daitsu

INSTALLATION AND MAINTENANCE MANUAL

IM · En

Wired Controller CDV 59

Serie
MULTI-HYBRID ACS

Models
CDV 59

Edition
R00

To Users

Thank you for selecting DAITSU product. Please read this instruction manual carefully before installing and using the product, so as to master and correctly use the product. In order to guide you to correctly install and use our product and achieve expected operating effect, we hereby instruct as below:

(1) This 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 responsibility for their safety. Children should be supervised to ensure that they do not play with the appliance.

(2) This instruction manual is a universal manual; some functions are only applicable to particular product. All the illustrations and information in the instruction manual are only for reference, and control interface should be subject to actual operation.

(3) In order to make the product better, we will continuously conduct improvement and innovation. If there is adjustment in the product, please subject to actual product.

(4) If the product needs to be installed, moved or maintained, please contact our designated dealer or local service center for professional support. Users should not disassemble or maintain the unit by themselves, otherwise it may cause relative damage, and our company will bear no responsibilities.

This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

Contents

1 Safety Notices (Please be sure to abide them)

⚠️ **WARNING:** If not abide them strictly, it may cause severe damage to the unit or the people.

⚠️ **NOTE:** If not abide them strictly, it may cause slight or medium damage to the unit or the people.

🚫 This sign indicates that the items must be prohibited. Improper operation may cause severe damage or death to people.

❗ This sign indicates that the items must be observed. Improper operation may cause damage to people or property.

⚠️ **WARNING!**

This product can't be installed at corrosive, inflammable or explosive environment or the place with special requirements, such as kitchen. Otherwise, it will affect the normal operation or shorten the service life of the unit, or even cause fire hazard or serious injury. As for the above special places, please adopt special air conditioner with anti-corrosive or anti-explosion function.

2 Operation Notices

(1) The power supply for all water tanks or hot water generators must be unified.
(2) Prohibit installing the wired controller at wet or sunshine places.
(3) Do not knock, throw or frequently disassemble the wired controller.
(4) Do not operate the wired controller with wet hands.
(5) When two wired controllers control one (or more) water tank or hot water generator(s), the address of wired controller should be different.

3 Display
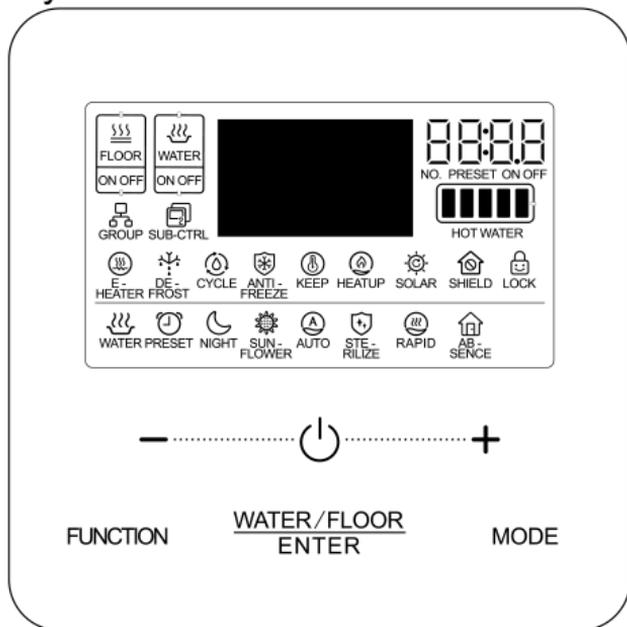
Fig. 3.1 Appearance of wired controller

3.1 LCD of Wired Controller
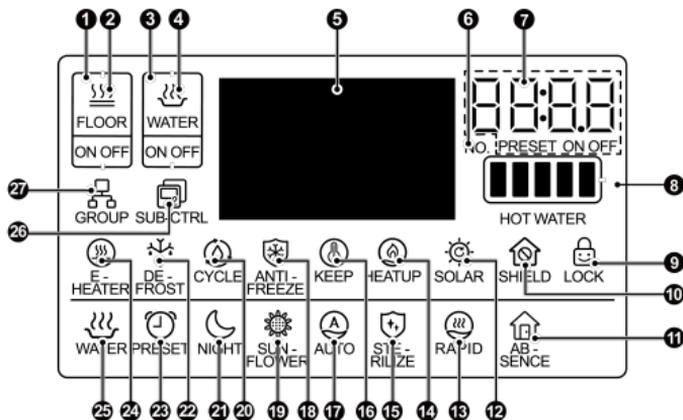
Fig. 3.2 LCD graphics of wired controller

3.2 LCD Display Instruction

Table 3.1 LCD display instruction

No.	Symbols	Instructions
1	FLOOR interface sign	The icon will light up when the current wired controller is at the interface of floor heating function.
2	FLOOR ON/OFF	The icon for floor heating keeps on; the ON/OFF icon is displayed according to the on or off status of floor heating.
3	WATER interface sign	The icon will light up when the current wired controller is at the interface of hot water function.

3

No.	Symbols	Instructions
4	WATER ON/OFF	Overview of the hot water function: the WATER icon keeps on; the ON/OFF icon is displayed according to the on or off status of hot water function.
5	Lattice zone	It displays set water temperature, actual water temperature, two-dimension code, IDU engineering No., error code or other information.
6	No.	When inquiring or setting project number of water tank or hot water generator, icon "NO." is displayed.
7	Timer zone	Display the system clock and timer status.
8	Available hot water	The proportion of available hot water for the current user is displayed according to the state in the frame for available hot water; it is displayed only at the interface for hot water.
9	Child lock	Child lock status.
10	Shield	Shielding status.
11	Absence	It's displayed when the ABSENCE function is valid.
12	Solar	It is displayed when the hot water generator is connected to solar energy; Flicker when solar power is on work.
13	Rapid	It's displayed when the RAPID function is valid. This function can be set separately under water heating or floor heating and the icon is displayed according to whether the function under the respective interface is valid or not.

No.	Symbols	Instructions
14	Heat up	Running status of the water tank or hot water generator.
15	Sterilize	The icon will light up when the STERILIZE function is valid and will be blinking under sterilization.
16	Keep	Running status of the water tank or hot water generator.
17	Auto	It's displayed when the function of water temperature auto setting is valid. This function can be set separately under water heating or floor heating and the icon is displayed according to whether the function under the respective interface is valid or not.
18	Anti-freeze	Anti-freezing status.
19	Sun-flower	It is displayed when the SUN-FLOWER function is valid.
20	Cycle	Running status of the back water pump.
21	Night	Night hot water mode.
22	Defrost	Outdoor unit defrosting status.
23	Preset	Preset hot water mode.
24	E-heater	The icon indicates whether the auxiliary electrical heating is on.
25	Standard hot water	Standard hot water mode.
26	Sub-controller	It indicates that the current wired controller is a slave wired controller (address of wired controller is 02).

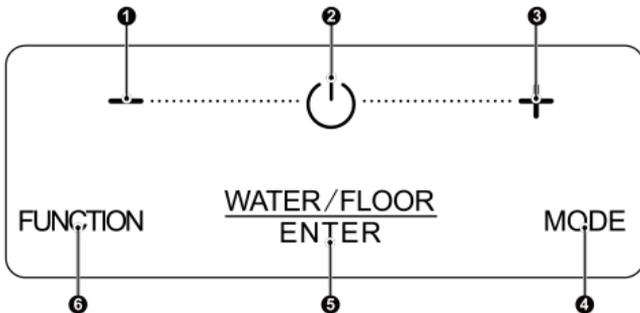| No.	Symbols	Instructions
27	Group	It is displayed when one wired controller controls multiple water tanks or hot water generators simultaneously.
NOTE: When wired controller is connected with different indoor units, some functions will be different.		

4 Buttons

4.1 Button Graphics

Fig.4.1 Button graphics

4.2 Function Instruction of Buttons

Table 4.1 Function instruction of buttons

No.	Buttons	Instructions
1	Decrease	1) Set water temperature for water heating, floor heating and high-temperature sterilization;
3	Increase	2) Set timer (water/floor heating), preset water heating time and sterilization time; 3) Set and inquire parameter.
2	ON/OFF	Water/Floor heating ON/OFF.
4	Mode	Under the interface of water heating, 3 modes can be switched: standard water heating, preset water heating and night water heating. (NOTE: modes cannot be switched under the interface of floor heating). When setting time or parameters, it can be used for enter the next layer of setting.
5	WATER/FLOOR/ENTER	Switchover between water heating and floor heating interfaces (only when water heating and flooring heating functions are both valid). The "WATER/FLOOR/ENTER" button can also be used for function selection and cancellation.
6	Function	WATER interface: Timer setting, clock setting, sun-flower function, water temperature auto function of water heating, sterilize function, rapid water heating function; FLOOR interface: Timer setting, clock setting, water temperature auto function of floor heating, absence function, rapid floor heating function.

No.	Buttons	Instructions
1 + 3	Child lock	Activate or cancel the child lock by long-pressing the "decrease" and "increase" buttons for 5 seconds.

5 Installation and Commissioning

Unit: mm
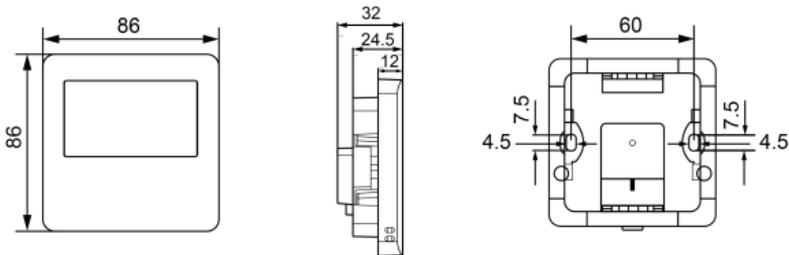
Fig. 5.1 Dimension of Wired Controller
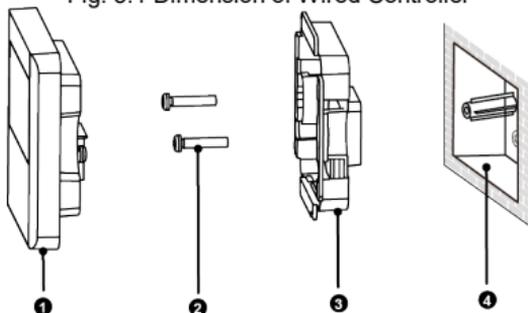
Fig. 5.2 Parts of Wired Controller

No.	1	2	3	4
Name	Panel of wired controller	Screw M4×25	Soleplate of wired controller	Junction box mounted in the wall space.
QTY	1	2	1	Parts supplied by users.

