

...step by step

 ELKATHERM®

Thermostat

Manual

ETT-100 | EN



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Description of the Device

Control Buttons

The device has two multifunctional control buttons, **+** (plus; increasing value) and **-** (minus; decreasing value).



Display

The 2-digit display shows the status of the device. The dot presents the level of 0.5 °C.



Starting the device

When it is connected to the power supply for the first time after factory settings the device produces sound and automatically turn on the device and display to the initial state (--). Other reconnectings to the power supply, the device will produce sound and display the last state it was before the power supply was disconnected.



Placing the device into a working state and setting the temperature

By pressing the button, the device shows the current status on the display. To turn on the device from off state (oF) press button +. The default temperature is 5 °C (LO). The change step is 0.5 °C. Pressing the buttons and changing set values produces short sound. This provides easier handling with the device to blind and visually impaired people.

Button **+** increases the value, and the button **-** decreases. The long button press switches to “Fast Change Mode”.




Standby state

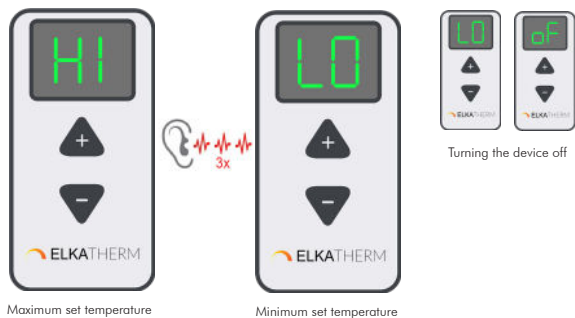
After 10 seconds of inactivity, the display automatically goes to standby state.



By pressing one of the buttons, display will turn on and show its status (room temperature). Once it is on, the temperature setting can be performed.

Minimum and Maximum temperature value

The minimum value of set temperature is LO, and the maximum value is HI. Reaching maximum and minimum temperature produces characteristic sounds, which makes the device easier to handle for blind or visually impaired people. Holding the  button for several seconds, after reaching the minimum set temperature of 5 °C (LO) will automatically turn the device off (oF state).



Maximum set temperature

Minimum set temperature

Setting and controlling the set temperature

The hysteresis is determined by the thermostat software and its value is 0.5 °C. After reaching the set temperature, the device turns off the heater. When the temperature is lower than the set temperature by 0.2 °C, the device turns the heater on. When the heater is in the working state, the device shows the current room temperature, and sign "ON" alternately, showing the working state of the heater.



When the set temperature is lower than the room temperature, the heater is turned off. The device shows the current room temperature and. As said before, after 10 seconds of inactivity, the displays automatically switches to the standby mode.

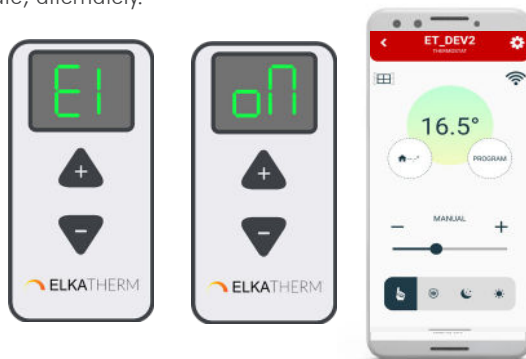
In order to change the set temperature, pressing any button ("-" or "+") when display is not in stand by, will show current set temperature. The set temperature will blink, and it is changed by pressing buttons. Once the setting is completed, the temperature will blink for several seconds, and after, the current room temperature will be shown (not blinking).



If the temperature is changed on the thermostat, while in program mode, the mode will be automatically changed from program to manual.

Errors and device information

“E1” represents a problem with the room temperature sensor. When the error is detected and showed on display as “E1”, the heater device will be turned off automatically. The display will show state “oF”. The device can be turned on manually by pressing the “+” button, and this will keep the heater on, until the button “-” is pressed which will then turn the heater off (keep in mind that pressing any button while display is in sleep will firstly awake the display and another pressing will serve as a command). The display will show “E1” and “oN” or “oF” depending on the heater state, alternately.



Open Window Detection

“Open Window Detection” is integrated within the device and it is possible to disable it in the settings of the mobile app.

