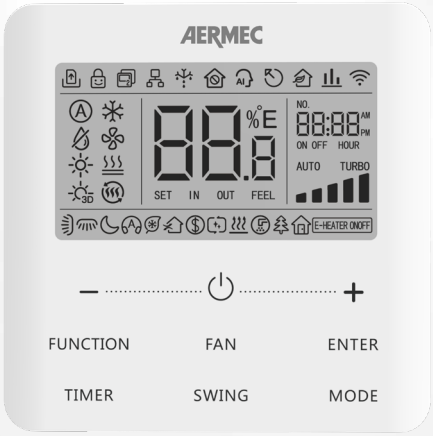
EN

24/05 – 5385746_04
Translation of Original instructions

WRC50

User manual



WIRED CONTROLLER

AERMEC

www.aermec.com

Dear customer,Thank you for choosing an Aermec product. It is the fruit of many years of experience and special design studies and has been made of the highest grade materials and with cutting edge technology.In addition, all our products bear the CE mark indicating that they meet the requirements of the European Machine Directive regarding safety. The quality level is being constantly monitored, so Aermec products are synonymous with Safety, Quality and Reliability.The data may undergo modifications considered necessary for the improvement of the product, at any time and without the obligation for any notice thereof.
Thank you again.
Aermec S.p.A.

COMPANY CERTIFICATIONS

SAFETY CERTIFICATIONS

This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled disposal of Waste Electrical and Electronic Equipment (WEEE), please return the device using appropriate collection systems, or contact the retailer where the product was purchased. Please contact your local authority for further details. Illegal dumping of the product by the user entails the application of administrative sanctions provided by law.

All specifications are subject to change without prior notice. Although every effort has been made to ensure accuracy, Aermec shall not be held liable for any errors or omissions.

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1 ELECTRICAL DEVICE WARNINGS

GENERAL WARNINGS

— Read carefully these general safety precautions before installing the air conditioning devices and ensure that the installation is performed correctly.
— Failure to observe these instructions can cause damages to property or people's injuries, which may b e serious depending on the circumstances.
— Aermec S.p.A. will in no case be liable for any damages to property and/or persons caused by improper operations such as: incorrect installations, debugging or maintenance not carried out, non-compliance with the installation regulations foreseen in the country where the device will be installed or non-compliance with the rules contained in this manual.
— Refer to the national regulations for the installation: the device must be installed in compliance with national plant engineering rules.

WARNINGS FOR THE USER

— It is not recommended for persons (including children) with limited physical, sensorial or mental abilities, or operators without experience and knowledge, to use the machine unless in the presence of a person responsible for their safety capable of monitoring them and of providing adequate instructions for use. Do not allow children to play with the appliance.
— All illustrations and information contained in this manual are purely indicative; for the actual command of the device functions, refer to the controller display (if fitted).
— In order to improve the product, we reserve the right to modify or revise this document without prior notice; therefore remember to periodically verify the presence of new versions.
— To prevent electric shock or fire accidents:

1. Do not operate the air conditioner with wet hands.
2. Do not disassemble the device or remove its internal parts.
3. Do not modify or repair the air conditioner by yourself.
4. Do not move or re-install the device by yourself.
5. Do not use flammable materials near the device.

— To clean the device, do not use organic solvents, such as paint thinners. Possible result: damages, electric shock or fire accidents.

WARNINGS FOR THE INSTALLER

— This device cannot be used on its own. Also refer to the user manuals of the outdoor/indoor unit.
— The electric connections and installation of the device must only be performed by individuals with the technical-professional requisites for installation, transformation, expansion and maintenance of the systems and able to check the same for safety and functionality purposes. In this manual they will be generically referred to as "Staff with specific technical skill".
— Improper installation or assembly of the device could cause electrocution, short-circuits, leaks and fires.
— Use exclusively optional devices and spare parts approved by Aermec S.p.A..
— Ensure that the electrical power supply complies with the parameters included in this manual. A power supply that is different from the recommended one can cause damage.
— Ensure that all connections are performed according to the instructions in this manual. Incorrect connections could cause communication malfunctioning.
— Ensure to be able to use the correct communication ports, otherwise the connection may not work properly.
— The connected communication line must be protected with electrical tape to prevent oxidation and short-circuits.



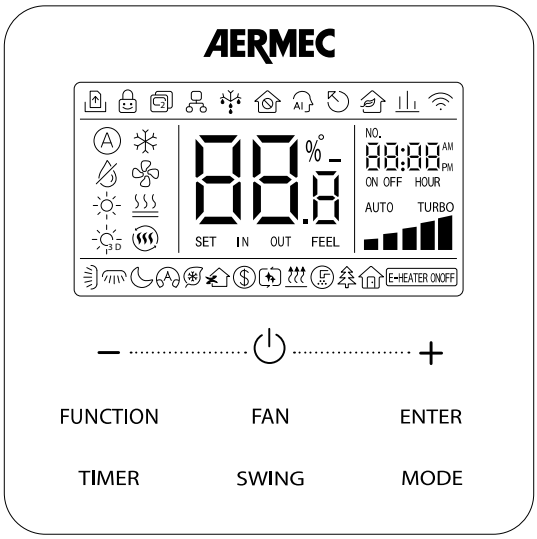
WARNING: Do not install the device in a location where it could be affected by inflammable gas leaks or deposits of materials which are inflammable, explosive, poisonous, corrosive or hazardous substances. Risk of fire or explosion. Install the device in a place with minimal levels of dust, fumes, air humidity and corrosive agents, and where it is not exposed to direct sunlight or adverse weather conditions.

2 OPERATION NOTICES

1. The power supply for all indoor units must be unified.
2. Never install the wired controller in the moist circumstance or expose it directly under the sunlight.
3. Never beat, throw, and frequently disassemble the wired controller and the wireless remote controller.
4. Never operate the wired controller and the wireless remote controller with wet hands.
5. This product is applicable to LPG unit whose outdoor unit and indoor unit communicate with each other by live line and neutral line.
6. When two wired controllers control one (or more) indoor unit(s), the address of wired controller should be different.

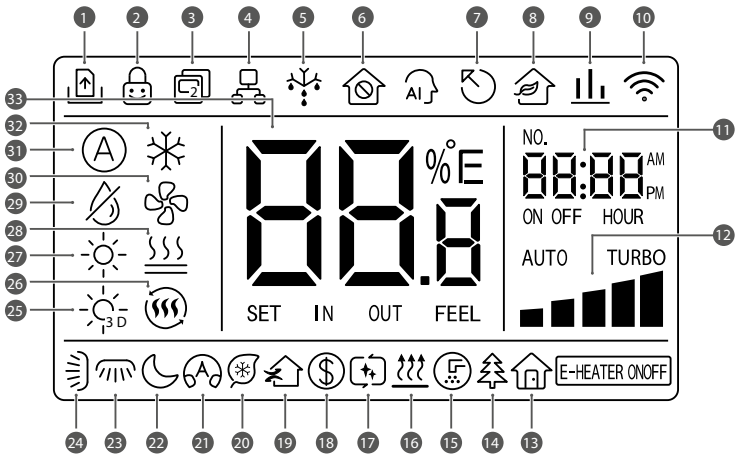
3 DISPLAY

Fig. 3.1: Outside View of the Wired Controller

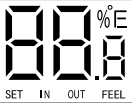


3.1 LCD OF THE WIRED CONTROLLER

Fig. 3.2: LCD graphics of wired controller



3.2 LCD DISPLAY INSTRUCTION

N.	Symbols	Functions
1		Gate Control function
2		Child Lock
3		Slave wired controller (address of wired controller is 02)
4		One wired controller controls multiple indoor units
5		Outdoor unit defrosting status
6		Shielding status
7		Current wired controller connects master indoor unit
8		FUNCTION NOT AVAILABLE
9		FUNCTION NOT AVAILABLE
10		FUNCTION NOT AVAILABLE
11		Timer zone: Display system clock and timer status
12		Current set fan speed
13		Absence function
14		FUNCTION NOT AVAILABLE
15		Remind to clean the filter
16		X-FAN function
17		Auto Clean function
18		Save status of indoor unit
19		FUNCTION NOT AVAILABLE
20		I-DEMAND function, Indoor unit optional function
21		Quiet status (including Quiet and Auto Quiet two status)
22		Night-time comfort function
23		FUNCTION NOT AVAILABLE
24		Up & Down Swing Setting
25		FUNCTION NOT AVAILABLE
26		FUNCTION NOT AVAILABLE
27		Heating mode
28		FUNCTION NOT AVAILABLE
29		Dry mode
30		Fan mode
31		Auto mode
32		Cooling mode
33		It shows the value of temperature, and displays the current type of value

NOTE: When wired controller is connected with different indoor units, some functions will be different.

