



Thermiq FanNova

Fan Coil thermostat, Wi-Fi, 230 V



White edition | 3 F820 42



Black edition | 3 F820 41

Full Manual



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1. INTRODUCTION

1.1. PRODUCT COMPATIBILITY

The product complies with the following EU directives: 2014/53/EU and 2011/65/EU.

1.2. SAFETY INFORMATION

Please read this manual in its entirety before commencing installation and operation.

- Before starting installation, maintenance work or connection work, it is essential to disconnect the mains supply and to ensure that terminals and electric wires are not live.
- There is a risk of electric shock from, for example, the contact of the fan coil, fan, heat source, control box or electric actuators. In addition to disconnecting the electrical supply to the thermostat, you must also absolutely disconnect the electrical supply to the heat source and ensure that there is no dangerous voltage at the terminals. Ensure that the supply voltage does not accidentally appear!
- The thermostat must not be misused.
- The information contained in the instructions is important for correct operation.
- In order to avoid accidents resulting in personal and material damage, all safety rules specified in these instructions must be observed.
- The thermostat must not be used with a damaged housing.
- Under no circumstances must the thermostat's design be modified.
- It is forbidden to operate a faulty appliance or one repaired by an unauthorised service.
- The appliance should not be used by persons with limited mental, sensory or intellectual abilities, without experience, with insufficient knowledge, as well as children.
- Keep the appliance away from children and ensure that they do not play with it. Children should not be left unattended.
- Do not leave the packaging, casing, or any loose parts of the appliance unattended, as they are a danger to children.

INSTALLATION:

- The installation must be carried out by a qualified person with the appropriate electrical licence, in accordance with the standards and regulations in force in your country and in the EU.
- The electrical installation in which the thermostat operates should be protected by a fuse selected according to the loads used.
- Never attempt to connect the appliance in any way other than that described in the instructions.
- The device must not be exposed to extreme temperatures, strong vibrations or subjected to mechanical impacts.
- The device should not be used in adverse environmental conditions.

NOTE

- There may be additional protection requirements for the entire installation, which are the responsibility of the installer.

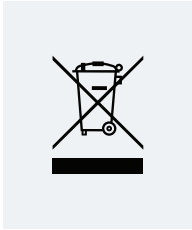
1.3. SYMBOLS USED



The symbol indicates the need to press a button on the thermostat or mobile app according to the instructions in the individual sections of this manual.



The symbol indicates important information on which damage to property, danger to human life and to pets may depend.



Concern for the environment is of paramount importance to us. Knowing that we manufacture electronic devices obliges us to dispose of used electronic components and equipment safely. For this reason, the company has received a registration number issued by the Chief Inspector of Environmental Protection. The symbol of the crossed-out rubbish bin on the product means that the product must not be disposed of in regular waste bins. Recycling helps to protect the environment. It is your responsibility to take your used equipment to a designated collection point for waste electrical and electronic equipment.

2. PRODUCT INFORMATION

The FanNova controller is an easy-to-use device, giving advanced solutions for managing fan coil units and trench heaters, ideal for both 2 and 4-pipe systems. With comprehensive Wi-Fi wireless communication and support for MOD-BUS RS-485 protocol, the FanNova integrates with state-of-the-art smart home and HVAC installations, providing full control over room temperature and humidity.

The unit offers flexible control of 3-speed 230 V fans, automatically adjusting fan speed as required. Anti-freeze and overheat protection functions ensure safety, and a built-in ECO mode allows energy savings, resulting in lower energy bills.

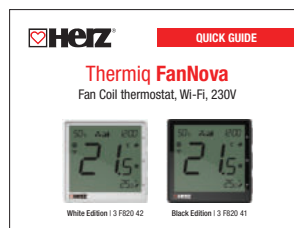
The FanNova controller is compatible with the HERZ Thermiq app, allowing you to remotely manage your system from anywhere - even when you are not at home. With the app, you can also use time schedules and monitor temperature history, ensuring that your system is fully optimised.

With support for mixed systems (fan coil for cooling and underfloor heating), the FanNova is a complete solution for anyone who wants to ensure thermal comfort in their home or office. Simple installation and intuitive operation via 3 side keys make it an ideal choice for both installers and end users.

PRODUCT FEATURES

- 230 V power supply
- Max. load of each output: 5(2) A
- Wi-Fi 2.4GHz wireless communication
- MOD-BUS RS-485 communication
- Mounting in a 60 mm flush box
- Control of 2- or 4-pipe fan coil units
- Control of 3-speed fans 230 V
- Control of combined systems (fan coil for cooling + underfloor heating)
- Configurable as underfloor heating thermostat possible
- Two colour versions
- Large, clear LCD display
- Humidity measurement
- Room temperature control via built-in or external temperature sensor
- Multiple operating configurations (pipe sensor, external contact, etc.)
- Economy mode (ECO)
- Automatic/manual fan speed control (stop, low, medium, high, auto)
- Anti-freeze and overheat protection function
- Delta FAN algorithm operation

2.1. PACKAGE CONTENTS



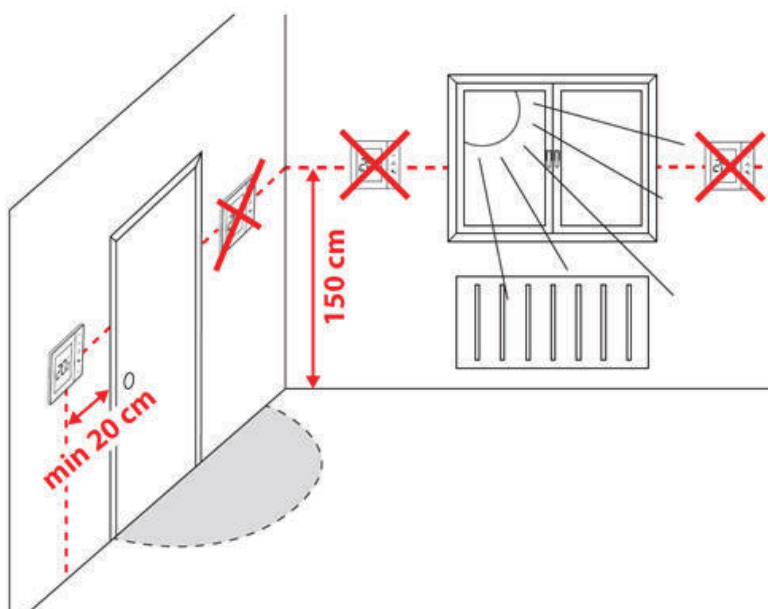
1. FanNova thermostat:
White Edition | 3 F820 42 or Black Edition | 3 F820 41

2. Quick Guide

3. Mounting Screws

Protective film with QR code for product page is attached to thermostat.

2.2. PROPER THERMOSTAT LOCATION



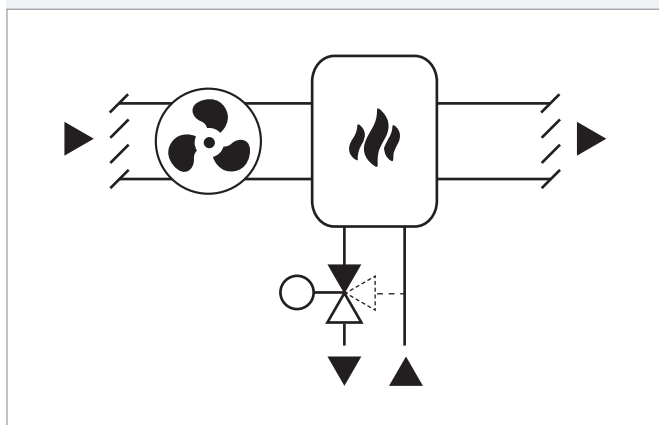
PLEASE NOTE: The recommended height for mounting the thermostat is approx. 1.5 m above the ground, away from any sources of heat or cool. It is not recommended to install the thermostat on an outside wall, in a draft or in a place where it will be exposed to direct sunlight.

3. APPLICATIONS AND SCHEMES

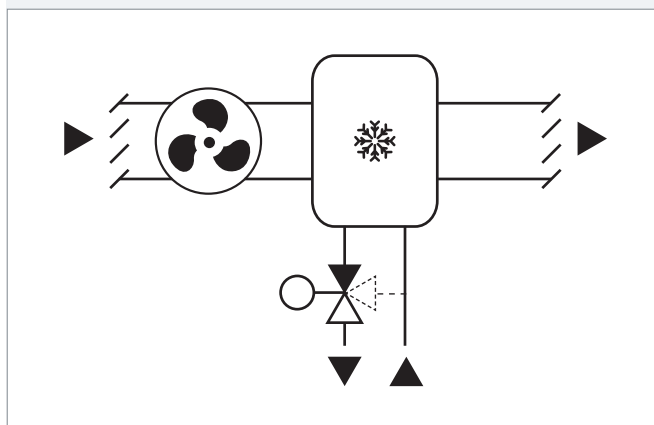
The FanNova can be configured to operate in various heating or cooling control systems. The supported applications are shown below:

2-PIPE APPLICATIONS

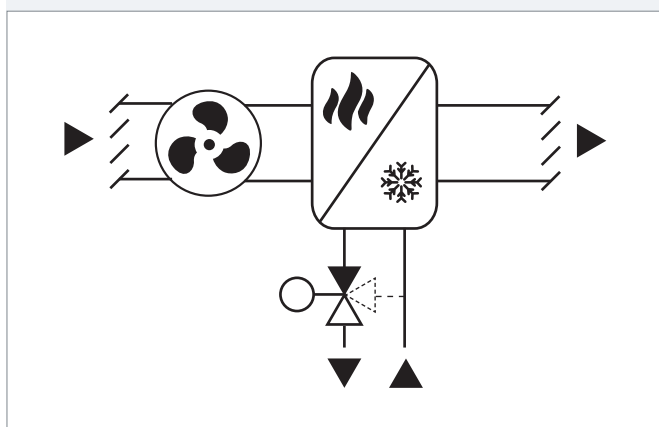
1. 2-pipe fan coil in heating mode



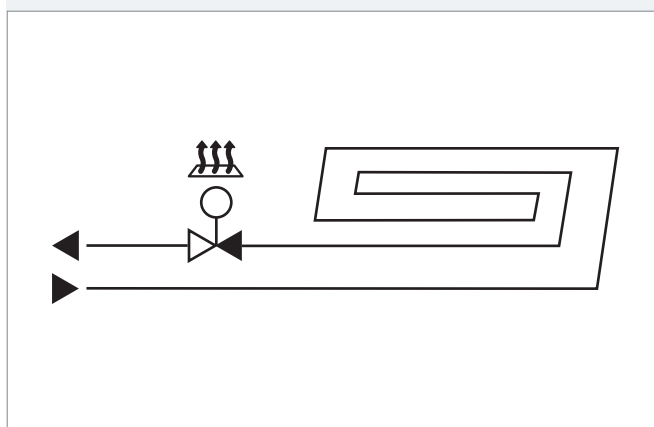
2. 2-pipe fan coil in cooling mode



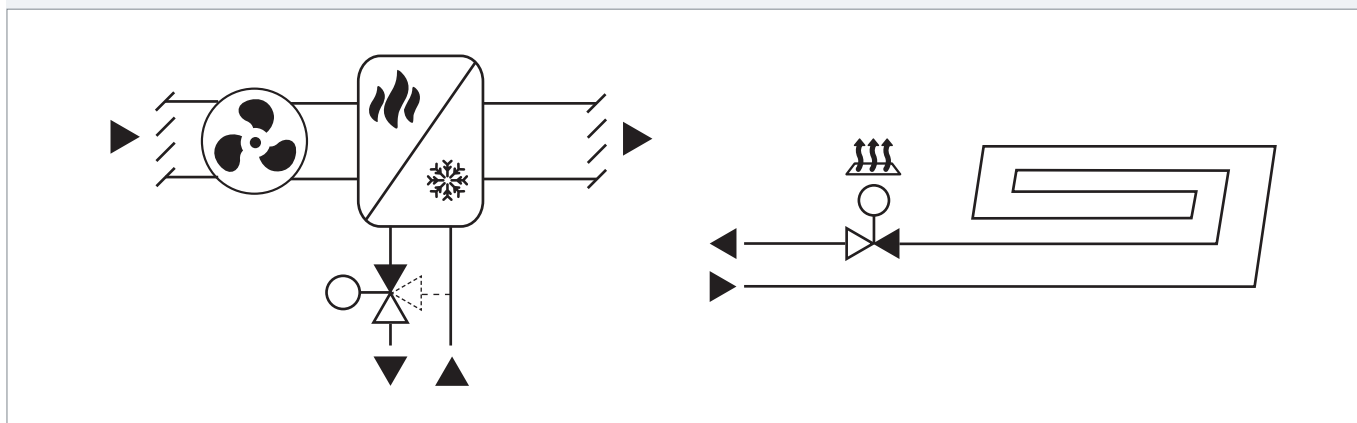
3. 2-pipe fan coil in heating / cooling mode



4. Control of Underfloor Heating



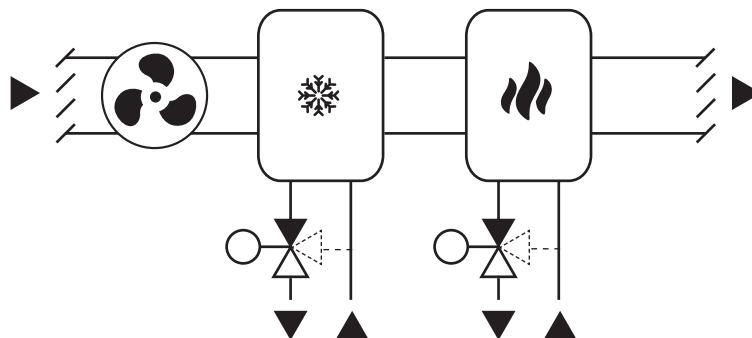
5. Underfloor Heating and 2-pipe fan coil in heating / cooling mode



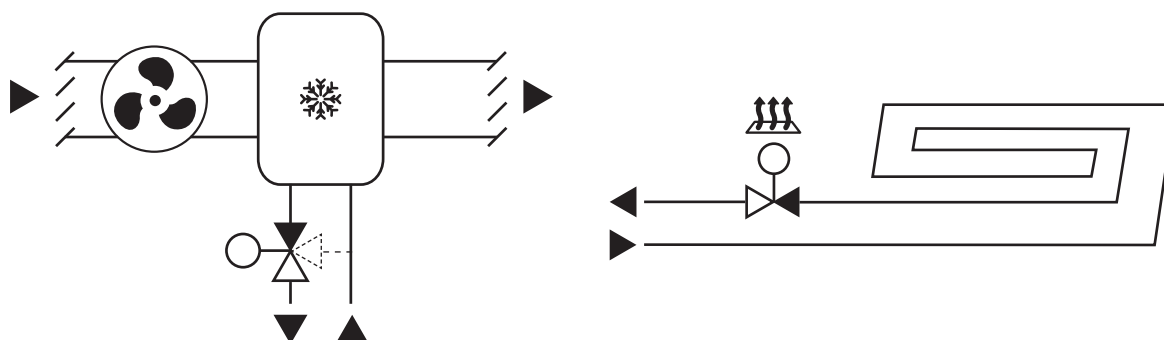
3. APPLICATIONS AND SCHEMES

4-PIPE APPLICATIONS

1. 4-pipe fan coil in heating and cooling mode



2. Underfloor Heating and Cooling with 2-pipe fan coil unit



Legend to the diagrams:



Heater



Heating/cooling or Underfloor
heating valve actuator



3-speed fan 230 V AC



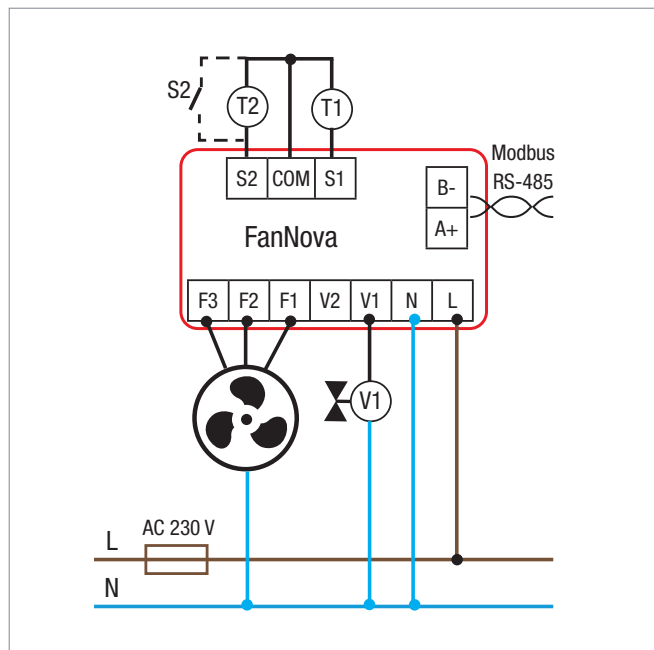
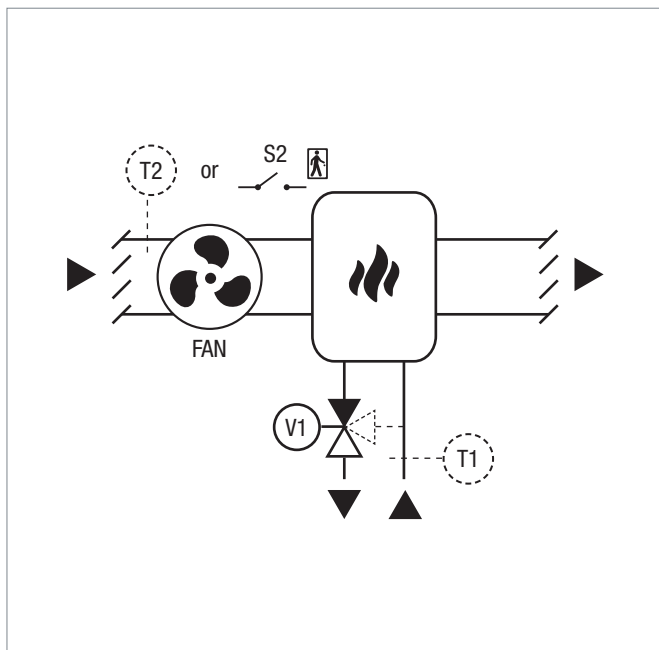
Cooler



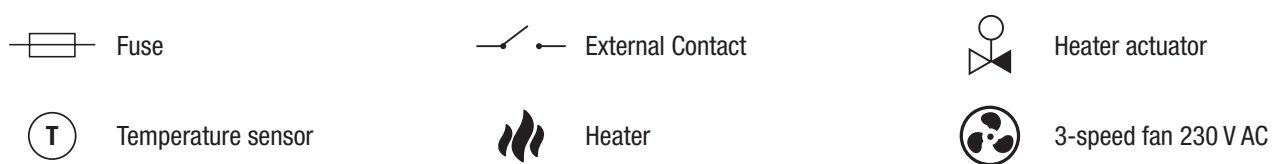
Underfloor heating

3.1. 2-PIPE APPLICATIONS. 2-PIPE FAN COIL IN HEATING MODE

The principle of operation of the 2-pipe fan coil in heating mode is based on the flow of hot water from a central heat source (e.g. a boiler) to the fan coil via a feed pipe. Inside the unit, the hot water flows through a coil (heat exchanger). At the same time, the fan of the fan coil unit draws air from room, which then flows through the finned surface of the heat exchanger. In this process, the air receives heat from the hot water and is heated. The heated air is then blown back into the room, causing its temperature to rise. The cooled water leaves the heat exchanger and returns through a second return pipe to the central heat source for re-heating.

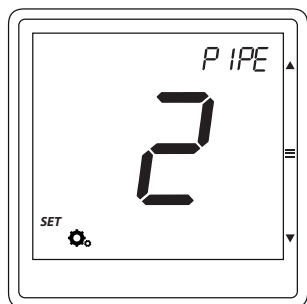


Legend to the diagrams:

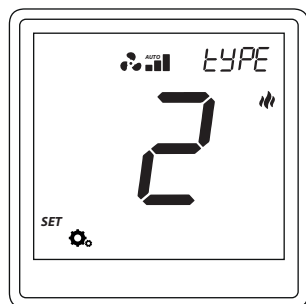


Thermostat connection terminals	
L, N	Power supply 230 V AC 50 Hz
F1, F2, F3	Output 230 V AC - I, II, III fan speed
V1	Control output 230 V AC - heating valve
T1	Pipe sensor - fan operation enable (option)
T2 or S2	T2 - Return air sensor / elevated sensor (option) or S2 - NO contact for hotel card or ECO mode (option)
COM	Ground for sensor / contact
A+ / B-	Communication port for Modbus RS-485

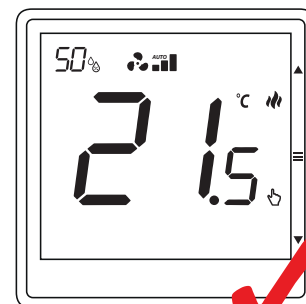
CONFIGURATION OF THE FANNOVA THERMOSTAT FOR A 2-PIPE SYSTEM IN HEATING MODE



Use the ▲ or ▼ keys to select 2 PIPE, then confirm with ≡ button.



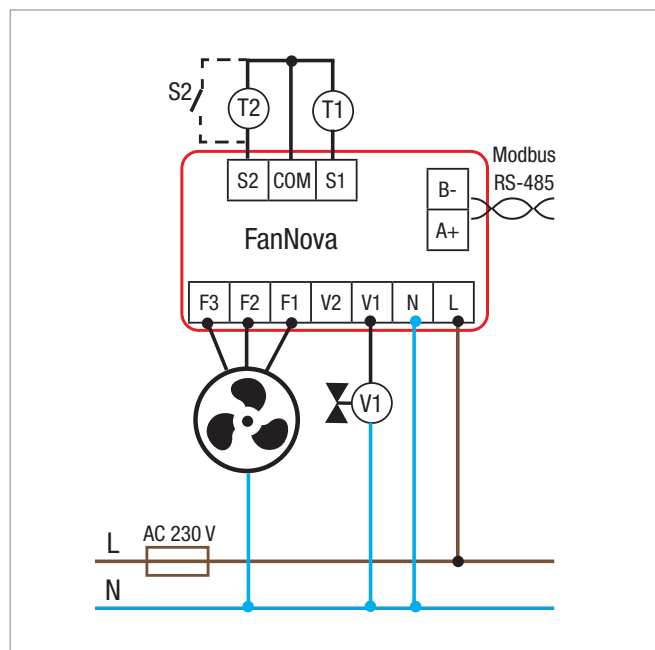
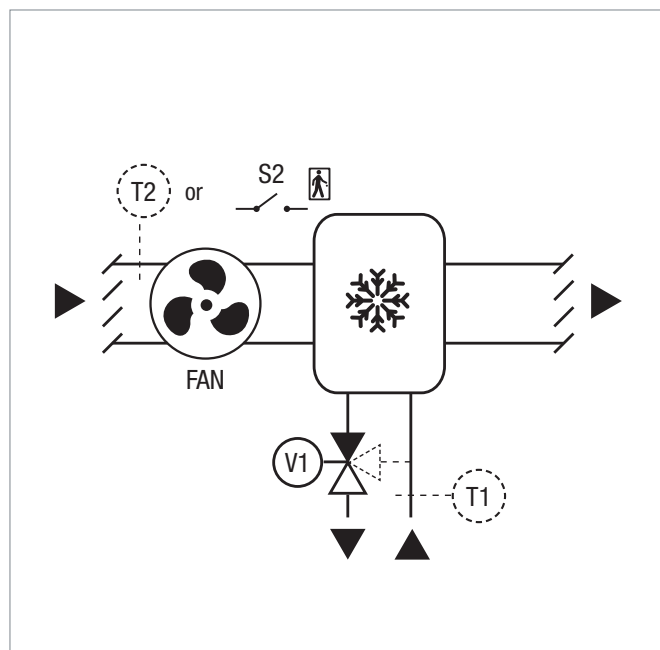
Press the ▲ or ▼ button to select the operating mode: Heating in a 2-pipe system. Confirm your selection with the ≡ key.



The thermostat was configured for a 2-pipe system.

3.2. 2-PIPE APPLICATIONS. 2-PIPE FAN COIL IN COOLING MODE

In the cooling mode of the 2-pipe fan coil, cold water from the central cooling source (e.g. chiller) is fed through one supply pipe to the coil (heat exchanger) located inside the unit. The cold water which flows through the exchanger, removes heat from the air, which was drawn from the room by the fan of the fan coil unit. The air, flowing through the finned surface of the exchanger, is cooled and often dehumidified by condensation of moisture, which is carried away by a drainage system. The cooled and dehumidified air is then blown back into the room, lowering its temperature and humidity. The heated water leaves the heat exchanger and returns through a second return pipe to the central cooling source for re-cooling.



Legend to the diagrams:

Fuse

External Contact

Cooler actuator

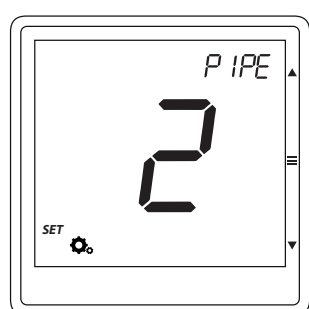
Temperature sensor

Cooler

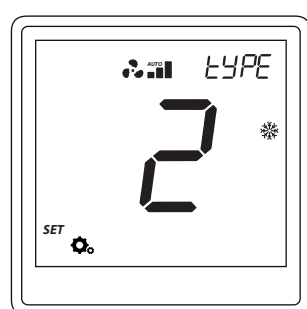
3-speed fan 230 V AC

Thermostat connection terminals	
L, N	Power supply 230 V AC 50 Hz
F1, F2, F3	Output 230 V AC - I, II, III fan speed
V1	Control output 230 V AC - cooler valve
T1	Pipe sensor - fan operation enable (option)
T2 or S2	T2 - Return air sensor / elevated sensor (option) or S2 - NO contact for hotel card or ECO mode (option)
COM	Ground for sensor/contact
A+ / B-	Communication port for Modbus RS-485

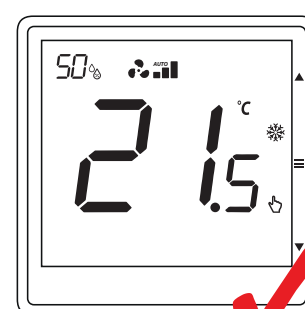
CONFIGURATION OF THE FANNOVA THERMOSTAT FOR A 2-PIPE SYSTEM IN COOLING MODE



Use the ▲ or ▼ keys to select 2 PIPE, then confirm with ≡ button.



Press the ▲ or ▼ button to select the operating mode: ❄️ AUTO Cooling in a 2-pipe system. Confirm your selection with the ≡ key.



The thermostat was configured for a 2-pipe system.

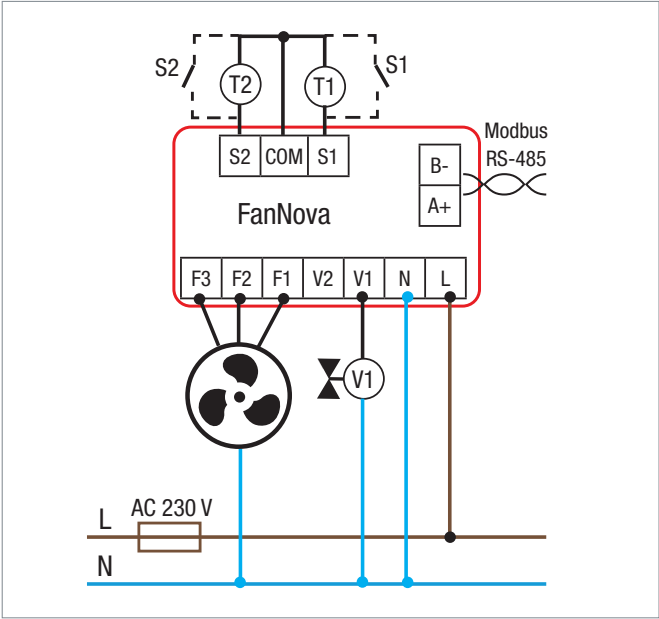
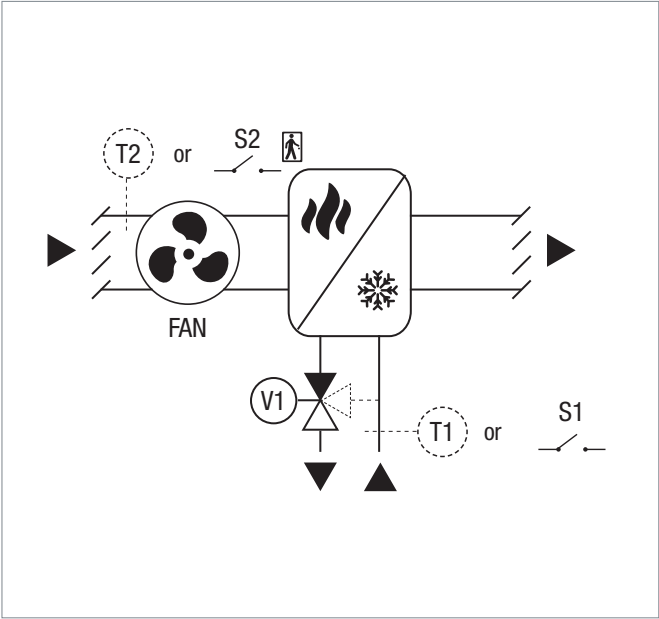
3.3. 2-PIPE APPLICATIONS. 2-PIPE FAN COIL IN HEATING / COOLING MODE

The 2-pipe fan coil uses the same set of two pipes to supply and discharge heated or cooled water. Its operation is based on the flow of water through a heat exchanger and room air circulation through this exchanger (forced by fan work). In heating mode, hot water from the central heat source flows through a heat exchanger. Fan draws air from room, which flows through the exchanger, is heated up and blown back inside the room. The cooled water returns through a second pipe to the heat source.

In cooling mode, cold water from the central cooling source flows through a heat exchanger. Fan draws air from room, which flows through the exchanger, is cooled down and blown back inside the room. During this operation, moisture condensation may occur, which must be removed by the drainage system. The heated water returns through a second pipe to the cooling source.

A key feature of a 2-pipe system is that it can only operate in one mode at a time - either heating or cooling. Additionally the source of the heated/cooled must switched - depends if fan coil will be used for heating or cooling purposes. That means no simultaneous heating and cooling operation is allowed. This has the advantage of being simpler and cheaper to install than a 4-pipe system. Temperature control is achieved by varying the water flow and fan speed. Switching between heating and cooling mode in a 2-pipe fan coil can be done in two ways:

- using an external temperature sensor (connected to S1/COM and mounted on water supply pipe), which automatically detects the temperature of the water supply pipe and adjusts FanNova operating mode accordingly,
- using external volt-free NO contact (connected to the S1/COM), which switches FanNova into the appropriate mode by means of a signal from the master control system (e.g. BMS, building automation or simple ON/OFF volt-free switch).

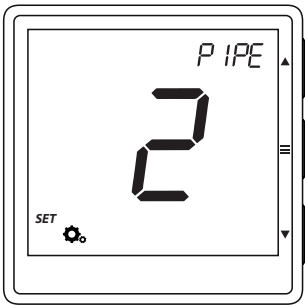


Legend to the diagrams:

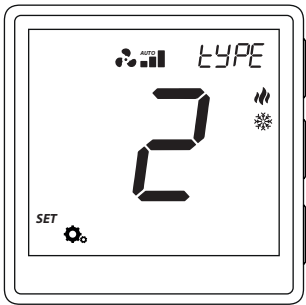
- Fuse
- External Contact
- Heater / Cooler actuator
- Temperature sensor
- Heater / Cooler
- 3-speed fan 230 V AC

Thermostat connection terminals	
L, N	Power supply 230 V AC 50 Hz
F1, F2, F3	Output 230 V AC - I, II, III fan speed
V1	Control output 230 V AC - heater/cooler valve
T1 or S1	Pipe sensor or contact for changing heating/cooling mode
T2 or S2	T2 - return air sensor/elevated sensor (option) or S2 - open contact for hotel card or ECO mode (option)
COM	Ground for sensor/contact
A+ / B-	Communication port for Modbus RS-485

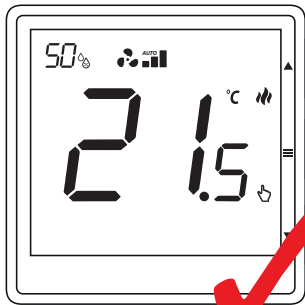
CONFIGURATION OF THE FANNOVA THERMOSTAT FOR A 2-PIPE SYSTEM IN HEATING / COOLING MODE



Use the ▲ or ▼ keys to select 2 PIPE, then confirm with ≡ button.



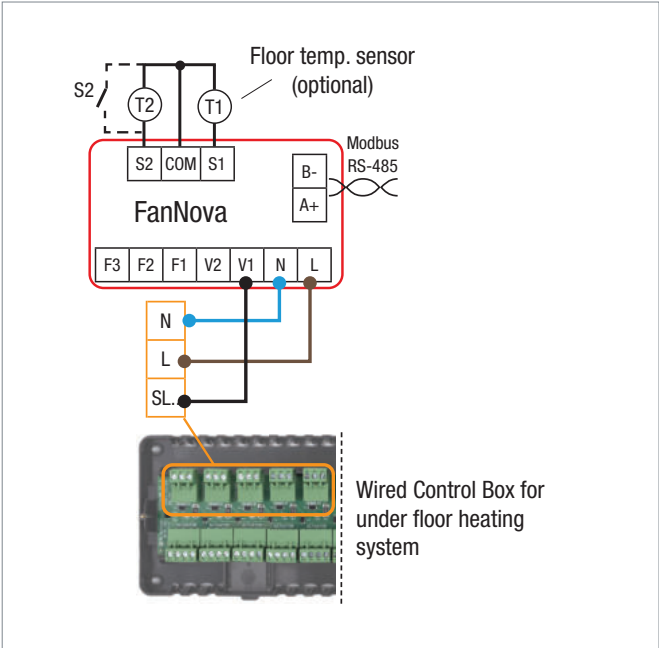
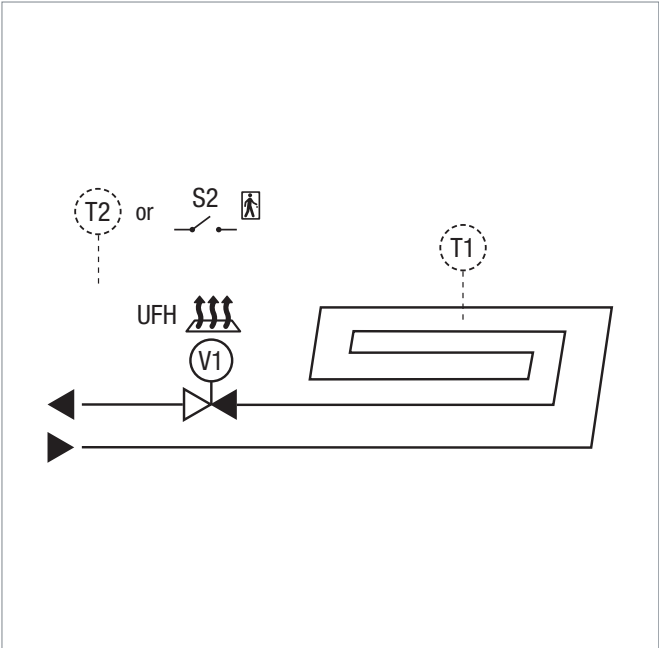
Press the ▲ or ▼ button to select the operating mode: 🔥 ❄️ 🌀 AUTO Heating and cooling in a 2-pipe system. Confirm your selection with the ≡ key.



The thermostat was configured for a 2-pipe system.

3.4. 2-PIPE APPLICATIONS. CONTROL OF UNDERFLOOR HEATING.

Underfloor heating is the most common type of heating, where underfloor heating pipes (filled with water or glycol) transports heat from a heat source (such as a gas boiler or heat pump) into the room. As an option, a floor temperature sensor can be implemented into the system to protect the floor from overheating or overcooling. This solution helps to protect floor materials (e.g. wood, vinyl parquet) and user itself, especially in rooms with higher temperature sensitivity, such as bathrooms or children’s rooms.



Thermostat connection terminals	
L, N	Power supply 230 V AC 50 Hz
V1	Control output 230 V AC - underfloor heating valve
T1	Floor sensor (optional)
T2 or S2	T2 - Return air sensor/elevated sensor (optional) or S2 - NO contact for hotel card or ECO mode(optional)
COM	Ground for sensor/contact
A+ / B-	Communication port for Modbus RS-485

Legend to the diagrams:

Fuse

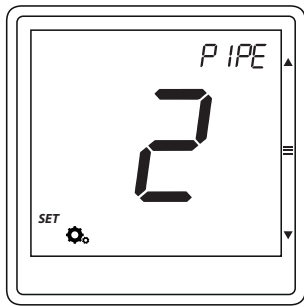
External Contact

Heating actuator

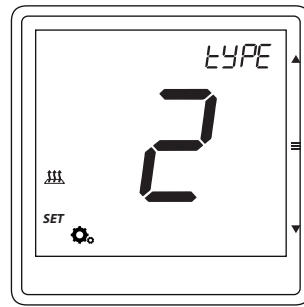
Temperature sensor

Underfloor heating

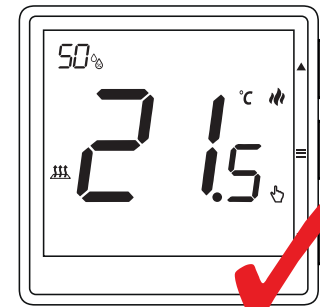
CONFIGURATION OF THE FANNOVA THERMOSTAT FOR UNDERFLOOR HEATING



Use the ▲ or ▼ keys to select 2 PIPE, then confirm with ≡ button.



Press the ▲ or ▼ button to select the operating mode: Underfloor heating. Confirm your selection with the ≡ key.



The thermostat has been configured for underfloor heating.

3.5. 2-PIPE APPLICATIONS. UNDERFLOOR HEATING AND 2-PIPE FAN COIL IN HEATING/COOLING MODE.

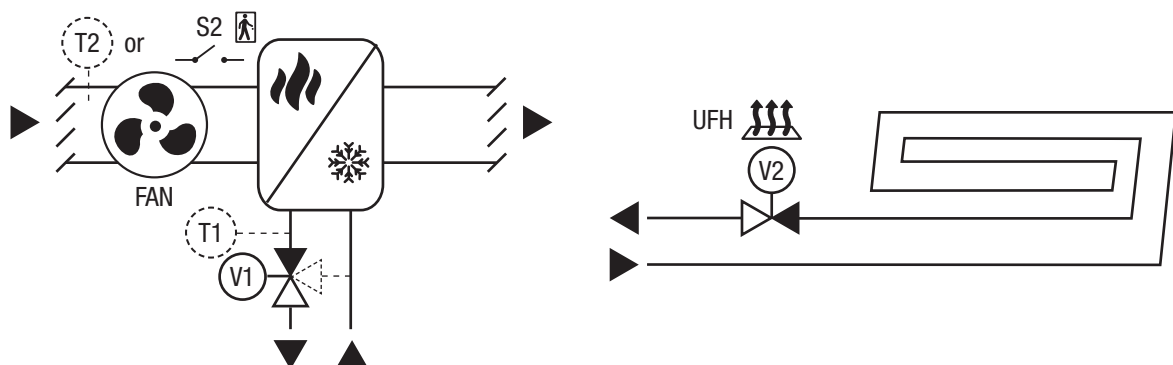
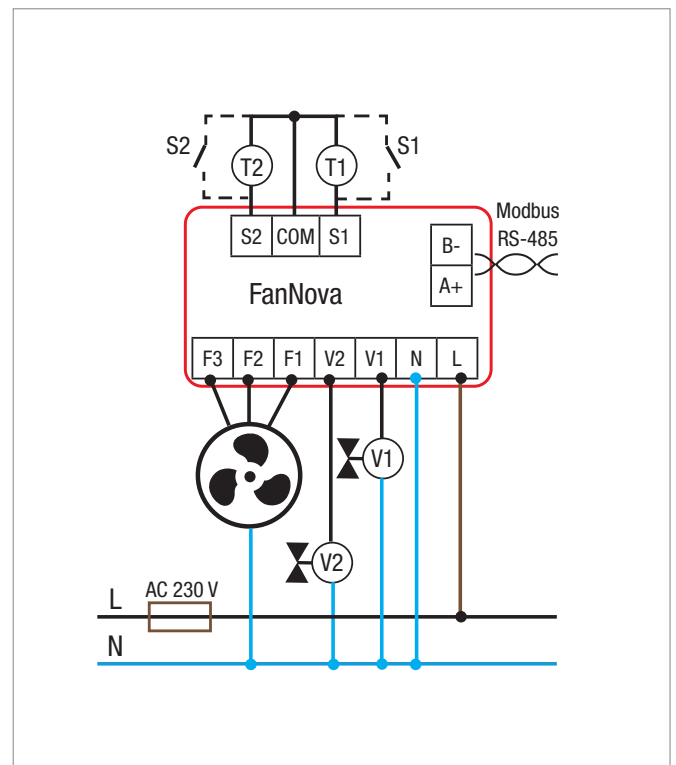
In this configuration, the FanNovacontroller operates two independent circuits:

V1 – 2-pipe fan coil unit: Operates alternately in heating or cooling mode. The valve actuator is controlled via the V1 output. In heating mode, hot water heats the air supplied to the room. In cooling mode, chilled water absorbs heat from the air, providing both cooling and dehumidification. Condensate is discharged into the drainage system. The 2-pipe system allows operation in only one mode at a time – either heating or cooling – depending on the available medium.

V2 – underfloor heating: Operates exclusively in heating mode. Warm water flows through pipes embedded in the floor, evenly heating the rooms. The actuator is controlled via the V2 output.

Switching between heating and cooling modes (for V1):

- automatically based on the temperature measured by sensor T1 (e.g. mounted on the supply pipe),
- automatically via the external contact input S1 (e.g. from a BMS system),
- manually via the controller interface.



Legend to the diagrams:

 Fuse

 External Contact

 Valve actuator

 Temperature sensor

 Heater / Cooler

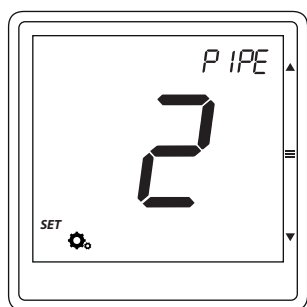
 3-speed fan 230 V AC

 Underfloor heating

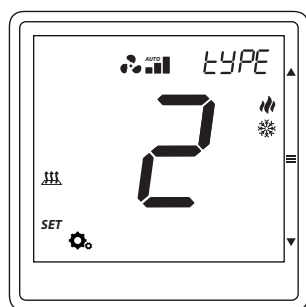
Thermostat connection terminals

L, N	Power supply 230 V AC 50 Hz
F1, F2, F3	Output 230 V AC - I, II, III fan speed
V1	Control output 230 V AC - heater/cooler valve
V2	Control output 230 V AC - underfloor heating valve
S1	Contact for changing heating/cooling mode (option)
T1	Pipe sensor or contact for changing heating/cooling mode (option)
T2 or S2	T2 - return air sensor/elevated sensor (option) or S2 - open contact for hotel card or ECO mode (option)
COM	Ground for sensor/contact
A+ / B-	Communication port for Modbus RS-485

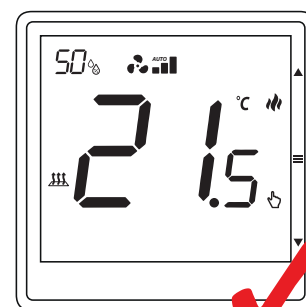
CONFIGURATION OF THE FANNOVA THERMOSTAT FOR UNDERFLOOR HEATING AND 2-PIPE FAN COIL IN HEATING/COOLING MODE.



Use the ▲ or ▼ keys to select 2 PIPE, then confirm with ≡ button.



Press the ▲ or ▼ button to select the operating mode:     Underfloor heating and 2-pipe fan coil in heating/cooling mode. Confirm your selection with the ≡ key.



The thermostat has been configured for underfloor heating and 2-pipe fan coil in heating/cooling mode.