Mode of operation: By following the changes in room temperature the device detects an open window. The display shows digits “oP”. Simultaneously, the mobile app gives notification for an open window.

Reset: After an open window has been detected, the device disables the heater for the next 10 minutes. Setting the new temperature (pressing of any control button) will reset

this feature. For the next 30 minutes, the device disables open window detection.

Antifrost

“Antifrost” protects your heating system from damage at cold temperatures. It can be enabled or disabled using the mobile app. Temperature range in which this safety measure can be set goes from 0 °C to 17 °C. When the device is turned off, if the current temperature is lower than “antifrost temperature”, heating is activated.

In case of error “E1”, Antifrost is disabled. When antifrost is activated, symbols “AF” and “oN” are displayed alternately. The mobile app gives notification that ANTIFROST is active.



Child Lock

“Child Lock” protects the device from unwanted changes in temperature settings, that can occur by accidentally pressing buttons on the device. When active, display shows LC when buttons are pressed, and this is activated via mobile application. In order to unlock the heater, press and hold two buttons until LC is shown on the display. Releasing the buttons will produce sound and unlock the device.

Device Offline

When the device is not connected to the internet on the display “oo” symbol will be shown, along with other statuses.



Device Settings

Entering the device settings menu is achieved by holding down both control buttons on the thermostat and each settings will be displayed alternately after “[]” symbol. “bC” is for Bluetooth connect, “SP” is for Smart pairing and “FS” is for Factory reset. The options in the menu are rolling as the buttons are pressed. Leaving the settings menu is achieved by releasing the buttons on “[]”.

1. Bluetooth Connect

The BluetoothConnect mode is activated by holding down both control buttons on the thermostat until “bC” is shown on display.

Keep holding the buttons until the symbol „bC” is shown on the display. Release the buttons once the „bC” is shown on the display. After the „bC” should blink on the display then the BluetoothConnect mode is active.



2. Smart Pairing

The Smart pairing on heater is activated by holding down both control buttons on the thermostat until "SP" is shown on display.

Release the buttons once the "SP" is shown on the display. After, the "SP" should blink on the display then the device is in smart pairing mode.

In order to pair heater and thermostat, the Smart Pairing (SP) setting should be initiated on both thermostat and heater. After configuration, the devices will be paired.

In order to pair multiple heaters with a thermostat, the "SP" setting should be active on all heaters and thermostat. The heaters will then pair with the thermostat that will control all heaters with the same setting.

If the heater is already connected to a thermostat, it is possible to add other heaters to the same thermostat. This is achieved by activating the "SP" setting on thermostat and on heater that needs to be connected to the thermostat.



3. Factory Reset

The device can be reset to factory settings.

The Factory reset is activated by holding down both control buttons on the thermostat until "FS" is shown on display.

Release the buttons once the „FS“ is shown on the display. After, the „FS“ should blink on the display then the device is reset.



Mobile application and connectivity

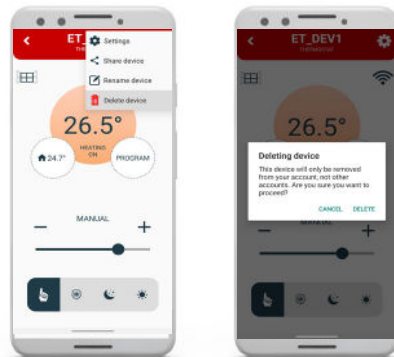
Add a device

- Adding new device is possible by using the mobile app
- Turn on Bluetooth and Location
- Add device via BluetoothConnect
- The BluetoothConnect mode is activated by holding down both control buttons on the device until [] is shown on display.
- Keep holding the buttons until the symbol bC is shown on the display. Release the buttons once the bC is shown on the display. After, the bC should blink on the display.
- In the mobile app, user check, fields and insert WIFI password
- The unit receives its unique UUID number
- The device is assigned to the account



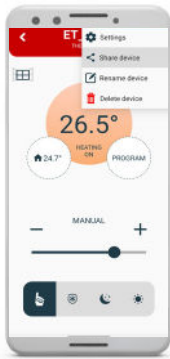
Delete the device

The device can be deleted from each account where it is available, and deletion is only performed for that account.