5.1 Instruction of Wired Controller

5.1.1 Communication Wire Selection

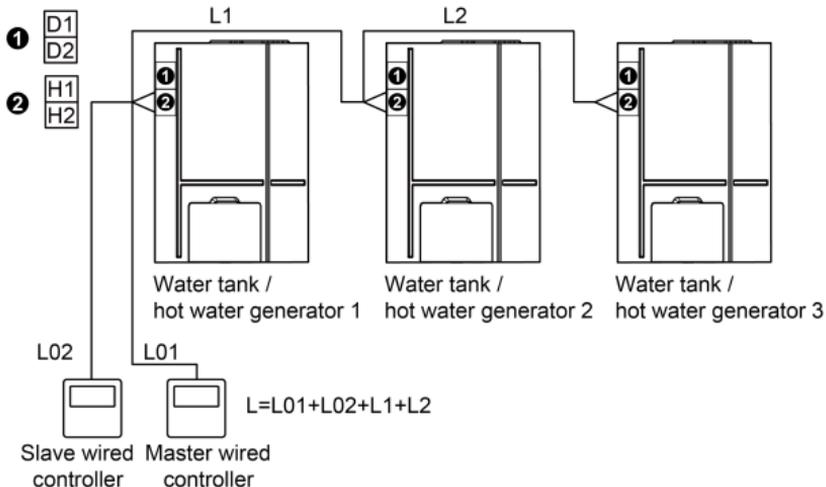Fig. 5.3 Length of communication wire

Wire material type	Total length L (m/feet)	Wire size (mm²/AWG)	Material standard	Remarks
Light/ Ordinary Polyvinyl chloride sheathed cord. (60227 IEC 52 /60227 IEC 53)	L≤250m (L≤820-1/5 feet)	2×0.75 mm²~ 2×1.25 mm² (2×AWG18~ 2×AWG16)	IEC 60227-5:2007	1) Total length of communication line can't exceed 250m (820-1/5feet). 2) The cord shall be Circular cord (the cores shall be twisted together). 3) If unit is installed in places with intense magnetic field or strong interference, it is necessary to use shielded wire.

5.1.2 Requirements for Installation

(1)   Prohibit installing the wired controller at wet places.

(2)   Prohibit installing the wired controller at direct sunshine places.

(3)   Prohibit installing the wired controller at the place near high temperature objects or water-splashing places.

5.1.3 Requirements for Wired Connection

There are four network wiring methods between the wired controller and the water tank or hot water generator:
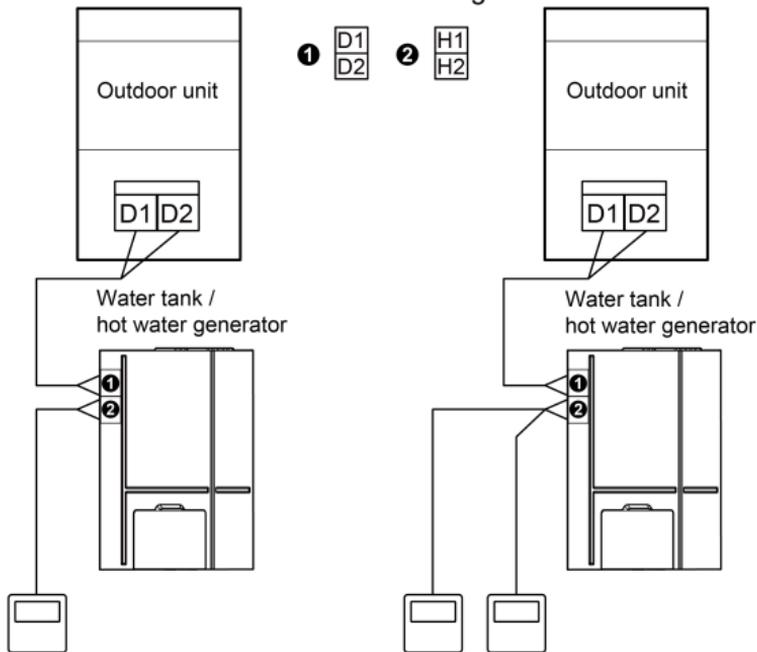
Fig. 5.4

Fig. 5.5

Fig.5.4 One wired controller controls one water tank or hot water

generator.

Fig.5.5 Two wired controllers control one water tank or hot water generator.

Fig. 5.6 One wired controller controls multiple water tanks or hot water generators simultaneously

Fig. 5.7 Two wired controllers control multiple water tanks or hot water generators simultaneously
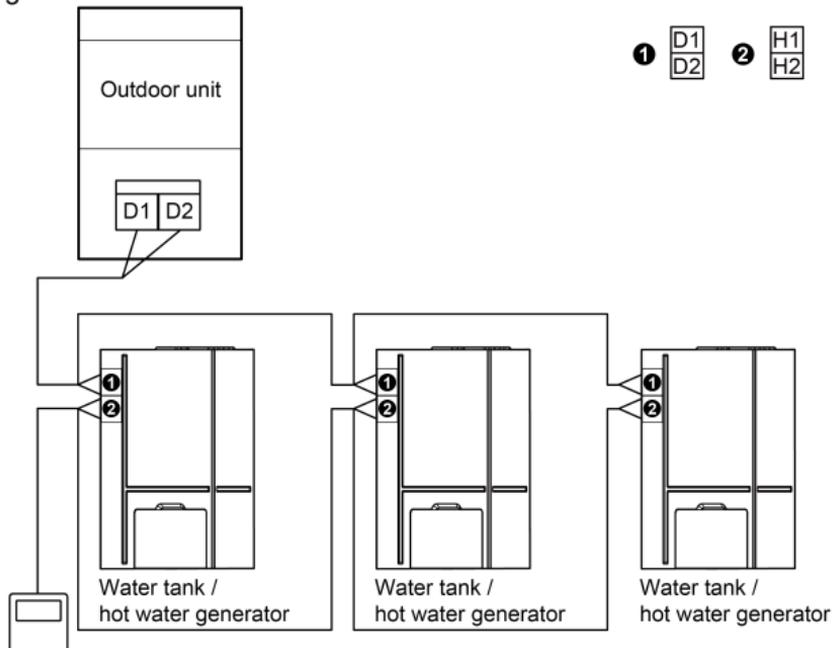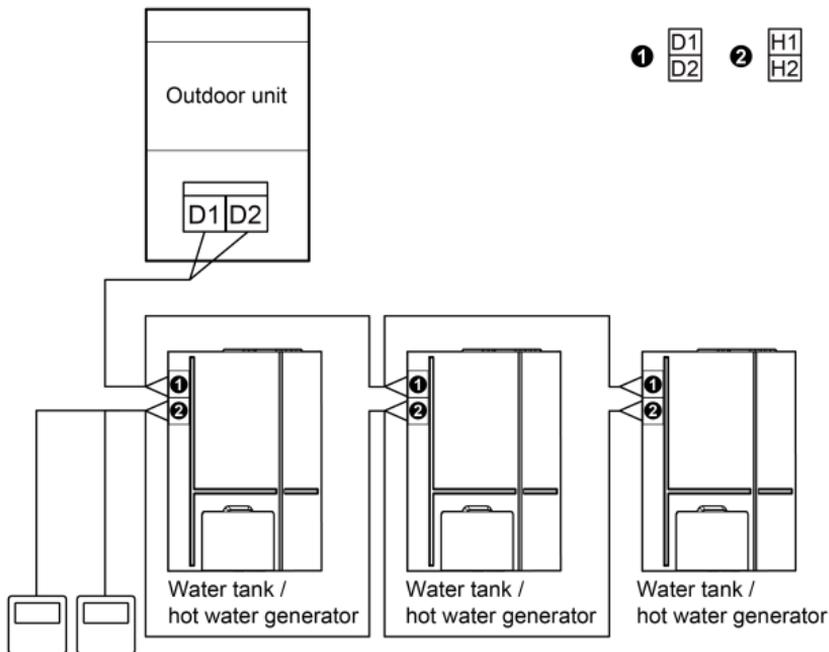
Instruction for wire connection:

(1) When one wired controller controls multiple water tanks or hot water generators simultaneously, the wired controller can

connect to any one water tank or hot water generator, but the connected ones must be either water tanks or hot water generators. The total quantity of water tank or hot water generator controlled by wired controller can't exceed 3 sets, and the connected water tank or hot water generator must be within the same network.

(2) When two wired controllers control one water tank or hot water generator, the addresses of those two wired controllers should be different. Please refer to 5.2.2 Parameter Setting.

(3) When two wired controllers control multiple water tanks or hot water generators simultaneously, they can connect to any one water tank or hot water generator, but the connected ones must be either water tanks or hot water generators. The addresses of those two wired controllers should be different. Please refer to 5.2.2 Parameter Setting. The total quantity of water tank or hot water generator controlled by wired controller can't exceed 3 sets, and the connected water tank or hot water generator must be within the same network.

(4) When one (or two) wired controller(s) control (s) multiple water tanks or hot water generators at the same time, the controlled water tanks or hot water generators should have the same setting.

(5) Network connection of wired controller and water tank or hot water generator must be according to one of the four wiring methods as shown in Fig 5.4-5.7 As for the connection method shown in Fig 5.5 and 5.7, there should be only one master

wired controller (address is 01) and one slave wired controller (address 02). The quantity of wired controller can't exceed two. It's suggested that the average length of communication wire between devices should be 15m.
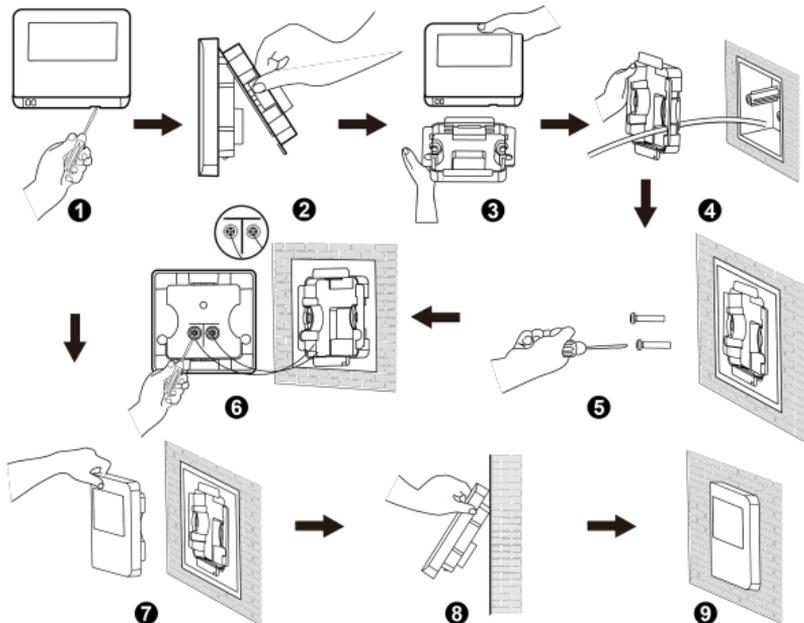
5.1.4 Installation

Fig. 5.8 Installation of Wired Controller

Fig. 5.8 is the simple installation process of wired controller; please pay attention to the following items:

(1)   Before installation, please cut off the power supply of water tank or hot water generator, it is not allowed to operate with power supply.

