daitsu

SERVICE MANUAL

UM

En

MODULAR CHILLER INVERTER

Serie
CSAD UiAWP 100-200-300 (PS)

Edition
R00

Models
CSAD UiAWP 100 (PS)
CSAD UiAWP 200 (PS)
CSAD UiAWP 300 (PS)

- This manual gives detailed description of the precautions that should be brought to your attention during operation.

- In order to ensure correct service of the wire controller please read this manual carefully before using the unit.

- For convenience of future reference, keep this manual after reading it.

Contents

1 Safety Precautions

The product and Operation and Installation Instructions record the following content, including the operation method, how to prevent harms to others and property losses, and how to use the product correctly and safely. Read the text after understanding the content (identification and marker maps) below carefully, and observe the precautions below.

⚠ Caution

Read the safety precautions carefully prior to installation.
The important safety precautions are provided below and must be observed.
Meanings of marks:

⚠ Caution Means improper handling may lead to personal injuries or material damages.

⚠ Warning Means improper handling may lead to death or serious injury.

After the installation work is completed, confirm that the trial operation is normal and hand over the manual to the customer for keeping.

[Note]: So-called "injuries" mean the harms not requiring hospitalization or long-term treatment, generally referring to wounds, burns, or electric shocks. Material damages refer to property and material losses.

1 Safety Precautions

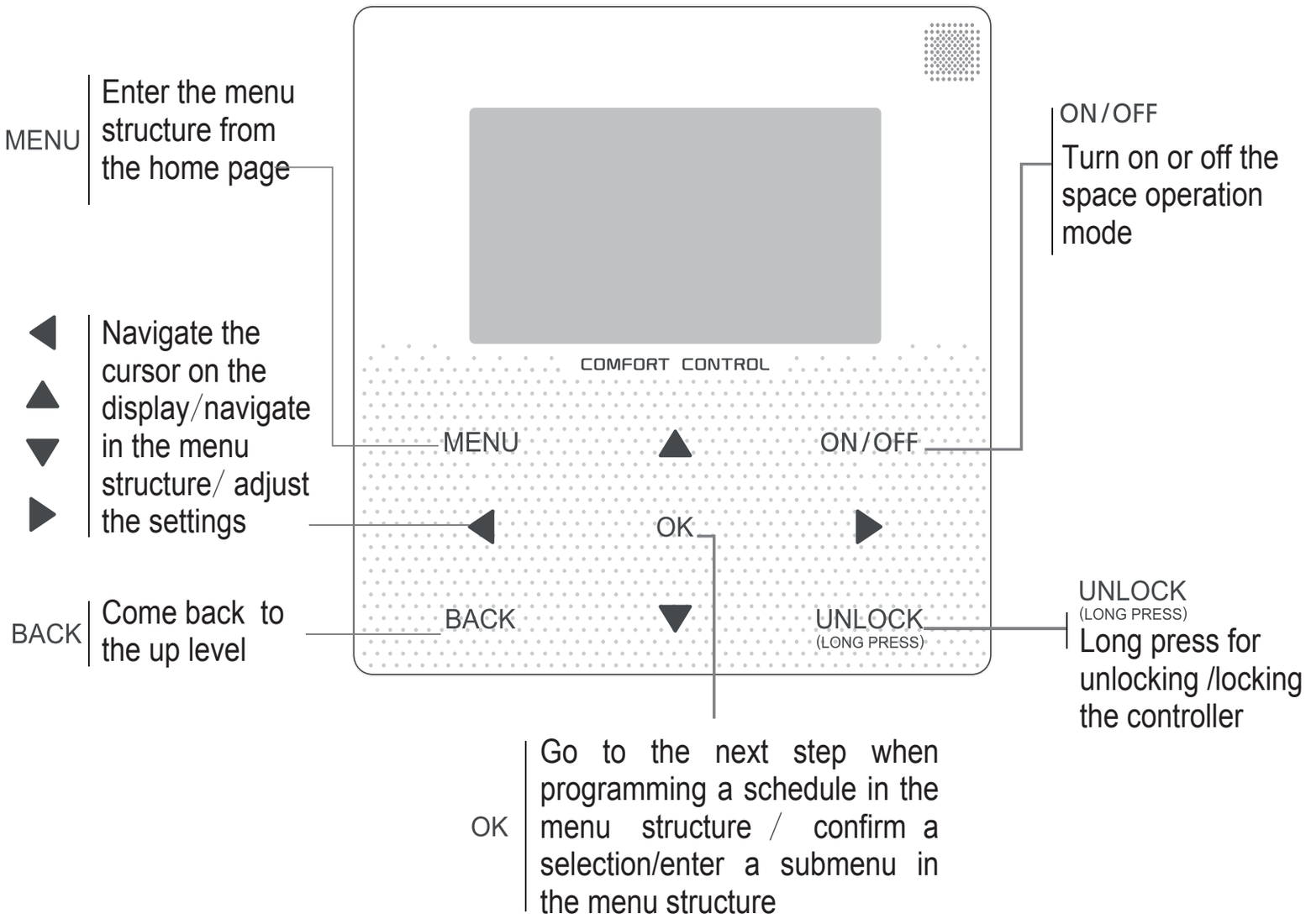
Icon	Name
	It indicates "prohibited". The specific content of prohibition is provided using graphics or text in the icon or nearby.
	It indicates "mandatory". The specific mandatory content is provided using graphics or text in the icon or nearby.

 Warning	Entrusted installation	Entrust your distributor or a professional to install the product. The installation operator must have acquired the relevant professional knowledge. In case of independent installation, wrong operations will lead to a fire, electric shock, or injury.
 Caution in Use	Prohibited	Do not spray combustible spray to the wired controller directly; otherwise a fire may be caused.
	Prohibited	Do not perform operations with a wet hand or allow water to enter the wired controller; otherwise the wired controller will be damaged.

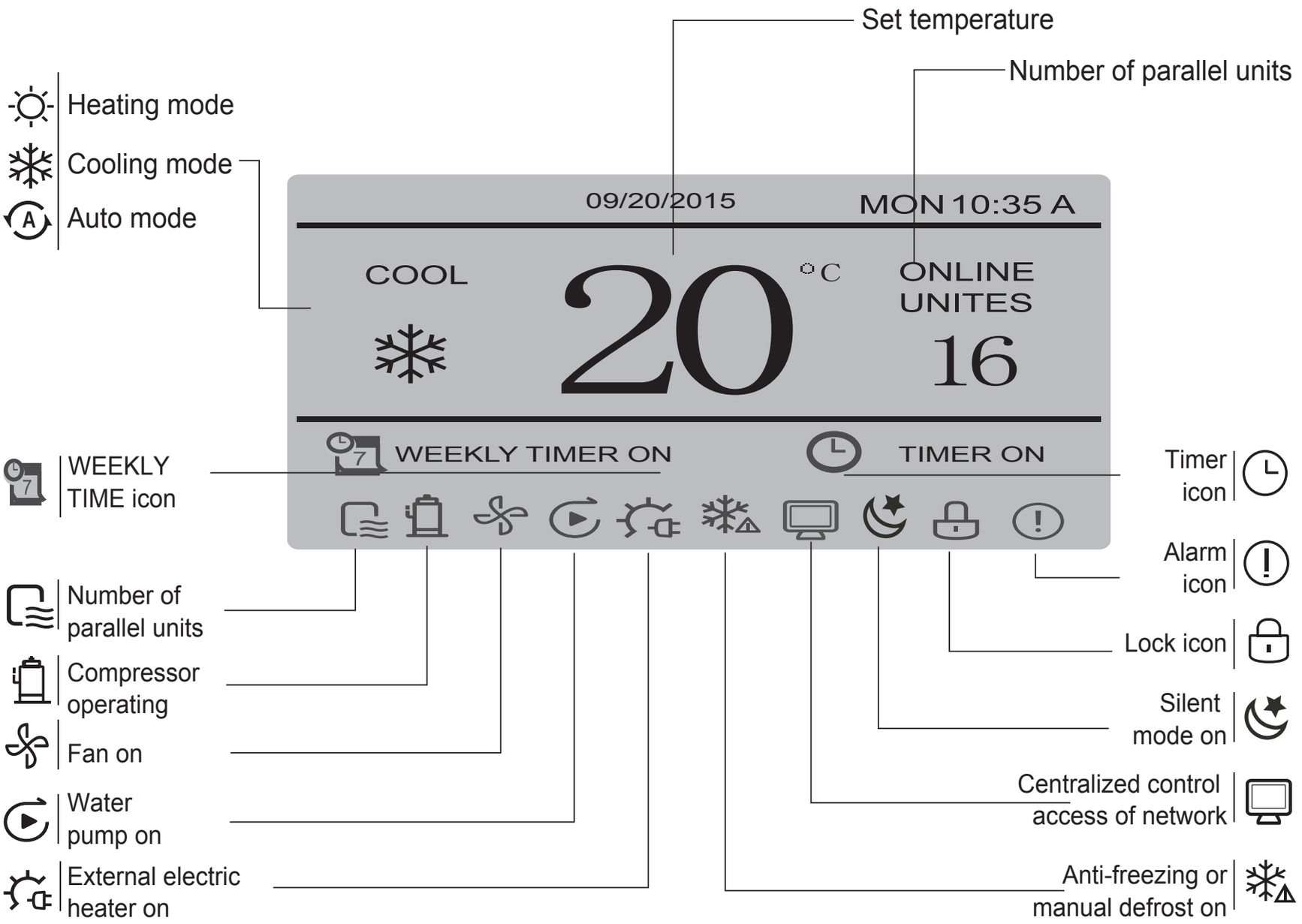
⚠Caution

- Do not install the product at a place where flammable gas easily leaks. Once flammable gas leaks and stays around the wired controller, a fire may be caused.

2 Overview of Wired Controller



2 Overview of Wired Controller



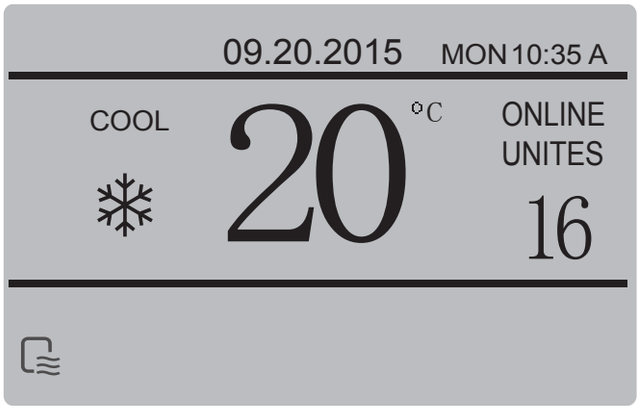
3 Menu Operations

3.1 Unlocking/Locking Operation

When the wired controller is locked, press and hold the "UNLOCK" button for 2s to unlock it, when "🔒" is not displayed; in the unlocked status, press and hold the "UNLOCK" button for 2s to lock it, when "🔒" is displayed and the wired controller cannot be operated; when there is no operation for continuous 60s on any page, the wired controller returns to the home page and is locked automatically, and the locking icon is displayed.

3.2 Power-on/off

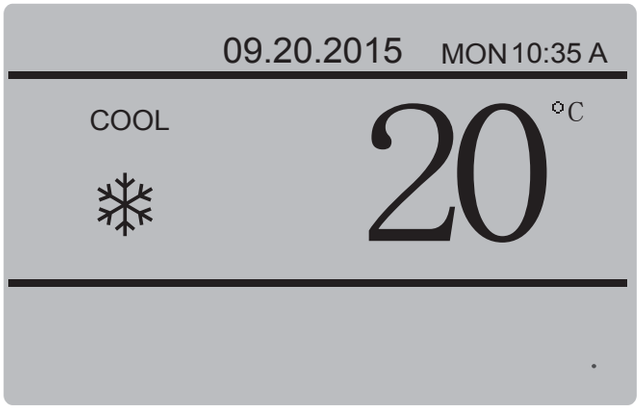
When the wired controller is unlocked and the unit is on, "ON/OFF" can be pressed to power off the unit under the home page only; when the unit is off, press "ON/OFF" to power on the unit. The mode can be switched under the power-off mode only.



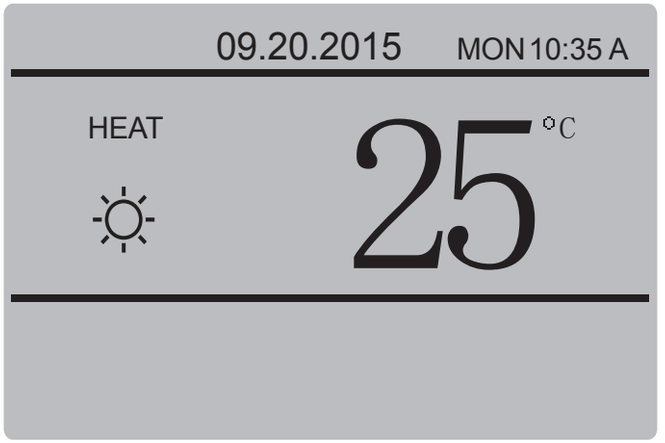
3.3 Setting Mode

In Unlock mode, press the "MENU" button to enter the menu setting interface, press the "▼" and "▲" buttons to select "MODE" and set a mode, and press the "OK" button as shown in the above figure to access the submenu (mode setting). As shown below: Three modes available.

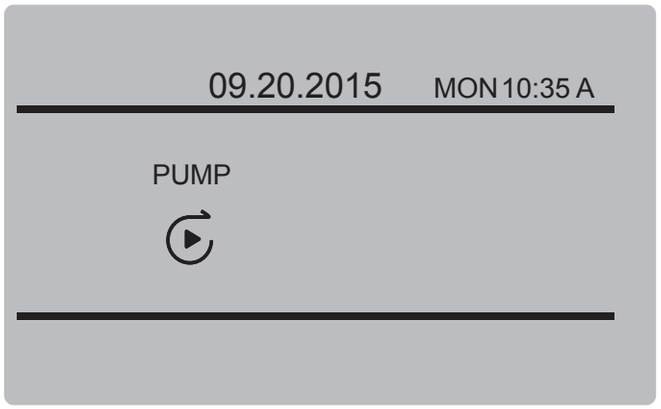
a. Cooling mode



b. Heating mode



c. Water pump mode

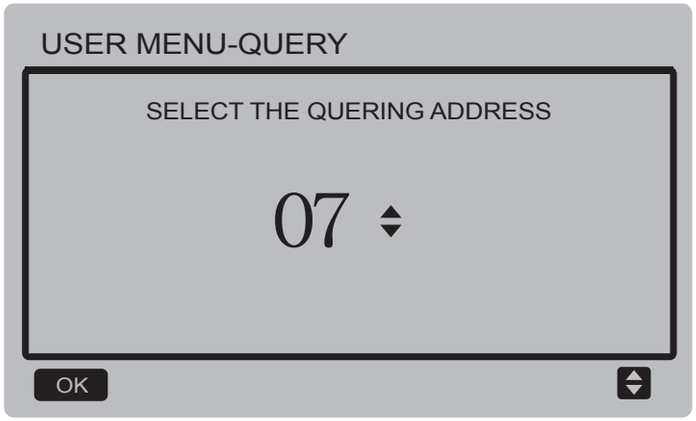


When the current mode button is selected (blinking), press "◄" and "►" to set a mode or temperature, and then press "▼" and "▲" to adjust the mode and set temperature value. After setting, press the "OK" button to save the setting and go back to the home page; or press the "BACK" button to go back to the home page; if there is no subsequent operation in 60s, the setting is saved automatically, and the system returns to the home page.

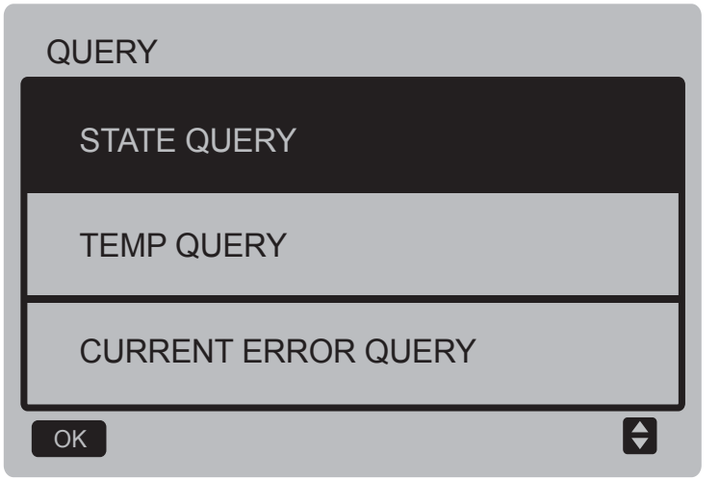
3.4 User Menu

Select "USER MENU" to enter the user menu. The interface is as follows:

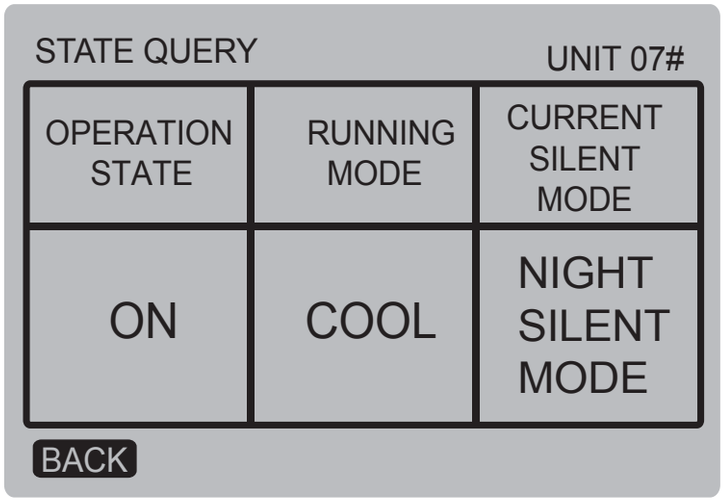
Select "QUERY" to access the query function. The interface and operation are as follows:



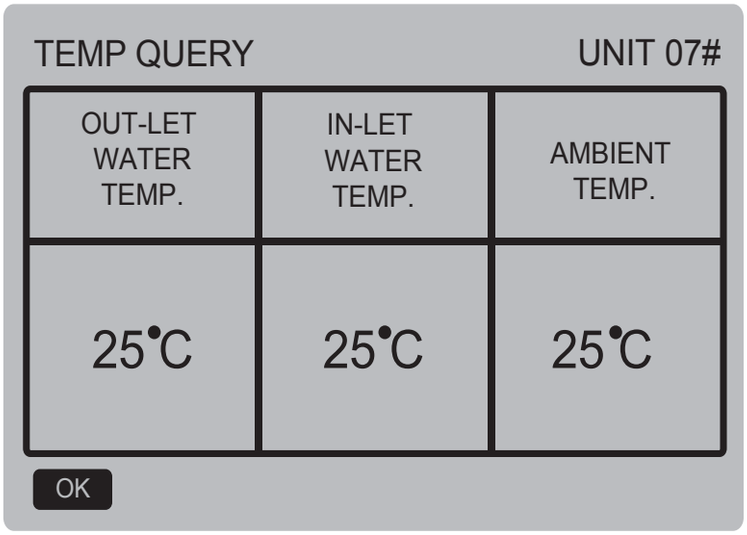
The user first uses the "▼" and "▲" buttons to select the address of module to view (the offline address is skipped automatically). Press the "OK" button to access the lower-layer submenu or press "BACK" to go back to the previous interface; during operation on the menu page, press "BACK" to go back to the previous interface. After entry, the interface is displayed as follows:



