



Owner's Manual

Original Instructions

Commercial Air Conditioners

Multi Variable Air Conditioners

Heat Storage Module

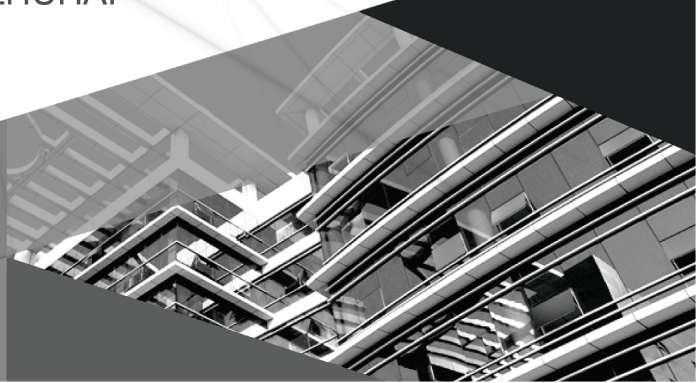
Models:

XRZ180L/A-T

Thank you for choosing this product. 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@cn.gree.com for the electronic version.

GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI



To Users

Thank you for selecting Gree's product. Please read this instruction manual carefully before installing and using the product, so as to master and correctly use the product. In order to guide you to correctly install and use our product and achieve expected operating effect, we hereby instruct as below:

- (1) This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsibility for their safety. Children should be supervised to ensure that they do not play with the appliance.
- (2) In order to ensure reliability of product, the product may consume some power under stand-by status for maintaining normal communication of system and preheating refrigerant and lubricant. If the product is not to be used for long, cut off the power supply; please energize and preheat the unit in advance before reusing it.
- (3) Please properly select the model according to actual using environment, otherwise it may impact the using convenience.
- (4) This product has gone through strict inspection and operational test before leaving the factory. In order to avoid damage due to improper disassembly and inspection, which may impact the normal operation of unit, please do not disassemble the unit by yourself. You can contact with the special maintenance center of our company if necessary.
- (5) For personal injury or property loss and damage caused by improper operation such as improper installation and debugging, unnecessary maintenance, violation of related national laws and rules and industrial standard, and violation of this instruction manual, etc., we will bear no liability.
- (6) When the product is faulted and cannot be operated, please contact with our maintenance center as soon as possible by providing the following information.
 - 1)Contents of nameplate of product (model, cooling/heating capacity, product No., ex-factory date).
 - 2)Malfunction status (specify the situations before and after the error occurs).
- (7) All the illustrations and information in the instruction manual are only for reference. In order to make the product better, we will continuously conduct improvement and innovation. We have the right to make necessary revision to the product from time to time due to the reason of sales or production, and reserve the right to revise the contents without further notice.
- (8) The final right to interpret for this instruction manual belongs to Gree Electric Appliances Inc. of Zhuhai.

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1 Safety Notices (Please be sure to abide)



WARNING: If not abide strictly, it may cause severe damage to the unit or the people.



NOTE: If not abide strictly, it may cause slight or medium damage to the unit or the people.



This sign indicates that the operation must be prohibited. Improper operation may cause severe damage or death to people.



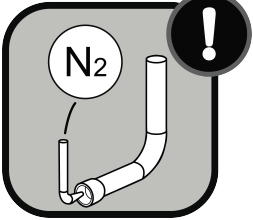
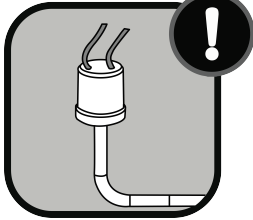
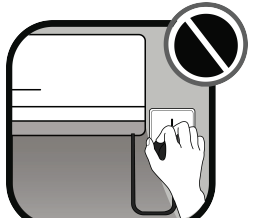

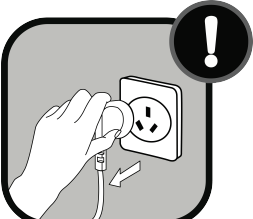

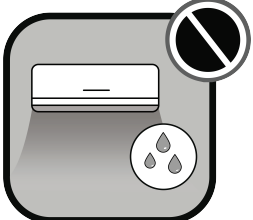

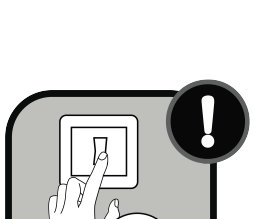
This sign indicates that the items must be observed. Improper operation may cause damage to people or property.



