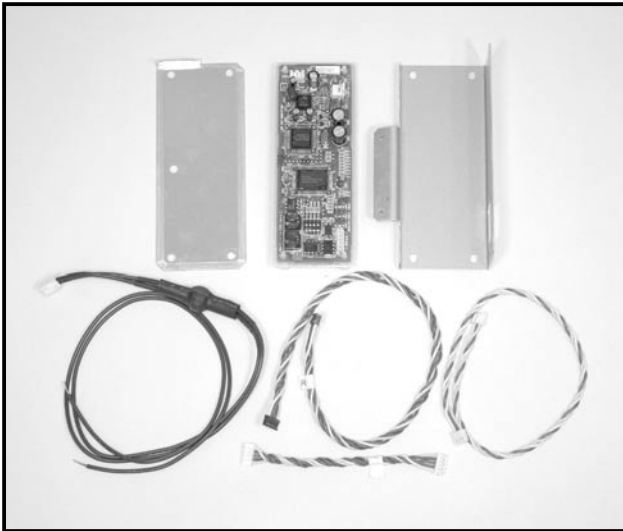


## Photo



## Descriptions

A-control Mr. SLIM models located in various places within a building can be connected to "M-NET" so that they can be monitored / controlled effectively and meticulously.

## Applicable Models

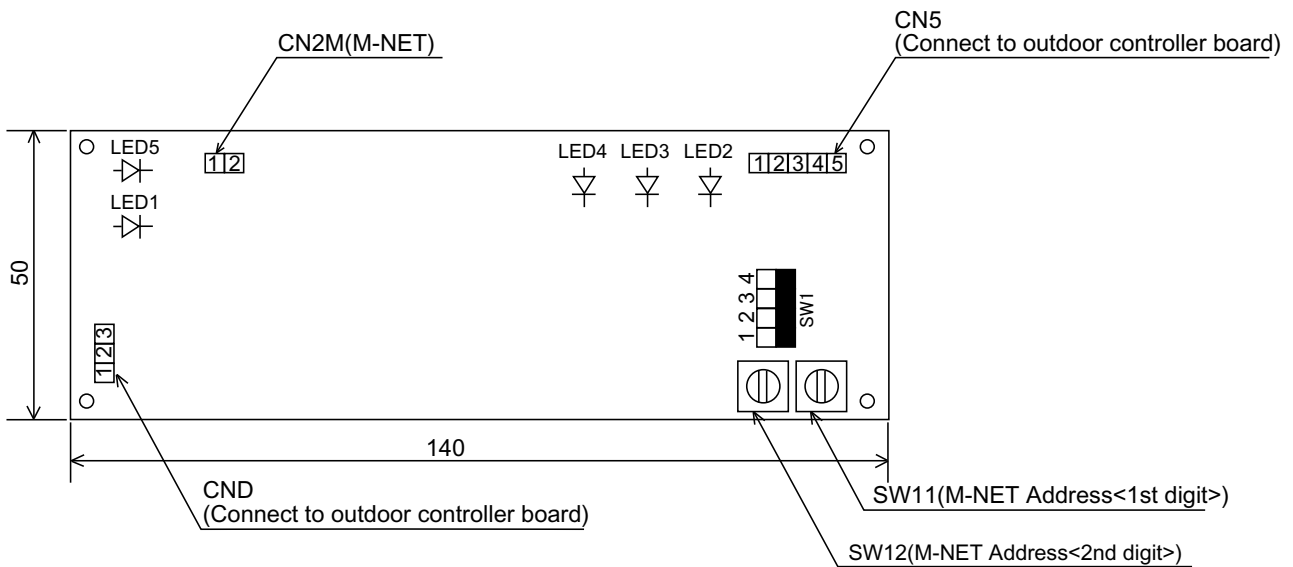
- All PU(H)-RP GA
- All PUHZ-RP outdoor Units (A-control)

## Specifications

Power	Supplied from control board
Power consumption	0.6W (at 5V DC, 12V DC)
Operating conditions	Mounted inside the electrical utility box of outdoor unit. (Temperature : -20 to 60°C , humidity : 90% or less (no condensation))
Weight	0.3k

## Dimensions

Unit : mm



### 1. Parts List

Applicable models

A : PUAZ-RP1.6/2VHA(-A), RP35/50VHA(-A)

B : PUAZ-RP2.5~6VHA(-A), RP60~140VHA(-A)

