



E10W230WIFI / E10B230WIFI
| Internet controlled thermostat, WiFi

FULL MANUAL

TABLE OF CONTENTS

1. Introduction	4
1.1 Product Compliance	4
1.2 Safety Informations	4
2. Product Overview	5
2.1 Package content	6
2.2 Proper thermostat location	6
2.3 Wall mounting	7
3. Connection description	8
3.1 Connection diagram for gas boiler	8
3.2 Connection diagram to pump / actuator	9
3.3 Connection diagram to the control box	10
4. About ENGO	11
4.1 Wi-Fi installation guidelines	11
4.2 Mobile device requirements	11
4.3 About ENGO Smart app (general information)	12
5. First power on	13
5.1 LCD icon description	14
5.2 Button description	14
6. ENGO Smart app installation	15
7. Installation of the Wi-Fi thermostat in the app	16
8. Operation in the app	19
8.1 General information	19
8.2 App icons description	19
8.3 Control	20
8.3.1 Setpoint temperature change	20
8.3.2 „Power“ function	21
8.3.3 Manual mode	22
8.3.4 Schedule mode	23
8.3.5 Holiday mode	27
8.3.6 FROST mode	28
8.3.7 Diagrams	29
8.4 Settings (installer parameters)	30
8.4.1 Child lock function	30
8.4.2 Backlight brightness	31
8.4.3 Max temp. limit	32
8.4.4 Min temp. limit	33
8.4.5 Sensor Selection	34
8.4.5.1 Internal temperature sensor (IN)	34
8.4.5.2 External temperature sensor (OUT)	35
8.4.6 Temperature correction	36
8.4.7 Control type (algorithm)	37
8.4.8 Device state on power	39
8.5 E10 thermostat management in the Engo Smart app	40
8.5.1 Change the name, icon and location of the thermostat	40
8.5.2 Device information	42
8.5.3 Tap-To-Run and Automation	43
8.5.4 Offline notification	48

8.5.5 Share device.....	49
8.5.6 Create group	51
8.5.7 FAQ & Feedback.....	53
8.5.8 Add to home screen	54
8.5.9 Check device network	55
8.5.10 Device update	56
9. Alarms / Push notifications / Emergency states	57
10. Remove device.....	59
11. Cleaning and maintenance	60
12. Technical Informations	60
13. Warranty	61

1. Introduction

1.1 Product Compliance

This product complies with the essential requirements and other relevant provisions of Directives 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.

WARNING!

- 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

E10W / E10B

E10 is a wired temperature thermostat with a WiFi and Bluetooth module. It enables economic and ecological control of any type of heating. Provides remote control of the heating system using the ENGO Smart / Tuya Smart app. It is characterized by a clear menu and a multitude of useful functions. Programming the E10 is very simple and allows you to adjust the heating cycle to the user's daily rhythm. The model is available in white and black.

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 issue voice commands via Amazon Alexa and Google Assistant. We also have 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:

- minimalistic design
- adjust the brightness of the display
- ability to share a device to multiple users
- possibility of connecting an external temperature sensor
- diagrams with temperature history (available in the app)
- multiple functions available from the ENGO Smart / Tuya Smart app
- possibility to set the minimum and maximum setpoint temperature range
- integration with Google Home, Alexa
- push notifications from the app
- very easy to use

2.1 Package content

- 1) **E10W / E10B** thermostat
- 2) Quick Guide
- 3) Mounting screws

1



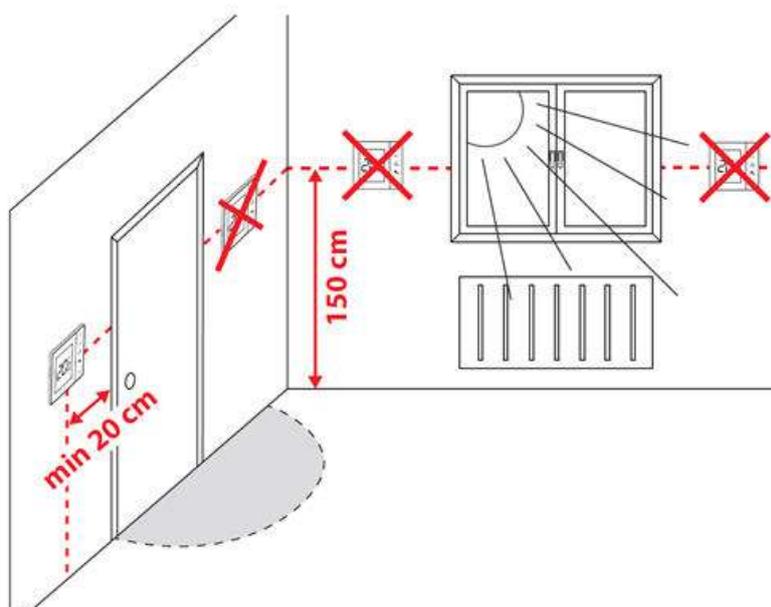
2



3



2.2 Proper thermostat location



Please note:

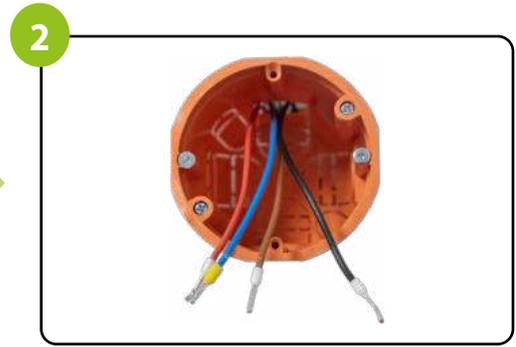
The recommended height for mounting the E10W / E10B thermostat is approx. 1.5 m above the ground, away from any sources of heat or cool. It is not recommended to install the thermostat on an outside wall, in a draft or in a place where it will be exposed to direct sunlight.

2.3 Wall mounting

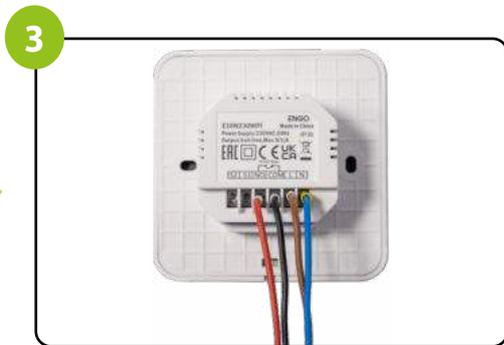
To properly mount the thermostat on the wall, please follow the steps below:



Use a screwdriver to unscrew the screw at the bottom of the thermostat to detach the rear part.



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



Connect the thermostat according to the wiring diagram.



Put the thermostat in the box.



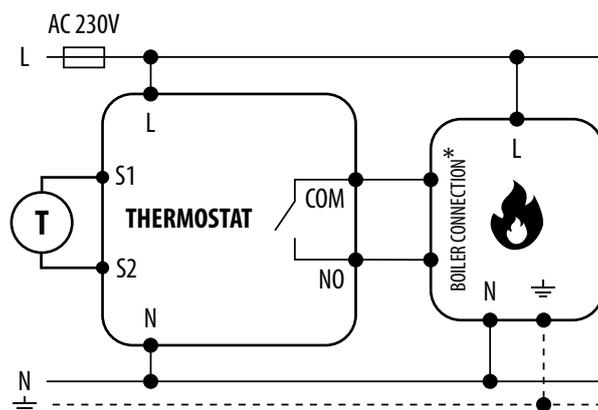
Screw the thermostat to the mounting box.



Slide the front of the thermostat onto its back and tighten the screw from the bottom.
Turn on the power.
The thermostat is now ready for operation.

3. Connection description

3.1 Connection diagram for gas boiler



Legend:



Boiler - Boiler connection*
- Boiler's contacts for ON/OFF thermostat (according to the boiler's instructions)

L, N - power supply

COM, NO - voltage-free output

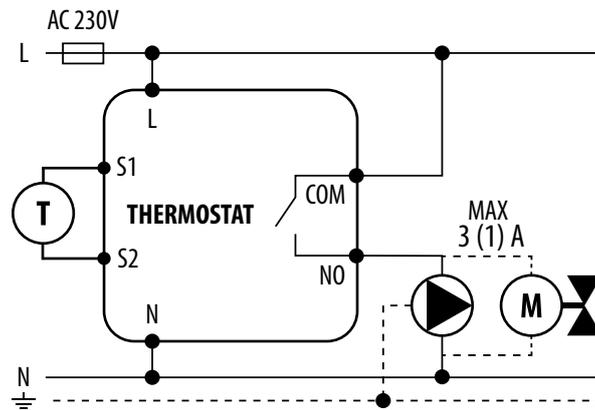
Wejścia S1, S2 - output for temperature sensor



Temperature sensor

 - fuse

3.2 Connection diagram to pump / actuator



Legend:



Pump



Valve



Temperature sensor

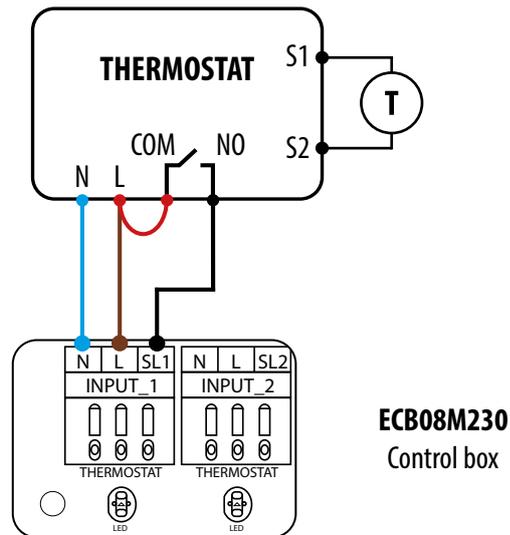
L, N - power supply

COM, NO - voltage-free output

Wejścia S1, S2 - output for temperature sensor

 - fuse

3.3 Connection diagram to the control box



Legend:

T Temperature sensor

L, N - power supply

COM, NO - voltage-free output

S1, S2 - output for temperature sensor

SL1...SL8 - 230V control input in the control box

 - fuse

4. About ENGO

4.1 Wi-Fi installation guidelines

- 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

4.2 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

4.3 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.

Finally, it is worth noting that a lot of Tuya products (compatible with the ENGO app) support Google Assistant and Amazon Alexa voice control, which can be recognized by the inscriptions on the label saying „works with Google Home” and „works with Amazon Alexa”, respectively. If „Intelligence Inside” is added to the text „Powered by Tuya” to create „Powered by Tuya: Intelligence Inside”, the product with this text supports Samsung’s SmartThings technology.

COMPATIBILITY WITH TUYA DEVICES (examples):



Smart plugs



Smart bulbs



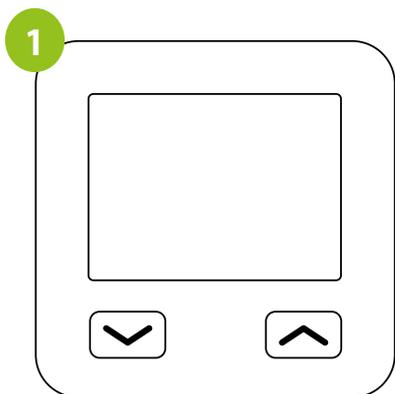
Cameras



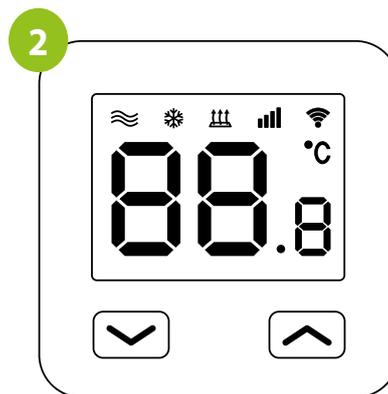
Doorbells

5. First power on

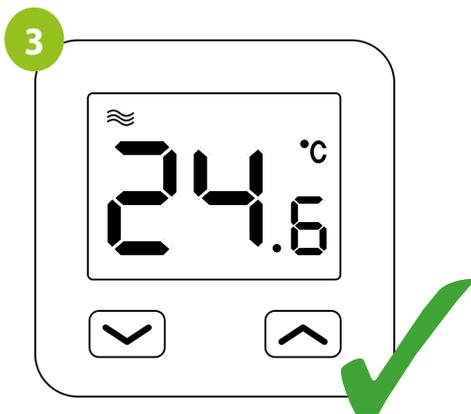
The thermostat is powered by 230V. When properly connected to the power supply, the thermostat will start up showing all the icons and then go to the main screen.



IN ORDER TO TURN ON THE THERMOSTAT IT IS NECESSARY CONNECT IT TO 230V...

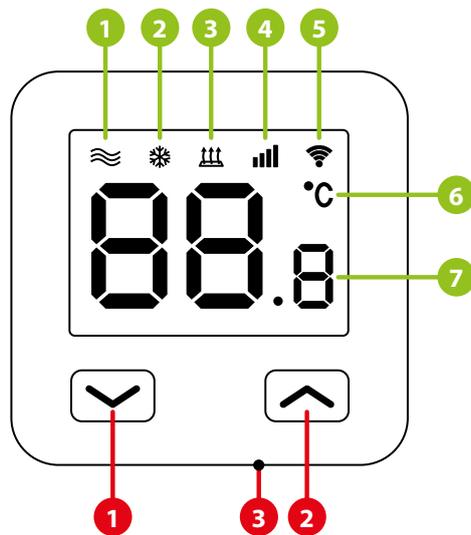


...THE DISPLAY WILL SHOW ALL THE ICONS...



...THE MAIN SCREEN IS APPEARED.

5.1 LCD icon description



- 1. Heating icon
 - 2. Frost protection mode
 - 3. Floor temperature protection
 - 4. Internet
 - 5. Connection with Wi-Fi
 - 6. Temperature scale (Celsius)
 - 7. Current / setpoint room temperature
- 1. "DOWN" button
 - 2. "UP" button
 - 3. "RESTART" button

5.2 Button description

Button	Function
∨	Change the parameter value down
∧	Change the parameter value up
∨ + ∧	Enter the pairing mode / Thermostat factory reset
• Reset	Thermostat's reboot

6. ENGO Smart app installation

DOWNLOAD THE ENGO SMART APP:



1. 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.

2. 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.



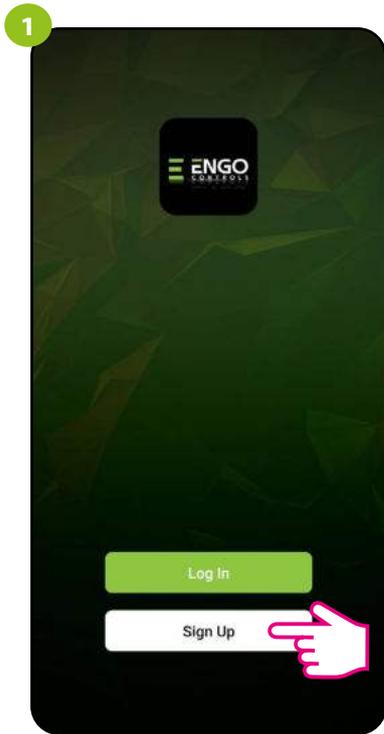
Please note! Please enable storage / location / camera permissions during installation. Otherwise, problems may arise during use / operation.

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.

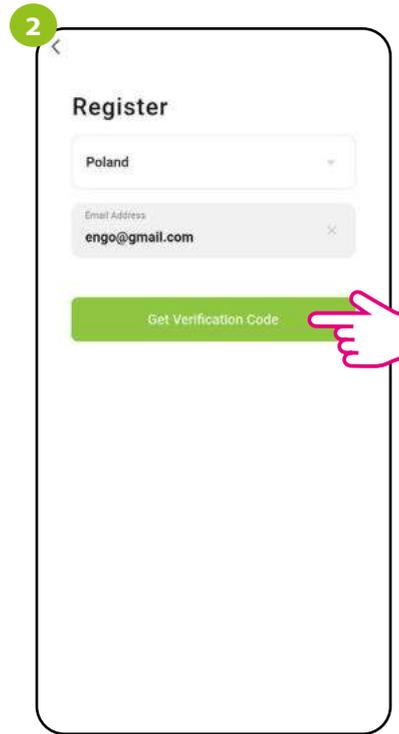
7. Installation of the Wi-Fi thermostat in the app

REGISTER THE NEW ACCOUNT:

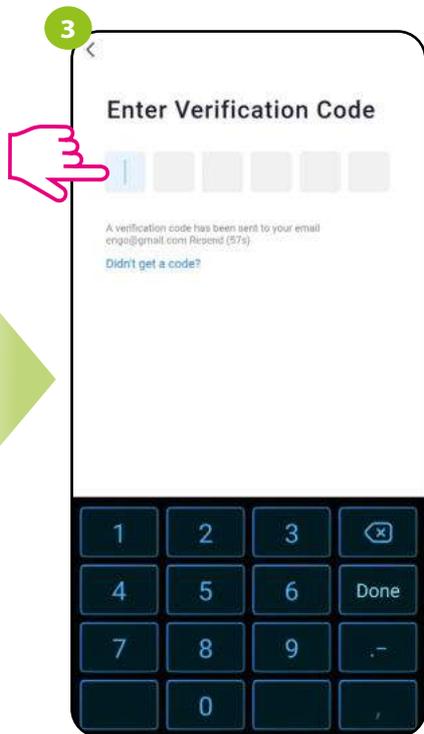
To register a new account, please follow the steps below:



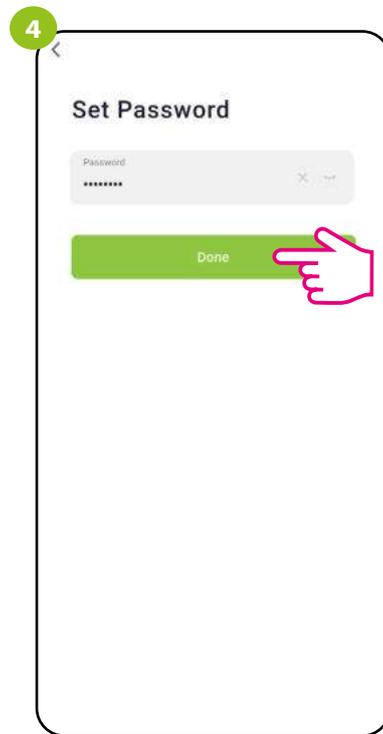
Click „Register” to create new account.



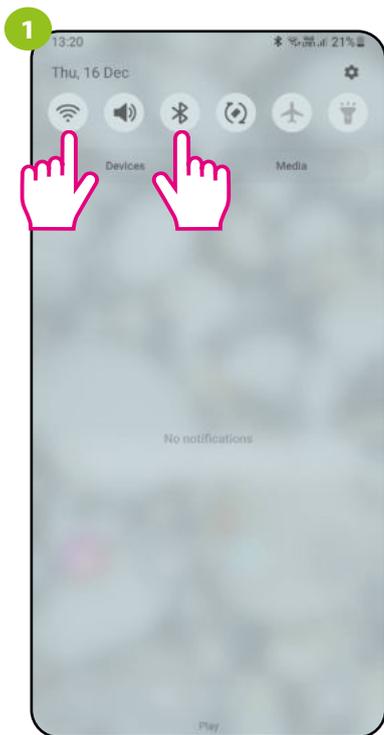
Enter your e-mail address to which the verification code will be sent.



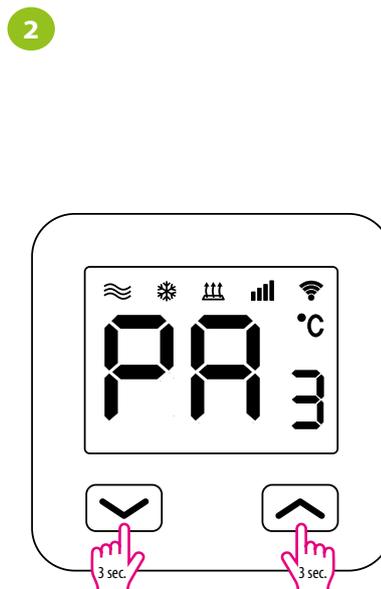
Enter the verification code received in the email.
Remember that you only have 60 seconds to enter the code!



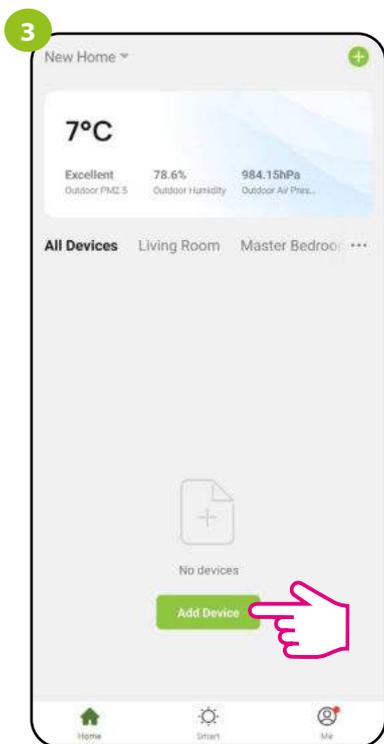
Then set the login password.



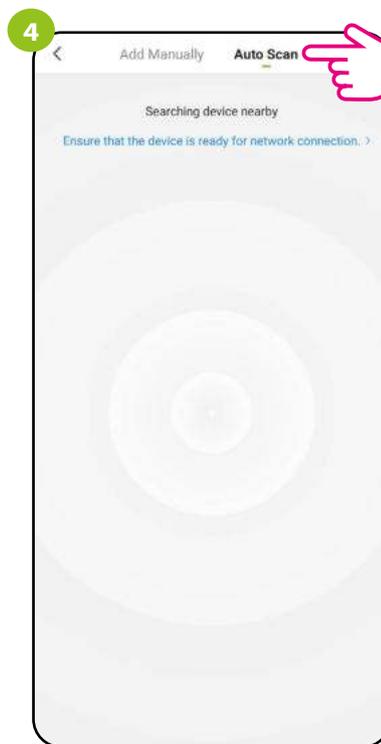
Turn on Wi-Fi and Bluetooth on your smartphone. It's best to connect mobile to the Wi-Fi network to which you want to assign the thermostat.



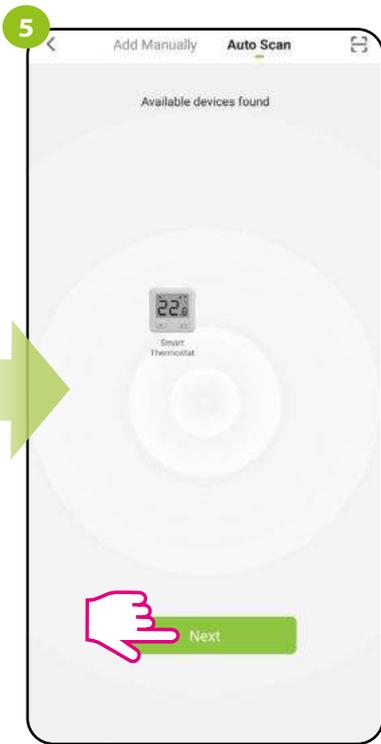
Make sure the thermostat is powered on. Then press and hold the buttons on the thermostat for approx. 3 sec. until the display shows „PA“. Then release the keys. The pairing mode will be started up.



In the app, select:
„Add Device“.



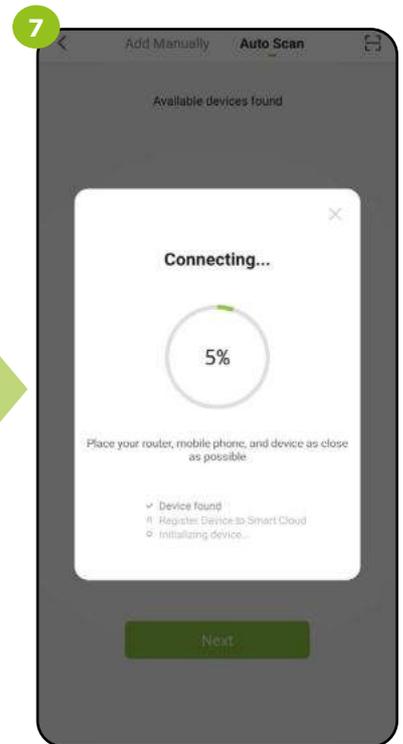
Then choose:
„Auto Scan“.



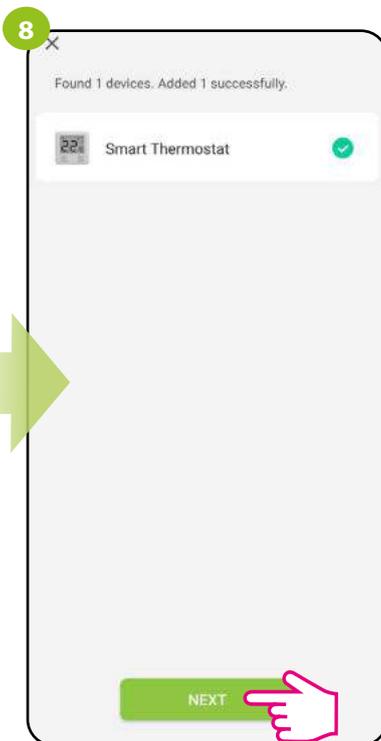
After finding the thermostat, go „Next”.



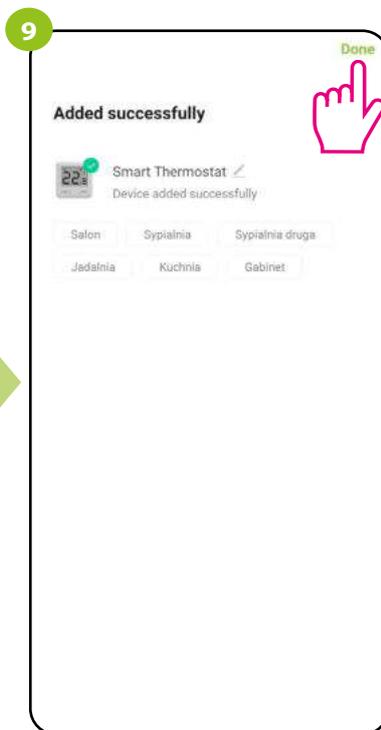
Select the Wi-Fi network in which the thermostat will operate and enter the password of this network.