(2)   Pull out the two-core twisted pair inside the installation hole in the wall, and thread the wire through the hole in the back of soleplate of wired controller.

(3)   Stick the soleplate of wired controller on the wall and then use screw M4×25 to fix the soleplate with the installation hole of wall.

(4)   Connect the two-core twisted pair to two wiring terminals in the rear case of wired controller respectively, and then screw up the screws.

(5)   Bundle panel and soleplate of wired controller together and the installation is completed.

5.1.5 Disassembly
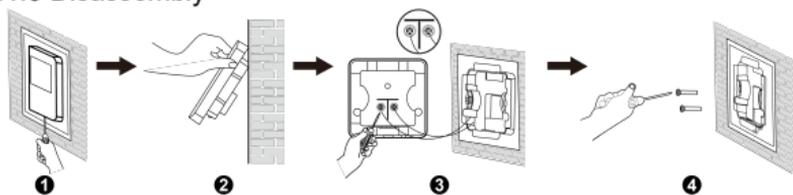
❶   ❷   ❸   ❹
Fig. 5.9 Disassembly of wired controller

5.2 Commissioning

5.2.1 Parameter Enquiry

Unit parameters can be checked in unit On or Off status.

(1) Long press "FUNCTION" button for 5s to enter the interface of viewing unit parameters. "C00" is displayed in lattice zone.

(2) Press "+" or "-" button to select parameter code.

(3) Press "WATER/FLOOR/ENTER" button to return to last step until exits viewing parameters.

The parameter enquiry list is as following:

Table 5.1 Parameters viewing list

Parameter code	Parameter name	Parameter range	Viewing method
C00	Entrance of adjustable parameter	—	In "C00" status, Timer zone shows the current water tank or hot water generator project number. When one wired controller is controlling multiple water tank or hot water generator units, then only the smallest project number will be displayed.

Parameter code	Parameter name	Parameter range	Viewing method
C01	View the project number and locate the faulted water tank or hot water generator	1~255: project number of online water tank or hot water generator	Press "MODE" button in "C01" status. Press "+" or "-" button to select the project number of water tank or hot water generator. Lattice zone: malfunction of the current water tank or hot water generator. Timer zone: (C5 malfunction of project number conflict) /project number of the current water tank or hot water generator. **NOTES:** System will not exit "C01" viewing automatically. User has to exit this interface manually.
C03	View the quantity of Aircon unit, water tank and hot water generators in the system.	1~80	Timer zone: display the quantity of indoor units within the system (including Aircon unit, water tank and hot water generator).

Parameter code	Parameter name	Parameter range	Viewing method
C06	View priority operation	00: normal operation 01: priority operation	Operation method: Enter viewing: press "MODE" button in "C06" status to enter the interface of viewing priority operation. Press "+" or "-" button to select water tank or hot water generator. Display method: Lattice zone: display project number of current water tank or hot water generator. Timer zone: displays current priority operation setting value of current water tank or hot water generator.
C09	View address of wired controller	01,02	Timer zone: display the address of wired controller.

Parameter code	Parameter name	Parameter range	Viewing method
C11	View the quantity of water tank or hot water generator in the case that one wired controller controls several water tanks or heat water generators at the same time	1~3	Timer zone: display the quantity of water tank or hot water generator controlled by the wired controller.
C12	View outdoor ambient temperature	—	Timer zone: display outdoor ambient temperature.

Parameter code	Parameter name	Parameter range	Viewing method
C18	One-button viewing of water tank or hot water generator project number	1~255 Project number of online water tank or hot water generator	Press "MODE" button in "C18" status to turn on the function of one-button viewing water tank or hot water generator project number. Press "+" or "-" button to select the water tank or hot water generator. Lattice zone: displays number of the current water tank or hot water generator. Timer zone: displays project number of water tank or hot water generator. **NOTES:** 1) After turning on the one-button viewing function, each wired controller of the entire system will display the project number of its controlling water tank or hot water generator on its timer zone.

Parameter code	Parameter name	Parameter range	Viewing method
C18	One-button viewing of water tank or hot water generator project number	1~255 Project number of online water tank or hot water generator	2) Slave wired controller cannot view "C18". Cancel method: 1) If user exits the "C18" interface manually, the one-button viewing function will be immediately turned off. 2) If system exits the "C18" interface due to no action in 20 seconds, user has to press the "⏻" button under on/off status to cancel this function. 3) After the one-button viewing function is turned on, pressing the "⏻" button of any wired controller of the same system network under on/off status will cancel this function.

Parameter code	Parameter name	Parameter range	Viewing method
C21	View water temperature	0~100℃	Enter viewing: press "MODE" button in "C21" status to enter the interface of viewing water temperature. Press "+" or "-" button to select the number of water tank or hot water generator. Display method: Lattice zone: display project number of current water tank or hot water generator; Timer zone: display water temperature of water tank or hot water generator.

NOTE:

Under parameter viewing status, "FUNCTION" button is invalid. Press button "⏻" to go back to the home page, but not turning on/off the unit.

5.2.2 Parameter Setting

Unit parameters can be set in unit On or Off status.

(1) Long press "FUNCTION" button for 5s and the lattice zone displays "C00"; long press "FUNCTION" button for another 5s to enter the interface of setting wired controller parameters. "P00" is displayed in lattice zone.

(2) Press "+" or "-" button to select parameter code. Press "MODE" button to enter parameter setting. At that time, parameter value is blinking. Press "+" or "-" button to adjust the parameter value

and press "WATER/FLOOR/ENTER" button to finish setting.
(3)   Press "WATER/FLOOR/ENTER" button to return to last step until exists setting parameters.

The parameter setting list is as following:

Table 5.2 Parameter setting list

Parameter code	Parameter name	Parameter range	Default value	Note
P13	Set address of wired controller	01: master wired controller 02: slave wired controller	01	Slave wired controller (02) is without unit parameter setting function except setting its address.
P14	Set quantity of group controlled water tank or hot water generator	00: it is prohibited to use this function 01-03: quantity of water tank or hot water generator	01	Set corresponding value according to the quantity of connected water tanks or hot water generators
P18	Shield waterflow switch protection	00: Not shield 01: Shielded	00	—

Parameter code	Parameter name	Parameter range	Default value	Note
P19	Button sensibility setting	00: Ex-factory sensibility 01: Medium-high sensibility 02: High sensibility 03: Adaptive sensibility 04: Keep current sensibility	03	—
P20	Power-off memory sun-flower function	00: Not memorized 01: Memorized	00	It can be set only when hot water function is valid.

Parameter code	Parameter name	Parameter range	Default value	Note
P43	Set priority operation	00: normal operation 01: priority operation	00	When power supply is insufficient, the water tanks or hot water generators, which are set to priority operation, can operate, while other water tanks or hot water generators are forced to be turned off.
P46	If keep warm function is allowed or not when the water tank is in standby status	00: allow 01: Not allow	00	—
P47	The temperature setting value of keep warm function when the water tank is in standby status	35~46°C	42°C	—
P50	Set the sun-flower keep warm water temperature	35~50°C	40°C	—

Parameter code	Parameter name	Parameter range	Default value	Note
P53	Automatically set modification value of hot water temperature	-2~8°C	0°C	—
P54	Days for circulation of high temperature sterilization	0~60 day	0	When the setting is 0, the function of high temperature sterilization is valid for once and will not be memorized.
P55	Time for starting high temperature sterilization in advance	0~3h	1	—
P56	Is it allowed to turn on e-heater when hot water mode is on?	00: Yes 01: No	00	—
P58	Is it allowed to recover heat automatically	00: Yes 01: No	00	—

Parameter code	Parameter name	Parameter range	Default value	Note
P59	Set water temperature of heater for automatic heat recovery	35~46°C	42°C	—
P73	Is the rapid heating mode allowed or not	00: Yes 01: No	01	—
P80	Is it allowed to open the auxiliary floor heating	00: Yes 01: No	00	—
P81	Max. set value for floor heating water outlet temperature	40~55°C	45°C	—
P82	Set value of water yielding temperature difference after floor heating reaches temperature point to restart of unit	2~15°C	10°C	—

NOTE:

Under parameter setting status, press button "$\circlearrowleft$" to go back to home page, but not turning on/off the unit.

6 Operation Instructions

6.1 Switch Between Water Heating & Floor Heating Interfaces

Press the "WATER/FLOOR/ENTER" button for every time under any condition with no other operation (log off in advance when there is), the current interface will switch between the water heating and floor heating interfaces.

In floor heating interface: press the "WATER/FLOOR/ENTER" button and the current interface will switch to the water heating interface, and the "⦿" will light up before the water heating mark.

In water heating interface: press the "WATER/FLOOR/ENTER" button and the current interface will switch to the floor heating interface, and the "⦿" will light up before the floor heating mark.

NOTE:

Only when the hot water generator is connected and the hot water and floor heating functions are effective, the interface switching operation and display are carried out according to the above contents.

6.2 Water Heating ON/OFF

In floor heating interface: press the "WATER/FLOOR/ENTER" button to activate the water heating interface; and then switch

according to the methods below:

Water heating on: press the "$\bigcirc$" button to turn off the water heating function;

Water heating off: press the "$\bigcirc$" button to turn on the water heating function;

In water heating interface: directly switch according to the above methods.
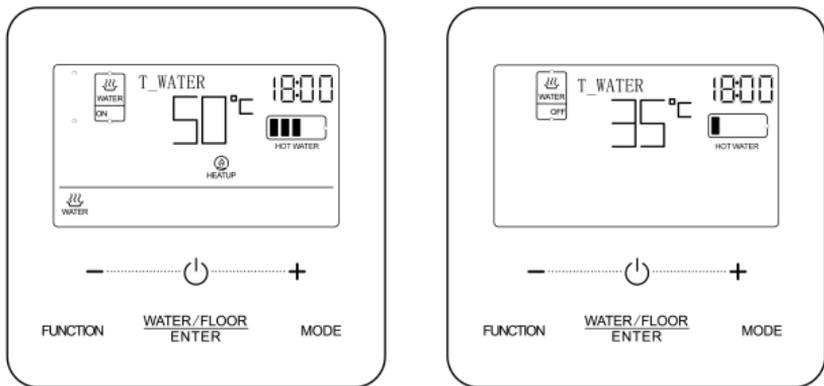
See Fig.6.1 for the water heating on and off interfaces.

