Keypad

Operating manual for the user and installer

en

05-2024

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 are 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.

Summary

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 manufacturing 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 grilles.

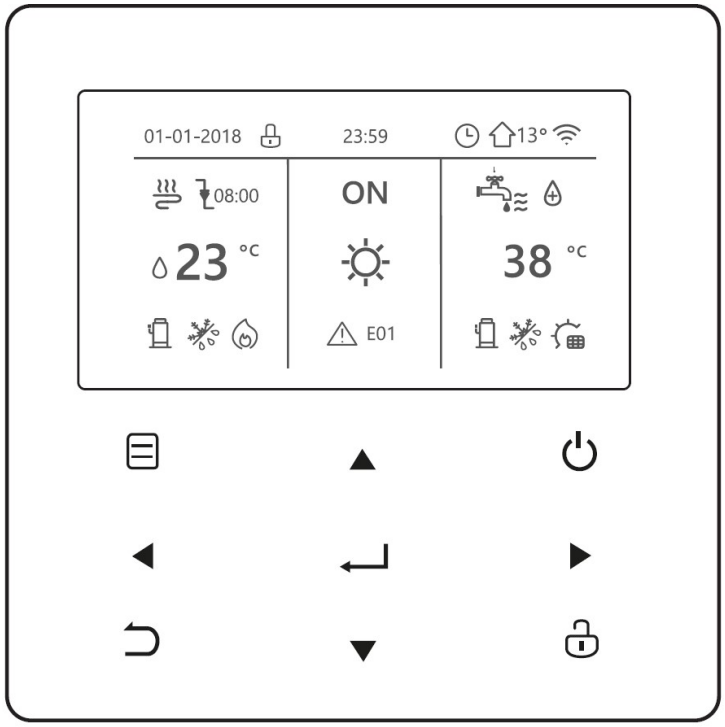
It is forbidden to open the access doors to internal parts of the unit without first turning the system's main switch to "off".

Keypad

User section

User section

2. Explanation of buttons

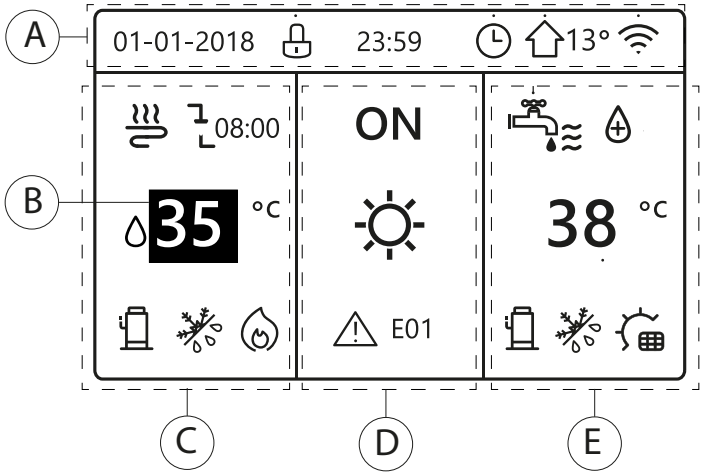


Buttons	Name	Function
	MENU	To open the various menus from the HOME page.
	OK	To confirm an operation.
	UNLOCK	Long press to unlock/lock the keypad. The display automatically locks after 120 seconds of inactivity.
	ON/OFF	To switch on/off zone 1/zone 2/DHW Press the button for 5 seconds to switch on/off zone 1/zone 2/DHW
	LEFT - RIGHT DOWN - UP	To move the cursor on the screen/navigate in the menu structure/adjust parameter settings
	BACK	To return to the previous level. Press to exit the current page and return to the previous page. Long press to return straight to the home screen.

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



A Display info
B Selection cursor
C System
D Operation mode
E Domestic hot water (DHW)

	Keypad lock		Compressor on
08:00	At the next scheduled action, the temperature will decrease		Pump on
	The temperature does not change	7	Weekly schedule
	The temperature decreases		Time schedule
	The temperature increases	13°	Outdoor temperature
	Fan coil		Wi-Fi
	Radiator		Domestic hot water (DHW)
	Underfloor heating (radiant panels)		Disinfect (anti-legionella) function on
23 °C	System water supply temperature (configurable)	ON OFF	Switch on Switch off
	Heating mode	38 °C	DHW tank temperature
	Cooling mode		Solar panel on
A	Automatic mode		Water tank electric heater on
	Additional heat source	E01	Alarms
	Electric heater	FREE	Smart grid mode

Other modes

Antifreeze mode on	Defrosting mode on	Holiday away/at home on	Silent mode on	ECO mode on
				

Type of system

	Fan coil	Radiator	Radiant panels	DHW
ON				
OFF				

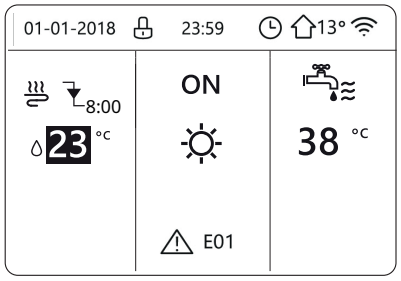
Smart grid

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

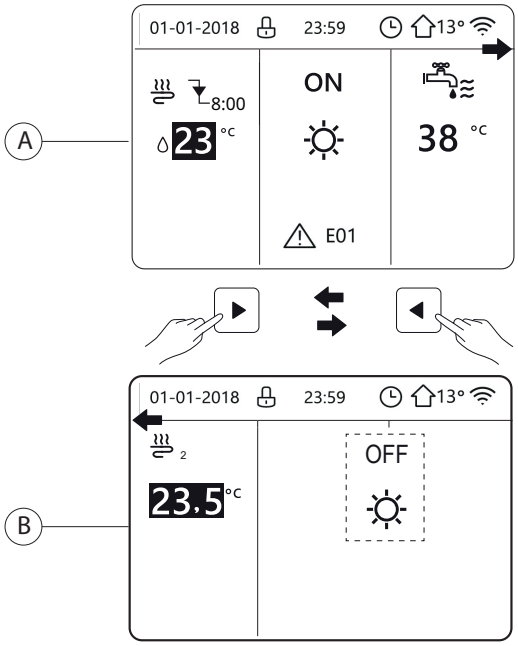
2.2 Main screen

The Home page is the Customer's access point for daily control and varies depending on the system (and the relevant configuration set by the Technician at first start-up).

1-zone system



Double zone system



A Zone 1
B Zone 2

2.3 Menu structure

► Operation mode

- Heat
- Cool
- Auto

► Default temperatures

- Preset temp.
  - |..... Time slots from 1 to 6
- Climate Temp. Set.
  - |..... Zone1 C-Mode Low Temp.
  - |..... Zone1 H-Mode High Temp.
  - |..... Zone2 C-Mode Low Temp.
  - |..... Zone2 H-Mode High Temp.
  - |..... Climatic curve
- Eco mode
  - |..... Current state (enable/disable)
  - |..... ECO timer
  - |..... Start time
  - |..... End time
  - |..... Climatic curve

► Domestic hot water (DHW)

- Disinfect (Anti-legionella)
  - |..... Status (enable/disable)
  - |..... Operation day
  - |..... Start time
- Fast DHW (enabled/disabled)
- Tank heating (enabled/disabled)
- DHW pump (circulation)
  - |..... Time slots from 1 to 9

► Time scheduling

- Daily timer
  - |..... Time slots from 1 to 6
- Weekly schedule
  - |..... Time slots from 1 to 6
- Schedule check
  - |..... Time slots from 1 to 6
- Cancel timer
  - |..... Cancel schedule

► Options

- Silent mode
  - |..... Status (enable/disable)
  - |..... Silent mode level
  - |..... Silent mode timer 1

|..... Silent mode timer 2

- Holiday away

|..... Current state
|..... DHW mode (enable/disable)
|..... Anti-legionella (enable/disable)
|..... Heating mode (enable/disable)
|..... Start date
|..... Finish date

- Holiday home

|..... Time slots from 1 to 6
|..... Current state
|..... Start date
|..... Finish date
|..... Timer

- Backup heating

|..... Backup heating (enable/disable)

► Child lock

|..... Cooling/heating temperature adjust (locked/unlocked)
|..... Cooling/heating mode on/off (locked/unlocked)
|..... DHW temperature adjust (locked/unlocked)
|..... DHW mode on/off (locked/unlocked)

► Technical data

- Service (servicing number)
- Error codes display
- Parameters display
- Screen settings (display)

|..... Time
|..... Date
|..... Language
|..... Backlight
|..... Buzzer
|..... Screen lock time
|..... Smart Grid Running Time

► Operation parameters (installer use)

|..... See Parameters table

► Customer support (installer use)

|..... DHW mode setting
|..... Cooling mode setting
|..... Heating mode setting
|..... Auto mode setting
|..... Temperature type setting
|..... Room thermostat
|..... Other heating source
|..... Holiday away setting
|..... Service call

|..... Restore factory settings
|..... Test run
|..... Special function
|..... Auto restart
|..... Power input limitation
|..... Input define
|..... Cascade settings
|..... HMI address set

►WLAN setting

- AP Mode
- Reset WLAN settings

►SN view

2.4 Terminology used

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

Sign	Description
DHW	Domestic hot water
WLAN	Wi-Fi network

3. Basic operations

This chapter contains the most frequent unit operations for the user.
No special technical skills are required to perform these operations.

3.1 Locking and unlocking the keypad

To lock/unlock the keypad:

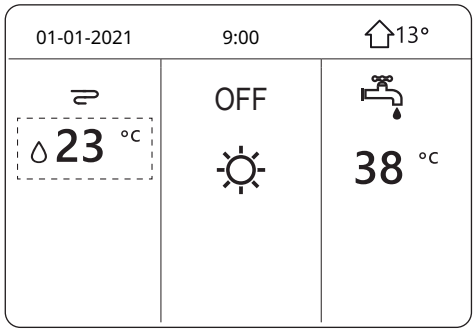
► press the Unlock button for 3 sec.

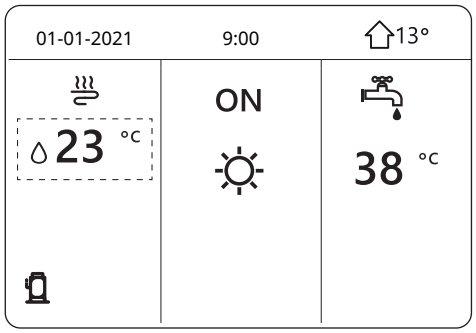
ⓘ The display automatically locks after 120 seconds of inactivity.

3.2 Switch the unit on and off

To switch on:

► press **ON/OFF** for 5 seconds





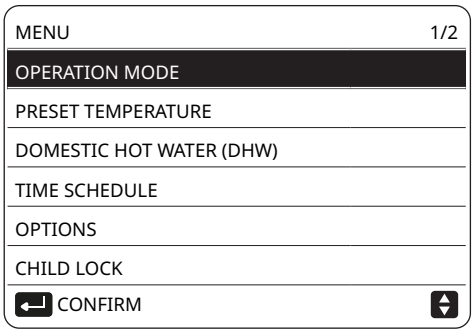
⚠ The black selection cursor must not be present when switching the unit on/off. If present, press OK to deselect it.

3.3 Operating mode selection

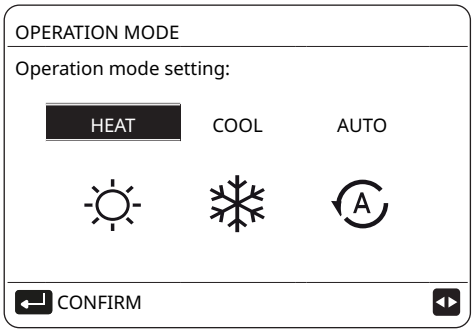
The modes are set on the Menu screen.

To select:

► press **MENU**
► press **Down** or **Up**
► select **OPERATING MODE**
► press **OK**



► press **Right** or **Left**
► select the required mode
► press **OK**
► press **Back**



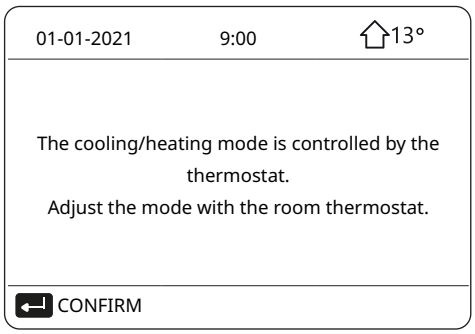
Available operating modes:

- Cooling
- Heating
- Automatic

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

If there is a room thermostat

If there is a room thermostat, the function can be switched off and the following screen will be displayed:



In this case, operations must be done on the room thermostat

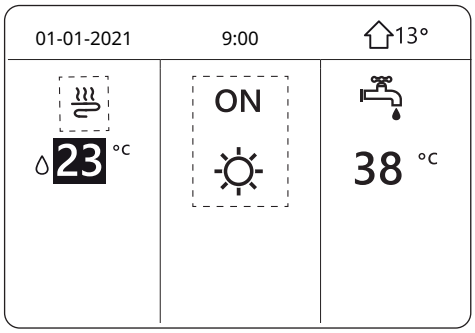
3.4 Switching heating/cooling on/off

► press **Left**

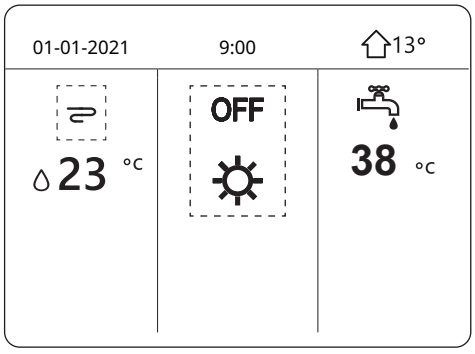
○ the black cursor moves to system side

► press **On/Off** to switch the heating or cooling on/off.

Function on

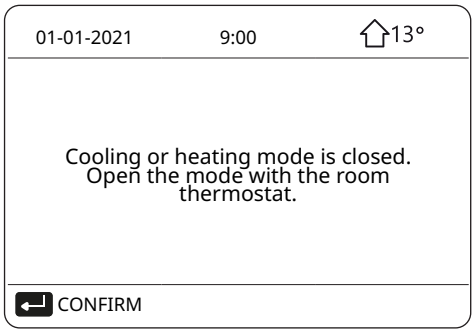


Function off



If there is a room thermostat

If there is a room thermostat, the function can be switched off and the following screen will be displayed:



In this case, operations must be done on the room thermostat

ⓘ If there are two zones, perform the same procedure on the second zone (see the Home page chapter).

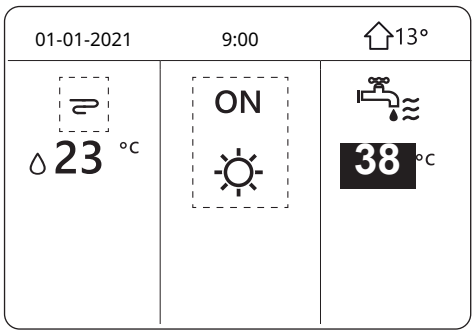
3.5 Switching domestic hot water (DHW) on/off

► press **Right**

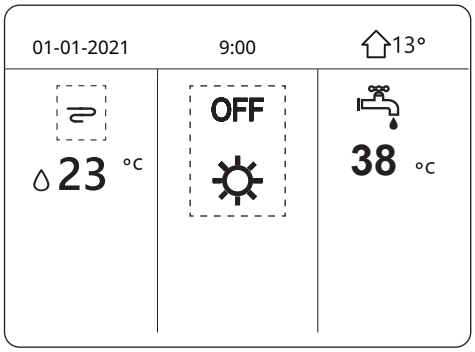
○ the cursor moves to the DHW dial

► press **On/Off** to switch the DHW on/off

Function on



Function off

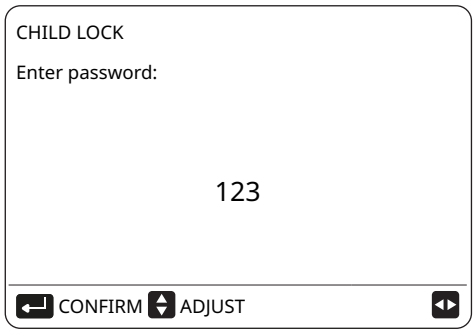


3.6 Child lock

The Child lock function prevents children from misusing the unit.
The function allows certain functions to be selectively locked or unlocked.

To access:

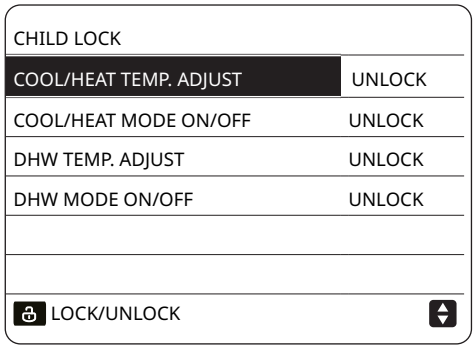
- ► press **MENU**
- ► press **Down** or **Up**
- ► select **Child lock**
- ► press **OK**
- ► enter the password.
- ► press **OK**



To set:

- ► press **Down** or **Up**
- ► select the function
- ► press **ON/OFF**
- ► press **Back**

To lock or unlock one or more functions.

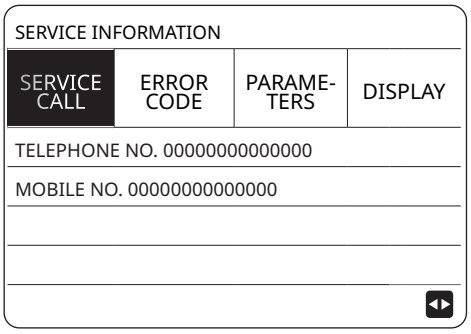


3.7 Technical data

This chapter contains useful functions such as customer support contacts, error codes, unit operation parameters and how to configure the display.

To select servicing information:

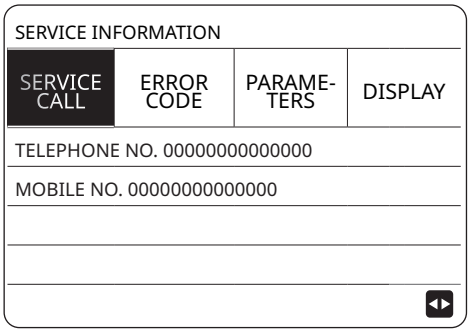
- ► press **MENU**
- ► press **Down** or **Up**
- ► select **Service information**
- ► press **OK**



Service call: displays the contacts needed to call for assistance
Error code: displays the meaning of the error codes
Parameters: used to control the operation parameters
Display: used to configure the display

3.7.1 Service call

The installer can enter the service centre number or a mobile no.
See the FOR SERVICEMAN menu.

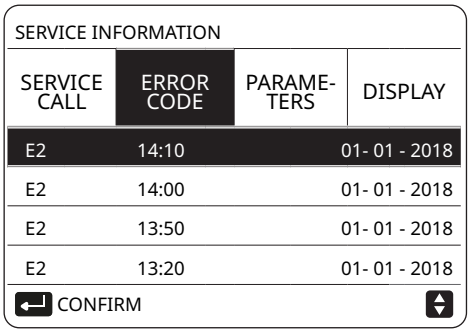


3.7.2 Error code

Error codes are displayed in the event of a failure or malfunction.

To display:

- ► press **RIGHT**
- ► press **Down** or **Up**
- ► go on the line
- ► press **OK**



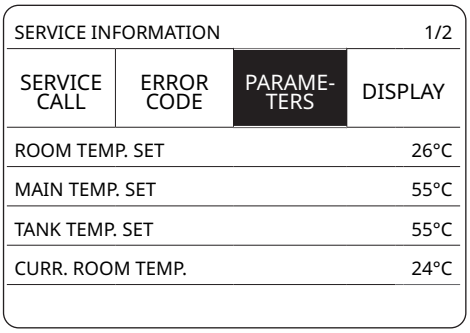
ⓘ A total of eight error codes can be stored.

3.7.3 Parameters

The main parameters are displayed on 2 screens.