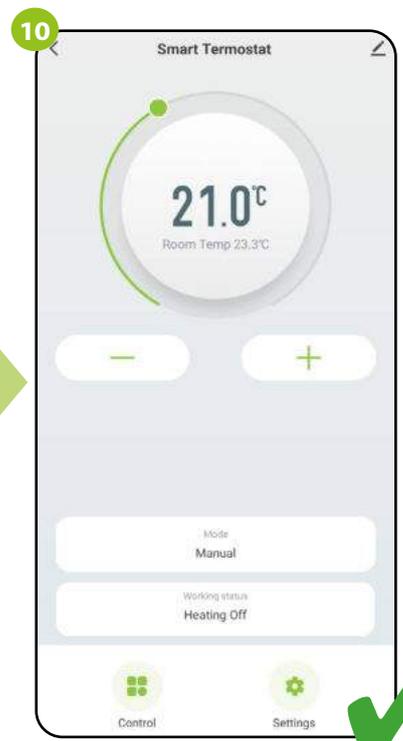
Wait for the app to configure the thermostat with the selected Wi-Fi network.



Go „NEXT”.



Name the device and click „Done”.



The thermostat has been installed and displays the main interface.

8. Operation in the app

8.1 General information

In this chapter, you can learn how to use the Wi-Fi 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.

8.2 App icons description

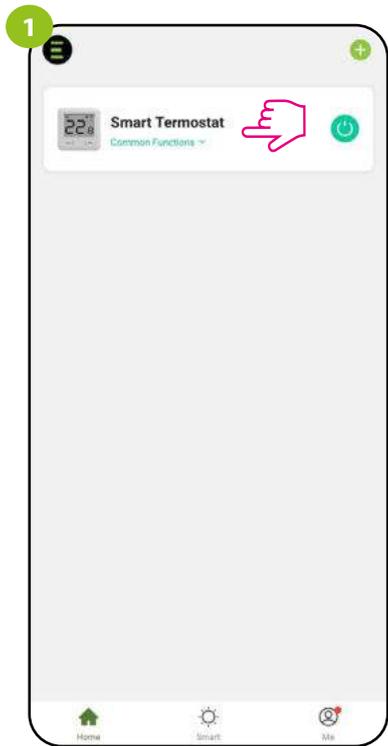
View of the E10 thermostat menu in the ENGO Smart app:



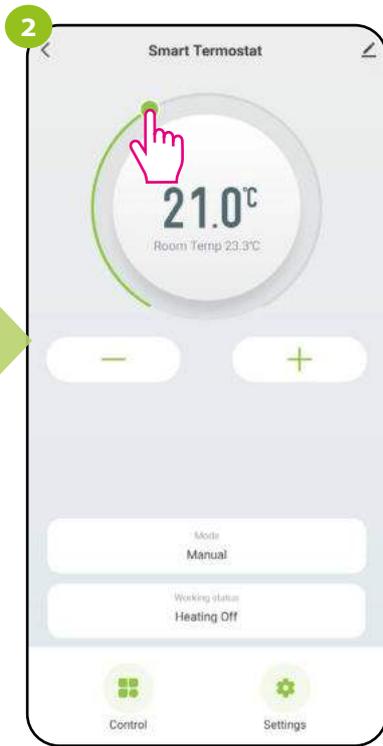
8.3 Control

8.3.1 Setpoint temperature change

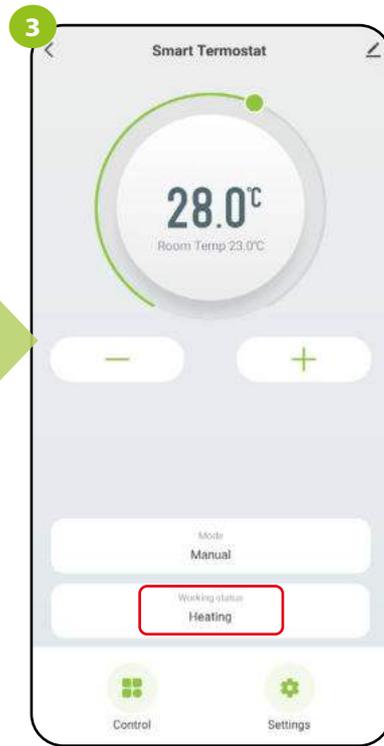
Changing the temperature setpoint is done by moving the cursor left / right in the app. On the screen, the actual temperature setpoint is represented by the number displayed in larger font.



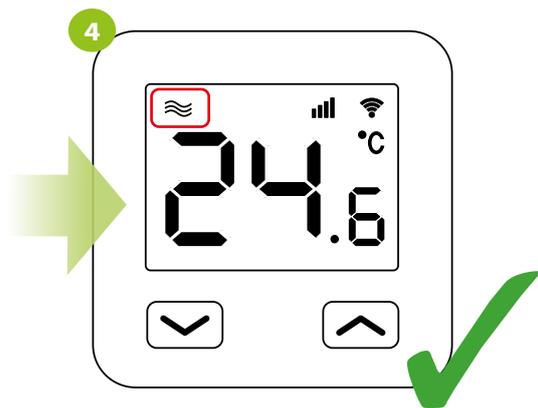
Enter the thermostat interface.



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



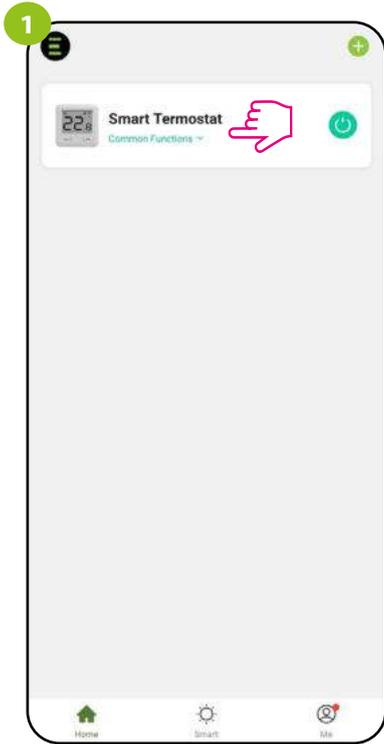
The thermostat started sending a signal for heating, which was signaled by a change of working status to „Heating“...



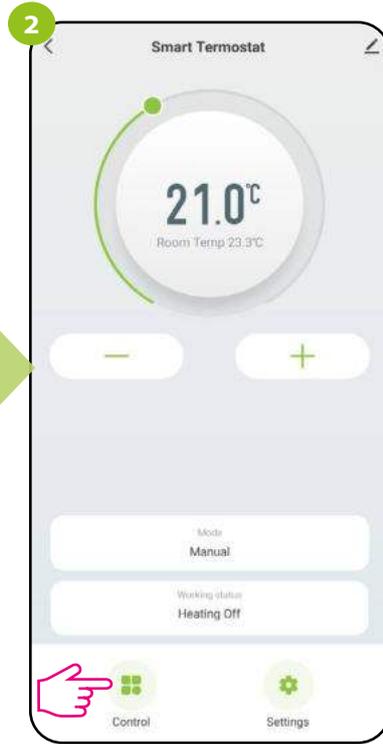
...and the heating icon appears on the display of the thermostat.

8.3.2 „Power” function

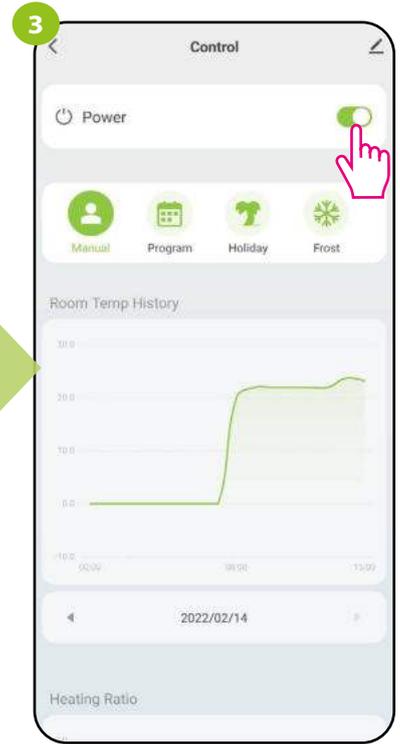
In this option, the user can turn ON / OFF the thermostat from the app without the need to interfere with the power wire. To do so, please follow the steps below:



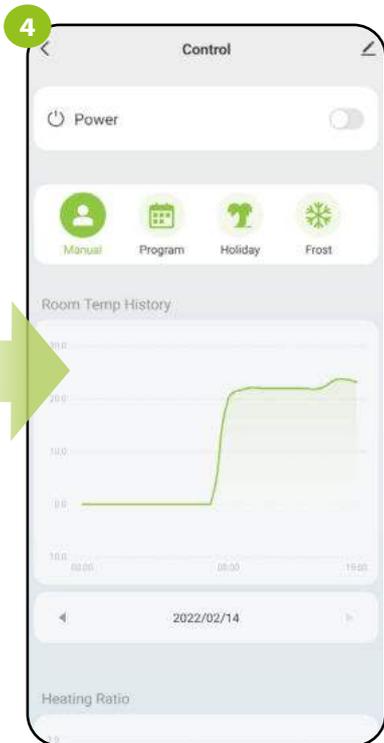
Enter the thermostat interface.



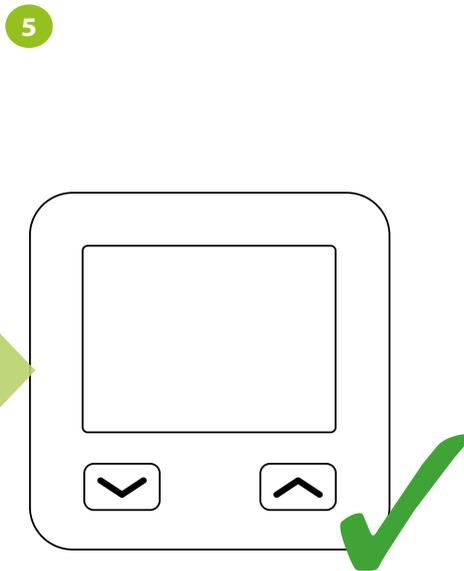
Select the „Control” option.



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



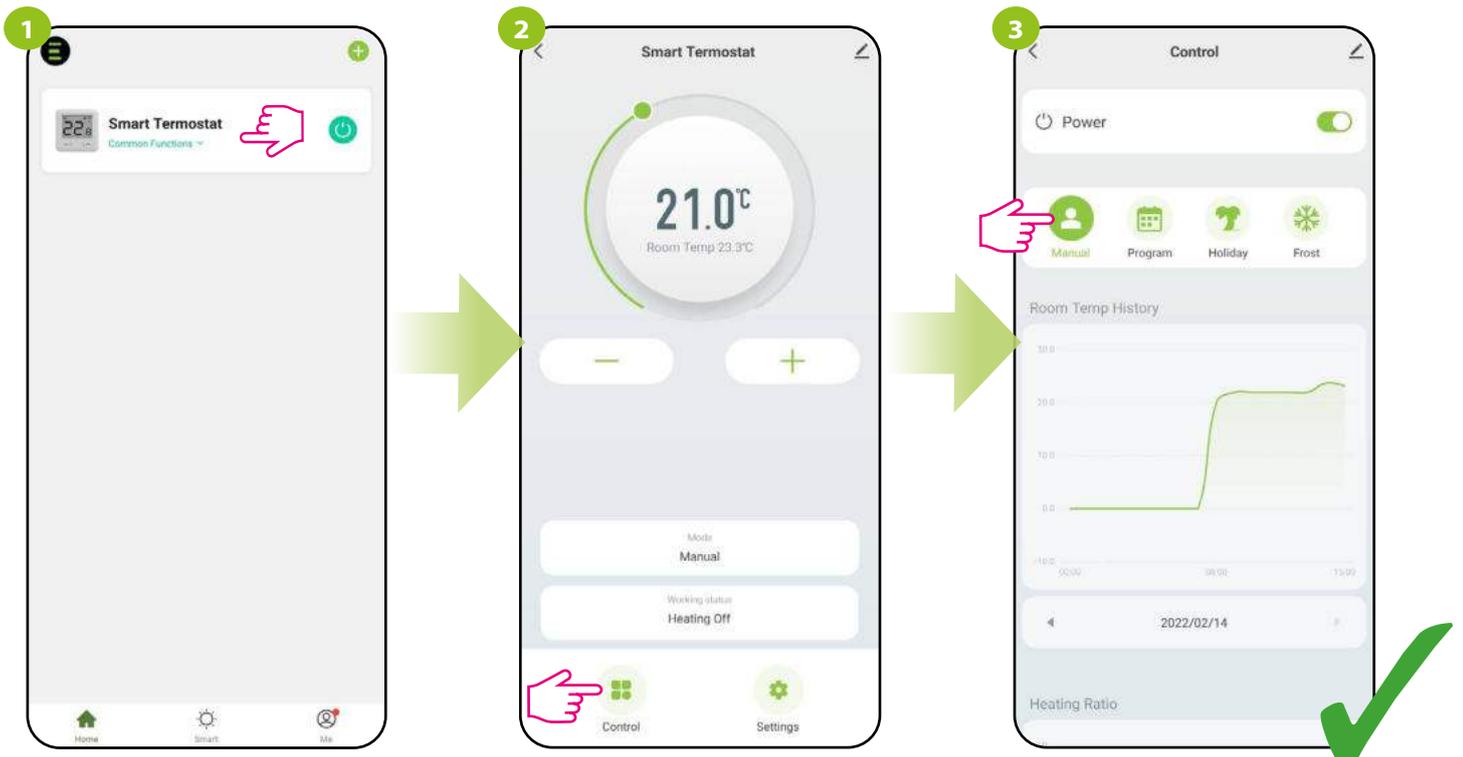
When the „Power” slider is grayed out, then the thermostat is off...



...and its display is blank.

8.3.3 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.

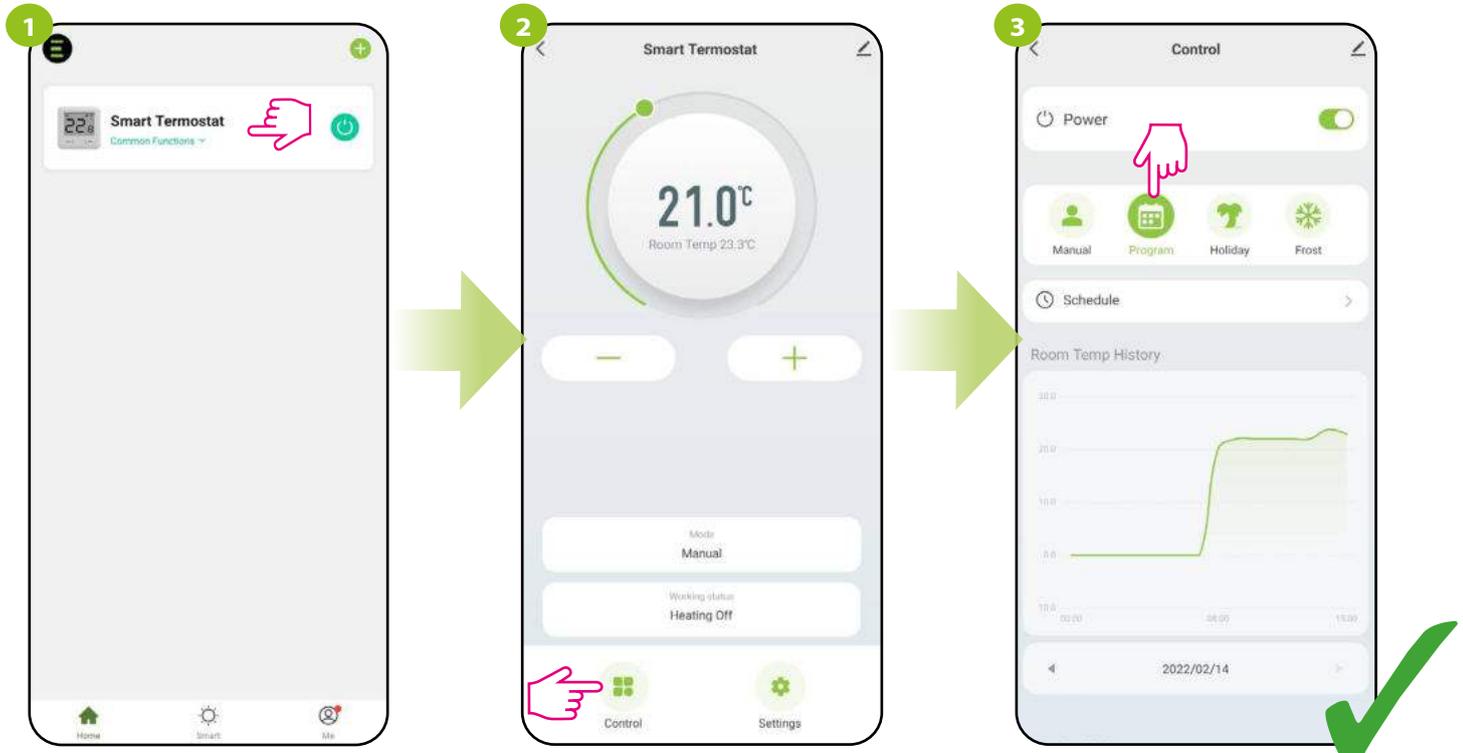
Select manual mode.

8.3.4 Schedule mode

The E10 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:

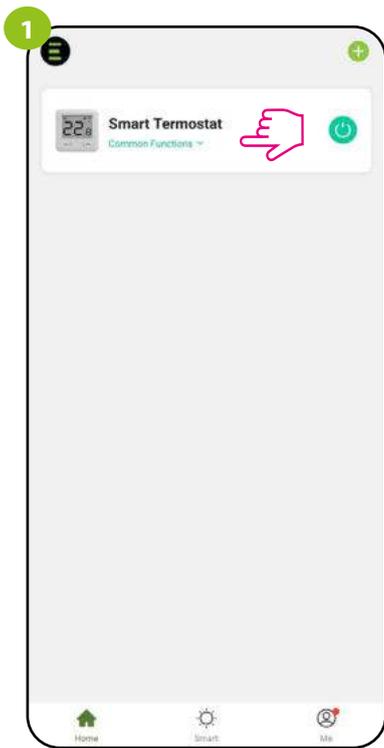


Enter the thermostat interface.

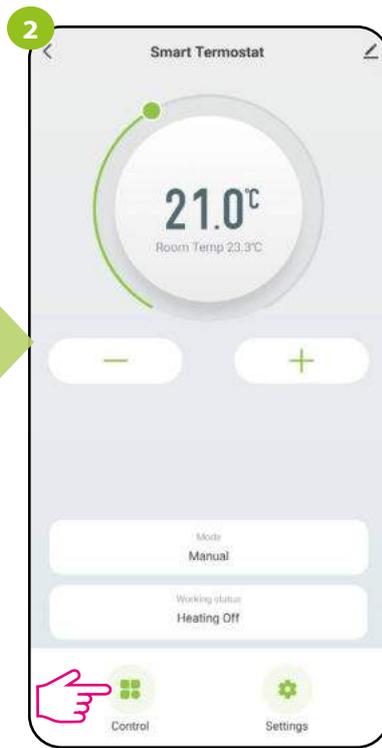
Select the „Control“ option.

Select schedule mode.

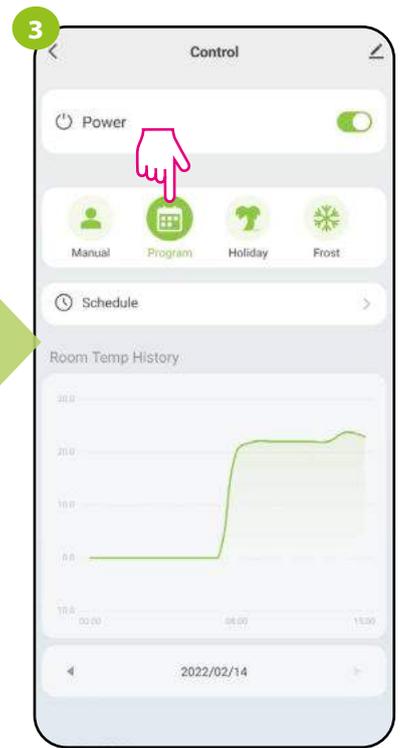
TO PROGRAM A SCHEDULE IN THE APP:



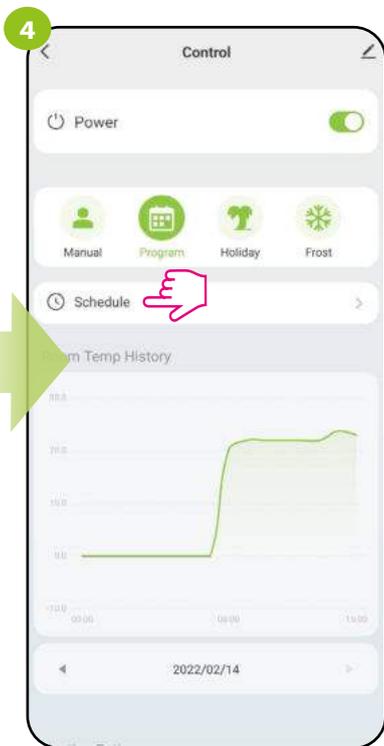
Enter the thermostat interface.



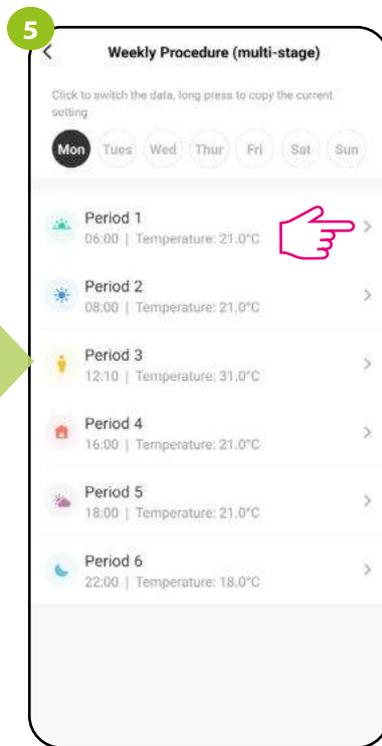
Select the „Control” option.



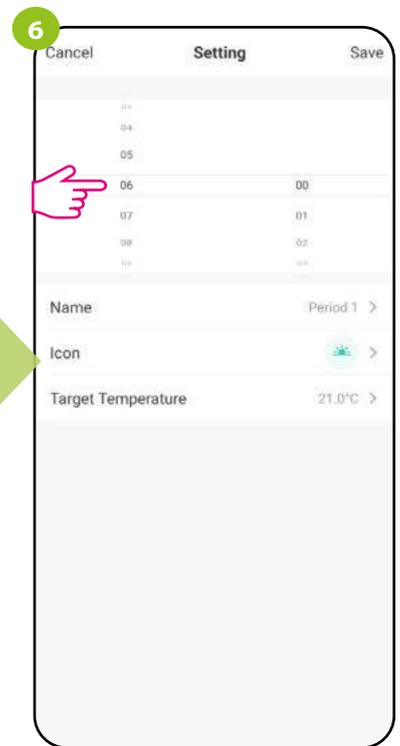
Select schedule mode.



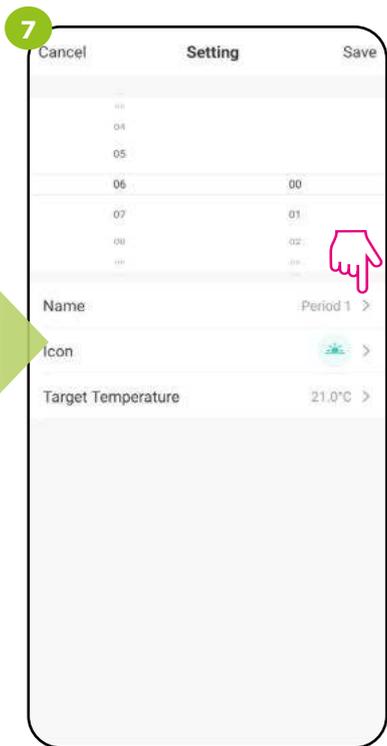
Enter the schedule settings.



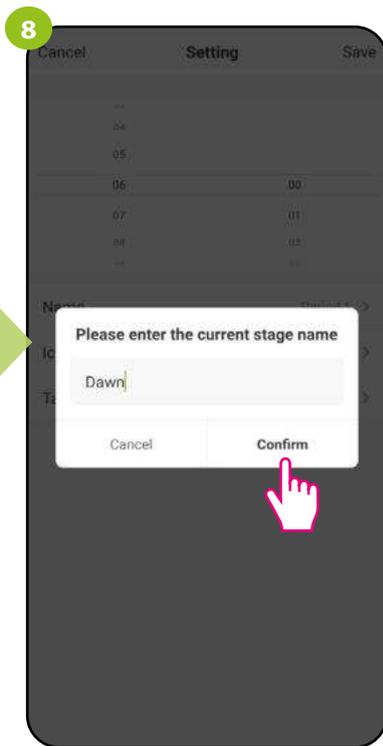
Select one of the six switch points to edit (the editing order is optional).



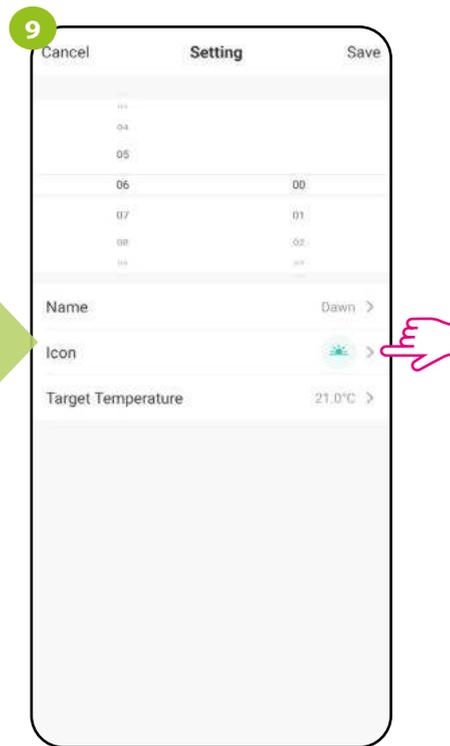
Select the start time of the switch point.



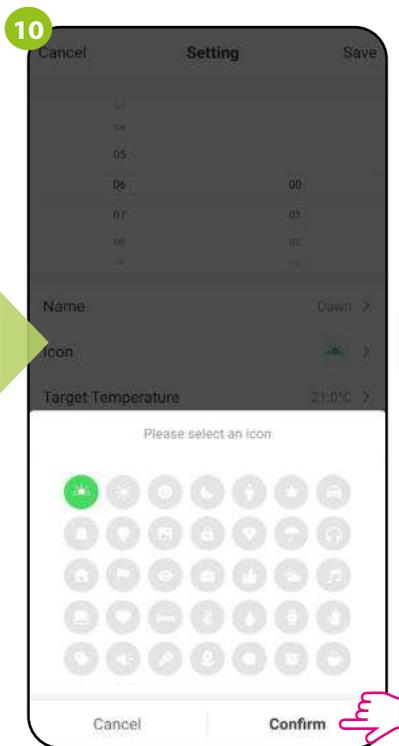
Click on the name.