Share the device

- The device can be shared to an unlimited number of accounts as follows:
 - The account that shares the device, should choose "share device" option from setting menu. The QR code is generated and shown on the display. The account which the device is shown to, should choose "add a device" option on its own account by clicking "+" in the applications home screen, then choose option "scan the QR code" which will open mobile camera, and the QR from the first account should be scanned. This will add the device to the other account.



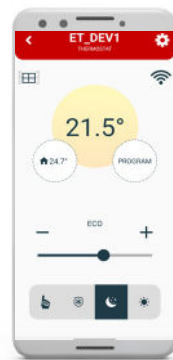
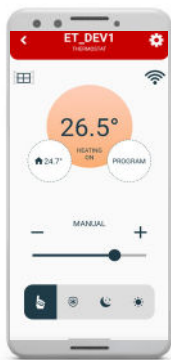
Device status

- The device has the following working statuses:
 - The thermostat is switched off - “SLEEP” status:
 - Thermostat is receiving data from WIFI, but the heating is off
 - All setup options allowed, subject to first switching on the thermostat from the mobile application itself, not necessarily physical activation
 - When clicked on tab Heaters in the Settings Menu, it shows the number of active heaters that are interconnected and connected to the app. For every individual heater there is a control panel to set the modes ON, OFF or AUTO. Beneath each heater the current software version is mentioned. If the version is up to date it will say UP TO DATE if the new version is available it will say UPGRADE. In case of Autoupdate is turned on, the software will be upgraded automatically.

- The thermostat is switched off - “OFFLINE” status
 - Disappearance of electricity
 - Loss of WIFI connection
 - Loss of Cloud connection
 - Internet disappearance
 - Negligible thermostat status.
- Active - “ON” status
 - Thermostat is on
 - WIFI and Cloud are active
 - All setup options are allowed

Set up settings - manage

- APP has the ability to set the following options
 - Change the set temperature
 - Set a weekly program
 - ON / OFF Switching the device on and off
 - Set mode (Manual, Program)
 - Turn window open detection on or off
 - Turn the sound on or off
 - Turn antifrost on and off as well as set its activating temperature
 - Set the calibration of room temperature sensor
 - Set the hysteresis
 - Set child lock
 - Set autoupdate
 - Set eco/comfort temperature
 - Set adaptive time



- APP has the ability to read the following information:
 - Current temperature
 - Set temperature
 - Weekly program
 - Device status
 - Current MODE operation
 - Current window status (if monitoring is enabled)
 - The strength of WiFi signals
 - The condition of the surface temperature sensor
 - Condition of room temperature sensor
 - Current software versions

Modes of operation

1. Manual mode
2. Antifrost mode
3. Eco mode
4. Comfort mode
5. Program mode

On the home screen of the device in the mobile app it is possible to select and modify the modes of operation as indicated on the figure above.

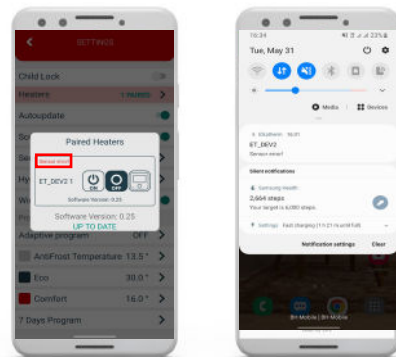
1. Manual mode will control heating by setting temperature in the range of 5 to 35 °C. The slider ("+" or "-") will change the set temperature to the desired value.
2. Antifrost mode will control heating by setting temperature in the range of 0 to 17 °C. The slider ("+" or "-") will change the set temperature to the desired value. The temperature set in this mode will be applied in the settings as well and used in the program mode.

3. Eco mode will control heating by setting temperature in the range of 10 to 30 °C. The slider ("+" or "-") will change the set temperature to the desired value. The temperature set in this mode will be applied in the settings as well and used in the program mode.

4. Comfort mode will control heating by setting

temperature in the range of 15 to 35 °C. The slider (“+” or “-”) will change the set temperature to the desired value. The temperature set in this mode will be applied in the settings as well and used in the program mode.

5. Program mode is activated on the screen and will set the temperatures according to the 7 Days program, that is explained in separate chapter, referred as “Weekly program”. When in program mode the display will show “Pr” symbol along with the set temperature and other statuses, alternately.



