Scan the QR code to read the manual in different languages.

Scan the QR code to install the control APP.

INSTALLATION & OWNER'S MANUAL

Wired Controller



Please read this manual carefully and keep it for future reference.
All the pictures in this manual are for illustration purpose only.

- 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 wired controller please read this manual carefully before using the unit.
- For convenience of future reference, keep this manual after reading it.

CONTENTS

1 GENERAL SAFETY PRECAUTIONS

- 1.1 About the documentation 01
- 1.2 For the user 02

2 BASIC PARAMETERS 05

3 INSTALLATION 06

4 OPERATION INSTRUCTIONS

- 4.1 Overall appearance 09
- 4.2 Display Explanation 10
- 4.3 Keyboard Explanation 13
- 4.4 Operating Explanation 14

5 ERROR AND OTHER CODES EXPANATION 46

1 GENERAL SAFETY PRECAUTIONS

1.1 About the documentation

- The original documentation is written in English. All other languages are translations.
- The precautions described in this document cover very important topics, follow them carefully.
- All activities described in the installation manual must be performed by an authorized installer.

1.1.1 Meaning of warnings and symbols

⚠ DANGER

Indicates a situation that results in death or serious injury.

⚠ DANGER: RISK OF ELECTROCUTION

Indicates a situation that could result in electrocution.

⚠ DANGER: RISK OF BURNING

Indicates a situation that could result in burning because of extreme hot or cold temperatures.

⚠ WARNING

Indicates a situation that could result in death or serious injury.

⚠ CAUTION

Indicates a situation that could result in minor or moderate injury.

NOTE

Indicates a situation that could result in equipment or property damage.

i INFORMATION

Indicates useful tips or additional information.

1.2 For the user

- If you are not sure how to operate the unit, contact your installer.

- The appliance is not intended for use by persons, including children, with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children must be supervised to ensure that they do not play with the product.

⚠ CAUTION

Do NOT rinse the unit. This may cause electric shocks or fire.

NOTE

- Do NOT place any objects or equipment on top of the unit.
- Do NOT sit, climb or stand on the unit.

- Units are marked with the following symbol:



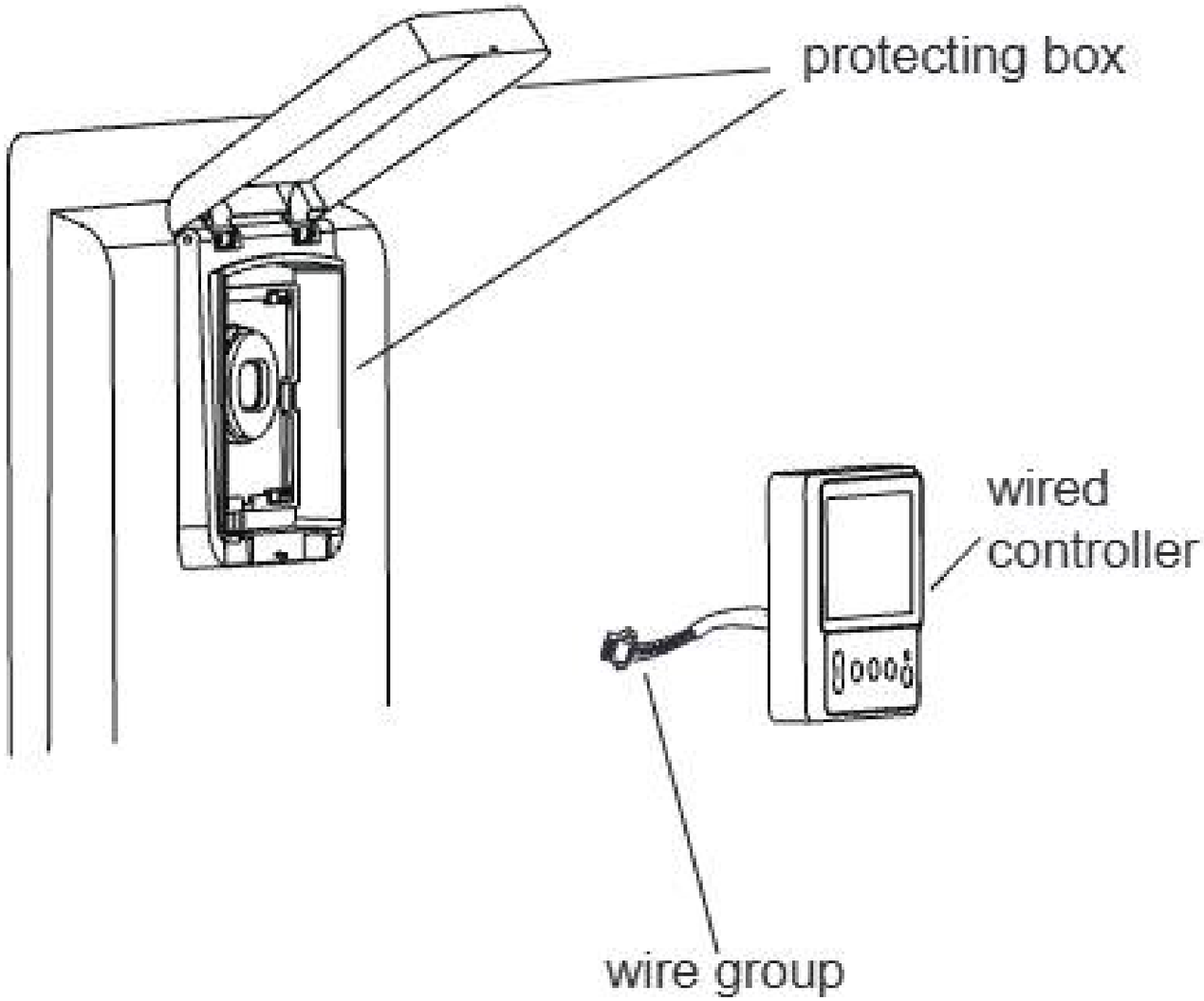
This means that electrical and electronic products may not be mixed with unsorted household waste. Do not try to dismantle the system yourself: the dismantling of the system, treatment of the refrigerant, of oil and of other parts must be done by an authorized installer and must comply with applicable legislation. Units must be treated at a specialized treatment facility for reuse, recycling and recovery. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health. For more information, contact your installer or local authority.

2 BASIC PARAMETERS

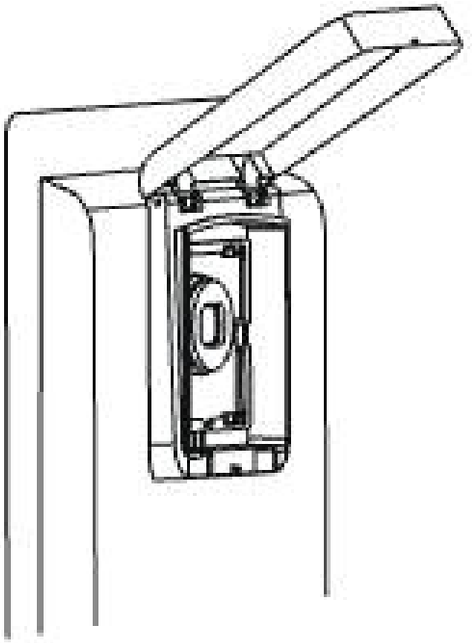
Items	Description
Working temperature range	-7~43˚C/54˚C(Customized)
Working humidity range	5~95%RH (No dew)
Power input	2W
Supply voltage	AC 13.5V
Button	Mechanical key
Case	PC+ABS
Dimensions	86×86×16mm (W×H×D)
Installation pitch	60mm (Standard)

3 INSTALLATION

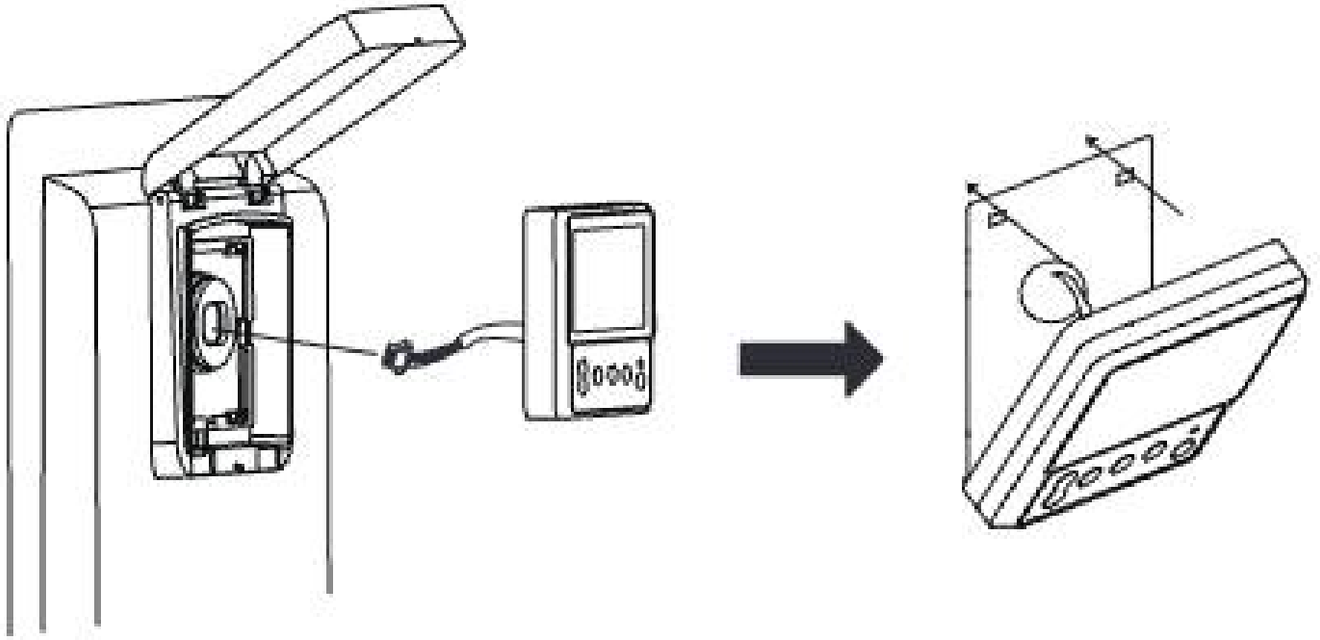
The controller should installed inside the protect box (The cover protects the controller from water and sunlight damage) .