C : PU(H)-P1~4VGA(A), P25~100VGA,  
PU(H)-P1.6~6YGA(A), P35~140YGAA

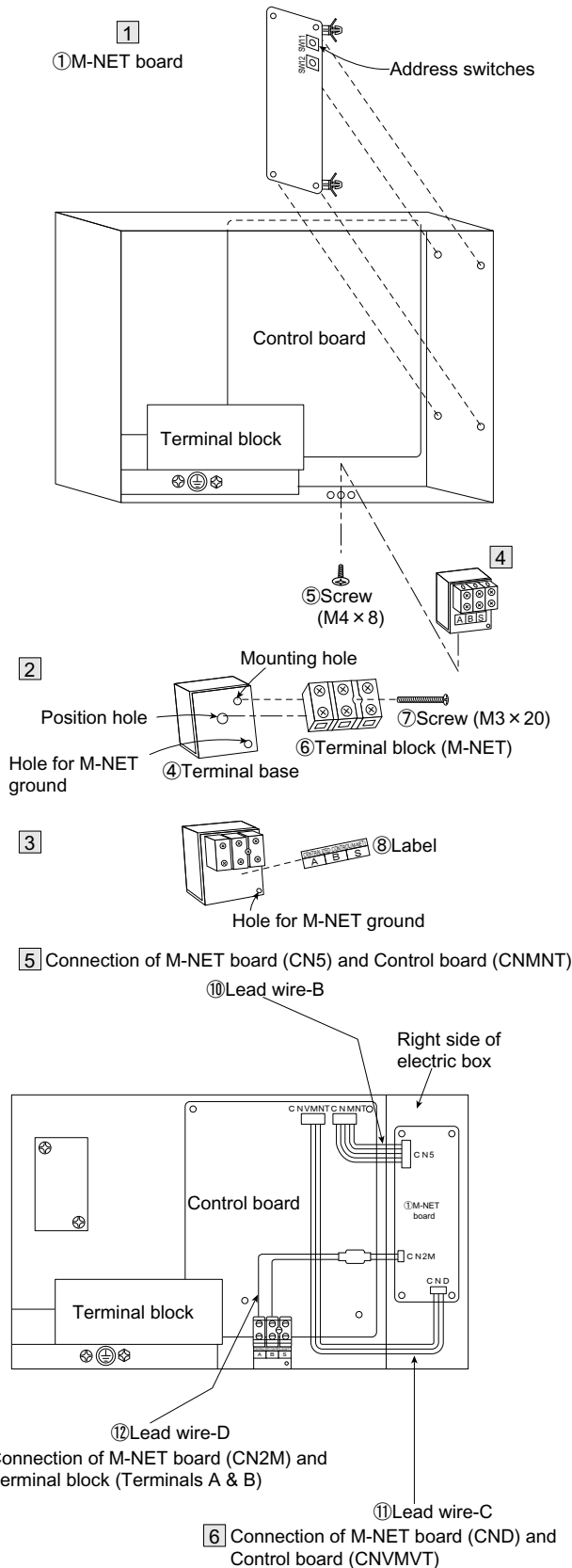
D : PUAZ-P8/10YE, P8/10MYA, P200/250MYA

E : PUAZ-RP4~6YHA, RP100~140YHA

F : PUAZ-RP8/10YHA(-A), RP200/250YHA(-A)

No.	Description	Figure	Q'ty	Applicable models						Note
				A	B	C	D	E	F	
①	M-NET board (with insulation sheets and supports)		1	○	○	○	○	○	○	
②	Plate (For mounting circuit board)		1	○						
③	Insulation sheets ▪ , ▪ , ▪	<ul style="list-style-type: none"> <li>▪ </li> <li>▪ </li> <li>▪ </li> </ul>	1	○						
			1	○						
			1	○	○					
④	Terminal base		1			○	○			
⑤	Screw (M4 x 8)		2	○ (1)		○ (1)	○ (1)	○ (2)		
⑥	Terminal block (M-NET)		1	○	○	○	○	○	○	
⑦	Terminal screw (M3x20)		1	○	○	○	○	○	○	
⑧	Label		1	○	○	○	○	○	○	
⑨	Lead wire-A (5 wires)	Color : Red  Length:380mm	1	○	○			○	○	Wire Marking : R410A Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.
⑩	Lead wire-B (5 wires)	Color : White  Length:120mm	1			○	○			Wire Marking : R407C Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.
⑪	Lead wire-C (3 wires)	 Length:380mm	1	○	○	○	○	○	○	
⑫	Lead wire-D (2 wires)	 Length:680mm	1	○	○	○	○	○	○	
⑬	Ground wire and screw (M4 x 8)		1each	○	○	○	○	○	○	
⑭	Pull tight		2	○	○	○	○	○	○	
⑮	Plate 2 (For mounting circuit board)		1					○		

**2. Installation procedures [PU(H)-P1~4VGA(A), P25~100VGAA, PU(H)-P1.6~6YGA(A), P35~140YGAA]**



- 1 Install the M-NET board ① so that the (SW11, SW12) come front.  
※Put it securely until it sounds click.
- 2 Install the Terminal block (M-NET) ⑥ on the Terminal base ④.  
※The Terminal base ④ has round boss for positioning.  
Match the round boss to the holes of the Terminal base ④.
- 3 Put the Label ⑧ on the Terminal base ④.  
※Not to close the Hole for M-NET ground.
- 4 Install the Terminal base ④ on the bottom inside of the electric box.