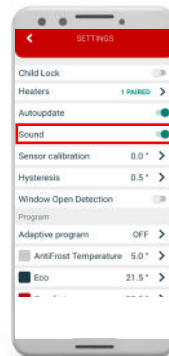
Example of the error information

Notifications

- The application allows you to turn all notifications on and off.
- The application allows you to view notifications for each individual device
 - Notification of an open window if monitoring is enabled
 - Notification of error on the room temperature sensor
 - Information about surface temperature sensor
 - Information about pending update
 - Information about time not synced, when device has not received time setting yet
- An application must be running to allow notifications

Sound

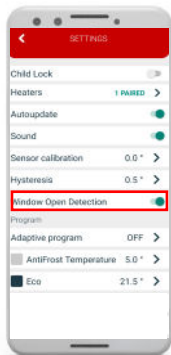
- Beeping of the device when pressing buttons and change statuses can be disabled in mobile app.
- This can be done by turning on or off the Sound option.



Sound is now enabled

Window tracking

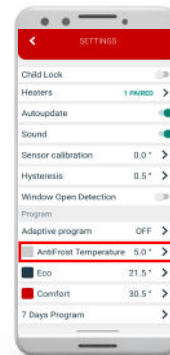
- Window open detection can be disabled or enabled via mobile app.
- This is done by turning on or off Window tracking option.



Window open detection is now enabled

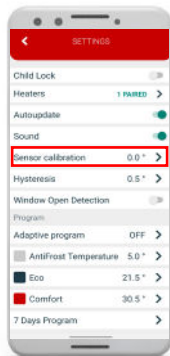
Antifrost

- Antifrost temperature can be set in a range from 0 °C to 17 °C
- If the device is turned off and the current temperature is lower than “antifrost temperature”, heating is turned



Room temperature sensor calibration

- The application allows you to calibrate the room temperature sensor.
- The calibration range is $\pm 10\text{ }^{\circ}\text{C}$ with changing levels of $0.5\text{ }^{\circ}\text{C}$

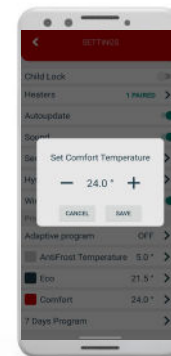
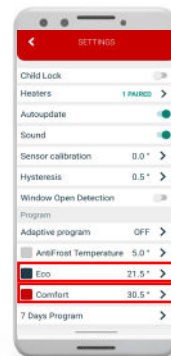


Eco/Comfort temperature

- Eco/Comfort temperature can be changed in the mobile app.
- By default Eco temperature is set to $18\text{ }^{\circ}\text{C}$, and Comfort temperature is set to $21\text{ }^{\circ}\text{C}$.

Weekly program

- Program can be set for each day in a week separately.
- It is also possible to set a program for a whole week.
- Temperature can be set to either Comfort, Antifrost or Economic for every half hour in the day.

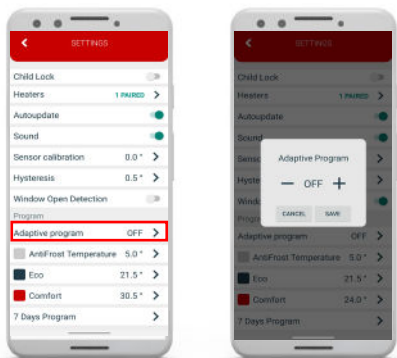


Current settings are shown here.

Temperature change range is $0.5\text{ }^{\circ}\text{C}$.

Adaptive program

- Setting the adaptive automatic program is possible by using the mobile app
- It enables the user to turn on the heating several minutes before it is scheduled in 7 Days program, so that the desired room temperature is achieved at the scheduled time.



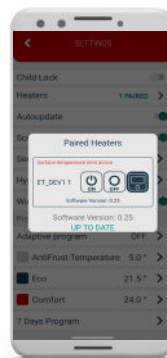
Current settings are shown here.