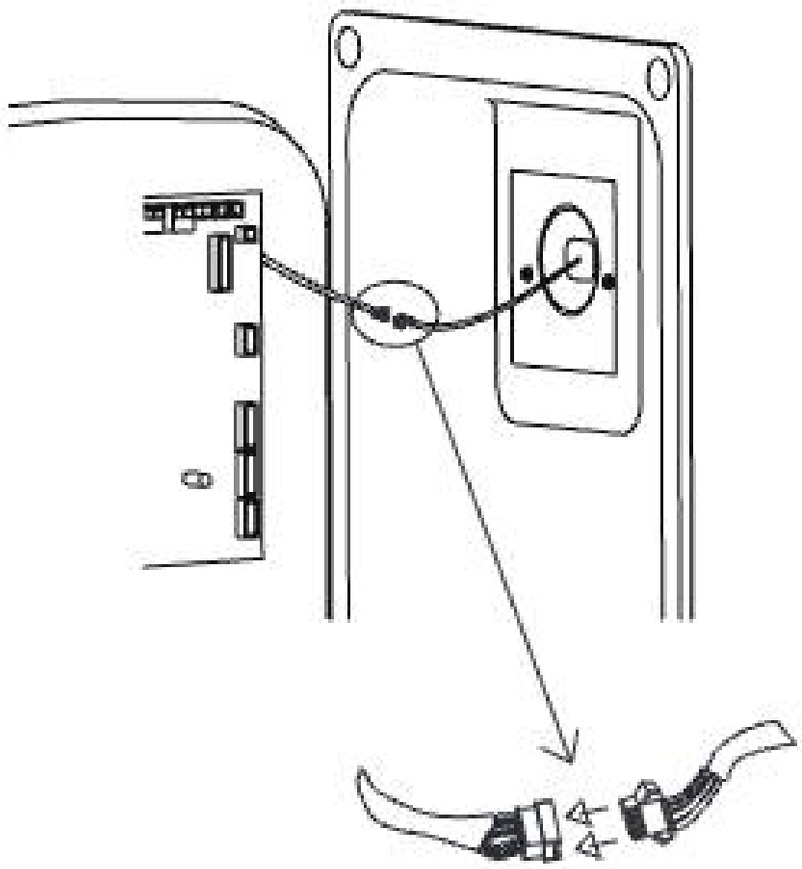
1. Open the cover of protecting box and lift it up.



2. Pass the connecting wire through the hole in the protecting box and press firmly to fix the controller.



3. Connecting the wire.

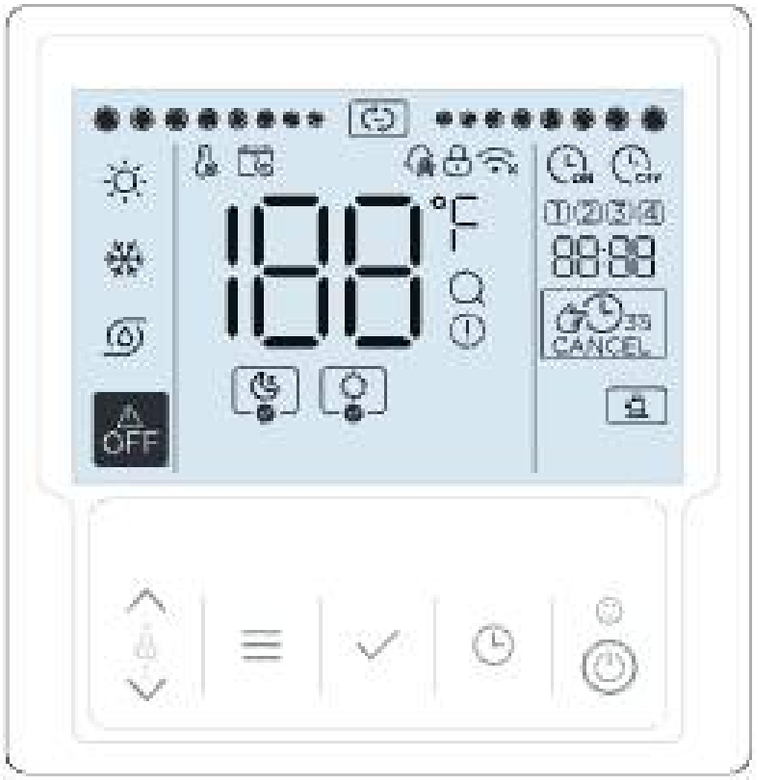


⚠ CAUTION

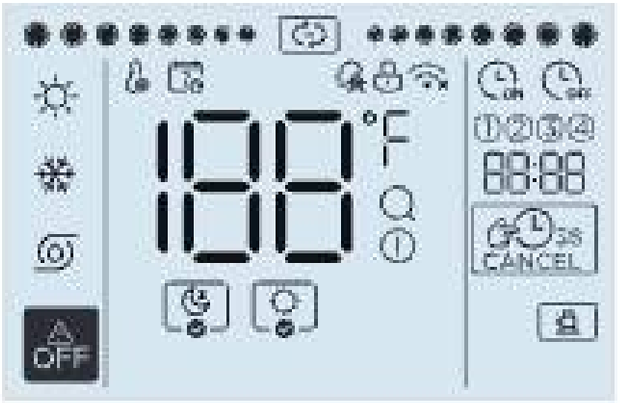
After operating the wired controller, close the protecting box cover to prevent damage caused by water and sunlight.

4 OPERATION INSTRUCTIONS

4.1 Overall Appearance

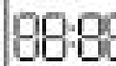
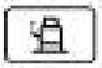


4.2 Display Explanation



NO.	Icon	Name	Description
1		Heating mode	It will be lightened when the setting operating mode is heating mode, otherwise it will be extinguished.
2		Cooling mode	It will be lightened when the setting operating mode is cooling mode, otherwise it will be extinguished.
3		Pump mode	It will be lightened when the setting operating mode is pump mode (only water pump operation), otherwise it will be extinguished.
4	OFF	OFF icon	It will be lightened when user turns off the controller or selects OFF mode in some timers.

NO.	Icon	Name	Description
5		Silence function	It will be lightened when the silence function is activated, and extinguished when the silence function is not activated. When it is selected (not activated), the icon will slowly flash.If manual silence function is activated, icon will flash in main interface.
6		Boost function	It will be lightened when the boost function is activated, and extinguished when the boost function is not activated. When it is selected (not activated), the icon will slowly flash.If manual boost function is activated, icon will flash in main interface.
7		Operating icon	It will only be dynamically lightened when the unit is operating.
8		Setting icon	It will only be lightened when setting or adjusting.
9		Weekly-schedule icon	It will be lightened when weekly-schedule is activated in the app, and extinguished when the weekly-schedule is not activated.
10		Smart-grid icon	It will be lightened when the smart-grid function is activated, and flashed when the operating time exceeds SMART GRID RUNNING TIME. It will be extingguished when the smart-grid function is not activated.
11		Lock icon	It will only be lightened when keyboard has been locked.
12		WiFi icon	will be lightened If WiFi is normal. will be lightened If WiFi is abnormal. or will be extinguished if WiFi function is not activated. when searching WiFi signal, will flash slowly.
13		Temperature icon	It will display current water temperatureat main interface, or display setting parameters when setting.

NO.	Icon	Name	Description
14		Temperature-unit icon	It will display ℃ or ℉ when 88 icon display temperature.
15		Query icon	It will only be lightened during querying.
16		Alarm icon	It will quickly flash when a fault occurs.
17		Timer-on icon	It will be lightened when setting timer on clock.
18		Timer-off icon	It will be lightened when setting timer off clock.
19		Timer icon	It will be lightened when corresponding timer is activated.
20		Clock icon	It will display clock at the main interface normally, and display error code when fault occurs, and display other parameters when querying or setting.
21		Cancel icon	It will be lightened when the timer or buzzer can be cancel .
22		Heat-pump icon	It will be lightened when the compressor is operating.

4.3 Keyboard Explanation

NO.	Button	Name	Explanation
1		Adjustment buttons	For adjusting parameters, moving cursor and so on.
2		Menu button	For entering or quit menus and so on.
3		Confirm button	For confirming settings, entering manual functions, and so on.
4		Clock/Timer clock button	For setting clock or timer.
5		ON/OFF button	For turn on or turn off the unit. If user turn on the unit, the led will be lightened, and the led will be distinguished if user turn off the unit.

4.4 Operating Explanation

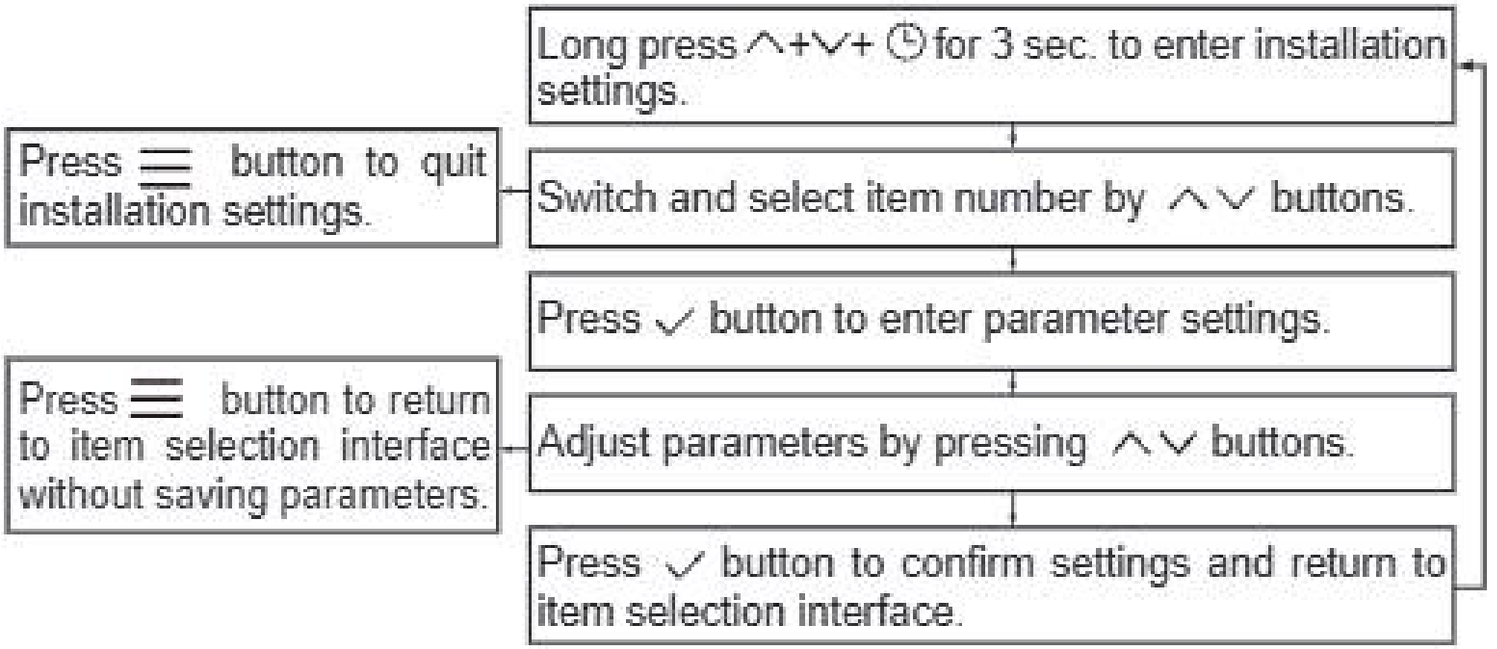
4.4.1 Installation settings

There are up to 9 items can be set up. The items include

1 - Network
2 - Timer type
3 - Temperature unit
4 - Silence
10 - Boost
11 - Smart grid
15 - Manually defrosting
20 - Operating time statistics
21 - Pump forced operation
25 -Water flow permanent malfuction(E0)
26 -Time correction

Long press ∧+∨+🕒 for 3 sec. to enter installation settings, then switch and select item number by ∧∨ buttons, then press ✓ button to enter the corresponding item setting or press ☰ button to quit installation settings(the parameters which does not be confirmed will not be saved).