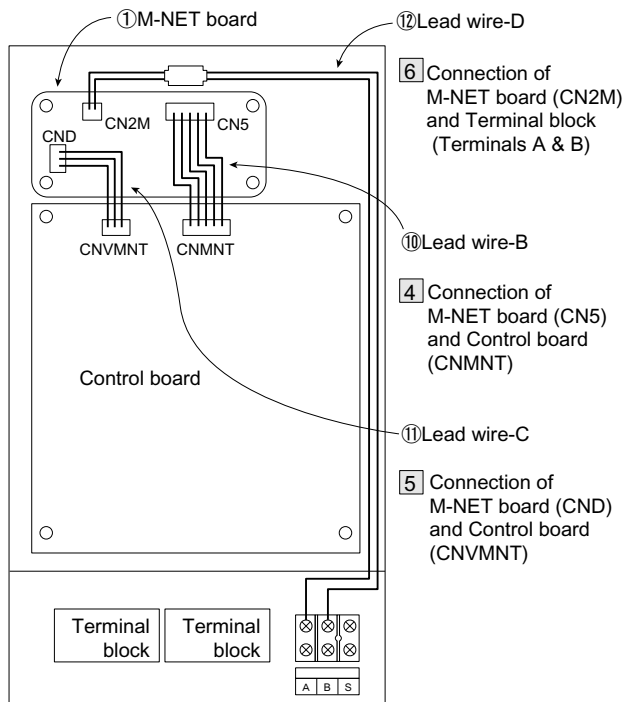
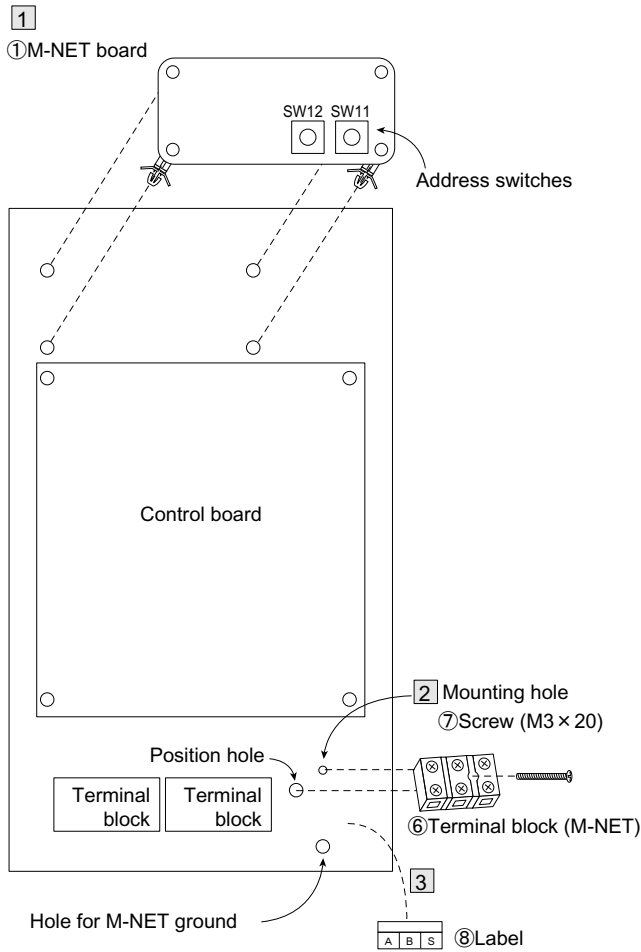
- 5 Connect the lead wire-B ⑩ to both the connector CN5 on the M-NET board ① and the connector CNMNT on the control board.  
※Caution  
Wire Marking:R407C, Connector color:White  
Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.
- 6 Connect the lead wire-C ⑪ to both the connector CND on the M-NET board ① and the connector CNVMNT on the control board.

- 7 Connect the lead wire-D ⑫ to both the connector CN2M on the M-NET board ① and the terminals A & B on the terminal block (M-NET) ⑥.
- 8 The lead wires should be tied together with the other lead wires with the pull tight ⑭ not to loose.  
Wiring length is adjusted according to apparatus.

It progresses to the page "3.Wiring method for M-NET"

- Note1:Use ground wire and screw ⑬ as required to connect the shield of M-NET transmission line to the unit.  
Note2:Take great care that no lead wire is caught on anything when installing panels.

**2. Installation procedures [PUH-P8/10YE, P8/10MYA, P200/250MYA]**



① Install the M-NET board ① so that the (SW11, SW12) come front.  
※Put it securely until it sounds click.

② Install the Terminal block (M-NET) ⑥ on the base of the electric box.

③ Put the Label ⑧ on the base of the electric box.

④ Connect the lead wire-B ⑩ to both the connector CN5 on the M-NET board ① and the connector CNMNT on the control board.  
※Caution  
Wire Marking:R407C, Connector color:White  
Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.

⑤ Connect the lead wire-C ⑪ to both the connector CND on the M-NET board ① and the connector CNVMNT on the control board.

