



Owner's Manual

Original Instructions

Commercial Air Conditioners

Multi Variable Air Conditioners Floor and Ceiling Type Indoor Unit

Models:

GMV-ND09ZD/A-T(U) GMV-ND12ZD/A-T(U)

GMV-ND18ZD/A-T(U) GMV-ND24ZD/A-T(U)

GMV-ND30ZD/A-T(U) GMV-ND36ZD/A-T(U)

GMV-ND42ZD/A-T(U) GMV-ND48ZD/A-T(U)

Thank you for choosing commercial air conditioners. Please read this Owner's Manual carefully before operation and retain it for future reference.

If you have lost the Owner's Manual, please contact the local agent or visit www.gree.com or send an email to global@gree.com.cn for the electronic version.

GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI

Preface

For correct installation and operation, please read all instructions carefully. Before reading the instructions, please be aware of the following items:

⚠ DANGER	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
⚠ WARNING	This mark indicates procedures which, if improperly performed, might lead to the death or serious injury of the user.
⚠ CAUTION	This mark indicates procedures which, if improperly performed, might possibly result in personal harm to the user, or damage to property.
NOTICE	NOTICE is used to address practices not related to personal injury.

⚠ WARNING	
(1)	Instructions for installation and use of this product are provided by the manufacturer.
(2)	Installation must be performed in accordance with the requirements of NEC and CEC by authorized personnel only.
(3)	For the safe operation of this unit, please read and follow the instructions carefully.
(4)	During operation, total capacity of indoor units should not exceed the total capacity of outdoor units. Otherwise, poor effect of cooling or heating may result.
(5)	Direct operators or maintainers should well keep this manual.
(6)	If this unit fails to operate normally, please contact our service center as soon as possible and provide the following information: 1) Content on the nameplate (model number, cooling capacity, production code, ex-factory date). 2) Malfunction details (before and after the malfunction occurs).
(7)	Each unit has been strictly tested and proved to be qualified before ex-factory. In order to prevent units from being damaged or operating normally because of improper disassembly, please do not disassemble the unit by yourself. If you need to disassemble and check units, please contact our service center. We will send specialists to guide the disassembly.
(8)	Under the standby status, the unit will consume a little power for ensuring reliability of complete unit, maintaining normal communication and preheating refrigerant. When the unit won't be used for a long time, cut off the power of the complete unit. However, please preheat it when operating the unit next time.
(9)	All graphics in this manual is only for your reference. For sales or production reasons, these graphics are subject to change by manufacturer without prior notice.
(10)	These instructions shall also be available in an alternative format, e.g. on a website.

User Notice

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and



understand the hazards involved. Children shall not play with the appliance.

Cleaning and user maintenance shall not be made by children without supervision.

DISPOSAL: Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.

Exception Clauses

Manufacturer will bear no responsibilities when personal injury or property loss is caused by the following reasons:

- (1) Damage the product due to improper use or misuse of the product;
- (2) Alter, change, maintain or use the product with other equipment without abiding by the instruction manual of manufacturer;
- (3) After verification, the defect of product is directly caused by corrosive gas;
- (4) After verification, defects are due to improper operation during transportation of product;
- (5) Operate, repair, maintain the unit without abiding by instruction manual or related regulations;
- (6) After verification, the problem or dispute is caused by the quality specification or performance of parts and components that produced by other manufacturers;
- (7) The damage is caused by natural calamities, bad using environment or force majeure.

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1 Safety Precautions

⚠ WARNING	
(1)	This product can't be installed at corrosive, inflammable or explosive environment or the place with special requirements, such as kitchen. Otherwise, it will affect the normal operation or shorten the service life of the unit, or even cause fire hazard or serious injury. As for above special places, please adopt special air conditioner with anti-corrosive or anti-explosion function.
(2)	Follow this instruction to complete the installation work. Please carefully read this manual before unit startup and service.
(3)	Wire size of power cord should be large enough. The damaged power cord and connection wire should be replaced by exclusive cable.
(4)	After connecting the power cord, please fix the electric box cover properly in order to avoid accident.
(5)	Never fail to comply with the nitrogen charge requirements. Charge nitrogen when welding pipes.
(6)	Never short-circuit or cancel the pressure switch to prevent unit damage.
(7)	Please firstly connect the wired controller before energization, otherwise wired controller can not be used.
(8)	Before using the unit, please check if the piping and wiring are correct to avoid water leakage, refrigerant leakage, electric shock, or fire etc.
(9)	Do not insert fingers or objects into air outlet/inlet grille.
(10)	Open the door and window and keep good ventilation in the room to avoid oxygen deficit when the gas/oil supplied heating equipment is used.
(11)	Never start up or shut off the air conditioner by means of directly plug or unplug the power cord.
(12)	Turn off the unit after it runs at least five minutes; otherwise it will influence oil return of the compressor.
(13)	Do not allow children operate this unit.
(14)	Do not operate this unit with wet hands.
(15)	Turn off the unit or cut off the power supply before cleaning the unit, otherwise electric shock or injury may happen.
(16)	Never spray or flush water towards unit, otherwise malfunction or electric shock may happen.
(17)	Do not expose the unit to the moist or corrosive circumstances.
(18)	Under cooling mode, please don't set the room temperature too low and keep the temperature difference between indoor and outdoor unit within 5°C (41°F).
(19)	User is not allowed to repair the unit. Fault service may cause electric shock or fire accidents. Please contact Gree appointed service center for help.
(20)	Before installation, please check if the power supply is in accordance with the requirements specified on the nameplate. And also take care of the power safety.
(21)	Installation should be conducted by dealer or qualified personnel. Please do not attempt to install the unit by yourself. Improper handling may result in water leakage, electric shock or fire disaster etc.
(22)	Be sure to use the exclusive accessory and part to prevent the water leakage, electric shock and fire accidents.
(23)	Make sure the unit can be earthed properly and soundly after plugging into the socket so as to avoid electric shock. Please do not connect the ground wire to gas pipe, water pipe, lightning rod or telephone line.
(24)	Electrify the unit 8 hours before operation. Please switch on for 8 hours before operation. Do not cut off the power when 24 hours short-time halting (to protect the compressor).
(25)	If refrigerant leakage happens during installation, please ventilate immediately. Poisonous gas will emerge if the refrigerant gas meets fire.
(26)	Volatile liquid, such as diluent or gas will damage the unit appearance. Only use soft cloth with a little neutral detergent to clean the outer casing of unit.
(27)	If anything abnormal happens (such as burning smell), please power off the unit and cut off the main power supply, and then immediately contact Gree appointed service center. If abnormality keeps going, the unit might be damaged and lead to electric shock or fire.

2 Product Introduction

2.1 Names of Key Components

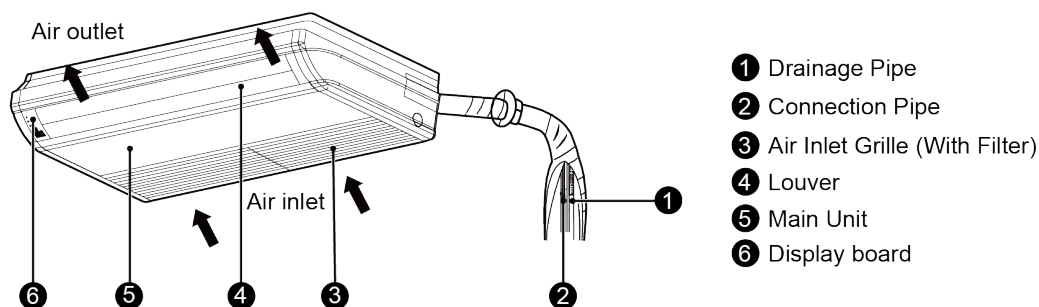


Fig.2.1.1

2.2 Rated Working Condition

-	Indoor Side Condition		Outdoor Side Condition	
	Dry Bulb Temp °C(°F)	Wet Bulb Temp °C(°F)	Dry Bulb Temp °C(°F)	Wet Bulb Temp °C(°F)
Rated Cooling	26.7(80.0)	19.4(67.0)	35(95.0)	23.9(75.0)
Rated Heating	21.1(70.0)	15.6(60.0)	8.3(47.0)	6.1(43.0)

3 Preparations for Installation

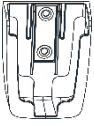

NOTICE

This picture is for reference only, please refer to the actual product; the unit of dimension is mm(inch).

