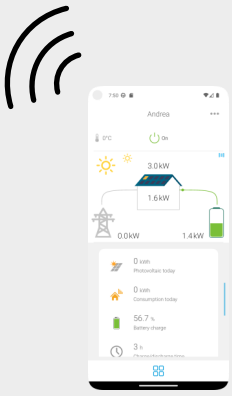
CONTROL4 NRG



MANUAL

INSTALLATION, CONFIGURATION AND USE MANUAL

Change living home

en

16127160007353-I 02/2026

ROMANIAN

BULGARIAN

SLOVENIAN

HRVATSKI

Dear Customer,

We congratulate you on choosing an ELFOSystem product, the air conditioning system at annual cycle that offers the possibility in a sole system of meeting all the heating, conditioning and domestic hot water needs.

Clivet is being working for years to offer systems able to assure the maximum comfort for long time with high reliability, efficiency , quality and safety. The target of the company is to offer advanced systems, that assure the best comfort, reduce the energy consumption, the installation and maintenance costs for all the life-cycle of the system.

With this manual, we want to give you information that are useful in all the phases: from the reception, to the installation and use until the disposal so that a system so advanced offers the best procedure of installation and use.

Best regards and have a nice reading !

CLIVET Spa

TABLE OF CONTENTS

USER MANUAL

MAIN FUNCTIONS

Indications for the use

Keep this manual in an accessible place for the operator.
In case of breakdown or malfunction:

- immediately deactivate the system.
- contact an assistance service centre authorized by the manifacturer.
- use original spares parts only

Ask the installer to be prepared on:

- start-up / shutdown;
- set-point and scheduling personalization;
- maintenance;
- what to do / what not to do in case of breakdown.

Main functions of the System.

Management of all ELFOSystem elements through the "touch screen" panel or remotely with the use of the dedicated App, if there is an internet connection module.

Heat pump for:

- hot and cold water for radiators, radiant panels and fan convectors;
- domestic hot water (DHW).

ELFOFresh for:

- renew air by heating or cooling it;
- manage the ambient humidity by controlling the intake air humidity ;
- air-condition in seasons when the heat pump, terminals and radiant panels or radiators are not necessary;
- renew and filter air without heating or cooling it (ventilation only).

Production of domestic hot water, for which it is possible to set:

- the maximum temperature of water inside the storage tank;
- time bands where water is taken to storage maximum temperature or kept at a maintenance temperature;
- production only with solar panels;
- production with boiler integrated.

Area Divisions:

- the house can be divided into homogeneous areas depending on the type of use (day or night area, up to a limit of 24 areas);
- a different hour schedule can be combined with each area, either from other areas or from day to day of the week;
  programs are common to all areas
- in one area, three operation modes can be set, comfort, economic or off;
  for comfort and eco modes, temperature and humidity set points can be configured together with the type of ventilation;
- an area can be forced in the required operation mode for a certain period, "stopping" temporarily the ongoing program .

Setpoint:

- each area has a comfort setpoint (optimal comfort, greater consumption) and an economic set (medium comfort, minimum consumption);
  the economic set is calculated adding (in summer) or subtracting (in winter) a set value to the comfort set point;
- the set point can be modified manually, any time .

Programs:

- a program can be selected among 7 available and modified according to the requirements;
- the time schedule sets the operation mode (comfort, economic or off) for each hour of the day and each day of the week;
- new programs can be added.

Domotic systems connection

Connection with the App

DISPLAY

MAIN PAGE

CONTROL4 NRG comfort and energy assistant.
The new main screen is split into 3 separate sections that display all the system information.
The sections are displayed according to the system configuration:

1 ELECTRICAL SYSTEM

This section can be found on the main screen if the SINERGY unit is available in the system configuration.
The following information is displayed:

- Photovoltaic system productiontaico
- Energy consumption
- Entry/withdrawal from the network
- Sinergy battery level

Pressing anywhere in the section opens the “Energy report” page.

2 ENERGY

This section can be found on the main screen if at least one energy measuring device is added to the system configuration.
The following information is displayed:

- Heat pump unit efficiency
- Targeted energy tips
- Energy usage statistics of the Sinergy unit connected

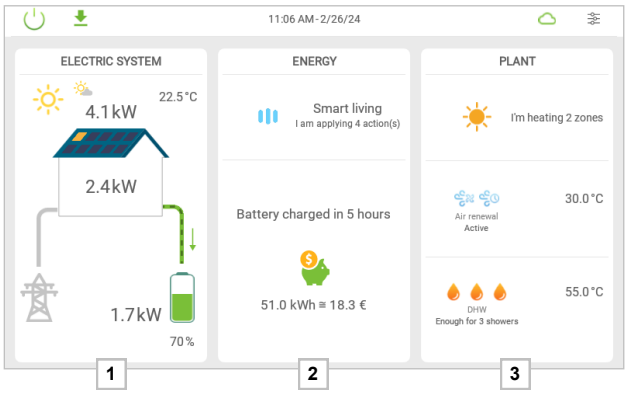
3 SYSTEM

This section can always be found on the main screen.
The following information is displayed:

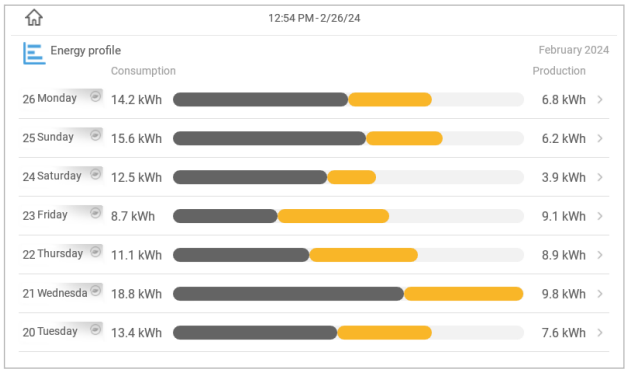
- Heat pump and area status
- Air renewal status
- DHW production status

Pressing anywhere in the section opens the area page.

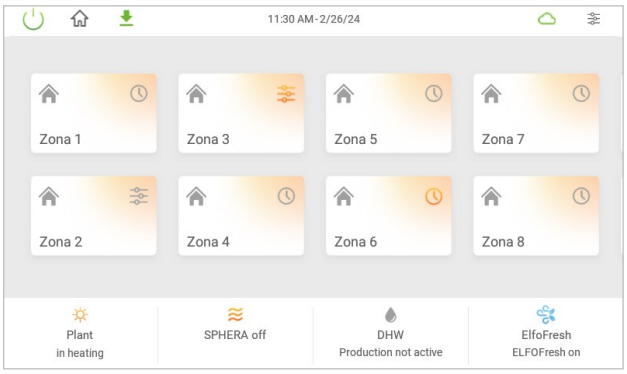
Caution: If the Sinergy unit and an energy measuring device are not available in the configuration, the main screen is **SYSTEM**.



select **1**



select **3**

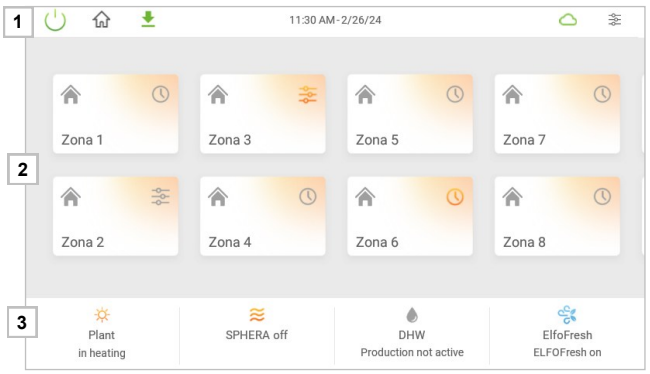


DISPLAY

Information displayed:
1 Main control

2 System areas

3 System status



1 Main control

Switching on and off the system, away from home

Return to the main display

Return to the main display
(displayed in the subsequent menus)

New software update availability notification

Date / Hour

15:11 - 16/01/23

Internet/Cloud connection status

Multi-status icon displays CONTROL4 NRG connectivity status

Not connected = There is no Internet, Wireless or wired connection

Connected = CONTROL4 NRG is connected to the Internet via Wi-Fi or wired Ethernet

Not connected to the Cloud = CONTROL4 NRG is connected to the Internet but not connected to the Cloud

Connected to the Cloud = CONTROL4 NRG is connected to the Internet and to the Cloud

Domotic control

Green = connected domotics

Red = disconnected domotics

Connected domotics, but not in communication (disabled)

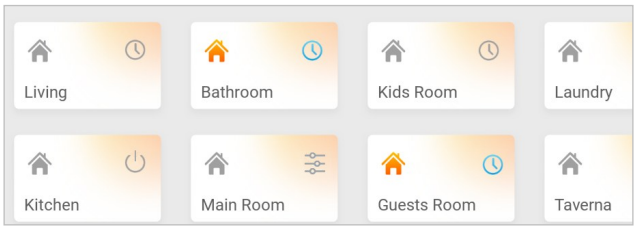
Alarms
Reports an alarm

USB inserted
Signals that a USB device is connected to the panel

Settings
Provides access to the system/user settings panel
- Press to access user settings
- Press and hold for 2 seconds to access the system settings

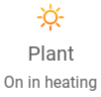
2. System areas:

- schedule



3. System status

System settings



Heat pump

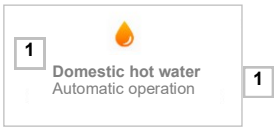
1 operating status
automatic: red = heating, blue = cooling
off : gray with x at the top
DWH only : drop

2 status

3 components found in the system:

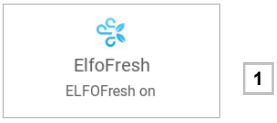
Production of domestic hot water

1 operating status
automatic / Off



ELFOFresh: (max. four units installed)

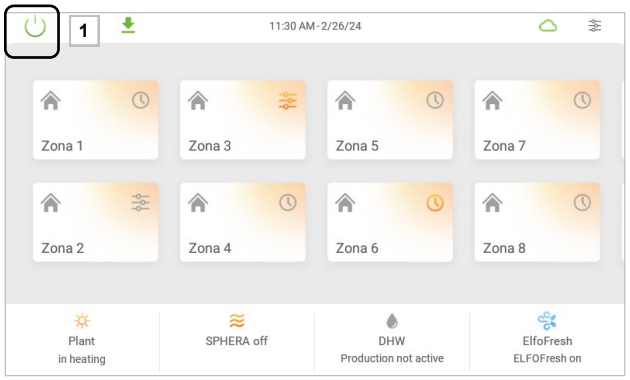
1 operating status
on / off / automatic / heating / cooling / ventilation off



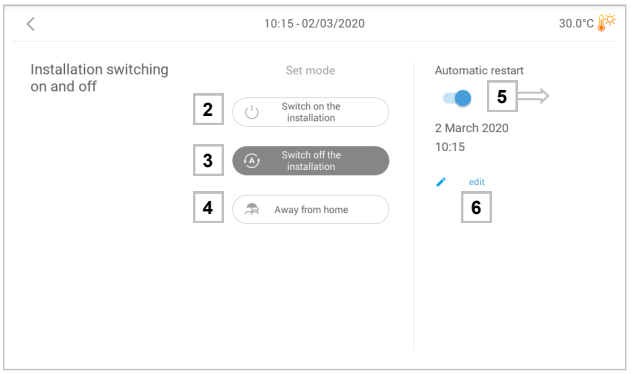
START-UP AND SWITCH-OFF

1 - The system can be:

- on
- off
- away from home



select **1**



2 - Start up the system

3 - Switch off the system

Switch off the system until day / hour:
at the due time, the system returns to the status previously set.

Move cursor "5"

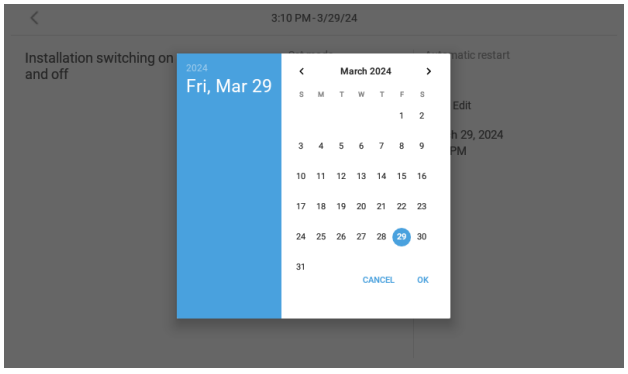
Press edit "6"

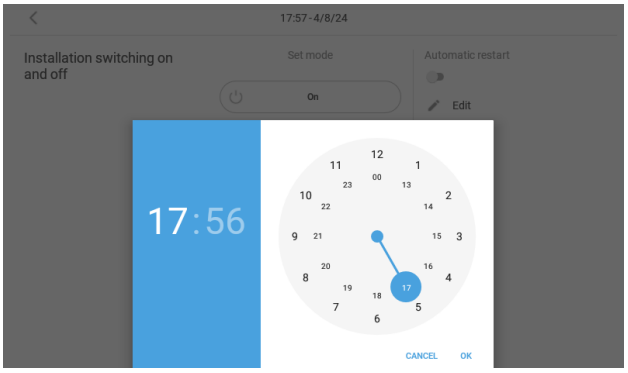
Set the SYSTEM START-UP date

Set the SYSTEM START-UP date

4 - Away from home
See management away from home

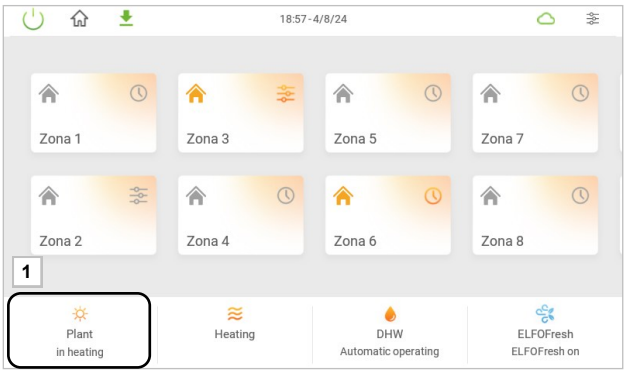
select **3**





CHANGE MODE

1 - Operation of the system.



select **1**

Select:

2 - Heating only (red background)

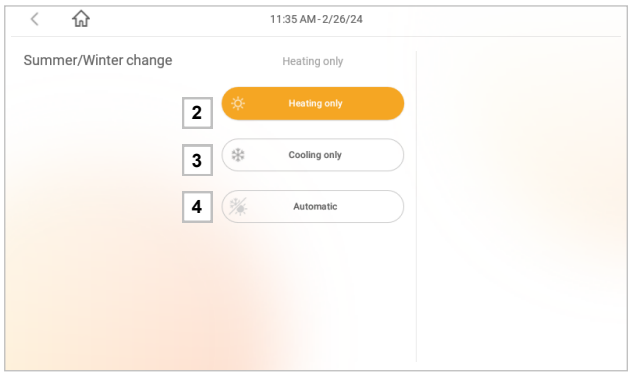
3 - Cooling only (blue background)

4 - Automatic

switches from heating to

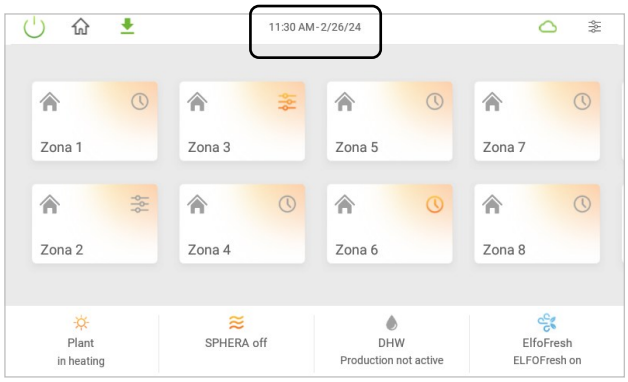
cooling automatically, depending on the outdoor and indoor temperature detected

mode enabled only if ELFOFresh EVO, is present



ADJUSTING DATE AND HOUR

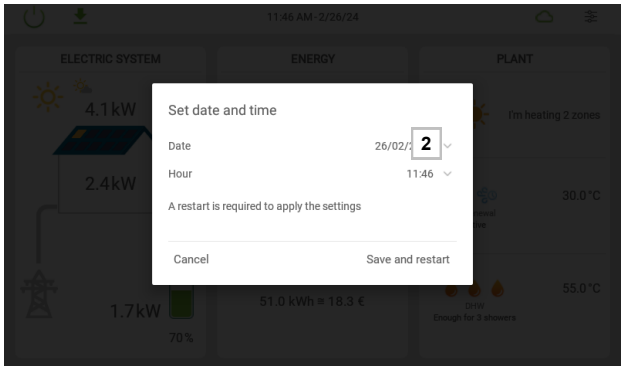
Set date and hour to synchronise the system operation.



press 2 sec. **1**

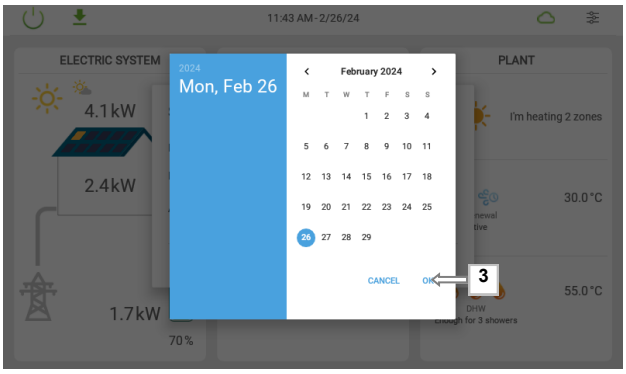
Settings:

- Set date
- Set hour



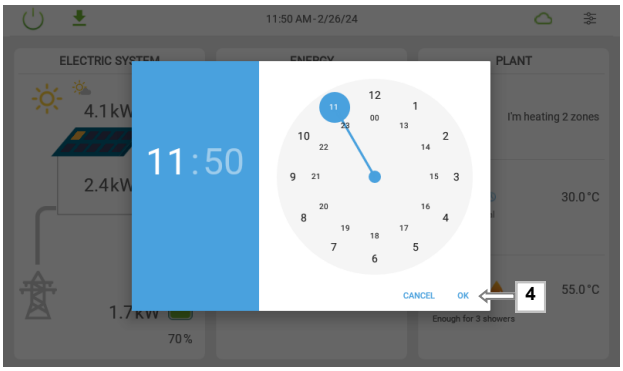
select **2**

After the date has been changed, press OK **“3”** to exit



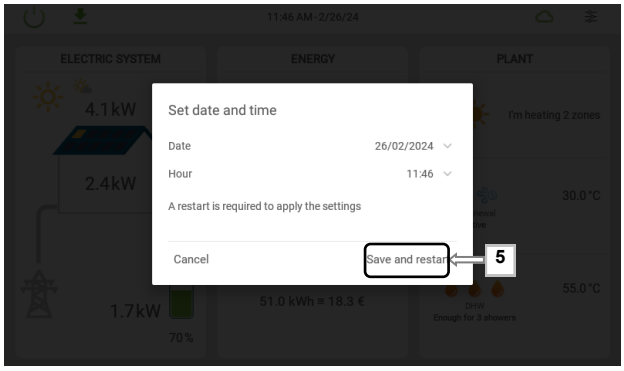
select **3**

After the time has been changed, press OK **“4”** to exit



select **4**

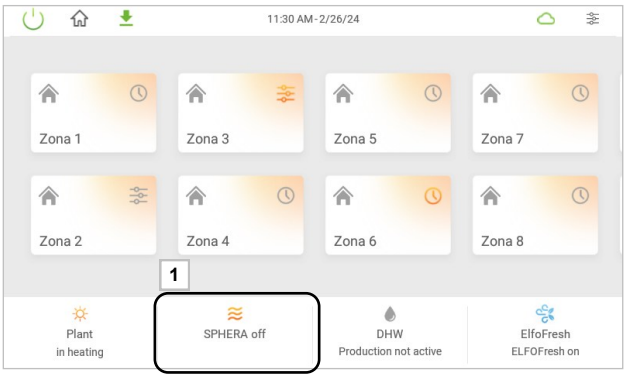
After the time has been changed, press SAVE AND RESTART **“5”** to save the changes made



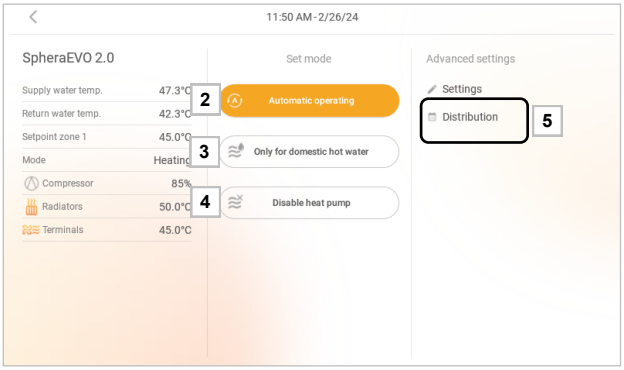
SET HEAT PUMP OPERATION

Information displayed:

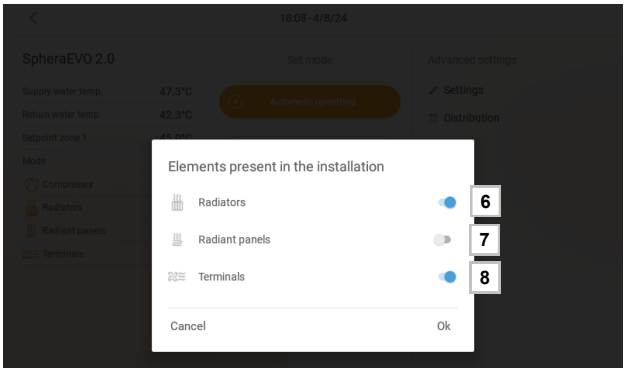
- supply water temperature
- supply water setpoint
- return water temperature
- operation status (heating/cooling/off)
- compressor (% capacity)
- signal power
- components found in the system (radiators, fan coils and radiant panels) and relative status (enabled / excluded).



select **1**



select **5**



2 - Automatic operation:
The heat pump is used to produce both air-conditioning system water and domestic hot water.

3 - For domestic hot water only:
The heat pump is used only to produce domestic hot water.

4 - Deactivate the heat pump:
The heat pump is switched off

5 - Distribution:
Displays the components in the system.

The operation of single components of the system can be enabled or excluded:

select 6, 7 or 8 to Exclude / Enable

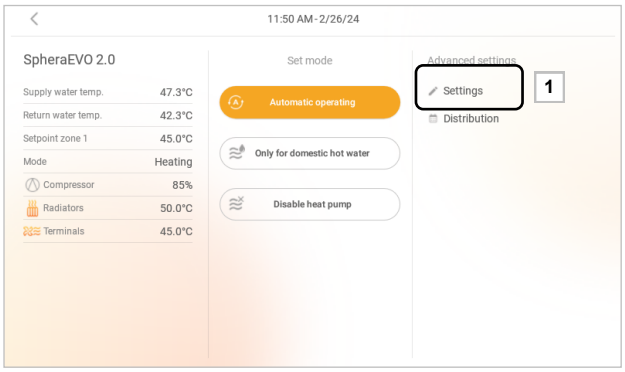
Example

6 - Radiators:
Enabled
7 - Radiant panels:
Excluded
8 - Terminals:
Enabled

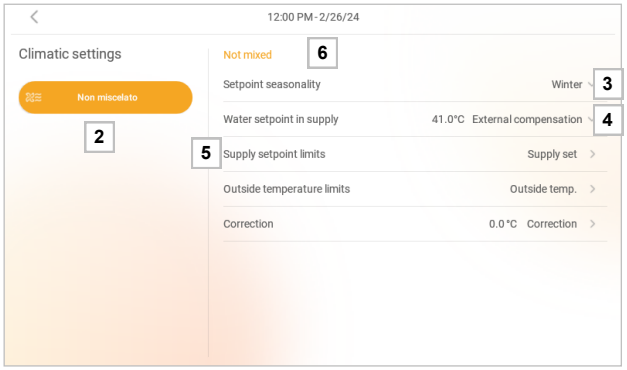
CLIMATE SETTINGS

Set the operation set point of each circuit:

- winter or summer,
- fixed or compensated



select **1**



2 - Hydraulic circuits of the system:
Select the single circuit to customise the set point

3 - Set point regular intervals:
Winter
Summer

4 - Supply water set point:
Fixed:
- no compensation is set on the outdoor temperature; the value can be set
- dew compensation remains active in the Summer

Compensated:
- varies according to the outdoor temperature

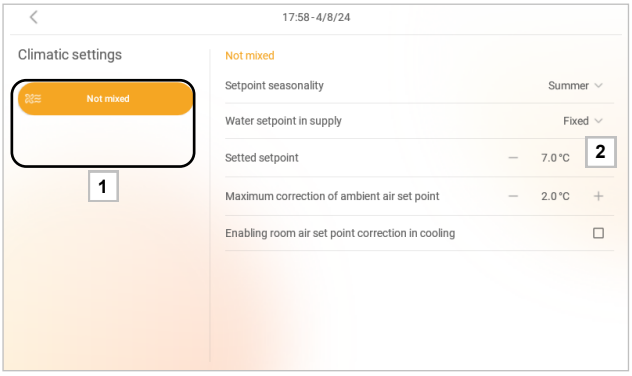
5 - Supply setpoint:
Set the flow temperature

6 - Circuits combined with the system components:
- Not mixed (high temperature)
- Mixed circuit 1 or 2 or 3

CHANGE OF SET POINT, FROM FIXED

1 - Select the single circuit to customise the set point

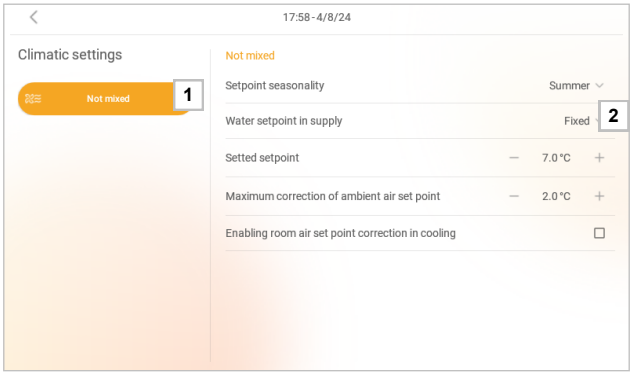
2 - Press + o - to change the setpoint



CHANGE OF SET POINT, FROM FIXED TO COMPENSATED

1 - Select the single circuit to customise the set point

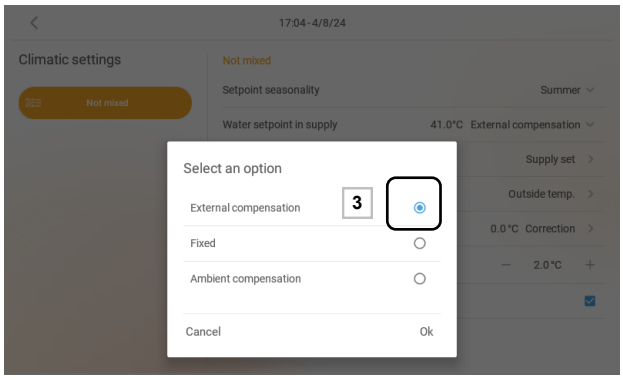
2 - Select "fix"



select **2**

3 - Compensated supply water set point:

- set the compensation curve that corrects the water set point value, depending on the outdoor air temperature value.



select **3**

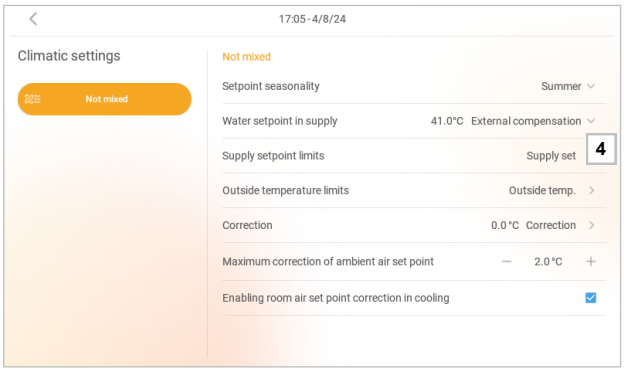
Example

Outdoor air >= 30°C ⟶ supply water set point = 7°C

Outdoor air <= 15°C ⟶ supply water set point = 12°C

MODIFICATION OF SUPPLY SET POINT

4 - Select supply set

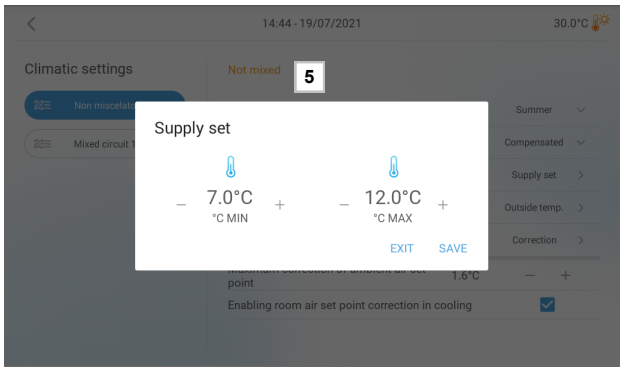


select **4**

5 - Set the required values:

Max 12°C

Min. 7°C

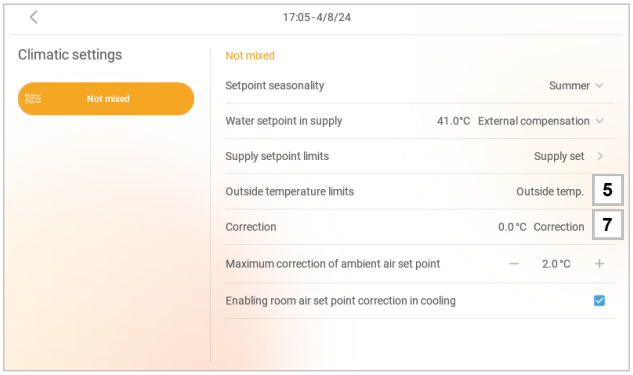


MODIFY THE OUTDOOR TEMPERATURE:

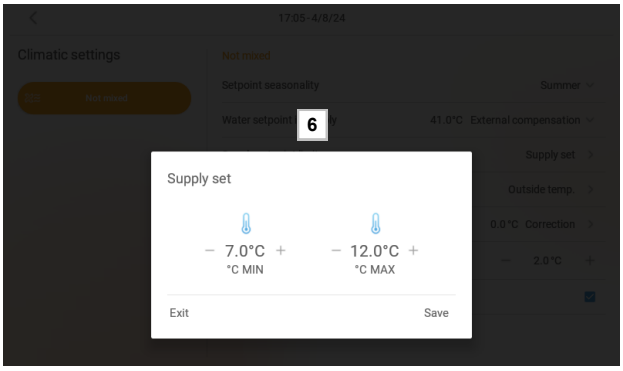
5 - select

6 - Set the required values:
Max 30°C
Min. 15°C

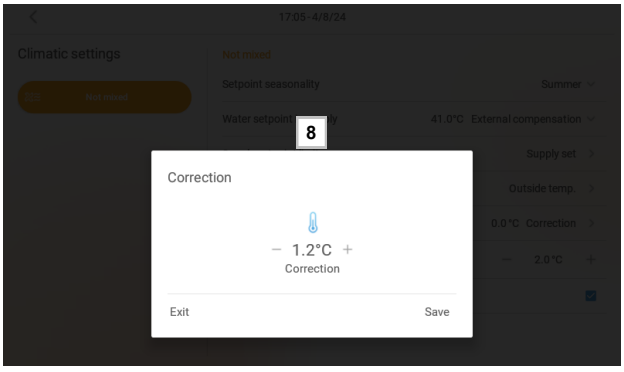
7 - Modify the correction



select **5**



select **7**



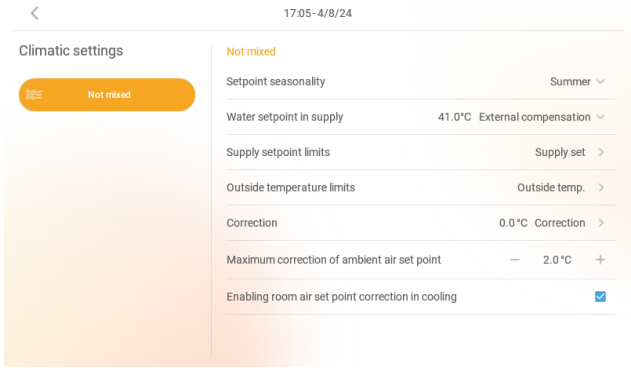
8 - Modify the correction
example: + 1.2°C

The correction can be used to modify the climatic curve rapidly.

Example:
Outdoor air = 30°C supply water set point = 7°C
Outdoor air = 15°C supply water set point = 12°C
Correction + 1.2°C in Summer

Values after the correction:
Outdoor air = 30°C supply water set point = 7+1.2 = 8.2°C
Outdoor air = 15°C supply water set point = 12+1.2 = 13.2°C

For the **winter** correction, follow the same procedure.

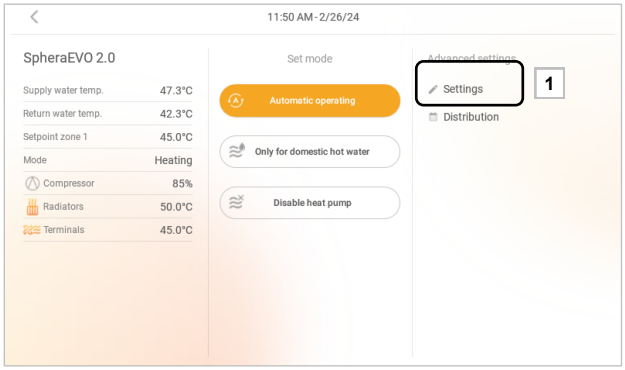


AIR SET POINT COMPENSATION BASED ON THE OUTSIDE TEMPERATURE

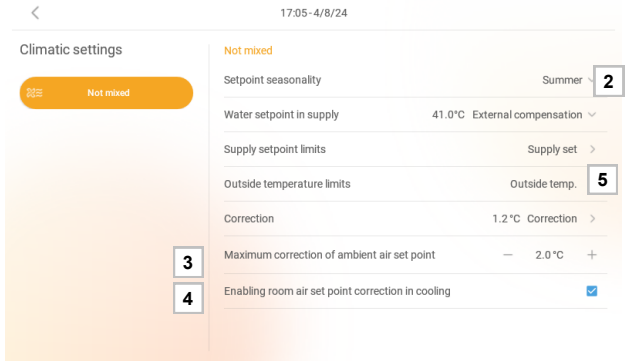
The air temperature set point correction function is enabled in **COOLING ONLY** mode.

The function applies a correction to the zone set point based on the outside temperature value.

The same outside temperature limits set for the climate curve of the PDC are used.



select **1**



The function is only combined with the not mixed circuit.

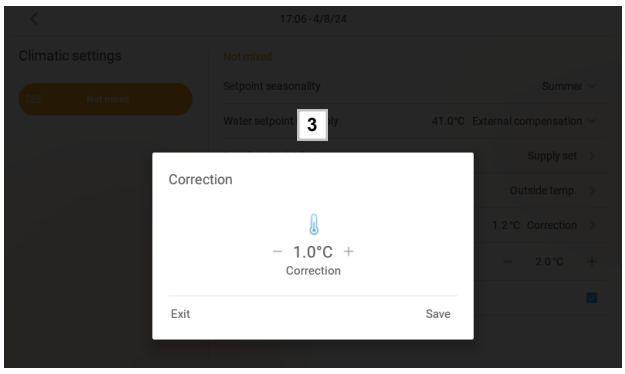
2 - Set on Summer

3 - Maximum correction of ambient air set point (0°C max 2°C)

4 - Enabling room air set point correction

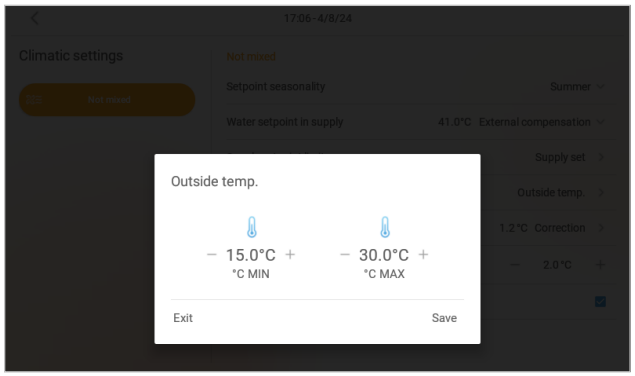
5 - Outside temperature limits setting

select **3**



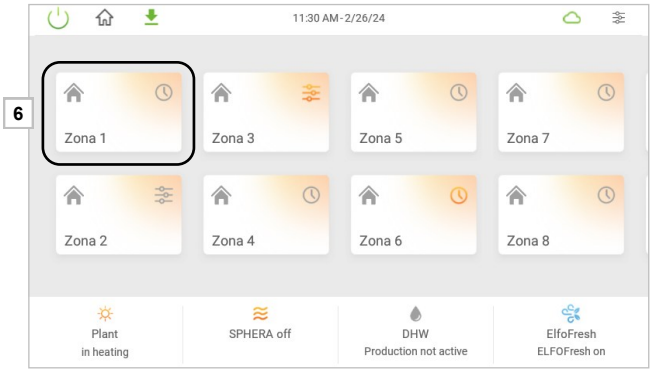
3 - Modify the correction
example: + 1.0°C

select **5**



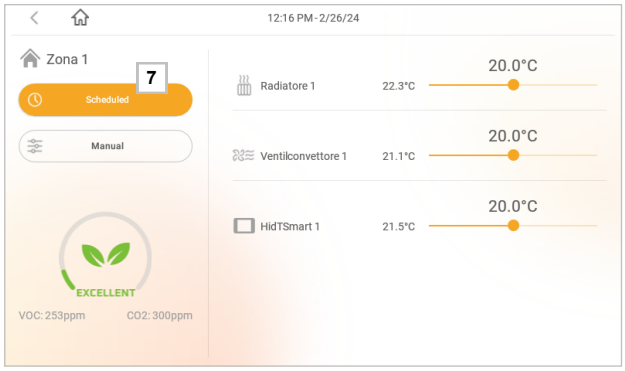
5 - Set the required values:
Max 30°C
Min. 15°C

Example of zone programming



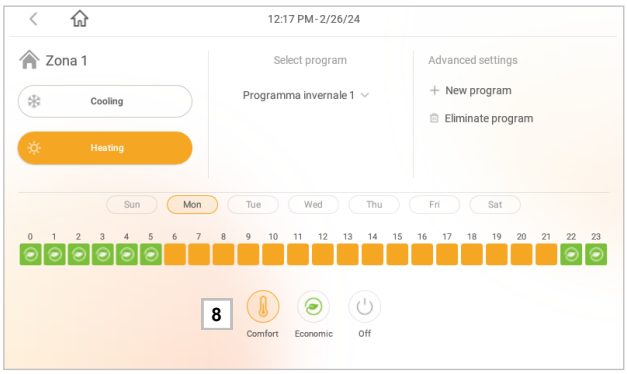
selezionare **6**

The air set point is corrected by applying an offset to the slider of the individual thermostats

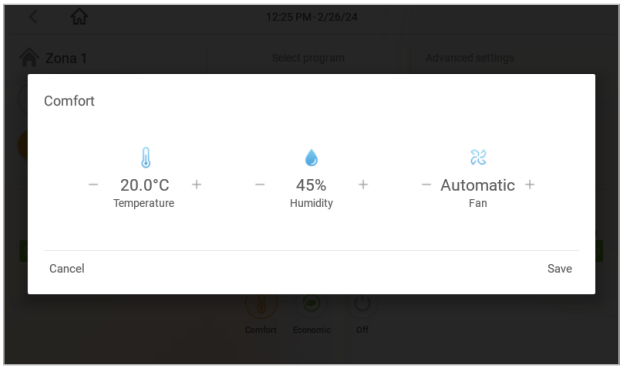


selezionare **7**

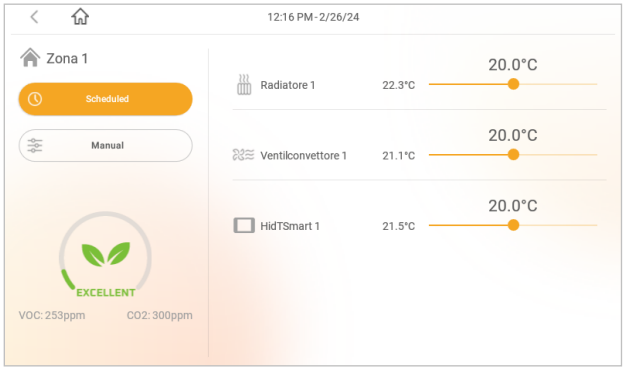
8 - Press “Comfort” for 2 seconds



Scheduled zone set point = 20°C



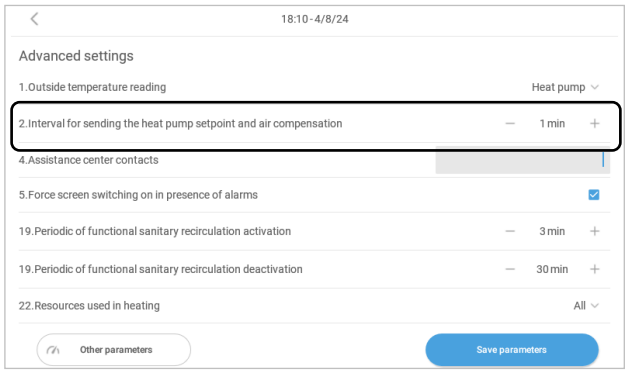
Set point corrected by air climate = 20° C



The calculation interval of the air set point correction is set in Parameter 2

Default 1 minuto

The parameter is the same one used to calculate the water set point climate.



DOMESTIC HOT WATER

DOMESTIC HOT WATER OPERATION

Information displayed:

- storage temperature

2 - Automatic operation:

domestic hot water is produced automatically, according to the requirement, using all the resources available.

3 - With thermal solar system only:

the storage tank temperature is ensured only using solar collectors, even with a greater set point.

4 - With auxiliary heating only:

the storage tank temperature is maintained only using the auxiliary heater (heater or integrated boiler).

5 - Deactivates the production:

excludes the production of domestic hot water.

In this mode, the temperature of the storage tank is not controlled.

6 - **Boost:**

Production of domestic hot water in the shortest time, in this way the heat pump (and any electrical resistance) will work simultaneously to reach the temperature set for domestic hot water as quickly as possible.

DOMESTIC HOT WATER SETTINGS

8 - Water set point with heat pump
is indicated as **RELOAD** in the programming

9 - Water set point with heat pump
is indicated as **MAINTENANCE** in the programming

10 - Maximum temperature allowed with solar collector

11 - Minimum temperature difference to activate the solar collector: the solar collector activates when the temperature is 5.0°C higher than the storage tank

12 - Activates the circulation for 3 minutes every 30 minutes

The recirculation function prevents the stratification in the ACS accumulation.

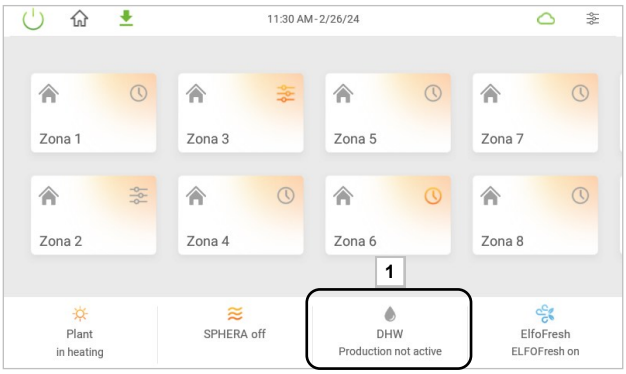
Is active only at the times foreseen by the scheduler (Maintenance + recirculation, Recharge + recirculation).

DOMESTIC HOT WATER PROGRAMMING

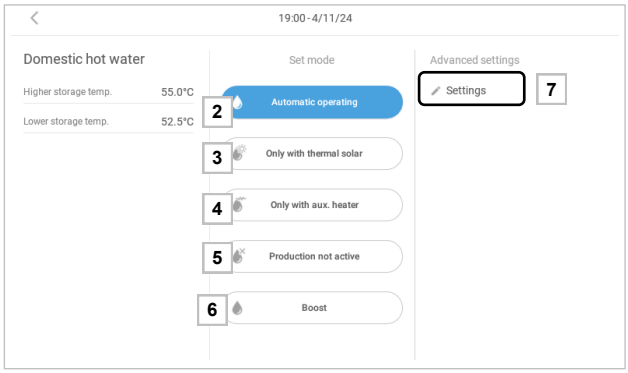
Elfocontrol[3] EVO is equipped with 3 preset time schedules.

Up to 7 programs can be saved in the memory.

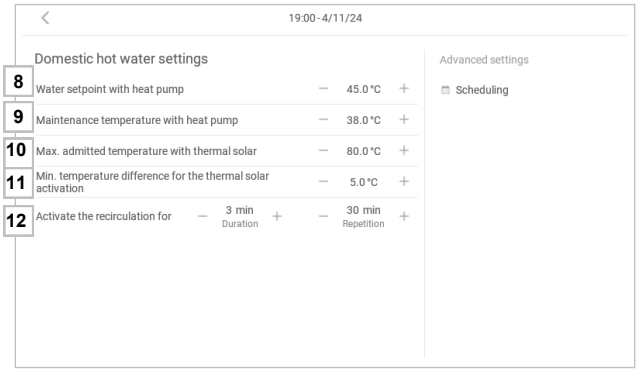
All programs can be modified.

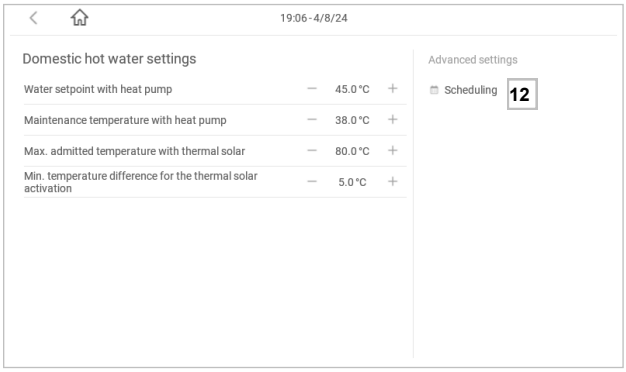


select **1**



select **7**





select **12**

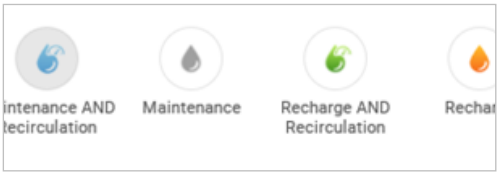
DOMESTIC HOT WATER

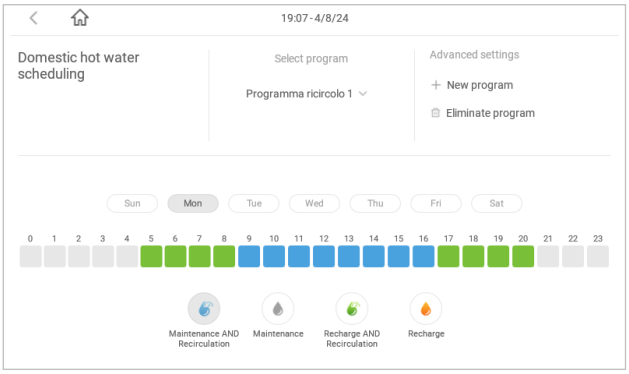
Programming example:
Day: Thursday
Program: Circulation program 1
Operation Profile:

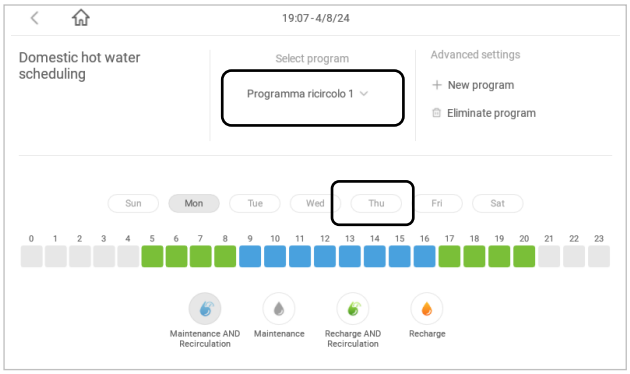
start time	end time	mode	set point (previous page)
1	4	Maintenance	ref. 8
5	8	Recharge and recirculation	ref. 7 + ref. 11
9	19	Maintenance and recirculation	ref. 8 + ref. 11
17	20	Recharge and recirculation	ref. 7 + ref. 11
21	22	Maintenance	ref. 8
23	0	Recharge	ref. 7

A different program can be combined to each day of the week

- select the day of the week to be programmed:
  the selected day is highlighted in “red”.
- select a program among the 7 available;
  the saved program can be removed;
  a new program can be created
- modify the program using buttons







FRESH AIR

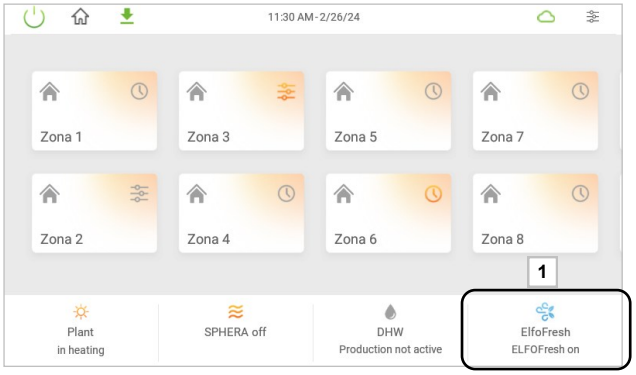
1- Information displayed:

- Elfofresh on / off
- operation status:
  heating / cooling / ventilation off

If 4 units are available, data of unit 1,2,3 and 4 are displayed alternatively.

