## Optional Parts List <Outdoor unit>

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### Optional Parts List <Indoor unit>

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*1: In the case the outdoor unit is SUZ or MXZ, the indoor unit of P-series can be connected
*2: In the case the outdoor unit is SUZ or MXZ, the indoor unit of P-series can be connected (MAC-397IF-E required)
*3: MAC-397IF-E is required
*4: Unable to use with wireless remote controller
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</table>
Branch pipe for Multi-System Twin type Twin use. (50:50)

**Applicable Models**
- PU-P71/100/125/140
- PUH-P71/100/125/140
- PUHZ-RP71/100/125/140
  for Twin 50:50 use

**Specifications**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution ratio</td>
<td>1 each for liquid pipe and gas pipe</td>
</tr>
<tr>
<td>Number of distribution pipes</td>
<td>2 (50:50)</td>
</tr>
<tr>
<td>Pipe material</td>
<td>Styrofoam molding (1 each for liquid pipe and gas pipe)</td>
</tr>
<tr>
<td>Joint</td>
<td>5 joints (3 types)</td>
</tr>
</tbody>
</table>

**Dimensions**

**LIQUID PIPE**
- OUTDOOR UNIT SIDE
- PIPE COVER (172 x 335 x 72)
- INDOOR UNIT SIDE

**GAS PIPE**
- OUTDOOR UNIT SIDE
- PIPE COVER (170 x 240 x 74)
- INDOOR UNIT SIDE

**Joint (Accessory)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>ΦA(ID)</td>
<td>6.35</td>
<td>2</td>
</tr>
<tr>
<td>ΦB(OD)</td>
<td>9.52</td>
<td>2</td>
</tr>
<tr>
<td>ΦC(ID)</td>
<td>19.05</td>
<td>1</td>
</tr>
<tr>
<td>ΦD(OD)</td>
<td>15.88</td>
<td>2</td>
</tr>
</tbody>
</table>
How to Use / How to Install

Package Air-conditioner Optional Parts Instruction Sheet for Simultaneous Twin Distributing Pipe

Make sure that you have all the following parts before installation.

<table>
<thead>
<tr>
<th>Instruction sheet</th>
<th>Gas pipe</th>
<th>Liquid pipe</th>
<th>Pipe cover (for gas pipe)</th>
<th>Pipe cover (for liquid pipe)</th>
<th>Joint pipe</th>
<th>Flare nut</th>
</tr>
</thead>
<tbody>
<tr>
<td>This sheet 1 sheet</td>
<td>1pc</td>
<td>1pc</td>
<td>1pc</td>
<td>1pc</td>
<td>#9.52</td>
<td>#15.88</td>
</tr>
</tbody>
</table>

See the following for the specifications of gas pipe and liquid pipe.

Pipe connections

1. Perform work, taking care with the followings:
   - Be sure to check the combination pattern of indoor and outdoor units and joints to be used (Table 2).
   - Be sure to observe the limits to refrigerant pipe length and number of bends (Table 1).
   - Insert the refrigerant pipe (procured at local site) and joint into the expanded pipe portions of distributing pipe (this product) until they stop, and then connect them using anti-oxidation soldering.
   - There is no restriction on the orientation of distributing pipe (this product) during installation.
   - Take care that no foreign object, such as dust, enters during pipe connecting work.
   - Do not bend or widen the distributing pipe (liquid pipe).

Pipe size and limit to refrigerant pipe

<table>
<thead>
<tr>
<th>Outdoor unit capacity</th>
<th>Pipe size (mm)</th>
<th>Actual pipe length (m)</th>
<th>Height Difference (m)</th>
<th>Number of bends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas pipe side</td>
<td>Liquid pipe side</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indoor unit side</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>71(3Hp)</td>
<td>15.88</td>
<td>50m or less</td>
<td>15 or less</td>
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<tr>
<td>140(4Hp)</td>
<td>19.05</td>
<td>80m or less</td>
<td>15 or less</td>
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<tr>
<td>200(8Hp)</td>
<td>25.4</td>
<td>80m or less</td>
<td>15 or less</td>
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<tr>
<td>250(10Hp)</td>
<td>32.6</td>
<td>80m or less</td>
<td>15 or less</td>
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</tr>
</tbody>
</table>

Pipe connections

Combination pattern of indoor and outdoor units and joints to be used:

1. Perform work, taking care with the followings:
   - Be sure to check the combination pattern of indoor and outdoor units and joints to be used (Table 2).
   - Be sure to observe the limits to refrigerant pipe length and number of bends (Table 1).
   - Insert the refrigerant pipe (procured at local site) and joint into the expanded pipe portions of distributing pipe (this product) until they stop, and then connect them using anti-oxidation soldering.
   - There is no restriction on the orientation of distributing pipe (this product) during installation.
   - Take care that no foreign object, such as dust, enters during pipe connecting work.
   - Do not bend or widen the distributing pipe (liquid pipe).

Heat insulation work

Notes:

1. Cover the entire refrigerant pipe (procured at local site) with heat insulation material. When using generally available heat insulation material, heat-resistant insulation material (at least 12 mm thick).
2. Heat insulation material: Provide wrap margins with insulation material. Wrap the spiral wrap margin (Note 2) around the entire refrigerant pipe (procured at local site) (Note 1). Heat insulation material can be obtained at local site. Please install contents other than this description on the main part of a product with an attached installation description, and use them as it.

Please install contents other than this description on the main part of a product with an attached installation description, and use them as it.
Distribution Pipe

MSDD-50WR-E

Photo

Descriptions

Branch pipe for Multi-System Twin type Twin use. (50:50)

Applicable Models

- PU-P200/250
- PUH-P200/250
- PUHZ-RP200/250

for Twin 50:50 use

Specifications

<table>
<thead>
<tr>
<th>Main body</th>
<th>Distribution ratio</th>
<th>Outdoor unit capacity is divided into two (50:50)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of distribution pipes</td>
<td>1 each for liquid pipe and gas pipe</td>
<td></td>
</tr>
<tr>
<td>Pipe material</td>
<td>Phosphate deoxidized copper C1220T-OL (JIS H3300)</td>
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</tr>
<tr>
<td>Accessory</td>
<td>Pipe cover Styrofoam molding (for liquid pipe and gas pipe)</td>
<td></td>
</tr>
<tr>
<td>Joint</td>
<td>5 joints (4 types)</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions

Unit: mm

**Liquid Pipe**

**Gas Pipe**

<table>
<thead>
<tr>
<th>Joint (Accessory)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Φ(ID)</td>
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<tr>
<td>28.6</td>
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<tr>
<td>15.88</td>
</tr>
<tr>
<td>19.05</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Joint (Accessory)</th>
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</thead>
<tbody>
<tr>
<td>Φ(ID)</td>
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<td>9.52</td>
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</tbody>
</table>
How to Use / How to Install

Package Air-conditioner Optional Parts Instruction Sheet for Simultaneous Twin Distributing Pipe

Make sure that you have all the following parts in packing box before installation.

<table>
<thead>
<tr>
<th>Instruction sheet</th>
<th>Gas pipe</th>
<th>Liquid pipe</th>
<th>Pipe cover (for gas pipe)</th>
<th>Pipe cover (for liquid pipe)</th>
<th>Joint pipe</th>
<th>Pipe nut</th>
</tr>
</thead>
<tbody>
<tr>
<td>This sheet 1 sheet</td>
<td>1pc</td>
<td>1pc</td>
<td>1pc</td>
<td>1pc</td>
<td>4pcs</td>
<td>2pcs</td>
</tr>
</tbody>
</table>

See the following for the specifications of gas pipe , and liquid pipe .

**Pipe size and limit to refrigerant pipe**

*For R407C fixed speed models*

<table>
<thead>
<tr>
<th>Pipe size (mm)</th>
<th>Actual pipe length (m)</th>
<th>Height Difference (m)</th>
<th>Number of bends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor unit side</td>
<td>Gas pipe side</td>
<td>Liquid pipe side</td>
<td>Outdoor unit side</td>
</tr>
<tr>
<td>71(3hp)</td>
<td>15.88 (5/8)</td>
<td>15.88 (5/8)</td>
<td>9.52 (3/8)</td>
</tr>
<tr>
<td>100-140 (4-6hp)</td>
<td>19.05 (3/4)</td>
<td>12.7 (1/2)</td>
<td>9.52 (3/8)</td>
</tr>
<tr>
<td>200(8hp)</td>
<td>25.4 (1)</td>
<td>19.05 (3/4)</td>
<td>12.7 (1/2)</td>
</tr>
<tr>
<td>250(10hp)</td>
<td>31.8 (1-1/8)</td>
<td>12.7 (1/2)</td>
<td>9.52 (3/8)</td>
</tr>
</tbody>
</table>

1. Perform work, taking care with the followings:
   - Be sure to check the combination pattern of indoor and outdoor units and joints to be used (Table 2).
   - Be sure to observe the limits to refrigerant pipe length and number of bends (Table 1).
   - Insert the refrigerant pipe (procured at local site) and joint into the expanded pipe portions of distributing pipe (this product) until they stop, and then conned them using anti-oxidation solder.
   - There is no restriction on the orientation of distributing pipe (this product) during installation.
   - Take care that no foreign object, such as dust, enters during pipe connecting work.
   - There is no restriction on the orientation of distributing pipe (this product) during installation.
   - Remove the tape of liquid pipe after checking it.