3.1 Standard Fittings

Please use the following provided accessories according to the requirement.

No.	Name	Appearance	Q'ty	Usage
1	Remote controller		1+2	To control the indoor unit
2	Special hut		2	GMV-ND09~12ZD/A-T(U)
			1	GMV-ND18~48ZD/A-T(U)
3	Corrugated pipe		1	GMV-ND18~48ZD/A-T(U)
4	M10X8 nut with washer		8	To be used together with the suspension bolt for installing the unit.
5	Insulation		1	To insulate the gas pipe
6	Insulation		1	To insulate the liquid pipe
7	Paper pattern for installation		1	Locate the drill hole on ceiling or wall
8	Fastener		4	To fasten the sponge

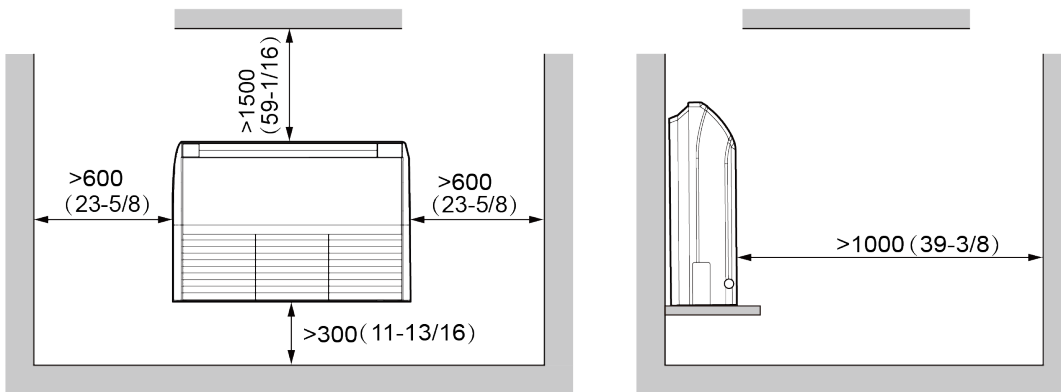
No.	Name	Appearance	Q'ty	Usage
9	Remote controller holder		1	Used for holding the remote controller
10	Tapping screw		2	Used for fixing the remote controller holder

3.2 Installation Position Selection

- (1) The location should be able to withstand the weight of unit.
- (2) The water can be drained conveniently from drainage pipe.
- (3) There should be no obstruction near air inlet and air outlet.
- (4) Follow the installation distance required in the Fig.3.2.1 below to ensure sufficient space for maintenance.
- (5) The installation location should be far from heat sources, flammable or explosive gas, or smog spread in the air.
- (6) The indoor unit, outdoor unit, power cord and connection electricity wire should be at least 1m from television and radio in order to prevent interference and noise (Even though 1m distance is ensured, there may be noise if the electric wave is too strong).

Unit: mm(inch)

Floor type



Ceiling type

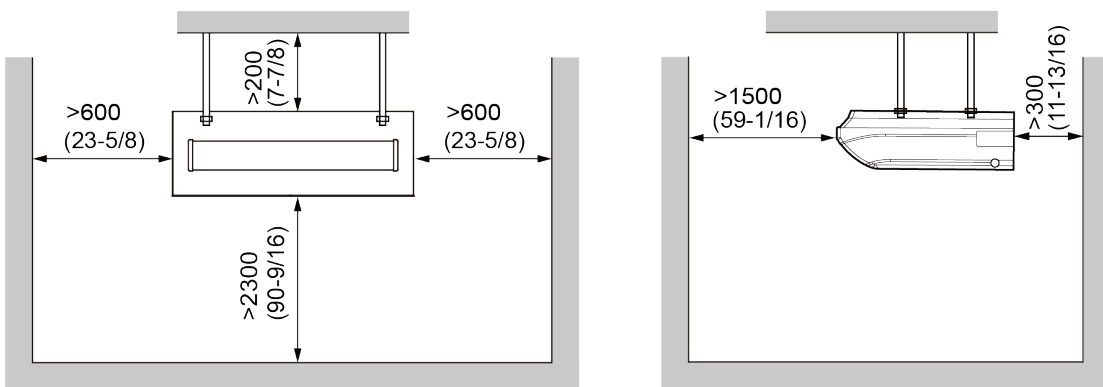


Fig.3.2.1

NOTICE	
(1)	The unit shall be installed in accordance with national standards or local regulations.
(2)	Only qualified personnel can carry out installation work, please contact with local dealer before installation.
(3)	Make sure all the installation work completed before energizing.

3.3 Requirements of Communication Wire Selection

NOTICE

If air conditioner used under strong electronic-magnetic interference circumstance, STP (shielded twisted pair) communication cable must be adopted.

3.3.1 Selection of Communication Wire between Indoor Unit and Wired Controller

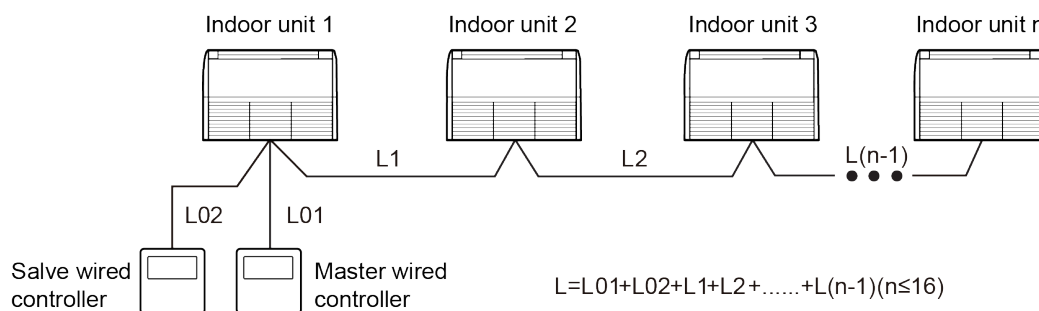


Fig.3.3.1

Wire type	Total length of communication wire between indoor unit and wired controller	Wire size	Remark
Light/Ordinary polyvinyl chloride sheathed cord	$L \leq 250\text{m}$ ($L \leq 820\text{-}1/5\text{ft.}$)	2×AWG18 ~2×AWG16	<ol style="list-style-type: none"> Total length of communication line can't exceed 250m (820-1/5ft.). The cord shall be Circular cord (the cores shall be twisted together). If unit is installed in places with intense magnetic field or strong interference, it is necessary to use shielded wire.

