Installation and operating instruction

HERZ clever&smart Room Controller Clima

3 F810 22

Read carefully before installation, commissioning and operation

CONTENT

Safety Instructions

▢ EG-Conformity

By affixing the CE mark to the unit the manufacturer declares that the HERZ clever&smart Room Controller Clima conforms to the following relevant safety regulations:

- EU low voltage directive 2014/35/EU
- EU electromagnetic compatibility directive 2014/30/EU
- EU RoHS Directive 2011/65/EU
- EU WEEE Directive 2012/19/EU (Reg.nr. DE 23479719)

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

▢ General Instructions

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.

This unit is an automatic, electrical Room Controller. Install the unit only in dry areas and under the ambient conditions described in "Specifications".

In addition, observe the applicable accident prevention regulations, the regulations of the Association of Electrical Engineering, the local power supply utility, the applicable DIN-EN standards and the installation and operating instructions for the additional system components. Installation, electrical connection, commissioning and maintenance of the device may only be carried out by an appropriately trained specialist.
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.

The manufacturer does not take over any liability for damage caused through improper usage or non-compliance of this manual!

> ⚠ Before working on the unit, switch off the power supply and secure it against being switched on again! Check that there is no power flowing! Electrical connections may only be made by a specialist and in compliance with the applicable regulations. The unit may not be put into operation if there is visible damage to the housing, e.g. cracks.

▢ Changes to the Unit

- 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

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
- Unauthorised structural changes to the unit
- 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 and Pollutants

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.

> ⚠ 🗑 For disposal, according to the WEEE Directive 2012/19/EU, the device does not belong in household waste under any circumstances. Dispose of the unit only at appropriate collection points or ship it back to the seller or manufacturer.

Description HERZ clever&smart Room Controller Clima

♡ Technical Data

Housing	2-part, ABS plastic 75 mm x 95 mm x 19 mm Glass front
Display	Capacitive touch panel Color display with 240x320 dots 2.8 inches (7 cm) diagonal
Operation	Intuitive user guidance
Language	20 menu languages selectable

Electrical specifications:

Power Supply	24 VDC +/- 10 %
Power consumption	max. 2,5 W
Protection Class	IP 20
Protection class / overvoltage category	III / I

Permissible Ambient Conditions

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

Measurement Range	Outside the measuring ranges there are larger deviations	
Internal temperature sensor	0 °C - 60 °C	Accuracy +/- 1 °C
		Resolution 0,1 °C
Internal sensor for rel. humidity	0 % - 100 %	Accuracy +/- 6 °C
		Resolution 0,1 %

⚠ After switching on or disconnecting from the mains, it takes up to 60 minutes until the temperature is displayed precisely.

Other Specifications

Installation Methods	Wall installation, with/without wall socket
Real Time Clock	RTC with 24 hour power reserve

♡ Scope of Supply

- HERZ clever&smart Room Controller Clima
- 2 screws 3,5 x 35 mm and 2 plugs 6 mm for wall installation.
- Terminating resistor (120 Ohm) pre-installed on one of the two CAN High/CAN Low connections, operating tool, switch box
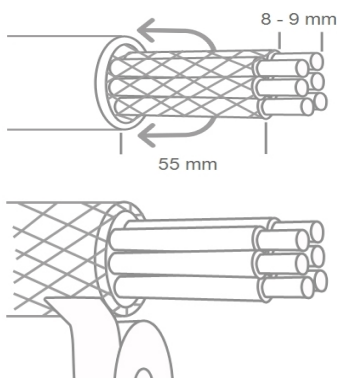- HERZ clever&smart Room Controller Clima installation guide

Installation

♡ HERZ clever&smart Room Controller Clima installation
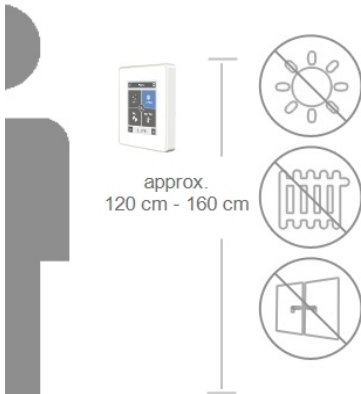
Mount the unit at a suitable location.

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

Recommended connection cable: twisted pair cable with shield, e.g. bus cable 3 × 2 × 0,22 mm². Strip cables, slip protective conductor over, and remove fill material as needed.

When wall mounting, make sure that the cables are kept as short as possible (max. 40 mm for direct wall mounting), as unnecessary vein loops in the HERZ clever&smart Room Controller Clima housing can lead to problems.

When mounting on a switch box, make sure that the cables are kept as short as possible (strip cables max. 55 mm) and that any vein loops are fed back into the switch box, as unnecessary vein loops in the HERZ clever&smart Room Controller Clima housing can lead to 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.

Mounting on plastic wall socket

Fasten the base to the switch box with the enclosed screws (3.0 x 16 mm).