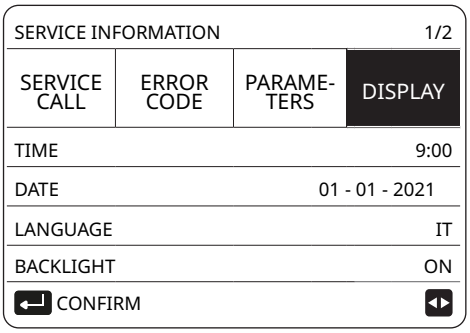
To display:

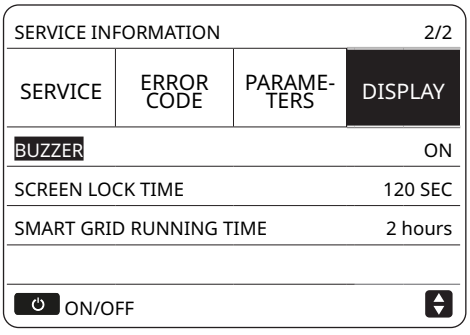
- ► press **RIGHT**
- ► press **OK**
- ► press **Down** or **Up**



3.7.4 Display (date, time, language settings)

- ► press **Right**
- ► press **OK**
- ► press **Down** or **Up**
- ► go on the function
- ► press **Right**
- ► press **Down** or **Up**
- ► press **OK**





The DISPLAY function is used to set:
Time: sets the current time
Date: sets the current date
Language: sets the language
Sound signal: sets the sound signal
Backlight: sets the screen backlight
Screen lock time: sets the screen lock time
Smart grid: sets the running time

4. Advanced operations

This section contains less frequent unit operations for the user.
A basic level of technical expertise in the operation of air conditioning systems is required to perform these operations.

⚠ If necessary, contact the Technical Support Service.

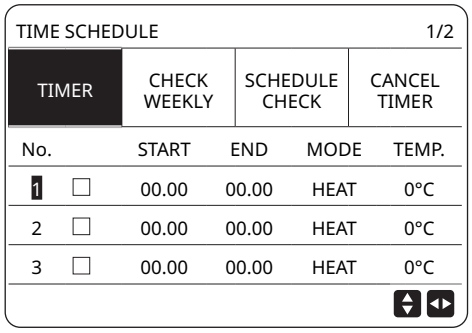
4.1 Time scheduling

The function enables daily and weekly scheduling.
Functions menu:

1 TIMER = daily schedule
2 WEEKLY SCHED. = weekly schedule
3 SCHED. CHECK = check the schedule
4 CANCEL TIMER = delete the schedule

Select the schedule:

► press **MENU**
► press **Down** or **Up**
► select **Schedule**
► press **OK**



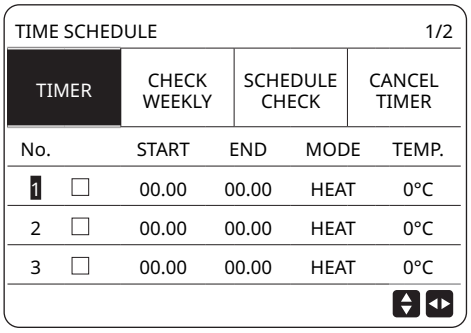
4.1.1 Timer

Up to 6 timer can be set.
If the TIMER function is on, the ⏲ icon appears on the home page.

To set:

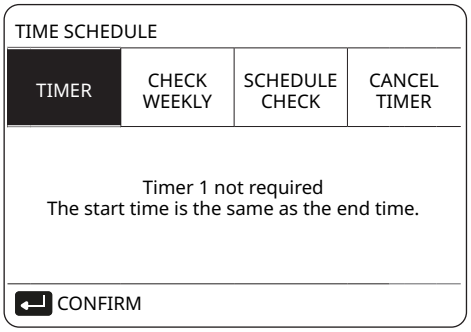
► press **Down**
► press **Right**
► press **OK**
► press **Right** or **Left**
► press **Down** or **Up** to adjust
► press **OK**

○ ☑ timer selected, ☐ timer deselected



Start: sets the command activation time
End: sets the command deactivation time
Mode: sets the operating mode.
Temp: sets the desired temperature

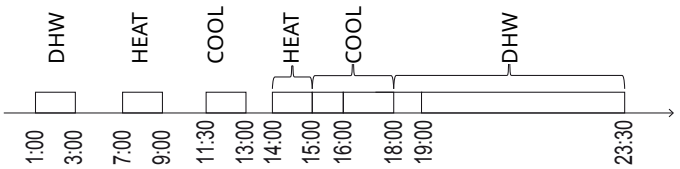
To delete the TIMER, move the cursor to ☑ and press "OK" changes to ☐, the timer switches off.
If a start time is set later than the end time, or a temperature outside the allowed range is set for the chosen operating mode, the following message is displayed.



Example
Setting 6 time slots:

NO.	START	END	MODE	TEMP.
T1	1:00	3:00	DHW	50 °C
T2	7:00	9:00	HEAT	28 °C
T3	11:30	13:30	COOL	20 °C
T4	14:30	16:30	HEAT	28 °C
T5	15:00	19:00	COOL	20 °C
T6	18:00	23.30	DHW	50 °C

Operation of the unit.



Operation of the unit according to the schedule:

TIME	Operation of the unit	
1:00	ON	DHW mode
3:00	OFF	DHW mode
7:00	ON	Heating mode
9:00	OFF	Heating mode
11:30	ON	Cooling mode
13:00	OFF	Cooling mode
14:00	ON	Heating mode
15:00	ON	Cooling mode is ON and Heating mode is OFF
16:00	OFF	Heating mode
18:00	ON	DHW mode
19:00	OFF	Cooling mode
23:00	OFF	DHW mode

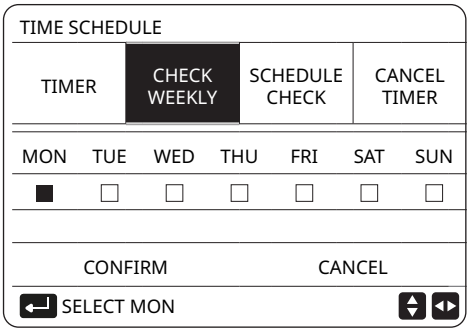
ⓘ If the start time and the end time are the same in the same time schedule, the TIMER function is not valid.

4.1.2 Weekly schedule

If the WEEKLY SCHED. function is on, 7 is displayed on the screen.

To set:

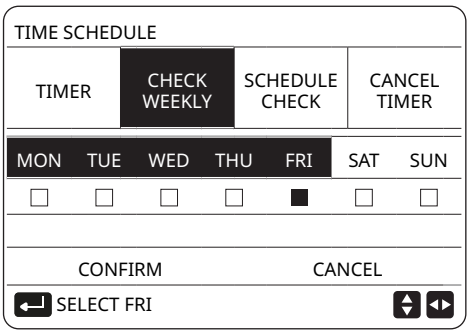
► press **Right**
► select **Weekly schedule**
► press **OK**



Select the days of the week to set a schedule.

To set:

► press **Right** or **Left**
► select the days
► press **OK** to select or deselect

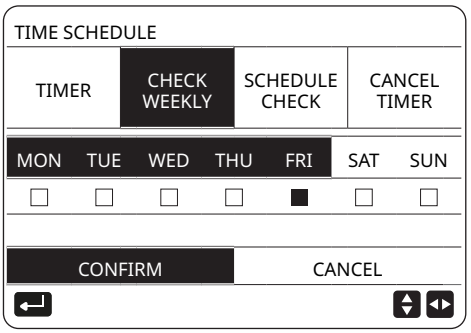


The days from Monday to Friday are selected and have the same schedule.

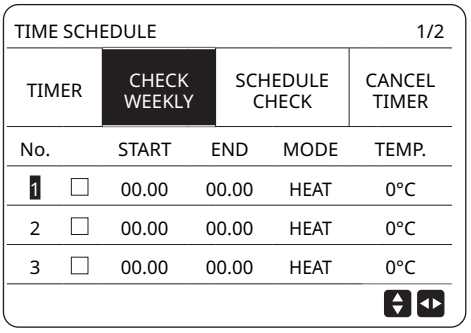
ⓘ If " MON " is displayed the day is selected, if " MON " is displayed it is deselected.

ⓘ To enable the WEEKLY SCHED. function, at least two days must be scheduled.

► press **Down**
► select CONFIRM
► press **OK**



Up to 6 time slots can be set.



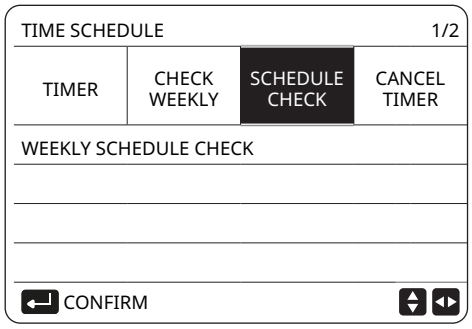
ⓘ Use the same daily Timer schedule logic for the settings.

4.1.3 Schedule check

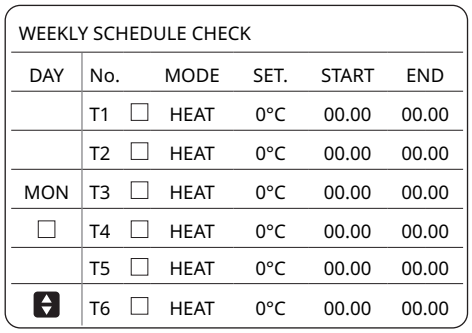
The function is only used to check the weekly schedule.

To check:

- ► press **Right**
- ► select **Schedule check**
- ► press **OK**



- ► press **Down** or **Up**

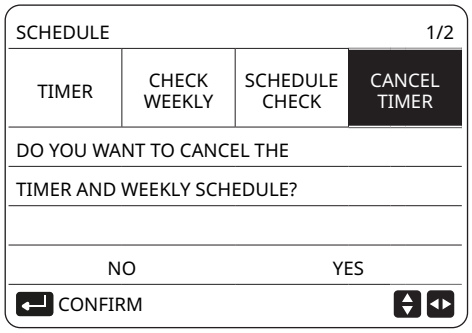


The Monday to Sunday schedule is displayed.

4.1.4 Cancel the timer

To cancel:

- ► press **Right**
- ► select **Cancel timer**
- ► press **OK**
- ► select **YES**
- ► press **Back**



When the TIMER or WEEKLY SCHED. is cancelled, the icon is no longer visible.

ⓘ The TIMER / WEEKLY SCHED. must be reset if switching from WATER FLOW TEMP. to ROOM TEMP or from ROOM TEMP. to WATER FLOW TEMP. Neither the TIMER nor the WEEKLY SCHED. are valid if the ROOM THERMOSTAT is on.

ⓘ The ECO MODO function has the priority, followed in sequence by the TIMER or WEEKLY SCHED. functions and the PRESET TEMP. or CLIMATE TEMP.SET. functions.

ⓘ If ECO MODE is on, the PRESET TEMP. or CLIMATE TEMP. SET. functions are disabled, vice versa if ECO MODE is off, either the PRESET TEMP. or CLIMATE TEMP.SET. functions are to be switched on.

ⓘ The TIMER or WEEKLY SCHED. functions can only operate if ECO MODE is off.

ⓘ The TIMER and WEEKLY SCHED. functions have the same priority and the function that is set last takes precedence.

ⓘ The PRESET TEMP. function is switched off if the TIMER or WEEKLY SCHED. functions are switched on.

ⓘ The CLIMATE TEMP.SET. function is not affected when the TIMER or WEEKLY SCHED. functions are set.

ⓘ The PRESET TEMP. and CLIMATE TEMP.SET. functions have the same priority and the function that is set last takes precedence.

ⓘ For all functions with an time schedule (PRESET TEMP., ECO, DISINFECT, DHW PUMP, TIMER, WEEKLY SCHED., SILENT MODE, HOLIDAY AT HOME), they can only be switched ON/OFF at the start and end times set.

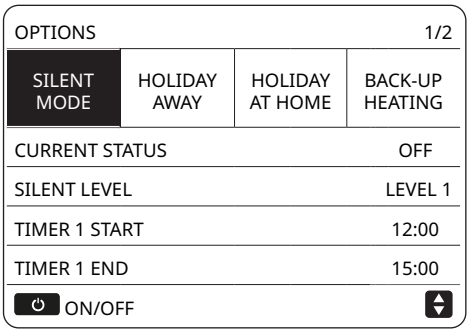
4.2 Options

The Options menu has the following functions:

1 SILENT MODE
2 HOLIDAY AWAY
3 HOLIDAY AT HOME
4 BACKUP HEATING

Select options:

► press **MENU**
► press **Down**
► selezionare **Opzioni**
► press **OK**



4.2.1 Silent mode

Silent Mode enables quieter operation of the unit.
However, it also reduces the heating/cooling capacity of the system.
There are 2 Silent Mode levels.
Level 2 is quieter than level 1, and further reduces the heating or cooling capacity.

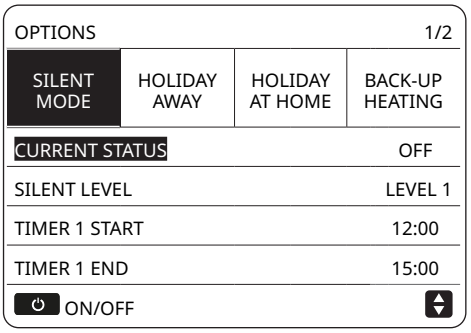
Silent Mode can be used in the following modes:

- silent mode all the time
- activation with timer

If silent mode is on, the ⏲ icon appears.

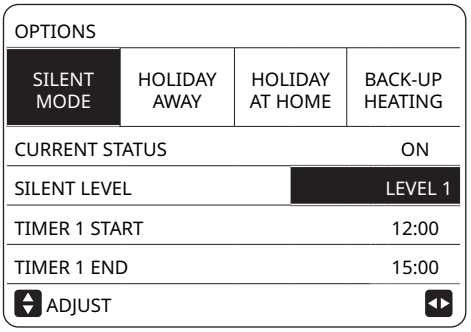
To switch on:

► press **Down**
► press **ON/OFF**



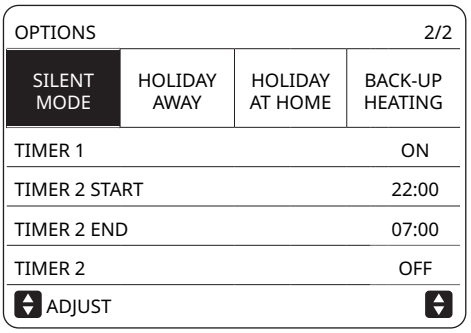
To set:

► press **Down** to select level 1 or 2
► press **Right**
► press **Down** or **Up**
► press **OK**



If the TIMER function is selected:

► press **Down**
► select **Timer**
► press **OK**



To set:

► press **Down**,**Up**,**Right**,**Left** to adjust the value
► press **OK**
► press **Back**

2 time slots can be set.

Current status: function status
Silent level: select the level
Timer start: sets the activation start time
Timer end: sets the activation end time

ⓘ Use the same logic to schedule timer 2.

ⓘ If the two time slots are both deselected, SILENT MODE is always operational.

ⓘ Otherwise, it will be switched on according to the time schedule.

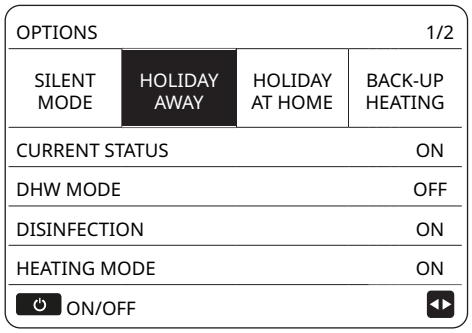
4.2.2 Holiday away

The 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.

If the Holiday Away is on, the

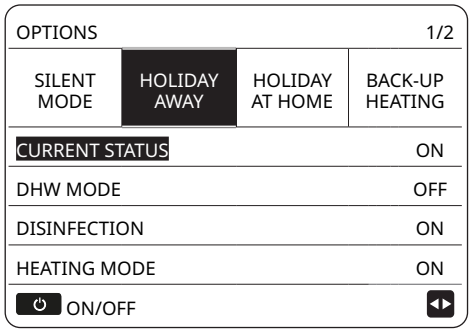
To select:

- ► press **Right**
- ► select **Holiday away**
- ► press **OK**



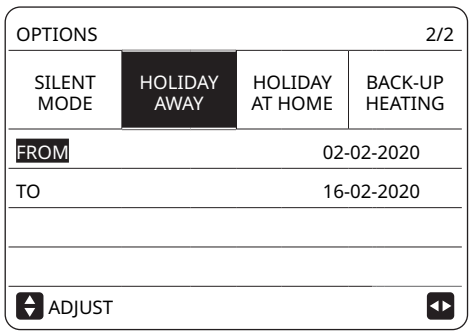
To switch on:

- ► press **Down**
- ► go on the function
- ► press **ON/OFF**



To set

- ► press **Down**,**Up,Right,Left** to adjust the value
- ► press **Back**



Example:

Setting	Value
Holiday away	ON
From	2 February 2020
To	16 February 2020
Operation mode	Heat
Disinfection	ON

HOLIDAY AWAY mode is on and the DHW function is set to ON, the disinfect function cannot be switched on.

HOLIDAY AWAY mode is on, the TIMER and WEEKLY SCHEDULE functions are disabled.

The remote control does not work when HOLIDAY AWAY mode is on.

The DISINFECT function is on, the unit will be disinfected at 23:00 on the last day.

When HOLIDAY AWAY mode is on, the climate curves are disabled and are switched on again at the end of the scheduled period.

The preset temperature is invalid while HOLIDAY AWAY mode is on, but the value remains displayed on the home page.

4.2.3 Holiday home

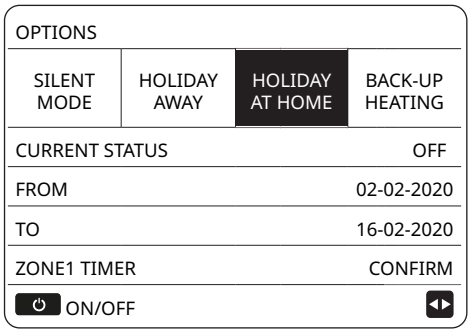
6 schedules can be programmed without changing the normal schedule when spending the holidays at home.
If HOLIDAY AT HOME mode is on, the

During the holiday, the HOLIDAY AT HOME mode allows you to override the normal schedule without changing it.

Period	Schedule
Before and after the holiday	The normal schedule is applied
During the holiday	The settings configured for the HOLIDAY AT HOME mode are used

To select:

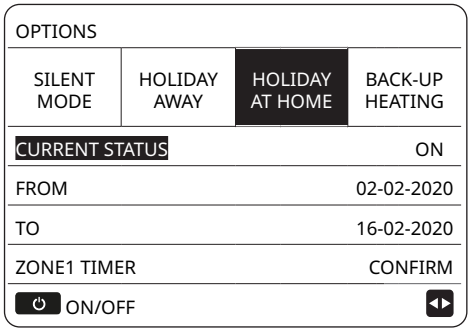
- ► press **Right**
- ► select **Holiday at home**
- ► press **OK**



To switch on:

► press **Down**

► press **ON/OFF**



To set:

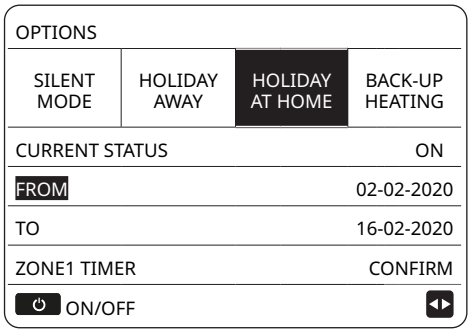
► press **Down**

► select the date

► press **OK**

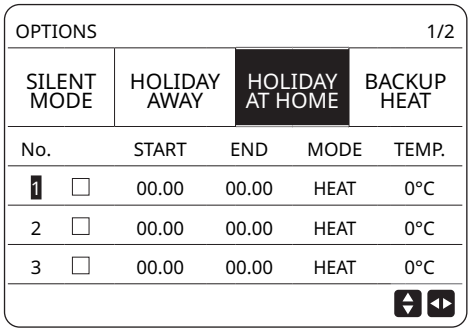
► press **Down**,**Up**,**Right**,**Left** to adjust

► press **OK**



► select **Timer**

► press **OK twice**



To set:

► press **Right**

► press **OK**

○ ☑ prg. selected, ☐ prg. deselected

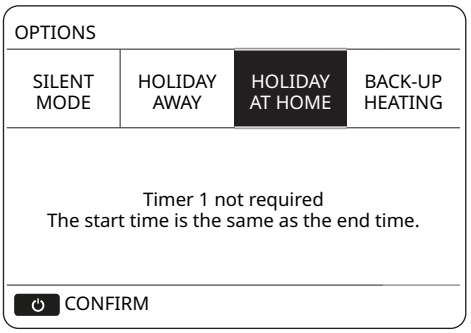
► press **Down**,**Up**,**Right**,**Left** to adjust

► press **OK**

► press **Back**

Start: sets the command activation time
End: sets the command deactivation time
Mode: sets the operating mode.
Temp: sets the desired temperature

If a start time is set later than the end time, or a temperature outside the allowed range is set for the chosen operating mode, the following message is displayed.