4 INSTALLATION AND START-UP

Fig. 4.1: Dimensions of Wired Controller

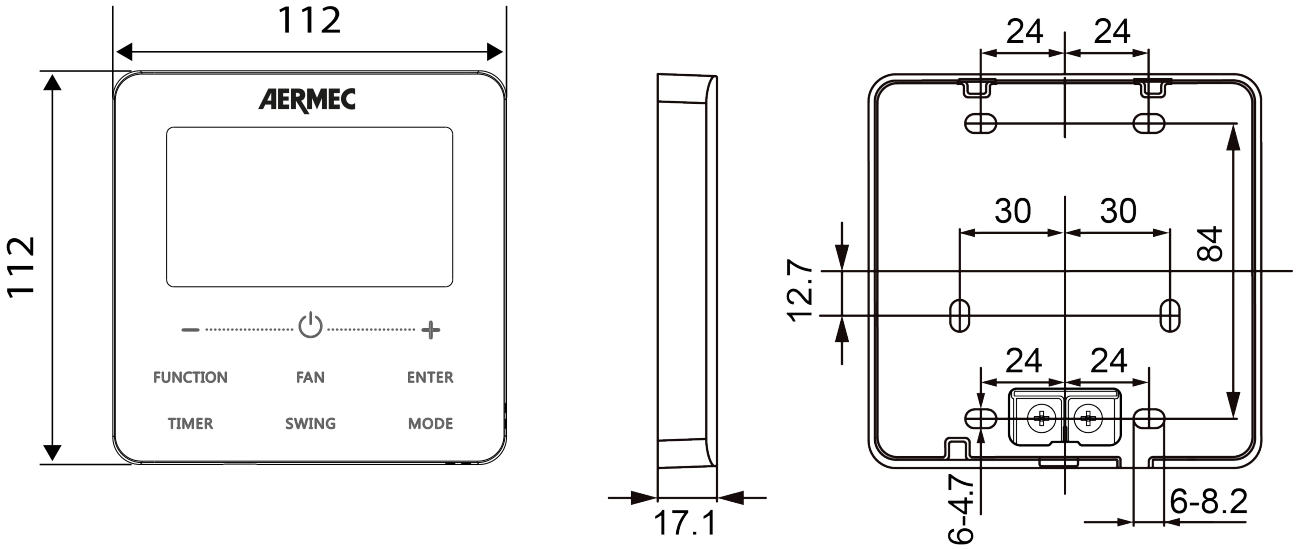
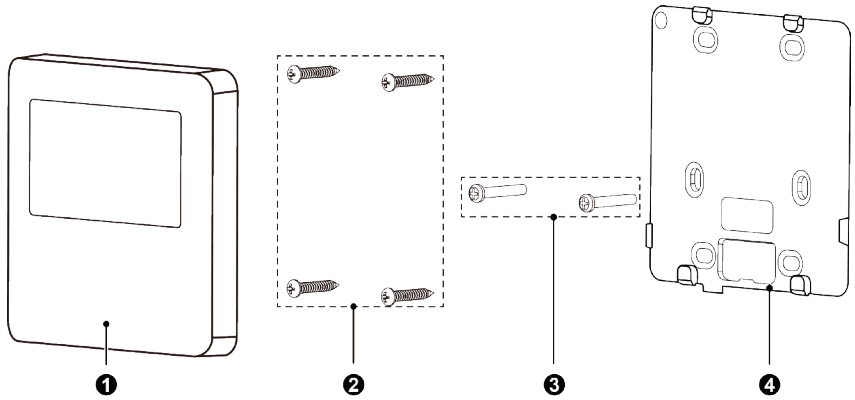


Fig. 4.2: Parts and Components of Wired Controller

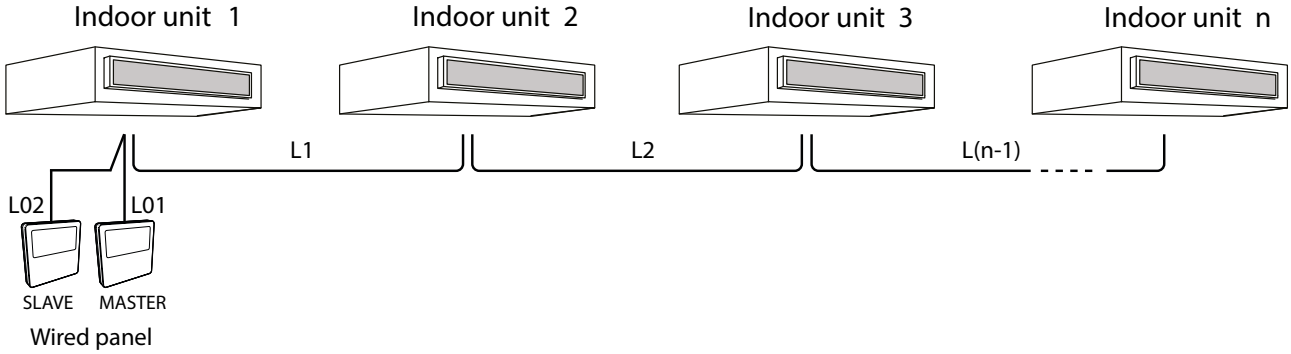


N.	1	2	3	4
Name	Wired Controller	Self-tapping screw ST3.9×25 MA	Screw M4×25	Soleplate of the Wired Controller
Quantity	1	4	2	1

4.1 INSTRUCTION OF WIRED CONTROLLER

4.1.1 Requirements for model selection of communication wire

Fig. 4.3: Length of communication wire



L= L01+L02+L1+L2+....+L(n-1) (n≤16)

Cable type	Max lenght	Size	Standard	Note
Standard 2-pole cable with PVC sheath (60227 IEC 52 / 60227 IEC 53)	L ≤ 250 m	from 2 x 0,75 to 2 x 1,25 mm^2	IEC 60227-5:2007	(1) Total length of communication line can't exceed 250m. (2) The cord shall be Circular cord (the cores shall be twisted together). (3) If unit is installed in places with intense magnetic field or strong interference, it is necessary to use shielded wire.

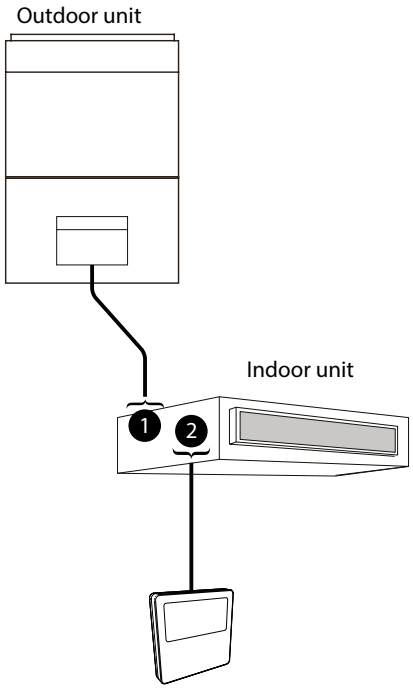
4.1.2 Requirements for installation

1. It is not allowed to install the wired controller in the wet place.
2. It is not allowed to install the wired controller in the place with direct sunlight.
3. It is not allowed to install the wired controller near the high-temperature object or the place is likely to be spattered with water.
4. It is not allowed to install the wired controller outdoor.

4.1.3 Requirements for wired connection

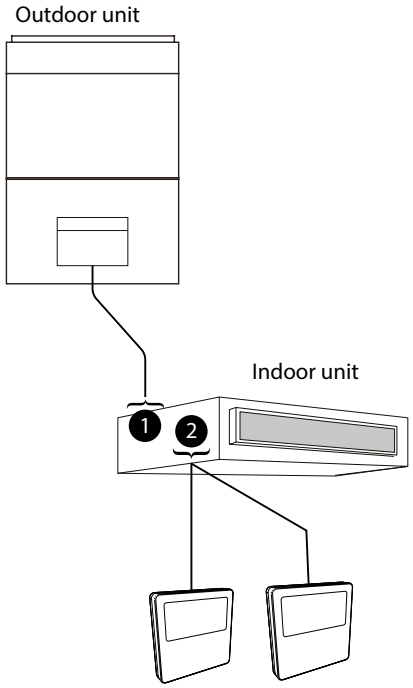
Network connecting methods between wired controller and indoor unit are as below:

Fig. 4.4: one wired controller controls one indoor unit



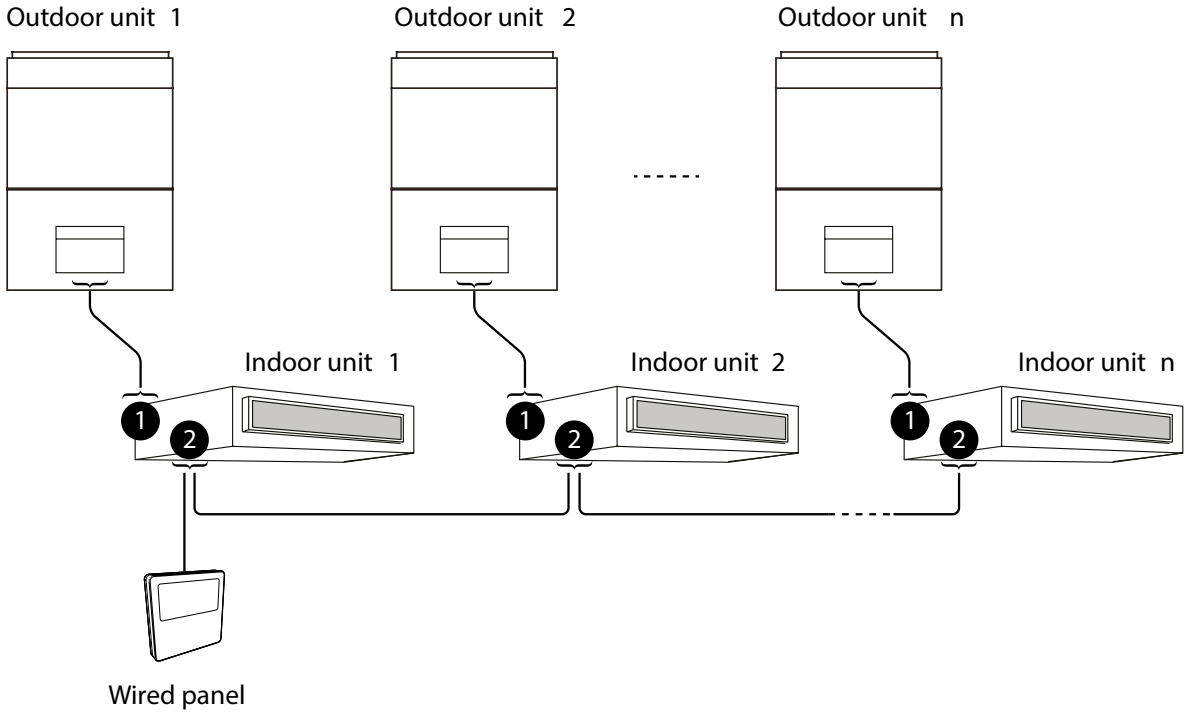
1. D1 D2 or N(1) 2 3 ⏚
2. H1 H2

Fig. 4.5: two wired controllers control one indoor unit



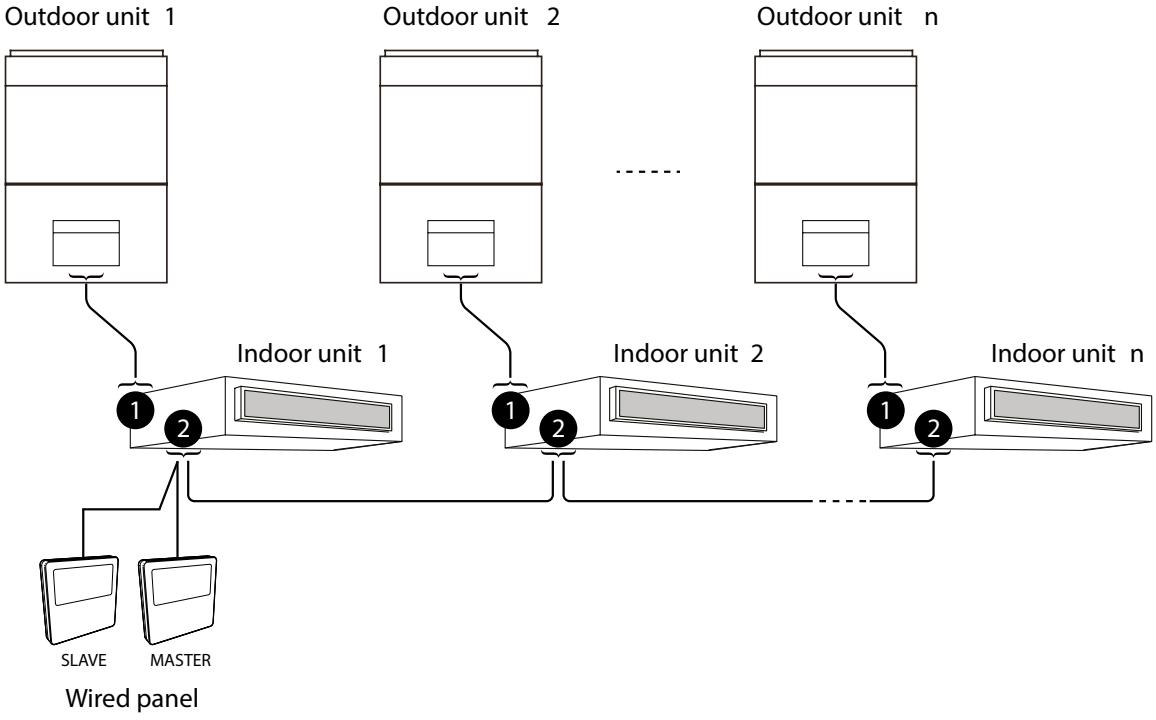
1. D1 D2 or N(1) 2 3 ⏚
2. H1 H2

Fig. 4.6: one wired controller controls multiple LPG unit indoor units simultaneously



1. N(1) 2 3 ⏚
2. H1 H2

Fig. 4.7: two wired controller control multiple LPG indoor units simultaneously



1. N(1) 2 3 ⏚
2. H1 H2

Instruction for wire connection:

1. The wiring methods in fig. 4.4, fig. 4.5, fig. 4.6 and fig. 4.7 can be adopted for the wired controller connecting LPG unit, It's suggested that the length of communication wire between devices should be 8m.
2. When one (or two) wired controller(s) control(s) multiple indoor units simultaneously, the wired controller can connect to any one indoor unit. The total quantity of indoor unit controlled by wired controller can't exceed 16 sets, and the connected indoor unit must be within the same indoor unit's network. Wire controller must set quantity of group control indoor units. Please refer to Parameter Setting "P14".
3. When two wired controllers control one (or more) indoor unit(s), the addresses of those two wired controllers should be different. Please refer to Parameter Setting "P13".
4. The terminal of the wire controller is non-polarized and cannot be connected to strong electric.

■ *Wired controller WRC50 only supports one (or more) indoor unit(s) controlled by one wired controller.*

4.1.4 Installation

Fig. 4.8: Installation of Wired Controller

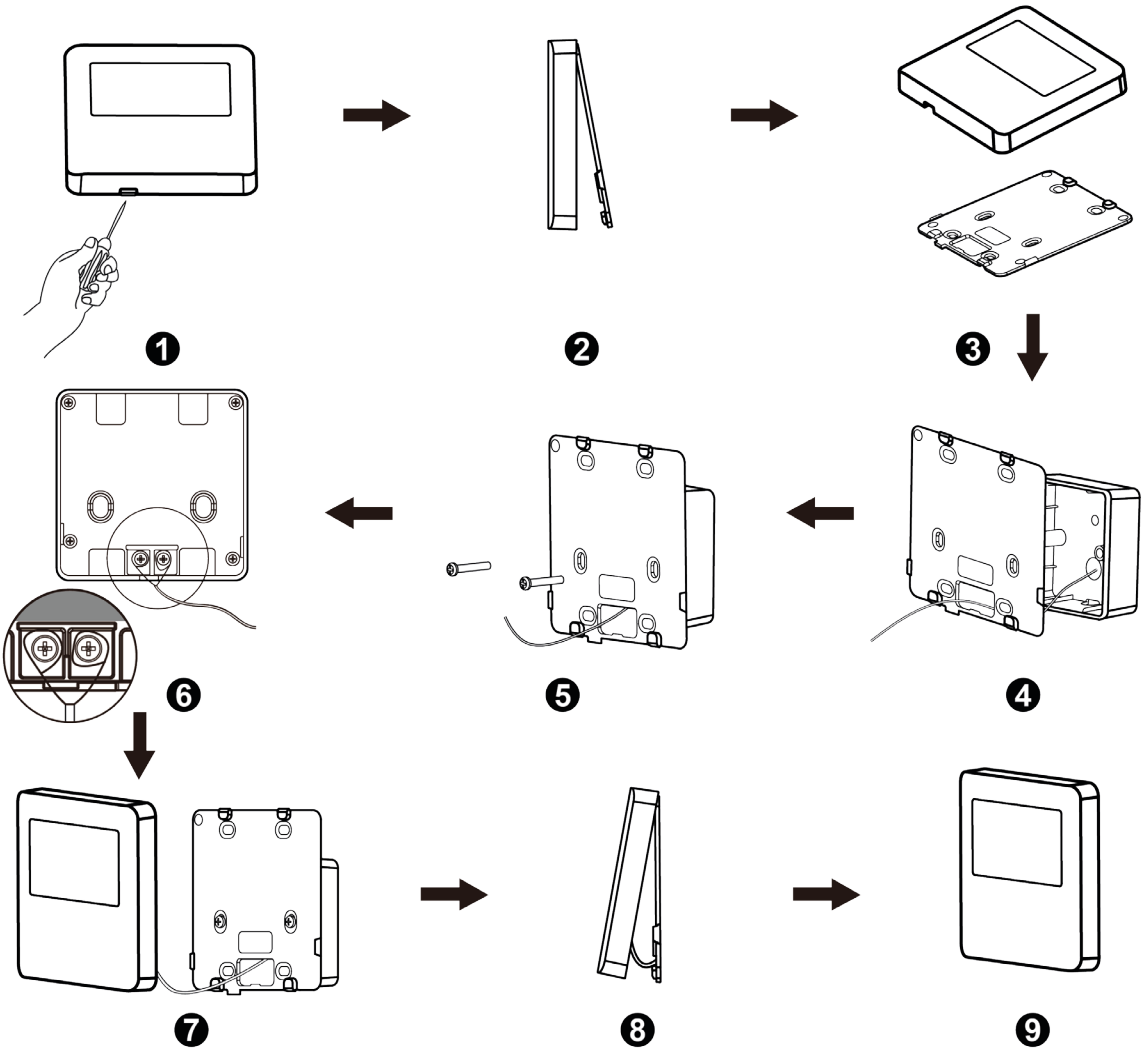
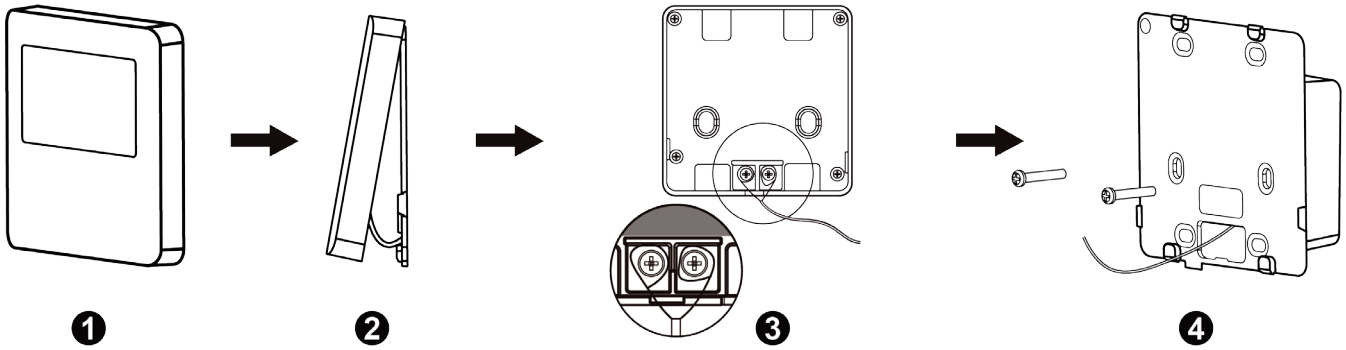


Fig. 4.8 shows a simple installation course of wired controller, and the following points should be noted:

1. Before installation, please cut off the power supply of indoor unit, it is not allowed to operate with power supply;
2. Pull out the 2-core twisted pair inside the installation hole in the wall, and thread the wire through the hole in the back of soleplate of wired controller;
3. Stick the soleplate of wired controller on the wall, and use Self-tapping Screw ST3.9×25 MA or screw M4×25 to fix the soleplate with the installation hole of wall;
4. Connect the 2-core twisted pair to wiring terminal H1 and H2, and then tighten the screw;
5. Arrange the wires in the back of panel, and then buckle the panel of wired controller with the soleplate of wired controller.

