

ZigBee Smart Thermostat, 230V



**EONE230W**



**EONE230B**

**FULL MANUAL**

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## 1. Introduction

### 1.1 Product Compliance

This product complies with the essential requirements and other relevant provisions of Directives 2014/30/EU, 2014/35/EU, 2014/53/EU and 2011/65/EU

### 1.2 Safety Informations

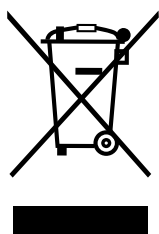
- Before starting installation work and before using the product, read the entire manual.
- The information contained in the instructions is essential for proper functioning.
- To avoid accidents resulting in personal injury and material damage, please follow all safety precautions, specified in this manual.
- The device should not be used by people with limited mental, sensory or mental abilities, without experience, of insufficient knowledge as well as children.
- Do not use an unassembled device (eg without a cover).
- The device may only be opened by a qualified person.
- Keep electrical devices out of the reach of children and ensure that they do not play with it. Children should not be left unattended. If necessary, disconnect the control system for the entire room.
- Do not leave the packaging, cabinet, or any loose parts of the device unattended, as they pose a risk to children.

#### INSTALLATION:

- Installation must be carried out by a qualified person with appropriate electrical qualifications in accordance with standards and regulations in force in the given country and in the EU.
- Never try to connect the device other than as described in the manual.
- Before assembly, repair or maintenance as well as during any connection works it is absolutely necessary disconnect the mains supply and make sure that the terminals and electric wires are not live.
- The device may not be exposed to extreme temperatures, strong vibrations or subjected to mechanical shock.
- The device should not be used in unfavorable environmental conditions or in rooms where there is a concentration of flammable gases, fumes or dust.

#### WARNING!

- There may be additional protection requirements for the entire installation that the installer is responsible for maintaining



Care for the natural environment is of paramount importance to us. The awareness that we manufacture electronic devices obliges us to dispose of used electronic components and devices safely. Therefore the company has received a registration number issued by the Chief Inspector for Environmental Protection. The crossed out symbol the trash can on the product means that the product must not be disposed of with ordinary waste containers. Sorting waste for recycling helps to protect the environment. It is the user's responsibility to surrender used equipment to a designated collection point for recycling waste from electrical and electronic equipment.



## 2. Product Overview

### EONE230W / EONE230B

EONE230 is a flush-mounted room thermostat based on ZigBee technology. It has a built-in humidity sensor and a function of setting the minimum and maximum set temperature. The thermostat has a programmable change of relay type and the ability to operation in heating or cooling mode. A unique feature of this thermostat is the ability to WIRELESS control (ENGO binding function) and WIRED control of devices that connect directly to the thermostat (e.g. wired control box, boiler). In order for to control thermostat wirelessly via the ENGO Smart / TUYA Smart mobile application, it must be connected to the EGATEZB Internet gateway (sold separately). Once added to the mobile app, the thermostat receives further functions, such as the ability to program schedules, time schedules or push notifications. The „ENGO binding” function provides a wireless and direct link between the thermostat and receivers (e.g. control box - ECB62ZB, control module - EMODZB or relay - EREL1ZB12A) only by using the EGATEZB gateway. ONE230 can also work as a stand-alone thermostat wired to the receiver (without cooperation with EGATEZB gateway).

Using ENGO Smart, we can manage smart home devices working on the basis of various communication standards - Zigbee, Bluetooth or Wi-Fi. We can control the equipment from anywhere. We also have the option to control several devices at the same time.

A big plus is the ability to create rules based on, among others about time, location or current air temperature. There is also an option to assign access rights to specific people - for example family members. ENGO Smart is a free app, available for both Android and iOS users.

#### Product features:

- communication in ZigBee 3.0 standard
- simple to use
- multitude of functions available from the ENGO Controls / Tuya Smart application
- possibility of connecting additional NTC sensor
- adjustable strength of the display backlight
- possibility to set the minimum and maximum set temperature
- graphs with temperature history available in the application
- possibility to share devices with multiple users
- push notifications from the application
- ENGO binding function (linking devices in Online and Offline mode)
- comfort warm floor function
- possibility to work as a standalone device

## 2.1 Package content

- 1) EONE230 thermostat
- 2) Quick Guide
- 3) Mounting screws



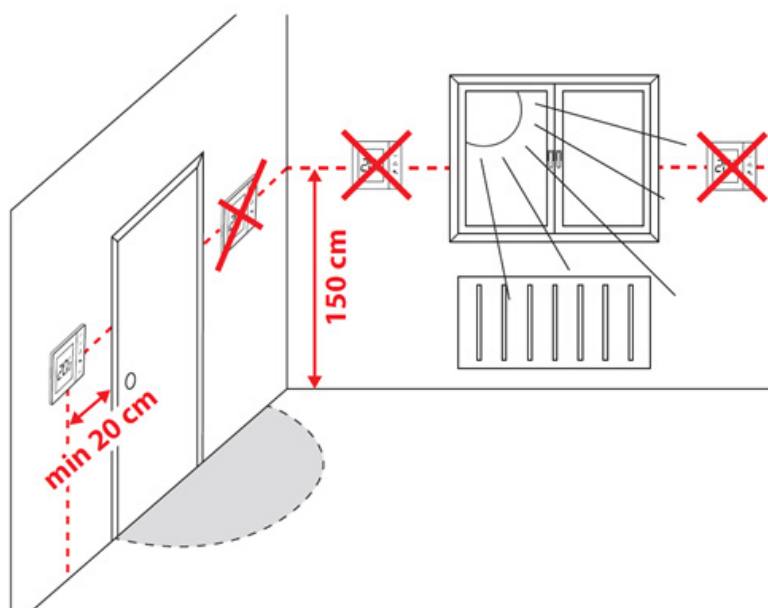
EONE230W (white) or EONE230B (black) thermostat

Quick Guide

Mounting screws

Protective film with QR code for product page <https://products.engocontrols.com/> is attached to thermostat

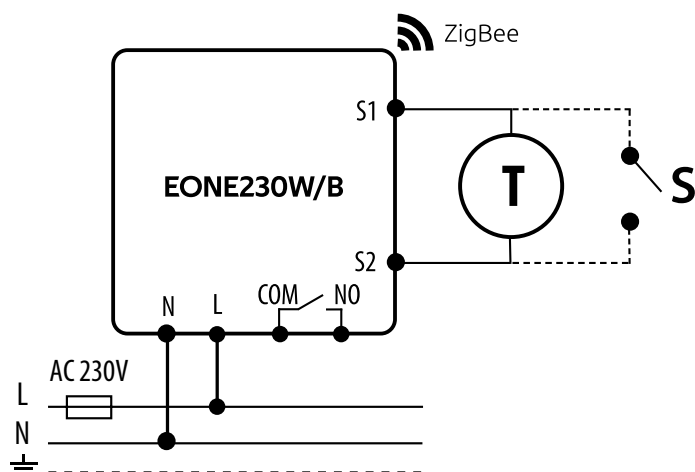
## 2.2 Proper thermostat location



### Please note:

The recommended height for mounting the thermostat is approx. 1.5 m above the ground, away from any sources of heat or cool. It is not recommended to install the thermostat on an outside wall, in a draft or in a place where it will be exposed to direct sunlight.

### 3. Description of thermostat terminals



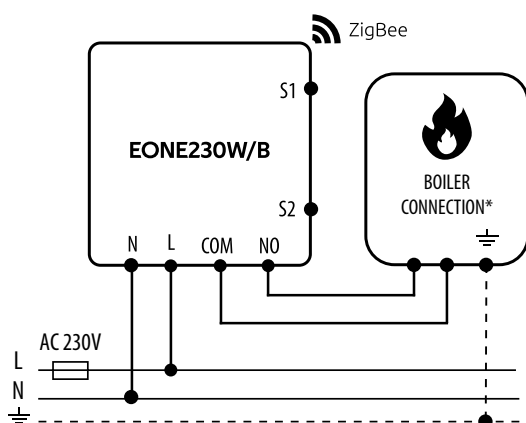
#### Legend:

L, N	230V Power supply
COM, NO	Voltage-free output
T	Temperature sensor
S	Voltage-free contact
S1, S2	Input for external temperature sensor or hotel card - voltage free
	FUSE
	Connection with ZigBee 3.0 network

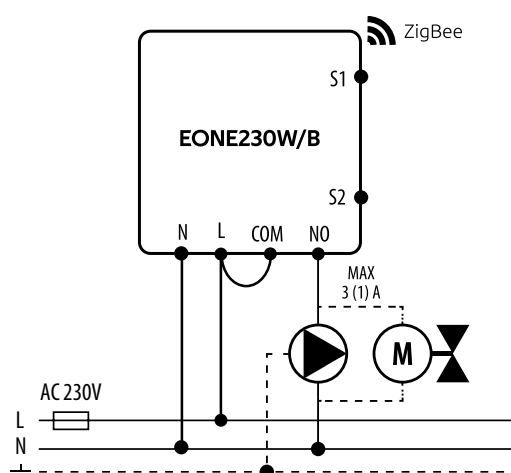
### 4. Connection description

The EONE230W/B thermostat can function as a stand-alone wired device without connection to the EGATEZB Internet gateway. There is possibility to connect it directly to a boiler or receiver or other ENGO Controls device. Take a look at the connection diagrams to see how to properly connect the thermostat. Note: Standalone EONE thermostat, can be easily added to ENGO Smart application at any time.

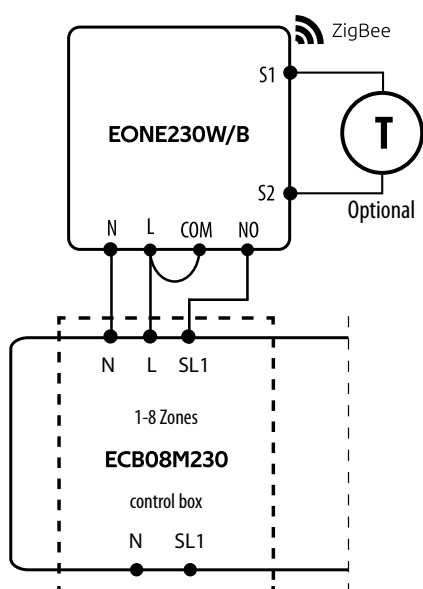
#### 4.1 Connection diagram for gas boiler



#### 4.2 Connection diagram to pump / actuator



#### 4.3 Connection diagram to the control box

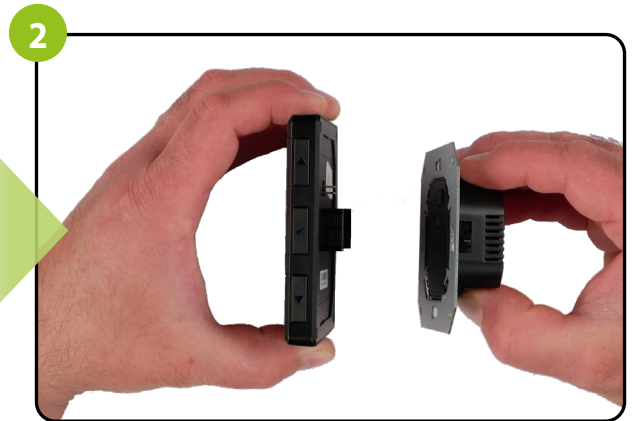
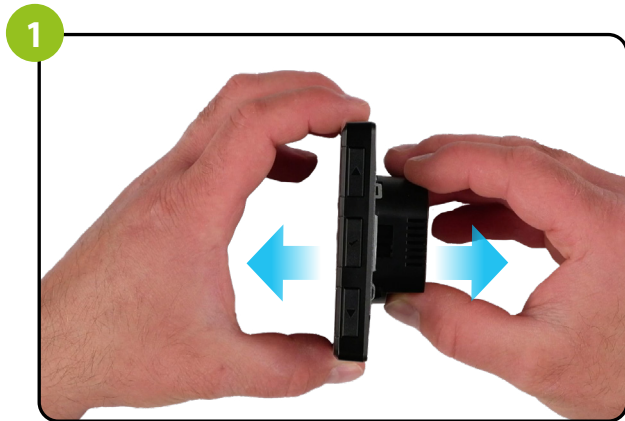


#### Legend:

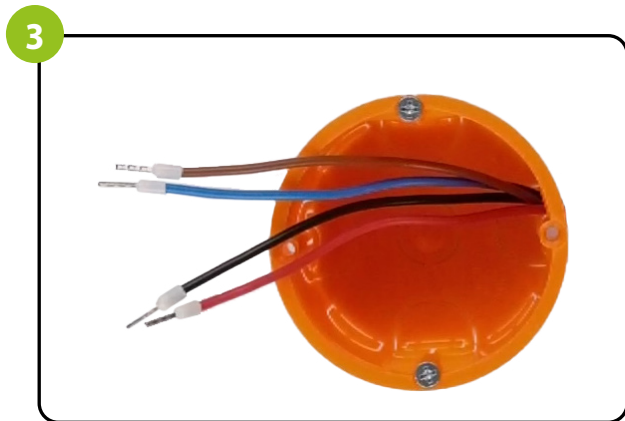
	<b>Boiler - Boiler connection*</b> - Boiler's contacts for ON/OFF thermostat (according to the boiler's instructions)
	Pump
	Valve
	Temperature sensor
L, N	230V Power supply
COM, NO	Voltage-free output
S1, S2	Output for temperature sensor
SL1	230V Control input in the control box
	Fuse

## 5. Wall mounting

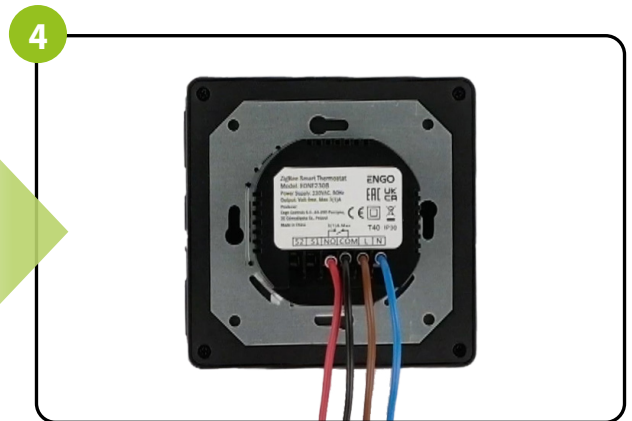
To properly mount the thermostat on the wall, please follow the steps below:



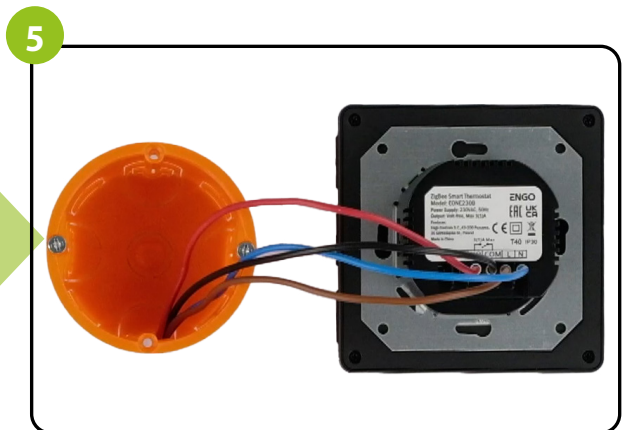
Grab the top part and the bottom part to disconnect



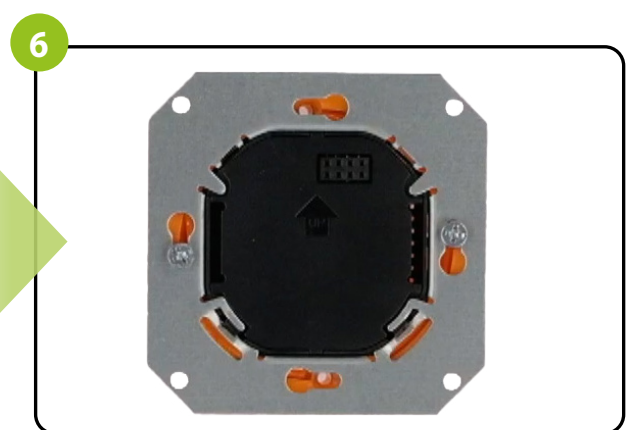
Make sure that the wires are not under 230V AC.



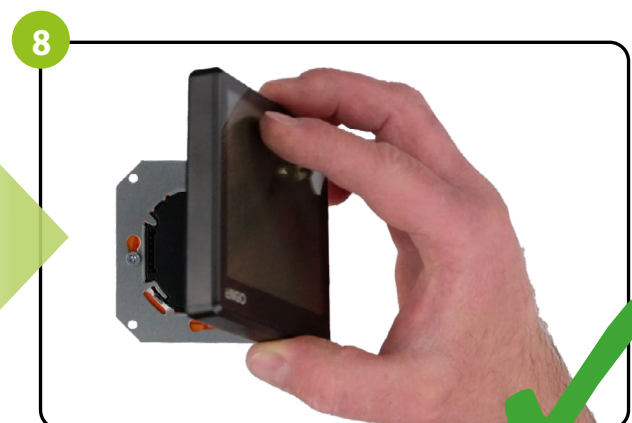
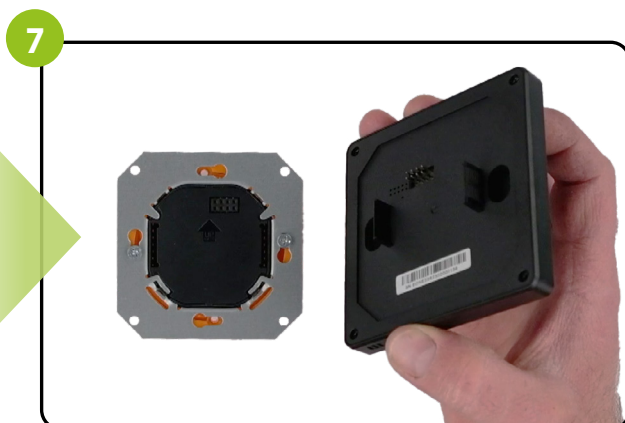
Connect the thermostat according to the wiring diagram.



Put the thermostat in the box.

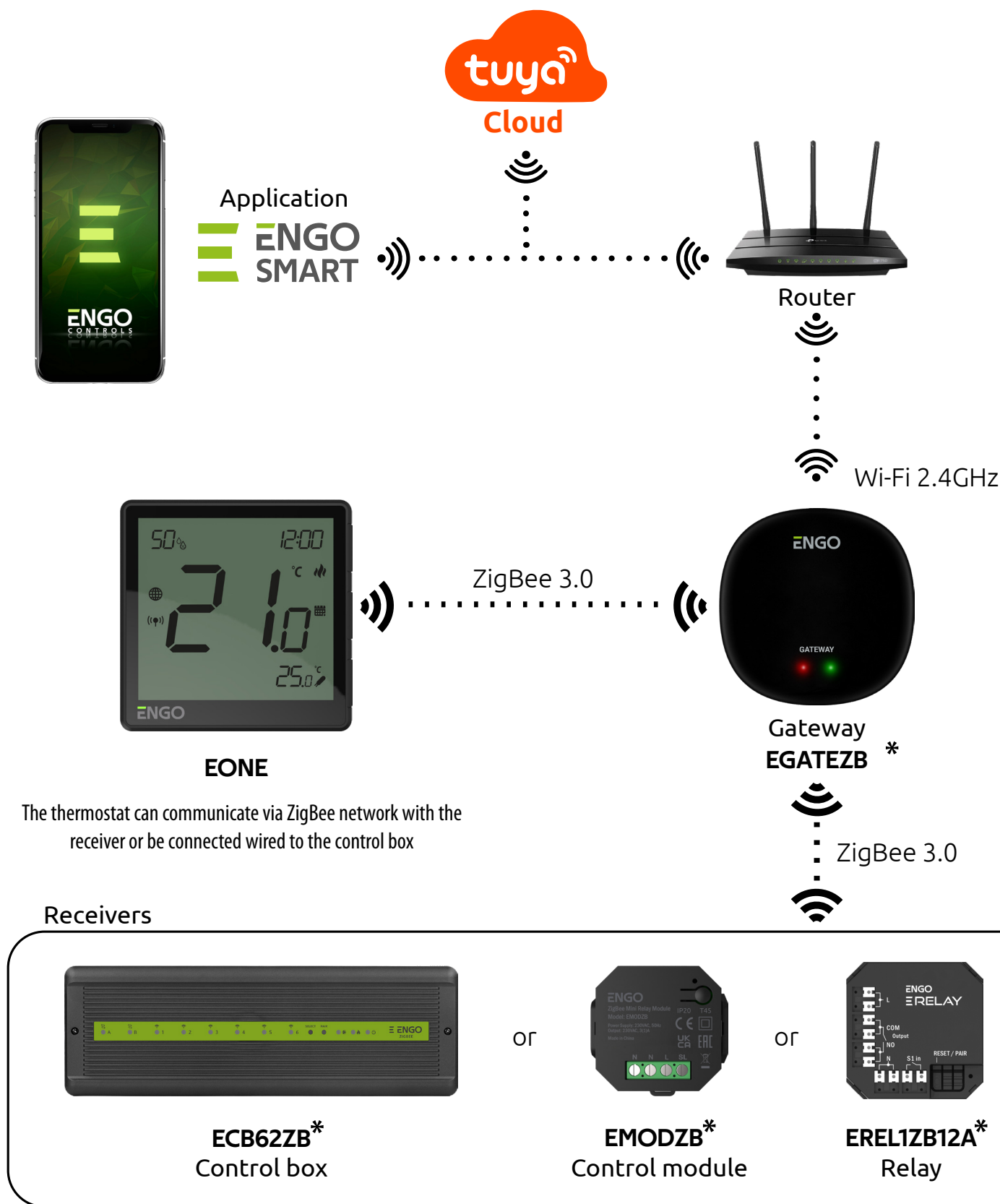


Screw the thermostat to the mounting box



Slide the front of the thermostat into it's back.  
Turn on the power. The thermostat is now ready for operation.

## 6. Communication diagram



\* Products sold separately

Devices operating on the third generation of ZigBee protocol. Communication works through an Internet gateway, providing remote control using the ENGO Smart application if the gateway is connected to the Internet.

## 7. About ZigBee network

### 7.1 ZigBee network creation and operation

**ZigBee** - is a wireless network based on IEEE 802.15.4 standard and its communication takes place in the 2.4 GHz band. The network is based on a mesh topology, which allows for a very large range and high reliability. The maximum range of direct communication between two network nodes (devices) is about 100m in open space.

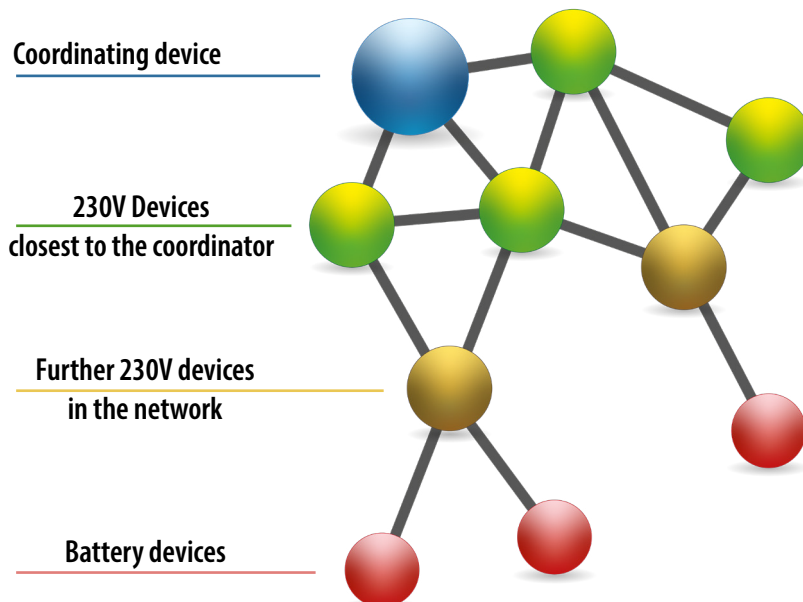
The devices included in the ZigBee network are divided into three types:

- **coordinator** - there can only be one such device in each network. It acts as a connection node for all devices;
- **router (repeater)** - this device is powered by 230VAC, with functionality similar to classic network routers, and its task is to forward data packets and increase the range of the network;
- **terminal device** - battery powered, sends data to the coordinator (also through the router) to which it is connected. It is usually put to sleep temporarily, which helps reduce energy consumption.

Built-in security in the ZigBee protocol (ISO-27001 and SSAE16 / ISAE 3402 Type II - SOC 2 certification) ensure high transmission reliability, detection and removal of transmission errors, as well as connectivity between established priority devices.

#### Four simple steps on how to properly create a ZigBee network:

1. Installation of the EGATEZB coordinator.
2. Next - add any powered 230V AC device.  
Note to locate it as near coordinator as possible.
3. Now you can increase range of the ZigBee network by adding more 230V AC powered devices.
4. At the end add more battery powered devices and accessories



## 8. About ENGO

### 8.1 Mobile device requirements

#### FOR A MOBILE DEVICE WITH ANDROID:

Android version 5.0 or higher

#### FOR A MOBILE DEVICE WITH IOS SYSTEM:

IOS version 9.0 or higher

### 8.2 About ENGO Smart app (general information)

The heart of the ENGO system is its ENGO Smart app. It allows you to combine the functionality of many devices in an accessible way. It allows you to connect to devices marked with the logs „Powered by Tuya” or „Powered by Tuya: Intelligence Inside”. Remote control is carried out via the Tuya cloud, which connects to the user's phone, so that the user of the device does not have to rent a server room or write software for it. Why can't the phone connect directly to the device? Such a necessity is due to the fact that it would require an appropriate router with a fixed IP address, so the cellular network will not work, and even with such a router, its configuration would be quite complicated and would require some sacrifices as regards the security of the link, because you would have to allow the devices from outside the house connected to it.

The first connection and configuration can be performed manually according to the instructions displayed in the app, but there is also an option to automatically scan for configurable devices. After that, the device automatically connects with the app and is visible on the list.

Each of the owned devices can be optionally assigned to the room in which it is located, which makes it easier to find out when our home is truly intelligent. All devices, regardless of whether they belong to specific rooms, are assigned to one of the houses that can have more than one. This assignment is not pointless, as the app knows where the device is located and can provide information about the current weather.

Thanks to this data, you can create so-called scenes, i.e. automate repetitive activities and thus save time. For example, you can set in the app that if the temperature drops below fifteen degrees, the heating will turn on or that the light will come on when the sun goes down.

But what if you need to automate something independent of the weather? The ENGO app also satisfy such a need, and it does so by using scenes that can be run with a single tap, or scenes that trigger when the state of one of the added devices changes. Example: we are leaving the house and we want the power to be cut off from the smart socket to which the iron is connected, and five minutes after that, all lights in the house turn off. It can be easily configured and started with one tap. It is similarly simple to solve the problem of turning off the light in the bedroom - if the bedside lamp is turned on, it can be set to turn off the light in the bedroom.

#### Compatibility of devices in the ENGO Smart application:

##### ENGO Wi-Fi



##### ENGO ZigBee



#### COMPATIBILITY WITH TUYA DEVICES (examples):



Smart plugs



Smart bulbs



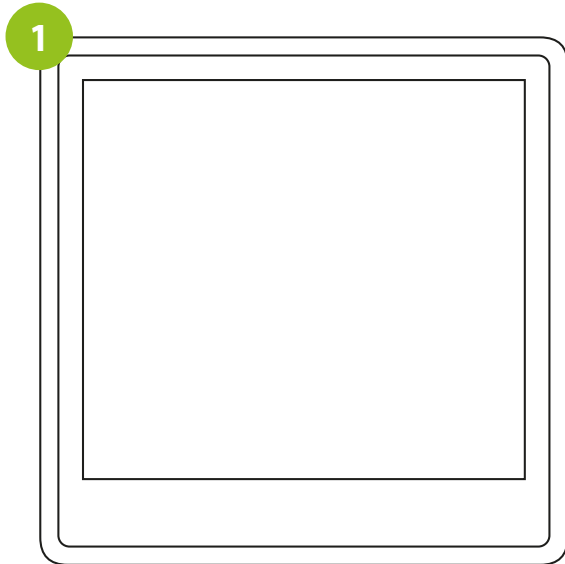
Cameras



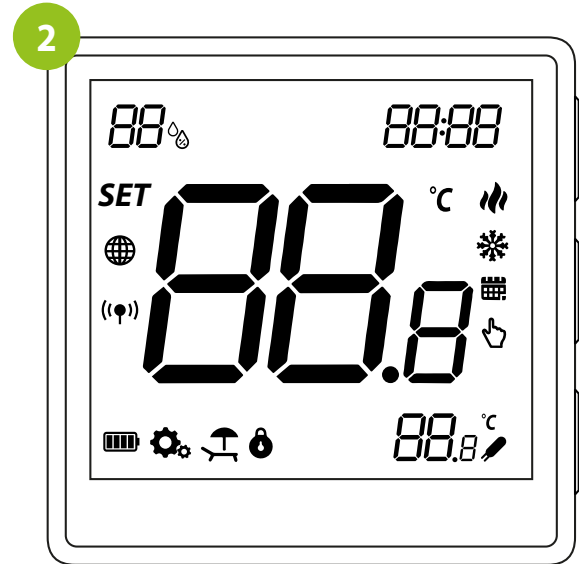
Doorbells

## 9. First power on

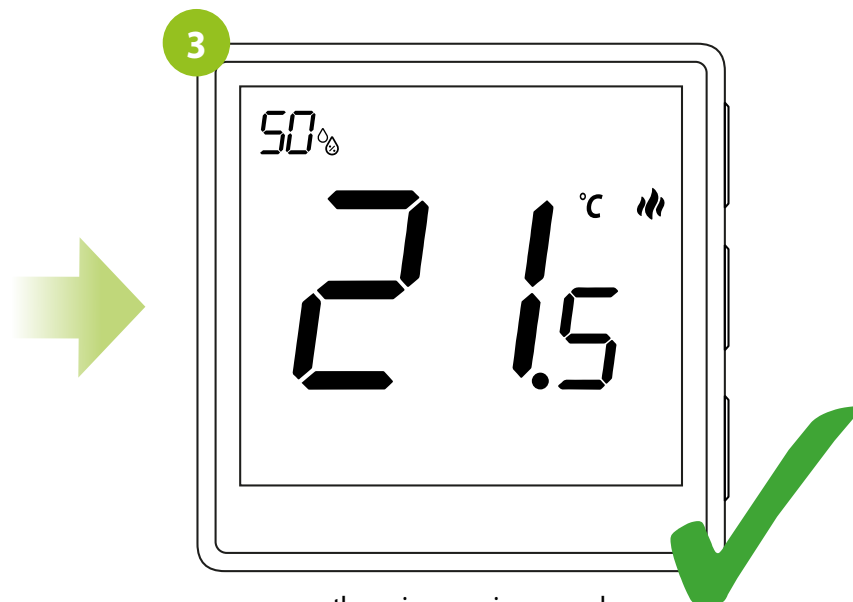
The thermostat is powered by 230V. When properly connected to the power supply, the thermostat will start up showing all the icons and then go to the main screen.



In order to turn on the thermostat it is necessary connect it to 230v...



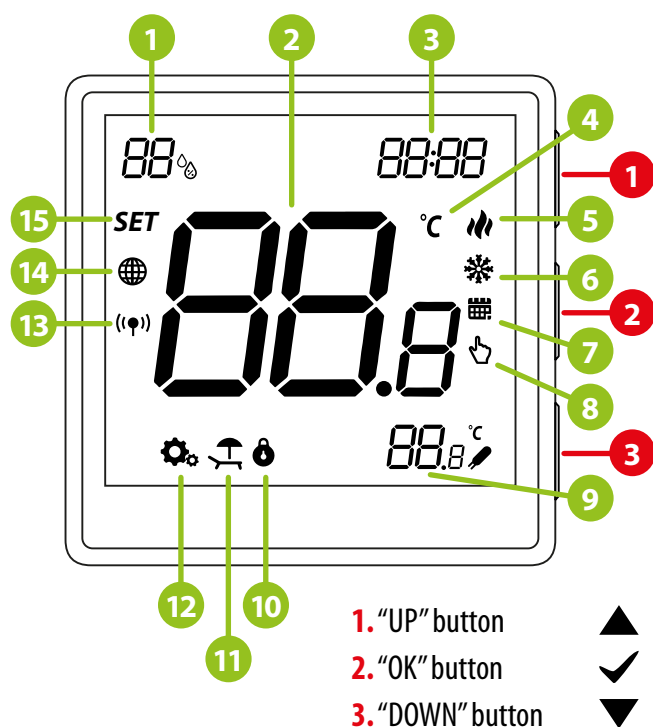
...the display will show all the icons...



...the main screen is appeared.



## 10.1 LCD icon description



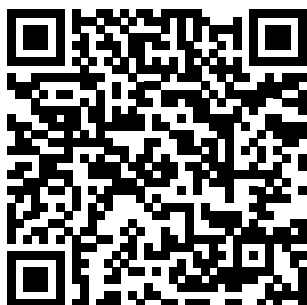
1. Humidity Display
2. Current Temperature / Setpoint Temperature
3. Clock
4. Temperature unit
5. Heating indicator (icon is animating when there is heating demand)
6. Cooling indicator (icon is animating when there is cooling demand)
7. Schedule mode icon
8. Temporary override mode
9. Additional temperature sensor
10. Key lock function
11. Holiday mode
12. Settings icon
13. Receiver binding indicator
14. ZigBee network connection indicator
15. SET information / Temperature settings

## 10.2 Buttons description located on right side of thermostat

▲	Change the parameter value up
▼	Change the parameter value down
✓	Change of mode manual/schedule - single click (Online mode only)
	Entering installer parameters - press and hold for 3 seconds
	Switching the thermostat off/on - press and hold for 5 seconds
▲ + ▼	Pairing mode with gateway - press and hold until the PA shows on the display, then release the keys
	Binding - linking the thermostat to the receiver - press and hold until the „bind“ shows on the display, then release the keys
	Thermostat factory reset - press and hold until the FA shows on the display, then release the keys
▲ + ✓	Lock/Unlock the keys - press and hold for 3 seconds
▼ + ✓	Switching between Heating/Cooling modes - press and hold for 3 seconds

## 11. ENGO Smart app installation

### DOWNLOAD THE ENGO SMART APP:



#### FOR A MOBILE DEVICE WITH ANDROID:

Method 1: Scan the QR code with the device's scanner, download and install the app.

Method 2: Open the Google Play Store on your smartphone, search for and install the „ENGO Smart” app.

#### FOR MOBILE DEVICE WITH IOS SYSTEM:

Method 1: Scan the QR code and follow the directions to get to the AppStore, download and install the app.

Method 2: Open Apple's „AppStore” on iPhone, search for „ENGO Smart” app, download and install.