ⓘ The HOLIDAY AWAY or HOLIDAY AT HOME functions must be set again if you change the unit's operating mode.

4.3 Energy analysis function

The Energy analysis function can be activated on the control interface.
To correctly activate the function, follow the steps below:

Select For serviceman:

► press **MENU**

► press **Down** or **Up**

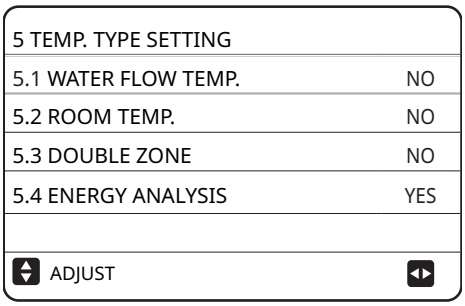
► select **For serviceman**

► press **OK**

► enter the password

► press **OK**

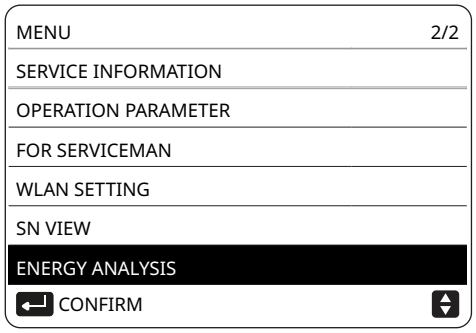
► select YES



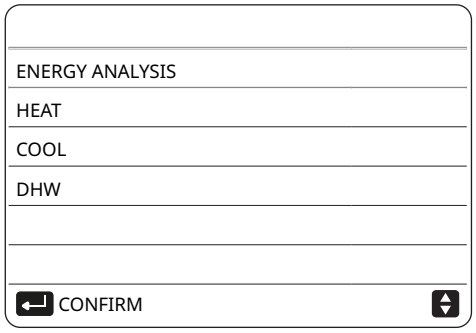
After enabling the Energy analysis function, the item “ENERGY ANALYSIS” will appear

► select

► press **OK**



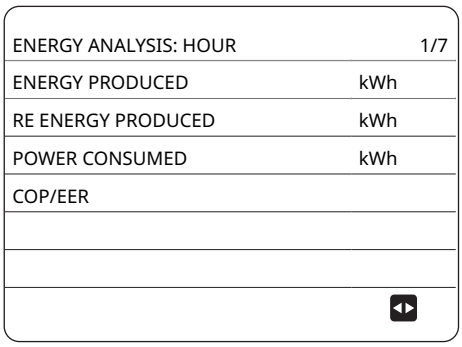
The Energy Analysis is available for heating, cooling and domestic hot water mode.

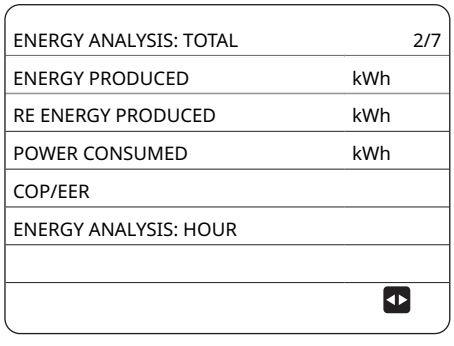


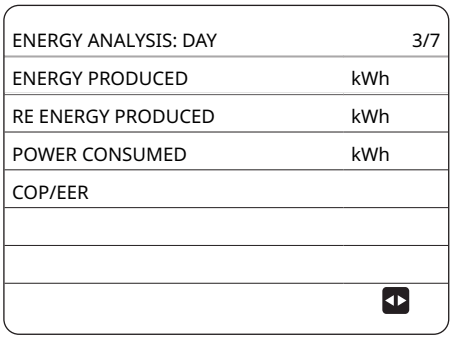
After selecting the operating mode, the energy analysis data can be displayed by time (hour, total, day, week, month, year and annually). The energy analysis interface is the same for all three operating modes.

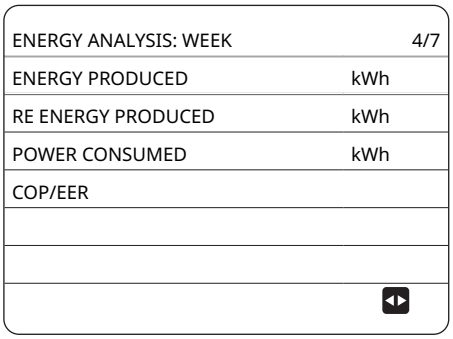
To check:

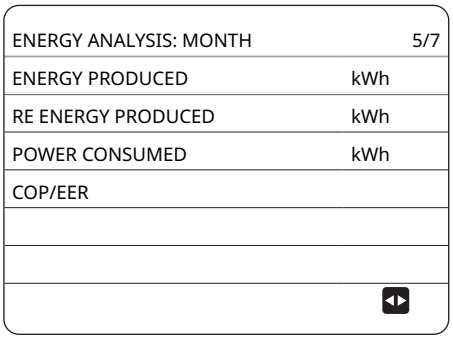
► press **Right** or **Left**

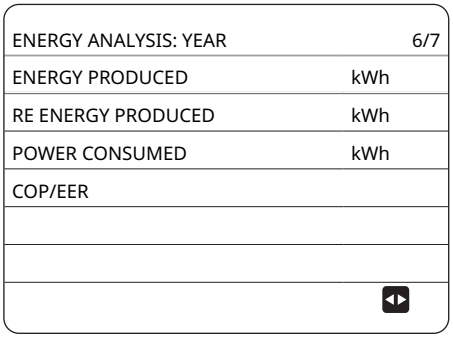


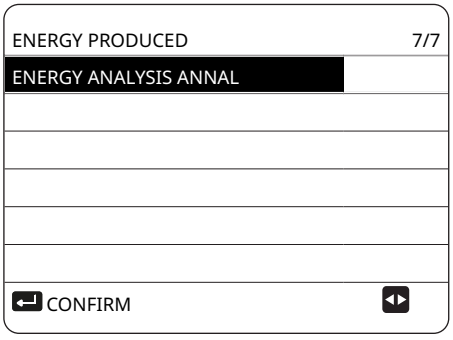












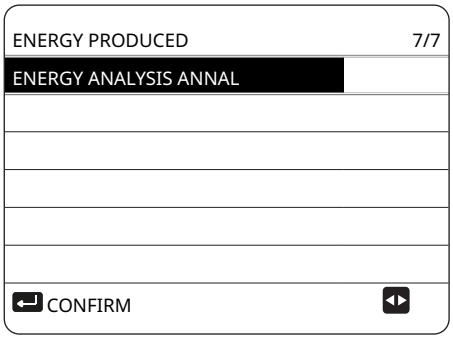
Note: the “Hour” display shows the calculated values in real time.

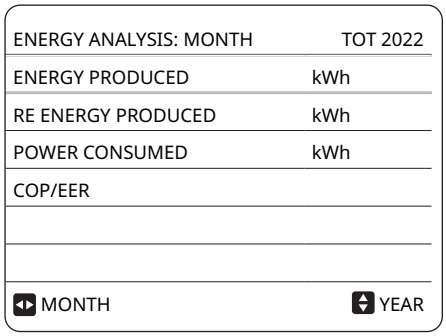
For the other period, however, the values are the result of integrating the corresponding capacity values.

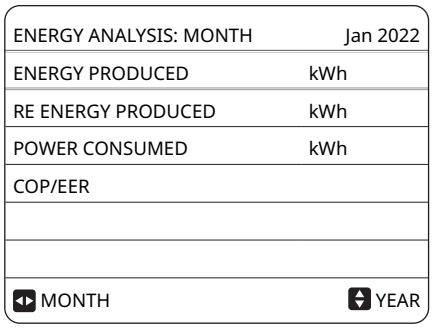
The “ENERGY ANALYSIS ANNAL” (screen 7) includes the historical energy data from the last 10 years.
In this case, data are shown on a monthly/annual basis.

To display the annuals:

- ► press **Right** or **Left** for details
- ► press **Right** or **Left** to check the total annual data and the data for the various months
- ► press **Down** or **Up** to check the data from different years







Parameter meanings:

- ENERGY PRODUCED: Heating/cooling production (includes electric heater production)
- RE ENERGY PRODUCED: Difference between production and consumption of the unit
- POWER CONSUMED: Electric energy consumption (includes electric heater consumption)
- COP/EER: Efficiency evaluated as the ratio between production and consumption (includes the electric heater)

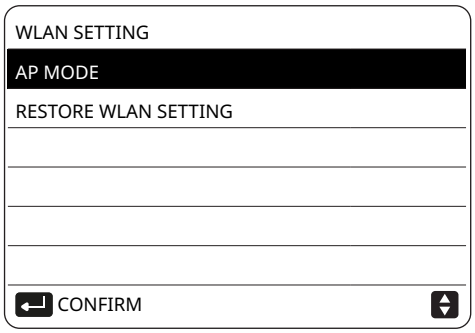
4.4 WLAN setting

The keypad has an intelligent control system based on an integrated module, which receives the signal through the application installed on the smartphone for remote control of the unit.
Before connecting the WLAN, check that your router is switched on and make sure the keypad is connected to the wireless signal.
During wireless network configuration, the WI-FI icon on the display flashes to indicate that the network is being connected.
Once the configuration is complete, the Wi-Fi icon stays on.

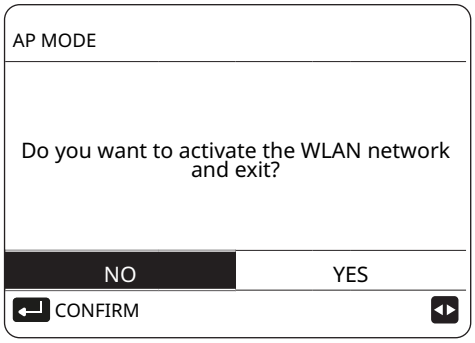
Keypad settings include AP MODE and WLAN SETTING RESET.

To set:

- ► press **MENU**
- ► press **Down** or **Up**
- ► select **WLAN setting**
- ► press **OK**



- ► press **OK**
- ► press **Right** or **Left**
- ► press **OK**



Select AP MODE on the mobile device and continue with the configuration settings following the APP instructions.

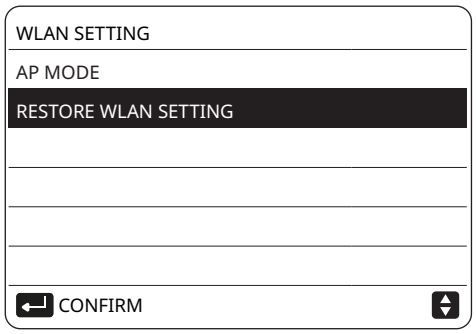
ⓘ After entering AP MODE, if the mobile phone is not connected, the Wi-Fi icon on the display will flash for 10 minutes, then disappear.

ⓘ If it is connected to the mobile phone, the Wi-Fi icon will remain displayed.

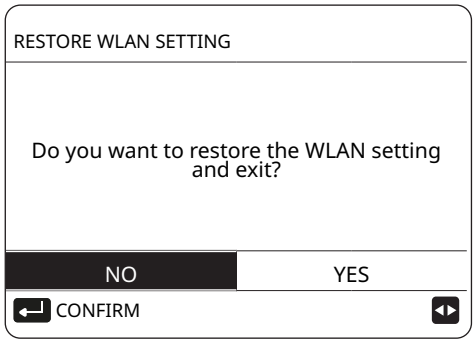
4.4.1 Restore WLAN settings

To restore:

- ► press **MENU**
- ► press **Down** or **Up**
- ► select **WLAN setting**
- ► press **OK**
- ► press **Down** or **Up**
- ► select **Restore WLAN setting**
- ► press **OK**



- ► press **Right** or **Left**
- ► press **OK**
- ► press **Back**

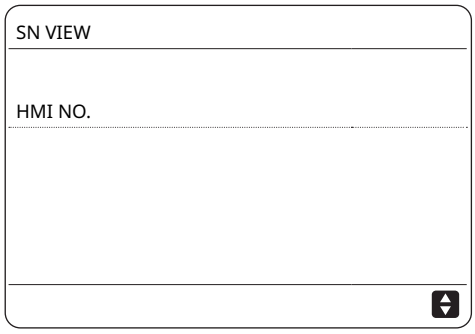


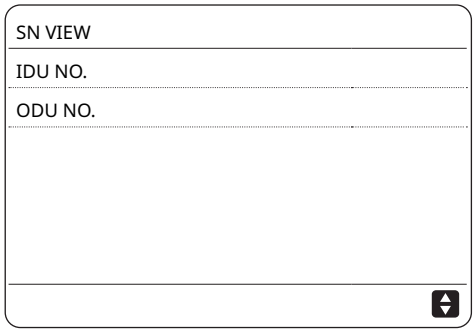
Once this operation is completed, the wireless setup is restored.

4.5 SN view

⚠ Displays the HMI keypad and IDU and ODU codes on the SN screen.

- ► press **MENU**
- ► press **Down** or **Up**
- ► select **SN view**
- ► press **OK**
- ► press **Down** or **Up**





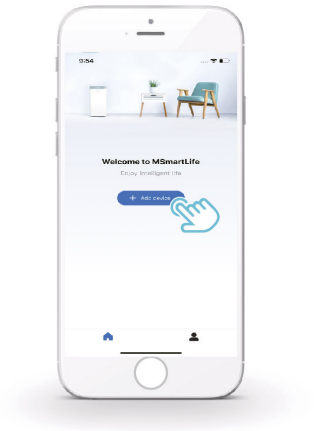
IDU = indoor unit
ODU = outdoor unit

4.6 Mobile device setting

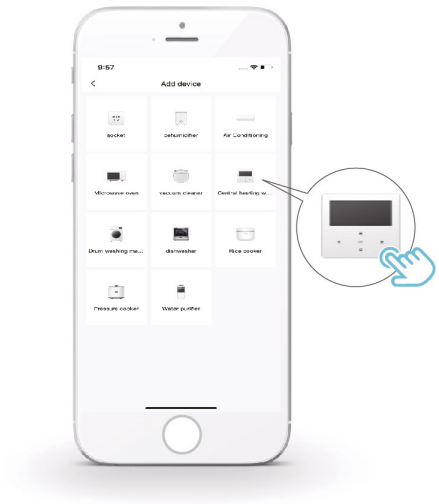
AP MODE is available for configuring the wireless network on a mobile phone.
AP MODE WLAN connection:
Install the APP
Scan the following QR code to install the Smart Home APP

Search on the APP STORE or GOOGLE PLAY for “Msmartlife” to install the APP.

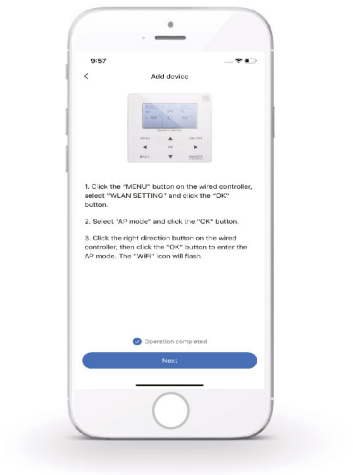
Sign in/Sign up
Press the '+' button on the right side of the home page to register the account and follow the instructions.



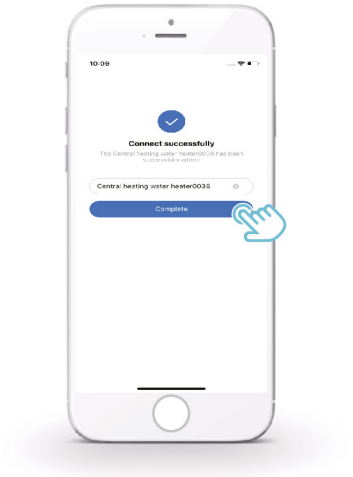
Add device
Choose the keypad model, then add the device.



Configure the keypad following the APP instructions

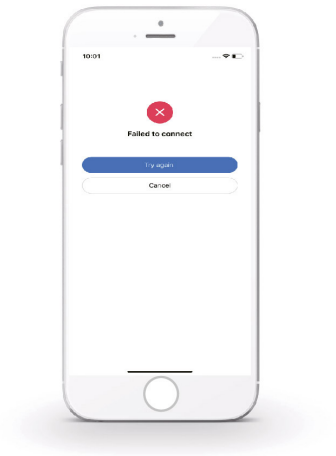


Wait for the device to connect and then press “Finish”



After the appliance has been successfully connected, the Wi-Fi icon on the keypad interface will remain on and the unit can be controlled through the APP.

If the network configuration fails or the mobile connection requires reconnection, use the RESTORE WLAN SETTING on the keypad, then repeat the procedure.

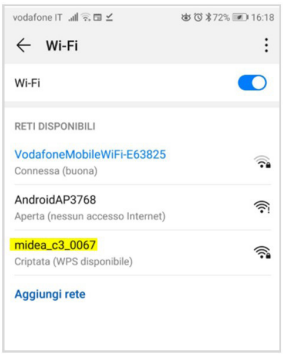


Warnings and troubleshooting for connection errors.

- When the device is connected to the network, make sure the phone is as close as possible to the device.
- Only supports routers with 2.4 GHz bandwidth.
- Special characters (punctuation, spaces, etc.) Not to be used for the WLAN network name.
- It is recommended not to connect more than 10 devices to a single router to avoid weak or unstable network signals.
- If the router or WLAN password is changed, delete all settings and reset the device.
- The contents of the APP may change as a result of version updates, in which case it will be based on actual operation.

4.6.1 Access to Wi-Fi network from mobile phone

Select the Wi-Fi network.



Enter password: 12345678

5. Other modes

This section contains functions with parameters that have been set by the installer or the Technical Support Service to customise the unit according to the system characteristics.

⚠ Although the can be accessed by the user, it is advisable not to change these modes.

⚠ If necessary, contact the Technical Support Service.

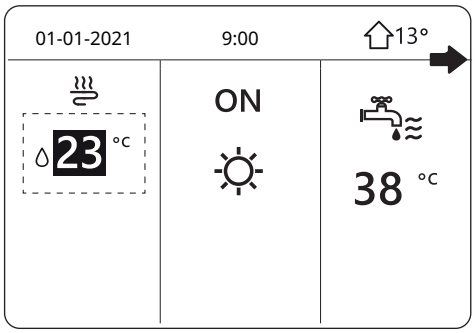
5.1 Temperature control

System water and DHW.