The setting method is as follows



Examples for item selection interface are as follows:



4.4.1.1 Network settings

Network settings include Network ON/OFF and control mode selection. There are three control modes (88:88 displays code):

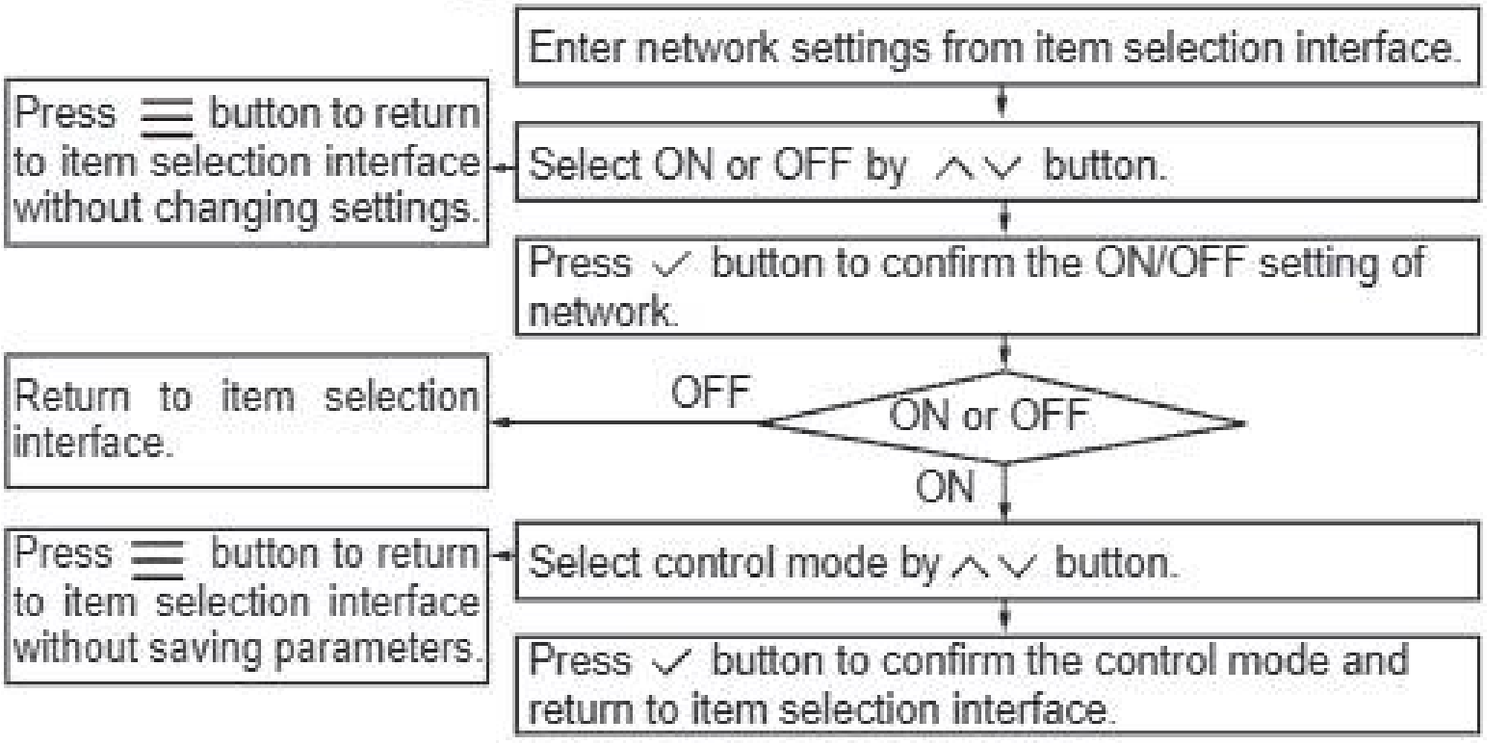
① App and local control (Code LC:nC , default mode): The unit will execute the latest arriving command.

② Only local control (Code LC): The unit will only execute the commands from this controller.

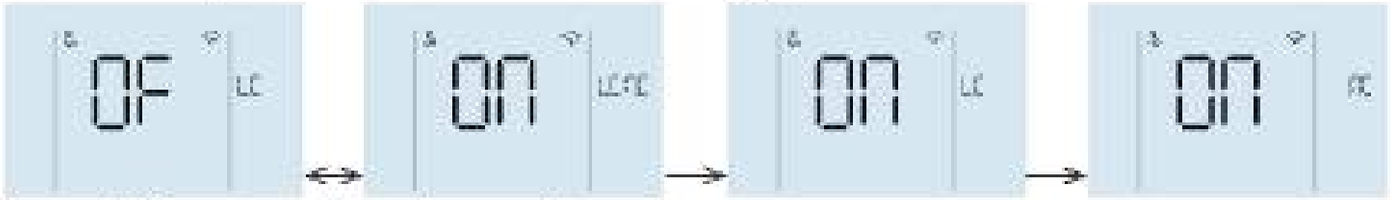
③ Only app control (Code nC): The unit will only execute the commands from App.

During setting, the symbol On displayed at 88 means valid and symbol OF means invalid.

The Network setting method is as follows:



The examples for network settings are as follows



About Connecting to network

Normally, after network is set as ON, the controller will automatically connect to network through WiFi, then the unit will be found in iLetComfort app.

If automatic networking fails, long press ∧+ ✓ buttons for 3 sec. to activate the WiFi module's AP mode (connect to the network) and long press ∧+ ≡ buttons for 3 sec. to clear the WiFi module's wiring information.

APP networking guidelines

❶ Download iLetComfort App

Scan the QR code below, or search for "iLetComfort" in Google play(Android devices) or App Store (ios devices) to download the App.

iLetComfort



Download on the App Store

GET IT ON Google Play

❷ Register & Log in

Step1: Register

Please enter your device brand name. If brand name can not be found or you don't know the device brand name, please enter "customer"



Step2: Login

Use your account to log in, if not please sign up one.



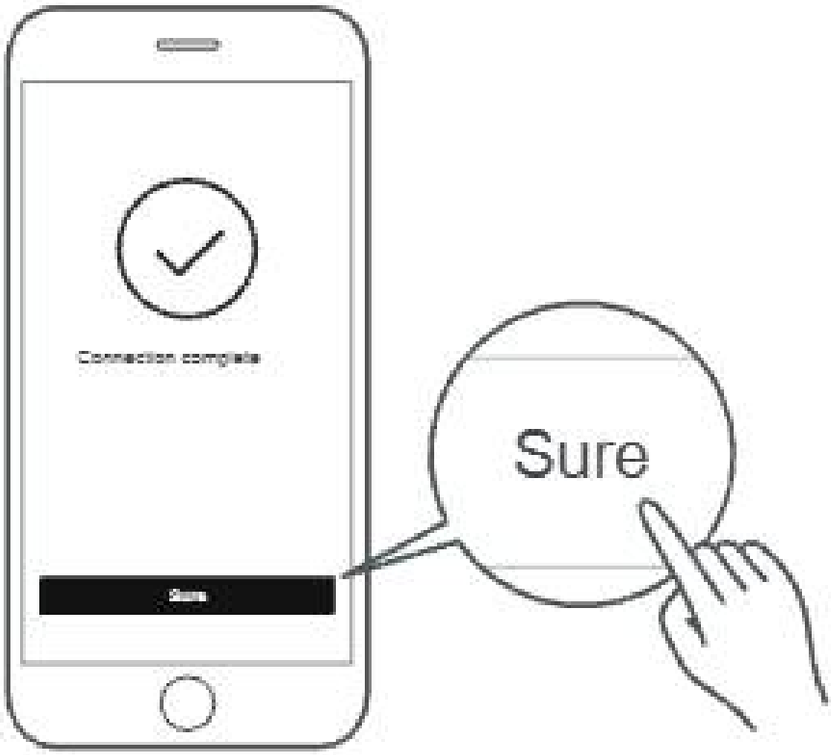
❸ Add your appliance

Tap the "+"icon to add device to your account.



❹ Connected to the network

Follow the instructions in the app to set up the WiFi connection.If the network connection fails, please refer to the App tips for operation. .



⚠ Notes on networking

- When networking the product, please make sure that the mobile phone is as close as possible to the product.
- According to the App tips, if the product only supports 2.4GHZ WiFi communication, please note that the 2.4GHz network is selected for connection.
- It is recommended that the WiFi router SSID names contain only alphanumeric values. Special characters, punctuation marks or spaces are used it might prevent the SSID name from showing up in the available networks to join in the App. Try it and if the SSID shows up then it is ok to use, otherwise log into the router and change the SSID name.
- A large number of devices on the WiFi router can affect network stability, there is no way that equipment manufacturer can advise a specific number limitation as this depends on router quality and many other factors.

- If the router or WiFi name and WiFi password change, please repeat the above process to reconnect to the network.
- As the product technology is updated, the content of App may change, and the actual display in App shall prevail.

⚠ Troubleshooting for networking failures

When the product is connected to the network, please make sure that the phone is as close as possible to the product.

We only support 2.4GHz band routers at present.

Special characters (punctuation, spaces, etc.) are not recommended as part of the WLAN name.

It is recommended that you connect no more than 10 devices to a single router lest home appliances are affected by weak or unstable network signal.

If the password of the router or WLAN is changed, clear all settings and reset the appliance.

The contents of App might change in version updates and actual operation shall prevail.