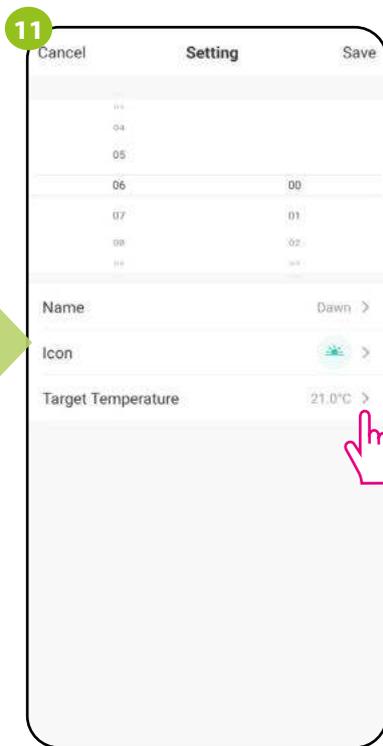
Enter the name of the day and confirm.



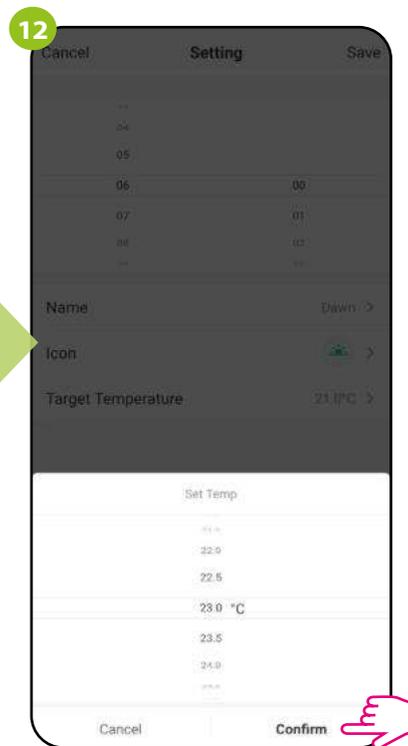
Click on the icon selection option.



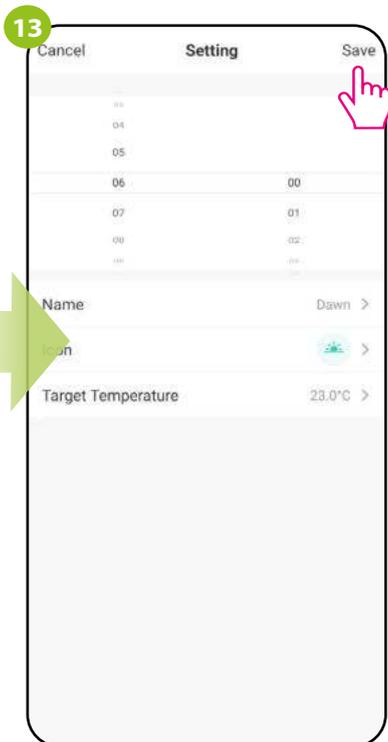
Select an icon for the selected one program and confirm.



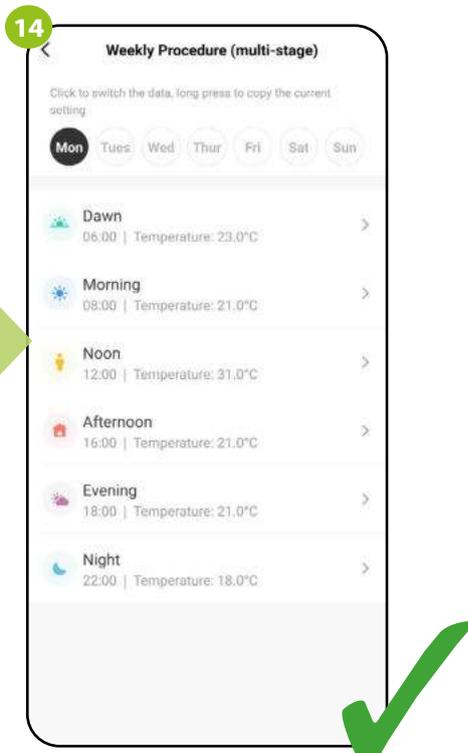
Click on the temperature setpoint option to set the temperature for selected program.



Set the temperature which will be maintained from the start of a program.



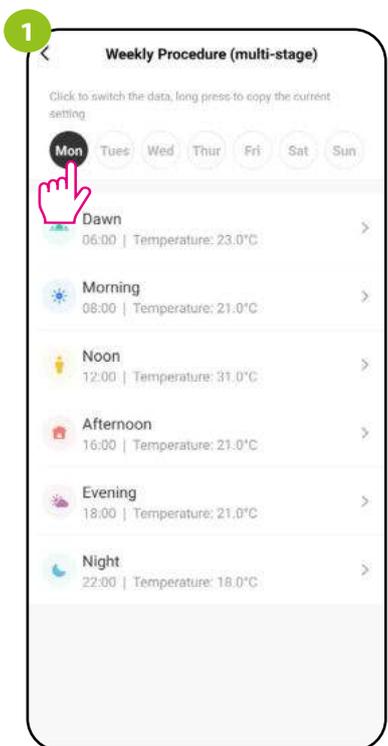
Then save the settings.



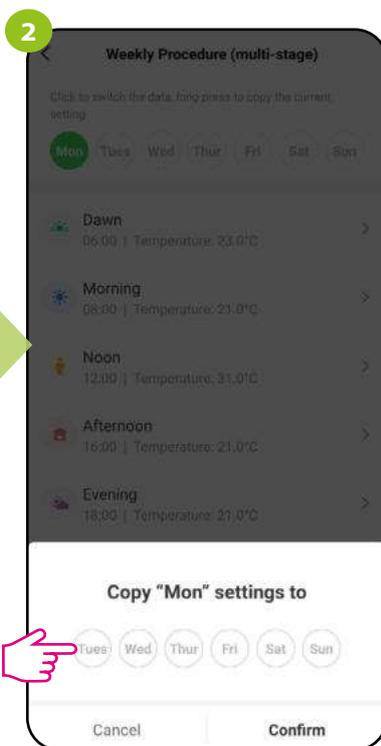
After all, you will see ready program in the schedule. Select another program and follow steps 5 to 13.

COPYING DAYS

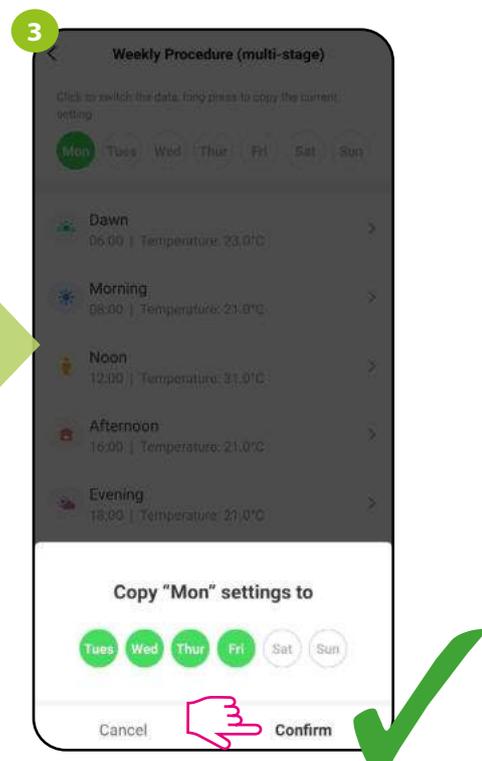
The ENGO Smart app allows you to copy the settings of a selected day in the schedule to another. Thanks to this, you do not have to set the next day for the second time if you want to have exactly the same settings in it. To do so, please follow the steps below:



Select, press and hold the day you want to copy and transfer its settings to another.



Then select the days for which you want to duplicate the settings.

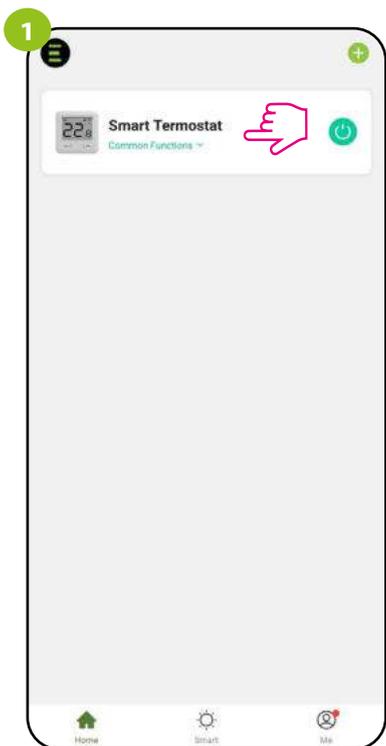


After selecting the days, confirm.

8.3.5 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).

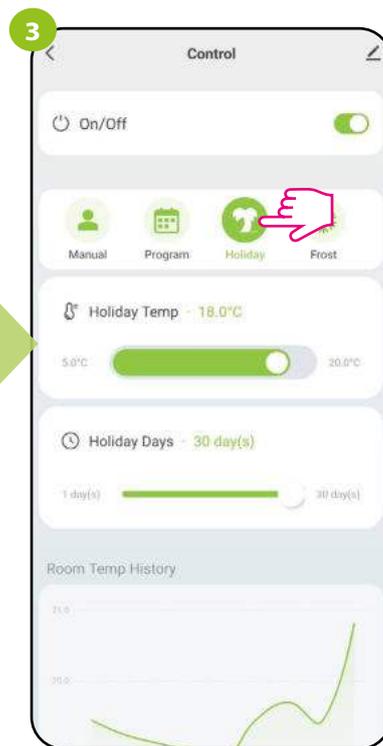
TO SET THE HOLIDAY MODE:



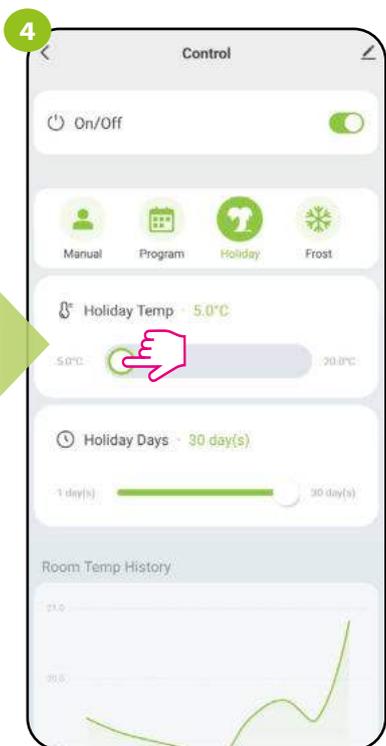
Enter the thermostat interface.



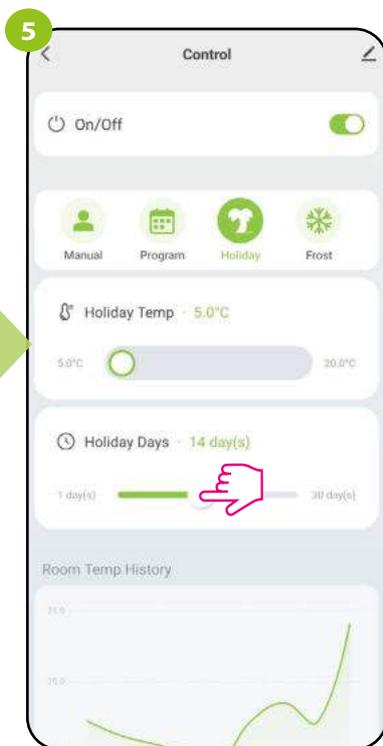
Select the „Control” option.



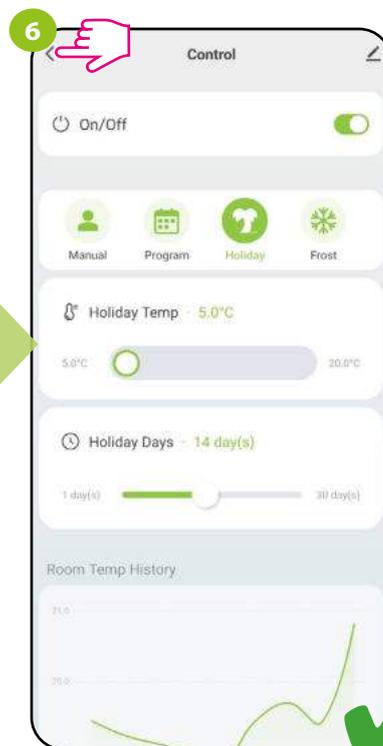
Select Holiday mode.



Set the temperature to be maintained in holiday mode.



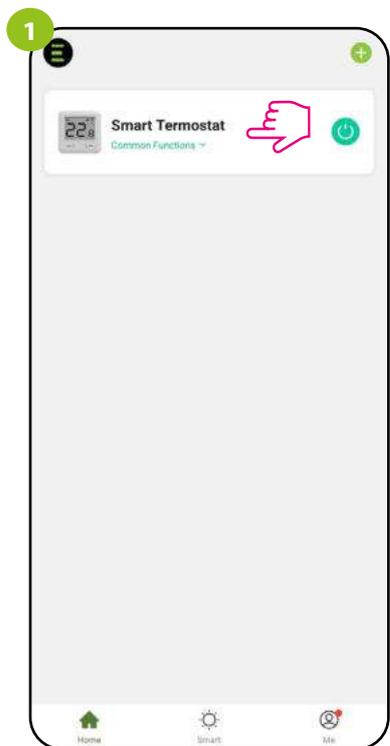
Set the duration of the holiday mode.



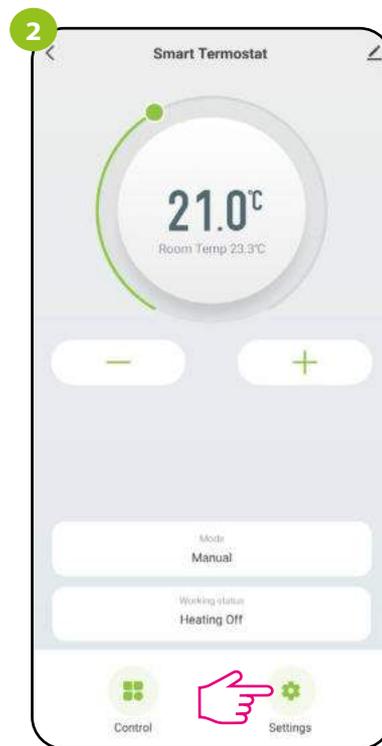
After all, exit holiday mode. All settings in holiday mode will be saved automatically.

8.3.6 FROST mode

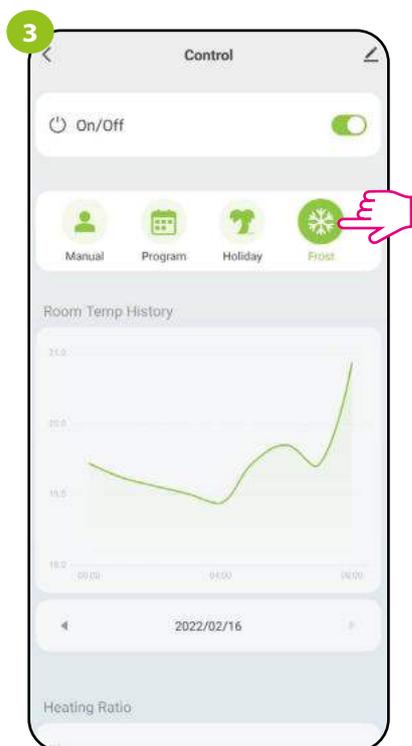
In the FROST mode, the preset temperature in the thermostat is kept as a constant value of 5°C. When the anti-freeze (FROST) mode is active, a snowflake icon is displayed on the thermostat. When the ambient temperature drops below 5°C, the thermostat will start sending the heating signal. This moment 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.



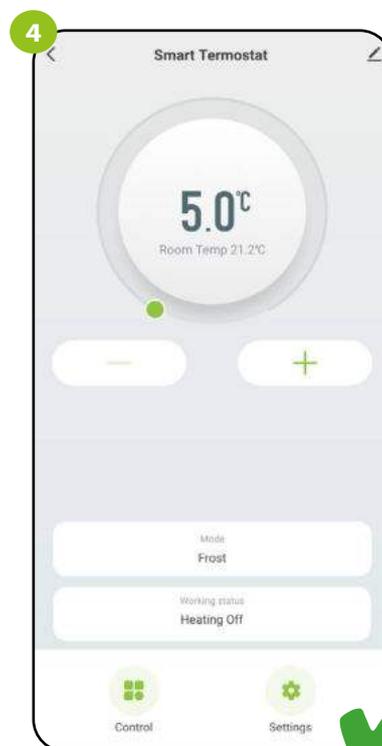
Enter the thermostat interface.



Select the „Control“ option.



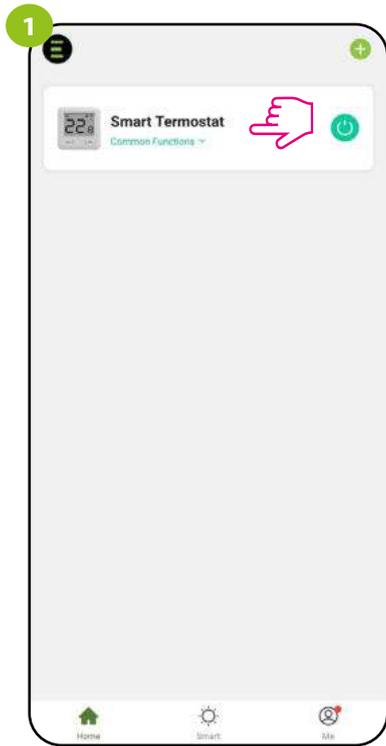
Select FROST mode.



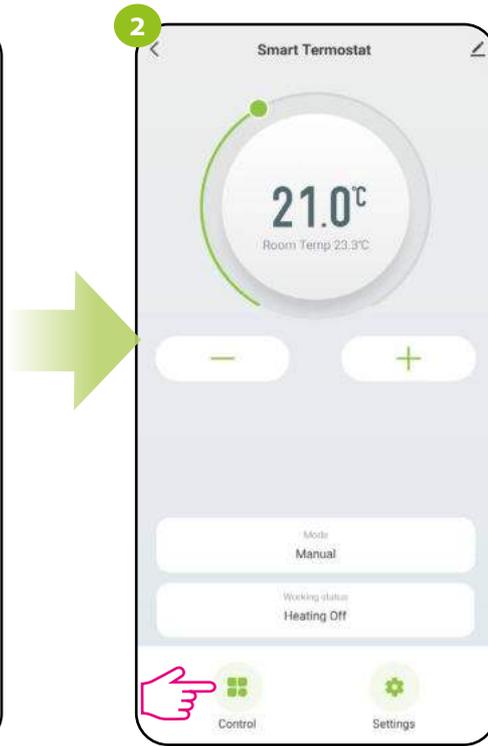
When the FROST mode is active, the thermostat interface will show 5°C.

8.3.7 Diagrams

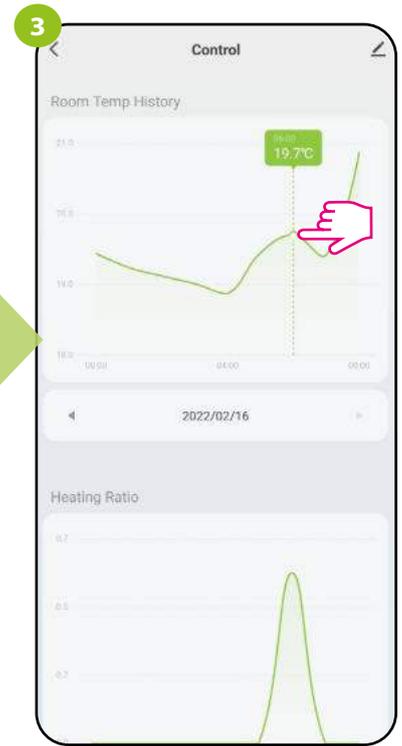
The ENGO Smart app offers room temperature history graphs and the heating time coefficient for the selected day. They allow you to better plan the operation of the thermostat, e.g. using the schedule mode based on the recorded data, which will make the operation even more economical.



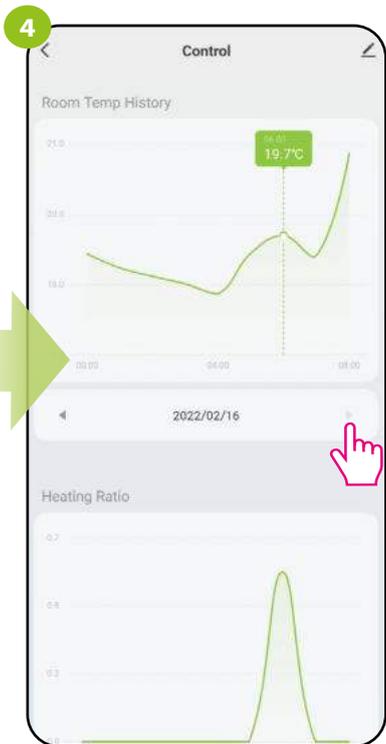
Enter the thermostat interface.



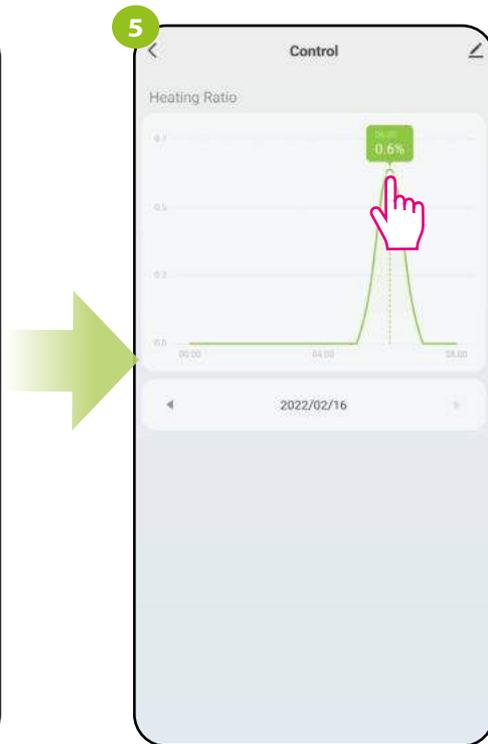
Select the „Control” option.



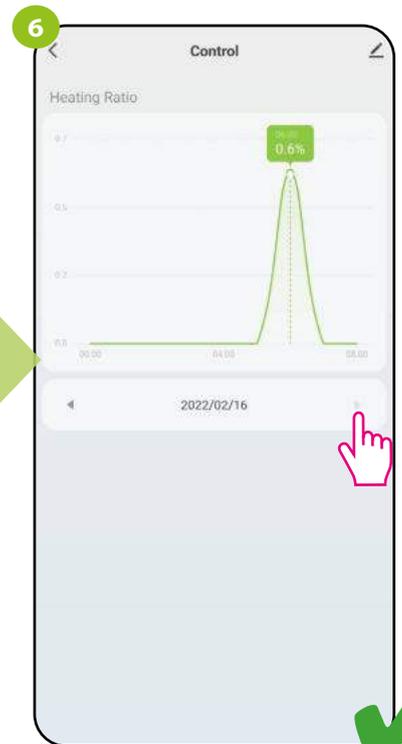
Click on the selected bar of the graph to view more details, e.g. the temperature that the thermostat maintained at the given time of the selected day.



Choose the day that interests you.



The heating time factor will show the percentage and the hour after hovering over the selected section.

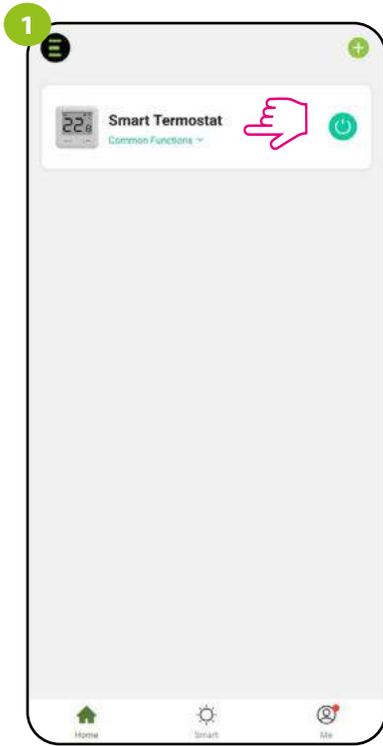


Choose the day that interests you.

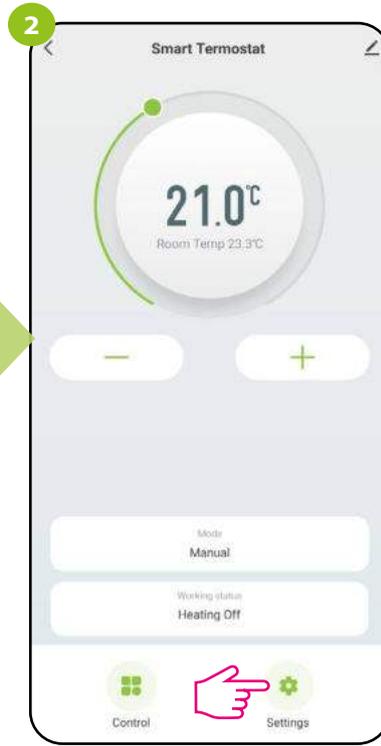
8.4 Settings (installer parameters)

8.4.1 Child lock function

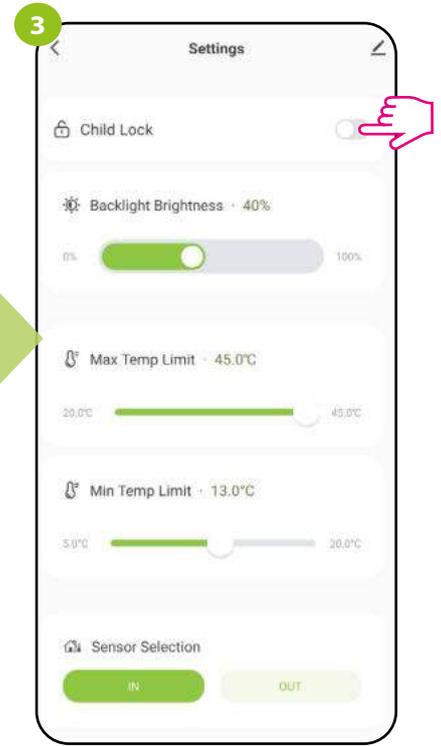
The app allows you to lock the buttons on the device. Just change the position of the slider on the screen. When the dot is green and on the right, then thermostat keys are locked. To unlock, press the slider again so that it is unlit and to the left. Then the buttons on the thermostat are unlocked.