To set:

► press **Left**

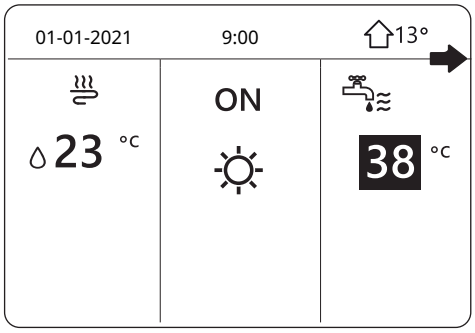
○ the black cursor appears

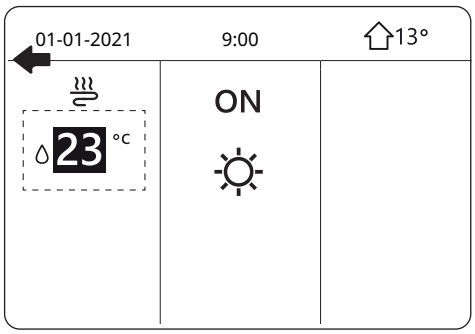


To control the temperature:

► press **Right** or **Left**

► press **Down** or **Up**





5.2 Preset temperature

The PRESET TEMP. function is used to set temperatures for heating or cooling mode in different time slots.

3 temperature setting modes can be scheduled:

1 PRESET TEMP. = Preset temperature

2 CLIMATE TEMP. SET. = Climate temperature setting

3 ECO MODE

The PRESET TEMP. function does not work under the following conditions:

- When AUTO mode is on
- When the TIMER or WEEKLY SCHEDULE function is on.

ⓘ When the DOUBLE ZONE function is on, the PRESET TEMP. function only works for zone 1.

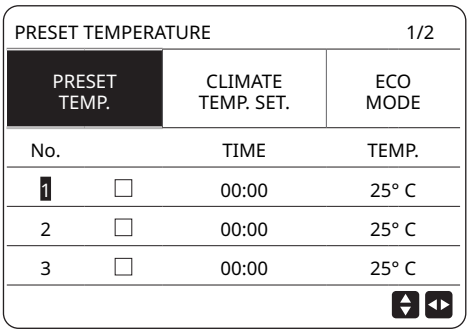
Select the preset temperature:

► press **MENU**

► press **Down** or **Up**

► select **PRESET TEMP.**

► press **OK**



To set:

► press **Down**

► press **Right**

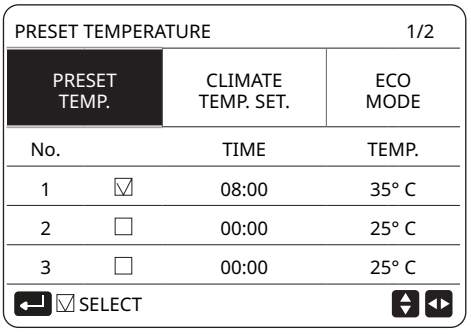
► press **OK**

○ ☑ timer selected

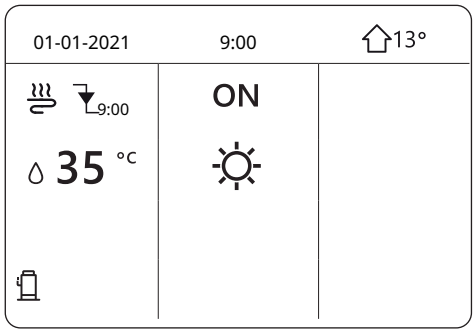
► press **Right** or **Left** to move

► press **Down** or **Up** to adjust the time and temperature

► press **OK**



6 time slots and 6 temperatures can be set.
Example: it is now 8:00 a.m. and the temperature is 35°C.



PRESET TEMP. schedule

NO.	TIME	TEMPERATURE
1	8:00	35°C
2	8:00	25°C
3	12:00	35°C
4	18:00	25°C
5	20:00	35°C
6	23:00	25°C

When the room operation mode is changed, PRESET TEMP. is automatically switched off and the schedule must be set again.

The PRESET TEMP. function can be used in Heating or Cooling mode.

5.3 Climate temperature setting

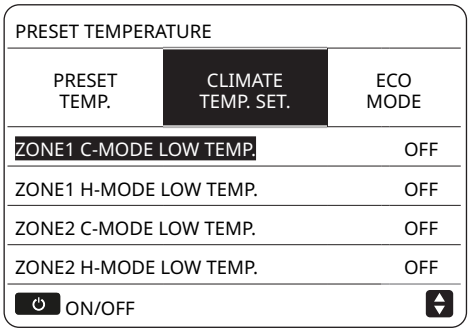
CLIMATETEMP. SET. = Climate temperature setting

The CLIMATE TEMP. SET. function is used to automatically set the water temperature of the system according to the outdoor temperature.
As the outdoor temperature increases, the demand for room heating is reduced.
To save energy, the desired water supply temperature is reduced when the outdoor air temperature increases in heating mode.

CLIMATE TEMP. SET. Used to select the climate curves for the various zones and different operation modes. If temperature curves are selected, the desired temperature cannot be adjusted.

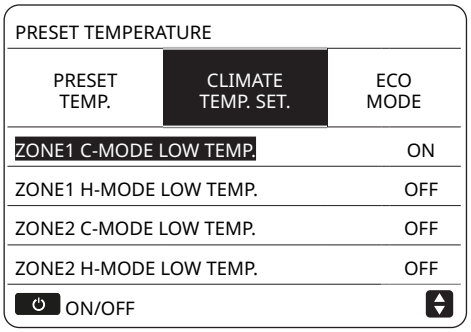
Select the preset temperature:

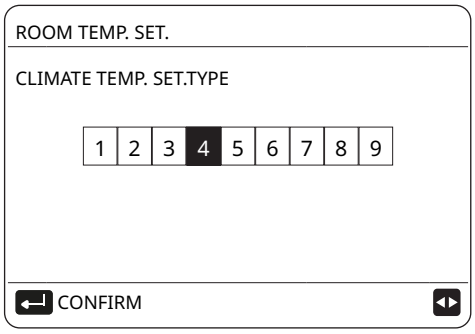
- ► press **MENU**
- ► press **Down** or **Up**
- ► select **PRESET TEMP.**
- ► press **OK**



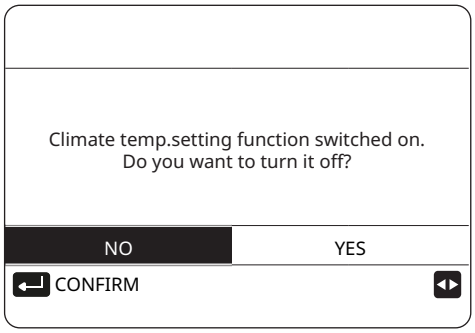
To set:

- ► press **Right**
- ► select **CLIMATE TEMP. SET.**
- ► press **Down**
- ► press **ON/OFF**





► press **Right** or **Left**
► select the curve
► press **OK**



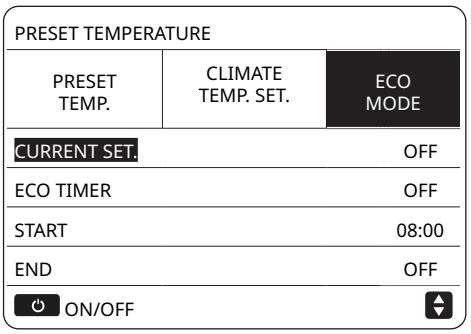
ⓘ If CLIMATE TEMP. SET. is on, the temperature cannot be adjusted.

5.3.1 ECO mode

ECO mode is used to save energy.

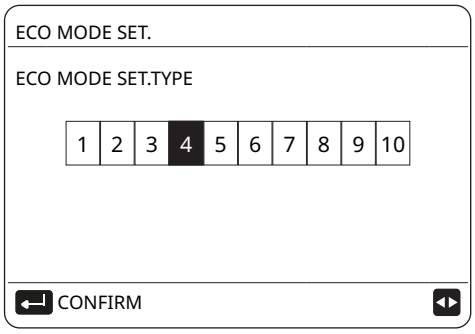
Select the preset temperature:

► press **MENU**
► press **Down** or **Up**
► select **PRESET TEMP.**

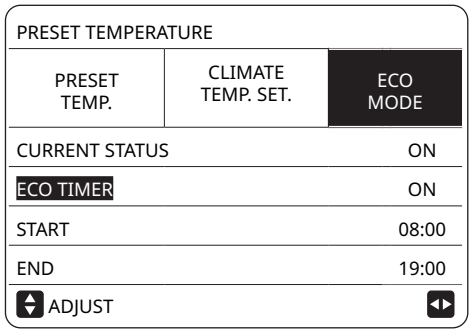


To set:

► press **Right**
► select **ECO MODE**
► press **Down**
► press **ON/OFF**



► press **Right** or **Left**
► select the curve
► press **OK**



To set:

► press **Down**
► select **ECO TIMER**
► press **ON/OFF**
► press **Down**
► press **Right**
► go on start or end to adjust the time
► press **OK**

ⓘ If ECO MODE is set to ON, the desired temperature (T1S) cannot be adjusted.

ⓘ If ECO MODE is ON and ECO TIMER is OFF, the unit always operates in ECO mode.

ⓘ If ECO MODE is ON and ECO TIMER is ON, the unit operates in ECO mode according to the start and end time.

When the function is on, the 🍃 icon appears on the keypad.

5.4 Domestic hot water (DHW)

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

1 DISINFECT (anti-legionella)

2 FAST DHW

3 TANK HEATER

4 DHW PUMP (DHW circulation)

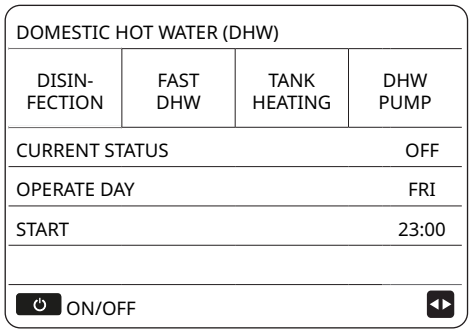
Select domestic hot water:

► press **MENU**

► press **Down**

► Select **DOMESTIC HOT WATER**

► press **OK**



5.4.1 Disinfect (anti-legionella)

The DISINFECT function is used to eliminate legionella bacteria by raising the storage tank temperature to 65-70°C
The disinfect temperature is set in DHW MODE.

To set:

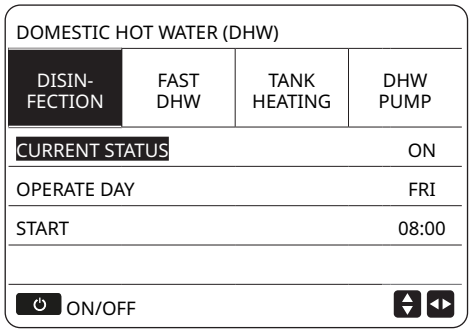
► press **Down**

► press **ON/OFF**

► press **Down** or **Up**

► press **Right** or **Left**

► adjust operate day and start



TUT = daily disinfection function.

When the function is on, the icon appears on the keypad.
In DISINFECT operation the unit does not work towards the system.

5.4.2 Fast DHW

The fast DHW function is used to force DHW mode for domestic hot water production.
The heat pump will be switched on together with the water tank heater and the domestic hot water temperature will be brought to setpoint.

To set:

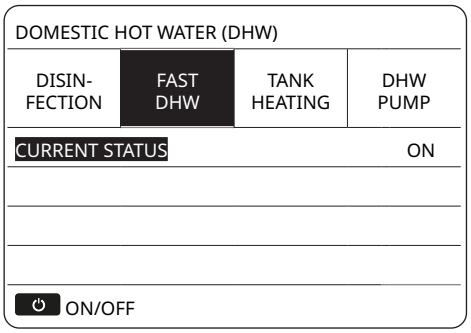
► press **Right**

► select **FAST DHW**

► press **Down**

► press **ON/OFF**

► press **Back**



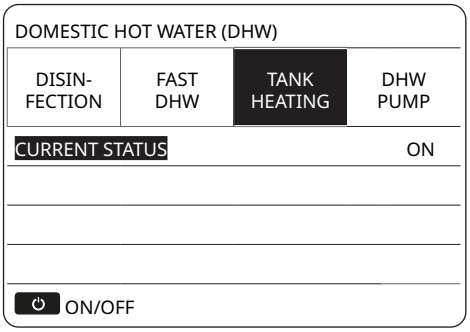
The FAST DHW function is only run once each time it is switched on.

5.4.3 Tank Heater

The TANK HEATER function is used to force water heating in the water tank (using the water tank heater) in cases where the heat pump is on for heating or cooling functions but there is still a demand for domestic hot water.
The TANK HEATING function can be used to heat the water in the water tank even if the heat pump has failed.

To set:

- ► press **Right**
- ► select **TANK HEATING**
- ► press **Down**
- ► press **ON/OFF**
- ► press **Back**



When the function is on, the icon appears on the keypad.

If the water tank sensor T5 is faulty, the heater will not start.

5.4.4 DHW pump (circulation) if present

The DHW PUMP function circulates the water in the water system.
The pump is to be provided by the customer.

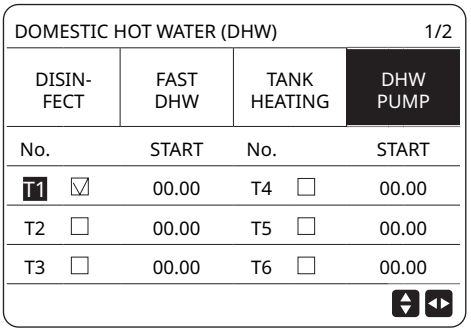
To enable the function:

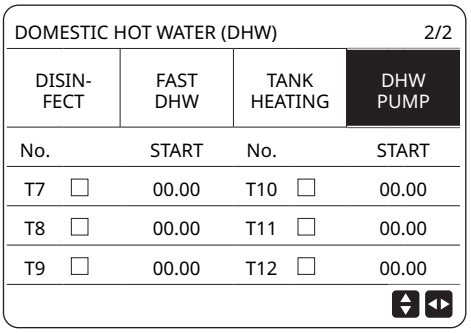
- ► press **MENU**
- ► press **Down**
- ► select **For serviceman**
- ► enter pwd
- ► select **DHW mode setting**

Enable parameters:
1.4 DHW PUMP;
1.19 DHW PUMP OPER.TIME

To set:

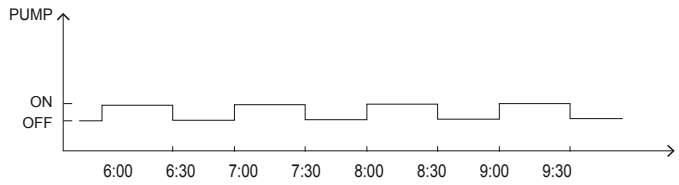
- ► press **Right**
- ► select **PUMP DHW**
- ► press **Down**
- ► press **OK**
- ○ ☑ timer selected, ☐ timer deselected
- ► press **Right**
- ► press **Down** or **Up** to adjust the time
- ► press **OK**





For example: the PUMP parameter has been set
The operating time of the PUMP is adjustable with the parameters.
Schedule example:

NO.	TIME
1	6:00
2	7:00
3	8:00
4	9:00



Parameter 1.19 DHW PUMP OPER.TIME has been set at 30 minutes, the pump will start at the following times.

5.4.5 Backup heater

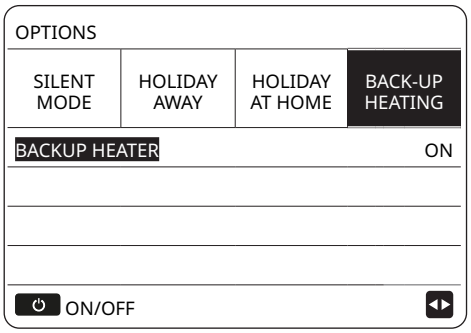
Currently not available.
Available as an accessory or configuration
The BACKUP HEATER function forces the backup heater on.

Select options:

- ► press **MENU**
- ► press **Down**
- ► selezionare **Opzioni**
- ► press **OK**

To set:

- ► press **Right**
- ► selezionare **BACK-UP RESIST**
- ► press **Down**
- ► press **ON/OFF**
- ► press **Back**



IBH= indoor unit backup heater.
AHS= additional heating source.

If AUTO mode is on for room heating or cooling, the BACKUP HEATER cannot be selected.

The BACKUP HEATER function is invalid if only ROOM HEATING MODE is enabled.

If IBH and AHS are enabled by the Dip-switches on the main control board of hydraulic module, the following function is displayed.

6. 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	Modbus code	Unit
E0	Water flow failure (water flow failure 3 times)	1	IDU
E1	Line-to-line or zero phase error (three-phase models have this error code)	33	ODU
E2	Communication fault between user interface and hydraulic module	2	IDU
E3	T1 water outlet temperature sensor failure	4	IDU
E4	T5 water tank water temperature sensor failure	5	IDU
E5	Outdoor unit temperature sensor T3 failure	39	ODU
E6	Outdoor unit room temperature sensor T4 failure	40	ODU
E7	Inertial tank sensor Tbt1 failure	6	IDU
E8	Water flow failure (displayed three times and can be reset after minutes)	9	IDU
E9	Th temperature sensor failure	41	ODU
EA	Outdoor unit air temperature sensor Tp failure	42	ODU
Eb	Tsolar sensor failure	7	IDU
EC	DHW additional tank sensor Tbt2 failure	8	IDU
Ed	Water temperature sensor Twin board replacement failure	10	IDU
EE	EEprom hydraulic module failure	11	IDU
P0	Low pressure protection	50	ODU
P1	Discharge temperature/high pressure control switch protection	52	ODU
P3	Compressor overcurrent protection	53	ODU
P4	Exhaust air temperature overheating protection Tp	54	ODU
P5	Twin-Twout, Twout-Twin protection or water supply temperature too high	26	IDU
P6	Module protection (IPDU and IR341, check the specific content)	55	ODU
Pb	Antifreeze (this is not a protection, the alarm light does not flash), the remote control does not display Pb, but displays the antifreeze icon;	25	IDU
Pd	Outdoor unit overheating T3 protection	57	ODU
PP	Abnormal temperature difference between water inlet and outlet	31	IDU
H0	Communication error between indoor unit and outdoor unit (continuous communication anomaly for 10 seconds)	3	IDU
H0	Communication error between outdoor unit and indoor unit (no communication in 10 s)	38	ODU
H1	Communication error between outdoor unit and IR341 (outdoor unit and inverter module)	39	ODU
H2	Gas side refrigerant T2 temperature sensor failure	12	IDU
H3	Liquid side refrigerant T2B temperature sensor failure	13	IDU
H4	After 3 L signals (L0/L1) in 1 hour, H4 appears, which cannot be reset. After H4 it is possible to check the last 3 L signals (not only L0, L1). For example: L0-L4-L8-L9-L0-L1 signal in 1 hour, H4 fault warning. The faults to be checked are L9, L0, L1.	44	ODU
H5	Ta temperature sensor failure	15	IDU
H6	DC fan failure	45	ODU
H7	Abnormal power supply voltage	46	ODU

Error code	Description	Modbus code	Unit
H8	High pressure sensor failure (replacement with heater when the outdoor unit is not installed)	47	ODU
H9	Tw2 sensor failure	20	IDU
HA	Plate exchanger outlet temperature sensor failure	14	IDU
Hb	Three consecutive PP protection and Twout<7°C faults; reset due to power failure;	21	IDU
Hd	Communication error between slave and master (this error occurs when several units are connected in parallel)	24	IDU
HE	Communication fault between hydraulic module and hydraulic module adapter board	23	IDU
HF	Outdoor unit EEPROM failure	43	ODU
HH	H6 failure 10 consecutive times in 120 minutes (reset after shut down)	48	ODU
HP	Cooling mode low pressure protection (in 1 hour, low pressure is below 0.6 MPa three consecutive times, can be reset automatically)	49	ODU
C7	Heat sink overheating protection	65	ODU
bH	Small PED board failure	143	ODU
F1	DC bus low voltage protection	142	ODU
L0	DC compressor module error	112	ODU
L1	DC bus low voltage protection	116	ODU
L2	DC bus high voltage protection	134	ODU
L4	MC/synchronisation/closed circuit error	135	ODU
L5	Zero speed protection	136	ODU
L7	Phase sequence fault protection	138	ODU
L8	Protection for when the preceding and following speed variation is >15 Hz	139	ODU
L9	Protection for when the difference between the set speed and the operating speed is >15 Hz	141	ODU

IDU = indoor unit
ODU = outdoor unit

Notes

KEYPAD

Installer section

Installer section

7. 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 provided with a user interface (also called an HMI) for managing the functions.
The user interface has a built-in temperature probe for possible use as a thermostat.
It has 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

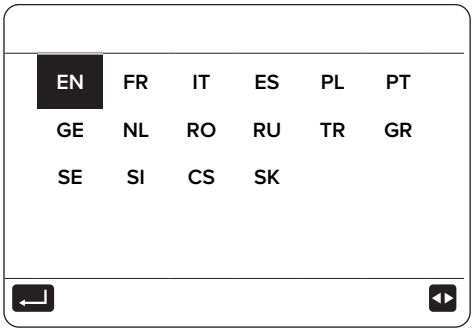
It is advised against using special characters (e.g. punctuation, spaces, etc.) in the WLAN name.