WiFi information

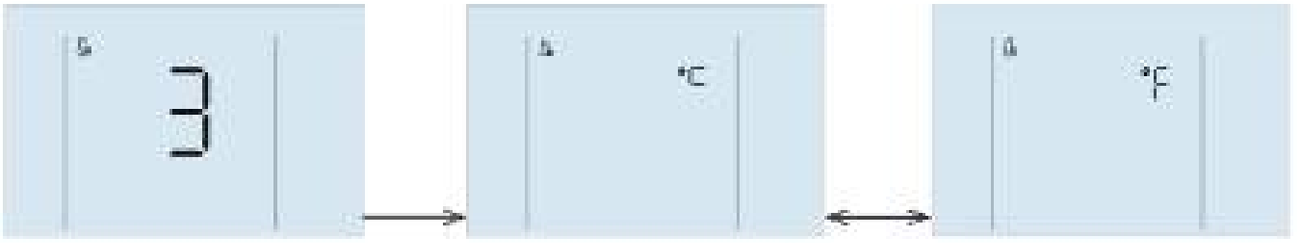
WiFi transmit frequency range:2.4002.4835 GHz
EIRP not more than 20dbm

4.4.1.2 Timer type settings

The controller provide Point timer.

4.4.1.3 Temperature unit setting

During setting, press ∧ ∨ buttons to switch and select ˚C or ˚F, then press ✓ button to confirm the unit setting.
The interface examples of timer type settings are as follows:



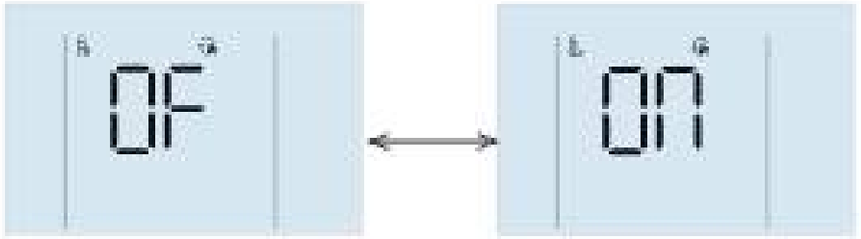
4.4.1.4 Other functions settings

Some functions can be set to valid or invalid, such as:

4 - Silence ( ) 10 - Boost ( ) 11 - Smart grid ( )

During setting, the symbol displayed at means valid and means invalid. Press ∧∨ buttons to switch and select ON or OF, then press ✓ button to confirm.

The setting interface examples of 11-Smart grid setting is as follows:



After 11-Smart grid setting is ON and press ✓ then there is a smart grid operation hours need to be setting or confirm. During setting, the symbol SG displayed at 88 and the operation hours displayed at 88. Press ∧∨ buttons to adjust the hours, then press ✓ button to confirm.

The interface examples of manual defrosting are as follows:



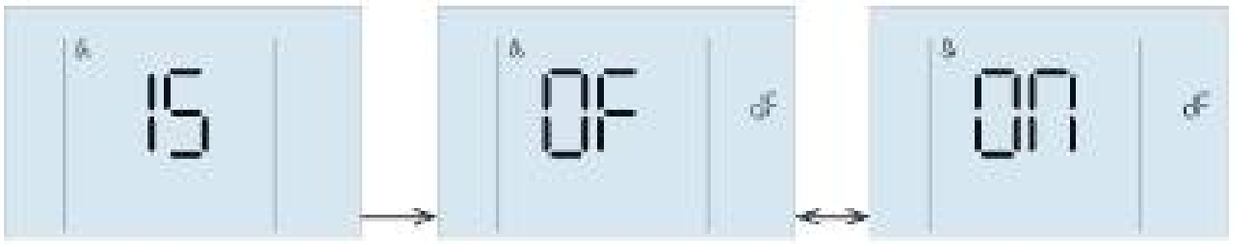
4.4.1.5 Debugging function

Debugging functions (88:88 displays code) include:

15 - Manual defrosting (dF) 20 - Operating time statistics (t1)

During setting, the symbol ON displayed at 88 means active and OF means inactive. Press ∧∨ buttons to switch and select ON or OF, then press ✓ button to confirm.

The interface examples of manual defrosting are as follows:



15 - Manual defrosting function will be deactivated automatically after defrosting.

20 - The unit operating time will be queried if the operating time statistics function has been activated. When the validity changes, the parameter of operating time value is cleared.

NOTE

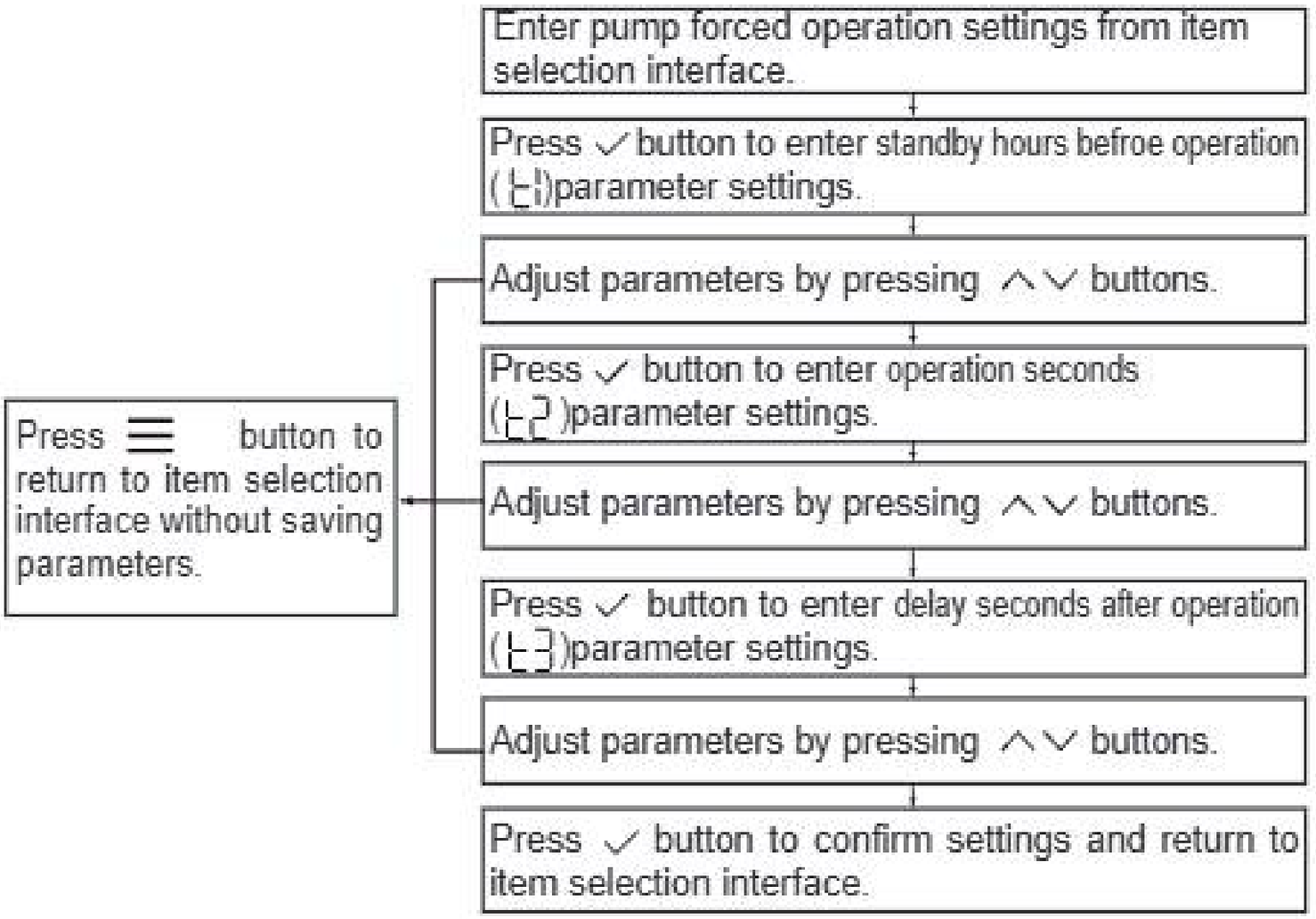
The power consumption and operating time data are refreshed per hour, and they are for reference only and should not be used as measurements.

4.4.1.6 Pump forced operation

If the outside pump is controled by the singal from the terminal in the heat pump.Then the unit will let the pump forced operation in standby mode accroding to the follow parameters:

(88:88 displays code)

standby hours befroe operation (t1)
Operation seconds (t2)
Delay seconds after opeation(t3)
The parameters setting as follows:



Examples for item selection interface are as follows:



4.4.1.7 Water flow permanent malfuction(E0) settings

When the water flow permanent malfuction(E0) function is activated, the water flow permanent malfuction(E0) will be detected, and it needs to be powered off and restarted. If it is not activated, only water flow malfuction(E8) will be detected.

4.4.1.8 Time correction settings

During setting, press ∧∨ buttons to add or subtract the correction hours of daylight saving time (The default value is 0).

4.4.2 Unlock / Lock keyboard

When the controller is locked and the icon is lightened, any button is invalid at this time. Long press the ∧ + ∨ key for 1 sec. to unlock the keyboard. The keyboard will be locked automatically When no button operation for 120 sec.

4.4.3 Turn on / turn off the unit

Press the button to turn on or turn off the unit, when the keyboard is unlocked.

If unit is turned on and not operating, the main interface will display setting mode, current temperature, clock and so on. If unit is turned on and operating, the operating icon will flash. If unit is turned off, the icon will be lightened and operating icon and mode icon will be distinguished.

