



**Short user manual:
Control Box and Home Sensor**

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BASIC INFORMATION / PRODUCT DESCRIPTION

Thermometer Home Sensor and Control Box are devices intended to control heating system. Communication of devices is performed wirelessly, and the initiator of the communication is Home Sensor. Control Box is directly connected with the heating system, and performs regulation of the heating system based on information gathered from Home Sensor.

Advantages and main characteristics of the devices are:

- Wireless thermostat is extremely small energy consumer
- Wireless thermostat can change location(room) of reading temperature
- Wireless thermostat shows current temperature and set temperature on display
- Wireless thermostat shows indicator of communication with Control Box on display
- Devices can communicate on long distances
- Simple device installation
- Simple device handling
- Multiple Home Sensors can be connected with Control Box

CONTENT OF THE BOX

On picture (Figure 1.) content of the box is shown. Small appearance deviations are possible of some components from the picture.

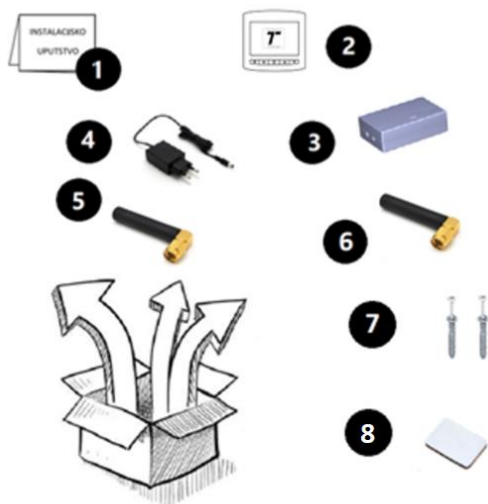


Figure 1. Content of the box

1. Installation manual
2. Home Sensor
3. Control Box
4. Adapter 7.5 V
5. 868 MHz antenna
6. GSM antenna
7. 2x screw and 2x plastic dowels
8. Duplex tape

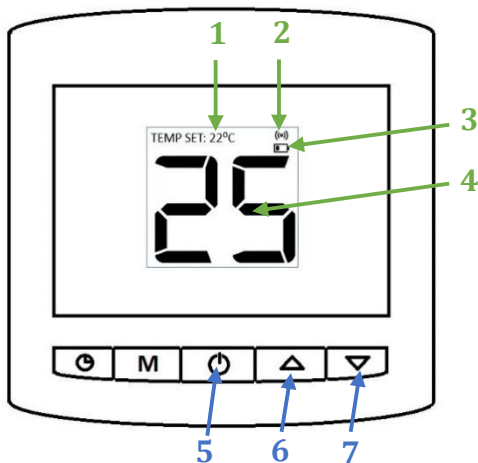
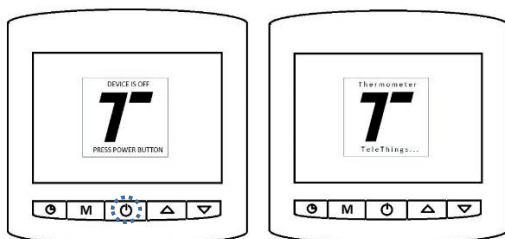


Figure 2. Home Sensor

- 1 – Zadana temperatura prostorije
- 2 – Indikator Radio veze
- 3 – Indikator Prazne baterije
- 4 – Trenutna temperatura prostorije (°C)
- 5 – Tipka za paljenje/gašenje uređaja
- 6 – Tipka „Gore“, povišava Zadanu temperaturu za 1°C
- 7 – Tipka „Dole“, snižava Zadanu temperaturu za 1°C



Device can be turned ON / OFF by pressing and holding the „Power“ button for 1 second. If the device was turned OFF, on the display it will be shown as on picture (Figure 3. – left), and while holding the button for 1 second display will turn ON. While turning on, display will look like on picture (Figure 3. - right)

