

KEYPAD



**Operating manual for the
user and installer**



UT 07-2026

The control keyboard is an accessory supplied separately.

Dear Customer,

Congratulations for choosing this product

Clivet has been working for years to offer systems able to assure the maximum comfort for a long time with highly-reliable, efficient, high-quality and safe solutions.

The target of the company is to offer advanced systems, that assure the best comfort and reduce energy consumption as well as the installation and maintenance costs for the entire life-cycle of the system.

With this manual, we want to give you information that is useful for all phases: from reception, installation and use to disposal - so that such an advanced system can provide the best performances during installation and use.

Best regards and have a good read.

CLIVET Spa

The original instructions are written in Italian.

All other languages are translations of the original instructions.

The data contained in this manual is not binding and may be changed by the manufacturer without prior notice. Reproduction, even partial, is FORBIDDEN.

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General

1. About the manual

- The manual ensures proper installation, use and maintenance of the unit
- this manual is an integral and essential part of the product
- keep this manual together with the wiring diagram in an accessible place for the operator. It should always accompany the product, even if it is transferred to another owner or user
- recipients of the instructions in the manual are indicated in the "Recipients" chapter
- the recipient is indicated at the beginning of each section of the manual
- recipients, to the extent of their responsibility, are required to read the instructions and warnings in this manual as they provide important information on safe installation, use and maintenance.

Remember that:

- the manufacturer accepts no liability for damage to persons or property resulting from failure to observe the rules in this manual
- failure to observe the instructions in this manual will result in forfeiture of the warranty
- the manufacturer reserves the right to make changes or improvements to this documentary material and to the units without prior notice
- visit the manufacturer's website for up-to-date details
- this manual contains proprietary information, all rights reserved, it may not be reproduced or photocopied, either in whole or in part, without the prior written consent of manufacturer.

1.1 Symbols

The symbols in the following chapter can be found in the manual and on the product, and provide quick and clear information for correct and safe use.

1.1.1 Safety symbols

Danger

This symbol indicates warnings, failure to comply may result in serious harm to health and fatal injuries.

Warning

This symbol indicates warnings, failure to comply may result in irreparable damage to the product or harm to the environment.

Prohibition

This symbol indicates operations that must never be carried out.

Note

This symbol indicates important information.

1.1.2 Editorial symbols

In the texts

Purpose of the action: indicates the purpose of a sequence of actions.

(it is identified by bold text followed by :)

- this symbol indicates actions that are required
- this symbol indicates the expected result after an action
- this symbol indicates the lists

In the images

- 1 uniquely indicates a component
- A indicates a group of components
- 1 indicates a sequence of actions

In the images, dimensions are expressed in millimetres unless otherwise indicated.

1.1.3 Symbols on the unit

The following symbols are used in some parts of the product:

Caution flammable material:

The refrigerant gas is flammable and odourless. Do not place it near continuously operating ignition sources (naked flames, gas appliances, electric stoves, lit cigarettes, etc.).

Instructions for the User

Read the User Manual carefully before using the product.

Instructions for the User

Read the Installer Manual carefully before installing the product.

Instructions for the Technical Support Service

Read the Technical Support Service Manual carefully before carrying out any operation on the product.

1.2 Recipients

1.2.1 User

Inexperienced person who is capable of:

- operating the product safely for people, for the product and for the environment
- interpreting elementary diagnostics of faults and abnormal operating conditions
- carrying out simple adjustment, test and maintenance operations.

1.2.2 Installer

Experienced and qualified person able to:

- to put the product in a safe operating condition for people, for the product and for the environment
- to comply with the regulations in force in the country of destination
- to provide the user with basic information on safe use and maintenance in accordance with this manual and current national regulations
- comply with the regulations in force in the country of destination.

1.2.3 Technical support service

Experienced person, qualified and authorised directly by the manufacturer to:

- carry out a diagnosis of product faults and abnormal operation, possibly using information provided by the user
- rectify faults, carrying out the necessary repairs, replacements and adjustments that will restore the product's ability to function correctly and safely for the people, for the product and for the environment
- comply with the regulations in force in the country of destination.

1.3 Document organisation

- The manual is divided into sections, each dedicated to one or more recipients
- the recipient is indicated at the beginning of each section of the manual.

1.4 General safety warnings

 Read the "About the manual" chapter carefully before proceeding with any operation.

 Each chapter contains specific warnings for the operations given therein. These warnings should be read before starting any activities.

 For every operation, always comply with current national regulations.

 All personnel must be aware of the operations and of the hazardous situations that may arise when starting any operations on the unit.

 Any contractual and non-contractual liability for damage caused to persons, animals or property by installation, adjustment or maintenance errors or improper use is excluded.

 Any uses not expressly indicated in this manual are not permitted.

 Do not change or tamper with the device as this can lead to hazardous situations.

 Use appropriate safety clothing and equipment.

 The manufacturer accepts no liability for failure to comply with current safety and accident prevention regulations.

 The manufacturer reserves the right to make changes to its models at any time to improve its product, subject to the essential characteristics described in this manual.

 The manufacturer is not obliged to add these changes to units previously manufactured, already delivered or being built.

 The unit is suitable for use by children aged 8 years and over and by persons with reduced physical, sensory or mental capabilities or lack of experience or knowledge if they are properly supervised or have received instructions on the safe use of the device and have understood the associated hazardous situations. Children must not play with the device. Cleaning and maintenance operations must not be carried out by children without supervision.

 It is forbidden to touch the device with wet

or damp parts of the body.

- ⊖ It is forbidden to carry out any operation before disconnecting the device from the mains power supply by turning the system's main switch to "off".
- ⊖ It is forbidden to change the safety or control devices without the device manufacturer's authorisation and instructions.
- ⊖ It is forbidden to pull, unplug or twist the electrical cables coming out of the device, even if it is disconnected from the mains power supply.
- ⊖ It is forbidden to introduce objects and substances through the air intake and supply grills.
- ⊖ It is forbidden to open the access doors to internal parts of the unit without first turning the system's main switch to "off".

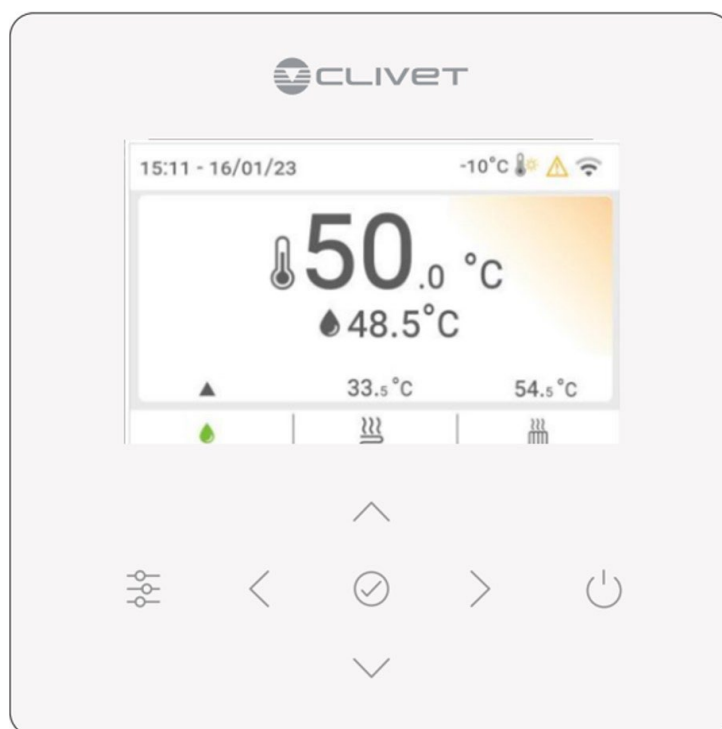
KEYPAD

User section



User section

2. Explanation of buttons



Buttons	Name	Function
	MENU/RETURN	To open the various menus from the HOME page. To return to the previous level or page. Long button press to return straight to the home page.
	OK	To enter a submenu To confirm entered values
	ON/OFF	To switch on/off zone 1/zone 2/DHW Press the button for 3 seconds to switch on/off zone 1/zone 2/DHW
	LEFT - RIGHT DOWN - UP	To move the cursor on the screen/navigate in the menu structure/adjust parameter settings
	UNLOCK	Press the button for 1.5 seconds to Unlock/Lock the keypad

Auto-restart function

The unit has an auto-restart function: in the event of a power failure (e.g. blackout), when the power supply is restored the unit restarts at the last selected settings.

2.1 Explanation of symbols

 -10°C	Outdoor temperature		Silent mode (on)
15:11 - 16/01/23	Date and hour		Wi-Fi (on)
 50.0 °C 48.5°C	Temperature setting Temperature measured		Smart grid (on)
	Keypad lock		Alarm (active)

	Control based on the room temperature		Appliance zone type: floor heating
	Control based on the water temperature		Appliance zone type: radiator
	Appliance zone type: fan coil		Appliance zone type: domestic hot water

Scheduling information

08:20	Scheduling start time	30°C	Set temperature
	Heating mode		

Symbols displayed with modes on

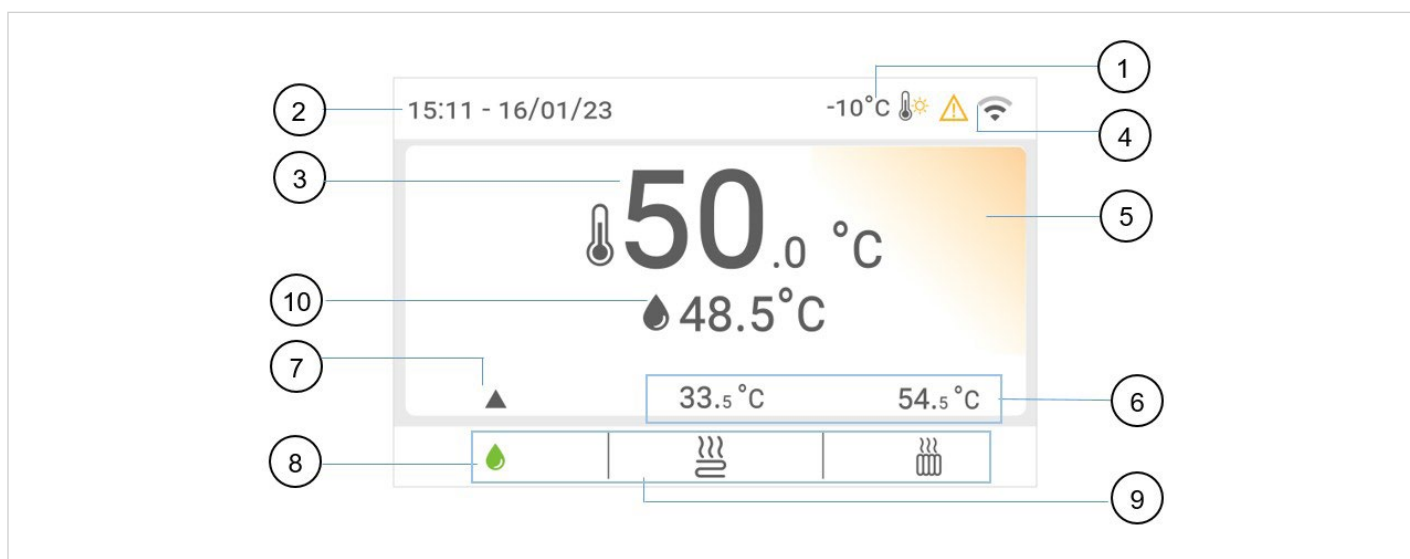
	Auxiliary electric heater		Antifreeze mode
	Daily scheduling		Defrosting
	Silent mode		Auxiliary heat generator
	Holiday mode		Solar
	Compressor		Anti-legionella
	Circulation pump		Weekly scheduling
	Eco mode		Boost mode

 Boost mode only available for Edge Pro 4-16kW.

Smart grid

Energy cost	Free	Low	High
Smart grid			
Energy source	Photovoltaics	From the mains	From the mains
Energy absorbed	Average	Average	Peak

2.2 Main screen



- 1 Outdoor air temperature
- 2 Current date and time
- 3 Selected function set point
- 4 Display of operation icons
- 5 Different colours indicate the operating modes, Heating (yellow), Cooling (blue) and Stand-by (Grey)
- 6 Current temperatures of the other functions
- 7 Selected function indicator
- 8 Green: function selected

- 9 Available functions
- 10 Temperature detected with selected function

The following data can be displayed:
DHW, fan coils, floor heating and radiators.

To display:

- press the **LEFT** and **RIGHT**

DHW



FLOOR HEATING



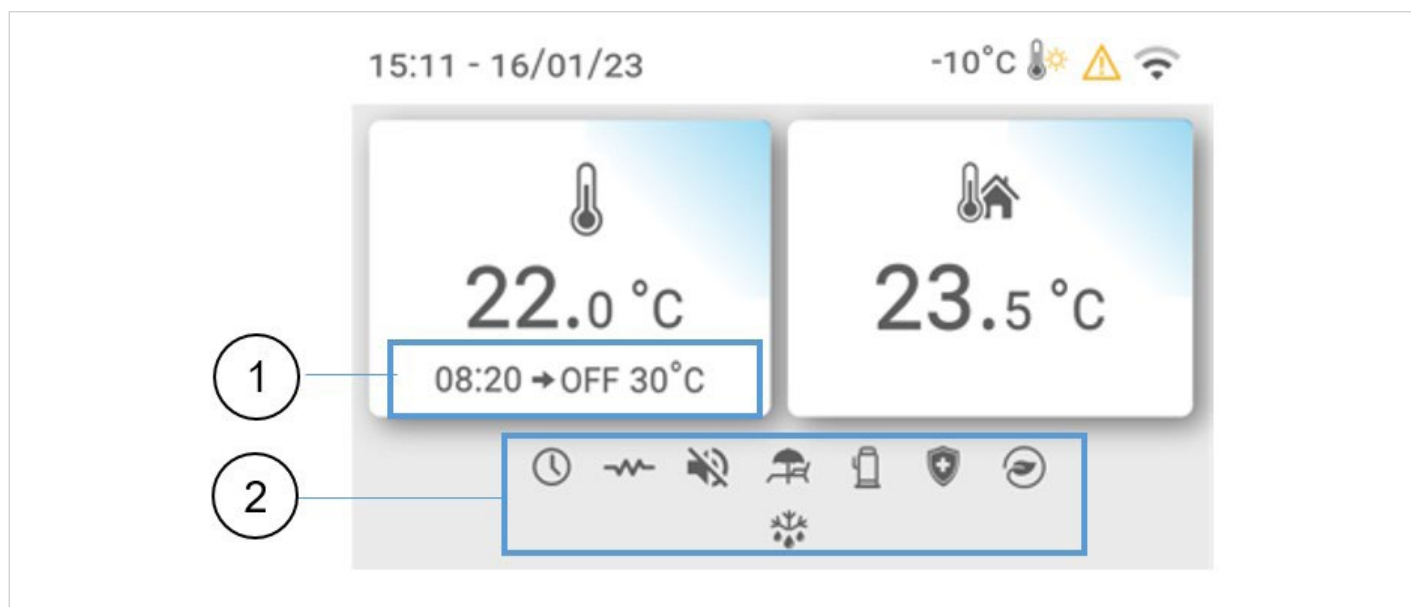
RADIATORS



2.3 Secondary screen

To open the secondary screen:

- ▶ select one of the available function
- ▶ press OK



1 Scheduling information

2 Modes on

i The other symbols have been described above

3. Menu structure

► Mode

- Heating
 - Cooling
 - Auto
-

► Scheduling

- Zone 1 daily timer
 - | Time slots from 1 to 6
 - Zone 2 daily timer
 - | Time slots from 1 to 6
 - DHW daily timer
 - | Time slots from 1 to 6
 - Zone 1 weekly timer
 - | Schedule from 1 to 4
 - Zone 2 weekly timer
 - | Schedule from 1 to 4
 - DHW weekly timer
 - | Schedule from 1 to 4
 - Holiday away
 - | Current state
 - | Start date
 - | Finish date
 - | Heating mode (enabled/disabled)
 - | DHW mode (enabled/disabled)
 - | Anti-legionella (enabled/disabled)
 - Holiday home
 - | Current state
 - | Start date
 - | Finish date
 - | Zone 1 holiday home timer
 - | Zone 2 holiday home timer
 - | DHW holiday timer
-

► Climatic curves

- Zone 1 heating mode
 - | Climatic curve (enabled/disabled)
 - | Climatic curve type
 - | Temperature level
 - | Temperature offset
- Zone 1 cooling mode
 - | As above

- Zone 2 heating mode
| As above
- Zone 2 cooling mode
| As above

► DHW settings

- Anti-legionella
| State (enabled/disabled)
| Operation day
| Start-up time
- Fast DHW mode (enabled/disabled)
- Tank heating (enabled/disabled)
- DHW pump
| Time settings from 1 to 12

► Settings

- Silent and boosted
| State (enabled/disabled)
| Mode setting
| Timer 1
| Timer 2
- Additional/backup electric heater
| State (enabled/disabled)
- Display setting
| Time
| Date
| Language
| Backlight
| Buzzer
| Screen lock
| Screen lock time
- Wlan
| Smart link (enabled/disabled)
| Reset WLAN settings
- Force defrost (enabled/disabled)

► Unit state

- Operation parameters
| See Parameters table
- Energy metering
| Heating energy data
| Cooling energy data
| DHW energy data
- SN Display
- Service call

► **Alarm info**

- See Alarms table
-

► **FAQ**

► **Network configuration settings**

- Network configuration (WLAN)

4. Basic operations

4.1 Locking and unlocking the keypad

To lock/unlock the keypad:

- ▶ simultaneously press **LEFT + RIGHT** for 1.5 seconds

 The display will dim if left idle for 30 seconds and it will switch off after a further 10 seconds.

4.2 Function ON/OFF

To switch on/off:

- ▶ select the function
- ▶ press **ON/OFF**

4.3 Temperature control

To control:

- ▶ select the function
- ▶ press **DOWN AND UP**
- ▶ set the temperature

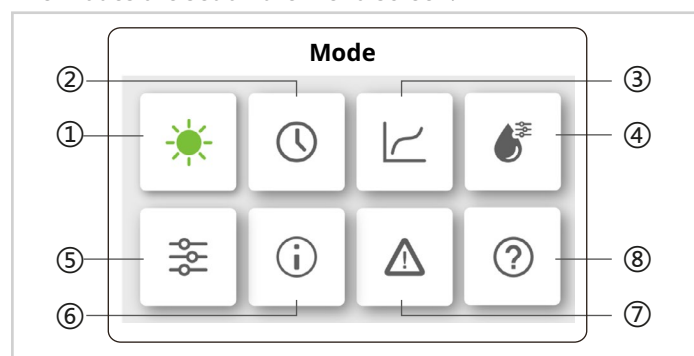
4.4 Terminology used

The terms related to this unit are shown in the table below

Sign	Description
DHW	Domestic hot water
WLAN	Wi-Fi network
FAQ	Information

5. Mode

The modes are set on the Menu screen.



- 1 Operational modes
- 2 Scheduling
- 3 Climatic curves
- 4 DHW
- 5 Settings
- 6 Unit state
- 7 Alarms
- 8 FAQ

To open the Menu screen:

- press **MENU/RETURN**

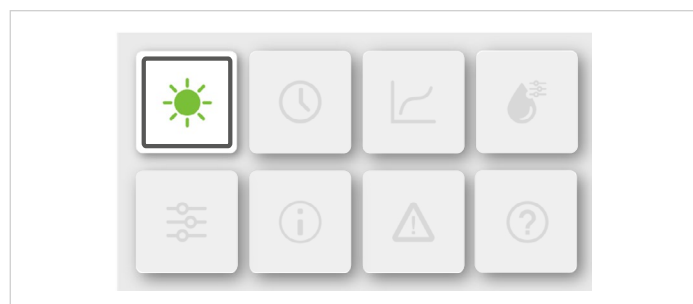
To select the function

- press **RIGHT** and **LEFT**
- go on the function
 - the icon turns green
- press **OK**

Indicator function

- press OK to activate
 - the indicator becomes
- press OK to deactivate
 - the indicator becomes

5.1 Operational modes



Available operating modes:

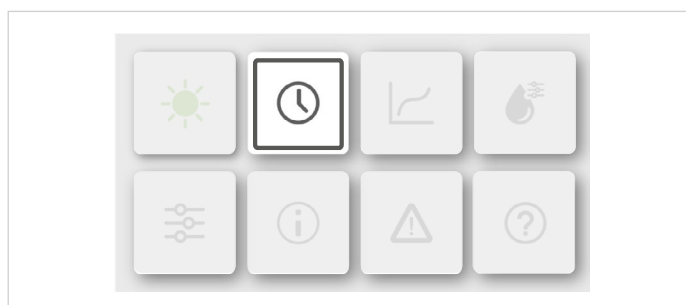
- Cooling
- Heating
- Automatic

i In Automatic mode, the unit automatically selects the operating mode between Cooling and Heating based on the outdoor air temperature and system settings.

To select the operating mode:

- press **RIGHT** and **LEFT**
- go on the mode
- press **OK**

5.2 Scheduling



The function enables daily and weekly scheduling for each zone.

Schedule		
Zone 1 daily timer	ON	>
Zone 2 daily timer	ON	>
DHW daily timer	OFF	>
Zone 1 weekly schedule	ON	>

Schedule		
Zone 2 weekly schedule	ON	>
DHW weekly schedule	ON	>
Holiday away	OFF	>
Holiday home	ON	>

Select the scheduling:

- press **DOWN** AND **UP**
- go on the scheduling
- press **OK**

5.2.1 Daily scheduling

Up to 6 time slots can be set.

Scheduling is repeated every day.

