

# **INSTALLATION & OWNER'S MANUAL**

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*WDC-86E/KD Wired Controller*

Thank you for purchasing the wired controller.  
This manual describes the safety precaution requirement of using this controller.



- Read this manual carefully and be sure you understand the information before attempting to use the controller.
- Keep this manual where it is readily accessible after reading it through.
- If another user operates the controller in the future, be sure to hand over this manual to the new user.

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# Installation

## 1. Safety Precautions

Please read these Safety Precautions carefully before installing the wired controller.

- This manual classifies the precautions into WARNING and CAUTION. They both contain important information regarding safety. Be sure to follow all the precautions below.

| Identifier  | Meaning   |
|---|---|
|  <b>Warning</b>   | Failure to follow these instructions properly may result in personal injury or loss of life.  |
|  <b>Caution</b>   | Failure to observe these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances. |
|  <b>Important</b> | Indicates a useful hint or additional information.  |

- After completing the installation, conduct a trial operation to check for faults and explain to the customer how to operate the controller with the aid of the operation manual. Ask the customer to store the installation manual along with the operation manual for future reference.

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 **Warning**

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- Ask your dealer or qualified personnel to carry out installation work. Do not attempt to install the wired controller yourself. Improper installation may result in leakage, electric shocks or fire.
- Consult your local dealer regarding relocation and reinstallation of the wired controller. Improper installation work may result in leakage, electric shocks or fire hazards.
- Install the wired controller in accordance with the instructions in this manual. Improper installation may result in water leakage, electric shocks or fire.

- Be sure to use only the specified accessories and parts for installation work.  
Failure to use the specified parts may result in the unit falling down, water leakage, electric shocks or fire.
- Install the wired controller on a foundation strong enough to withstand the weight of the wired controller.  
Insufficient strength may result in the wired controller falling down and causing injury.
- Electrical work must be performed in accordance with the relevant local and national regulations and with the instructions in this manual.  
Be sure to use a dedicated power supply circuit only. Insufficient power circuit capacity and improper workmanship may result in electric shocks or fire.
- Always perform installation work with the power turned off.  
pressing electric parts may result in electric shock.
- Do not disassemble, reconstruct or repair.  
This may result in electric shock and/or fire.
- Make sure that all wiring is secured, the specified wires are used and that there is no strain on the terminal connections or wires.  
Improper connections or securing of wires may result in abnormal heat build-up or fire.
- The choice of materials and installations must comply with the available national and international standards.



## Caution




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- To avoid leakage and electric shock due to entry of water or insects, fill the wiring through hole with putty.
- To avoid electric shocks, do not operate with wet hands.
- Do not wash the wired controller with water, as this may result in electric shocks or fire.
- When the follow me function of the wired controller is used, select the installation location while considering it should be a place:
  - 1).Where the average temperature in the room can be detected.
  - 2).Which is not exposed to direct sunlight.
  - 3).Which is not near a heat source.
  - 4).Which is not affected by the outside air or air draught due to, for example, opening/closing of doors, the air outlet of the indoor unit or the like.

## 2. Accessories

■ Please check that you have all the following parts.

Table 2.1

| No. | Name  | Schematic   | Qty. | Remarks  |
|-----|---|---|------|--|
| 1   | Phillips head screw, M4X25mm                        |  | 2    | Used to install the wired controller on the electrical box |
| 2   | Plastic support bar $\varphi 5 \times 16 \text{mm}$ |  | 2    | Used to install the wired controller on the electrical box |
| 3   | Operation and Installation Manual                   |  | 1    | /  |

■ Please prepare the following parts on site.

Table 2.2

| No. | Name                            | Qty. | Remarks   |
|-----|---------------------------------|------|---|
| 1   | 86 electrical box               | 1    | General specification for electrical box, which is embedded into the wall.  |
| 2   | 2-core shielded copper wires    | 1    | 2*AWG16-AWG20, pre-embedded into wall. Longest wiring length is 200 metres. |
| 3   | Wiring tubes (insulation suite) | 1    | Pre-embedded into wall.   |
| 4   | Big Phillips screwdriver        | 1    | To install the Phillips screws.   |
| 5   | Small slotted screwdriver       | 1    | To dismantle the bottom lid of the wired controller.                        |

### 3. Installation Procedure

#### 3-1 Determine Where to Install the Wired Controller

Make sure to refer to "1. Safety Precautions" to determine the location.

#### 3-2 Structural Dimensions

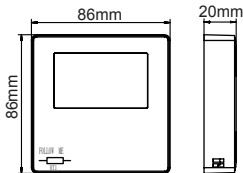


Figure 3.1

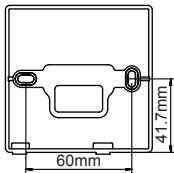


Figure 3.2

#### 3-3 Rear Cover Installation

**3-3-1** Insert a small slotted-head screwdriver into the bottom slot of the wired controller and rotate in the direction indicated to remove the rear cover of the wired controller. Pay attention to the direction of rotation to prevent any damage to the rear cover of the wired controller. (see Figure 3.3)

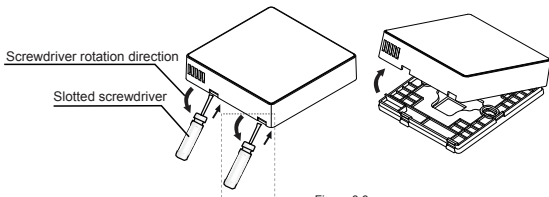


Figure 3.3



**Warning**

- When using the small slotted screwdriver to open the rear cover of the wired controller, be careful not to damage the PCB inside.
- Do not touch the PCB of the wired controller.

**3-3-2** Use a cutting tool to adjust the height of the two plastic support bars (accessory 2) to match the standard length of the screw pillars of the electrical box to the wall surface. Make sure that the support bars are level on the wall when the screw pillars of the electrical box are mounted. (see Figure 3.4)

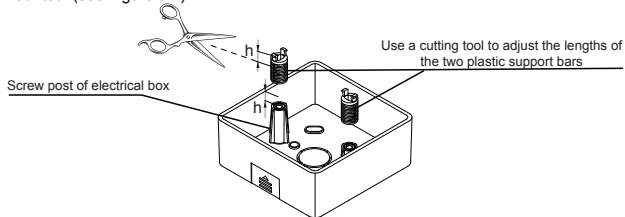


Figure 3.4

**3-3-3** Once the heights of the plastic support bars are adjusted, fix the bars on the rear cover. (see Figure 3.5)

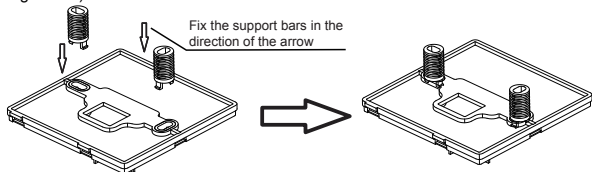


Figure 3.5

**3-3-4** Take the shielded wiring that has been pre-embedded in the wall, and thread it through the wire hole of the rear cover. Use the Philips head screws (accessory 1) to fix the rear cover of the wired controller to the electrical box via the support bars. Make sure that the rear cover is not deformed after being installed (see Figure 3.6).