#### FOR A MOBILE DEVICE WITH ANDROID:

Android version 5.0 or higher

#### FOR A MOBILE DEVICE WITH IOS SYSTEM:

IOS version 9.0 or higher



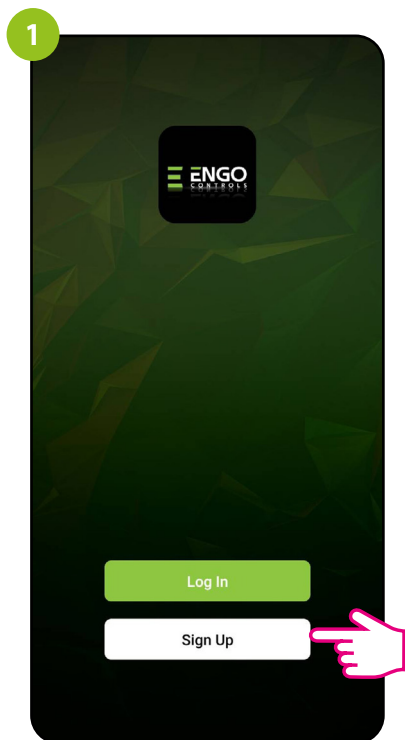
**Please note!** Please enable storage / location / camera permissions during installation. Otherwise, problems may arise during use / operation.

**Please note!** Make sure your router is within range of your mobile phone. Make sure you are connected to the Internet. This will reduce the pairing time of the device.

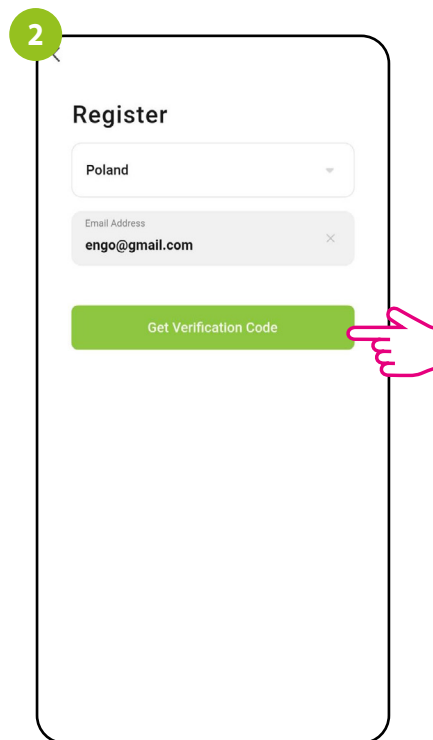
## 11.1 Account registration

### REGISTER THE NEW ACCOUNT:

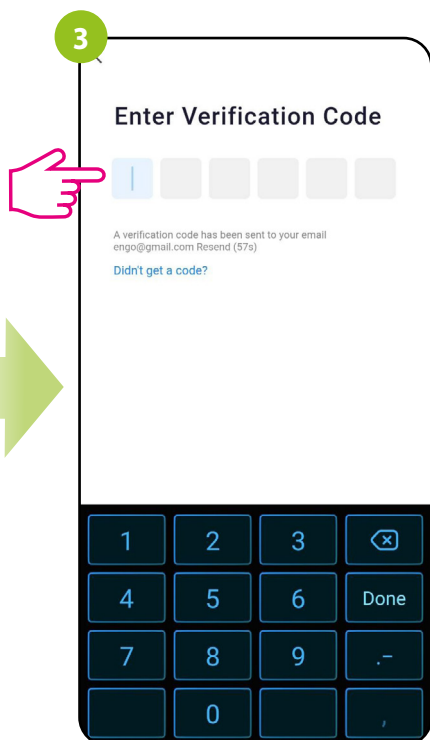
To register a new account, please follow the steps below:



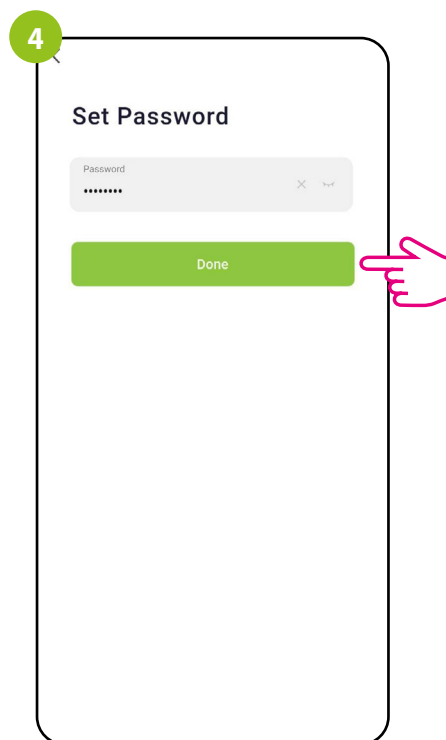
Click „Register” to create new account.



Enter your e-mail address to which the verification code will be sent.



Enter the verification code received in the email. Remember that you only have 60 seconds to enter the code!



Then set the password for login. The password must contain 6-20 characters including letters and numbers.

## 11.2 Password reset

### FORGOTTEN PASSWORD:

If you have forgotten your password, you can log in as below:

1

**Log In**

Poland

Please enter your account

Password

☐ I Agree [Privacy Policy](#) and [User Agreement](#)

Log In

[Forgot Password](#)

Click on „I forgot my password.”

2

**Forgot Password**

Poland

Please enter your account

Get Verification Code

Enter the e-mail address used during account registration.

3

Poland

Please enter your account

engo@gmail.com

Get Verification Code

Click to receive the verification code to the email address you entered.

4

**Enter Verification Code**

1

A verification code has been sent to your email  
artur.grolnik@gmail.com. Resend (57s)

[Didn't get a code?](#)

Enter the verification code received in the email. Remember that you only have 60 seconds to enter the code!

5

**Set Password**

Password

Use 6-20 characters with a mix of letters and numbers

Done

Set a NEW password for login. The password must contain 6-20 characters including letters and numbers.

6

**Set Password**

Password

.....

Done

Once approved, you will be immediately logged into the application.

### 11.3 Guidelines for installing devices in a WiFi network

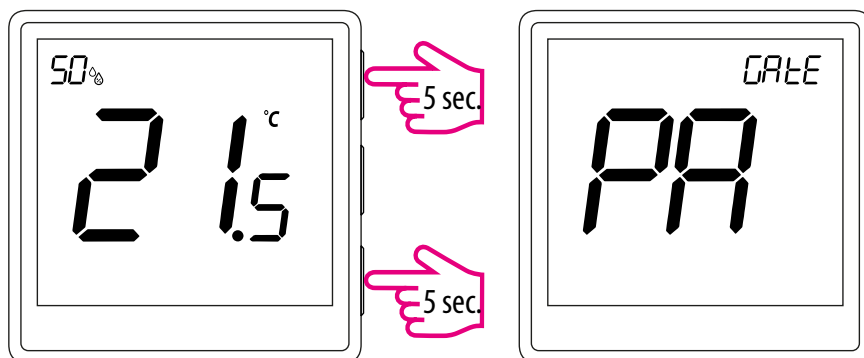
- Make sure that the Wi-Fi network where you want to install the app broadcasts in the 2.4 GHz frequency.
- We recommend turning off mobile internet (cellular data) on your phone during configuration.
- It is recommended to use the encryption of the Wi-Fi network at the WPA-Personal level.

Parameters	Specification
Frequency band (GHz)	2.4GHz
WLAN standard	IEEE 802.11 b/g/n
Protocols	IPv4/IPv6/TCP/UDP/HTTPS/TLS/MulticastDNS
Protection	WEP/WPA/WPA2/AES128
Supported type	STA/AP/STA+AP

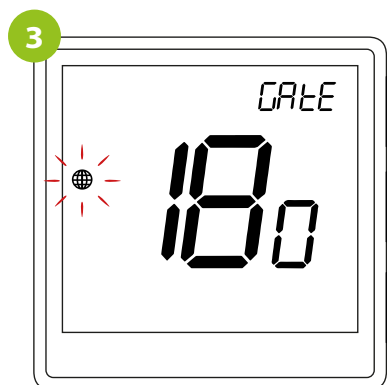
## 12. Installation of the ZigBee thermostat in the app - ONLINE



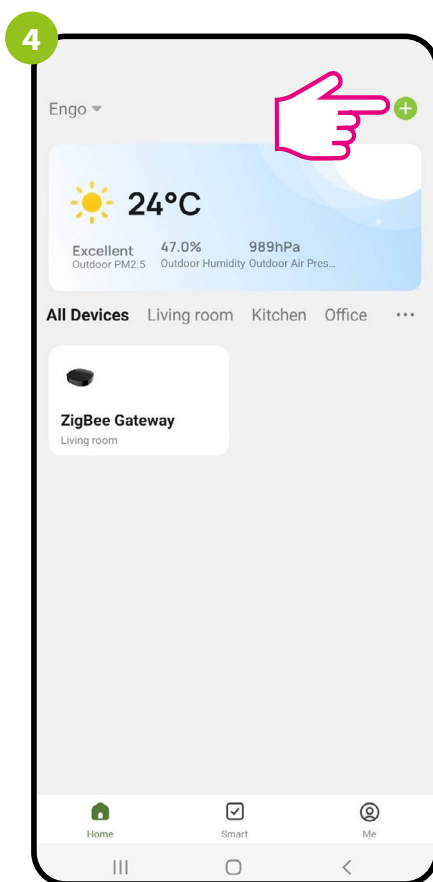
Make sure that gateway has been added to the application.



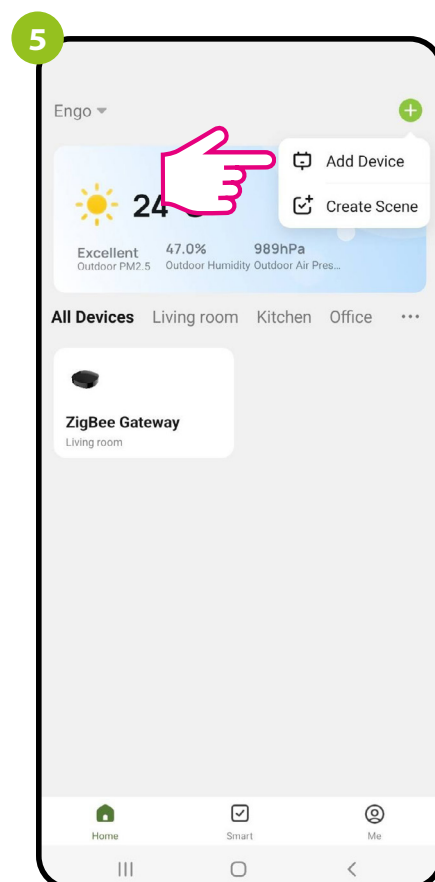
On the EONE thermostat, hold ▲ and ▼ buttons simultaneously for 5 seconds until „PA” appears on the display. The thermostat will enter pairing mode.



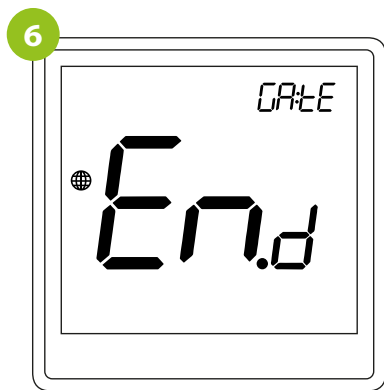
Thermostat count backwards (180s).



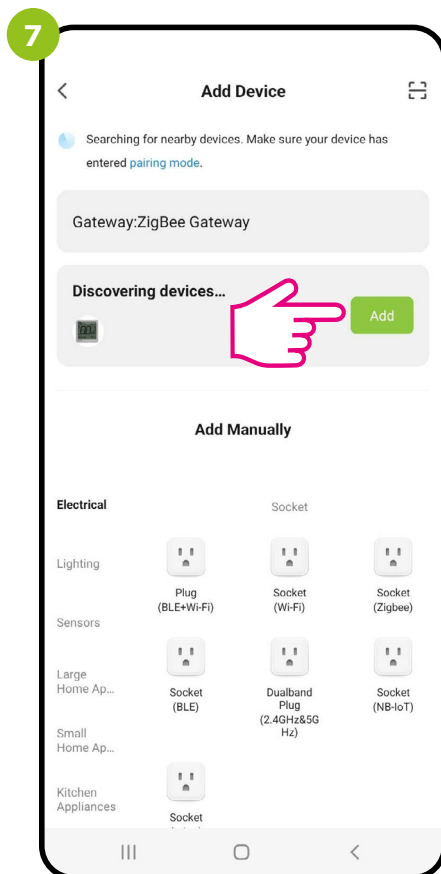
In the application, click on the + in upper right corner.



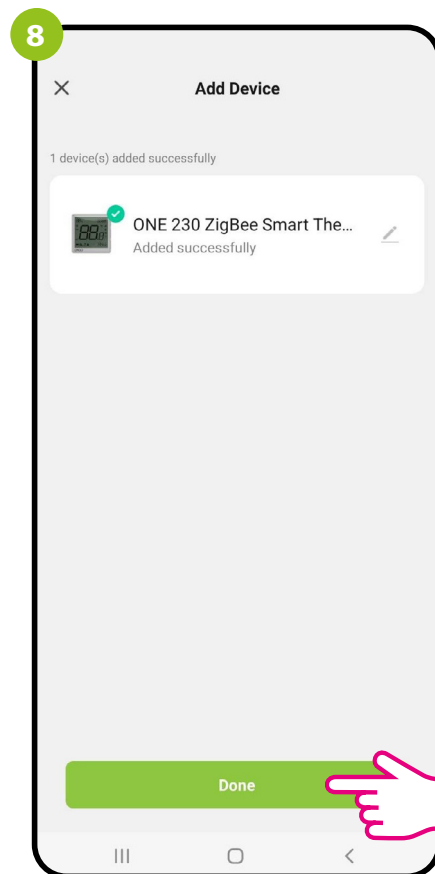
Select:  
„Add Device”.



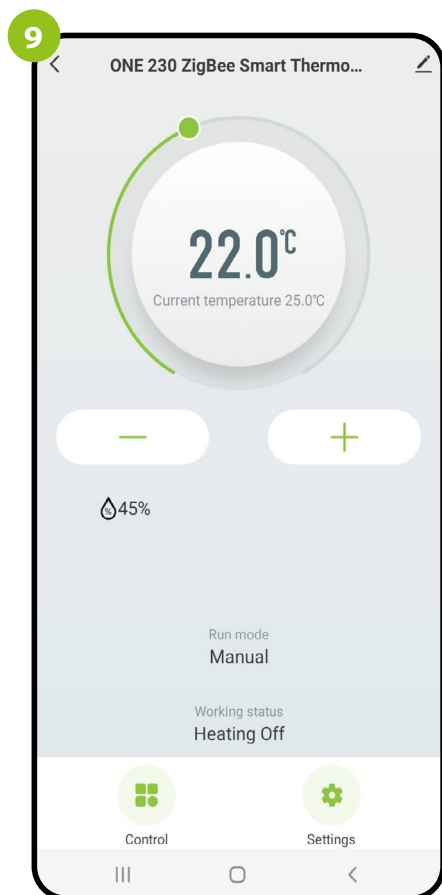
Wait for „End“.



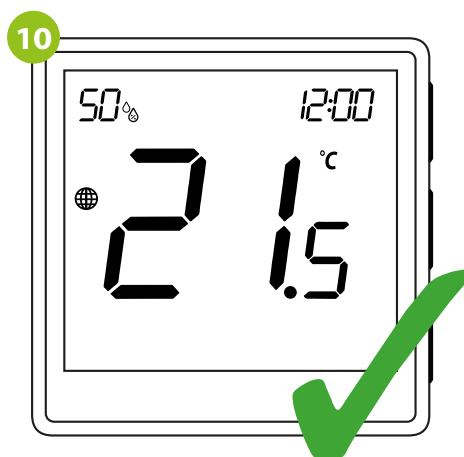
When the ZigBee network gateway has correctly searches for the thermostat, click the button „Add.“



Name the device and click „Done“.



The thermostat has been installed and displays the main interface.



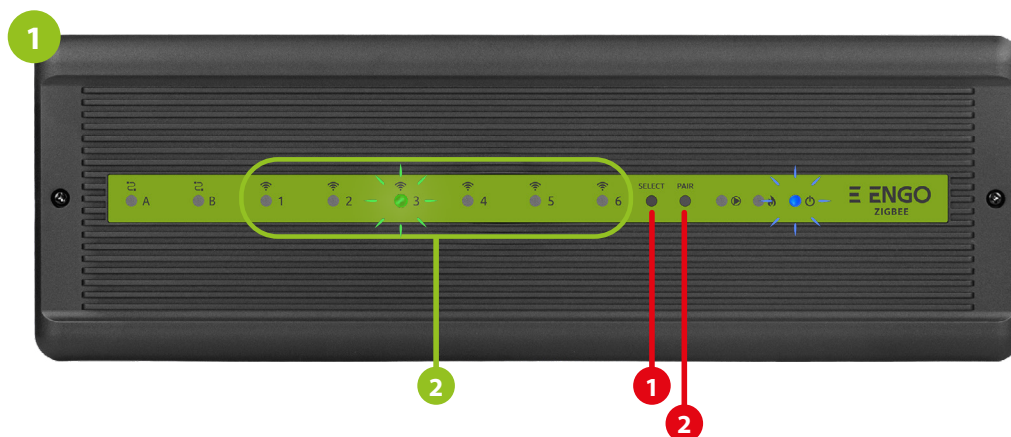
On the thermostat screen appeared an icon globe indicating that it has been added to the ZigBee network.

## 13. ENGO Binding

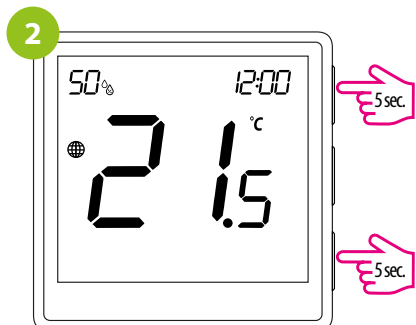
The ENGO ZigBee series of devices - as the only one working on the basis of the TUYA platform - offers the so-called ENGO binding function, which allows direct binding of EONE thermostat with receivers (ECB62ZB control box, EMODZB module, EREL1ZB12A relay) using EGATEZB gateway. This makes it possible to bind devices without creating automation in the mobile application. The binding function ensures stable communication of devices online and offline (even without Internet or router connection).

### 13.1 Linking thermostat to the wireless control box ECB62ZB

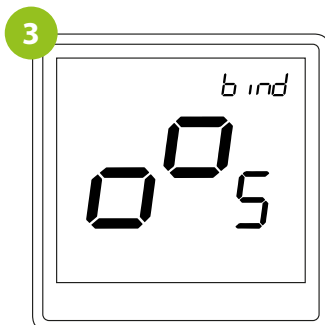
Make sure that the ECB62ZB control box and thermostat are in the same ZigBee network (they are added to the same gateway EGATEZB) and the POWER LED lights up blue.



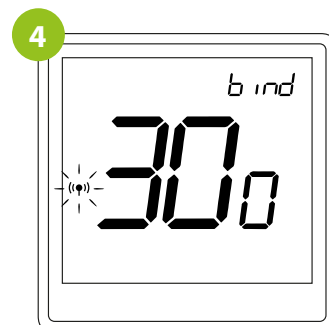
In order to correctly link thermostat with the control box, first select the zone in the control box with the SELECT button (1) (zone which you want to link with thermostat). The LED (2) will flash 3 times for the selected zone. Confirm your selection by clicking PAIR button (2). The LED (2) will flash green with the previously selected zone - binding process has started, it is active for 10 minutes and during this time you can link thermostat with the selected zone.



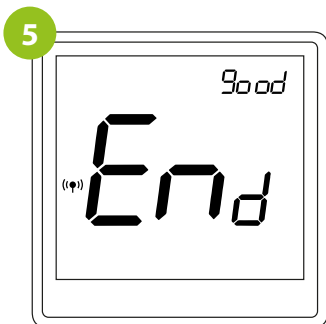
On the EONE thermostat, hold ▲ and ▼ buttons until the "bind" message appears.



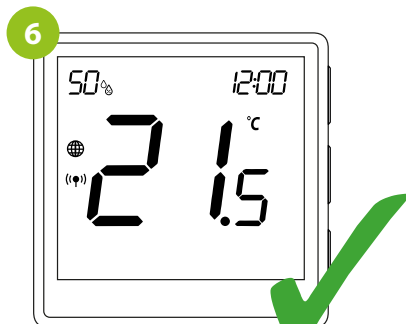
Release keys, binding function is active.



The "binding" process takes up to 300 seconds.



After successful binding operation "End" message will be displayed.



Both devices have been successfully linked. Thermostat displays the main screen, icon "((⬆))" appeared on the screen indicating connection with the receiver



#### ATTENTION:

If the binding process fails, it must be repeated taking into account the distances between devices, obstacles and local radio signal interferences.



#### Remember:

Radio range can be increased by Engo ZigBee repeaters.



#### ATTENTION:

When the controller is bound to a wireless zone in the control box, in case of loss of communication between devices, the zone will turn off after 50 minutes.

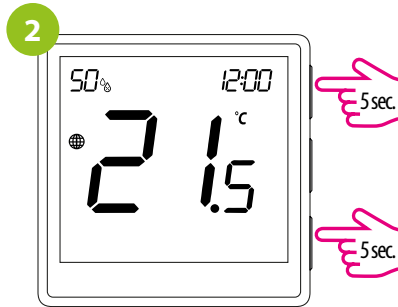


### 13.2 Linking thermostat to the control module EMODZB

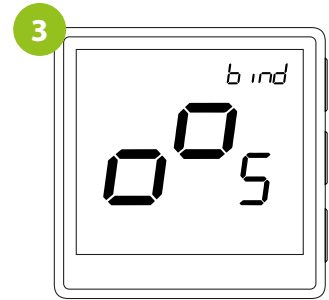
Make sure that the module and thermostat are in the same ZigBee network (they are added to the same gateway EGATEZB).



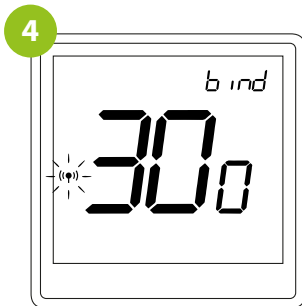
To properly bind thermostat with the module first click quickly the button on the device 5 times. The LED diode will start flashing slowly on red, which means the device will enable binding mode.



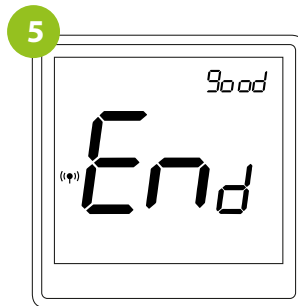
On the EONE thermostat, hold ▲ and ▼ buttons at the same time for 10 seconds until the „bind” function appears.



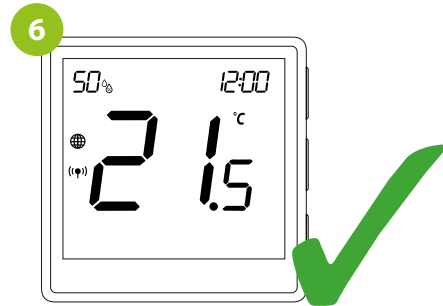
Release the keys, binding function (process of linking thermostat) is active.



The „binding” process takes up to 300 seconds.



After successful binding operation „End” message will be displayed. The LED on the module will stop flashing.



Both devices have been successfully linked. Thermostat displays the main screen, icon (📶) appeared on the screen indicating connection with the receiver.



#### ATTENTION:

If the binding process fails, it must be repeated taking into account the distances between devices, obstacles and local radio signal interferences.



#### Remember:

Radio range can be increased by Engo ZigBee repeaters



#### ATTENTION:

When the controller is bound to the module, in case of loss of communication between devices, the module will turn off after 50 minutes.

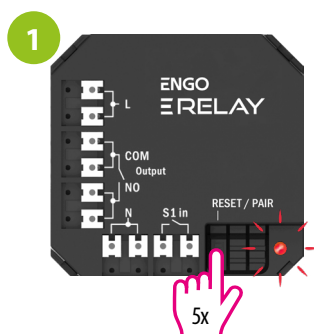


#### ATTENTION:

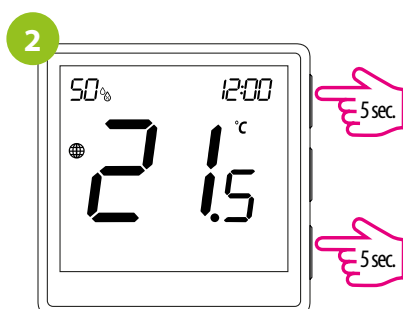
When the regulator is bound to the module, do not set time schedules in the module because they will interfere with the operation of the heating system.

### 13.3 Linking thermostat to the relay EREL1ZB12A

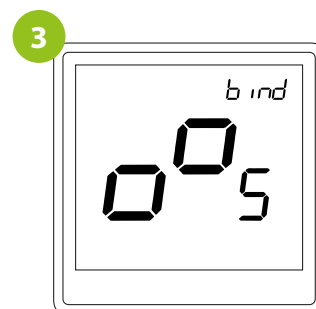
Make sure that the relay and thermostat are in the same ZigBee network (they are added to the same gateway EGATEZB).



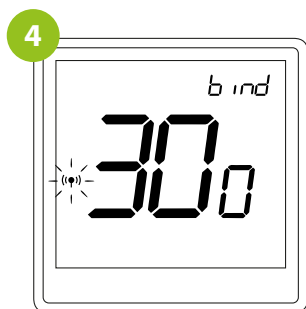
To properly bind thermostat with the relay first click quickly the button on the device 5 times. The LED diode will start flashing slowly on red, which means the device will enable binding mode.



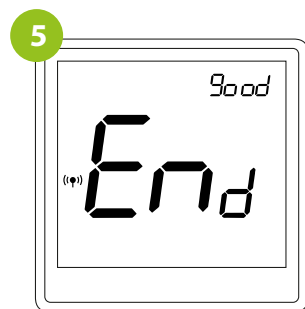
On the EONE thermostat, hold and buttons ▲ and ▼ for 10 at the same time seconds until the „bind“ function appears.



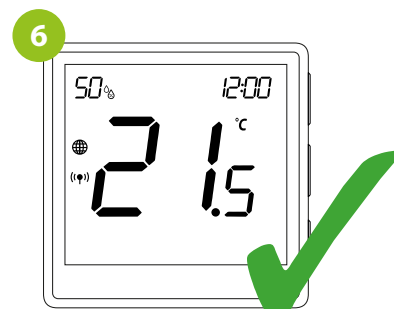
Release the keys, binding function (process of linking thermostat) is active.



The „binding“ process takes up to 300 seconds.



After successfull binding operation „End“ message will be displayed. LED on the module will stop flashing.



Both devices have been successfully linked. Thermostat displays the main screen, icon (●) appeared on the screen indicating connection with the receiver.



#### ATTENTION:

If the binding process fails, it must be repeated taking into account the distances between devices, obstacles and local radio signal interferences.



#### Remember:

Radio range can be increased by Engo ZigBee repeaters.



#### ATTENTION:

When the controller is bound to the relay, in case of loss of communication between devices, the module will turn off after 50 minutes.



#### ATTENTION:

When the regulator is bound to the relay, do not set time schedules in the relay because they will interfere with the operation of the heating system.

## 14. Thermostat operation in the app - ONLINE

### 14.1 General information

In this chapter, you can learn how to use the Engo One thermostat in connection with the ENGO Smart app. To be able to control the thermostat via the Internet, you will need an Internet connection and the ENGO Smart app. Controlling the thermostat via the app from a mobile device (iOS, Android) gives you a lot of freedom and the ability to remotely manage the temperature from anywhere.

### 14.2 App icons description

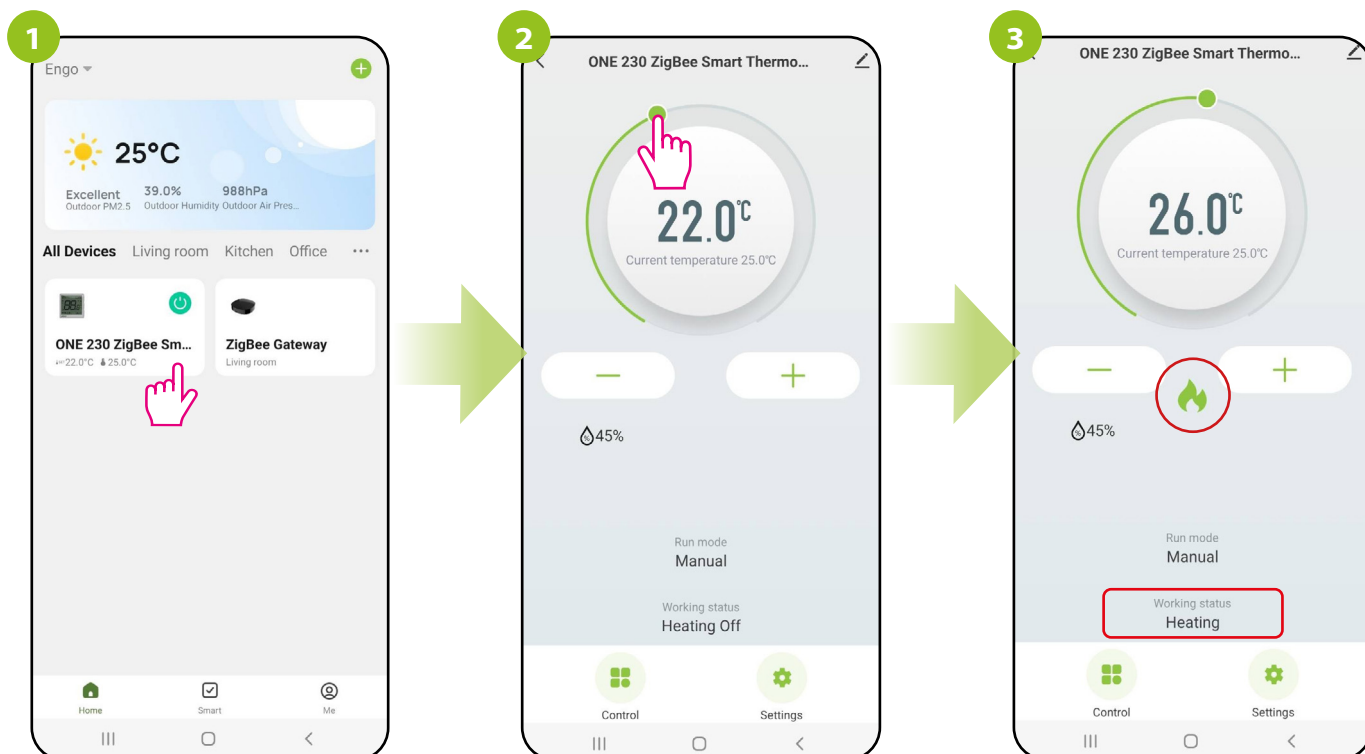
View of the EONE thermostat menu in the ENGO Smart app:



## 14.3 Control

### 14.3.1 Setpoint temperature change

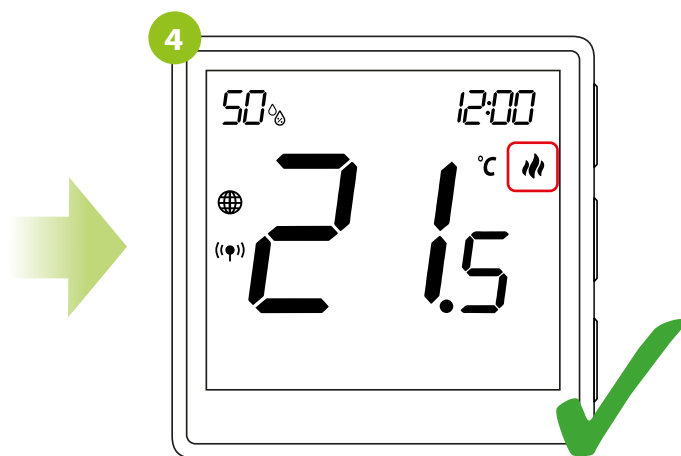
Changing the temperature setpoint is done by moving the cursor left / right in the app. On the screen, the actual temperature setpoint is represented by the number displayed in larger font.



Enter the thermostat interface.

Make a new temperature setting by moving the slider along the bar.

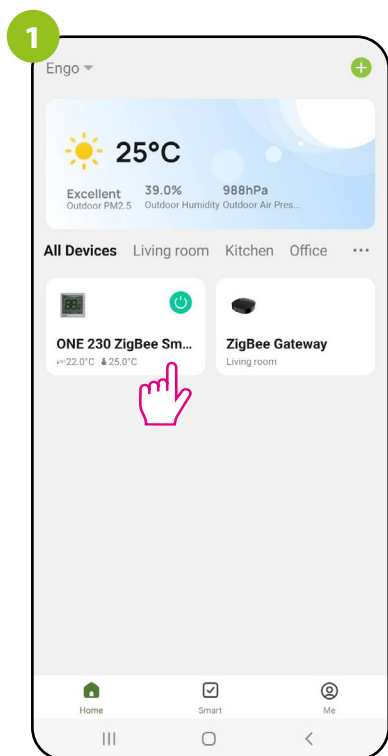
The thermostat started sending a signal for heating, which was signaled by a change of working status to „Heating”...



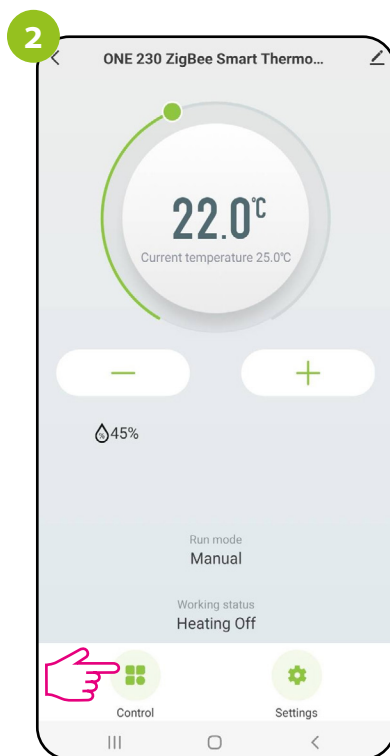
...and the heating icon appears on the display of the thermostat.

