Installation and user manual

SRC

Smart Remote Control

CE

systemair

INSTALLATION INSTRUCTION — English

NOTICE D'INSTALLATION — Français

INSTALLATIONSHANDBUCH — Deutsch

ISTRUZIONI INSTALLAZIONE — Italiano

INSTRUCCIONES DE INSTALACIÓN — Español

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POWER SUPPLY MUST BE SWITCHED OFF BEFORE STARTING WORK IN THE ELECTRIC CONTROL BOX

1. GENERAL RECOMMENDATIONS

Please read the following safety precautions very carefully before installing the unit.

1.1. SAFETY DIRECTIONS

Follow the safety rules in forces when you are working on your appliance.

The installation, commissioning, use and maintenance of these units should be performed by qualified personnel having a good knowledge of standards and local regulations, as well as experience of this type of equipment.

This appliance has not been designed for use by persons (including children) with reduced physical, sensorial or mental faculties or by persons without any experience or knowledge of heating systems, unless they act under the safety and supervision of a responsible person or have received prior training concerning the use of the appliance.

Any wiring produced on site must comply with the corresponding national electrical regulations.

Make sure that the power supply and its frequency are adapted to the required electric current of operation, taking into account specific conditions of the location and the current required for any other appliance connected to the same circuit.

The unit must be EARTHED to avoid any risks caused by insulation defects.

It is forbidden to start any work on the electrical components if water or high humidity is present on the installation site.

1.2. WARNING

Cutoff power supply before starting to work on the appliance.

The manufacturer declines any responsibility and the warranty becomes void if these instructions are not respected.

If you meet a problem, please call the Technical Department of your geographical area.

The information contained in these Instructions are subject to modification without advance notice.

1.3. ENVIRONMENT

This equipment is designed for indoor installation ONLY.

Climatic conditions	
Transport	Ambient temperature -20... 70°C Max. ambient humidity 95% RH, non-condensing
Storage	Ambient temperature -20... 70°C Max. ambient humidity 95% RH, non-condensing
Operation	Ambient temperature -20... 50°C Max. ambient humidity 95% RH, non-condensing

2. PRESENTATION

2.1. INTRODUCTION

The **SRC** HMI (**S**mart **R**emote **C**ontrol) is a control interface for control systems. It has the advantage of being a remote control system. The control can be centralized and is done either individually or by zone (unit group). It can control up to:

- 31 units
- 15 separate zones

2.2. MINI-BMS

The SRC controls several devices of different types over several zones:

- Chillers and hot water production units
  - ✔ Chiller A (SYSAQUA featuring POL423 or POL636 or POL638 control)
  - ✔ Chiller B (SYSCROLL except SYSCROLL EVO 20-30)
- Air handling units (featuring Access Control)
- Fan convector units
  - ✔ Fan convector unit A (featuring SYSLOGIC control)
  - ✔ Fan convector unit B (featuring TCONTROLPOD control)

2.3. REMOTE CONTROL

The SRC is used as a simple remote control. It controls a single type of device, whether alone or several in a single zone:

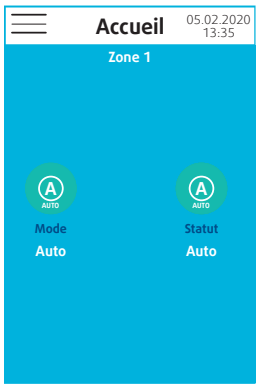
- Fan convector unit only
  - ✔ Fan convector unit (featuring SYSLOGIC control)
- Fan convector unit zone (featuring SYSLOGIC control)
- Heat pump on water circuit only (featuring POL423 or POL636 or POL638 control)
- Heat pump zone on water circuit (featuring POL423 or POL636 or POL638 control)

2.4. FEATURES

2.4.1. CHILLERS AND HOT WATER PRODUCTION UNITS

The **SRC** is used to act on the following:

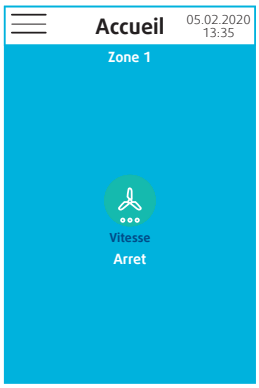
- operating mode
- unit status



2.4.2. AIR HANDLING UNIT

The **SRC** is used to act on the following:

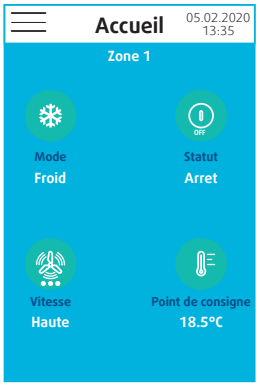
- ventilation speed



2.4.3. FAN CONVECTOR UNIT

The **SRC** is used to act on the following:

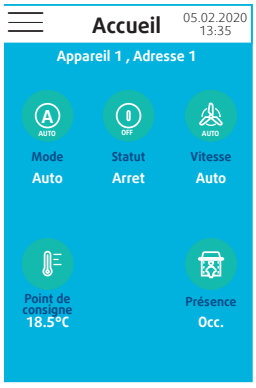
- operating mode
- unit status
- ventilation speed
- ambient setpoint



2.4.4. HEAT PUMP ON WATER CIRCUIT

The **SRC** is used to act on the following:

- operating mode
- unit status
- ventilation speed
- ambient setpoint(s)
- in use/not in use

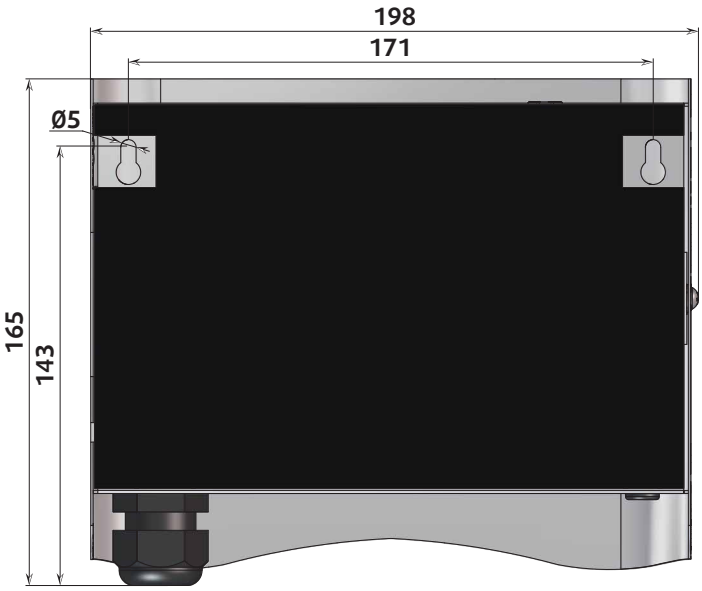


3. DIMENSIONS AND INSTALLATION

3.1. POWER AND COMMUNICATION UNIT

The power and communication unit contains:

- a 220 V ~/24 V DC transformer
- a Modbus RTU protocol protection card



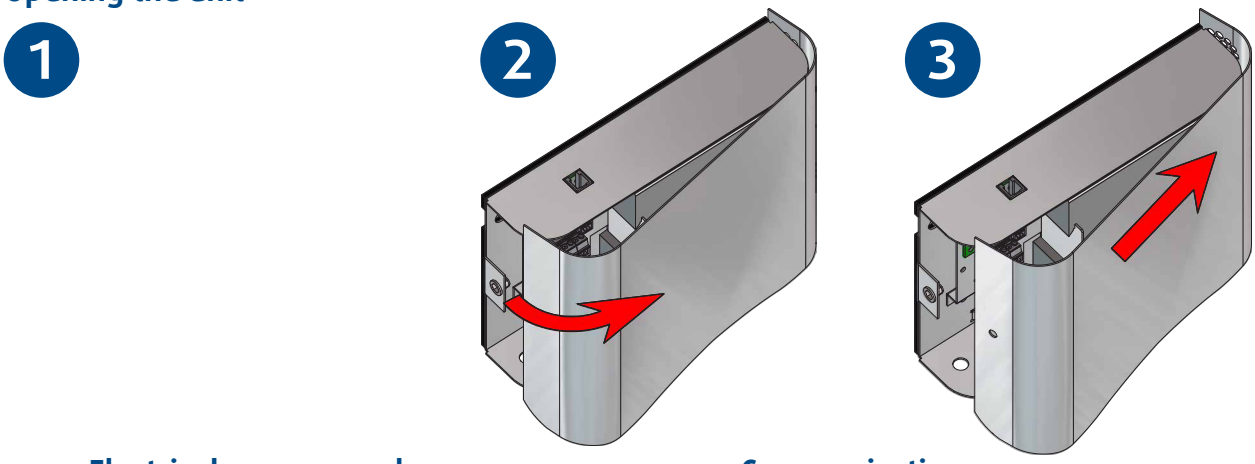
To install the power and communication unit:

1. Mount 2 screws on the wall, respecting the dimensions.
2. Hook the unit onto the screws.

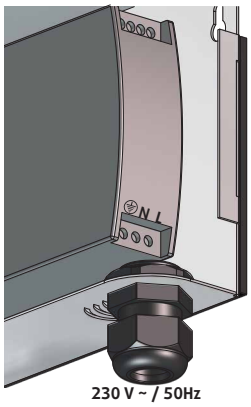
Information

the power and communication unit can be installed at the bottom of the wall just above the electrical ducts. A 1 m connection cable between the unit and the **SRC** remote control is supplied. It is possible to use a connection cable of up to 6 m.

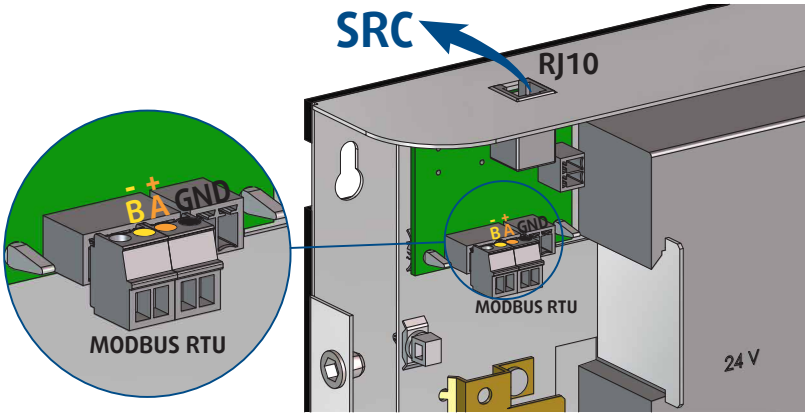
Opening the unit



Electrical power supply

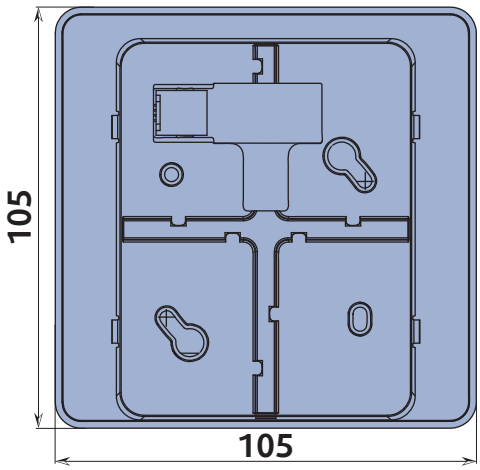


Communication



3.2. SRC REMOTE CONTROL

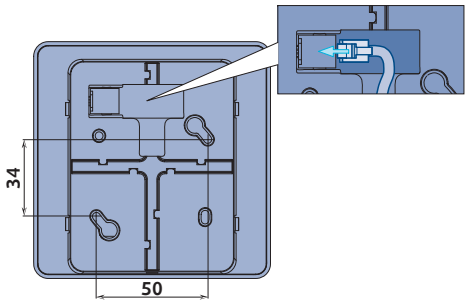
The **SRC** is designed to be mounted on a wall. There are two mounting options:

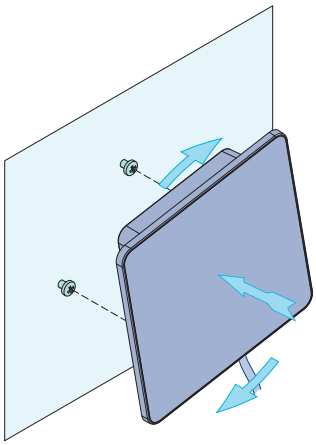


Method 1

To install the **SRC**:

1. Mount 2 screws on the wall, respecting the dimensions.
2. Connect the RJ10 cable
3. Attach the **SRC** remote control to the screws.