3.3.2 Selection of Communication Wire between Indoor Unit and Indoor Unit (Outdoor Unit)

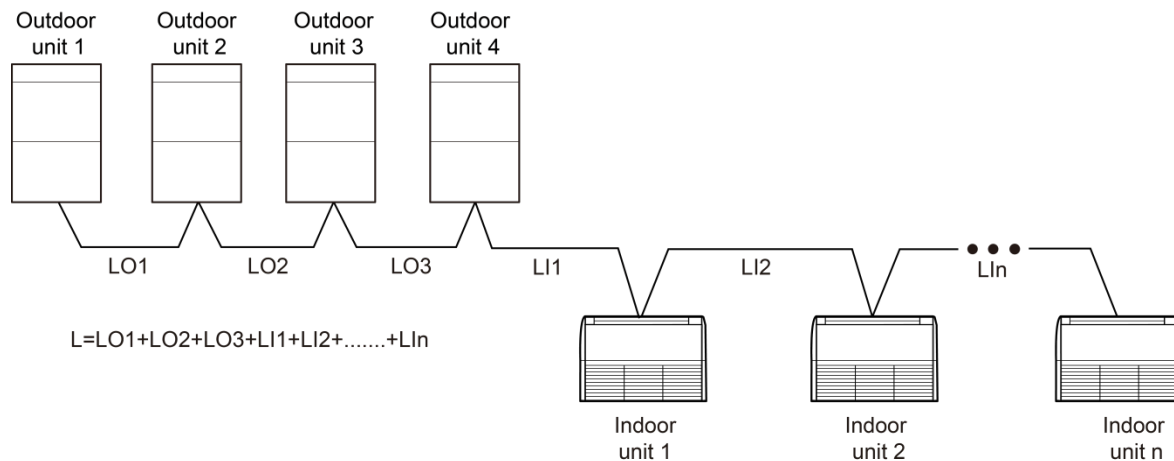


Fig.3.3.2

Wire type	Total length of communication wire between indoor unit and indoor unit(outdoor unit)	Wire diameter	Remark
Light/Ordinary polyvinyl chloride sheathed cord	L≤1000m (L≤3280-5/6ft.)	≥2×AWG18	1. If the wire diameter is enlarged to 2×1mm ² (2×AWG16), the total communication line length can reach 1500m (4921-1/4ft.). 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.

3.4 Wiring Requirement

NOTICE

- ① The circuit breaker and power cord specification in above sheet are based on max power (max current) of the unit.
- ② The power cord specification in above sheet is based on ambient temperature of 40°C.
- ③ The circuit breaker specification in above sheet is based on ambient temperature of 40°C. If the working condition is different, please adjust it according to the specification sheet of circuit breaker.

Dimension of power cord and capacity of air switch

Model	Power specification	MCA(A)	MOP(A)
GMV-ND09ZD/A-T(U)	208/230V-1ph-60Hz	1	15
GMV-ND12ZD/A-T(U)		1	15
GMV-ND18ZD/A-T(U)		1	15
GMV-ND24ZD/A-T(U)		1	15
GMV-ND30ZD/A-T(U)		1	15
GMV-ND36ZD/A-T(U)		1	15
GMV-ND42ZD/A-T(U)		1	15
GMV-ND48ZD/A-T(U)		1	15

4 Installation Instructions

4.1 Indoor Unit Installation

4.1.1 Indoor unit dimension and suspension bolt position

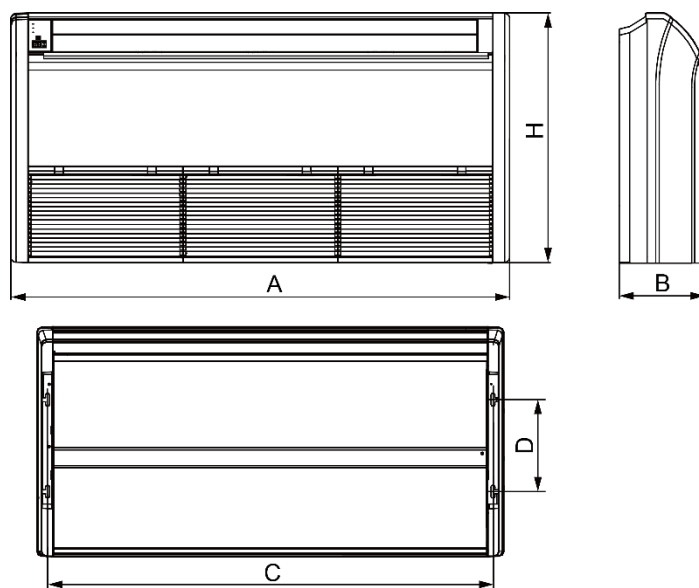


Fig.4.1.1

Below are dimensions of A, B, C, etc. for different models:

Unit: mm(inch)

Models:	A	B	C	D	H
GMV-ND09ZD/A-T(U)	1220 (48)	225 (8-7/8)	1158 (45-5/8)	280 (11)	700 (27-1/2)
GMV-ND12ZD/A-T(U)					
GMV-ND18ZD/A-T(U)					
GMV-ND24ZD/A-T(U)	1420 (55-15/16)	245 (9-5/8)	1354 (53-5/16)	280 (11)	700 (27-1/2)
GMV-ND30ZD/A-T(U)					
GMV-ND36ZD/A-T(U)	1700 (66-15/16)	245 (9-5/8)	1634 (64-21/64)	280 (11)	700 (27-1/2)
GMV-ND42ZD/A-T(U)					
GMV-ND48ZD/A-T(U)					

Models:	Drainage pipe (Outer Diameter × wall thickness) (mm/inch)	Outer diameter of connection pipe (mm/inch)	
		Liquid pipe	Gas pipe
GMV-ND09ZD/A-T(U)	Φ17×1.75 (Φ11/16×1/16)	6.35(1/4)	9.52(3/8)
GMV-ND12ZD/A-T(U)		6.35(1/4)	12.7(1/2)
GMV-ND18ZD/A-T(U)		9.52(3/8)	15.9(5/8)
GMV-ND24ZD/A-T(U)		9.52(3/8)	15.9(5/8)
GMV-ND30ZD/A-T(U)		9.52(3/8)	15.9(5/8)
GMV-ND36ZD/A-T(U)		9.52(3/8)	15.9(5/8)
GMV-ND42ZD/A-T(U)			
GMV-ND48ZD/A-T(U)			

NOTICE

The drilling work must be carried out by qualified personnel.

4.1.2 Suspend the indoor unit

- (1) Determine the location of the hanger through the paper template, and then remove the

paper template, as shown in Fig.4.1.2.1(a).

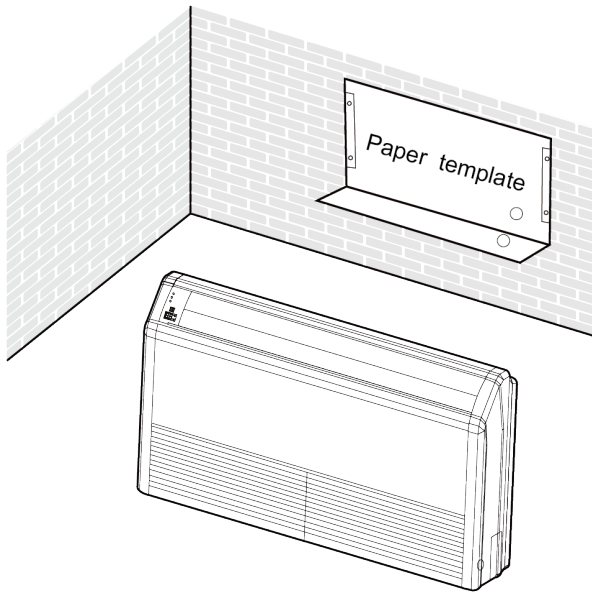


Fig.4.1.2.1(a)

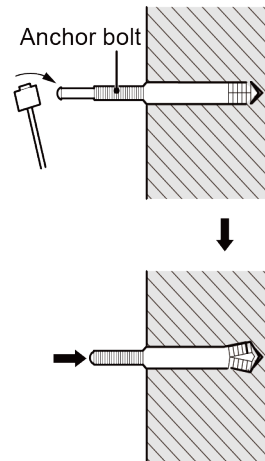


Fig.4.1.2.1(b)

- (2) Insert the anchor bolts into the drilled holes, and drive the pins completely into the anchor bolts with a hammer, as shown in Fig.4.1.2.1(b).
- (3) Remove the right and left side panels, as shown in Fig.4.1.2.2.
- (4) Put the hanger bolt into the clasp of the indoor unit and tighten screws on the hanger to prevent the indoor unit from moving, as shown in Fig.4.1.2.2.
- (5) Reinstall and tighten the right and left side panels, as shown in Fig.4.1.2.3.
- (6) Adjust the height of the unit to make the drain pipe slant slightly downward so that the drainage will become much smoother, as shown in Fig.4.1.2.3.