Some interface examples of operating, standby and OFF state are as follows:



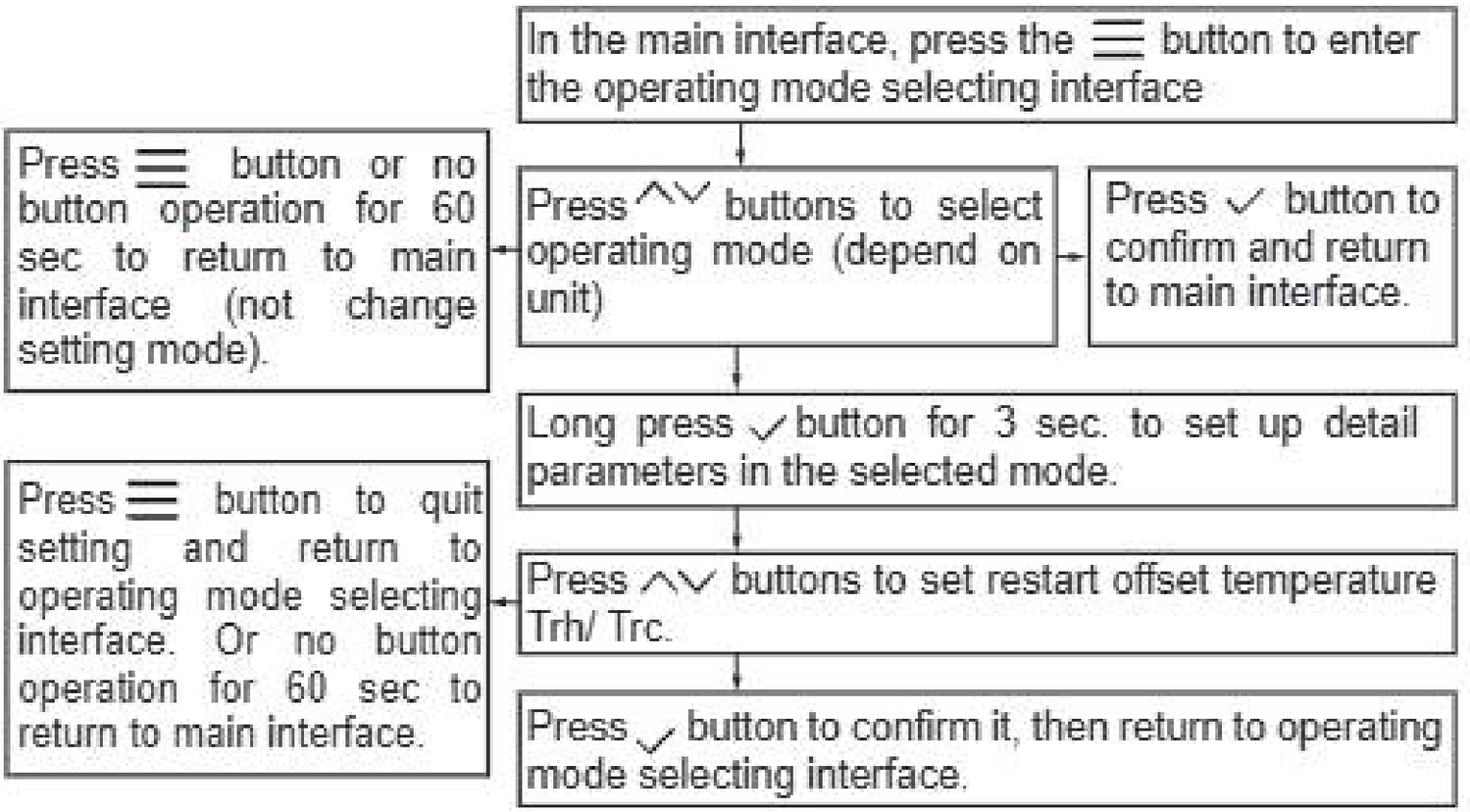




4.4.4 Operating mode setting

The code trh displayed at 88:88 means Trh (restart offset temperature for heating mode), the code trc displayed at means Trc (restart offset temperature for cooling mode), and the value displays at 188 .

The setting method is as follows:



An interface examples is as follows:



4.4.5 Target temperature setting

In the main interface, press ∧∨ buttons to adjust target temperature. During adjusting, press ≡ or ✓ button to confirm settings then return to main interface, or no press any button for 60 sec then confirm settings automatically and return to main interface.

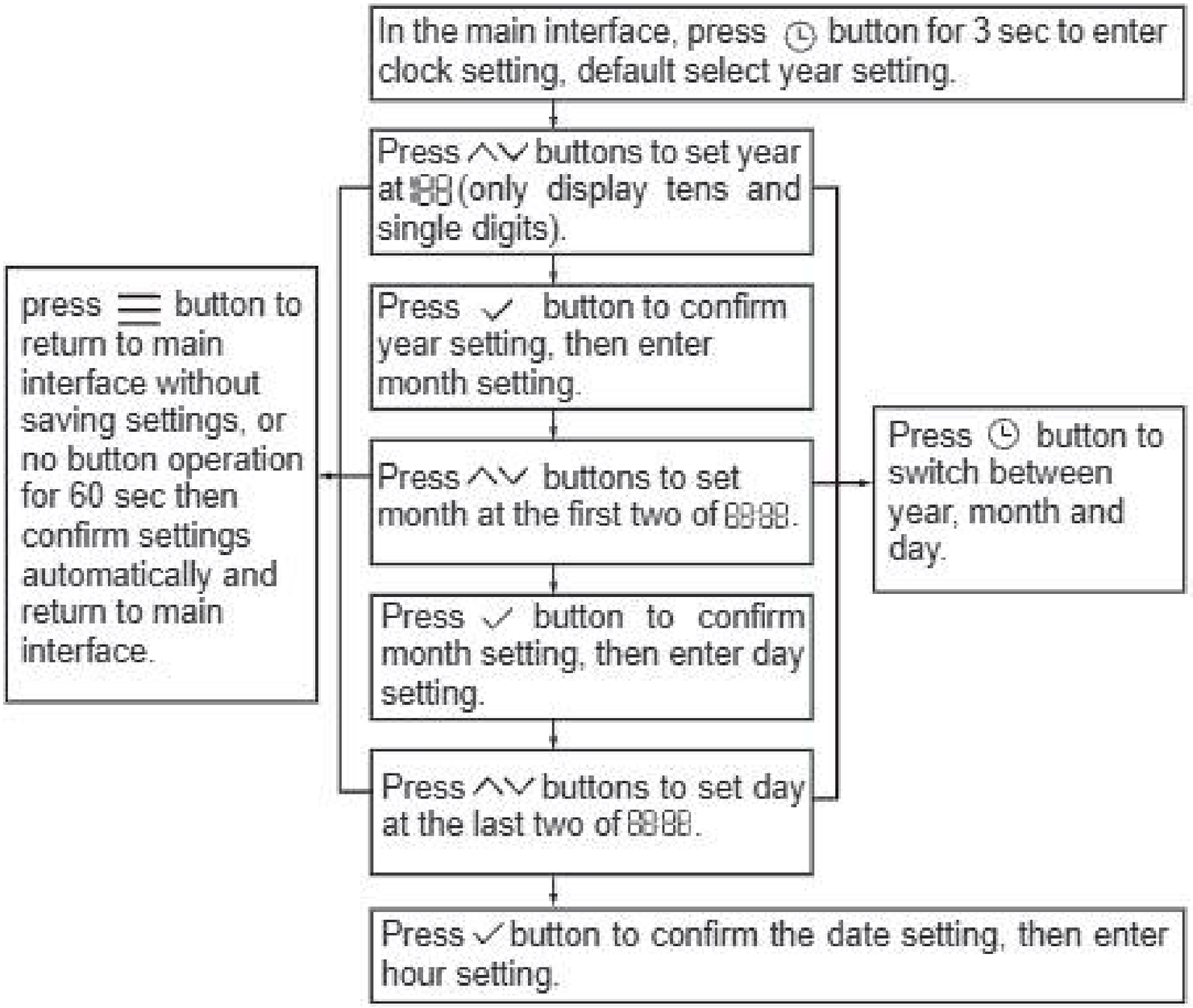
An interface example of setting is as follows:

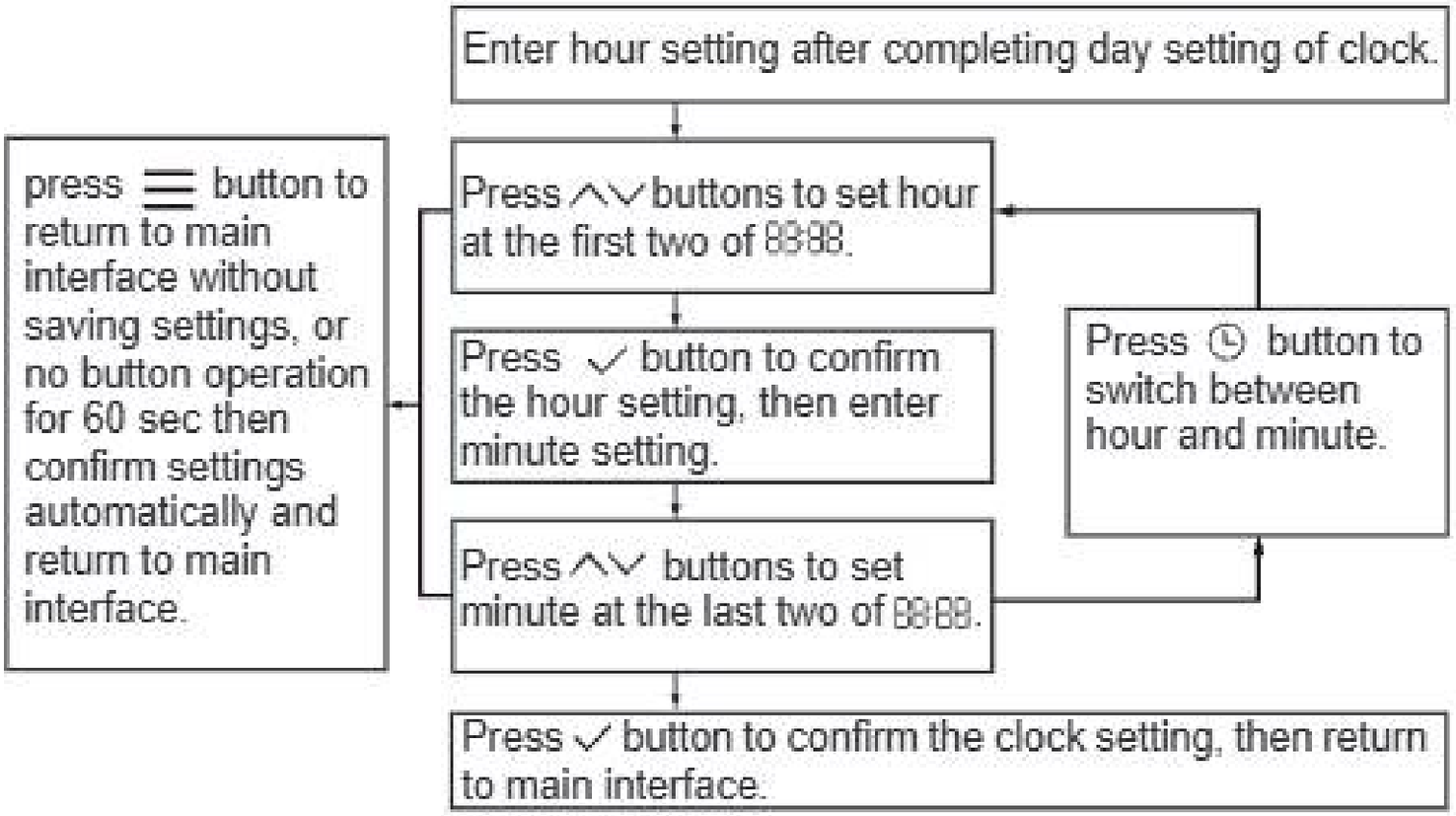


4.4.6 Clock setting

If the controller has successfully connected to network, it will update the clock automatically from network, else user can set clock in the controller. Only icon and current setting parameters are lightened during clock setting.