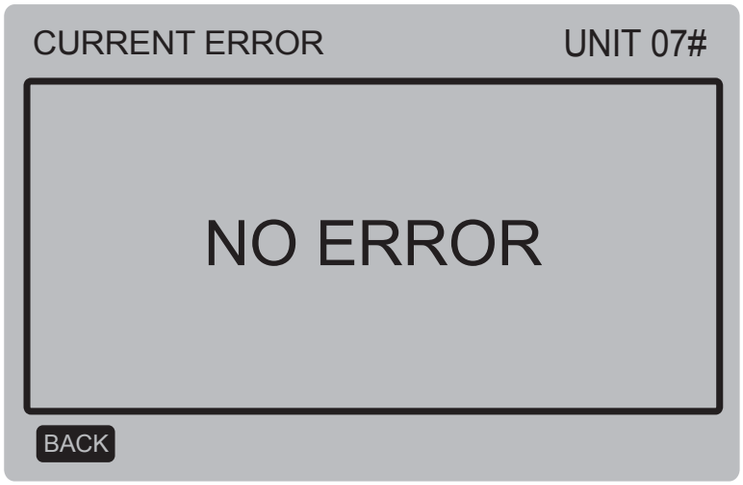
◆ State query:
Select "STATE QUERY", and press the "OK" button to enter the interface. The interface display is as follows:



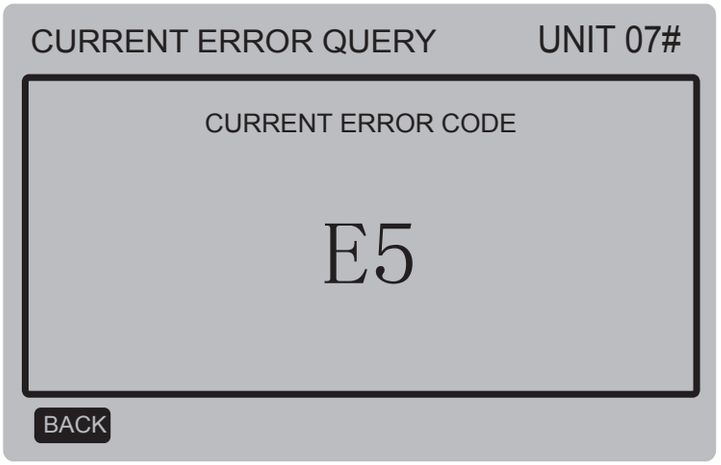
◆ Temperature query:
Select "TEMP QUERY", and press the "OK" button to enter the interface. The interface display is as follows:



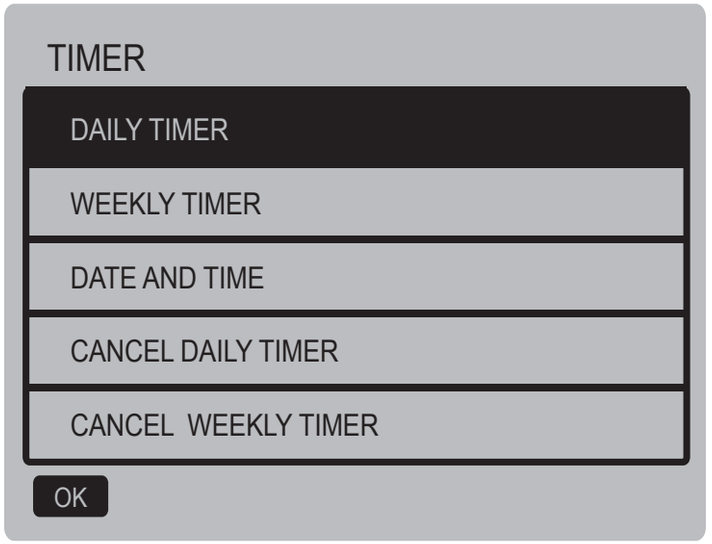
◆ Current error:
Select "CURRENT ERROR", and press the "OK" button to enter the interface. The interface display is as follows if there is no error currently:



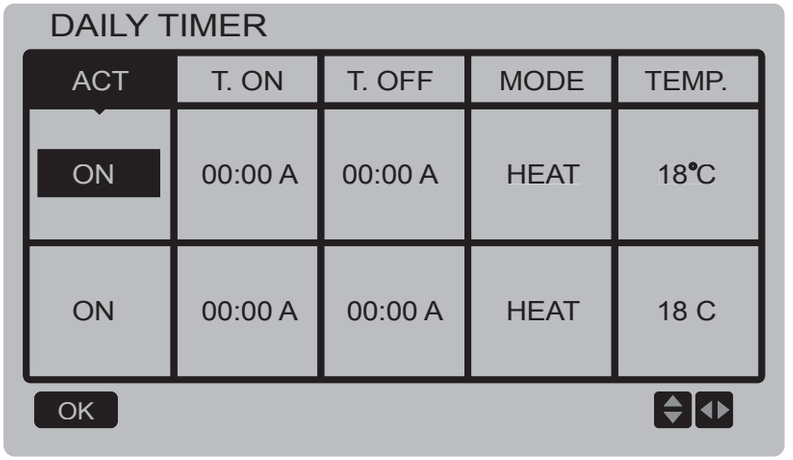
If there is an error, the interface display is as follows, and the current error code and description are displayed:



◆ Setting the timer:
Select "TIMER", and press the "OK" button to enter the interface. The interface display is as follows:



Select "DAILY TIMER", and press the "OK" button to enter the interface. The interface display is as follows:

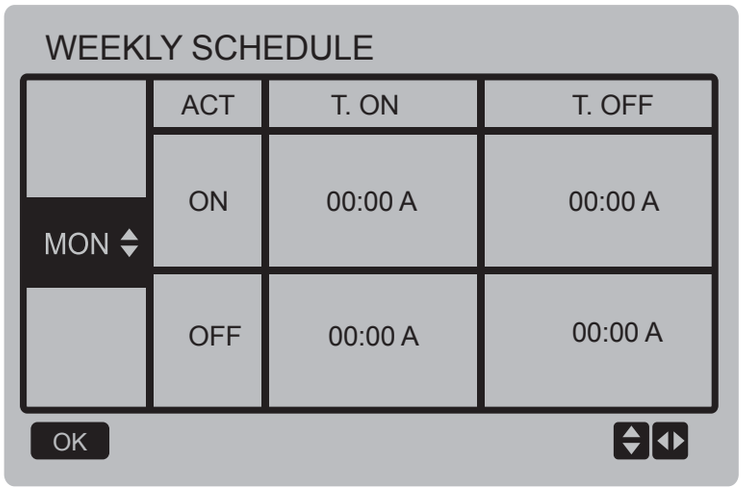


When the cursor stays at "ACT", press the "▲" and "▼" buttons to select the parameter value "OFF" (default value, indicating that the timer of this segment is invalid) corresponding to Time1 or Time2, and press the "▲" and "▼" buttons to adjust the parameter value to "ON" (indicating that the timer of this segment is valid); press the "◄" and "►" buttons to select the start time, end time, mode and temperature to be set, and then use the "▲" and "▼" buttons to adjust the time, mode, and temperature value. After setting, press "OK" to confirm saving, or press "BACK" to cancel setting and return to the upper layer page. If Time1 ON is set the same as Time1 OFF, the setting is invalid, the ACT option for the timer of this segment jumps to "OFF", the setting of Timer2 is the same as that of Timer1, and the timing interval of Time2 can cross with that of Time1.

For example, if Timer1 ON is set to 12:00 for Timer1 and Timer1 OFF is set to 15:00, then the values of Timer2 ON and Time2 OFF can be accessed in the range of 12:00-15:00. If timing intervals cross each other, the timed-on signal is sent in the case of Timer ON, and the timed-off signal is sent in the case of Timer OFF. After timer setting is completed, the corresponding prompt is displayed on the main interface.

◆ Setting the weekly schedule:

Select "WEEKLY SCHEDULE", and press the "OK" button to enter the interface. The interface display is as follows:



At most two timing segments can be set each day in the weekly schedule, and the ON and OFF time needs to be set for each timing segment (the set internal is 10 minutes).

Operation instructions:

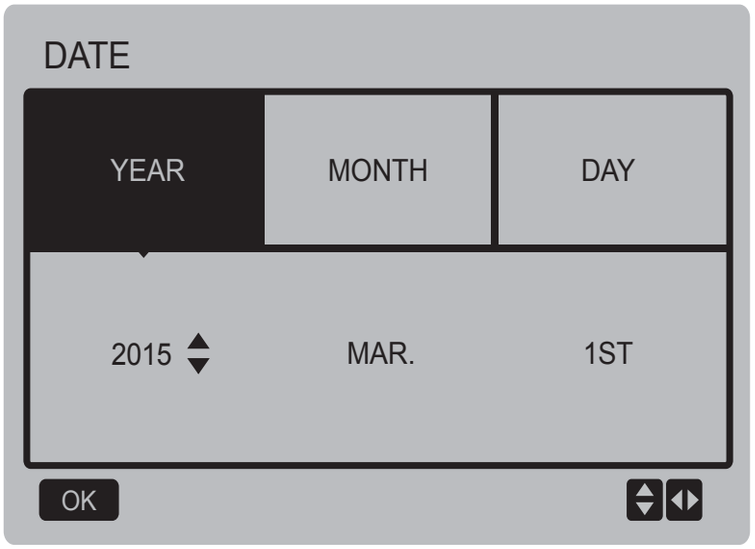
Press the "▲" and "▼" buttons to select the day to be set; when the cursor stays at "ACT", press the "▲" and "▼" buttons to select the Timer1 or Timer2 parameter value "OFF" (default value, indicating that the timer of this segment is invalid), and use the "▲" and "▼" buttons to adjust the parameter value to "ON" (indicating that the timer of this segment is valid).

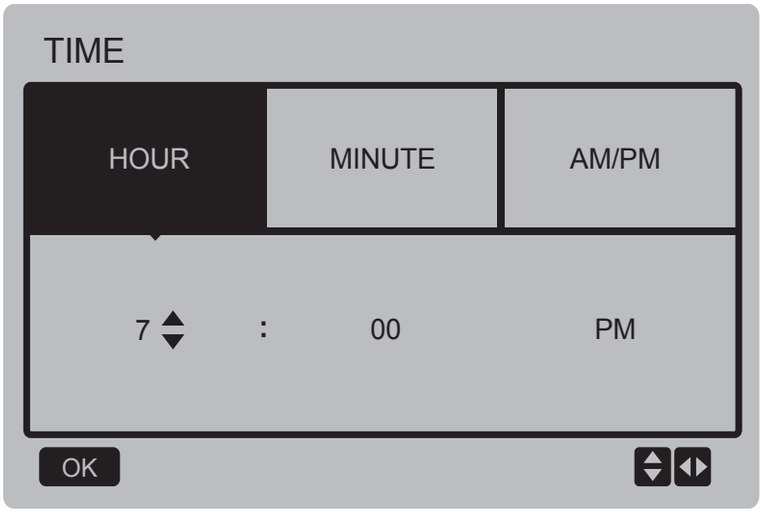
Press the "◄" and "►" buttons to select the start time and end time to be set; press the "▲" and "▼" buttons to select Time1 or Time2, press the "OK" button, and use the "▲" and "▼" buttons to adjust the time. After setting, press "OK" to confirm saving, or press "BACK" to cancel setting and return to the upper layer page. If Time1 ON is set the same as Time1 OFF, the setting is invalid. After the ACT option for timing of this segment jumps to "OFF" and setting is completed, press "OK" to confirm saving, or press "BACK" to cancel setting and return to the upper layer page.

Note: Some days or all the 7 days can be set for the weekly schedule; after the weekly schedule is set, the corresponding prompt is displayed on the main interface.

◆ Setting date/time:
Select "DATE AND TIME", and press the "OK" button to enter the interface. The interface display is as follows:

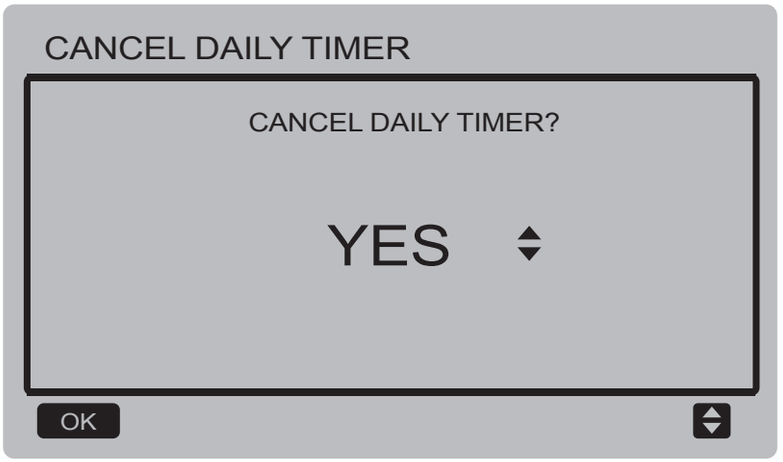
Press the "▲" and "▼" buttons to select the date, time and time format to be set, and press the "OK" button to access the lower-layer submenu:





Operation instructions:
Press the "◄" and "►" buttons to select year, month and date, press the "▲" and "▼" buttons to adjust the parameter value, and press the "OK" button to save the setting.
Time setting operation instructions:
Press the "◄" and "►" buttons to select hour and minute, press the "▲" and "▼" buttons to adjust the parameter value, and press the "OK" button to save the setting.

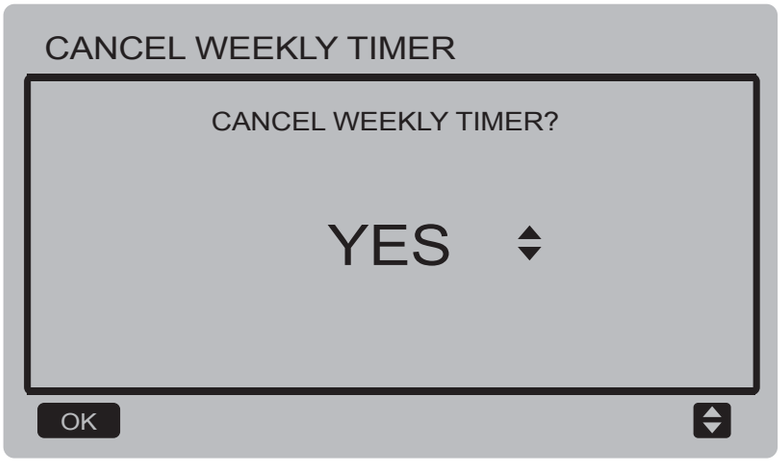
◆ Cancelling dailay time:
Select "CANCEL DAILY TIME", and press the "OK" button to enter the interface. The interface display is as follows:



Press the "▲" and "▼" buttons to adjust the parameter, and press the "OK" button to save the setting and return to the previous interface,press the "BACK" button to cancel the setting and return to the previous interface.

◆ Cancelling weekly timer:

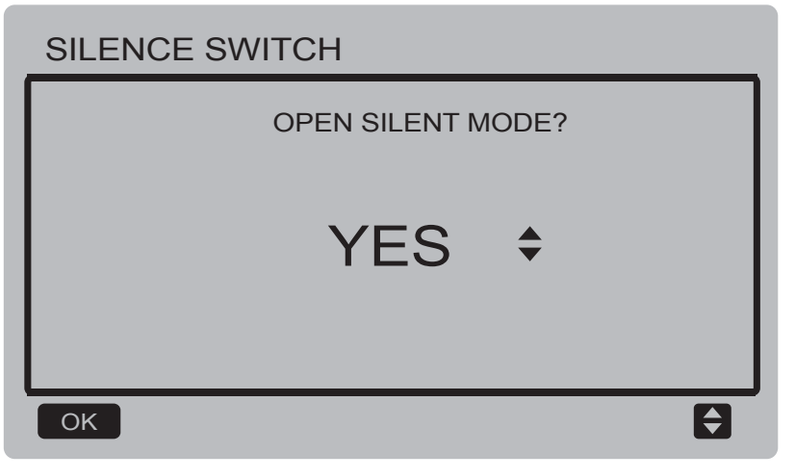
Select "CANCEL WEEKLY TIMER", and press the "OK" button to enter the interface. The interface display is as follows:



Press the "▲" and "▼" buttons to adjust the parameter, and press the "OK" button to save the setting and return to the previous interface,press the "BACK" button to cancel the setting and return to the previous interface.

◆ Silent mode switch:

Select "SILENCE SWITCH", and press the "OK" button to enter the interface. The interface display is as follows:

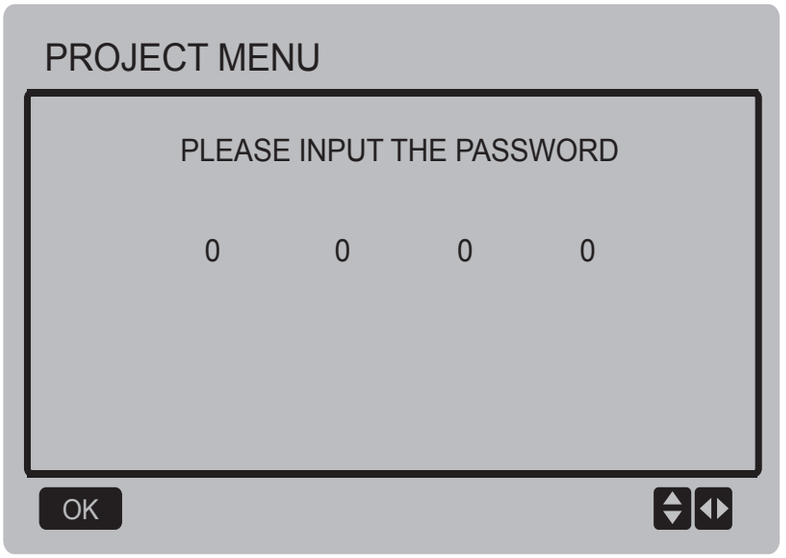


Press the "▲" and "▼" buttons to adjust the parameter, and press the "OK" button to save the setting and return to the previous interface,press the "BACK" button to cancel the setting and return to the previous interface.

