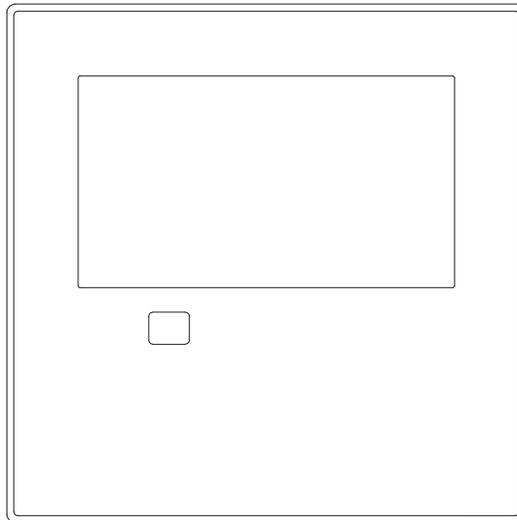# Installer's Guide

Wired Communicating Controller

Note: Graphics in this document are for representation only. Actual model may differ in appearance.

ZCONTDUCACVVMA

⚠ SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

DLR-SVN007A-EN

Introduction

Read this manual thoroughly before operating or servicing this unit.

This document is customer property and is to remain with this unit. Return to the service information pack upon completion of work.

Warnings, Cautions, and Notices

Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

⚠ WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.
NOTICE	Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants.

Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

⚠ WARNING

Proper Field Wiring and Grounding Required!

Failure to follow code could result in death or serious injury.

All field wiring MUST be performed by qualified personnel. Improperly installed and grounded field wiring poses FIRE and ELECTROCUTION hazards. To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in NEC and your local/state/national electrical codes.

⚠ WARNING

Personal Protective Equipment (PPE) Required!

Failure to wear proper PPE for the job being undertaken could result in death or serious injury. Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, MUST follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- **Before installing/servicing this unit, technicians MUST put on all PPE required for the work being undertaken (Examples; cut resistant gloves/ sleeves, butyl gloves, safety glasses, hard hat/ bump cap, fall protection, electrical PPE and arc flash clothing). ALWAYS refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.**

- **When working with or around hazardous chemicals, ALWAYS refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labelling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.**

- **If there is a risk of energized electrical contact, arc, or flash, technicians MUST put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, PRIOR to servicing the unit. NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.**

⚠ WARNING

Follow EHS Policies!

Failure to follow instructions below could result in death or serious injury.

- **All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.**
- **Non-Trane personnel should always follow local regulations.**

⚠ WARNING

Cancer and Reproductive Harm!

This product can expose you to chemicals, including lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings. ca.gov.

⚠ WARNING

Safety Hazard!

Failure to follow instructions below could result in death or serious injury or property damage.

This unit is not to be used 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 the use of the appliance by a person responsible for their safety.

Do not allow children to play or climb on the unit or to clean or maintain the unit without supervision.

⚠ WARNING

Risk of Fire or Explosion!

Failure to follow instructions below could cause a fire which could result in death, serious injury, and equipment damage.

- **Do not install the unit in a corrosive, inflammable, or explosive environment to avoid impact to normal operations or shortened service life of the unit.**
- **Do not install the appliance near a heat source or water.**
- **Do not install the controller in a location with heavy oil, vapor, or sulfurated gas.**
- **Install indoors and avoid direct sunlight, rain, and snow.**
- **Install in a location without electromagnetic interference or dust.**

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Table of Contents

General Information

Parts List

Verify the following parts were provided.

Table 1.   Parts list

| Qty	Description
1	Wired controller
1	Installation manual
3	M3.5×25 screws (for mounting on the wall)
3	Wall Plugs
2	M4×25 screws (For mounting on switch box)
1	Battery
1	Connective wire group (optional)
1	M4×8 screw (for mounting the connective wire group)

Compatible with Single Zone and Multi-Zone Systems: M5THM, M5THS, M5MHW.

Safety Precautions

- This manual provides the installation method of wired controller. Refer to the wiring diagram of this installation manual to connect the wire controller with indoor unit.