Direct wall mounting

Hold the lower part of the housing up to the selected position and mark the three mounting holes. Make sure that the wall surface is as even as possible so that the housing does not become distorted when it is screwed on. Using a drill and drill 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.
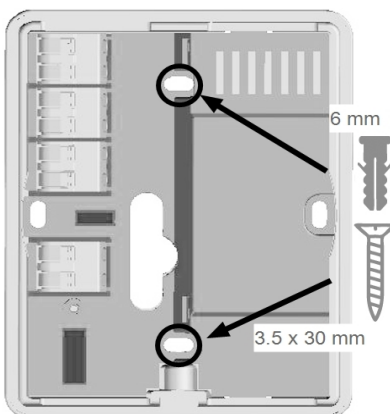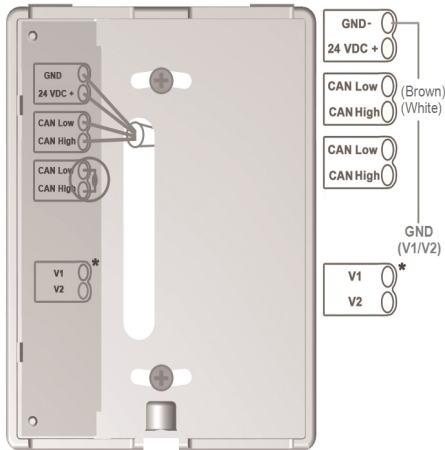
Open the connection terminals with the accompanying operating tool and make the electrical connection (24 VDC, GND, CAN-High and CAN-Low) as described in the operating manual of the Control Box.

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

Operating tool

For the pin assignment of the CAN bus line on the HERZ clever&smart Control Box, please refer to the corresponding instructions for use or operating manual.

* Only available on Clima version!
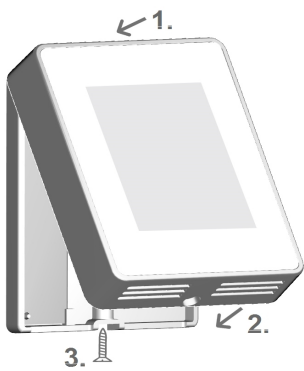
Place the control panel on the lower part of the housing as illustrated in the picture and fix it in place with the screw supplied.
Switch on the mains voltage of the Control Box and put the HERZ clever&smart Room Controller Clima into operation.

⚠️ The setup wizard can be accessed at any time in HERZ clever&smart Room Controller Clima under the menu item 'Expert'.

♡ Room Overview

Displays the room temperature, humidity and outdoor temperature after activating the start screen.

Room icon

Selecting a room icon takes you to the room temperature settings.

Outdoor temperature

Displayed as soon as an outdoor sensor is used or an outdoor sensor is activated on a HERZ clever&smart Control Box menu "Expert > Control Box > Heating circuit > Sensor outdoor".

Multiroom selection

By dragging your finger vertically across several rooms, you can change the operating mode in all rooms at the same time.

45.0 %
19.5 °C
23.0 °C
22.7 °C
11.3 °C
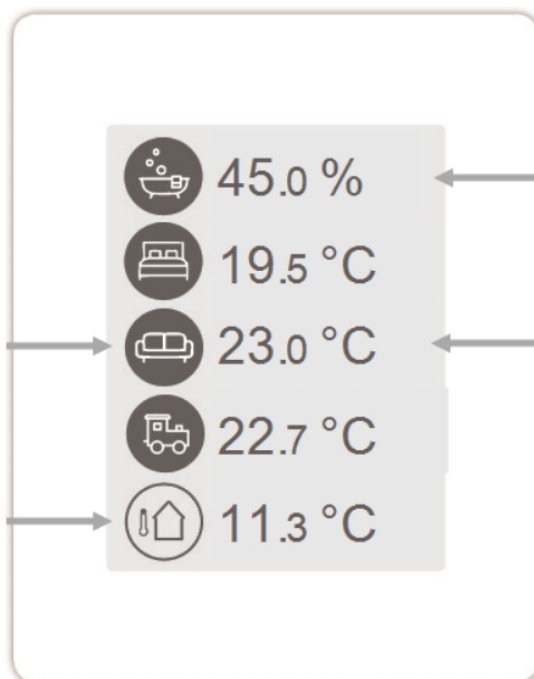
%
Room humidity

Relative humidity.

°C
Room temperature

Current room temperature.

Operating Mode

Back/ Forward
Navigate back to the overview.

Room
Displays the selected space.

Reference temperature
Setting the reference temperature for the active operating mode in the displayed room.
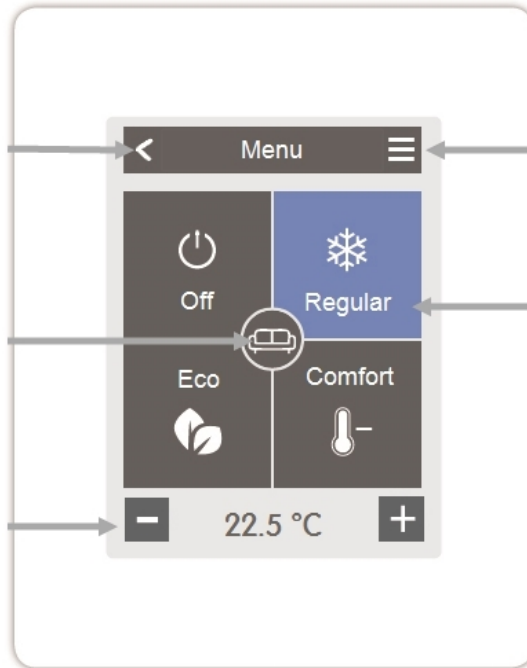
Menu
Navigate to the main menu
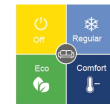
Operating Modes
The operating mode shown in colour is currently active and can be changed by selecting another mode. Manually selected modes remain active until the next change of mode by the timer program. A background frost protection function remains active in the "off" mode.

