

INSTALLATION MANUAL FOR A-M CONVERTER

For models in which this component is used, see the separate sheet.

SAFETY PRECAUTIONS

- Before starting installation, read the "Safety Precautions" described below.
- The following precautions must be observed as it describes the serious matters for safety.
- The safety precautions are described with the degree of danger.

⚠ WARNING When you handle wrong, it can lead to death or serious injury.

⚠ CAUTION When you handle wrong, it can lead to injury or damage to building and furniture.

- After installation, make test operation and confirm that it works properly, and explain the safety precautions, operation method, and maintenance to your customers.
- Tell your customers to keep this installation manual together with operation manual with them, and when they give or sell this machine to other person put this installation manual and operation manual with it.

⚠ WARNING

The installation must be done by dealer or qualified person.

- If the customers do the installation by themselves and it is not perfectly installed it can cause water leak, electric shock, or fire.

The installation must be done in accordance with this manual.

- If the installation is not perfectly done, it can cause water leak, electric shock, or fire.

Never try any modification.

- For repair, ask your dealer.
- If the machine is not modified or repaired completely, it can cause water leak, electric shock, or fire.

Never move or reinstall the machine by the customers.

- If the installation is not perfectly done, it can cause water leak, electric shock, or fire. Ask your dealer or qualified person.

The wiring must be securely done by using proper cable. The wires should be connected to the terminals not to have external force of the cable.

- Faulty connections can cause heat or fire.

The terminal cover (panel) of the unit must be installed securely.

- Faulty installation can cause fire or electric shock by dust or water.

The electric installation must be done by qualified person in accordance with this installation manual. Use the separate circuit only for this machine and use rated voltage and circuit breaker.

- If the electric circuit power is not sufficient or the wiring is not properly done, it can cause electric shock or fire.

Before electric wiring

⚠ CAUTION

Install a circuit breaker depending upon the location.

- Without a circuit breaker, it can cause electric shock.

Use standard wires which meet current capacity.

- Otherwise, it can cause short-circuit, heat, or fire.

Put ground wire.

- Never ground to gas pipe, water pipe, lightning conductor, or telephone ground wire.
- Faulty ground can cause electric shock.

Wires must not have tension.

- It can cause snapping, heat, or fire.

Before test operation

⚠ CAUTION

Turn the power on 12 hours or more before operation.

- If you start operation as soon as the power on, it can cause failure.
- Never turn the power off during season.

Never operate the machine without panel or guard off.

- It can cause serious injury being caught by rotating part or burn or electric shock by high voltage part.

Never operate the machine without air filter off.

- It can cause failure by dust.

Never operate the switches with your hand wet.

- It can cause electric shock.

Never touch refrigerant pipes while the machine running.

- The refrigerant pipes becomes high and low temperature while the machine running. If you touch the pipes by hand, it can cause chilblain or burn.

Never turn the power off as soon as the machine stops.

- Wait for 5 minutes or more. It can cause water leak or failure.

Attention for M-NET connection

Pay attention to the next points for wiring of shielded wires.

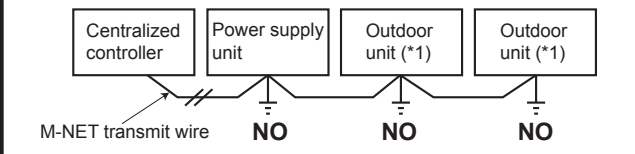
(1) Ground wire connection

CAUTION

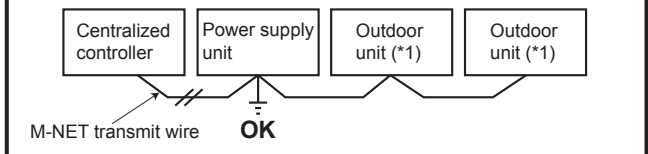
The shielded wires of M-NET transmission should be connected with the ground wire at any only one place of the unit to be connected.

• It can cause the transmission error due to noise.
Outdoor unit digital LED display reads "Ed" "A7" error.
Centralized controller reads "0403" "6607" error.

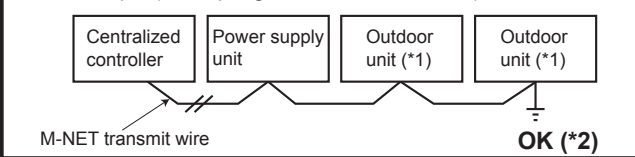
Bad example (Multiple ground of shielded wire)



Good example (One spot ground of shielded wire)

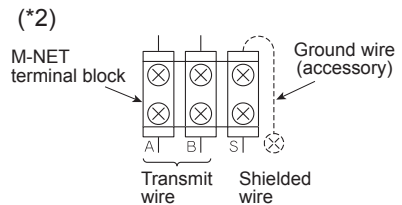


Good example (One spot ground of shielded wire)



(*1) Refer to the appendix List of Models to check the applicable models.

(*2) In case that the outdoor unit is grounded, connect the ground wire supplied as accessory to the S terminal (secondary) of M-NET terminal block and M-NET Ground terminal inside of electric box with using screws supplied.



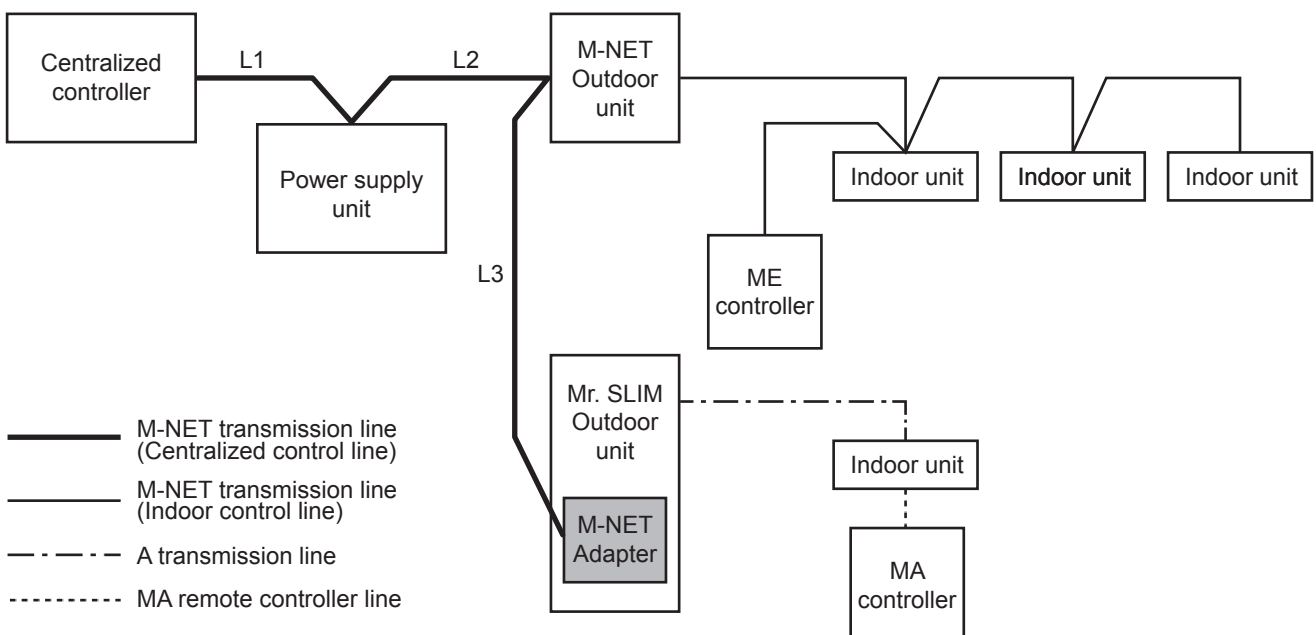
Note: If the shield and earth are grounded in two or more locations, electrical circuit is generated through them, and a potential difference is created because of the impedance difference between or among the ground locations. This may cause noise in the shield. Ground at only one point, then no circuit is created and no noise gets in.

