ORIGINAL MANUAL

Kaysun

OWNER'S MANUAL

Central Heat Pump Heater Wire Controller

KCTAQ-01

Thank you very much for purchasing our product.
Before using the unit, please read this manual carefully and keep it for future reference.

- This manual gives detailes description of the precautions that should be brought to your attention during operation
- To ensure correct service of the wiring controller please read this manual carefully before using the unit
- For convenience of future reference, keep this manual after reading it

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1 GENERAL SAFETY PRECAUTIONS

1.1 About the documentation

- The precautions described in this document cover very important topics, follow them carefully.

1.1.1 Meaning of warnings and symbols

DANGER
Indicates a situation that results in serious injury.

DANGER: RISK OF ELECTROCUTION
Indicates a situation that could result in an electric shock.

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 serious injury.

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

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

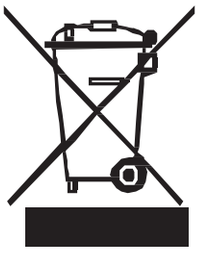
INFORMATION
Indicates useful tips or additional information.

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 apply water to the unit. This may cause electric shocks or fire.

- **Units are marked with the following symbol:**

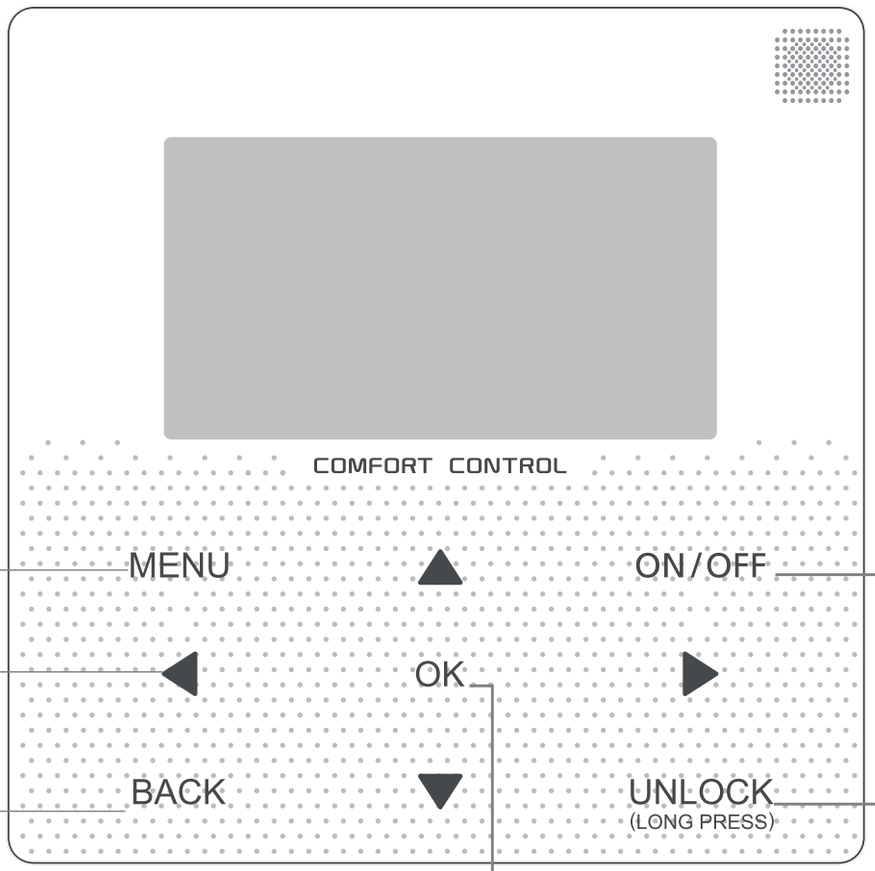


This means that electrical and electronic products may not be mixed with unsorted household waste. Do NOT try to dismantle the system yourself: the dismantling of the system, treatment of the refrigerant, of oil and of other parts must be done by an authorized installer and must comply with applicable 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 location authority.

- **Placed in a location away from radiation.**

2 A GLANCE OF THE USER INTERFACE

2.1 The appearance of the wire control device



MENU | Enter the menu structure from the home page

◀ ▲ ▼ ▶ | Navigate the cursor on the display/navigate in the menu structure/ adjust the settings

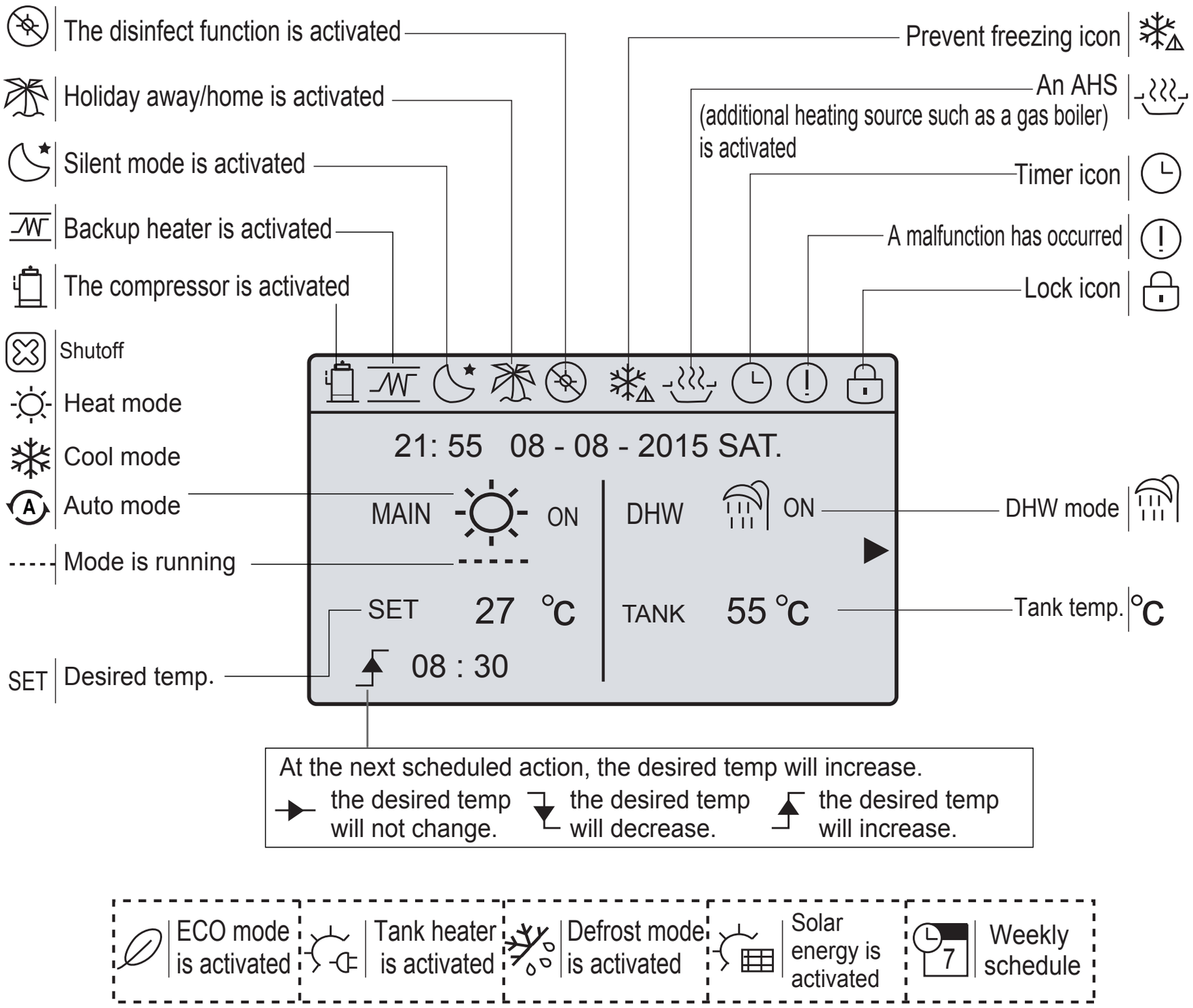
BACK | Return to the parent menu

ON/OFF | Turn the space operation mode or DHW mode on or off in the menu

UNLOCK (LONG PRESS) | Long press to lock/unlock the controller functions such as "TANK temp. adjusting"

OK | Go to the next step when programming a schedule in the menu structure/confirm a selection/enter a submenu in the menu structure

2.2 Status icons



3 USING HOME PAGES

3.1 About home pages

You can use the home pages to read out and change settings that are meant for daily usage. What you can see and do on the home pages is described where applicable. Depending on the system layout, the following home pages may be possible:

- Room temperature (ROOM)
- Outlet water temperature (MAIN)
- DHW tank temperature (TANK)

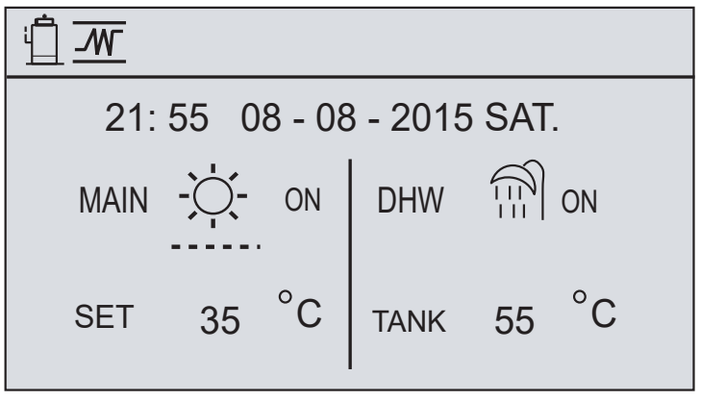
DHW=domestic hot water

① **home page1:**

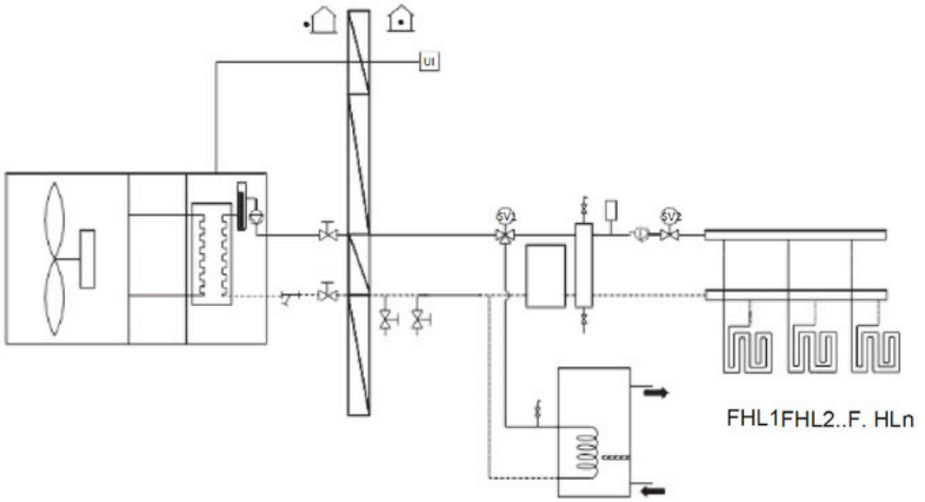
If the WATER FLOW TEMP. is set YES and ROOM TEMP. is set NON. (See FOR SERVICEMAN TEMPERATURE TYPE SETTING on installation & owner's manual). There will be only main page. The system has the function including floor heating and domestic water. The page will appear:

NOTE:

All the pictures in the manual are used to explain, the actual pages in the screen maybe have some difference.



the system layout 1

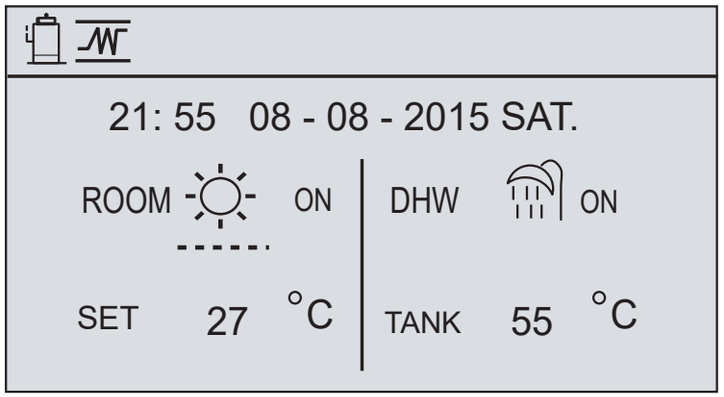


② **home page2:**

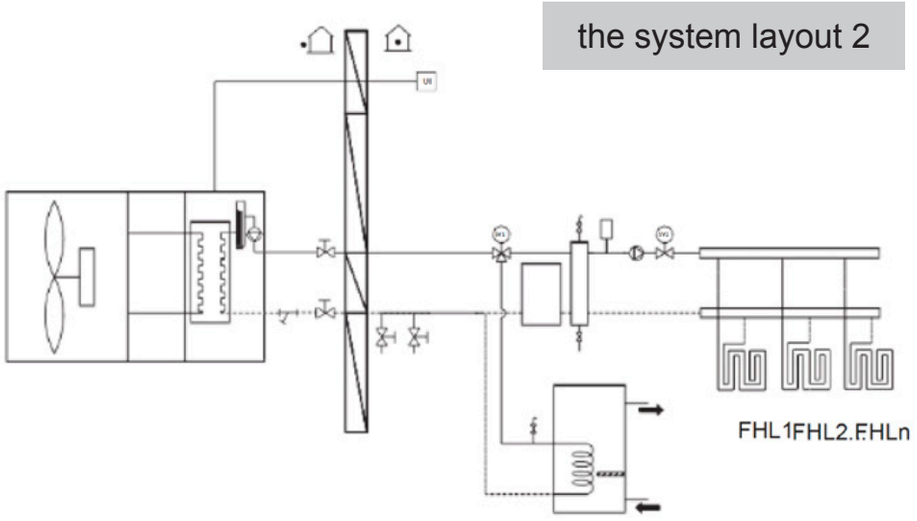
If you have set the WATER FLOW TEMP. is set NON and ROOM TEMP. is set YES (See FOR SERVICE TEMPERATURE TYPE SETTING on installation & owner's maunal). There will be only main page. The system has the function including floor heating and domestic hot water. The page will appear:

NOTE:

The interface should be installed in the floor heating room to check the room temperature.

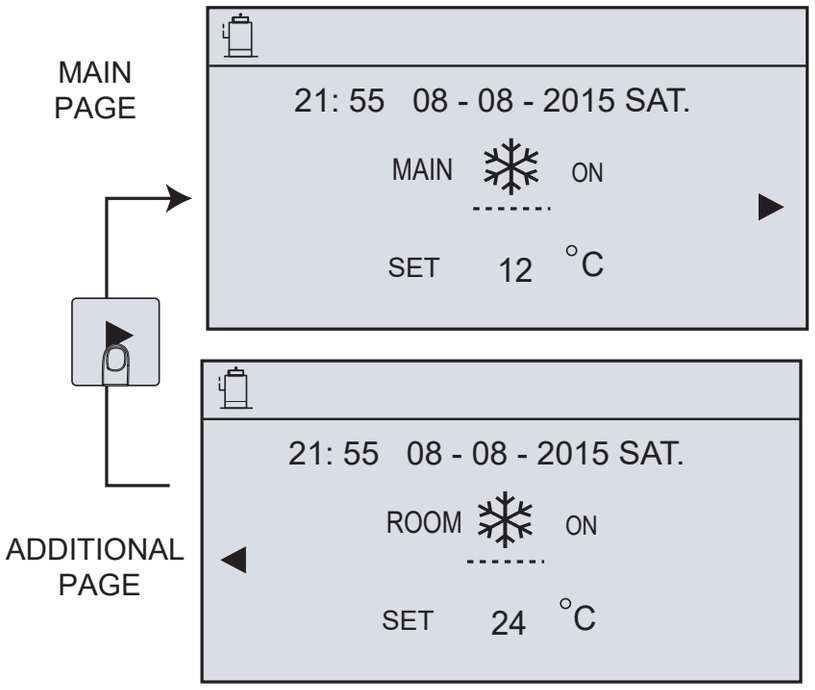


the system layout 2

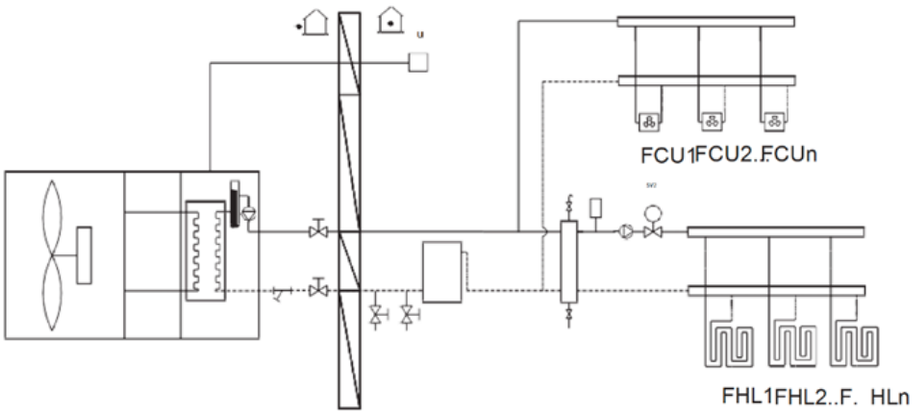


③ **home page3:**

If the WATER FLOW TEMP. is set YES and ROOM TEMP. is set YES (See FOR SERVICEMAN TEMPERATURE TYPE SETTING on installation & owner's manual). There will be main page and additional page. The system has the function including floor heating and space cooling for fan coil. The page will appear:

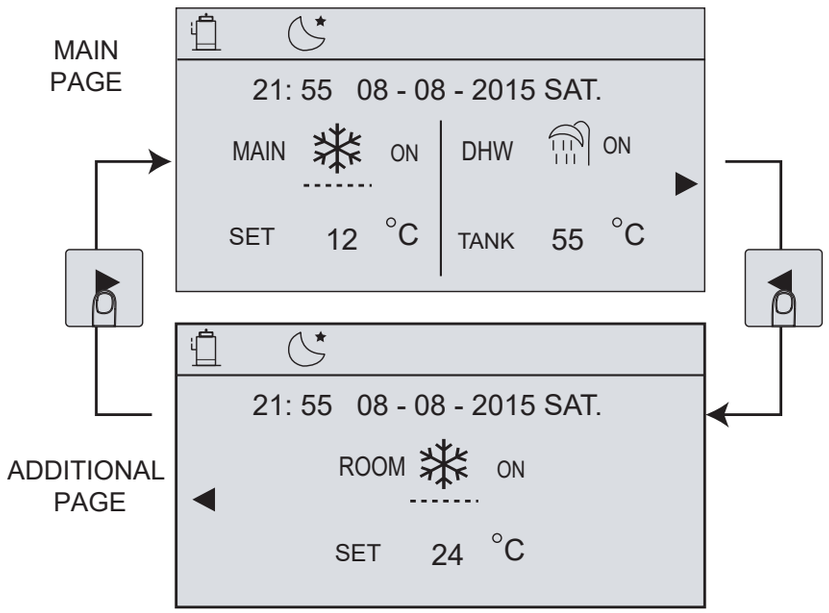


the system layout 3

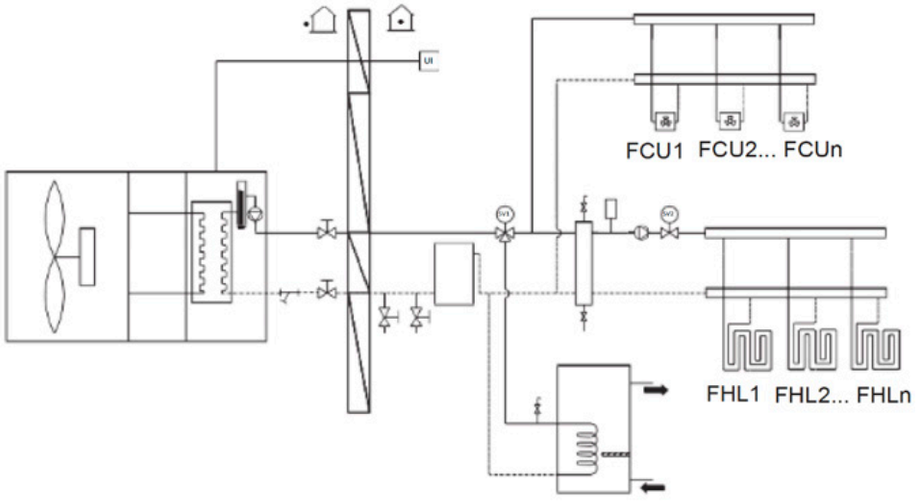


④ **home page4:**

If you have set the WATER FLOW TEMP to YES and ROOM TEMP to YES There will be a main page and an added page. The system has the functions of floor heating, air conditioning, and water heating. This page will appear:

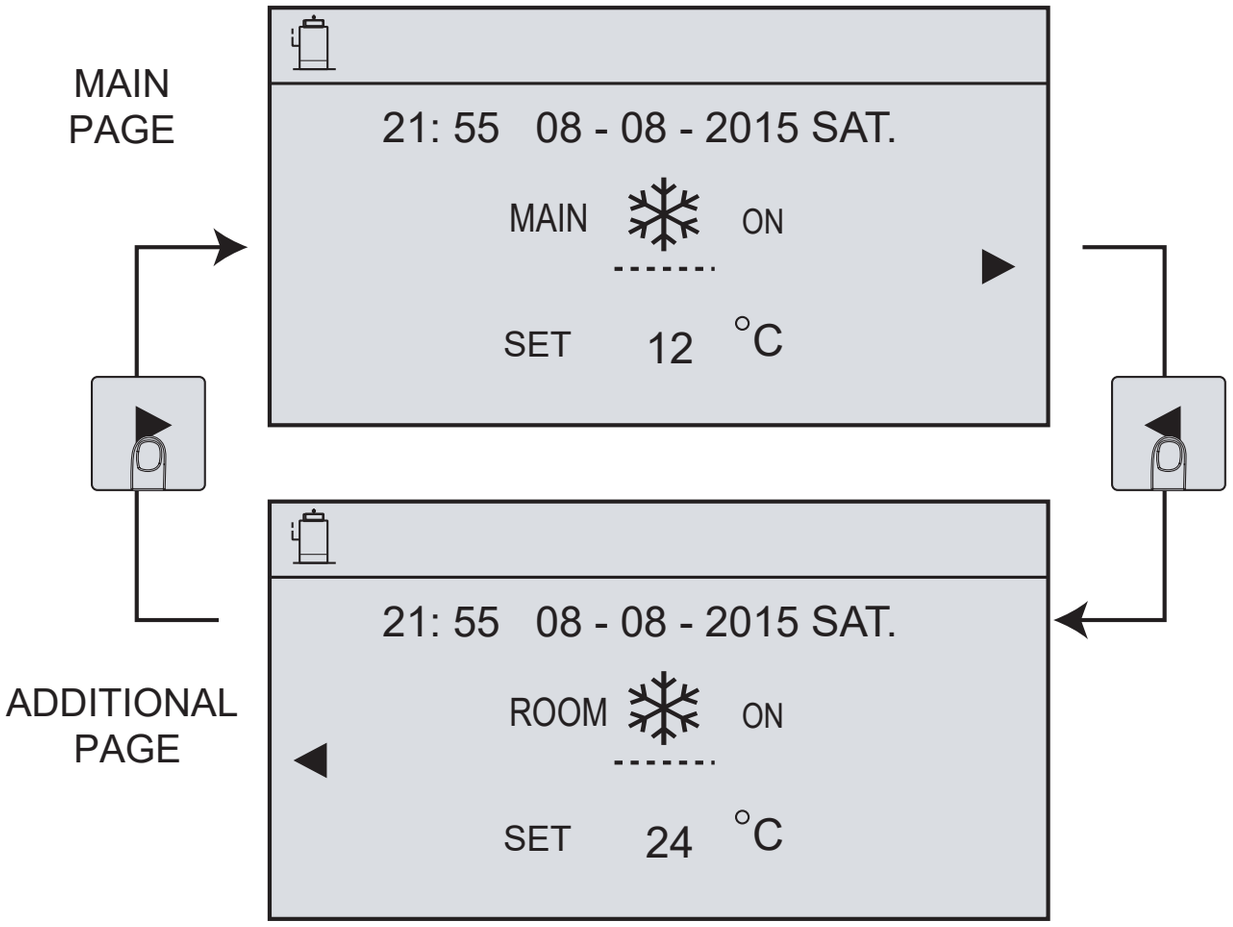


the system layout 4



⑤**home page5:**

If you have set the WATER FLOW TEMP to YES and ROOM TEMP to YES There will be a main page and an added page. The system has the function of air conditioning. This page will appear:



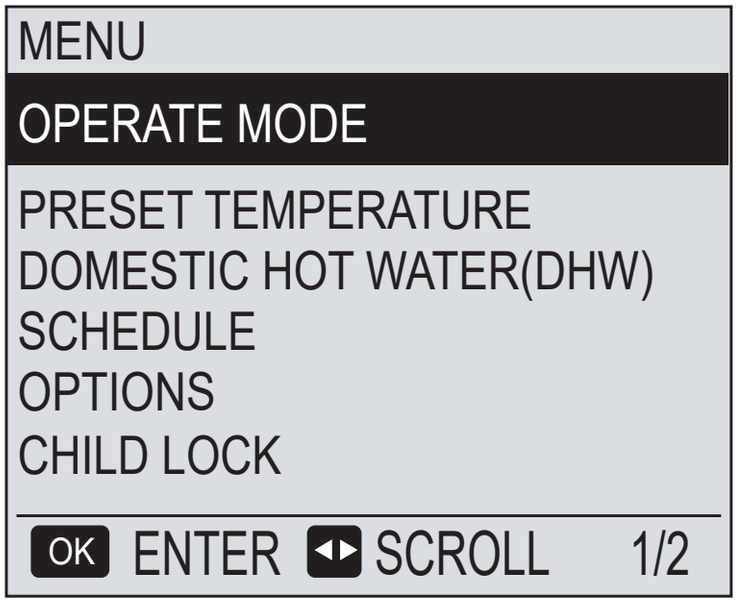
4 MENU

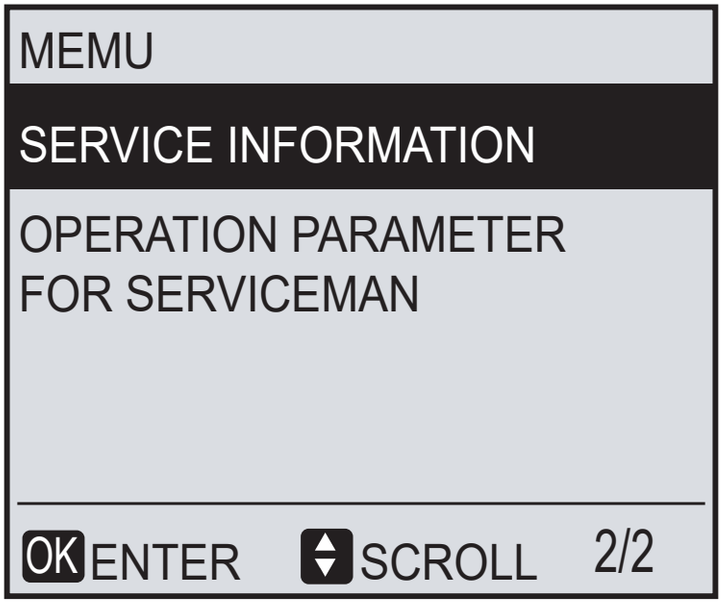
4.1 About the menu structure

You can use the menu structure to read out and configure settings that are NOT meant for daily usage. What you can see and do in the menu structure is described where applicable. For an overview of the menu structure, see "7 MENU STRUCTURE: Overview".

4.2 To go to the menu

From a home page, press "MENU". Result: The menu will appear:





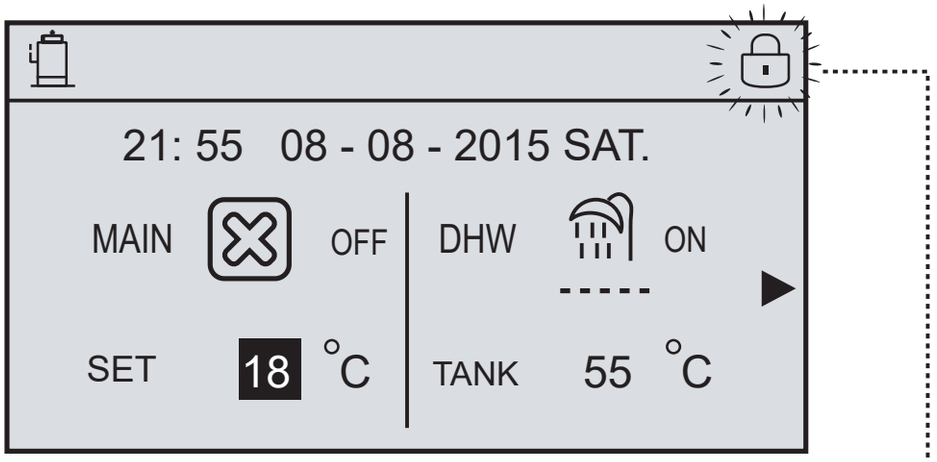
4.3 To navigate the menu

Use"▼", "▲" to scroll.

