ENGO CONTROLS

E901WIFI

E901WIFI | Internet, wireless thermostat, WiFi

E901TXWIFI

E901RXWIFI

FULL MANUAL

TABLE OF CONTENTS

4 **1. Introduction**
4 **1.1 Product Compliance**
4 **1.2 Safety Informations**
5 **2. Product Overview**
6 **2.1 Package content**
6 **2.2 Proper thermostat location**
7 **2.3 Wall mounting**
8 **2.4 Free-standing thermostat**
9 **3. E901RXWIFI receiver**
9 **3.1 Receiver's switches description**
10 **3.2 Receiver LED indicators**
11 **3.3 Connection description**
12 **4. Before you start (first power on)**
13 **4.1 LCD icon description**
13 **4.2 Button description**
14 **5. Offline operation of the thermostat (without connecting to the app)**
14 **5.1 Offline time setting**
15 **5.2 Manual mode - temperature setting**
16 **5.3 AUTO mode**
16 5.3.1 Schedule
17 5.3.2 Programming schedule
18 5.3.3 Temporary override mode
19 **5.4 OFF mode**
20 **5.5 Holiday mode**
21 **5.6 Key lock function**
22 **6. Offline installer parameters (without connection to the application)**
24 **7. Engo Smart App**
24 **7.1 7.1 App description (general information)**
25 **7.2 Engo Smart App installation**
28 **7.3 Guidelines for installing devices in a WiFi network**
29 **8. Installation of the Wi-Fi thermostat in the app**
32 **9. Operation in the app**
32 **9.1 General information**
32 **9.2 App icons description**
33 9.2.1 Setpoint temperature change
34 **9.3 Control**
34 9.3.1 „Power" function
35 9.3.2 Schedule mode
39 9.3.3 Holiday mode
40 9.3.4 Manual mode
41 9.3.5 Party mode
42 9.3.6 FROST mode
43 9.3.7 Battery condition
44 9.3.8 Diagrams

45 **9.4 Settings (installer parameters)**
45 9.4.1 Child lock function
46 9.4.2 Key sound
47 9.4.3 Setting PIN
48 9.4.4 Max setpoint temperature limit
48 9.4.5 Min setpoint temperature limit
49 9.4.6 Temperature correction
50 9.4.7 Relay type
51 9.4.8 Control type (algorithm)
53 9.4.9 Heating/Cooling mode selection
54 **9.5 E901WIFI thermostat management in the Engo Smart app**
54 9.5.1 Change the name, icon and location of the thermostat
56 9.5.2 Device information
57 9.5.3 Offline notification
58 9.5.4 Share device
60 8.5.6 Create group
62 9.5.6 FAQ & Feedback
63 9.5.7 Add to home screen
64 9.5.8 Check device network
65 9.5.9 Device update
68 9.5.10 Tap-To-Run and Automation
71 **10. No communication - cyclical work**
72 **11. Alarms / Push notifications / Emergency states**
73 **12. Remove device**
74 **13. Pairing E901WIFI thermostat with receiver.**
76 **13.1 Transmission test**
77 **14. User settings reset**
77 **15. Clear settings - factory reset**
78 **16. Cleaning and Maintenance**
78 **17. Technical Informations**
79 **18. Warranty**

1. Introduction

1.1 Product Compliance

Directives UE: 2014/53/EU, 2011/65/EU 868.0 MHz - 868.6 MHz; <13dBm WIFI 2,4 GHz.

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

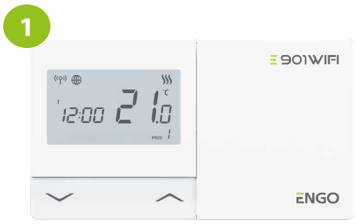
E901WIFI is a temperature thermostat with a WiFi module. It enables economic and ecological control of any type of heating. It is characterized by a clear menu and a multitude of useful functions. Programming the E901WIFI is very simple and allows you to adjust the heating cycle to the user's daily rhythm. The built-in WiFi module (in the receiver) allows remote control of the heating system using smartphone or tablet using the ENGO Smart / TUYA Smart application. The devices are factory paired and ready to work.

Product features:

- multiple functions available from the ENGO Smart / Tuya Smart app
- programming of time schedules
- programmable change of relay type
- maximum / minimum temperature limitation
- two relay types (selectable in thermostat settings): NO (normally open) or NC (normally closed)
- has the HEATING / COOLING function
- PIN lock
- has unique transmission codes
- automatically renews the operating signal

2.1 Package content

1) E901TXWIFI thermostat
2) E901RXWIFI receiver
3) Quick Guide
4) Thermostat bracket
5) Power supply wire and control wire
6) 2xAA batteries
7) Mounting screws



E901TXWIFI thermostat

E901RXWIFI receiver

Quick Guide

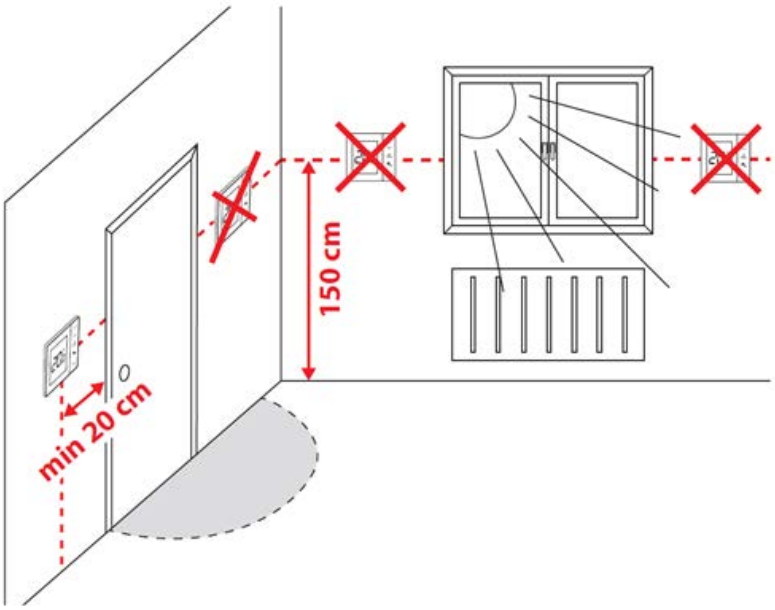
Thermostat bracket

Power supply wire and control wire

2xAA batteries

Mounting screws

2.2 Proper thermostat location



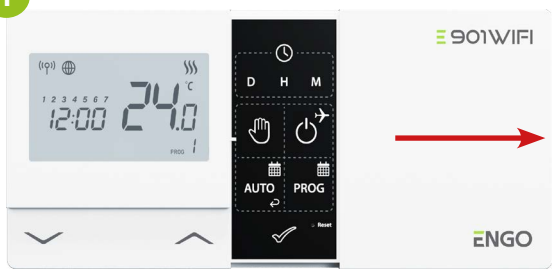
Please note:

The recommended height for mounting the E901WIFI 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:

1



Remove the thermostat cover as shown in the picture. If there are batteries inside, remove them.

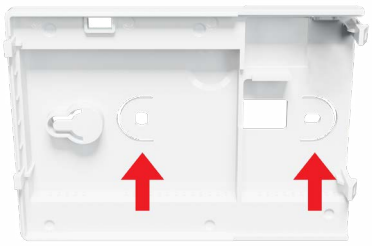
2

Use a screwdriver to push the plastic tabs in as shown in the figure until you feel resistance, and tilt the front part of the housing.

3

Separate the front part from the back part in the direction shown above.

4



Then fix the back cover to the wall using the supplied mounting screws and the holes provided (see red arrows).

5

Using the hinges, fold the back and front covers by moving as shown in the picture above.

2.4 Free-standing thermostat

With the bracket attached to the E901WIFI set, you can use the thermostat anywhere in the house and put it on a table, desk, etc. To use the bracket properly, see the steps below:

1

Mount the bracket on the back of the thermostat with use of the two designed holes.

2

Place the thermostat in a comfortable and accessible place (see „Please note" in chapter 2.2 page 6)..

3. E901RXWIFI receiver

E901TXWIFI thermostat communicates bi-directionally with the E901RXWIFI receiver on the 868Mz frequency. The set is factory paired and prepared for work. In addition, the receiver has a built-in 2.4Ghz Wi-Fi and BLE (Bluetooth Low Energy) module. So that the thermostat can be controlled with mobile application, place the receiver within the 2.4GHz Wi-Fi network. The receiver should be powered with 230VAC, and the maximum load of the receiver is 16A. It is forbidden to install the device in places exposed to water and steam condensation water. The receiver can operate in two different modes - AUTO (automatic) and MANUAL (manual). To select a specific mode, use the switches on the front of the receiver.

3.1 Receiver's switches description

	LEFT SWITCH
1.	**ON -** receiver ON
2.	**OFF -** receiver OFF
	RIGHT SWITCH
3.	**MANUAL -** Receiver works in manual mode (receiver operation state depends on the position of the left switch)
4.	**AUTO -** Receiver works in AUTO mode (according to the thermostat's commands)

REMEMBER!:

Thermostat (transmitter) will communicate with receiver only when both are paired together and receiver's switches are set to ON and AUTO position.

3.2 Receiver LED indicators

The status of the receiver is indicated by two LEDs. These are LEDs with the following color:

1 - **red (upper one),**
- **green (upper one),**
- **blue (upper one)**

2 - **orange(lower one)**
- **pink (lower one).**

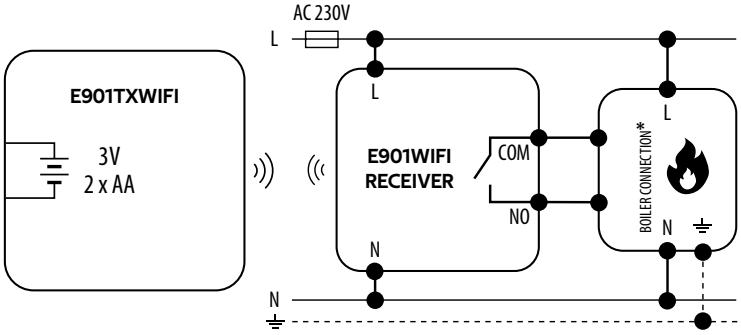
A detailed explanation of the meaning of the LEDs can be found in the table below:

	DESCRIPTION
The red flashes	The red LED diode flashes - receiver and thermostat are prepared for installation in the app. LED always flashes red: - immediately after connecting the receiver to the power supply, if the thermostat is not added to the app - after running the parameter "APP" -> YES (installer parameters) - after removing thermostat from the app (device automatically entered pairing mode)
The red LED lights up	The red LED diode is steady - E901 WIFI has not been installed in the app and it is working in Offline mode. It means also app pairing mode timed out (pairing with app must be done within 10 minutes after enabling pairing mode).
The green LED lights up	The receiver is connected to a router, that does not have access to the Internet (works in offline mode).
The green flashes	The receiver lost communication with the router (router turned off).
The blue LED lights up	The receiver is connected to a router with Internet access (works in online mode).
The blue flashes	Odbiornik był sparowany, ale stracił łączność z regulatorem z powodu braku zasięgu lub wyczerpania baterii w regulatorze. Niebieska dioda na odbiorniku zaczyna migać po ok. 15 minutach, gdy nie otrzyma sygnału z regulatora.
The orange LED lights up	The receiver in AUTO (automatic) mode received a heating / cooling signal from regulator or the receiver has been started in manual mode (left switch ON, right switch MANUAL).
The orange is off	The receiver didn't get a heating / cooling signal from the thermostat.
The orange flashes	The receiver is in the pairing mode and is looking for a signal from the thermostat (then you need to run the parameter SYNC on the thermostat).
The pink LED lights up	The update process has started. To increase the chance of successful update - immediately after the pink LED appears, click any button on the thermostat to turn on the display backlight.

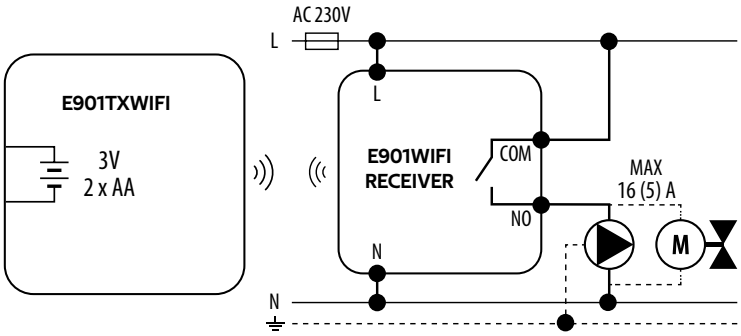
3.3 Connection description

Make sure, the black receiver E901RXWIFI is in the range of the Wi-Fi 2,4GHz network

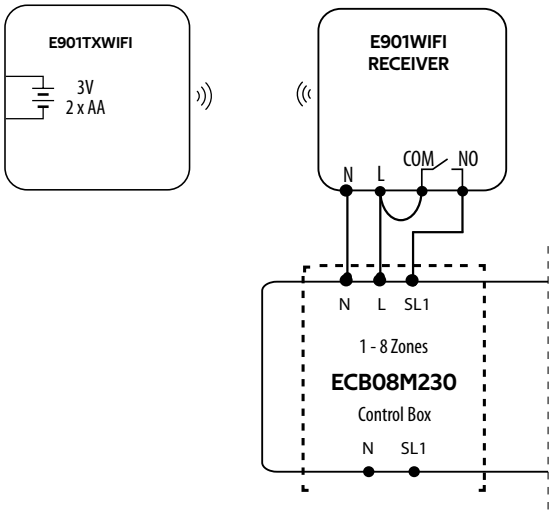
a) Connection diagram to gas boiler



b) Connection diagram to the pump / actuator



c) Connection diagram to the control box



Description:

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

Pump

Valve actuator

L, N - power supply 230V

COM, NO - voltage-free output

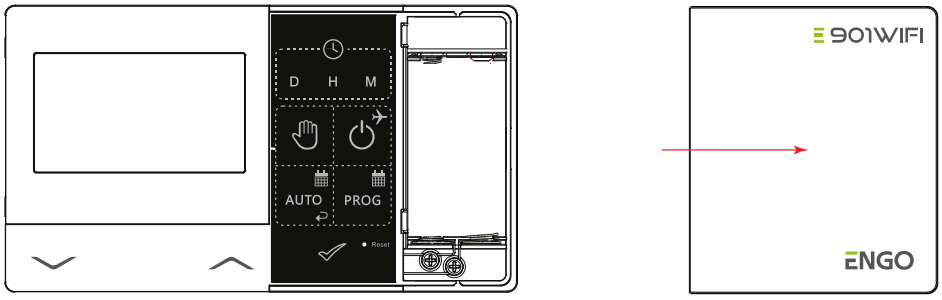
- fuse

- batteries

4. Before you start (first power on)

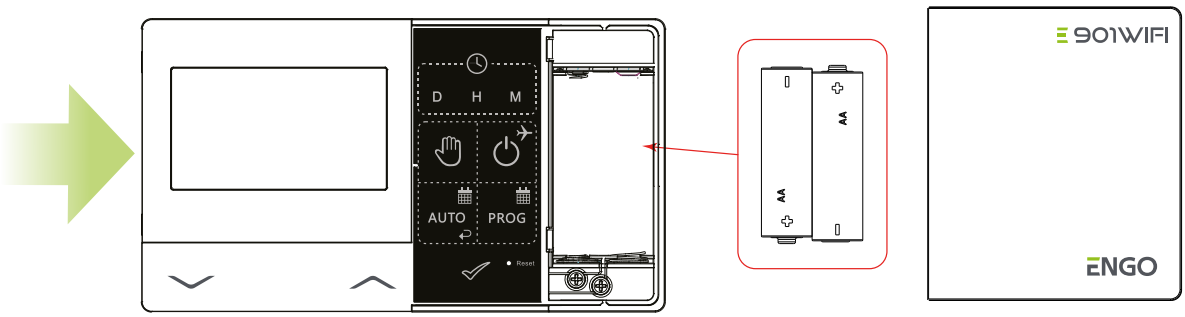
The thermostat is powered by two 1.5V AA alkaline batteries. Insert the batteries into the battery basket under the slide cover, paying attention to their polarity. The thermostat will start up showing the current software version, and then go to the main screen.

1



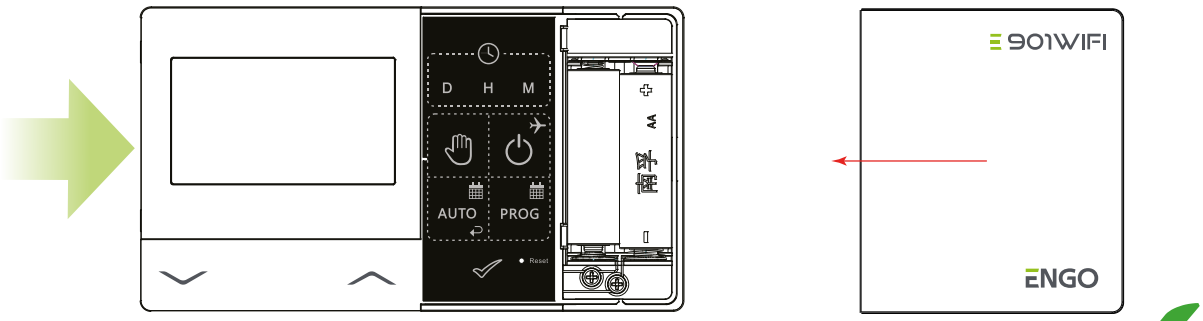
PULL OFF THERMOSTAT SLIDE COVER.

2



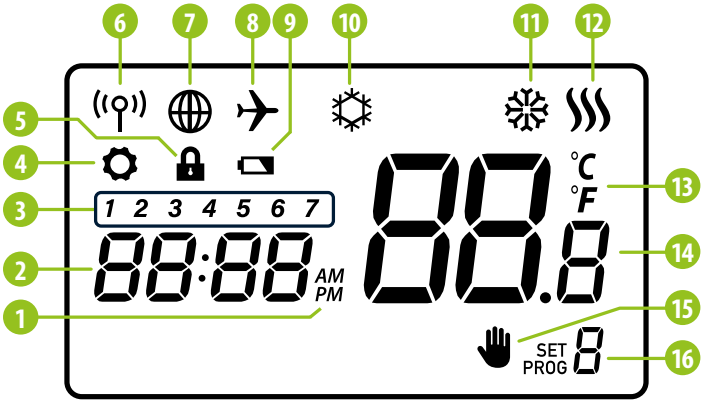
INSERT THE BATTERIES, PAY ATTENTION TO THEIR POLARITY!

3



PLACE AND SLIDE THERMOSTAT FRONT HOUSING.
THE LCD WILL TURN ON WHEN THE BATTERIES ARE INSERTED.

4.1 LCD icon description



1. AM/PM
2. Clock
3. Day of the week indicator
4. Settings icon
5. Child lock function
6. Send a signal (pairing)
7. Connection with Internet
8. Holiday Mode
9. Low battery indicator
10. Frost Protection Mode
11. Cooling status
12. Heating status
13. Temperature unit
14. Room / setpoint temperature
15. Temporary override / manual mode
16. Program number

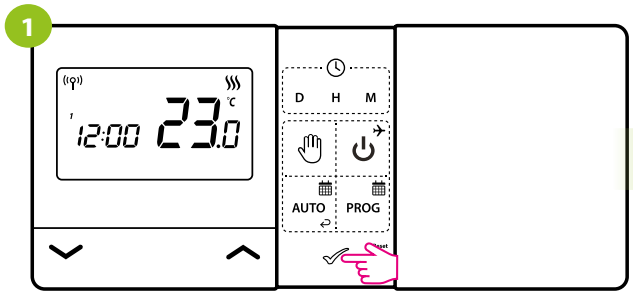
4.2 Button description

Button	Function
∨	Change the parameter value down
∧	Change the parameter value up
D	Set the day of the week
H	Set the hour
M	Set the minutes
	Manual mode
	OFF mode / Holiday Mode
AUTO	AUTO mode / Back button
PROG	Programming schedule / schedule type selection
✓	Confirm button
• Reset	Factory Reset

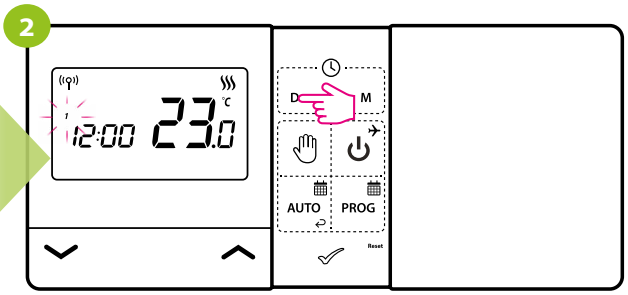
5. Offline operation of the thermostat (without connecting to the app)

5.1 Offline time setting

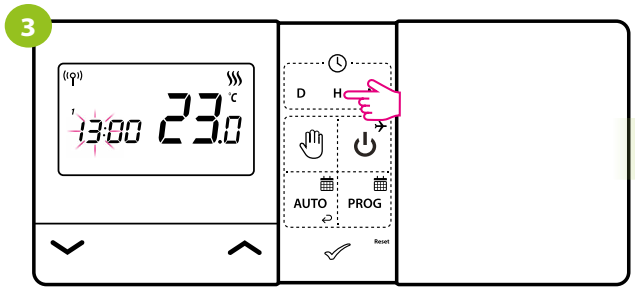
In order for the thermostat to work properly, it is necessary to set the time first.
The current time is set using the D, H, M buttons. To do this, refer to the steps below:



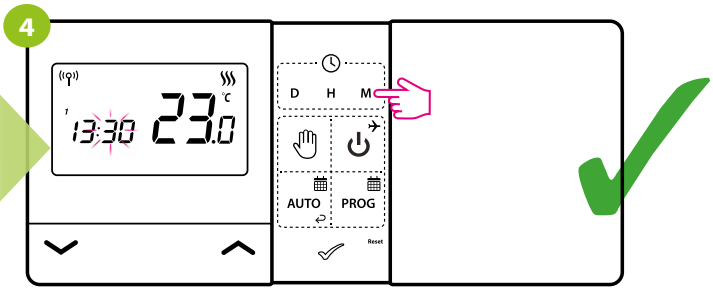
Press any button to highlight the display.



Pressing D button set the day.



Pressing H button set the hour.



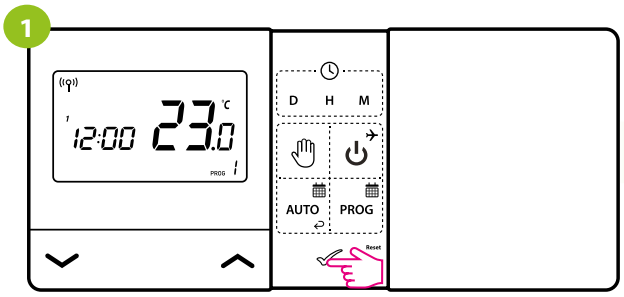
Pressing M button set the minutes.

If the thermostat is added to the app, the time is automatically updated and downloaded from the Internet.
Then the D,H,M keys are inactive.

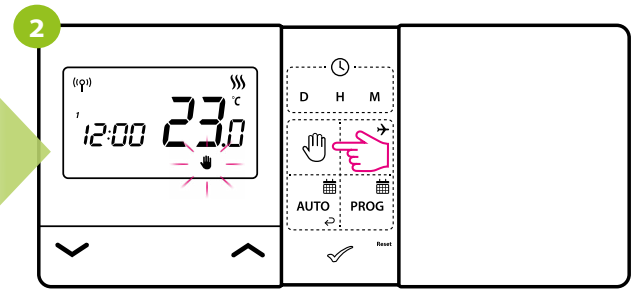
5.2 Manual mode - temperature setting

In manual mode chosen setpoint temperature level is maintained permanently until user changes operation mode or set a different temperature setpoint again.

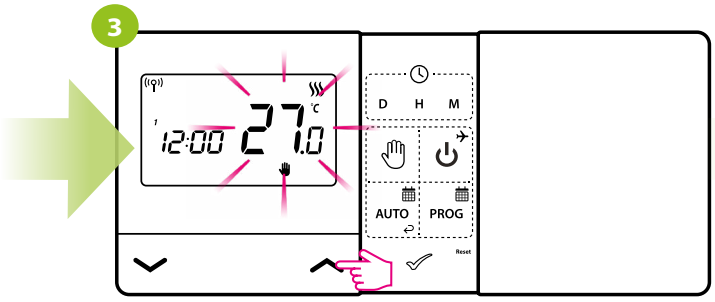
To set the comfort temperature, see the steps below:



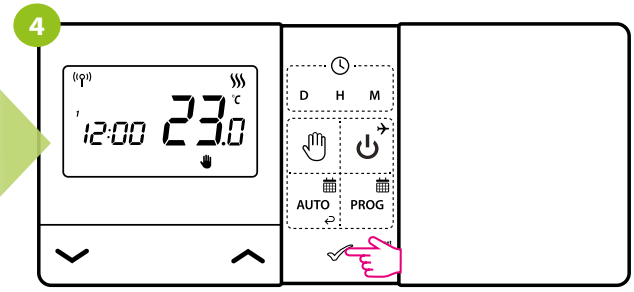
Press any button to highlight the display.



Press button to enter manual mode.
The hand icon should be visible on the display.



Using ∧ or (∨) buttons to set new temperature value.



Confirm by ✓ button or wait until the thermostat will approve your choice itself and display the main screen.

5.3 AUTO mode

- AUTO mode - In the automatic mode, the thermostat maintains the setpoint temperature according to the schedule selected by the user.
AUTO

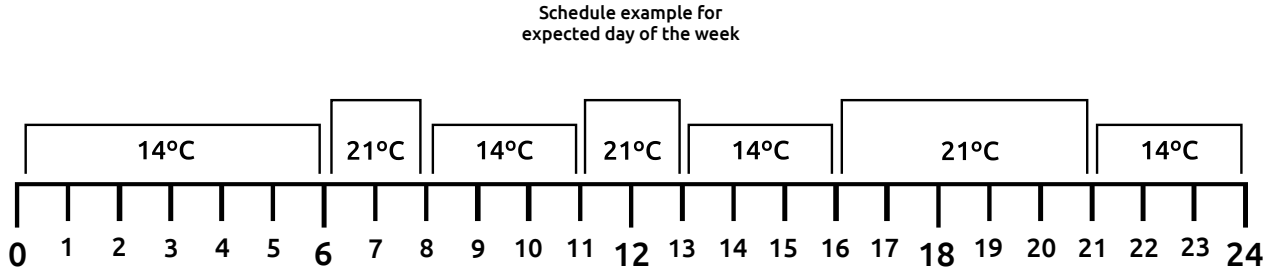
5.3.1 Schedule

The schedule allows you to program 6 time intervals during the day with precision down to the minute. Each of the 6 time intervals allows you to set a different setpoint temperature.

When creating a schedule, we have to set time period and setpoint temperature for given time period. We create a schedule for each day separately.

Schedule type example

TIME INTERVAL	Schedule example for expected day of the week
P1	Time 6:00 Temp. setpoint 21 ° C
P2	Time 8:00 Temp. setpoint 14°C
P3	Time 11:00 Temp. setpoint 21°C
P4	Time 13:00 Temp. setpoint 14°C
P5	Time 16:00 Temp. setpoint 21°C
P6	Time 21:00 Temp. setpoint 14°C

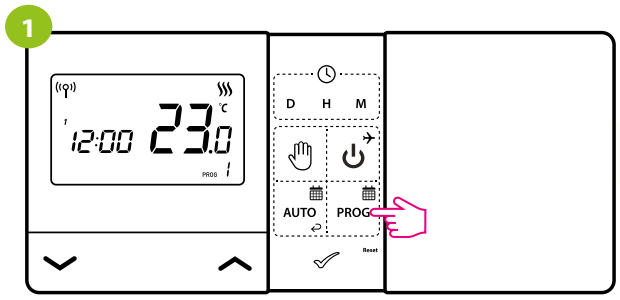


5.3.2 Programming schedule

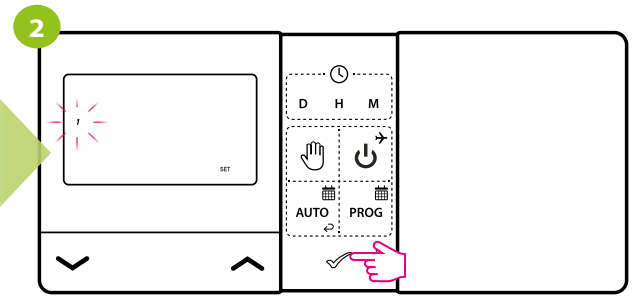
We set the schedule for each day separately.

(NOTE) It is recommended to create a schedule for each day of the week.

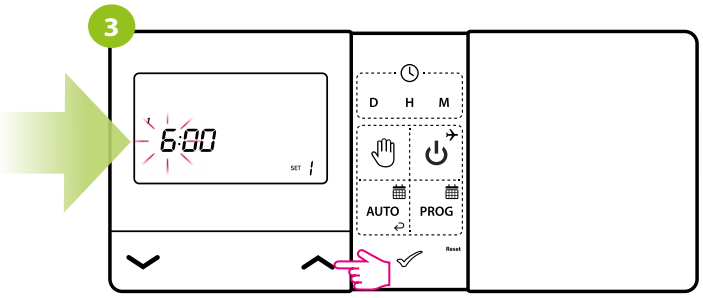
Example schedule setting:



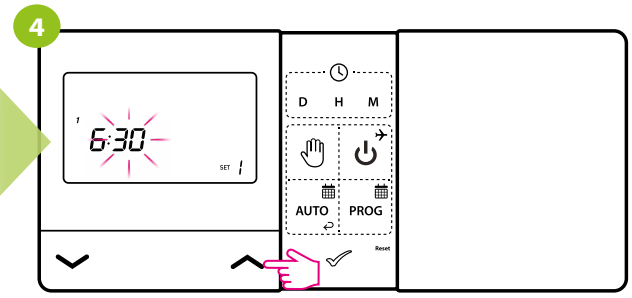
Press PROG enter the programming mode.



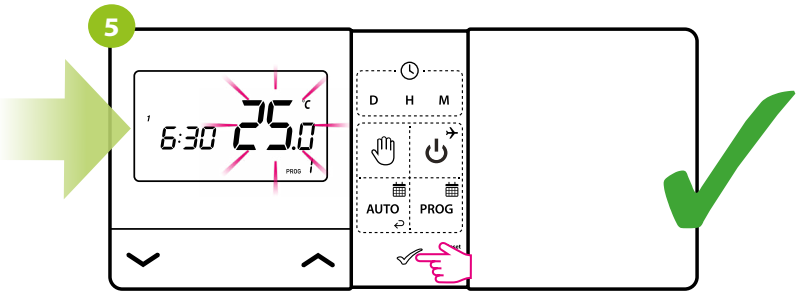
Select the week period using ∧ or ∨ buttons.
Confirm by ✓ button.



Using ∧ or ∨ buttons set the hour for the time period and then confirm by ✓ button.



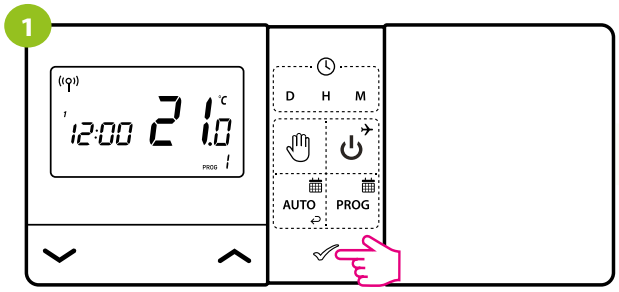
Using ∧ or ∨ buttons set the minutes for the time period and then confirm by ✓ button.



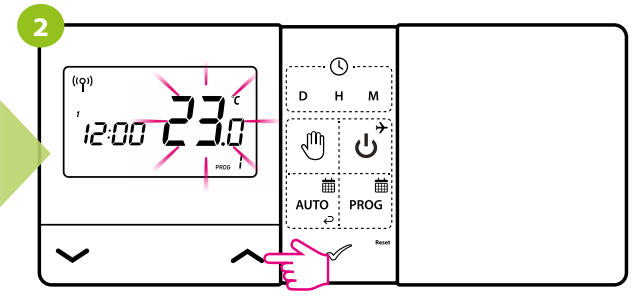
Use ∧ or ∨ buttons to set temperature setpoint.
Confirm by ✓ button. The thermostat will proceed to program selection for the next time period
(a maximum of 6 time periods/switching points can be set).

5.3.3 Temporary override mode

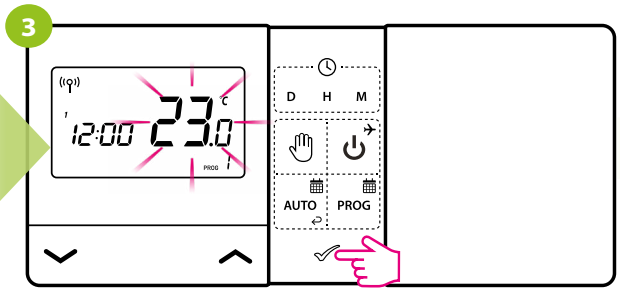
When thermostat is running schedule mode (AUTO) we can temporarily override it by setting new setpoint temperature:



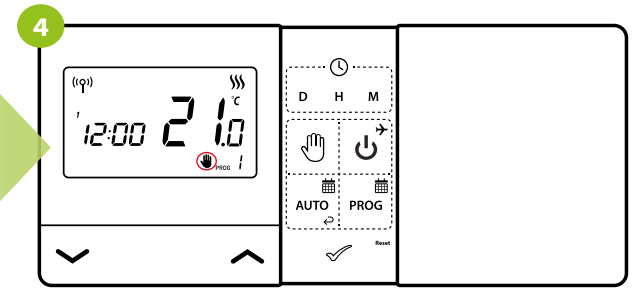
Press any button to highlight the display.



Using ∧ or ∨ buttons, set temperature setpoint.



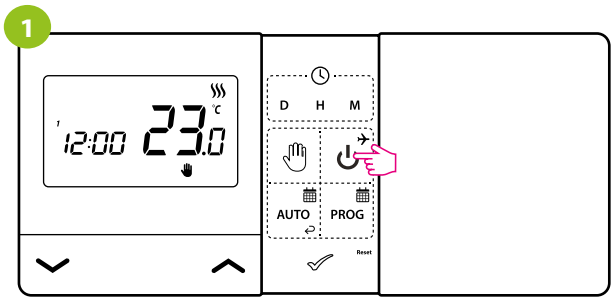
Confirm by ✓.



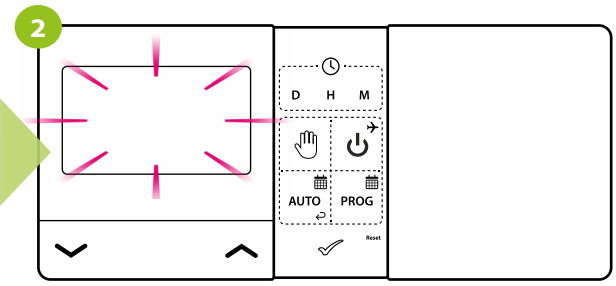
The hand icon will be displayed.
The temperature will be maintained until the next change forced by schedule.

5.4 OFF mode

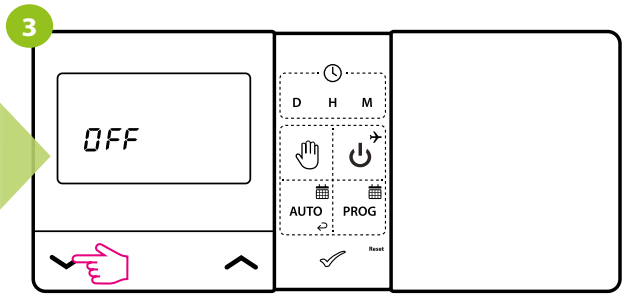
Press any button to highlight the display, then follow the steps below:



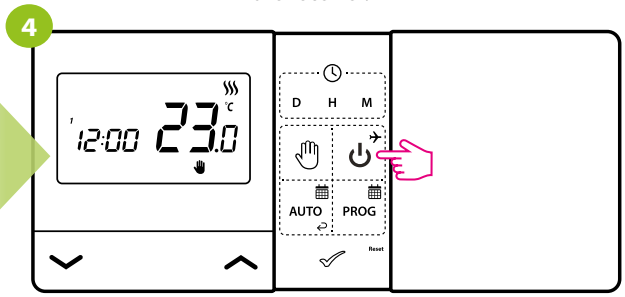
Press the ⏻ button to enter OFF MODE of the thermostat.



The thermostat screen will go blank and the relay will be off. The relay won't send a heating/cooling signal to the receiver.



In OFF MODE, pressing any key makes thermostat show OFF on the LCD display.

