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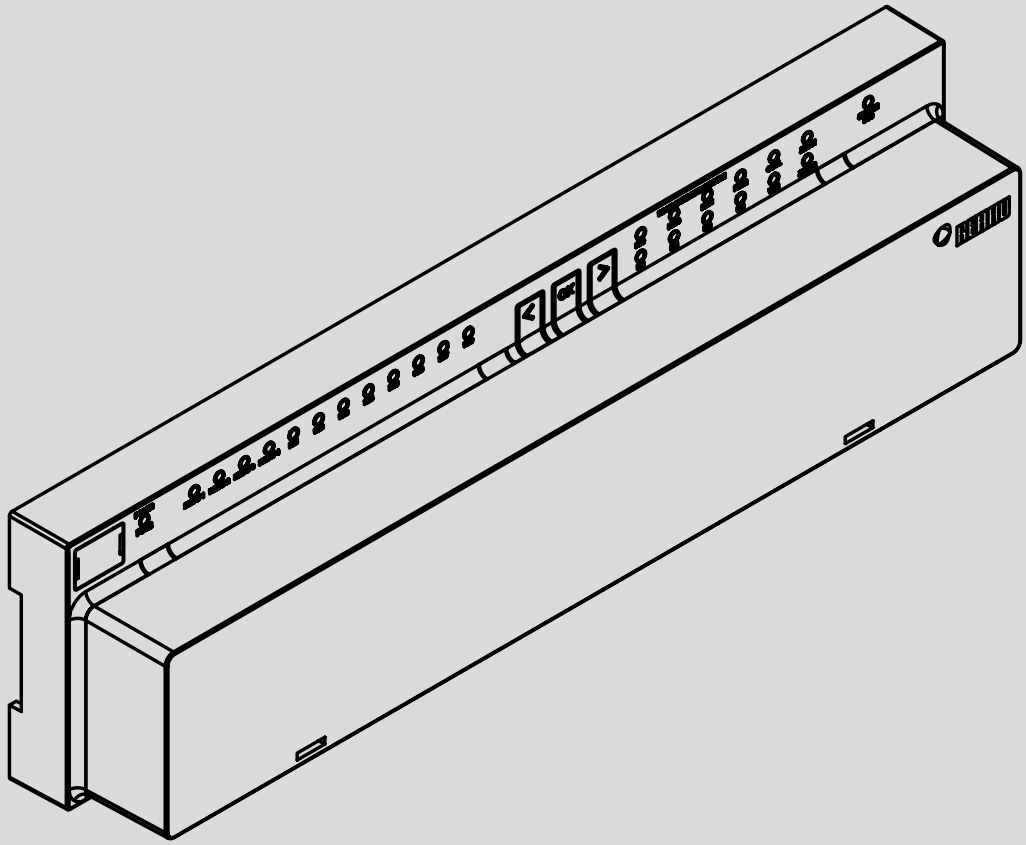


NEA SMART 2.0 Control System

EN Commissioning instructions for switched fan coils and modulating RAUCLIMATE SILENT BREEZE fan coils

REHAU | Building Solutions

Contents

01 Safety warnings and operating instructions

Piktograms and logos
Warnings and general information are marked with the symbols listed below.

Pictograms and logos

 Danger to life due to high voltage

 Safety information

 Legal information

 Important information which must be observed

 Configurable parameter

Safety warnings and operating instructions
- For your own safety and the safety of other people, please read through all safety instructions and operating instructions carefully and completely before commencing assembly.
- Keep the operating instructions safe and have them available.
- If you have not understood the safety instructions or any individual installation instructions or find them unclear, please contact your REHAU sales office.
- Non-compliance with the safety information may lead to damage to property and personal injury.

Use in line with the specification
The NEA SMART 2.0 control system must be configured, installed and operated only as described in this technical information and in the other installation manuals for the system.
Any other use is not in accordance with the specification and is therefore not permitted.
Observe all national and international regulations on routing, installation, accident prevention and safety and the instructions in this technical information when installing piping systems and electrical components and equipment.
Areas of application which are not covered by this technical information (special applications) must be discussed with our application department.
Contact your REHAU sales office.

Prerequisites for personnel
- Our systems must only be installed by authorised and trained personnel.
- Only trained and authorised personnel may work on electrical installations or pipework components.

General precautions
- Keep your workplace clean and free of obstructions.
- Ensure that your work space has adequate lighting.
- Keep children, pets and unauthorised persons away from tools and installation areas. This particularly applies to renovations in occupied areas.

Applicable fan coil-specific documents
Be sure to follow the assembly, safety and warning instructions in the “Installation and User Manual” of the fan coil. The installation and user manual is included with the fan coil.

The functions for switched fan coils and RAUCLIMATE SILENT BREEZE fan coils described in this manual will be available from April 2024.

Requirements

Base
From software version V6.0. You can see the software version on the integrated websites in the “System” menu item and in the mobile app under “Settings”, “General”. If your system has an older software version, please perform an over-the-air update.

Room units
From software version V1.7 and with humidity measurement of type HBW, HRW, HBB, HRB.
No over-the-air update is possible for room control units.

02 Introduction

The NEA SMART 2.0 system can be operated with switched fan coils and modulating RAUCLIMATE Silent Breeze fan coils.

Switched fan coils are fan coils with the operating state on / off. The switching on / off is done via room zones (RZ) or relay outputs (RELAY) of the NEA SMART 2.0 system.

Modulating fan coils are fan coils with variable airflow (air speed) in addition to the on / off operating state. The airflow is automatically adjusted depending on the parameter setting and current operating conditions. They are controlled via the system bus (SYSBUS) of the NEA SMART 2.0 system. The NEA SMART 2.0 system is used to control fan coils of the type RAUCLIMATE SILENT BREEZE.
Depending on the version, different fan stages and a flap control are available to control the air flow (oscillating / directional).

Comfort Cooling PLUS is a smart function that automatically increases comfort and well-being in the room when RAUCLIMATE SILENT BREEZE fan coils are used in cooling mode.

The temperature felt by the user in a room is also significantly influenced by the humidity in the room. Even when the desired room temperature setpoint is reached, the user may feel uncomfortable due to excessive humidity in the room. The Comfort Cooling PLUS function continuously calculates approximately the temperature perceived by the user from the measured air temperature and humidity in the room. The calculated perceived temperature value is used to continuously adjust the fan coil set point. At the same time, the operation of the fan coil dehumidifies the air within the systemrelated limits. Without further user intervention through constant manual setpoint adjustments, Comfort Cooling PLUS automatically moves the room air condition into the comfort range using specially developed algorithms.

In addition, the operation of an additional surface cooling is optimized by reducing the humidity.

The Comfort Cooling PLUS function can be activated individually for each room.

03 System Boundaries

Maximum Number of Switched Fan coils

- Up to 60 switched fan coils per complete system in the highest configuration stage
- Up to 8 switched fan coils per NEA SMART 2.0 Base
- Up to 12 switched fan coils per NEA SMART 2.0 Base and R-Module
- The maximum number of switched fan coils is limited by:
  - Number of NEA SMART 2.0 room unit used
  - Number of available room zones (RZ)
  - 1 switched fan coil per room or control area (CA)
- Note: Each switched fan coil is assigned to only one room at a time. It is not possible to use one switched fan coil for multiple rooms.

Maximum number of modulating RAUCLIMATE SILENT BREEZE Fan Coils

- Up to 30 modulating RAUCLIMATE SILENT BREEZE fan coils per complete system in the highest configuration stage
- Up to 16 modulating RAUCLIMATE SILENT BREEZE fan coils per NEA SMART 2.0 Base
- Up to 4 modulating RAUCLIMATE SILENT BREEZE fan coils per room or control area (CA)
- Note: It is not possible to use one RAUCLIMATE SILENT BREEZE fan coil for multiple rooms

Possible Combinations

- A total of up to 5 fan coils (1x switched and 4x modulating) per room or control area (CA)
- Any combination of up to 60 switched and 30 modulating RAUCLIMATE SILENT BREEZE fan coils possible in one installation

04 General Function

Fan coils can be operated in two different configurations:
- usually for additional support of a surface heating / cooling system
- in special cases as a stand-alone heating / cooling system

It is possible to operate fan coils in the following operating modes, which are specified by the installer during the installation of the system:
- Heating mode only
- Cooling mode only
- Heating & Cooling Mode

Range of functions – Installer
The fan coil configuration is done by the installer via wizard and the room configuration pages (web pages). During operation, the installer can make settings for switched fan coils via the app

Installer	**Wizard / Web pages** Room configuration pages	**App** Installer area
Fan coil assignment to room	x	
Fan coil supply (Selection: none, manifold-number, fan coil pump global or local)	x	
Fan coil operation (Selection: heating, cooling, heating and cooling)	x	
Fan coil tolerance*)	x	
Deactivation of switched fan coils	x	
Activation of Comfort Cooling PLUS to increase comfort in unpleasantly high humidity conditions for RAUCLIMATE SILENT BREEZE fan coils	x	x
Adaption of run and pause times of switched fan coils	x	x

Range of functions – User
The fan coil user settings and the operation of the fan coils are carried out by the user via the room operating pages (web pages), the app or the room units.

User	**Web pages** Room pages	**App**	**Room units**
Selection of fan coil operating state ON, OFF and speed stage STANDBY, MIN, MED, MAX	x	x	x
Activation of the fan coil fan flap (on / off) to switch between oscillating and directional airflow	x	x	x
Fan Coil tolerance*)	x	x	
Fan coil lock / stop for deactivation of switched fan coils	x	x	
Fan Coil "Active Reduced" to activate / deactivate switched fan coils in REDUCED operation when using switched fan coils alone	x	x	
Determination of the maximum possible air speed "MAX for fan" (MIN, MED, MAX) and presetting of the fan speed stage (STANDBY, MIN, MED, MAX) in operating mode NORMAL and REDUCED for RAUCLIMATE SILENT BREEZE fan coils	x	x	
Activation of "Comfort Cooling PLUS" function to increase comfort in uncomfortably high humidity for RAUCLIMATE SILENT BREEZE fan coils	x	x	
Switching between heating, cooling or automatic switching between heating and cooling	x	x	x

*) Fan Coil tolerance:
- Comfort: Fan Coil will be activated, when room temperature is 0,5 K away from set point
- Normal: Fan Coil will be activated, when room temperature is 1 K away from set point
- ECO: Fan Coil will be activated, when room temperature is 1,5 K away from set point

05 How to connect a fan coil to the system

05.01 Switched Fan Coils

There are 4 options:

1. Relay Outputs (RELAY) of the NEA SMART 2.0 Base and the R-Module
Switched fan coils can be connected directly to the relay outputs of the base and the R-Module.

2. Room Zone Outputs (RZ) of the NEA SMART 2.0 Base and the R-Module

Switched fan coils must not be connected directly to room zones (RZ).
For connection, a decoupling via an additional relay is mandatory.

- For the base NEA SMART 2.0 24 V, the REHAU switching relay 24 V (Mat.No. 13388041001) must be used.
- For the base NEA SMART 2.0 230 V, the REHAU switching relay 230 V (Mat.No. 13388061001) must be used.

3. Relay Outputs (RELAY) of the U-Module, defined as "Fan Coil Module"
Up to 4 switched fan coils can be connected directly to the 4 relay outputs of the U-Module.

4. Relay Outputs (RELAY) of the U-Module, defined as "Fan Coil and Dehumidifier Module"
Switched fan coils can be connected directly to the assigned relay outputs #1 and #3 of the U-Module.

The relay outputs are:
#1: Fan Coil 1 (instead of a dehumidifier #1)
#2: Dehumidifier #1
#3: Fan Coil 2 (instead of a dehumidifier #2)
#4: Dehumidifier #2

Relay outputs (RELAY) at the Base, R-Modules and U-Module have a potential-free contact.
The maximum current of 1A for inductive loads must not be exceeded at relay outputs.

05.02 Modulating RAUCLIMATE SILENT BREEZE Fan Coils

Modulating RAUCLIMATE SILENT BREEZE fan coils are connected to the NEA SMART 2.0 system bus (SYSBUS) and controlled via it.

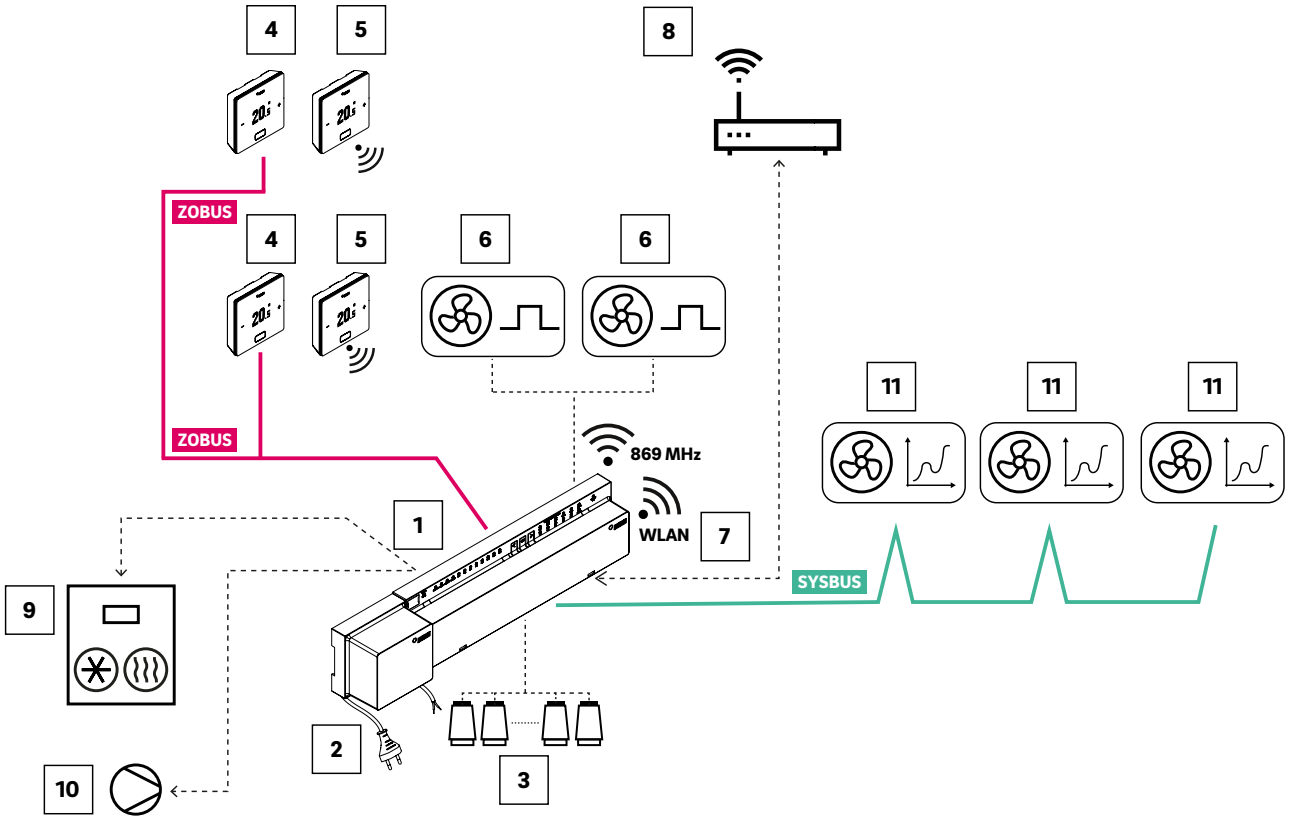


Fig. 05-1 NEA SMART 2.0 system, room temperature control for heating / cooling with switched fan coils and modulating RAUCLIMATE SILENT BREEZE fan coils