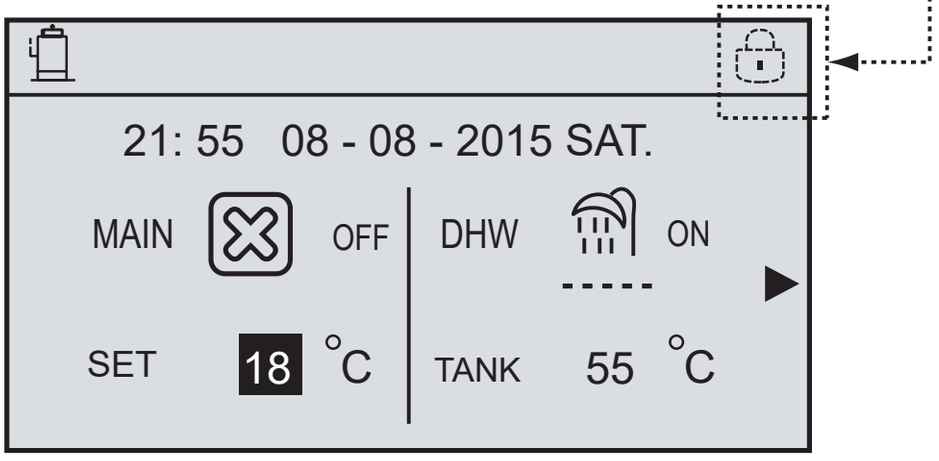
5 BASIC USAGE

5.1 Screen Unlock

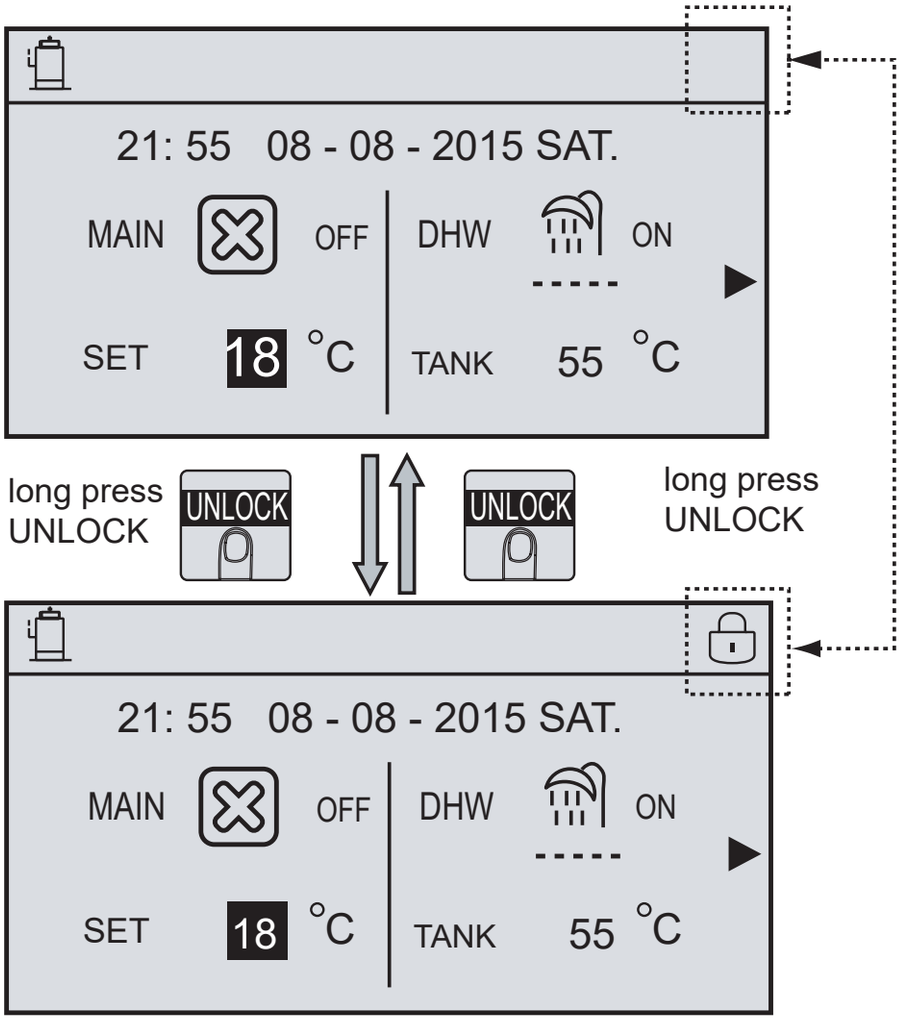
If the icon is on the screen, the controller is locked. This page is displayed:



Press any key and the icon will flash. Long press "UNLOCK" key, the icon will disappear, and the interface can be controlled.



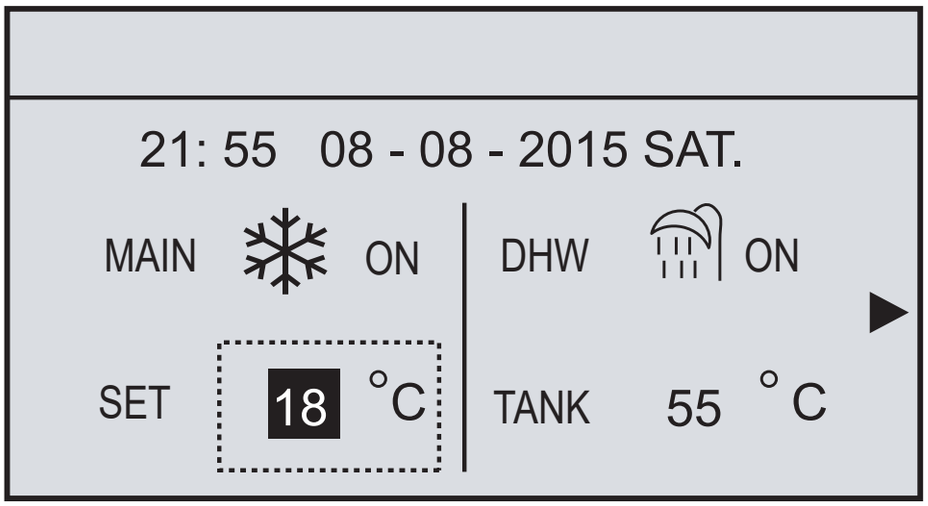
The interface will be locked if there is no handing for a long time (about 60 seconds: it can be set by the interface, see 6.7 SERVICE INFORMATION).
If the interface is unlocked, long press "unlock", the interface will be locked.



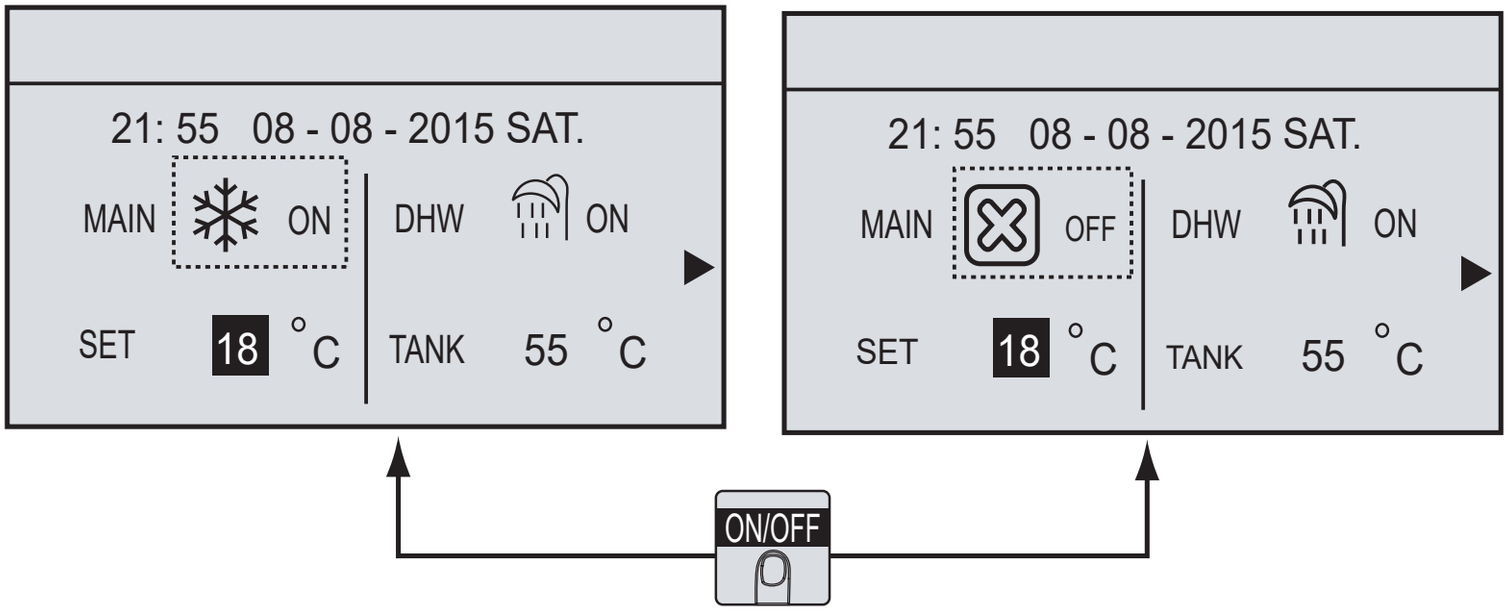
5.2 Turning ON/OFF controls

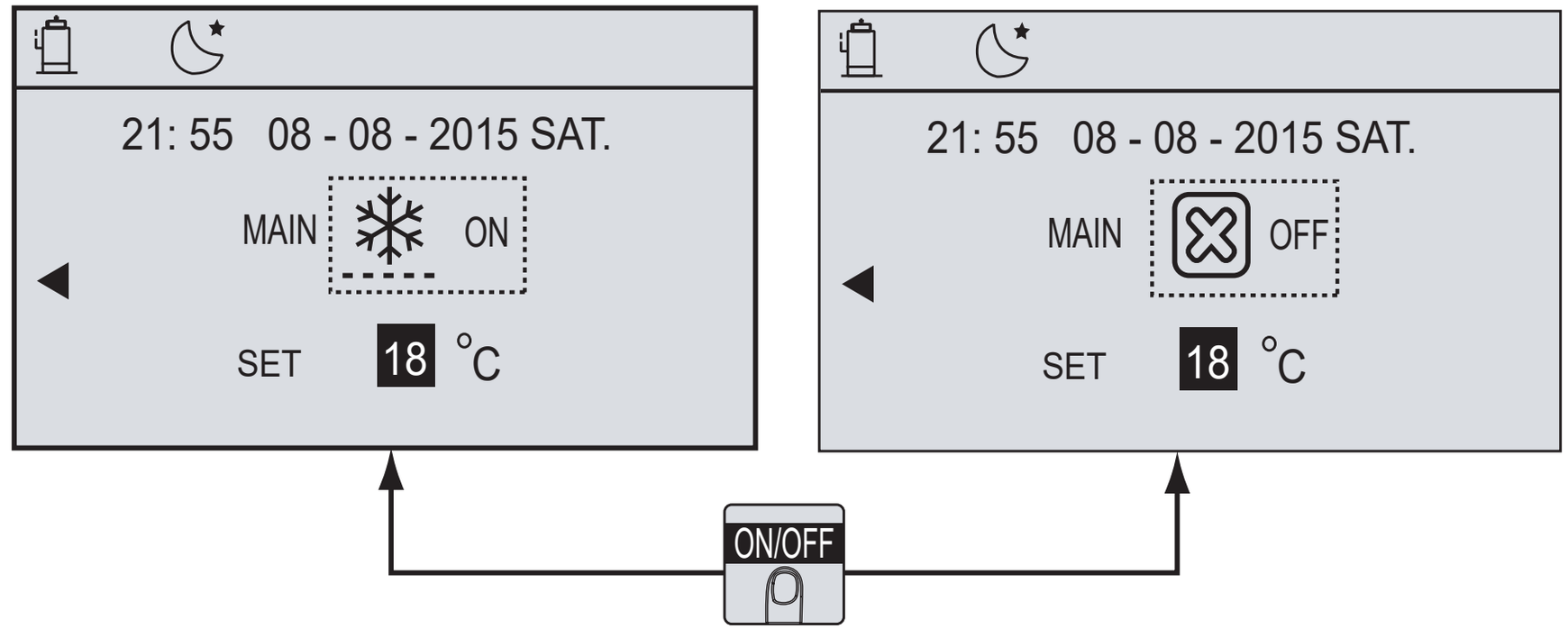
Use the interface to turn the unit on and off the unit for space heating or cooling.

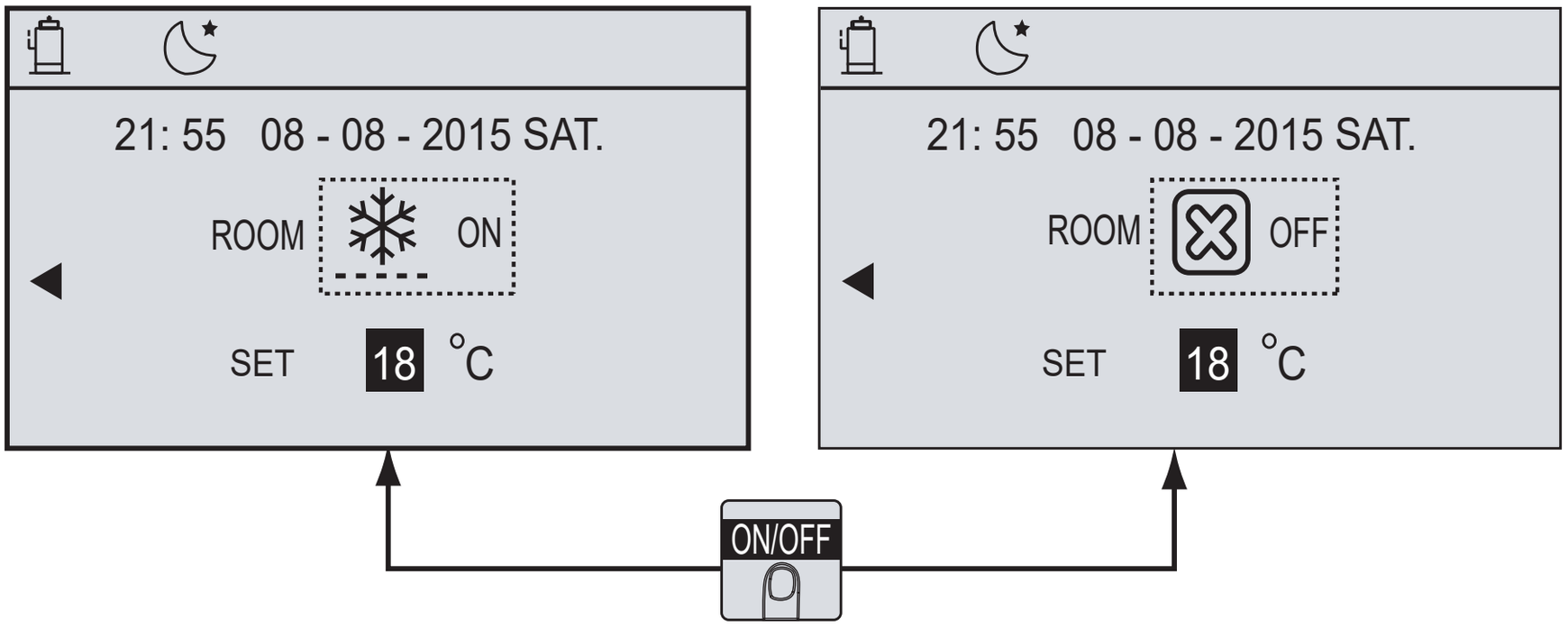
- The ON/OFF of the unit can be controlled by the interface if the ROOM THERMOSTAT is NON. (See ROOM THERMOSTAT SETTING on INSTALLATION & OWNER'S MANUAL)
- Press "◄", "▲" on home page and the black cursor will appear:



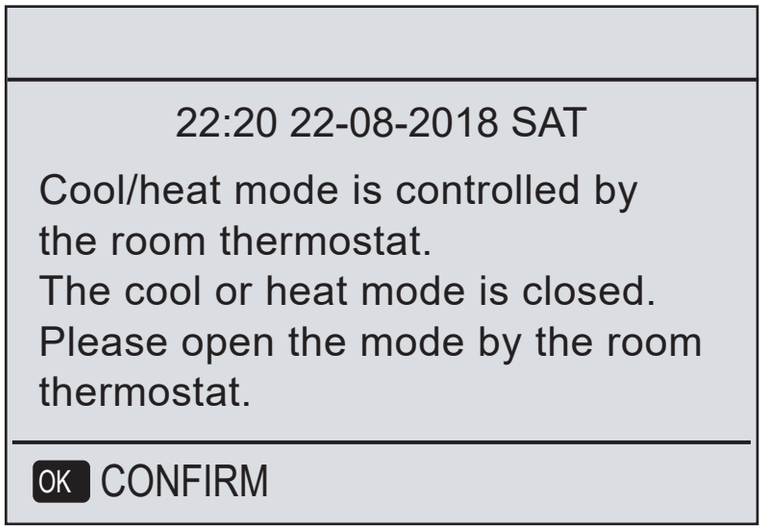
1) When the cursor is ON space operation mode (Including heat mode , cool mode and auto mode (A) , press the "ON/OFF" key to turn on/off the operation mode.



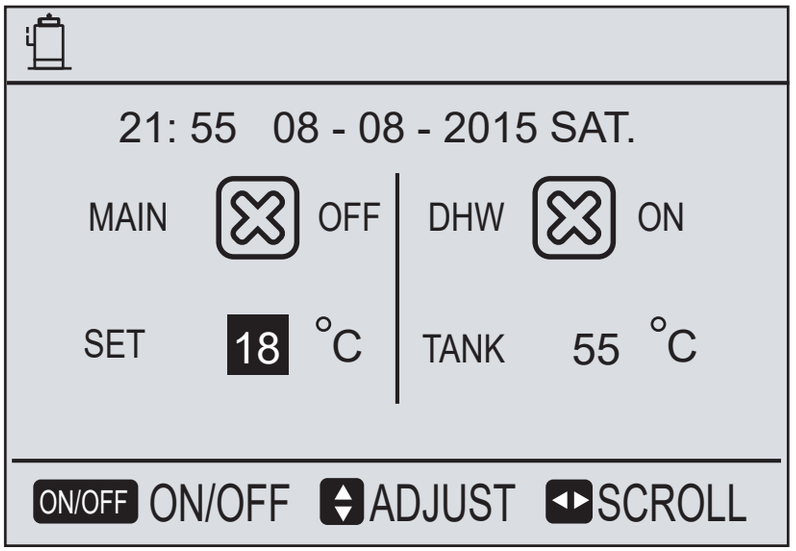

21: 55 08 - 08 - 2015 SAT.
MAIN
ON
SET
18
°C
21: 55 08 - 08 - 2015 SAT.
MAIN
OFF
SET
18
°C
ON/OFF


21: 55 08 - 08 - 2015 SAT.
ROOM
ON
SET
18
°C
21: 55 08 - 08 - 2015 SAT.
ROOM
OFF
SET
18
°C
ON/OFF

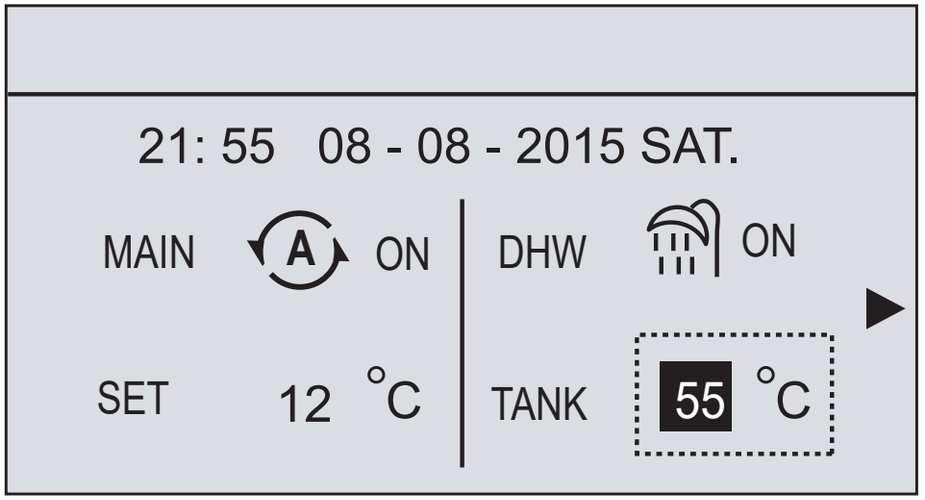
Use the room thermostat to turn the unit on and off for space heating or cooling.
① The room thermostat is SET YES (see ROOM THERMOSAT in the Installation & Owner's manual). The unit is turned on or off using the room thermostat. Press on/off on the interface and the page will display:



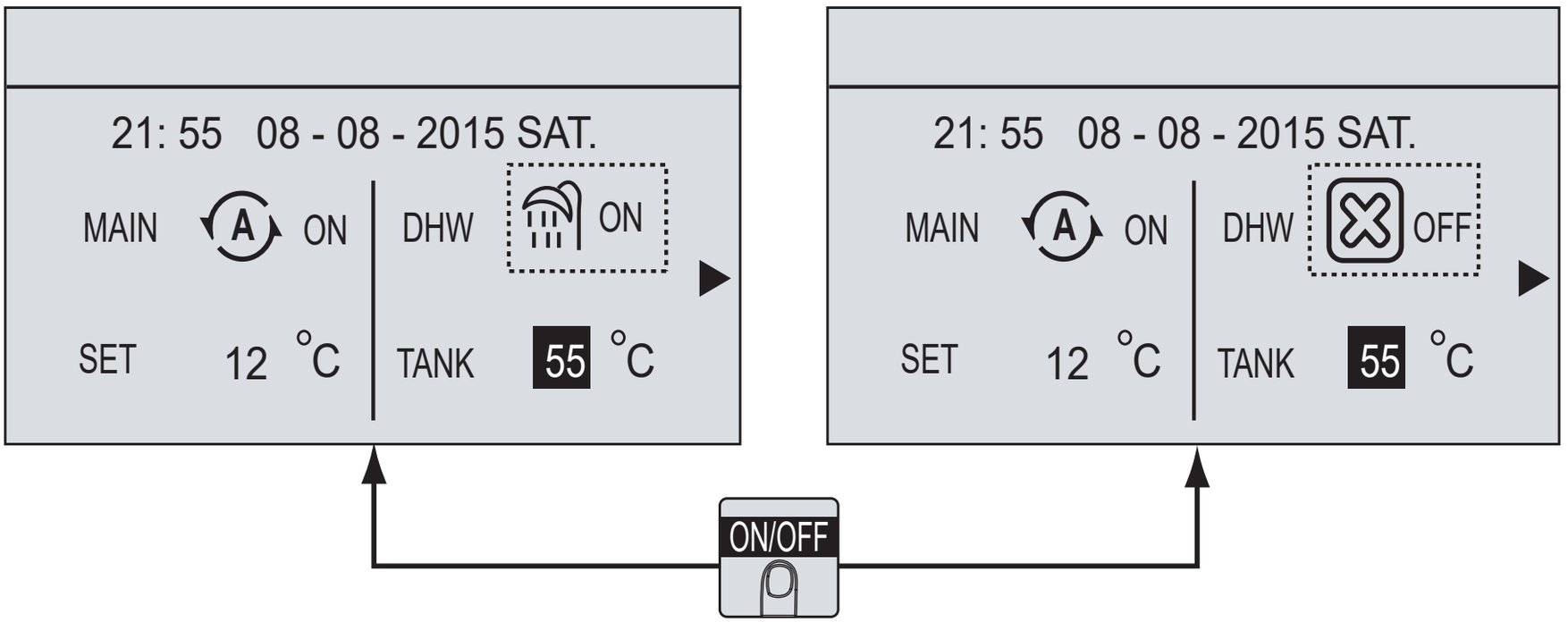
② DUAL ROOM THERMOSTAT is set to YES (see ROOM THERMOSTAT SETTING on INSTALLATION & OWNER'S MANUAL). The room thermostat for the fan coil will turn off, the room thermostat for floor heating will turn on, and the unit will run but the display will be OFF. This page is displayed:



Use the interface to turn the unit on or off for DHW. Press "►", "▼"on home page and the black cursor will appear:

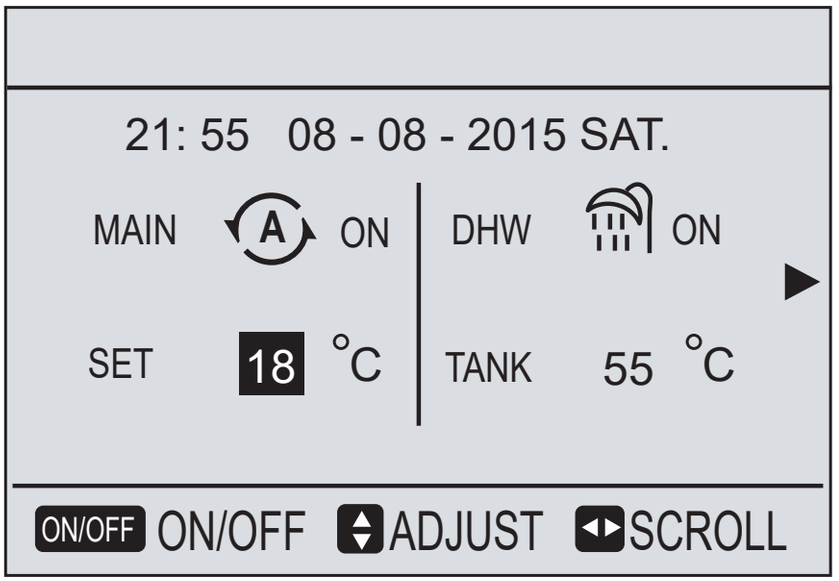


2) When the cursor is in DHW mode. Press the ''ON/OFF'' key to turn DHW mode on/off.

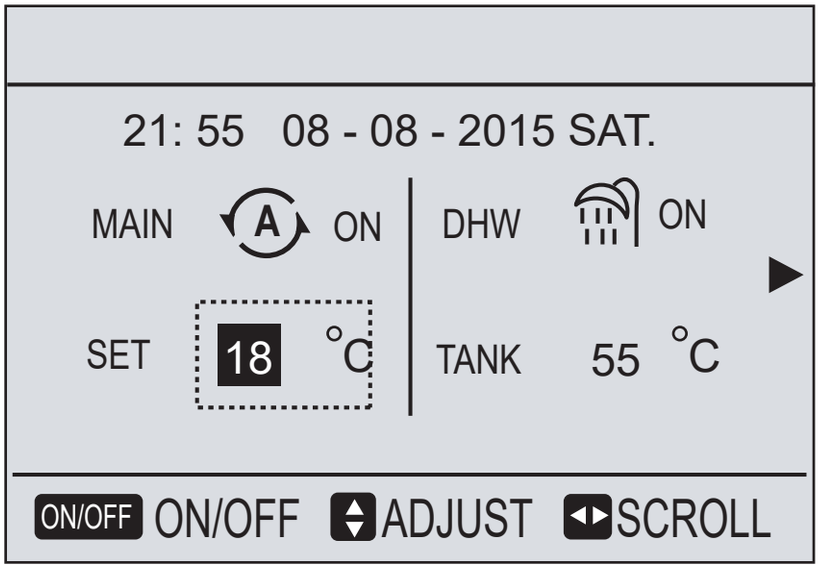


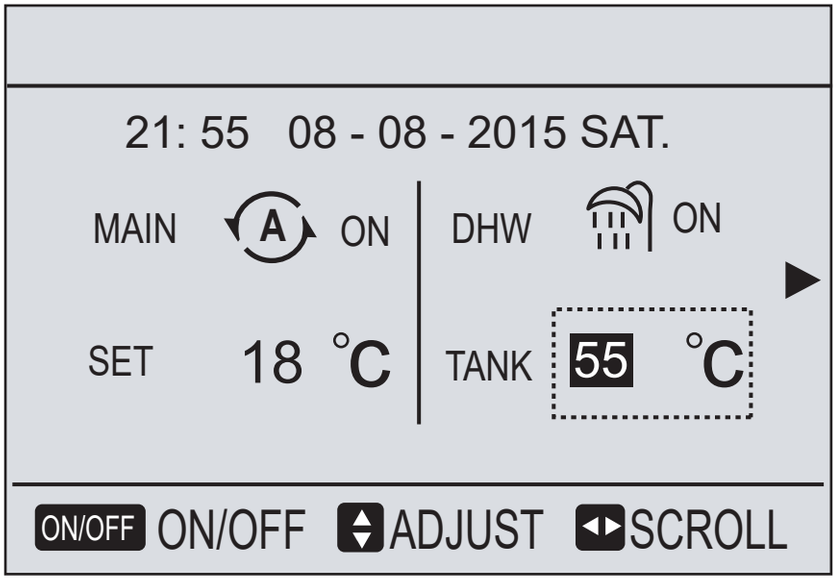
5.3 Adjusting the temperature

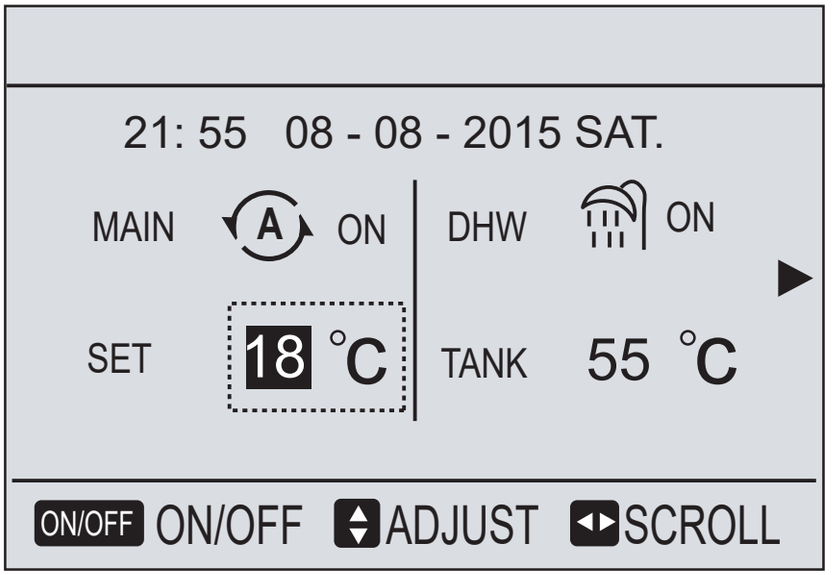
Press "◄", "▲" on the home page and the black cursor will appear:

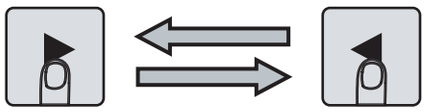


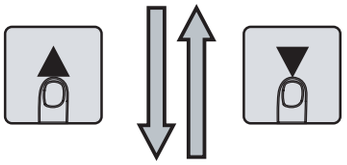
■ If the cursor is on temperature, use the "◄", "►" to select and use "▼", "▲" to adjust the temperature.