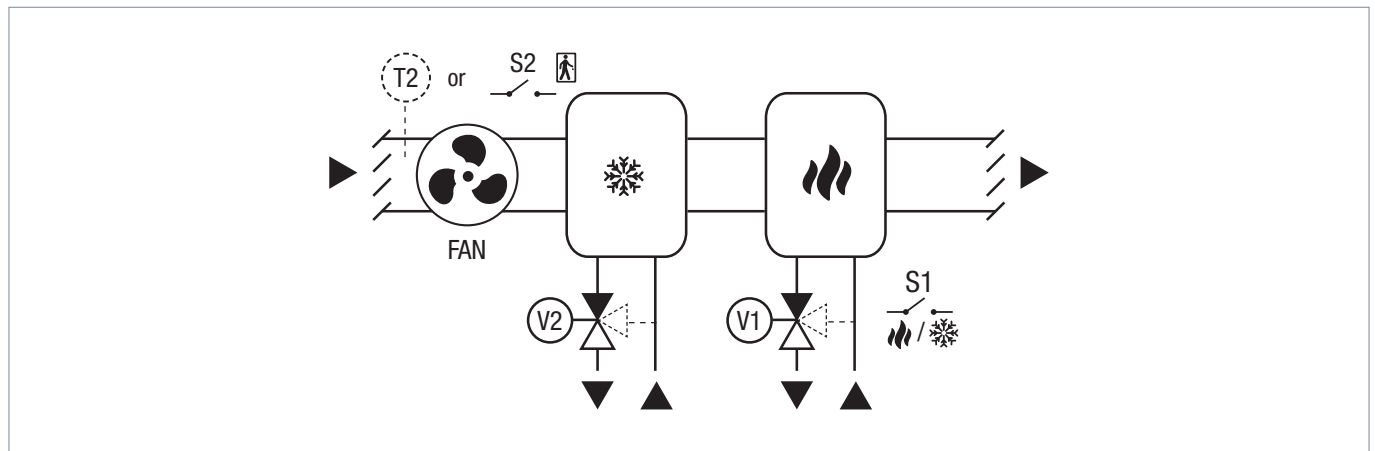
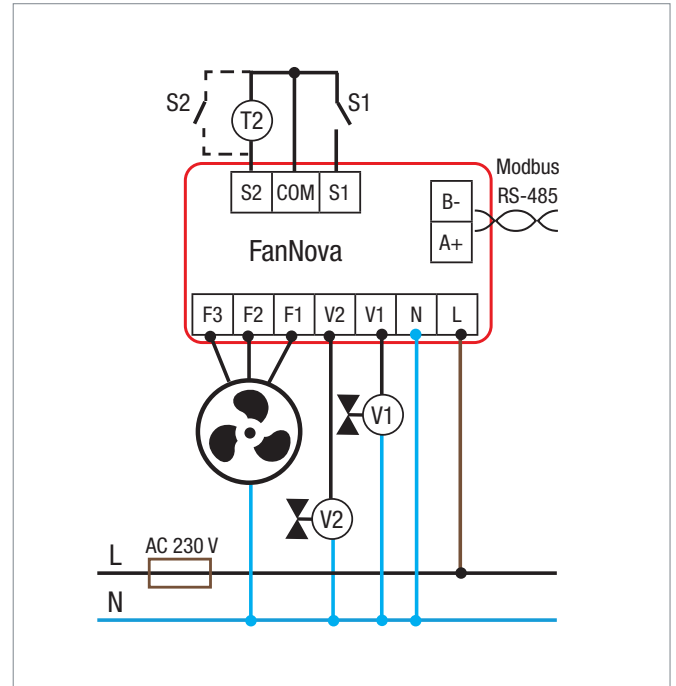
3.6. 4-PIPE APPLICATIONS. 4-PIPE FAN COIL IN HEATING / COOLING MODE.

The 4-pipe fan coil has two independent heating and cooling coils and separate circuits for hot and cold water. It allows simultaneous availability of heating and cooling functions, but operates in one mode at a time.

- Heating mode: hot water feeds the heating coil; air takes away the heat and is blown into the room. The cooling coil remains inactive.
- Cooling mode: cold water feeds the cooling coil; the air gives up heat and is cooled (with condensation). The heating coil is inactive.

Ways to switch the operation mode:

- manually (from the controllers button or app),
- automatically via the S1-COM contact (external signal),
- changing the mode depending on the ambient temperature
- (automatically on the basis of the Dead Zone)

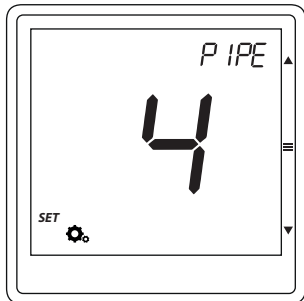


Legend to the diagrams:

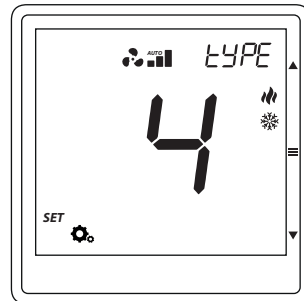
Fuse	External Contact	Valve actuator
Temperature sensor	Cooler	3-speed fan 230 V AC
Underfloor heating	Heater	

Thermostat connection terminals	
L, N	Power supply 230 V AC 50 Hz
F1, F2, F3	Output 230 V AC - I, II, III fan speed
V1	Control output 230 V AC - heater valve
V2	Control output 230 V AC - cooler valve
S1	Switching contact for heating/cooling mode (option)
T2 or S2	T2 - return air sensor/elevated sensor (option) or S2 - hotel card contact or ECO mode (option)
COM	Ground for sensor/contact
A+ / B-	Communication port for Modbus RS-485

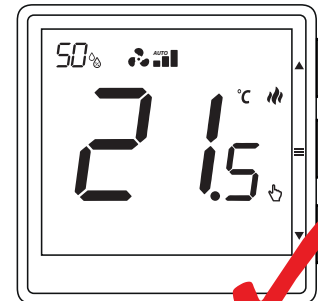
CONFIGURATION OF THE FANNOVA THERMOSTAT FOR A 4-PIPE SYSTEM IN HEATING/COOLING MODE



Use the ▲ or ▼ keys to select 4 PIPE, then confirm with ≡ button.



Press the ▲ or ▼ button to select the operating mode:    . Fan coil heating and cooling in a 4-pipe system. Confirm your selection with the ≡ key.



The thermostat was configured for a 4-pipe system.

3.7. 4-PIPE APPLICATIONS. UNDERFLOOR HEATING AND COOLING WITH 2-PIPE FAN COIL UNIT.

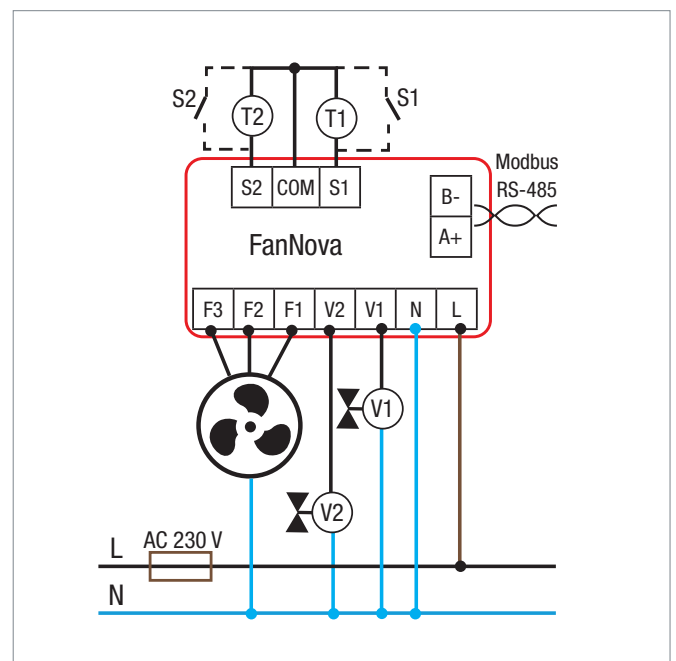
Underfloor heating pipes (filled with water or glycol) transports heat from a heat source (such as a gas boiler or heat pump) into the room.

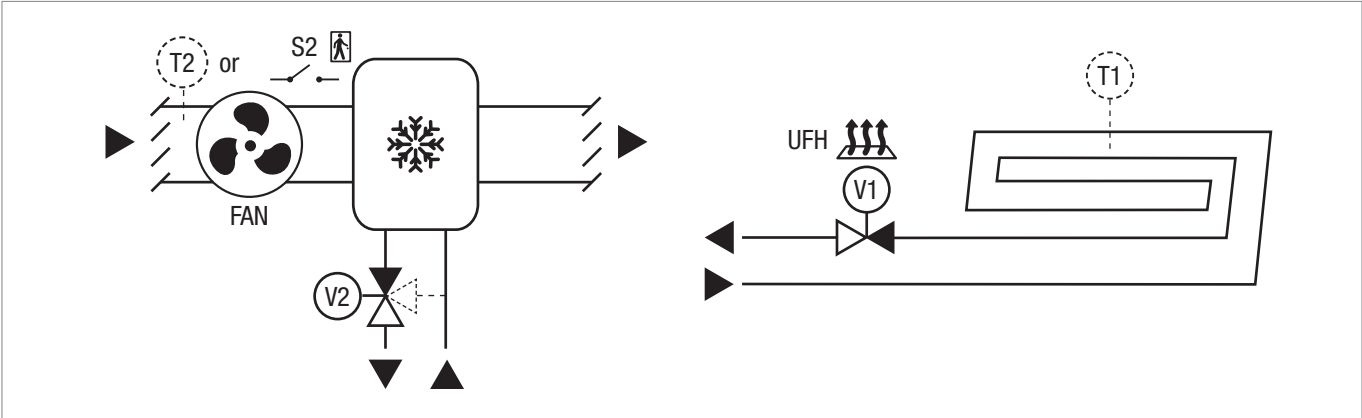
2-pipe fan coil - cooling mode

Cold water from the cooling unit goes into the coil, where it is heated up by the air (which is drawn in by the fan). As a result air is cooled down and then blown back into the room. The heated water returns through the return pipe to the cooling source.

Heating/cooling modes switching methods:

- manually (from FanNova device level),
- automatically via S1/COM input input („NO” volt-free external switching signal),
- automatically based on dead zone feature - Heating/Cooling modes are changed according to room temperatures.



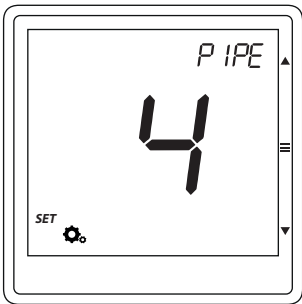


Legend to the diagrams:

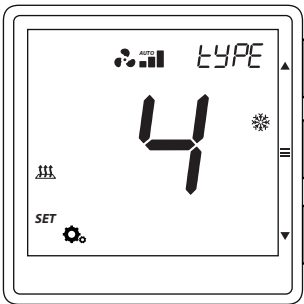
- Fuse
- External Contact
- Valve actuator
- Temperature sensor
- Cooler
- 3-speed fan 230 V AC
- Underfloor heating

Thermostat connection terminals	
L, N	Power supply 230 V AC 50 Hz
F1, F2, F3	Output 230 V AC - I, II, III fan speed
V1	Control output 230 V AC - underfloor heating valve
V2	Control output 230 V AC - cooling unit valve
S1	Switching contact for heating/cooling mode (option)
T2 or S2	T2 - return air sensor/elevated sensor (option) or S2 - hotel card or ECO mode contact (option)
COM	Ground for sensor/contact
A+ / B-	Communication port for Modbus RS-485

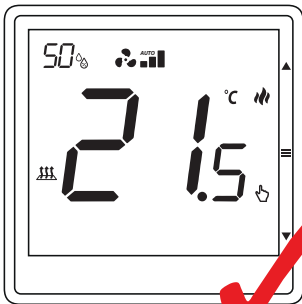
FANNOVA THERMOSTAT CONFIGURATION FOR UNDERFLOOR HEATING AND 2-PIPE FAN COIL COOLING



Use the ▲ or ▼ keys to select 4 PIPE, then confirm with ≡ button.



Press the ▲ or ▼ button to select the operating mode: . Underfloor heating and 2-pipe cooling system. Confirm your selection with the ≡ key.



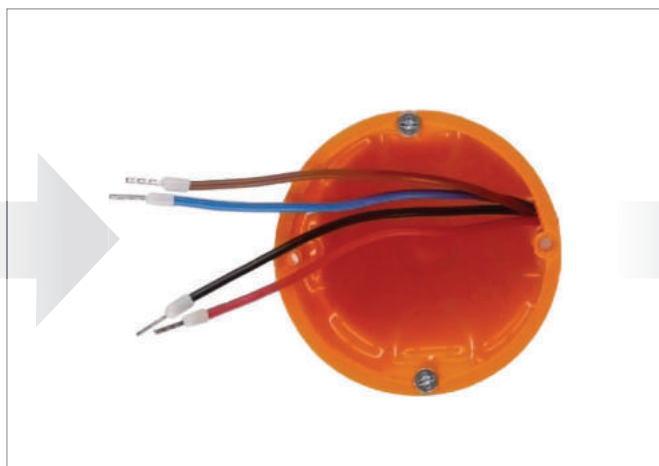
The thermostat was configured for a underfloor heating and 2-pipe cooling system.

4. WALL MOUNTING

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



Grab the top part and the bottom part to disconnect.



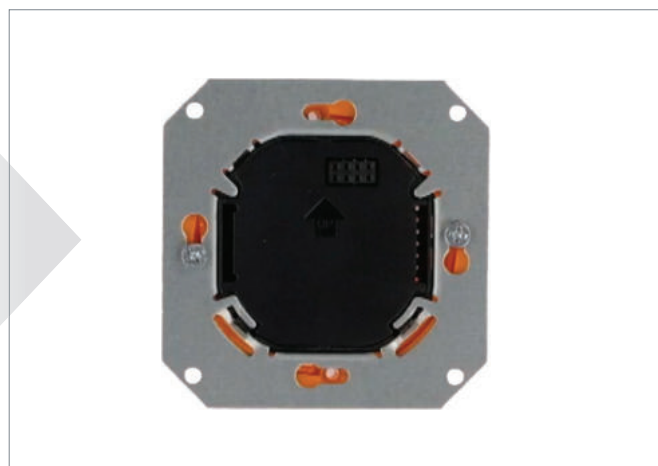
Make sure that the wires are not under 230 V AC.



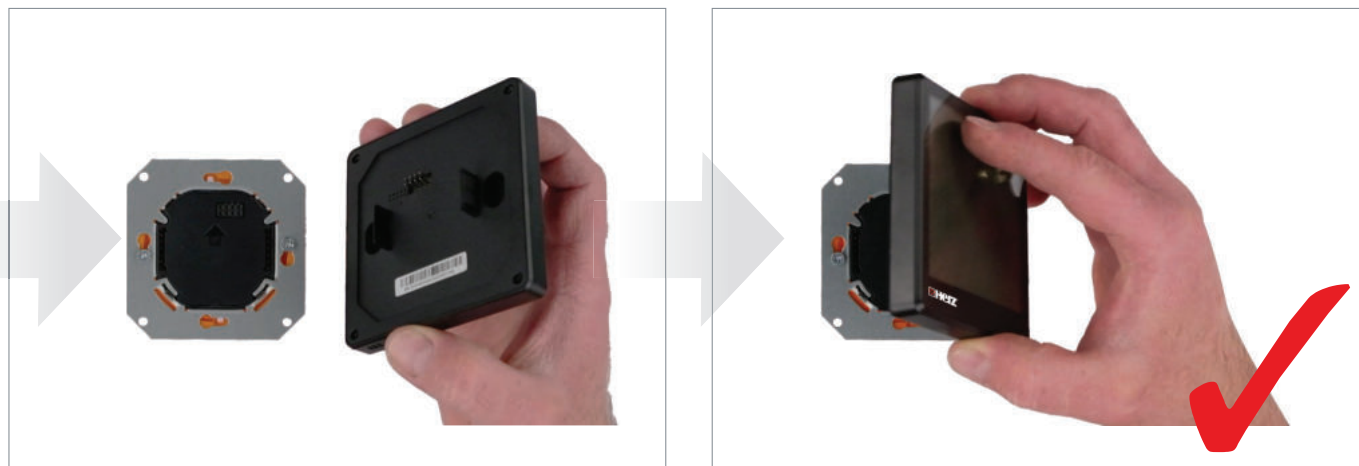
Connect the thermostat according to the wiring diagram.



Put the thermostat in the box.



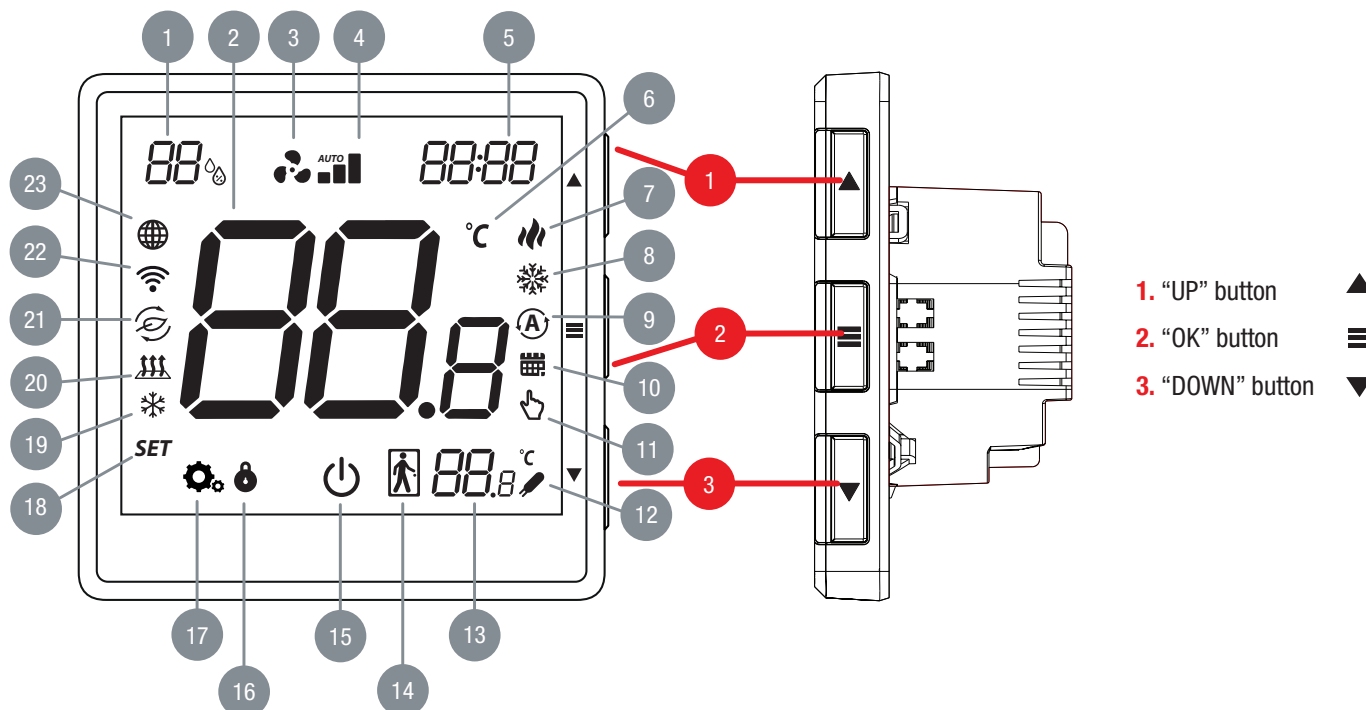
Screw the thermostat to the mounting box.



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

5. FIRST POWER ON

5.1. LCD ICON DESCRIPTION



- | | | |
|---|--|-----------------------------------|
| 1. Humidity display | 9. AUTO Heat/Cool active | 16. Key lock |
| 2. Room temp | 10. Schedule icon | 17. Parameters icon |
| 3. Fan icon (it is animating when fan is running) | 11. Manual or temporary override mode | 18. Setting icon (set value icon) |
| 4. Fan Speed (LO, ME, HI, AUTO, OFF) | 12. Pipe sensor (2-PIPE) or external temp sensor | 19. Frost mode icon |
| 5. Clock | 13. Temp value of the additional sensor | 20. Underfloor heating icon |
| 6. Celcius unit | 14. Occupancy sensor -connected to S2-COM | 21. ECO mode icon |
| 7. Heating mode icon | 15. Power OFF icon | 22. Wi-Fi connection |
| 8. Cooling icon | | 23. Cloud connection |

5.2 BUTTONS DESCRIPTION LOCATED ON RIGHT SIDE OF THERMOSTAT

▲	Change the parameter value up
▼	Change the parameter value down
≡	Manual / Schedule mode - short button press (online mode)
	Enter the installer parameters- hold 3 seconds
	Turn OFF / ON thermostat - hold 5 seconds
▲ + ▼	Enter the pairing mode - hold until the PA message appears
	Factory reset - hold until the FA message appears
▲ + ≡	Lock / Unlock thermostat keys - hold 3 seconds
▼ + ≡	Heating / Cooling mode change - hold 3 seconds

6. ABOUT HERZ THERMIQ

6.1. MOBILE DEVICE REQUIREMENTS

FOR A MOBILE DEVICE WITH ANDROID: Android version 5.0 or higher

FOR A MOBILE DEVICE WITH IOS SYSTEM: IOS version 9.0 or higher

6.2. ABOUT HERZ THERMIQ APP (GENERAL INFORMATION)

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

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

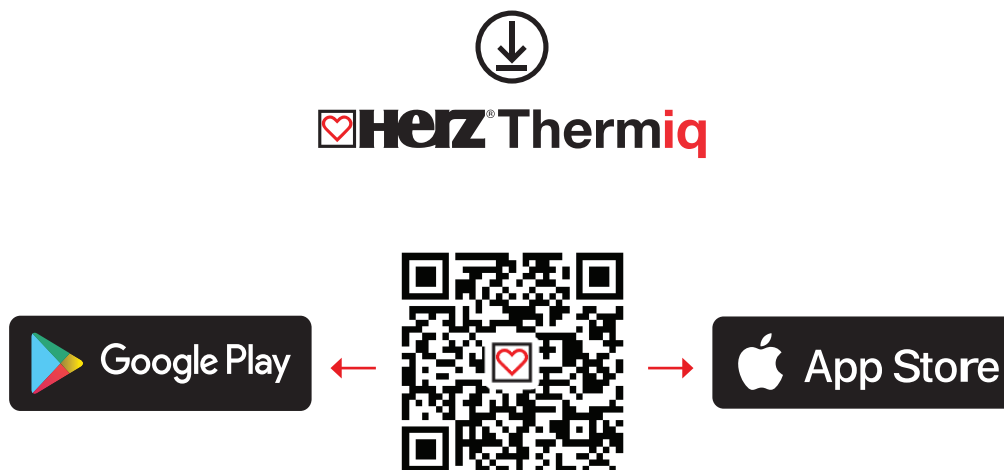
Each of the owned devices can be optionally assigned to the room in which it is located, which makes it easier to find out when our home is truly intelligent. All devices, regardless of whether they belong to specific rooms, are assigned to one of the houses that can have more than one. This assignment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

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

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

7. HERZ THERMIQ APP INSTALLATION

DOWNLOAD HERZ THERMIQ APP



FOR A MOBILE DEVICE WITH ANDROID:

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

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

FOR A MOBILE DEVICE WITH ANDROID:

Android version 5.0 or higher

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 „HERZ Thermiq” app, download and install.

FOR A MOBILE DEVICE WITH IOS SYSTEM:

IOS version 9.0 or higher



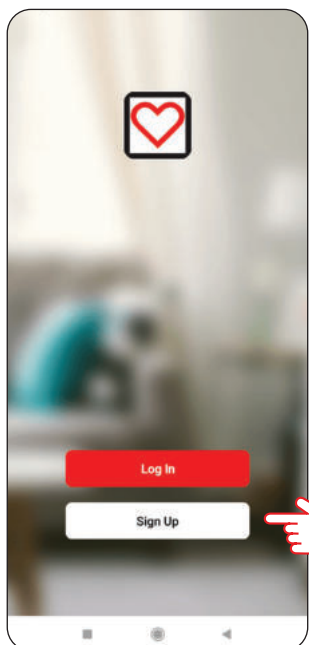
PLEASE NOTE: Please enable storage / location / camera permissions during installation. Otherwise, problems may arise during use / operation.



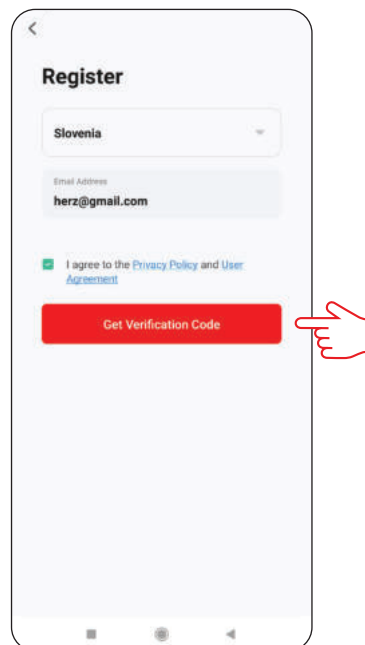
PLEASE NOTE: Make sure your router is within range of your mobile phone. Make sure you are connected to the Internet. This will reduce the pairing time of the device.

7.1. ACCOUNT REGISTRATION

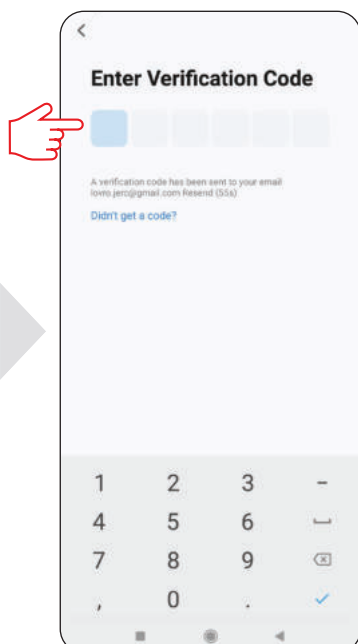
To register a new account, please follow the steps below:



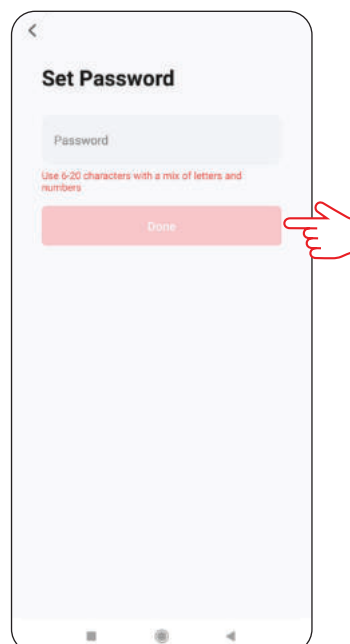
Click „Register” to create new account.



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



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

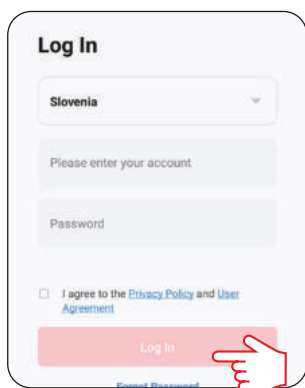


Then set the password for login. The password must contain 6-20 characters including letters and numbers.

7.2. PASSWORD RESET

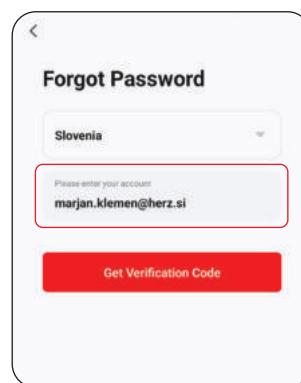
FORGOTTEN PASSWORD

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



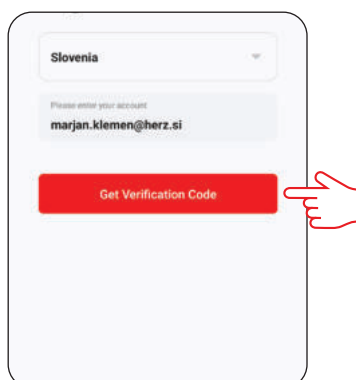
The 'Log In' screen shows a dropdown menu for 'Slovenia', a text input for 'Please enter your account', a text input for 'Password', a checkbox for 'I agree to the [Privacy Policy](#) and [User Agreement](#)', and a red 'Log In' button. A red hand icon points to the 'Log In' button.

Click on „I forgot my password.”



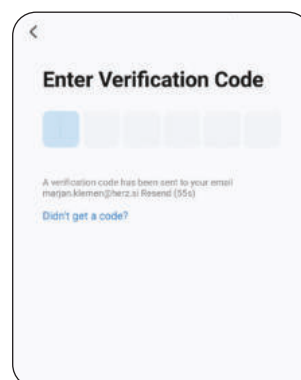
The 'Forgot Password' screen shows a dropdown menu for 'Slovenia', a text input for 'Please enter your account' containing 'marjan.klemen@herz.si', and a red 'Get Verification Code' button.

Enter the e-mail address used during account registration.



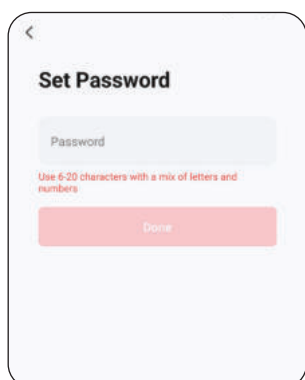
The 'Forgot Password' screen shows the email 'marjan.klemen@herz.si' entered in the text input, and a red 'Get Verification Code' button. A red hand icon points to the 'Get Verification Code' button.

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



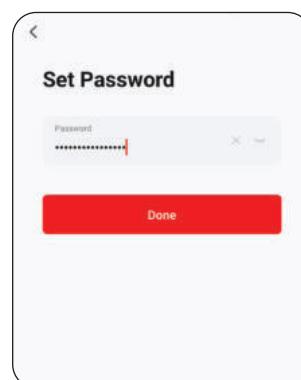
The 'Enter Verification Code' screen shows five empty input boxes for the code, a message 'A verification code has been sent to your email marjan.klemen@herz.si (55s)', and a link 'Didn't get a code?'.

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



The 'Set Password' screen shows a text input for 'Password', a red message 'Use 6-20 characters with a mix of letters and numbers', and a red 'Done' button.

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



The 'Set Password' screen shows the password entered in the text input, and a red 'Done' button.

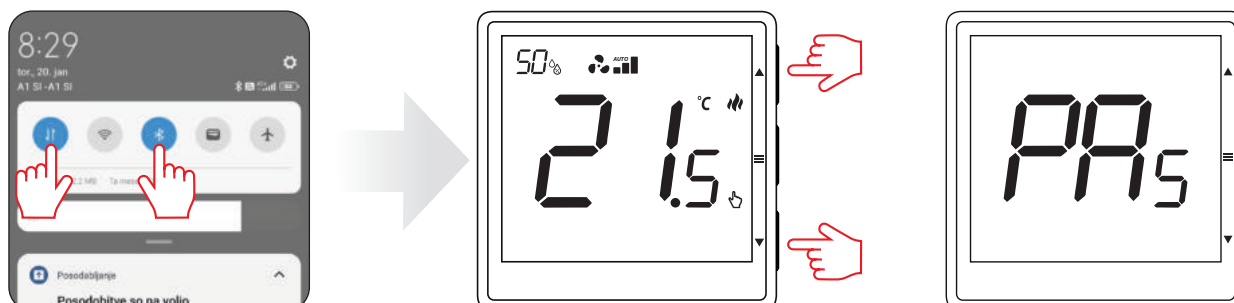
Once approved, you will be immediately logged into the application.

7.3. GUIDELINES FOR INSTALLING DEVICES IN A WI-FI NETWORK

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

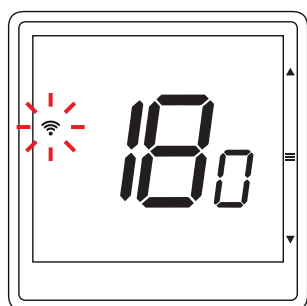
Parameters	Specification
Frequency band (GHz)	2.4GHz
WLAN standard	IEEE 802.11 b/g/n
Protocols	IPv4/IPv6/TCP/UDP/HTTPS/TLS/MulticastDNS
Protection	WEP/WPA/WPA2/AES128
Supported type	STA/AP/STA+AP

8. INSTALLATION OF THE WI-FI THERMOSTAT IN THE APP

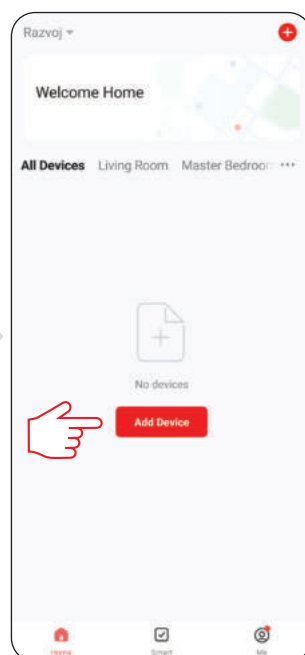


On the mobile device, make sure that the HERZ Thermiq app has access to the permissions (Location, Bluetooth, Nearby Devices). Then enable Bluetooth and location. Connect to that 2.4GHz Wi-Fi network you want to assign the thermostat to.

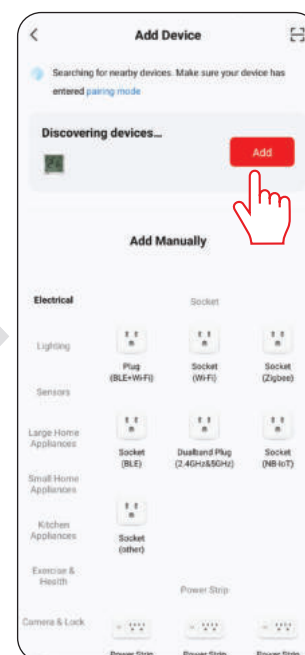
Ensure that the thermostat is powered on and has been configured. Then press and hold the thermostat keys for approximately 3 seconds until the display shows „PA”. Then release the keys. Pairing mode will be invoked.



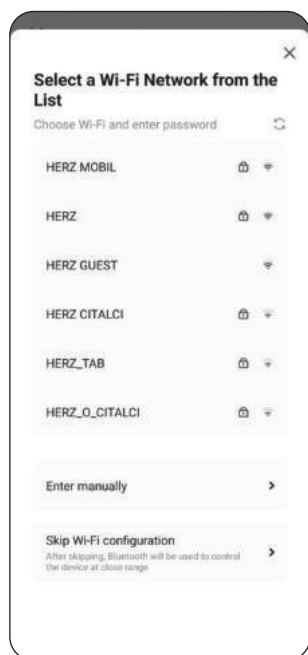
The thermostat counts backwards (180s).



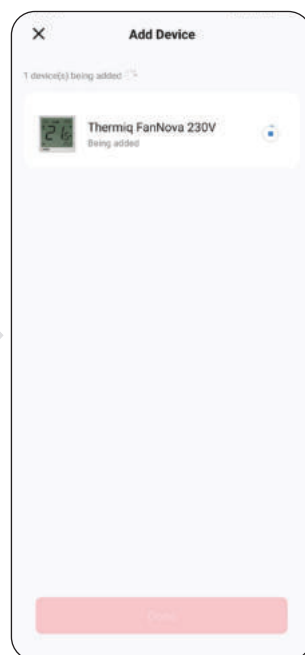
In the app, select: „Add device”.



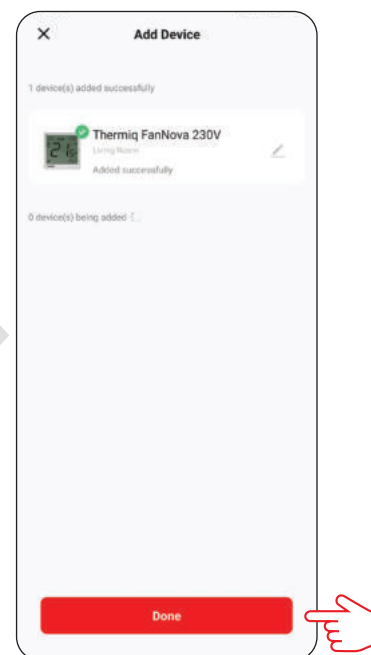
Once you have found the thermostat, click "Add".



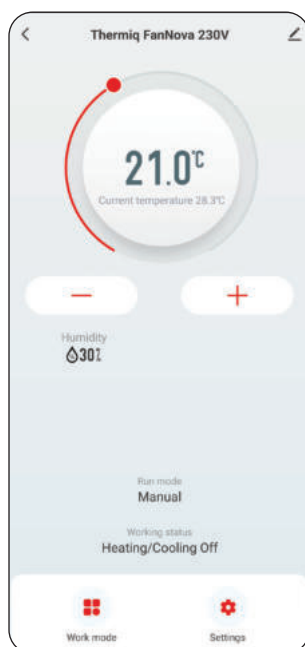
Select the Wi-Fi network on which the thermostat will operate and enter the password for that network.



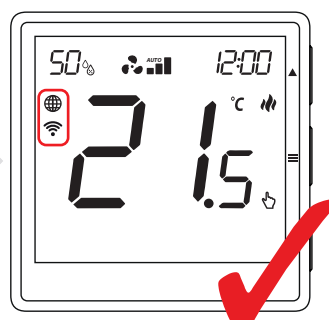
Wait for the app to configure the thermostat with the selected Wi-Fi network.



Name the device and click „Done”.



The thermostat has been installed and displays the main interface in the application.



A Wi-Fi icon appeared on the thermostat screen to indicate that it had been added to a Wi-Fi network, and a globe icon to indicate that the thermostat was connected to the cloud.

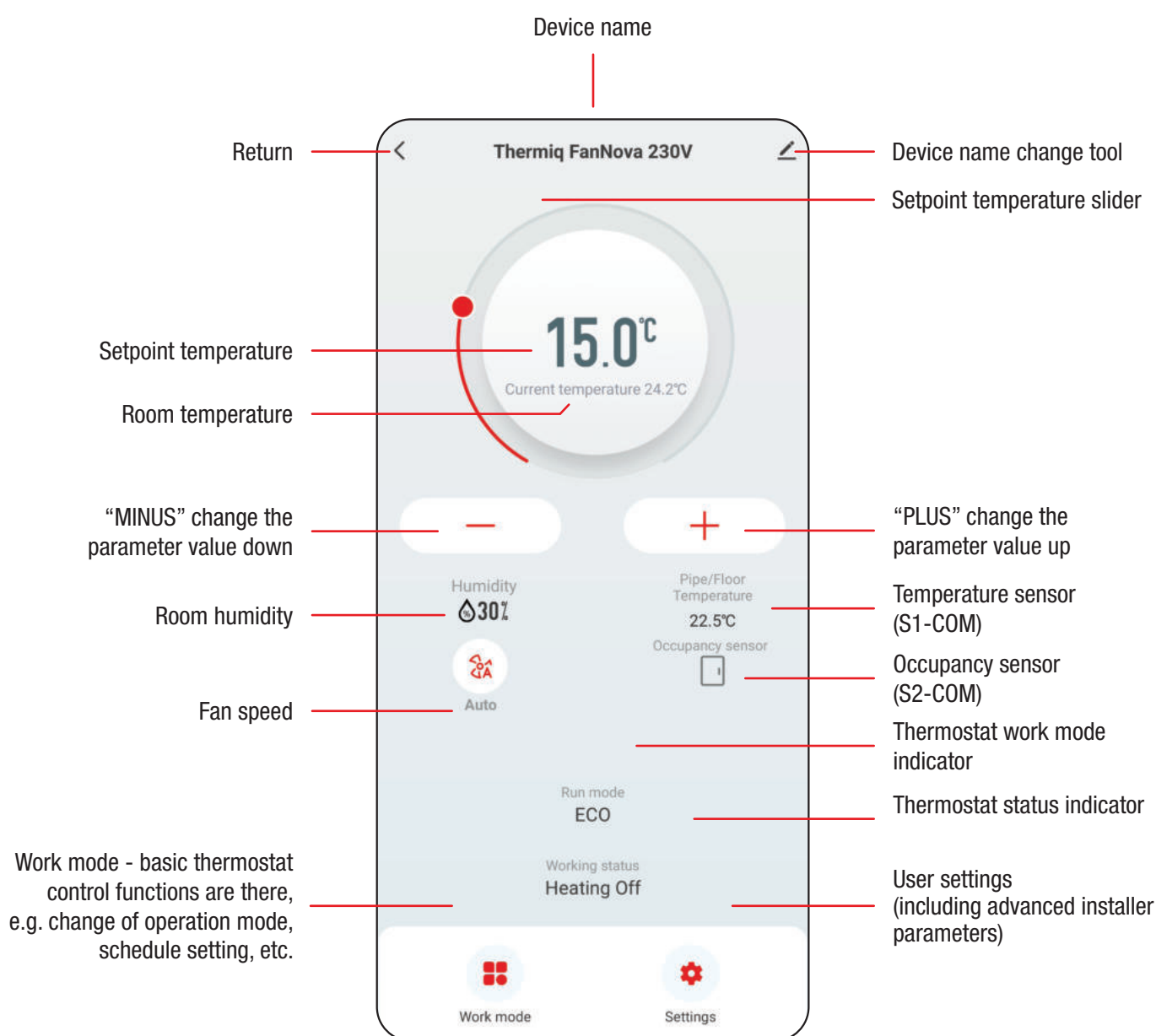
9. THERMOSTAT OPERATION IN THE APP - ONLINE

9.1. GENERAL INFORMATION

In this chapter, you can learn how to use the FanNova fan coil controller in connection with the HERZ Thermiq app. To be able to control the thermostat via the Internet, you will need an Internet connection and the HERZ Thermiq 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

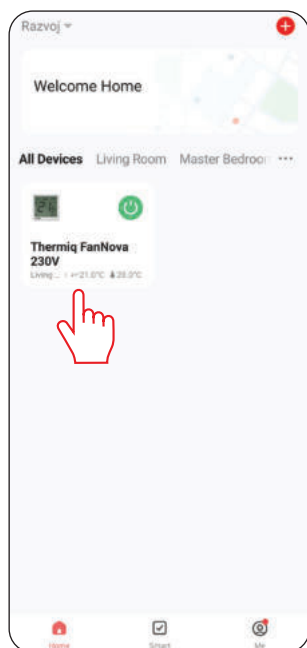
View of the FanNova thermostat menu in the HERZ Thermiq app:



10. CONTROL

10.1. SETPOINT TEMPERATURE CHANGE

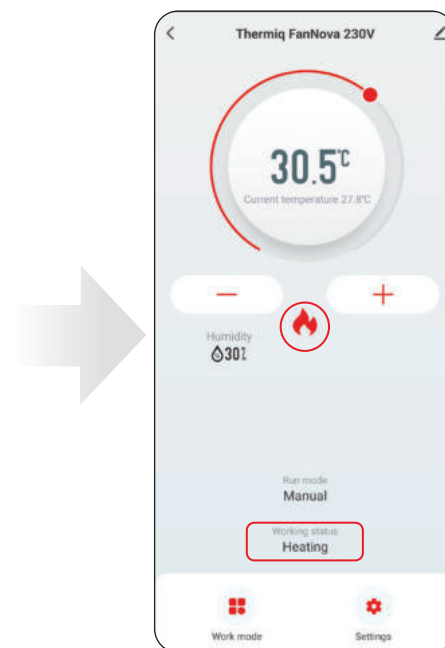
Changing the temperature setpoint is done by moving the cursor left / right in the app. On the screen, the actual temperature setpoint is represented by the number displayed in larger font.



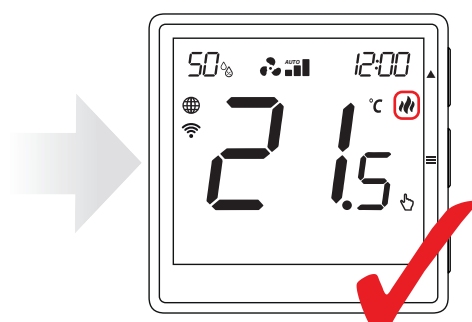
Enter FanNova interface.



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



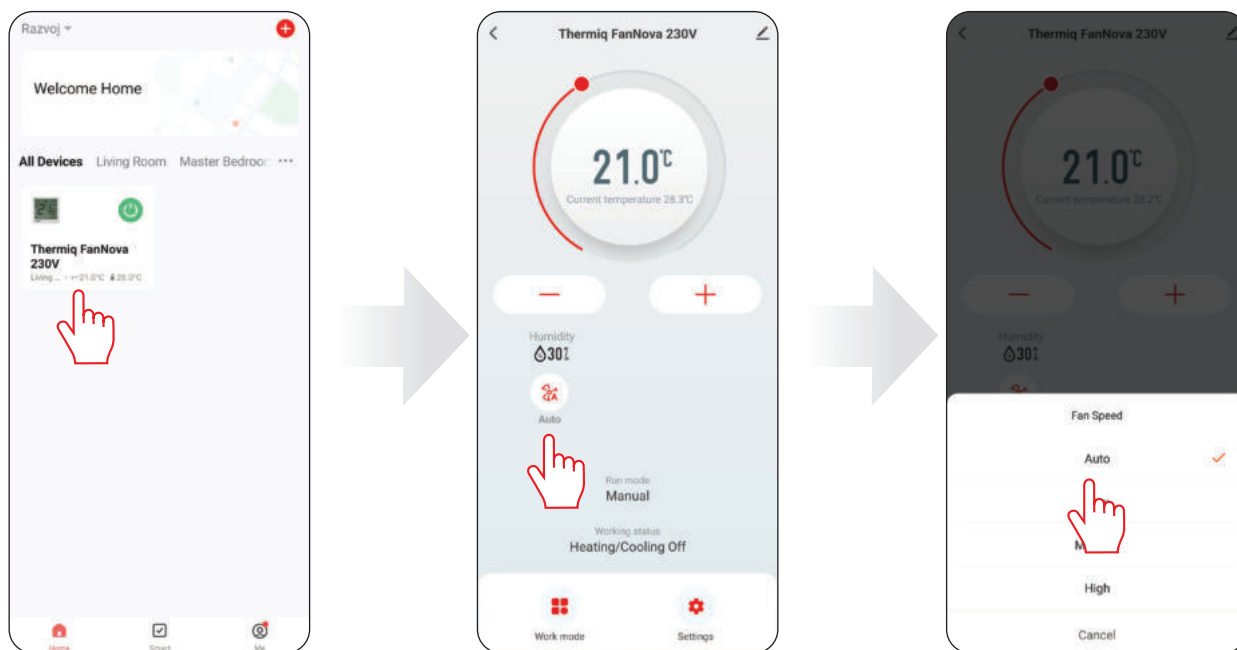
The thermostat started sending a signal for heating, which was signaled by a change of working status to „Heating”...