ZOBUS	Zone Bus (ZOBUS) for connecting the room controllers	6	Switched fan coils, controlled via relay output (RELAY) of the NEA SMART 2.0 Base or via NEA SMART Switching relay, connected to room zone output (RZ)
SYSBUS	System bus for connecting slaves, U-modules and modulating RAUCLIMATE SILENT BREEZE fan coils	7	WLAN / LAN interface to connect the system to router and cloud
1	NEA SMART 2.0 Base 24 V, central control unit (master) for up to 8 rooms	8	Router for WLAN / LAN home network and connection to the cloud
2	NEA SMART 2.0 Transformer 24 V	9	Demand signal of the base to heater / chiller
3	Actuators 24 V on the manifold	10	Demand signal from the base to (global) pump for radiant systems and to (local / global) pumps for fan coils
4	NEA SMART 2.0 Room unit wired, for measuring room temperature and room air humidity	11	RAUCLIMATE SILENT BREEZE Fan Coils
5	NEA SMART 2.0 Room unit wireless, for measuring room temperature and room air humidity		

Tab. 05-1 NEA SMART 2.0 system, room control for heating / cooling with switched fan coils and modulating RAUCLIMATE SILENT BREEZE fan coils

Within the NEA SMART 2.0 system, the RAUCLIMATE SILENT BREEZE fan coils must be clearly assigned to the associated NEA SMART 2.0 Base (Master, Slave 1, Slave 2, Slave 3 or Slave 4) and clearly numbered within the assigned base.

The connection of the system bus (SYSBUS) and the assignment (addressing) via DIP switches is carried out on the gateway circuit board. The gateway circuit board is a component of the main circuit board of fan coil.

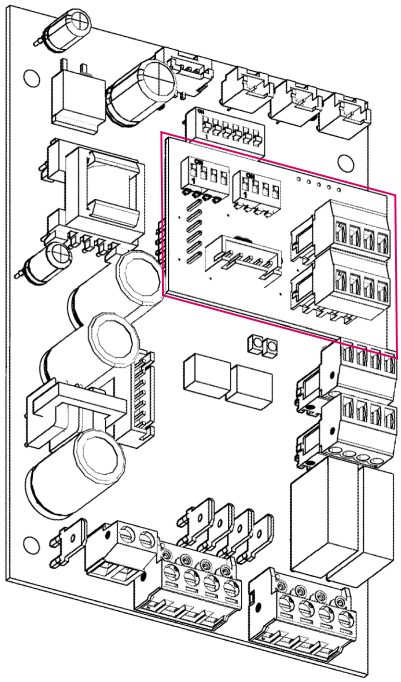


Fig. 05-2 Fan coil main circuit board with gateway circuit board

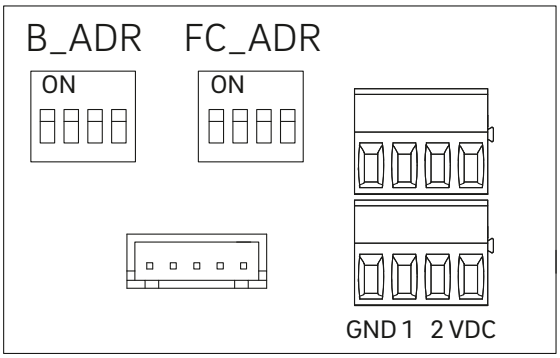


Fig. 05-3 Gateway circuit board

System bus (SYSBUS) connection

To connect the system bus, there are two 4-pin terminals available, labelled with GND, 1, 2, VDC. One terminal is provided for the actual connection of the system bus. The second terminal allows the system bus to be easily looped through to other bus subscribers (Bases, U-Modules, RAUCLIMATE SILENT BREEZE Fan Coils, KNX-Gateways) within the NEA SMART 2.0 system.

- The polarity of the system bus (SYSBUS) must be strictly adhered to
- Swapping the polarity leads to damage to the devices (Bases, U-Modules, RAUCLIMATE SILENT BREEZE Fan Coils, KNX-Gateways) connected to the system bus (SYSBUS)
- Limits of the system bus (SYSBUS):
  - Allowed topology: line
  - Maximum length: 500 m
- Make sure that the bus cables in the terminal box are routed directly to the connections of the system bus (SYSBUS) and that the insulation is only stripped as far as necessary for the connection
- Please follow the instructions in the assembly manual that is included with the Fan Coil

Assignment (Addressing)
Assignment (addressing) is done via two 4-pin DIP switches labelled with B_ADR and FC_ADR.

B_ADR: Assign the selected RAUCLIMATE SILENT BREEZE fan coil to the associated base (Master, Slave 1, Slave 2, Slave 3 or Slave 4).

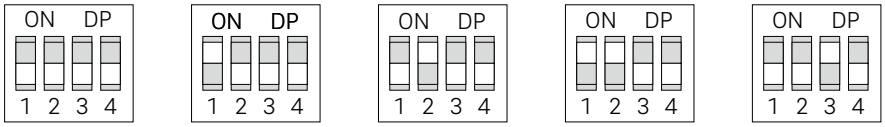


Fig. 05-4 B_ADR

FC_ADR: Numbering (1 to 16) of the RAUCLIMATE SILENT BREEZE Fan Coil within an associated base.

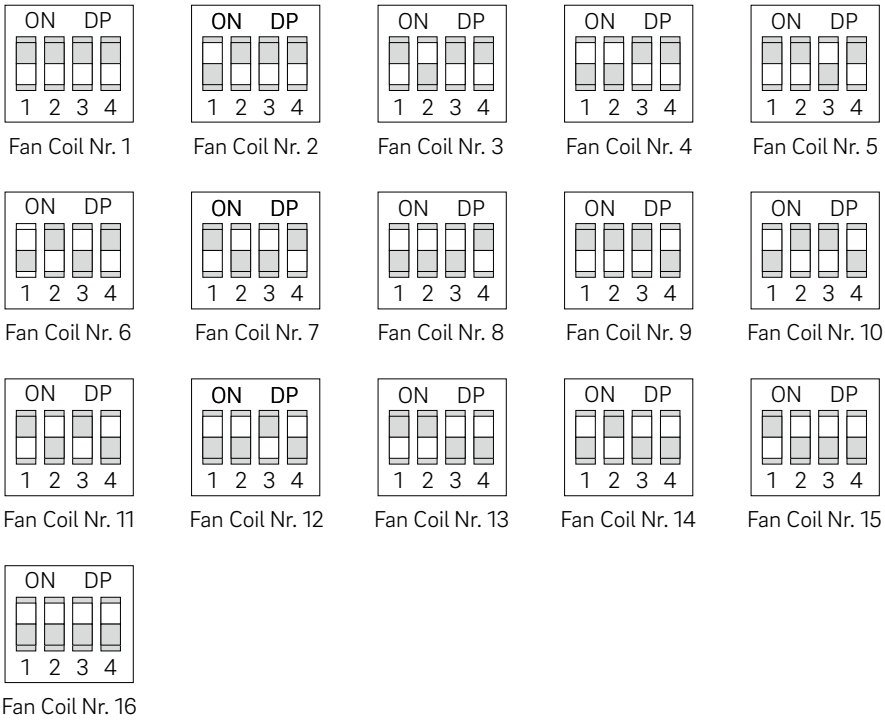


Fig. 05-5 FC_ADR

The addressing of the RAUCLIMATE SILENT BREEZE fan coils is clearly defined by the combination of base address B_ADR and fan coil address FC_ADR.

Therefore, in a NEA SMART 2.0 installation for the different bases (MASTER, SLAVE 1, ...) the same fan coil addresses FC_ADR – starting from fan coil number 1 – can be used.

Example: Gateway configurations

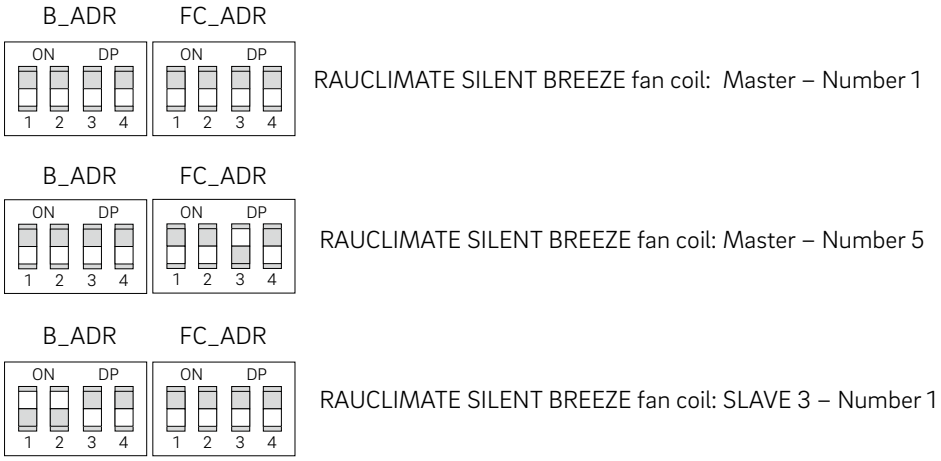


Fig. 05-6 Examples

05.03 Configuration

The setup of fan coils in the NEA SMART 2.0 system is carried out in a 2-step process by the installer:

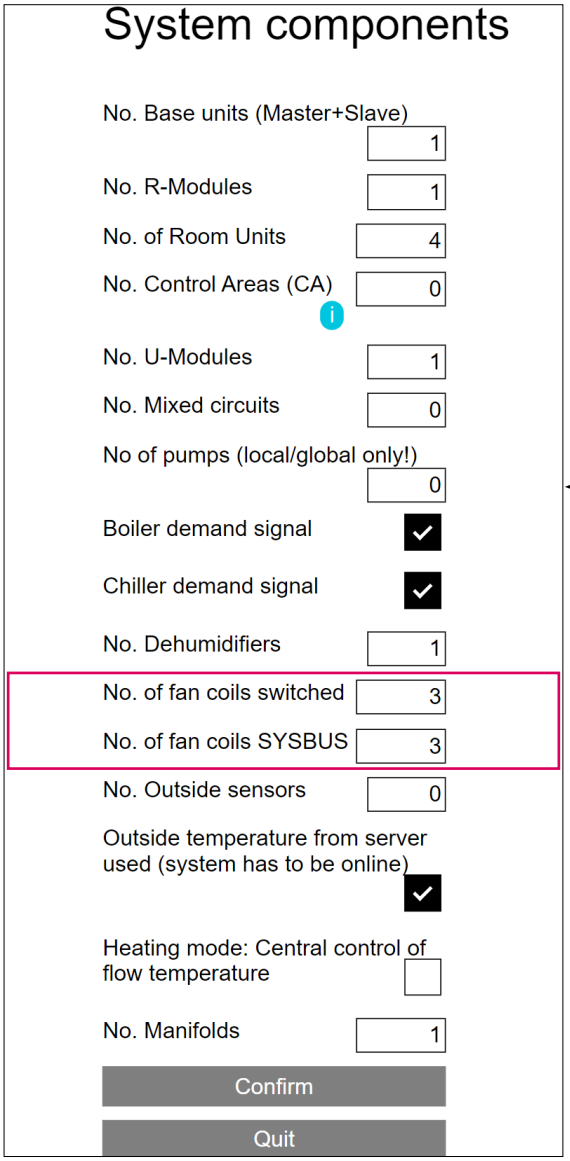
1. Initial fan coil configuration in the Wizard, see chapter 06.
2. Further settings on the web pages for the rooms, see chapter 07.

06 Initial Configuration – Wizard

The configuration of a system with fan coils must always be carried out by using the system type „Advanced Installation“ in the first step of the wizard.

06.01 Number of Fan Coils

On the „System Components“ page you have to enter the number of switched fan coils (No. of fan coils switched) and modulating RAUCLIMATE SILENT BREEZE fan coils (No. of fan coils SYSBUS).

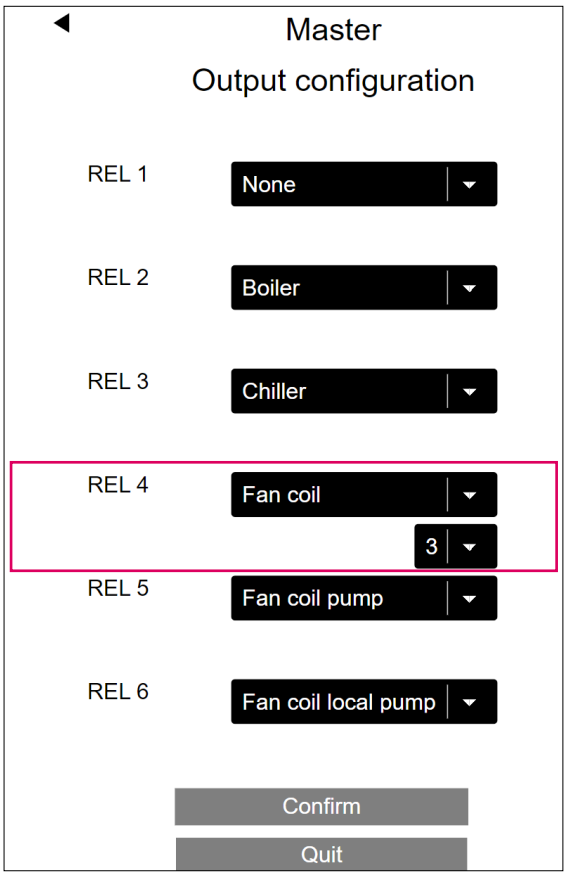


In this input field, only the number of pumps for radiant systems is entered.

06.02 Switched Fan Coils

There are four options for integrating switched fan coils into the NEA SMART 2.0 system.