(2) Length of M-NET transmission line

CAUTION

The shielded wires of M-NET transmission should be used below the maximum line length.

• It can cause the transmission error.
Outdoor unit digital LED display reads "Ed" "A7" error.
Centralized controller reads "0403" "6607" error.

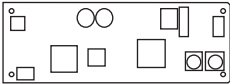
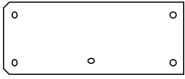
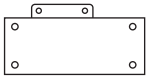





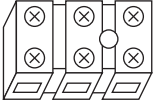


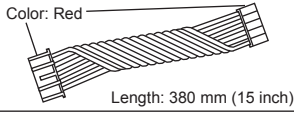
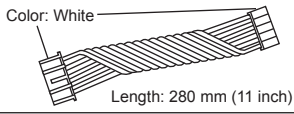
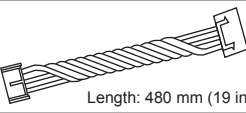
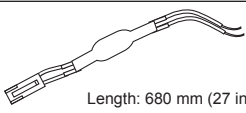

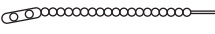


Maximum power feeding length for the centralized control line:

L1 ≤ 200 m (656 ft)

L2 + L3 ≤ 200 m (656 ft)

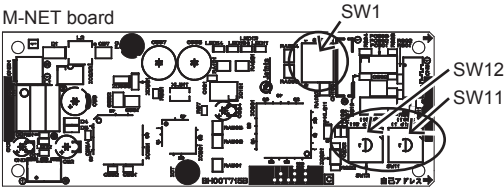
1.Parts List

No.	Description	Figure	Q'ty	Applicable models							Note
				A	B	C	D	E	F	G	
①	M-NET board (with insulation sheets and supports)		1	○	○	○	○	○	○	○	
②	Plate1 (For mounting M-NET board)		1	○							
③	Plate2 (For mounting M-NET board)		1			○					
④	Plate3 (For mounting M-NET board)		1						○		
⑤	Insulation sheets S,M,L		⑤ 1	○							
			⑤ 1	○							
			⑤ 1	○	○						
⑥	Screw (M4×8)		2	○ (1)		○ (2)			○ (2)		
⑦	Terminal block (M-NET)		1	○	○	○	○	○	○	○	
⑧	Terminal screw (M3×20)		1	○	○	○	○	○	○	○	
⑨	Label		1	○	○	○	○	○	○	○	
⑩	Lead wire-A (5 wires)		1	○	○	○		○	○	○	Wire Marking : INV type Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.
⑪	Lead wire-B (5 wires)		1				○				Wire Marking : NON-INV Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.
⑫	Lead wire-C (3 wires)		1	○	○	○	○	○	○	○	
⑬	Lead wire-D (2 wires)		1	○	○	○	○	○	○	○	
⑭	Ground wire and screw (M4×8)		1 each	○	○	○	○	○	○	○	
⑮	Fastener		2	○	○	○	○	○	○	○	

2.Switch setting

Before installation

Set switch on M-NET board in advance before installing on the electrical parts box.



(1) M-NET address setting

The setting should be done by rotary switches SW11 and SW12 on M-NET board. (Factory settings are all Zero)

Make sure to set M-NET address within the range of 01 to 50.

When installing two or more outdoor units, do not use the same number more than once for M-NET address.

<Example>

M-NET address No.	1	2	50
Switch setting	SW 11 (Ones digit)		
	SW 12 (Tens digit)		

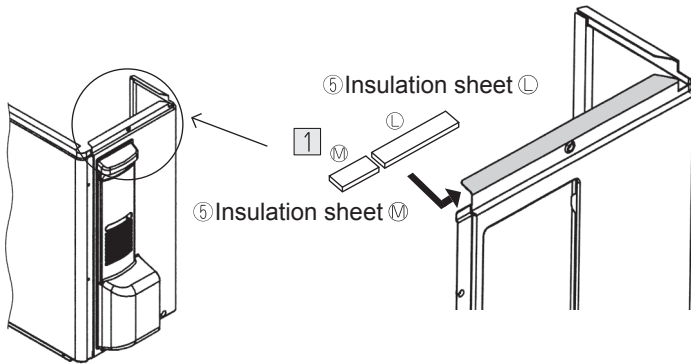
(2) Switch 1-8 setting

SW1-8 Selection	Function	Function details	Initial setting	Effective timing
<p>ON</p>	<p>Turn the switch ON when MA remote controller or wireless remote controller is connected to indoor unit.</p> <p>M-NET</p> <p>MA: MA remote controller RC: Wireless remote controller</p>	<p><FUNCTION> Set the connection of MA-remote controller or wireless remote controller to the indoor unit. ON : exist (initial setting) OFF : not exist</p>	ON	When power supply ON
<p>OFF</p>	<p>Turn the switch OFF when MA remote controller or wireless remote controller is NOT connected to indoor unit.</p> <p>M-NET</p>	<p><NOTE> In case of switch is ON, transmission error between M-NET board and centralized controllers does not be detected, and M-NET board operates continuously.</p>		

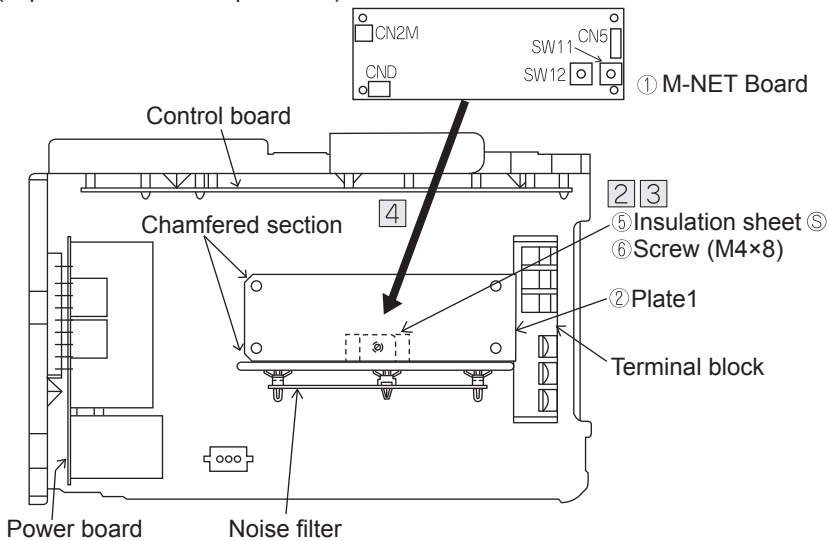
Note: SW1-3 is always ON

3.Installation procedure [Applicable model : Group A]