Menu

Heating/cooling
Switch between heating and cooling modes.

Holiday
Set the period and temperature for a longer absence.
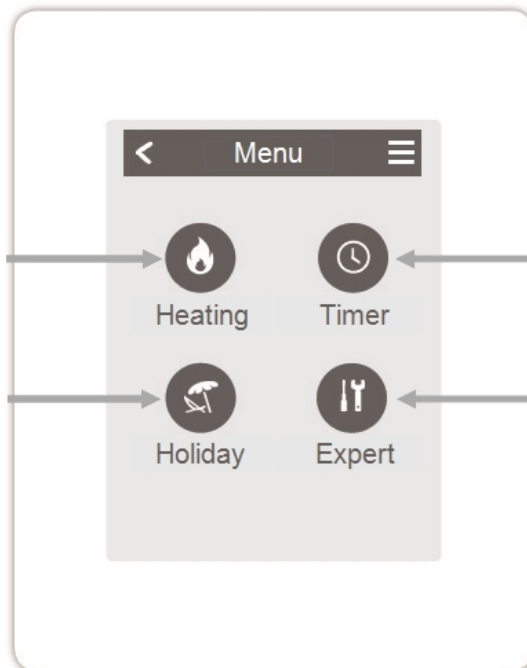
Timer
Setting of individual heating or cooling times for each day of the week with copy function for subsequent days.

Expert
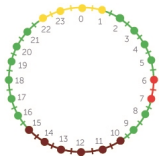Advanced settings for the technician.

♡ Set Operation Hours

Overview > Operating Mode > Menu > **Timer**

Setting of individual heating and cooling times for the selected room.
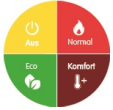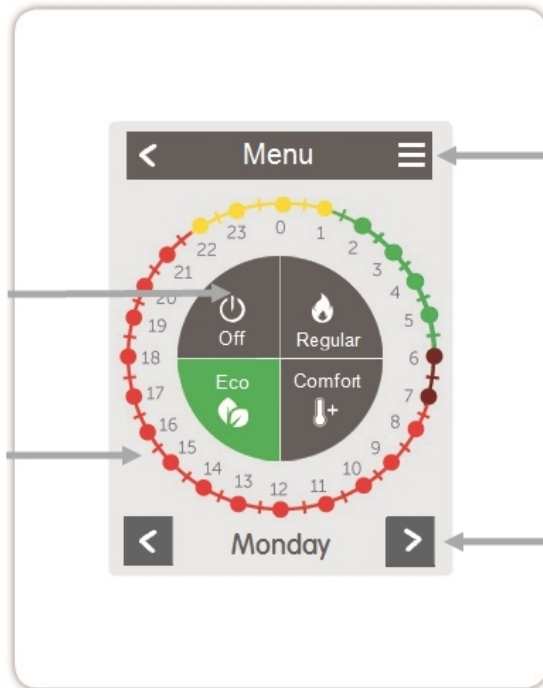
Operating Modes
Selection of the operating mode to select individual heating or cooling sections.

Clock
Time table of the selection in periods of 30 minutes increments.
Touch individual segments, or drag your finger over complete time intervals to colour them according to the selected operation mode.

Menu
Opens the copy function. The function allows you to copy the heating and cooling times to the following day, to Monday - Friday or to Monday - Sunday.

Back / Next Weekday
Selects the set day.

♡ Set Operation Hours Example

Step 1
Use the arrow keys to select the desired day.
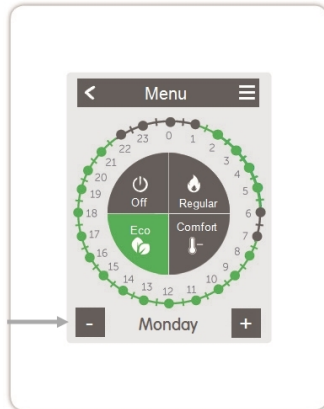
Step 2
Select the desired mode (Normal, Comfort, Eco or Off) and then move your index finger over the desired time period. The selected period changes colour to the colour of the selected operating mode after selection. Set the times of the other operating modes in the same way.
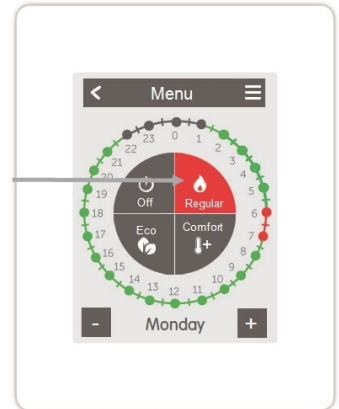
Step 3
After completing the setting of the individual heating or cooling times, you have the option of copying the times via the main menu to the following day, to Monday - Friday or to Monday - Sunday or to set them individually for each day of the week.
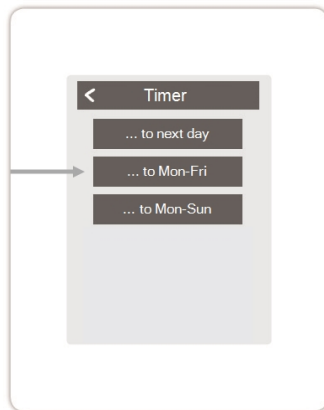
In the interests of efficient and energy-saving single room control, the operating times should be set specifically for each room.