Zone 1 daily timer				
No.	Time	Mode	Temp.	
01	01:00	☀	26°C	●
02	20:00	☀	26°C	●
03	00:30	OFF	0°C	●
04	00:30	☀	26°C	●

Time: sets the command activation time

Mode: sets the operating mode. If it is OFF, the zone switches off at the set time.

Temp: sets the desired temperature

State: enables or disables the command

- ❗ Use the same logic to set Zone 2 and DHW.
- ❗ If the Zone 2 and DHW functions are disabled, they will not be visible on the screens.

5.2.2 Weekly scheduling

Scheduling is repeated every week.

Up to 4 schedules can be set.

Zone 1 weekly schedule		
Schedule 1	ON	>
Schedule 2	ON	>
Schedule 3	OFF	>
Schedule 4	ON	>

Select the scheduling:

- ▶ press **DOWN AND UP**
- ▶ go on the scheduling
- ▶ press **OK**

Zone 1 weekly schedule	
Weekly schedule	●

To switch on:

- ▶ press **OK**

Zone 1 weekly schedule	
Weekly schedule	●
Day	Every day >
Control	>

To select the day:

- ▶ press **DOWN AND UP**
- ▶ go on the day
- ▶ press **OK**

Zone 1 daily timer	
Sunday	☑
Monday	○
Tuesday	○
Wednesday	○

To select the daily scheduling:

- ▶ press **DOWN AND UP**
- ▶ go on the Command (N.)
- ▶ press **OK**

Zone 1 daily timer				
No.	Time	Mode	Temp.	
01	01:00	☀	26.5°C	●
02	20:00	☀	26.5°C	●
03	00:30	☀	26.5°C	●
04	00:30	☀	26.5°C	●

- ❗ Use the same logic to set Zone 2 and DHW.

5.2.3 Holiday away

This function prevents the system from freezing during winter holidays away from home and restarts the unit before returning home, while at the same time limiting consumption of the unit when not in use.

To activate the function:

- ▶ press **OK**

Holiday away

Current state ☐

Holiday home

Current state ☐

Holiday away

Current state ☐

From 15-08-2022

A 17-09-2022

Heating mode

Holiday home

Current state ☐

From 15-08-2022

A 17-09-2022

Zone 1 holiday timer OFF >

Holiday away

DHW mode ☐

Disinfection ☐

Holiday home

Zone 2 holiday timer OFF >

DHW holiday timer OFF >

To set:

- ▶ press **DOWN AND UP**
- ▶ go on the function
- ▶ press **OK**

Current state: function state

From: sets the command activation date

To: sets the command deactivation date

i If the Heating mode, DHW mode and Disinfect functions are disabled, they will not be visible on the screens.

5.2.4 Holiday home

When you are in the house, this function allows you to override the normal schedule without changing it.

To activate the function:

- ▶ press **OK**

To set:

- ▶ press **DOWN AND UP**
- ▶ go on the function
- ▶ press **OK**

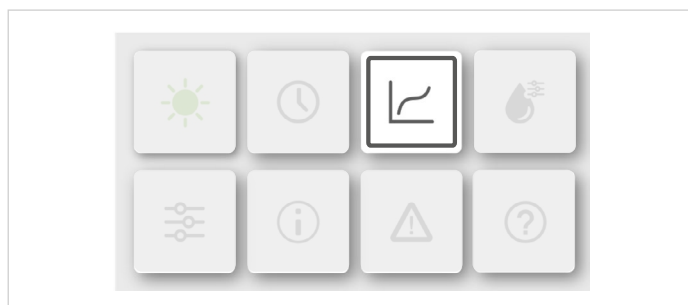
Current state: function state

From: sets the command activation date

To: sets the command deactivation date

Set scheduling: Zone 1 holiday timer , Zone 2 holiday timer and Holiday DHW timer.

i If Holiday home is disabled, the functions will not be visible on the screens.

5.3 Climatic curves

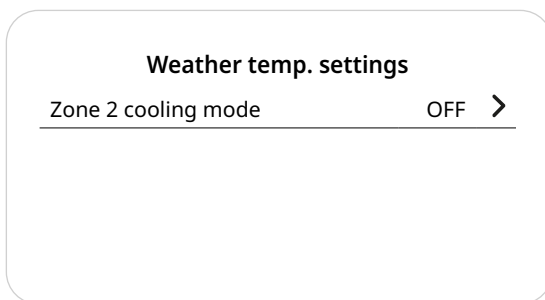
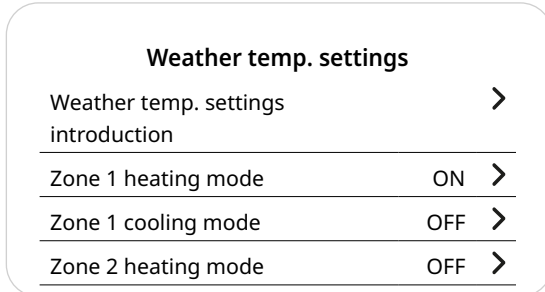
The function is used to automatically set the water temperature of the system according to the outdoor

temperature.

As the outdoor temperature increases, the request for room heating is reduced.

To activate the function:

- press **OK**

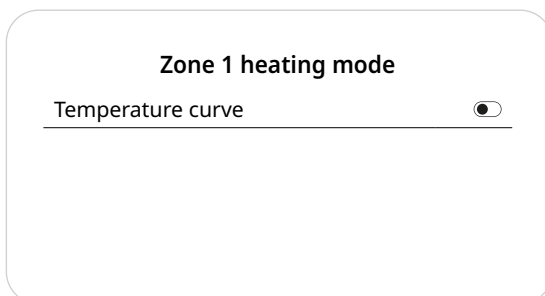


i If climatic curves are selected, it is not possible to control the system water temperature set (on the main screen).

i The function is not available in Holiday away and Holiday home mode.

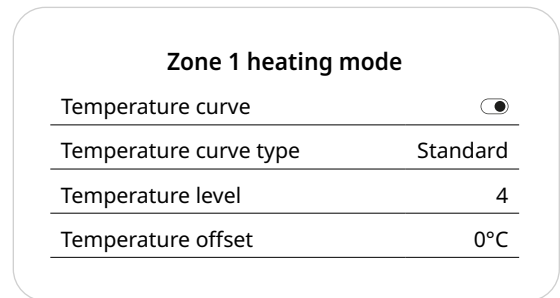
Select the Climate zone:

- press **DOWN AND UP**
- go on the Zone
- press **OK**



To switch on:

- press **OK**



Temperature curve: function state
 Temp curve type: select between Standard, Customised ECO
 Temperature level: 8 preset curves are available
 Temperature offset: curve temperature control

Standard function:

- 8 preset curves
- curve temperature control

ECO function:

- 8 preset curves
- if the ECO timer is off, the unit always operates in ECO mode.
- if the ECO timer is on, the unit operates in ECO mode according to the start and finish time

Customised function (installer use):

- operating parameter control
- curve temperature control

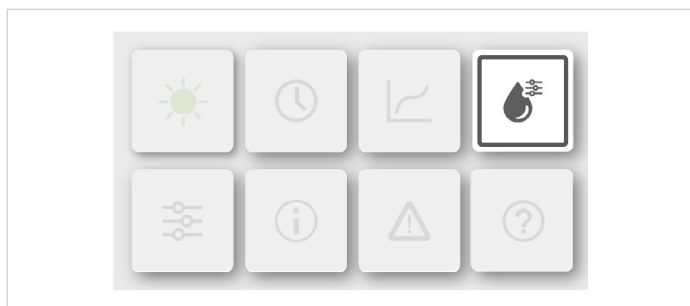
i The ECO function is only on for Zone 1 heating mode for one zone.

i If the Temperature curve function is disabled, it will not be visible on the screen.

i Use the same logic to set Zone 1 cooling mode, Zone 2 heating mode and Zone 2 cooling mode.

i If the DOUBLE ZONE function is disabled, the Zone 2 heating/cooling mode setting will not be visible on the screens.

5.4 DHW



DHW mode for domestic hot water production includes the following functions:

- DISINFECT (anti-legionella)
- Fast DHW
- Tank heating
- DHW pump (DHW circulation)

To activate the function:

- press **OK**

DHW settings	
Disinfection	ON >
Fast DHW	☒
Tank heater	☒
DHW pump	OFF >

Disinfect (anti-legionella)

The DISINFECTION function is used to eliminate legionella bacteria by raising the storage tank temperature to 65 - 70°C set on the HMI.

- i** During the disinfect function, if DHW scheduling is on, disinfection will be interrupted without any prior notice.

Select Disinfect:

- press **DOWN AND UP**
- go on the function
- press **OK**

Disinfection	
Current state	☒

Disinfection	
Current state	☒
Operation day	Every day
Start	01:00

To set:

- press **DOWN AND UP**
- go on the function
- press **OK**

Current state: function state

Operation day: sets the operation day or week.

Start: sets the command activation time

Fast DHW

The function is used to force DHW mode for domestic hot water production.

Select Fast DHW:

- press **DOWN AND UP**
- go on the function
- press **OK**

DHW settings	
Disinfection	ON >
Fast DHW	☒
Tank heater	☒
DHW pump	OFF >

- i** The function is used to activate other auxiliary sources available for DHW heating.

- i** The function stops automatically when the temperature is achieved.

Tank heating

The Tank heating function forces the water heating in the water tank (using auxiliary sources).

Select Tank heater:

- press **DOWN AND UP**
- go on the function
- press **OK**

DHW settings

Disinfection	ON	>
Fast DHW	☐	
Tank heater	☐	
DHW pump	OFF	>

DHW pump

The DHW Pump function recirculates the water in the water system.

There are 12 settings available lasting 5 minutes each.

Select DHW Pump:

- ▶ press **DOWN AND UP**
- ▶ go on the function
- ▶ press **OK**

DHW pump

No.	☐	Time
01	☐	01:00
02	☐	20:00
03	☐	00:30
04	☐	00:30

5.5 Settings



Setting modes available:

- Silent mode and boosted
- Backup heater
- Display setting
- WLAN setting
- Force defrost

To select:

- ▶ press **RIGHT** and **LEFT**
- ▶ go on the function
- ▶ press **OK**

Settings

Silent and boosted	ON	>
Backup heater	☐	
Display setting		>
WLAN setting		>

Settings

Force defrost	☐
---------------	--------------------------

Silent and boosted

Silent Mode enables quieter operation of the unit. There are 2 Silent Mode levels:

- Silent
- Super silent

To switch on:

- ▶ press **OK**

To set:

- ▶ press **DOWN AND UP**

► go on the function

► press **OK**

Silent mode: function state

Mode setting: select the level

Timer 1: activates the function

From: sets the command activation time

To: sets the command deactivation time

Boost

Heating operation level

Adjusts the heating mode operation level.

The higher the level, the greater the unit's heating capacity.

The noise level and power consumption may be higher.

The default setting is 0 (standard level).

Cooling operation level

Adjusts the cooling mode operation level.

The mode is the same as for heating.

i Use the same logic to set Silent mode timer 2.

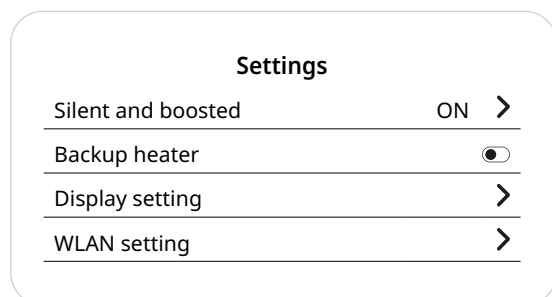
i If neither of the time slots are selected, Silent mode is always on, whereas if it is enabled, it follows the time schedule.

i If the start time is later than the finish time, Silent mode will run all day.

Backup heater

Available as an accessory or configuration.

The Backup heater function forces the backup heater on.



To set:

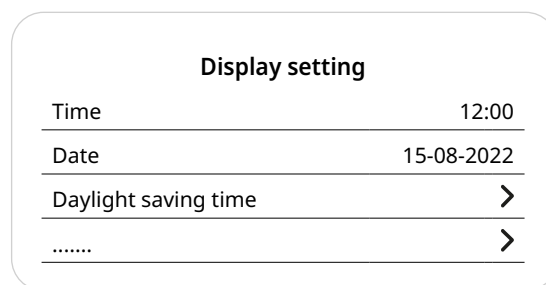
► press **DOWN AND UP**

► go on the function

► press **OK**

Display setting

The function is used to set the interface.



To set:

► press **DOWN AND UP**

► go on the function

► press **OK**

Time: sets the current time

Date: sets the current date

Daylight saving time: sets the daylight saving start time and end time

Language: language selection

Sound signal: sets the sound signal

Backlight: sets the screen backlight

Screen lock: sets the screen lock

Screen lock time: sets the screen lock time

Decimal separator: sets the type of decimal separator

WLAN setting

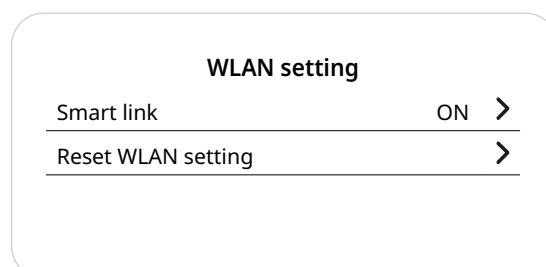
The unit can be controlled and managed through the SmartHome App via a Wi-Fi module built into the HMI, which provides various features.

Before connecting the WLAN, check that the router is switched on and the HMI is in a position to receive the wireless signal.

The router must have a 2.4GHz bandwidth.

It is advised against using special characters (e.g. punctuation, spaces, etc.) in the WLAN name.

If the router or network password is changed, it may be necessary to delete the units linked to the App and pair them again.



⚠ Check the keypad code on the SN screen.

To set:

- ▶ press **DOWN AND UP**
- ▶ go on the function
- ▶ press **OK**

Smart link

Every time Smart link is used, the WLAN connection is activated for 5 minutes.

Start the app to connect to the unit.

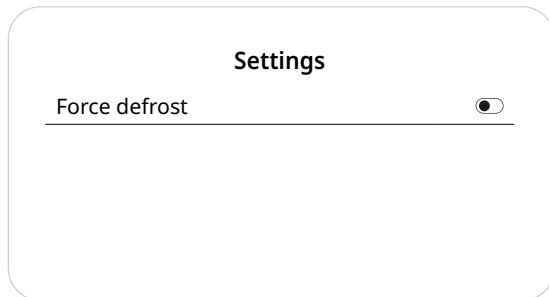
Reset WLAN setting

If the network is reset, the unit will no longer be connected to the app.

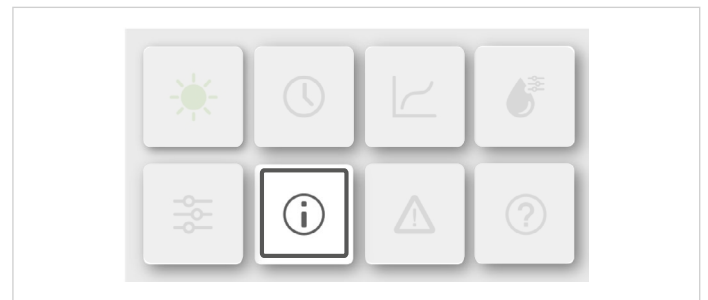
Repeat the WLAN set-up procedure.

Force defrost

When the defrosting function is finished, the indicator automatically switches back to OFF.

**To switch on:**

- ▶ press **OK**

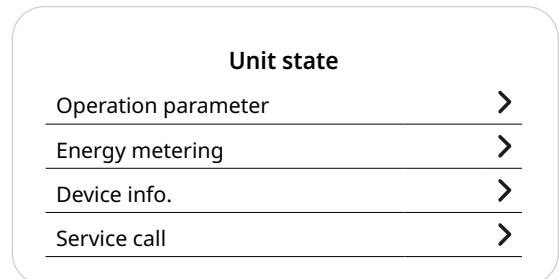
5.6 Unit state

The Unit status menu displays the following functions:

- Operation parameter: operating parameter control
- Energy metering: energy consumption control
- Device info.: displays the code paired with the master or slave unit
- Service call: displays the contacts needed to call for assistance

To select:

- ▶ press **DOWN AND UP**
- ▶ go on the function
- ▶ press **OK**

**Operation parameter**

The Operation parameter menu is used by the installer or the support technician to check the operation parameters. The values shown on the pages are only indicative.

Operation parameter			
Unit	No.		
00	1	Online unit number	
00	2	ODU model	
00	3	Operation mode	Heating
00	4	Operation status	ON

To display:

- ▶ press **DOWN AND UP**

Energy metering

The function enables the production, power and efficiency of

the unit to be checked.

Immediate information:

- Heating energy data *
- Cooling energy data *
- DHW energy *

To display the data:

- Energy data: to check daily, weekly, monthly or yearly data or total data
- Data log: to check the data from different years

⚠ * If - - - is displayed, the function is disabled.

ⓘ COP/EER is calculated under normal operating conditions of the unit.

To select:

- ▶ press **DOWN AND UP**
- ▶ go on the function
- ▶ press

Energy metering

Heating energy data	>
Cooling energy data	>
DHW energy	>

Heating energy data

Heating energy data

Energy data	>
Historical data	>

Energy data

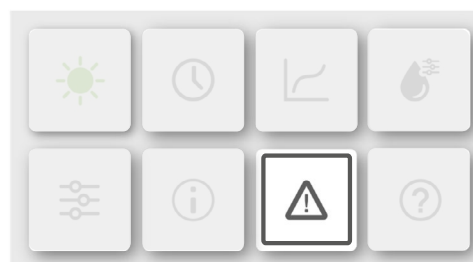
Thermal energy: now

Production
RE production
Consumption
COP

Thermal energy: now

Total	$\hat{\vee}$	$\langle \rangle$
Production		
RE production		
Consumption		
COP		

5.7 Alarms



The alarm code displays the meaning of error codes in case of failure or malfunction.

Error info.

Unit	Code	Time	Date

To display:

- ▶ press **DOWN AND UP**
- ▶ go on the line
- ▶ press

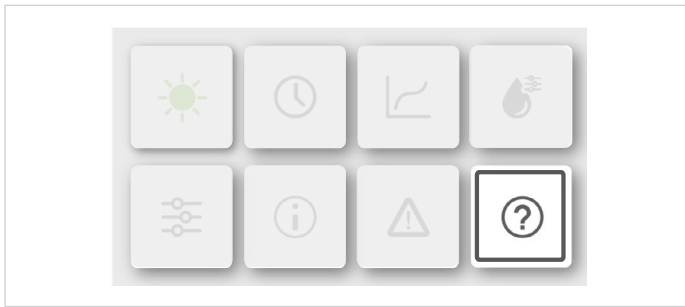
Error info.

Unit	Code	Time	Date

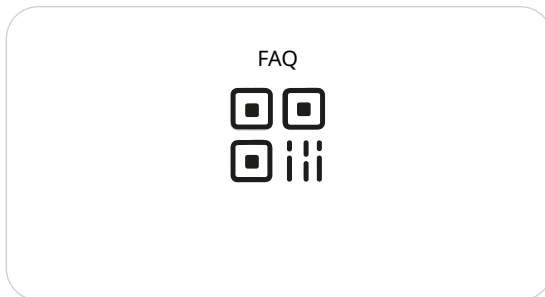
Press OK to scroll through the list of all recorded faults.

Historical data

5.8 FAQ



Scan the QR code for more information.



6. Network configuration settings

6.1 Network configuration (WLAN)

The unit can be controlled and managed through the Clivet Eye App via a Wi-Fi module built into the HMI, which provides various features.

⚠ Before connecting the WLAN, check that the building's router is switched on and the HMI is in a position to receive the wireless signal well. The router must have a 2.4GHz bandwidth.

⚠ It is advisable not to connect more than 10 units to one router, as the network signal may be too weak or unstable.

i It is advised against using special characters (e.g. punctuation, spaces, etc.) in the WLAN name.

If the router or network password is changed, it may be necessary to delete the units linked to the App and pair them again.

The appearance and functions of the App may differ from how they are in this document depending on the release of post-publication updates.