2. Pipe connections:
   - The provided joints will be necessary depending on the capacity of model used: See (Table 2), and connect the joints as shown in (Fig. 2).
   - Do not bend or widen the distributing pipe (liquid pipe).

*For R410A Power Inverter models*

<table>
<thead>
<tr>
<th>Pipe size (mm)</th>
<th>Actual pipe length (m)</th>
<th>Height Difference (m)</th>
<th>Number of bends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor unit side</td>
<td>Gas pipe side</td>
<td>Liquid pipe side</td>
<td>Outdoor unit side</td>
</tr>
<tr>
<td>71(3hp)</td>
<td>15.88 (5/8)</td>
<td>15.88 (5/8)</td>
<td>9.52 (3/8)</td>
</tr>
<tr>
<td>100-140 (4-6hp)</td>
<td>19.05 (3/4)</td>
<td>12.7 (1/2)</td>
<td>9.52 (3/8)</td>
</tr>
<tr>
<td>200(8hp)</td>
<td>25.4 (1)</td>
<td>19.05 (3/4)</td>
<td>12.7 (1/2)</td>
</tr>
<tr>
<td>250(10hp)</td>
<td>31.8 (1-1/8)</td>
<td>12.7 (1/2)</td>
<td>9.52 (3/8)</td>
</tr>
</tbody>
</table>

1. Perform work, taking care with the followings:
   - Be sure to check the combination pattern of indoor and outdoor units and joints to be used (Table 2).
   - Be sure to observe the limits to refrigerant pipe length and number of bends (Table 1).
   - Insert the refrigerant pipe (procured at local site) and joint into the expanded pipe portions of distributing pipe (this product) until they stop, and then conned them using anti-oxidation solder.
   - There is no restriction on the orientation of distributing pipe (this product) during installation.
   - Take care that no foreign object, such as dust, enters during pipe connecting work.
   - There is no restriction on the orientation of distributing pipe (this product) during installation.
   - Remove the tape of liquid pipe after checking it.

2. Pipe connections:
   - The provided joints will be necessary depending on the capacity of model used: See (Table 2), and connect the joints as shown in (Fig. 2).
   - Do not bend or widen the distributing pipe (liquid pipe).

Heat insulation work:

1. Cover the entire refrigerant pipe (procured at local site) with heat insulation material. When using generally available heat insulation material, heat resistant insulation material (at least 12 mm thick). Pipe covers and will shrink slightly at high temperatures. Provide wrap margins with insulation.
**Photo**

For double-branching of the refrigerant piping to connect 2 branch boxes. (Flare connection type)

**Descriptions**

**Applicable Models**

- MXZ-8A140VA
- PAC-AK30BC
- PAC-AK50BC

**Dimensions**

**LIQUID PIPE**

<table>
<thead>
<tr>
<th>ID φ 9.52</th>
<th>82</th>
</tr>
</thead>
<tbody>
<tr>
<td>(To outdoor unit)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ID φ 9.52</th>
<th>143</th>
</tr>
</thead>
<tbody>
<tr>
<td>(To Branch box)</td>
<td></td>
</tr>
</tbody>
</table>

**GAS PIPE**

<table>
<thead>
<tr>
<th>ID φ 15.88</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>(To outdoor unit)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ID φ 15.88</th>
<th>186</th>
</tr>
</thead>
<tbody>
<tr>
<td>(To Branch box)</td>
<td></td>
</tr>
</tbody>
</table>
# How to Use / How to Install

## 2-BRANCH PIPE(JOINT) (MSDD–50AR–E)

In case of 2 branch box connection for flare connection

### The kit contains followings

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Manual</td>
<td>This one-sheet manual</td>
</tr>
<tr>
<td>2. Liquid pipe (small: φ 9.52)</td>
<td></td>
</tr>
<tr>
<td>3. Gas pipe (large: φ 15.88)</td>
<td></td>
</tr>
<tr>
<td>4. Heat-insulation cover (small)</td>
<td></td>
</tr>
<tr>
<td>5. Heat-insulation cover (large)</td>
<td></td>
</tr>
</tbody>
</table>

### During installation, be careful about the followings

1. Note the limit length of the refrigerant pipe refer to the installation manual of outdoor unit and branch box.
2. Note the limits for installing the indoor units refer to the installation manual of outdoor unit and branch box.
3. In connecting pipes, take care not to let any dirt or other foreign matter enter any pipe.
4. Put a heat insulator into every refrigerant pipe.

### Outline of system and pipe size

#### Outdoor unit

- Branch box #1
- Branch box #2

#### See the following for the specifications of liquid pipe, and gas pipe

<table>
<thead>
<tr>
<th>Pipe Type</th>
<th>Nominal Diameter (mm)</th>
<th>Flare Dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid</td>
<td>φ 9.52</td>
<td>12.8-13.2</td>
</tr>
<tr>
<td>Gas</td>
<td>φ 15.88</td>
<td>19.3-19.7</td>
</tr>
</tbody>
</table>

### Installing the refrigerant piping

- **Fare cutting dimensions**
- **Fare nut tightening torque**

#### Copper pipe O.D. (mm) | Flare dimensions (mm) | Fare nut tightening torque (N-m)
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>φ 9.52</td>
<td>12.8-13.2</td>
<td>22</td>
</tr>
<tr>
<td>φ 15.88</td>
<td>19.3-19.7</td>
<td>29</td>
</tr>
</tbody>
</table>

#### Installation direction of joint

- **Horizontal direction**
- **Vertical direction**

### Installing Heat Insulation Cover and Heat Insulators

- **Liquid pipe**
- **Gas pipe**

- **Tape** (to be locally procured)
- **Heat Insulator** (to be locally procured) (Note 1)

#### Wrapping margin (Note 2)

- **Heat Insulation cover**

- **The liquid pipe (small: φ 9.52)** Make it fit the heat-insulation cover(small).
- **Seal the mating of the heat-insulation cover with the tape for sealing heat insulators (to be locally procured).**
- **Do the same with the gas pipe (large: φ 15.88), using the heat-insulation cover (large), as with the liquid pipe (small).**

#### Note 1: Install a heat insulator on every part of the refrigerant pipes (to be locally procured).

#### Note 2: The pipe covers shrink a little under high heat.

Therefore, allow for some wrapping margin in the heat insulators.
For double-branching of the refrigerant piping to connect 2 branch boxes. (Brazing type)

**Applicable Models**
- MXZ-8A140VA
- PAC-AK30BC
- PAC-AK50BC

**Dimensions**

**LIQUID PIPE**

Unit: mm

- ID ø 9.52 (To outdoor unit)
- ID ø 9.52 (To Branch box)

**GAS PIPE**

- ID ø 15.88 (To outdoor unit)
- ID ø 15.88 (To Branch box)
How to Use / How to Install

The kit contains followings

<table>
<thead>
<tr>
<th>Manual</th>
<th>Liquid pipe (small: d=9.52)</th>
<th>Gas pipe (large: d=15.88)</th>
<th>Heat-insulation cover (small)</th>
<th>Heat-insulation cover (large)</th>
<th>Pipe (Gas pipe use: d=15.88 → d=19.05)</th>
</tr>
</thead>
</table>

This one-sheet manual

During installation, be careful about the followings

1. Note the limit length of the refrigerant pipe refer to the installation manual of outdoor unit and branch box.
2. Note the limits for installing the indoor units refer to the installation manual of outdoor unit and branch box.
3. Use solder in connecting any branch joint with any piping system or with the pipe. Insoldering, use oxygen-free solder.
4. Each branch joint has a stopper. In connecting any pipe to any branch joint, thrust the pipe home till it ocks.
5. In connecting pipes, take care not to let any dirt or other oreign matter enter any pipe.
6. Put a heat insulator into every refrigerant pipe.