The display shows the unit number to which the data is combined with

1 = unit 1 data
2 = unit 2 data
3 = unit 3 data
4 = unit 4 data

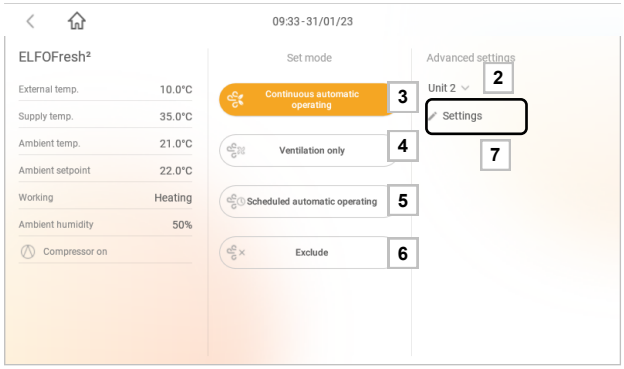


select **1**

2- Select the unit of which the operation must be set

Information displayed:

- Outdoor air temperature
- Supply air temperature
- Ambient air temperature
- Ambient set poin
- Ventilation
- Unit status
- Ambient humidity % (not available with ElfoFresh EVO)
- Compressor status



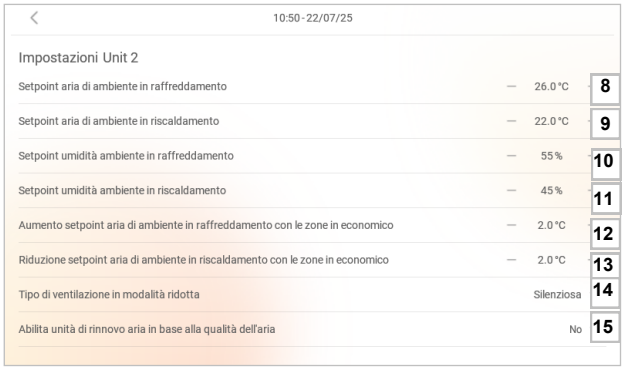
select **7**

3 - Continuous automatic operation:
the fresh air unit operates without interruptions

4 - Ventilation only:
forces the "ventilation only" mode

5 - Scheduled automatic operation:
operation according to the programming

6 - Exclude:
ELFOFresh off



CONFIGURE THE SET POINTS:

8 - Ambient air setpoint in the summer

9 - Ambient air setpoint in the winter

10 - Ambient humidity set point in the summer (not available with ElfoFresh EVO)

11 - Ambient humidity set point in the winter (not available with ElfoFresh EVO)

12 - Ambient air setpoint increasing in summer with zones in economic mode

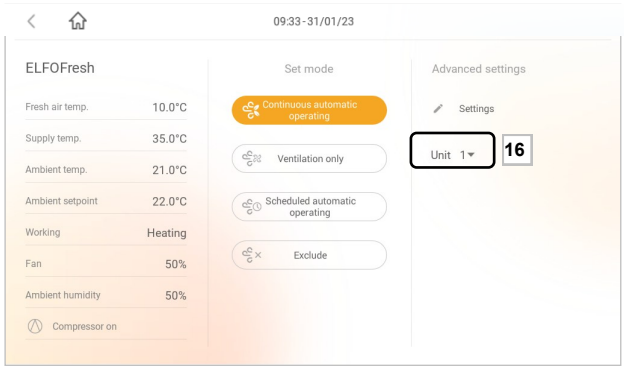
13 - Ambient air setpoint decreasing in winter with zones in economic mode

14 - Type of ventilation in reduced mode (Normal, Silent, Super Silent).

15 - Air renewal enabled based on detected air quality

If four units are installed inside the system, settings must be performed on all units.

16 - select unit and repeat the procedure



PROGRAMMING

Provide fresh air depending on a daily time schedule.

5 preset daily programs are available (max 14 programs).

All programs can be modified.

A different program can be combined to each unit.

Operation mode:

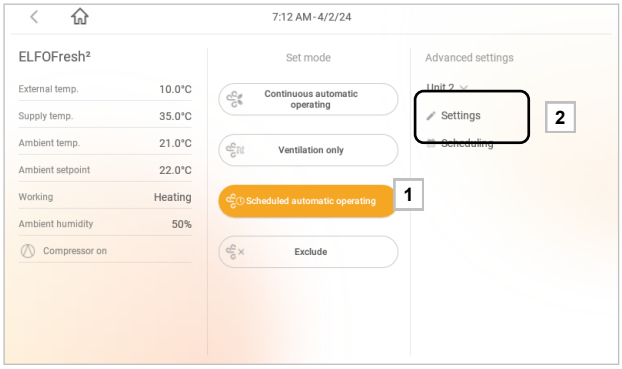
Normal: optimal fresh air.
To be used in case rooms are occupied.

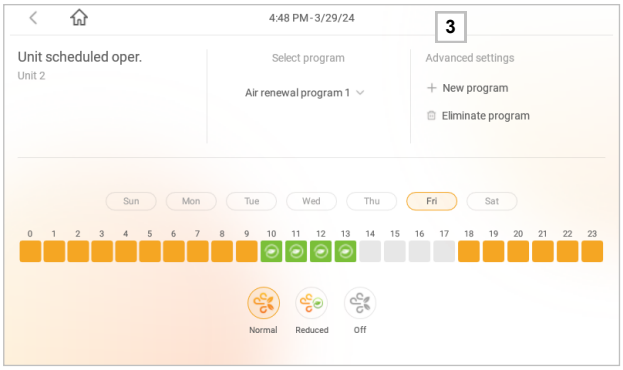
Reduced: reduced ventilation flow rate.
The volume of fresh air is reduced for greater saving and silence. To be used in case it is not necessary to provide fresh air continuously.

Switched Off: the unit is switched off.

Select **1**

Select **2** → **3** appears





Programming example:

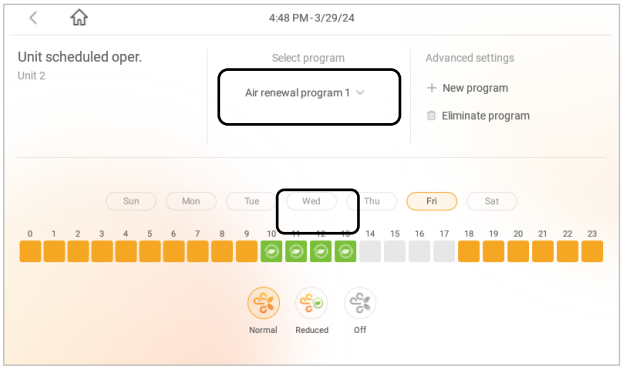
Day: Wednesday

Program: Fresh air program 1

Operation Profile:

exsample Cooling

start time	end time	mode	set point (previous page)
0	8	Normal	ref. 8 + ref. 10
9	12	Reduced	ref. 8 + ref. 10 + ref. 12
13	16	Switched Off	-
17	23	Normal	ref. 8 + ref. 10



A different program can be combined to each day of the week

- select the day of the week to be programmed:
  the selected day is highlighted in “red”.
- select a program among the 14 available;
  the saved program can be removed;
  a new program can be created
- modify the program using buttons

Automatic management of renewal units according to air quality

The system allows automatic activation of the air renewal units based on the air quality detected by a probe installed in the same zone.

For the functionality to be active::

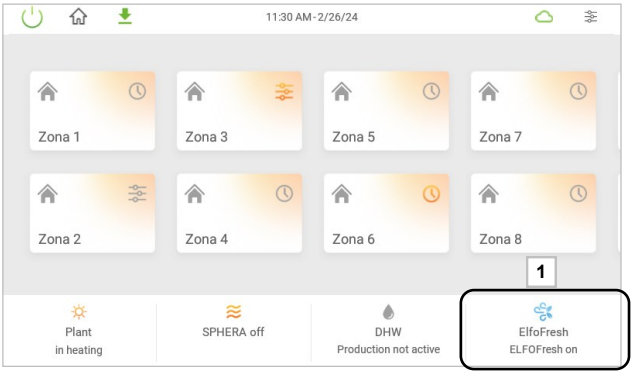
- the renewal unit must be associated with a zone;
- an air quality probe must be present in the same zone;
- in the unit settings, the intervention mode must be enabled in case of poor air quality (Ventilation or Comfort). By default, the option is disabled.

The intervention threshold is predefined and set at a value of 150.

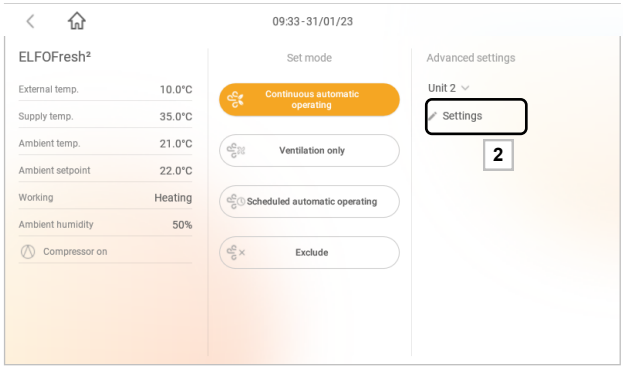
This value corresponds to the limit between “good” and “poor” quality according to the classification provided by the probe manufacturer (Airgloss). The threshold refers to the IAQ (Indoor Air Quality), which is the air quality index calculated directly by the probe itself.

When the probe detects an IAQ value above 150, the renewal unit automatically switches to the selected mode, temporarily overriding the current operation.

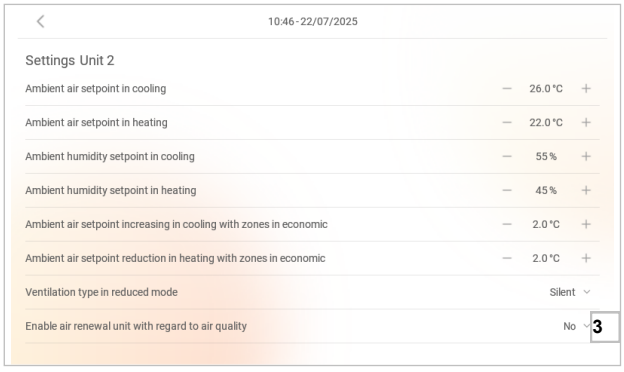
Once the air quality returns below the threshold, the unit resumes the user-configured mode (Programmed, Auto, Ventilation or Off).



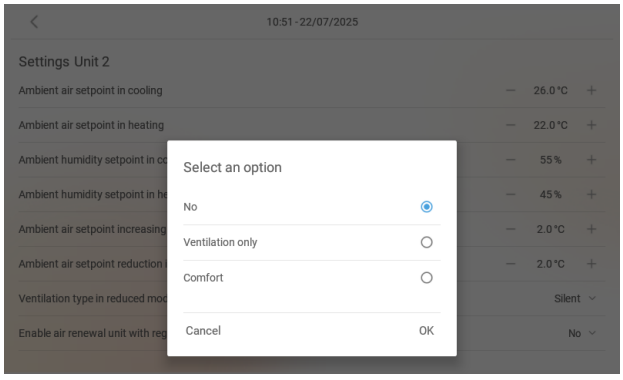
select **1**



select **2**



select **3**

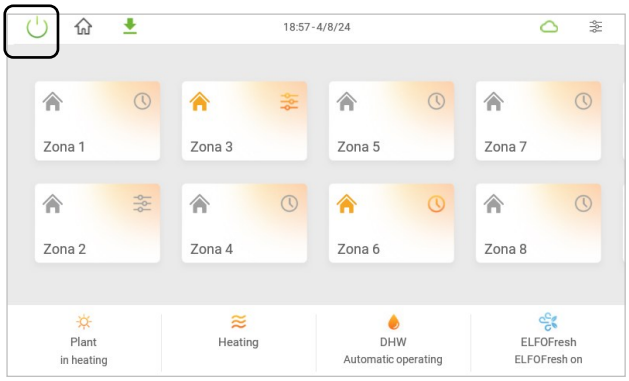


"AWAY FROM HOME" CONTROL

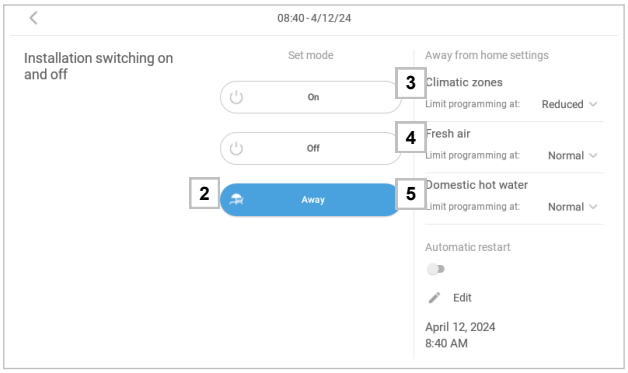
The "away from home" control mode can be activated when the room is not occupied.

The "Away fom home" control allows setting the operation of:

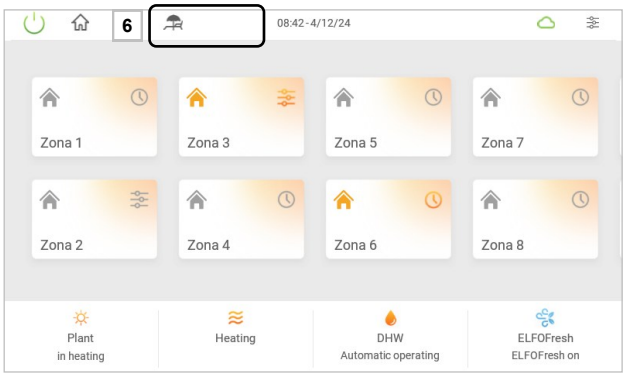
- climatic zones
- fresh air unit
- domestic hot water



select **1**



select **2**



"AWAY FROM HOME" SETTINGS

It is possible

3 - Climatic Zones

All zones can be set in the following modes:

- Normal: follows the scheduled programming
- Economic: follows the scheduled programming, but it is forced in Eco
- Off

4 - Fresh air unit

Fresh air units can be set in the following modes:

- Normal: automatic ventilation
- Reduced: reduced ventilation
- Off: ventilation off

5 - Domestic hot water

DHW can be set in the following modes:

- Normal: follows the scheduled programming
- Reduced: is maintained at a lower temperature for an higher energy savings
- Off

7 - If "AWAY FROM HOME" function is enabled :

- the word "AWAY FROM HOME" is displayed

REPORT ENERGETICO

The electric energy is displayed on the CONTROL4 NRG panel and provides a weekly profile of the energy used by the air conditioning system and by the photovoltaic system (when present).

To access the energy report, press anywhere in the ELECTRICAL SYSTEM section on the main page.

Note:

The function is active if the following is configured in the system:

– at least one single-phase or three-phase electric energy measuring device

(see system component configuration)

– Clivet Sinergy unit

Consultation of weekly electric energy consumption.

Depending on the composition of the system, the following information is available:

Air conditioning system consumption	Electrical measuring device 1
Consumption of all electric utilities	Electrical measuring device 2
Photovoltaic production	• Clivet Sinergy • Electrical measuring device 3 (for third party PV systems)

A. Energy consumption

B. Energy production

Select a line to access the daily details.

The Consumption tab shows the electric energy consumption curves on an hourly basis, broken down into:

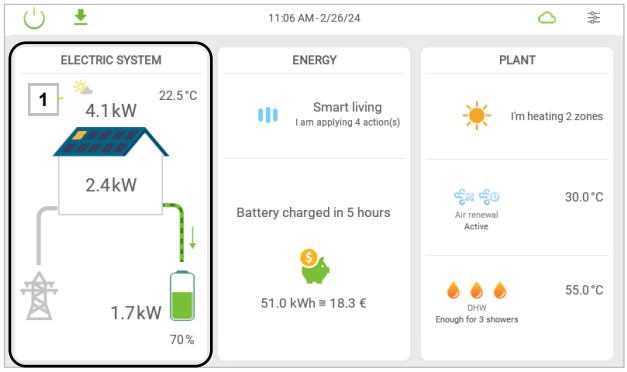
- Domestic water
- Cooling

Select 3 - Production

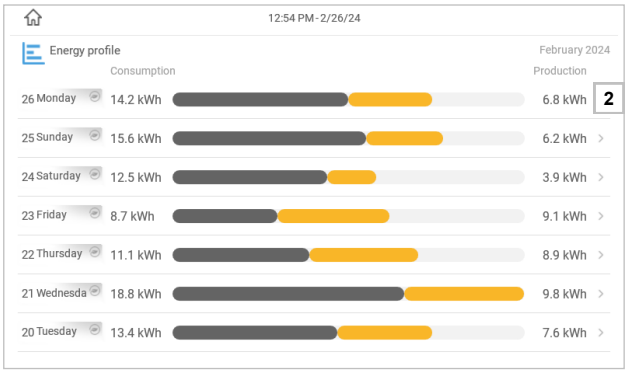
The **Production** tab shows the electric energy consumption curves on an hourly basis, broken down into

CAUTION

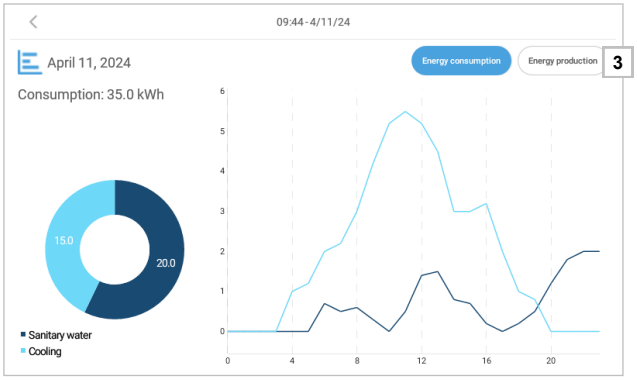
The electric energy measuring device can be connected **ONLY** to a single-phase unit.



select **1**



select **2**



Select **3**

ZONE SCHEDULING

The operation of every zone can be SCHEDULED or MANUAL.

Scheduled zone in temperature (gray)

Scheduled zone in call (red = heat; blue = cool)

Zone off

Manual zone in temperature (gray)

Manual zone in call (red = heat; blue = cool)

In the time scheduling of the zones, for the slave terminals it is not possible to do an off-set using the cursor

2 - Scheduled zone :
uses one of the 7 preset programs.

3 - Zone managed in manual mode:
The programming can be ignored and the zone forced for a determined period of time in comfort, normal or off mode.

4 - Modification of a single component temperature

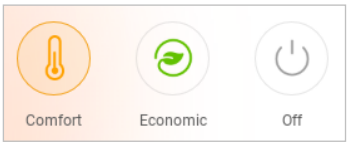
PROGRAMMED MODE

Comfort:
Ideal temperature, to use when we are at home.
Economic:
Holding temperature, to use when the zone is not used.

PROGRAM ZONE
A different program can be combined to each day of the week

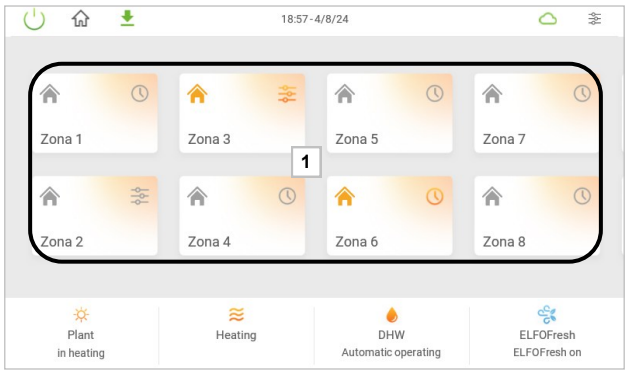
5 - Select:

- cooling or heating
- select the day of the week to be programmed:
  the selected day is highlighted in red.
- summer or winter program among those available;
  the saved program can be removed;
  a new program can be created
- modify the program using buttons

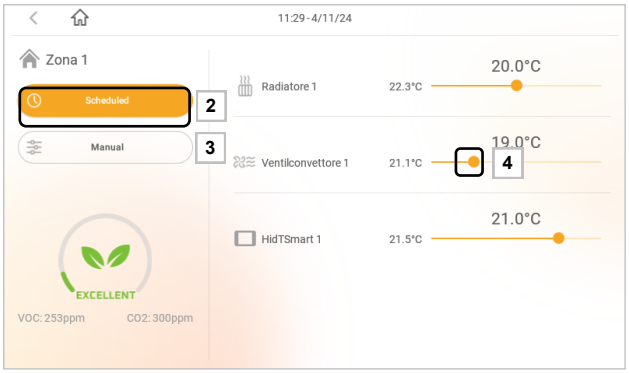


6 - **SETTING ZONE TEMPERATURES**
Set the zone temperature, selecting one of the preset time schedules:

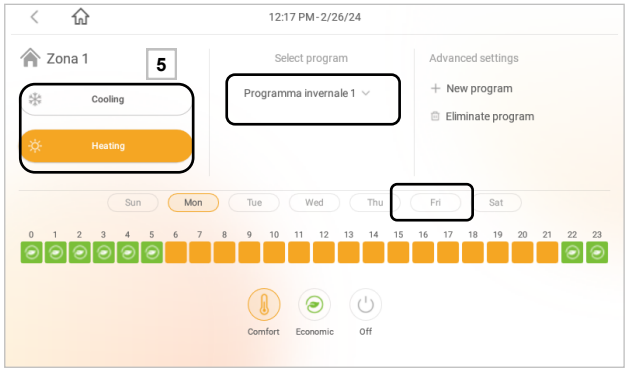
- 7 COOLING programs
- 7 HEATING programs.

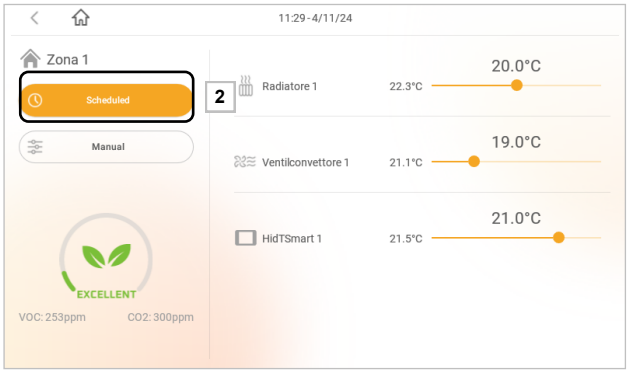


select **1**



select **2**



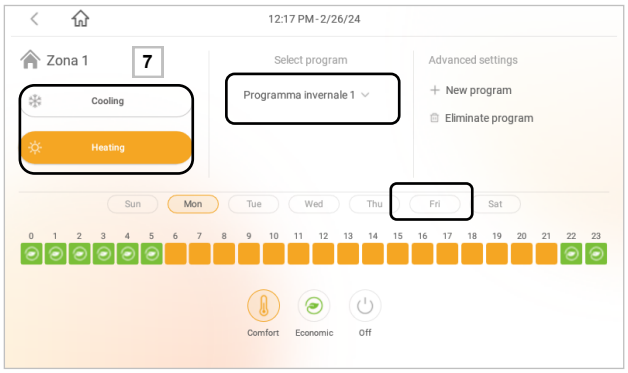


select **2**

ZONE SCHEDULING

7 - Select:

- cooling or heating
- the day of the week to be programmed:
  the selected day is highlighted in red.
- cooling or heating program among those available



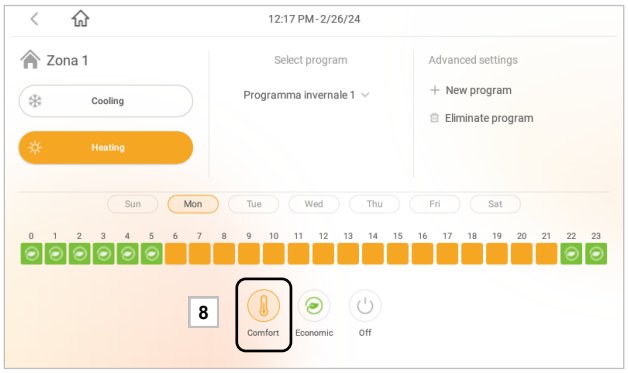
The temperature of the "**Comfort**" profile is preset for all the house zone:

- 24°C for cooling
- 21°C for heating

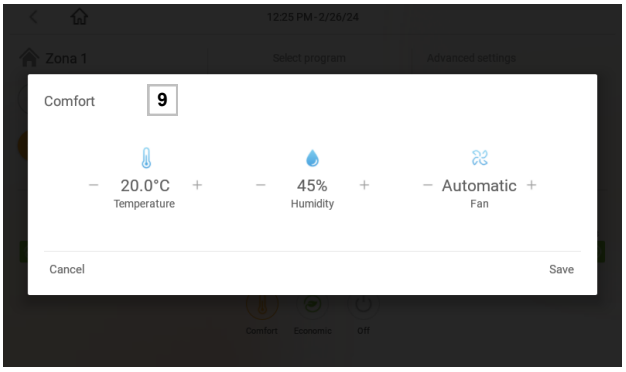
A different temperature can be set for each zone.

To modify the temperature:

- 8 - Press "Comfort" for 2 seconds
- 9 - Set
  - zone temperature
  - humidity %
  - automatic / manual / silenced / off ventilation (fancoil = off)



press for 2 sec **8**



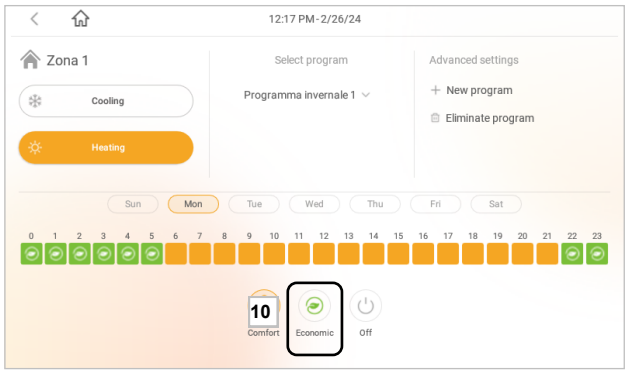
ZONE SCHEDULING

The temperature of the "**Economic**" profile depends on the temperature of the"**Comfort**" profile:

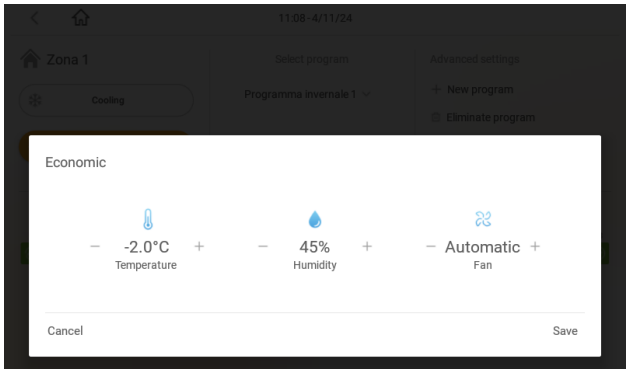
- it is higher in cooling
- lower in heating.

To modify the temperature difference:

- press **"Economic"** for 2 sec



press for 2 sec **10**



Set:

- temperature difference compared to the "Comfort" mode
- humidity %
- automatic / manual / silenced / off ventilation

Example

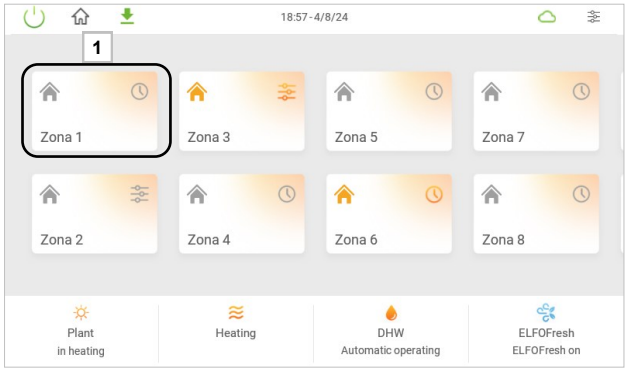
Cooling Temperature	Comfort 24°C	difference +2 °C	**Economical** **26°C**
Heating Temperature	Comfort 21 °C	difference -2 °C	**Economical** **19°C**

Temperature must be selected for both Cooling and Heating (section 7)

ZONE IN MANUAL MODE

The zone can be forced for a certain period of time in the desired mode, ignoring the time schedule.

At the due time, the program previously stopped is restarted.



select **1**

Set the Zone manually in one of the following operation modes:

3 - Comfort:

- for ever (it does not return to the programming)
- for 1,2….3 hours...

4 - Economic:

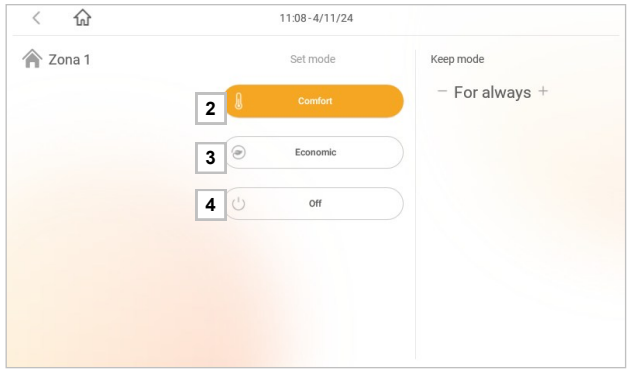
- for ever (it does not return to the programming)
- for 1,2….3 hours...

5 - Off:

- for ever (it does not return to the programming)
- for 1,2….3 hours....

The minimum setting interval to force the preset time schedule is 1 hour.

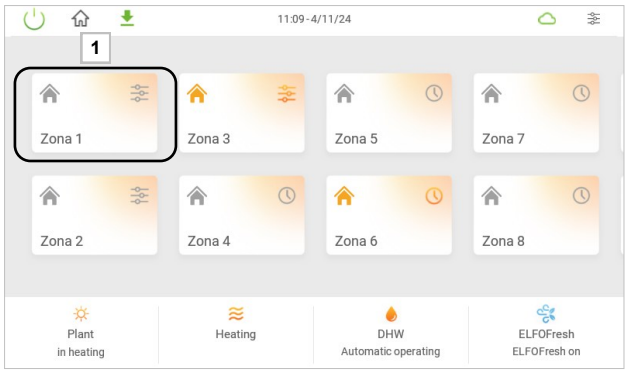
The zone in "**for ever**" mode, enter into the programming to return to the normal programming.



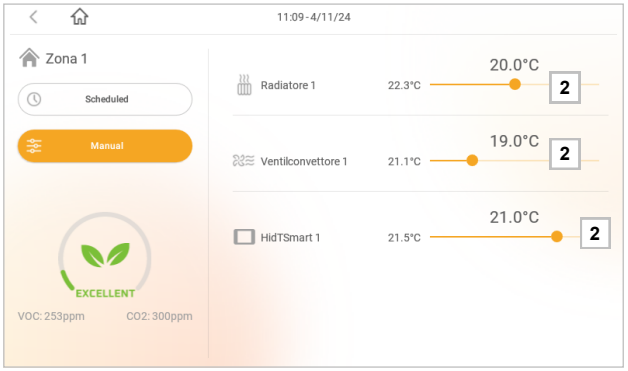
select **2**

ZONE SCHEDULING

Modification of a single component temperature



select **1**

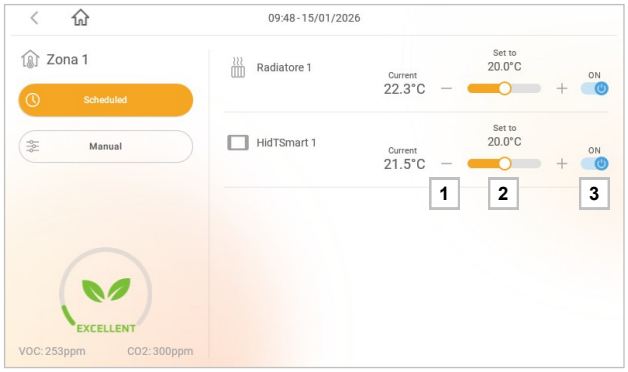


2 –correction setting cursors

Example

sub-zone	Final temperature
Living room 1	20.0°C
Living room 2	19.0°C
Main entrance	21.5°C

From version 4.15.0



1 - decreases setpoint
2 - increases setpoint
3 - terminal ON/OFF

ALARMS

Attention:
Before resetting an alarm, identify and remove the cause generating that.

Repeated resets can cause system malfunctions or irreversible damage.
In case of doubt, contact the After Sales Centre.

Alarms are indicated by the symbol:

Alarms are saved in the memory.

Example:

- heat pump in alarm or system main alarm

2- description of the alarm and date/hour of the event

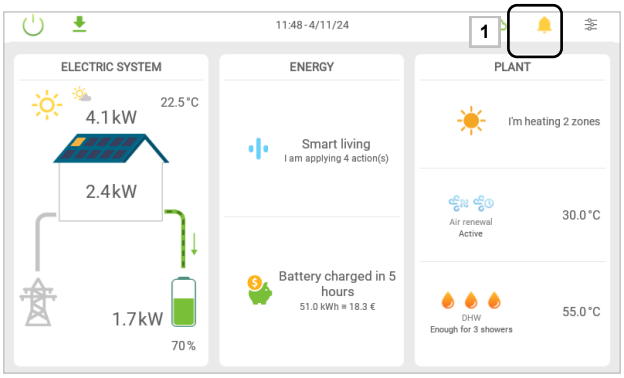
Alarm status:

- text in RED = active alarm
- text in BLACK = alarm resetted by the user (by the Reset button)
- text in GREEN = alarm reset (resetted by the user), or alarm reset without user intervention

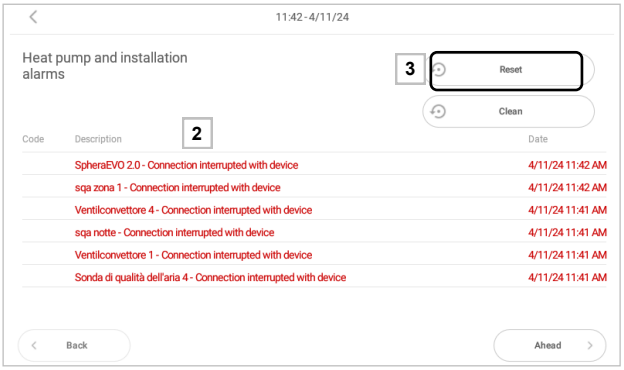
For contact the After Sales Centre

1– Open the Settings menu

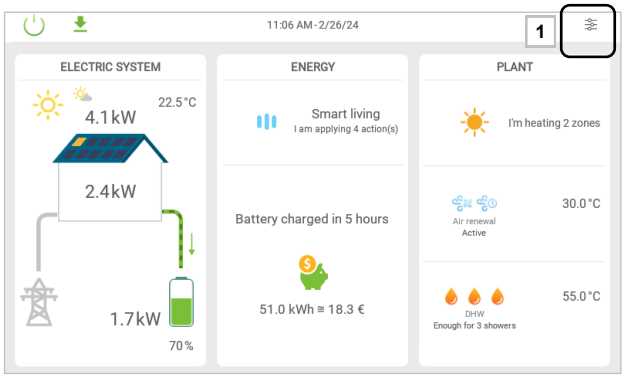
2– Open the Info tab to access the support information.



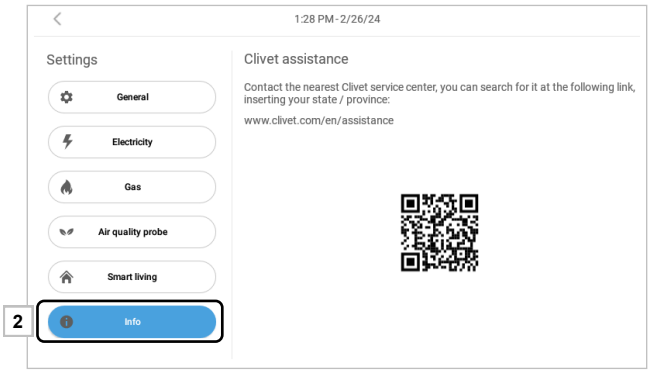
select **1**



select **3**



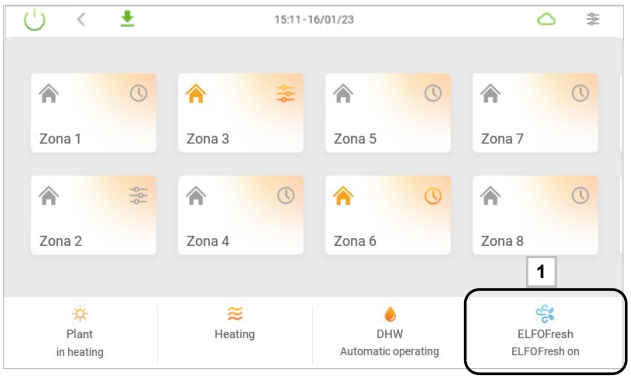
select **1**



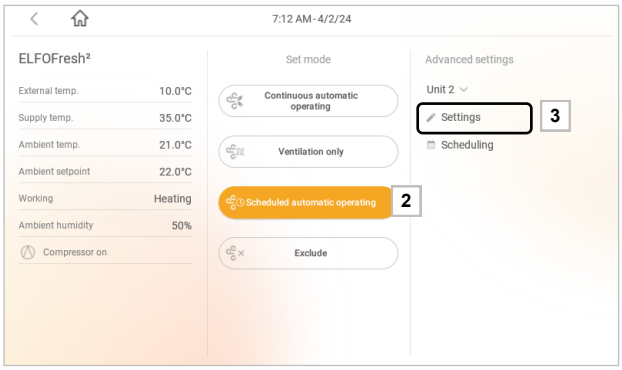
MODIFICATION OF THE PROGRAM NAME

Names of the following programs can be customised:

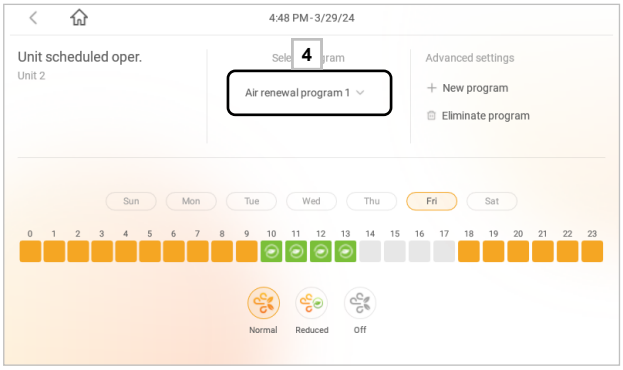
- Domestic hot water
- Elfofresh
- Zone



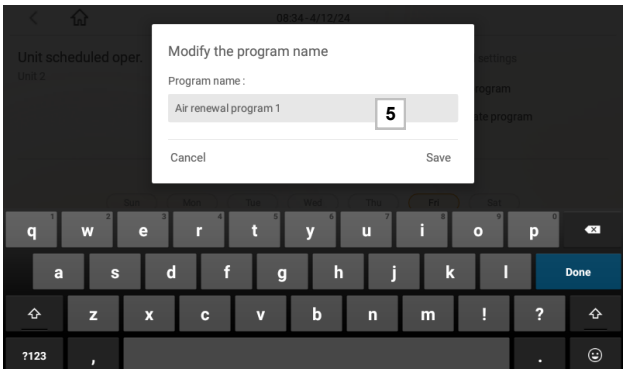
select **1**



select **2** → **3**



press for 2 sec **4**

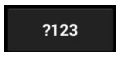


select **5**

MODIFICATION OF THE PROGRAM NAME

Use the keyboard to type the name of the program.
Key functions:

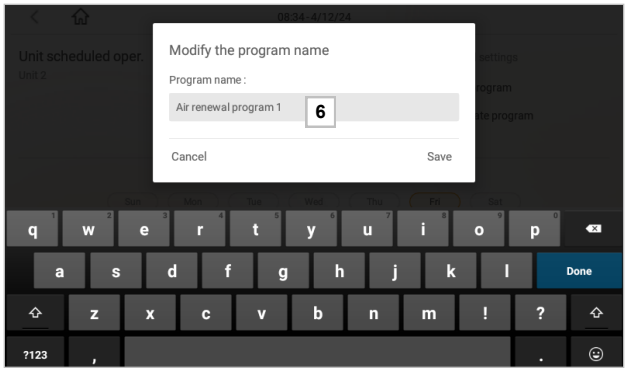
Capital or small letters



Numbers

Space

Delete



select **6**

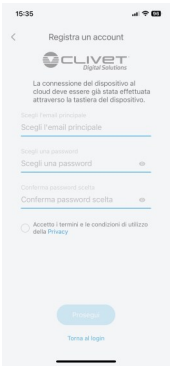
CLIVET APP

Search for the Clivet Eye App on PLAY STORE and APP STORE

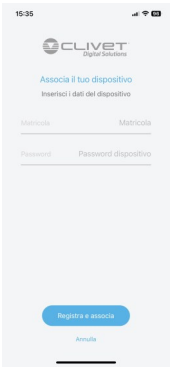
To install:

- download the app
- register with your email + password
- associate your device(s) by entering the serial number and password provided
- access your system by selecting it from the list of associated devices

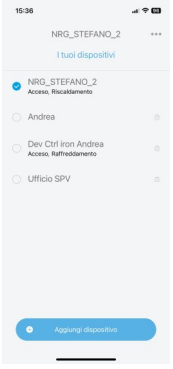
1



2



3



INDEX

INSTALLER MANUAL

Electrical connections

Addressing

Configuration

INSTRUCTIONS FOR THE INSTALLER

GENERAL WARNINGS

Regulations
The information contained in this manual must be integrated with current statutory regulations and by the standards of good practice. Operate with the safety regulations in force.

Planning
The water and electric system must be determined by the system designers in accordance with the regulation in force.

Installation
All electrical and installation operations should be performed by trained personnel having the necessary requirements by the regulations in force and being informed about the risks relevant to these activities.

Maintenance
Only qualified personnel can operate on the system, as required by the regulation in force.

Modification
Any type the modifications will end the warranty coverage and the manufacturer responsibility.

Breakdown/Malfuction
Using the system in case of breakdown or malfunction voids the warranty.
Disable the system immediately in case of breakdown or malfunction.
Contact a certified assistance service authorized by the manufacturer.
Use original spares parts only.

MENU (SETTINGS)

Press the icon to open the Settings menu

CAUTION

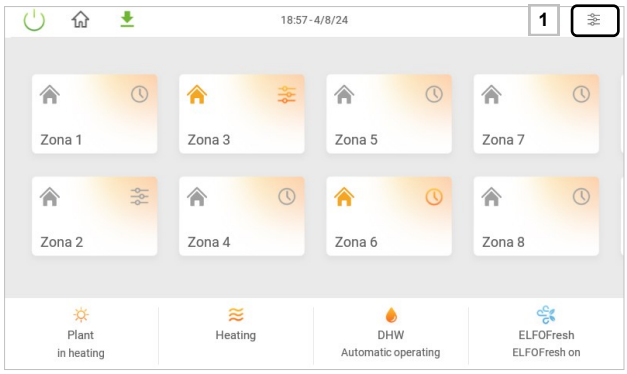
Access to parameters or modifications are only allowed to the installer who takes full responsibility, in case of doubt contact Clivet S.p.A.

For any changes not permitted or not approved by Clivet S.p.A., it declines any responsibility for malfunctions and/or damage to the unit/ system.

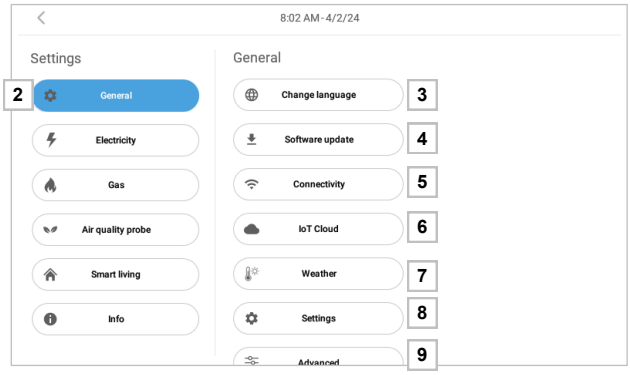
The following operations are only necessary for special calibrations and configurations, and are therefore only intended for authorised service centres or in any case qualified technicians.

The following can be accessed from tab 2 - **General**:

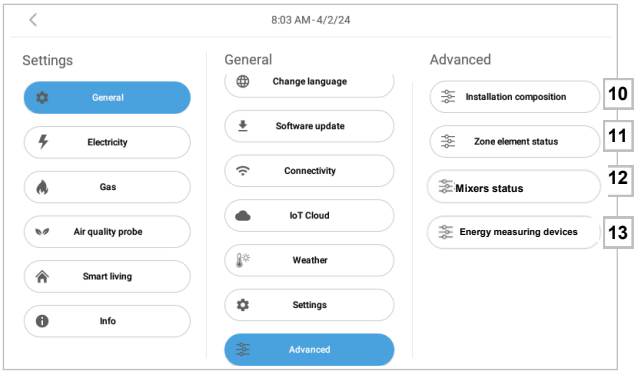
3 - Language change
4 - Software update
5 - Connectivity
7 - Weather
8 - Settings
9 - Advanced
10 - System layout
11 - Area elements status
12 - Mixers status
13 - Energy measuring devices



Press 2 sec 1



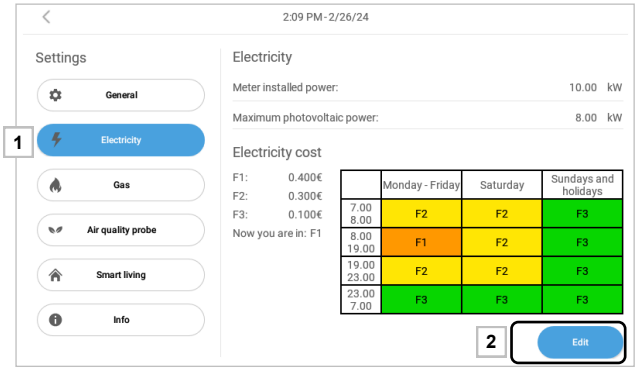
select 8



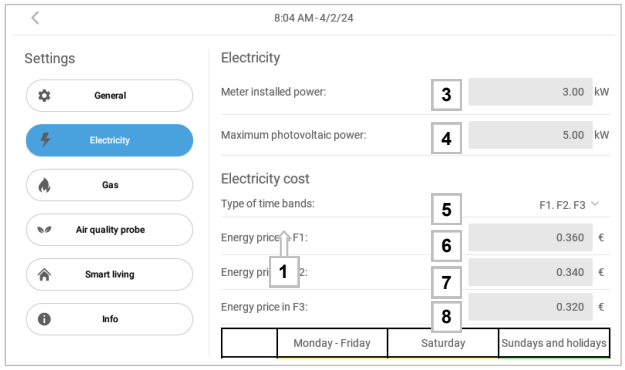
From the Settings menu, select:

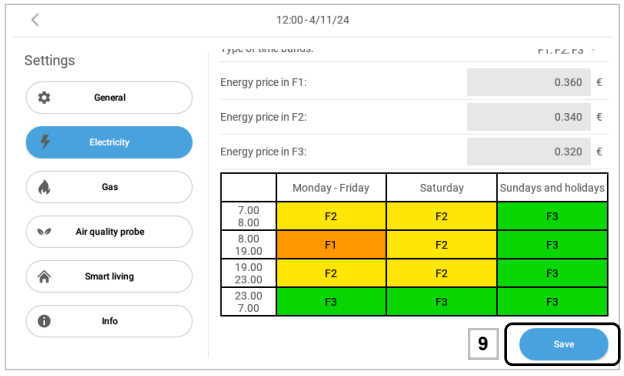
1- Electricity to set the electrical system information.

This information is used by the system to provide personalised statistics and energy tips on the home page of the “ELECTRICAL SYSTEM” and “ENERGY” sections



select **2**





select **9**

3 - Set Installed meter capacity

4 - Set Maximum photovoltaic capacity

5 - Select Time slots type:

- F0: Supply at a single hourly rate
- F1, F2, F3: Supply at a twice-hourly rate divided into 3 slots
- F1, F23: Supply at a twice-hourly rate divided into 2 slots

6,7,8 - Depending on the type, set the energy costs for the respective slots.

Note: The values can be found in the contractual conditions stipulated with the electric energy supplier

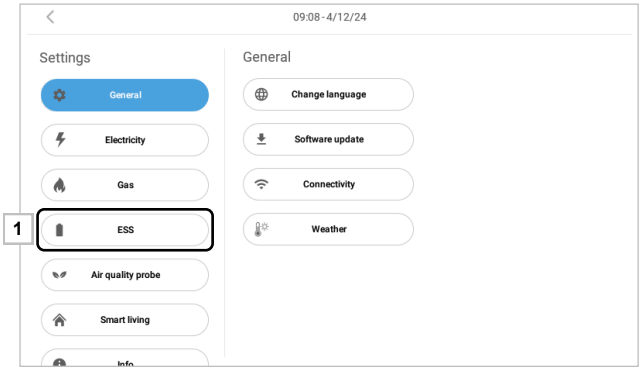
To complete the operation, drag area “**1**” upwards.

