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CALEON

Installation and Operation Manual  
°CALEON WIFI ROOM UNIT

EN

CALEON

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# SAFETY INSTRUCTIONS

## Declaration

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By affixing the CE mark to the unit the manufacturer declares that °CALEON unit conforms to the following relevant safety regulations:

- EU low voltage directive 2014/35/EU
- EU electromagnetic compatibility directive 2014/30/EU

Conformity has been verified and the corresponding documentation and the EU declaration of conformity are kept on file by the manufacturer.

## General instructions

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### Please read carefully!

These installation and operating instructions contain basic instructions and important information regarding safety, installation, commissioning, maintenance and the optimal use of the unit. Therefore these instructions must be read and understood completely by the installation technician/specialist and by the system user before installation, commissioning and operation of the unit. Installation, electrical connection, commissioning and maintenance of the unit may only be carried out by specialists who possess the appropriate training.

**Users:** Make sure that the specialist gives you detailed information on the function and operation of the unit. Always keep these instructions in the vicinity of the unit. Changes to the unit may compromise safety and functioning of the unit and entire heating system.

## Changes to the Unit

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- Changes, additions to or conversion of the unit are not permitted without written permission from the manufacturer.
- It is likewise forbidden to install additional components that have not been tested together with the unit.
- If it becomes clear that safe operation of the unit is no longer possible, for example because of damage to the housing, turn the Unit off immediately.
- Any parts of the unit or accessories that are not in perfect condition must be exchanged immediately.
- Use only original spare parts and accessories from the manufacturer.
- Markings made on the unit at the factory must not be altered, removed or made illegible.
- Only the settings described in these instructions may be set using the Unit.



Changes to the unit can compromise the safety and function of the unit or the entire system.

## Warranty and Liability

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The Unit has been manufactured and tested with regard to high quality and safety requirements. The warranty and liability shall not include, however, any injury to persons or material damage that is attributable to one or more of the following causes:

- Failure to observe these installation and operating instructions.
- Improper installation, commissioning, maintenance and operation.
- Improperly executed repairs.
- Unauthorized structural changes to the unit.
- Additional components have been installed into the Unit that have not been tested with it.
- Damage caused by continuing to use the Unit despite an obvious defect.
- Use of non-OEM spare parts
- Use of the device for other than its intended purpose.
- Operation above or below the limit values listed in the Specifications section.
- Force majeure

## Disposal of the Unit

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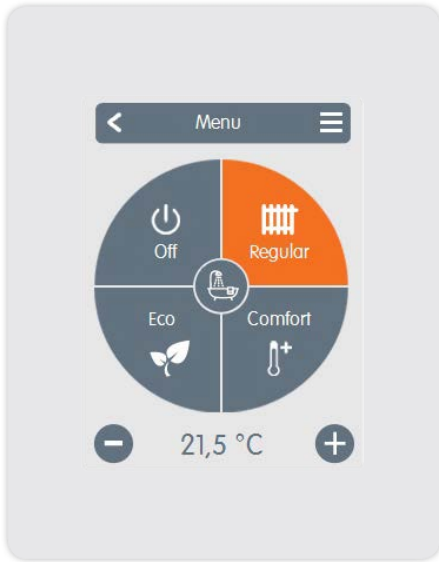
The unit conforms to the European RoHS 2011/65/EU for the restriction of the use of certain hazardous substances in electrical and electronic equipment.



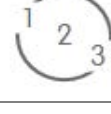



Under no circumstances may the device be disposed of with the normal household waste. Dispose of the unit only at appropriate collection points or ship it back to the seller or manufacturer.

# DESCRIPTION OF °CALEON ROOM UNIT

## Specifications



 Housing	2-part, ABS plastic 75 mm x 95 mm x 19 mm Glass front
 Display	Capacitive touch screen Colour display with 240x320 dots 7 cm diagonal
 Operation	Intuitive user guidance
 Language	Deutsch                      English Español                      Italiano Français                      Português

### Electrical Data:

Power supply	12 - 24 VDC +/- 10%
Power consumption	0,5 W - 1,0 W
IP rating	IP20
Protection class / overvoltage category	III / II

### Max. cable length

CAN  
Up to 3m an unshielded pair bus cable can be used. If the cable length is over 3m, it is necessary to use a shielded twisted pair bus cable and connect the shield on one side to the protective conductor.