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

10.2. CHANGING THE FAN SPEED

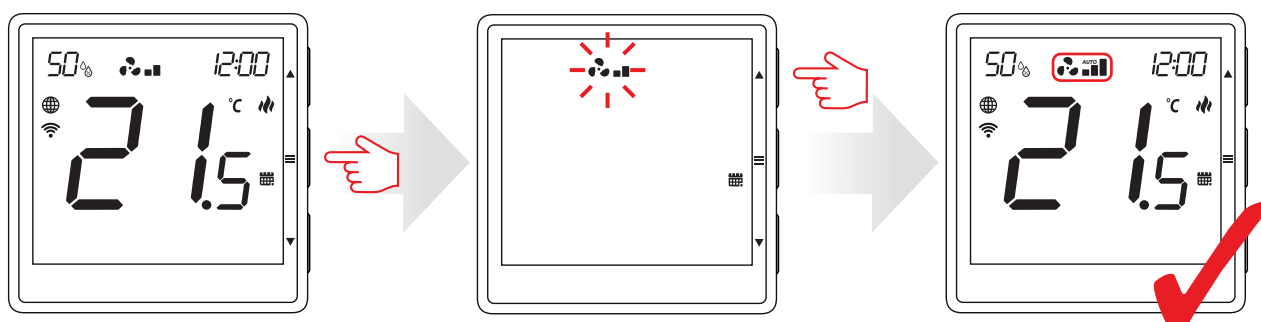
The fan speed is changed by clicking on the fan speed icon and then selecting one of the available options. The fan can run at the manually selected speed (low, medium or high) or at automatic speed.



Enter the thermostat interface.

Click on the fan speed icon.

Select the fan speed.

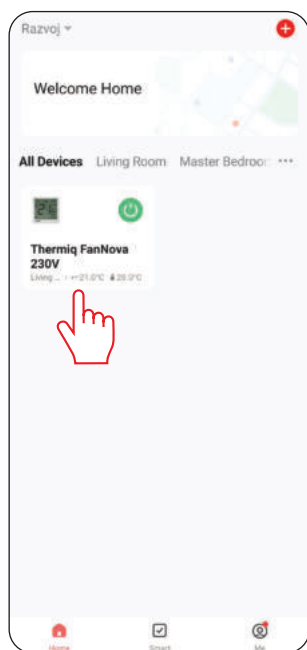


You can also change the fan speed on the thermostat by clicking on the  button. Then select the fan speed with the  or  key .

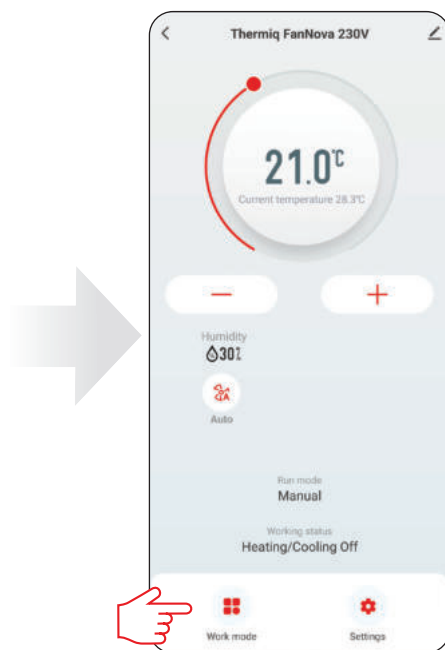
The fan speed has been changed.

10.3. "POWER" FUNCTION

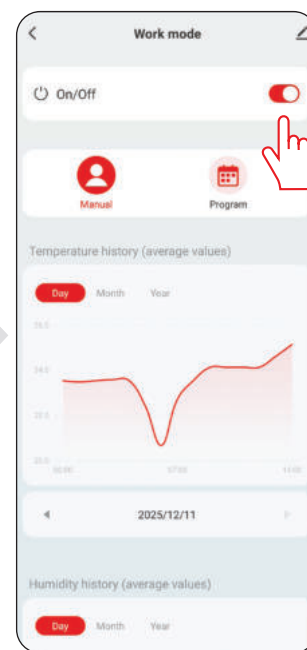
In this option, the user can turn ON / OFF the thermostat from the app without the need to interfere with the power wire. To do so, please follow the steps below:



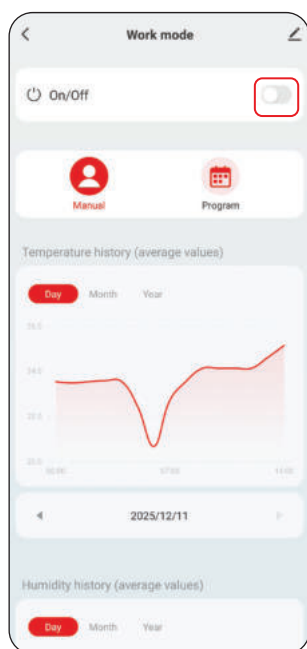
Enter the thermostat interface.



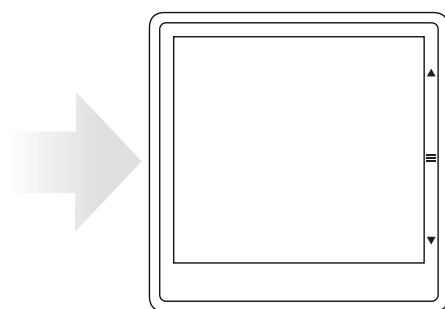
Select the „Work mode" option.



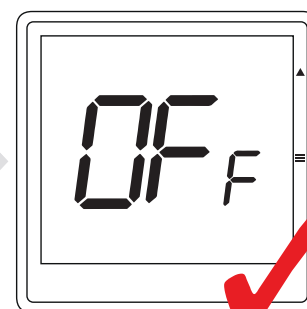
You can turn the thermostat on / off by using „Power" slider.



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



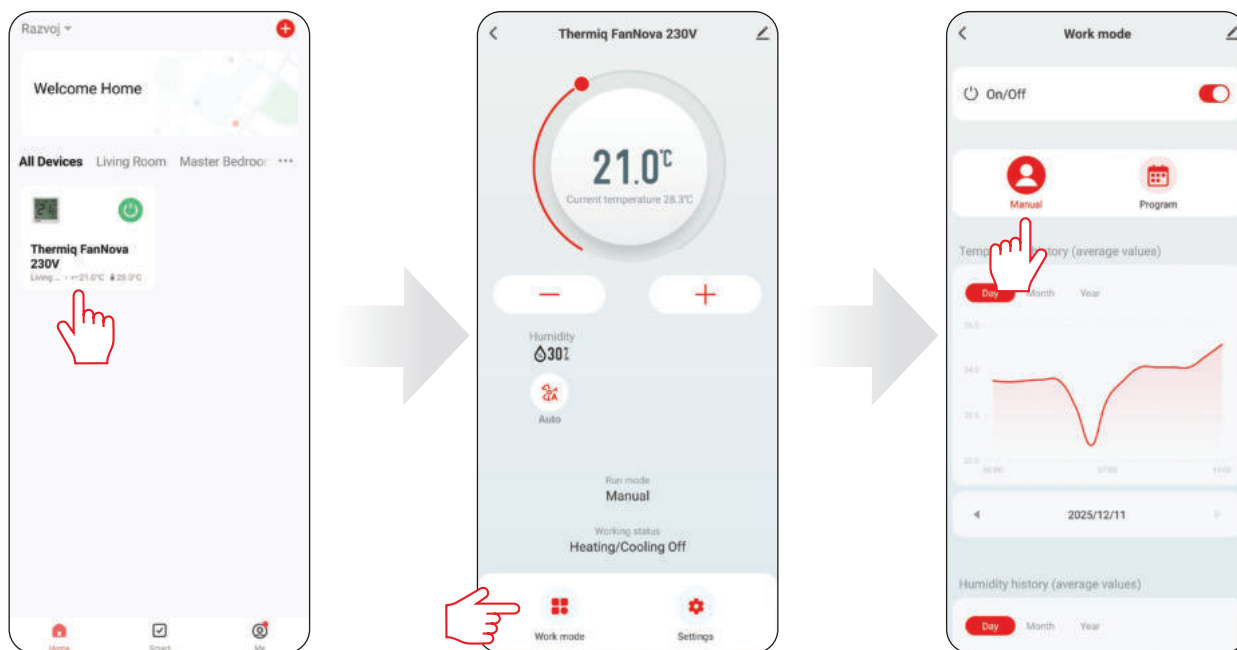
...and its display is blank.



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

10.4. MANUAL MODE

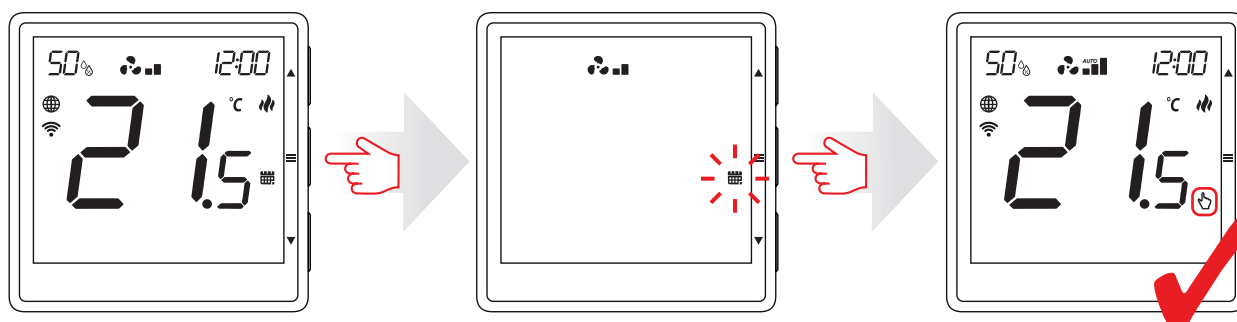
In the manual mode, the thermostat will maintain the temperature setpoint until the user changes it again via the app or thermostat, or selects a new operating mode in the app. To set the manual mode, follow the steps below:



Enter the thermostat interface.

Select the „Work mode" option.

Select Manual Mode.

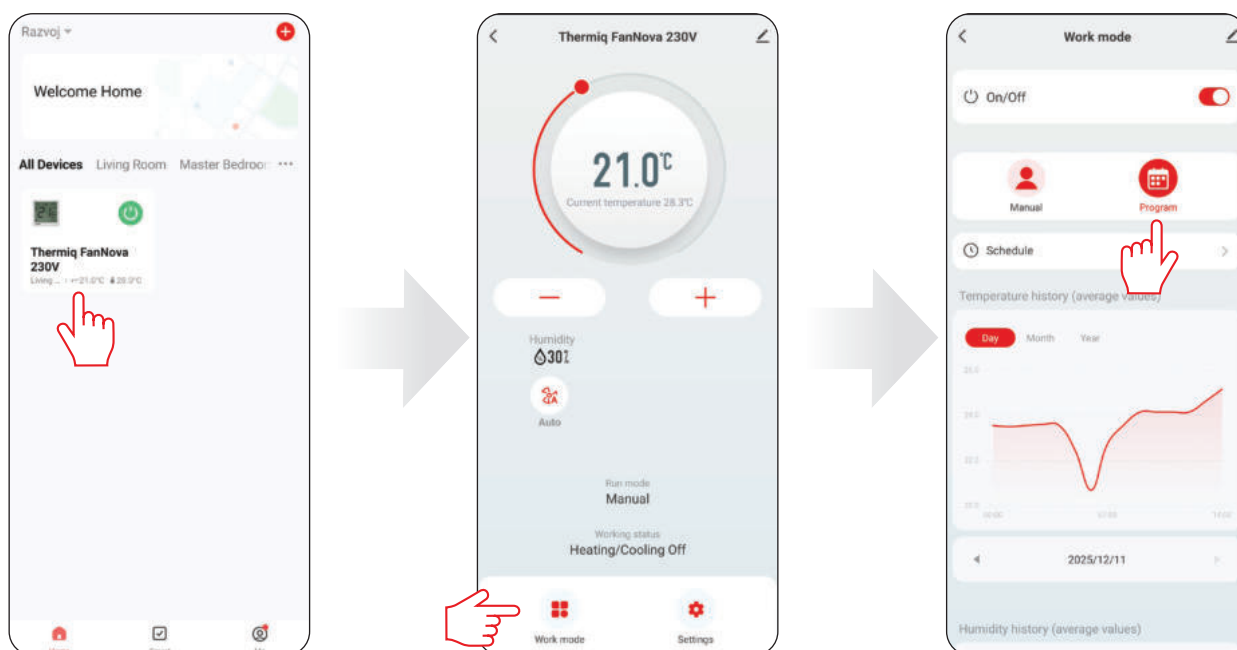


To change the mode from active schedule to manual mode, click the ≡ button.
Click the ≡ button again to select the operating mode.

10.5. SCHEDULE MODE

The Wi-Fi thermostat allows you to set schedules. When creating a schedule, user will need to program time and setpoint temperature, which will be valid from that point. A maximum of 6 switching points can be set for each day of the week. To activate the schedule, press the schedule icon in the „Work modes” place. Once activated, the status of the thermostat will update to „Schedule”.

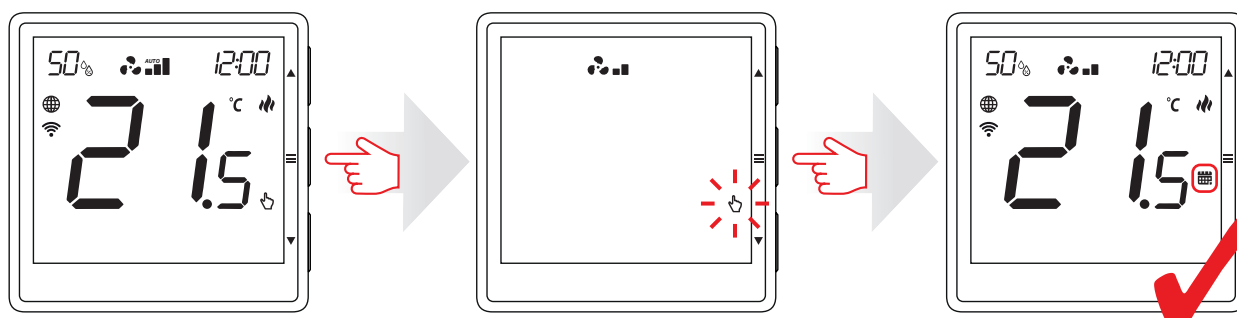
TO ACTIVATE SCHEDULE MODE:



Enter the thermostat interface.

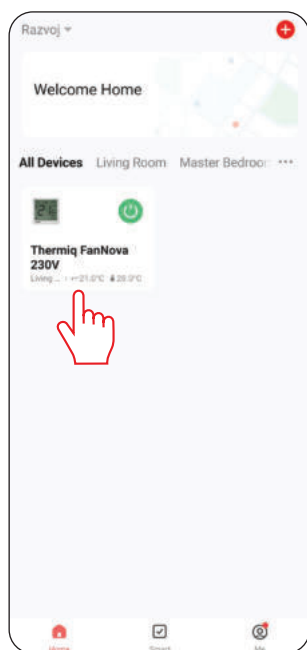
Select the „Work mode” option.

Select a Program Mode.

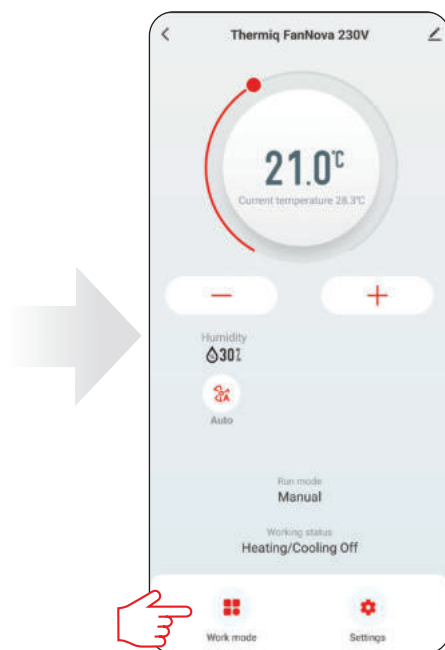


To change the mode from manual to active schedule mode, click the ≡ button.
Click the ≡ button again to select the operating mode.

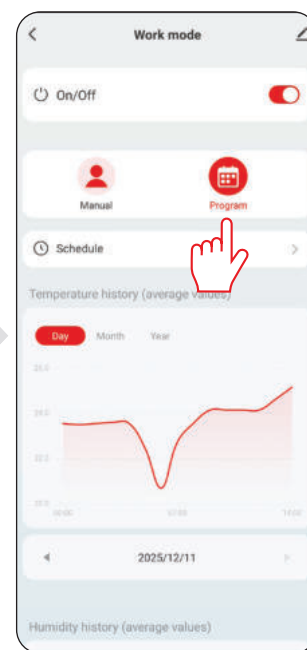
TO PROGRAM A SCHEDULE IN THE APP:



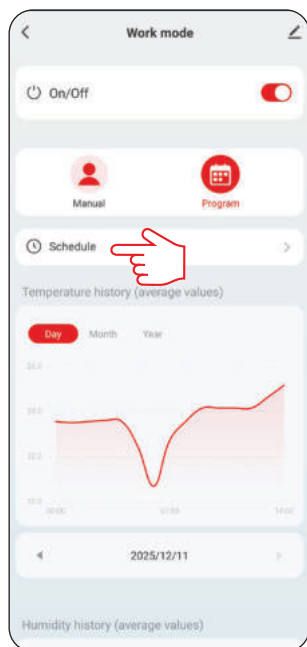
Enter the thermostat interface.



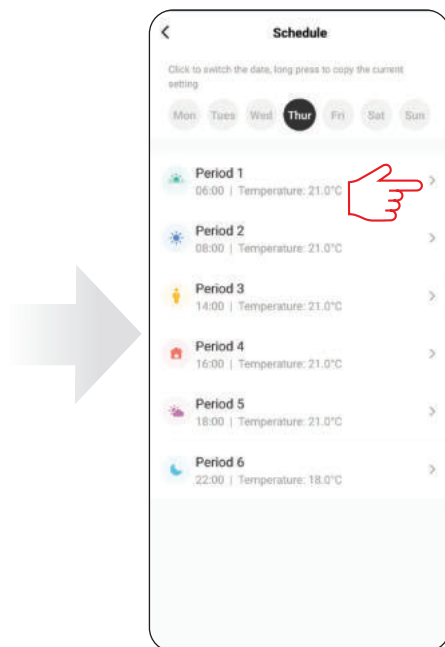
Select the „Work mode" option.



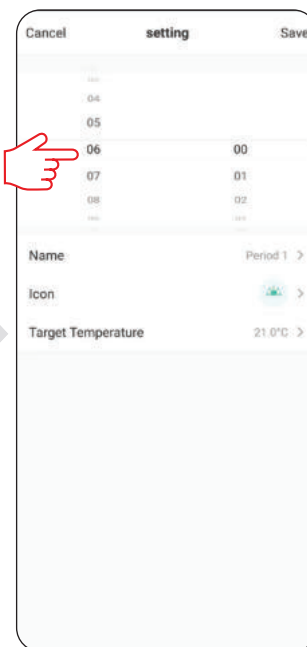
Select a Program Mode.



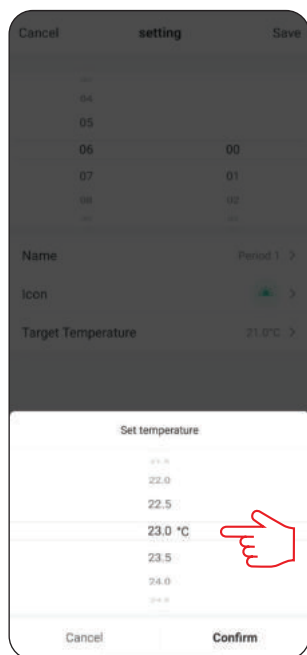
Enter the schedule settings.



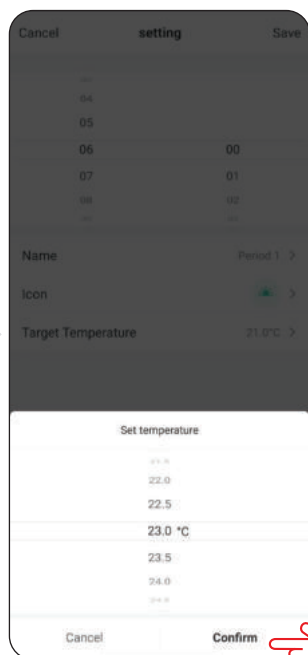
Select one of the six switch points to edit (the editing order is optional).



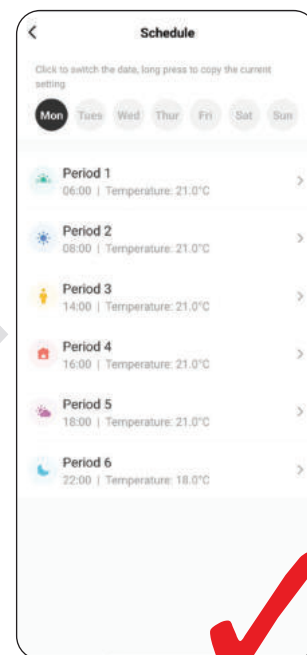
Select the start time of the switch point.



Set the temperature which applies when the program starts.



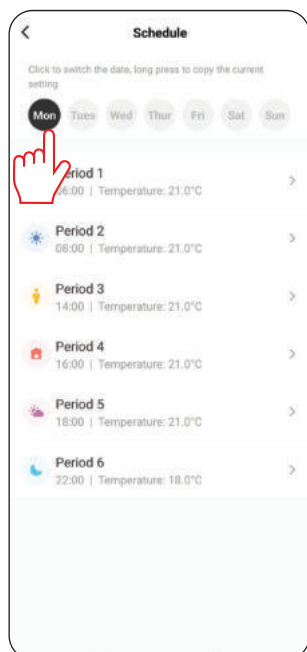
Next click „Confirm”.



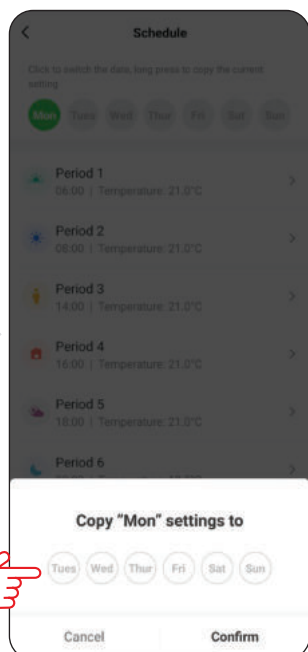
After all, you will see ready program in the schedule. Select another program and follow steps 5 to 8.

COPYING DAYS

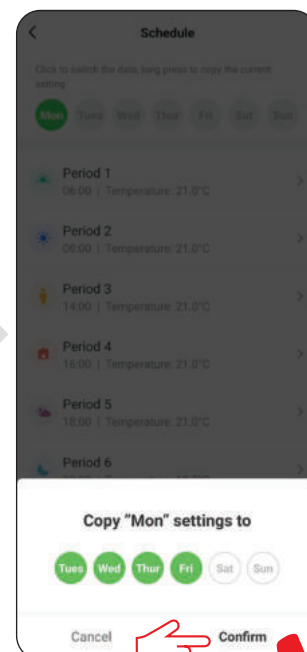
The HERZ Thermiq app allows you to copy the settings of a selected day in the schedule to another. Thanks to this, you do not have to set the next day for the second time if you want to have exactly the same settings in it. Please follow the steps below:



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



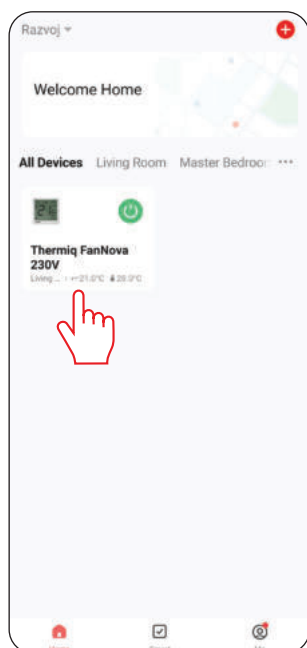
Then select the days for which you want to duplicate the settings.



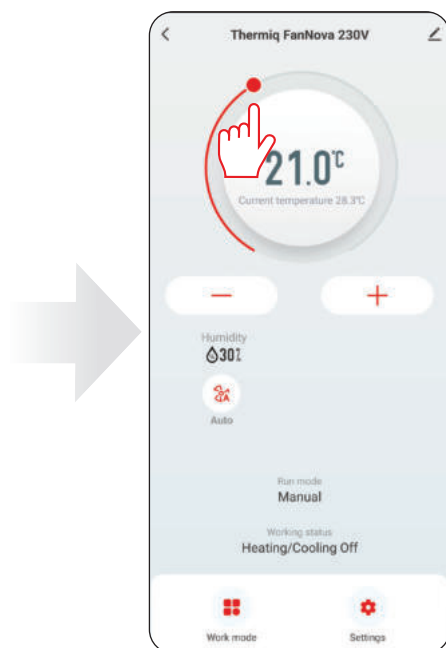
After selecting the days, confirm.

10.6. TEMPORARY OVERTWRITE MODE

Temporary temperature override mode is activated when the user changes manually setpoint temperature during active schedule mode. A hand and calendar icon are displayed on the FanNova LCD. Additionally information about the temporary mode is displayed in the in the app (Run mode status).



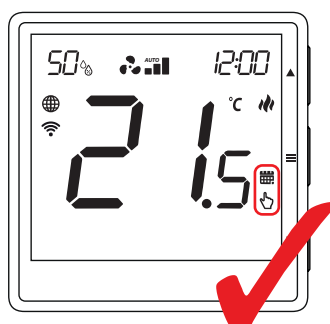
Enter the thermostat interface.



Change the desired temperature.



When the schedule is overwritten the operating mode changes from schedule to temporary mode.



A calendar icon with a hand will appear on the thermostat.

10.7. ECO MODE

ECO mode on the fan coil thermostat is a setting that saves energy by optimising the unit's operation. It typically works like:

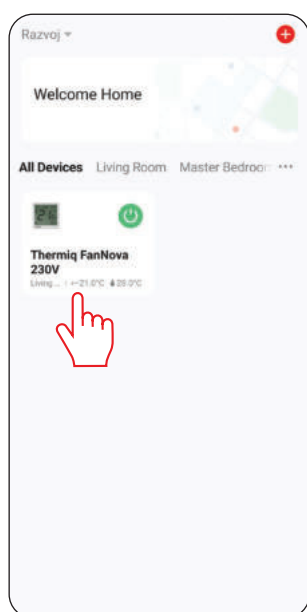
- Lowering or raising the temperature - depending on the mode (cooling or heating), the temperature is set to a less intense value than in comfort mode, e.g. a few degrees lower in winter and higher in summer.
- Activation under certain conditions - ECO mode is often used when a room is not used for a long period of time (e.g. at night or when user is away).

This mode reduces the running costs of the fan coil while keeping the indoor conditions at an acceptable level.

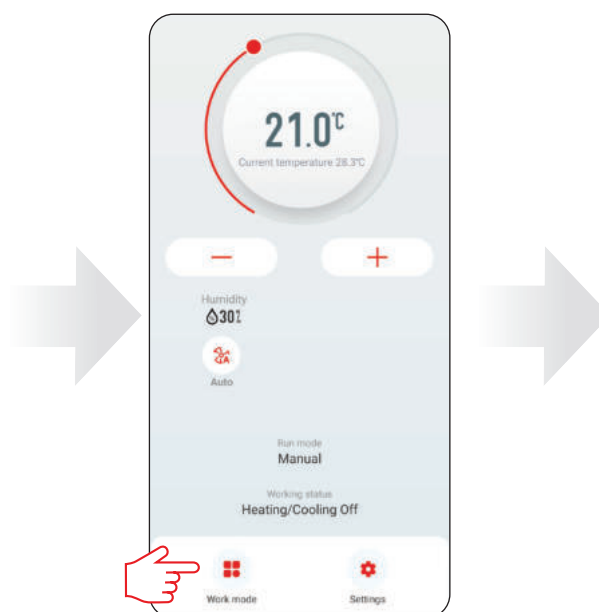
ECO mode can be activated in 2 ways:

- Manually - if activated in the installer parameters settings. ECO mode is selected manually from the thermostat or from the application (description in point 10.7.1).
- Automatically - if an external volt-free switch is connected to the S2-COM input. When the S2-COM contact is opened, the thermostat switches to ECO mode. It is then not possible to activate manual or schedule mode. When the S2-COM contact is closed again, the thermostat reverts to the previous operating mode (see paragraph 15.5.1 for details).

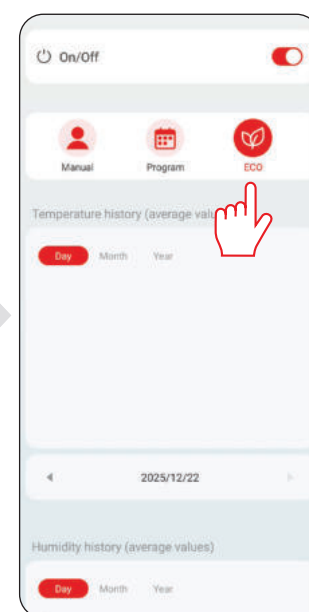
If ECO mode is active, the LCD screen will show a leaf icon.



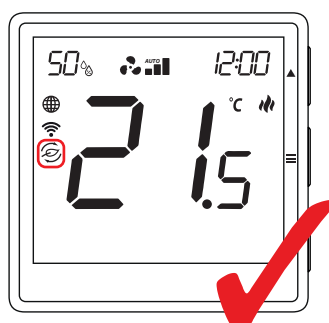
Enter the thermostat interface.



Select the „Work mode” option.

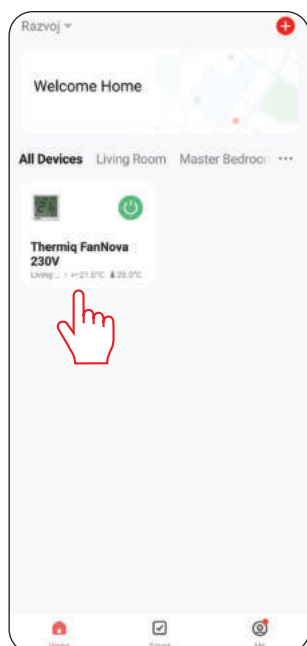


Select ECO mode.

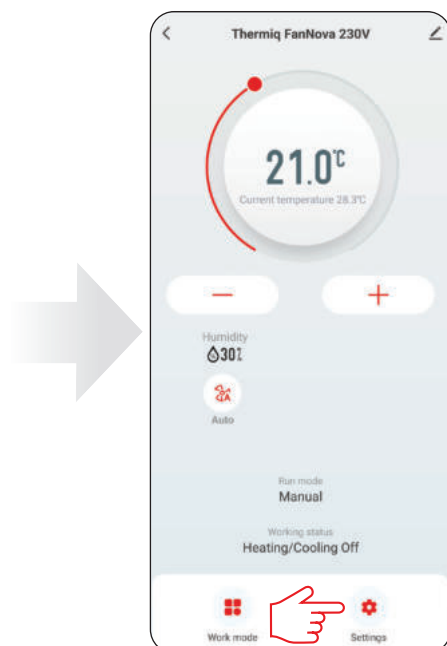


When ECO mode is active, a leaf icon will appear on the thermostat screen in addition to the heating icon.

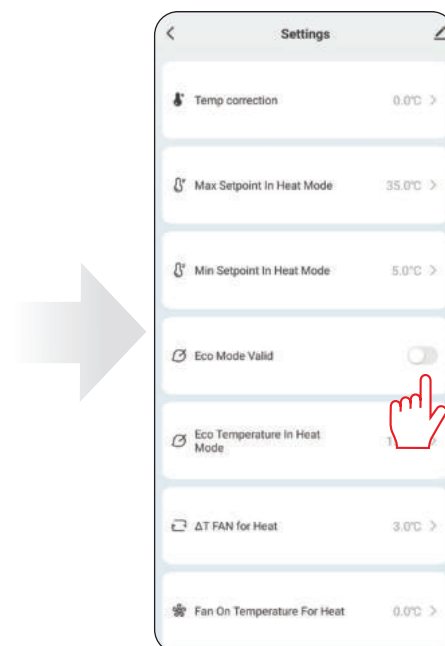
10.7.1. ENABLING ECO MODE



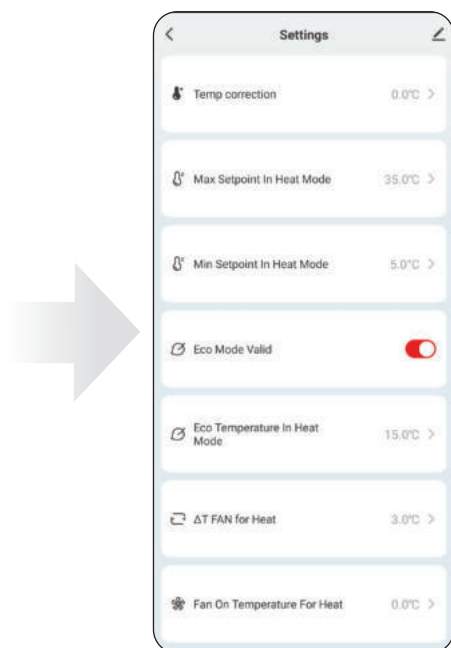
Enter the thermostat interface.



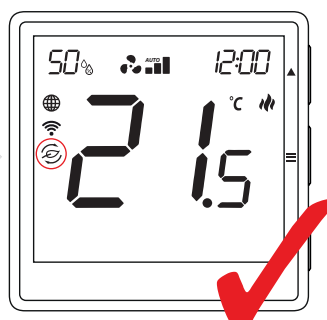
Select the „Settings" option.



Use the slider to enable/disable ECO mode valid.

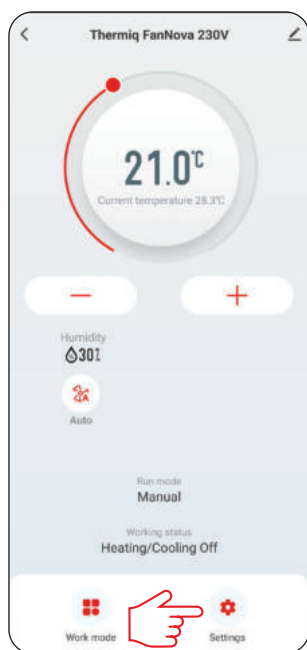


When the slider is highlighted in red, ECO mode valid is active.

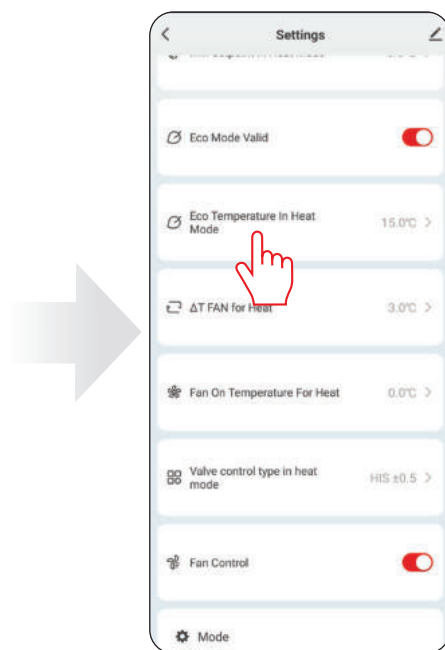


When ECO mode is selected, leaf icon appears on the thermostat.

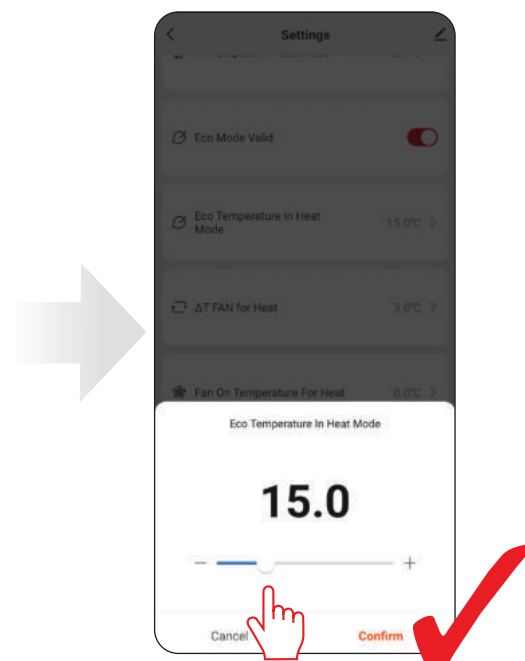
10.7.2. ECO TEMPERATURE IN HEAT MODE



Select the „Settings” option.

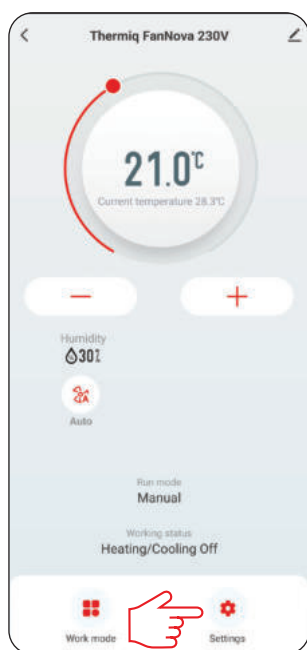


Click „ECO Temperature in Heat Mode”.

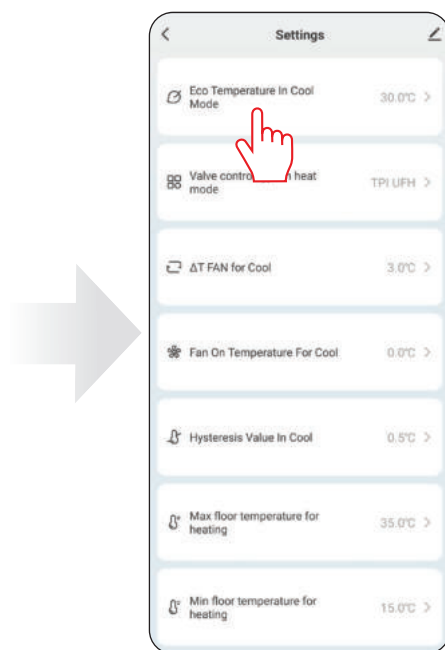


Set the ECO mode temperature and confirm.

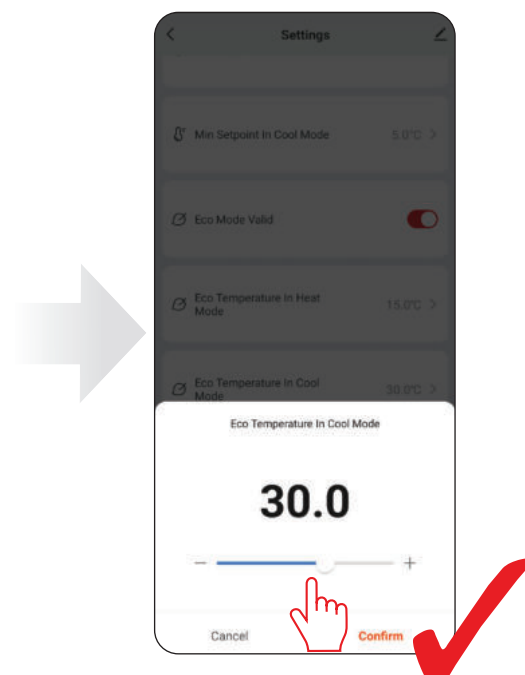
10.7.2. ECO TEMPERATURE IN COOL MODE



Select the „Settings” option.



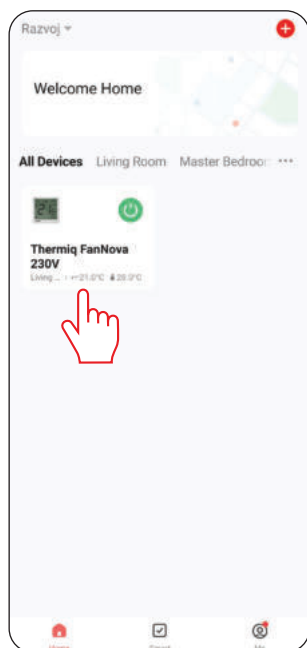
Click „ECO temperature in cool mode”.



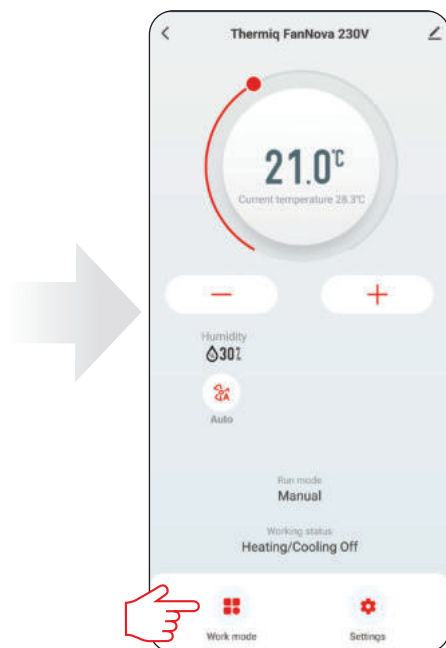
Set the ECO mode temperature and confirm.

10.8. FROST MODE (ONLY FOR UNDERFLOOR HEATING)

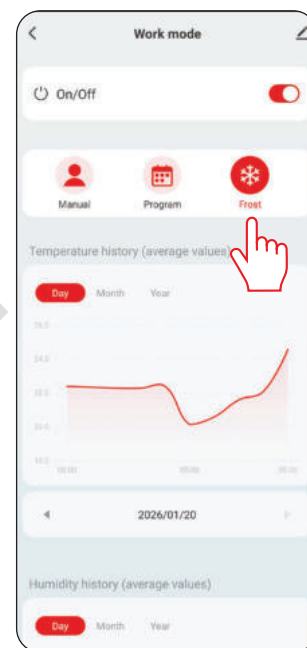
In the FROST mode, setpoint temperature is kept as a constant, selectable value from the range of 5°C - 17°C.. When the anti-freeze (FROST) mode is active, a snowflake icon is displayed on the thermostat. When the ambient temperature drops below selected setpoint temperature, the thermostat will start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



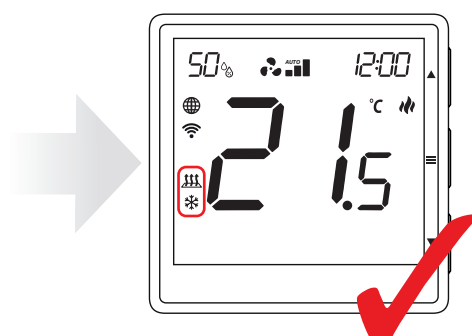
Enter the thermostat interface.



Select the „Work mode” option.



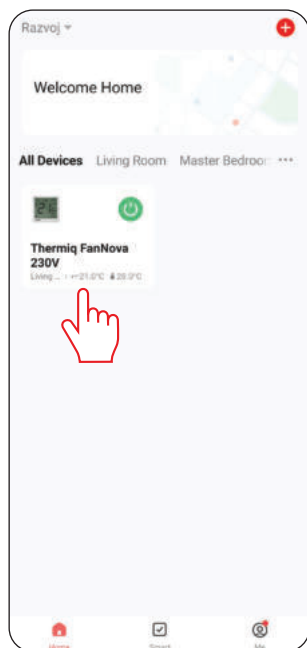
Select FROST mode.



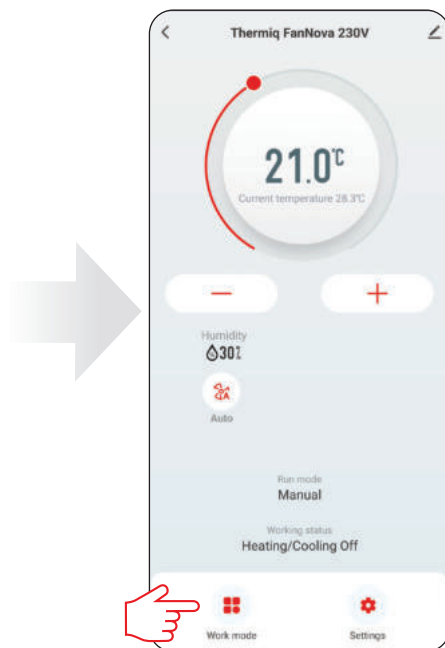
When the FROST mode is active on the thermostat screen in addition to the heating icon, a snowflake will appear.

10.9. DIAGRAMS

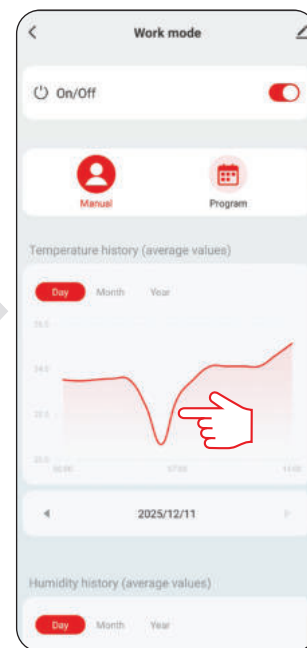
The HERZ Thermiq app offers room temperature history graphs and the heating time coefficient for the selected day. They allow you to better plan the operation of the thermostat, e.g. using the schedule mode based on the recorded data, which will make the operation even more economical.