- The wired controller works in low voltage loop circuit. Do not wire to a high-voltage loop.Wiring clearance between configured tubes should be at the range of 1 to 2 ft or above.

- The 24 AWG shielded wire of the wired controller must be grounded firmly.

- After connecting the wired controller, do not use a megger to detect insulation.
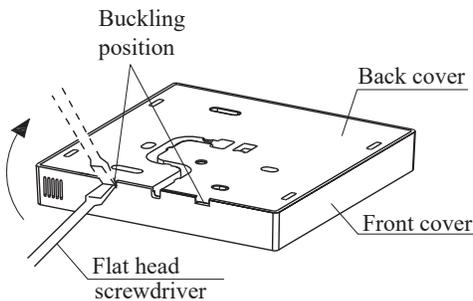
Installation

Figure 1. Wired remote controller dimensions
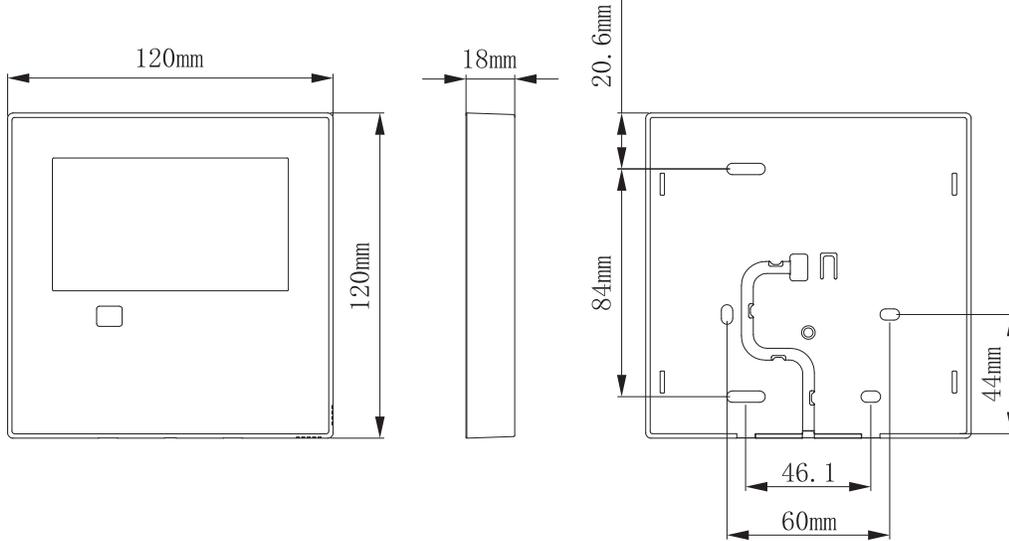
1. Remove the upper part of the wired controller.

   a. Insert a prying tool into the slots on the lower part of the wired controller.

   b. Remove the upper part of the wired controller.

Figure 2. Remove upper part of wired controller

Note: The PCB is mounted in the upper part of the wired controller. Use caution not to damage the board with the prying tool.

2. Secure the back plate of the wired controller.

Note: Place on a flat surface and use caution not to distort the back plate by overtightening the mounting screws.
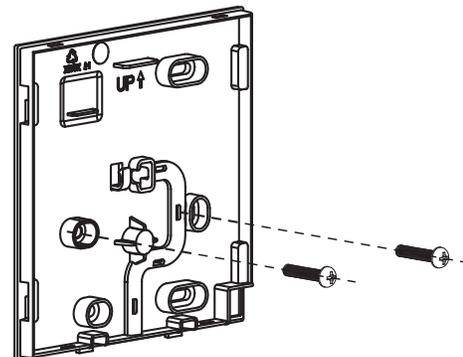
- For exposed mounting, fasten the back plate on the wall with three M3.5x25 screws and plugs.
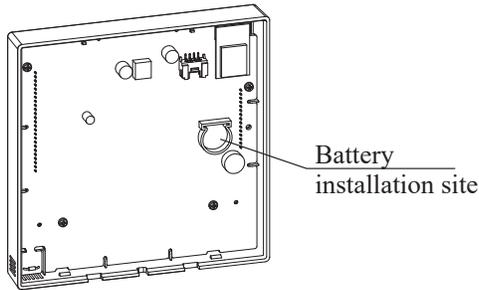
Figure 3. Exposed mounting

