

USE AND INSTALLATION INSTRUCTIONS

APPLICABLE MODEL:

B531(E)

Thank you very much for purchasing this Interface unit. Please read this use and installation instructions carefully before installing and using this appliance and keep this manual for future reference.



Version No. 2354406-C

1. Safety precautions

1.1 Cautions important notice

Important notice

- We pursue a policy of continuing improvement of products. The right is therefore reserved to vary specifications without notice.
- Our liability shall not cover occasional damage accidents arising from using this equipment in specific environment.
- No part of this manual may be reproduced without written permission.
- Signal words (DANGER, WARNING and CAUTION) are used to identify levels of hazard seriousness.
- Definitions for identifying hazard levels are provided below with their respective signal words.

▲ DANGER : Hazards or unsafe practices which WILL result in severe personal injury or death.

▲ WARNING : Hazards or unsafe practices which COULD result in severe personal injury or death.

▲ CAUTION : Hazards or unsafe practices which COULD result in minor personal injury or product or property damage.

NOTE: Hints and instructions for operation, maintenance and repair are as shown above.

- Installation, maintenance and care of equipment must be performed by qualified professionals.
- If you have any doubt, please contact with your dealer or the service center.
- This manual should be considered as a permanent part of the equipment and should remain with the air conditioning equipment.

1.2 Checking product received

- Upon receiving this product, inspect it for any shipping damage. Claims for damage, either apparent or concealed, should be filed immediately with the shipping company.
- Please check whether accessories are complete by referring to packing list.

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- Check the model No., electrical characteristics (power supply, voltage and frequency) and accessories to determine whether they are correct. The standard utilization of the unit shall be explained in these instructions. Therefore, the utilization of the unit other than those indicated in these instructions is not recommended.
- Follow local codes and regulations when installing it.
- Please contact your local agent, as the occasion arises. Our company disclaim all responsibility for changing the equipment without our company's written consent.

1.3 Security overview

▲ DANGER

- Do not install by yourself. Please entrust professionals or authorize your dealer to install. If you install by yourself or install improperly, it may cause electric shock or fire accident.
- Installation works shall be carried out correctly by referring to this installation manual. If not, it may cause electric shock or fire accident, etc.
- Never operate with wet hands or spray water to the product. All these products are equipped with electrical components, spraying of water may cause severe electric shock hazard or short-circuit accident.
- Never touch or adjust safety devices in the equipment. If these devices are touched or adjusted, it may cause a serious accident.
- Never open enclosure of equipment to repair without turning OFF the main power supply.
- Cables of specified specifications shall be used during wiring, be reliably connected and avoided from being nipped by enclosure. The terminal connection shall be secured reliably, and the cables and wiring terminals shall be avoided from being subjected to any

1. Safety precautions

external force, or the wiring would be poor and would cause overheating, fire or other hazards.

- During installation, please use the components provided with the equipment together or appointed components. If any component which is not appointed by our company is used, it may cause electric shock, fire or other accidents.
- Please stably install to a place where weight of the machine can be supported fully, or it may lead to falling of machine body and injury.
- After the equipment is installed, turn it on to carry out electric leakage test.

▲ CAUTION

- Do not install the indoor unit, outdoor unit, interface unit, wired controller or cable within approximately 3 meters from strong electromagnetic wave radiators (such as medical equipment).
- Do not step or put any material on the product.
- In order to ensure that the temperature sensor in wired controller operates normally, please select installation location according to followings:
 - A. Places where average room temperature can be detected.
 - B. Places which is kept out of direct sunlight.
 - C. Places where there is no heat/cold source nearby.
- Do not play with the interface unit.

▲ WARNING

- Do not install in following places, or it may cause fire, machine deformation or faults.
 - *Places where oil (including machinery oil) mist and steam drift.
 - *Places where sulfide gas drifts (such as in hot spring).
 - *Places where there are inflammable gases.
 - *Coastal areas and the places where the machine body will be corroded by salt, strong acid or alkali.

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*Places where the temperature is high or there is open fire, or it may cause heat generator or fire.

*Places which are close to the machine generating electromagnetic wave. The electromagnetic wave may influence remote control system and disturb normal operation of controller.

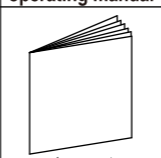

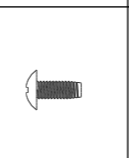
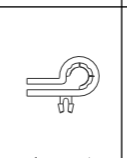
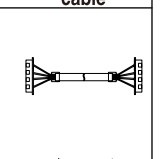
*Places where there is a lot of moisture or that may be wetted. Once water enters into equipment, it may not only cause electric shock, but also may cause fault of internal electrical components.