4.1.5 Disassembly

Fig. 4.9: Disassembly of wired controller



4.2 COMMISSIONING

4.2.1 Set a Master unit

Under Off status, long press "MODE" button for 5s to set the corresponding indoor unit of wired controller as master indoor unit.

If the system mode priority is the master-slave mode, "" icon will be light after finishing setting.

■ *NOTE: There is a master indoor unit in a system, other slave indoor units can be set as master unit, in which case, the original master unit will become a slave unit.*

4.2.2 Display indoor unit operating parameters

Unit parameters can be checked in unit On or Off status:

1. Press "FUNCTION" button for 5s to enter the interface of viewing unit parameters. "C00" is displayed in temperature zone.
2. Press "+" or "-" button to select parameter code.
3. Press "ENTER" button to return to last step until exits viewing parameters.

The parameter enquiry list is as following:

Index parameter	Function	Range	Description of operating parameter
C07	Display the room temperature	-	Enter viewing: press "MODE" button in "C07" status. Press "+" or "-" button to select indoor unit. Temperature zone: displays current indoor unit project number; Timer zone: displays outdoor ambient temperature.
C08	View Filter Clean Reminder time	4-416: days	Timer zone: displays Filter Clean Reminder time
C09	Display the address of the wired panel	01, 02	Timer zone: displays the address of wired controller
C11	View the indoor unit quantity	01-16	This parameter indicates (in the timer zone) the number of units in any group connected to the wired panel
C12	Display external temperature;	-	This parameter indicates (in the timer zone) the temperature of the external air
C17	View indoor relative humidity	0~100%: relative humidity	Press "MODE" button to enter into the review interface of indoor relative humidity under "C17" status. Press "+" or "-" button to switch the number of indoor unit. Temp area: display current indoor unit's project number. Timer zone: display indoor relative humidity.
C23	Version inquiry	-	Timer zone: program version of the current wired controller

■ *Note:*

1. Under parameter viewing status, "FAN", "TIMER", and "SWING" buttons are invalid. Press "" button to go back to the homepage, while not to turn on/off the unit.
2. Under parameter viewing status, the signal from remote controller is invalid.

4.2.3 Activation of indoor unit operating parameter modification menu

Unit parameters can be set in unit On or Off status:

1. Long press "FUNCTION" button for 5s and the temperature zone displays "C00"; long press "FUNCTION" button for another 5s to enter the interface of setting wired controller parameters. "P00" is displayed in temperature zone.
2. Press "+" or "-" button to select parameter code. Press "MODE" button to enter parameter setting. At that time, parameter value is blinking.
3. Press "+" or "-" button to adjust the parameter value and press "ENTER" button to finish setting.
4. Press "ENTER" button to return to last step until exists setting parameters.

The parameter setting list is as following:

Index parameter	Function	Range	Default	Description of operating parameter
P11	Enable infra-red remote controls	00: NOT enabled 01: enabled	01	This parameter is used to enable or disenable the infra-red remote controls on the system (if envisaged); this parameter can ONLY be set from the panel of the master indoor unit.
P13	Set the address of the wired panel	01: MASTER panel 02: SLAVE panel	01	This parameter is used to set the address to be assigned to the wired panel; this parameter is used if two panels are connected to the same machine or the same group in order to set two different addresses.
P14	Set the number of units in the group	00: test disenabled 01-16: group with ... units	01	This parameter performs a test on the group (if a group has been created) in order to specify how many indoor units belong to it. This test checks whether the number set in the parameter matches the number of units detected by the system in the group; if this function is disenabled (value 00) and the wired panel manages a group, no alarms will be displayed for any malfunctions in this group.
P16	Set unit of measure	00: °C 01: °F	00	This parameter specifies which unit of measure is used to display temperatures.
P30	Set static pressure of indoor fan motor	01-09: static pressure level of indoor fan motor	05	-
P46	Clear Filter / Clean accumulated time	00: do not clear 01: clear	00	-
P71	Set the Setback function	01: deactivated 01: activated	00	-
P72	Upper temperature limit for Setback function	20~30°C (68~86°F)	26°C (79°F)	When temperature unit is °C, temperature upper limit – temperature lower limit ≥ 4°C; When temperature unit is °F, temperature upper limit – temperature lower limit ≥7°F.
P73	Lower temperature limit for Setback function	16~26°C (61~79°F)	20°C (68°F)	
P74	When inserting the card, whether to resume to previous status	00: no 01: yes	01	When it is set as 00, it will keep the status after inserting the gate control card, that is, if it is OFF status when pulling out the card, when inserting the card, it is still OFF status.
P83	Temperature control method under cooling mode	00: Ambient temperature control 01:Temperature and humidity correction control	Depending on Indoor unit	NOTE: Only applicable to the unit which is with temperature and humidity correction control function
P86	Auto clean mode	01: Normal 02: Quick 03: Deep	01	NOTE: Only applicable to the unit with auto clean function.
P87	Interval of Set temperature in Celsius	00: 1°C 01: 0.5°C	01	01: The set temperature will be adjusted at 0.5°C. 00: The set temperature will be adjusted at 1°C.

Note:

1. Under parameter setting status, "FAN", "TIMER" and "SWING" button are invalid. Press "⏻" button to go back to home page, but not turning on/off the unit.
2. Under parameter setting status, the signal from remote controller is invalid.

WARNING: accidental modification of these parameters may cause malfunctions or block the entire system; reminder: setting or modifying these parameters must ONLY be performed by the technical assistance service or personnel having the necessary technical skills.

5 OPERATION INSTRUCTIONS

5.1 ON/OFF

Press "⏻" button to turn on the unit. Press "⏻" button again to turn off the unit.
The interfaces of "ON/OFF" status are shown in Fig. 5.1 and 5.2.

Fig. 5.1: Interface of ON status

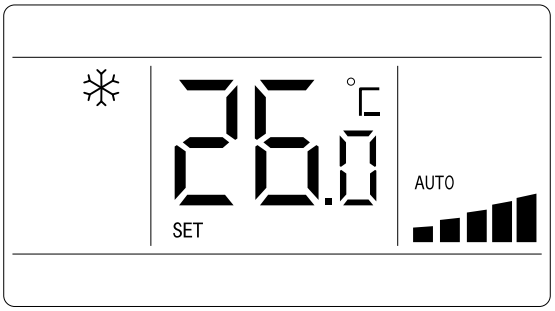
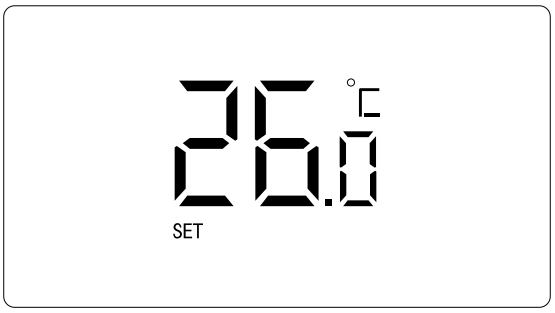
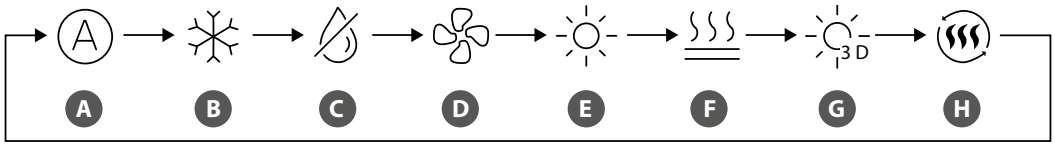


Fig. 5.2 Interface of OFF status



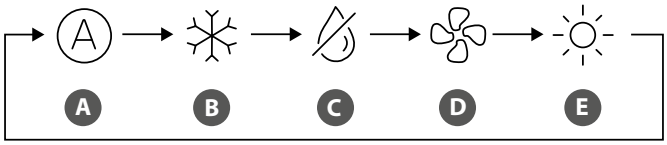
5.2 MODE SETTING

Under On status, pressing "MODE" button can set mode circularly as:



A Auto
B Cooling
C De-Humidification
D Ventilation
E Heating
F FUNCTION NOT AVAILABLE
G FUNCTION NOT AVAILABLE
H FUNCTION NOT AVAILABLE

Or:



A Auto
B Cooling
C De-Humidification
D Ventilation
E Heating

■ *NOTE:*

1. The available modes are different for different models, the wired controller will automatically select mode setting range according to the model of indoor unit.
2. Under Auto mode, if the indoor unit is running under Cooling, the icons "Ⓐ" and "❄" will light up; if the indoor unit is running under Heating, the icons "Ⓐ" and "☼" will light up.