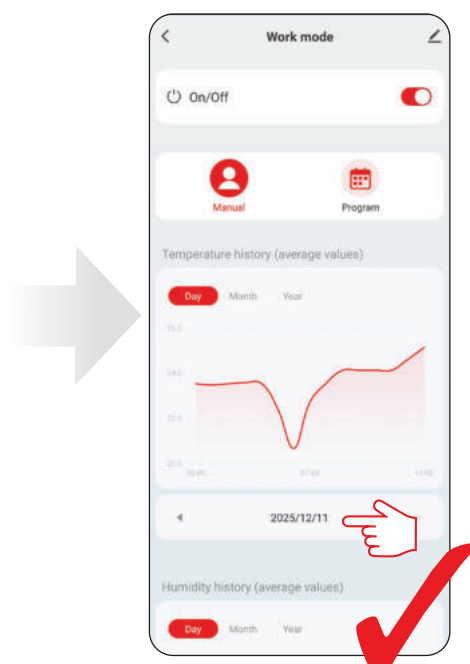
Enter the thermostat interface.



Select the „Work mode” 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.

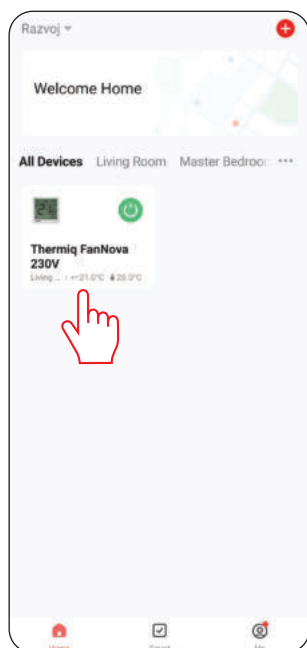


Choose the day that interests you.

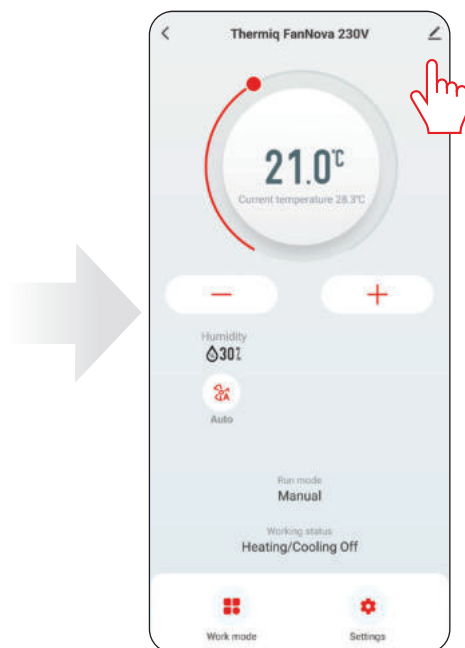
11. GENERAL MANAGEMENT IN THE APPLICATION

11.1 CHANGING THE NAME, ICON AND LOCATION OF THE THERMOSTAT

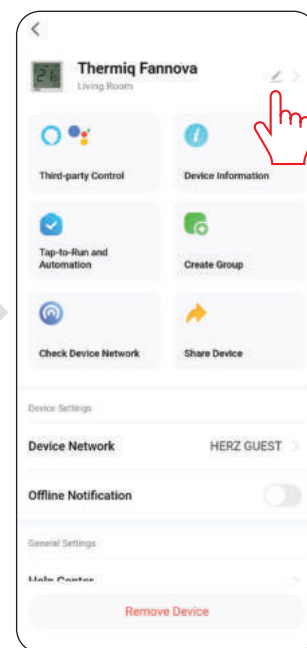
Name the thermostat, edit its icon or select the location of the house where it should be located:



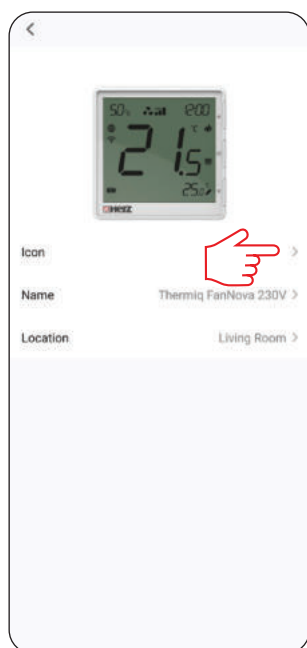
Enter the thermostat interface.



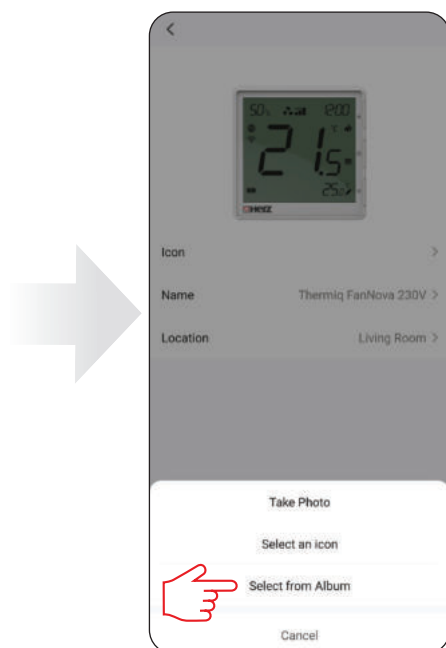
Click the pencil icon in the top right corner.



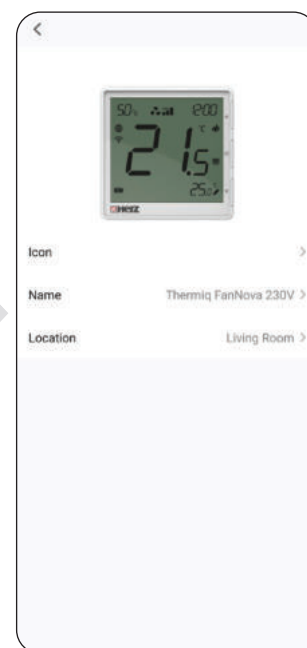
Click the pencil again.



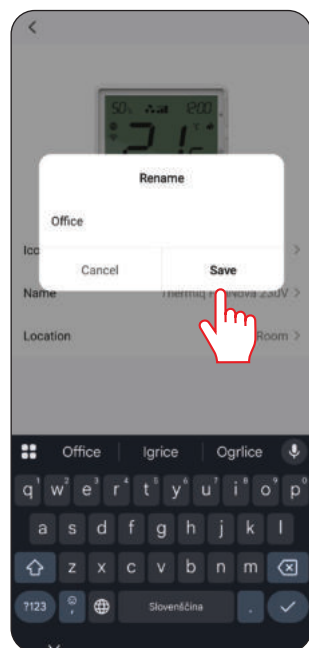
Go into the icon settings.



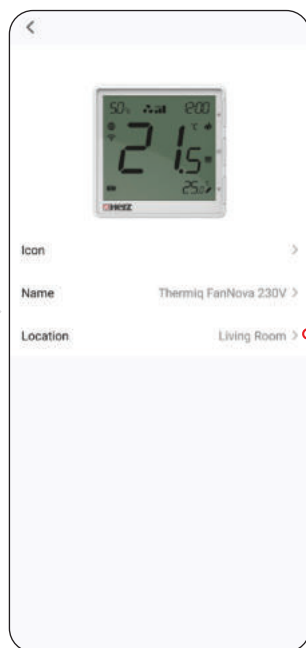
Take a photo or select an image from a local album.



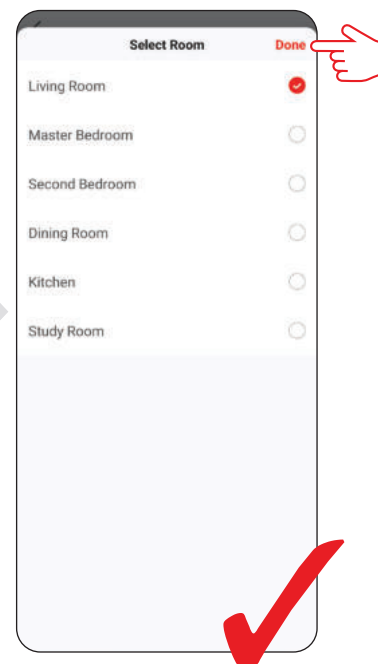
Open the name editing window.



Enter a name and click save.



Determine which room you want the thermostat to be located in.

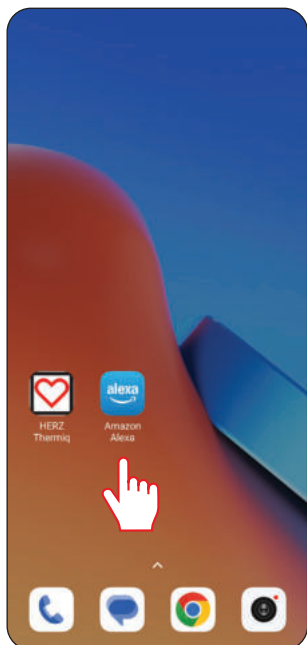


Select the location and click 'Done' in the top right corner.

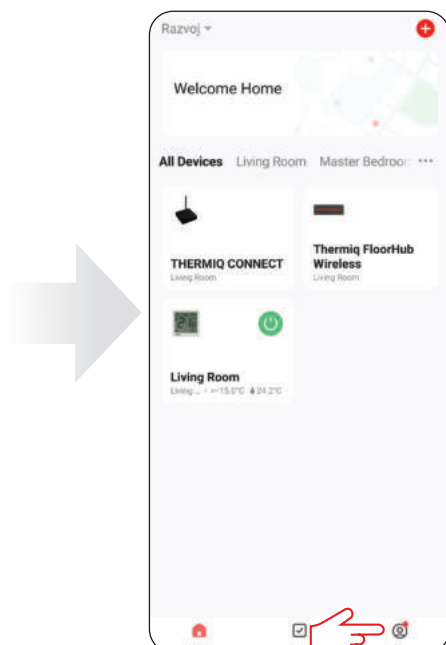
11.2. SUPPORTED EXTERNAL CONTROL (VOICE ASSISTANTS)

11.2.1. INTEGRATION WITH AMAZON ALEXA

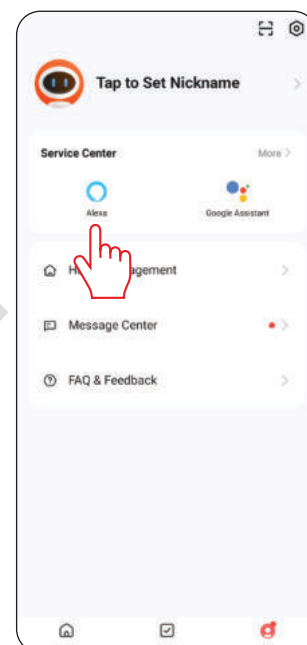
To integrate HERZ Thermiq products with your Amazon Alexa account, follow these steps:



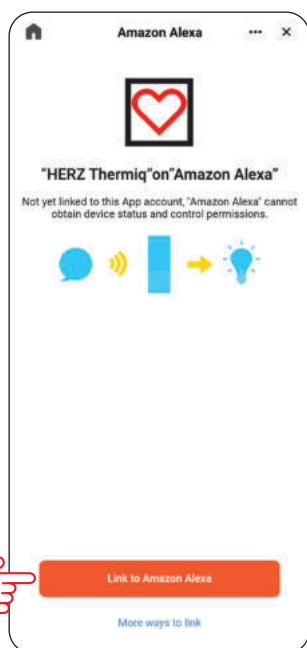
Install the Amazon Alexa app.



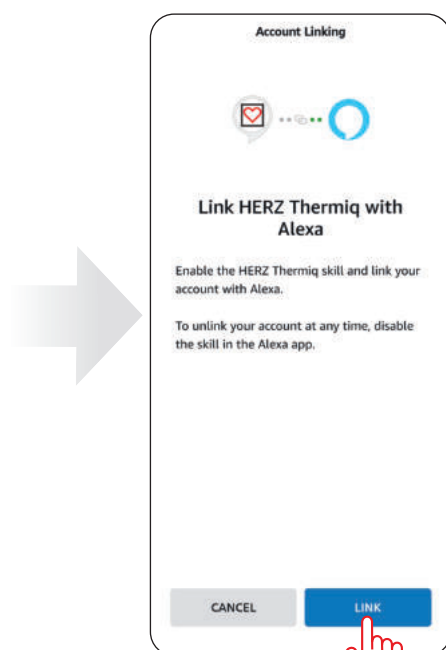
Go to the 'Me' tab.



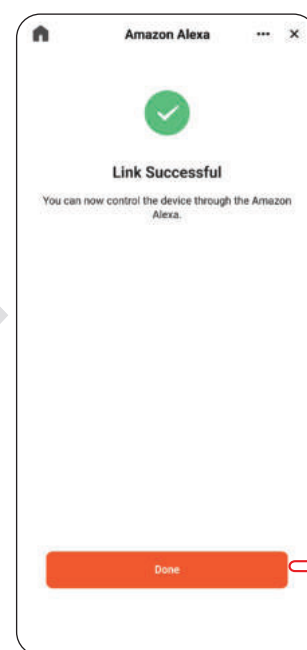
Go to the Alexa service.



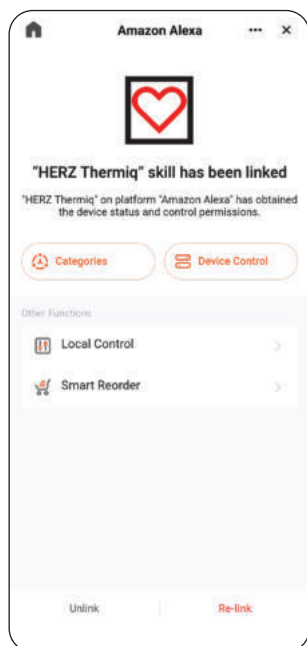
Click „Link to Amazon Alexa”.



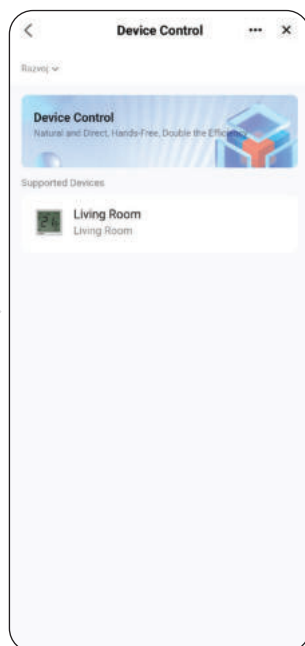
Connect the devices by clicking „LINK”.



The connection was successful, end by clicking „Done”.

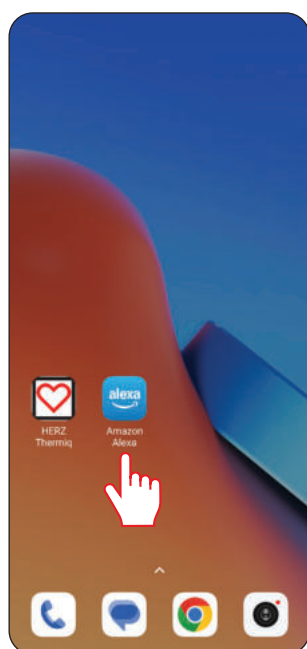


The devices have been linked to Alexa.

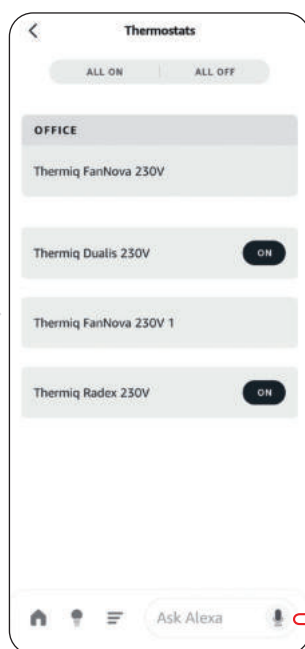


Devices are visible in the Alexa app.

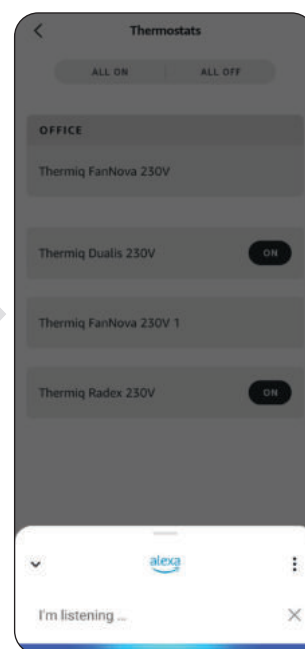
TRIGGERING THE VOICE ASSISTANT:



Click the Alexa assistant icon.



Click on the microphone icon.



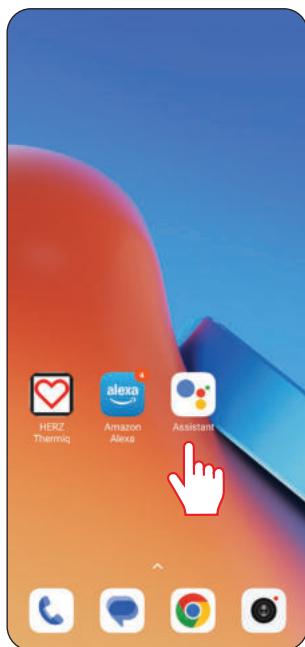
Tell us what you would like to shoot.

FANNOVA - LIST OF VOICE COMMANDS FOR AMAZON ALEXA

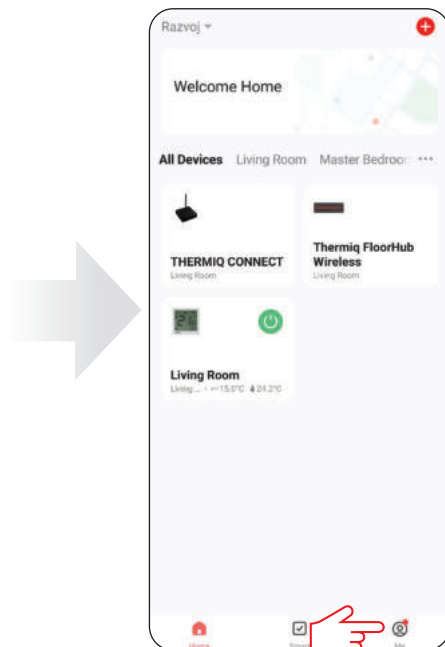
Command	Explanation
Alexa, what is the temperature of <device name>	Checking the temperature measured by the thermostat
Alexa, set <device name> to HEAT mode	Changing the operating mode to heating
Alexa, set <device name> to COOL mode	Changing the operation mode to cooling mode
Alexa, what is the target temperature of <device name>	Checking the target temperature
Alexa, set <device name> to twenty degrees	Setting the target temperature

11.2.2. INTEGRATION WITH GOOGLE ASSISTANT

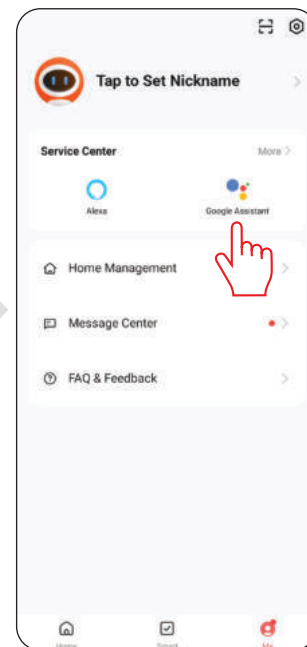
To integrate HERZ Thermiq products with your Google Home account, follow these steps:



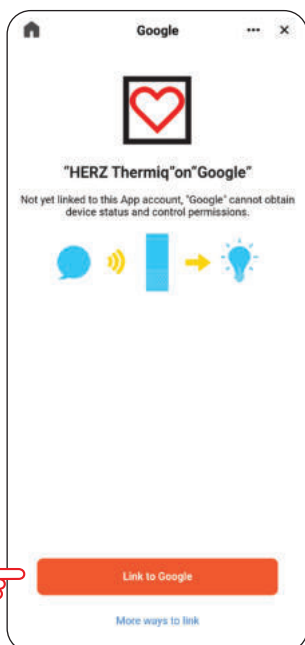
Install the Google Home app and Google Assistant.



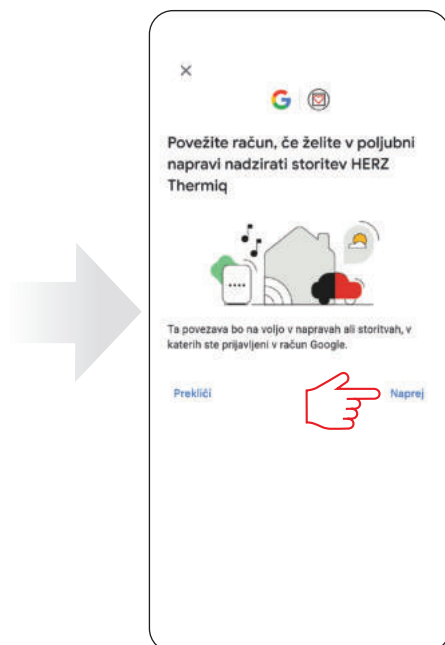
Go to the 'Me' tab.



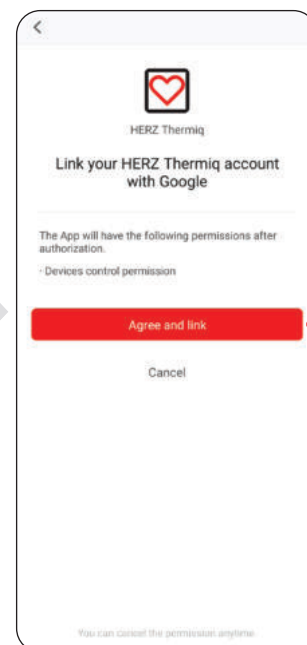
Go to the Google Assistant service.



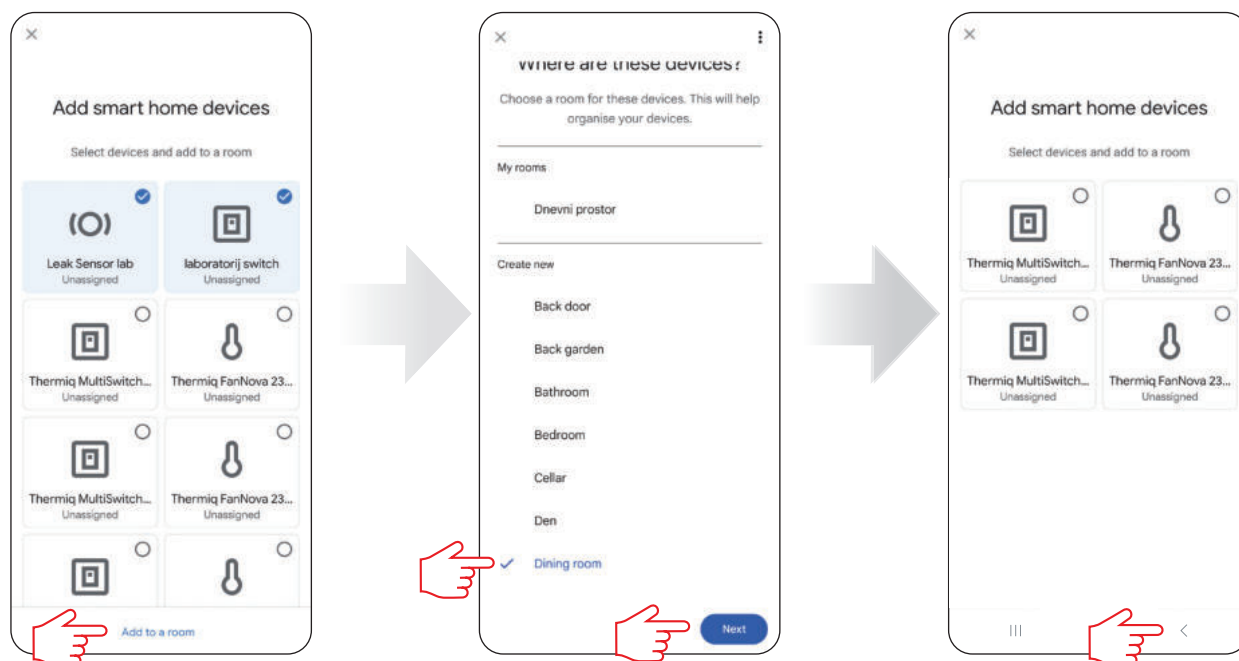
Make sure your phone is connected to the same Wi-Fi network as your devices added to your HERZ Thermiq account. Then click „Link to Google”.



Click „Continue”.



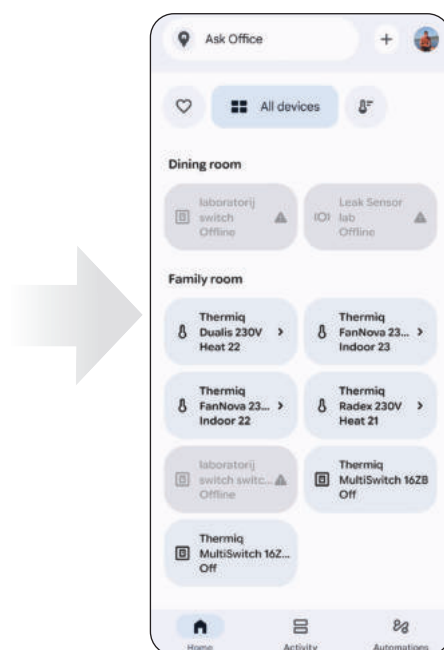
Consent is required to proceed further.



Wait for the account to be linked. Select the devices and click „Add a room”.

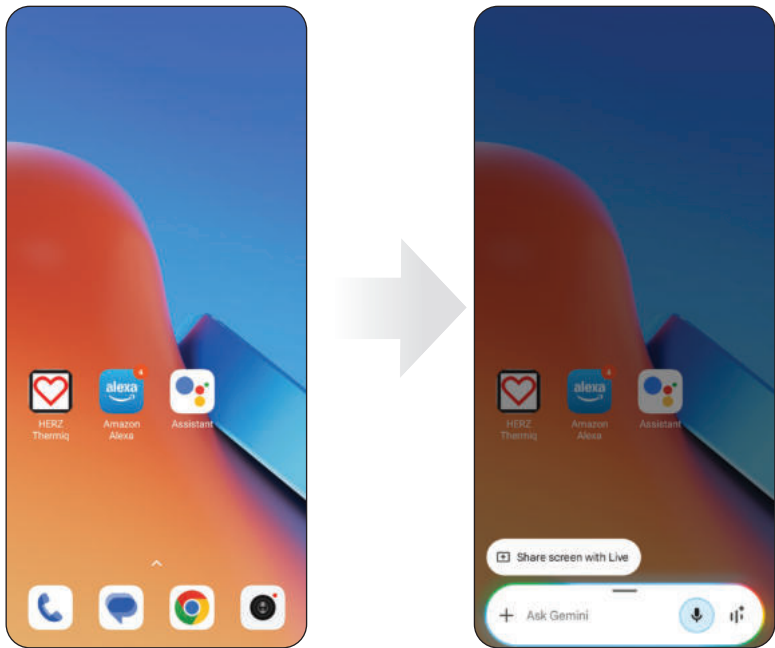
Choose a room and click „Next”.

Go Back.



Configuration is complete.

Voice control with Google Assistant can be implemented in triggering the voice assistant:



Click on the Google Assistant icon. Tell us what you would like to shoot.

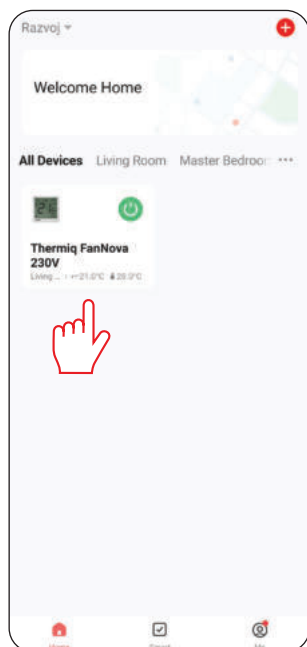
FANNOVA - LIST OF VOICE COMMANDS FOR GOOGLE HOME

Command	Explanation
OK Google what the temperature of <device name> is	Check measured and setpoint temperature
OK Google, change mode of <device name> to HEAT	Change operation mode to heating
OK Google, change mode of <device name> to COOLING	Change operation mode to cooling
OK Google, set <device name> to twenty degrees	Set setpoint temperature

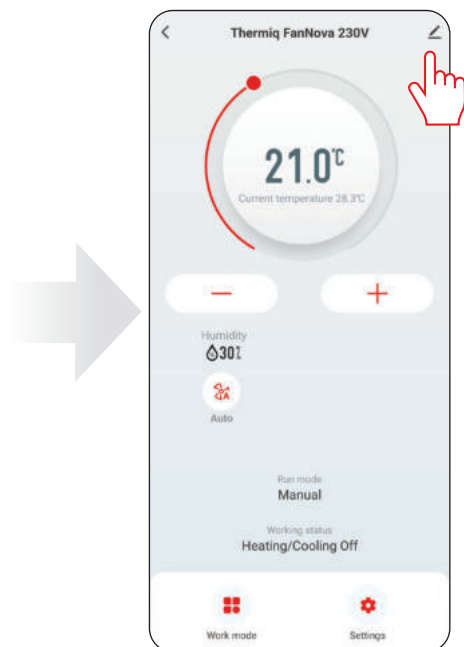
 **NOTES:** Voice control will be more effective if device names are easy for the voice assistant to say and understand.

11.3. DEVICE INFORMATION

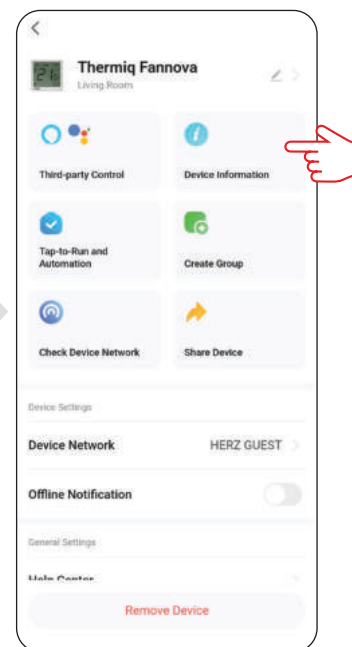
The user will find here detailed information about the device, eg. Virtual ID, device IP, MAC address, the time zone in which the device is located and signal strength. Check the steps below:



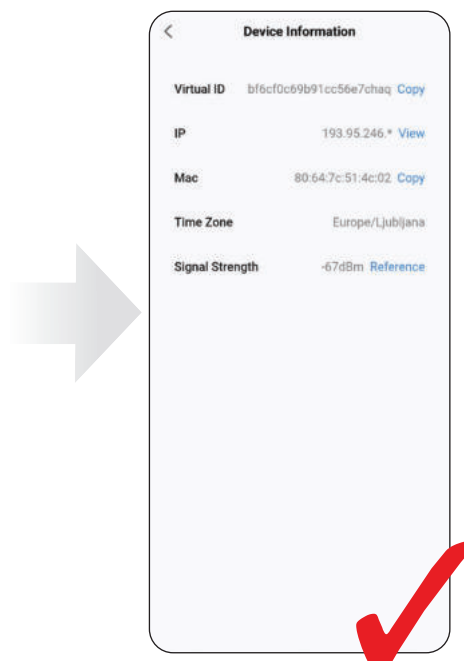
Enter the thermostat interface.



Click the pencil icon in the top right corner.



Select „Device information”.



Read the ‚Device Information’.

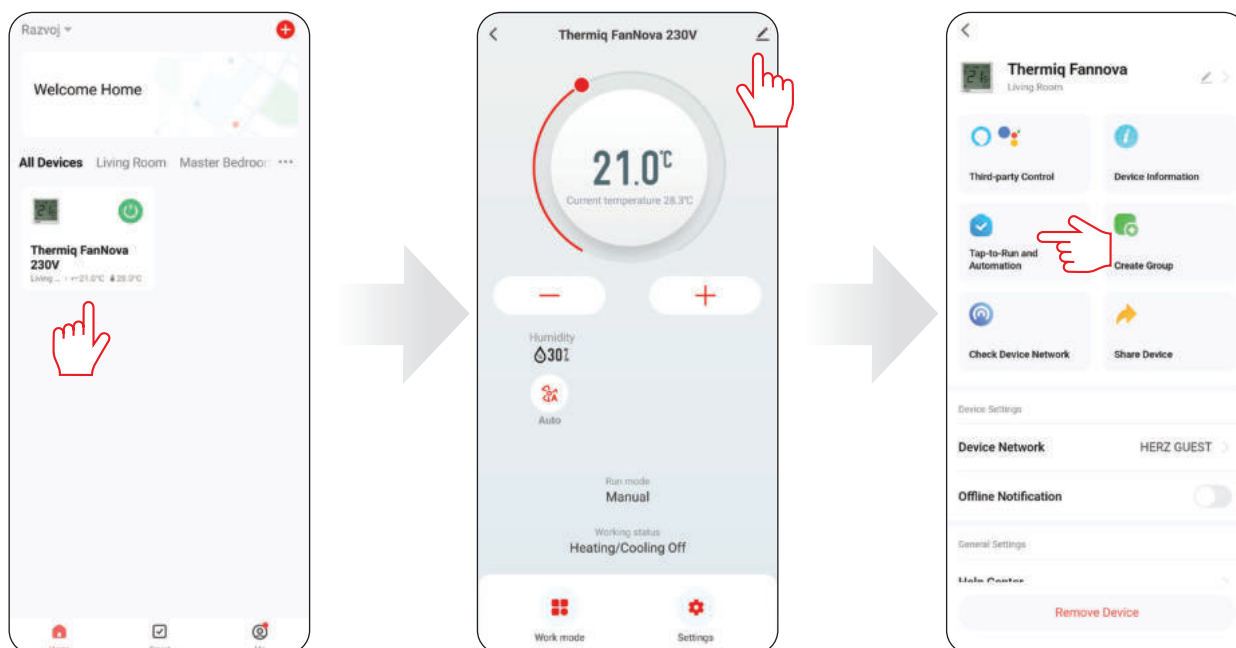
11.4. TAP-TO-RUN AND AUTOMATION

The "Tap-To-Run" and "Automation" rules are a pre-configured set of actions defined by an easy-to-use interface.

- Tap-To-Run - with a single tap, make the complex rules triggered,
- Automation - set up linked actions where one device will affect another without your intervention.

11.4.1. PREVIEW OF CREATED SCENES

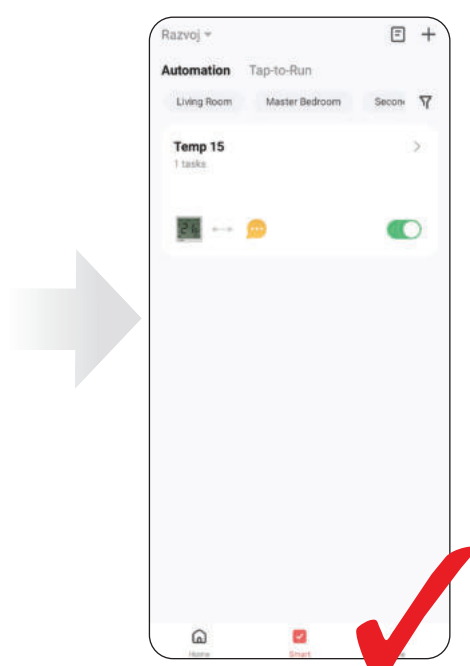
Follow the steps below to check the scenes associated with the thermostat:



Enter the thermostat interface.

Click the pencil icon in the top right corner.

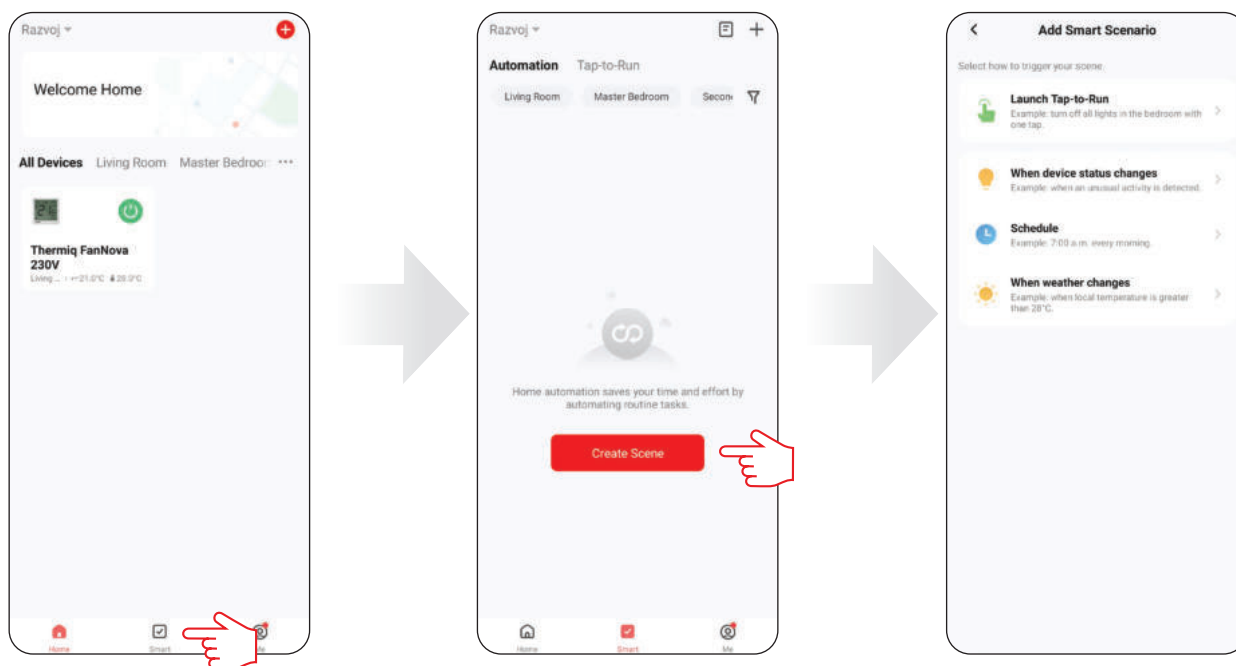
Select „Tap-to-run and Automation”.



View the automations.

11.4.2. CREATING AUTOMATION

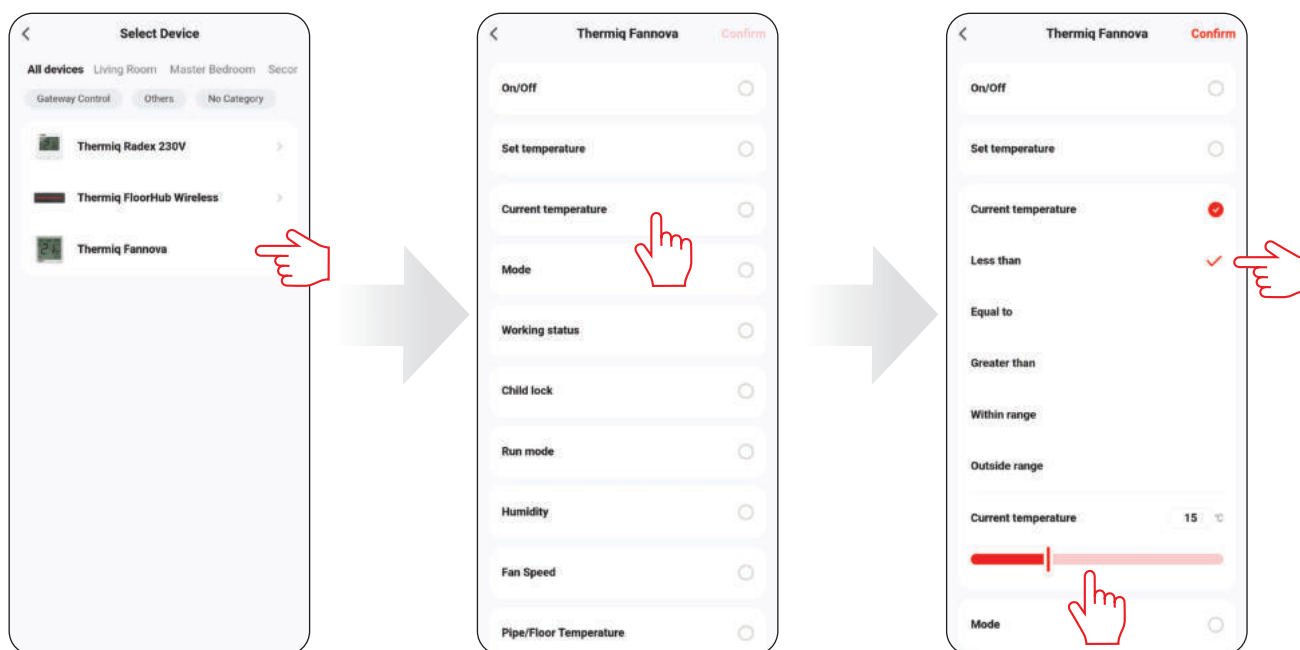
To create a rule that sends a notification when the room temperature drops below 15 degrees follow these steps:



In the HERZ Thermiq app, enter „Smart”.

Click „Create scene”.

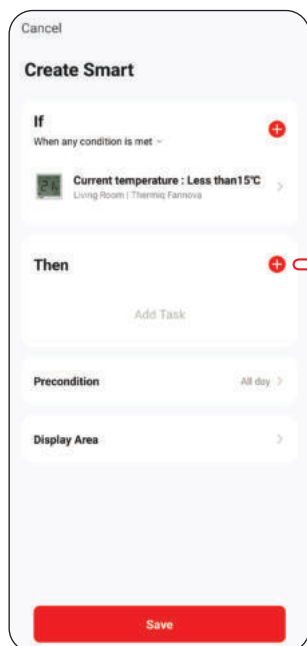
Select „When device status changes”.



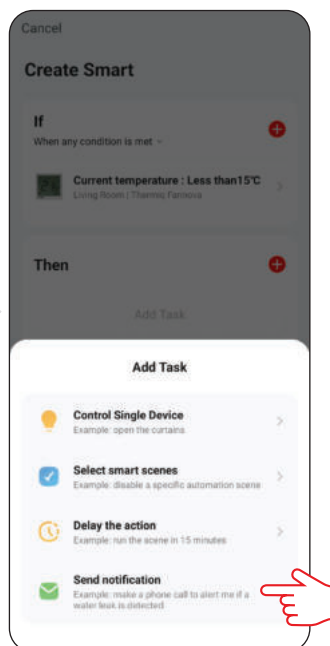
Select the thermostat.

Select „Current temperature”.

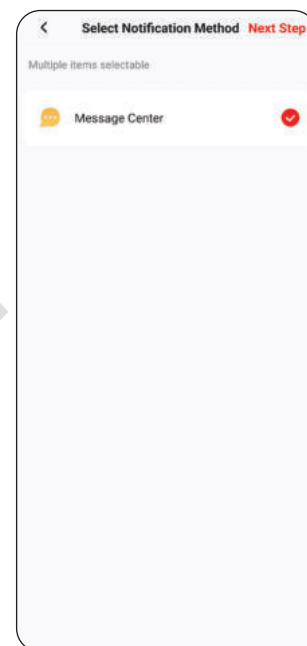
Select ‚Less than’, then set 15 degrees and click ‚Confirm’



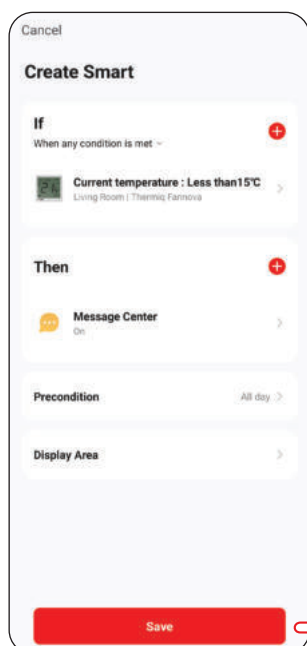
Add an action to be performed.



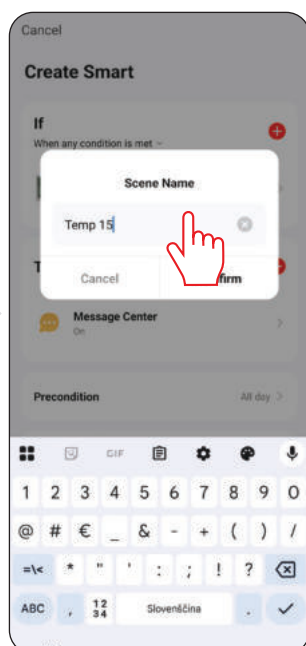
Select „Send notification”.



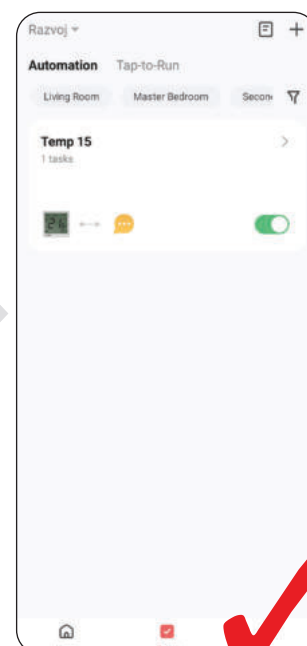
Select „Message center”, then click on „Next step”.



Click „Save”.



Name the rule, then „Confirm”.