Procedure for management via the App:

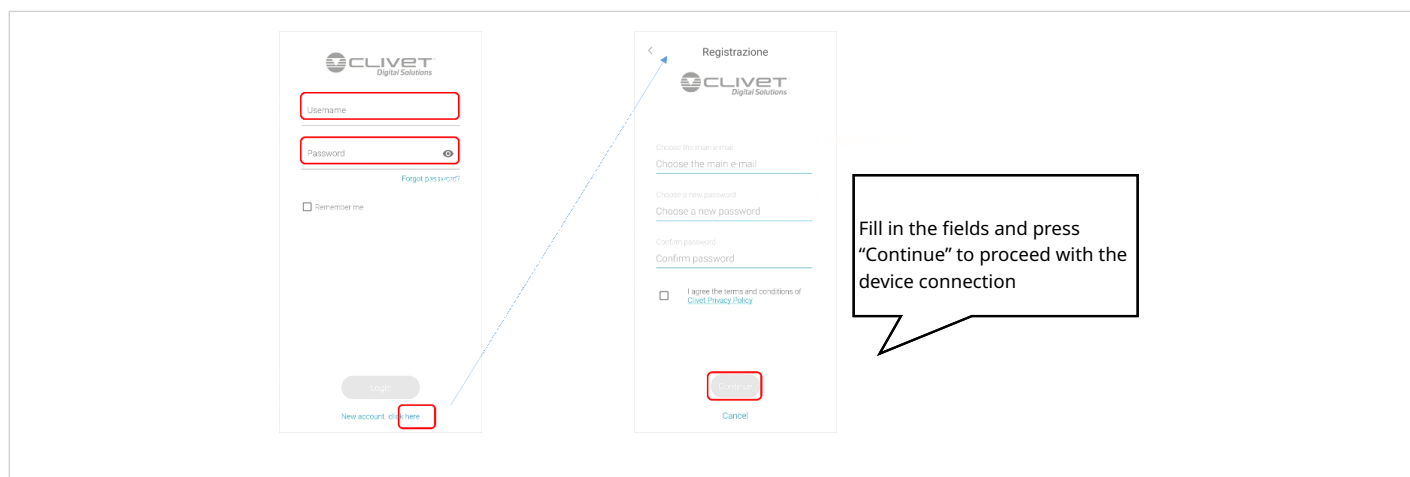
- with a smartphone or table
- the App is available for Android and IOS systems
- download from the App Store
- install the App on the device that will control the unit

For quick access to the App download page, scan this QR code



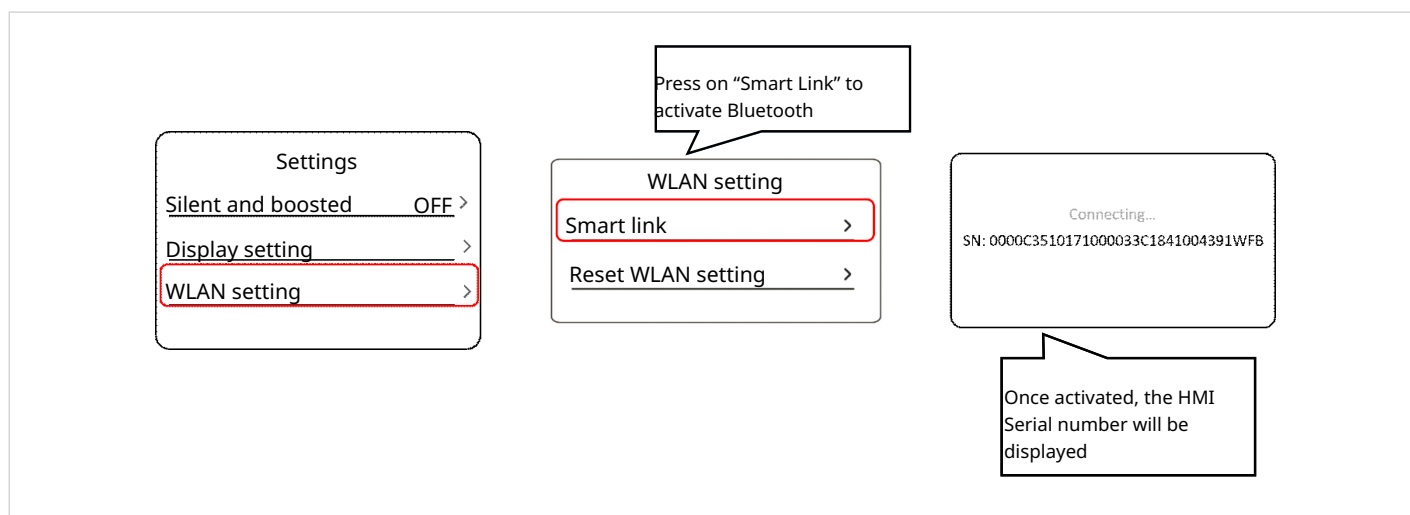
Sign up/Log in

Open the App and create a new account on the home page or log in:



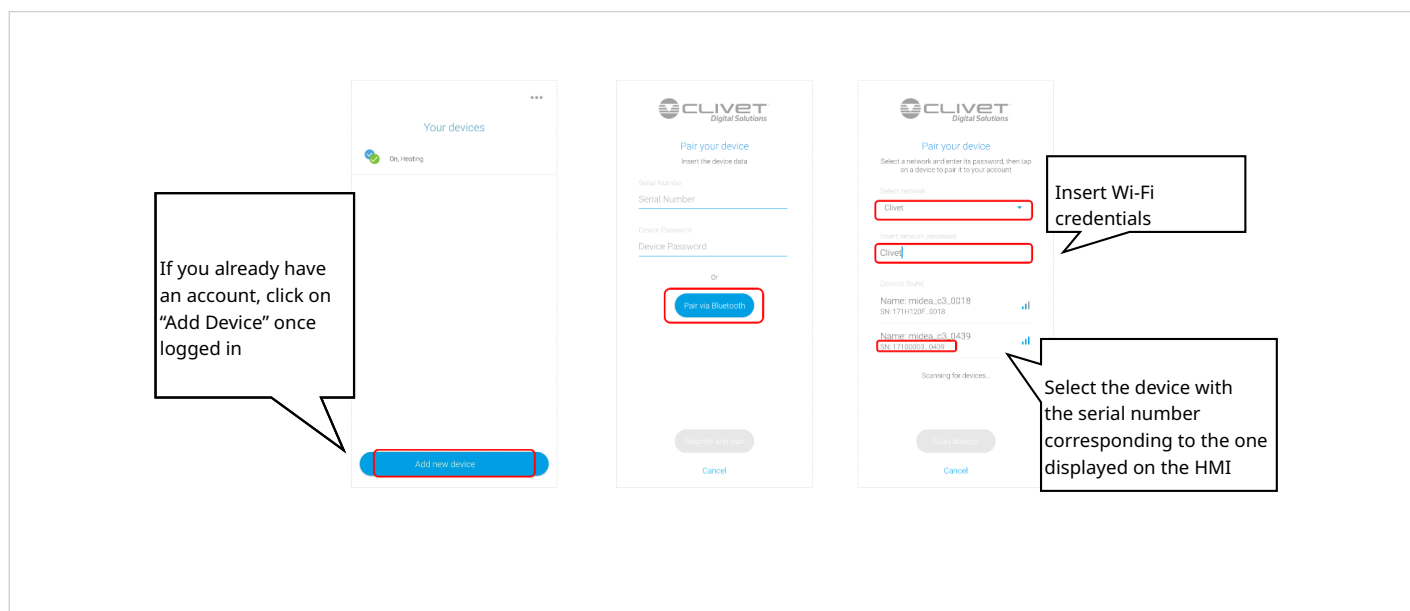
On the HMI

Activation of Bluetooth

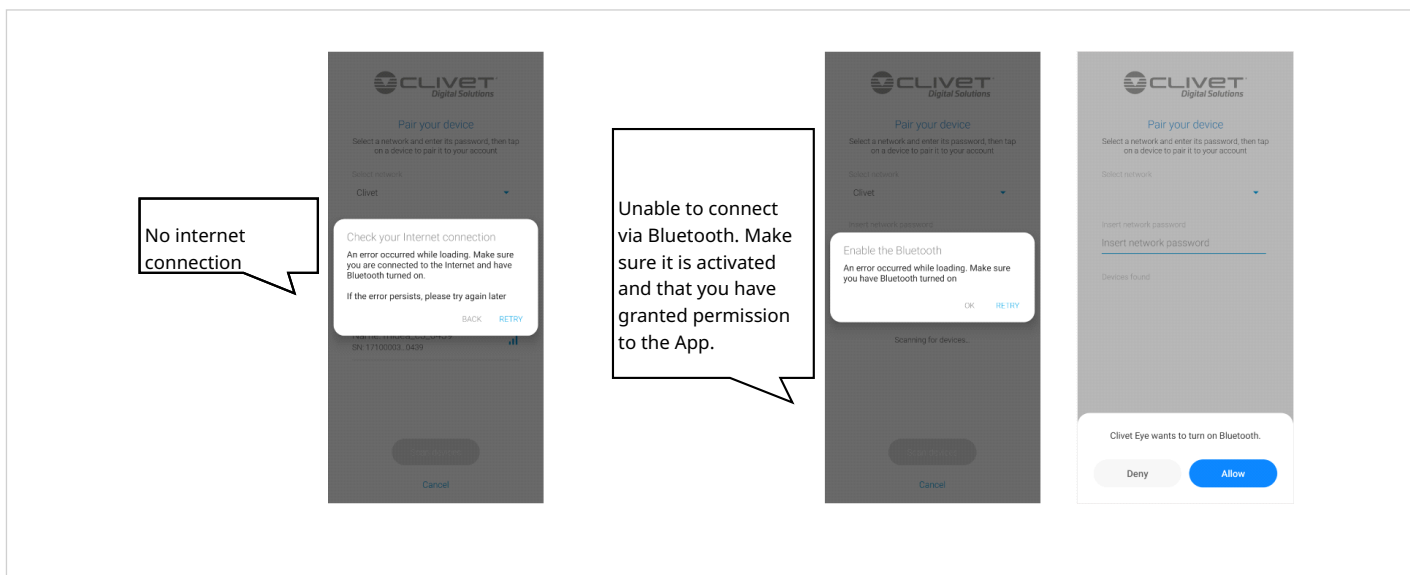


Add device and Wi-Fi network

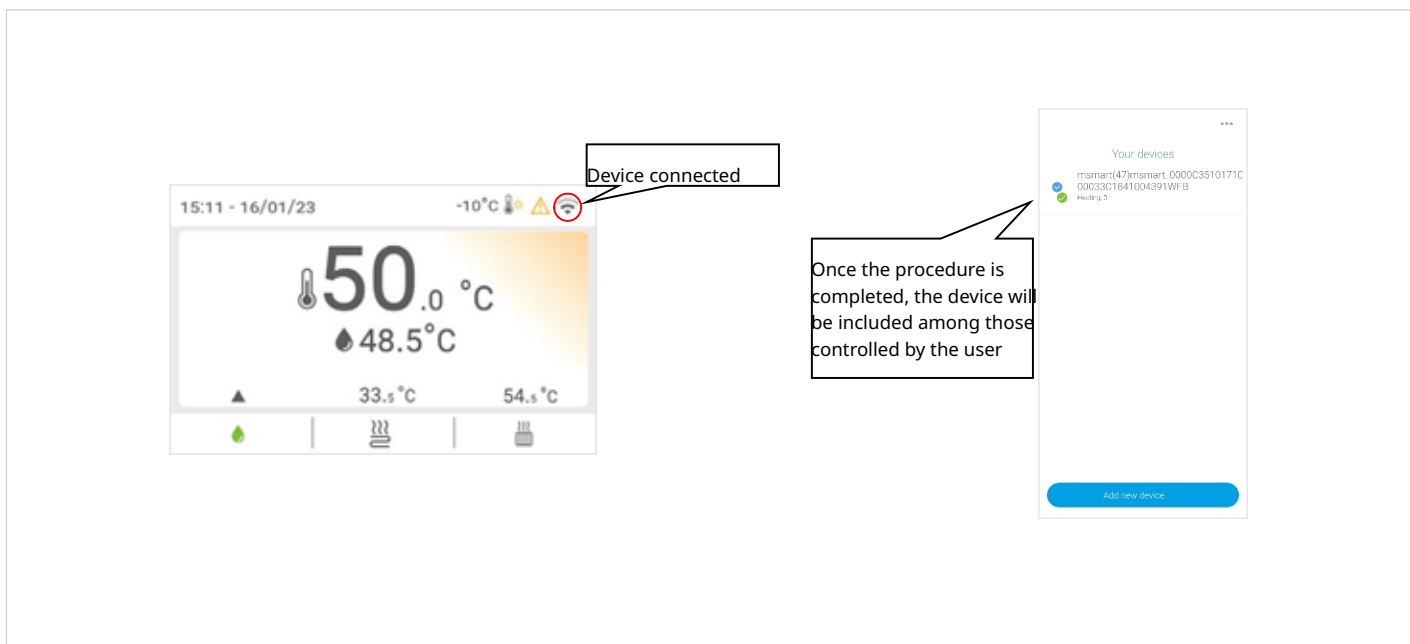
Connect the device via Bluetooth:



Error messages

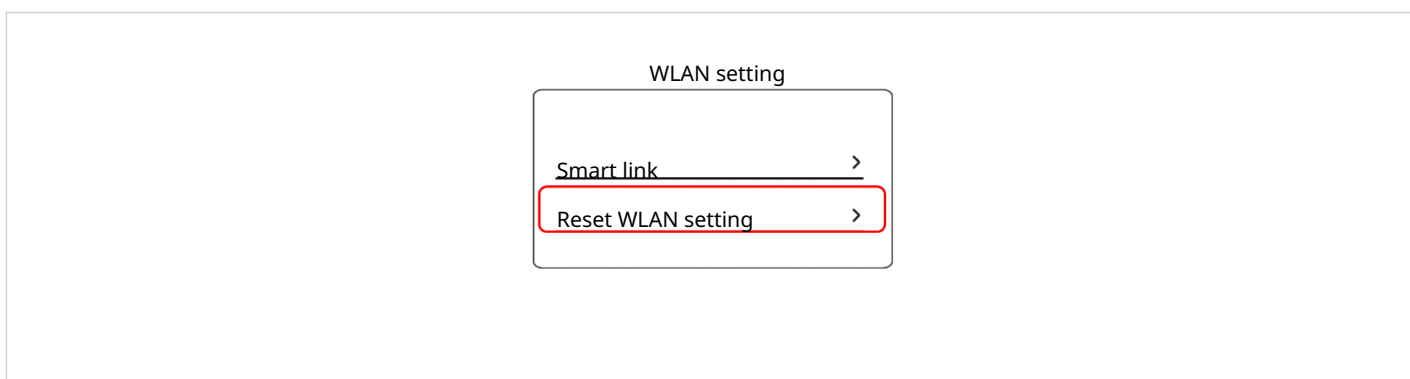


Management via the App



Reset settings

❗ If the connection fails, reset the settings and repeat the procedure.



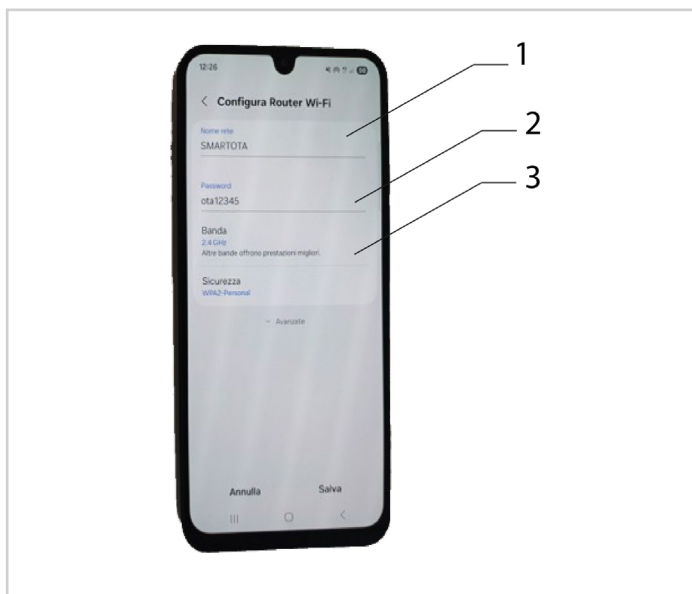
7. OTA function

The OTA (Over-The-Air) function allows the software of a device to be updated via a wireless connection, without the need to physically connect it to a computer.

Activate WIFI Hotspot from your mobile phone

To activate the function:

- select the hotspot



OTA

Please input the password:

Updating, please wait...

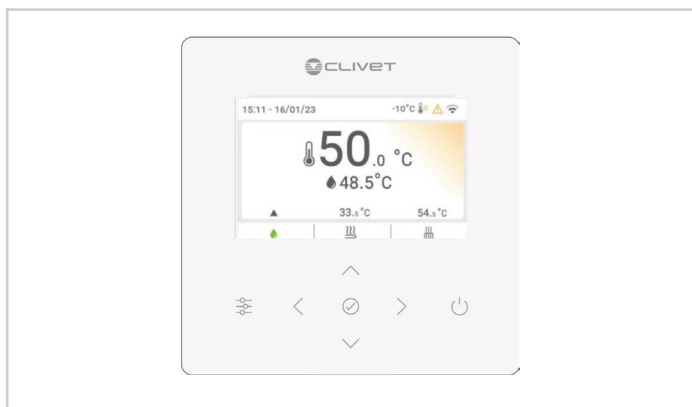
Once the update is complete, the main page appears.

Example:

WIFI Name = SMARTOTA

WIFI password = ota12345

WIFI setting = 2.4GHz, WPA2



To activate the function:

- simultaneously press **Menu** + **Down** for 3 seconds
- enter the password and confirm
 - Password 999

8. Alarms

In the event of malfunctions, alarms are indicated by the appearance of the “Active alarm” symbol on the multifunction keypad.

To display an alarm, select .

To reset an alarm, remove the cause of the alarm and reset the active alarm.

 Before resetting an alarm identify and remove the cause that generate it.

 Repeated resets can cause irreversible damage. If in doubt, contact a service centre.

Error code	Description
E0	Water flow error. (10 times E8).
E1	Power supply fault
E2	Communication error between controller and indoor unit.
E3	Hydro-box water outlet temperature sensor failure (T1).
E4	Water tank temperature sensor failure (T5).
E5	T3 unit temperature sensor failure
E6	Outdoor unit ambient temperature sensor failure (T4).
E7	Balancing tank temperature sensor failure (Tbt).
E8	Water flow error.
E9	Compressor suction pipe temperature sensor failure (Th).
EA	Compressor discharge pipe temperature sensor failure (Tp).
Eb	Solar panel temperature sensor failure (Tsolar).
Ed	Hydro-box module plate exchanger water inlet temperature sensor failure (Tw_in).
EE	Hydro-box EEPROM PCB failure.
EL	Communication error between hydro module and MH kit.
P0	Heat pump system low pressure protection.
P1	Heat pump system high pressure protection.
P3	Alternating current protection.
P4	Compressor discharge temperature too high protection.
P5	Tw_out-Tw_in value too high protection.
Pb	Antifreeze mode
Pd	Condensing temperature too high protection.
PP	Unusual Tw_out-Tw_in protection.
H0	Communication error between hydro-box and outdoor unit.
H1	Communication error between main control board and inverter board.
H2	Refrigerant coming from plate exchanger outlet temperature sensor failure (T2)
H3	Refrigerant coming from plate exchanger inlet temperature sensor failure (T2)
H4	Protections L1* three times.
H5	Room temperature sensor failure (Ta).
H6	DC fan motor failure.
H6*	2nd DC fan motor failure
H7	AC voltage protection.
H8	High pressure sensor failure.
H9	Zone 2 water flow temperature sensor failure (Tw2).
HA	Hydro-box module plate exchanger water outlet temperature sensor failure (Tw_out).
Hb	“PP” protection 3 times
Hd	Communication error between master unit and slave unit.
HF	Outdoor unit EEPROM failure.
HH	H6 10 times in 120 minutes.

Error code	Description
HP	Low pressure protection in cooling mode.
C0	Multiple backup hosts enabled, check composition code.
C2	IBH PCB failure.
C3	Current transfer or IBH open circuit protection failure.
C4	Current transfer failure or IBH open circuit failure.
C7	Protection against high inverter module heat sink temperatures.
bA	T4 out of operation range.
F1	Low DC bus voltage protection.
F6	Fault
F61*	EEV2 fault
F61*	EEV2 fault
F62*	EEV3 fault
F31*	Temperature sensor(T9O) fault
F51*	Temperature sensor(T9I) fault
P21	Low pressure sensor failure.
CL	.Water pump communication wire fault
F75	Insufficient supply overheating
FC1	Temperature sensor failure TL
EU	Water flow sensor failure
P27	Protection against reverse insertion of the pressure sensor
J11	Instantaneous phase current control protection
J12	30 s continuous phase current control protection
J1E	Hardware overcurrent protection
J2E	Overheating protection
J31	Bus voltage too high fault
J32	Bus voltage too high fault
J3E	Bus voltage too low fault
J43	Abnormal phase current sampling bias
J45	Fan motor code mismatch fault
J46	IPM PROTECTION (FO)
J47	Module type mismatch (after testing module resistance)
J52	Motor stall protection
J5E	The motor failed to start
J61	Fan terminal short-circuit protection
J65	IPM short-circuit protection
J6E	Phase loss protection
L11	Instantaneous phase current control protection
L12	30 s continuous phase current control protection
L1E	Hardware overcurrent protection
L2E	Overheating protection
L31	Bus voltage too high fault
L32	Bus voltage too high fault
L34	Three-phase power supply phase loss fault
For	Three-phase units
L3E	Bus voltage too low fault
L43	Abnormal phase current sampling bias
L45	Fan motor code mismatch fault
L46	IPM Protection (FO)

Error code	Description
L47	Module type mismatch
L52	Motor stall protection
L5E	The motor failed to start
L61	Compressor terminal short-circuit protection
L65	IPM short-circuit protection
L6E	Phase loss protection
LB7	PEDbH fault
LBE	High pressure switch action
LC1	Instantaneous PFC software protection overcurrent
LC2	30 s continuous PFC software control protection
LC3	PFC low voltage protection
LC4	The PFC power factor is below 0.8
LC5	Overcurrent protection with valid PFC value
LC6	Hardware overcurrent protection of PFC1 channel
LC7	Hardware overcurrent protection of PFC2 channel
LC8	Hardware overcurrent protection of PFC3 channel
LC9	PFC module overheating protection
LCA	PFC module CBC overcurrent fault protection
LCB	PFC bus or PFC semibus overvoltage
LCC	PFC IGBT short circuit
LCD	Abnormal PFC announcement sampling distortion
LCE	PFC hardware overcurrent protection