Save the changes with 9 - Save

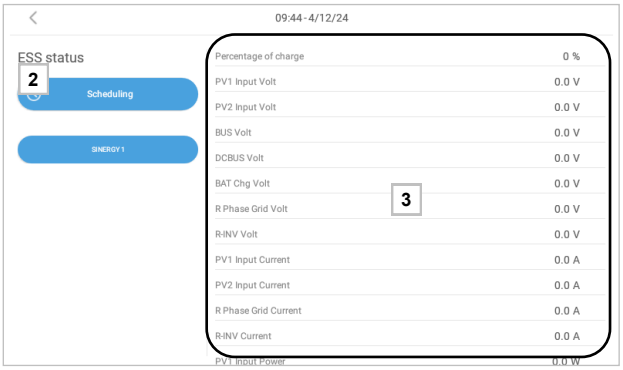
ESS MENU

From the Settings menu, select:

1 - ESS to access information on the electrical water tank unit



select 1



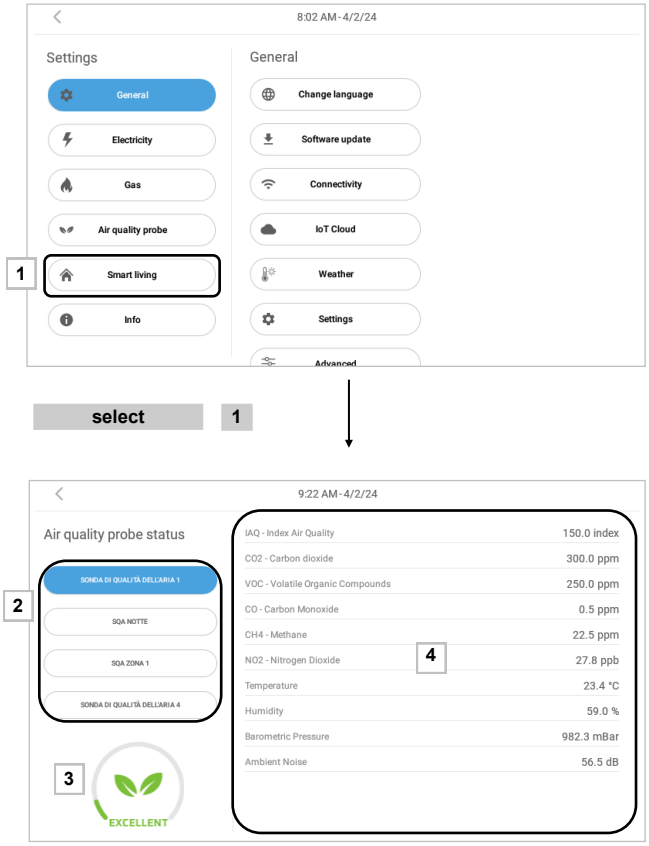
2 - Name of the unit in the system configuration

3 - Scrollable list showing the unit's main parameters

AIR PROBE MENU

From the Settings menu, select:

1 - Air quality probe to access information on the electrical water tank unit



2 - List with the names of the air quality probes available in the system configuration.

3 - Dynamic icon representing the air quality index detected by the probe

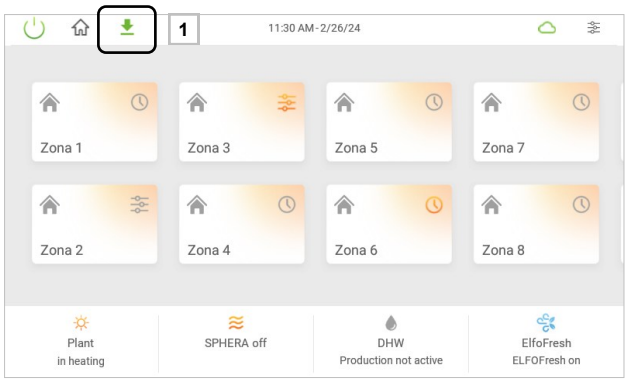
4 - List of environmental parameters measured in real time by the air quality probe

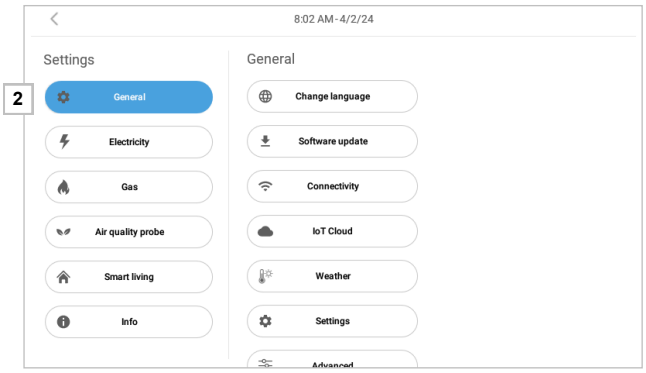
SOFTWARE UPDATE

From the Settings menu, select:

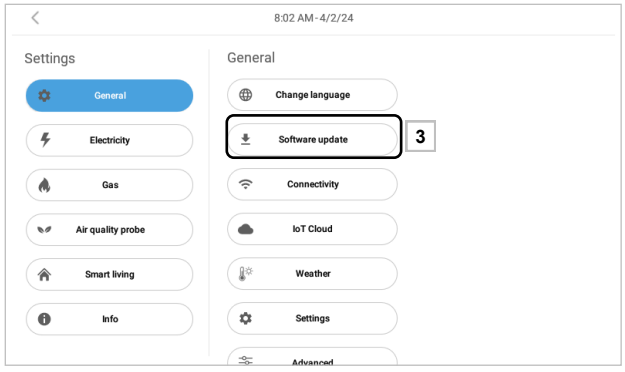
2 - General to access information on the electrical water tank unit.

Note: The software update page can be accessed directly also by tapping the software update availability notification icon in the top bar "**1**"

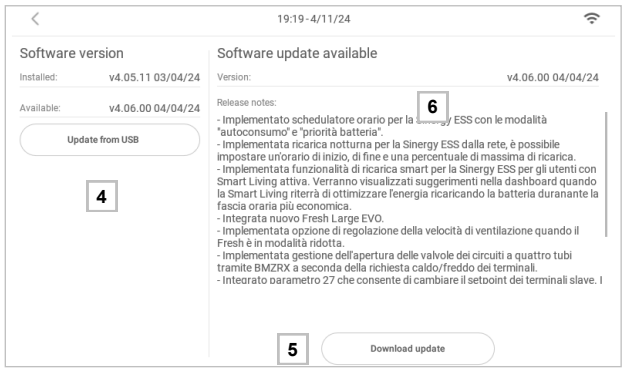




select **2**



select **3**



Selezionare **5**

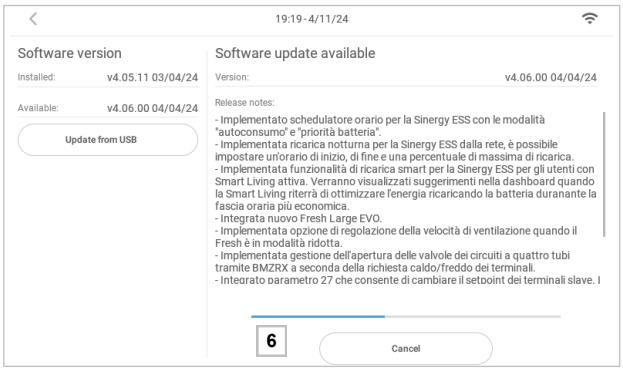
4 - Software version displays the following information:

- Installed: version currently in use in the device
- Available: Version number available and release date
- Update from USB: the software version of the panel can be updated with a USB flash drive

5 - Software update displays the following information:

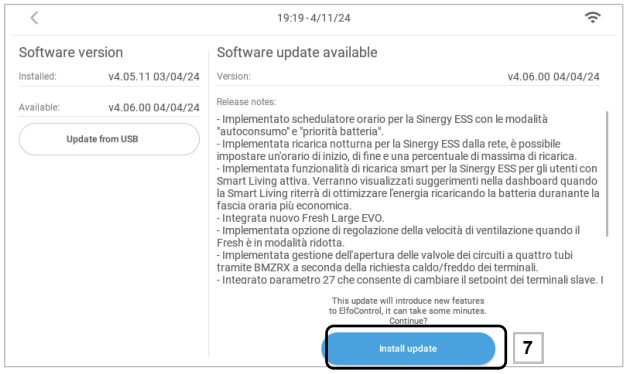
- Version available and release date
- Download update: Download button for

6 - Release notes displays the list of new features/bug fixes introduced with the new version available.



Please wait for download to complete **6**

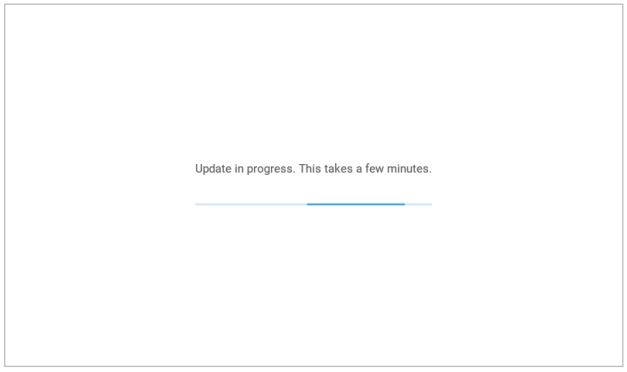
When the download is complete, press Install update to update the software



select **7**

Wait for the update operations to finish.

When finished, the main page will be displayed again.



INTERNET CONNECTION

The **Connection** screen displays the information on:

A - CONTROL4 NRG's Internet connection status and the interface used (Ethernet* or Wi-Fi**)

B - Internet connection status

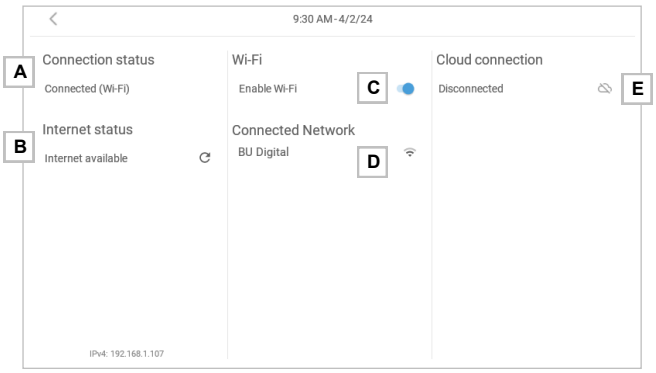
C - Enables/disables the Wi-Fi board (where available)

D - List of available Wi-Fi connections and any connected network

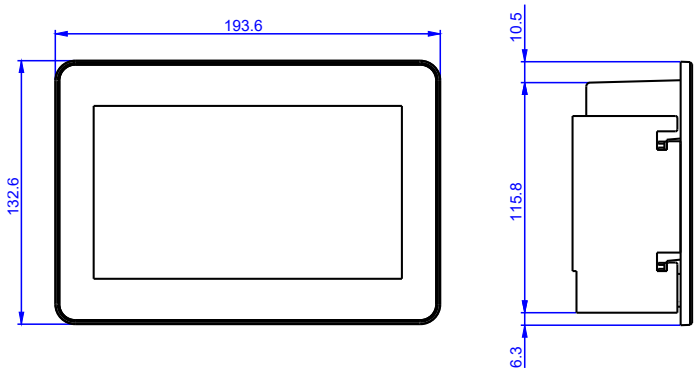
E - Cloud connection status

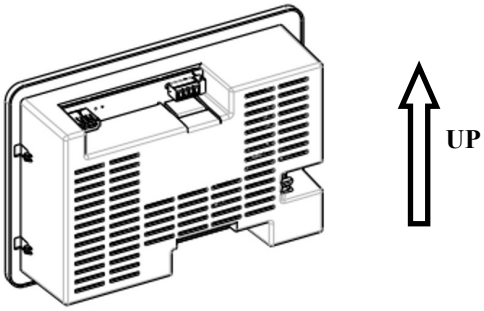
* The Ethernet port uses standard Fast Ethernet. If the Control4 NRG is connected to a gigabit Ethernet switch, it is advisable to reduce the switch port speed to 10Mb/s

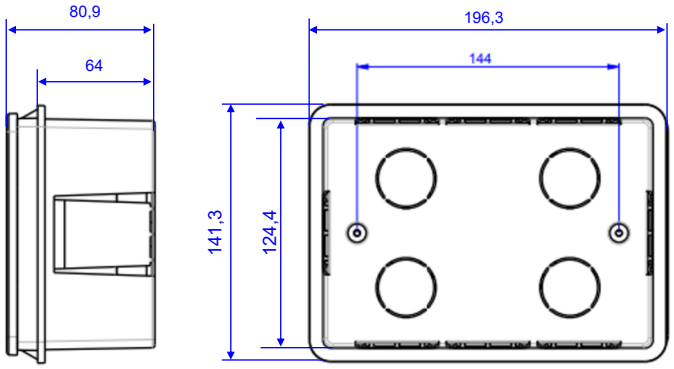
** Connection to a Wi-Fi network is only possible with a Control4 NRG version that has Wi-Fi support. Also ensure that 2.4GHz networks are used.



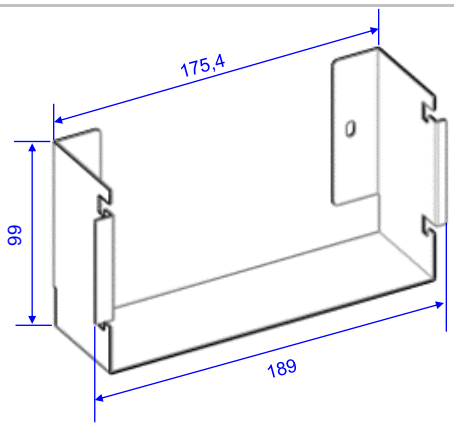
CONTROL4 NRG





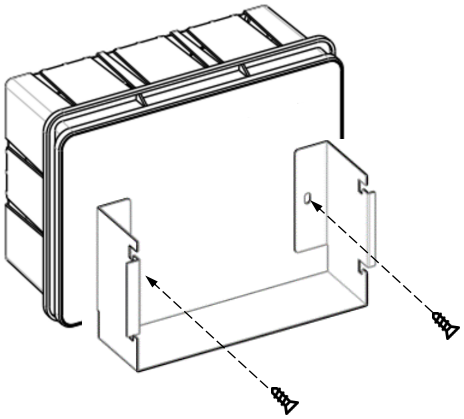


Dimensions of uncased box for wall-mounting

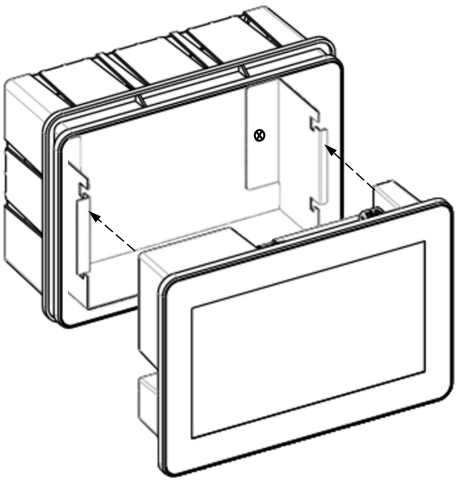


Dimensions of metal bracket for fixing the CONTROL4 NRG in the box

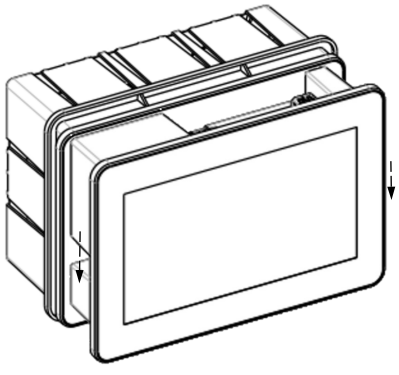
1



2

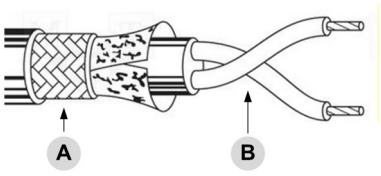


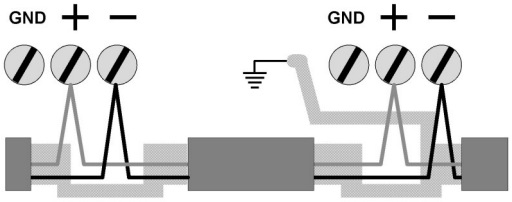
3

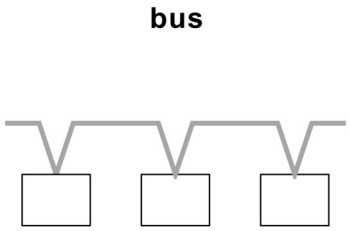


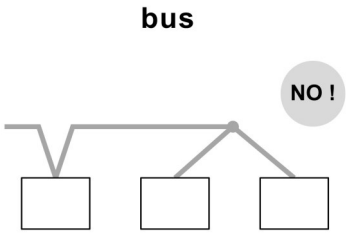
BUS RS485

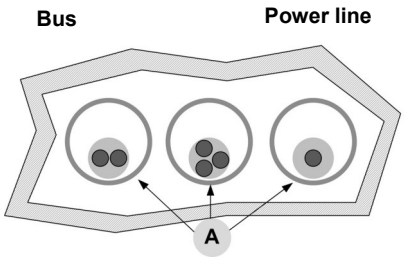
Twisted (B) and Shielded cable (A)



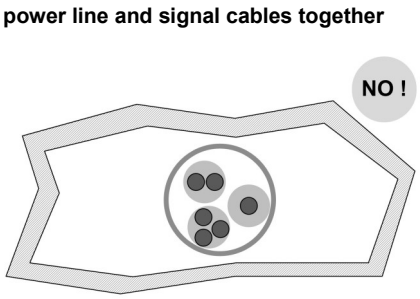


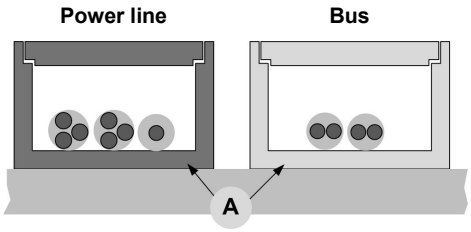




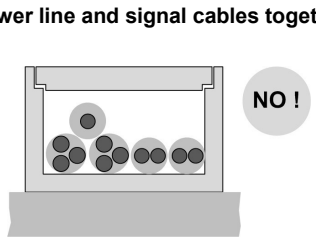


A - Corrugated tube





A - Metal conduit



SHIELDED CABLE

- 50-metre spool (optional CBSX)
- Pair of twisted and shielded conductors
- Conductor section 0,22 mm^2…0.35mm^2
- Nominal capacity between conductors < 50 pf/m
- Typical impedance 120 Ω
- Use a suitable cable to RS485 network

SERIAL LINE

- Maximum number of components: 40
- Maximum length of every single serial line 1000 m
- Difference in potential between the "earth" of the two RS485 devices: lower than 7 v
- Provide guards to protect against electrostatic discharges of atmospheric origin
- Complete last network component.

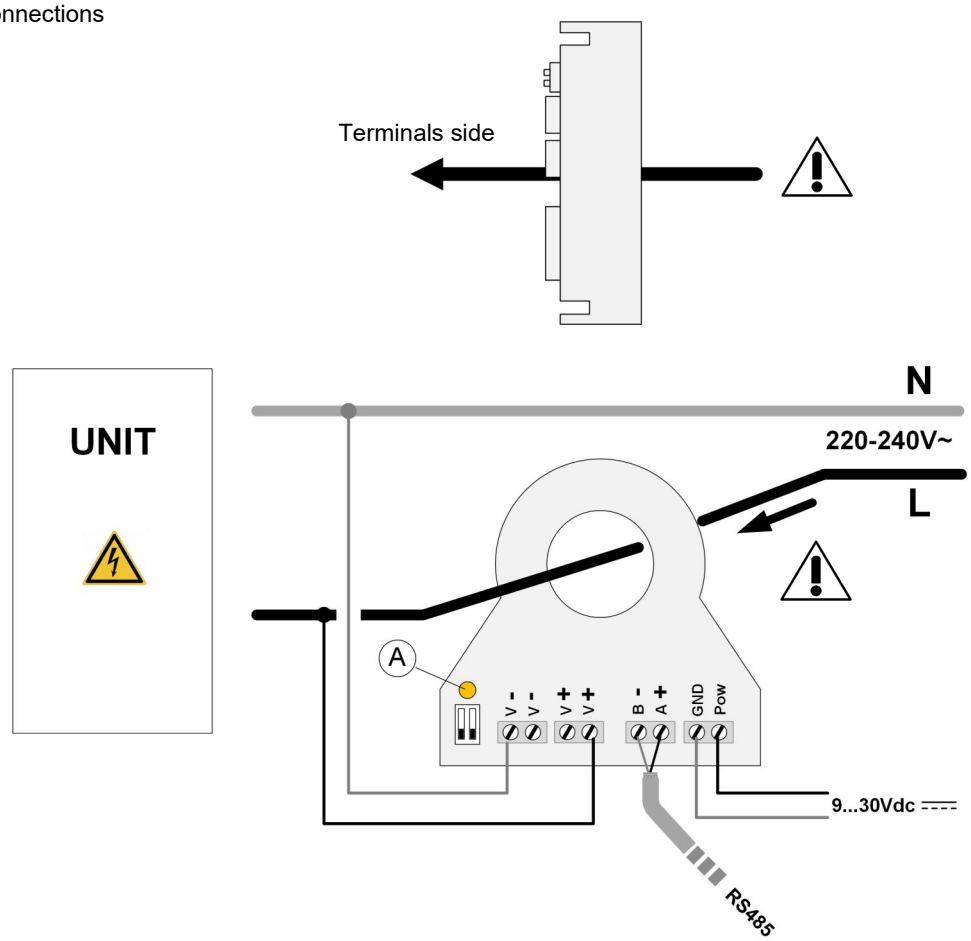
INSTALLATION OF THE SERIAL LINE

- Performed by trained and qualified personnel in data communication networks
- Performed up to standard
- Separated from other cables, especially from power cables or supplied with different voltages
- Far from cables or devices that can affect electromagnetically.

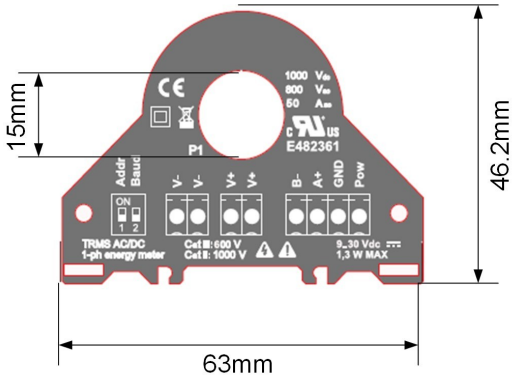
ELECTRICITY METER - SINGLE PHASE

The energy value is acquired by the CONTROL4 NGR via a ModBUS serial communication line

Electrical connections



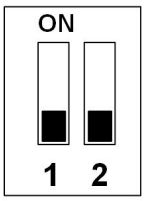
Assembly on DIN rail



A - Diagnostics LED

◐	Blink	Communication OK
●	Fixed	Communication KO
○	Off	Not feeded

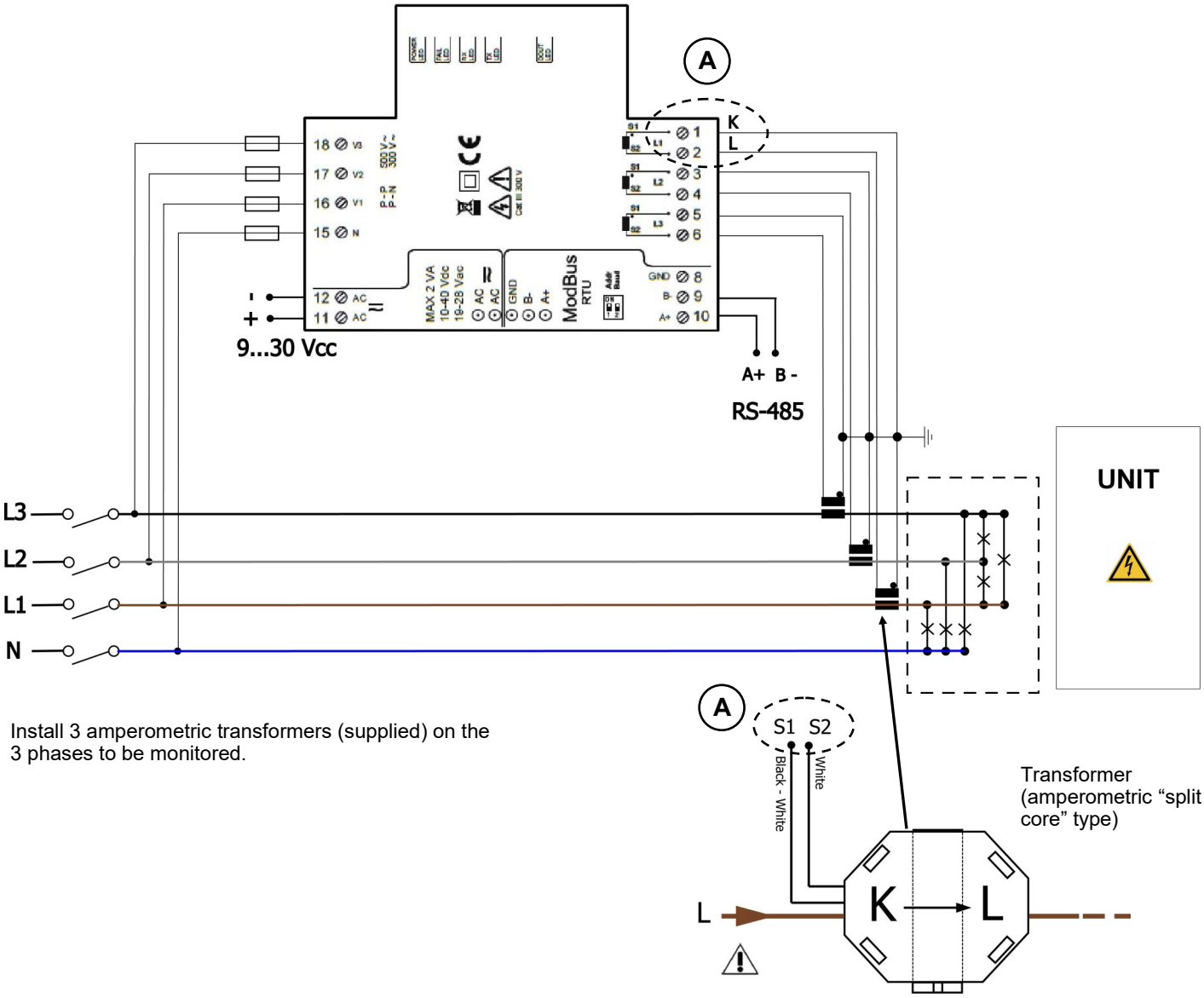
DIP position



ELECTRICITY METER - THREE-PHASE

The energy values is acquired by the CONTROL4 NGR via a ModBUS serial communication line

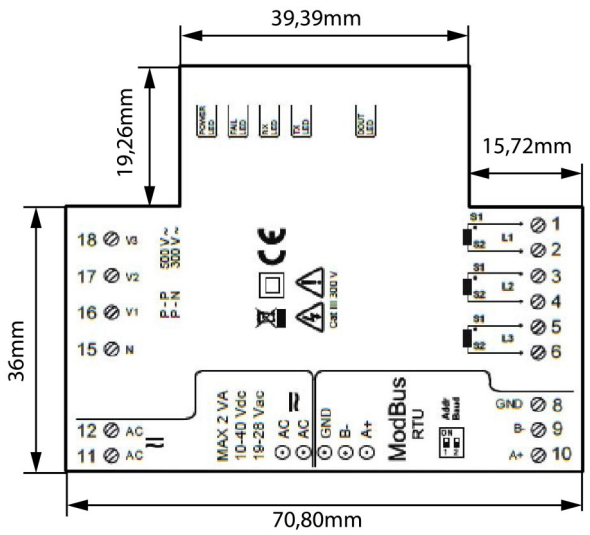
Electrical connections



Install 3 amperometric transformers (supplied) on the 3 phases to be monitored.

Transformer (amperometric “split core” type)

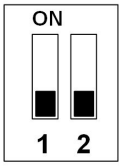
Assembly on DIN rail



Diagnostics

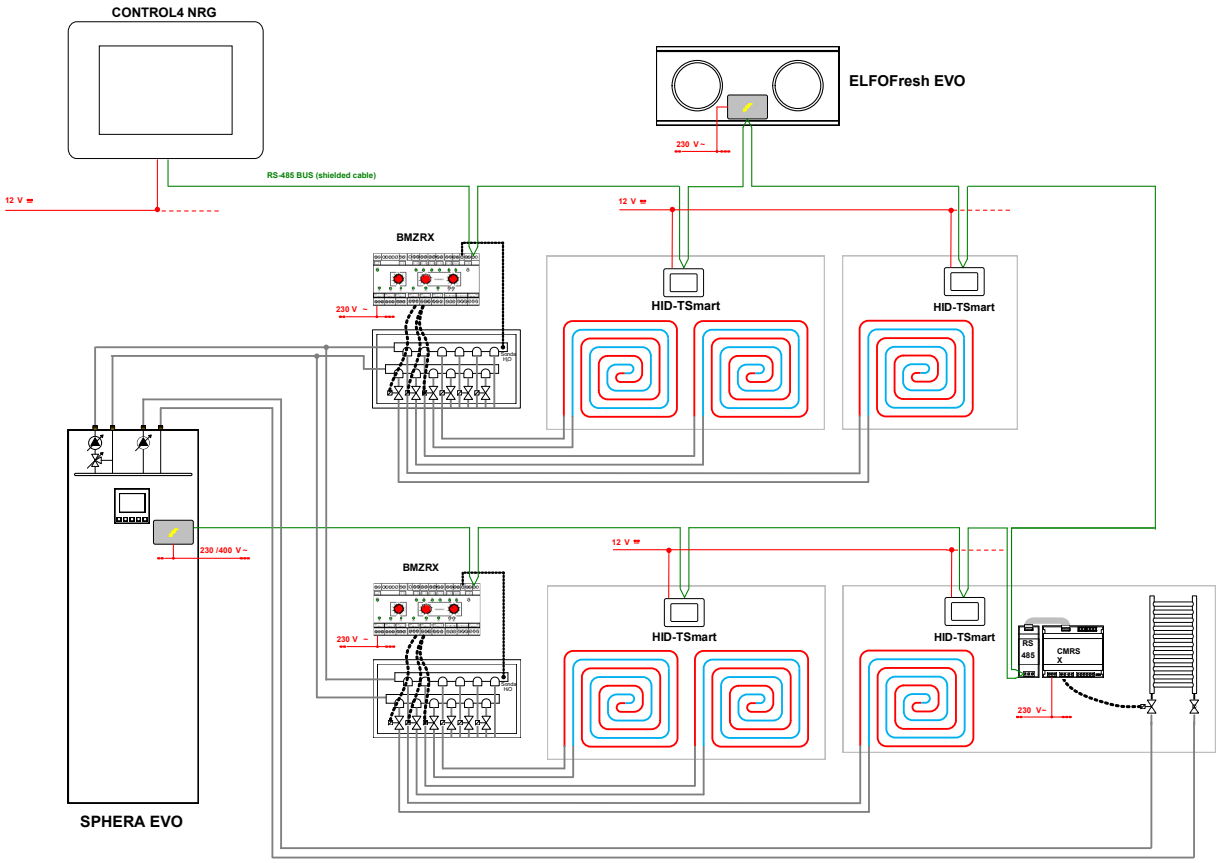
Function	State	Meaning
Power (gren)	On	Powered
	Off	Not powered
Fail (yellow)	On	Inverted current phase
RX and TX (red)	Blink	Communication OK
	Off	Communication KO
Dout (gren)	Not used	

DIP position



SYSTEM DIAGRAMS

New building with radiant panels and radiators



Indicative diagram

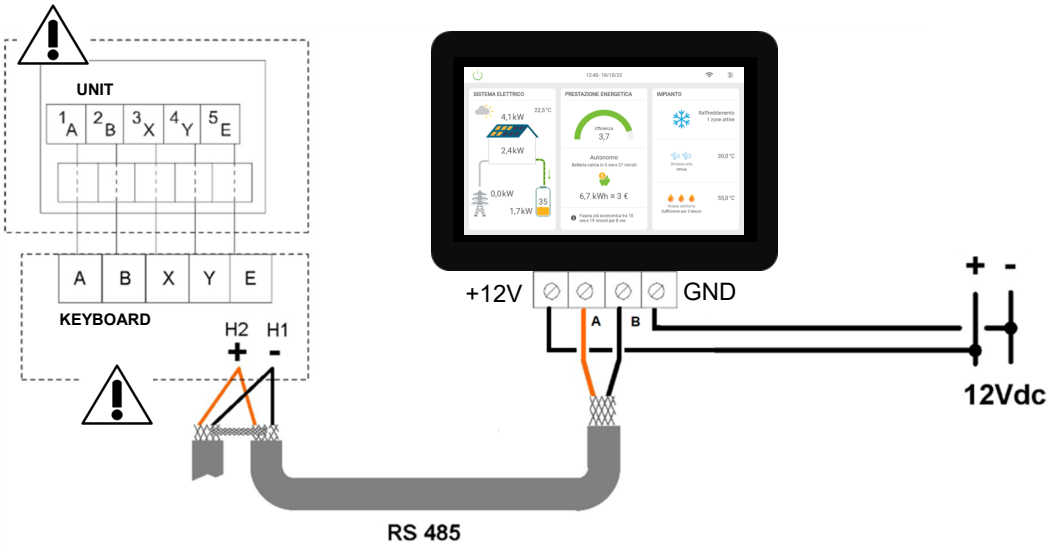
The components of the system are not indicated, because they must be specified by both the Designer and Installer (e.g. expansion tanks, vents, cocks, calibration/safety valves, etc.)

UNIT FOR PRODUCING THERMAL AND COOLING ENERGY

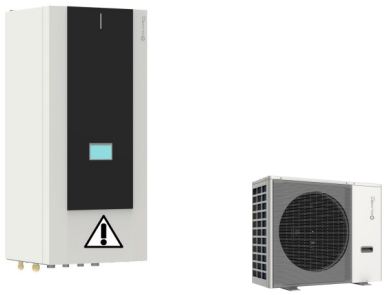
SPHERA EVO 2.0
SQKN-YEE 1 TC+MiSAN-YEE 1 S 2.1-8.1 R-32

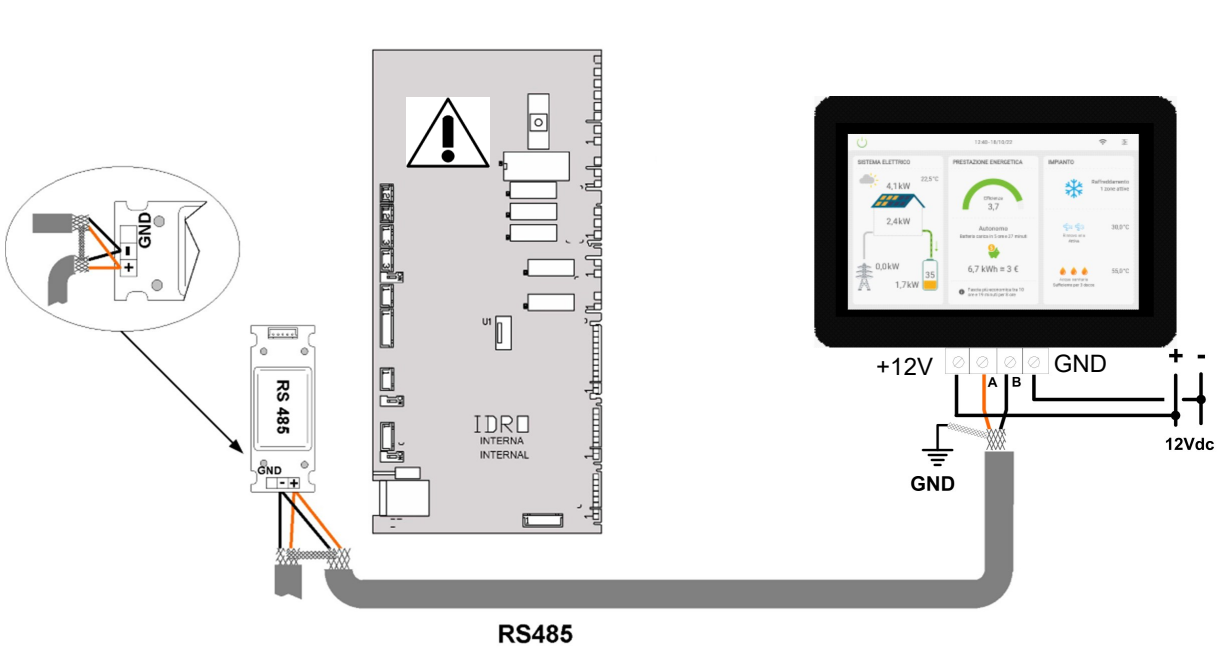
SPHERA EVO 2.0
SQKN-YEE 1 BC+MiSAN-YEE 1 S 2.1-8.1 R-32

SPHERA EVO 2.0
SQKN-YEE 1 BC+MiSAN-YEE 1 S 2.1-5.1 R-32



SPHERA EVO 2.0 EASYHybrid
SQKN-YEE 1 BH+MiSAN-YEE 1 S 2.1-8.1 R-32





UNIT FOR PRODUCING THERMAL AND COOLING ENERGY

SPHERA EVO
SRHME+MDAN-YMi 2.1-5.1 R-32

SPHERA EVO
SRHME-BC+MDAN-YMi 2.1-5.1 R-32

SPHERA EVO
SRHM-IC+MDAN-YMi 2.1-5.1 R-32

ELFOEnergy Edge EVO
WSAN-YMi 21-141 R-32

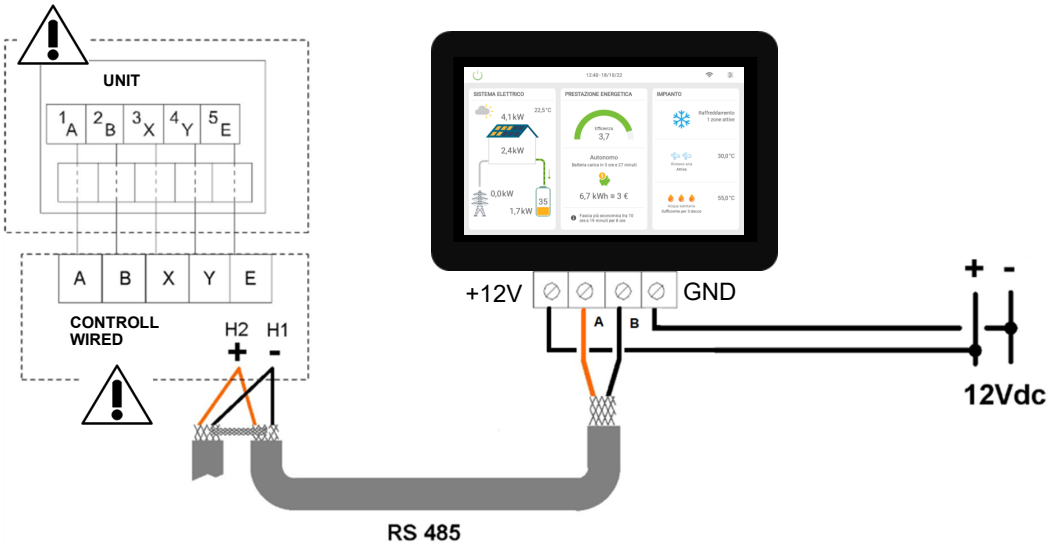
CONTROLL
WIRED

SHEEN EVO
WSAN-YSi 10.1-22.2 R-32

CONTROLL
WIRED

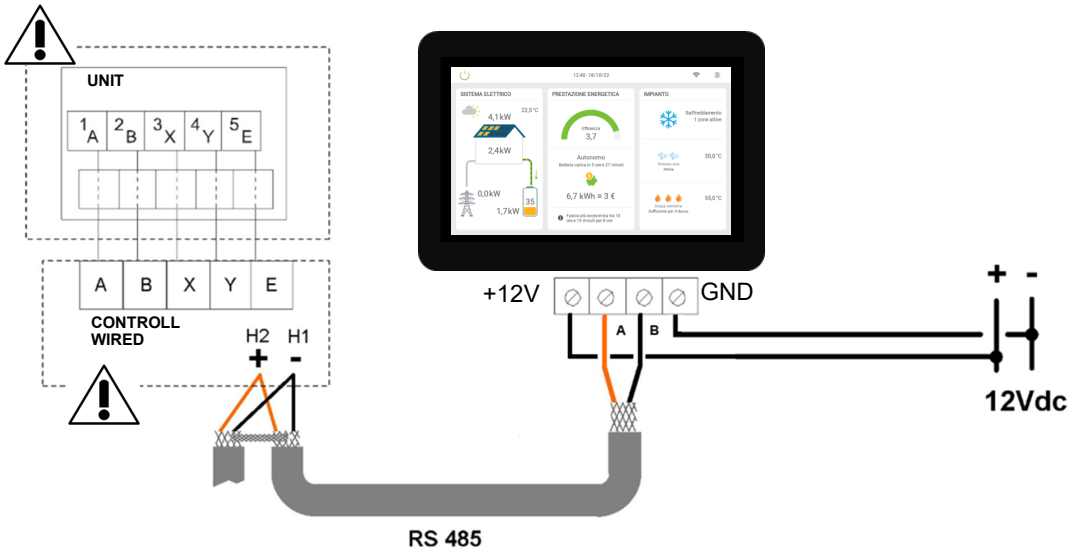
ELFOEnergy Edge
WSAN-YMi 21-81 R-32

CONTROLL
WIRED



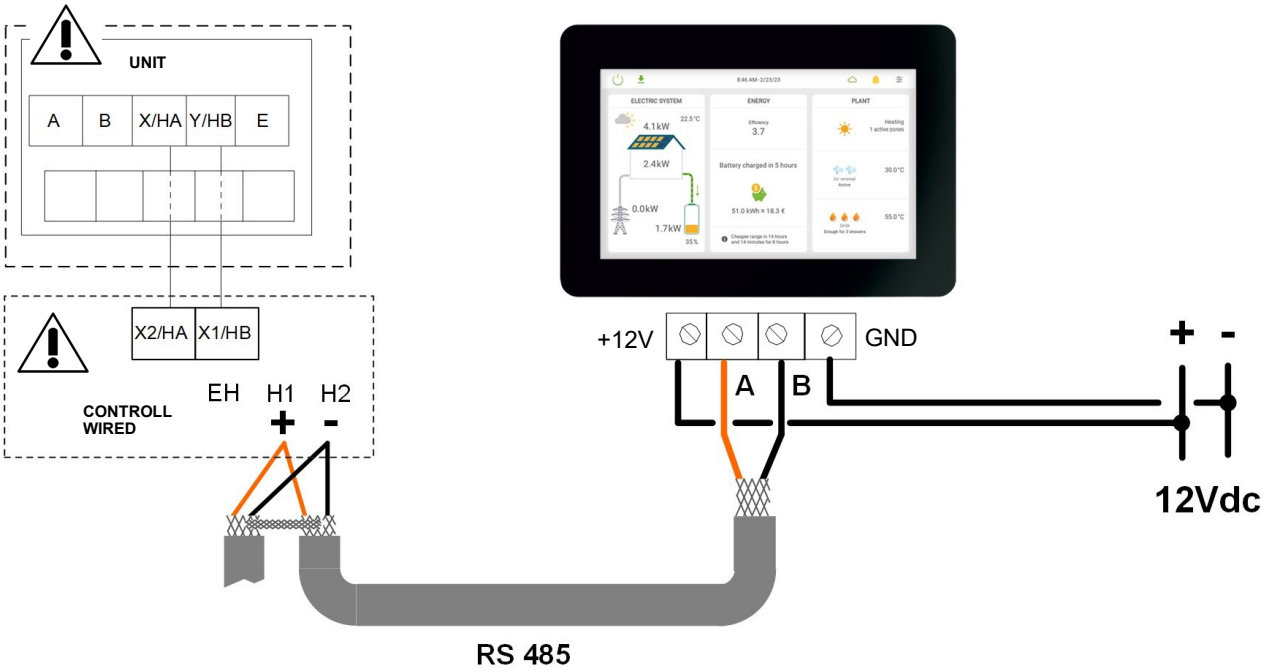
Edge EVO 2.0 - EXC
WiSAN-YME 1 S 2.1-14.1