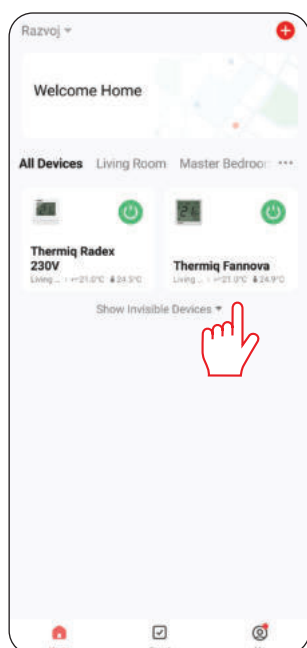


A rule sending a notification when the room temperature drops below 15 degrees has been created.

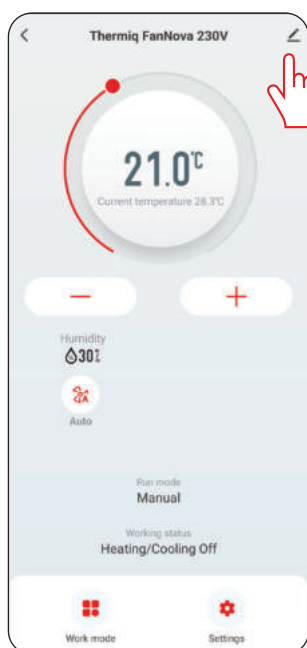
11.5. CREATE A GROUP

Simultaneous control will be available once a new group has been created and selected thermostats have been assigned to that group. A virtual master thermostat will then appear on the main screen to override all parameters in the grouped thermostats.

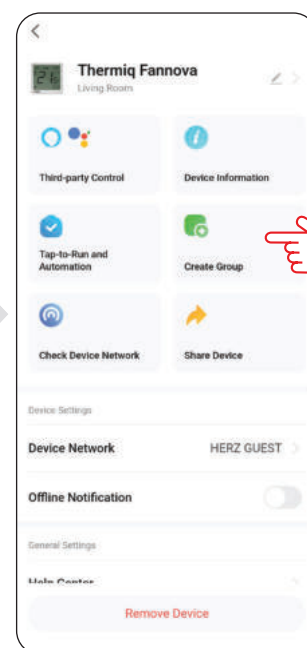
For example: If you set manual mode in the virtual thermostat, every thermostat in that group will switch to manual mode. See the steps below on how to group several thermostats.



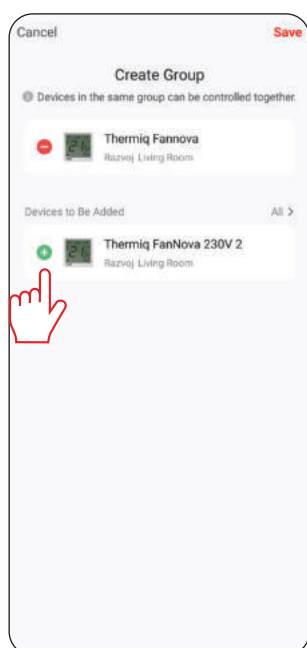
Enter the thermostat interface.



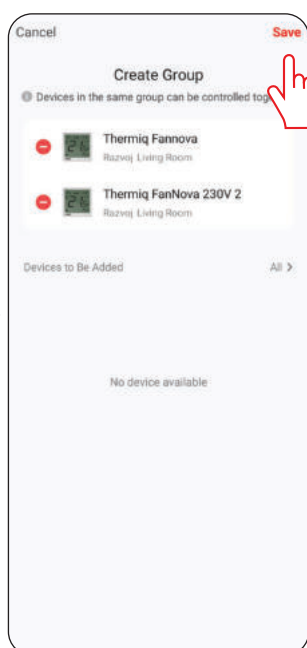
Click the pencil icon in the top right corner.



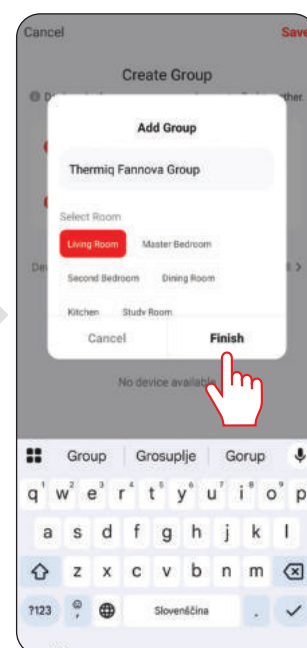
Select „Create Group”.



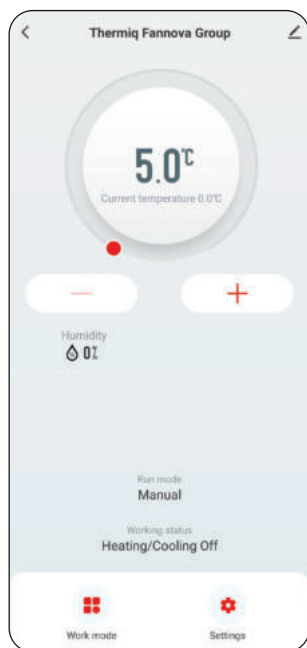
Select the devices you wish to assign to the group.



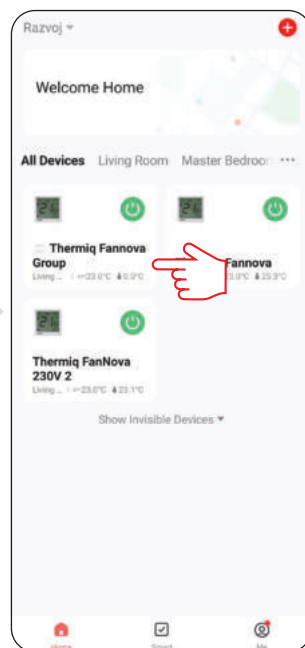
Click „Save”.



Name the group and click „Finish”.



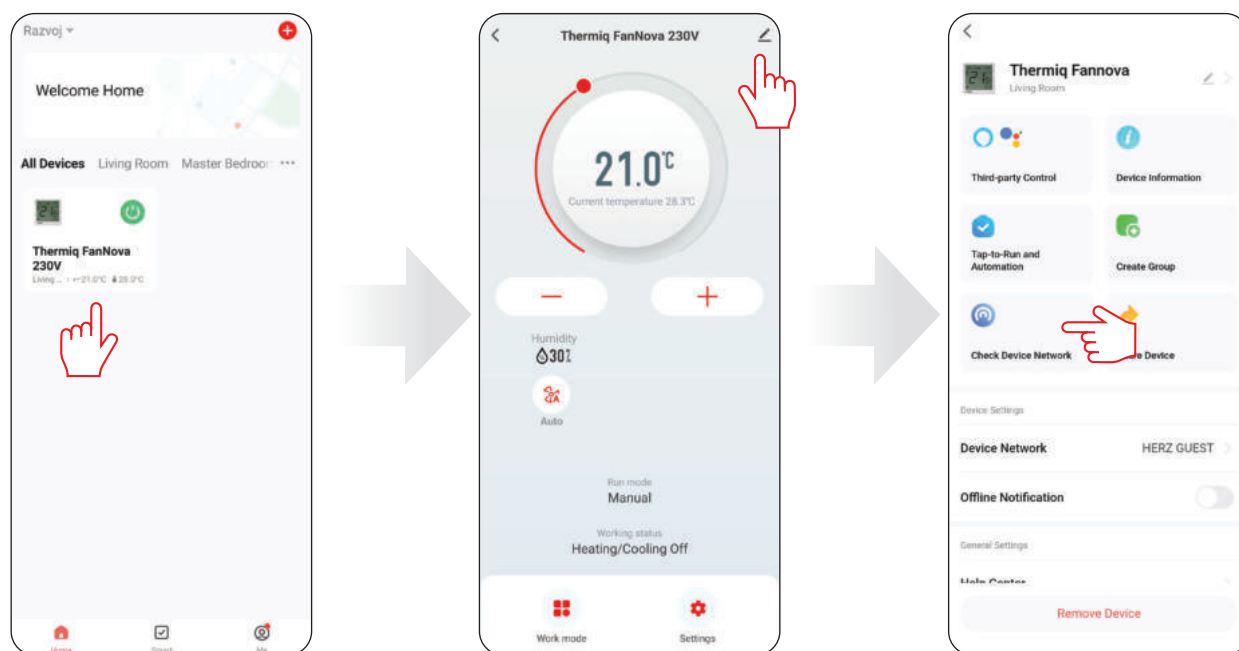
The main group management interface will be displayed, from where the temperature can be set or operating modes / settings changed.



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

11.6. CHECK DEVICE NETWORK

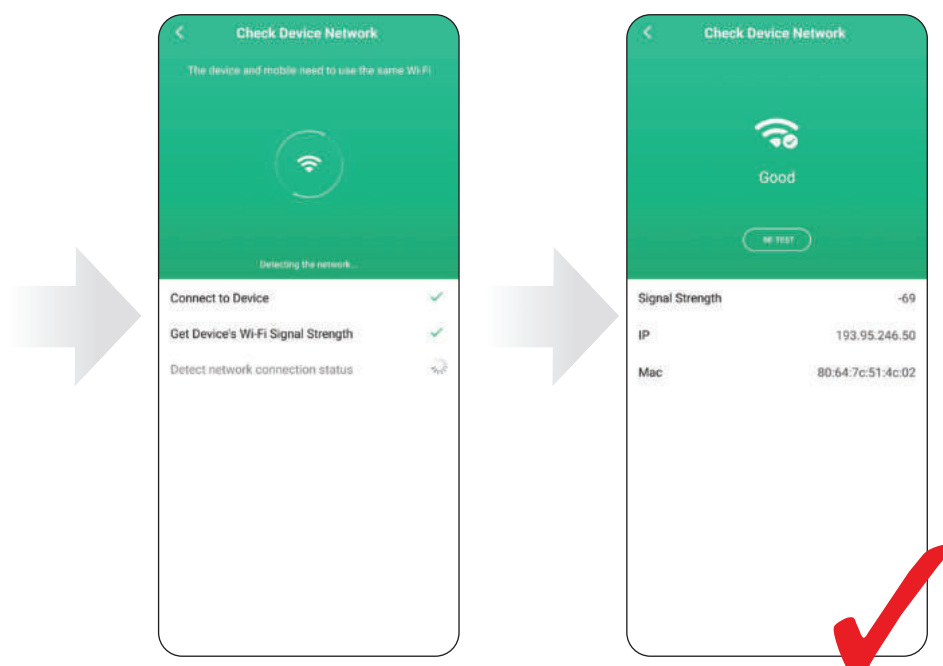
Each wireless device has a limited range of data transmission. In addition to distance, range can be affected by many other external factors such as stone walls, interference from other wireless networks, reinforced concrete ceilings, metal structural elements, pillars, etc. The HERZ Thermiq app has 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, device and phone must be connected to the same WiFi network. Follow the steps below:



Enter the thermostat interface.

Click the pencil icon in the top right corner.

Select „Check Device Network”.

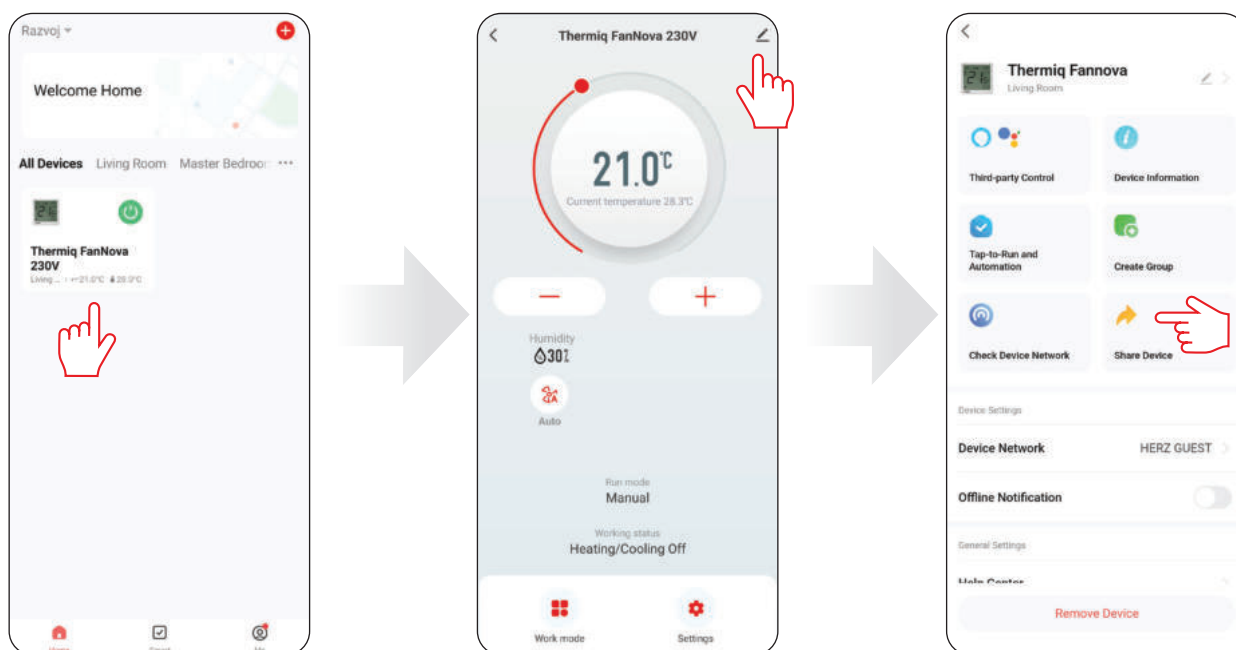


The app will start testing the Wi-Fi connection to the thermostat....

...after a successful test, the application will show detailed parameters e.g. signal strength, device IP and MAC address.

11.7. SHARE DEVICE

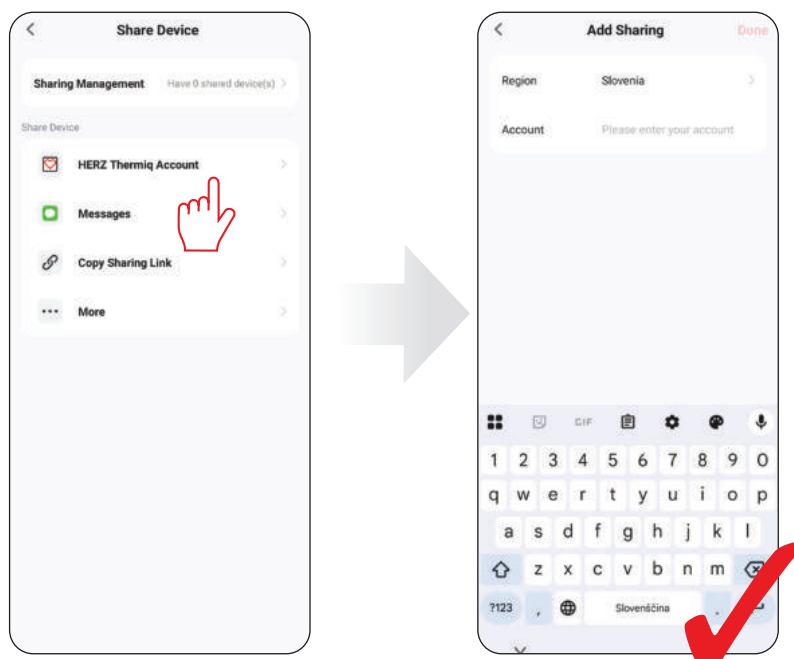
The HERZ Thermiq app offers the possibility of sharing the selected devices with other users (assigned to the home). This is a convenient option if you want to share selected devices but don't want to give access for all devices. To do this, follow the steps below:



Enter the thermostat interface.

Click the pencil icon in the top right corner.

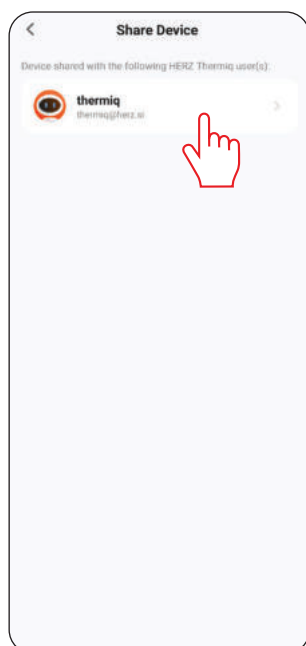
Select „Share Device”.



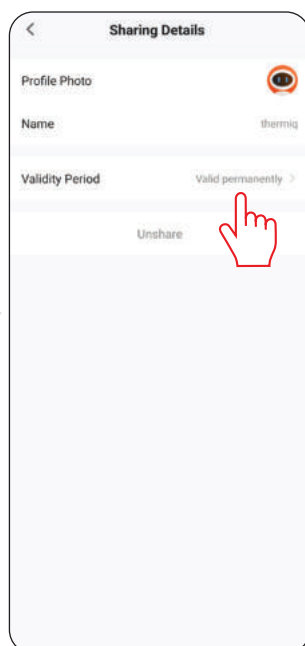
Select „Share with the HERZ Thermiq Account”.

Enter the country/region and email address/user name of the account which you want to give permission.

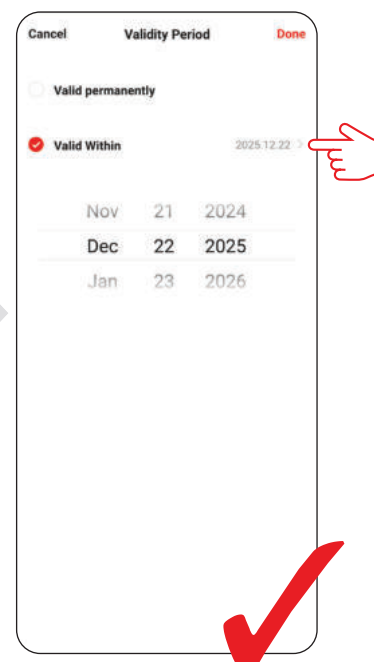
Once a device has been shared, the user can determine until when this sharing is to be valid and can also discontinue it at any time by selecting „Undo sharing”.



Select a user.



Go to expiry date.



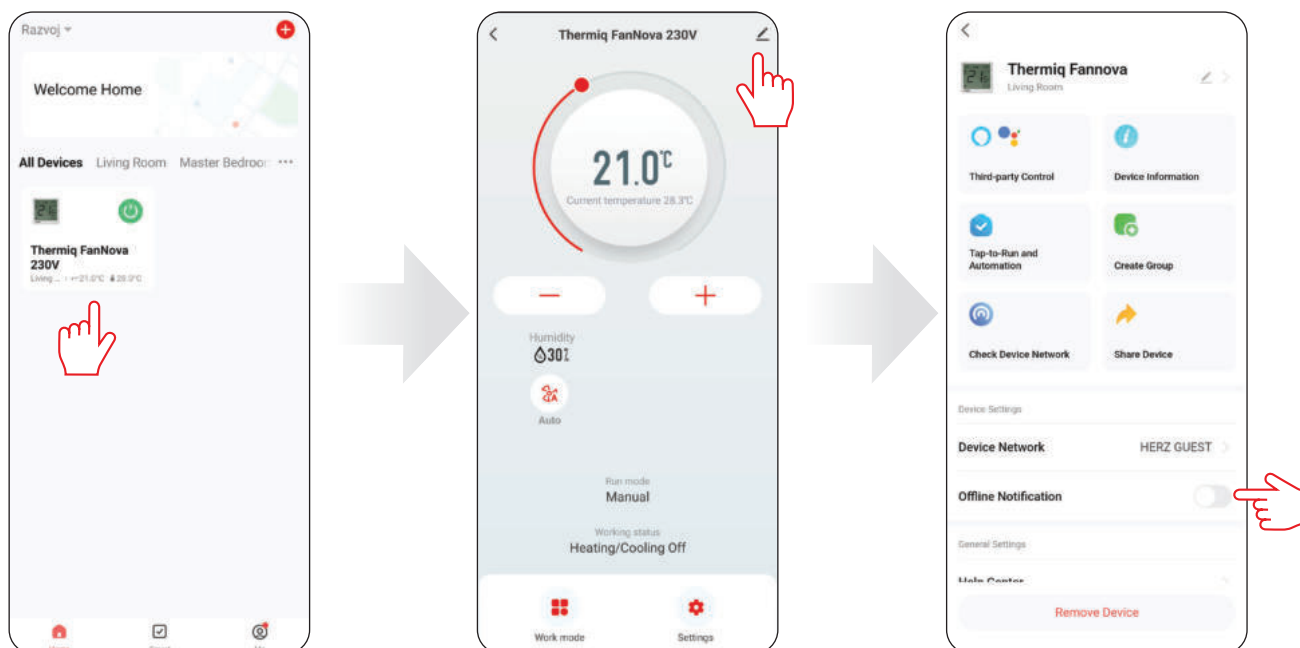
Select the period for which the sharing is to be effective.

11.8. OFFLINE NOTIFICATION

The HERZ Thermiq app allows you to receive notifications when the device goes offline (loses network connection). FanNova supports the online status monitoring function. The HERZ Thermiq app must have permission to send notifications (notification permissions must be set in the phone settings)

Note - notifications may be delayed if the device is using an unstable Wi-Fi network.

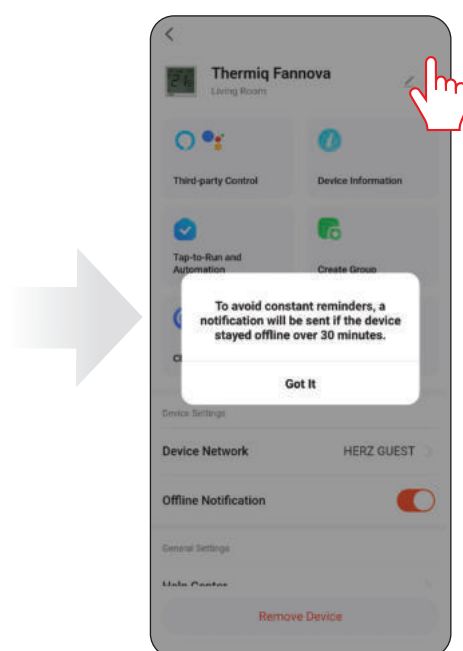
The user can enable or mute notifications regarding the thermostat at any time. See steps below:



Enter the thermostat interface.

Click the pencil icon in the top right corner.

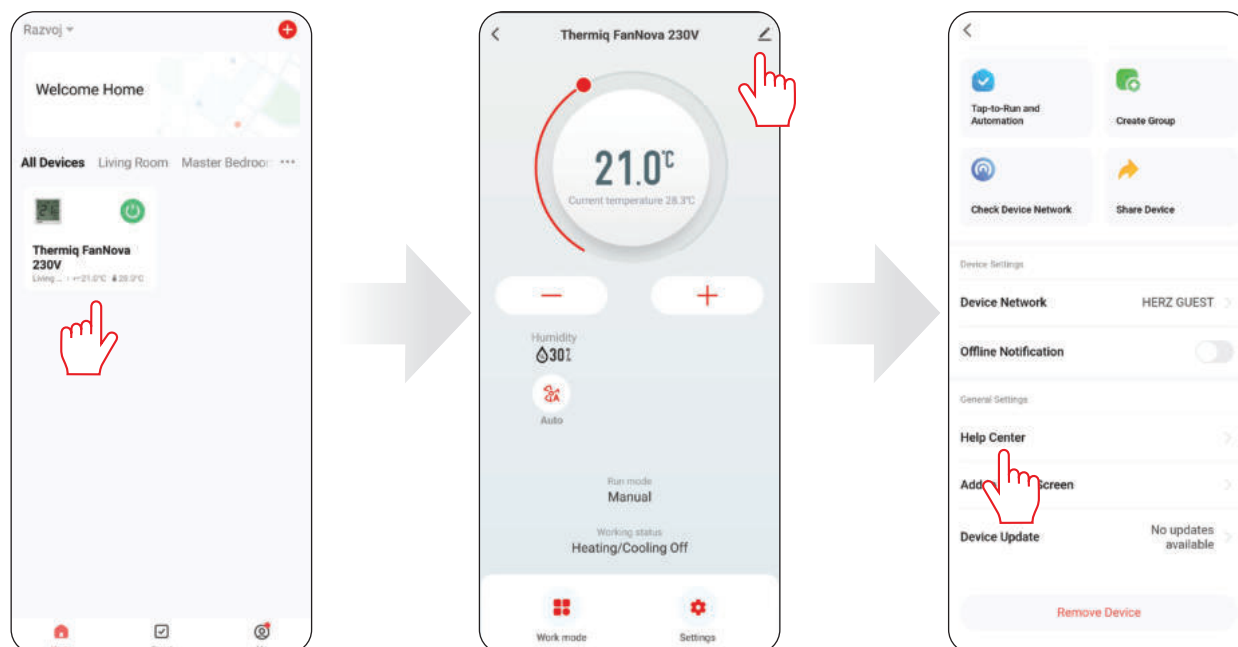
Check „Offline Notification”.



Confirm with „Got it”.

11.9. FAQ AND FEEDBACK

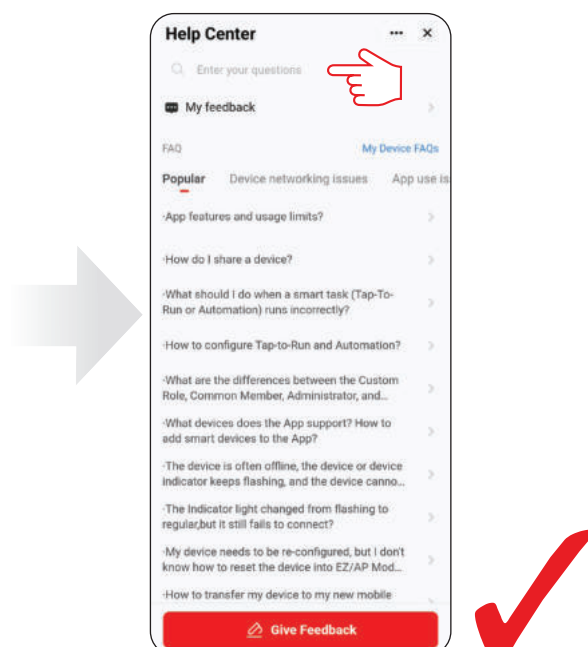
Find the answer to the problem in the FAQ option and opinions (the most common problems and questions) by searching for a specific key word. If you did not find the answer, please contact technical support.



Enter the thermostat interface.

Click the pencil icon in the top right corner.

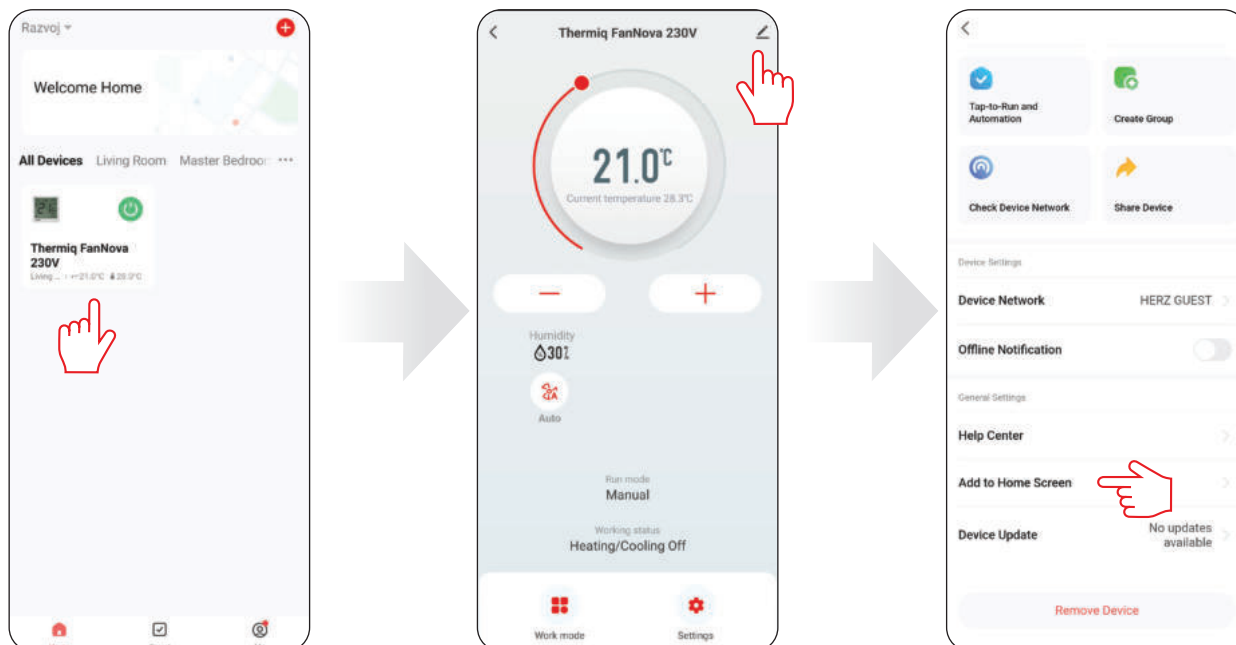
Select „Help Center”.



Type in your problem and the app will automatically start searching for a possible answer.

11.10. ADD TO HOME SCREEN

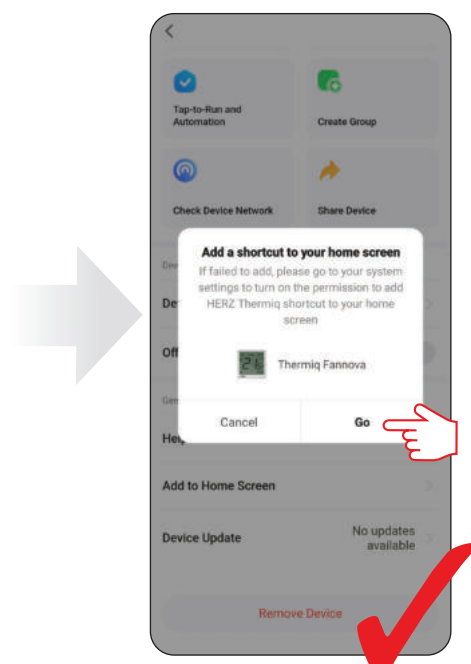
If you are tired of constantly opening the app to enter the thermostat settings, or if you want to set a new temperature quickly - pin the thermostat to the main desktop of your smartphone. See steps below:



Enter the thermostat interface.

Click the pencil icon in the top right corner.

Select „Add to Home Screen”.

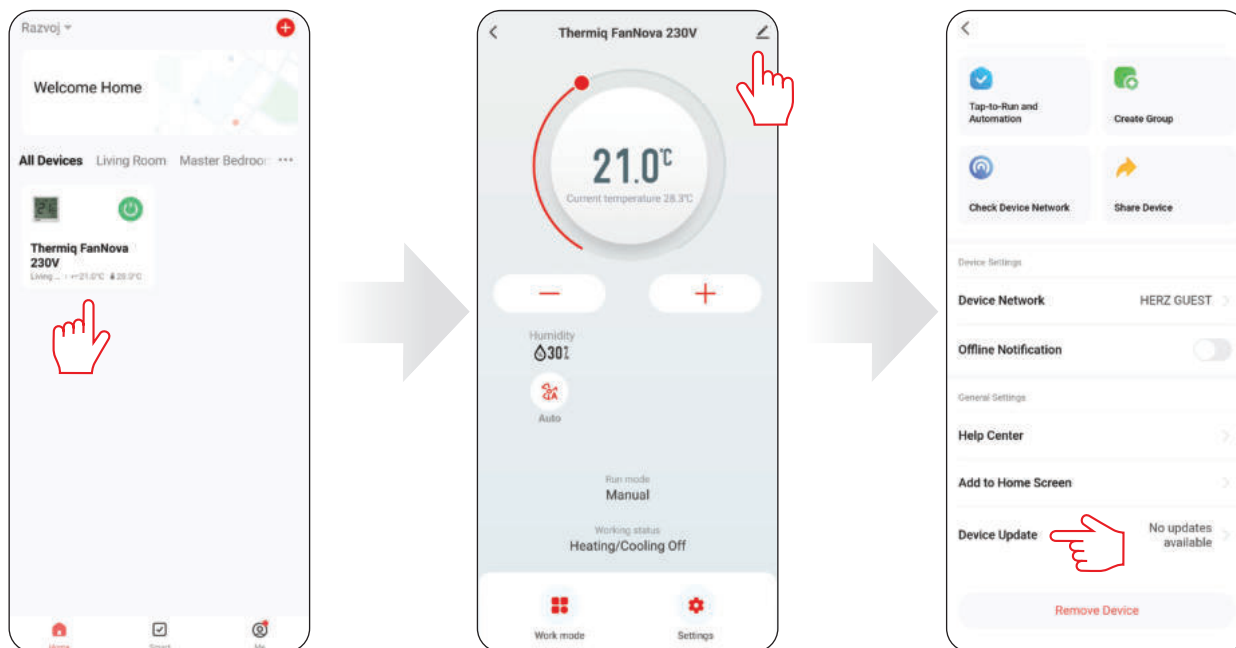


Confirm it by „Go” button. After all, a shortcut to the thermostat will appear on the phone's desktop.

11.11. DEVICE UPDATE

Allows you to update the device software to the latest version. The update can be started manually or an automatic option can be selected.

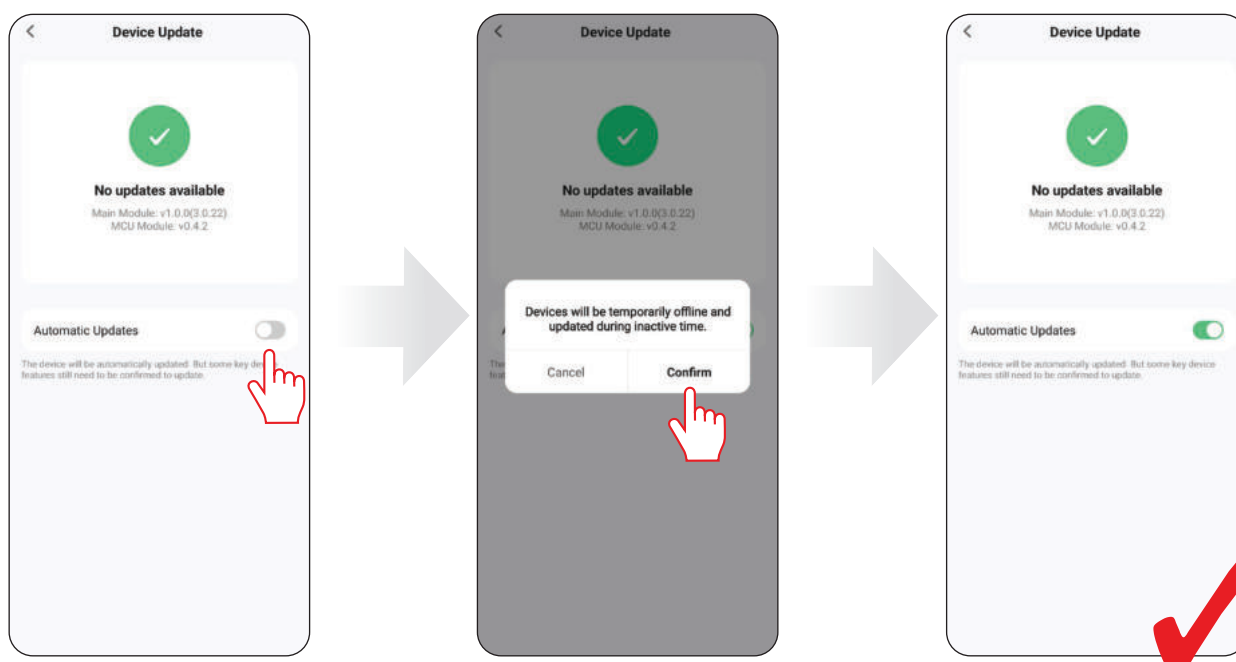
11.11.1. UPDATING DEVICES AUTOMATICALLY



Enter the thermostat interface.

Click the pencil icon in the top right corner.

Select „Device Update”.

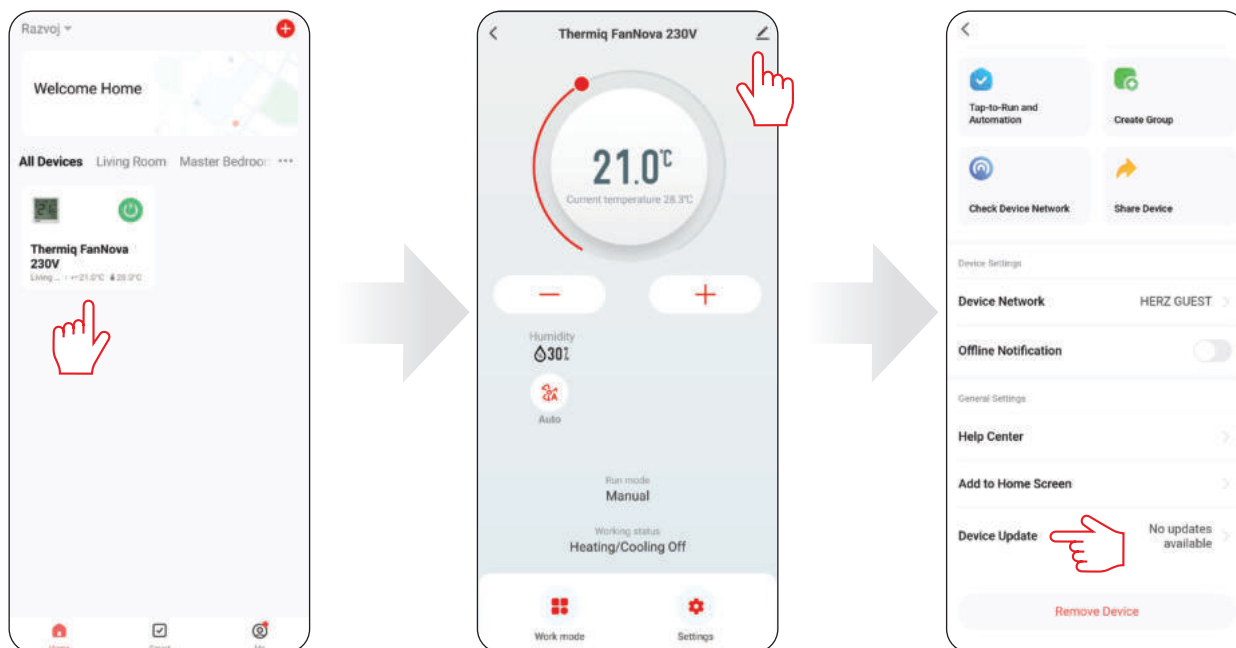


Check this option if you want the thermostat software to always update automatically.

Confirm.

From now on, whenever there is new software, the thermostat will initiate an update.

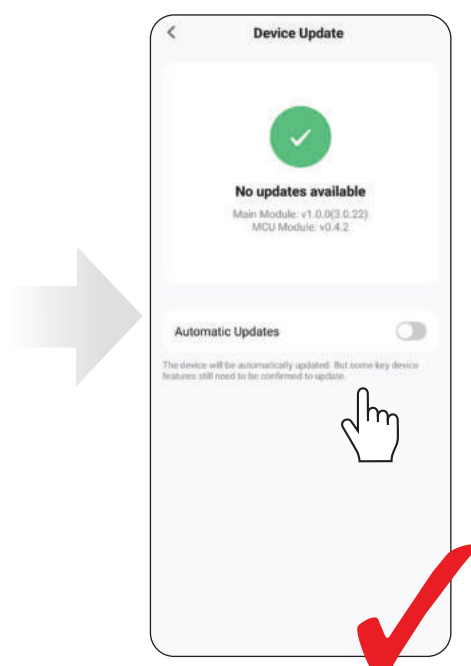
11.11.2. UPDATING DEVICES MANUALLY



Enter the thermostat interface.

Click the pencil icon in the top right corner.

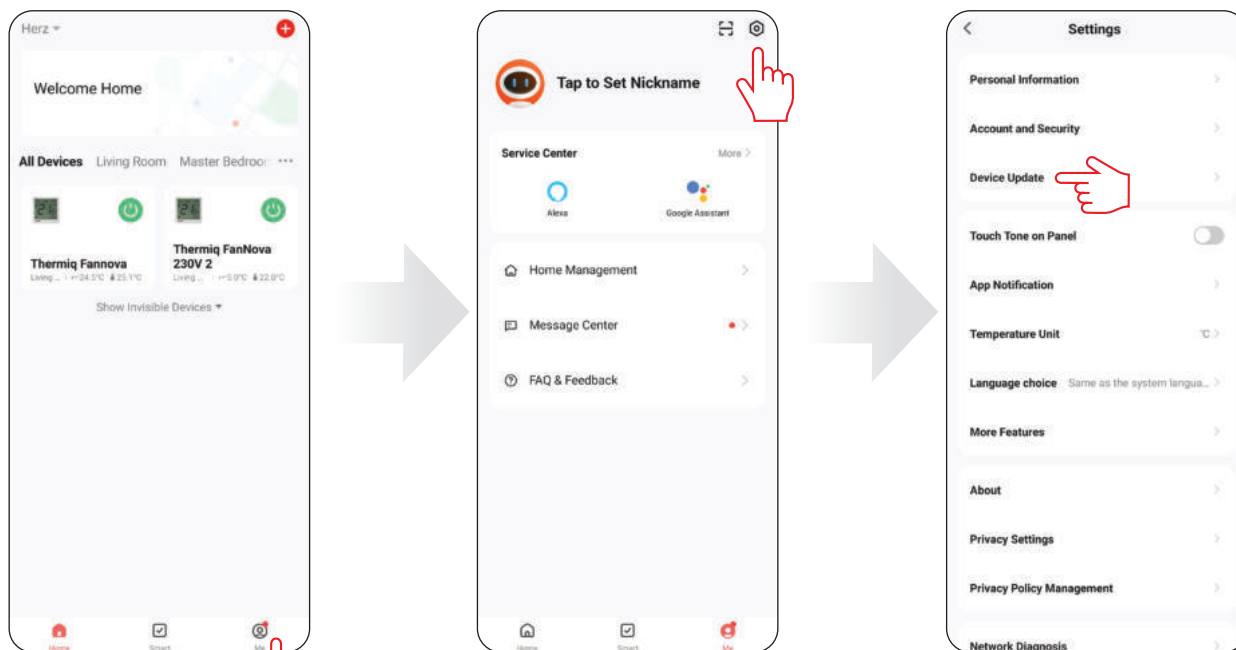
Select „Device Update”.



Leave this option unchecked if you want the thermostat software to update itself manually.

11.11.3. CHECKING WHETHER UPDATES ARE AVAILABLE FOR INSTALLED DEVICES

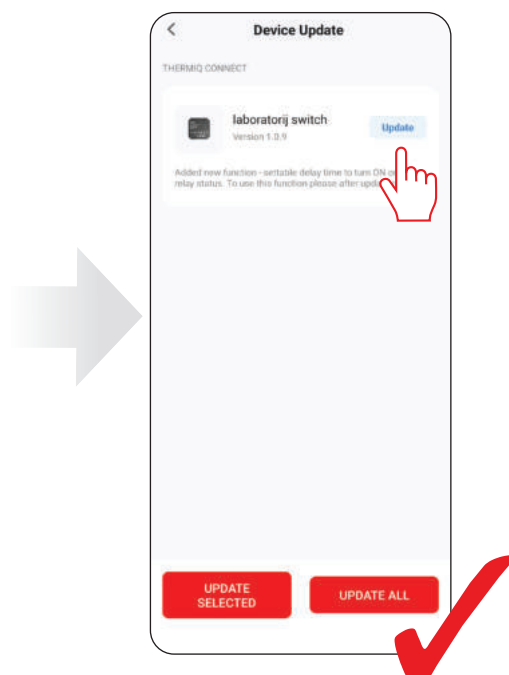
If you have selected a manual update trigger in the device update settings, you can check in one place whether there are updates available for the installed devices. To do this, follow the steps below.



Click „Me“.

Click the hexagon icon in the top right corner (system settings).

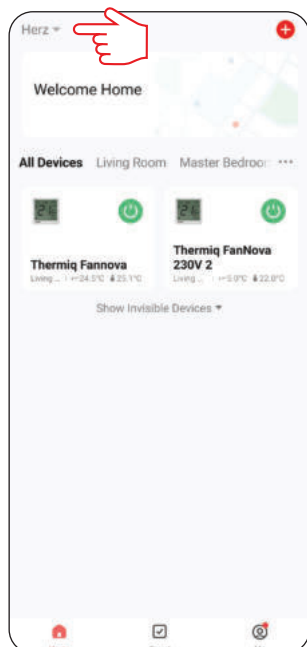
Select „Device Update“.



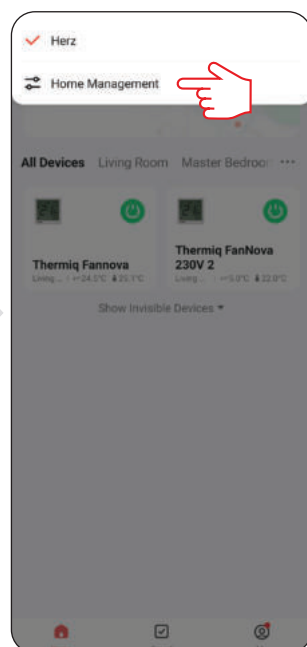
Available updates for installed devices will be visible. Clicking „Update“ will trigger an update for the selected device.