Outline of system and pipe size

Outdoor unit 2branches pipe(joint):optional part explained by this manual

Branch box #1

Branch box #2

See the following for the specifications of liquid pipe, and gas pipe

<table>
<thead>
<tr>
<th>(1)Outdoor unit:R410A type (MXZ-8A140VA)</th>
<th>(2)Outdoor unit:R22 type (MXZ-7A140VC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid(mm)</td>
<td>A</td>
</tr>
<tr>
<td>Ref to installation manual of outdoor unit and branch box</td>
<td>d=9.52</td>
</tr>
</tbody>
</table>

Installation direction of joint

Horizontal direction

Within ±30°

Vertical direction

Within ±15°

Installing Heat Insulation Cover and Heat Insulators

- The liquid pipe (small) Make it fit the heat-insulation cover (small).
  Seal the mating of the heat-insulation cover with the tape for sealing heat insulators(to be locally procured).
- Do the same with the gas pipe(large), using the heat-insulation cover (large), as with the liquid pipe (small).

Note 1: Install a heat insulator on every part of the refrigerant pipes (to be locally procured).
If you want to use commercially-available heat insulators, use heat-resistant heat insulators(at least 12mm thick).

Note 2: The pipe covers shrink a little under high heat. Therefore, allow for some wrapping margin in the heat insulators.
**Distribution Pipe**

**Photo**

3-branch pipe for Multi-System Triple use (33:33:33)

**Descriptions**

Applicable Models

- PU-P140/200/250
- PUH-P140/200/250
- PUHZ-RP140/200/250

for 33:33:33 Triple use

**Specifications**

<table>
<thead>
<tr>
<th>Main body</th>
<th>Distribution ratio</th>
<th>Outdoor unit capacity is divided into three (33:33:33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of</td>
<td>Number of pipes</td>
<td>1 each for liquid pipe and gas pipe</td>
</tr>
<tr>
<td>distribution pipes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipe material</td>
<td>Polyethylene foam molding (for liquid pipe)</td>
<td></td>
</tr>
<tr>
<td>Accessory</td>
<td>Pipe cover</td>
<td>EPT sponge rubber type (for gas pipe)</td>
</tr>
<tr>
<td>Joint</td>
<td>9 joints (5 types)</td>
<td></td>
</tr>
</tbody>
</table>

**Dimensions**

**OUTDOOR UNIT SIDE**

**GAS PIPE**

**PIPE COVER (143 × 341 × 78)**

**INDOOR UNIT SIDE**

**Dimensions**

Unit : mm

<table>
<thead>
<tr>
<th>LIQUID PIPE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTDOOR UNIT SIDE</td>
<td></td>
</tr>
<tr>
<td>PIPE COVER (143 × 341 × 78)</td>
<td></td>
</tr>
<tr>
<td>INDOOR UNIT SIDE</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JOINT (Accessory)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTDOOR UNIT SIDE</td>
<td></td>
</tr>
<tr>
<td>INDOOR UNIT SIDE</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>φA(ID)</th>
<th>φB(OD)</th>
<th>Amount</th>
<th>ϕC(ID)</th>
<th>ϕD(OD)</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.7</td>
<td>9.52</td>
<td>1</td>
<td>12.7</td>
<td>15.88</td>
<td>3</td>
</tr>
<tr>
<td>19.05</td>
<td>25.4</td>
<td>1</td>
<td>6.35</td>
<td>9.52</td>
<td>3</td>
</tr>
<tr>
<td>15.88</td>
<td>25.4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Make sure that you have all the following parts in packing box before beginning installation:

1. Instruction sheet
2. Gas pipe
3. Liquid pipe
4. Pipe cover (for gas pipe)
5. Pipe cover (for liquid pipe)
6. Pipe covers
7. Bander
8. Joint
9. Flare nut

See the installation manual provided with the main unit for details on charge-less pipe length and refrigerant additional charge amount.

1. Perform work, taking care with the following:
   - Be sure to check the connection pattern of indoor and outdoor units, joints to be used (Table 3), pipe size (Table 1), and joint used (1).
   - Be sure to observe the limits to refrigerant pipe length and number of bands (Table 2).
   - Insert the refrigerant pipe (procured at local site) and joint (2) into the separated pipe portions of distributing pipe (this product) until they stop, and then connect them using anti-corrosion soldering.
   - There is no restriction on the orientation of distributing pipe (the product) during installation.
   - Take care that no foreign object, such as dust, enters during pipe connecting work.
   - Remove the tag of liquid pipe (3) after checking it.

2. Connect pipes:
   - The provided joints (1) will be necessary depending on the capacity of model used. See (Table 3), and connect the refrigerant pipe.
   - Do not bend or warp the distributing pipe (liquid pipe).

   **Combination pattern of indoor and outdoor units and joints to be used:**

   - For R410A fixed speed model:
   - For R410A Power Inverter model:

3. Heat insulation work:

   - Cut off any outer pipe cover to make appropriate length.
   - Use pipe covers to completely cover the connection portions of refrigerant pipe (procured at local site) and gas pipe (2) and liquid pipe (3).
   - Cover the entire refrigerant pipe (procured at local site) with heat insulation material.

   When using generally available heat insulation material, make sure it is heat-resistant insulation material (at least 12 mm thick).
3-branch pipe for Multi-System Triple use. (25:25:50)

### Specifications

<table>
<thead>
<tr>
<th>Main body</th>
<th>Distribution ratio</th>
<th>Outdoor unit capacity is divided into three (25:25:50)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of distribution pipes</td>
<td>1 each for liquid pipe and gas pipe</td>
<td></td>
</tr>
<tr>
<td>Pipe material</td>
<td>Phosphate deoxidized copper C1220T-OL (JIS H3300)</td>
<td></td>
</tr>
<tr>
<td>Accessory</td>
<td>Pipe cover Polyethylene foam molding (for liquid pipe) EPT sponge rubber type (for gas pipe)</td>
<td></td>
</tr>
<tr>
<td>Joint</td>
<td>9 joints (7 types)</td>
<td></td>
</tr>
</tbody>
</table>

### Dimensions

**LIQUID PIPE**

OUTDOOR UNIT SIDE \( \phi 15.88 \) (ID)

INDOOR UNIT SIDE

OUTDOOR UNIT SIDE \( \phi 25.4 \) (ID)

INDOOR UNIT SIDE

**GAS PIPE**

<table>
<thead>
<tr>
<th>Joint (Accessory)</th>
<th>( \phi A ) (ID)</th>
<th>( \phi B ) (OD)</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.7</td>
<td>9.52</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>19.05</td>
<td>15.88</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>28.6</td>
<td>25.4</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Joint (Accessory)</th>
<th>( \phi C ) (ID)</th>
<th>( \phi D ) (OD)</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.35</td>
<td>9.52</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>9.52</td>
<td>15.88</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>12.7</td>
<td>15.88</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>19.05</td>
<td>25.4</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**PU-P140**

**PUH-P140/200/250**

for 25:25:50 Triple use
INSTALLATION MANUAL OF MULTI DISTRIBUTOR PIPES (TRIPLE) OPTIONAL PARTS

Model SDT-111SA-E [Indoor unit (triple) with same capacity 33:33:33]
Model SDT-112SA-E [Indoor unit (triple) with differing capacity 25:25:50]
Model SDT-122SA-E [Indoor unit (triple) with differing capacity 20:40:40]

1. The following items packed in the box and must be checked before working.

   1. Installation manual
   2. Gas pipe
   3. Liquid pipe
   4. Pipe cover (gas pipe)
   5. Pipe cover (liquid pipe)
   6. Pipe cover (liquid pipe with V cut)
   7. Pipe cover (liquid pipe)
   8. Band
   9. Joint

   ● As the joint 9 differs according to the model, refer to (Table 2).
   ● The gas pipe 2 and liquid pipe 3 are specified as shown below.

2. Pipe size and refrigerant pipe limits.

   (Table 2)

<table>
<thead>
<tr>
<th>Outdoor unit</th>
<th>Pipe size (mm/inch)</th>
<th>Actual piping length (m)</th>
<th>Height difference (m)</th>
<th>No. of bends</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Liquid side</td>
<td>Indoor – Outdoor</td>
<td>Indoor – Indoor</td>
<td>Indoor – Indoor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Indoor – Outdoor</td>
<td>Indoor – Indoor</td>
<td>Indoor – Indoor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Indoor – Outdoor</td>
<td>Indoor – Indoor</td>
<td>Indoor – Indoor</td>
</tr>
<tr>
<td>PU(P)-P6</td>
<td>15.5/3/4</td>
<td>4.7/3/4</td>
<td>9.52 (2/3)</td>
<td>2/2</td>
</tr>
<tr>
<td>PUH(P)-8</td>
<td>15.5/5/6</td>
<td>4.8/3/6</td>
<td>12.7 (2)</td>
<td>2/2</td>
</tr>
<tr>
<td>PUH(P)-10</td>
<td>18.0/7/8</td>
<td>5.0/3/8</td>
<td>19.5/5/7</td>
<td>2/2</td>
</tr>
</tbody>
</table>

   Note 1: The number of bands in the refrigerant pipe is respectively 8 or less in the range of (A+B)/(A+C)/(A-D).