### Permissible Ambient Conditions

during operation	0 °C - 50 °C, no moisture condensation permitted
for transport/storage	0 °C - 60 °C, no moisture condensation permitted

### Measuring range Internal

temperature sensor	0 °C - 60 °C	Accuracy +/- 1 °C Resolution 0,1 °C
Internal humidity sensor	0 % - 100 % RH	Accuracy +/- 6 % Resolution 0,1 %

### Other Specifications

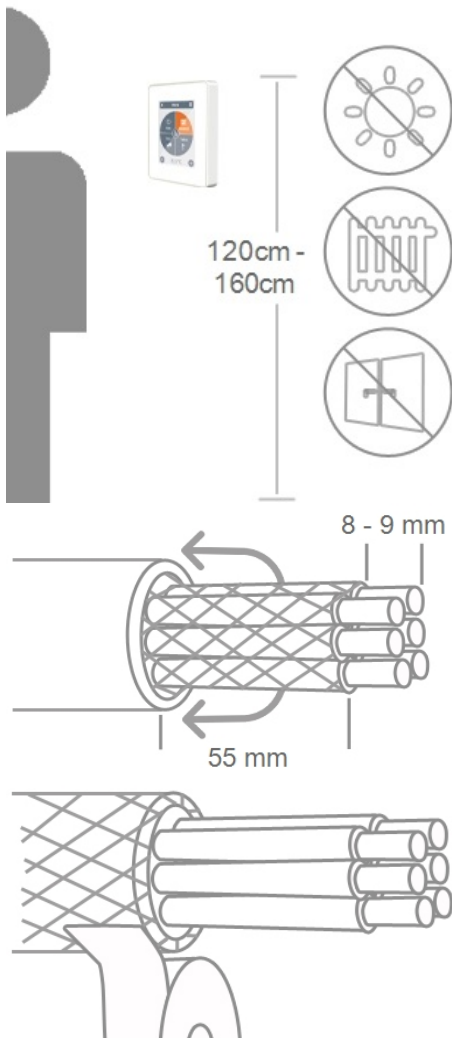
Installation methods	Wall installation, with/without wall socket
Real time circuit	24 hours power reserve

## Scope of Supply


- °CALEON Room Unit
- 2 screws 3,5 x 35 mm and 2 plugs 6 mm for wall installation
- 2 single conductor connectors, CAN connector with connecting cables, terminating resistor CAN connector, terminating resistor °CALEON, operating tool
- °CALEON installation guide

# INSTALLATION

## °CALEON Installation



Mount the unit at a suitable location.


 Pay attention to suitable environmental conditions. Direct sunlight, sources of heat and cold, e.g. radiators and windows must be avoided.

Strip cables, slip protective conductor over, and remove fill material as needed.

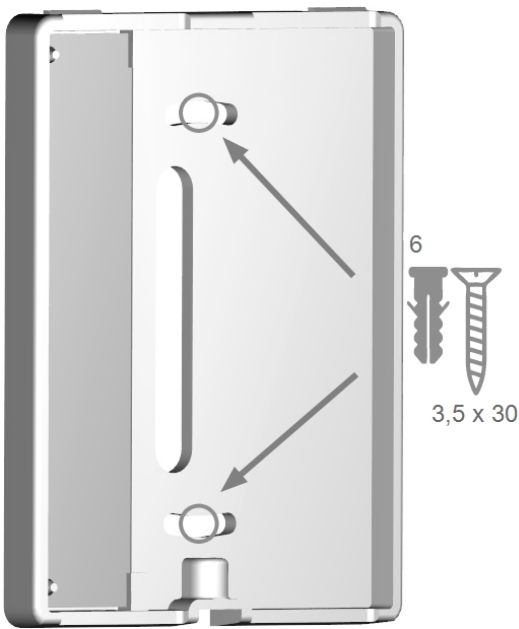
When mounting °CALEON's base to the wall the connecting cables must be kept as short as possible. For direct wall mounting a maximum length of 40 mm is recommended. Long wire loops inside the °CALEON's housing may cause problems.