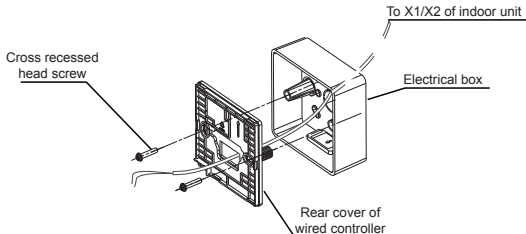


Figure 3.6

**i Important**

- The rear cover may be deformed if the screw is too tight.

**3-4 Wiring**

**⚠ Caution**

- Prepare the electrical box and the 2-core shielded copper wire on site.
- Do not touch the PCB of the wired controller.

**3-4-1 Wiring specification**

Table 3.1

|          |                             |
|----------|-----------------------------|
| Type     | 2-core shielded copper wire |
| Diameter | AWG 16-20                   |
| Length   | Maximum 200m                |

### 3-4-2 Communication wiring

- The communication between the indoor unit and wired controller is bi-directional communication. The parameters displayed on the wired controller are refreshed in real time according to changes in the parameters of the indoor unit.
- X1 and X2 are terminals to connect the indoor unit and wired controller. There is no polarity between X1 and X2.
- The longest wiring length between the wired controller and indoor unit is 200 meters.

#### ■ One controller to one indoor unit connection method

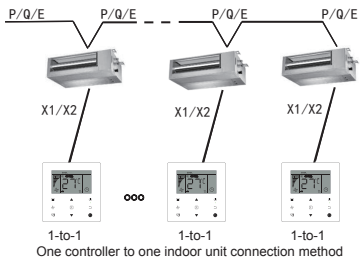
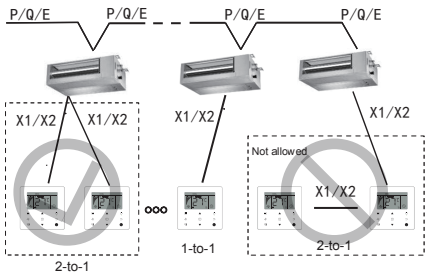


Figure 3.7

#### ■ Two controllers to one indoor unit connection method



Two controllers to one indoor unit connection method

Figure 3.8

- For the two controllers to one indoor unit connection method, two wired controllers control the same indoor unit, where one controller will be the **"Main"**, and the other be the **"Secondary"**. Refer to **"Field setting"**. The default setting of the wired controller is set to main controller.
- This method is only available for two WDC-86E/KD wired controllers.

### 3.5 Install Main Body of Wired Controller

Take the shielded wiring that has been pre-embedded in the wall and pass it through the wiring hole of the rear cover of the wired controller. Once connected, connect the wiring to the terminal X1/X2 (CN2) of the wired controller, and fix the wired controller to the rear cover. (see Figure 3.9)

Fix the wired controller correctly and firmly to the rear cover so that the wired controller will not drop. (see Figure 3.10)

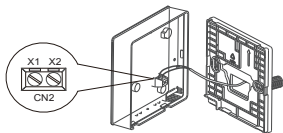


Figure 3.9

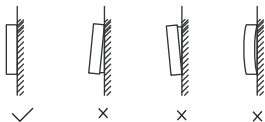


Figure 3.10



### Caution

- During installation, reserve a certain length for the connecting shielded wiring to make it easier to remove the wired controller for maintenance.

## Operation

### 1. Safety Precautions



This controller is not intended to be used by persons, including children, with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they are supervised or have been given instructions on how to use the controller by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the controller.

Please read the Safety Precautions carefully before operating the wired controller.

■ The Safety Precautions classifies the precautions into WARNING and CAUTION.

They both contain important information regarding safety. Be sure to follow all the precautions below.

| Identifier  | Meaning   |
|---|---|
|  <b>Warning</b> | Failure to follow these instructions properly may result in personal injury or loss of life.  |
|  <b>Caution</b> | Failure to observe these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances. |

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 **Warning**

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- **Do not install the wired controller by yourself.**  
Improper installation may result in electric shocks or fire.  
Consult your dealer.
- **Do not modify or repair the wired controller.**  
This may result in electric shocks or fire.  
Consult your dealer.
- **Do not relocate or reinstall the wired controller by yourself.**  
Improper installation may result in electric shocks or fire.  
Consult your dealer.
- **Do not use flammable materials (e.g., hairspray or insecticide) near the controller.**  
Do not clean the controller with organic solvents such as paint thinner.  
The use of organic solvents may cause crack damage to the controller, electric shocks or fire.



Caution

- **Do not play with the wired controller.**

Accidental operation by a child may result in impairment of bodily functions and harm health.

- **Never disassemble the wired controller.**

Pressing the interior parts may result in electric shocks or fire.

Consult your dealer or authorized contractor for internal inspections and adjustments.

**To avoid electric shocks, do not operate with wet hands.**

- **Do not wash the wired controller.**

- Doing so may cause electric leakage and result in electric shocks or fire.

**Do not leave the wired controller wherever there is a risk of wetting.**

- If water gets into the wired controller there is a risk of electrical leakage and damage to electronic components.

## 2. Parts of the Wired Controller

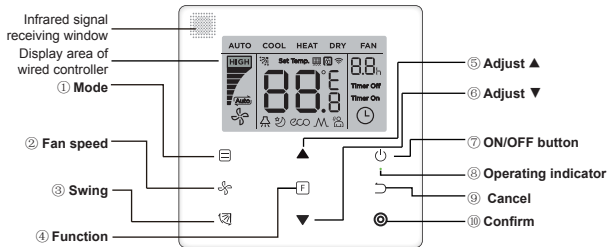













Figure 4.1

Table 4.1

| Button   | Functions   |
|--|---|
| 1.  Mode                | To set the operating mode:  Auto → Cool → Heat → Dry → Fan |
| 2.  Fan speed           | To set the fan speed.   |
| 3.  Swing               | To set the swing function.  |
| 4.  Function            | To switch to functions that can be set in the current mode.   |
| 5.  Adjust upwards      | To adjust temperature setting and timing (for timer) upwards.   |
| 6.  Adjust downwards    | To adjust temperature setting and timing (for timer) downwards.   |
| 7.  ON/OFF              | To turn on/off the unit   |
| 8.  Operating indicator | To indicate the ON/OFF state of the indoor unit.  |
| 9.  Cancel              | To turn off the timer/IDU LED display/silent/ECO/auxiliary heater function <sup>1</sup> ; to cancel the timer.                              |
| 10.  Confirm            | To turn on the timer/IDU LED display/silent/ECO/auxiliary heater function <sup>1</sup> ; to confirm the timer.                              |

Note 1: Auxiliary heater function is reserved.