CONTROLL WIRED



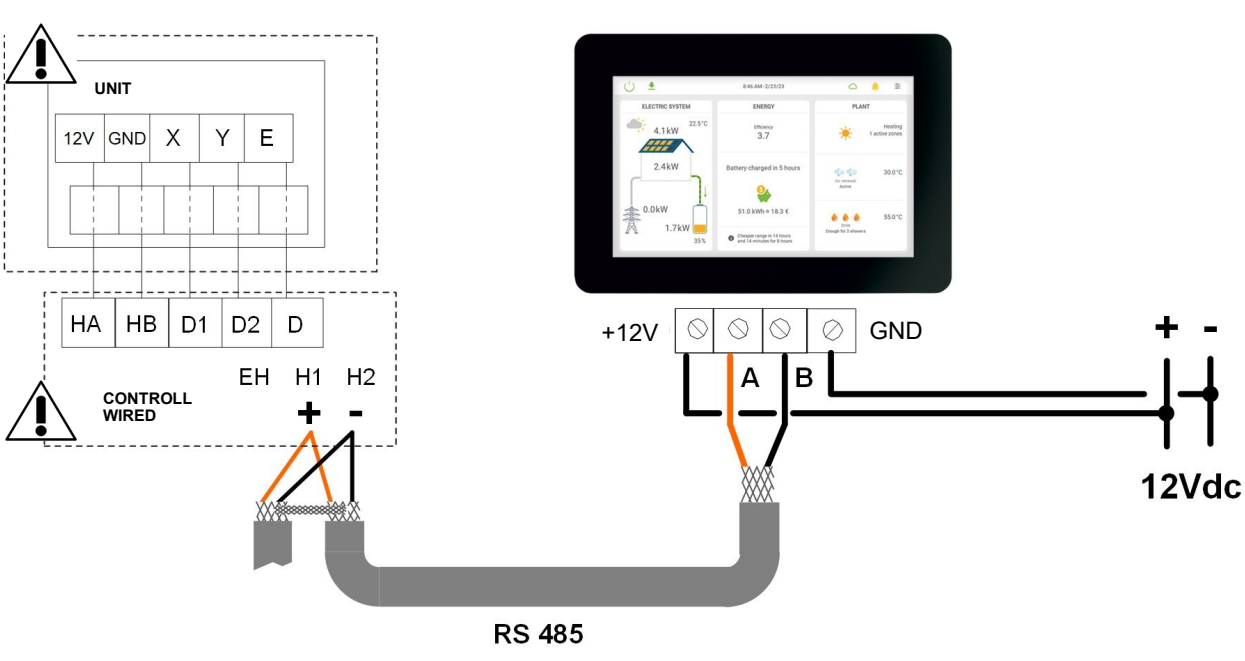
Edge F R-290
WiSAN-PME 1 S 2.1-8.1

CONTROLL WIRED



Edge EVO 2.0 - EXC
WiSAN-YME 1 S 2.1-14.1

CONTROLL
WIRED



UNIT FOR PRODUCING THERMAL AND COOLING ENERGY

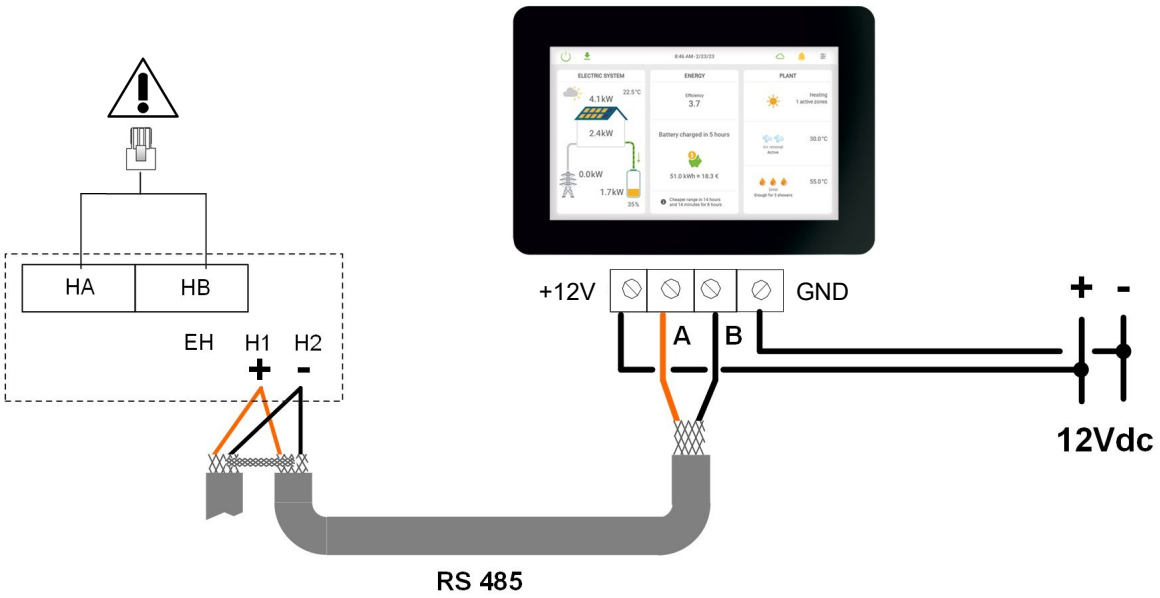
EASYBox
HQCN-NEE 1 BC

EASYTank
HQCN-NEE 1 TC

EASYIn
HQCN-NEE 1 IC

EASYMini
HQCN-NEE 1 MC

UNIT R-290



UNIT FOR PRODUCING THERMAL AND COOLING ENERGY

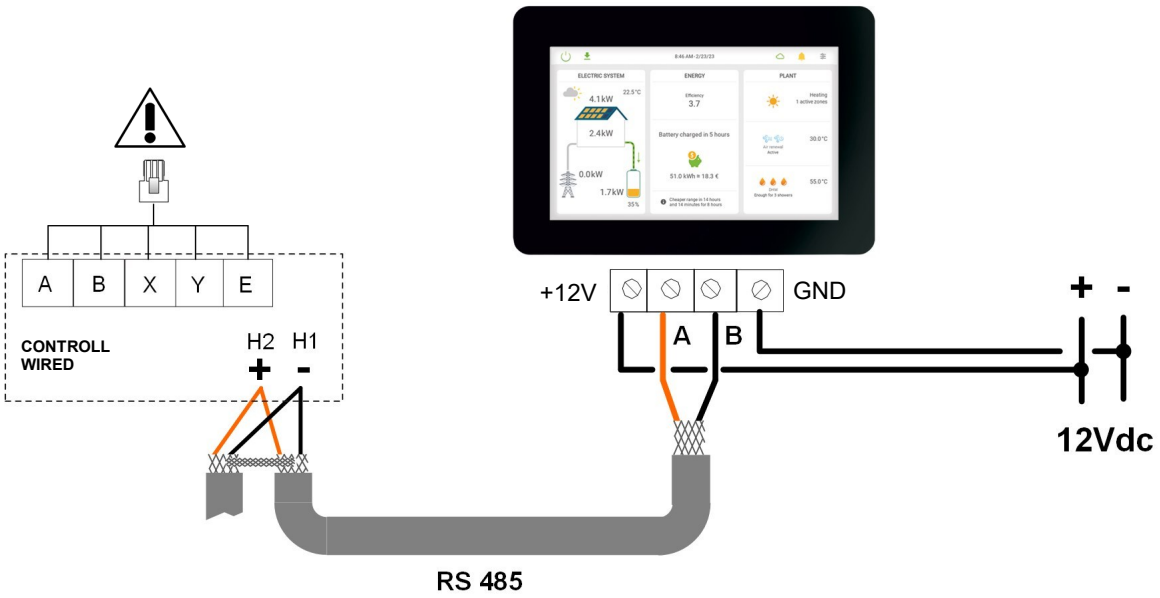
EASYBox
HQCN-NEE 1 BC

EASYTank
HQCN-NEE 1 TC

EASYIn
HQCN-NEE 1 IC

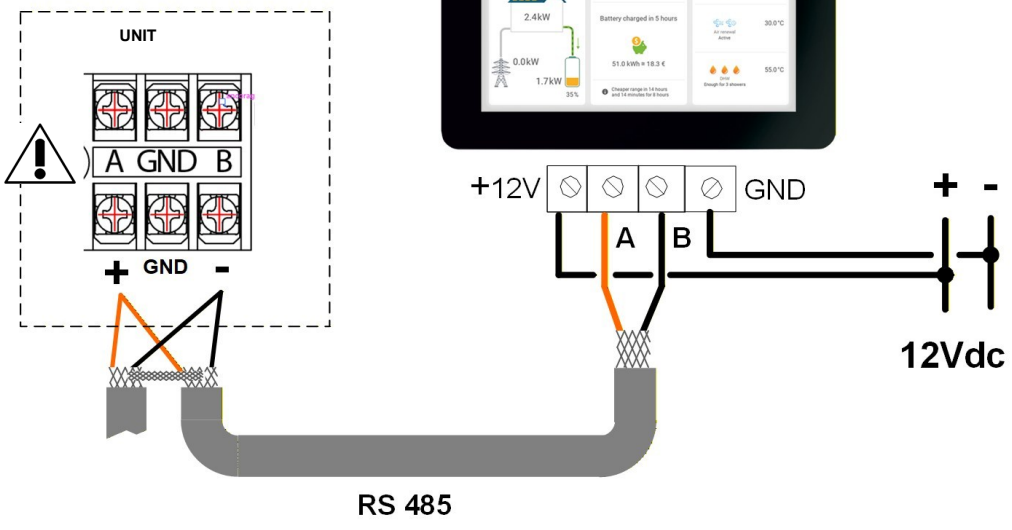
EASYMini
HQCN-NEE 1 MC

UNIT R-32



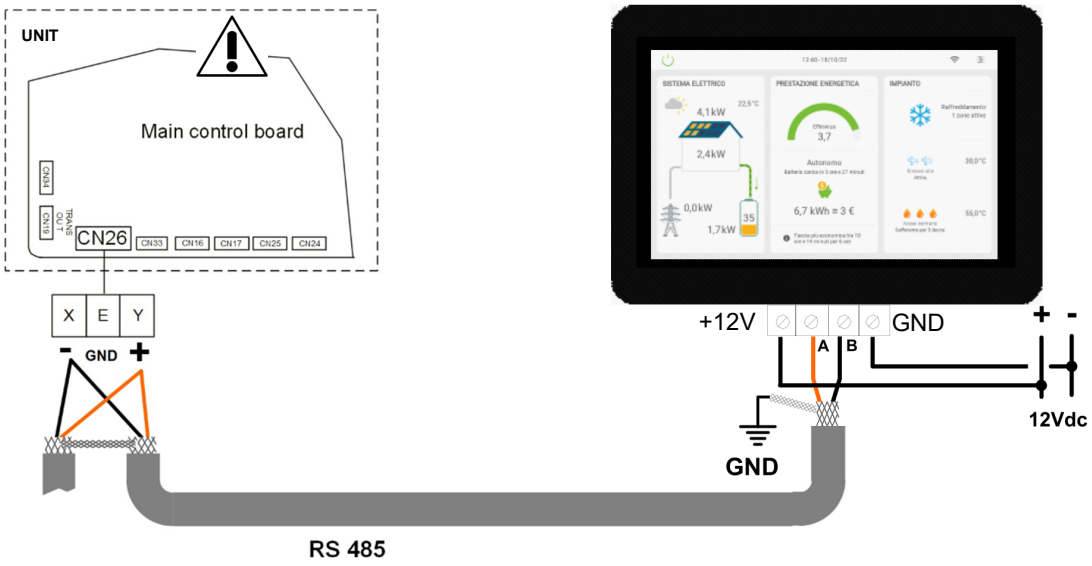
UNIT FOR THE PRODUCTION OF DHW

AQUA F 100L
DSDH-P AQ 1 S 100



UNIT FOR THE PRODUCTION OF DHW

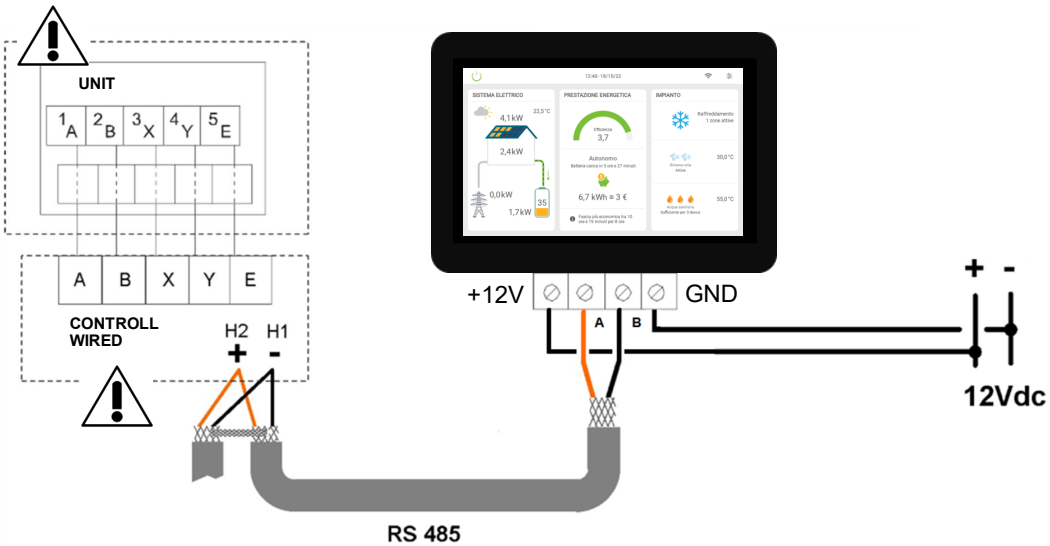
AQUA Plus
SWAN-2 190-300



FRESH AIR UNIT

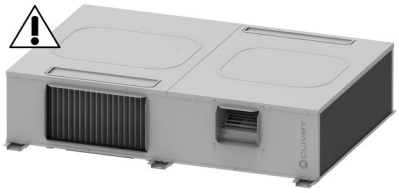
ELFOFresh EVO
CPAN-YIN Size 2 R-32

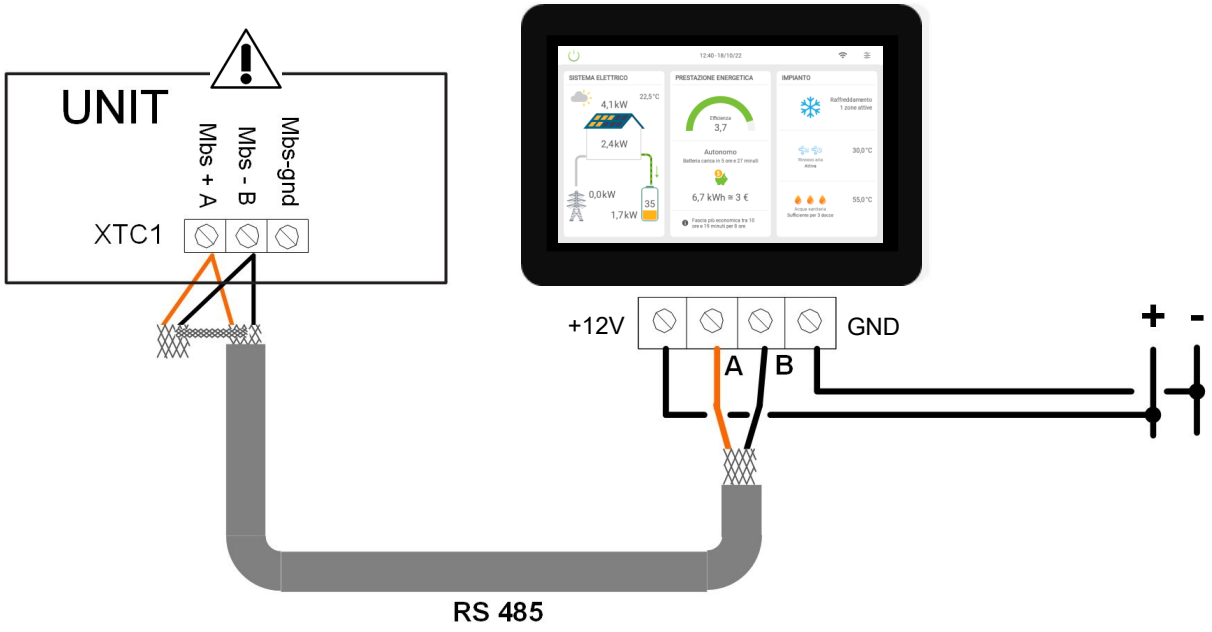
CONTROLL WIRED



FRESH AIR UNIT

Fresh Large EVO
CiSDN-Y EF 1 S Size 1-2-3



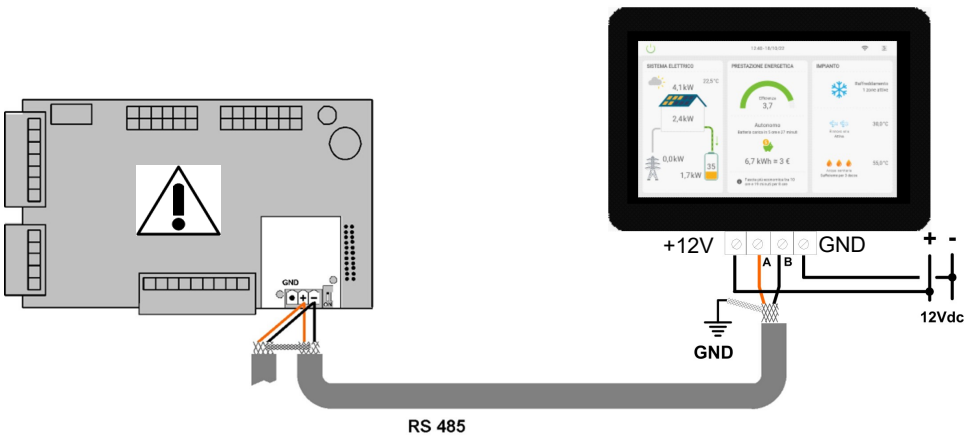


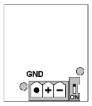
FRESH AIR UNIT

ELFOFRESH^2
CPAN-U 70-120 R134a

ELFOFRESH^2
CPAN-U 200-650 R410a

ELFOFRSH LARGE
CPAN-U 17-51 R410a





SP1X - RS485 serial port for remote communication - optional

Termination

UNIT FOR PRODUCING THERMAL AND COOLING ENERGY

GAIA ARIA
MSER-XEE 31-61 R-410A

Version AD

GAIA ACQUA
WSHR-XEE 31-61 R-410A

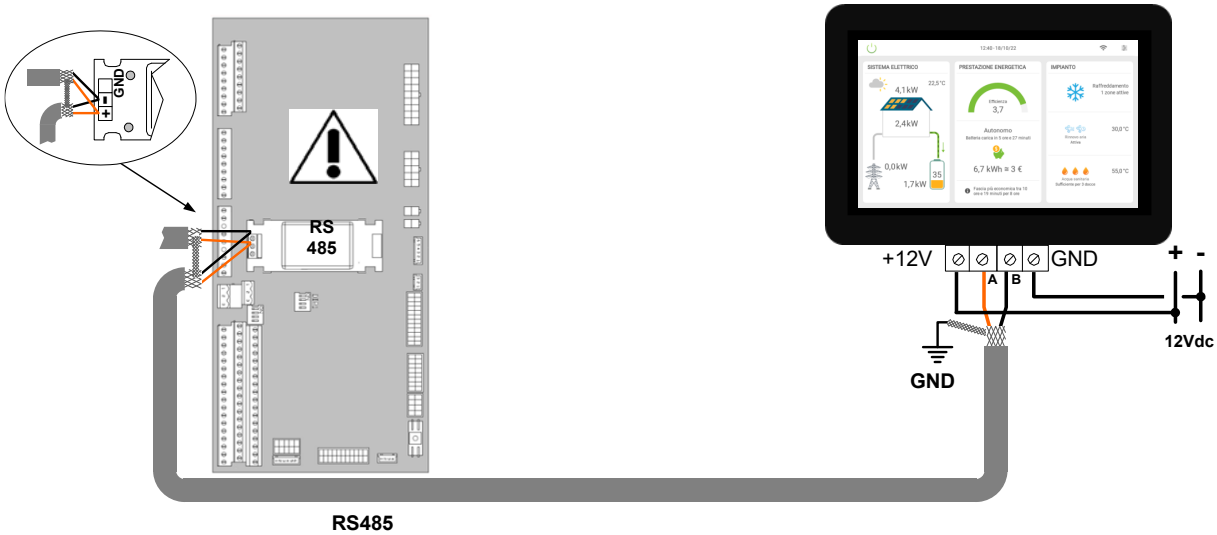
Version AD

ELFOENERGY GROUND MEDIUM
WSH/N-XEE 82-802

GAIA MAXI ARIA
MSER-XIN 61 R-410A

GAIA MAXI ACQUA
WSHR-XIN 61 R-410A

ELFOENERGY VULCAN MEDIUM
WBAN 82-802 R-407C



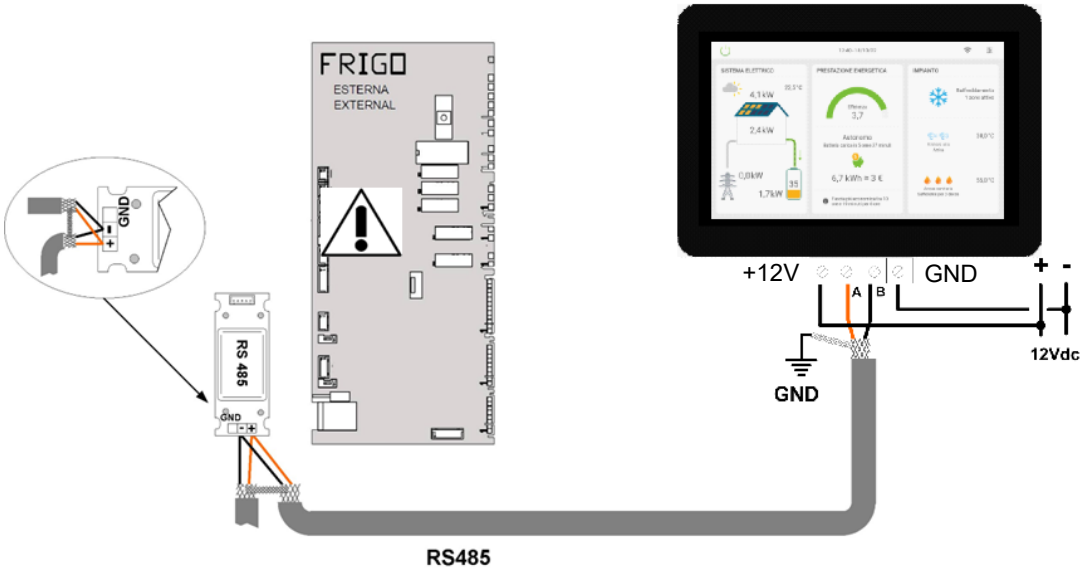
Termination

UNIT FOR PRODUCING THERMAL AND COOLING ENERGY

GAIA L Comfort
GLC 2.1-8.1 R-410A

GAIA L Hybrid
GLH 2.1-8.1 R-410A

GAIA-i
GIGA 2.1-4.1 R-410A

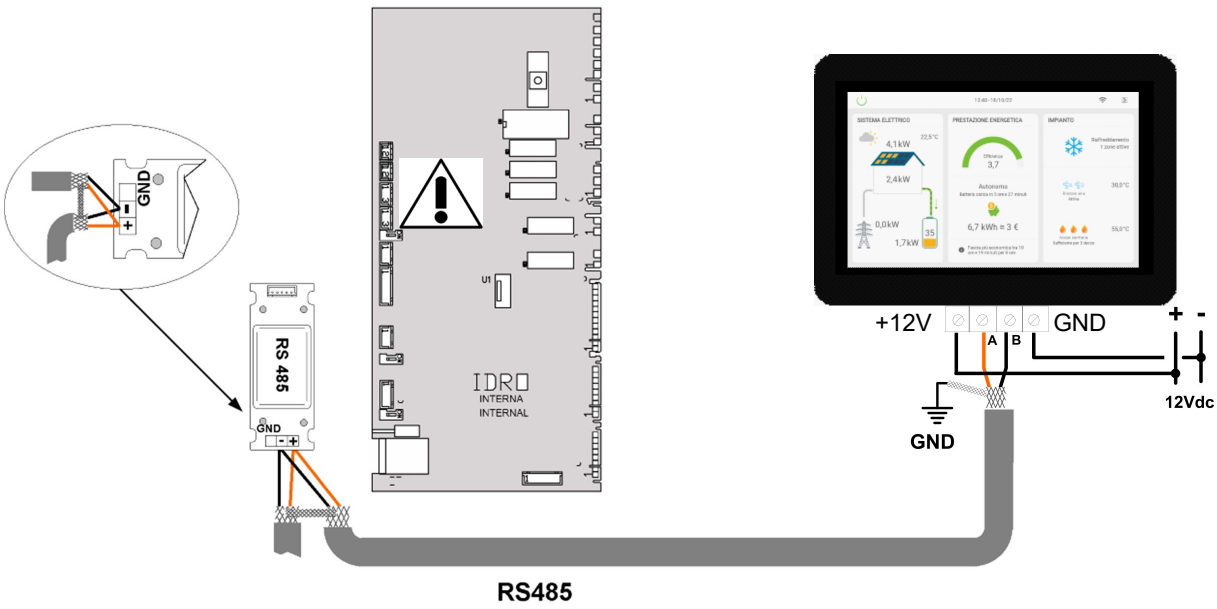


SPHERA T Comfort
SRHM+MDAM-XMi 2.1-8.1 R-410A

SPHERA T Hybrid
SRHM+MDAM-XMi 2.1-8.1 R-410A

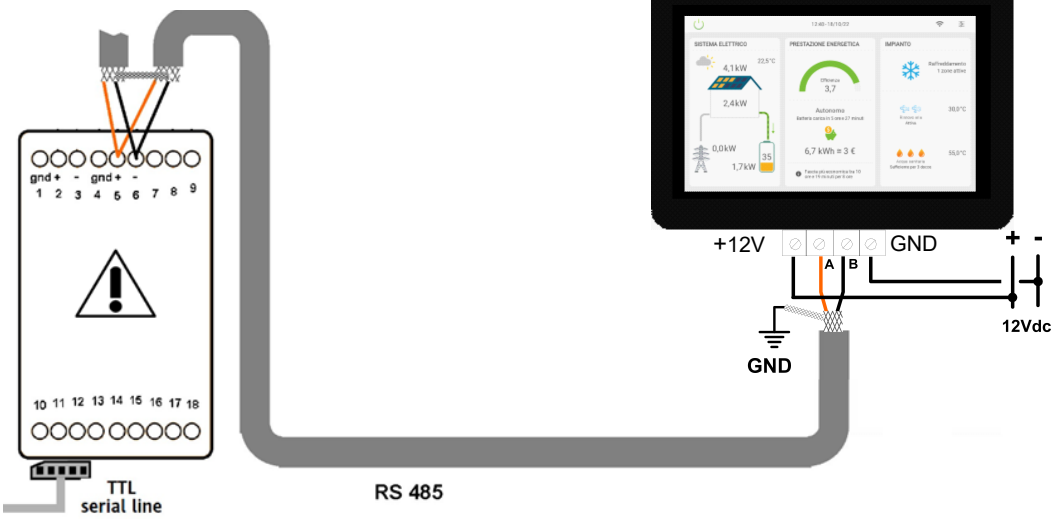
SPHERA-i
SRHM+MDAM-XMi 2.1-4.1 R-410A

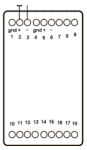
SPHERA B
SRHM+MDAM-XMi 2.1-8.1 R-410A



ELFOENERGY EXTENDED INVERTER WSAN/T-XIN 21-171 R-410A

ELFOENERGY DUCT INVERTER WSN/T-XIN 21-141 R-410A



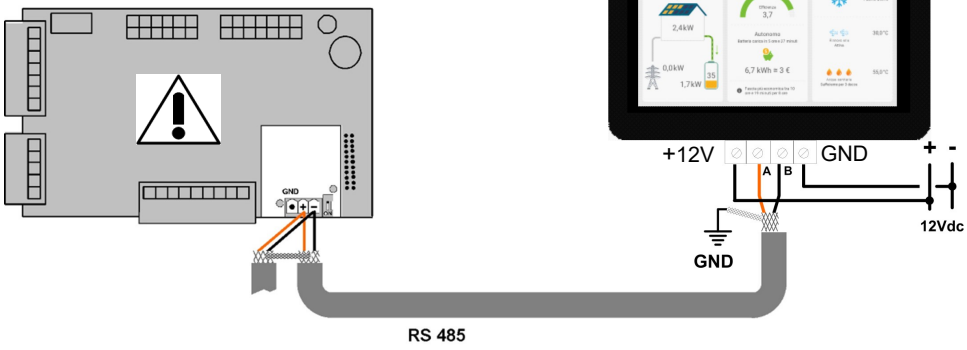


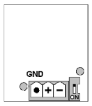
CMSC2X - Serial communication module with RS485 serial converter kit- optional

UNIT FOR PRODUCING THERMAL AND COOLING ENERGY

ELFOENERGY GROUND
WSH/N-EE17-121 R-410A

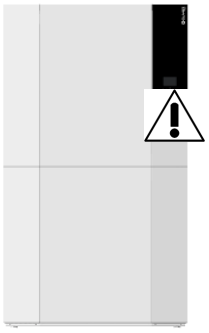
ELFOENERGY MEDIUM
WSAN/T-XEE 82-302 R-410A

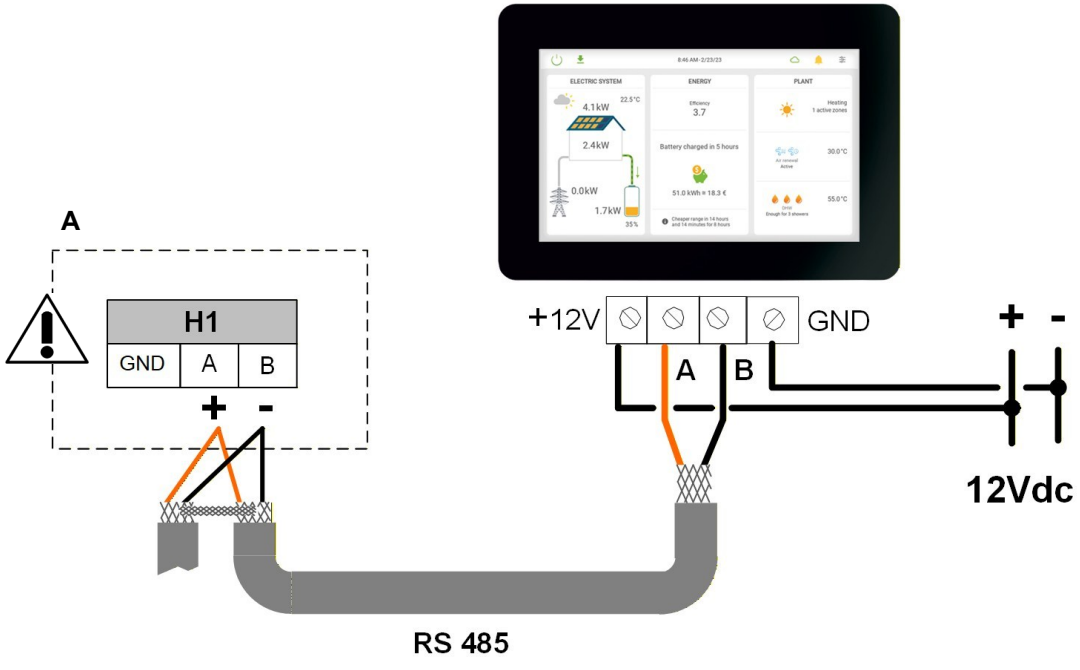




CMMBX - Serial communication module with supervisor (MODBUS) - optional

FULLNESS
CiSDN-M EP 1 MR 3.1





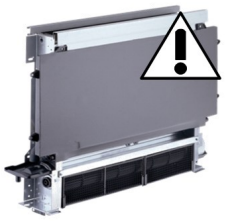
A = Thermostat

AMBIENT TERMINALS

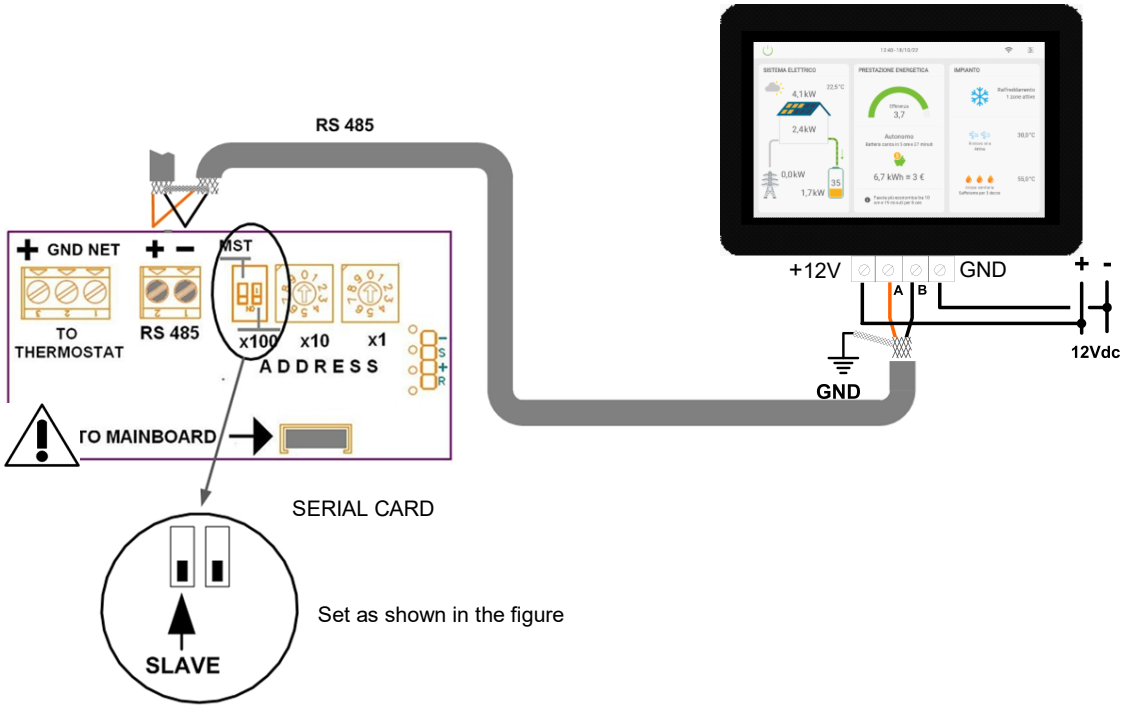
ELFOROOM² OUTVOT 003.0-015.0

ELFOROOM² OUTVOT 003.0-015.0

ELFOROOM² INVOT 003.0-015.0



ELFOROOM² INVOT 003.0-015.0



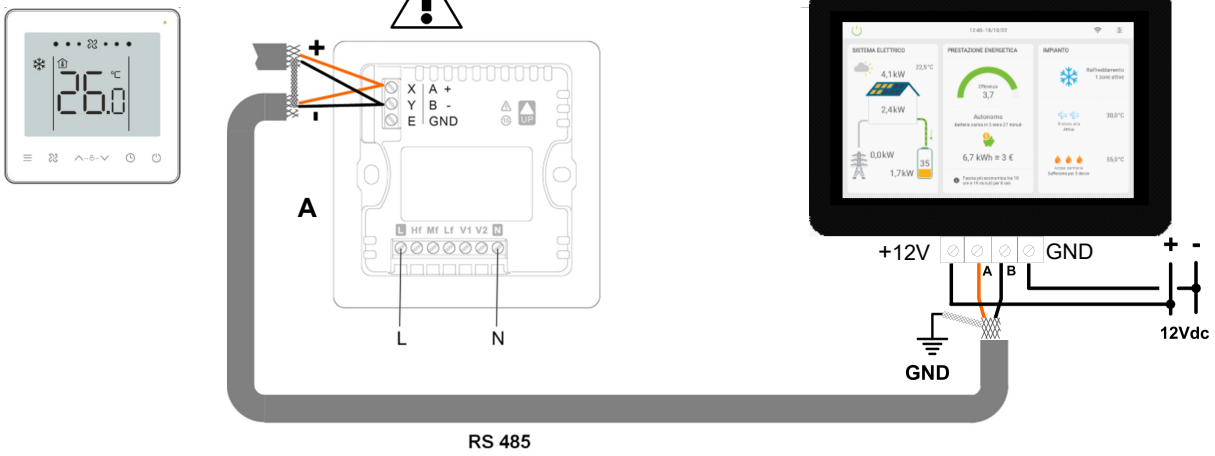
AMBIENT TERMINALS

AURA CAS (cased)
CFFA 1-12

AURA UNC (uncased)
CFFA 1-12

CONNECTION WITH THERMOSTAT (AURA AC VERSIONS)

KJRP-86A



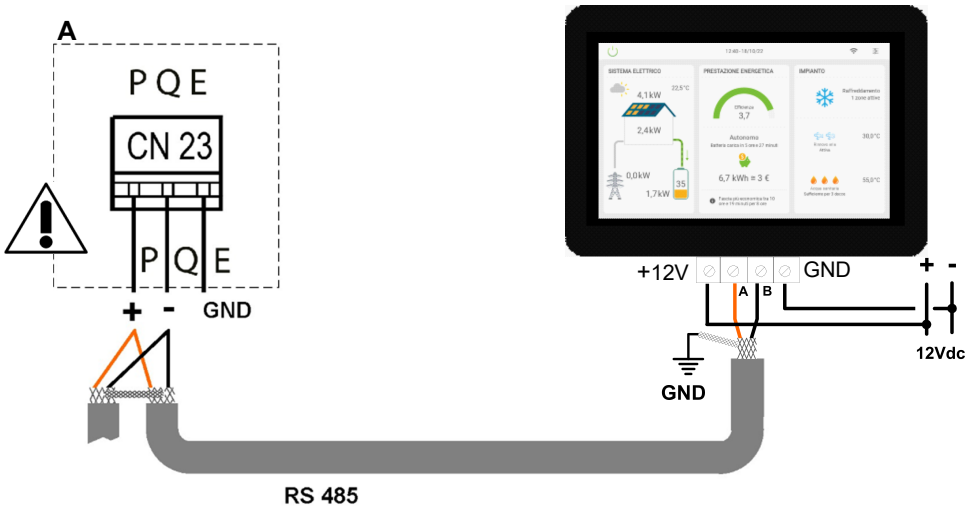
A = Thermostat

AMBIENT TERMINALS

AURA CAS (cased)
CFF 1-12

AURA UNC (uncased)
CFF 1-12

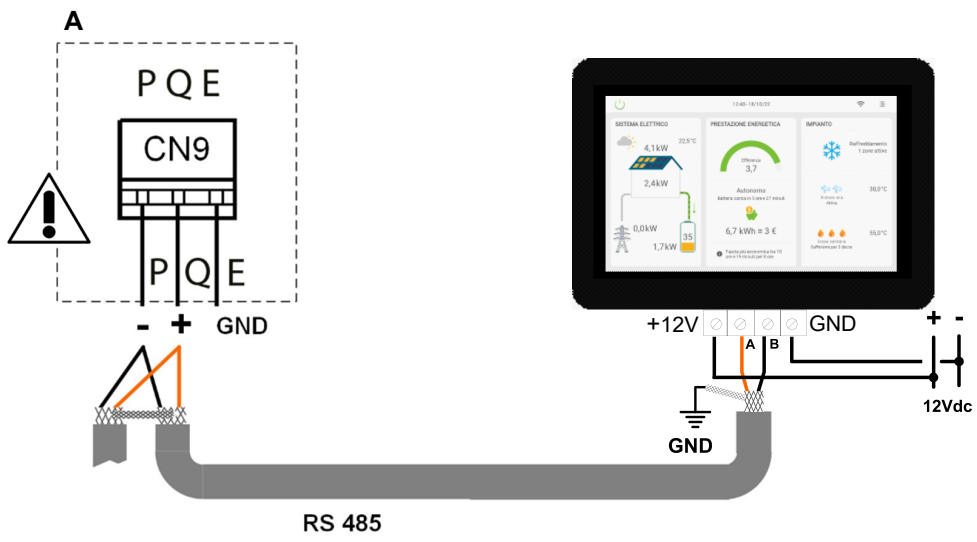
DIRECT CONNECTION WITH RS-485 SERIAL (AURA DC VERSIONS)



A = Thermostat

AMBIENT TERMINALS

ELFOSPACE BOX3
CFK 007.0 - 011.0 - 015.0



A = main board

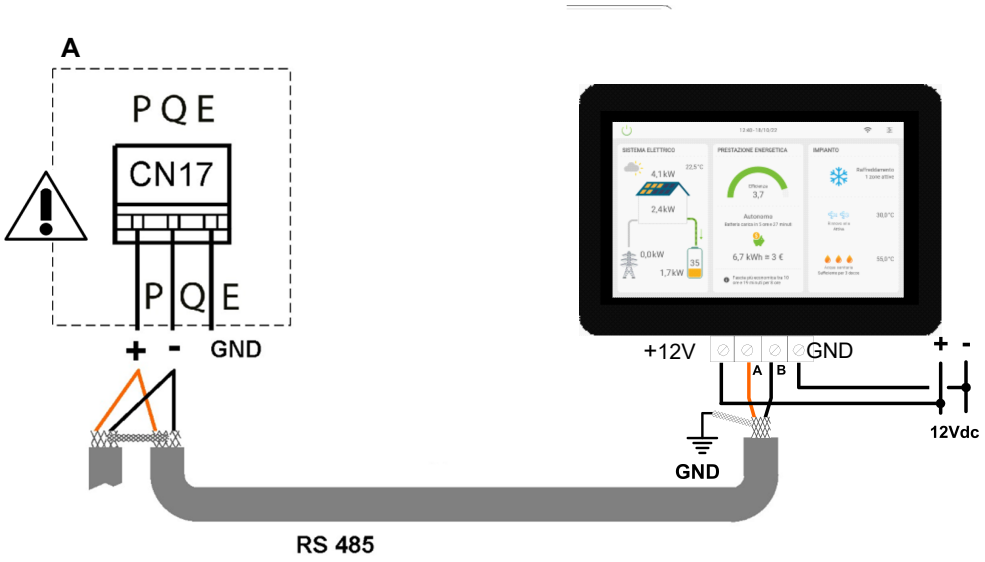
AMBIENT TERMINALS

ELFOSPACE BOX3
CFK 021.0 - 031.0

CC2 - 2-pipe system (size 021.0 and 031.0)
CC4 - 4-pipe system (size 021.0)

ELFOSPACE BOX3
CFK 031.0 - 041.0

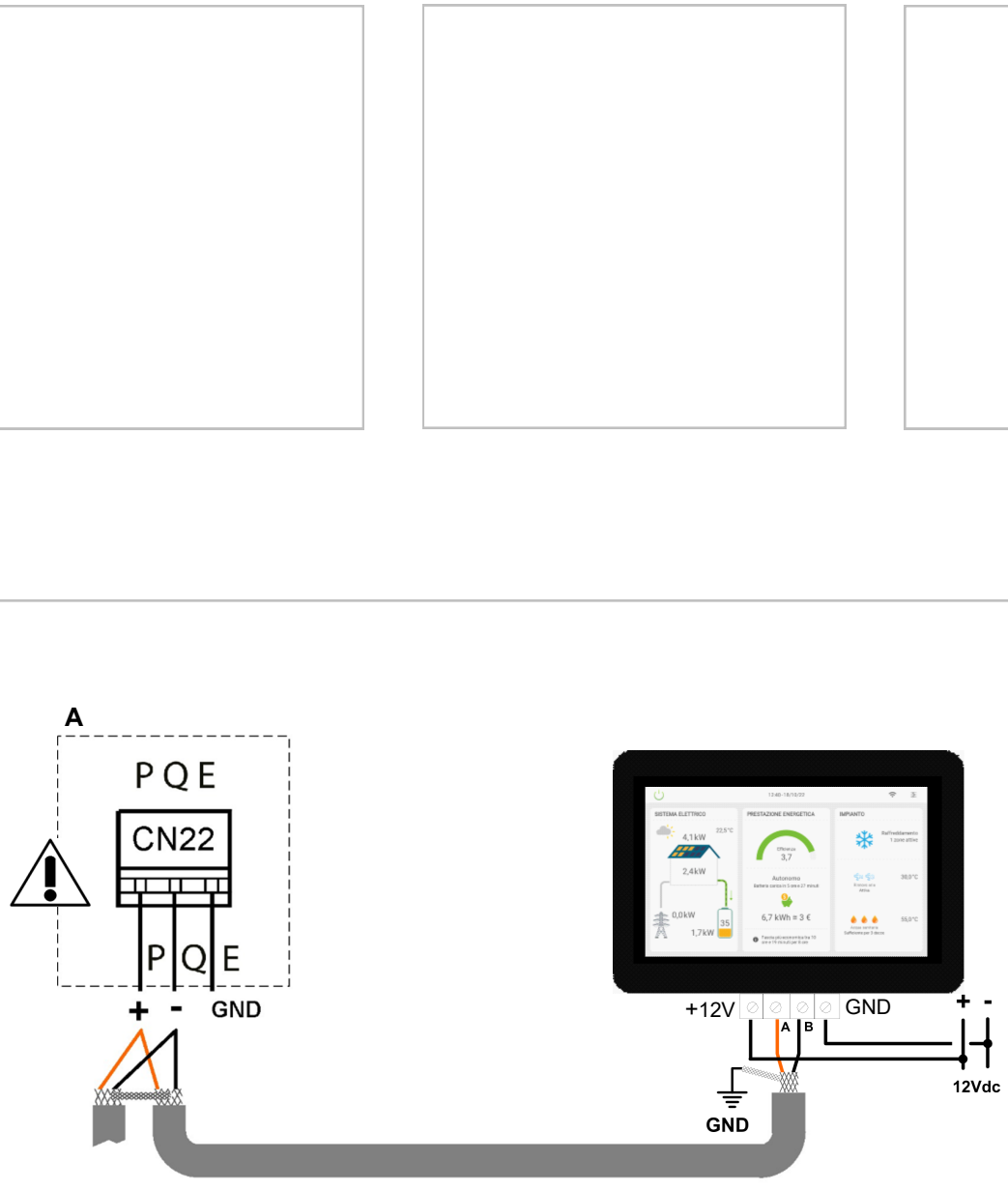
CC2 - 2-pipe system (size 041.0)
CC4 - 4-pipe system (gr 031.0 and 041.0)



A = main board

AMBIENT TERMINALS

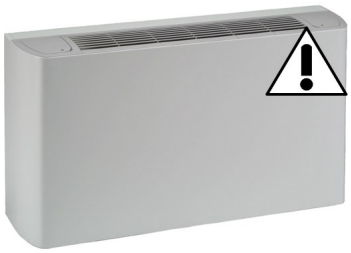
MOOD
CFW-2 1-5



A = main board

AMBIENT TERMINALS

ELFOSPACE OUT-V 003.0-051.0



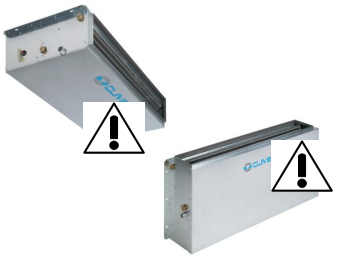
ELFOSPACE OUT-H 003.0-051.0

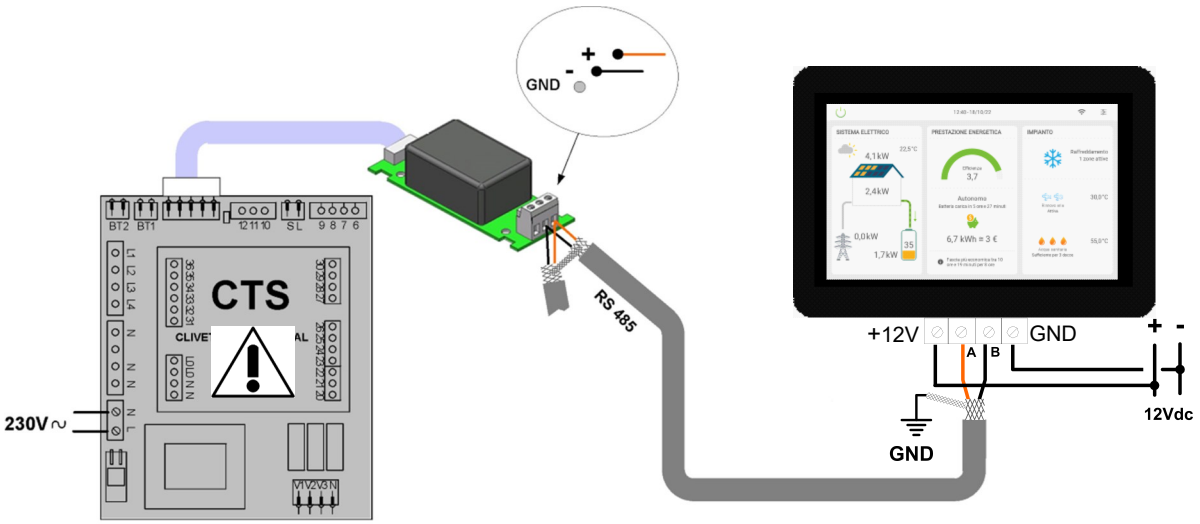
ELFOSPACE IN-V 003.0-051.0

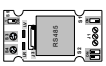
ELFOSPACE IN-H 003.0-051.0

ELFODUCT MP 15-71

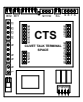
ELFODUCT HP 015.0-071.0







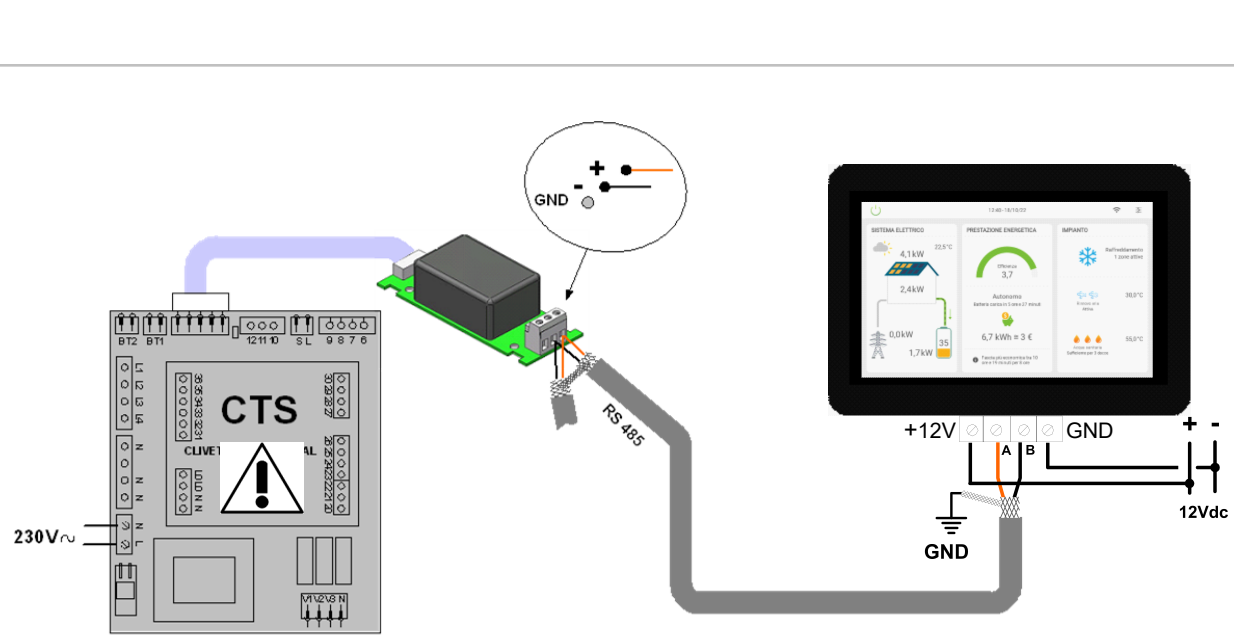
SP1X - RS485 serial port for remote communication - optional

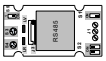


CTS- CLIVET TALK TERMINAL SPACE Electronic for HID-T2 or HID-T3 thermostats - optional

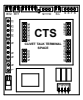
AMBIENT TERMINALS

ELFODUCT CF-V 31-242





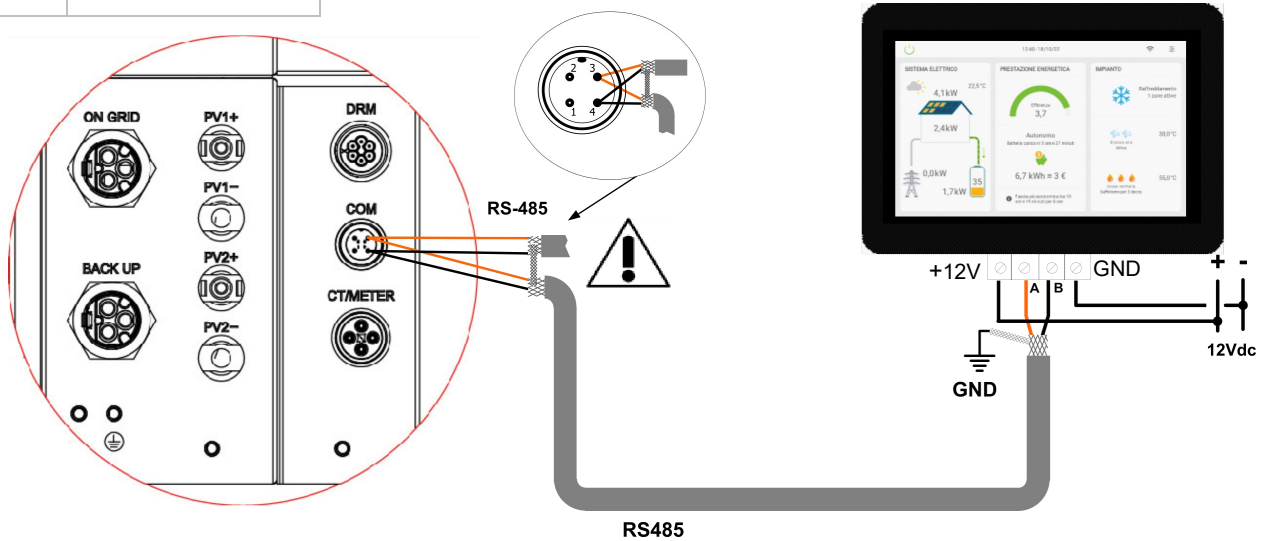
SP1X - RS485 serial port for remote communication - optional



CTS- CLIVET TALK TERMINAL SPACE Electronic for HID-T2 or HID-T3 thermostats - optional

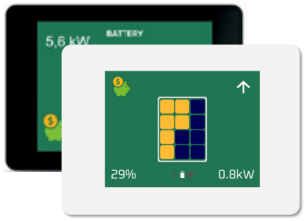
SINERGY 51.05 - 51.20

CONNECTOR “COM”	
PIN	**DESCRIPTION**
3	RS-485 **A+**
4	RS-485 **B-**

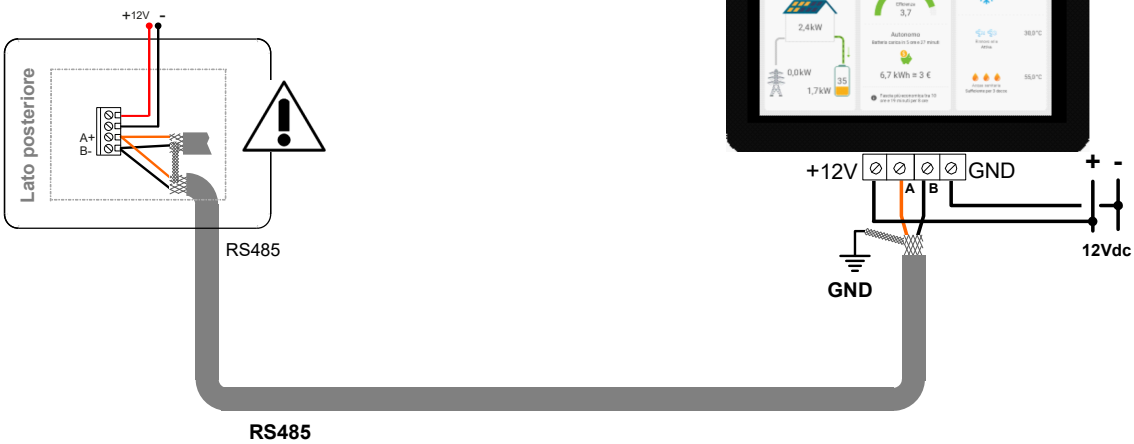


SMART THERMOSTAT

HID-TSmart v2022



HID-TSmart v2025

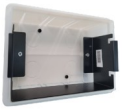


SYSTEM ACCESSORIES

CONTROL4 NRG

CONTROL4 NRG

193x132x5 3mm LxHxP



PS installation box
Metal fixing bracket
196,3x141x80,9 mm LxHxP

(mounting accessories supplied in the package)

Installation

AL12X
Power supply 230/1/50 - 12Vdc 2A
2 DIN modules
77x90x55 mm LxHxP

CBSX
Shielded cable for RS485 bus;

Room thermostats and sensors

HID-TSmart T v2022
Thermostat with 3.5” touchscreen display and temperature sensor
112x77x18 mm LxHxP

HID-TSmart T&H v2022
Thermostat with 3.5” touchscreen display and temperature and humidity sensor
112x77x18 mm LxHxP

HID-TSmart T v2025
Thermostat with 3.5” touchscreen display and temperature sensor
112x77x18 mm LxHxP

HID-TSmart T&H v2025
Thermostat with 3.5” touchscreen display and temperature and humidity sensor
112x77x18 mm LxHxP

HID-TiFX
Thermostat for fancoil control
120x80x42 mm LxHxP

HIDURNX
HIDUR Modbus temperature and humidity sensor HIDUR (built-in)
In built-in 503 box (by only)
22,4x45,5x51,6 LxHxP

z-IAQX
Multi sensor for air quality acquisition with 9 monitored ambient variables
110x70x28 mm LxHxP

Radiant panels - Ambient terminals

BMZRX
Radiant area module with generic input/ output mode with RS485 communication port + TTL/485 converter for Modbus temperature and humidity sensor.
157x90x60 mm LxHxP

CMRSX
Single area module with RS485 communication port;
6 DIN modules + 2 DIN modules of the TTL/485 converter

105x90x60 mm LxHxP

EMRSX
Mixing unit control module;
6 DIN modules + 2 DIN modules of the TTL/485 converter

105x90x60 mm LxHxP

FMRSX
Fancoil unit control module;
6 DIN modules + 2 DIN modules of the TTL/485 converter

105x90x60 mm LxHxP

SYSTEM ACCESSORIES

Electricity meter

M1NRGX
Electricity meter only for a single-phase unit.
Assembly on vertical or horizontal DIN rail.
63x46,2x26,4 LxHxP

M3NRGX
Electricity meter only for a three-phase unit.
Supplied with three amperometric transformers type "split core"
Assembly on vertical or horizontal DIN rail.
70,8x55,26x17,5 LxHxP

Interface module

DOMX
Connection device with home automation systems

53x92x63 mm LxHxP

Split gateway Intesis

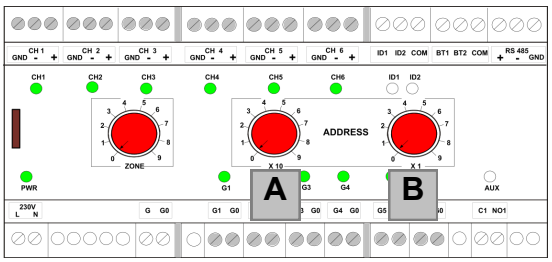
Midea split control module

93x53x58 mm LxHxP

SYSTEM ACCESSORIES

MODULE OF RADIANT

Module addressing is done using the selectors.