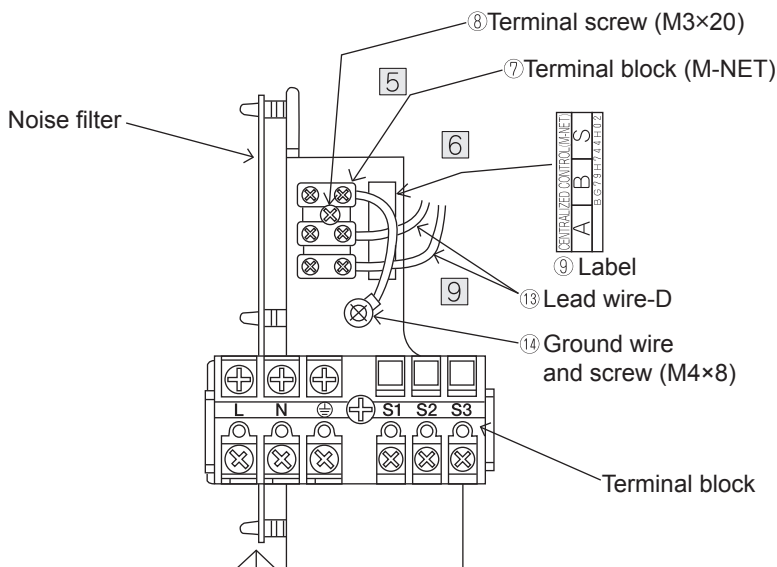
- To protect the wires connected to M-NET board from the edges of sheet-metal component, paste the insulation on the edge surface of panel sheet-metal before proceeding with the following work.



(Top view of Electrical parts box)



(When viewed from the side of Electrical parts box)

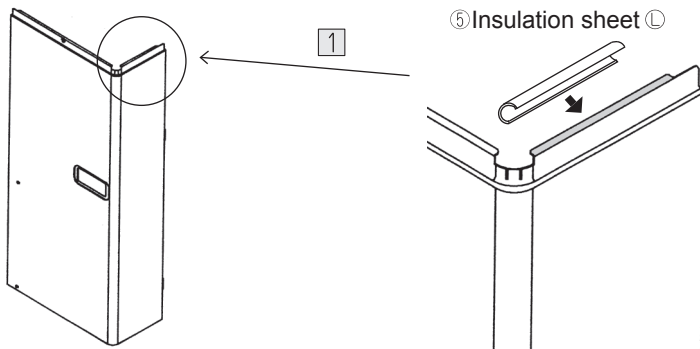


- 1 Paste insulation sheets ⑤ and ⑥ to the backside of the flange surface on the top of the side panel.
- 2 Starting from the bottom, mount insulation sheet ⑤ to the "L" bend section on the back of the noise filter mounting panel.
- 3 Position the chamfered section of plate ② so that it faces the fan side (the left side of the drawing) and mount it using screw ⑥.
- 4 Install M-NET board ① (with insulation sheets and supports) on the four corners of plate ② so that the rotary switches (SW11, SW12) are on the terminal block side and then mount.
Note: Push it firmly until you hear it "click".
- 5 Use terminal screw ⑧ to secure terminal block ⑦.
Note:
Terminal block ⑦ has a round boss for positioning: Fit the round boss into the positioning hole in steel-plate.
- 6 Paste label ⑨
- 7 Use lead wire-A ⑩ to connect CN5 of M-NET board ① connection and CNMNT of outdoor control board.
• Caution
Wire Marking: INV type,
Connector color: Red
Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.
- 8 Use lead wire-C ⑫ to connect CND of M-NET board ① connection and CNVMNT of outdoor control board.
- 9 Use lead wire-D ⑬ to connect CN2M of M-NET board ① connection and terminals A and B of terminal block ⑦ Polarity is not a concern.
Note:
Connect the wire firmly making sure that the screws on terminal block are not loose.
- 10 The lead wires should be tied together with the other lead wires with the fastener ⑮ not to loose.
Wiring length is adjusted according to apparatus.

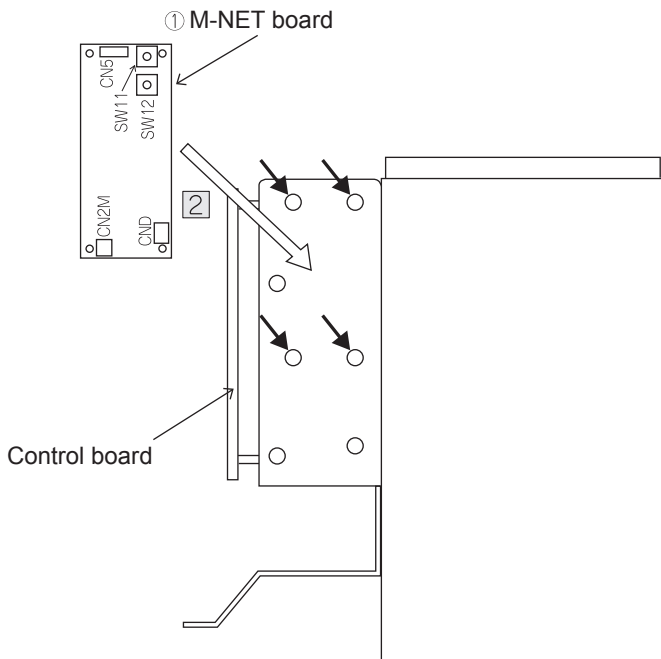
Note1:
Use ground wire and screw ⑭ as required to connect the shield of M-NET transmission line to the unit.
(See the attention on page 2)
Note2:
Take great care that no lead wire is caught on anything when installing panels.

3. Installation procedure [Applicable model : Group B]

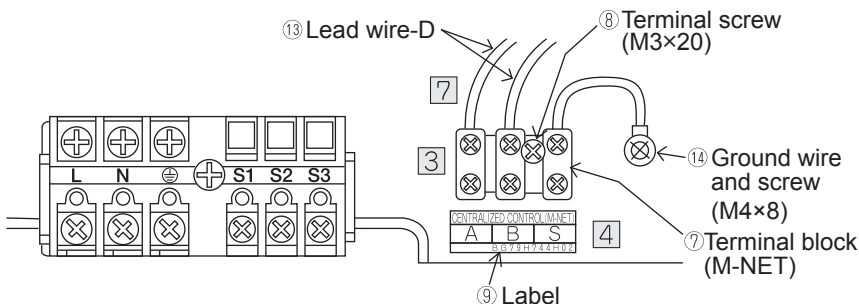
- To protect the wires connected to M-NET board from the edges of sheet-metal component, paste the insulation on the edge surface of panel sheet-metal before proceeding with the following work.



(When viewed from the side of Electrical parts box)



(When viewed from the side of Electrical parts box)



- 1 Paste insulation sheet ⑤ on sheet-metal so that it completely envelops the edge surface of sheet-metal.

- 2 Install M-NET board ① (with insulation sheets and supports) on the side of electrical parts box so that the rotary switches (SW11, SW12) faces up (at the four points indicated by arrows).
Note: Push it firmly until you hear it "click".

- 3 Use terminal screw ⑧ to secure terminal block ⑦.

Note:

Terminal block ⑦ has a round boss for positioning: Fit the round boss into the positioning hole in steel-plate.