Update software on the heater

- The application shows the current version of the software
- When updating information, the application checks for the availability of a new version on the server
- If there is a new version, it is possible to send the update request to the device, i.e. the link to the specific file with the latest version
- When receiving update, the device will show "uP" symbol, during the process of configuring new software
- The AUTOUPDATE (enable / disable) option will enable automatic update of the heaters firmware. By selecting autoupdate, each subsequent available update will be

applied on the heater inside the device and will update automatically.

- If Autoupdate is active, the heaters section will display information about the current firmware version, and that the update is registered and will be updated automatically. There is a possibility of immediate update as before in case the latest version is not registered. If the Autoupdate option is turned off, in the heaters section there is an option for manual firmware update if the new update is available.
- If the AUTOUPDATE is active disconnecting power supply and reconnecting will automatically update the software once the device is back online if the update is available.




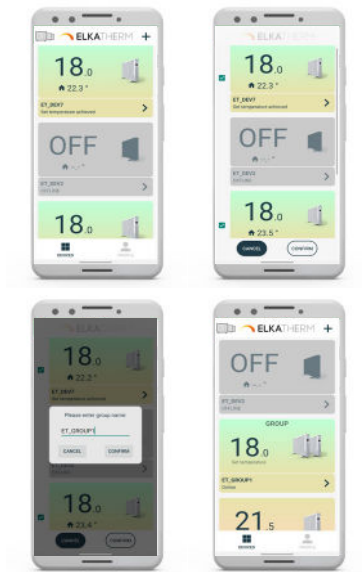
During the update, the device display shows "uP" digits.

Device groups

How to group devices


It is possible to group only already online 2 or more devices on main list.

1. Open the mobile app.
2. Click on button create group. 
3. A check box will be displayed; check if you want to add.
4. Options Confirm if you want to create or Cancel if you don't want, are available on the screen
5. If you choose create group a new pop-up will be displayed in which group name should be entered .
6. After clicking Confirm a group will be created.



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To add a device to an existing group:

1. Open the mobile app
2. Click on button  (add to group)
3. Select the device you want to add.
4. Select the group to which you want to add the device

In this type of grouping the devices, all devices in the group are configured with all group settings; all changes in the group are automatically applied to each device in the group, on all available accounts, regardless of whether the device is separate or part of a group (same group which is shared; because it cannot certainly be part of another group).

In this connection, any change on the device (devices in the group): physically on the heater, or on the battery thermostat, or via mobile application, will be automatically applied to all devices in that group, and the main screen of groups in the application will display the same status because each device will receive the same setting. If the change on all devices is to be made through the application, then on the main control screen of the group, these changes will be set. In this connection, the statuses of the individual devices will be displayed on the additional screen.

On the group main screen it is possible to set temperature for manual, eco, comfort, antifrost modes, or activate program mode.



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Share group


It is possible to share already connected device with other accounts (e.g. with family members) by using the mobile app.

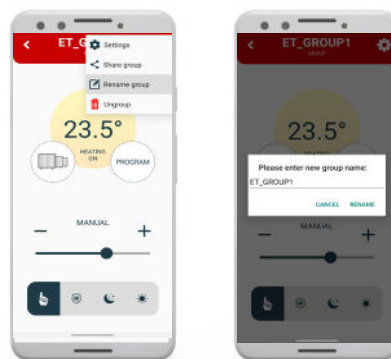
1. Open the mobile app.
2. Select the group you want to share.
3. Click the symbol  in the upper right corner.
4. Select SHARE GROUP.
5. Use other mobile phone to scan QR-code from the screen of your group.



Rename group

It is possible to rename the group via mobile app.

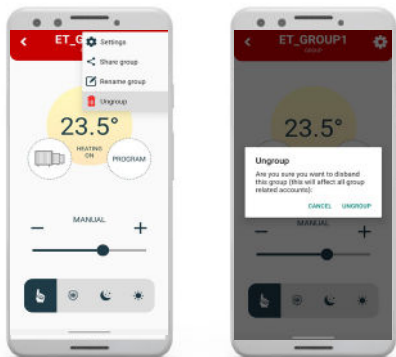
1. Open the mobile app.
2. Select the device you want to rename.
3. Click the symbol  in the upper right corner.
4. Select RENAME GROUP.
5. Choose RENAME if you want to rename the group or CANCEL if you don't want to rename the group.



Ungroup group

It is possible to ungroup the group from mobile app. If the device is shared with multiple accounts, it will only be ungroup from your account.