Fig 3-3
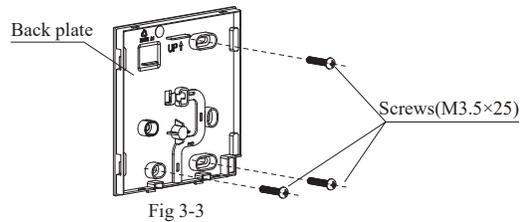
- Use two M4x25 screws to install the back cover on the 86 switch box and one M4x25 screw to attach to the wall.
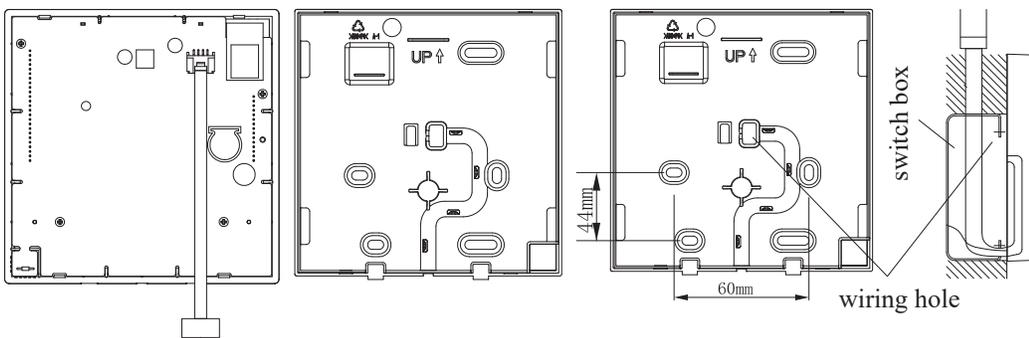
Figure 4. Install back cover

3. Install the battery.

Figure 5.   Battery installation

Battery
installation site

Figure 6.   Wiring

44mm

60mm

switch box

wiring hole

Note: Do not allow water to enter the remote control. Use the trap and putty to seal the wires.

Use wire cutters to notch the specified areas for wiring to pass through.

Figure 7.   Wiring

44mm

60mm

switch box

wiring hole

Note: Refer to ductless indoor unit for wiring and board connections.

a. Put the battery in installation site. Confirm that the positive side of the battery aligns with the positive side of the installation site.

b. Set the time on first power up. Batteries inside the devices can keep the controller running during a power failure.

4. Wire the indoor unit.

5. Connect the wire from the master control board of the indoor unit to a connecting cable. Then connect the other side of the connecting cable to the remote control.

Note: Reserve a length of connecting wire for periodic maintenance.

The connection lug at the end of the shielded wire should be properly grounded.

6. Reattach the upper part of the controller. Avoid clamping the wire during installation.

Figure 8.   Reattach upper part of controller
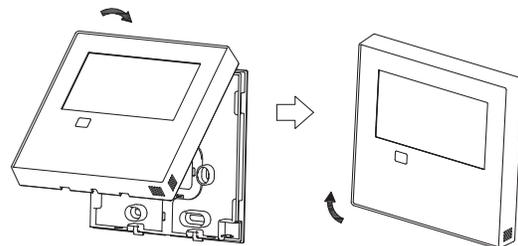
Specifications

Table 2. Specifications

Input voltage	DC 12V
Signal voltage	DC 5V
Ambient temperature	23 to 110° F (–5 to 43° C)
Ambient humidity	RH40% to RH90%

Table 3. Wiring specifications

Wiring type	Size	Total length
24 AWG stranded shielded wiring	0.5 to 1.25 mm	≤ 164 feet (50 m)