 *Only for Edge Pro 26-30kW

Notes

KEYPAD

Installer section



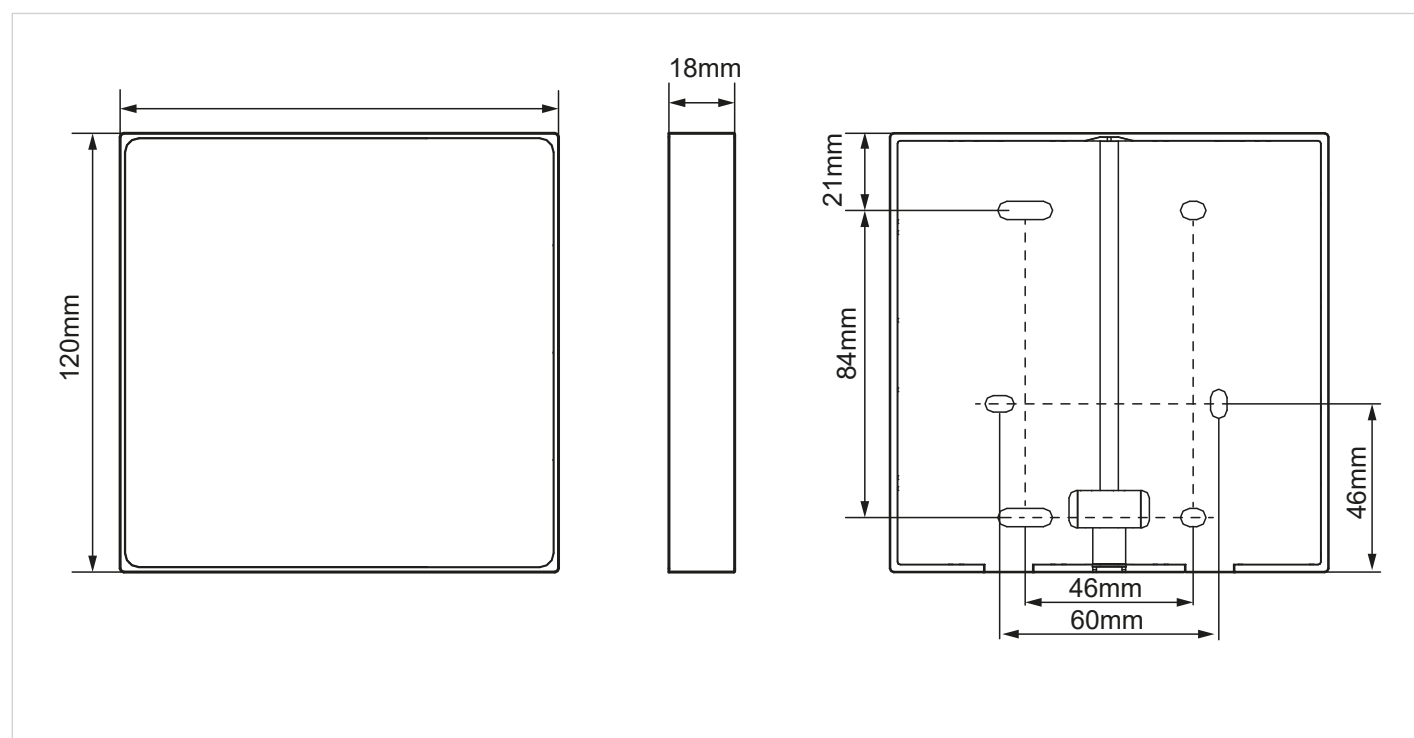
Installer section

9. User interface installation

9.1 Prerequisites

Do not install:

- ⊖ Near to heat sources.
 - ⊖ In points exposed to direct solar radiation.
 - ⊖ In a position exposed to air coming through openings or diffusers.
 - ⊖ Behind curtains or furniture.
 - ⊖ Next to doors and windows to the outside.
 - ⊖ On walls crossed by chimneys or heating pipes.
 - ⊖ On outdoor walls.
 - ⊖ In environments with a strong presence of oil, steam or gaseous sulphides.
- ⚠ Failure to do so may result in damage to the controller and malfunction.
- ⚠ The wired remote controller circuit is low voltage.
- ⚠ Do not connect to a normal 220V/380V circuit, nor place it in the same wiring conduit as such a circuit.



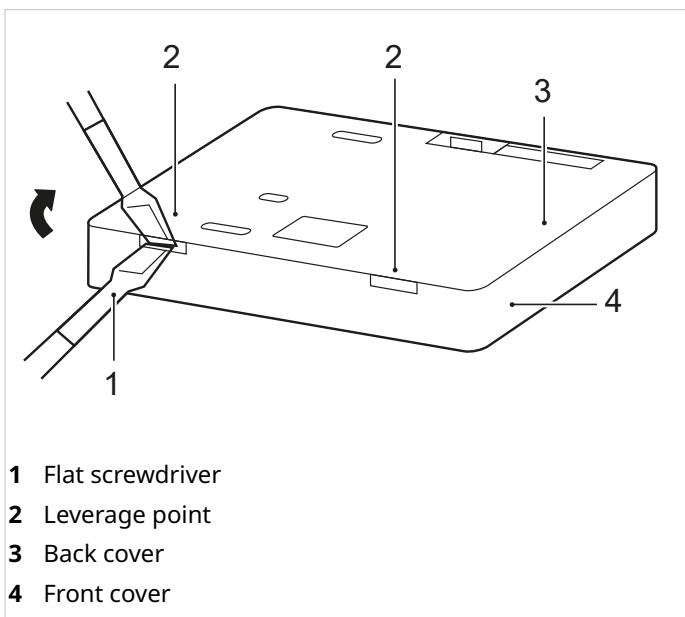
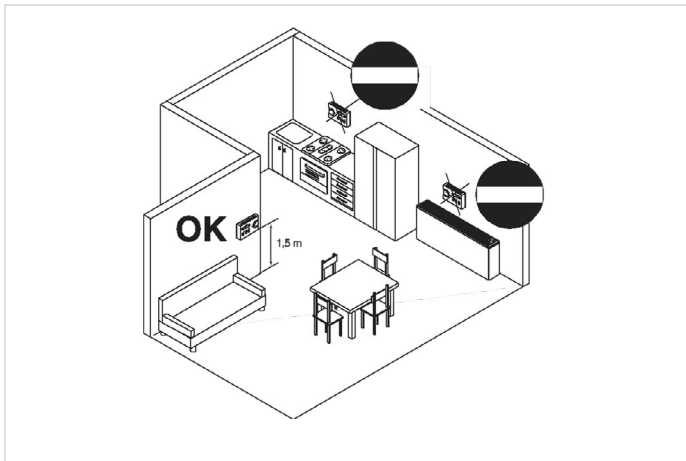
Num.	Name	Quantity	Notes
1	Wired controller	1	
2	Round head screw	4	For wall assembly
3	Phillips round head screw	2	For electrical box assembly
4	Phillips screw, M4 x 25	2	For electrical box assembly
5	Plastic support bar	4	For wall assembly

Check that:

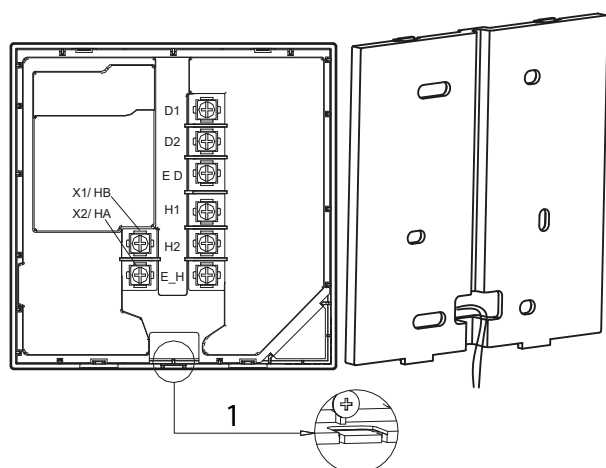
- the choice of installation point is crucial for environmental comfort and power consumption

The thermostat must be fitted:

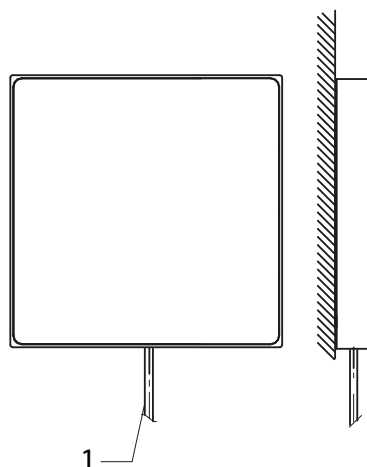
- in a room with average temperature and humidity conditions, representative of the other rooms
- 150 cm high
- preferably on an internal wall



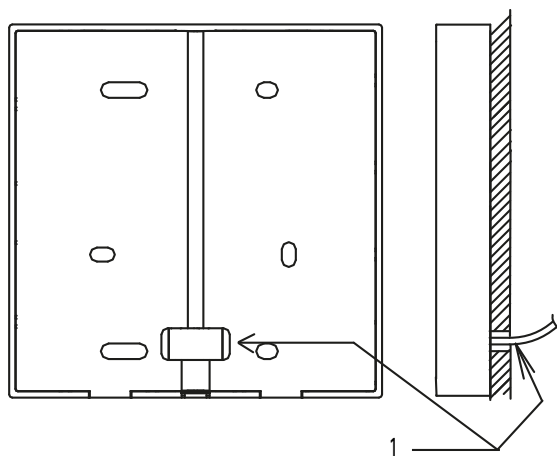
9.2 Wall-mounted installation



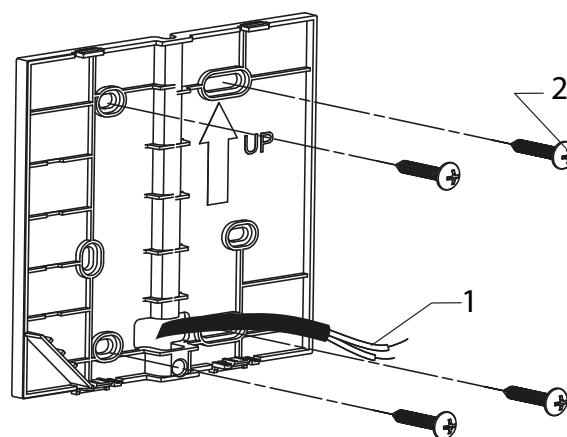
1 Lower part opening for cable outlet



1 Cable outlet

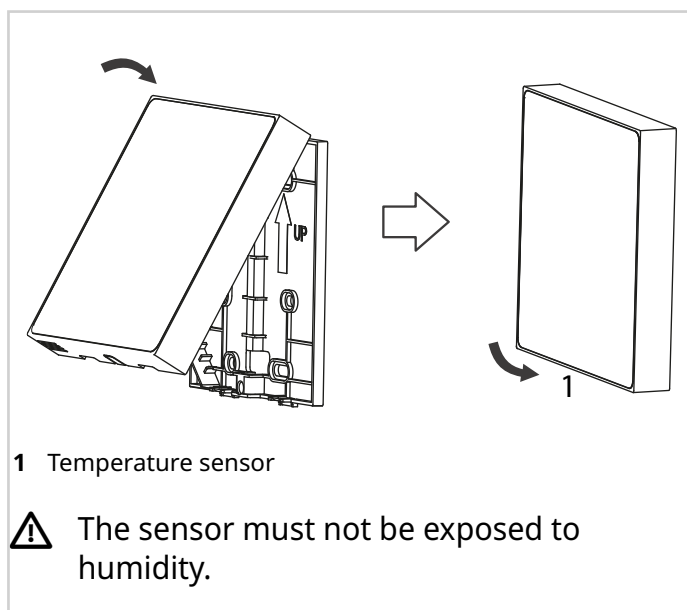
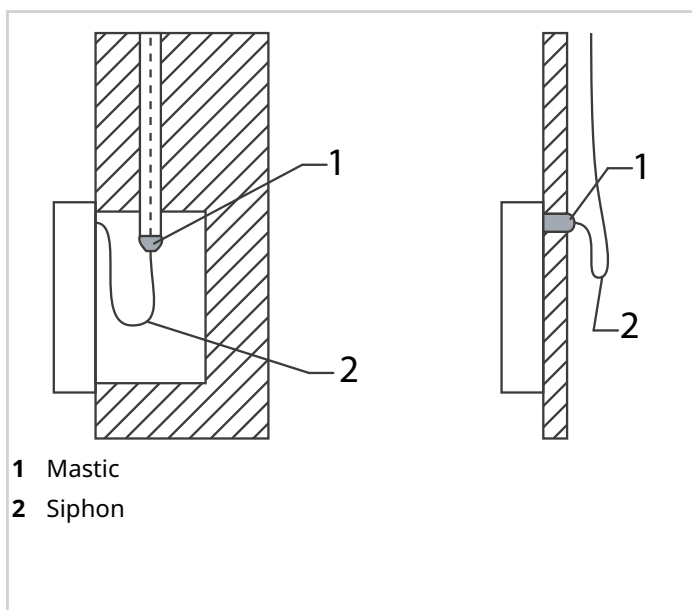
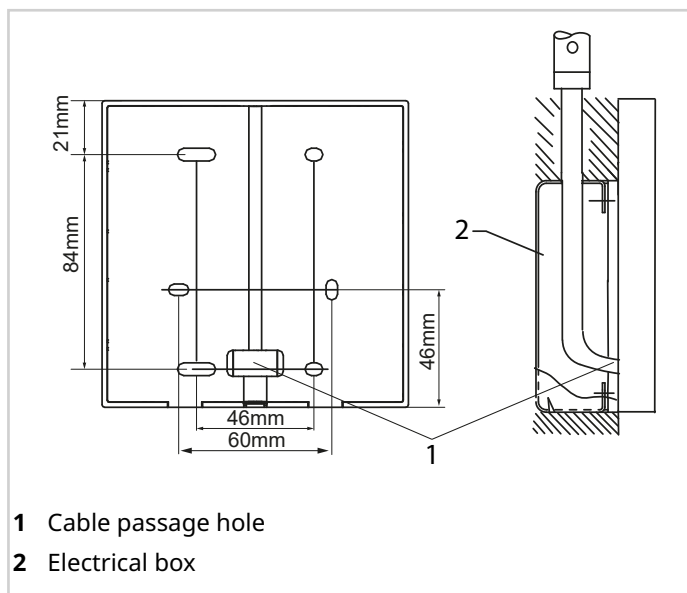
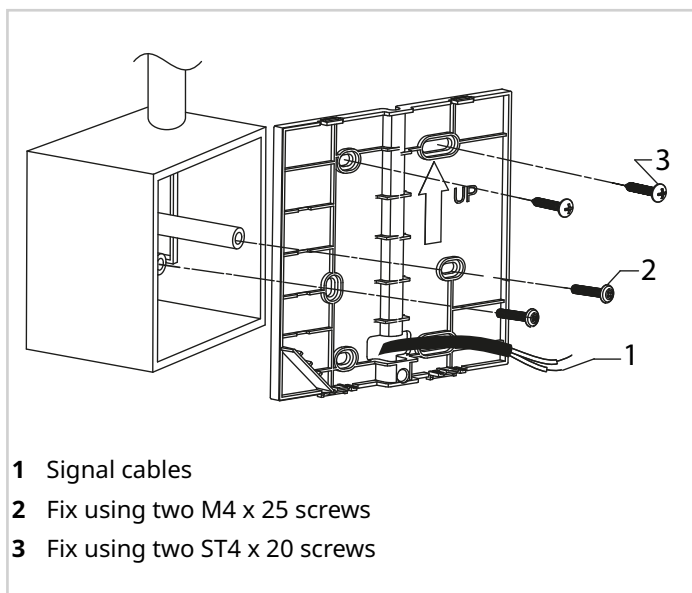


1 Wall hole for cable passage
Diameter: Ø 8 - Ø 10



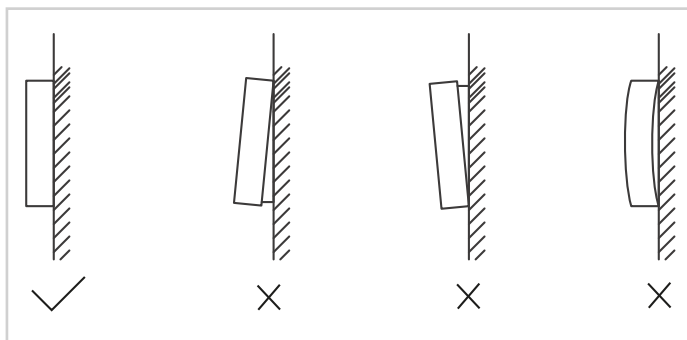
1 Signal cables
2 Fix using four ST4 x 20 screws

9.3 Installation in an uncased box



⚠ Prevent water from entering the wired controller, use siphons and mastic to seal the wire connectors during installation.

⚠ Do not crush the communication wire during installation.



⚠ Over-tightening the screw will buckle the back cover.

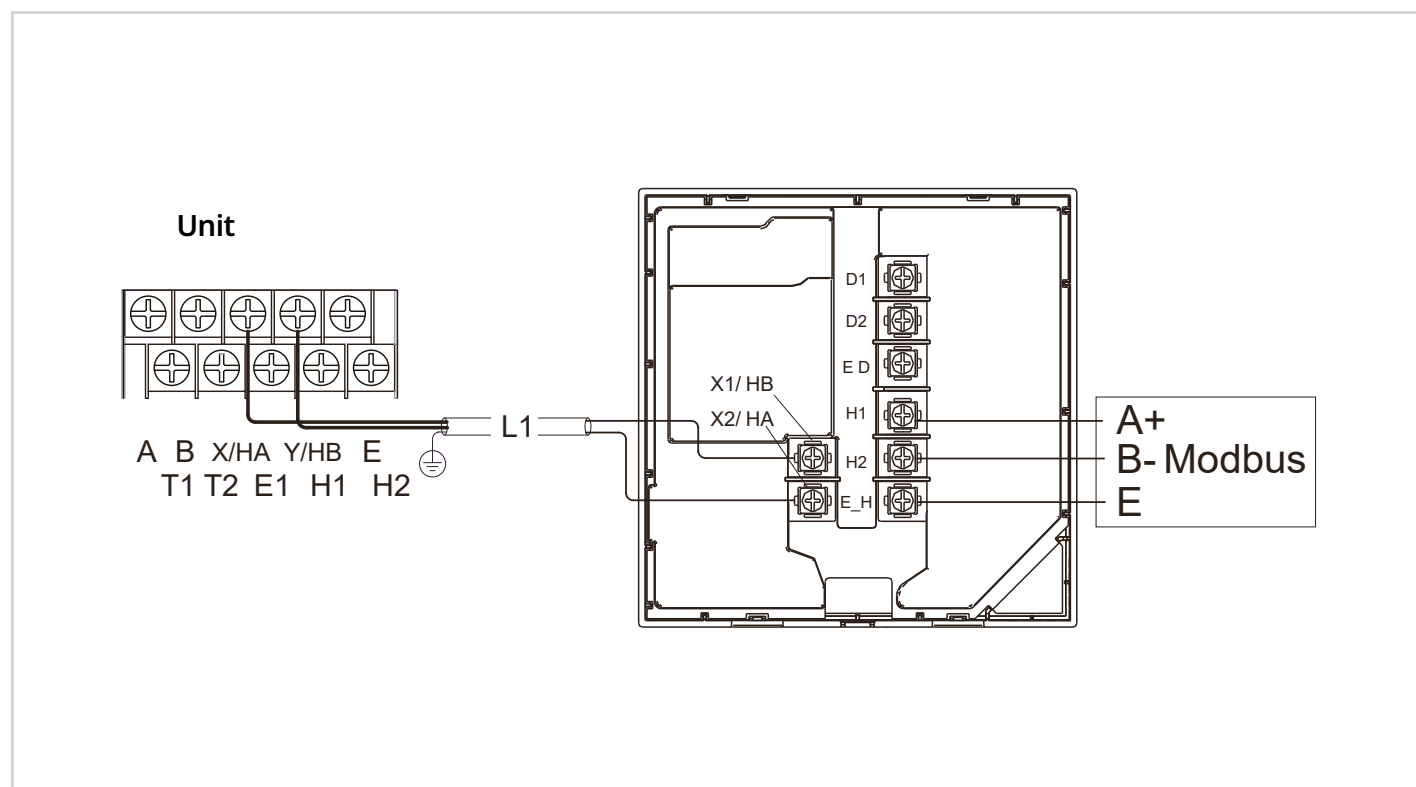
9.4 Electrical connections

The user interface can also be used as a room thermostat.

- i** Use a shielded wire and connect to earth. This appliance supports the MODBUS RTU communication protocol.

Check that:

- all components are present
- the shielded cable is firmly connected to earth, otherwise transmission problems will occur
- the shielded cable is not cut to connect it to an extension cord, use a terminal block if necessary
- a megger is not used to check the insulation of the signal wire when the connection is completed



Component	Type
Cable	2-wire shielded
Cable section (mm ²)	0,75
Maximum cable length (m)	50
Input voltage (HA/HB)	18V DC

10. Configuration

 The unit must be configured for optimal operation before it can be put into service.

 Configuration entails a Technician adjusting the settings and parameters according to the type of system, climatic conditions, accessories installed and the Customer's usage preferences.

The unit is equipped with a user interface (hereafter also called HMI) to be installed on site and used to manage the functions.

The user interface has a built-in temperature probe for possible use as a thermostat.

It is designed to have different login levels according to the settings to be controlled:

- open-login functions are designed for customer-specific settings
- protected login for setup by a specialised technician

 It is advised against using special characters (e.g. punctuation, spaces, etc.) in the WLAN name.

 If the router or network password is changed, it may be necessary to delete the units linked to the App and pair them again.

 The appearance and functions of the App may differ from how they are in this document depending on the release of post-publication updates.

10.1 Switch-on and language selection

When the unit is switched on for the first time, the HMI will initialize the system and display the percentage of completion (1%~99%); the HMI cannot be used during this process.

The HMI then prompts you to select the system language from those available.

10.2 Date and hour

Set the current date and time on the keypad.