If the router or network password is changed, it may be necessary to delete the units linked to the App installed 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.

7.1 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:



7.2 Date and hour

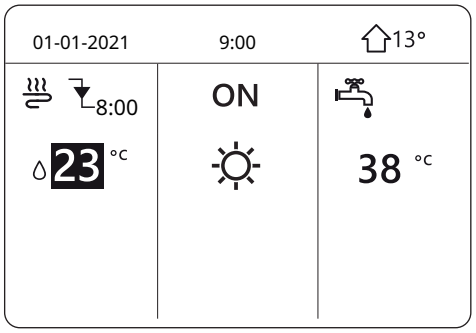
Set the current date and time on the keypad.

7.3 Main screen

The home page changes according to the type of system.

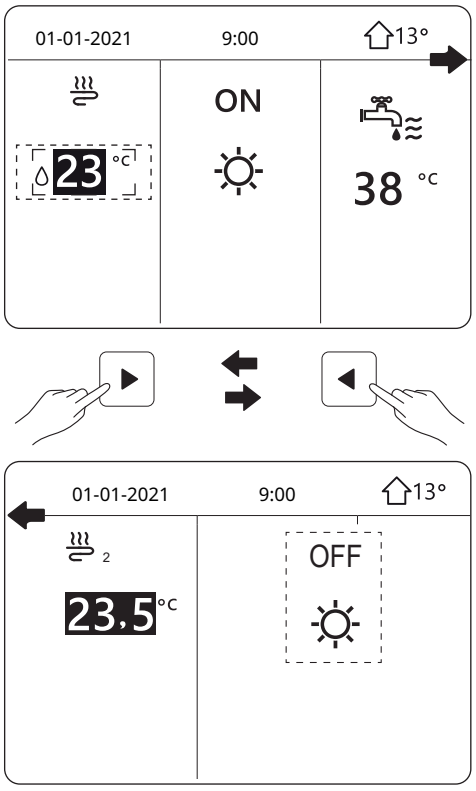
Configuration to be provided by the installer.

Single 1-zone system



Keypad control:
MENU > FOR SERVICEMAN > ROOM THERMOSTAT > ROOM THERMOSTAT = NONE
Thermostat control:
MENU > FOR SERVICEMAN > ROOM THERMOSTAT > ROOM THERMOSTAT = ONE ZONE

Double zone system



Keypad control:
MENU > FOR SERVICEMAN > ROOM THERMOSTAT > ROOM THERMOSTAT = NONE

7.4 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

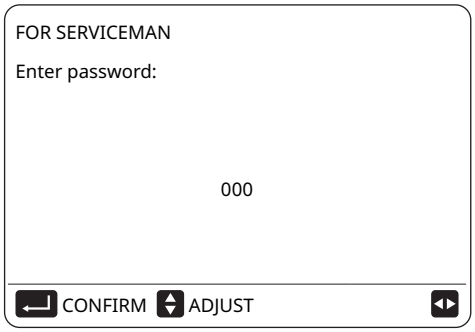
7.5 Access to the menu

The FOR SERVICEMAN section is reserved for installers and servicing technicians.

- Configure the system composition.
- Configure the parameters.

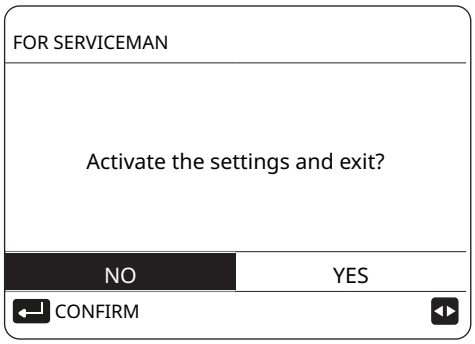
To access:

► press **Menu**
► select for serviceman
► press **OK**
► Enter PWD
► press **OK**



To exit the configuration
After setting all the parameters.

► press **BACK**
► select **YES**
► press **OK**



ⓘ After exiting the FOR SERVICEMAN section, the unit will switch off.

ⓘ This is NOT intended for the end user to change settings.

7.6 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
1.10 t_INTERVAL_DHW
1.11 dT5_TBH_ OFF
1.12 T4_TBH_ON
1.13 t_TBH_DELAY
1.14 T5S_DISINFECT
1.15 t_DI_HIGHTEMP
1.16 t_DI_MAX
1.17 t_DHWHP_RESTRICT
1.18 t_DHWHP_MAX
1.19 TIMER PUMP_D
1.20 PUMP_D OPER.TIME
1.21 PUMP_D DISINFECT RUN
1.22 DHW FUNCTION
1.23 t_ANTILOCK

2 Cooling mode setting

2.1 COOLING MODE
2.2 t_T4_FRESH_C
2.3 T4CMAX
2.4 T4CMIN
2.5 dT1SC
2.6 dTSC
2.7 t_INTERVAL_C
2.8 T1SetC1
2.9 T1SetC2
2.10 T4C1
2.11 T4C2
2.12 ZONE1 C-EMISSION
2.13 ZONE2 C-EMISSION

3 Heating mode setting

3.1 HEATING MODE
3.2 t_T4_FRESH_H
3.3 T4HMAX
3.4 T4HMIN
3.5 dT1SH
3.6 dTSH
3.7 t_INTERVAL_H
3.8 T1SetH1
3.9 T1SetH2
3.10 T4H1
3.11 T4H2
3.12 ZONE1 H-EMISSION

8. Operation parameters

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

To access:

- ► press menu
- ► select operation parameters
- ► 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 ± 1°C.
The flow-rate parameters are calculated based on pump operation parameters.

OPERATION PARAMETERS	1/9
ONLINE UNITS NUMBER	0
OPERATION MODE	DHW
SV1 STATE	OFF
SV2 STATE	OFF
SV3 STATE	OFF
PUMP_I	OFF

OPERATION PARAMETERS	4/9
T5 DHW WATER TANK TEMP.	25°C
Tw2 CIRCUIT2 WATER TEMP.	--°C
TIS C1 CLIM.CURVE TEMP.	0°C
TIS2 C2 CLIM. CURVE TEMP.	0°C
TW_0 PLATE W-OUTLET TEMP.	0°C
TW_I PLATE W-INLET TEMP.	0°C

OPERATION PARAMETERS	7/9
FAN SPEED	0 R/MIN
IDU TARGET FREQUENCY	0 Hz
FREQUENCY LIMITED TYPE	0
SUPPLY VOLTAGE	0V
DC GENERATRIX VOLTAGE	0V
DC GENERATRIX CURRENT	0A

OPERATION PARAMETERS	2/9
PUMP_0	OFF
PUMP_C	OFF
PUMP_S	OFF
PUMP_D	OFF
PIPE BACKUP HEATER	OFF
TANK BACKUP HEATER	OFF

OPERATION PARAMETERS	5/9
Tbt1 BUFFERTANK_UP TEMP.	0°C
Tbt2 BUFFERTANK_LOW TEMP.	0°C
Tsolar	0°C
SOFTWARE	IDU 00-00-2000V00

OPERATION PARAMETERS	8/9
T W_0 PLATE W-OUTLET TEMP.	0°C
TW_I PLATE W-INLET TEMP.	0°C
T2 PLATE F-OUT TEMP.	25°C
T2B PLATE F-IN TEMP.	--°C
Th COMP. SUCTION TEMP.	25°C
Tp COMP. DISCHARGE TEMP.	25°C

OPERATION PARAMETERS	3/9
BOILER GAS	OFF
T1 OUTLET WATER TEMP.	--°C
WATER FLOW	0,00M3/H
HEAT PUMP CAPACITY	0,00kW
POWER CONSUM	0 kWh
Ta ROOM TEMP.	--°C

OPERATION PARAMETERS	6/9
ODU MOD.	0 kW
COMPRESSOR CURRENT	0 A
COMPRESSOR FREQUENCY	0 Hz
COMPRESSOR RUN TIME	0 MIN
COMPRESSOR TOTAL RUN TIME	0 HOURS
EXPANSION VALVE OPENING	0 P

OPERATION PARAMETERS	9/9
T3 COIL F. TEMP.	25°C
T4 OUTDOOR AIR TEMP.	25°C
TF MODULE TEMP.	0°C
P1 COMPRESSOR PRESSURE	0 kPa
ODU SOFTWARE	00-00-2000V00
HMI SOFTWARE	24-02-2021V67

8.1 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

Address register	Meaning	Description	
200	Type	The upper 8 bits define the appliance type: centralised heating operation: 0x07 Bit 4 is the product algebra: 0x0*: E Range 0x1*: second generation R32, A range 0X2*: second generation R32 upgrade, A range (compatible with custom requirements) 0x3*: A-Sphera custom upgrade The 4 lower bits represent the sub-types: R32 refrigerant frequency conversion water pump model: 0X *2; Complete as 0 x0732 The 4 lower bits define the categories. Modulating heat pump model with R32 refrigerant: 0x02	
201	T1S Upper temperature limit set in cooling mode	The 8 low bits represent zone 1 and the 8 high bits represent zone 2 The 8 low bits represent area 1 and the 8 high bits represent area 2	
202	T1S Lower temperature limit set in cooling mode	The 8 low bits represent zone 1 and the 8 high bits represent zone 2 The 8 low bits represent area 1 and the 8 high bits represent area 2	
203	T1S Upper temperature limit set in heating mode	The 8 low bits represent zone 1 and the 8 high bits represent zone 2 The 8 low bits represent area 1 and the 8 high bits represent area 2	
204	T1S Lower temperature limit set in heating mode	The 8 low bits represent zone 1 and the 8 high bits represent zone 2 The 8 low bits represent area 1 and the 8 high bits represent area 2	
205	TS Set the upper temperature limit	Reading = actual*2 actual value *2	
206	TS Set the lower temperature limit	Reading = actual*2 actual value *2	
207	DHW upper temperature limit		
208	DHW upper temperature limit		
209	Circulation pump operating time	Circulation pump, default operating time 5 minutes, adjustment interval 5 - 120 min, with steps of 1 min	
210	Parameter setting 1	BIT15	DHW enabling/disabling
		BIT14	TBH water tank water electric heating (read only)
		BIT13	Sterilization function
		BIT12	DHW pump; 1=enabled; 0=disabled
		BIT11	Reserved
		BIT10	The DHW pump supports piping disinfection
		BIT9	Cooling mode enabling
		BIT8	T1S cooling mode high/low temperature control (read only) zone 1
		BIT7	Heating mode enabling
		BIT6	T1S heating mode high/low temperature control (read only) zone 1
		BIT5	Backup PUMPI silent pump function, 1:backup
		BIT4	Backup room temperature sensor Ta
		BIT3	Room thermostat
		BIT2	Room thermostat - MODE SETTING
		BIT1	Double room thermostat, 1=enabled; 0=disabled
		BIT0	0: Room cooling and heating priority; 1: Hot water priority

Address register	Meaning	Description	
210	Parameter setting 2	BIT15	DHW (double DHW double enabling) 1: Yes 0: No
		BIT14	DHW control M1M2 dry contact 1: Yes 0: No
		BIT13	RT_Ta_PCNEn (Enable small temperature board)
		BIT12	Sensor Tbt2 enabling 1: Yes 0: No
		BIT11	Selection of piping length 1:> 10 m 0: <10 m
		BIT10	Solar input port 1: CN18 0: CN11
		BIT9	Solar module 1: Yes 0: No
		BIT8	Definition of the input port: 0= remote switch 1= DHW heater
		BIT7	Smart grid: 0= None 1= Yes
		BIT6	T1B Sensor enabling 0= None 1= Yes
		BIT5	T1S High/low cooling temp. setting zone 2
		BIT4	T1S High/low heating temp. setting zone 2
		BIT3	Double zone setting is effective
		BIT2	Ta Sensor position 1: IDU 0: HMI
		BIT1	Tbt Sensor enabling 1: Yes 0: No
		BIT0	IBH / AHS Installation position 1: water tank 0: piping
212	dT5_On	A Range: Default: 10°C interval: 1 ~ 30°C E Range: Default: 5°C, interval: 2 ~ 0°C control interval 1°C	
213	dT1S5	Default: 10°C, interval: 5-40°C, Control interval 1°C	
214	T_Interval_DHW	Default: 5min, interval: 5~5min, Control interval 1min	
215	T4DHWmax	Default: 43°C, interval: 35-43°C, Control interval 1°C	
216	T4DHWmin	A Range: Default: -10°C interval: -25 ~ 30°C E Range: Default: -10°C, interval: -25-5°C control interval 1°C	
217	t_TBH_delay	Default: 30min interval: 0~240min, Control interval 5min	
218	dT5S_TBH_off	Default: 5°C, interval: 0~10°C, Control interval 1°C	
219	T4_TBH_on	A Range: Default: 5°C interval: -5 ~ 50°C E range: Default: 5°C, interval: 5 ~ 20°C control interval 1°C	
220	T5s_DI	Water tank water temperature setting for the sterilization function. Default: 65°C, Control interval: 60~70°C	
222	t_DI_hightemp	High temperature sterilization time. Default: 15min; Control interval 5~60min	
223	t_interval_C	Compressor start time interval in cooling mode. Default value 5min; interval: 5 ~ 5min	
224	dT1SC	Default: 5°C, interval: 2-10°C, Control interval 1°C	
225	dTSC	Default: 2°C, interval: 1-10°C, Control interval 1°C	
226	T4cmax	Default: 52°C, interval: 35-52°C, Control interval 1°C	
227	T4cmin	Default: -5°C, interval: -5-25°C, Control interval 1°C	
228	t_interval_H	Compressor start time interval in heating mode. Default value 5min; interval: 5 ~ 5min	
229	dT1SH	A Range: Default: 5°C interval: 2-20°C E Range: Default: 5°C, interval: 2-10°C control interval 1°C	
230	dTSH	Default: 2°C, interval: 1-10 °C, Control interval 1°C	
231	T4hmax	Default: 25°C, interval: 20-35°C, Control interval 1°C	
232	T4hmin	A Range: Default: -1.5°C interval: -25-30°C control interval 1°C E Range: Default: -1.5°C, interval: -25-15°C control interval 1°C	

Address register	Meaning	Description
233	T4_IBH_on	Outdoor temperature for starting the IBH backup heater Default value: -5 °C; control interval: -15 ~ 10 °C.
234	dT1_IBH_on	IBH indoor unit backup electric heater switch-on temperature hysteresis, setting range: 2~10°C, default value is 5°C
235	t_IBH_delay	Compressor operation time before starting the backup heater. Default value 30min; control interval: 15 ~ 120min
236	t_IBH12_delay	Reserved
237	T4_AHS_on	Room temperature for starting the additional heating source AHS. A Range: interval: -15 ~ 30°C E Range: control interval -15 ~ 10 °C Clivet model default value is 10°C, Midea model -5°C
238	dT1_AHS_on	The temperature difference for starting the additional heating source AHS. A Range: Default value 5°C; interval: 2 ~ 20°C E Range: Default value 5°C; control interval: 2 ~ 10°C
239	dT1_AHS_off	Reserved
240	t_AHS_delay	Compressor operation time before starting the additional heating source. Default value 30min; control interval 5 ~ 120min.
241	t_DHWHP_max	Maximum operation time for the heat pump to run hot water. Default value: 90min; control interval: 10 ~ 600 min; Set value in minutes
242	t_DHWHP_restrict	Maximum operation time of the heat pump in heating/cooling mode. Default value: 30min; control setting: 10 ~ 600 min; Set value in minutes
243	T4autocmin	Default value: 25°C, interval: 20~29°C, Control interval 1°C
244	T4autohmax	Default value:17°C, interval: 10~17°C, Control interval 1°C
245	T1S_H.A_H	T1 value in heating mode during holidays; Default 25°C; Control interval : 20~25°C.
246	T5S_H.A_DHW	T5 value in hot water mode during holidays Default 25°C; Control interval : 20~25°C.
247	Start percentage	Default value 10; interval 10-100, Control interval 10
248	Adjustment time	Default value 5; Interval 1-60
249	dTbt2	Default value 15; interval 0-50
250	IBH1 power	Default value 0; interval 0-200; unit 100W
251	IBH2 power	Default value 0; interval 0-200; unit 100W
252	TBH power	Default value 0; interval 0-200; unit 100W
253	Comfort parameter	Reserved, query this register to report address errors
254	Comfort parameter	Reserved, query this register to report address errors
255	t_DRYUP	Heating days; Default 8 days; Control interval: 4 ~ 15 days
256	t_HIGHPEAK	Floor drying days. Default 5 days, Control interval: 3 ~ 7 days
257	t_DRYD	Cooling days. Default 5 days. Control interval: 4 ~ 15 days
258	T_DRYPEAK	Max floor drying temperature. Default 45°C; Control interval: 30-55°C.
259	t_firstFH	Time of first floor heating. Default value 72 hours; control interval 48-96 hours
260	T1S(First warm)	Water outlet temperature for preheating radiant panels. Default: 25°C; Control interval 25~35°C
261	T1SetC1	Temperature curve parameters in cooling mode 9, interval setting 5-25°C, default 10°C Temperature curve parameters in cooling mode 9, interval setting 5-25°C, default 10°C
262	T1SetC2	Temperature curve parameters in cooling mode 9, interval setting 5-25°C, default 16°C
263	T4C1	Temperature curve parameters in cooling mode 9, interval setting (-5)-46°C, default 35°C
264	T4C2	Temperature curve parameters in cooling mode 9, interval setting (-5)-46°C, default 25°C

Address register	Meaning	Description
265	T1SetH1	Temperature curve parameters in heating mode 9, interval setting 25-60°C, default 35°C
266	T1SetH1	Temperature curve parameters in heating mode, interval setting 25-60°C, default 28°C
267	T4H1	Temperature curve parameters in heating mode, interval setting (-25)-35°C, default -5°C
268	T4H2	Temperature curve parameters in heating mode, interval setting (-25)-35°C, default 7°C
269		Current limitation scheme, 0= no setting; 1~8= Scheme 1~8, default 0
270	HB: t_T4_FRESH_C	Interval setting 0.5 - 6 hours, send value = current value * 2
	LB: t_T4_FRESH_H	Interval setting 0.5 - 6 hours, send value = current value * 2
271	T_PUMPI_DELAY	Interval setting 2-20, send value = current value * 2
272	EMISSION TYPE	Bit12-15= Zone 2 Type of cooling terminal
		Bit8-11= Zone 1 Type of cooling terminal
		Bit4-7= Zone 2 Type of heating terminal
		Bit0-3= Zone 1 Type of heating terminal

8.2 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 * 2; 35 is transmitted, e.g.17.5°C	
4	T5s	Storage tank water temperature setting, 20°C ~ 60/75°C (EDGE A with AHS can be set at 75°C, other unit at 60°C) Default =50°C	
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

Address register	Meaning	Description	
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	

8.3 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 in 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 unit type 0702 where the value represented by the character 071X represents the capacity of the unit 4-30 or 4-30KW