- 4 Paste label ⑨ under terminal block ⑦.

- 5 Use lead wire-A ⑩ to connect CN5 of M-NET board ① connection and CNMNT of outdoor control board.

• Caution

Wire Marking: INV type,

Connector color: Red

Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.

- 6 Use lead wire-C ⑫ to connect CND of M-NET board ① connection and CNVMNT of outdoor control board.

- 7 Use lead wire-D ⑬ to connect CN2M of M-NET board ① connection and terminals A and B of terminal block ⑦. Polarity is not a concern.

Note:

Connect the wire firmly making sure that the screws on terminal block are not loose.

- 8 The lead wires should be tied together with the other lead wires with the fastener ⑮ not to loose. Wiring length is adjusted according to apparatus.

Note1:

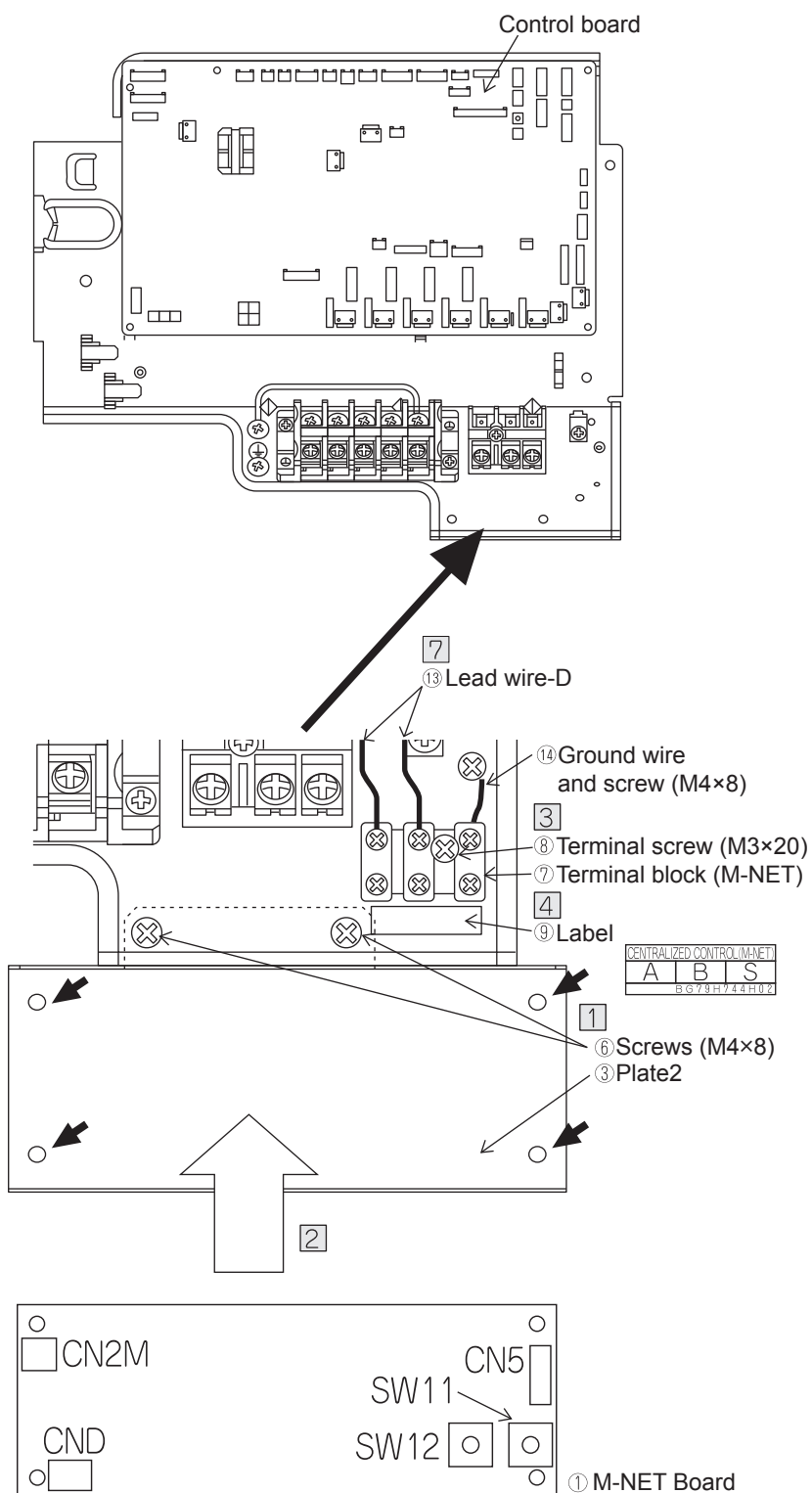
Use ground wire and screw ⑭ as required to connect the shield of M-NET transmission line to the unit.

(See the attention on page 2)

Note2:

Take great care that no lead wire is caught on anything when installing panels.

3. Installation procedure [Applicable model : Group C]



- 1 Attach the plate2 ③, using two screws ⑥.
- 2 Install M-NET board ① (with insulation sheets and supports) on the plate2 ③ so that the rotary switches (SW11, SW12) right side (at the four points indicated by arrows).
Note: Push it firmly until you hear it "click".
- 3 Use terminal screw ⑧ to secure terminal block ⑦.
Note:
Terminal block ⑦ has a round boss for positioning: Fit the round boss into the positioning hole in steel-plate.
- 4 Paste label ⑨ under terminal block ⑦.
- 5 Use lead wire-A ⑩ to connect CN5 of M-NET board ① connection and CNMNT of outdoor control board.
• Caution
Wire Marking: INV type,
Connector color: Red
Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.
- 6 Use lead wire-C ⑫ to connect CND of M-NET board ① connection and CNVMNT of outdoor control board.
- 7 Use lead wire-D ⑬ to connect CN2M of M-NET board ① connection and terminals A and B of terminal block ⑦ Polarity is not a concern.
Note:
Connect the wire firmly making sure that the screws on terminal block are not loose.
- 8 The lead wires should be tied together with the other lead wires with the fastener ⑮ not to loose.
Wiring length is adjusted according to apparatus.

Note1:

Use ground wire and screw ⑭ as required to connect the shield of M-NET transmission line to the unit.

