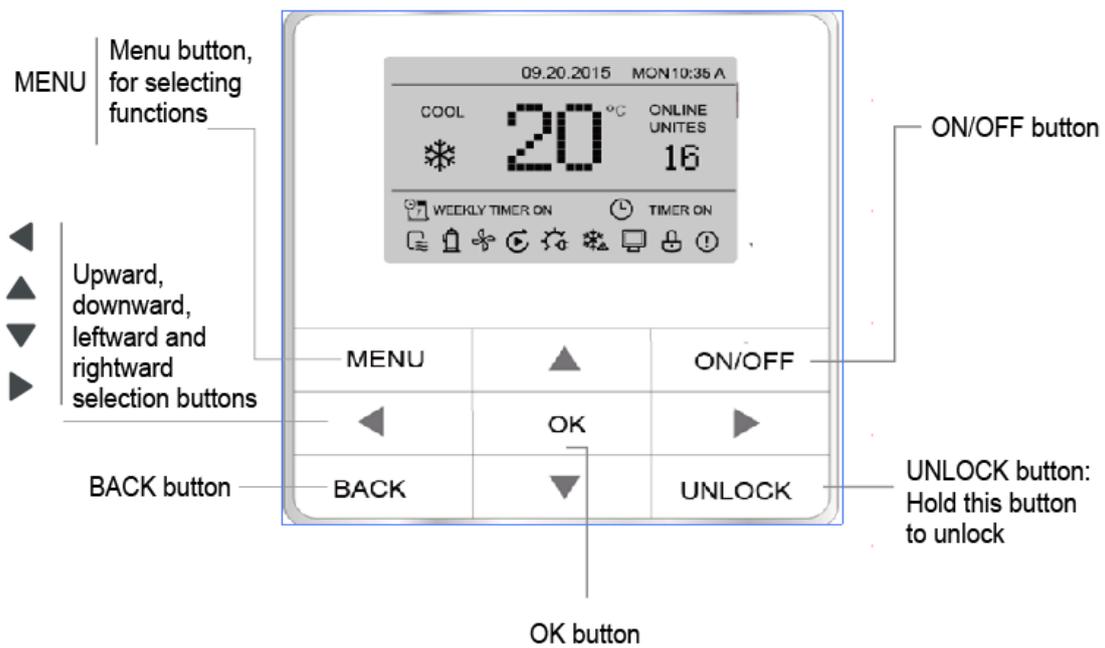


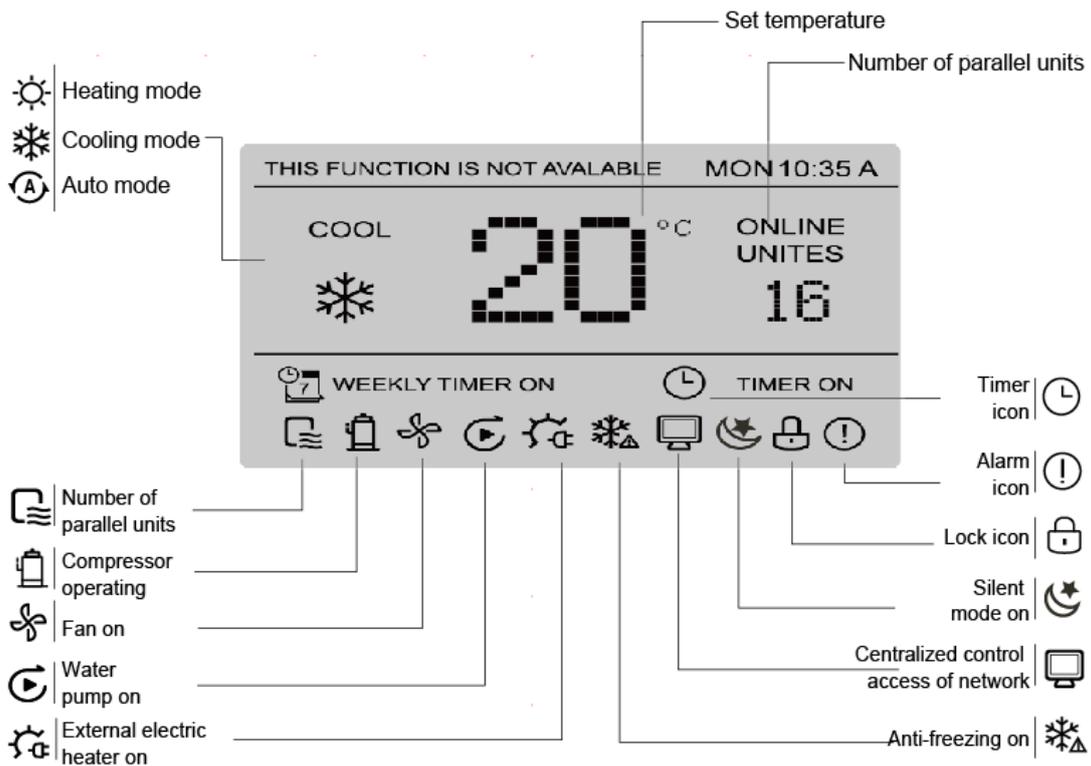
19. Wired Controller KJRM-120H/BMWKO-E (Standard)