⑥ Connect the lead wire-D ⑫ to both the connector CN2M on the M-NET board ① and the terminals A & B on the terminal block (M-NET) ⑥.

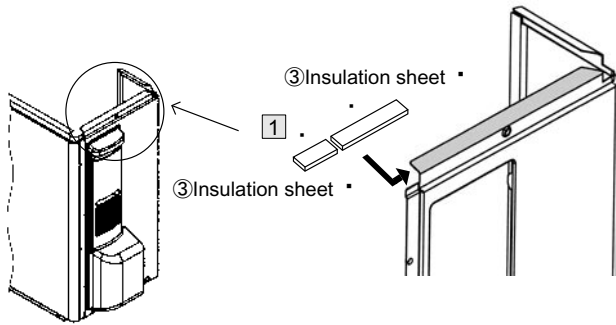
⑦ The lead wires should be tied together with the other lead wires with the pull tight ⑭ not to loose.  
Wiring length is adjusted according to apparatus.

It progresses to the page  
“3.Wiring method for M-NET”

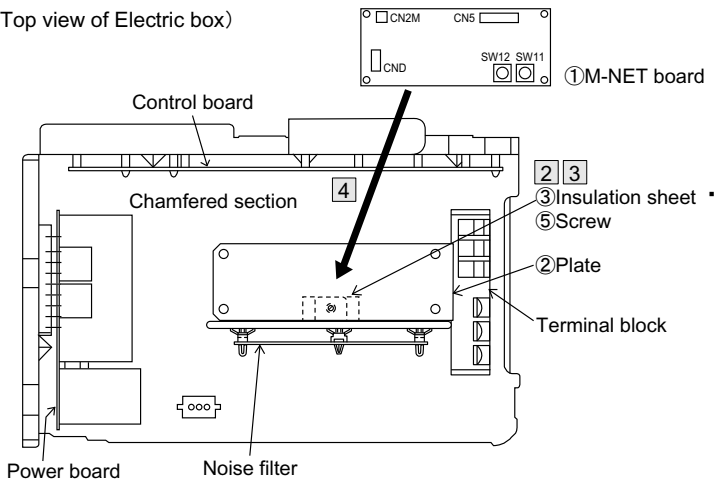
Note1:Use ground wire and screw ⑬ as required to connect the shield of M-NET transmission line to the unit.  
Note2:Take great care that no lead wire is caught on anything when installing panels.

## 2. Installation procedures [PUHZ-RP1.6/2VHA(-A), RP35/50VHA(-A)]

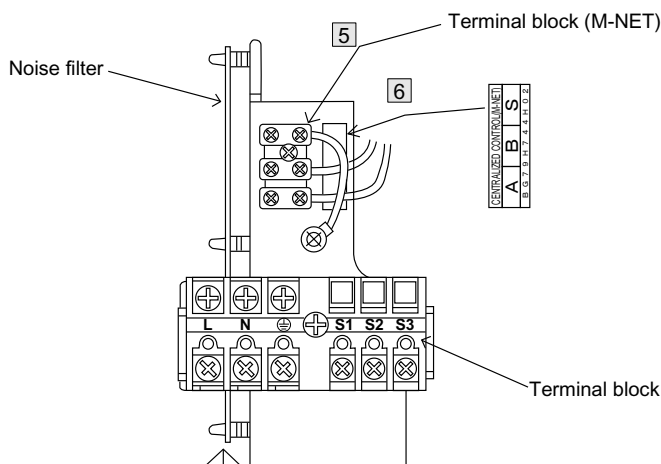
- To protect the wires connected to M-NET board from the edges of sheet-metal component, paste the insulation on the edge surface of panel sheet-metal before proceeding with the following work.



(Top view of Electric box)



(When viewed from the side of Electric box)



- Affix insulation sheets ① and ③ to the backside of the flange surface on the top of the side panel.

- Starting from the bottom, mount Insulation Sheet ③ to the "L" bend section on the back of the noise filter mounting panel.

- 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 ⑤.

- As shown in the illustration, position M-NET board ① (insulation sheet, with support) on the four corners of Plate ② so that the DIP switches (SW11, SW12) are on the terminal block side and then mount. ※Push it firmly until you hear it "click"

- Use terminal screw ⑦ to secure terminal block ⑥  
※Terminal block ⑥ has a round boss for positioning: Fit the round boss into the positioning hole in steel-plate.

- Paste label ⑧

- Use lead wire-A ⑨ to connect CN5 of M-NET board ① connection and CNMNT of outdoor control board.  
※Caution  
Wire Marking: R410A, Connector color: Red  
Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.

- Use lead wire-C ⑩ to connect CND of M-NET board ① connection and CNVMNT of outdoor control board.

- Use lead wire-D ⑪ to connect CN2M of M-NET board ① connection and terminals A and B of terminal block ⑥. Polarity is not a concern.  
※Connect the wire firmly making sure that the screws on terminal block are not loose.

- The lead wires should be tied together with the other lead wires with the pull tight ⑭ not to loose.  
Wiring length is adjusted according to apparatus.