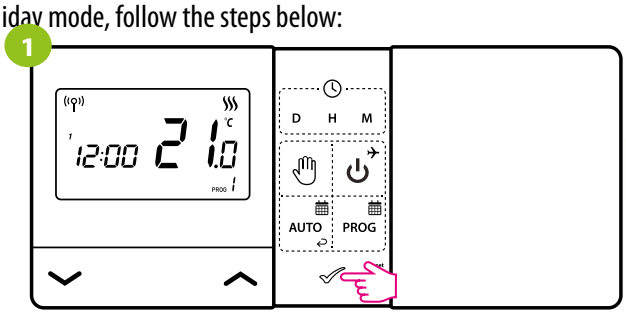


To exit OFF MODE, press the ⏻ button again. Thermostat will return to the previous operating mode.

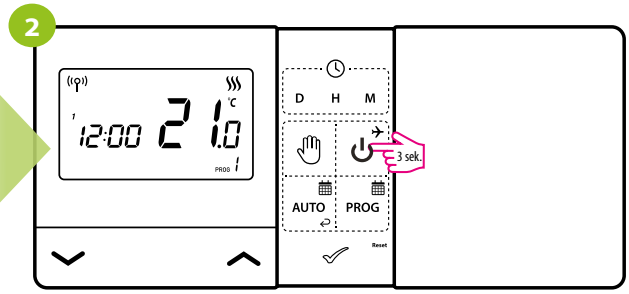
5.5 Holiday mode

Holiday mode is a special program temperature setpoint which thermostat will maintain for specified amount of days. During holiday mode thermostat is maintaining frost protection setpoint temperature.

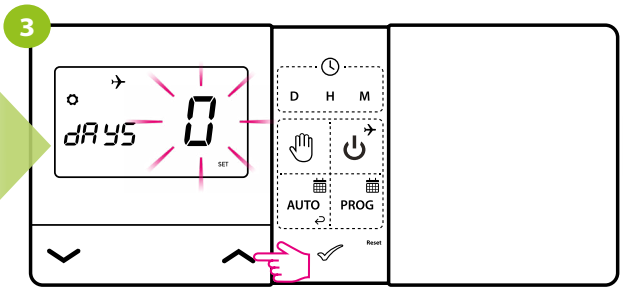
To set holiday mode, follow the steps below:



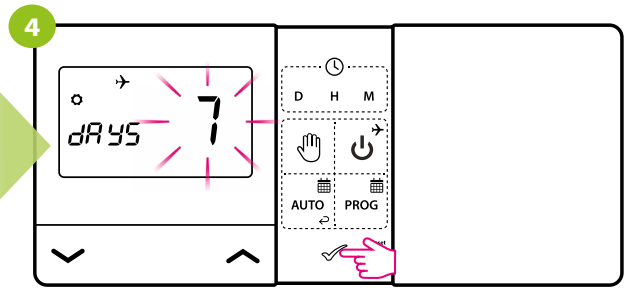
Press any button to highlight the display.



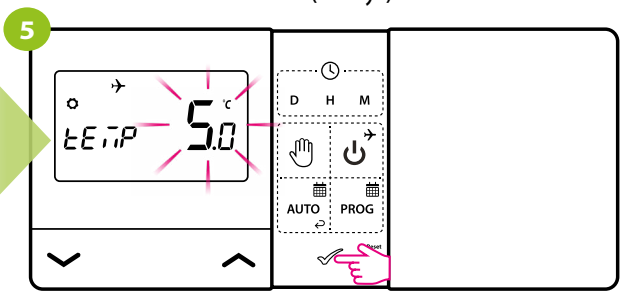
Press and hold ⏻ button for 3 seconds.



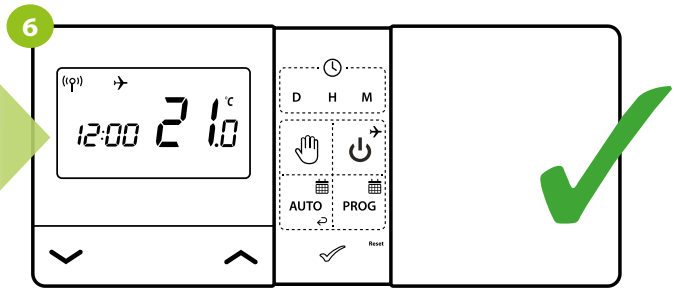
Use ^ or v buttons to select duration of the holiday mode (in days).



Confirm by ✓ button.

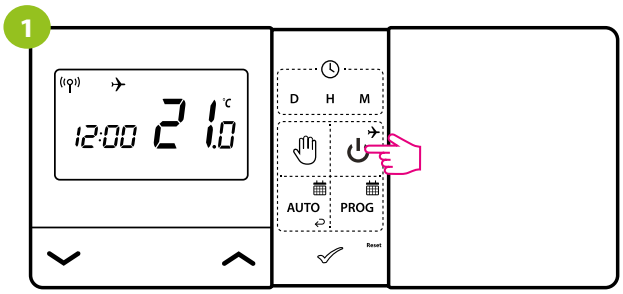


Use ^ or v buttons to set temperature setpoint which thermostat will maintain for defined number of days. Confirm by ✓ button.

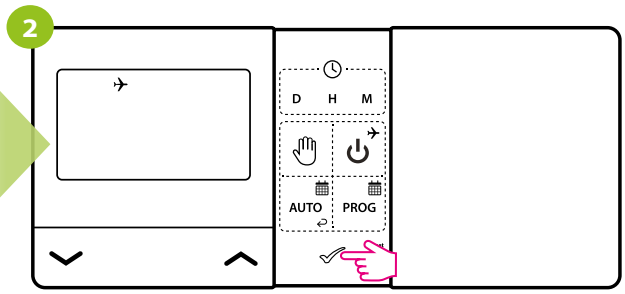


The thermostat is working in holiday mode. Plane icon is on the display.

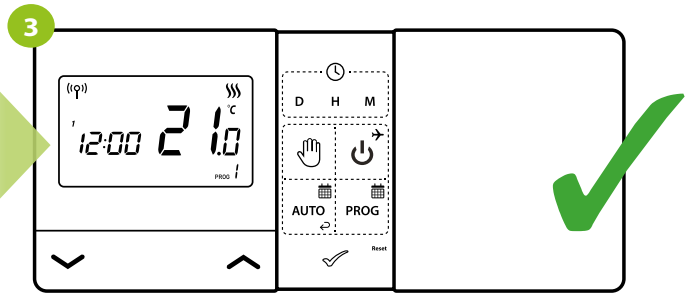
TO STOP HOLIDAY MODE:



Press ⏻ button.



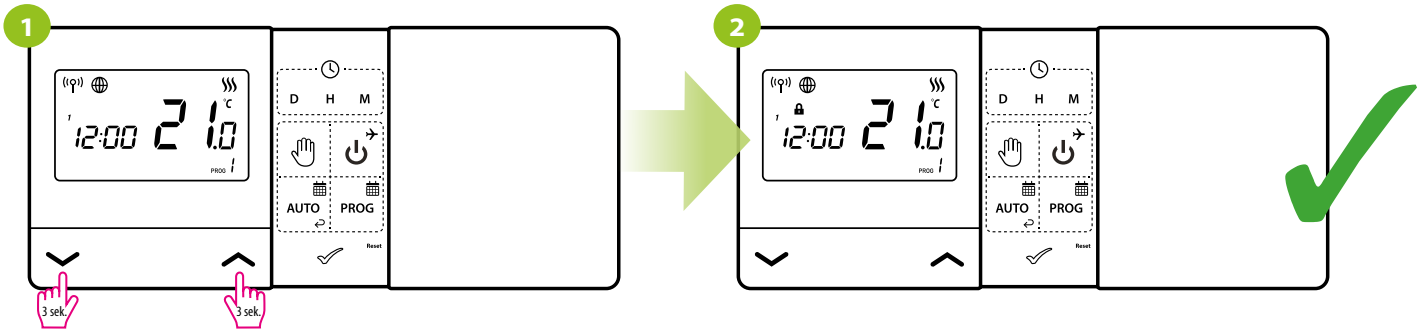
Confirm by ✓ button.



The thermostat will return to the previous mode.

5.6 Key lock function

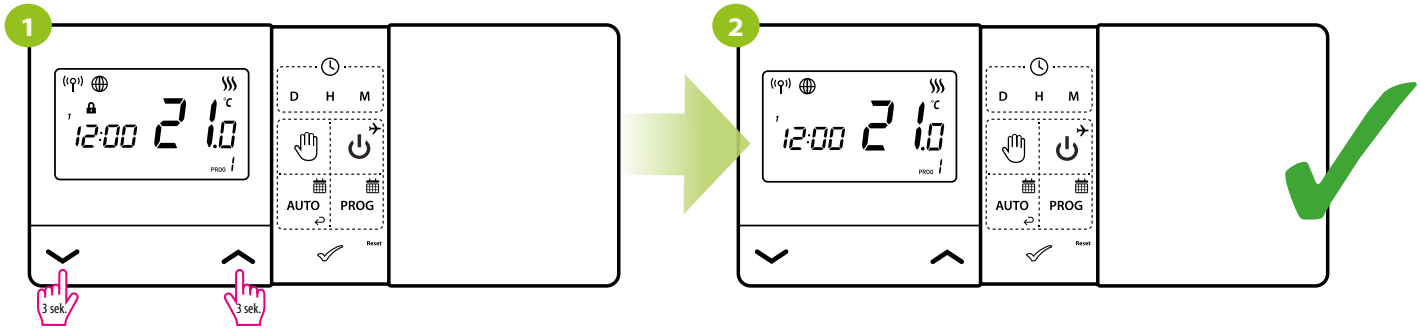
To LOCK the thermostat keys, follow the steps below:



Press and hold ∧ and ∨ buttons for 3 seconds.

A lock icon will appear on the screen.
The buttons on the thermostat have been locked.

To UNLOCK the thermostat keys, follow these steps:



Press and hold ∧ and ∨ buttons again for 3 seconds.

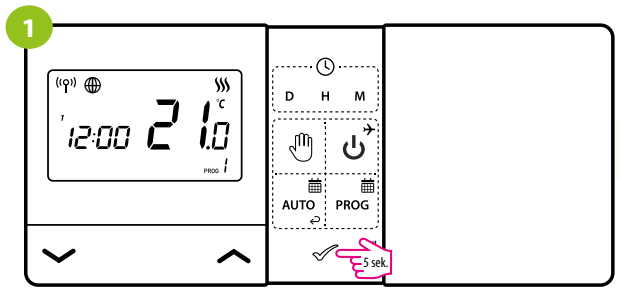
The lock icon will disappear from the screen.
The buttons on the thermostat have been unlocked.

In the thermostat, it is possible to set additional PIN code for key lock function..
This is done using parameters P09 and P10 in the installer settings

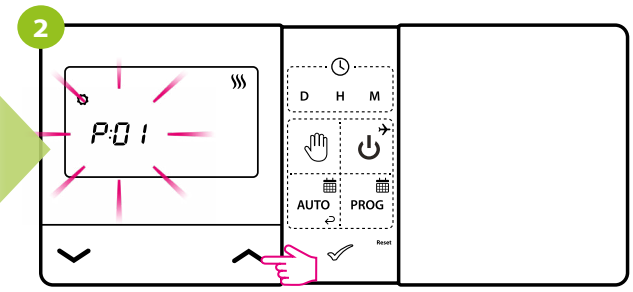
1. After activating the P09 parameter and setting a new PIN code, the user will need to enter the PIN code each time to enter the installer parameter settings.

2. If user wants to set PIN lock not only for installer parameter settings but also for keys lock then its necessary to activate P10 parameter. Set the PIN code in the installer settings in parameter P09 and then activate parameter P10. After activating the P10 parameter, entering the PIN code will be required each time when user wants to unlock thermostat keys.

6. Offline installer parameters (without connection to the application)



To enter installer settings, press and hold ✓ button for 5 seconds.



You are in the installer mode. Use ∧ or ∨ buttons to move between parameters. Enter the parameter by ✓ button. Edit the parameter using ∧ or ∨ button. Confirm the new parameter value with the ✓ button.

INSTALLER PARAMETERS:

Pxx	Function	Value	Description	Default value
P01	Heating/Cooling mode selection	❄	Cooling	♨
		♨	Heating	
P02	Temperature control method	1	SPAN ±0,25°C	1
		2	SPAN ±0,5°C	
		3	TPI for Underfloor Heating	
		4	TPI for Radiators	
		5	TPI for Electrical Heating	
P03	Offset temperature	-3.5°C do + 3.5°C	If the thermostat indicates wrong temperature, you can correct it by ± 3.5°C	0°C
P04	Relay type	NO	Normally Open type of relay	NO
		NC	Normally Closed type of relay	
P05	Clock format	24h	24 hour	24h
		12h	12 hour	
P06	Minimum setpoint	5°C - 20°C	Minimum heating / cooling temperature that can be set	5°C
P07	Maximum setpoint	20°C - 35°C	Maximum heating / cooling temperature that can be set	35°C

Pxx	Function	Value	Description	Default value
P08	Key sound	NO	Off	YES
		YES	On	
P09	PIN Code	NO	Disabled	NO
		PIN	Enabled	
P10	Require a PIN to unlock the keys every time	NO	Function disabled	NO
		YES	Function enabled	
SYNC	Pairing function with E901RXWIFI receiver (SYNC)	NO	Pairing disabled	NO
		YES	Pairing enabled	
APP	Pairing function with app	NO	Pairing disabled	NO
		YES	Pairing enabled	
CLR	Clear parameters to the default factory settings	NO	No action	NO
		YES	Factory Reset	

7. Engo Smart App

7.1 7.1 App description (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 „Powered by Tuya" or „Powered by Tuya: Intelligence Inside" logos.

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.

We can add more E901WiFi devices to the app. All of them can be optionally assigned to the specified rooms, which makes them easier to identify. All devices, regardless of whether they belong to specific rooms, are assigned to one of the created houses (user can have more than one house to manage). Such assignment can be helpful. If there are more houses to manage, app can provide current weather information for each house separately.

Thanks to this data, you can create so-called scenes, e.g. automate repetitive activities to 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 to change heating mode on all theremostats. It can be easily configured tap-to-run scenes (e.g. user will tap one button in the app and all thermostats will change mode to OFF MODE). Of course there are much more possibilities because ENGO Smart app is compatible with various devices available on the market.

Device compatibility in the ENGO Smart application:

ENGO Wi-Fi

E901WIFI

E10W230WIFI/E10B230WIFI

EIRTXWIFI

ENGO ZigBee

EGATEZB

EONEBATW/EONEBATB
EONE230W/EONE230B

EDOORZB

ECB62ZB

EMODZB

Compatibility with tuya devices (examples):

Smart plugs

Smart bulbs

Cameras

Doorbells

7.2 Engo Smart App installation

DOWNLOAD THE ENGO SMART APP:

DOWNLOAD FROM: Google Play

DOWNLOAD FROM: App Store

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.

Requirements for a mobile device with Android:

Android version 5.0 or higher

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.

Requirements for a mobile device with IOS:

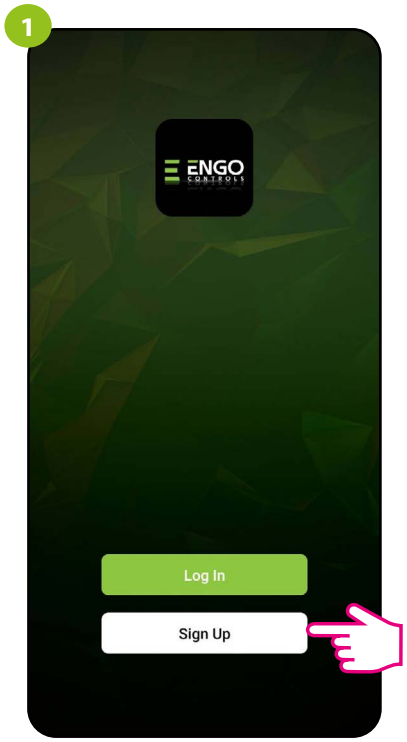
IOS version 5.0 or higher

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

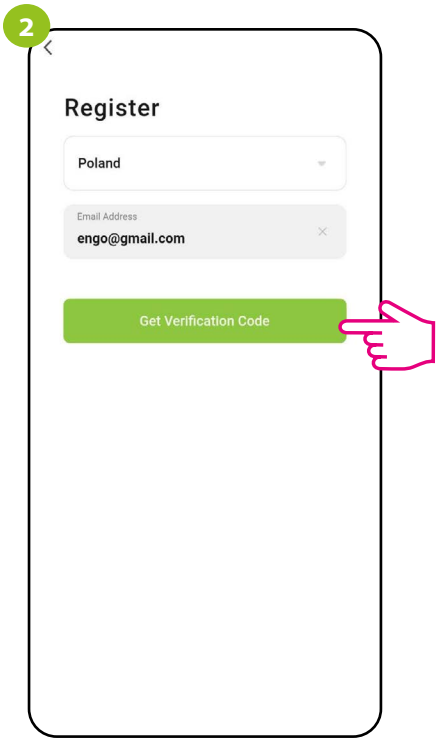
Please note! Make sure your router is within range of your mobile phone. Make sure you are connected to the Internet. This will reduce the pairing time of the device.

REGISTER THE NEW ACCOUNT:

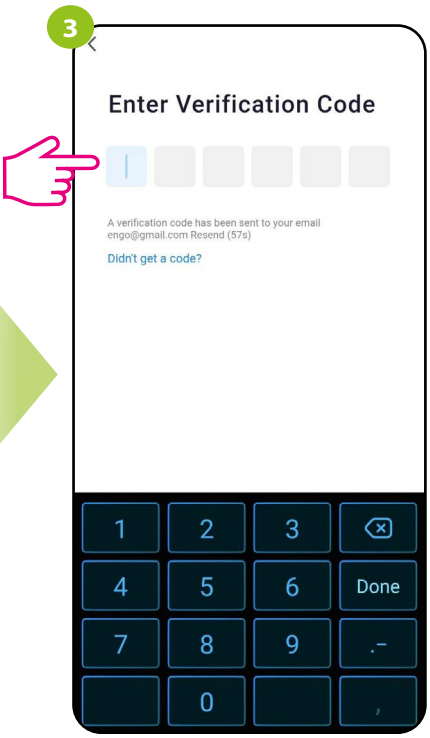
To register a new account, please follow the steps below:



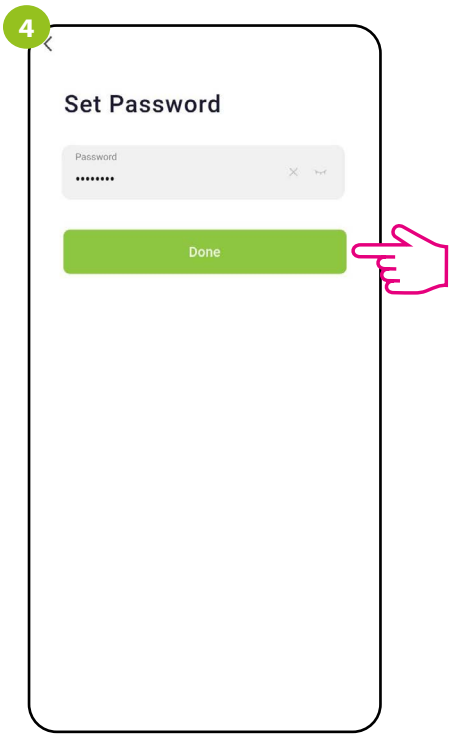
Click „Sign Up" to create new account.



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



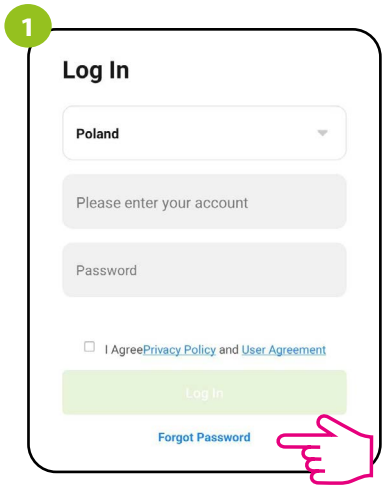
Enter the verification code received in the email.
Remember that you only have 60 seconds to enter the code!



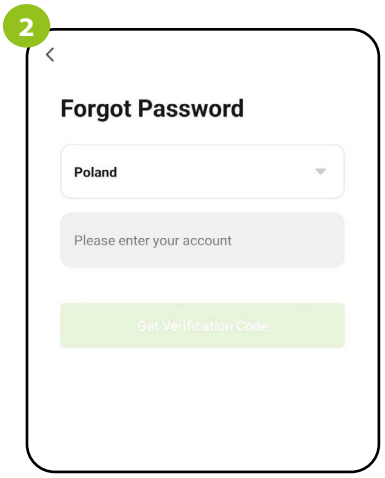
Then set the login password.
Password must contain 6-20 characters in including letters and numbers.

FORGOTTEN PASSWORD:

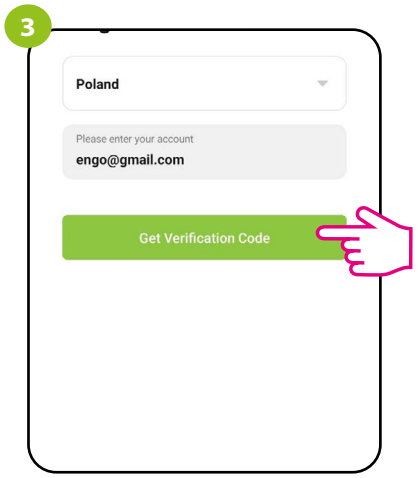
If you have forgotten your password, you can use „I forgot my password" function as below:



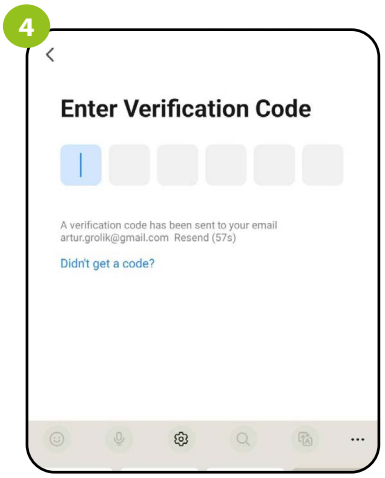
Click on „I forgot my password"



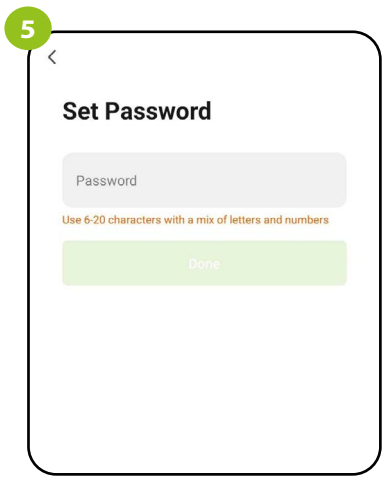
Enter the email address used when registering an account



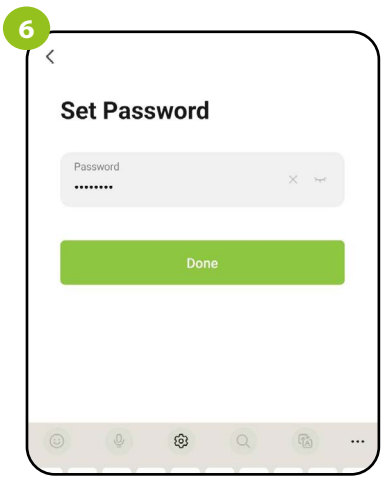
Click to get a verification code to the entered e-mail address



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



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



Once approved, you'll logged into the application.

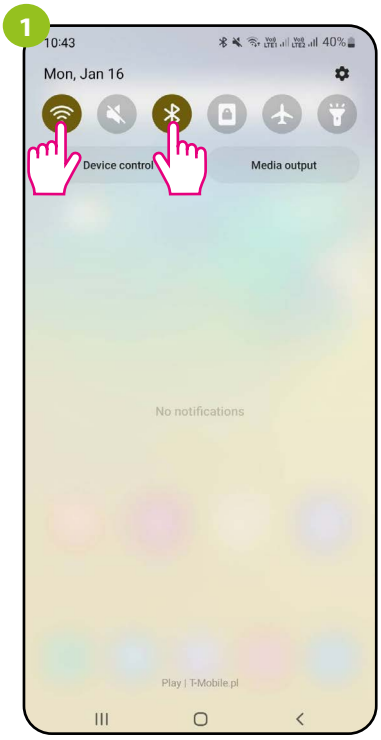
7.3 Guidelines for installing devices in a WiFi network

• Make sure that the Wi-Fi network where you want to install the app operates over the 2.4 GHz frequency.
• We recommend turning off mobile internet (mobile data) on your phone during configuration.
• It is recommended to use the encryption of the Wi-Fi network at the WPA2-Personal level.

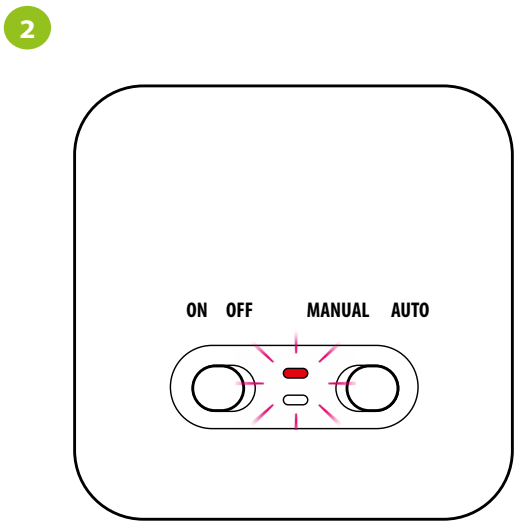
Parameters	Specification
Frequency band (GHz)	2.4GHz
WLAN standard	IEEE 802.11 b/g/n
Protocols	IPv4/IPv6/TCP/UDP/HTTPS/TLS/MulticastDNS
Protection	WEP/WPA/WPA2/AES128
Supported type	STA/AP/STA+AP

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

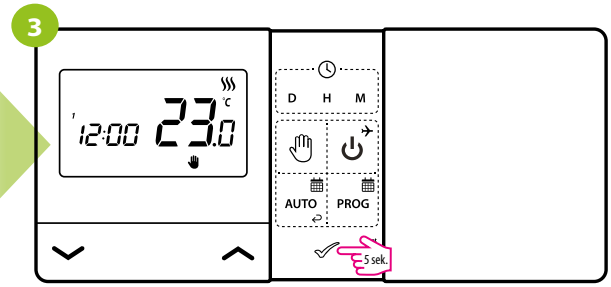
Connect the thermostat to WiFi:



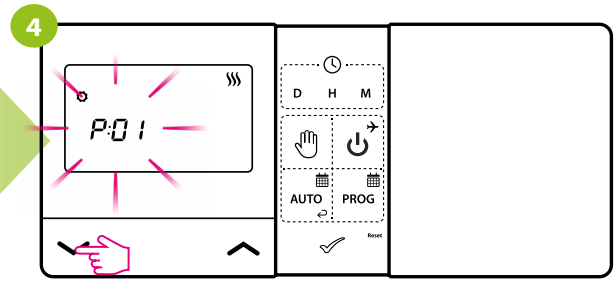
Turn on Wi-Fi and Bluetooth on your smartphone. It's best to connect mobile to the Wi-Fi network to which you want to assign the thermostat.



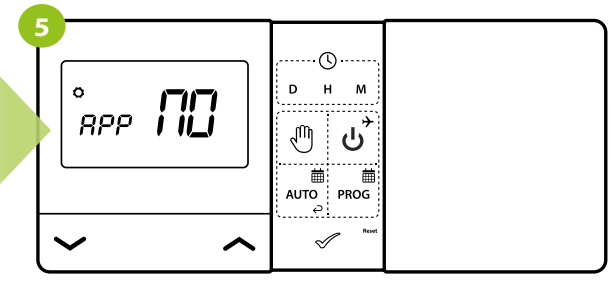
Connect the receiver to the power supply.
If E901WIFI has not yet been added to the application, the red LED receiver will flash red for a maximum 10 minutes, which means that the devices are ready to be added to the app.
If you do not add the device to the application within this time, the LED will turn on solid red light (cannot be installed in the app).
ATTENTION!
If you choose to add E901WIFI to the app, then you can do it in two ways:
1. Turn off the receiver from the power supply and after a few seconds connect it back.
Wait until the red LED on the receiver flashes on red and start adding devices in the application - go to step 7 on the next page.
2. If the red LED on the receiver is not flashing, force installing process from thermostat, continue with the steps below:



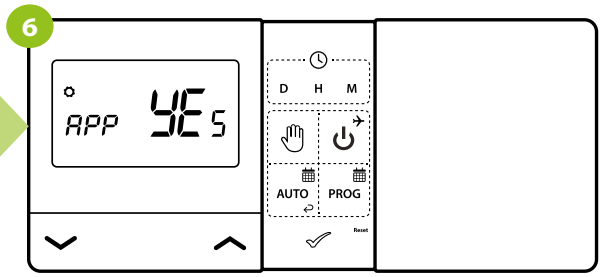
Press and hold ✓ button for 5 seconds



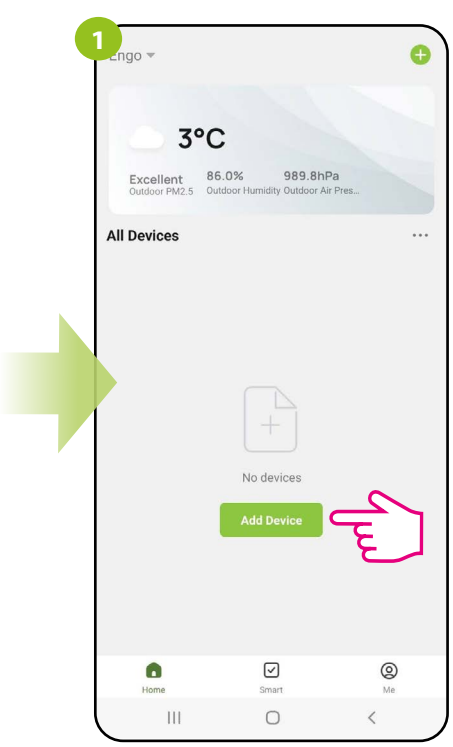
Use ∧ or ∨ buttons to select the parameter of adding to the application - APP



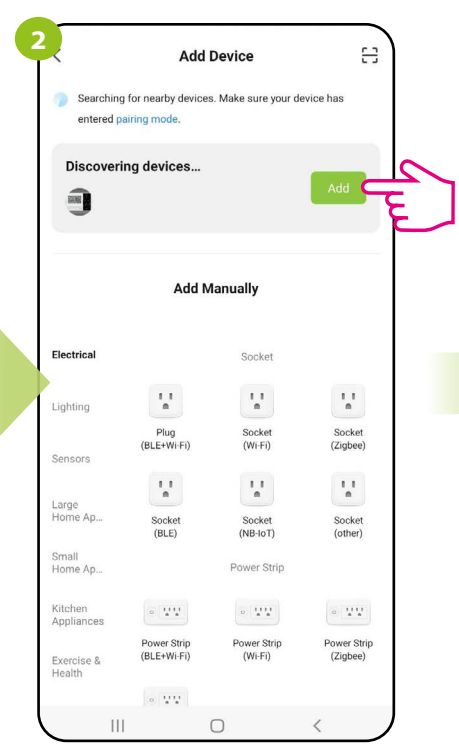
Confirm by ✓ button.



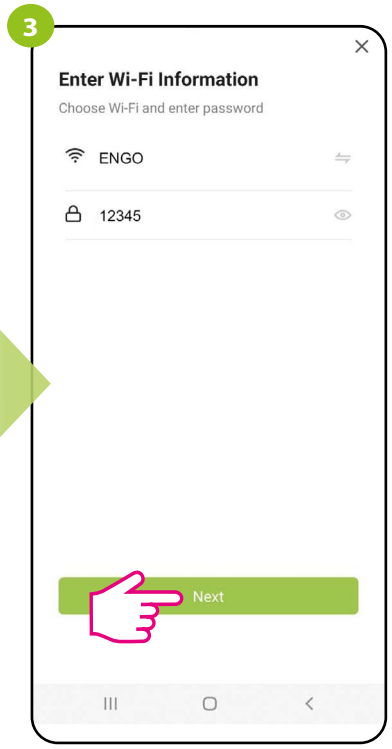
Use ∧ or ∨ buttons to select YES and start the process of adding to the application by confirming ✓ button.



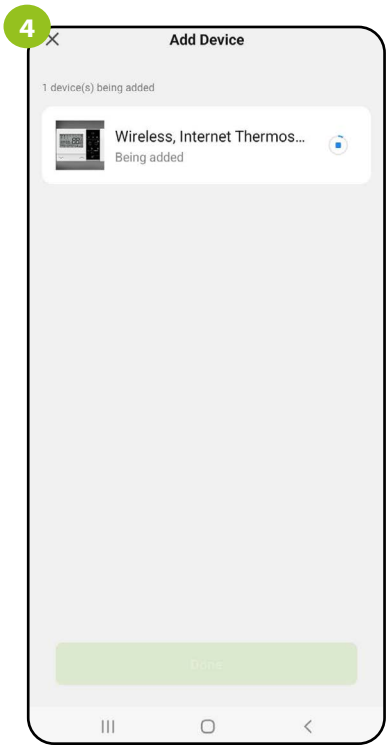
In the app, select: „Add Device".



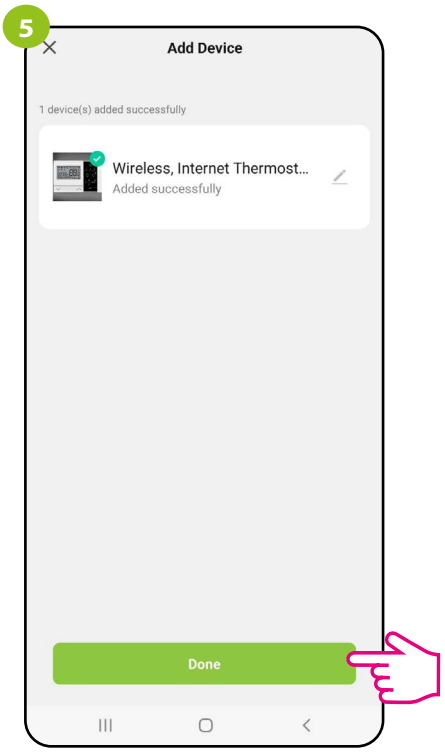
After finding the thermostat, go „Add".



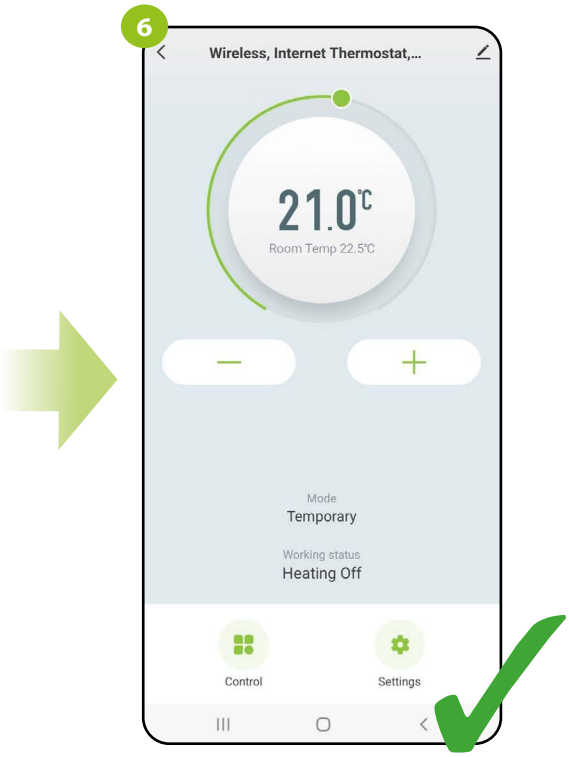
Select the Wi-Fi network in which the thermostat will operate and enter the password of this network.



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



Name the device and click „Done".



The thermostat has been installed and displays the main interface.