WARNING!

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 .

	<p>Follow this manual to complete the installation work. Please read this manual carefully before turning on or repairing the unit.</p>		<p>Installation should be performed by the distributor or qualified technicians. Do not install the product by yourself. Improper installation may lead to water leakage, electric shock or fire hazard, etc.</p>
	<p>Before installation, please check whether the power supply is complied with that specified on the nameplate and check the safety of the power supply.</p>		<p>When installation is finished, please check whether the pipelines and electric wires are connected correctly to avoid water leakage, refrigerant leakage, electric shock or fire, etc.</p>
<p>Dedicated components</p>	<p>Be sure to use special accessories and parts for installation to prevent water leakage, electric shock and fire hazard, etc.</p>		<p>If refrigerant leakage happens, please ventilate the room immediately.</p>
<p>Dedicated</p>	<p>Diameter of power cord should be large enough. The damaged power cord and connection wire must be replaced with special cables.</p>		<p>When the power cord is connected, please fix the electric box cover properly to avoid safety accidents.</p>

	<p>Never fail to comply with the nitrogen-charging welding process. Do charge nitrogen when welding the pipes.</p>		<p>Never short circuit or cancel the pressure switch to prevent unit damage.</p>
	<p>Never plug in or unplug the power plug directly to turn on or turn off the heat storage module.</p>		<p>Open the door and window frequently to keep good ventilation for avoiding oxygen deficit when gas heater or oil heater is used in the room.</p>
	<p>The heat storage module can be cleaned only when it has been turned off and the power has been cut off; otherwise, it may cause electric shock or injury.</p>		<p>Never spray or flush water towards the heat storage module; otherwise, malfunction or electric shock may happen.</p>
	<p>Do not expose the heat storage module to the moist or corrosive environment.</p>		<p>Do not repair the unit by yourself. Wrong maintenance may cause electric shock or fire hazard. Please contact Gree appointed service center for help.</p>
	<p>If there are any abnormal circumstances (such as burning smell, etc.), please turn off the unit and cut off the main power supply immediately, and then contact Gree appointed service center. If those abnormal circumstances still exist, the unit may be damaged and it may lead to electric shock or fire hazard.</p>	<p style="text-align: center;">-</p>	<p style="text-align: center;">-</p>
<p>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. Install units according to national wiring codes. If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard. An all-pole disconnection device which has at least 3mm clearances in all poles, and disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.</p>			
<p>Gree Electric Appliances, Inc. of Zhuhai will not assume responsibility for any personal injury or property loss caused by improper installation, improper debugging, unnecessary repair or not following the instructions of this manual.</p>			

2 Product Introduction

Names of Key Components

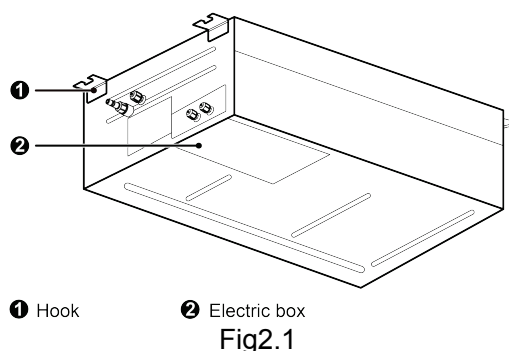


Fig2.1


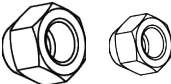


3 Preparations for Installation



NOTICE: Product graphics are only for reference. Please refer to actual products. Unspecified measure unit is mm.

3.1 Standard Fittings

Please use the supplied standard fittings listed below as instructed.