### 3. Icons in the Display

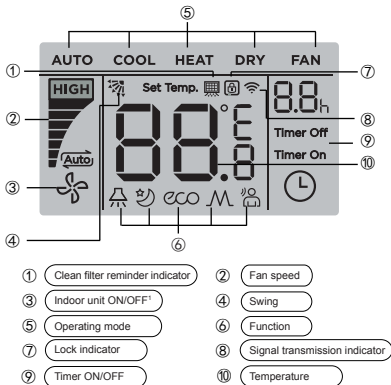


Figure 5.1

Note1: When the indoor unit is on, the icon "🌀" spins; when the indoor unit is off, the icon "🌀" does not spin.

### 4. Operation Guide

#### 4-1 ON/OFF Setting

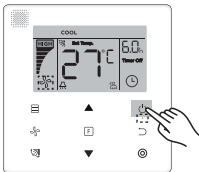






Figure 6.1

- 1) Press  (ON/OFF) button, and the Operating Indicator "●" on the wired controller will light up, while the ON/OFF icon "  " of the indoor unit on the display will spin to indicate that the indoor unit has started running. (see Figure 6.1)
- 2) Press  (ON/OFF) button again, and the Operating Indicator "●" on the wired controller will turn off, and the display icon "  " will stop spinning as the indoor unit stops running.

## 4-2 Mode Setting

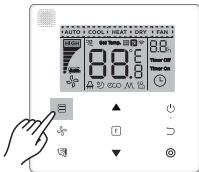



Figure 6.2

Press  (Mode) button. Each time press this button, the operating mode will change in turn as shown in Figure 6.3.

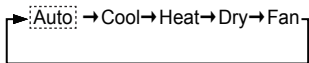


Figure 6.3

In the "Auto", "Cool", "Dry", or "Heat" mode, press ▲ and ▼ buttons to adjust to the setting temperature. (see Figure 6.4)

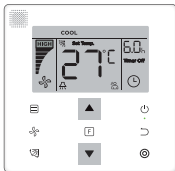


Figure 6.4

**Note:**

- The "Auto" mode is not available for all air conditioner models.
- In the "Auto" mode, press ▲ and ▼ buttons, "Cool", and "Heat" button blink. Press to set cool and heat setpoint temperature. press ⏏ (Cancel) button to exit the settings page.
- Temperature setting is not available in the "Fan" mode.
- "Dry" mode is not available for FAPU .

**4-3 Fan Speed Setting**

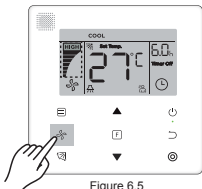




Figure 6.5

In the "Cool", "Heat" or "Fan" mode, press  (Fan speed) button to set the operating fan speed (see Figure 6.5).

If the wired controller is configured with seven fan speeds, press  (Fan speed) button to set the fan speed in turn as shown in Figure 6.6.

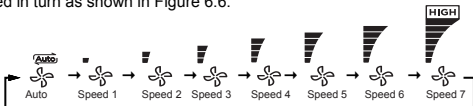



Figure 6.6

If the wired controller is configured with three fan speeds, press  (Fan speed) button to set the fan speed in turn as shown in Figure 6.7.

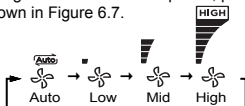



Figure 6.7

#### Note:

- In the "Auto" and "Dry" modes, the fan speed is set to "Auto", and will not change even press  (Fan speed) button.
- The default fan speed is 7 fan speeds, please refer to "Field Setting" to adjust the default fan speed.

## 4-4 Swing Setting

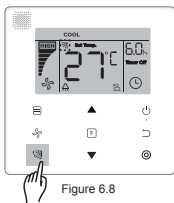


Figure 6.8





Press  (Swing) button to control the swing of the vertical louver of indoor unit (see Figure 6.8). When the unit is on, the display icon shows the swing angle of the current louver. Press  (Swing) button, and the louver switches from the current angle to the angles in turn as shown in Figure 6.9.



Figure 6.9

When the louver is in "Auto" state, Press  (Swing) button again, and the louver will stop at the current operating angle, and the display icon will show the current angle of the louver after 10 seconds.

**Note:**

- The swing function is only available for indoor units configured with vertical louver.
- When the unit is off, the  (Swing) button is invalid, and the wired controller automatically turns off the swing function, and the display icon will no longer show the swing angle.
- **This wired controller is unable to control horizontal swing in indoor unit.**

## 4-5 Function Setting

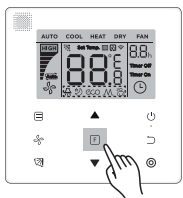


Figure 6.10

Press **F** (Function) button to switch to the function that can be set in the current mode (see Figure 6.10).

- Press **F** (Function) button to go to the function setting, and the display on the wired controller will show in turns: "L", "A", "M", "eco", "M" (reserved). Alternatively, you can press **▲** and **▼** buttons to switch to the selected function. (see Figure 6.11)



Figure 6.11

- Press **F** (Function) button to go to the function settings. Press **F** (Function) button each time to select the function, and the icon for the selected function will blink. Press **⊙** (Confirm) button to confirm the function, or **⏏** (Cancel) button to cancel the function.

#### 4-5-1 IDU LED Display

The "IDU LED Display" function is used to control the on/off state of display in the indoor unit.

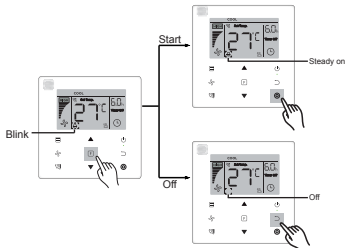


Figure 6.12

Press **F** (Function) button to go to the function setting page. Press **F** (Function) button again to select "A", and the IDU LED Display icon "A" will blink. Then press **⊙** (Confirm) button to confirm, and "A" will light up, or press **⏏** (Cancel) button to cancel, and the "IDU LED Display" function will turn off. (see Figure 6.12)

## 4-5-2 Silent

The **"Silent"** function is used to send the **"Silent"** control signal to the indoor unit. The indoor unit automatically optimizes the noise it generates when it is in the **"Silent"** state.