Floor type

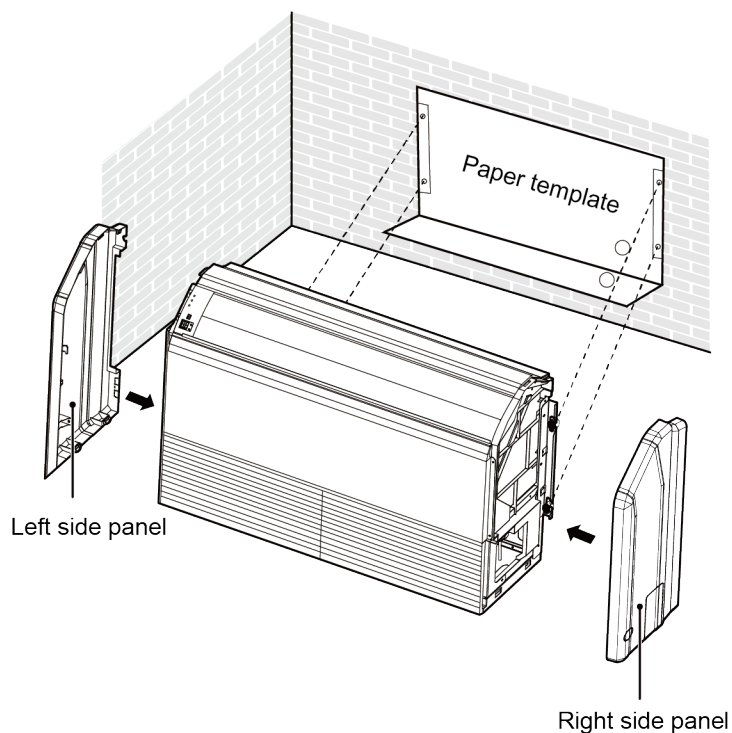


Fig.4.1.2.2

Ceiling type

Unit: mm(inch)

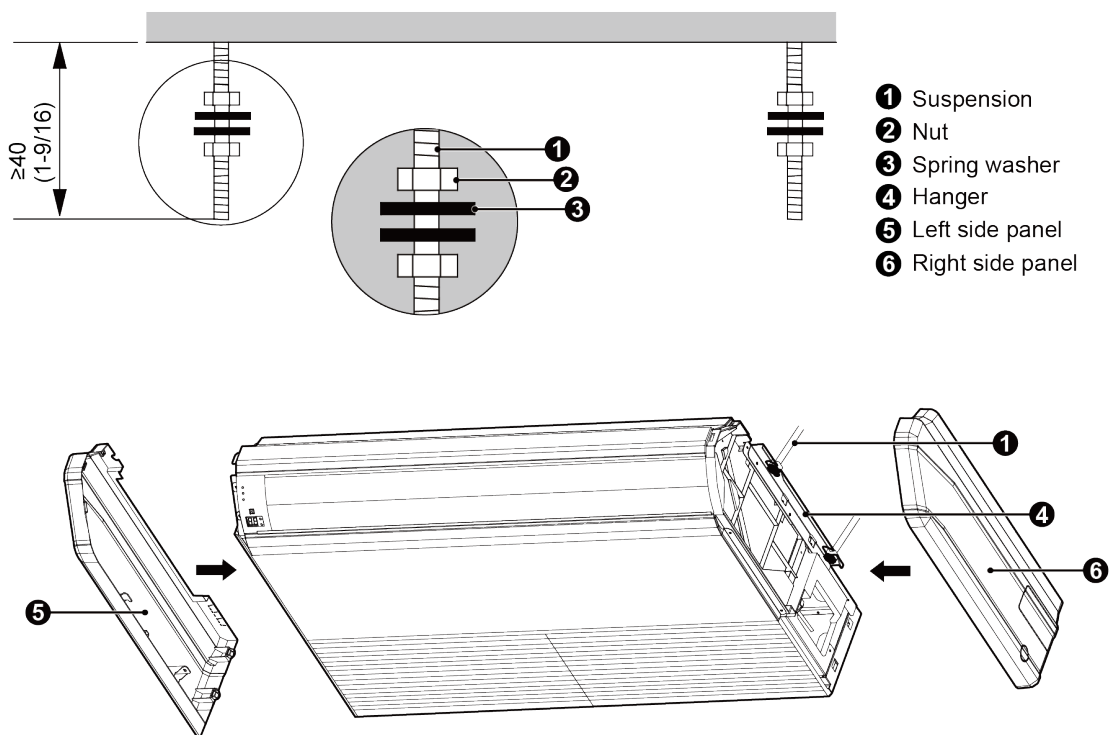


Fig.4.1.2.3

4.1.3 Leveling

The water level test must be done after installing the indoor unit to make the unit is horizontal, as shown Fig.4.1.3.

NOTICE

Adjust the height of the unit to make the drain pipe slant slightly downward so that the drainage will become much smoother.

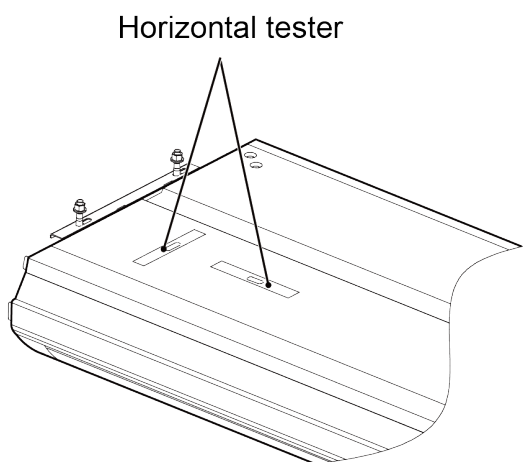


Fig.4.1.3

4.2 Refrigerant Pipe Connection

- (1) Aim the flaring port of copper pipe at the center of screwed joint and then tighten the flaring nut with hand as shown in Fig.4.2.1.

- (2) Tighten the flaring nut with torque wrench.

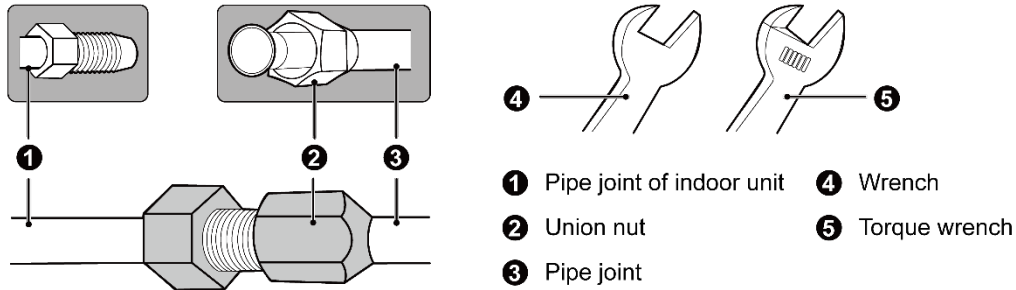


Fig.4.2.1

Pipe diameter mm(inch)	Torque (N•m)
6.35(1/4)	15~30
9.52(3/8)	35~40
12.7(1/2)	45~50
15.9(5/8)	60~65

- (3) Use pipe bender when bending the pipe and the bending angle should not be too small.
 (4) Wrap the connection pipe and joint with sponge and then tie them firmly with tape.