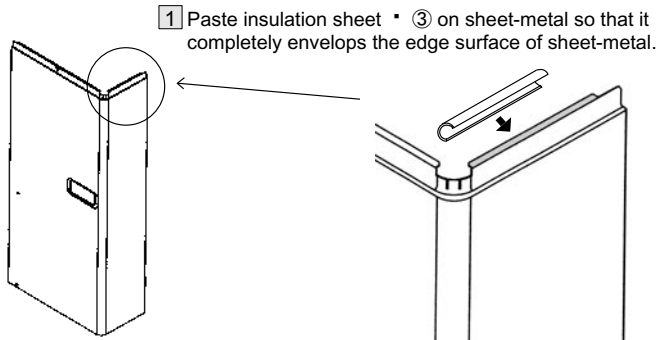
It progresses to the page "3. Wiring method for M-NET"

Note1: Use ground wire and screw ⑬ as required to connect the shield of M-NET transmission line to the unit.

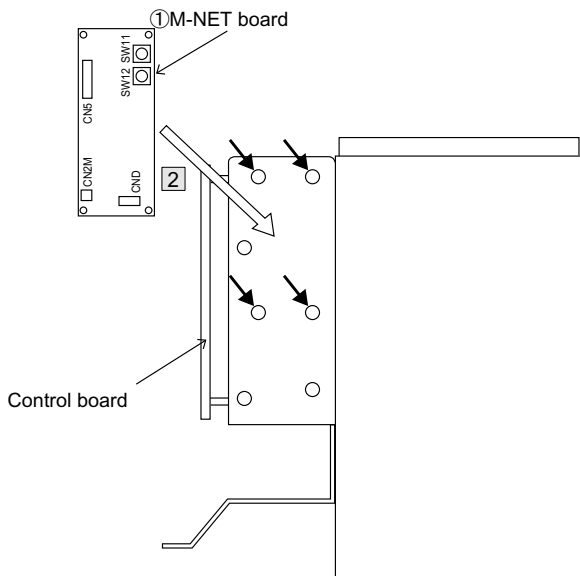
Note2: Take great care that no lead wire is caught on anything when installing panels.

## 2. Installation procedures [PUHZ-RP2.5~6VHA(-A), RP60~140VHA(-A)]

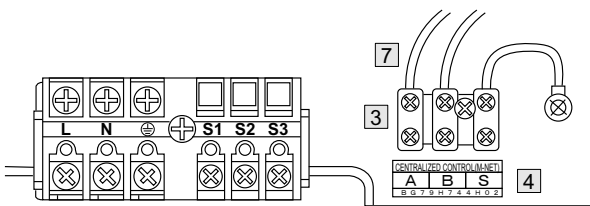
- To protect the wires connected to M-NET board from the edges of sheet-metal component, paste the insulation on the edge surface of panel sheet-metal before proceeding with the following work.



(When viewed from the side of Electric box)



(When viewed from the side of Electric parts box)



- 1 Paste insulation sheet ③ 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 Electric box so that the rotary switch faces up (at the four points indicated by arrows).  
※ Push it firmly until you hear it "click".

- 3 Use terminal screw ⑦ to secure terminal block ⑥  
※ Terminal block ⑥ has a round boss for positioning: Fit the round boss into the positioning hole in steel-plate.

- 4 Paste label ⑧ under terminal block ⑥

- 5 Use lead wire-A ⑨ to connect CN5 of M-NET board ① connection and CNMNT of outdoor control board.  
※ Caution  
Wire Marking: R410A, 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 ⑩ to connect CND of M-NET board ① connection and CNMNT of outdoor control board.