- Turn on/off the **"Silent"** function: press **[F]** (Function) button to switch to the **"Silent"** function ("**🔇**" blinks), and press **[Enter]** (Confirm) button to turn on the function or **[Cancel]** button to turn off the function (see Figure 6.13).

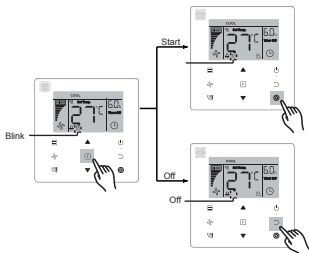


Figure 6.13

### Note:

- The **"Silent"** function will be cancelled and needed to be reset when the unit is manually turned off.
- Once it has been running for 8 hours, the Silent icon "**🔇**" will no longer light up, and the unit will exit the **"Silent"** operating state.
- The **"Silent"** and **"ECO"** functions cannot be set at the same time.

## 4-5-3 ECO

The **"ECO"** function is used to send the **"ECO"** control signal to the indoor unit. The indoor unit will run in the energy saving mode when it is in the **"ECO"** state.

- Turn on/off the **"ECO"** function: press **[F]** (Function) button to switch to the **"ECO"** function ("**eco**" blinks), and press **[Enter]** (Confirm) button to turn on the function or **[Cancel]** button to turn off the function (see Figure 6.14).

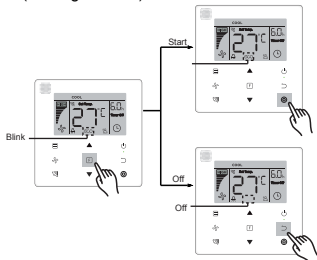


Figure 6.14

**Note:**






- When switching modes or turning off the unit, the unit will exit the **"ECO"** function.
- Once it has been running for 8 hours, the ECO icon "**eco**" will no longer light up, and the unit will exit the **"ECO"** operating state.
- The **"Silent"** and **"ECO"** functions cannot be set at the same time.

**4-5-4 Auxiliary Heater (Reserved)**

**4-5-5 Follow Me**



The **"Follow Me"** function of the wired controller is on by default, and its icon lights up when the function is on.

- 1) Turn off **"Follow Me"**: Press  (Swing) and  (Confirm) buttons at the same time, and hold for 5 seconds to turn off the **"Follow Me"** function, and its icon disappear.
- 2) Turn on **"Follow Me"**: When the **"Follow Me"** function is off, Press  (Swing) and  (Confirm) buttons at the same time, and hold for 5 seconds to start the **"Follow Me"** function again, and display its icon  (see Figure 6.15).

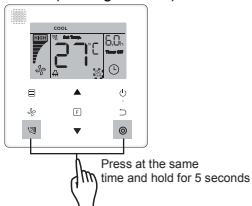








Figure 6.15

**Note:**

- When the **"Follow Me"** functions of wired and remote controllers are turned on at the same time, the **"Follow Me"** function priority is assigned to the wired controller.

#### 4-5-6 Timer

**"Timer"** is used to set the timed on/off state of indoor unit.

- press  (Function) button to switch to the **"Timer"** function. When the indoor unit is on, first complete the **"Timer Off"** settings, and then the **"Timer On"** settings. When the indoor unit is off, first complete the **"Timer On"** settings, then the **"Timer Off"** settings.
  - When the indoor unit is off:
- 1) **"Timer On"** setting: press  (Function) button to go to the **"Timer On"** setting, the display will show **"0.0h Time On"**, and the words **"Time On"** will blink, then press  (Confirm) button to go to the timer setting. Press  and  buttons to adjust the time, and press  (Confirm) button to complete the timer setting (see Figure 6.16).

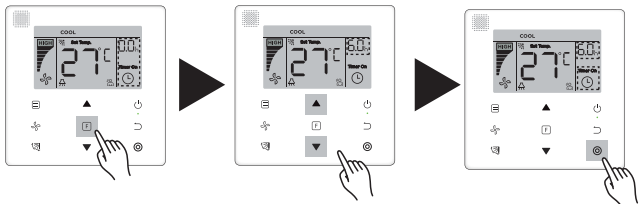


Figure 6.16

- 2) **"Timer Off"** setting: Once the **"Timer On"** setting is completed, press **[F]** (Function) button to go to the **"Timer Off"** setting, the display will show **"0.0h Time Off"**, and the words **"Time Of"** will blink. press **[C]** (Confirm) button to go to the timer setting, and press **▲** and **▼** buttons to adjust the time, then press **[C]** (Confirm) button to complete the timer setting.
- When the indoor unit is on: Refer to the above operations to configure the **"Timer On"** and **"Timer Off"** settings.
  - When adjusting the timing steps, press and hold **▲** and **▼** buttons for more than 1 second to adjust the timing step values quickly.
  - **"Cancel Timer"** Function: press **[F]** (Function) button to go to the timer setting, press **[C]** (Cancel) or **[ON/OFF]** button or set the time value to zero to cancel the timer settings. Go back to the main page.

**Note:**

- When the unit is on, the wired controller can be used to set the timer information for **"Timer Off"** and **"Timer On"**, and when **"Timer Off"** is cancelled, **"Timer On"** will be cancelled as well. When the unit is off, timer information for both **"Timer On"** and **"Timer Off"** can be set, and when **"Timer On"** is cancelled, **"Timer Off"** will be cancelled as well.
- Once the wired controller has set the timer information, the Timer icon in the display of the indoor unit will not light up until the preset timing when the wired controller sends the ON/OFF signal to the indoor unit.
- Secondary wired controller has no timer function.

## 4-6 Clean Filter Reminder

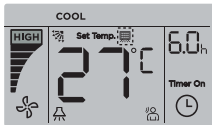





Figure 6.17

- When the operating time reaches the preset time, the **Filter** icon "  " lights up to remind users to clean the filter.
- Press and hold  (Swing) button for 5 seconds to remove the **Filter** icon "  ".
- Go to **"Field Setting"** to turn on/off this function or preset time of this function.
- The secondary wired controller has no clean filter reminder function.

## 4-7 Locking Function

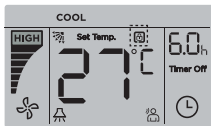







Figure 6.18

- When the system contains both the centralized controller and wired controller at the same time, the centralized controller can lock the indoor unit so that some of its functions become unavailable. If the indoor unit is locked by the centralized controller, and the display icon of the wired controller "  " is on, and some operations fail to respond, please check the corresponding setting of the centralized controller.
- When the wired controller locks the temperature range by itself, the icon "  " will light up, but the outer frame "  " will be off. When the temperature range is locked by the centralized controller, the lock icon "  " and the outer frame "  " will both light up at the same time. When two locks exist, the interval for the alternating display is 5 seconds.