Fig.6.1 Water Heating On/Off Interface

6.3 Water Heating Mode Setting

When water heating is on, press "MODE" button each time, then mode will cycle in the order below:

Fig.6.2 Switchover of Water Heating Mode

Standard hot water mode: The water tank or hot water generator immediately starts or stops heating according to current water temperature setting.

Preset hot water mode: Preset the water heating time, so that the water tank or hot water generator will be started in advance according to the actual water temperature. Meanwhile, the compressor may be started or stopped according to the difference between water temperature setting and actual water temperature. The water tank or hot water generator will be stopped 1~4 hour after the preset time. After started, the machine will run cyclically every day.

Night hot water mode: Fix the time of hot water supply at 00:00~06:00, so that the water tank or hot water generator will be started in this time section. The start or stop of the compressor is decided according to the difference between preset water temperature and actual water temperature. If exceeding this time section, the water tank or hot water generator will be stopped. After started, the machine will run cyclically every day.

6.4 Water Heating Temperature Setting

When water heating is on, press the "+" or "-" button, the set temperature will increase or decrease by 1℃; when long-pressing the button, the temperature will increase or decrease by 1℃ every 0.3s.

In the standard water heating mode, preset water heating mode and night water heating mode, the set temperature ranges from 35℃ to the maximum available temperature of the water heating. The default setting temperature is 50℃.

NOTES:
①　The default maximum available temperature of the water heating is considered as 55℃, which can be set to 55℃ to 70℃ by professional technicians.
②　The temperature of standard water heating, preset water heating and night water heating enjoys the same set range, and the set values of the water temperature under different modes are independent.
③　When the temperature auto setting function of water heating is valid, the "+" or "-" button is not available for adjustment of water temperature.

6.5 Function Switchover of Water Heating

The following functions can be set under the water heating on/off status:

Water heating on/off	Functions	Note
Standard water heating on	Timer setting, clock setting, sunflower(advanced function), water temperature auto set for water heating, high-temperature sterilization, rapid water heating	—
Preset water heating on	Preset setting, clock setting, water temperature auto set for water heating, high-temperature sterilization, rapid water heating	—
Night water heating on	Timer setting, clock setting, water temperature auto set for water heating, high-temperature sterilization, rapid water heating	—
Water heating off	Timer setting, clock setting, high-temperature sterilization	—

When the unit is turned on, under the standard water heating mode, functions will be switched circularly according to the sequence as below after each pressing of "FUNCTION" button on the basic functions setting interface:

Fig.6.3 Basic Function Switchover in Standard Water Heating Mode

When the unit is turned on, under the standard water heating mode, press and hold "FUNCTION"+ "MODE" buttons for 5s to enter into the setting interface for advanced functions. On this interface, function will be switched circularly according to the sequence as below after each pressing of "FUNCTION" button:

Fig.6.4 Advanced Function Switchover in Standard Water Heating Mode

Under water heating on status, for preset water heating mode, each pressing of button "FUNCTION" will switch functions in the order below:

Fig.6.5 Function Switchover in Preset Water Heating Mode

Under water heating on status, for night water heating mode, each pressing of button "FUNCTION" will switch functions in the order below:

Fig.6.6 Function Switchover in Night Water Heating Mode

Under water heating off status, each pressing of button "FUNCTION" will switch functions in the order below:

Fig.6.7 Function Switchover in Water Heating Off Status

34

NOTES:

①   If the function is shielded or unavailable due to other reasons, its setting will be skipped when pressing the "FUNCTION" button.

②   As for the rapid and automatic water temperature and Sun-flower functions, the icon of the function will not be displayed if it can't be set in the switched mode; While a certain function can be set in the switched mode, it can be set, modified or cancelled in the mode.

③   The ON advanced functions can be set on the basic functions interface. The OFF advanced functions must be set on the advanced functions interface.

6.6 Sun-flower Setting

Sun-flower function: find out the highest outdoor temperature point of the previous day by recording the outdoor temperature history, so as to determine the time of power on water heating and save energy.

Set sun-flower function: Under the standard water heating mode, press and hold "FUNCTION" and "MODE" buttons for 5s to enter into the advanced function setting interface and then press the "FUNCTION" button to switch to the sun-flower function, and press the "WATER/FLOOR/ENTER" button to enable the sun-flower function when the icon of " SUN-FLOWER " flickers.

Cancel sun-flower function: press the "FUNCTION" button when

standard water heating mode is on to switch to the sun-flower function, and press the "WATER/FLOOR/ENTER" button to cancel it.

NOTE: Sun-flower function is defaulted to be unmemorized after power failure. While it can be memorized after power failure by setting the parameters P20. Please refer to 5.2.2 parameters settings.

6.7 Water Temperature Auto Setting Function of Water Heating

Water temperature auto setting function: the set water temperature for water heating is given by the main board according to the outdoor ambient temperature. User doesn't need to set the water temperature.

Set water temperature auto setting function: press the "FUNCTION" button when water heating is on to switch to the automatic function, and the icon of " $\underset{\text{AUTO}}{\text{\textcircled{A}}}$ " flickers. Press the "WATER/FLOOR/ENTER" button to enable the automatic function.

Cancel water temperature auto setting function: press the "FUNCTION" button when water heating is on to switch to the automatic function, and press the "WATER/FLOOR/ENTER" button to cancel it.

6.8 High-temperature Sterilization Setting

High-temperature sterilization function: the water temperature of the water tank is required to be heated to 65 to 70℃ (configurable) in the required time for high-temperature sterilization.
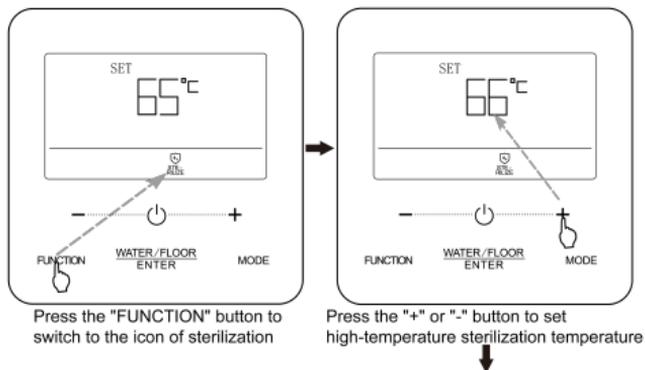
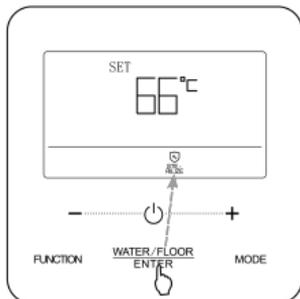(1) When the number of high-temperature sterilization cycle days

is 0, it means the sterilization set is only available for once:

Set high-temperature sterilization function: press the "FUNCTION" button in the water heating interface to switch to the sterilization function, and the icon " $\overset{\bigoplus}{\underset{\text{RILIZE}}{\text{STE-}}}$ " will flicker, then press the "+" or "-" button to adjust the temperature of high-temperature sterilization, and press the "WATER/FLOOR/ENTER" button to enable the high-temperature sterilization function.
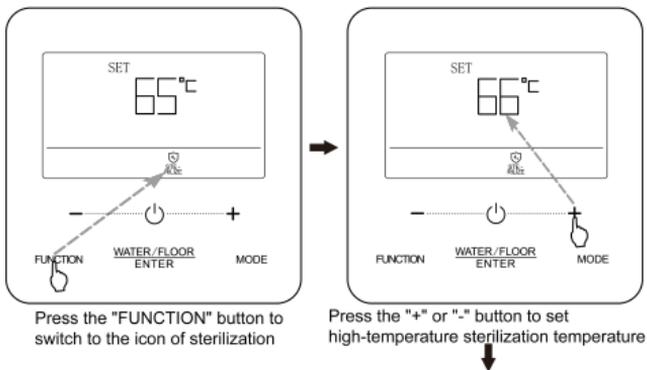
Cancel high-temperature sterilization function: press the "FUNCTION" button in the water heating interface to switch to the sterilization function, and press the "WATER/FLOOR/ENTER" button to cancel it.

High-temperature sterilization function setting is as show in the Fig:

Press the "FUNCTION" button to
switch to the icon of sterilization

Press the "+" or "-" button to set
high-temperature sterilization temperature

Press the "WATER/FLOOR/ENTER" button
to enable the high-temperature sterilization

Fig.6.8 When High-temperature Sterilization is Available For Once

(2)   When the number of high-temperature sterilization cycle days is above 0, it means the sterilization function is available for cycling:
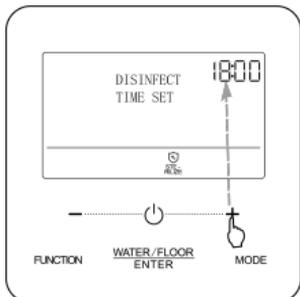
Set high-temperature sterilization function: press the "FUNCTION" button in the water heating interface to switch to the sterilization function, and the icon of " $\underset{\substack{STE\\RILIZE}}{\textcircled{+}}$ " will flicker, then press the "+" or "-" button to adjust the temperature of high-temperature sterilization. Press the "MODE" button, and the time zone will flicker. Press the "+" or "-" button to adjust the preset hour for high-temperature sterilization, press "MODE" button to switch to minute setting, and then press "+" or "-" button to set the preset minute for the high-temperature sterilization. Press the "WATER/FLOOR/ENTER" button to enable the high-temperature

38

sterilization function.

Cancel high-temperature sterilization function: press the "FUNCTION" button in the water heating interface to switch to the sterilization function, and press the "WATER/FLOOR/ENTER" button to cancel it.

NOTES:

① The preset time of high-temperature sterilization is considered as "12:00", and the time zone shows "12:00".

② The cycling days of high-temperature sterilization can be changed or set by professional technicians, and the number of factory default high-temperature cycling days is 0.