Address register	Meaning	Description	
124	Current error code	Specific error code, refer to the code table.	
125	Error code 1		
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 1: electricity (from photovoltaics) 0: based on SG signal
		BIT10	SG 1: normal electric price 0: high electric price
		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 (1 : d8)
		BIT3	Oil return
		BIT2	Antifreeze
		BIT1	Defrosting
		BIT0	Pump in forced operation
129	Load output	BIT15	Defrosting
		BIT14	External heat source
		BIT13	Compressor on
		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	Unit: Amps	
134	DC bus voltage	Return value = actual value / 10 (Unit: Volts)	
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 1-1 5 units BIT0 Reserved
143	High bit of electrical	Energy consumption
144	Low bit of electrical	
145	High bit of heat	Heating capacity of the system
146	Low bit of heat	
147	AHS power supply output Sphera Range A	value read = current value* 10 (unit: V)

8.4 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	Twi	TW_in, unit:°C entering water temperature; (value read = current value)	
1003	Two	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		Reserved
			Reserved
			Reserved
			Reserved
		Bit4	T1 water outlet temperature; 1- enabled; 0- disabled
		Bit3	IBH backup system electric heater; 1- enabled; 0- disabled
		Bit2	DHW
		Bit1	Heat
		Bit0	Cool
1009	IDU load	Bit7	HEAT 4 compressor heater 1- on; 0- off
			Reserved
		Bit5	Defrosting 1- on; 0- off
		Bit4	RUN 1- on; 0- off
		Bit3	PUMP_I 1- on; 0- off
			Reserved
		Bit1	IBH2 = 1- on; 0- off
		Bit0	IBH1 = 1- on; 0- off
1010	IDU load output - Reserved		Reserved
			Reserved
			Reserved
			Reserved
			Reserved
			Reserved
			Reserved
			Reserved
1011	T1	Total water outlet, unit:°C, (value read = current value);invalid: 0x7F	
1012	T1B	Total water outlet (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	Tank temperature, unit:°C. (value read = current value); invalid: 0x7F	
1016	Ta	Indoor air temperature, unit:°C. (value read = current value); invalid: 0x7F	
1017	Tbt1	Inertial tank temperature, unit:°C. (value read = current value); invalid: 0x7F	
1018	Tbt2	Additional 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	

Address register	Meaning	Description
1021	Unit target frequency	
1022	Software version	1~99 means IDU software version
1023	High bit of capacity	
1024	Low bit of capacity	
1025	IDU capacity	(value read = current 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
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
1036	DC bus voltage	(value read = current value) (unit:V)
1037	ODU current	Operating power supply, unit: A (value read = current value)
1038	ODU voltage	Unit voltage: V (value read = current value)
1039	ODU frequency limitation solution	Solution read from ODU 174
1040	High bit of electrical computation	
1041	Low bit of electrical computation	
1042	ODU software version	

Notes:

1 Only addresses referring to slave unit 1 are shown in the table

2 Addresses referring to slave unit X (2-15) = Addresses referring to slave unit 1 + (X-1)*200. E.g.: The addresses for slave unit 4 are 1600-1642

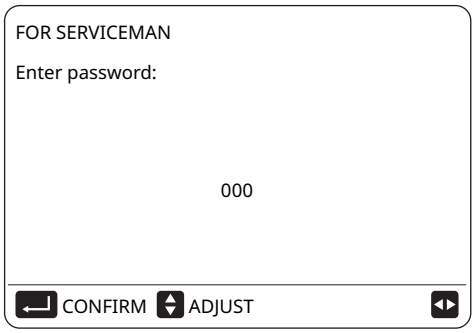
8.5 Opening the “For serviceman” menu

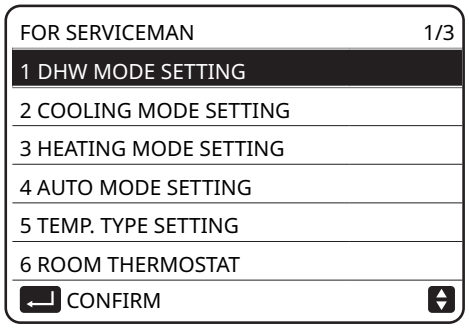
To access:

► press **Menu**
► select for serviceman
► press **OK**
► Enter PWD
► press **OK**

To exit the configuration
After setting all the parameters.

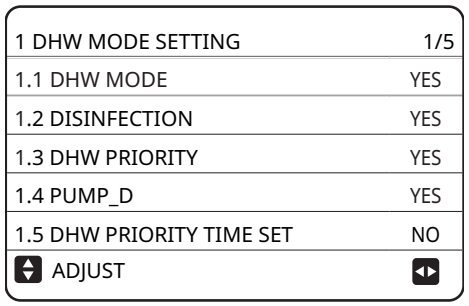
► press **BACK**
► select **YES**
► press **OK**





8.6 DHW (Domestic Hot Water) mode settings

MENU > FOR SERVICEMAN > 1. DHW MODE SETTINGS



1.1 DHW MODE

Enables/disables Domestic Hot Water mode

1.2 DISINFECTION

Enables/disables the anti-legionella cycle

1.3 DHW PRIORITY

Defines the priority between domestic hot water heating and room heating

1.4 PUMP_D

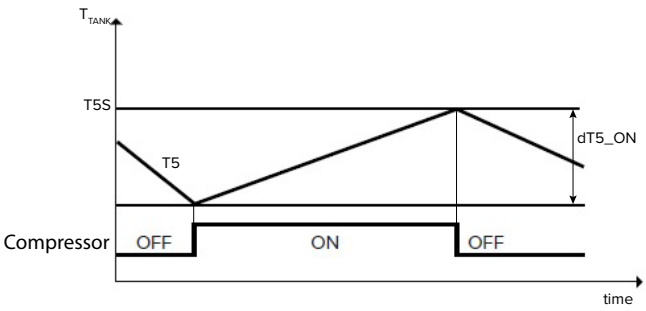
Enables DHW recirculation management by the unit

1.5 DHW PRIORITY TIME SET.

This parameter can be enabled or disabled. If on, it enables parameters: 1.17 t_DHWHP_RESTRICT and 1.18 t_DHWHP_MAX.

1.6 dT5_ON

Sets the temperature difference between the DHW setpoint (T5S) and the storage tank temperature (T5) above which the heat pump switches on in DHW mode. When T5S - T5 ≥ = dT5_ON, the heat pump supplies hot water to the DHW tank.

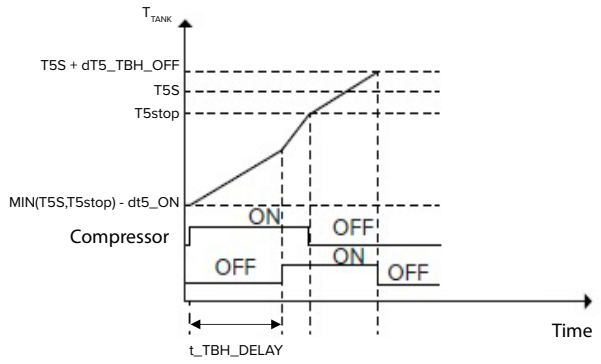


T5: DHW tank water temperature
T5S: DHW temperature set

The heat pump exits DHW mode when T5>= T5S, or when T5 >= the domestic hot water operating limit (T5stop). The latter varies depending on the outdoor temperature

1.7 dT1S5

Sets the heat pump exchanger outlet temperature (T1S) in relation to the DHW storage tank temperature (T5).
For DHW mode, the user sets the DHW setpoint temperature (T5S) on the home page and cannot set T1S manually.
T1S is set as T1S = T5 + dT1S5.
CAUTION!! The default value of dT1S5 = 10.
If the DHW setpoint (T5S) is > 55°C, change the value using the following formula:
dT1S5 = 65°C - DHW setpoint (T5S).
The Figure (below) illustrates the operation of the heat pump and electric heater in DHW mode.
If the DHW tank temperature (T5) is lower than T5stop - dT5_ON, then the heat pump switches on in DHW mode.
If, after the t_TBH_delay time has passed, T5 has still not reached T5stop, the TBH switches on.
Once T5 reaches T5stop the heat pump stops and the TBH continues to run until T5 reaches T5S + dT5_TBH_OFF.
Note: When T5S > T5stop, the operation is the same, but the heat pump bases its logic on T5S instead of T5stop.
Operation in DHW mode



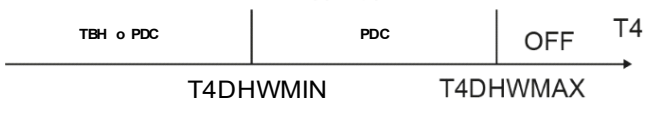
T5: DHW tank water temperature
T5S: DHW temperature set
T5stop: Maximum temperature achievable in the DHW tank in heat pump only.
TBH: DHW tank electric heater

1.8 T4DHWMAX

Sets the outdoor temperature above which the heat pump will not operate in DHW mode.
T4DHWMAX is the maximum outdoor temperature at which the heat pump can operate for domestic water heating.
The unit does not start up if the outdoor temperature exceeds this value in domestic water mode.
The maximum value that T4DHWMAX can withstand is 43°C, which is the upper outdoor temperature limit for heat pump operation in DHW mode.

1.9 T4DHWMIN

Sets the outdoor temperature below which the heat pump will not operate in DHW mode.
T4DHWMIN is the minimum outdoor temperature at which the heat pump can operate for domestic hot water heating.
The lowest value that T4DHWMIN withstand is -25°C, which is the lower outdoor temperature limit for heat pump operation in DHW mode.
The heat pump switches off when the outdoor temperature drops below this value in domestic water mode. The relationship between activation of the unit and the outdoor temperature is shown in the following figure:



PDC: Heat pump
TBH: DHW tank electric heater

1.10 t_INTERVAL_DHW

Defines the compressor activation interval in domestic water mode.
When the compressor switches off, at least the T_INTERVAL_DHW time plus one minute must elapse before its next activation.

1.11 dT5_TBH_OFF

Sets the temperature range at which the electric heater (TBH), if activated by the machine logic, brings the water tank above the setpoint temperature (T5S).
When T5 > Min (T5S + dT5_TBH_OFF, 65°C) the electric heater switches off.

1.12 T4_TBH_ON

Sets the outdoor temperature below which the electric heater becomes available.

1.13 t_TBH_ DELAY

Indicates the compressor operation time beyond which the electric heater can be activated.

1.14 T5S_DISINFECT

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

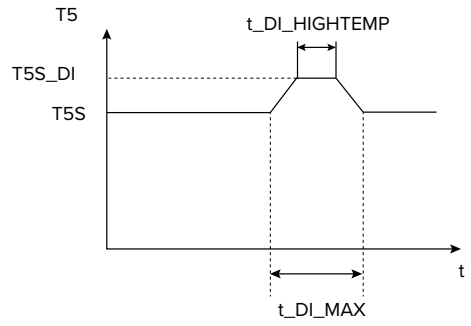
ⓘ The maximum temperature that can be set is 70°C.

1.15 t_DI_HIGHTEMP

Defines the minimum duration where T5 >= T5S_DI;

1.16 t_DI_MAX

Defines the maximum disinfection duration (anti-legionella).



T5: DHW tank water temperature
T5S: DHW temperature set

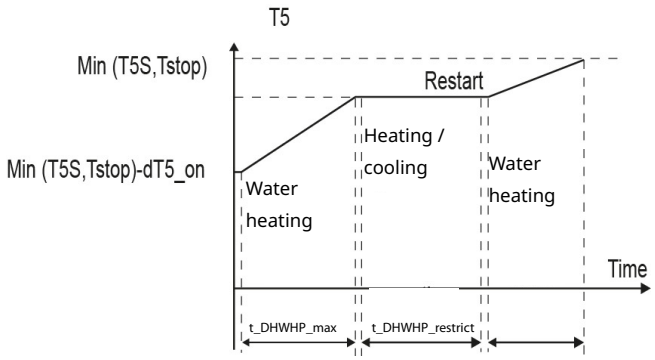
1.17 t_DHWHP_RESTRICT

Parameter enabled when 1.5 DHW PRIORITY TIME SET is activated.
Sets the maximum time the heat pump can operate in heating or cooling mode before switching to DHW mode, if there is a DHW mode requirement. During operation in heating or cooling mode, the heat pump becomes available for DHW mode as soon as the temperature set for heating/cooling the room have been reached (see “COOLING MODE SETTING Menu” and “HEATING MODE SETTING Menu”) or after t_DHWHP_MAX minutes have elapsed.

1.18 t_DHWHP_MAX

Parameter enabled when 1.5 DHW PRIORITY TIME SET is activated.
Sets the maximum time the heat pump can operate in DHW mode before switching to room heating or room cooling mode, if there is a room heating/cooling mode requirement. During operation in DHW mode, the heat becomes available

for room heating/cooling as soon as the domestic water temperature (T5) reaches the temperature set for domestic water (T5S) or after t_DHWHP_MAX minutes have elapsed
The figure shows the effects of t_DHWHP_MAX and t_ DHWHP_RESTRICT when DHW PRIORITY is enabled. The heat pump initially operates in DHW mode. After t_DHWHP_MAX minutes, T5 has not reached the value set.
Operation in DHW PRIORITY



T5: DHW tank water temperature
T5S: DHW temperature set
T5stop: Outlet water temperature operating limit in DHW mode

1.19 TIMER PUMP_D

The user is able to set the circulation pump (on-site capacity output) in DHW mode.
For installation with a circulation pump, select ON so that the user can set the pump start time.

1.20 PUMP_D OPER.TIME

Sets the pump operating time for each of the start-up times indicated by the user in the DHW PUMP scheduling in the DOMESTIC HOT WATER (DHW) menu, if the START TIMER is enabled.

1.21 PUMP_D DISINFECT RUN

Enables the circulation pump (on-site capacity output) if it is to be activated or not during disinfection mode.

1.22 DHW FUNCTION

Parameter enabled when 1.4 DHW PUMP is activated.
To be activated with additional DHW tank.

1.23 t_ANTILOCK

Defines the opening period of the valves for the automatic ANTILOCK function (activation of the valves if they remain in the OFF position for more than 24 hours).
After the set time has elapsed, the valve is deactivated.

8.7 Cooling mode settings

MENU > FOR SERVICEMAN > 2. COOLING MODE SETTING

2.1 COOLING MODE

Enables or disables cooling mode.
For installations with cooling terminals, select YES to enable cooling mode.
For installations without cooling terminals, select NO to disable cooling mode.

2.2 t_T4_FRESH_C

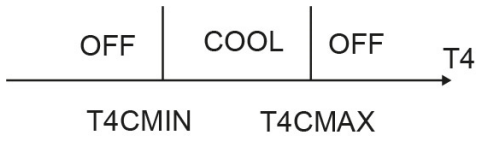
Sets the climatic curve temperature update time for the cooling model

2.3 T4CMAX

Sets the outdoor temperature above which the heat pump does not operate in cooling mode.
The maximum T4CMAX value is 46°C, which is the upper outdoor temperature limit for heat pump operation in cooling mode.

2.4 T4CMIN

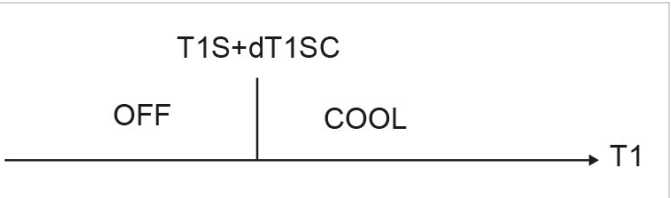
Sets the outdoor temperature below which the heat pump does not operate in cooling mode.
The lowest T4CMIN value is -5°C, which is the lower outdoor temperature limit for heat pump operation in cooling mode.



T4: Outdoor temperature

2.5 dT1SC

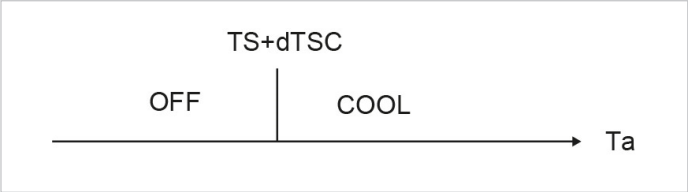
Sets the minimum temperature difference between the heat pump outlet water temperature (T1) and the set heat pump outlet water temperature (T1S), which supplies cold water to the room cooling terminals.
When T1 - T1S ≥ dTISC the heat pump supplies cold water to the room cooling terminals, and when T1 ≤ T1S the heat pump does not supply cold water to the room cooling terminals.



T1: Heat pump water outlet temperature
T1S: Heat pump water outlet temperature set

2.6 dTSC

Sets the temperature difference between the actual outdoor temperature (Ta) and the set outdoor temperature (TS) above which the heat pump supplies cold water to the room cooling terminals. When Ta - TS ≥ dTSC the heat pump supplies cold water to the room cooling terminals, and when Ta ≤ TS the heat pump does not supply cold water to the room cooling terminals.



The dTSC is applicable if ROOM TEMP is selected with YES in the TEMP. TYPE SETTING Menu (see “TEMP. TYPE SETTING Menu”).

2.7 t_INTERVAL_C

Sets the compressor re-start delay in cooling mode.
When the compressor stops, it will not restart until at least t_INTERVAL_H minutes have elapsed.

2.8 T1SetC1

Sets temperature 1 of the automatic setting curve for cooling mode.

2.9 T1SetC2

Sets temperature 2 of the automatic setting curve for cooling mode.

2.10 T4C1

Sets outdoor temperature 1 of the automatic setting curve for cooling mode.

2.11 T4C2

Sets outdoor temperature 2 of the automatic setting curve for cooling mode.

2.12 ZONE1 C-EMISSION

Sets the emission type of zone1 for cooling mode.
Select type:
RAD = radiators (do not use)
FCU = fancoils
FLH = radiant panels

2.13 ZONE2 C-EMISSION

Sets the emission type of zone2 for cooling mode.
Select type:
RAD = radiators (do not use)
FCU = fancoils
FLH = radiant panels

8.8 Heating mode settings

MENU > FOR SERVICEMAN > 3. HEATING MODE SETTING

3.1 HEATING MODE

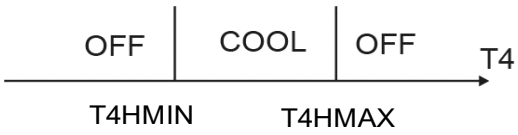
Enables/disables Heating mode.

3.2 t_T4_FRESH_H

sets the climatic curve temperature update time for the heating model.

3.3 T4HMAX

Sets the outdoor temperature above which the heat pump will not operate in heating mode.
The maximum T4HMAX value is 35°C, which is the upper outdoor temperature limit for heat pump operation in heating mode.
Refer to the figure.



T4: Outdoor temperature

3.4 T4HMIN

Sets the outdoor temperature below which the heat pump will not operate in heating mode.
The lowest T4HMIN value is -25°C, which is the lower outdoor temperature limit for heat pump operation.

3.5 dT1SH

Sets the temperature difference between the heat pump outlet water temperature (T1) and the set heat pump outlet water temperature (T1S) at which the heat pump supplies heated water to the room heating terminals.

3.6 dTSH

Sets the temperature difference between the actual outdoor temperature (Ta) and the set outdoor temperature (TS) above which the heat pump supplies heated water to the room heating terminals.
When TS - Ta ≥ dTSH the heat pump supplies heated water to the room heating terminals, and when Ta ≥ TS the heat pump does not supply heated water to the room heating terminals.
Refer to the figure.

Note:
This function is only available when ROOM TEMP is enabled

The dTSH is applicable if OUTDOOR TEMP is selected with YES in the TEMP. TYPE SETTING Menu (see “TEMP. TYPE SETTING Menu”)

3.7 t_INTERVAL_H

Sets the compressor re-start delay in heating mode. When the compressor stops, it will not restart until at least t_INTERVAL_H minutes have elapsed.

3.8 T1SetH1

Sets temperature 1 of the automatic setting curve for heating mode.

3.9 T1SetH2

Sets temperature 2 of the automatic setting curve for heating mode.

3.10 T4H1

Sets outdoor temperature 1 of the automatic setting curve for heating mode.

3.11 T4H2

Sets outdoor temperature 2 of the automatic setting curve for heating mode.