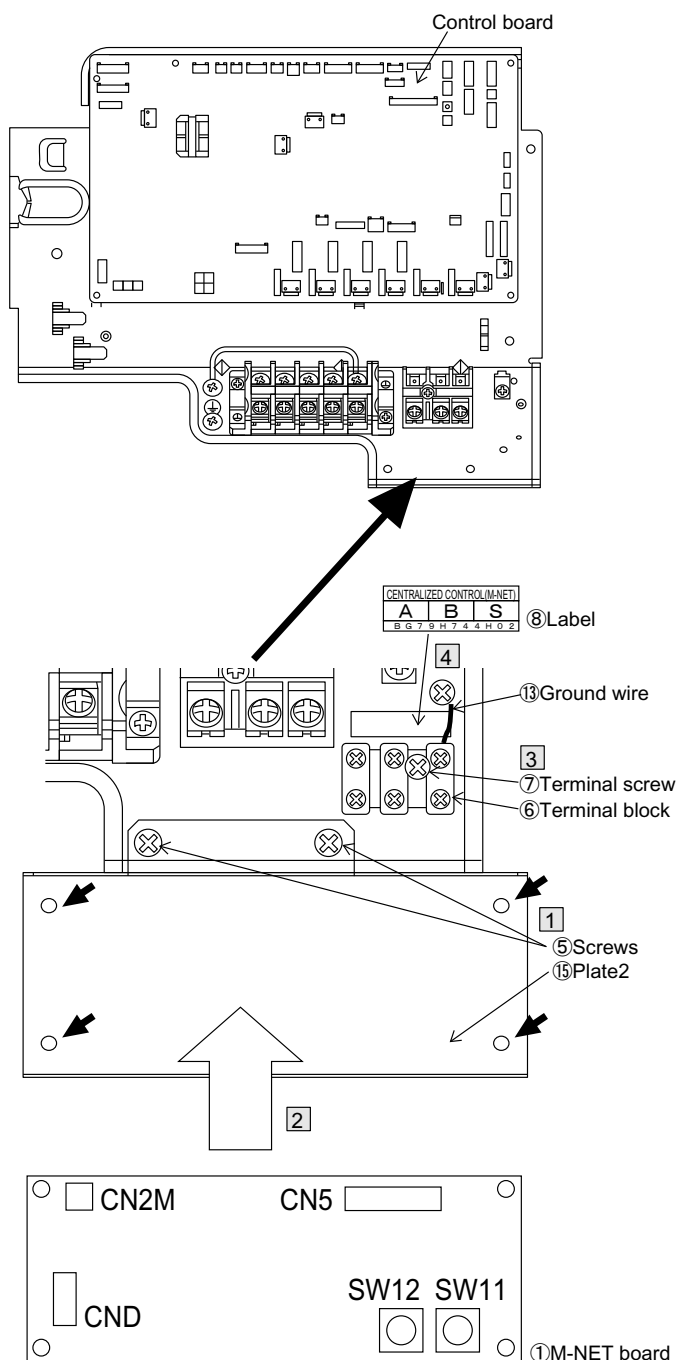
- 7 Use lead wire-D ⑪ to connect CN2M of M-NET board ① connection and terminals A and B of terminal block ⑥. Polarity is not a concern.  
※ Connect the wire firmly making sure that the screws on terminal block are not loose.

- 8 The lead wires should be tied together with the other lead wires with the pull tight ⑬ not to loose.  
Wiring length is adjusted according to apparatus.

It progresses to the page  
"3. Wiring method for M-NET"

- Note1: Use ground wire and screw ⑬ as required to connect the shield of M-NET transmission line to the unit.  
Note2: Take great care that no lead wire is caught on anything when installing panels.

## 2. Installation procedures [PUHZ-RP4~6YHA, PUHZ-RP100~140YHA]



- 1 Attach the Plate 2 ⑮, using two screws ⑤.
- 2 Install M-NET board ① (with insulation sheets and supports) on the Plate2 ⑮.  
※Push it firmly until you hear it "click" w.
- 3 Use terminal screw ⑦ to secure terminal block ⑥  
※Terminal block ⑥ has a round boss for positioning: Fit the round boss into the positioning hole in steel-plate.
- 4 Paste label ⑧
- 5 Use lead wire-A ⑨ to connect CN5 of M-NET board ① connection and CNMNT of outdoor control board.  
※Caution  
Wire Marking: R410A, 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 ⑪ to connect CND of M-NET board ① connection and CNVMNT of outdoor control board.
- 7 Use lead wire-D ⑫ to connect CN2M of M-NET board ① connection and terminals A and B of terminal block ⑥ Polarity is not a concern.  
※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 pull tight ⑭ not to loose.  
Wiring length is adjusted according to apparatus.

It progresses to the page  
"3. Wiring method for M-NET"

- Note1: Use ground wire and screw ⑬ as required to connect the shield of M-NET transmission line to the unit.
- Note2: Take great care that no lead wire is caught on anything when installing panels.

## 2. Installation procedures [PUHZ-RP8/10YHA(-A), RP200/250YHA]

(When viewed from the side of electrical parts box)

① M-NET board

- 1 Install M-NET board ① (with insulation sheets and supports) on the side of electric box .  
At the four point indicated by arrows.  
※Push it firmly until you hear it "click".
- 2 Use terminal screw ⑦ to secure terminal block⑥  
※Terminal block⑥ has a round boss for positioning:Fit the round boss into the positioning hole in steel-plate.
- 3 Paste label ⑧ under terminal block ⑥
- 4 Use lead wire-A ⑨ to connect CN5 of M-NET board ① connection and CNMNT of outdoor control board.  
※Caution  
Wire Marking:R410A, Connector color:Red  
Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.
- 5 Use lead wire-C ⑪ to connect CND of M-NET board ① connection and CNVMNT of outdoor control board.
- 6 Use lead wire-D ⑫ to connect CN2M of M-NET board ① connection and terminals A and B of terminal block ⑥ Polarity is not a concern.  
※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 pull tight ⑭ not to loose.  
Wiring length is adjusted according to apparatus.