### 14.3.2 „Power” function

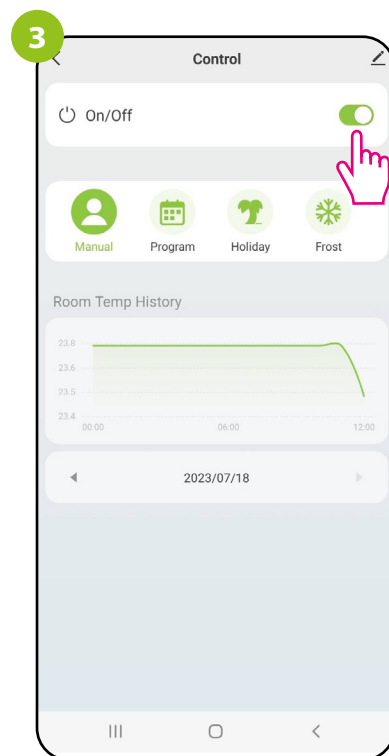
In this option, the user can turn ON / OFF the thermostat from the app without the need to interfere with the power wire. To do so, please follow the steps below:



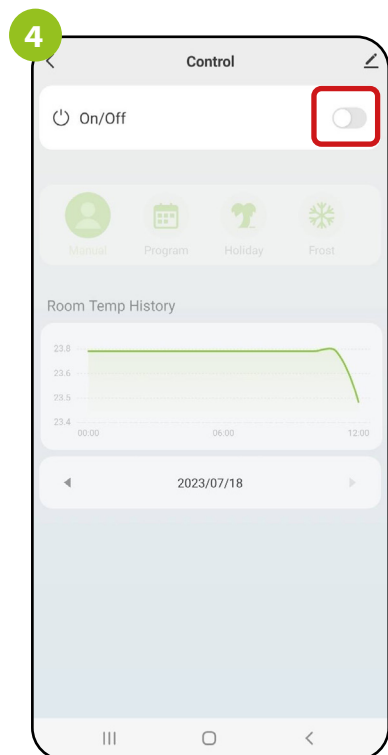
Enter the thermostat interface.



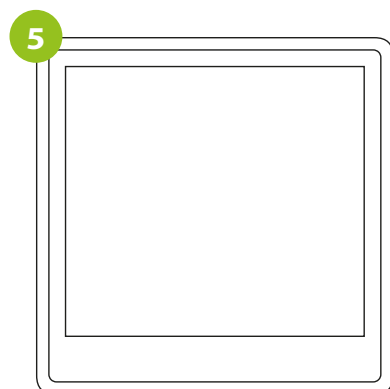
Select the „Control” option.



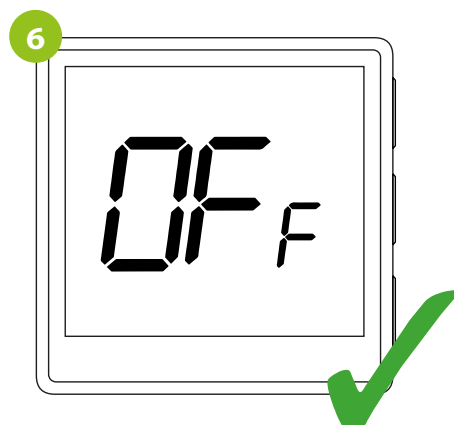
You can turn the thermostat on / off by using „Power” slider



When the „Power” slider is grayed out, then the thermostat is off...



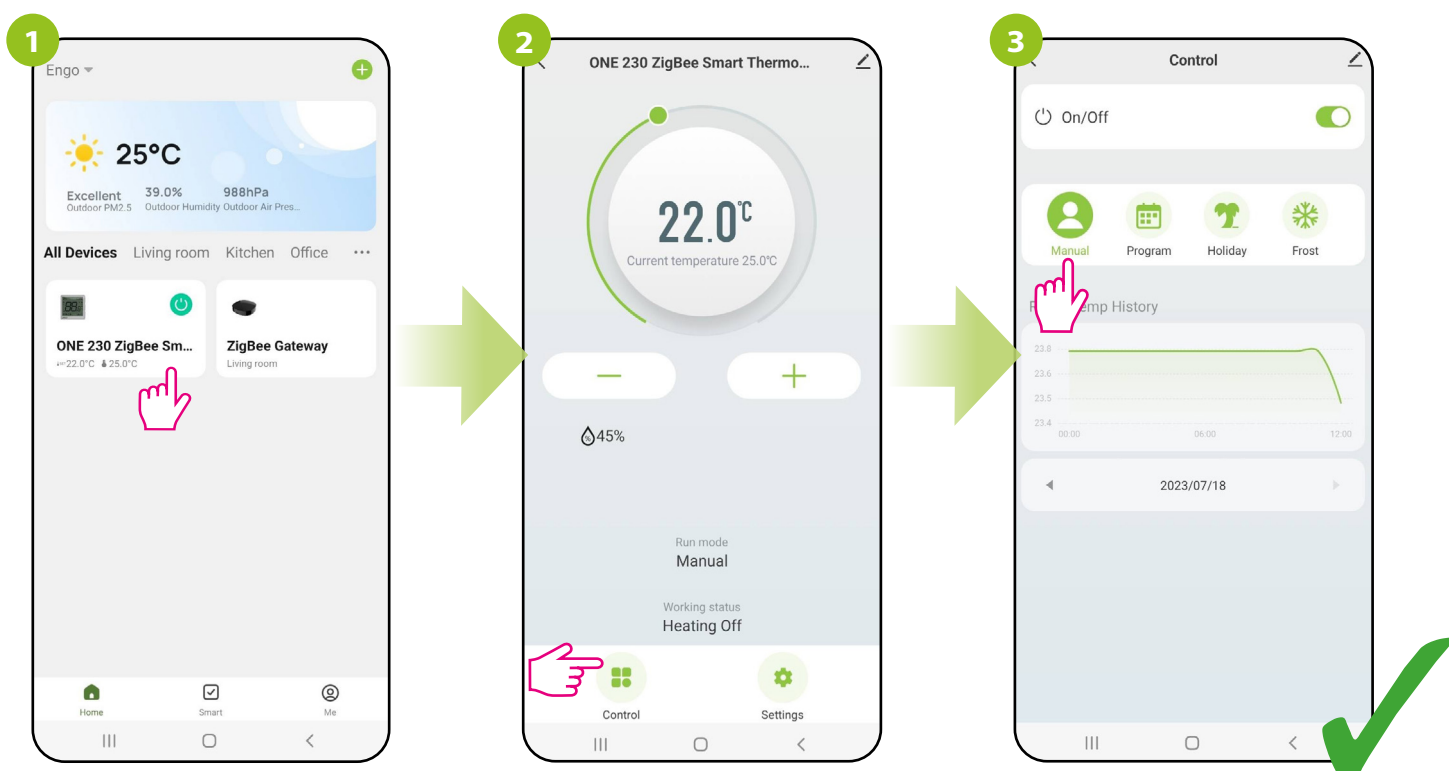
...and its display is blank.



Press the button to light up the screen. The message „OFF” will be displayed, which indicates the status of the thermostat off. If you want to switch the thermostat back on, move the ON/OFF slider at the application or hold the OK button on the thermostat for 5 seconds.

### 14.3.3 Manual mode

In the manual mode, the thermostat will maintain the temperature setpoint until the user changes it again via the app or thermostat, or selects a new operating mode in the app. To set the manual mode, follow the steps below:



Enter the thermostat interface.

Select the „Control” option.

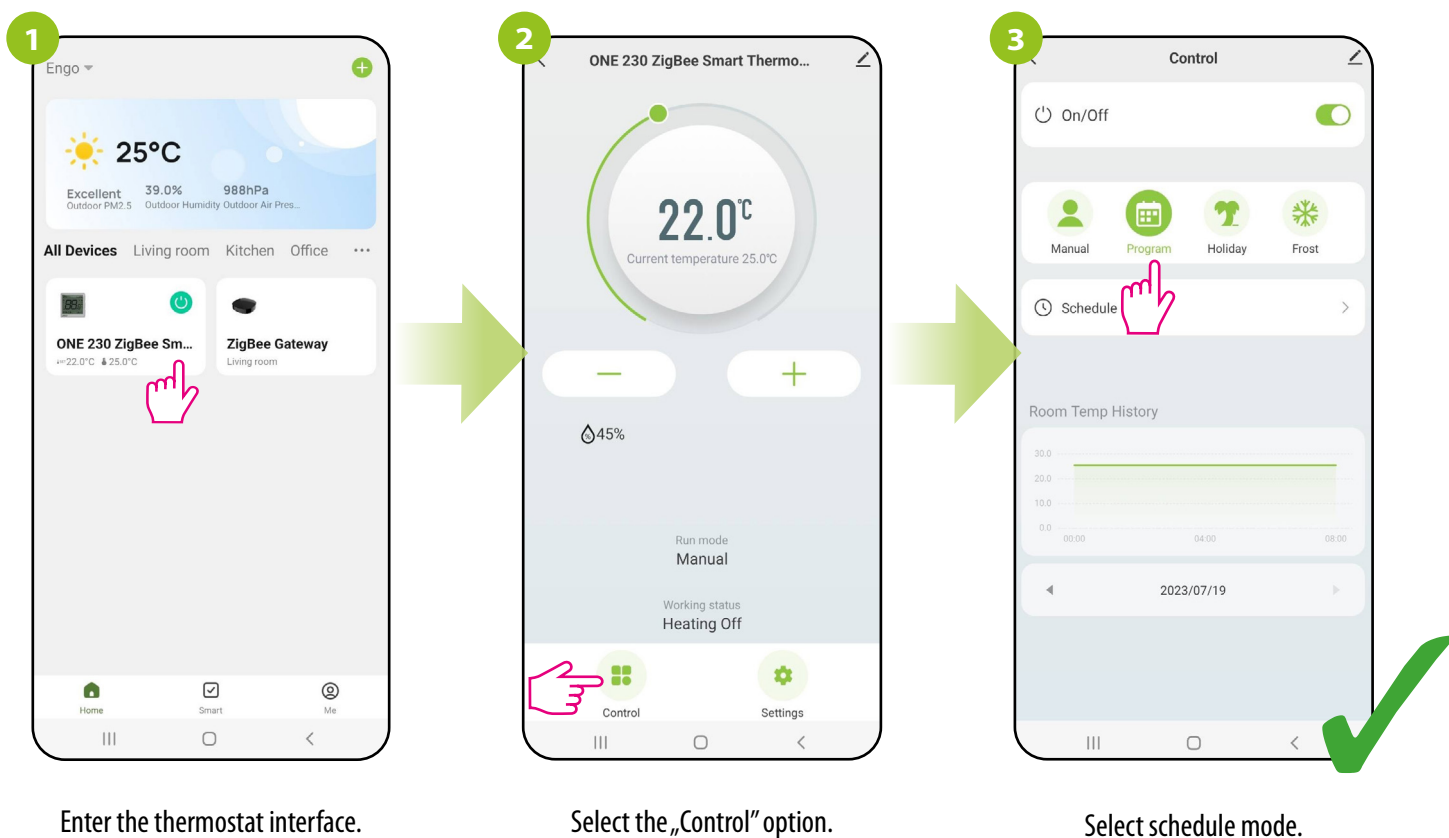
Select manual mode.

### 14.3.4 Schedule mode

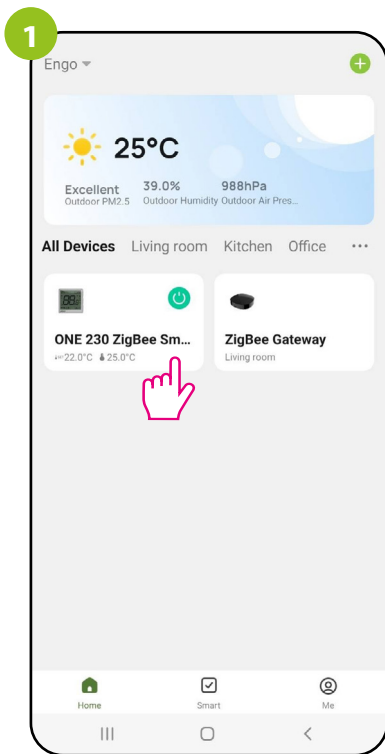
The ZigBee thermostat allows you to set schedules. When creating a schedule, the time of its commencement along with the set temperature is given. A maximum of 6 switching points can be set for each day of the week.

To activate the schedule, press the schedule icon in the „Work modes” place. Once activated, the status of the thermostat will update to „Schedule”.

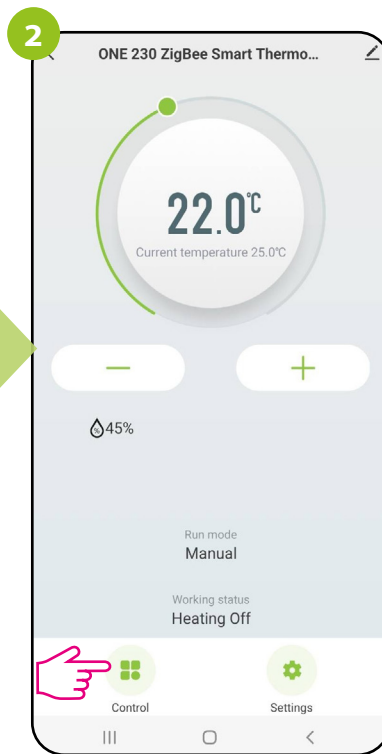
To activate the schedule mode:



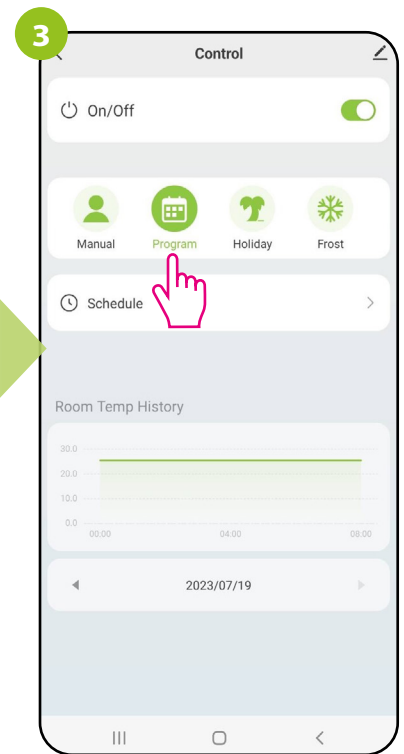
## TO PROGRAM A SCHEDULE IN THE APP:



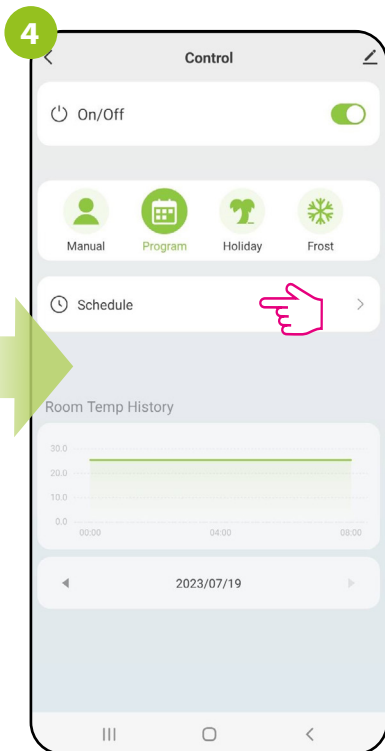
Enter the thermostat interface.



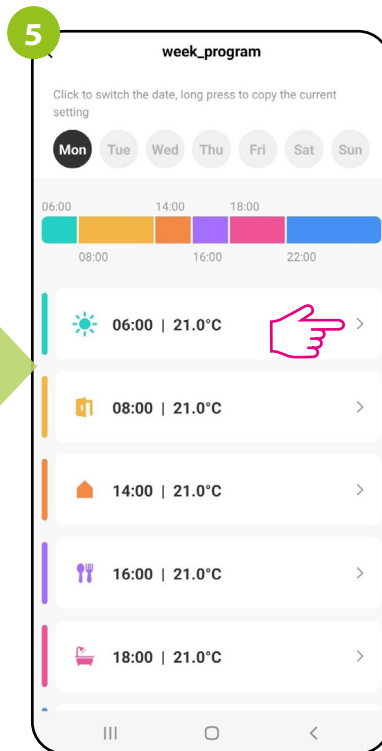
Select the „Control” option.



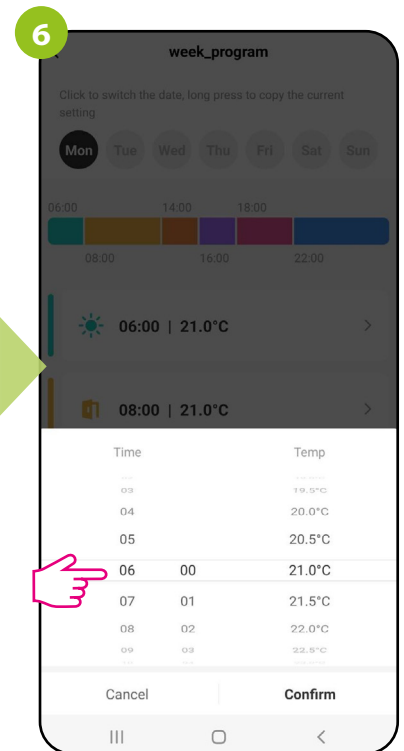
Select schedule mode.



Enter the schedule settings.

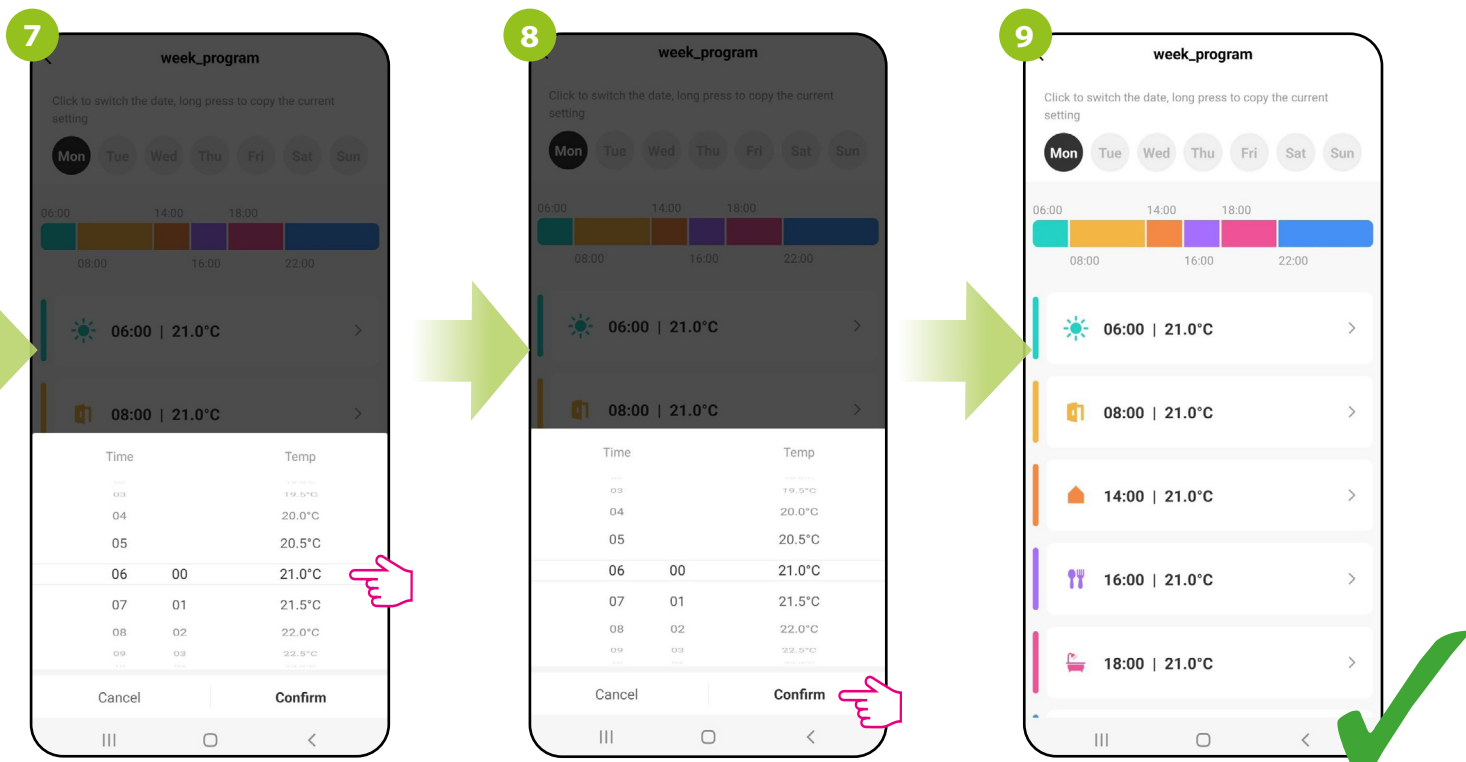


Select one of the six switch points to edit (the editing order is optional).



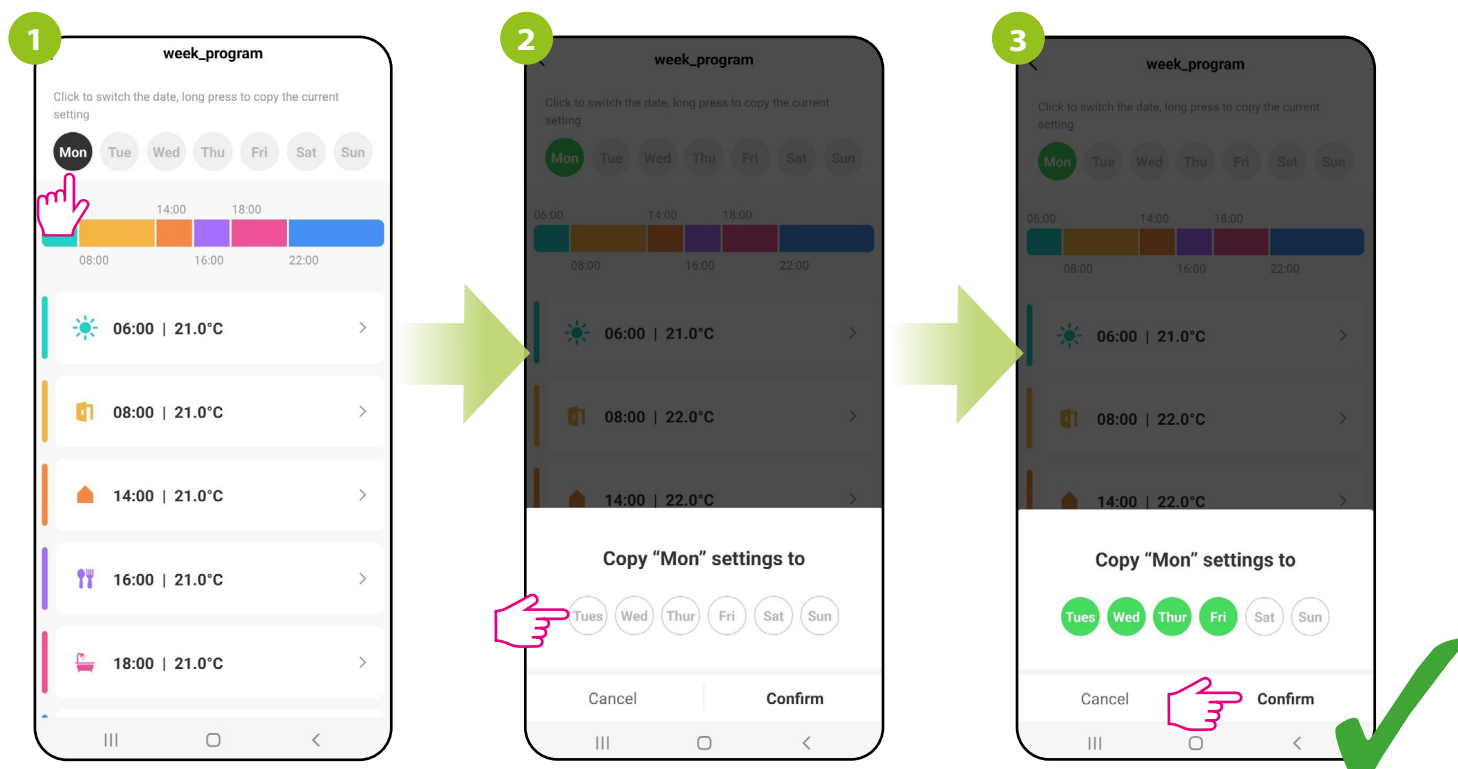
Select the start time of the switch point.





## COPYING DAYS

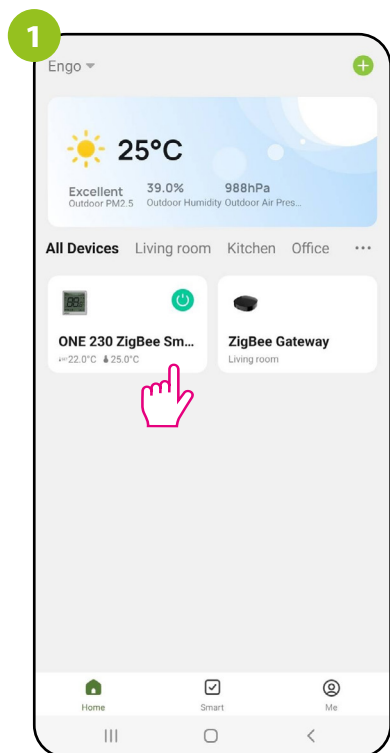
The ENGO Smart app allows you to copy the settings of a selected day in the schedule to another. Thanks to this, you do not have to set the next day for the second time if you want to have exactly the same settings in it. To do so, please follow the steps below:



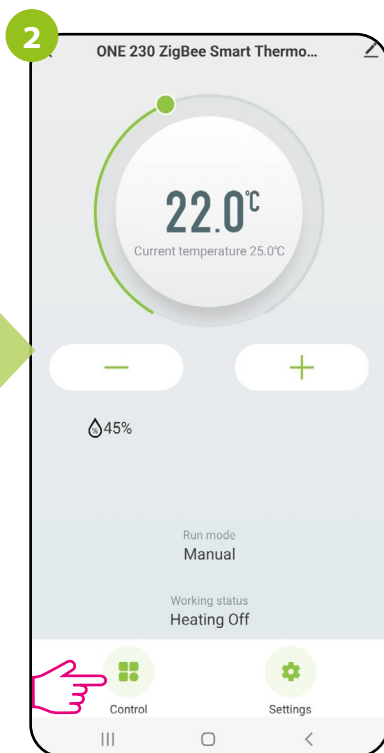
### 14.3.5 Holiday mode

In the holiday mode, you can program the temperature that will be maintained for a selected number of days (e.g. during a home absence).

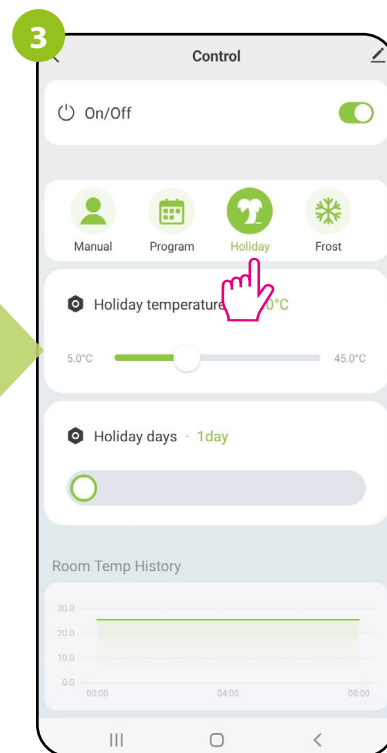
#### TO SET THE HOLIDAY MODE:



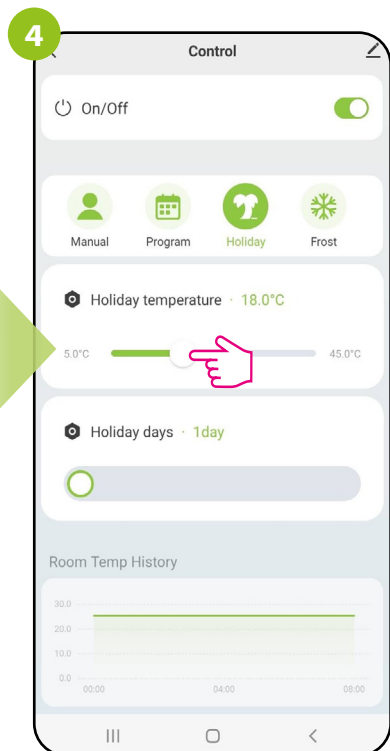
Enter the thermostat interface.



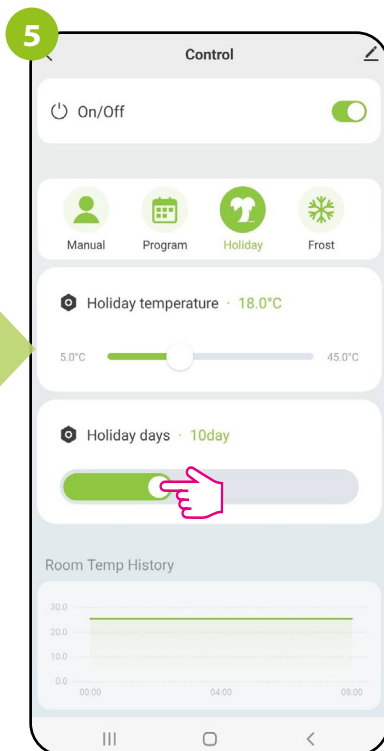
Select the „Control” option.



Select Holiday mode.



Set the temperature to be maintained in holiday mode.



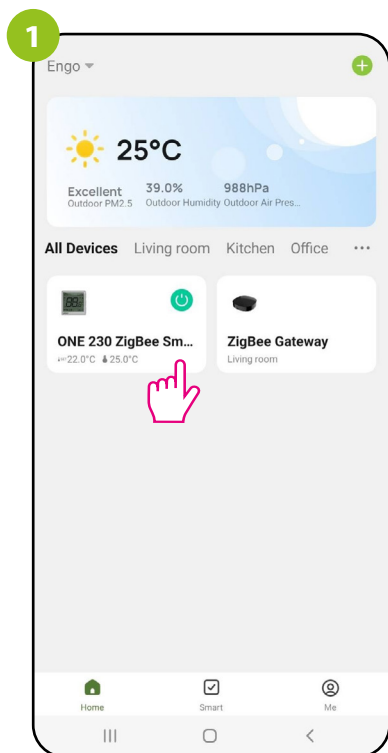
Set the duration of the holiday mode.



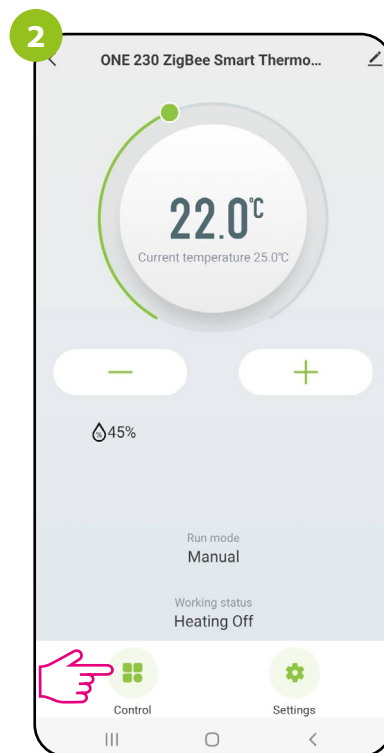
After all, exit holiday mode.  
All settings in holiday mode will be saved automatically

### 14.3.6 FROST mode

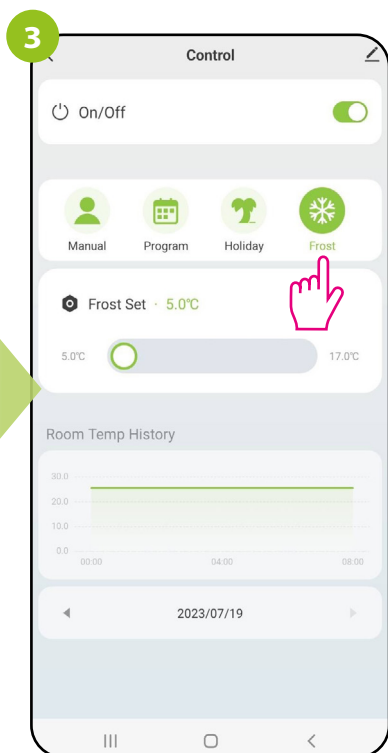
In the FROST mode, the preset temperature in the thermostat is kept as a constant, selectable value from the range of 5°C - 17°C.. When the anti-freeze (FROST) mode is active, a snowflake icon is displayed on the thermostat. When the ambient temperature drops below selected setpoint temperature, the thermostat will start sending the heating signal. This moment will be signaled by the app by changing the status to „Heating on - FROST mode“, and the snowflake icon will start blinking on the thermostat. Changing the set temperature during the active FROST mode (from the app or thermostat level) will change the status to manual mode.



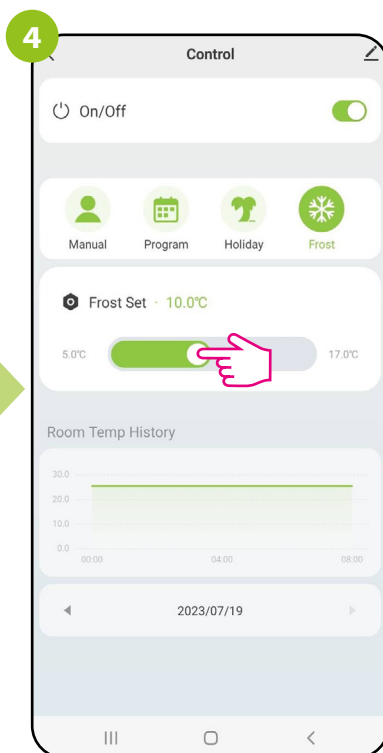
Enter the thermostat interface.



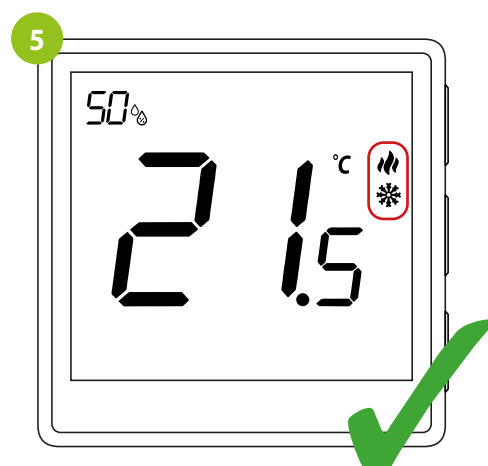
Select the „Control“ option.



Select FROST mode.



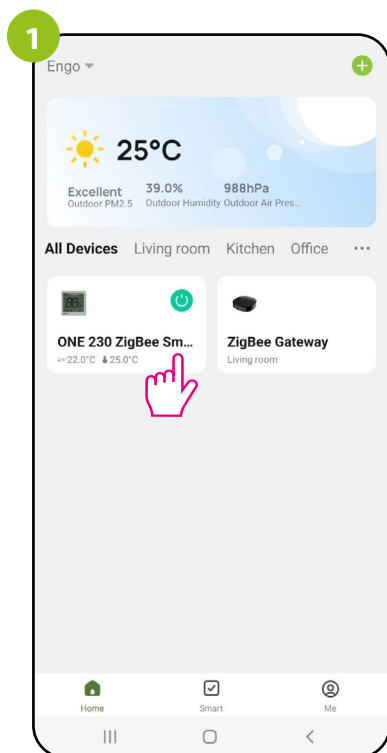
Set FROST setpoint temperature.