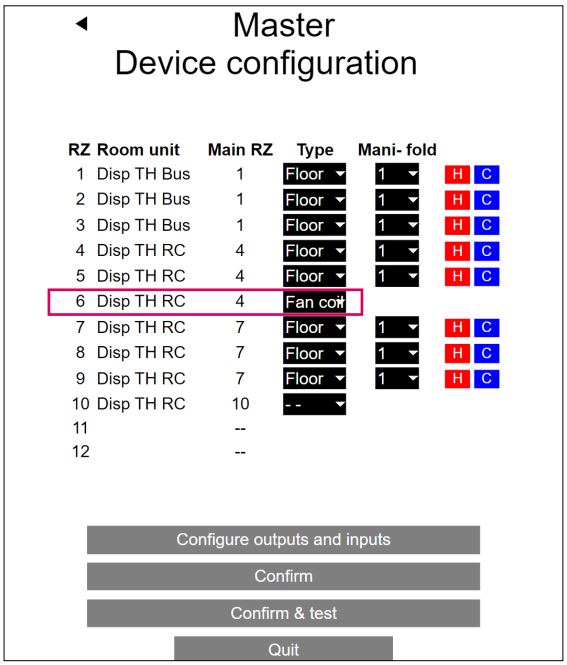
06.02.01 Use of Relay Outputs (RELAY) of the NEA SMART 2.0 Base and the R-Module



The basic assignment of switched fan coils to the relay outputs (RELAY) of the NEA SMART 2.0 Base and the R-Module is done on this page by selecting

- Fan Coil and
- Fan Coil Number

06.02.02 Use of the Room Zones (RZ) Outputs of the NEA SMART 2.0 Base and the R-Module



The assignment of switched fan coils to the room zones (RZ) of the NEA SMART 2.0 Base and the R-Module is done on this page by selecting the type

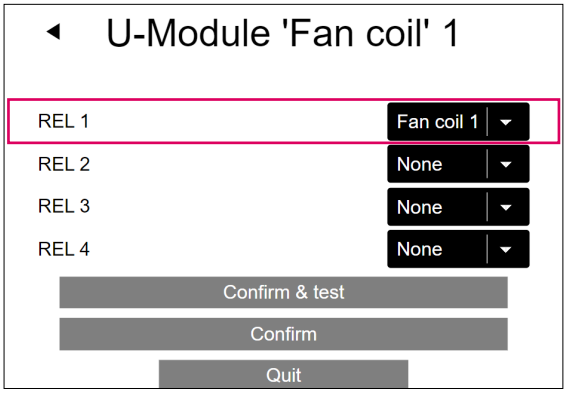
- Fan Coil

In this case, the switched fan coil is automatically assigned to the room unit that is paired with this room zone.
Therefore, no number is assigned to the fan coil.

There is no selection of manifold and heating and cooling on this page. This selection is made on the room side in the installer area.

Switched fan coils must not be connected directly to room zones (RZ). For connection, decoupling via the REHAU switching relay is mandatory.

06.02.03 Use of an U-Module, defined as „Fan Coil Module“

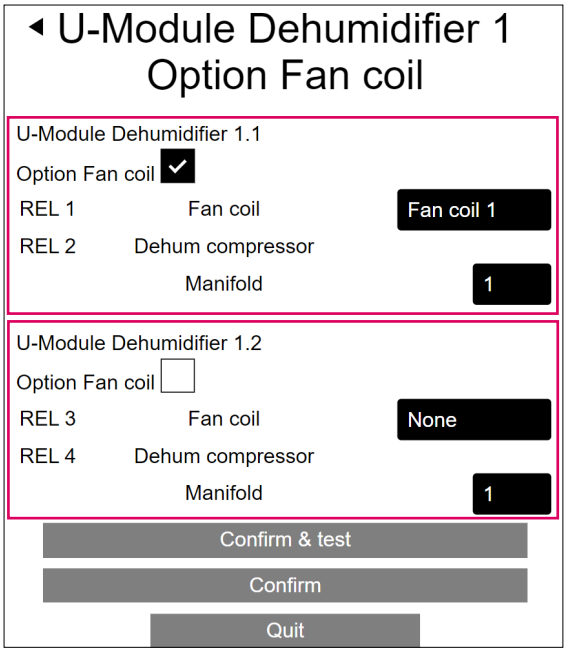


The assignment of switched fan coils to the relay outputs (RELAY) of a NEA SMART 2.0 U-Module, defined as “Fan Coil Module” is done on this page by selecting

- Fan Coil #Number

It is possible to assign up to four switched fan coils.

06.02.04 Use of an U-Module, defined as „Dehumidifier Option Fan Coil Module“



The assignment of switched fan coils to the relay outputs (RELAY) of a NEA SMART 2.0 U-Module, defined as “Dehumidifier Option Fan Coil Module” is done on this page by selecting

- Fan Coil option
- Fan Coil #Number

Manifold: The manifold selection refers to the dehumidifier.

When the U-Module is defined as “Dehumidifier Option Fan Coil Module”, the relay outputs are used as:

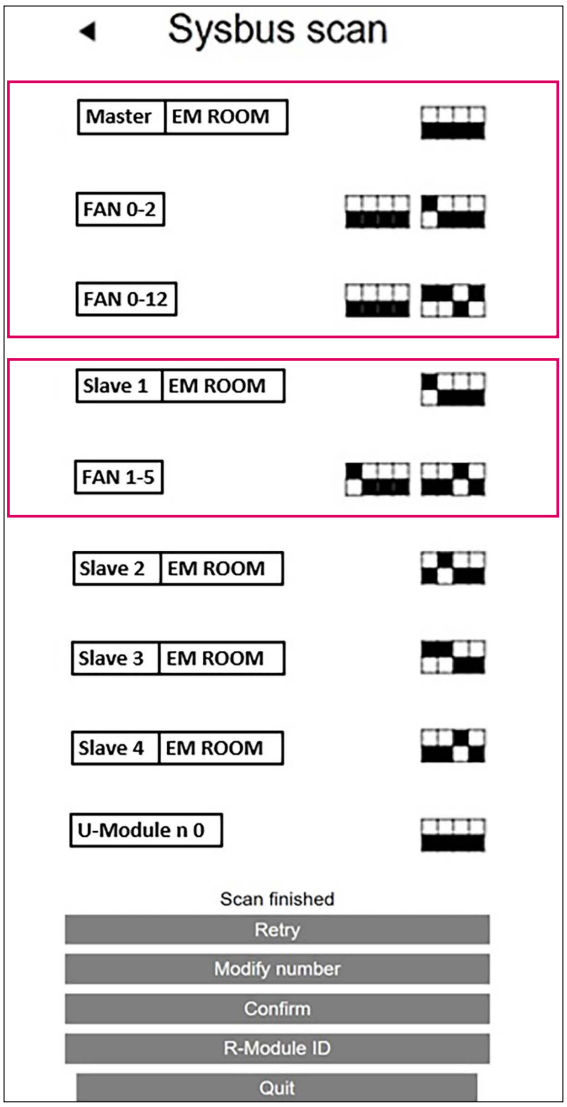
RELAY 1: Fan Coil 1 (instead of a dehumidifier valve #1)
RELAY 2: Compressor dehumidifier #1
RELAY 3: Fan Coil 2 (instead of a dehumidifier valve #2)
RELAY 4: Compressor dehumidifier #2

06.03 Modulating RAUCLIMATE SILENT BREEZE Fan Coils

The modulating RAUCLIMATE SILENT BREEZE fan coils are controlled via the system bus (SYSBUS) of the NEA SMART 2.0 system.

The System Bus Scan checks which components are connected to the system bus:
- NEA SMART 2.0 Bases (Master, Slave1, Slave 2, Slave 3, Slave 4)
- NEA SMART 2.0 R-Modules
- NEA SMART 2.0 U-Modules
- RAUCLIMATE SILENT BREEZE fan coils
- KNX-Gateways

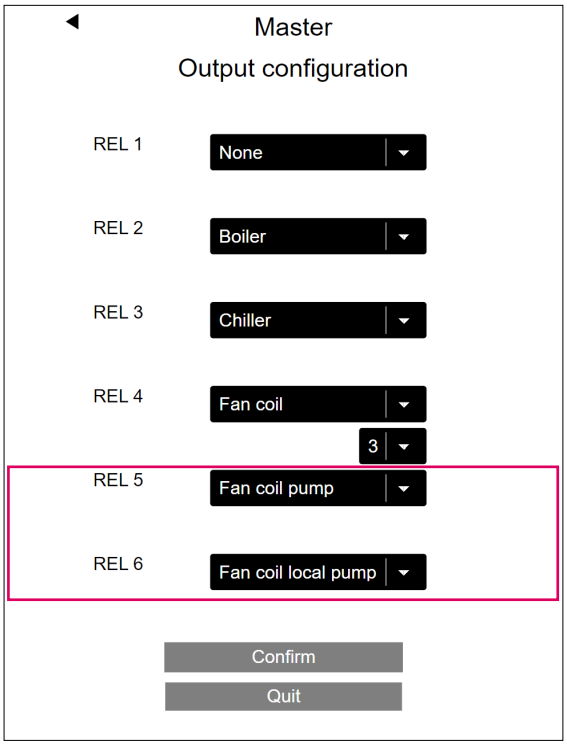
The result is displayed on the Sysbus Scan page.
The graphic below shows the assignment of the RAUCLIMATE SILENT BREEZE fan coils to the bases and the setting of the DIP switches of the system bus addresses.



MASTER + R-Module with two assigned RAUCLIMATE SILENT BREEZE fan coils

SLAVE 1 + R-Module with one assigned RAUCLIMATE SILENT BREEZE fan coil

06.04 Local and Global Fan Coil Pumps



The assignment of the fan coil pumps to relay outputs (RELAY) is done on this page by selecting.

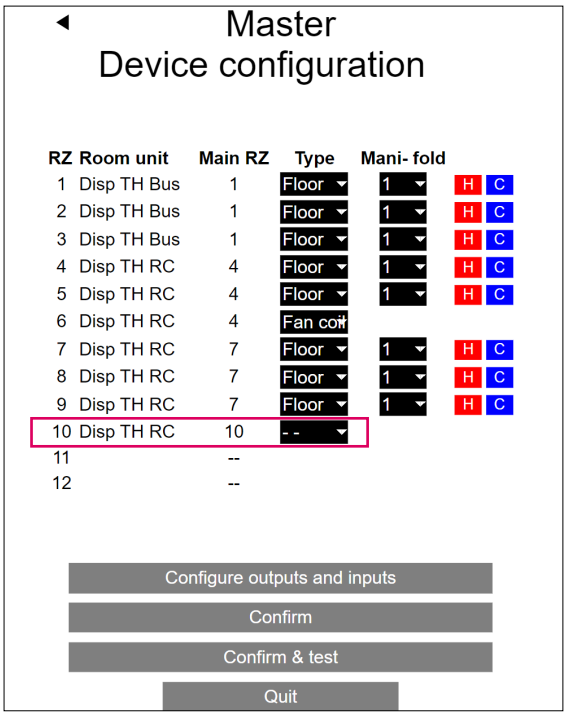
- Fan Coil Pump (= Global Fan Coil Pump)
- Fan Coil Local Pump

A local fan coil pump is activated when one of the switched fan coils or RAUCLIMATE SILENT BREEZE fan coils assigned to this base starts. The global fan coil pump is activated as soon as one of the local pumps is working.

One individual local fan coil pump can be configured per NEA SMART 2.0 Base. The global fan pump can be assigned to any NEA SMART 2.0 Base (master and slaves). Therefore a maximum number of five local fan coil pumps (one per base) and one global fan coil pump (one for the entire system) can be configured.

06.05 Fan coil as the stand-alone heating / cooling system

In special cases, fan coils can be operated as a the stand-alone heating / cooling system without a radiant heating / cooling system.



By selection

- Type: ---

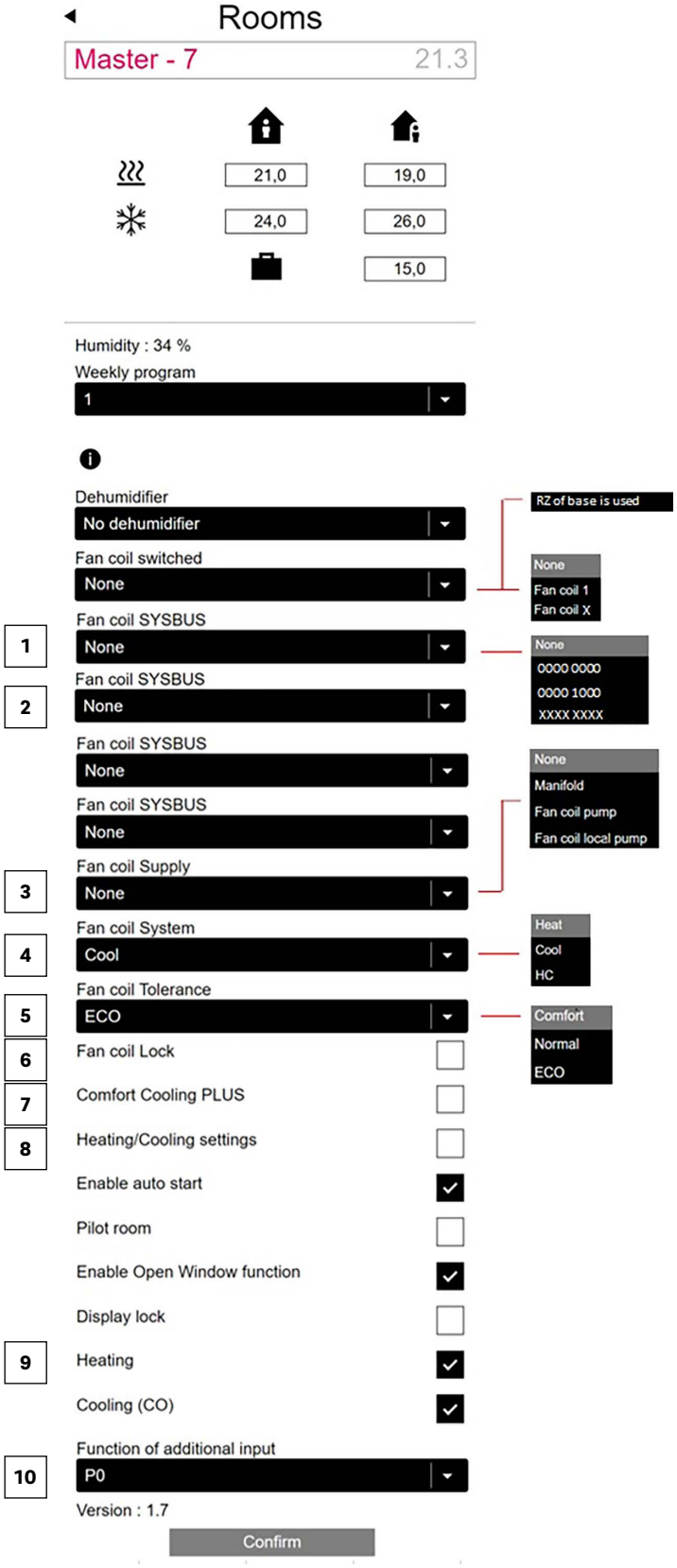
no radiant heating / cooling system is assigned to the room zone RZ.