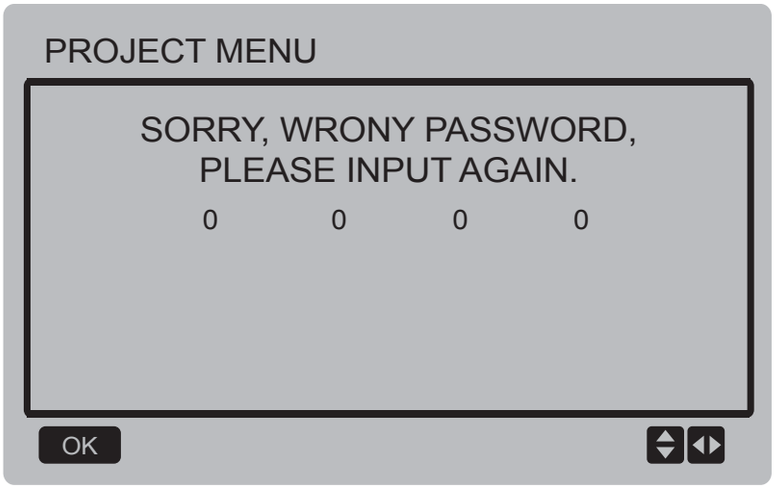
After the silent mode is selected and opened, " " on the main interface is on.

3.5 Setting PROJECT MENU

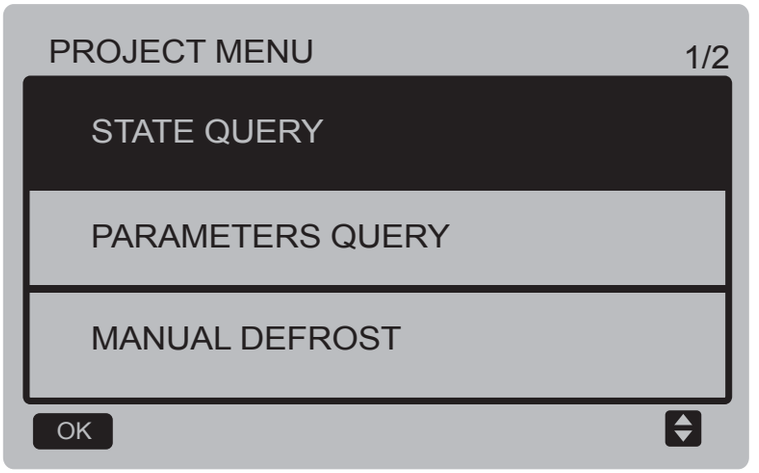
◆ Entering the password:
Select "PROJECT MENU", and press the "OK" button to enter the menu. The screen prompts the user to enter the password, as shown below:

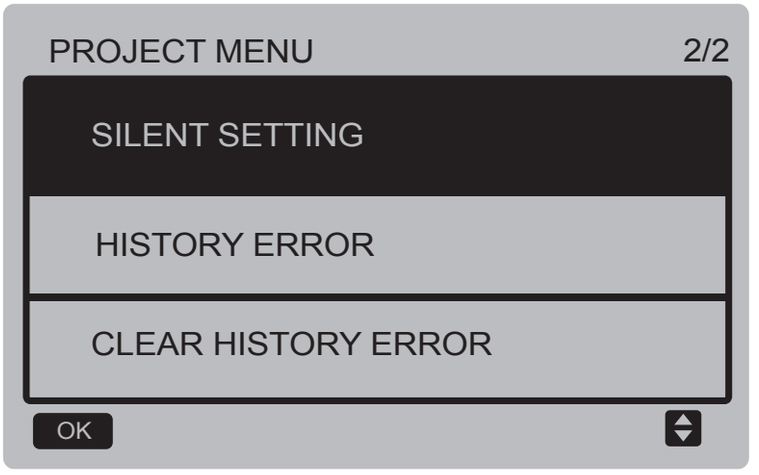


The initial password is 6666 and cannot be changed. Press the "▲" and "▼" buttons to change the number to enter, and press the "◄" and "►" buttons to change the bit code to enter. After the number is entered, the display is not changed. After entering the password, press the "OK" button to enter the interface; press the "BACK" button to go back to the previous interface; the display is as follows if the input is incorrect:



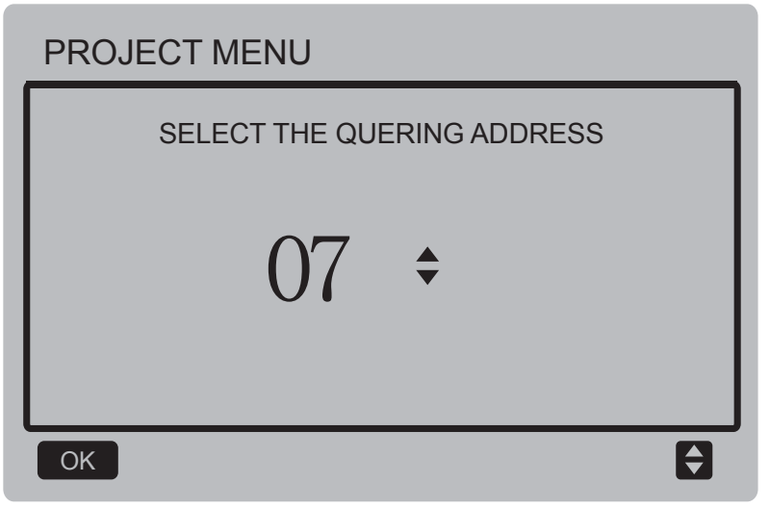
The query interface as follows is displayed if the input is correct:



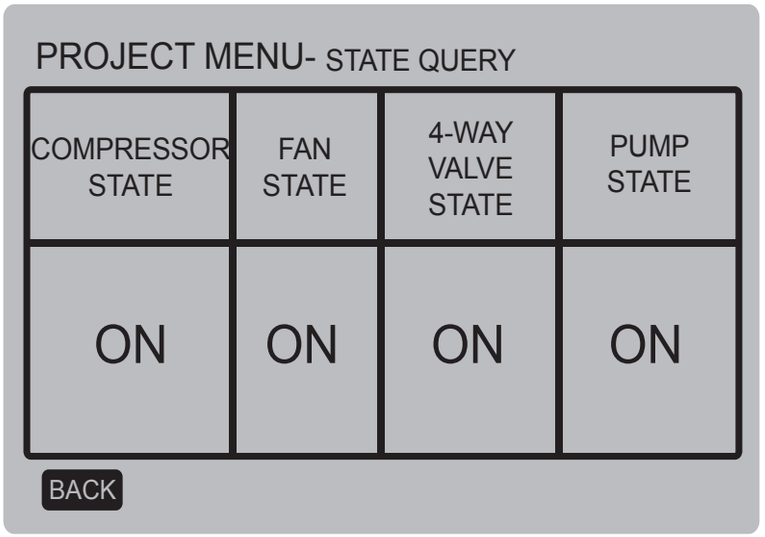


◆ State query:

Select "STATE QUERY", and press the "OK" button to enter the interface. The screen prompts the user to select the address for query, as shown below:

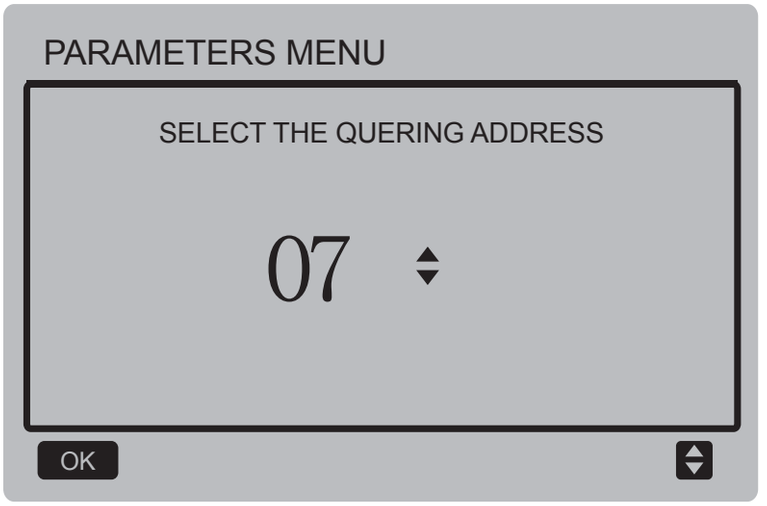


Press the "▼" and "▲" buttons to select the module address to view (the offline address is skipped automatically), and press the "OK" button to enter the interface. The screen display is as follows:

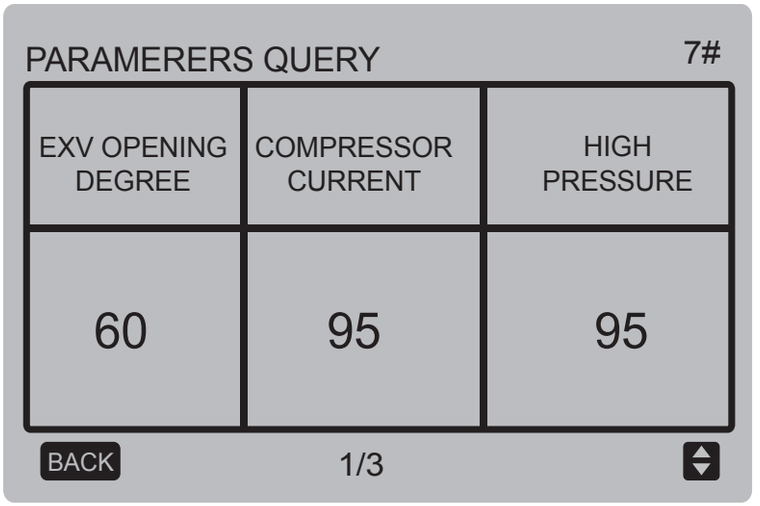


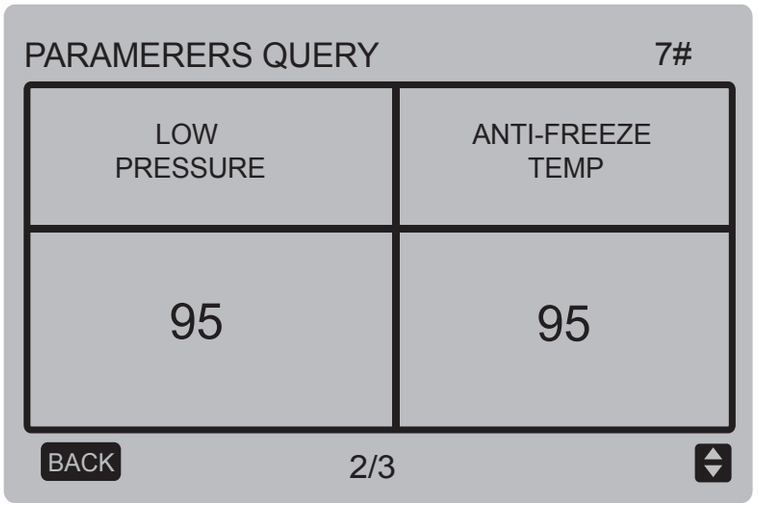
◆ Parameters query:

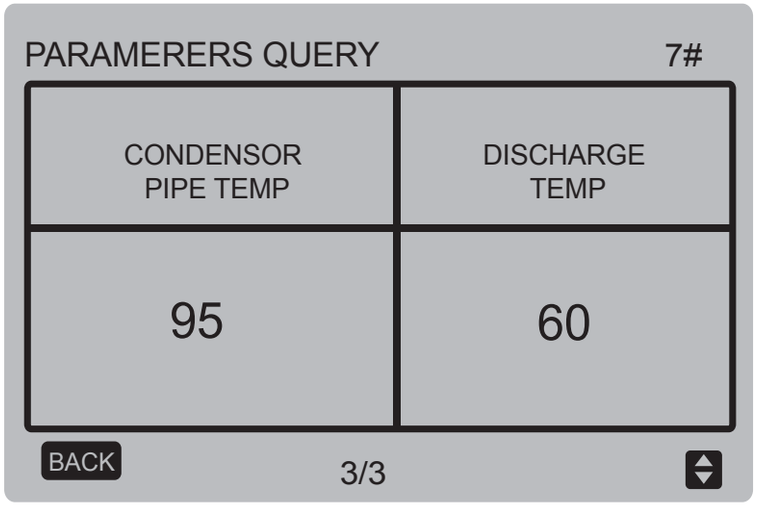
Select "PARAMETERS QUERY", and press the "OK" button to enter the interface. The screen prompts the user to select the address for query, as shown below:



Press the "▼" and "▲" buttons to select the module address to view (the offline address is skipped automatically), and press the "OK" button to enter the interface. The screen display is as follows:



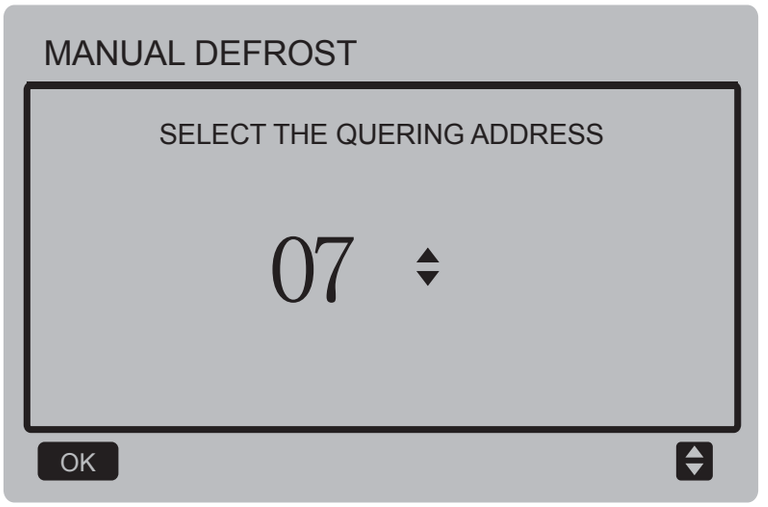




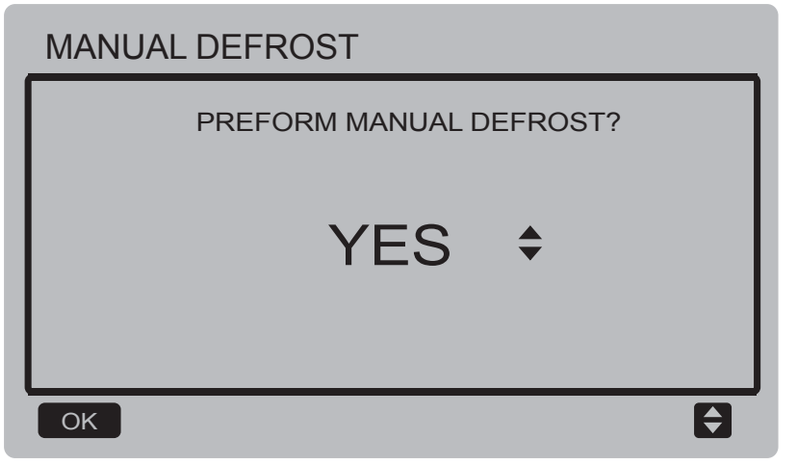
Press the "BACK" button to go back to the previous interface; the system returns to the main page if there is no operation in 60s.

◆ Manual defrost:

Select "MANUAL DEFROST", and press the "OK" button to enter the interface. The screen prompts the user to select the address for query, as shown below:



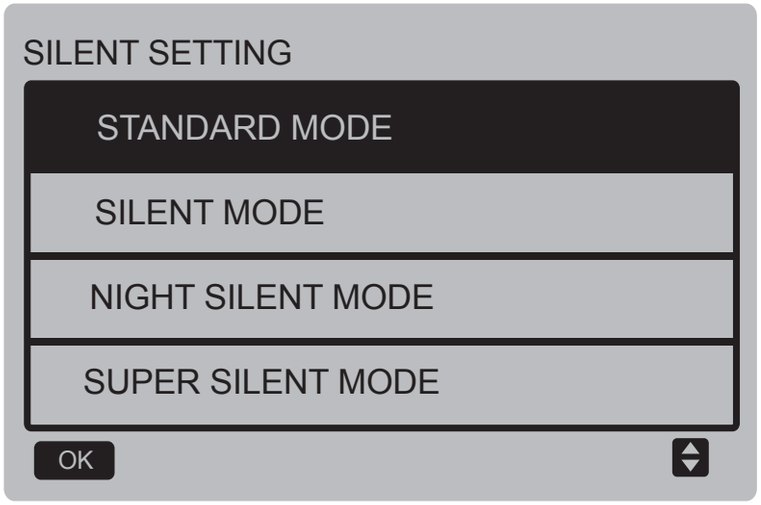
Press the "▼" and "▲" buttons to select the module address to view (the offline address is skipped automatically), and press the "OK" button to enter the interface. The screen display is as follows:



Press the "BACK" button to cancel the setting and return to the previous interface. After the manual defrost is selected and opened, "❄" on the main interface is on.