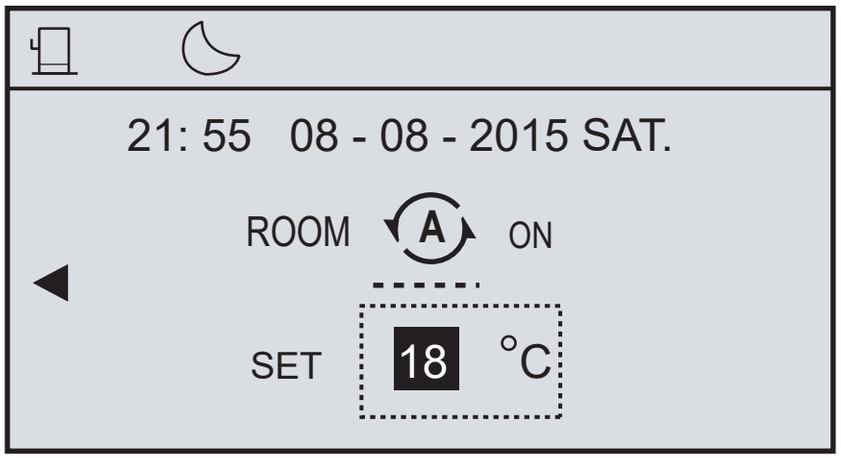


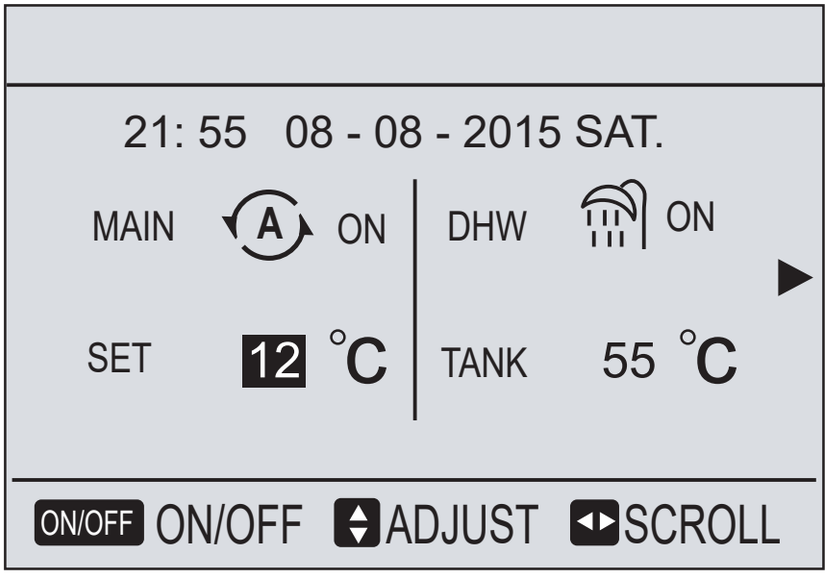

21: 55 08 - 08 - 2015 SAT.
MAIN A ON
DHW ON
SET 18 °C
TANK 55 °C
ON/OFF ON/OFF
ADJUST
SCROLL


21: 55 08 - 08 - 2015 SAT.
MAIN A ON
DHW ON
SET 18 °C
TANK 55 °C
ON/OFF ON/OFF
ADJUST
SCROLL



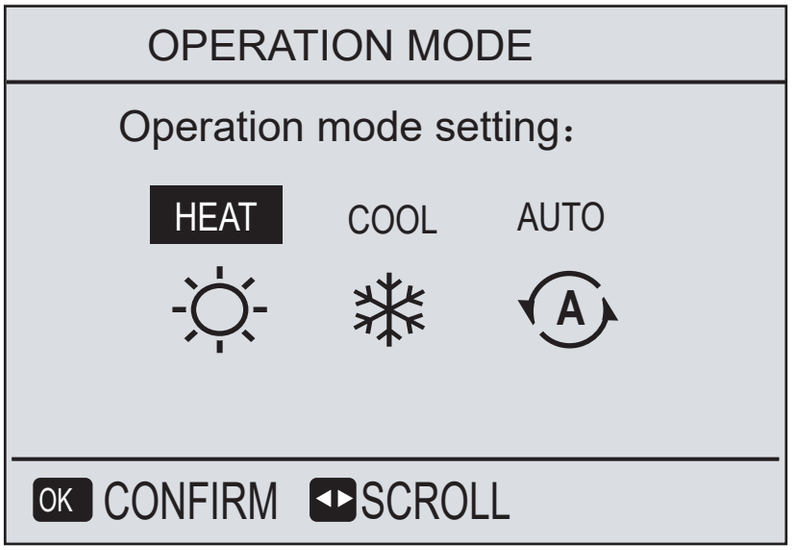



21: 55 08 - 08 - 2015 SAT.
ROOM A ON
SET 18 °C


21: 55 08 - 08 - 2015 SAT.
MAIN A ON
DHW ON
SET 12 °C
TANK 55 °C
ON/OFF ON/OFF
ADJUST
SCROLL

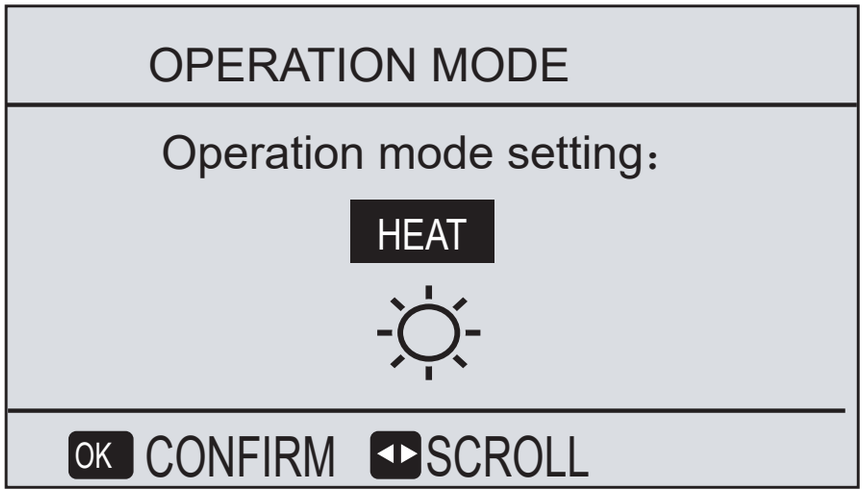
5.4 Adjusting the space operation mode

■ Adjusting space operation mode on the interface.
Go to "MENU" > "SPACE OPERATION MODE". Press "OK" and this page will appear:



■ There are three modes to be selected including heat, cool, and auto mode. Use the "◄", "►" to scroll and press "OK" to select.

Even you don't press OK button and exit the page by pressing BACK button. The mode is also effective if the cursor must be moved to the operation mode.
If there is only heat(cool) mode, this page will appear:

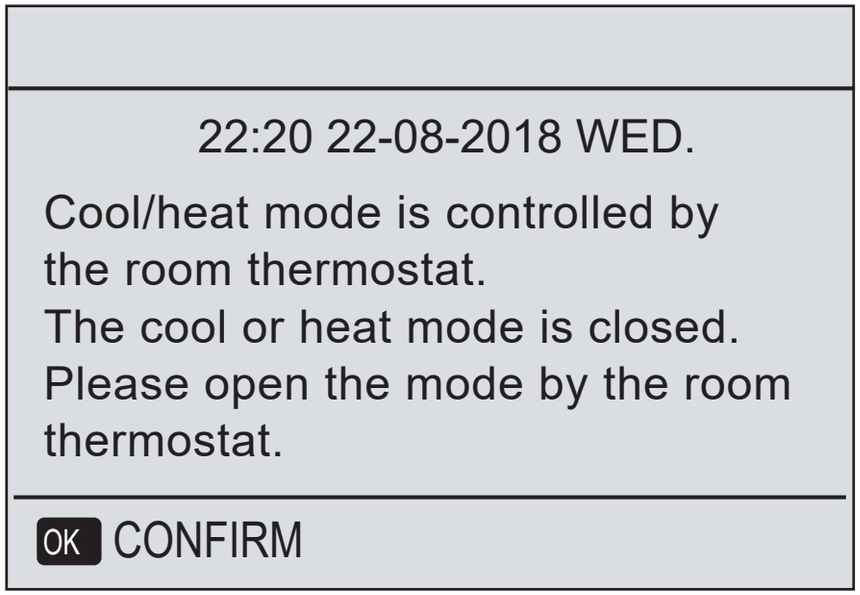


■ The operation mode cannot be changed to see the cool MODE SETTING in the installation owner's manual.

If you select…	Then the space operation mode is…
heat	Always heat mode
cool	Always cool mode
auto	Automatically changed by the software based on the outdoor temperature (and depending on installer settings also the indoor temperature). It takes monthly restrictions into account. **Note:** Automatic changeover is only possible under certain conditions. See the FOR SERVICEMAN > AUTO MODE SETTING on installation & owner's manual.

■ Adjust the space mode on the room thermostat to see room thermostat in the installation & owner's manual.

Go to MENU > OPERATION MODE. If you press any key to select or adjust, this page will appear:



6 MENU

6.1 Operation Mode

See "5.4 OPERATION MODE"

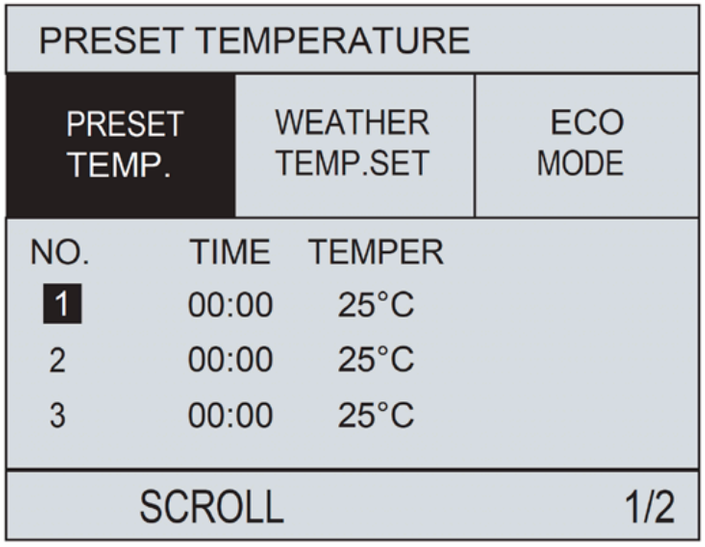
6.2 Preset Temperature

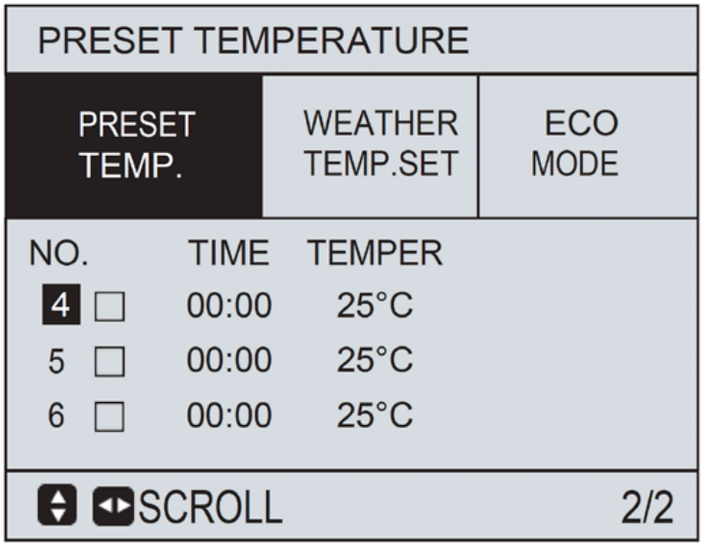
PRESET TEMPERATURE has PRESET TEMP\WEATHER TEMP.\ECO MODE 3 items.

6.2.1 PRESET TEMP.

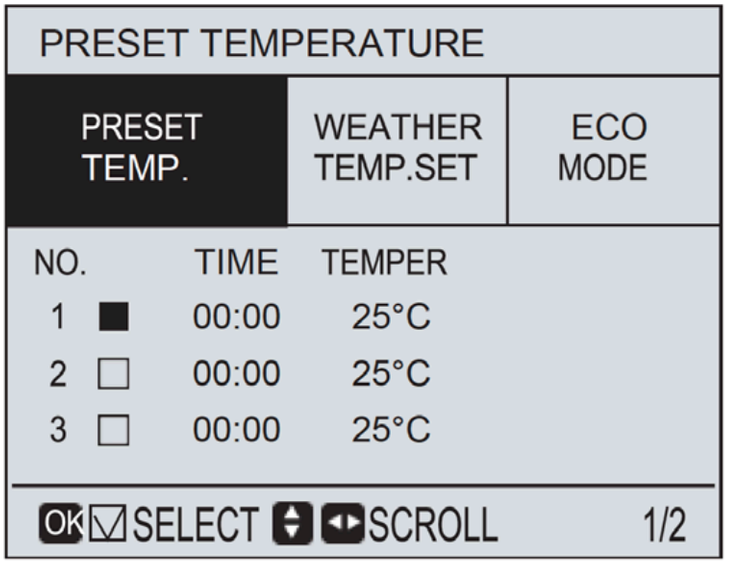
PRESET TEMP. function is used to set different temperature on different time when the heat mode or cool mode is on.

■ PRESET TEMP. = PRESET TEMPERATURE
■ The PRESET TEMP. function will be off in these conditions
  1) AUTO mode is running.
  2) TIMER or WEEKLY SCHEDULE is running.
■ Go to "MENU" > "PRESET TEMPERATURE" > "PRESET TEMP". press "OK".
The following page will appear:

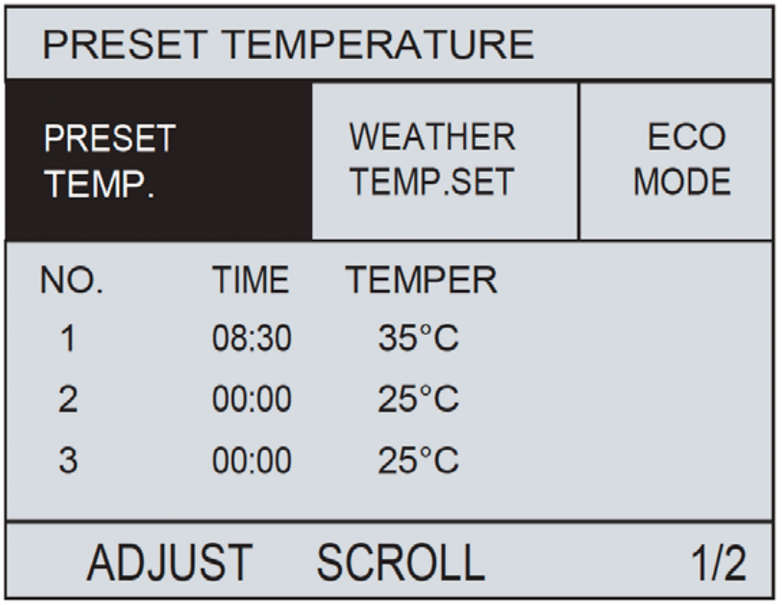




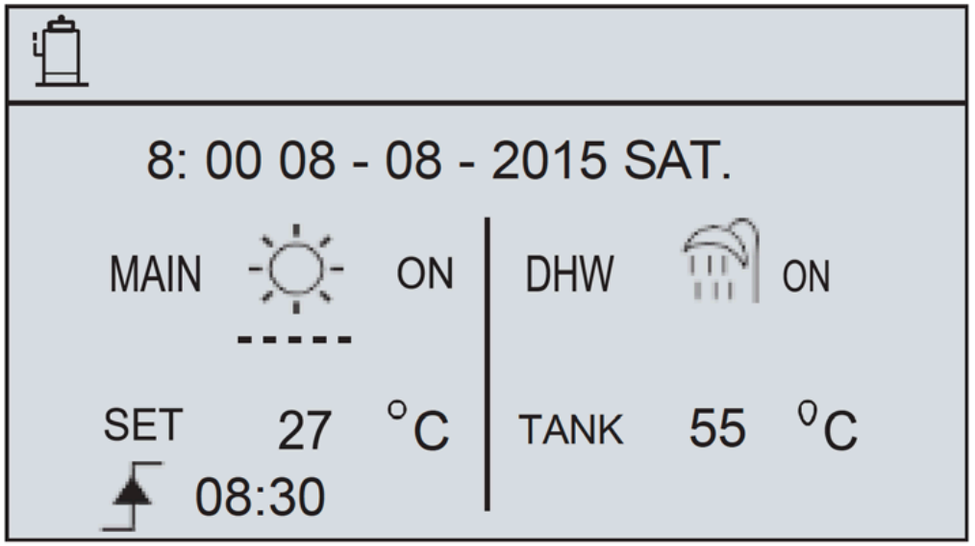
Use "◄", "►", "▼", "▲" to scroll and use "▼", "▲" to adjust the time and the temperature.
When the cursor is on "■", as the following page:



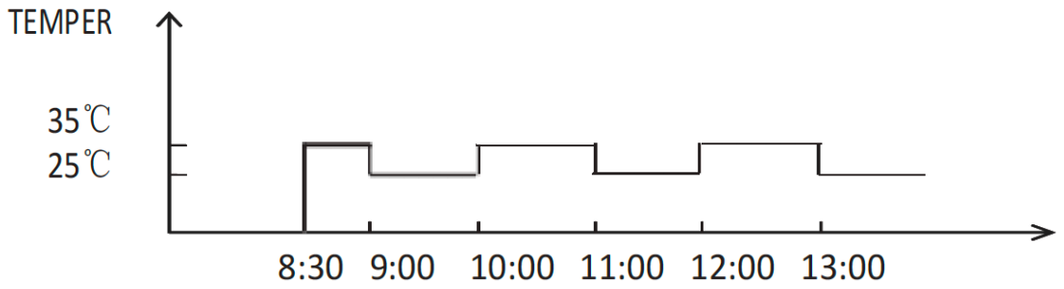
Press "OK", ant the "■" becomes "☑". The timer 1 is selected. Press "OK" again, the "☑" becomes "■". The timer 1 is unselected.



Use "◄", "►", "▼", "▲" to scroll and use "▼", "▲" to adjust the time and the temperature.
Set six periods and six temperatures can be set.
For example: Now time is 8:00 and temperature is 30ºC. We set the PRESET TEMP as follows table.
The following page will appear:



NO.	TIME	TEMPER
1	8:30	35ºC
2	9:00	25ºC
3	10:00	35ºC
4	11:00	25ºC
5	12:00	35ºC
6	13:00	25ºC



INFORMATION

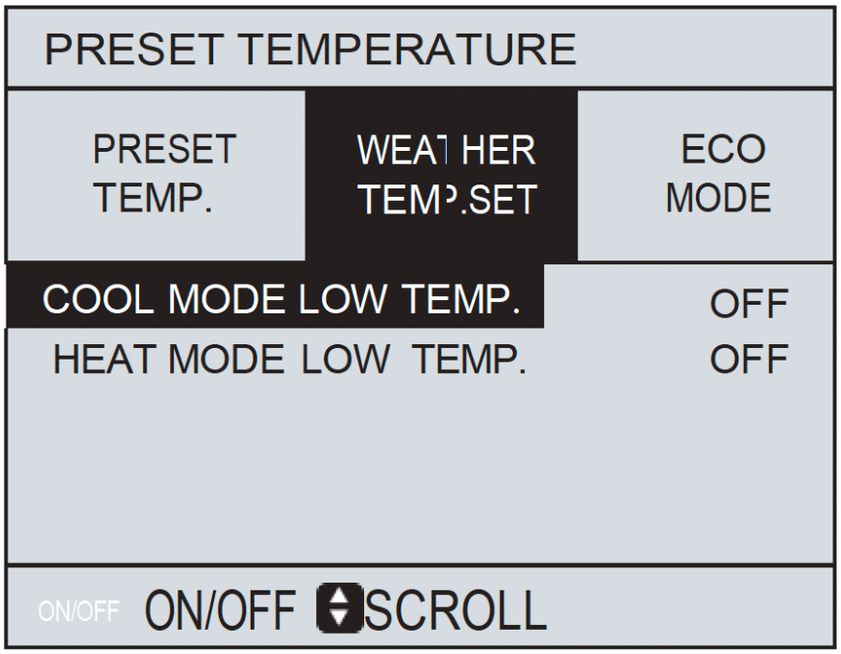
- When the space operation mode is changed the PRESET TEMP. is off automatically.
- The PRESET TEMP. function can be used in the heat mode or cool mode. But if the operation mode is changed, the PRESET TEMP. function need reset again.
- The running preset temperature is invalis when the unit is OFF. It will run according to the next preset temperature when the unit turn on again.

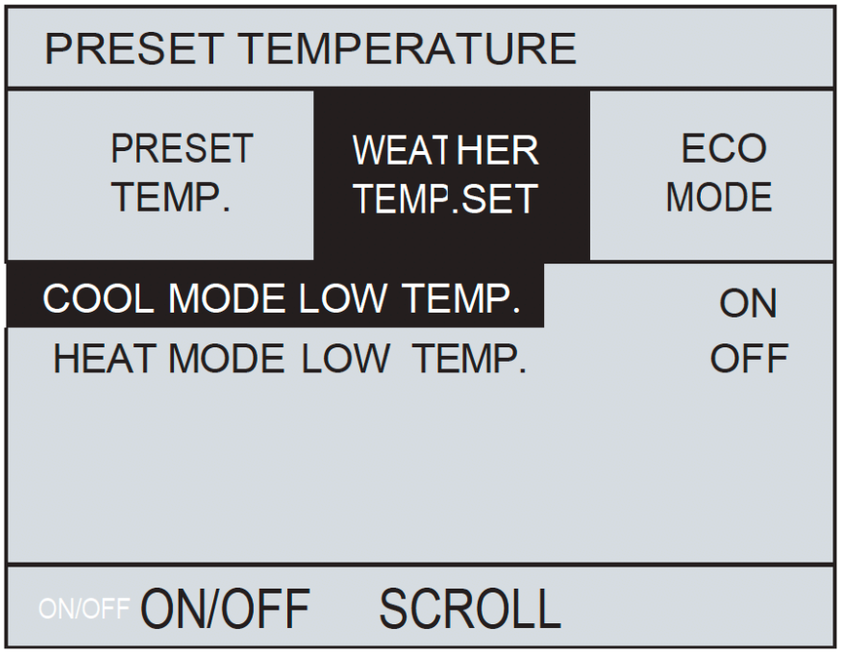
6.2.2 WEATHER TEMP. SET

- WEATHER TEMP. SET = WEATHER TEMPERATURE SET
- Weather temp. set function is used to preset the desired the water flow temperature automatically depending on the outside air temperature. During the warmer weather the demand for space heating is reduced. To prevent the heat pump from producing excessing water flow temperature for the primary circuit. the weather temp. set can be used to maximize efficiency and reduce running costs.

  Go to "MENU" > "PRESET TEMPERATURE" > "WEATHER TEMP. SET". Press "OK".

  The following page will appear:





INFORMATION

- WEATHER TEMP. SET have four kinds of curves: 1.the curve of the high temperature setting for heating, 2.the curve of the low temperature setting for heating, 3.the curve of the high temperature setting for cooling, 4.the curve of the low temperature setting for cooling.

It only has the curve of the high temperature setting for heating. if the high temperature is set for heating.

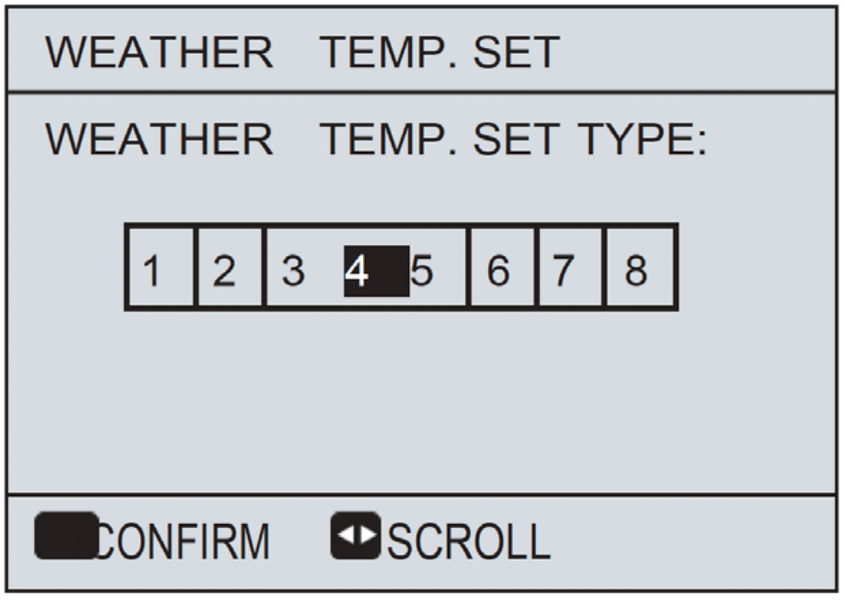
It only has the curve of the low temperature setting for heating, if the low temperature is set for heating.

It only has the curve of the high temperature setting for cooling, if the high temperature is set for cooling.

It only has the curve of the low temperature setting for cooling, if the low temperature is set for cooling.

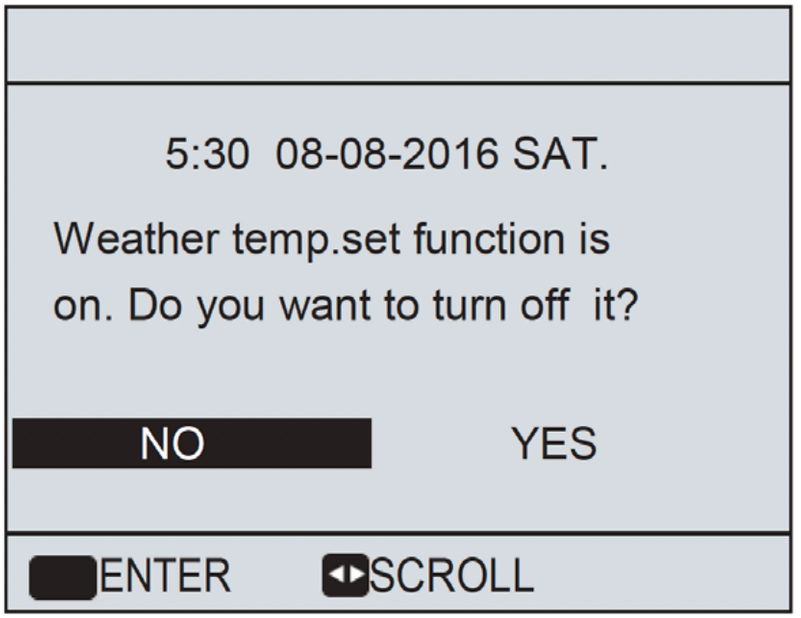
- See FOR SERVICEMAN > COOL MODE SETTING and > HEAT MODE SETTING in installation & owner's manual.
- The desired temperature (T1S) can't be adjusted, when the temperature curve is set ON.