   (Table 3)

<table>
<thead>
<tr>
<th>Joint size (mm)</th>
<th>SDT-111</th>
<th>SDT-112</th>
<th>SDT-122</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) OD 15.88-ID 9.52</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>(2) OD 15.88-ID 12.7</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>(3) OD 15.88-ID 19.05</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>(4) OD 25.4-ID 19.05</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>(5) OD 25.4-ID 28.6</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

   3. Joint pipe for refrigerant pipe.
3. Pipe connection

1. Note the following during work:
   - Be sure to recheck the combination (Table 1) of the indoor/outdoor units.
   - Observe the refrigerant pipe length limits and no. of bend limits (Table 2).
   - Insert the refrigerant pipe (cut to length) into the flared end of the distributor pipe (packaged) unit in the former pipe stop.
   - Use oxidation-free solder for connection when possible.
   - The installation direction of the distributor pipe (packed) is not regulated.
   - Take care to prevent dirt, foreign materials, etc., from entering the pipe when connecting the pipe.
   - After checking, remove the tag from the liquid pipe. 
2. Pipe connection
   - Referring to (Table 2), check the pipe size, and connect the refrigerant pipe.
   - Do not bend or expand any distributor pipe (liquid pipe).
3. Triple combination with differing capacities
   - Even if the capacity of the indoor unit differs depending on the combination, the pipe size may be the same. In this case, connect the pipes to ensure proper distribution according to the following: (only liquid pipe side).
   - If the capacity of the indoor unit is larger, connect the liquid pipe 1 to the "Larger" side.
   - If the capacity of the indoor unit is smaller, connect the liquid pipe 3 to the "Smaller" side.

4. Heat insulating work

1. Wrap the pipe covers 4, 5, and 6 on the gas pipe 2 without clearance as shown above. Moreover, securely press the V cut areas of the pipe cover 4 against the pipe base on both sides during assembling.
2. Securely seal the cut areas of the pipe covers 4, 5, and 6 with heat insulating sealing tape (obtained locally). Wrap the seal tape in a cross to eliminate clearance at the cross area of the pipe.
3. Fasten the end of each pipe cover with band 10.
4. Install the liquid pipe 3 while aligning it with the pipe cover 7 (2 pcs). Seal the joint area of the pipe cover 7 with heat insulating sealing tape (obtained locally).
5. As shown above, install the liquid pipe 3 on the pipe covers 8 and 9, and securely seal with heat insulating sealing tape (obtained locally).
6. Fasten the end of each pipe cover with band 10.

Note:
1. Cut the excessive part of each pipe cover.
2. Securely cover the joint areas (8) of the refrigerant pipe (obtained locally) to the gas pipes 2 and liquid pipe 3 with the pipe covers.
3. Cover the entire refrigerant pipe (obtained locally) with heat insulating material. If commercial heat insulating material is used, it must be 12mm or thicker.

5. Control wiring for indoor unit

<table>
<thead>
<tr>
<th>Specifications of each control cable</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control cable</td>
<td>Prepared by site</td>
<td>Enclosed with the remote controller</td>
<td></td>
</tr>
<tr>
<td>Control circuit voltage</td>
<td>220-240V DC12V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cable thickness</td>
<td>2.5mm² or more</td>
<td>0.3mm² or more</td>
<td></td>
</tr>
<tr>
<td>Polarity</td>
<td>Designated</td>
<td>Not designated</td>
<td></td>
</tr>
</tbody>
</table>
3-branch pipe for Multi-System Triple use (20:40:40)

**Specifications**

<table>
<thead>
<tr>
<th>Main Body</th>
<th>Number of distribution pipes</th>
<th>Distribution ratio</th>
<th>Outdoor unit capacity is divided into three (20:40:40)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Applicable Models**

- PUH-P200
- PUH-P250

for 20:40:40 Triple use

**Dimensions**

Unit: mm

### LIQUID PIPE

- **OUTDOOR UNIT SIDE**
  - φ 15.88 (ID)

- **PIPE COVER**
  - (143 × 341 × 78)

- **INDOOR UNIT SIDE**
  - 3-φ 9.52 (ID)

### GAS PIPE

- **OUTDOOR UNIT SIDE**
  - φ 25.4 (ID)

- **JOINT (Accessory)**
  - φA(ID) 80
  - φB(OD) 80

- **INDOOR UNIT SIDE**
  - 3-φ 15.88 (ID)

### JOINT (Accessory)

- **ΦA(ID)**
  - 12.7
  - 19.05
  - 28.6

- **ΦB(OD)**
  - 9.52
  - 15.88

- **Amount**
  - 2
  - 2
  - 1

### ΦC(ID)

- 6.35
- 12.7

### ΦD(OD)

- 9.52
- 15.88

- **Amount**
  - 1
  - 2
INSTALLATION MANUAL OF MULTI DISTRIBUTOR PIPES (TRIPLE) OPTIONAL PARTS

Model SDT-111SA-E [Indoor unit (triple) with same capacity 33:33:33]
Model SDT-112SA-E [Indoor unit (triple) with differing capacity 25:25:50]
Model SDT-122SA-E [Indoor unit (triple) with differing capacity 20:40:40]

1. The following items packed in the box and must be checked before working.

- Installation manual
- Gas pipe
- Liquid pipe
- Pipe cover (gas pipe) with V-cut
- Pipe cover (liquid pipe)
- OD43X3502 - 1 pc
- OD43X3504 - 1 pc
- OD42X180E - 1 pc
- OD42X180F - 1 pc
- OD43X200E - 3 pcs
- Green Band
- Joint

- As the joint differs according to the model, refer to (Table 2).
- The gas pipe and liquid pipe are specified as shown below.

2. Pipe size and refrigerant pipe limits.

<table>
<thead>
<tr>
<th>Outdoor unit</th>
<th>Gas side</th>
<th>Actual piping length (m)</th>
<th>Height difference (m)</th>
<th>(Note) No. of bends</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUH-P6</td>
<td>19.5/3/4</td>
<td>9.52/3/4</td>
<td>50m or less</td>
<td>less than 15</td>
</tr>
<tr>
<td>PUH-P8</td>
<td>26.4/1</td>
<td>12.7</td>
<td>70m or less</td>
<td></td>
</tr>
<tr>
<td>PUH-P10</td>
<td>36.8/1</td>
<td>19.95/3/4</td>
<td>10m or less</td>
<td></td>
</tr>
</tbody>
</table>

Note: The number of bands in the refrigerant pipe is respectively 6 or less in the range of A+B+C+D (Note 2).

Table 2}

<table>
<thead>
<tr>
<th>1 Joint size (mm)</th>
<th>SDT-111</th>
<th>SDT-112</th>
<th>SDT-122</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) OD 15.88-ID 9.52</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>(2) OD 15.88-ID 12.7</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>(3) OD 15.88-ID 19.05</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>(4) OD 25.4-ID 19.05</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>(5) OD 25.4-ID 28.6</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

The following items must be obtained locally in addition to the packed parts.
- Heat insulating sealing tape.
- Extension pipe for refrigerant pipe.
3. **Pipe connection**

1. Note the following during work:
   - Be sure to recheck the combination (Table 1) of the indoor/outdoor units.
   - Observe the Refrigerant Pipe length limits and NO. of bend limits (Table 2).
   - Insert the refrigerant pipe (obtain locally) into the flared end of the distributor pipe (packed unit: former pipe stop).
   - Use oxidation-free solder for connection when possible.
   - The installation direction of the distributor pipe (packed) is not regulated.
   - Take care to prevent dirt, foreign materials, etc., from entering the pipe when connecting the pipe.
   - After checking, remove the tag from the liquid pipe 3.
2. **Pipe connection**
   - Referring to (Table 2), check the pipe size, and connect the refrigerant pipe.
   - Do not bend or expand any distributor pipe (liquid pipe).

3. Triple combination with differing capacities
   - Even if the capacity of the indoor unit differs depending on the combination, the pipe size may be the same. In this case, connect the pipes to ensure proper distribution according to the following (only liquid pipe side).
   - If the capacity of the indoor unit is larger, connect the liquid pipe 3 to the “Large” side.
   - If the capacity of the indoor unit is smaller, connect the liquid pipe 3 to the “Small” side.