When mounting °CALEON's base to a plastic wall socket the connecting cables must be kept as short as possible (strip cables not more than 55 mm). Also make sure that wire loops are led back to the plastic wall socket, since long wire loops inside the °CALEON's housing may cause problems.

Strip the last 8-9 mm of the wires. Isolate shielding and connect it at a suitable location (controller or CAN-box) to the protective conductor.

 Any contact between protective conductor and circuit board can cause serious damage.

Strip cables by 75 mm max. and strip the last 7-10 mm of the wires.

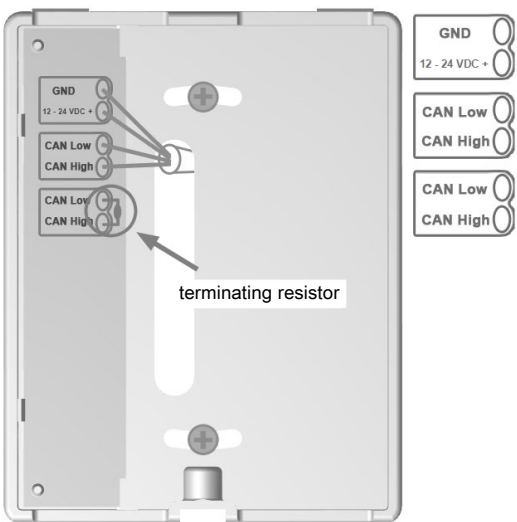


### Mounting on plastic wall socket

Fix the base with the screws (3.0 x 16) to the mounting box.

### Direct wall mounting

Hold the lower part of the housing up to the selected position and mark the mounting holes. Make sure that the wall surface is as even as possible so that the housing does not become distorted when screwed on. Using a 6mm drill, drill 2 holes at the points marked on the wall and push in the plugs. Insert screws and screw it in slightly. Align the base and tighten the screws.



Open the terminals with the enclosed operating tool and connect the electric cables as described.



Power supply 12 - 24 VDC, ensure correct polarity or it may cause damage to the unit!



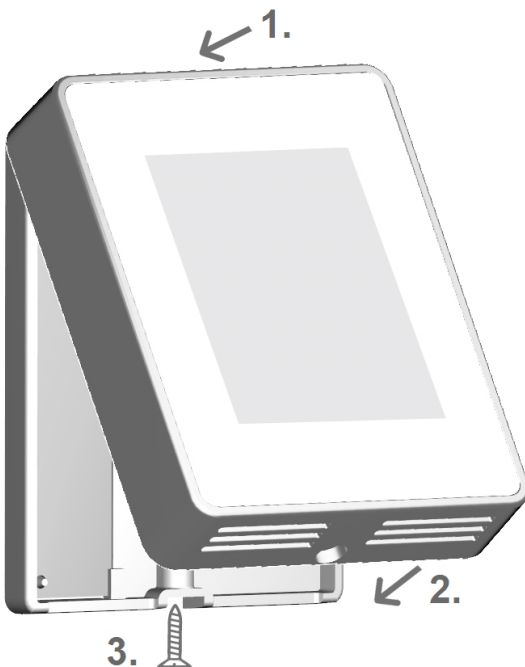
The first and last unit in the CAN-network in series must be fitted with terminating resistor.

The connection of the opposite side (controller) can be found in the corresponding terminal diagram in the controller manual.

Refit the base and fasten with screw. Switch on mains voltage and place °CALEON in operation.