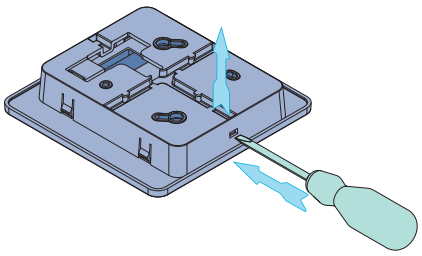


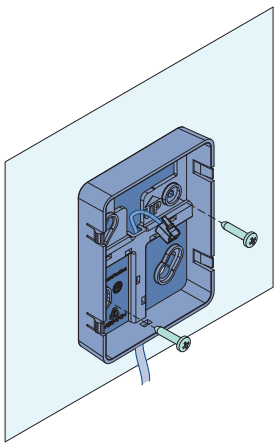


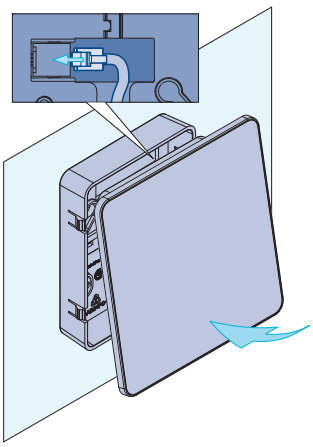
Method 2

To install the **SRC**:

1. Fix the back to the wall
2. Connect the RJ10 cable
3. Clip the cover by pressing lightly on it at the clip.



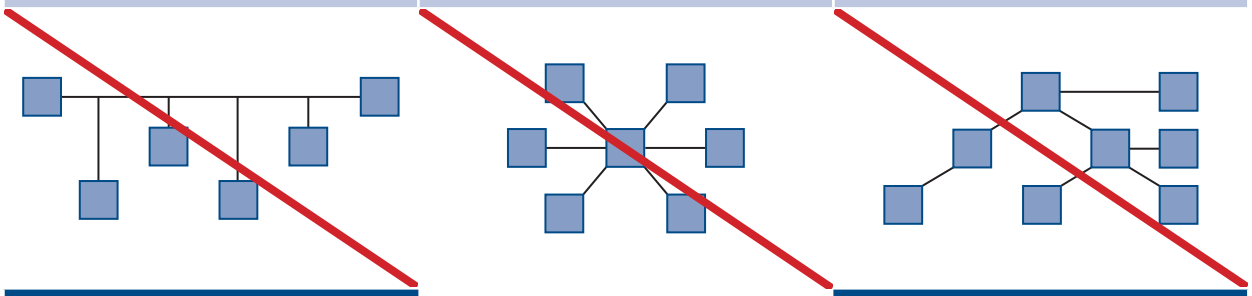




3.3. WIRING

3.3.1. NETWORK PRINCIPLE

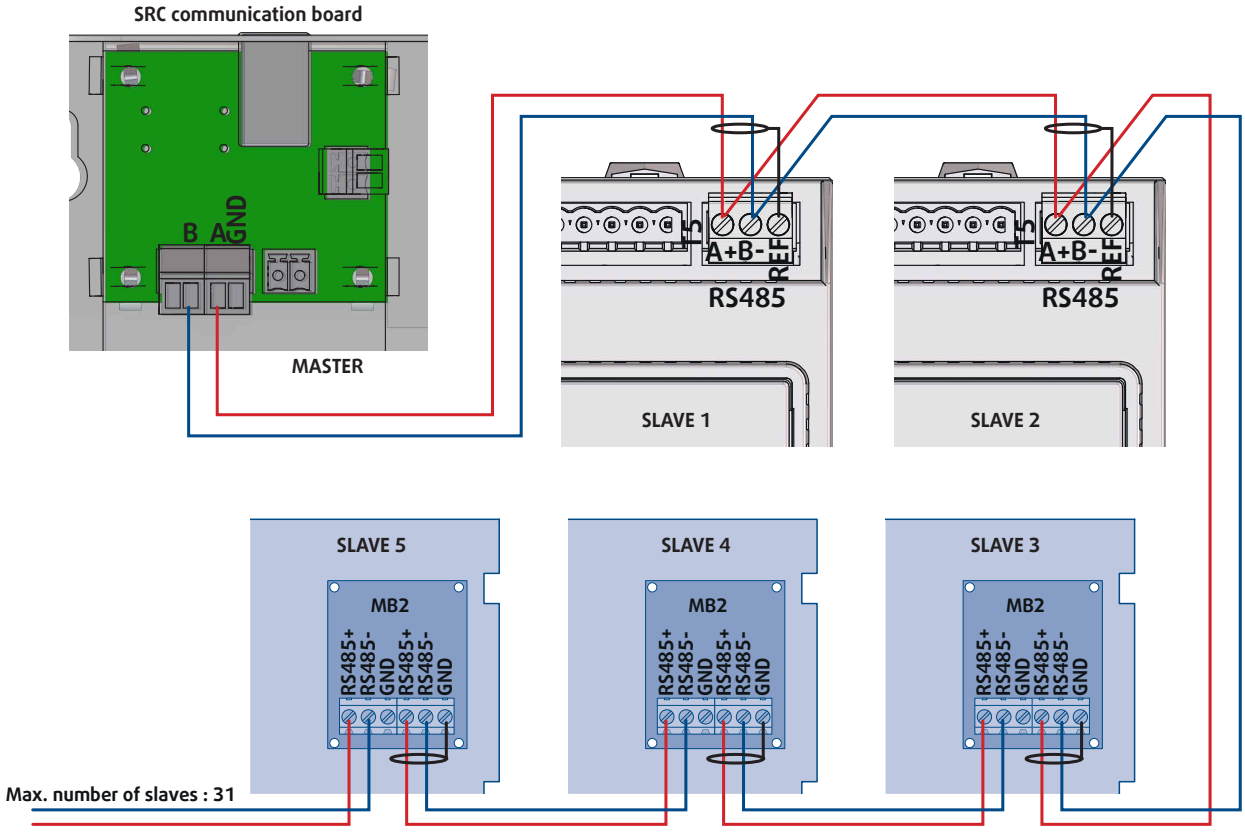
Bus topology	Star topology	Trunk and branch topology
Prohibited	Prohibited	Prohibited



Ring topology	Linear topology
Prohibited	Authorized

The interconnection wires must be a screened twisted pair. The wire impedance shall be between 100 and 130 ohms, and its cross-sectional area between 0.12 and 0.3 mm² (26 to 22 AWG).

Each network is limited to 31 units and a distance of 1,000 meters. However, we recommend using a repeater well before reaching the limits and in accordance with the geographical constraints.



Information

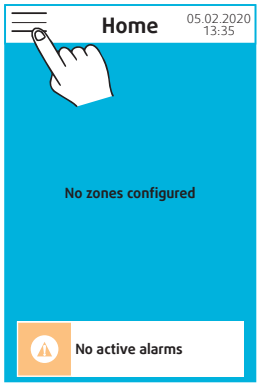
The transmission is configured in 9600 baud, without parity, with 8 data bits and 1 stop bit.

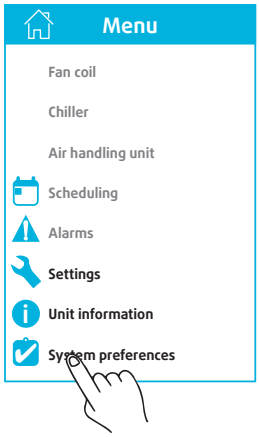
4. INITIAL SETTINGS

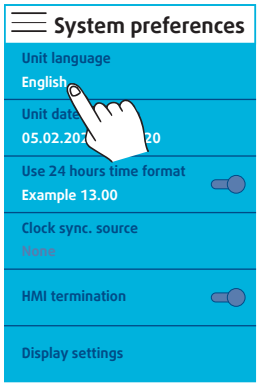
4.1. INTERFACE SETTINGS

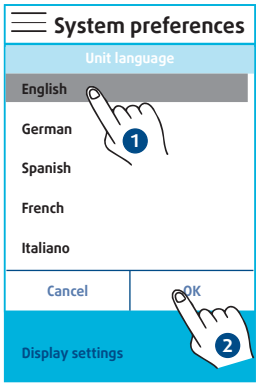
Start by configuring the settings for the:

1. language

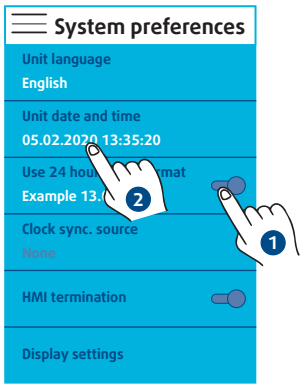


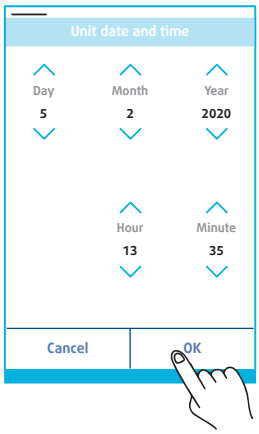




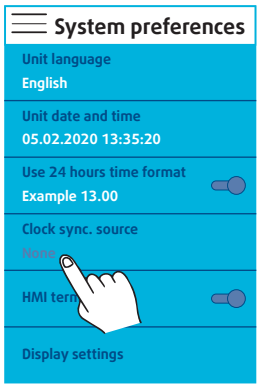


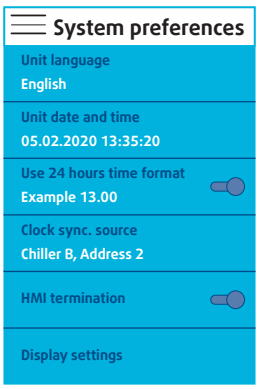
2. type of time display
3. date and time





When the **SRC** is used to manage units equipped with an internal clock, it is possible to synchronize the **SRC** to one of these units. Synchronization is done automatically (depending on the unit) or at the **SRC** power-up.



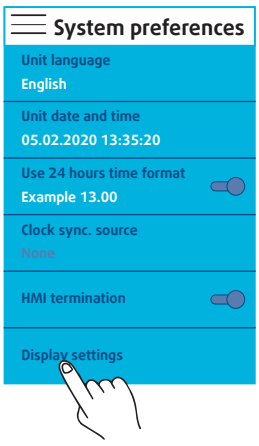


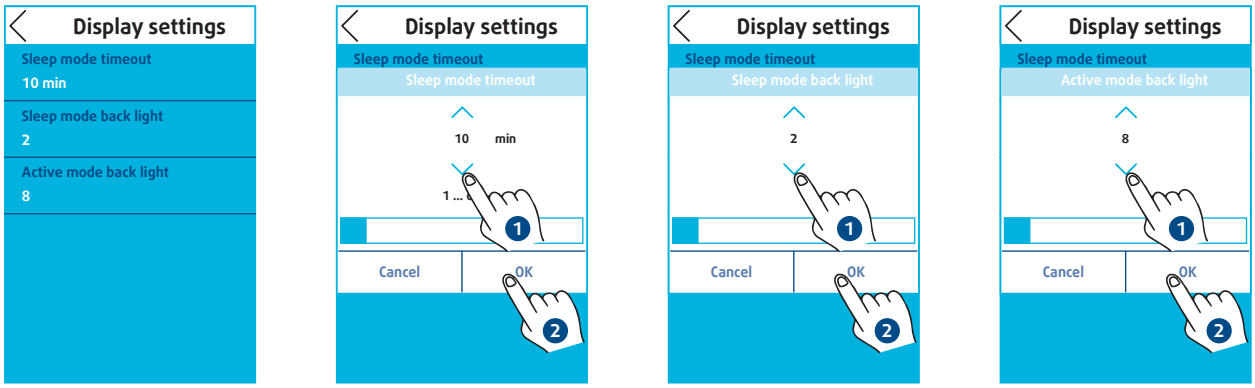
Caution

In the case of heat pump management on water circuits, the **SRC**'s clock must be synchronized with that of one of the units.

4.2. DISPLAY SETTING

This menu allows you to manage the screen brightness when it is active or in standby mode. It is also possible to set the standby time.



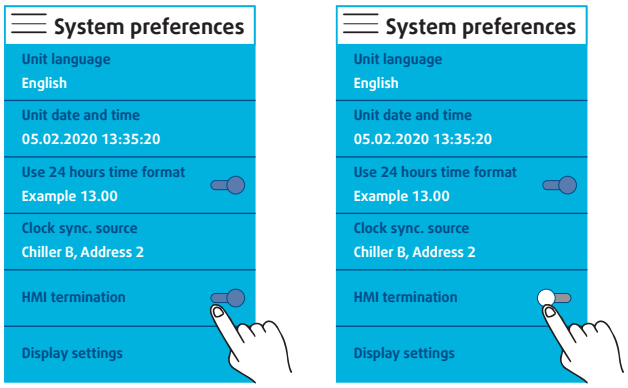


Information

Setting "0" for standby brightness turns off the **SRC** screen. Simply tapping on the screen brings the **SRC** out of this mode.

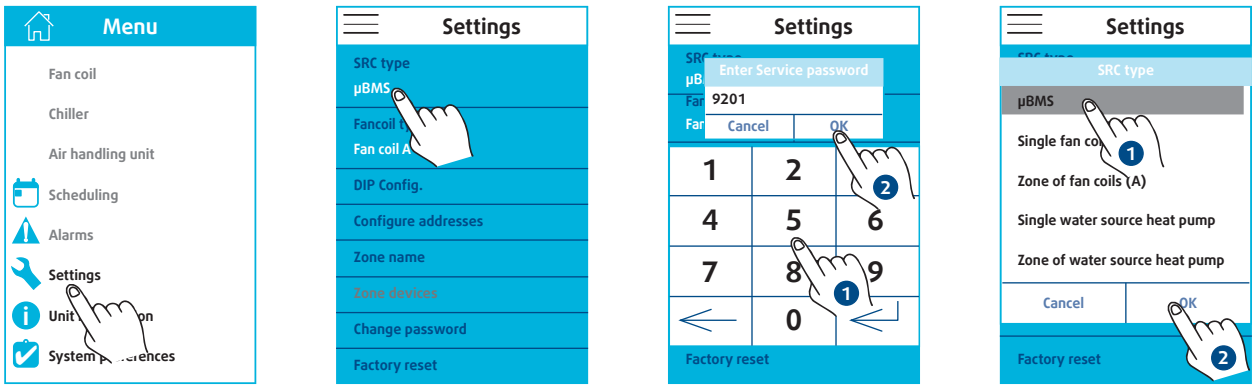
4.3. INTERFACE RESISTOR

The **SRC** is equipped with a 120 ohm terminating resistor. By default, the end of line resistor is activated. It can be deactivated directly via the "Preferences" screen.



