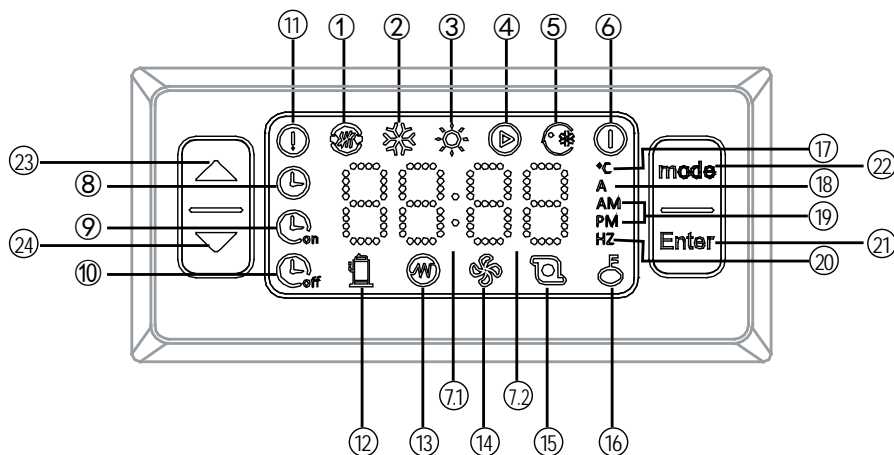


18. Controller










18.1 Standard controller

It is built-in with the chiller at the factory.

The front panel of the device functions as the user interface and is used to perform all operations relating to the device.



NO.	Icon	Description
①		Outside heat source running icon(Reserved)
②		Cooling mode icon This icon will be constantly light when customers choose cooling mode.
③		Heating mode icon This icon will be constantly light when customers choose heating mode.
④		Water pump mode icon This icon will be constantly light when customers choose water pump mode.
⑤		Force cooling icon This icon will be constantly light when customers choose force cooling mode.
⑥		Power off icon This icon will be constantly light when customers choose Power off mode.
⑦.1		Clock icon, " : " flash once every 1s. It will display time when customers set the timer.
⑦.2		The last 2 digits of the nixie tube "88" icon. If "88" is constantly light, it will display the current inlet water temperature. Its unit is °C. When customers do the water temperature setting, icon will display the setting water temperature. When checking, "88" will display the result of checking. When water heating is broken down or in protection, "88" display the error code and protection code.
⑧		Clock icon It will display when finish setting the clock and be extinguished when the clock setting work is done.
⑨		Timing on function icon will flash when setting timing on. The icon will be constantly light when finish setting.
⑩		Timing off function icon will flash when setting timing off. The icon will be constantly light when finish setting.
⑪		Breakdown light icon When the unit is broken down or under protection, this icon will flash and will be off when malfunction and protection are eliminated.
⑫		Compressor booting indicator icon When booting the compressor, this icon will be constantly light. It will be off when the compressor is shut down
⑬		E-heater booting indicator icon (Reserved) When booting the external E-heater, this icon will be constantly light. It will be off when the external E-heater is shut down.
⑭		Fan booting indicator icon When booting the fan, this icon will be constantly light. It will be off when the fan is shut down.
⑮		Water pump booting indicator icon When booting the water pump, this icon will be constantly light. It will be off when the water pump is shut down.

⑫		Key freezing icon When freezing the keys, this icon will be constantly light. It will be off when unfreezing keys.
⑬		Temperature unit icon When the control panel displays temperature, this icon will be constantly light.
⑭		Current unit icon When the control panel displays current, this icon will be constantly light.
⑮		Time format icon The unit is 12-hour format. "AM" will be constantly light when it is forenoon. "PM" will be constantly light when it is afternoon
⑯		Frequency unit icon It will be constantly light when the control panel displays frequency of the compressor.
⑰		ON/OFF and OK button 1. Long press "Enter" for 3S will power on or off the controller. 2. Press "Enter" to confirm the former operation when finishing the setting work.
⑱		Mode choice function/Function choice/Back function button 1. Mode choice function. Choose operation mode. 2. Function choice. Long press it for 3s to enter function setting in the main interface. (Clock setting, Timing on and timing off setting) 3. Back to the previous menu. Long press it for 3s to back to previous menu in the function setting interface. Top menu is the main interface.
⑲		Up 1. (Value increase) 2. Forward to the previous interface.
⑳		Down 1. (Value decrease) 2. Backward to the next interface.

18.1.1 Control panel operation description

1) ON/OFF

The first time to powered on the unit, operation panel displays "OFF". Long press "Enter" for 3s, to unlock "OFF" status and enter into standby status.

Power on: In the standby status, press "mode" to enter mode choice function. Press "mode" circularly to choose one kind of "power on" mode, the mode icon will flicker at the moment. Press "Enter" to confirm the power on mode. The unit will run as the chosen mode when the mode icon will be constantly light.