The high-temperature sterilization function setting is as shown in the figure:

Press the "FUNCTION" button to switch to the icon of sterilization

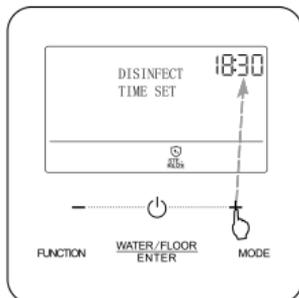Press the "+" or "-" button to set high-temperature sterilization temperature

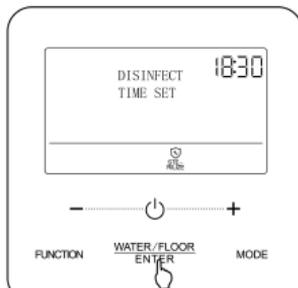Press the "+" or "-" button to set
the preset hour for sterilization
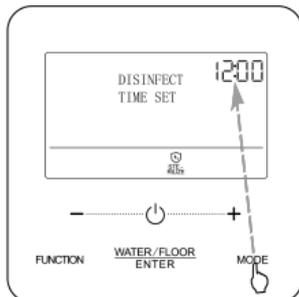
Press the "MODE" button to set preset
time for high-temperature sterilization
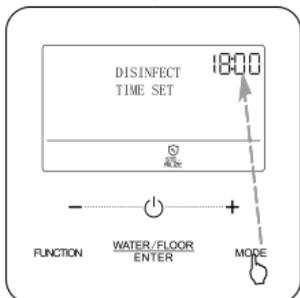
Press the "MODE" button to switch
to minute setting

Press the "+" or "-" button to set the
preset minute for sterilization

Press the "WATER/FLOOR/ENTER" button to enable high-temperature sterilization

Fig.6.9 When High-temperature Sterilization is Available for Cycling

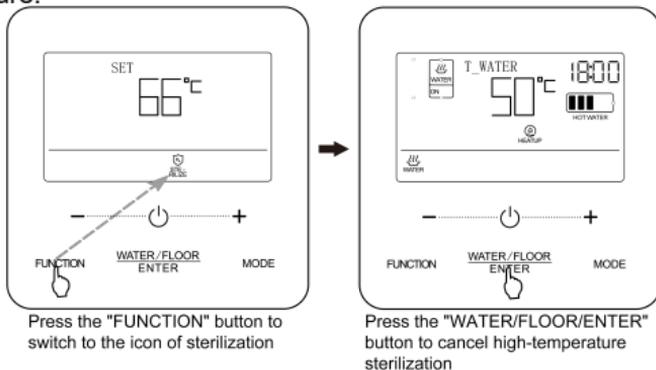Cancelling of the high-temperature sterilization is as shown in the figure:

Press the "FUNCTION" button to switch to the icon of sterilization

Press the "WATER/FLOOR/ENTER" button to cancel high-temperature sterilization

Fig.6.10 Cancel High-temperature Sterilization

6.9 Setting of Rapid Water Heating

Rapid water heating: turn on compressor and e-heater when the outdoor unit allows to.

Set rapid water heating: press the "FUNCTION" button when water heating is on to switch to rapid water heating, and the icon of " $\underset{\text{RAPID}}{\text{\tiny ((}}$ " flickers. Then press the "WATER/FLOOR/ENTER" button to enable the rapid water heating function.

Cancel rapid water heating: press the "FUNCTION" button when water heating is on to switch to rapid water heating, and press the "WATER/FLOOR/ENTER" button to cancel it.

NOTES:

① The rapid water heating function is only available for once. It will be cancelled to save energy when the water tank or hot water generator reaches thermal insulation state.

② The rapid water heating function will be cancelled after the water heating is off.

6.10 Timer Setting of Water Heating

Timer on/off of water heating can be set either when the water heating is on or off.

Set timer for water heating:

Press "FUNCTION" button to switch to timer-on setting for water heating, the lattice area will display "TIMER SETTING", and timer area "ON" icon flickers.

Press "+" or "-" button to set the hour of timer-on for water heating, press "MODE" button to switch to minute setting and then press "+"

or "-" button to set the minute for timer-on. Press "WATER/FLOOR/ENTER" button can complete timer-on setting of water heating.

Before pressing "WATER/FLOOR/ENTER" button, press "MODE" button can save the timer-on setting of water heating and switch to timer-off setting for water heating, and the "OFF" icon flickers.

Press "+" or "-" button to set the hour of timer-off for water heating. Press "MODE" button to switch to minute setting and then press "+" or "-" button to set the minute for timer-off. Press "WATER/FLOOR/ENTER" button or "MODE" button can complete timer setting of water heating.
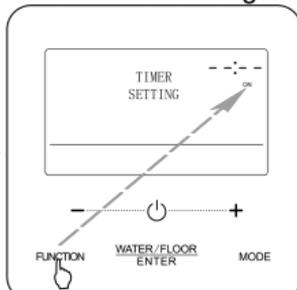
Cancel timer for water heating:

Press "FUNCTION" button to switch to water heating timer setting, press "MODE" button can switch to water heating timer-on or timer-off function, press "WATER/FLOOR/ENTER" button can cancel water heating timer function.
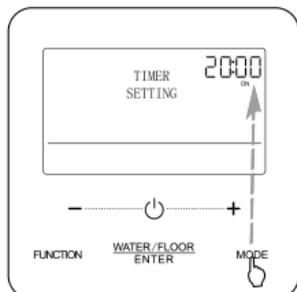
Timer setting for water heating is as shown in the figure:
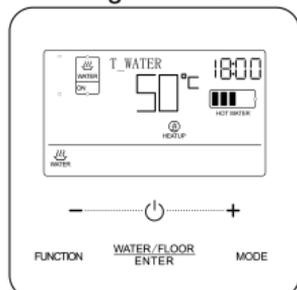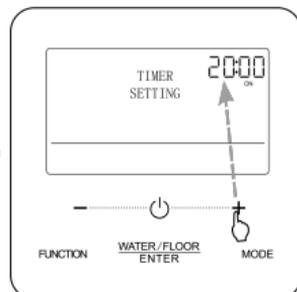

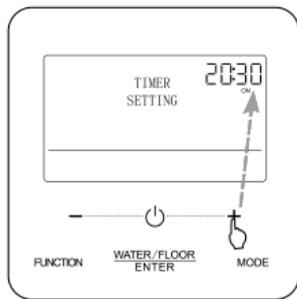Power on with timer unset

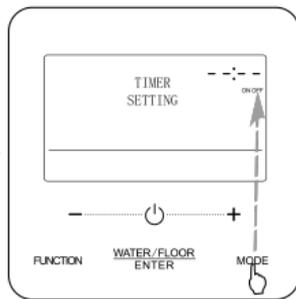Press "FUNCTION" button to switch to timer-on setting of water heating
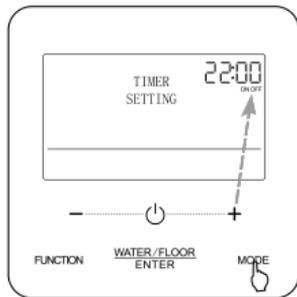

Press the "MODE" button to switch to minute setting

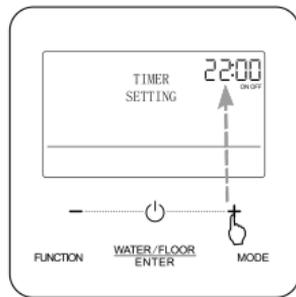Press "+" or "-" button to set the hour of timer-on for water heating

44

Press the "+" or "-" button to set
the minute for timer-on

Press the "MODE" button to switch
to power-off timer for water heating

Press "MODE" button to switch
to minute setting

Press "+" or "-" button to set the hour
of timer-off for water heating

Press the "+" or "-" button to set the minute for timer-off

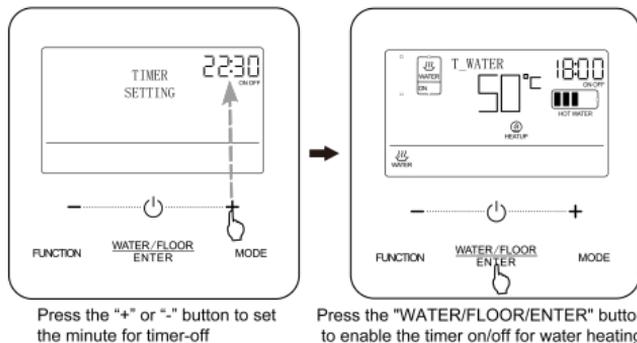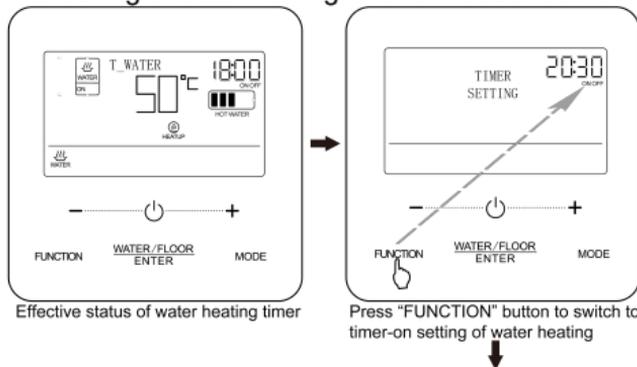Press the "WATER/FLOOR/ENTER" button to enable the timer on/off for water heating

Fig.6.11 Timer Setting of Water Heating

The cancelling of water heating timer-on is as shown in the figure:

Effective status of water heating timer

Press "FUNCTION" button to switch to timer-on setting of water heating
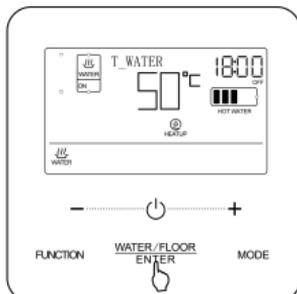
Press the "WATER/FLOOR/ENTER" button
to cancel timer-on for water heating

Fig.6.12 Cancelling of Water Heating Timer-on

The cancelling of water heating timer-off is as shown in the figure:

Effective status of water heating timer

Press "FUNCTION" button to switch to
timer-on setting for water heating

Press the "WATER/FLOOR/ENTER" button to cancel timer-off for water heating

Press the "MODE" button to switch to timer-off setting for water heating
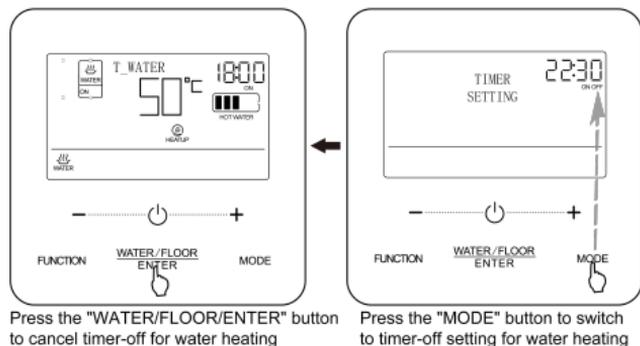
Fig.6.13 Cancelling of Water Heating Timer-off

6.11 Preset Water Heating Setting

Preset water heating:

Under water heating preset mode, press "FUNCTION" button to switch to preset setting, the lattice area will display "PRESET SETTING", and the "PRESET" characters of timer area flicker.