4.3 Drainage Pipe Installation and Drainage System Testing

4.3.1 Notices for Installation of Drainage Pipe

- (1) It is not allowed to connect the condensate drain pipe into waste pipe or other pipelines which are likely to produce corrosive or peculiar smell to prevent the smell from entering indoors or corrupt the unit.
- (2) It is not allowed to connect the condensate drain pipe into rain pipe to prevent rain water from pouring in and cause property loss or personal injury.
- (3) Condensate drain pipe should be connected into special drain system for air conditioner.
- (4) The drainage pipe should be short and the gradient downwards should be at least 1%~2% in order to drain condensation water smoothly.
- (5) The diameter of drainage hose should be bigger or equal to the diameter of drainage pipe joint.
- (6) Install drainage pipe according to the following Fig.4.3.1.1 and arrange insulation to the drainage pipe. Improper installation may lead to water leakage and damp the furniture and other things in the room.
- (7) You can buy normal hard PVC pipe used as the drainage pipe. During connection, insert the end of PVC pipe into the drainage hole and then tighten it with drainage hose and wire binder. Never connect the drainage hole and drainage hose with glue.
- (8) When the drainage pipelines are used for several units, the position of pipeline should be about 100mm (3-15/16inch) lower than the drainage port of each unit. In this case, thicker pipes should be applied.

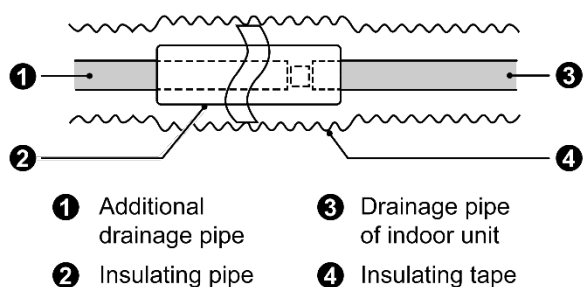


Fig.4.3.1.1

(9) Connect the drainage pipe properly, as shown in Fig.4.3.1.2.

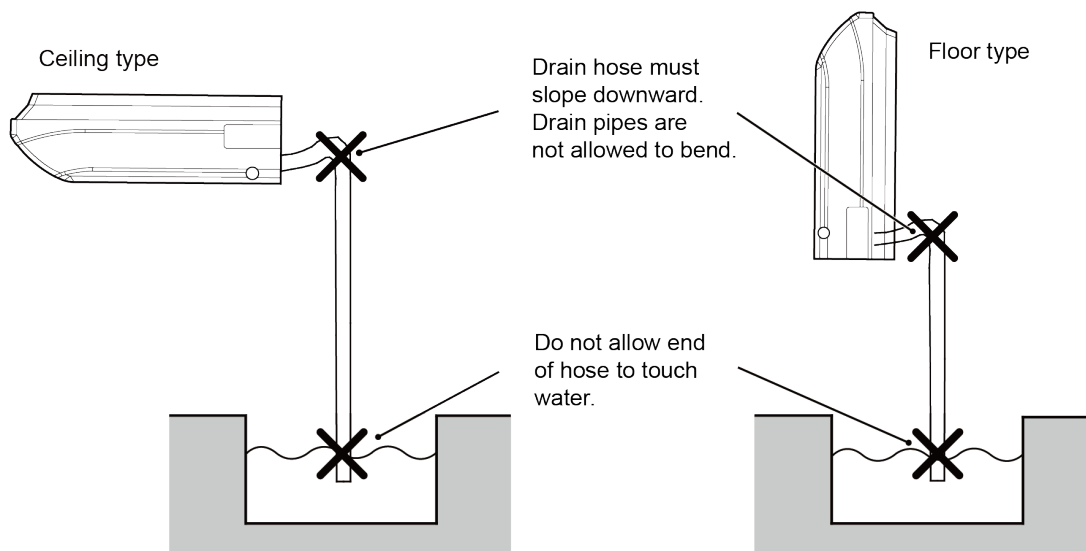


Fig.4.3.1.2

4.3.2 Drainage pipe installation

- (1) Drainage pipe should have the same diameter or larger diameter than the connection pipes (PVC pipe, outside diameter 17mm (11/16inch), thickness \geq 1.75mm (1/16inch)).
- (2) Keep drainage pipe short and sloping downwards at a gradient of at least 1% for preventing forming air bubbles.
- (3) Insert the drainage hose into drain socket, tighten the metal clamp securely.
- (4) Warp the sealing pad over drain hose and metal clamp for heat insulation.
- (5) Make sure to perform insulation work for all drainage piping in order to prevent any possible water drop due to dew condensation.
- (6) Apply the suitable diameter for converging drainage pipe according to the operating capacity of the unit, as show in Fig.4.3.2.1.

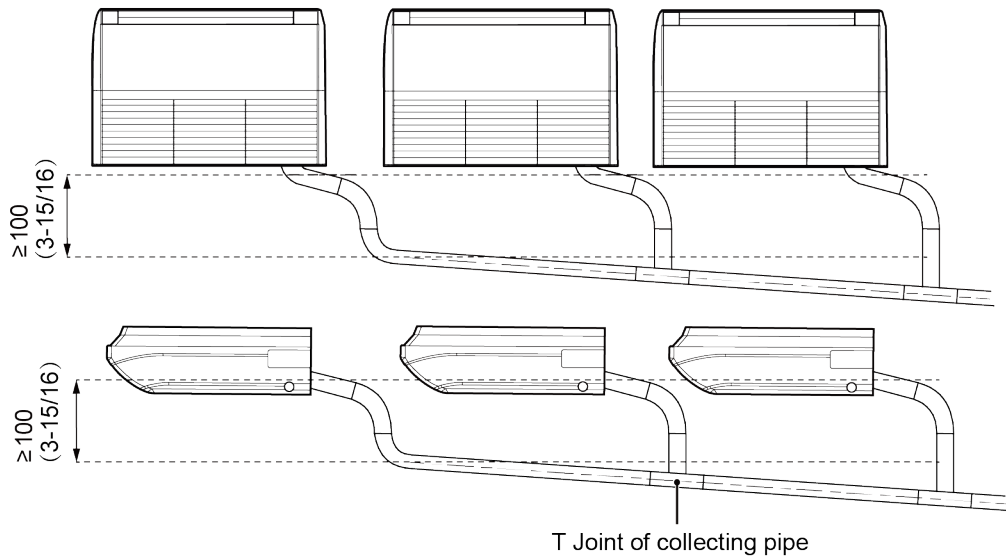


Fig.4.3.2.1

(7) The horizontal pipe can't be connected to vertical pipe in the same level; please select the connection way as shown in following figure.

No.1: Three-way connection of drainage pipe joints (Fig.4.3.2.2)

No.2: Connection of downspout elbow (Fig.4.3.2.3)

No.3: Inserting horizontal pipe connection (Fig.4.3.2.4)

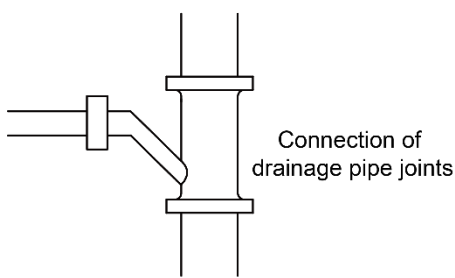


Fig.4.3.2.2

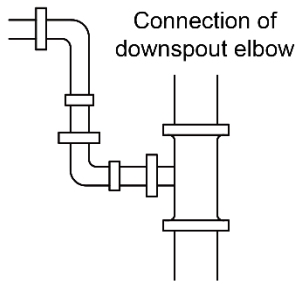


Fig.4.3.2.3

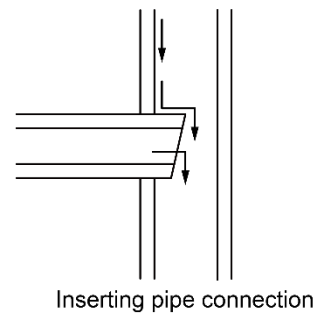


Fig.4.3.2.4

(8) Drain pipes should have a downward slope of at least 1~2%, in order to prevent pipes from sagging, install hanger bracket at intervals of 1000~1500mm (39-3/8~59inch).