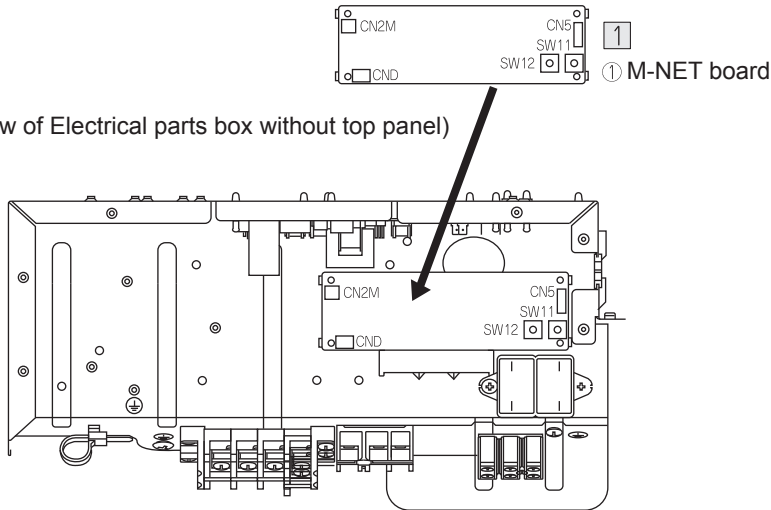
(See the attention on page 2)

Note2:

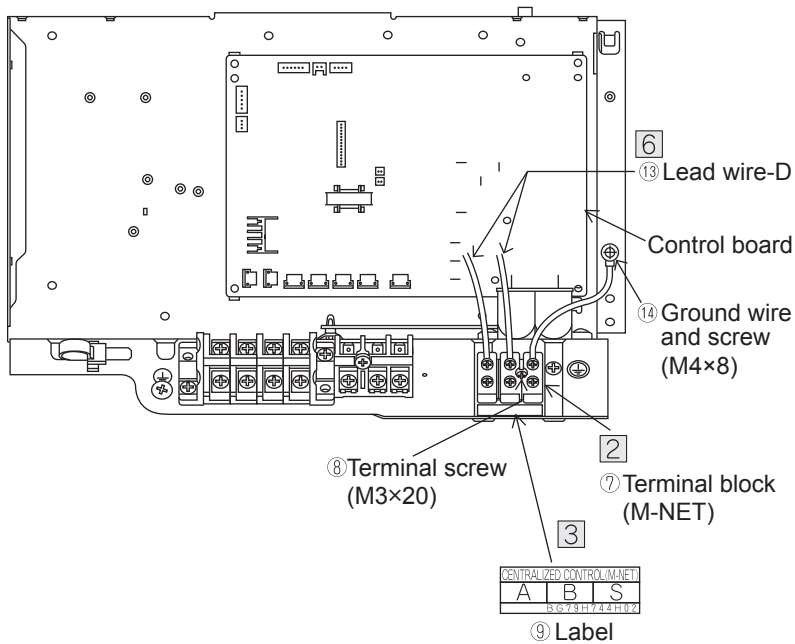
Take great care that no lead wire is caught on anything when installing panels.

3. Installation procedure [Applicable model : Group D]

(Top view of Electrical parts box without top panel)



(Front view of Electrical parts box)



1 Install M-NET board ① (with insulation sheets and supports) on the bottom of electrical parts box so that the rotary switches (SW11, SW12) come front.
Note: Push it firmly until you hear it “click”.

2 Use terminal screw ⑧ to secure terminal block ⑦.
Note:
Terminal block ⑦ has a round boss for positioning: Fit the round boss into the positioning hole in steel-plate.

3 Paste label ⑨ under terminal block ⑦.

4 Use lead wire-B ⑪ to connect CN5 of M-NET board ① connection and CNMNT of outdoor control board.

• Caution

Wire Marking: NON-INV,

Connector color: White

Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.

5 Use lead wire-C ⑫ to connect CND of M-NET board ① connection and CNVMNT of outdoor control board.

6 Use lead wire-D ⑬ to connect CN2M of M-NET board ① connection and terminals A and B of terminal block ⑦. Polarity is not a concern.

Note:

Connect the wire firmly making sure that the screws on terminal block are not loose.

7 The lead wires should be tied together with the other lead wires with the fastener ⑮ not to loose.
Wiring length is adjusted according to apparatus.

Note1:

Use ground wire and screw ⑭ as required to connect the shield of M-NET transmission line to the unit.

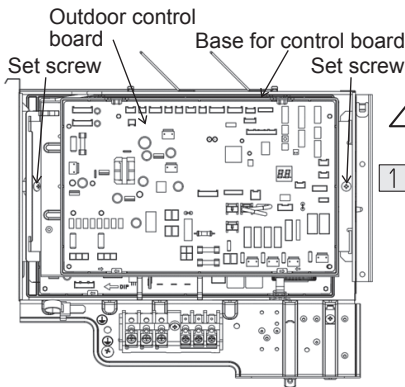
(See the attention on page 2)

Note2:

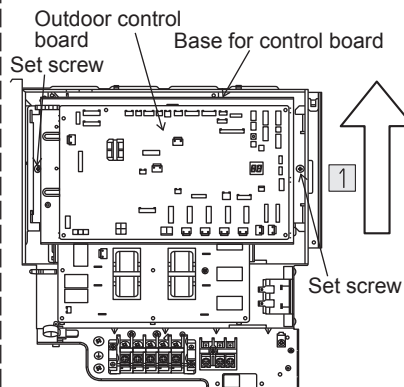
Take great care that no lead wire is caught on anything when installing panels.

3. Installation procedure [Applicable model : Group E]

■ Single phase model

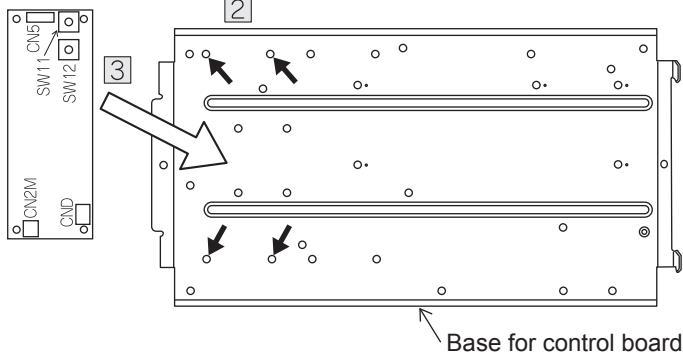


■ 3 phase model



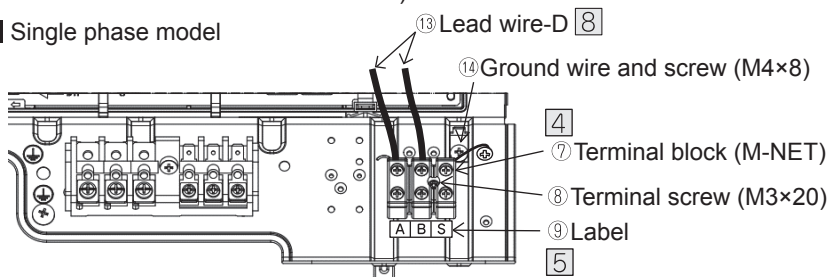
(Back of base for control board)

① M-NET Board

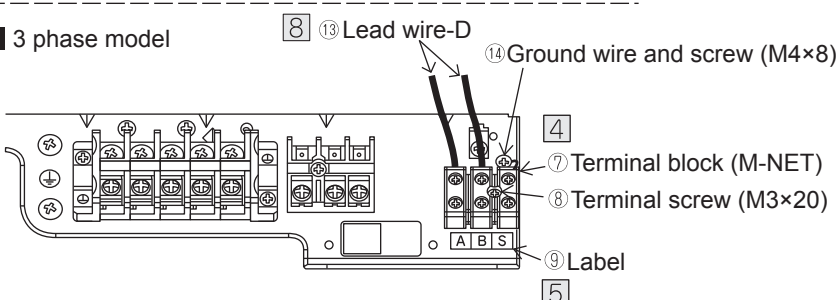


(Viewed from the front of terminal block)