It progresses to the page  
"3.Wiring method for M-NET"

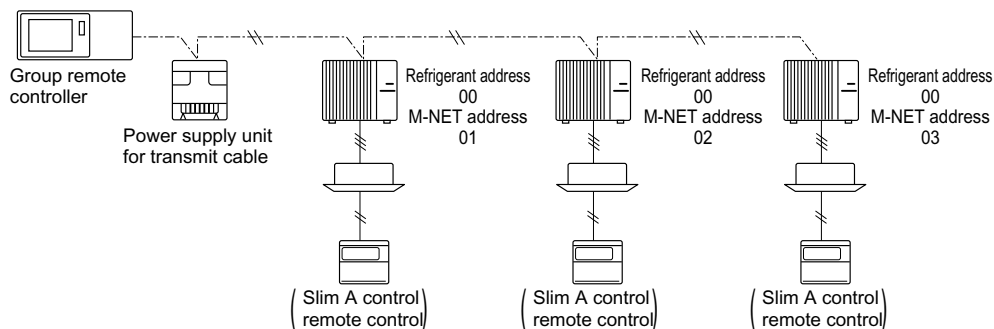
Note1:Use ground wire and screw ⑬ as required to connect the shield of M-NET transmission line to the unit.  
Note2:Take great care that no lead wire is caught on anything when installing panels.



### 3. Wiring method for M-NET

(1) Attention

- ① Outside of the unit, the wires for transmission (called for transmit wires later) should keep away (5 cm or more) from power cable not to receive electric noise. (Never put the transmit wires and power cable in the same cable pipe.)
- ② Never supply voltage 220V-240V to the terminals (TB7) for transmission. If the voltage is supplied, it can break the electronic parts on the A-M CONVERTER board.
- ③ Use the shielded cable (CVVS, CPEVS) of 1.25mm square thickness with 2 wires for the transmission cable. Never use transmit wires of different system with a cable which contains multi wires. The communication of transmit signals will not work properly and it can cause wrong operation.



Between the outdoor units, it is OK that only M-NET wiring (2 wires, no polarity) is done.

(2) M-NET address setting

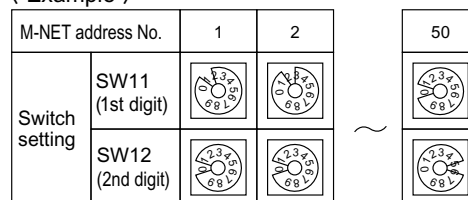
Make M-NET setting and refrigerant address setting on only outdoor unit. There is no address settings for outdoor unit and remote controller like City Multi system.

The M-NET address setting for taking into centralized control system should be done only to the outdoor unit. The address set number should be 1-50 same as for City Multi indoor unit and make set in order of number for the same group.

	A control slim	City Multi (M-NET)
Indoor unit	—————	1~50
Outdoor unit	1~50	51~100
Remote controller	—————	101~150
System controller	201~250	
Group remote controller	201~250	

The setting should be done by rotary switches SW11 for one figure and SW12 for double figures on A-M CONVERTER of the outdoor unit. (Factory settings are all zero.)

< Example >

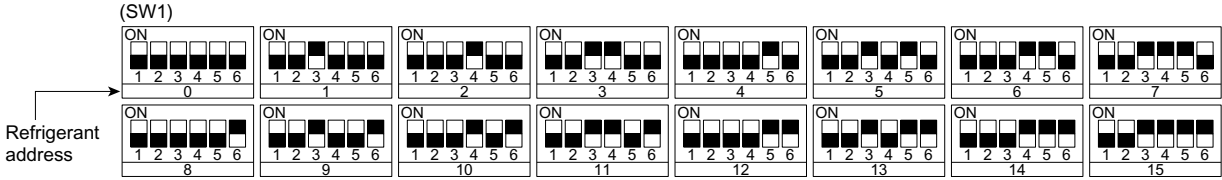


(3) Refrigerant address setting

In case that the A control Slim is set for group between different refrigerant (when multiple refrigerant system is set in one group), it is necessary to make refrigerant address setting besides the wiring for remote controller (TB5) between the indoor units.

In case that the group setting is not done, be sure to leave the refrigerant address set for 00.

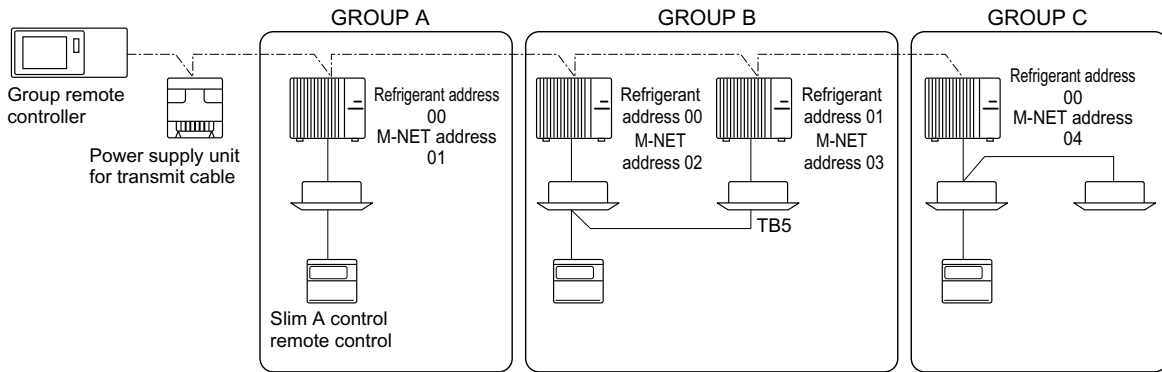
The refrigerant address is set by dip switch SW1 (3-6) on the outdoor controller of the outdoor unit. (Factory settings are all OFF .....Refrigerant address 00).