In this example, no radiant heating / cooling system is assigned to the room with the room unit of room zone RZ 10.

07 Installer's Settings on the Websites

07.01 Room Configuration Page Fan Coils – Allocation, Supply, System, Tolerance

After the initial configuration in Wizzard, the advanced settings „Allocation, Supply, System, Tolerance" for the fan coils are carried out on the websites of the rooms in the installer area (room configuration pages).



1 **Switched Fan Coil**
Allows to assign a switched fan coil to a room.

- **RZ is used by Basis**
  If "RZ is used by Basis" appears, a switched fan coil has been assigned to a room zone (RZ) during configuration in the Wizard. The switched fan coil is automatically assigned to the room unit that is coupled to this room zone (RZ).

- **Empty**
  If Empty is selected, no switched fan coil is assigned to the room.

- **Fan Coil x**
  If Fan Coil x is selected, the switched fan coil with the number x is assigned to the room.

2 **Fan Coil SYSBUS**
Allows to assign modulating RAUCLIMATE SILENT BREEZE fan coils to a room.

- **Empty**
  If Empty is selected, no RAUCLIMATE SILENT BREEZE fan coil will be assigned to the room.

- **Address xxxx xxxx**
  If address xxxx xxxx is selected, the RAUCLIMATE SILENT BREEZE fan coil with the address xxxx xxxx will be assigned to the room (xxxx xxxx = position of the DIP switches).

The number of address fields displayed for the assignment of RAUCLIMATE SILENT BREEZE fan coils depends on the context depending on the course of the configuration. However, a maximum of four RAUCLIMATE SILENT BREEZE fan coils can be assigned to a room.

3 **Fan Coil Supply**
The Fan Coil Supply defines the supply of the fan coils with the cooling / heating medium.

- **Empty**
  If Empty is selected, the supply is not controlled by the NEA SMART 2.0 system

- **Manifold Number**

- **Fan Coil Pump (= Fan Coil Global Pump)**

- **Fan Coil Local Pump**

4 **Fan Coil System**
The Fan Coil System defines the mode of operation of the Fan Coils

- **Heating**
- **Cooling**
- **Heating / Cooling (HC)**

5 **Fan Coil Tolerance**

- **ECO**
- **NORMAL**
- **COMFORT**

The fan coil starts when the room temperature at ECO 1.5 K / NORMAL 1 K / COMFORT 0.5 K deviates from the setpoint.

6 **Fan Coil Lock**
Fan Coil Lock for permanent deactivation of switched fan coils. If the check box is selected, the fan coil will be blocked.

7 **Comfort Cooling PLUS**
Comfort Cooling PLUS to increase comfort in unpleasantly high humidity conditions for RAUCLIMATE SILENT BREEZE Fan Coils

8 **Heating / Cooling Settings**
Activation enables the operating mode of the system to be changed (heating, manual heating, cooling, manual cooling, automatic) via the room control unit(s) in this room.

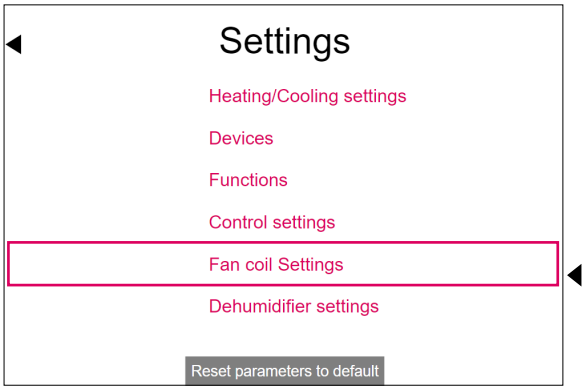
9 **Heating / Cooling (CO)**
Checkboxes Heating / Cooling (CO) enable operating mode heating, cooling or heating / cooling and the associated setpoint input for this room.

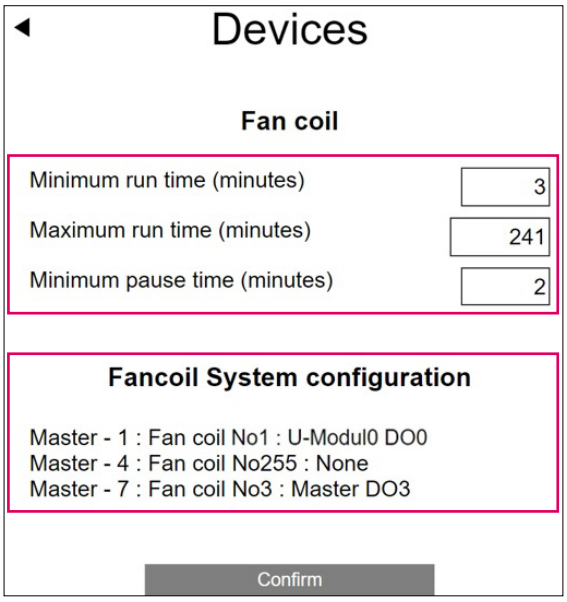
- Preselection is based on the operating mode definition on page "Master Device Configuration" for radiant systems.
- If fan coils are operated as a stand-alone system without any radiant system, there is no preselection.
- A manual selection regarding the fan coil operating mode has to be done by the installer in any case.

10 **P11**
If the parameter P11 is selected, the external input of the room unit (only from SW version 1.7) is configured for an outside temperature measurement.

07.02 Switched Fan Coils – Time Control and Display of the Configuration

In the installer area, minimum / maximum running times and pause times can be defined for switched fan coils. These specifications are not necessary for the modulating RAUCLIMATE SILENT BREEZE Fan Coils.



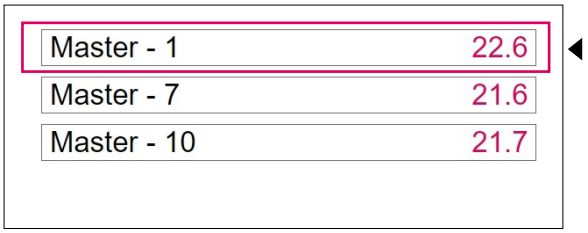


Fan Coils Configuration – Examples

- Room Master – 1
  Configuration of the switched fan coil number 1 at the U-Module output DO 0 = RELAY 1
- Room Master – 4
  Configuration of the switched fan coil via the room zone (RZ). If switched fan coils are configured via a room zone (RZ), the display “Fan Coil No255: None” is displayed.
- Room Master – 7
  Configuration of the switched fan coil number 3 at the output DO 3 = RELAY 4 of the base

08 Operation via Websites

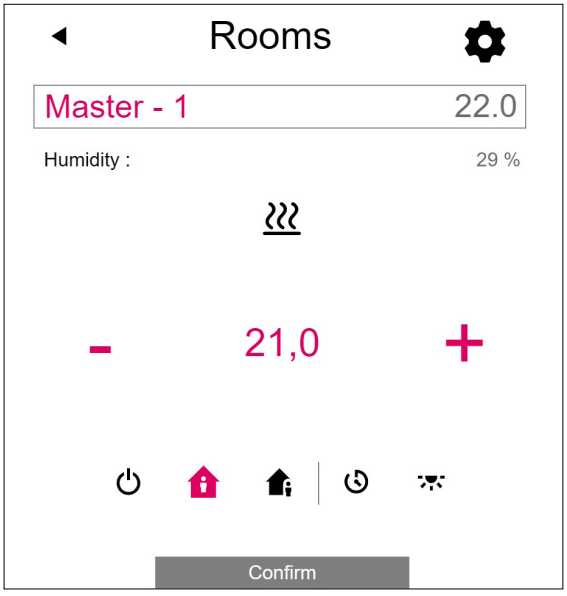
In the user area of the website, settings can be made for switched fan coils and modulating RAUCLIMATE SILENT BREEZE fan coils for each room.



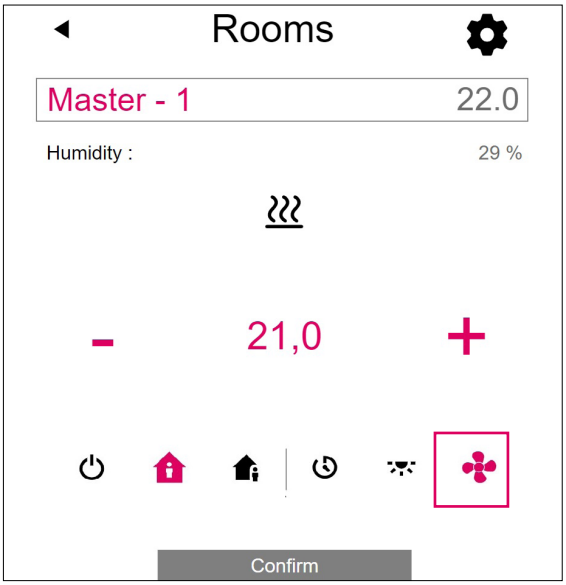
08.01 Basic Settings

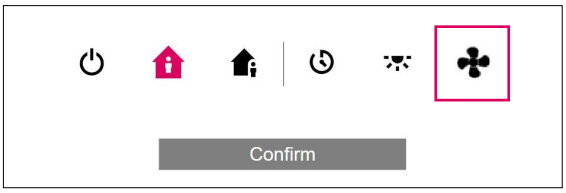
Depending on the room configuration different displays appear on the room page

A) Room without Fan Coil



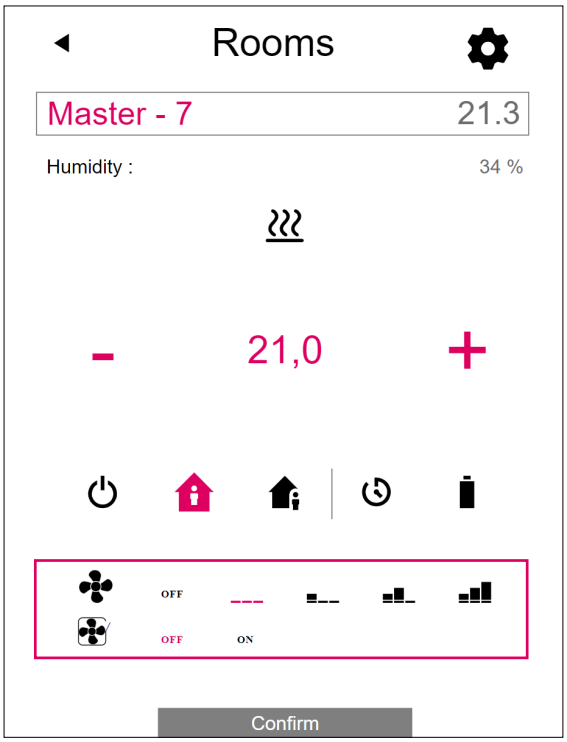
B) Room with switched Fan Coil



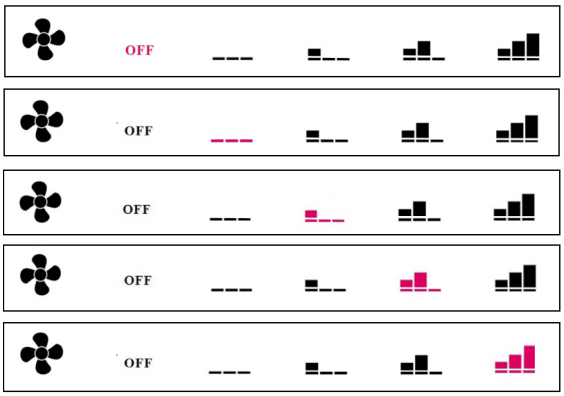


- The „Fan coil Symbol" button can be used to manually start and stop the switched fan coil. The button indicates the operating status (red = fan coil in operation).
- A missing „Fan coil Symbol" button indicates that the switched fan coil is permanently deactivated (switched off). The deactivation is done via the checkbox „Fan coil lock" in the advanced settings or via the room unit (Fan coil ON / OFF).

C) Room with up to four modulating RAUCLIMATE SILENT BREEZE fan coils or with a combination of one switched fan coil and up to four modulating RAUCLIMATE SILENT BREEZE fan coils



- Changing fan coil operation mode



OFF

STANDBY

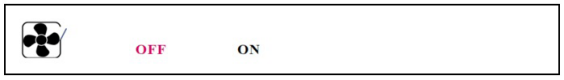
MIN –
lowest fan speed

MED –
medium fan speed

MAX –
highest fan speed

- Display operating status (red fan coil symbol = fan coil in operation)

- Activation of the fan coil flap (OFF / ON) to switch between oscillating and directional airflow when using a RAUCLIMATE SILENT BREEZE fan coil with flap



Switched fan coils and RAUCLIMATE SILENT BREEZE fan coils are in the setting

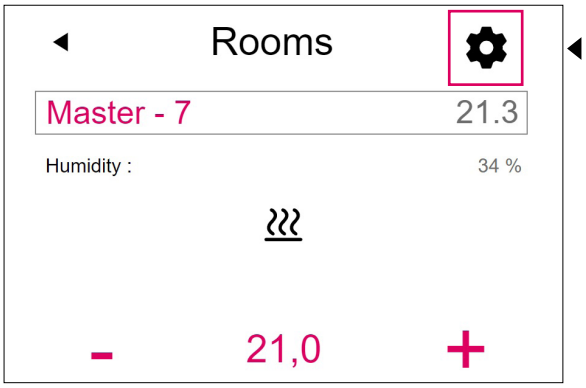
- OFF permanently disabled
- STANDBY deactivated until the next switching point of a time program arrives or the energy level is manually changed. In this case the default setting for energy level REDUCED / NORMAL is applied.

RAUCLIMATE SILENT BREEZE Fan Coils are in the setting

- MIN / MED / MAX operated in the selected mode until the next switching point of a time program arrives or the energy level is manually changed.
  In this case the default setting for energy level REDUCED / NORMAL is applied.