3.12 ZONE1 H-EMISSION

Sets the emission type for heating mode.
Select type:
RAD = radiators
FCU = fancoils
FLH = radiant panels

3.13 ZONE2 H-EMISSION

Sets the emission type for heating mode.
Select type:
RAD = radiators
FCU = fancoils
FLH = radiant panels

3.14 t_DELAY_PUMP

Pump switch-off delay from compressor OFF.

8.8.1 Automatic mode settings

MENU > FOR SERVICEMAN > 4. AUTO MODE SETTING

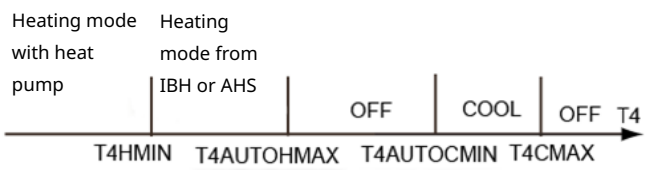
sets temperature 1 of the automatic setting curve for heating mode.

4.1 T4AUTOCMIN

Sets the outdoor temperature below which the heat pump does not supply cold water for room cooling in automatic mode.

4.2 T4AUTOHMAX

Sets the outdoor temperature above which the heat pump does not supply heated water for space heating in automatic mode.
Refer to the figure.



AHS: Additional heating source
IBH: Backup electric heater
T4CMAX: The outdoor temperature above which the heat pump will not operate in cooling mode.
T4HMIN: The outdoor temperature below which the heat pump will not operate in heating mode.

8.8.2 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 (Ta)

MENU > FOR SERVICEMAN > 5. TEMP. TYPE SETTING
TEMP. TYPE SETTING is used to select whether the water supply temperature or the room temperature is used to control heat pump ON/OFF. If the ROOM TEMP function is enabled, the setpoint for the outlet water temperature is calculated according to the climatic curves.
For installations without room thermostats, heating and cooling modes can be controlled as follows:

- the unit only manages the water temperature
- the unit manages the room temperature detected by the user interface

5.1 WATER FLOW TEMP.

If YES is selected, the user is able to control the system water temperature on the user interface home page.

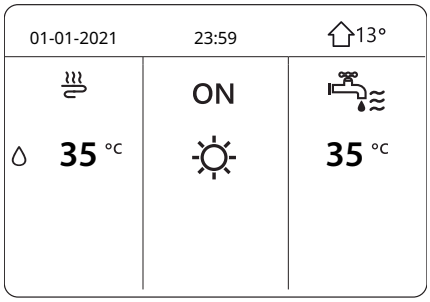
5.2 ROOM TEMP.

if YES is selected, the user is able to control the room air temperature where the user interface is located.
If the ROOM TEMP function is enabled, the setpoint for the water outlet temperature is calculated according to the climatic curves.

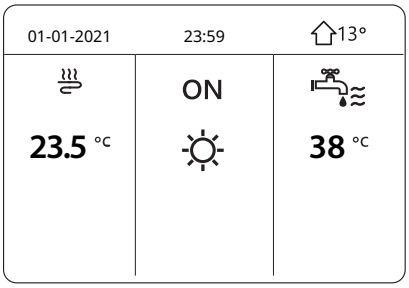
5.3 DOUBLE ZONE

Select YES for a double zone system.

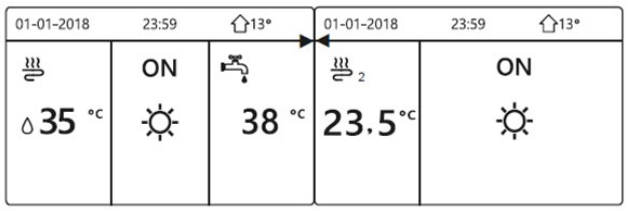
WATER FLOW TEMP. only = YES



ROOM TEMP. only = YES



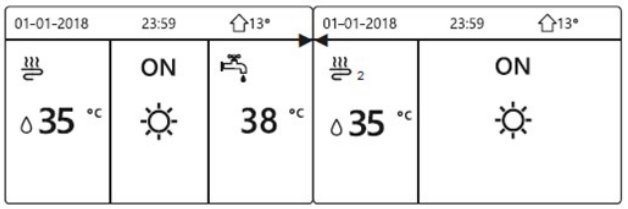
WATER FLOW TEMP. = YES
+
ROOM TEMP. = YES



ZONE 1 ZONE 2

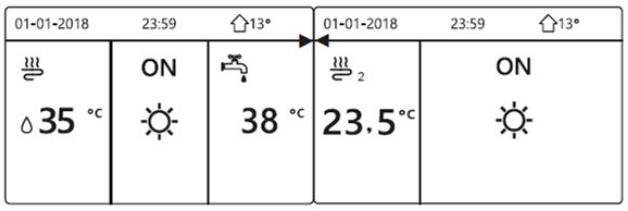
In this case the setpoint for zone 1 is T1S, the setpoint for zone 2 is T1S2 (the corresponding TIS2 is calculated according to the climatic curve).

DOUBLE ZONE = YES
+
ROOM TEMP. = NO



ZONE 1 ZONE 2

DOUBLE ZONE = YES
+
ROOM TEMP. = YES



ZONE 1 ZONE 2

In this case the setpoint for zone 1 is T1S, the setpoint for zone 2 is T1S2 (the corresponding TIS2 is calculated according to the climatic curve).
data (T1) and Zone 2 with regulation based on the ambient air temperature (Ta)

8.8.3 Zone thermostat settings

MENU > FOR SERVICEMAN > 6. ROOM THERMOSTAT
As an alternative to controlling room heating/cooling modes according to the unit outlet water temperature, a separate room thermostat can be installed to control these modes.

ⓘ The following parameters must be set under ROOM THERMOSTAT.

6.1 ROOM THERMOSTAT

Sets whether or not room thermostats are installed.
For installations with room thermostats, select: ONE ZONE - DOUBLE ZONE - MODE SET
For installations without room thermostats, select NO.
Configuration: ONE ZONE, unit ON/OFF is controlled by the thermostat, whereas COOLING/HEATING mode is controlled from the keypad on the unit.
Configuration: DOUBLE ZONE, unit ON/OFF is controlled by the thermostat, whereas COOLING/HEATING mode for both zones is controlled from the keypad on the unit.
Configuration: MODE SET, both ON/OFF and COOLING/HEATING mode are controlled by the thermostat.
See the Electrical connections chapter.

8.8.4 Auxiliary heat source settings

MENU > FOR SERVICEMAN > 7. OTHER HEATING SOURCE
The following parameters must be set in OTHER HEATING SOURCE.
The backup electric heater is optional

7.1 dT1_IBH_ON

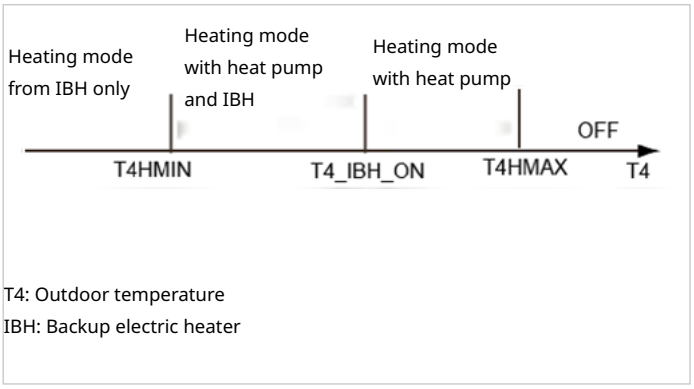
Sets the heat pump outlet water temperature difference (T1S) and the heat pump outlet water temperature (T1) above which the backup electric heater is switched on.
When T1S - T1 ≥ dT1_IBH_ON the backup electric heater is switched on (on models where the backup electric heater has a simple on/off function).

7.2 t_IBH_DELAY

Sets the delay between compressor start and backup electric heater switch-on.

7.3 T4_IBH_ON

Sets the outdoor temperature below which the backup electric heater is used. If the outdoor temperature is higher than T4_IBH_ON, the backup electric heater is not used.
The relationship between activation of the back heater and the outdoor temperature is shown in the figure:



T4: Outdoor temperature
IBH: Backup electric heater

7.4 dT1_ASH_ON

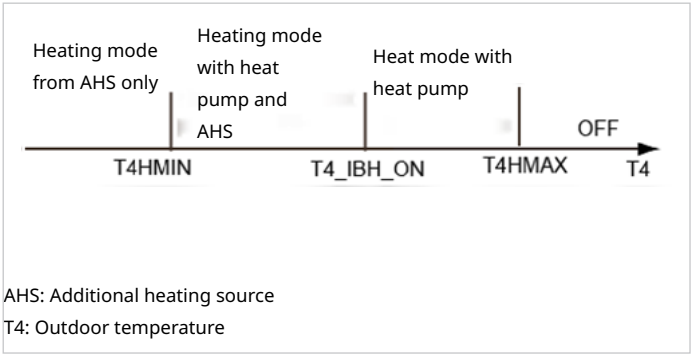
Sets the temperature difference between the set heat pump outlet water temperature (T1S) and the heat pump outlet water temperature (T1) above which the additional heating source is enabled. When T1S - T1 ≥ dT1_AHS_ON the additional heating source is switched on.

7.5 t_ASH_DELAY

Sets the delay between compressor start and additional heating source switch-on

7.6 T4_AHS_ON

Sets the outdoor temperature below which the additional heating source is used. If the outdoor temperature is higher than T4_ASH_ON, the additional heating source is not used.
The relationship between activation of the additional heating source and the outdoor temperature is shown in the following figure.



AHS: Additional heating source
T4: Outdoor temperature

7.7 IBH POSIT.

Sets the position of the IBH (only possible selection)

7.8 P_IBH1

Sets the power input of the IBH (if present).
It is used for more accurate calculation of the unit's output and efficiency.

7.9 P_IBH2

Sets the power input of the IBH 2 (if present).
It is used for more accurate calculation of the unit's output and efficiency.
Not available for the SPHERA EVO 2.0 unit

7.10 P_TBH

Sets the power input of the TBH (if present).

It is used for more accurate calculation of the unit's output and efficiency.

7.11 EnSWITCHPDC

Enables or disables the € switch function.
The € switch function makes it possible to calculate the resource (between the heat pump and boiler) that is able to fulfil the heat request with the lowest economic cost in every operating condition.
To use the € switch function, simply enter the cost of a cubic metre of gas (GAS_COST) and the cost of a kWh of electric energy (ELE_COST), both of which can be obtained from the energy company's supply contract.
The function calculates the minimum efficiency of the heat pump required to make it more cost-effective than the boiler. When the efficiency of the heat pump is lower than the minimum efficiency, the heat pump is switched off and the demands are handled by the boiler.
If the € switch function is activated, the boiler activation logic for integration remains unchanged.

7.12 GAS_COST

Set the average cost of fuel gas used to power the boiler (in €/mc).
If you don't know this value and want to calculate it, we recommend that you take your latest gas bills, add up the various amounts (in €) and divide it by the sum of the amount of gas consumed (in mc).

7.13 ELE_COST

Set the average cost of electric energy (in €/kWh)

7.14 MAX_SETHEATER

Maximum setpoint value that can be reached by the boiler for setpoint control by 0-10V signal.
For a Clivet boiler the value is 80°C

7.15 MIN_SETHEATER

Minimum setpoint value that can be reached by the boiler for setpoint control by 0-10V signal.
For a Clivet boiler the value is 30°C

7.16 MAX_SIGHEATER

0-10V signal relating to the maximum boiler setpoint value
For a Clivet boiler the value is 10V

7.17 MIN_SIGHEATER

0-10V signal relating to the minimum boiler setpoint value.
For a Clivet boiler the value is 3V

7.18 DELTATSOL

Set the temperature difference between Tsol (if solar option is present) and T5 which activates the pump for the solar option (Pump_S).
When Tsol - T5 > DELTATSOL the Pump_S is activated.

8.9 Holiday Away function settings

MENU > FOR SERVICEMAN > 8. HOLIDAY AWAY SETTING

The HOLIDAY AWAY SETTING menu settings are used to set the outlet water temperature to prevent water pipes from freezing when away from home during cold seasons.

8.1 T1S_HA_H

Sets the heat pump outlet water temperature for room heating mode in holiday away mode.

8.2 T5S_HA_DHW

Sets the heat pump outlet water temperature for DHW mode when in holiday away mode.

8.10 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 ∧∨ buttons. The maximum number of characters is 14.

8.11 Restore factory settings

MENU > FOR SERVICEMAN > 10. RESTORE FACTORY SETTINGS

The parameters can be restored to the factory settings. Selecting YES starts restoring all settings to factory default and the progress is displayed in percentage.

8.12 Test mode settings

MENU > FOR SERVICEMAN > 11. TEST RUN
TEST RUN is used to check that the valves, air purge function, circulation pump, room cooling mode, room heating mode and DHW mode are all working properly.
During the operation test, the buttons do not work except for the OK button. If you wish to abort the operation test, press OK.

POINT CHECK
The POINT CHECK menu is used to check operation of the individual components.
Use Up and Down to scroll through the components to be controlled and press ON/OFF to enable/disable the component's on/off status.
If a valve does not switch on/off when its on/off status is enabled or if a pump/heater does not work when enabled, check the component's connection on the hydronic system mainboard.
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)

AIR PURGE
Once installation is complete, it is important to run the air purge function to remove any air in the water piping that could cause malfunctions during operation.
The AIR PURGE operation is used to remove air from the water piping.

⚠ Before activating AIR PURGE mode, make sure that the air purge valve is open.

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

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

CIRCULATED PUMP RUNNING
Used to control operation of the circulation pump.

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

COOL MODE RUNNING
Used to check operation of the system in room cooling mode.

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

HEAT MODE RUNNING
Used to check operation of the system in heating cooling mode.

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

DHW MODE RUNNING
Used to check operation of the system in DHW mode.

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

8.13 Special function settings

MENU > FOR SERVICEMAN > 12. SPECIAL FUNCTION

The SPECIAL FUNCTION is used to preheat the floor and dry the floor once installation is complete or the first time the unit is started or restarted after a long stop.

ⓘ During preheating for floor operation all buttons except OK are deactivated.

12.1 PREHEATING FOR FLOOR

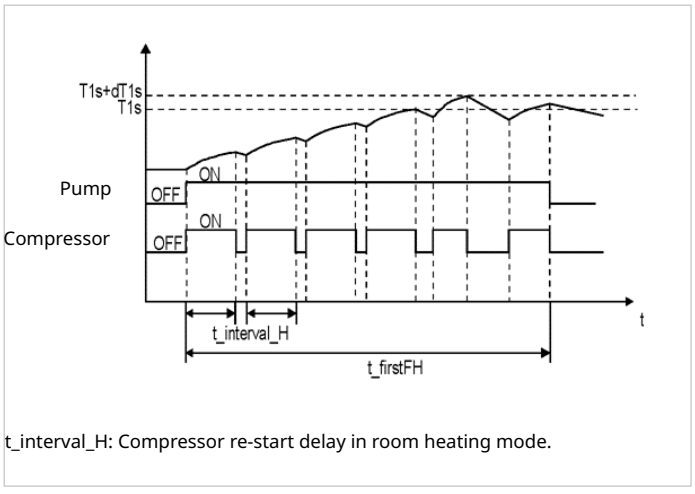
If radiant panels are activated on a floor that still contains a considerable amount of water, there is a risk of the floor warping or cracking due to heating. To protect the floor, a drying process must be carried out, during which the floor temperature should be gradually raised.
When using the unit for the first time, there may be some residual air in the system which can cause it to malfunction. To reject this air, run the purge function (check that the relief valve is open).
The parameters that can be set for this function are:

T1S

Sets the water outlet temperature set for preheating radiant panels.

t_fristFH

Sets the preheating duration of radiant panels.
Operation of the unit while preheating radiant panels is described in the following figure:



t_interval_H: Compressor re-start delay in room heating mode.

While preheating for floor operation is running, the heat pump operating minutes and outlet water temperature are

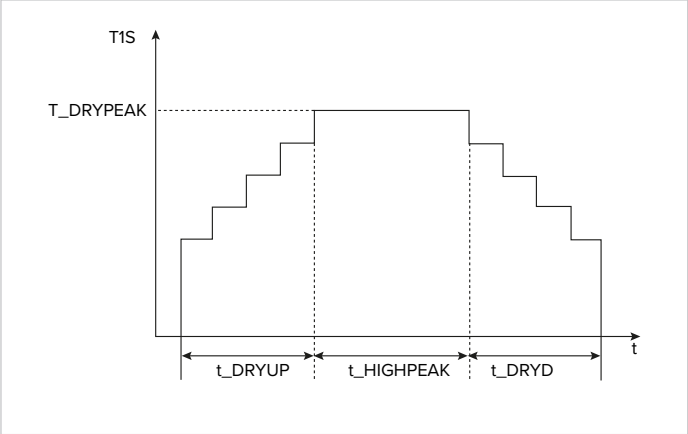
displayed on the keypad.
To exit preheating for floor operation, press OK and select YES when prompted.

12.2 FLOOR DRYING UP

For newly installed floor heating systems, the floor drying mode can be used to remove moisture from the floor slab and subfloor to prevent the floor from warping or cracking during floor heating operation.
There are 3 phases to the floor drying operation:

- phase 1: gradual temperature increase from 25°C to the high temperature
- phase 2: maintain high temperature
- phase 3: gradual temperature decrease from the high temperature to 45°C

t_DRYUP is the start day of heating operation.
t_HIGHPEAK is the last day of high temperature.
t_DRYDOWN is the temperature dropping day.
T_DRYPEAK is the maximum temperature to be reached by the system water during floor drying.
START TIME sets the floor drying operation start time.
START DATE sets the floor drying operation start date.
The water outlet temperature during floor drying is described in the following figure:



During the floor drying operation all buttons except OK are deactivated.
To exit the floor drying operation, press OK and select YES when prompted.

ⓘ In the event of a heat pump malfunction, the floor drying mode will continue if a backup electric heater and/or an additional heating source, configured to support the room heating mode, is available.

8.14 Automatic restart settings

MENU > FOR SERVICEMAN > 13. AUTO RESTART
The AUTO RESTART function is used to select whether the unit reapplies the user interface settings when power is restored after a power failure.
Select YES to enable auto restart or NO to disable auto restart.
If the auto restart function is enabled, when the power supply returns after a power failure, the unit reapplies the user interface settings from before the power failure.
If this function is disabled, when the power supply returns after a power failure, the unit will not restart automatically.

8.15 Unit's power supply limitation settings

MENU > FOR SERVICEMAN > 14. POWER INPUT LIMITATION
Set the power input limitation value: control interval 0-8.
If the unit can be operated without power input limitation, select 0.
If the unit is to be operated at a lower power input select 1-8 and the power input and capacity of the unit will decrease.

Size					
	2.1-3.1	4.1-5.1	6.1M-7.1M	8.1M	6.1T-8.1T
0	18	19	30	30	14
1	18	19	30	30	14
2	16	18	28	29	13
3	15	16	26	27	12
4	14	14	24	25	11
5	13	12	22	23	10
6	12	12	20	21	9
7	12	12	18	19	9
8	12	12	16	17	9

8.16 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:

- 15.1 --> Enables contacts CN36 as REMOTE ON/OFF or as TBH ON/OFF;
- 15.2 --> Enables a SMART GRID;
- 15.3 --> Enables DOUBLE ZONE HIGH/LOW TEMPERATURE option;
- 15.4 --> Enables inertial tank temperature probe (only for unit function in cascade)
- 15.5 --> Enables additional DHW tank temperature probe;
- 15.6 --> Sets the position of the room temperature probe (to use the user interface as a thermostat, set to "HMI")
- 15.7 --> Sets the offset of the room temperature read by the user interface.
- 15.8 --> Enables the solar option. ONLY SOLAR (the DHW is heated by the solar option only). SOLAR + HP (DHW is produced by both solar and heat pump);
- 15.9 --> The piping length between the indoor unit and the outdoor unit
- 15.10 --> Enables outdoor temperature control (not available for this version)
- 15.11 --> Limits the internal pump of the unit (not available for this version)
- 15.12 --> Defines what type of signal contacts DFT1/DFT2 should manage (defrosting or alarm).