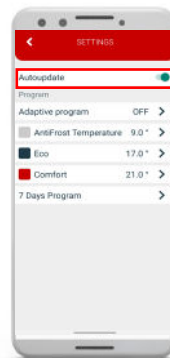
1. Open the mobile app.
2. Select the group you want to share.
3. Click the symbol in the upper right corner.
4. Select UNGROUP.
5. A message will be displayed; choose ACCEPT if you want to ungroup the devices or CANCEL if you don't want to ungroup the devices.



Autoupdate


The AUTOUPDATE (enable/disable) option will enable automatic update of the heater's firmware. By selecting autoupdate, each subsequent available update will be forced on the heater inside the device and will update automatically.

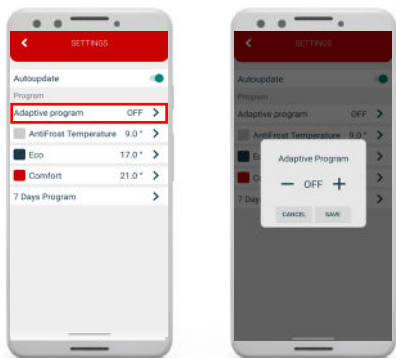
If Autoupdate is active, the heaters section will display information about the current firmware version, and that the update is registered and will be updated automatically. There is a possibility of immediate update as before in case the latest version is not registered. If the Autoupdate option is turned off, in the heaters section there is an option for manual firmware update as in previous applications/versions.



Adaptive program

Setting the adaptive program is possible by using the mobile app. It enables the user to turn on the heating several minutes before it is scheduled in 7 Days program, so that the desired room temperature is achieved at the scheduled time.


1. Click the symbol  in the upper right corner and then click SETTINGS.
2. Choose ADAPTIVE PROGRAM and set the desired value desired value between 1 and 60 minutes, or OFF.
3. Click SAVE.

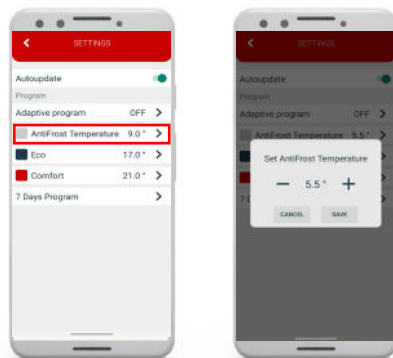


Antifrost

In the mobile app on the control panel antifrost can be modified from 0-17C. It will also be immediately modified in the settings.

To modify antifrost in the settings follow the steps:


1. Click on the symbol  in the upper right corner and then click on SETTINGS.
2. Click on AntiFrost and set the desired temperature.
3. Click SAVE.

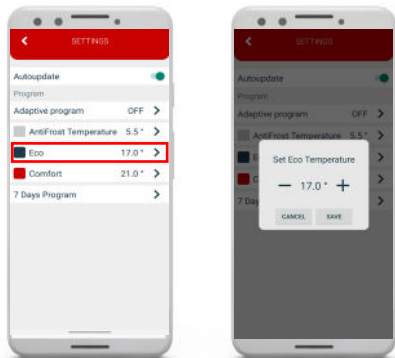


Setting the Eco temperature

In the mobile app, on the control panel, Eco temperature can be modified from 10-30 C. It will also be immediately modified in the settings.

To modify Eco temperature in the settings follow the steps:


1. Click the symbol  in the upper right corner and then click SETTINGS.
2. Choose Eco temperature and set desired value.
3. Click SAVE.

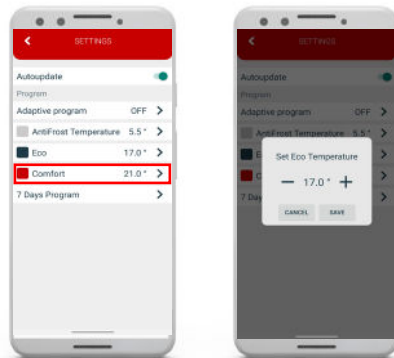


Setting the Comfort temperature

In the mobile app, on the control panel, Comfort temperature can be modified from 15-35 C. It will also be immediately modified in the settings.