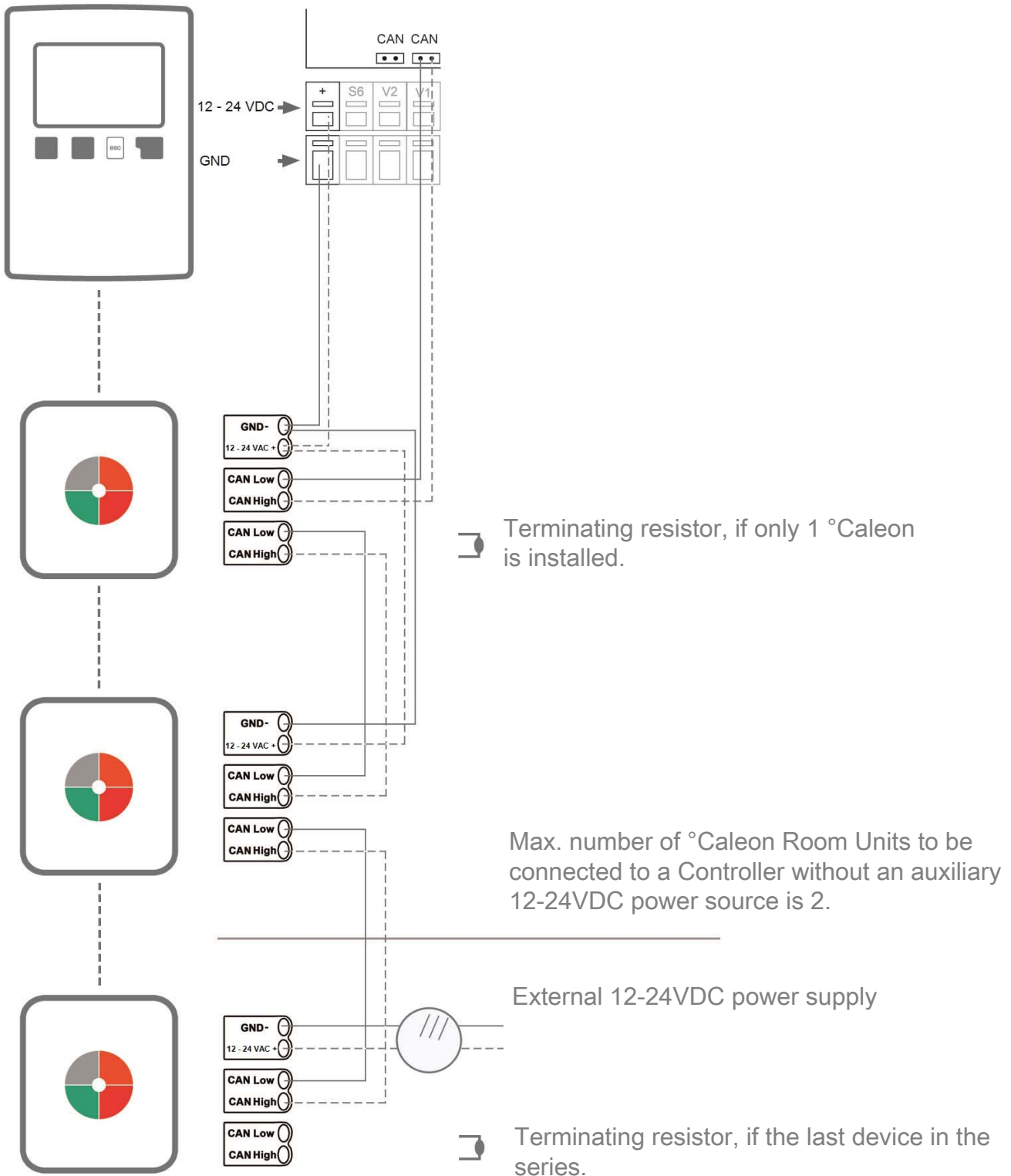


The Commissioning menu can be accessed from the Expert menu at any time.



## Example of Controller Connection

Use a four-core cable to electrically connect the Caleon room unit to controllers with CAN communication. If the cable length is more than 3 meters, use a twisted shielded cable and connect the shield at one end of the cable. If the cable length is less than 3 meters, it is possible to use a non-twisted unshielded cable. Connect the CAN power and communication as shown in fig. below. Alternatively, it is possible to connect the CAN communication between the Caleon room unit and controllers with CAN communication via a two-core cable. The power supply of the room unit must then be solved by an external 24VDC power supply. The CAN bus terminating resistor may be connected just to one end of the communication line (either to the controller or to the last unit in the series - see figure below). The resistor included with the Caleon unit is designed for connection to a connector on the controller's printed circuit board.