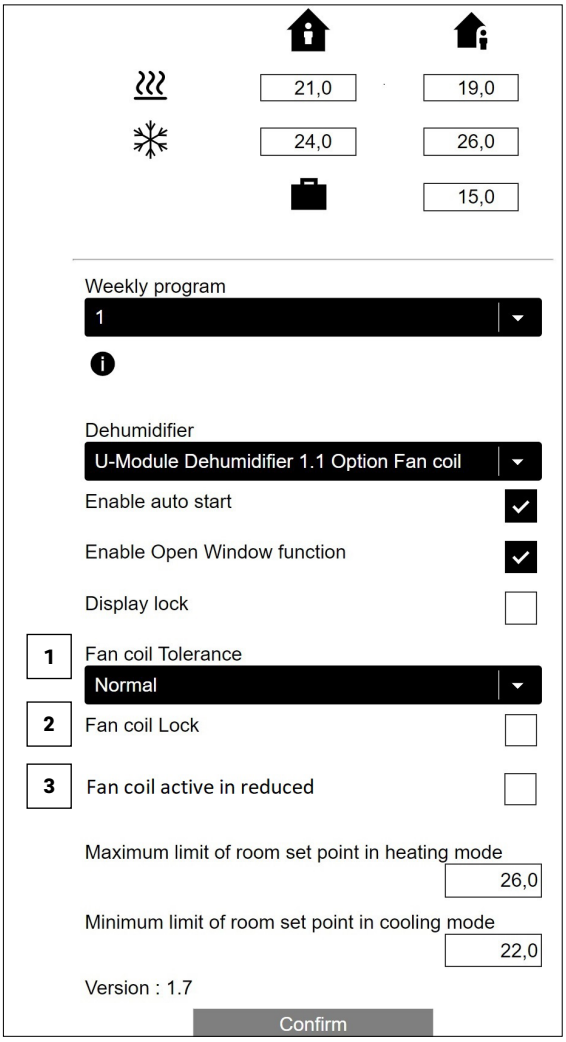
Without the use of timers, the fan coil remains in the selected energy level.

08.02 Advanced Settings



Depending on the room configuration, different setting options appear.

A) Advanced Settings for Switched Fan Coil

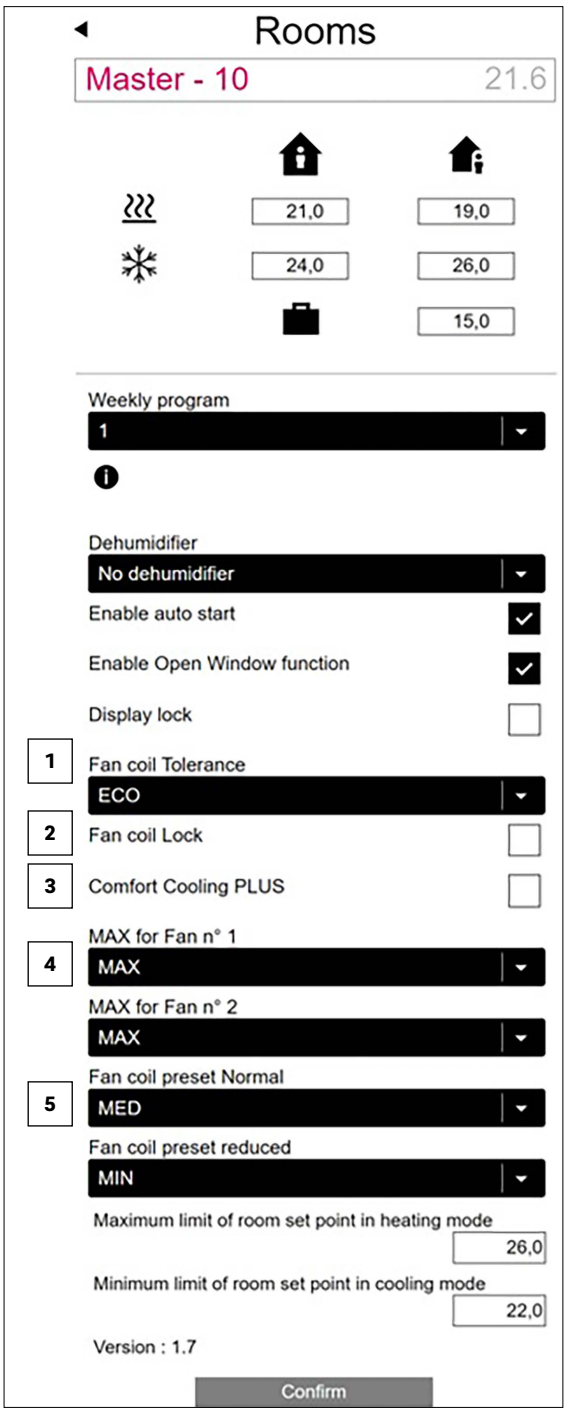


1 Selection Fan coil Tolerance: ECO, NORMAL, COMFORT.
Fan coil starts when the room temperature at ECO 1.5 K / NORMAL 1 K / COMFORT 0.5 K deviates from the set point.

2 Fan coil locks for permanent deactivation of switched fan coils. If the check box is selected, the fan coil is locked.

3 Fan coil active in reduced: When checkbox is activated, fan coil works also in reduced mode

B) Advanced settings for modulating RAUCLIMATE SILENT BREEZE fan coils or for a combination of one switched fan coil and several modulating RAUCLIMATE SILENT BREEZE fan coils



1 Selection Fan coil tolerance: ECO, NORMAL, COMFORT.
Fan coil starts when the room temperature at ECO 1.5 K / NORMAL 1 K / COMFORT 0.5 K deviates from the setpoint.

2 Fan coil lock for permanent deactivation of switched fan coils and modulating RAUCLIMATE SILENT BREEZE fan coils.
If the checkbox is checked the fan coil is blocked.

3 Comfort Cooling PLUS to increase comfort in unpleasantly high humidity conditions for RAUCLIMATE SILENT BREEZE fan coils.

4 Max for fan n°:
Selection of the maximum possible air speed (MIN, MED, MAX) for RAUCLIMATE SILENT BREEZE fan coils. The RAUCLIMATE SILENT BREEZE fan coils assigned to the room are listed individually (maximum 4) and can be individually adapted.

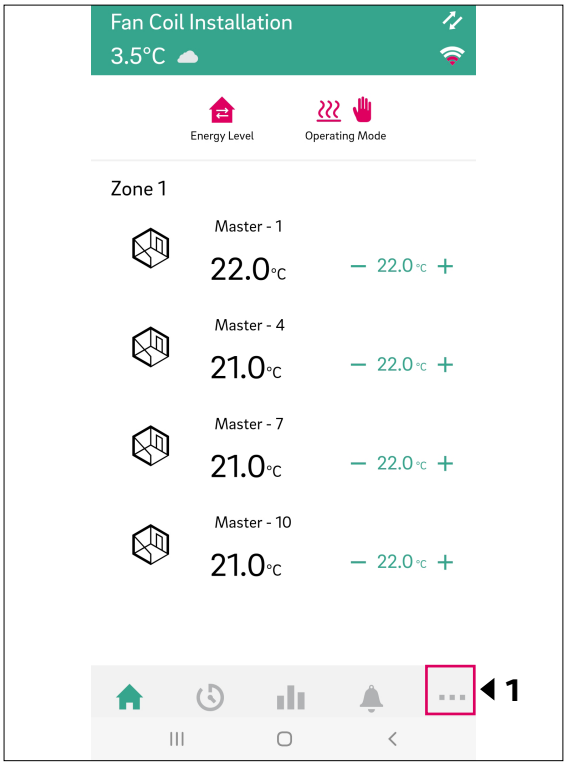
5 Fan coil Preset Normal / Reduced: Preset of the fan stage (STANDBY, MIN, MED, MAX) in energy level REDUCED and NORMAL for RAUCLIMATE SILENT BREEZE fan coils.

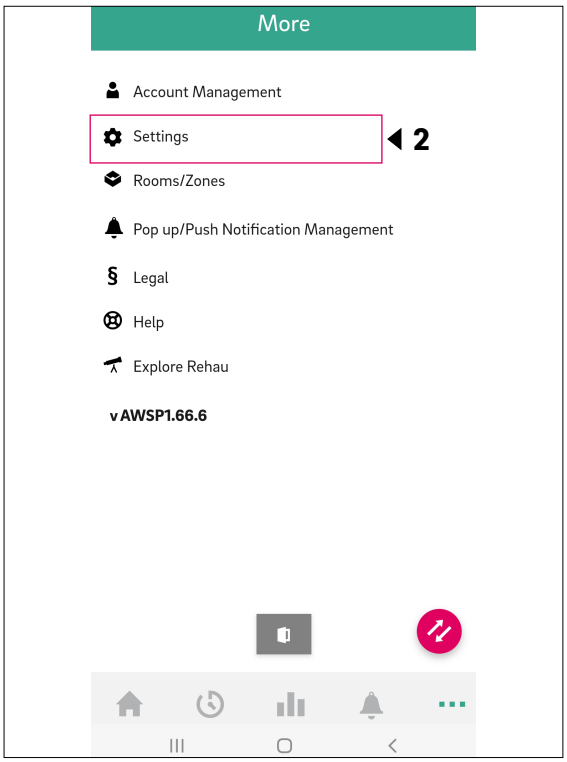
If STANDBY is selected under Default Settings, switched fan coils and RAUCLIMATE SILENT BREEZE fan coils are deactivated in REDUCED and / or NORMAL operation in the basic state. This setting can be temporarily overridden on the main room page – until the next switching point of a time program arrives.

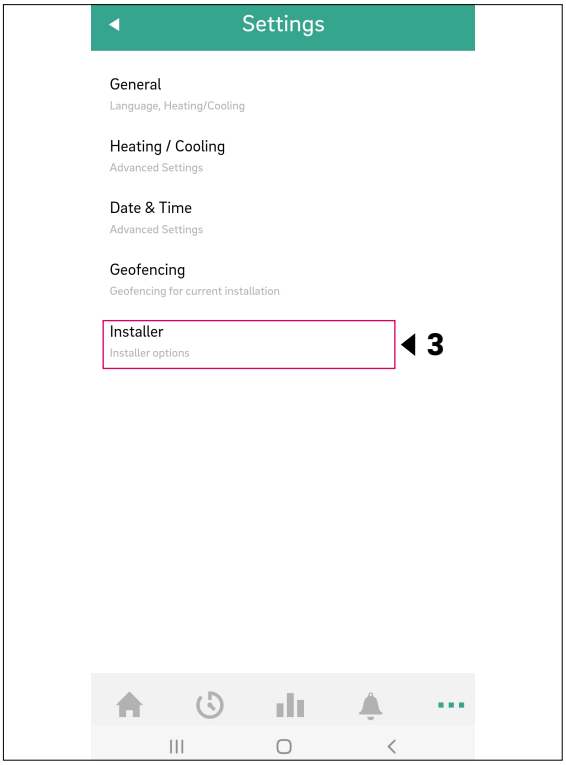
09 Operation via app

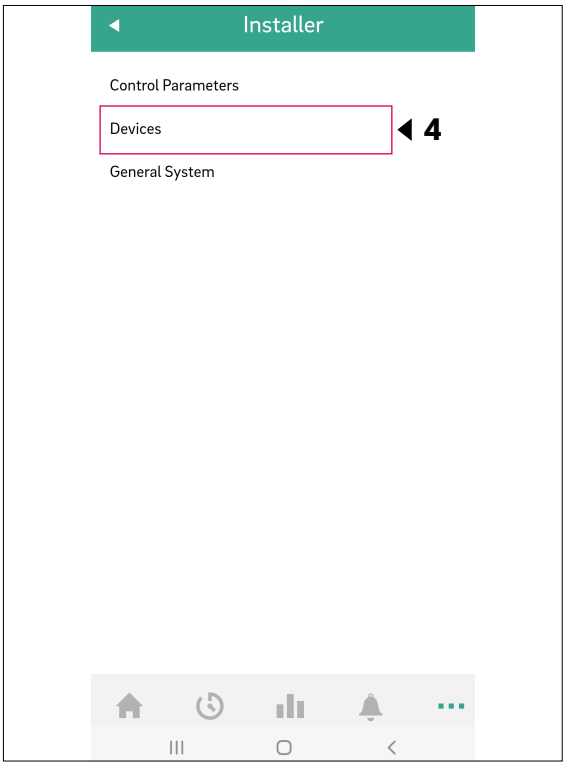
09.01 Installer

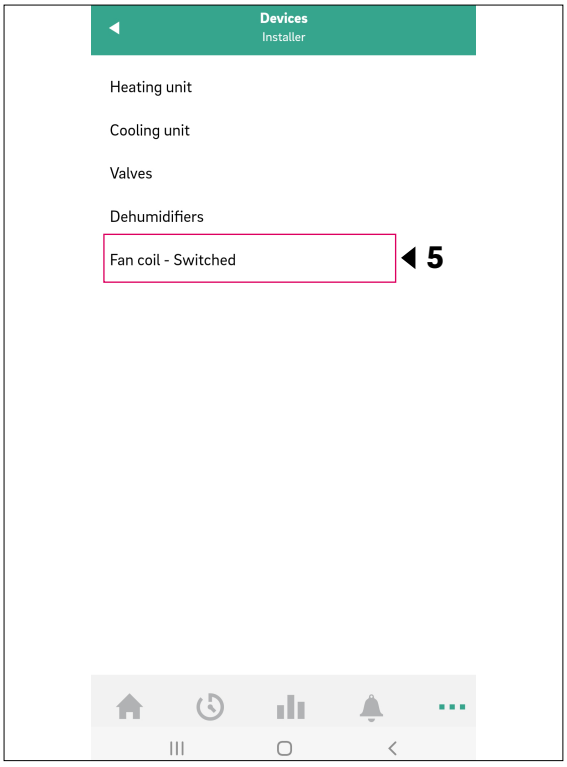
In the installer area, minimum / maximum run times and pause times can be defined for switched fan coils. These specifications are not necessary for the modulating RAUCLIMATE SILENT BREEZE fan coils.