♡ Expert Menu
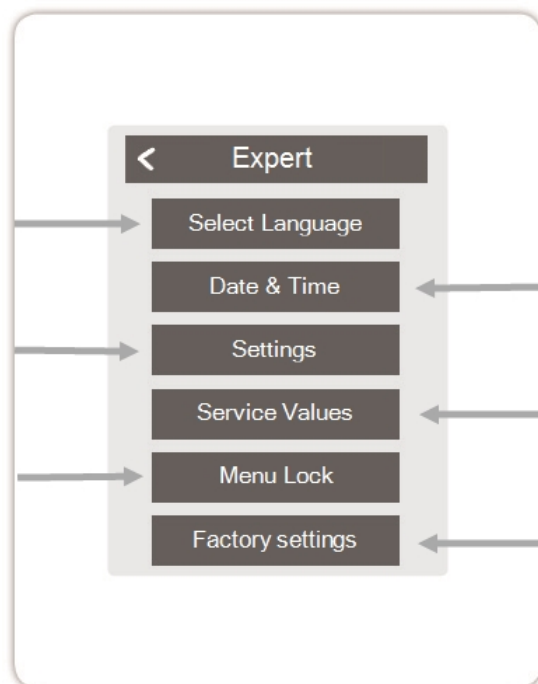
Select Language
Set the device language

Settings
Parameterisation of the heating/cooling system

Menu Lock
Activate menu lock to protect settings with a password.

Date & Time
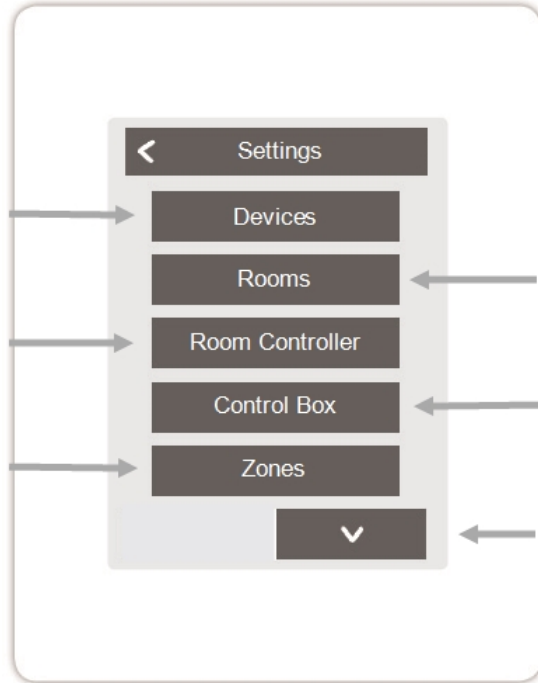Setting the time and date and automatic summertime/wintertime changeover

Service Values
Information about the system

Factory settings
The factory settings are restored in the device

> The menu structure described here is based on the status at the time of production and may vary due to subsequent software changes.

♡ Settings

Devices
Add, manage and remove connected devices

Room Controller
Assignment and configuration of additional functions for analogue outputs V1/V2

Zones
Assigning rooms to heating and cooling zones

Rooms
Add, manage and remove rooms and assign them to connected devices

Control Box
Assignment and configuration of additional functions of the free switching outputs on the HERZ clever&smart Control Box Clima. This menu is only visible if this HERZ clever&smart Room Controller Clima was set as the "Configurator" ("Expert > Settings > Devices > Control box > Configurator") of the HERZ clever&smart Control Box Clima during commissioning.

Display Brightness
Adjust the display brightness

Interface Mode
Switch between full and restricted menu. Only the reference temperature can be set in the mode "Hide menu". To return to "full" mode, press and hold the upper-right corner of the display for 5 seconds.