There are three red selectors on the front of the module.
To change addresses, refer to selector A and B as shown below:

SELECTOR A = Set X10

SELECTOR B = Set X1

Example to assign address 12: : Selector **A** = 1, selector **B** = 2

PROCEDURE

1 - Switch off the module

2 - Using a flat blade screwdriver, turn selectors A and B to the required position to set the address

Example to assign address 12:
Selector A = 1, selector B = 2

3 - Switch on the module

If the system configuration includes several radiant area modules (MAX 5):
the first must have address = 11
the second must have address = 12
the third must have address = 13
the fourth must have address = 14
the fifth must have address = 15

COMPONENT PARAMETERS

ONTROL4 NRG will automatically set the control of the various outputs.

Below are the parameters that **are set by the autoconfiguration** on the various system components; the list should be considered as indicative and is an operational outline to be assessed based on the type and configuration of the system.

Setting parameters		
Channel	**Parameter**	**Value**
1	P02	0 = Disabled 1 = Thermoregulation 1G 2 = Thermoregulation 2 G 3 = I/O 4 = Relay control ID 5 = Thermostat Module
2	P03	
.....	.....	
6	P07	

Serial Communication Parameters			
Parameter	**Mnemonic Name**	**Description**	**Value**
33	Index	Device address	11,12....
34	Baud Rate	Baud Rate 0=4800 1 :9600 2 :19200	1
35	Parity	Parity 0=NO / 1=Odd 2=Even	0

Radiant area module: configuration of the channels

Modbus	Parameter	Value	Description
1001	02 (A)	0 = Disabled 1 = Thermoreg. 1 G.- HID-T3 2 = Thermoreg. 2 G. - HID-T3 5 = Thermostat Module - HID-T2; 6 = Electromechanical thermostat	EnChannel1: Type of function associated to channel 1 Electromechanical thermostat (connected between "-" and "GND"; closed = active call; No par.71 = 1)
1002	03 (A)	As EnChannel1	EnChannel2: Type of function associated to channel 2
1003	04 (A)	As EnChannel1	EnChannel3: Type of function associated to channel 3
1004	05 (A)	As EnChannel1	EnChannel4: Type of function associated to channel 4
1005	06 (A)	As EnChannel1	EnChannel5: Type of function associated to channel 5
1006	07 (A)	As EnChannel1	EnChannel6: Type of function associated to channel 6
1054	55 (A)	0 = Summer only 1 = Winter only 2 = Summer / Winter	UseMode1: Use type of channel 1
1055	56 (A)	As UseMode1	UseMode2: Use type of channel 2
1056	57 (A)	As UseMode1	UseMode3: Use type of channel 3
1057	58 (A)	As UseMode1	UseMode4: Use type of channel 4
1058	59 (A)	As UseMode1	UseMode5: Use type of channel 5
1059	60 (A)	As UseMode1	UseMode6: Use type of channel 6
1030	31 (A)	3	Delay of the dew alarm signal (E07), set at 15 minutes to prevent delayed alarm signals, due to the deactivation of the compressor, once the set has been reached.
1031	32 (A)	0.0	It is an offset on the dew point, normally it is set at -2C°, considering that between the temperature of both the panels and surface there is a difference and on the latter, condensation is not formed on the panels. This allows working with lower water temperatures at the dew point, enhancing the cooling capacities.
1069	870 (A)	20C°	Dew point limit exceeded, whose channel is excluded automatically from the calculation, in order to not affect the water temperature inside the entire system and the head closes.
1070	71 (B)	0 = Clivet 1 = Modbus; 2 = Modbus Touch	If thermostat model =1 (Modbus thermostats) the parameters from P02 to P07 cannot be set at 5 or 6.
1071	72 (B)	0 = Temperature + RH 1 = Temperature only 2 = RH only	ThermostatCh1 Only if thermostat=1
1072	73 (B)	As TermostatCh1	ThermostatCh2 Only if thermostat=1
1073	74 (B)	As TermostatCh1	ThermostatCh3 Only if thermostat=1
1074	75 (B)	As TermostatCh1	ThermostatCh4 Only if thermostat=1
1075	76 (B)	As TermostatCh1	ThermostatCh5 Only if thermostat=1
1076	77 (B)	As TermostatCh1	ThermostatCh6 Only if thermostat=1

A: parameters set by the AUTOCONFIGURATION function

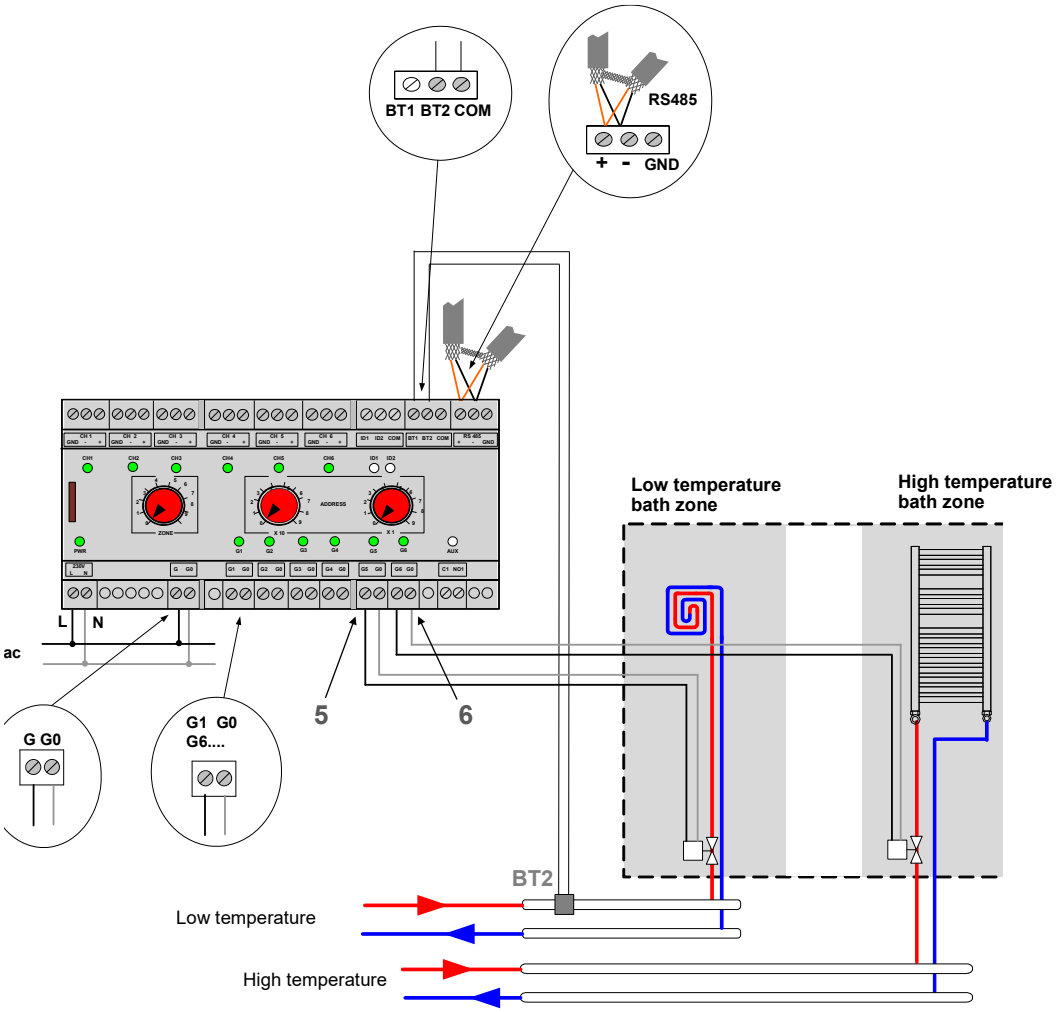
B: should always be set only with probe ambiant HID-UR (Parameter 71 = 1)

SYSTEM ACCESSORIES

MODULE OF RADIANT AREAS

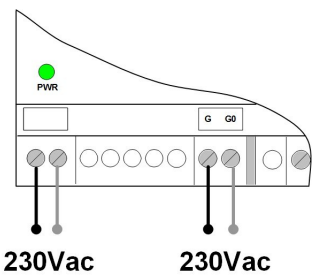
Example on how to use:

Step management
Output 5 controls the shut-off valve for the radiant panel
Radiator management
Output 6 controls the water shut-off valve for the heated towel rail

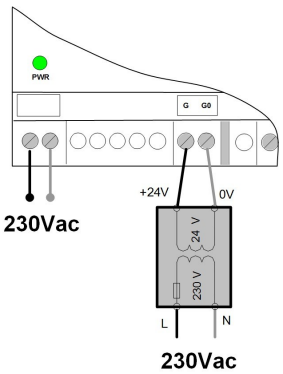


THE MODULE CAN CONTROL:

230v valve on/off



24ac valve on/off (transformer provided by the client)

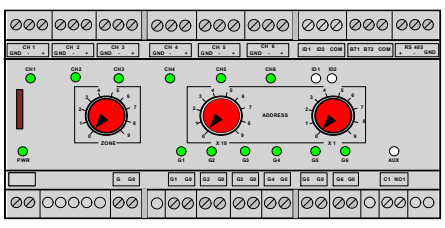


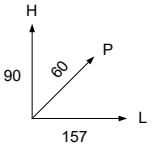
Technical Data

Operating Temperature from 0 C° to 70 C°

IP20 isolation degree

Operating humidity (non-condensing) from 10% to 90%





MODULE OF RADIANT AREAS WITH HID-UR BUILT-IN MODBUS TEMPERATURE AND HUMIDITY SENSOR

The thermostats run only if combined with the radiant module.

Example on how to use:

Step management

The sensor 1 - 2 - 3 controls one area with 1 component

Double step management

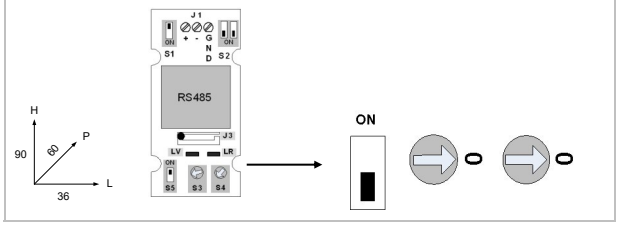
The sensor 4 controls one area with 2 components

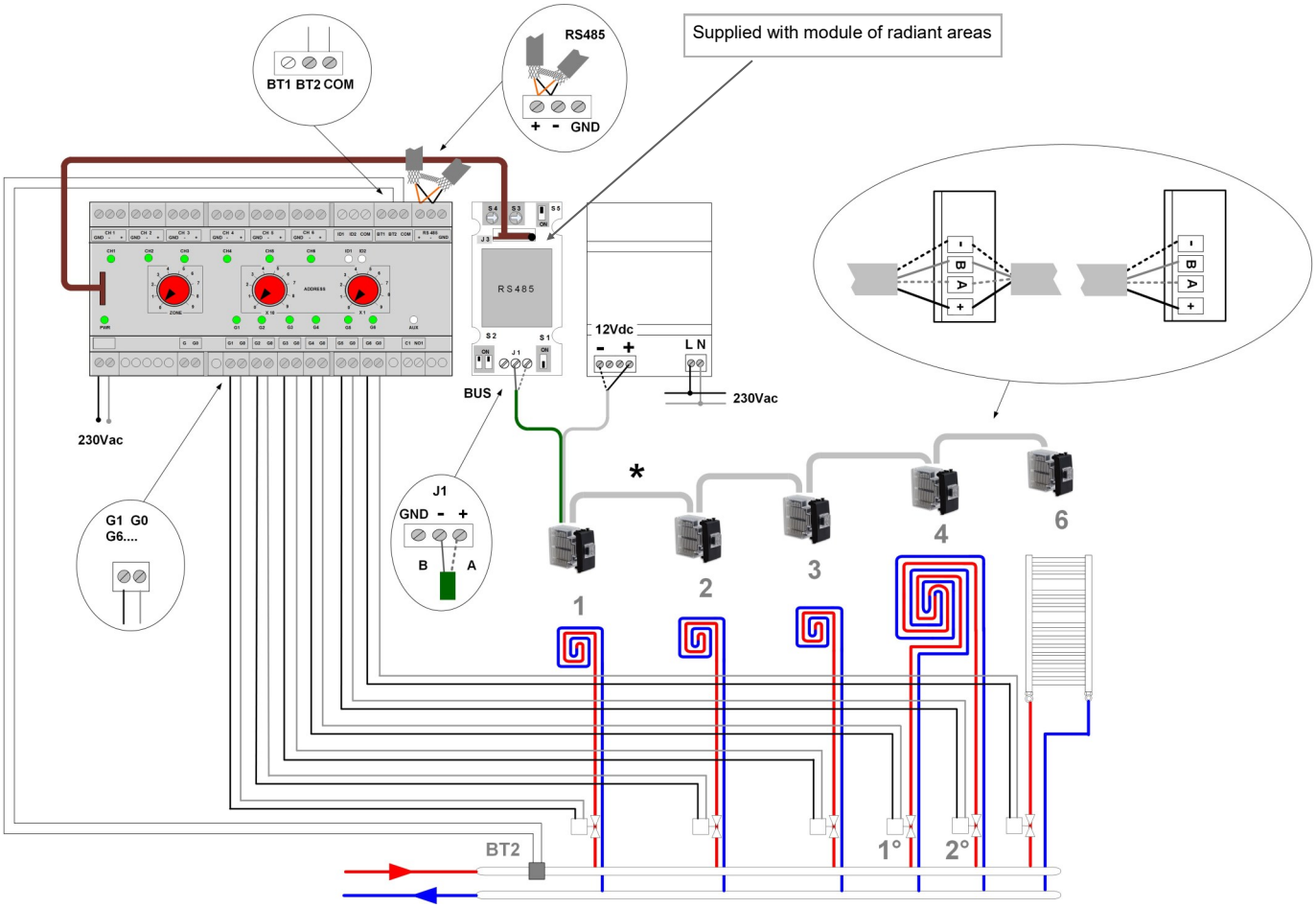
Radiator management

The sensor 6 controls the valve for the heated towel rails

Warning: to disable the humidity function (see page 98)

Set as indicated in the figure





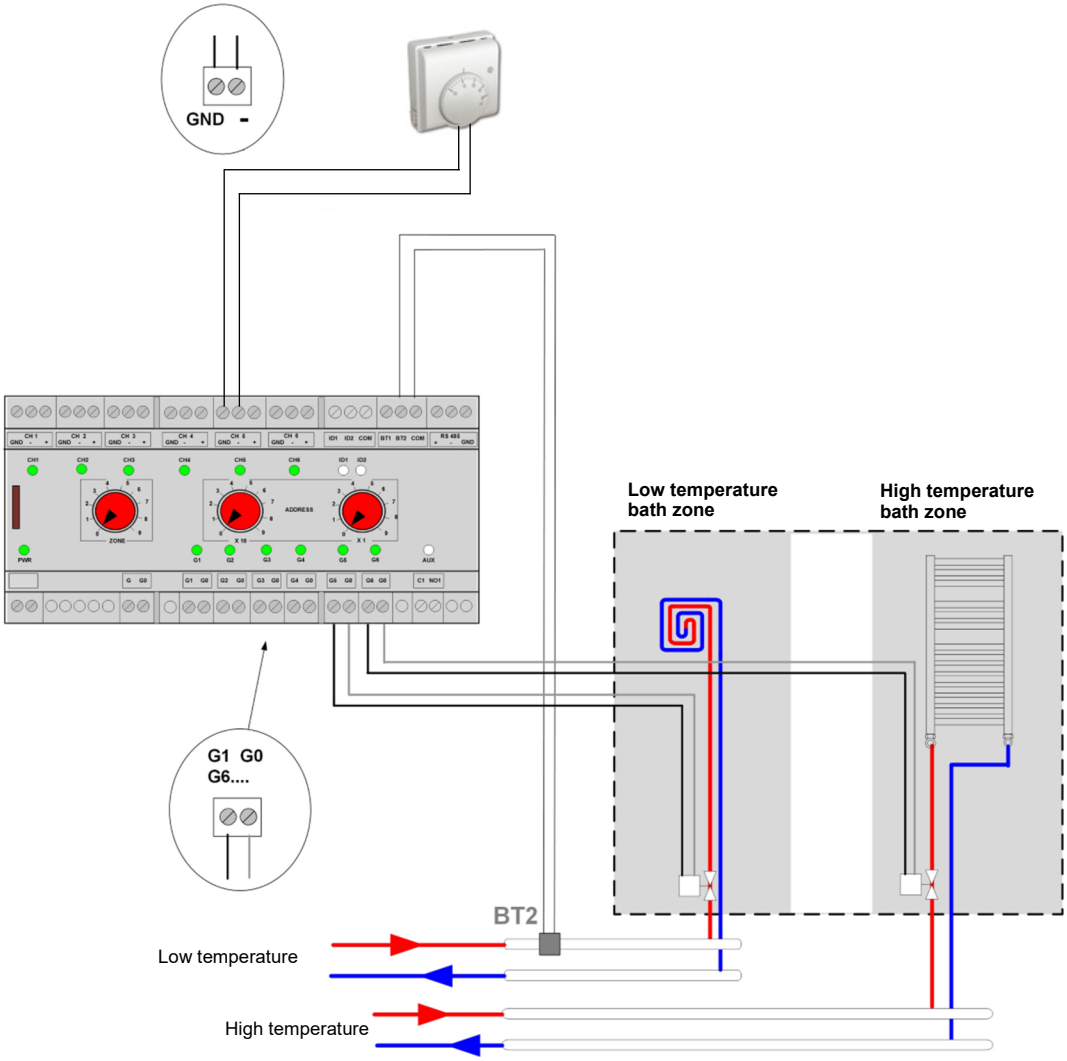
* **Serial line**

Temperature and humidity sensors

4-conductor shielded cable 2x0,75 + 2x0,22mm2, distance max 1000m

RADIANT AREA MODULE WITH ELECTRO-MECHANICAL THERMOSTAT WITH DRY CONTACT

This option does not allow the temperature to be displayed by Control4 NRG, it only allows ON/OFF management of the area and time schedule.
This option does not allow temperature changes to be made by Control4 NRG.



SYSTEM COMPONENT ADDRESSING

ADDRESSING

Each unit inside the network is recognised thanks to an address.
The address must be stored in the memory of the unit using a keyboard or thermostat.

Serial addressing	
Domestic hot water module	1
Heat pump	2
Unit for fresh air (Elfo Fresh EVO)	3,4,5,6
Generic I/O modules	7,8
Unit Sinergy	9
Elfo Pack	10
Multiple area modules	11,12,13,14,15
Terminals / Single zone modules	17,18…,48,49,60,61,...*
Mixing module	50,51,52
Air quality probes	110..121
HID-TSmart thermostats	150...179
Electricity meter	170,171,172

* The addresses 17,18 and next are used both for terminals and for the single zone modules (page 115).
The addresses with the lowest value must be assigned to single zone modules.
Example:
First zone module: address 17
Second zone module: address 18
First terminal:address 19
Second terminal: address 20

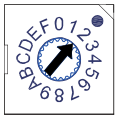
SPHERA EVO / SPHERA EVO 2.0 / WiSAN-YME 1 S EDGE EVO 2.0 - EXC

The Modbus addressing of the unit can be set in two modes:

- with the rotary switches (Method A) or from the HMI keyboard (Method B, Sphera Evo 2.0, Edge EVO 2.0)

Where possible, it is recommended to make the setting from the HMI.

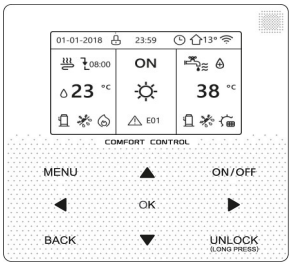
S3



Method A
Setting
Unit main board
S3 = 2

Method B
Setting
For serviceman > 17 HMI address set > 17.2
HMI address from BMS **= 2**

WSAN-YMI 21-141 EDGE EVO

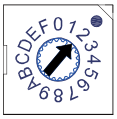


The Modbus addressing of the unit can be set in two modes:

- with the rotary switches (Method A, for AA models, size 21-81) or from the HMI keyboard (Method B)

Where possible, it is recommended to make the setting from the HMI.

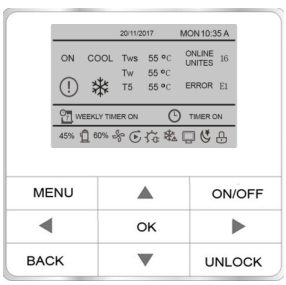
S3



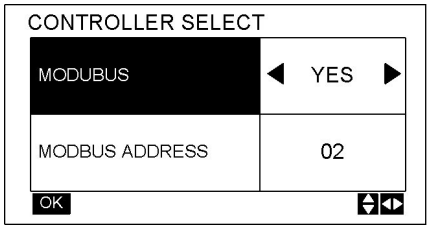
Method A
Setting
Unit main board
S3 = 2

Method B
Setting
For serviceman > 17 HMI address set > 17.2
HMI address from BMS
Check that each unit has a different address.

WSAN-YSI 10.1-22.2 SHEEN



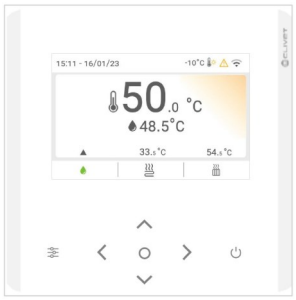
Enabling
Menu > Project menu > set password >controller select > modbus >YES



Modbus address = 2

SYSTEM COMPONENT ADDRESSING

EDGE F R-290 WiSAN-PME 1 S 2.1-8.1 / EDGE EVO 2.0 - EXC R-32 WISAN -YME 1 S 2.1-14.1



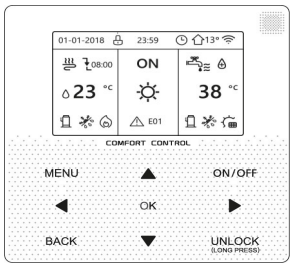
Parameters to be modified		
Parameter	**Description**	**Value**
HMI address for BMS	Set the HMI address code for BMS	2

Enter the password Maintenance operator to access the parameters.

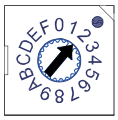
Press for 3 seconds	+
Enter the PASSWORD	For serviceman 000 Please input the password:
Confirm	
Press	
The confirmation page is displayed	
Select YES	
Select HMI ADDRESS SETTING	**▲ UP** **▼ DOWN**
Select HMI ADDRESS FROM BMS	**▲ UP** **▼ DOWN**
Press Adjust to change	

SYSTEM COMPONENT ADDRESSING

WSAN-YMI 21-81 EDGE



S3



Setting
Unit main board
S3 = 2

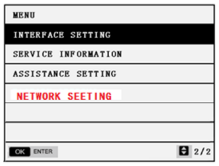
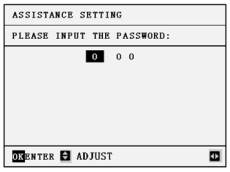
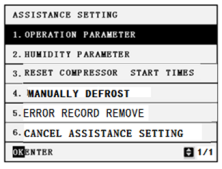
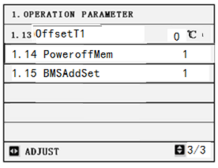
ELFOFRESH EVO CPAN-YIN SIZE 2

if one unit is present:
address = 3

if four units are presents:
First unit address = 3
Second unit address = 4
Third unit adress = 5
Fourth unit adress = 6

Enter the password Maintenance operator to access the parameters.

Parameters to be modified			
Parameter	**Mnemonic Name**	**Description**	**Value**
1.15	BmsAddSet	ModBus serial address	3,4,5,6

Press MENU		
Select “Assistance Setting”	**▲ UP** **▼ DOWN**	
Press	**OK**	
Enter the PASSWORD		
Press	**OK**	
Select “Operation Parameter”	**▲ UP** **▼ DOWN**	
Press	**OK**	
Select “1.15 BmsAddSet”	**▲ UP** **▼ DOWN**	
Edit value as indicated in the table		

SYSTEM COMPONENT ADDRESSING

FRESH LARGE EVO CISDN-Y EF 1 S SIZE 1-2-3

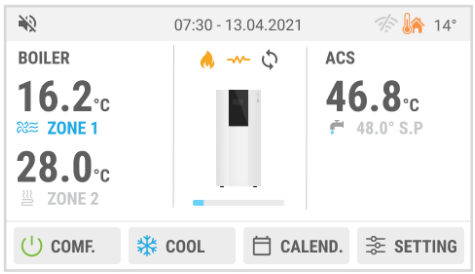
Parameters to be modified			
Parameter	**Mnemonic Name**	**Description**	**Value**
1.15	Bms Add Set	ModBus serial address	1

Enter the password Maintenance operator to access the parameters.

Press MENU		
Select Assistance Setting	**▲ UP** **▼ DOWN**	MENU **ASSISTANCE SETTING** WLAN SETTING OK ENTER 1/2 ▲▼
Press	**OK**	
Enter the PASSWORD		**ASSISTANCE SETTING** PLEASE INPUT THE PASSWORD 000 OK ENTER ▲▼ ADJUST ◄►
Press	**OK**	
Select Operation Parameter	**▲ UP** **▼ DOWN**	ASSISTANCE SETTING 1 **OPERATION PARAMETER** 2 HUMIDITY PARAMETER 3 RESET COMPRESSOR 4 MANUALLY DEFROST 5 ERROR RECORD REMOVE 6 CANCEL ASSISTANCE SET- OK ENTER ▲▼
Press	**OK**	
Select 1.12 Bms Add Set	**▲ UP** **▼ DOWN**	**1. OPERATION PARAMETER** 1.07 DeadZone 2°C 1.08 SupFanSet 6 1.09 SupFanSet2 7 1.10 OffsetT 1 0°C 1.11 PoweroffMem 1 1.12 **BMS Add Set** 1 ◄► ADJUST 2/3
Press Adjust to change		

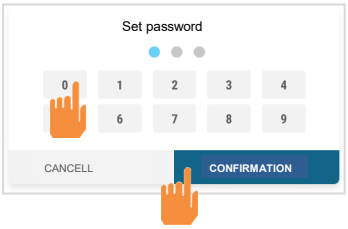
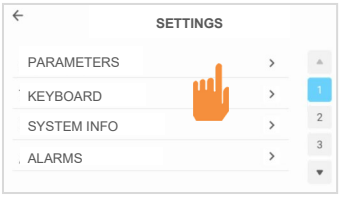
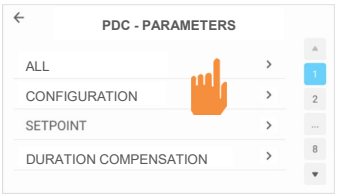
SYSTEM COMPONENT ADDRESSING

SPHERA EVO 2.0 EASYHYBRID



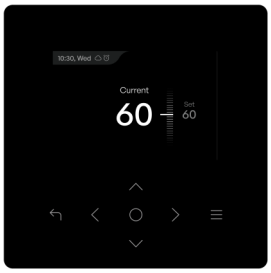
Parameters to be modified			
Parameter	**Mnemonic Name**	**Description**	**Value**
101	Index	ModBus supervision serial address	2
102	Baud Rate	Baud Rate (0=4800 / 1=9600 2 =19200)	1
103	Parity	Parity 0=NO / 1=Odd 2=Even supervision serial	0

Enter the password Maintenance operator to access the parameters.

Press “Setting”	
Enter the Password Press Confirmation	
Select “Parameters” Press	
Select “All” Press	
Select the parameter to be modified “101” Confirm	
Enter the value Confirm the value entered	
Set parameters 102 and 103.	

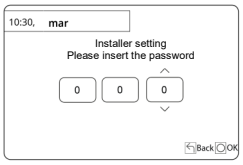
SYSTEM COMPONENT ADDRESSING

FULLNESS



Parameters to be modified		
Parameter	**Description**	**Value**
HMI address for BMS	Set the HMI address code for BMS	3

Enter the password Maintenance operator to access the parameters.

Press for 3 seconds	
Enter the PASSWORD	
Press	
Select “System”	
Press	
Select “Third Party Comm. Adress”	
Press	
Press Adjust to change	
Press	

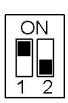
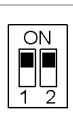
CFW-2 1 - 5 MOOD

On / off switch		Address network
SW1	ENC2	
		01 - 16
		17 - 32
		33 - 48
		49 - 64

CFFC / CFFU / CFFAC / CFFAU 1-12 AURA

On / off switch		Address network
S4	ENC1	
		01 - 16
		17 - 32
		33 - 48
		49 - 64

CFK 021.0-041.0 ELFOSPACE BOX3

On / off switch		Address network
S4	ENC1	
		01 - 16
		17 - 32
		33 - 48
		49 - 64

SYSTEM COMPONENT ADDRESSING

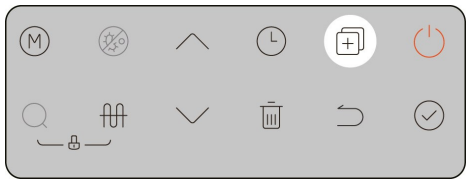
CFK 007.0-015.0 ELFOSPACE BOX3

On / off switch		Address network
S1	ENC1	
		64
		01 - 15
		16 - 31
		32 - 47
		48 - 63

SWAN-2 190-300 - AQUA PLUS

Addressing	
Press 3 sec.	
Select C02	
Press	
Select 1	
Press	

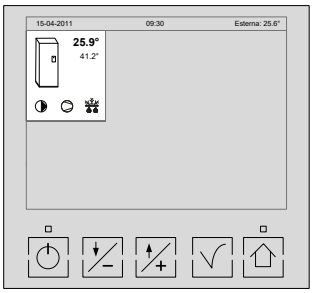
AQUA F 100L



Addressing	
Press 3 sec.	
Press	
Select the parameter	7
Press	
Press	
Select the parameter	21
Press	
Select the address	from 1 to 20
Press	

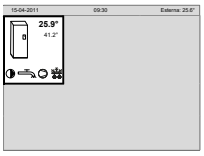
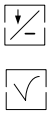
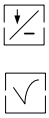
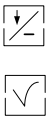
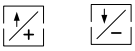
SYSTEM COMPONENT ADDRESSING

GAIA ARIA and ACQUA version AC / GAIA MAXI / GROUND MEDIUM / GAIA L COMFORT and HYBRID / GAIA-i / SPHERA



Parameters to be modified			
Parameter	**Mnemonic Name**	**Description**	**Value**
315	Index	ModBus supervision serial address	2
316	Baud Rate	Baud Rate (0=4800 / 1=9600 2 =19200)	1
317	Parity	Parity 0=NO / 1=Odd 2=Even supervision serial	0

Enter the password Maintenance operator to access the parameters.

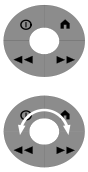
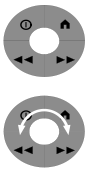
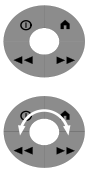
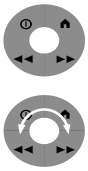
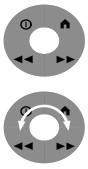
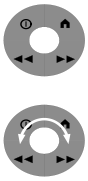
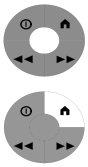
Press Confirm		
Press to select the "Settings " menu Confirm		**Heat pump** Boiler only DHW only Normal operation **Settings** Operation status
Press to select the "Parameters " menu Confirm and enter the PASSWORD		**HP - Parameter** Secondary circuit 1 Set point Supply set Current set **Parameter / PWD**
Press to select the "Communication " menu Confirm		**HP - Parameter** All Configuration Set point Demand limit **Communication**
Select the parameter to be modified Confirm	 	**HP - Parameter** Id 315 address ModBus Svision address Min 0 Max 127 Valore 1
Enter the value Confirm the value entered	 	**HP - Parameter** **Min 0** **Max 127** **2**
Set parameters 316 and 317 Press to return to the main screen		**HP - Parameter** Id 315 address ModBus Svision address Min 0 Max 127 Value 2

SYSTEM COMPONENT ADDRESSING

VULCAN MEDIUM

Vulcan Medium - Parameters to be modified			
Parameter	**Mnemonic Name**	**Description**	**Value**
315	Address	ModBus supervision serial address	2
316	Baud Rate	Baud Rate (0=4800 / 1=9600 2 =19200)	1
317	Parity	Parity 0=NO / 1=Odd 2=Even supervision serial	0

Enter the Maintenance operator password to access the parameters.

Press. Rotate to select the "Scheduling" menu.		Main Menu Stata Scheduling **Date and hour** Password
Press. Rotate to select the "Configuration" menu.		Main Menu Stata Alarms **Configuration** Date and hour
Press. Rotate to select the "Machine" menu.		Configuration Menu Keypad **Unit** System's variables
Press. Rotate to select the unit.		Unit configuration All Configuration **Setpoint** Charge compensation
Press. Select the parameter to be modified.		Manufacturer parameters Id 39 MaxSetHeat Max Set in heat Min -60 Max 90 Value 40.0
Press Enter the value.		Manufacturer parameters Id 3 Max Min Value 40.0 **Min - 60.0** **Max 90.0** **50**
Press Press to return to the main screen.		Manufacturer parameters Id 39 MaxSetHeat Max Set in heat Min -60 Max 90 Value 50.0

SYSTEM COMPONENT ADDRESSING

WSAN/T-XIN / WSN/T-XIN

Parameters to be modified		
Parameters	**Description**	**Value**
CF30	ModBus protocol controller Address	2
CF31	ModBus protocol Baud Rate (2=4800 / 3=9600 4 =19200)	3
CF32	Parity modbus 1=EVEN / 2=NONE / 3=ODD	2
CL43	DI4 Digital input Configuration (remote OFF)	-2
CL44	DI5 Digital input Configuration (remote Summer / Winter)	0

Press	esc + set	**PAr**
Press	set	**CL**
Select **CF** menu	⌄ / ⌃	**CF**
Press	set	**CF01**
Select **CF30**	⌄ / ⌃	**CF30**
Press	set	**0**
Set the value	⌄ / ⌃	**2**
Confirm	set	**2**
Back to the previous menu	esc	
Repeat the sequence for the other parameters		

SYSTEM COMPONENT ADDRESSING

ELFOENERGY / CPAN-U

Units can be CPAN-U 70-650 and / or CPAN-U 17-51

if one unit is present:
address = 3

if four units are presents:
First unit address = 3
Second unit address = 4
Third unit adress = 5
Fourth unit adress = 6

ELFOEnergy - Parameters to be modified			
Parameter	**Mnemonic Name**	**Description**	**Value**
164	Address	ModBus serial address	2
165	Baud Rate	Baud Rate (0=4800 / 1=9600)	1
166	Parity	Parity 0=NO / 1=YES	0

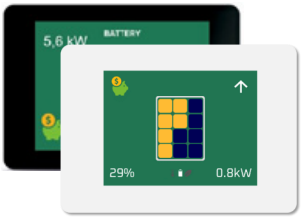
CPAN-U - Parameters to be modified			
Parameter	**Mnemonic Name**	**Description**	**Value**
165	Address	ModBus serial address	3,4,5 or 6
166	Baud Rate	Baud Rate (0=4800 / 1=9600)	1
167	Parity	Parity 0=NO / 1=YES	0

1	Press	SET	**Parameter** **Value** 10.3
2	Enter the PASSWORD	- +	021
3	Access parameter 164	↑ ↓	164XY
4	Edit value as indicated in the table	- +	1642
5	Repeat the sequence for the other parameters indicated in the table		
6	Save in the memory Exit	SET	10.3

SYSTEM COMPONENT ADDRESSING

HID-TSMART THERMOSTATS

The indications given are valid for thermostat version 2022

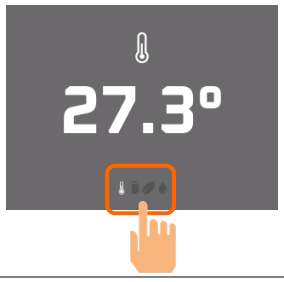
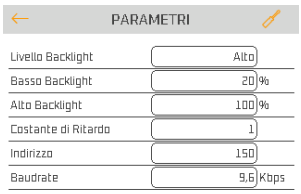


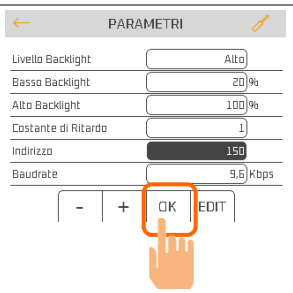
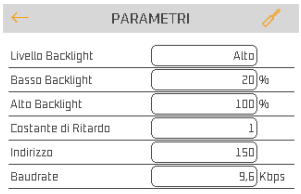
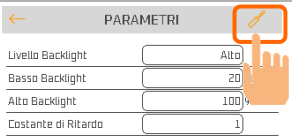
HID-TSmart addressing	
Unit	**Modbus address**
HID-TSmart 1	150
HID-TSmart 2	151
HID-TSmart 3	152
HID-TSmart 4	153
...	...
HID-TSmart 30	179

The thermostat is connected in daisy-chain topology (in-out) directly to the CONTROL4 NRG serial bus 485

ADDRESSING PROCEDURE

HID-TSmart is supplied by default with Modbus address **150**. Follow the procedure below to address the HID-TSmart if there is more than one unit in the system.

Step	Action	Picture
1	Alimentare il dispositivo	
2	Press for more than 5 seconds at the bottom center where the context bar is present	
3	You access the **CONFIGURATION** menu	
4	Select **PARAMETERS** menu	
5	Scroll down to the **Address** parameter	
6	Select the numeric value to the right of the parameter name	

7	Set the desired address using the + and - keys displayed on the screen	
8	Press OK to confirm	
9	Verify that the **BaudRate** parameter is set to 9.6Kbps ⚠	
10	AAfter making the changes, press the icon at the top right to return to the main screen	

Diagnostics

When the module is powered, it boots up during which the display shows the thermostat's Modbus address.

SYSTEM COMPONENT ADDRESSING

HID-TSMART THERMOSTATS V2025

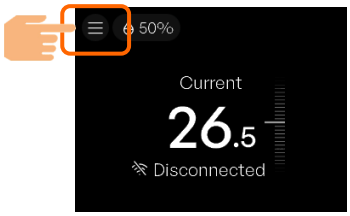
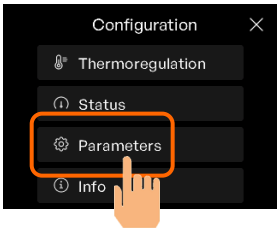
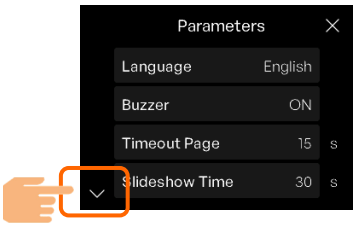
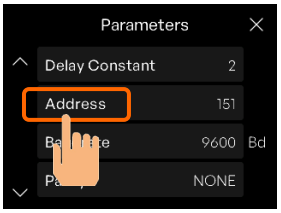
The indications given are valid for thermostat version 2025

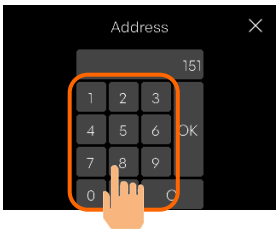
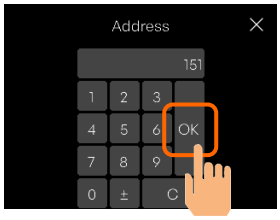
HID-TSmart addressing	
Unit	**Modbus address**
HID-TSmart 1	150
HID-TSmart 2	151
HID-TSmart 3	152
HID-TSmart 4	153
...	...
HID-TSmart 30	179

The thermostat is connected in daisy-chain topology (in-out) directly to the CONTROL4 NRG serial bus 485

ADDRESSING PROCEDURE

HID-TSmart v2025 is supplied by default with Modbus address **150**. Follow the procedure below to address the HID-TSmart if there is more than one unit in the system.

Step	Action	Picture
1	Alimentare il dispositivo	
2	Press for 2 seconds to access settings	
3	You access the **CONFIGURATION** menu	
4	Select **PARAMETERS** menu	
5	Scroll down to the **Address** parameter	
6	Select **address**	

7	Set the desired address using the keys	
8	Press OK to confirm	
9	Disconnect and reconnect the power supply to the thermostat and check that communication works properly	

Diagnostics

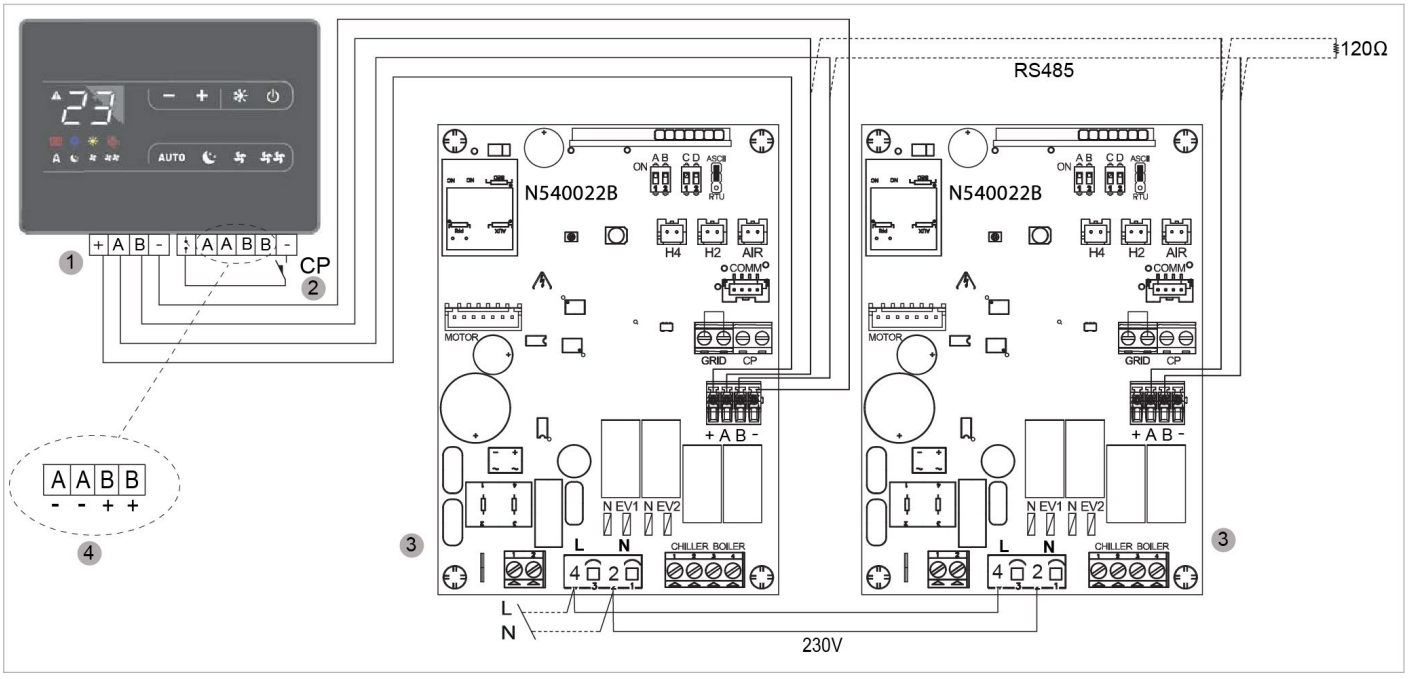
When the module is powered, it boots up during which the display shows the thermostat's Modbus address.

SYSTEM COMPONENT ADDRESSING

HID-TI6 THERMOSTATS

The thermostat only works in conjunction with ELFOROOM2 fan coil units
The terminals for connecting to the CONTROL4 NRG bus are located on the HID-T6 thermostat unit

CONNECTIONS



1) Connection terminal block (fancoils serial)
2) Connection terminal block of presence contact
3) Electronic board
4) Serial connection to the CONTROL4 NRG bus (via serial RS-485)

Use the icons – + to move inside the menu.
Use the icon ⏻ to select menu items and to confirm changes made.
Pressing ⏻ and confirming the change will switch to the next item.
To exit from menu:

- Press the icon ⏻ for 10sec.
- Or wait 30 sec. for automatic shutdown

Attention: after 30 seconds from the last action, the control goes off and the settings is memorised.