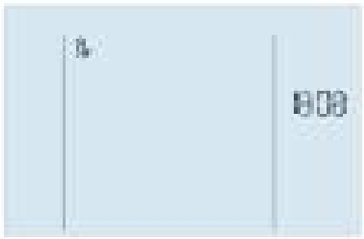
The setting method is as follows:





Some interface examples (2022.03.26 18:08) of clock setting are as follows:





4.4.7 Timer Switch ON/OFF setting

The controller provides point timer, which can be set up to 4 different points in time to execute different command every day, the timer step is 10 min.

After the timer settings are completed, the activated timer numbers are displayed at the main interface. When the clock reaches the timer point, according to the switching action at that time point,  or  will be displayed respectively and unit will execute the commands.

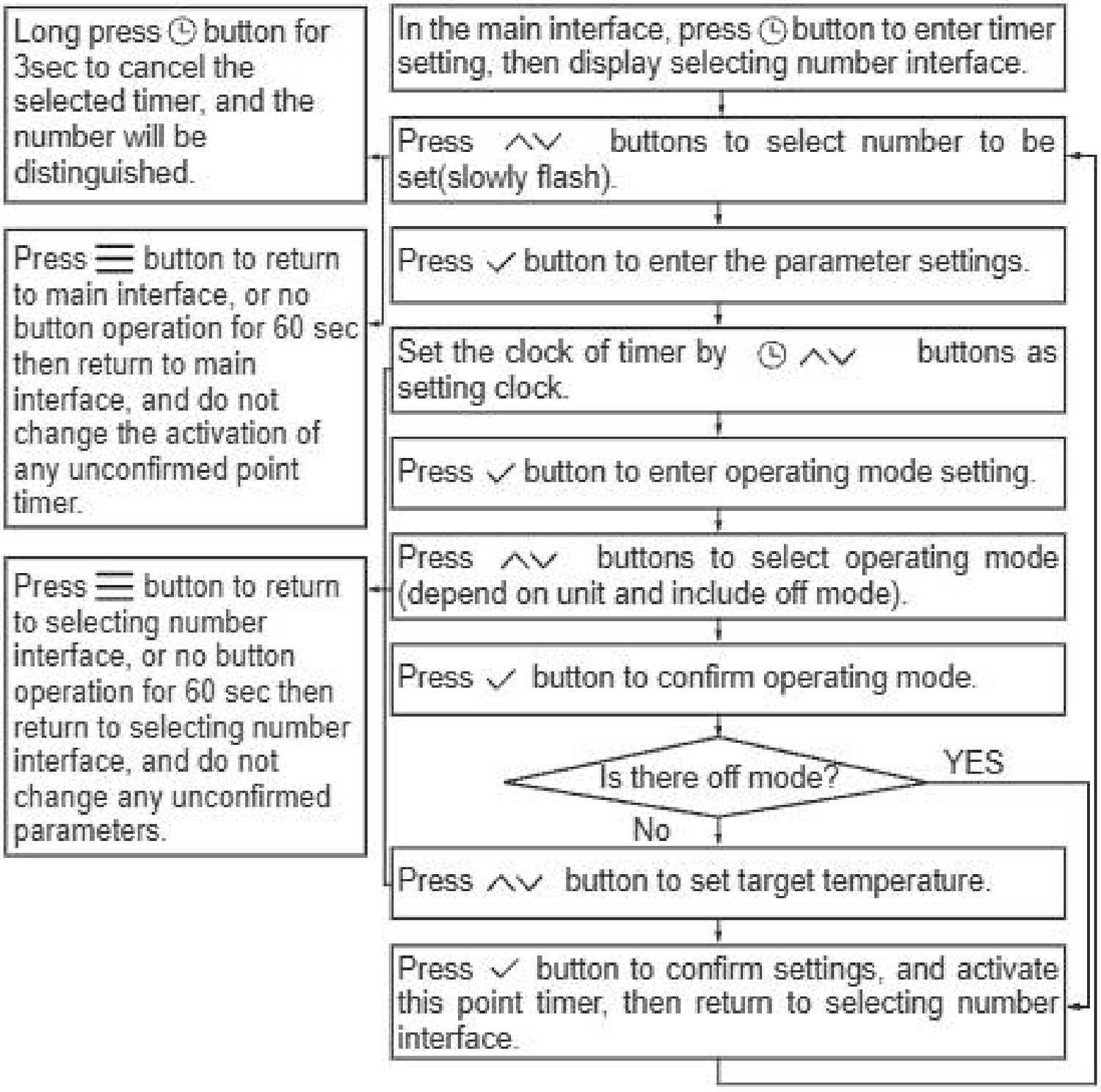
NOTE

The unit will always execute the latest command.

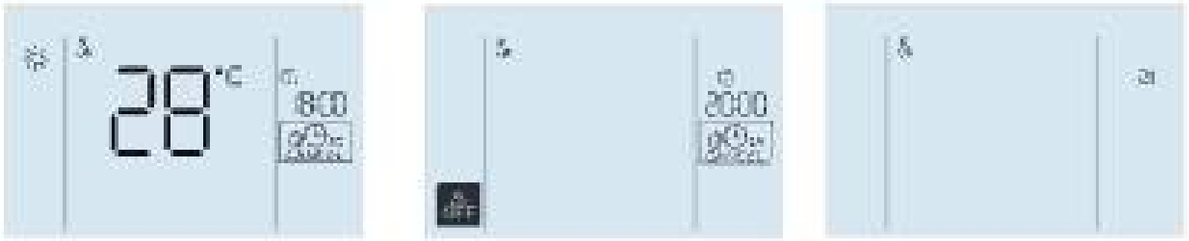
For example, the user sets timer (5:00 on, target 25 ˚C), timer (12:00 off), timer (14:00 on, target 30 ˚C). If user adjusts the target temperature to 30˚C at 7:00, the target temperature will be set to 30˚C directly until 12:00 then unit is turned off; if user manually turns off the unit at 7:00, the unit will be turned off immediately until 14:00 when timer is executed.

Under the timer, the  icon is displayed and the LED light is off when the unit is not turned on, and the run icon is displayed and the LED light is on when the unit is turned on.

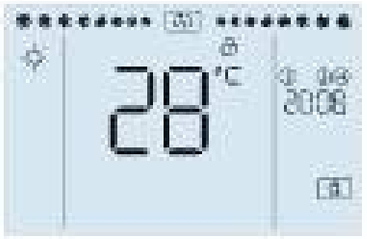
The setting method is as follows:



The following are examples in setting steps: No.1 timer switch on, No.2 timer switch off, No.3 timer switch not activated.



An main interface example (No.1, No.3 and No.4 have been activated, but No.2 is not activated.) is as follows:

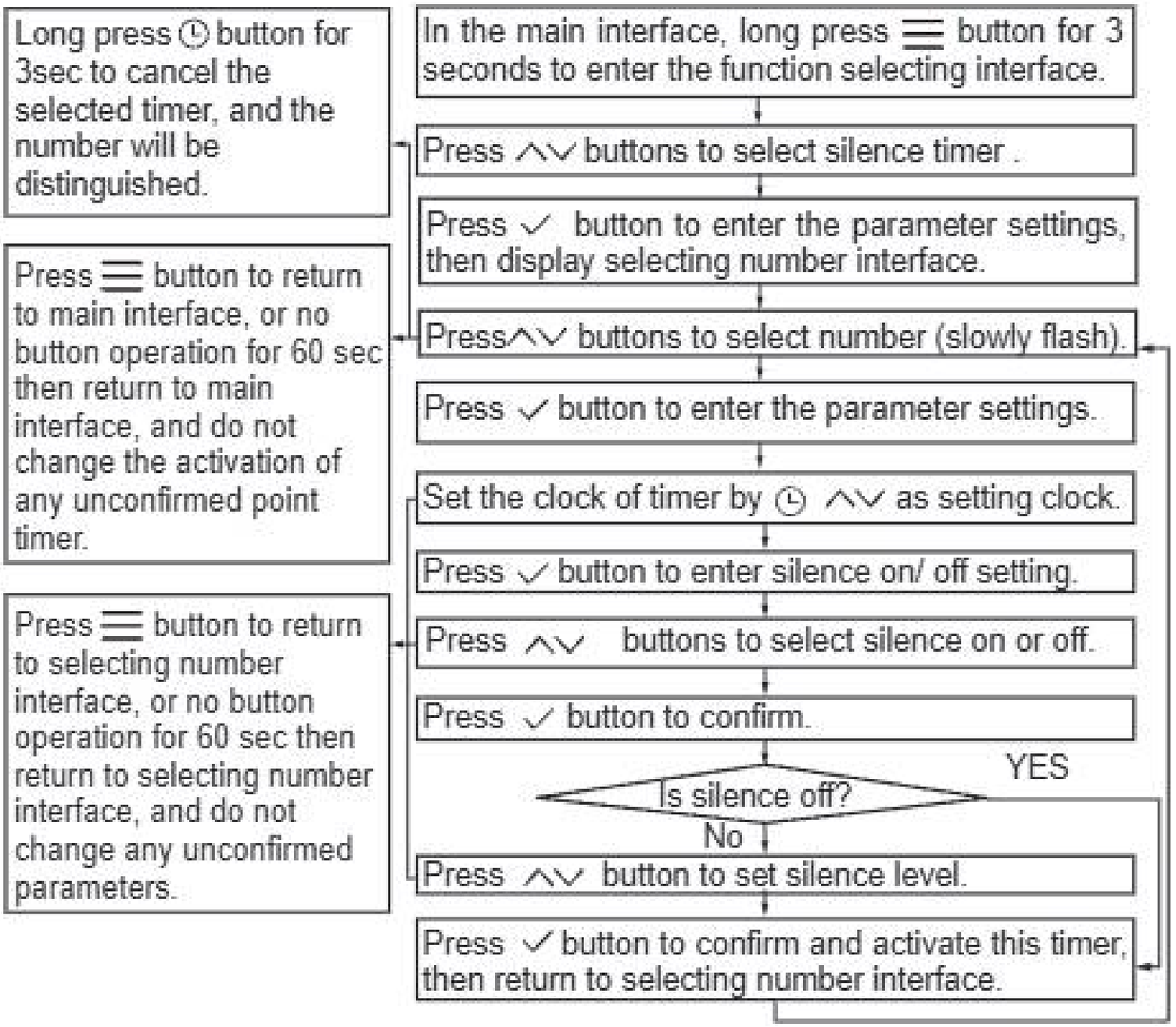


4.4.8 Function activation and parameters setting

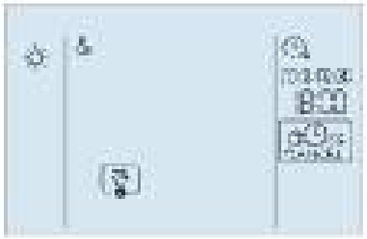
In the main interface, long press ☰ button for 3 sec. to enter the function selection and activation interface. The available functions depend on the unit, including timer silence, timer boost. During setting, the selected function icon will slowly flash. For example, if timer boost function is not activated then  icon will be lightened, and if it is activated then  icon will be lightened, and if it is selected but not activated then the  icon will slowly flash, and if it is selected and activated then the  icon will slowly flash. Press ✓ button to activate or deactivate the selected function.