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



Figure 4. Successfully setting the temperature

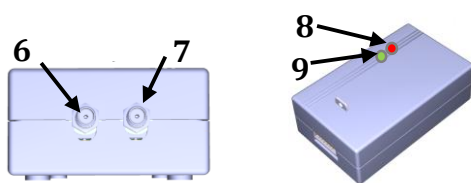
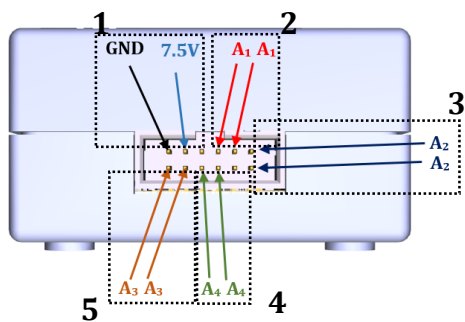
Pressing and holding button „UP“ or „DOWN“, device enters in menu for setting the temperature. Respectively, pressing button „UP“ set temperature increases by 1°C and decreases by 1°C if button „DOWN“ is pressed. On picture (Figure 4.) graphical representation of setting the temperature is shown.



If indicator of communication is not shown (Figure 5.), it is necessary to check the power supply of the Control Box or to initiate registration process (Pairing the devices).

If indicator of empty battery is shown, it is necessary to replace batteries on the device.

Figure 5. Interruption of communication between Control Box and Home Sensor



- 1 – Device power supply
- 2 – Electronically controlled switch connector (Relay 1)
- 3 – Electronically controlled switch connector (Relay 2)
- 4 – Electronically controlled switch connector (Relay 3)
- 5 – Electronically controlled switch connector (Relay 4)
- 6 – Antenna connector (GSM)
- 7 – Antenna connector (868 MHz)
- 8 – Device power indicator
- 9 – Relay activity indicator

Figure 6. Control Box

STEPS FOR REGISTRATION (PAIRING) OF DEVICES USING BUTTONS

A prerequisite for this process is that adding Home Sensors is allowed on Control Box

- 1) Turn Control Box ON and wait while device is configuring.
- 2) Turn Home Sensor ON until the main view on display is shown (Figure 4.)
- 3) Press and hold buttons „UP“ and „DOWN“ on Home Sensor
- 4) Press and hold buttons „UP“ and „DOWN“ until on display is shown that the registration process is started, then buttons can be released
- 5) Wait until on display is shown that the registration process is successfully done (Registration? OK)
- 6) Wait for the radio signal indicator to be shown on the main view of display

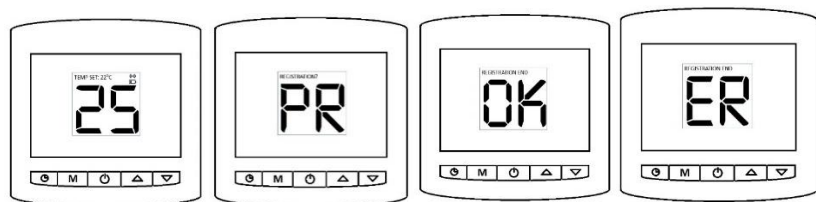


Figure 7. Registration process

RECOMMENDATION FOR USE

Due to the relevance and validity of measurement and regulation, wireless thermostat should not be installed near heat sources, such as radiators, furnaces, refrigerators and other objects which can emit heat in their immediate vicinity.

Also, for the same reason, Home Sensor should not be installed near windows or entrance doors. It's not recommended to install devices (Home Sensor and Control Box) on unstable surfaces, or surfaces which are exposed to vibrations, due to a possible fall of device and physical damage. Keep devices as far as possible from impact of high humidity and liquid sources due to a possible damage of device's electronic components. Keep the device out of reach of children.