19.1 Appearance



19.2 Overview of Wired Controller





19.3 Wired controller specifications

Model	KJRM-120H/BMWKO-E
Power Supply Voltage	AC 10.5 V
Wiring size	0.75mm ²

Performance Features

1. Newly designed dot-matrix display.
2. Operating mode: cooling mode, heating mode, and water pump mode.
3. 3-level users: user, project and service
4. Auto-restart function
5. Address setting function
6. combination function

19.4 Menu Operations

19.4.1 Unlocking/Locking Operation

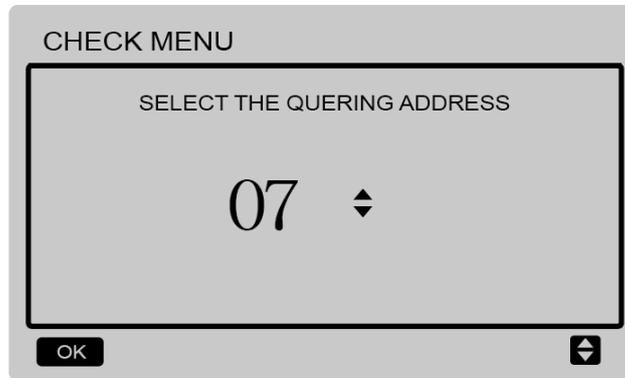
When the wired controller is locked, press and hold the "UNLOCK" button for 2s to unlock it, when "🔒" is not displayed; in the unlocked status, press and hold the "UNLOCK" button for 2s to lock it, when "🔒" is displayed and the wired controller cannot be operated; when there is no operation for continuous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

19.4.2 Power-on/off

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

19.4.3 Query Operation

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



The user first uses the "▼" and "▲" buttons to select the address of module to view (the offline address is skipped automatically). Press the "OK" button to access the lower-layer submenu, or press "BACK" to go back to the previous interface. During operation on the menu page, press "BACK" to go back to the previous interface. After 0# main unit is selected, the system enters the main unit operating status: operation state, running mode, total outlet water temperature, outlet water temperature, inlet water temperature, anti-free temperature, ambient temperature, compressor current, EXV opening degree, error code. Press the "◀" and "▶" buttons to switch the interface display.

19.4.4 Setting Wired Controller Address

Press the "MENU", "▶", "▲" and "▼" buttons for 3s at the same time to access wired controller address selection, and press the "▲" and "▼" buttons to select the desired values. The set address range is 0 to 15.

19.4.5 Power Failure Memory Function

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

19.4.6 Combination Function of Wired Controller

- 1) A maximum of 16 wired controllers can be connected in parallel, and the address can be set in the range of 0 to 15.
- 2) After wired controllers are connected in parallel, wired controllers with the same address are not allowed on the bus; otherwise a communication failure will occur.
- 3) After multiple wired controllers are connected in parallel, data is shared among them, e.g., the power-on/off function, data settings (such as the water temperature and hysteresis) and other parameters

will be kept consistent (note: The mode, temperature, and hysteresis settings can be shared only when the system is powered on).