No.	Name	Graphics	Quantity	Purpose
1	Insulating materials		2	Used for the joint of gas pipe and liquid pipe for indoor unit
2	Union nut		2	Used for the joint of gas pipe and liquid pipe for indoor unit
3	Spring washer M8, nut M8, nut with washer M8, washer M8		4	Used for hanging the indoor unit
4	Tieline		6	Wrap the sponge at the connection position
5	Others	User Manual: 1 copy Loosen-leaf of Instruction Manual: 1 copy (harmful substance content table) Qualified Certificate: 1 copy Bar Code : 1 copy		

3.2 Location for Installation

- (1) The top holder must be strong enough to support unit's weight.
- (2) In order to make sure the space for maintenance, please install the heat storage module according to the dimension described below.
- (3) Keep the unit away from heating source, inflammable gas or smoke.
- (4) This is a concealed ceiling type unit.
- (5) Indoor unit, outdoor unit, power cord and electric wire should stay at least 1m from the TV set and radio. Otherwise, these electrical appliances may have image interference and noise (Even if the distance is 1m, when there is strong electric wave, noise may still occur).

(6) The appliance shall not be installed in the laundry.

Unit: mm

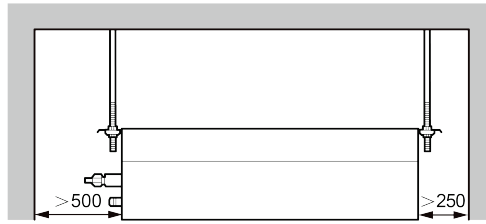


Fig 3.1



NOTICE:

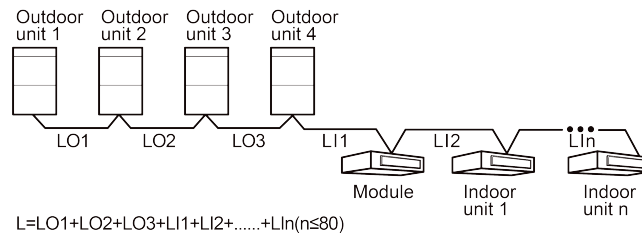
- ① Installation of the unit must be in accordance with National Electric Codes and local regulations.
- ② Improper installation will affect unit’s performance, so do not install the unit by yourself. Please contact local dealer to arrange professional technicians for the installation.
- ③ Do not connect power until all installation work is finished.

3.3 Requirements for Communication Line



NOTICE:

If the unit is installed in the place with strong electromagnetic interference, twisted pair line with shielding function must be applied on the communication wire between heat storage module and indoor unit (outdoor unit).



$$L=LO1+LO2+LO3+LI1+LI2+.....+LIN(n\leq 80)$$

Fig 3.2

Material Type	Total Length L (m/feet) of Communication Cable between Indoor Unit and Indoor (Outdoor) Unit	Wire size (mm ² /AWG)	Material Standard	Remarks
Light/Ordinary polyvinyl chloride sheathed cord. (60227 IEC 52 /60227 IEC 53)	L≤1000m (L≤3280-5/6feet)	≥2×0.75 (≥2×AWG18)	IEC 60227-5:2007	(1) If the wire diameter is enlarged to 2×1 mm ² (2×AWG16), the total communication line length can reach 1500 m (4921-1/4feet). (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 Requirements

(1) Power Cord Size and Air Switch Capacity.

Model	Power Supply	Air Switch Capacity(A)	Minimum Sectional Area of Ground Wire(mm ²)	Minimum Sectional Area of Power Cord(mm ²)
XRZ180L/A-T	220~240V-1Ph-50Hz 208~230V-1Ph-60Hz	6	1.0	1.0



NOTICE:

- ① Use copper wire only as unit's power cord. Operating temperature should be within its rated value.
 - ② If the power cord is more than 15m long, please increase properly the sectional area of power cord to avoid accident due to overload.
 - ③ Above selection requirements: Power cord size is based on BV single-core wire (2~4pc) at 40°C ambient temperature when laying across plastic pipe. Air switch is D type and used at 40°C. If actual installation condition varies, please lower the capacity appropriately according to the specifications of power cord and air switch provided by manufacturer.
- (2) Install cut-off device near the unit. The minimum distance between each stage of cut-off device should be 3mm (The same for both heat storage module and outdoor unit).
- (3) If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.