12. SHARING DEVICES

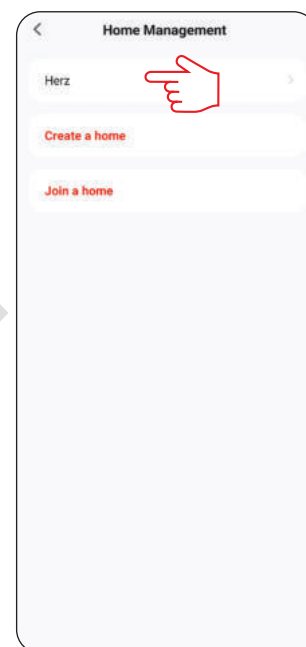
The HERZ Thermiq app offers the possibility of sharing the selected device with other users (assigned to the home). You can also assign a user the role of administrator/standard user. To do this, follow the steps below:



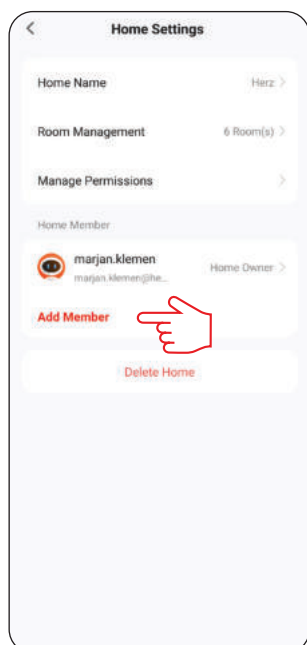
Click the home name.



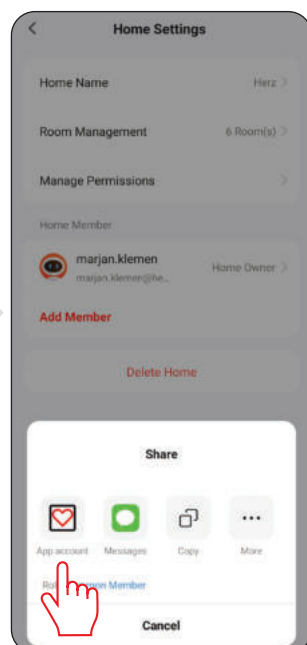
Enter „Home Managment”.



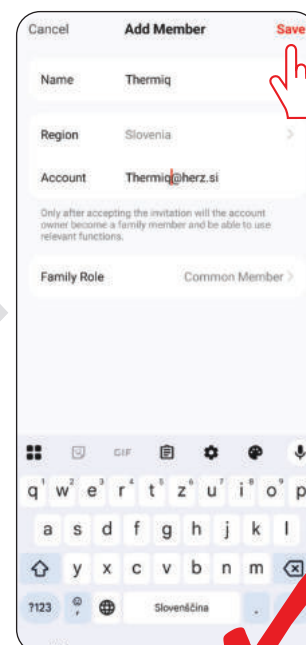
Select your home.



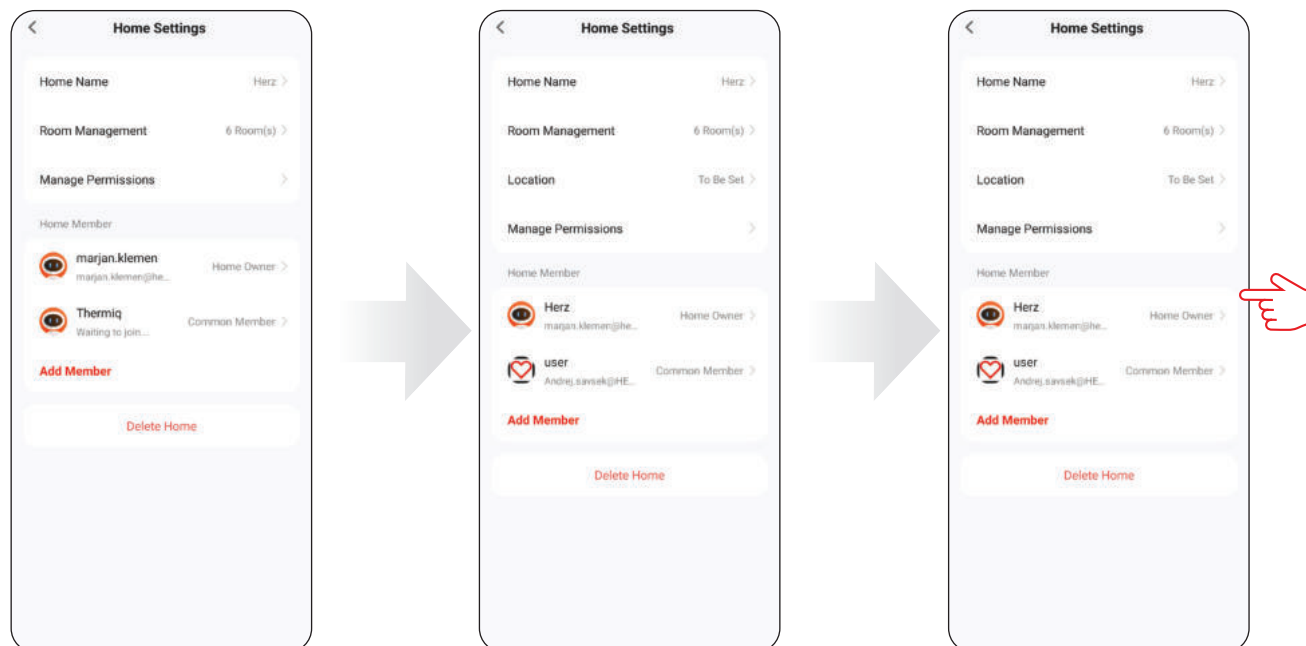
Add Member.



Choose an invitation method.



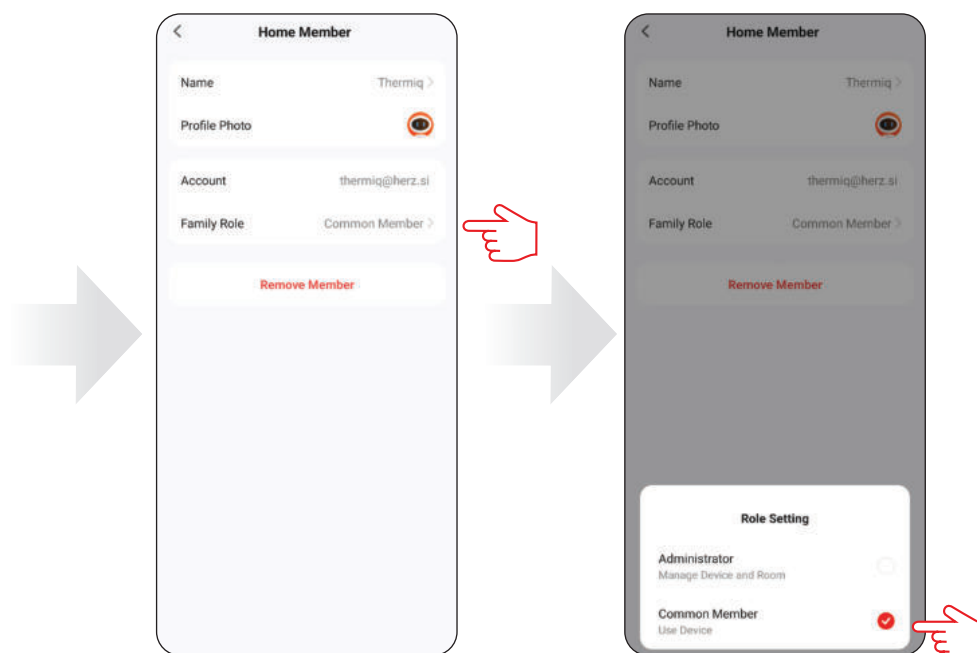
Enter the house member details and click „Save”.



The invited user must confirm their desire to join home.

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

To go to edit click on the username.

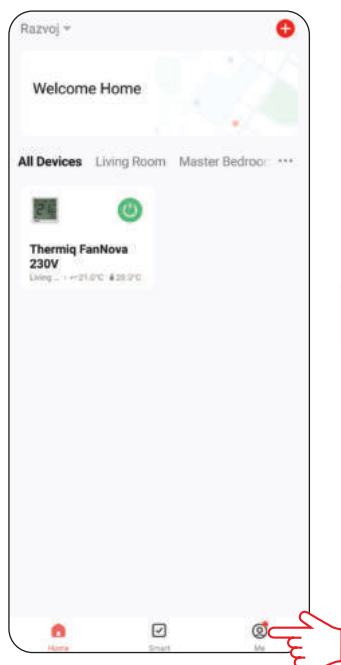


We can edit the name of the user and permissions by clicking „Family Role.”

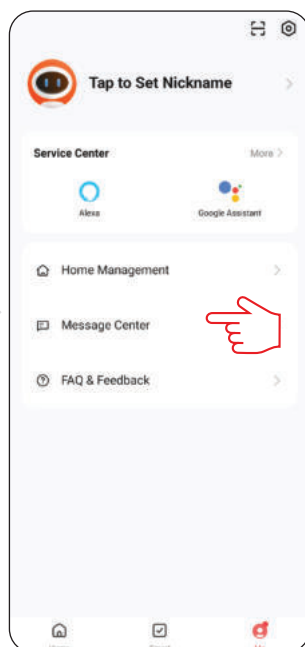
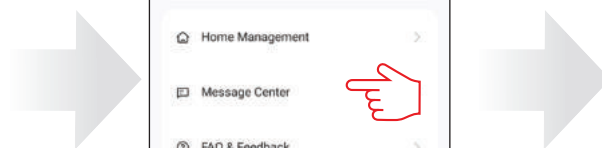
A member of the home can be given administrator permission or standard member.

13. NOTIFICATIONS IN THE APPLICATION

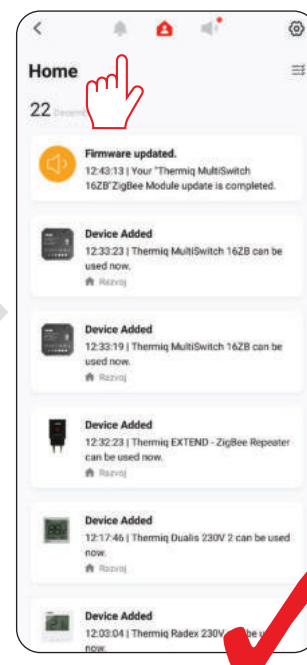
Follow the steps below to access notifications:



Enter „Me”.



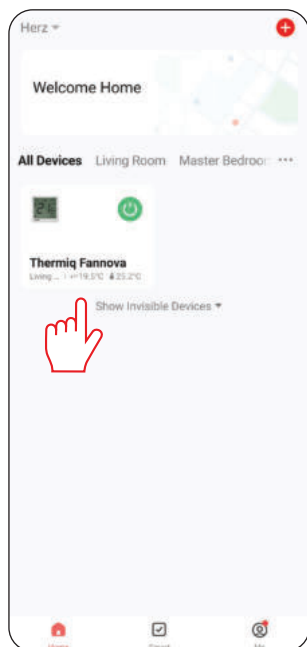
Select the message centre.



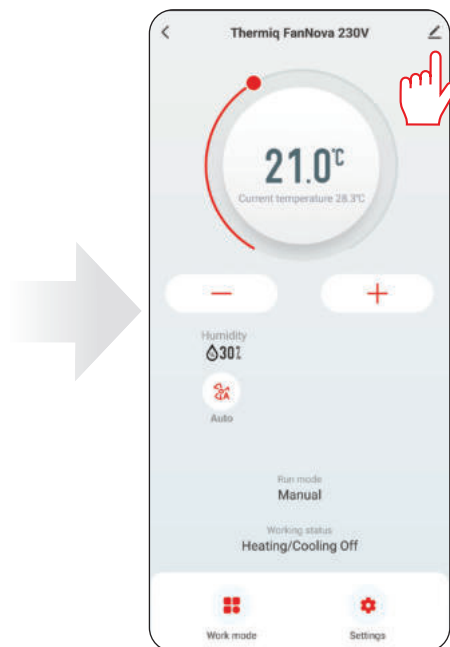
Jump sequentially between the tabs: Alarm, Devices and Notifications to find a message or notification regarding the thermostat.

14. REMOVING THE DEVICE FROM THE APPLICATION

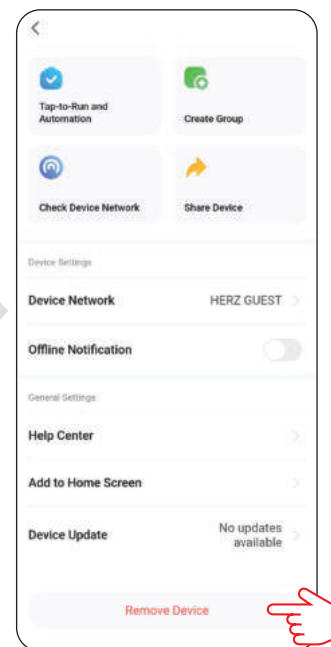
To remove the FanNova thermostat from your account, follow the steps below:



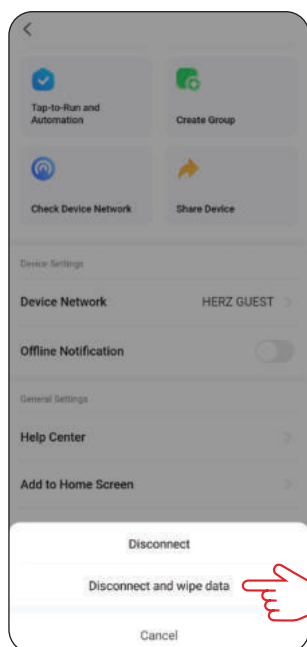
Enter the thermostat interface.



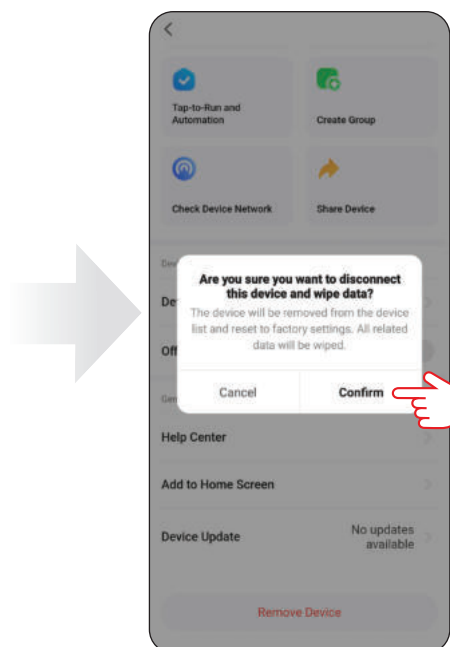
Click the pencil icon in the top right corner.



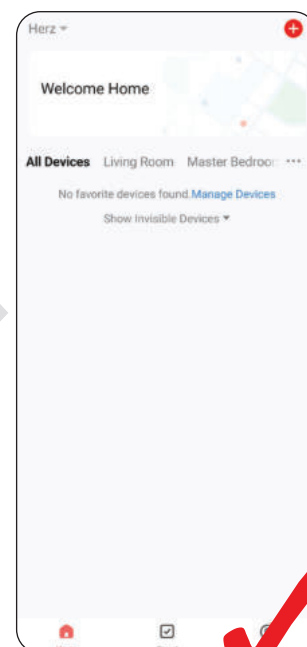
Select „Remove Device”.



Choose a way to delete device from the app.



Then confirm.



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



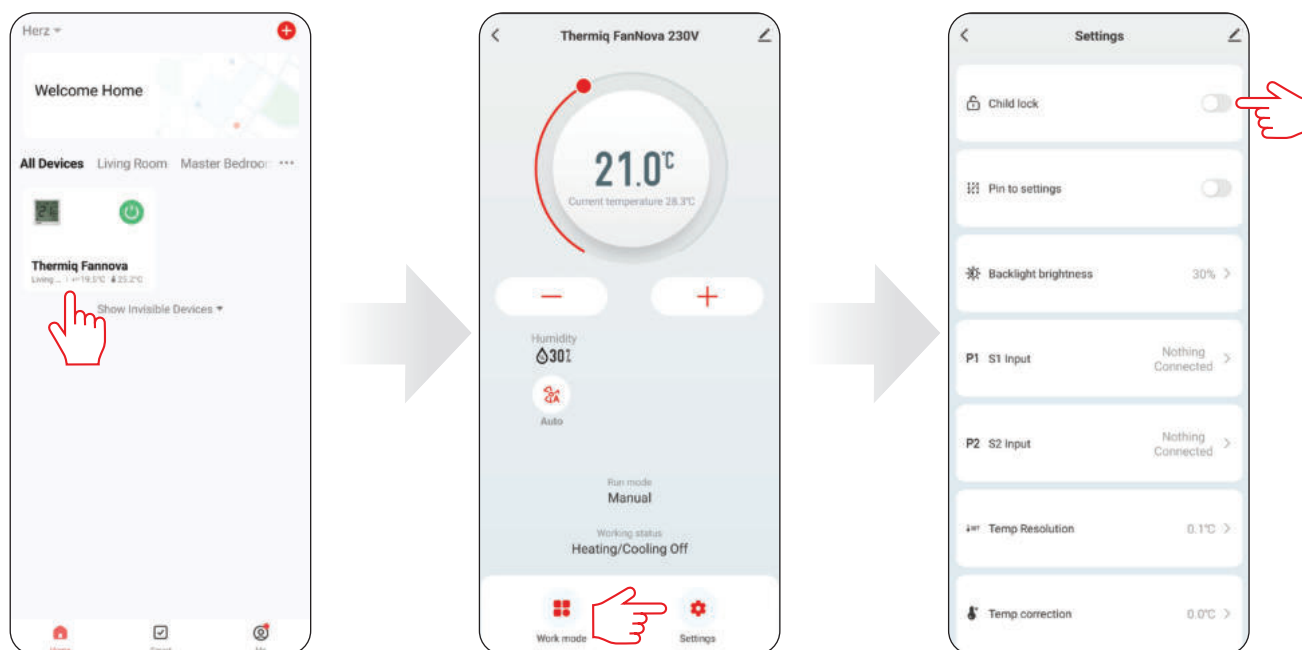
ATTENTION! Disconnect - The device will be removed from the app, all associated „Tap-To-Run” scenes and automated scenarios won't be available. The next time you connect to the app, the device will be added with the previous settings, but the „Tap-To-Run” rules will need to be created again.

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

15. SETTINGS (INSTALLER PARAMETERS)

15.1. KEY LOCK FUNCTION

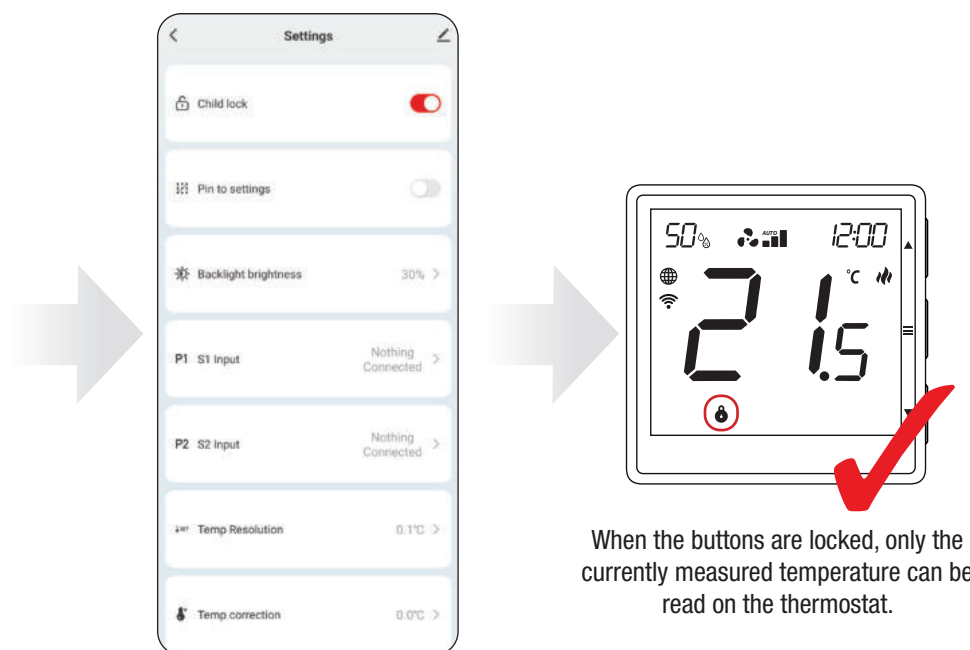
The app allows you to lock the buttons on the device. Just change the position of the slider on the screen. When the dot is green and on the right, then thermostat keys are locked. To unlock, press the slider again so that it is unlit and to the left. Then the buttons on the thermostat are unlocked.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



Enter the thermostat interface.

Select „Settings”.

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



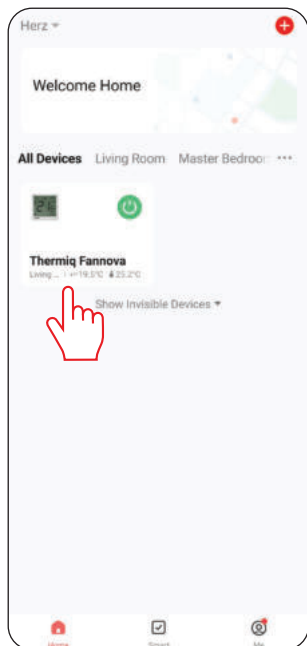
When the buttons are locked, only the currently measured temperature can be read on the thermostat.

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

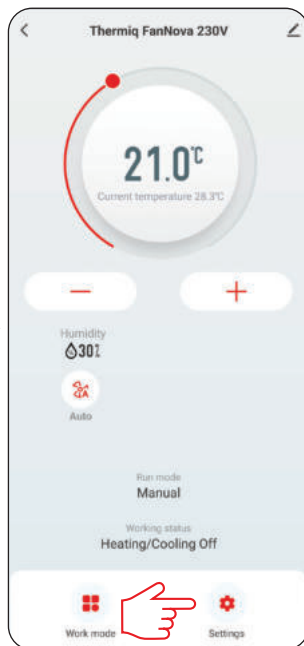
15.2. SETTING PIN

From the app, the user has the option of enabling or disabling the PIN lock for the installer settings and for unlocking thermostat buttons. **ATTENTION!** PIN code cannot be set within the mobile app. This has to be done within thermostat installer parameters.

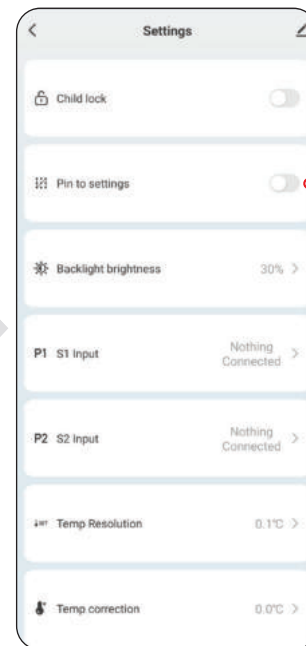
1. After activating the P16 parameter and setting a new PIN code, the user will have to enter the PIN code each time to enter the settings installer parameters.
2. An additional function is the key lock, also with a PIN code. To activate this function, you must first set the code in the installer settings PIN in parameter P23 and then activate parameter P24. After activating parameter P24 entering the PIN code is required each time when unlocking thermostat buttons.



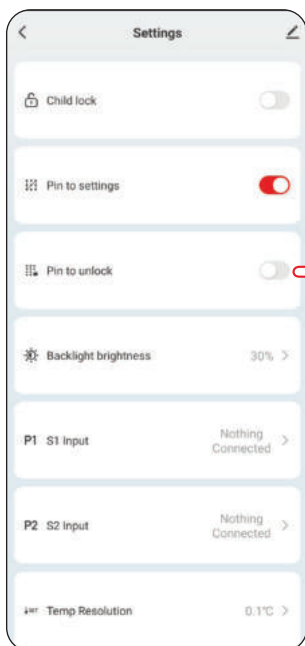
Enter the thermostat interface.



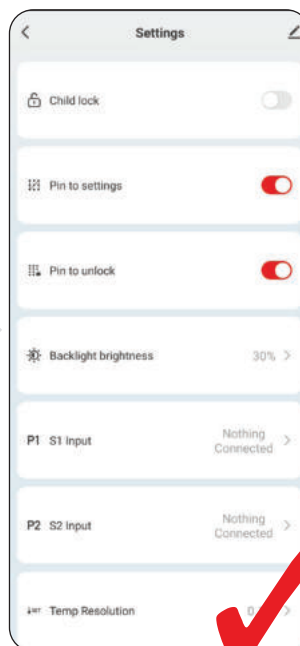
Select „Settings”.



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



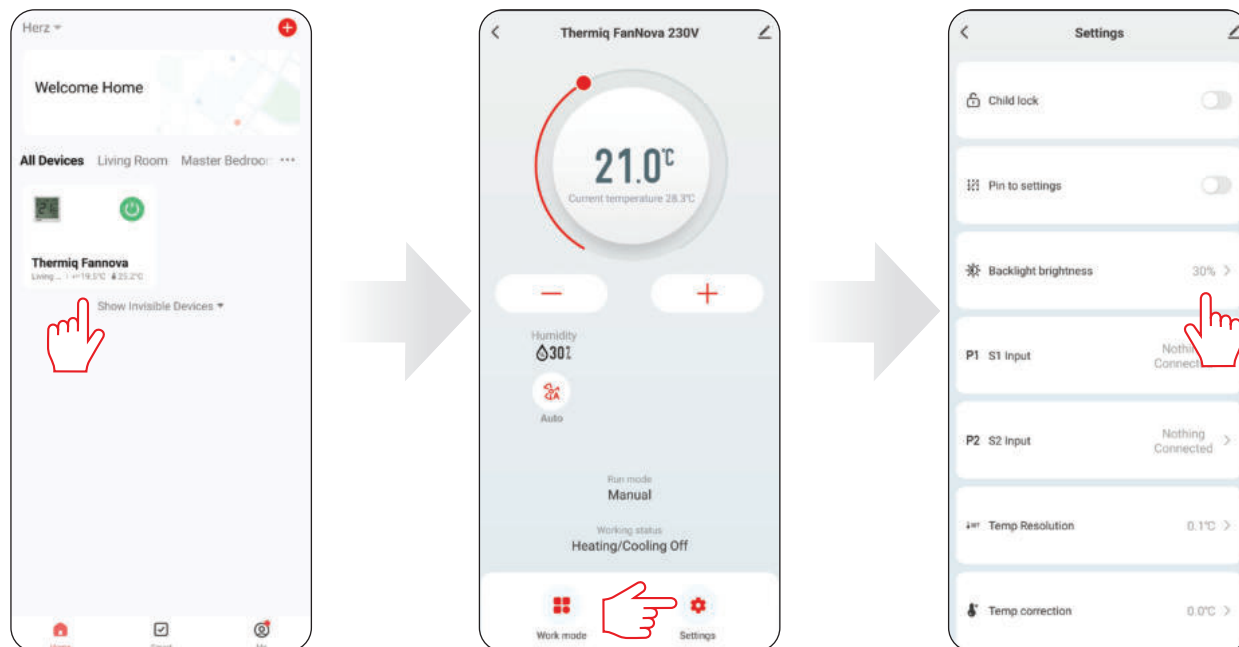
If the „Pin to settings” is enabled, a new parameter appears - „Pin to unlock” (thermostat keys).



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

15.3. BACKLIGHT BRIGHTNESS

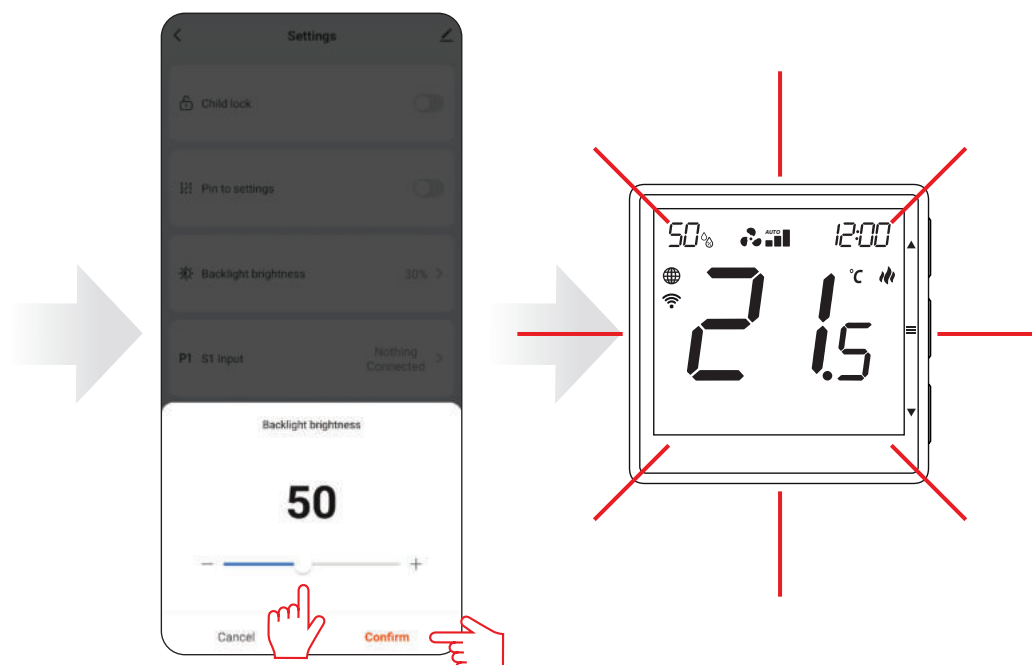
The user can change the brightness of the thermostat display. Move the slider to the appropriate direction as in the steps below:



Enter the thermostat interface.

Select „Settings”.

Select „Backlight brightness”.



Move the slider to set the brightness of the display. Then click „Confirm”.

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

15.4. MULTI-FUNCTIONAL INPUT S1-COM

S1-COM INPUT - FUNCTIONS AND APPLICATIONS

The S1-COM input on the FanNova thermostat is a configurable voltage-free digital input whose function depends on the selected operating mode of the device. It can be used both in systems with fan coil units and in underfloor heating.

Use in 2-pipe fan coil mode.

In this configuration, the S1-COM input can perform one of the following functions:

a) Operating mode switching (heating/cooling). The input can be controlled from an external source such as a BMS control panel, a manual switch or a switching valve contact. Operating logic:

- S1-COM open contact > heating mode
- S1-COM closed contact > cooling mode

b) Operation with medium temperature sensor (pipe sensor). Two modes of operation are possible:

- automatic switching between heating and cooling depending on pipe sensor temperature
- allowing fan operation only when pipe sensor temperature reaches a preset threshold (cold air protection function).

Use in underfloor heating thermostat mode.

When configured as a floor heating thermostat, a floor temperature sensor can be connected to the S1-COM input.

Functionality includes:

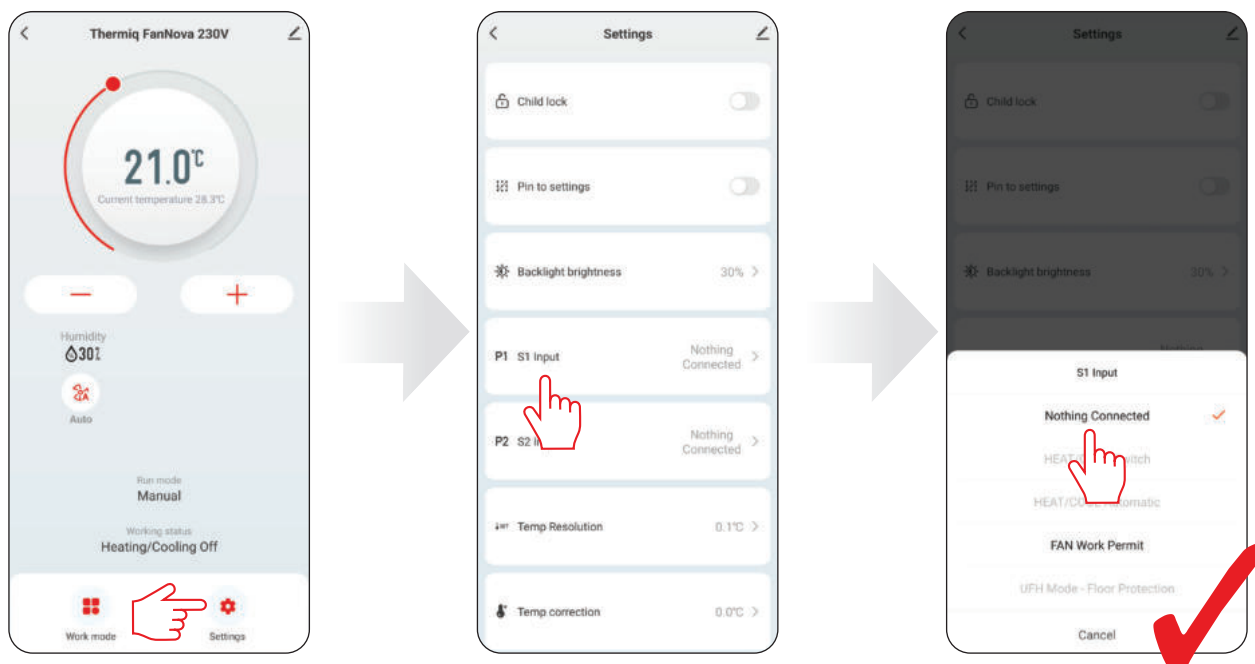
- control of the maximum and/or minimum floor temperature,
- protection of the floor surface from overheating (e.g. wood, panels).

Technical parameters of S1-COM input

- Type: Volt-free input
- Compatibility: NO contact or NTC sensor (e.g. EFS300)
- Reaction: when S1/COM input status is changed (NO volt-free operation) or exceeds a setpoint temperature threshold (NTC sensor operation)
- Configuration: available from the installer menu

15.4.1 HEATING/COOLING - MANUAL MODE CHANGE FROM DEVICE OR APP LEVEL

If nothing is connected to the S1-COM input in the thermostat settings, configure the S1 input as inactive. To configure the S1-COM input. Follow the steps below:



Enter the thermostat interface.

Click on the „S1 Input” parameter.

Select „Nothing connected”.

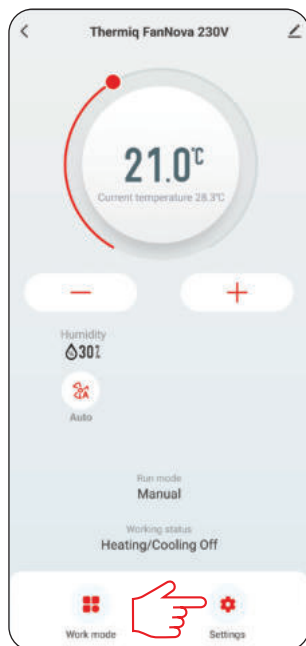
From this point switching between heating/cooling modes will be possible manually from the device (hold DOWN+MENU buttons for few seconds) or app level (last position of the installer parameters).

15.4.2. HEATING/COOLING - MODE CHANGE VIA EXTERNAL CONTACT

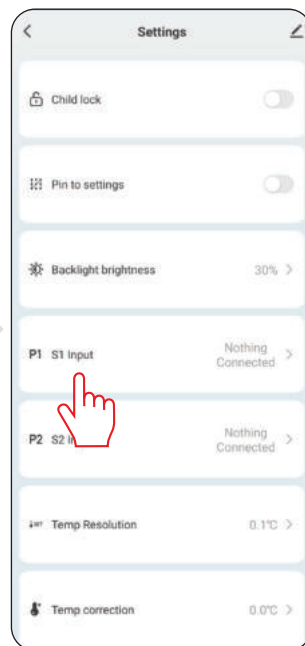
S1-COM input used to change heating/cooling via a connected external contact.

- S1-COM open --> HEAT mode
- S1-COM closed --> COOL mode

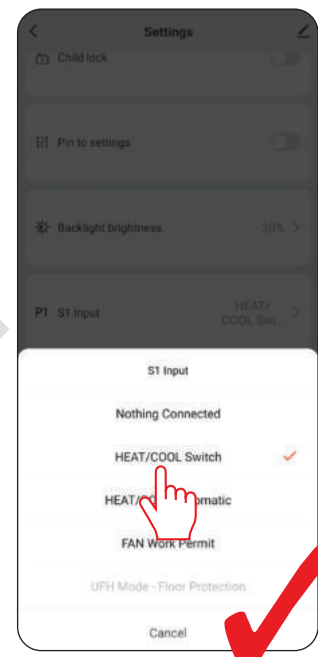
To configure the S1-COM input follow the steps below:



Select the „Settings” option.



Click on the „S1 Input” parameter.

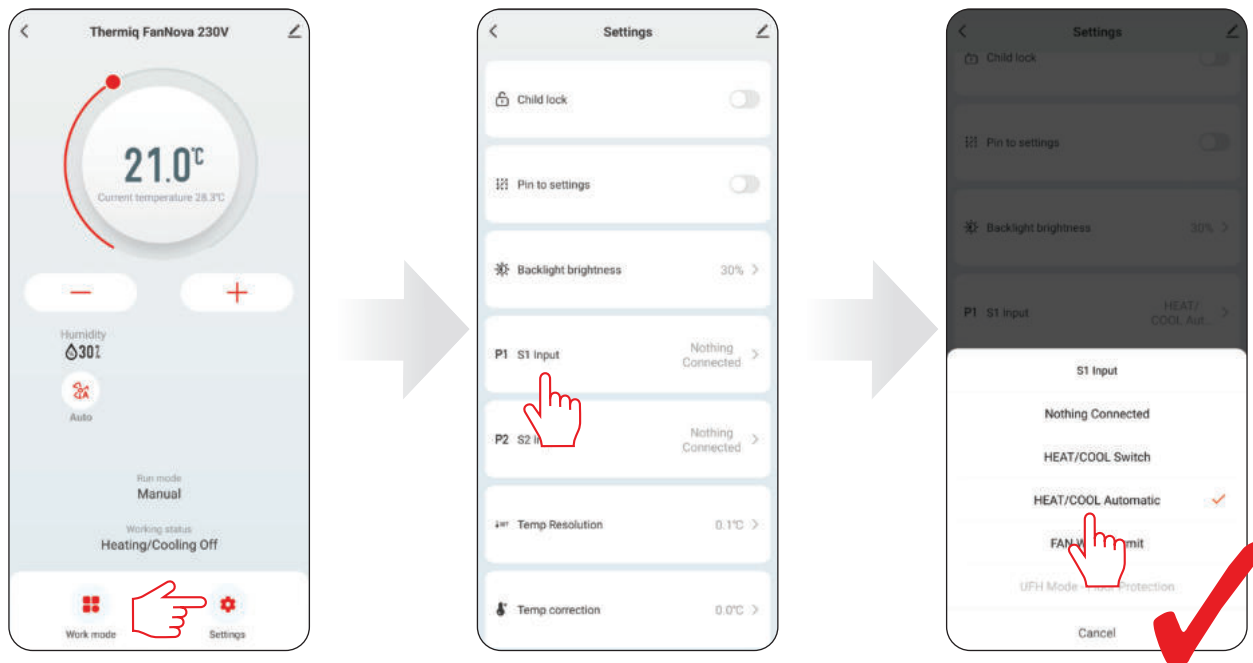


Select „HEAT/COOL switch”.

15.4.3. HEATING/COOLING - AUTOMATIC CHANGEOVER

Automatic switching of operating mode - heating/cooling

The FanNova thermostat allows automatic switching between heating and cooling modes, depending on the system configuration and information about temperature of the heating/cooling source. The switching method depends on the type of installation: 2-pipe or 4-pipe.



Select the „Settings” option.

Click on the „S1 Input” parameter.

Select „HEAT/COOL Automatic”.

15.4.3.1. 4-PIPE SYSTEM - AIR TEMPERATURE SENSOR

In a configuration with a 4-pipe fan coil unit, the FanNova thermostat uses the room air temperature to determine the active operating mode. In this arrangement, the unit independently selects the appropriate function.

Operating principle:

The thermostat compares the current room temperature with the setpoint temperature:

- When the room temperature falls below the setpoint by a certain amount of hysteresis -> heating is activated.
- When the temperature exceeds the setpoint by the specified hysteresis -> cooling is activated.
- In the interval between the thresholds (so-called Dead Zone), the thermostat remains deactivated - which promotes energy saving and stabilises thermal comfort.

See the chart “Delta FAN - heating and cooling mode with Dead Zone”. - p.89.

15.4.3.2 AUTOMATIC HEATING/COOLING MODE SWITCHING IN A 2-PIPE SYSTEM WITH PIPE SENSOR

In a 2-pipe system, the FanNova controller allows automatic switching between heating and cooling modes based on the supply pipe temperature. A pipe sensor must be connected to the S1-COM input. If the pipe temperature rises above the value set in P17, the controller switches to heating mode. If the temperature falls below the value set in P18, the controller switches to cooling mode. This function enables automatic, season-independent system operation without the need for manual mode switching.

Fan and Valve V1 Operating Cycle (2-Pipe System with Pipe Sensor)

The sequence below describes the six-step operation cycle of the FanNova controller in heating/cooling mode:

Stage I

V1 valve open, controller in cooling mode, pipe temperature rises to $P17 + 2^{\circ}\text{C}$ > fan turns off

Stage II

V1 remains open, pipe temperature reaches $P18$ > controller switches to heating mode

Stage III

Heating mode, V1 open, pipe temperature drops to $P18 - 2^{\circ}\text{C}$ > fan turns off

Stage IV

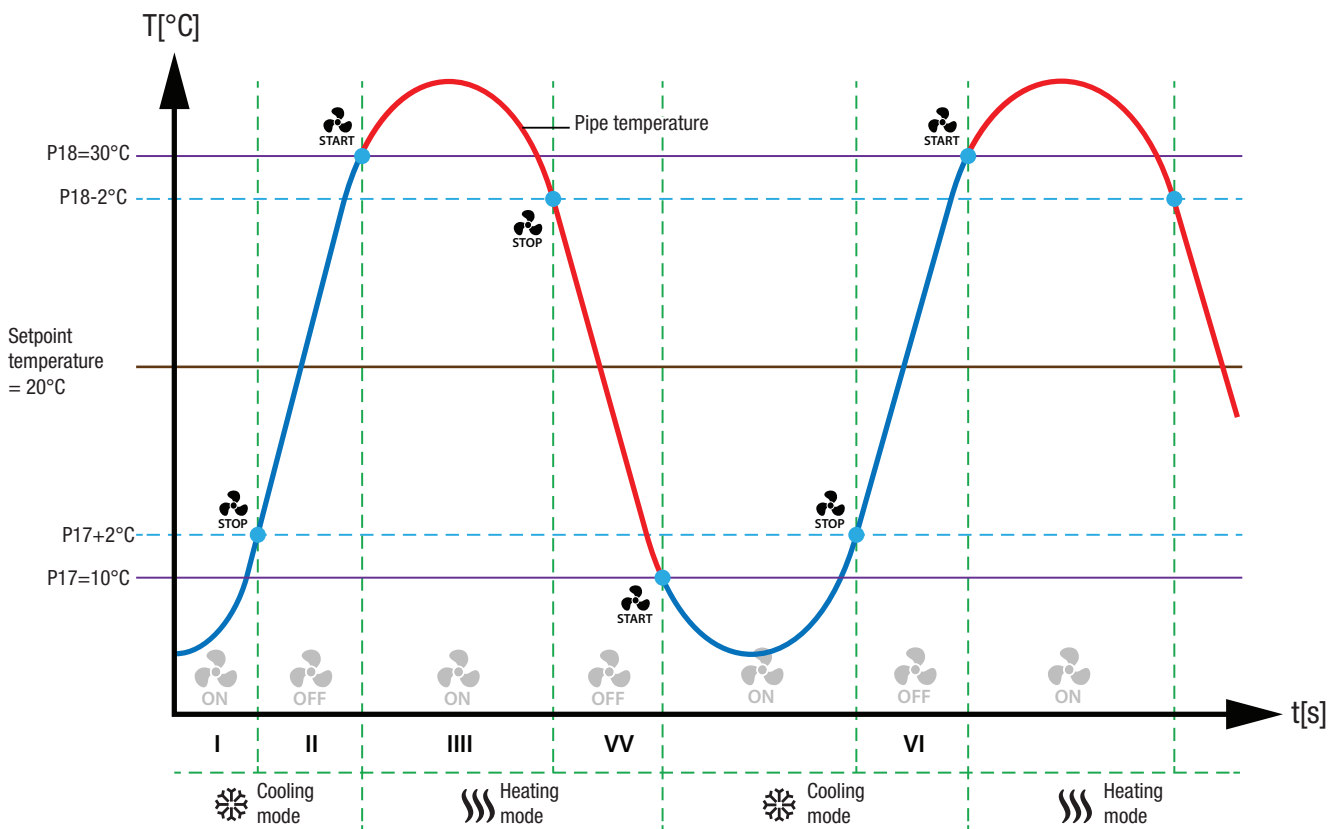
Temperature continues to drop to $P17 >$ controller switches to cooling mode

Stage V

Cooling mode resumes, V1 open, pipe temperature rises to $P17 + 2^{\circ}\text{C}$ > fan turns off (same as Stage I)

Stage VI

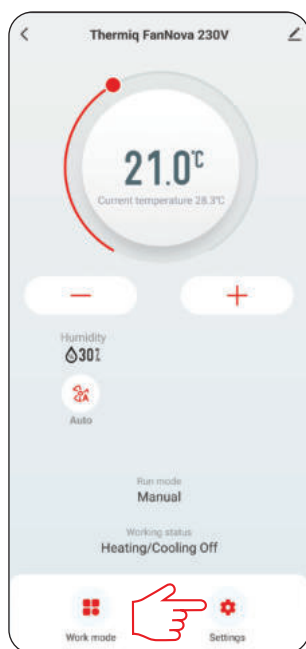
Pipe temperature reaches $P18$ > controller switches back to heating mode (same as Stage II)



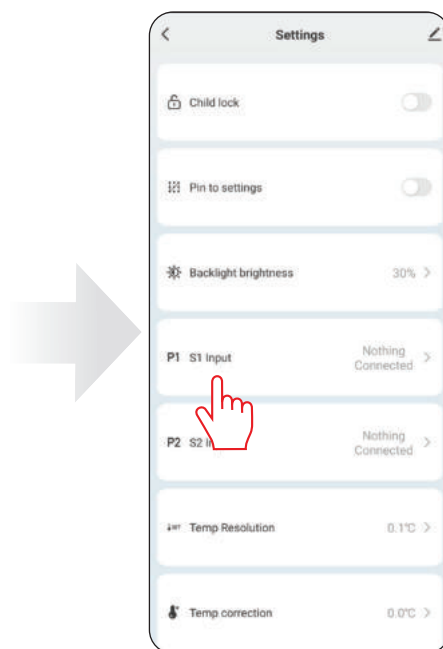
15.4.4. FAN OPERATION PERMISSION IN A 2-PIPE SYSTEM

Pipe sensor can be used to determine fan operation permission. E.g. if the pipe temperature is too low and the thermostat is in heating mode - the pipe sensor will not allow the fan to start. In this case heating/cooling modes changeover is done manually - using device buttons or app. The values for fan control based on the pipe temperature are set in parameters P17 and P18.