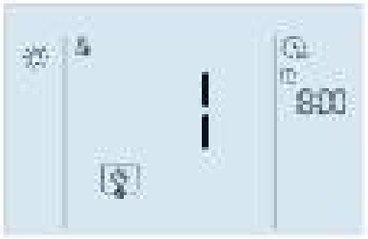
4.4.8.1 Timer Silence setting

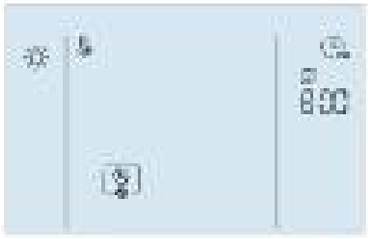
There are 4 point timers in this setting. Every timer includes the point clock, silence function on/off. Controller will execute the command at the point clock.The setting method is as follows:


In the main interface, long press button for 3 seconds to enter the function selecting interface.
Press buttons to select silence timer .
Press button to enter the parameter settings, then display selecting number interface.
Press buttons to select number (slowly flash).
Press button to enter the parameter settings.
Set the clock of timer by as setting clock.
Press button to enter silence on/ off setting.
Press buttons to select silence on or off.
Press button to confirm.
Is silence off?
YES
No
Press button to set silence level.
Press button to confirm and activate this timer, then return to selecting number interface.
Long press button for 3sec to cancel the selected timer, and the number will be distinguished.
Press button to return to main interface, or no button operation for 60 sec then return to main interface, and do not change the activation of any unconfirmed point timer.
Press button to return to selecting number interface, or no button operation for 60 sec then return to selecting number interface, and do not change any unconfirmed parameters.

The following are examples in setting steps: No.1 timer silence time point number selection interface, No.2 timer silence on, No.3 timer silence off.







NOTE

1) The unit will always execute the latest command.

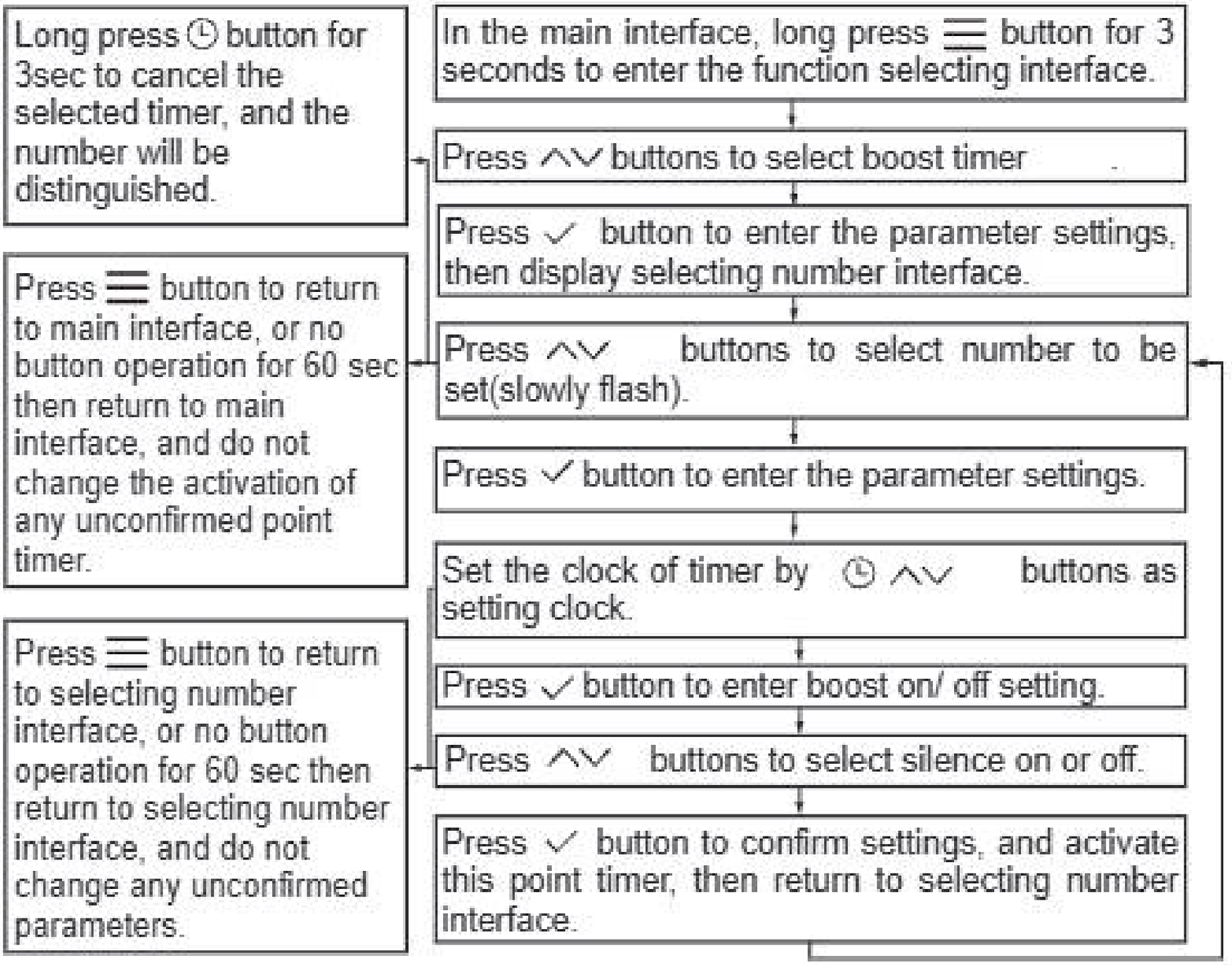
For example, the user sets timer (20:00 silence on, level 1), timer (8:00 silence off), timer (13:00 on, level 1). If user manually turns off the silence function at 22:00, the silence function will be turned off immediately until next day 13:00 then unit will turns on the silence function by timer ; if user manually turns on the unit at 10:00, the silence function will be turned on immediately until next day 8:00 when timer is executed.

2) When the unit is in off mode, the unit will not be turned on by silence function.

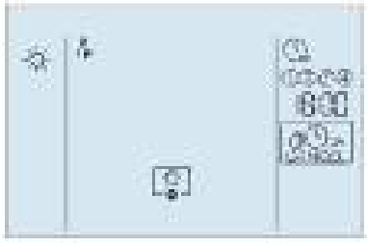
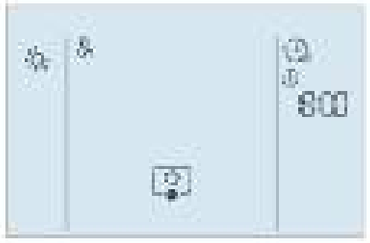
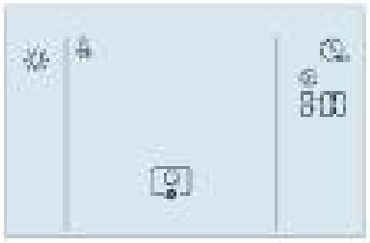
4.4.8.2 Timer Boost setting

There are 4 point timers in this setting. Every timer includes the point clock, boost function on/off. Controller will execute the setting action at the point clock.

The setting method is as follows:



The following are examples in setting steps: No.1 timer boost time point number selection interface, No.2 timer boost on, No.3 timer boost off.

NOTE

1) The unit will always execute the latest command. For example, the user sets timer (8:00 boost on), timer (12:00 boost off), timer (16:00 boost on). If user manually turns off the boost function at 10:00, the boost function will be turned off immediately, and it will be turned on in 16:00 according to timer ; if user manually turns on the unit at 18:00, the boost function will be turned on immediately until next day 8:00 when timer is executed.

2) If the unit is be turned off or automatic standby when reached the set temperature, the boost function will be turned off automatic.

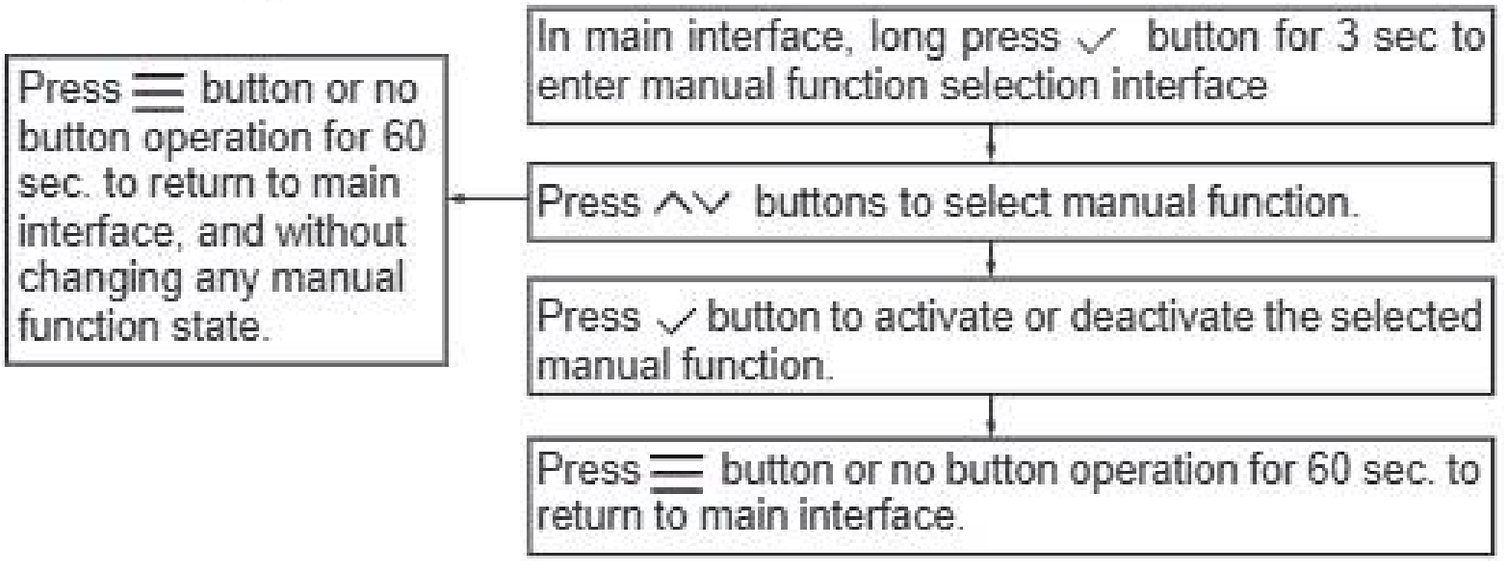
3) The unit and boost function will not be turned on when the unit is in off mode or the silence function is enabled.