SYSTEM COMPONENT ADDRESSING

DEVICE ADDRESS

To view and change the address:

- with panel in stand-by press and hold for 5 sec. the **AUTO** key.
- it appears address 001 flashing
- use the **–** and **+** keys to set a value from 1 to 255
- press the ⏻ button and wait 10 seconds to confirm the setting

It is advisable to table the addresses that the individual fancoils must assume so that they are then easily identifiable once recognized by the system.

Contact Clivet service for changing the unit parameters for connecting the HID-T6 thermostat.

Fancoil address	Destination
Andress 17	Leave free
Andress 18	kitchen
Andress 19	Livingh room
Andress 20	Room 1
…..	….

Attention
Do not leave fancoils with address 001.
This precaution will allow any substitutions and / or additions of devices on the network.

FEATURES OF THE SERIAL PORT

Protocol
The "Modicon ModBus" RTU serial communication protocol, with the following settings:

- Bauderate = 9600
- Data bits= 8
- Parità = none
- Stop bit = 1

See the accessory instruction sheet for configuring and modifying the operating parameters.

HID-UR TEMPERATURE AND HUMIDITY SENSOR

HIDUR built-in temperature and humidity sensor

Sensor addressing	
Channel	**Flashings**
1	2
2	4
3	6
4	8
5	10
6	12

The thermostat runs only if combined with the radiant module.

Signalling LED
A multi-colour LED is fitted on the front part (visible from the front slot) which indicates the device status.
After powering on:
- The device boots up.
- The device is set to operating mode.

Boot up. After turning on, the red LED flashes fast once. If there are no problems, the LED goes off, otherwise it continues flashing.

Red LED flashing. Indicates that no firmware is installed.

Red LED on fixed. Indicates that the sensor is not communicating with the master board. The red LED stays on for maximum 4 seconds and then goes off in the next 8 seconds.

Operating mode. During operation the LED is off.
Note that in the first 30 seconds of turning on, a blue LED flashes to indicate proper functioning.

Address assignment. During address assignment, the green LED comes on waiting for the onboard button to be pressed.
After assignment, the LED goes off and flashes N times (the number of flashes corresponds to the new address).

Address check. Pressing the onboard button during sensor operation, the green LED flashes N times (the number of flashes corresponds to the new address).

On the back of the sensor there is an addressing button:

1 - Power up and hold down the addressing button; the blue LED will flash 6 times.

2 - Count the number of slow flashes of the green LED up to the address to be assigned and release the button.

3 - After 7 flashes of the blue LED, the sensor repeats the number of the assigned address with flashes of the green LED and confirms the procedure with 1 flash of the blue LED.

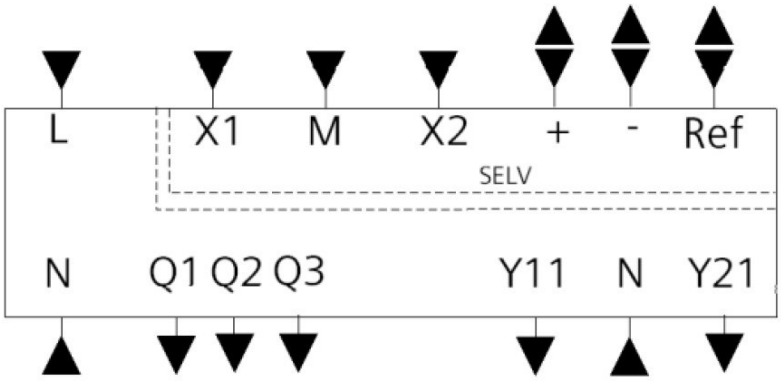
Addressing key

Refer to page 69 to address the radiant area module.

SYSTEM COMPONENT ADDRESSING

HID-T9 THERMOSTATS

CONNECTIONS



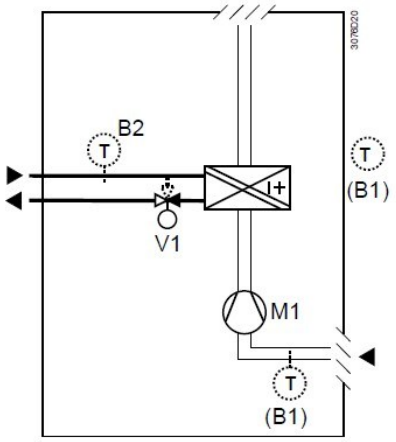
L, N	Operating voltage AC 230 V
Q1	Control output “Fan speed 1 AC 230 V”
Q2	Control output “Fan speed 2 AC 230 V”
Q3	Control output “Fan speed 3 AC 230 V”
Y11,Y21	Control output “Valve” AC 230 V (N.O., for normally closed valves), output for compressor or output for electrical heater
X1, X2 [1)]	Multifunctional input for temperature sensor (e.g. QAH11.1) or potential-free switch Factory setting: X1 = Operating mode switchover contact X2 = External sensor (function can be selected via parameter P38/P40).
M [1)]	Measuring neutral for sensor and switch
+	RS485 Modbus connection
-	RS485 Modbus connection
REF	RS485 signal/common ground (Differential common)

[1)] RDF302.B does not have inputs X1, X2 and M.

CONFIGURAZIONE DIP SWITCH (2/4 TUBI)

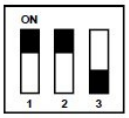
2-pipe fan coil unit
(heating or cooling)

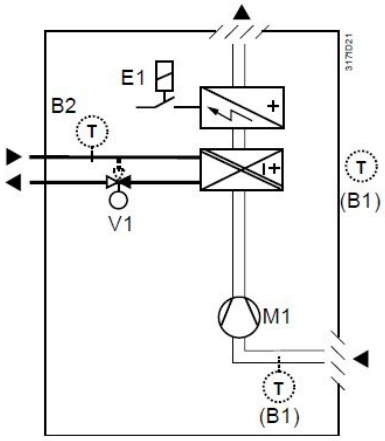
ON/OFF



2-pipe fan coil unit with electric heater
(heating or cooling)

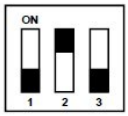
ON/OFF

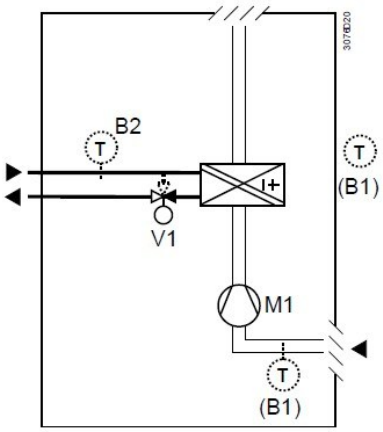




2-pipe fan coil unit
(heating or cooling)

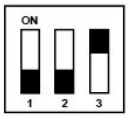
3-position

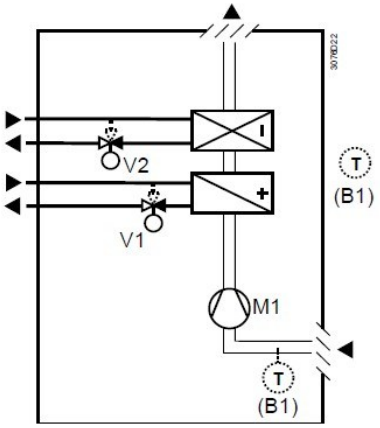




4-pipe fan coil unit
(heating or cooling)

ON/OFF





PARAMETER CONFIGURATION

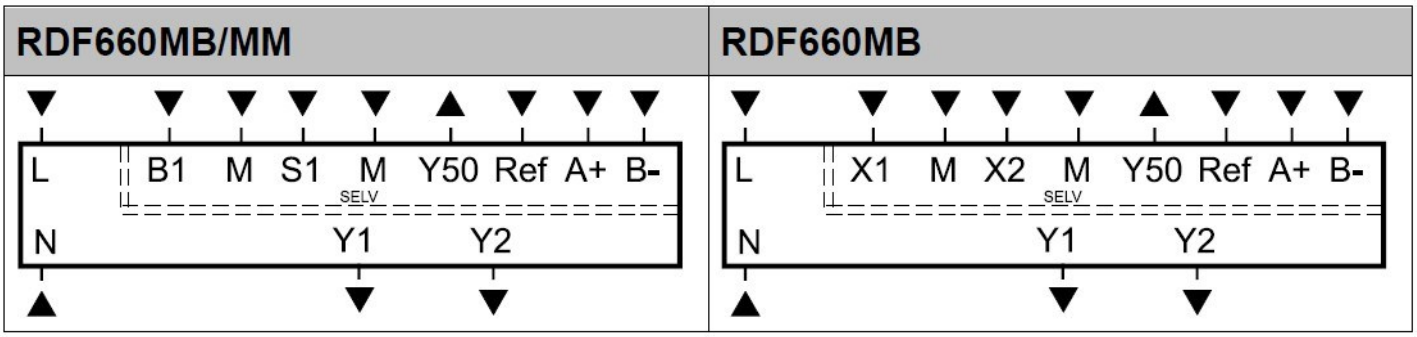
Navigate through the parameters using the + and - buttons.

- Simultaneously press the + and - buttons for 3 seconds
- Release and within 2 seconds press the - button for 3 seconds
- P01 is displayed on the screen
- To change a parameter, simultaneously press the + and - buttons
- The parameter will start to flash
- To confirm the change, repeat the pressure on the + and - buttons
- Set parameter P68 to 1 (baud rate 9600 BPS)
- Set parameter P70 to 2 (no parity bit)
- Addressing must be done on parameter P81
- Select an address between 17 and 67
- To exit and save the changes, navigate with the + or - button until END is displayed
- To confirm the exit, simultaneously press the + and - buttons.

SYSTEM COMPONENT ADDRESSING

HID-T10 THERMOSTATS

CONNECTIONS

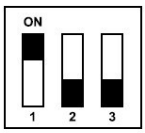


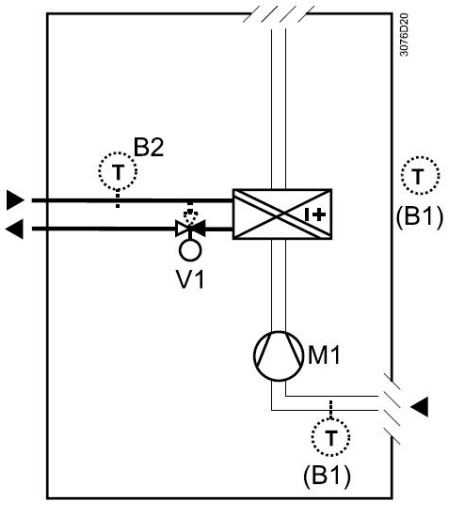
L, N	Operating voltage AC 230 V
Y50	DC 0...10 V fan output
M	Reference for DC fan
Y1,Y2	Control output “Valve” AC 230 V (N.O., for normally closed valves), output for compressor or output for electrical heater
B1, S1 (RDF660MB/ MM only)	Multifunctional input for temperature sensor (e.g. QAH11.1) or potential-free switch Factory setting: B1 = H/C changeover (DI) S1 = Window contact
X1, X2 (RDF660MB only)	Multifunctional input for temperature sensor (e.g. QAH11.1) or potential-free switch Factory setting: X1 = Window contact X2 = External temperature sensor
M	Measuring neutral for sensor and switch
REF	RS485 signal/common ground (Differential common)
A+	RS485 Modbus connection
B-	RS485 Modbus connection

DIP SWITCH CONFIGURATION (2/4 PIPES)

2-pipe fan coil unit
(heating or cooling)

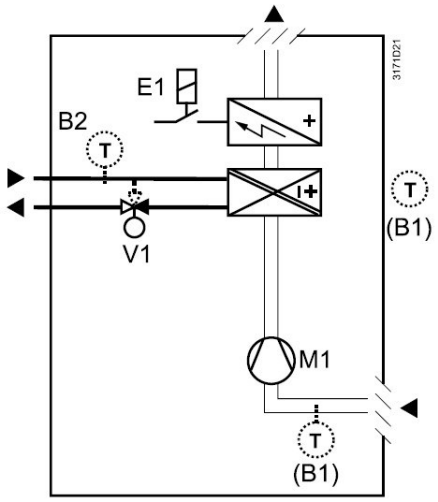
ON/OFF





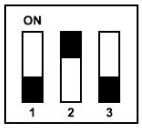
2-pipe fan coil unit with electric heater
(heating or cooling)

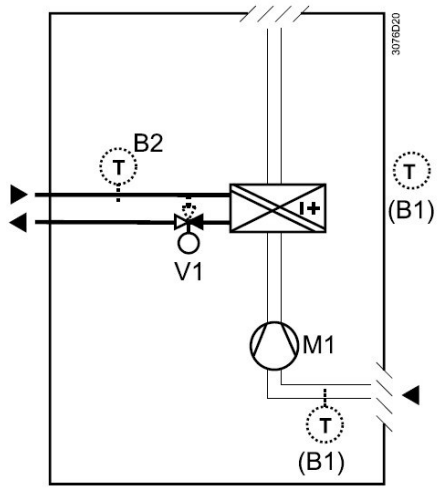
ON/OFF



2-pipe fan coil unit
(heating or cooling)

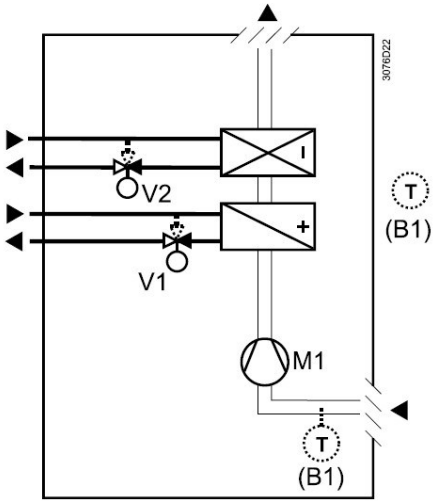
3-position





4-pipe fan coil unit
(heating or cooling)

ON/OFF



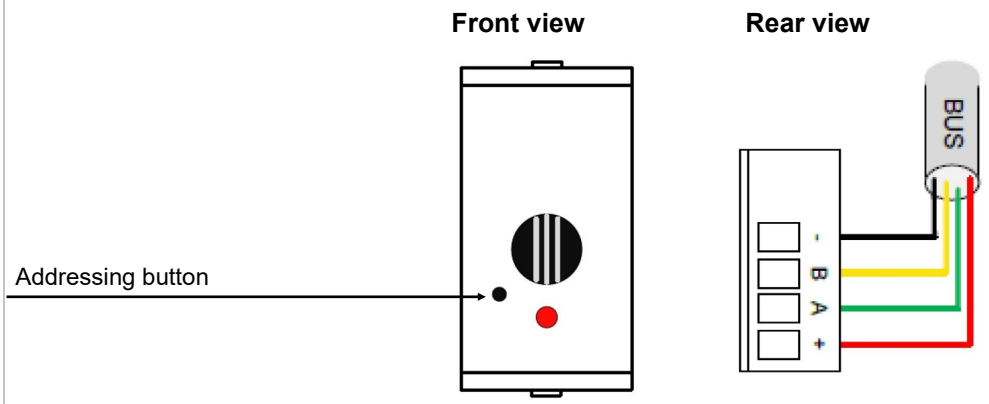
PARAMETER CONFIGURATION

Navigate through the parameters using the + and - buttons.

- Simultaneously press the + and - buttons for 3 seconds
- Release and within 2 seconds press the - button for 3 seconds
- P01 is displayed on the screen
- To change a parameter, simultaneously press the + and - buttons
- The parameter will start to flash
- To confirm the change, repeat the pressure on the + and - buttons
- Set parameter P68 to 1 (baud rate 9600 BPS)
- Set parameter P70 to 2 (no parity bit)
- Addressing must be done on parameter P81
- Select an address between 17 and 67
- To exit and save the changes, navigate with the + or - button until END is displayed
- To confirm the exit, simultaneously press the + and - buttons.

SYSTEM COMPONENT ADDRESSING

HIDURMX TEMPERATURE AND HUMIDITY SENSOR



(-)	GND	Power supply
(B)	-	Modbus serial
(A)	+	Modbus serial
(+)	+12Vdc	Power supply

ADDRESSING

- Power up the device while keeping the addressing button pressed.
- The red LED will start to flash quickly; after a few seconds the flash will slow down, count the number of flashes until they are the same as the value of the address to be assigned, then release the button.
- A fast flash at the end confirms the procedure.

AIR QUALITY PROBE

ADDRESSING

To correctly configure and address the probe, follow the steps below:

1) Disconnect any other sensors on the communication bus.
2) Write the following values into the indicated registers:
   - Register 2 → 2
   - Register 3 → 960
   - Register 4 → 0
   - Register 5 → desired address value (between 110 and 133)
3) Save the configuration in the EEPROM memory by writing:
   - Register 6 → 1
   - Register 0 → 1
4) Check that the procedure has been completed correctly by pointing to the new address and reading Register 1. The value returned must be 1.
5) Remove and restore power to the probe. Check that the device responds correctly to the newly configured address.

Command Name	Registers	Register values
RS485 settings	002	Command type, 2 = RS485 settings
	003	Baudrate setting/10, Range: 960, 1920, 3840, 5760, 7680, 11520
	004	Parity, 0 = none, 1 = odd, 2 = even
	005	Slave ID address, Range : 1 – 247
	006	Save in EEPROM, 0 = none, 1 = yes

SYSTEM COMPONENT ADDRESSING

FANCOIL UNIT CONTROL MODULE - FCM010X

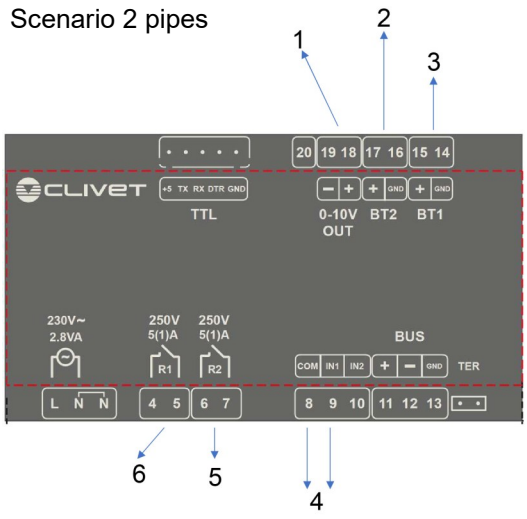
DIN control module for managing a fancoil.

It is connected in chain topology (in-out) directly to the HPC500 T 485 serial bus via the RS485 communication port available on the TTL/RS485 converter module (included) and requires a 230V AC power supply.

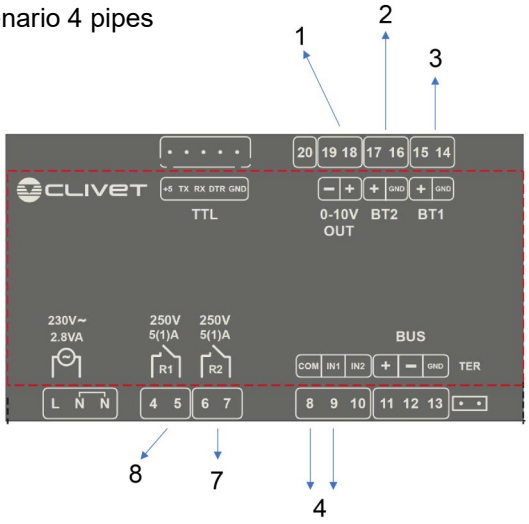
Includes a 10K NTC probe (water temperature) with 5 metre cable.

Specification		Min	Max
Power supply	230VAC	-10%	+10%
Frequency	50/60Hz	-5%	+5%
Consumption	5.8VA		
Insulation class	II		
Protection	IP20		
Operating temperature	25°C	0°C	70°C
Operating humidity	30%	10%	90%
Storage temperature	25°C	-20°C	85°C
Storage humidity	30%	10%	90%
Current on each relay output			5A @ 250V

Scenario 2 pipes



Scenario 4 pipes



1	Fan speed	5	Fan
2	Water probe	6	Valve
3	Air probe	7	Hot valve
4	Window contact	8	Cold valve

SYSTEM COMPONENT ADDRESSING

DESCRIPTION OF FAN COIL MANAGEMENT MODULE TERMINALS (AP1)

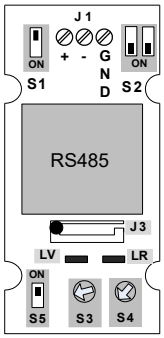
Terminal	Use	Notes
L, N	230V AC	
4, 5	1) In 2 pipes, valve 2) In 4 pipes, cold valve	
6, 7	1) In 2 pipes, ON/OFF fan 2) In 4 pipes, hot valve	
8, 9	Window contact	If not used for the specific purpose, these terminals must be short-circuited using a wire (at least 1 mm²)
10, 11, 12, 13		Not used
14, 15	Air probe	
16, 17	Water probe	
18, 19	0-10V output	
20		Not used
TTL serial	AP2 module connection	

DESCRIPTION OF TTL/RS-485 CONVERTER TERMINALS (AP2)

Terminal	Use	Notes
GND		Not used
+	Connect to terminal A+ of RS-485 serial line	
-	Connect to terminal B- of RS-485 serial line	
TTL	Connect to TTL serial port on AP1 module	

RS485 MODULE

Addressing can be done using the selectors on the RS485 module.



Follow this procedure:

1 - Disconnect power supply to the RS-485 module and fancoil management module

2 - Set the address with the selectors on the RS485 module

S5 = hundreds. Must always be set to OFF

S3 = tens

S4 = unit

exemple : 50= S3 =5 , S4 =0

3 - Set parameters 34 and 35 under *Other parameters in the Advanced settings of CONTROL4 NRG (see page 136)*

SYSTEM COMPONENT ADDRESSING

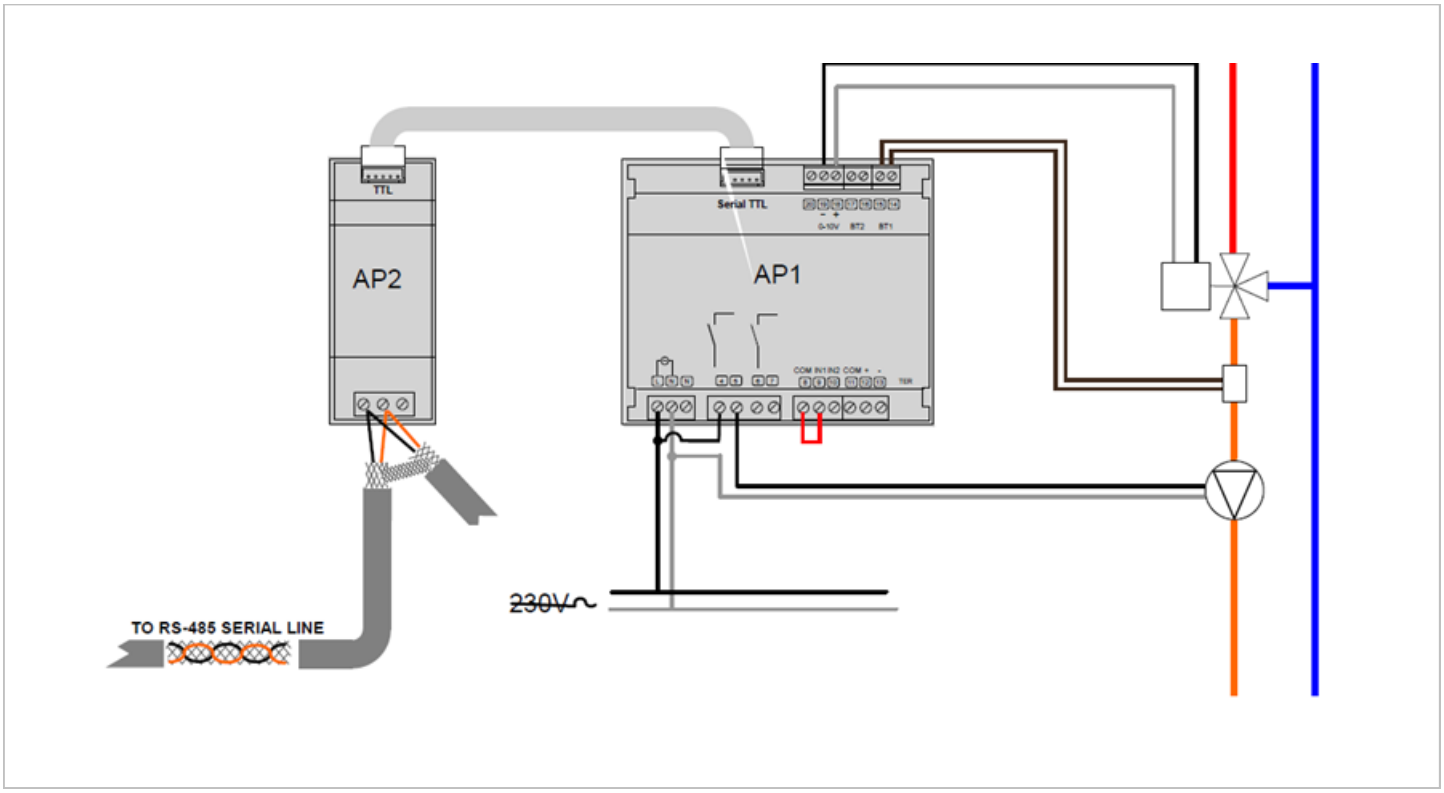
MIXING MODULE - EMRSX

DIN control module for managing a mixing circuit in order to maintain a section of the circuit at a different temperature to the main system.

It is connected in chain topology (in-out) directly to the HPC500 T 485 serial bus via the RS485 communication port available on the TTL/ RS485 converter module (included) and requires a 230V AC power supply.

Includes a 10K NTC probe (water temperature) with 5 metre cable.

Specification		Min	Max
Power supply	230VAC	-10%	+10%
Frequency	50/60Hz	-5%	+5%
Consumption	5.8VA		
Insulation class	II		
Protection	IP20		
Operating temperature	25°C	0°C	70°C
Operating humidity	30%	10%	90%
Storage temperature	25°C	-20°C	85°C
Storage humidity	30%	10%	90%
Current on each relay output			5A @ 250V



SYSTEM COMPONENT ADDRESSING

DESCRIPTION OF MIXING MODULE TERMINALS (AP1)

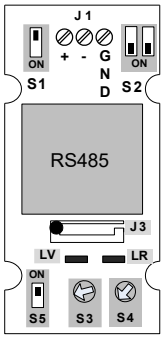
Terminal	Use	Notes
L, N	230V AC	
4, 5		
6, 7		Not used
8, 9	1 Overheating protection 2 Dew point detection	If not used for the specific purpose, these terminals must be short-circuited using a wire (at least 1 mm²)
10, 11, 12, 13		Not used
14, 15	Water probe	
16, 17		Not used
18, 19	0-10V valve	
20		Not used
TTL serial	AP2 module connection	

DESCRIPTION OF TTL/RS-485 CONVERTER TERMINALS (AP2)

Terminal	Use	Notes
GND		Not used
+	Connect to terminal A+ of RS-485 serial line	
-	Connect to terminal B- of RS-485 serial line	
TTL	Connect to TTL serial port on AP1 module	

RS485 MODULE

Addressing can be done using the selectors on the RS485 module.



Follow this procedure:

1 - Disconnect power supply to the RS485 module and mixing module

2 - Set the address with the selectors on the RS485 module

S5 = hundreds. Must always be set to OFF

S3 = tens

S4 = unit

exemple : 50= S3 =5 , S4 =0

3 - Set parameters 34 and 35 under *Other parameters in the Advanced settings of CONTROL4 NRG (see page 136)*

BT2 EXSTERNAL TEMPERATURE READING PROBE

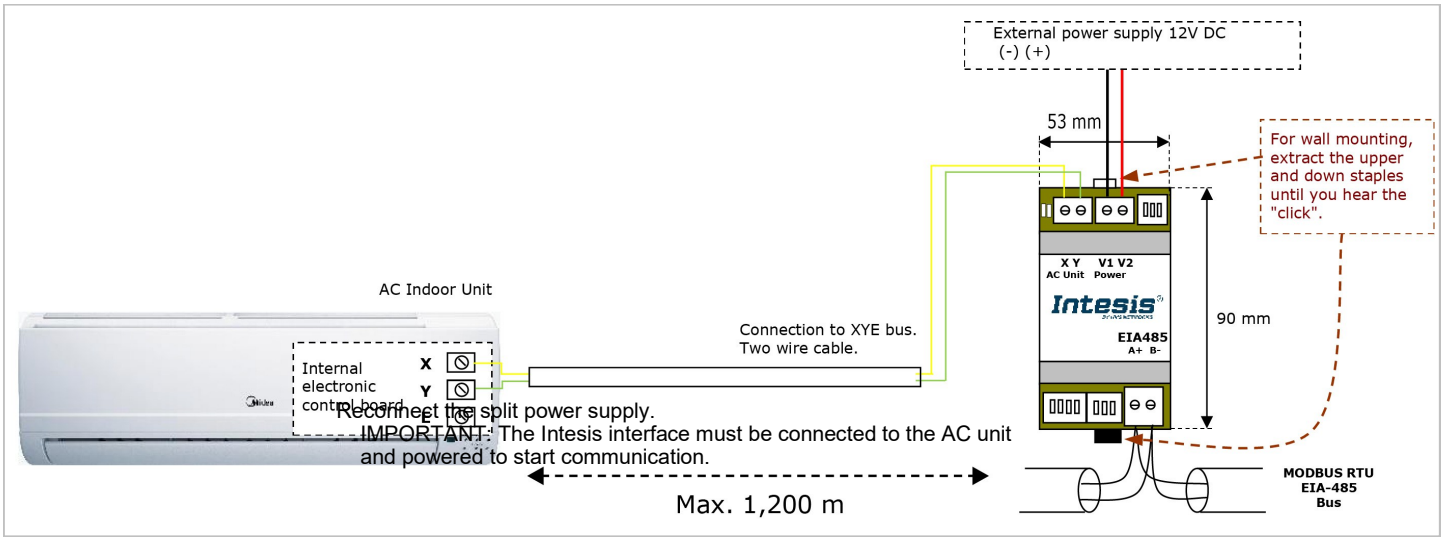
PE3S0006 - Option

Enable BT2 probe:

- System setting menu (page 136)
- Parameter menu
- Setting parameter 1 = mixing module

SYSTEM COMPONENT ADDRESSING

INTESIS SPLIT GATEWAY CONNECTION



ADDRESSING

Procedure to be performed:

1) Disconnect the split power supply.
2) Connect the XYE bus between the interface and the indoor unit according to the electrical connection instructions and observing polarity.
3) Connect the Modbus RTU bus to the EIA485 A/B connector on the interface.
4) Connect the power cable between the interface and the mains according to the instructions in the diagram.
5) Check the DIP switch configuration of the Intesis interface and make sure it matches the parameters of the current installation:

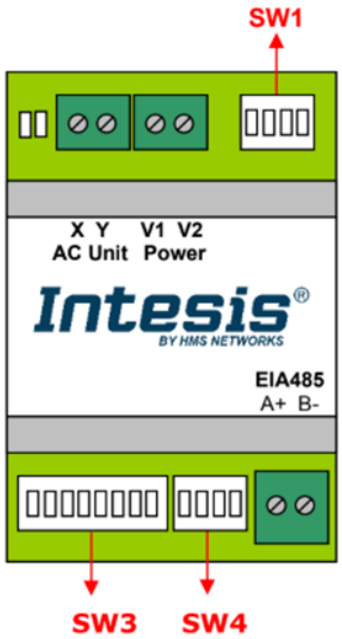
   By default, the interface is set to:

   - Modbus slave address → 1
   - Modbus baud rate → 9600 bps
   - Feature units → see table SW1

   These parameters can be changed via DIP switches SW3 and SW4 (see tables below). All other switch positions are set to low (Off position) by default

   NOTE: Any change to the DIP switch configuration requires a system power-up cycle to be applied.
6) Ricollegare l'alimentazione elettrica dello split.

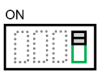
IMPORTANTE: L'interfaccia Intesis deve essere collegata all'unità AC e alimentata per avviare la comunicazione.



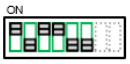
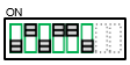
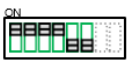
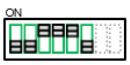
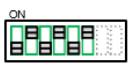
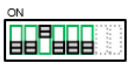
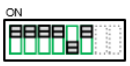
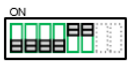
CONFIGURATION VIA DIP SWITCHES

SW1

SW3-P7..8	SW4-P3	Description
		2400bps
		4800bps
		9600bps (Default value)
		19200bps
		38400bps
		57600bps
		76800bps
		115200bps

SW1-P1..4	Description
	The AC unit does not have an AUTO mode (default)
	The AC unit has an AUTO mode
	The AC unit does not have a DRY mode (default)
	The AC unit has a DRY mode
	The AC unit does not have a fan AUTO mode (default)
	The AC unit has a fan AUTO mode
	The AC unit has 2 fan speeds (default)
	The AC unit has 3 fan speeds

SW3 - MODBUS SLAVE ADDRESS

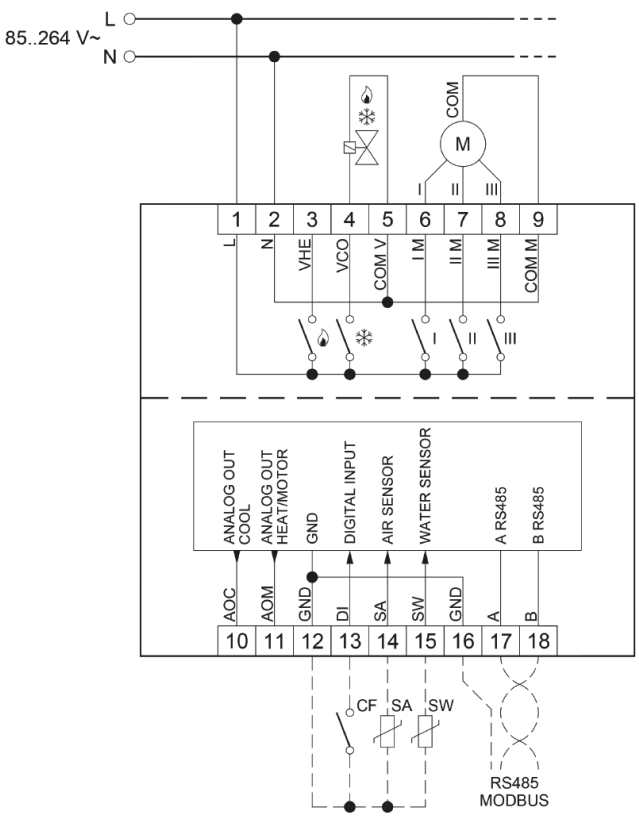
Add	SW3-P1...6	*Add*	SW3-P1...6	*Add*	SW3-P1...6	*Add*	SW3-P1...6	*Add*	SW3-P1...6
0		13		26		39		52	
1		14		27		40		53	
2		15		28		41		54	
3		16		29		42		55	
4		17		30		43		56	
5		18		31		44		57	
6		19		32		45		58	
7		20		33		46		59	
8		21		34		47		60	
9		22		35		48		61	
10		23		36		49		62	
11		24		37		50		63	
12		25		38		51			

SYSTEM COMPONENT ADDRESSING

HID-TIFX THERMOSTAT

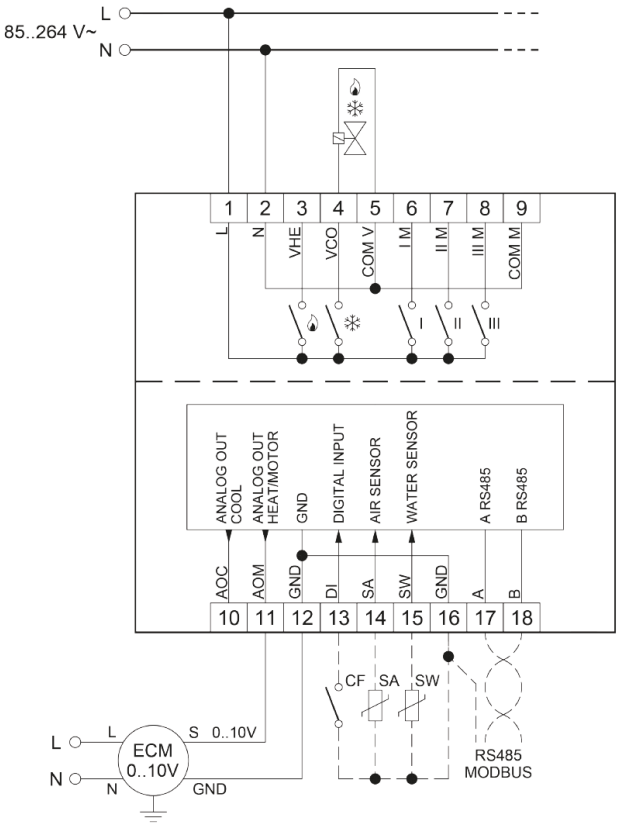
2-PIPE SYSTEM CONNECTION DIAGRAM

1: Wiring diagram for a 2-pipe system with control of a hot/cold on/off valve and a three-speed AC fan.



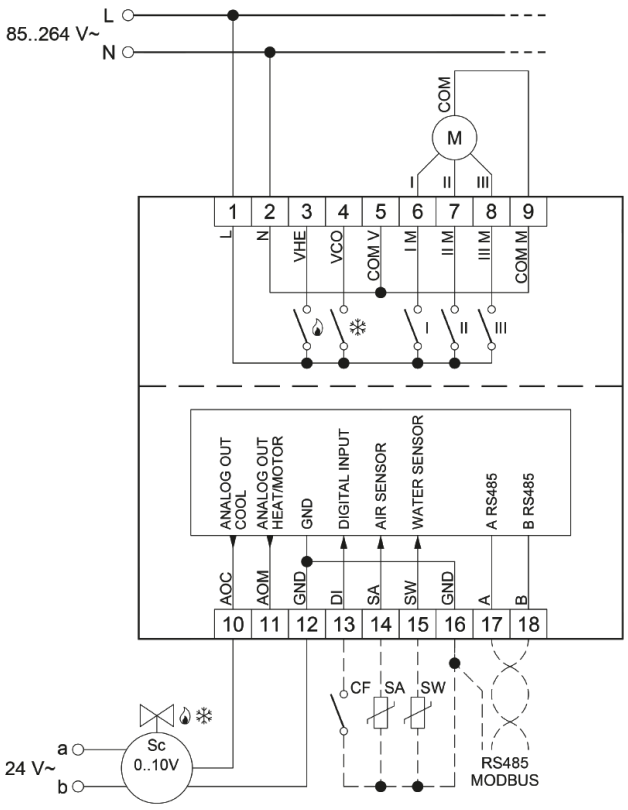
Configuration parameters:
P03 2 PIPES
P04 3 SPEEDS AC FAN MOTOR
P05 ON/OFF RELAY OUT

2: Wiring diagram for a 2-pipe system with control of a hot/cold on/off valve and a proportional EC fan.



Configuration parameters:
P03 2 PIPES
P04 EC FAN MOTOR
P05 ON/OFF RELAY OUT

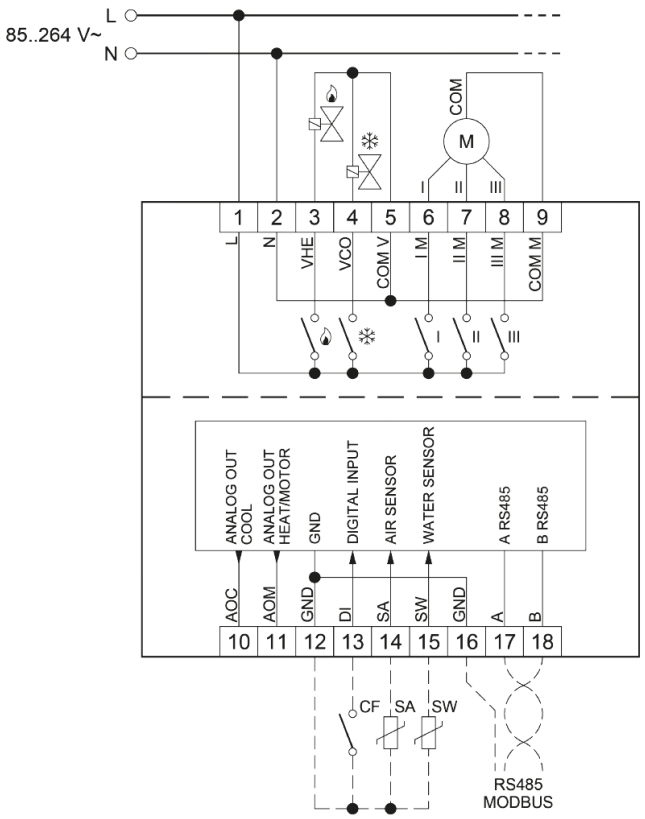
3: Wiring diagram for a 2-pipe system driving a 0.10V hot/cold actuator and a three-speed AC fan.



Configuration parameters:
P03 2 PIPES
P04 3 SPEEDS AC FAN MOTOR
P05 PROPORTIONAL ANALOG OUT

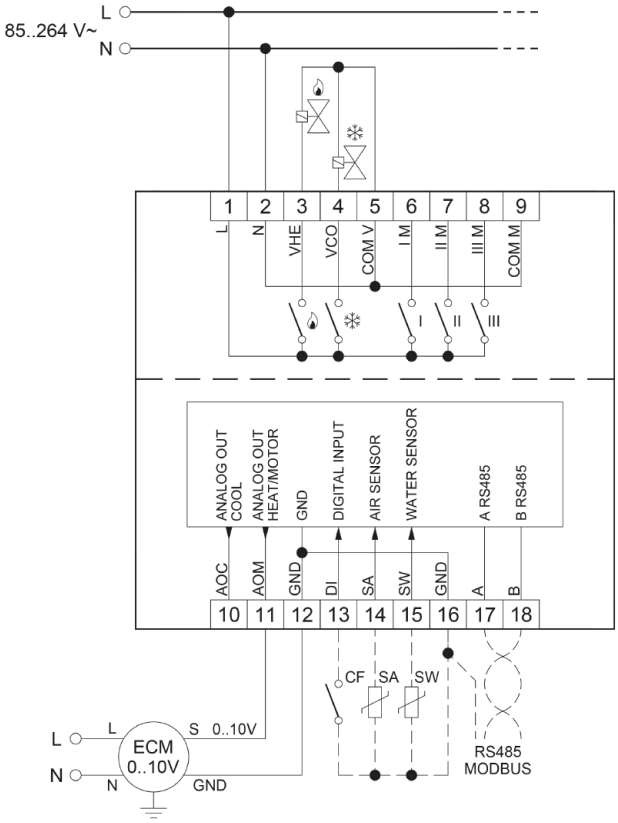
4-PIPE SYSTEM CONNECTION DIAGRAM

1: Wiring diagram for a 4-pipe system with control of two hot and cold on/off valves and a three-speed AC fan.



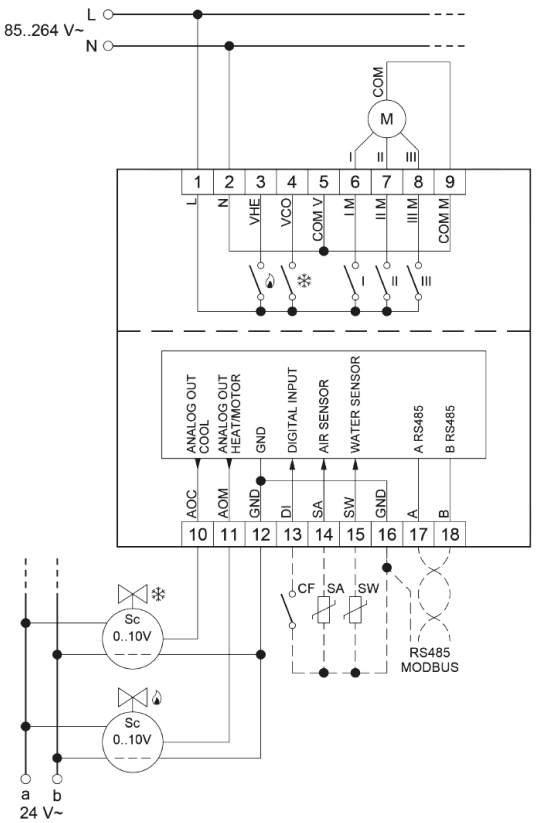
Configuration parameters:
P03 4 PIPES / UNDERFLOOR HEATING
P04 3 SPEEDS AC FAN MOTOR
P05 ON/OFF RELAY OUT

2: Wiring diagram for a 4-pipe system with control of a hot/cold on/off valve and a proportional EC fan.



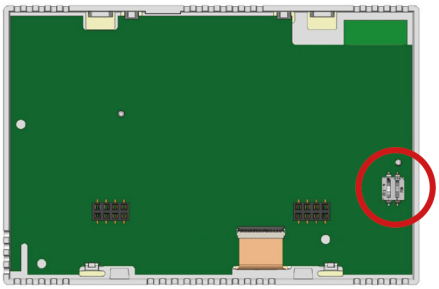
Configuration parameters:
P03 4 PIPES / UNDERFLOOR HEATING
P04 3 EC FAN MOTOR
P05 ON/OFF RELAY OUT

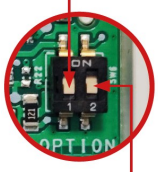
3: Wiring diagram for a 4-pipe system with control of two 0.10V hot and cold actuators and a three-speed AC fan.



Configuration parameters:
P03 2 PIPES
P04 3 SPEEDS AC FAN MOTOR
P05 PROPORTIONAL ANALOG OUT

DIP SWITCH CONFIGURATION (OPTION)





1 ON — Enables 120 ohm terminating resistor on the RS485 bus

2 OFF — Enables access to parameter configuration and access to pairing mode (default)

CONFIGURE THE PARAMETERS INDICATED IN THE CONNECTION DIAGRAM USED

1. Press and hold the ⏻ + ∨ keys simultaneously for 5 seconds to enter configuration. The display shows the first parameter of the “U” group: U007 CHRONO PROGRAM. If the padlock icon (🔒) is present on the display, access to parameters is not permitted; check the arrangement of dip switch 2.
2. Press the , button; the display shows the first parameter of the “P” group: P03 SYSTEM TYPE.
3. Pressing ∧ ∨ keys will scroll through the various group parameters.
4. By pressing the button , the selected parameter can be changed.
5. By pressing the ∧ ∨ buttons, the value of the selected parameter can be changed. Changes to parameters are saved automatically.
6. To exit edit mode, press the key
7. To exit parameter configuration, press ⏻ or wait two minutes.

Parameters to be set according to configuration type

Parameter	Name	Value	Min	Max
P03	SYSTEM TYPE	1) 2 PIPES 2) 4 PIPES 3) ELECTRIC HEATER 4) INTEGRATING EL.HEATER 5) UNDERFLOOR HEATING	0	4
P04	FAN TYPE	1) NO FAN 2) 3 SPEEDS AC FAN MOTOR 3) EC FAN MOTOR 4) BOTH 5) CUSTOM	0	4
P05	VALVE TYPE	1) NO VALVE 2) ON/OFF RELAY OUT 3) PROPORTIONAL ANALOG OUT 4) BOTH 5) CUSTOM	0	4

To configure the addressing parameters, follow the steps below:
1. Using an external tool, modify the registers:
   - Register 0 (address) 17…49, 60…
   - Register 2 (baudrate) 3
   - Register 3 (parity bit) 15
2) Check that the thermostat responds to the new address

ZONE MODULE (HEATED TOWEL)

The module operation opens and closes the valve, according to the temperature detected by the thermostat, in the cooling mode, the module closes the valve.
The module can be used also to control 1 radiant circuit.
The area module must be powered at 230 Vac 50 Hz.
Assembly on DIN guide

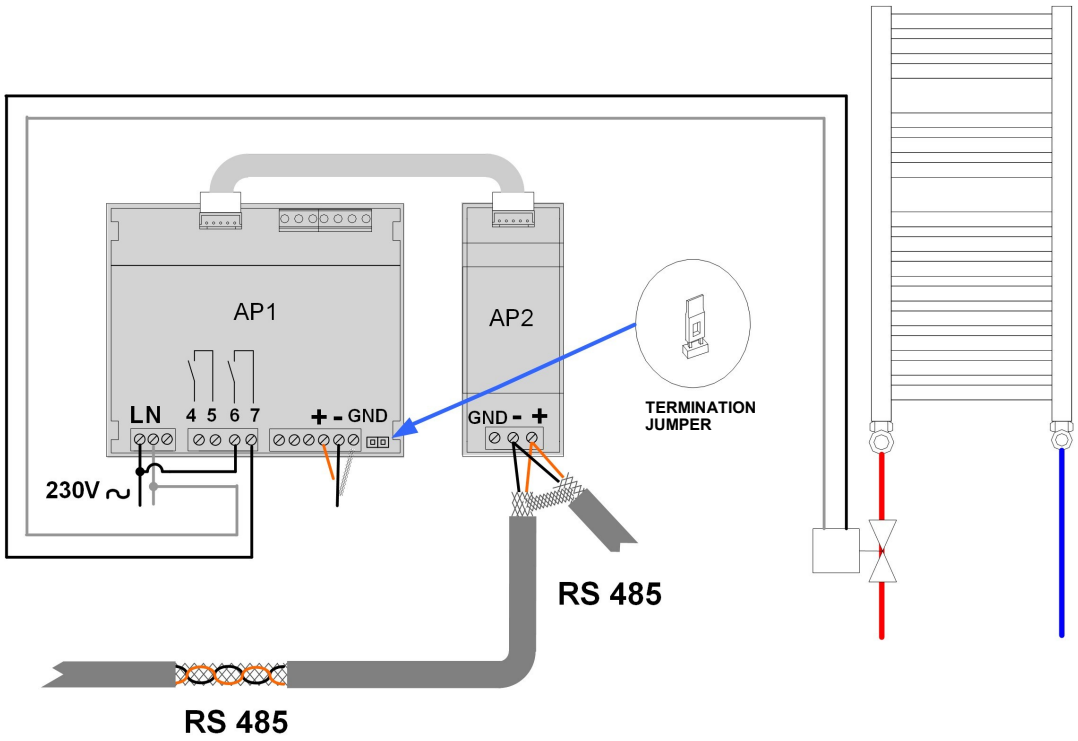
Type of cable used:
2x0.35 mm² with screen on gnd

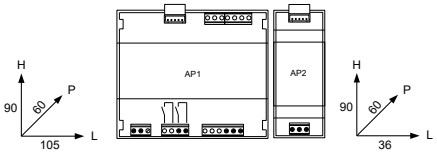
Maximum distance: 15 m

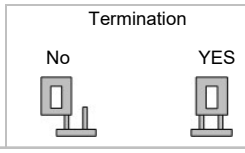
Parameters to be modified			
Parameter	**Mnemonic Name**	**Description**	**Value**
33	Index	Device address	17,18...
34	Baud Rate	Baud Rate 0=4800 1 :9600 2 :19200	1
35	Parity	Parity 0=NO / 1=Odd 2=Even supervision serial	0

Addressing can be carried out in two ways, depending on the configuration of the RS485 module.
If selectors are present, follow the procedure
1 - Disconnect power supply to the RS485 module and mixing module
2 - Set the address with the selectors on the RS485 module
S5 = hundreds. Must always be set to OFF
S3 = tens
S4 = unit
example: 17= S3 =1 , S4 =7
3 - Set parameters 34 and 35 under *Other parameters in the Advanced settings of CONTROL4 NRG (see page 136)*
For module **RS485**, see page 105

Alternatively, if the module does not have selectors, parameter 33 (Modbus address) will need to be set using third-party software.