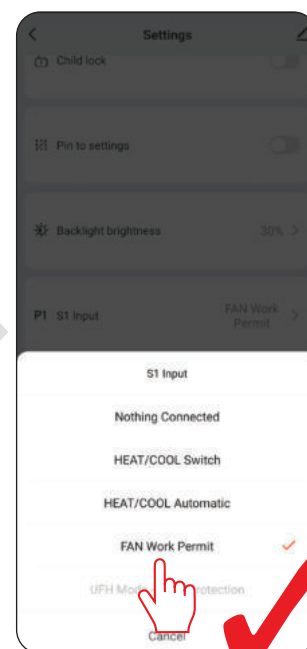
To configure the S1-COM input follow the steps below:



Select the „Settings” option.



Click on the „S1 Input” parameter.

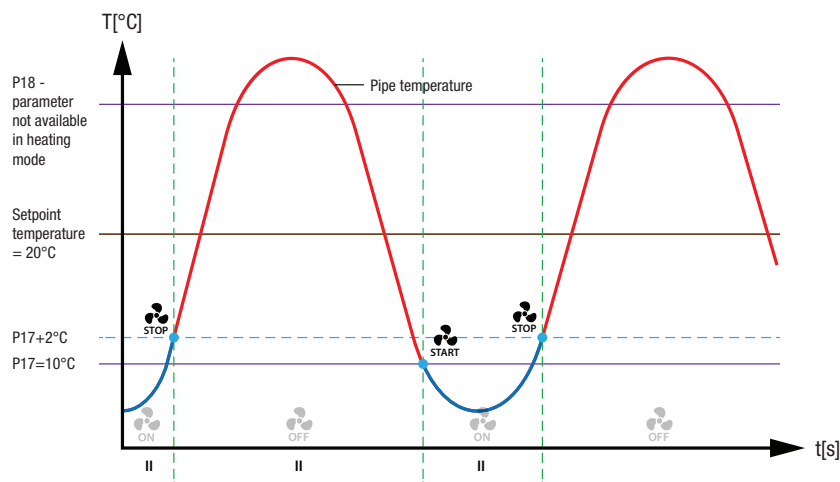


Select „FAN Work Permit”.

15.4.4.1. FAN OPERATION IN COOLING MODE (2-PIPE SYSTEM WITH PIPE SENSOR)

In cooling mode, the FanNova controller can operate in conjunction with a pipe temperature sensor, allowing precise control of the fan based on the actual availability of the cooling medium. This ensures that the fan runs only when effective cooling is possible, helping to reduce unnecessary noise and energy consumption.

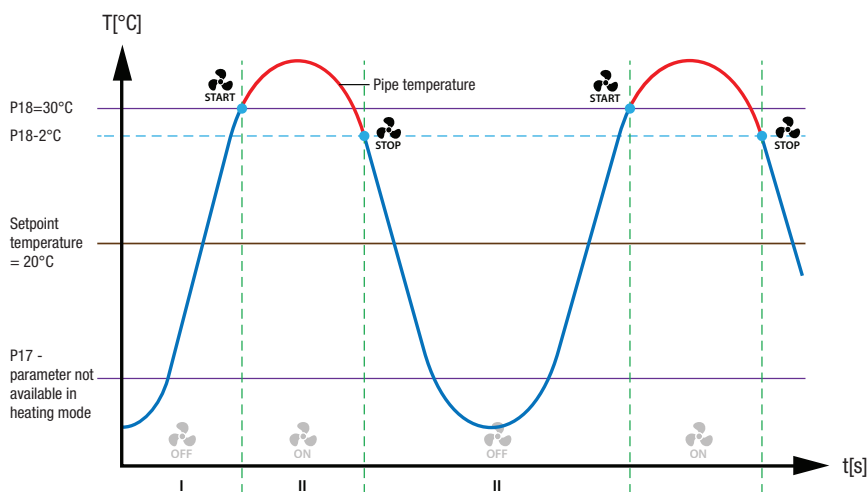
1. When the controller operates in cooling mode and the room requires a temperature decrease, the V1 valve opens (allowing the flow of the cooling medium).
2. The fan starts only when the pipe temperature drops below the value set in parameter P17.
3. If the pipe temperature rises by 2°C above P17, the fan turns off, but the V1 valve remains open.
4. The controller monitors the pipe temperature and restarts the fan only when the temperature drops again below P17.
5. This function prevents fan coil units (water-based coolers) from being activated when the cooling system is unavailable (e.g. during winter when the chiller is off).



15.4.4.2. FAN OPERATION IN HEATING MODE (2-PIPE SYSTEM WITH PIPE SENSOR)

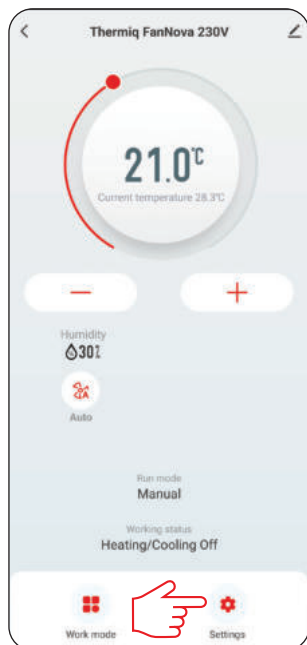
In heating mode, the FanNova controller can be used with a pipe temperature sensor to ensure the fan only operates when hot water is available in the system. This prevents unnecessary fan operation when the heating source is inactive, reducing energy usage and protecting system components.

1. When the controller operates in heating mode and the room requires a temperature increase, the V1 valve opens (allowing the flow of the heating medium).
2. The fan starts only when the pipe temperature exceeds the value set in parameter P18.
3. If the pipe temperature drops by 2°C below P18, the fan turns off, but the V1 valve remains open.
4. The controller monitors the pipe temperature and restarts the fan only when it rises again above the value set in P18.
5. This control strategy prevents fan convectors (water-based heaters) from operating during summer or when the heat source (e.g. boiler) is turned off.

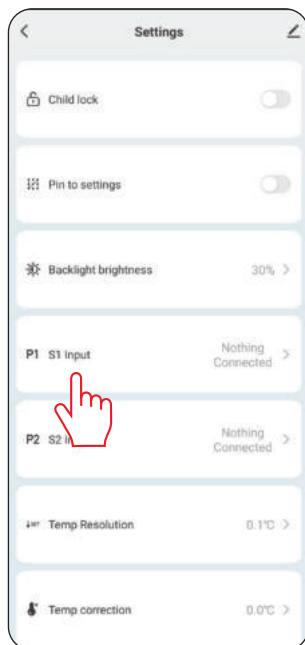


15.4.5. OPERATION WITH FLOOR SENSOR

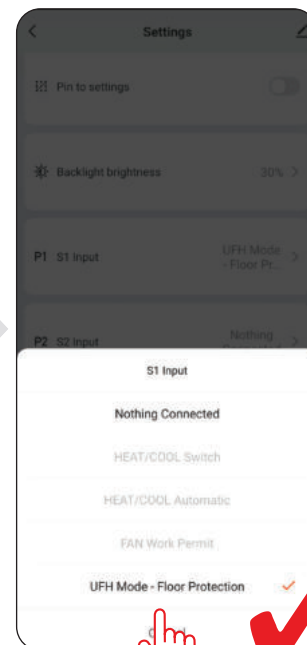
Activation of the floor sensor in the underfloor heating configuration. To configure the S1-COM input follow the steps below:



Select the „Settings” option.



Click on the „S1 Input” parameter.



Select „UFH Mode - Floor Protection”.

15.5. MULTI-FUNCTIONAL INPUT S2-COM

S2-COM INPUT - FUNCTIONS AND APPLICATIONS.

The S2-COM input of the FanNova thermostat is a configurable voltage-free input that can be used for various applications depending on the settings made in the installer menu. By default, the S2-COM input is inactive, but can be used as one of two functions:

1. Activation of ECO mode (by volt-free NO contact).

A volt-free (NO) contact can be connected to the S2-COM input, e.g. from:

- a hotel card,
- presence sensor,
- service switch.

Operating principle:

- Closed contact > thermostat enters economy mode, lowering or increasing the set temperature according to the configuration,
- Open contact > return to comfort mode.

This function allows efficient energy management, e.g. in hotel rooms or offices.

2. External air temperature sensor (NTC sensor connected to S2-COM).

Alternatively, an NTC temperature sensor (e.g. Heat Guard) can be connected to the S2-COM input to move the temperature measurement point away from the controller. This is useful in situations where:

- the thermostat placement is inappropriate in terms of room temperature measurements (e.g. close to a window, radiator or fireplace),
- FanNova device must be installed in different room (e.g. in boiler room) and room temperature control is required in other room.

When this function is activated, the thermostat uses external sensor to determine room temperature.

Technical specifications of S2-COM input:

Type: volt-free configurable input

Operating modes:

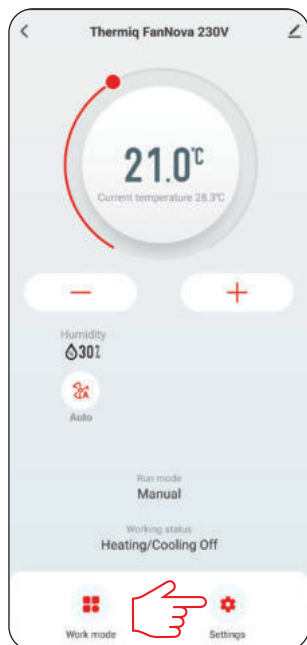
- NO normally opencontact (e.g. hotel card),
- NTC sensor (air temperature measurement)

Configuration: depends on the settings made in installer menu

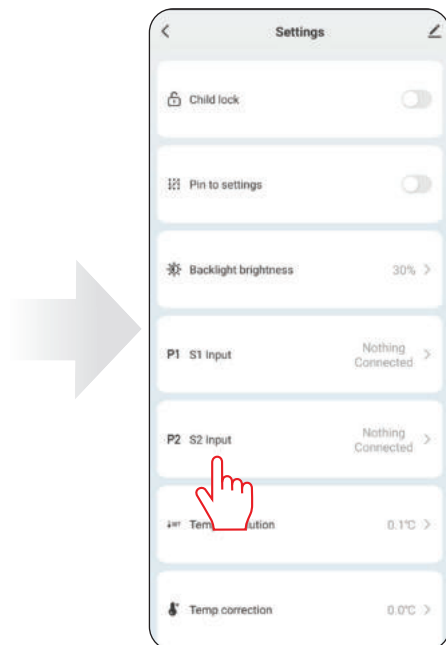
Default: by default S2-COM is disabled

15.5.1. S2-COM AS A ECO MODE SWITCHING

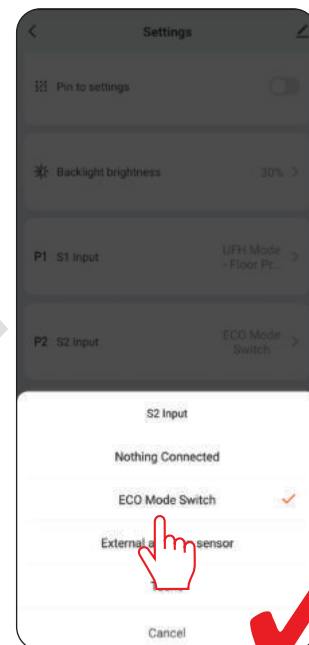
ECO mode switch - occupancy sensor (switch to ECO mode when contacts open). To configure the S2-COM input follow the steps below:



Select the „Settings” option.



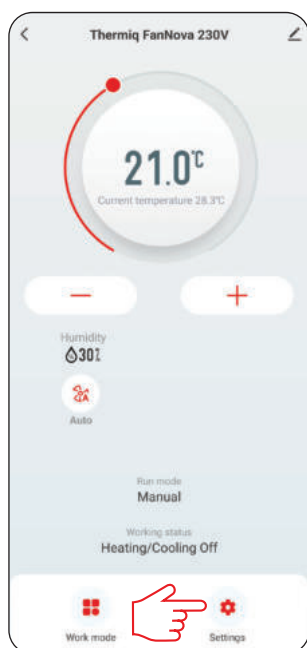
Click on the „S2 Input” parameter.



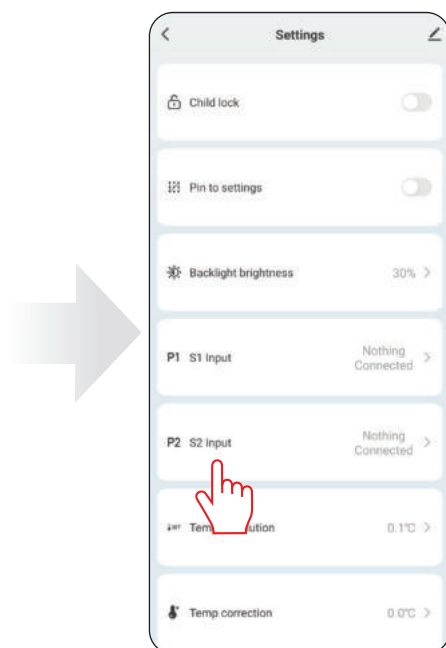
Select „ECO Mode Switch”.

15.5.2. S2-COM AS AN EXTERNAL AIR TEMPERATURE SENSOR

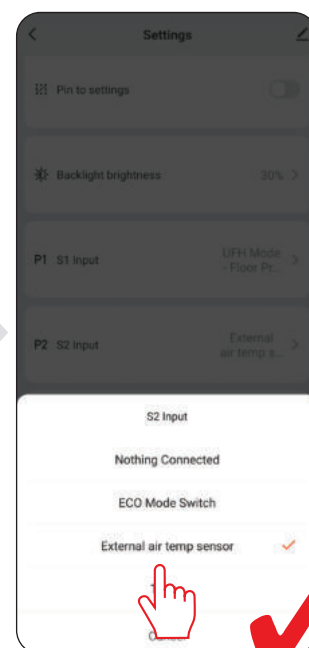
External air temperature sensor. To configure the S2-COM input follow the steps below:



Select the „Settings” option.



Click on the „S2 Input” parameter.

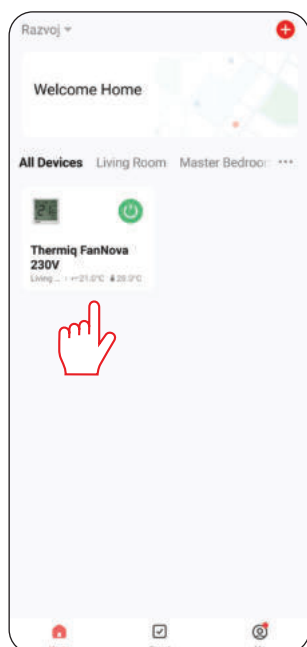


Select „External air temp sensor”.

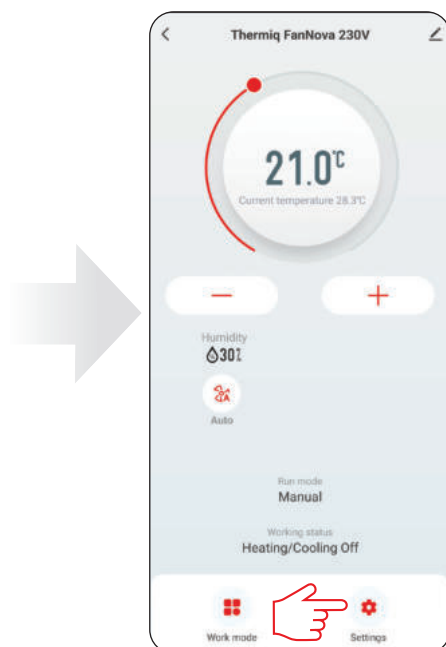
15.6. ACCURACY OF TEMPERATURE INDICATION

This function allows to change the accuracy of displayed room temperature - accuracy can be in 0.1 or 0.5 degrees.

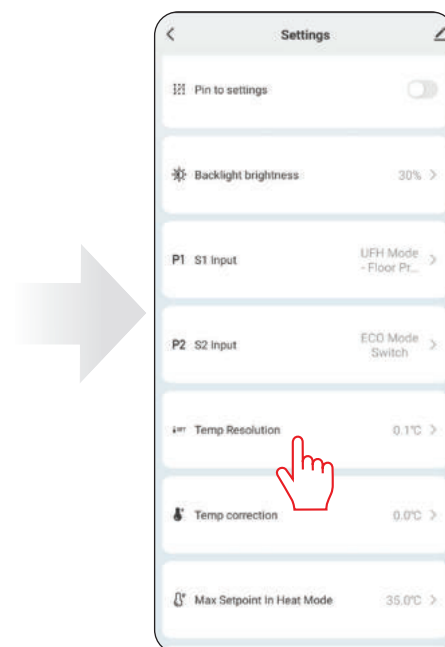
Take a look at the steps below:



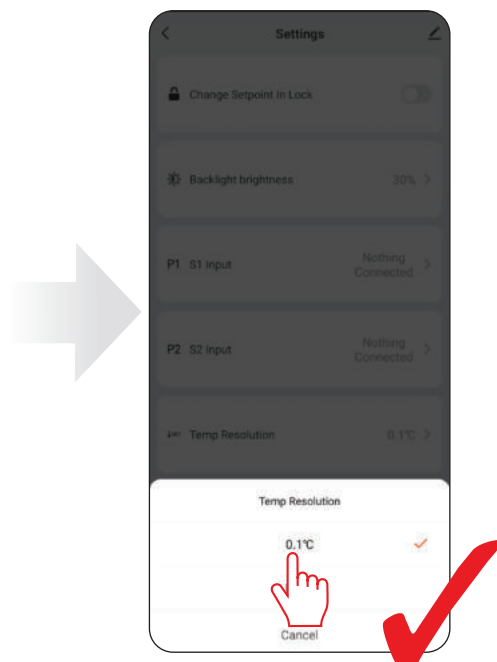
Enter the thermostat interface.



Select the „Settings” option.



Click on the parameter „Temp Resolution”.

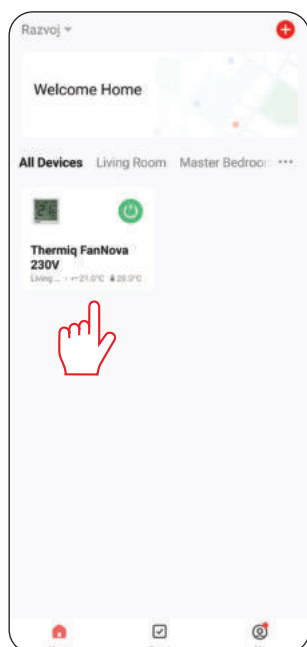


Select an accuracy of 0.1 or 0.5 degrees.

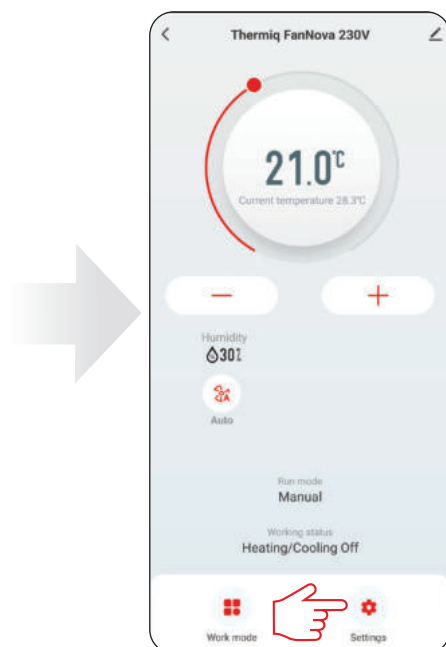
15.7. TEMPERATURE CORRECTION

This function allows you to correct the displayed room temperature by $\pm 3.0^{\circ}\text{C}$ in steps of 0.5°C .

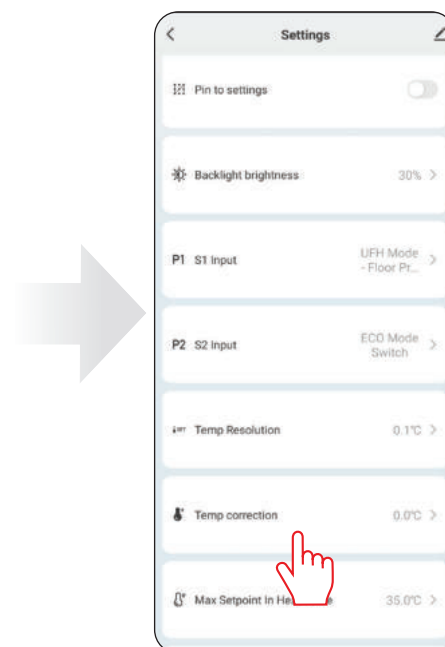
Look at the steps below:



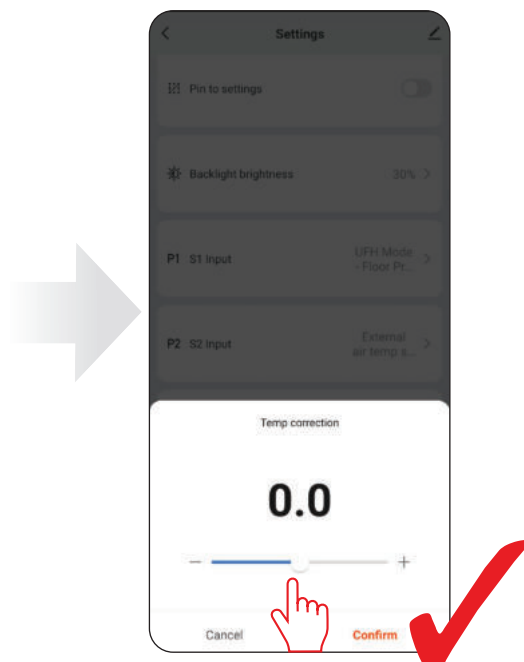
Enter the thermostat interface.



Select the „Settings” option.



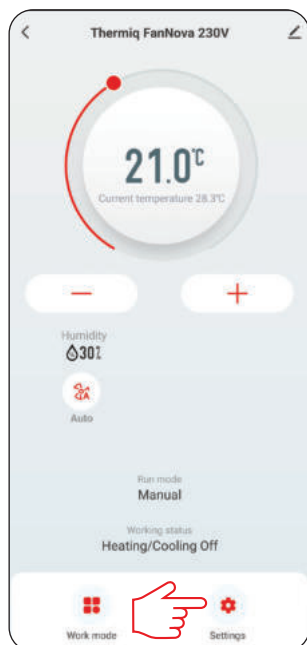
Click on the parameter „Temp Correction”.



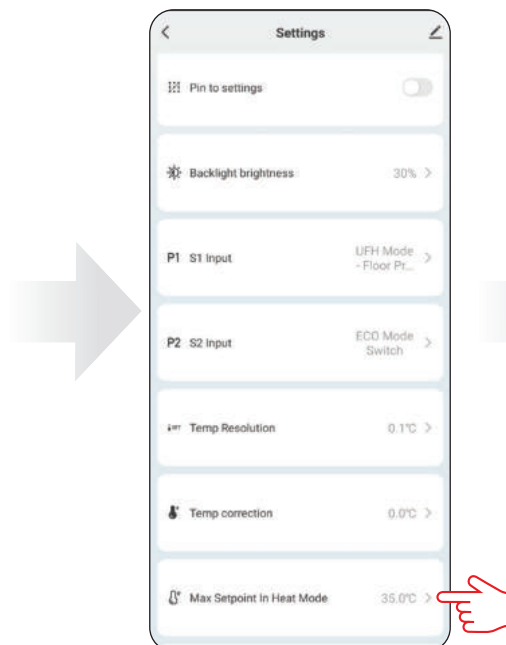
Move the slider to select the correction value. Then click „Confirm”.

15.8. MAXIMUM SETPOINT TEMPERATURE LIMIT

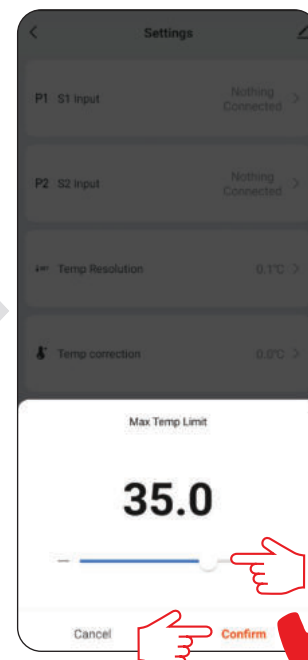
This parameter allows to determine maximum setpoint temperature. User will not be able to set higher setpoint than this value.



Select the „Settings” option.



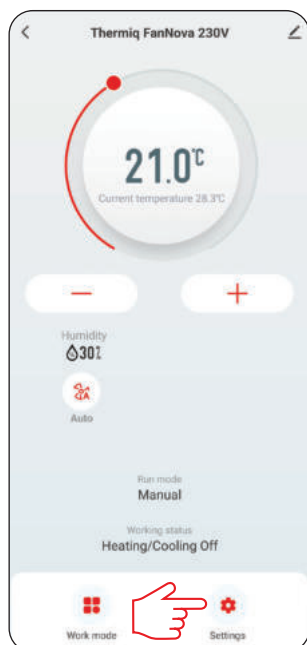
Select „Max Setpoint In Heat Mode”.



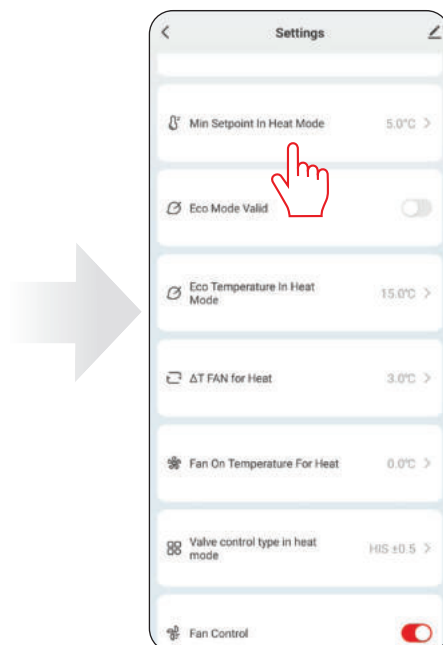
Move the slider to change the value for the maximum setpoint temperature (from 5°C to 45°C). Then click „Confirm”.

15.9. MINIMUM SETPOINT TEMPERATURE LIMIT

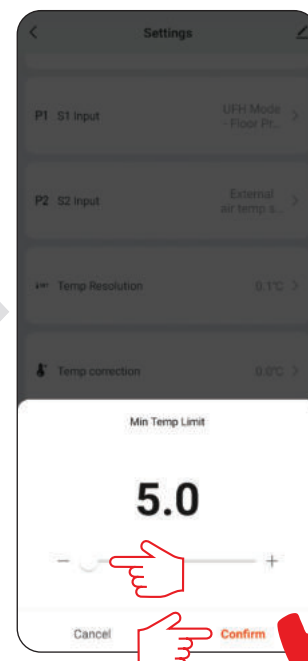
This parameter allows to determine minimum setpoint temperature. User will not be able to set lower setpoint than this value.



Select the „Settings” option.



Select „Min Setpoint In Heat Mode”.



Move the slider to change the value for the minimum setpoint temperature (from 5°C to 45°C). Then click „Confirm”.

15.10. ALGORITHMS FOR HEATING AND COOLING VALVE CONTROL

The FanNova thermostat operates in ON/OFF control mode, offering two types of control:

- regulation using hysteresis,
- or the more advanced TPI (Time Proportional and Integral) algorithm, dedicated mainly to underfloor heating systems

Hysteresis (ON/OFF control).

In the FanNova thermostat, the standard control mode is ON/OFF control using hysteresis. The hysteresis is the temperature difference between heating off and heating on states. For example, if the setpoint temperature is 20 °C and the hysteresis is set to ± 0.5 °C, the heating will be switched on at 19.5 °C and off at 20.5 °C. The hysteresis value can be configured between ± 0.1 °C and ± 2.0 °C - the lower the value, the faster the thermostat will react to a temperature change, but also the more frequently the heat source will be switched on and off.

In systems with high thermal inertia, such as underfloor heating, the use of hysteresis can lead to overheating or underheating of rooms. This is due to the delayed response of the system: when the heating is switched on, the temperature may continue to fall before the floor has warmed up, whereas when it is switched off, it may continue to rise as the heated floor gives off heat over a period of time. In such cases, it may be more efficient to use the TPI algorithm.

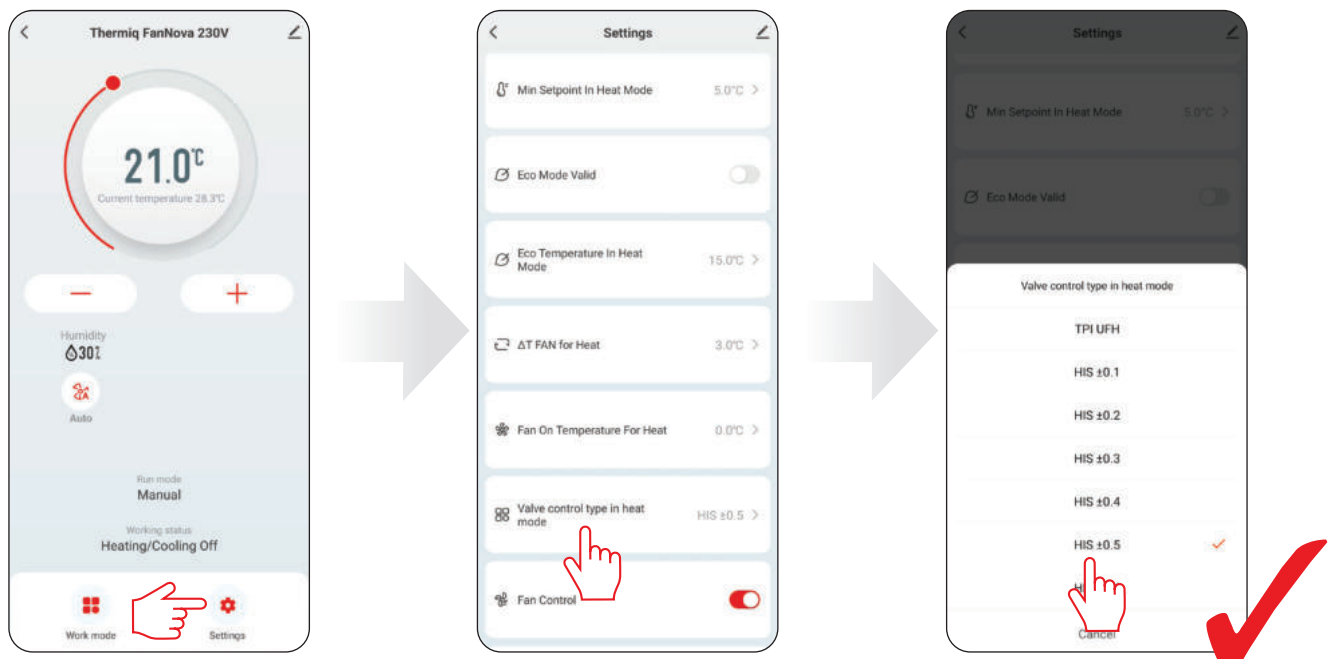
TPI ALGORITHM (for underfloor heating).

The TPI (Time Proportional and Integral) algorithm is an alternative mode of operation for the FanNova thermostat, designed primarily for the control of underfloor heating systems. Unlike classic hysteresis, TPI does not operate on the principle of simply switching the heating on and off, but controls it in an impulse manner - by means of short activations of several minutes in regular time cycles (e.g. every 15 minutes).

On the basis of the difference between the set temperature and the current temperature and the rate of change, the thermostat selects the appropriate length and frequency of the heating pulses. Even after reaching the setpoint temperature, the TPI continues to activate short reheat pulses to keep the temperature constant. The closer to the setpoint, the shorter and less frequent the activations.

The algorithm has basic adaptive logic - it 'learns' how the system reacts and predicts how long the reheat should be active. In this way, the TPI enables precise temperature control, reduces fluctuations, minimises energy consumption and provides higher thermal comfort in the room. This mode is particularly recommended for installations with high thermal inertia, where traditional hysteresis proves insufficient.

How to set the valve control algorithm in the HERZ Thermiq application for the FanNova thermostat:



Select the „Settings” option.

Click on „Valve control type in heat mode”.

Select the algorithm with which you want to regulate the room temperature. Then click „Confirm”.

15.11. FAN CONTROL, DELTA FAN ALGORITHM

The FanNova thermostat allows automatic adjustment of the fan speed based on the difference between the set temperature and the current room temperature. Two independent parameters are responsible for the operation of this function:

- Delta FAN Heating - used in heating mode,
- Delta FAN Cooling - used in cooling mode.

Each parameter defines the temperature range (ΔT) in which the thermostat gradually increases the intensity of fan operation - from low to maximum.

Operating principle:

In automatic mode, the fan changes its speed depending on how much the room temperature deviates from the setpoint. The greater the deviation, the more intensive the fan operation.

The parameter Delta FAN determines how large this temperature difference range must be for the fan to reach full speed:

- a lower value of Delta FAN results in a faster response of the system - the fan increases the intensity even at small temperature deviations.
- a higher value of Delta FAN results in a slower response - the fan will increase gradually and with a delay, only at larger temperature differences.

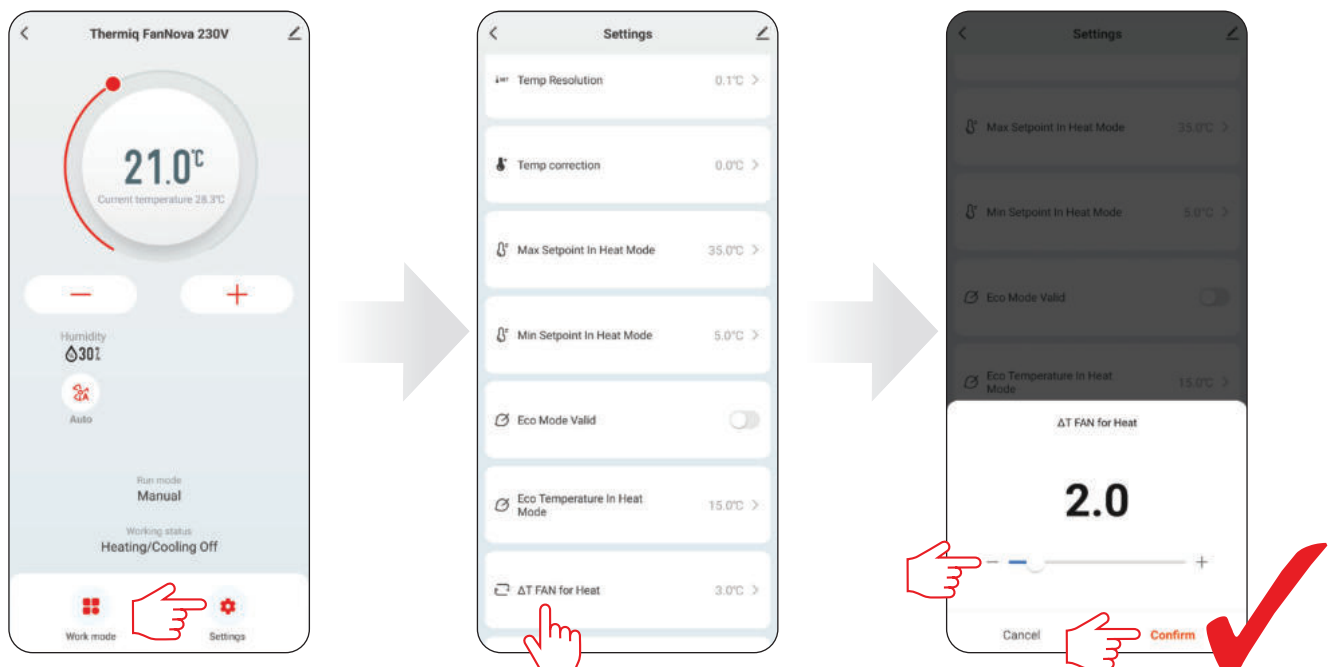
Example:

In heating mode, with Delta FAN = 1.0 °C, the fan will increase its intensity more quickly in response to a drop in temperature.

On the other hand, with Delta FAN = 5.0 °C, the fan speed will only increase with a much larger temperature drop.

Depending on the current temperature difference (ΔT), the thermostat automatically adjusts the fan intensity within the range defined by the parameters Delta FAN Heating and Delta FAN Cooling. In this way, it is possible to optimally adapt the operation of the unit to the characteristics of the room and the desired thermal comfort.

To change the level of the ΔT Fan parameter for heating, follow the steps below:



Select the „Settings” option.

Enter „ ΔT FAN for Heat”.

Set the desired level and click „Confirm”.

To change the level of the ΔT fan parameter for cooling, change the system type to cooling and, similarly, set the value for the ΔT fan parameter for cooling.

DELTA FAN IN HEATING MODE

Below graph shows the relationship between the room temperature and the fan response in heating mode when the thermostat is in automatic air speed control mode.

The horizontal axis (X) shows the room temperature. On the upper vertical axis is the valve opening status and on the lower vertical axis (Y) is the fan speed intensity.

The graph shows the set temperature line - e.g. 22 °C - which is the reference point for the operation of the Delta FAN function.

Operating principle:

When the room temperature falls below the setpoint, the thermostat gradually increases the fan speed intensity. The greater the downward temperature deviation, the stronger the fan response. The temperature range within which this adjustment takes place is determined by the parameter Delta FAN Heating.

Example:

Setpoint temperature = 22 °C

Delta FAN Heating = 2.0 °C

Fan operating range: 22 °C -> 20 °C

- In this range, the fan increases the discharge intensity in proportion to the decrease in temperature.

Low speed activation point (F1)

The initial fan speed - F1 (low) - is by default synchronised with the activation point of the heating valve control output.

This means that the fan will not start until the valve is opened.

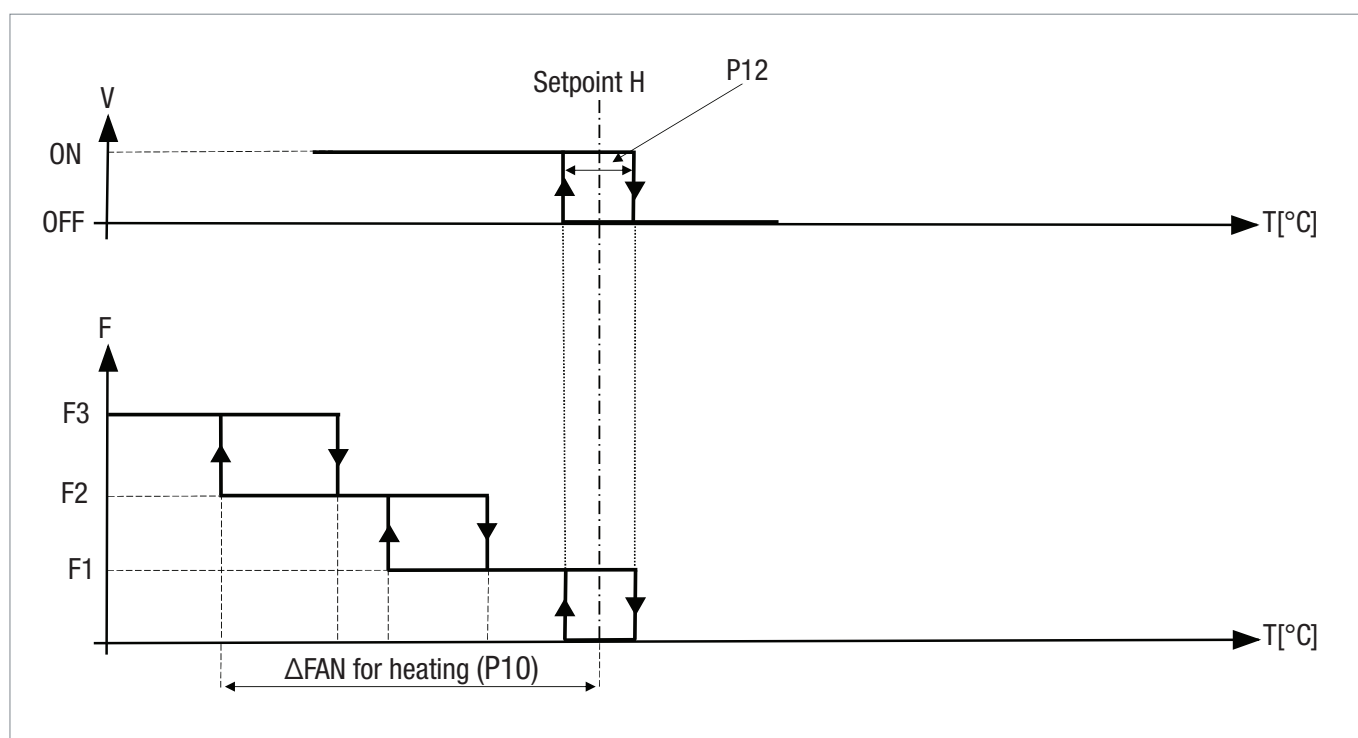
Such synchronisation ensures thermal comfort and energy efficiency by eliminating the unwanted cold air supply at the start of the heating cycle.

Interpretation of the graph:

The area to the left of the set temperature is the operating range of the Delta FAN Heating function.

The slope of the curve illustrates the speed of the fan response - the greater the slope, the faster the response (lower Delta FAN value).

A flat curve indicates a soft response - characteristic of higher Delta FAN values.



Explanation of symbols:

T [°C]	Room temperature	F1	I - low fan speed	V	Valve operation
Setpoint H [°C]	Set temperature for heating	F2	II - medium fan speed	P10	Fan delta algorithm for heating
F	Fan speed	F3	III - high fan speed	P12	Heating valve hysteresis

DELTA FAN IN COOLING MODE

Below graph shows the relationship between the room temperature and the fan response in cooling mode when the thermostat is in automatic air speed control mode.

The horizontal axis (X) shows the room temperature. On the upper vertical axis is the opening status of the cooling valve and on the lower vertical axis (Y) is the fan speed intensity.

The graph shows the setpoint temperature line - e.g. 24 °C - which is the reference point for the operation of the Delta FAN Cooling function.

Operating principle:

When the room temperature rises above the setpoint, the thermostat gradually increases the fan speed to effectively lower the temperature. The greater the upward temperature deviation, the stronger the fan response. The temperature range within which this adjustment takes place is determined by the parameter Delta FAN Cooling.

Example:

Setpoint temperature = 24 °C

Delta FAN Cooling = 2.0 °C

Fan operating range: 24 °C -> 26 °C

- In this range, the thermostat gradually increases the fan speed intensity in proportion to the increase in room temperature.

Low speed activation point (F1)

The initial fan speed - F1 (low) - is synchronised by default with the activation point of the cooling valve control output.

This means that the fan will not start until the cooling valve is open.