- One or more of the following functions of the indoor unit are locked when the icon "🔒" lights up on the display: wireless remote controller, on/off state, lowest cooling set temperature, highest set temperature, mode, fan speed, wired controller lock.
- When the centralized controller and wired controller execute the lock function on the wired controller at the same time, priority is assigned to the centralized controller.

## 4.8 Main/Secondary Wired Controller

- When two wired controllers control one indoor unit at the same time, one controller will be the **"Main"**, and the other will be the **"Secondary"**.
- Go to **"Field Setting"** to configure the **"Main"** and **"Secondary"** controllers. The default setting is set to main wired controller.

Note:

- The main wired controller can set the **"Timer"**, **"Filter"** and **"Indoor unit commissioning parameter"**, but not the secondary remoter controller.
- The **"Follow Me"** function of the main wired controller is effective but the secondary wired controller does not have this function.
- If either controller is used to change the operating state of the indoor unit, the change will be

## Field Setting

### 1. Restore Factory Default

- At any time, press and hold **⊞** (Mode), **F** (Function), **▲** and **▼** buttons at the same time for 5 seconds, and the wired controller will reset.

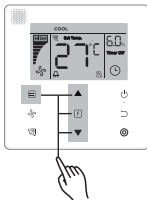


Figure 7.1

## 2. Query and Set the Indoor Unit Address

- If the indoor unit has no address, the display will show "FE", and the wired controller will display an E9 error.
- Press and hold ▲ and ▼ buttons for 8 seconds to go to the page to set the indoor unit address. press □ (Cancel) button to exit the settings page.

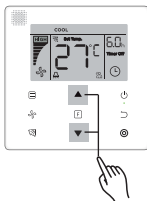


Figure 7.2

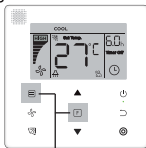
- Query and set up the address of the indoor unit is allowed in the address setting page.
- In the address setting page, the wired controller displays the current address if the indoor unit has an address. If the indoor unit has no address, press ▲ and ▼ buttons to

adjust the address to the required value (address range is 0-63). press **Ⓒ** (Confirm) button to send the current address value to the indoor unit. In 60 seconds, the wired controller will exit the address setting page, or press **⏏** (Cancel) button to exit the address setting page.

- In the address setting page, the wired controller will not respond to any remote control signals.

### 3. Commissioning Parameter Settings

- Commissioning parameter can be set when the unit is on or off.
- Press and hold **F** (Function) and **Ⓔ** (Mode) buttons for 5 seconds to go to the page for commissioning parameter settings.



#### Note:

- For cooling only operations, please do corresponding settings as described .

Figure 7.3

- Go to the commissioning parameter setting page. Check that **"C0"** is displayed in the temperature display area. Press **▲** and **▼** buttons to change the **"commissioning parameter Code"**.
- Once the **"commissioning parameter Code"** is selected, press **Ⓒ** (Confirm) button to go to the specific commissioning parameter settings, and then press **▲** and **▼** buttons to adjust the value. Press **Ⓒ** (Confirm) button to save the value and complete the commissioning parameter setting.
- Press **⏏** (Cancel) button to return to the previous page until you exit commissioning parameter settings. Alternatively, system will exit the commissioning parameter settings page if there is no operation for 60 seconds.
- When it is in the commissioning parameter settings page, the wired controller does not respond to any remote control signals.
- In the commissioning parameter setting page, the **Ⓔ** (Mode), **⌬** (Fan speed), **⌘** (Swing), **F** (Function) and **⏻** (ON/OFF) buttons are not available.

Table 5.1

| Parameter Code  | Parameter Content                                    | Select Parameters              | Default Value | Remarks  |
|-----------------|--|--------------------------------|---------------|--|
| C0              | Address Setting                                      | F0: Main wired controller      | F0            | If two wired controllers control one indoor unit, the address must be different  |
|                 |  | F1: Secondary wired controller |               |  |
| C1              | Cooling Only/Cooling and Heating and Heating Setting | 00: Cooling and Heating        | 00            | Heating mode is not available in cooling only setting.   |
|                 |  | 01: Cooling Only               |               |  |
| C2              | Reserved   | /                              | /             | /  |
| C3              | Set time to remind users to clean the filter         | 00/01/02/03/04                 | 02            | 00: No reminder to clean filter  |
|                 |  |                                |               | 01: 1250h  |
|                 |  |                                |               | 02: 2500h  |
|                 |  |                                |               | 03: 5000h  |
|                 |  |                                |               | 04: 10000h   |
| C4              | Settings for infrared receiver of wired controller   | 00: Disable                    | 01            | When "Disable" is selected, the wired controller cannot receive remote control signal,   |
|                 |  | 01: Enable                     |               |  |
| C5 <sup>1</sup> | Fan speed setting in wired controller                | 00: 3 fan speeds               | 02            | Default is 7 fan speeds.<br>The bi-directional communication automatically identifies 3 fan speeds or 7 fan speeds.  |
|                 |  | 01: 4 fan speeds               |               |  |
|                 |  | 02: 7 fan speeds               |               |  |
| C6              | Reserved   | /                              | /             | /  |
| C7              | Display indoor room temperature                      | 00: No                         | 00            | If "00" is selected, the wired controller will display the setting temperature when the backlight is off. If "01" is selected, the wired controller will display the room temperature when the backlight is off. |
|                 |  | 01: Yes                        |               |  |