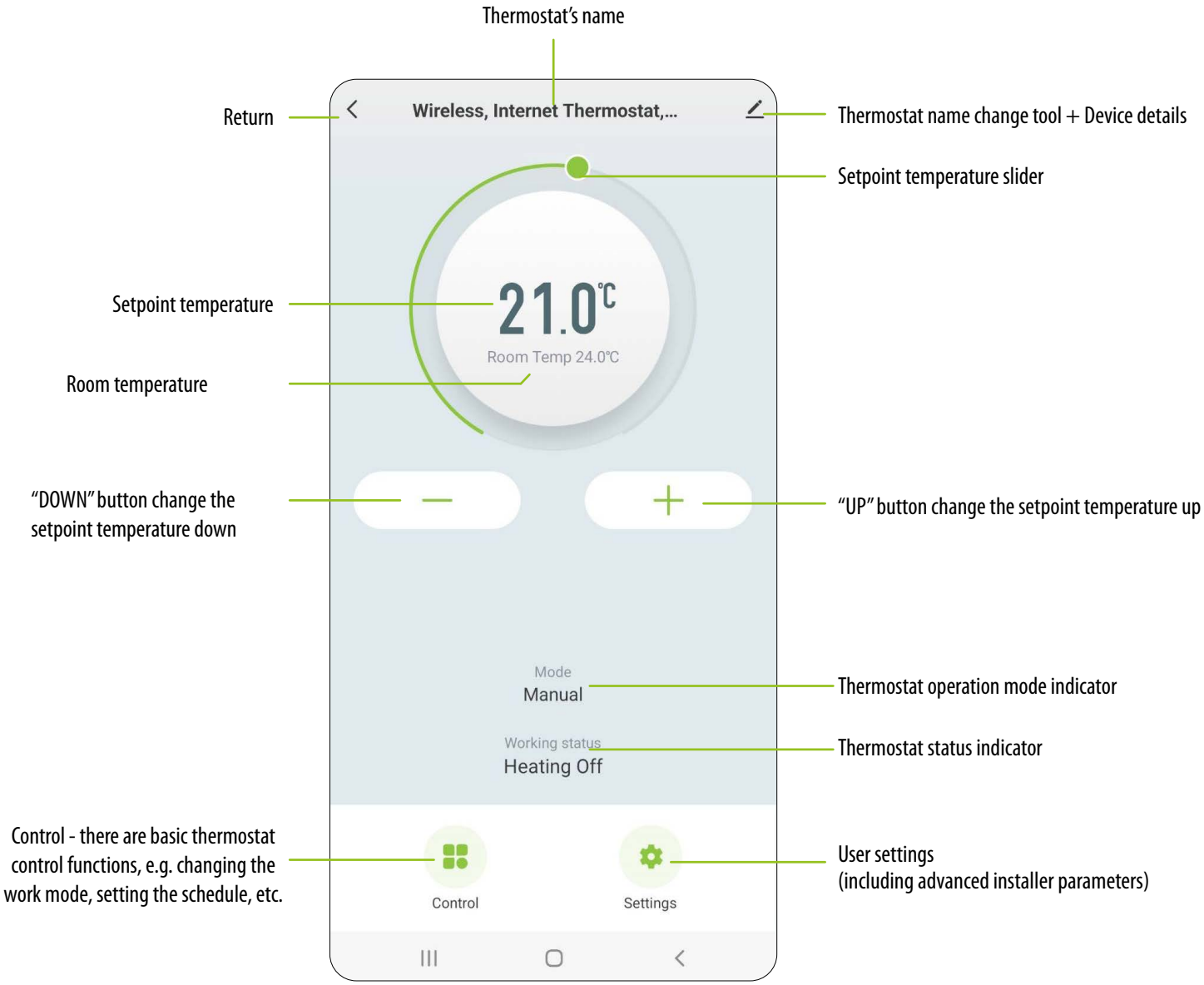
9. Operation in the app

9.1 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.

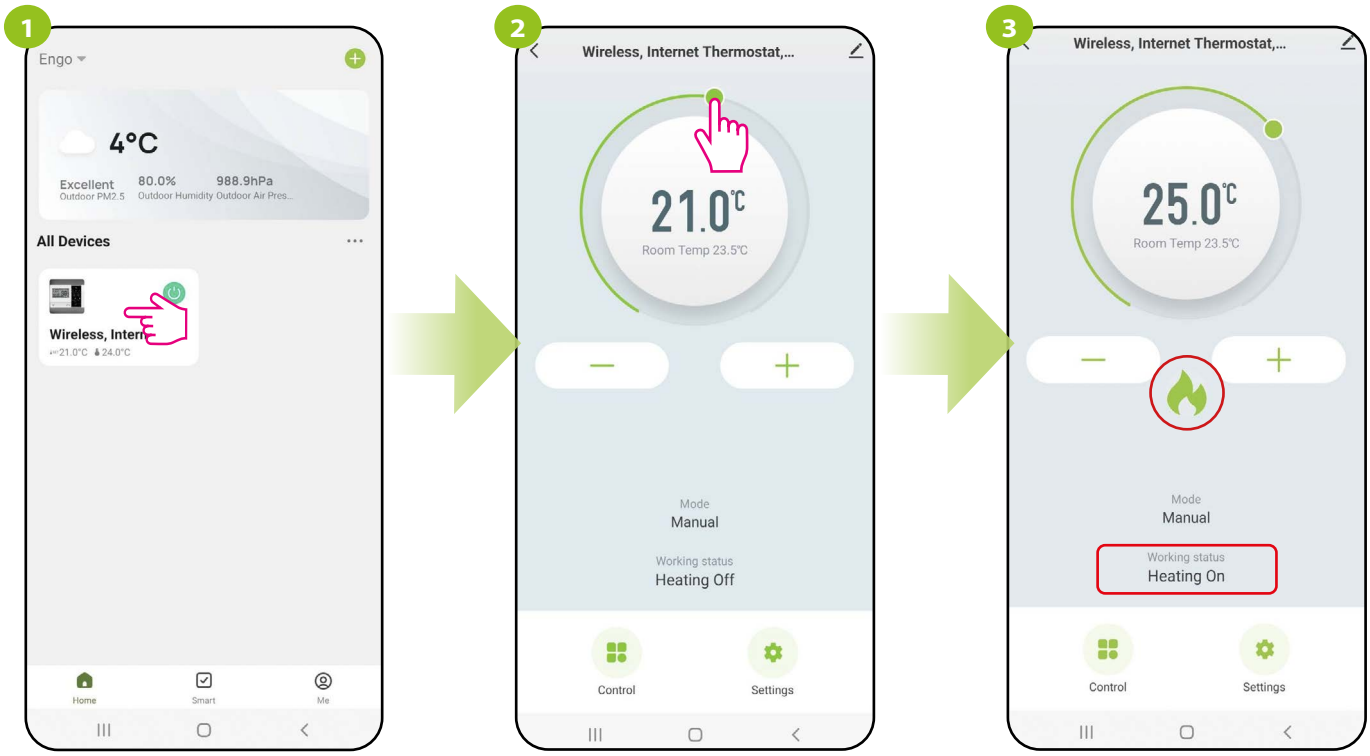
9.2 App icons description

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



9.2.1 Setpoint temperature change

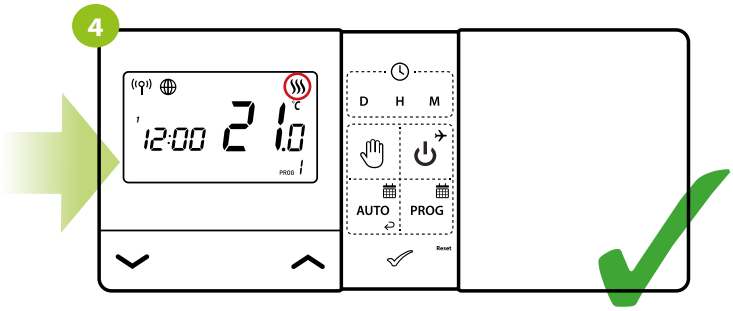
Changing the temperature setpoint is done by moving the cursor left / right in the app. On the screen, the actual temperature setpoint is represented by the number displayed in larger font.



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 On”

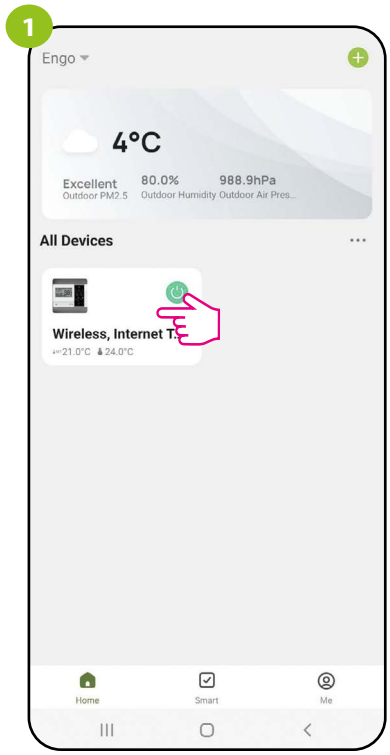


...and the heating icon appears on the display of the thermostat.

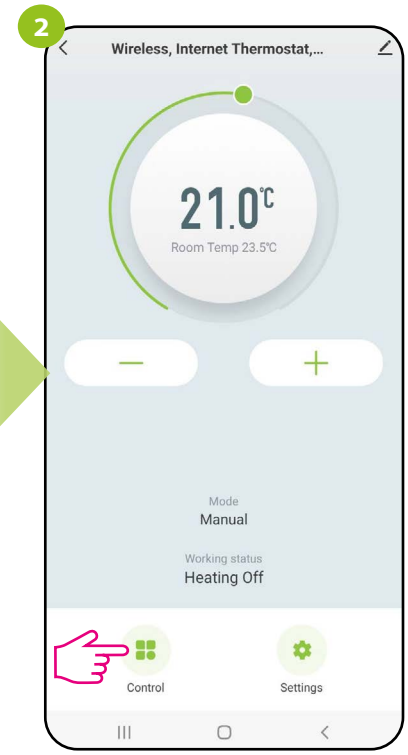
9.3 Control

9.3.1 „Power" function

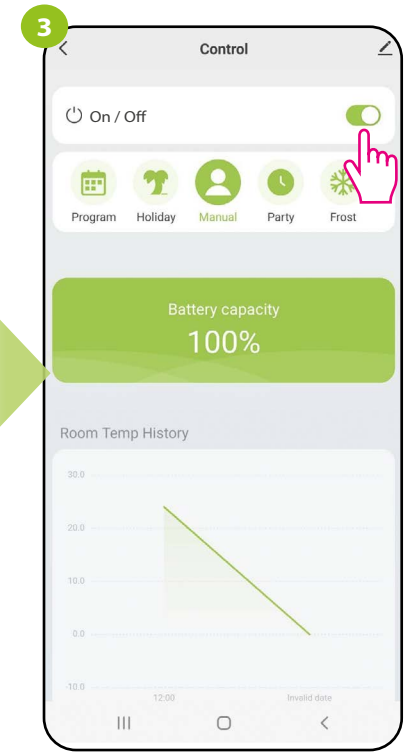
In this option, the user can turn ON / OFF the thermostat by the app. To do so, please follow the steps below:



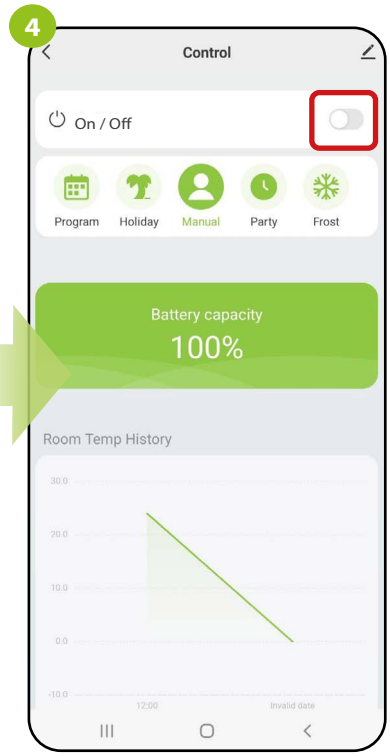
Enter the thermostat interface



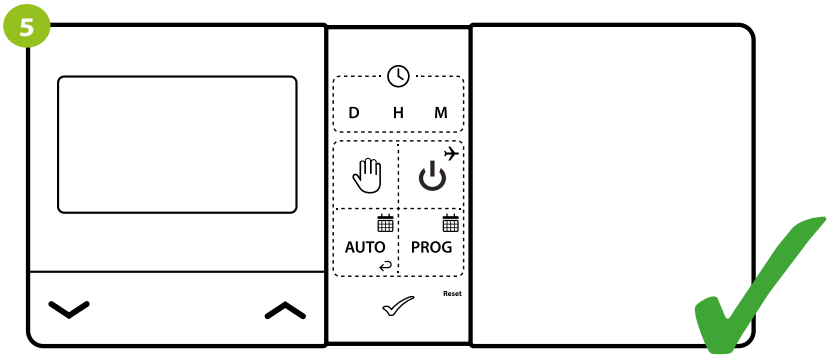
Select the „Control" option



You can turn the thermostat ON / OFF by using „Power" slider.



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



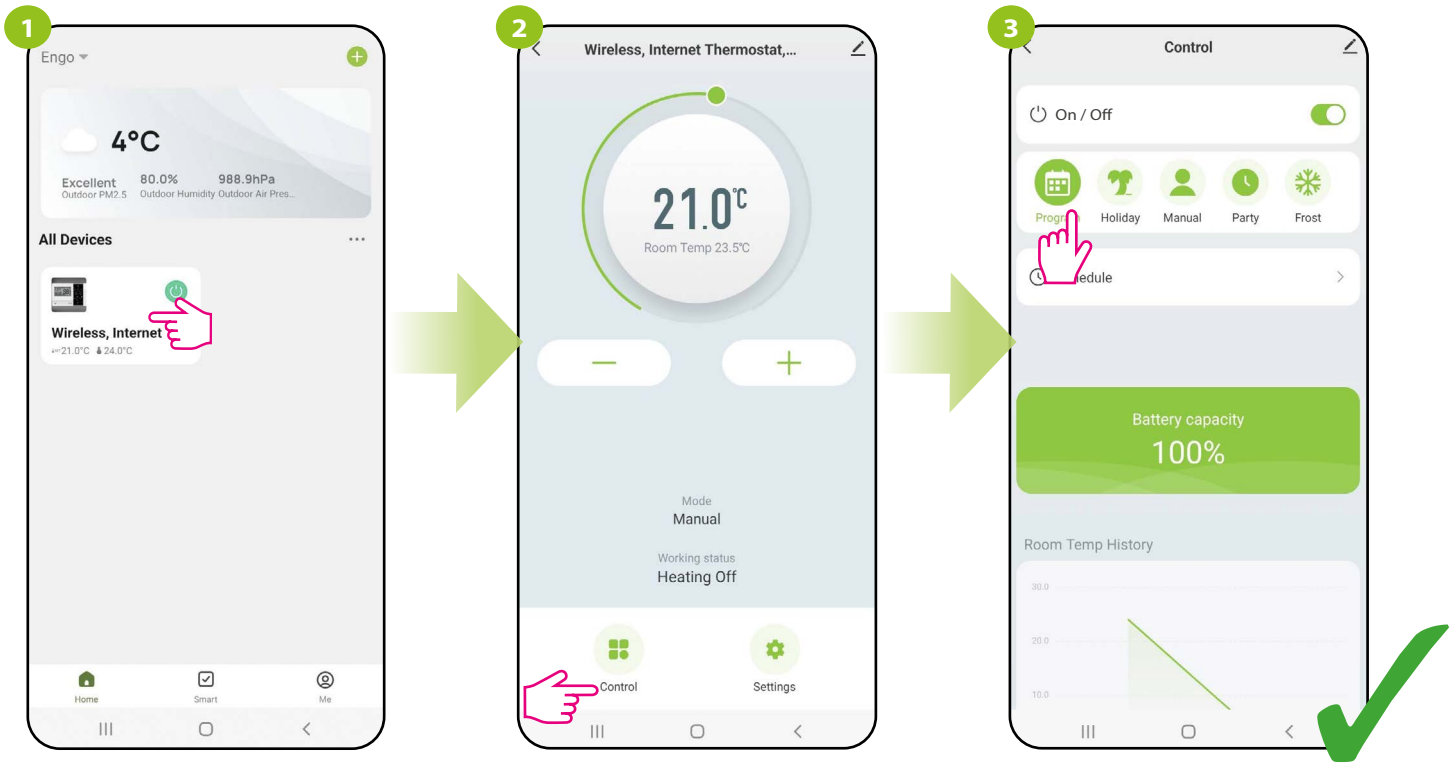
The thermostat screen will go blank, and the relay will be off. The relay will not sends a heating/cooling signal to the receiver.

9.3.2 Schedule mode

The WiFi 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 „Program" icon in the „Control" tab. Once activated, the status of the thermostat will update to „Schedule".

To activate the schedule mode:

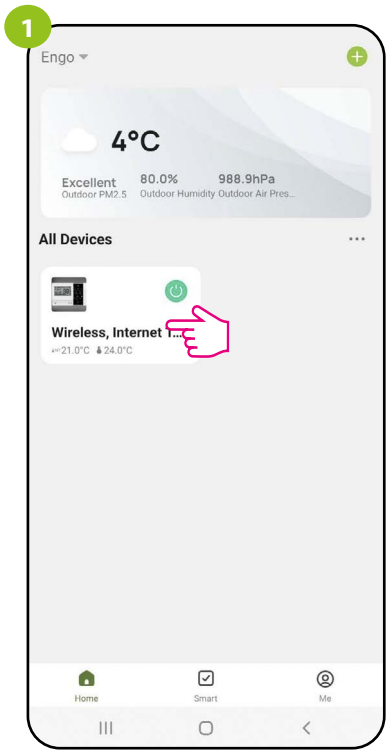


Enter the thermostat interface.

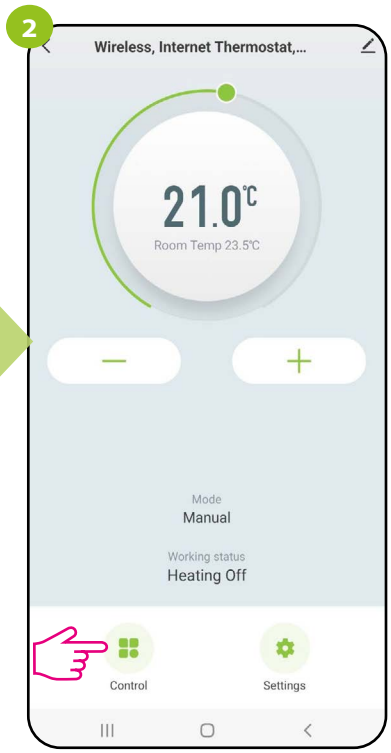
Select the „Control" option.

Select „Program" mode.

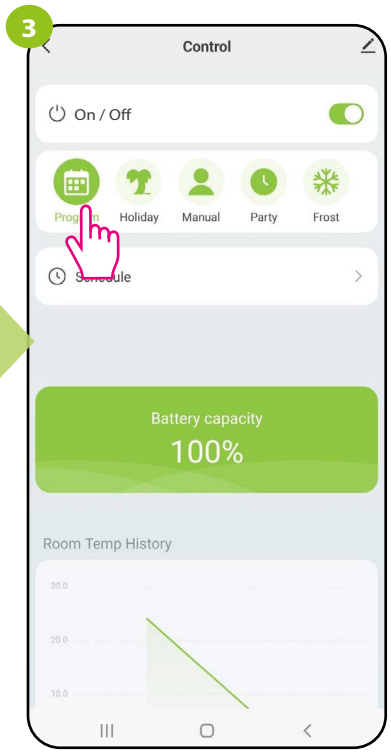
TO PROGRAM A SCHEDULE IN THE APP:



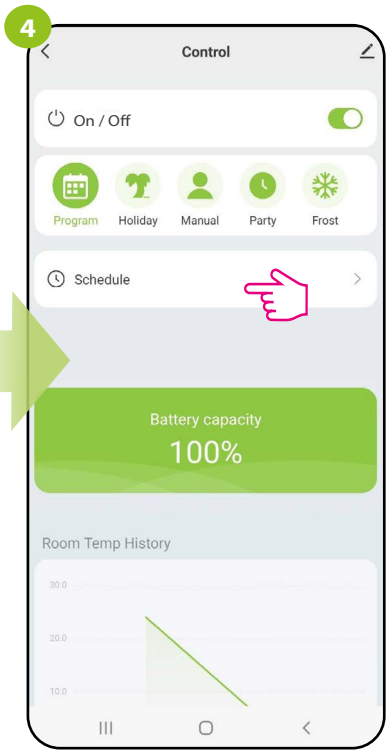
Enter the thermostat interface.



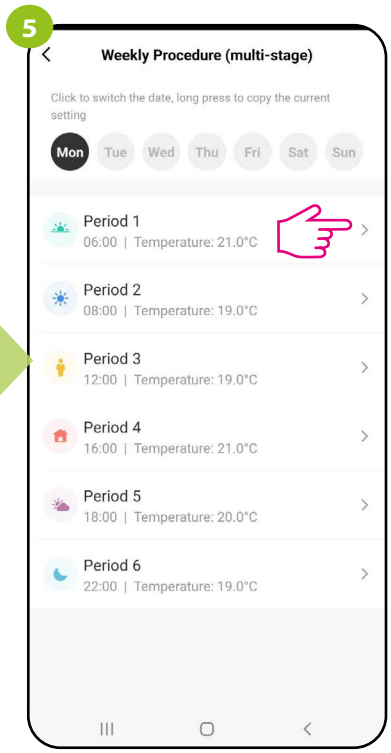
Select the „Control" option.



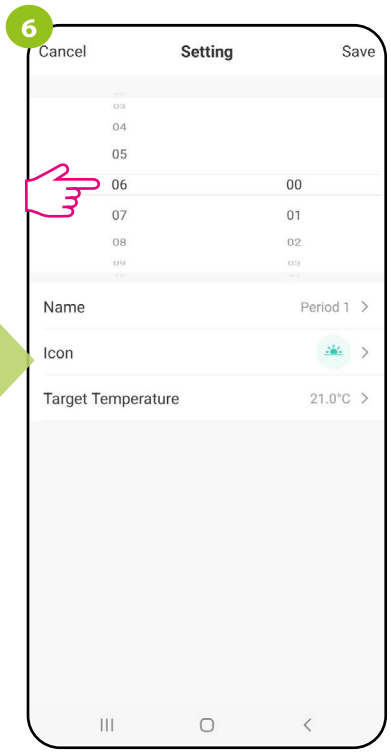
Select „Program" mode.



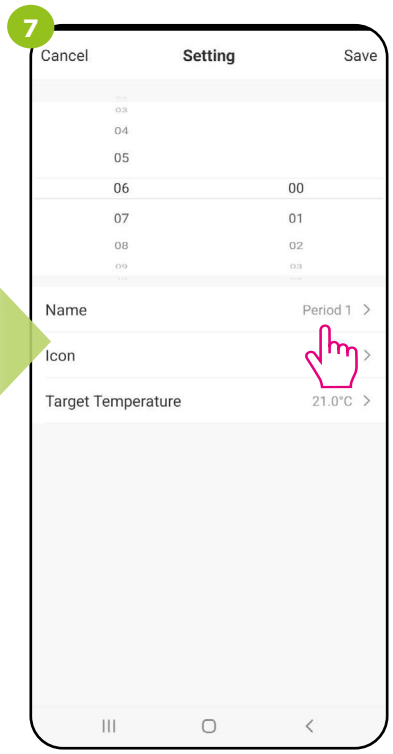
Enter the schedule settings



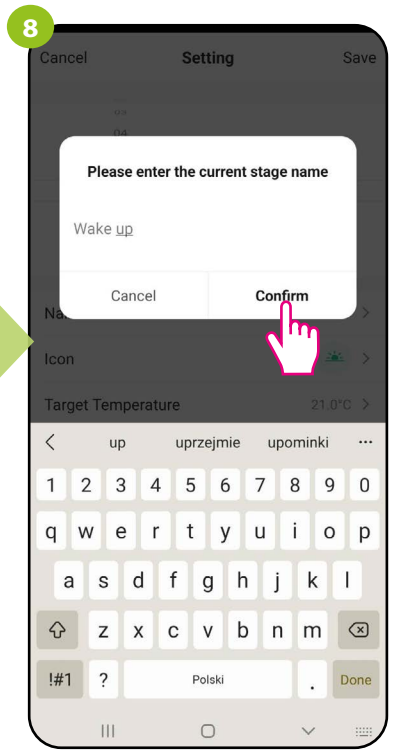
Select one of the six switch points to edit (the editing order is optional).



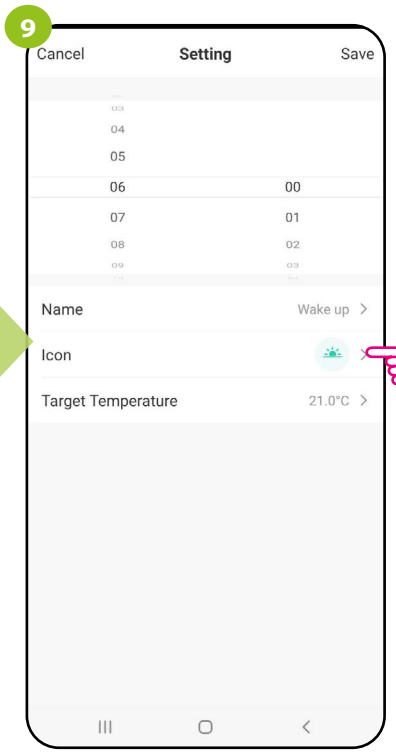
Select the start time of the switch point.



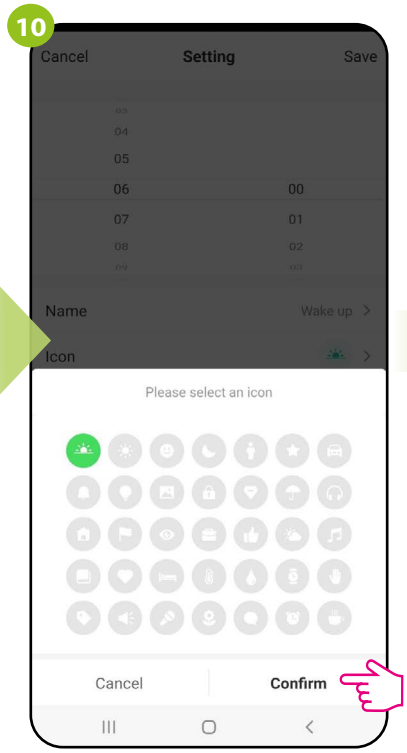
Click on the name.



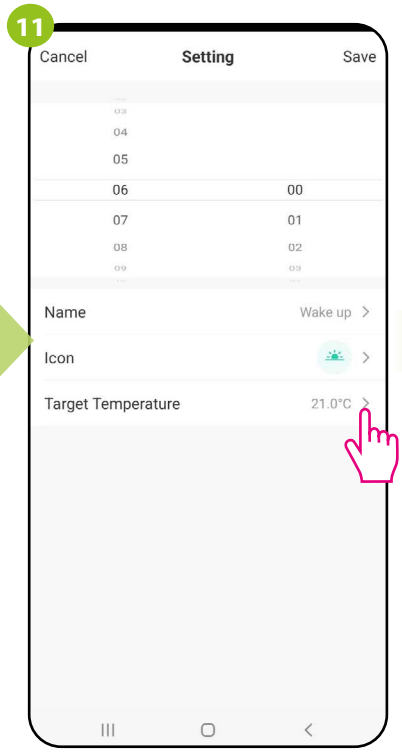
Enter the name of the time period and confirm.



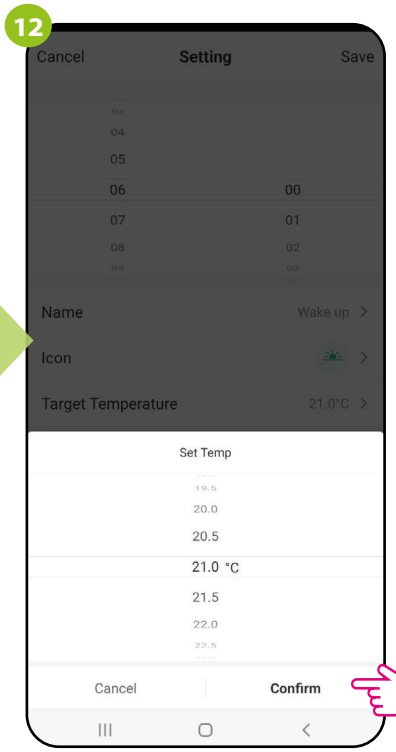
Click on the icon selection option.



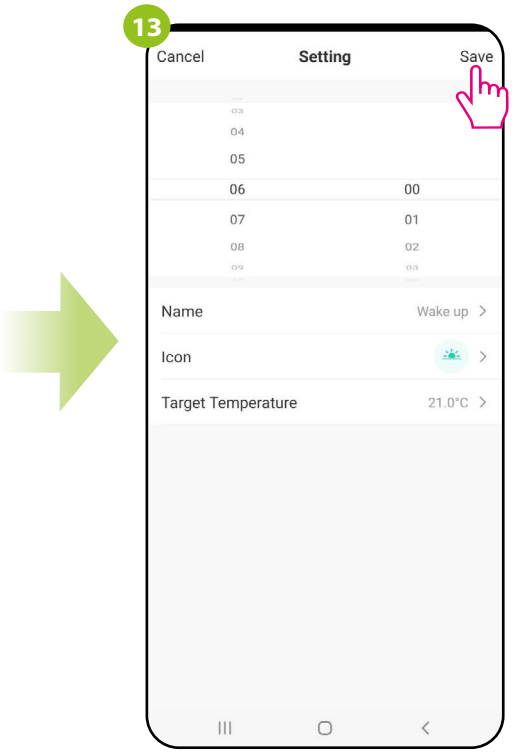
Select an icon for the selected one program and confirm.



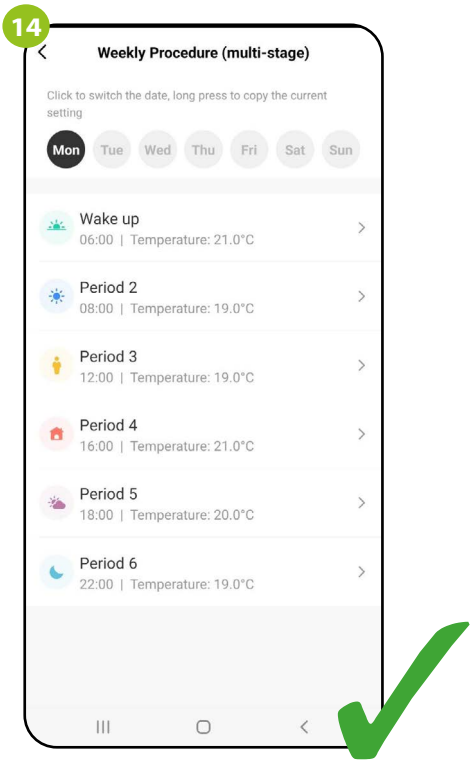
Click on the temperature setpoint option to set the temperature for selected program.



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



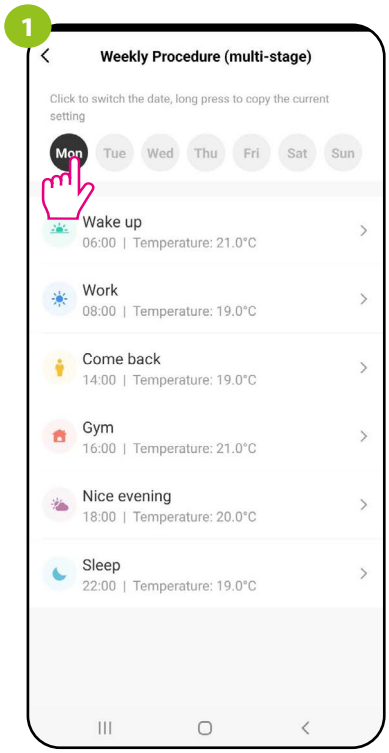
Then save the settings.



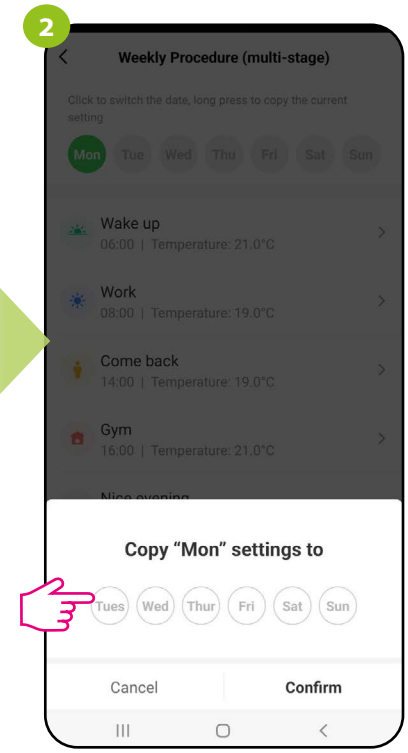
After all, you will see changes in the schedule. Select another program and follow steps 5 to 13.

COPYING DAYS

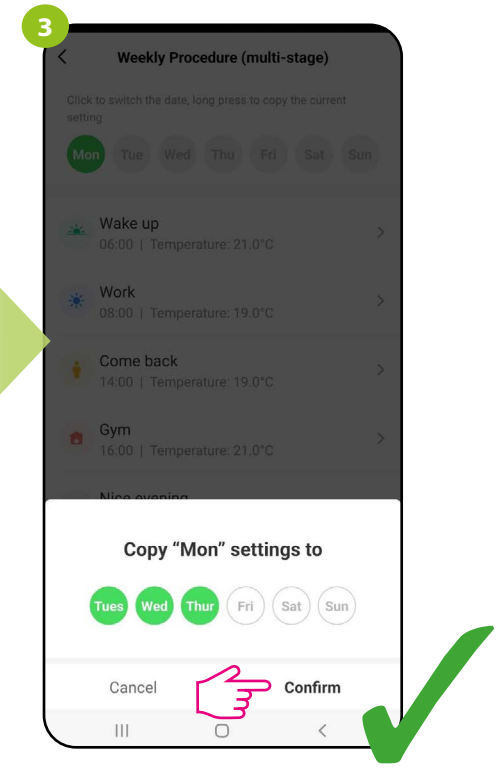
The ENGO Smart app allows you to copy the settings of a selected day in the schedule to another. Thanks to this, you do not have to set the next day for the second time if you want to have exactly the same settings in it. To do so, please follow the steps below:



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.

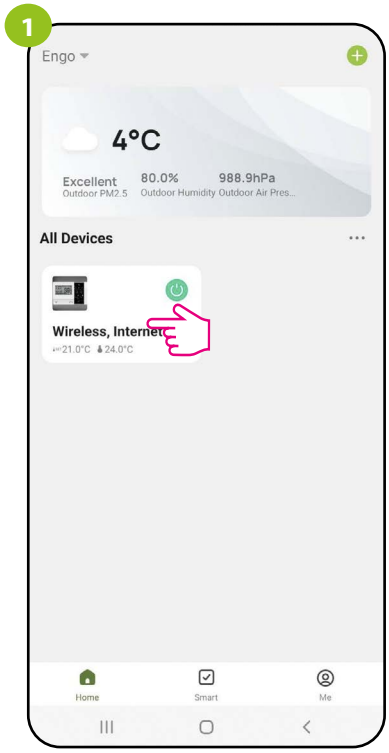


After selecting the days, confirm.

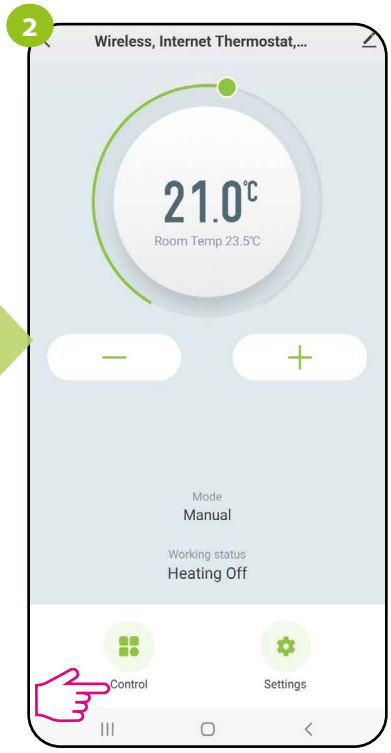
9.3.3 Holiday mode

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)

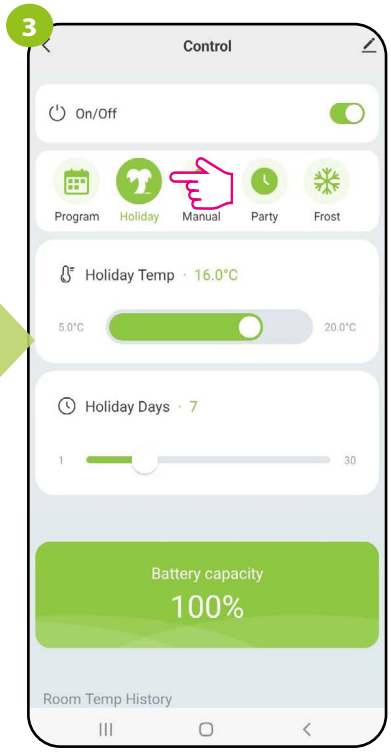
TO SET THE HOLIDAY MODE:



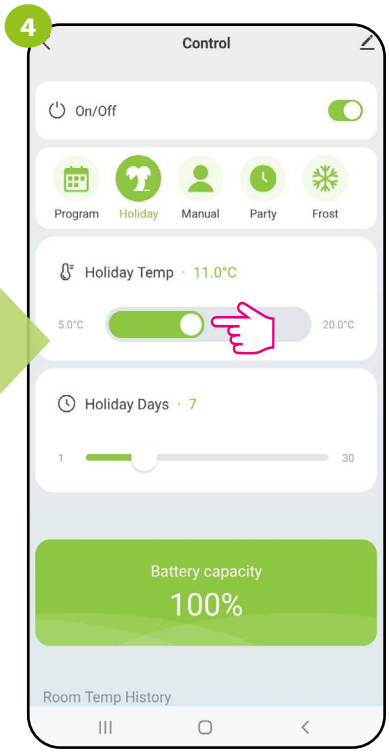
Enter the thermostat interface.