SPECIFICATION

THERMOMETER HOME SENSOR

Model name	Telethings Thermometer Home Sensor		
Description	Device for measuring/setting the temperature		
Measuring the temperature	0°C - 60°C, with 1°C step		
Setting the temperature	5°C – 35°C, with 1°C step		
Set temperature regulation	+/-0,5°C		
Control Box communication	Mandatory sending current temperature every 60 minutes, or while room temperature was changed by 0,5°C. Pressing the buttons UP or DOWN set temperature is being sent. Holding the buttons UP and DOWN at the same time, request for registration (Pairing) of devices is being sent.		
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	Up to 100m outdoors		

THERMOMETER CONTROL BOX

Model name	Telethings Thermometer Control Box		
Description	Device for processing data and regulating system's heating		
Power supply	Adapter 7. 5V --- 2 A		
Device dimensions	10 x 6 x 2,5cm		
Device weight	100 gr		
Temperature	Storage temperature	-10°C - +60°C	
	Operating temperature	0°C - +60°C	
Radio signal frequency	868 MHz		
Communication range	Up to 100m outdoors		

INSTALLATION

Installation of the device Control Box should be done by service engineer or a person licensed for installing Control Box.

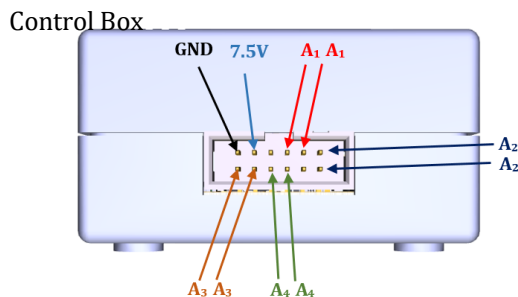
Control box installation directions:

- 1) Turn off power supply on heating system (due to protection against possible electric shock)
- 2) Twist the antenna (868MHz) on Control Box; on connector designed for antenna (Figure 6.)
- 3) Twist the antenna (GSM) on Control Box; on connector designed for GSM antenna (Figure 6.)



- 4) Connect heating system and/or cooling system and Control Box with voltage-free (dry) contact/Connect heating system on electronically controlled switches (Relays), as on picture (Figure 6.)
(A₁ represents connectors for Relay 1., A₂ represents connectors for Relay 2. etc.)
- 5) Connect power supply on Control Box using adapter.
- 6) Turn power supply on for heating/cooling system.

After wiring Control Box with heating/cooling system (Figure 8.) and connecting to power supply, Control Box is successfully installed. If Control Box was not previously paired with Home sensor, then first thing is to add Home Sensor using mobile application then set the parameters for added Home Sensor. Detail information about using mobile application can be found on page www.telethings.com



Home Sensor preparation directions:

1. Disassemble Home Sensor (Figure 9.)
2. Insert batteries
3. Assemble Home Sensor in original condition

Figure 8. Scheme for connecting Control Box



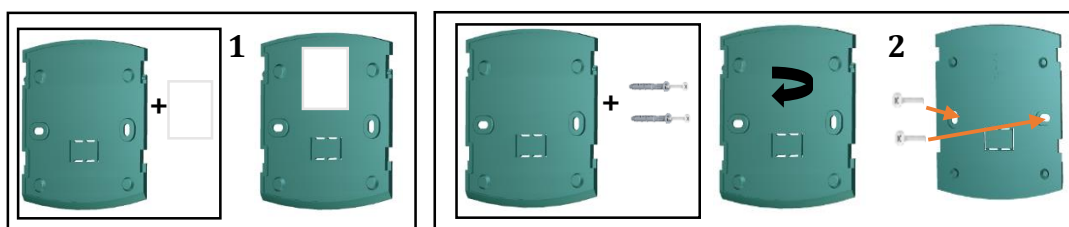
- 1 – Turn Home Sensor around
- 2 – Skinuti plastic bracket from rear side
- 3 – Remove battery cover

Figure 9. Steps for disassembling device for batteries replacement



- 1 – Position batteries correctly
- 2 – Insert batteries
- 3 – Put battery cover back
- 4 – Connect Home Sensor with rear bracket

Figure 10. . Steps for inserting batteries and then assembling the device



- 1 – Mounting Home Sensor on the wall using duplex tape
- 2 – Mounting Home Sensor on the wall using screws

Figure 11. Attaching the rear plastic holder to the wall (or other surface)