- If you want to use heat mode, you select "HEAT MODE LOW TEMP". If you want to use cool mode, you select "COOL MODE LOW TEMP". You can select the low or high temperature setting for heating or cooling to see the "Table 1~4". If you select "ON", the following page will appear:

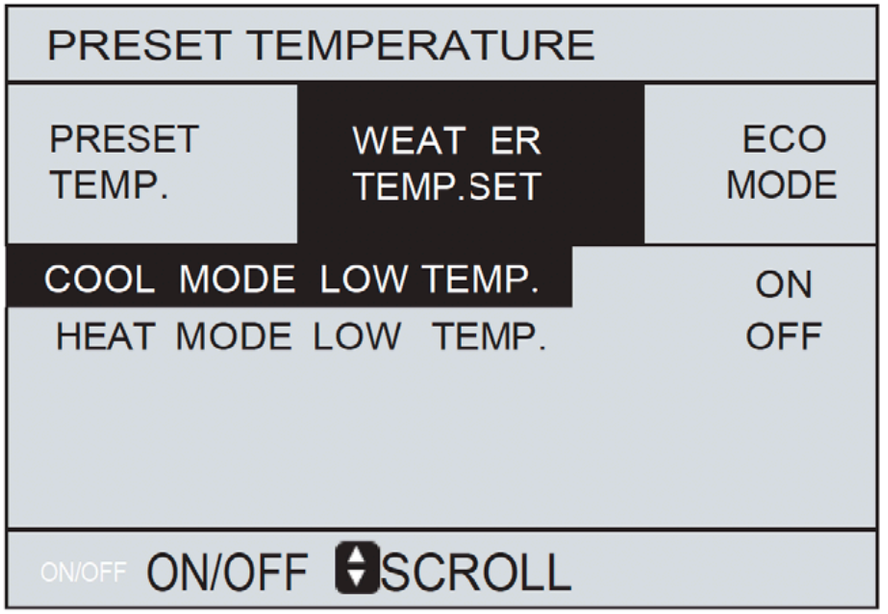


Use "◄", "►" to scroll. Press "OK" to select

■ If the weather TEMP. SET is activated, desired temperature can not be adjusted on the interface. Press the "▼", "▲" to adjusr the temperature on home page. The following page will appear:

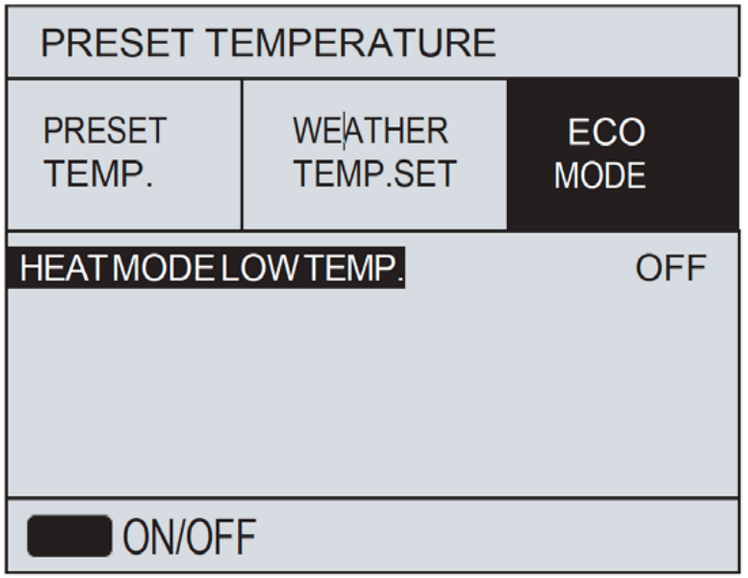


Move to "NO", press "OK" to come back to home page, move to "YES", press "OK" to reset the WEATHER TEMP. SET.

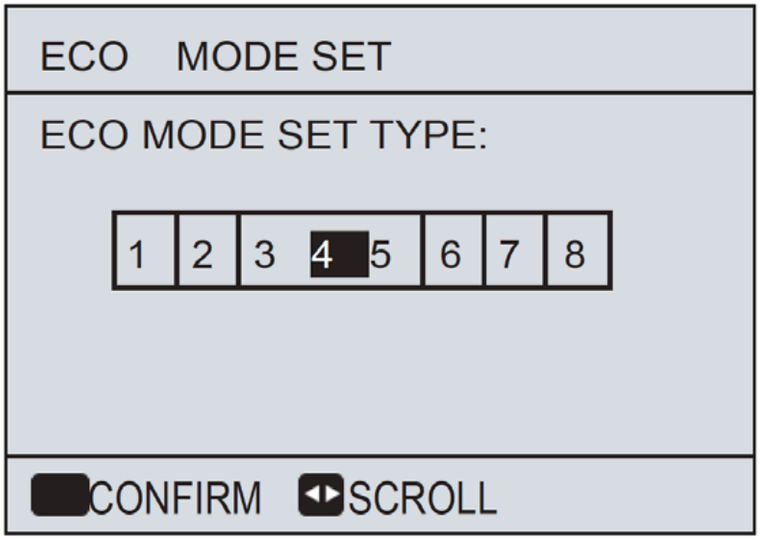


6.2.3 ECO MODE

Use ECO MODE is used to save energy.
If ECO mode is activated, is displayed on the home page.
Go to "MENU" > "PRESET TEMPERATURE" > "ECO MODE".
Press "OK". The following page will appear:



Press "ON/OFF". The following page will appear:



Use "◄", "►" to scroll. Press "OK" to select

INFORMATION

- ECO MODE SET have two kinds of curves: 1.the curve of the high temperature setting for heating, 2.the curve of the low temperature setting for heating.

It only have the curve of the high temperature setting for heating, if the high temperature is set for heating.

It only have the curve of the low temperature setting for heating, if the low temperature is set for heating.

- See FOR SERVICEMAN > HEAT MODE SETTING in installation & owner's manual.
- The desired temperature (T1S) can't be adjusted, when the ECO mode is ON.
- You can select the low or high temperature setting for heating to see the "Table 5~6"
- If HEAT MODE is ON and ECO TIMER is OFF, the unit run ECO mode all the time.
- If HEAT MODE is ON and ECO TIMER is ON, the unit run ECO mode according to the start time and end time.

6.3 Domestic Hot Water (DHW)

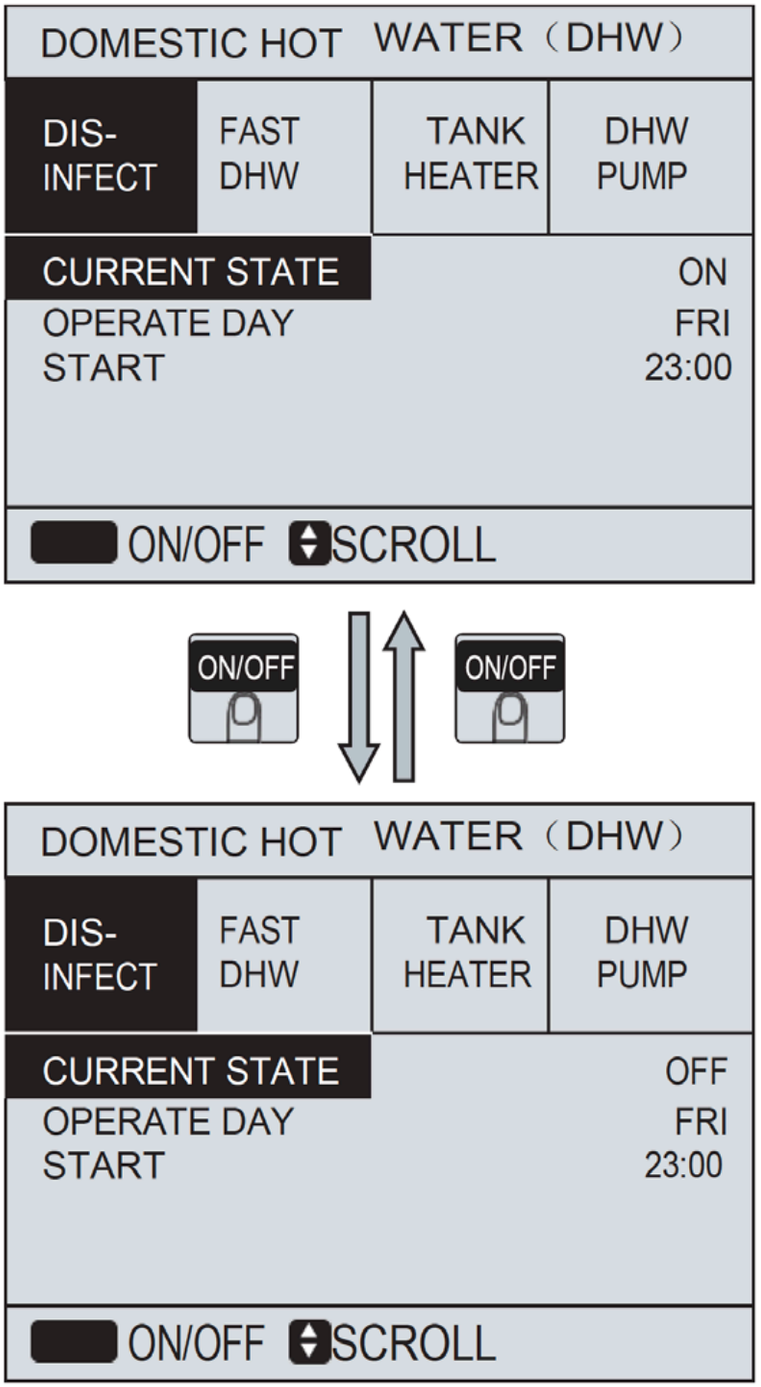
DHW mode typically consists of the following:

1) DISINFECT
2) FAST DHW
3) TANK HEATER
4) DHW PUMP

6.3.1 Disinfect

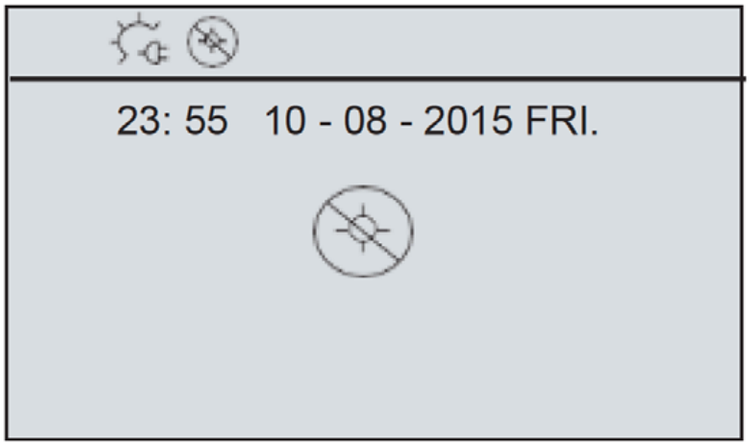
The DISINFECT function is used to kill the legionella. In disinfect function the tank temperature will be reached 65~70ºC forcely the disinfect temperature is set in FORSERVICEMAN. See DISINFECT in Installation & Owner's Manual.

Go to "MENU" > "DOMESTIC HOT WATER" > "DISINFECT". Press "OK". The following page will appear:



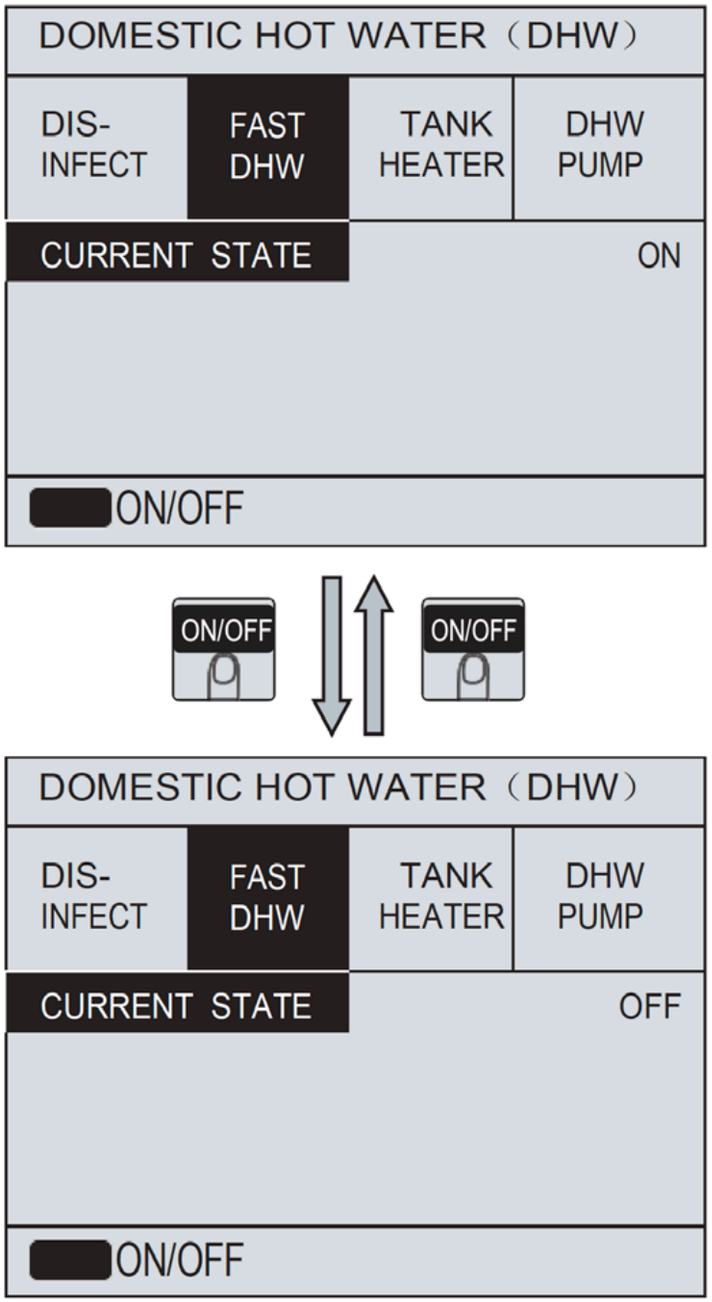
Use "◄", "►", "▼", "▲" to scroll and use "▼", "▲" to adjust the parameters when setting "OPERATE DAY" and "START". If the OPERATE DAY is set FRIDAY and the START is set 23:00, the disinfect function will active on 23:00 Friday.

If CURRENT STATE is OFF, DISINFECT is invalid.
If the disinfect function is running, the following page will appear:



6.3.2 Fast DHW

The FAST DHW function is used forced the system to operation in DHW mode.
The heat pump and the booster heater or backup heater will operate for DHW mode together.
Go to MENU > DOMESTIC HOT WATER > FAST DHW. Press "OK":



Use "ON/OFF key to select ON or OFF.

INFORMATION

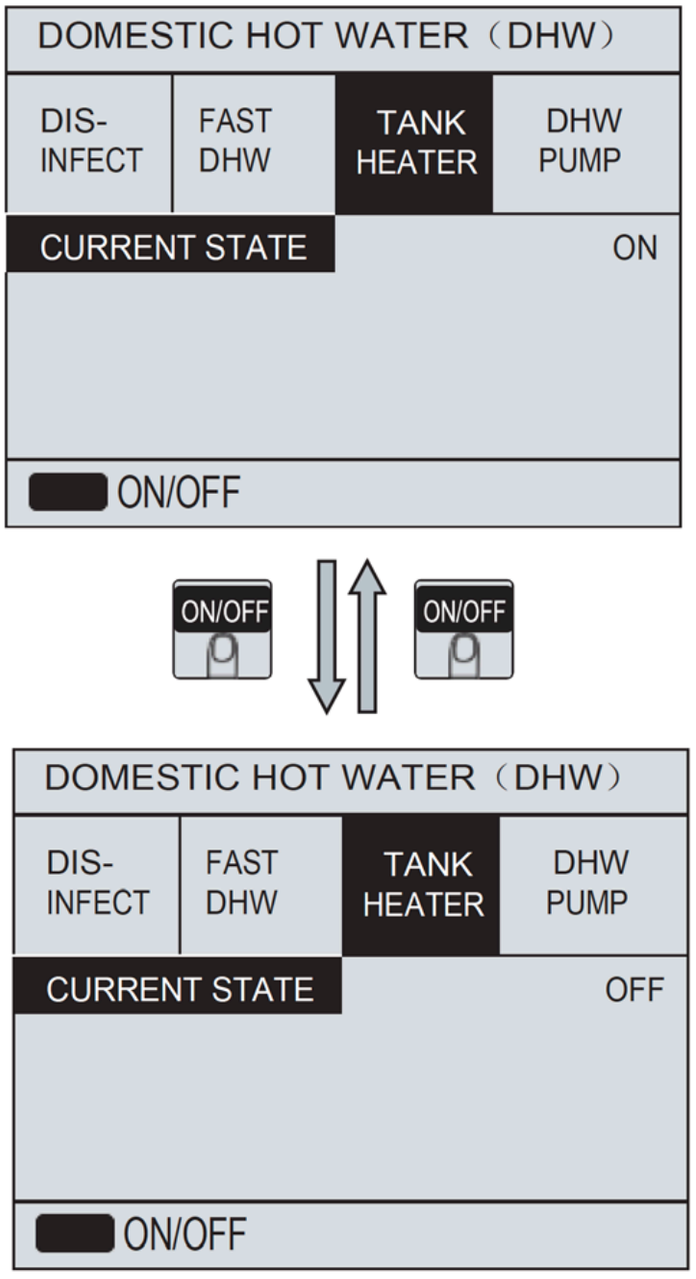
If CURRENT STATE is OFF, the FAST DHW is invalid, and if CURRENT STATE is ON, the FAST DHW function is effective. The FAST DHW function is once effective.

6.3.3 HEATER TANK

The tank heater is used to force the tank heater to heat the water in tank. In the same situation, the cooling or heating is required and the heat pump system is operating for cooling or heating, however there still is a demand from the hot water.

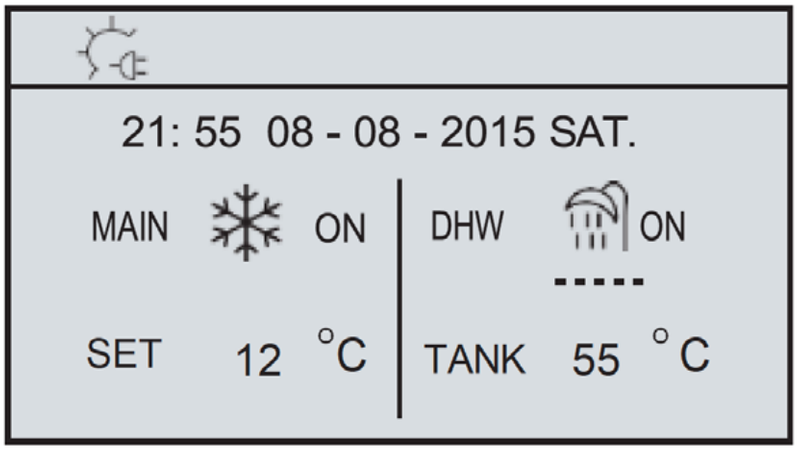
TANK HEATER function can be used to heat the water in tank. Also, even if the heat pump system fails, TANK HEATER can be used to heat water in tank.

Go to "MENU" > "DOMESTIC HOT WATER" > "TANK HEATER". Press "OK".



Use "ON/OFF" to select ON or OFF. Use "BACK" to exit.

If TANK HEATER is effect, the following page will appear:



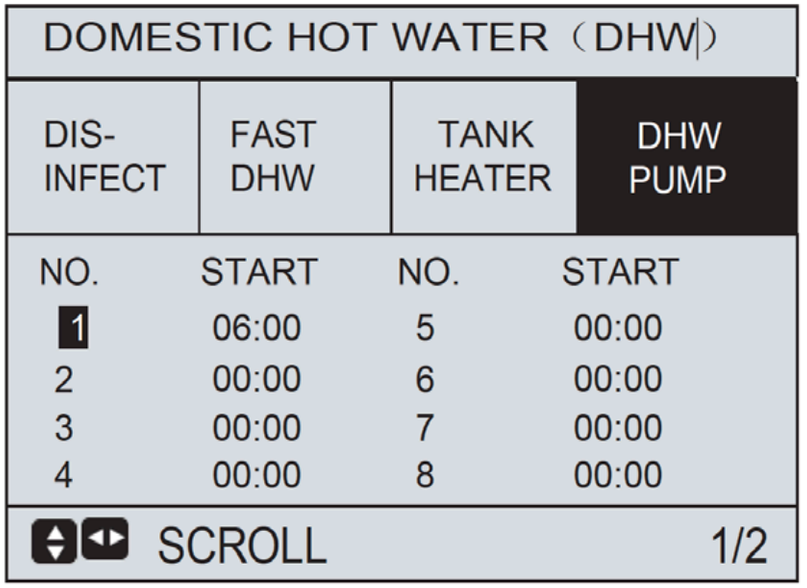
INFORMATION

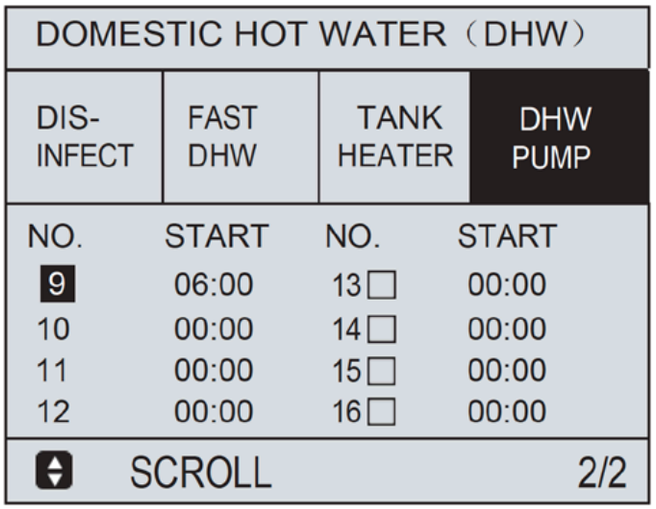
If CURRENT STATE is OFF, TANK HEATER is invalid. If the T5 (sensor of tank) is fault, tank heater can't work.

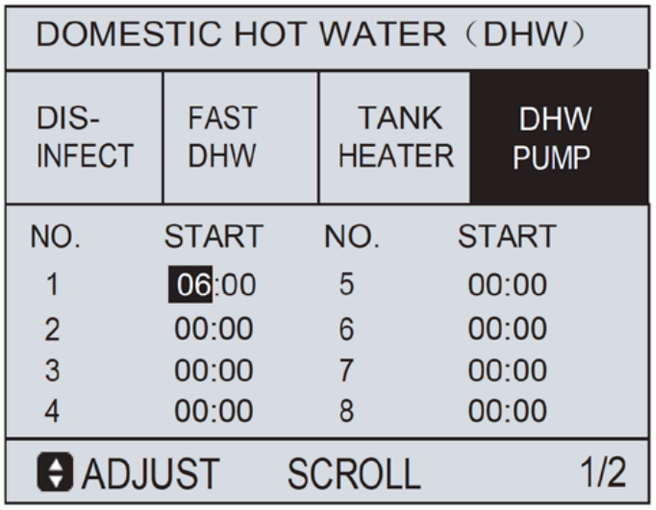
6.3.4 DHW Pump

The DHW PUMP function is used to return water of the water net. Go to "MENU" > "DOMESTIC HOT WATER" > "DHW PUMP".

Press "OK". The following page will appear:



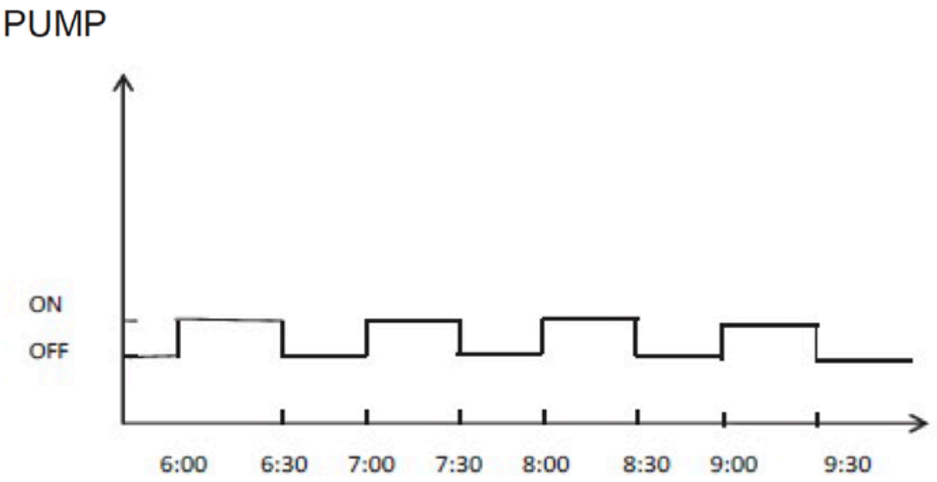




Move to "■", press "OK" to select or unselect. ("☑" the timer is selected. "□" the timer is unselected).
Use "◄", "►", "▼", "▲" to scroll and use "▼", "▲" to adjust the parameters.
For example: you have set the parameter about the DHW PUMP (See FOR SERVICEMAN TEMPERATURE TYPE SETTING on installation& owner's manual). PUMP RUNNING TIME is 30 minutes. Set as follows:

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

The PUMP will run as follows:



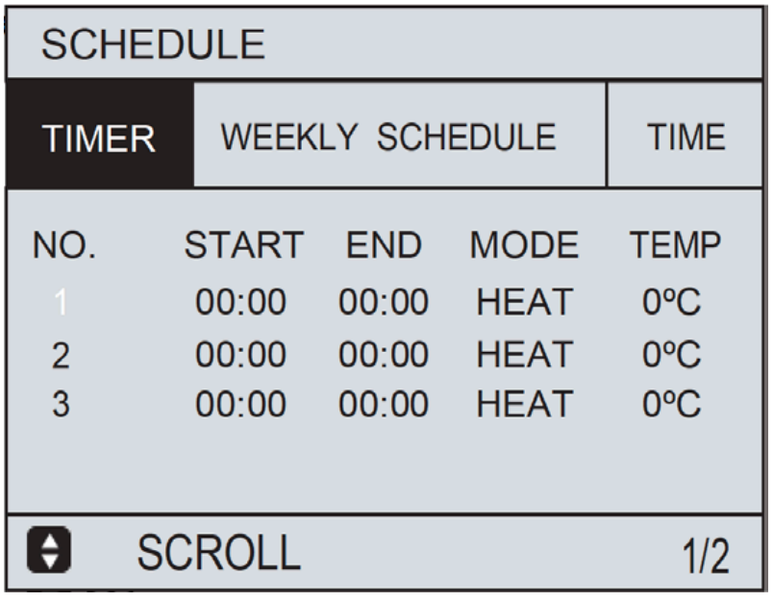
6.4 Schedule

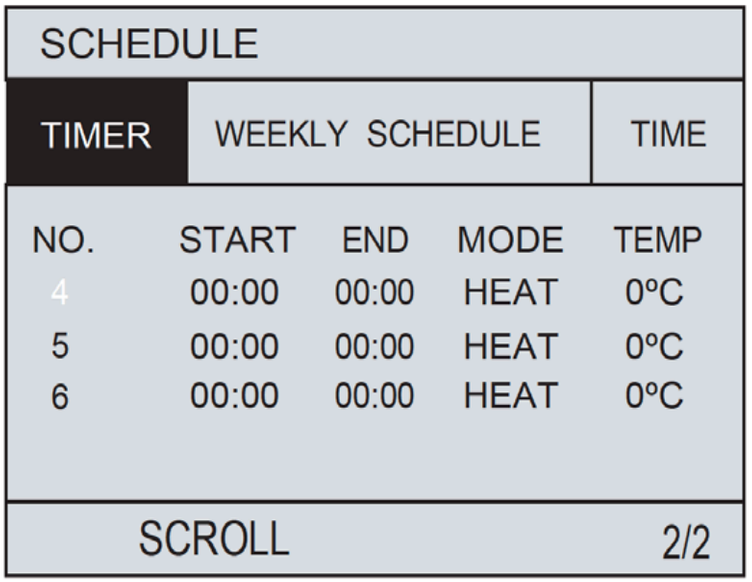
SCHEDULE menu contents as following:

1) TIMER to set the day schedule
2) WEEKLY SCHEDULE to set the weekly schedule
3) TIME to set the current time and date

6.4.1 Disinfect

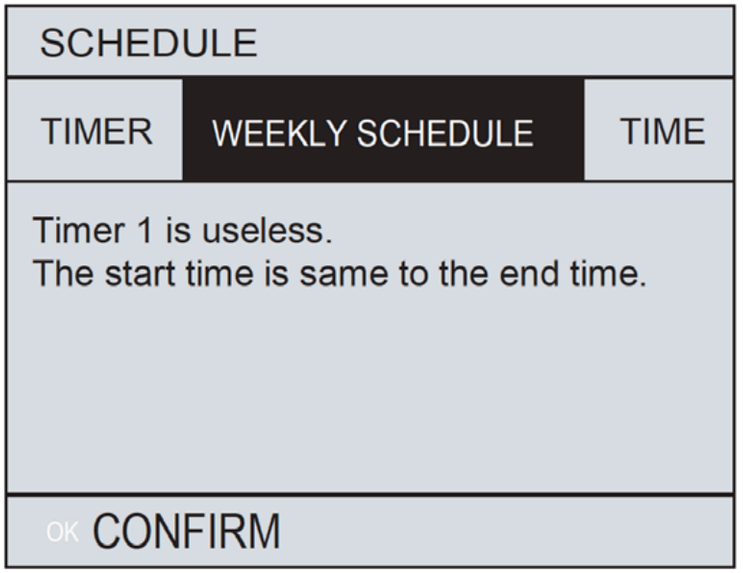
If the weekly schedule function is on, the timer is off, the later setting is effective. If the Timer is activated, ⏲ is displayed on home page





Use "◄", "►", "▼", "▲" to scroll and use "▼", "▲" to adjust the time, the mode and the temperature.
Move to "■", press "OK" to select or unselect. ("☑" the timer is selected. "□" the timer is unselected) six timers can be set.
If you want to cancel the TIMER, you move the cursor to "☑", press "OK", the ☑ become □, the timer is invalid.