   (Example)
   ![Pipe connection diagram]

4. **Heat insulating work**

1. Wrap the pipe covers 4, 5, and 6 on the gas pipe 2 without clearance as shown above. Moreover, securely press the V cut areas of the pipe cover 4 against the pipe base on both sides during assembling.
2. Securely seal the cut areas of the pipe covers 4, 5, and 6 with heat insulating sealing tape (obtained locally). Wrap the seal tape in a cross to eliminate clearance at the cross area of the pipe.
3. Fasten the end of each pipe cover with band 10.

   ![Heat insulating work diagram]

4. Install the liquid pipe 3 while aligning it with the pipe cover 7 (2 pcs). Seal the joint area of the pipe cover 1 with heat insulating sealing tape (obtained locally).
5. As shown above, install the liquid pipe 3 on the pipe covers 8 and 9, and securely seal with heat insulating sealing tape (obtained locally).
6. Fasten the end of each pipe cover with band 10.

5. **Control wiring for indoor unit**

<table>
<thead>
<tr>
<th>Specifications of each control cable</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control cable</td>
<td>Prepared by site</td>
<td>Enclosed with the remote controller</td>
</tr>
<tr>
<td>Control circuit voltage</td>
<td>220-240V</td>
<td>DC12V</td>
</tr>
<tr>
<td>Cable thickness</td>
<td>2.5mm or more</td>
<td>0.3mm or more</td>
</tr>
<tr>
<td>Polarity</td>
<td>Designated</td>
<td>Not designated</td>
</tr>
</tbody>
</table>

![Control wiring for indoor unit diagram]
4-branch pipe for Multi-System Quadruple use (25:25:25:25)

**Applicable Models**
- PU-P200/250
- PUH-P200/250
- PUHZ-RP200/250

**Specifications**

<table>
<thead>
<tr>
<th>Component</th>
<th>Distribution ratio</th>
<th>Number of distribution pipes</th>
<th>Pipe material</th>
<th>Accessory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main body</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution ratio</td>
<td>Outdoor unit capacity is divided into four (25:25:25:25)</td>
<td>1 each for liquid pipe and gas pipe</td>
<td>Phosphate deoxidized copper C1220T-OL (JIS H3300)</td>
<td>Polyethylene foam molding (for liquid pipe) EPT sponge rubber type (for gas pipe)</td>
</tr>
<tr>
<td>Number of distribution pipes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipe material</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessory</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipe cover</td>
<td>Polyethylene foam molding (for liquid pipe)</td>
<td></td>
<td>EPT sponge rubber type (for gas pipe)</td>
<td></td>
</tr>
<tr>
<td>Joint</td>
<td>11 joints (5 types)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Band</td>
<td>7 bands</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Dimensions**

**Liquid Pipe**

- Unit: mm
- ΦA(ID): 28.6
- ΦB(OD): 25.4
- Amount: 1
- ΦC(ID): 12.7
- ΦD(OD): 15.88
- Amount: 4

**Gas Pipe**

- Unit: mm
- ΦA(ID): 6.35
- ΦB(OD): 9.52
- Amount: 4
- ΦC(ID): 9.52
- ΦD(OD): 12.7
- Amount: 1
How to Use / How to Install

Package Air-conditioner Optional Parts Instruction Sheet for Simultaneous Quadruple Distributing Pipe exclusively used with Free Compo Multi-Units

Model MSDF-1111R-E (Indoor unit: quadruple/With same capacity 25:25:25:25)………… Outdoor unit PUH-P8~10, 200~250MYA type (R407C fixed speed)
Outdoor unit PUHZ-RP8~10, 200~250HA type (R410A power inverter)

* Make sure that you have all the following parts in packing box before beginning installation:

1. Installation manual
2. Gas pipe
3. Liquid pipe
4. Pipe cover (gas pipe)
5. Pipe cover (liquid pipe)
6. Pipe cover (liquid pipe)
7. Pipe cover
8. Band
9. Joint
10. Flange nut

- Gas pipe and liquid pipe are specified as shown below.

Pipe size and refrigerant pipe limits.

For R407C fixed speed models

<table>
<thead>
<tr>
<th>Outdoor unit capacity</th>
<th>Gas pipe size</th>
<th>Liquid pipe size</th>
<th>Actual pipe length (m)</th>
<th>Height Difference (m)</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 (9pcs)</td>
<td>Ø 25.4 (1)</td>
<td>Ø 15.86 (10)</td>
<td>A + B = A + C = 40m or less</td>
<td>h = 1m or less</td>
<td>15 or less</td>
</tr>
<tr>
<td>250 (12pcs)</td>
<td>Ø 25.4 (1)</td>
<td>Ø 15.86 (10)</td>
<td>A + B = A + C = 50m or less</td>
<td>h = 1m or less</td>
<td>15 or less</td>
</tr>
</tbody>
</table>

For R410A Power Inverter models

<table>
<thead>
<tr>
<th>Outdoor unit capacity</th>
<th>Gas pipe size</th>
<th>Liquid pipe size</th>
<th>Actual pipe length (m)</th>
<th>Height Difference (m)</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 (9pcs)</td>
<td>Ø 25.4 (1)</td>
<td>Ø 15.86 (10)</td>
<td>A + B = A + C = 40m or less</td>
<td>h = 1m or less</td>
<td>15 or less</td>
</tr>
<tr>
<td>250 (12pcs)</td>
<td>Ø 25.4 (1)</td>
<td>Ø 15.86 (10)</td>
<td>A + B = A + C = 50m or less</td>
<td>h = 1m or less</td>
<td>15 or less</td>
</tr>
</tbody>
</table>

Note 1: The number of bends in the refrigerant pipes is respectively 8 or less in the range of (A + B) / (A + C) / (A + D) / (A + E).

Pipe connections

1. Perform work, taking care with the following:
   - Be sure to check the combination pattern of indoor and outdoor units, joints to be used (Table 2), pipe size and joint used (3).
   - Be sure to observe the limits to refrigerant pipe length and number of bends (Table 1).
   - Insert the refrigerant pipe (procured at local site) and joint into the expanded pipe portion of distributing pipe (this product unit) until they stop, and then connect them using anti-oxidation soldering.
   - There is no restriction on the orientation of distributing pipe (this product unit) during installation.
   - Take care that no foreign object, such as dust, enters during pipe connecting work.
   - Remove the cap of liquid pipe after checking it.
   - Pipe connections: The provided joints will be necessary depending on the capability of model used (See Table 2), and connect the refrigerant piping.
   - Do not bend or weld the distributing pipe (liquid pipe).

Combination pattern of indoor and outdoor units and joints to be used

For R407C fixed speed

<table>
<thead>
<tr>
<th>Joint to be used</th>
<th>Indoor unit</th>
<th>PUH-P8<del>10 / PUHZ-RP8</del>10 / MSDF-1111R-E</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 (9pcs)</td>
<td>Ø 15.86 (10)</td>
<td>Outer Ø 25.4 / inner Ø 19.12 / indoor gas pipe size + 1</td>
</tr>
<tr>
<td>250 (12pcs)</td>
<td>Ø 15.86 (10)</td>
<td>Outer Ø 25.4 / inner Ø 19.12 / indoor gas pipe size + 1</td>
</tr>
</tbody>
</table>

For R410A Power Inverter

<table>
<thead>
<tr>
<th>Joint to be used</th>
<th>Indoor unit</th>
<th>PUH-P8<del>10 / PUHZ-RP8</del>10 / MSDF-1111R-E</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 (9pcs)</td>
<td>Ø 15.86 (10)</td>
<td>Outer Ø 25.4 / inner Ø 19.12 / indoor gas pipe size + 1</td>
</tr>
<tr>
<td>250 (12pcs)</td>
<td>Ø 15.86 (10)</td>
<td>Outer Ø 25.4 / inner Ø 19.12 / indoor gas pipe size + 1</td>
</tr>
</tbody>
</table>

Heat insulation work

Heat Insulation

- Cut the excessive part of each pipe cover.
- Securely cover the joint area (iii) of the refrigerant pipe (obtained locally) to the gas pipes (2) and liquid pipes (3) with the pipe covers.
- Cover the entire refrigerant pipe (obtained locally) with heat insulating material if commercial heat insulating material is used; it must be 12mm or thicker.
A part to connect refrigerant pipes of the different diameter. (Unit Φ6.35 → Φ9.52)

**Applicable Models**
- PUHZ-RP
- PUHZ-HRP
- PUHZ-HP

**Specifications**

<table>
<thead>
<tr>
<th>Pipe diameter</th>
<th>Unit 6.35</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipe material</td>
<td>C1220T-OL</td>
</tr>
</tbody>
</table>

**How to Use / How to Install**

Make sure that you have all the following parts, in addition to this manual in this box:

1) Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right. Use optional accessory flare nut at this time.

2) Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerant or oil (locally procured) on flare surface.

3) Securely tighten flare nut using torque wrench according to the table on the right. (Proper tightening torque using torque wrench)

4) After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.

5) Heat insulation is necessary for this optional part: Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

6) Perform test run according to the installation manual of the unit, making sure to also perform operation check.

---

**Joint Pipe**

**PAC-SG72RJ-E**

**Dimensions**

Unit : mm (inch)

Φ9.52 (3/8")

Φ6.35 (1/4")

---

**Installation procedure**

(carefully read the following before installing.)

This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.

- **When installing this optional part, be sure to read** "Refrigerant pipe connection" in the installation manual attached to outdoor unit.

- **Check the installation manual attached to the outdoor unit for advisability on whether or not onsite (existing) pipes can be used.**

- **When pipe of 19.05 diameter is used, be sure to turn ON the SW8-1 on outdoor unit control board.**

---

<table>
<thead>
<tr>
<th>Outer diameter of copper pipe (mm)</th>
<th>Processing size of flare section (mm)</th>
<th>Flare shape</th>
</tr>
</thead>
<tbody>
<tr>
<td>Φ6.35</td>
<td>8.7~9.1</td>
<td>R0.4</td>
</tr>
<tr>
<td>Φ9.52</td>
<td>12.6~13.2</td>
<td>R0.8</td>
</tr>
<tr>
<td>Φ12.70</td>
<td>16.2~16.6</td>
<td>Ø9.52</td>
</tr>
<tr>
<td>Φ15.88</td>
<td>19.3~19.7</td>
<td>Ø19.05</td>
</tr>
<tr>
<td>Φ19.05</td>
<td>23.6~24.0</td>
<td>Ø19.05</td>
</tr>
</tbody>
</table>
OPTIONAL PARTS

A part to connect refrigerant pipes of the different diameter.  
(Unit φ9.52 → φ12.7)

**Joint Pipe**

- **PAC-SG72RJ-E** (unit side: φ6.35 diameter, onsite pipe side: φ9.52 diameter)
- **PAC-SG73RJ-E** (unit side: φ9.52 diameter, onsite pipe side: φ12.70 diameter)
- **PAC-SG74RJ-E** (unit side: φ12.70 diameter, onsite pipe side: φ15.88 diameter)
- **PAC-SG75RJ-E** (unit side: φ15.88 diameter, onsite pipe side: φ19.05 diameter)

### Specifications

- **Pipe diameter**: φ9.52
- **Pipe material**: C 1220T - OL

### How to Use / How to Install

1. **Make sure that you have all the following parts**, in addition to this manual in this box:
   - 2) **Remove caps** (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerant oil (locally procured) on flare surface.
   - 3) **Securely tighten flare nut using torque wrench** according to the table on the right. (Proper tightening torque using wrench).
   - 4) **After refrigerant pipe is connected**, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.
   - 5) **Heat insulation is necessary** for this optional part: Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).
   - 6) **Perform test run** according to the installation manual of the unit, making sure to also perform operation check.

---

**Applicable Models**

- **PUHZ-RP**
- **PUHZ-P**
- **PUHZ-HRP**

---

**Joint Pipe**

*Unit side 6.35 diameter, onsite pipe side: φ9.52 diameter, φ12.70 diameter, φ15.88 diameter, φ19.05 diameter)*

---

**How to Install**

- **Installation procedure** (carefully read the following before installing.)
  - This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.
  - When installing this optional part, be sure to read “Refrigerant pipe connection” in the installation manual attached to outdoor unit.

---

**Specifications**

<table>
<thead>
<tr>
<th>Pipe diameter (mm)</th>
<th>B size (mm)</th>
<th>Outer diameter of copper pipe (mm)</th>
<th>Processing size of flare section (mm)</th>
<th>Flare shape</th>
</tr>
</thead>
<tbody>
<tr>
<td>φ6.35</td>
<td>6.35/8</td>
<td>φ8.35</td>
<td>8.7~9.1</td>
<td></td>
</tr>
<tr>
<td>φ9.52</td>
<td>9.52/10</td>
<td>φ9.52</td>
<td>12.8~13.2</td>
<td></td>
</tr>
<tr>
<td>φ12.70</td>
<td>12.70/13</td>
<td>φ12.70</td>
<td>16.2~16.6</td>
<td></td>
</tr>
<tr>
<td>φ15.88</td>
<td>15.88/16</td>
<td>φ15.88</td>
<td>19.3~19.7</td>
<td>15.88/16</td>
</tr>
<tr>
<td>φ19.05</td>
<td>19.05/19</td>
<td>φ19.05</td>
<td>23.6~24.0</td>
<td>19.05/19</td>
</tr>
</tbody>
</table>

---

**Dimensions**

*Unit: mm (inch)*

---

**Photo**

A part to connect refrigerant pipes of the different diameter. (Unit φ9.52 → φ12.7)
Joint Pipe
Unit φ 12.7 → Pipe φ 15.88
PAC-SG74RJ-E

Photo

A part to connect refrigerant pipes of the different diameter.
(Unit φ 12.7 → φ 15.88)

Descriptions

Applicable Models
- PUHZ-RP
- PUHZ-P
- PUHZ-HRP

Specifications

<table>
<thead>
<tr>
<th>Pipe diameter</th>
<th>Unit side:</th>
<th>Onsite piping side:</th>
</tr>
</thead>
<tbody>
<tr>
<td>φ 12.7</td>
<td>φ 15.88</td>
<td>φ 15.88</td>
</tr>
</tbody>
</table>

Joint Pipe PAC-SG72RJE (unit side: φ 6.35 diameter, onsite pipe side: φ 9.52 diameter)
PAC-SG73RJE (unit side: φ 9.52 diameter, onsite pipe side: φ 12.70 diameter)
PAC-SG74RJE (unit side: φ 12.70 diameter, onsite pipe side: φ 15.88 diameter)
PAC-SG75RJE (unit side: φ 15.88 diameter, onsite pipe side: φ 19.05 diameter)

Dimensions

Unit : mm (inch)

How to Use / How to Install

Make sure that you have all the following parts, in addition to this manual in this box:

1. Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right. Use optional accessory flare nut at this time.

Installation procedure
(carefully read the following before installing.)
This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.
When installing this optional part, be sure to read the "Refrigerant pipe connection" in the installation manual attached to outdoor unit.

Check the installation manual attached to the outdoor unit for advisability on whether or not onsite (existing) pipes can be used.
When pipe of 19.05 diameter is used, be sure to turn ON the SWB-1 on outdoor unit control board.

2. Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerant or oil (locally procured) on flare surface.

3. Securely tighten flare nut using torque wrench according to the table on the right. (Proper tightening torque using torque wrench)

4. After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.

5. Heat insulation is necessary for this optional part: Wrap insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

6. Perform test run according to the installation manual of the unit, making sure to also perform operation check.

Optional Parts

Use of refrigerant oil
- Apply refrigerator oil to entire circumference of flare sheet surface.
- Do not apply to thread section. (If applied to threads, flare nut can easily be loosened.)
### Specifications

<table>
<thead>
<tr>
<th>Pipe diameter</th>
<th>Pipe</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>φ 15.88</td>
<td>C</td>
<td>1220T - OL</td>
</tr>
</tbody>
</table>

### How to Use / How to Install

1. **Make sure that you have all the following parts, in addition to this manual in this box:**

   - Joint Pipe PAC-SG72RJ-E (unit side: φ 6.35 diameter, onsite pipe side: φ 9.52 diameter)
   - PAC-SG73RJ-E (unit side: φ 9.52 diameter, onsite pipe side: φ 12.70 diameter)
   - PAC-SG74RJ-E (unit side: φ 12.70 diameter, onsite pipe side: φ 15.88 diameter)
   - PAC-SG75RJ-E (unit side: φ 15.88 diameter, onsite pipe side: φ 19.05 diameter)

2. **Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right. Use optional accessory flare nut at this time.**

3. **Check the installation manual attached to the outdoor unit for advisability on whether or not onsite (existing) pipes can be used.**

4. **When pipe of 19.05 diameter is used, be sure to turn ON the SW8-1 on outdoor unit control board.**

5. **When flare processing for refrigerant R410A is applied using current tool, refer to the table above. B size can be secured using copper pipe gauge for margin adjustment.**

6. **After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.**

7. **Heat insulation is necessary for this optional part: Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).**

8. **Perform test run according to the installation manual of the unit, making sure to also perform operation check.**
A part to connect refrigerant pipes of the different diameter. (Unit Φ9.52 → Φ15.88)

### Applicable Models
- MXZ-8A140VA
- MXZ-4A/5A
- PAC-AK30BC
- PAC-AK50BC

### Specifications
- Joint Pipe PAC-SG76RJ-E
- Pipe diameter Φ9.52
- Pipe material C1220T - OL

### Dimensions
- Unit : mm (inch)

<table>
<thead>
<tr>
<th>Outer Diameter of Copper Pipe (mm)</th>
<th>Processing Size of Flare Section (mm)</th>
<th>Flare Shape</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.35</td>
<td>8.7~9.1</td>
<td>R0.4-R0.8</td>
</tr>
<tr>
<td>9.52</td>
<td>12.8~13.2</td>
<td></td>
</tr>
<tr>
<td>12.7</td>
<td>16.2~16.6</td>
<td></td>
</tr>
<tr>
<td>15.88</td>
<td>19.3~19.7</td>
<td></td>
</tr>
</tbody>
</table>

### How to Use / How to Install

1. **Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right. Use optional accessory flare nut at this time.**
   - Check the installation manual attached to the outdoor unit for advisability on whether or not onsite (existing) pipes can be used.