- Do not carry out machine installation, wire connection or other installation works if you have not read this installation manual.
- Do not use any sprays such as insecticide, lacquer, hair spray or other poisonous gases within approximately 1 meter from the system.
- If circuit breaker or fuse is often activated, contact your local dealer timely.
- Please carry out installation construction and wire connection construction by strictly referring to this installation and maintenance manual, or it may cause electric shock and fire accident, etc.
- Never put any unrelated material on or in the unit.
- Protect the wires and electrical parts from rats or other small animals. If not, rats may gnaw at the unprotected parts and at the worst, a fire may occur.
- Tighten cables because external stress may cause fire hazard.
- If indoor distribution board or fuse is often activated, stop the air-conditioning system and contact local agent.
- The appliance shall be installed in accordance with national wiring regulations.
- The appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.
- Children being supervised not to play with the appliance.

2. Installing the zone control interface unit

2.1 Checking accessories

Check the following accessories are included with the unit before installation:

Installation and operating manual	Screw bolt	Screw	Wire clamp	Connecting cable
 (1pc)	 (5pcs)	 (1pc)	 (1pc)	 (1pc)

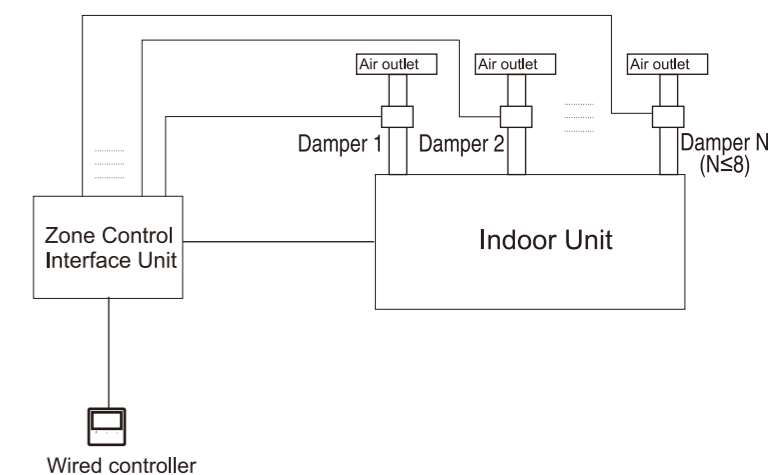
2.2 Choosing the zone control interface unit installation

- Do not install the interface unit in outdoor location as it is designed for indoor installation only. (The interface board and casing are not waterproof.)
- Avoid locations where the unit is exposed to direct sunlight or other sources of heat.
- Select a location where easy wiring access to the power source is available.
- Avoid locations where combustible gases may leak, be produced, flow, or accumulate.
- Select a level location that can bear the weight and vibration of the unit.
- Avoid locations where the unit is exposed to oil, steam, or sulfuric gas.
- Do not install in location that is hot or humid for long period of time.

2. Installing the zone control interface unit

2.3 Installing the zone control interface unit

- The zone controller is primarily responsible for controlling the dampers in each room. It is connected in series between the indoor unit of the air conditioner and the wired controller, executing the damper control commands set by the wired controller, forwarding the wired controller commands to the indoor unit, and transmitting indoor unit information to the wired controller, as shown in the fig.2.3.1 below.



<Fig.2.3.1>

Notes:

- (1) When connecting the damper to the zone control interface unit, it is necessary to connect according to the port order of the zone controller, i.e., ZONE1, ZONE2, and ZONE3. The connections cannot be skipped.
- (2) There can only be one damper connected to each damper port of the zone control interface.

2. Installing the zone control interface unit

(3) The damper must meet the following parameter requirements, we recommend "Polyaire"/ "Tradies choice" brands as option. (Fig.2.3.2 for reference).

Input			Output	
Power supply	Maximum operating current (RMS)	Full close or Full open	Rate	Torque
AC24V~50Hz	250mA	15s	1RPM	2.5Nm

Note: The damper motor wire is RJ12 (6-polar, 6-core).

