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.

1. Parts List

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Figure</th>
<th>Qty</th>
<th>No</th>
<th>Description</th>
<th>Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M-Net board (with insulation sheets and supports)</td>
<td><img src="image1" alt="M-Net board" /></td>
<td>1</td>
<td>3</td>
<td>Lead wire (5 wires)</td>
<td><img src="image2" alt="Lead wire" /></td>
</tr>
<tr>
<td>2</td>
<td>Insulation</td>
<td><img src="image3" alt="Insulation" /></td>
<td>1</td>
<td>1</td>
<td>Lead wire (3 wires)</td>
<td><img src="image4" alt="Lead wire" /></td>
</tr>
<tr>
<td>3</td>
<td>Terminal block (M-Net)</td>
<td><img src="image5" alt="Terminal block" /></td>
<td>1</td>
<td>3</td>
<td>Lead wire (2 wires)</td>
<td><img src="image4" alt="Lead wire" /></td>
</tr>
<tr>
<td>4</td>
<td>Terminal screw (M3x20)</td>
<td><img src="image6" alt="Terminal screw" /></td>
<td>1</td>
<td>3</td>
<td>Ground wire and screw (M4x10)</td>
<td><img src="image7" alt="Ground wire" /></td>
</tr>
<tr>
<td>5</td>
<td>Laber</td>
<td><img src="image8" alt="Laber" /></td>
<td>1</td>
<td>3</td>
<td>Pull light</td>
<td><img src="image9" alt="Pull light" /></td>
</tr>
</tbody>
</table>

**WARNING**
- The installation must be done by dealer or qualified person.
- Never move or reinstall the machine by the customers.

**CAUTION**
- Before electric wiring
  - Install a circuit breaker depending upon the location.
  - Put ground wire.
  - Wire must not have tension.

- Before test operation
  - Turn the power on 15 hours or more before operation.
  - Never operate the machine without air filter off.
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- Never operate the machine when it is working.
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- Never place this machine in the interior of the building.
- Never place this machine in the interior of the building.
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- Never operate the machine with the hand wet.
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**NOTE**
- 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.

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

- 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.

- The electric circuit power is not sufficient or the wiring is not properly done, it can cause electrical shock or fire.
2. Installation procedure

- 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.

Paste insulation ② on sheet-metal so that it completely envelops the edge surface of sheet-metal.

(When viewed from the side of electrical parts box)

Control board

11. Install M-NET board ③ (with insulation sheets and supports) on the side of electrical parts box so that the rotary switch faces up (at the four points indicated by arrows).

12. Use terminal screw ⑥ to secure terminal block ⑦.
   * Terminal block ⑤ has a round boss for positioning. Fit the round boss into the positioning hole in steel-plate.

13. Paste label ⑤ under terminal block ⑤.

14. Use lead wire ⑨ to connect CNS of M-NET board ③ connection and CHVNT of outdoor control board.

15. Use lead wire ⑨ to connect CHV of M-NET board ③ connection and CHVNT of outdoor control board.

16. Use lead wire ⑨ to connect CHV of M-NET board ③ connection and terminals A and B of terminal block ⑤. Polarity is not a concern.
   * Connect the wire firmly making sure that the screws on terminal block are not loose.

17. Use pull-strap ⑨ to bundle the lead wires connected in steps ④, ⑥ and ⑧.

Note 1: Use ground wire and screw ③ as required to connect the shield of M-NET transmission line to the unit.

Note 2: Take great care that no lead wire is caught on anything when installing panels.
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 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.
  - Central 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.
3. Wiring method for M-NET

(1) Attention
- 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.)
- 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.
- Use the shielded cable (CVVS, COPVS) 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 units.
There is no address settings for outdoor unit and remote controller like free plan 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 free plan indoor unit and make set in order of number for the same group.

<table>
<thead>
<tr>
<th>A control slim</th>
<th>Free plan (M-NET)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indoor unit</td>
<td>1-50</td>
</tr>
<tr>
<td>Outdoor unit</td>
<td>1-50</td>
</tr>
<tr>
<td>Remote controller</td>
<td>101-150</td>
</tr>
<tr>
<td>System controller</td>
<td>201-250</td>
</tr>
<tr>
<td>Group remote controller</td>
<td>201-250</td>
</tr>
</tbody>
</table>

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.)

(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 the switch SW1 (3-8) on the outdoor controller of the outdoor unit. (Factory settings are all 01 - Refrigerant address 00.)

(4) Limitation for address settings
In case of group coarson, 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.