If you set the start time later than the end time or the temperature out of range of the mode. The following page will appear:

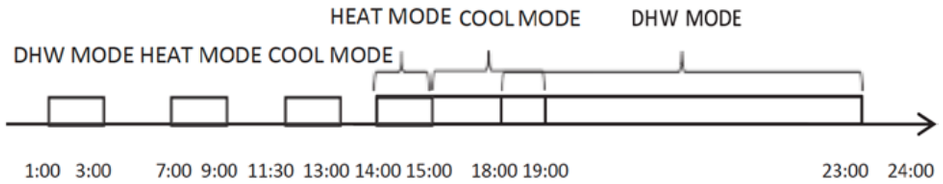


Example:

Six timer is set as following:

NO.	START	END	MODE	TEMP
T1	1:00	3:00	DHW	50ºC
T2	7:00	9:00	HEAT	28ºC
T3	11:30	13:00	COOL	20ºC
T4	14:00	16:00	HEAT	28ºC
T5	15:00	19:00	COOL	20ºC
T6	18:00	23:00	DHW	50ºC

The unit will run as following:



The operation of the controller at the following time:

Time	The operation of the controller
1:00	DHW mode is turned ON
3:00	DHW mode is turned OFF
7:00	HEAT MODE is turned ON
9:00	HEAT MODE is turned OFF
11:30	COOL MODE is turned ON
13:00	COOL MODE is turned OFF
14:00	HEAT MODE is turned ON
15:00	COOL MODE is turned ON and HEAT MODE is turned OFF
16:00	HEAT MODE is turned OFF
18:00	DHW MODE is turned ON
19:00	COOL MODE is turned OFF
23:00	DHW mode is turned OFF

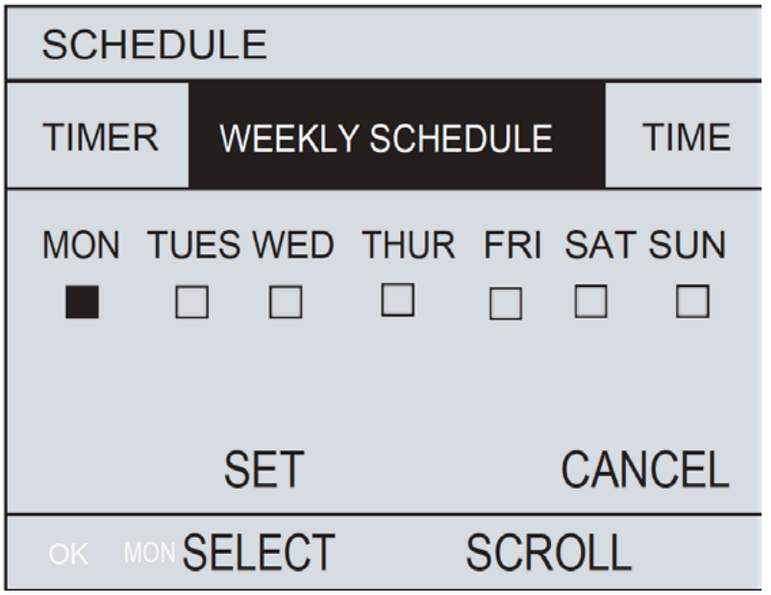
INFORMATION

If the start time is same to the end time in one timer, the timer is invalid.

6.4.2 Weekly schedule

If the timer function is on the weekly schedule is off, the later setting is effective. If WEEKLY SCHEDULE is activated, is displayed on the home page.

Go to "MENU" > "SCHEDULE" > "WEEKLY SCHEDULE". Press "OK". The following page will appear:

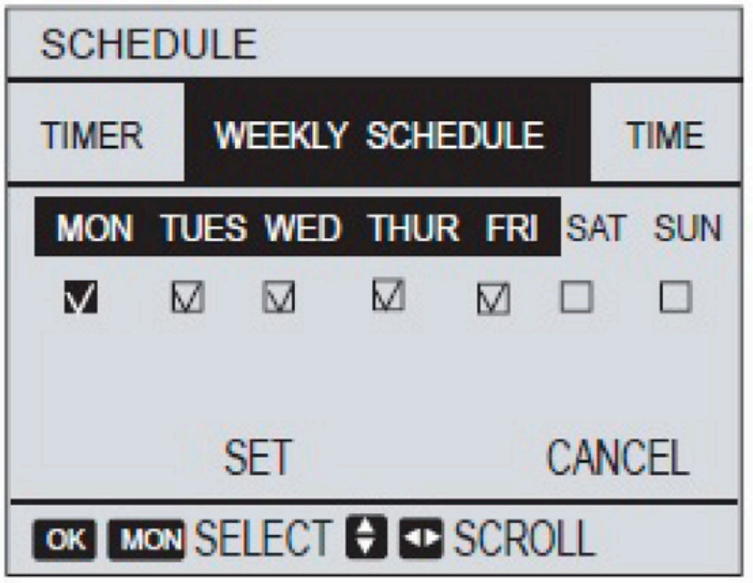


First select the days of the week, you wish to schedule.

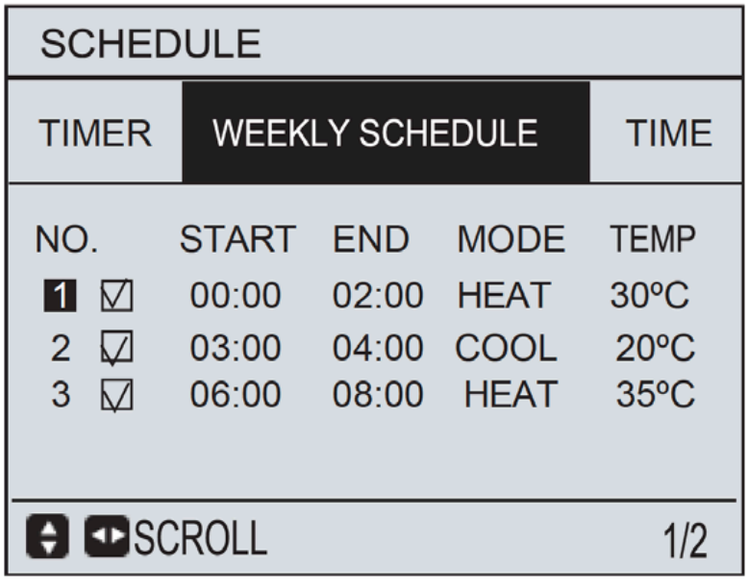
Use "◄", "►" to scroll, press "OK" to select on unselect the day. " MON " means that the day is selected, "MON" means that the day is unselected.

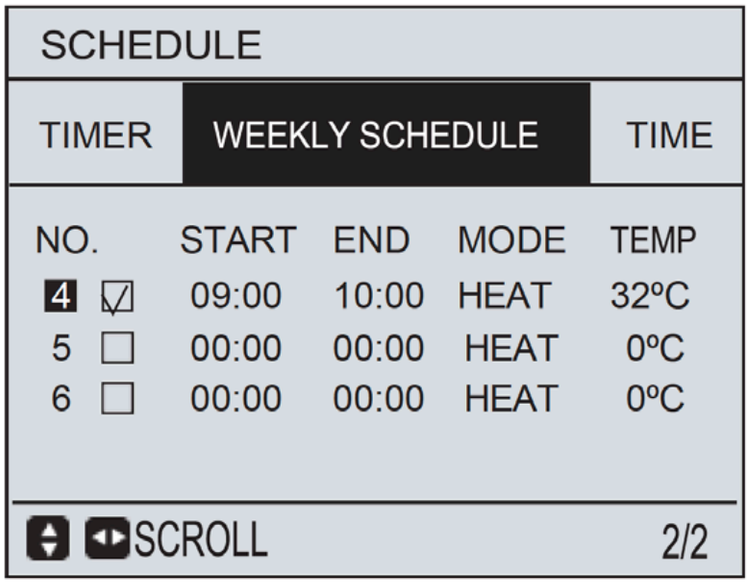
INFORMATION

We must set two days at least when we want to enable WEEKY SCHEDULE function.



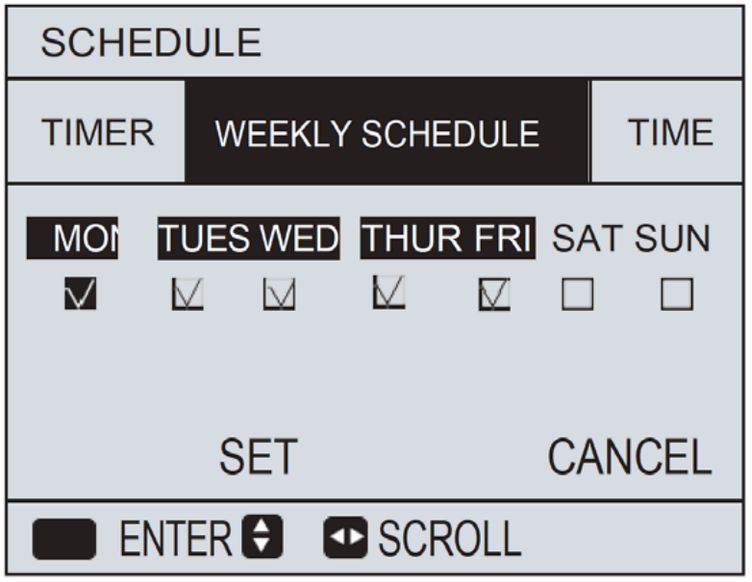
Use "◄", "►" move to SET, press "OK". The Monday to Friday are selected to be scheduled and they have the same schedule.
The following pages will appear:





Use "◄", "►", "▼", "▲" to scroll and adjust the time, the mode and the temperature. Timers can be set, including start time and end time, mode and temperature. The mode includs heat mode, cool mode and DHW mode.
The setting method reffer to timer setting. The end time must be later than the start time. Otherwise this will show that **Timer is of no effect**.

How to cancel the WEEKLY SCHEDULE
Cancel the schedule: First select the days of the week.
Use "◄", "►" to scroll.

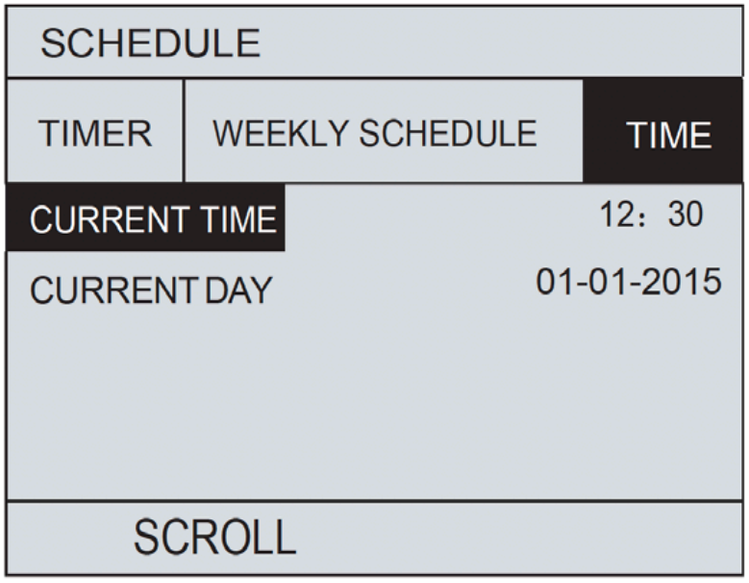


INFORMATION

You have to reset TIMER/WEEKLY SCHEDULE, if you change the MAIN page to the ROOM page or you change the ROOM page to the MAIN page.
The TIMER or WEEKLY SCHEDULE is invalid, if ROOM THERMOSTAT is effect.

6.4.3 Time

The TIME function is used to set the local actual time and date.
Go to "MENU" > "SCHEDULE" > "TIME". Press "OK". The following page appear:



Use "◄", "►", "▼", "▲" to scroll and use "▼", "▲" adjust the time and date.

INFORMATION

- The ECO or COMFORT MODE has the highest priority, the TIMER or WEEKLY SCHEDULE has the second priority and the PRESET TEMP. or WEATHER TEMP. SET has the lowest priority.
- The PRESET TEMP. or WEATHER TEMP. SET becomes invalid, when we set the ECO or COMFORT valid. We must reset the PRESET TEMP. or WEATHER TEMP. SET when we set the ECO or COMFORT valid.
- TIMER or WEEKLY SCHEDULE is not affected when ECO or COMFORT is valid. TIMER or WEEKLY SCHEDULE is activated when the ECO or COMFORT is not running.
- TIMER and WEEKLY SCHEDULE are the same priority. The after setting function is valid. The PRESET TEMP. becomes invalid when TIMER or WEEKLY SCHEDULE is valid. The WEATHER TEMP. SET is not affected by the setting of TIMER or WEEKLY SCHEDULE.
- PRESET TEMP. and WEATHER TEMP. SET are the same priority. The after setting function is valid.

INFORMATION

All about the time set items (PRESET TEMP, ECO/COMFORT, DISINFECT, DHW PUMP, TIMER, WEEKLY SCHEDULE, SILENCE MODE, HOLIDAY HOME), the ON/OFF of the corresponding function can be activated only when the start time or the end time.

6.5 Options

OPTIONS menu contents as following

1) SILENT MODE
2) HOLIDAY AWAY
3) HOLIDAY HOME
4) BACKUP HEATER

6.5.1 Silent Mode

The SILENT MODE is used to decrease the sound of the unit. However, it also decreases the heating/cooling capacity of the system. Thwew are two silent mode levels.

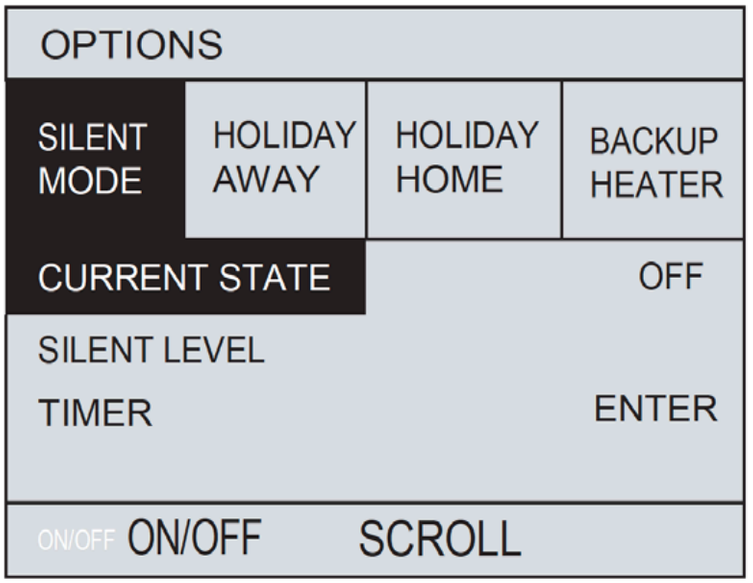
level2 is more silent than level1, and the heating or cooling capacity is also more decreasing.

There are two method to use the silent mode:

1) silent mode in all time;
2) silent mode in timer.

■ Go to the home page to check if silent mode is activated. If is displayed, if the silent mode is will display on the home page.

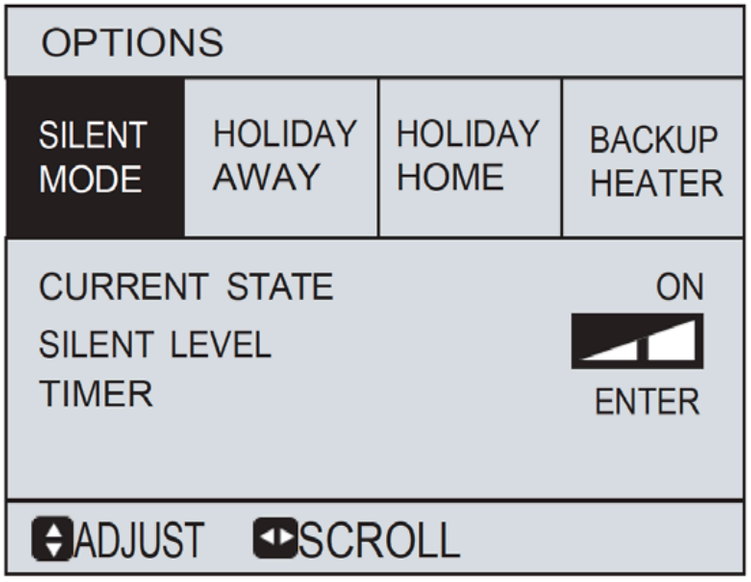
■ Go to "MENU" > "OPTIONS" > "SILENT MODE". Press "OK". The following page will appear:



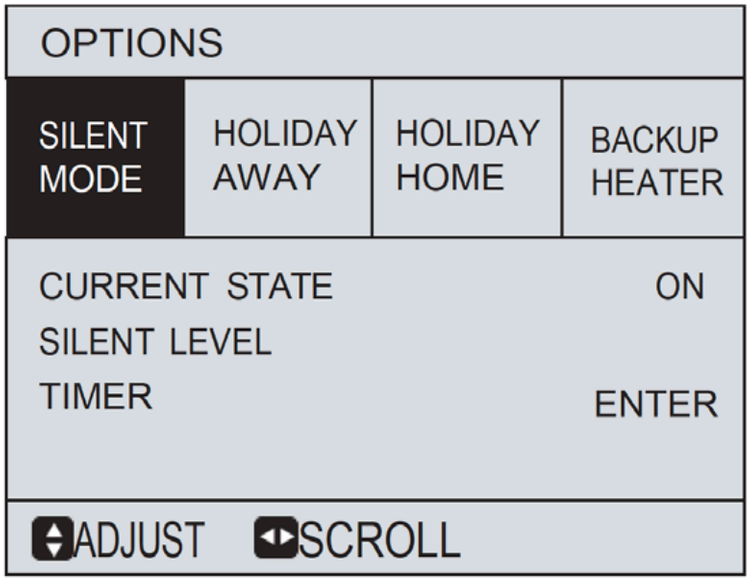
Use "ON/OFF" to select ON or OFF.

Description:
If CURRENT STATE is OFF, SILENT MODE is invalid.

When you select SILENT LEVEL, and press "OK" or "►". The following page will appear:



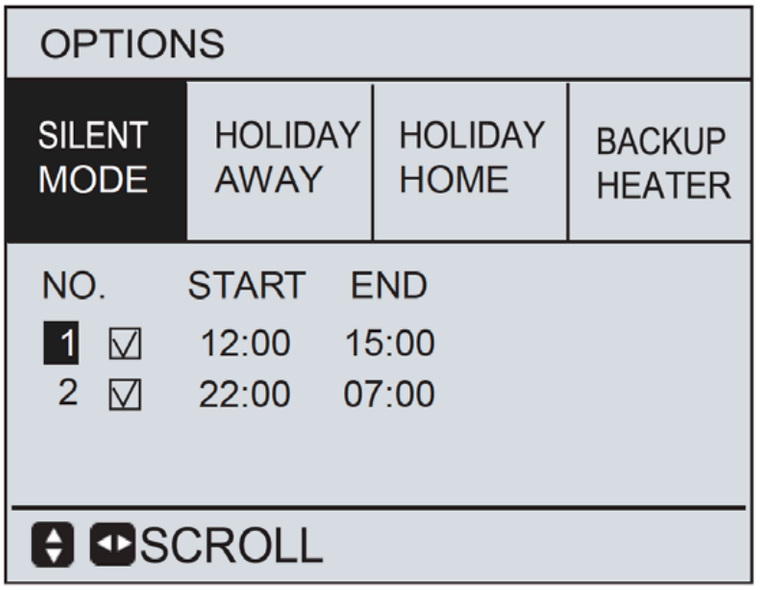
LEVEL 1



LEVEL 2

You can use "▼", "▲" to select level 1 or level 2. Press "OK".

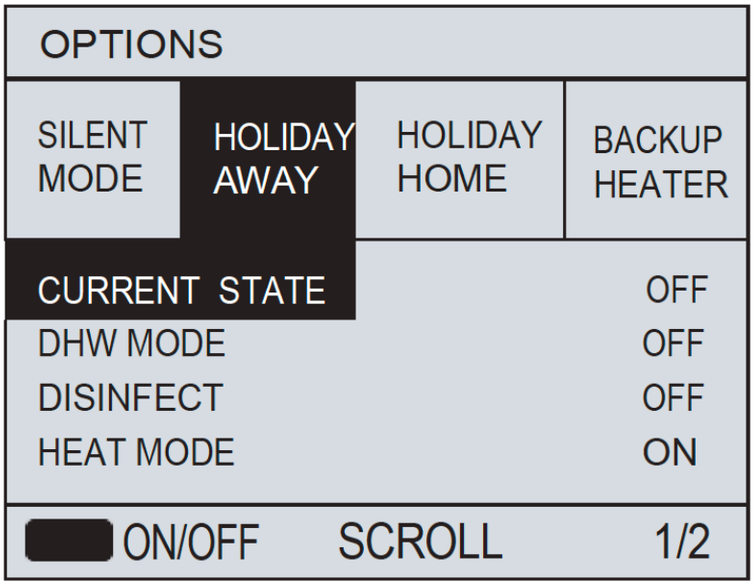
If the silent TIMER is selected. Press "OK" to enter, the following page will appear.

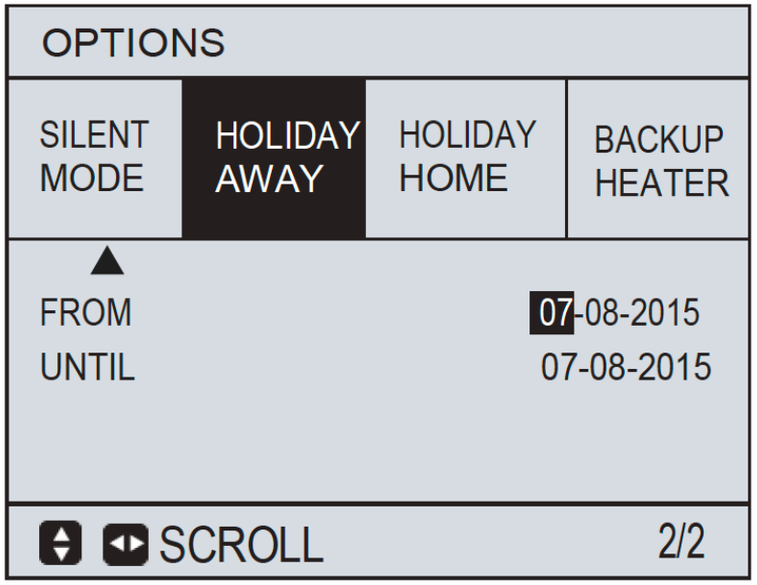


There are two timers for setting. Move to "■", press "OK" to select or unselect.
If the two time are both unselected, the silent mode will operate in all time. Otherwise, it will operate according as the time.

6.5.2 Holiday Away

■ If the holiday away mode is activated, ' will display on the home page.
The holiday away function is used to prevent frozen in the winter during the outside holiday, and return the unit before the end of the holiday.
Go to "MENU" > "OPTIONS" > "HOLIDAY AWAY". Press "OK". The follwing page will appear.





Usage example: You go away during the winter. The current date is 2016-01-31, two days later is 2016-02-02, it is the beginning date of the holiday.
If you are in the following situation:
■ In 2 days, you go away for 2 weeks during the winter.
■ You want to save energy, but prevent your house from freezing. Then you can do the following:
1) Configure the holiday. Configure the following settings:

SETTING	VALUE
Holiday away	ON
From	2 February 2016
Until	16 February 2016
Operation mode	Heating
Disinfect	ON

2) Activate the holiday mode.
Go to "MENU" > "OPTIONS" > "HOLIDAY AWAY". Press "OK".
Use "ON/OFF" to select "OFF" or "ON" and use "◄", "►", "▼", "▲" to scroll and adjust.

INFORMATION

- If DHW mode in holiday away mode is ON, the disinfect set by user is invalid.
- If holiday away mode is ON, the timet and weekly schedule are invalid except exit.
- If the CURRENT STATE is OFF, the HOLIDAY AWAY is OFF.
- If the CURRENT STATE is ON, the HOLIDAY AWAY is ON.
- The remote control doesn't accept any orders when holiday away mode is ON.
- Disinfecting the unit on 23:00 of the last day if disinfect is ON.
- When in holiday away mode, the climate related curves previously set is invalid, and the curves will automatically take effect after the holiday away mode is end.
- The preset temperature is invalid when in holiday away mode, but the preset value still display on the main page.

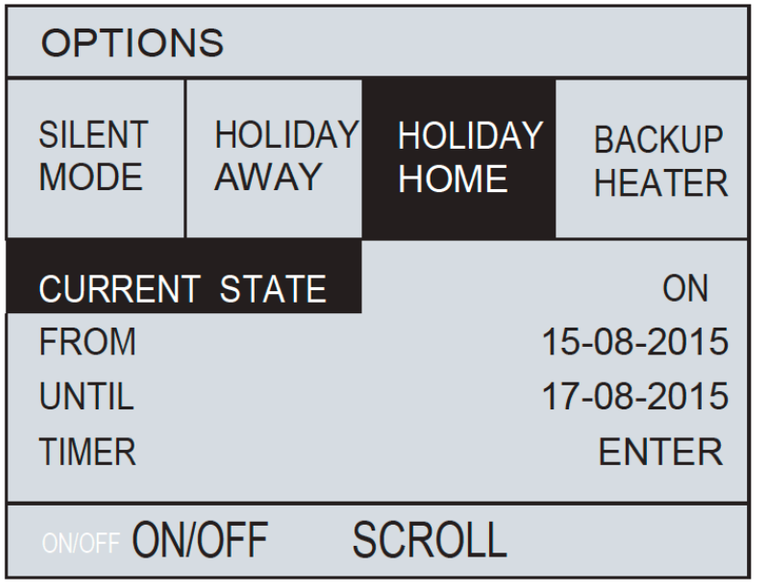
6.5.3 Holiday Home

The holiday home function is used to deviate from the normal schedules without having to change them during the holiday at home.

- During your holiday, you can use the holiday mode to deviate from your normal schedules without having to change them

PERIOD	THEN...
Before and after your holiday	Your normal schedules will be used
During your holiday	The configured holiday settings will be used

To activate or deactivate the holiday home mode.
Go to "MENU" > "OPTIONS" > "HOLIDAY HOME". Press "OK". The following page will appear:



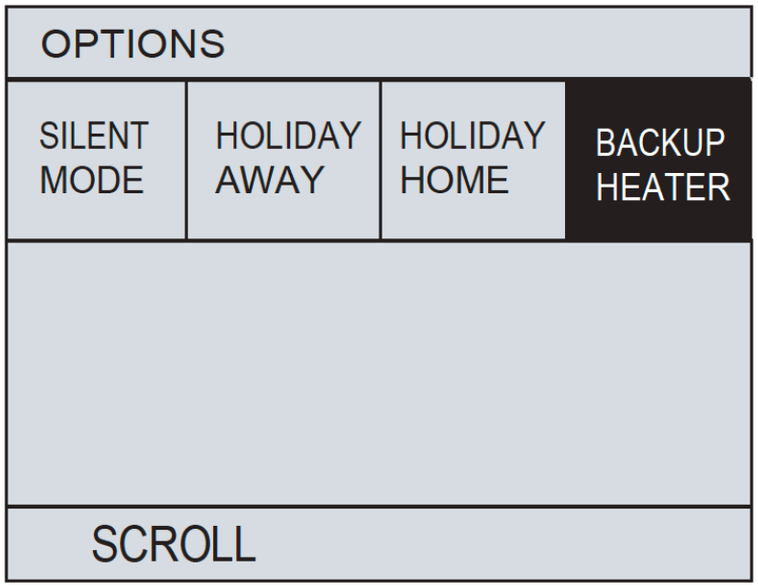
Use "ON/OFF" to select "OFF" or "ON" and use "◄", "►", "▼", "▲" to scroll and adjust.
If the CURRENT STATE is OFF, the HOLIDAY HOME is OFF.
If the CURRENT STATE is ON, the HOLIDAY HOME is ON.
Use "▼", "▲" to adjust the date.
■ Before and after your holiday, your normal schedule will be used.
■ During your holiday, you save energy and prevent your house from freezing.