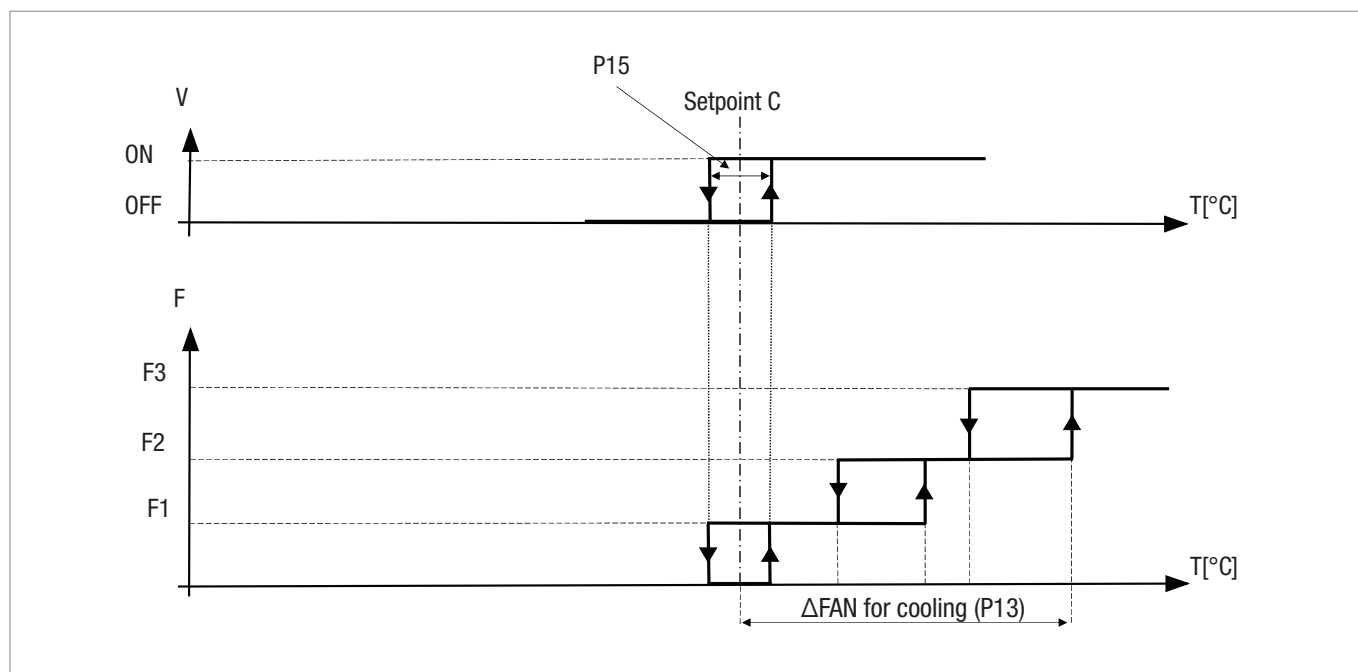
Such synchronisation increases cooling efficiency and user comfort by eliminating unnecessary airflow that would not lower the temperature.

Interpretation of the graph:

The area to the right of the setpoint temperature is the operating range of the Delta FAN Cooling function.

The slope of the curve illustrates the speed of the fan response - higher the slope, the faster the response (lower Delta FAN value).

A flatter curve indicates a slower, more gradual increase in the airflow - characteristic of higher values of the Delta FAN parameter.



Explanation of symbols:

$T [^{\circ}\text{C}]$	Room temperature	F1	I - low fan speed	V	Valve operation
Setpoint C [$^{\circ}\text{C}$]	Set temperature for cooling	F2	II - medium fan speed	P13	Fan delta algorithm for cooling
F	Fan speed	F3	III - high fan speed	P15	Cooling valve hysteresis

DELTA FAN - HEATING AND COOLING MODE WITH DEAD ZONE

Below graph shows the relationship between the room temperature and the fan response in heating and cooling modes, with the automatic fan speed control function in the FanNova thermostat activated.

On the horizontal axis (X) is the room temperature.

On the upper vertical axis is the opening status of the valve (heating or cooling), and on the lower vertical axis is the fan speed intensity.

Operating principle:

- In heating mode, when the temperature falls below the set temperature, the fan gradually increases speed - this range is determined by the parameter Delta FAN Heating.
- In cooling mode, when the temperature rises above the set temperature, the fan also gradually increases

the intensity of the operation - as determined by the parameter Delta FAN Cooling.

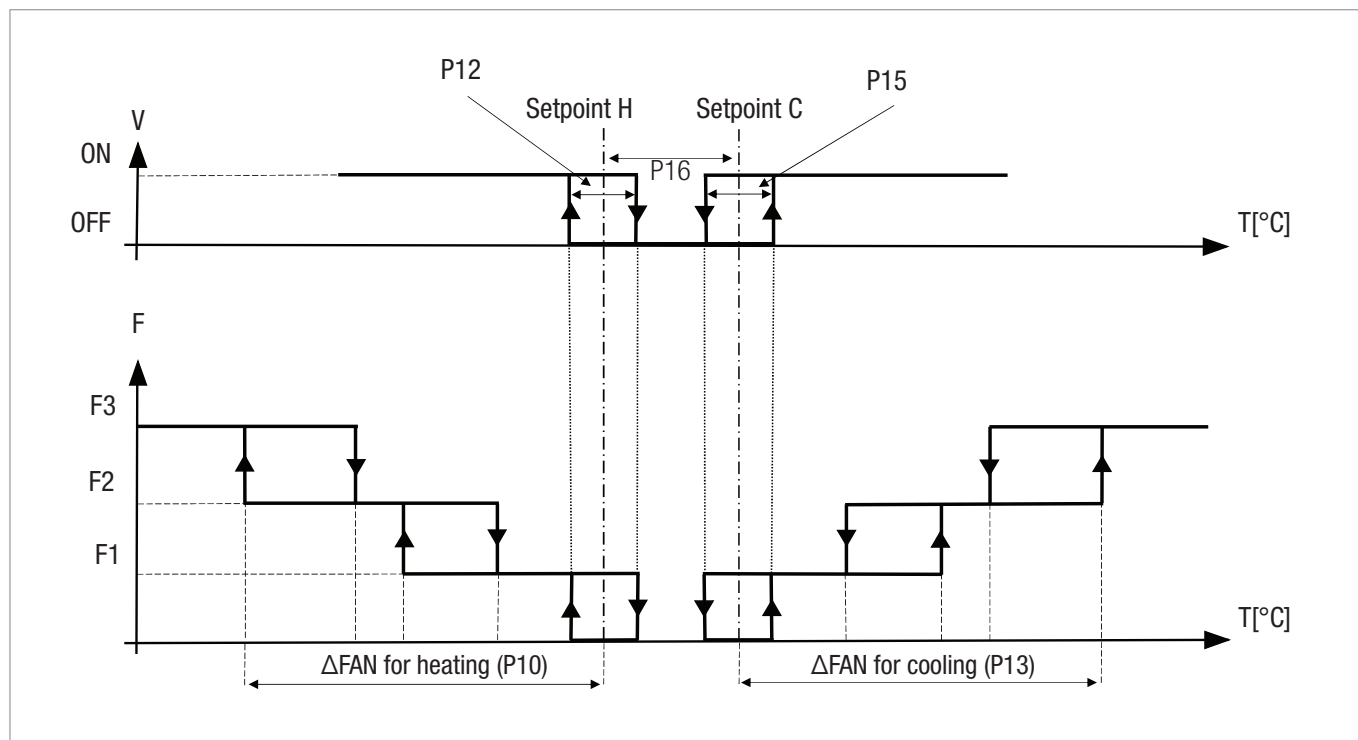
- The Dead Zone is the range around the setpoint temperature in which the thermostat does not run either heating or cooling.

Within this range, the fan can be switched off or run minimally - depending on the configuration.

Additional information:

The low fan speed (F1) is synchronised by default to the moment when the corresponding valve (heating or cooling) is opened.

The slope of the curve shows the rate of response - lower values of Delta FAN result in a faster fan speed changes, higher values in a slower and smoother increase.



Explanation of symbols:

$T [^{\circ}\text{C}]$	Room temperature	F1	I - low fan speed	P10	Fan delta algorithm for heating
Setpoint H $[^{\circ}\text{C}]$	Set temperature for heating	F2	II - medium fan speed	P12	Heating valve hysteresis
Setpoint C $[^{\circ}\text{C}]$	Set temperature for cooling	F3	III - high fan speed	P13	Algorithm delta Fan for cooling
F	Fan speed	V	Valve operation	P15	Cooling valve hysteresis
				P16	Dead zone for switching heating/cooling in a 4-pipe system

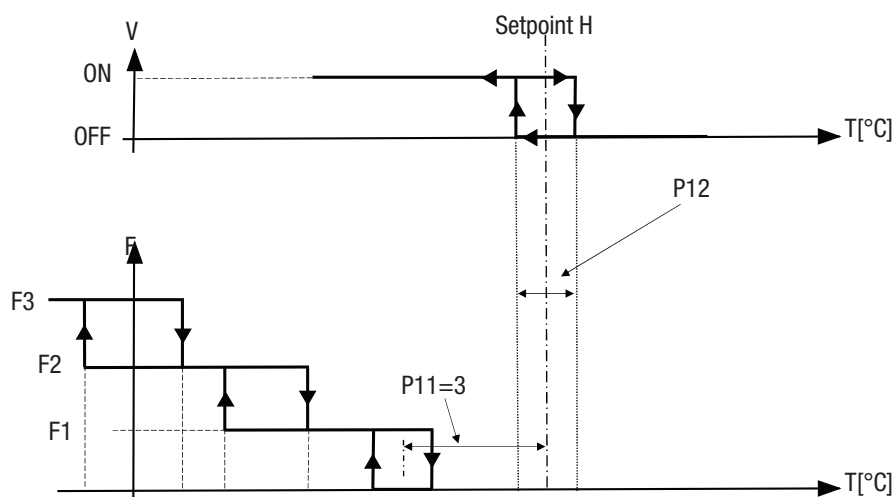
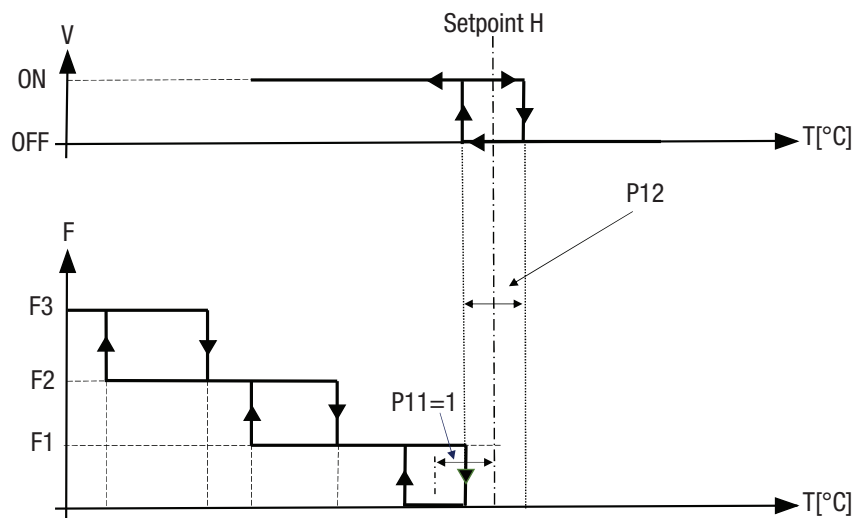
FAN ON DELAY - HEATING MODE

This parameter specifies how much room temperature should drop to make fan operation start.

Operation takes place in two stages: first the thermostat opens the heating valve, allowing water to flow through the coil, and the fan remains inactive. If the room temperature continues to fall, the fan is switched on when P11 hysteresis is reached.

This function allows the room to be heated by the open valve alone, without having to switch on the fan. This makes it possible to reduce noise and energy consumption. The fan is only activated when passive heating is insufficient.

This parameter works in conjunction with the Delta FAN Heating range and determines the start point of the fan operation.



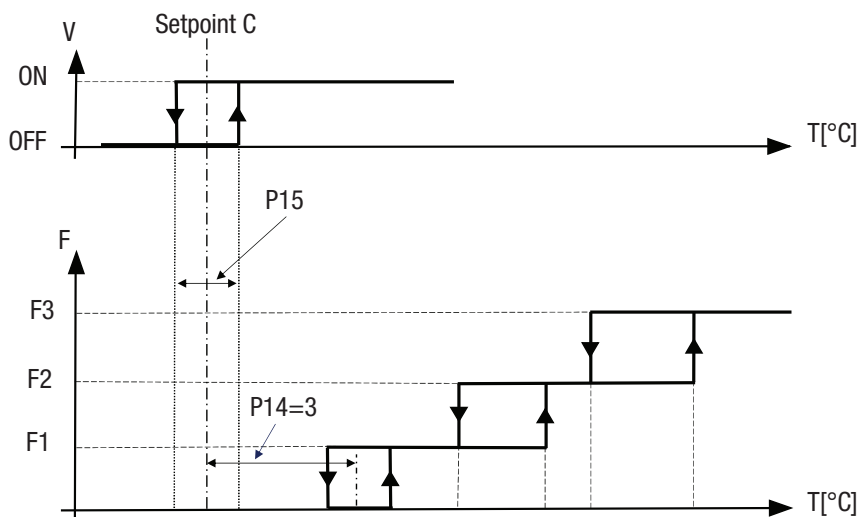
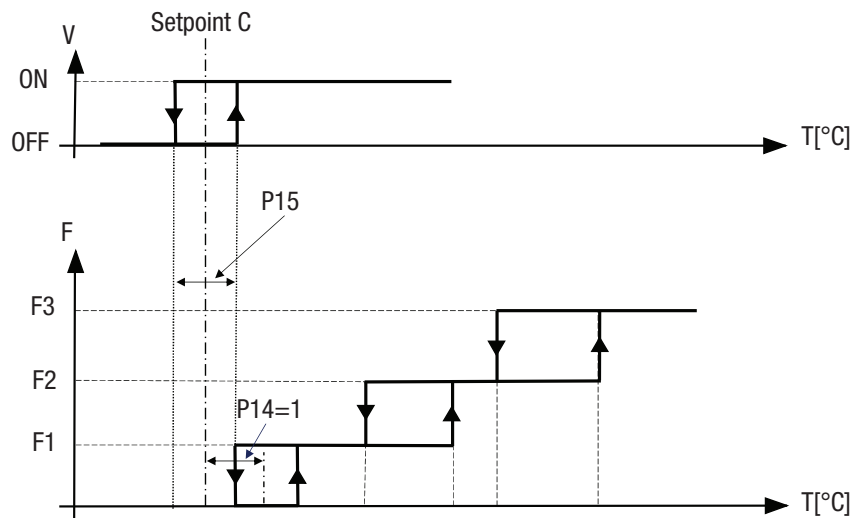
Explanation of symbols:

T [°C]	Room temperature	F1	I - low fan speed	V	Valve operation
Setpoint H [°C]	Set temperature for heating	F2	II - medium fan speed	P11	Fan operation hysteresis for heating
F	Fan speed	F3	III - high fan speed	P12	Heating valve hysteresis

FAN ACTIVATION DELAY - COOLING MODE

How much room temperature should rise to make fan operation start. Operation takes place in two stages: first the thermostat opens the cooling valve, allowing water to flow through the coil, and the fan remains off. If the room temperature continues to rise, the fan is switched on when P14 hysteresis is exceeded.

This function allows the room to be cooled by the open valve alone, without having to run the fan. This reduces noise and energy consumption, particularly in the case of small temperature deviations. The fan is only switched on when passive cooling is insufficient. This parameter works in conjunction with the Delta FAN Heating range and determines the start point of the fan operation.



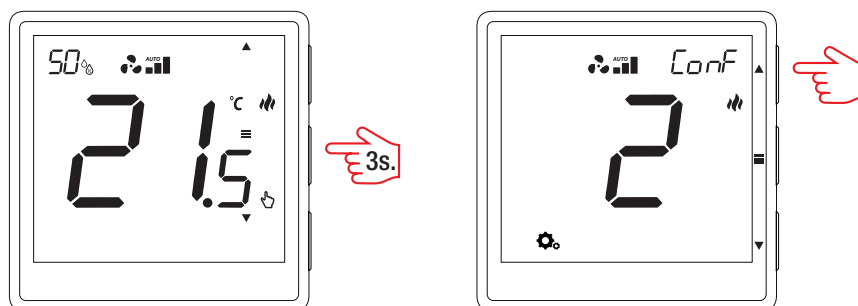
Explanation of symbols:

T [$^{\circ}\text{C}$]	Room temperature	F1	I - low fan speed	V	Valve operation
Setpoint C [$^{\circ}\text{C}$]	Set temperature for cooling	F2	II - medium fan speed	P14	Fan operation hysteresis for cooling
F	Fan speed	F3	III - high fan speed	P15	Cooling valve hysteresis

16. INSTALLER PARAMETERS

To enter installer parameters press and hold  button for 3 seconds.

Use  or  button to move between parameters. Enter the parameter by . Edit the parameter using  or . Confirm the new parameter value with the  button.



Pxx	Function	Value	Description	Def.
ConF	Read-only parameter	-	Preview of the current controller configuration	-
P01	S1 - COM input configuration	0	None connected	0
		1	Input used to change heating/cooling via contact external connected to S1-COM: - S1-COM open --> HEAT mode - S1-COM short-circuited --> COOLING mode	
		2	Input used for AUTOMATIC heating/cooling change based on the PIPE TEMPERATURE in a 2-pipe system. The controller switches between heating and cooling modes to pipe temperature set in parameters P17 and P18.	
		3	Fan operation permit dependent on temperature measurement on the pipe. E.g. if the temperature on the pipe is too low and the regulator is in heating mode - the pipe sensor will not allow you to start fan. The change of heating/cooling is done manually - using the buttons. Values for fan control based on pipe temperatures are set in parameters P17 and P18.	
		4	Activating the Floor Sensor in the UFH configuration	
P02	S2 - COM input configuration	0	None connected	0
		1	When the contacts are open switch on Eco Mode	
		2	External temperature sensor	
P03	Display temp accuracy	0,1°C	Indication of room temperature with an accuracy of 0,1°C	0,1°C
		0,5°C	Indication of room temperature with an accuracy of 0,5°C	
P04	Offset temperature	-3.0°C - +3.0°C	If the thermostat indicates wrong temperature, you can correct it by max ± 3.0°C	0°C
P05	Max. temperature setpoint	5°C - 45°C	Maximum heating / cooling temperature that can be set	35°C
P06	Min. temperature setpoint	5°C - 45°C	Minimum heating / cooling temperature that can be set	5°C

P07	ECO mode	NO	Function disabled	NO
		YES	Function enabled	
P08	ECO temp value in HEAT mode	5°C - 45°C	ECO temp value in HEAT mode	15°C
P09	ECO temp value in COOL mode	5°C - 45°C	ECO temp value in COOL mode	30°C
P10	FAN Control - Delta FAN Algorithm for Heating	0,5°C - 5°C	The parameter determines the width of the temperature range in which fan operates in heating mode. If the room temperature drops: 1. When the Delta FAN value is small, the faster the fan response temperature change - faster speed increase 2. When the Delta FAN value is high, the slower the fan increases speed	2°C
P11	Fan ON temperature in heating mode	0°C - 5°C	The fan will start operating if the room temperature drops below the set temperature by the value of parameter	0,5°C
P12	Hysteresis for HEATING valve	0,1°C - 2°C	Hysteresis value for the heating valve	0,5°C
P13	Heat Cool switching - Dead zone for 4-pipe system	0,5°C - 5°C	The parameter determines the width of the temperature range in which fan operates in cooling mode. If the room temperature rises: 1. When the Delta FAN value is small, the faster the fan response temperature change - faster speed increase 2. When the Delta FAN value is high, the slower the fan increases speed	2°C
P14	Fan ON temperature in cooling mode	0°C - 5°C	The fan will start operating if the room temperature rises above the set temperature by the value of parameter	0,5°C
P15	Hysteresis for cooling valve	0,1°C - 2°C	Hysteresis value for the COOLING valve	0,5°C
P16	Heat Cool switching - Dead zone for 4-pipe system	0,5°C - 5°C	The value of the difference between the set temperature and the temperature of the room so that the controller automatically changes the Heating/cooling operations	2°C
P17	In a 2-pipe system, below this value the system switches to cooling mode and allows the fan to start	10°C - 25°C	Temperature sensor on the pipe - below this value, the system switches to cooling mode / allows the fan to start	10°C
P18	In a 2-pipe system, above this value the system switches to heating mode and allows the fan to start	27°C - 40°C	Temperature sensor on the pipe - above this value, the system switches to heating mode / allows the fan to start	30°C
P19	Cooling mode switching ON delay	0-15 min	Parameter used in 4-pipe systems with automatic switching between heating and Cooling. This avoids switching between modes too often heating and cooling as well as room temperature oscillations	0 min
P20	Maximum floor temperature	5°C - 45°C	In order to protect the floor, heating will be switched on, when the temperature of the floor sensor exceeds the maximum value	35°C
P21	Minimum floor temperature	5°C - 45°C	In order to protect the floor, heating will be turned off, when the temperature of the floor sensor drops below the minimum value	10°C
P22	Backlight brightness	0% - 100%	Adjustable in the range from 10 to 100%	30%

P23	PIN Code for installer parameters	NO	Function disabled	NO
		PIN	Function enabled	
P24	Require a PIN to unlock the keys every time (function active when P23=PIN)	NO	NO	NO
		YES	YES	
FAN	Fan	NO	Inactive - the output contacts for fan control are completely disabled	YES
		YES	Enabled	
P26	Change setpoint when locked	NO / YES	NO – the lock applies both to the keys and to changing the set temperature. YES – the user can change the set temperature even when the keys are locked.	NO
CLR	Clear settings factory reset	NO	No action	NO
		YES	Restore default settings of all parameters	

17. MODBUS RTU PROTOCOL FOR FANNOVA CONTROLLER

INTRODUCTION

Modbus RTU is a popular master–slave communication protocol used in building automation systems. The FanNova can operate as a slave device in a Modbus network, allowing remote reading and control of the controller's basic functions.

MODBUS RTU PROTOCOL – OPERATING PRINCIPLE

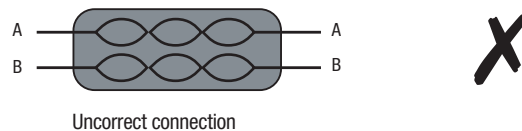
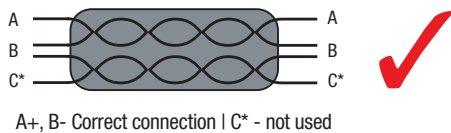
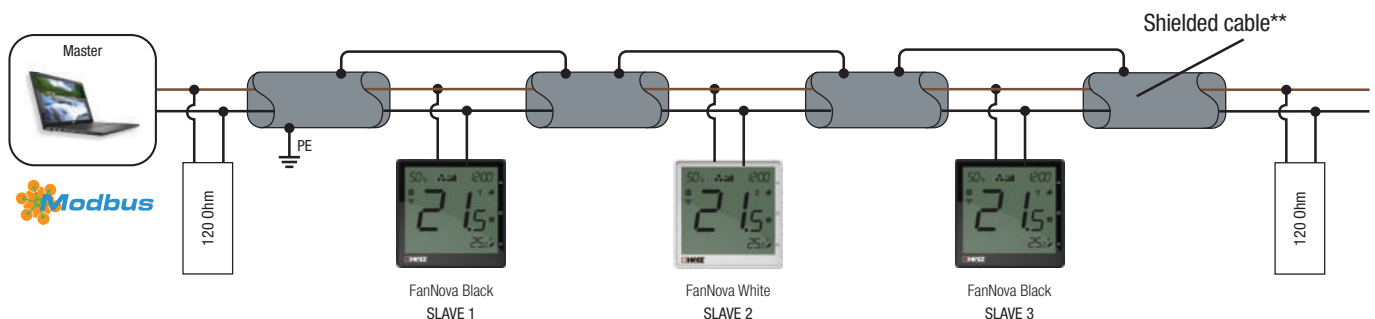
- Master–slave system – only the master device (e.g. PLC, computer) initiates requests
- Serial communication via RS-485 interface (2-wire)
- Up to 247 slave devices supported
- Each slave device must have a unique address
- No communication between slave devices

PHYSICAL CONNECTIONS

Data lines

- A+ (DATA+)
- B- (DATA-)

Despite the absence of a dedicated communication ground, proper operation is possible when using appropriately shielded cables and a correct network topology.



Recommended Cables**

- Shielded twisted pair with 120 Ω impedance, e.g.:
- Belden 3105A (2x24 AWG, shielded)
- LIYCY 2x0.5 mm²
- FTP/STP Cat5e (1 pair + shield)

Termination (End-of-Line Resistors)

- 120 Ω between A+ and B-
- Install at both ends of the bus (first and last device)

Cable Shield Connection:

- Connect the shield only on the master side (to PE or GND)
- Do not connect the shield on the slave side (leave unconnected)

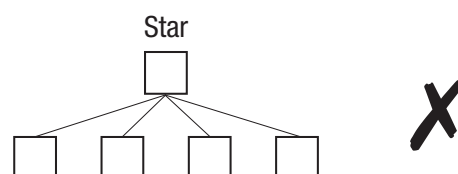
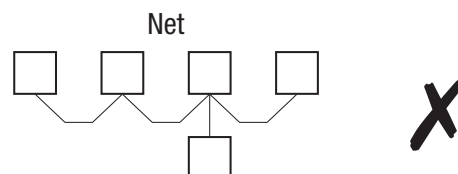
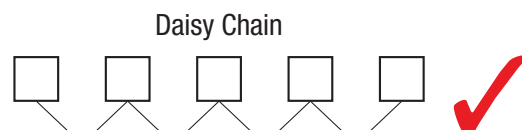
Additional Recommendations:

- Use RS-485 converters with galvanic isolation in industrial or distributed installations
- Avoid ground loops and potential differences – proper cable shielding is usually sufficient

Bus topology – linear (serial) type,

avoid star connections.

Maximum length: up to **1200 m** at **9600 bps**



RS-485 COMMUNICATION SETTINGS

Pxx	Function	Value	Description	Default value
Addr	MODBUS Slave device address (ID)	1 - 247	MODBUS Slave Address (ID)	1
BAUD	Bitrate (Baud)	4800	Bitrate (Baud)	9600
		9600		
		19200		
		38400		
PARI	Parity bit - sets data parity for error detection	None	Lack	None
		Even	Even	
		Odd	Odd	
STOP	Stop bit	1	1 stop bit	1
		2	2 stop bit	

SUPPORTS THE FOLLOWING FUNCTION CODES:

- #03 - reading n registers (Holding Registers)
- #04 - reading n registers (Input Registers)
- #06 - write 1 register (Holding Register)

INPUT REGISTERS - READ ONLY

Address		Access	Description	Value Range	Means	Default
Dec	Hex					
0	0x0000	R (#03)	HERZ MODBUS Model ID	1-247	MODBUS Slave (ID)	1
1	0x0001	R (#03)	Firmware-Version	0x0001-0x9999	0x1110=1.1.10 (BCD code)	
2	0x0002	R (#03)	Working-state		0b00000010=Idle, switch OFF 0b00000000=Idle, room meet temperature 0b10000001=Heating 0b10001000=Cooling 0b00001000=Idle, sensor error	
3	0x0003	R (#03)	Value of the Integrated temperature sensor, °C	50 - 500	N -> temp=N/10 °C	
5	0x0005	R (#03)	Value of the External temperature sensor S1, °C	50 - 500	0 = Open (sensor break)/ contact open 1 =Closed (sensor short circuit) / contact closed N -> temp=N/10 °C	
6	0x0006	R (#03)	Value of the External temperature sensor S2, °C	50 - 500	0 = Open (sensor break)/ contact open 1 =Closed (sensor short circuit) / contact closed N -> temp=N/10 °C	
7	0x0007	R (#03)	Fan state	0b00000000 - 0b00001111	0b00000000= OFF 0b00000001= I Fan stage low 0b00000010= II Fan stage medium 0b00000100= III Fan state high 0b00001000= Auto - OFF 0b00001001= Auto - I low 0b00001010= Auto - II medium 0b00001100= Auto - III high	

8	0x0008	R (#03)	Valve 1 state	0 - 1000	0 = OFF (valve closed) 1000 = ON / 100% (valve open)	1
9	0x0009	R (#03)	Valve 2 state	0 - 1000	0 = OFF (valve closed) 1000 = ON / 100% (valve open)	
10	0x000A	R (#03)	Humidity measurement (with 5% indication accuracy)	0 - 100	N -> humidity=N %	

HOLDING REGISTERS – FOR READING AND WRITING

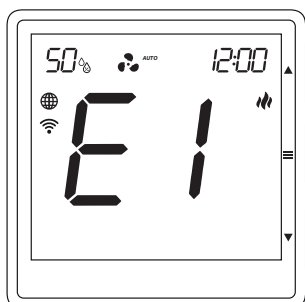
Address		Access	Description	Value Range	Means	Default
Dec	Hex					
0	0x0000	R/W (#04)	Herz MODBUS Model ID	1-247	MODBUS Slave (ID)	1
234	0x00EA	R/W (#06)	Fancoil type	1 - 6	1 = 2 pipe - only heating 2 = 2 pipe - only cooling 3 = 2 pipe - heating & cooling 4 = 2 pipe - underfloor heating 5 = 4 pipe - heating & cooling 6 = 4 pipe - underfloor heating & cooling by fancoil	0
235	0x00EB	R/W (#06)	S1-COM input configuration (P01 install parameter)	0	Input inactive. Change between heating and cooling modes with the buttons or app.	0
				1	Input used to change heating/cooling modes via external contact connected to S1-COM: - S1-COM open --> HEAT mode - S1-COM shorted --> COOL mode	
				2	Input used to AUTOMATICALLY change heating/cooling modes based on PIPE TEMPERATURE in a 2-pipe system. The controller switches between heating and cooling modes based on the pipe temperature set in parameters P17 and P18.	
				3	Fan operation permission dependent on the temperature measurement on the pipe. For example, if the temperature on the pipe is too low, and the controller is in heating mode - the pipe sensor will not allow the fan to run. The change of heating/cooling modes is done manually - using the buttons or app. Values for fan control based on pipe temperature are set in parameters P17 and P18.	
				4	Activation of the floor sensor in the floor heating configuration.	
236	0x00EC	R/W (#06)	S2-COM input configuration (P02 install parameter)	0	Input disabled	0
				1	Occupancy sensor (when contacts are opened, activate ECO mode)	
				2	External temperature sensor	
237	0x00ED	R/W (#06)	Selectable ECO mode (Installer Parameters -P07)	0	NO - Disabled	0
				1	YES - Active	
238	0x00EE	R/W (#06)	ECO mode temperature value for heating (Installer parameters -P08)	50 - 450	N-> temp=N/10 °C	150

239	0x00EF	R/W (#06)	ECO mode temperature value for cooling (Installer parameters -P09)	50 - 450	N-> temp=N/10 °C	300
240	0x00F0	R/W (#06)	Algorithm delta FAN in heating mode The parameter determines the width of the temperature range, in which the fan operates in heating mode. If the room temperature drops then: 1. When the value of delta FAN is small, the faster the response of the fan to a room temperature change - faster increase in speed 2. Higher value of Delta FAN, the slower the fan increases speed (Installer parameters -P10)	5-50	N-> temp=N/10 °C	20
241	0x00F1	R/W (#06)	Fan on temperature for heating. The fan will start working if the temperature in the room drops below the preset by the value of the parameter (Installer parameters -P11)	0-50	N-> temp=N/10 °C	50
242	0x00F2	R/W (#06)	Control algorithm (TPI or hysteresis) for the heating valve (Installer parameters -P12)	0-20	0 = TPI 1 = $\pm 0,1^{\circ}\text{C}$ 2 = $\pm 0,2^{\circ}\text{C}...$ N-> temp=N/10 °C ($\pm 0,1... \pm 2^{\circ}\text{C}$)	5
243	0x00F3	R/W (#06)	FAN delta algorithm for cooling The parameter determines the width of the temperature range in which the fan operates in cooling mode. If the room temperature increases then: 1. When a small value of Delta FAN, the faster the response of the fan to a room temperature change - faster increase in speed. 2. Higher value of Delta FAN, the slower the fan increases speed. (Installer parameters -P13)	5-50	N-> temp=N/10 °C	20
244	0x00F4	R/W (#06)	Fan on temperature for cooling. The fan will start working if the temperature in the room rises above the setpoint by the value of the parameter. (Installer parameters -P14)	0-50	N-> temp=N/10 °C	50
245	0x00F5	R/W (#06)	Hysteresis value for the cooling valve (Installer parameters -P15)	1-20	N-> temp=N/10 °C ($\pm 0,1... \pm 2^{\circ}\text{C}$)	5
246	0x00F6	R/W (#06)	Dead zone of switching heating/cooling modes in a 4-pipe system. The difference between the setpoint temperature and room temperature, at which the controller will automatically change the heating/cooling operation mode. (Installer parameters -P16)	5-50	N-> temp=N/10 °C	20
247	0x00F7	R/W (#06)	The switching temperature value from heating to cooling - 2-pipe system. In a 2-pipe system, below this value the system switches to cooling mode and allows the fan to start. (Installer parameters -P17)	270-400	N-> temp=N/10 °C	300

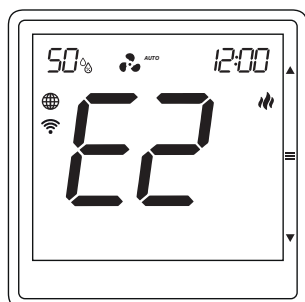
248	0x00F8	R/W (#06)	The value of the switching temperature from cooling into heating - 2-pipe system. In a 2-pipe system, above this value the system switches to heating mode and allows the fan to start. (Installer parameters -P18)	100-250	N-> temp=N/10 °C	100
249	0x00F9	R/W (#06)	Cooling ON delay. A parameter used in 4-pipe systems with automatic switching between heating and cooling. This avoids too frequent switching between heating and cooling modes and oscillation of the room temperature. (Installer parameters -P19)	0-15 min		0
250	0x00FA	R/W (#06)	Maximum floor temperature To protect the floor, heating will be turned off, when the floor sensor temperature rises above the maximum value. (Installer parameters -P20)	50-450	N-> temp=N/10 °C	350
251	0x00FB	R/W (#06)	Minimum floor temperature To protect the floor, heating will be switched on, when the floor sensor temperature drops below the minimum value. (Installer parameters -P21)	50-450	N-> temp=N/10 °C	150
254	0x00FE	R/W (#06)	PIN code for installer settings (Installer Parameters -P23)	0-1	0 = disabled 1 = PIN (First default code 0000)	0
255	0x00FF	R/W (#06)	Requiring a PIN code to unlock the keys (Installer Parameters -P24)	0-1	0 = NO 1 = YES	0
256	0x0100	R/W (#06)	Fan operation (Installer parameters -FAN)	0-1	0 = NO - Inactive - output contacts for fan control are completely disabled 1 = YES	1
257	0x0101	R/W (#06)	Power on/off - switching off the regulator	0,1	0=OFF 1=ON	1
258	0x0102	R/W (#06)	Operation mode	0,1,3	0=Schedule 1=Manual 3=FROST - anti-freeze mode	0
260	0x0104	R/W (#06)	Fan speed setting		0b000000= OFF - fan off 0b00000001= I (low) fan gear 0b000010= II (medium) fan gear 0b00000100= III (high) fan gear 0b00001000= Automatic fan speed - OFF 0b00001001= Automatic fan speed - 1st gear 0b00001010= Automatic fan speed - 2nd gear 0b00001100= Automatic fan speed - 3rd gear	
262	0x0106	R/W (#06)	Key lock	0,1	0=unlocked 1=Locked	0
263	0x0107	R/W (#06)	Display brightness (Installer Parameters -P22)	0-100	N-> Brightness =N%	30
268	0x010C	R/W (#06)	Clock - minutes	0-59	Minutes	0
269	0x010D	R/W (#06)	Clock - hours	0-23	Hours	0
270	0x010E	R/W (#06)	Clock - Day of the week (1=Monday)	1~7	Day of the week	3

273	0x0111	R/W (#06)	Set temperature in schedule mode	50-450	N-> temp=N/10 °C	210
274	0x0112	R/W (#06)	Set temperature in manual mode	50-450	N-> temp=N/10 °C	210
275	0x0113	R/W (#06)	Set temperature in FROST mode	50	N-> temp=N/10 °C	50
279	0x0117	R/W (#06)	Maximum setpoint temperature	50-450	N-> temp=N/10 °C	350
280	0x0118	R/W (#06)	Minimum setpoint temperature	50-450	N-> temp=N/10 °C	50
284	0x011C	R/W (#06)	Accuracy of displayed temperature	1,5	N-> temp=N/10 °C	1
285	0x011D	R/W (#06)	Correction of displayed temperature	30... 30	N-> temp=N/10 °C (-3,0 do 3,0 °C in steps of 0,1 °C)	0
288	0x0120	R/W (#06)	Selection of system type - heating / cooling (dependent on the setting of input S1)	0,1	0 = Heating 1 = Cooling	0

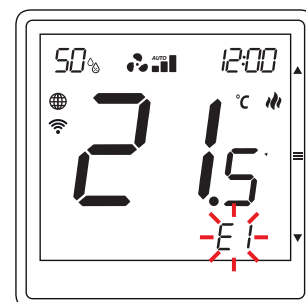
18. ERROR CODES



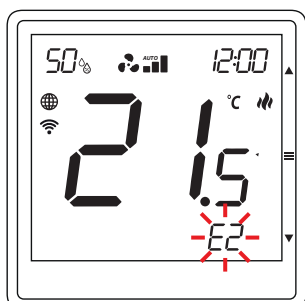
E1 - Short circuit in the internal temperature sensor circuit



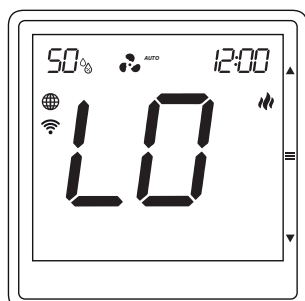
E2 - Break in the internal temperature sensor circuit



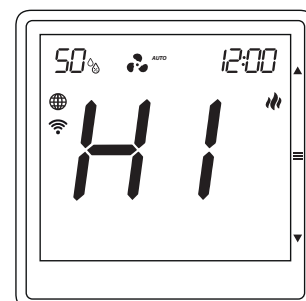
E1 - Short circuit in the external temperature sensor circuit



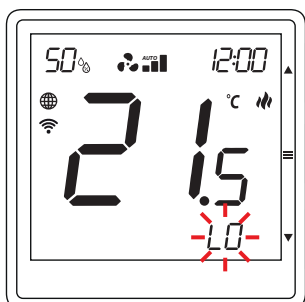
E2 - Short circuit in the internal temperature sensor circuit



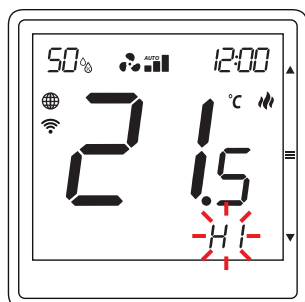
LO - Temperature measured by the internal sensor too low



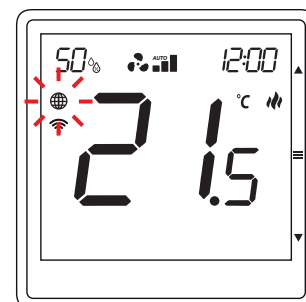
HI - Too high temperature measured by the internal sensor



LO - Temperature measured by external sensor too low

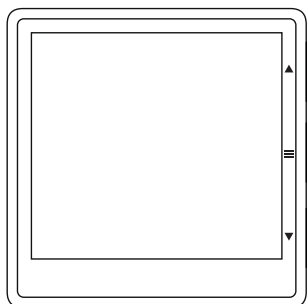


HI - Too high temperature measured by external sensor



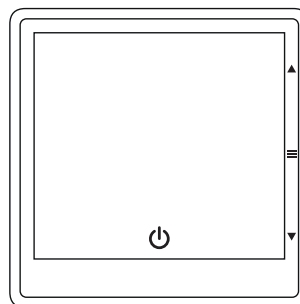
(GLOBE) blinks - Lost connection with Wi-Fi network

- Check that the router is connected to the power supply
- Check that the 2.4GHz Wi-Fi network is available
- Make sure that the name and password of the 2.4GHz Wi-Fi network (to which the thermostat is connected) have not been changed



The thermostat has an off display

- Check thermostat power supply

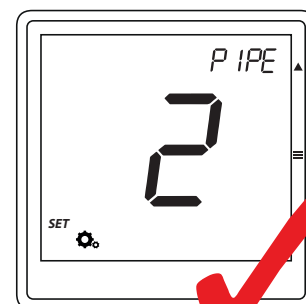
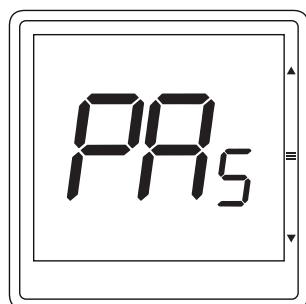
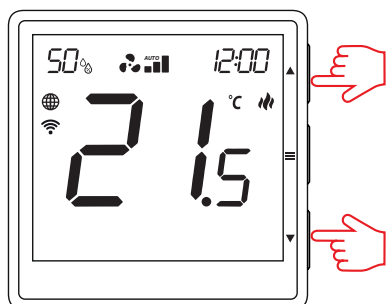


The thermostat has on display ⏻ icon

- Check if thermostat is turned off by the app. Push any key - thermostat screen will show 'OFF' when it is turned OFF.
- You can turn on thermostat by press and hold the ≡ key.

19. FACTORY RESET

To RESET controller to factory settings, hold down the ▲ & ▼ buttons until the FA message appears. Then release the keys. Controller will restart, restore default factory settings and displays the home screen. The device will be also removed from app. Factory reset can be done within 5 minutes after power supply connection. If controller is connected longer - factory reset cannot be performed.



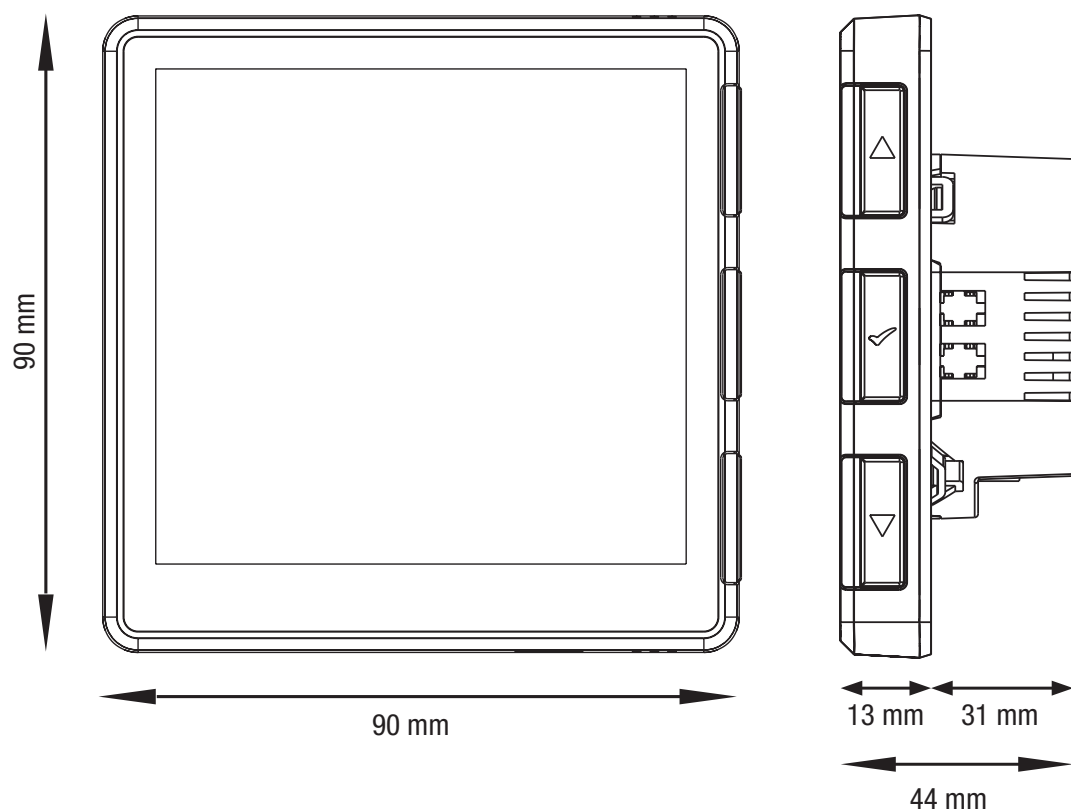
PLEASE NOTE: A factory reset is only possible within the first 5 minutes after connecting the thermostat to the 230 V power supply.

20. CLEANING AND MAINTENANCE

The FanNova thermostat requires no special maintenance. Do not use brushes, scrubbers or other tools that may scratch the surface of the thermostat to clean and maintain the surface, and do not use abrasive, foaming agents or aggressive substances containing acids, chlorine or its compounds, solvents or bleaching agents, as this may damage the thermostat. Always clean the display and the buttons with a damp soft cloth. Plastic surfaces can also be cleaned with colourless, mild cleaning agents. The cleaning agent should not be sprayed directly onto the device. After washing the surface, it can be gently polished with a soft, dry cloth. There are no user serviceable/replaceable parts inside the appliance. Service or repair can only be carried out by an authorised HERZ Controls service centre.

21. TECHNICAL DATA

Power supply	230 V AC 50 Hz
Setpoint temp. range	5,0°C to 45,0°C
Display temp. accuracy	0,1 or 0,5°C
Control algorithm	Delta FAN, Hysteresis ($\pm 0,1 \dots \pm 2^\circ\text{C}$), TPI (for underfloor heating)
Communication	Wi-Fi 2,4GHz
Input A+/B-	Modbus RS-485
Inputs	S1/COM, S2/COM - temp. sensor or volt-free contact
Valve control outputs	V1, V2 - 230 V AC, 5(2)A
Fan control outputs	F1, F2, F3 - 230 V AC, 5(2)A
Dimmension	90 x 90 x 44 mm (13 mm after mounting in a box with a diameter of 60)



22. WARRANTY

HERZ 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. HERZ reserves the sole responsibility for breach of this warranty by repairing or replacing the defective product. This product includes software that matches the distributor's identification at the time of sale. The manufacturer / distributor provides a guarantee covering all functions and specifics of the product in accordance with this marking. The distributor's warranty does not cover the correct operation of the functions and features available as a result of a product software update.

Customer name:

Customer address:

..... Postcode:

Tel no.: Email:

Company name:

Tel no.: Email:

Installation date:

Installer name:

Installer's signature:





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