Enter the thermostat interface.



Select „Settings“.



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



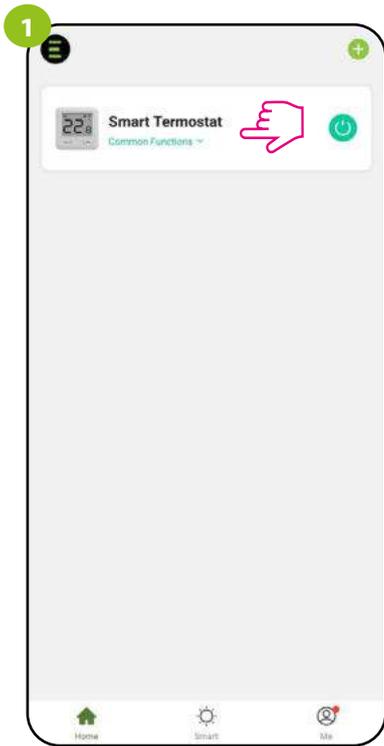
When the slider is highlighted green, then thermostat buttons are blocked.



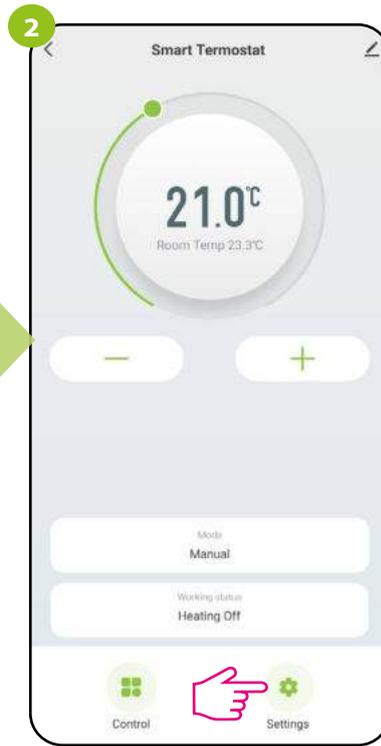
When the buttons are locked, only the currently measured temperature can be read on the thermostat.

8.4.2 Backlight brightness

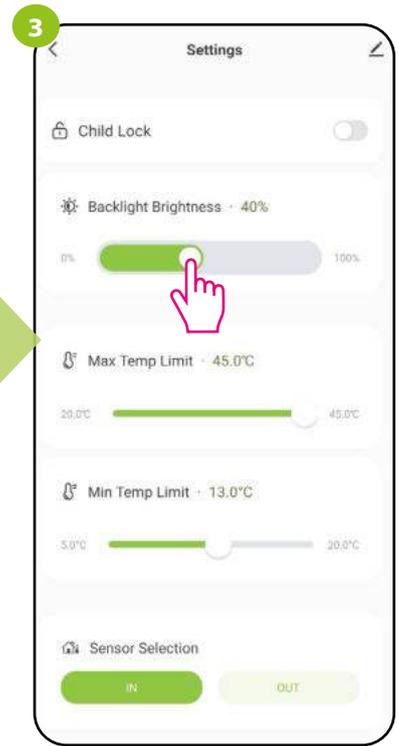
The user can change the brightness of the thermostat display. Move the slider to the appropriate direction as in the steps below:



Enter the thermostat interface.



Select „Settings“.



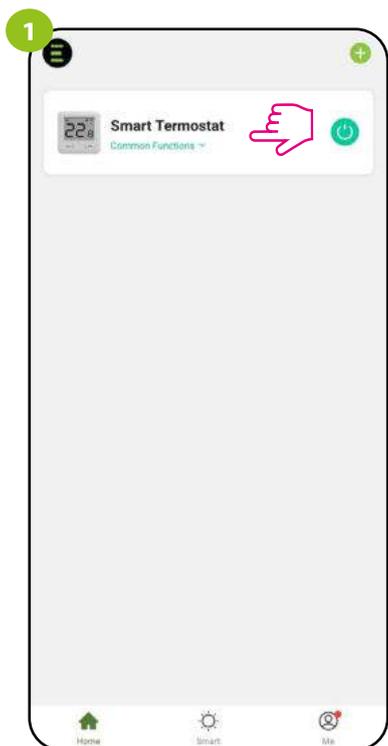
Use the slider to set the brightness of the display.



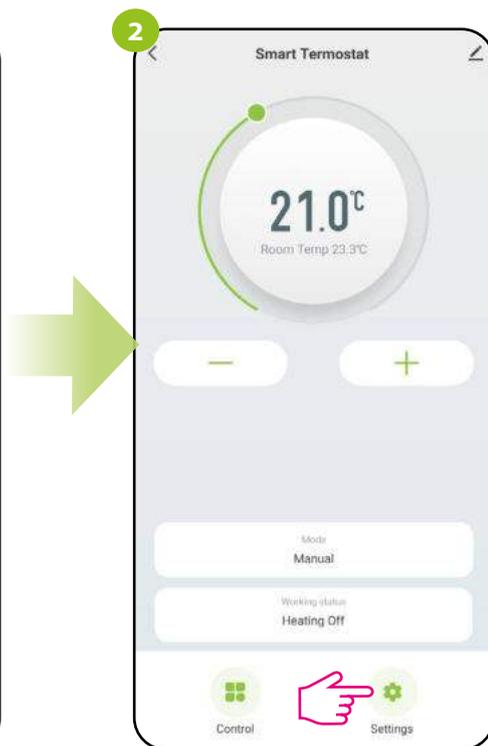
When the slider is moved (see previous step), the thermostat display automatically changes its brightness.

8.4.3 Max temp. limit

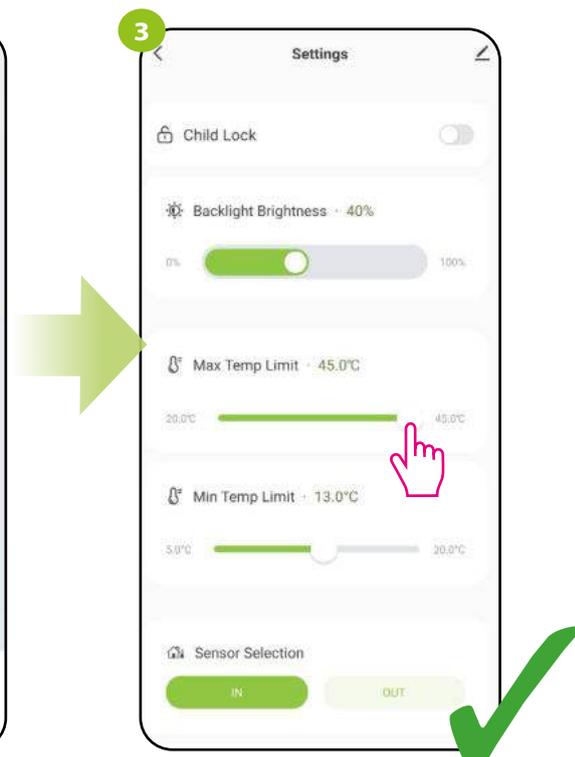
This parameter allows you to set the maximum temperature setpoint in the thermostat. Take a look at the steps below:



Enter the thermostat interface.



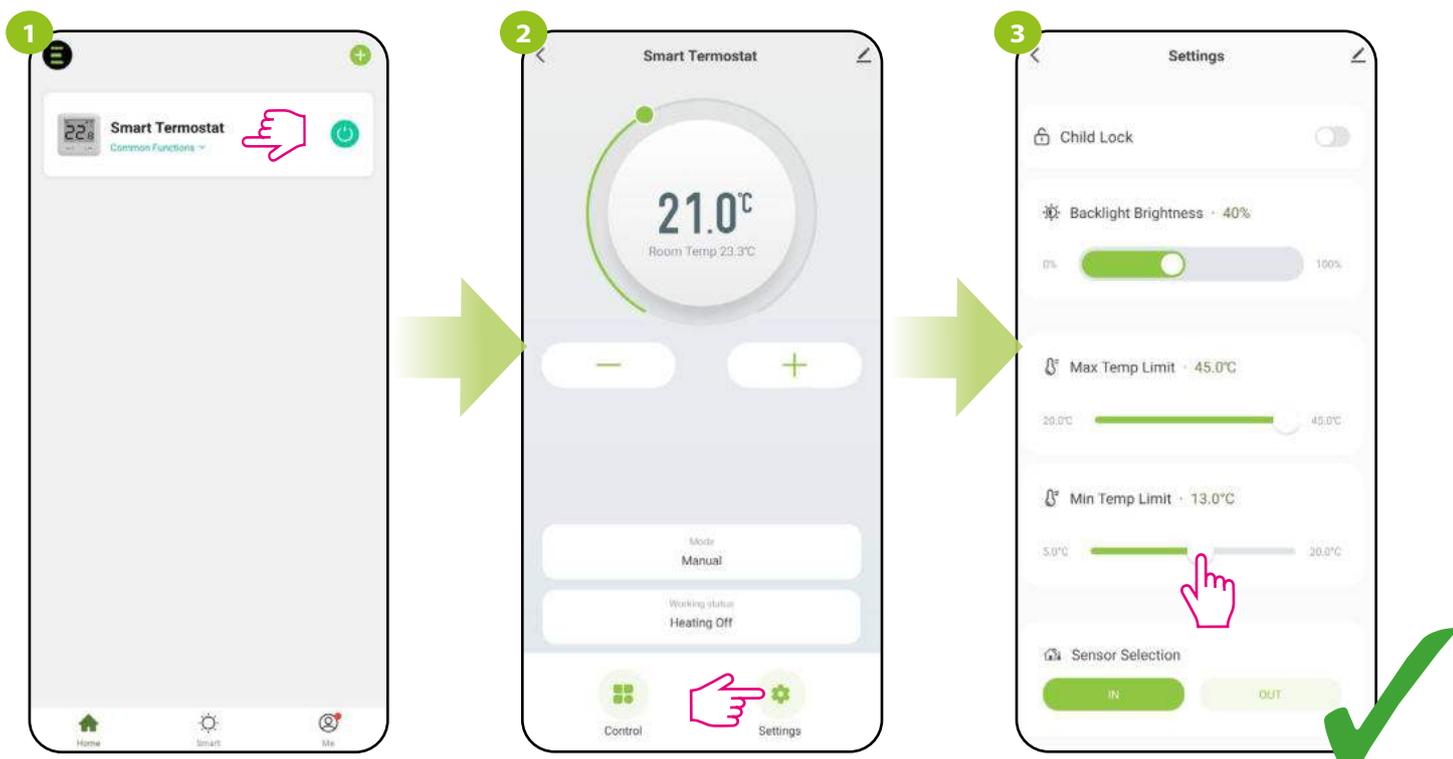
Select „Settings“.



Use the slider to change the value for the maximum temperature set point (from 20°C to 45°C).

8.4.4 Min temp. limit

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



Enter the thermostat interface.

Select „Settings“.

Use the slider to change the value for the minimum temperature set point (from 5°C to 20°C).

8.4.5 Sensor Selection

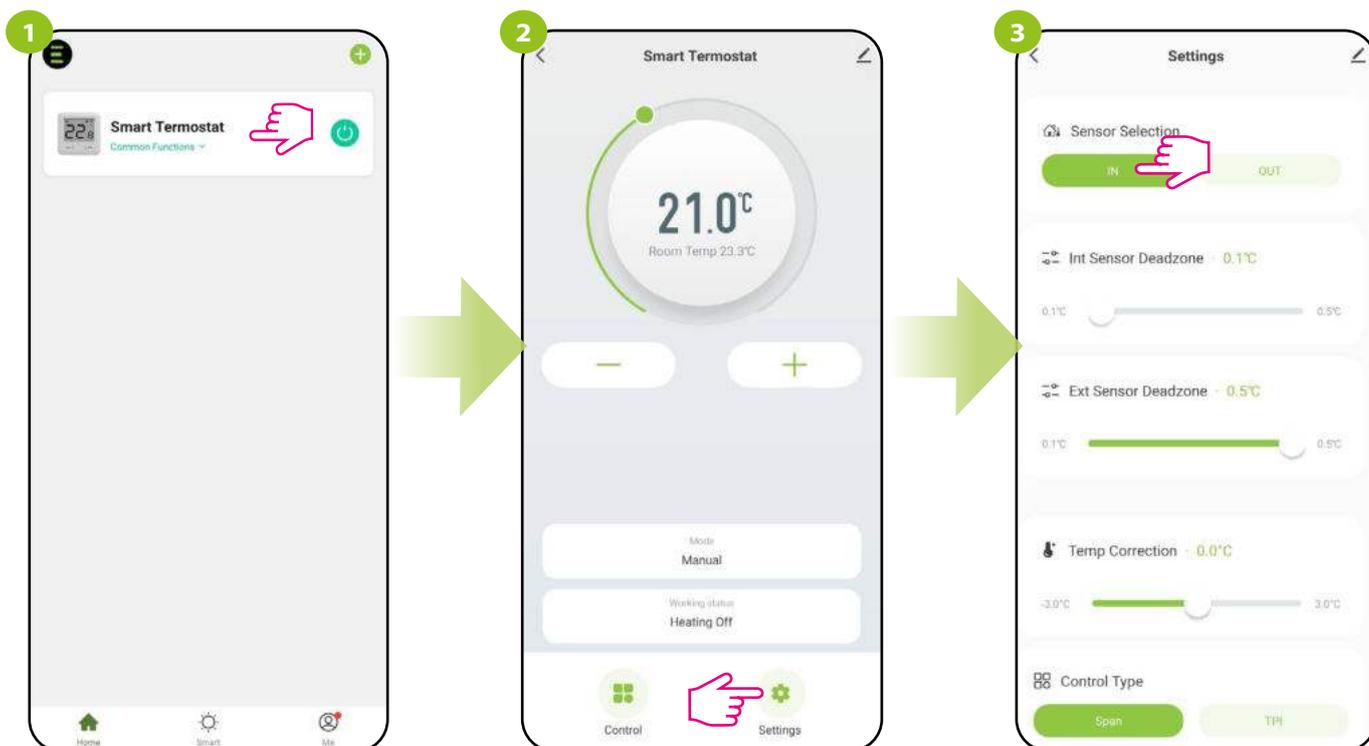
8.4.5.1 Internal temperature sensor (IN)

By default, the thermostat measures the temperature with the thermostat's internal built-in temperature sensor.



PLEASE NOTE!

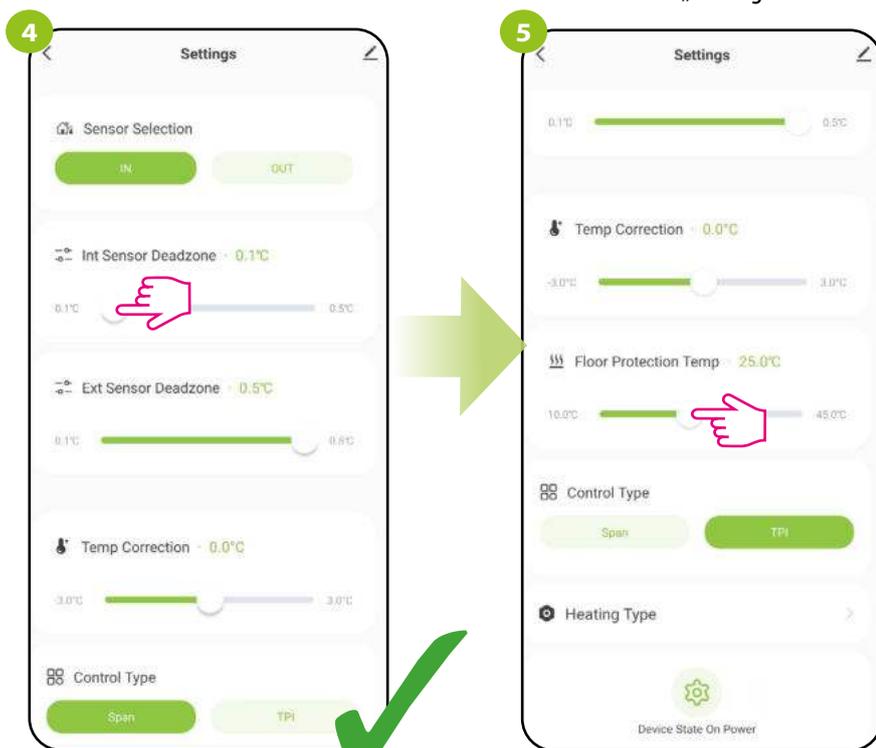
For the selected option with an internal sensor, if an additional floor sensor is connected to the terminals S1-S2 of the thermostat, both sensors are active (internal and external). The internal sensor measures and controls the temperature in the room, and the additional sensor acts as a floor protection against overheating and overcooling. The factory setting for overheat protection is 26°C, adjustable from 10°C to 45°C. When this value is exceeded, the thermostat will turn off the heating. When overheating occurs, the floor protection icon will flash on the thermostat's LCD display. The app also shows the message „Heating off - sensor overheating“. After the floor sensor has cooled down, the heating restarts. The factory temperature setting for protection against floor overcooling is fixed at 5°C. After the temperature on the floor sensor drops below 5°C, the thermostat will automatically start heating. The Floor Protection icon will flash on the thermostat LCD. The app will display the message „Heating on - FROST mode“.



Enter the thermostat interface.

Select „Settings“.

Select internal (IN) sensor.



Use the slider to set the IN sensor deadzone value from $\pm 0.1^{\circ}\text{C}$ to $\pm 0.5^{\circ}\text{C}$.

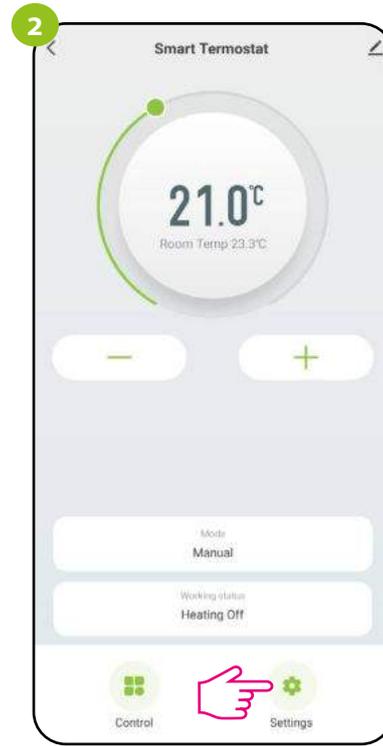
Additionally, you can set the maximum set temperature (from 10°C to 45°C) for the floor sensor (if there is an underfloor heating system and the sensor is connected).

8.4.5.2 External temperature sensor (OUT)

If an external sensor is connected and selected, the thermostat will display the temperature from that sensor ignoring the internal sensor. An external temperature sensor can be used when the thermostat controls a room to which we have no access. Please note that if there is no external sensor connected, and the external sensor is selected in the settings, the thermostat display will not show temperature, but error E2 instead of.



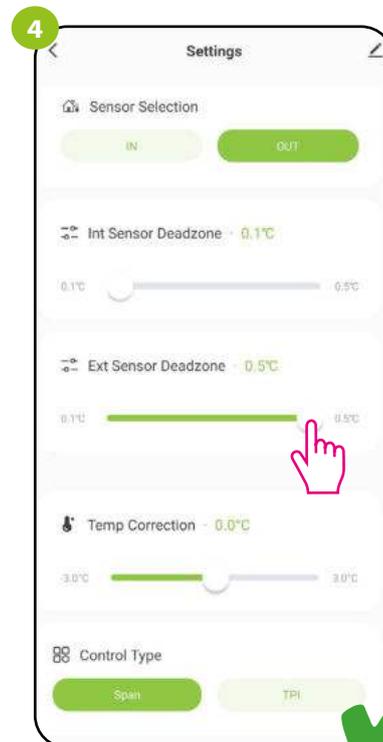
Enter the thermostat interface.



Select „Settings“.



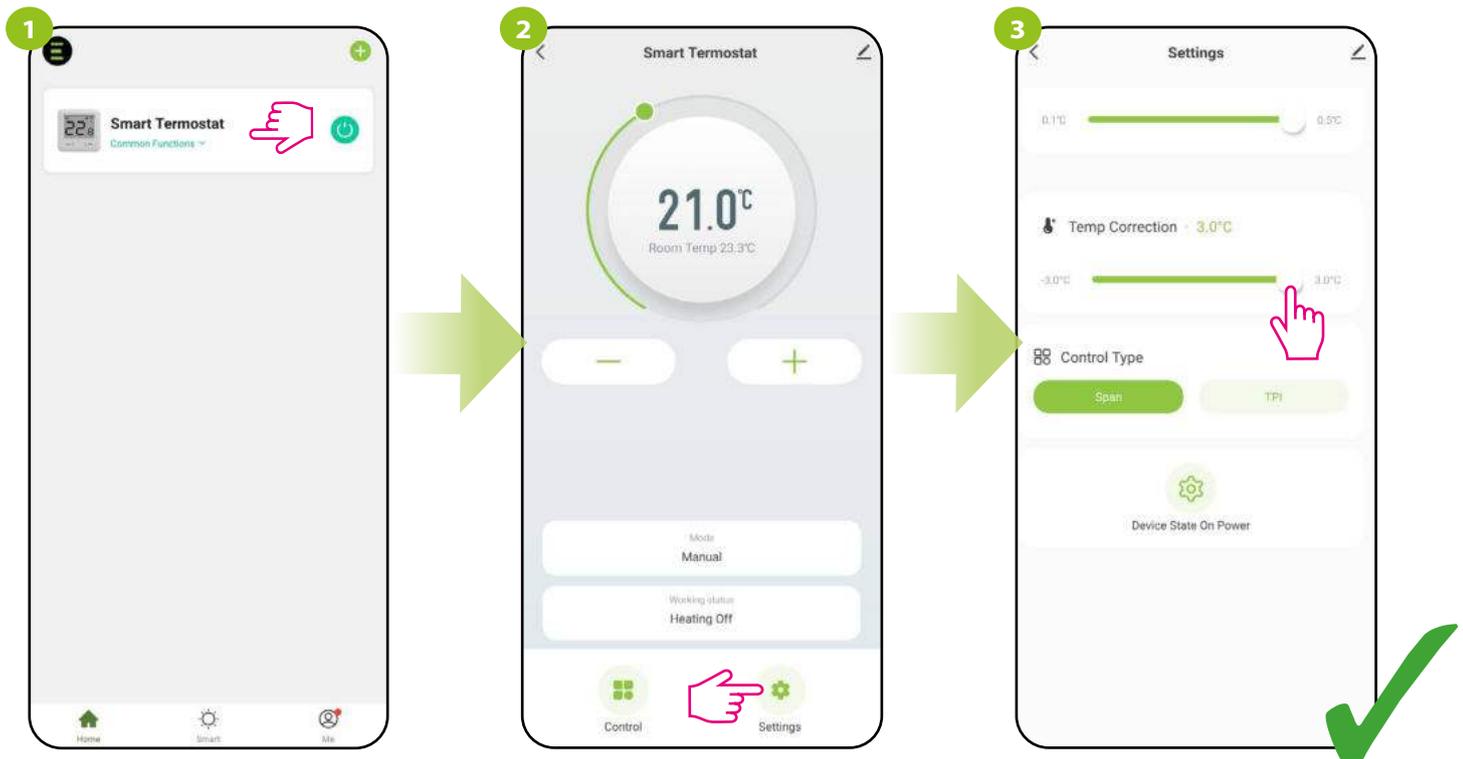
Select the external (OUT) sensor.



Use the slider to set the EXT sensor deadzone value from $\pm 0.1^{\circ}\text{C}$ to $\pm 0.5^{\circ}\text{C}$.

8.4.6 Temperature correction

This function allows you to adjust the room temperature by $\pm 3.0^{\circ}\text{C}$ in steps of 0.5°C . This is useful if the thermostat is in a location with a slightly different temperature than the general room temperature. Take a look at the steps below:



Enter the thermostat interface.

Select „Settings“.

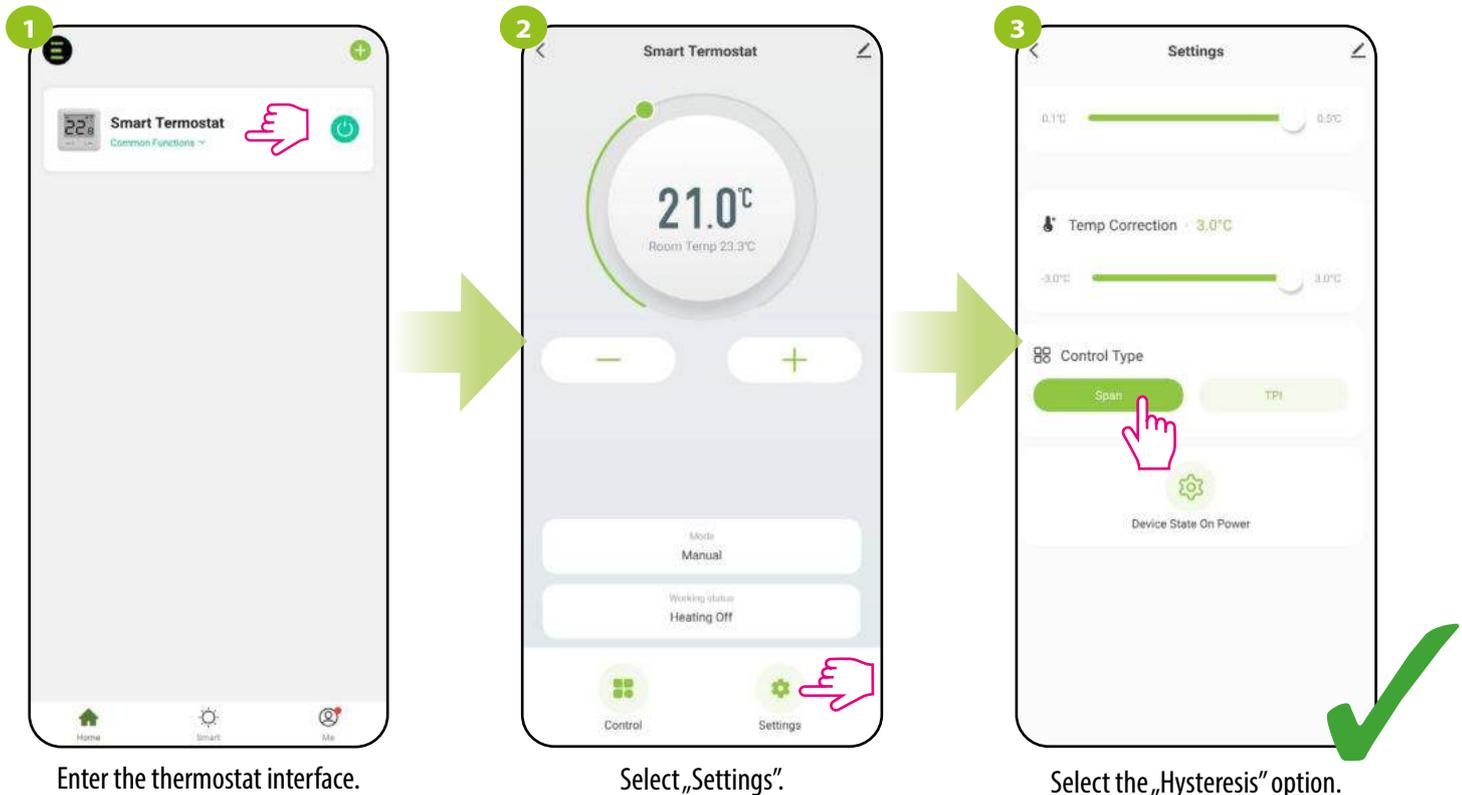
Use the slider to select the correction value for the current temperature.