INFORMATION

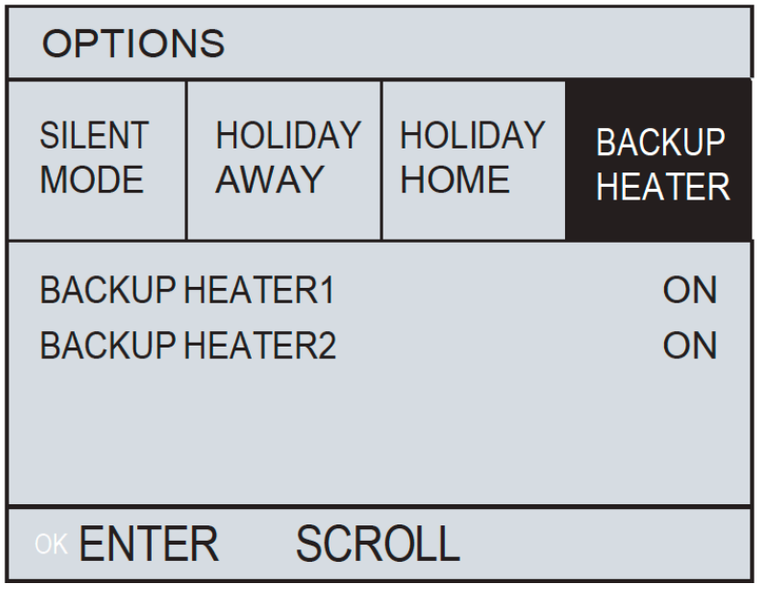
You have to reset Holiday away or Holiday home, if you change the unit whether or not have the function of DHW or HEAT.

6.5.4 Backup Heater

■ The BACKUP HEATER function is used to force the backup heater.
Go to "MENU" > "OPTIONS" > "BACKUP HEATER". Press "OK". If the HEATER is set NON in "OTHER HEATING SOURCE". The following page will appear:



■ If the HEATER is set YES in "OTHER HEATING SOURCE", the following page will appear:



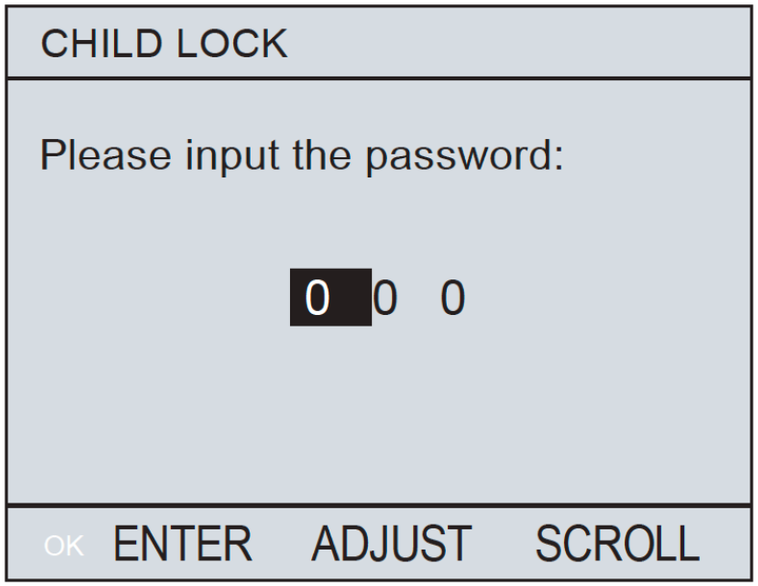
Use "ON/OFF" to select "OFF" or "ON" and use "▼", "▲" to scroll.

INFORMATION

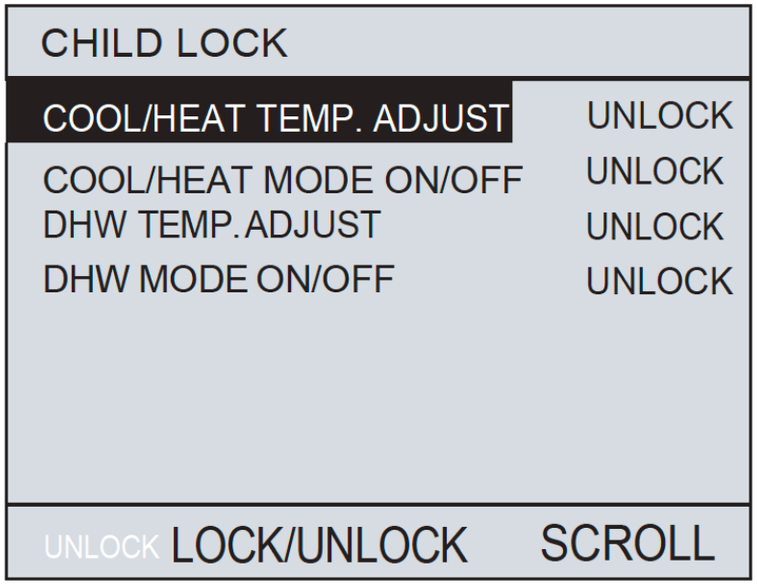
- If the operation mode is auto mode in space heating or cooling side, the backup heater function can not be selected.
- The BACKUP HEATER function is in invalid when only ROOM heat mode enabled.

6.6 CHILD LOCK

The CHILD LOCK function is used to prevent children error operation. The mode setting and temperature adjusting can be locked or unlocked by use CHILD LOCK function. Go to "MENU" > "CHILD LOCK". The page is displayed:



Input the current password, the following page will appear:



Use "▼", "▲" to scroll and "UNLOCK" to select LOCK or UNLOCK. The temperature can't be adjusted when the temperature is locked. The mode can't be changed when the mode is locked. If you want to change them, you must unlock them use the CHILD LOCK function.

6.7 Service information

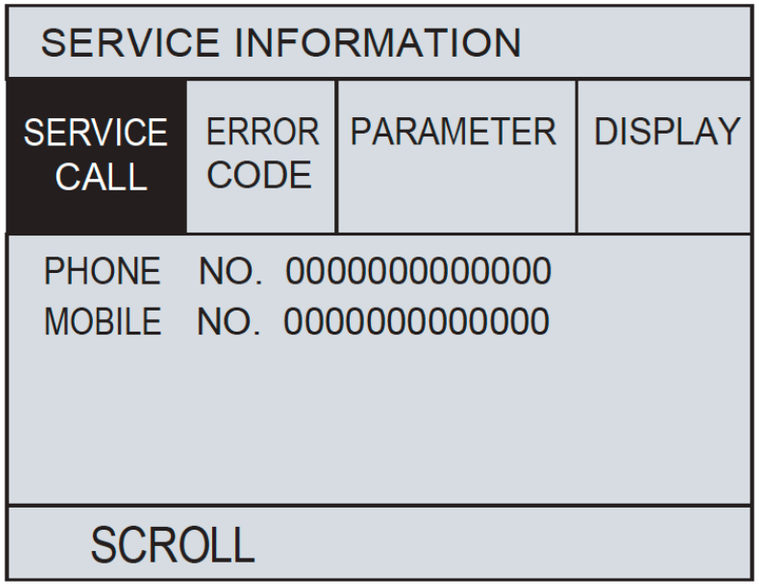
6.7.1 About service information

Service information menu contents as following:

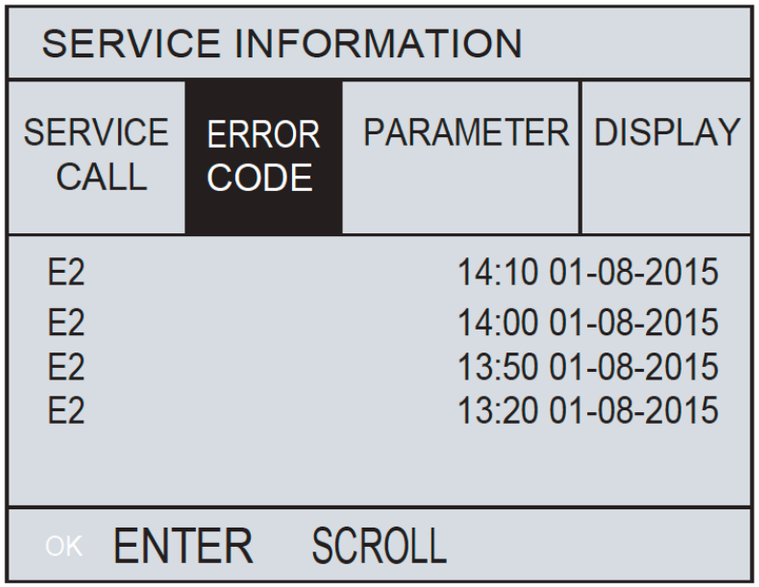
1) service call: to check service call for contacting;
2) error code: to check the error code mean;
3) parameter: to review the operation parameters;
4) display: to set the display.

6.7.2 How to go to service information menu

- Go to "MENU" > "SERVICE INFORMATION". Press "OK". The following page will appear:
- The service call can show the service phone or mobile number. The installer can input the phone number. See FOR SERVICEMAN.



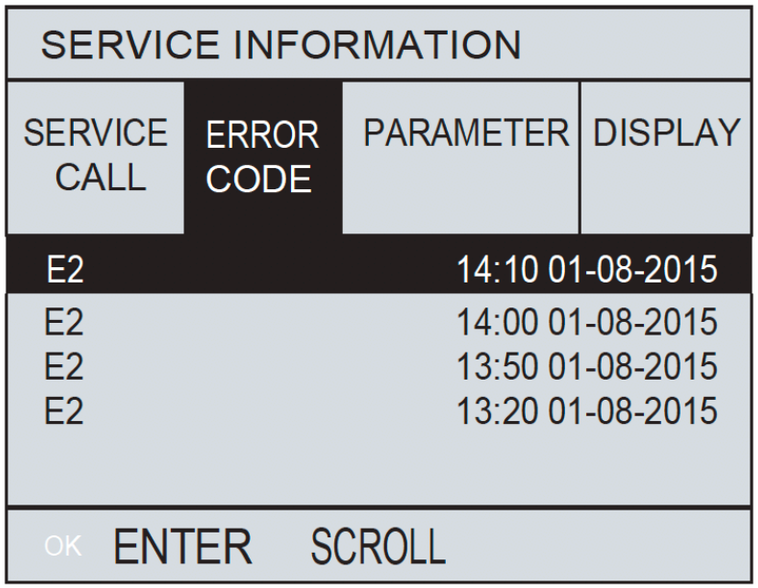
Error code is used to show when the fault or portion happen and show the mean of the error code.



Press OK the page will appear:

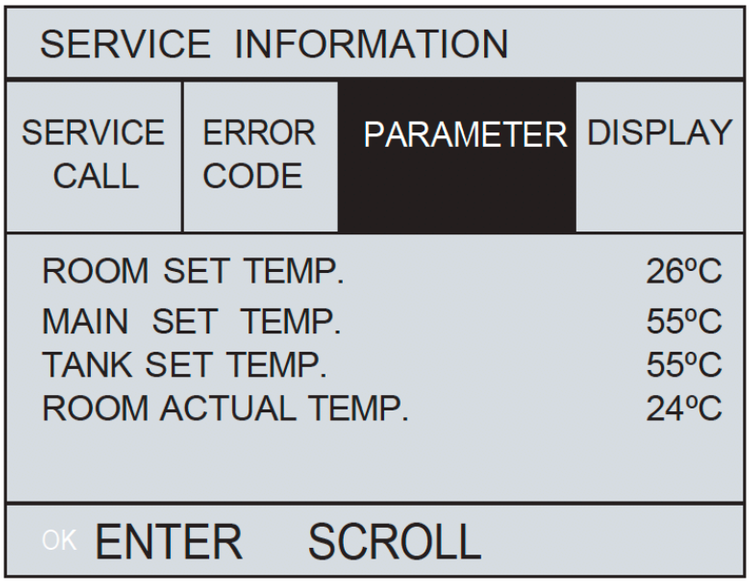
INFORMATION

■ A total of eight fault codes can be recorded.

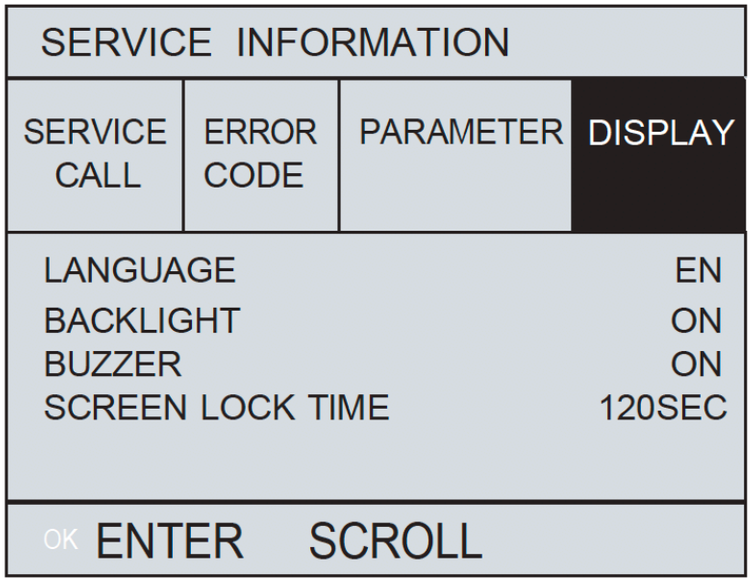


Press OK to show the mean of the error code:

The parameter function is used to display the main parameter, there are two pages to show the parameter:



The display function is used to set the interface, the main items is language, backlight, buzzer and screen lock time:



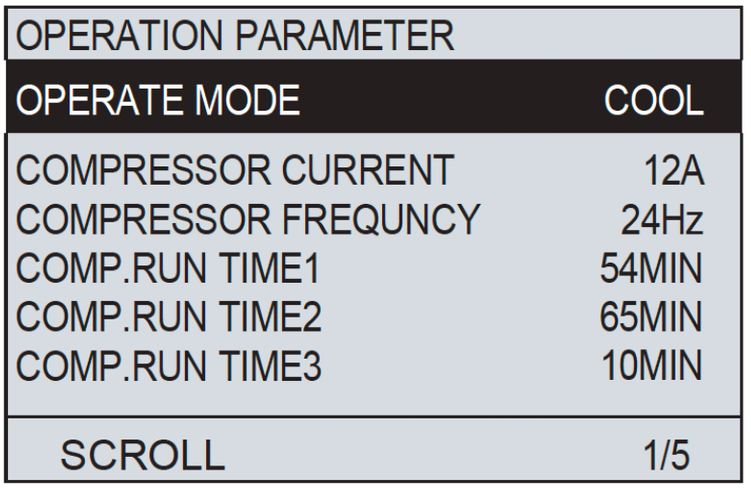
Use "OK" to enter and use "◄", "►", "▼", "▲" to scroll.

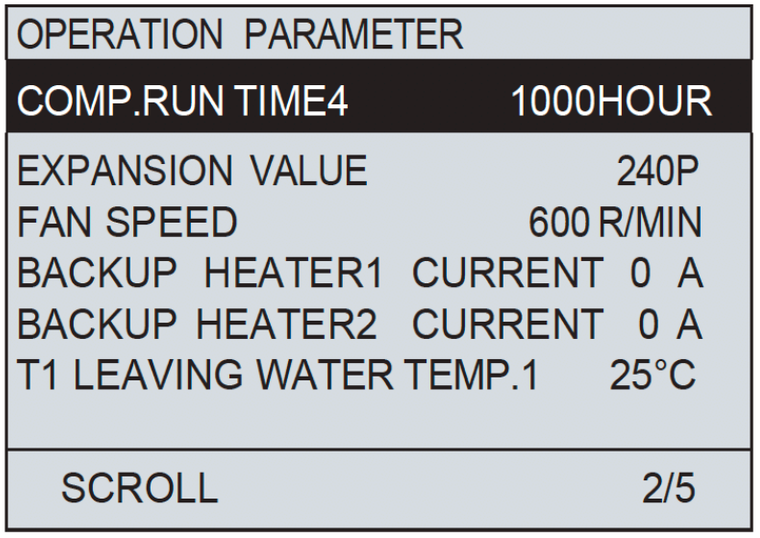
Information:
Now there is only one language English in the interface.

6.8 Operation Parameter

This menu is for installer or service engineer reviewing the operaiton parameter.

- At home page, go to "MENU" > "OPERATION PARAMETER".
- Press "OK". There are five pagews for the operating paramter as following. Use "▼", "▲" to scroll.





OPERATION PARAMETER	
T1B LEAVING WATER TEMP.2	25°C
T2 PLATE F-OUT TEMP.	30°C
T2B PLATE F-IN TEMP.	45°C
T3 OUTDOOR EXCHANGE TEMP.	-7°C
T4 OUTDOOR AIR TEMP.	-7°C
T5 WATER TANK TEMP.	-7°C
SCROLL	3/5

OPERATION PARAMETER	
Ta Room temp	25°C
Th COMP. SUCTION TEMP.	25°C
Tp COMP. DISCHARGE TEMP.	25°C
Tw-0 PLATE W-OUTLET TEMP.	25°C
Tw-I PLATE W-INLET TEMP.	25°C
P1 COMP. PRESSURE1	200kPa
SCROLL	4/5

OPERATION PARAMETER	
P2 COMP. PRESSURE2	--kPa
POWER CONSUMPTION	0KWH
SCROLL	5/5

INFORMATION

The power consumption parameter is preparatory.
If some parameter is not activated in the system, the parameter will show "--".

6.9 For Serviceman

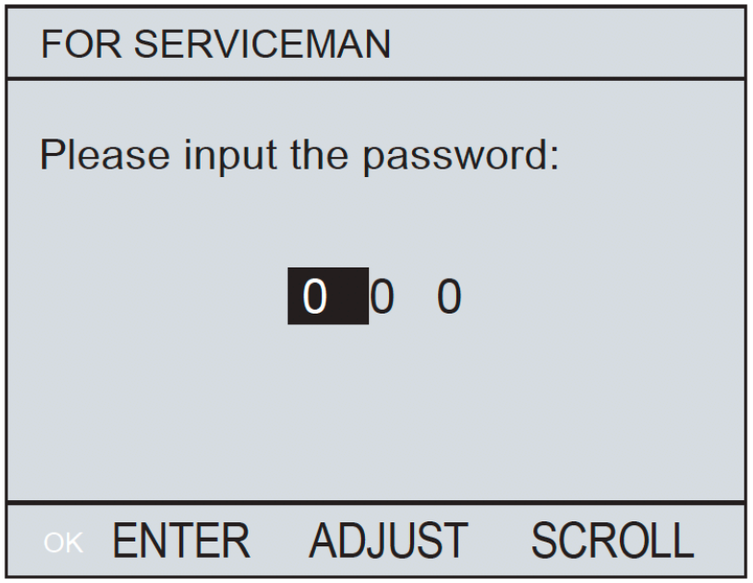
6.9.1 About For Serviceman

FOR SERVICEMAN is used for installer and service engineer.

- Setting the composition of equipment.
- Setting the parameters.

6.9.2 How to go to For Serviceman

Go to "MENU" > "FOR SERVICEMAN". Press "OK"

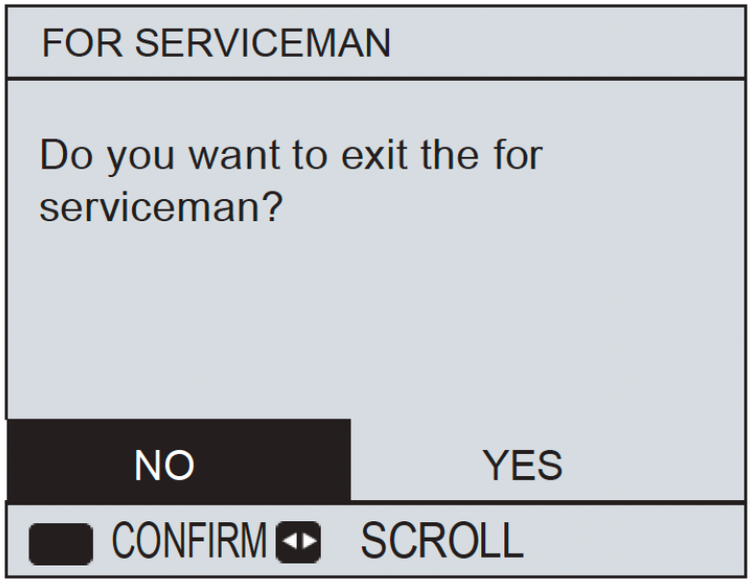


- The FOR SERVICEMAN is used for installer or service engineer. It is NOT intended the home owner alters setting with this menu.
- It is for this reason password protection is required to prevent unauthorized access to the service settings.

6.9.3 How to exit For Serviceman

If you have set all the parameter.

Press "BACK", the following page will be appear:



Select "YES" and press "OK" to exit the FOR SERVICEMAN. After exiting the FOR SERVICEMAN, the unit will be turned off.

7 INSTALLATION MANUAL

7.1 Safety Precautions

- Read the safety precautions carefully before installing the unit.
- Important safety issues are as follows
- Confirm everything is normal during testing, then hand the manual to the user
- Meaning of marks:

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

WARNING

Entrust the distributor or a technician to install the unit.
Installation by anyone else may lead to faulty installation, electric shocks or fires.

Strictly follow this manual.
Improper installation may lead to electric shocks or fires.

Reinstallation must be performed by a technician.
Improper installation may lead to electric shocks or fires.

Do not disassemble your air conditioner.
Disassembly may cause errors or heating, which may result in a fire.

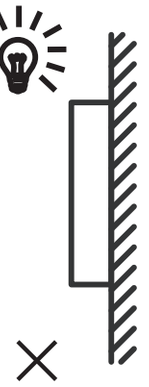
CAUTION

Do not install the unit in a place that is vulnerable to flammable gas.
If flammable gases leak around the wired controller, a fire may occur.

The wiring should adapt to the wired controller's current.
Otherwise, electric leaks or heating may occur and result in a fire.

The specified cables must be used for wiring. Do not apply any external force may on the terminal.
Otherwise, wires may be cut and heating may occur, which may result in a fire.

Do not place the wired controller near lamps or the remote controller signal may be interrupted. (Refer to the figure on the right)



7.2 Other Precautions

7.2.1 Installation location

Do not install the unit where there is a lot of oil, steam or sulfide gas.
Otherwise, the product may be damaged and fail.

7.2.2 Preparations before installation

1) Check whether the following assemblies are complete

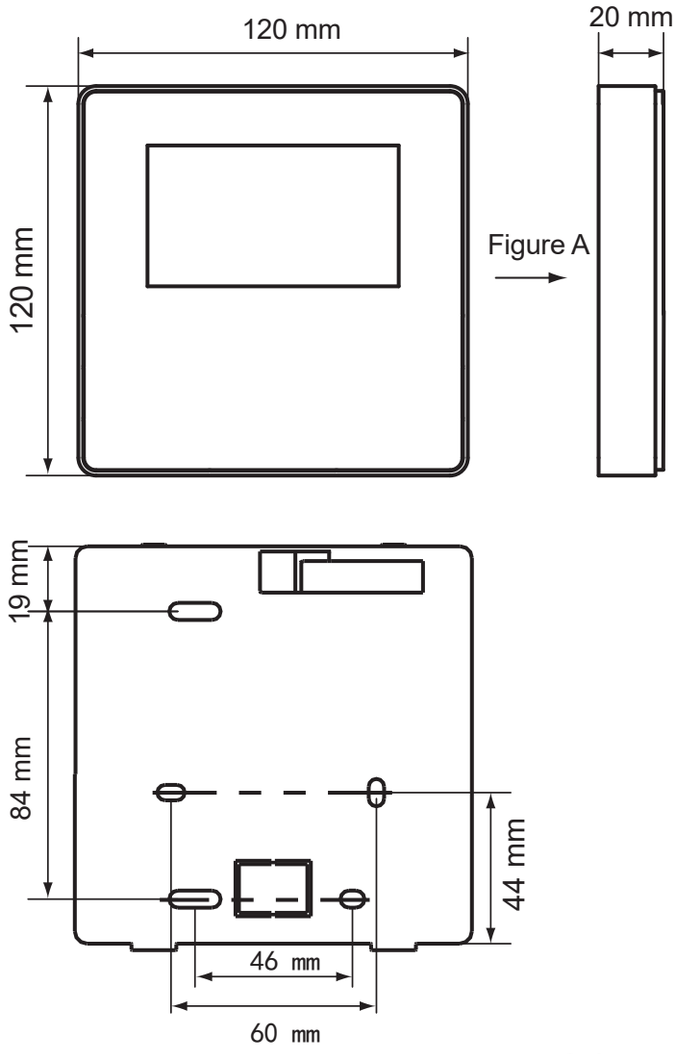
No.	Name	Qty.	Remarks
1	Wired controller	1	_____
2	Cross round head wood mounting screw	3	GB950-86 M4X20 (For Mounting on the Wall)
3	Cross round head mounting screw	2	M4X25 GB823-88 (For Mounting on the Electrical Switch Box)
4	Installation & Owner's Manual	1	_____
5	Plastic bolt	2	This accessory is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

7.2.3 Note for installing the wired controller:

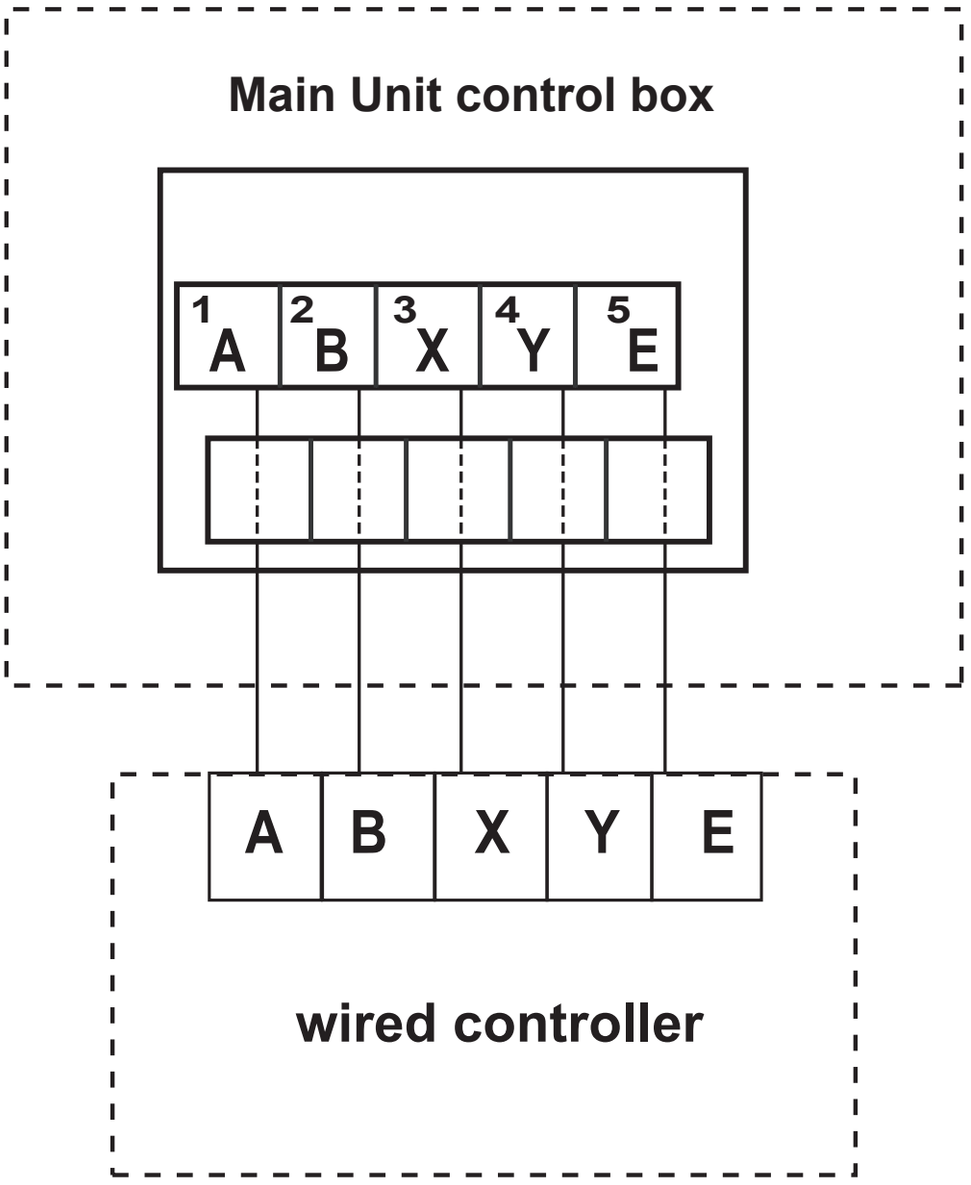
1) This installation manual contains information about the procedure for installing the Wired Controller. Refer to the Indoor Unit Installation Manual for connecting the Wired Controller and the Indoor Unit.
2) The circuit of the Wired Controller is low voltage. Never connect it to a standard 220V/380V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