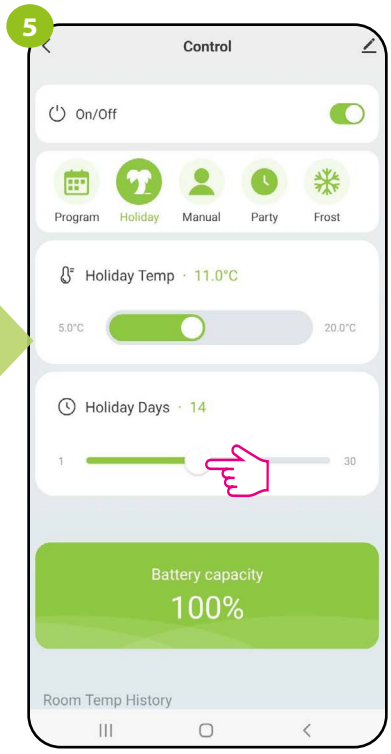
Select the „Control" option.



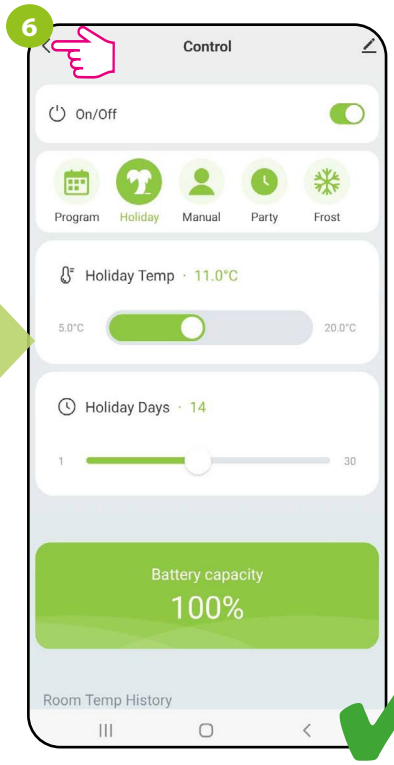
Select „Holiday" mode.



Set the temperature to be maintained in holiday mode.



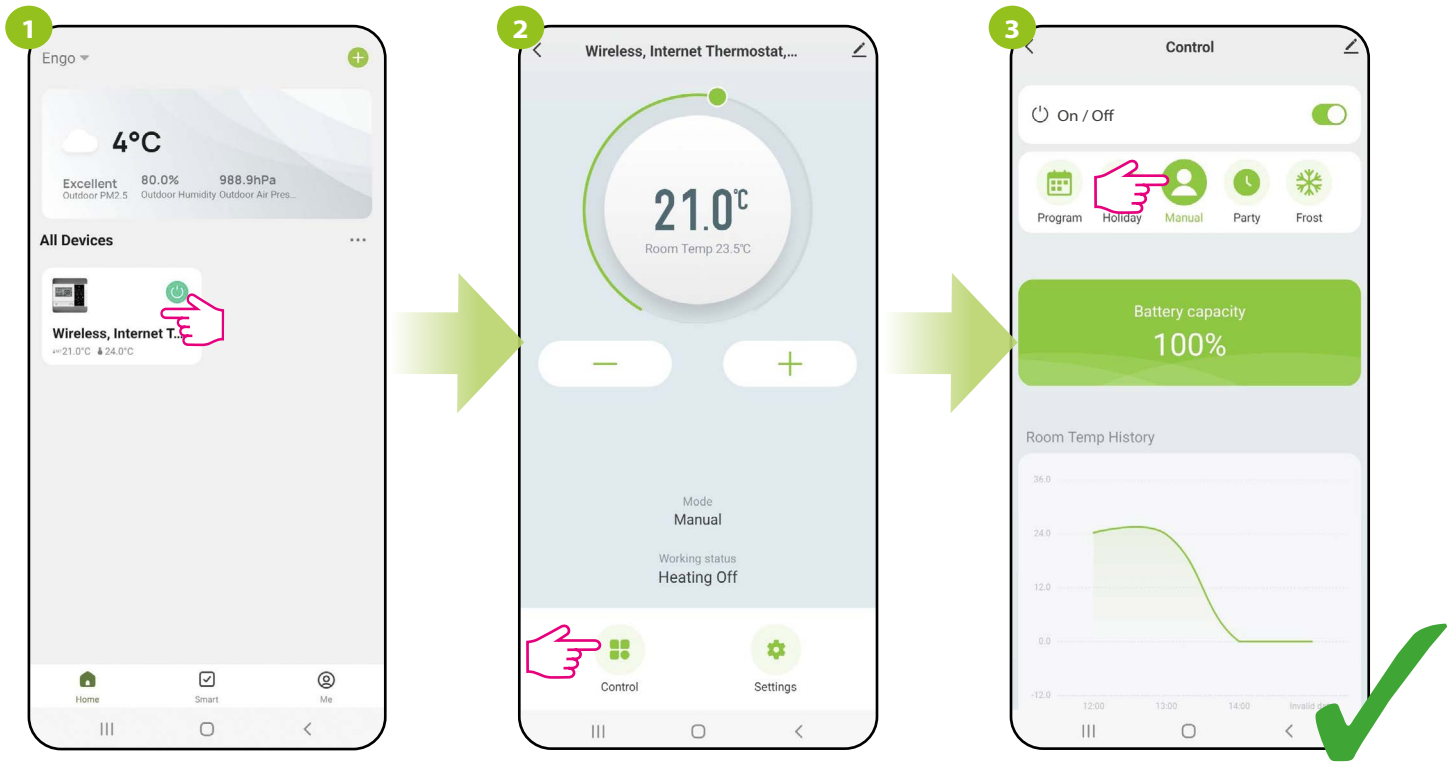
Set the duration of the holiday mode.



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

9.3.4 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

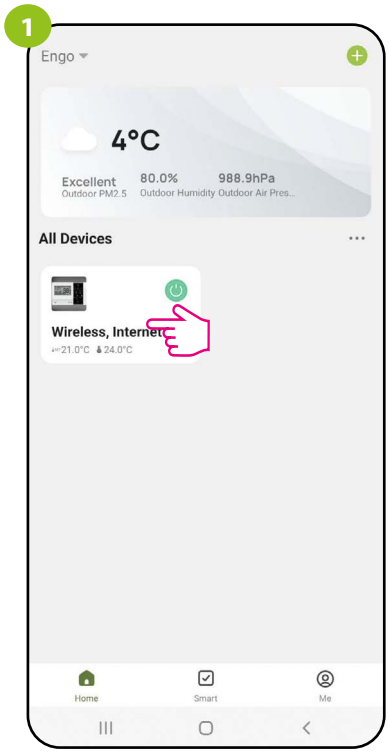
Select the „Control" option.

Select „Manual" mode.

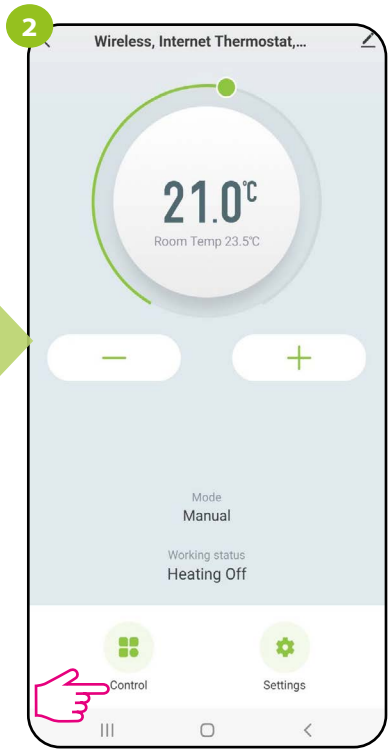
9.3.5 Party mode

Party mode is only available from the mobile app.
In the party mode, you can program the temperature that will be maintained for the selected number of hours (e.g. during a party).

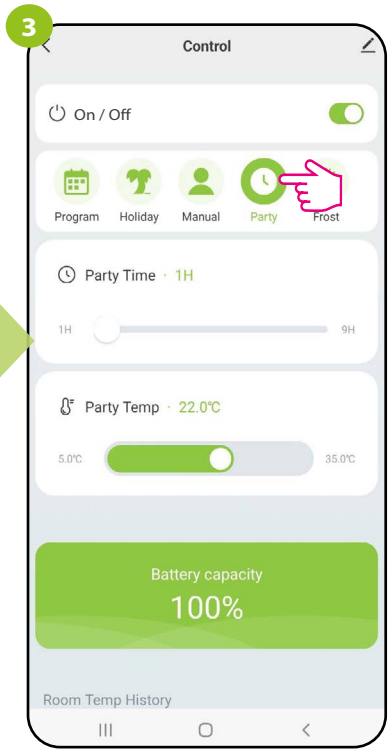
TO SETUP PARTY MODE:



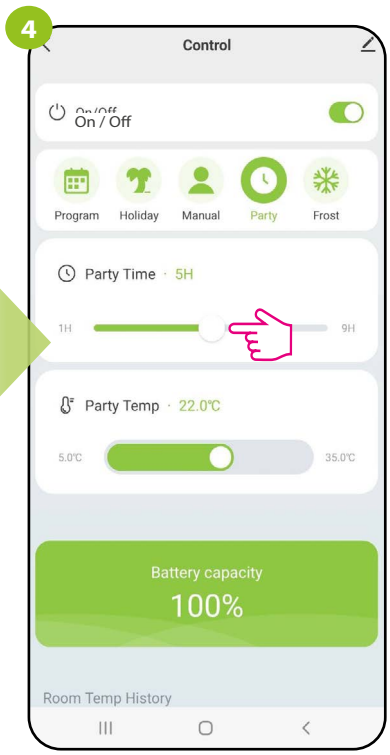
Enter the thermostat interface



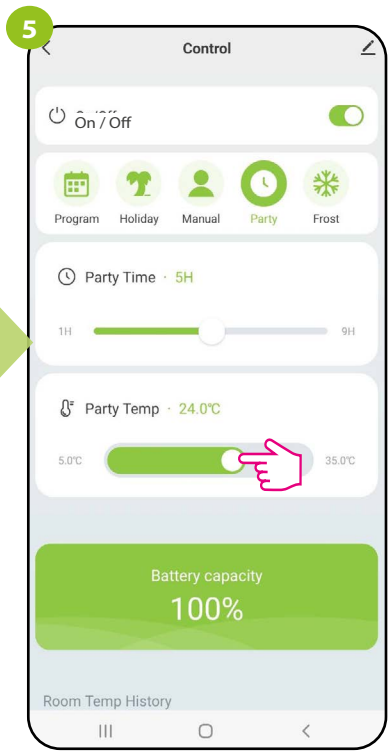
Select the „Control" option.



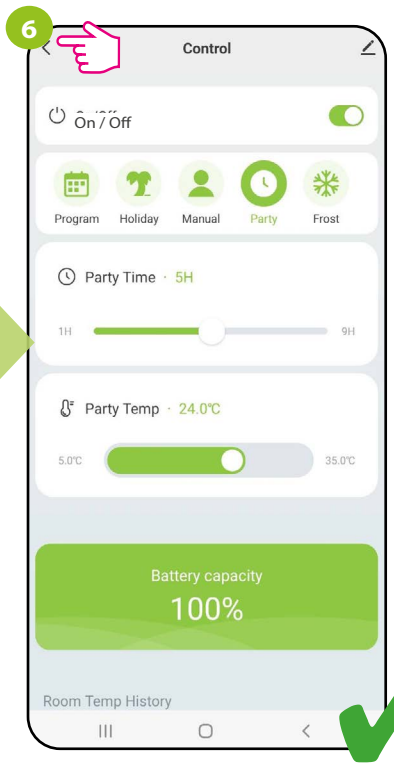
Select „Party" mode



Set the temperature to be maintained in party mode.



Set the duration of the party mode

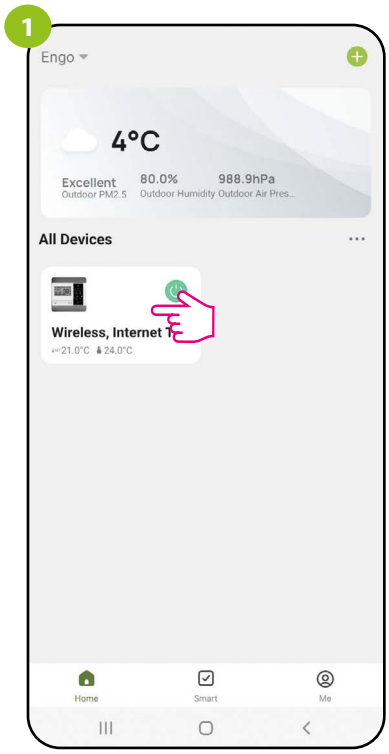


After all, exit „Control Mode".
All settings in party mode will be saved automatically.

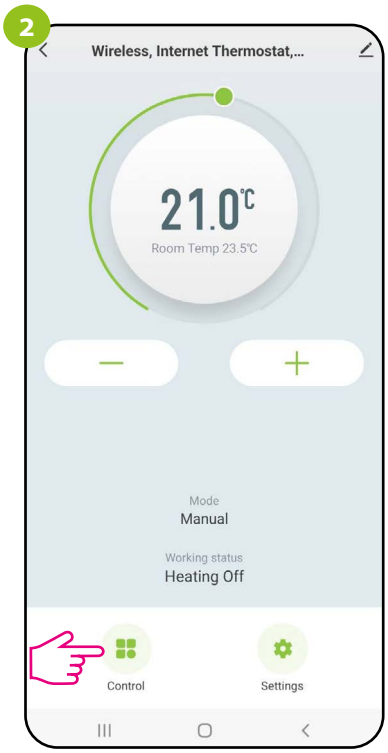
Party mode is only available from the mobile app.

9.3.6 FROST mode

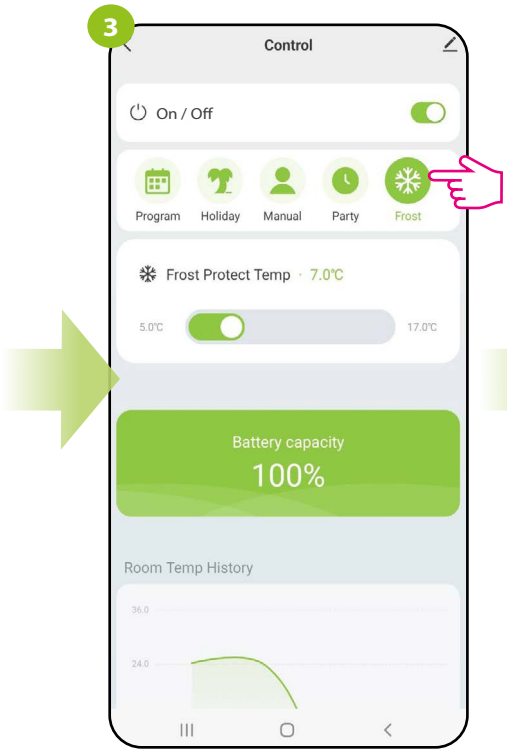
The „Frost" mode (frost protection) is only available from the mobile application.
In the „Frost" mode, the setpoint temperature range is 5 - 17°C. When the frost protection mode (Frost) is active, snowflake icon is displayed on the thermostat LCD. When the ambient temperature drops below the temperature setpoint for the „Frost" mode, the thermostat will start sending a heating signal. This moment will be signaled by the application with a status change to „Heating on - antifreeze mode", and the snowflake icon on the thermostat will start flashing. Changing setpoint temperature of thermostat during the active frost mode (from the application or thermostat) will change thermostat status to Manual mode.



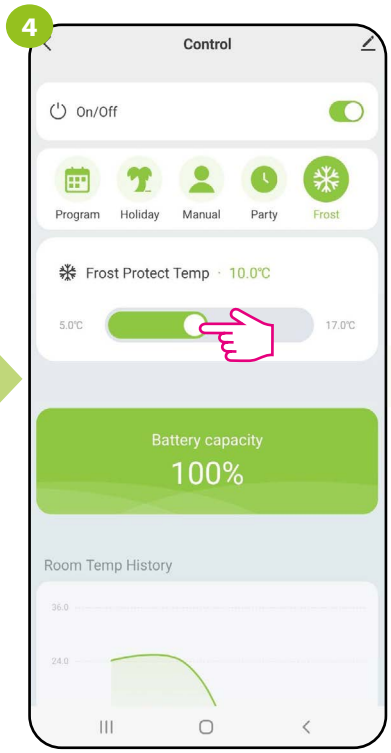
Enter the thermostat interface.



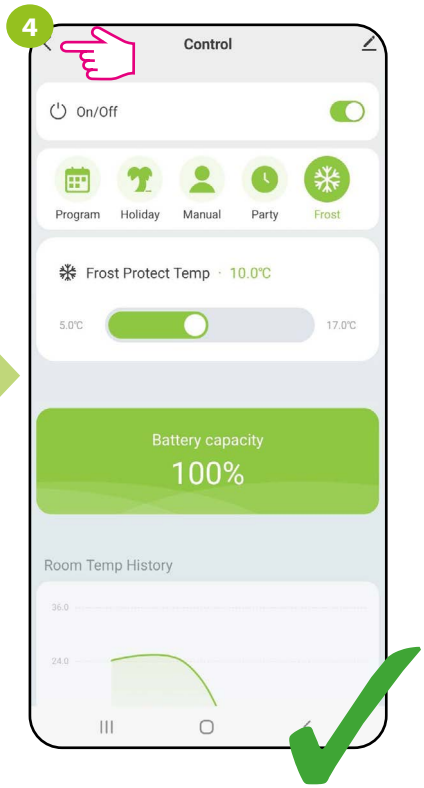
Select the „Control" option.



Select „Frost" mode.



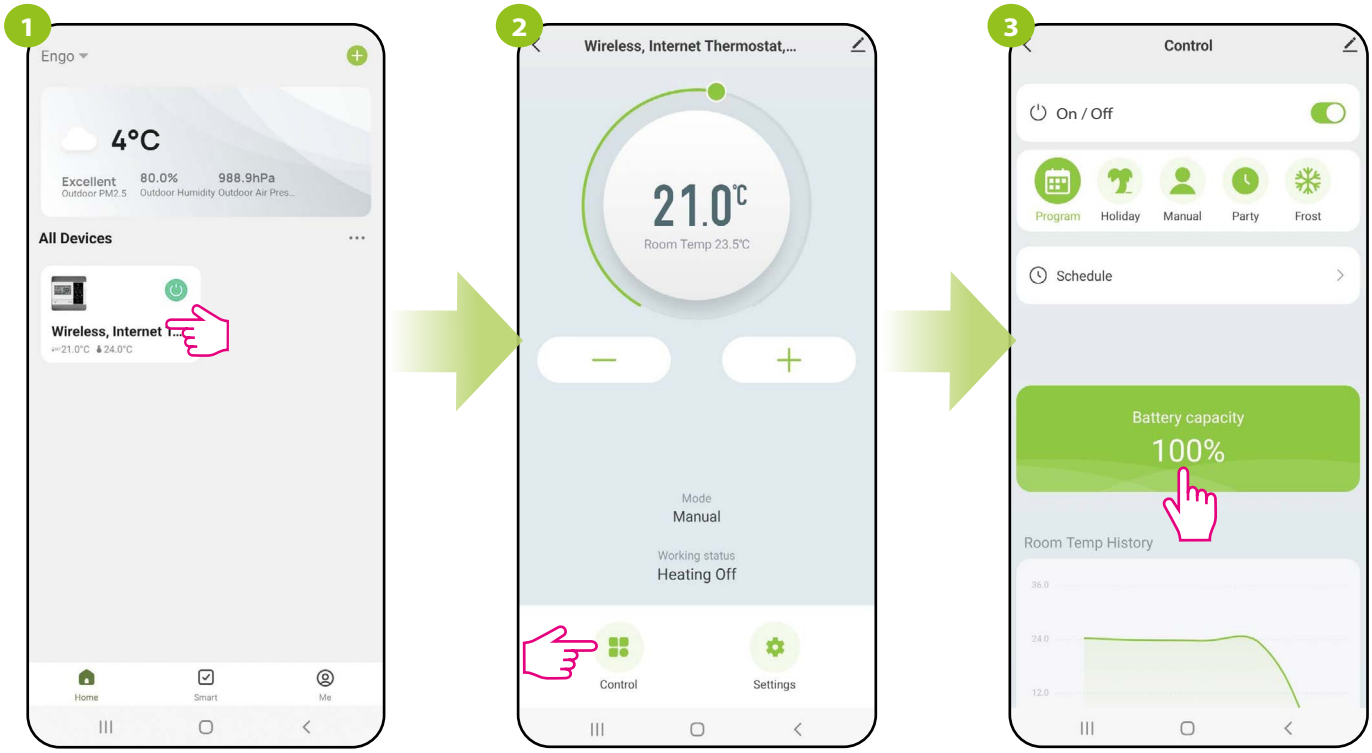
Set the temperature you want kept in „Frost" mode.



After all, exit „Control Mode". All settings in „Frost" mode will be saved automatically.

9.3.7 Battery condition

To check the battery condition in the thermostat, follow the instructions.below.



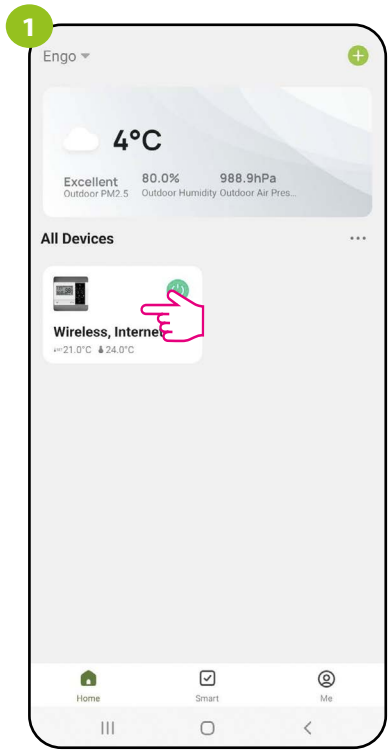
Enter the thermostat interface.

Select the „Control" option

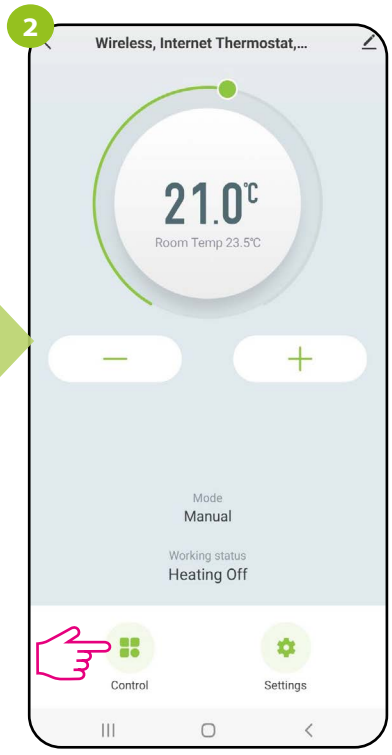
The battery condition is shown in percents.

9.3.8 Diagrams

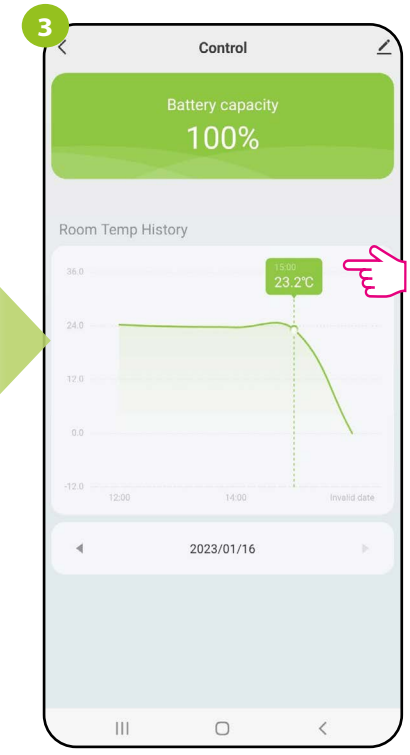
The ENGO Smart app offers room temperature history graphs. They allow you to better plan the operation of the thermostat, e.g. using the schedule mode based on the recorded data, which will make the operation even more economical.



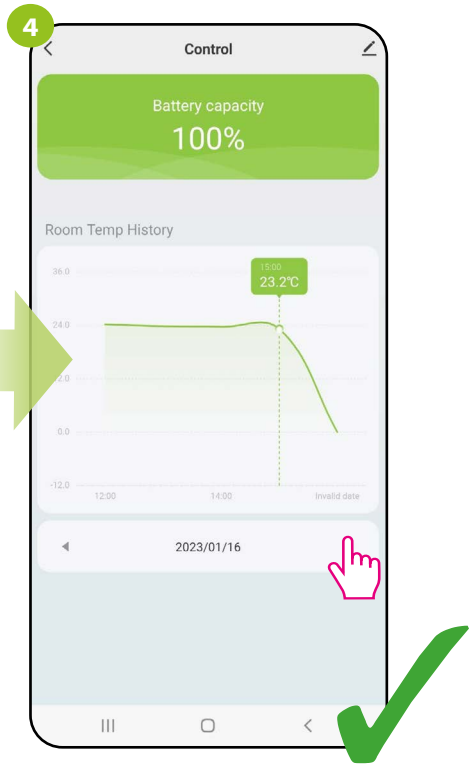
Enter the thermostat interface.



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

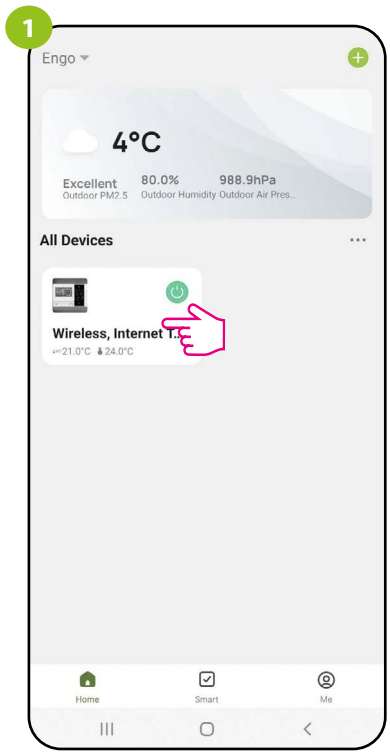


Choose the day that interests you.

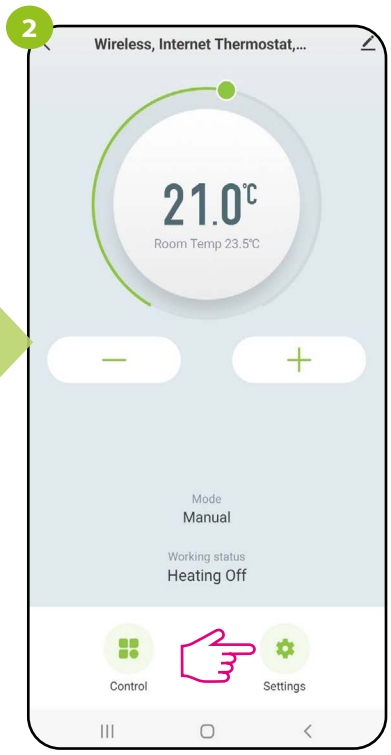
9.4 Settings (installer parameters)

9.4.1 Child lock function

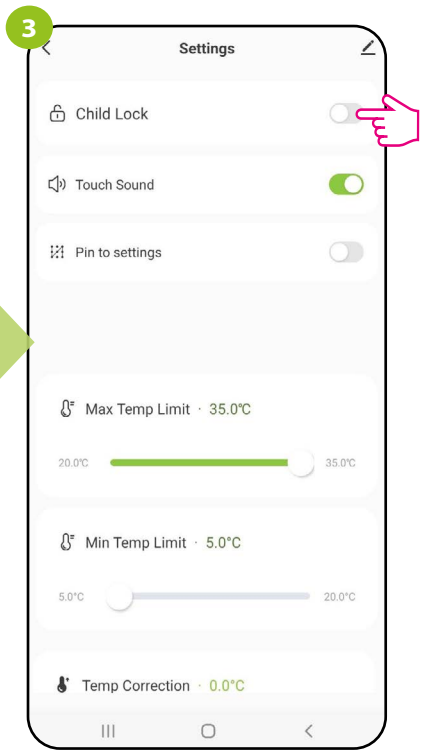
The app allows you to lock the buttons on the device. Just change the position of the slider on the screen. When the switch goes green, then thermostat keys are locked. To unlock, press the slider again so it will change back to grey. Then the buttons on the thermostat are unlocked.



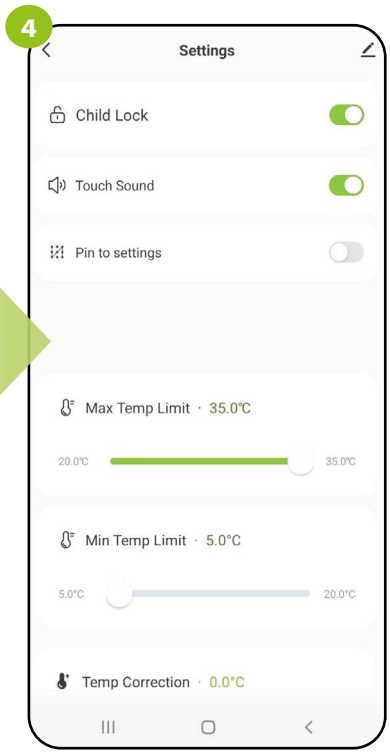
Enter the thermostat interface.



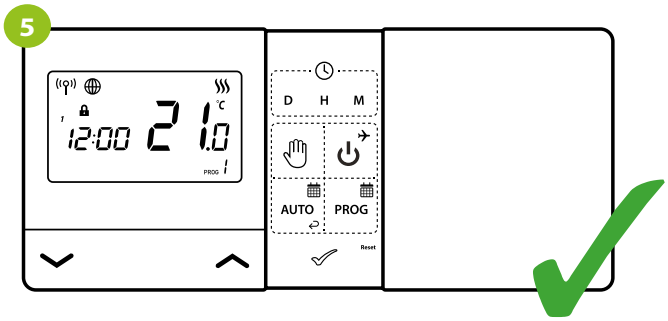
Select „Settings".



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



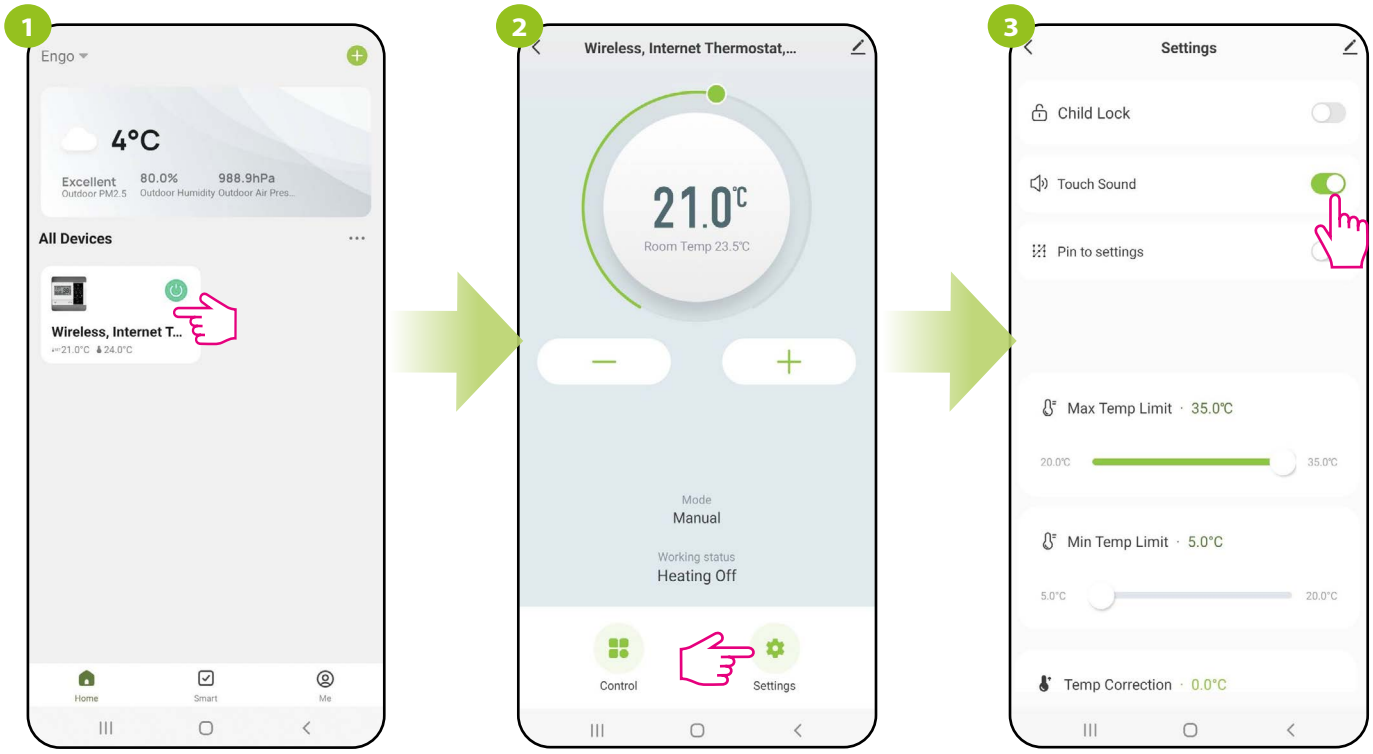
When the slider is highlighted green, then thermostat buttons are blocked.



A lock icon will appear on the screen.
The buttons on the thermostat have been locked.

9.4.2 Key sound

The user can enable or disable the sound of buttons in the thermostat. Move the slider to the right side as in steps shown below:



Enter the thermostat interface.

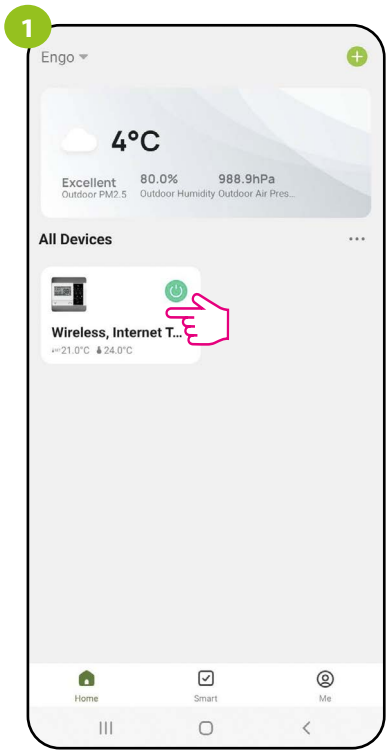
Select „Settings".

Use the slider to lock / unlock the key sound on the thermostat.

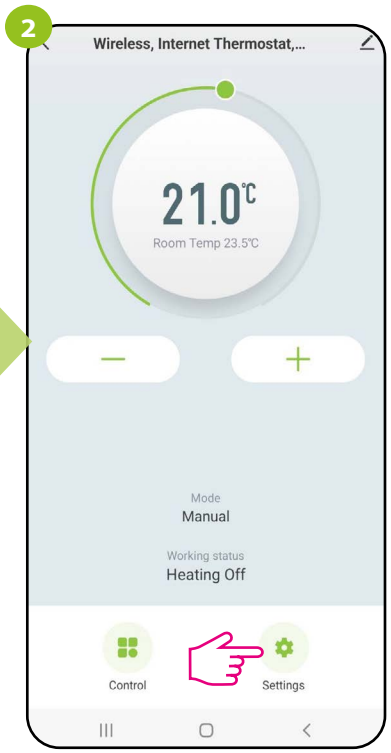
9.4.3 Setting PIN

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

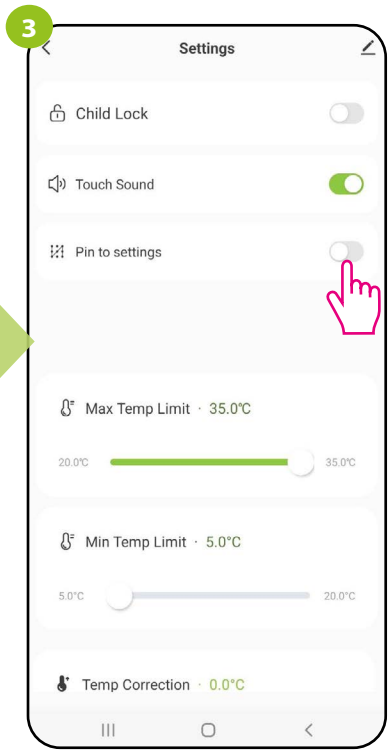
ATTENTION!!! Setting the PIN code is only possible from the thermostat (it is not possible from the Engo SMART app). Details of PIN lock setting are described on page 20.