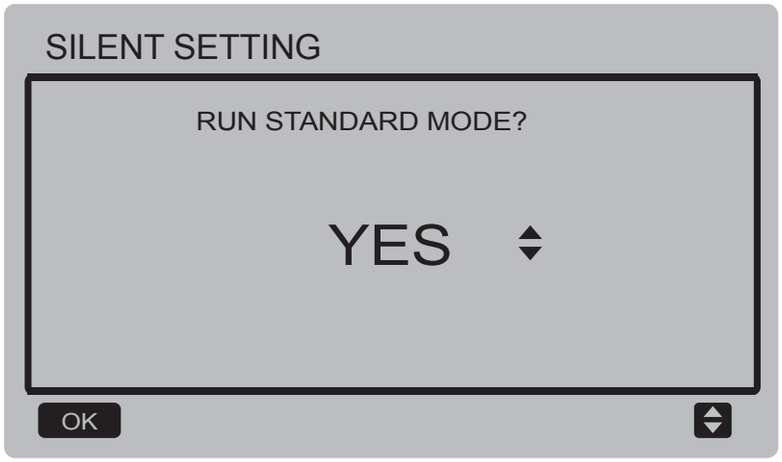
◆ Silent setting:

Select "SILENT SETTING", and press the "OK" button to enter the interface. The interface display is as follows:



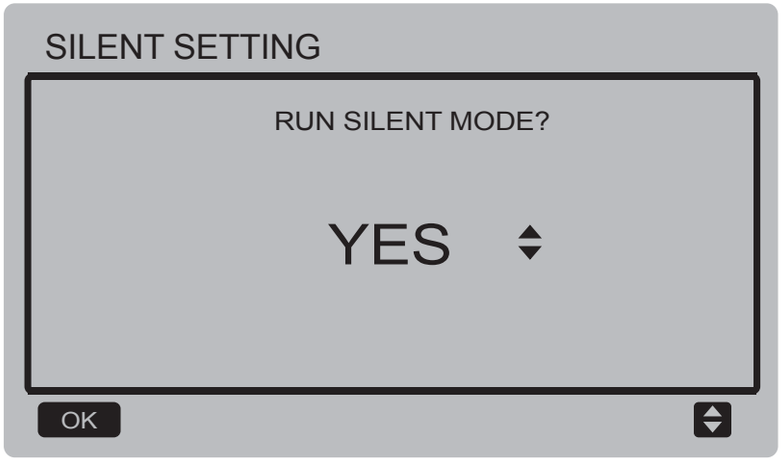
Press the "▼" and "▲" buttons to select the option to enter, and press the "OK" button to enter the interface; or press the "BACK" button to go back to the previous menu.

a. Setting the standard mode:
Select "STANDARD MENU", and press the "OK" button to enter the interface. The interface display is as follows:



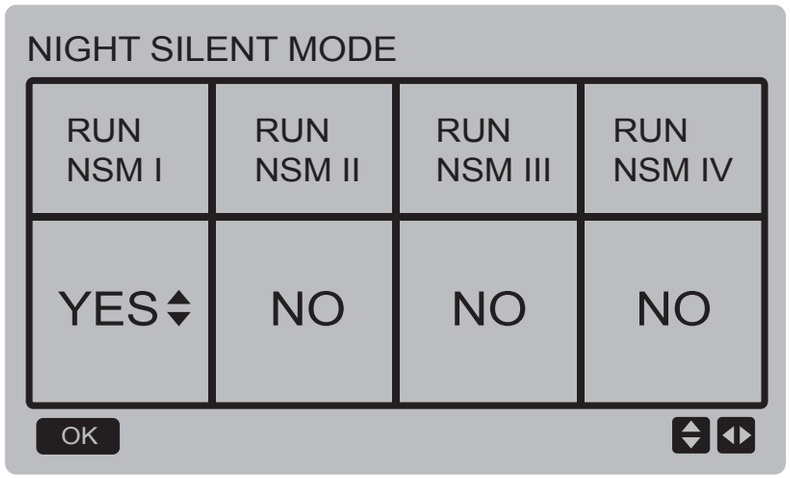
Press the "▼" and "▲" buttons to select the desired option, and press the "OK" button to save the setting and go back to the previous interface.Press the "BACK" button to cancel the setting and return to the previous interface.

b. Setting the silent mode:
Select "SILENT MENU", and press the "OK" button to enter the interface. The interface display is as follows:



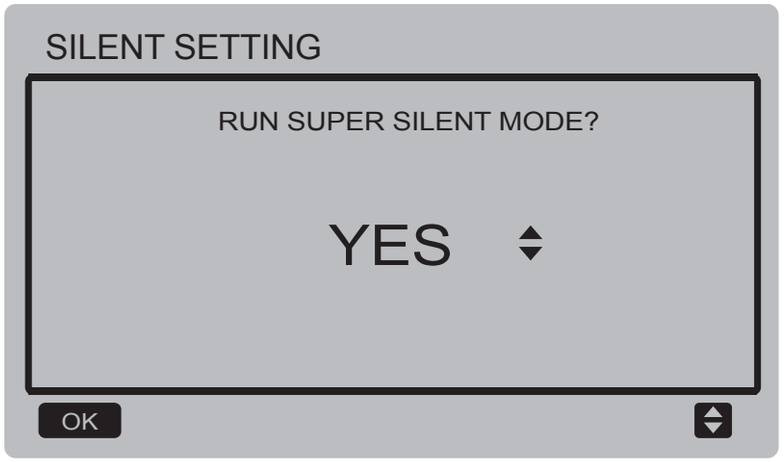
Press the "▼" and "▲" buttons to select the desired option, and press the "OK" button to save the setting and go back to the previous interface.Press the "BACK" button to cancel the setting and return to the previous interface.

c. Setting the night silent mode (factory default setting):
Select "NIGHT SILENT MENU", and press the "OK" button to enter the interface. The interface display is as follows:



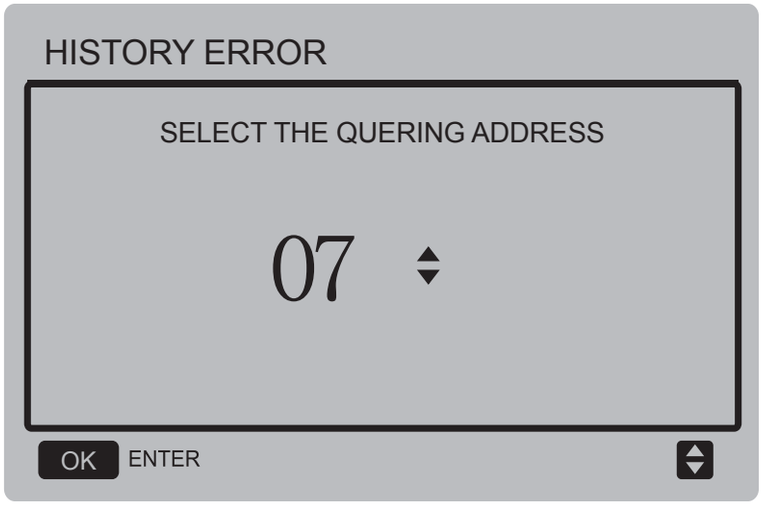
Press the "◄" and "►" buttons to select the night silent mode I/II/III/IV, press the "▼" and "▲" buttons to change the set status, and press the "OK" button to save the setting and go back to the previous interface; or press the "BACK" button to go back to the previous menu.

d. Setting the super silent mode:
Select "SUPER SILENT MENU", and press the "OK" button to enter the interface. The interface display is as follows:

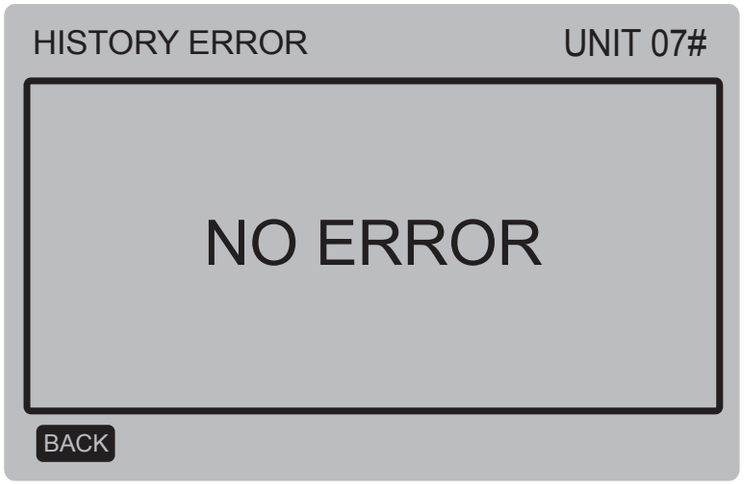


Press the "▼" and "▲" buttons to select the desired option, and press the "OK" button to save the setting and go back to the previous interface.Press the "BACK" button to cancel the setting and return to the previous interface.

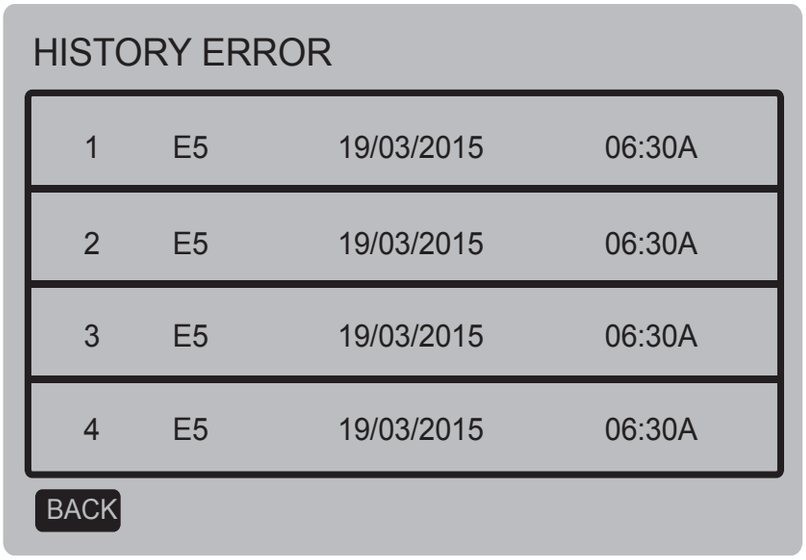
◆ Querying history error:
Select "HISTORY ERROR", and press the "OK" button to enter the interface. The screen prompts the user to select the address for query, as shown below:



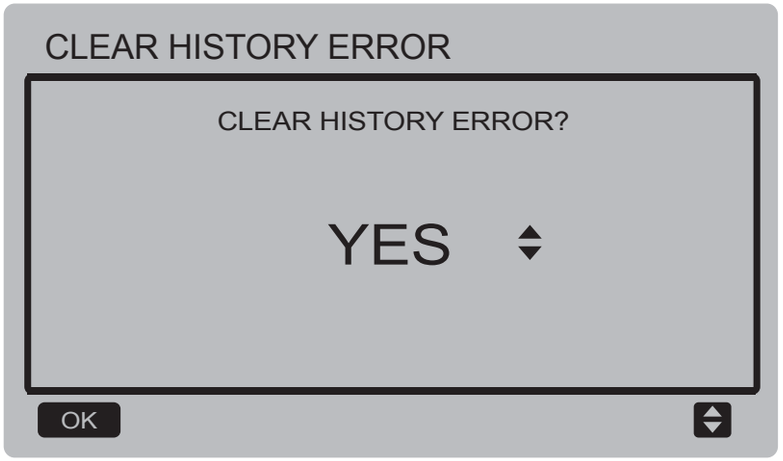
Press the "▼" and "▲" buttons to select the module address to view (the offline address is skipped automatically), and press the "OK" button to enter the interface. If there is no history error, the screen display is as follows:



If there is an error, the screen display is as follows. A maximum of 4 history errors can be displayed.



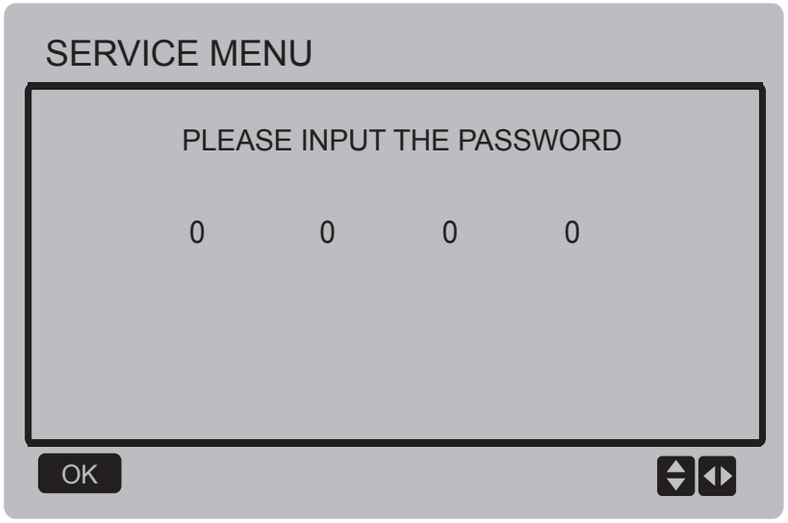
◆ Clearing history error:
Select "CLEAR HISTORY ERROR", and press the "OK" button to enter the interface. The interface display is as follows:



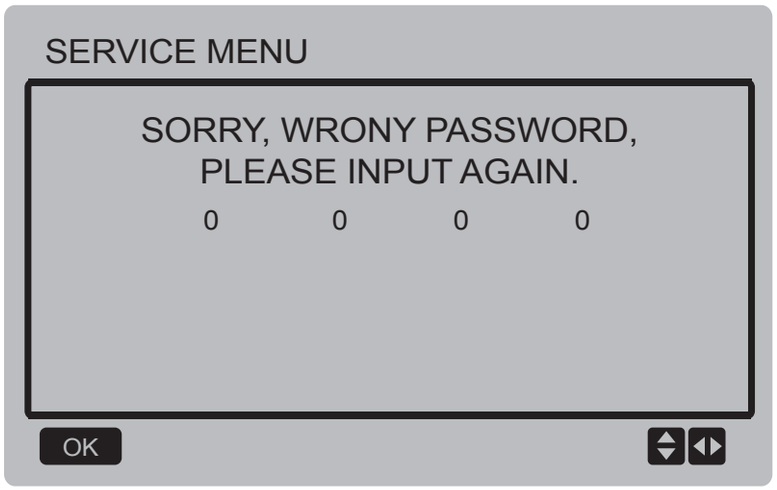
Press the "▼" and "▲" buttons to select the desired option, and press the "OK" button to save the setting and go back to the previous interface.Press the "BACK" button to cancel the setting and return to the previous interface.

3.6 Setting SERVICE MENU

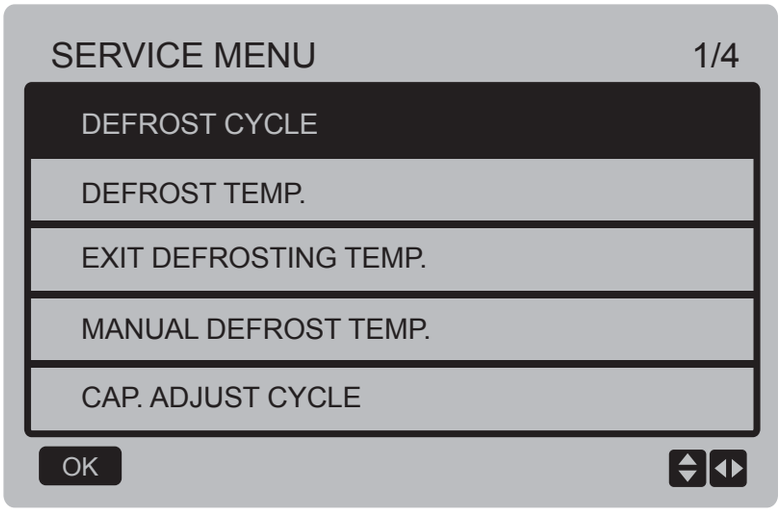
◆ Entering the password:
Select "SERVICE MENU", and press the "OK" button to enter the interface. The screen prompts the user to enter the password, as shown below:

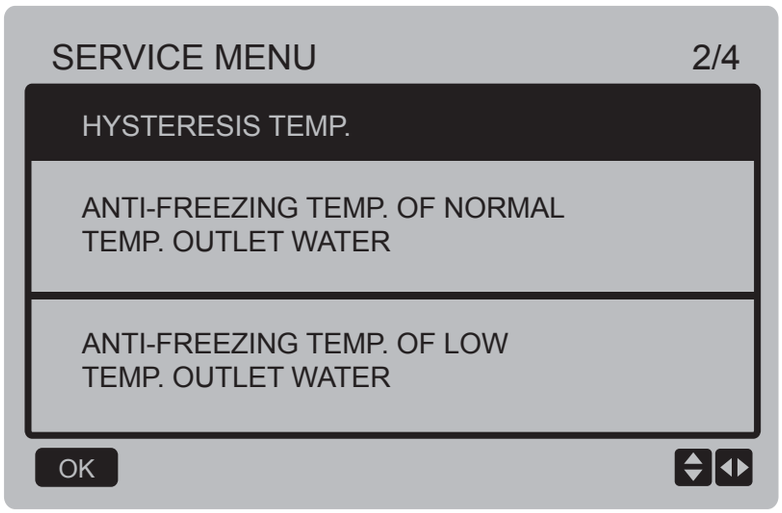


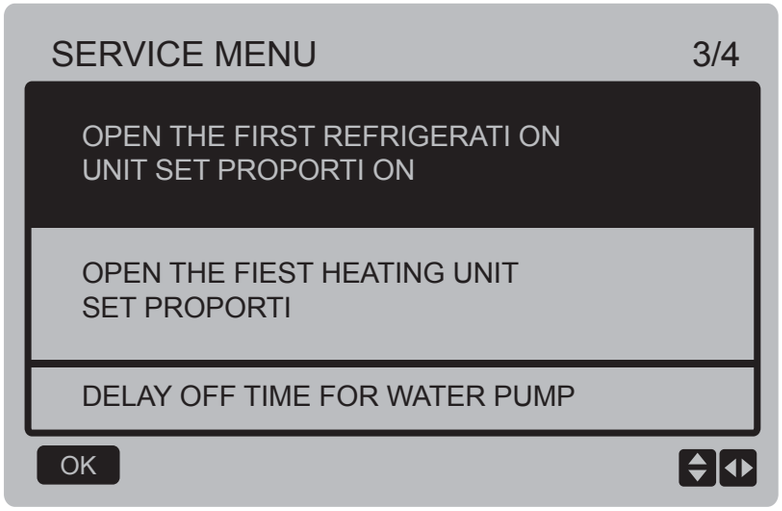
The initial password is 9999 and cannot be changed. Press the "▲" and "▼" buttons to change the number to enter, and press the "◄" and "►" buttons to change the bit code to enter. After the number is entered, the display is not changed. After entering the password, press the "OK" button to enter the interface; press the "BACK" button to go back to the previous interface; the display is as follows if the input is incorrect:

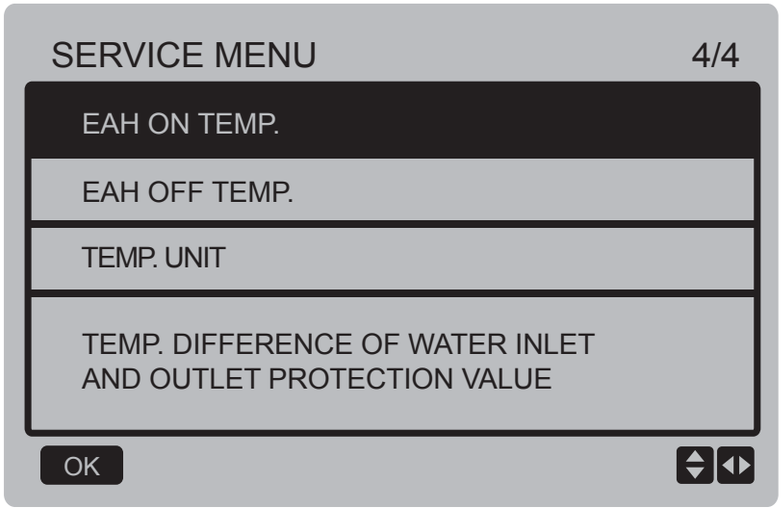


The query interface as follows is displayed if the input is correct:



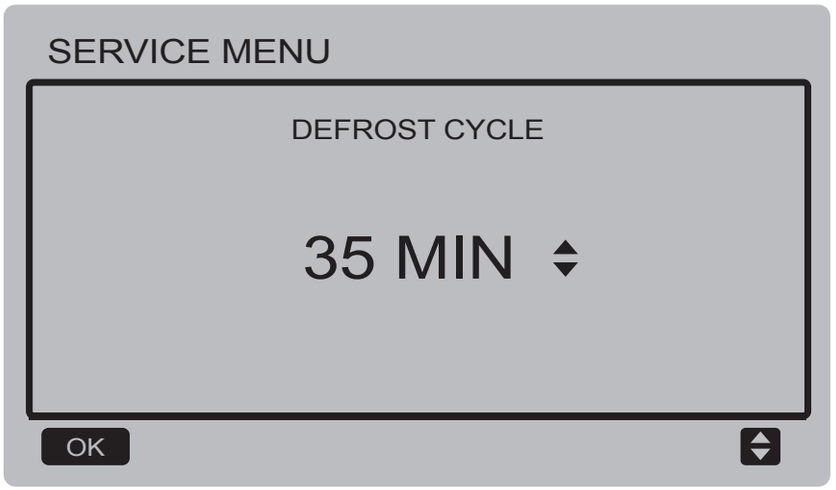






Press the "▼" and "▲" buttons to select the desired option, and press the "OK" button to access the interface.Press the "BACK" button to cancel the setting and return to the previous interface.