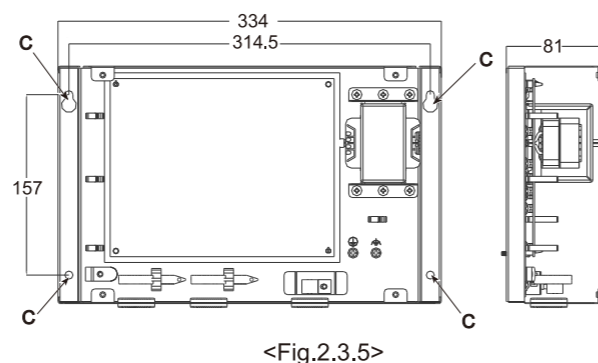
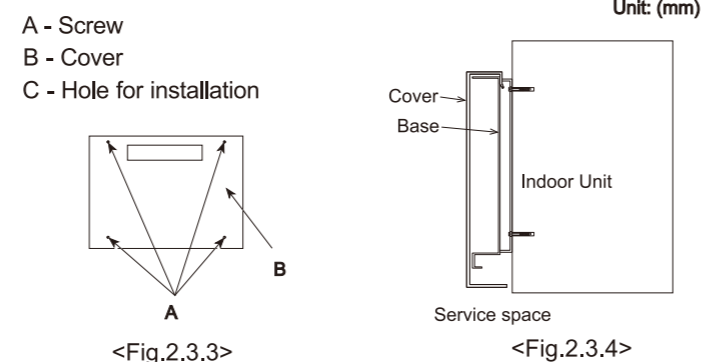


<Fig.2.3.2>

2. Installing the zone control interface unit

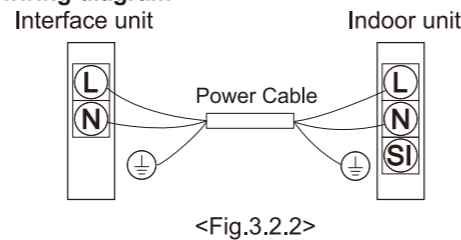
- Remove 4 screws from interface unit and remove the cover by sliding it upward (see Fig. 2.3.3).
- Install the screws (select accessory screws or locally supplied as required) in the holes (C hole).

* To prevent the unit from falling off, select the attached screws and secure the base levelly to the appropriate wall location (See Fig. 2.3.4).



3. Electrical work

• Electrical wiring diagram



• Cable specification

Wiring Wire No. x size (mm ²)	Power Source Cable Size (Interface unit-Indoor unit)
	3 × 1.5mm ²

* Max. cable length is 45m.
If 2.5mm² used, Max. cable length is 50m.

Notes:

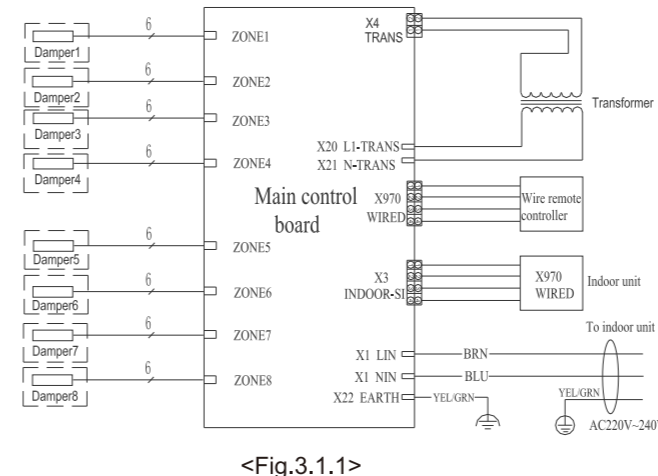
- Wiring size must comply with the applicable local and national code.
- Interface unit/ indoor unit connecting cords shall not be lighter than polychloroprene sheathed flexible cord. (Design 60245 IEC 57)
Interface unit power supply cords shall not be lighter than polychloroprene sheathed flexible cord. (Design 60227 IEC 53)
- Install an earth longer than other cables.

3.3 External function setting

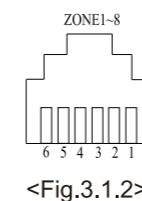
- The function implementation of the zone control interface unit is controlled by a wired controller with a zone control function, which can set the name, on/off status, valve opening, and group control of the damper. Please refer to the wire controller's technical data for specific setting methods.

3. Electrical work

3.1 Electrical wiring diagrams



Notes: The ZONE interface is defined as shown in Fig.3.1.2
1. 1 and 2 are used to control the damper to open.
2. 3 and 4 are used for the common point.
3. 5 and 6 are used to control the damper to close.



4. Troubleshooting

4.1 Troubleshooting

- LED lights on the zone control panel flash when the zone control interface unit is defective. To check if the zone control interface unit is faulty, please open the top cover and look at the fault light on the board.