Press "+" or "-" button to set the hour for water heating preset. Press "MODE" button to switch to minute setting and then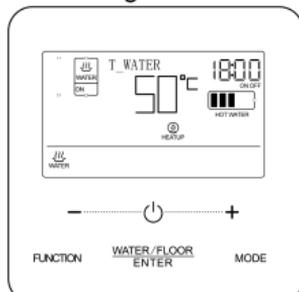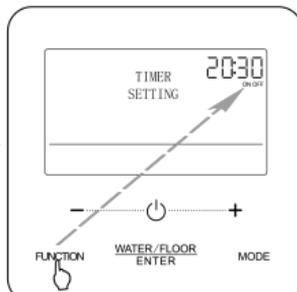 press "+" or "-" button to set the minute for water heating preset. Press the "WATER/FLOOR/ENTER" button to enable the preset function.

Cancelling of preset water heating:

Under water heating preset mode, press "FUNCTION" button to switch to preset setting, the lattice area will display "PRESET SETTING", and the "PRESET" characters of timer area flicker, press

"WATER/FLOOR/ENTER" button to clear the preset time, then the preset water heating is canceled.

Preset water heating as shown in the figure:

Power on status for preset water heating mode

Press the "FUNCTION" button to switch to set the preset time

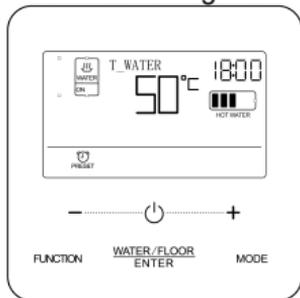Press "MODE" button to switch to minute setting

Press "+" or "-" button to set the hour for water heating preset

Press "+" or "-" button to set the minute for water heating preset

Press the "WATER/FLOOR/ENTER" button to enable the preset function
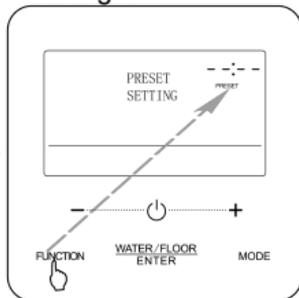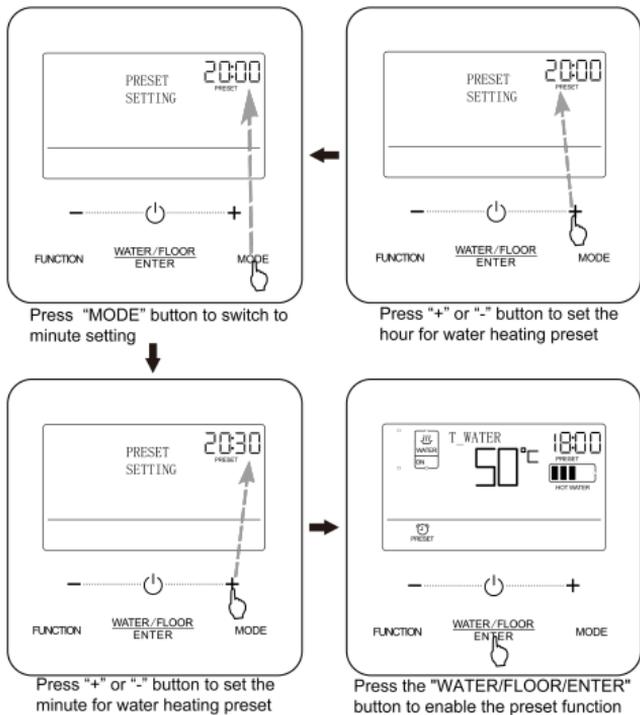
Fig.6.14 Preset Water Heating

The cancelling of preset water heating is as shown in the figure:

Preset mode with effective preset status

Press the "FUNCTION" button to switch to set the preset time

Press the "WATER/FLOOR/ENTER" button to cancel the preset water heating
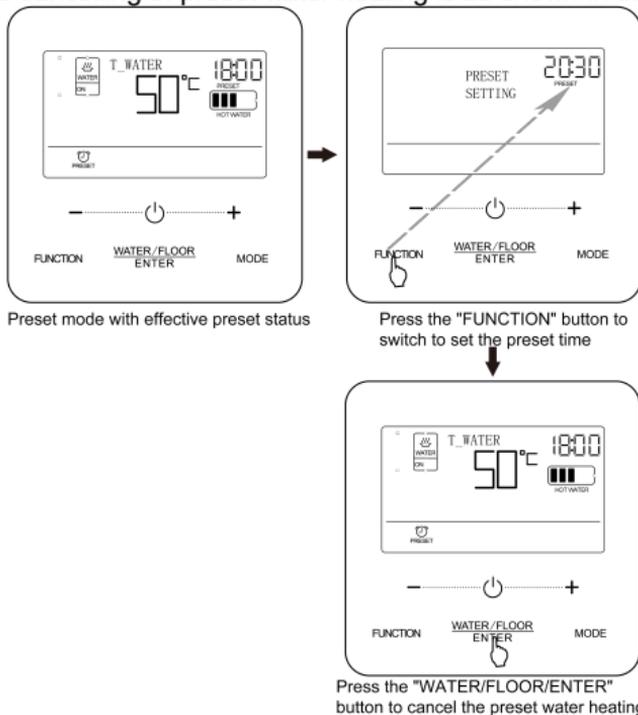
Fig.6.15 Cancelling of Preset Water Heating

6.12 Floor Heating ON/OFF

Floor heating on/off: in the floor heating interface, press the "⏻" button for every time, it will switch in the order of on → off → on.

In water heating interface: press the "WATER/FLOOR/ENTER" button to activate the floor heating interface first, and then pressing the "⏻" button for every time will switch between floor heating on and off.

Fig.6.16 Floor Heating On/Off

6.13 Water Temperature Setting of Floor Heating

Press the "+" or "-" button when the floor heating is on, the set temperature will increase or decrease by 1℃; when long-press it, the temperature will increase or decrease by 1℃ for every 0.3s.

Set outlet water temperature range of floor heating: 25℃ to the highest outlet water temperature of floor heating. The default setting temperature is 40℃.

NOTES:
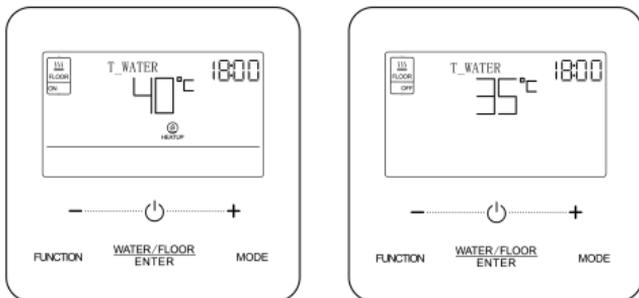① The default highest outlet water temperature of floor heating is 45°C, which can be adjusted in the range of 40°C to 55°C by professionals.
② When the automatic water temperature setting function of floor heating is available, the "+" or "-" button can't be used to adjust the set water temperature of floor heating.

6.14 Function Switchover of Floor Heating

Under the floor heating on/off status, the functions available for set are shown in the table below:

Floor heating on/off	Functions	Note
On	Timer setting, clock setting, water temperature auto setting of floor heating, rapid floor heating, absence	—
Off	Timer setting, clock setting, absence	—

In the floor heating interface:

When the floor heating is on, press the "FUNCTION" button, and switch the functions in the following order:

Fig.6.17 Function Switchover under Floor Heating On

When the floor heating is off, press the "FUNCTION" button, and switch the functions in the following order:
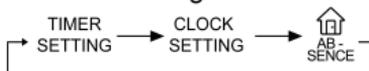

Fig.6.18 Function Switchover under Floor Heating Off

6.15 Water Temperature Auto Setting Function of Floor Heating

Water temperature auto setting function of floor heating: the set outlet water temperature for floor heating is given by the main board of hot water generator according to the outdoor ambient temperature. User doesn't need to set the water temperature.

Set water temperature auto setting function of floor heating: press the "FUNCTION" button when the floor heating is on to switch to the automatic function, and the icon of " $\underset{\text{AUTO}}{\textcircled{A}}$ " will flicker. At the lattice zone of LCD, the current automatic setting level flashes, and press "+" or "-" to switch automatic setting level; press the "WATER/FLOOR/ENTER" button to enable this function.

Cancel water temperature auto setting function of floor heating: press the "FUNCTION" button when water heating is on to switch to the automatic function and press the "WATER/FLOOR/ENTER" button to cancel it.

6.16 Setting of Rapid Floor Heating

Rapid floor heating: turn on the compressor and electronic heating of floor heating when the outdoor unit allows to.

Set rapid floor heating: press the "FUNCTION" button when floor heating is on to switch to the Rapid function, and the icon of " $\underset{\text{RAPID}}{\textcircled{}}$ " will flicker. Press the "WATER/FLOOR/ENTER" button to enable this function.

Cancel rapid floor heating: press the "FUNCTION" button when

floor heating is on to switch to the Rapid function and press the "WATER/FLOOR/ENTER" button to cancel it.

NOTES:

①   The function of rapid floor heating will only be available for once, and when the floor heat function of the hot water generator reaches the thermal insulation state, the rapid floor heating function will be cancelled to save energy.

②   The rapid floor heating function will be cancelled after floor heating is off.

6.17 Absence Setting of Floor Heating

Absence function of floor heating: it will maintain a certain water temperature when the user goes out, so as to prevent pipe freezing or damage to the indoor equipment.

Set Absence function of floor heating: press the "FUNCTION" button when floor heating is on or off to switch to the Absence function, and the icon of " 🏠 ⏎ SENCE " will flicker, and press the "WATER/FLOOR/ENTER" button to enable this function.

Cancel Absence function of floor heating: press the "FUNCTION" button when floor heating is on or off to switch to Absence function, and press the "WATER/FLOOR/ENTER" button to cancel it.

NOTE: Only when the linkage setting between IDU and shunt valve is in effect, the absence function can be set.

6.18 Timer Setting of Floor Heating

The floor heating on/off timer both can be set when floor heating is on or off.

Set timer for floor heating:

Press "FUNCTION" button to switch to timer-on setting for floor heating. The "TIMER SETTING" will be display on the lattice zone of LCD, and the icon of "ON" will flicker.

Press "+" or "-" button to set the hour of timer-on for floor heating. Press "MODE" button to switch to minute setting and then press "+" or "-" button to set the minute of timer-on for floor heating.Press the "WATER/FLOOR/ENTER" button to enable the setting.

Press the "MODE" button before pressing the "WATER/FLOOR/ENTER" button to save the set time for floor heating on and switch to the timer setting for floor heating off, and the icon of "OFF" will flicker.