# OPERATION

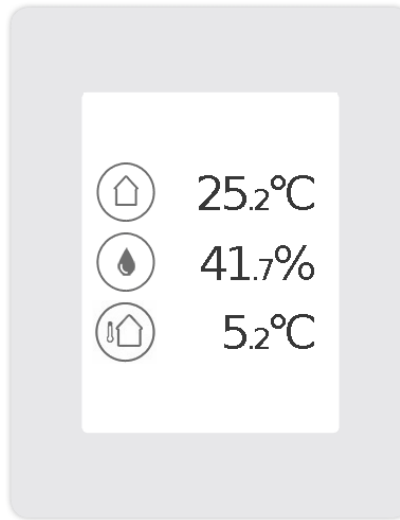
## Overview of temperatures & humidity

It displays room temperature and humidity as well as outside temperature. If there is no activity for 60 sec., the device is automatically switched to the overview.



### Room temperature

This indicates the temperature of the selected space with 0.1°C resolution.



### Room humidity

Here the relative humidity in the room is displayed with 0.1 % resolution.



### Outdoor temperature

This is the outdoor temperature with 0.1°C resolution, measured by the connected controller.

## Operating Mode Selection



### Back

navigates back to the overview.



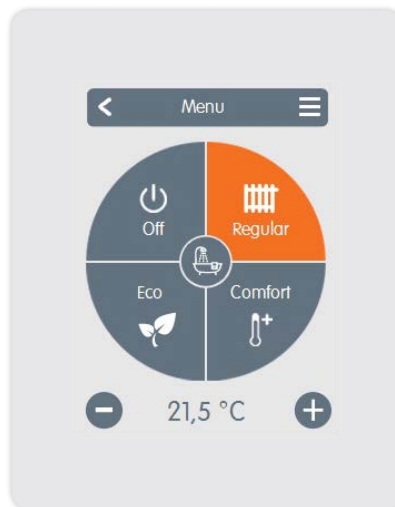
### Location/Room

displays the selected location/room.



### Minus/Plus

changes the desired temperature +/- 0.5 ° C.



### Operating modes

navigates to the main menu.



### Operating modes

specifies which operating mode (Normal, Comfort, Eco and Off) is selected. The selected mode is shown in colour. By pressing the plus and minus keys it is possible to adjust the setpoint temperature of the modes.

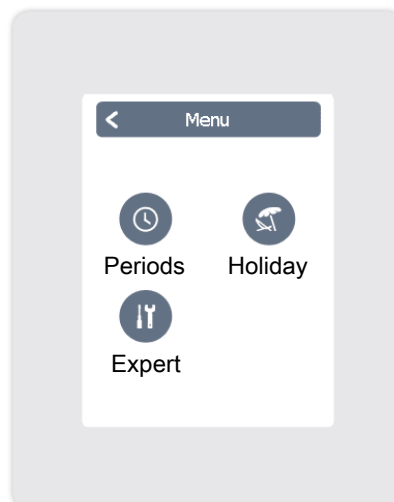
## Main Menu

Overview > Operating Mode > Main Menu



### Periods

Adjustment of individual heating times for each weekday with copy function for subsequent days.



### Holiday

Set time and temperature for the period of absence.



### Expert

Standard settings such as language, time and date, functional options and factory setting.

## Expert Menu

Overview > Operating Mode > Main Menu > Expert

### Language

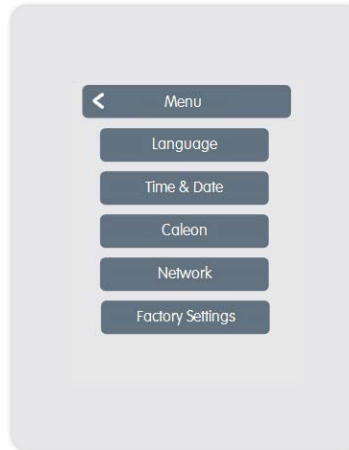
The configuration of the device language.