Features and Functions

Figure 9. Features

Features

- LCD display
- Error code display for servicing
- 4–way wire layout
- Room temperature display

Functions

- Modes:
    - Auto
    - Cool
    - Dry
    - Fan
    - Heat
    - Emergency Heat
- Fan Speed
    - Mute
    - Low
    - Med-low
    - Med
    - Med-high
    - High speed
    - Turbo
    - Auto
- Timer ON/OFF
- Temp setting
- Weekly timer
- Follow me
- 24–hour system
- 12–hour system
- Auto-restart
- Child lock
- LCD display
- Clock
- Panel function

LCD Labels

Figure 10.   LCD labels
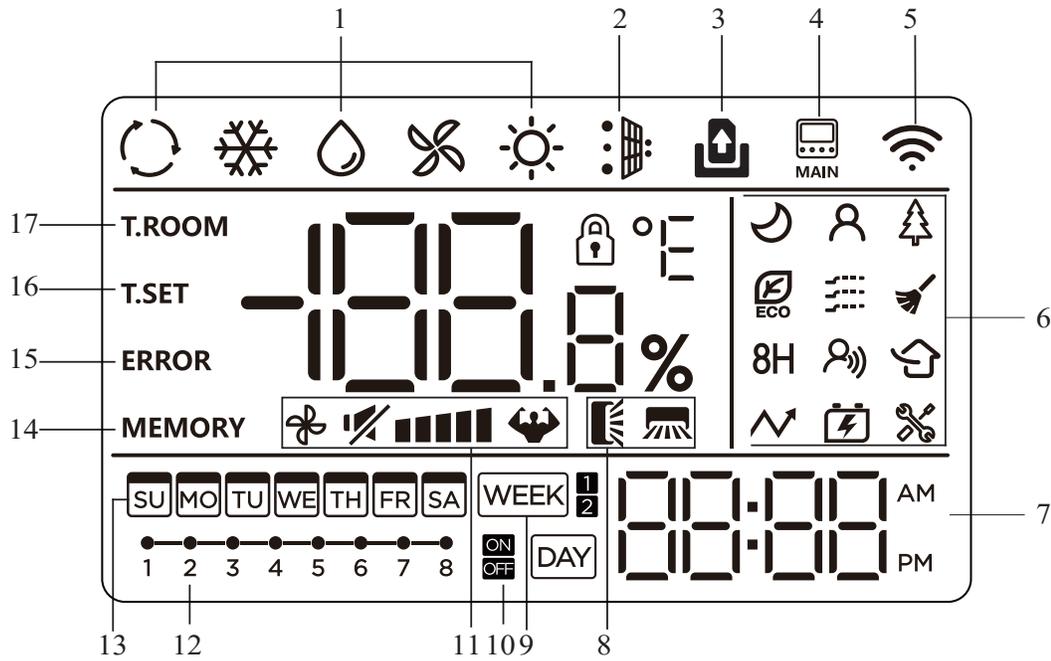
Table 4.   LCD descriptions