8.4.7 Control type (algorithm)

HYSTERESIS ALGORITHM

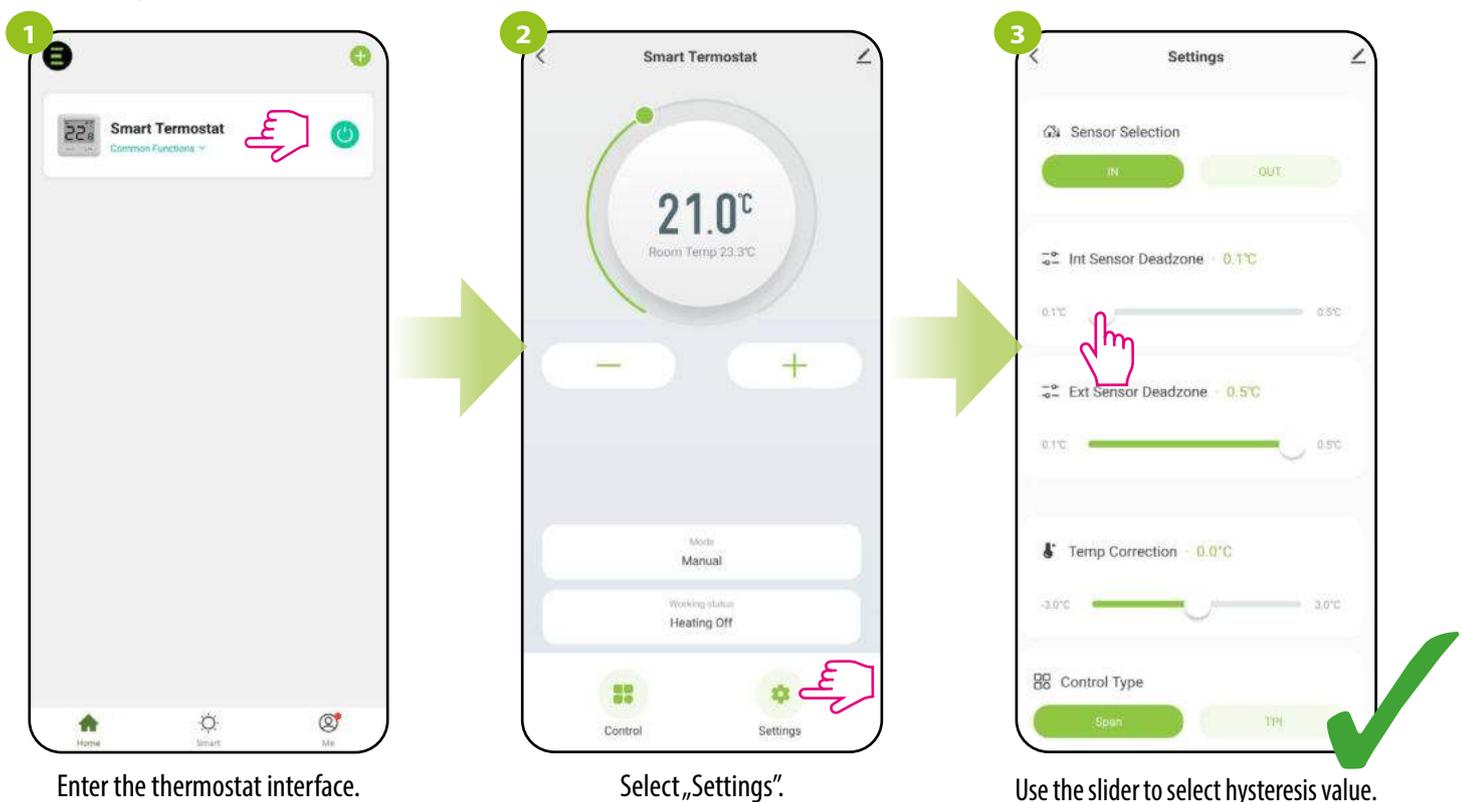
Hysteresis algorithm uses a temperature difference (against setpoint temperature) to switch heating device ON and OFF. If thermostat works over hysteresis and it is used in a slow response system (e.g. underfloor heating), cycles of underheating and overheating cannot be avoided. It is difficult to maintain 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°C and if the hysteresis is 0.5°C , the heating will be turned on when the temperature drops to 19.5°C and turned off when the temperature reaches 20.5°C .

How to set the hysteresis in the ENGO Smart app for the Wi-Fi thermostat:



From this point on, the thermostat will start working according to the hysteresis set on the internal or external sensor.

How to set the hysteresis on the internal or external sensor:

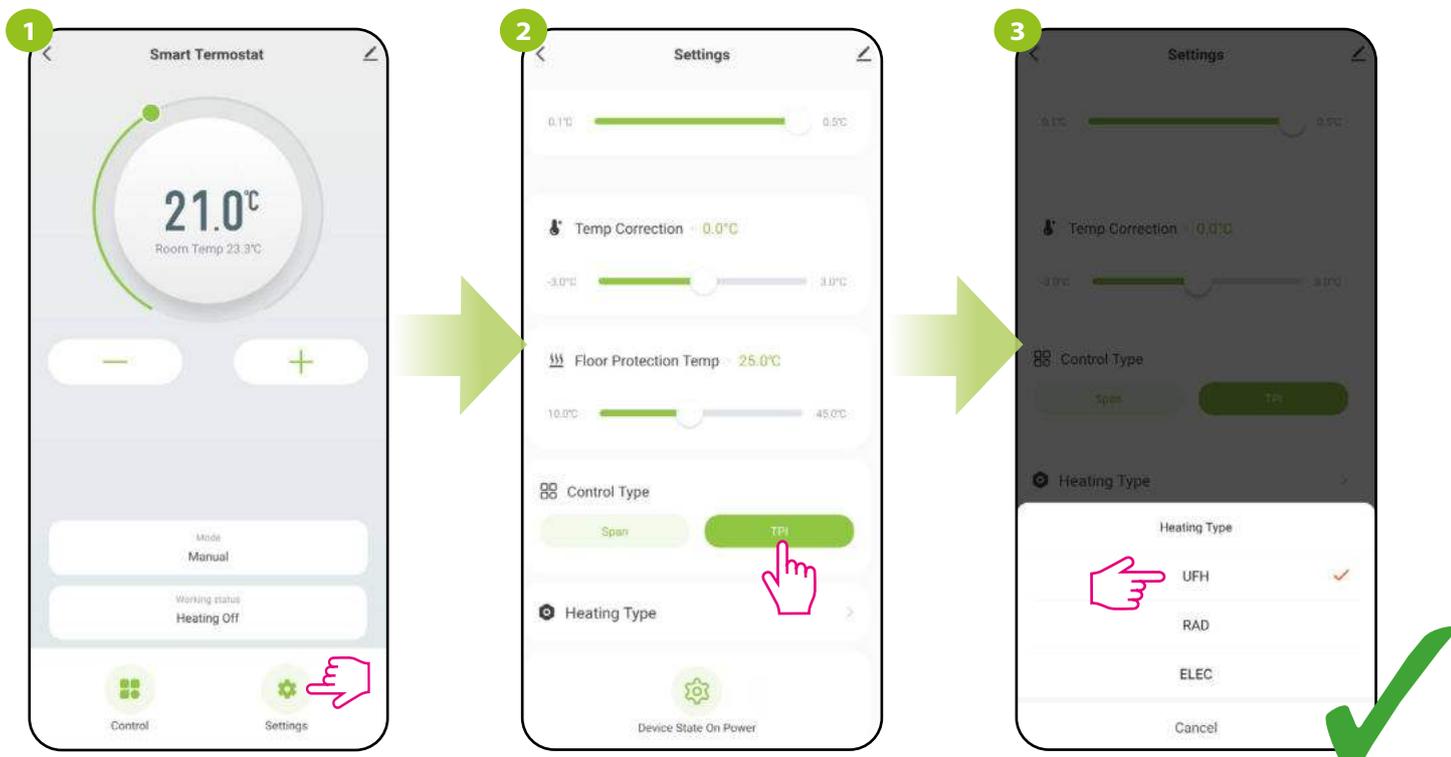


TPI ALGORITHM

The 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 E10 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:



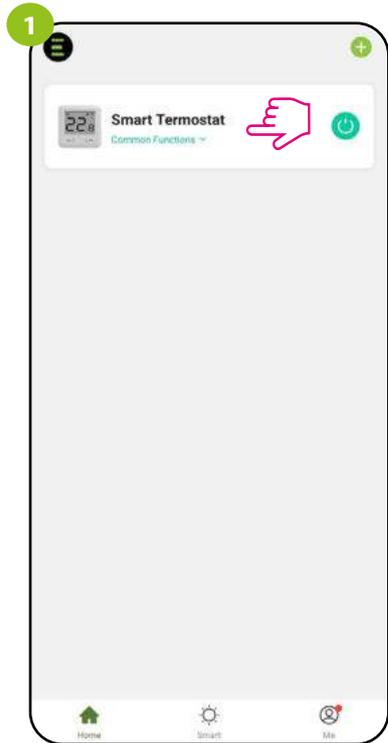
Select „Settings“.

Choose „TPI“.

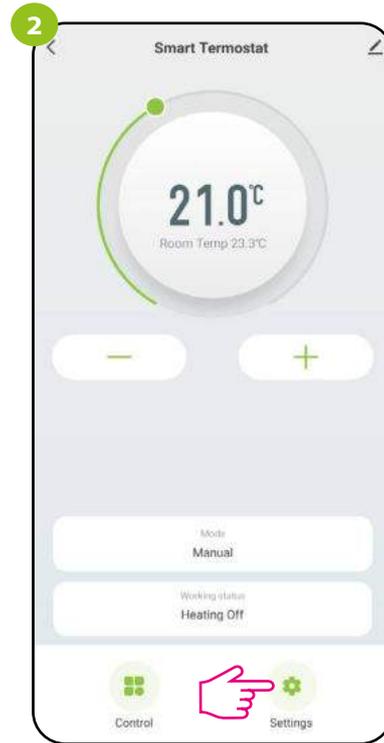
Then select the type of TPI heating system. Depending on your choice, the thermostat will better adjust its work.

8.4.8 Device state on power

The user can decide what action the thermostat can take after a power failure (or power outage). Take a look at the steps below:



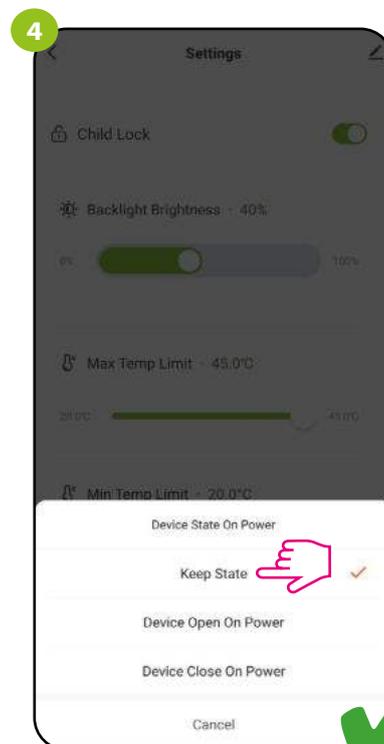
Enter the thermostat interface.



Select „Settings“.



Choose „Device state on power“.

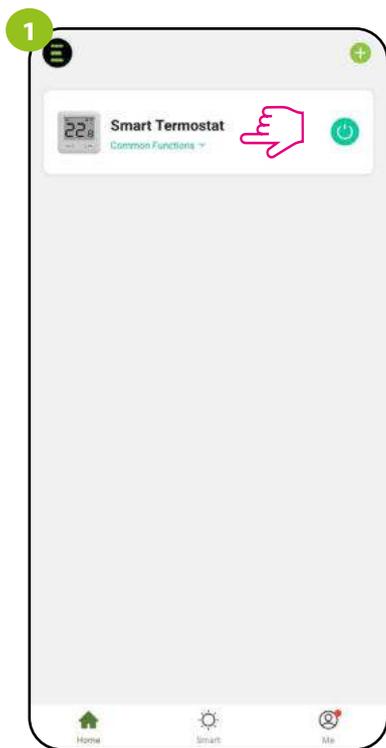


Decide what action you want the thermostat to take when turned on.

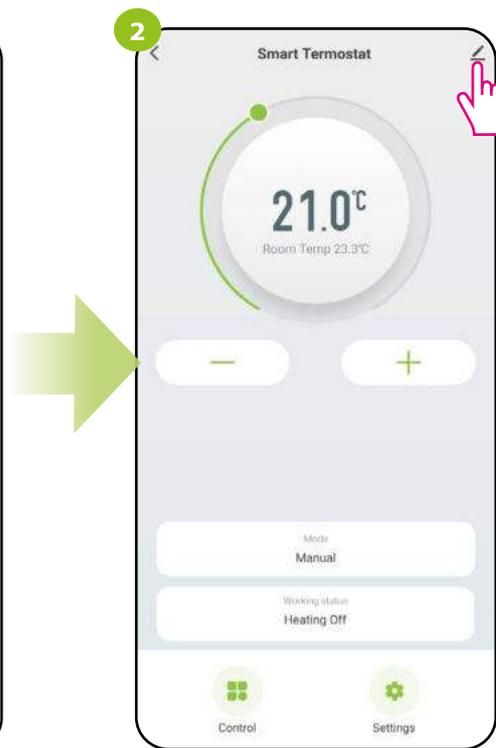
8.5 E10 thermostat management in the Engo Smart app

8.5.1 Change the name, icon and location of the thermostat

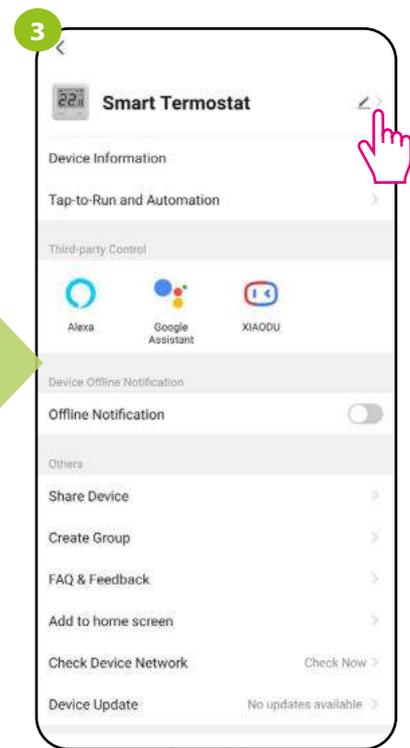
Name the thermostat, edit its icon or define its location (room).



Enter the thermostat interface.



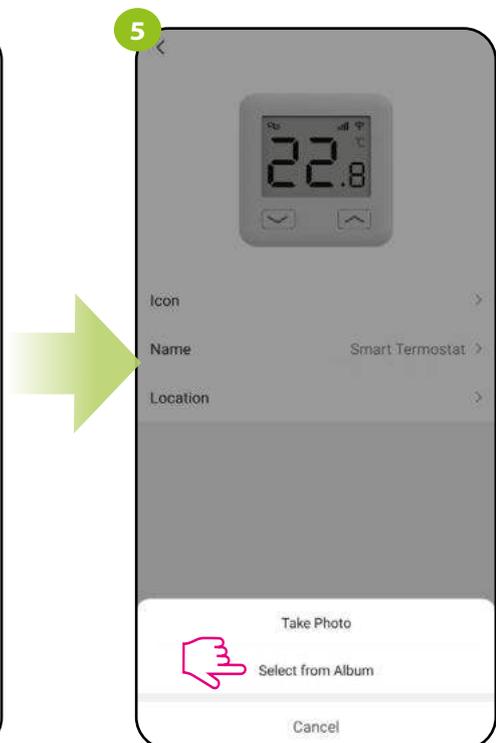
Click the pencil icon in the top right corner.



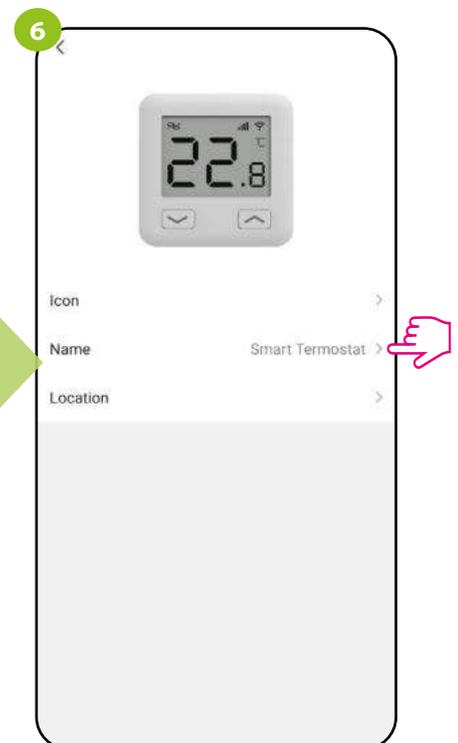
Tap the name of the thermostat.



Enter icon settings.



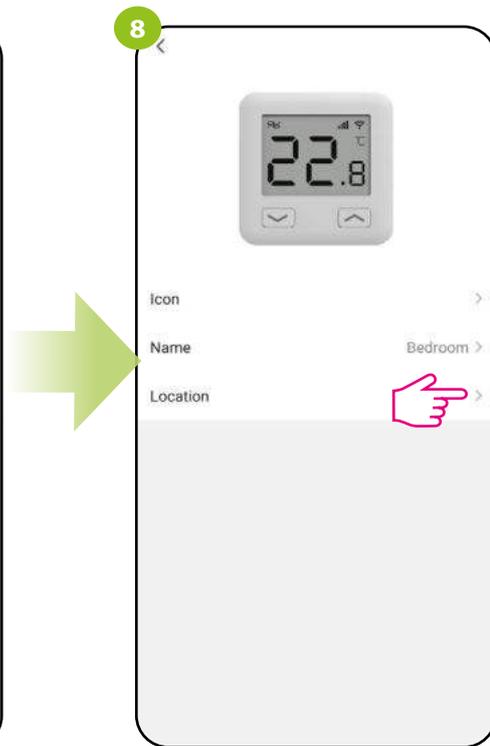
Take a photo or select an image from your local album.



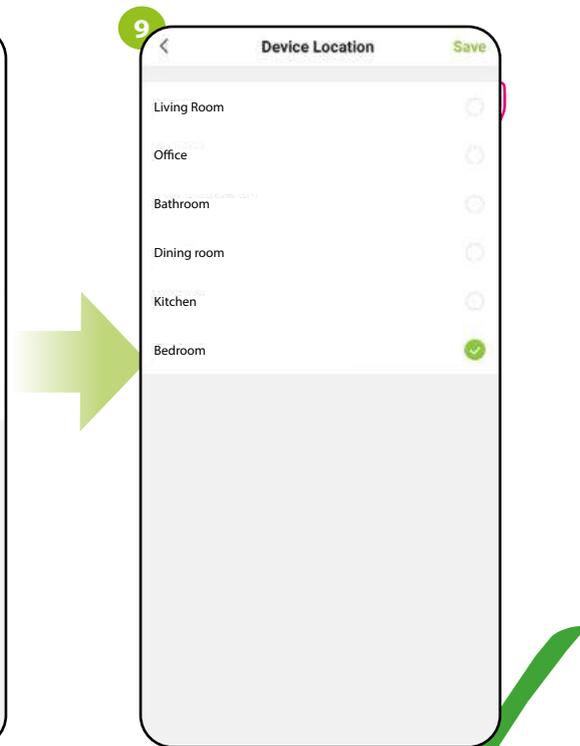
Enter thermostat name.



Write a name and click save.



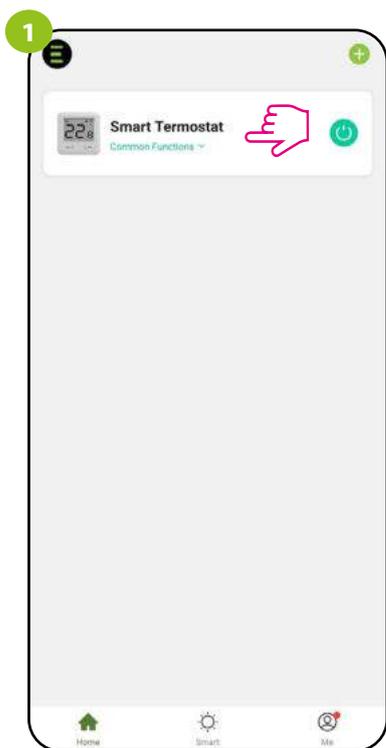
Determine the location of the thermostat.



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

8.5.2 Device information

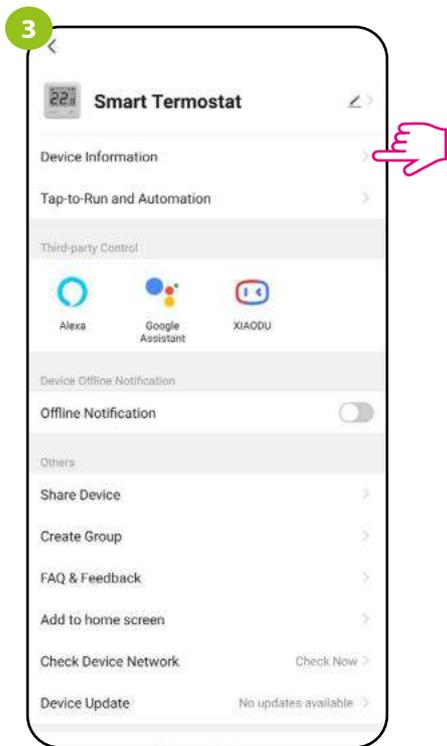
The user will find here detailed information about the device, eg. Virtual ID, device IP, MAC address, the time zone in which the device is located and signal strength. Check the steps below:



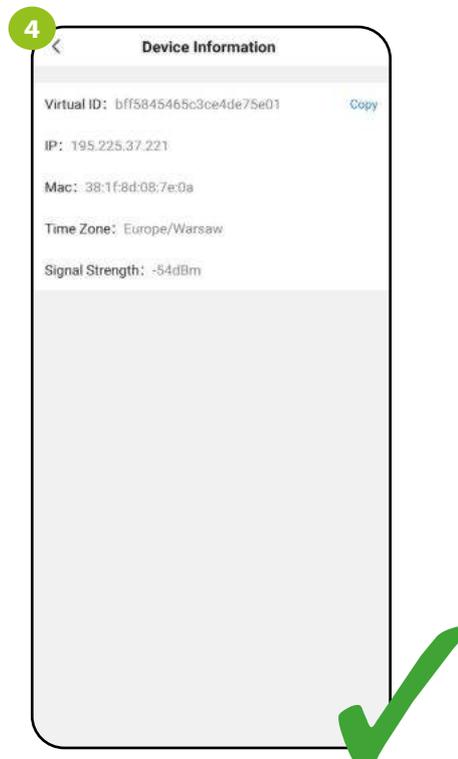
Enter the thermostat interface.



Click the pencil icon in the top right corner.



Select „Device Information“.



8.5.3 Tap-To-Run and Automation

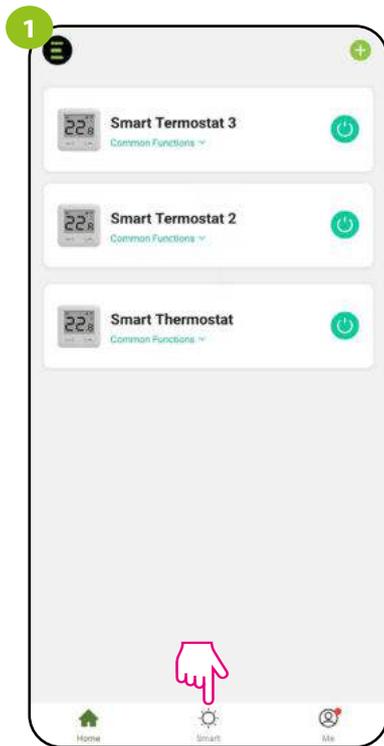
The „Tap-To-Run” and „Automation” rules are a preconfigured set of actions defined by an easy-to-use interface. Besides the obvious tasks that can be programmed to keep the system running automatically. In addition, there are also functions that improve the visual effect and the convenience of use. There 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.

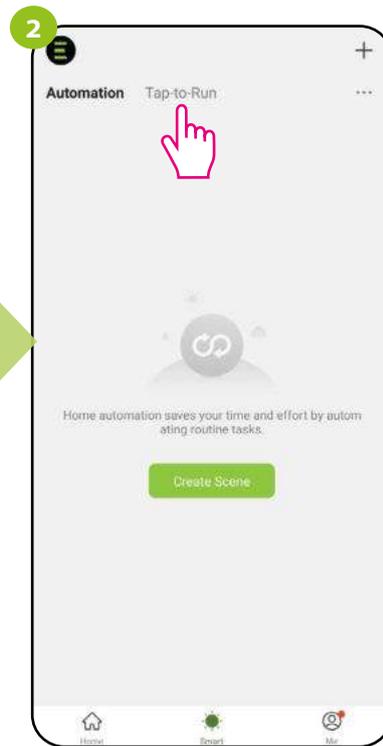
An example of setting the „Tap-To-Run” rule with the use of three E10 thermostats, where these actions will be triggered:

- a) disconnecting the first thermostat from the power supply,
- b) setting the frost protection mode on the second thermostat,
- c) setting the temperature setpoint at 23°C.