### Time & Date

The configuration of the time and date and automatic summer/winter changeover.

### Caleon

Settings concerning basic functions such as sensor calibration, location and commissioning.



### Network

Information on device version as well as the CAN ID for the device on the network.

### Factory Settings

The factory settings are restored in the device.

## Expert Menu °CALEON

Overview > Operating Mode > Main Menu > Expert > Settings

### Devices

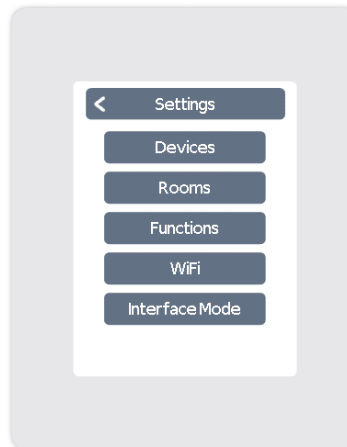
Used to adapt the offset for the said local sensors, display brightness etc.

### Rooms

In this menu you specify in which room °CALEON is installed.

### Functions

In this menu all the available functions of the connected controller can be set.



### WiFi

Here the features of the wireless WiFi network are set and managed.

### Interface mode

Setting the unit type – normal (full functions) or simple (basic display).

To exit the simple display mode, press and hold the top right corner of the display for at least 5 seconds.

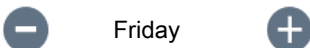
## Set Operation Hours

Overview > Operating Mode > Main Menu > Timer



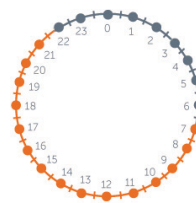
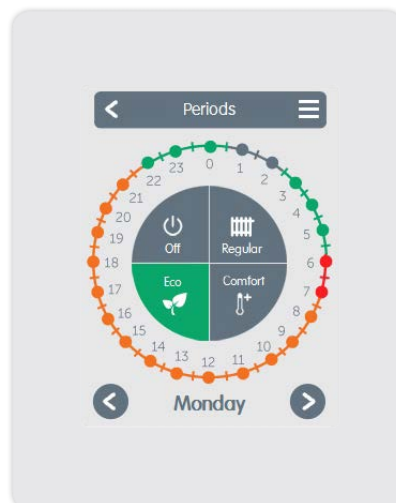
### Operating modes

Selects the operating mode to individual heating sections.



### Previous/Next Day

Selects the set day.



### Clock

Time table of the selection in periods of 30 minutes increments.



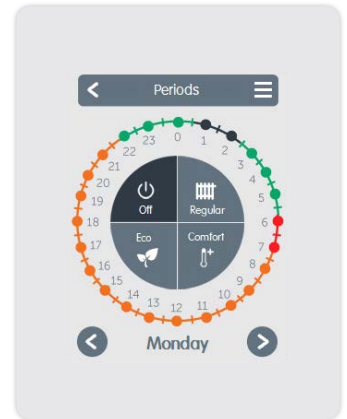
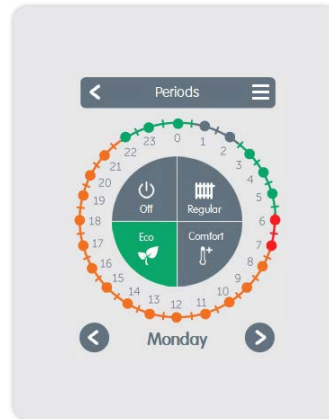
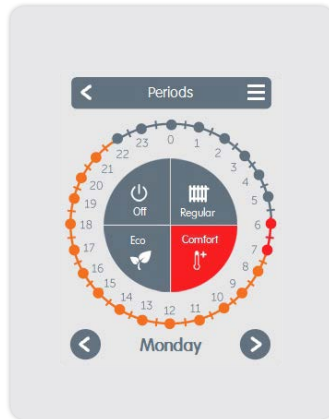
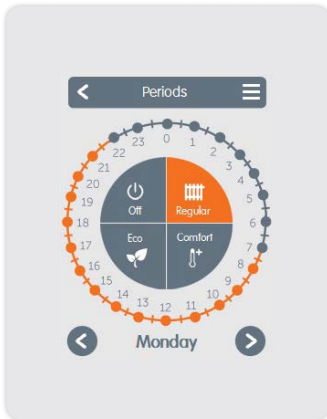
### Menu

Opens the copy function. This function allows you to copy the heating times for the next day, on Monday-Friday or Monday-Sunday.