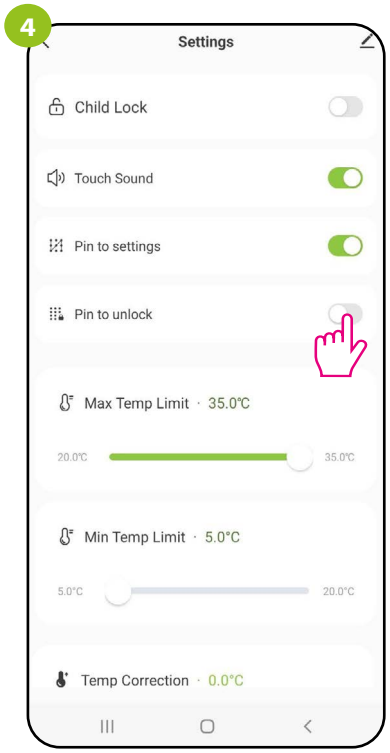
Enter the thermostat interface.



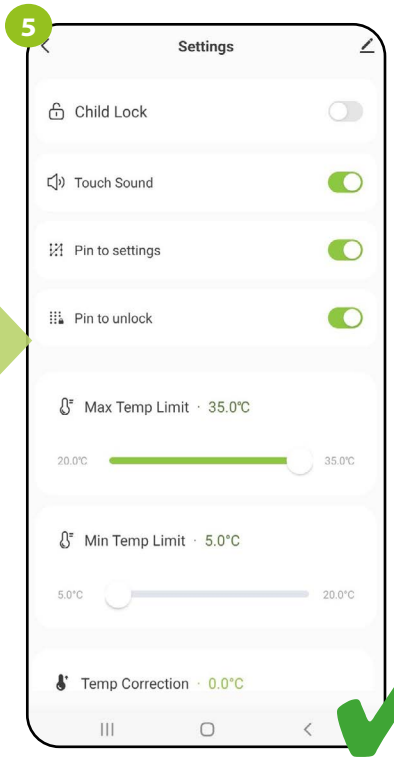
Select „Settings".



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.



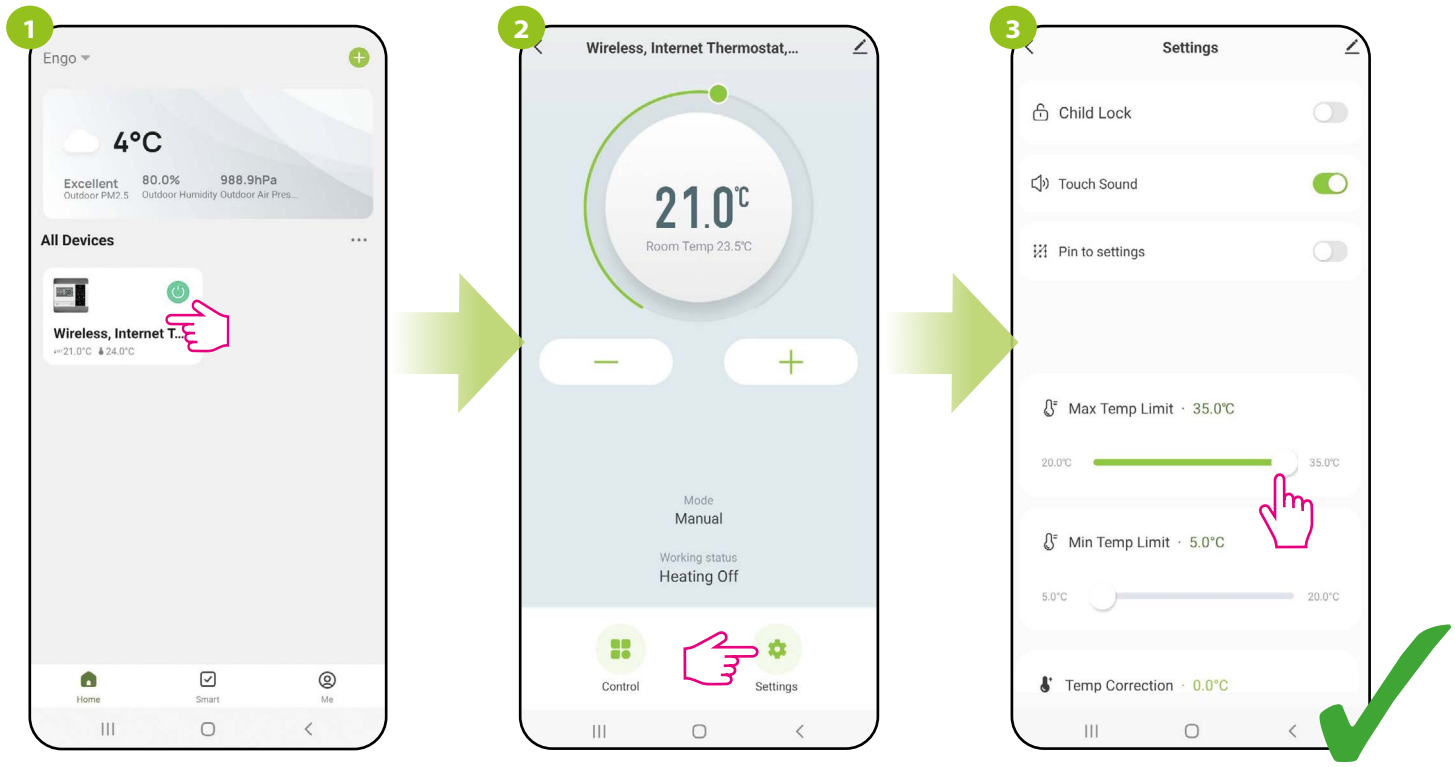
If the „Pin to settings" is enabled, a new parameter appears - „Pin to unlock" (thermostat keys).



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

9.4.4 Max setpoint temperature limit

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



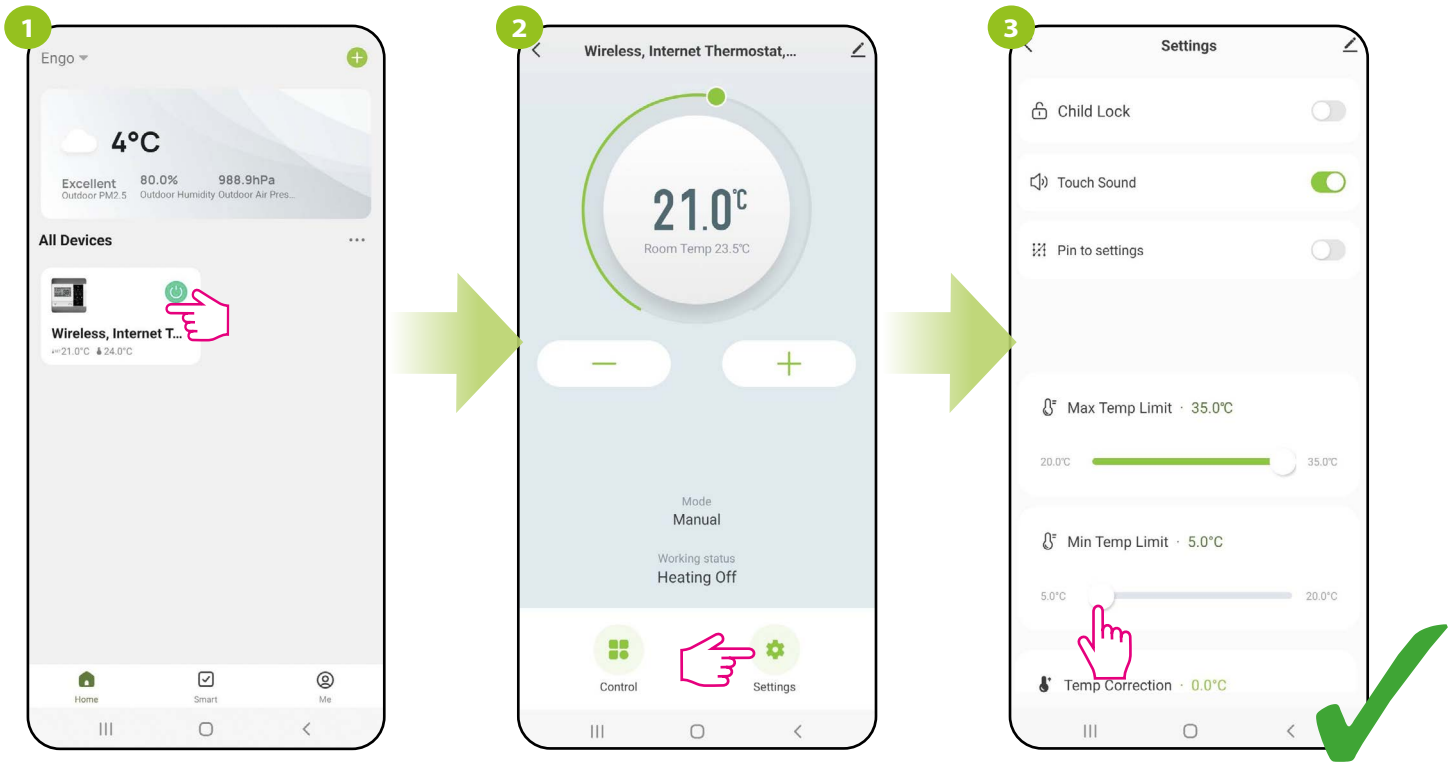
Enter the thermostat interface.

Select „Settings".

Use the slider to change the value for the maximum temperature set point (from 20°C to 35°C).

9.4.5 Min setpoint temperature limit

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



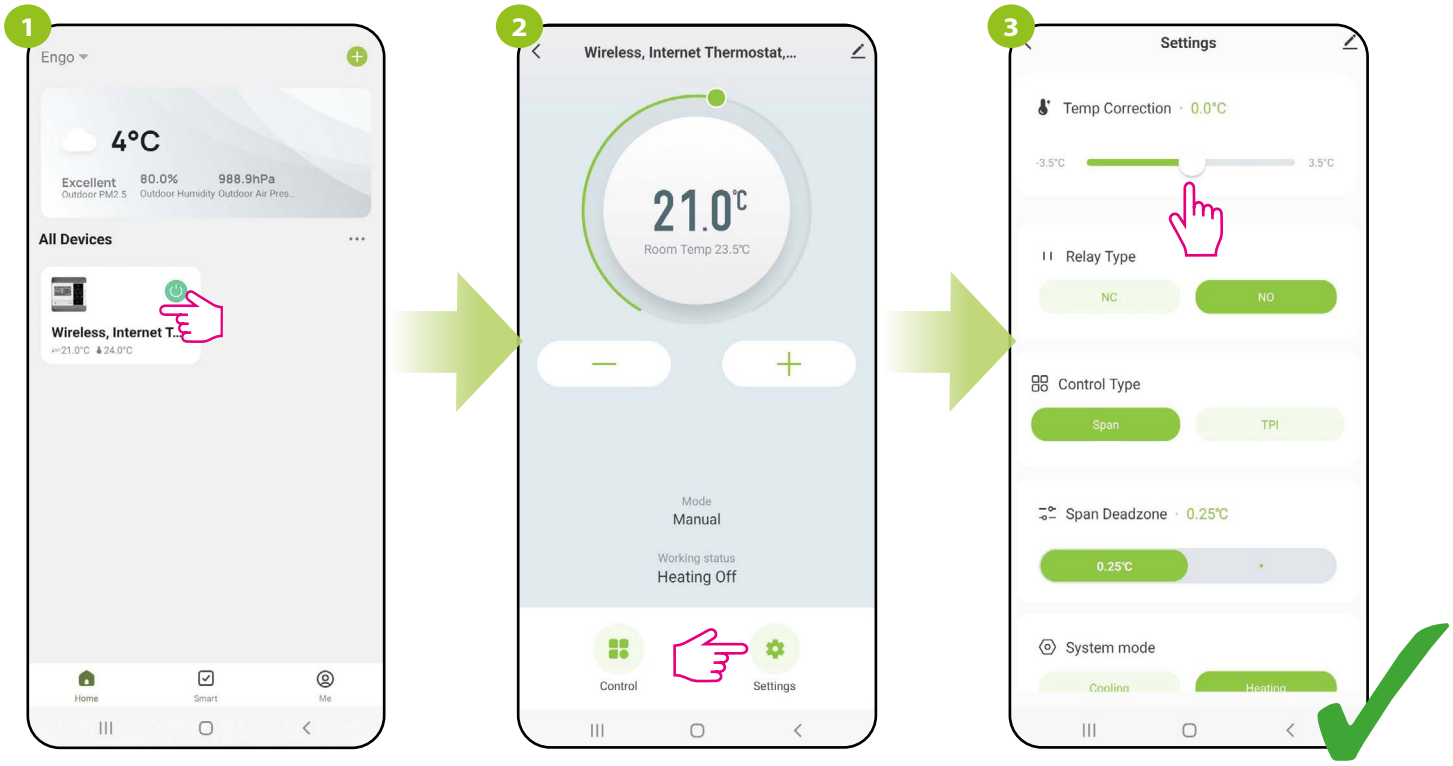
Enter the thermostat interface.

Select „Settings".

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

9.4.6 Temperature correction

This function allows you to adjust the measured room temperature reading by ± 3.5°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:



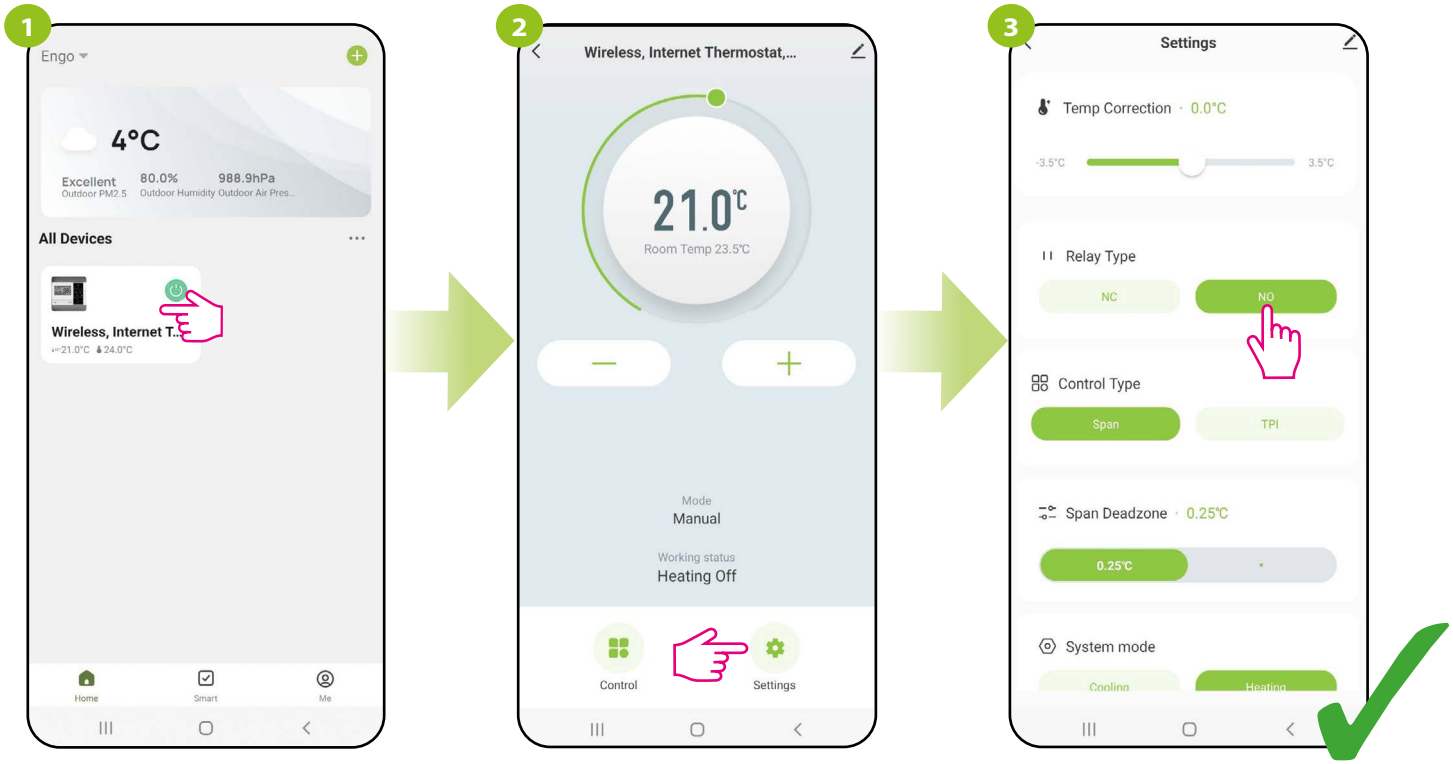
Enter the thermostat interface.

Select „Settings".

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

9.4.7 Relay type

This function allows you to set the type of relay operation:
a) relay type NO (i.e. when it heats, it closes the „NO-COM" contacts of the receiver - factory setting), e.g. for gas boilers, heat pumps,

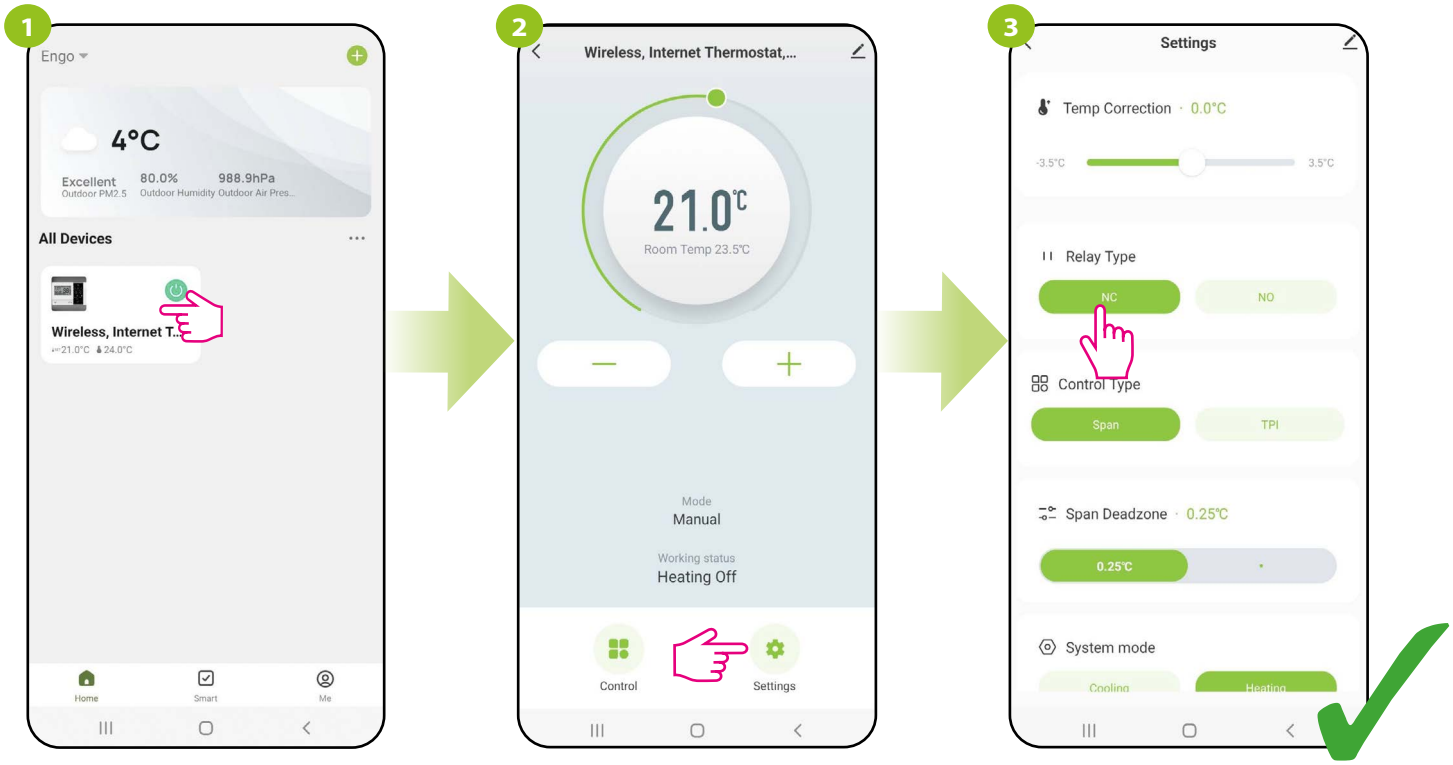


Enter the thermostat interface

Select „Settings"

Select NO relay type

b) type of relay NC (i.e. when it heats, it opens the „NO-COM" contacts of the receiver) e.g. for coal or pellet boilers - the operation logic is reversed by software.



Enter the thermostat interface

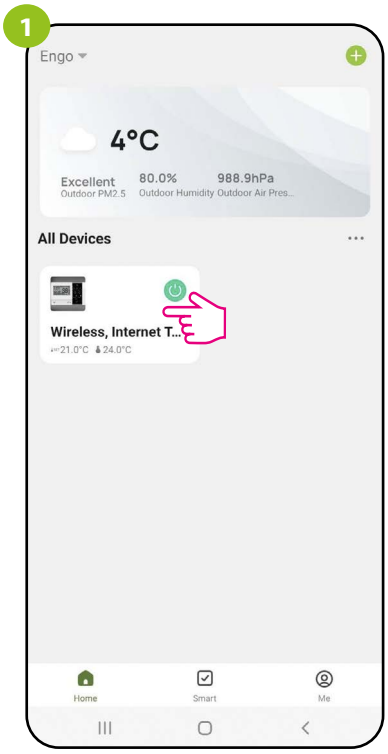
Select „Settings"

Select NC relay type

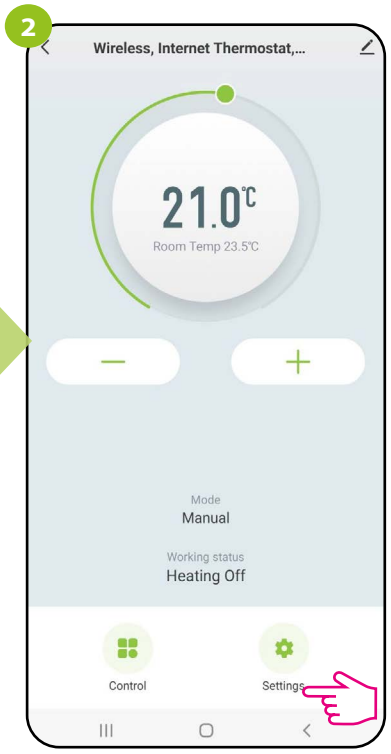
9.4.8 Control type (algorithm)

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 release the heat to surroundings. There are two histeresis values to choose: ± 0.25°C or ± 0.5°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.

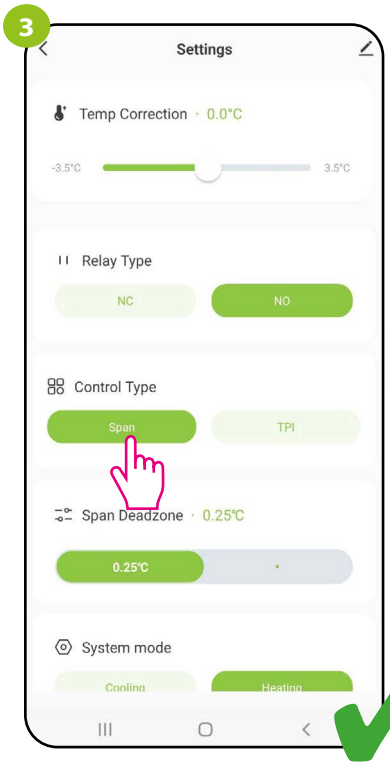
How to set the hysteresis in the ENGO Smart app for the Wi-Fi thermostat:



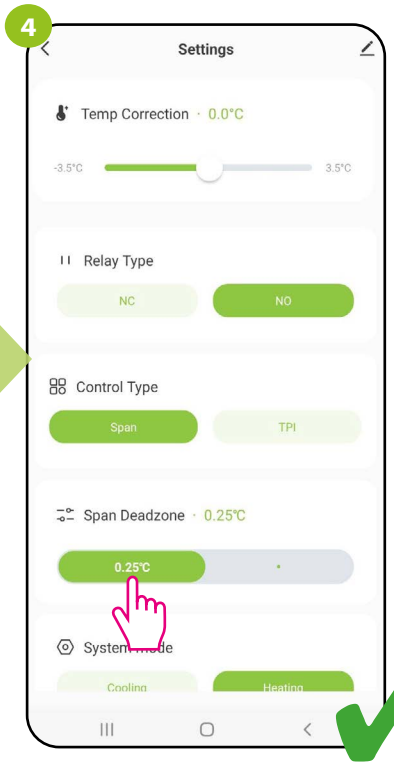
Enter the thermostat interface



Select „Settings"



Select the „Span" option.

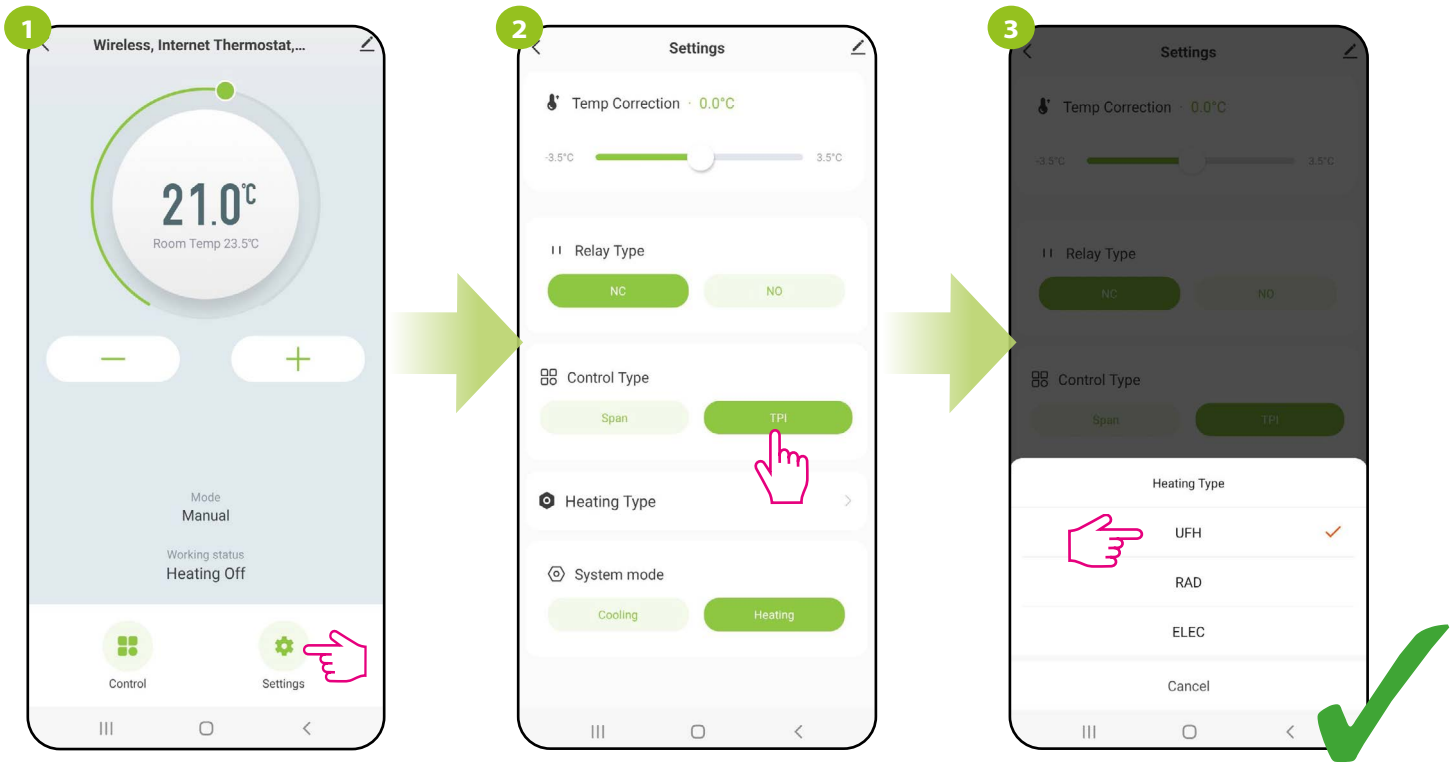


Use the slider to select hysteresis value

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 Proporcional 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 E901WIFI 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:



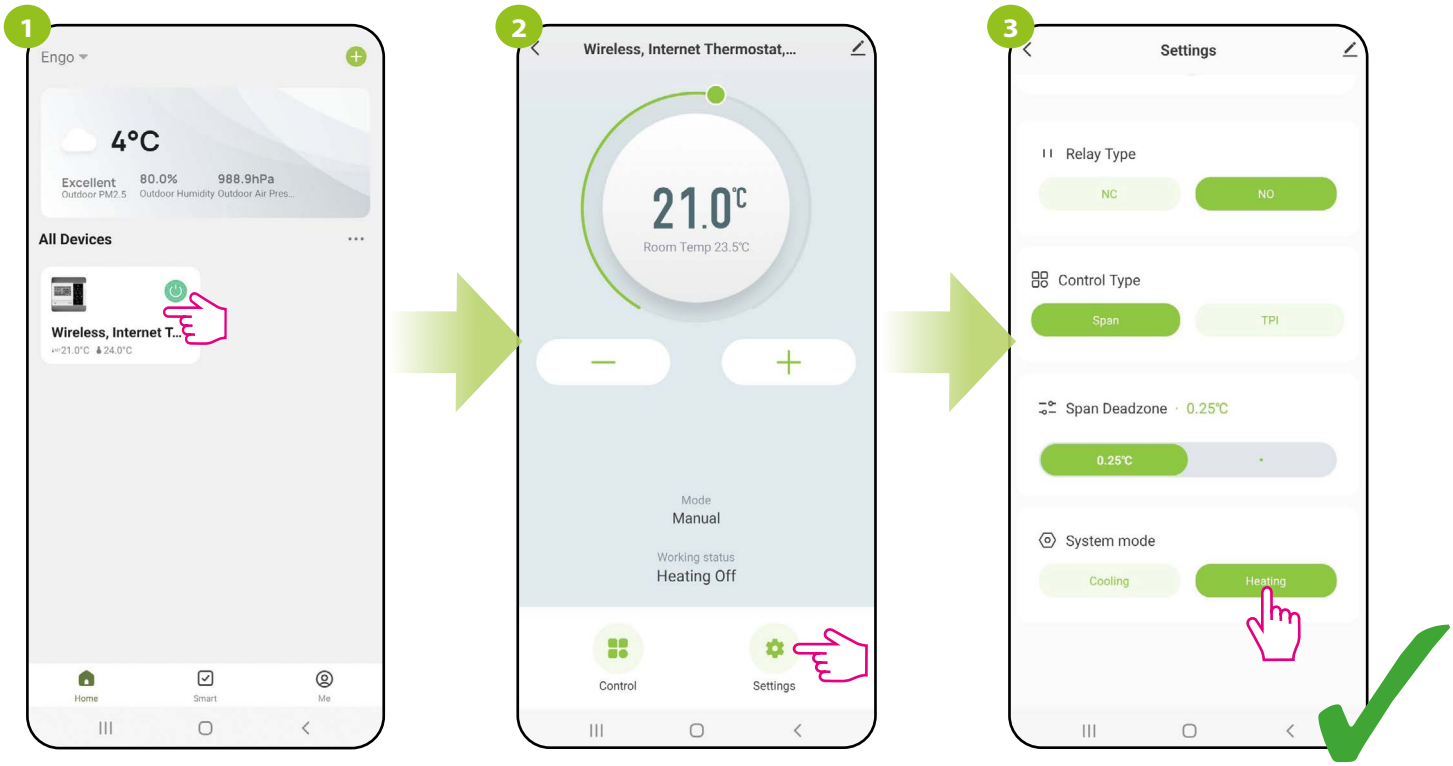
Select „Settings".

Choose „TPI".

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

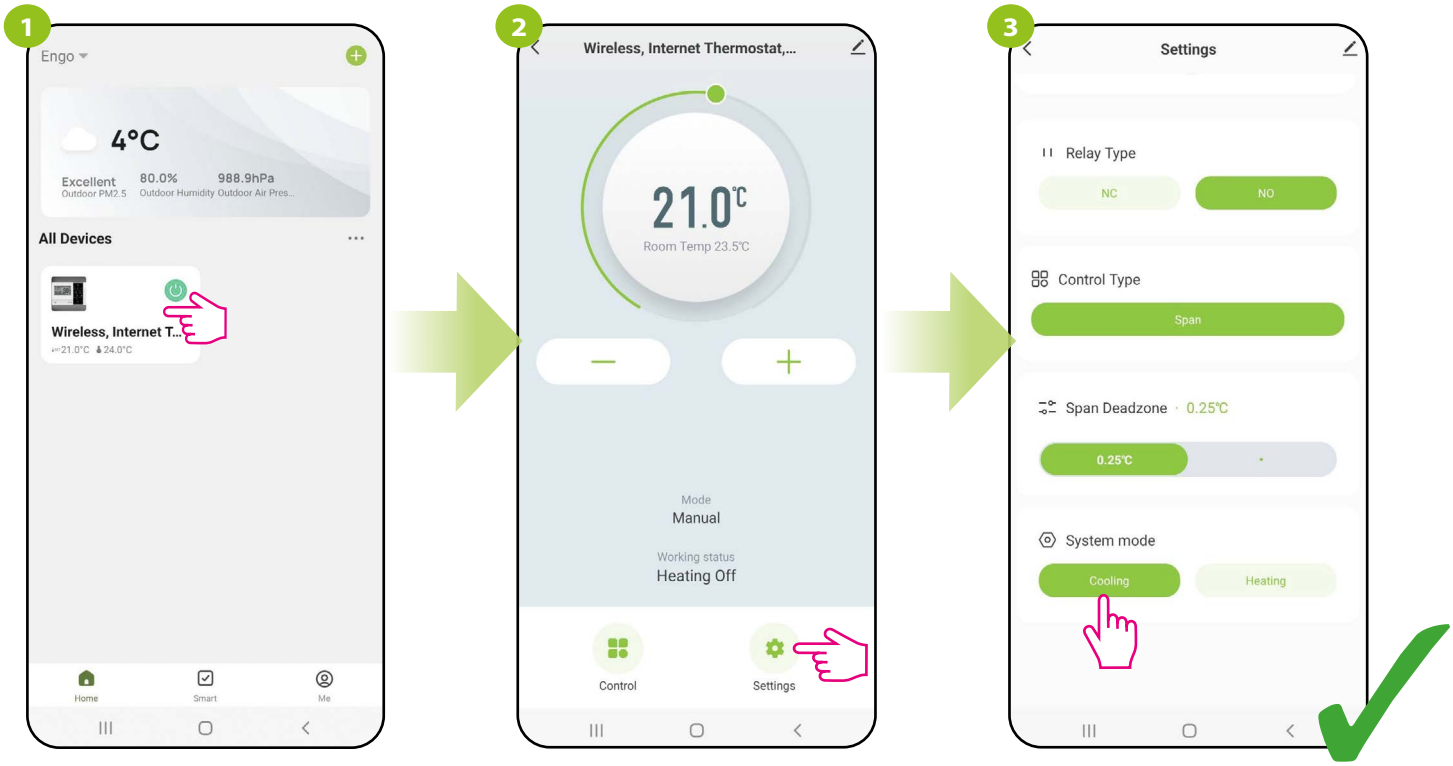
9.4.9 Heating/Cooling mode selection

This function allows you to select the operating mode of the thermostat:
a) operating the heating system (factory setting),
b) operation of cooling system.



Enter the thermostat interface. Select „Settings". Select „Heating".

b) operation of cooling system.