10.3 Terminology used

The terms related to this unit are shown in the table below

Sign	Description
DHW	Domestic hot water
AHS	Backup boiler
HMI	User interface
IBH	Backup electric heater
OFN	Oxygen-Free-Nitrogen
P_i	Unit pump or Zone 1 pump (for double zone systems)
P_o	Secondary circuit pump (or Zone 1 pump for double zone systems)
P_c	Zone 2 pump (for double zone systems)
P_d	DHW recirculation pump
P_s	Solar circuit pump
P_x	Defrosting status or alarm status
Pe	Evaporating pressure
Pc	Condensing pressure
SV1	3-way circuit/DHW diverter valve
SV2	3-way diverter valve for direct double zone systems
SV3	3-way mixing valve for mixed circuit
TBH	Backup electric heater for DHW tank
T1	Water supply temperature from additional heating source (with IBH heater or AHS boiler)
T2	Refrigerant temperature entering the user side exchanger (plate heat exchanger) in Cooling mode (or leaving in Heating mode)
T3	Refrigerant temperature leaving the source exchanger (coil) in Cooling mode (or entering in Heating mode)
T4	Outdoor air temperature
T5	DHW tank temperature
T1S	Water supply temperature setpoint
Ta	Room air temperature, detected by the probe in the HMI
Tbt1	Temperature of the upper part of the inertial storage tank
Th	Compressor suction refrigerant temperature
Tp	Compressor discharge refrigerant temperature
Tsolar	Water temperature in the solar thermal circuit
Tw2	Water supply temperature for the mixed zone (for double zone systems)
TWin	Unit water return temperature
TWout	Unit water supply temperature

10.4 Opening the “For serviceman” menu

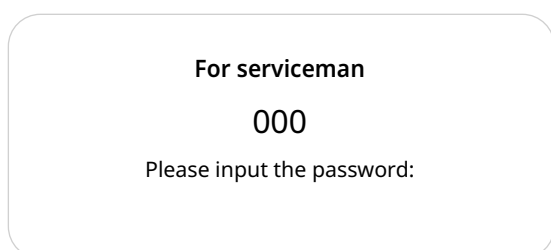
⚠ To access customer support on the keypad, no operating mode must be selected.

To access:

- ▶ press  +  for 3 seconds
- ▶ enter the password and confirm

After modifications:

- ▶ press 
- the confirmation page is displayed
- ▶ select YES



10.5 Menu structure

1 DHW settings

- 1.1 DHW mode
- 1.2 Disinfection
- 1.3 DHW priority
- 1.4 Pump_D
- 1.5 DHW priority time set
- 1.6 dT5_ON
- 1.7 dT1S5
- 1.8 T4DHWMAX
- 1.9 T4DHWMIN
- 1.11 T5S_DISINFECT
- 1.12 t_DI_HIGHTEMP
- 1.13 t_DI_MAX
- 1.14 t_DHWHP_RESTRICT
- 1.15 t_DHWHP_MAX
- 1.16 PUMP_D TIMER
- 1.17 PUMP_D RUNNING TIME
- 1.18 PUMP_D DISINFECT
- 1.19 DHW function

2 Cooling setting

- 2.1 Cooling mode
- 2.2 t_T4_FRESH_C
- 2.3 T4CMAX

- 2.4 T4CMIN
- 2.5 dT1SC
- 2.6 dTSC
- 2.8 Zone 1 C-emission
- 2.9 Zone 2 C-emission

3 Heating setting

- 3.1 Heating mode
- 3.2 t_T4_FRESH_H
- 3.3 T4HMAX
- 3.4 T4HMIN
- 3.5 dT1SH
- 3.6 dTSH
- 3.8 Zone 1 H-emission
- 3.9 Zone 2 H-emission
- 3.10 Force defrost

4 Auto mode setting

- 4.1 T4AUTOCMIN
- 4.2 T4AUTOHMAX

5 Temp. type setting

- 5.1 Water flow temp.
- 5.2 Room temp.
- 5.3 Double zone

6 Room thermostat setting

- 6.1 Room thermostat
- 6.2 Mode set priority

7 Other heat source

- 7.1 IBH function
- 7.2 IBH locate
- 7.3 dT1_IBH_ON
- 7.4 t_IBH_DELAY
- 7.5 T4_IBH_ON
- 7.6 P_IBH1
- 7.7 P_IBH2
- 7.8 AHS FUNCTION
- 7.9 AHS_PUMPI CONTROL
- 7.10 dT1_AHS_ON
- 7.11 t_AHS_DELAY
- 7.12 T4_AHS_ON
- 7.13 EnSwitchPDC
- 7.14 GAS-COST
- 7.15 ELE-COST
- 7.16 MAX-SETHEATER

- 7.17 MIN-SETHEATER
- 7.18 MAX-SIGHEATER
- 7.19 MIN-SIGHEATER
- 7.20 TBH FUNCTION
- 7.21 dT5_TBH_OFF
- 7.22 t_TBH_DELAY
- 7.23 T4_TBH_ON
- 7.24 P_TBH
- 7.25 Solar function
- 7.26 Solar control
- 7.27 Deltatsol

8 Holiday away setting

- 8.1 T1S_H.A_H
- 8.2 T5S_H.A_DHW

9 Service call

- 9.1 Phone number
- 9.2 Mobile number

10 Restore factory settings

11 Test run

12 Special functions

- 12.1 Preheating for floor T1S
- 12.2 Floor drying up

13 Auto restart

- 13.1 Auto restart cooling/heating mode
- 13.2 Auto restart DHW mode

14 Power input limitation

- 14.1 Power input limitation

15 Auto restart

- 15.1 M1M2
- 15.2 Intelligent network
- 15.3 T1T2
- 15.4 Tbt
- 15.5 P_X PORT

16 Cascade setting

- 16.1 PER_START
- 16.2 TIME_ADJUST

17 HMI address setting

- 17.2 HMI address for BMS
- 17.3 Stop BIT

18 Common setting

- 18.1 t_DELAY PUMP
- 18.2 POM.ANTIBL_t1
- 18.3 t2_ANTILOCK PUMP RUN
- 18.4 SV ANTIBL_t1
- 18.5 t2-ANTILOCK SV
- 18.6 Ta-regul.
- 18.7 F-PIPE LENGTH
- 18.8 PUMP_I SILENT OUTPUT
- 18.9 Energy metering
- 18.10 Pump_O

19 Clear energy data

20 Intelligent function settings

- 20.1 Energy correction

21 Reset alarm

22 Base pan heater

- 22.1 Base pan heater ON-OFF
- 22.2 Base pan heater_ON 0°C
- 22.3 Base pan heater_OFF 2°C

11. Operation parameters

The OPERATION PARAMETER menu is used by the installer or the support technician to check the operation parameters.

To access:

- ▶ press 
- ▶ select Unit status
- ▶ select Operation parameter
- ▶ press OK

The operation parameters are displayed on the following screens.

Press Down, Up to scroll.

 The energy consumption parameter is calculated, not measured.

If a parameter is not available for the system, the corresponding value will be "--"

The heat pump capacity is indicative and should not be used as a measure of the unit's power.

The accuracy of the sensor is $\pm 1^{\circ}\text{C}$.

The flow-rate parameters are calculated based on pump operation parameters.

 *Only for Edge Pro

	Description
1	Online unit number
2	ODU model
3	Operation mode
4	Operation status
5	Frequency limited type
6	Comp. run time
7	Comp. frequency
8a	Fan 1 speed
8b*	Fan 2 speed
9a	Expansion valve 1
9b*	Expansion valve 2
9c*	Expansion valve 3
10	Tp comp. discharge temp.
11	Th comp. suction temp.
12	T3 outdoor exchanger temp.
13	TL Distribution temp.
14	T4 outdoor air temp.
15a	TF module temp.
15b*	T9I temperature
15c*	T9O temperature
16	P1 comp. pressure
17	P2 comp. pressure
18	T2B plate F-in temp.
19	T2 plate F-out temp.
20	Tw_in plate water inlet temp.
21	Tw_out plate water outlet temp.
22	T1 leaving water temp.
23	Tw2 circuit2 water temp.
24	Ta room temp.
25	RH room humidity
26	T5 water tank temp.
27	T5_2 water tank temp.
28	TBt buffer tank temp.
29	Tsolar

	Description
30	T1S_C1 CLI. curve temp.
31	T1S2_C2 CLI. curve temp.
32	Water pressure
33	Water flow
34	Heat pump capacity
35	ODU current
36	ODU voltage
37	DC voltage
38	DC current
39	Power consump.
40	SV1
41	SV2
42	SV3
43	Pump_I
44	Pump_O
45	Pump_C
46	Pump_S
47	Pump_D
48	IBH1
49	IBH2
50	TBH
51	AHS
52	Comp. total run time
53	Fan total run time
54	Pump_I total run time
55	IBH total run time
56	IBH2 total run time
57	TBH total run time
58	AHS total run time
62	Pump_I PWM

11.1 Parameters

The unit leaves the factory with the unit parameters set by default to values capable of fulfilling most installation situations. For detailed customisation of the system, however, it is possible to make changes; a list of all the unit parameters, with the available settings, is given below.

Depending on the configuration of the unit, some parameters are visible and others are not.

⚠ Access to parameters or modifications are only allowed to a qualified serviceman who assumes all responsibility; in case of doubt contact Clivet. For any changes not permitted or not approved by Clivet, Clivet declines any responsibility for malfunctions and/or damage to the unit/system and to people

i *Only for Edge Pro

Parameter	Description	Default	Min.	Max	UM
DHW mode	Enable or disable DHW mode: 0=NON, 1=YES	1	0	1	/
Disinfection	Enable or disable the disinfect mode: 0=NON, 1=YES	1	0	1	/
DHW priority	Enable or disable DHW priority mode: 0=NON, 1=YES	1	0	1	/
Pump_D	Enable or disable DHW pump mode: 0=NON, 1=YES	0	0	1	/
DHW priority time set	Enable or disable DHW priority time setting: 0=NON, 1=YES	0	0	1	/
dT5_ON	The temperature difference for starting DHW mode	10	1	30	°C
dT1S5	The difference value between Twout and T5 in DHW mode	10	5	40	°C
T4DHWMAX	The maximum ambient temperature at which the heat pump can operate for domestic water heating	46 (43)*	35	46 (43)*	°C
T4DHWMIN	The minimum ambient temperature at which the heat pump can operate for domestic water heating	-10	-25	30	°C
t_INTERVAL_DHW	The start time interval of the compressor in DHW mode	5	5	5	Minutes
T5S_DISINFECT	The target temperature of water in the domestic hot water tank in DISINFECT mode	65	60	70	°C
t_DI_HIGHTEMP	The time for which the highest temperature of water in the domestic hot water tank in DISINFECT mode lasts	15	5	60	Minutes
t_DI_MAX	The maximum time for which disinfection lasts	210	90	300	Minutes
t_DHWHP_RESTRICT	The operating time for heating/cooling	30	10	600	Minutes
t_DHWHP_MAX	The maximum continuous operating time of the heat pump in DHW PRIORITY mode	90	10	600	Minutes
PUMP_D TIMER	Enable or disable the DHW pump to run as scheduled and to keep running for PUMP RUNNING TIME: 0=NON, 1=YES	1	0	1	/
PUMP_D RUNNING TIME	The certain time for which the DHW pump keeps running	5	5	120	Minutes
PUMP_D DISINFECT	Enable or disable the DHW pump to operate when the unit is in DISINFECT mode and T5 is larger than or equal to T5S_DI-2: 0=NON, 1=YES	1	0	1	/
DHW function	Enable or disable the cooling mode:0=NON,1=YES	0	0	1	/

Configuration

Parameter	Description	Default	Min.	Max	UM
Cooling mode	Enable or disable the cooling mode: 0=NON, 1=YES	1	0	1	/
t_T4_FRESH_C	The refresh time of climate-related curves in cooling mode	0,5	0,5	6	Hours
T4CMAX	The highest ambient operating temperature in cooling mode	52 (48)*	35	52 (48)*	°C
T4CMIN	The lowest ambient operating temperature in cooling mode	10	-5 (-15)*	25	°C
dT1SC	The temperature difference for starting the heat pump (T1)	5	2	10	°C
dTSC	The temperature difference for starting the heat pump (Ta)	2	1	10	°C
t_INTERVAL_C	Compressor operation delay in cooling mode	5	5	5	Minutes
Zone 1 C-emission	The type of Zone 1 terminal for cooling mode: 0=FCU (fan coil unit), 1=RAD. (radiator), 2=FLH (floor heating)	1	0	2	/
Zone 2 C-emission	The type of Zone 2 terminal for cooling mode: 0=FCU (fan coil unit), 1=RAD. (radiator), 2=FLH (floor heating)	1	0	2	/
Heating mode	Enable or disable the heating mode: 0=NON, 1=YES	1	0	1	/
t_T4_FRESH_H	The refresh time of climate-related curves in heating mode	0,5	0,5	6	Ore
T4HMAX	The maximum ambient operating temperature in heating mode	25	20	46 (43)*	°C
T4HMIN	The minimum ambient operating temperature in heating mode	-15	-25	30	°C
dT1SH	The temperature difference for starting the unit (T1)	5	2	20	°C
dTSH	The temperature difference for starting the unit (Ta)	2	1	10	°C
t_INTERVAL_H	Compressor operation delay in heating mode	5	5	5	Minutes
Zone 1 H-emission	The type of Zone 1 terminal for heating mode: 0=FCU (fan coil unit), 1=RAD. (radiator), 2=FLH (floor heating)	2	0	2	/
Zone 2 H-emission	The type of Zone 2 terminal for heating mode: 0=FCU (fan coil unit), 1=RAD. (radiator), 2=FLH (floor heating)	0	0	2	/
Force defrost	Enable or disable the force defrost: 0=NON, 1=YES.	0	0	1	/
T4AUTOCMIN	The minimum operating ambient temperature for cooling in auto mode	25	20	29	°C
T4AUTOHMAX	The maximum operating ambient temperature for heating in auto mode	17	10	17	°C
Water flow temp.	Enable or disable the WATER FLOW TEMP.: 0=NON, 1=YES	1	0	1	/
Room temp.	Enable or disable the ROOM TEMP.: 0=NON, 1=YES	0	0	1	/
Double zone	Enable or disable the DOUBLE ZONE: 0=NON, 1=YES	0	0	1	/
Room thermostat	The style of room thermostat: 0=NON, 1=MODE SET, 2=ONE ZONE, 3=DOUBLE ZONE, 4= DOUBLE ZONE MODE	0	0	4	/
Mode set priority	Select the priority mode in ROOM THERMOSTAT: 0=HEAT, 1=COOL"	0	0	1	/
IBH function	Select the mode of IBH (BACKUP HEATER): 0=HEAT+DHW, 1=HEAT	0 (DHW=e-nabled)	0	1	/

Parameter	Description	Default	Min.	Max	UM
IBH locate	IBH/AHS installation location: 0=pipe loop	0	0	0	/
dT1_IBH_ON	The temperature difference between T1S and T1 for starting the backup heater	5	2	10	°C
t_IBH_DELAY	The time for which the compressor has run before startup of the first step backup heater	30	15	120	Minutes
T4_IBH_ON	The ambient temperature for starting the backup heater	-5	-15	30	°C
P_IBH1	Power input of IBH1	0,0	0,0	20.0	kW
P_IBH2	Power input of IBH2	0,0	0,0	20.0	kW
AHS FUNCTION	Enable or disable the AHS (AUXILIARY HEATING SOURCE) function: 0=NON, 1=HEAT, 2=HEAT+DHW	0	0	2	/
AHS_PUMPI CONTROL	Select the pump operating status when only AHS runs: 0=RUN, 1=NOT RUN	0	0	1	/
dT1_AHS_ON	The temperature difference between T1S and T1 for starting the auxiliary heating source	5	2	20	°C
t_AHS_DELAY	The time for which the compressor has run before startup of the additional heating source	30	5	120	Minutes
T4_AHS_ON	The ambient temperature for starting the additional heating source	10	-15	30	°C
EnSwitchPDC	Enable or disable automatic switch of heat pump and auxiliary heating source based on running cost: 0=NON, 1=YES	0	0	1	/
GAS-COST	Price of gas	0,85	0,00	5.00	price/m ³
ELE-COST	Price of electricity	0,20	0,00	5.00	price/kWh
MAX-SETHEATER	Maximum set temperature of additional heating source	80	1	80	°C
MIN-SETHEATER	Minimum set temperature of additional heating source	30	0	80	°C
MAX-SIGHEATER	The voltage corresponding to the maximum set temperature of additional heating source	10	1	10	V
MIN-SIGHEATER	The voltage corresponding to the minimum set temperature of additional heating source	3	0	9	V
TBH FUNCTION	Enable or disable the TBH (TANK BOOSTER HEATER) function: 0=NON, 1=YES	1	0	1	/
dT5_TBH_OFF	The temperature difference between T5 and T5S (the set water tank temperature) for turning the booster heater off	5	0	10	°C
t_TBH_DELAY	The time for which the compressor has run before startup of the booster heater	30	0	240	Minutes
T4_TBH_ON	The ambient temperature for starting the tank booster heater	5	-5	50	°C
P_TBH	Power input of TBH	2	0	20	kW
Solar function	Enable or disable the SOLAR function: 0=NON, 1=ONLY SOLAR, 2=SOLAR+HP (HEAT PUMP)	0	0	2	/
Solar control	Solar pump (pump_s) control: 0=Tsolar, 1=SL1SL2	0	0	1	/

Parameter	Description	Default	Min.	Max	UM
Deltatsol	The temperature deviation for enabling SOLAR	10	5	20	°C
T1S_H.A_H	The target outlet water temperature for space heating in HOLIDAY AWAY mode	25	20	25	°C
T5S_H.A_DHW	The target temperature for heating domestic hot water in HOLIDAY AWAY mode	25	20	25	°C
Preheating for floor	Enable or disable floor preheating: 0=NON, 1=YES	0	0	1	/
	Pump_i air vent outlet: percentage of air discharged by the Pump_i	70	20	100	%
	Air vent operating time: air filling operating time setting	20	20	60	Minutes
T1S	The set outlet water temperature during first floor preheating	25	25	35	Hours
t_ARSTH	Running time for first floor preheating	72	48	96	/
Floor drying up	Enable or disable floor drying: 0=NON, 1=YES	0	0	1	/
t_Dryup	Temp-up days for floor drying	8	4	15	Day
t_Highpeak	Days for floor drying	5	3	7	Day
t_Drydown	Temp-down days for floor drying	5	4	15	Day
t_Drypeak	Outlet water temperature for floor drying	45	30	55	hours/ min
Start time	The start time of floor drying	00:00	00:00	23:30	hours/ min
Start date	The start date of floor drying	Current date+1	Current date+1	31/12/2099	gg/mm/ aaaa
Auto restart cooling/heating mode	Enable or disable the auto restart of cooling/heating mode: 0=NON, 1=YES	1	0	1	/
Auto restart DHW mode	Enable or disable the auto restart of DHW mode: 0=NON, 1=YES	1	0	1	/
Power input limitation	The type of power input limitation	1	1	8	/
M1M2	Define the function of the M1M2 switch: 0=REMOTE ON/OFF, 1=TBH ON/OFF,2=AH5 ON/OFF	0	0	2	/
Intelligent network	Enable or disable the SMART GRID: 0=NON, 1=YES	0	0	1	/
T1T2	Control options of Port T1T2: 0=NON, 1=RT/Ta_PCB	0	0	1	/
Tbt	Enable or disable the TBT: 0=NON, 1=YES	0	0	1	/
P_X PORT	Select the function of P_X PORT: 0=DEFROST, 1=ALARM	0	0	1	/
PER_START	Percentage of operating units among all units	10	10	100	%
TIME_ADJUST	Time interval for determining the necessity of unit loading/unloading	5	1	60	Minutes
HMI setting	Choose the HMI: 0=MASTER	0	0	0	/
HMI address for BMS	Set the HMI address code for BMS	1	1	255	/

Parameter	Description	Default	Min.	Max	UM
Stop BIT	Upper computer stop bit: 1=STOP BIT1, 2=STOP BIT2	1	1	2	/
t_DELAY PUMP	The time for which the compressor has run before startup of the pump	2.0	0,5	20	Minutes
POM.ANTIBL_t1	The pump anti-lock interval	24	5	48	Hours
t2_ANTILOCK PUMP RUN	The pump anti-lock running time	60	0	300	Seconds
SV ANTIBL_t1	The valve anti-lock interval	24	5	48	Hours
t2-ANTILOCK SV	The valve anti-lock running time	30	0	120	Seconds
Ta-regul.	The corrected value of Ta inside the wired controller	0	-10	10	°C
F-PIPE LENGTH	Select the total length of the liquid pipe (F-PIPE LENGTH): 0=F-PIPE LENGTH<10m, 1=F-PIPE LENGTH>=10m	0	0	1	/
PUMP_I SILENT OUTPUT	The Pump_I max output limitation	100	50	100	%
Energy metering	Enable or disable the energy analysis: 0=NON, 1=YES	1	0	1	/
Pump_O	Additional circulation pump P_o operation: 0=ON (keep running) 1=Auto (controlled by the unit)	0	0	1	/
Energy correction (heating/DHW)	Energy correction for heating and DHW	0	-50	50	%
Energy correction (cooling)	Energy correction for cooling	0	-50	50	%
Base pan electric heater ON	The T4 value of the outdoor ambient temperature determines the ON value. (Edge Pro 12.1-20.1 only)	0	-10	0	°C
Base pan heater OFF	The T4 value of the outside room temperature determines the OFF value. (Edge Pro 12.1-20.1 only)	2	Max (-5, resistance ON+2)	5	°C

11.2 Opening the “For serviceman” menu

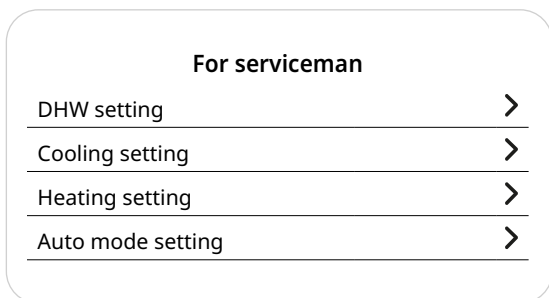
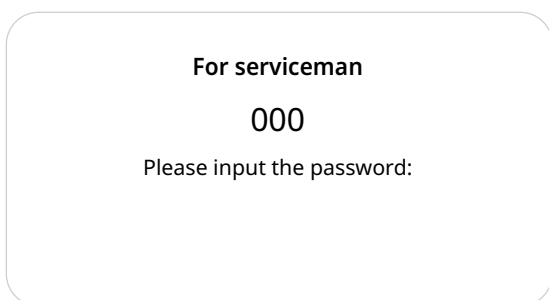
⚠ To access customer support on the keypad, no operating mode must be selected.