5. CONFIGURATION OF THE CONTROL TYPE

The choice of control system is made in the Parameter menu. Access is password protected (9201 by default)



With the **Mini BMS** option, the **SRC** allows you to group and manage several types of units by zones:

- Chillers and hot water production units
- Air handling units
- Fan convector units

For the other options, the **SRC** considers the network as a single zone in which only one type of machine is present:

- Fan convector units featuring SYSLOGIC control
- Heat pump on water circuit

5.1. MINI-BMS

The configuration must be carried out according to the following process:

1. address configuration
2. choice of the control type used on the fan convector units
3. definition of the fan convector unit configuration
   - ✔ Configuration dip switch (SYSLOGIC control)
   - ✔ AC motor (TCONTROLPOD control)
   - ✔ EC motor (TCONTROLPOD control)
4. zone creation

Information

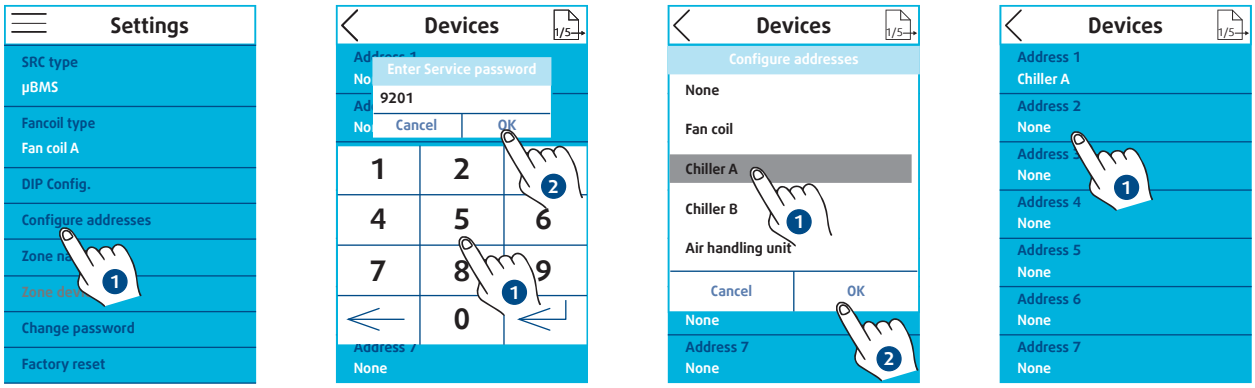
To make it easier to identify the fields when using the **SRC**, it is possible to name each of the zones.

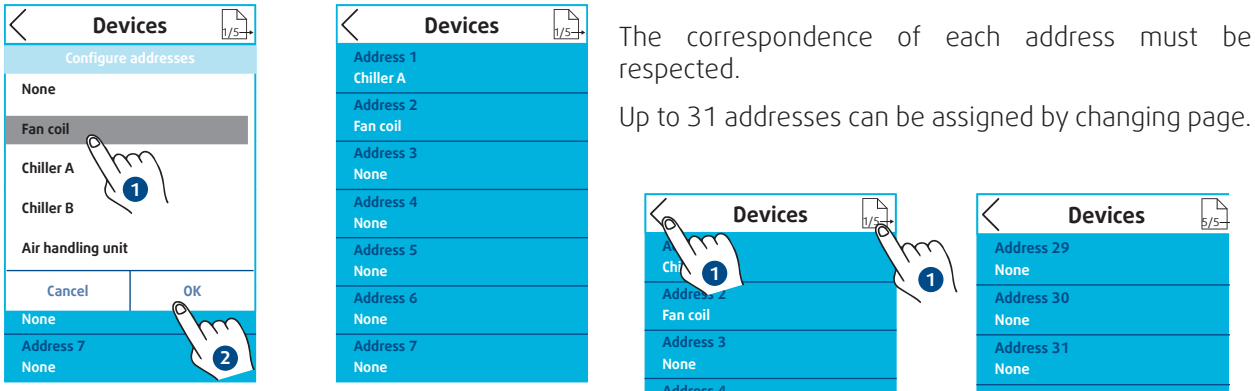
5.1.1. ADDRESSING IN MINI-BMS MODE

Caution

Before setting up the **SRC**, it is important that all slave units are addressed.

- **Maximum of 31 units**
- **Addresses between 1 and 31**

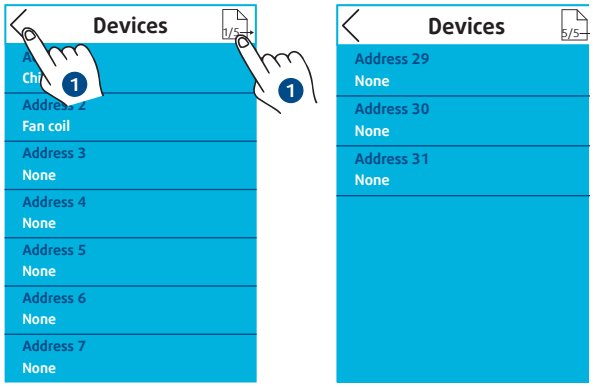




It is always possible to add or remove a machine at a later date.

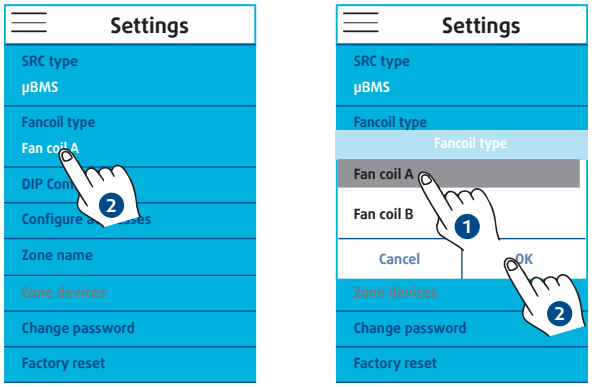
The correspondence of each address must be respected.

Up to 31 addresses can be assigned by changing page.



5.1.2. FAN CONVECTOR UNIT CONTROL

This menu is used to define the type of regulation fitted to the fan convector units:



➢ Fan convector unit A

- ✔ featuring SYSLOGIC control

➢ Fan convector unit B

- ✔ featuring TCONTROLPOD AC control
- ✔ featuring TCONTROLPOD EC control

5.1.3. FAN CONVECTOR UNIT CONFIGURATION

The **SRC** must be set up according to the configuration of the fan convector units.

5.1.3.1. FAN CONVECTOR UNIT A

Type A fan coils are equipped with SYSLOGIC control. This electronic card has a DIP switch to define the characteristics of the machine There are 7 possible configurations:

1. 2 tubes with valve
   Cooling only

2. 2 tubes with valve
   Reversible/change over

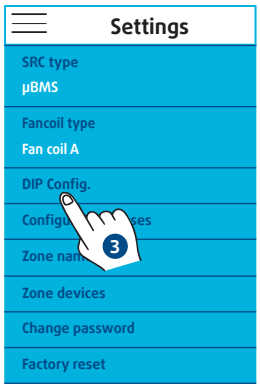
3. 2 tubes with valve
   Heating only

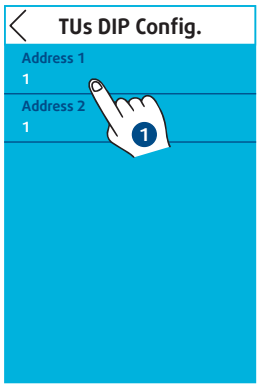
4. 2 tubes without valve
   Reversible/change over

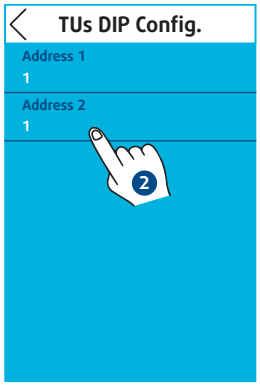
5. 4 tubes with valve
   Cooling/Heating

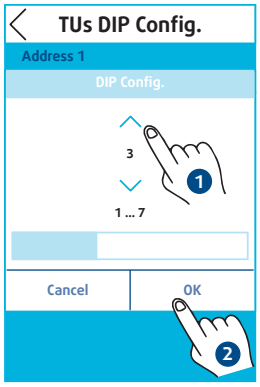
6. 2 tubes with valve and electric heating
   Cooling/Heating

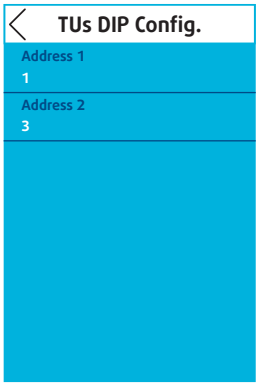
7. 2 tubes with valve and electric heating
   Reversible/change over







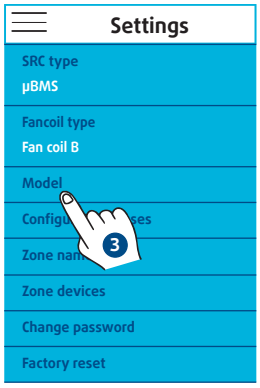


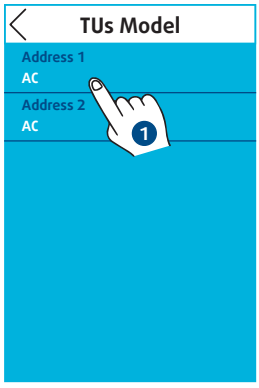


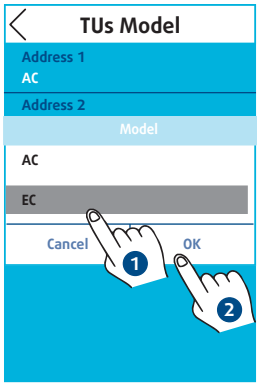
5.1.3.2. FAN CONVECTOR UNIT B

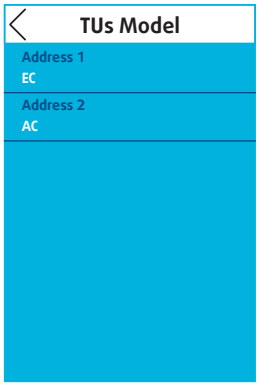
Type B fan convector units feature TCONTROLPOD control. This electronic board is specific according to the type of motor equipping the unit:

- **AC**
- **EC**





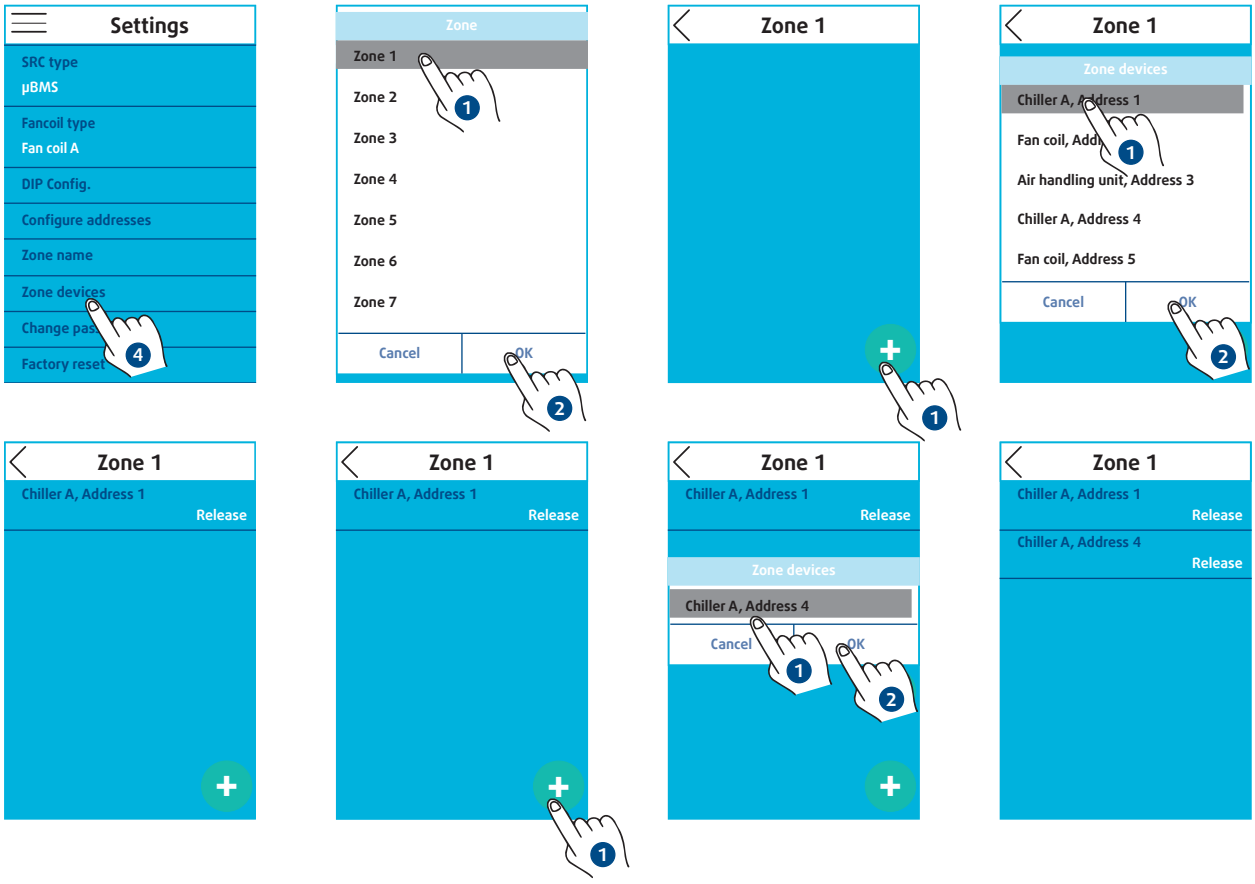




5.1.4. ZONE CREATION

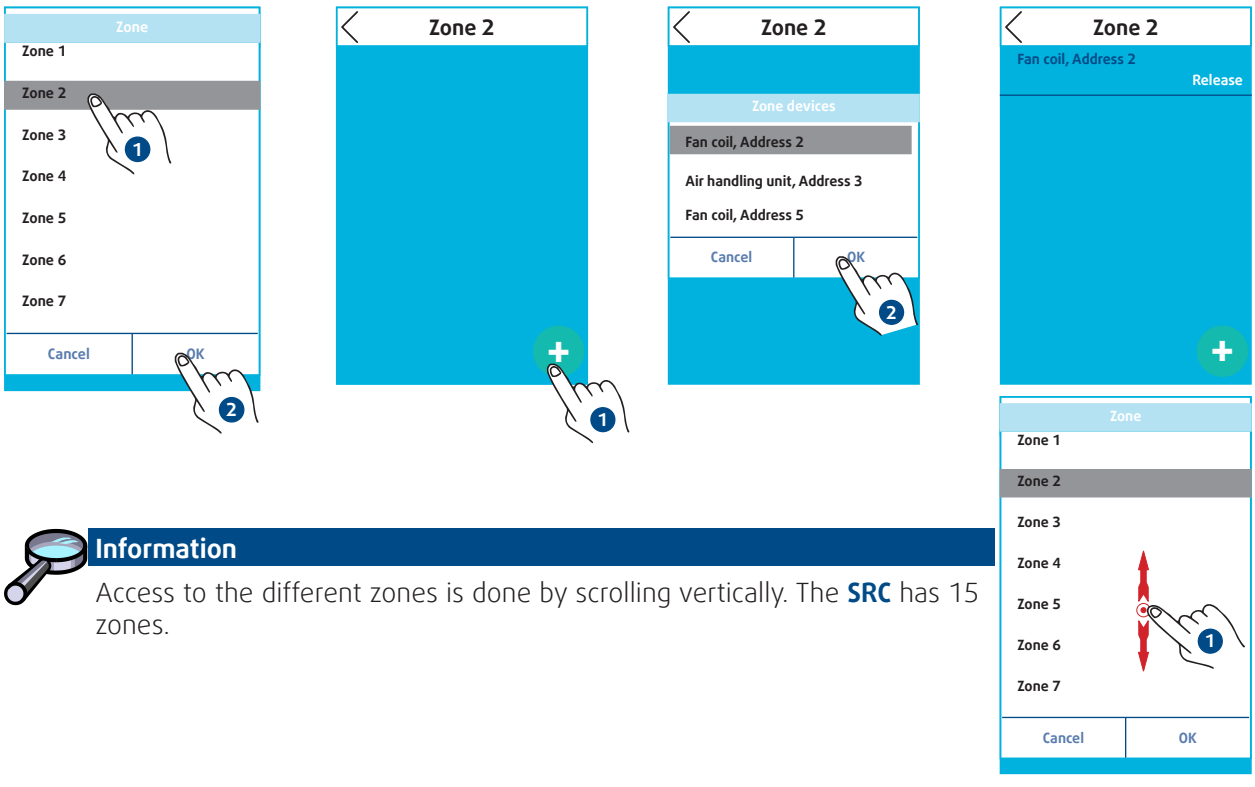
After selecting the desired area, add and remove the available devices:

- Chillers
- Terminal units
- Air handling units



Caution

Each zone can only have one type of device. For fan convector unit zones, the configuration of the Dips or the motor type must be identical.



Information

Access to the different zones is done by scrolling vertically. The **SRC** has 15 zones.

5.1.5. NAME ZONES

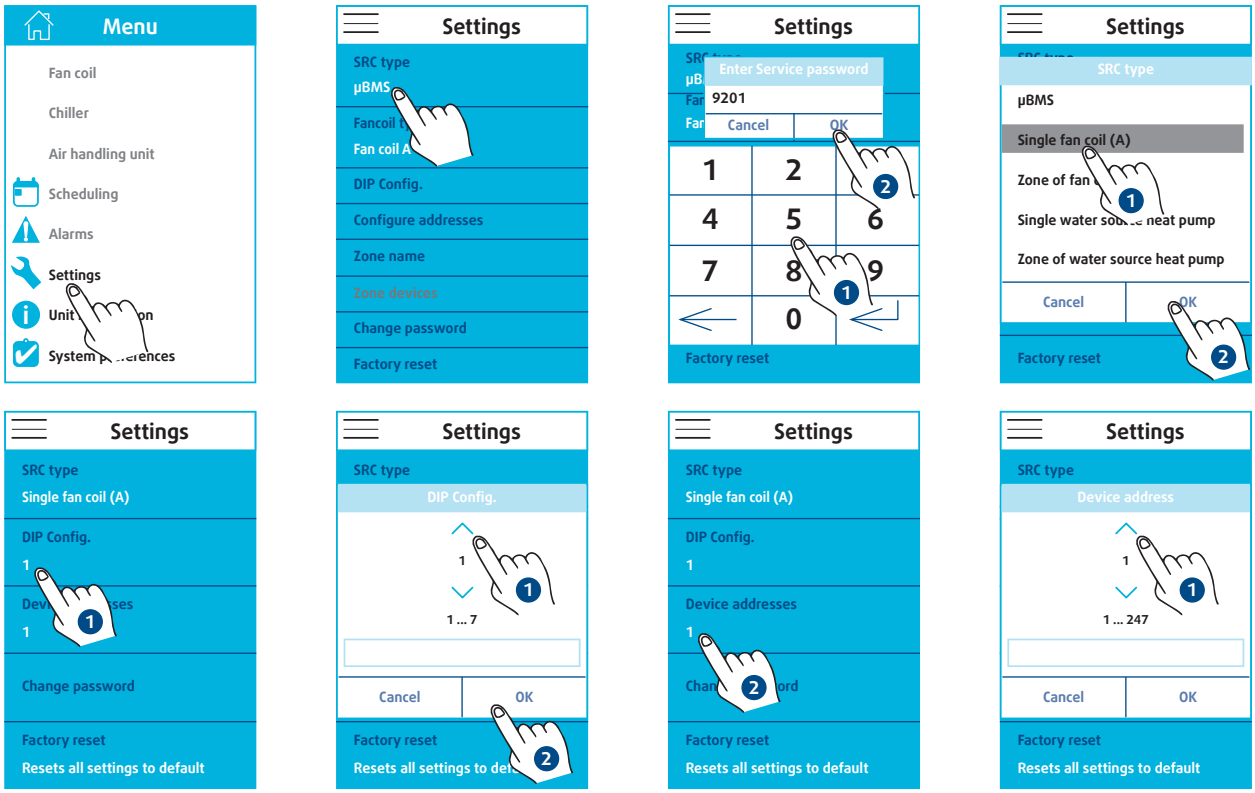
Select a zone from the proposed list (zone 1, zone 2, etc.) to name it.

5.2. FAN CONVECTOR UNIT ONLY

In this operating mode the **SRC** can only control one type A fan conductor unit.

The configuration must be carried out according to the following process:

1. definition of the fan convector unit configuration
2. address configuration



The DIP Config. corresponds to the technical specifications of the fan convector unit (Refer to the § **FAN CONVECTOR UNIT A**, page 12). It is imperative that all fan convector units have strictly the same configuration.

The declared address must be the same as that of the fan convector unit. The address can be between 1 and 247.

5.3. FAN CONVECTOR UNIT ZONE

In this operating mode, the **SRC** can control a maximum of 31 type A fan conductor units.

The configuration must be carried out according to the following process:

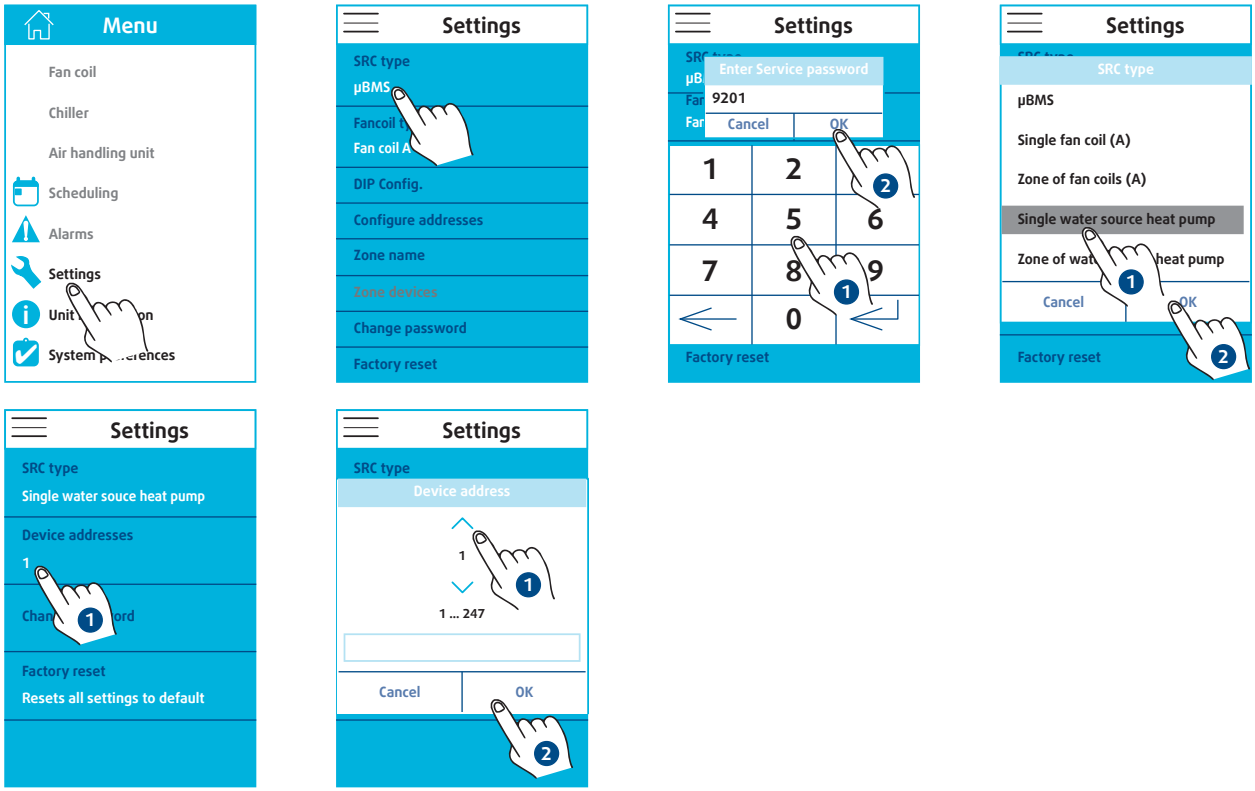
1. definition of the fan convector unit type configuration
2. address configuration

The DIP Config. corresponds to the technical specifications of the fan convector unit type (Refer to the § **FAN CONVECTOR UNIT B**, page 12).

The declared address must be the same as that of the fan convector unit. The address can be between 1 and 247. All addresses must be unique.

5.4. HEAT PUMP ON WATER CIRCUIT ONLY

In this operating mode, the **SRC** can only control one heat pump on water circuit.