Press "+" or "-" button to set the hour of timer-off for floor heating. Press "MODE" button to switch to minute setting and then press "+" or "-" button to set the minute of timer-off for floor heating. Press the "WATER/FLOOR/ENTER" or "MODE" button to enable the setting.

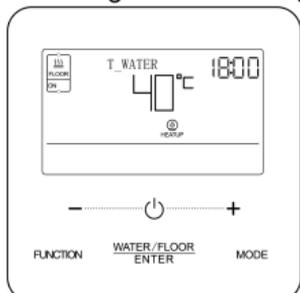Cancel timer setting of floor heating:

Press the "FUNCTION" button to switch to the timer setting for floor heating. Press "MODE" button to switch between timer on or timer off, and press the "WATER/FLOOR/ENTER" button to cancel timer for floor heating.

Timer setting of floor heating is as shown in the figure:

Floor heating on with timer unset
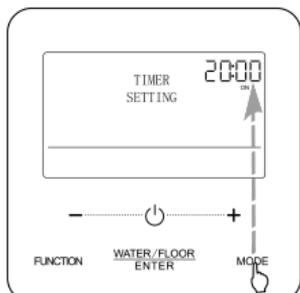
Press "FUNCTION" button to switch to timer-on setting for floor heating

Press "MODE" button to switch to minute setting
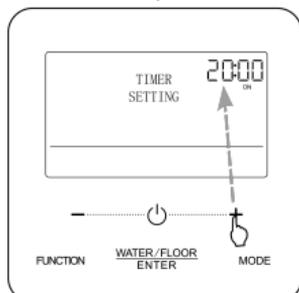
Press "+" or "-" button to set the hour of timer-on for floor heating
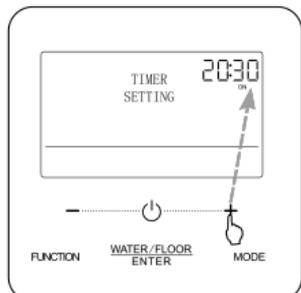
Press "+" or "-" button to set the minute of timer-on for floor heating

Press the "MODE" button to switch to timer-off for floor heating
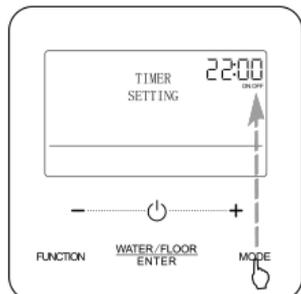
Press "MODE" button to switch to minute setting

Press "+" or "-" button to set the hour of timer-off for floor heating

Press "+" or "-" button to set the minute of timer-off for floor heating
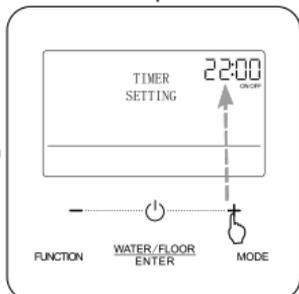
Press the "WATER/FLOOR/ENTER" button to enable the timer on/off for floor heating
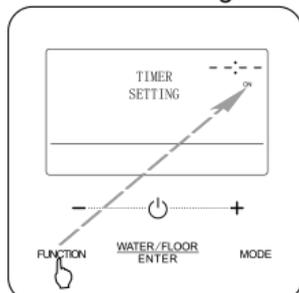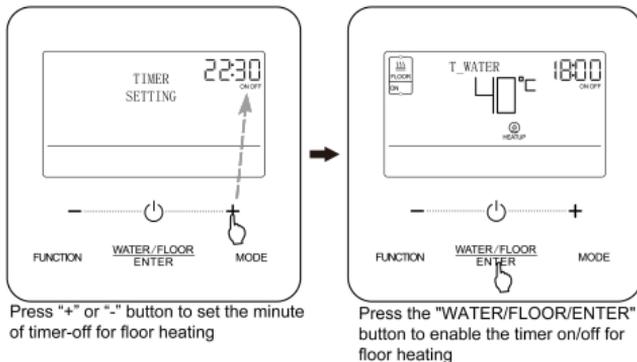
Fig.6.19 Timer Setting for Floor Heating On or Off

The cancelling of floor heating timer-on is as shown in the figure below:

Effective status of floor heating timer-on or timer-off

Press the "FUNCTION" button to switch to the timer setting for floor heating

Press the "WATER/FLOOR/ENTER" button to cancel timer-on for floor heating
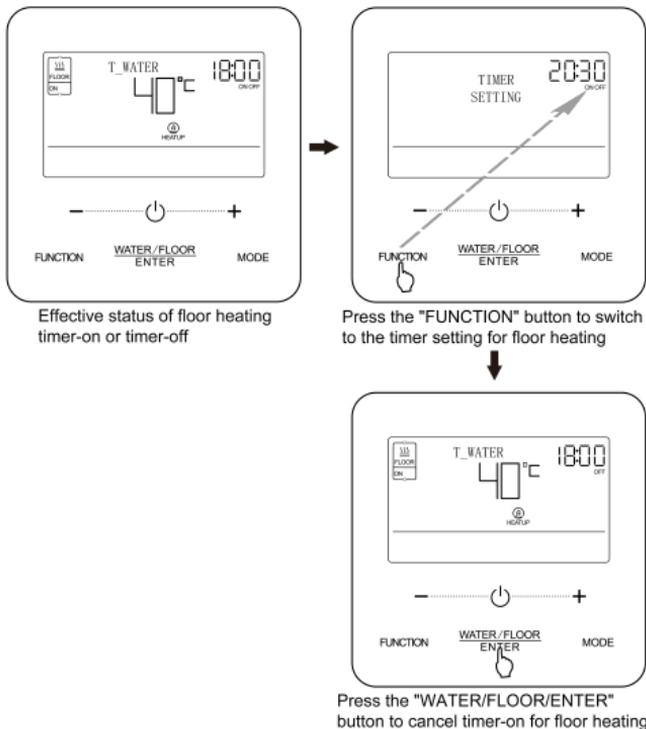
Fig.6.20 Cancel Timer-on for Floor Heating

The cancelling of the floor heating timer-off is as shown in the figure below:

Effective status of floor heating timer-on or timer-off

Press the "FUNCTION" button to switch to timer-on setting

Press the "WATER/FLOOR/ENTER" button to cancel timer-off for floor heating

Press the "MODE" button to switch to timer-off setting for floor heating
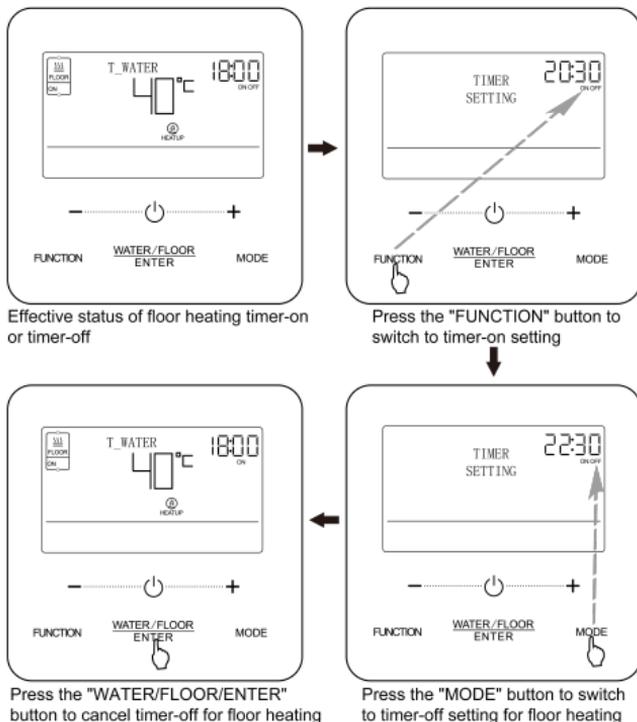
Fig.6.21 Cancel Timer-off for Floor Heating

6.19 Clock Setting

Clock display: the timing zone will show the system clock both when it is on or off, and the clock can be set at this moment.

Clock setting: Press "FUNCTION" button to switch to system clock setting, the lattice area will display "CLOCK SETTING", and timer area displays the current system clock "00:00", Press "+" or "-" button to set the hour of clock time. Press "MODE" button to switch to minute setting and then press "+" or "-" button to set the minute for clock time. Press "WATER/FLOOR/ENTER" button to save the setting and then exit.

The real-time clock setting is as shown in the figure below:

Operation status
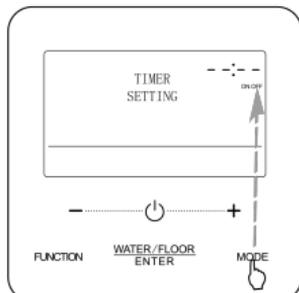
Press the "FUNCTION" button to switch to the real-time clock setting

Press "MODE" button to switch to minute setting

Press "+" or "-" button to set the hour of clock time

Press "+" or "-" button to set the minute for clock time

Press the "WATER/FLOOR/ENTER" button to confirm the clock setting
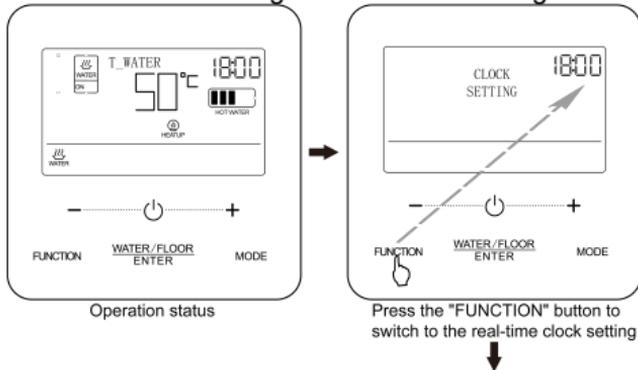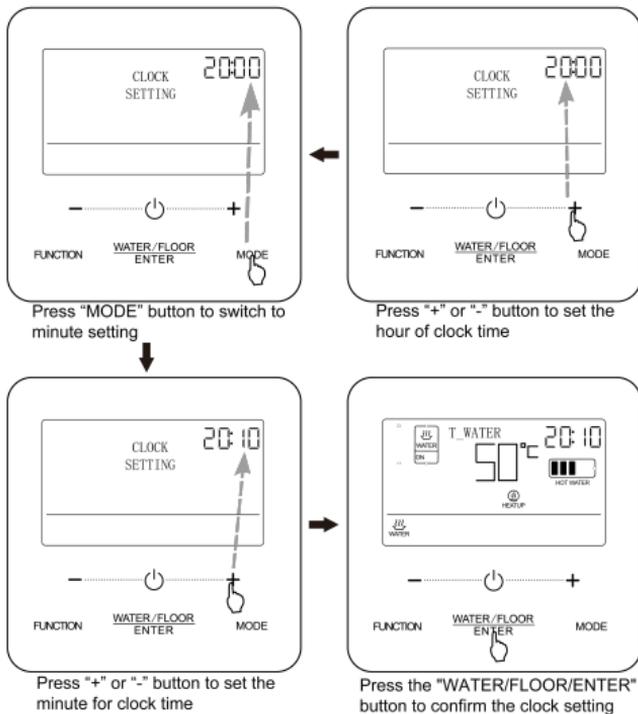
Fig.6.22 Real-time Clock Setting

6.20 Clean Setting

Start the water pump, which is used for engineering evacuation, water line cleaning, etc.