Unit: mm(inch)

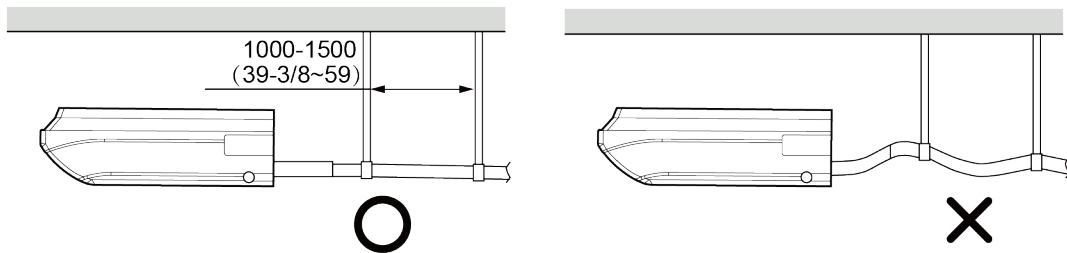


Fig.4.3.2.5

(9) Prepare the local piping at the connection point for the drain pipe, as shown in the installation drawings.

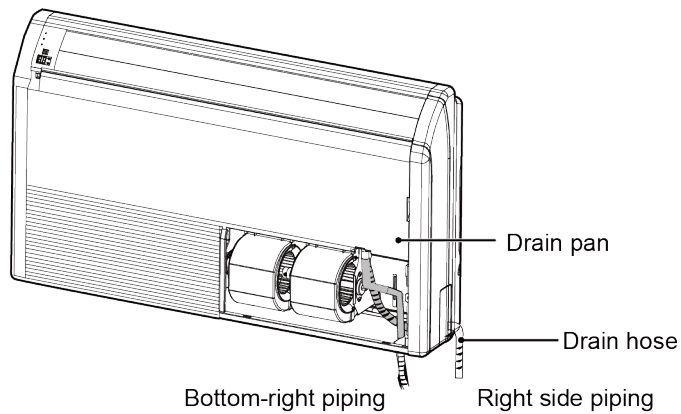


Fig.4.3.2.6

4.3.3 Test of Drainage System

- (1) Please test drainage system after electric work is finished. Inject approximately 1L purified water to drain pan from air vent, ensure that not to splash the water over the electrical components (e.g. water pump etc.).
- (2) During the test, please carefully check the drainage joint and make sure no any leakage occur.
- (3) It is strongly recommended to do the drain test before ceiling decoration.

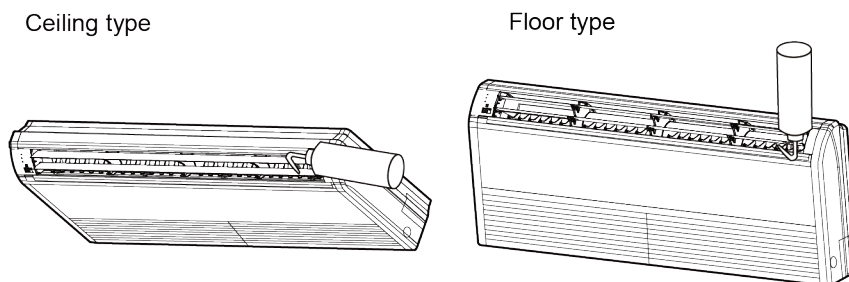


Fig.4.3.3.1

4.4 Wired controller installation

Wired controller is optional accessory. If wired controller is needed, please contact your local dealer and install the wired controller according to the instruction manual.

NOTICE

Do perform the commissioning operation before first use, automatic addressing or other settings, please refer to the manual of ODU.

5 Wiring Work

NOTICE

- ① Units must be grounded securely, or it may cause electric shock.
- ② Please carefully read the wiring diagram before carry out the wiring work, incorrect wiring could cause malfunction or even damage the unit.
- ③ The capacity of power supply must be sufficient and the sectional area of wires in the room should be above 2.5mm².

- ④ The unit should be powered by independent circuit and specific socket.
- ⑤ The wiring should be in accordance with related regulations in order to ensure the units reliable running.
- ⑥ Install circuit breaker for branch circuit according to related regulations and electrical standards.
- ⑦ Crimp terminal or single wire must be applied for all wires.
- ⑧ Keep cable away from refrigerant piping, compressor and fan motor.
- ⑨ Do not change the wiring inside the unit.
- ⑩ If there is strong electromagnetic interference around the unit, shielded twisted pair line should be applied; The metal shielded layer of twisted pair wire must be grounded to avoid electromagnetic interference.
- ⑪ The communication wires should be separated from power cord and connection wire between indoor unit and outdoor unit.
- ⑫ Adjust the static pressure via wired controller according to site circumstance.

5.1 Connection of Wire and Patch Board Terminal

- (1) The connection of wire (as shown in Fig.5.1.1)
 - 1) Strip about 25mm insulation of the wire end by stripping and cutting tool.
 - 2) Remove the wiring screws on the patch board.
 - 3) Shape the tail of wire into ring by needle nose plier, and keep the gauge of ring in accordance with screw.
 - 4) Use the screwdriver for tightening the terminal.
- (2) The connection of stranded wire (as shown in Fig.5.1.2)
 - 1) Strip about 10mm insulation of the end of stranded wire by stripping and cutting tool.
 - 2) Loosen the wiring screws on patch board.
 - 3) Insert the wire into the ring tongue terminal and tighten by crimping tool.
 - 4) Use the screwdriver for tightening the terminal.

Unit: mm(inch)