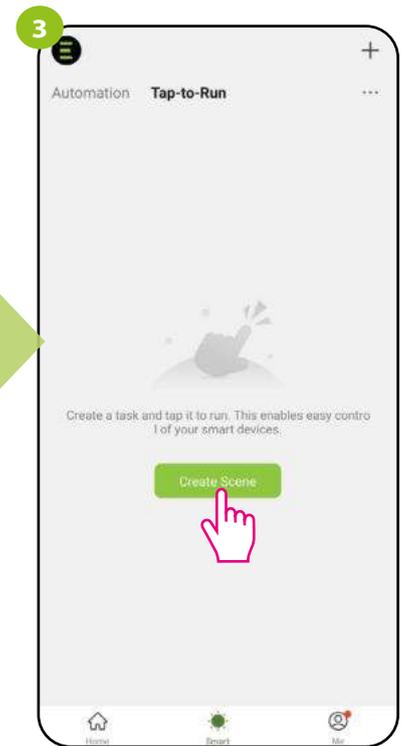
Follow the steps below:



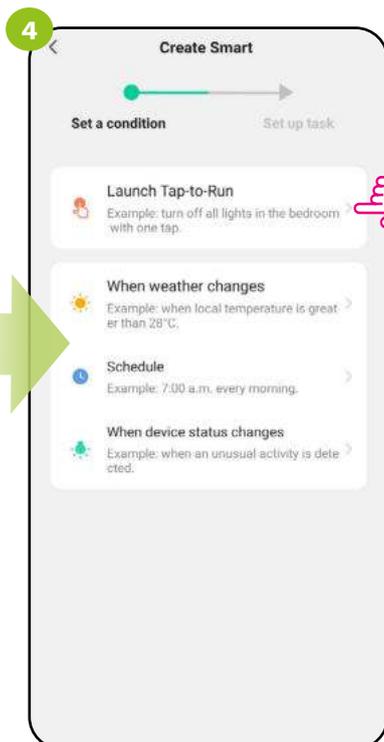
Enter the Smart menu.



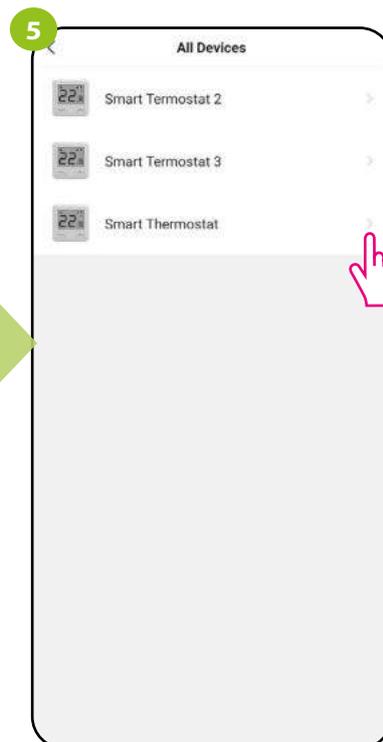
Choose Tap-To-Run.



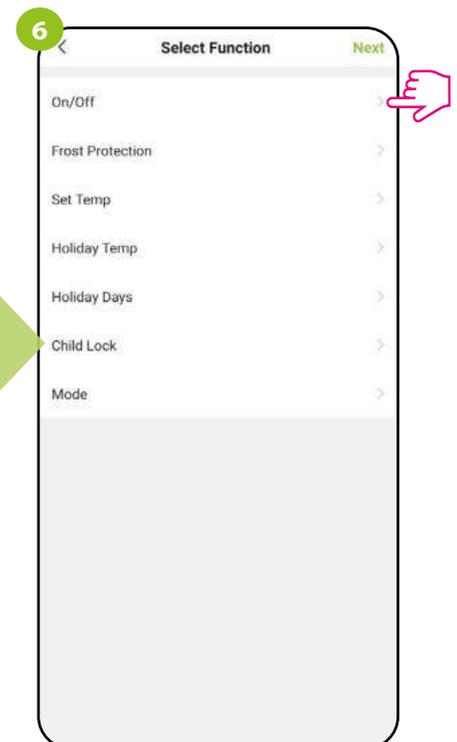
Click „Create Scene”.



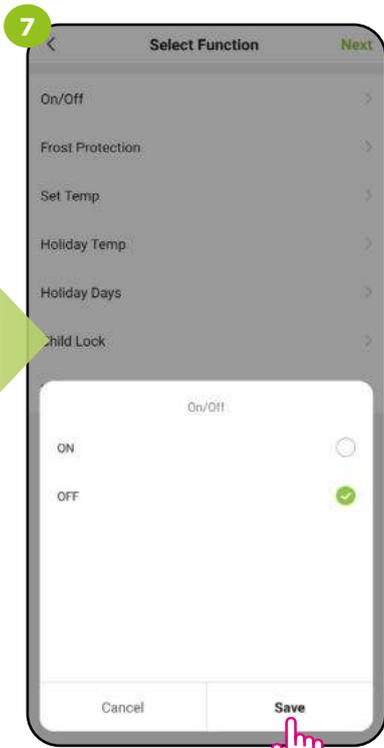
Select „Launch Tap-to-Run”.



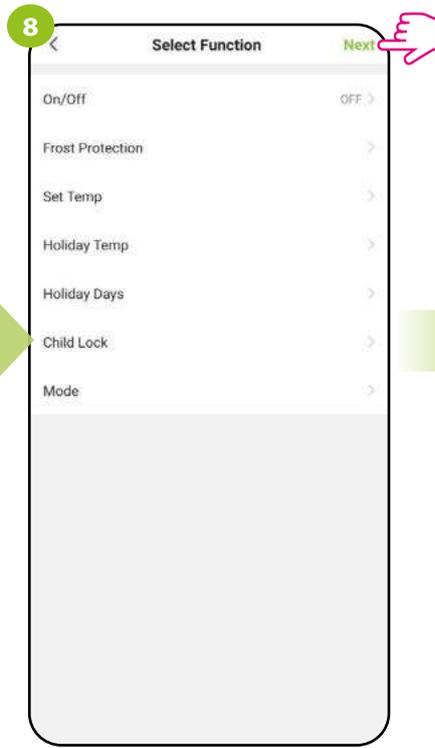
Click on the device, in this case the first thermostat.



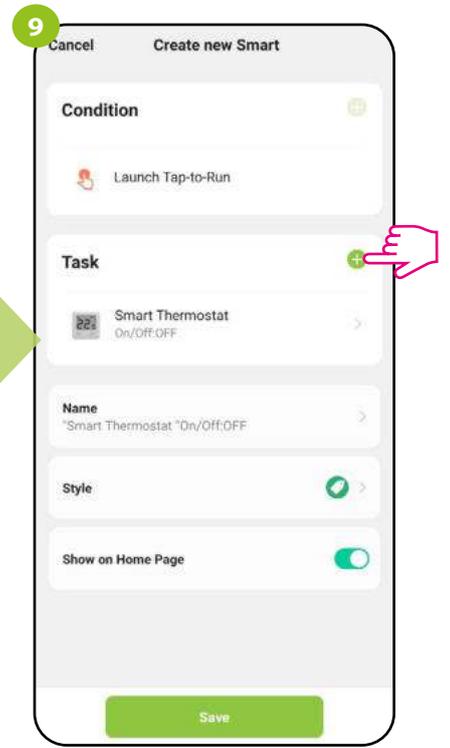
Then enter the „On / Off” function.



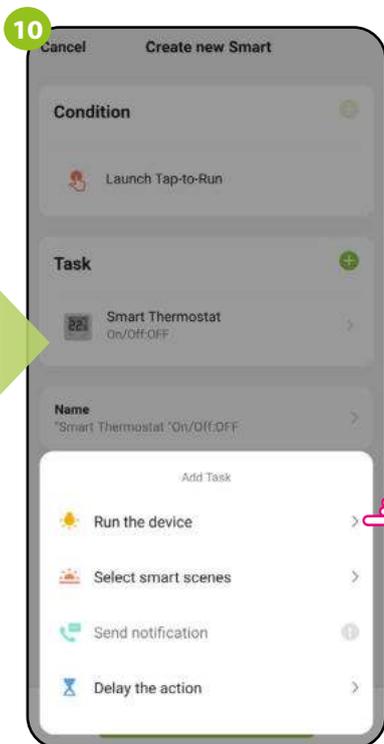
Set it as „OFF” and click Save.



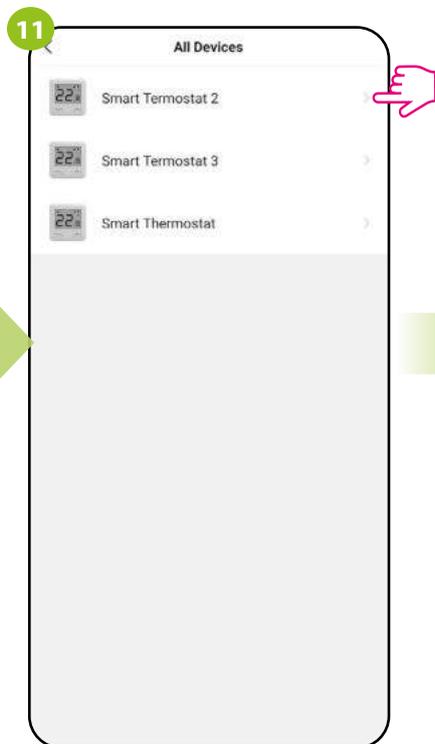
Go „Next”.



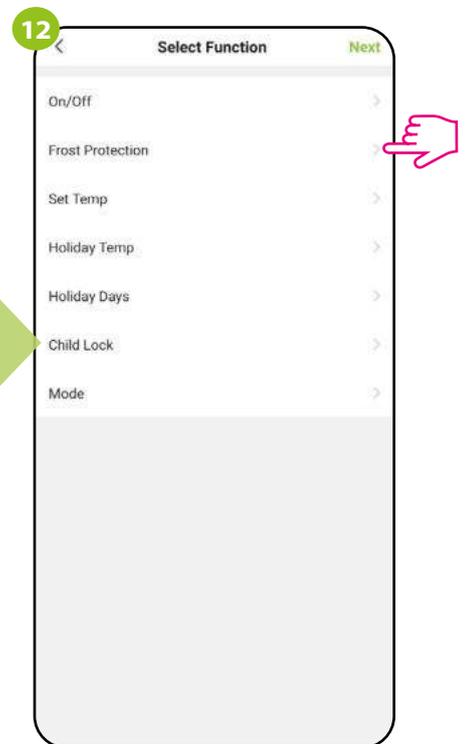
Select a function for the second thermostat (frost protection mode setting).



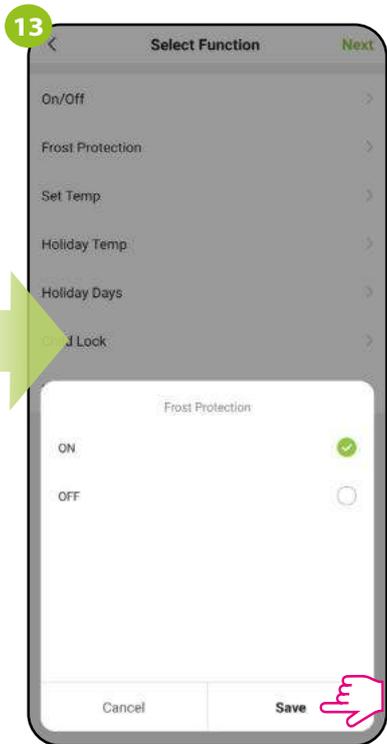
Select „Run the device”.



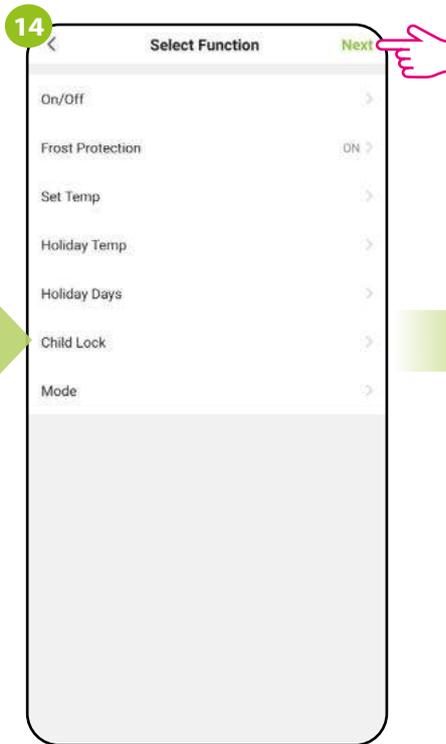
Click on the device, in this case the second thermostat.



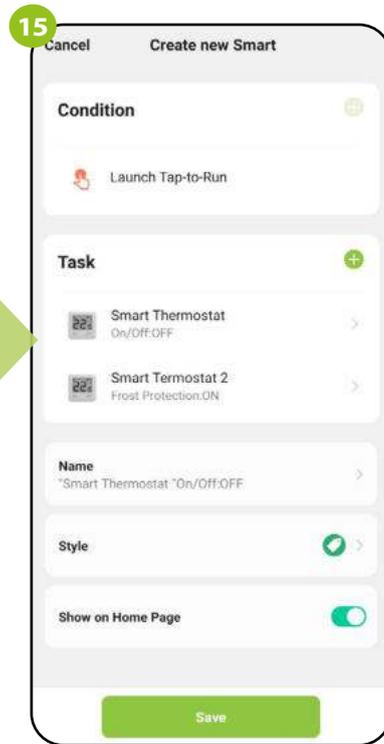
Then enter the „Frost Protection” function.



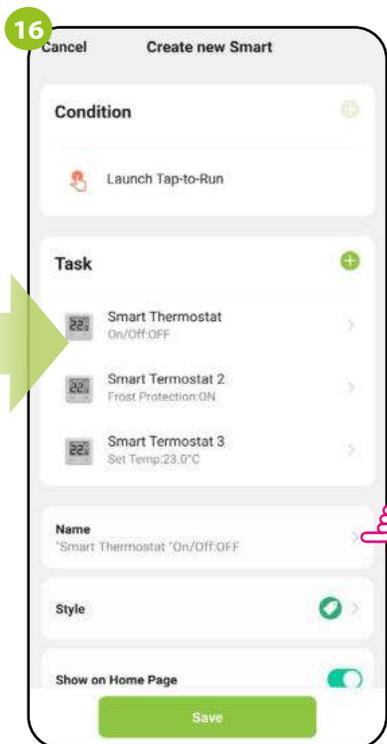
Set it as „ON” and click Save.



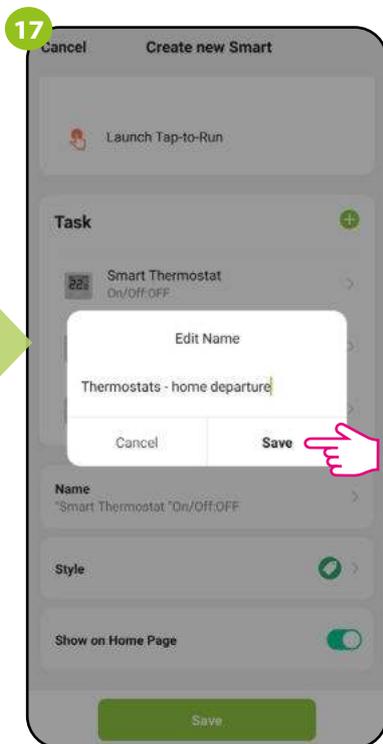
Go „Next”.



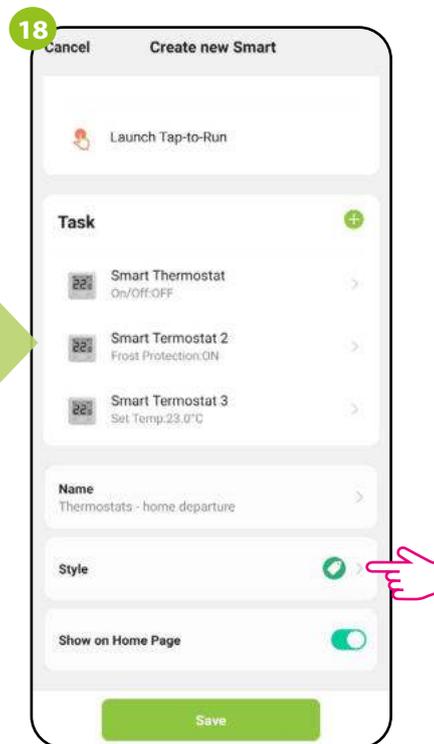
Now set the task for the third thermostat by following steps 9-14, except that instead of frost protection mode, select the task „Set Temp”.



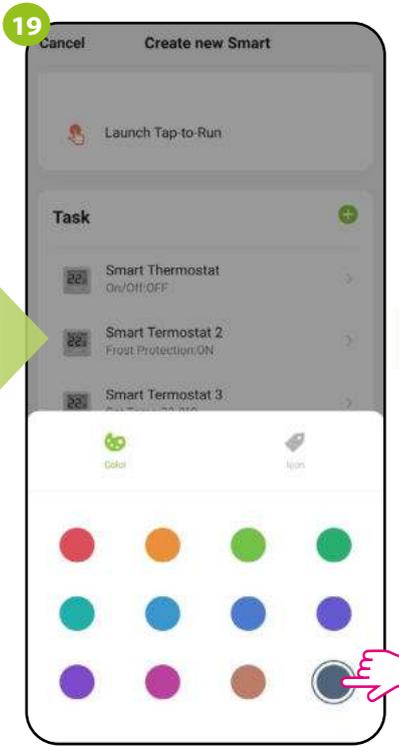
After following the previous steps, you can now rename the rule, choose its color, icon, or show it on home page.



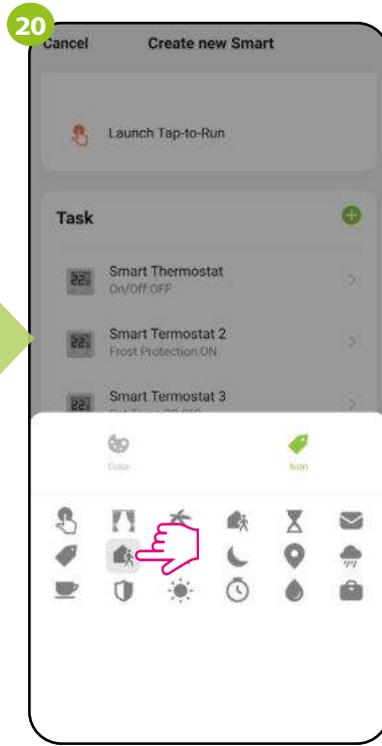
Enter a new name and click Save.



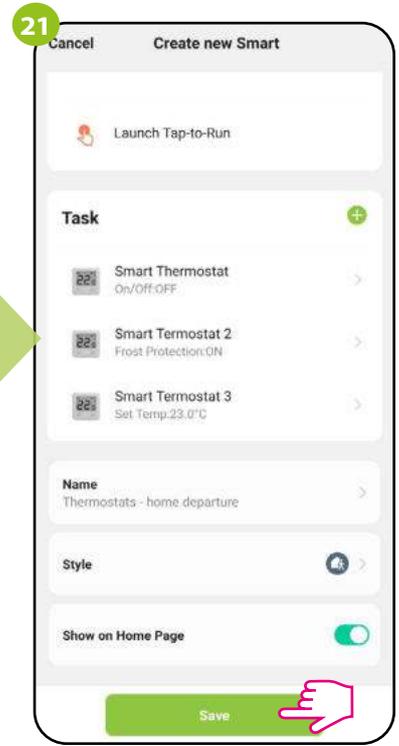
Select a style to change the color and icon of the rule.



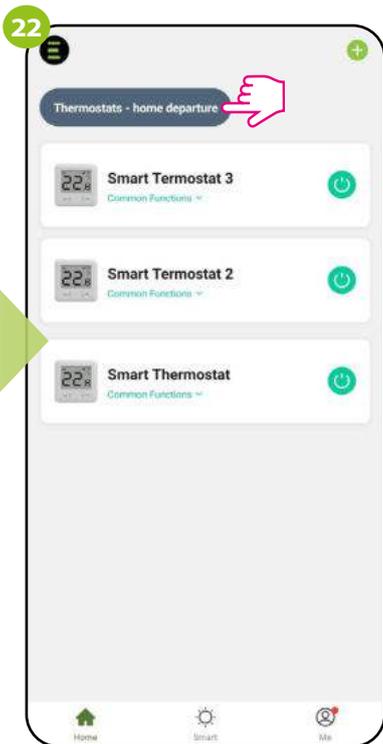
Choose color.



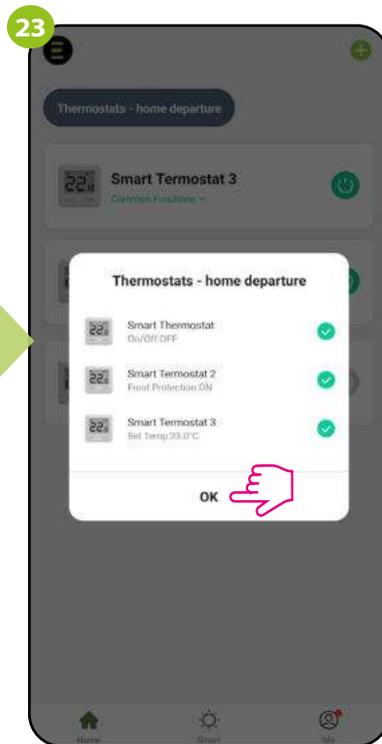
Select the icon.



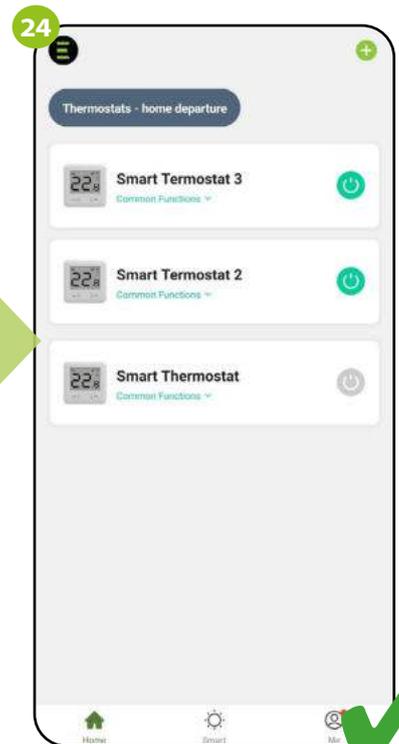
Save the rule after all optional edits.



The rule has been added and saved. If you selected „Show on Home Page“, it will appear in the Smart menu. To run it, click on its name.



Confirm the run of the functions by „OK“ button.



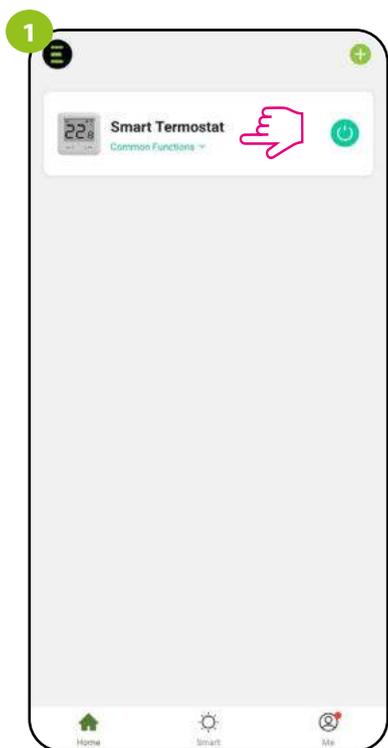
The thermostats follow the programmed functions. The rule works fine.

PLEASE NOTE!

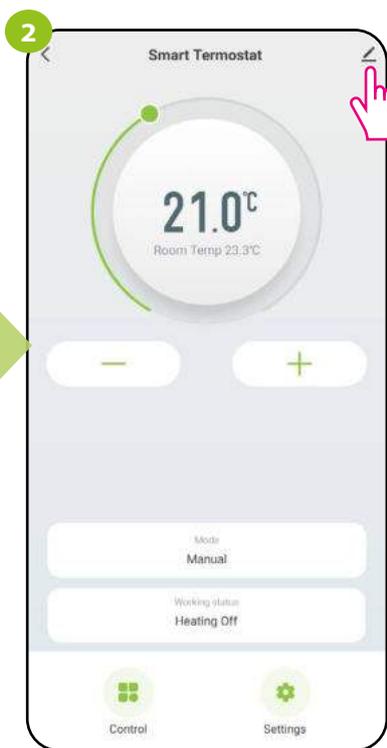
It is possible to delete a single task without deleting the entire rule. To do this, push, hold and slide the tile of the given task to the left. The „Delete“ button will be displayed in red:



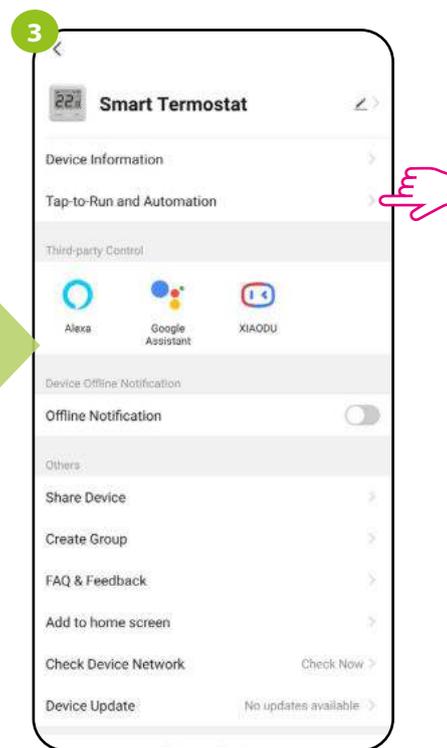
The user can easily check how many rules are associated with the device. Just take a look at the steps below:



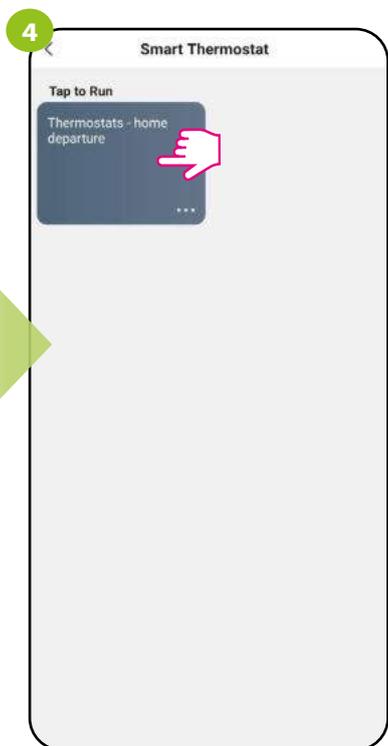
Enter the thermostat interface.



