

WT05520X01

# MITSUBISHI ELECTRIC

Air Conditioning For Building Application

## Control box replace kit PAC-KE70HS-E



### Installation Manual

This installation manual contains only the description of how to install the Control box replace kit PAC-KE70HS-E. For information about how to wire and how to install air conditioning units, see the installation manual for them.

For your safety, first be sure to read “(1) Safety Precautions” described below thoroughly and then install the Control box replace kit PAC-KE70HS-E correctly.

## 1 Safety Precautions

- The following two symbols are used to denote dangers that may be caused by incorrect use and their degree:

 <b>WARNING</b>	This symbol denotes what could lead to serious injury or death if you misuse the PAC-KE70HS-E.
 <b>CAUTION</b>	This symbol denotes what could lead to a personal injury or damage to your property if you misuse the PAC-KE70HS-E.

- After reading this installation manual, keep it in a place where the final user can see it anytime he or she wants to it. When someone moves, repairs or uses the PAC-KE70HS-E, make sure that this manual is forwarded to the final user.

### WARNING

**Always have the unit installed by Authorized Mitsubishi Representative or similar professional.**  
Improper installation by the user could result in problems such as water leakage, electric shock or fire.

**Always use the designated cables and connect them properly. When connecting the terminals, make sure that external forces from the cable is not being conveyed to the terminal and then tighten it securely.**  
Improper or loose connections could cause excessive heat or fire.

**Only use Mitsubishi-approved accessories, such as an air cleaner, humidifier or electric heater.**  
Always have such accessories installed by an Authorized Mitsubishi Representative or similar professional. Improper installation by the user may result in water leakage, electric shock or fire.

**Install the unit according to this Installation Manual.**  
If the unit is installed improperly, water leakage, electric shock or fire may result.

**Have all electric work performed by a properly licensed electrician. Electric work should be performed in strict adherence to procedures to this Installation Manual. Always provide a dedicated power supply.**  
If the capacity of the power supply is inadequate, it could result in problems such electric shock or fire.

**Never modify the unit and always have repairs performed by an Authorized Mitsubishi Representative.**  
Improper repair could result in problems such water leakage, electric shock or fire.

### CAUTION

#### PRECAUTIONS BEFORE INSTALLATION

**Never use for special applications such as storing food, plants, precision equipment or art.**  
The quality of these items may deteriorate.

**Never use the unit in special environments.**  
Special environments with high concentrations of oil, steam or sulfuric gases will reduce the performance of the air condition and cause its parts to deteriorate.

**Never install the unit where run-off could result in damage.**  
If the humidity in the room exceeds 80% or if the drain becomes clogged, water may drain off of the indoor unit. When the unit is used for heating, there may be drainage from the outdoor unit. If required, provide collector drain for the outdoor unit.

**Always provide adequate signal noise protection when installing in facilities such as hospitals and communication stations.**

Equipment at these facilities, such as inverters, in-house generators, high-frequency medical equipment, two-way communication equipment, may cause the air conditioner to operate improperly. Conversely, the signal noise from the air conditioner may affect the operation of medical equipment and two-way communication equipment and this could interfere with the medical treatment being given a patient or cause disturbances or interference in video broadcasting equipment.

#### PRECAUTIONS BEFORE REMOVE AND ELECTRIC WORK

**Route wiring so that there is no tension.**  
Tension could cause the wire to break and this could result in excessive heat or fire.

**Dispose of packing materials properly.**

**Use care when transporting the unit.**

- Always use two or more people for lifting a product weight 20 kg. or more.
- Some products are packaged with plastic wrapping bands. Never use these for lifting or transporting the product.
- Never touch the fins on the heat exchanger. They are sharp and could cause cuts.
- Never allow children to play with the plastic bags used for packaging. Always tear them up when disposing. A child could suffocate in these bags.

#### PRECAUTIONS BEFORE TEST RUN

**Never touch the switch with wet hands.**  
Electric shock could occur.

**Never operate the air conditioner with the panel or guard removed.**  
The hand could come in contact with rotating, hot or high-pressure components. They could cause electrical shock or entanglement.

**Never operate the air conditioner with the air filter removed.**  
Particles will enter into the air conditioner and cause damage.

**Never turn off the power supply immediately after stopping the unit.**  
Wait five minutes or more before turning off the power supply. Turning off the power supply before that time could result in water leakage or damage.