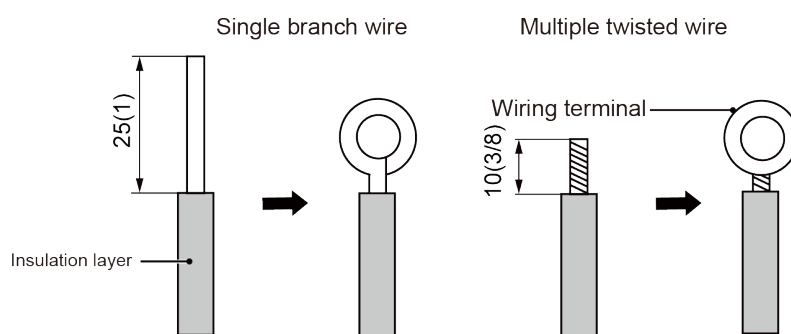


Fig.5.1.1

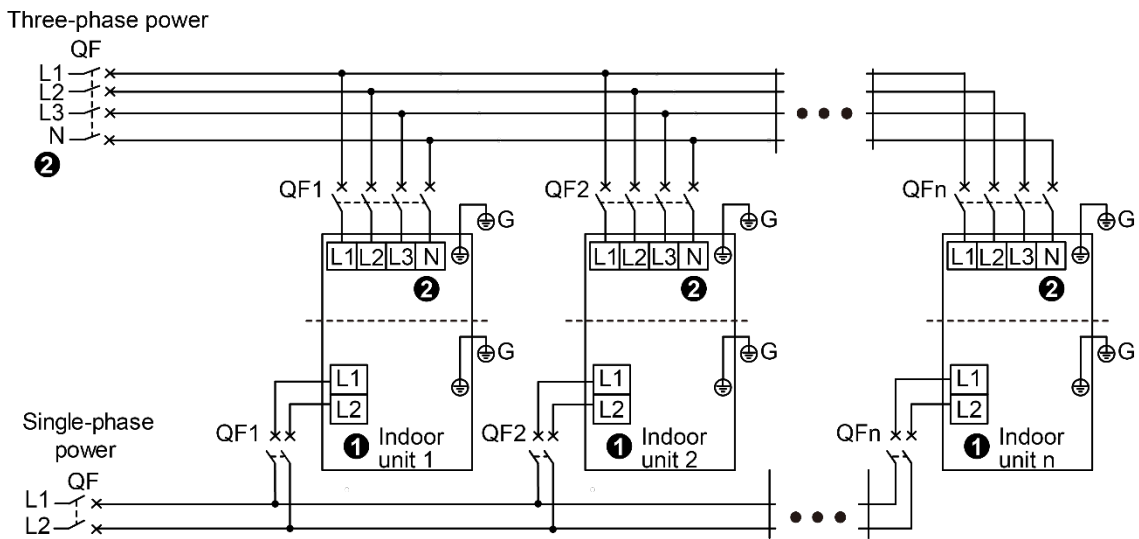
Fig.5.1.2

5.2 Power Cord Connection

NOTICE

- ① Every unit should be equipped with an circuit breaker for short-circuit and overload protection.

- ② During operation, all indoor units connected to the same outdoor unit system must be kept energized status. Otherwise, the unit can't operate normally.



- ① NOTICE** (1) Connect wires for single-phase unit according to figure ① and connect wires for three-phase unit according to figure ②. As for some areas where there's no neutral wire, please refer to the wiring diagram of unit for details.
 (2) The maximum connection quantity "n" for indoor unit is decided by the capacity of outdoor unit. Please refer to the unit capacity of unit for details.

Fig.5.2.1

- (1) Detach the electric box lid.
- (2) Let the power cord pass through the wiring through-holes.
- (3) Connect wires according to Fig. 5.2.1.
- (4) Fix the power cord with wiring clamp.
- (5) The wire diameter of power cord can't be less than 18AWG.

5.3 Connection of Communication Wire between Indoor Unit and Outdoor Unit (or indoor unit)

For units with single-phase power supply.

- (1) Detach the electric box lid.
- (2) Let the Communication cable pass through the wiring through-holes.
- (3) Connect the communication wire to terminal D1 and D2 of indoor 4-bit wiring board, as shown in Fig.5.3.1.

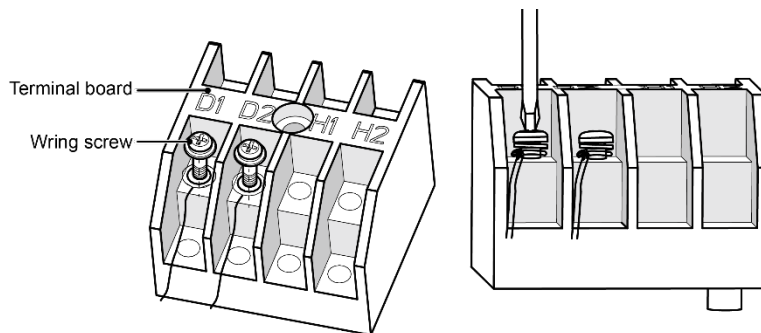
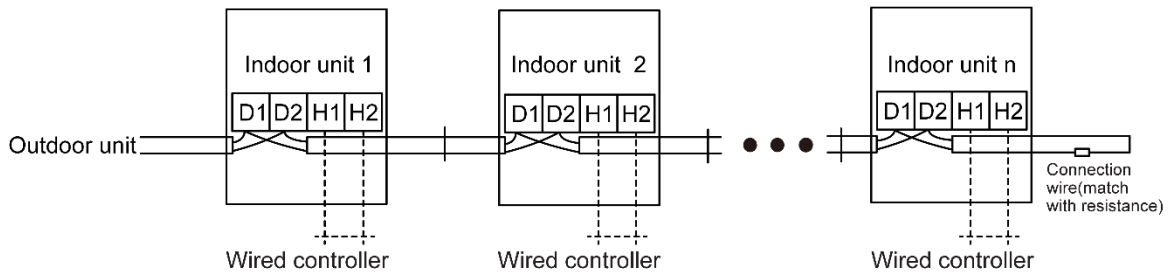


Fig.5.3.1



NOTICE Indoor unit quantity n is according to the outdoor unit capacity.

Fig.5.3.1

Fig.5.3.2

- (4) Fix the communication cable with clamp of electric box.
- (5) For more reliable communication, make sure connect the downstream IDU of the communication bus (terminal D1 and D2), as shown in Fig.5.3.2, terminal resistor to the most terminal resistor is provided with each ODU.

5.4 Connection of Communication Wire for Wired Controller

- (1) Detach the electric box lid.
- (2) Let the communication wire pass through the wiring through-holes.
- (3) Connect the communication wire to terminal H1 and H2 of indoor 4-bit wiring board.
- (4) Fix the communication wire with clamp.
- (5) Wiring instructions of signal receiver and wired controller.

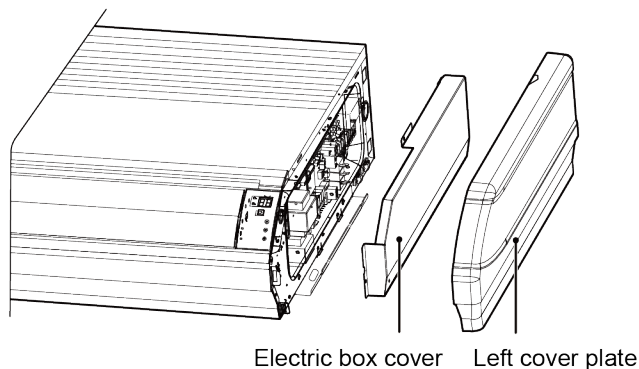


Fig.5.4.1

- (6) Both IDU and wired controller are equipped with signal receiver, and available for remote control respectively (Fig.5.4.2).

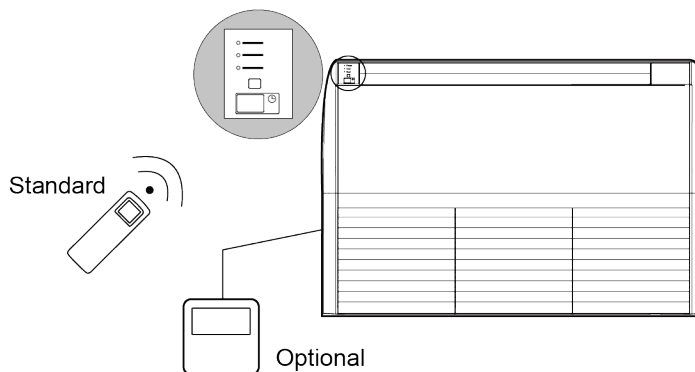


Fig.5.4.2

5.5 Wiring instructions of Wired Controller and Indoor Units Network

- (1) Communication wire of indoor unit and outdoor unit (or indoor unit) is connected to D1, D2.
- (2) Wired controller is connected to H1, H2.
- (3) One indoor unit can connect two wired controllers that must be set as master one and slave one.
- (4) One wired controller can control 16 indoor units in maximum at the same time (As shown in Fig.5.5.1).