To access:

- ▶ press  +  for 3 seconds
- ▶ enter the password and confirm

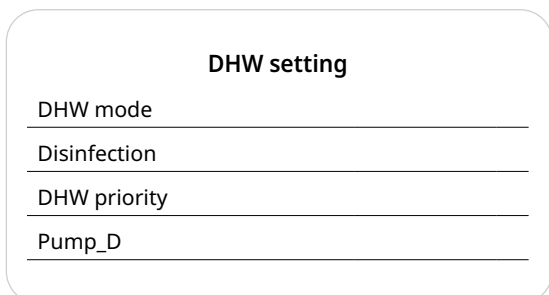
After modifications:

- ▶ press 
- the confirmation page is displayed
- ▶ select YES



11.3 DHW (Domestic Hot Water) mode settings

MENU > FOR SERVICEMAN > 1. DHW MODE SETTING



1.1 DHW MODE

Enables/disables Domestic Hot Water mode

1.2 DISINFECTION

Enables/disables the anti-legionella cycle

1.3 DHW PRIORITY

Defines whether DHW mode has priority over operation in Heating/Cooling mode

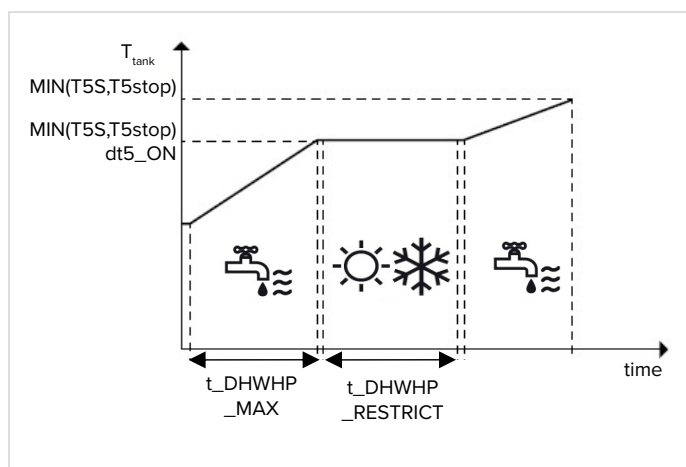
1.4 PUMP_D

Enables DHW recirculation management by the unit

1.5 DHW PRIORITY TIME SET.

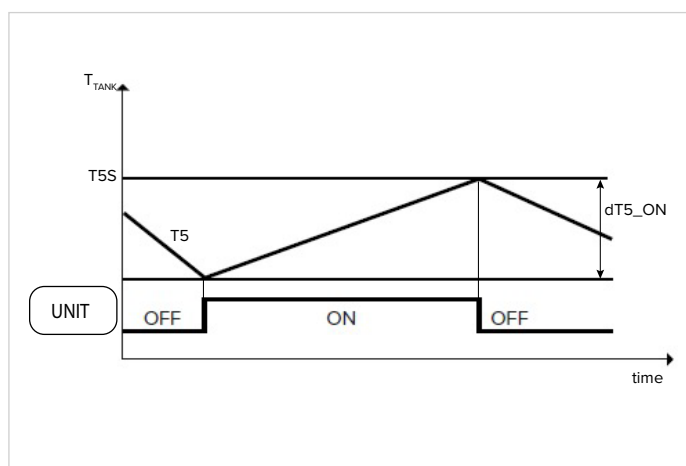
Enables two controls and their respective parameters:

- in the presence of a DHW request, it defines a maximum operating time in Heating/Cooling mode before switching to DHW (managed with parameter $t_{\text{DHWHP_RESTRICT}}$);
- in the presence of a system request, it defines a maximum operating time in DHW before switching to Heating/Cooling mode (managed with parameter $t_{\text{DHWHP_MAX}}$).



1.6 dt5_ON

Controls activation of the DHW request, defining the temperature range between DHW setpoint (T5S) and DHW storage tank temperature (T5) beyond which the heat pump is to be activated.



DHW is requested when $T5S - T5 \geq dt5_ON$

i A DHW request ends when $T5 \geq T5S$ or when T5 reaches the maximum temperature for DHW in the heat pump T5stop, which is parameterised according to the outdoor temperature T4.

Grandezza 2.1-8.1					
T4	[°C]	<-5	-5≤T4<20	20≤T4<40	≥40
T5 stop	[°C]	T4+75	70	90-T4	50

- i** If there is a further request for DHW beyond T5stop, the unit can activate the TBH boiler heater until setpoint T5S is achieved.

1.7 dT1S5

Defines the range between the water supply temperature (Twout) and the DHW storage tank temperature (T5). The heat pump in DHW mode will deliver water at $Twout = T5 + dT1S5$.

- i** If the DHW setpoint (T5S) > 55°C, change the parameter according to the formula $dT1S5 = 65 - T5S$. Setting dT1S5 higher than this criterium makes the unit work faster and less efficient in charging cycles but also means that the unit will go into normal protection before reaching the setpoint with subsequent restart and loss of the benefits of the faster ramp.

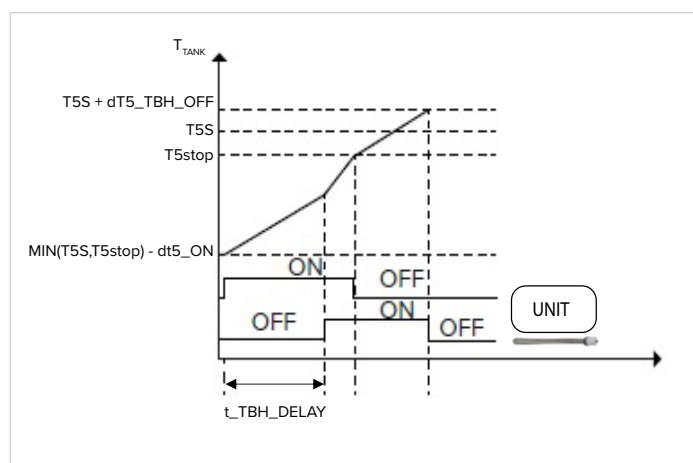
1.8 T4DHWMAX

Defines the maximum outdoor air temperature for which the unit can operate in DHW with heat pump

1.9 T4DHWMIN

Defines the minimum outdoor air temperature for which the unit can operate in DHW with heat pump.

- i** Below T4DHWMIN, if within the operating range, the unit can produce DHW with the DHW storage tank heater (TBH).



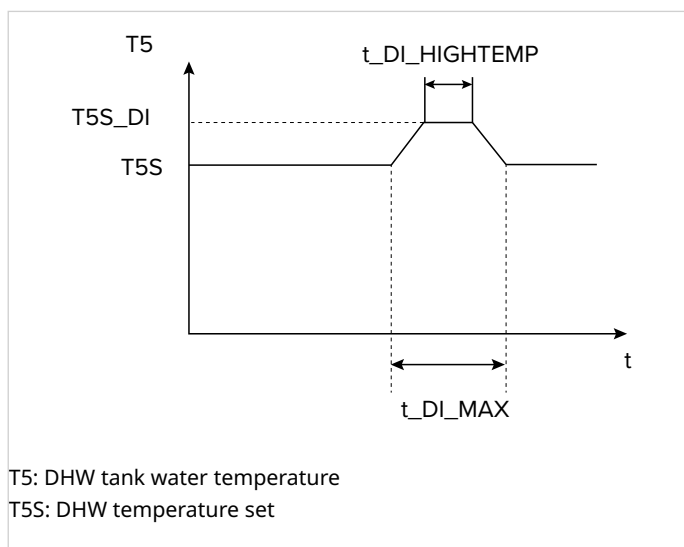
1.11 T5S_DISINFECT

Defines the temperature to which the unit brings the DHW storage tank in the DISINFECT (anti-legionella) function.

1.12 t_DI_HIGHTEMP

Defines the minutes for which the unit should keep the DHW

tank at temperature T5S_DISINFECT in the DISINFECT (anti-legionella) function.



1.13 t_DI_MAX

Defines the maximum minutes for which the unit can keep the DISINFECT (anti-legionella) function on.

1.14 t_DHWHP_RESTRICT

In the presence of a DHW request, it defines the maximum operating minutes of the heat pump in Heating/Cooling mode before switching to DHW mode. Clearly, the parameter only applies if priority has been given to the system.

- i** During operation in Heating/Cooling mode, the heat pump switches to DHW mode once the system setpoint has been reached or after the minutes in $t_DHWHP_RESTRICT$ have elapsed.

1.15 t_DHWHP_MAX

In the presence of a Heating/Cooling request, it defines the maximum operating minutes in DHW mode before switching to Heating/Cooling mode. Clearly, the parameter only applies if priority has been given to DHW.

- i** During operation in DHW mode, the heat pump switches to Heating/Cooling mode once the DHW setpoint has been reached or after the minutes in t_DHWHP_MAX have elapsed.

1.16 PUMP_D TIMER

Enables hourly scheduling of the DHW circulation pump. The pump schedule can be set by the user.

- ① The recirculation pump requires a dedicated power supply.

1.17 PUMP_D RUNNING TIME

Defines the operating minutes of the circulation pump when it is started.

1.18 PUMP_D DISINFECT RUN

Enables activation of the recirculation pump even during the anti-legionella cycle. Activation of the function is recommended. It becomes mandatory if T5 is located below the additional heater (TBH).

1.19 DHW function

Defines the DHW function related to the second water tank.

0 = this mean no second water tank,

1 = this mean second water tank is present and therefore also the control of pump D will be enabled.

11.4 Cooling mode settings

MENU > FOR SERVICEMAN > 2. COOLING MODE SETTING

2.1 COOLING MODE

Enables/disables Cooling mode.

2.2 t_T4_FRESH_C

Sets the time when the unit updates the climatic curve, adjusting it according to the outdoor air temperature.

2.3 T4CMAX

Defines the maximum outdoor air temperature for which the unit can operate in Cooling mode. This value should clearly be changed if the unit is used for process cooling. This value should clearly be changed if the unit is used for process cooling.

2.4 T4CMIN

Defines the minimum outdoor air temperature for which the unit can operate in Cooling mode.

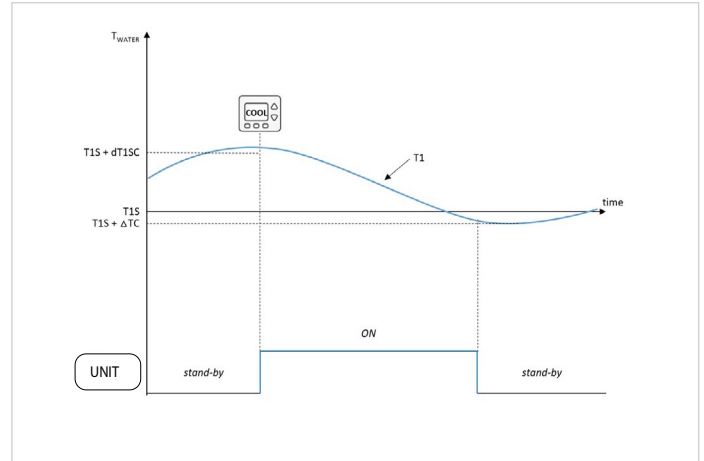
This value should clearly be changed if the unit is used for process cooling.

2.5 dT1SC

Defines the range between the water supply temperature (T1) and the setpoint (T1S) within which the unit starts to operate in Cooling mode.

The heat pump starts when $T1 > T1S + dT1SC$ and stops when $T1 \leq T1S + \Delta TC$

- ① ΔTC is a constant that cannot be changed and can either be 0 (for $5^{\circ}\text{C} \leq T1 < 8^{\circ}\text{C}$) or -1 (for $8^{\circ}\text{C} \leq T1$).

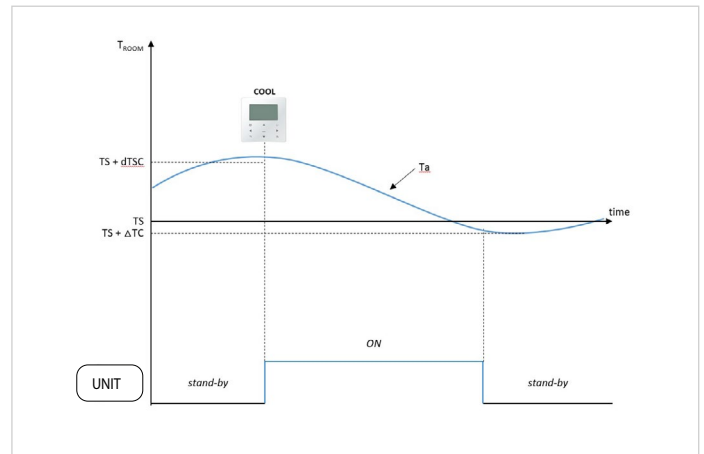


This value is strongly related to the minimum permissible water content of the circuit. A narrower control band can be accepted with a high water volume.

2.6 dTSC

Defines the range between the room air temperature (Ta) and the setpoint (TS) within which the unit starts to operate in Cooling mode.

The heat pump starts when $Ta \geq TS + dTSC$ and stops when $Ta \leq TS - 1$.



- ① The parameter is only used if the unit's Cooling mode control is on room air temperature.

2.8 Zone 1 EMISS. - Cool.

Sets the type of distribution system in Cooling mode of the system's zone 1.

FHL = radiant / FCU = fan coils / RAD = radiators.

2.9 Zone 2 EMISS. - Cool.

Sets the type of distribution system in Cooling mode of the system's zone 2.

FHL = radiant / FCU = fan coils / RAD = radiators.

11.5 Heating mode settings

MENU > FOR SERVICEMAN > 3. HEATING SETTING

3.1 HEATING MODE

Enables/disables Heating mode.

3.2 t_T4_FRESH_H

Sets the time when the unit updates the climatic curve, adjusting it according to the outdoor air temperature.

3.3 T4HMAX

Defines the maximum outdoor air temperature for which the unit can operate in Heating mode.

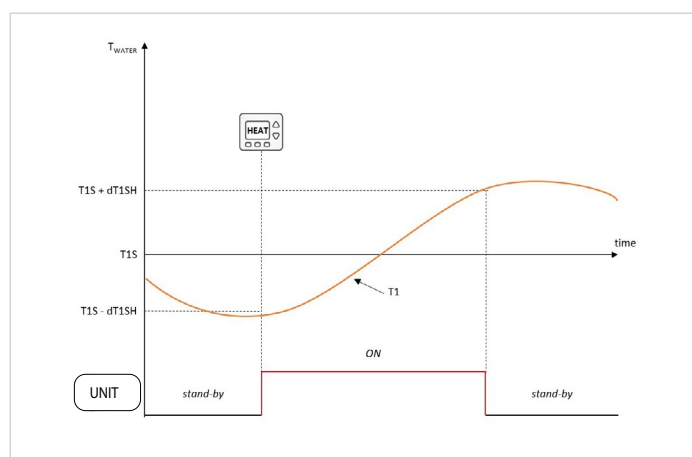
3.4 T4HMIN

Defines the minimum outdoor air temperature for which the unit can operate in Heating mode.

3.5 dT1SH

Defines the range between the water supply temperature (T1) and the setpoint (T1S) within which the unit starts to operate in Heating mode.

The heat pump starts when $T1 \leq T1S - dT1SH$ and stops when $T1 \geq T1S$.

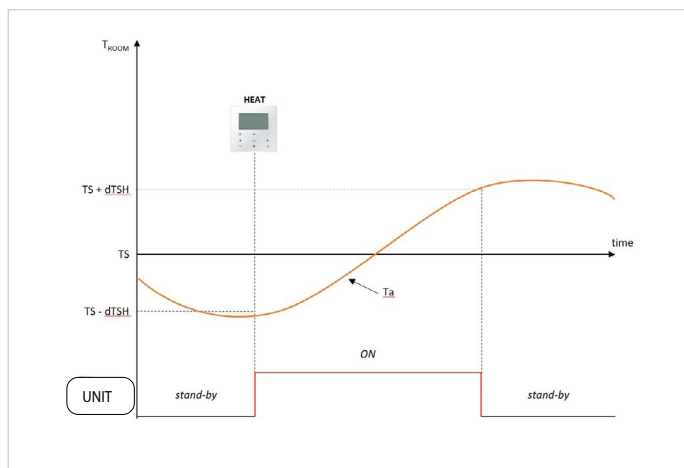


This value is strongly related to the minimum permissible water content of the circuit. A narrower control band can be accepted with a high water volume.

3.6 dTSH

Defines the range between the room air temperature (T_a) and the setpoint (TS) within which the unit continues to operate in Heating mode.

The heat pump starts when $T_a \leq TS - dTSH$ and stops when $T_a \geq TS + dTSH$.



The parameter is only used if the unit's Heating mode control is on room air temperature.

3.8 Zone 1 EMISS. - Heat.

Sets the type of distribution system in Heating mode of the system's zone 1.

FHL = radiant / FCU = fan coils / RAD = radiators.

3.9 Zone 2 EMISS. - Heat.

Sets the type of distribution system in Heating mode of the system's zone 2.

FHL = radiant / FCU = fan coils / RAD = radiators.

3.10 FORCE DEFROSTING

Sets the heat pump in defrosting mode with manual command, it runs for 10 minutes and the outlet temperature of the air side exchanger $T3 < 0^\circ\text{C}$ lasts for more than 6 minutes.

11.6 Automatic mode settings

MENU > FOR SERVICEMAN > 4. AUTO MODE SETTING

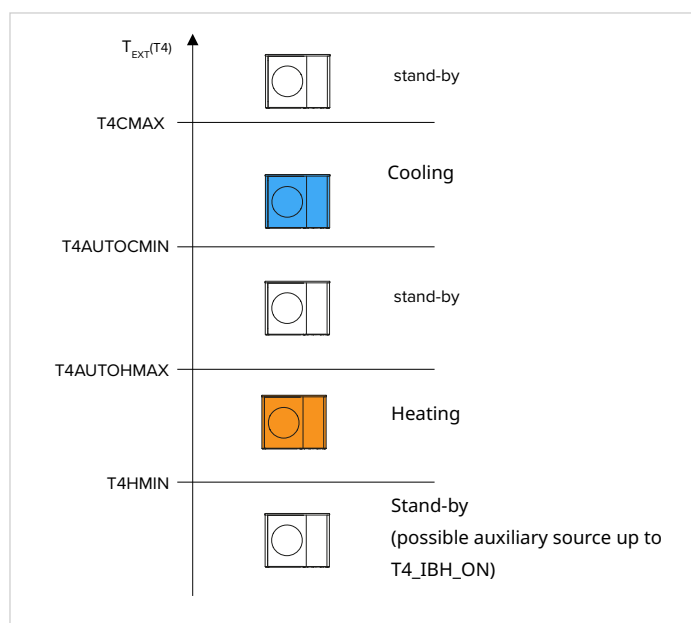
4.1 T4AUTOCMIN

Defines the minimum outdoor temperature below which the heat pump will not work in automatic Cooling mode.

4.2 T4AUTOHMAX

Defines the maximum outdoor temperature beyond which the heat pump will not work in automatic Heating mode.

In combination with a possible additional electric heater and the previously set parameters, AUTO mode operation follows this pattern:



11.7 Control settings

During the initial start-up phase, the type of control required for the system can be selected.

The unit can be managed with control on:

- supply water temperature (T1), which has two options:
 - fixed setpoint, set from the user interface
 - auto control setpoint, calculated from a preselected climatic curve
- room temperature (T_a)

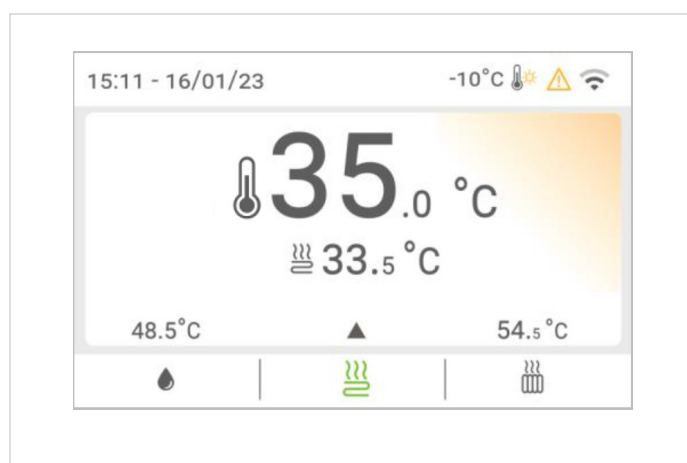
MENU > FOR SERVICEMAN > TEMP. TYPE SETTING

The request to the unit can be made from the user interface (thanks to the built-in temperature sensor) or from the electro-mechanical thermostat.

In the second case, the zone thermostat can only control the Heating/Cooling mode change if it has a double relay, otherwise it must be managed from the HMI.