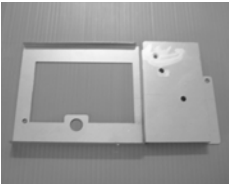
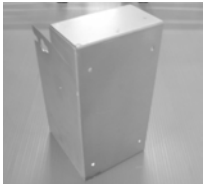
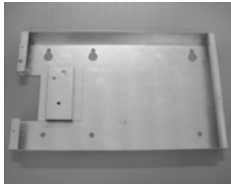

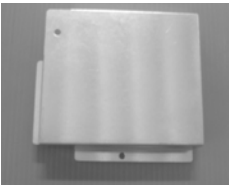








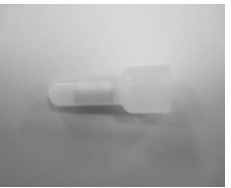

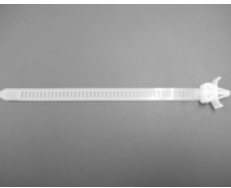




## 2 Confirming the Supplied Parts

### 1. Model names and applicable models

Model name	Applicable types
PAC-KE70HS-E	PEFY-P15VMS1(L)-E, PEFY-P20VMS1(L)-E, PEFY-P25VMS1(L)-E PEFY-P32VMS1(L)-E, PEFY-P40VMS1(L)-E, PEFY-P50VMS1(L)-E PEFY-P63VMS1(L)-E
	PEFY-P06NMSU-E, PEFY-P08NMSU-E, PEFY-P12NMSU-E PEFY-P15NMSU-E, PEFY-P18NMSU-E, PEFY-P24NMSU-E
	SEZ-KD25VA(L), SEZ-KD35VA(L), SEZ-KD50VA(L) SEZ-KD60VA(L), SEZ-KD71VA(L)
	SEZ-KD09NA, SEZ-KD12NA, SEZ-KD15NA, SEZ-KD18NA
	PEA-A12AA, PEA-A18AA

### 2. Provided parts

Check that the packet includes the following parts in addition to this installation manual.

Parts	① PLATE A	② PLATE B	③ PLATE C	④ COVER A
Q'ty	1	1	1	1
Shape				
Parts	⑤ COVER B	⑥ LEAD WIRE MOTOR	⑦ LEAD WIRE LEV	⑧ LEAD WIRE THM A
Q'ty	1	1	1	1
Shape		 White 7-pin connector	 White 6-pin connector	 White 4-pin connector
Parts	⑨ LEAD WIRE THM B	⑩ LEAD WIRE EARTH	⑪ LEAD WIRE PUMP	⑫ LEAD WIRE FS
Q'ty	1	1	1	1
Shape	 Red 2-pin connector	 Ring terminal on both ends	 Blue 3-pin connector	 White 4-pin connector
Parts	⑬ INSULATOR	⑭ Connecting terminals	⑮ BAND	⑯ CLAMP
Q'ty	3	4	6	4
Shape				
Parts	⑰ SCREW 1	⑱ SCREW 2	⑲ SCREW 3	⑳ FERRITE CORE
Q'ty	2	4	5	1
Shape	 4X10	 4X10 with a washer	 5X10 with a washer	

When installing the control box replace kit on the air inlet on the unit, ⑫ LEAD WIRE FS is not used.

### 3 Installing the Control box replace kit

#### 3-1 Removing the control box.

- (1) Remove the CONTROL BOX COVER from the unit by unscrewing the two screws on the cover. (Fig. 1)  
\* Keep the screws for using them later.

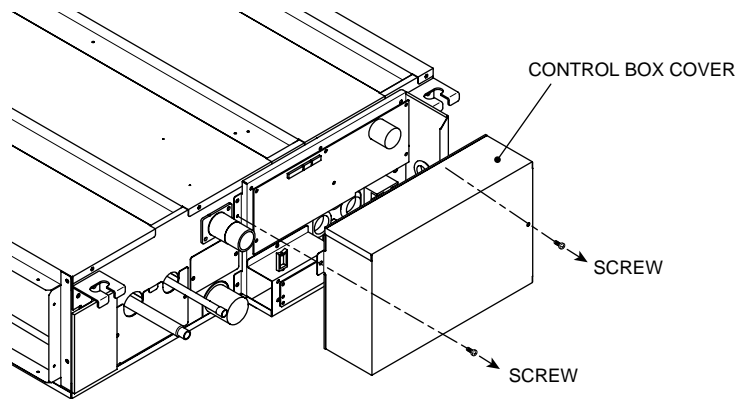


Fig. 1

- (2) Remove the each wiring from the control board. (Fig. 2)  
The wiring to be removed varies depending on the model. Refer to the table1.  
\* Fig.2 shows PEFY-P\*VMS1-E.