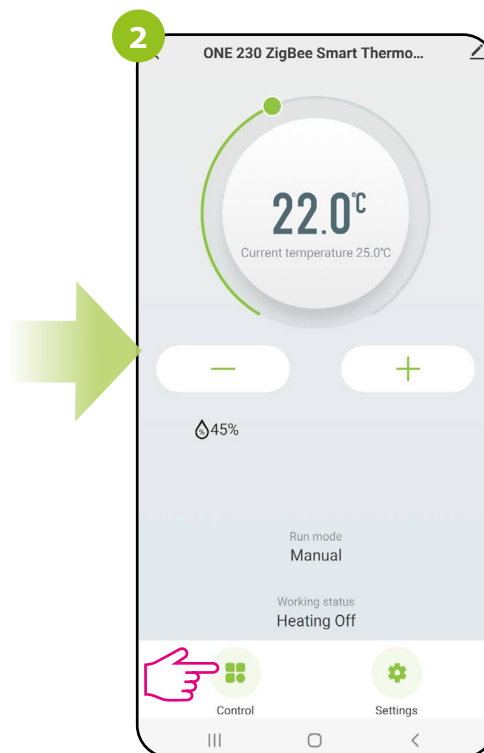
When the FROST mode is active on the thermostat screen in addition to the heating icon, a snowflake will appear.

### 14.3.7 Diagrams

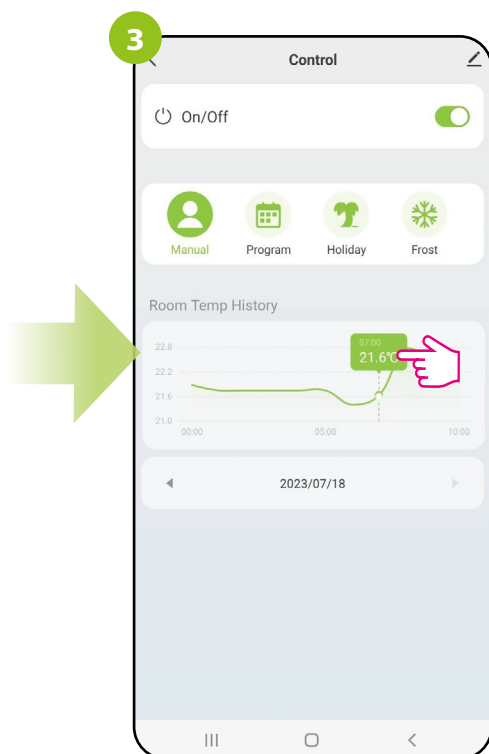
The ENGO Smart app offers room temperature history graphs and the heating time coefficient for the selected day. They allow you to better plan the operation of the thermostat, e.g. using the schedule mode based on the recorded data, which will make the operation even more economical.



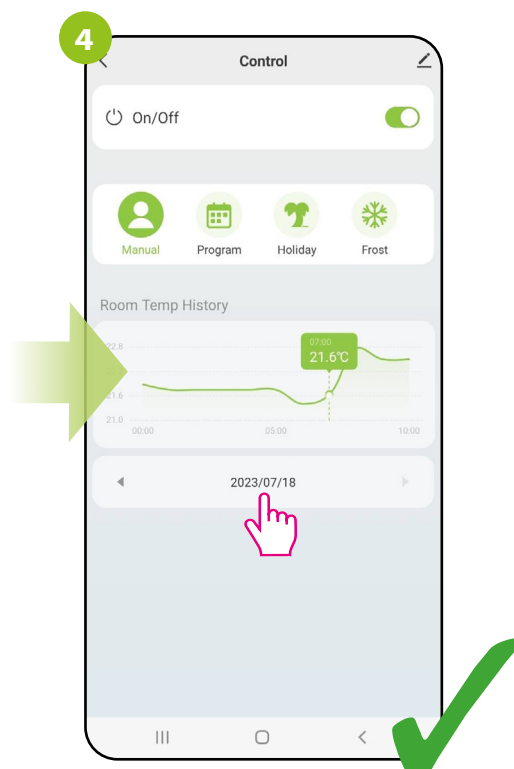
Enter the thermostat interface.



Select the „Control” option.



Click on the selected bar of the graph to view more details, e.g. the temperature that the thermostat maintained at the given time of the selected day.

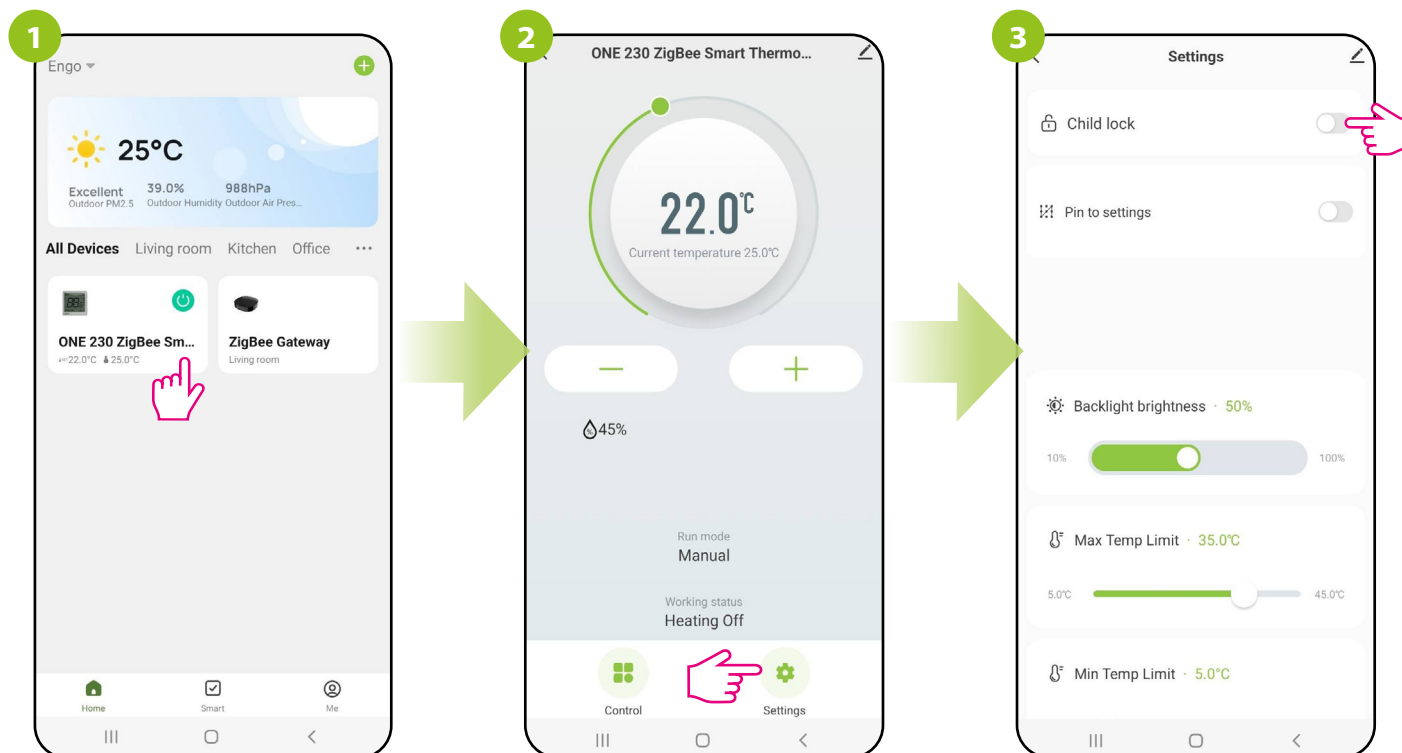


Choose the day that interests you.

## 14.4 Settings (installer parameters)

### 14.4.1 Key lock function

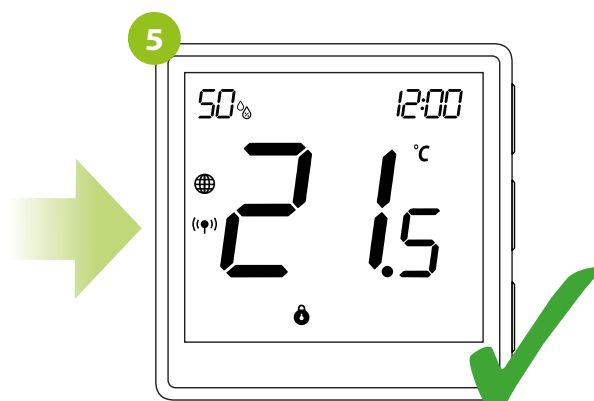
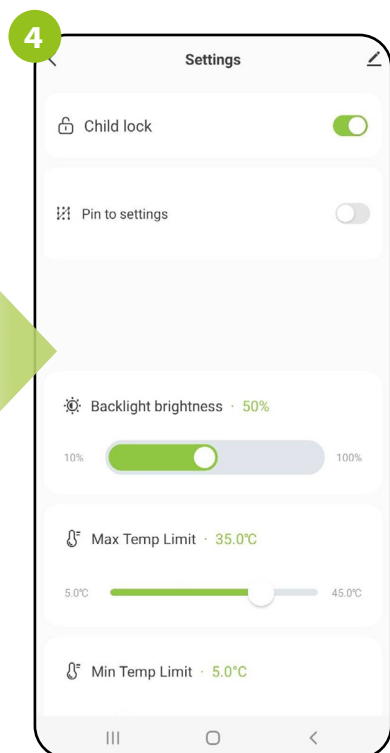
The app allows you to lock the buttons on the device. Just change the position of the slider on the screen. When the dot is green and on the right, then thermostat keys are locked. To unlock, press the slider again so that it is unlit and to the left. Then the buttons on the thermostat are unlocked. You can also lock/unlock from the thermostat using the keys UP and OK.



Enter the thermostat interface.

Select „Settings“.

Use the slider to lock / unlock the buttons on the thermostat.



When the buttons are locked, only the currently measured temperature can be read on the thermostat.

When the slider is highlighted green, then thermostat buttons are blocked.

## 14.4.2 Setting PIN

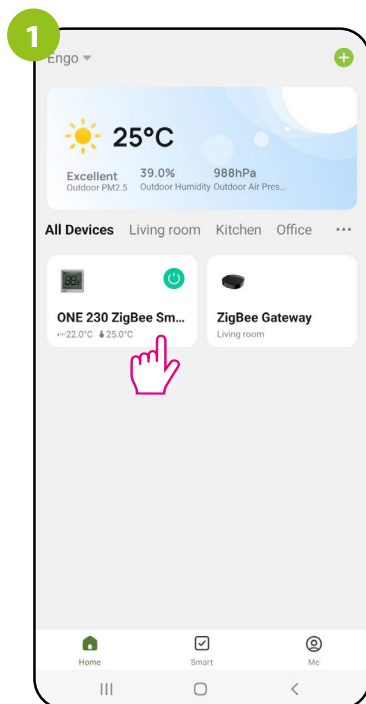
From the app, the user has the option of enabling or disabling the PIN lock for the installer settings and for unlocking thermostat buttons.



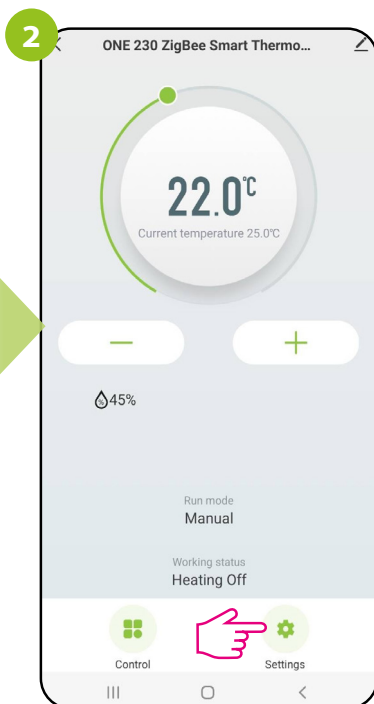
**ATTENTION!!!** PIN code cannot be set within the mobile app. This has to be done within thermostat installer parameters.

1. After activating the P16 parameter and setting a new PIN code, the user will have to enter the PIN code each time to enter the settings installer parameters.

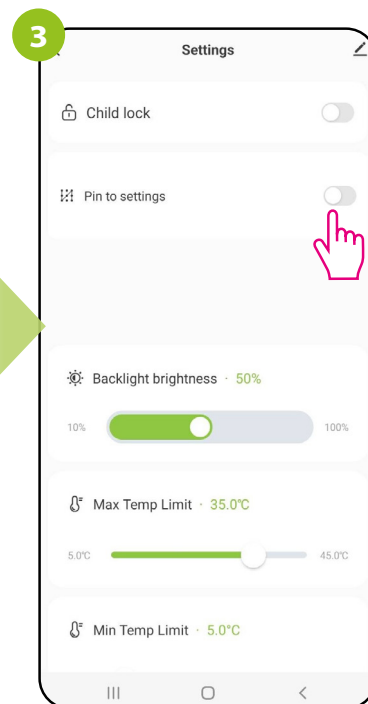
2. An additional function is the key lock, also with a PIN code. To activate this function, you must first set the code in the installer settings PIN in parameter P16 and then activate parameter P17. After activating parameter P17, entering the PIN code is required each time when unlocking thermostat buttons.



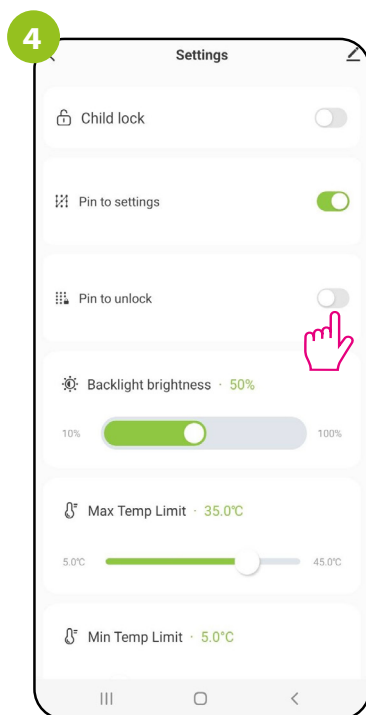
Enter the thermostat interface.



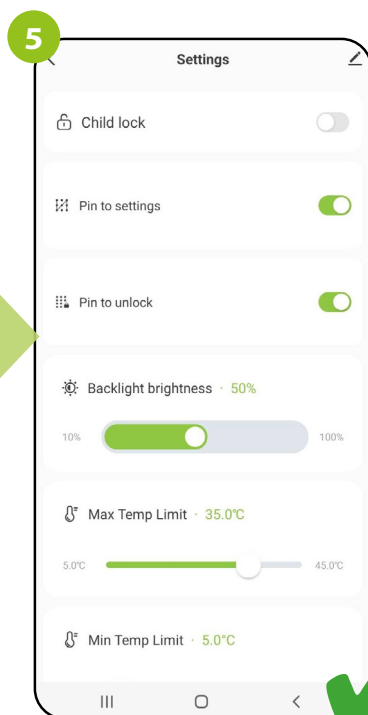
Select „Settings“.



If the „Pin to settings“ is enabled then user of the thermostat each time will need to enter a PIN to enter the installer settings.



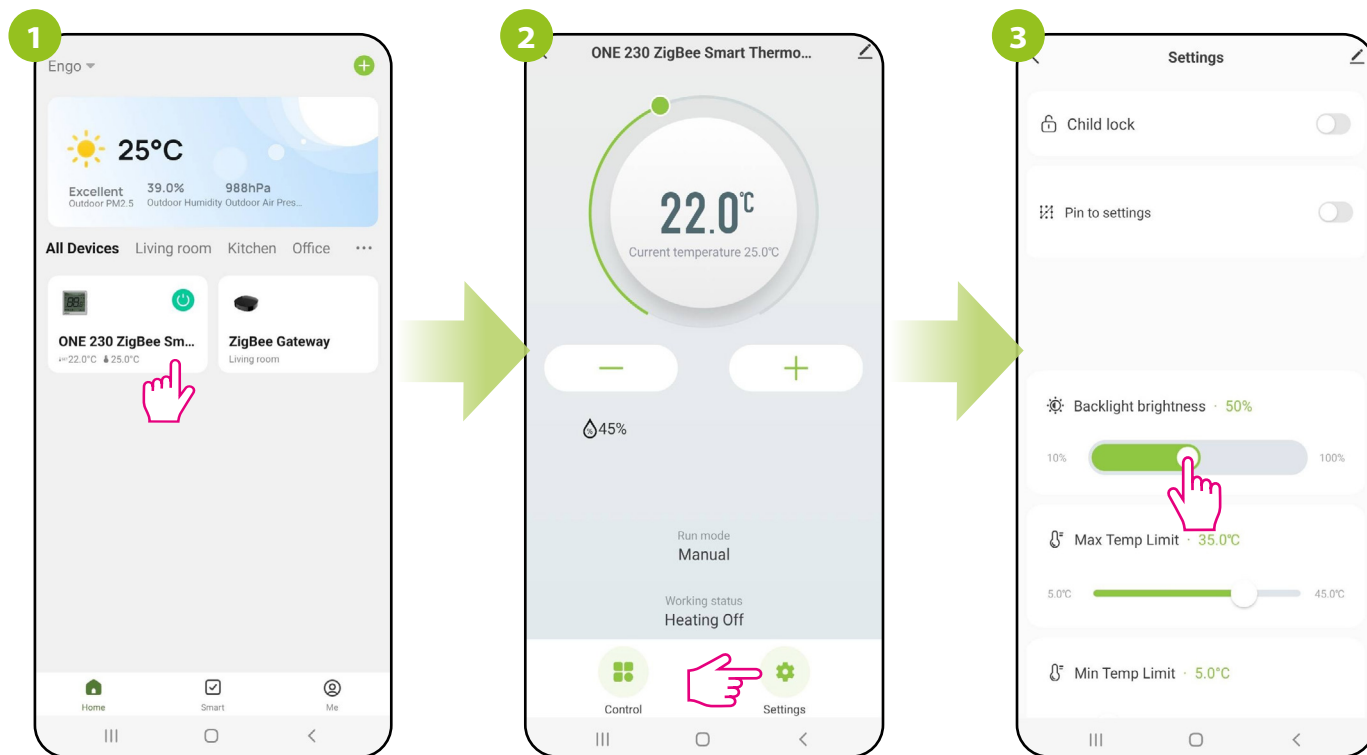
If the „Pin to settings“ is enabled, a new parameter appears - „Pin to unlock“ (thermostat keys).



If the „Pin to unlock“ is enabled, the user will always need to enter pin code to unlock thermostat buttons.

### 14.4.3 Backlight brightness

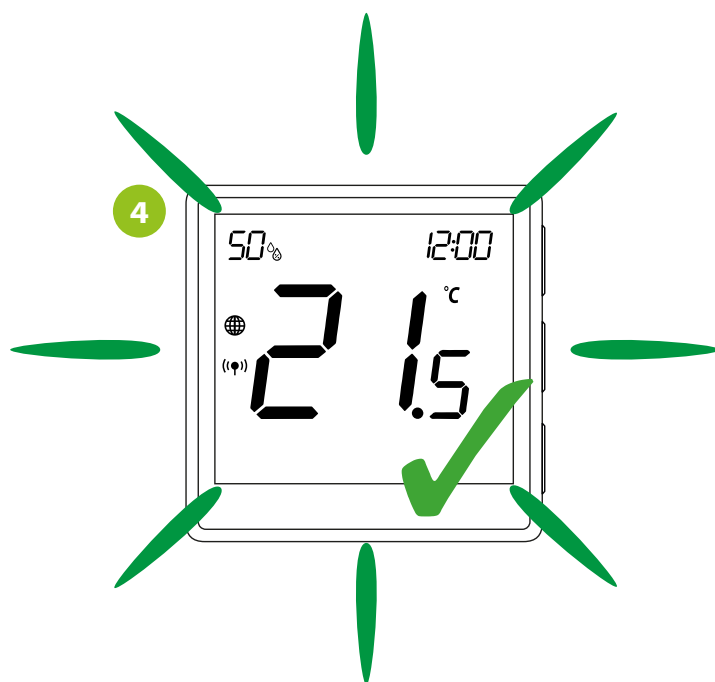
The user can change the brightness of the thermostat display. Move the slider to the appropriate direction as in the steps below:



Enter the thermostat interface.

Select „Settings“.

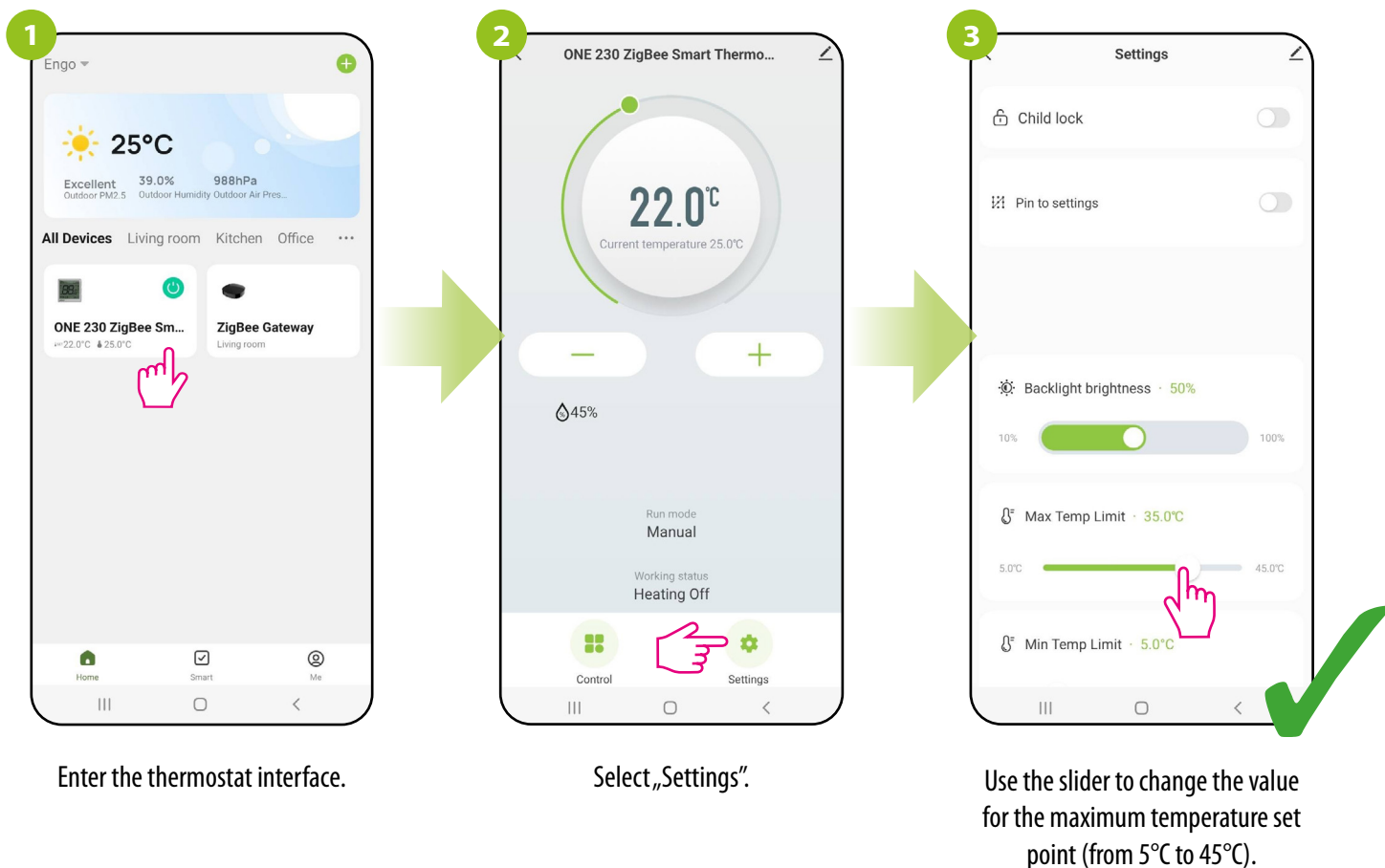
Use the slider to set the brightness of the display.



When the slider is moved (see previous step), the thermostat display automatically changes its brightness.

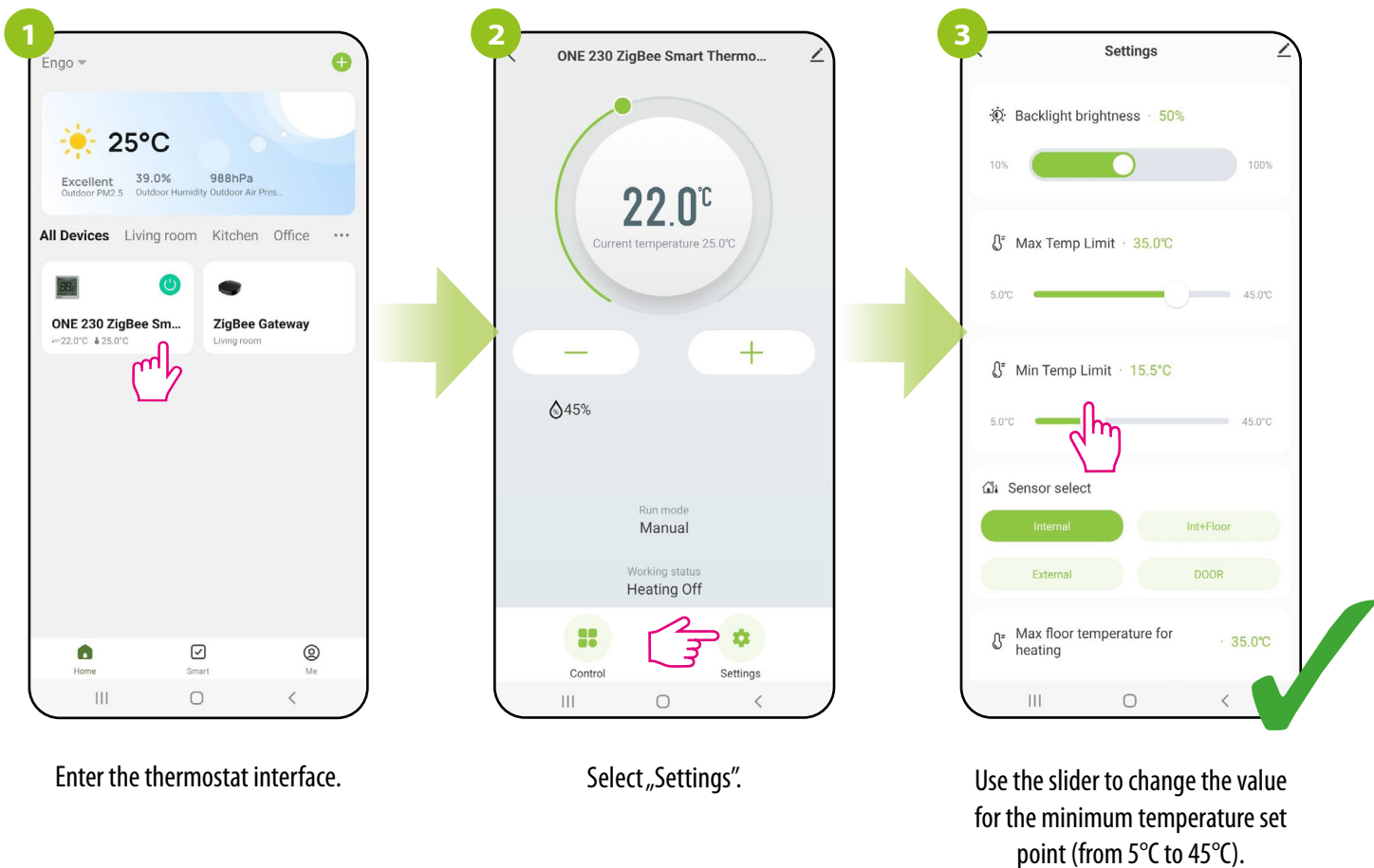
#### 14.4.4 Max temp. limit

This parameter allows you to set the maximum temperature setpoint in the thermostat. Take a look at the steps below:



#### 14.4.5 Min temp. limit

This parameter allows you to set the minimum temperature set in the thermostat. Take a look at the steps below:



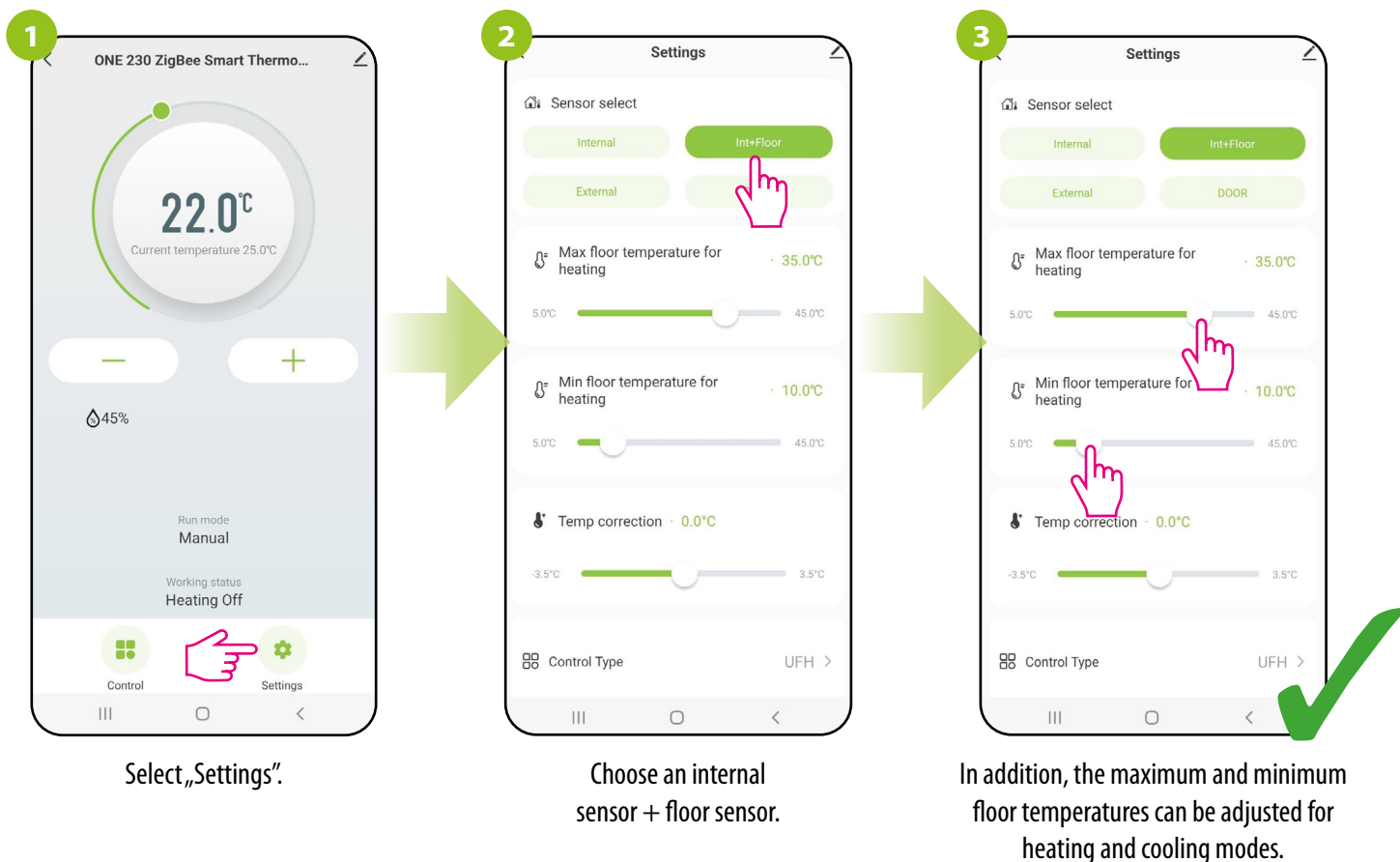


## 14.4.6 Sensor Selection

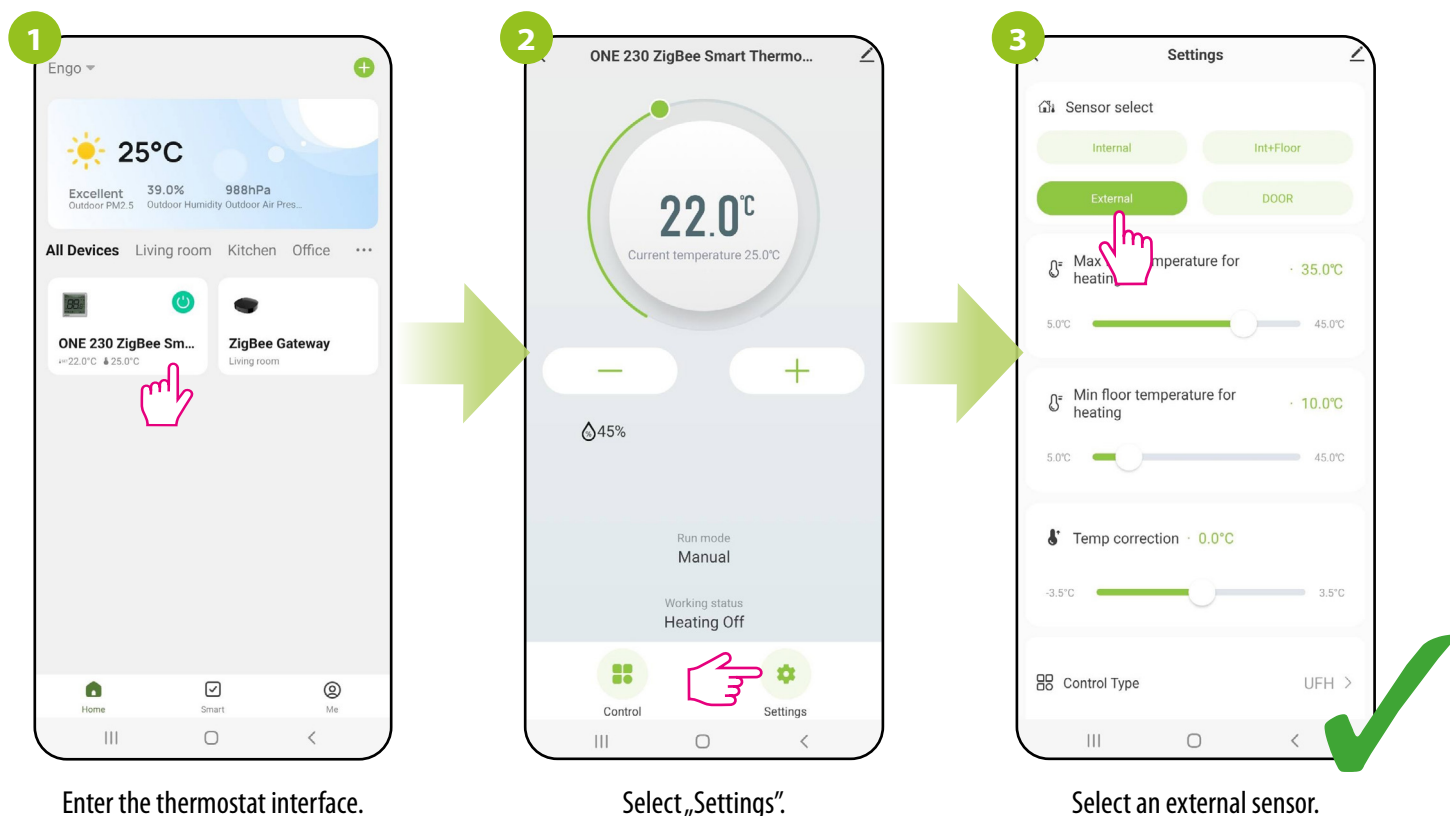
**Internal temperature sensor (IN)** - By default, the thermostat measures the temperature with the thermostat's internal built-in temperature sensor and input S1/S2 is inactive



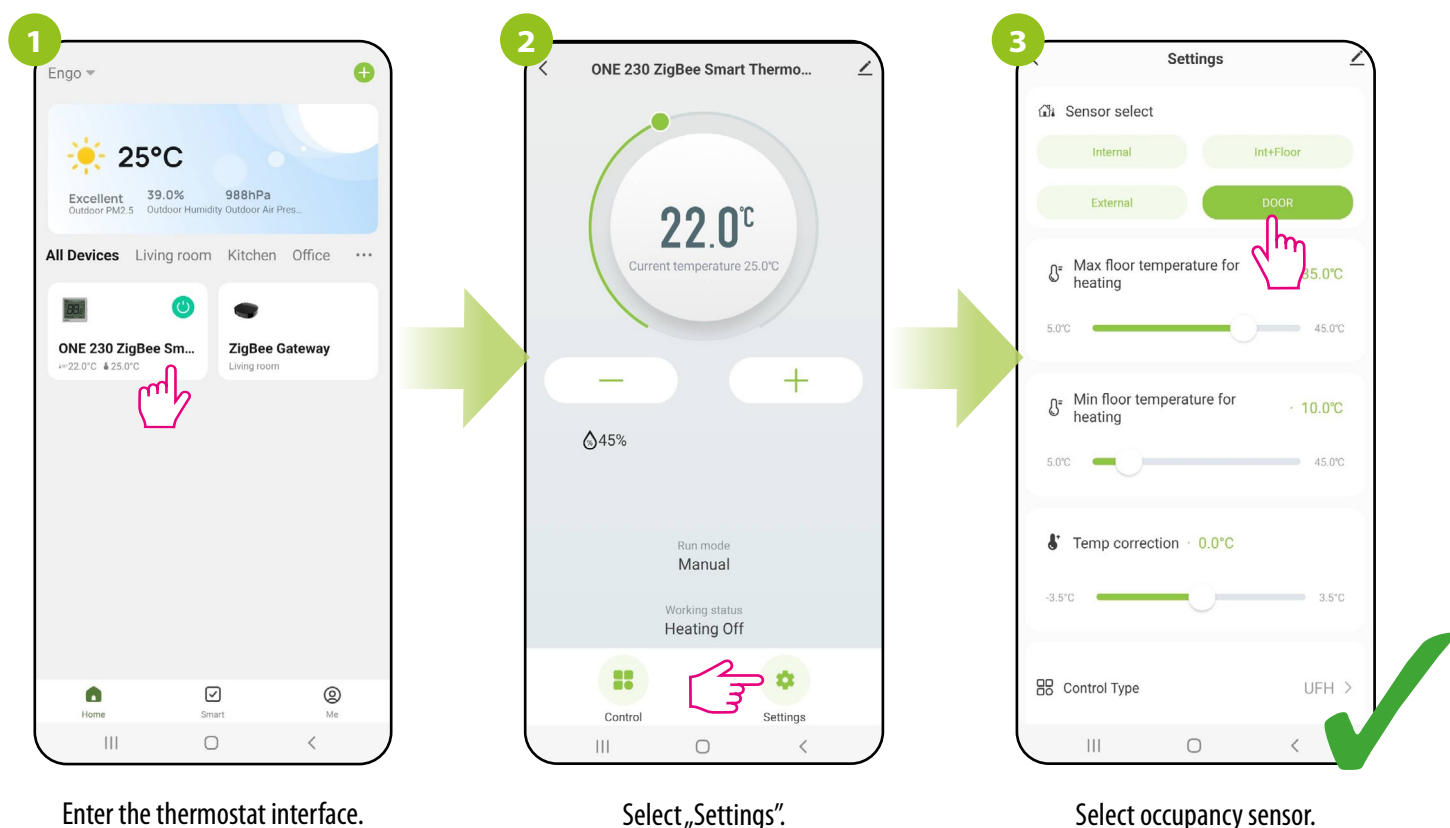
**Internal sensor + floor temperature sensor** - if you connect an additional floor sensor to terminals S1/S2 of the thermostat, both sensors are active (internal and external). The internal sensor measures and controls the room temperature, and the additional sensor acts as a protection of the floor against overheating and overcooling.