- 4) Start point of data sharing: After the power-on/off button is pressed, data can be shared during parameter adjustment. The "OK" button must be pressed after parameters are adjusted, and the finally adjusted values will be shared.
- 5) Since the bus is processed in the polling mode, the data of the wired controller with the minimum number is valid if multiple wired controllers are operated at the same time in the same bus cycle (4s). Avoid the above situation during operation.
- 6) After any of parallel wired controllers has been reset, the address of this wired controller is 0 by default.

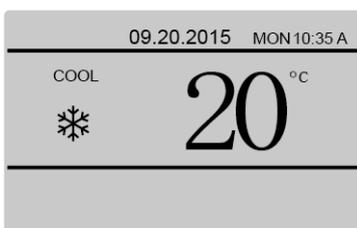
19.4.7 Upper Computer Communication Function

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

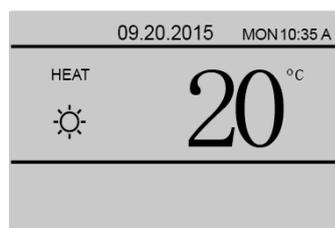
19.4.8 Setting Mode

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

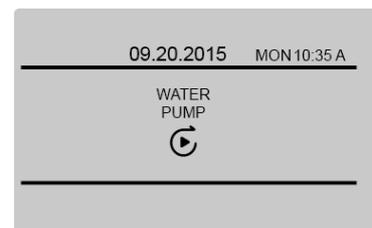
a. Cooling mode



b. Heating mode



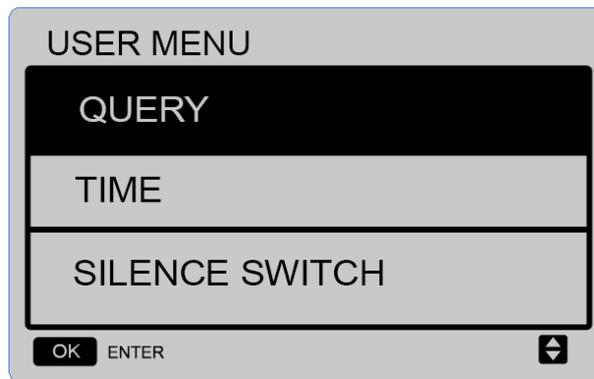
c. Water pump mode



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

19.4.9 User Menu

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



◆ Main functions

Query: state query, temperature query, current error

Time: daily timer, weekly schedule, date and time

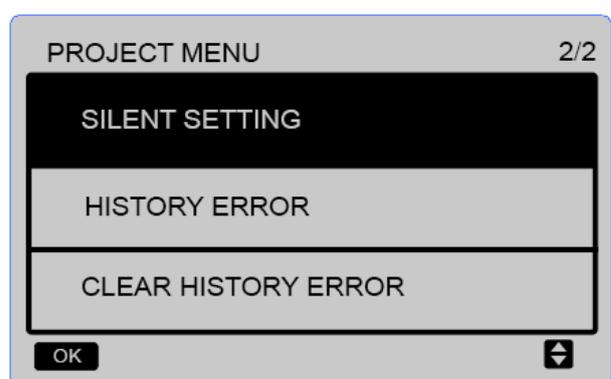
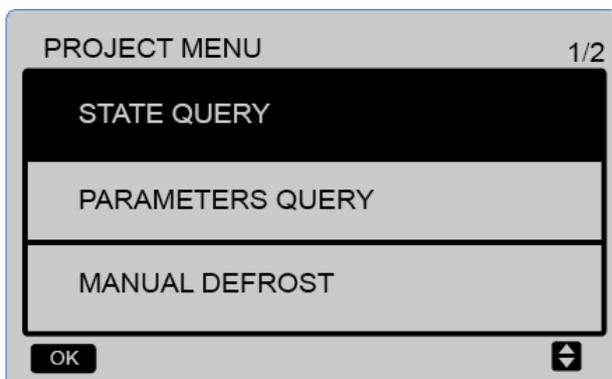
Silent switch

Press the "▼" and "▲" buttons to select the desired option, and press the "OK" button to access the interface.