Fig. 2

Table1

	CNMF(Motor)	CN60(LEV)	CNP(Pump)	CN4F(FS)	CN44(Piping sensor)
PEFY-P*VMS1-E	○	○	○	○	○
PEFY-P*VMS1L-E	○	○	—	—	○
PEFY-P*NMSU-E	○	○	○	○	○
SEZ-KD*VA(L)	○	—	—	—	○
SEZ-KD*NA	○	—	○	○	○
PEA-A*AA	○	—	○	○	○

- (3) Remove the CONTROL BOX from the unit by unscrewing the three screws on the unit. (Fig. 3)  
\* Keep the screws for using them later.
- (4) Remove the return air sensor from the control box. (Fig. 3)

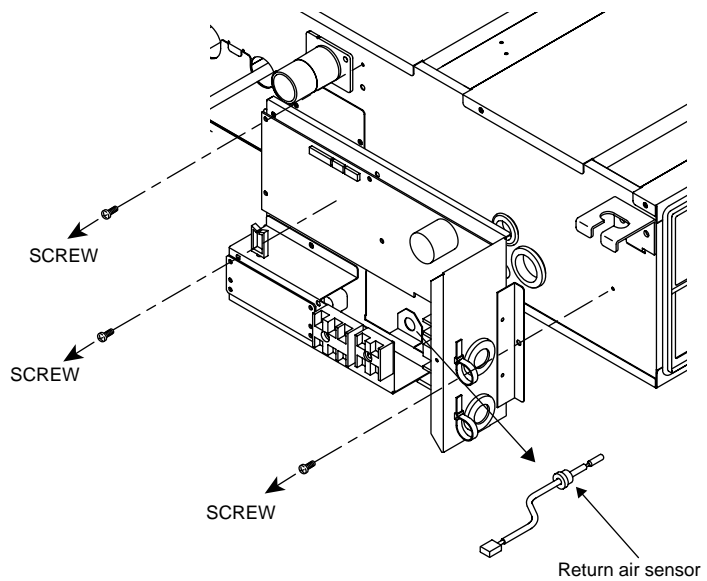


Fig. 3

(5) Remove the filter from the unit, and pull out the excess wire that is clamped down with CLAMP (a) to the outside of the unit. (Fig. 4)

(6) Unclamp the wire from CLAMP (b), install ②FERRITE CORE on the motor wire, and wrap ⑬BAND around it. (Fig. 5)

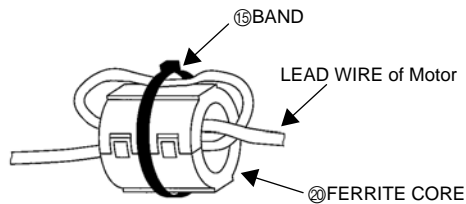


Fig. 5

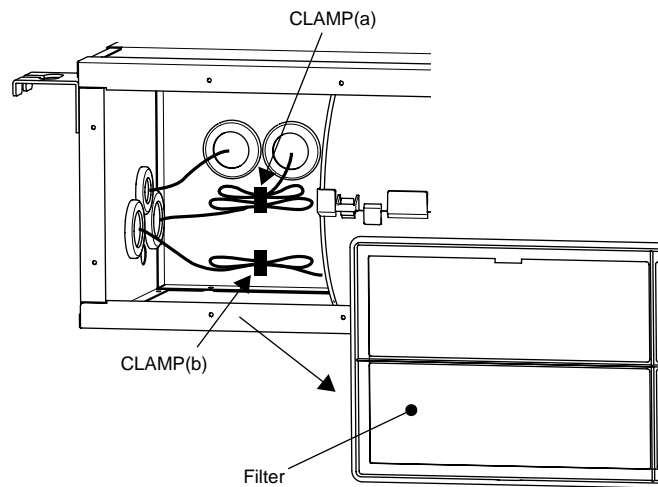
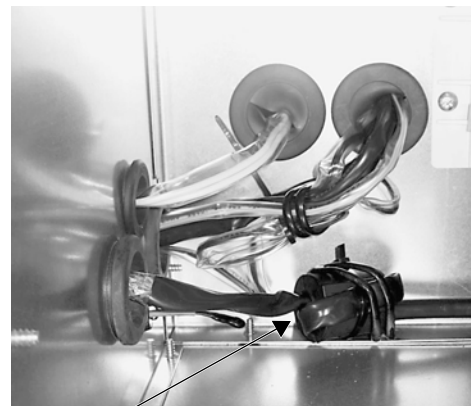


Fig. 4

(7) Clamp down the wires with CLAMP (a) and (b) as they were.