## Setting Operation Hours

### Step 1

Use the arrow keys to select the desired day.



### Step 2

Select the first heating mode (Regular) - with the index finger select the desired length of time. The selected period is coloured by selecting the colour of the operating mode (regular = orange).

### Step 3

Continue to the next mode (Comfort) and proceed as described above, select the time period for the Comfort Mode.

### Step 4

Continue to the next mode (Eco) and proceed as described above, select the time period for the Eco Mode.

### Step 5

Continue to the next mode (Off) and proceed as described above, select the time period for the Off Mode.

### Step 6

After the completion of the setting of the individual heating times, you have the option of selecting times using the main menu for the next day, or to copy Monday-Friday or Monday-Sunday.

## WiFi Settings

Overview > Operating Mode > Main Menu > Expert > WiFi

### Enable WiFi

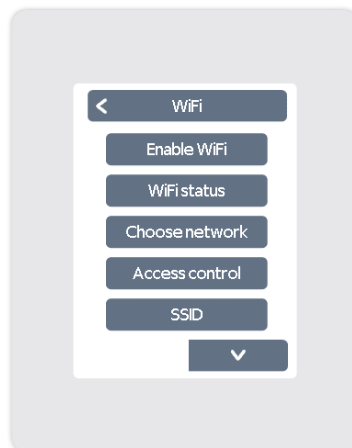
Activates connection to wireless network

### WiFi status

Network and signal status, address information for the Caleon room unit (required to connect to the Caleon App).

### Choose Network

Search for all available wireless networks within range.



### Access control

Allow access through Caleon App.

You can fill in up to 5 e-mail addresses that will have a permission for remote access to the room unit.

### SSID

The possibility of manually connecting to a WiFi network by entering its name (for example, if the network does not actively broadcast its name, is hidden).

### Password

Enter the password to connect to the wireless network.

### Enable DHCP

Activation of network IP address retrieval by DHCP server (recommended). If DHCP is not activated or the DHCP server is not in the network, it is necessary to fill in the IP addresses manually.

### IP address

Room unit IP address.



### Subnet mask

Network space mask of the wireless network

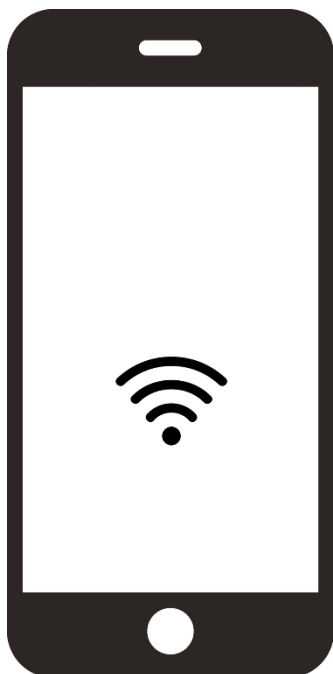
### Gateway

Gateway (router) IP address.

### DNS/DNS 2

DNS server addresses (primary / secondary).

## Downloading and configuring Caleon App



1. Download the Caleon App to your mobile device. The app is available for Android (Google Play) and iOS (Apple App Store).
2. Launch the application and create a user account.
3. Confirm your email address by clicking the link in the activation email.
4. Connect the room unit to the WiFi network  
in Expert > WiFi > Choose network .
5. Enable remote access from your email address in the  
Expert > WiFi> Access Control menu.
6. Log in to the Caleon App using your email address and password.
7. In the Caleon App, fill in the network address of your room unit (you can find the address in Expert > WiFi> Wifi Status).