19.4.10 PROJECT MENU

◆ Entering the password:

Select "PROJECT MENU", and press the "OK" button to enter the menu. The screen prompts the user to enter the password. The initial password is 6666 and cannot be changed. Press the "▲" and "▼" buttons to change the number to enter, and press the "◀" and "▶" buttons to change the bit code to enter. After the number is entered, the display is not changed. After entering the password, press the "OK" button to enter the interface; press the "BACK" button to go back to the previous interface. The query interface as follows is displayed if the input is correct:



◆ Main functions:

- a. State query: compressor state, fan state, 4-way valve state, pump state

b. Parameters query: EXV opening degree, compressor current, high pressure, low pressure, anti-freeze temperature, condenser pipe temperature, discharge temperature,

c. Manual defrost

d. Silent setting: standard mode, silent mode, night silent mode (factory default setting), super silent mode.

e. Querying history error: A maximum of 4 history errors can be displayed.

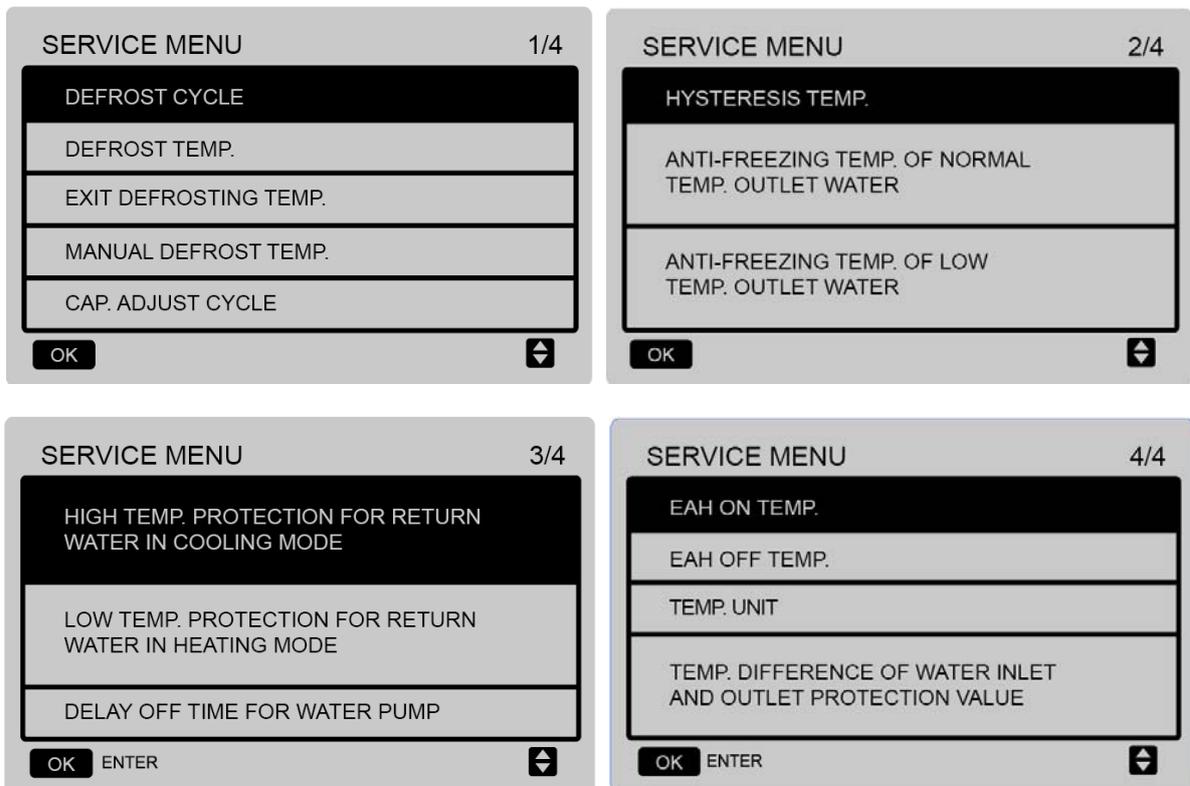
f. Clearing history error:

Press the "▼" and "▲" buttons to select the desired option, and press the "OK" button to access the interface.