\* Clamp down the ②FERRITE CORE along with the wire with CLAMP (b). (Fig. 6)

(8) Replace the filter.



②FERRITE CORE

Fig. 6

(9) Install ⑬INSULATORS over the exposed nail tips on the back of the control box. (Fig. 7)

\* They are used to prevent the screw tips from damaging the wires.

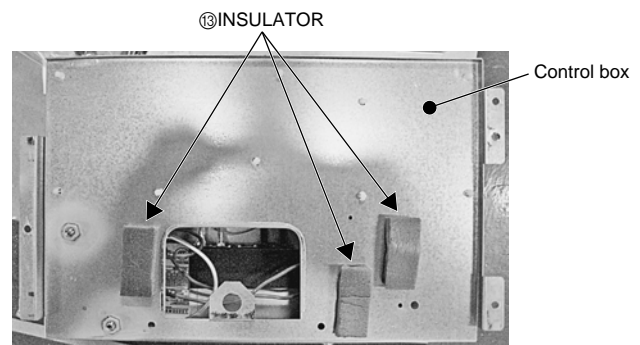


Fig. 7

### 3-2 Installing the components

- (1) Install ①PLATE A and the return air sensor to the unit. Unscrew the screw (a) from the unit and screw ①PLATE A onto the unit with the screw (a). (⑰screw) (Fig. 8)  
When installing the PLATE A and the return air sensor, put the wiring through the opening of the PLATE A.

\* Install the return air sensor as shown in the Fig.9.

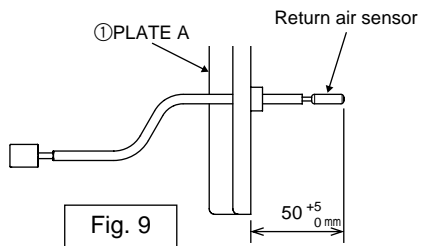


Fig. 9

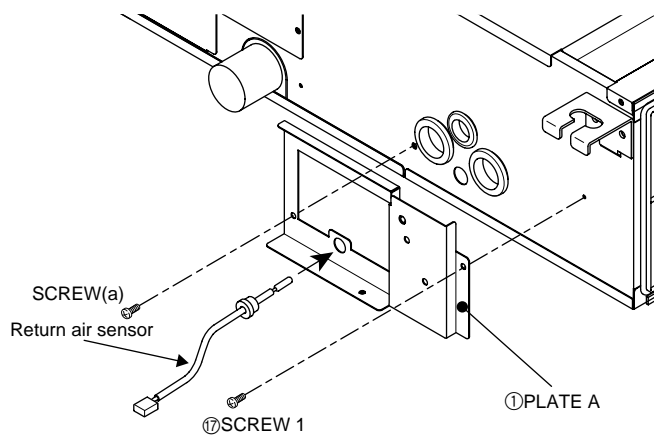


Fig. 8

- (2) Install ②PLATE B to the unit.(Fig. 10)  
Loosen the two screws (b) from the mounting bracket on the unit and screw ②PLATE B onto the unit with the two screws (b).  
Unscrew the screw (c) from the bottom board on the unit and screw ②PLATE B onto the unit with the screw (c).

- (3) Install ③PLATE C to the unit with 4 screws. (Fig. 10)

- (4) After installing the components to the unit, make sure that all screws are tightened firmly.