5.3 TEMPERATURE SETTING

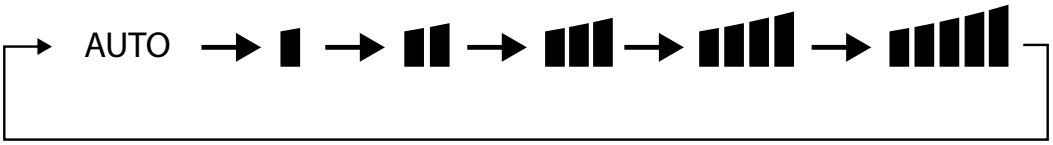
Press "+" or "-" button under on status to increase or decrease set temperature by 0.5°C/1°C or 1°F; hold "+" or "-" button to increase or decrease set temperature by 0.5°C/1°C or 1°F every 0.3s. Please refer to "4.2.3 Activation of indoor unit operating parameter modification menu p. 12" Parameter Setting for the setting method of the temperature setting interval in Celsius.
n Dry mode, when temperature is 16°C or 61°F, continuously press "-" button twice to decrease temperature to 12°C or 54°F (when save function is activated, the temperature in Dry mode can't be adjusted to 12°C or 54°F).
When the control method under Dry mode is humidity control, press "+" or "-" button to adjust the set humidity at 5% intervals.
The humidity setting range is 45%-75%, and the default value is 65%. The humidity control method under Dry mode can only be set for the unit with this function.
Please refer to "4.2.3 Activation of indoor unit operating parameter modification menu p. 12" Parameter Setting for the setting method.

Note:

1. Only when the wired controller controls LPG indoor units can the setting temperature be adjusted by pressing "+" or "-" under Auto mode.
2. When Absence function is activated, the setting temperature cannot be adjusted by pressing "+" or "-".

5.4 FAN SETTING

Under On status, pressing "FAN" button can set fan speed circularly as:



In unit on status, press "FUNCTION" button to switch to Turbo function with Turbo function icon "TURBO" blinking, and then press "ENTER" button to start or cancel Turbo function.

When Turbo function is activated, Turbo function icon "

" will be bright.

NOTE:

1. Under Dry mode, fan speed is low and can't be adjusted.
2. If indoor unit's fan speed is set auto, indoor unit will change fan speed automatically according to room temperature in order to make the room temperature more stable and comfortable.

5.5 TIMER SETTING

The wired controller is equipped with two kinds of timer: general timer and clock timer.
General timer is factory defaulted setting. Please refer to "4.2.3 Activation of indoor unit operating parameter modification menu p. 12" Parameter Setting for the timer setting way.

5.5.1 General timer

Unit On/Off after a desired hour can be set through general timer.

Set Timer: when timer is not set, press "TIMER" button to enter timer setting and "HOUR" icon is blinking. Press "+" or "-" button to adjust timer time. Press "TIMER" button to save the setting and then exit setting.

Cancel Timer: when timer is set, press "TIMER" button to cancel it.

Timer setting range: 0.5-24h. Press "+" or "-" button to increase or decrease timer time by 0.5h; hold "+" or "-" button to increase or decrease timer time by 0.5h every 0.3s.

5.5.2 Clock setting

Clock display: when the timer setting way is clock timer, timer zone displays system clock in unit On and Off status. The clock can be set at this time.

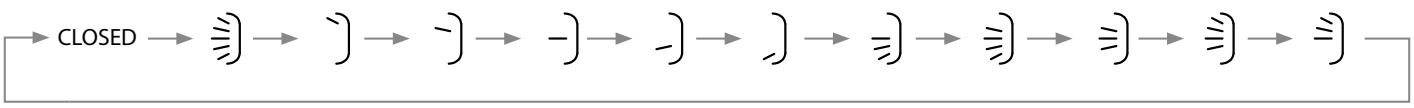
Clock setting: long press "TIMER" button for 5s to enter clock setting. Press"+" or "-" button to increase or decrease clock time by 1min; hold "+" or "-" button for 5s to increase or decrease clock time by 10min; hold "+" or "-" button for 10s to increase or decrease clock time by 60min.
Press "ENTER" button or "TIMER" button to save the setting and then exit setting.

5.6 SET DELIVERY FIN (SWING)

In unit on status, up & down swing function can be set.

Up & down swing function:
Up & down swing function has two modes: simple swing mode and fixed-angle swing mode. In unit off status, press "SWING" button and "+" button together for 5 seconds to switch between simple swing mode and fixed-angle swing mode. Up & down swing icon "" will blink during switching.

1. When simple swing mode is set in unit on status, press "SWING" button to start or stop up & down swing.
2. When fixed-angle swing mode is set in unit on status, press "SWING" button to adjust swing angle circularly as below:



5.7 QUIET FUNCTION SETTING

Quiet function: decrease the noise of indoor unit and achieve the quiet effect. Quiet function has two modes: Quiet mode and Auto Quiet mode. It is available only in Auto, Cooling, Dry, Fan, Heating,.

Turn on Quiet Function: press "FUNCTION" button to turn to Quiet function and then Quiet icon "" or auto quiet icon "" is blinking. At this moment, press "+" or "-" button to switch between quiet and auto quiet, and then press "ENTER" button to activate.

Turn off Quiet Function: press "FUNCTION" button to turn to Quiet function and then press "ENTER" button to cancel Quiet function.

■ *Note:*

1. When Quiet function is enabled, indoor unit will operate at quiet fan speed. Fan speed is lowered so as to reduce the noise of indoor fan motor.
2. When Auto Quiet function is enabled, indoor unit will change fan speed automatically according to room temperature. After room temperature reaches a set point, unit will operate at quiet fan speed.

5.8 SLEEP SETTING

Night-time comfort function: in this mode, the unit will operate according to the preset sleep curve to provide comfortable sleep environment.

Activating / Deactivating the Night-Time Comfort Function: in unit On status, press "FUNCTION" button to switch to Sleep function and the Sleep icon """ will blink. Press "ENTER" button to turn on this function. When Sleep function is activated, """ icon is bright and quiet or auto quiet mode is also activated.
Under Auto or Fan the Sleep function is not available.

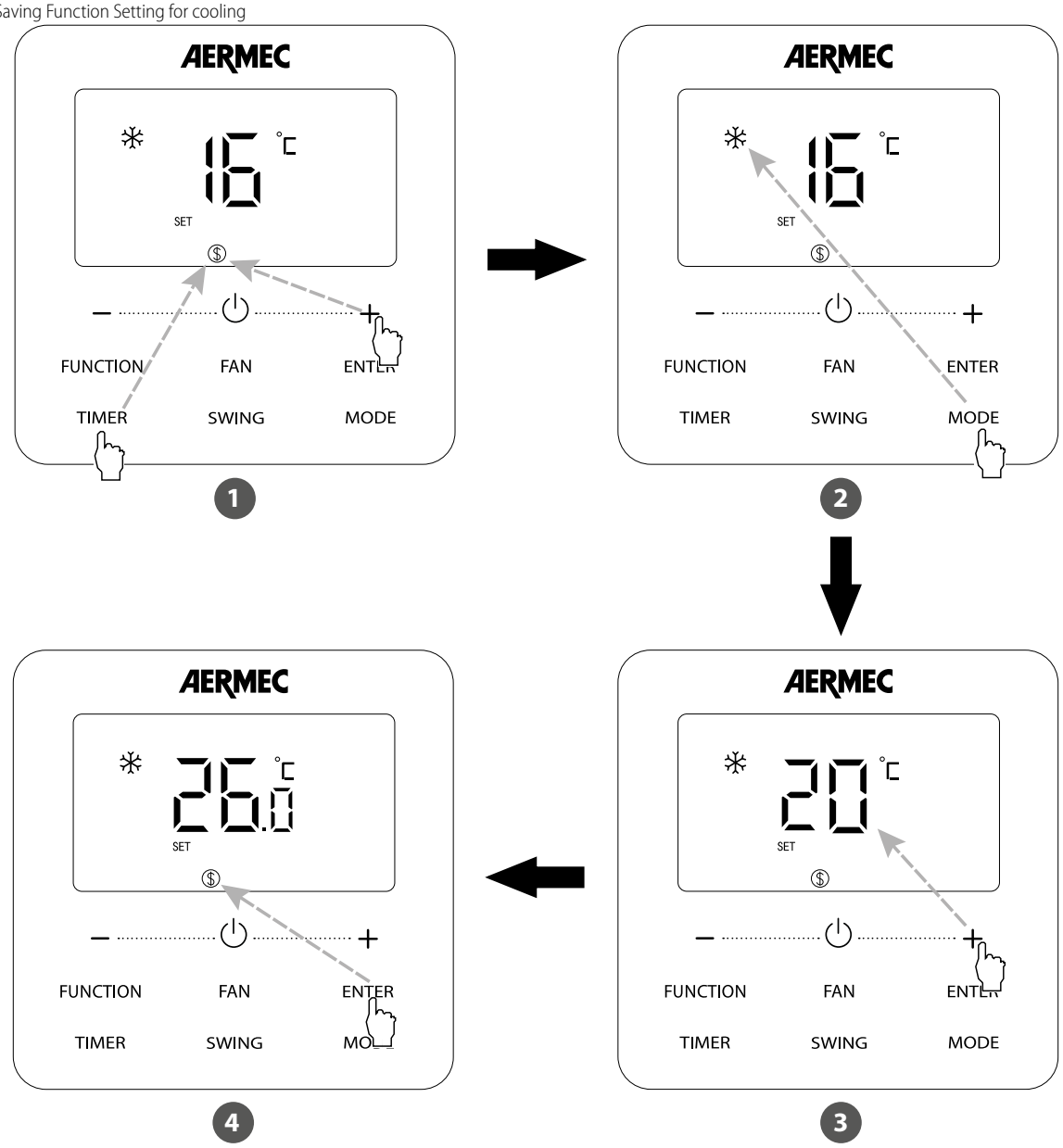
5.9 ENERGY SAVING FUNCTION SETTING

Energy Saving function: Air conditioner can be operated in small temperature range by setting the minimum temperature under Cooling and Dry modes and setting maximum temperature under Heating mode. Thus, energy saving can be realized.

Start up Energy-Saving function for Cooling: When the unit is off, simultaneously press "TIMER" and "+" buttons for 5s, the buzzer will give out a sound and then unit will enter into Save setting mode. "" icon is blinking. Mode icon is on. Press "MODE" button to switch to Cooling or Dry mode. Press "+" or "-" button to adjust the temperature limit for Save function; press "ENTER" button to start up Save function.