4 Installation Instructions

4.1 Installation of Indoor Unit

4.1.1 Outline Dimension and Installation Spots

Equip with a service port after lifting the unit. For the convenience of maintenance, the service port should be on one side of the electric box and below unit's lower level.

Below are the outline dimension applicable to heat storage module of XRZ180L/A-T:

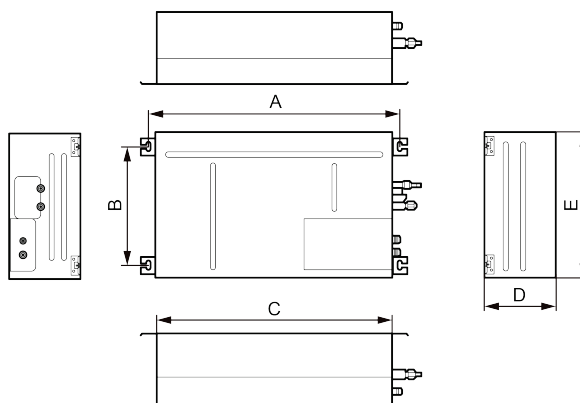


Fig 4.1

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

Unit: mm

Model \ Item	A	B	C	D	E
XRZ180L/A-T	780	364	730	220	450

4.1.2 Punching of Bolt Spots and Bolt Installation

Punch holes on the installation area according to the 4 spots on the paper pattern; the punching diameter may refer to the diameter of expansion bolt, about 60mm to 70mm depth, as shown in Fig 4.2

Unit: mm

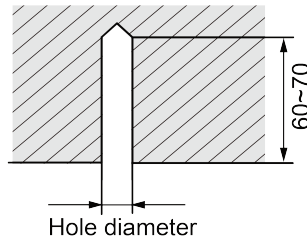


Fig 4.2

Insert the expansion bolt M10 into the hole and then drive the iron nail into the bolt, as shown in Fig 4.3.

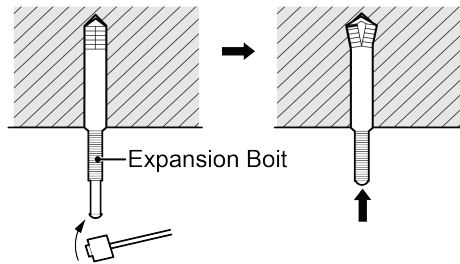


Fig 4.3

NOTICE:

The length of bolt depends on the installation height of the unit, bolts are field supplied.

4.1.3 Lift the Unit

Lift up the unit to the ceiling and secure it on the bolt. Use specialized nut to secure the unit.

Unit: mm

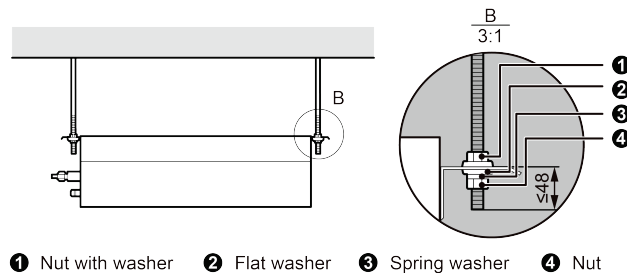


Fig 4.4



NOTICE:

- ① Before installation, please finish the preparation work of all pipes (connection pipe) and wires (wired controller wire, connection wire of IDU and ODU) that need to be connected with the indoor unit.
- ② Punch holes on the ceiling (air return opening or air inlet). Ceiling may have to be strengthened to make it level and to prevent it from vibration. You may consult user or constructor for details.
- ③ If the ceiling is not strong enough, you can install a beam bracket in a corner and secure the unit on the beam.

4.1.4 Horizontal Alignment

After the heat storage module is installed, remember to check the horizontal status of the whole unit. It should be horizontal from front to back and slant 1% from left to right, following the drainage direction, as shown in Fig 4.5.