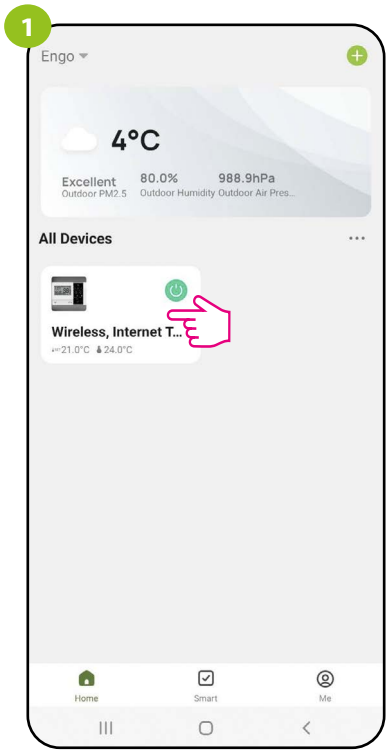


Enter the thermostat interface. Select „Settings". Select „Cooling".

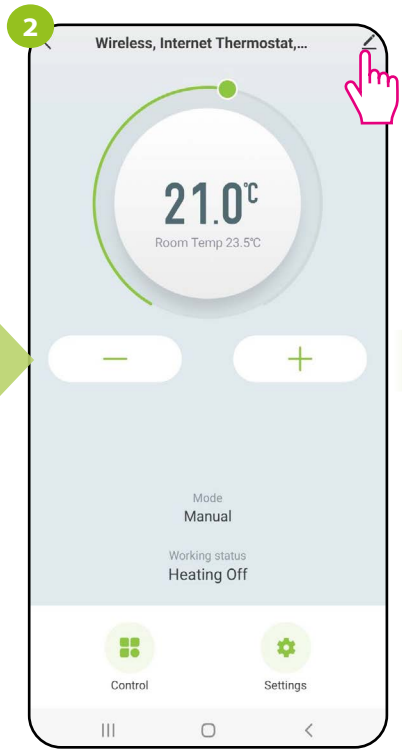
9.5 E901WIFI thermostat management in the Engo Smart app

9.5.1 Change the name, icon and location of the thermostat

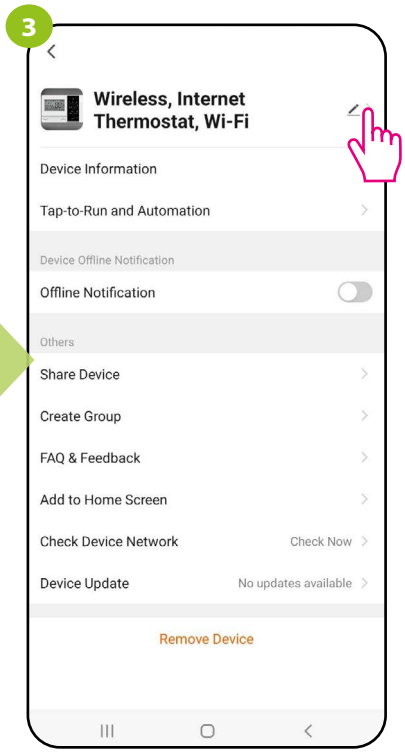
Name the thermostat, edit its icon or define it's location (room).



Enter the thermostat interface.

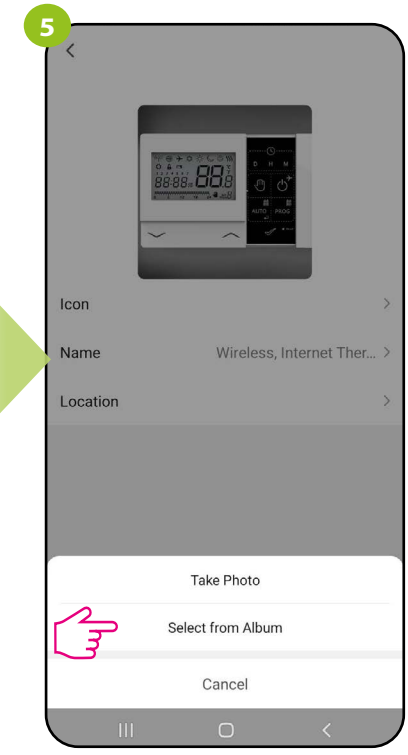


Click the pencil icon in the top right corner.

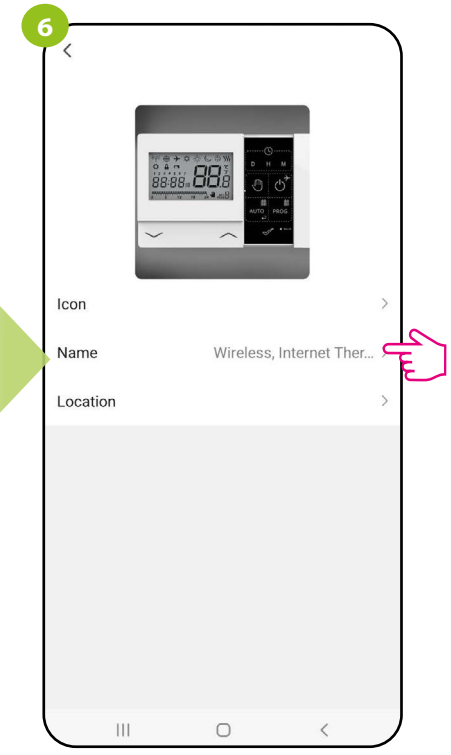


Tap the name of the thermostat.

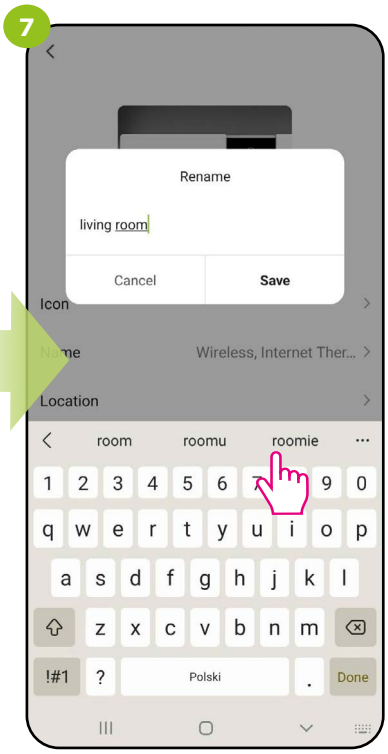
Enter icon settings.



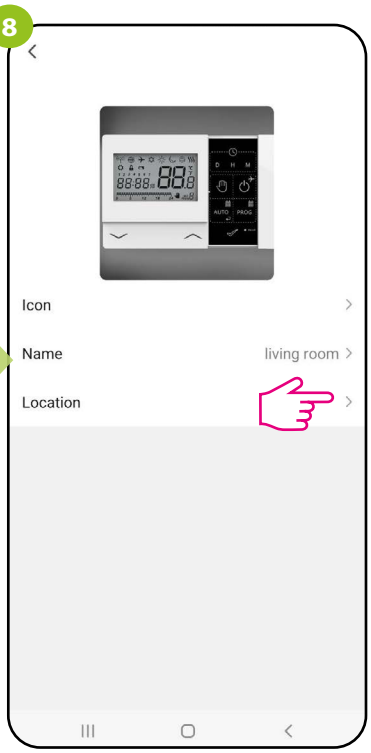
Take a photo or select an image from your local album.



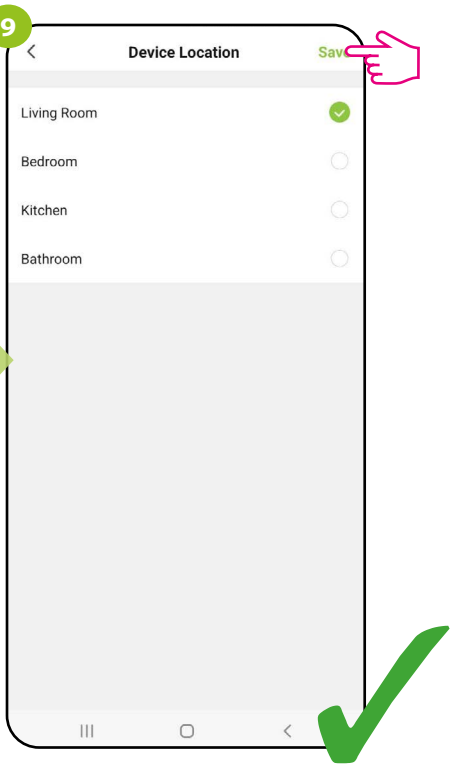
Enter thermostat name.



Write a name and click save



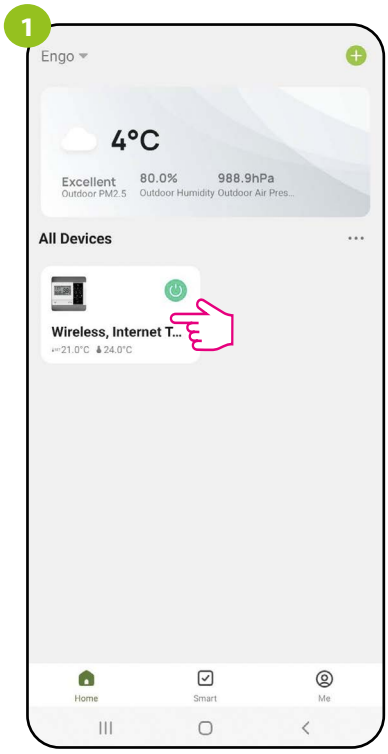
Determine the location of the thermostat.



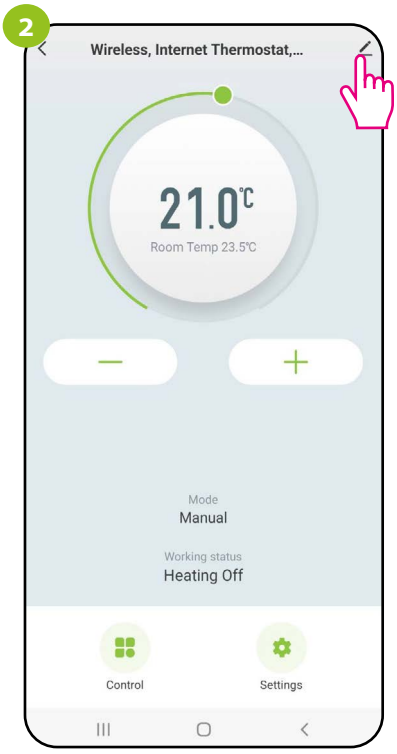
Choose a place and click „Save" in the top right corner.

9.5.2 Device information

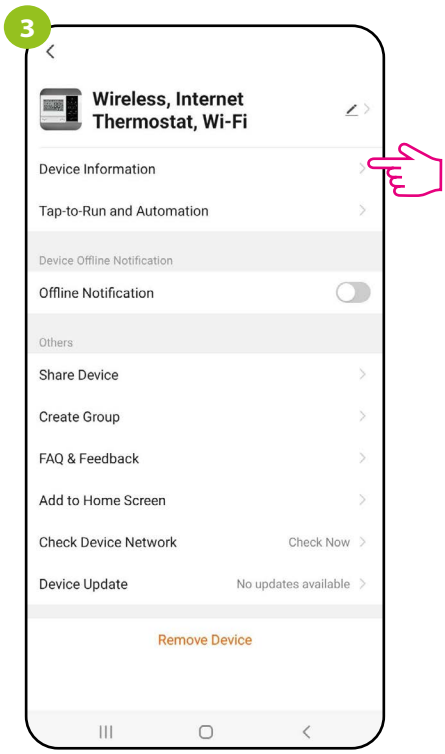
The user will find here detailed information about the device, eg. Virtual ID, device IP, MAC address, the time zone in which the device is located and signal strength. Check the steps below:



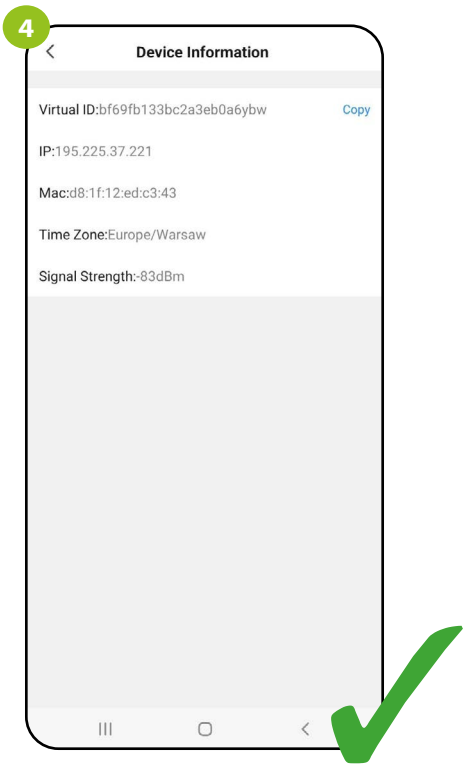
Enter the thermostat interface.



Click the pencil icon in the top right corner.

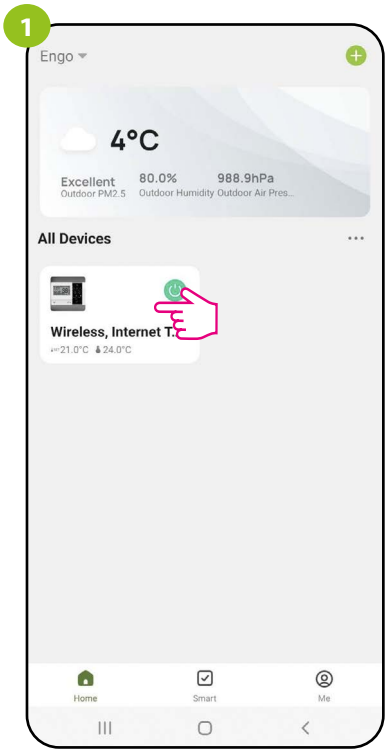


Select „Device Information"

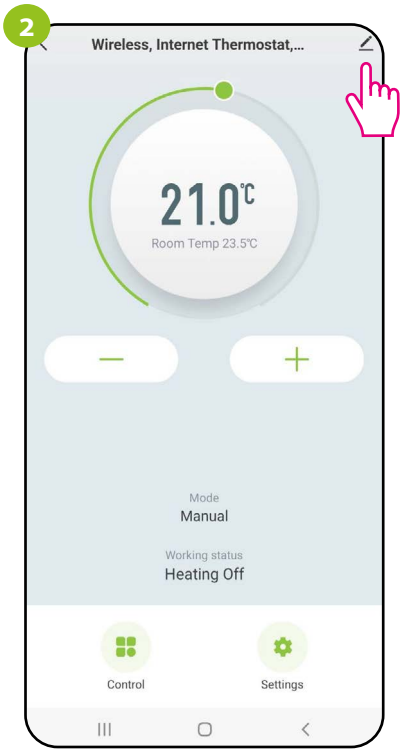


9.5.3 Offline notification

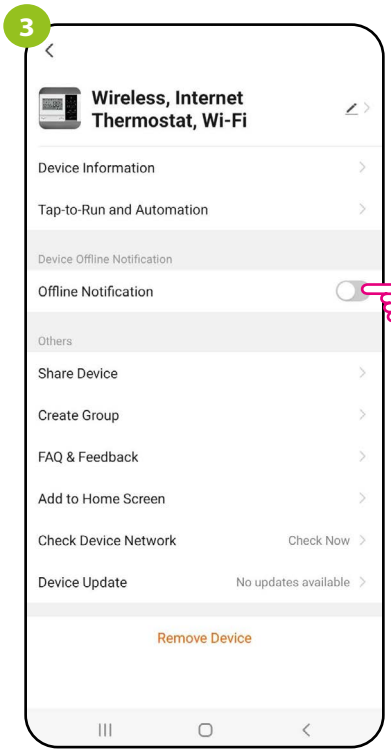
The user can enable/disable notifications about the thermostat status at any time. See steps below:



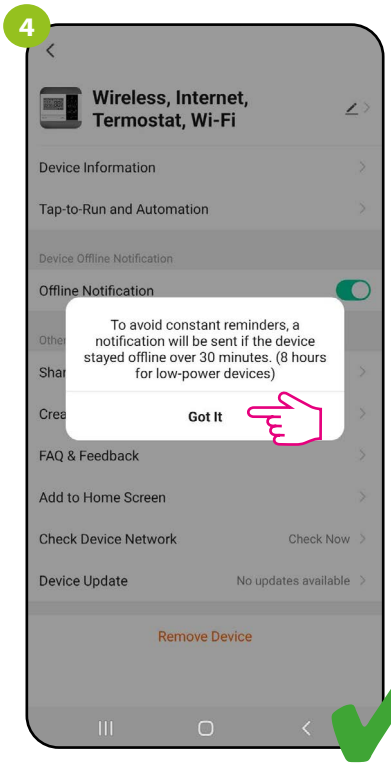
Enter the thermostat interface.



Click the pencil icon in the top right corner.



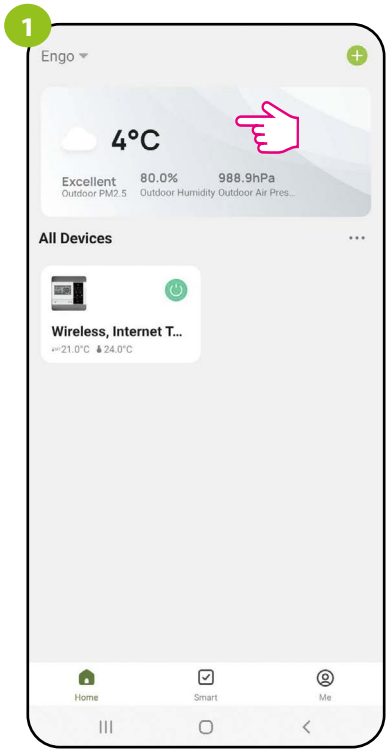
Check „Offline notification".



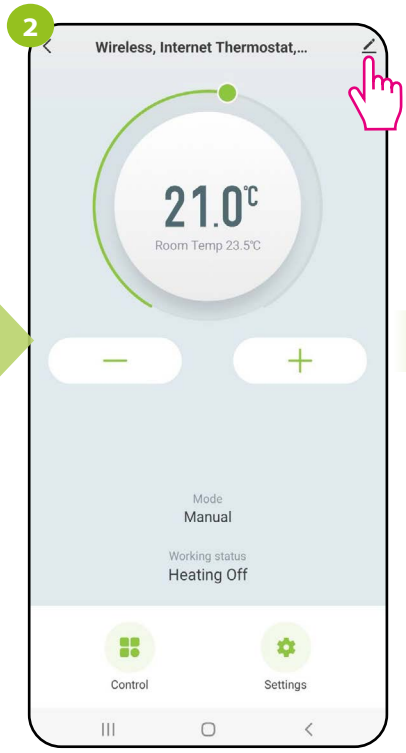
Confirm „Got it".

9.5.4 Share device

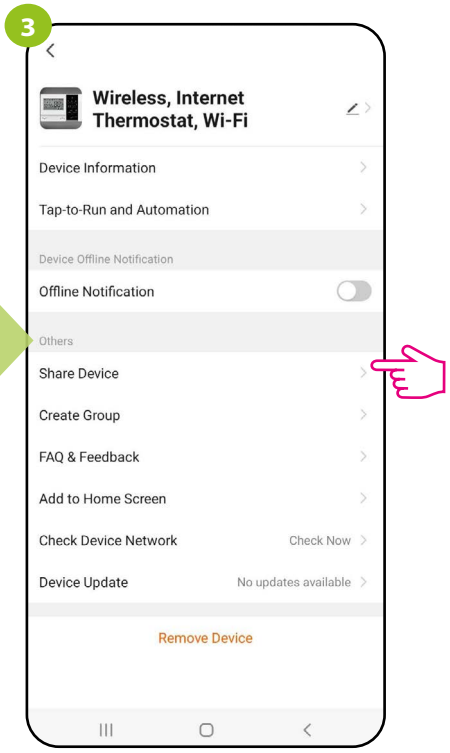
The ENGO Smart app offers the possibility of sharing the selected devices with other users (assigned to the home). This is a convenient option if you don't want to give your home full access. To do this, follow the steps below:



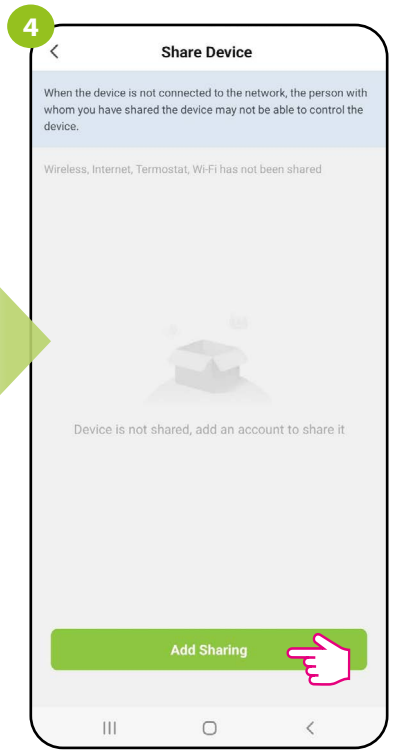
Enter the thermostat interface.



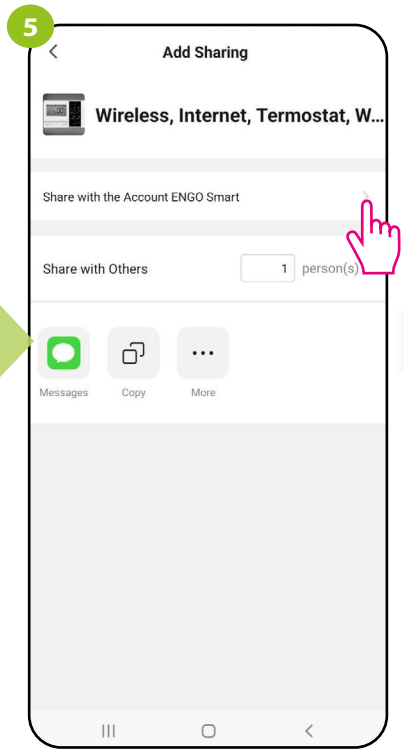
Click the pencil icon in the top right corner.



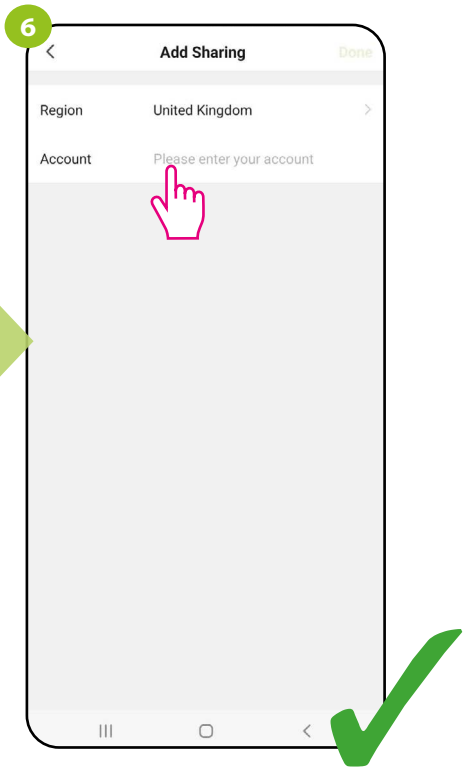
Select „Share Device".



Add sharing

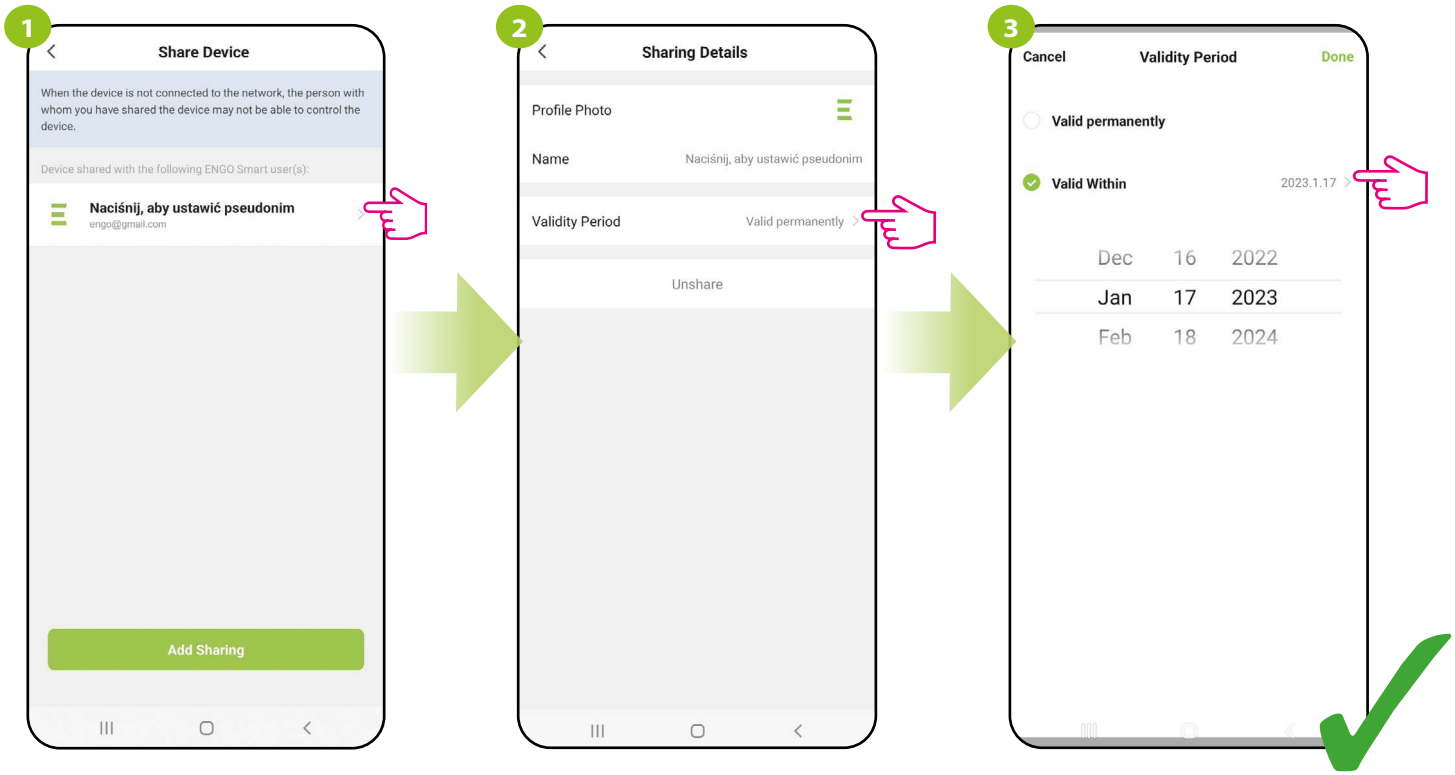


Send device link directly to selected user...



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

User can also set a validity period for shared device and can also terminate it at any time by selecting „Unshare”.



Select a user

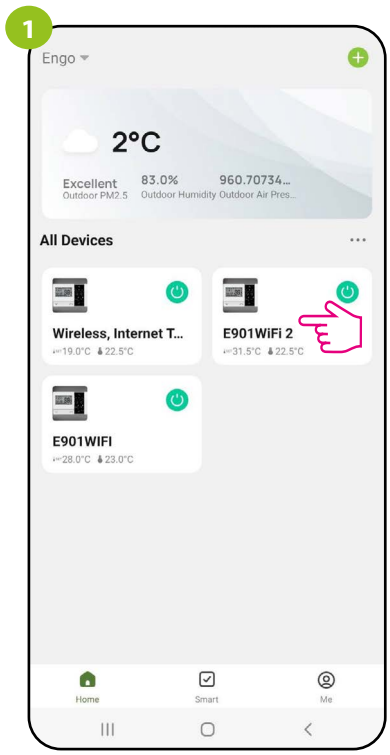
Go to the „Validity Period”.

Choose a date when device will stop to be shared.

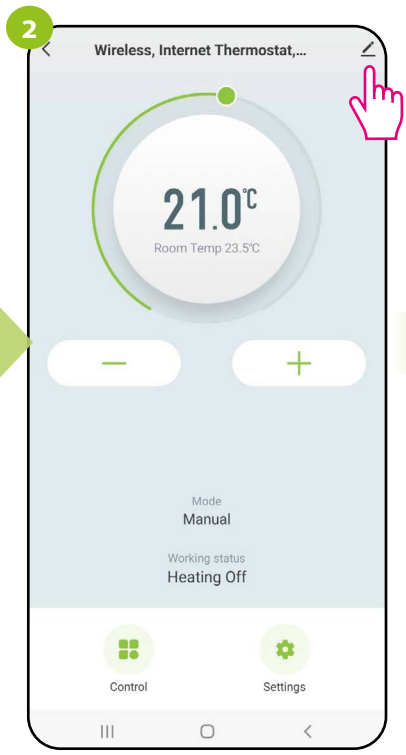
8.5.6 Create group

Simultaneous control of few WiFi 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.

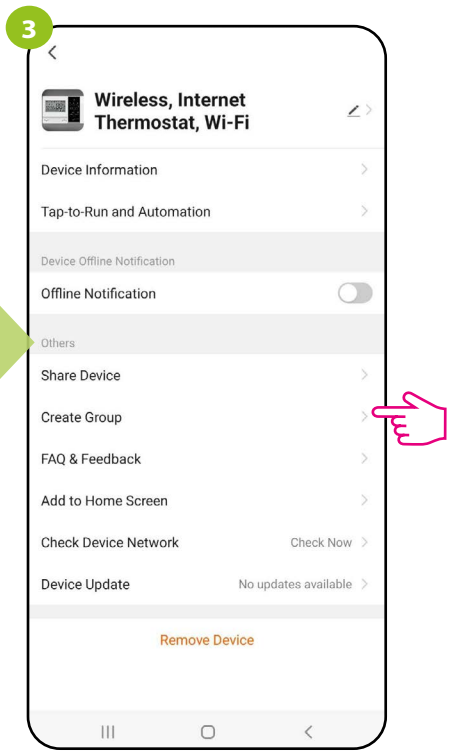
For example: If you set the virtual thermostat to manual mode, then each thermostat in this group will switch to manual mode. See the steps below on how to group multiple thermostats.



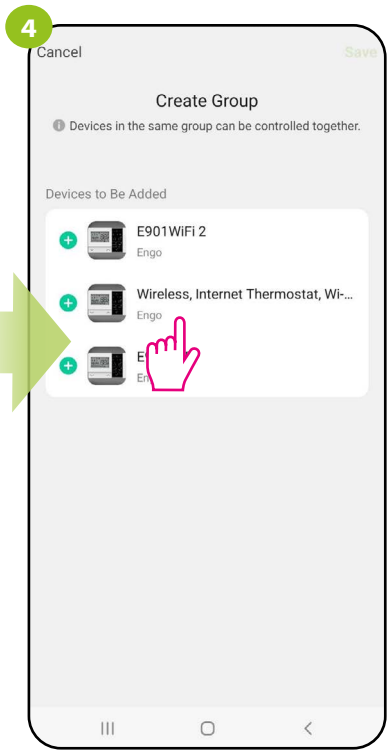
Enter the thermostat interface.



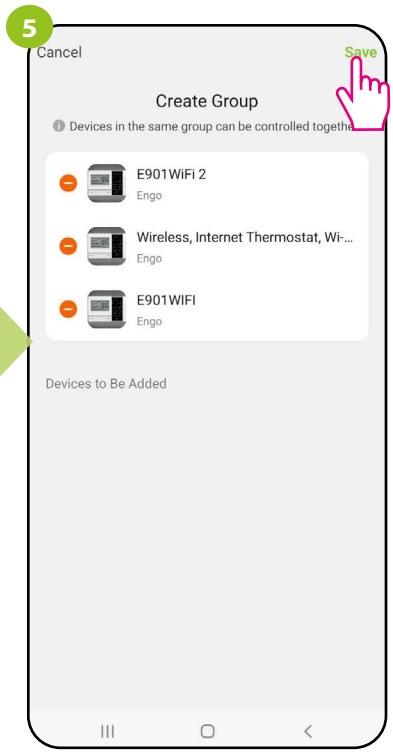
Click the pencil icon in the top right corner.



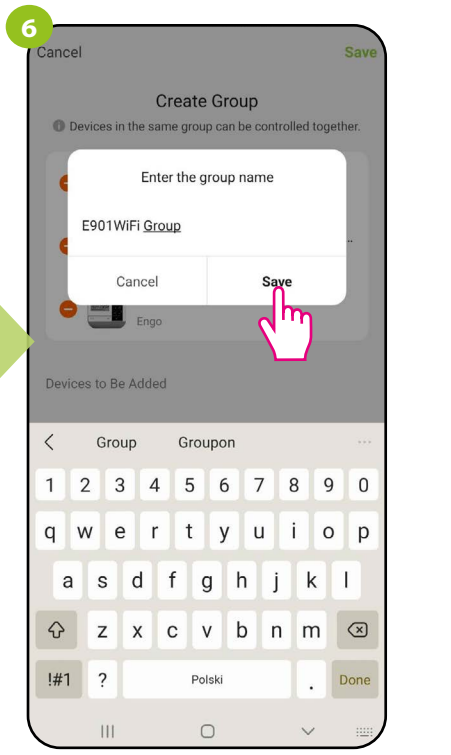
Select „Create Group"



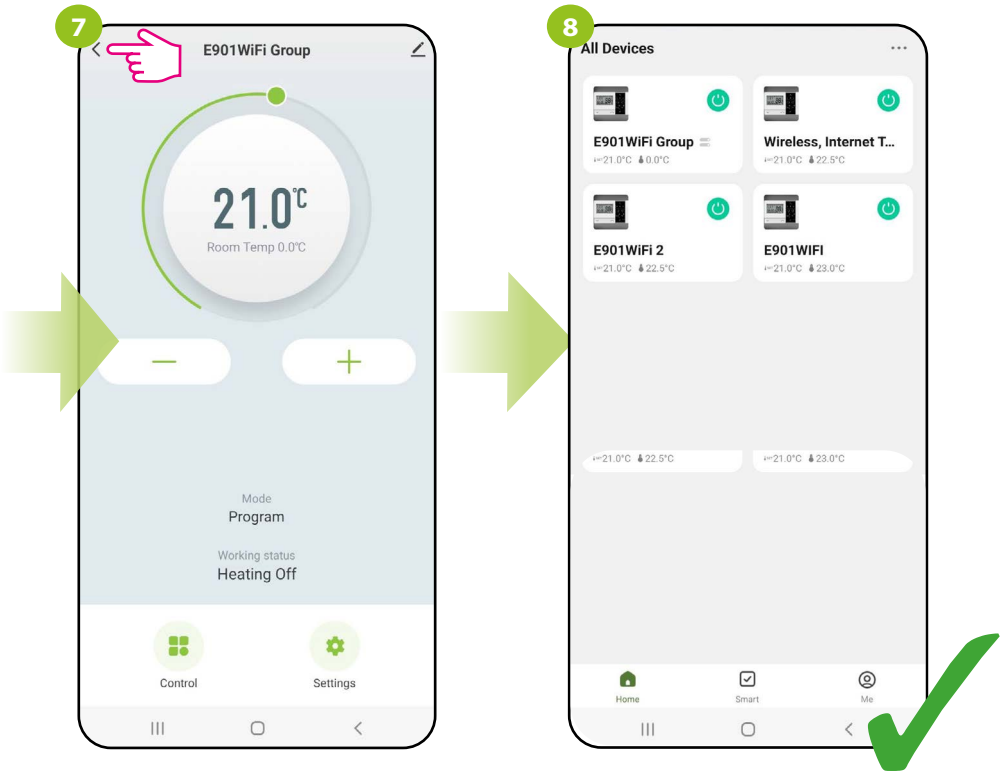
Select the devices you want to assign to the group.



Click „Save".



Name the group and confirm by „Save".

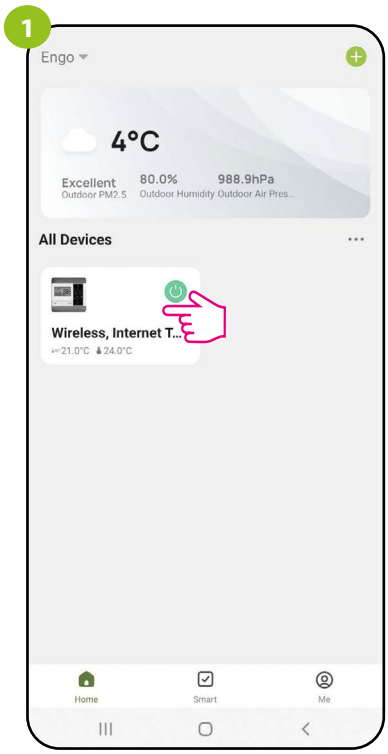


Group management interface will be displayed.