Fig. 5.4 shows how to set Save function for Cooling:

Fig. 5.4: Energy Saving Function Setting for cooling



1 Press TIMER and "+" buttons for 5 seconds and set Energy-Saving function in OFF status
2 Press MODE button and select Cooling or Dry mode
3 Press "+" or "-" button to adjust the minimum temperature
4 Press Enter button to activate Energy-Saving function

Start up Energy-Saving function for Heating: When the unit is off, simultaneously press "TIMER" and "+" buttons for 5s, the buzzer will give out a sound and then unit will enter into Energy-Saving setting mode. "$" icon is blinking. Mode icon is on. Press "MODE" button to switch to Heating mode. Press "+" or "-" button to adjust the temperature limit for Save function. Press "ENTER" button to start up Save function. After starting up save function, it will display "$" icon for all modes under on and off status.

Cancel Energy-Saving function: When the unit is off, press "TIMER" and "+" buttons for 5s to enter into save setting, press "ENTER" button to cancel Save function of all modes.

■ *NOTE: When the Save function is turned on and then set temperature exceeds the limit value for Save function, "$" icon blinks three times and then buzzer will give out two sounds successively.*

5.10 FILTER CLEAN REMINDER SETTING

Filter Clean Reminder Function: Unit will remember its own operating time. When the setting time is up, this function will remind you to clean the filer. A dirty filter will result in bad heating and cooling performance, abnormal protection, bacteria gathering, etc.

Turn on Filter Clean Reminder Function: When unit is on, press "FUNCTION" button and select Filter Clean Reminder. "" icon will blink. Press "+" or "-" button to adjust the cleaning level, of which the range is 00, 10-39. Press "ENTER" to turn on this function.

Turn off Filter Clean Reminder Function: When unit is on and this function has been turned on, press "FUNCTION" button and select Clean. Then "" icon will blink. Set the cleaning level as 00 and press "ENTER" function to cancel this setting.

When Filter Clean Reminder time is up, "" icon will light up to remind you to clean the filter. There are two ways to cancel filter clean reminding:

1. Press "" button twice within one second to cancel reminding and it will retime according to the original cleaning level.
2. Press "FUNCTION" button to turn to Filter Clean Reminder Function, then press "ENTER" to cancel reminding, and it will retime according to the original cleaning level. The clean reminding can be cancel only when you didn't reset the cleaning level under the setting of Filter Clean Reminder Function.

■ *NOTE:*

Description on cleaning level: When setting the Filter Clean Reminder Function, timer zone will display 2 digits, of which the former indicates the pollution degree of operating place and the latter indicates the operating time of indoor unit.

There are 4 types of situations:

Pollution level of the environment where the indoor unit is installed	Description of Levels
Turn off Clean reminding	Timer zone shows 00
Light Pollution	The former digit shows 1 while the latter one shows 0, which indicates the accumulating operating time is 5500 hours. Each time the latter digit increases 1, the operating time increases 500 hours. When it reaches 9, it means the operating time is 10000 hours.
Medium Pollution	The former digit shows 2 while the latter one shows 0, which indicates the accumulating operating time is 1400 hours. Each time the latter digit increases 1, the operating time increases 400 hours. When it reaches 9, it means the operating time is 5000 hours.
Heavy Pollution	The former digit shows 3 while the latter one shows 0, which indicates the accumulating operating time is 100 hours. Each time the latter digit increases 1, the operating time increases 100 hours. When it reaches 9, it means the operating time is 1000 hours.

5.11 X-FAN SETTING

X-FAN function: After the unit is turned off, the water in evaporator of indoor unit will be automatically evaporated to avoid mildew.

Under Cooling or Dry mode, press "FUNCTION" button to select X-FAN. "" icon will blink.
Then press "ENTER" button to turn on/off this function.

5.12 I-DEMAND SETTING

I-DEMAND Function: The unit will operate in the "SE" mode to save energy. I-DEMAND function can be only used under cooling mode.

Under Cooling mode, press "FUNCTION" button to select I-DEMAND. "" icon will blink.
Then press "ENTER" button to turn on/off this function.

5.13 ABSENT SETTING

Absence Function: This is used to maintain indoor temperature so that unit can realize fast heating after it is turned on. This function can only be used under Heating mode.

Under Heating mode, press "FUNCTION" button to select Absence. "" icon will blink.
Then press "ENTER" button to turn on/off this function.

5.14 SHIELDING STATUS

Remote Shield Function: Remote monitor or central controller can disable the relevant functions of wired controller so as to realize the function of remote control.

When the remote monitor or central controller activates Remote Shield on the wired controller, "" icon will show. If user wants to control through the wired controller, "" icon will blink to remind that these controls are disabled.

5.15 CHILD LOCK FUNCTION

Child Lock Function: When unit is turned on normally or turned off, pressing "+" and "-" button together for 5 seconds will turn on Child Lock function. "" will show on the display. Pressing "+" and "-" together again for 5 seconds to turn off this function.
All the other buttons will be disabled when Child Lock function is on.

5.16 GATE CONTROL FUNCTION

Gate-Control Function: When there is Gate-control System, user can insert a card to turn on the unit or pull off a card to turn off the unit. When the card is re-inserted, the unit will recover the operation as state in memory. When the card is pulled off (or improperly inserted), "" icon will show, neither remote control nor operation of wired controller will be effective and icon "" will be flickering.

If the accessory ECD10 (gate controller) is installed, no function needs to be enabled on the wired control panel. The configuration will be managed by the gate controller. For the enabling procedure, please refer exclusively to the manual of the accessory.

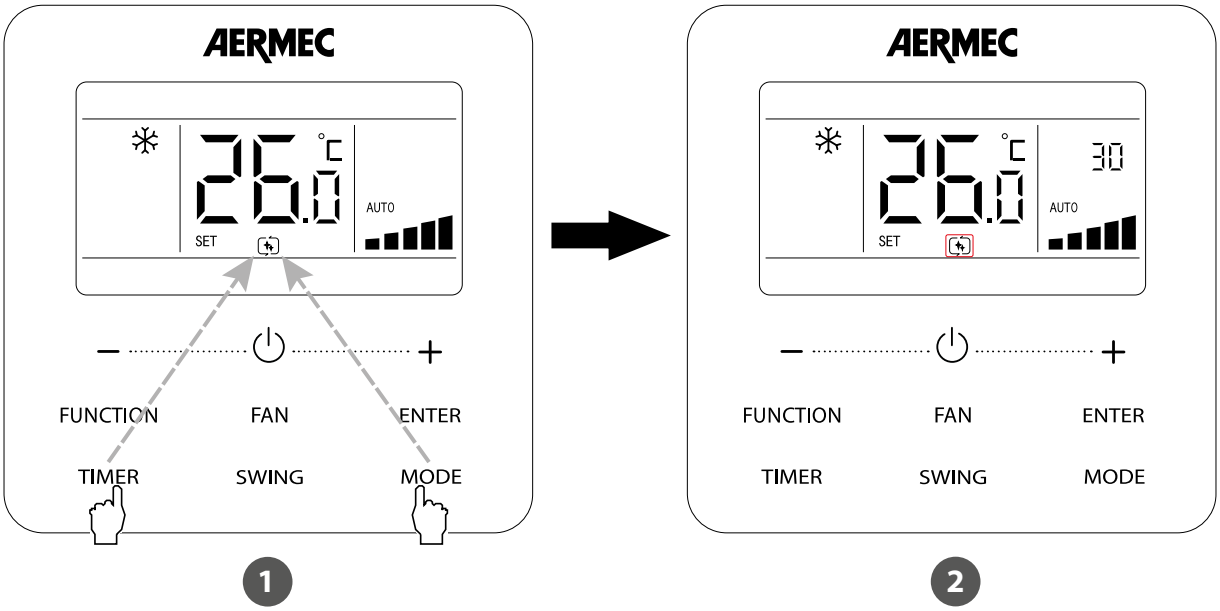
5.17 INQUIRY OF INDOOR TEMPERATURE WITH ONE BUTTON

In the homepage, hold "ENTER" button for 5 seconds, and the wired controller will display the indoor temperature for 5 seconds.
Within the 5 seconds, it can quit displaying the indoor temperature immediately and be responded to the instructions as usual after pressing any buttons.

5.18 AUTO CLEAN FUNCTION

In the homepage, hold "MODE" and "TIMER" buttons for 5 seconds to turn on or turn off Auto Clean function. When Auto Clean function is turned on while the unit has not entered into the Auto Clean mode, "" icon is always on; when the unit has entered into the Auto Clean mode, "" will be flickering.
Press "" button to exit the Auto Clean mode, "" icon will be off when the unit has exited the Auto Clean mode. All other buttons will not be activate when "" icon is always on or flickering

Fig. 5.5: Turn on Auto Clean function



1 Press MODE and TIMER buttons for 5 seconds to set Auto Clean function in ON or OFF status

2 After unit has entered into Auto Clean mode, "" icon will be flickering.

Note:

— This function is only applicable to the unit with Auto Clean function.
— When the unit is faulty, Auto Clean function cannot be turned on.
— During Auto Clean function is on, there will be phenomenon, such as frosting of evaporator of indoor unit, sound of liquid flow, and fluctuation of indoor temperature and humidity, which affects the comfort. Auto Clean function is recommended to be used when there are no people in the room. In order to ensure the cleaning effect, it is recommended to turn on Auto Clean function every three months.
— The auto clean effect will be weakened if indoor environment humidity is low.
— It is recommended to use Auto Clean function at the outdoor ambient temperature of 10°C~40°C. Otherwise, Auto Clean function will exit in advance, which is the normal phenomenon.
— When the wired controller controls LPG unit, Auto Clean function can only be turned on under OFF status and timer zone do not display the remaining time of the Auto Clean mode.