■ Single phase model

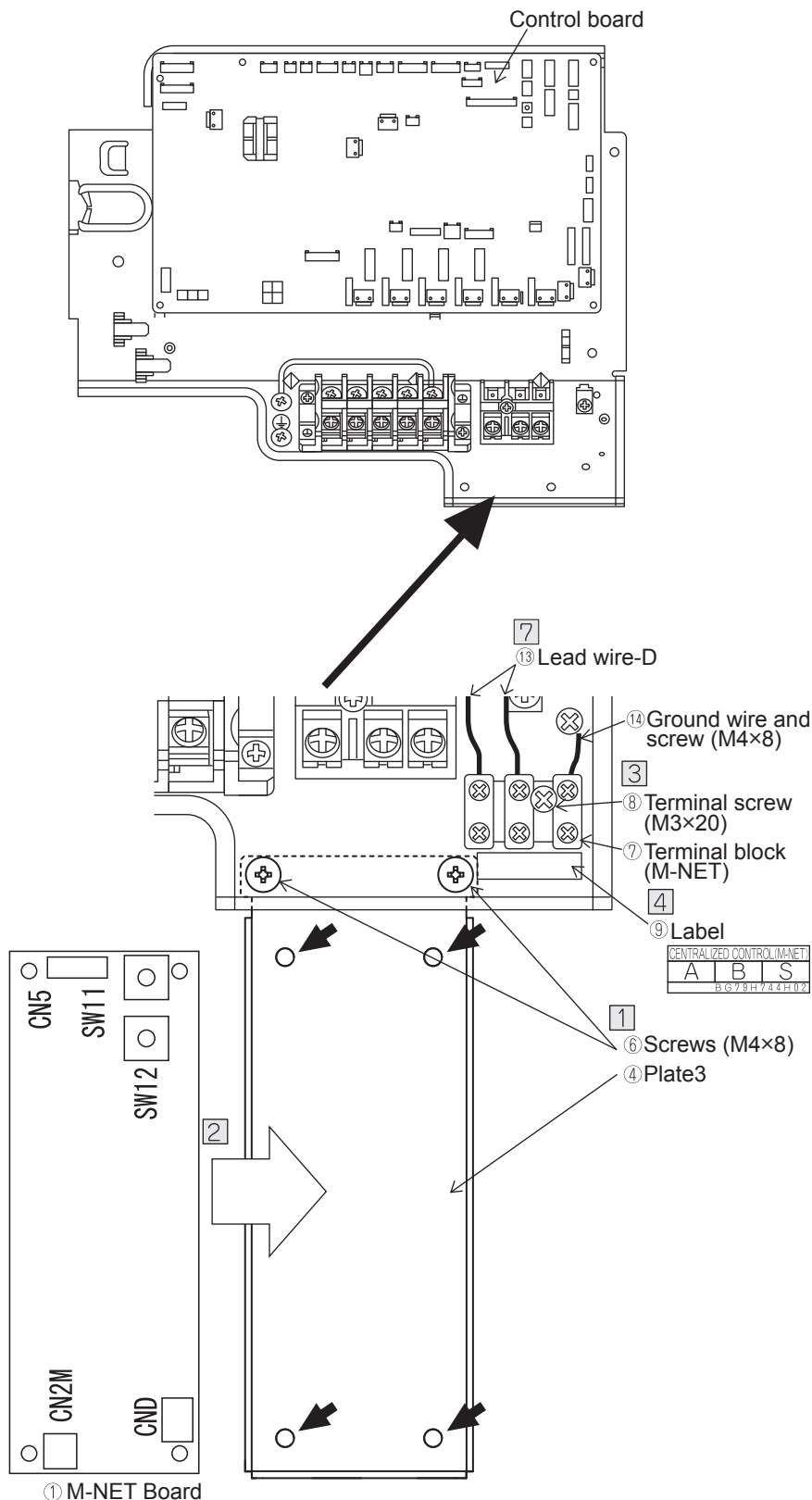


■ 3 phase model



- 1 Remove the two screws that secure the control board base of electrical parts box, and then slide the base in the direction of the arrow to remove it from the electrical parts box.
 - 2 Check for the four M-NET board ① attachment holes (arrows) in the back of control board base (the control board is attached to the surface).
 - 3 Install the M-NET board ① (with insulation sheets and supports) so that the rotary switches (SW11, SW12) faces up (at the four points indicated by arrows).
 - 4 Use terminal screw ⑧ to secure terminal block ⑦.
Note:
Terminal block ⑦ has a round boss for positioning: Fit the round boss into the positioning hole in steel-plate.
 - 5 Paste label ⑨ under terminal block ⑦.
 - 6 Use lead wire-A ⑩ to connect CN5 of M-NET board ① connection and CNMNT of outdoor control board.
• Caution
Wire Marking: INV type,
Connector color: Red
Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.
 - 7 Use lead wire-C ⑫ to connect CND of M-NET board ① connection and CNVMNT of outdoor control board.
 - 8 Use lead wire-D ⑬ to connect CN2M of M-NET board ① connection and terminals A and B of terminal block ⑦ Polarity is not a concern.
Note:
Connect the wire firmly making sure that the screws on terminal block are not loose.
 - 9 The lead wires should be tied together with the other lead wires with the fastener ⑮ not to loose.
Wiring length is adjusted according to apparatus.
- Note1:
Use ground wire and screw ⑭ as required to connect the shield of M-NET transmission line to the unit.
(See the attention on page 2)
- Note2:
Take great care that no lead wire is caught on anything when installing panels.

3. Installation procedure [Applicable model : Group F]



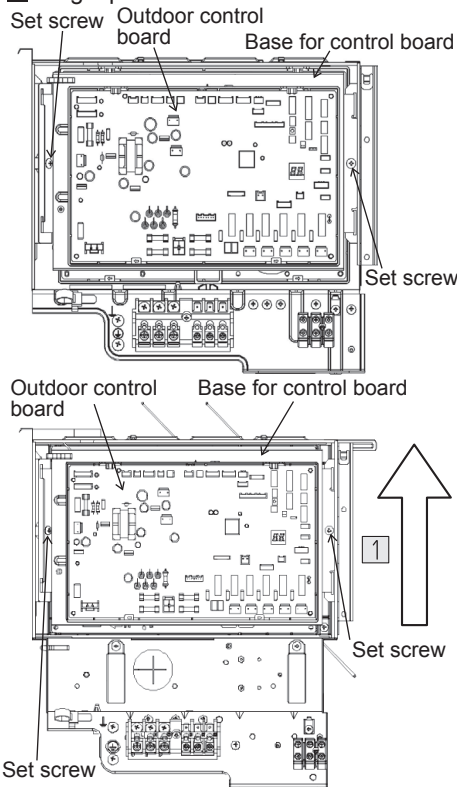
- 1 Attach the plate3 ④, using two screws ⑥.
- 2 Install M-NET board ① (with insulation sheets and supports) on the plate3 ④ so that the rotary switches (SW11, SW12) faces up (at the four points indicated by arrows).
Note: Push it firmly until you hear it "click".
- 3 Use terminal screw ⑧ to secure terminal block ⑦.
Note:
Terminal block ⑦ has a round boss for positioning: Fit the round boss into the positioning hole in steel-plate.
- 4 Paste label ⑨ under terminal block ⑦.
- 5 Use lead wire-A ⑩ to connect CN5 of M-NET board ① connection and CNMNT of outdoor control board.
• Caution
Wire Marking: INV type,
Connector color: Red
Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.
- 6 Use lead wire-C ⑫ to connect CND of M-NET board ① connection and CNVMNT of outdoor control board.
- 7 Use lead wire-D ⑬ to connect CN2M of M-NET board ① connection and terminals A and B of terminal block ⑦ Polarity is not a concern.
Note:
Connect the wire firmly making sure that the screws on terminal block are not loose.
- 8 The lead wires should be tied together with the other lead wires with the fastener ⑮ not to loose.
Wiring length is adjusted according to apparatus.