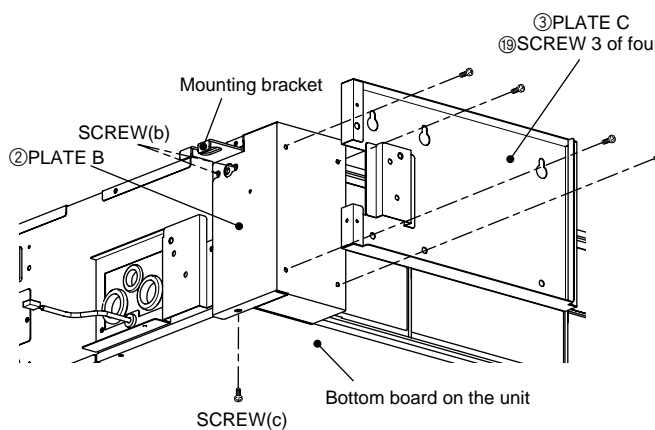


Fig. 10

### 3-3 Electrical wiring

(1) Connect the each wiring.(Fig. 11)

Refer to 3-1(2) Table 1 for the wiring based on the model.

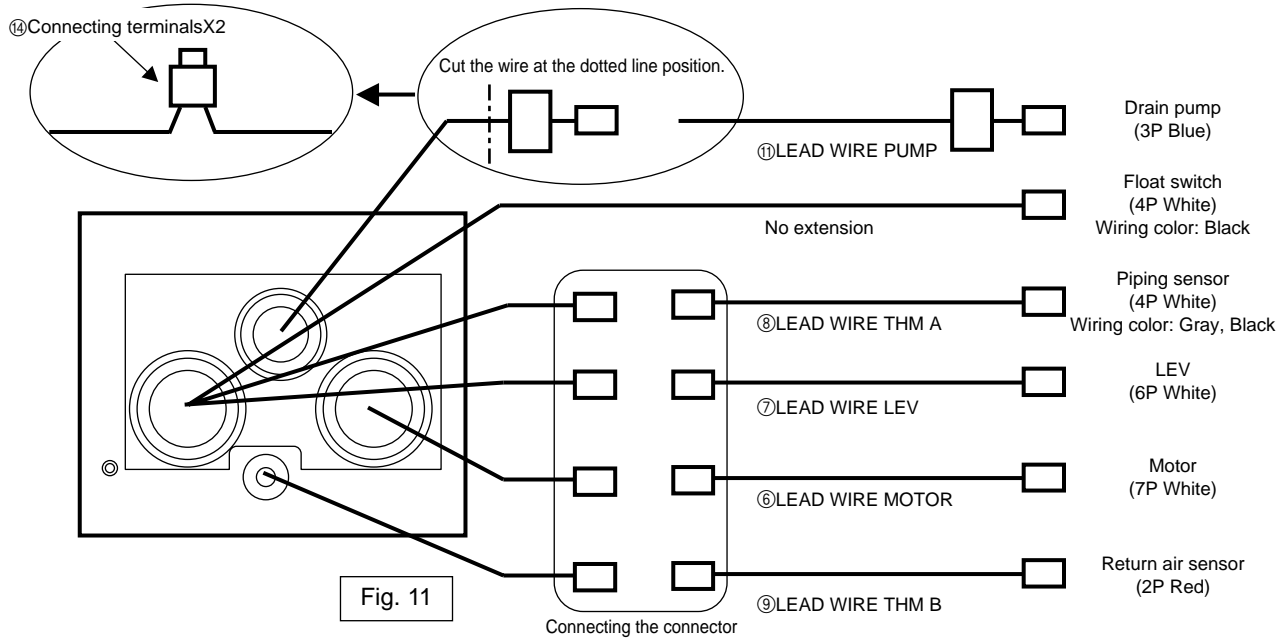


Fig. 11

(2) Install ⑩ LEAD WIRE EARTH and

⑯ CLAMP to the unit. (Fig. 12)

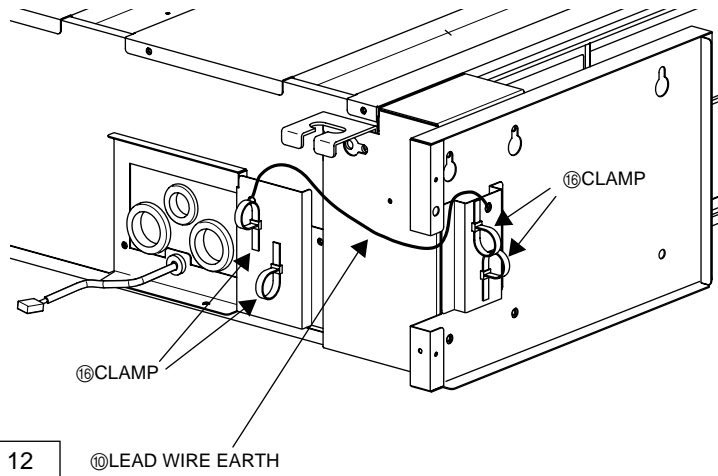


Fig. 12

(3) Tie the each wiring. (Fig. 13)

\* When tying the wiring, separate the light electric wire from the strong electric wire.