5.19 "SETBACK" FUNCTION

The Setback function, after having set the maximum and minimum temperature limit, guarantees the maintenance of the desired temperature range within an environment.

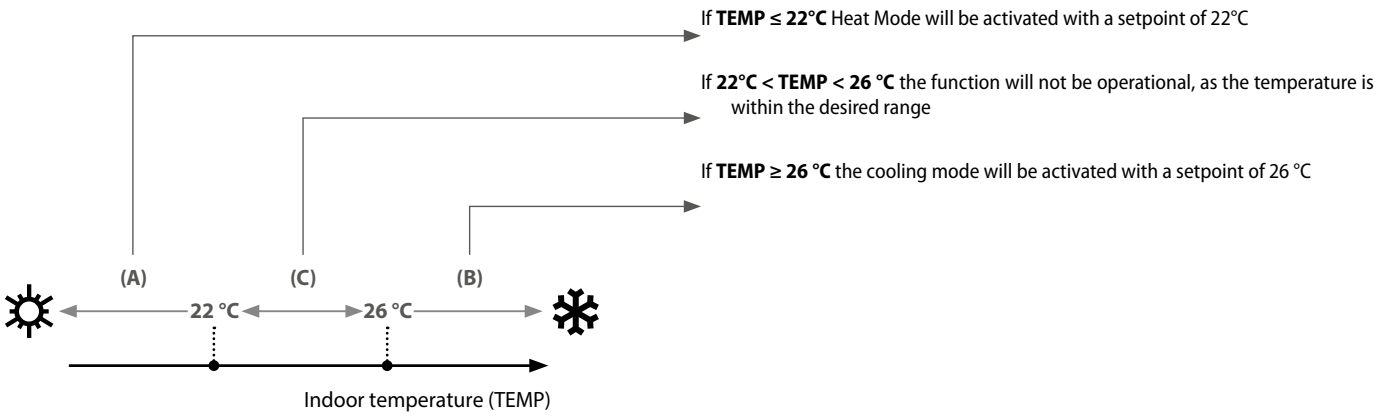
The Setback function has the following logic:

— The function must be activated via the parameter P71, set a Maximum Limit via the parameter P72 and a Minimum Limit via the parameter P73 (reference paragraph "4.2.3 Activation of indoor unit operating parameter modification menu p. 12"). The two limits must have a minimum delta of 4°C.
— The function is only operational when the wired control panel is in OFF.
— When the room temperature is lower than the Minimum Limit, the unit starts in heating mode until the Minimum Limit set is reached; once the set is reached, the unit will change operation to Ventilation mode.
— When the room temperature is higher than the Maximum Limit, the unit will start in cooling mode until the Maximum Limit set is reached; once the set is reached, the unit will change operation to Ventilation mode.
— The wired control panel display will show the code "AS" when the unit is working towards the set point; when the ambient temperature is within the set limits, the code "AS" will not be displayed.
— When the ambient temperature is within the set limits, the unit remains in OFF; if the ambient temperature exceeds the Maximum or Minimum limit, it will start as written in the previous paragraphs.

■ *Note:*

1. The Setback function is disabled by default; it can be enabled or disabled by setting the parameter P71.
2. When the Panel Lock function of the remote monitor or central controller is activated, the wired control panel cannot enter or exit the Setback function.
3. When the unit is operating in Setback mode, the slave wired control panel cannot set the Energy Saving function and neither displays nor receives settings.
4. During operation, the one on the wired control panel will be used as the room temperature probe.

Operating logic for Setback Mode



5.20 LOW TEMPERATURE DRYING FUNCTION

Under dry mode, when the setting temperature is 16°C, press "-" button for twice, the setting temperature becomes 12°C, then the unit enters into low-temperature dry function.
When low-temperature dry function is turned on, directly press "+" button or switch the mode can quit the function.

5.21 MEMORY FUNCTION

1. Under ON or OFF status, long press "FUNCTION" button for 5s and the temperature zone displays "C00"; then press "MODE" button three times quickly;
2. Press "FUNCTION" button for another 5s to enter the interface of setting wired controller parameters. "P00" is displayed in temperature zone;
3. Press "+" or "-" button to select parameter code to "P15". Press "MODE" button to enter parameter setting. At that time, parameter value is blinking. Press "+" or "-" button to adjust the parameter value and press "ENTER" button to finish setting. When the parameter value is "01", memory function is set. When the parameter value is "00", memory function is not set. The default value of parameter is "01".

If memory function has not been set, when the unit is re-energized after power failure, the unit is power-off status. If the memory function is set in wired controller, when the wired controller is re-energized after power failure, it will resume to the operating status before power failure.

5.22 SET THE UNIT OF MEASUREMENT FROM FAHRENHEIT (°F) TO DEGREES CELSIUS (°C)

1. Under ON or OFF status, Long press "FUNCTION" button for 5s and the temperature zone displays "C00"; then press "MODE" button three times in one second;
2. Press "FUNCTION" button for another 5s to enter the interface of setting wired controller parameters. "P00" is displayed in temperature zone;
3. Press "+" or "-" button to select parameter code to "P16". Press "MODE" button to enter parameter setting. At that time, parameter value is blinking at time displaying zone. Press "+" or "-" button to adjust the parameter value and press "ENTER" button to finish setting. When the parameter value is "01", the unit is Fahrenheit (°F), when the parameter value is "00", the unit is Celsius (°C). The default value of parameter is "00".

5.23 INQUIRY OF HISTORICAL MALFUNCTION

Under ON or OFF status, Long press "FUNCTION" button for 5s and the temperature zone displays "C00"; then press "MODE" button three times in one second.

Then it is possible to select:

1. **Inquiry of historical malfunction of indoor unit**: press " " or " " button to select parameter code "C05". Press "MODE" button to enter the interface of viewing historical malfunction of indoor unit. If there are several indoor units in network, press " " or " " button and press "MODE" button to select the indoor unit. Press " " or " " button to view the 5 malfunctions happened recently. The specific error code will blink at temperature displaying zone. The 5th displayed malfunction is the last malfunction.
2. **Inquiry of historical malfunction of outdoor unit**: press "+" or "-" button to select parameter code "n6". Press "MODE" button to enter the interface of viewing historical malfunction of outdoor unit. If there are several indoor units in network, press "+" or "-" button and press "MODE" button to select the outdoor unit. Press "+" or "-" button to view the 5 malfunctions happened recently. The specific error code will blink at temperature displaying zone. The 5th displayed malfunction is the last malfunction.

5.24 SETTING THE AMBIENT PROBE TO BE USED

— Under ON or OFF status, Long press "FUNCTION" button for 5s and the temperature zone displays "C00"; then press "MODE" button three times in one second;
— Press "FUNCTION" button for another 5s to enter the interface of setting wired controller parameters. "P00" is displayed in temperature zone;
— Press "+" or "-" button to select parameter code to "P20". Press "MODE" button to enter parameter setting. At that time, parameter value is blinking at time displaying zone. Press "+" or "-" button to adjust the parameter value and press "ENTER" button to finish setting.

There are 3 selections:

1. When the parameter value is "01", the ambient temperature at air return is set as indoor ambient temperature.
2. When the parameter value is "02", the temperature at wired controller is set as indoor ambient temperature.
3. When the value of the parameter is "03", the sensor on the suction side of the indoor unit will be set to read the room temperature when in cooling, dehumidification and/or ventilation mode; when in heating mode it will select the sensor on the wired control panel.

5.25 SETTING THE ROOM TEMPERATURE CORRECTION

1. Under ON or OFF status, Long press "FUNCTION" button for 5s and the temperature zone displays "C00"; then press "MODE" button three times in one second;
2. Long press "FUNCTION" button for another 5s to enter the interface of setting wired controller parameters. "P00" is displayed in temperature zone.

Then it is possible to select:

— **Compensation of temperature sensor in cooling, dry and fan mode**: press "+" or "-" button to select parameter code to "P21". Press "MODE" button to enter parameter setting. At that time, parameter value is blinking at time displaying zone. Press "+" or "-" button to adjust the parameter value and press "ENTER" button to finish setting. The compensation value setting range is -15 to 15.

— **Compensation of temperature sensor in heating mode**: press "+" or "-" button to select parameter code to "P22". Press "MODE" button to enter parameter setting. At that time, parameter value is blinking at time displaying zone. Press "+" or "-" button to adjust the parameter value and press "ENTER" button to finish setting. The compensation value setting range is -15 to 15.

5.26 SETTING THE USEFUL HEAD FOR THE FANS OF DUCT TYPE INDOOR UNITS

1. Under ON or OFF status, Long press "FUNCTION" button for 5s and the temperature zone displays "C00"; then press "MODE" button three times in one second;
2. Press "FUNCTION" button for another 5s to enter the interface of setting wired controller parameters. "P00" is displayed in temperature zone;
3. Press " " or " " button to select parameter code to "P30". Press "MODE" button to enter parameter setting. At that time, parameter value is blinking at time displaying zone. Press "+" or "-" button to adjust the parameter value and press "ENTER" button to finish setting.

The parameter value setting range is 01 to 09.

There are 9 selections for LPG_D units:

— P3 (LCD display 03)
— P4 (LCD display 04)
— P5 (LCD display 05)
— P6 (LCD display 06)
— P7 (LCD display 07)

Static pressure selection	Super high speed	High speed	Medium speed	Low speed
P3	S09	S08	S06	S04
P4	S10	S09	S07	S05
P5	S11	S10	S08	S06
P6	S12	S11	S09	S07
P7	S13	S12	S10	S08

■ *Note:*

1. The external static pressure (ESP) can be changed in 5 levels by the remote controller.
2. The default ESP mode setting is "P05" which is the rated ESP.
3. The remote controller can be used to change turbo, H, M and L.