4.4.9 Manual function

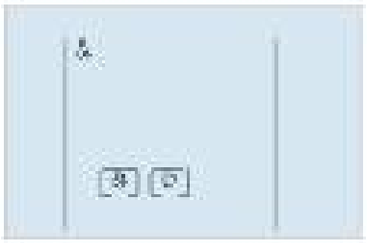
4.4.9.1 Activate manual function

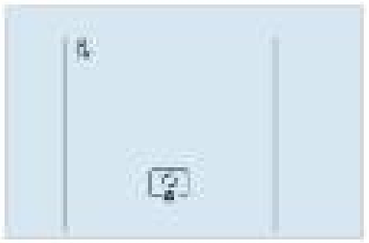
In main interface, long press ✓ button for 3 sec. to enter manual function selection interface, setting icon ( ) and manual function icons (boost , silence) will be lightened, then press ∧∨ buttons to select function. If the function is selected, the function icon will slowly flash. Press ✓ button to activate or deactivate the selected manual function. If the function is activated, the function icon (such as boost) and the ✔ icon will be lightened together (such as).

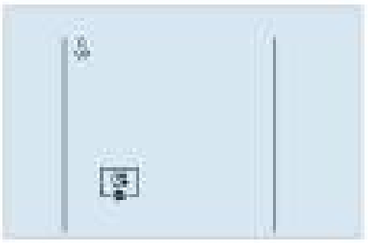
The setting method is as follows:



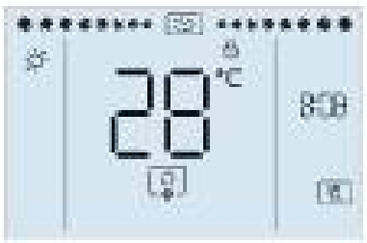
Some interface examples are as follows:

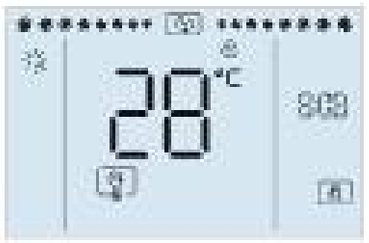






The activated function icon will slowly flash in main interface.
Some interface examples are as follows:





NOTE

1) If the unit is be turned off or automatic standby when reached the set temperature, the boost function will be turned off automatic.

3) The unit and boost function will not be turned on when the unit is in off mode.

4) The boost function will not be turned on when the silence function is enabled.

4.4.10 Query

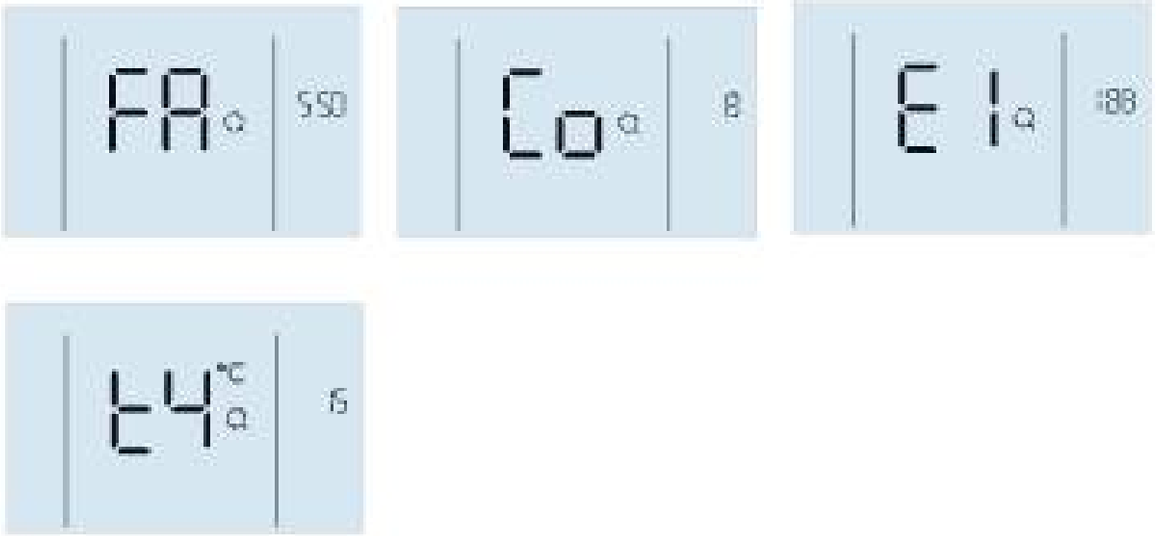
Press ∧ + ⏲ buttons for 1 sec. to query unit operating parameter. During querying, press ∧∨ buttons to switch different parameters. The Q icon will be lightened during querying. If some parameters are invalid for some unit, the parameter will be displayed as "--" or "----".

Query explanation

No.	Displayed at 88:88	Explanation	Displayed at 188
1	Fan speed gear value (0 means fan stopped)	Fan speed	FA (FA)
2	Pump0=OFF, 1=ON	Water pump state	Pu (PU)
3	Pulse value	Pulse value of EXV1	E1 (E1)
4	Frequency (Hz)	Compressor frequency	Fr (Fr)
5	Current value (A)	Unit current	Co (Co)
6	Voltage value (V)	Unit voltage	uo (uo)
7	Voltage value (V)	DC bus voltage	dC (dC)
8	Pressure value (KPa)	Discharge pressure (PC)	PC (PC)
9	Pressure value (KPa)	Suction pressure (PE)	PE (PE)
10	Temperature value	Discharge temp. (Tp)	tP (Tp)
11	Temperature value	Suction temp. (Th)	th (Th)

No.	Displayed at 88:88	Explanation	Displayed at 188
12	Temperature value	Fin-coil heat exchanger temp.(T3)	t3 (t3)
13	Temperature value	Ambient temp. (T4)	t4 (t4)
14	Temperature value	Liquid coil temp. (T2)	t2 (t2)
15	Temperature value	Vapor coil temp. (T2B)	1t2 (1t2)
16	Temperature value	Water inlet temp. (Twi)	tn (tn)
17	Temperature value	Water outlet temp. (Two)	to (to)
18	Temperature value	Drive board temp. (TF)	tF (tF)
19	trc (trc)	Cooling mode restart offset temp. (Trc)	value
20	trh (trh)	Heating mode restart offset temp. (Trh)	value
21	Cumulative time (hours)	Unit operation cumulative hours (t1)	t1 (t1)
22	Code	Compressor frequency limite code (Li)	Li (Li)
23	Er 1 (Er1)	Historical fault 1	code
24	Er2 (Er2)	Historical fault 2	code
25	Er3 (Er3)	Historical fault 3	code
26	Ctrl (Ctrl)	Controller software version	version No.
27	OdU (OdU)	Main board software version	version No.

Some interface examples are as follows:



4.4.11 Initialize and restore factory settings

The controller will initialize in a initial few seconds after power on, and no control commands or button operations are valid.

In main interface, long press ∧+∨+✓buttons for 10 sec. to restore factory settings.

5 ERROR AND OTHER CODES EXPLANATION

When the unit occurred any fault, the error code will be displayed at 88:88, and alarm icon ⓘ will quickly flash, and cancel icon  will slowly flash, and buzzer will sound 3 times every 180 sec. Long press ◷ for 3 sec. to cancel buzzer, but alarm icon and error code will quickly flash until the fault is removed.

Error and Other Code Explanation

Code	Explanation
bA	Ambient temp. sensor (T4) out of operation range
C7	High temperature protection of inverter module
E0	Water flow malfunction(after 3 times E8)
E2	Communication malfunction (controller - main board)
E3	Total outlet water temp.sensor(T1) malfunction
E5	Air side heat exchanger temp. sensor (T3)malfunction
E6	The ambient temperature sensor (T4)malfunction
E8	Water flow malfunction
E9	Suction temperature sensor(Th) malfunction
EA	Discharge temperature sensor(Tp) malfunction
Ed	Inlet water temp.sensor (Tw_in) malfunction
EE	EEprom malfunction
F1	DC bus low voltage protection
F6	EXV1 fault
H1	Communication malfunction (inverter board - main board)
H2	Liquid refrigerant temp.sensor(T2) malfunction
H3	Gas refrigerant temp.sensor(T2B) malfunction
H4	Three times L0 protecs

Code	Explanation
H6	The DC fan malfunction
H7	Voltage protection
H8	HP pressure sensor malfunction
HA	Outlet water temp.sensor (Tw_out) malfunction
Hb	Three times PP protection and Tw_out below 7
HF	Inverter module board EE prom malfunction
HH	10 times H6 in 2 hours
HP	Low pressure protection in cooling mode
P0	Low pressure switch protection
P1	High pressure switch protection
P3	Compressor overcurrent protection
P4	Comp discharge temp. too high protection
P5	|Tw_out-Tw_in| value too big protection
Pb	Anti-freeze mode
PP	|Tw_out-Tw_in| abnormal protection
Pd	High temperature protection of air side heat exchanger temperature(T3)
L0	Inverter or compressor protection
L1	DC bus low voltage protection
L2	DC bus high voltage protection

Code	Explanation
L3	Current sampling error of PFC circuit
L4	Rotating stall protection
L5	Zero speed protection
L7	Phase loss protection of compressor
Pb	Anti-freezing operation state
dF	Defrosting operation state
d0	Compressor oil return operation state
d8	Remote switch on/off state

NOTE


16117100003314 V.C

印刷方式：黑白印刷，100*100mm
材质说明：封面封底铜版纸105g
内页 双胶纸80g

设计更改记录表（仅做说明用，不做菲林）

版本升级	更改人	更改日期	更改主要内容	涉及更改页面（印刷页码）
A-B	张顺	23-02-13	见附件更改记录表	见附件更改记录表
B-C	郭锦杰	23-07-28	见附件更改记录表	见附件更改记录表