| Parameter Code   | Parameter Content  | Select Parameters   | Default Value | Remarks  |               |               |               |               |         |   |   |
|------------------|--|---|---------------|--|---------------|---------------|---------------|---------------|---------|---|---|
| C8               | Settings to turn on/off operating indicator              | 00: Off   | 01            | Select "On" and the operating indicator will show the ON/OFF state of the indoor unit.<br>Select "Off" and the operating indicator will always be off regardless if the indoor unit is on or off.                  |               |               |               |               |         |   |   |
|                  |  | 01: On  |               |  |               |               |               |               |         |   |   |
| C9 <sup>1</sup>  | Static pressure setting of indoor unit                   | A5 <sup>2</sup> :00/01/02/03/04/05/06/07/08/09/FF<br>H-DUCT <sup>3</sup> ,<br>FAPU <sup>4</sup> :<br>00/01/~ /19/FF | 01            | The indoor unit sets the selected corresponding static pressure.<br>Refer to the indoor unit for specific static pressure values. FF: initial value is based on the indoor unit data read by the wired controller. |               |               |               |               |         |   |   |
| C10 <sup>1</sup> | Set the time delay to stop the fan of the indoor unit.   | 00/01/02/03/04/FF   | 00            | Parameter  | 00            | 01            | 02            | 03            | 04      | FF  |   |
|                  |  |   |               | Value Represents   | 4 Min         | 8 Min         | 12 Min        | 16 Min        | NO Stop |   | Based on the dial switches in the main PCB of the indoor unit |
| C11 <sup>1</sup> | Indoor unit - cold draft prevention temperature settings | 00/01/02/03/FF  | 00            | Parameter  | 00            | 01            | 02            | 03            | FF      |   |   |
|                  |  |   |               | Common Indoor Unit   | 15°C/<br>59°F | 20°C/<br>68°F | 24°C/<br>75°F | 26°C/<br>79°F |         | Based on the dial switches in the main PCB of the indoor unit |   |
|                  |  |   |               | FAPU   | 14°C/<br>57°F | 12°C/<br>54°F | 16°C/<br>61°F | 18°C/<br>64°F |         | Based on the dial switches in the main PCB of the indoor unit |   |



| Parameter Code         | Parameter Content                                      | Select Parameters     | Default Value                      | Remarks          |              |              |              |              |   |   |
|------------------------|--|-----------------------|------------------------------------|------------------|--------------|--------------|--------------|--------------|---|---|
| C12 <sup>1 and 5</sup> | Indoor unit heating temperature compensation setting   | 00/01/02/<br>03/04/FF | 00                                 | Parameter        | 00           | 01           | 02           | 03           | 04  | FF  |
|                        |  |                       |                                    | Value Represents | 6°C/<br>43°F | 2°C/<br>36°F | 4°C/<br>39°F | 6°C/<br>43°F | 0°C/<br>32°F  | Based on the dial switches in the main PCB of the indoor unit |
| C13 <sup>1 and 5</sup> | Indoor unit cooling - Temperature compensation setting | 00/01/FF              | 00                                 | Parameter        | 00           |              | 01           |              | FF  |   |
|                        |  |                       |                                    | Value Represents | 0°C/32°F     |              | 2°C/36°F     |              | Based on the dial switches in the main PCB of the indoor unit |   |
| C14 <sup>5</sup>       | Indoor unit auxiliary heater setting                   | 00: None              | Common Indoor Unit: 01<br>FAPU: 00 |                  |              |              |              |              |   |   |
|                        |  | 01: Available         |                                    |                  |              |              |              |              |   |   |
| C15 <sup>1</sup>       | Indoor unit auto-restart setting                       | 00: None              | 01                                 |                  |              |              |              |              |   |   |
|                        |  | 01: Available         |                                    |                  |              |              |              |              |   |   |
| C16 <sup>5</sup>       | Indoor unit vertical swing setting                     | 00: None              | Common Indoor Unit: 01<br>FAPU: 00 |                  |              |              |              |              |   |   |
|                        |  | 01: Available         |                                    |                  |              |              |              |              |   |   |

| Parameter Code   | Parameter Content   | Select Parameters                                   | Default Value                               | Remarks                |        |        |        |        |
|------------------|---|---|---|------------------------|--------|--------|--------|--------|
| C17 <sup>5</sup> | Indoor unit horizontal swing setting                              | 00: None  | Common Indoor Unit:<br>01<br>FAPU: 00       |                        |        |        |        |        |
|                  |   | 01: Available                                       |   |                        |        |        |        |        |
| C18              | Display of indoor unit to receive the remote control signals      | 00: No  | 01  |                        |        |        |        |        |
|                  |   | 01: Yes   |   |                        |        |        |        |        |
| C19              | Buzzer of the indoor unit rings                                   | 00: No  | 01  |                        |        |        |        |        |
|                  |   | 01: Yes   |   |                        |        |        |        |        |
| C20              | <b>Follow Me</b> in wired controller temperature correction       | Celsius:<br>-5.0~5.0°C<br>Fahrenheit:<br>-9.0~9.0°F | Celsius:<br>-3.0°C<br>Fahrenheit:<br>-6.0°F | Accuracy is 0.5°C/1°F. |        |        |        |        |
| C21              | Set outdoor ambient temperature value when auxiliary heater is on | Celsius:<br>-5~20°C<br>Fahrenheit:<br>23-68°F       | Celsius:<br>15 °C<br>Fahrenheit:<br>59 °F   | Accuracy is 1°C/1°F.   |        |        |        |        |
| C22              | Mode switch interval in Auto mode                                 | 00/01/02/03   | 00  | Parameter              | 00     | 01     | 02     | 03     |
|                  |   |   |   | Value Represents       | 15 Min | 30 Min | 60 Min | 90 Min |

| Parameter Code | Parameter Content   | Select Parameters   | Default Value                             | Remarks   |    |    |    |   |
|----------------|---|---|---|---|----|----|----|---|
| C23            | Select opening of electronic expansion valve in Heating or Standby mode | 00/01/02/FF   | 01  | Parameter   | 00 | 01 | 02 | FF  |
|                |   |   |   | Value Represents  | 72 | 96 | 00 | Based on the dial switches in the main PCB of the indoor unit |
| C24            | Temperature Unit  | 00/01   | 00  | 00: Celsius<br>01: Fahrenheit   |    |    |    |   |
| C25            | Set lowest cooling temperature limit                                    | Celsius:<br>30°C - 17°C<br>(default is 17°C)<br>Fahrenheit:<br>86°F - 62°F<br>(default is 62°F) | Celsius:<br>17 °C<br>Fahrenheit:<br>62 °F | Fresh air processing unit:30°C/86°F~13°C/55°F.                        |    |    |    |   |
|                |   |   |   | AHU controller box(outlet air temperature control):30°C/86°F~10°C/°F. |    |    |    |   |
|                |   |   |   | Only available for the wired controller itself.                       |    |    |    |   |
| C26            | Set highest heating temperature limit                                   | Celsius:<br>30°C - 17°C<br>(default is 17°C)<br>Fahrenheit:<br>86°F - 62°F<br>(default is 62°F) | Celsius:<br>30 °C<br>Fahrenheit:<br>86 °F | Only available for the wired controller itself.                       |    |    |    |   |
| C27            | Set to display 0.5°C  | 00/01   | 00  | 00: Show 1 °C<br>01: Show 0.5°C                                       |    |    |    |   |

| Parameter Code | Parameter Content  | Select Parameters                                  | Default Value | Remarks   |
|----------------|--|--|---------------|---|
| C28            | Capacity setting   | 0:Invalid value                                    | 0             | Indoor cannot change capacity setting when receive 0. |
|                |  | 0.1-19.9HP:<br>0.1HP can set                       |               |   |
|                |  | 21-40HP:<br>1HP can set<br>42-80HP:<br>2HP can set |               |   |
|                |  | FF:using indoor switch numbers                     |               |   |
| C29            | send wired control setting parameter to indoor unit within two hours of power on (setting parameter:C9-C19,C21-23,C28) |  |               |   |
| C30            | drain pump setting   | 00/01  | 0             | 00:invalid  |
|                |  |  |               | 01:valid  |

1 Once the indoor unit and wired controller communicate successfully, the default parameters of the above table will synchronize to the indoor unit settings.