**External temperature sensor (as an air sensor)** - if an external sensor is connected to the S1/S2 terminals and selected external sensor, the thermostat will display the temperature from this sensor ignoring the internal sensor. The external temperature sensor can be used in case where the thermostat need to be in other place than controlled room.

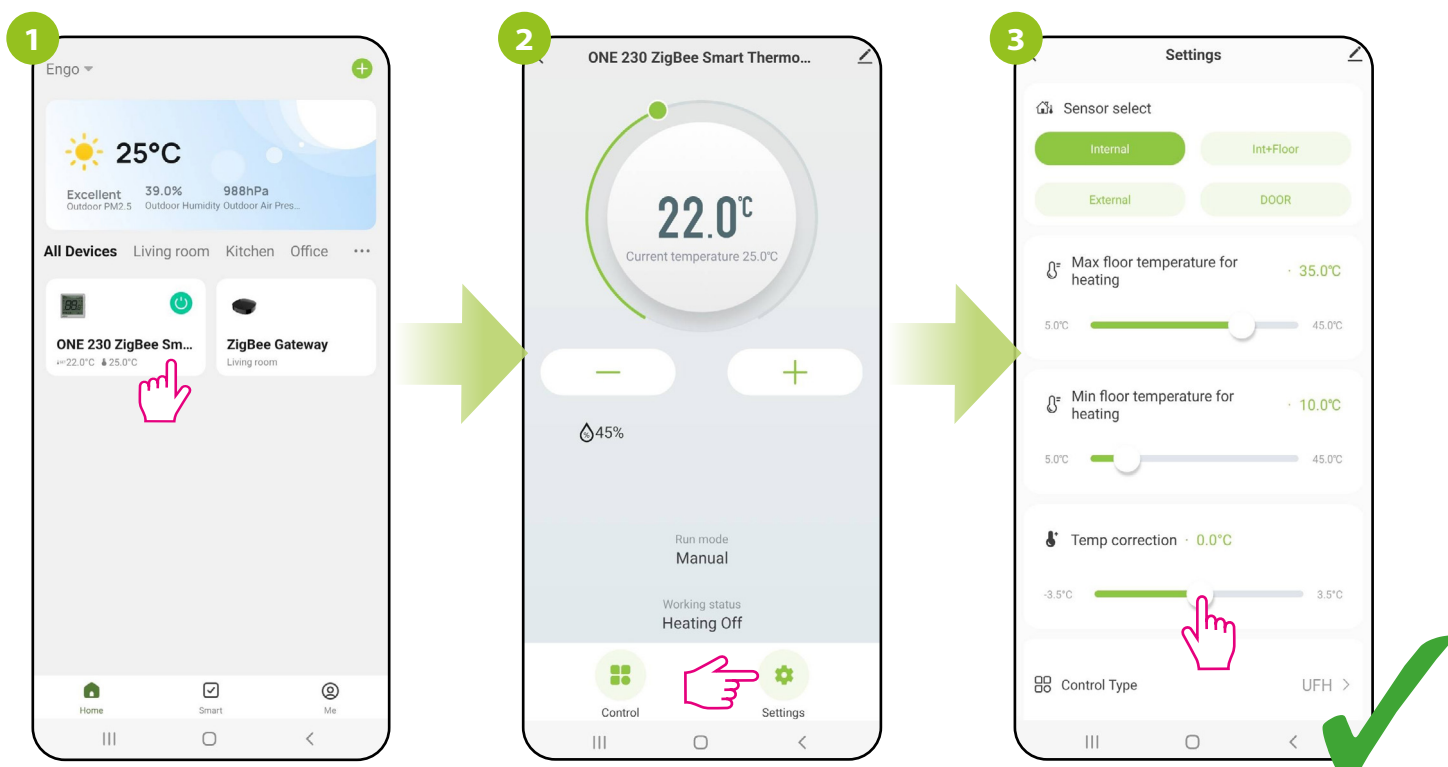


**External voltage-free contact (ON/OFF) or occupancy sensor** - an external volt-free contact is connected to the S1/S2 input (e.g. hotel card, occupancy sensor). When S1/S2 contacts are closed, thermostat is in normal operation mode e.g. schedule mode or manual mode. When S1/S2 contacts are opened, thermostat activates STANDBY mode (in heating mode maintains a setpoint of 5°C, and in cooling mode thermostat is OFF)



### 14.4.7 Temperature correction

This function allows you to adjust the room temperature by  $\pm 3.5^{\circ}\text{C}$  in steps of  $0.5^{\circ}\text{C}$ . Take a look at the steps below:



Enter the thermostat interface.

Select „Settings“.

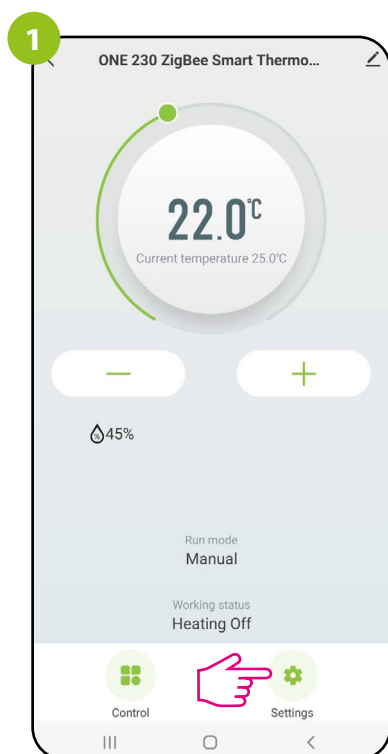
Use the slider to select the correction value for the current temperature.

## 14.4.8 Control type (algorithm)

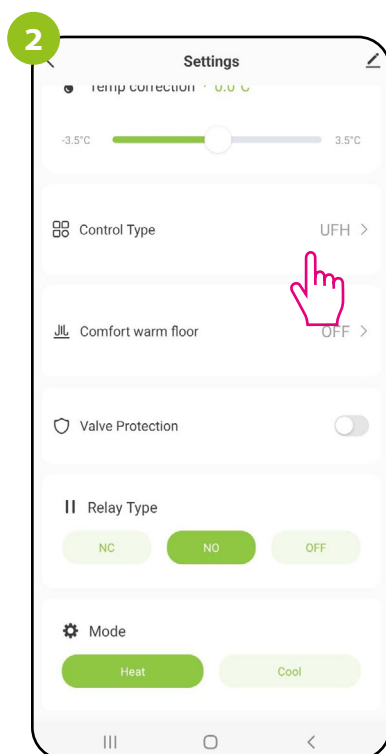
**HYSTERESIS ALGORITHM** uses a temperature difference (against setpoint temperature) to switch heating device ON and OFF. If thermostat works over hysteresis and it is used in a slow response system (e.g. underfloor heating), cycles of underheating and overheating cannot be avoided. It is difficult to maintain a constant temperature in the room because the thermostat is activated when the temperature drops below the setpoint temperature. In a system with high thermal inertia, the room temperature may still drop after the thermostat is turned on. Conversely, the thermostat switches off when the temperature is higher than the preset temperature. After the thermostat is turned off, the room temperature continues to rise because the heated concrete floor has to give off heat to the surroundings. The hysteresis value can be changed in steps of 0.1 from  $\pm 0.1^{\circ}\text{C}$  to  $\pm 0.5^{\circ}\text{C}$  - the lower the value, the thermostat will react faster to temperature changes in the room. For example, if you set the temperature to  $20^{\circ}\text{C}$  and if the hysteresis is  $0.5^{\circ}\text{C}$ , the heating will be turned on when the temperature drops to  $19.5^{\circ}\text{C}$  and turned off when the temperature reaches  $20.5^{\circ}\text{C}$ .

**TPI ALGORITHM** works differently compared to the hysteresis. It selects „a few or a dozen or so minute time pulses” for switching on and off the heating device in such a way as to maintain the room temperature closest to the set values. Even when the temperature has been reached, it heats up with impulses anyway to maintain comfort in the room. TPI (Time Proportional and Integral) is an algorithm with a simple memory in its software, thanks to which it „learns” how the temperatures in the room are achieved and maintained. It has the basic computing ability: it „works” with collected data and current temperatures, „predicting” how long heat must be supplied (heating must be on). This is a kind of „intelligent control” as the heat supply takes long enough to reach the set point and turns off, increasing energy efficiency. TPI works according to cycles, the length of which is measured in amounts per hour. During normal use, you can see that the thermostat works shorter as it approaches the set temperature. Once the set point is reached, the thermostat run times become short in order to maintain the temperature. In the EONE thermostat, you can select the TPI algorithm for a specific type of heating (floor, radiator or electric).

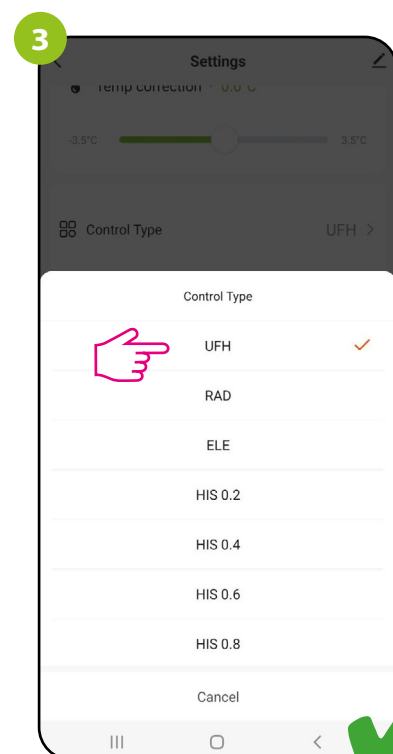
### How to set the TPI algorithm in the ENGO Smart app for the Wi-Fi thermostat:



Select „Settings”.



Select „Control algorithm”.



Then select the type of control heating system. Depending on your choice, the thermostat will better adjust its work.

### 14.4.9 Comfort warm floor function

This function helps to keep the floor warm, even if the room is warm enough and there is no need to turn on the heating. User can select 5 levels of warm floor feature. For small rooms with short loops that can be heated quickly, level 1 is dedicated. For large rooms with long loops level 5 is dedicated. For your own convenience, activate the parameter and choose the level that suits you, but keep in mind the economy of using this function.

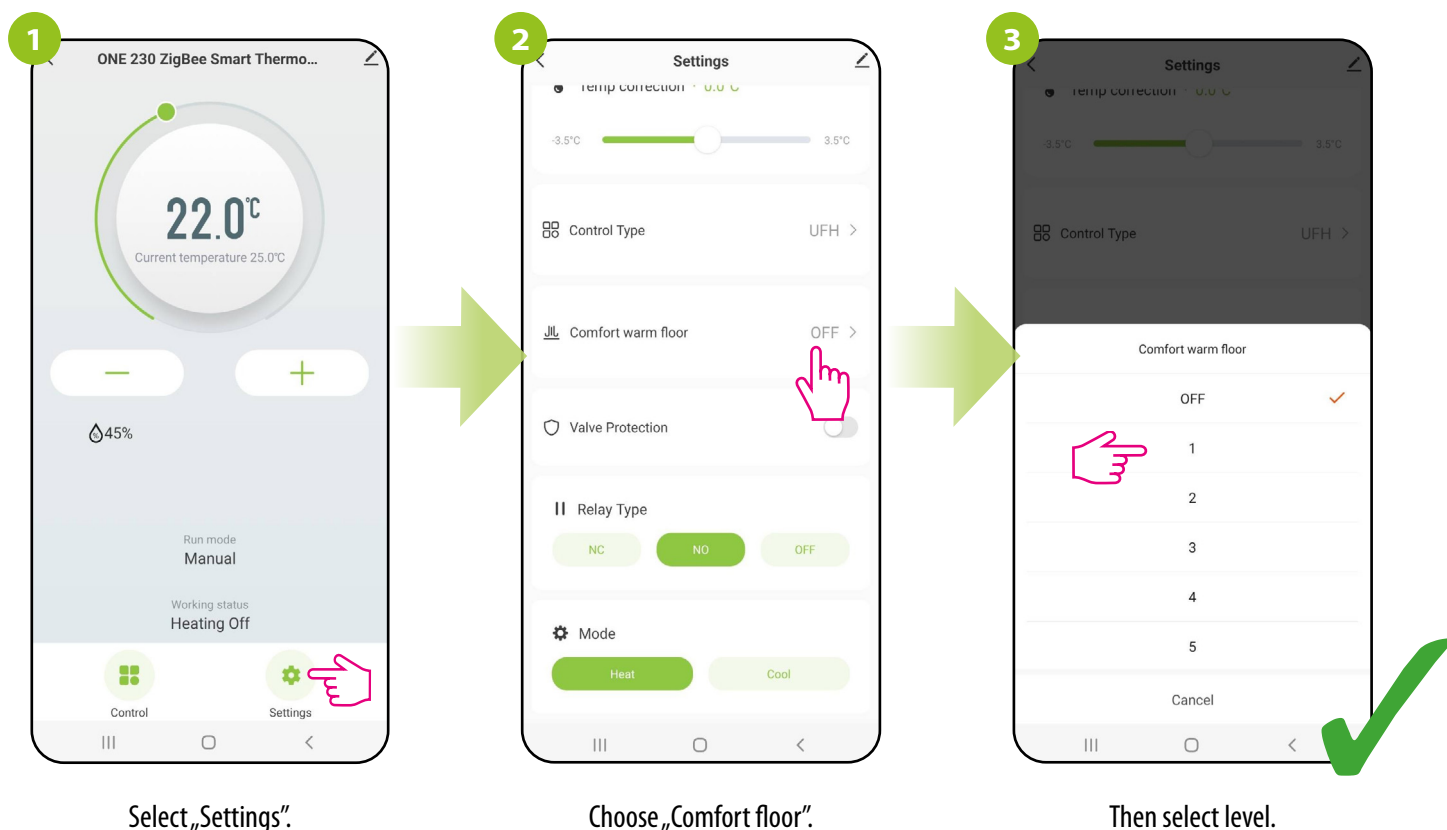
- **INACTIVE** - by default this function is disabled

If the thermostat doesn't send a signal for 60 minutes then:

- **LEVEL 1** - heating will be on for 7 minutes.
- **LEVEL 2** - heating will be on for 11 minutes.
- **LEVEL 3** - heating will be on for 15 minutes.
- **LEVEL 4** - heating will be on for 19 minutes.
- **LEVEL 5** - heating will be on for 23 minutes.

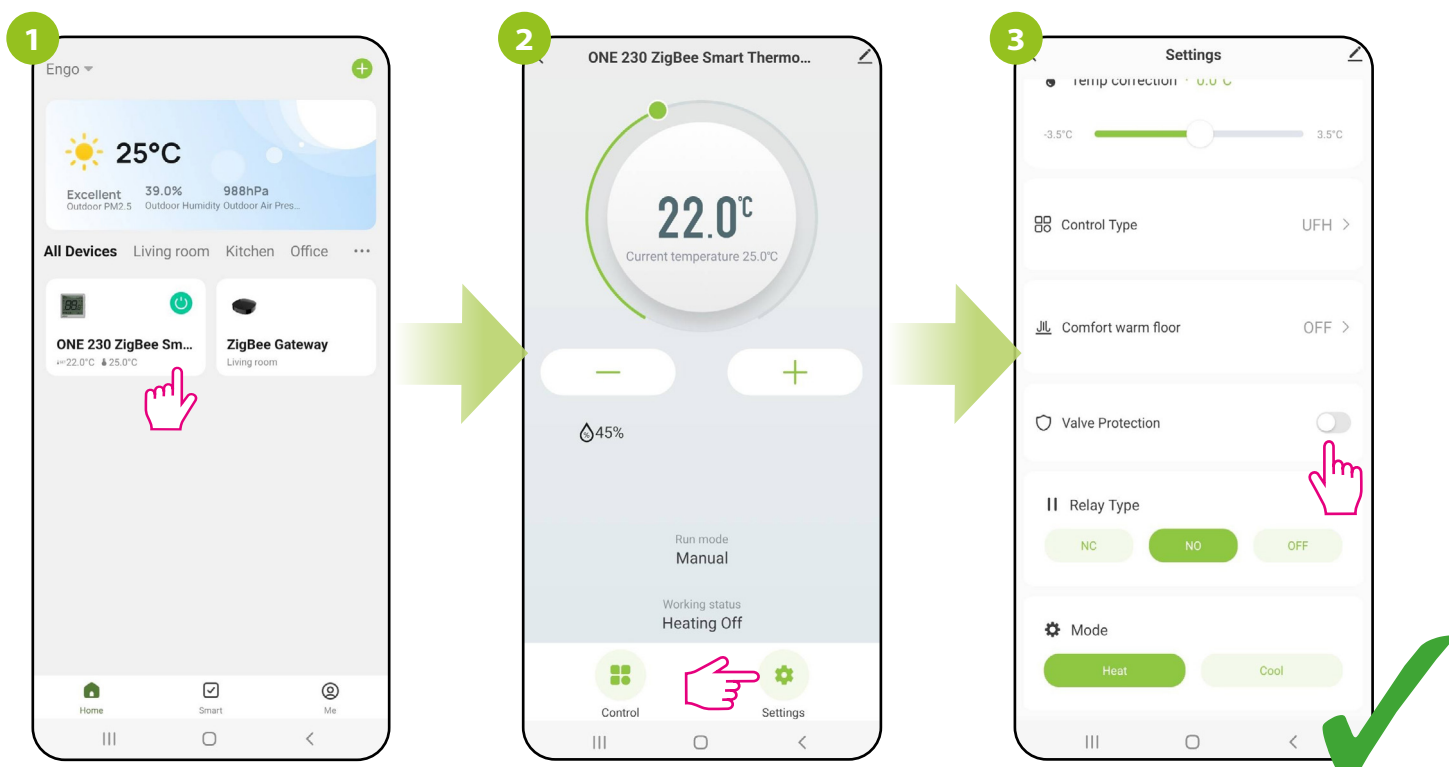
After the comfort floor function forcibly turns on the heating (for 7 or 11 or 15 or 19 or 23 minutes), the thermostat will wait another 60 minutes and check whether or not heating was requested during this time. If the thermostat doesn't note a heating demand in the last 60 minutes, it will again turn on forced heating according to the set of comfort floor level, etc.

To activate the comfort floor function, follow these steps:



## 14.4.10 Valve protection

Valve protection function is intended to protect thermostatic valves against getting stuck or jamming (e.g. in summer time when heating system is disabled). If thermostat doesn't send a signal for heating for a period of 7 days, then heating is turned on for a very short period of time just to move the actuators



Enter the thermostat interface.

Select „Settings“.

Use the slider to turn on/off the valve protection.

## 14.4.11 Internal relay

The 230V-powered EONE thermostat has a built-in relay, which allows wired control of, for example, a gas boiler, circulating pump, or cooperation with a wired control box.

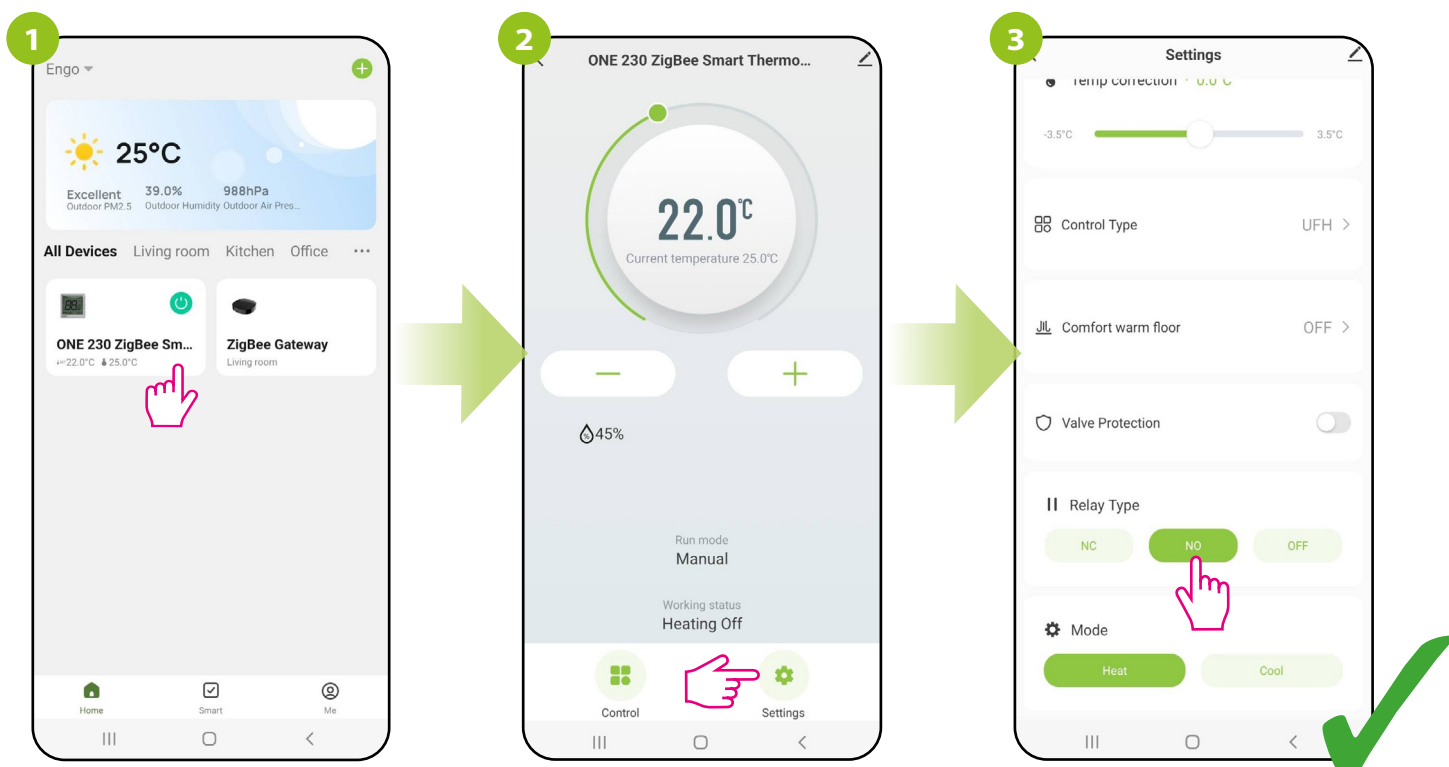
Modes of relay operation:

RELAY TYPE **NO-COM\*** - Normally open type of relay (factory setting)

RELAY TYPE **NC-COM\*** - Normally closed type of relay (logic of operation reversed by software)

**OFF** - Built-in relay is disable

Follow the steps below to change the way the relay works:



Enter the thermostat interface.

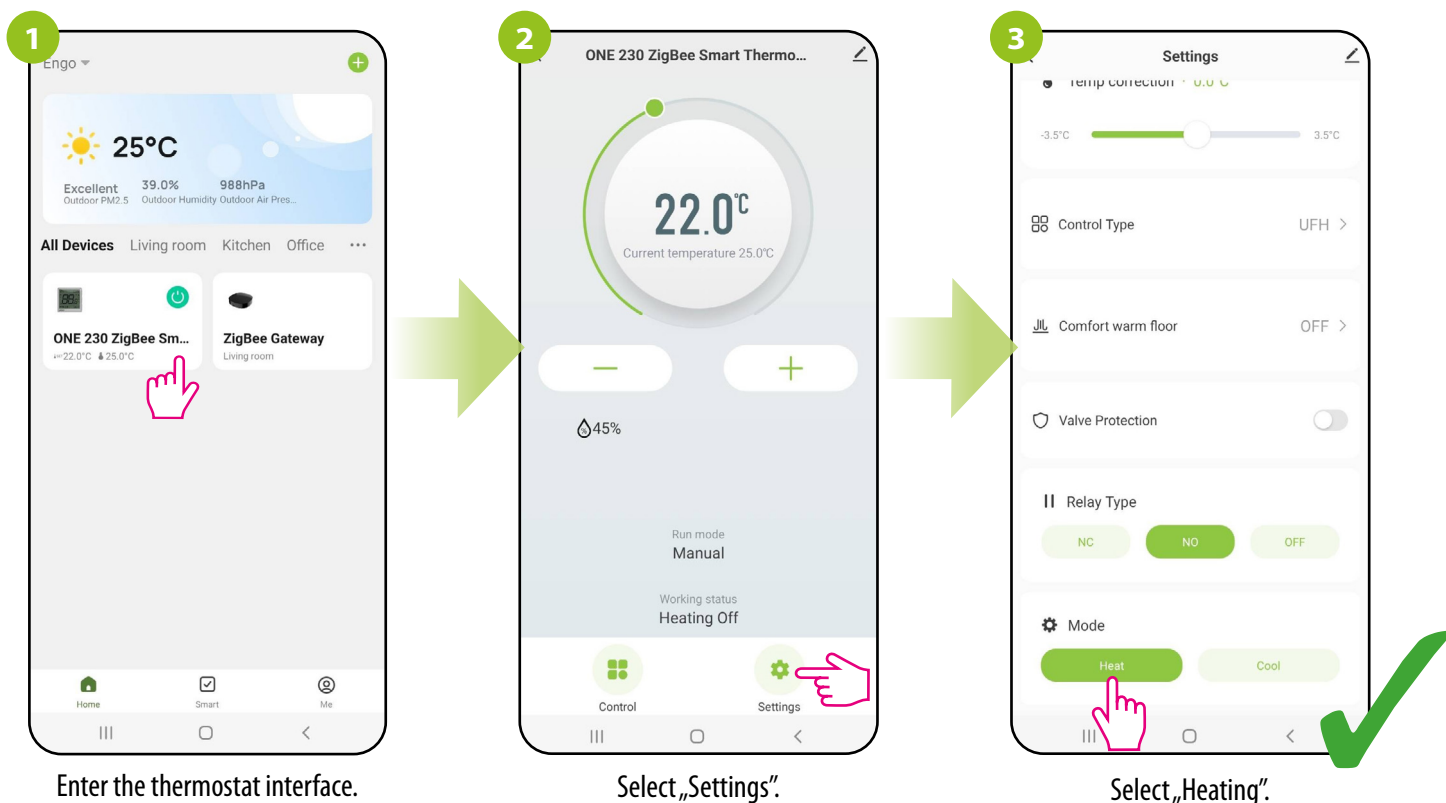
Select „Settings“.

Select type of relay.

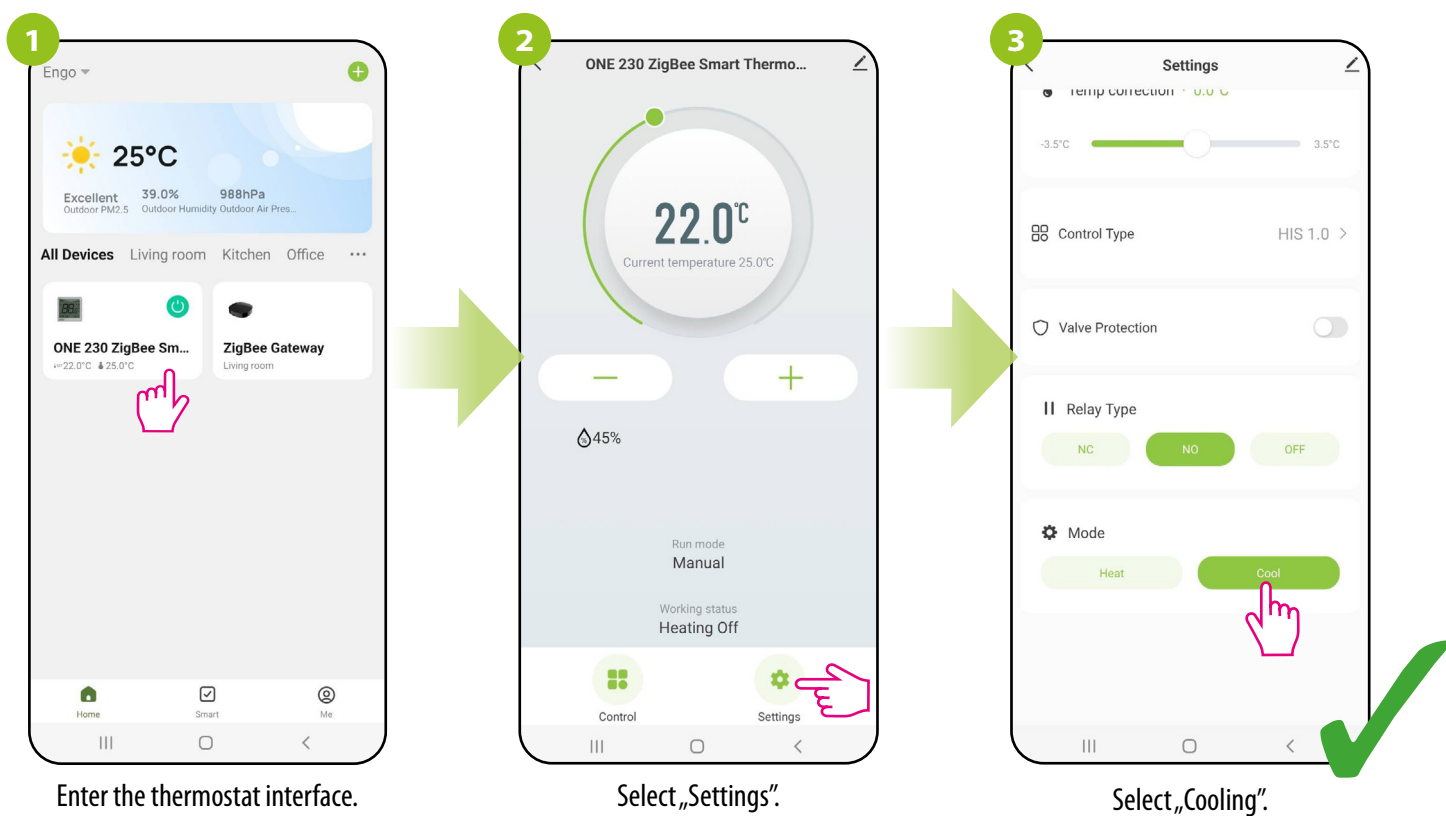
#### 14.4.12 Heating/Cooling mode selection

This function allows you to select the operating mode of the thermostat:

a) operating the heating system (factory setting),



b) operation of cooling system.