There are three LED lights on the main control panel: LED1, LED2, and LED3. The fault prompt is explained as follows (See Fig. 4.1.1).

LED1 flashing:

Error reading EE data from zone controller after power on.

Troubleshooting:

Replace the zone controller's main control board.

LED2 flashing:

Communication failure between zone control interface unit and wired controller.

Troubleshooting:

Check the connection between the zone control interface unit and the wired controller, if the connection is good, please replace the zone controller's main control board or wired controller.

LED3 flashing:

Communication failure between zone control interface unit and indoor unit.

Troubleshooting:

Check the connection between the zone control interface unit and the indoor unit, if the connection is good, please replace the zone controller's main control board or check the indoor unit end.

3. Electrical work

3.2 Electrical connection



All electrical work should be carried out by a suitably qualified technician.

Failure to comply with this could lead to electrocution, fire, and death.

All wiring should be according to national wiring regulations.

Connections should be made to the terminals indicated in the following figures.

Use ring terminals and insulate the wires. Tighten the screw from the bottom terminals first.

Notes:

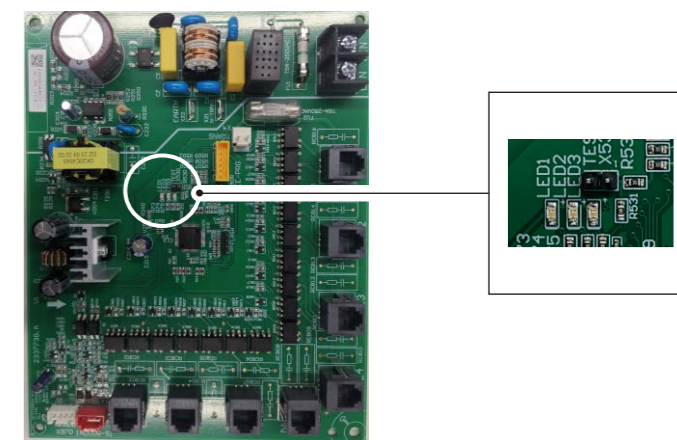
- Do not run the low voltage cables through a slot that the high voltage cables go through.
- Do not bundle power cables together with other cables.
- Bundle cables by using clamps.

4. Troubleshooting

Notes:

If other faults occur, such as a malfunctioning damper, please check the connecting wires first, then troubleshoot whether the damper itself is malfunctioning.

The damper is a market standard component. If the system cannot run properly due to issues with the damper itself, such as its inability to open/close, being stagnant or malfunctioning, these faults cannot be identified through the zone control interface unit. Please replace the damper for such problems.



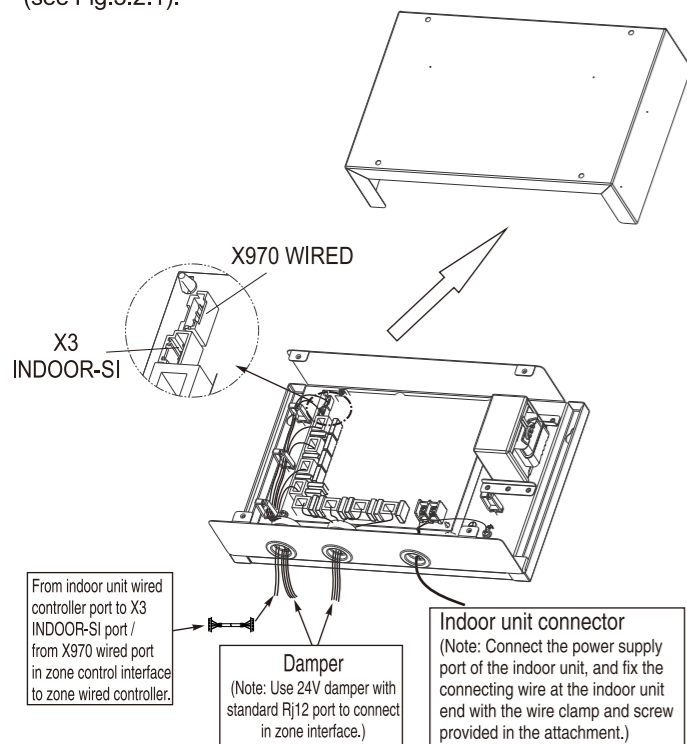
<Fig.4.1.1> Control board

3. Electrical work

• Wiring connection

Remove 4 screws from interface unit and remove the cover by sliding it upward (see Fig. 2.3.3).

Connection with indoor unit and wired controller by connecting cable. (see Fig.3.2.1).



<Fig.3.2.1>