19.4.11 SERVICE MENU

◆ Entering the password:

Select "SERVICE MENU", and press the "OK" button to enter the interface. The screen prompts the user to enter the password. The initial password is 9999 and cannot be changed. Press the "▲" and "▼" buttons to change the number to enter, and press the "◀" and "▶" buttons to change the bit code to enter. After the number is entered, the display is not changed. After entering the password, press the "OK" button to enter the interface; press the "BACK" button to go back to the previous interface. The query interface as follows is displayed if the input is correct:



◆ Main functions

a. Defrost cycle

b. Defrost temperature

- c. Exit defrost temperature
- d. Manual defrost temperature
- e. Capacity adjust cycle
- f. Hysteresis temperature
- g. Anti-freezing temperature of normal temperature outlet water
- h. Anti-freezing temperature of low temperature outlet water
- i. Setting the proportion for starting the unit for the first time for cooling
- j. Setting the proportion for starting the unit for the first time for heating
- k. Delay off time for water pump
- l. Temperature of starting electric auxiliary heating
- m. Temperature of stopping electric auxiliary heating
- n. Selecting temperature unit (reserved):
- o. Setting temperature difference protection of inlet and outlet water

Press the "▼" and "▲" buttons to select the desired option, and press the "OK" button to access the interface.

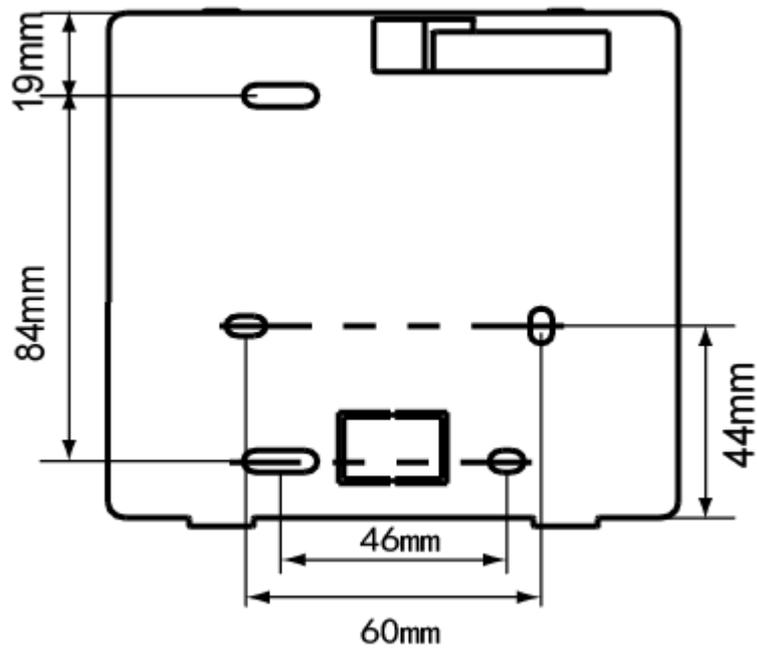
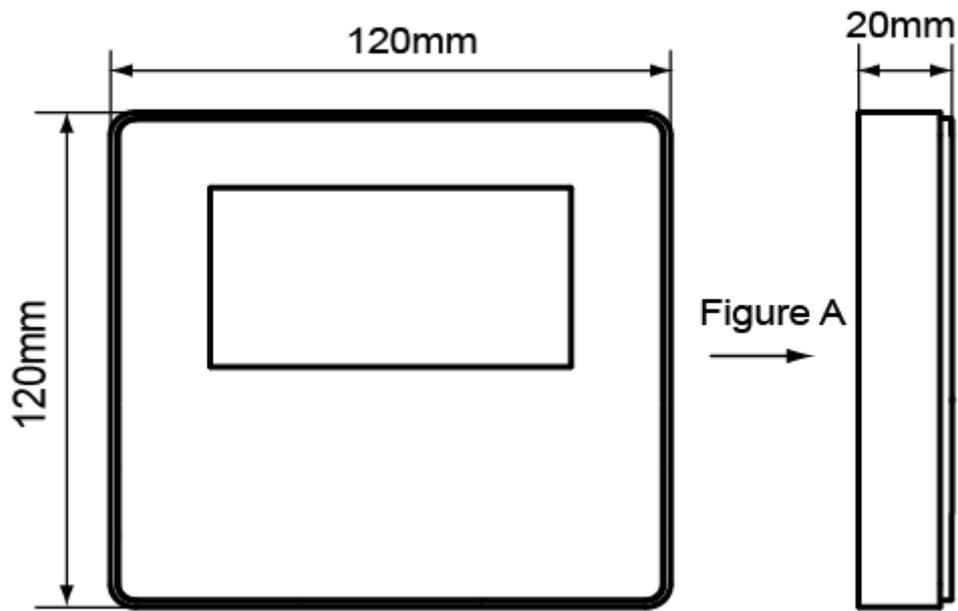
19.5 Installation