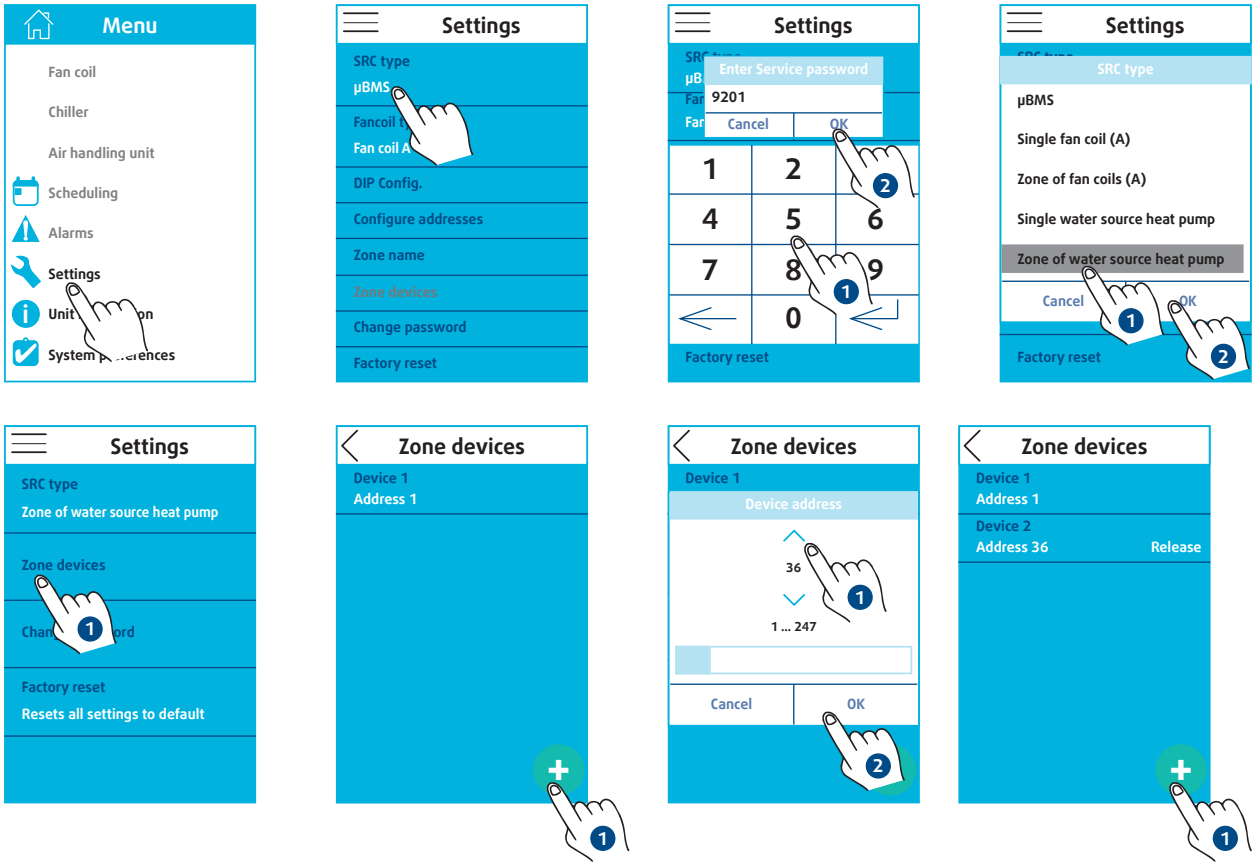
The declared address must correspond to that of the heat pump on water circuit. The address can be between 1 and 247.

5.5. HEAT PUMP ON WATER CIRCUIT ONLY ZONE

In this operating mode, the **SRC** can control a maximum of 31 heat pumps on water circuit.

The configuration must be carried out according to the following process:

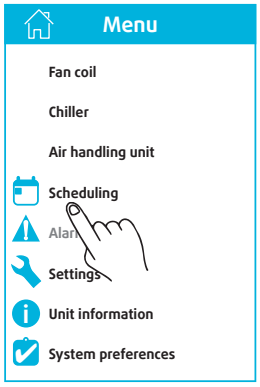
1. address configuration

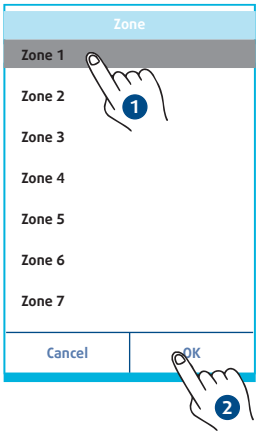


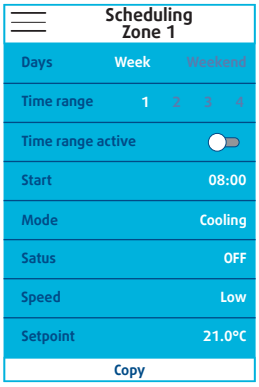
The declared address must correspond to that of the heat pump on water circuit. The address can be between 1 and 247. All addresses must be unique.

6. HOURLY PROGRAMMING

6.1. GENERAL



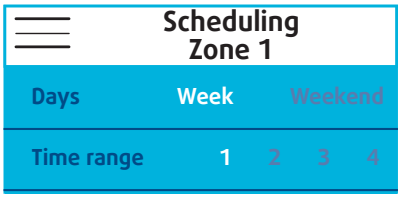




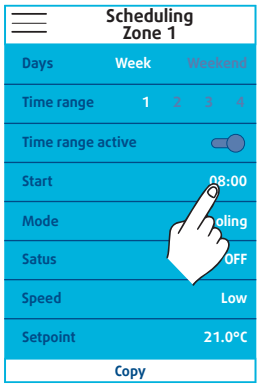
The **SRC** allows the operating parameters to be programmed by zone.

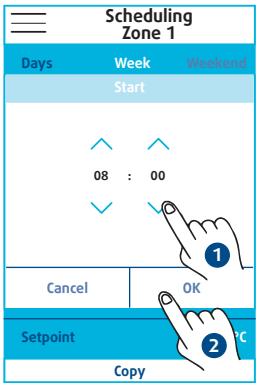
It is possible to program weekdays and weekends differently.

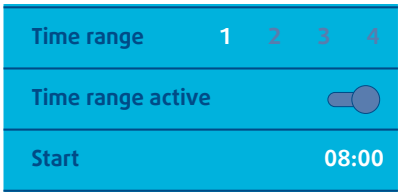
For each programming group, 4 time slots are available.



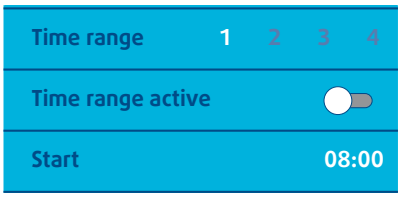
For each time slot, it is possible to set the time from which the operating parameters will be applied. It is also necessary to enable or disable this time slot.







Active range



Inactive range

Caution

The time programming of the ranges must be chronological. Otherwise, the SRC will malfunction.

When creating or modifying a program, the **SRC** immediately applies the setting of the range that is active at that time.

Example:

Time: 2:30 PM

T1 active at 8:00 AM

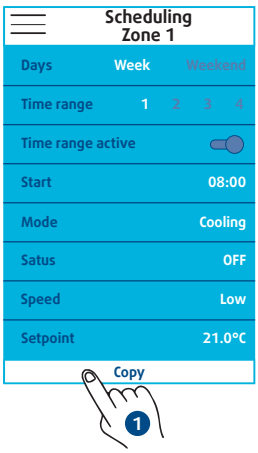
T1 active at 12:00 noon

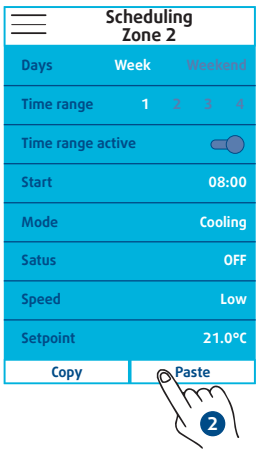
T3 active at 6:00 PM

T4 active at 10:00 PM

The SRC applies the programming of the T2 range.

The Copy/Paste function allows you to copy the entire programming of a zone and apply it to a second zone equipped with the same type of unit.





6.2. FAN CONVECTOR UNIT

6.2.1. FAN CONVECTOR UNIT A

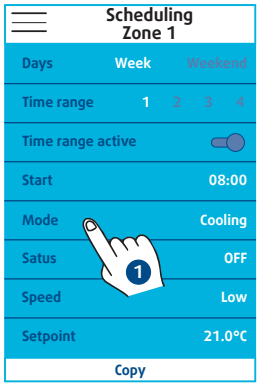
The **SRC** programming makes it possible to define:

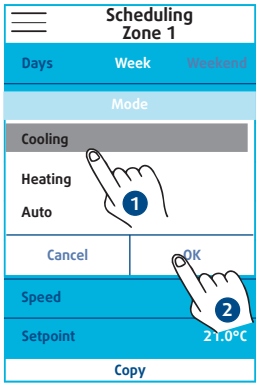
➢ operating mode

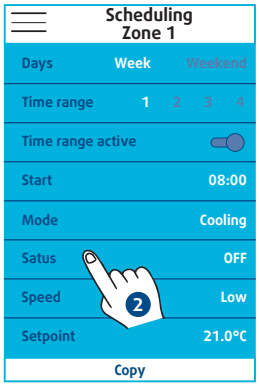
- ✔ Cool
- ✔ Heat
- ✔ Auto

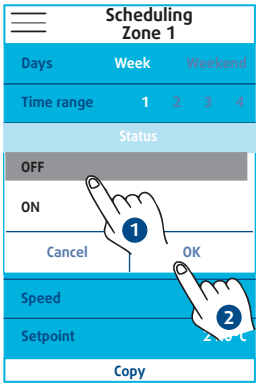
➢ unit status

- ✔ On
- ✔ Off





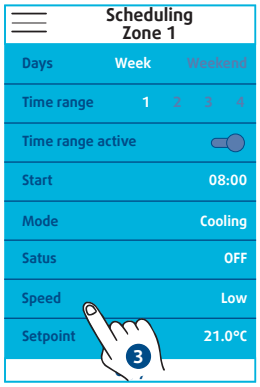


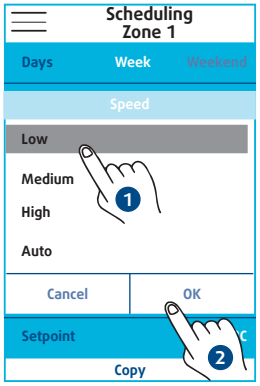


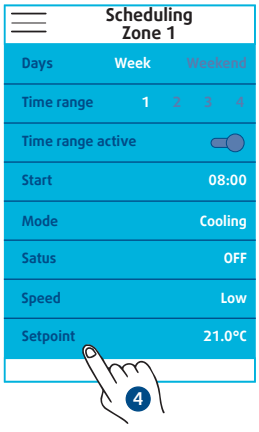
➢ ventilation speed

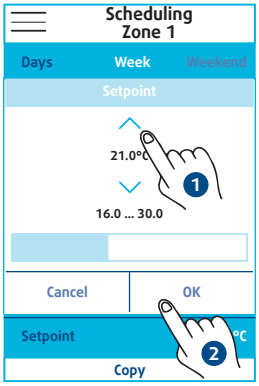
- ✔ Low
- ✔ Average
- ✔ High
- ✔ Auto

➢ ambient setpoint









6.2.2. FAN CONVECTOR UNIT B

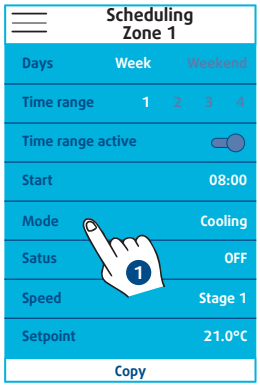
The **SRC** programming makes it possible to define:

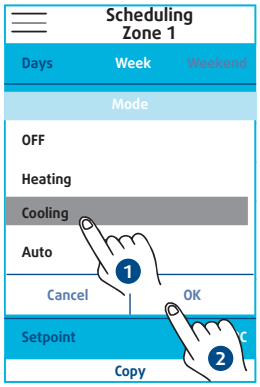
➢ operating mode

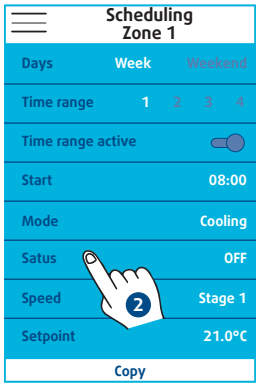
- ✔ Off
- ✔ Heat
- ✔ Cool
- ✔ Auto

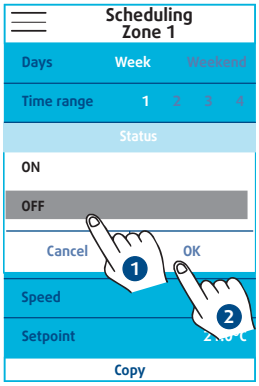
➢ unit status

- ✔ On
- ✔ Off





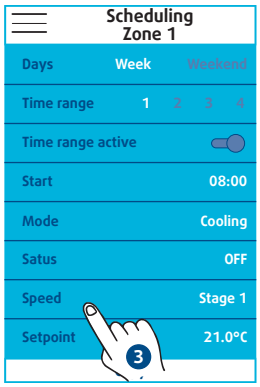


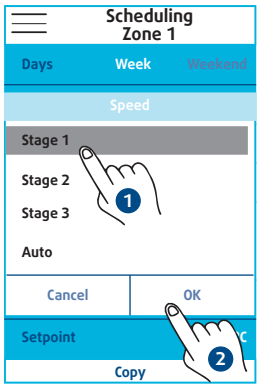


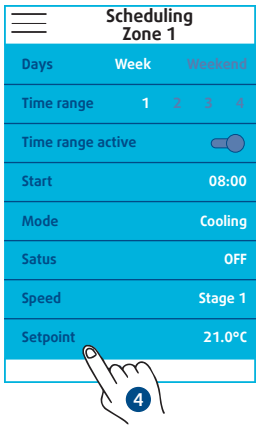
➢ ventilation speed

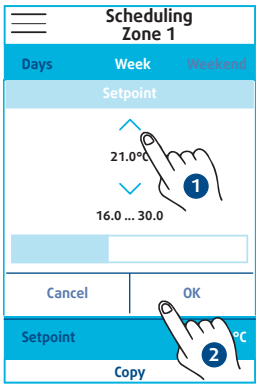
- ✔ Stage 1
- ✔ Stage 2
- ✔ Stage 3
- ✔ Auto

➢ the BMS setpoint









The setting of the ambient setpoint depends:

➢ on the BMS setpoint (**SRC**)

➢ on the TCONTROLPOD control setpoint.