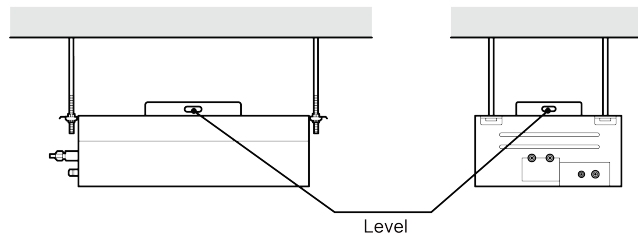


Fig 4.5

4.2 Pipe Connection

- (1) Direct the flaring of copper pipe to the center of screwed connection and then screw the flaring nut tight as shown in Fig 4.6
- (2) Use a torque wrench to tighten up the flaring nut until the wrench gives out a click sound.

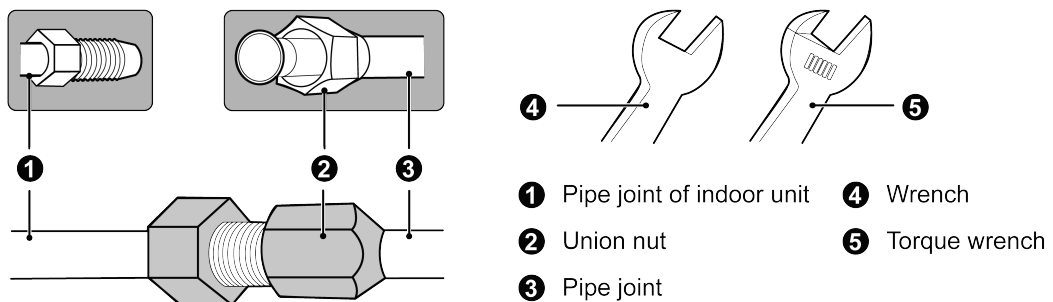


Fig 4.6

Torque for tightening nut	
Pipe diameter (mm)	Torque (N·m)
Φ6.35	15~30
Φ9.52	35~40
Φ12.7	45~50
Φ15.9	60~65

- (3) The pipe should not be bent too much or it may crack. Use a pipe bender when bending the pipe.
- (4) Use a sponge to wrap the uninsulated connection pipe and the joint. Then tie it tight with a plastic tape.

5 Wire Connection



Before obtaining access to terminals, all supply circuits must be disconnected.

- (1) For personal safety, the air conditioner must be properly grounded.
- (2) Read carefully the voltage indicated on the nameplate before connecting wires. Then connect wires according to the wiring diagram. Improper wiring will lead to abnormal operation or damage the unit.
- (3) Power capacity should be large enough. Sectional area of room wires should be above 2.5mm².
- (4) For unit's power supply, please use specialized branch circuit and specialized power socket.
- (5) All wiring must comply with standards to ensure safe and correct operation.
- (6) Install specialized branch circuit breaker according to related laws and regulations and electrical standards.
- (7) All wiring must use pressure terminal or single wire. Multi-twisted wire that connects directly to the wiring board may cause fire hazard.
- (8) Keep the wires away from refrigerant pipe, compressor and fan.
- (9) Do not alter the inner wires of air conditioner. Manufacturer does not assume responsibility for damage or abnormal operation due to this reason.
- (10) If the unit is installed in places with strong electromagnetic interference, it's recommended to use twin-twisted shield wire. During wire connection, please pay attention that the metal shield layer of the twin-twisted wire must be grounded (outer case) in order to prevent the unit from electromagnetic interference.
- (11) Communication line should be separated from the power cord and the connecting wire of IDU and ODU.
- (12) If the project needs higher static pressure, you can set it through the wired controller.