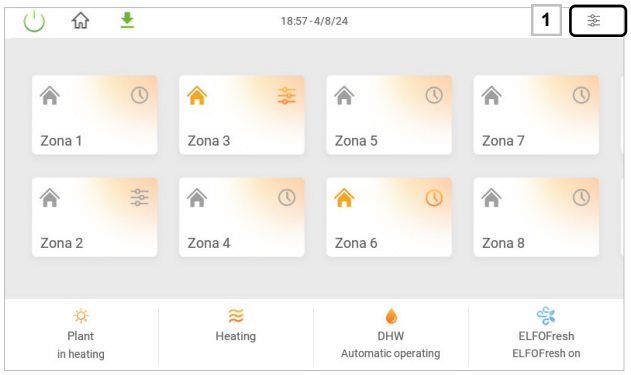




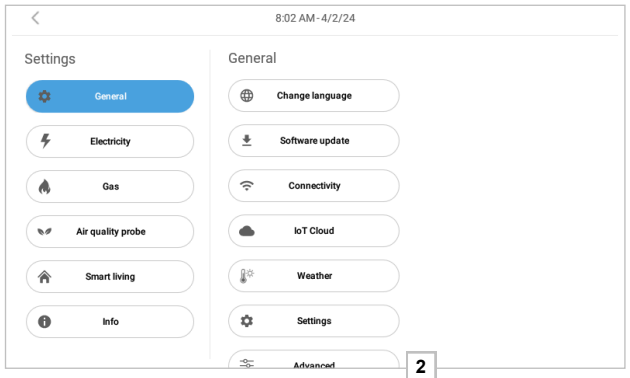
CONTROL4 NRG - SYSTEM CONFIGURATION

The configuration is performed directly on ELFOControl[3] EVO introducing:

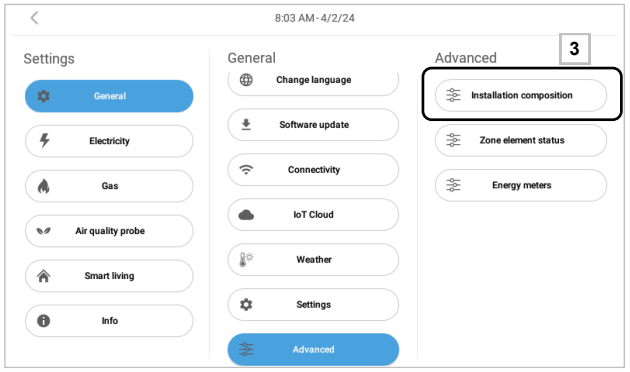
- type of system;
- name of the climatic areas (kitchen, living room, etc.);
- mixed and not mixed circuits;
- units installed (which and how many: heat pumps, terminals, etc.);
- modules installed (input/output modules, single modules, etc.);
- number of hydraulic circuits (booster pumps, area valve);
- combining components with the areas.



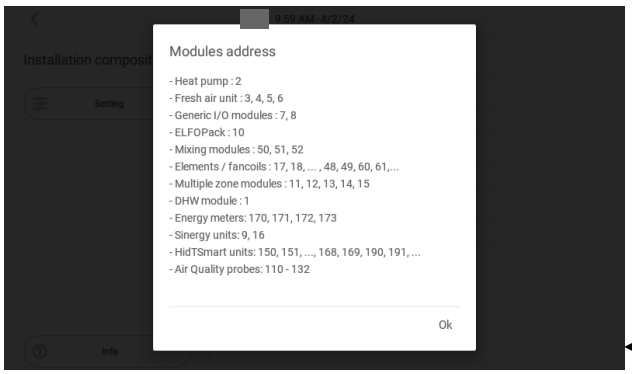
press for 2 sec. **1**

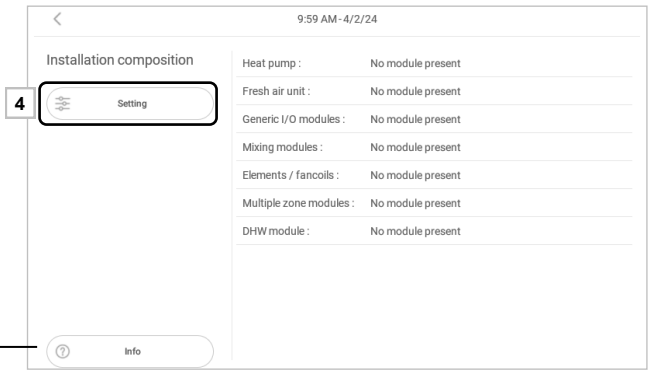


select **2**



select **3**





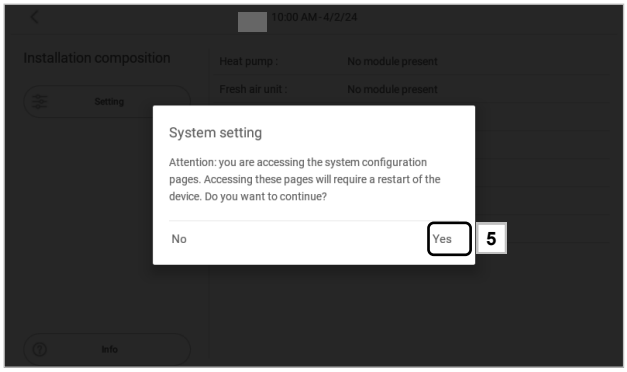
select **4**

Create / modify areas:

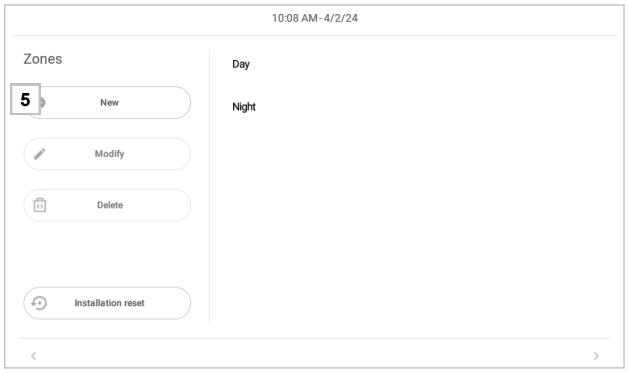
- new
- modify
- remove
- installation reset

Use the keyboard to type the name of the area.
Key functions:

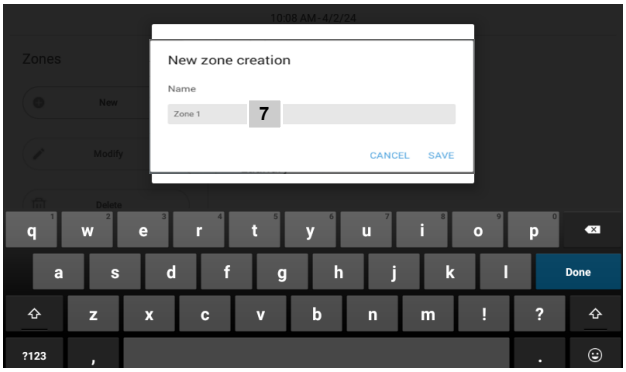
⇧	Capital or small letters
?123	Numbers
	Space
⌫	Delete



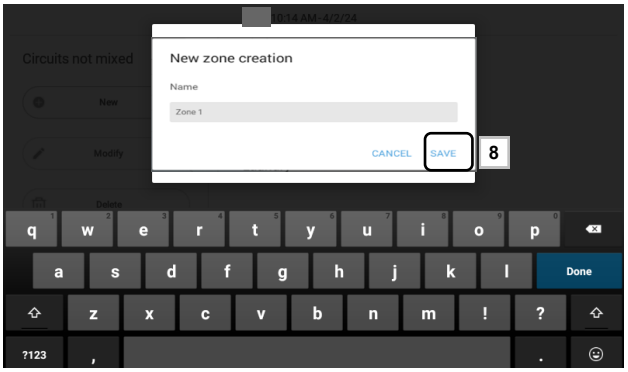
select 5



select 6



select 7



select 8

Define the hydraulic circuits:

- high temperature non-mixed circuits (max. 10)
  Circuits greater than 4 refer to the 1st high temperature area
- low temperature mixed circuits (max. 3) refer to the subsequent page

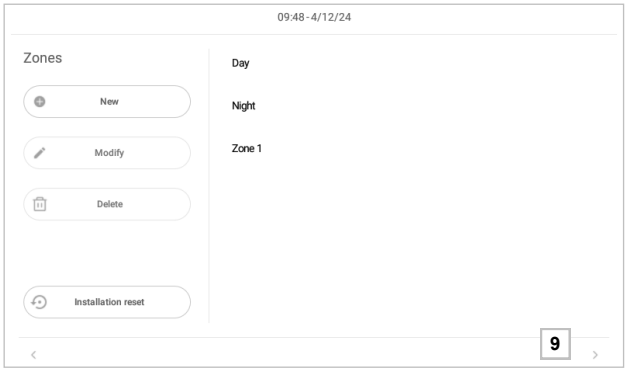
Possible combinations with boosters:

STD booster

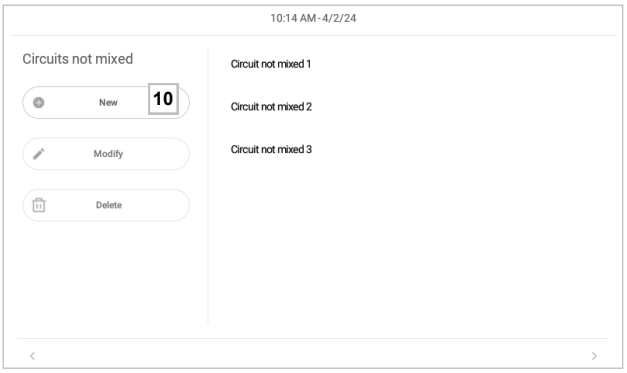
- area 1: high temperature only

optional boosters

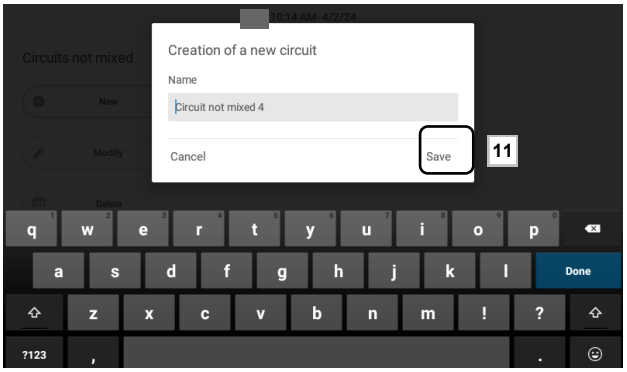
- 2 areas: high temperature only
- 2 areas: one high temperature + one low temperature
- 3 areas: high temperature only
- 3 areas: two high temperature + one low temperature
- 3 areas: one high temperature + two low temperature
- 4 areas: high temperature only
- 4 areas: three high temperature + one low temperature
- 4 areas: two high temperature + two low temperature
- 4 areas: one high temperature + three low temperature



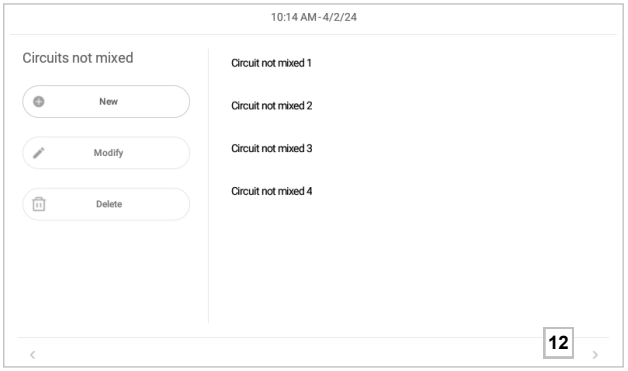
select **9**



select **10**



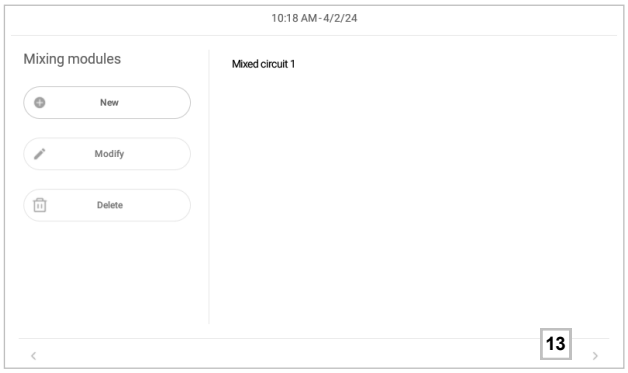
select **11**



select **12**

Define mixed circuits:

- low temperature mixed circuits (max. 3)
- for combinations, refer to the previous page



select **13**

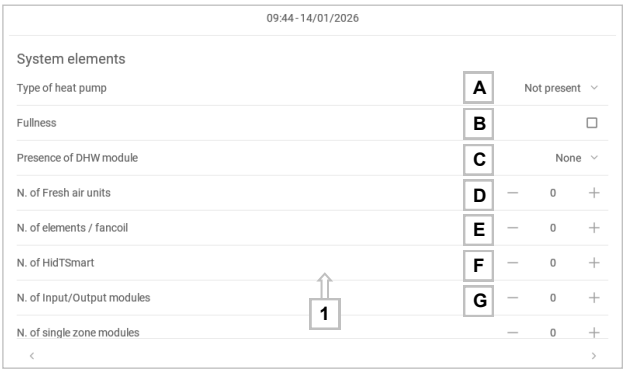
Define the composition of the system:

A. heat pump type
B. Fullness module
C. domestic water module presence:none
DHW from HP
AQUA / Combo On-Off
Swan-2 / Combo Modbus
Aqua F 100L
Domestic water from Fullness (if Fullness is configured)
D. number of air renewal units (max. 4, if Fullness is configured max. 3)
E. number of fan coil modules (max. 40 including other elements present)

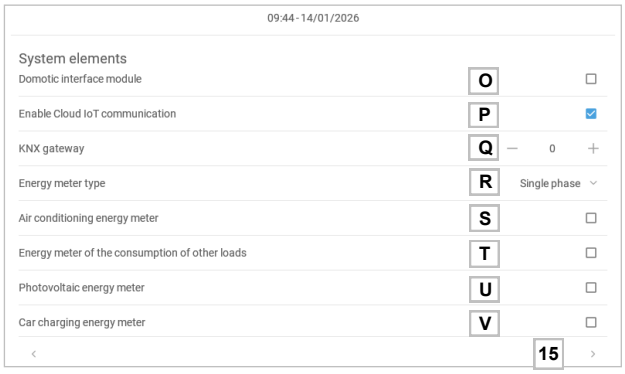
⚠ Important: check fan coil model, if bus connection is direct to unit board or via thermostat/HMI

F. number of HID-TSmart thermostats (max. 30)
G. number of Input/Output modules (max. 2, for MIOX compatibility)
H. number of individual area modules (max. 40 including other elements present)
I. number of multiple area modules (max. 5)
J. number of mixing modules (max. 3)
K. ESS type (max. 1)
not present
single-phase Sinergy
three-phase Sinergy
L. number of Sinergy units (max. 2)
M. parallel connection of ESS units (selectable only with two three -phase Sinergy units)
N. number of air quality probes (one per area, max. 24)
O. interface module with home automation
P. enable Cloud IoT communication
Q. KNX gateway (max. 1)
R. energy meter type
single-phase
three-phase
S. air conditioning energy meter
T. energy meter for consumption of other loads
U. photovoltaic energy meter
V. car charging energy meter

To see the other elements, drag area "**1**" upwards



select **14**



select **15**

Zone elements

They are listed:

A. Element 1 to be defined:
   Single zone modules
   Terminals (fan coils)
B. Smart thermostats

A - Single radiant zone modules

For each single zone module available, define the type of controlled component for each channel:

- Fan coil
- Radiator
- Radiant panel

Local control (keypad/thermostat)

Belonging area:

- kitchen, living room, etc.

Type of circuit assigned:

- mixed
- non-mixed

Number of circuit:

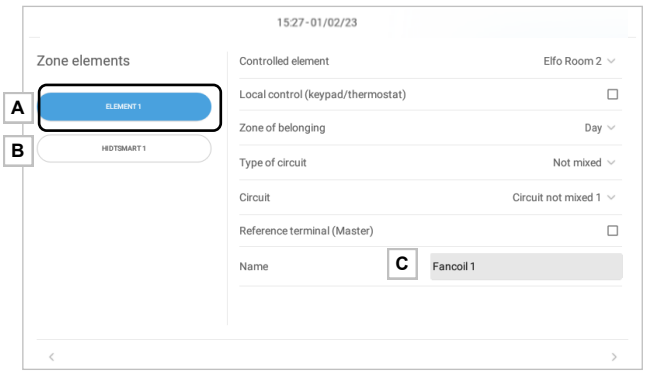
- mixed circuit n.1 / 2 / 3
- non-mixed circuit n.1 / 2 / 3

Terminal of reference (master)

Use mode

- HeatCool
- Cool only
- Heat only

To modify the name, select **D.**



select **A**

Zone terminals (fan coils)

Define the belonging area for each component available in the system. (radiator/fan coil)

Local control (from keyboard or thermostat)

Belonging area:

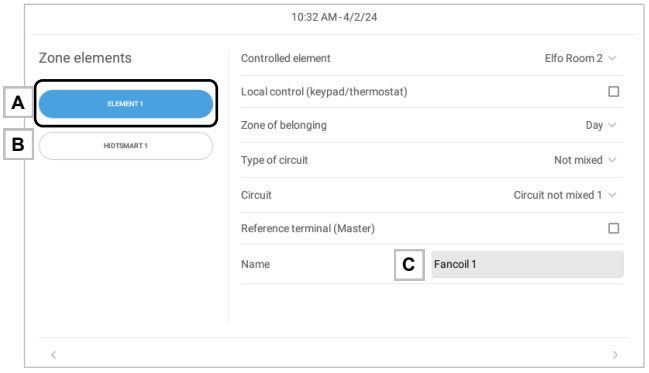
- kitchen, living room, etc.

Type of circuit assigned:

- mixed
- non-mixed
- mixed circuit n.1 / 2 / 3
- non-mixed circuit n.1 / 2 / 3

Terminal of reference (master)

To modify the name, select **D.**



select **A**

B - Smart Thermostats

Set the following parameters for each Smart thermostat in the system:

Belonging area:

- kitchen, living room, etc.

Type of circuit assigned:

- mixed
- non-mixed
- mixed circuit n.1 / 2 / 3
- non-mixed circuit n.1 / 2 / 3

Enable energy display
Select to enable the energy context display on the thermostat

Energy display mode
Select which information to display on the energy context page:

- Photovoltaics and coil
- Coil
- Photovoltaics

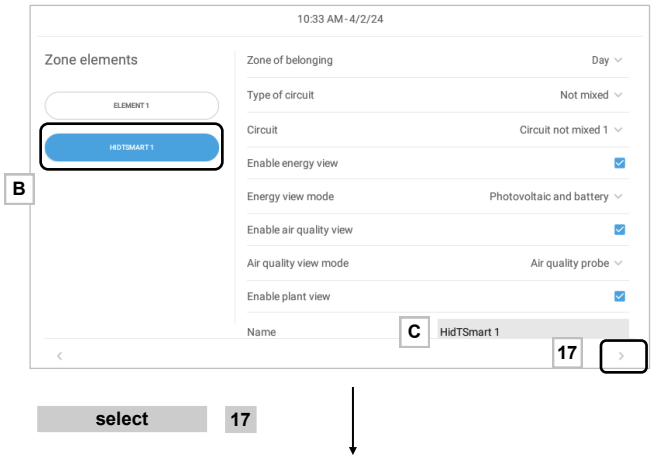
Enable air quality display
Select to enable the air quality context display

Air quality display mode
Select which information to display on the energy context page:

- Air quality probe
- ElfoFresh

Enable system display
Select to enable the system context display, showing the most relevant system information

To modify the name, select **D.**



Multiple zone module
For each module available, define the type of controlled component for each channel:

- single step radiant panel (Temperature + Humidity)
- single step radiant panel (Temperature only)
- double step radiant panel (Temperature + Humidity)
- triple step radiant panel(Temperature + Humidity)
- radiator
- fan coil with electro-mechanical thermostat
- radiator with electro-mechanical thermostat
- radiant panel with electro-mechanical thermostat
- not used

Generic I/O (see page 121)

Reference terminal (Master) pag. 127

Use mode

- HeatCool
- Cool only
- Heat only

Belonging area:

- kitchen, living room, etc.

Type of circuit assigned:

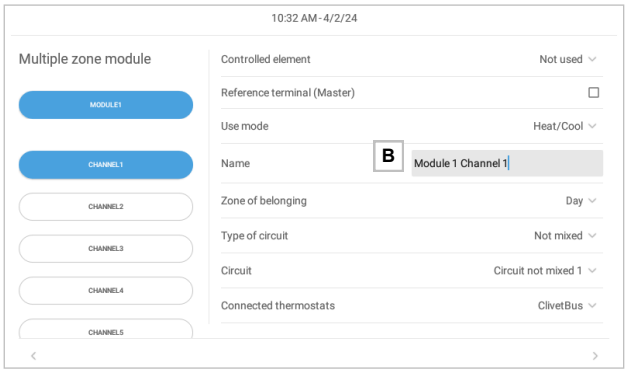
- mixed
- non-mixed

Number of circuit:

- mixed circuit n.1 / 2 / 3
- non-mixed circuit n.1 / 2 / 3

<table>
<tr><td colspan="3">Thermostats connected:</td></tr>
<tr><td>Clivet Bus</td><td colspan="2">See ELFO Control3 EVO installation manual</td></tr>
<tr><td rowspan="3">Modbus</td><td>Sensor thermostat+ humidity</td><td>Ambient probe (HID-UR)</td></tr>
<tr><td>Thermostat only (temperature only)</td><td rowspan="2">See ELFO Control³ EVO installation manual</td></tr>
<tr><td>Sensor only (temperature+humidity</td></tr>
<tr><td>Modbus Touch</td><td colspan="2">See ELFO Control³ EVO installation manual</td></tr>
</table>

To modify the name, select **B.**



GENERIC INPUT/OUTPUT MODES PROVIDED BY THE MULTIPLE RADIANT AREA MODULE

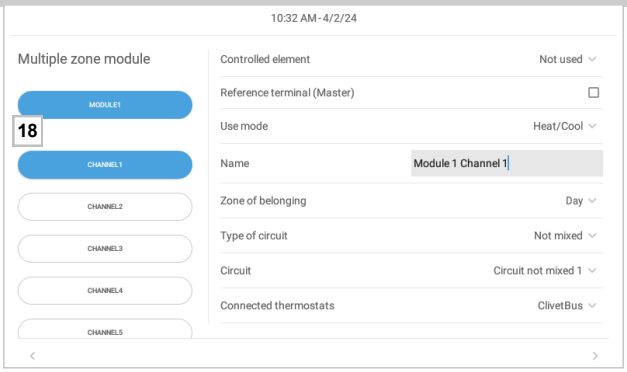
Select I/O from Controlled element

Define the inputs and outputs of multiple radiant area module canals:

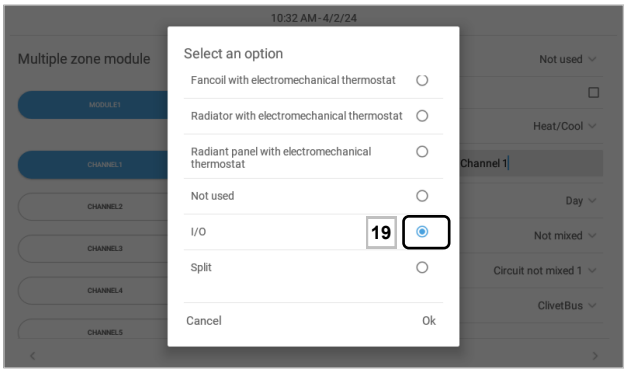
- **Remote consent** remotely activates the CONTROL4 NRG system;
- **Boiler alarm** acquires the backup heater's alarm.

Configure the outputs to control the following functions:

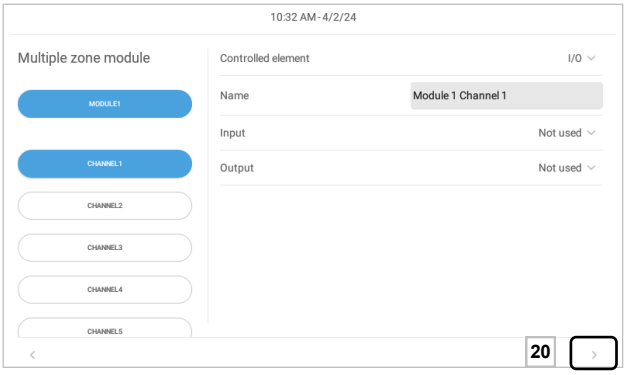
- **Circulator activation**: activates when there is a request for the water circuit associated with the circulator;
- **Zone valve control**: activates when there is a request for the water circuit associated with the zone valve;
- **Seasonal management**: with the system in heating mode it closes the contact, when it is in cooling mode it opens it. If the system includes a Chiller combined with a boiler, it can be used to control the shut-off valves of the water circuit;
- **Heating resource activation**: activates when the system is in heating mode and one of the areas needs to be activated.
  If only the boiler is to be used and not combined with a heat pump.
- **Delayed heating resource activation**: activates with a delay time (set in the parameter) when the system is in heating mode and one of the areas needs to be activated.
  If only the boiler is to be used and not combined with a heat pump.
- **Pump on secondary**: activates according to the actual energy request from a specific area
- **Dehumidifier**: activates up to 4 auxiliary dehumidifiers with ON/OFF input contact for remote consent. The output is activated if at least one of the associated areas is in dehumidifying mode and the system is powered-on.
- **ElfoFresh post-heating heater in dehumidification**: activates the use of a post-heating heater for Elfo Fresh units in dehumidification
- **Cooling resource activation**: if the boiler is used in combination with a unit to produce cooling energy only, the module will also switch circuits according to the system's heating or cooling operating mode.
  - normally open contacts on stand-by to chiller.
  - powered contacts to boiler.
- **Delayed cooling resource activation**: the same as the previous mode with the introduction of a delay time that can be set in parameter.
- **Photovoltaics**
  In compliance with the thresholds in parameter 67 and 68
- **Coil**
  In compliance with the thresholds in parameter 70 and 71
- **Air quality:** activation based on the air quality level detected in the selected area. It is possible to configure the threshold level (values from 1 to 6) and define the activation condition, selecting whether the event should be activated when the air quality level is higher than or the same as, or lower than or the same as the set value.



select **18**



select **19**



select **20**

GENERIC INPUT/OUTPUT MODES PROVIDED BY THE MULTIPLE RADIANT AREA MODULE

Remote On / off from telephone dial

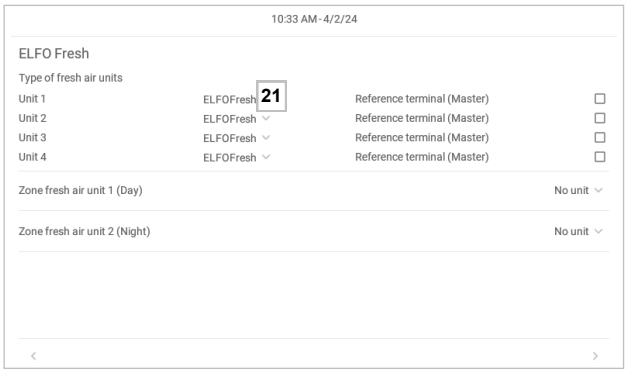
Configure parameter 49. Use remote consent in the Advanced settings

Par.49	Configuration	CLOSE 	OPEN 	Note
0		Not used		
1	System (NC)	System OFF DHW OFF System ON-OFF from CONTROL4 NRG keypad disabled	System ON DHW ON System ON-OFF from CONTROL4 NRG key-pad	At **CLOSED** contact it switches off the whole system including DHW
2	Air-conditioning only (NC)	System OFF DHW ON (ONLY DHW) System ON-OFF from CONTROL4 NRG keypad	System ON DHW ON (NORMAL CONF.) System ON-OFF from CONTROL4 NRG key-pad	At **CLOSED** contact is switches off only the air-conditioning system, leaving the DHW pro-duction active.
3	System (NA)	System ON DHW ON System ON-OFF from CONTROL4 NRG keypad	System OFF DHW OFF System ON-OFF from CONTROL4 NRG keypad disabled	At **OPEN** contact it switches off the whole system including DHW
4	Air-conditioning only (NA)	System ON DHW ON (NORMAL CONF.) System ON-OFF from CONTROL4 NRG keypad	System OFF DHW ON (ONLY DHW) System ON-OFF from CONTROL4 NRG key-pad	At **OPEN** contact is switches off only the air-conditioning system, leaving the DHW production active.

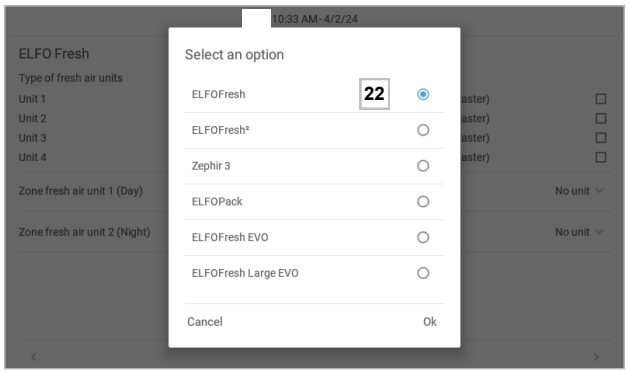
Select the type of Elfofresh installed:

- Elfofresh
- Elfofresh^2
- Zephir 3
- ELFOPack
- ElfoFreshEvo

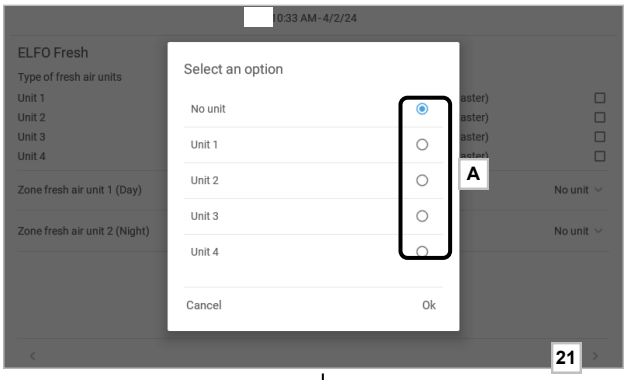
A - Combine each used unit to every area.



select **21**



select **22**



select **23**

Select:

- mix module controlled by the thermostat
- assign the area where it is installed
- name of the thermostat

Select:

- name of the air quality sensor
- assign the area where it is installed

Automatic parameter settings

Select **YES** = the auto-configuration of all elements in the installation starts (loading of the STD system settings)

Select NO = to maintain any Custom settings on the unit / devices (**reserved only to qualified/specialised personnel**)

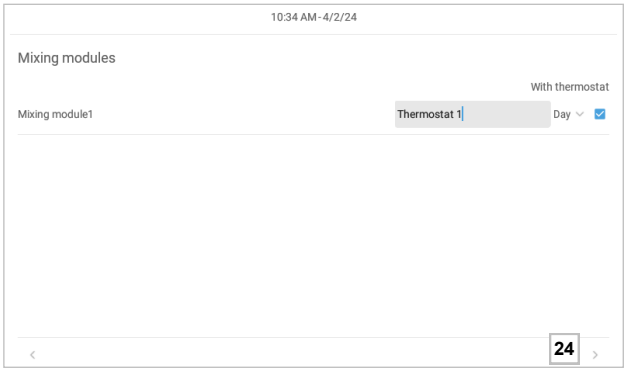
The auto-configuration may take a few minutes.

It is also possible to enable the auto-configuration also later (parameter 50 access reserved to installer / ATC)

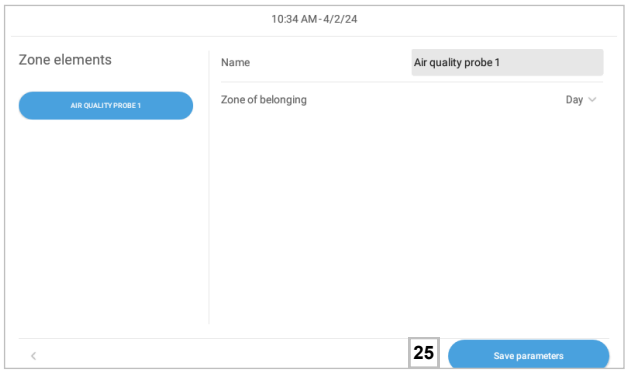
ATTENTION

The access to parameters or modifications are allowed only to the installer who assumes all responsibility, in case of doubts please contact Clivet.

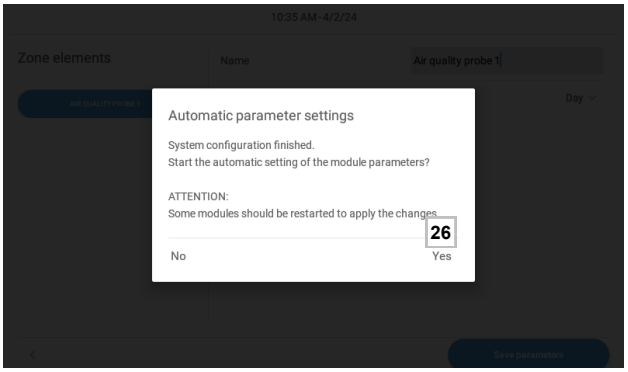
For any changes not permitted or not approved by Clivet, the same declines any responsibility for malfunctions and/or damages to the unit/system.



select **24**



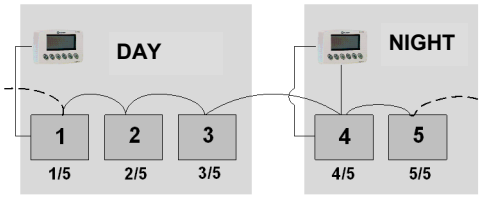
select **25** **end of the configuration**



select **26**

Master terminal

Combining the terminal of reference with the master terminal in the configuration



Component 1 :
DAY area, thermostat YES, terminal of reference NONE
Component 2 :
DAY area, thermostat YES, terminal of reference 1
Component 3 :
DAY area, thermostat YES, terminal of reference 1
Component 4 :
NIGHT area, thermostat YES, terminal of reference NONE
Component 5:
DAY area, thermostat NO, terminal of reference 4

Electricity meter

Address allocation:

- 170 Energy meter 1 (absorbed)
- 171 Energy meter 2 (absorbed)
- 172 Energy meter 3 (Production)

The meter is preconfigured with address 170

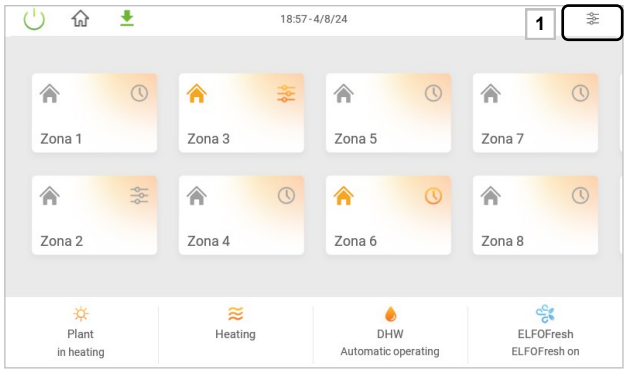
Meter address setting:

1. Power up and connect the meter to the CONTROL4 NRG serial line
2. Go to the “Other parameters” page of CONTROL4 NRG (See screenshots opposite)
3. Set **Device address** field = 170
4. Set **Parameter address** field = 2
5. Set **Enter value** field = New Modbus ID (171 or 172)
6. Press the "**Write**" button
7. Set **Parameter address** field:
   - Single-phase model = 251
   - Three-phase model = 243
8. Set **Enter value** field = 49600
9. Press the "**Write**" button
10. Switch the meter off and on again and check for correct addressing

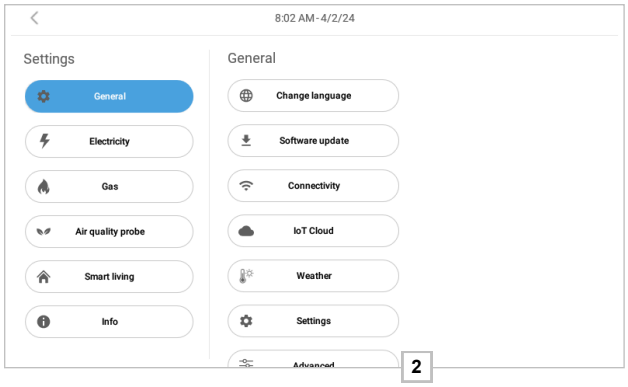
Verification of address change:

1. From the “Other parameters” screen of CONTROL4 NRG:
2. Set **Device address** field with the new Modbus address (171 or 172 depending on what has been set)
3. Set **Parameter address** field = 2
4. Press the “**Read**” button and check that the device responds.

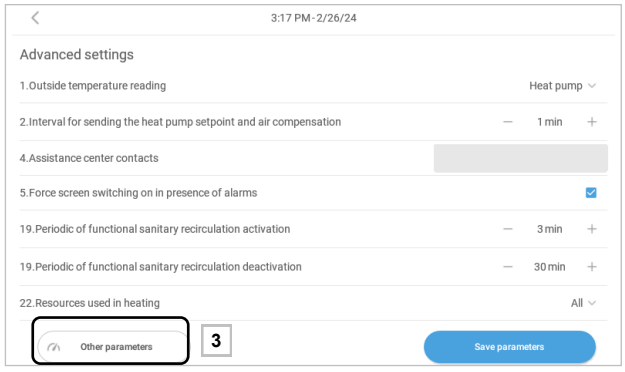
NOTE:
if it is necessary to address more than one meter, only connect one meter at a time to the serial line to carry out the addressing procedure.



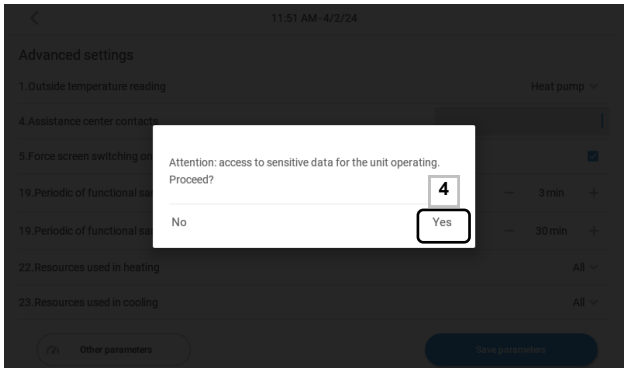
press for 2 sec. **1**



select **2**



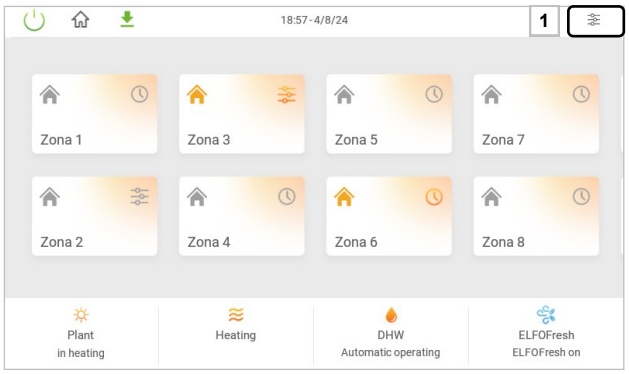
select **3**



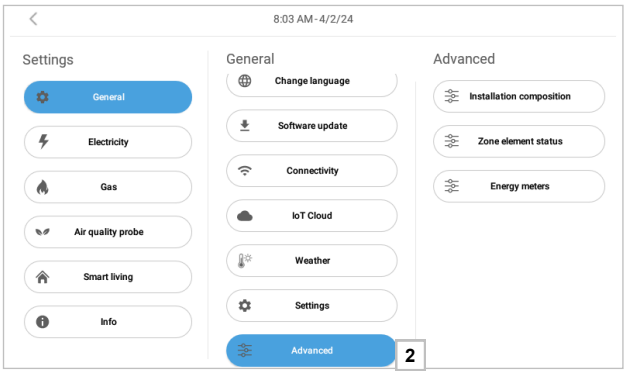
select **4**

Vedere pag. 136 “Accesso parametri/visualizzazione”

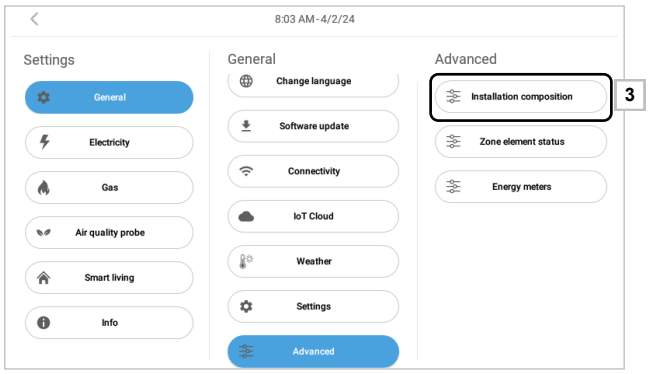
Check of the auto-configuration procedure end.



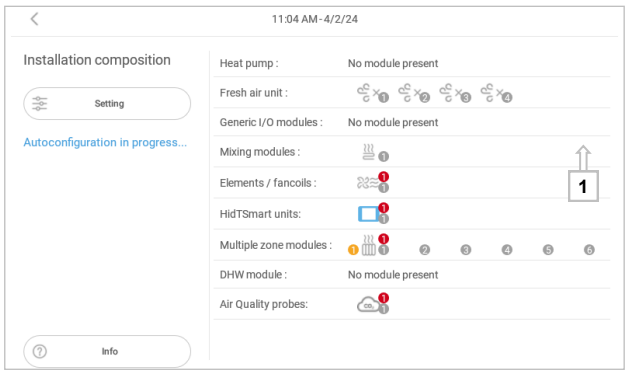
press for 2 sec. **1**



select **2**



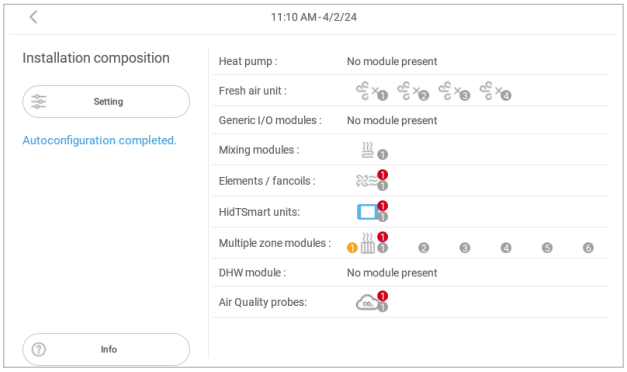
select **3**



To see the other areas, drag area "**1**" upwards

AUTOCONFIGURATION

Autoconfiguration completed
For make the autoconfiguration changes effective, turn off and on the power TO MODULES.



If you do not see " Autoconfiguration completed":

1. check the element is in ON
2. check the network

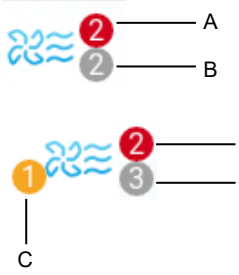
VERIFICATION OF THE COMPONENT COMMUNICATION

Once the system is restarted and the new configuration loaded, verify the serial communication.

For a correct verification, wait 5/10 minutes from the first restart, this period can vary depending on the composition of the system.

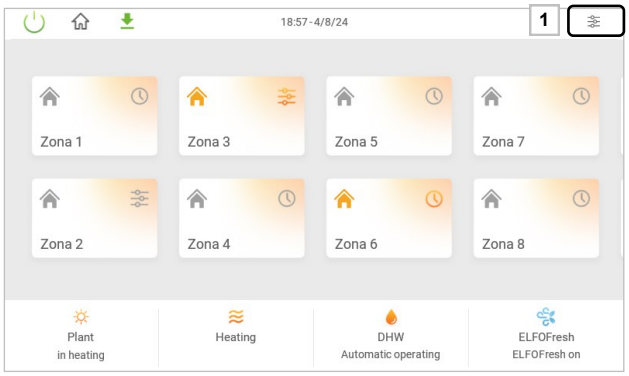
Communication OK (blue)

Communication OFF (grey)

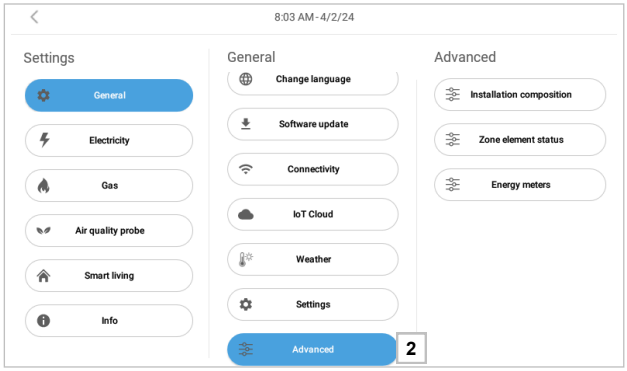


A - Belonging to area: 2
B - Terminal number: 2
C - Circuit number: 1
D - module channel: 3

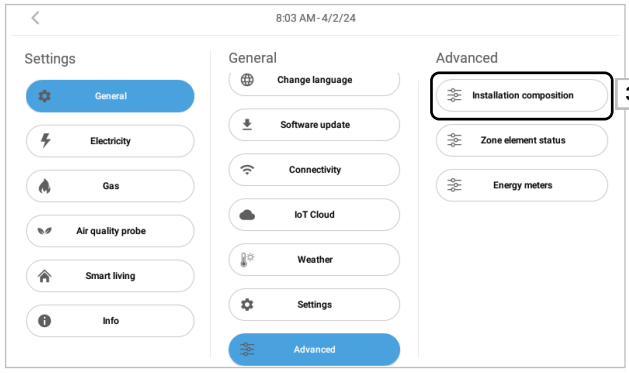
The unit does not communicate with CONTROL4 NRG, an alarm is notified "communication with interrupted device".