Note1:
Use ground wire and screw ⑭ as required to connect the shield of M-NET transmission line to the unit.
(See the attention on page 2)

Note2:
Take great care that no lead wire is caught on anything when installing panels.

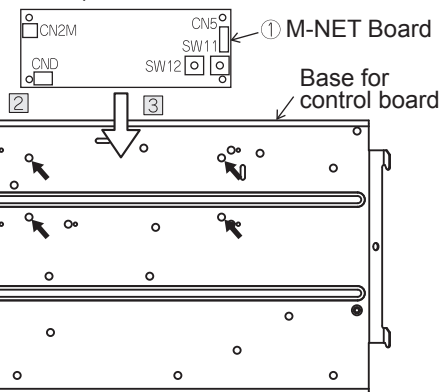
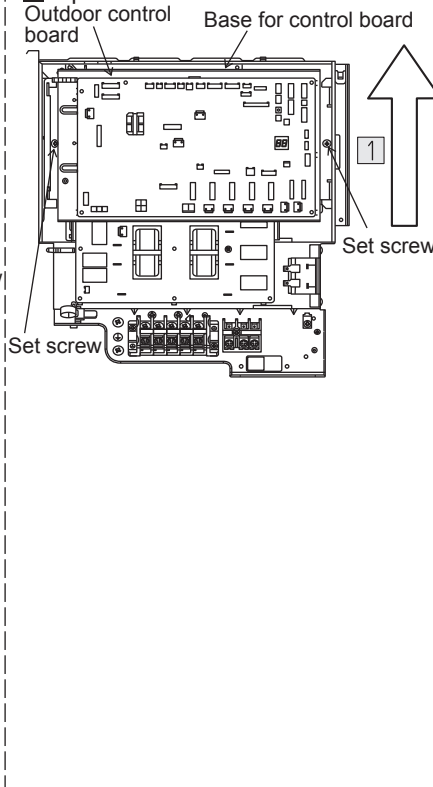
3. Installation procedure [Applicable model : Group G]

■ Single phase model



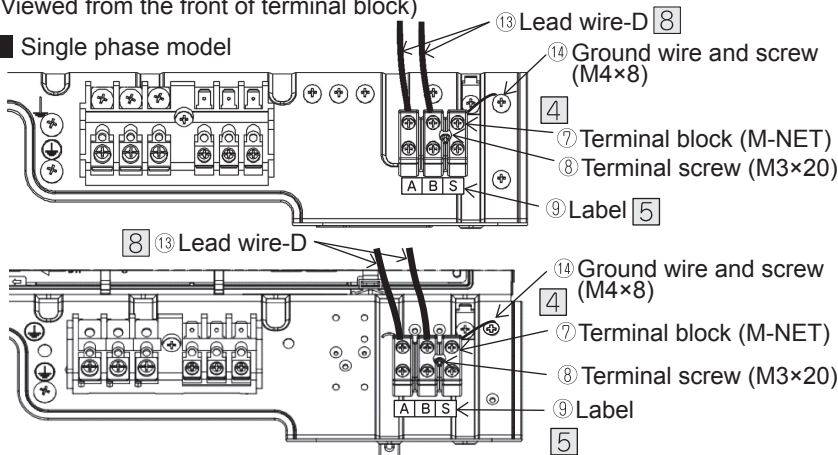
(Back of base for control board)

■ 3 phase model

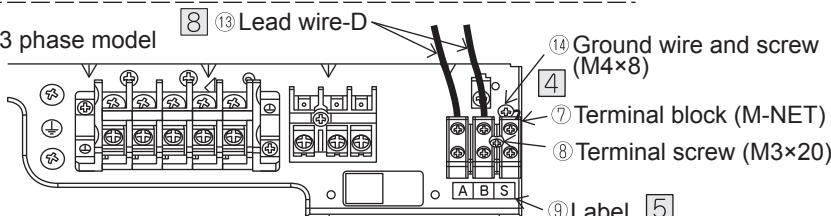


(Viewed from the front of terminal block)

■ Single phase model



■ 3 phase model



1 Remove the two screws that secure the control board base of electrical parts box, and then slide the base in the direction of the arrow to remove it from the electrical parts box.

2 Check for the four M-NET board ① attachment holes (arrows) in the back of control board base (the control board is attached to the surface).

3 Install M-NET board ① (with insulation sheets and supports) so that the rotary switches (SW11, SW12) faces up (at the four points indicated by arrows).

4 Use terminal screw ⑧ to secure terminal block ⑦.

Note:

Terminal block ⑦ has a round boss for positioning: Fit the round boss into the positioning hole in steel-plate.

5 Paste label ⑨ under terminal block ⑦.

6 Use lead wire-A ⑩ to connect CN5 of M-NET board ① connection and CNMNT of outdoor control board.

• Caution

Wire Marking: INV type,

Connector color: Red

Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.

7 Use lead wire-C ⑫ to connect CND of M-NET board ① connection and CNVMNT of outdoor control board.

8 Use lead wire-D ⑬ to connect CN2M of M-NET board ① connection and terminals A and B of terminal block ⑦ Polarity is not a concern.

Note:

Connect the wire firmly making sure that the screws on terminal block are not loose.

9 The lead wires should be tied together with the other lead wires with the fastener ⑮ not to loose. Wiring length is adjusted according to apparatus.

Note1:

Use ground wire and screw ⑭ as required to connect the shield of M-NET transmission line to the unit.

(See the attention on page 2)

Note2:

Take great care that no lead wire is caught on anything when installing panels.

HEAD OFFICE: TOKYO BUILDING,2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN

PAC-SJ95MA-E
List of Models on separate sheet

Group	Applicable model	Page	Group	Applicable model	Page	Group	Applicable model	Page
A:	PUHZ-RP1.6/2VHA PUHZ-RP35/50VHA PUHZ-RP35/50VHA ₁ PUHZ-RP35/50VHA2 PUHZ-RP35/50VHA2 ₁ PUHZ-RP35/50VHA3 PUHZ-RP35/50VHA4 PUZ-A18NHA PUZ-A18NHA2 PUZ-A18NHA3 PUZ-A18NHA4 PUZ-A18NHA6 PUY-A12/18NHA PUY-A12/18NHA ₁ PUY-A12/18NHA2 PUY-A12/18NHA3 PUY-A12/18NHA4 PUY-A12/18NHA6	5	B:	PUZ-A24—42NHA PUZ-A24—42NHA2 PUZ-A24—42NHA3 PUZ-A24—42NHA4 PUZ-A42NHA5 PUZ-A24—42NHA6 PUY-A24—42NHA PUY-A24—36NHA ₁ PUY-A24—42NHA2 PUY-A24—42NHA3 PUY-A24—42NHA4 PUY-A42NHA5 PUY-A24—42NHA6 PUZ-HA30/36NHA PUZ-HA30/36NHA2 PUZ-HA30/36NHA4 PUZ-HA30/36NHA5 PUZ-HA42NKA PUHZ-P50—140VHA-S PUHZ-P50—140VHA-SH	6	E:	PUHZ-P200/250YHA PUHZ-P200/250YHA3 PUHZ-P200/250YHA3R1 PUHZ-P200/250YHA3R2 PUHZ-P200/250YHA3R3 PUHZ-BP170—250YHA-A PUHZ-RP200/250YHA2 PUHZ-RP200/250YKA PUHZ-RP200YKAR1 PUHZ-ZRP200/250YKA.UK PUHZ-ZRP200/250YKAR1.UK PUHZ-ZRP200/250YKA2.UK PUHZ-ZRP200/250YKA3.UK PUHZ-HRP200YKA PUHZ-SHW230YKA2 PUHZ-RP280XHA2 PUHZ-RP100—140YHA2-A PUHZ-RP100—140YHA2#1-A PUHZ-RP100—200YKA-A PUHZ-RP100—200YKA2-A PUHZ-P100—140YHA.UK PUHZ-P100—140YHAR1.UK PUHZ-P125/140YHAR2.UK PUHZ-P100—140YHA2.UK PUHZ-P100YHA3.UK PUHZ-P200/250YKA.UK PUHZ-P200/250YKAR1.UK PUHZ-P200/250YKA2.UK PUHZ-P200/250YKA3.UK PUHZ-P(L/S/D)125/140VHA-S PUZ-A24/30NHA7 PUZ-A36/42NKA7 PUY-A24/30NHA7 PUY-A36/42NKA7 PUHZ-RP71VHA5R2-A PUHZ-ZRP250XKA	9
B:	PUHZ-RP2.5—6VHA PUHZ-RP3—6VHA-A PUHZ-RP60—140VHA PUHZ-RP71—140VHA-A PUHZ-RP60—140VHA ₁ PUHZ-RP71—140VHA ₁ -A PUHZ-RP60—140VHA2 PUHZ-RP60—140VHA2 ₁ PUHZ-RP71—140VHA2-A PUHZ-RP60—100VHA3 PUHZ-RP60—100VHA3#1 PUHZ-RP125/140VHA2#2 PUHZ-RP71—140VHA2#1-A PUHZ-RP60/71VHA4 PUHZ-RP71VHA4-A PUHZ-RP71VHA5-A PUHZ-RP100—140VKA PUHZ-RP100—170VKA-A PUHZ-RP100—170VKA2-A PUHZ-ZRP60/71VHA PUHZ-ZRP60/71VHAR1 PUHZ-ZRP60/71VHAR1-ER PUHZ-ZRP60/71VHAR1-ET PUHZ-ZRP60/71VHA2 PUHZ-ZRP60/71VHA2-ER PUHZ-ZRP60/71VHA2-ET PUZ-ZM60/71VHA PUHZ-ZRP100—140VKA PUHZ-ZRP100—140VKA2.UK PUHZ-ZRP100—140VKA3.UK PUHZ-ZRP125/140VKA3R1.UK PUZ-ZM100—140VKA.UK PUZ-ZM125/140VKAR1.UK PUHZ-RP80NHA PUHZ-RP80NHA2 PUHZ-P100—140VHA.UK PUHZ-P100—140VHA ₁ .UK PUHZ-P100—140VHA2.UK PUHZ-P125/140VHA2 ₁ .UK PUHZ-P100—140VHA3.UK PUHZ-P100—140VHA3R1.UK PUHZ-P100—140VHA3R2.UK PUHZ-P125/140VHA3R3.UK PUHZ-P100—140VHA4.UK PUHZ-P100VHA5.UK PUHZ-BP100—140VHA-A PUHZ-HRP71/100VHA PUHZ-HRP71/100VHA2 PUHZ-HRP71/100VHA2R1 PUHZ-HRP100VHA2R2 PUHZ-SHW80/112VHA PUHZ-SHW112VHAR2.UK PUHZ-SHW112VHAR3.UK PUHZ-SHW112VHAR4.UK	6	C:	PUHZ-RP4—6YHA PUHZ-RP100—140YHA PUHZ-RP100—140YHA2 PUHZ-RP100—140YHA2 ₁ PUHZ-RP100YHA3 PUHZ-RP100YHA3#1 PUHZ-RP125/140YHA2#2 PUHZ-HRP100/125YHA PUHZ-HRP100/125YHA2 PUHZ-HRP100/125YHA2R1 PUHZ-SHW112/140YHA PUHZ-SHW112/140YHAR1 PUHZ-SHW112/140YHAR2.UK PUHZ-SHW112/140YHAR3.UK PUHZ-SHW112/140YHAR4.UK PUHZ-SHW140YHAR5.UK PUHZ-P(L/S/D)125/140YHA-S	7	F:	PUHZ-RP100—140YKA PUHZ-ZRP100—140YKA PUHZ-ZRP100—140YKAR1 PUHZ-ZRP100—140YKA2.UK PUHZ-ZRP100—140YKA3.UK PUHZ-ZRP100—140YKA3R1.UK PUHZ-ZRP125/140YKA3R2.UK PUZ-ZM100—140YKA.UK PUZ-ZM125/140YKAR1.UK	10
			D:	PUH-P71/100VHA.UK PUH-P71/100VHA ₁ .UK PUH-P71/100VHA#2.UK PUH-P71/100VHAR3.UK PU-P71/100VHA.UK PU-P71/100VHA ₁ .UK PU-P71/100VHA#2.UK PU-P71/100VHAR3.UK PUH-P71—140YHA.UK PUH-P71—140YHA ₁ .UK PUH-P71—140YHA#2.UK PUH-P71—140YHAR3.UK PUH-P100—140YHAR4.UK PUH-P100—140YHAR5.UK PUH-P100—140YHAR6.UK PU-P71—140YHA.UK PU-P71—140YHA ₁ .UK PU-P71—140YHA#2.UK PU-P71—140YHAR3.UK PU-P100—140YHAR4.UK PU-P100—140YHAR5.UK PU-P100—140YHAR6.UK	8	G:	PUY-P42/48VKA. TH PUY-P42/48YKA. TH PUY-P42/48VKA. TH-T PUY-P42/48YKA. TH-T PUY-P42/48VKA. TH-U PUY-P42/48YKA. TH-U PUY-P42YKA. TH-HK PUY-SP42/48VKA. TH PUY-SP36/42/48YKA. TH PUY-SP42/48VKA. TH-T PUY-SP36/42/48YKA. TH-T PUY-SP42/48VKA. TH-D PUY-SP36/42/48YKA. TH-D PUY-SP42/48VKA. TH-N PUY-SP36/42/48YKA. TH-N PUY-P45/60NKA.TH-SA PUY-P45/60VKA2.TH-U PUY-P45/60VKA2.TH-QA PUY-P125VKA.TH-SG PUHZ-P100—140VKA.TH PUHZ-P100—140VKA.TH-ET PUHZ-P100—140VKA.TH-ER PUHZ-P100—140YKA.TH PUHZ-P100—140YKA.TH-ET PUHZ-P100—140YKA.TH-ER PUHZ-SP125/140VKA.TH PUHZ-SP100—140YKA.TH	11