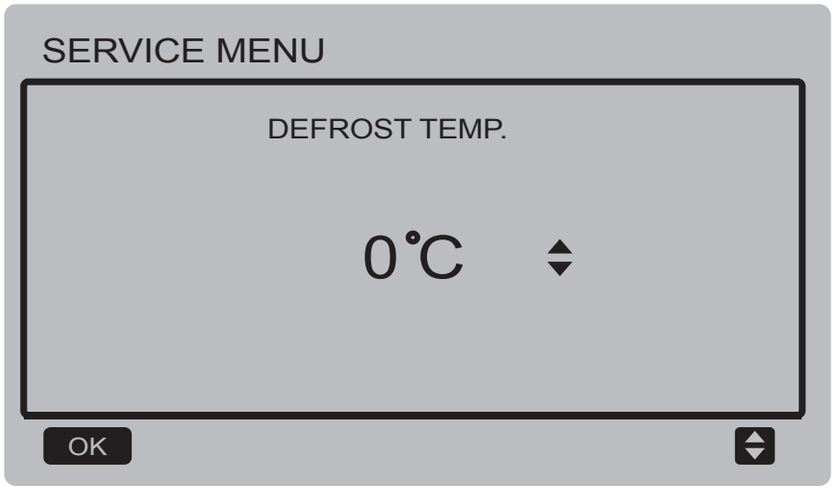
a. Defrost cycle:
Select "DEFROST CYCLE", and press the "OK" button to enter the interface. The interface display is as follows:



Press the "▼" and "▲" buttons to adjust the parameter, and press the "OK" button to save the setting and return to the previous interface. Press the "BACK" button to cancel the setting and return to the previous interface.

b. Defrost temperature:

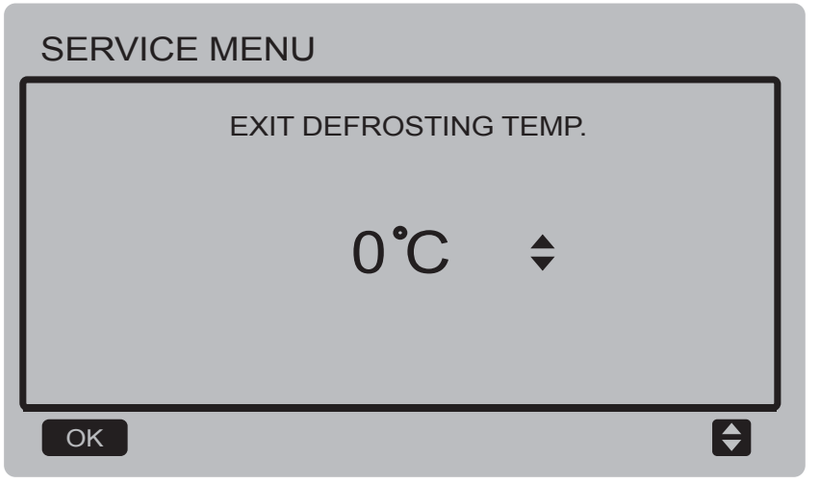
Select "DEFROST TEMP", and press the "OK" button to enter the interface. The interface display is as follows:



Press the "▼" and "▲" buttons to adjust the parameter, and press the "OK" button to save the setting and return to the previous interface. Press the "BACK" button to cancel the setting and return to the previous interface.

c. Exit defrost temperature:

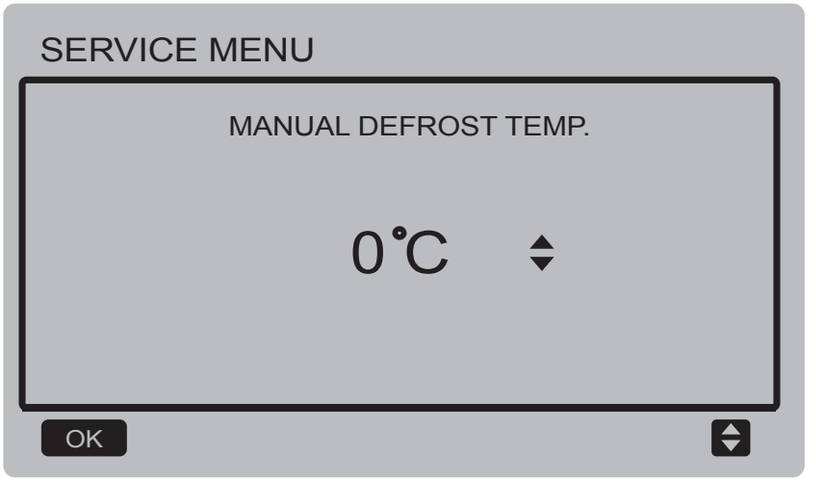
Select "EXIT DEFROST TEMP", and press the "OK" button to enter the interface. The interface display is as follows:



Press the "▼" and "▲" buttons to adjust the parameter, and press the "OK" button to save the setting and return to the previous interface. Press the "BACK" button to cancel the setting and return to the previous interface.

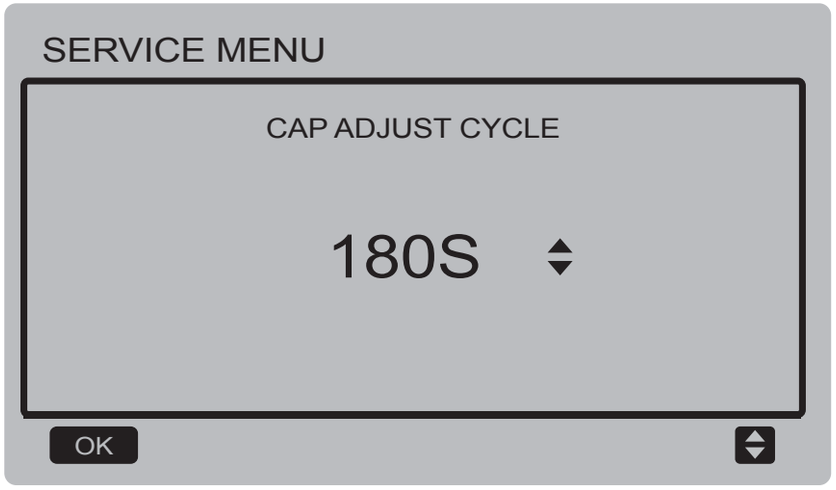
d. Manual defrost temperature:

Select "MANUAL DEFROST TEMP", and press the "OK" button to enter the interface. The interface display is as follows:



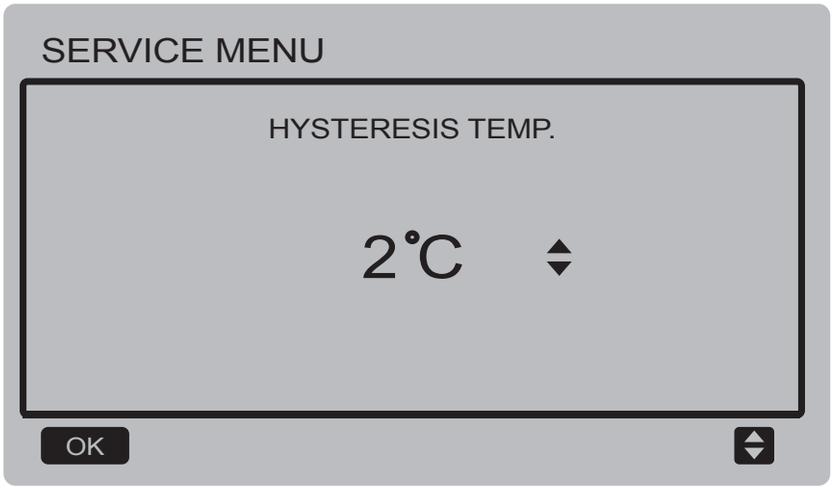
Press the "▼" and "▲" buttons to adjust the parameter, and press the "OK" button to save the setting and return to the previous interface. Press the "BACK" button to cancel the setting and return to the previous interface.

e. Capacity adjust cycle:
Select "CAP ADJUST CYCLE", and press the "OK" button to enter the interface. The interface display is as follows:



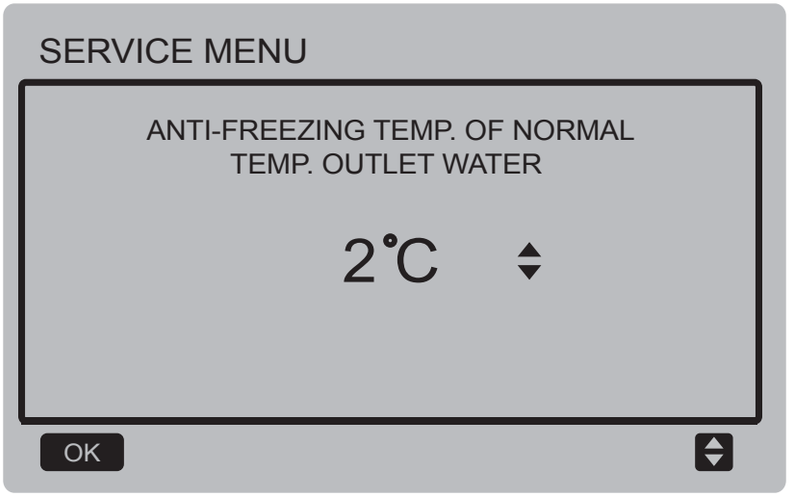
Press the "▼" and "▲" buttons to adjust the parameter, and press the "OK" button to save the setting and return to the previous interface. Press the "BACK" button to cancel the setting and return to the previous interface.

f. Hysteresis temperature:
Select "HYSTERESIS TEMP", and press the "OK" button to enter the interface. The interface display is as follows:



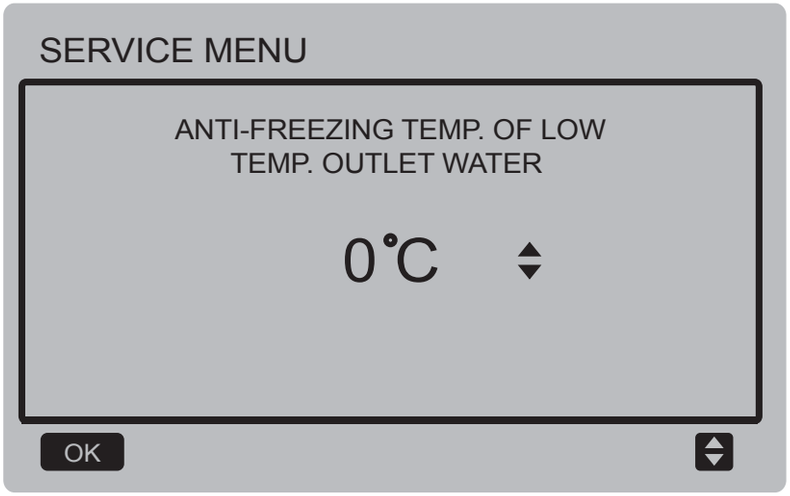
Press the "▼" and "▲" buttons to adjust the parameter, and press the "OK" button to save the setting and return to the previous interface. Press the "BACK" button to cancel the setting and return to the previous interface.

g. Anti-freezing temperature of normal temperature outlet water:
Select "ANTI-FREEZING TEMP OF NORMAL TEMP OUTLET WATER", and press the "OK" button to enter the interface. The interface display is as follows:



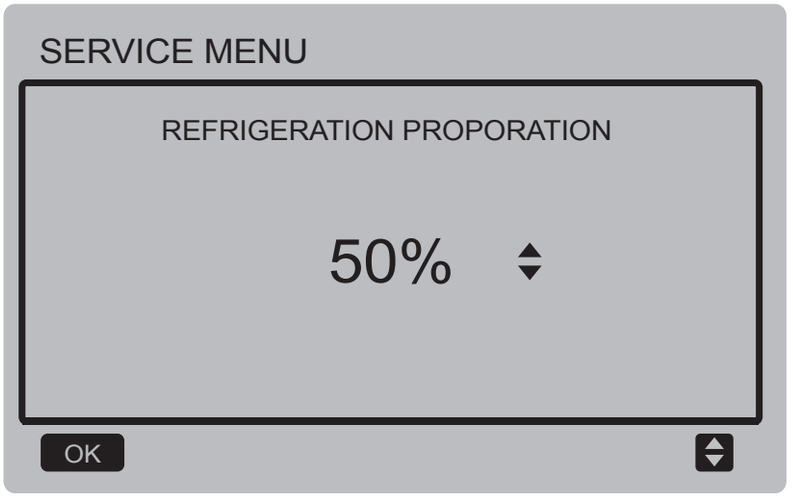
Press the "▼" and "▲" buttons to adjust the parameter, and press the "OK" button to save the setting and return to the previous interface.
Press the "BACK" button to cancel the setting and return to the previous interface.

h. Anti-freezing temperature of low temperature outlet water:
Select "ANTI-FREEZING TEMP OF LOW TEMP OUTLET WATER", and press the "OK" button to enter the interface. The interface display is as follows:

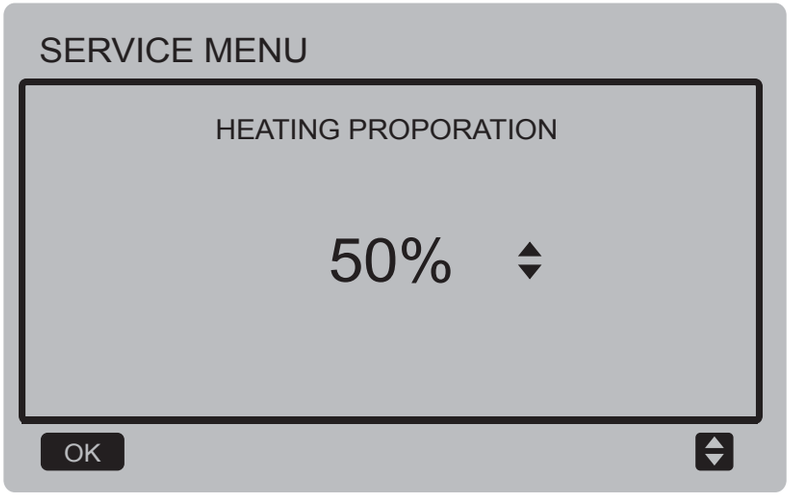


Press the "▼" and "▲" buttons to adjust the parameter, and press the "OK" button to save the setting and return to the previous interface.Press the "BACK" button to cancel the setting and return to the previous interface.

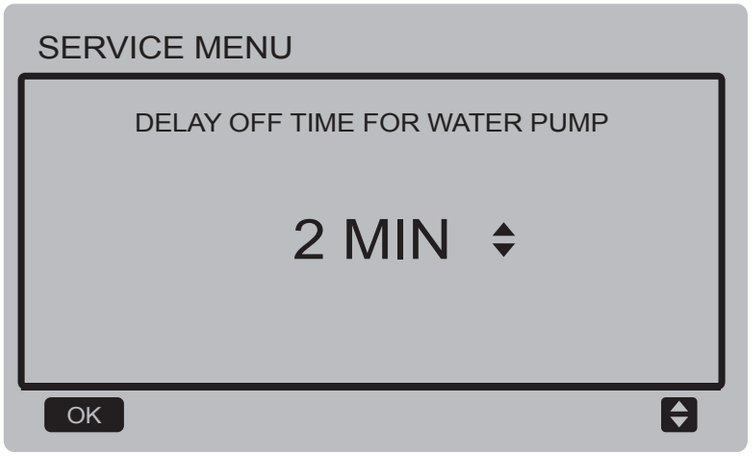
i. Setting the proportion for starting the unit for the first time for cooling:
Select
"OPEN THE FRIST REFRINGERATION UNIT SET PROPORTION", and press the "OK" button to enter the interface. The interface display is as follows:



j. Setting the proportion for starting the unit for the first time for heating:
Select
"OPEN THE FRIST HEATING UNIT SET PROPORTION", and press the "OK" button to enter the interface. The interface display is as follows:

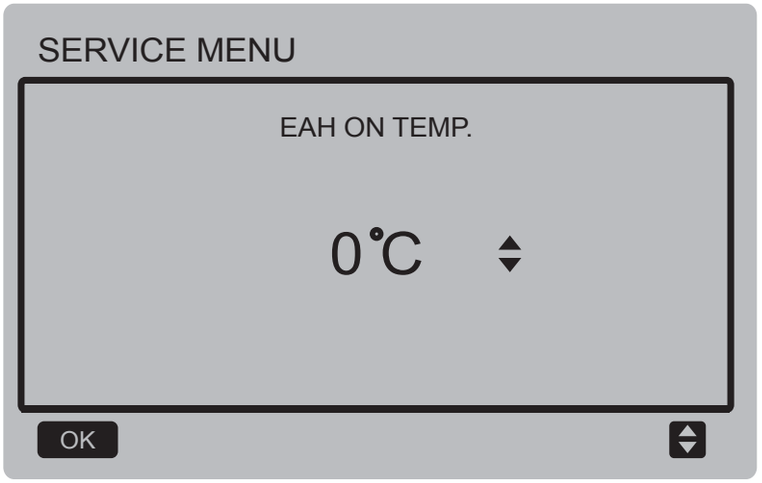


k. Delay off time for water pump:
Select "DELAY OFF TIME FOR WATER PUMP", and press the "OK" button to enter the interface. The interface display is as follows:



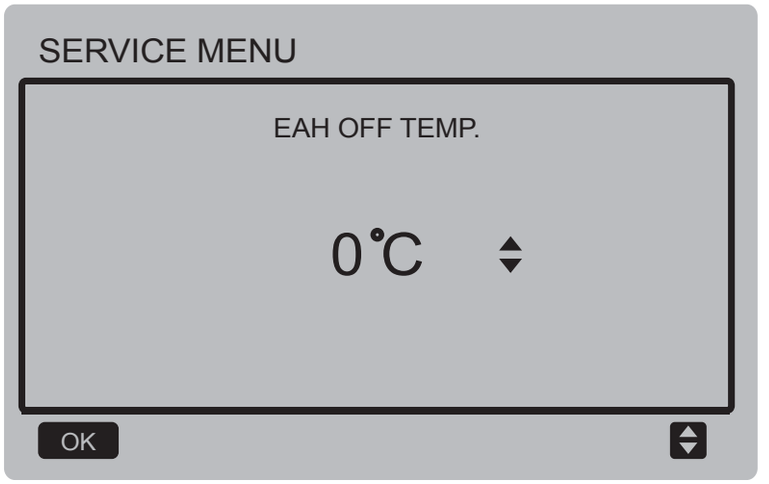
Press the "▼" and "▲" buttons to adjust the parameter, and press the "OK" button to save the setting and return to the previous interface.Press the "BACK" button to cancel the setting and return to the previous interface.