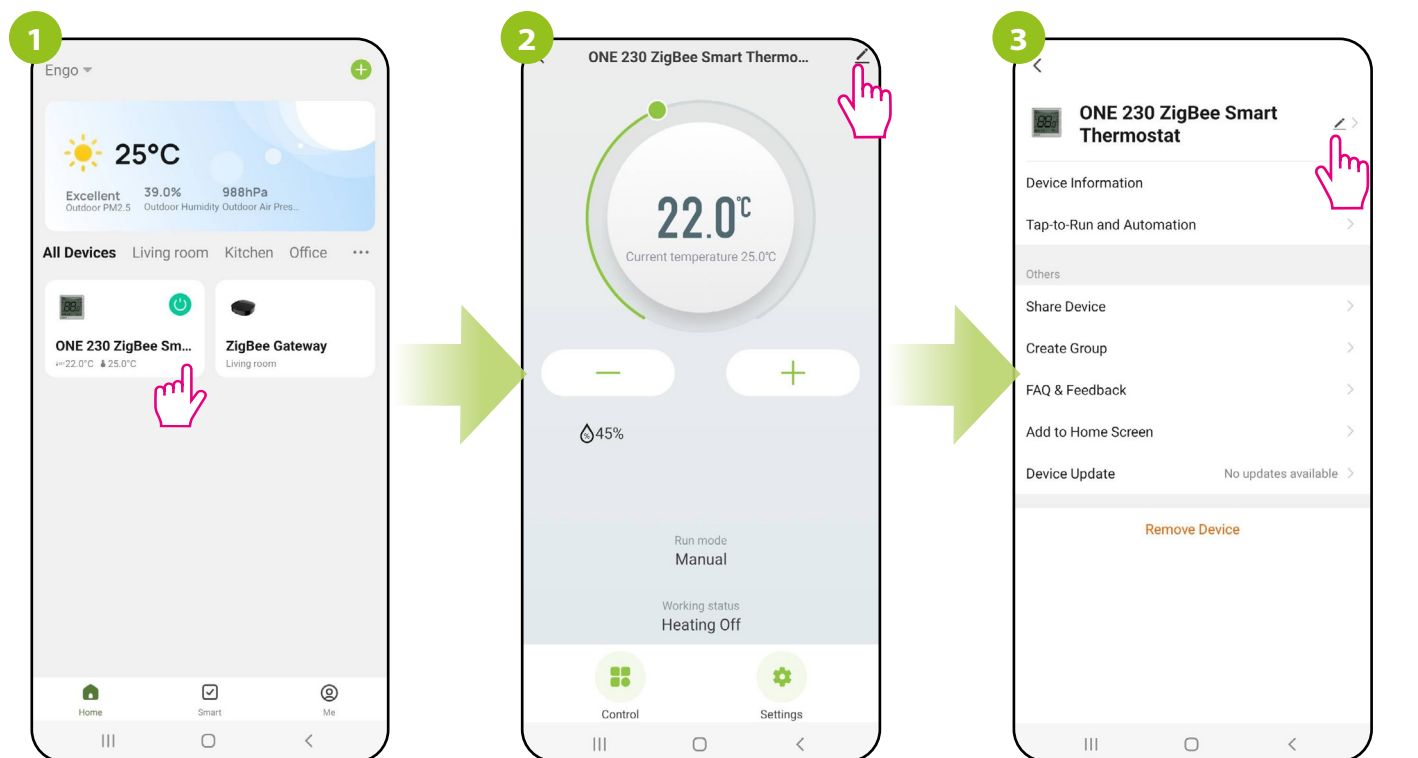




## 14.5 General orders

### 14.5.1 Change the name, icon and location of the thermostat

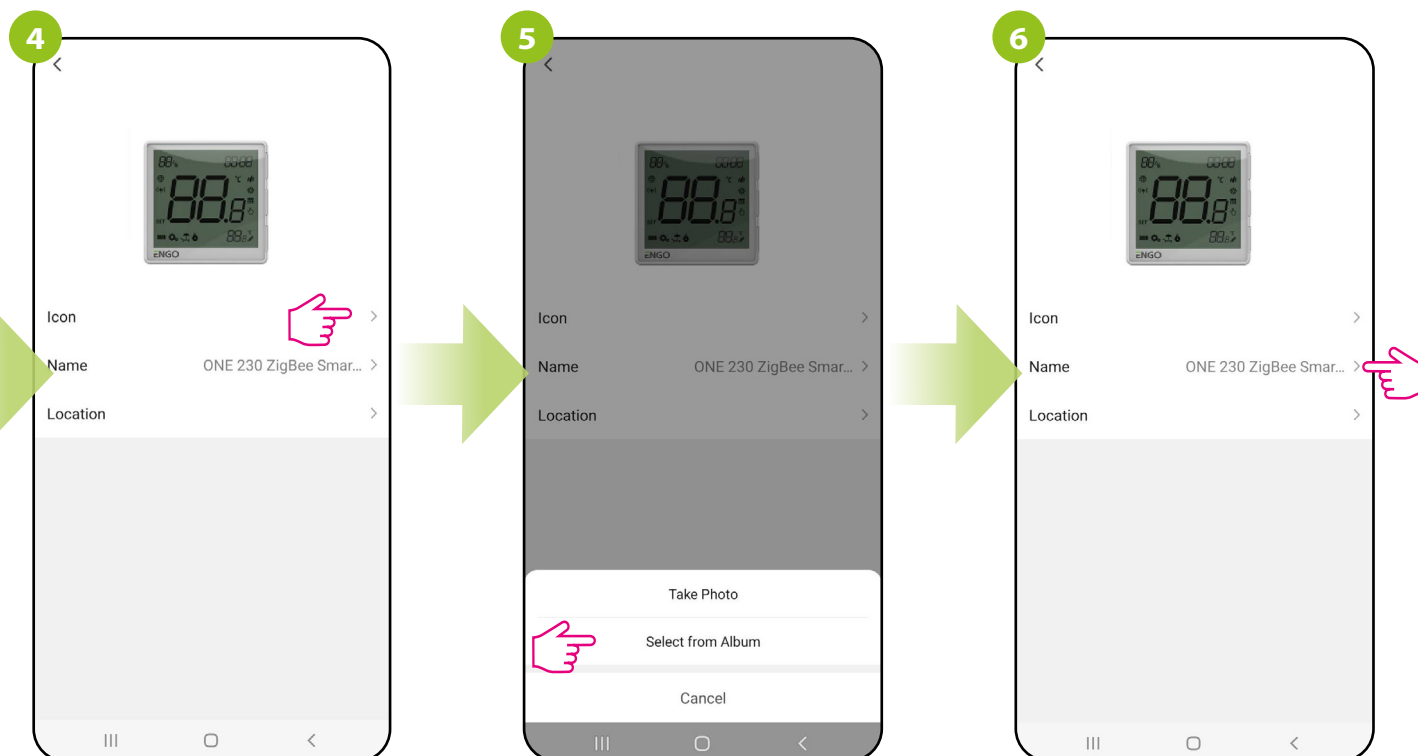
Name the thermostat, edit its icon or define its location (room).



Enter the thermostat interface.

Click the pencil icon in the top right corner.

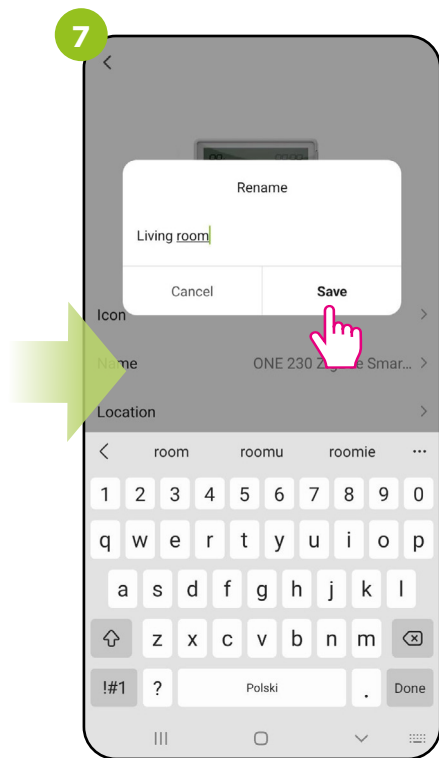
Tap the name of the thermostat.



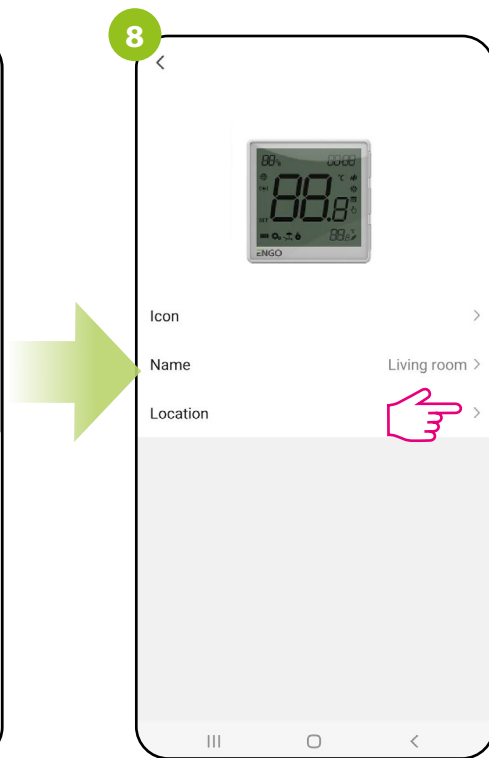
Enter icon settings.

Take a photo or select an image from your local album.

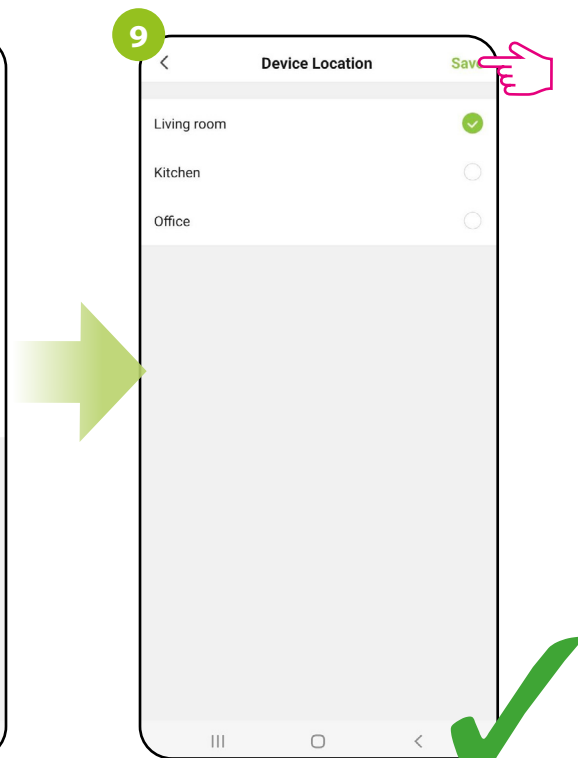
Enter thermostat name.



Write a name and click save.



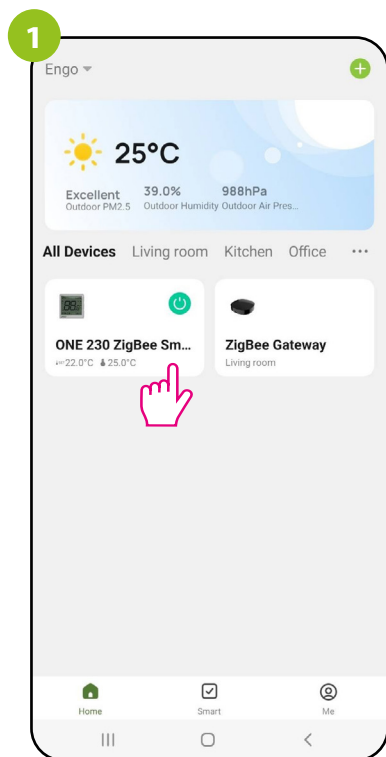
Determine the location of the thermostat.



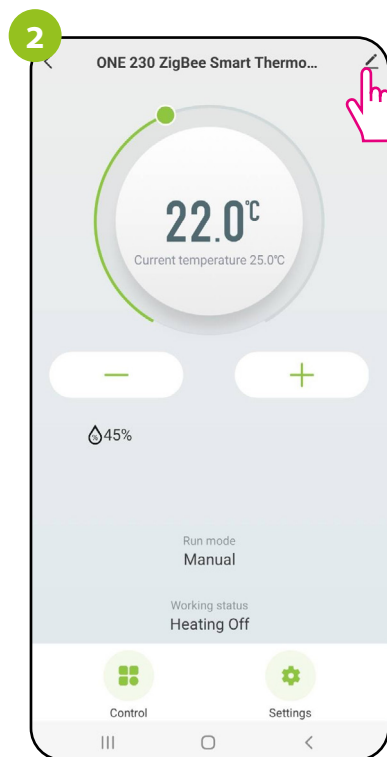
Choose a place and click „Save” in the top right corner.

## 14.5.2 Device information

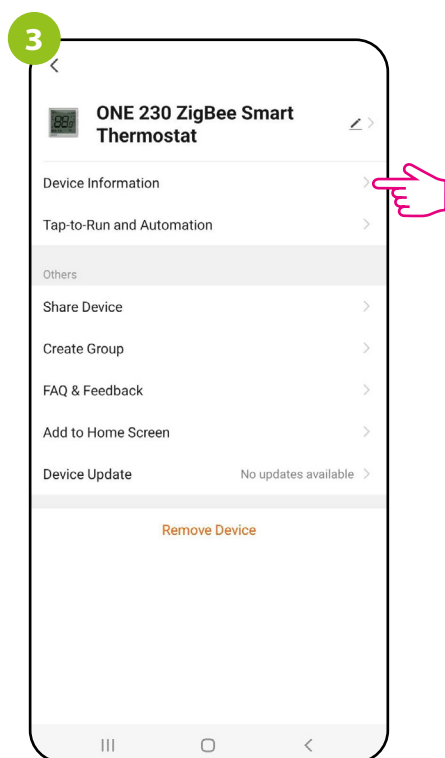
The user will find here detailed information about the device, eg. Virtual ID, device IP, MAC address, the time zone in which the device is located and signal strength. Check the steps below:



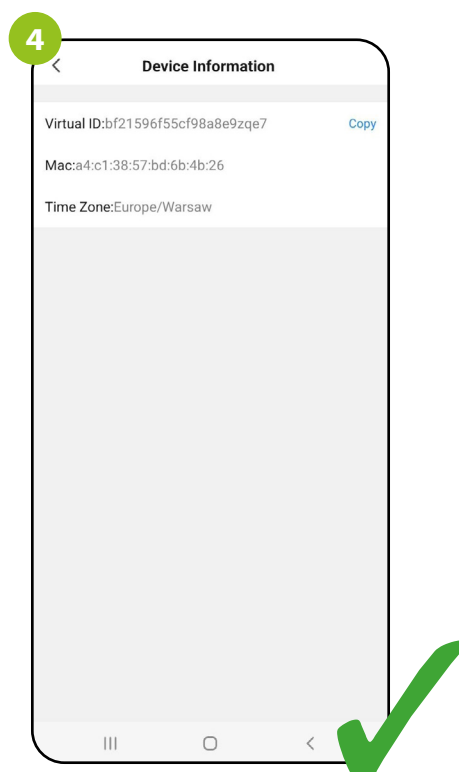
Enter the thermostat interface.



Click the pencil icon in the top right corner.



Select „Device Information”.



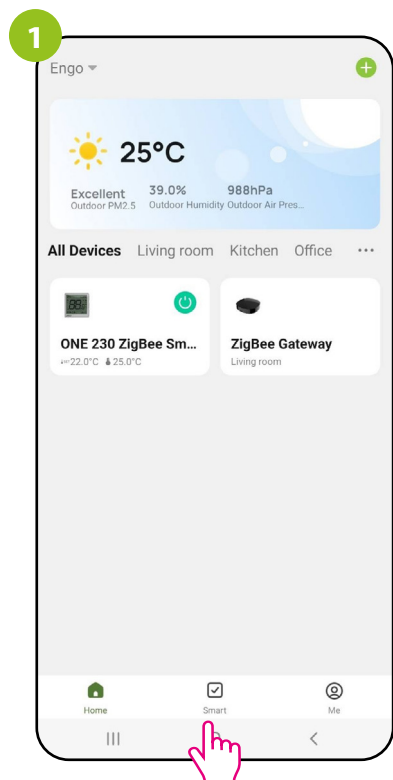
### 14.5.3 Tap-To-Run and Automation

The „Tap-To-Run” and „Automation” rules are a preconfigured set of actions defined by an easy-to-use interface. Besides the obvious tasks that can be programmed to keep the system running automatically. In addition, there are also functions that improve the visual effect and the convenience of use. There are 2 main rule programming interfaces in the app that can be used for task settings:

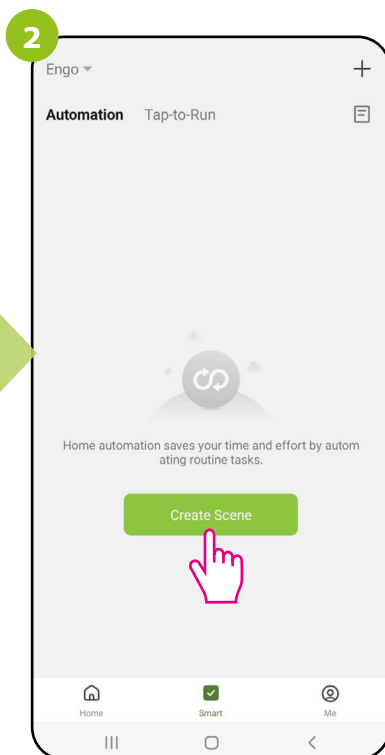
**Tap-To-Run** - with one touch, run several operations at the same time e.g. turn OFF all thermostats

**Automation** - set up linked activities, where one device will affect another by defined actions.

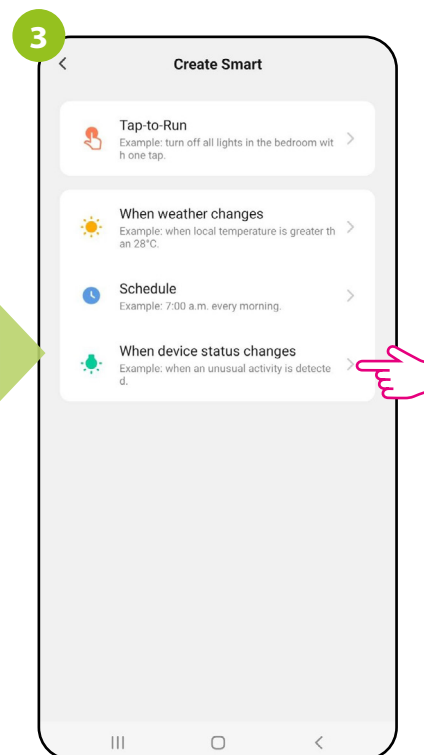
Example of „Automation” setting for EONE thermostat where the application will send a notification when the room temperature drops below the set value. Follow the steps below:



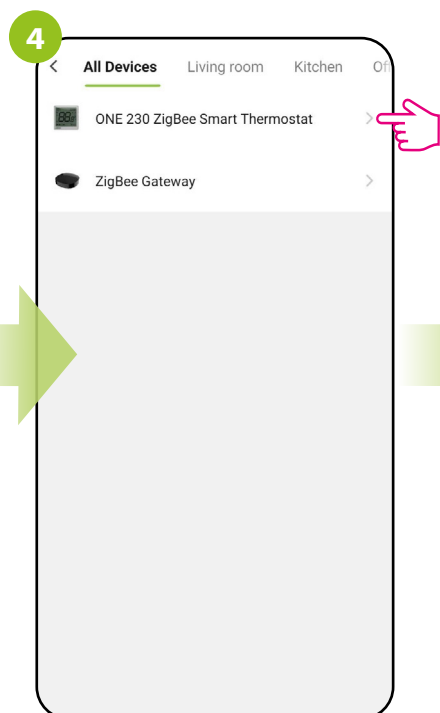
Enter the Smart menu.



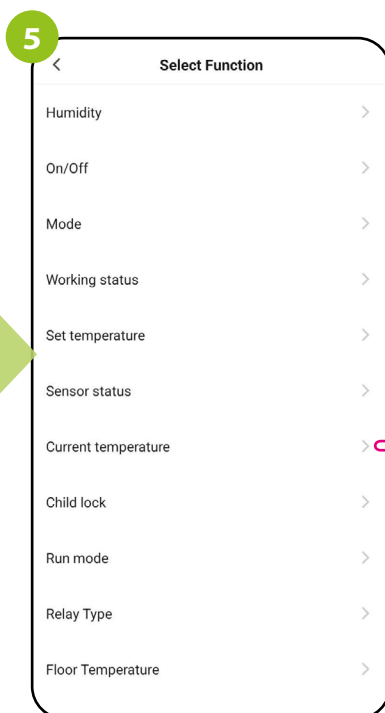
Select „Create Scene”.



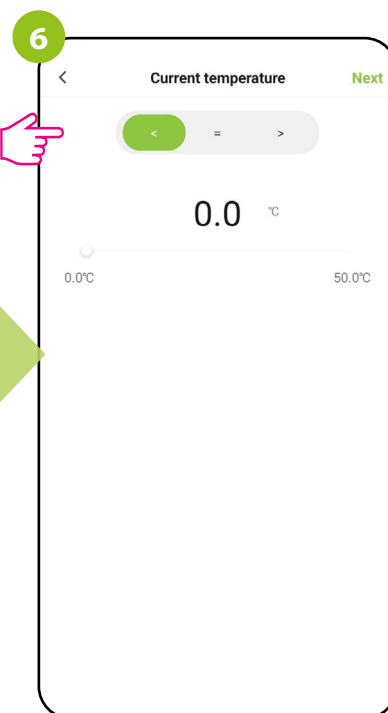
Select „When device status change”.



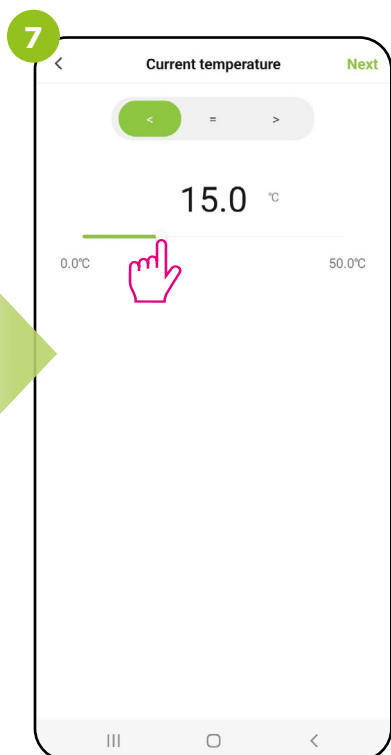
Select the device for which you want to create an automation.



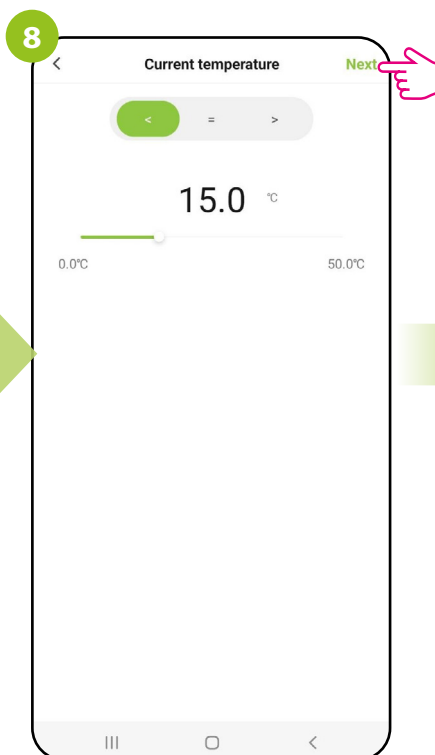
Select „Room Temp”.



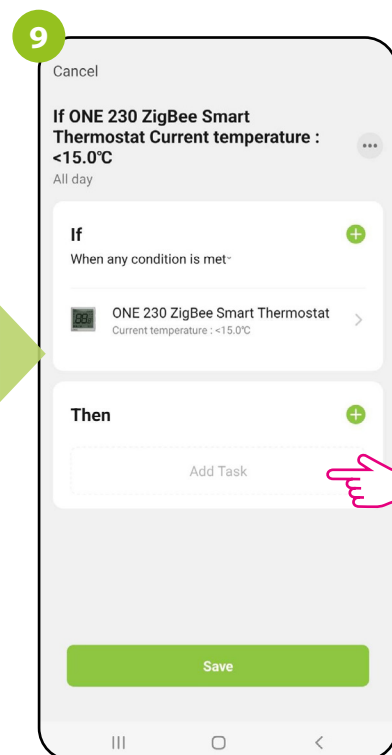
Click „less than”.



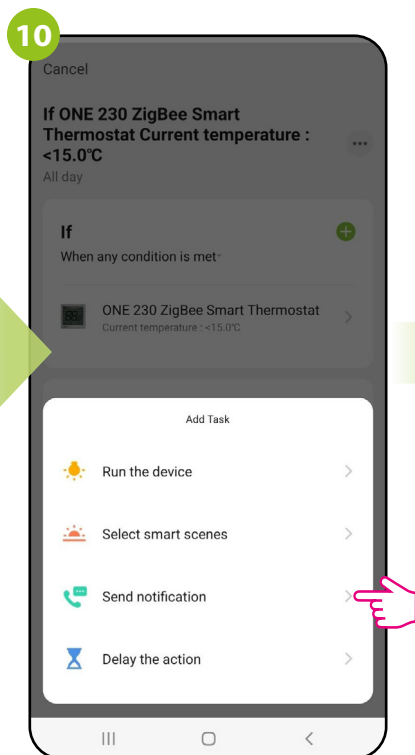
Use the slider to set the value of room temperature, below which you will receive a notification of low room temperature.



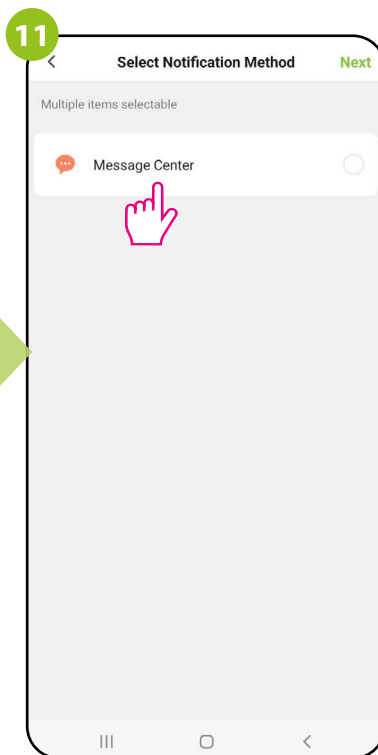
Go „Next“.



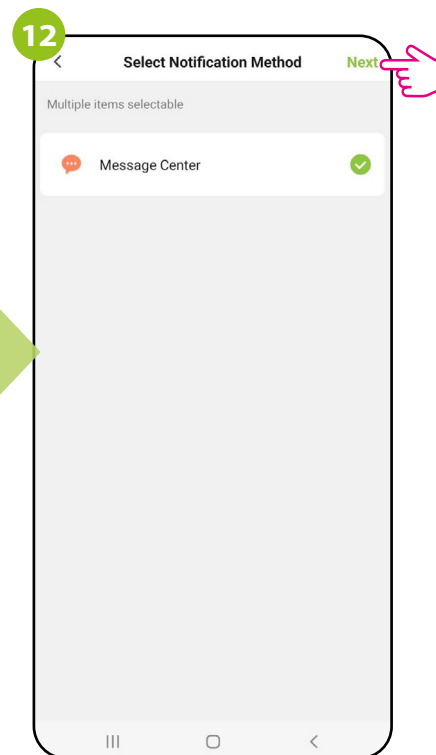
Add an action to perform.



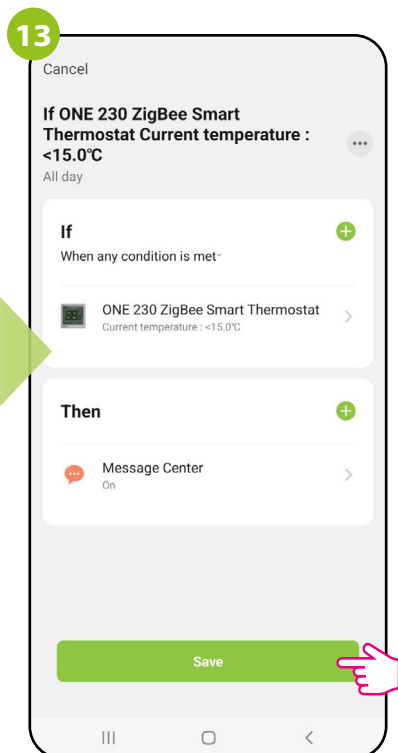
Select „Send notification“.



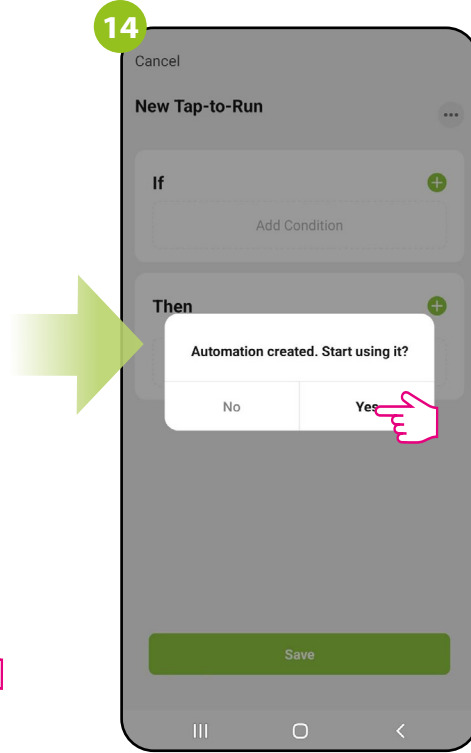
Click „Message center“.



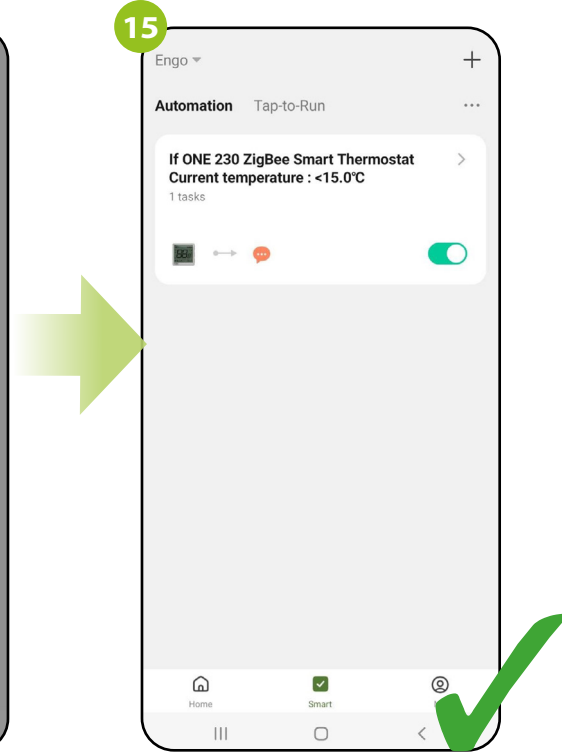
Go „Next“.



Click „Save“.



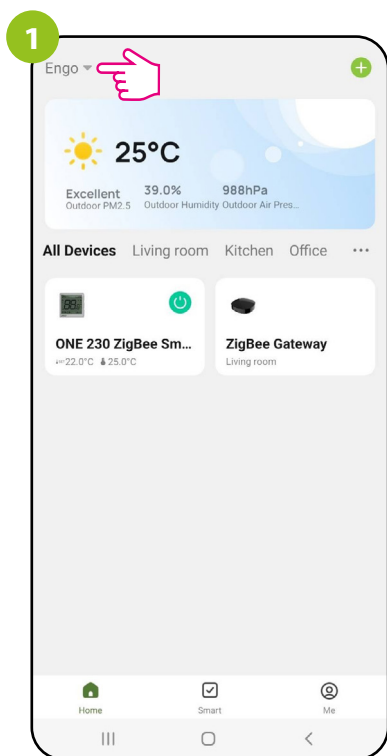
Click „Yes“



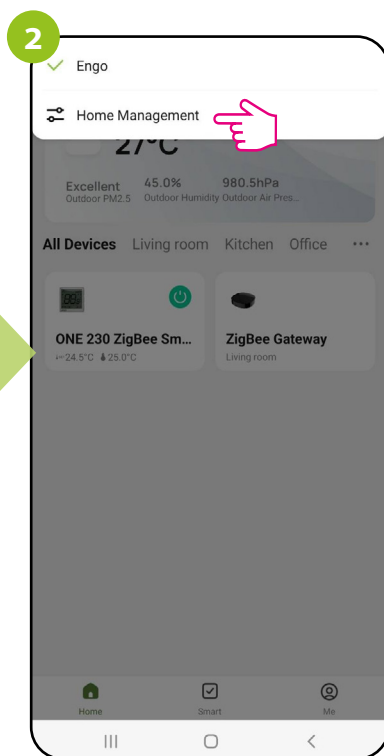
The rule was written when temperature in the room drops below the value, the application will send notification about this event.

### 14.5.4 Sharing devices/home

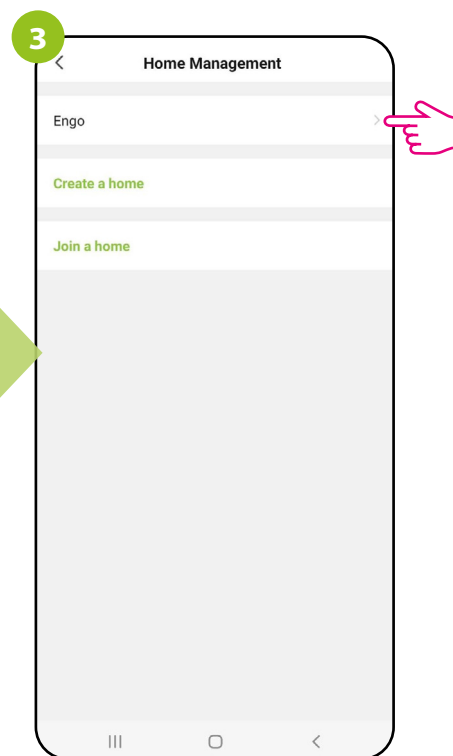
The ENGO Smart app offers the possibility of sharing the selected device with other users (assigned to the home). You can also assign a user the role of administrator/standard user. To do this, follow the steps below:



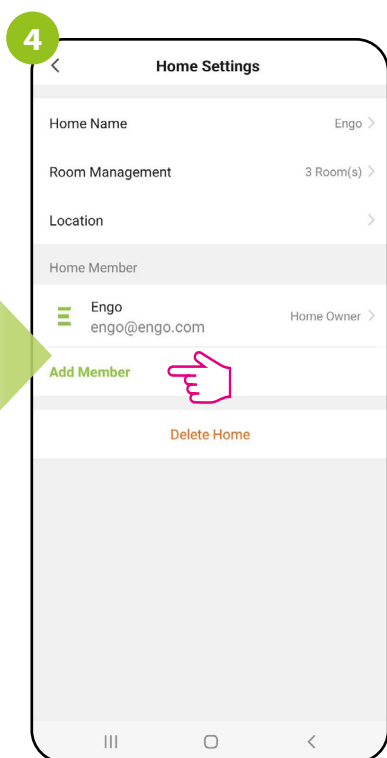
Click the home name.