7.3 Installation procedure and matching settings of the wired controller

7.3.1 Structure size figure

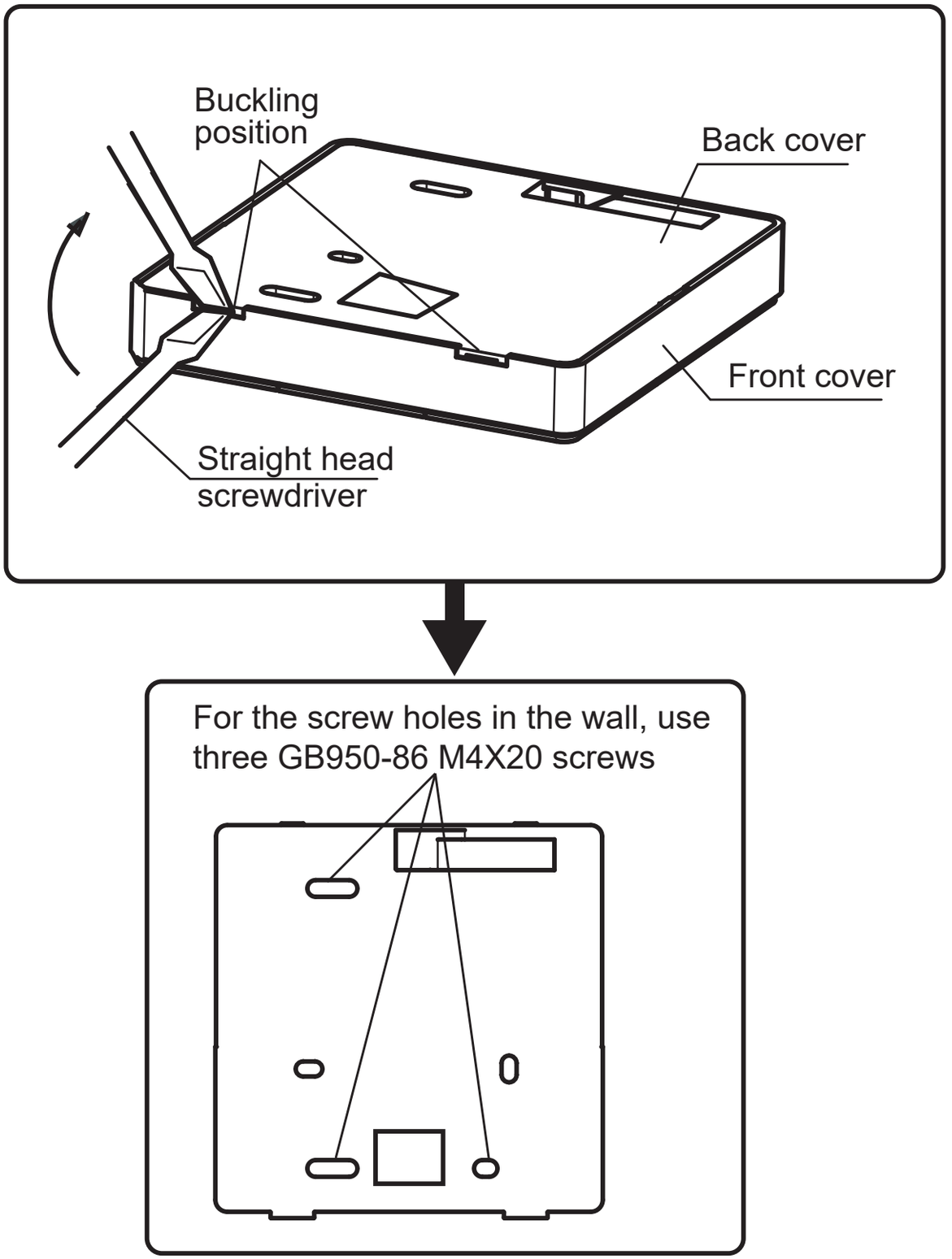


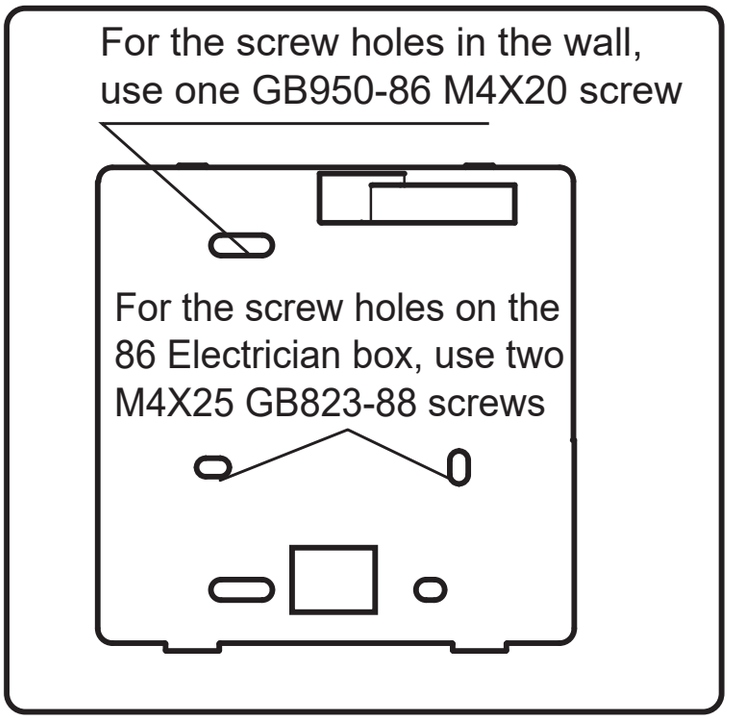
7.3.2 Wiring

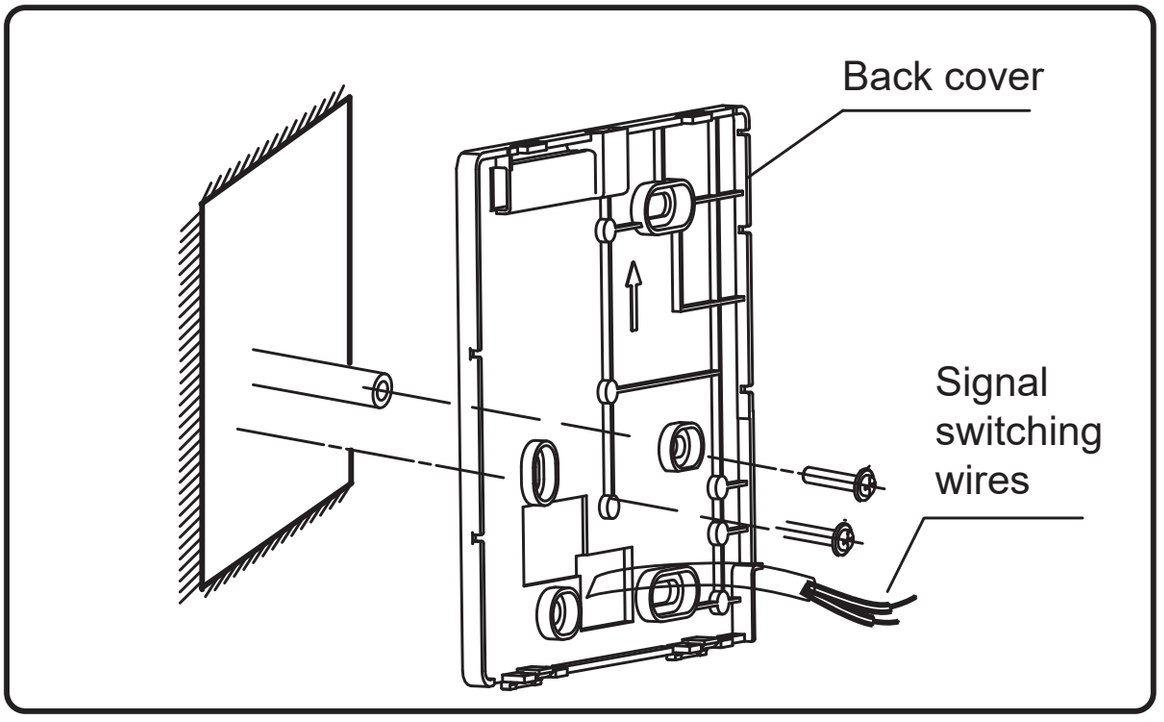


Input Voltage(A/B)	13.5VAC
Wiring size	0.75mm^2

7.3.3 Back cover installation




For the screw holes in the wall,
use one GB950-86 M4X20 screw
For the screw holes on the
86 Electrician box, use two
M4X25 GB823-88 screws


Back cover
Signal
switching
wires

1) Use a straight head screwdriver to insert the buckling position in the bottom of the wired controller, and unscrew the screws to remove the back cover. (Pay attention to the rotation direction, or you will damage the back cover).

2) Use three GB950-86 M4X20 screws to fix the back cover to the wall.

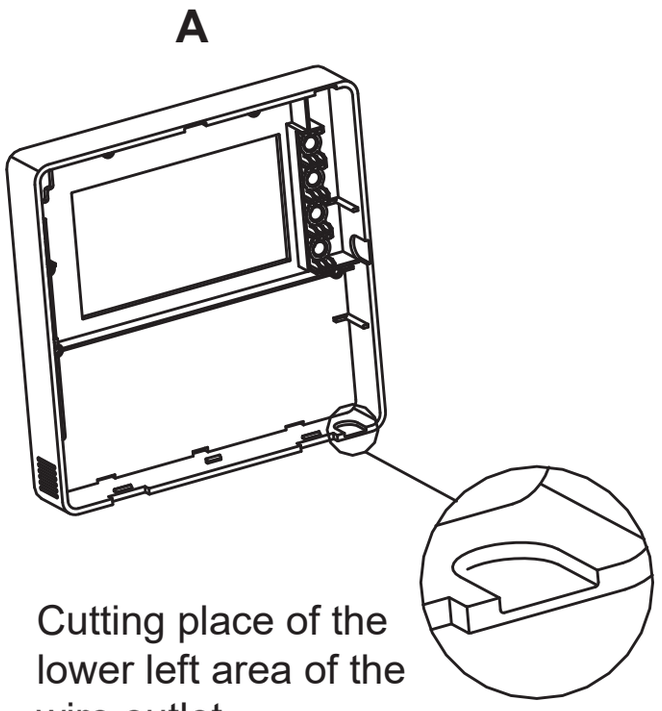
3) Use two M4X25 GB823-88 screws to install the back cover on the 86 electrician box. Use one GB950-86 M4X20 screw to screw it on the wall.

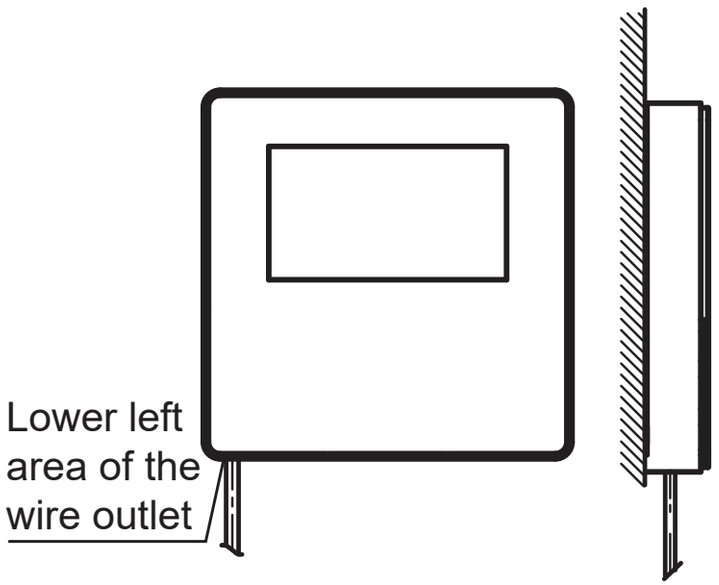
4) Adjust the length of the two plastic screws are in the accessory to the standard length from the electrical box screw bar to the wall. When installing the screw bar to the wall, make it as flat as the wall.

5) Use cross head screws to fix the wired controller bottom cover in the wall through the screw bar. Ensure the wired controller bottom cover is at the same level after installation. Then fix the wired controller to the bottom cover.

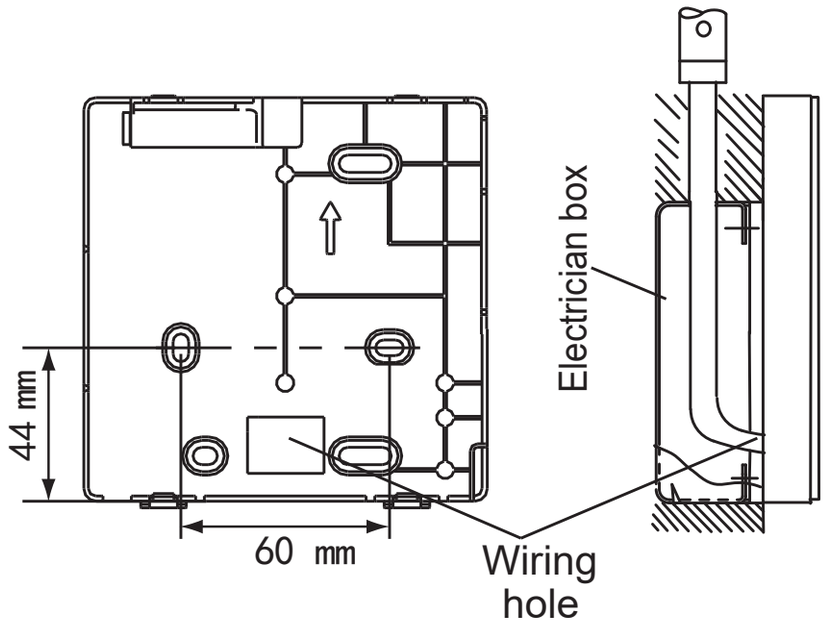
6) Over fastening the screw will lead to deformation of the back cover.

7.3.4 Wire outlet

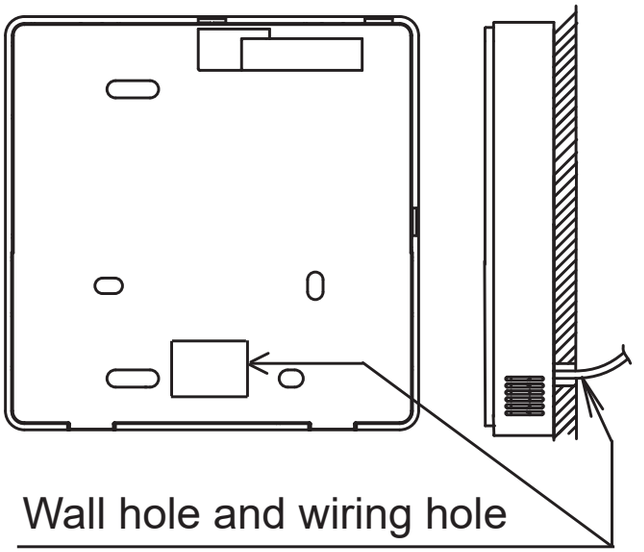


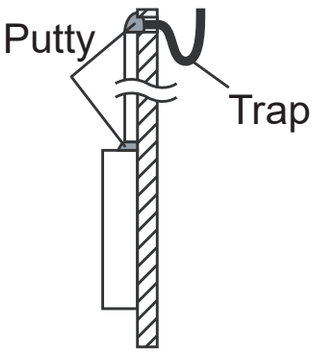


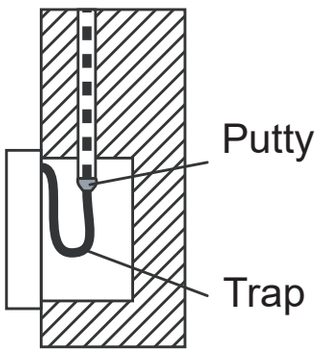
B

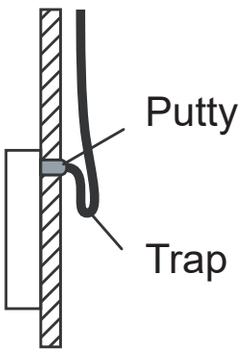


C





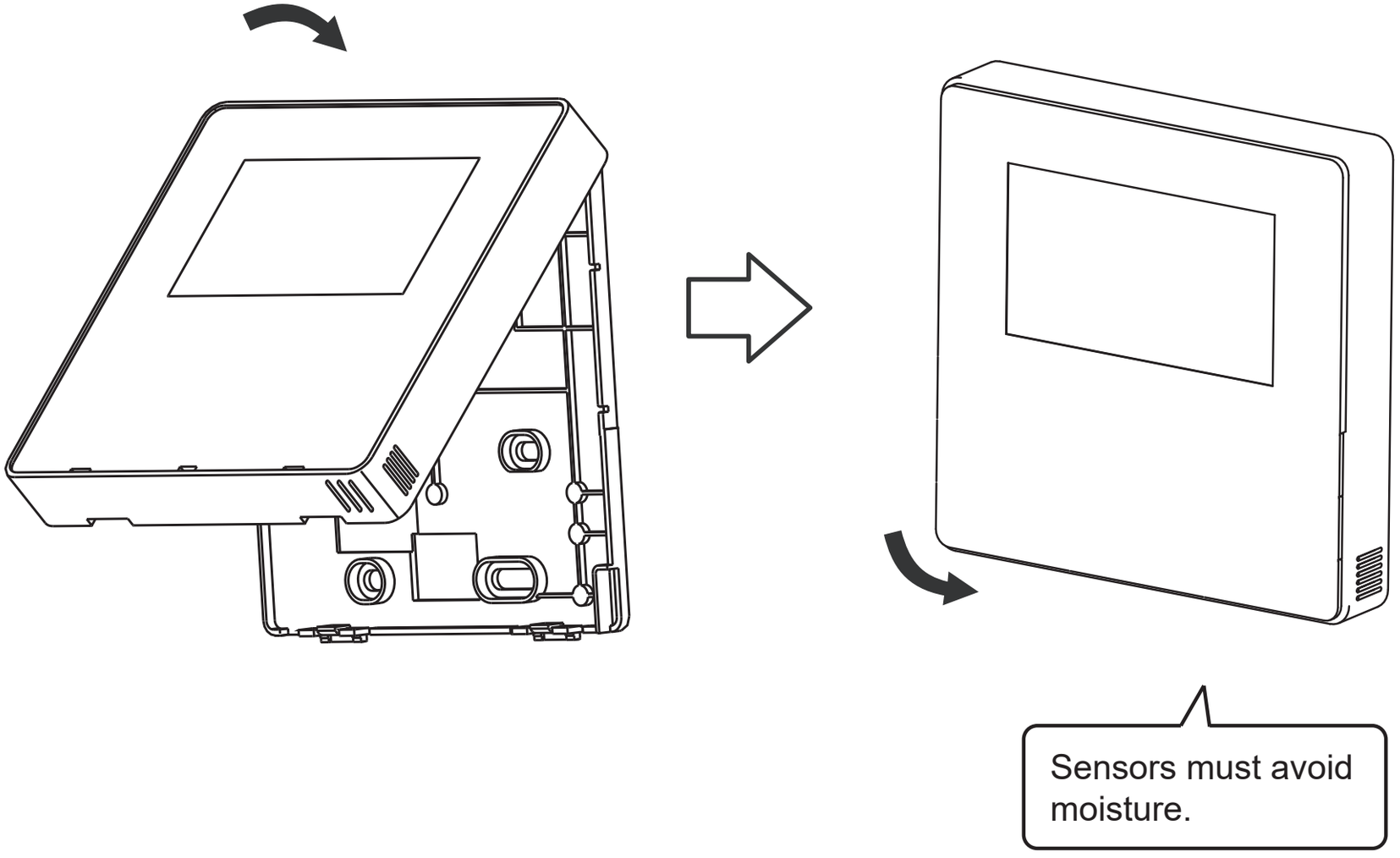




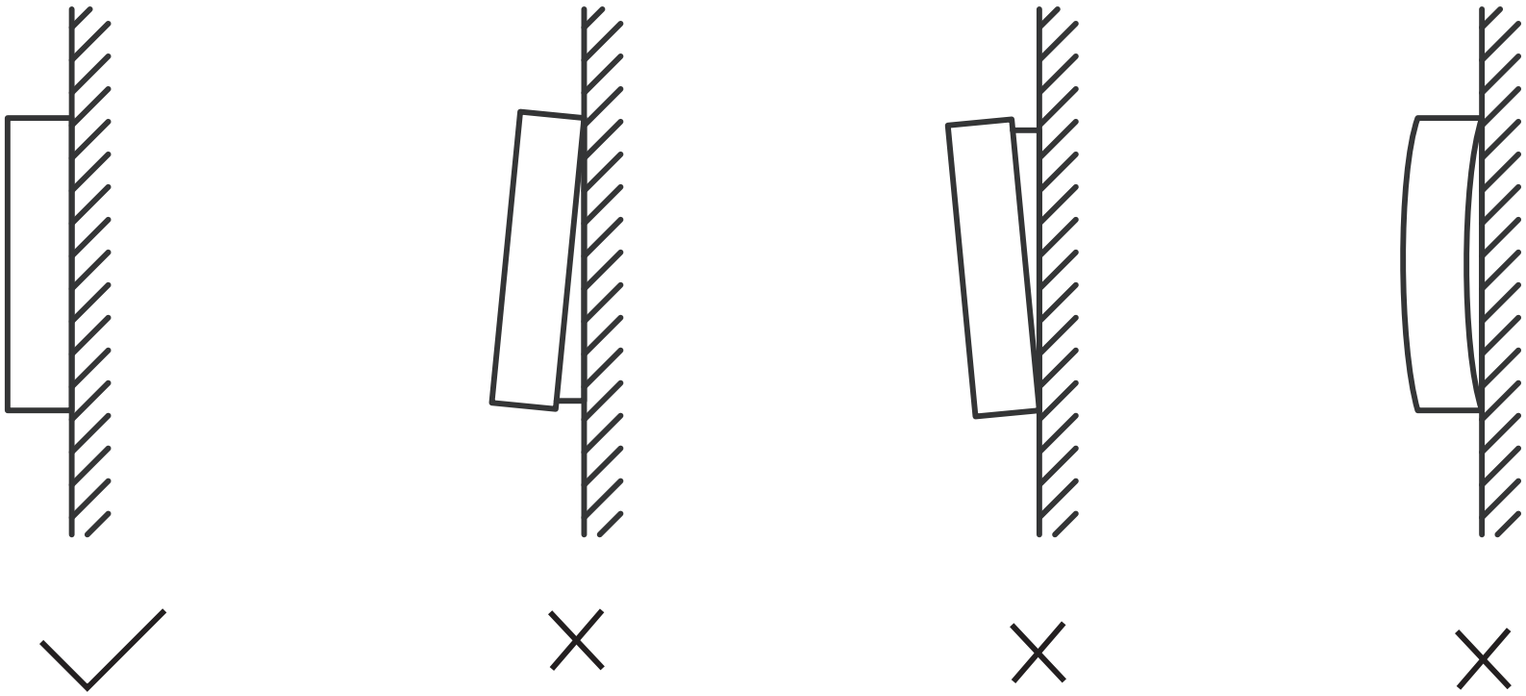
Do not let water enter the wired controller. Use trap and putty to seal the connectors of wires during wiring installation.

7.4 Front cover installation

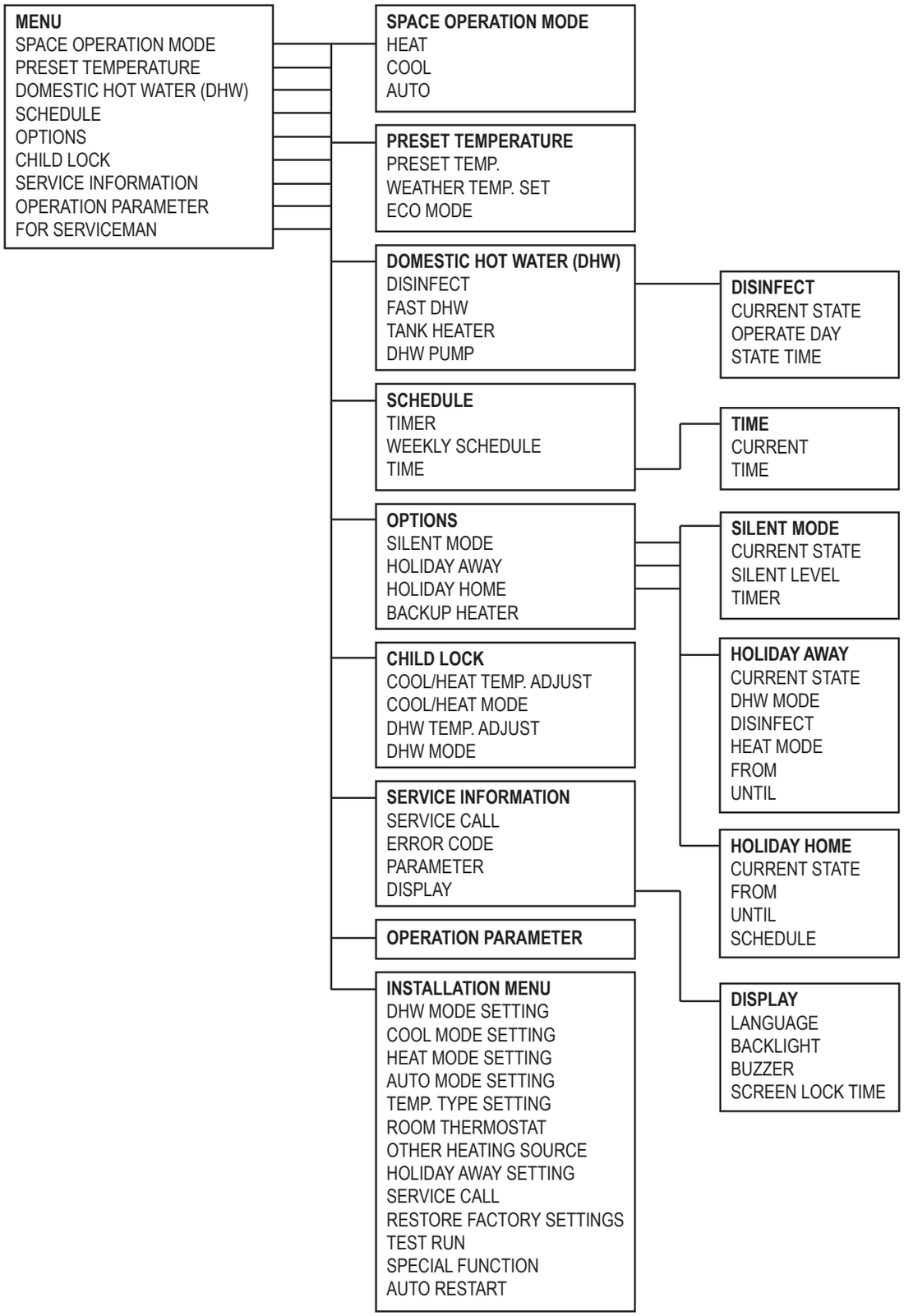
After adjusting the front cover and the buckling the front cover, avoid clamping the communication switching wire during installation.



Correctly install the back cover and firmly buckle the front cover and back cover, otherwise the front cover will fall off.