2. **Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerant or oil (locally procured) to flare surface.**

3. **Securely tighten flare nut using torque wrench according to the table on the right.**
   - (Proper tightening torque using torque wrench)

4. **After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.**

5. **Heat insulation is necessary for this optional part:** Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

6. **Perform test run according to the installation manual of the unit, making sure to also perform operation check.**

---

Refrigerator oil application point:
- Apply refrigerant oil to entire circumference of flare sheet surface.
- Do not apply to thread section. (If applied to threads, flare nut can easily be loosened.)
A part to connect refrigerant pipes of the different diameter. (Unit \( \Phi 6.35 \rightarrow \Phi 9.52 \))

### Specifications
- **Pipe diameter**: \( \Phi 6.35 \)
- **Pipe material**: C 1220T - OL

### How to Use / How to Install

1. **Apply flare processing to onsite pipes to adapt to R410A**, according to the table on the right. Use optional accessory flare nut at this time.
2. **Check the installation manual attached to the outdoor unit for advisability on whether or not onsite (existing) pipes can be used.**

#### Joint Pipe
- **PAC-SG76RJ-E** (unit side: \( \Phi 9.52 \) diameter, onsite pipe side: \( \Phi 15.88 \) diameter)
- **PAC-493PI** (unit side: \( \Phi 6.32 \) diameter, onsite pipe side: \( \Phi 9.52 \) diameter)
- **MAC-A454JP-E** (unit side: \( \Phi 9.52 \) diameter, onsite pipe side: \( \Phi 12.7 \) diameter)
- **MAC-A455JP-E** (unit side: \( \Phi 12.7 \) diameter, onsite pipe side: \( \Phi 9.52 \) diameter)
- **MAC-A456JP-E** (unit side: \( \Phi 12.7 \) diameter, onsite pipe side: \( \Phi 15.88 \) diameter)

#### How to Use

3. **Remove caps (both ends)** for protection against mixing of foreign materials from optional part, and thinly apply refrigerant oil (locally procured) on flare surface.

4. **Securely tighten flare nut using torque wrench** according to the table on the right. (Proper tightening torque using torque wrench)

5. **Heat insulation is necessary** for this optional part: Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

6. **Perform test run according to the installation manual of the unit, making sure to also perform operation check.**
A part to connect refrigerant pipes of the different diameter. (Unit φ9.52 → φ12.7)

### Applicable Models
- MXZ-A14/18
- PAC-AK30BA
- MXZ-3A/4A/5A
- PAC-AK50BA
- MXZ-8A140VA

### Specifications

<table>
<thead>
<tr>
<th>Pipe diameter (mm)</th>
<th>Unit : mm (inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>φ9.52</td>
<td>9.52</td>
</tr>
<tr>
<td>φ12.7</td>
<td>12.7</td>
</tr>
</tbody>
</table>

### Dimensions

<table>
<thead>
<tr>
<th>Unit side</th>
<th>Onsite piping side</th>
</tr>
</thead>
<tbody>
<tr>
<td>φ9.52 (3/8&quot;)</td>
<td>φ12.7 (1/2&quot;)</td>
</tr>
</tbody>
</table>

### How to Use / How to Install

1. Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right. Use optional accessory flare nut at this time.
2. Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerant oil (locally procured) on flare surface.
3. Securely tighten flare nut using torque wrench according to the table on the right. Proper tightening torque using torque wrench:

<table>
<thead>
<tr>
<th>Outer diameter of copper pipe (mm)</th>
<th>Tightening torque N·m (kgf·cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>φ6.35</td>
<td>14<del>18(140</del>180)</td>
</tr>
<tr>
<td>φ9.52</td>
<td>34<del>42(340</del>420)</td>
</tr>
<tr>
<td>φ12.7</td>
<td>49<del>61(490</del>610)</td>
</tr>
<tr>
<td>φ15.88</td>
<td>68<del>82(680</del>820)</td>
</tr>
</tbody>
</table>

4. After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.
5. Heat insulation is necessary for this optional part: Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).
6. Perform test run according to the installation manual of the unit, making sure to also perform operation check.
**A part to connect the refrigerant pipes of the different diameter.**
(Unit φ12.7 → φ9.52)

### Specifications

- **Pipe diameter**: φ 12.7
- **Pipe material**: C 1220T - OL

### Applicable Models

- MXZ-4A/5A
- MXZ-8A140VA
- PAC-AK30BC
- PAV-AK50BC

### How to Use / How to Install

**Make sure that you have all the following parts, in addition to this manual in this box:**

1. Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right. Use optional accessory flare nut at this time.

2. Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerant oil (locally procured) on flare surface.

3. Securely tighten flare nut using torque wrench according to the table on the right. (Proper tightening torque using torque wrench)

4. After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.

5. Heat insulation is necessary for this optional part. Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

6. Perform test run according to the installation manual of the unit, making sure to also perform operation check.

**Joint Pipe**

- **PAC-SG76RJ-E** (unit side: φ 9.52 diameter, onsite pipe side: φ 15.88 diameter)
- **PAC-493PI** (unit side: φ 6.32 diameter, onsite pipe side: φ 9.52 diameter)
- **MAC-A454JP-E** (unit side: φ 9.52 diameter, onsite pipe side: φ 12.7 diameter)
- **MAC-A455JP-E** (unit side: φ 12.7 diameter, onsite pipe side: φ 9.52 diameter)
- **MAC-A456JP-E** (unit side: φ 12.7 diameter, onsite pipe side: φ 15.88 diameter)

### Dimensions

**Unit : mm (inch)**

- **Ф 12.7** (1/2")
- **Ф 9.52** (3/8")

### How to Use / How to Install

1. Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right. Use optional accessory flare nut at this time.

2. Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerant oil (locally procured) on flare surface.

3. Securely tighten flare nut using torque wrench according to the table on the right. (Proper tightening torque using torque wrench)

4. After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.

5. Heat insulation is necessary for this optional part. Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

6. Perform test run according to the installation manual of the unit, making sure to also perform operation check.

---

**Pipe diameter (mm)**

<table>
<thead>
<tr>
<th>Unit</th>
<th>φ 6.35 (1/4&quot;)</th>
<th>φ 9.52 (3/8&quot;)</th>
<th>φ 12.70 (1/2&quot;)</th>
<th>φ 15.88 (5/8&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>0~&lt;0.5</td>
<td>0~&lt;0.5</td>
<td>0~&lt;0.5</td>
<td>0~&lt;0.5</td>
</tr>
<tr>
<td>Torque (kgf·cm)</td>
<td>34<del>42/340</del>420</td>
<td>49<del>61/480</del>610</td>
<td>68<del>82/680</del>820</td>
<td>79<del>91/760</del>910</td>
</tr>
</tbody>
</table>

**Flare shape**

- R405A flare tool
- R22/R407C flare tool
- Clutch type

**Flare processing size of flare section (mm)**

| φ 6.35 | 34~42/340~420 |
| φ 9.52 | 49~61/480~610 |
| φ 12.70 | 68~82/680~820 |
| φ 15.88 | 79~91/760~910 |

---

**Dimensions**

**Unit : mm (inch)**

- **Ф 12.7** (1/2")
- **Ф 9.52** (3/8")

**Notes**

- * photo model: PAC-493PI

---

**Pipe diameter (mm)**

<table>
<thead>
<tr>
<th>Unit</th>
<th>φ 12.7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine</td>
<td>34~42</td>
</tr>
<tr>
<td>Tightening torque N·m (kgf·cm)</td>
<td>49~61</td>
</tr>
<tr>
<td>φ 6.35</td>
<td>14<del>18/140</del>180</td>
</tr>
<tr>
<td>φ 9.52</td>
<td>34<del>42/340</del>420</td>
</tr>
<tr>
<td>φ 12.70</td>
<td>49<del>61/480</del>610</td>
</tr>
<tr>
<td>φ 15.88</td>
<td>68<del>82/680</del>820</td>
</tr>
</tbody>
</table>

---

**Installation procedure**

(Preread the following before installing.)