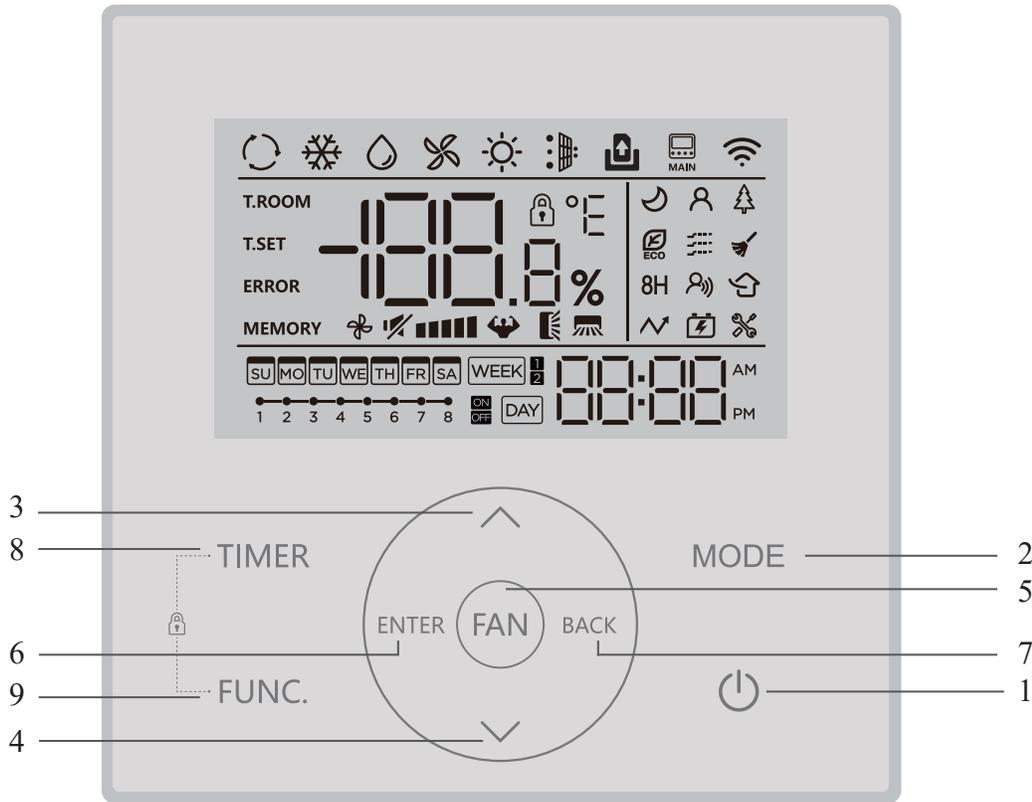|		
1. Mode	7. Clock	13. Week
2. Dust full	8. Swing	14. Power-down memory
3. Door Card	9. Week timer	15. Error
4. Main IDU	10. Timer ON/OFF	16. Temperature setting
5. Wi-Fi	11. Fan speed	17. Room temperature
6. Function	12. Timer task	

Button Labels

Figure 11. Button labels

Table 5. Button descriptions

Number	Button Name	Description
1	ON/OFF button	Press the button to turn the air conditioner power on and off.
2	MODE button	Press MODE to change the air conditioner modes cyclically (Auto, Cool, Dry, Fan, Heat, Emergency Heat).
3	Up button	Press the up button to increase the set temperature or time value.
4	Down button	Press the down button to decrease the set temperature or time value.
5	FAN SPEED button	Press the FAN button to change the fan speed cyclically (Mute, Low speed, Medium-low speed, Medium speed, Medium-high speed, High speed, Turbo, Auto Speed).
6	ENTER button	When setting the function, press ENTER to confirm the function selection.
7	BACK button	When settig the function, press BACK to return to the previous setting.
8	TIMER button	Press the TIMER button to set the schedule for the controller.
9.	FUNCTION button	Press the button for function Selection. The current function to be selected will blink.

Generator Mode

To enable Generator Mode, press the generator icon until it blinks. Then press the enter button.

When powered by electricity supply from the power grid:

1. Operate in regular generator mode.
2. Use the up and down buttons to set the gear: OFF>L1. p>L2.p>L3.p>L4.p>L5.p>L6.p.

When powered by the generator:

1. Operate in automatic generator mode.
2. Use the up and down buttons to set the gear: OFF>L1. p>L2.p>L3.p>L4.p>L5.p>L6.p.
3. After selecting the gear, press the enter button.
4. The generator icon lights up.

Notes:

- *If the generator setting is off, the generator icon is not displayed.*
- *Some models do not support the six-gear generator.*
- *The automatic generator function is only available on select models. Regular air conditioners do not support the automatic generator mode and operate in regular generator mode instead.*
- *When the automatic generator function is turned off, it operates in the regular generator mode.*

Fresh Air Mode

To enable Fresh Air Mode:

1. Press the fresh air icon until it blinks.
2. Press the enter button to access the fresh air settings.
3. Use the up and down buttons to set the gear: OFF>F1>F2>F3>AF>OF. (AF is automatic fresh air mode).
4. Press enter to confirm the gear settings.