19.5.1 Preparation before installation

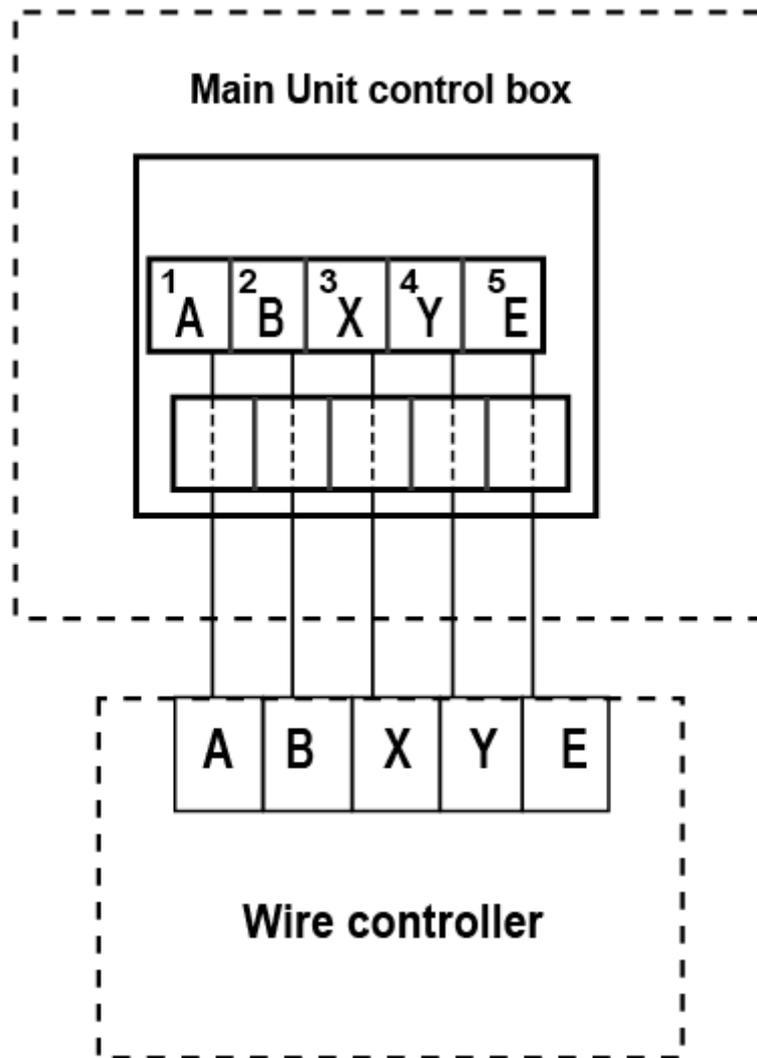
- 1) Check whether the following assemblies are complete.