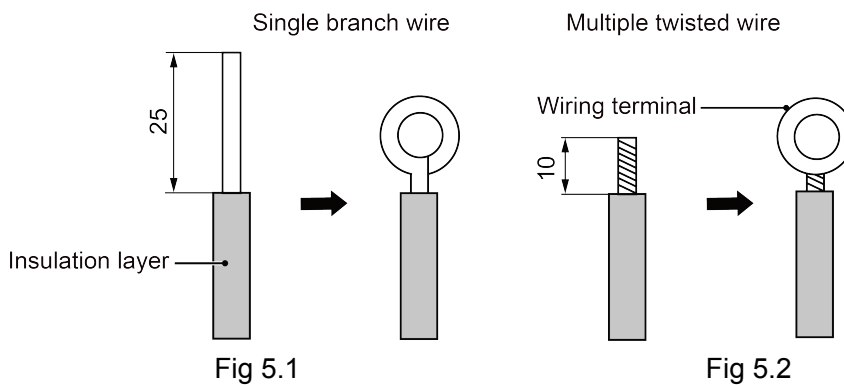
5.1 Connection of Wire and Wiring Board Terminal

- (1) Connection of Single Branch Line (shown in Fig 5.1)
 - 1) Use a wired stripper to strip away about 25mm of the insulation layer at the end of single branch line so that the single-core wire can be exposed.
 - 2) Use a screwdriver to remove the terminal screw on the terminal board.
 - 3) Use a plier to bend the end of single branch line until it forms a circle that has a similar size with the screw.
 - 4) Lead the screw across the circle of the single branch line and fix it on the wiring board.

(2) Connection of Multi-twisted Wire (shown in Fig 5.2)

- 1) Use a wired stripper to strip away about 10mm of the insulation layer at the end of multi-twisted wire.
- 2) Use a screwdriver to remove screw on the wiring board of air conditioner.
- 3) Use a round terminal fastener or a plier to securely fasten the round terminal with each core wire of the multi-core wire.
- 4) Confirm each position of core wire on the round terminal and then use a screwdriver to tighten the terminal screw.

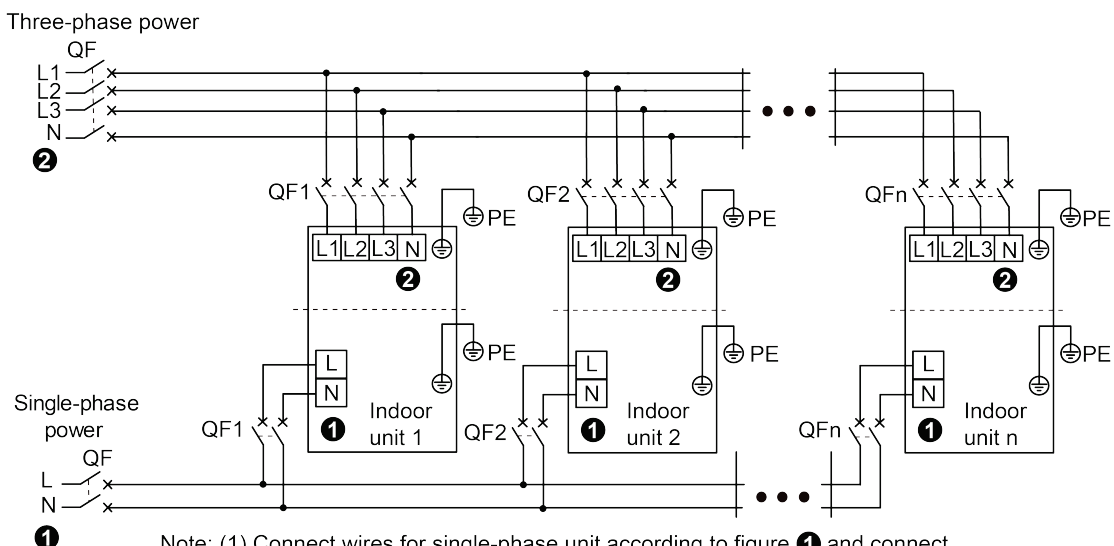
Unit: mm



5.2 Power Cord Connection



Power supply of each indoor unit and heat storage module must be from the same source.



- Note: (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 5.3

For heat storage module that uses single-phase power

- 1) Remove the cover of electric box of heat storage module.
- 2) Lead the power cord across the rubber ring.

- 3) Connect the power cord to the L, N terminals and the grounding screw.
- 4) Fasten the power cord with a wire clamp.