l. Temperature of starting electric auxiliary heating:
Select "EAH ON TEMP", and press the "OK" button to enter the interface. The interface display is as follows:



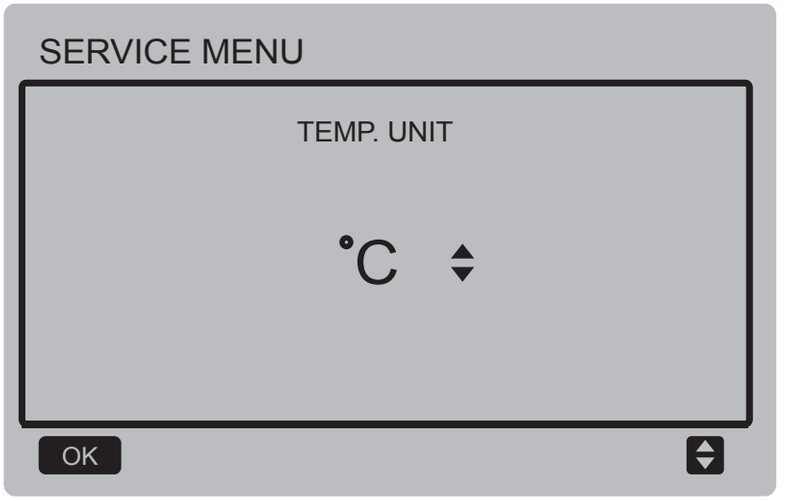
Press the "▼" and "▲" buttons to adjust the parameter, and press the "OK" button to save the setting and return to the previous interface.

m. Temperature of stopping electric auxiliary heating:
Select "EAH OFF TEMP", and press the "OK" button to enter the interface. The interface display is as follows:



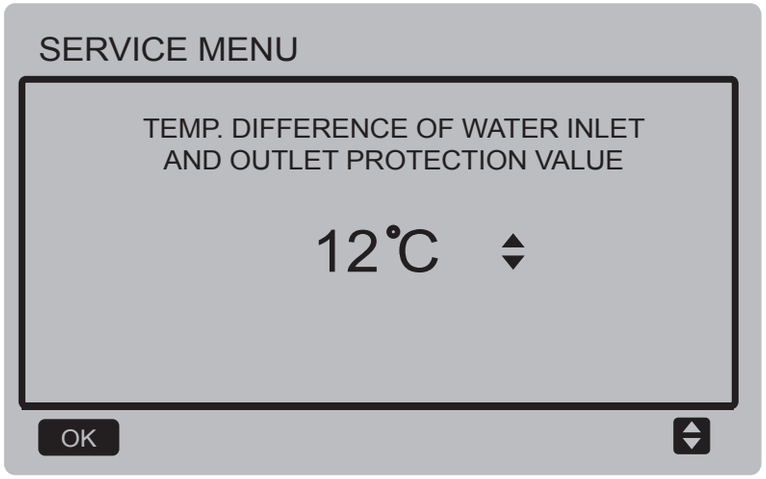
Press the "▼" and "▲" buttons to adjust the parameter, and press the "OK" button to save the setting and return to the previous interface.Press the "BACK" button to cancel the setting and return to the previous interface.

n. Selecting temperature unit (reserved):
Select "TEMP UNIT", and press the "OK" button to enter the interface. The interface display is as follows:



Press the "▼" and "▲" buttons to adjust the parameter, and press the "OK" button to save the setting and return to the previous interface.

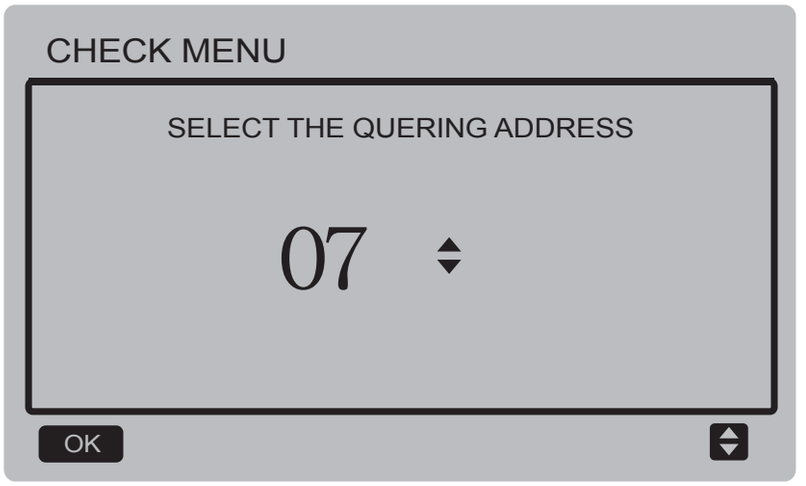
o. Setting temperature difference protection of inlet and outlet water:
Select "TEMP. DIFFERENCE OF WATER INLET AND OUTLET PROTECTION VALUE", and press the "OK" button to enter the interface. The interface display is as follows:



Press the "▼" and "▲" buttons to adjust the parameter, and press the "OK" button to save the setting and return to the previous interface.Press the "BACK" button to cancel the setting and return to the previous interface.

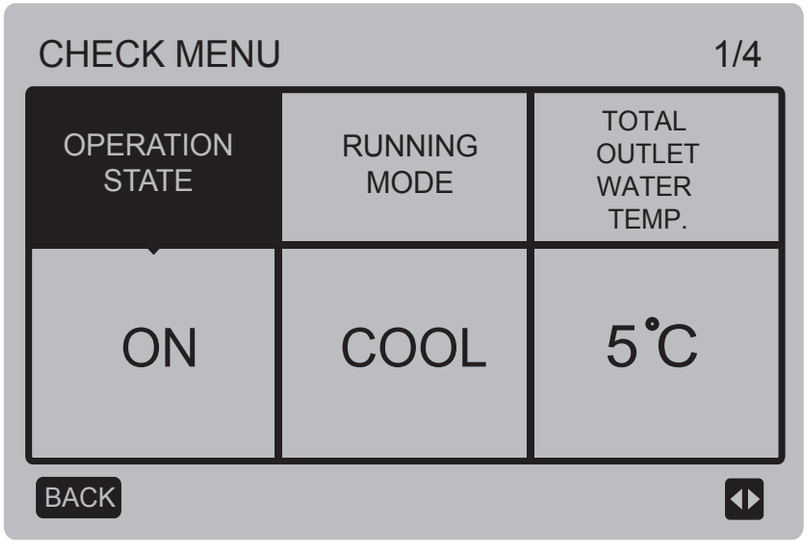
3.6 Setting MENU

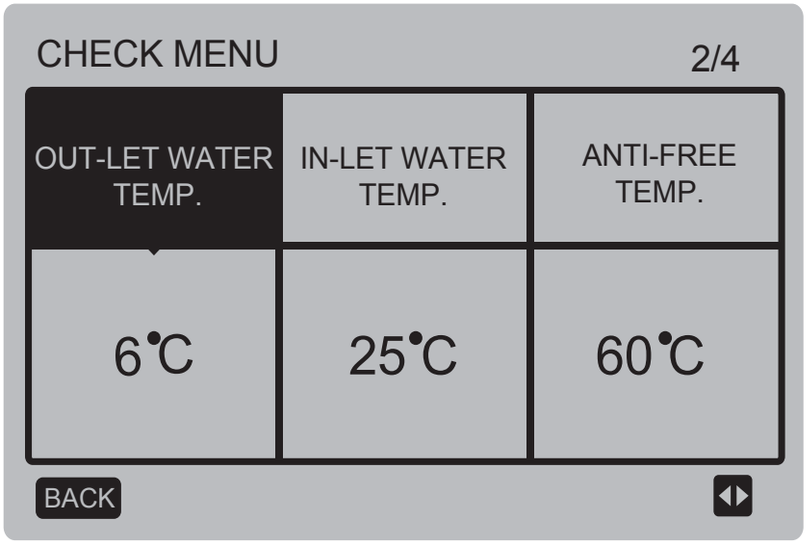
Press the "MENU" button to enter the query interface below:

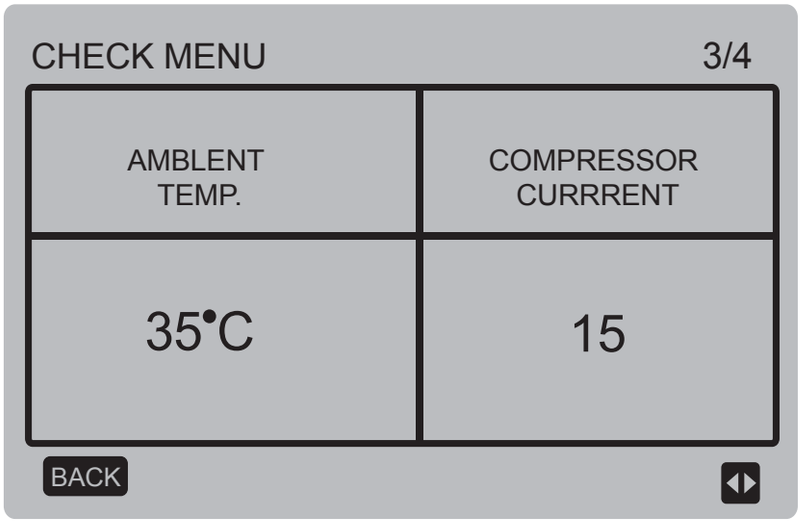


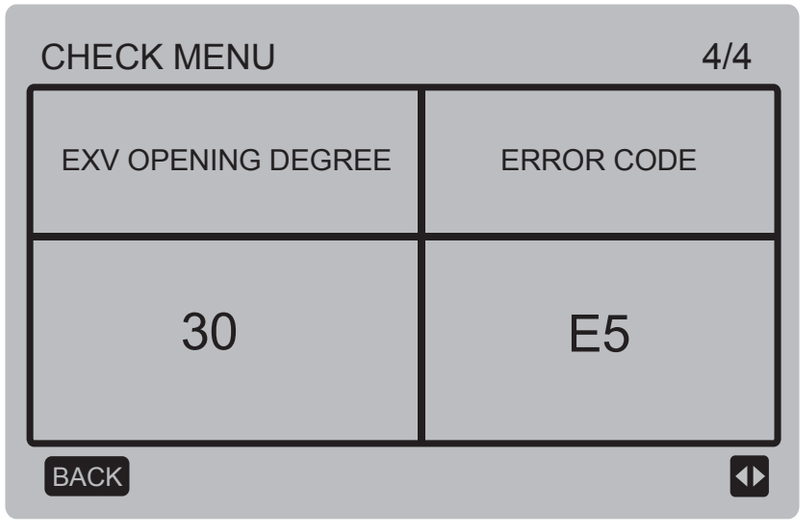
The user first uses the "▼" and "▲" buttons to select the address of module to view (the offline address is skipped automatically). Press the "OK" button to access the lower-layer submenu, or press "BACK" to go back to the previous interface. During operation on the menu page, press "BACK" to go back to the previous interface.

After 0# main unit is selected, the system enters the main unit operating status viewing interface:





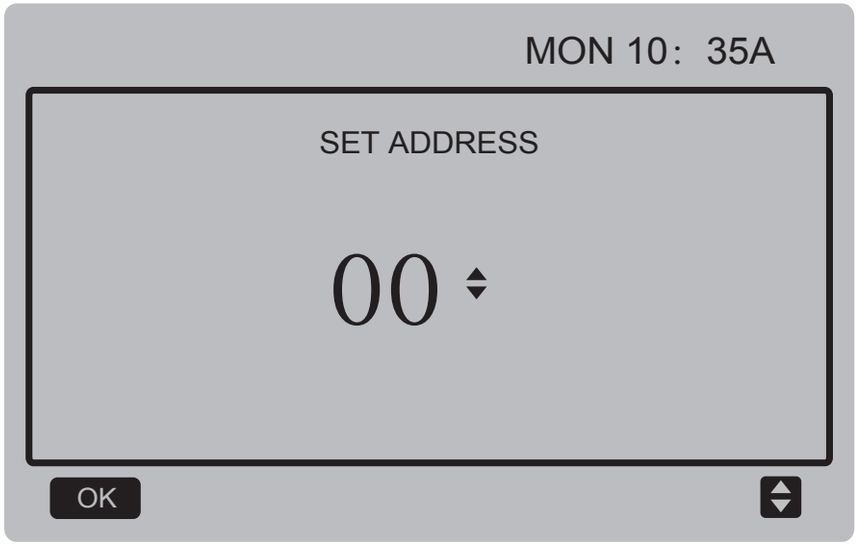




Press the "◄" and "►" buttons to switch the interface display.

3.7 Setting Wired Controller Address

Press the "MENU" and "►" buttons for 3s at the same time to access wired controller address selection, and press the "▲" and "▼" buttons to select the desired values.If there is no subsequent operation in 60s, the setting is saved automatically, and the system returns to the home page.Press the "BACK" button to cancel the setting and return to the previous interface.



The set address range is 0 to 15.

3.8 Power Failure Memory Function

The power supply to the system fails unexpectedly during operation. When the system is powered on again, the wired controller continues to operate according to the status before the last power failure, including the power-on/off status, mode, set temperature, failure, protection, wired controller address, timer, hysteresis, etc. However, the memorized content must be the content set at least 7s before the power failure.

3.9 Parallel Function of Wired Controller

1) A maximum of 16 wired controllers can be connected in parallel, and the address can be set in the range of 0 to 15.
2) After wired controllers are connected in parallel, wired controllers with the same address are not allowed on the bus; otherwise a communication failure will occur.
3) After multiple wired controllers are connected in parallel, data is shared among them, e.g., the power-on/off function, data settings (such as the water temperature and hysteresis) and other parameters will be kept consistent (note: The mode, temperature, and hysteresis settings can be shared only when the system is powered on).
4) Start point of data sharing: After the power-on/off button is pressed, data can be shared during parameter adjustment. The "OK" button must be pressed after parameters are adjusted, and the finally adjusted values will be shared.
5) Since the bus is processed in the polling mode, the data of the wired controller with the minimum number is valid if multiple wired controllers are operated at the same time in the same bus cycle (4s). Avoid the above situation during operation.
6) After any of parallel wired controllers has been reset, the address of this wired controller is 0 by default.

3.10 Upper Computer Communication Function (Reserved)

1) The home page displays the content below during communication with the upper computer: Communication between the wired controller and the upper computer.
2) If the outdoor main control board is in the remote ON/OFF control mode and the wired controller sends an alarm, the current alarm page displays: Remote ON/OFF Control Mode. In this case, the network control of upper computer is invalid, and the wired controller can query the system status only and cannot send out control information.

4 INSTALLATION MANUAL

4.1 Safety precaution

- Read the safety precautions carefully before installing the unit.
- Stated below are important safety issues that must be obeyed.
- Conform there is no abnormal phenomena during test operation after complete, then hand the manual to the user.
- Meaning of marks:

WARNING	Means improper handling may lead to personal death or severe injury.
CAUTION	Means improper handling may lead to personal injury or property loss.

WARNING

Please entrust the distributor or professionals to install the unit.
Installation by other persons may lead to imperfect installation, electric shock or fire.

Strictly follow this manual.
Imporper installation may lead to electric shock or fire.

Reinstallation must be performed by professionals.
improper installation may lead to electric shock or fire.

Do not disassemble your air conditioner at will.
A random disassembly may cause abnormal operation or heating, which may result in fire.

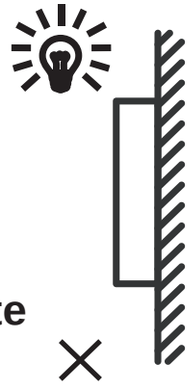
CAUTION

Do not install the unit in a place vulnerable to leakage of flammable gases.
Once flammable gases are leaked and left around the wire controller, fire may occure.

The wiring should adapt to the wire controller current.
Otherwise, electric leakage or heating may occur and result in fire.

The specified cables shall be applied in the wiring. No external force may be applied to the terminal.
Otherwise, wire cut and heating may occur and result in fire.

Do not place the wired remote controller near the lamps, to avoid the remote signal of the controller to be disturbed. (refer to the right figure)



4.2 Other Precautions

4.2.1. Installation location

Do not install the unit in a place with much oil, steam, sulfide gas. Otherwise, the product may deform and fail.

4.2.2 Preparation before installation

1) Check whether the following assemblies are complete.