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

19.5.2 Structure size figure



19.5.3 Wiring



19.5.4 Back cover installation

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

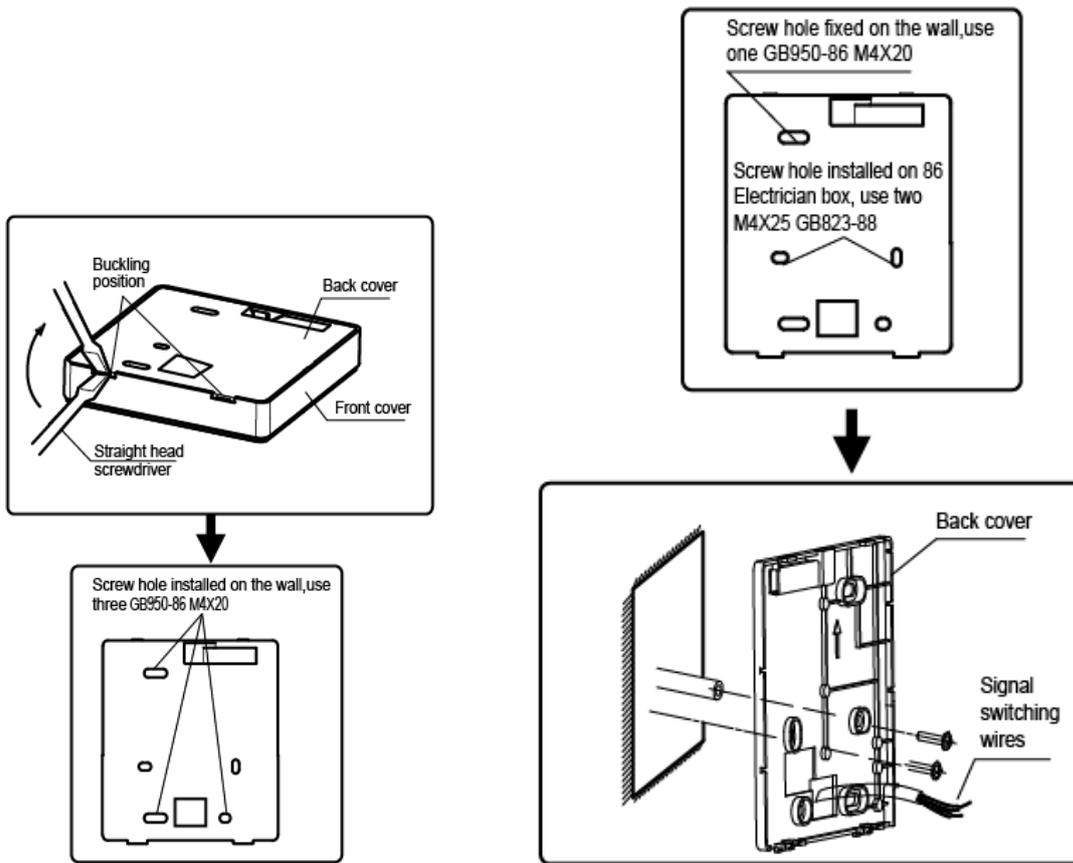
2) Use three GB950-86 M4X20 screws to directly install the back cover on the wall.

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

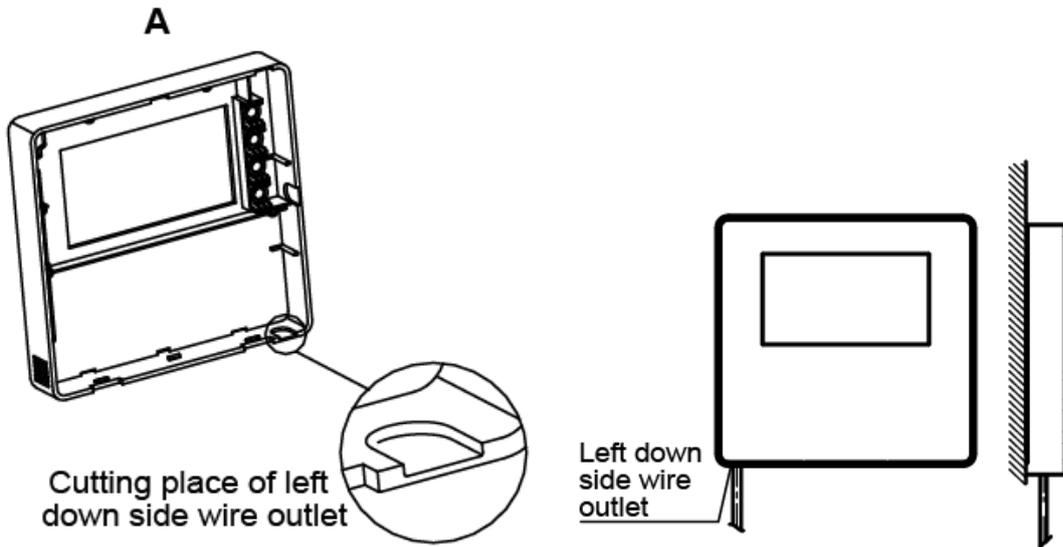
4) Adjust the length of two plastic screw bars in the accessory to be standard length from the electrical box screw bar to the wall. Make sure when install the screw bar to the wall, make it as flat as the wall.