If the gear is not set to OFF, the fresh air icon is constantly lit. If the gear is set to OFF the icon does not display.

Function Button

1. Press the FUNC. button to select functions.
2. The current selected function blinks.
3. Use the up and down buttons to select a different function.
4. When the icon for the desired function blinks, select ENTER to turn activate or deactivate the function.

Table 6.   Function descriptions

Function	Icon
Sleep	
Health	

Table 7.   Parameter descriptions

Table 6.   Function descriptions (continued)

Function	Icon
Eco	
Gentle	
Self-cleaning	
8H	8H
Generator	
Parameter setting	

Parameter Setting

1. Use the up and down buttons to change the function code..
2. Select ENTER to select the target function and set the function parameter.
3. The temperature zone will blink and display the current function parameter.
4. Use the up and down buttons to change the parameter.
5. Select ENTER to confirm.
6. Select the power button to exit the parameter setting.

Device Function Code	Device Function	Device Function Parameter	Notes
P6	Degree Fahrenheit/ Celsius display	F-C	C: Degree Celsius display F: Degree Fahrenheit display
PA	Ambient/set temperature display	00–01	00: Set temperature 01: Ambient temperature

Table 7. Parameter descriptions (continued)

Device Function Code	Device Function	Device Function Parameter	Notes
PD	Wired controller button buzzer switch	ON-OFF	ON: Buzzer on OFF: Buzzer off
A8	Maximum backlight luminance	30–100	Percentage of maximum backlight luminance
B3	Dust full reminder	ON-OFF	ON: Dust full reminder function on OFF: Dust full reminder function off
B4	Clock display setting	12–24	12: 12–hour system display 24: 24–hour system display
BA	Night quiet mode switch (on some models)	ON-OFF	ON: Activate night quiet mode OFF: Deactivate night quiet mode
BB	Night quiet mode start time (on some models)	00–23	Start time selection
BC	Night quiet mode end time (on some models)	00–23	End time selection
BD	Automatic generator switch (on some models)	ON-OFF	ON: Activate automatic generator OFF: Deactivate automatic generator
BE	Filter life span	00–99	Filter life span percentage
Bg	Sabbath function gears (for some models)	00–05	00: Off 01–05: 1 to 5 gear

Filter Life Span Reset Function

When the filter core lifetime percentage is lower than 20%, a filter reminder appears when shutting down.

After replacing the filter, users can reset the fresh air filter reminder in the parameter settings:

1. Select the filter reset function parameter **BE**.

2. View the current filter lifetime percentage.

3. Click ^ to reset the percentage to 99%.

4. Click enter to complete the filter percentage reset.

Sabbath Function

When the controller is powered on, the Sabbath function can be activated in either cooling or heating mode:

1. In the user settings, select the parameter **Bg**.

2. Adjust the gear by pressing the up or down arrows.

3. Set the parameter to 00 to keep the Sabbath function off or set it to any value between 01 and 05 to enable the Sabbath function on the corresponding gear.

While the Sabbath function is active, the controller is in **Sb** locked state and will not respond to the user pressing any buttons or app operation.

To rest the Sabbath function:

1. Press and hold the **FUNC** button for at least five seconds.

2. The controller will beep twice indicating the Sabbeth function has been disabled, the controller is unlocked, and button/app control is restored.

Timer Settings

Real-time timer settings:

1. Press and hold the TIMER button for more than two seconds.

2. The timer zone blinks and displays the day of the week.

3. Use the up and down arrows to select the day of the week and press ENTER.

4. Use the up and down arrows to select the hour value and press ENTER.

5. Use the up and down arrows to select the minute value and press ENTER.

To quickly adjust the value, press and hold the up or down button.

If the indoor unit is connected to the Wi-Fi network, the wired controller will automatically synchronize the current time without needing to manually set the click.