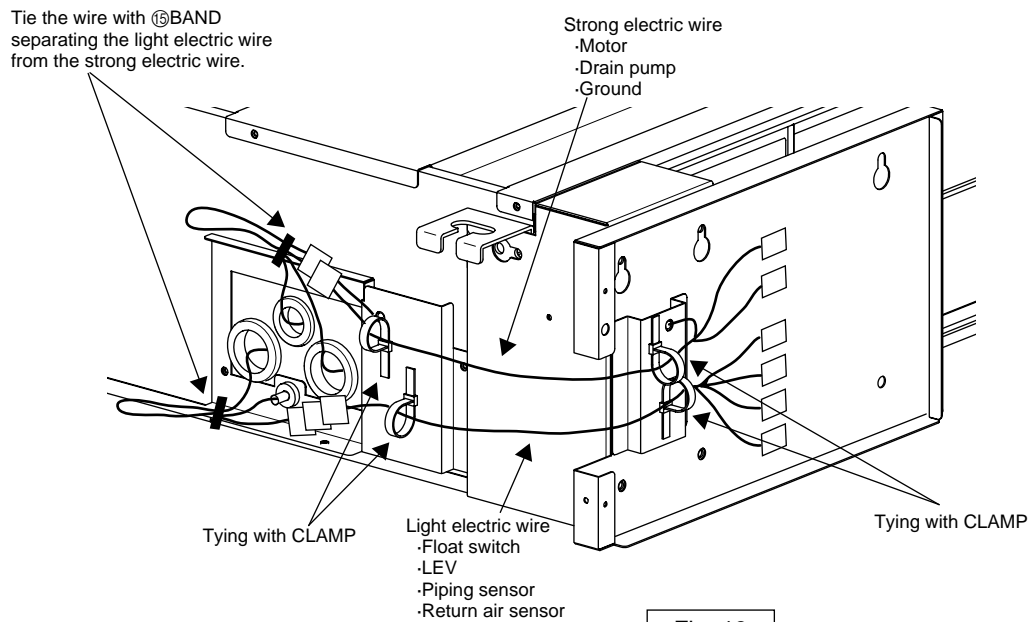


Fig. 13

- (4) Put the wiring through the opening of the control box and connect the wiring to the connector on the control board.(Fig. 14)  
 ※ Refer to 3-1(2) section for the connector target.
- (5) Install the control box to the unit.(Fig. 14)  
 ※ Tie the excess parts of the wiring with ⑮BAND separating the light electric wire from the strong electric wire and keep them on the back of the control box.