To modify Comfort temperature in the settings follow the steps:

1. Click the symbol  in the upper right corner and then click SETTINGS.
2. Choose Comfort temperature and set desired value.
3. Click SAVE.

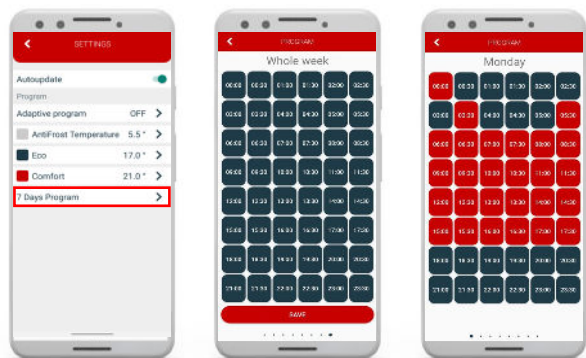


Setting the weekly program

The program can be set for each day in a week separately or for the whole week at once. During one day for every half an hour Comfort/Eco/AntiFrost temperature is being set. Economic temperature is set by default in other half-hour intervals. To setup the whole week, swipe all the way to the right.

- Click the symbol  in the upper right corner and then click SETTINGS.
- Choose SEVEN DAYS PROGRAM.
- Choose half-hour intervals in which you want to have Comfort, Eco or AntiFrost temperature activated, for each day separately or the whole week at once.

NOTE: First setup the time for the entire week, then if necessary adjust the time for each day.



Group individual settings


Individual Devices in Group

Individual settings within the group will be limited.

A connection in which all devices in the group are configured with all group settings and all changes in the group are automatically applied to each device in the group, on all available accounts, regardless of whether the device is separate or part of a group (same group which is shared; because it cannot certainly be part of another group).

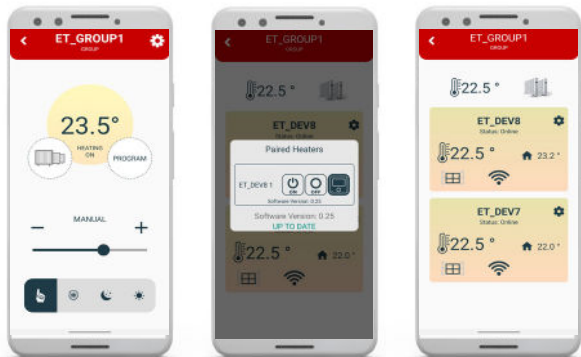
In this connection, any change on the device (devices in the group): physically on the heater, or on the battery thermostat, will be automatically applied to all devices in that group, and the main screen groups in the application will display the status of that device because everyone will receive the same setting. If the change on all devices is to be made through the application, then on the main control screen of the group, these changes will be set. In this connection, the statuses of the individual devices will be displayed on the screen.

To see statuses of the individual devices within the group:

1. Click on button  group.
2. New screen will be displayed

Device status information is only displayed and the user has no additional settings.

Clicking (pressing) on any part of the device field (except the gear icon) opens a new screen.



Child Lock

With Child Lock turned on, the thermostat can only be controlled via mobile app while changing the settings on the thermostat itself is disabled. The Child Lock will turn on immediately but the information will be displayed on the thermostat a few minutes later (Max. 3 minutes). Disabling the child lock in device settings will unlock the device.

The device can be unlocked manually:

- Press and hold two buttons
- Keep holding the buttons until "LC" is shown on the display
- Release the buttons when "LC" is shown on the display
- The device should unlock.

In case of internet loss and the child lock is still on you can

return it to manual mode by disconnecting heater from the power and turning it again on.

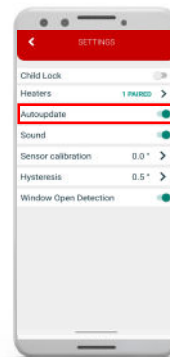
Thermostat information

There are informations about thermostat and battery status, if connected.

Autoupdate

The AUTOUPDATE (enable/disable) option will enable automatic update of the heater's firmware. By selecting autoupdate, each subsequent available update will be forced on the heater inside the device and will update automatically.

If Autoupdate is active, the Heaters section will display information about the current firmware version, and that the update is registered and will be updated automatically. There is a possibility of immediate update as before in case the latest version is not registered. If the Autoupdate option is turned off, in the heaters section there is an option for manual firmware update as in previous applications/versions.