8.17 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.

16.3 ADDRESS RESET

Sets the unit address, for Slave units only.

ⓘ Slave units are auto-addressing and do not require manual address setting. FF is equivalent to setting an invalid address.

If necessary, set the address manually.

8.18 Other HMI settings

MENU > FOR SERVICEMAN > 17. HMI ADDRESS SET
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:

17.1 HMI SET

Defines whether the HMI has limited settings (parameter = 1): in this case it can only manage ON/OFF, mode change and setpoint.

17.2 HMI ADDRESS FOR BMS

Defines the unit address for management with BMS systems.

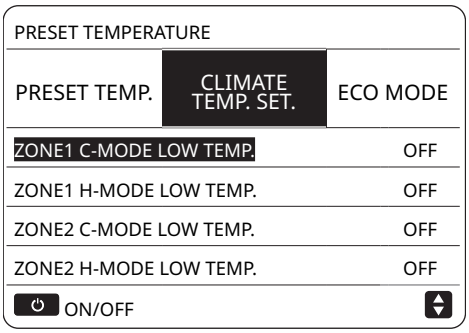
ⓘ This parameter is only manageable if the unit has not been limited in point 17.1.

17.3 STOP BIT

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

8.19 Climatic curve setting

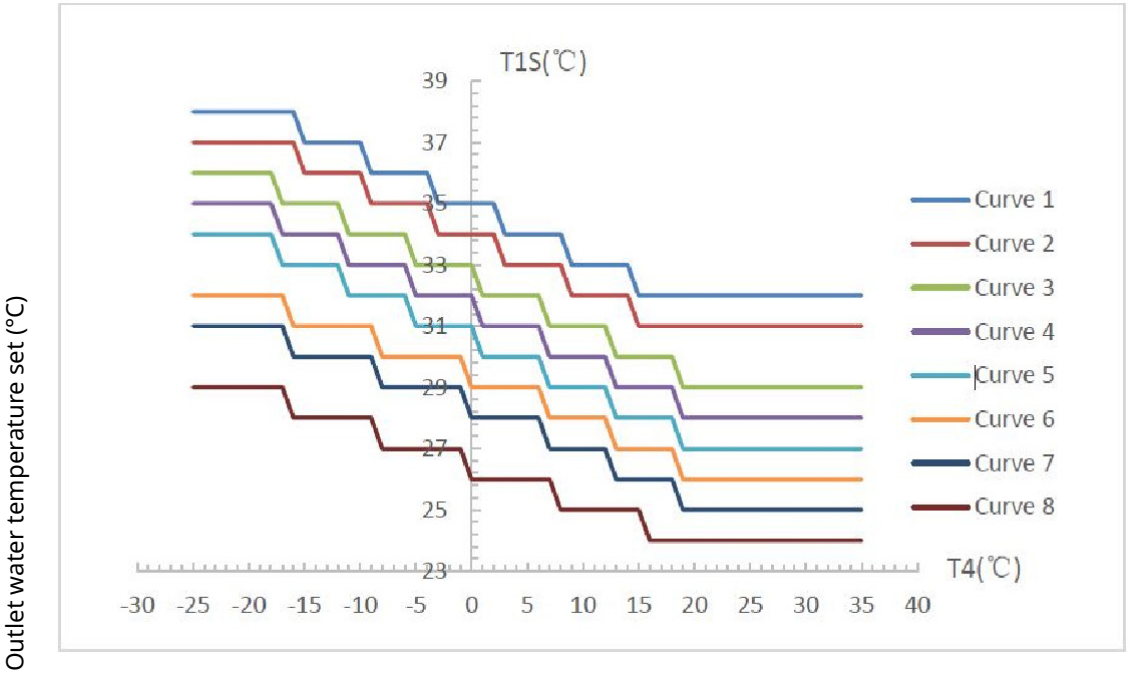
The relevant climatic curves can be selected in the user interface, MENU > PRESET TEMPERATURE > CLIMATE TEMP. SET.
The curves for heating mode and ECO heating mode are the same but the preset curve is number 4 in heating mode, while in ECO mode the preset curve is number 6.



The preset curve for cooling mode is number 4.
Once the curve is selected, the outlet water temperature set (T1s) is determined by the outdoor temperature.
In each mode, each of the eight curves can be selected on the user interface.
The relationship between the outdoor temperature (T4) and the outlet water temperature set (T1s) is described in Figure A, Figure B, Figure C and Figure D.
The automatic setting curves are the ninth curve for cooling and heating mode, the ninth curve can be set as in Figure E and Figure F

Figure A

Low temperature curves for Heating mode

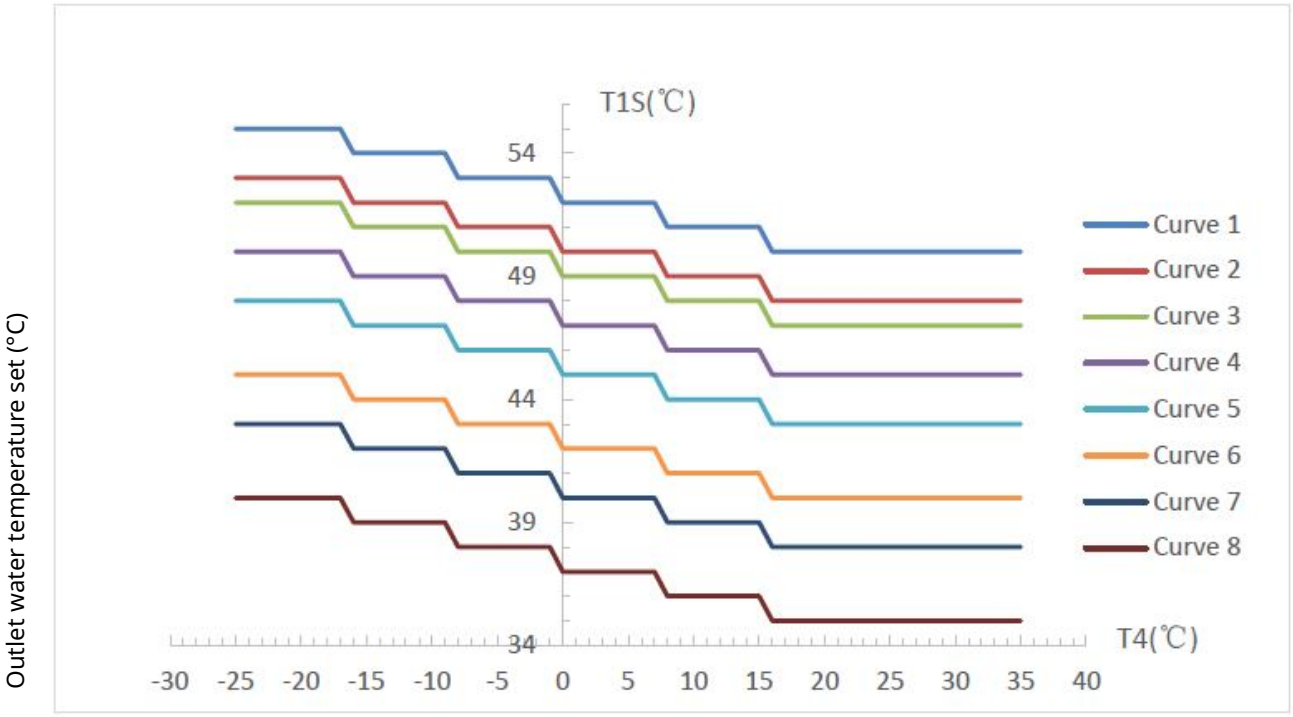


Notes

1. Can be selected when low temperature is set for heating mode.
2. Curve 4 is preset in low temperature heating mode and curve 6 is preset in ECO mode.

Figure B

High temperature curves for Heating mode



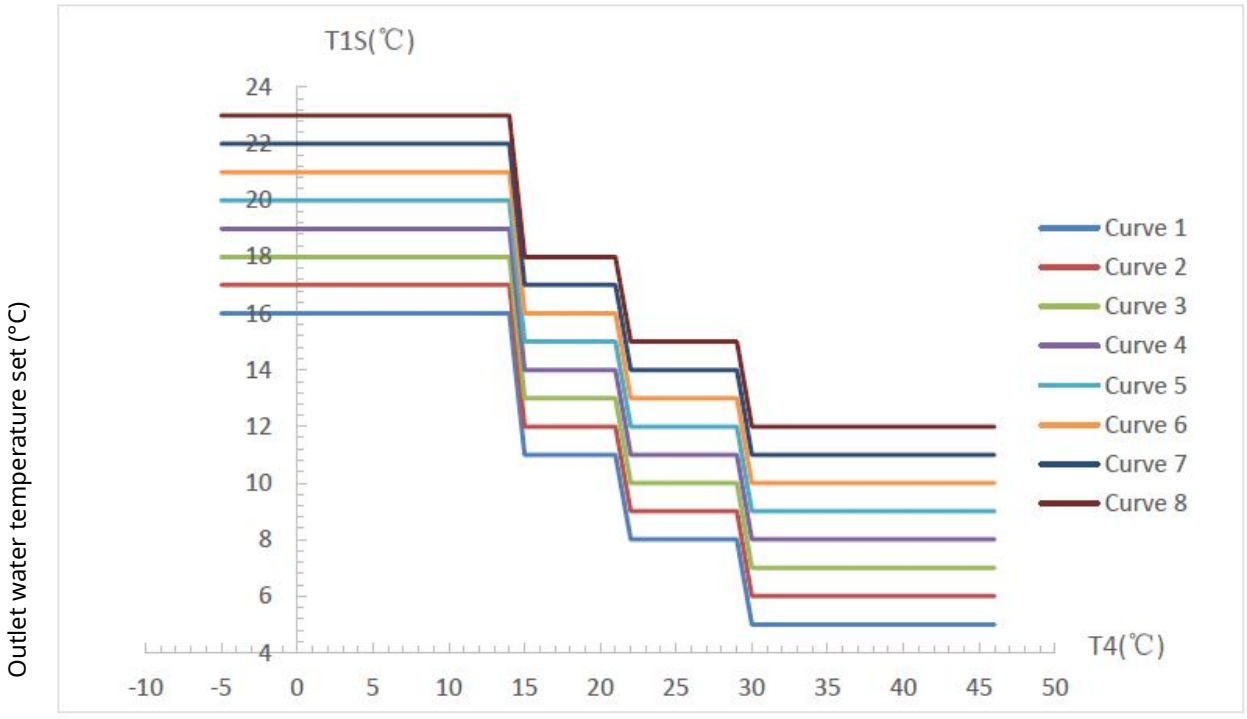
Notes

1 Can be selected when high temperature is set for heating mode

2 Curve 4 is preset in high temperature heating mode and curve 6 is preset in ECO mode.

Figure C

Low temperature curves for Cooling mode



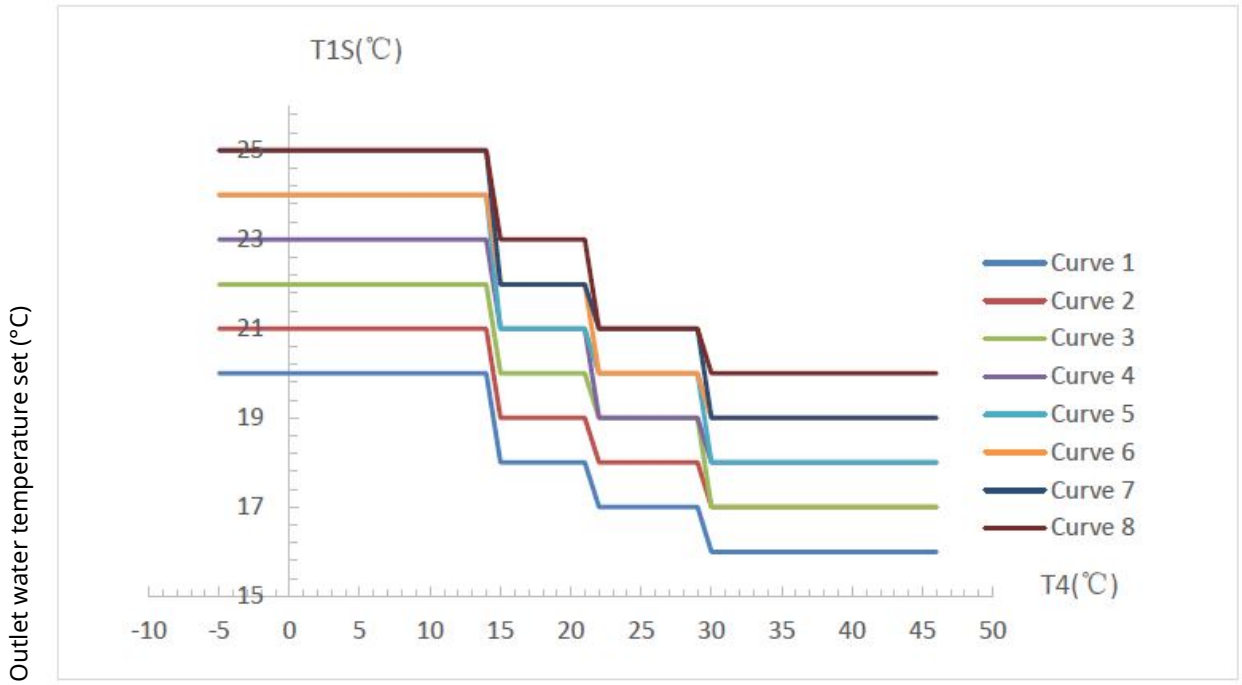
Notes

1 Can be selected when low temperature is set for cooling mode

2 Curve 4 is preset in low temperature cooling mode

Figure D

High temperature curves for Cooling mode

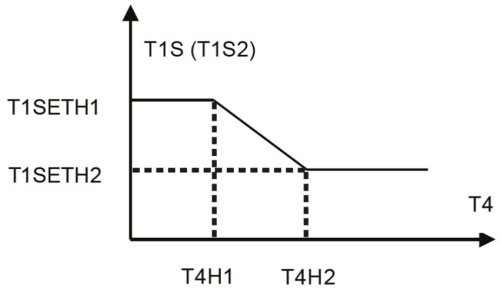


Notes

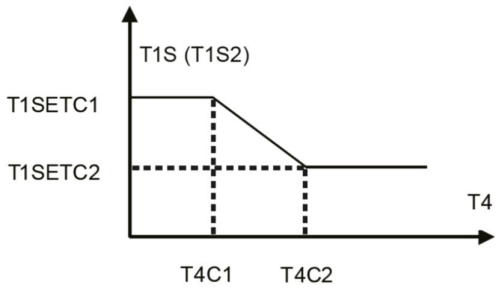
1 Can be selected when high temperature is set for cooling mode

2 Curve 4 is preset in high temperature cooling mode

Automatic setting curve for heating mode



Automatic setting curve for cooling mode



For T1SETH1, T1SETH2, T4H1, T4H2 settings see “HEATING MODE SETTING Menu” and for T1SETC1, T1SETC2, T4C1,T4C2 settings see “COOLING MODE SETTING Menu”

9. USB update and functions

9.1 Copy the parameters from unit A to unit B

⚠ Access reserved for Servicing during start-up and follow-up interventions.

Some brands of USB flash drives may not be recognised

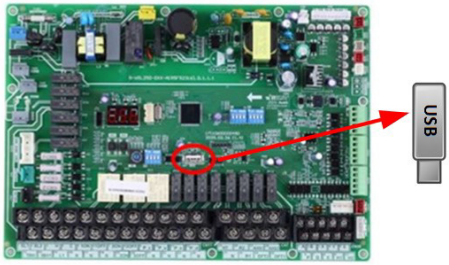
Material required:

- PC
- USB flash drive max. 8GB (empty)

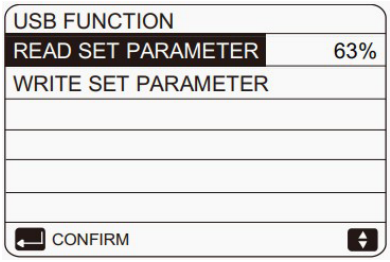
When the USB is plugged into the PC, format it in FAT32.

Unit A

With the unit powered and switched **OFF**, plug the flash drive into the USB port on the indoor unit board.



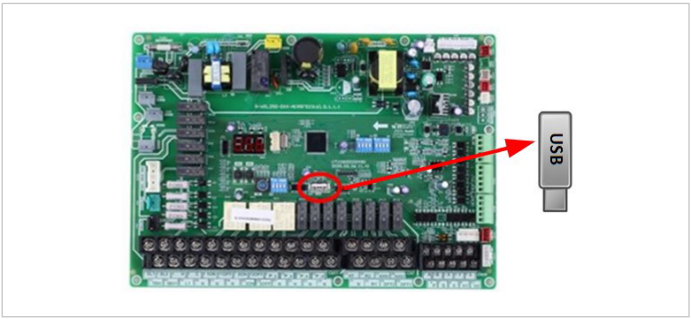
Select “READ SET PARAMETER” on unit A.



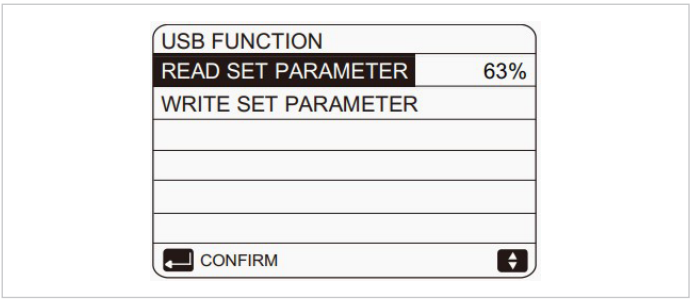
When the parameters have been copied, the word “SUCCESS” is displayed.
The file is automatically saved on the USB flash drive as an EXCEL file.

Unit B

With the unit powered and switched OFF, plug the flash drive into the USB port on the indoor unit board.



Select “WRITE SET PARAMETER” on unit B



9.2 Indoor/outdoor unit software update

⚠ Access reserved for Servicing during start-up and follow-up interventions.

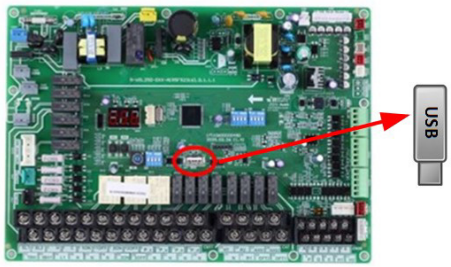
Some brands of USB flash drives may not be recognised

Material required:

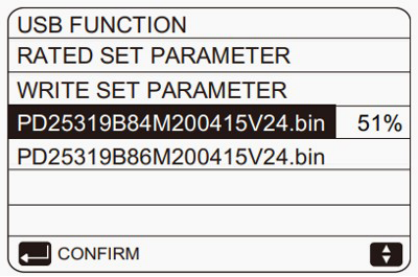
- PC
- USB flash drive max. 8GB (empty)

When the USB is plugged into the PC, format it in FAT32.
Copy the “PDxxxxxx.bin” files onto the USB flash drive

With the unit powered and switched **OFF**, plug the flash drive into the USB port on the indoor unit board.

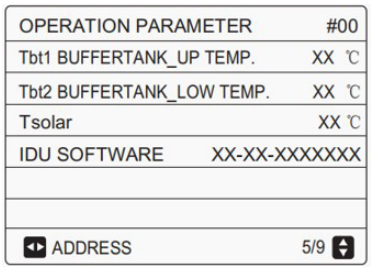


Select the file for the indoor unit.
When the procedure has finished, the word “SUCCESS” is displayed.
Follow this procedure for the outdoor unit.

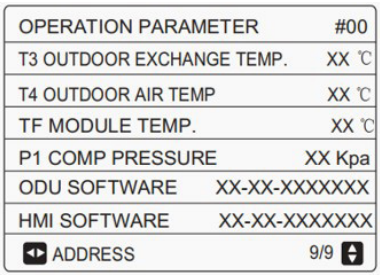


Software update check

Internal unit



External unit



10. **Disposal**

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.

Notes

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