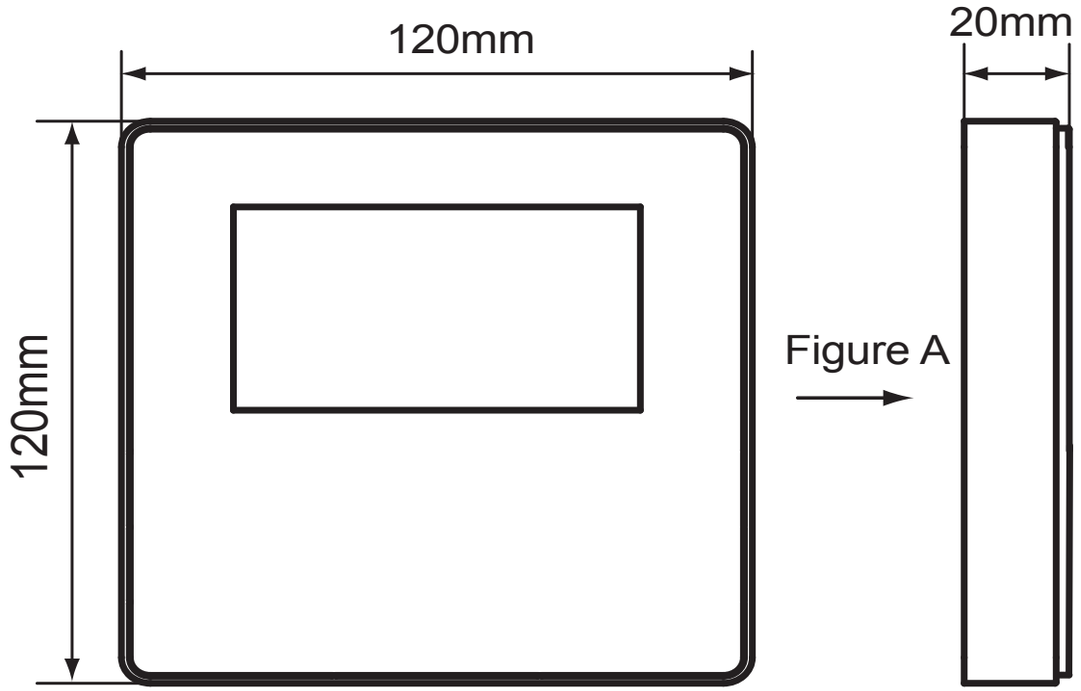
No.	Name	Qty.	Remarks
1	Wire controller	1	————————
2	Cross round head wood mounting screw	3	GB950-86 M4X20 (For Mounting on the Wall)
3	Cross round head mounting screw	2	M4X25 GB823-88 (For Mounting on the Electrical Switch Box)
4	Installation & Owner's Manual	1	————————
5	Plastic bolt	2	This accessory is used when install the centralized control inside the electric cabinet
6	Plastic expansion pipe	3	For Mounting on the Wall

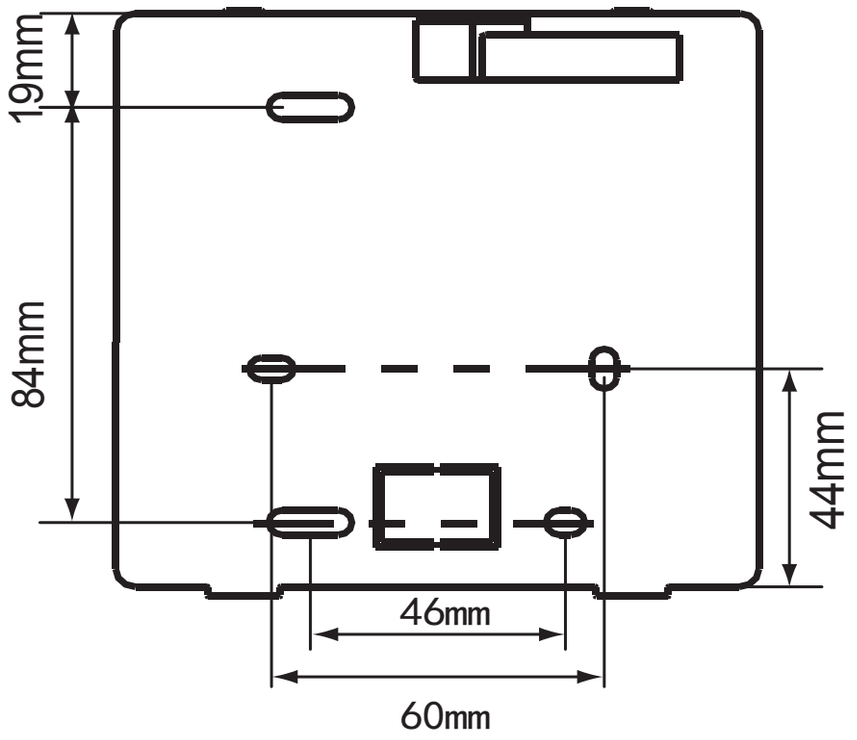
4.2.3 Note to installation of wire controller:

1) This installation manual contains information about the procedure of installing Wired Remote Controller. Please refer to Indoor Unit Installation Manual for connecting between Wired Remote Controller and Indoor Unit.
2) Circuit of Wired Remote Controller is low voltage circuit. Never connect it with a standard 220V/380V circuit or put it into a same Wiring Tube with the circuit.
3) The shield cable must be connected stable to the ground, or transmission may fail.
4) Do not attempt to extend the shield cable by cutting, if it is necessary, use Terminal Connection Block to connect.
5) After finishing connection, do not use Megger to have the insulation check to the signal wire.

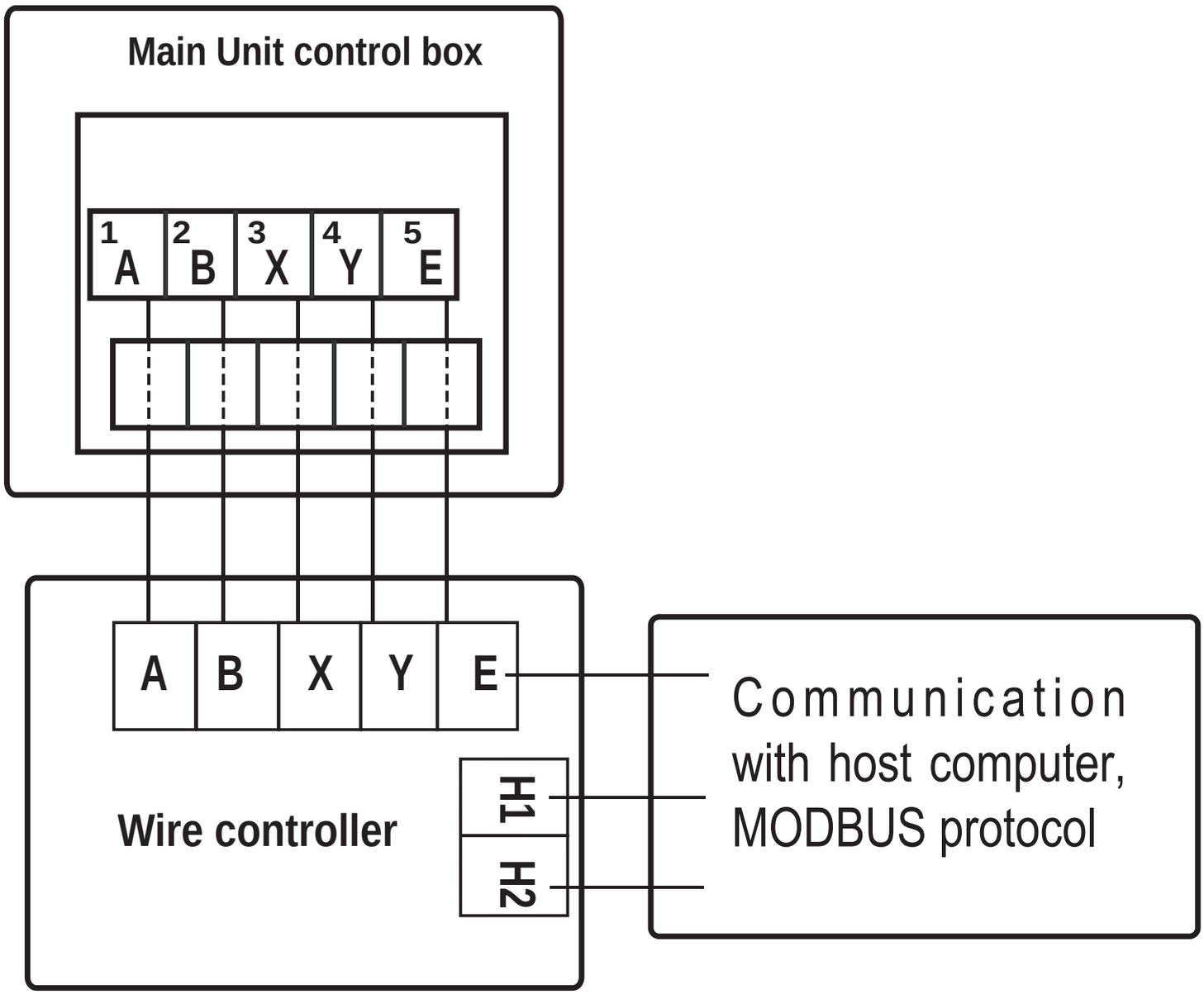
4.3 Installation procedure and matching setting of wire controller

4.3.1 Structure size figure



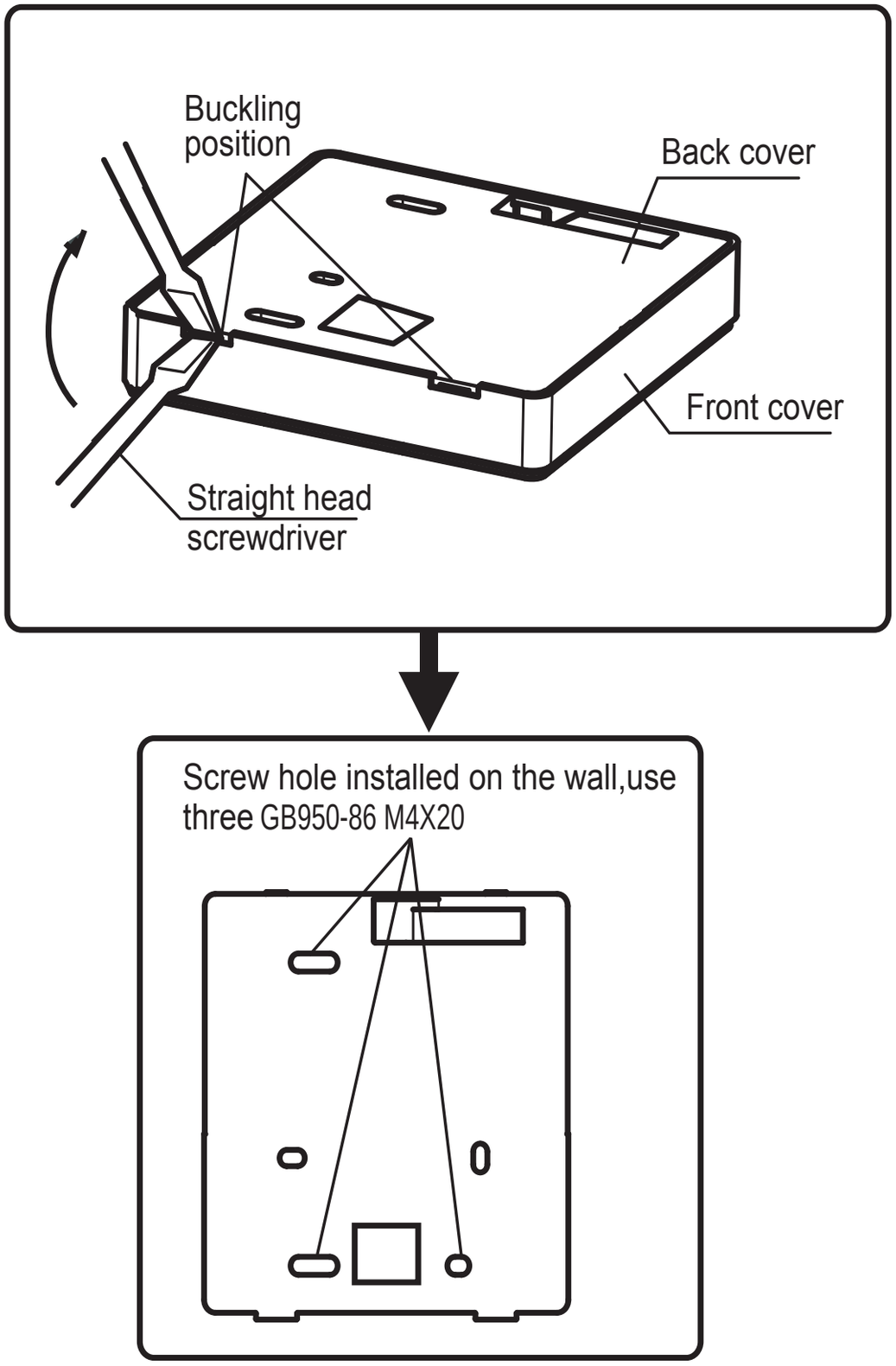


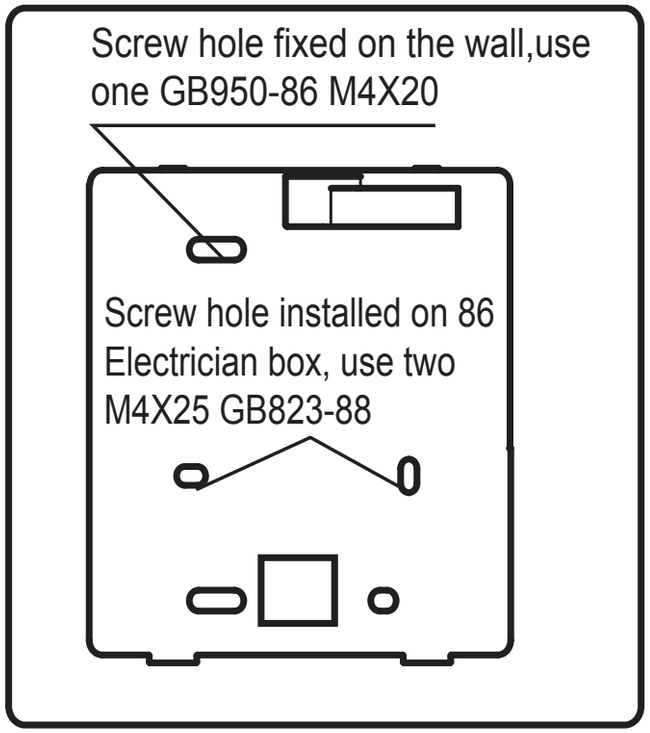
4.3.2 Wiring

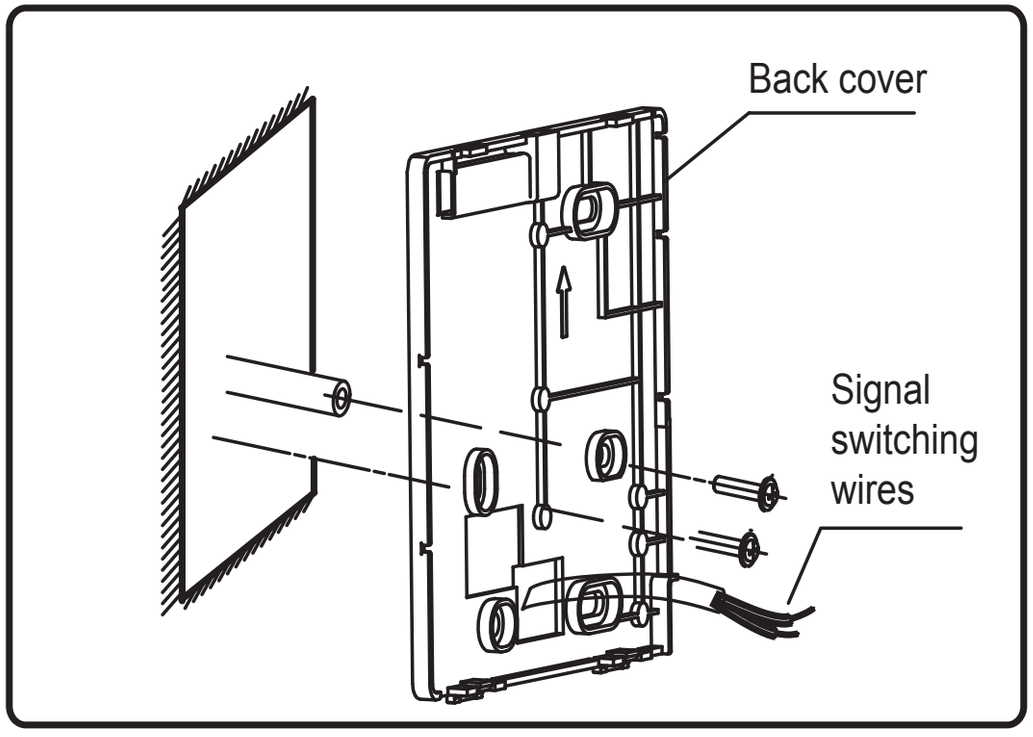


Input Voltage(A/B)	13.5VAC
Wiring size	0.75mm^2

4.3.3 Back cover installation




Screw hole fixed on the wall,use one GB950-86 M4X20
Screw hole installed on 86 Electrician box, use two M4X25 GB823-88


Back cover
Signal switching wires

1）Use straight head screwdriver to insert into the buckling position in the bottom of wire controller, and spin the screwdriver to take down the back cover. (Pay attention to spinning direction, otherwise will damage the back cover!)

2) Use three GB950-86 M4X20 screws to directly install the back cover on the wall.

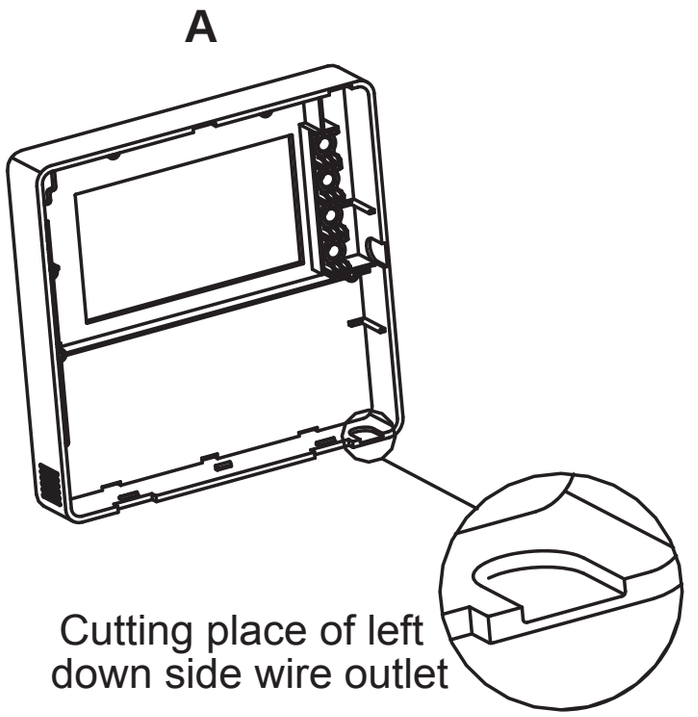
3) Use two M4X25 GB823-88screws to install the back cover on the 86 electrician box, and use one GB950-86 M4X20 screws for fixing on the wall.

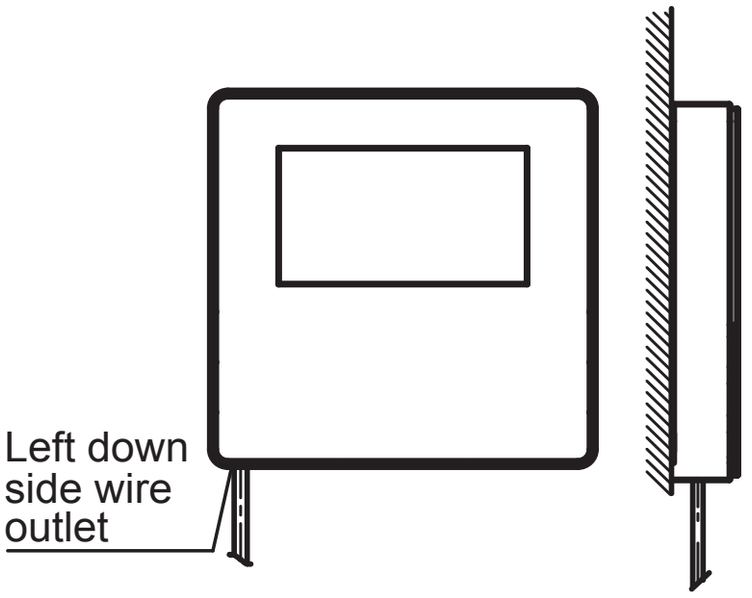
4) Adjust the length of two plastic screw bars in the accessory to be standard length from the electrical box screw bar to the wall. Make sure when install the screw bar to the wall, make it as flat as the wall.

5) Use cross head screws to fix the wire controller bottom cover in the wall through the screw bar. Make sure the wire controller bottom cover is on the same level after installation, and then install the wire controller back to the bottom cover.