Room Sync.
If room synchronisation is activated, rooms set up on other HERZ clever&smart Room Controllers of the same network are also displayed on this HERZ clever&smart Room Controller and vice versa.
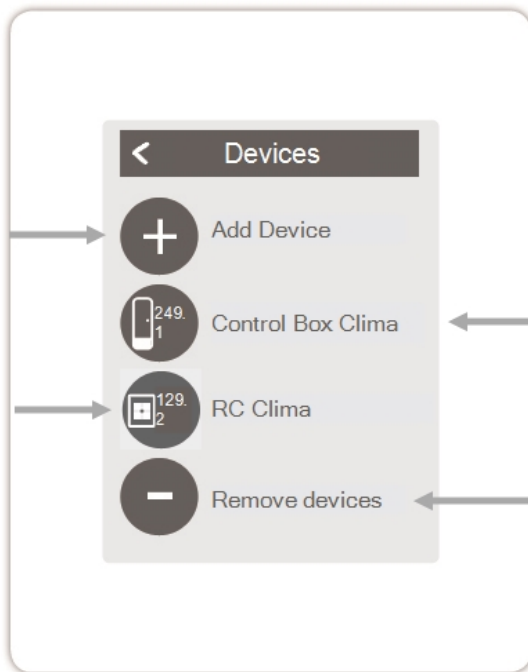
♡ Devices

Overview > Operating mode > Menu > Expert > Settings > **Devices**

⚠️ Clima systems must first be switched to 'heating' mode before another device can be added to the system during operation.

Add Device
Starts the search for new available devices in the network

Device icon
Shows the type of connected device and its CAN ID

Description
Shows the detected type of the unit

Remove devices
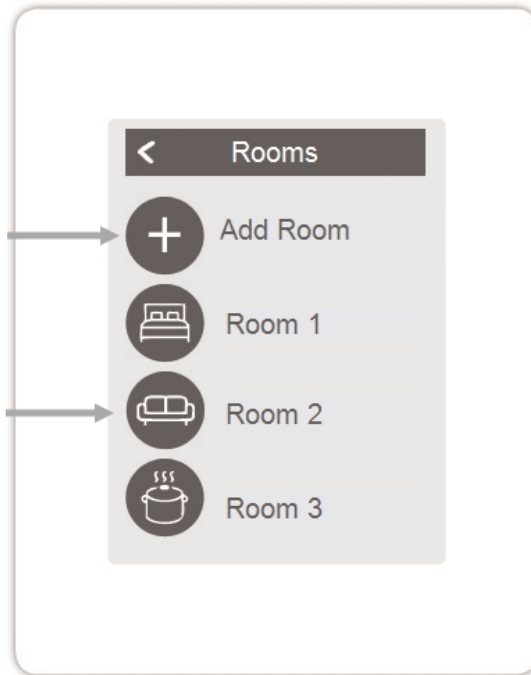Devices are removed from the network

♡ Rooms

Overview > Operating mode > Menu > Expert > Settings > **Rooms**

Add Room
Adding rooms

Room 2
Setting the location, sensors and
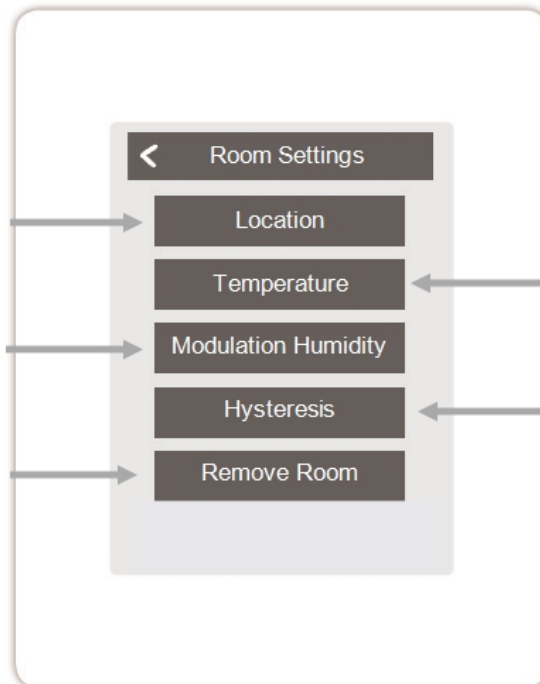actuators of the respective room

Overview > Operating mode > Menu > Expert > Settings > **Room 2**

Location
Selection of the space icon

Modulation Humidity
Sensors in the selected room

Remove Room
Removing the selected room
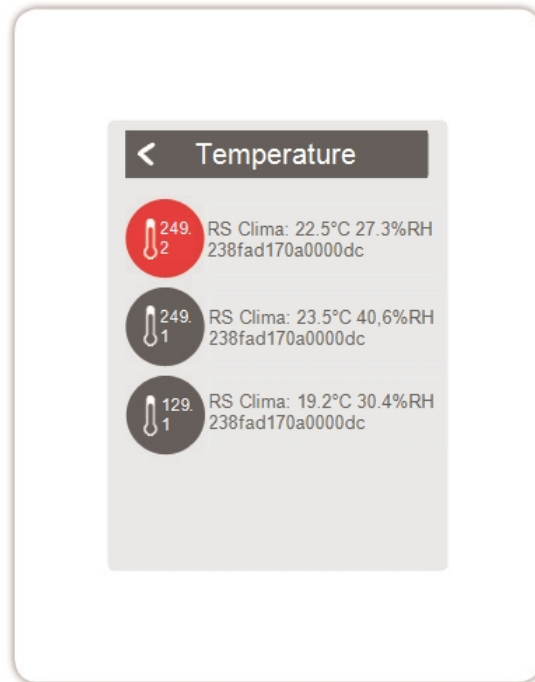
Temperature
Sensors in the selected room