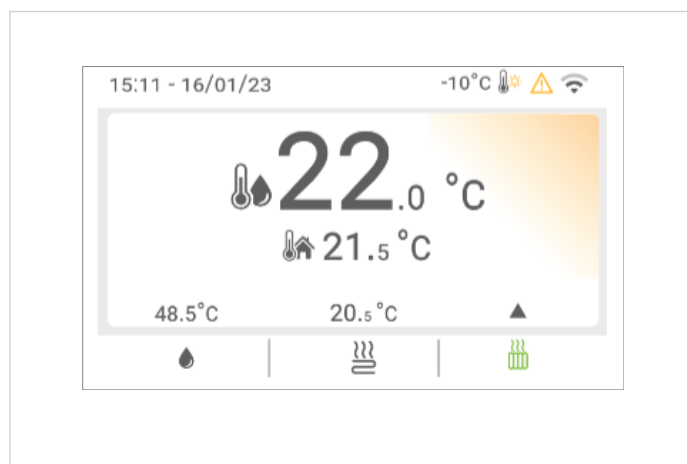
5.1 WATER FLOW TEMP.

Enables/disables control of the unit according to the supply water temperature (T1).



5.2 ROOM TEMP.

Enables/disables control of the unit according to the room air temperature (T_a).



i The supply water temperature is automatically controlled according to the climatic curve.

5.3 DOUBLE ZONE

Enables/disables management of a second system zone: a second menu dedicated to management of Zone 2 appears on the HMI display.

- ❗ Parameters 5.1 and 5.2 are set to One, 5.3 will be automatically changed to One.

The two zones can be controlled in different ways:

Zone 1 and Zone 2

Both are controlled according to the supply water temperature (T1).

it will be necessary to set these parameters:

5.1 WATER FLOW TEMP. = 1

5.2 ROOM TEMP. = 0

Zone 1

With control based on the supply water flow temperature (T1) and **Zone 2** with control based on the room air temperature (Ta).

it will be necessary to set these parameters:

5.1 WATER FLOW TEMP. = 1

5.2 ROOM TEMP. = 1

Zone 1 will have setpoint T1S and Zone 2 will have setpoint T1S2.

- ❗ Zone 2 has automatically controlled supply water temperature according to the climatic curve. In 2-zone systems, Zone 1 cannot have control based on the room air temperature.
- ❗ Both zones can be equipped with an electro-mechanical thermostat to manage the request.

11.8 Zone thermostat settings

MENU > FOR SERVICEMAN > 6. ROOM THERMOSTAT SETTING

A zone thermostat can be used to manage the request to the unit.

- ❗ The HMI must still be connected to the unit in order to manage its internal parameters.

6.1 AMB THERMOSTAT

Enables/disables the request to the unit from zone thermostats other than the HMI.

0 = no zone thermostat.

1 = MODE SETTING = single zone system with double relay zone thermostat, for managing the request to the unit and seasonal mode change (see type A connection in the Installation manual).

2 = ONE ZONE = single zone system with zone thermostat, for managing the request to the unit (see type B connection in the Installation manual).

The seasonal mode change can be managed from the HMI.

3 = TWO ZONES = two zone system with zone thermostat, for managing the request to the unit (see type C connection in the Installation manual).

The seasonal mode change of both zones can be managed

from the HMI.

6.2 MODE SETT. PRIORITY

If the room thermostat is set to **MODE SETTING**, the following screen is displayed:

The Mode set priority defines the priority of operation in cooling or heating mode.

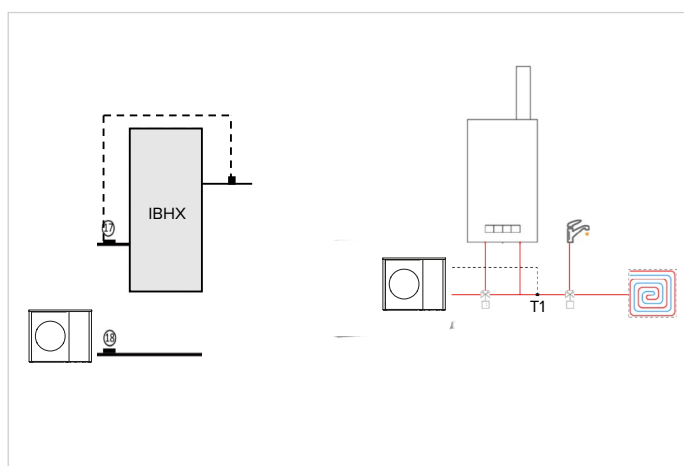
11.9 Auxiliary heat source settings

MENU > FOR SERVICEMAN > 7. OTHER HEAT SOURCE

This section is used to control the parameters of an additional/backup electric heater on the system (IBH), a boiler (AHS) or a solar thermal system.

- ❗ These sources are optional and can be supplied separately. Only one auxiliary Heat source, either electric heater or boiler, can be managed at the same time.

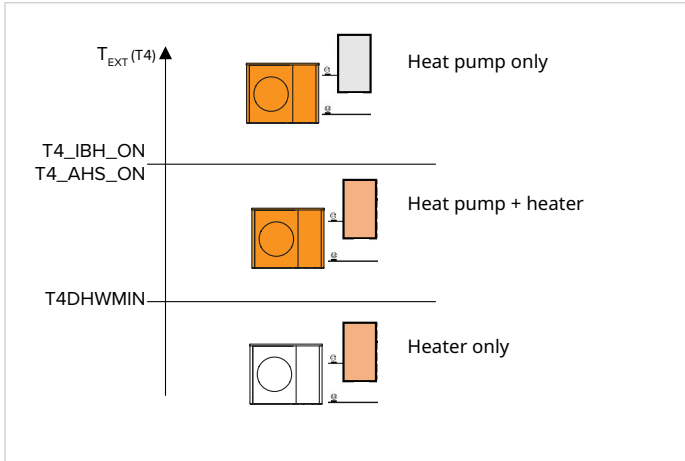
The connection and control of an electric heater in a system or boiler requires a dedicated water temperature probe, to be fitted on the downstream water supply branch:



The activation operating mode (in Heating, DHW production or both) must be selected with the dip-switches on the board during installation.

Activation of the auxiliary source is linked to the simultaneous presence of 3 conditions, each of which is associated with a parameter:

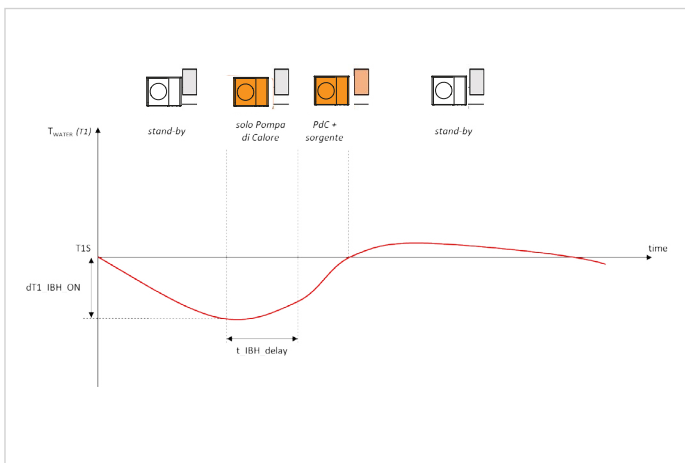
- very low outdoor temperature: parameter T4_IBH_ON or T4_AHS_ON: the minimum outdoor air temperature for heat pump operation only



- i** To make the auxiliary source work only as a replacement for the unit, set the parameter to the same value as T4HMIN (the minimum outdoor temperature at which the heat pump can operate).

Supply temperature too far from the setpoint: parameter $\Delta T1_IBH_ON$ or $\Delta T1_AHS_ON$: the minimum ΔT between water setpoint TS1 and unit supply T1.

Too long to reach the setpoint: parameter t_IBH_DELAY or t_AHS_DELAY : the maximum waiting time between compressor start-up and auxiliary source activation.



- i** The BACKUP HEATER function allows start-up of the auxiliary source to be forced from the HMI.

7.1 IBH function

Defines the backup heater function.

7.2 IBH locate

Defines the installation position of the backup heater/ auxiliary heating source.

7.3 $\Delta T1_IBH_ON$

Defines the range between the water supply temperature (T1) and the setpoint (T1S) beyond which the heater is switched on. When $T1 \leq T1S - \Delta T1_IBH_ON$ the heater is

switched on.

7.4 t_IBH_DELAY

Defines the minimum minutes between compressor start-up and heater start-up.

7.5 T4_IBH_ON

Defines the outdoor temperature below which the heater can be used. If the outdoor temperature is higher than T4_IBH_ON, the heater cannot be used.

7.6 P_IBH1

Defines the electric power of the heater, if present: the value set here is used to calculate the heat output and efficiency of the unit.

IBH1 must be set to the power of the first stage. The parameters do not count the power of external elements because the supply port is different.

7.7 P_IBH2

Reserved for factory settings.

7.8 AHS FUNCTION

Defines the auxiliary heating source function.

7.9 AHS_PUMP_I CONTROL

Sets the operation state of Pump_I when only the auxiliary heating source is running.

7.10 $\Delta T1_AHS_ON$

Defines the range between the water supply temperature (T1) and the setpoint (T1S) beyond which the boiler is switched on. When $T1S - T1 \geq \Delta T1_AHS_ON$, the boiler is switched on.

7.11 t_AHS_DELAY

Defines the minimum minutes between compressor start-up and boiler start-up.

7.12 T4_AHS_ON

Defines the outdoor temperature below which the boiler can be used. If the outdoor temperature is higher than T4_AHS_ON, the heater cannot be used.

7.13 EnSWITCHPDC

Enables/disables the intelligent function for hybrid € switch heat pumps.

The € switch function analyses the operating conditions of the unit and uses an algorithm to calculate the minimum efficiency that the heat pump must have in order to continue to operate more economically than the boiler. Should the heat pump operate below this efficiency, the unit switches off the heat pump and only uses the boiler.

The € switch function uses the cost of fuel gas (€/Smc from a bill, to be entered in parameter GAS_COST) and the cost of electricity (€/kWh from a bill, to be entered in parameter ELE_COST).

- i** The logics that activate the boiler to supplement the capacity of the heat pump remain unchanged even with the € switch function on.

7.14 GAS_COST

Defines the cost of fuel gas used to power the boiler (in €/Smc, from a bill).

- i** In the absence of this value, it can be estimated with data retrieved from the last bills using the simplified formula: Energy cost = (Total amount of bills [€]) / (Total amount of consumption [Smc]). In reality, the method is simplified because there are a number of fixed costs in the bill that are independent of actual fuel consumption. The precise calculation is beyond the scope of this manual.

7.15 ELE_COST

Defines the cost of electricity used to power the unit (in €/kWh, from a bill).

- i** In the absence of this value, it can be estimated with data retrieved from the last bills using the simplified formula: Energy cost = (Total amount of bills [€]) / (Total amount of consumption [Smc]). In reality, the method is simplified because there are a number of fixed costs in the bill that are independent of actual fuel consumption. The precise calculation is beyond the scope of this manual.

The unit manages the AHS setpoint dynamically with a 0-10V signal, through the maximum and minimum setpoint parameters set in the boiler.

7.16 MAX_SETHEATER

Defines the maximum setpoint value that can be reached by the boiler, which is used to control the 0-10V signal.

7.17 MIN_SETHEATER

Defines the minimum setpoint value that can be reached by the boiler, which is used to control the 0-10V signal.

7.18 MAX_SIGHEATER

Defines the signal voltage associated with the maximum setpoint value that can be set in the boiler.

7.19 MIN_SIGHEATER

Defines the signal voltage associated with the minimum setpoint value that can be set in the boiler.

7.20 TBH FUNCTION

Defines whether the tank heating function is on.

7.21 dT5_TBH_OFF

Defines how many degrees above the DHW setpoint (T5S) the water tank heater (TBH) must be brought to. When TBH is activated, the DHW storage tank will be brought to temperature $T5S + dT5_TBH_OFF$.

- i** When the temperature of the DHW storage tank (T5) reaches T5stop, the heat pump stops and the DHW storage tank heater (TBH)

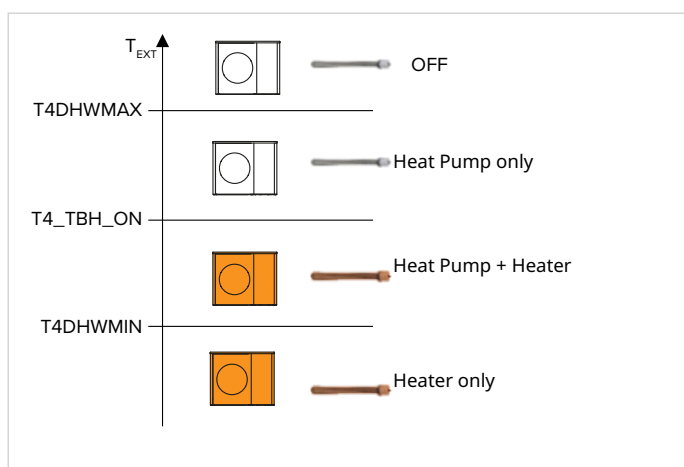
can continue to operate. The TBH heater is switched off when the DHW storage tank temperature is $T5 > T5S + dT5_TBH_OFF$ or $T5 > 70^{\circ}\text{C}$. Any protection of the heating element built into the storage tank should be set to $T5S + dT5_TBH_OFF$.

7.22 t_TBH_DELAY

Defines the minimum minutes of compressor operation beyond which, if the unit fails to bring the DHW storage tank to the setpoint, the TBH heater can be activated.

7.23 T4_TBH_ON

Defines the maximum outdoor air temperature at which the TBH heater can be activated.



7.24 P_TBH

Defines the electric power of the DHW tank heater, if present: the value set here is used to calculate the heat output and efficiency of the unit.

7.25 Solar function

Defines whether the heating system has a solar function.

7.26 Solar control

Defines the type of solar pump control.

7.27 DELTASOL

Defines the range between the solar circuit temperature (T_{sol}) and the DHW storage tank temperature ($T5$) which, if the solar function is activated, starts the Pump_s pump. The pump is switched on when $DELTASOL < T_{sol} - T5$.

11.10 Service call contact settings

MENU > FOR SERVICEMAN > 9. SERVICE CALL

Service call contacts can be stored so that they are always at hand in case of need.

PHONE

Stores a phone number.

MOBILE

Stores a mobile phone number.

-  To change numbers from the keypad, use the $\wedge \vee$ buttons. The maximum number of characters is 13.

11.11 Restore factory settings

MENU > FOR SERVICEMAN > 10. RESTORE FACTORY SETTINGS

The parameters can be restored to the factory settings.

11.12 Test mode settings

MENU > FOR SERVICEMAN > 11. TEST RUN

The test mode is used to check operation of the valves, air purge, pumps, Heating, Cooling and DHW.

-  In this mode, the keypad is disabled with the exception of the **OK** button. You can exit the test at any time by pressing this button.

POINT CHECK

Used to check the operation of a number of components. By selecting the component from the menu, it can be forcibly started: if it does not work, check its electrical connection.

-  Before activating the function, make sure the DHW tank and the system are filled with water and the air has been discharged, otherwise the unit could be damaged.

-  Navigate through the components to be tested with the $\wedge \vee$ buttons. Force activation of the component by setting it to ON and pressing OK.

The components that can be activated are:

SV1: 3-way DHW switching valve

SV2: 3-way 2-zone switching valve for unmixed 2-zone systems

PUMP_I: primary circuit pump (P_i)

PUMP_O: secondary circuit pump (P_o)

PUMP_C: mixed circuit pump (P_c)

PUMP_S: solar circuit pump (P_s)

PUMP_D: DHW recirculation pump (P_d)

IBH: built-in electric heater (IBH - only for applicable configurations)

TBH: DHW storage tank heater (TBH)

AHS: back-up boiler (AHS)

SV3: 3-way double zone valve for mixed zone 2 (SV3)

-  In 2-zone systems with one mixed zone, SV2 is not available.

AIR PURGE

Starts the purge cycle, which eliminates air in the water circuit that can cause the unit to malfunction.

-  Before activating the function, open the relief valve.

-  The air purge cycle lasts a maximum of 30 minutes.

-  Check the cause of any errors shown on the display during the procedure.

CIRCULATION PUMP RUNNING

Starts the unit's circulation pump.

-  Check the cause of any errors shown on the display during the procedure.

COOLING MODE RUNNING

Starts the unit in Cooling mode, so that system operation can be checked.

-  Check the cause of any errors shown on the display during the procedure.

HEATING MODE RUNNING

Starts the unit in Heating mode, so that system operation can be checked.

-  Check the cause of any errors shown on the display during the procedure.

DHW RUNNING

Starts the unit in DHW mode, so that system operation can be checked.

-  Check the cause of any errors shown on the display during the procedure.

11.13 Special function settings

MENU > FOR SERVICEMAN > 12. SPECIAL FUNCTIONS

Special functions can be used during installation or maintenance to better manage or access the system, e.g. on first start-up to run a radiant floor drying up cycle or when the unit is restarted after being OFF for a long period.

i In this mode, the keypad is disabled.

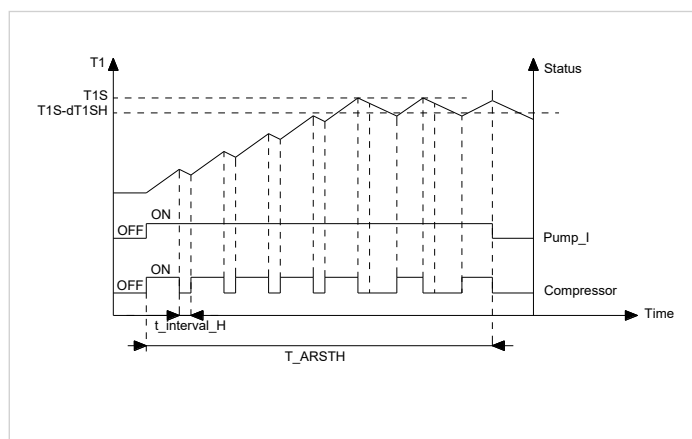
12.1 PREHEATING FOR FLOOR T1S

The function can be useful when the distribution system consists of a radiant floor: if Heating mode is activated on a floor that still contains a considerable amount of water, there is a risk that it will warp or crack.

To protect the floor, a preheating cycle must be carried out, during which the temperature of the water supplied to the floor is gradually raised.

i If this is the first time the unit has been started up, before activating this function run the air purge function (indicated in this paragraph), in order to avoid malfunctions or damage to the system.

The operating logic is shown in the following diagram:



The parameters that can be set for this function are:

T1S

Defines the water supply setpoint temperature for the floor preheating function.

T_ARSTH

Defines how long the floor preheating function runs for. The HMI display shows the water supply temperature and the operating time of the function.

Elapsed time

This is the elapsed time after the floor preheating function.

Tw_out temp.

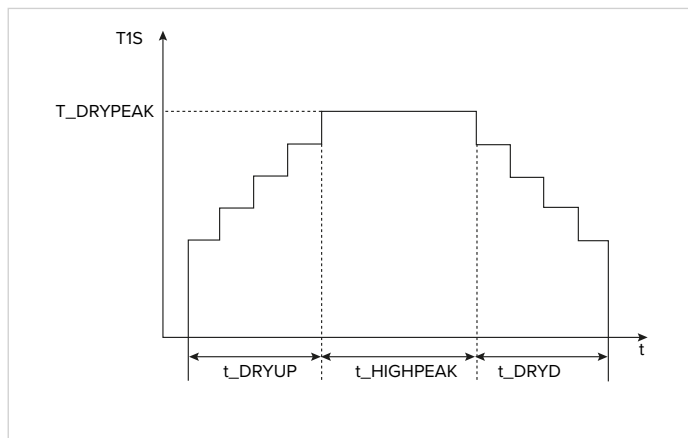
This is the current outlet water temperature.

12.2 FLOOR DRYING UP

The function can be useful for newly installed radiant floor distribution systems: during the first start-up in Heating mode, condensate can form in the floor slab or under the

floor, which may cause the floor to warp or break.

To protect the floor, a drying cycle must be carried out at the first start-up, during which the temperature of the water supplied to the floor is adjusted as shown in the diagram:



i If this is the first time the unit has been started up, before activating this function run the air purge function (indicated in this paragraph), in order to avoid malfunctions or damage to the system. If the heat pump is out of service, the function continues using the boiler or backup electric heater, if present and enabled.

The parameters that can be set for this function are:

HEATING TIME (t_DRYUP)

Defines the number of days over which the water supply temperature is gradually increased.

DURATION (t_HIGHPEAK)

Defines the number of days over which the water supply temperature is kept constant.

DOWN TIME TEMP. (t_DRYDOWN)

Defines the number of days over which the water supply temperature is gradually decreased.

PEAK TEMPERATURE (T_DRYPEAK)

Defines the maximum water supply temperature of the function.

START TIME

Defines the start time of the function.

START DATE

Defines the start date of the function.

The HMI display shows the water supply temperature and the operating time of the function.

EMPTY AHS CIRCUIT

Reserved parameter, do not change.

11.14 Automatic restart settings

MENU > FOR SERVICEMAN > 13. AUTO RESTART

The unit stores the user settings even after the power supply has been cut off.

This function sets whether the unit should automatically restart or remain on stand-by when the power supply is restored after a power failure.

The parameters that can be set for this function are:

13.1 COOLING/HEATING MODE

Defines whether the automatic restart function is switched on for Cooling and Heating modes.

13.2 DHW MODE

Defines whether the automatic restart function is switched on for DHW mode.

11.15 Unit's power supply limitation settings

MENU > FOR SERVICEMAN > 14. POWER INPUT LIMITATION

This function is used to limit the current consumed by the unit according to predefined profiles.