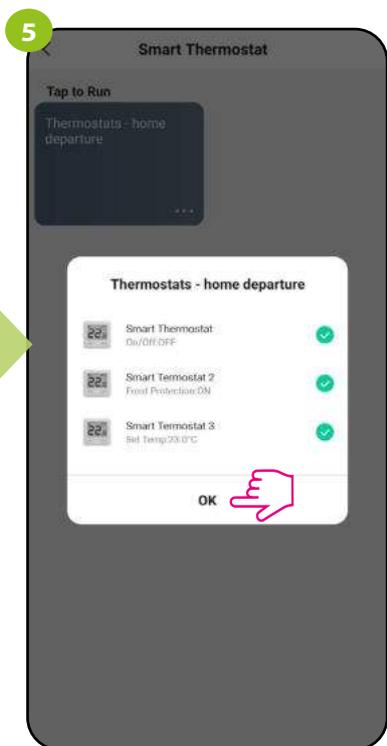
Click the pencil icon in the top right corner.



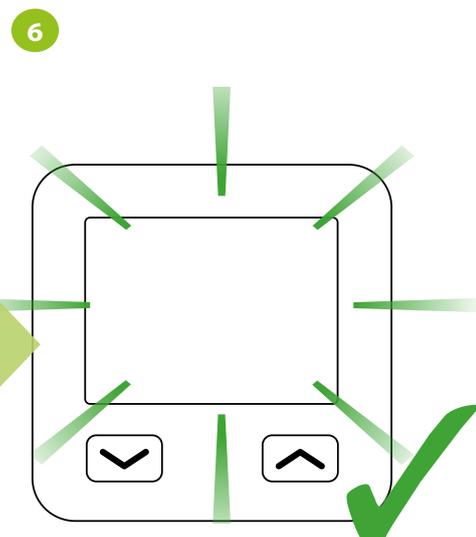
Select „Tap-To-Run and Automation“.



All rules related to the thermostat will be displayed. To activate one at this point, click on its tile.



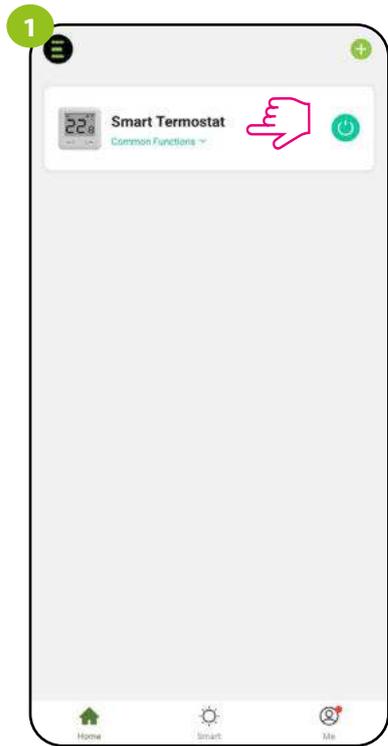
Confirm by „OK“ button.



The rule has been activated. In this case, the first thermostat has turned off and the rest of the functions have been triggered.

8.5.4 Offline notification

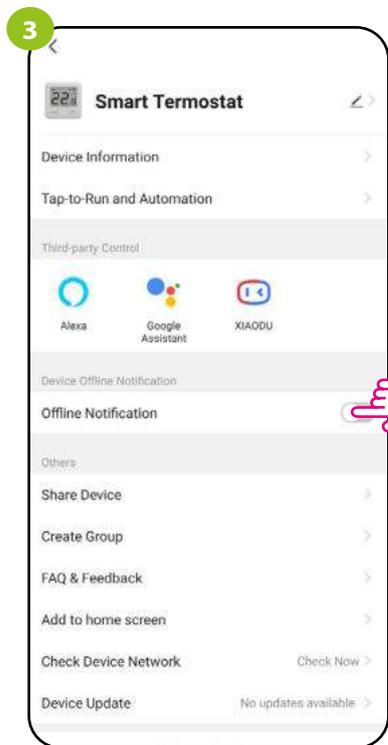
The user can mute notifications about the thermostat at any time. See steps below:



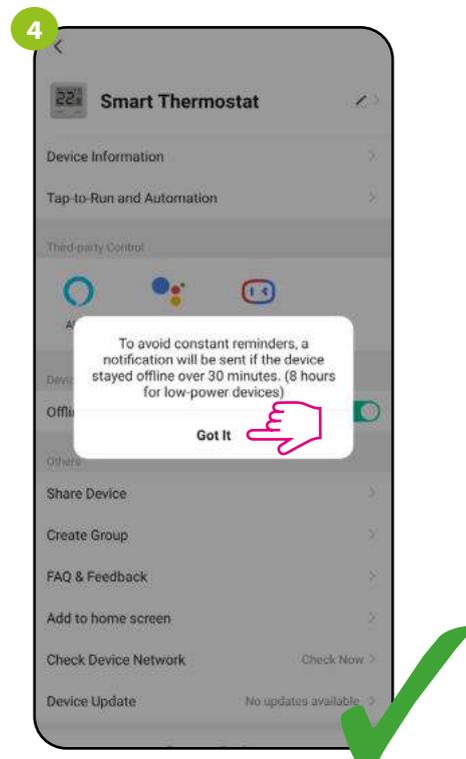
Enter the thermostat interface.



Click the pencil icon in the top right corner.



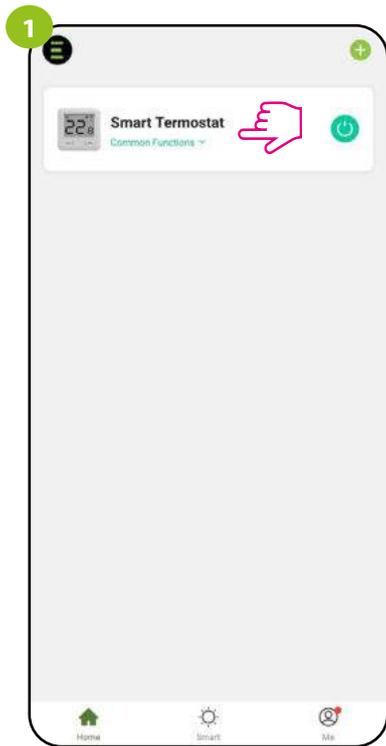
Check „Offline notification“.



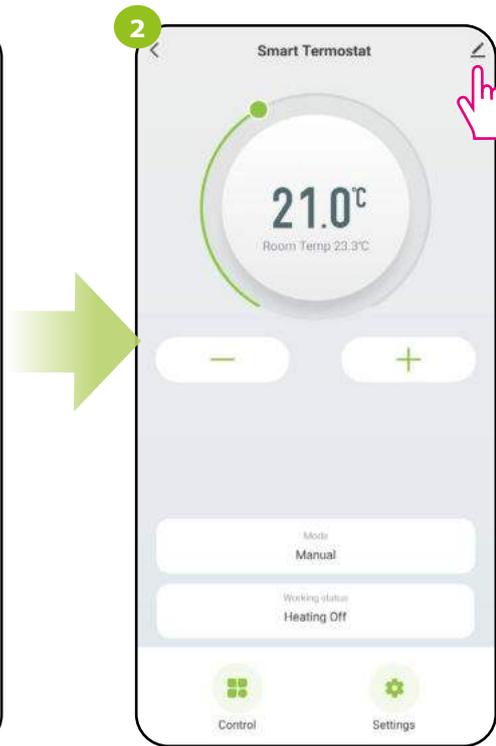
Confirm „Got it.“

8.5.5 Share device

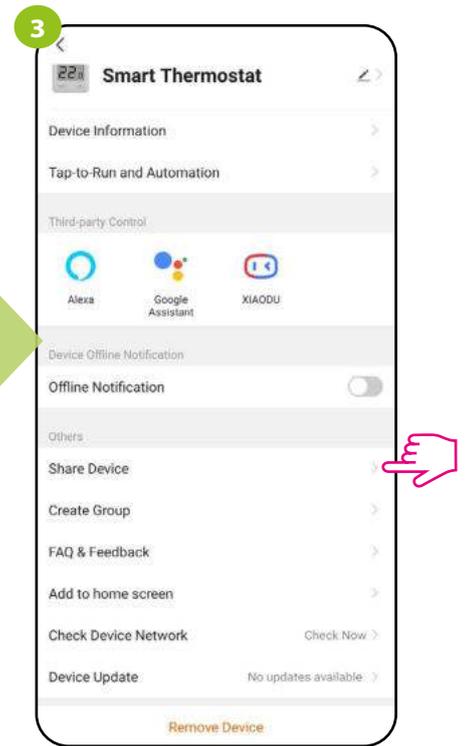
The ENGO Smart app offers the possibility of sharing the selected device with other users (assigned to the home). This is a convenient option if you don't want to give your home full access. To do this, follow the steps below:



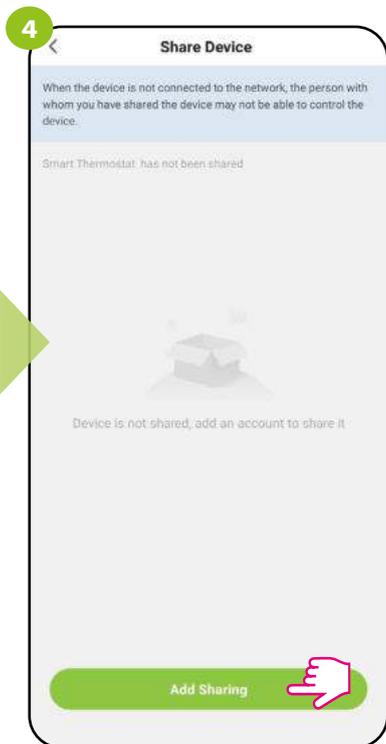
Enter the thermostat interface.



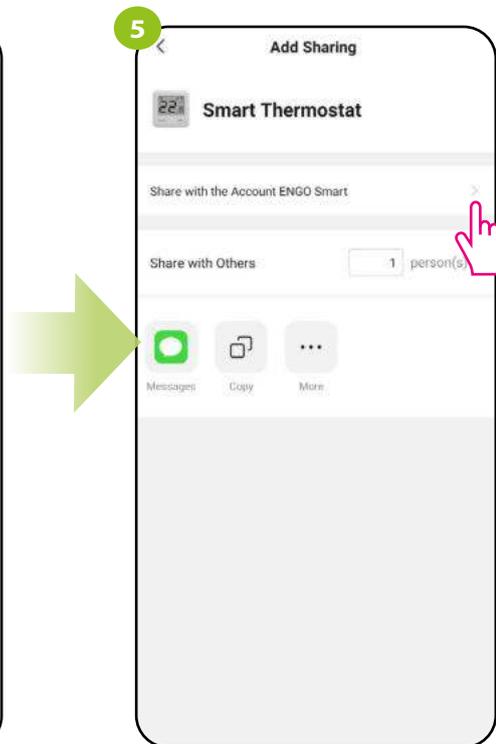
Click the pencil icon in the top right corner.



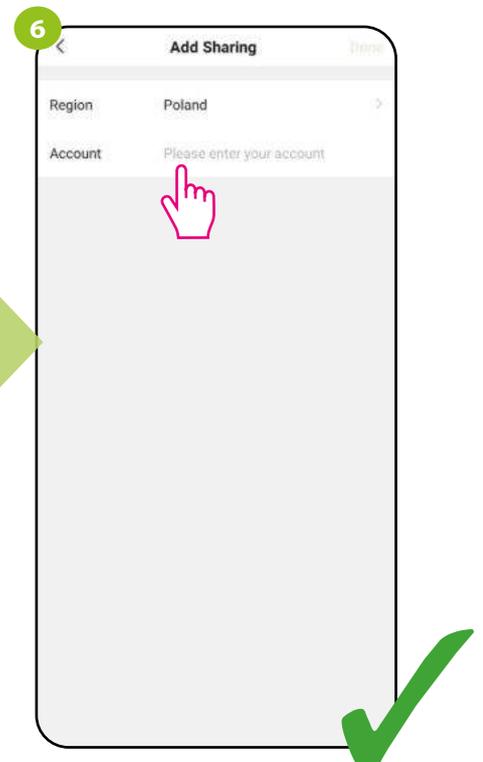
Select „Share Device“.



Add sharing.

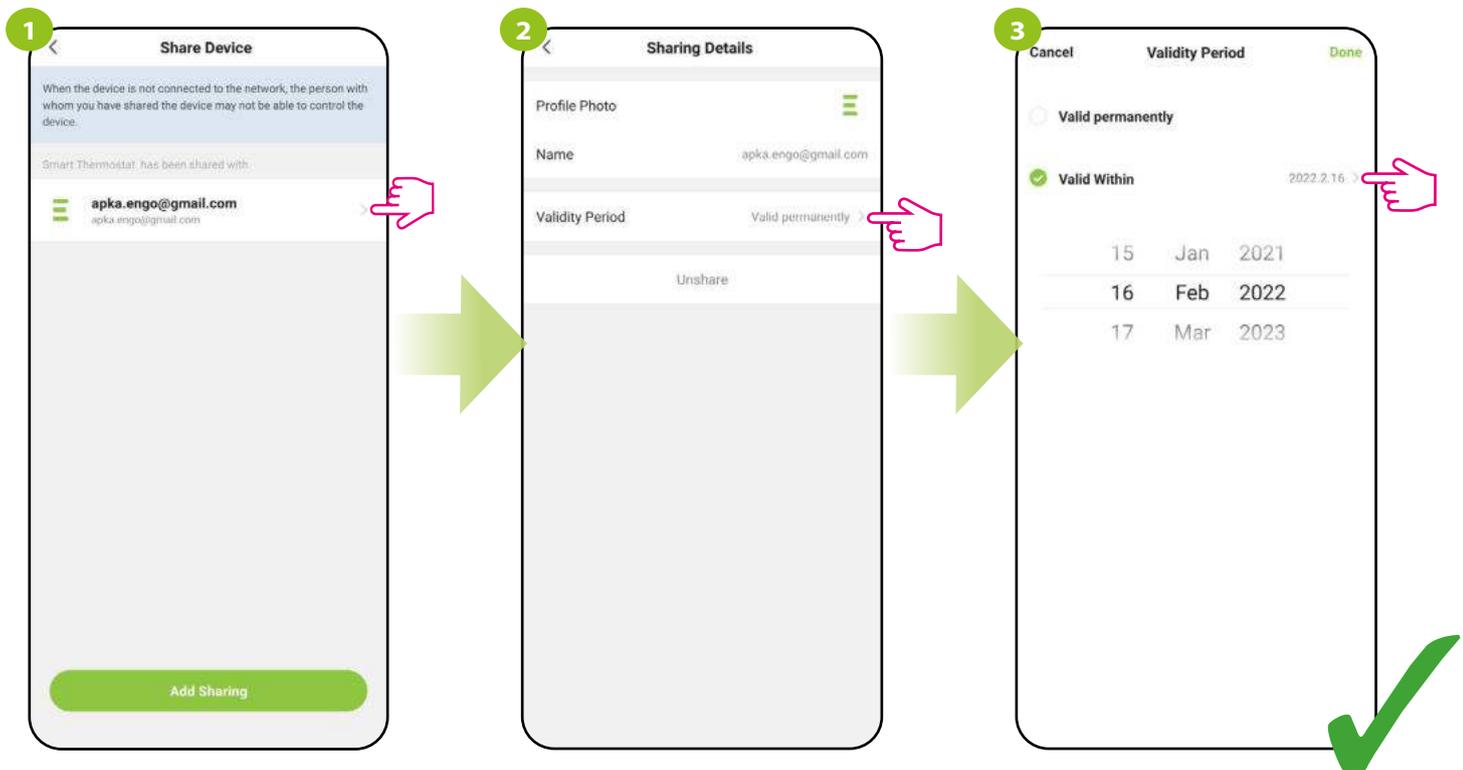


Send device link directly to selected user...



...or enter person's e-mail address / name.

After the device is made available, the user can set a validity period for this sharing and can also terminate it at any time by selecting „Unshare“.



Select a user.

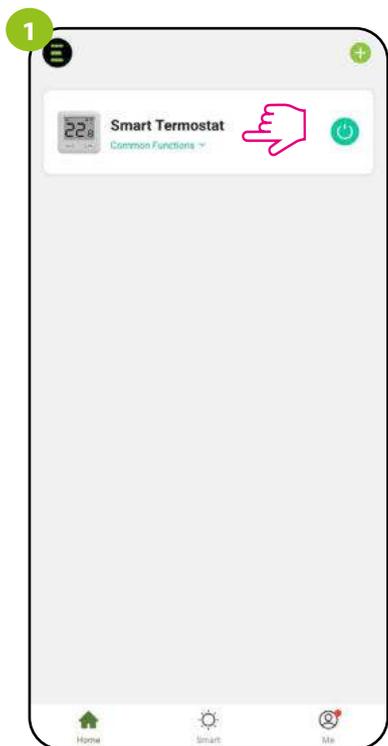
Go to the expiry date.

Select the period for which the sharing is to be effective.

8.5.6 Create group

Simultaneous control of few E10 thermostats 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.

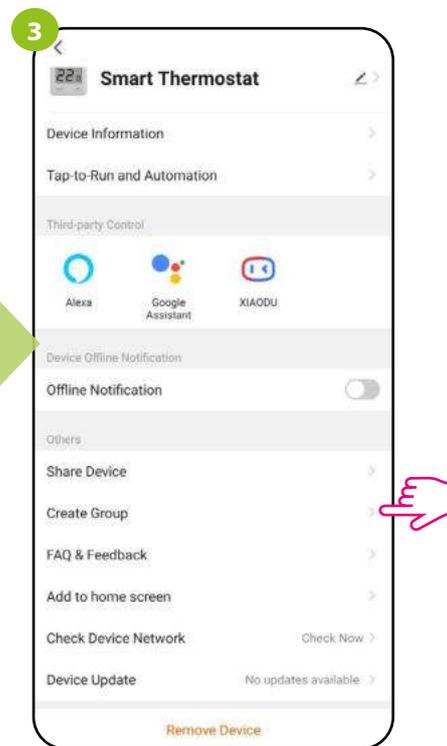
For example: If you set the virtual thermostat to manual mode, then each thermostat in this group will switch to manual mode. See the steps below on how to group multiple thermostats.



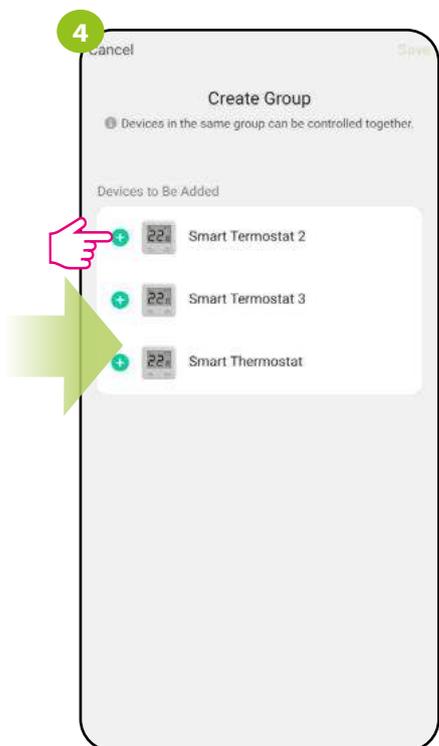
Enter the thermostat interface.



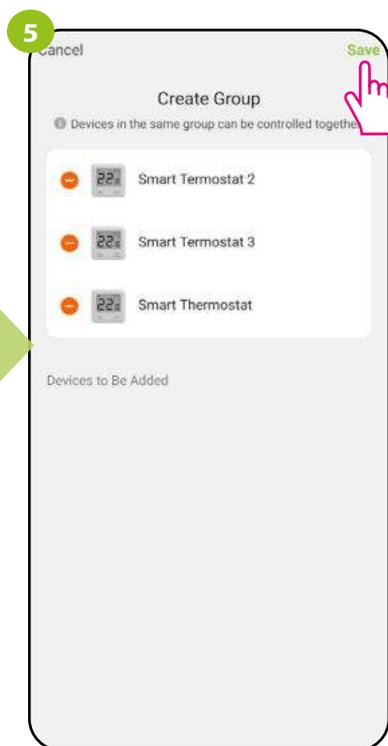
Click the pencil icon in the top right corner.



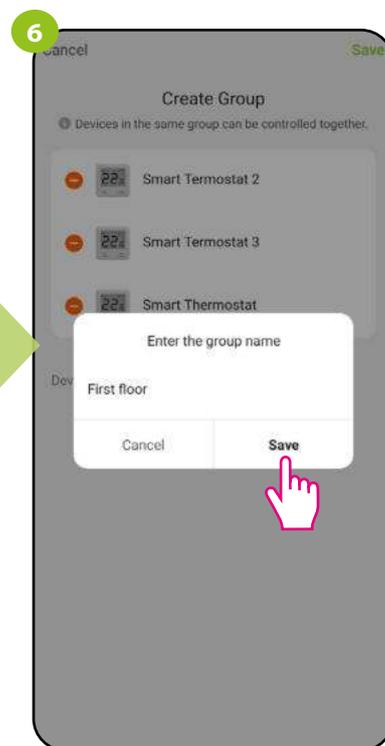
Select „Create Group“.



Select the devices you want to assign to the group.



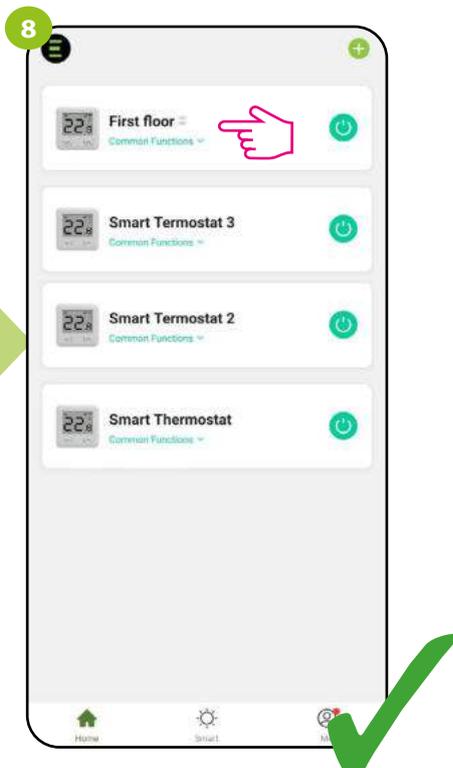
Click „Save“.



Name the group and confirm „Save“.



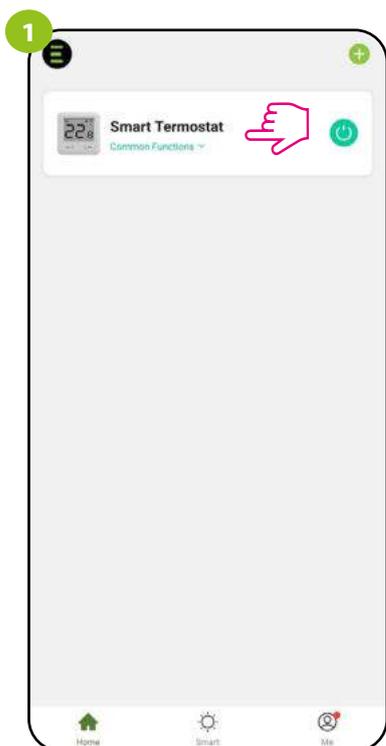
The main group management interface will be displayed from where you can set temperature or change operation modes / settings.



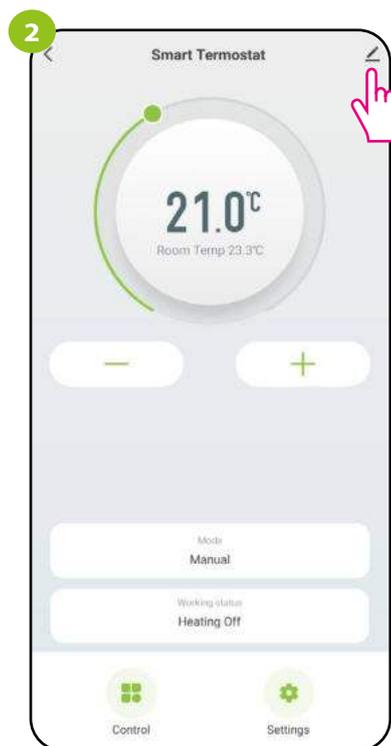
The group will also automatically appear on the main screen of the app.

8.5.7 FAQ & Feedback

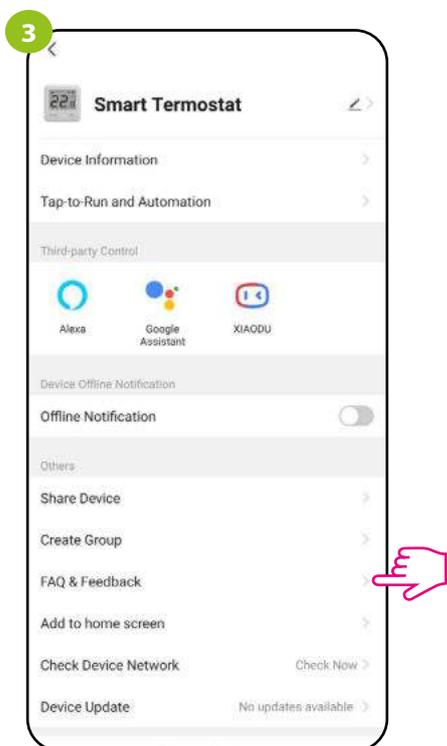
Find the answer to the problem in the FAQ option and opinions (the most common problems and questions) by searching for a specific key word. If you did not find the answer, please contact technical support.



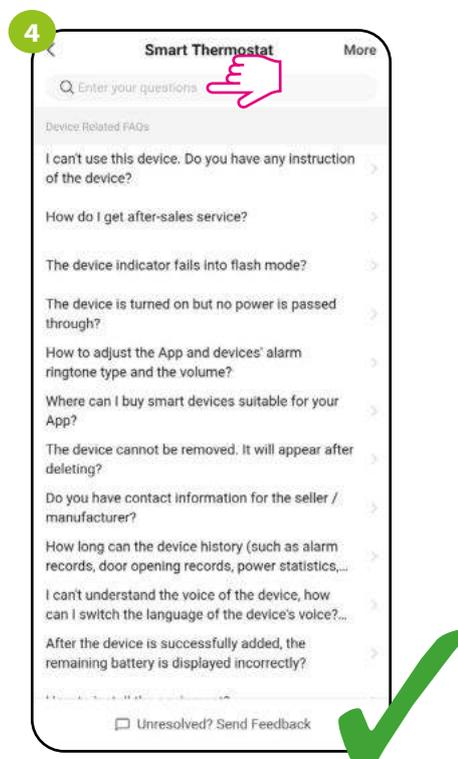
Enter the thermostat interface.