If the user changes the setpoint locally using the TCONTROLPOD remote control, then there is a **ΔT** between the setpoint set on the SRC and the one requested by the TCONTROLPOD control. This **ΔT** will be kept for a change of setting on the **SRC**.

6.3. CHILLERS AND HOT WATER PRODUCTION UNITS

6.3.1. CHILLER A

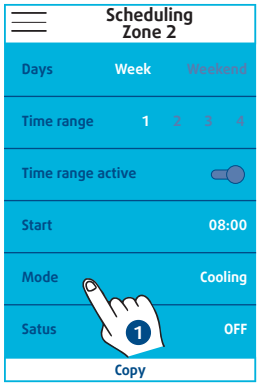
The **SRC** programming makes it possible to define:

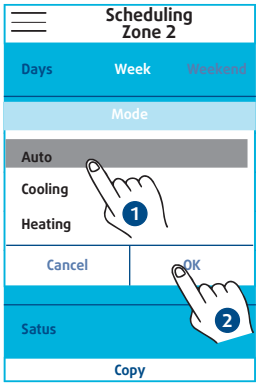
operating mode

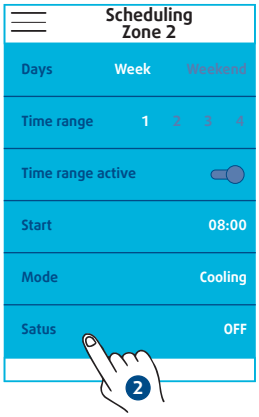
- ✔ Auto
- ✔ Cool
- ✔ Heat

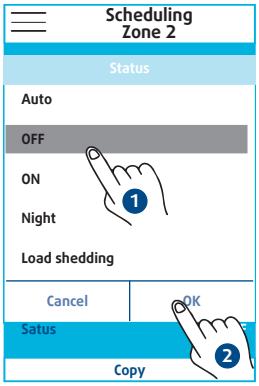
➢ unit status

- ✔ Auto
- ✔ Off
- ✔ On
- ✔ Night
- ✔ Load shedding









6.3.2. CHILLER B

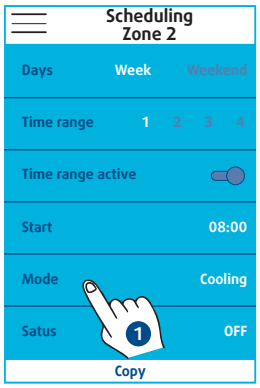
The **SRC** programming makes it possible to define:

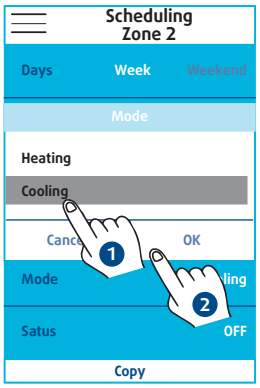
operating mode

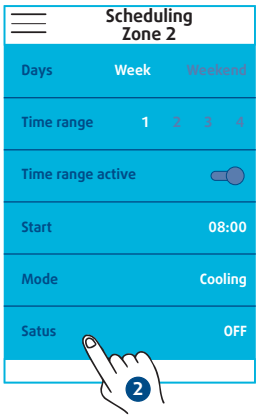
- ✔ Heat
- ✔ Cool

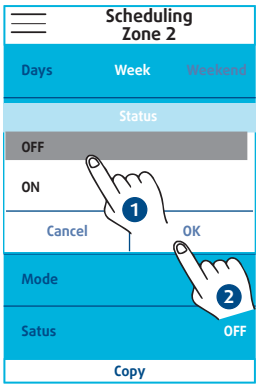
➢ unit status

- ✔ Off
- ✔ On







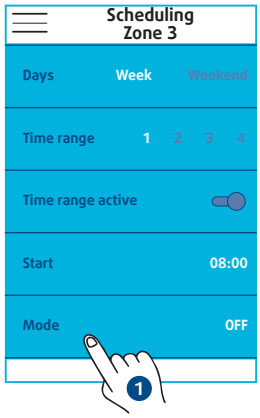


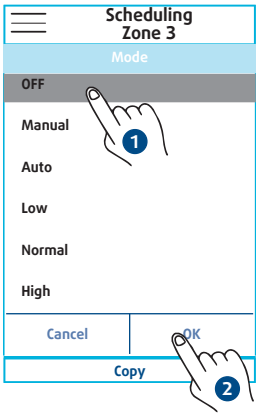
6.4. AIR HANDLING UNIT

The **SRC** programming makes it possible to define:

➢ operating mode

- ✔ Off
- ✔ Manual
- ✔ Auto
- ✔ Low
- ✔ Normal
- ✔ High





6.5. HEAT PUMP ON WATER CIRCUIT

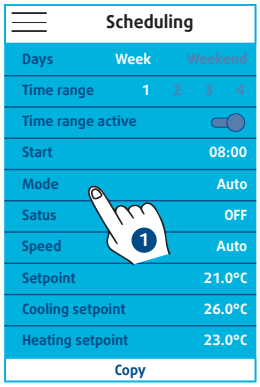
The **SRC** programming makes it possible to define:

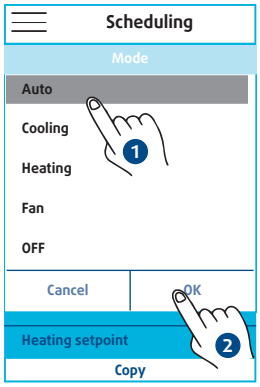
operating mode

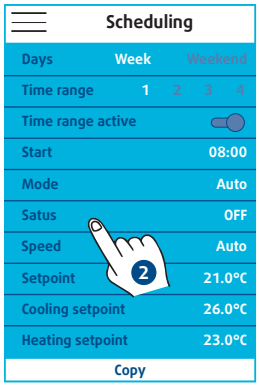
- ✔ Auto
- ✔ Cool
- ✔ Heat
- ✔ Fan
- ✔ Off

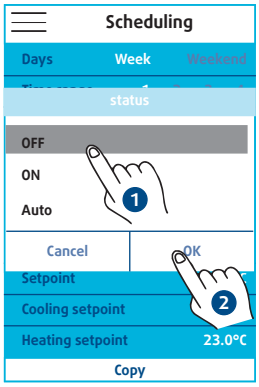
➢ unit status

- ✔ On
- ✔ Off
- ✔ Auto





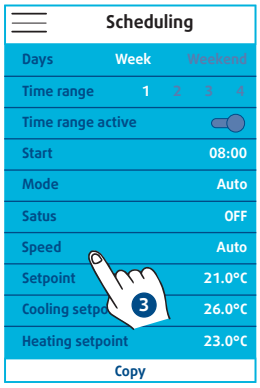


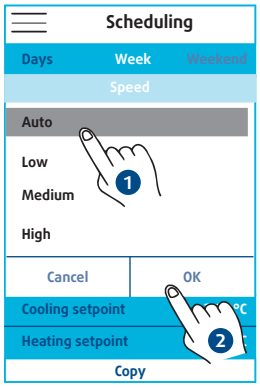


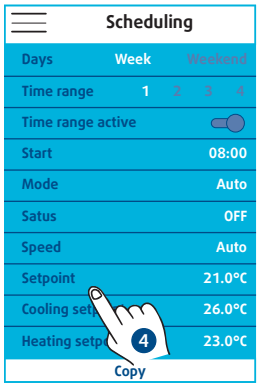
➢ ventilation speed

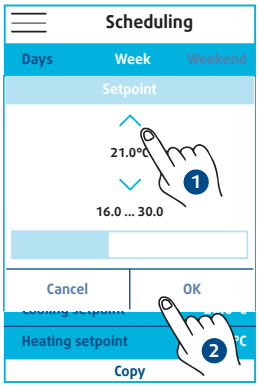
- ✔ Auto
- ✔ Low
- ✔ Average
- ✔ High

➢ ambient setpoint









Heat pump on water circuit control can manage several setpoints.

➢ Single setpoint: the setpoint can be adjusted between 15°C and 30°C

➢ Two setpoints: this approach introduces a comfort zone in which no cold or heat production is required. It is bounded by the heat setpoint and the cool setpoint. The lower limit of the heat setpoint is 17°C and the upper limit of the cold setpoint is 30°C. The minimum **ΔT** between the setpoints is set when the units are installed.

The number of setpoints can be configured when installing heat pumps on water circuit.

Caution

The number of setpoints can only be detected when the SRC is on. If this setting is changed, you must reboot the SRC.

7. CONTROL OF DEVICES

The **SRC** can control all the devices by acting:

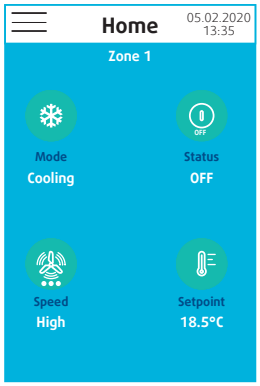
➢ on the zone

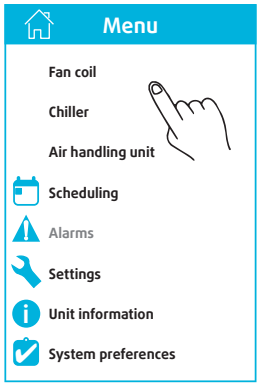
with direct control of units

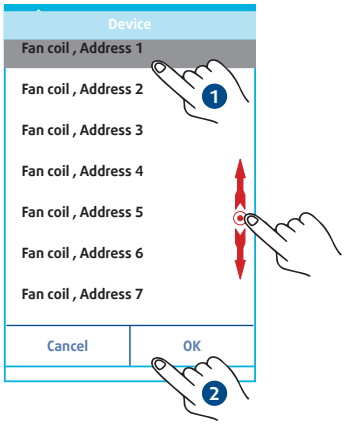
➢ on one device only

direct control of a unit

verification of operating parameters







Information

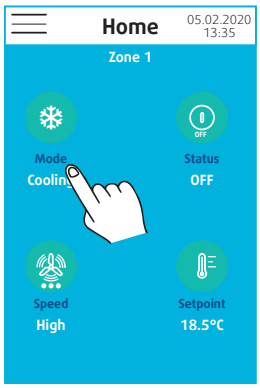
The zone display corresponds to the machine with the smallest address in the zone.

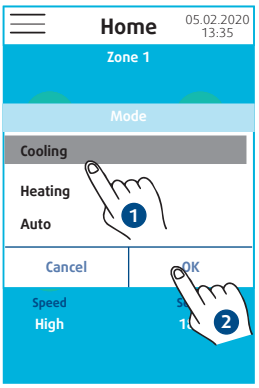
7.1. FAN CONVECTOR UNIT

7.1.1. FAN CONVECTOR UNIT A

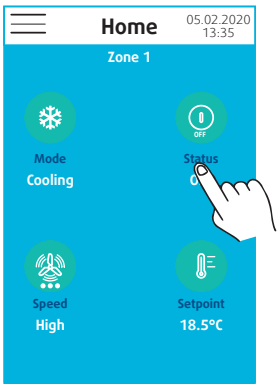
In mini-BMS mode, the **SRC** is used to act for all the devices in the zone on:

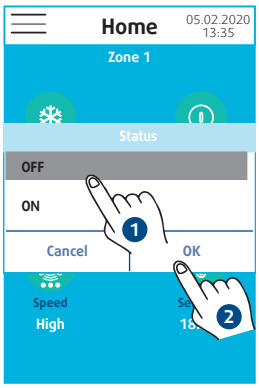
➢ operating mode



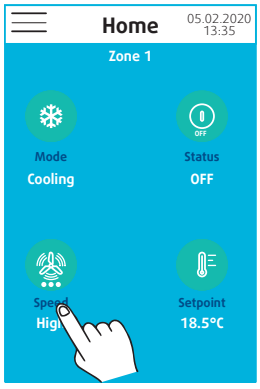


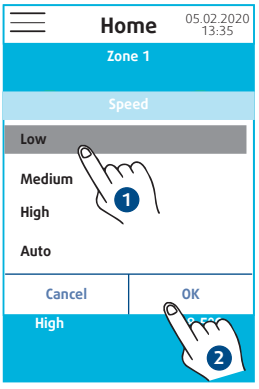
➢ unit status



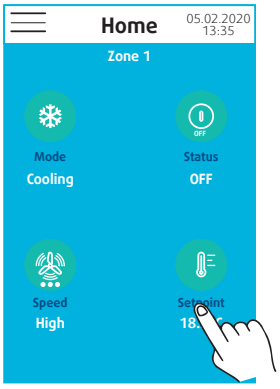


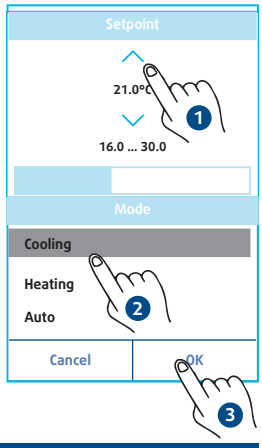
➢ ventilation speed





➢ ambient setpoint





Information

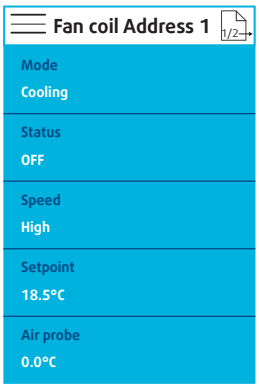
When the selected operating mode is AUTO, the **SRC** displays the actual operating mode of the machine (COOL or HEAT). AUTO will only be displayed when the machine is off or the setpoint is reached.