8 MENU STRUCTURE: Overview



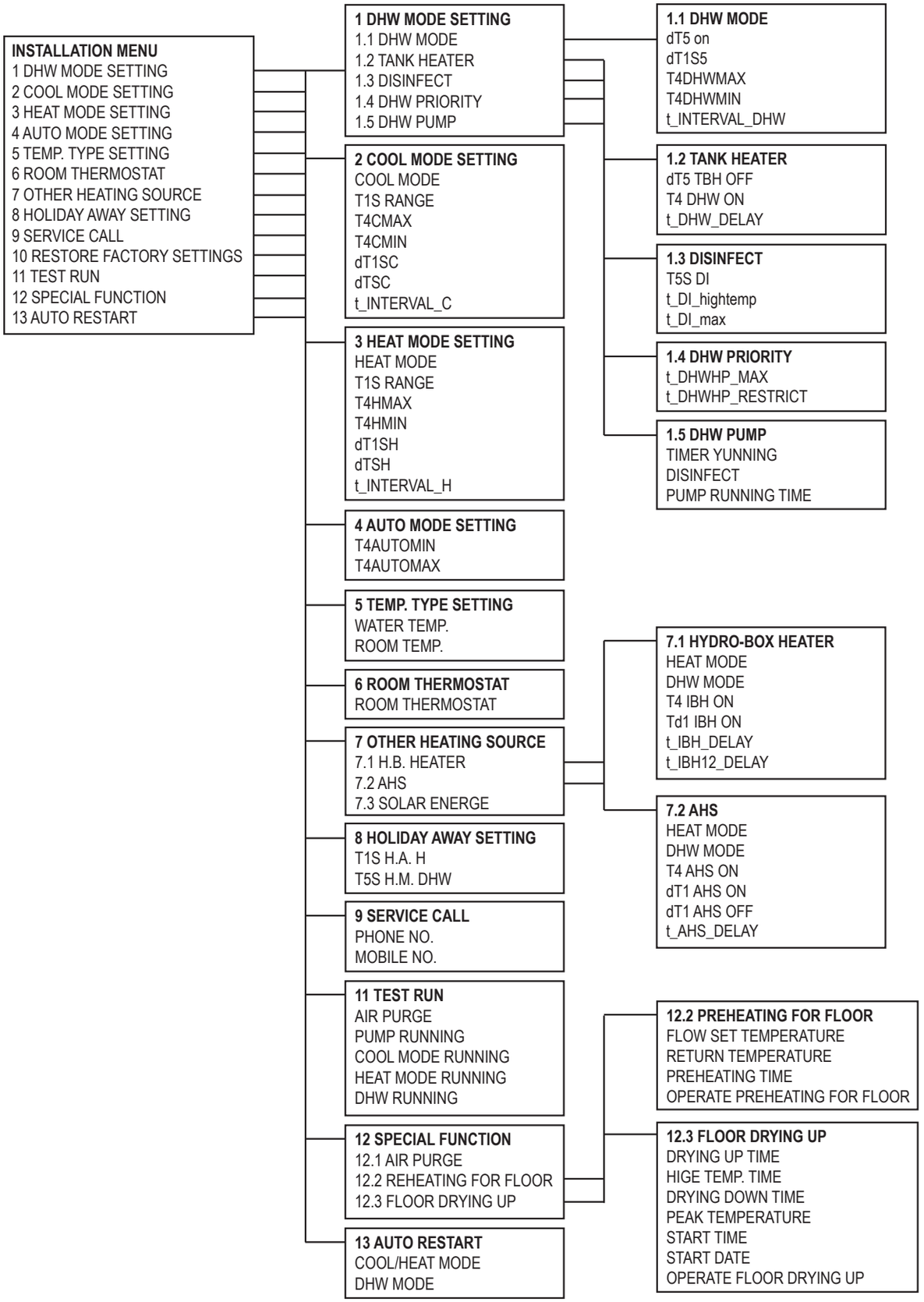

INSTALLATION MENU
1 DHW MODE SETTING
2 COOL MODE SETTING
3 HEAT MODE SETTING
4 AUTO MODE SETTING
5 TEMP. TYPE SETTING
6 ROOM THERMOSTAT
7 OTHER HEATING SOURCE
8 HOLIDAY AWAY SETTING
9 SERVICE CALL
10 RESTORE FACTORY SETTINGS
11 TEST RUN
12 SPECIAL FUNCTION
13 AUTO RESTART
1 DHW MODE SETTING
1.1 DHW MODE
1.2 TANK HEATER
1.3 DISINFECT
1.4 DHW PRIORITY
1.5 DHW PUMP
1.1 DHW MODE
dT5 on
dT1S5
T4DHWMAX
T4DHWMIN
t_INTERVAL_DHW
1.2 TANK HEATER
dT5 TBH OFF
T4 DHW ON
t_DHW_DELAY
1.3 DISINFECT
T5S DI
t_DI_hightemp
t_DI_max
1.4 DHW PRIORITY
t_DHWHP_MAX
t_DHWHP_RESTRICT
1.5 DHW PUMP
TIMER YUNNING
DISINFECT
PUMP RUNNING TIME
2 COOL MODE SETTING
COOL MODE
T1S RANGE
T4CMAX
T4CMIN
dT1SC
dTSC
t_INTERVAL_C
3 HEAT MODE SETTING
HEAT MODE
T1S RANGE
T4HMAX
T4HMIN
dT1SH
dTSH
t_INTERVAL_H
4 AUTO MODE SETTING
T4AUTOMIN
T4AUTOMAX
5 TEMP. TYPE SETTING
WATER TEMP.
ROOM TEMP.
6 ROOM THERMOSTAT
ROOM THERMOSTAT
7 OTHER HEATING SOURCE
7.1 H.B. HEATER
7.2 AHS
7.3 SOLAR ENERGE
7.1 HYDRO-BOX HEATER
HEAT MODE
DHW MODE
T4 IBH ON
Td1 IBH ON
t_IBH_DELAY
t_IBH12_DELAY
7.2 AHS
HEAT MODE
DHW MODE
T4 AHS ON
dT1 AHS ON
dT1 AHS OFF
t_AHS_DELAY
8 HOLIDAY AWAY SETTING
T1S H.A. H
T5S H.M. DHW
9 SERVICE CALL
PHONE NO.
MOBILE NO.
11 TEST RUN
AIR PURGE
PUMP RUNNING
COOL MODE RUNNING
HEAT MODE RUNNING
DHW RUNNING
12 SPECIAL FUNCTION
12.1 AIR PURGE
12.2 REHEATING FOR FLOOR
12.3 FLOOR DRYING UP
12.2 PREHEATING FOR FLOOR
FLOW SET TEMPERATURE
RETURN TEMPERATURE
PREHEATING TIME
OPERATE PREHEATING FOR FLOOR
12.3 FLOOR DRYING UP
DRYING UP TIME
HIGE TEMP. TIME
DRYING DOWN TIME
PEAK TEMPERATURE
START TIME
START DATE
OPERATE FLOOR DRYING UP
13 AUTO RESTART
COOL/HEAT MODE
DHW MODE

Table1 The environment temperature curve of the low temperature setting for heating

T4	≤-20	-19	-18	-17	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0
1-T1S	30	30	30	30	30	30	30	30	30	30	30	30	29	29	29	28	28	28	27	27	27
2-T1S	34	34	34	34	34	34	34	34	34	34	34	34	33	33	32	32	31	31	30	30	29
3-T1S	38	38	38	38	38	38	38	38	38	38	38	37	37	36	36	35	34	34	33	33	32
4-T1S	41	41	41	41	41	41	41	41	41	41	41	40	40	39	38	38	37	36	35	35	34
5-T1S	45	45	45	45	45	45	45	45	45	45	45	44	43	42	42	41	40	39	38	38	37
6-T1S	49	48	48	47	47	46	46	45	45	44	44	44	43	43	42	42	41	41	40	40	39
7-T1S	51	51	50	50	49	49	48	48	47	47	46	45	45	44	44	43	43	42	42	41	41
8-T1S	54	53	53	52	52	51	50	50	49	49	48	47	47	46	46	45	44	44	43	43	42
T4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	≥20	
1-T1S	26	26	26	25	25	25	24	24	24	23	23	23	22	22	22	21	21	21	20	20	20
2-T1S	29	29	28	27	27	27	26	26	25	25	24	24	23	23	22	22	21	21	20	20	20
3-T1S	31	31	30	30	29	28	28	27	27	26	25	25	24	24	23	22	22	21	21	20	20
4-T1S	33	33	32	31	31	30	29	28	28	27	26	26	25	24	24	23	22	21	21	20	20
5-T1S	36	35	34	33	33	32	31	30	29	28	28	27	26	25	24	23	23	22	21	20	20
6-T1S	39	38	38	37	37	37	36	36	35	35	34	34	33	33	32	32	31	31	30	30	30
7-T1S	40	40	39	39	38	37	37	36	36	35	35	34	34	33	33	32	32	31	31	30	30
8-T1S	41	41	40	40	39	38	38	37	37	36	35	35	34	34	33	32	32	31	31	30	30

Table2 The environment temperature curve of the high temperature setting for heating

T4	≤-20	-19	-18	-17	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0
1-T1S	55	55	55	55	54	53	53	52	51	51	50	49	49	48	47	47	46	45	45	44	43
2-T1S	55	55	55	55	55	55	55	54	53	53	52	51	51	50	49	48	48	47	46	45	45
3-T1S	55	55	55	55	55	55	55	55	55	55	54	53	52	52	51	50	49	48	48	47	46
4-T1S	46	46	46	46	46	46	46	46	46	46	46	45	45	44	43	43	42	41	40	40	39
5-T1S	50	50	50	50	50	50	50	50	50	50	50	49	48	47	47	46	45	44	43	43	42
6-T1S	53	53	53	53	53	53	53	53	53	53	53	52	51	50	49	48	47	46	46	45	44
7-T1S	57	57	57	57	57	57	57	57	57	57	57	56	55	54	53	52	52	50	48	47	46
8-T1S	60	60	60	60	60	60	60	60	60	60	60	59	58	57	55	54	53	52	51	50	48
T4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	≥20	
1-T1S	43	42	41	41	40	39	39	38	37	37	36	35	35	34	33	33	32	31	31	30	30
2-T1S	44	43	42	41	41	40	40	39	38	37	37	36	35	34	34	33	32	31	31	30	30
3-T1S	45	44	44	43	42	41	40	40	39	38	37	36	36	35	34	33	32	32	31	30	30
4-T1S	38	38	37	36	36	35	34	33	33	32	31	31	30	29	29	28	27	26	26	25	25
5-T1S	41	40	39	38	38	37	36	35	34	33	33	32	31	30	29	28	28	27	26	25	25
6-T1S	43	42	41	40	39	38	37	36	35	34	33	32	32	31	30	29	28	27	26	25	25
7-T1S	45	44	43	42	41	40	39	38	37	36	35	34	32	31	30	29	28	27	26	25	25
8-T1S	47	46	45	44	42	41	40	39	38	37	35	34	33	32	31	30	28	27	26	25	25

Table3 The environment temperature curve of the low temperature setting for cooling

T4	-10≤T4<15	15≤T4<22	22≤T4<30	30≤T4<46
1-T1S	18	13	10	7
T4	-10≤T4<15	15≤T4<22	22≤T4<30	30≤T4<46
2-T1S	19	14	11	8
T4	-10≤T4<15	15≤T4<22	22≤T4<30	30≤T4<46
3-T1S	20	15	12	9
T4	-10≤T4<15	15≤T4<22	22≤T4<30	30≤T4<46
4-T1S	21	16	13	10
T4	-10≤T4<15	15≤T4<22	22≤T4<30	30≤T4<46
5-T1S	22	17	14	11
T4	-10≤T4<15	15≤T4<22	22≤T4<30	30≤T4<46
6-T1S	23	18	15	12
T4	-10≤T4<1524	15≤T4<22	22≤T4<30	30≤T4<46
7-T1S	24	19	16	13
T4	-10≤T4<15	15≤T4<22	22≤T4<30	30≤T4<46
8-T1S	25	21	18	14

Table 4 The environment temperature curve of the high temperature setting for cooling

T4	-10≤T4<15	15≤T4<22	22≤T4<30	30≤T4<46
1-T1S	20	18	18	18
T4	-10≤T4<15	15≤T4<22	22≤T4<30	30≤T4<46
2-T1S	21	19	18	18
T4	-10≤T4<15	15≤T4<22	22≤T4<30	30≤T4<46
3-T1S	22	20	18	18
T4	-10≤T4<15	15≤T4<22	22≤T4<30	30≤T4<46
4-T1S	23	21	18	18
T4	-10≤T4<15	15≤T4<22	22≤T4<30	30≤T4<46
5-T1S	24	22	20	18
T4	-10≤T4<15	15≤T4<22	22≤T4<30	30≤T4<46
6-T1S	25	23	21	19
T4	-10≤T4<1524	15≤T4<22	22≤T4<30	30≤T4<46
7-T1S	25	24	22	20
T4	-10≤T4<15	15≤T4<22	22≤T4<30	30≤T4<46
8-T1S	25	25	23	21

Table 5 The environment temperature curve of the low temperature setting for ECO mode

T4	≤-20	-19	-18	-17	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0
1#	25	25	25	25	25	25	25	25	25	25	25	24	24	24	23	23	23	23	22	22	22
2#	29	29	29	29	29	29	29	29	29	29	29	28	28	27	27	26	26	26	25	25	24
3#	32	32	32	32	32	32	32	32	32	32	32	31	31	30	30	29	29	28	28	27	26
4#	36	36	36	36	36	36	36	36	36	36	36	35	35	34	33	32	31	31	30	30	29
5#	39	39	39	39	39	39	39	39	39	39	39	38	38	37	36	35	35	34	33	32	31
6#	45	45	44	43	42	42	41	41	40	40	39	39	39	38	38	37	37	36	36	35	34
7#	48	48	47	46	45	44	43	42	42	41	41	40	40	39	39	38	38	37	37	36	36
8#	50	49	49	48	47	46	46	45	45	44	43	43	42	42	41	40	40	39	39	38	37
T4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	≥20	
1#	22	21	21	21	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
2#	24	24	23	23	22	22	22	21	21	20	20	20	20	20	20	20	20	20	20	20	
3#	26	26	25	25	24	24	23	23	22	21	21	21	20	20	20	20	20	20	20	20	
4#	29	28	27	26	25	24	24	23	23	22	22	22	21	21	20	20	20	20	20	20	
5#	31	30	29	28	27	27	26	25	24	23	23	22	22	21	20	20	20	20	20	20	
6#	34	33	33	32	32	31	31	30	30	30	30	30	30	30	30	30	30	30	30	30	
7#	35	34	34	33	33	32	32	31	31	30	30	30	30	30	30	30	30	30	30	30	
8#	37	36	35	35	34	34	33	33	32	31	31	31	30	30	30	30	30	30	30	30	

Table6 The environment temperature curve of the high temperature setting for ECO mode

T4	≤-20	-19	-18	-17	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0
1#	50	50	49	49	48	48	47	47	46	46	45	45	44	44	43	42	42	41	40	39	38
2#	50	50	50	50	50	50	49	49	48	48	47	47	46	45	44	43	43	42	42	41	40
3#	50	50	50	50	50	50	50	50	50	50	49	49	48	47	46	45	45	44	43	42	41
4#	41	41	41	41	41	41	41	41	41	41	41	40	40	39	39	38	38	37	36	35	34
5#	45	45	45	45	45	45	45	45	45	45	45	44	43	42	41	40	40	39	38	37	36
6#	48	48	48	48	48	48	48	48	48	48	48	47	46	45	44	43	42	41	41	40	39
7#	52	52	52	52	52	52	52	52	52	52	52	51	50	49	48	46	45	44	43	42	41
8#	55	55	55	55	55	55	55	55	55	55	55	54	53	51	50	49	48	47	46	45	43
T4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	≥20	
1#	38	37	37	36	35	35	34	34	33	32	32	31	30	30	30	30	30	30	30	30	
2#	40	39	38	37	36	36	35	34	33	32	32	31	30	30	30	30	30	30	30	30	
3#	41	40	39	38	37	37	36	35	34	33	33	32	32	31	30	30	30	30	30	30	
4#	34	33	32	32	31	31	30	29	28	27	27	27	26	26	25	25	25	25	25	25	
5#	35	35	34	33	32	31	31	30	29	28	28	27	26	26	25	25	25	25	25	25	
6#	38	37	36	35	34	33	32	31	30	29	29	28	27	26	25	25	25	25	25	25	
7#	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	25	25	25	25	
8#	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	26	25	25	25	

9 Appendix

Modbus Mapping Table

6-3 Modbus Port Communication Specifications:

Port: RS-485; the wired controller XYE is the communication port for connecting with the hydraulic module. H1 and H2 are the Modbus communication ports.
Communication address: It is consistent with the DIP switch address of the hydraulic module.

Baud rate: 4800, 9600, 19200, 38400. The default setting is 9600.
Number of digits: Eight
Verification: Odd, even, none
Stop Bit: 1 bit, 2 bits
Communication protocol: Modbus RTU (Modbus ASCII is not supported)
Default configuration: 9600, N, 8, 1 (i.e. the baud rate is 9600, no verification, eight bits, one stop bit)

1 Mapping of registers in the wired controller

The following addresses can use 03H, 06H (write single register), 10H (write multiple register)

Register address	Description	Remarks	
0 (PLC:40001)	Power on or off.	BIT15	Reserved
		BIT14	Reserved
		BIT13	Reserved
		BIT12	Reserved
		BIT11	Reserved
		BIT10	Reserved
		BIT9	Reserved
		BIT8	Reserved
		BIT7	Reserved
		BIT6	Reserved
		BIT5	Reserved
		BIT4	Reserved
		BIT3	Reserved
		BIT2	0: DHW(T5S) power off; 1: DHW(T5S) power on
		BIT1	0: power off floor heating; 1: power on floor heating
		BIT0	0: power off air conditioner; 1: power on air conditioner

1 (PLC:40002)	Setting the mode	1: Auto; 2: Cool; 3: Heat; Others: Invalid	
2(PLC:40003)	Setting water temperature T1s	Water temperature T1s is corresponding to the floor heating.	
3 (PLC:40004)	Setting air temperature Ts	The room temperature ranges between 17°C and 30°C, and is valid when there is Ta.	
4 (PLC:40005)	T5s	The water tank temperature range is between 40°C and 60°C.	
5 (PLC:40006)	Function setting	BIT15	Reserved
		BIT14	Reserved
		BIT13	Reserved
		BIT12	1: curve setting is enabled; 0: curve setting is disabled.
		BIT11	DHW pump's running constant-temperature water recycling
		BIT10	ECO mode
		BIT9	Reserved
		BIT8	Holiday home (the status can only be read, not changed)
		BIT7	0: Silent mode level1; 1: Silent mode level2
		BIT6:	Silent mode
		BIT5:	Holiday away (the status can only be read, but cannot be changed)
		BIT4:	Disinfect
		BIT3:	Reserved
		BIT2:	Reserved
		BIT1:	Reserved
		BIT0:	Reserved
6 (PLC:40007)	Curve selection	Curve 1-8	
7 (PLC:40008)	Forced water heating	0: invalid 1: always on 2: always off	TBH is the electric water tank heater. IBH1 and 2 are the hydraulic module's rear electric heater. IBH1 and 2 can be activated together. TBH cannot be activated together with IBH1 and 2.
8 (PLC:40009)	Forced TBH		
9 (PLC:40010)	Forced IBH1		
10 (PLC:40011)	Forced IBH2		

2. When the wired controller is connected to the hydraulic module, the parameters of the whole unit can be checked:

Whole unit parameter mapping address table

2.1. Running parameters

Register address	Description	Remarks
100 (PLC:40101)	Operating frequency	Compressor operating frequency in Hz
101 (PLC:40102)	Operating Mode	Whole unit's actual operating mode, 2: cooling, 3: heating, 0: off
102 (PLC:40103)	Fan Speed	Fan speed, in r/min
103 (PLC:40104)	PMV openness	Openness of the outdoor unit's electronic expansion valve in P =
104 (PLC:40105)	Water inlet temperature	TW_in, in °C TW_out, in °C
105 (PLC:40106)	Water outlet temperature	
106 (PLC:40107)	T3 Temperature	Condenser temperature, in °C
107 (PLC:40108)	T4 Temperature	Outdoor ambient temperature in °C
108 (PLC:40109)	Discharge temperature	Compressor discharge temperature Tp in °C
109 (PLC:40110)	Return air temperature	Compressor air return temperature in °C
110 (PLC:40111)	T1	Total water outlet temperature in °C
111 (PLC:40112)	T1B	System total water outlet temperature (behind the auxiliary heater) °C
112 (PLC:40113)	T2	Refrigerant liquid side temperature in °C
113 (PLC:40114)	T2B	Refrigerant gas side temperature in °C
114 (PLC:40115)	Ta	Room temperature, in °C
115 (PLC:40116)	T5	Water tank temperature
116 (PLC:40117)	Pressure 1	Outdoor unit high pressure value, in kPA
117 (PLC:40118)	Pressure 2	Outdoor unit low pressure value, in kPA
118 (PLC:40119)	Outdoor unit current	Outdoor unit operating current, in A
119 (PLC:40120)	Outdoor unit voltage	Outdoor unit voltage in V
120 (PLC:40121)	Hydraulic module current 1	Hydraulic module current 1 in A
121 (PLC:40122)	Hydraulic module current 2	Hydraulic module current 2, in A
122 (PLC:40123)	Compressor operating time	Compressor operating time in hours
123 (PLC:40124)	Model	10-18, means 10-18 KW
124 (PLC:40125)	Current fault	Fault Coding Standards. Check the code table for detailed fault codes
125 (PLC:40126)	Fault 1	Fault Coding Standards Check the code table for detailed fault codes.
126 (PLC:40127)	Fault 2	
127 (PLC:40128)	Fault 3	

128 (PLC:40129)	Status bit 1	BIT15	Reserved
		BIT14	Reserved
		BIT13	Reserved
		BIT12	Reserved
		BIT11	Reserved
		BIT10	Reserved
		BIT9	Reserved
		BIT8	Solar energy signal input
		BIT7	Room temperature controller cooling
		BIT6:	Room temperature controller heating
		BIT5:	Outdoor unit test mode mark
		BIT4:	Remote On/Off (1: d8)
		BIT3:	Oil return
		BIT2:	Anti-freezing
		BIT1:	Defrosting
		BIT0:	Enforced water pump
129 (PLC:40130)	Load output	BIT15	DEFROST
		BIT14	External heater
		BIT13	RUN
		BIT12	ALARM
		BIT11	Solar water pump
		BIT10	HEAT4
		BIT9	SV3
		BIT8	Mixed water pump P_m
		BIT7	Water return water P_p
		BIT6:	External water pump P_o
		BIT5:	SV2
		BIT4:	SV1
		BIT3:	Water pump PUMP_I
		BIT2:	Electric heater TBH
		BIT1:	Electric heater IBH2
		BIT0:	Electric heater IBH1
130 (PLC:40131)	Whole unit version No.	1~99 is the whole unit's version number and refers to the hydraulic module's version number.	
131 (PLC:40132)	Wired controller version No.	1~99 is the wired controller's version number.	

2.2 Parameter setting

Register address	Description	Remarks	
200 (PLC:40201)	Home appliance type	RemarksThe upper 8 bit is the home appliance type: Central heating: 0x07	
201 (PLC: 40202)	Temperature upper limit of T1S cooling		
202 (PLC: 40203)	Temperature lower limit of T1S cooling		
203 (PLC: 40204)	Temperature upper limit of T1S heating		
204 (PLC: 40205)	Temperature lower limit of T1S heating		
205 (PLC: 40206)	Temperature upper limit of TS setting		
206 (PLC: 40207)	Temperature lower limit of TS setting		
207 (PLC: 40208)	Temperature upper limit of water heating		
208 (PLC: 40209)	Temperature lower limit of water heating		
209 (PLC: 40210)	PUMP RUNNING TIME	DHW PUMP water return running time. It is five minutes by default and can be adjusted between 5 and 120 min at an interval of 1 min.	
210 (PLC: 40211)	Parameter setting 1	BIT15	Enable water heating
		BIT14	Supports water tank electric heater TBH
		BIT13	Supports disinfection
		BIT12	DHW PUMP, 1: supported; 0: not supported
		BIT11	Reserved
		BIT10	DHW pump supports Pipe Disinfect
		BIT9	Enable cooling
		BIT8	T1S cooling high/low temperature settings
		BIT7	Enable heating
		BIT6:	T1S heating high/low temperature settings
		BIT5:	Supports T1 sensor
		BIT4:	Supports room temperature Sensor Ta
		BIT3:	Supports room thermostat
		BIT2:	Room thermostat
		BIT1:	Dual Room Thermostat, 0: not supported; 1: supported
		BIT0:	0: room cooling/heating first, 1: water heating first

211 (PLC:40212)	Parameter setting 2	BIT15	Supports backup heater (IBH)
		BIT14	IBH supports heating
		BIT13	IBH supports water heating
		BIT12	Supports AHS
		BIT11	AHS supports heating
		BIT10	AHS supports water heating
		BIT9	Supports solar energy module
		BIT8	Reserved
		BIT7	Reserved
		BIT6:	Reserved
		BIT5:	Reserved
		BIT4:	Reserved
		BIT3:	Reserved
		BIT2:	Reserved
		BIT1:	Reserved
		BIT0:	Reserved
212 (PLC: 40213)	dT5_On	Default setting: 5°C, range: 2~10°C, setting interval: 1°C	
213 (PLC: 40214)	dT1S5	Default setting: 10°C, range: 5~20°C, setting interval: 1°C	
214 (PLC: 40215)	T_Interval_DHW	Default setting: 5 min, range: 5~30 min, setting interval: 1 min	
215 (PLC: 40216)	T4DHWmax	Default setting: 43°C, range: 35~43°C, setting interval: 1°C	
216 (PLC: 40217)	T4DHWmin	Default setting: -10°C, range: -20~5°C, setting interval: 1°C	
217 (PLC: 40218)	t_TBH_delay	Default setting: 90 min, range: 60~240 min, setting interval: 5 min	
218 (PLC: 40219)	dT5_TBH_off	Default setting: 5°C, range: 2~10°C, setting interval: 1°C	
219 (PLC: 40220)	T4_TBH_on	Default setting: 5°C, range: -5~20°C, setting interval: 1°C	
220 (PLC: 40221)	T5s_DI	Temperature of the disinfection water tank, range: 60~70°C, default setting: 65°C	

221 (PLC: 40222)	t_DI_max	Maximum disinfection duration, range: 90~300 min, default setting: 210 min
222 (PLC: 40223)	t_DI_hightemp	Disinfection high temperature duration, range: 5~60 min, default setting: 15 min
223 (PLC: 40224)	t_interval_C	Time interval of compressor start-up in cooling mode; range: 5~30 min, default setting: 5 min
224 (PLC: 40225)	dT1SC	Default setting: 5°C, range: 2~10°C, setting interval: 1°C
225 (PLC: 40226)	dTSC	Default setting: 2°C, range: 1~10°C, setting interval: 1°C
226 (PLC: 40227)	T4cmax	Default setting: 43°C, range: 35~46°C, setting interval: 1°C
227 (PLC: 40228)	T4cmin	Default setting: 10°C, range: -5~25°C, setting interval: 1°C
228 (PLC: 40229)	t_interval_H	Time interval of compressor start-up in the heating mode; range: 5~60 min, default setting: 5 min
229 (PLC: 40230)	dT1SH	Default setting: 5°C, range: 2~10°C, setting interval: 1°C
230 (PLC: 40231)	dTSH	Default setting: 2°C, range: 1~10°C, setting interval: 1°C
231 (PLC: 40232)	T4hmax	Default setting: 25°C, range: 20~35°C, setting interval: 1°C
232 (PLC: 40233)	T4hmin	Default setting: -15°C, range: -20~5°C, setting interval: 1°C
233 (PLC: 40234)	T4_IBH_on	Ambient temperature for enabling the hydraulic module auxiliary electric heating IBH, range: -15~10°C; default setting: -5°C
234 (PLC: 40235)	dT1_IBH_on	Temperature return difference for enabling the hydraulic module auxiliary electric heating IBH, range: 2~10°C; default setting: 5°C
235 (PLC: 40236)	t_IBH_delay	Delay time of enabling the hydraulic module auxiliary electric heating IBH, range: 15~120 min; default setting: 30 min
236 (PLC: 40237)	t_IBH12_delay	When IBH1 is enabled, the default time for enabling IBH2, range: 5~30 min, default setting: 5 min
237 (PLC: 40238)	T4_AHS_on	Ambient temperature for enabling the external heater AHS, range: -15~10°C, setting interval: -5°C
238 (PLC: 40239)	dT1_AHS_on	Temperature return difference for enabling the external heater AHS, range: 2~10°C; default setting: 5°C
239 (PLC: 40240)	dT1_AHS_off	Temperature return difference for closing the external heater AHS, range: -5~0°C; default setting: 0°C
240 (PLC: 40241)	t_AHS_delay	Delay time for enabling the external heater AHS, range: 15~120 min; default setting: 30 min

241 (PLC: 40242)	t_DHWHP_max	Longest duration of water heating by the heat pump, range: 60~600 min, default setting: 180 min;
242 (PLC: 40243)	t_DHWHP_restrict	Duration of limited water heating by the heat pump, range: 60~600 min, default setting: 180 min;
243 (PLC: 40244)	T4autocmin	Default setting: 25°C, range: 20~29°C, setting interval: 1°C
244 (PLC: 40245)	T4autohmax	Default setting: 17°C, range: 10~17°C, setting interval: 1°C
245 (PLC: 40246)	T1S_H.A_H	In the holiday mode, setting of T1 in the heating mode, range: 20~25°C, default setting: 25°C
246 (PLC: 40247)	T5S_H.A_DHW	In the holiday mode, setting of T1 in the water heating mode, range: 20~25°C, default setting: 25°C
247 (PLC: 40248)	ECO parameter	Reserved, wrong address is reported when this register is queried
248 (PLC: 40249)	ECO parameter	Reserved, wrong address is reported when this register is queried
249 (PLC: 40250)	ECO parameter	Reserved, wrong address is reported when this register is queried
250 (P LC:40251)	ECO parameter	Reserved, wrong address is reported when this register is queried
251 (PLC: 40252)	Comfort parameter	Reserved, wrong address is reported when this register is queried
252 (P LC:40253)	Comfort parameter	Reserved, wrong address is reported when this register is queried
253 (PLC: 40254)	Comfort parameter	Reserved, wrong address is reported when this register is queried
254 (P LC:40255)	Comfort parameter	Reserved, wrong address is reported when this register is queried
255 (PLC: 40256)	t_DRYUP	Temperature rise day number, range: 4~15 days, default setting: 8 days
256 (PLC: 40257)	t_HIGHPEAK	Drying day number, range: 3~7 days, default setting: 5 days
257 (PLC: 40258)	t_DRYD	Temperature drop day number, range: 4~15 days, default setting: 5 days
258 (PLC: 40259)	T_DRYPEAK	Highest drying temperature, range: 30~55°C, default setting: 45°C
259 (PLC: 40260)	t_firstFH	Running time of floor heating for the first time, default setting: 72 hrs, range: 48-96 hrs
260 (PLC: 40261)	T1S (first floor heating)	T1S of floor heating for the first time, range: 25~35°C, default setting: 25°C

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