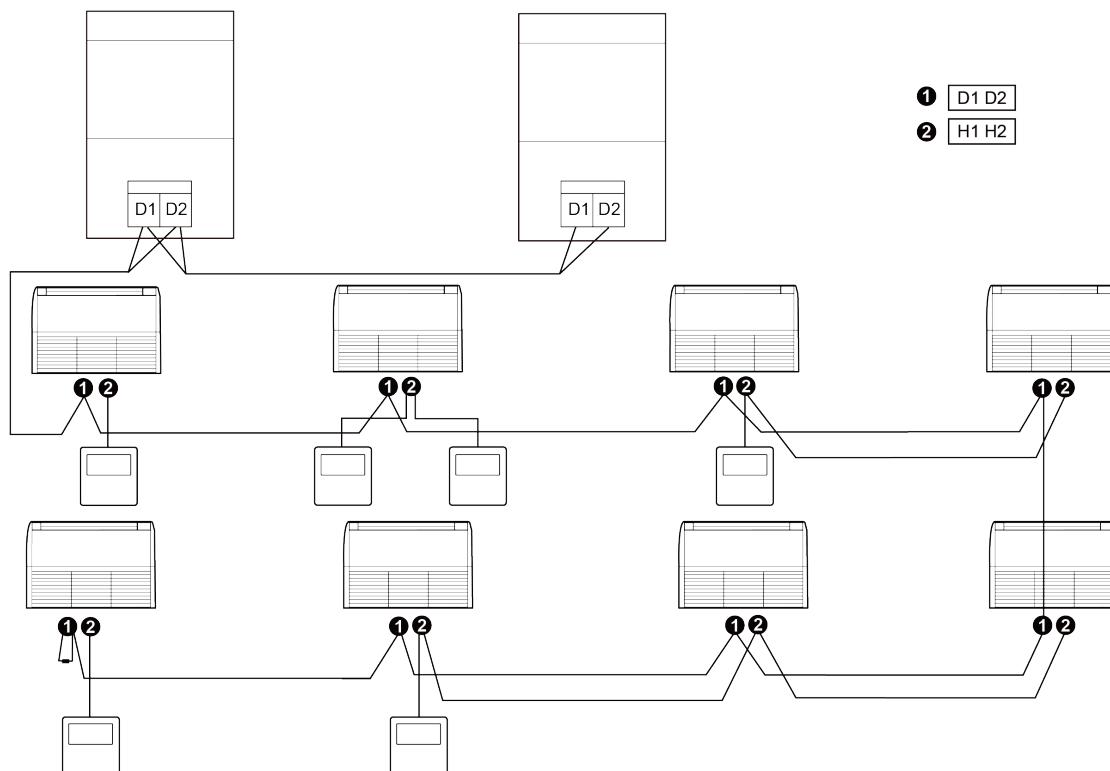


Fig.5.5.1

NOTICE

- (1) The type of indoor units must be the same if they are controlled by the same wired controller.
- (2) When the indoor unit is controlled by two wired controllers, the addresses of the two wired controllers should be different through address setting. Address 1 is for main controller; Address 2 is for slave controller. Detailed setting please refer to the instruction manual of wired controller.

6 Routine Maintenance

NOTICE

- (1) Do not turn off the unit and cut off the main power supply when cleaning the air conditioner to avoid electric shock or injury.
- (2) Stand at solid table when cleaning the unit.
- (3) Do not clean the unit with hot water whose temperature is higher than 45°C to prevent fade or deformation.
- (4) Do not dry the filters by fire, or it may catch fire or become deformed.
- (5) Clean the filter with a wet cloth dipped in neutral detergent.
- (6) Please contact after-sales service staff if there is abnormal situation.

6.1 Cleaning of Filter

- (1) Remove the filters from inlet of IDU. Use a vacuum cleaner to remove dust. If the filters are dirty, wash them with warm water and mild detergent, and then dry the filters in the shade.
- (2) If the unit used in the environment with much dust, please clean it regularly (usually once every two weeks).

6.2 Maintenance before the Seasonal Use

- (1) Check if the air inlet and air outlet of indoor and outdoor unit are blocked.
- (2) Check if securely grounded.
- (3) Check if all the power cord and communication cable are securely connected.
- (4) Check if any error code displayed after energized.

6.3 Maintenance after the Seasonal Use

- (1) Set the unit in fan mode for half a day in a sunny day to dry the inner part of unit;
- (2) When the unit won't be used for a long time, please cut off power supply for energy saving; the characters on the wired controller screen will disappear after cutting off the power supply.

7 Table of Error Codes for Indoor Unit

Error Code	Content	Error Code	Content	Error Code	Content
L0	Indoor Unit Error	LA	Indoor Units Incompatibility Error	d9	Jumper Cap Error
L1	Indoor Fan Protection	LH	Low Air Quality Warning	dA	Indoor Unit Network Address Error
L2	E-heater Protection	LC	ODU-IDU Incompatibility Error	dH	Wired Controller PCB Error
L3	Water Full Protection	d1	Indoor Unit PCB Error	dC	Capacity DIP Switch Setting Error
L4	Wired Controller Power Supply Error	d3	Ambient Temperature Sensor Error	dL	Outlet Air Temperature Sensor Error
L5	Freeze protection	d4	Inlet Pipe Temperature Sensor Error	dE	Indoor Unit CO ₂ Sensor Error
L7	No Master Indoor Unit Error	d6	Outlet Pipe Temperature Sensor Error	dy	Water Temperature Sensor Error
L8	Power Insufficiency Protection	d7	Humidity Sensor Error	C0	Communication Error
L9	Quantity Of Group Control Indoor Units Setting Error	d8	Water Temperature Error	AJ	Filter Cleaning Reminder
db	Special Code: Field Debugging Code				

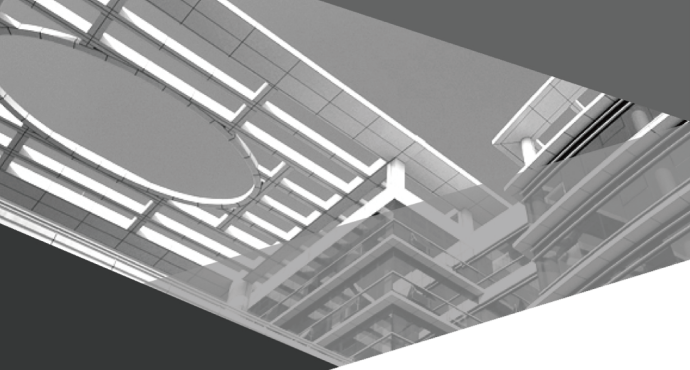
8 Troubleshooting

The air conditioner is not expected to be serviced by users. Incorrect repair may cause electric shock or fire, so please contact an authorized service center for professional service. The following checks prior to contact may save your time and money.

Phenomenon	Troubleshooting
The unit can't start up	<ul style="list-style-type: none"> ① Power supply is not connected ② Circuit breaker tripping caused by leakage of electricity ③ Input voltage is too low ④ Operation button is closed ⑤ Control loop is abnormal
The unit stops after running for a while	<ul style="list-style-type: none"> ① There is obstacle in front of the condenser ② Control loop is abnormal ③ Set the unit in cooling mode when outdoor ambient temperature is higher than 43°C
Poor cooling effect	<ul style="list-style-type: none"> ① The filter is dirty ② Too heavy heat load of room (e.g. too many people) ③ Door or window is open ④ Inlet and outlet of IDU are blocked ⑤ Setting temperature is too high ⑥ The performance of room temperature sensor is getting worse
Poor heating effect	<ul style="list-style-type: none"> ① The filter is dirty ② Door or window is open ③ Setting temperature is too low ④ Refrigerant leakage ⑤ Outdoor ambient temperature is lower than -5°C ⑥ Abnormality of control circuit
Indoor fan doesn't start up during heating	<ul style="list-style-type: none"> ① Placing position of tube temperature sensor head is not suitable ② Tube temperature sensor head isn't inserted well ③ Wiring of tube temperature sensor head is broken ④ Capacitor is leaking electricity

NOTICE

If air conditioner still fails to work normally after checking and handling as described above, please stop using it immediately and contact local service center for assistance.



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