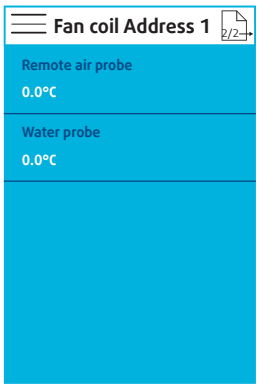
The **SRC** can act individually, like a remote control on:

- operating mode
- unit status
- ventilation speed
- ambient setpoint

It is also possible to check the different temperatures measured by the:

- air return sensor
- remote control sensor
- water sensor

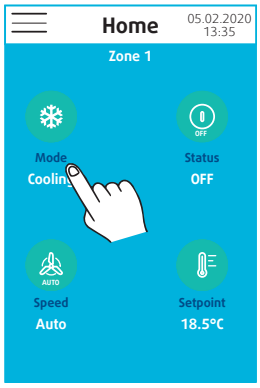


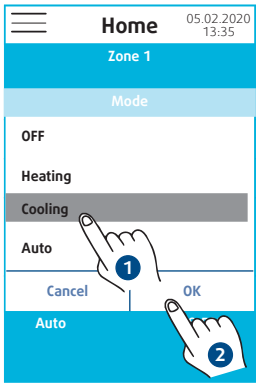


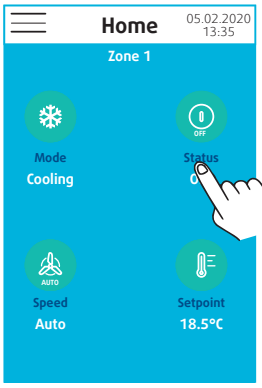
7.1.2. FAN CONVECTOR UNIT B

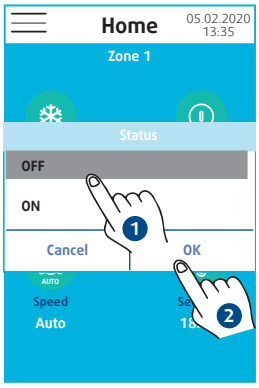
In mini-BMS mode, the **SRC** is used to act for all the devices in the zone on:

- operating mode
- unit status

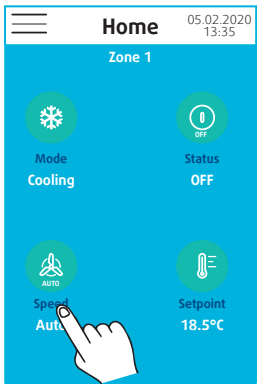


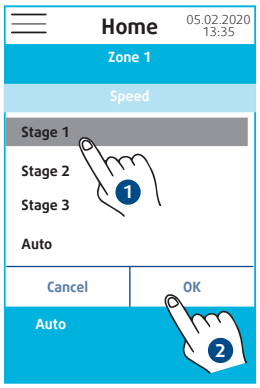


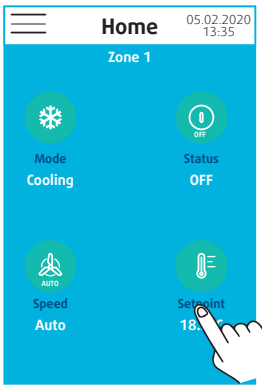


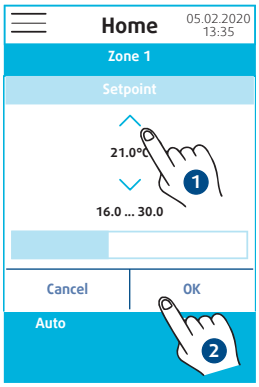


- ventilation speed
- ambient setpoint







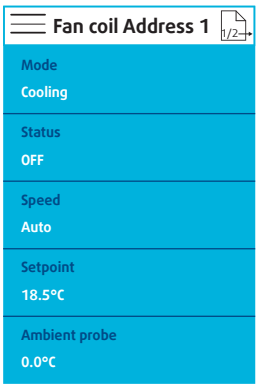


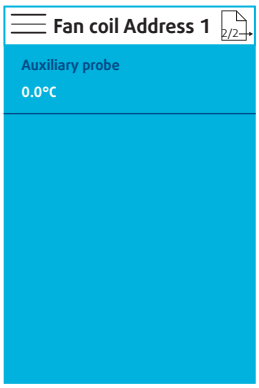
The **SRC** can act individually, like a remote control on:

- operating mode
- unit status
- ventilation speed
- ambient setpoint

It is also possible to check the different temperatures measured by the:

- ambient temperature sensor
- auxiliary probe



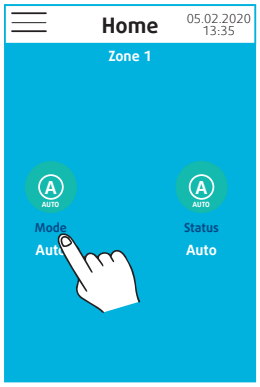


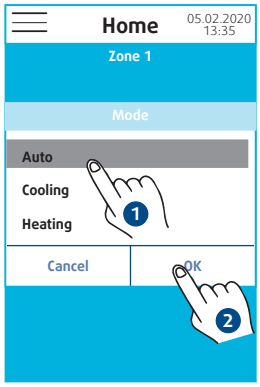
7.2. CHILLERS AND HOT WATER PRODUCTION UNITS

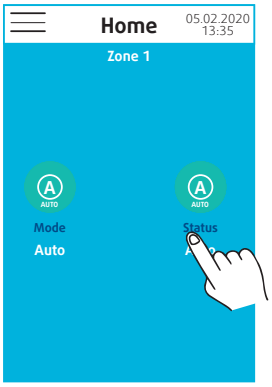
7.2.1. CHILLER A

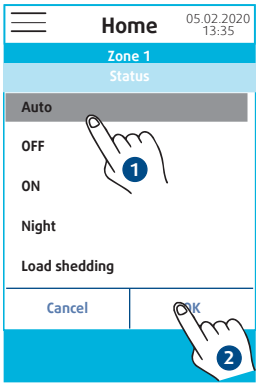
The **SRC** is used to act for all the devices in the zone on the following:

- operating mode
- unit status







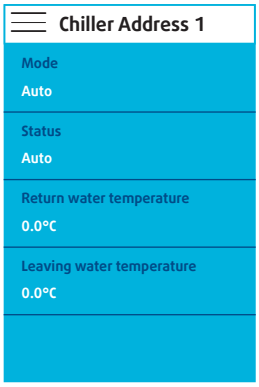


The **SRC** can act individually, like a remote control on:

- operating mode
- unit status

It is also possible to check the different temperatures measured by the:

- water return sensor
- water flow sensor

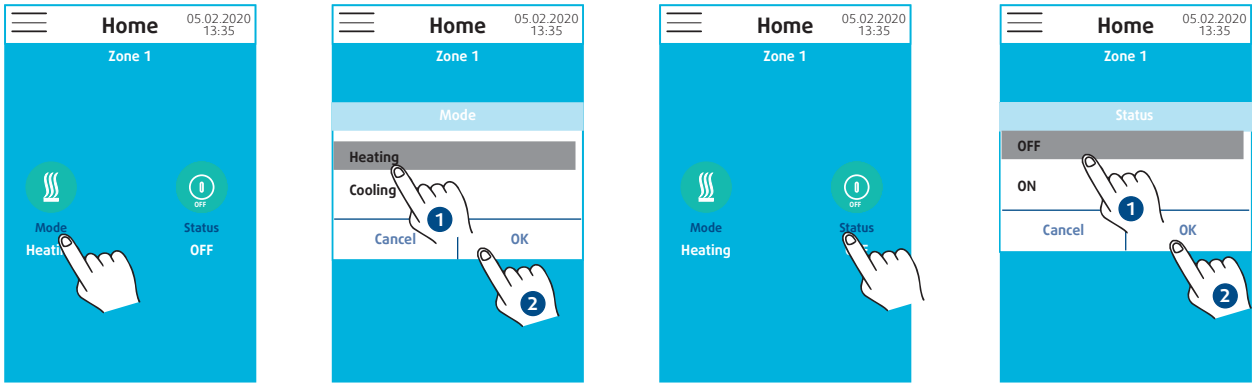


7.2.2. CHILLER B

The **SRC** is used to act for all the devices in the zone on the following:

➢ operating mode

➢ unit status



The **SRC** can act individually, like a remote control on:

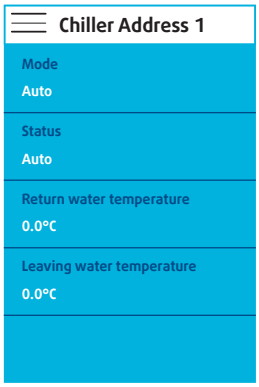
➢ operating mode

➢ unit status

It is also possible to check the different temperatures measured by the:

➢ water return sensor

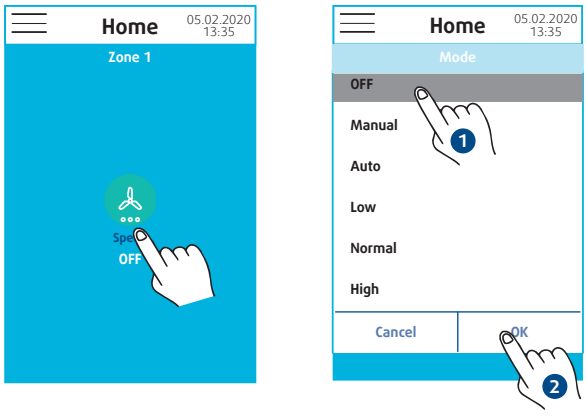
➢ water flow sensor



7.3. AIR HANDLING UNIT

The **SRC** is used to act for all the devices in the zone on the following:

➢ ventilation speed

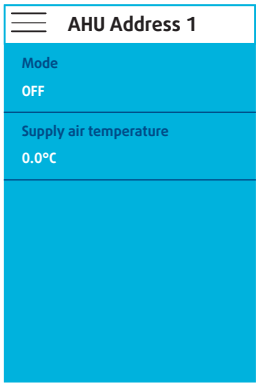


The **SRC** is used to act individually on the following:

➢ ventilation speed

It is also possible to check the temperature measured by the:

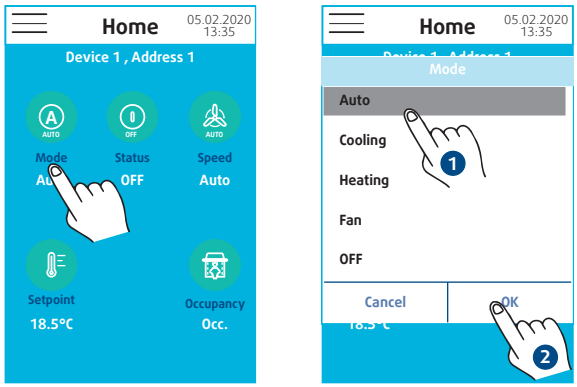
➢ air flow sensor



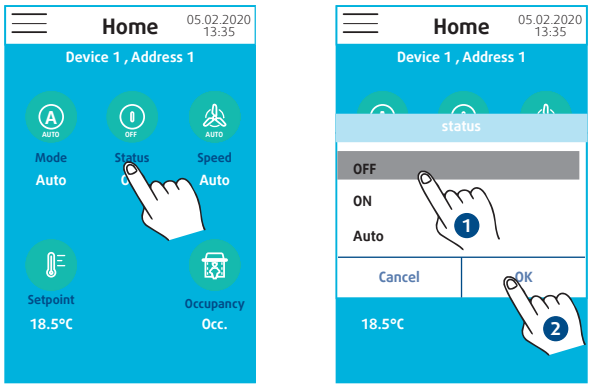
7.4. HEAT PUMP ON WATER CIRCUIT

The **SRC** can act individually, like a remote control on:

➢ operating mode

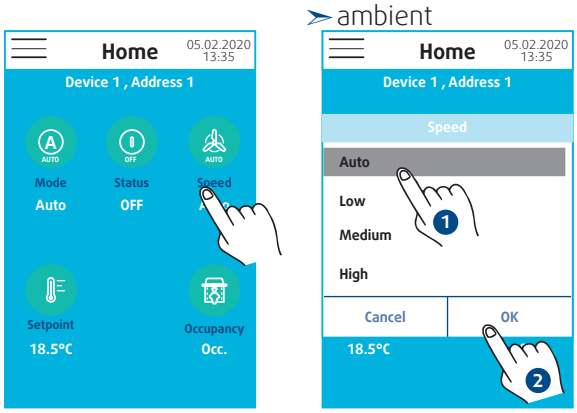


➢ unit status



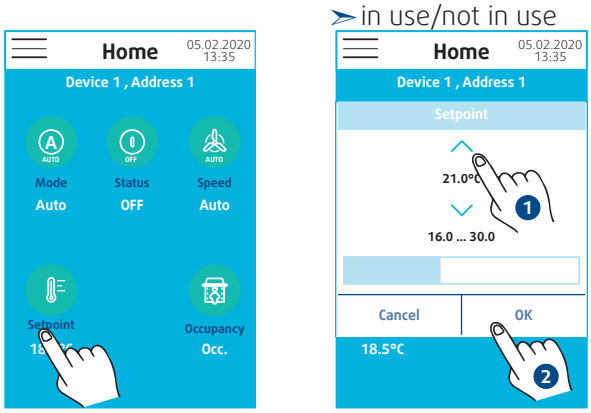
➢ ventilation speed

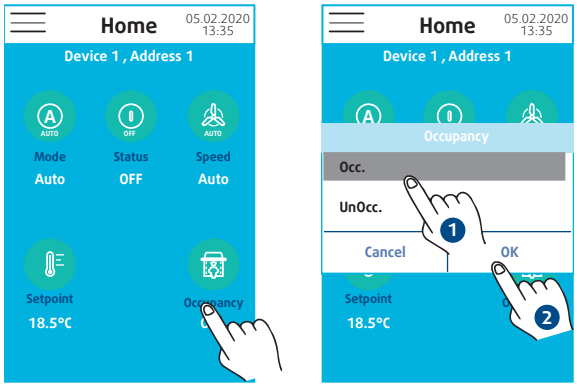
➢ ambient



setpoint(s)

➢ in use/not in use



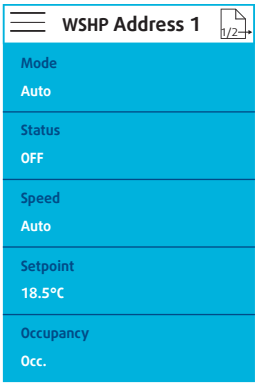


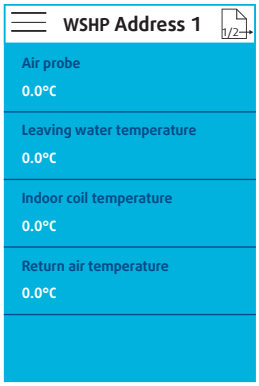
The **SRC** is used to act individually on the following:

- operating mode
- unit status
- ventilation speed
- ambient setpoint(s)
- in use/not in use

It is also possible to check the temperature measured by the:

- air return sensor (remote control sensor)
- water flow sensor
- evaporator unit sensor
- air return sensor





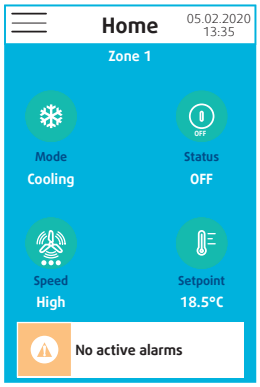
Information

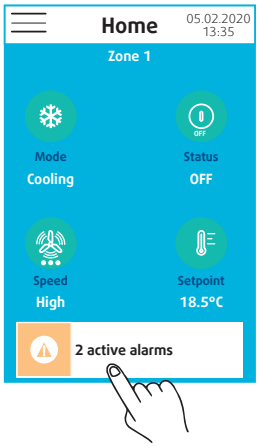
If the heat pump on water circuit is not configured to use the temperature sensor on a remote control, the value displayed in the "Air return sensor" field is equivalent to that in the "Air return temperature" field.

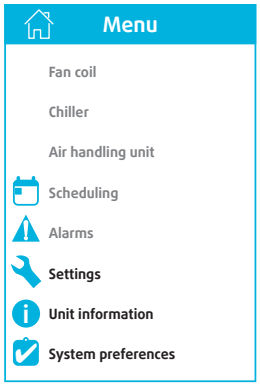
8. ALARM

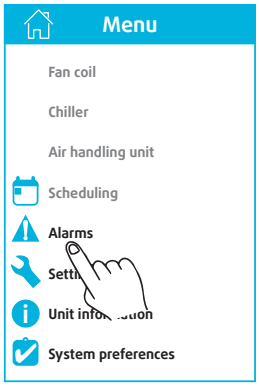
The **SRC** can report alarms on units. The information is displayed:

- on the home page
  the field specifies the number of alarms
- on the menu
  the "Alarms" menu is displayed in black if at least one alarm is active









Information

For type A fan convector unit zones, the communication alarms of the different units will only appear when a value change is sent to them.

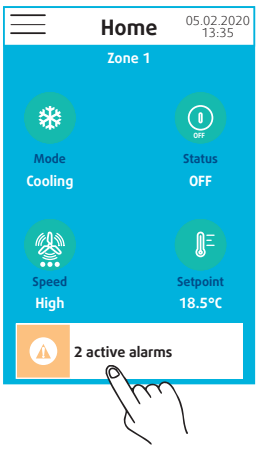
The **SRC** returns two different error messages:

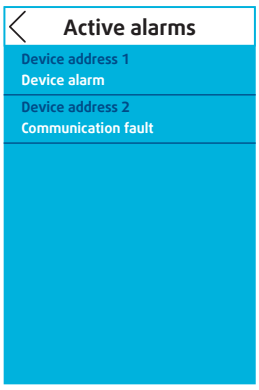
➢ Defective unit

at least 1 alarm on the unit. It disappears automatically as soon as the problem is corrected.

➢ Communication error

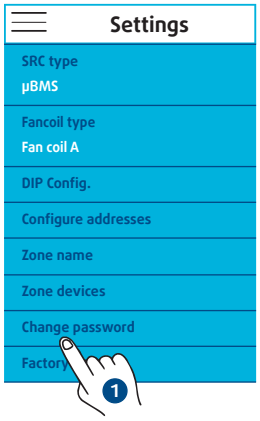
no modbus communication

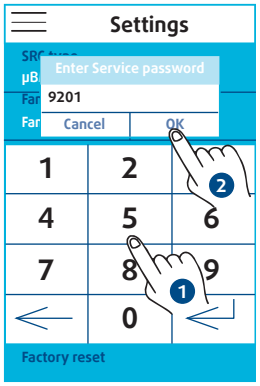


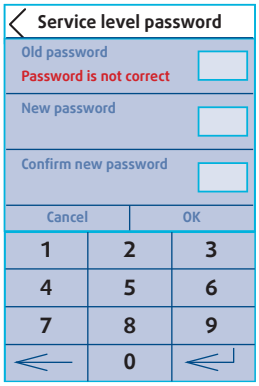


9. PASSWORD CHANGE

You can change the default password (9201).





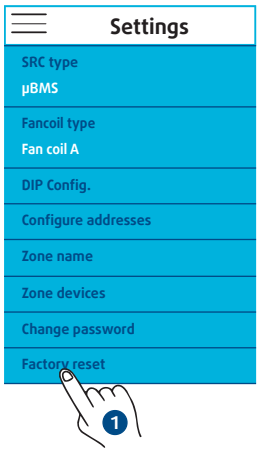


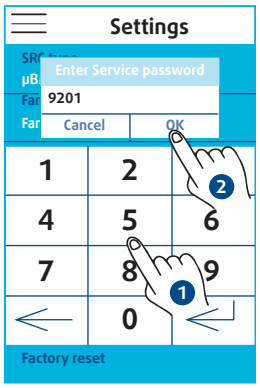
Caution

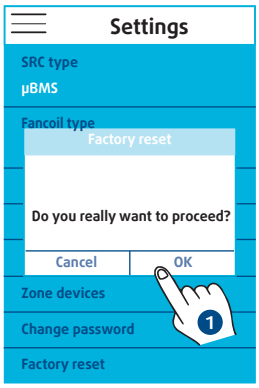
If you forget the new password, action by the after-sales service will be required.

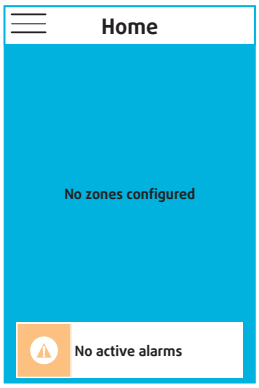
10. SRC RESET

This command resets the **SRC**. All created fields and addresses will be deleted, all the values displayed will be the default parameters.









11. IN CASE OF WARRANTY - MATERIAL RETURN PROCEDURE

Material must not be returned without permission of our After Sales Department.

To return the material, contact your nearest sales office and ask for a "return form". The return form shall be sent with the returned material and shall contain all necessary information concerning the problem encountered.

The return of the part is not an order for replacement. Therefore, a purchase order must be entered through your nearest distributor or regional sales office. The order should include part name, part number, model number and serial number of the unit involved.

Following our personal inspection of the returned part, and if it is determined that the failure is due to faulty material or workmanship, and in warranty, credit will be issued on customer's purchase order. All parts shall be returned to our factory, **transportation charges prepaid**.

12. ORDERING SERVICE AND SPARE PARTS ORDER

The part number, the order confirmation and the unit serial number indicated on the name plate must be provided whenever service works or spare parts are ordered.

For any spare part order, indicate the date of unit installation and date of failure. Use the part number provided by our service spare parts, if it not available, provide full description of the part required.

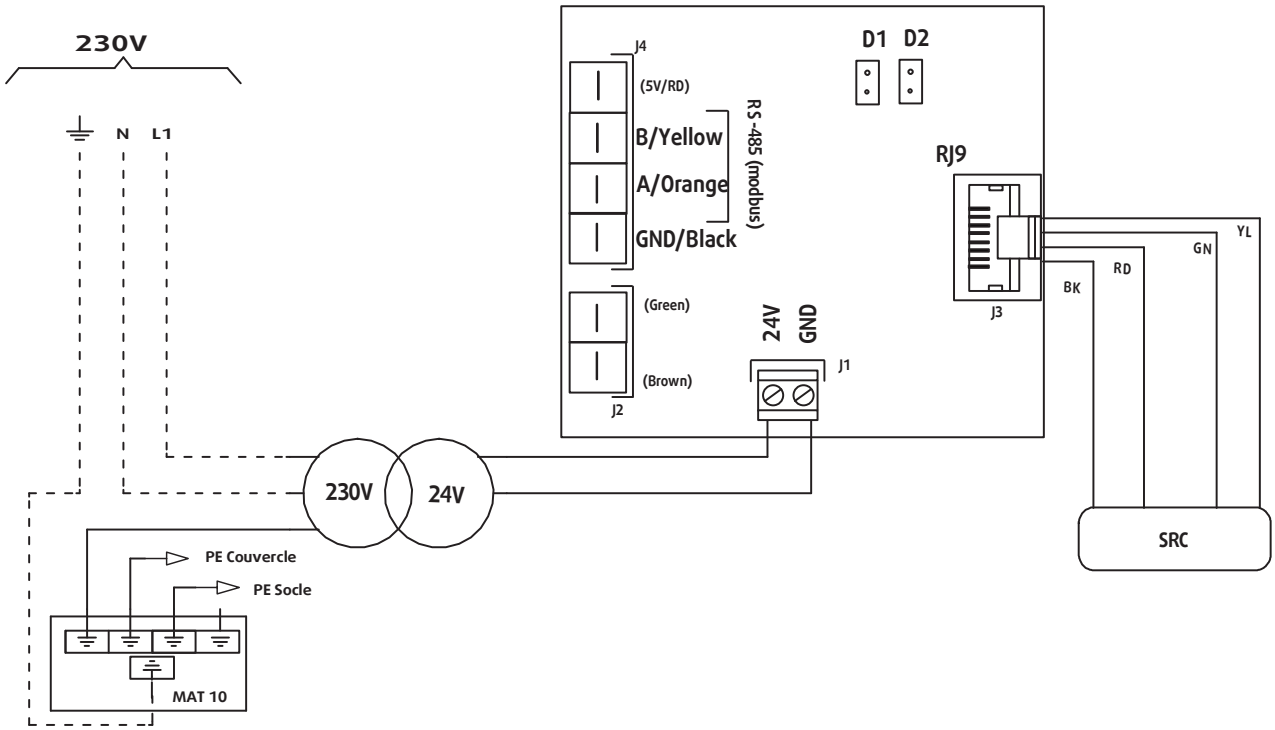
KIT SRC	
230V ~	50/60Hz
SE 4841	

BN	BRUN	*BROWN*	MARRON	BRAUN	MARRONE
BK	NOIR	*BLACK*	NEGRO	SCHWARTZ	NERO
RD	ROUGE	*RED*	ROSSO	ROT	ROJO
BU	BLEU	*BLUE*	BLU	BLAU	AZUL
GNYE	VERT/JA.	*GREEN/YELL.*	GIALLO/V.	GRUN/G.	VERDE/AM.
VT	VIOLET	*PURPLE*	VIOLA	VIOLETT	VIOLETA

WIRING BY INSTALLER ----------

CABLAGE CLIENT

OPTIONAL/OPTION — — — — -



As part of our ongoing product improvement programme, our products are subject to change without prior notice. Non contractual photos.

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🖷 : +33 (0)2 32 32 55 13

J581786GB

IOM SRC 01-S-1GB
Part number : **J581786GB**
Supersedes : **None**