Heaters

When clicked on it, it shows the number of active heaters that are interconnected and connected to the app. For every individual heater there is a control panel to set the modes ON, OFF or AUTO. Beneath each heater the current software version is mentioned. If the version is up to date it will say UP TO DATE if the new version is available it will say UPGRADE. To upgrade the software version each time, it will need to be done manually.

Sound

The sound can be disabled or enabled for each device in the group individually.

Error state

There can also be states of the heaters which will be indicated by background color in the app. If the color of the option Heaters normal (white) the devices are functioning normally. If the color of the option Heaters is red that means that there is some error on the device. If you tap on the option Heaters, it will lead in the new menu previously explained, where you can see the type of error and for which individual heater. The error states are also indicated on the heaters itself by blinking red and blue LED light.

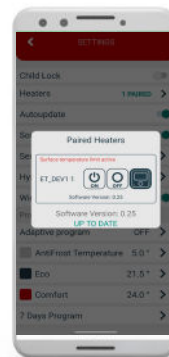
There are 3 info states that can happen on the heaters:

- Surface temperature limit active
- Surface temperature limit reached
- No information

In the following pages each of the errors will be explained.

Surface temperature limit active

If it is active, it means that an external sensor (surface temperature sensor) has been added. The room temperature will be controlled by the user definition temperature setting and the heater will be controlled by the temperature limit defined by surface temperature sensor.



Surface temperature limit reached


The meaning of this information is that the device is overheating. Surface limit temperature is 57°C. It is indicated by red message as information in the option Paired Heaters in app. This information will cause the surface to turn off due to overheating, until the temperature drops by 0.5°C and then turn on again.

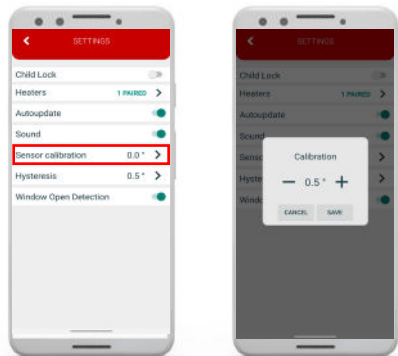
No information

If surface temperature limit is not active, no information will be displayed.

Temperature sensor calibration


Sensor calibration is an adjustment performed on a sensor to make that thermostat as accurate as possible.

1. Open the mobile app.
2. Click the symbol  in the upper right corner and then click SETTINGS.
3. Choose SENSOR CALIBRATION and set desired value between $-5\text{ }^{\circ}\text{C}$ and $+5\text{ }^{\circ}\text{C}$.
4. Click SAVE.

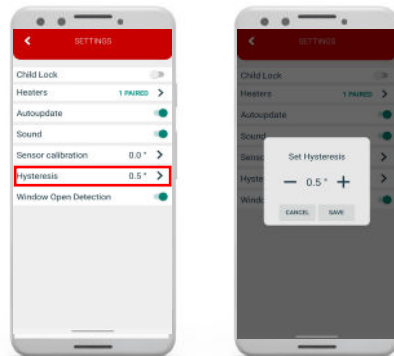


Setting the hysteresis

Hysteresis is the value for which the current temperature must be lower than the set temperature in order to switch the heating on. Hysteresis setup is possible via mobile app.

1. Open the mobile app.
2. Click the symbol  in the upper right corner and then click SETTINGS.

3. Choose HYSTERESIS and set desired value between $0.2\text{ }^{\circ}\text{C}$ and $5\text{ }^{\circ}\text{C}$.
4. Click SAVE.




Window open detection

Window open detection is a feature that detects whether your window is open. It can only be detected when the heater is turned on. If opened window has been detected the heater will automatically be turned off for next 10 minutes, unless you apply some change to any of your general settings which will temporarily disable window open detection for the next 30 minutes. Also after 10 minutes have passed since the opened window has been detected, this will also temporarily disable window open detection for the next 30 minutes.

Window open detection can be enabled or disabled via mobile app at any given time.

1. Open the mobile app.

2. Click the symbol  in the upper right corner and then click SETTINGS.
3. Press on the slider to turn on/off window open