Hysteresis
Switch-off hysteresis for the room
setpoint temperature

♡ Sensors

Icon
Already selected sensor

CAN ID of the Control Box + serial number
Temperature sensor selection in the selected room

Sensor icon with CAN ID of the control box + serial number
Humidity sensor selection in the selected room
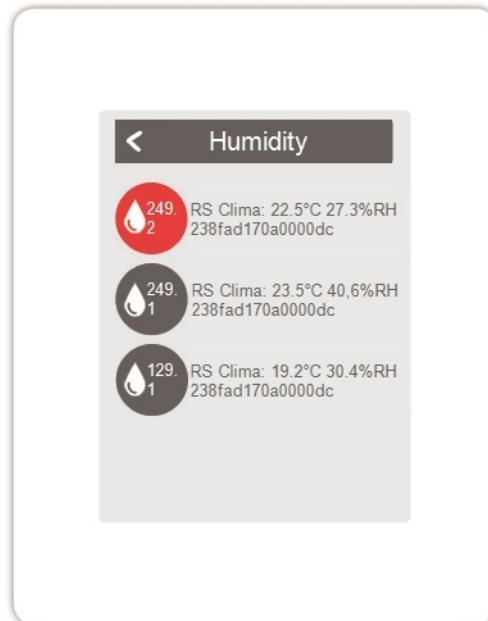
♡ Room Controller

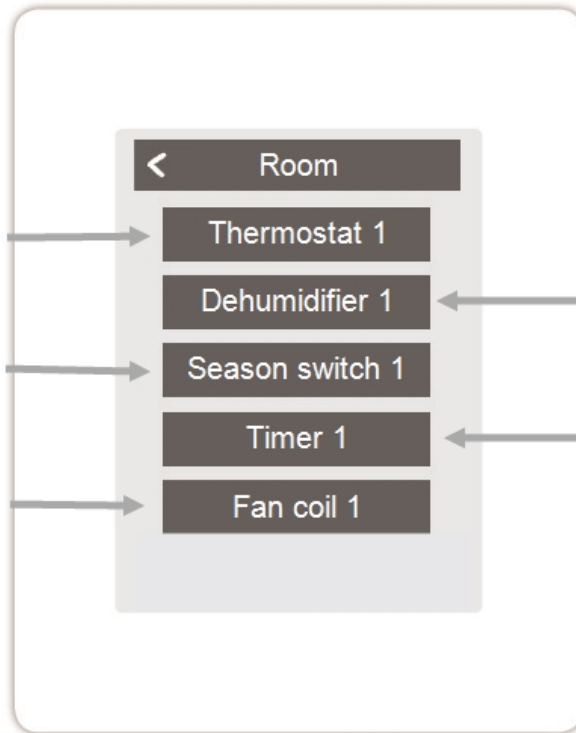Activate and set additional functions.

Thermostat 1
Switches the defined output to the set room / rooms depending on time and temperature.

Season switch 1
Switches the operating mode of the heat pump / cooling unit between "heating" and "cooling". For this, the heat pump / refrigeration unit must be suitable for reversible operation.

Fan coil 1
Controls convection heating and cooling via the 0-10 V or PWM outputs.

Dehumidifier 1
Switches the defined output depending on the set humidity in the set room(s).

Timer 1
Switches the defined output depending on the set times.

< Room
Thermostat 1
Dehumidifier 1
Season switch 1
Timer 1
Fan coil 1

Switches the defined output to the set room / rooms depending on time and temperature.
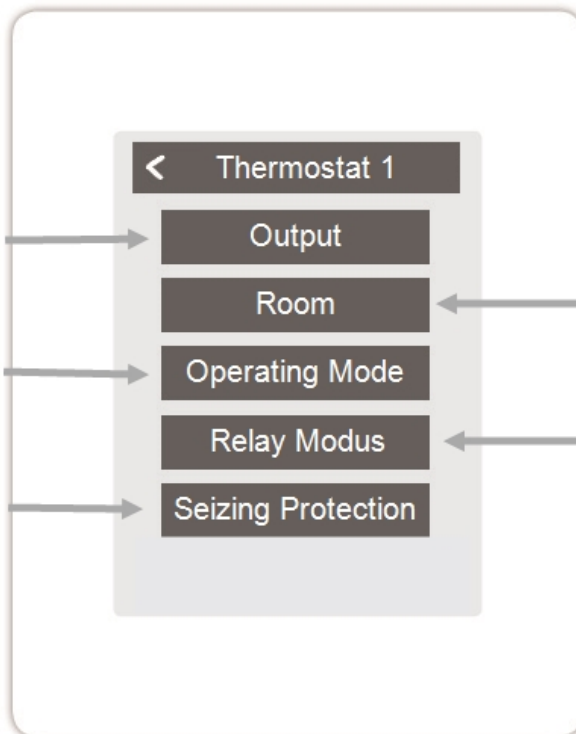
Output
Assign the output to be switched by the function. The other menu options become visible after assigning the output.