Maximum current limitation [A] according to the selected profile:

Size	4kW-6kW	8kW-10kW	12kW M-16kW M	12kW T-16kW T
1	13.5	17.5	28	9.5
2	12	16	26	8.5
3	11	15	24	7.5
4	10	14	22	7
5	9	13	20	6.5
6	8	12	18	6
7	8	12	18	6
8	8	12	18	6

Size	26kW	30kW
1	23	26
2	22	25
3	21	24
4	20	23
5	19	22
6	18	21
7	17	20
8	16	19

Size	25kW	30kW	35kW	40kW
1	13.5	17.5	28	9.5
2	12	16	26	8.5
3	11	15	24	7.5
4	10	14	22	7
5	9	13	20	6.5
6	8	12	18	6
7	8	12	18	6
8	8	12	18	6

The settable parameter for this function is:

14.1 CONSUMPTION LIMITATION

Enables the function and defines the maximum consumption profile.

i By enabling the function, unit performance will be less than nominal.

11.16 Unit input signal settings

MENU > FOR SERVICEMAN > 15. INPUT DEFINITION

This function is used to adjust and set the unit input signal and probe functions according to the requirements of the system.

The parameters that can be set for this function are:

M1 M2

Defines what the potential-free contact M1M2 should control (0 = remote ON/OFF; 1 = boiler electric heater (TBH); 2 = backup boiler).

SMART GRID

Enables/disables the Smart Grid function (see the SMART GRID Management paragraph)

Tw2

Enables/disables reception of the signal from the secondary circuit supply water temperature probe (Tw2).

Tbt1

Enables/disables reception of the signal from the inertial storage tank temperature probe Tbt1.

TIT2

Reserved, do not use.

DFT1/DFT2

Defines what type of signal contacts DFT1/DFT2 should manage (0 = defrosting; 1 = alarm state)

11.17 Cascade system settings

MENU > FOR SERVICEMAN > 16. CASCADE SETTING

Used to set the unit as part of a cascade system.

The parameters that can be set for this function are:

16.1 PER_START

Defines the percentage of units that are activated at system start-up.

NOTE

The percentage refers to the total number of units in the cascade system, including both Master and Slave units.

16.2 TIME_ADJUST

Defines the minutes after which the Master unit checks whether a Slave unit is switched on/off.

11.18 Other HMI settings

MENU > FOR SERVICEMAN > 17. HMI ADDRESS SETTING

If the unit is controlled with home automation or BMS systems, it is possible to limit access from the HMI to only certain parameters.

The parameters that can be set for this function are:

17.2 HMI ADDRESS FOR BMS

Defines the unit address for management with BMS systems.

17.3 STOP BIT

Defines the data exchange protocol between the BMS software and the HMI (it must be the same for both).

11.19 Common system settings

MENU > FOR SERVICEMAN > 18. COMMON SETTING

This function is used to adjust and set the functions according to the requirements of the system.

18.1 t_DELAY_PUMP

Sets the minutes of delay between compressor switch-off and pump switch-off.

18.2 t1 ANTILOCK PUMP

Sets the time range in which pump_I, pump_O and pump_C run for antilock control.

18.3 t2_ANTILOCK PUMP RUN

Sets the antilock operating time of Pump_I, Pump_O and Pump_C

18.4 t1_ANTILOCK SV

Sets the time range for valves SV1, SV2 and SV3 for antilock control.

18.5 t2_ANTILOCK SV RUN

Sets the antilock operating time of valves SV1, SV2 and SV3

18.6 Ta-regul.

Sets a correction value to be considered on the value detected by the Ta probe.

18.7 F-PIPE LENGTH

Reserved, do not use.

18.8 PUMP_I SILENT OUTPUT

Enables/disables the silent function for the unit's pump, which reduces the pump output by 5% to make the unit quieter.

18.9 ENERGY ANALYSIS

Energy metering allows the user to check energy data for the day, week, month and year.

18.10 PUMP_O

Sets the type of zone 1 pump control (Pump_O).

12. Management and monitoring

Clivet EYE is a Cloud-based monitoring and remote management system for Clivet units and systems that allows supervision via App or Web Dashboard.

 The application will be available from May 2024.

13. MODBUS registers

13.1 MODBUS communication specification

Interface: RS-485

XYE = communication port for connecting to the hydraulic module.

H1 / H2 = Modbus communication ports.

Communication parameters:

Baud rate: 9600

Data length: 8 bit

Control: no control

Stop bit: 1 bit

Communication protocol: RTU Modbus (ASCII Modbus is not supported)

13.2 Controls

Address register	Meaning	Description	
0	ON/OFF	bit15	Reserved
		bit14	Reserved
		bit13	Reserved
		bit12	Reserved
		bit11	Reserved
		bit10	Reserved
		bit9	Reserved
		bit8	Reserved
		bit7	Reserved
		bit6	Reserved
		bit5	Reserved
		bit4	Reserved
		bit3	0= off (T2S); 1= on (T2S) (WATER FLOW TEMP control - zone 2)
		bit2	0= DHW (T5S) off; 1= DHW (T5S) on
		bit1	0= off (T1S); 1= on (T1S) (WATER FLOW TEMP control - zone 1)
		bit0	0= off (TS) 1= on (TS) (ROOM TEMP thermostat control)
1	Operation mode	1: auto; 2: Cooling; 3: heating; other value: invalid	
2	Set water temp. T1s	bit8-bit15	Water temp. T1s setting for ZONE 2
		bit0-bit7	Water temp. T1s setting for ZONE 1
3	Set air temperature Ts	Room temperature setting, when a valid Ta is present, 17°C ~ 30°C transmission value equal to actual value	
4	T5s	Storage tank water temperature setting, 20°C - 75°C. Default = 50°C	

Address register	Meaning	Description	
5	Function settings	bit15	Reserved
		bit14	Reserved
		bit13	1 = ZONE 2 curve on; 0 = ZONE 2 curve disabled
		bit12	1 = ZONE 1 curve on; 0 = ZONE 1 curve disabled
		bit11	DHW pump operating with return water at constant temperature
		bit10	ECO mode
		bit9	Reserved
		bit8	Holiday home (read only, cannot be changed)
		bit7	0= silent level1; 1= silent level2
		bit6	Silent mode
		bit5	Going on holiday (read only, cannot be changed)
		bit4	Sterilization (disinfect)
		bit3	Reserved
		bit2	Reserved
		bit1	Reserved
		bit0	Reserved
6	Curve selection	bit8-bit15	ZONE 2 Curves 1- 9
		bit0-bit7	ZONE 1 Curves 1- 9
7	Forced hot water	0 invalid 1 forced ON 2 forced OFF	TBH is the electric heater inside the water tank, IBH is the heating backup electric heater TBH and IBH cannot be forced together
8	Forced TBH		
9	Forced IBH		
10	SG operation time	0-24hrs	
11	Set the water temperature T1s zone1	Water temperature T1s setting for ZONE 1	
12	Set the water temperature T1s zone2	Water temperature T1s setting for ZONE 2	
13	t_antilock	Valves SV1 and SV3 antilock time, range 0 - 60 s;	
14	Water temperature switch zone 2	0: flow off (T1S2); 1: flow on (T1S2) (WATER FLOW TEMP - Zone 2)	
15	Water tank switch	0: DHW (T5S) off; 1: DHW (T5S) on	
16	Water temperature switch zone 1	0: flow off (T1S); 1: flow on (T1S) switches on (WATER FLOW TEMP -Zone 1)	
17	Room temperature switch	0: off (TS); 1: on (TS) (ROOM TEMP)	
18	Zone 1 curve selection	1: Zone 1 curve on; 0: Zone 1 curve off	
19	Zone 2 curve selection	1: Zone 2 curve on; 0: Zone 2 curve off	
20	Silent level	Reserved	
21	Current percentage limit	Reserved	

1 Point 0 has the same functions as points 14, 15, 16 and 17. It is recommended to use points 14-17 for control.

2 Point 6 has the same function as points 18 and 19. It is recommended to use points 18-19 for control.

3 Point 2 has the same function as points 11 and 12. It is recommended to use points 11-12 for control.

13.3 States

Address register	Meaning	Description
100	Operating frequency	Compressor operating frequency in Hz. Value read = current value
101	Operation mode	Unit's operation mode, 0: shut down 2: cooling, 3: heating,
102	Fan speed	Fan speed, unit: rpm. Value read = current speed value
103	PMV	ODU electronic expansion valve opening, unit: P. Value read = current value (shows only 8 multiples. Only multiples of 8 will be shown)
104	Inlet water temperature	TW_in, unit: °C; value read = current value
105	Outlet water temperature	TW_out, unit: °C; value read = current value
106	T3 temperature	Condenser temperature in °C. Value read = current value
107	T4 temperature	Outdoor temperature, unit: °C. Value read = current value
108	Discharge gas temperature	Compressor discharge temperature Tp, unit: °C. Value read = current value
109	Intake gas temperature	Compressor suction temperature Th, unit: °C. Value read = current value
110	T1	Total outlet water temperature, unit: °C. Value read = current value
111	T1B	Total outlet water temperature (after auxiliary heat source), unit: °C. Value read = current value
112	T2	Liquid refrigerant temperature, unit: °C. Value read = current value
113	T2B	Gas refrigerant temperature, unit: °C. Value read = current value
114	Ta	Room temperature, unit: °C value, read = current value
115	T5	DHW tank water temperature
116	Pressure value 1	ODU high pressure value, unit: kPa. Value read = current value
117	Pressure value 2	ODU low pressure value, unit: kPa. Value read = current value (reserved)
118	ODU current	Current ODU running current value, unit A, Value read = current value
119	ODU voltage	ODU power supply voltage value, unit: V. Value read = current value (reserved)
120	Tbt1	Tbt1 unit: °C. Value read = current value
121	Tbt2	Tbt2 unit: °C. Value read = current value
122	Compressor running time	Compressor running time, unit: hour, value read = current value
123	Unit capacity	Register 200 is reserved for type 0702 and the value for type 071X represents the capacity of type 4-30 represents 4-30kW

Address register	Meaning	Description	
124	Current error code	Specific error code, refer to the code table.	
125	Error code 2		
126	Error code 2		
127	Error code 3		
128	State bit: 1	BIT15	Ask for installation parameter, 1: ask; 0: don't ask
		BIT14	Software version, 1: ask; 0: don't ask
		BIT13	Load SN, 1: ask; 0: don't ask
		BIT12	Reserved
		BIT11	EVU state
		BIT10	SG state
		BIT9	Water tank water antifreeze
		BIT8	Solar signal input
		BIT7	Room thermostat in cooling mode
		BIT6	Room thermostat in heating mode
		BIT5	ODU test mode
		BIT4	Remote ON-OFF
		BIT3	Oil return
		BIT2	Antifreeze
		BIT1	Defrosting
		BIT0	Pump in forced operation (reserved)
129	Load output	BIT15	Defrosting
		BIT14	External heat source
		BIT13	Run
		BIT12	ALARM
		BIT11	Solar pump Pump_S
		BIT10	HEAT4
		BIT9	SV3
		BIT8	Mixing pump P_c
		BIT7	Recirculation pump P_d
		BIT6	External pump P_o
		BIT5	SV2
		BIT4	SV1
		BIT3	Standard unit pump Pump_I
		BIT2	TBH
		BIT1	IBH2
		BIT0	IBH
130	IDU software version	0 - 99 Indicates the software version of the indoor unit	
131	HMI software version	0 - 99 Indicates the software version of the user interface	
132	Unit target frequency	Compressor target frequency in Hz. Send value = actual value	
133	DC bus current	Feedback value = actual * 10 (Unit: Amps)	
134	DC bus voltage	Feedback value = actual * 10	
135	TF module temperature	Unit (°C) - ODU feedback to IDU	
136	Curve 1T1S	Value read = current value	

Address register	Meaning	Description
137	Curve 2T1S	Value read = current value
138	Water flow	Value read = current value* 100 [unit: m ³ /hour]
139	ODU frequency limitation	Diagram value ----- ODU feedback 174
140	IDU capacity	Value read = current value* 100 unit: kW
141	Solar T	
142	Number of units in cascade	BIT1-BIT15 represents the online/offline state of 1-15 units BIT0 Reserved
143	Total power consumed For master unit high bit	Value read = current value
144	Total power consumed For master unit low bit	Value read = current value
145	Total energy produced For master unit high bit	Value read = current value
146	Total energy produced For master unit low bit	Value read = current value
147	AHS power supply output to EDGE series	Value read = current value* 10 (unit: V)
148	Real-time heating energy produced for master unit	Value read = current value* 100
149	Real-time heating re energy produced for master unit	Value read = current value* 100
150	Real-time COP in heating mode for master unit	Value read = current value* 100
151	Real-time heating power consumed for master unit	Value read = current value* 100
152	Total heating energy produced for system high bit	Value read = current value* 100
153	Total heating energy produced for system low bit	Value read = current value* 100
154	Total heating re energy produced for system high bit	Value read = current value* 100
155	Total heating re energy produced for system low bit	Value read = current value* 100
156	Total heating power consumed for system high bit	Value read = current value* 100
157	Total heating power consumed for system low bit	Value read = current value* 100
158	Total heating energy produced for master unit high bit	Value read = current value* 100
159	Total heating energy produced for master unit low bit	Value read = current value* 100
160	Total heating re energy produced for master unit high bit	Value read = current value* 100
161	Total heating re energy produced for master unit low bit	Value read = current value* 100
162	Total heating power consumed for master unit high bit	Value read = current value* 100
163	Total heating power consumed for master unit low bit	Value read = current value* 100
164	Total COP in heating mode for master unit	Value read = current value* 100

Address register	Meaning	Description	
165	Total cooling energy produced for master unit high bit	Value read = current value* 100	
166	Total cooling energy produced for master unit low bit	Value read = current value* 100	
167	Total cooling re energy produced for master unit high bit	Value read = current value* 100	
168	Total cooling re energy produced for master unit low bit	Value read = current value* 100	
169	Total cooling power consumed for master unit high bit	Value read = current value* 100	
170	Total cooling power consumed for master unit low bit	Value read = current value* 100	
171	Total cooling re energy produced for master unit low bit	Value read = current value* 100	
172	Total cooling power consumed for master unit high bit	Value read = current value* 100	
173	Total cooling power consumed for master unit low bit	Value read = current value* 100	
174	Total DHW re energy produced for master unit high bit	Value read = current value* 100	
175	Total DHW re energy produced for master unit low bit	Value read = current value* 100	
176	Total DHW power consumed for master unit high bit	Value read = current value* 100	
177	Total DHW power consumed for master unit low bit	Value read = current value* 100	
178	Total COP in DHW mode for master unit	Value read = current value* 100	
179	Real-time cooling energy produced for master unit	Value read = current value* 100	
180	Real-time cooling re energy produced for master unit	Value read = current value* 100	
181	Real-time cooling power consumed for master unit	Value read = current value* 100	
182	Real-time EER in cooling mode for master unit	Value read = current value* 100	
183	Real-time DHW energy produced for master unit	Value read = current value* 100	
184	Real-time DHW re energy produced for master unit	Value read = current value* 100	
185	Real-time DHW power consumed for master unit	Value read = current value* 100	
186	Real-time COP in DHW mode for master unit	Value read = current value* 100	
187	Modbus protocol version number	Format: 29=V2.9	
188	Error code (format V8)	V8 Fault analysis method. When this fault bit is not 0, use this fault bit to analyse the fault code.	
189	Status bit 2	BIT8-BIT15	Reserved
		BIT7	Number of power supply phases; 0 : single-phase; 1 : three-phase

Address register	Meaning	Description
190	Hydraulic module	Default 0

Address register	Meaning	Description
191	TL	Read value = current value, invalid: 0xFF
192	Duty cycle PWM water pump feedback	Transmit value = actual value*10
193	T9i	Reserved
194	T9io	Reserved
195	ODU EXV2	Open expansion valve 2, Read value = current value
196	ODU EXV3	Open expansion valve 3, Read value = current value
197	Fan speed 2	Unit: RPM Value read = current value
198	Status 3	BIT15 TBH; 1: enabled; 0: disabled
		BIT14 AHS; 1: enabled; 0: disabled
		BIT13 Reserved
		BIT12 T1B; 1: enabled; 0: disabled
		BIT11 AHS mode; 1:Heating and DHW, 0: Heat Only
		BIT10 IBH; 1: enabled; 0: disabled
		BIT9 T1; 1: enabled; 0: disabled
		BIT8 Energy measurement; 1: enabled; 0: disabled
		BIT7 Reserved
		BIT6 Reserved
		BIT5 DHW operating state; 1:ON; 0:OFF
		BIT4 Heating operating state; 1:ON; 0:OFF
		BIT3 Cooling operating state; 1: ON; 0:OFF
		BIT2 Reserved
		BIT1 Reserved
		BIT0 Reserved
199	Hydraulic module operation mode	0: OFF; 2: Cooling; 3: Heating; 5:ACS; Altro: Non valido

Note:

- 1 When Tw2 is not available, '25' will be displayed at address 111 of the upper unit.
- 2 When Ta is not available, '25' will be displayed at address 114 of the upper unit.

13.4 States of units in cascade

Address register	Meaning	Description	
1000	Operation mode	Operation mode, 2: cool, 3: heat; 0: OFF	
1001	Com. Rps	Comp.freq., unit: Hz, (value read = current value)	
1002	Tw _i	TW _{in} , unit:°C entering water temperature; (value read = current value)	
1003	Tw _o	TW _{out} , unit:°C leaving water temperature; (value read = current value)	
1004	Tsolar	Tsolar, unit:°C solar temperature; (value read = current value)	
1005	Salve unit error code	Specific error code, refer to the code table.	
1006	P6 error	Reserved	
1007	IDU status 1	Bit3~7	Reserved
		Bit2	Oil return
		Bit1	Antifreeze
		Bit0	Defrosting
1008	IDU status 2	Bit5~7	Reserved
		Bit4	T1 enabled: 1- enabled; 0- disabled
		Bit3	IBH enabled: 1- enabled; 0- disabled
		Bit2	DHW
		Bit1	Heat
1009	IDU load	Bit0	Cool
		Bit7	Crankcase Heater: 1- on; 0- off
		Bit6	Reserved
		Bit5	Defrosting 1- on; 0- off
		Bit4	RUN 1- on; 0- off
		Bit3	PUMP_I 1- on; 0- off
		Bit2	TBH = 1- on; 0- off
		Bit1	IBH2 = 1- on; 0- off
1010	IDU load output - Reserved	Bit0	IBH1 = 1- on; 0- off
		Bit0~7	Reserved
1011	T1	Total outlet water temperature, unit:°C, (value read = current value); invalid: 0x7F	
1012	T1B /TW2	Total outlet water temperature (after auxiliary heat source), unit:°C. (value read = current value); invalid: 0x7F	
1013	T2	Refrigerant liquid temperature, unit:°C. (value read = current value); invalid: 0x7F	
1014	T2B	Refrigerant gas temperature, unit:°C. (value read = current value); invalid: 0x7F	
1015	T5	DHW tank temperature, unit:°C. (value read = current value); invalid: 0x7F	
1016	Ta	Room temperature, unit:°C. (value read = current value); invalid: 0x7F	
1017	Tbt1	Upper storage tank temperature, unit:°C. (value read = current value); invalid: 0x7F	
1018	Tbt2	Lower storage tank temperature, unit:°C. (value read = current value); invalid: 0x7F	
1019	Water flow	(value read = current value)* 100, unit: M3/H	
1020	Unit type	10-18 : means 10-18kW	
1021	Unit target frequency		
1022	Software version	1~99 means IDU software version	
1023	Total energy output	Unit: kWh	
1024		Current value= (Read value in reg. 1023 (16bits) * 65536 + Read value in reg. 1024 (16 bits))/100	
1025	IDU capacity	(value read = actual value) *100, unit: kW	
1026	Fan speed	Fan speed, (value read = current value)	
1027	PMV	ODU EXV opening, unit: P. value read = current value (Only multiples of 8 will be shown)	
1028	T3	Coil temperature, unit:°C	
1029	T4	Outdoor temperature, unit:°C	
1030	Tp	Discharge temperature Tp, unit: °C	

Address register	Meaning	Description	
1031	Th	Suction temperature, unit:°C	
1032	TF	Unit (°C) ---- External unit feedback invalid value 0x7F	
1033	Pressure 1	ODU high pressure, unit: kPa. (value read = current value)	
1034	Pressure 2	ODU low pressure, unit: kPa. (value read = current value) (reserved)	
1035	DC bus current	Unit: Amps, return value = current value*10	
1036	DC bus voltage	Unit: Volts, return value = current value*10	
1037	ODU current	Unit: A (value read = current value)	
1038	ODU voltage	Unit: V (value read = current value)	
1039	ODU frequency limitation solution	Solution read from ODU 174	
1040	Electricity consumption	Unit: kWh	
1041		Current value = (Read value in reg.1040(16bits)*65536+Read value in reg.1041(16bits))/100	
1042	ODU software version		
1043	Fault code (V8 format)	This can be found in Appendix V8 Fault analysis method.	
1044	Status bit 2	BIT8-BIT15	Reserved
		BIT7	Number of power supply phases; 0 : single-phase; 1 : three-phase
		BIT6-BIT0	Reserved
1045	Feedback water pump PWM duty cycle	Value read = current value* 10	
1046	TL	External unit refrigerant pipe temperature °C Value read = current value	

The table above shows the Modbus mapping table information for slave 1.

The information in the mapping table for slave x is obtained by adding the value (x-1)×200 to the address of slave 1. For example, the address corresponding to slave 4 is 1600~1642.

14. Disposal

14.1 WEEE INFORMATION

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 used 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 something 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 refrigeration 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.



14.2 WEEE Disposal Procedure (Italian Market)



14.3 WEEE Disposal Procedure (German Market)



[illegible]

Notes

Notes

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