When the water heating and floor heating are off, and the unit is not in high-temperature sterilization status, press and hold "WATER/FLOOR/ENTER" button for 5 seconds to turn on the clean function, then the lattice area will give out a prompt "CLEAN". During cleaning, the lattice area will display "CLEANING". Press and hold "WATER/FLOOR/ENTER" button for 5 seconds, the cleaning will be stopped and the cleaning prompt is eliminated.

6.21 Remote Shield Function

Remote shield function: Remote monitor or integrated controller can shield the button operation of wired controller to invalid its operation, so as to realize remote control function.

During remote shielding, all button operation of wired controller is invalid.

When remote monitor or integrated controller shield the wired controller, the " 🏠 SHIELD " icon is on. When user uses wired controller to conduct button operation, the " 🏠 SHIELD " icon will flicker to prompt the user.

6.22 Child Lock Function

Simultaneously pressing the "+" and "-" buttons for 5s when it is on or off with no fault, the wired controller will enter the child lock function, and the LCD display will show the icon of " 🔒 LOCK ". Press both buttons again to exit the child lock function.

The other buttons will not response in the child lock state.

7 Error Display

When error occurs during system operation, the lattice zone of the wired controller will show the error code, and show the error codes in cycle when there are several errors.

❶ NOTE: If error occurs, please turn off the unit and send for professionals to repair.

Fig.7.1 shows the error of inconsistent number of water tank or hot water generator for one-controls-more system under power on status.

Fig.7.1

65
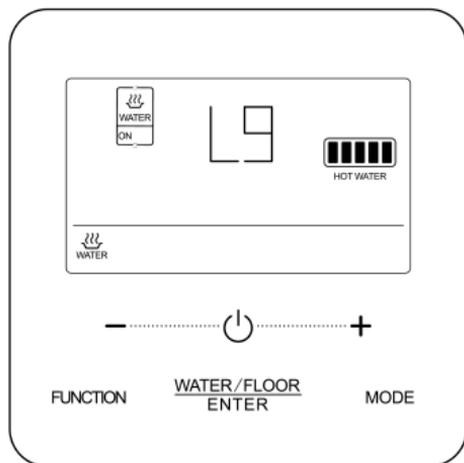
7.1 Table of Error Codes for Outdoor Unit

Error Code	Content	Error Code	Content
E0	Outdoor Unit Error	J9	System Pressure Under-Ratio Protection
E1	High Pressure Protection	JA	Protection of Abnormal Pressure
E2	Discharge Low Temperature Protection	JC	Protection of Water Flow Switch
E3	Low Pressure Protection	JL	Protection of Low High-pressure
E4	Excess Discharge Temperature Protection of Compressor	JE	Oil Return Pipe is Blocked
Ed	Low Temperature Protection of Driver Module	JF	Oil Return Pipe is Leaking
F0	Bad Performance of the Outdoor Mainboard	JJ	Low Water-in Temperature Protection
F1	High Pressure Sensor Error	b1	Outdoor Ambient Temperature Sensor Error
F2	Inlet Tube Temperature Sensor Error of Plate Type Heat Exchanger	b2	Defrosting Temperature Sensor 1 Error
F3	Low Pressure Sensor Error	b3	Defrosting Temperature Sensor 2 Error
F4	Outlet Tube Temperature Sensor Error of Plate Type Heat Exchanger	b4	Subcooler Liquid-out Temperature Sensor Error
F5	Compressor 1 Discharge Temperature Sensor Error	b5	Subcooler Gas-out Temperature Sensor Error

Error Code	Content	Error Code	Content
F6	Compressor 2 Discharge Temperature Sensor Error	b6	Gas-liquid Separator Inlet Temperature Sensor Error
F7	Compressor 3 Discharge Temperature Sensor Error	b7	Gas-liquid Separator Outlet Temperature Sensor Error
F8	Compressor 4 Discharge Temperature Sensor Error	b8	Outdoor Humidity Sensor Error
F9	Compressor 5 Discharge Temperature Sensor Error	b9	Heat Exchanger Gas-out Temperature Sensor Error
FA	Compressor 6 Discharge Temperature Sensor Error	bA	Oil-return Temperature Sensor Error
FC	Compressor 2 Current Sensor Error	bH	System Clock Malfunction
FL	Compressor 3 Current Sensor Error	bE	Malfunction of Entry Tube Temperature Sensor of Condenser
FE	Compressor 4 Current Sensor Error	bF	Malfunction of Exit Tube Temperature Sensor of Condenser
FF	Compressor 5 Current Sensor Error	bJ	High and Low Pressure Sensors are Connected Inversely
FJ	Compressor 6 Current Sensor Error	bP	Oil-return 2 Temperature Sensor Error
FP	Malfunction of DC motor	bU	Oil-return 3 Temperature Sensor Error
FU	Compressor 1 Top Temperature Sensor Error	bb	Oil-return 4 Temperature Sensor Error

Error Code	Content	Error Code	Content
Fb	Compressor 2 Top Temperature Sensor Error	bd	Air-in Temperature Sensor Error of Subcooler
Fd	Mode Exchanger Outlet Pipe Temperature Sensor Error	bn	Liquid-in Temperature Sensor Error of Subcooler
Fn	Mode Exchanger Inlet Pipe Temperature Sensor Error	by	Water-out Temperature Sensor Error
Fy	Water-in Temperature Sensor Error	P0	Compressor Drive Board Error
J1	Compressor 1 Over-current Protection	P1	Compressor Drive Board Malfunction
J2	Compressor 2 Over-current Protection	P2	Protection of Compressor Drive Board Power Supply
J3	Compressor 3 Over-current Protection	P3	Protection of Compressor Drive Board Module Reset
J4	Compressor 4 Over-current Protection	H0	Error of Fan Drive Board
J5	Compressor 5 Over-current Protection	H1	Malfunction of Fan Drive Board
J6	Compressor 6 Over-current Protection	H2	Protection of Fan Drive Board Power Supply
J7	4-way Valve Blow-by Protection	GH	PV DC/DC Protection
J8	System Pressure Over-Ratio Protection	—	—

7.2 Table of Error Codes for Water Tank or Hot Water Generator

Error Code	Content	Error Code	Content
L0	Indoor unit error	d2	Downstream water temperature sensor error
L4	Wired Controller Power Supply Error	d4	Inlet pipe temperature sensor error
L5	Anti-Frosting protection	d6	Outlet pipe temperature sensor error
L6	Mode conflict	d9	Jumper cap error
L8	Power Insufficient Protection	dA	Indoor Unit Hardware Address Error
L9	Quantity Of Group Control water tank or hot water generator Setting Error	dH	Wired Controller PC-Board Error
LA	water tank or hot water generator Incompatibility Error	dF	Upstream water temperature sensor error
LC	Outdoor-Indoor Incompatibility Error	dJ	Error of returning water temperature sensor
LL	Error of water flow switch	dP	Error of inlet water temperature sensor of generator
LE	Abnormal rotate speed of EC DC water pump	dU	Error of outlet water temperature sensor of generator
LF	Error of floor heating shunt valve setting	db	Special code: field debugging code

Error Code	Content	Error Code	Content
d1	Indoor Unit PC-Board Error	dd	Error of solar power temperature sensor

7.3 Table of Debugging Codes

Error Code	Content	Error Code	Content
U2	Outdoor Unit Capacity Code/Jumper Cap Setting Error	C0	Communication between indoor unit and outdoor unit and the communication between indoor unit and wired controller have malfunction
U3	Phase Sequence Protection of Power Supply	C1	Communication error of expansion board
U4	Protection of Lack of Refrigerant	C2	Communication error between master control and inverter compressor drive
U5	Wrong Address of Compressor Drive Board	C3	Communication error between master control and inverter fan motor drive
U6	Valve Abnormal Alarm	C4	Error of Lack of Indoor Unit
U7	Grid DRED0 Response Protection	C5	Alarm of Indoor Unit Project Number Collision
U8	Indoor Unit Tube Malfunction	C6	Alarm of Wrong Number of Outdoor Unit

Error Code	Content	Error Code	Content
U9	Outdoor Unit Tube Malfunction	C7	Mode Exchanger Communication Error
UA	Overvoltage Protection of DC Bus Bar in Power Grid Side	CH	Rated capacity is too high
UH	Under voltage Protection of DC Bus Bar in Power Grid Side	CC	No master control unit error
UC	Master indoor unit is successfully set	CL	Rated capacity is too low
UL	Emergency Operation DIP switch setting of the compressor is wrong	CE	Communication Failure Between Mode Exchanger and Indoor Unit
UE	Refrigerant Charging is ineffective	CF	Error of Multiple Master Indoor Unit
UF	Indoor Unit Identification Error of Mode Exchanger	CJ	System addresses is incompatible
UJ	PV module F0 protection	CP	Error of Multiple Master Wired Controller
UP	Protection shutdown error of thermal storage module	CU	Communication Error between Indoor Unit and Remote Receiver
UU	Electronic expansion valve leak error of thermal storage module	Cb	Outflow of Units IP Address
Ub	Protection without shutdown error of thermal storage module	Cd	Communication Failure Between Mode Exchanger and Outdoor Unit

Error Code	Content	Error Code	Content
Ud	Grid-connection driver board error	Cn	Indoor and Outdoor Network Error of Mode Exchanger
Un	Communication error between grid-connection driver board and master controller	Cy	Communication Error of No Master in Mode Exchanger
Uy	PV module overheating protection	—	—

7.4 Table of Status Codes

Error Code	Content	Error Code	Content
A0	Unit is waiting for debugging	A8	Vacuum-pumping Mode
A1	Check the compressor operation parameters.	AJ	Filter Clean Reminder
A2	After-sales Refrigerant Reclaim	AU	Remote Urgent Stop
A3	Defrosting	Ab	Emergency Stop
A5	Online Testing	Ad	Operation Restriction

daitsu

EUROFRED
being efficient