Operating Mode
Set the operating mode of this thermostat function. Heating, cooling or heating and cooling

Seizing Protection
If the seizing protection is activated (daily, weekly, off), the Control Box switches on the outputs at 12 o'clock for 5 seconds one after the other to prevent the connected actuator from seizing in case of longer inactivity.

Room
Selection of the sensors on whose settings and states the function is to be based.

Relay Modus
Switching mode of the output: regular / inverted

< Thermostat 1
Output
Room
Operating Mode
Relay Modus
Seizing Protection

The dehumidifier function switches the defined output depending on the set humidity in the set room(s).
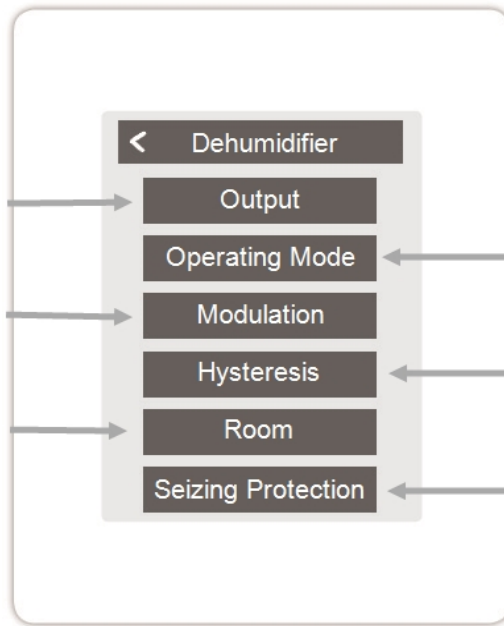
Output
Assign the output to be switched by the function. The other menu options become visible after assigning the output.

Modulation Humidity
Set the limit value for the air humidity. If this is exceeded, the dehumidifier is switched on.

Room
Room selection for assigning the humidity of a room as the basis for switching the dehumidifier.

Operating Mode
Specify in which operating states of the heating and cooling system the dehumidifier is to be switched on.

Hysteresis
Set the switch-off hysteresis

Seizing Protection
If the seizing protection is activated (daily, weekly, off), the Control Box switches on the outputs at 12 o'clock for 5 seconds one after the other to prevent the connected actuator from seizing in case of longer inactivity.

The seasonal switch changes the operating mode of the heat pump (compressor) between "heating" and "cooling". Therefore the heat pump (compressor) must be compatible with reversible operation.

Output
Assign the output to be switched by the function. The other menu options become visible after assigning the output.

Seizing Protection
If the seizing protection is activated (daily, weekly, off), the Control Box switches on the outputs at 12 o'clock for 5 seconds one after the other to prevent the connected actuator from seizing in case of longer inactivity.
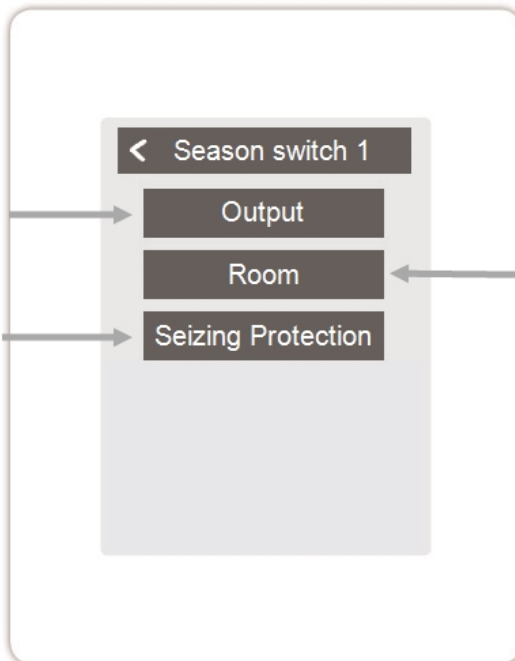
Room
Room selection to start the function. As soon as one of the assigned rooms switches from "heating" mode to "cooling" mode the season switch becomes active and the assigned relay is switched.

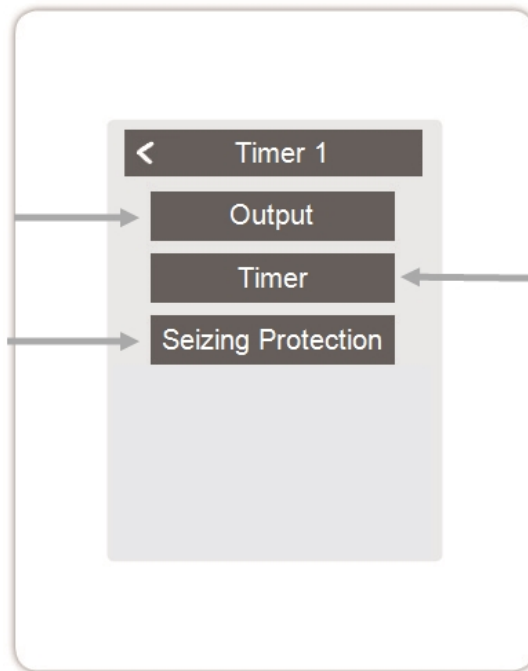The function Timer 1-2 switches the defined output depending on the set times.