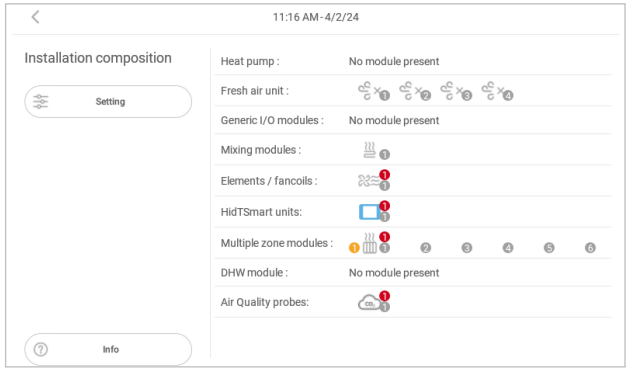
press for 2 sec. 1



select 2



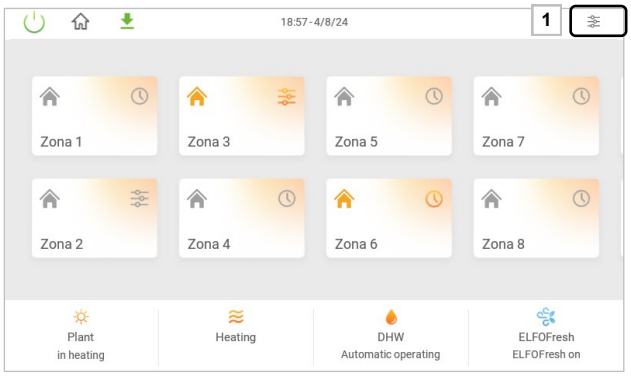
select 3



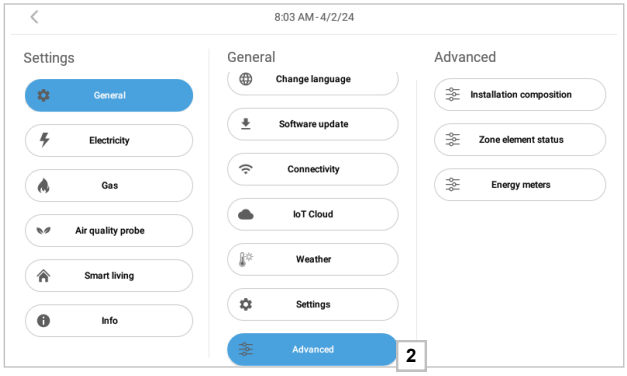
STATUS COMPONENT SYSTEM

ZONE ELEMENTS STATUS

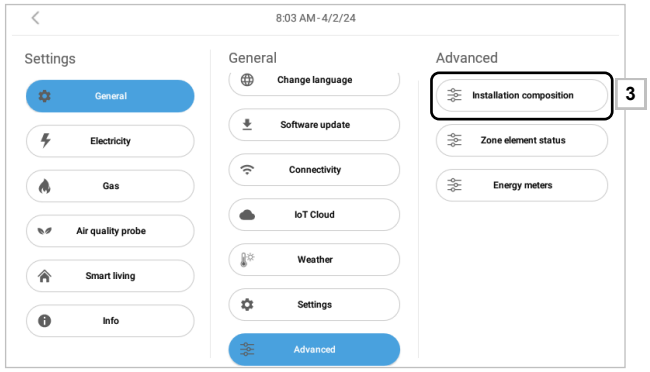
Check of the installed radiant / fancoil / zone modules operation status,Smart thermostats installed.



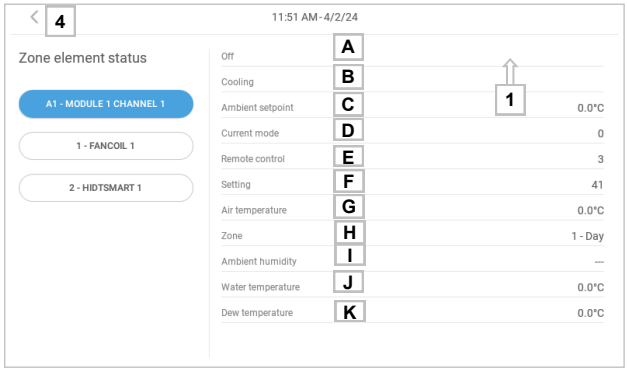
press for 2 sec. 1



select 2



select 3



select 4

For reference only:

A. Status on / off
B. Heating/cooling
C. Ambient setpoint °C
D. Current mode
E. Remote control
F. Setting
G. Air temperature °C
H. Zone
I. Ambient humidity %
J. Water temperature °C
K. Dew temperature °C

To see all the components, drag area "**1**" to the left.

STATUS COMPONENT SYSTEM

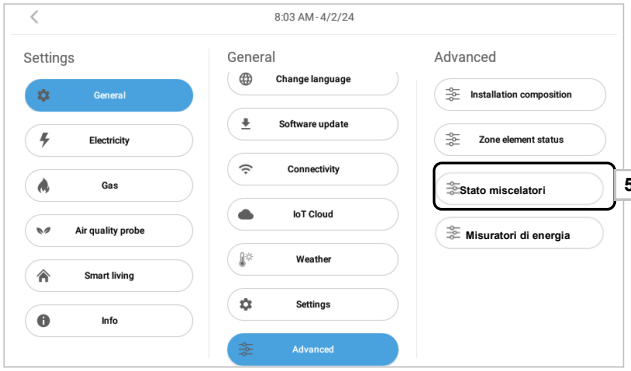
STATUS OF THE MIXERS

Verification of the operation status of the installed mixing circulators.

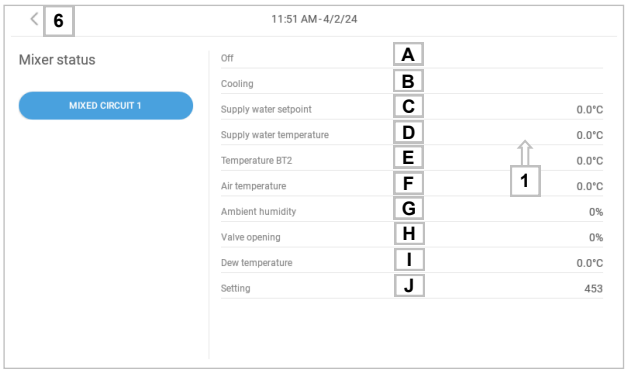
For reference only:

A. Circulator status on / off
B. Heating/cooling
C. Supply water setpoint °C
D. Supply water temperature °C
E. Temperature BT2
F. Air temperature °C
G. Ambient humidity %
H. Valve opening %
I. Dew temperature °C
J. Configuration

To see all the components, drag area "**1**" to the left.



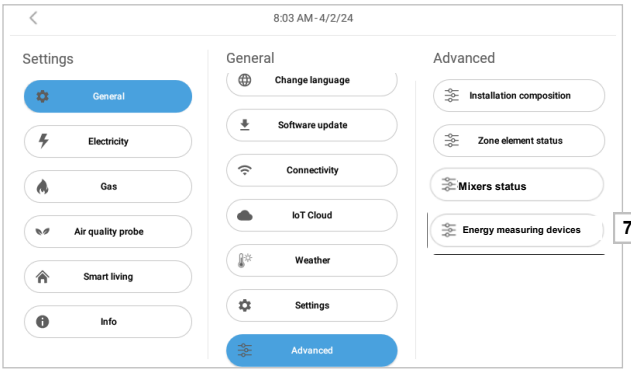
select **5**



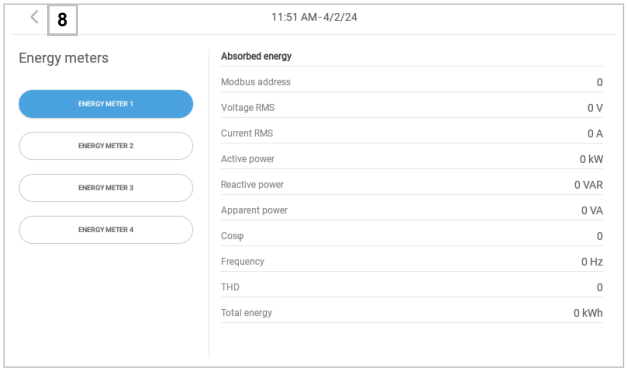
select **6**

ENERGY MEASURING DEVICES

Check the measured values of the electric energy measuring devices in consultation only. The parameters displayed vary according to single -phase or three-phase models.



select **7**

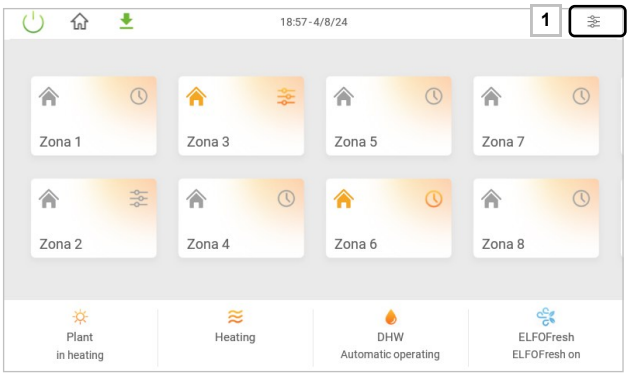


select **8**

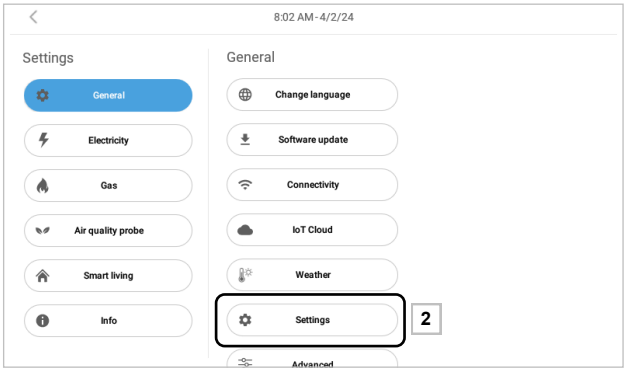
STATUS COMPONENT SYSTEM

You can insert the contact references.

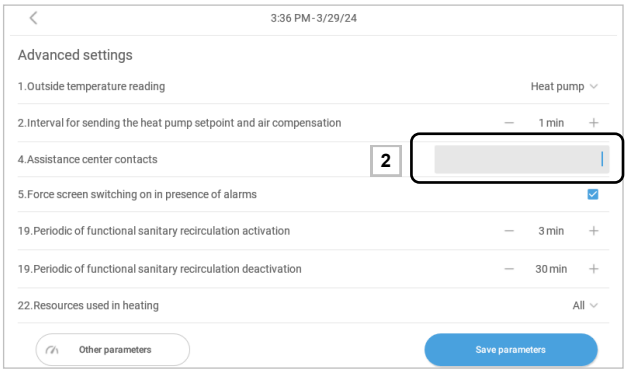
Access to the **parameters** is reserved only to **After Sales Centre.**



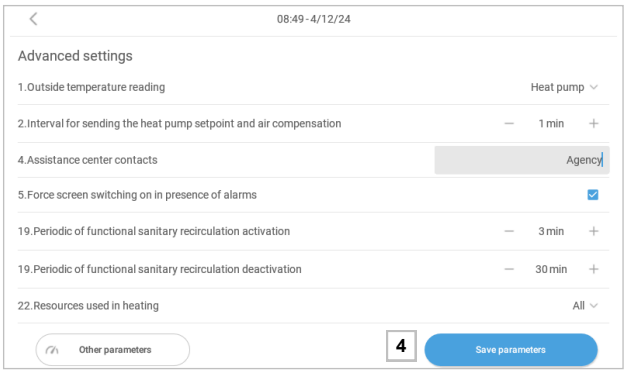
press for 2 sec. 1



select 2



select 3



select 4

TROUBLESHOOTING

1. **All the units requested do not respond.**

- Verify no short-circuits occurred on the RS485 serial line
- Ensure that the power supply is available.

2. **Some units requested do not respond.**

- Ensure they are switched on
- Ensure that the address, baud-rate and parity are correct
- Ensure that they are connected to the bus correctly
- Referring to the electrical diagram, verify if the TTL/485 converter on the fan coil is connected correctly or it has been introduced erroneously on the card programming TTL
- Try to replace the converter installed

3. **From a certain point on, the units do not communicate**

- It is likely that the bus of the first unit does not communicate due to a short-circuit
- It is likely that the unit that precedes physically the first unit that does not communicate have inverse bus polarity
- It is likely that the line section that powers these units is interrupted accidentally or is not connected.

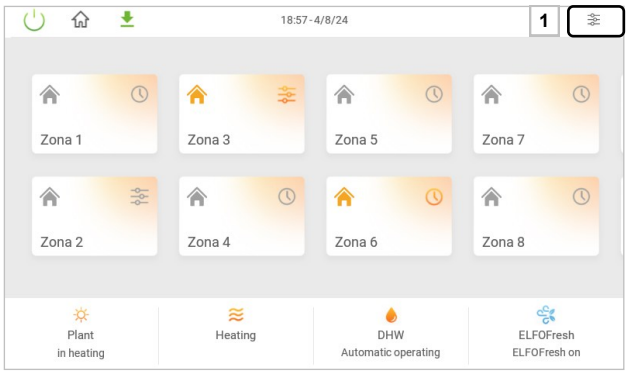
ATTENTION

The access to parameters or modifications are allowed only to the installer who assumes all responsibility, in case of doubts please contact Clivet S.p.A.

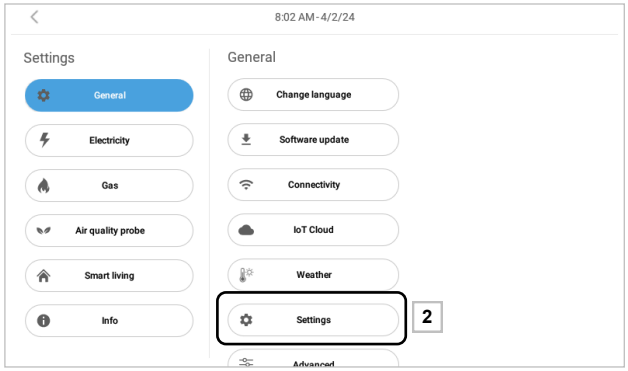
For any changes not permitted or not approved by Clivet S.p.A., the same declines any responsibility for malfunctions and/or damages to the unit/system.

The operations listed below are required only for particular calibrations and configurations, they are therefore addressed only to qualified authorized assistance centres.

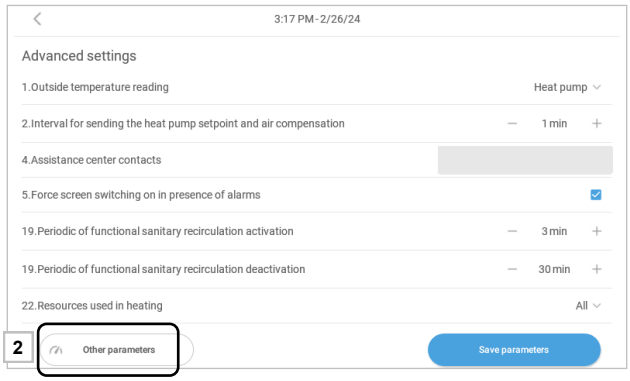
For settings, see the **List of parameters** chapter



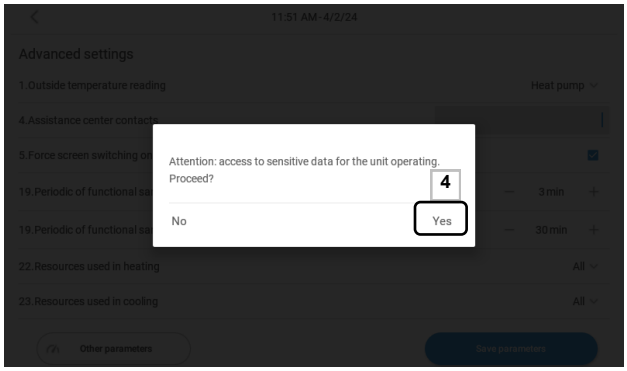
press for 2 sec. **1**



select **2**



select **3**



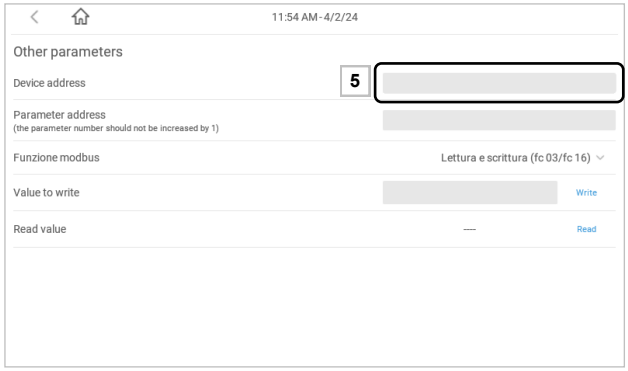
select **4**

3 - Other parameters

Parameter access (read/write Modbus commands)

Key functions:

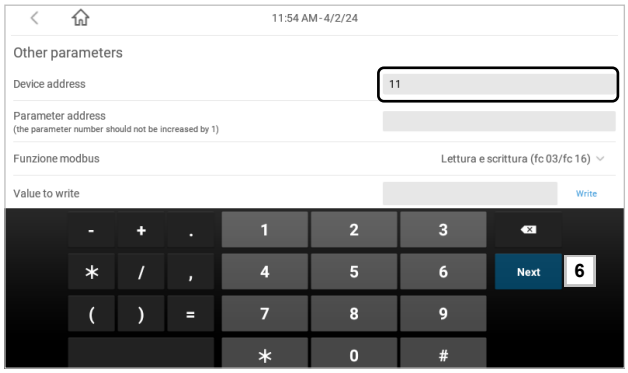
Delete



select 5

Device address field= Enter the device's Modbus address

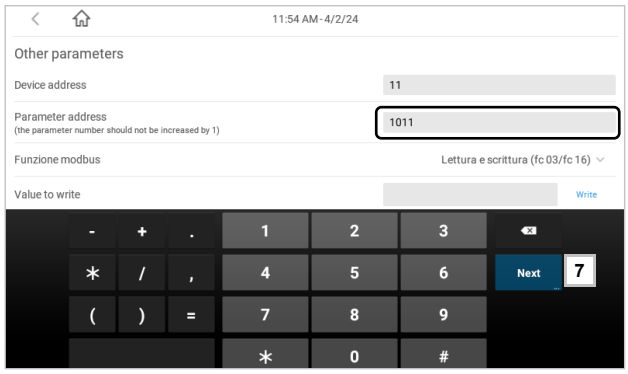
Example:
for multiple area module 11



select 6

Parameter address field: enter the value of the Modbus register to be read or written

Example:
10011 - Value in the Modbus mapping of the multiple area module



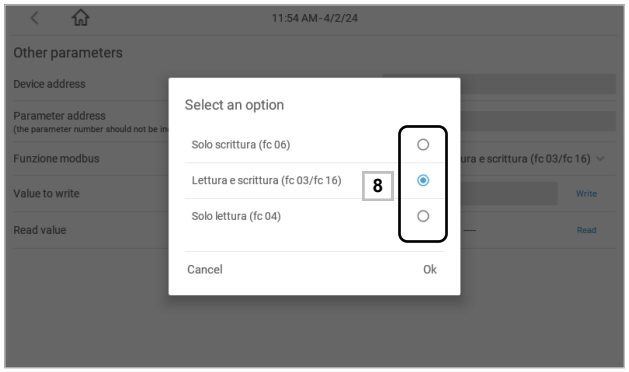
select 7

Modbus Function field: select the function code to be used for the reading/writing operation of the parameter to be checked:

Writing only (fc 06)

Reading and writing (fc 03 / fc 16)

Reading only (fc 04)



select 8

In the **Enter value** field: enter the value to be written for the parameter indicated

Write button = writes the value

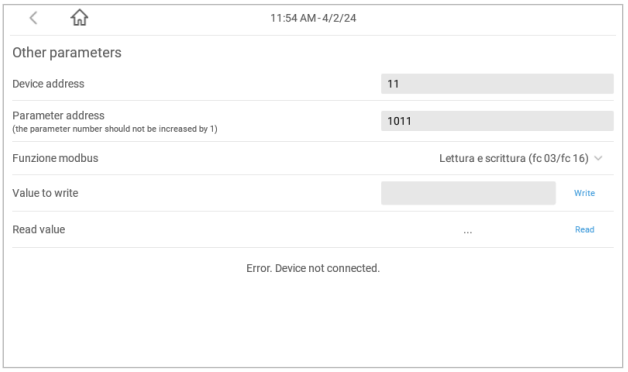
Read button = displays the default value

In case of register reading, press end without entering the value.

In case of register writing, enter the value to be written.
Attention writing with decimals (ex. 10,5) the value to be written has to be considered without comma (ex. 105)

In case of negative values (16-bit) the value has to be written in two's complement, obtained as follows:
65536 minus the negative number without comma

Example, write **-5.5 °C** and transform it in the following way:
65536 – 55 = 65481
The negative number **-5.5** corresponds to **65481** that must be written.



List of parameters

1. Outdoor temperature reading

Indicates which device is used to measure the outdoor temperature.

a) None
b) Heat pump
c) Air renewal unit
d) Heat pump + air renewal unit
e) Mixing module

2. Interval for sending the heat pump setpoint and air compensation

Indicates how often to send the water setpoint to the heat pump. This is to prevent (especially when using ambient or outdoor compensation) the setpoint from being changed too frequently.

3. Heat pump priority

Indicates whether the heat pump should first fulfil the request for domestic hot water production or room climate.

a) Domestic water
b) System

⚠ Not all heat pumps support this mode

4. Contact the service centre

5. Force screen switch-on in the presence of serious alarms

Keeps the screen on in the event of a serious alarm

9. Domestic water setpoint storage band

Hysteresis for domestic hot water storage setpoint

10. Difference between domestic hot water setpoint and heat pump

Value added to the water setpoint to produce domestic hot water using a heat pump

11. Antilegionella cycle frequency

Indicates the frequency of the antilegionella cycle

a) Not active
b) Weekly
c) Monthly
d) Yearly
e) Daily

12. Day of the month

Indicates the day of the month on which to run the antilegionella cycle. Visible if the frequency set is Monthly or Yearly

13. Day of the week

Indicates the day of the week on which to run the antilegionella cycle. Visible if the frequency set is Weekly

14. Month

Indicates the month of the year on which to run the antilegionella cycle. Visible if the frequency set is Yearly

15. Setpoint for antilegionella cycle

Indicates the setpoint for the antilegionella cycle

16. Duration of the antilegionella cycle

Indicates the duration of the antilegionella cycle

⚠ Not all heat pumps support the antilegionella mode

17. Minimum temperature for electric heater activation

Indicates the temperature at which the heat pump activates the internal electric heater to bring the domestic water temperature to the set temperature to be maintained

18. Opening time of domestic water valve

Time required for the valve to switch from system to domestic hot water

19. Periodic functional domestic water recirculation activation

Indicates how long the domestic hot water circulation pump must remain activated when required by the schedule

20. Periodic functional domestic water recirculation deactivation

Indicates how long the domestic hot water circulation pump must remain deactivated after being activated for the time indicated by parameter 19

22. Resources used in winter operation

Indicates which terminals will be used in heating mode

23. Resources used in summer operation

Indicates which terminals will be used in cooling mode

24. Room thermostat management

Indicates whether it is possible to change the temperature and mode of room thermostats locally

a) Forceable
b) Locked

25. Setpoint difference between fan coils and radiant panels (master/slave)

Indicates the setpoint difference to be applied to the slave radiant panels of a fan coil

26. Local forcing duration of thermostats

Indicates the local forcing duration of room thermostats

27. Enable modification of slave terminal setpoint

Indicates whether the setpoints of the slave terminals can be changed individually

30. ElfoFresh² return airflow

Indicates the return airflow for ElfoFresh² units

a) Standard
b) Low
c) Medium
d) High

31. ElfoFresh² supply airflow

See parameter 30

32. ElfoFresh² return airflow in Eco mode

See parameter 30

33. ElfoFresh² supply airflow in Eco mode

See parameter 30

39. Dew compensation difference

Temperature increase/decrease relating to the correction due to the dew point

40. Setpoint difference between mixers and heat pump

Value to be added to the heat pump water setpoint when the setpoint is controlled by a mixer

41. Enable mixing module ambient compensation (in heating mode)

Enables the "ambient compensation" water setpoint calculation within the mixing module, the same function that is found in heat pumps.

42. Water setpoint reduction based on the request in dual temperature systems

Enable parameter 40

43. Opening time of the mixing module valve

44. Opening weight of the mixing module valve

45. Enable dew limitation on mixed pump units and mixing modules

Enables dew point control on the heat pump or mixing module. If disabled, Elfo must calculate the dew point

48. Valve switching time

48. Use of remote enable signal

System for remotely controlling the activation/deactivation of the system or air conditioning

a) Not used
b) System (NC)
c) Air conditioning only (NC)
d) System (NO)
e) Air conditioning only (NO)

50. Auto configuration of device parameters

Enables or disables system auto configuration

51. Connection type

Indicates whether Control4 NRG is associated with a home automation module or the ClivetEye module

a) None
b) Home automation/BMS
c) ClivetEye module (not used)

52. Enabling/timeout

Home automation heartbeat verification time

53. H2O temperature setpoint delta to anticipate area switch-on

The area advance is only performed if the current water temperature of the system is not lower than the value indicated in this parameter

56. Maximum advance time for area switch-on

Area advance time if required

57. Primary circuit advance time

If the system has an inertial tank, start the heat pump before the thermostat requests it (check the time schedule), otherwise it would take a long time to heat the system and there would be a risk of reaching the setpoint well after the thermostat request.

62. Day away from home Swan2/Combo2

63. Use an Ethernet/RS485 converter

Indicates whether the Modbus communication is carried out via Ethernet and therefore using the Erman module

64. Hydronic system type

Indicates whether it is a 2- or 4-pipe system

65. Energy page display mode

Indicates how to display energy data in graphs

a) Consumption only
b) Consumption and production

66. Maximum air setpoint correction

Indicates how many offset degrees can be set for each terminal in relation to the area setpoint

67. Photovoltaic enabling threshold

Indicates the activation threshold (power produced by the photovoltaic system) for the I/O channels of the BMZRX photovoltaic module

69. Photovoltaic disabling threshold

Indicates the deactivation threshold (power produced by the photovoltaic system) for the I/O channels of the BMZRX photovoltaic module

69. Maintenance of exceeding the photovoltaic threshold

Indicates the minimum activation time for the I/O channels of the BMZRX photovoltaic module

70. Battery enabling threshold

See parameter 67

71. Battery disabling threshold

See parameter 68

72. Cooling automatic mode change hysteresis

Indicates the mode change hysteresis for Hid-T Smart devices

73. Heating automatic mode change hysteresis

Indicates the mode change hysteresis for Hid-T Smart devices

74. Dehumidification temperature delta

Indicates how much to adjust the terminal setpoint when the area requires dehumidification

75. Terminal operating mode when the area is in dehumidification mode

When the area requires dehumidification, the assigned terminals will operate according to the mode selected:

a) Current mode: maintains the current operating mode and ventilation of the terminals
b) Silent start-up: forces the terminals to switch on with silent ventilation (if available)
c) Automatic switch-on: forces the terminals to switch on with automatic ventilation

76. Automatic mode priority

Defines which module has the highest priority in determining the system mode change

a) Air renewal unit
b) Heat pump

PARAMETERS OF THE COMPONENTS

Below, we describe the parameters that **are set by the autoconfiguration** on the several components of the system; the list must be considered indicative and is an operative trace to be assessed, depending on the type and system configuration.

GAIA (version AB and AC) - Anti-dew compensation enabling (only in cooling)			
Modbus	Parameter	Value	Description
	27	1	Anti-dew compensation enabling circuit 1 ; 0 = deactivate
	892	1	Anti-dew compensation enabling circuit 2 ; 0 = deactivate
	901	1	Anti-dew compensation enabling circuit 3 ; 0 = deactivate

Enablement of DHW on Elfo Energy			
Modbus	Parameter	Value	Description
43686	50	2	Enablement of DHW production
43739	110		Introduce the excursion time of the valve
43576	119	1	DHW in heat and cool mode ; 2= if Wban
43569	140	1	Enablement of the plug-in card

ELFOEnergy SMALL			
Modbus	Parameter	Value	Description
43627	163	1	Select the supervision mode

ELFOFresh^2 CPAN-U 70-650			
Modbus	Parameter	Value	Description
1129	130	2	Enablement of the modbus ambient probe (always set to 2)
1160	161	0	Select the supervision mode
1137	138	2	Enablement of UR% ambient probe from Elfocontrol^3 EVO

ELFOFresh CPAN-U 17-51			
Modbus	Parameter	Value	Description
43639	130	2	Enablement of modbus ambient probe
43647	138	2	Enablement of UR% ambient probe from Elfocontrol^3 EVO
	161	0	Select the supervision mode

Mixing module			
Modbus	Parameter	Value	Description
1077	78	- -	Enables compensation for dew in cooling mode. 0 = deactivate, 1 = activate
1084	85	90 sec.	Time required to position VRad from closed to fully open
1085	86	400 num	Allows weighing the opening time of the valve,increase only if the mixing valve oscillates a lot (typical of two-way valves)

SYSTEM INTERFACE (DOMOTICS)

If the device DOMOX is present during the system configuration (p. 119) to the "Installation composition" screen, activate the "Interface module with domotics"

System architecture

The connection between CONTROL4 NRG and the home automation system is done using a device called "DOMOX - Home Automation interface module".

The home automation system must implement a modbus communication TCP/IP over ethernet connection

The reading/writing registers are NOT retentive, i.e. a possible lack of the Sten module power supply implies the loss of values written by the system.

The settings determined by the external system modify the local ones of CONTROL4 NRG ; it means that in the case of an external system disconnection, CONTROL4 NRG will maintain the last values set.

The only settings not stored are: zone Scenario , DHW Profile

They are In fact interpreted as forcing coming from an external scheduler with respect to scheduling set on CONTROL4 NRG .

As long as it is connected, the only one settings that the external system requires to be modified can not be changed locally acting on CONTROL4 NRG .

Communication mode

Deafult parameters Modbus TCP/IP side connection:

Address IP: 10.0.0.141

Doors TCP: 23

Modbus address: 190

By connecting to the address http://10.0.0.141:8680 You can change these settings (password required). Caution: changing settings RTU side will cause the lack of communication between CONTROL4 NRG and the DOMX module. The DHCP client is not active, do not enable it.

Currently Sten only accepts commands modbus 03 in reading and 16 in writing.

DOMX only accepts Modbus 03 read and 16 write commands.

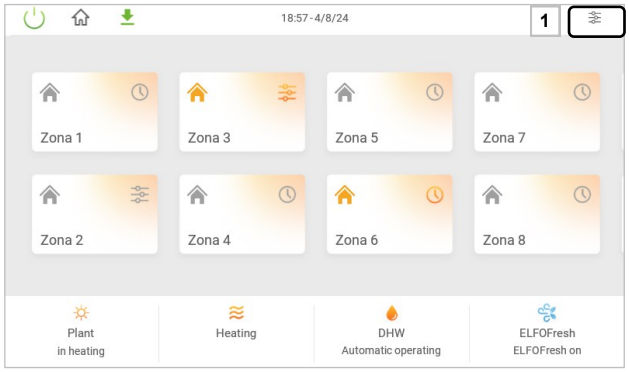
GREEN ICON
Connected domotics

RED ICON
Disconnected domotics

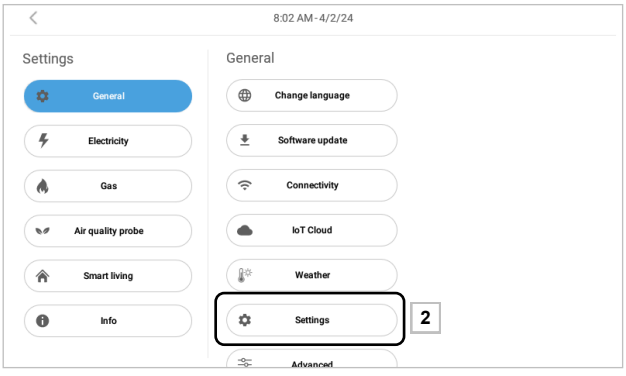
Connected domotics, but not in communication (Disabled)

CONFIGURATION (parameters 51-52)

Prolonged pressure “1”

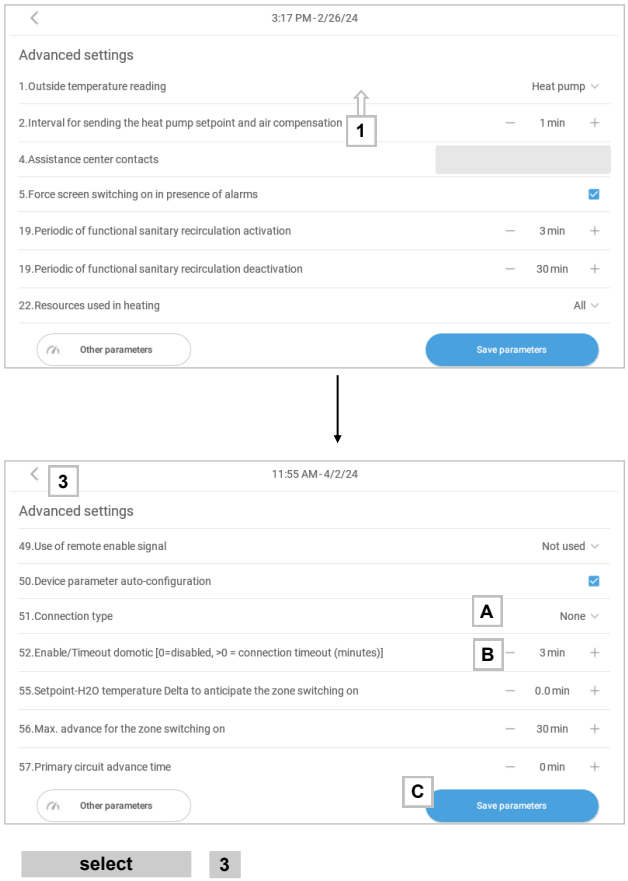


press for 2 sec. **1**



select **2**

Drag area “**1**” upwards.



select **3**

A - Enable parameter 51. Connection type

None

Domotic /BMS

B - Set the communication timeout (par.52)

0 minutes = system disabled

> 0 minutes = it is the communication check time with the home automation system.

After this time (which starts from the last valid response received by the home automation system) without having r eceived a reply from the home automation system, CONTROL4 NRG reports a lack of communication.

C - Save parametres

Log list

Heart bit for communication timeout handling

The register address 0 is used by CONTROL4 NRG to determine if the external system is properly connected. The system will have to write at least every minute, a value other than 0. CONTROL4 NRG , once read a value other than 0, consider the system connected and will use the data read on Sten in those "local" to thermoregulate system.

Just read the value, CONTROL4 NRG puts it back to 0, and if within a minute the system not puts it to a value different from 0, CONTROL4 NRG one considers disconnected and back to work in stand-alone mode, using its own local settings.

Command registers

CONTROL4 NRG performs a consistency check on the data read; If a register is 0, the command is considered invalid, and the setting is the locale domain. The temperature values, where not explicitly stated, are to be considered in tenths of a degree(°C/10): 213 means 21.3°C.

1 - System

1.1 Commands

Address	Description	Notes
1	Plant status	1 = off, 2 = on
2	Plant mode	1 = cooling, 2 = heating
3	Heat pump mode	1 = PDC disabled, 2 = only domestic hot water (DHW), 3 = auto mode
4	DHW mode	1 = DHW disabled, 2 = solar only , 3 = auxiliary heater only, 4 = auto mode
5	Away function	1 = away, 2 = At home
6	Alarm reset	1 = heat pump alarm reset, 2 = Fresh alarm reset 1, 3 = Fresh alarm reset 2 , 4 = Fresh alarm reset 3, 5 = Fresh alarm reset 4
7	Cooling Setpoint Heat pump	It is referred to the fixed setpoint of the unmixed circuit
8	Heating Setpoint Heat pump	It is referred to the fixed setpoint of the unmixed circuit

1.2 Stata

Address	Description	Notes
140	System status	1 = off, 2 = on
141	System mode	1 = cooling, 2 = heating
142	Heat pump status	0 = off (or standby), 1 = system, 2 = DHW
143	Outdoor temperature	
144	Heat pump alarm	0 = not alarm, 1 = alarm
145	Heat pump supply temperature	
146	Compressor heat pump power	0…100% ((in tenths of %)
147	Heat pump working Setpoint	

2 - Zone

2.1 Commands

For each zone you can set the commands listed in the table below.

There are 7 records for each zone

Zone	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Offset	10	17	24	31	38	45	52	59	66	73	80	87
Zone	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
Offset	616	623	630	637	644	651	658	665	672	679	686	693

Address (es. zone 1)	Description	Notes	Limits
Offset zone + 0 (**10** + 0 = 10)	Winter comfort Setpoint zone		8.0°C…35.0°C
Offset zone + 1 (**10** + 1 = 11)	Summer comfort setpoint zone		8.0°C…35.0°C
Offset zone + 2 (**10** + 2 = 12)	Delta winter setpoint eco zone	Positive value. In Eco mode will be subtracted from the comfort Setpoint	0.1°C…15.0°C
Offset zone + 3 (**10** + 3 = 13)	Delta summer setpoint eco zone	Positive value. In Eco mode will be added to the comfort Setpoint	0.1°C…15.0°C
Offset zone + 4 (**10** + 4 = 14)	Zone mode	1 = zone off, 2 = zone Eco, 3 = zone comfort	
Offset zone + 5 (**10** + 5 = 15)	Winter humidity Setpoint zone		10%...90%
Offset zone + 6 (**10** + 6 = 16)	Summer humidity Setpoint zone		10%...90%

Note: If mode zone = 0, The zone will follow the local programming set to CONTROL4 NRG (Or any area mode manual forcing)

2.2 Status

For each zone you can read the data listed in the table below.

There are 4 records for each zone

Zone	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Offset	150	154	158	162	166	170	174	178	182	186	190	194
Zone	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
Offset	700	704	708	712	716	720	724	728	732	736	740	744

Address (es. zone 1)	Description	Notes
Offset zone + 0 (**150** + 0 = 150)	Average temperature zone	
Offset zone + 1 (**150** + 1 = 151)	Average umidity zone	
Offset zone + 2 (**150** + 2 = 152)	Profile zone	1 = zone off, 2 = zone on eco mode, 3 = zone on comfort mode
Offset zone + 3 (**150** + 3 = 153)	Setpoint zone	

3 - Domestic Hot Water (DHW)

3.1 Commands

Address	Description	Notes	Limits
110	Setpoint reload DHW		25°C…55°C
111	Setpoint maintenance DHW		25°C…55°C
112	DHW profile	1 = Maintenance + recirculation, 2 = Maintenance, 3 = recirculation+ recharge, 4 = recharge	

3.2 Stata

Address	Description	Notes
200	DHW temperature	
201	DHW second temperature	
202	DHW profile	1 = Maintenance + recirculation, 2 = Maintenance, 3 = recirculation+ recharge, 4 = recharge
203	Solar temperature	
204	Solar status	0 = disable, 1 = active
205	DHW pump/ Recirculation	0 = disable, 1 = active
206	Heating element/DHW boiler	0 = disable, 1 = active
207	Antilegionella	0 = not in progress, 1 = in progress

4 - ElfoFresh

4.1 Commands

For each ElfoFresh (EF) you can set the commands listed in the table below.
There are zone 5 records for each ElfoFresh

ElfoFresh	1	2	3	4
Offset	115	120	125	130

Address (es. zone 1)	Description	Notes	Limits
Offset EF+ 0 (**115** + 0 = 115)	Winter Setpoint room temperature		18.0°C…26.0°C
Offset EF+ 0 (**115** + 1 = 116)	Summer Setpoint room temperature		22.0°C…28.0°C
Offset EF+ 0 (**115** + 2 = 117)	Winter room humidity Setpoint		5%…80%
Offset EF+ 0 (**115** + 3 = 118)	Summer room humidity Setpoint		45%…100%
Offset EF+ 0 (**115** + 4 = 119)	Functionnning mode	1 = EF disabled, 2 = EF fan mode only, 3 = auto mode	

4.2 Stata

For each ElfoFresh (EF) you can read the data listed in the table below.
There are 9 records for each ElfoFresh

ElfoFresh	1	2	3	4
Offset	210	219	228	237

Address (es. zone 1)	Description	Notes
Offset EF+ 0 (**210** + 0 = 210)	Room supply temperature	
Offset EF+ 0 (**210** + 1 = 211)	Room return temperature	
Offset EF+ 0 (**210** + 2 = 212)	Room air humidity	
Offset EF+ 0 (**210** + 3 = 213)	Outdoor air temperature	
Offset EF+ 0 (**210** + 4 = 214)	Ambient air setpoint	
Offset EF+ 0 (**210** + 5 = 215)	Status	0 = off, 1 = on
Offset EF+ 0 (**210** + 6 = 216)	Compressor	0 = off, 1 = on
Offset EF+ 0 (**210** + 7 = 217)	Dehumidify	0 = not in progress, 1 = In progress
Offset EF+ 0 (**210** + 8 = 218)	Alarm	0 = not on alarm, 1 = alarm

System architecture

The connection between the two systems is made via a KNX-Modbus gateway. The module takes care of creating the interface that enables communication between the Modbus RTU protocol on RS485 serial communications used by C4NRG and the KNX network.
C4NRG is a Modbus RTU “Master” device, and therefore does not allow other Master devices to be used on its network. The gateway then takes care of creating a Slave-to-Slave interface with the thermostats in the KNX network.
This document describes the registers required by the protocol.
At present, the Control4 NRG is only able to manage KNX thermostats.

Gateway setup

To enable communication with the Control4 NRG, the KNX-Modbus gateway must be configured as follows.

- Baudrate: 9600 bit/s
- Parity: None
- Stop bit: 1 bit
- Order of bits: MSB (most significant bit)
- Register address: 0
- Modbus address of the gateway: 200

List of registers

Listed below are the statuses and commands managed within the Control4 NRG.
The Modbus addresses given refer to the first thermostat only. The second thermostat will start from address 16, the third from 32, and so on.
It is of paramount importance for the correct operation of Control4 NRG to map all registers reported even if the thermostats do not provide the required mode.

Statuses

Modbus	Name	KNX data type	Modbus function	Maximum register value	Maximum KNX value
0	Air temperature	DPT_Value_Temp	04	1000	100
1	Humidity	DPT_Value_Humidity	04	1000	100
2	Setpoint	DPT_Value_Temp	04	1000	100
3	Mode	DPT_HVACMode	04	-	-
4	Ventilation type	DPT_FanMode	04	-	-
5	Seasonality	DTP_Heat/Cool	02	-	-
6	Heating valve	DPT_Switch	02	-	-
7	Cooling valve	DPT_Switch	02	-	-
8	Reserved				
9	Reserved				

If the thermostat only provides a unified object for managing the status of the valves, simply assign a register of your choice between 6 and 7 (heating valve/cooling valve).

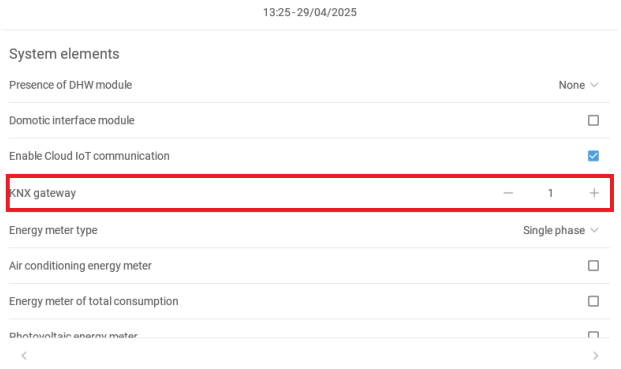
Controls

Modbus	Name	KNX data type	Modbus function	Maximum register value	Maximum KNX value
10	Heating setpoint	DPT_Value_Temp	06/16	1000	100
11	Cooling setpoint	DPT_Value_Temp	06/16	1000	100
12	Mode	DPT_HVACMode	06/16	-	-
13	Ventilation type	DPT_Switch	05/15	-	-
14	Seasonality	DPT_Heat/Cool	05/15	-	-
15	Thermostat lock	DPT_Switch	05/15	-	-

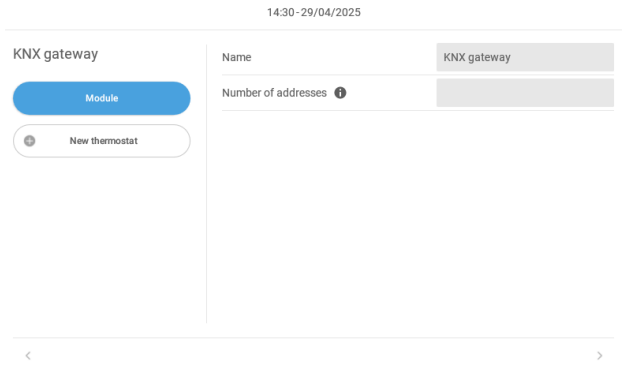
Thermostat setup on Control4 NRG

Once the KNX-side setup is done, the gateway and Control4 NRG can be connected via RS485 serial communications.
You can proceed to configure the equipment via the wizard. To access the setup wizard, follow the procedure given in the Control4 NRG manual.

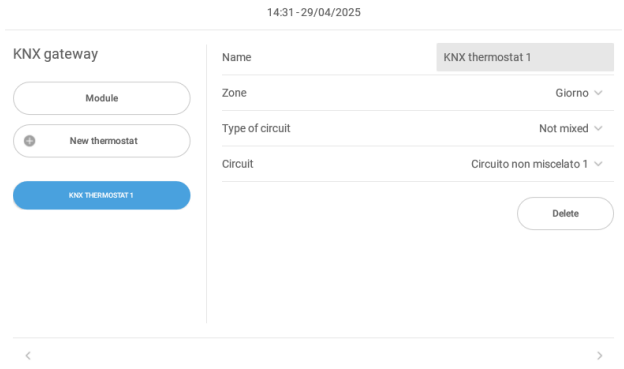
- In the “Equipment elements” section, add the KNX gateway.



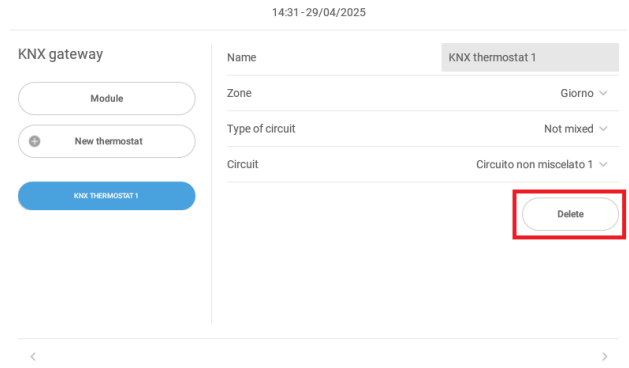
- Add the number of registers managed by the gateway (and rename if desired). Tap the “New Thermostat” button to add a thermostat

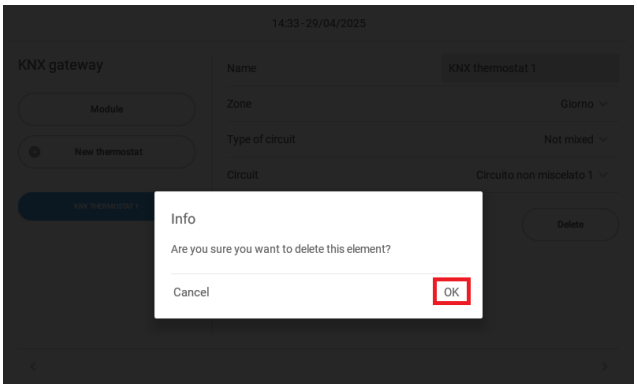


- Configure individual thermostats by selecting the area they belong to and the associated circuit.



- To delete a thermostat, press the “Delete” button and confirm.





Post-setup operations

After connecting the KNX gateway with the Control4 NRG and configuring the devices via the wizard, there may be a mismatch between the operating mode of the Control4 NRG and the thermostats. To force synchronisation, press and hold the KNX button on the gateway until the LEDs flash orange. Then release the button and check that the operation mode settings (mode, seasonality, etc.) are aligned between Control4 NRG and the connected thermostats.

Should the synchronisation fail, it is recommended to change the operation parameters manually from the Control4 NRG in order to overwrite the data in the gateway registers.

DISPOSAL

Disconeting

Only authorised personnel must disconnect the unit.
Avoid leak or spills into the environment.
Before disconnecting the unit, the following must be recovered, if present:
• refrigerant gas
• anti-freeze solutions in the water circuit
Awaiting dismantling and disposal, the unit can also be stored outdoors, if the electrical, cooling and water circuits of the unit have 100% integrity and are isolated, bad weather and rapid change in temperature will not result in any environmental impact.

Dismalting and disposal

The unit must always be sent to authorised centres for dismantling and disposal.
When dismantling the unit, the fan, the motor and the coil, if operating, may be recovered by the specialist centres for reuse.
All the materials must be recovered or disposed of in compliance with the corresponding national standards in force.
For further information on the decommissioning of the unit, contact the manufacturer.

Directive EC RAEE

The manufacturer is registered on the EEE National Register, in compliance with implementation of Directive 2012/19/EU and relevant national regulations on waste electrical and electronic equipment.
This Directive requires electrical and electronic equipment to be disposed of properly.
Equipment bearing the crossed-out wheelie bin mark must be disposed of separately at the end of its life cycle to prevent damage to human health and to the environment.
Electrical and electronic equipment must be disposed of together with all of its parts.
To dispose of “household” electrical and electronic equipment, the manufacturer recommends you contact an authorised dealer or an authorised ecological area.
“Professional” electrical and electronic equipment must be disposed of by authorised personnel through established waste disposal authorities around the country.
In this regard, here is the definition of household WEEE and professional WEEE:
WEEE from private households: WEEE originating from private households and WEEE which comes from commercial, industrial, institutional and other sources which, because of its nature and quantity, is similar to that from private households. Subject to the nature and quantity, where the waste from EEE was likely to have been by both a private household and users of other than private households, it will be classed as private household WEEE;
Professional WEEE: all WEEE which comes from users other than private households.
This equipment may contain:
refrigerant gas, the entire contents of which must be recovered in suitable containers by specialised personnel with the necessary qualifications;
• lubrication oil contained in compressors and in the cooling circuit to be collected;
• mixtures with antifreeze in the water circuit, the contents of which are to be collected;
• mechanical and electrical parts to be separated and disposed of as authorised.
When machine components to be replaced for maintenance purposes are removed or when the entire unit reaches the end of its life and needs to be removed from the installation, waste should be separated by its nature and disposed of by authorised personnel at existing collection centres.

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