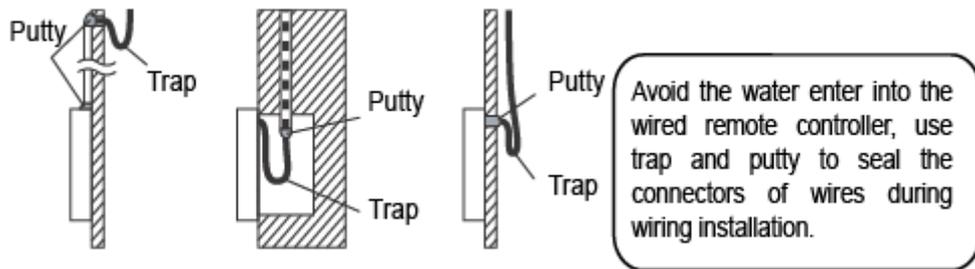
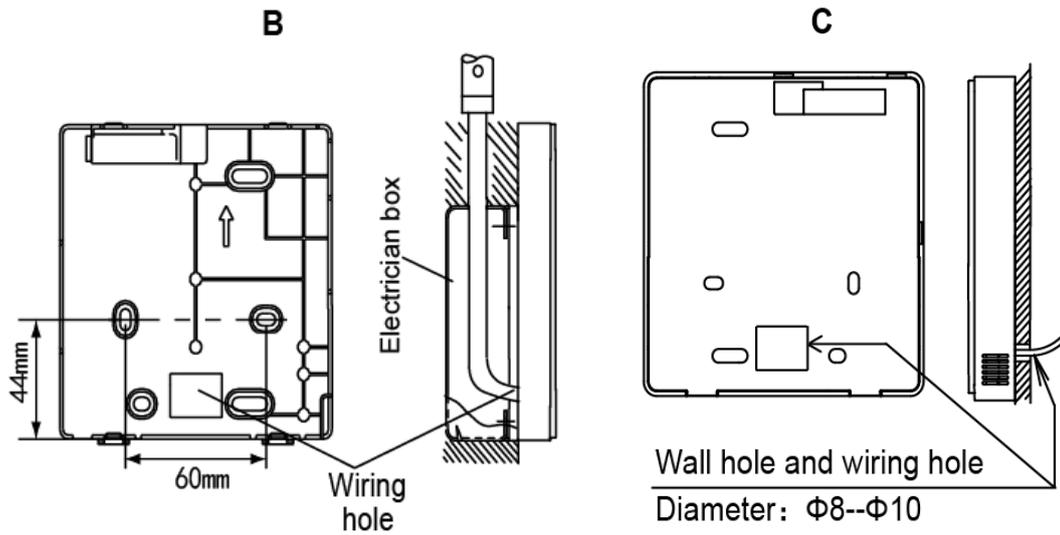
5) Use cross head screws to fix the wire controller bottom cover in the wall through the screw bar. Make sure the wire controller bottom cover is on the same level after installation, and then install the wire controller back to the bottom cover.

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



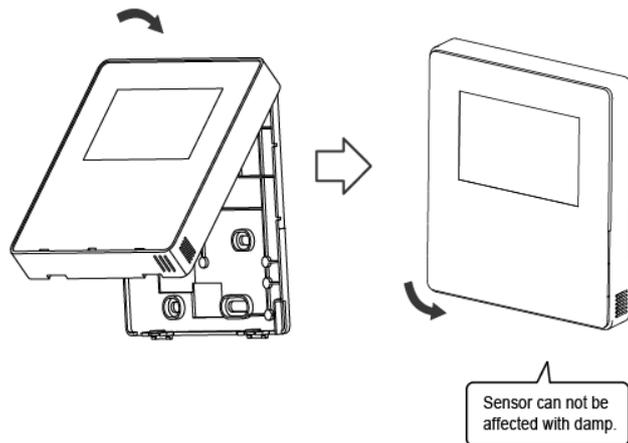
19.5.5 Wire outlet





19.5.6 Front cover installation

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



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