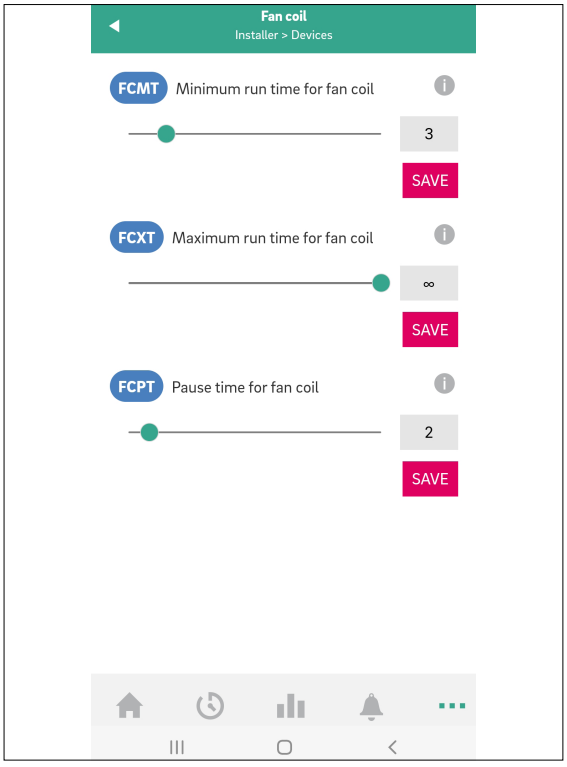








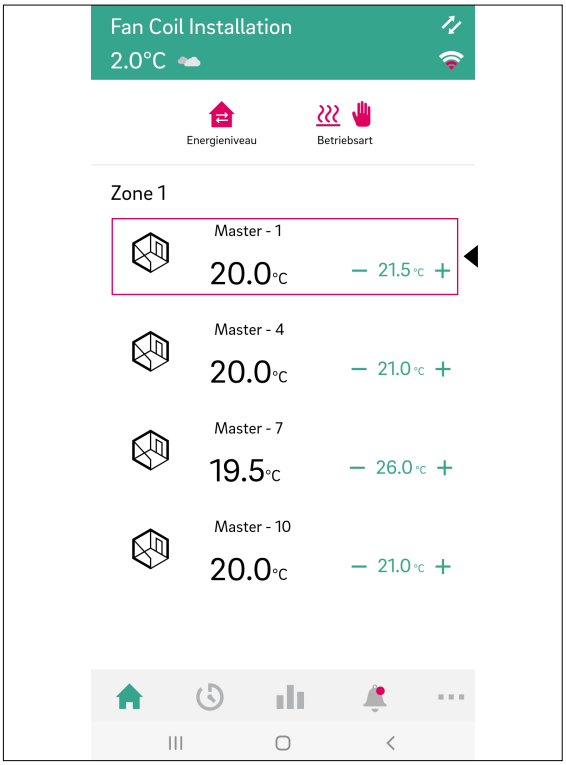




09.02 Users

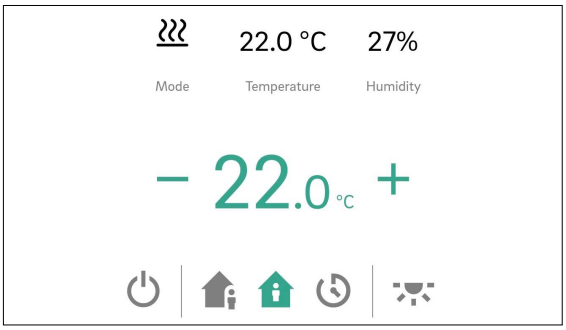
In the user area, basic settings for switched fan coils and modulating RAUCLIMATE SILENT BREEZE fan coils can be made for each room.

09.02.01 Basic Settings

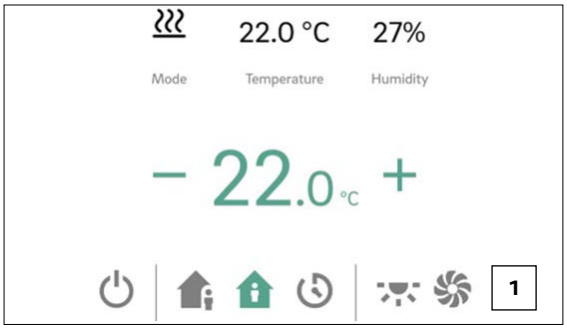


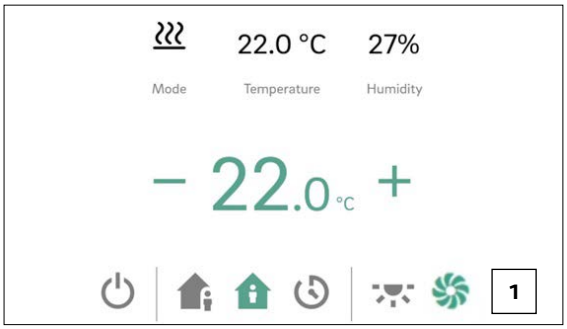
Depending on the room configuration, different displays appear on the room page:

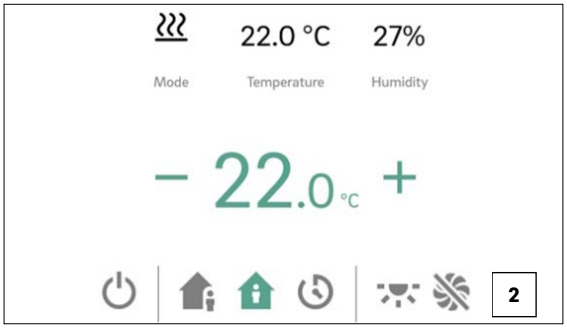
A) Room without fan coil



B) Room with switched fan coil



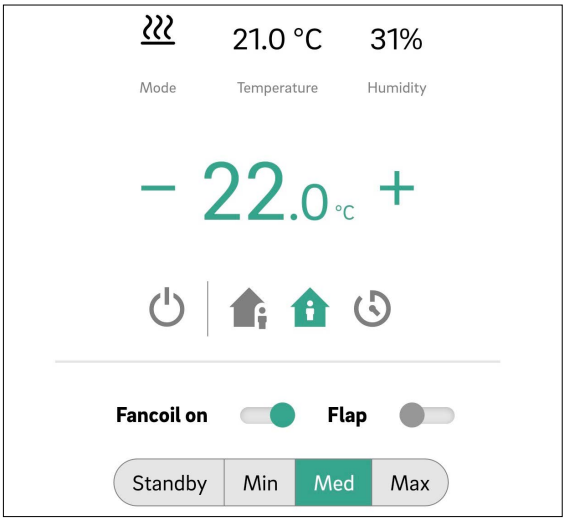




[1] The „Fan Coil Icon" button can be used to manually start and stop the switched fan coil. The button indicates the operating status (green = fan coil in operation).

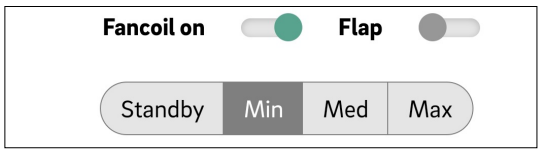
[2] A crossed-out "Fan Coil Icon" button indicates that the switched fan foil is permanently disabled (turned off). Activation / deactivation is done via the Enabled / Deactivated button in the advanced settings or via the room unit (fan coil on / off).

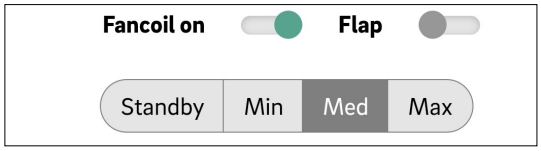
C) Room with modulating RAUCLIMATE SILENT BREEZE fan coils or with a combination of one switched fan coil and several modulating RAUCLIMATE SILENT BREEZE fan coils

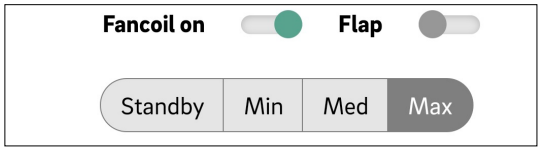


- Change fan coil operating mode (OFF, STANDBY, MIN, MED, MAX)

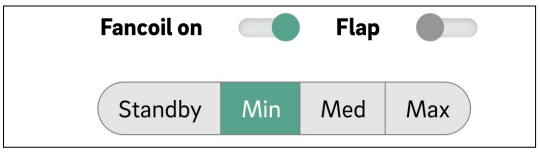
When the fan coil is switched off, the setting options for operating mode and fan flap are hidden.



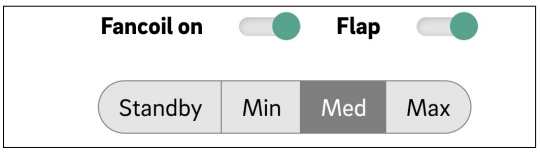




- Display fan foil operating status (green = Fan coil in operation)



- Activation of the fan foil flap (grey = Off / green = On) to switch between oscillating and directional airflow when using a RAUCLIMATE SILENT BREEZE fan coil with fan flap



Switched fan coils and RAUCLIMATE SILENT BREEZE fan coils are in the setting

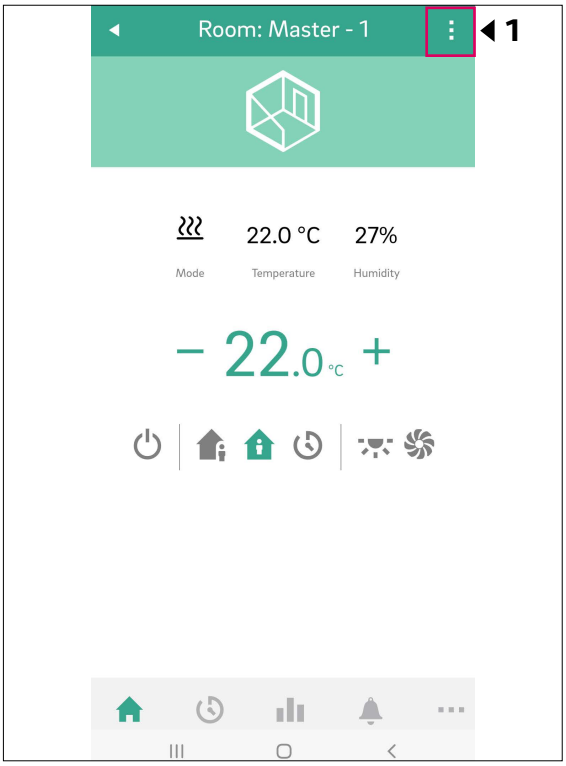
- Fancoil OFF permanently disabled
- STANDBY deactivated until the next switching point of a time program arrives or the energy level is manually changed. In this case the default setting for energy level REDUCED / NORMAL is applied.

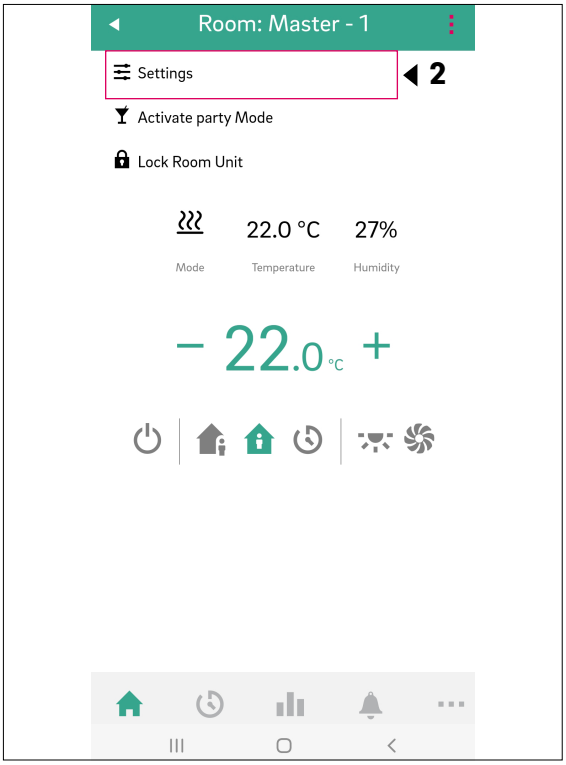
RAUCLIMATE SILENT BREEZE fan coils are in the setting

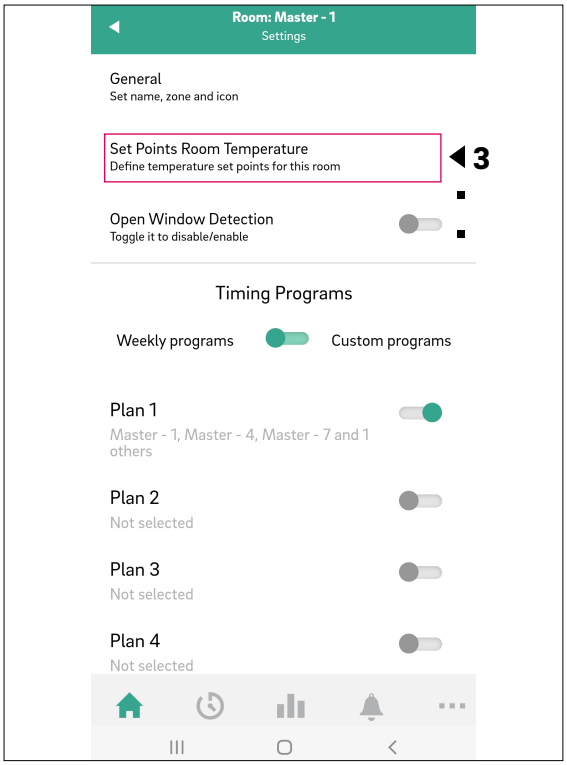
- MIN / MED / MAX operated in the selected mode until the next switching point of a time program arrives or the energy level is manually changed. In this case the default setting for energy level REDUCED / NORMAL is applied.

Without the use of timers, the fan coil remains in the selected energy level.

09.02.02 Advanced Settings

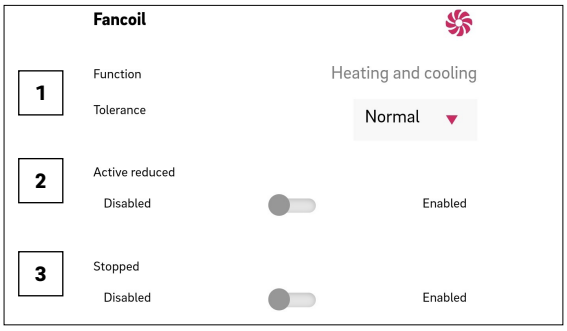






Depending on the room configuration, different setting options appear on the room page:

A) Advanced settings for switched fan coils

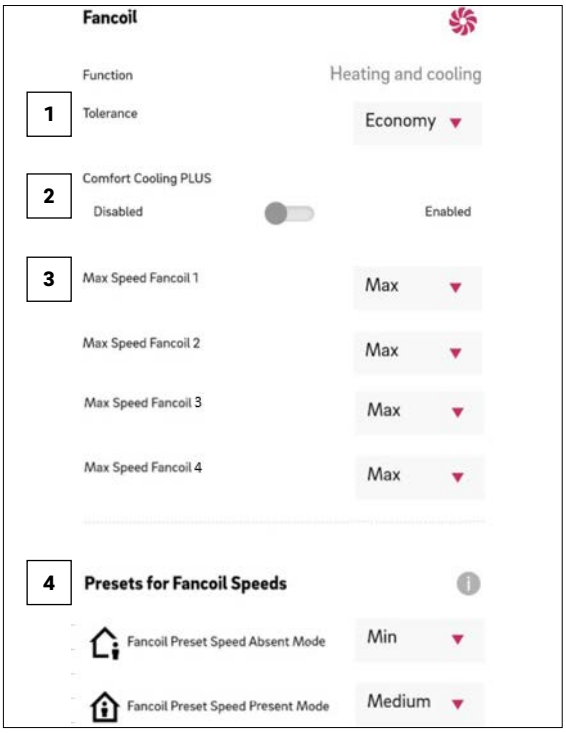


1 Selection fan coil tolerance: ECO, NORMAL, COMFORT
Fan coil starts when the room temperature deviates from the set point at ECO 1.5 K / NORMAL 1 K / COMFORT 0.5 K.
2 Active Reduced to enable / deactivate switched fan coils in REDUCED operation.