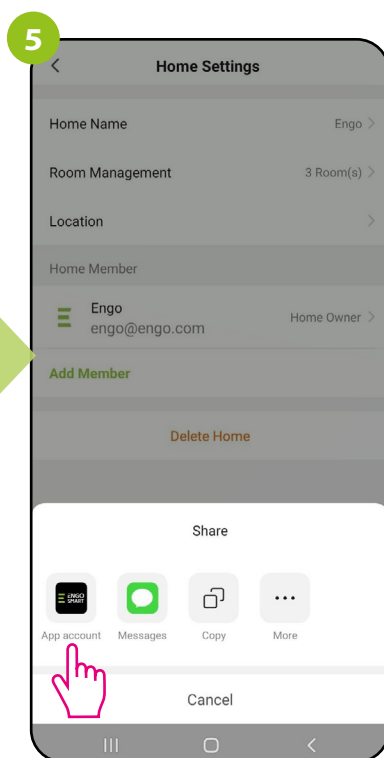
Enter „Home Management“.



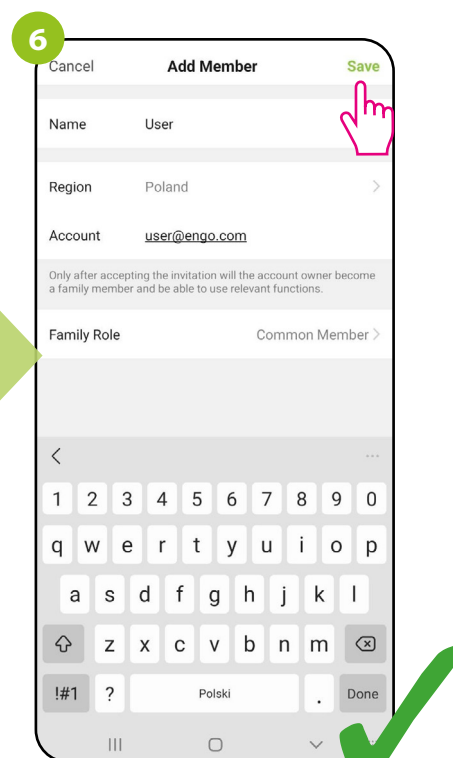
Select your home.



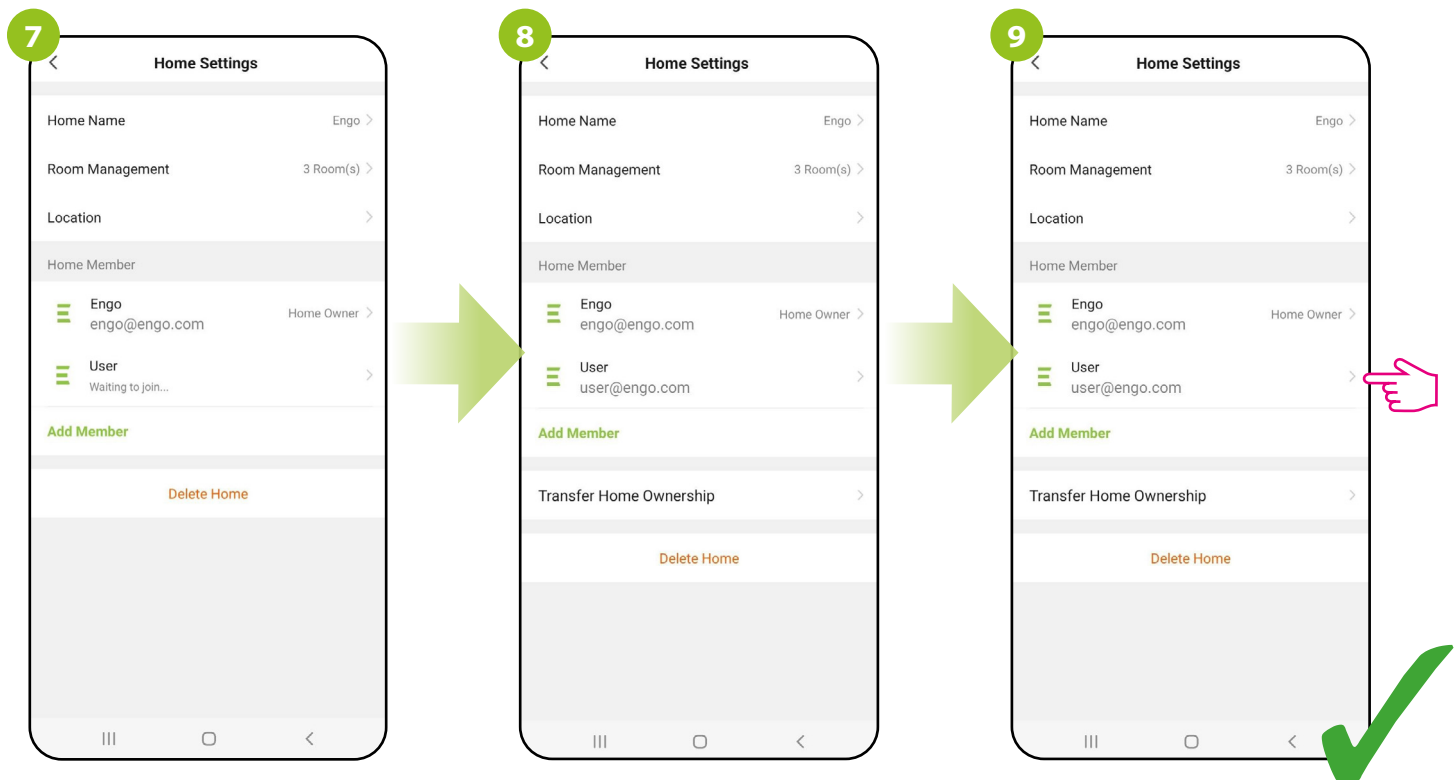
Add Member.



Choose an invitation method.



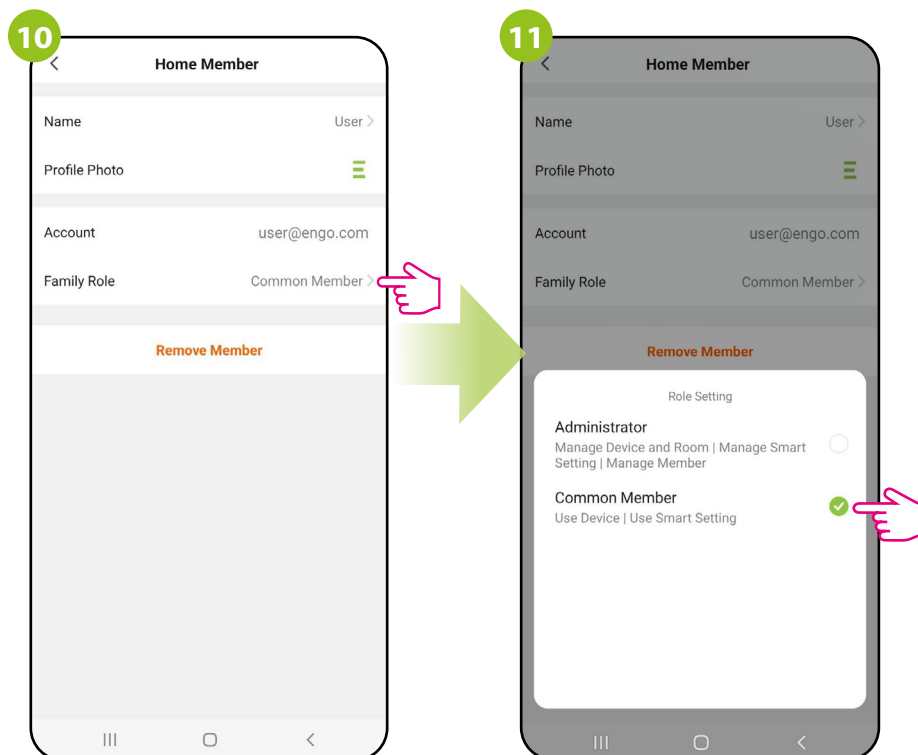
Enter the house member details and click „Save“.



The invited user must confirm their desire to join home.

When the user accepts the invitation, will be visible in the list of home members.

To go to edit click on the username.



We can edit the name of the user and permissions by clicking „Role at home.”

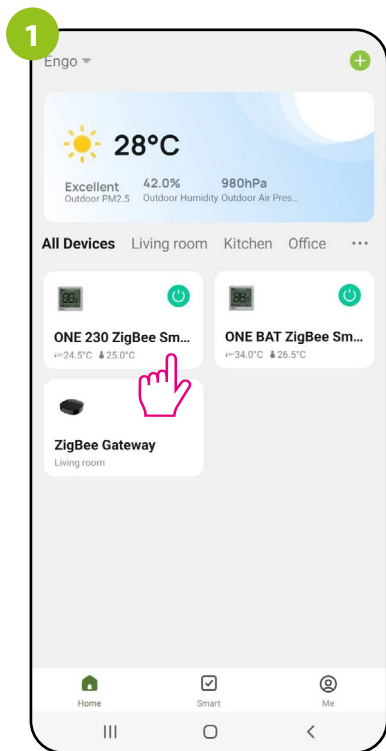
A member of the home can be given administrator permission or standard member.



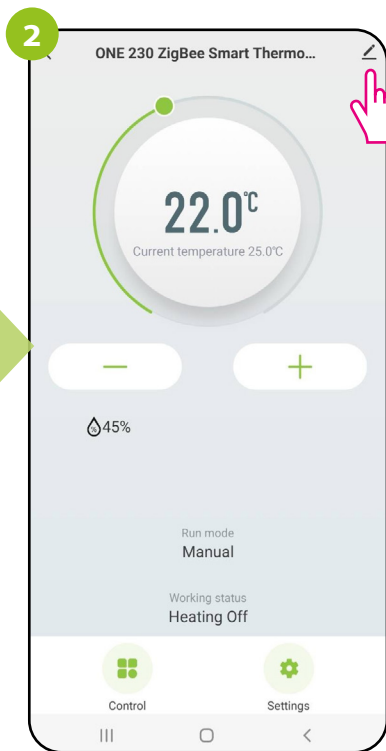
### 14.5.5 Create group

Simultaneous control will be available after creating a new group and assigning the selected thermostats to this group. Then, a virtual master thermostat appears on the desktop, which allows you to overwrite all parameters in the grouped thermostats.

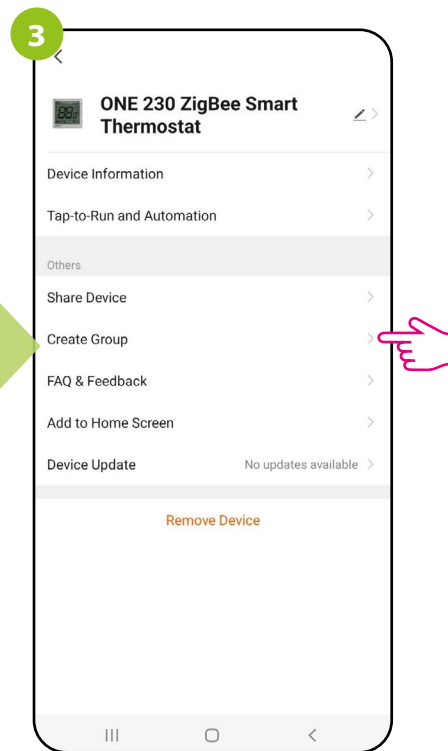
**For example:** If you set the virtual thermostat to manual mode, then each thermostat in this group will switch to manual mode. See the steps below on how to group multiple thermostats.



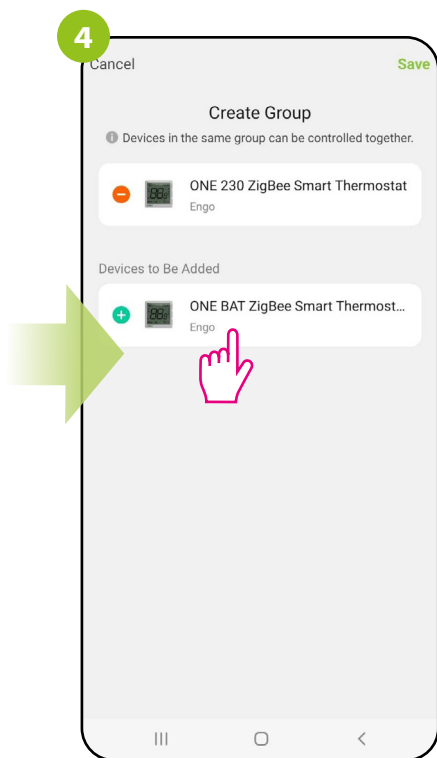
Enter the thermostat interface.



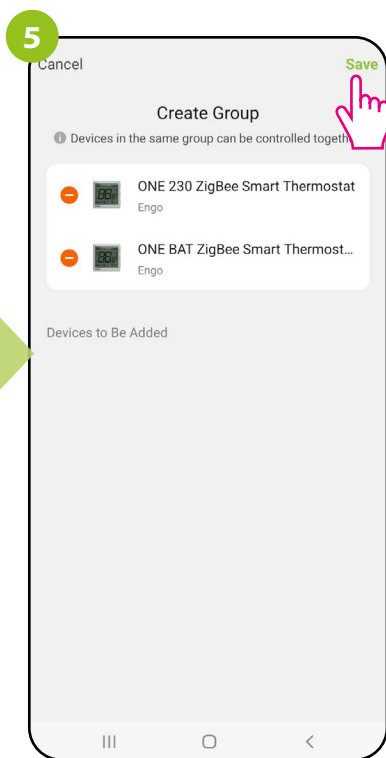
Click the pencil icon in the top right corner.



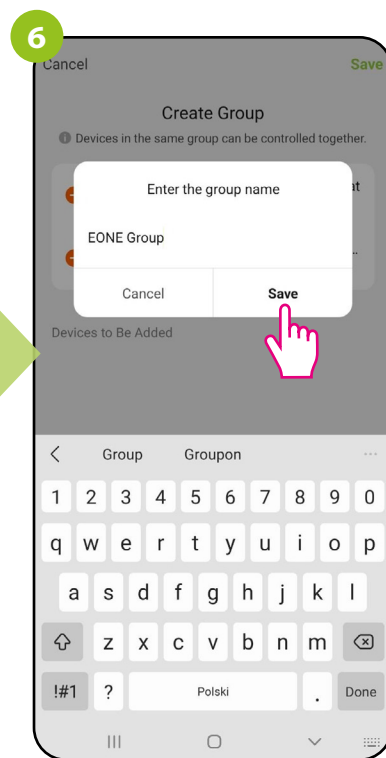
Select „Create Group”.



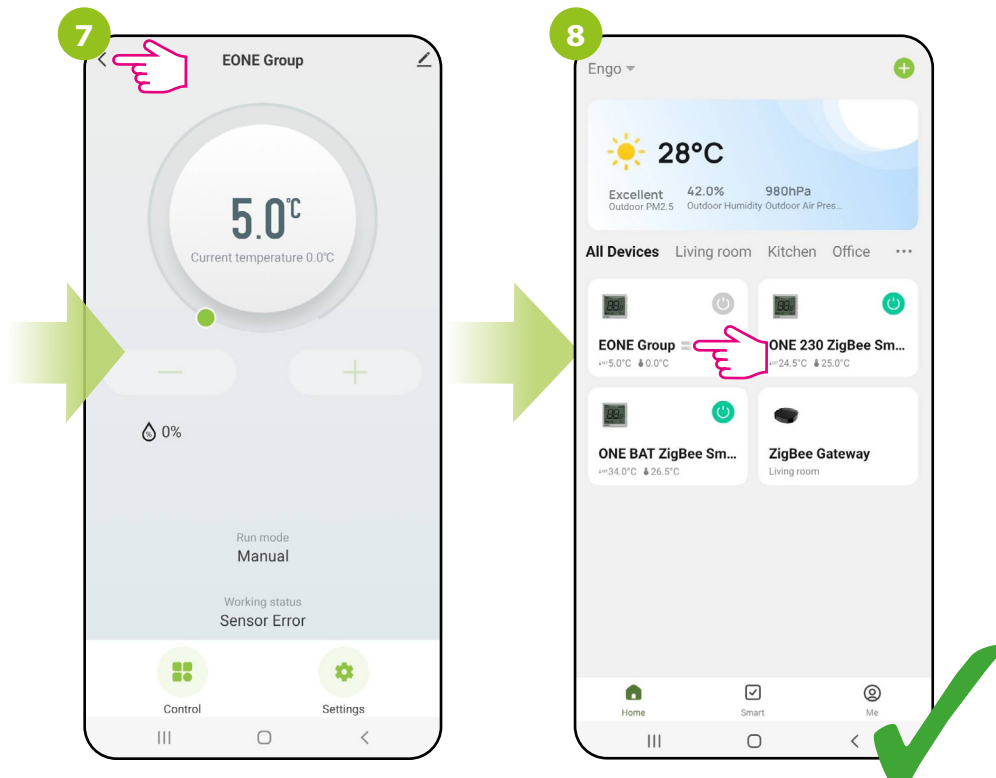
Select the devices you want to assign to the group.



Click „Save”.



Name the group and confirm „Save”.

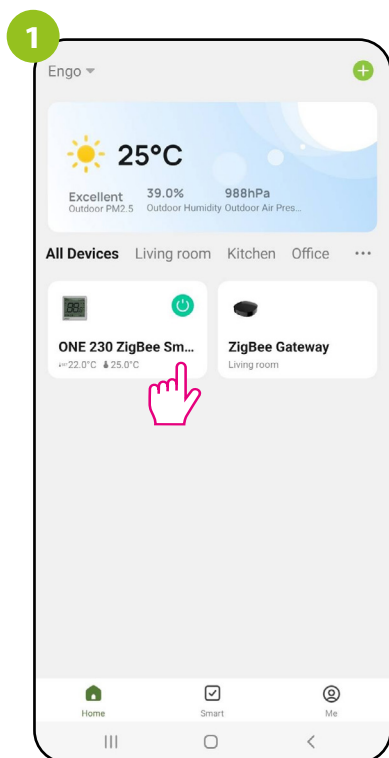


The main group management interface will be displayed from where you can set temperature or change operation modes / settings.

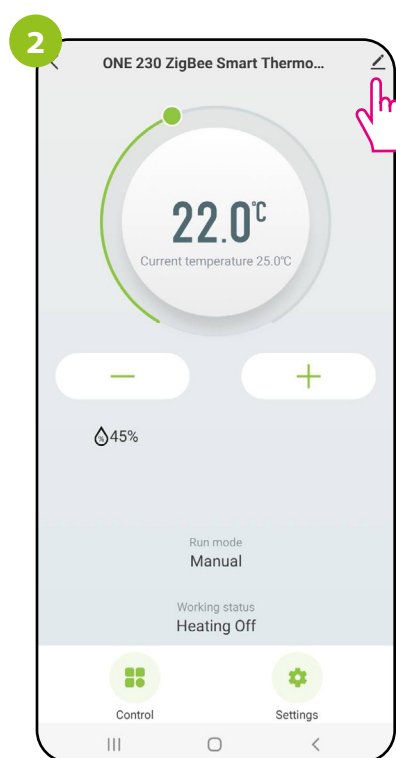
The group will also automatically appear on the main screen of the app.

### 14.5.6 FAQ & Feedback

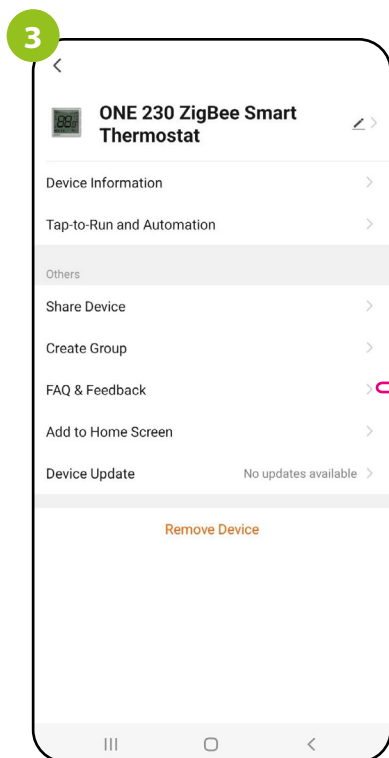
Find the answer to the problem in the FAQ option and opinions (the most common problems and questions) by searching for a specific key word. If you did not find the answer, please contact technical support.



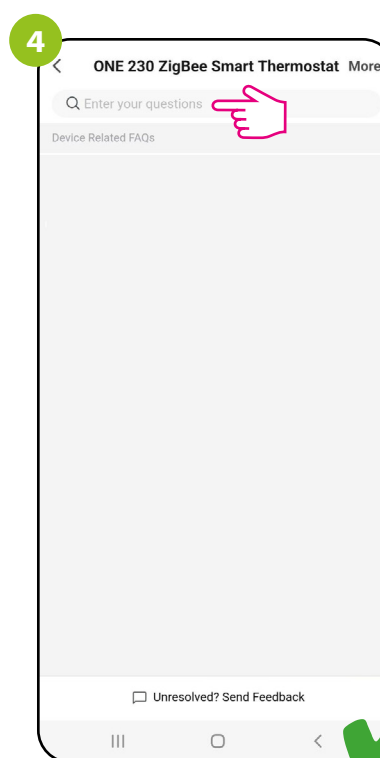
Enter the thermostat interface.



Click the pencil icon in the top right corner.



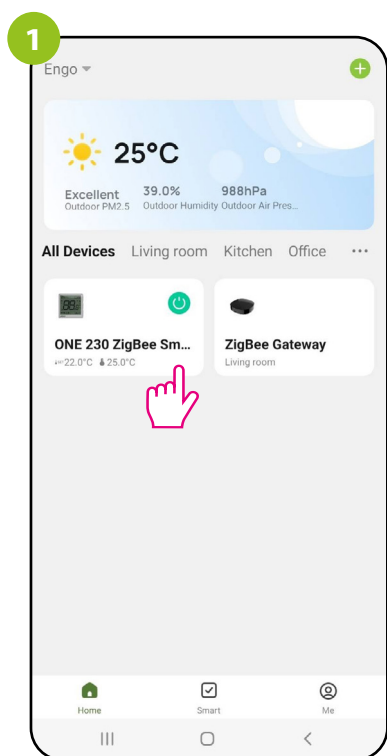
Select „FAQ & Feedback“.



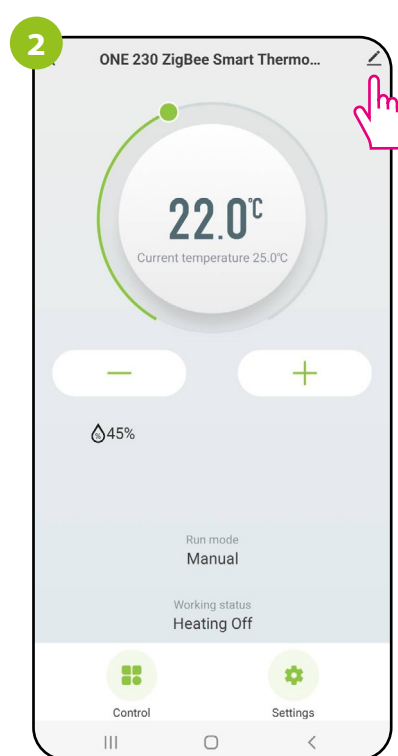
Enter a bothering problem and the app will automatically start searching for a possible answer.

### 14.5.7 Add to home screen

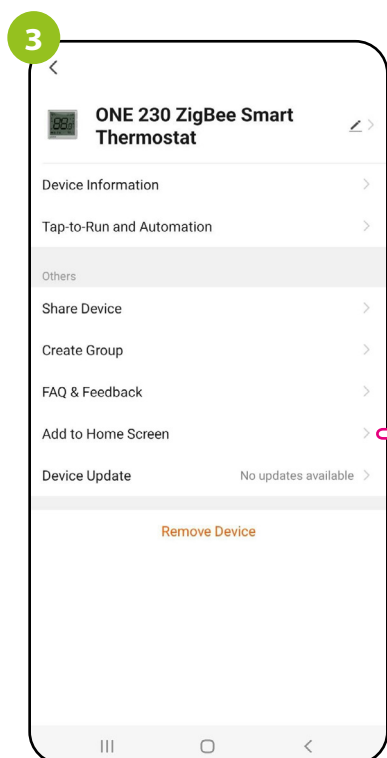
If you are tired of constantly opening the app to enter the thermostat settings, or if you want to set a new temperature quickly - pin the thermostat to the main desktop of your smartphone. See steps below:



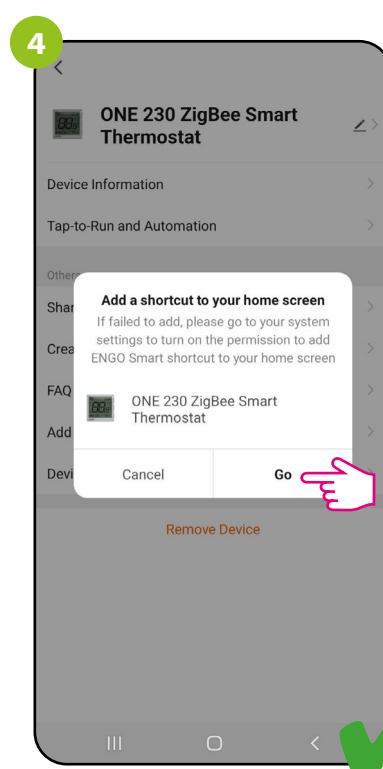
Enter the thermostat interface.



Click the pencil icon in the top right corner.



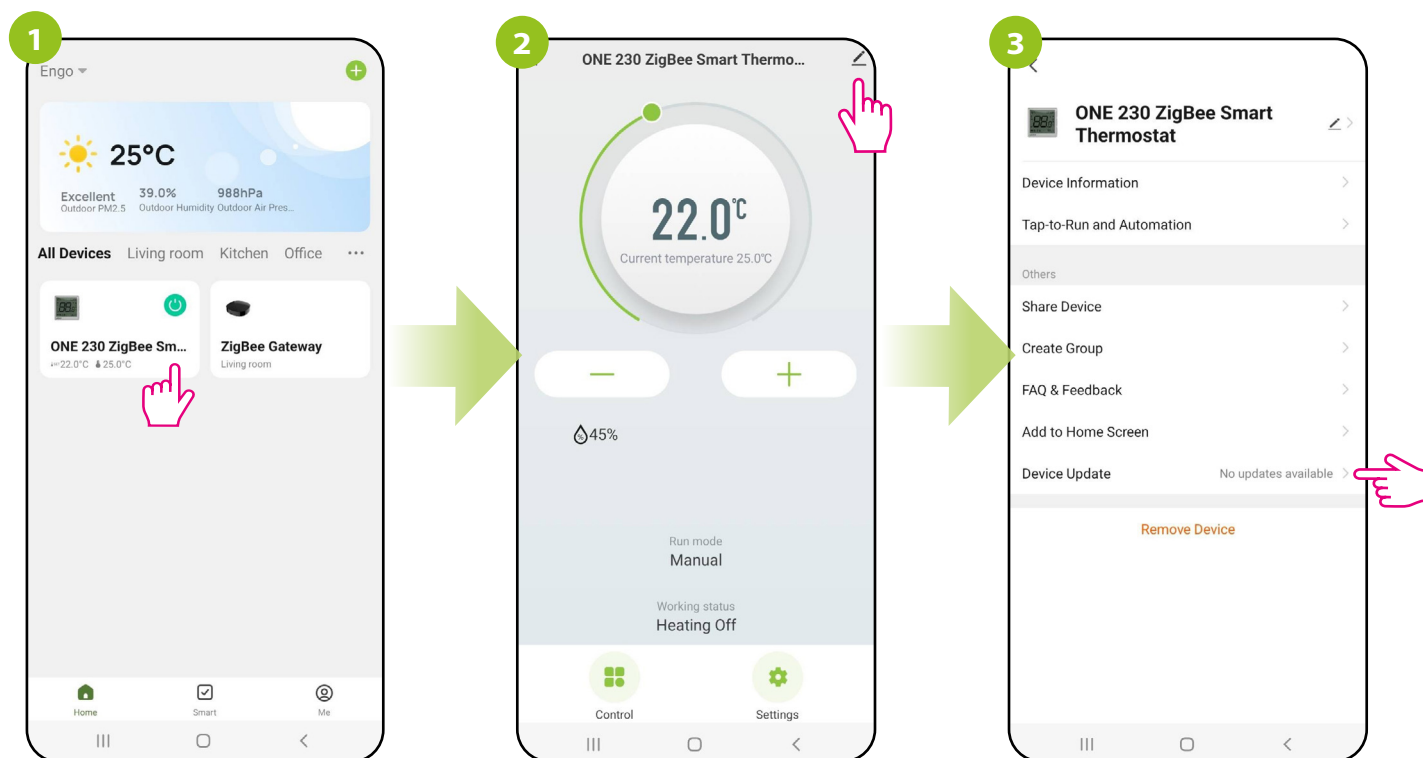
Select „Add to home screen”.



Confirm it by „Go” button. After all, a shortcut to the thermostat will appear on the phone's desktop.

## 14.5.8 Device update

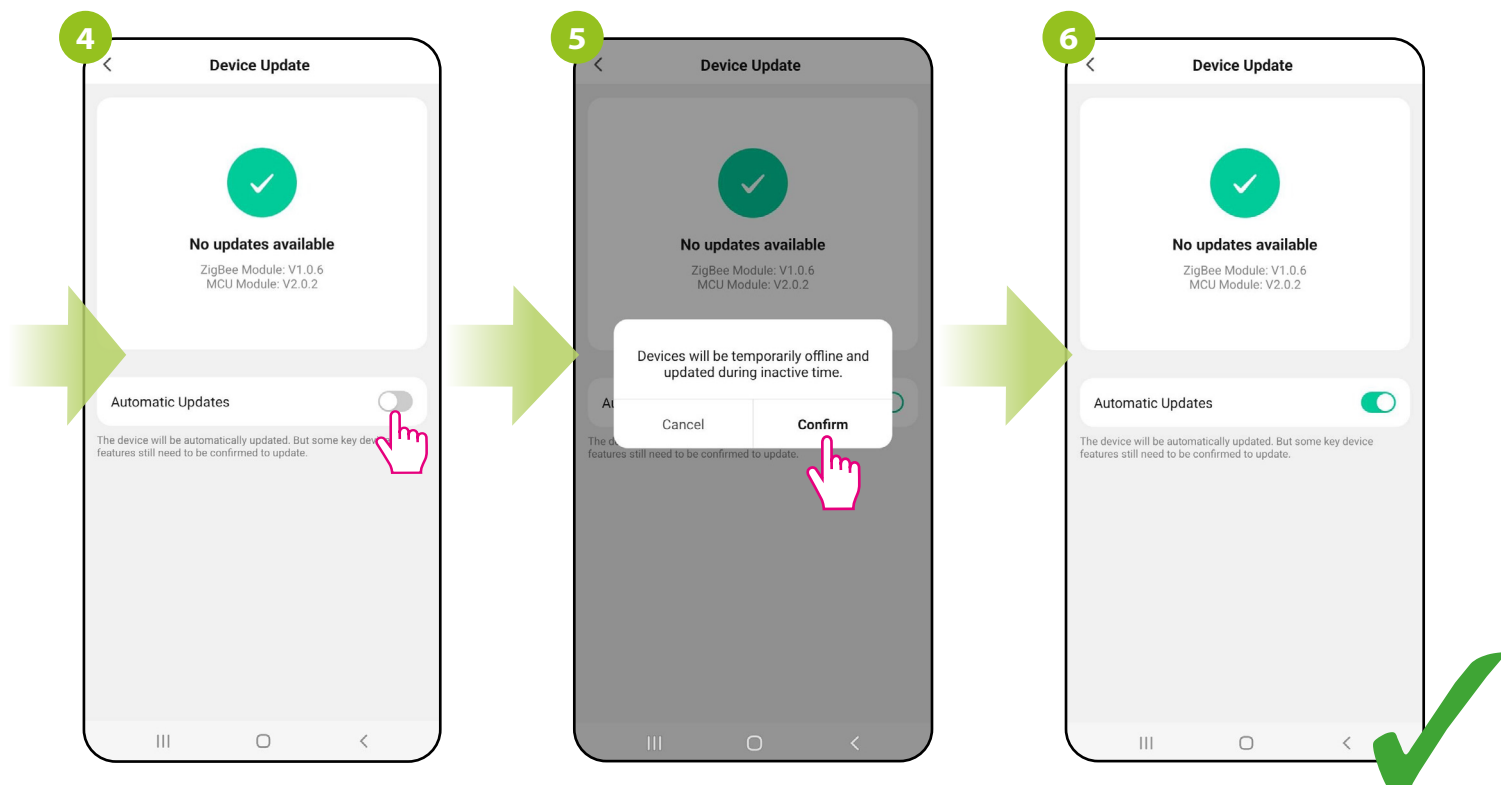
It allows you to update the device software to the latest version. You can start the update manually or choose the automatic update option.



Enter the thermostat interface.

Click the pencil icon in the top right corner.

Select „Check for available software updates“.

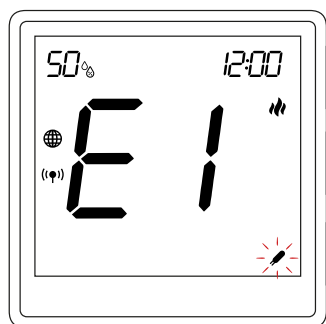


Check this option if you want the thermostat software to always update automatically.

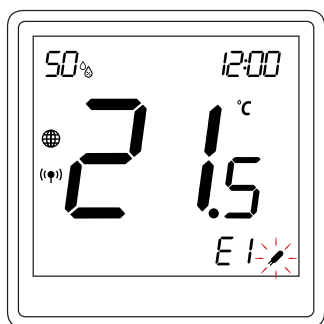
Confirm.

From now on, whenever there is a new software, the thermostat will start updating.