Timer Functions

Timer Function Selection

1. Press the TIMER button to access the timer function selection interface.

2. Use the up and down buttons to select the timer function (Timer On, Timer Off, Week Timer 1, Week Timer 2).

3. Press ENTER to confirm the selection and access the timer function setting interface.

Note: Week Timer 2 allows the setting of the power-on mode, the temperature value, and the fan speed.

Timer On/OFF Function Setting

1. Access the TIMER on/off function setting. The timer zone icon blinks.

2. Use the up and down arrows to adjust the timer hour value. Press ENTER to confirm.

3. Use the up and down arrows to adjust the timer minute value. Press ENTER to confirm.

4. Exit the timer function setting interface.

Week Timer 1 Function Setting

1. After access the Week Timer 1 function setting interface, select the timer task. The timer task icon blinks.

2. Use the up and down arrows to select the timer task from 1 to 8. The selected timer task icon blinks. Press ENTER to confirm.

3. Use the up and down arrows to select the date of the weekly time from Sunday to Saturday.

4. Press the FUNC. button.

• If the temperature zone displays ON, the current date setting has gone into effect.

• If the temperature zone displays OFF, the current date setting has not gone into effect.

   Press ENTER to confirm.

5. Use the up and down arrows to switch between Day on and Day off. Press ENTER to confirm timer on/off setting.

6. Use the up and down arrows to set the timer hour value. Press ENTER to confirm.

7. Use the up and down arrows to set the timer minute value. Press ENTER to confirm.

8. Repeat steps 2 to 7 to set other tasks for the Week Timer 1.

9. After completing all timer operations, press the power button to exit the timer setting.

Notes:

   • *Press the BACK button to return to the previous setting.*

   • *In Step 1, press and hold the TIMER button for more than two seconds to clear the settings for Week Timer 1.*

   • *In Step 2, press and hold the TIMER button for more than two seconds to clear the setting for the current task.*

Week Timer 2 Function Setting

1. After access the Week Timer 2 function setting interface, select the timer task. The timer task icon blinks.

2. Use the up and down arrows to select the timer task from 1 to 8. The selected timer task icon blinks. Press ENTER to confirm.

3. Use the up and down arrows to select the date of the weekly time from Sunday to Saturday.

4. Press the FUNC. button.

• If the temperature zone displays ON, the current date setting has gone into effect.

• If the temperature zone displays OFF, the current date setting has not gone into effect.

   Press ENTER to confirm.

5. Use the up and down arrows to switch between Day on and Day off. Press ENTER to confirm timer on/off setting.

   When the timer is switched to Day ON, set the power-on mode, the temperature, and the fan speed:

   a. When the mode icon blinks, use the up and down arrows to change the mode. Press ENTER for mode confirmation.

   b. When the temperature icon blinks, use the up and down arrows to change the mode. Press ENTER for temperature confirmation.

   c. When the fan speed icon blinks, use the up and down arrows to change the mode. Press ENTER for fan speed confirmation.

   When the timer is switched to Day off, proceed to Step 6.

6. Use the up and down arrows to set the timer hour value. Press ENTER to confirm.

7. Use the up and down arrows to set the timer minute value. Press ENTER to confirm.

8. Repeat steps 2 to 7 to set other tasks for the Week Timer 2.

9. After completing all timer operations, press the power button to exit the timer setting.

Notes:

   • *Press the BACK button to return to the previous setting.*

   • *In Step 1, press and hold the TIMER button for more than two seconds to clear the settings for Week Timer 1.*

   • *In Step 2, press and hold the TIMER button for more than two seconds to clear the setting for the current task.*

Disposal Guidelines

This appliance contains refrigerant and other potentially hazardous materials. When disposing of this appliance, the law requires special collection and treatment. DO NOT dispose of this product as household waste or unsorted municipal waste. Dispose of the appliance at designated municipal electronic waste collection facility

Disposing of this appliance in the forest or other natural surroundings endangers your health and is bad for the environment. Hazardous substances may leak into the ground water and enter the food chain.

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