2 Only for medium static duct unit

| Capacity   | 00   | 01   | 02   | 03   | 04   | 05   | 06   | 07    | 08    | 09    |
|------------|------|------|------|------|------|------|------|-------|-------|-------|
| 1.8-7.1kW  | 0Pa  | 10Pa | 20Pa | 30Pa | 40Pa | 50Pa | 50Pa | 50Pa  | 50Pa  | 50Pa  |
| 8.0-12.5kW | 10Pa | 20Pa | 30Pa | 40Pa | 50Pa | 60Pa | 70Pa | 80Pa  | 90Pa  | 100Pa |
| 14.0kW     | 30Pa | 40Pa | 50Pa | 60Pa | 70Pa | 80Pa | 90Pa | 100Pa | 125Pa | 150Pa |

3 Only for high static duct unit

| Capacity     | 00     | 01     | 02     | 03     | 04     | 05     | 06     | 07     | 08     | 09     | 10     | 11     | 12     | 13     | 14     | 15     | 16     | 17     | 18     | 19     |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 7.1-16.0 kW  | 30 Pa  | 50 Pa  | 60 Pa  | 70 Pa  | 80 Pa  | 90 Pa  | 100 Pa | 110 Pa | 120 Pa | 130 Pa | 140 Pa | 150 Pa | 160 Pa | 170 Pa | 180 Pa | 190 Pa | 200 Pa | 200 Pa | 200 Pa | 200 Pa |
| 20.0-28.0 kW | 30 Pa  | 50 Pa  | 60 Pa  | 70 Pa  | 80 Pa  | 90 Pa  | 100 Pa | 110 Pa | 120 Pa | 130 Pa | 140 Pa | 150 Pa | 160 Pa | 170 Pa | 180 Pa | 190 Pa | 200 Pa | 210 Pa | 230 Pa | 250 Pa |
| 40.0-56.0 kW | 100 Pa | 120 Pa | 140 Pa | 160 Pa | 180 Pa | 200 Pa | 220 Pa | 240 Pa | 260 Pa | 270 Pa | 280 Pa | 290 Pa | 300 Pa | 310 Pa | 320 Pa | 330 Pa | 340 Pa | 360 Pa | 380 Pa | 400 Pa |

4 Only for FAPU models



| Capacity     | 00     | 01     | 02     | 03     | 04     | 05     | 06     | 07     | 08     | 09     | 10     | 11     | 12     | 13     | 14     | 15     | 16     | 17     | 18     | 19     |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 14.0kW       | 100 Pa | 110 Pa | 120 Pa | 130 Pa | 140 Pa | 150 Pa | 160 Pa | 170 Pa | 180 Pa | 190 Pa | 200 Pa | 210 Pa | 220 Pa | 230 Pa | 240 Pa | 250 Pa | 250 Pa | 250 Pa | 250 Pa | 250 Pa |
| 20.0-28.0 kW | 100 Pa | 120 Pa | 140 Pa | 160 Pa | 180 Pa | 200 Pa | 220 Pa | 240 Pa | 260 Pa | 270 Pa | 280 Pa | 290 Pa | 300 Pa | 310 Pa | 320 Pa | 330 Pa | 340 Pa | 360 Pa | 380 Pa | 400 Pa |
| 45.0-56.0 kW | 100 Pa | 120 Pa | 140 Pa | 160 Pa | 180 Pa | 200 Pa | 220 Pa | 240 Pa | 260 Pa | 270 Pa | 280 Pa | 290 Pa | 300 Pa | 310 Pa | 320 Pa | 330 Pa | 340 Pa | 360 Pa | 380 Pa | 400 Pa |

5 This parameter is not available for the FAPU models.

**Note:**

- The secondary wired controller can only perform the parameter settings for C0-C8 and C24-C27.

## 4. Query Operations

In the main page, press and hold  (Fan speed) and  (Confirm) buttons at the same time for 5 seconds to go to the query page. You can query the check operation parameters of the outdoor and indoor units as well as the program version of the controller.

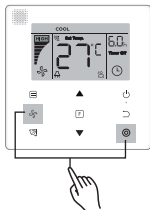




Figure 7.4

Press  and  buttons to select the indoor or outdoor unit: o00-o03 for outdoor unit; n00-n63 for indoor unit.





- press  (Confirm) button to query the parameter, or  (Cancel) button to quit the query function.
- In the query page, press  and  buttons to query the parameters. Parameters can be queried in turn.
- The "**Check No.**" is displayed in the timer area at the top of the query page, and the contents of the checked parameter is displayed in the temperature area.

Table 6.1

| No. | Parameter displayed on the wired controller during ODU spot check |
|-----|---|
| 1   | ODU address   |
| 2   | Outdoor ambient(T4) temperature (°C)                              |
| 3   | T2/T2B average Temp. (corrected) (°C)                             |
| 4   | Main heat exchanger pipe(T3) temperature (°C)                     |
| 5   | Discharge Temp. of compressor A(°C)                               |
| 6   | Discharge Temp. of compressor A(°C)                               |
| 7   | Inverter compressor A current (A)                                 |
| 8   | Inverter compressor B current (A)                                 |
| 9   | Reserved  |
| 10  | Fan speed   |
| 11  | EXVA position/4   |
| 12  | EXVB position/4   |
| 13  | EXVC position/4   |
| 14  | Operating mode  |
| 15  | Priority mode   |
| 16  | Total capacity requirement correction of indoor unit              |
| 17  | Number of outdoor units   |
| 18  | Total capacity of outdoor unit                                    |

| No. | Parameter displayed on the wired controller during ODU spot check  |
|-----|--|
| 19  | Inverter-module heatsink Temp. A(°C)   |
| 20  | Inverter-module heatsink Temp. B(°C) (reserved)  |
| 21  | Reserved   |
| 22  | --   |
| 23  | Plate heat exchanger outlet (T6B) temperature (°C)   |
| 24  | Plate heat exchanger inlet (T6A) temperature (°C)  |
| 25  | System discharge superheat degree  |
| 26  | --   |
| 27  | Number of operating indoor units (in case of virtual addresses, this is the number of units with the virtual addresses included) |
| 28  | --   |
| 29  | High pressure of system  |
| 30  | Low pressure of the system (reserved)  |
| 31  | Most recent error or protection code   |
| 32  | Inverter compressor A frequency  |
| 33  | Inverter compressor B frequency  |
| 34  | Unit capacity  |
| 35  | Program version No.  |
| 36  | Address of VIP indoor unit   |



| No. | Parameter displayed on the wired controller during ODU spot check |
|-----|---|
| 37  | Reserved 2  |
| 38  | Reserved 2  |