Output
Assign the output to be switched by the function.
The other menu options become visible after assigning the output.

Seizing Protection
If the seizing protection is activated (daily, weekly, off), the Control Box switches on the outputs at 12 o'clock for 5 seconds one after the other to prevent the connected actuator from seizing in case of longer inactivity.

< Timer 1
Output
Timer
Seizing Protection

Timer
Set the times at which the outputs are to be switched.

The fan coil function controls convection heating and cooling via the 0-10V/PWM outputs .

Output
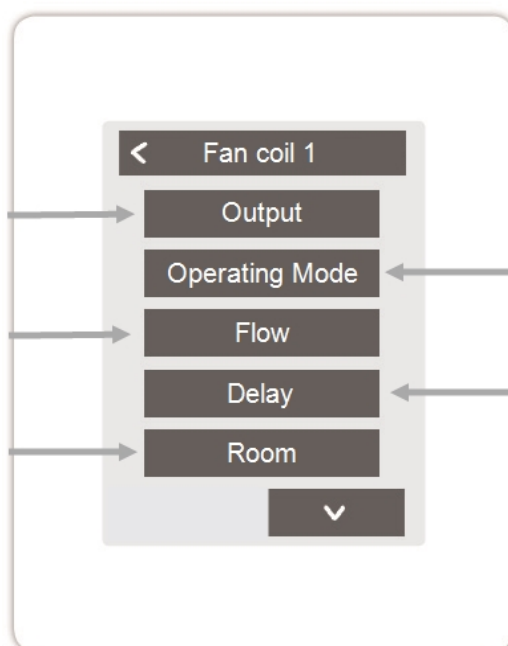Assign the output to be switched by the function.
The other menu options become visible after assigning the output.

Flow
Assignment of the convector flow sensor in "Heating" mode.

Room
Selection of the sensors on whose settings and states the function is to be based.

Operating Mode
Set the operating mode of this convector function. Heating, cooling, or heating and cooling.

Delay
Delays the switching on of the fan coil so that it does not push against closed valves.

Modulation Humidity
Set the limit value for the air humidity. If this is exceeded, the fan coil is switched on.

Hysteresis
Set the switch-off hysteresis

Modulation
Modulation of the output for power control

Signal type
Selection of the control:
0-10V = voltage signal
PWM = square wave signal

Relay Modus
Switching mode of the output:
regular / inverted

Off Signal
Signal to switch off the target device

On Signal
Signal to switch on the target device at minimum power

Max Signal
Signal to set target unit to maximum power

Seizing Protection
If the seizing protection is activated (daily, weekly, off), the Control Box switches on the outputs at 12 o'clock for 5 seconds one after the other to prevent the connected actuator from seizing in case of longer inactivity.
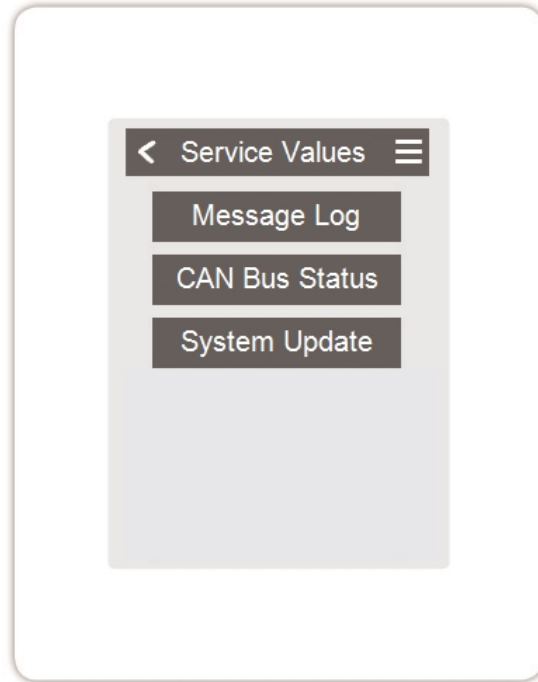
♡ Service Values

Message Log
Display of the error memory

System Update
Enables an update of all Room
Controller and Control Boxs
networked in the private CAN network.

CAN Bus Status
CAN bus status display

♡ Support

Event	Support
The display does not show anything.	Is the device connected to the 24 VDC power supply of the Control Box (terminal L)? Has the electrical connection been implemented as described in the operating manual?
No Control Box appears in the unit menu or CAN bus participants are missing.	Is the CAN bus connection properly installed and have all CAN bus devices been wired in a line structure (no star or tree)? Are terminating resistors (120 Ohm) installed on the first and last CAN bus nodes of the line between the CAN high and CAN low connections for terminating the CAN bus?
No additional function can be assigned to the analogue outputs V1/V2 of the HERZ Room Controller Clima WiFi.	Is the selected function already assigned to another output? Is the output already assigned to another function?

♡ Notes

Event	Support

Final Declaration
Although these instructions have been created with the greatest possible care, the possibility of incorrect or incomplete information cannot be excluded. Subject as a basic principle to errors and technical changes.

Date and time of installation:

Name of installation company:

Space for notes:

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