## 15. Alarms / Push notifications / Emergency states



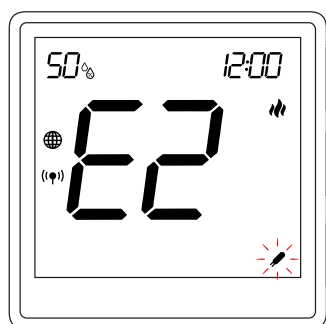
External



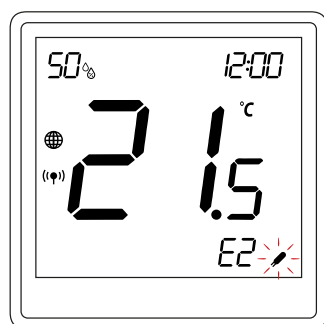
Internal + floor

**E1** – Short-circuit in the circuit of the external temperature sensor plugged into the S1/S2 contacts.

- If the sensor is connected to the S1/S2 input, check the wiring.
- Check for insulation damage (short circuit) in the wiring of the sensor wiring. Sensor resistance for 25°C=10kΩ.
- Check the setting in the Installer Parameters - ADDITIONAL INPUT S1/S2 - whether the parameter related to TEMPERATURE SENSOR is activated.



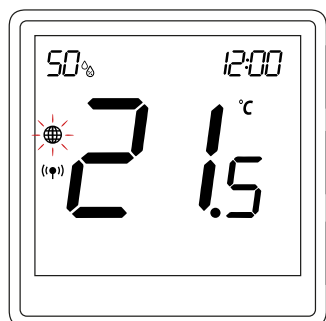
External



Internal + floor

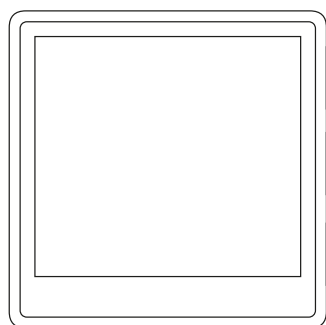
**E2** – Break in the circuit of the external temperature sensor plugged in S1/S2 contacts.

- If the sensor is connected to the S1/S2 input, check the wiring.
- Check for damage (break) to the wires in the sensor wiring. Sensor resistance for 25°C=10kΩ.
- If the sensor is not connected check the setting in Parameters Installer - ADDITIONAL INPUT S1/S2



**(GLOBE ICON) is flashing** – Connection to ZigBee gateway is lost.

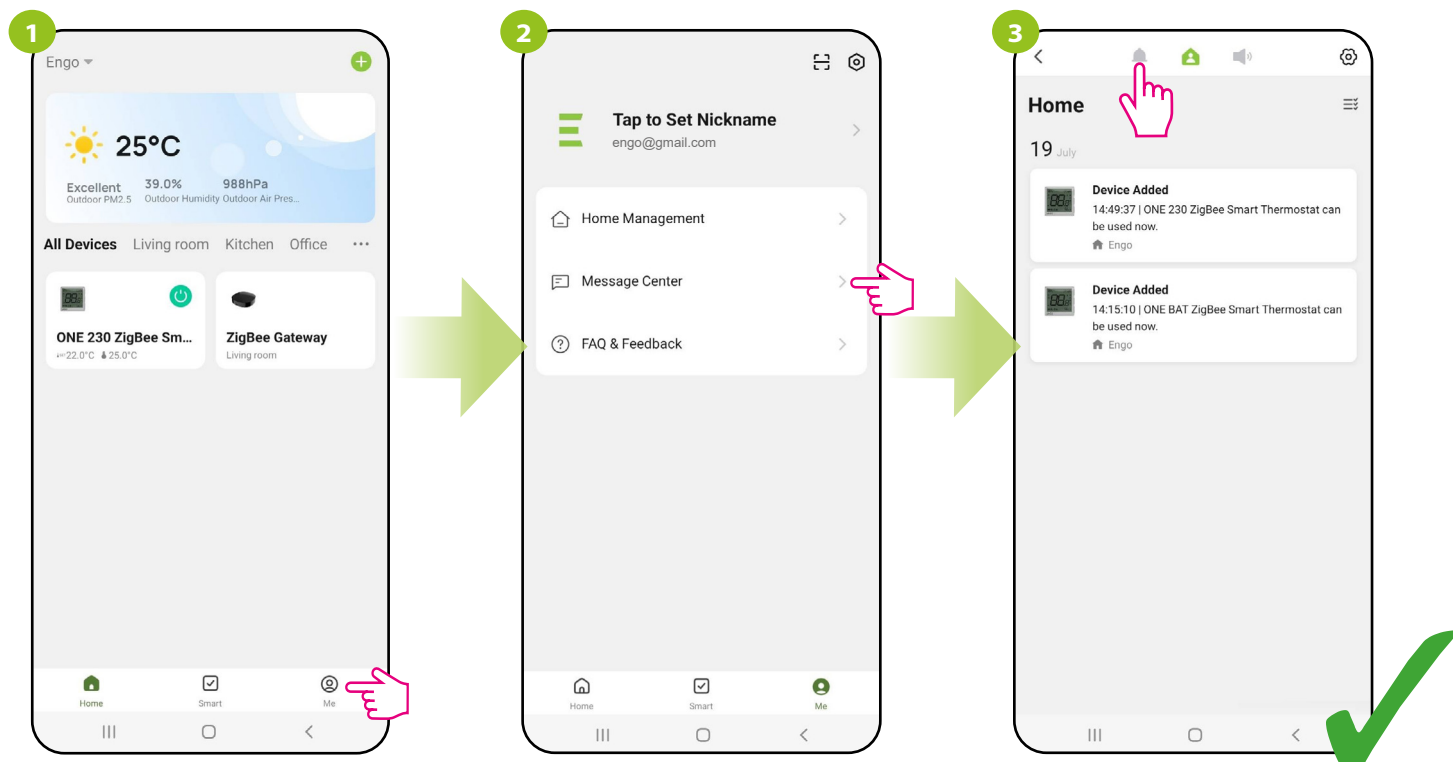
- Check if the EGATEZB gateway is connected to the power supply



**The thermostat has the display off** – Check that the thermostat is not turned off in the app.

## Alerts.

To access notifications follow these steps:



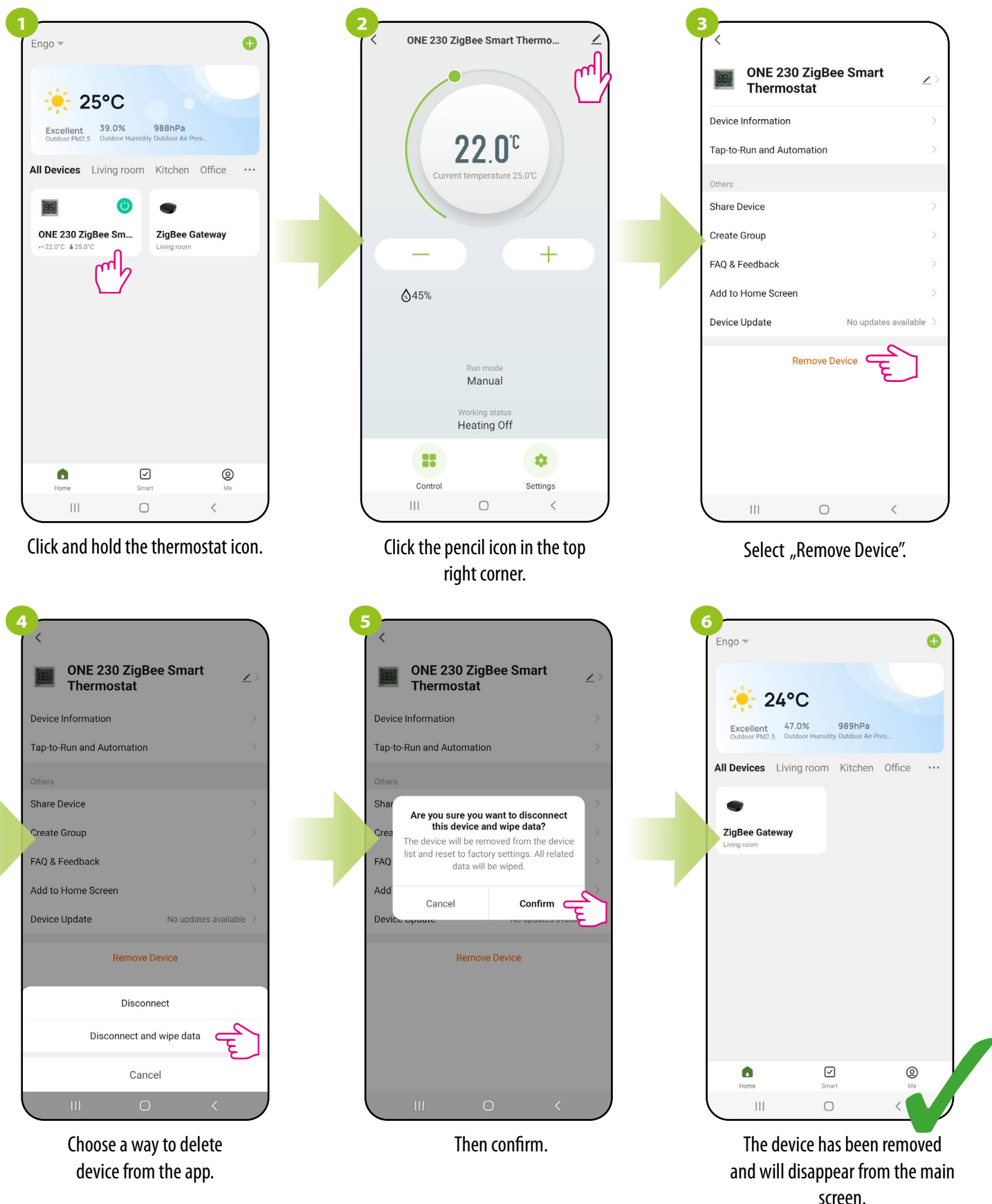
Enter „Me” menu.

Select „Message Center”.

Move sequentially between the tabs: Alarm, Devices and Notifications in order to find a message or notification regarding to the thermostat.

## 16. Remove device

To remove the EONE thermostat from your account, follow these steps:



### ATTENTION!!!

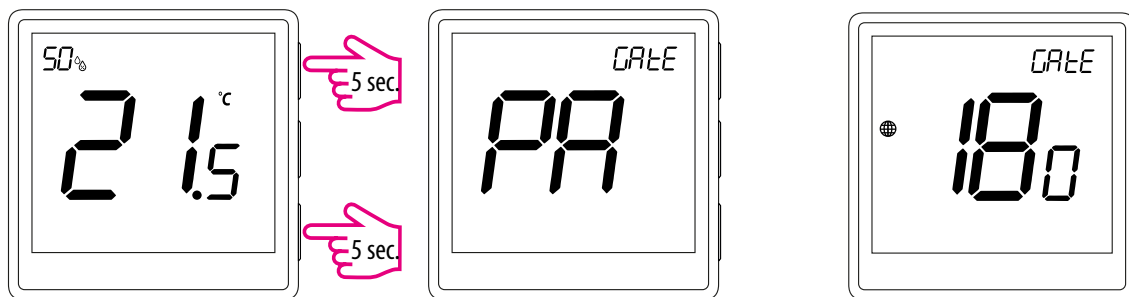
**Disconnect** - The device will be removed from the app, all associated „Tap-To-Run“ scenes and automated scenarios won't be available. The next time you connect to the app, the device will be added with the previous settings, but the „Tap-To-Run“ rules will need to be created again.

**Disconnect and wipe data** - the device will be removed from the application and will be restored to factory settings.



## 17. Installation of the ZigBee thermostat in the app - OFFLINE

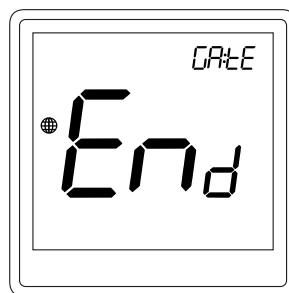
### 17.1 Adding thermostat to the ZigBee network



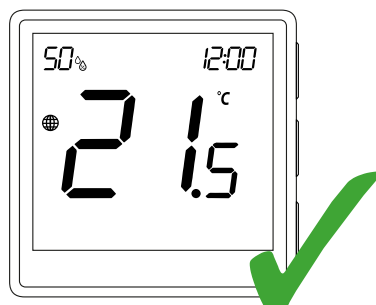
On the EONE thermostat, hold ▲ and ▼ buttons simultaneously for 5 seconds until „PA” appears on the display.  
The thermostat will enter pairing mode and count backwards (180s).



On the EGATEZB gateway, press the RESET button. The green LED will start flashing.  
Pairing mode will then be invoked.



After the pairing is completed, the thermostat show End message on the display.

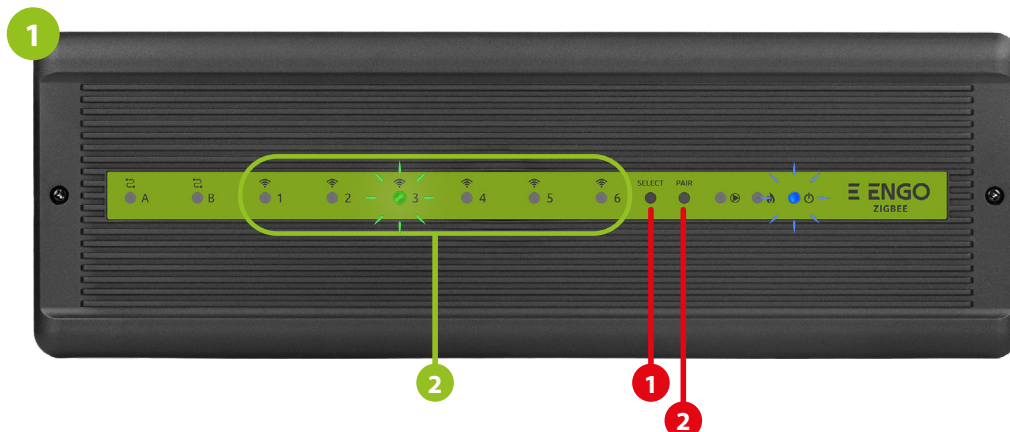


On the screen of the thermostat appears an globe icon indicating that it has been added succesfully to the ZigBee network.

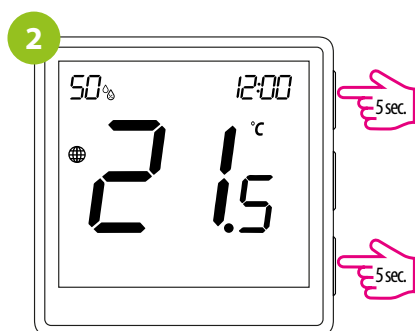
The ENGO ZigBee series of devices - as the only one working on the basis of the TUYA platform - offers the so-called ENGO binding function, which allows direct binding of EONE thermostat with receivers (ECB62ZB strip, EMODZB module, EREL1ZB12A relay) using EGATEZB gateway. This makes it possible to bind devices without creating automation in the mobile application. The binding function ensures stable communication of devices online and offline (even without Internet or router connection).

## 17.2 Linking thermostat to the wireless control box ECB62ZB

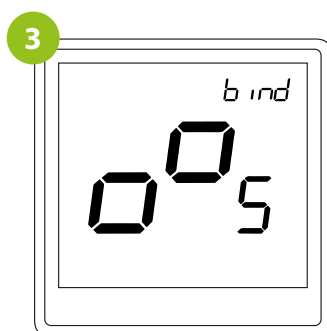
Make sure that the ECB62ZB control box and thermostat are in the same ZigBee network (they are added to the same gateway EGATEZB) and the POWER LED lights up blue.



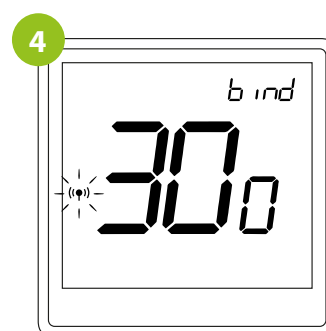
In order to correctly link thermostat with the control box, first select the zone in the control box with the SELECT button (1) (zone which you want to link with thermostat). The LED (2) will flash 3 times for the selected zone. Confirm your selection by clicking PAIR button (2). The LED (2) will flash green with the previously selected zone - binding process has started, it is active for 10 minutes and during this time you can link thermostat with the selected zone.



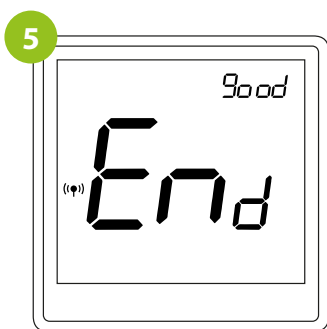
On the EONE thermostat, hold ▲ and ▼ buttons until the "bind" message appears.



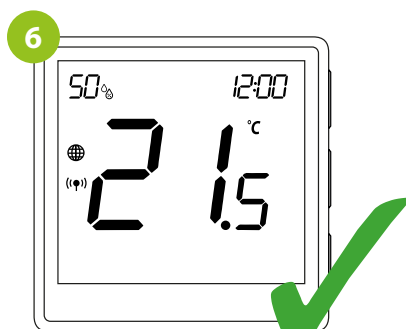
Release keys, binding function is active.



The "binding" process takes up to 300 seconds.



After successful binding operation "End" message will be displayed.



Both devices have been successfully linked. Thermostat displays the main screen, icon (⦿) appeared on the screen indicating connection with the receiver.



### ATTENTION:

If the binding process fails, it must be repeated taking into account the distances between devices, obstacles and local radio signal interferences.



### Remember:

Radio range can be increased by Engo ZigBee repeaters



### ATTENTION:

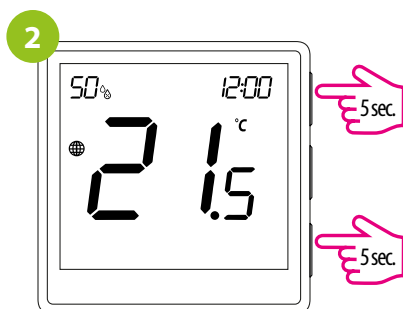
When the controller is bound to a wireless zone in the control box, in case of loss of communication between devices, the zone will turn off after 50 minutes.

## 17.3 Linking thermostat to the control module EMODZB

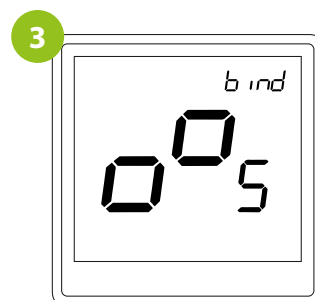
Make sure that the module and thermostat are in the same ZigBee network (they are added to the same gateway EGATEZB).



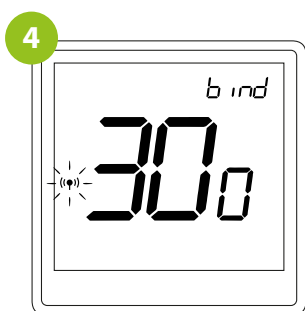
To properly bind thermostat with the module first click quickly the button on the device 5 times. The LED diode will start flashing slowly on red, which means the device will enable binding mode.



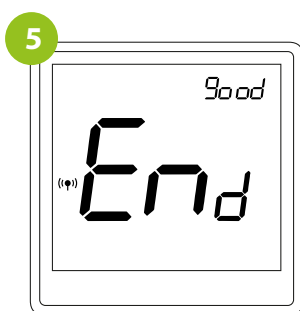
On the EONE thermostat, hold ▲ and ▼ buttons at the same time for 10 seconds until the „bind” function appears.



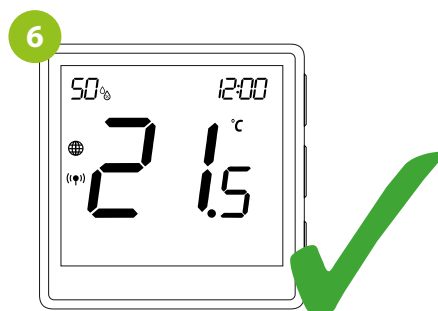
Release the keys, binding function (process of linking thermostat) is active.



The „binding” process takes up to 300 seconds.



After successful binding operation „End” message will be displayed. The LED on the module will stop flashing.



Both devices have been successfully linked. Thermostat displays the main screen, icon (📶) appeared on the screen indicating connection with the receiver.



### ATTENTION:

If the binding process fails, it must be repeated taking into account the distances between devices, obstacles and local radio signal interferences.



### Remember:

Radio range can be increased by Engo ZigBee repeaters



### ATTENTION:

When the controller is bound to the module, in case of loss of communication between devices, the module will turn off after 50 minutes.

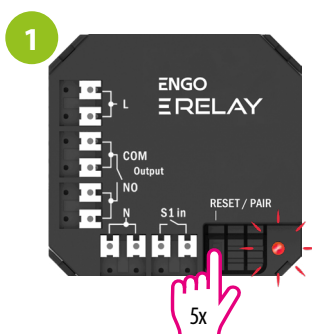


### ATTENTION:

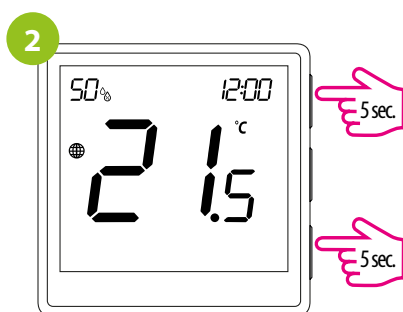
When the regulator is bound to the module, do not set time schedules in the module because they will interfere with the operation of the heating system.

## 17.4 Linking thermostat to the relay EREL1ZB12A

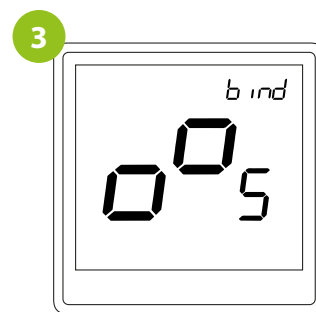
Make sure that the relay and thermostat are in the same ZigBee network (they are added to the same gateway EGATEZB).



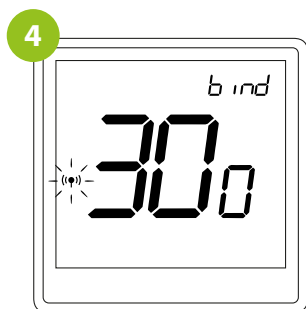
To properly bind thermostat with the relay first click quickly the button on the device 5 times. The LED diode will start flashing slowly on red, which means the device will enable binding mode.



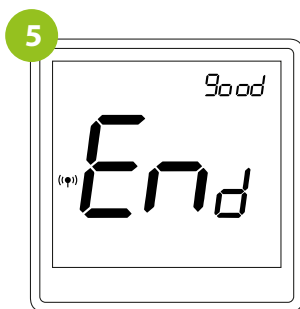
On the EONE thermostat, hold and buttons ▲ and ▼ for 10 at the same time seconds until the „bind” function appears.



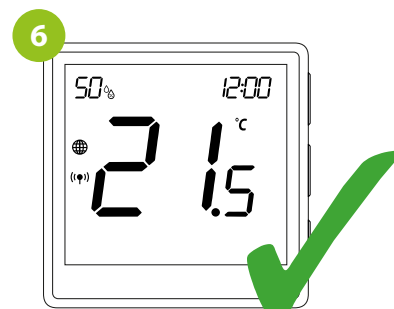
Release the keys, binding function (process of linking thermostat) is active.



The „binding” process takes up to 300 seconds.



After successfull binding operation „End” message will be displayed. LED on the module will stop flashing.



Both devices have been successfully linked. Thermostat displays the main screen, icon (🏠) appeared on the screen indicating connection with the receiver.



### ATTENTION:

If the binding process fails, it must be repeated taking into account the distances between devices, obstacles and local radio signal interferences.



### Remember:

Radio range can be increased by Engo ZigBee repeaters.



### ATTENTION:








When the controller is bound to the relay, in case of loss of communication between devices, the module will turn off after 50 minutes.

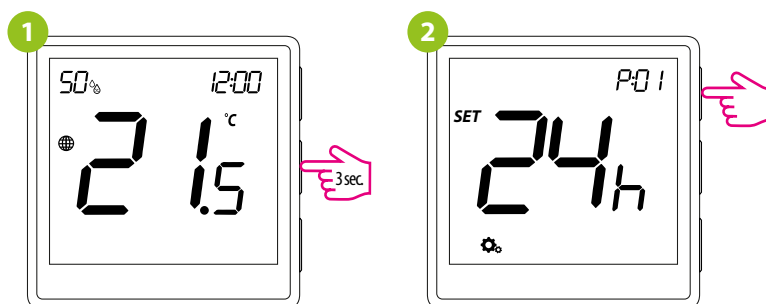


### ATTENTION:




When the regulator is bound to the relay, do not set time schedules in the relay because they will interfere with the operation of the heating system.

## 18. Offline installer parameters

To enter the installer mode, hold down the  button for 3 seconds. Navigate between parameters using the buttons  or . Enter a parameter using the  button. Edit a parameter using the  or  buttons. Confirm the new parameter value with the  button.

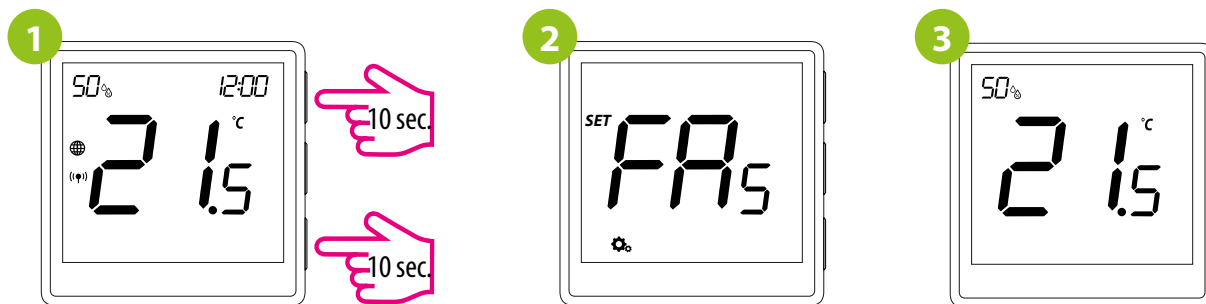


### Installer parameters

Pxx	Function	Value	Description	Default value
P01	Clock format	12h	12 hour	24h
		24h	24 hour	
P02	Heating/Cooling Selection		Heating	
			Cooling	
P03	Control algorithm	TPI UFH	TPI for Underfloor Heating	TPI UFH for heating HIS 1.0 for cooling
		TPI RAD	TPI for Radiators	
		TPI ELE	TPI for Electrical Heating	
		HIS 0.2	SPAN +/-0,1°C	
		HIS 0.4	SPAN +/-0,2°C	
		HIS 0.6	SPAN +/-0,3°C	
		HIS 0.8	SPAN +/-0,4°C	
		HIS 1.0	SPAN +/-0,5°C	
		HIS 2.0	SPAN +/-1,0°C	
		HIS 3.0	SPAN +/-1,5°C	
		HIS 4.0	SPAN +/-2,0°C	
P04	Offset temperature	-3.5°C do +3.5°C	If the thermostat indicates wrong temperature, you can correct it by max ± 3.5°C"	0°C
P05	"Minimum setpoint"	5°C - 45°C	Minimum heating / cooling temperature that can be set	5°C
P06	"Maximum setpoint"	5°C - 45°C	Maximum heating / cooling temperature that can be set	35°C
P07	S1/S2 Input	1	Disable	1
		2	External sensor as a floor sensor	
		3	External sensor as an air sensor	
		4	Occupancy sensor (ON/OFF volt free input)	
P08	Maximum floor temperature for heating (function active when P07=2)	5°C - 45°C	In order to protect the floor, the heating will be turned off, when the temperature of the floor sensor rises above the maximum value.	35°C
P09	Minimum floor temperature for heating (function active when P07=2)	5°C - 45°C	In order to protect the floor, the heating will be switched on, when the temperature of the floor sensor drops below the minimum value.	10°C
P10	Maximum floor temperature for cooling (function active when P07=2)	5°C - 45°C	In order to protect the floor, cooling will be switched on, when the temperature of the floor sensor exceeds the maximum value.	15°C
P11	Minimum floor temperature for cooling (function active when P07=2)	5°C - 45°C	In order to protect the floor, cooling will be turned off, when the temperature of the floor sensor drops below the minimum value	7°C
P12	Comfort warm floor	OFF	This function helps to keep the floor warm, even if there is no heating demand from the room thermostat. This feature is available only for Heating Mode. User can select 5 levels of warm floor feature. Note that comfort warm floor function will activate heating for specified amount of time (in relation to Level setting chosen by user). Heating will be activated only if in the past 1 hour heating was OFF.	OFF
		Level 1 = 7min		
		Level 2 = 11min		
		Level 3 = 15min		
		Level 4 = 19min		
		Level 5 = 23min		
P13	Valve protection	ON	Function disabled	OFF
		OFF	Function enabled	
P14	Internal relay	NO	Relay type NO-COM	NO
		NC	Relay type NC-COM	
		OFF	Relay disabled	
P15	Backlight brightness	10% - 100%	Adjustable in the range from 10 to 100%	50%
P16	PIN Code for settings access	NO	Function disabled	NO
		PIN	Function enabled	
P17	Require a PIN to unlock the keys every time (function active when P16=PIN)	NO	Function disabled	NO
		YES	Function enabled	
CLR	Clear settings factory reset	NO	No action	NO
		YES	Factory Reset	

## 19. Factory reset

To RESET the thermostat to factory settings, hold ▲ and ▼ buttons Until the FA message appears, then release the buttons. The thermostat will restart, restore factory default values and display the main screen. If the thermostat was added to the Internet gateway and ZigBee network, then it will be removed from it and you will have to add/pair it again.

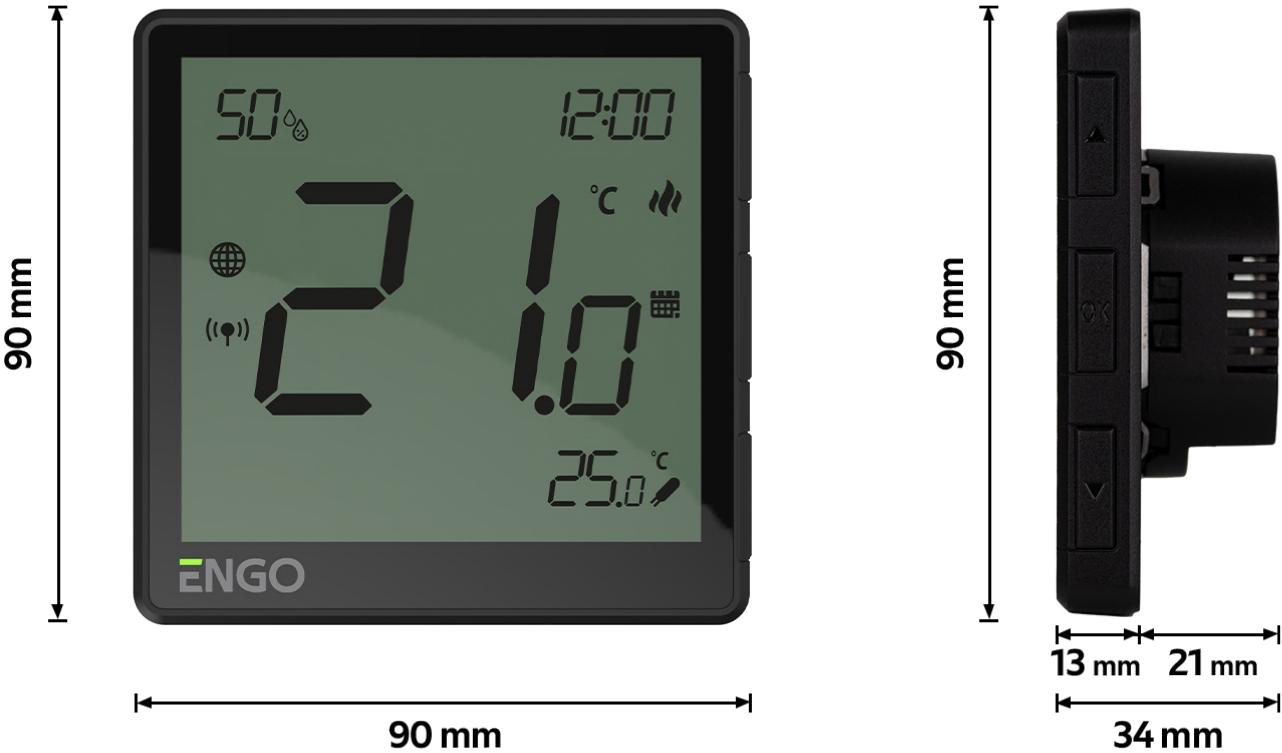


## 20. Cleaning and Maintenance

The EONE thermostat does not require any special maintenance. Do not use brushes, washers or other tools that may scratch the surface of the thermostat for cleaning and maintenance of the surface, and do not use abrasive or foaming agents, as well as aggressive substances containing acids, chlorine or its compounds, solvents or bleaching agents, as this may damage the thermostat. Always clean the display and buttons with a damp, soft cloth. Plastic surfaces can also be cleaned with colorless, mild cleaning agents. Do not spray cleaner directly onto the device. After washing the surface, you can gently polish it with a soft, dry cloth. There are no user serviceable / replaceable parts inside. Service or repair may be performed only by an authorized ENGO Controls service.

21. Technical Informations

Power supply	230V AC 50 Hz
Max. load	3(1)A
Temperature range	5,0°C - 45,0°C
Display temperature accuracy	0,5°C
Control algorithm	TPI or Histeresis (from $\pm 0,1^{\circ}\text{C}$ to $\pm 2^{\circ}\text{C}$ )
Communication	ZigBee 3.0 2,4GHz
S1/S2 multifunctional input	Floor temp sensor, external air sensor, occupancy sensor
Output control	COM / NO (Volt-free)
IP protection class	IP30
Dimension [mm]	90 x 90 x 34 mm (13 mm after mounting in electrical box $\Phi$ 60)



## 22. Warranty

**ENGO CONTROLS** warrants this product to be free from any defects in material or workmanship and to perform as specified for a period of five years from the date of installation. ENGO Controls reserves the sole responsibility for breach of this warranty by repairing or replacing the defective product. This product includes software that matches the distributor's identification at the time of sale. The manufacturer / distributor provides a guarantee covering all functions and specifics of the product in accordance with this marking. The distributor's warranty does not cover the correct operation of the functions and features available as a result of a product software update.

Customer Name: .....

Customer Address: .....

..... Post Code: .....

Tel No.: ..... Email: .....

Company name: .....

Tel No.: ..... Email: .....

Installation Date: .....

Installer Name: .....

Installer Signature: .....









Ver. 1

Date of issue: XI 2023

**Producer:**

Engo Controls S.C.  
43-262 Kobielice  
4 Rolna St.  
Poland

**Distributor:**

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[www.engocontrols.com](http://www.engocontrols.com)