Power off: Press "mode" in the main interface to enter mode choice function and the icon which indicate the current mode will flicker. Press "mode" circularly to choose power off mode, "①" will flicker at this moment. Press "Enter" button to confirm the power off mode. By this time, "①" will be constantly light and the unit stops.

2) Mode choice and temperature settings

Press "mode" in the main interface to enter mode choice function. The "Mode" icon will flicker. Click "mode" circularly to choose a mode. The circulating order is "Cooling mode" → "Heating mode" → "Water pump mode" → "Power off mode" → "Cooling mode". The chosen mode will flicker. Press "▲" or "▼" to increase/decrease the temperature in the chosen mode.

Press "Enter" to confirm power off mode and the set temperature. Mode icon will be constantly light and the unit will run as the chosen mode. Press "▲" or "▼" in the main interface to increase/decrease the temperature in the chosen mode.

3) Clock setting

Long press "mode" for 3s to enter function interface. "⌚" clock icon will flicker. Press "Enter" to enter clock setting function. "⌚" icon will be constantly light and the first 2 digits on nixie tube will flicker. Press "▲" or "▼" to set minute. Press "⌚" when finish setting and "Enter" will be extinguished.

4) Timing setting

a. Timing on setting

- ① Long press "mode" for 3s to enter function interface. "🕒" clock icon will flicker. Press "mode" again to enter timing on function. "🕒" will flicker and press "Enter" to enter timing on setting.
- ② At this moment, last 2 digits of the nixie tube display "01" which means the first group setting begins. Press "Enter" to the next step.
- ③ By this time, mode icon will flicker and press "mode" to choose timing on mode. Press "Enter" to confirm your choice and go to the next step.
- ④ By this time, the last 2 digits of the nixie tube will flicker and press "▲" or "▼" to adjust temperature and set the temperature of the inlet water. Press "Enter" to confirm and move to the next step.
- ⑤ By this time, the first 2 digits of the nixie tube will flicker and press "▲" or "▼" to adjust time of timing on. Press "mode" to confirm and switch to minute setting automatically. The last 2 digits of the nixie tube will flicker and press "▲" or "▼" to adjust minute setting of timing on. (minimal unit of minute adjustment: 15 minutes).
- ⑥ Press "Enter" to confirm. The first group setting is finished and "🕒" will be constantly light.
When processing the second timing setting, repeat the 1-2 operation above. When the nixie tube displays "01" and flicker, press "▲" or "▼" to choose the timing on group. When the nixie tube displays "02" which means setting timing on function of the second group.
Refers the timing on setting operation of group 1 to set that of group 2.
- Long press "mode" for 3s to return to the previous interface to reset the parameter during setting clock timing.

b. Timing off setting

- ① Long press "mode" for 3s in the main interface to enter function interface. Press "mode" circularly to enter timing off function. "Enter" will flicker and press "🕒" to enter timing off setting.
- ② At this moment, the last 2 digits of the nixie tube display "01" which means the first group setting begins. Press "Enter" to the next step.
- ③ By this time, the first 2 digits of the nixie tube will flicker and press "▲" or "▼" to adjust time of timing off. Press "mode" to confirm and switch to minute setting automatically. The last 2 digits of the nixie tube will flicker and press "▲" or "▼" to adjust minute setting of timing off. Press "🕒" to confirm. The first group setting is finished and "🕒" will be constantly light.
- ④ When processing timing setting of group 2, repeat the 1-2 operation above. When the nixie tube displays "01" and flicker, press "▲" or "▼" to choose the timing off group. When the nixie tube displays "02" which means setting timing off function of the second group.
Refers the timing off setting operation of group 1 to set that of group 2.

c. Cancel all timing on/off settings

Long press "mode" for 3s to enter function interface. "🕒" clock icon will flicker and press "mode" to choose the timing function. "🕒" and "🕒" flicker simultaneously means choosing to cancel all timing functions.

Press "Enter" to cancel timing settings. "🕒" and "🕒" both will be extinguished.

18.1.2 Functions of combination key

Force cooling function

Press "▼" and "mode" simultaneously for 3s in the main interface to enter into force cooling mode.

The force cooling mode icon will be constantly light.

Press "▼" button and "mode" button simultaneously for 3s to quit force cooling mode. The unit will enter power off mode automatically when quitting force cooling mode.

18.1.3 Auto-lock(unlock) function

If don't operate the controller in 60s, the keyboard will lock automatically. Press "mode" and "Enter" simultaneously for 3s to unlock.

18.1.4 Factory Reset

In main interface, long press "Enter" for 3s, the unit will close and recovers to factory default mode. Display panel will display "OFF".

18.2 Wired controller

Features

- a. Touch key operation;
- b. LCD displays operation parameters;
- c. Multiple timer;
- d. Real-time clock (battery life:5~8 years).