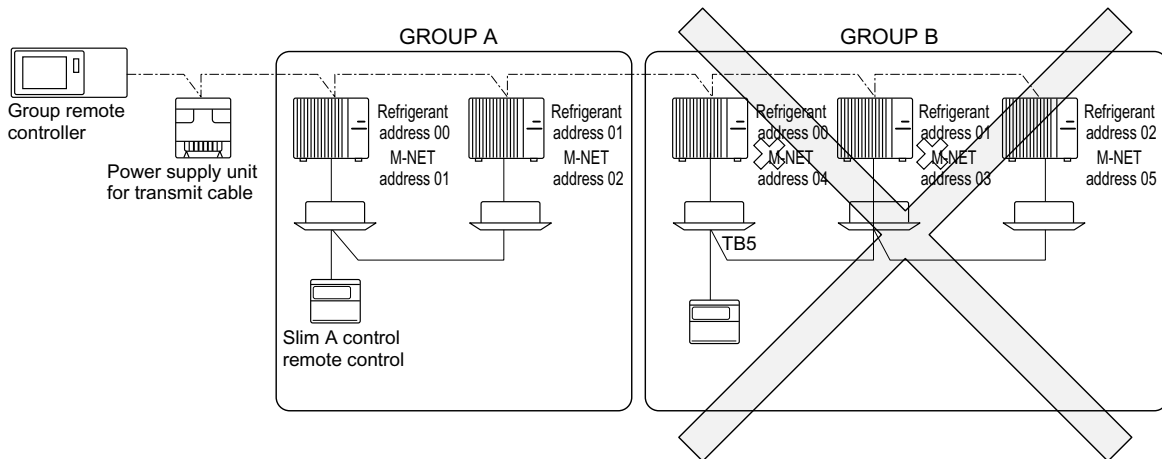
(4) Limitation for address settings

In case of group operation, the M-NET address settings and the refrigerant address settings should be done with the procedure above.

However, make the minimum M-NET address settings in the group for the outdoor unit which has the refrigerant address 00.



※It does not matter if the refrigerant address settings are same with the different group.



※It is not good with the above setting in the group B because the outdoor unit which has the refrigerant address 00 does not have the minimum M-NET address 3 in the group. Make the outdoor unit of the refrigerant address set with the minimum address in the group like the group A.

## Attention for A control Slim M-NET connection

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

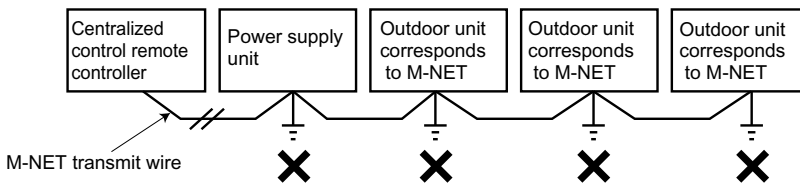
### ⚠ CAUTION

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.

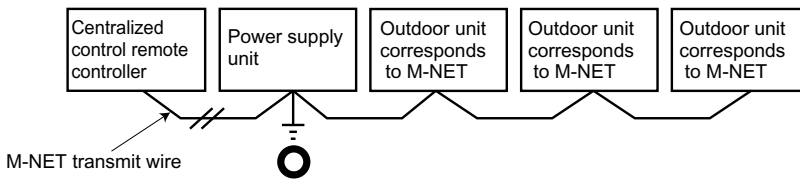
- It can cause the transmission error due to noise.

Outdoor unit digital LED display reads "Ed" error.  
Centralized control remote controller reads "0403" error.

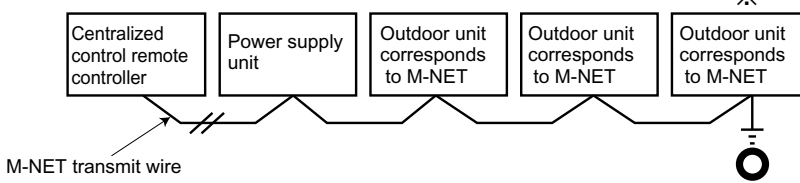
#### × Bad example (Multiple ground of shielded wire)



#### ○ Good example (One spot ground of shielded wire)



#### ○ Good example (One spot ground of shielded wire)



※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.