Click the pencil icon in the top right corner.



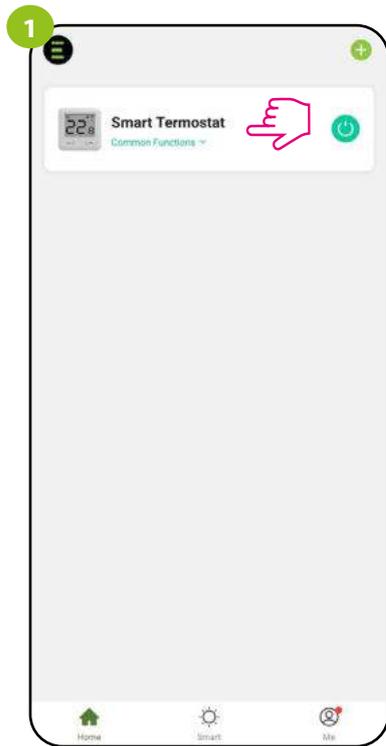
Select „FAQ & Feedback“.



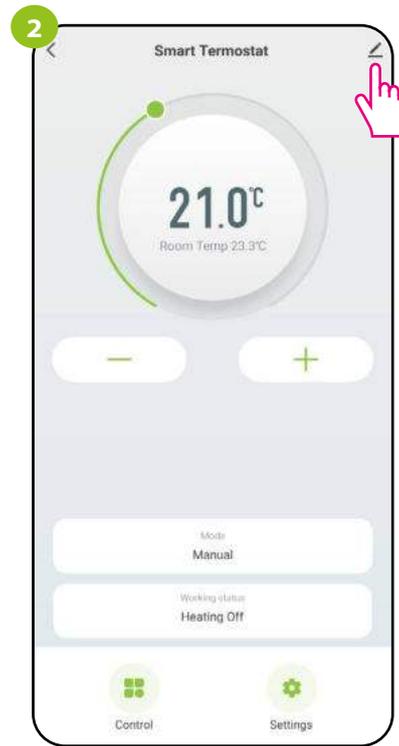
Enter a bothering problem and the app will automatically start searching for a possible answer.

8.5.8 Add to home screen

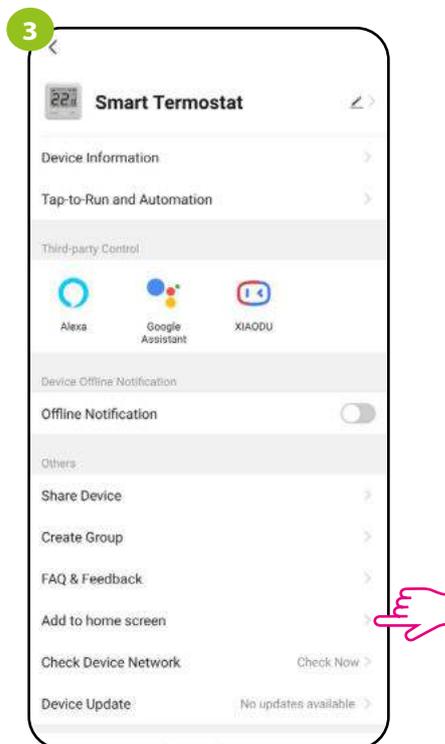
If you are tired of constantly opening the app to enter the thermostat settings, or if you want to set a new temperature quickly - pin the thermostat to the main desktop of your smartphone. See steps below:



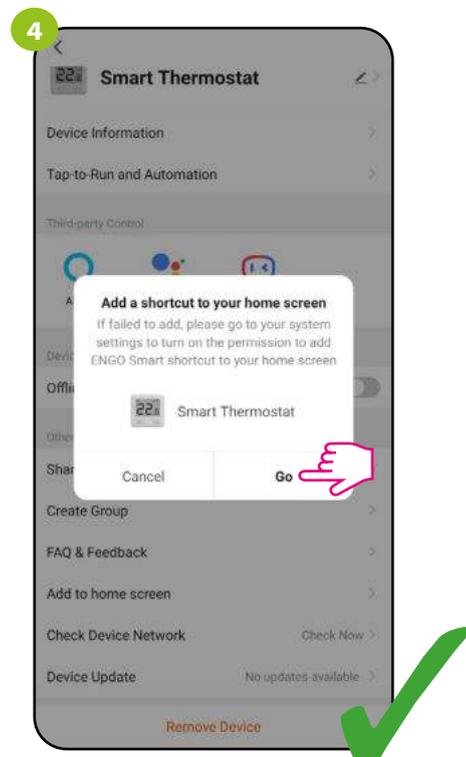
Enter the thermostat interface.



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.

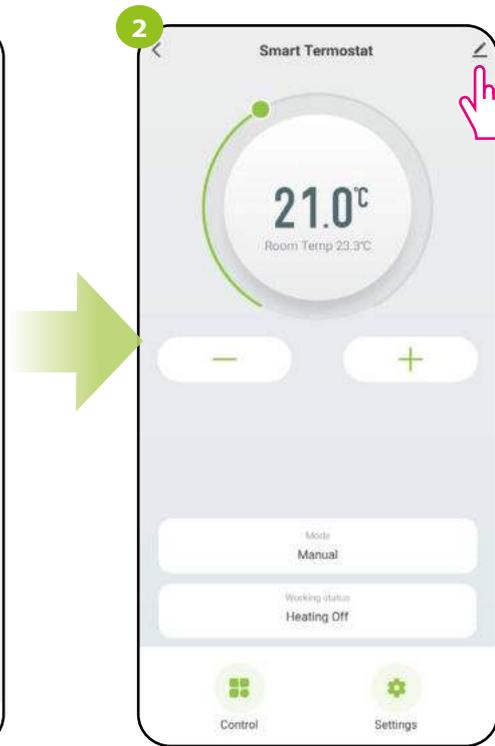
8.5.9 Check device network

Each wireless device has a limited range of data transmission. In addition to distance, range can be affected by many other external factors such as stone walls, interference from other wireless networks, reinforced concrete ceilings, metal structural elements, pillars, etc.

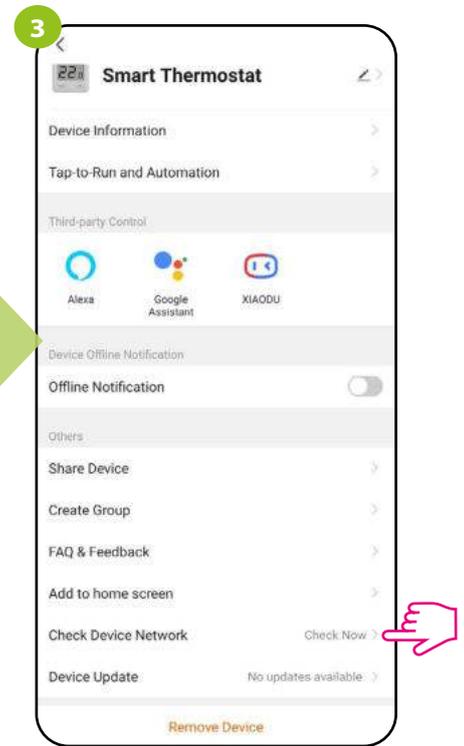
The ENGO Smart app has a built-in function that allows you to check the range and quality of wireless connection of the added devices. This is the case with the Wi-Fi thermostat. To check the connection quality, follow the steps below:



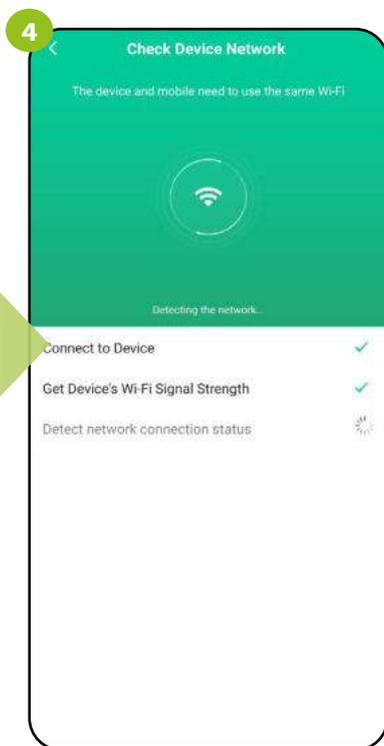
Enter the thermostat interface.



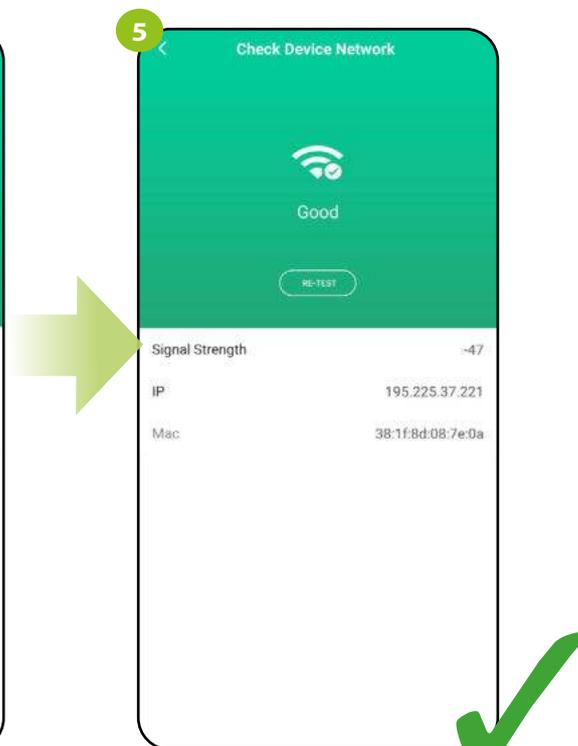
Click the pencil icon in the top right corner.



Select „Check Device Network“.



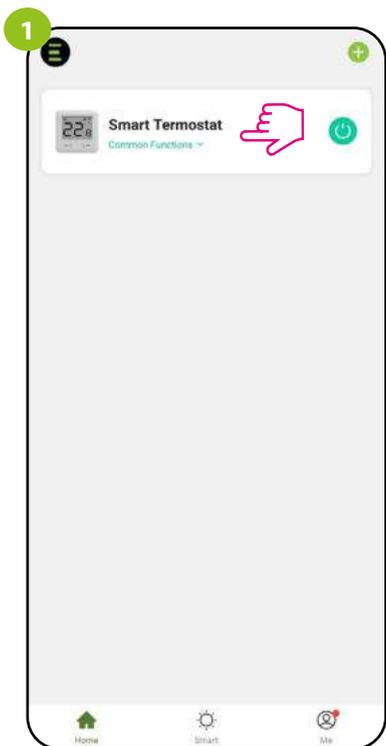
The app will start testing the Wi-Fi connection with the thermostat...



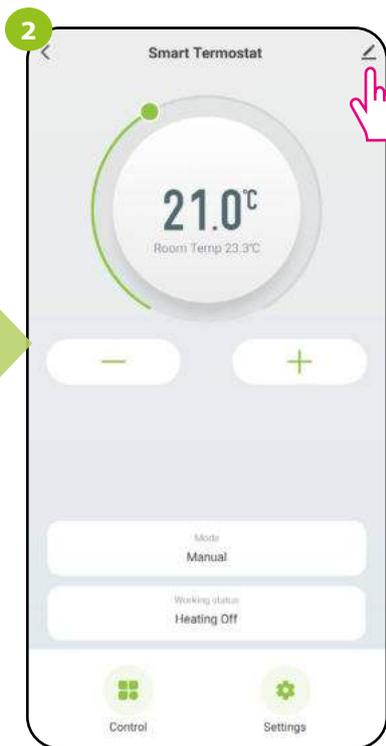
...after a positive test result, the app will show you detailed parameters, e.g. signal strength, device IP and MAC address.

8.5.10 Device update

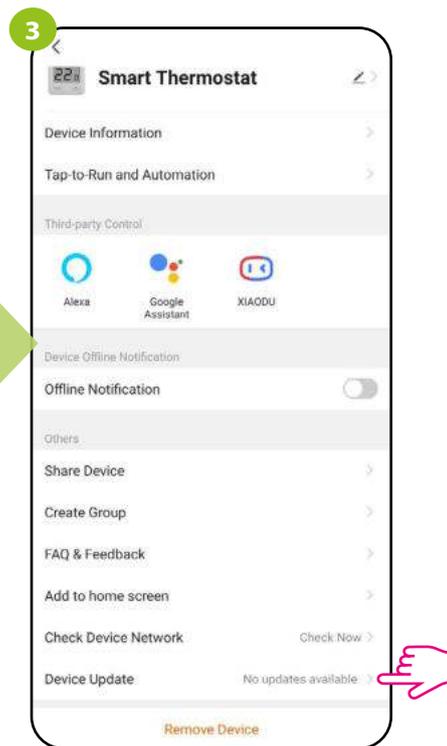
It allows you to update the device software to the latest version. You can start the update manually or choose the automatic update option.



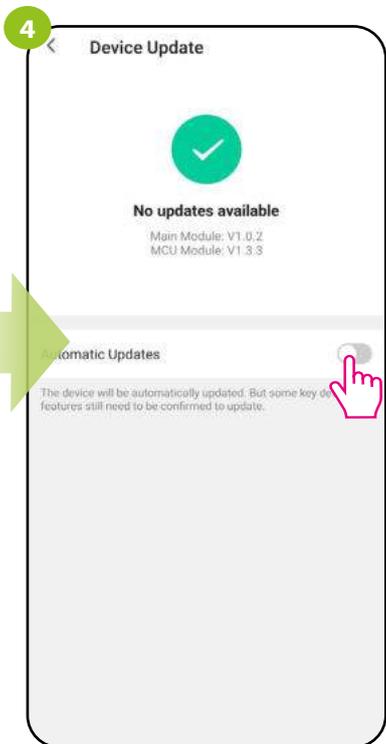
Press and hold the thermostat icon.



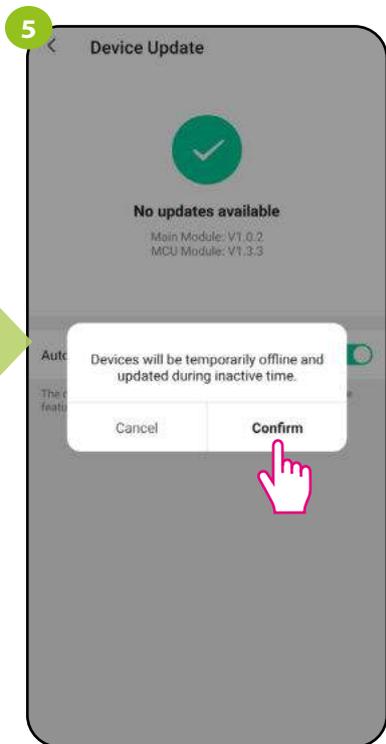
Click the pencil icon in the top right corner.



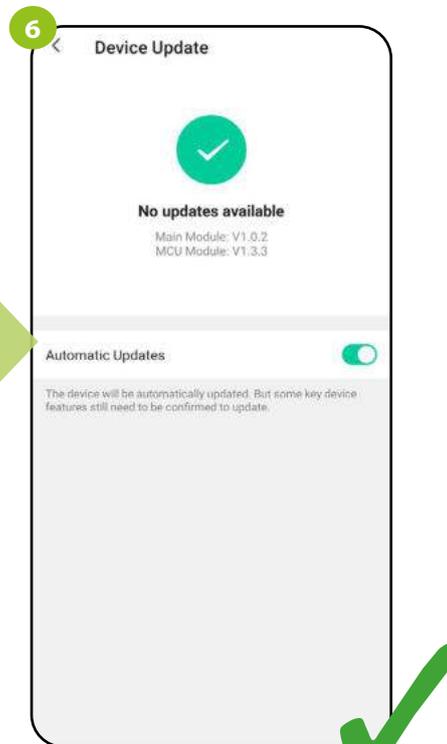
Select „Check for available software updates“.



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



Confirm.

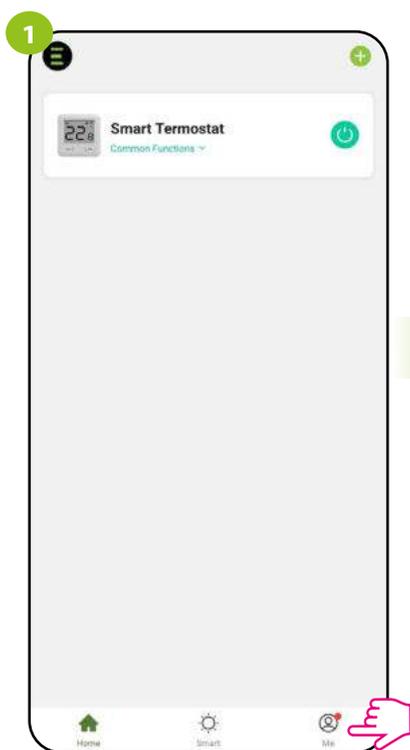


From now on, whenever there is a new software, the thermostat will start updating.

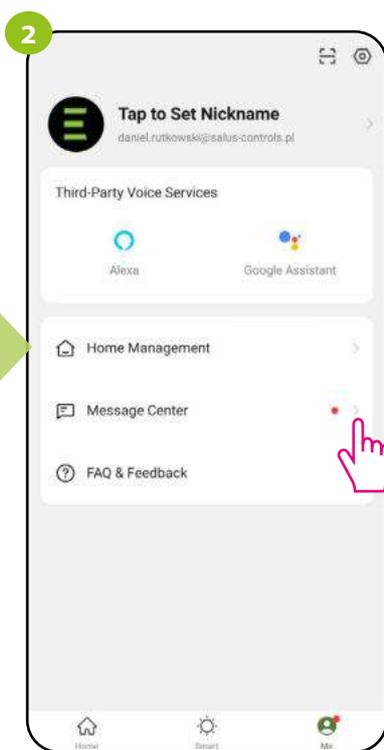
9. Alarms / Push notifications / Emergency states

How to fix the problem?

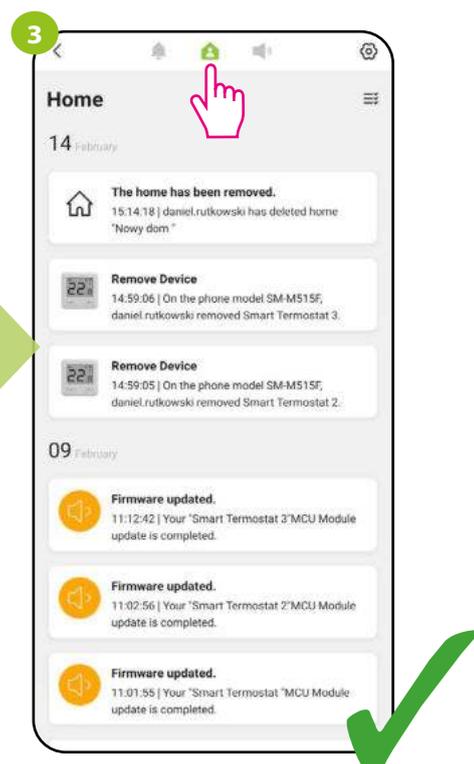
DESCRIPTION	TROUBLESHOOTING
The internet connection icon is not displayed on the thermostat.	The thermostat is not connected to the Internet. Check the connection between thermostat and Internet. In this case, it is possible to control the thermostat locally using a mobile device. The mobile device and the thermostat must be on the same Wi-Fi network.
The Wi-Fi connection icon is flashing on the thermostat.	1. The Wi-Fi network in which the thermostat was installed is turned off. Check the router and Wi-Fi connection. In this case, it is possible to control the thermostat locally via Bluetooth. The mobile device must have access to the Internet (via Wi-Fi or mobile data) and be near the thermostat. 2. The thermostat is in pairing mode. Reinstall the thermostat.
Thermostat displays error E2*.	Check or connect the external temperature sensor.
The thermostat has the display off.	Check if you connected the wires correctly or if the thermostat is not turned off in the app.



Enter the „Me” menu.

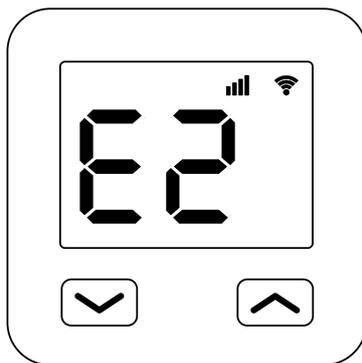


Select a message center.



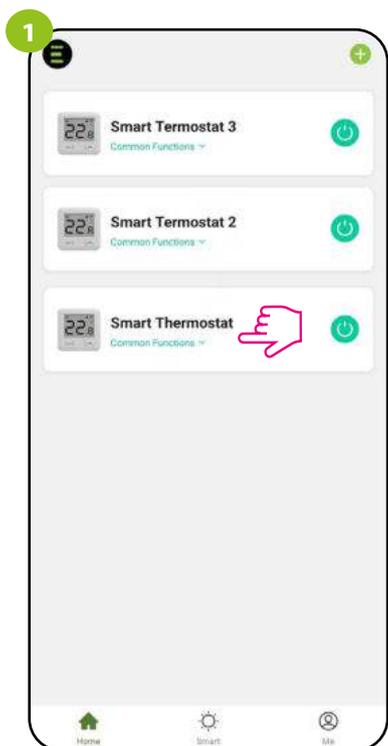
Jump between the Alarm, Home and Bulletin tabs one by one to find a message or notification about your thermostat.

* When the thermostat detects an error related to the external sensor (see section 8.4.6.2), it will display the following message. See the previous page for a solution.

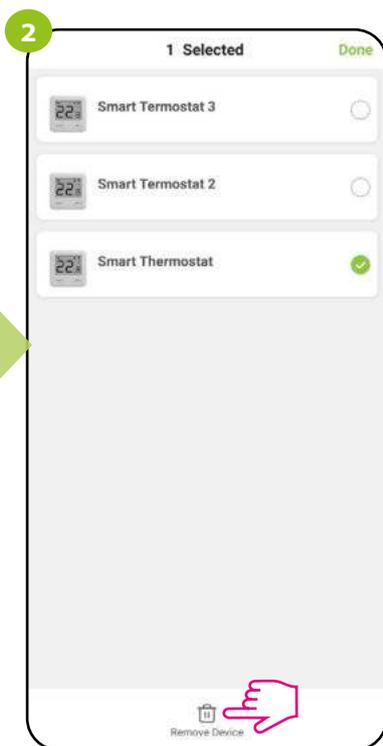


10. Remove device

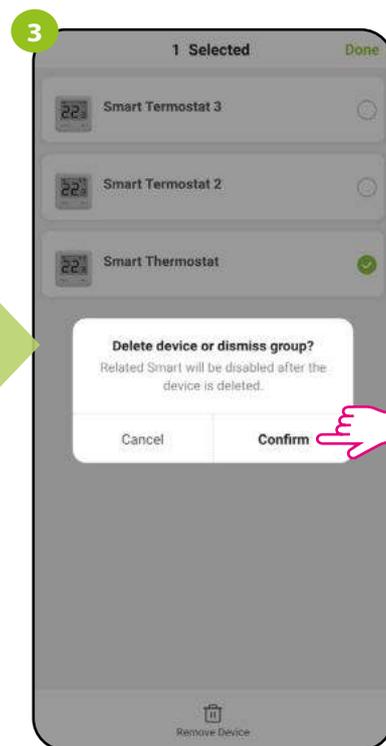
To remove the E10 thermostat from your account, follow these steps:



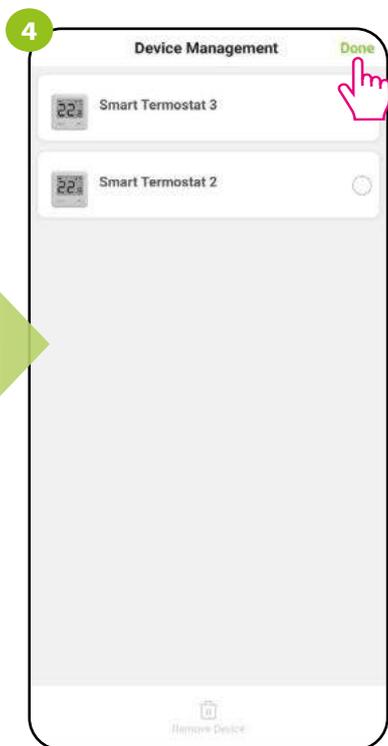
Click and hold the thermostat icon.



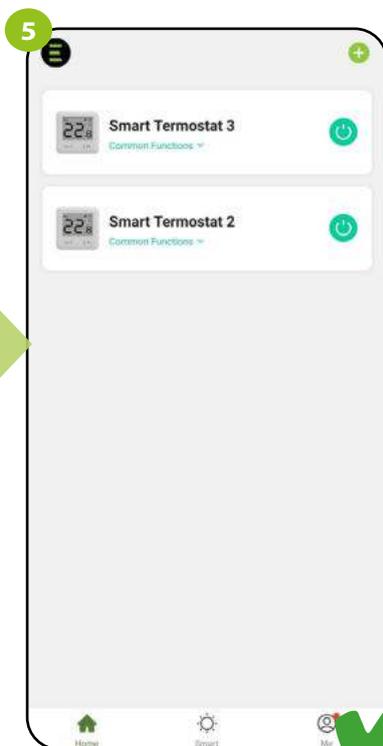
Select the device and click „Remove device“.



Then confirm.



Click „Done“.



The device has been removed and will disappear from the main screen.

11. Cleaning and maintenance

The E10 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.

12. Technical Informations

Power supply	230V AC 50 Hz
Max. load	3(1)A
Temperature range	5,0°C to 45,0°C
Display temperature accuracy	0,1°C
Control algorithm	TPI or Hysteresis (from $\pm 0.1^\circ\text{C}$ to $\pm 0.5^\circ\text{C}$)
Communication	WiFi 2,4 GHz
Input S1 – S2	Floor temperature or Air temperature measurement
Control output	COM / NO (volt free)
IP class	IP30
Dimensions [mm]	86 x 86 x 39 mm (14 after mounting in a $\Phi 60$ mm box)



13. 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:



Producer:

Engo Controls S.C.
43-200 Pszczyna
3E Górnośląska St.
Poland

Distributor:

QL CONTROLS Sp z o.o. Sp. k.
43-262 Kobielice
4 Rolna St.
Poland

Ver. 1

Date of issue: II 2022

Power supply: 2xAA batteries

www.engocontrols.com