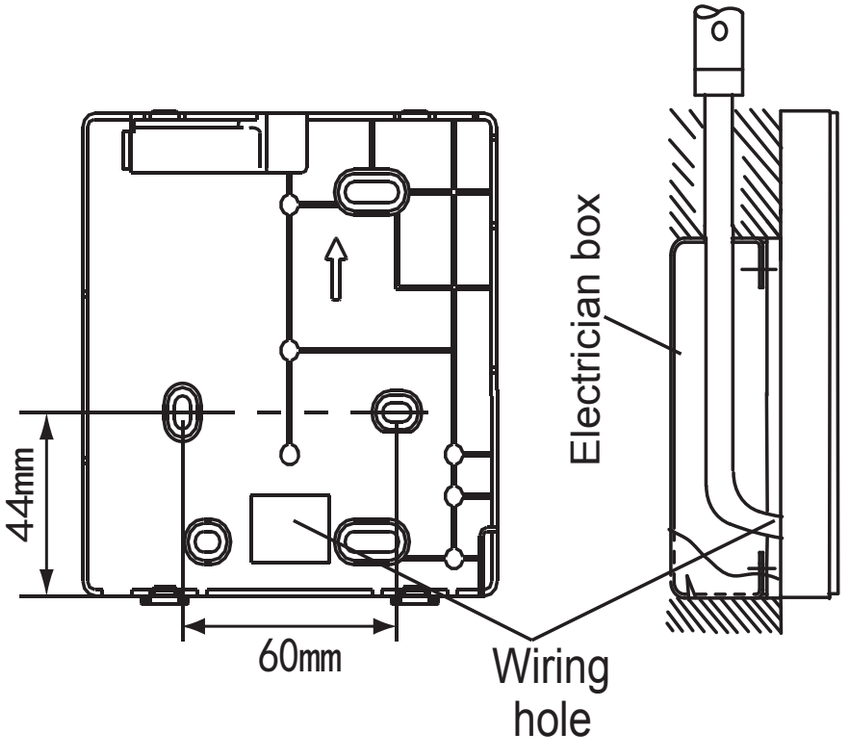
6) Over fasten the screw will lead to deforma tion of back cover.

4.3.4 Wire outlet

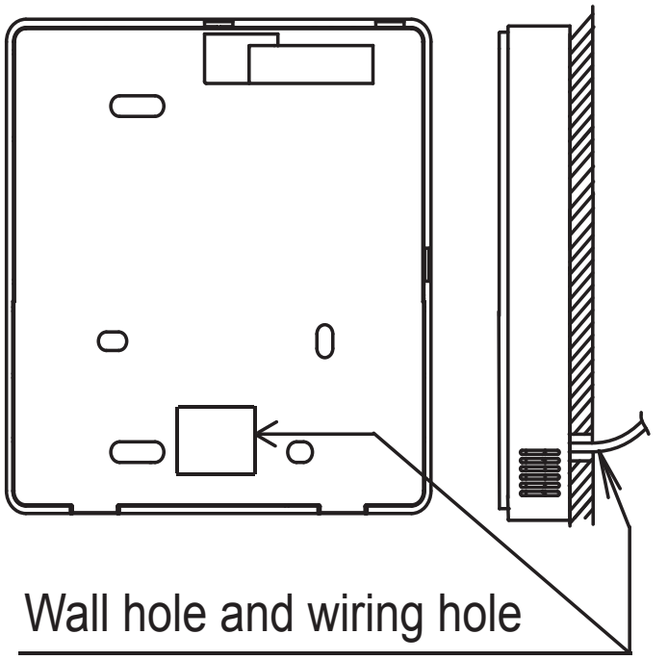


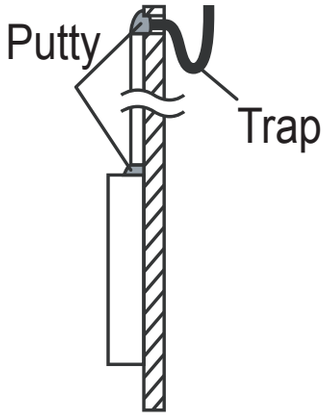


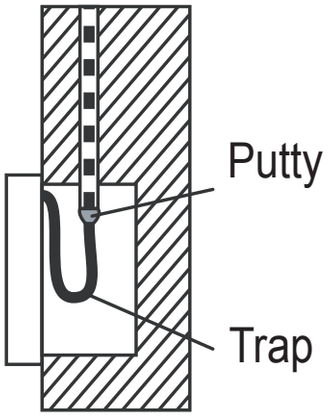
B

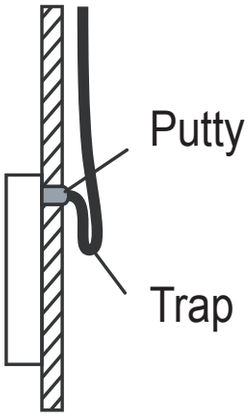


C





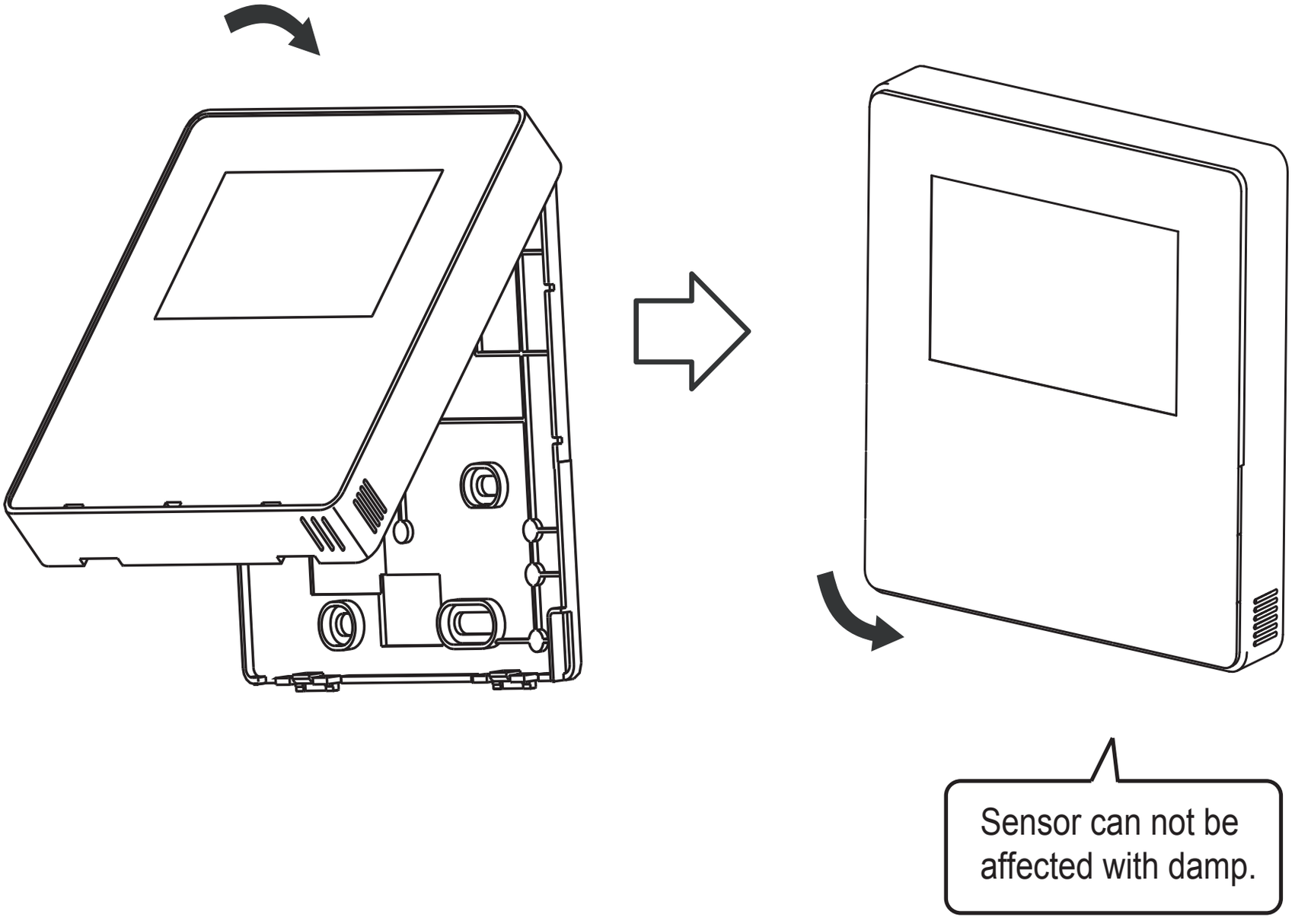




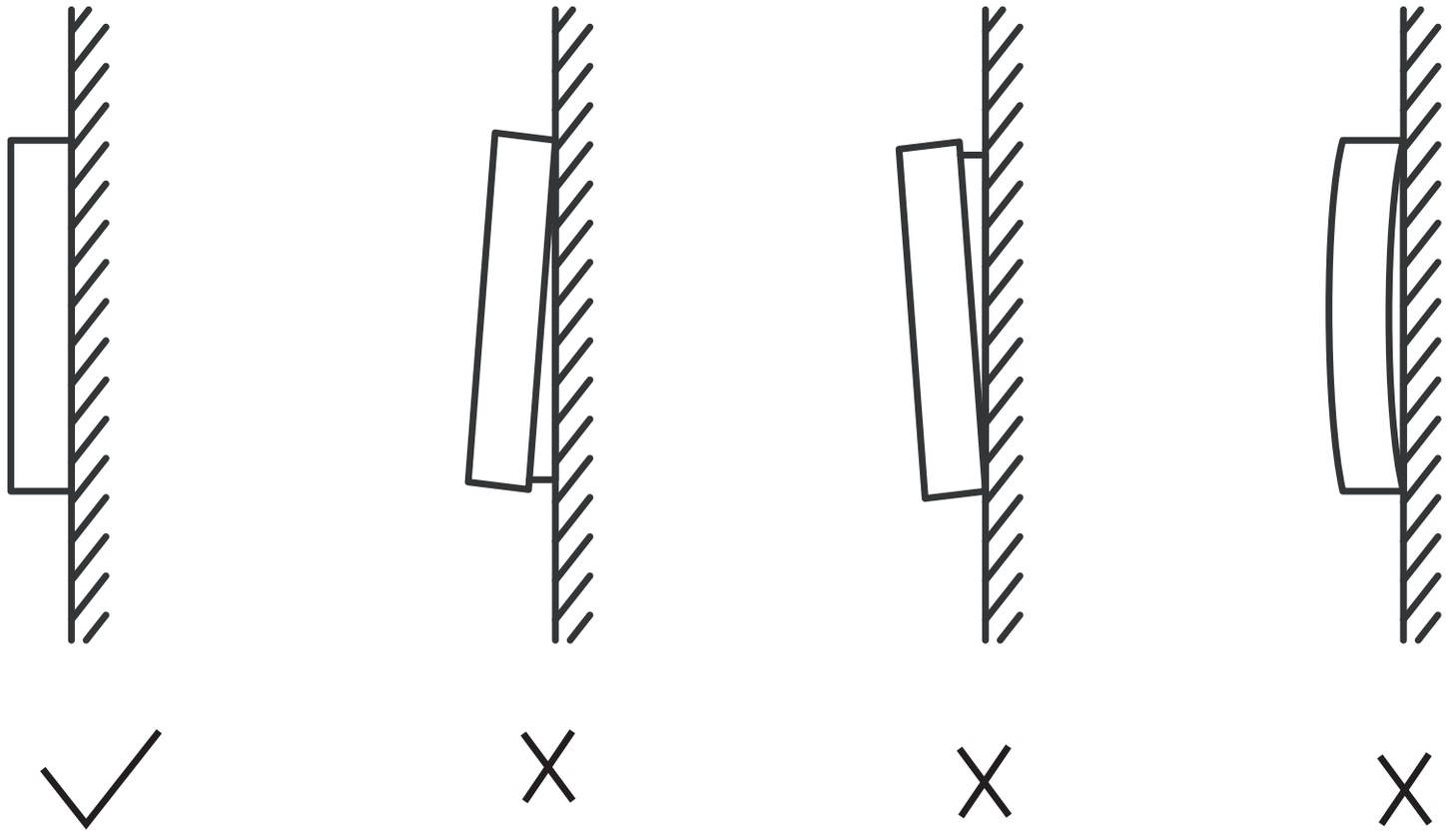
Avoid the water enter into the wired remote controller, use trap and putty to seal the connectors of wires during wiring installation.

4.4 Front cover installation

After adjusting the front cover and then buckle the front cover; avoid clamping the communication switching wire during installation.



Correct install the back cover and firmly buckle the front cover and back cover, otherwise will make the front cover drop off.



No	Error code	Content
1	1E0	EEPROM error of main control board
	2E0	EEPROM error of inverter module A
	3E0	EEPROM error of inverter module B
2	E1	Power phase sequence error
3	E2	Communication error between main control board and wired controller
4	E3	Total water outlet temperature sensor error(master only)
5	E4	Outlet water temp sensor error
6	E5	Condenser tube temperature sensor error
7	E7	Outdoor ambient temperature sensor error
8	E9	Water flow detection error(protection occurs for 3 times in 60 minutes and the failure can be recovered by power disconnection only)
9	1Eb	Evaporator anti-freezing temperature sensor (T61)error
	1Eb	Evaporator anti-freezing temperature sensor (T62)error
10	EC	Wired controller detected that the units on-line reduction
11	1Ed	System A discharge pipe temperature sensor error
	2Ed	System B discharge pipe temperature sensor error
12	EF	Inlet water temperature sensor error
13	EH	System self- check error alarm
14	EP	Discharge pipe temperature sensor error alarm
15	EU	Total cooling outlet temperature sensor(Tz) error
16	P0	High pressure or air discharge temperature protection(protection occurs for 5 times in 120 minutes and the failure can be recovered by power disconnection only)
17	P1	Low pressure protection(protection occurs for 5 times in 120 minutes and the failure can be recovered by power disconnection only)
18	P4	System A Current protection(protection occurs for 5 times in 120 minutes and the failure can be recovered by power disconnection only)

No	Error code	Content
19	P5	System B Current protection (protection occurs for 5 times in 120 minutes and the failure can be recovered by power disconnection only)
20	1P6	System A inverter module protection
	2P6	System A inverter module protection
21	P7	Condenser high temperature protection
22	P9	Protection of outlet and inlet water temperature difference(protection occurs for 3 times in 60 minutes and the failure can be recovered by power disconnection only)
23	PA	Inlet water high temperature in cooling mode
24	Pb	System anti-freezing protection
25	PC	Evaporator pressure low in cooling mode
26	PE	Low-temperature protection of evaporator (manual recovery)
27	PH	T4 high temperature protection in heating mode
28	PL	Tfin module high temperature protection(Protection occurs for 3 times in 100 minutes and the failure can be recovered by power disconnection only)
29	1PU	DC fan A module protection
	2PU	DC fan B module protection
30	1H0	System A IPM module Communication error
	2H0	System B IPM module Communication error
31	H1	Under/Over voltage protection
32	1H4	Three times 1PP protection within one hour (power off recovery)
	2H4	Three times 2PP protection within one hour (power off recovery)
33	1H6	System A DC bus voltage error
	2H6	System B DC bus voltage error
34	Fb	Pressure sensor error
35	Fd	Air suction temperature protection error

No	Error code	Content
36	FE	Heat recovery temperature sensor error
37	1FF	DC fan A error
	2FF	DC fan B error
38	FP	DIP inconsistency of multiple water pumps(Power failure recovery required)
39	L0	Inverter module protection
40	L1	DC bus low voltage protection
41	L2	DC bus high voltage protection
42	L4	MCE error
43	L5	Zero speed protection
44	L7	Phase sequence error
45	L8	Compressor frequency variation greater than 15Hz within one second protection
46	L9	Actual compressor frequency differs from target frequency by more than 15Hz protection
47	dF	Defrosting prompt

ATTACHED TABLE ABOUT MODBUS

6.1 Communication specification

Interface: RS-485, H1 on the back of the controller, H2 connected to the serial port of T/R- and T/R+, H1, H2 as the RS485 differential signal.

The Upper computer is the host , and the slave machine is the line controller

the communication parameters are as follows:

- baud rate: 9600bps.
- Data length: 8 Data bits.
- check: None Parity.
- Stop bit: 1 stop bit.
- communication protocol: Modbus RTU.

Mailing address: after the online controller home page is unlocked, it is checked by MENU+ right key, 0-15 represents address 1-16 and 16 addresses respectively

6.2 Supported function codes and exception codes

Function code	Explain
03H	Read Holding Registers
06H	Write Single Register
10H	Read/Write multiple registers

Exception code specification

Exception code	MODBUS name	Remarks
03H	illegal function code	Function code not supported by line controller
06H	illegal data address	The address sent in query or setting is undefined in the line controller
10H	illegal data values	The set parameter is an illegal value, which exceeds the reasonable set range

6.3 Address mapping in register of wired controller

Addresses below can be used as 03H(Read), 06H(Write in a single register) , 10H(Write in several registers)		
Data	Address of Register	Notes
Switch state	1	0x00 :Turn off 0x01:Turn on
Setting of mode	2	0x01： Cooling Mode 0x02： Heating Mode 0x03： Water pump Mode Line controller in the boot mode, can not set the mode, otherwise it will return the exception code
Water temp. setting	3	Water temp setting*2+30=Register value The upper and lower limits of the refrigeration heat setting are limited according to the temperature adjustment range set by the external machine. If the range is exceeded, the abnormal code will be returned
Mute switch	4	ON:1 OFF:0

Note:06H,10H Write register,If the value is written beyond the scope of the note, the exception code is returned

The following address can use 03H (read)		
Data	Address of Register	Notes
Compressor switch status	5	Bit0 ON:1 OFF:0
Fan switch status		Bit1 ON:1 OFF:0
Water pump switch state		Bit2 ON:1 OFF:0
Status of auxiliary heat switch		Bit3 ON:1 OFF:0
Defrost state		Bit4 ON:1 OFF:0
Frost proof knot		Bit5 ON:1 OFF:0
Remote control state		Bit6 ON:1 OFF:0
Reserve		Bit7 ON:1 OFF:0
Number of units on line	6	1-16
running state	N*100+101	ON:0x01 OFF:0x00
Operation mode	N*100+102	OFF:0x00 refrigeration:0x01 Heating:0x02 Water pump:0x03
quiet mode	N*100+103	Night mute:0x00 mute:0x01 Super sound-off:0x02 No mute:0x03

The following address can use 03H (read)		
Data	Address of Register	Notes
Out water temp	N*100+104	Out water temp *2+30=register value
In water temp	N*100+105	In water temp *2+30=register value
Ambient temp	N*100+106	Ambient temp*2+30=register value
Current fault sequence number	N*100+107	Current fault sequence number
Current failure state	N*100+108	Fault code number(please find out the external machine failure code list) If the EC fault occurs, the register displays 255

Note: (N stands for external machine address 0-15, 0 stands for host 0)

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Eurofred S.A.
Marqués de Sentmenat 97
08029 Barcelona
www.eurofred.es