There are 9 selections for LPG_DH units:

— P1 (LCD display 01)
— P2 (LCD display 02)
— P3 (LCD display 03)
— P4 (LCD display 04)
— P5 (LCD display 05)
— P6 (LCD display 06)
— P7 (LCD display 07)
— P8 (LCD display 08)
— P9 (LCD display 09)

■ *You can select P01, P02, P03, P04, P05, P06, P07, P08, P09 in fan mode of indoor fan motor, which means different fan mode combinations are corresponding to different static pressure. Ex-factory defaulted mode is P05. You can set the mode through wired controller. S01, S02, S03……S12, S13 means the rotation speed of indoor unit is from low to high.*

Combination relationship of static pressure

Static pressure selection	Super high speed	High speed	Medium speed	Low speed
P1	S05	S03	S02	S01
P2	S06	S04	S03	S02
P3	S07	S05	S04	S03
P4	S08	S06	S05	S04
P5	S09	S07	S06	S05
P6	S10	S08	S07	S06
P7	S11	S09	S08	S07
P8	S12	S10	S09	S08
P9	S13	S11	S10	S09

5.27 SETTING OF MASTER AND SLAVE WIRED CONTROLLER

1. Under ON or OFF status, Long press "FUNCTION" button for 5s and the temperature zone displays "C00"; then press "MODE" button three times in one second;
2. Press "FUNCTION" button for another 5s to enter the interface of setting wired controller parameters. "P00" is displayed in temperature zone;
3. Press "+" or "-" button to select parameter code to "P20". Press "MODE" button to enter parameter setting. At that time, parameter value is blinking at time displaying zone on the temperature display area. Press "+" or "-" button to adjust the parameter value and press "ENTER" button to finish setting.

There are 2 selections:

— When the parameter value is "01", the wired controller is set as master wired controller.
— When the parameter value is "02", the wired controller is set as slave wired controller.

5.28 SET THE INDOOR UNIT ADDRESS (CC2)

In order to use the Centrilized controller CC2 accessory correctly, each indoor unit (up to a maximum of 36) must have a different serial address.
Unit parameters can be set in unit On or Off status:

1. Press "FUNCTION" button for 5s and the temperature zone on the display will show "C00".
2. Press the MODE button 3 times with intervals of less than 1 second.
3. Press "FUNCTION" button for 5 seconds once again to enter the wired contoller parameters setting page. "P00" will be shown in the temperature zone of the display.
4. Press "+" or "-" button to select parameter code "P42".
5. Press the "MODE" button to enter the parameters setting page. The desired parameter value will flash.
6. Press "+" or "-" button to adjust the parameter value (from 1 to 36) and press "ENTER" button to exit the setting mode.
7. Press "ENTER" button to go back to previous step and finally exiting the setting parameter page.

Attention:

— To avoid communication errors, remember that different indoor units must have different serial addresses.
— It is not possible to connect more than 36 indoor units to centrilized controller CC2.
— The MINIMODBUS20 accessory (to be purchased separately) is mandatory for connecting the units to the CC2 centralized controller.

5.29 SET THE INDOOR UNIT ADDRESS (BMS)

To manage the indoor unit with BMS supervision system, each indoor unit (up to a maximum of 255) must have a different serial address.
Unit parameters can be set in unit On or Off status:

1. Press "FUNCTION" button for 5s and the temperature zone on the display will show "C00".
2. Press the MODE button 3 times with intervals of less than 1 second.
3. Press "FUNCTION" button for 5 seconds once again to enter the wired contoller parameters setting page. "P00" will be shown in the temperature zone of the display.
4. Press "+" or "-" button to select parameter code "P42".
5. Press the "MODE" button to enter the parameters setting page. The desired parameter value will flash.
6. Press "+" or "-" button to adjust the parameter value (from 1 to 255) and press "ENTER" button to end setting mode.
7. Press "ENTER" button to go back to previous step and finally exiting the setting parameter page.

Attention:

— Units cannot be connected to CC2 centralized controller and MODBUS system at the same time, only one can be selected.
— Maximum 255 indoor units can be connected in the same network.
— Before contacting any wires, make sure power is cut off.
— The MINIMODBUS20 accessory (to be purchased separately) is mandatory for connecting the units to theMODBUS system.

When the wired controller is controlling one indoor unit, it will enter the setting menu immediately; when the wired controller is controlling multiple indoor units, enter the selection menu of indoor unit to press "+" or "-" button to switch the number of indoor unit, the timer area will display the address number of indoor unit and the temperature area will display the number of indoor unit acquiescently.
Press "MODE" button to enter the setting menu, in the timer area, the number displaying the indoor unit address will blink, press "+" or "-" button to adjust the address number of indoor unit, short press "ENTER" button to confirm the setting and return to the previous status.

Press "⏻" button to exit the setting after completion and return to the homepage. When the address is set, the wired controller can be removed and connect the centralized controller CC2 to the indoor mainboard. Then connect the required units to realize centralized control of these units.

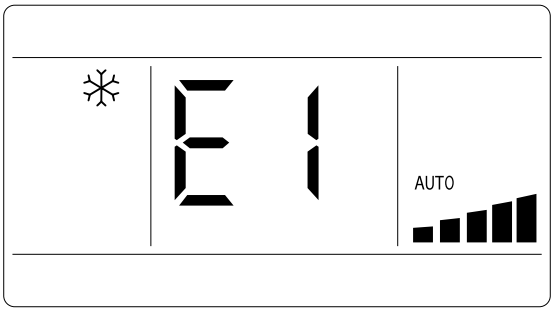
6 ERRORS DISPLAY

When there occurs any error during operation, the temperature display zone on the wired controller will show error codes. If several errors happen at the same time, error codes will show on the display repeatedly.

WARNING: reminder: in the event of an alarm, the unit must be switched off and the technical assistance service contacted for any kind of intervention on the unit.

Fig. 6.1 is the display of Outdoor Unit High Pressure Protection when unit is on:

Fig. 6.1: Display of Outdoor Unit High Pressure Protection



6.1 TABLE OF DISPLAY ERROR CODES FOR LPG UNIT

6.1.1 Table of error codes for outdoor unit

Code	Description	Code	Description
E4	Compressor discharge high temperature protection error	LA	Outdoor unit fan motor 2 error
H4	Overload protection	L3	Outdoor unit fan motor 1 error
PA	Outdoor unit AC current protection	E1	Compressor high pressure protection error
H5	IPM module current protection	U3	DC bus voltage drop error
PB	Driver module temperature protection error	U5	General current detection error
E2	Anti-freeze protection	PU	Capacitor charging error
U2	Compressor phase inversion and phase loss protection	U1	Compressor phase current sensing circuit error
HC	PFC overcurrent protection	H7	Compressor phase displacement protection
PH	BUS overvoltage protection	HE	Compressor demagnetisation protection
PL	BUS undervoltage protection	LE	Excessive compressor speed
Lc	Compressor startup failure	P6	Master and driver control communication error
PO	Driver reset protection	P5	Compressor overcurrent error
LF	Power protection	PP	Input AC voltage error
CB	Compressor dial code or jumper cap abnormal	Uo	External air temperature anomaly
PF	Driveboard temperature sensor error	E6	Communication error between indoor and outdoor unit
P9	AC contactor protection	C4	Outdoor unit jumper error
PE	Temperature drift protection	dJ	AC sequence error (phase loss or phase inversion protection)
C7	Condenser temperature sensor error	Rd	Outdoor fan motor phase loss protection
C9	Compressor driver memory chip failure	RE	Outdoor unit fan motor current detection circuit error
EL	Emergency stop (fire alarm)	Rc	Outdoor unit fan motor starting error
oE	Outdoor unit error, for the specific error refer to the state indicated on the main board of the outdoor unit	RJ	Outdoor unit fan motor phase displacement protection error
dc	Compressor intake temperature probe error	UL	Outdoor unit fan motor overcurrent protection
P7	Temperature sensor module circuit malfunction	R1	Outdoor unit fan motor IPM module protection
U8	Zero-crossing protection	c6	Compressor discharge temperature probe error
F3	Outdoor unit ambient temperature probe error	C3	Condenser temperature probe error
E3	Protection against the lack of refrigerant or protection against low compressor pressure	U7	4-way valve reversing error
EE	Memory chip read and write error	-	-

6.1.2 Table of error codes for indoor unit

Code	Description	Code	Description
E0	Indoor unit fan motor error		
9A	Indoor unit DC fan motor card current detection circuit error	9C	Communication error between the indoor unit DC fan motor and master control
C1	Indoor unit ambient probe error	9d	Indoor unit DC fan motor driver module high temperature protection
C2	Evaporator temperature probe error	9E	Indoor unit DC fan motor driver module temperature sensor error
E9	Indoor unit full water error	9F	Indoor unit DC fan motor card memory chip error
CJ	Indoor unit jumper error	9H	Indoor unit fan motor card charging circuit error
93	Indoor unit DC fan motor card IPM module error	9L	Indoor unit DC fan motor card AC power supply voltage error protection
90	Indoor unit DC fan motor card bus undervoltage error	9o	Indoor unit DC fan motor card electrical box temperature sensor error
91	Indoor unit DC fan motor card bus overvoltage error	9P	Indoor unit DC fan motor card AC power supply zero-crossing protection
92	Indoor unit DC fan motor current error	C0	Communication error between the control panel and the indoor unit
94	Indoor unit DC fan motor PFC protection	9b	Indoor unit DC fan motor phase displacement protection
95	Indoor unit DC fan motor start-up error	L5	Control panel power supply overcurrent protection
96	Indoor unit DC fan motor phase loss error	CE	Control panel temperature probe error
97	Indoor unit DC fan motor card reset error	dH	Control panel card fault
98	Indoor unit DC fan motor overcurrent error	L4	Control panel power supply fault
99	Indoor unit DC fan motor power error	-	-

6.1.3 Table of status codes

Code	Description	Code	Description
CL	Auto clean	H1	Ordinary defrosting state
Fo	Refrigerant gas recovery mode	A9	Operate in Setback Function

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