look like the

Picutre 3. Graphical representation of display before and after turning device ON

By pressing and holding the "Up" or "Down" keys, the device enters the menu for setting the temperature. Respectively, by pressing the "Up" button the set temperature increases by 1°C and decreases by 1°C if the "Down" button is pressed. Picture (Picture 4.) shows a graphical representation of the temperature setting menu.

Picture 4. Successfully set temperature

The radio icon is an indicator of successful communication between the application on the server and the device. The battery icon is a low battery indicator on the device. When the low battery icon appears, the batteries must be replaced as soon as possible.
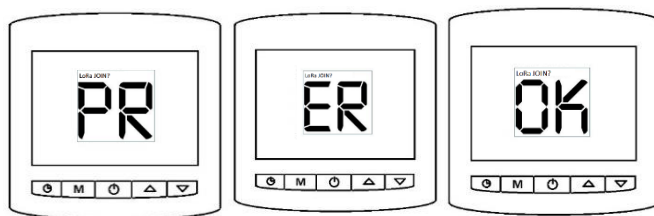

The transfer icon is an indicator of communication between the application on the server and the device. While the transfer is in progress, the keys cannot be used. Pressing and holding the "Up" key or the "Down" key speeds up the response of the device, i.e. entering the temperature setting menu.

Picture 5. Transfer indicator (Icon of data transfer)

WIRELESS THERMOSTAT LORA JOIN PROCEDURE

In order for the device to communicate with the server and receive messages from the server, LoRaWAN devices must successfully complete the JOIN procedure with the server. The JOIN procedure is initiated automatically while the device is in the start-up phase. When sending a JOIN request to the server, the display will look like on the image (Picture 6. - left). If the device fails to complete the JOIN with the server, the ER letters will be displayed, which means that an error occurred during the JOIN procedure (Picture 6. - middle). If the device has successfully performed the JOIN procedure, the OK letters will appear on the display (Picture 6. - right). If the device fails to connect to the server, you must reset the device (turn off the device and then turn it on) to try to connect to the server again.

After the device has successfully completed the JOIN procedure, it can start sending and receiving messages from the server (application).

Picture 6. LoRa JOIN procedure

RECOMMENDATIONS FOR USE

Due to the relevance and validity of the measurement, and also due to the regulation, the thermometer should not be placed near heat sources, such as radiators, stoves, refrigerators, etc. objects that emit heat in their immediate vicinity. Also, for a similar reason, the Thermometer should not be placed near external windows or front doors.

It is not recommended to place the device on an unstable surface, or a surface exposed to vibrations, due to the possible fall of the device and physical damage. Keep the device as far away as possible from the effects of high humidity and liquid sources due to the possibility of damage to the electrical components of the device. Keep the device out of the reach of children. Thank you for following our recommendations.

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SPECIFICATION

WIRELESS THERMOSTAT

Description	Device for measuring, setting and reporting temperatures
Measuring temperature	0°C - 60°C, with step of 1°C
Setting temperature	5°C – 35°C, with step of 1°C over device, or with step of 0,5 °C using application on server
Temperature regulation	+/-0,5°C
Server communication	-Mandatory sending of the current temperature to the server after the desired time period (min. 1 minute, max. 240 minutes) that the user can set on the server (if the user sets 0 for the communication period, the option of mandatory sending after the desired time period is excluded). -When the room temperature changes by at least 0.5 ° C. -When a new temperature is set. By pressing the "Up" keys or the "Down" keys, the set temperature is selected and sent to the server.
Power supply	2xAAA batteries (3 V)
Device dimensions	9 x 11 x 2 cm
Device weight	60 gr
Temperature	Storage temperature -10°C - +60°C Operating temperature 0°C - +60°C
Radio signal frequency	868 MHz
Communication range	Urban area: up to 2-3 km Rural area: beyond 5 to 7 km

DEVICE INSTALLATION

Wireless Thermostat Preparation Guide:

1. Disassemble the Home Sensor (Picture 7.)

2. Insert the batteries into the Home Sensor (Picture 8.)

3. Assemble the Home Sensor to its original condition

It is recommended to use alkaline AAA batteries. If the batteries run out during operation, the low battery indicator will appear on the display and the batteries need to be replaced by following these steps:

1. Remove the thermostat housing by gently pulling it out of the base,

2. Remove the old batteries and replace them with new ones,

3. Set the (+) and (-) symbols correctly.

NOTE: Battery replacement is recommended once during the season or if the thermostat will be left unattended for a long time.
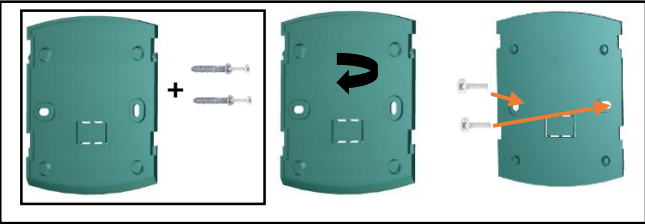

1 - Turn the Home Sensor

2 - Remove the plastic bracket from the back

3 - Remove the battery cover

Picture 7. Steps to disassemble the device to insert the batteries

1 - Position the batteries

2 - Insert the batteries

3 - Replace the battery cover

4 - Connect the Home Sensor to the rear bracket

Picture 8. Steps to insert the batteries and then to assemble the device

Mounting the Home Sensor on the wall using screws

Picture 9. Mounting the rear plastic bracket to a wall (or other surface)