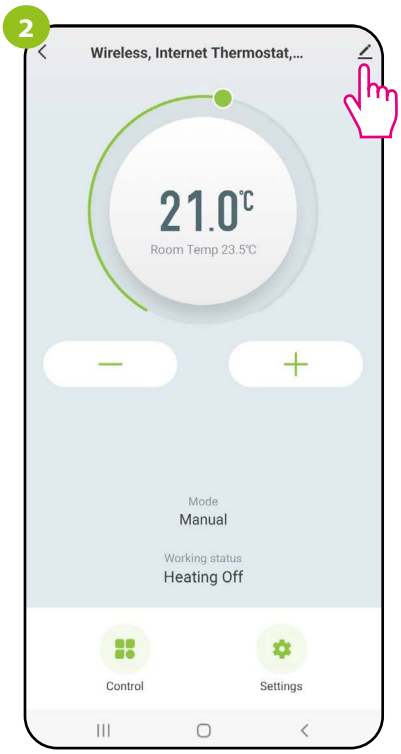
Group tile will also automatically appear on the main screen of the app.

9.5.6 FAQ & Feedback

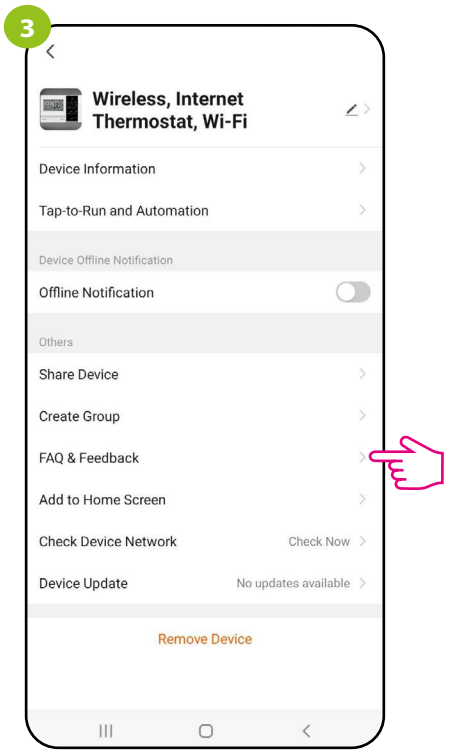
Find the answer to the problem in the FAQ option and opinions (the most common problems and questions) by searching for a specific key word. If you did not find the answer, please contact technical support.



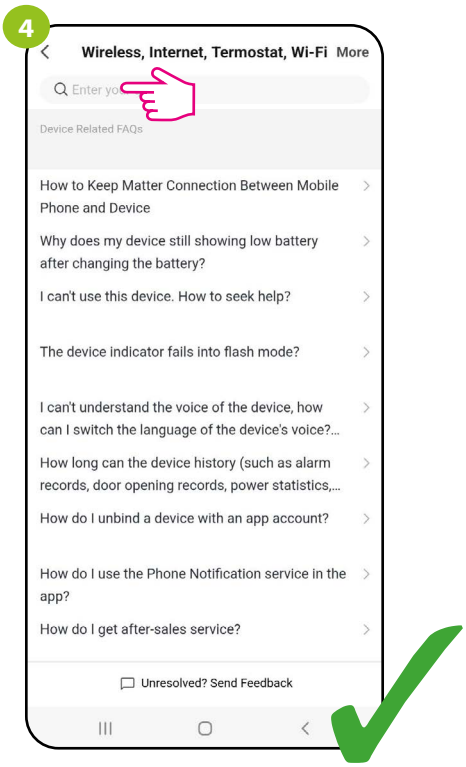
Enter the thermostat interface.



Click the pencil icon in the top right corner.



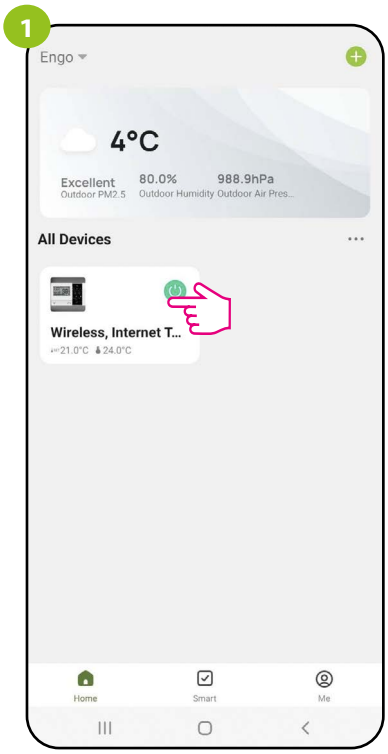
Select „FAQ & Feedback".



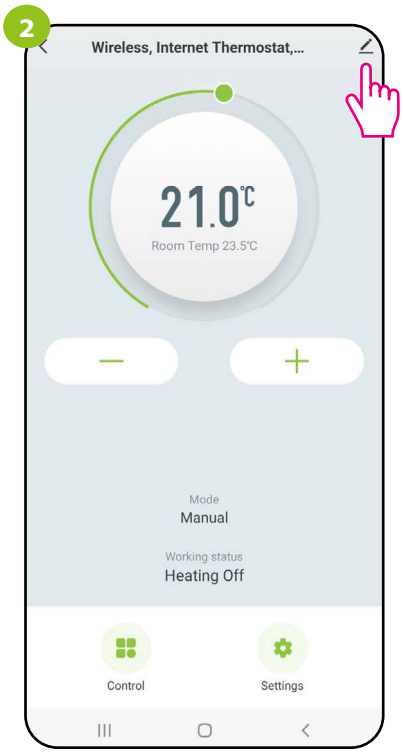
Enter a bothering problem and the app will automatically start searching for a possible answer.

9.5.7 Add to home screen

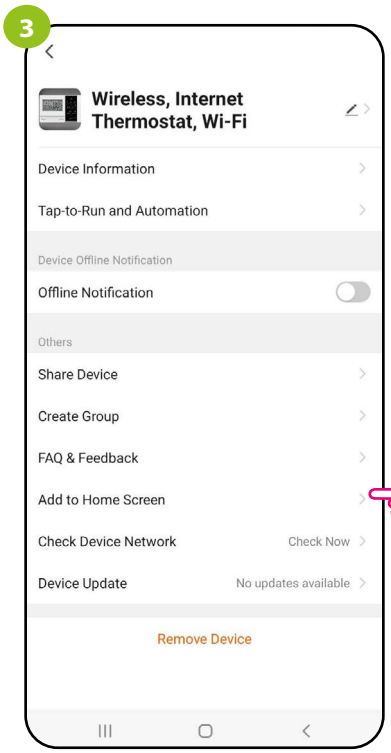
If you are tired of constantly opening the app to enter the thermostat settings, or if you want to set a new temperature quickly - pin the thermostat to the main desktop of your smartphone. See steps below:



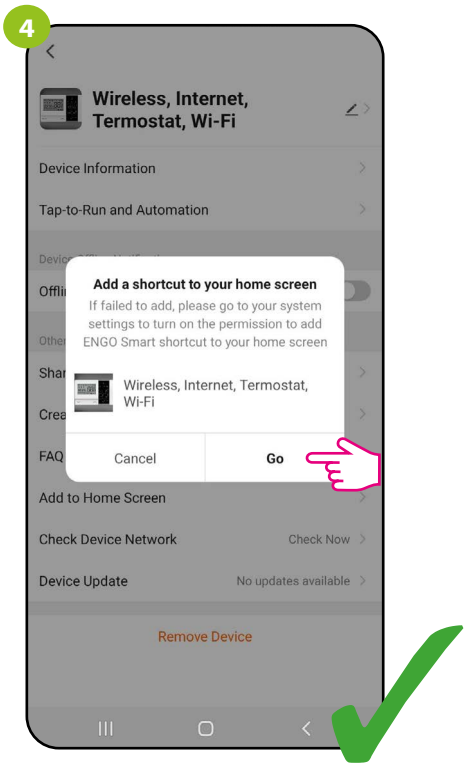
Enter the thermostat interface.



Click the pencil icon in the top right corner.



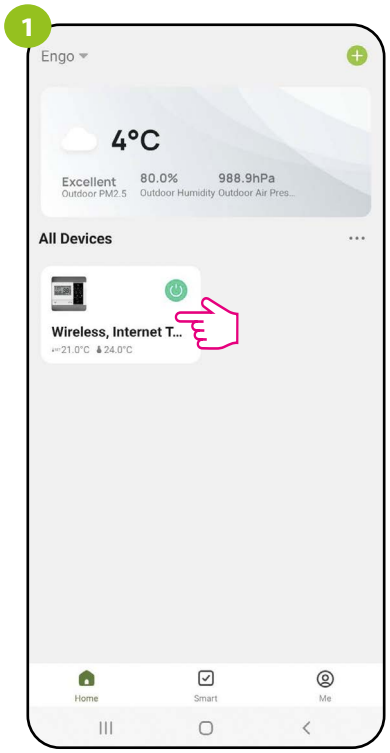
Select „Add to home screen".



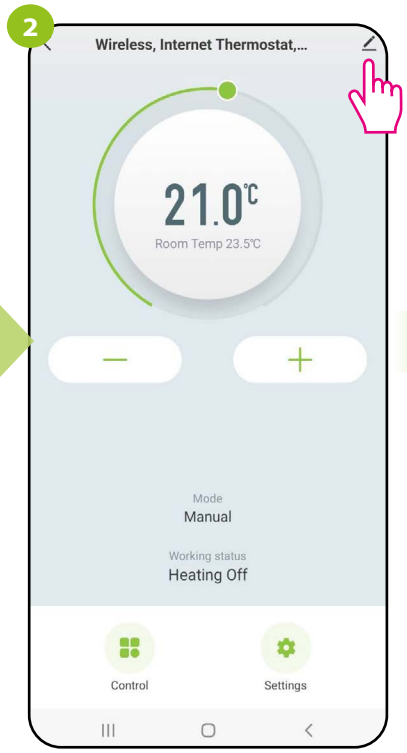
Confirm it by „Go" button. After all, a shortcut to the thermostat will appear on the phone's desktop.

9.5.8 Check device network

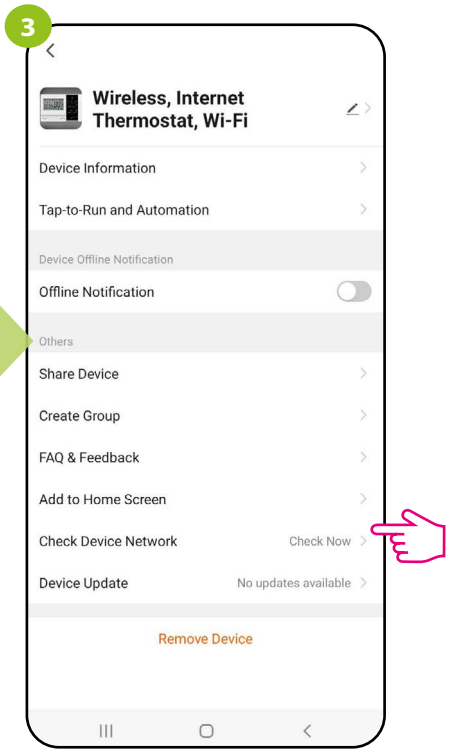
Each wireless device has a limited range of data transmission. In addition to distance, range can be affected by many other external factors such as stone walls, interference from other wireless networks, reinforced concrete ceilings, metal structural elements, pillars, etc.
The ENGO Smart app has a built-in function that allows you to check the range and quality of wireless connection of the added devices. To check the connection quality, follow the steps below:



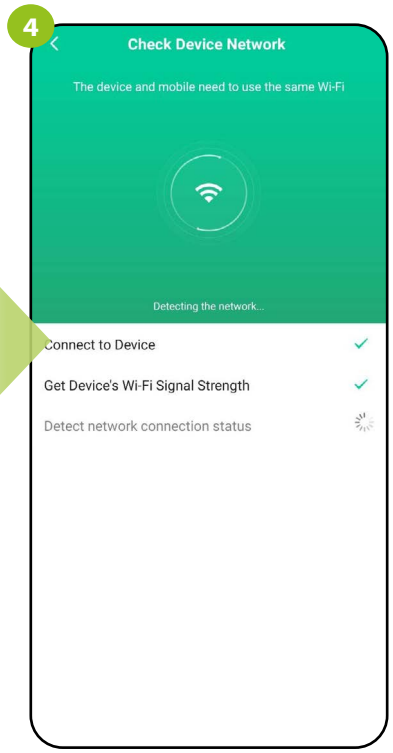
Enter the thermostat interface.



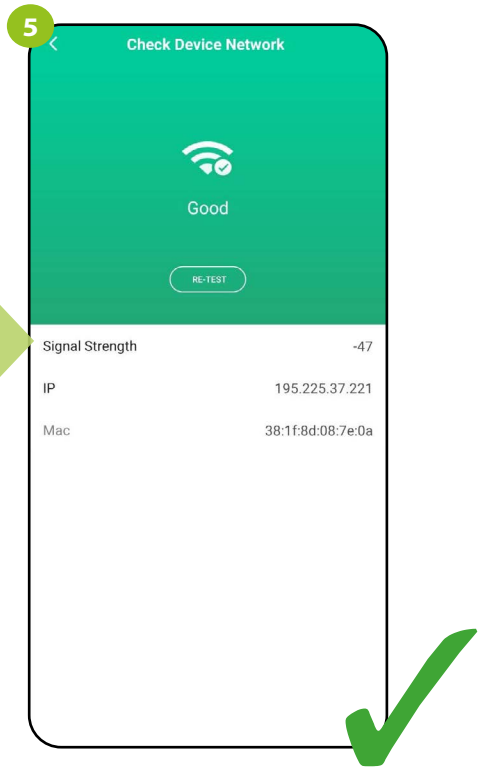
Click the pencil icon in the top right corner.



Select „Check Device Network".



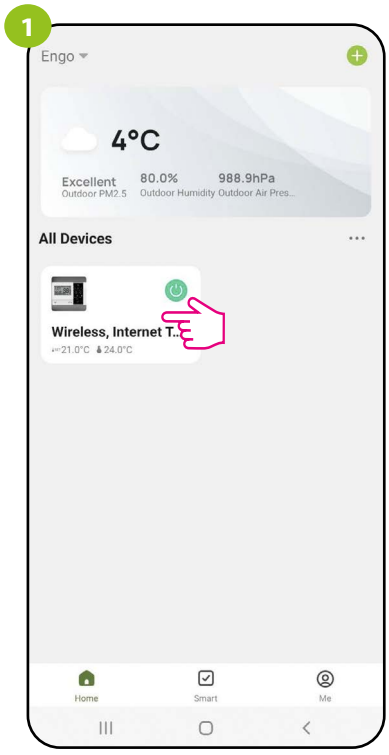
The app will start testing the Wi-Fi connection with the thermostat...



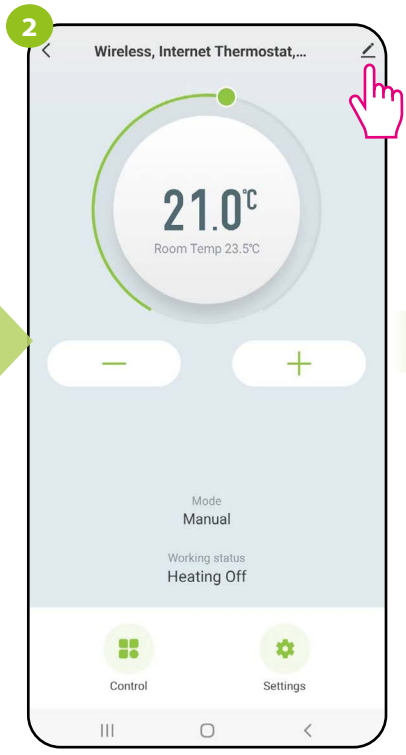
...after a positive test result, the app will show you detailed parameters, e.g. signal strength, device IP and MAC address.

9.5.9 Device update

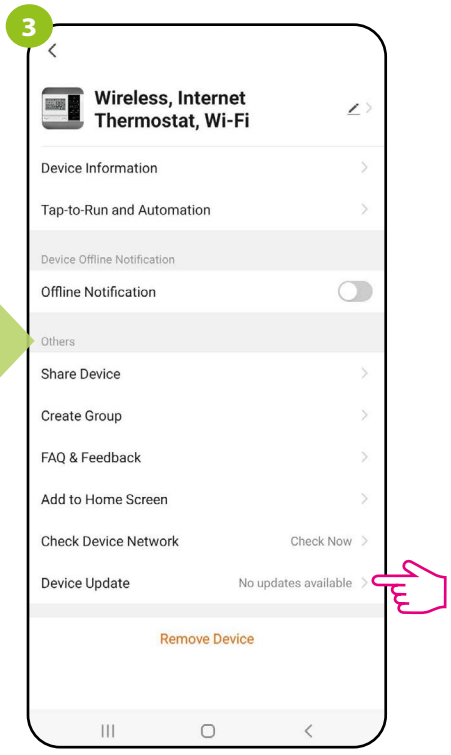
To properly update E901WIFI, make sure that:
1. The transmitter of the thermostat (white part with the display) is located 0.5m-1m from the receiver (black part connected to the heating device).
2. As soon as the top LED diode of the receiver turns pink - immediately touch any key of the transmitter to turn ON the backlight of the screen. This action is crucial to make update successful. Otherwise update process will require another attempt.



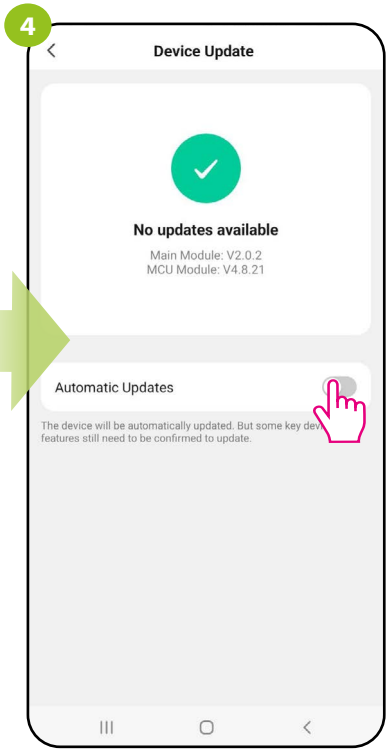
Enter the thermostat interface.



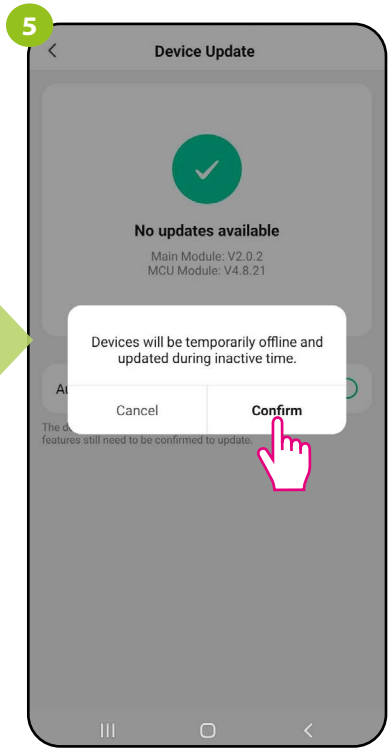
Click the pencil icon in the top right corner.



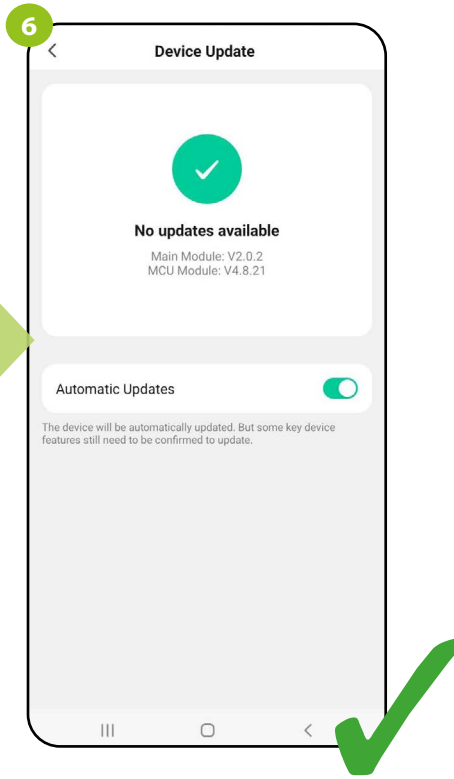
Select „Check for available software updates".



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

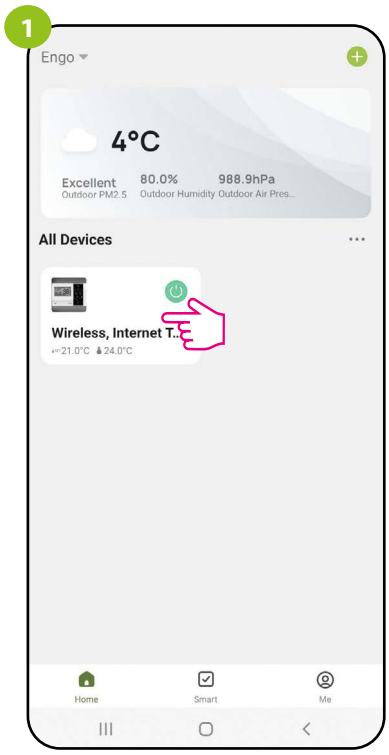


Confirm.

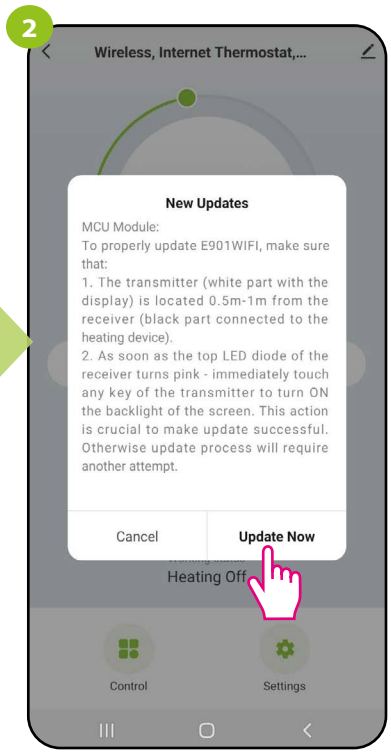


From now on, whenever there is a new software, the thermostat will start updating.

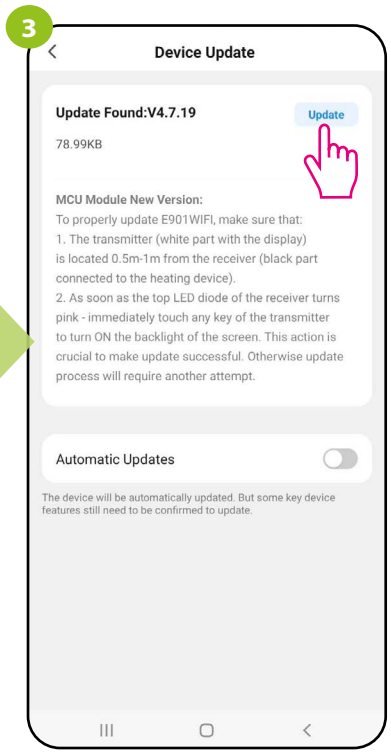
While updating, the thermostat should be within 1 meter of the receiver, the WiFi signal strength should be good.



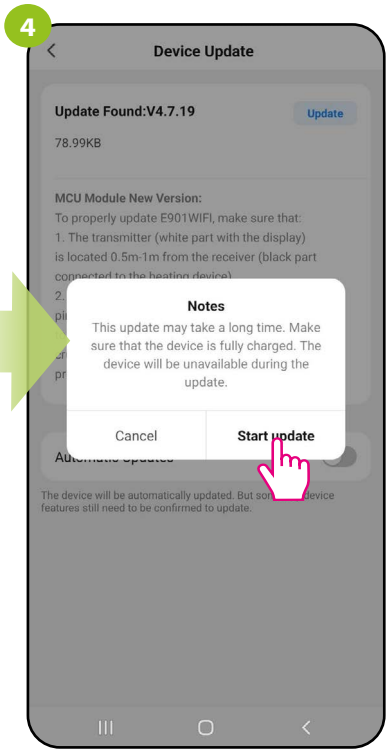
Upper LED on the receiver lights up pink.



There is information about available update, read it carefully and click „Update Now".

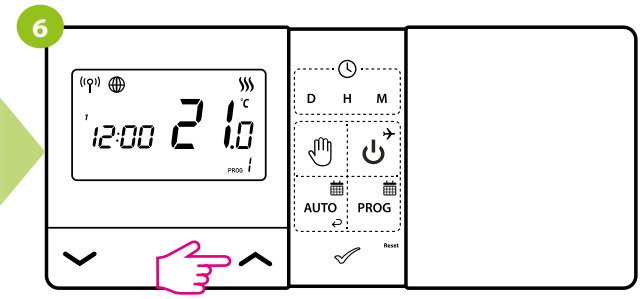


Then click „Update".

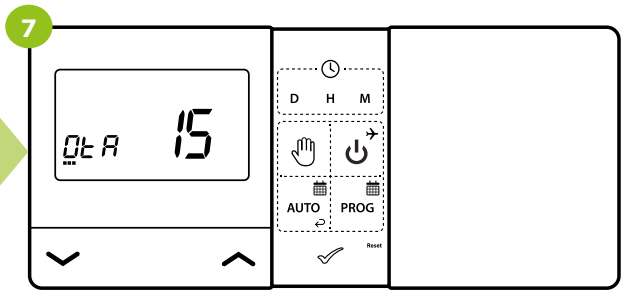


Select „Update"

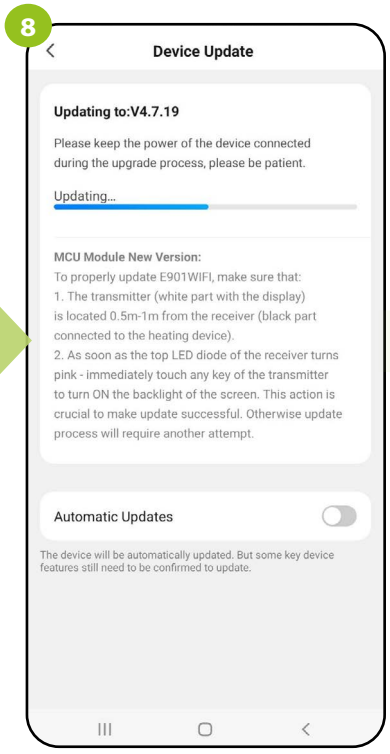
Upper LED on the receiver lights up pink.



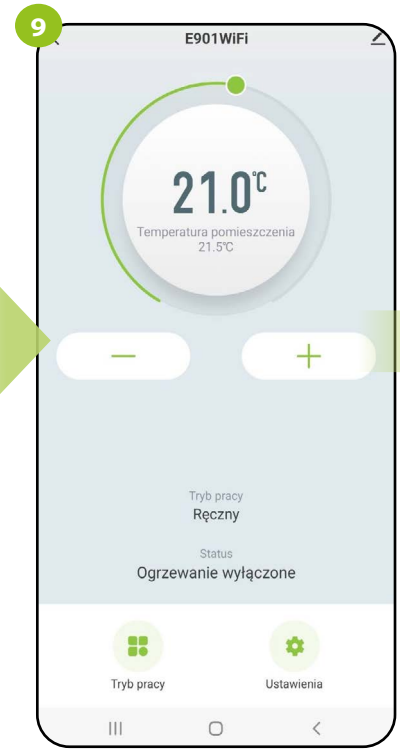
Press any button to highlight the display.



„OTA" message appeared on the screen and indicator shows the progress of the update in percents.



The app also shows a progress bar update.



After completing the update in the app the thermostat displays the main interface.

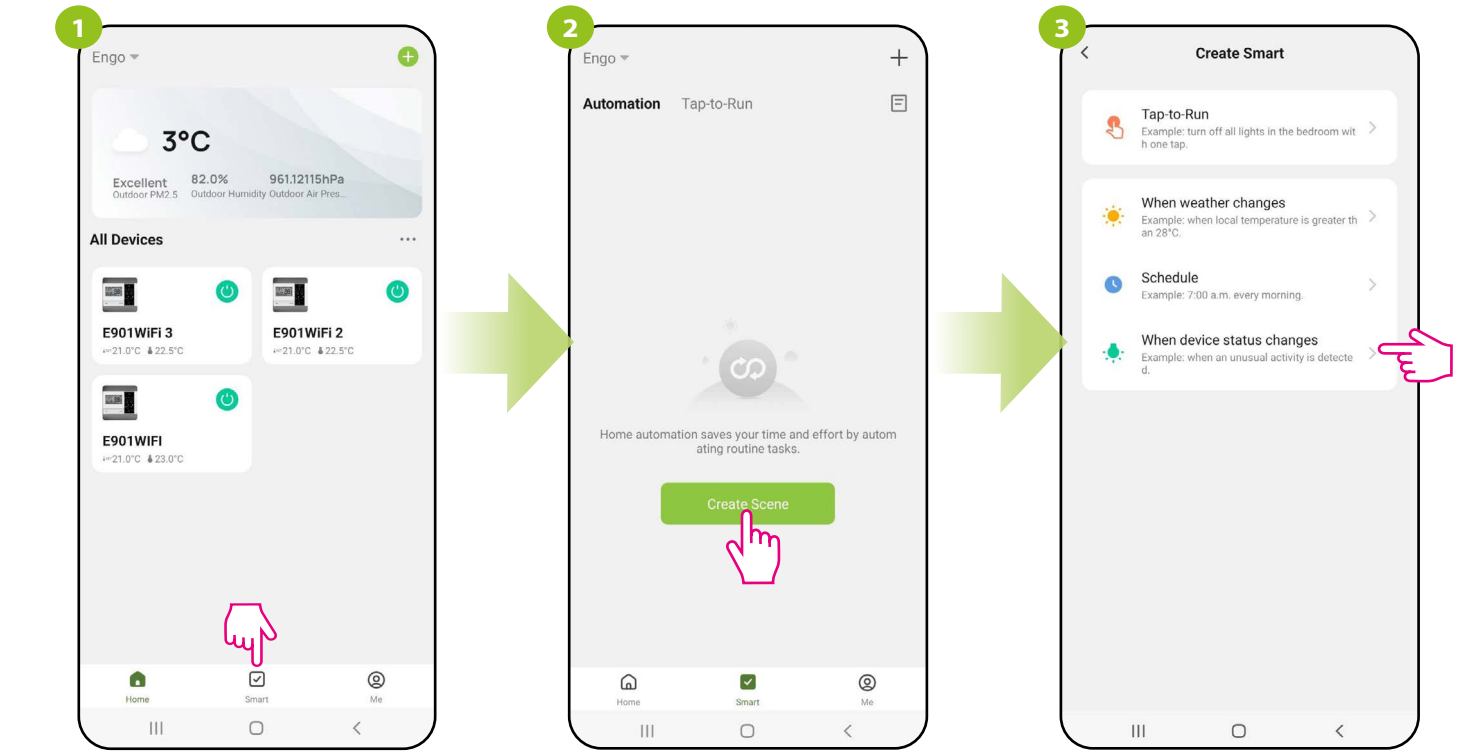
The thermostat returned to the main screen, and the upper LED on the receiver lights up blue.

9.5.10 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. There are 2 main rule programming interfaces in the app that can be used for task settings:

- **Tap-To-Run** - run several operations at the same time with one virtual app button e.g. turn OFF all thermostats,
- **Automation** - set up linked activities, where one device will affect another by defined actions.

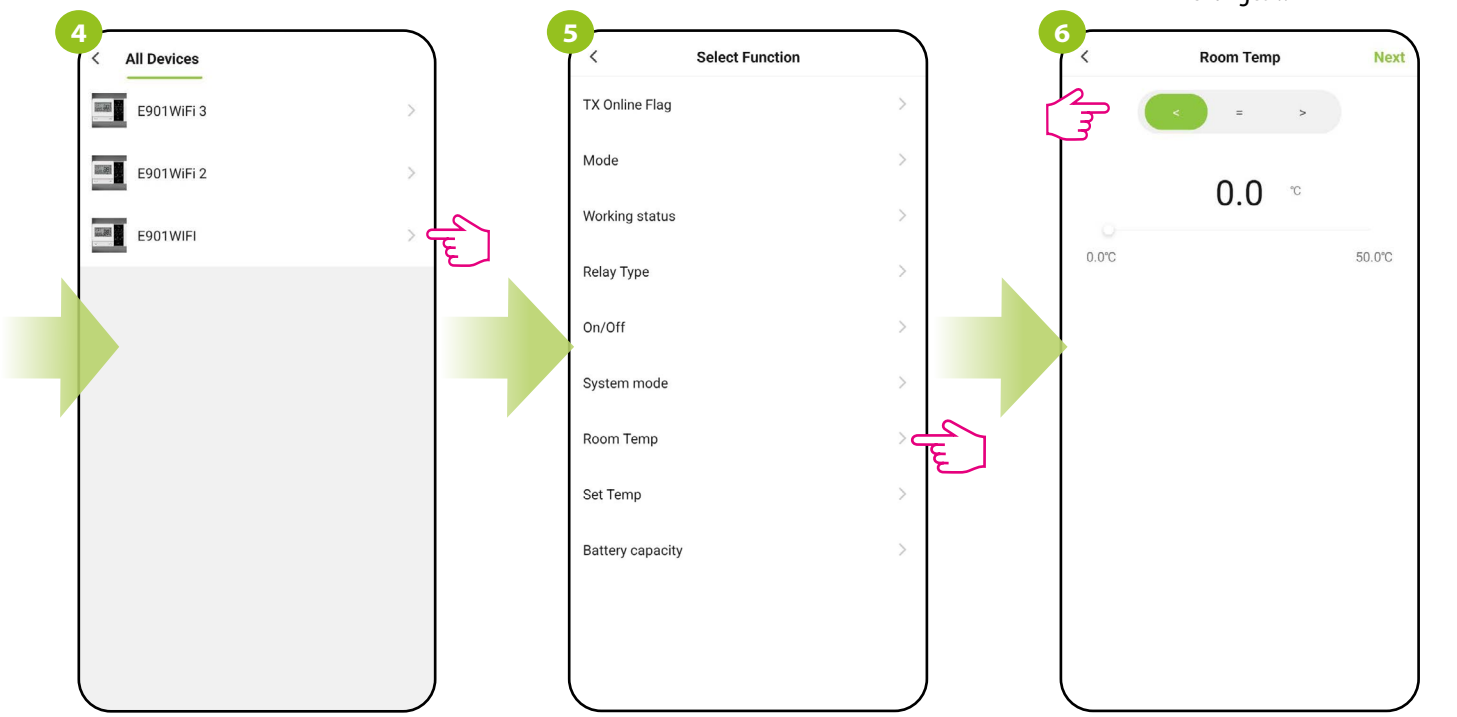
An example of setting the „Tap-To-Run" rule with the use of E901WIFI thermostat where the app will send a notification when the room temperature falls below the trigger value.
Follow the steps below:



Enter the Smart menu.

Click „Create Scene"

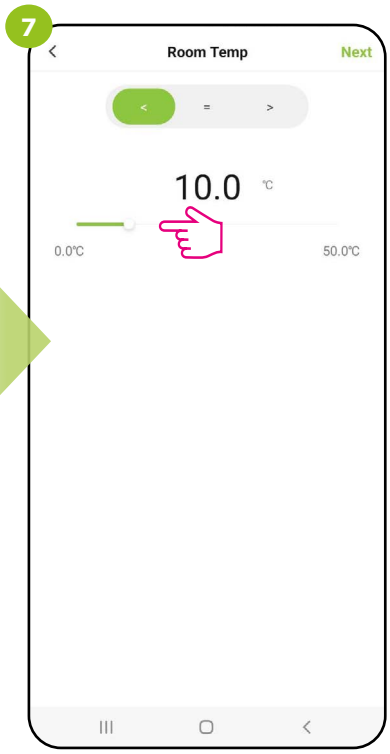
Select „When device status changes"..



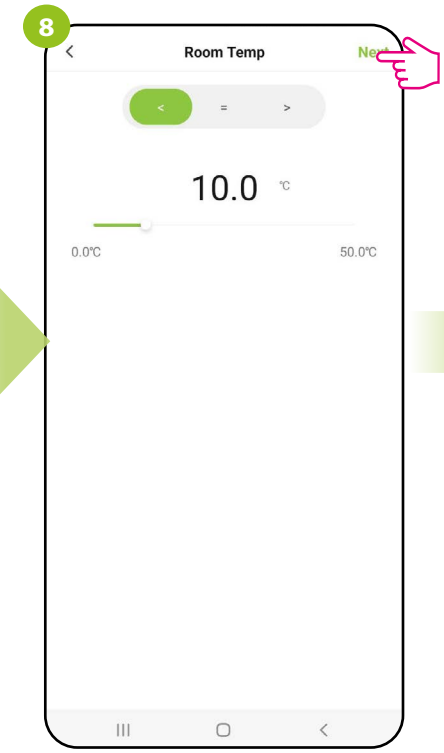
Chose device.