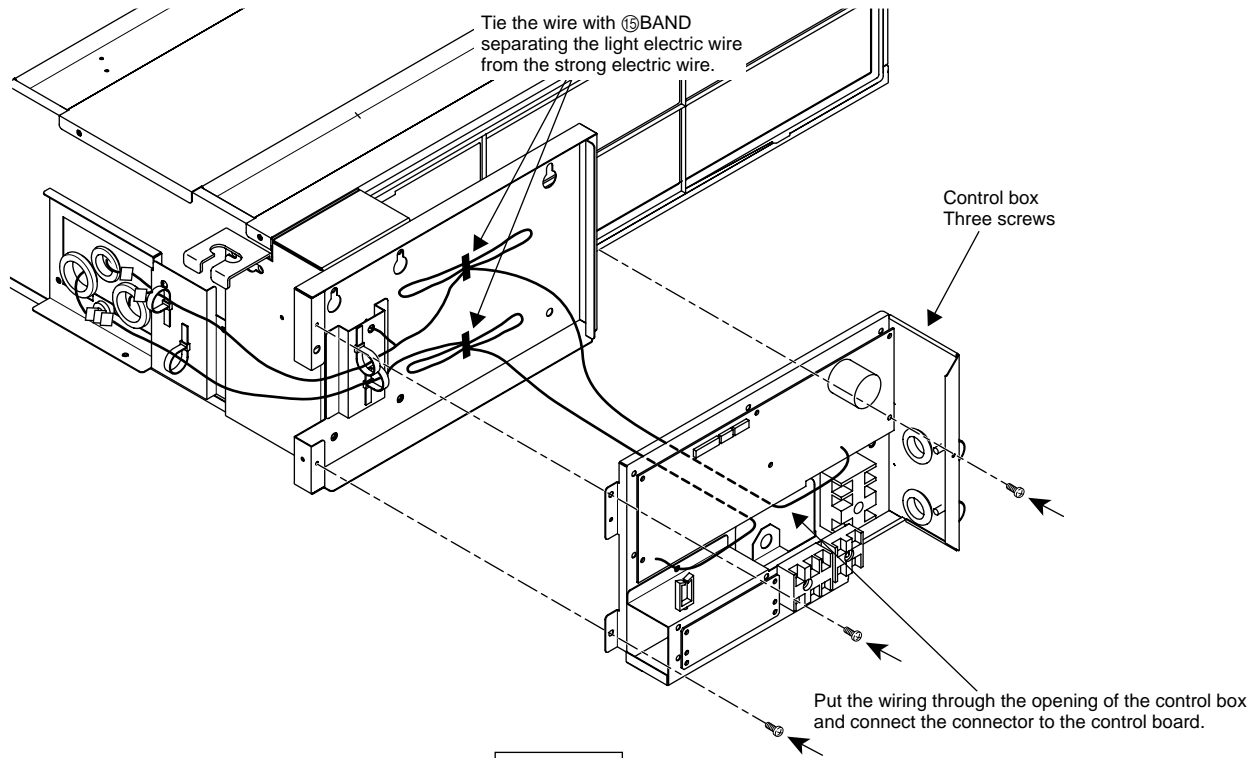


Fig. 14

- (6) Make sure that the control board and the relay connector are securely connected.
- (7) Install ④COVER A, ⑤COVER B, and the CONTROL BOX COVER to the unit.(Fig. 15)  
 Hook the ④COVER A over the PLATE A , and then screw the ④COVER A on the PLATE A.

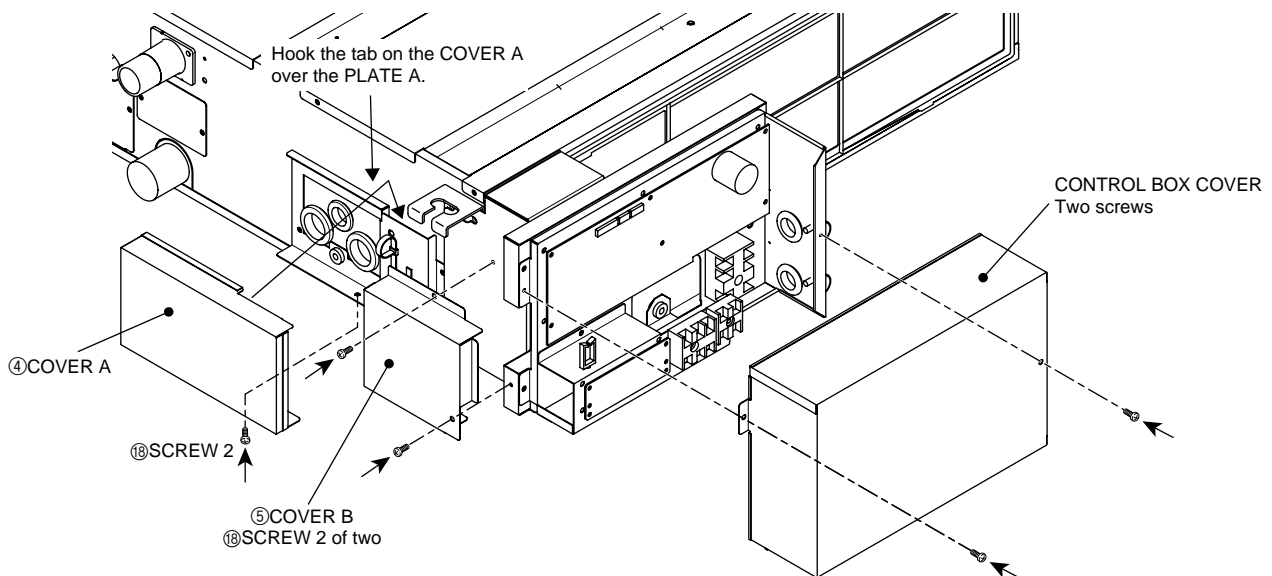


Fig. 15