- Enabled: Switched fan coil is activated in NORMAL and REDUCED mode
- Disabled: Switched fan coil is activated in NORMAL mode and permanently switched off in REDUCED mode

3 Fan coil locked (Enabled / Disabled) for permanent deactivation of switched fan coils.

B) Advanced settings for modulating RAUCLIMATE SILENT BREEZE fan coils or for a combination of one switched fan coil and several modulating RAUCLIMATE SILENT BREEZE fan coils



1 Tolerance: Selection fan coil tolerance: ECO, NORMAL, COMFORT.
Fan coil starts when the room temperature deviates from the set point at ECO 1.5 K / NORMAL 1 K / COMFORT 0.5 K.
2 Comfort Cooling PLUS:
Activation of COMFORT COOLING Plus to increase comfort in unpleasantly high humidity conditions for RAUCLIMATE SILENT BREEZE fan coils.
3 Max Speed Fancoil: Selection of the maximum possible air speed (MIN, MED, MAX) for RAUCLIMATE SILENT BREEZE fan coils.
The RAUCLIMATE SILENT BREEZE fan coils assigned to the room are listed individually (maximum 4) and can be individually adapted.
4 Presets for Fancoil Speeds:
Preset of the fan speed stage (STANDBY, MIN, MED, MAX) in energy level REDUCED (Absent Mode) and NORMAL (Present Mode) for RAUCLIMATE SILENT BREEZE fan coils.

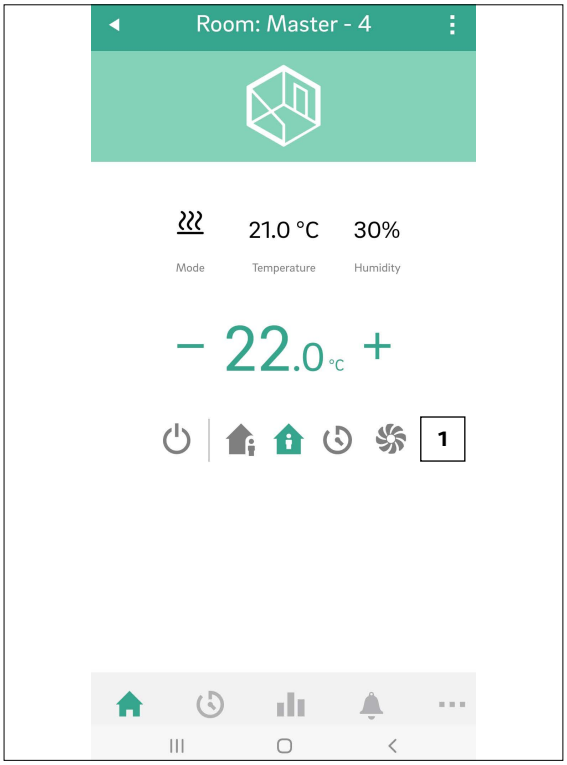
If STANDBY is selected under presets (default settings), switched fan coils and RAUCLIMATE SILENT BREEZE fan coils are deactivated in REDUCED and / or NORMAL operation in the basic state. This setting can be temporarily overridden on the main room page.

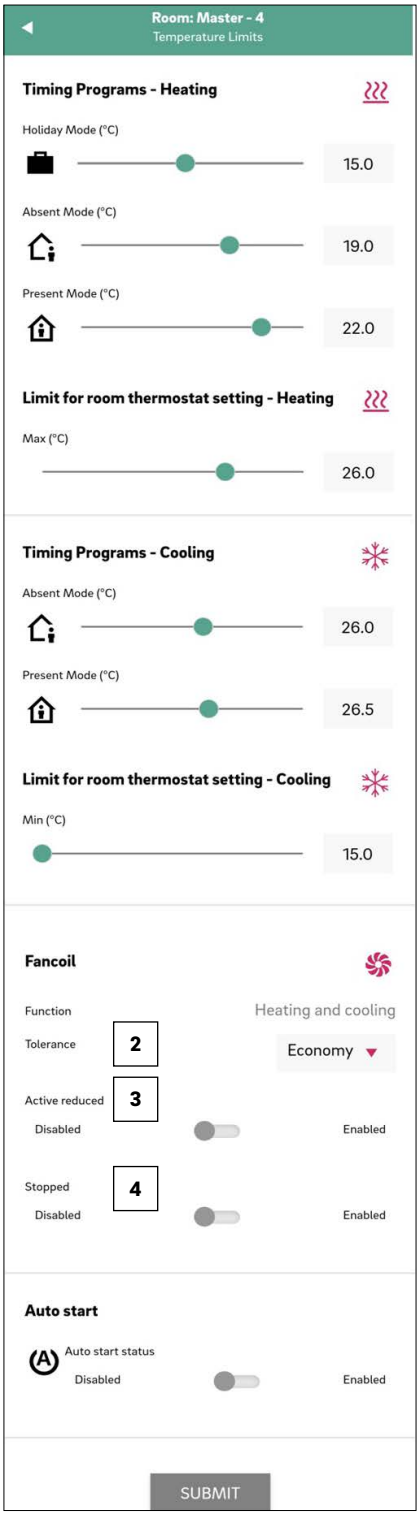
09.03 App Pages using Example Configurations

Room Master-4

Configuration:

- 1 x Switched fan coil





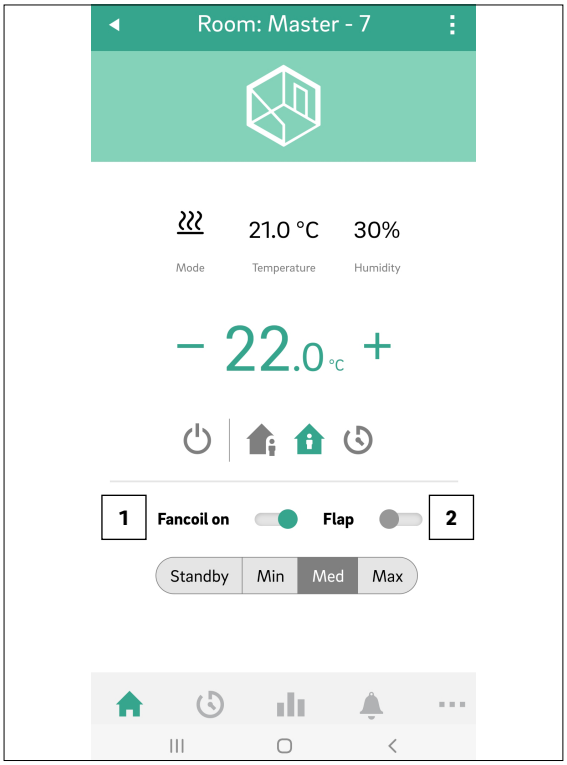
1 Change / Display
Fan Coil Operation Mode

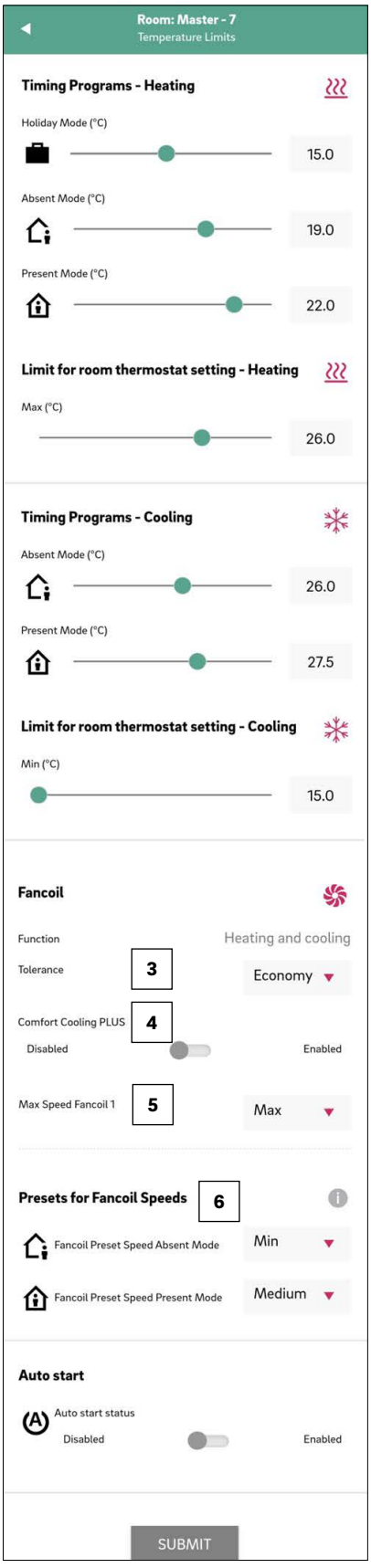
2 Selection
Fan Coil Tolerance
(ECO, NORMAL, COMFORT)

3 **Active Reduced**
for activating / deactivating switched fan coils in REDUCED operation, when there is only a switched fan coil assigned to the room

4 **Fan coil locked (Lock / Stop)**
to activate / deactivate switched fan coils

Room Master-7
Configuration:
- 1 x Switched fan coil
- 1 x RAUCLIMATE SILENT BREEZE fan coil





1 Change / display of the **fan coil operating mode** (OFF, STANDBY, MIN, MED, MAX)

2 Activation of the **Fan Coil Flap** (On / Off) to switch between oscillating and directional airflow.
Displayed only for fan coils with flap control).

3 Selection **Fan Coil Tolerance** (ECO, NORMAL, COMFORT)

4 Activation **Comfort Cooling PLUS** for RAUCLIMATE SILENT BREEZE fan coils

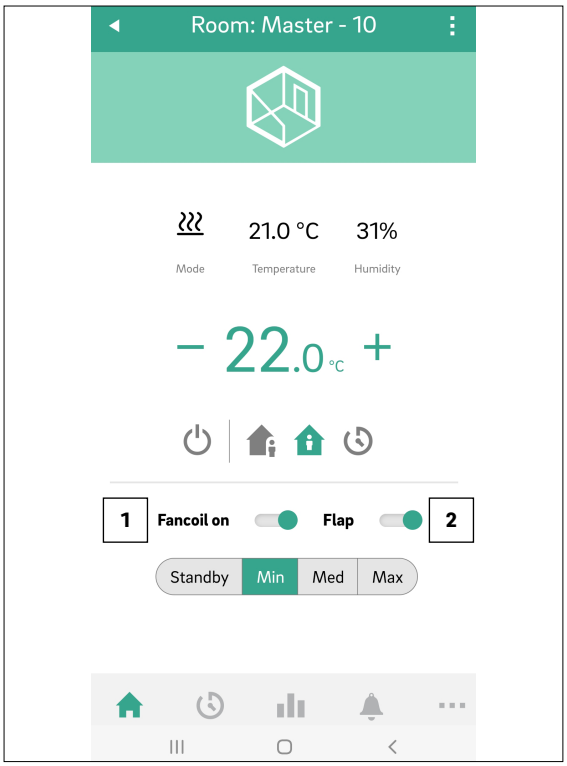
5 Selection of the maximum possible air speed **Max speed Fancoil** (MIN, MED, MAX) for RAUCLIMATE SILENT BREEZE fan coils

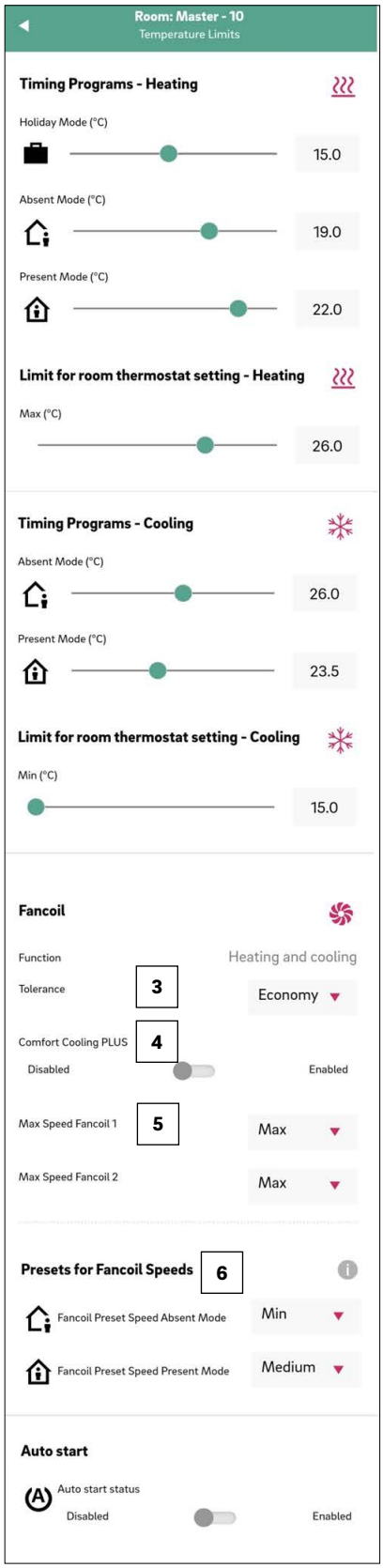
6 Presetting of the fan speed stage (STANDBY, MIN, MED, MAX) in the energy level **REDUCED** and **NORMAL** for RAUCLIMATE SILENT BREEZE fan coils

Room Master-10

Configuration:

- 2 x RAUCLIMATE SILENT BREEZE Fan Coils





1 Change / display of the **fan coil operating mode** (OFF, STANDBY, MIN, MED, MAX)

2 Activation of the **Fan Coil Flap** (On / Off) to switch between oscillating and directional airflow.
Displayed only for fan coils with flap control.