Select „Room temperature".

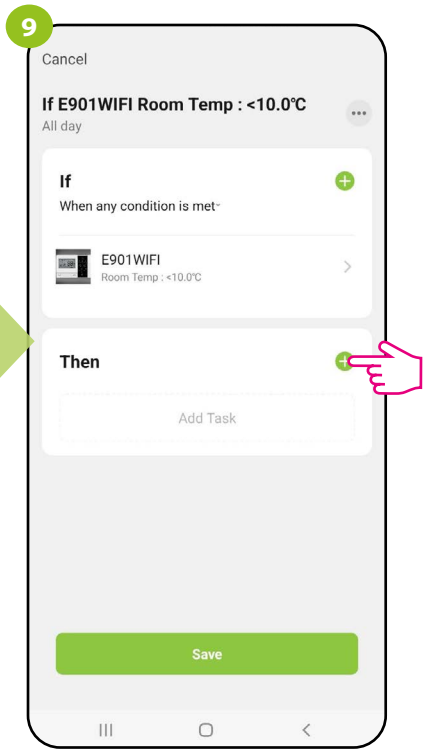
Click „Less than".



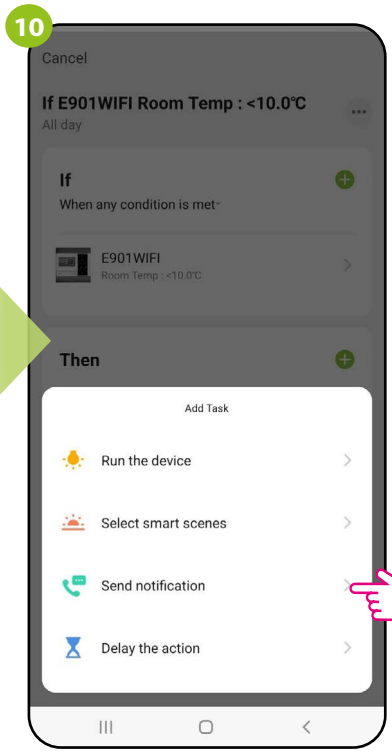
Use the slider to set the value room temperature below which you will receive a notification with low room temperature.



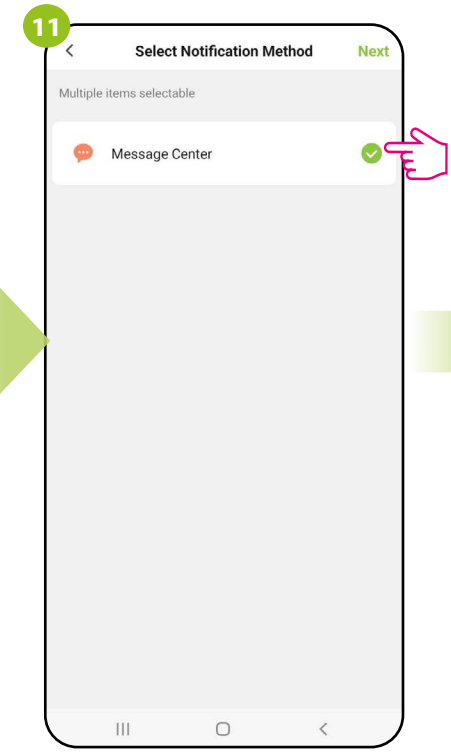
Click „Next".



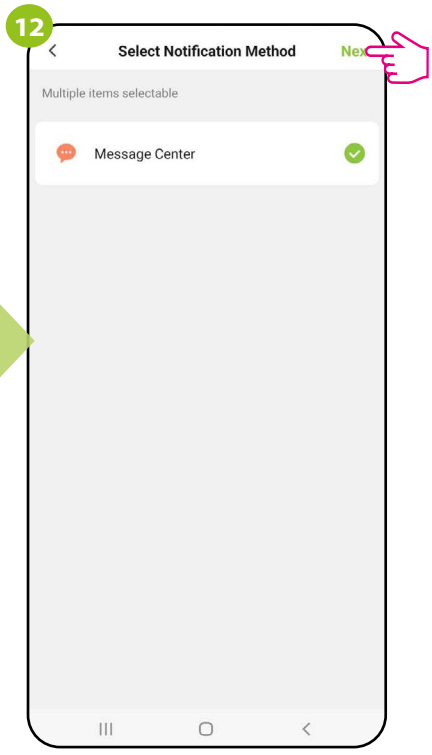
Click „Then".



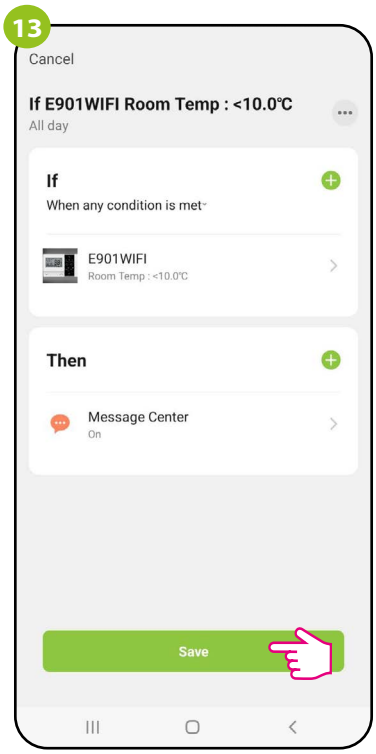
Select „Send notification".



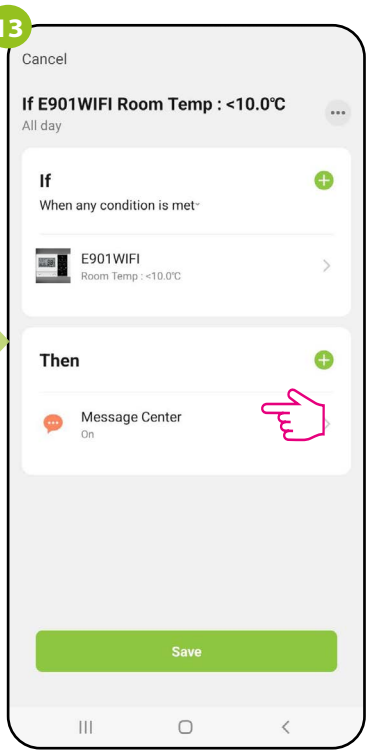
Click „Message Center".



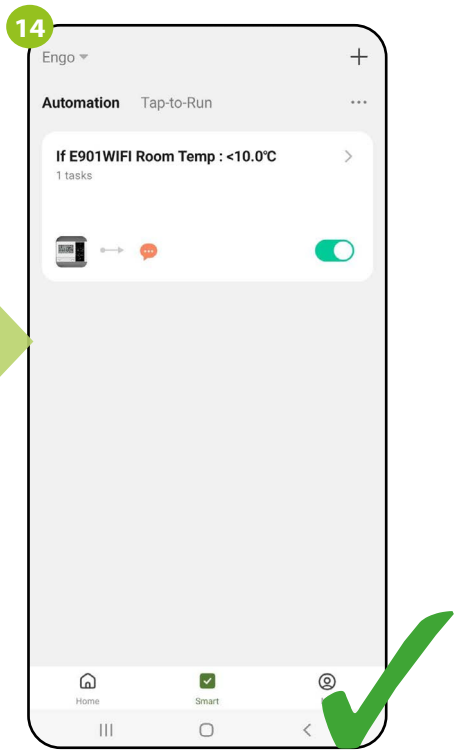
Click „Next".



Click „Save".



Click „Yes".

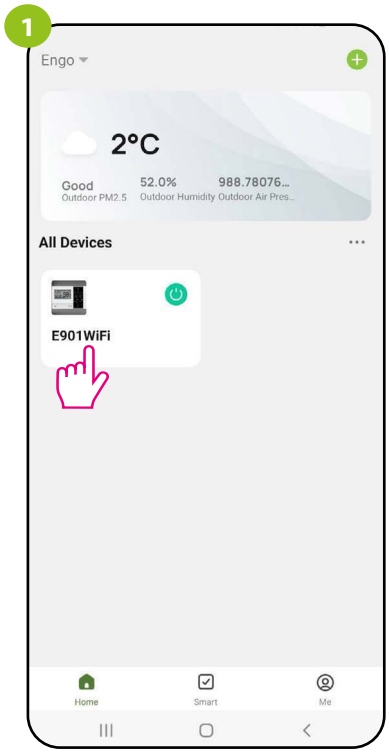


The rule was saved: when the temperature in the room drops below the trigger value, the app will send a notification about this event.

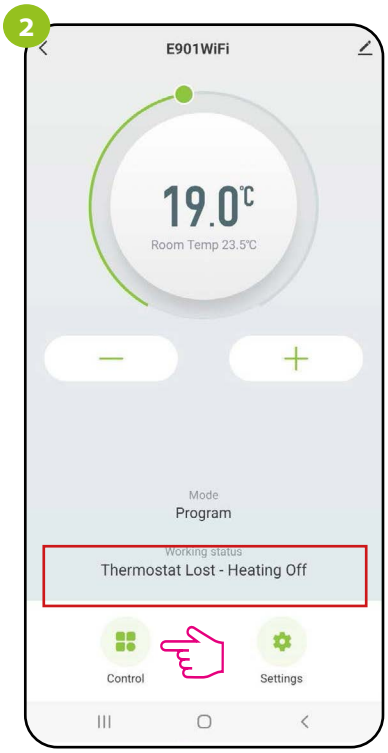
10. No communication - cyclical work

If the receiver loses connection with the thermostat (e.g. as a result of battery discharge), the user will receive a push notification in the application informing about that. If it is not possible to replace the battery in the near future, there is an option of emergency control of the receiver. From the application level, the receiver can be turned on or off permanently, or start the cyclic heating mode (cycle: 11 minutes – heating is off / 4 minutes heating is on).

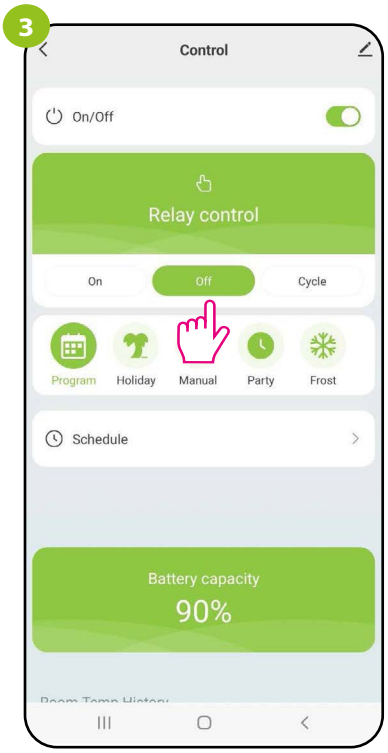
To select the type of emergency relay control of the receiver that has lost connection with the thermostat, follow the steps below:



Enter the thermostat interface.



Select the "Control" option.



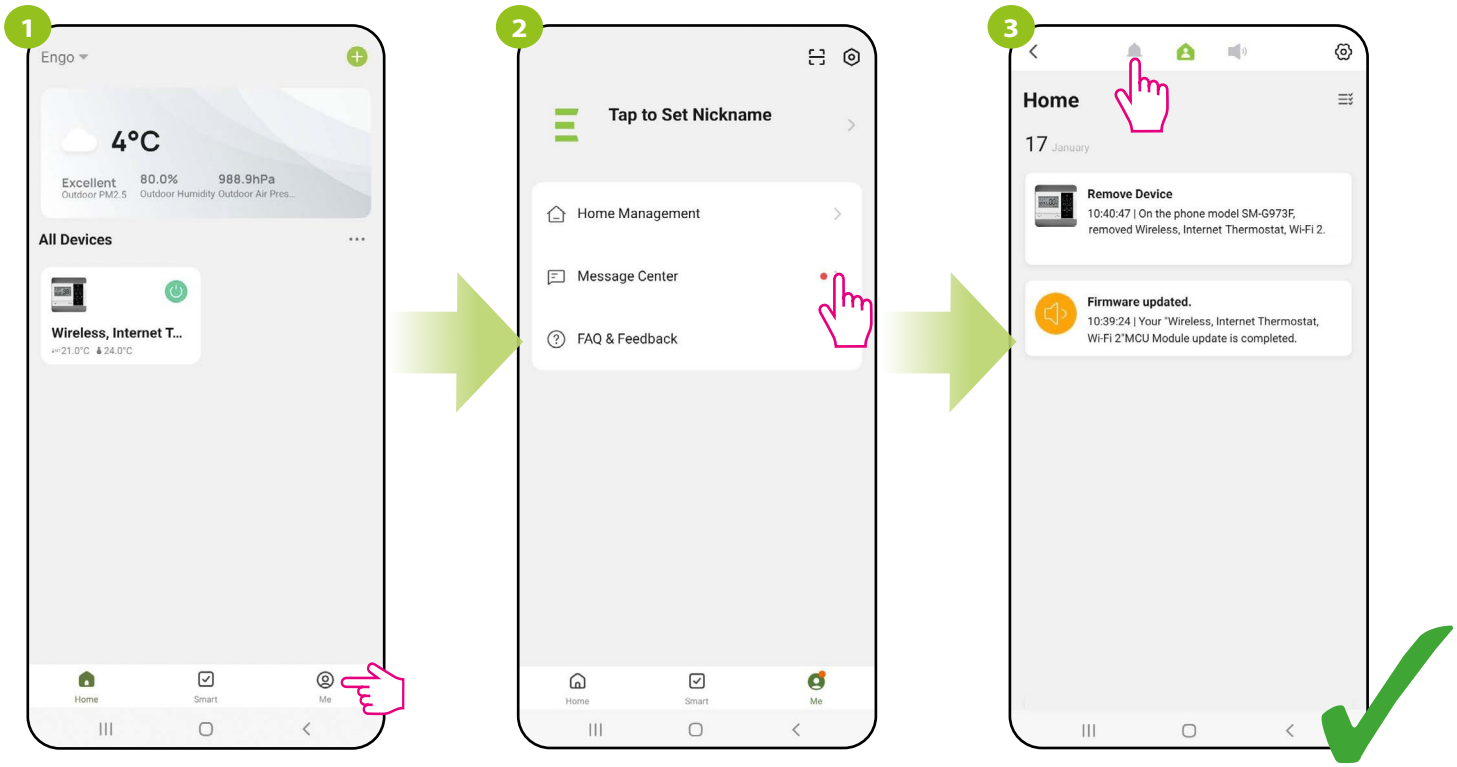
Choose Relay control
On / Off / Cycle

11. Alarms / Push notifications / Emergency states

How to fix the problem?

Description	Solution
Red LED flashes on the receiver.	The thermostat has not been added to the app or has been removed from the app. Add thermostat to the application according to the instruction.
Green LED lights up on the receiver.	The receiver is connected to a router that has no access to the Internet (works offline). Check your internet connection and router connection.
Green LED flashes on the receiver.	Check if you have entered the correct WiFi network password. If you want to add E901WiFi thermostat to the app please remember to run device scanning only on one phone. If you run device scanning on two or more phones you may encounter issues. Phone must have enabled Bluetooth/ Location functions, and must be connected to the same WiFi network which we want to be used by thermostat.
Error in adding the thermostat to the app.	Check if you have connected the wires correctly or if the thermostat is not turned off from app. You may also try to remove device from app completely („Disconnect and wipe data" function), sync your E901TXWIFI (transmitter) with E901RXWIFI (receiver) again (see chapter 12) and try to add to the app one more time (e.g. by enabling „APP" parameter from E901TXWIFI menu).
Notification „LOST RF" on the thermostat.	Check if the receiver is connected to the power supply or check the distance/obstacles between E901TXWIFI (transmitter) and E901RXWIFI (receiver).

Alarms.
To go to notification page, follow these steps:



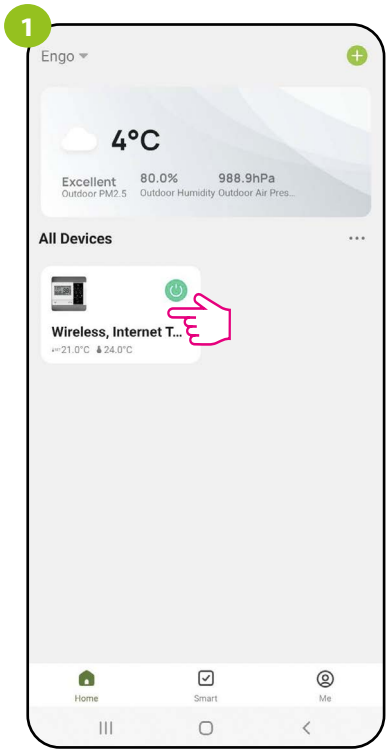
Enter the „Me" menu.

Select a „Message Center".

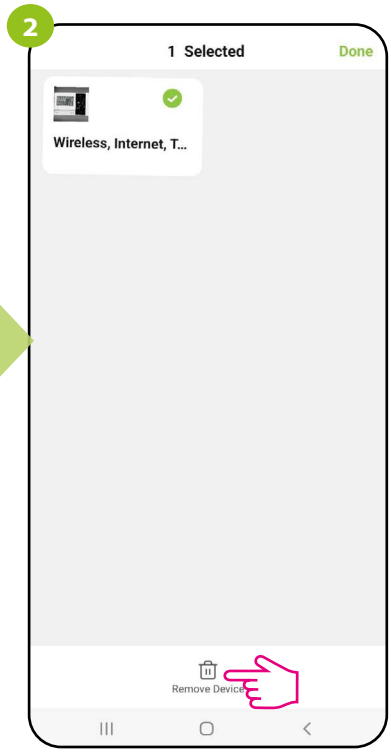
Jump between the Alarm, Home and Bulletin tabs one by one to find a message or notification about your thermostat.

12. Remove device

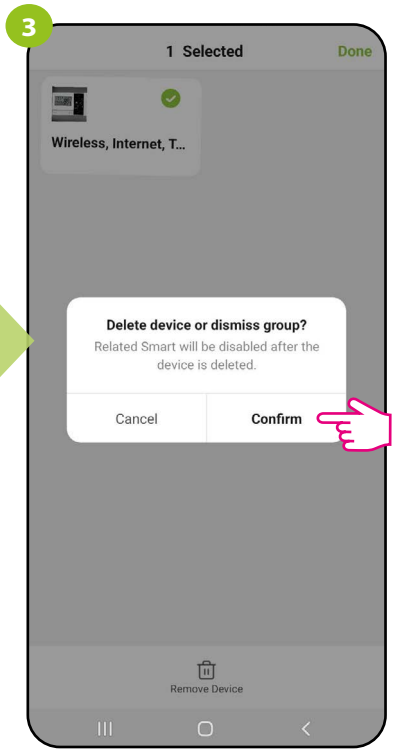
To remove the E901WIFI thermostat from your account, follow these steps:



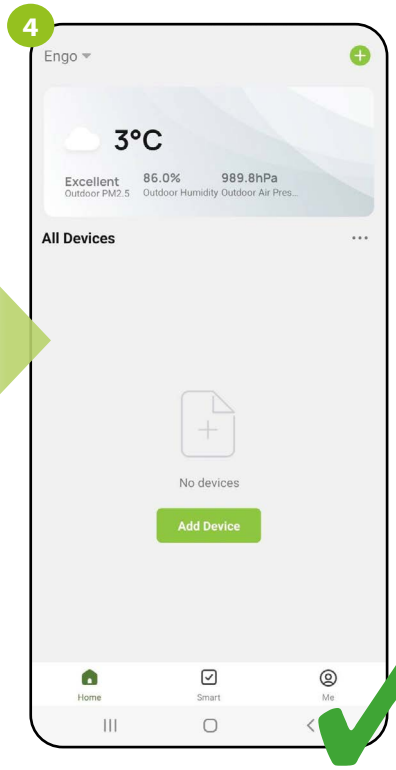
Click and hold the thermostat icon.



Select the device
and click „Remove device".



Then confirm.



Click „Done"

13. Pairing E901WIFI thermostat with receiver.

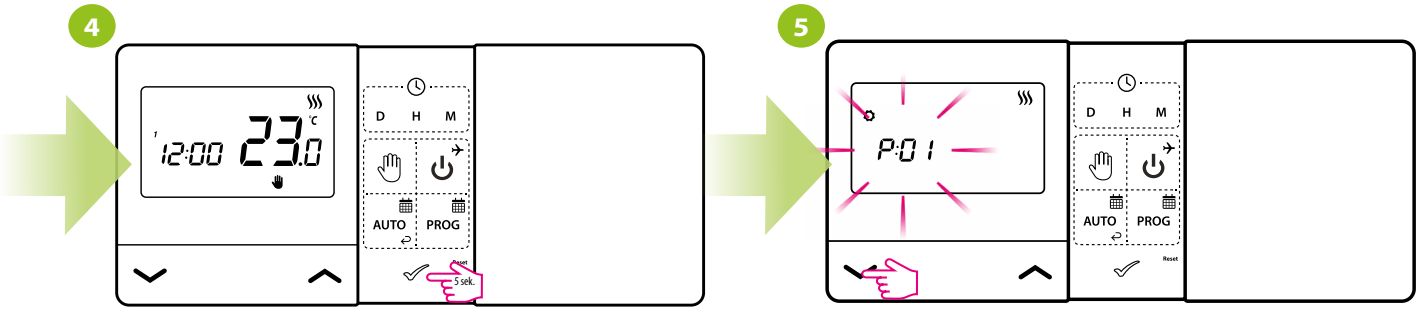
PLEASE NOTE!
E901WIFI thermostat is already paired with the receiver!

In order to pair the devices correctly, you must first prepare the receiver for synchronization!

If you want to re-pair the devices with each other, make sure that the receiver is disconnected from the power supply and the switches on it are in the ON and AUTO positions. Then connect the receiver to the power supply.

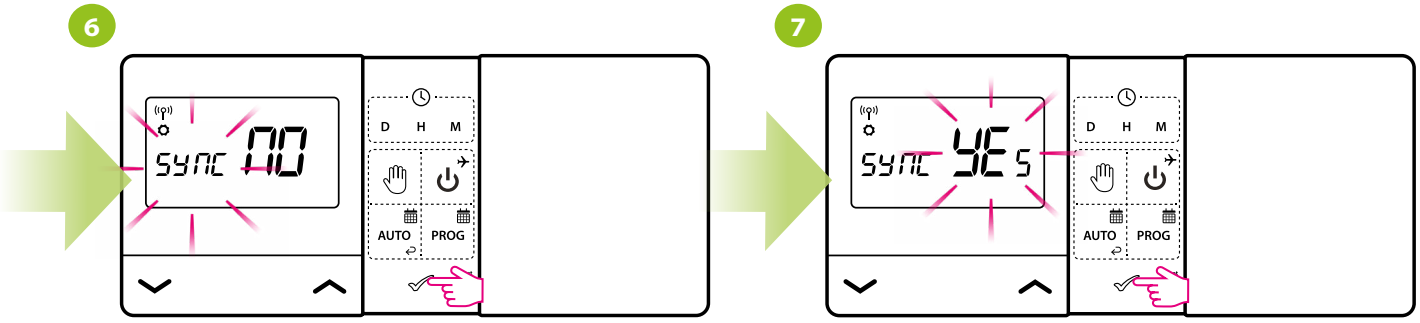
Move the left switch to the OFF position and back to the ON position with a quick motion.

The orange LED will start blinking to confirm that the receiver has entered the pairing mode.



Press and hold ✓ button for 5 seconds.

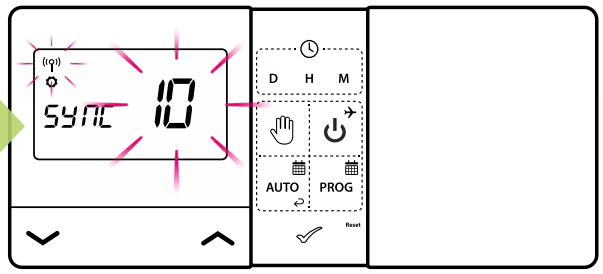
Use ⌄ button to select SYNC parameter.



Confirm by ✓ button.

Using ⌃ or⌄ buttons choose YES and start the pairing process on a new frequency by pressing the ✓ button.

8

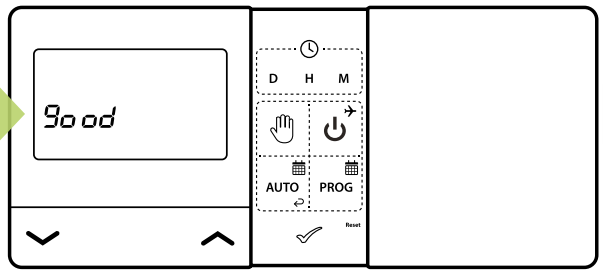


The thermostat started to send a signal to find the receiver (the symbol of the blinking antenna) and started the countdown with the number 10 (min). The pairing process may take up to 10 minutes.

9

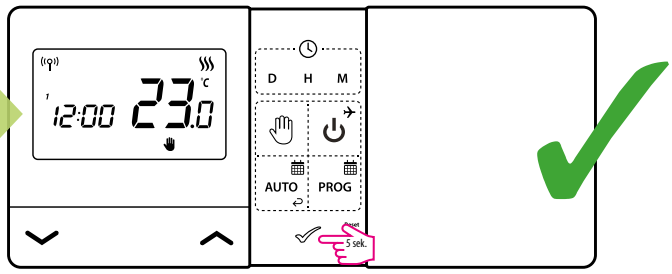
When the orange diode on the receiver lights up continuously, the devices have been paired on a new frequency.

10



The thermostat will display the message „good", which means that the devices are successfully paired with each other.

11

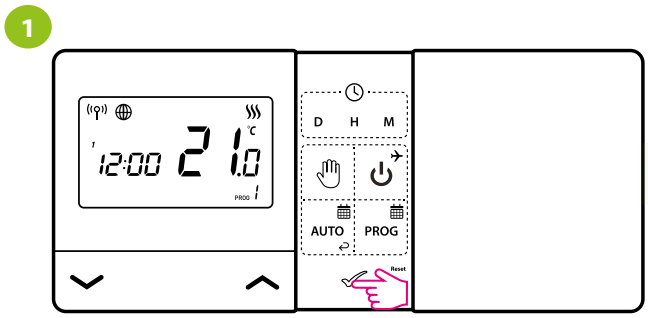


The thermostat will return to the main screen.

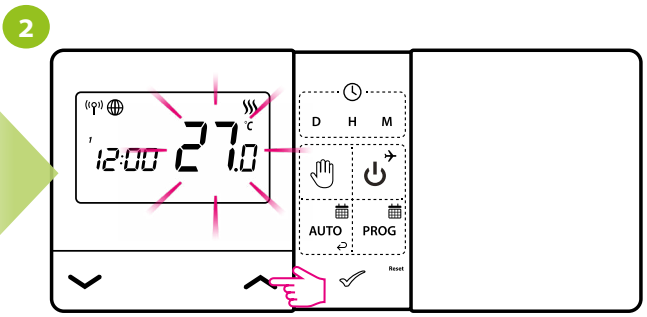
WARNING! If the orange diode on the receiver has not stopped blinking after 10 minutes, repeat the pairing process taking into account the distance between devices, obstacles and interference.

13.1 Transmission test

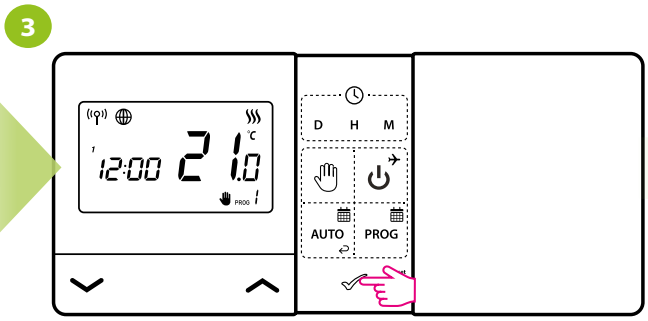
It is important to place the receiver and transmitter in places where nothing is interfering with the radio signal. The range of communication between the transmitter and the receiver in an open area is up to 60m. The radio transmission is influenced by many factors that can shorten the working distance, such as thick walls, drywall covered with aluminum foil, metal objects such as cabinets, general radio interference, etc. However, the range is sufficient for most domestic applications. It is recommended that the radio transmission between devices has to be tested before mounting the thermostat to the wall. The test can be performed by changing the setpoint temperature, i.e. by activating or deactivating the heating.



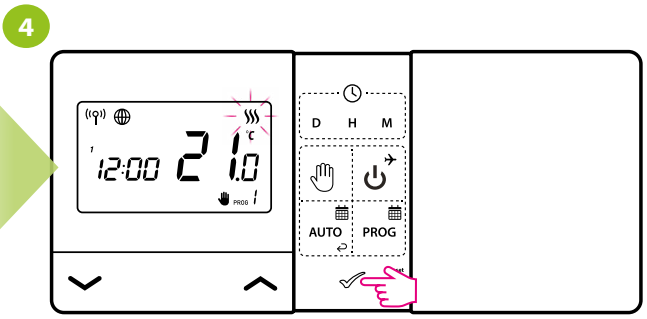
Check that the thermostat is not sending a signal to heat. Press any button to highlight the display.



Use the ^ or v buttons to set a higher temperature than the thermostat measures.

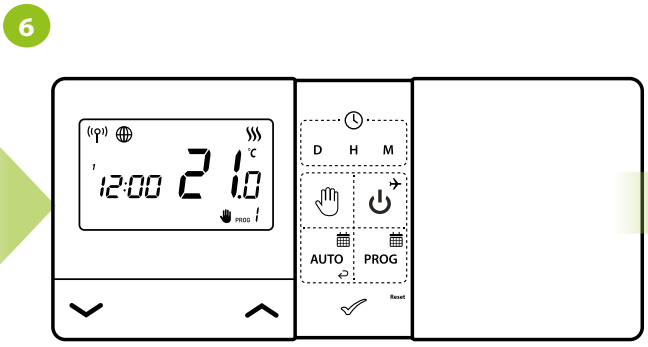


Confirm by ✓ button or wait until the thermostat will approve your choice itself and display the main screen.



The thermostat started sending a heating signal when the screen went blank. The heating icon will animate which means that thermostat sends a signal for heating.

Check that the orange LED on the receiver is on. If so, it means that the communication between the devices is correct.



Set the temperature setpoint a few degrees lower than the room temperature by repeating steps 1 to 5. Wait a few seconds. The flames icon should stop animating...

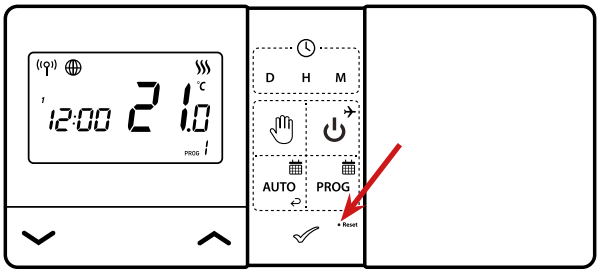
...and the orange LED on the receiver should go out.

Pleasenote:

If the orange LED does not turn on / off as indicated by the transmitter flame icon, try moving the transmitter closer to the receiver and repeat all steps from the beginning. If it still doesn't work, try the pairing process again.

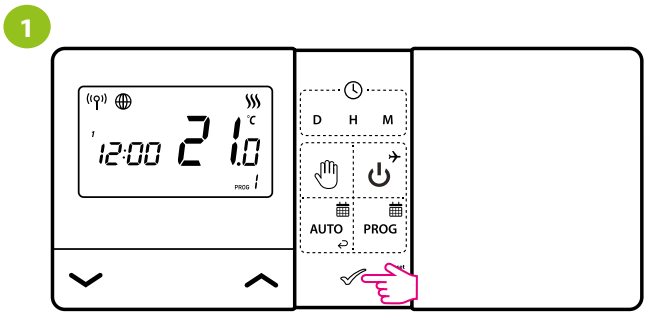
14. User settings reset

There is a small hole to the right of the ✓ button. This is the REBOOT button. Pressing this key will restart the thermostat and reset time.

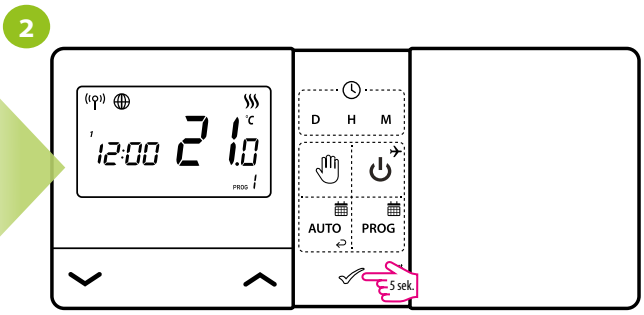


15. Clear settings - factory reset

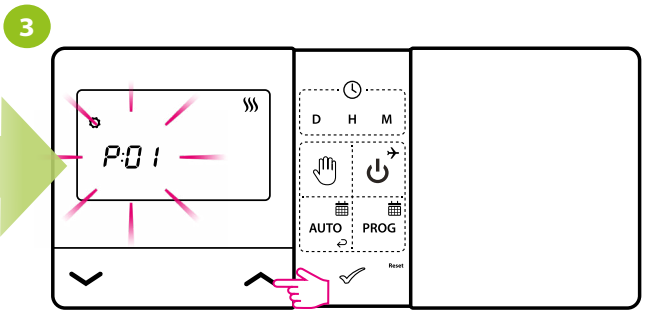
To perform factory reset (which will remove all user/installer settings), use the „CLr" parameter from installer parameters menu. After confirming the parameter, the thermostat will restore the default settings.



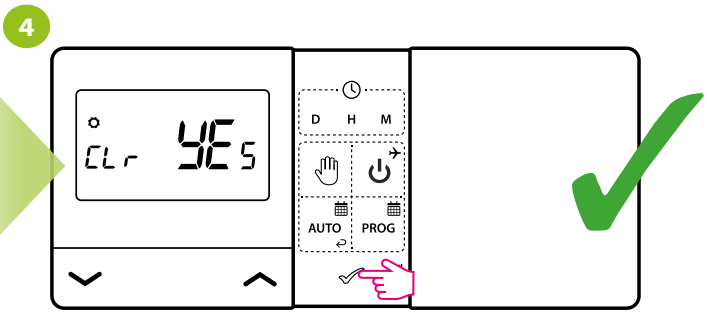
Press any button to highlight the display.



Press and hold ✓ button for 5 seconds.



Use ^ or v buttons to move to CLR parameter.



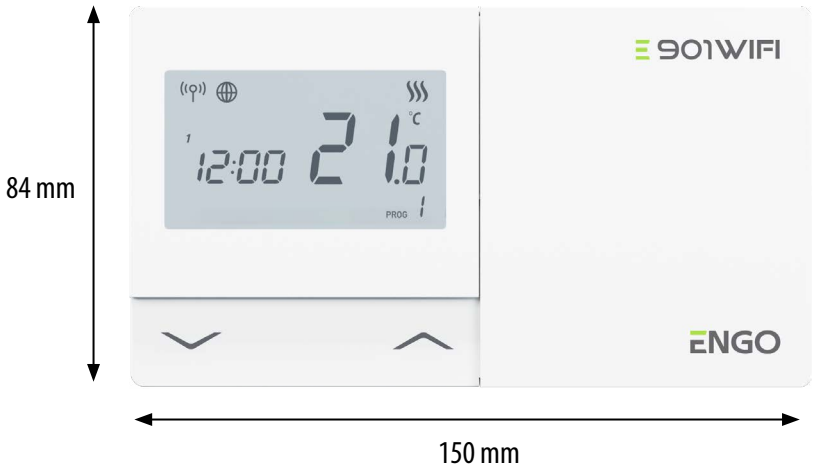
Confirm the new parameter value with the ✓ button.

16. Cleaning and Maintenance

The E901WIFI 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.

17. Technical Informations

Power supply	2 x AA batteries
Receiver's power supply	230V AC 50 Hz
Max. load	16 (5) A
Output signal	COM / NO (volt free)
Temperature range	5 - 35°C
Display temperature accuracy	0.5°C
Control algorithm	TPI or Histereza: ±0.25°C i ±0.5°C
Communication	Wireless, 868Mhz + WIFI 2,4 GHz
Dimension [mm]	transmitter: 150 x 84 x 22 receiver: 96 x 96 x 27



18. 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.
The full terms of the warranty are available on the website www.engocontrols.com

Customer name: .....

Customer address: .....

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

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

Company Name: .....

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

Installation Date: .....

Installer Name: .....

Installer Signature: .....

ENGO
CONTROLS

Ver. 1
Date of issue: IV 2023

Producer:
Engo Controls S.C.
Górnośląska 3E St.
Poland

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

www.engocontrols.com