5.3 Connection of Communication Line of Heat Storage Module

- (1) Open the cover of electric box of heat storage module.
- (2) Lead the communication line across the rubber ring.
- (3) Connect the communication line to terminal D1 and D2 on the 2-digit wiring board of heat storage module, as shown in Fig 5.4.

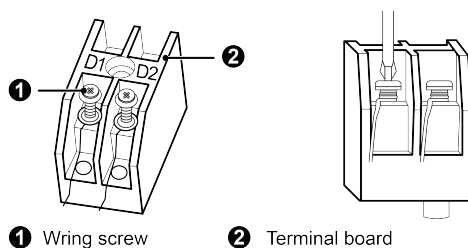
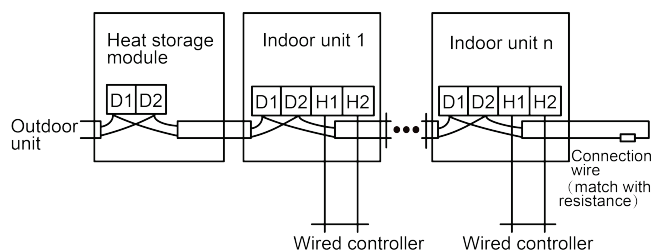


Fig 5.4



Note: Indoor unit quantity n is according to the outdoor unit capacity.

Fig 5.5

- (4) Secure the communication line with the wire clamp on the electric box.
- (5) In order to ensure the reliability of communication between heat storage module and ODU and the communication among each IDU, add a matched resistance(supplied in a package before ex-factory) on the wiring board of the last indoor unit in a series connection. The matched resistance should be connected in parallel between terminal screw D1 and D2, as shown in Fig 5.5.

6 General Maintenance



WARNING!

- ① Before the cleaning, turn unit off and disconnect power supply. Otherwise, it may result in electric shock or personal injury.
- ② When cleaning the heat storage module, please use stable standing platform.
- ③ Do not clean the unit using hot water of over 45 to prevent the unit from losing color or deforming.
- ④ Volatile liquid like thinner or gasoline will damage the heat storage module.
- ⑤ If any problem, please contact after-sales service agent for assistance.

6.1 Maintenance Before Use-season

- (1) Check whether grounding wire is in good condition.
- (2) Check whether wire connection is correct.

6.2 Maintenance After Use-season

If you won't use the heat storage module for a long time, disconnect power please.

7 Malfunction Codes of IDU

Error Code	Content	Error Code	Content	Error Code	Content
d4	Inlet Pipe Temperature Sensor Error	d6	Outlet Pipe Temperature Sensor Error	dA	Indoor Unit Hardware Address Error
C0	Communication malfunction between IDU, ODU and IDU's wired controller	C5	Alarm because project code of IDU is inconsistent	—	—

8 Troubleshooting

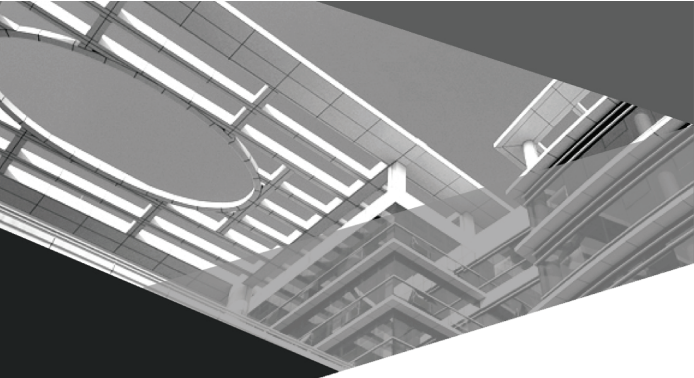
If your heat storage module is not working well, please check the following table first before asking for service:

Phenomenon	Troubleshooting
Alarm because project code of IDU is inconsistent	Press SW1 and SW2 buttons on main board of heat storage module at the same time for at least 5s and release. Project code is displayed on digital tube. Press SW1(UP)button or SW2(DOWN)button to select the project code. Press SW3 to make it confirmed.



NOTICE:

If heat storage module 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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