3 Selection **Fan Coil Tolerance** (ECO, NORMAL, COMFORT)

4 Activation **Comfort Cooling PLUS** for RAUCLIMATE SILENT BREEZE fan coils

5 Selection of the maximum possible air speed **Max speed Fancoil** (MIN, MED, MAX) for RAUCLIMATE SILENT BREEZE fan coils No. 1 and fan coil No. 2

6 Presetting of the fan speed stage (STANDBY, MIN, MED, MAX) in the energy level **REDUCED** and **NORMAL** for RAUCLIMATE SILENT BREEZE fan coils

10 Operation via Room Unit with Display

The room units (room controller with LED matrix display from SW version 1.7) allow the user to make basic settings for the operation of the fan coils:

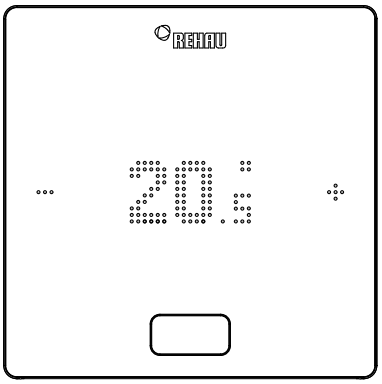
- Selection of the fan coil operating state ON, OFF and the fan speed stages STANDBY, MIN, MED, MAX
- Activation / deactivation of the fan coil flap (on / off) to switch between oscillating and directional airflow

Furthermore, the mode of operation of the NEA SMART 2.0 system can be switched between heating, cooling or automatic switching between heating and cooling on enabled room controllers.

10.01 Operation

MINUS Symbol

- Reduce desired temperature
- Previous menu item



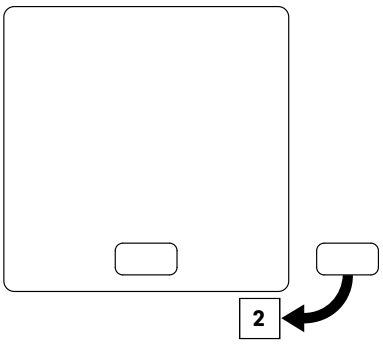
PLUS Symbol

- Increase the desired temperature
- Next menu item

HOME Button

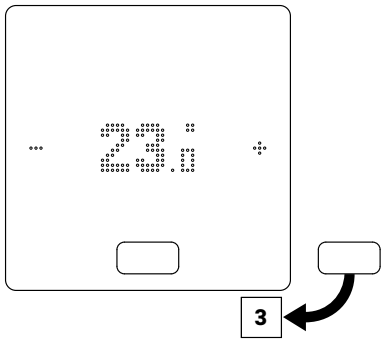
- Activate display
- Next menu item
- Confirm

1 **Initial state**

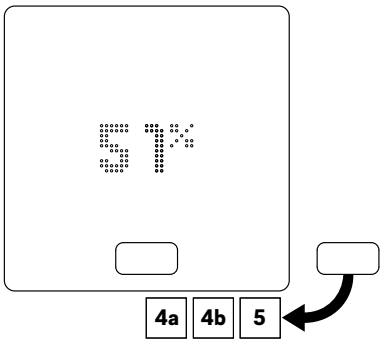


2 **Display of current room temperature and setpoint**

- To display the setpoint (desired temperature), press + or – once. Each additional keystroke to + or – increases or decreases the setpoint



3 **Display of current humidity** for room units with humidity measurement

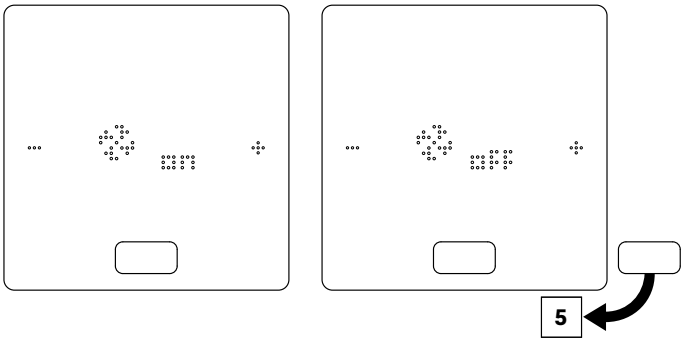


Depending on the configuration, different display options appear after pressing the HOME button:

4a Room with switched fan coil
4b Room with modulating RAUCLIMATE SILENT BREEZE fan coils or with a combination of a switched fan coil and modulating RAUCLIMATE SILENT BREEZE fan coils
5 Room without fan coil

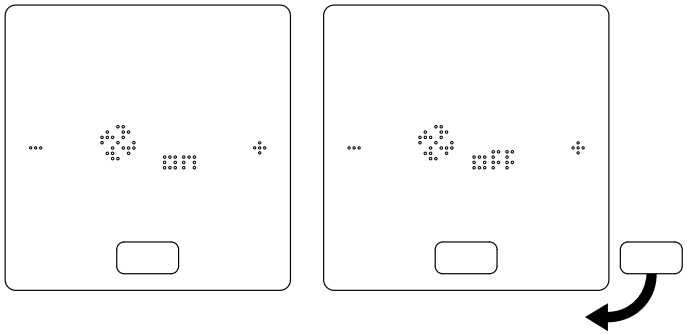
4a **Room with switched fan coil**

- By pressing + or – the switched fan coil is manually started (ON) or stopped (OFF)



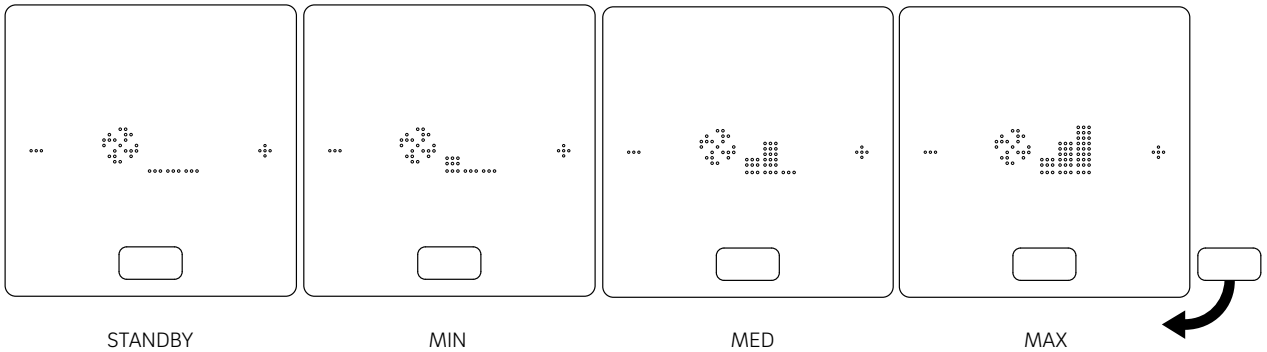
4b Room with modulating RAUCLIMATE SILENT BREEZE fan coils or with a combination of a switched fan coil and modulating RAUCLIMATE SILENT BREEZE fan coils

- Switched fan coils and RAUCLIMATE SILENT BREEZE fan coils are permanently deactivated when the setting is OFF
- Switching is made by pressing + or –



When the fan coil is switched off, there is no selection option for operating mode and fan coil flap.

- Changing the fan coil operating mode is done by pressing + or –



Switched fan coils and RAUCLIMATE SILENT BREEZE fan coils are with the setting

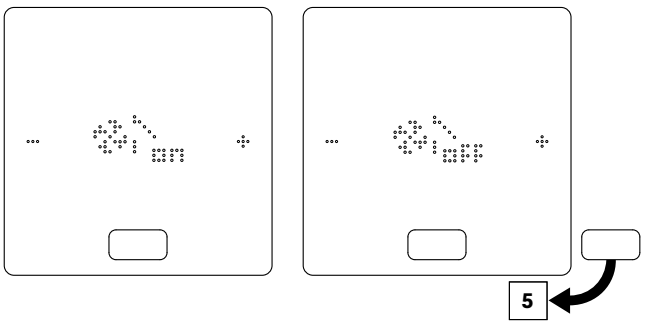
- OFF permanently disabled
- STANDBY deactivated until the next switching point of a time program arrives or the energy level is manually changed. In this case the default setting for energy level REDUCED / NORMAL is applied.

RAUCLIMATE SILENT BREEZE fan coils are in the setting

- MIN / MED / MAX operated in the selected mode until the next switching point of a time program arrives or the energy level is manually changed. In this case the default setting for energy level REDUCED / NORMAL is applied.

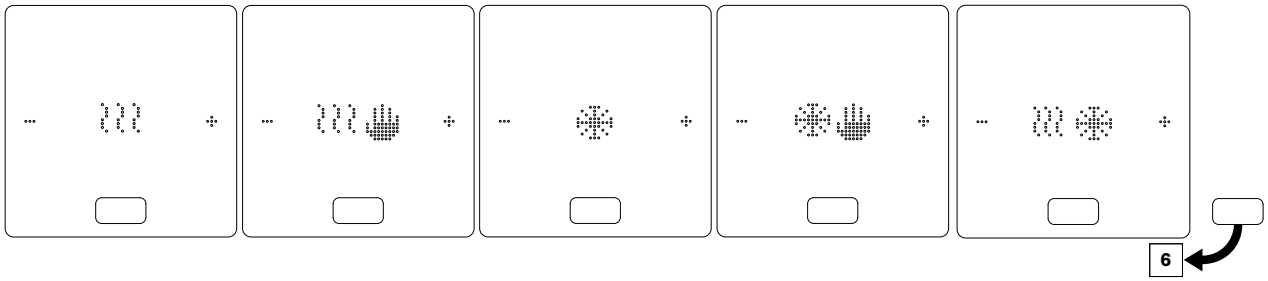
Without the use of timers, the fan coil remains in the selected energy level

- When RAUCLIMATE SILENT BREEZE fan coils with flap are used, the flap can be switched between oscillating (ON) and directional (OFF) airflow by pressing + or –



5 **Display and switching of the Operation Mode**

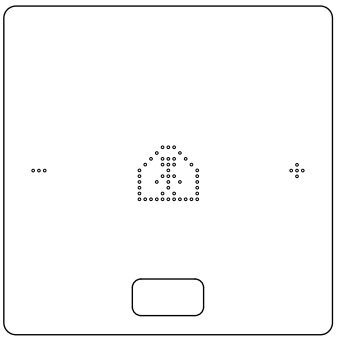
- Activating the Heating / Cooling Settings checkbox on the room configuration page in the installer's area allows to switch the mode of operation (Heating, Heating manual, Cooling, Cooling manual, Automatic) of the system via the enabled room control units of this room.
- If the Heating / Cooling settings checkbox has been activated, the +/– signs appear to allow switching.
- The configuration of the system and the actual conditions determine the modes of operation which may be selected by the user.



Heating mode automatic start | Heating mode manual | Cooling mode automatic start | Cooling mode manual | Heating / cooling mode automatic switching

6 **Display and switching of Energy Levels**

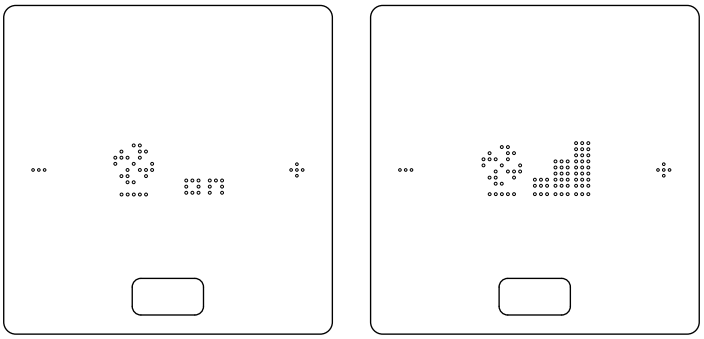
- Options: Normal Operation, Reduced Operation, Standby, Automatic Operation with Timer, Party Mode
- The energy level can be changed by pressing +/–



10.02 Status indicator

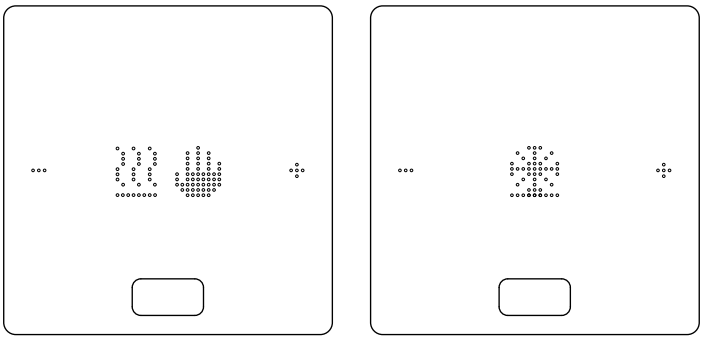
10.02.01 Status Fan Coil

- The status indicator "Fan Coil in operation" is indicated by an underscore below the fan icon



10.02.02 Status of Operation Mode

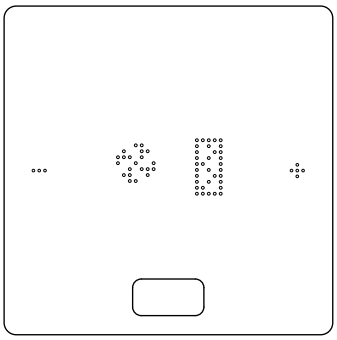
- The status “Heating active” and “Cooling active” is indicated by an underscore below the heating icon (wave) or cooling icon (ice crystal).



10.03 Messages

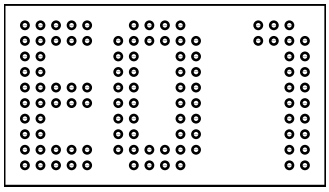
10.03.01 Filter cleaning indicator

The filter cleaning indicator notifies the user to clean the filter.
After cleaning the filter, press the HOME button for 5 seconds to reset the message.



- Before any cleaning and maintenance: Disconnect the device from the power supply by setting the main switch of the system to “OFF”.
- Wait until the components have cooled down to avoid burns.
- After completion of the maintenance work, the original condition must be restored.
- Observe the applicable safety and warning instructions in the fan coil’s “Installation and User Manual”.

10.03.02 Error Codes on NEA SMART 2.0 Room Controllers



The following fan coil specific error messages can be displayed on the controller's display.

Please contact your installer to resolve the issue:

E 50 Communication error between base and RAUCLIMATE SILENT BREEZE fan coil

E 51 Motor fault

E 52 Fan Coil Stop – difference between air and T2 water temperature too large

E 53 Sensor T2 water temperature defective (short circuit / interruption)

E 54 T2 Water temperature too cold for heating or too warm for cooling

E 56 Fan Coil in fault mode

Notes

Notes

Our verbal and written advice with regard to usage is based on years of experience and standardised assumptions and is provided to the best of our knowledge. The intended use of REHAU products is described comprehensively in the technical product information. The latest version can be viewed at www.rehau.com/TI. We have no control over the application, use or processing of the products. Responsibility for these activities therefore remains entirely with the respective user/processor. Where claims for liability nonetheless arise, they shall be governed exclusively according to our terms and conditions, available at www.rehau.com/conditions, insofar as nothing else has been agreed upon with REHAU in writing. This shall also apply for all warranty claims, with the warranty applying to the consistent quality of our products in accordance with our specifications. Subject to technical changes.

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