Table 6.2

| No. | Parameter displayed on the wired controller during IDU spot check  |
|-----|--|
| 1   | IDU communication address  |
| 2   | Capacity (HP) of IDU   |
| 3   | IDU network address (the same as the communication address)        |
| 4   | Set temperature Ts   |
| 5   | Room temperature T1  |
| 6   | Actual T2 indoor temperature                                       |
| 7   | Actual T2A indoor temperature                                      |
| 8   | Actual T2B indoor temperature                                      |
| 9   | Ta temperature (FAPU)  |
| 10  | Compressor discharge temperature (show high discharge temperature) |
| 11  | Target superheat degree (reserved)                                 |
| 12  | EXV position/8   |
| 13  | Software version No.   |
| 14  | Error Code   |

## 5. Error Display

- When there is a communication error between the wired controller and the indoor unit, the wired controller will show the error code **"E9"**, an indication of a communication failure in wired controller.
- When the indoor or outdoor unit fails, the display of the wired controller shows the address of faulty unit(s) in the timer area, and the error code in the temperature area.

Table 7.1

| List of IDU error codes: |  |
|--------------------------|--|
| Error Code               | Error Definition and Description                     |
| FE                       | Indoor unit has no address                           |
| E0                       | Mode conflict error                                  |
| E1                       | Communication error between indoor and outdoor units |
| E2                       | T1 sensor error                                      |
| E3                       | T2 sensor error                                      |
| E4                       | T2B sensor error                                     |
| E5                       | T2A sensor error (Reserved)                          |
| E6                       | Fan error in indoor unit                             |
| E7                       | EEPROM error fault                                   |
| Ed                       | Outdoor unit error                                   |
| EE                       | Water level alarm error                              |
| Eb                       | Electronic expansion valve of indoor unit has error  |

Table 7.2

| List of ODU error codes: |   |            |  |
|--------------------------|---|------------|--|
| Error Code               | Error Definition and Description  | Error Code | Error Definition and Description                                 |
| E0                       | ODU communication fault   | XF1        | PTC error  |
| E1                       | Three-phase power supply phase protection                                     | F3         | Error in temperature sensor at T6B plate heat exchanger outlet   |
| E2                       | Communication error between indoor and outdoor units                          | F5         | Error in temperature sensor at T6A plate heat exchanger inlet    |
| E4                       | Error in condenser temperature sensor (T3) or ambient temperature sensor (T4) | P0         | Inverter compressor top temperature protection                   |
| E5                       | Voltage protection  | P1         | High pressure protection   |
| E7                       | Discharge temperature sensor fault  | P2         | Low pressure protection  |
| E8                       | ODU address error fault   | XP3        | Compressor overcurrent protection                                |
| XE9                      | Drive mismatching fault   | P4         | Protection against excessive discharge temperature of compressor |
| EL                       | Reserved  | P5         | High temperature protection of condenser                         |
| XH0                      | Communication error between IR341 and master chip                             | P9         | DC Fan Error   |
| H1                       | Communication chip and master chip communication fault                        | PF         | Reserved   |
| H2                       | ODU qty decrease fault  | PL         | Protection against excessive temperature of the inverter module  |
| H3                       | ODU qty increase fault  | PP         | Protection against excessively low discharge superheat           |

List of ODU error codes:

| Error Code | Error Definition and Description      | Error Code | Error Definition and Description   |
|------------|---------------------------------------|------------|--|
| XH4        | Inverter module protection fault      | XL0        | Inverter module fault  |
| H5         | 3X P2 protection fault in 60 minutes  | XL1        | DC bus low voltage protection  |
| H6         | 3X P4 protection fault in 100 minutes | XL2        | DC bus high voltage protection   |
| H7         | IDU qty decrease fault                | XL3        | Reserved   |
| H8         | High-pressure sensor fault            | XL4        | MCE fault/synchronization/closed loop  |
| H9         | 3X P9 protection in 60 minutes        | XL5        | Zero speed protection  |
| Hb         | Low pressure sensor fault             | XL7        | Phase sequence error protection  |
| C7         | 3X PL protection in 100 minutes       | XL8        | Protection against sudden speed change in compressor > 15Hz  |
| F0         | 3X PP protection in 100 minutes       | XL9        | Protection to prevent the difference between the speed setting and actual operating speed of the compressor > 15Hz |

# Troubleshooting

Table 8.1

| Error code and description  |  | Possible Causes                                    | Possible Solutions   |
|---|--|--|--|
| No display on the wired controller  |  | IDU is not powered on                              | Power on the IDU.  |
|   |  | Wired controller connection error                  | First power off the IDU, and then check if the wired controller connection is correct. See Section 3.4 on the wiring requirements. |
|   |  | Wired controller damaged                           | Replace the wired controller.  |
|   |  | Power supply failure of the IDU main PCB           | Replace the IDU main PCB.  |
| E9  | Wired controller and IDU communication fault | IDU has no address or IDU address duplicated       | Set an address for the IDU; duplicated IDU addresses are not allowed in the same system.   |
|   |  | Wired controller damaged                           | Replace the wired controller.  |
|   |  | IDU main PCB fault                                 | Replace the IDU main PCB.  |
| Some functions of the indoor unit cannot be controlled, such as ON/OFF, temperature, mode, fan speed and wired controller lock. |  | The "🔒" icon in the wired controller is always on. | Check if the indoor unit has been locked by the centralized controller.  |





MD18U-003FW

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## 说明书更改说明（此页不作菲林）

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材质：双胶纸黑白印(说明书)

规格：(大度)100\*100

颜色：本色

克重：100g

- 1.A升级为B：说明书替换为英文版本。18.5.16
- 2.B升级为C：增加新风机静压能力表P32。18.5.28
- 3.C升级为D：图片6.12修正P18。18.6.05
- 4.D升级为E：增加单冷设置标识P26。19.9.26
- 5.E升级为F：增加新风机和独立控制盒参数表