- This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.
- When installing this optional part, be sure to read “Refrigerant pipe connection” in the installation manual attached to outdoor unit.
Joint Pipe

Unit $\Phi 12.7$ → Pipe $\Phi 15.88$

**Photo**

A part to connect refrigerant pipes of the different diameter.
(Unit $\Phi 12.7$ → $\Phi 15.88$)

**Applicable Models**

- MXZ-4A/5A
- MXZ-8A140VA
- PAC-AK30BC
- PAV-AK50BC

**Specifications**

<table>
<thead>
<tr>
<th>Pipe diameter</th>
<th>Unit</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\Phi 12.7$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pipe material: C 1220T - OL

**Dimensions**

| Joint Pipe (unit side: $\Phi 9.52$ diameter, onsite pipe side: $\Phi 15.88$ diameter) |
| PAC-493PI (unit side: $\Phi 6.32$ diameter, onsite pipe side: $\Phi 9.52$ diameter) |
| MAC-A454JP-E (unit side: $\Phi 12.7$ diameter, onsite pipe side: $\Phi 9.52$ diameter) |
| MAC-A455JP-E (unit side: $\Phi 12.7$ diameter, onsite pipe side: $\Phi 9.52$ diameter) |
| MAC-A456JP-E (unit side: $\Phi 12.7$ diameter, onsite pipe side: $\Phi 15.88$ diameter) |

**How to Use / How to Install**

1. Make sure that you have all the following parts, in addition to this manual in this box:
   - Joint Pipe
   - PAC-SG76RJ-E (unit side: $\Phi 9.52$ diameter, onsite pipe side: $\Phi 15.88$ diameter)
   - PAC-493PI (unit side: $\Phi 6.32$ diameter, onsite pipe side: $\Phi 9.52$ diameter)
   - MAC-A454JP-E (unit side: $\Phi 12.7$ diameter, onsite pipe side: $\Phi 9.52$ diameter)
   - MAC-A455JP-E (unit side: $\Phi 12.7$ diameter, onsite pipe side: $\Phi 9.52$ diameter)
   - MAC-A456JP-E (unit side: $\Phi 12.7$ diameter, onsite pipe side: $\Phi 15.88$ diameter)

2. Create a gas leakage inspection for onsite pipes (including this optional part) and indoor/outdoor unit.

3. Heat insulation is necessary for this optional part: Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

4. Perform test run according to the installation manual of the unit, making sure to also perform operation check.

**Application**

- Do not apply refrigerant oil to thread section.
  - If applied to thread section, flare nut can easily be loosened.

- Apply refrigerant oil to entire circumference of flare sheet surface.

**Joining Methods**

- When flare processing for refrigerant R410A is applied using current tool, refer to the table above. B size can be secured using copper pipe gauge for margin adjustment.

**Refrigerant oil application point**

- $\Phi 9.52$: 0.8
- $\Phi 6.32$: 0.5
- $\Phi 12.7$: 1.0
- $\Phi 15.88$: 1.5

- Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right. Use optional accessory flare nut at this time.

**Installation Procedure**

(carefully read the following before installing.)

This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.

When installing this optional part, be sure to read "Refrigerant pipe connection" in the installation manual attached to outdoor unit.
**Filter Dryer** (for Liquid Pipe of Φ 6.35)  

**Descriptions**
Removes minute dirt particles in the refrigerant pipe, when replacing an air-conditioning unit. (for Liquid Pipe of Φ 6.35)

**Applicable Models**
- PUHZ-RP35
- PUHZ-RP50

**Specifications**

<table>
<thead>
<tr>
<th>Pipe size</th>
<th>Liquid side: Φ 6.35 flare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Applicable refrigerant</td>
</tr>
<tr>
<td></td>
<td>R407C / R410A</td>
</tr>
</tbody>
</table>

**Dimensions**  
Unit: mm

- Φ 67 ± 0.8
- 122 ± 1.6
- 76 ± 1.5
How to Use / How to Install

Make sure that you have all the following parts.

<table>
<thead>
<tr>
<th>Part</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Filter dryer</strong></td>
<td></td>
</tr>
<tr>
<td>PAC-SG81DR-E (for diameter of Φ6.35)</td>
<td>One piece</td>
</tr>
<tr>
<td>PAC-SG82DR-E (for diameter of Φ9.52)</td>
<td>One piece</td>
</tr>
<tr>
<td><strong>Connection pipe</strong></td>
<td></td>
</tr>
<tr>
<td>PAC-SG81DR-E (for diameter of Φ6.35)</td>
<td>One piece</td>
</tr>
<tr>
<td>PAC-SG82DR-E (for diameter of Φ9.52)</td>
<td>One piece</td>
</tr>
<tr>
<td><strong>Heat insulator</strong></td>
<td></td>
</tr>
<tr>
<td>PAC-SG81DR-E (for diameter of Φ6.35)</td>
<td>One piece</td>
</tr>
<tr>
<td>PAC-SG82DR-E (for diameter of Φ9.52)</td>
<td>One piece</td>
</tr>
</tbody>
</table>

Installation Procedures (carefully read the following before installation.)

**Cautions:**

1) This optional part is used to remove moisture within refrigerant pipe to prevent compressor failures. However, if too much impurity inside refrigerant cycle has accumulated, such as amount of mixed moisture, dryer must be replaced after one season elapses. (Amount of allowable moisture absorption: 3 - 7 cc)

2) Install the filter dryer to refrigerant pipe mid way on liquid side.

3) Filter dryer can be installed outside of the unit. Installation inside the unit is possible only when installation space can be secured.

1 Preparation for installation

In the following parts, the installation for PUHZ-RP3VHA is highlighted as a representative.

- 1) Refer to the installation manual of the unit for procedure of refrigerant piping and vacuuming, etc.
- 2) Remove the panel from outdoor unit. (See Fig. 1.)
- 3) Removing the panel
  - Remove the service panel, front pipe cover and back pipe cover.
  - Remove back pipe cover only when taking it from back pipe.
- 4) Pipe connection
  - When bending pipe, take bending R (R100~R150) just enough, and take care that pipe does not fold.
  - Apply pipe processing without touching compressor. (If the pipe touches, it may cause abnormal sound or vibration.)
  - Apply flare processing to connection pipe, arranging this on site.
  - Thinline apply refrigerator oil (locally procured) to flare sheet surface.

<table>
<thead>
<tr>
<th>Outer diameter of copper pipe (mm)</th>
<th>Processing size of flare section (mm)</th>
<th>Refrigerator oil application point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Φ6.35</td>
<td>8.7 ~ 9.1</td>
<td>Apply refrigerator oil to entire circumference of flare sheet surface</td>
</tr>
<tr>
<td>Φ9.52</td>
<td>12.9 ~ 13.2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flare shape</th>
<th>Refrigerator oil application point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Φ9.52</td>
<td>Apply refrigerator oil to entire circumference of flare sheet surface</td>
</tr>
<tr>
<td>Φ6.35</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outer diameter of copper pipe (mm)</th>
<th>Tightening torque (N·m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Φ6.35</td>
<td>14 ~ 16, 140 ~ 180</td>
</tr>
<tr>
<td>Φ9.52</td>
<td>34 ~ 42, 340 ~ 420</td>
</tr>
</tbody>
</table>

Proper tightening torque using torque wrench

Pipe diameter (mm) | B size (mm) | Clutch type |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>R410A flare tool</td>
<td>R42, R407C flare tool</td>
<td></td>
</tr>
<tr>
<td>Φ6.35(1/4&quot;)</td>
<td>0 ~ 0.5</td>
<td>1.0 ~ 1.5</td>
</tr>
<tr>
<td>Φ9.52(3/8&quot;)</td>
<td>0 ~ 0.5</td>
<td>1.0 ~ 1.5</td>
</tr>
</tbody>
</table>

When flare processing for refrigerant R410A is applied using current tool, refer to the tables above. B size can be secured using copper pipe gauge for margin adjustment.
2 Installation of Filter dryer

Be sure to install filter dryer on liquid side (narrow side).

1) When filter dryer is being installed inside the unit, refer to Figs 2 and 3, according to the installation space for dryer. If installation space for dryer cannot be secured, install it outside of the unit. Install referring to Item 2-ii).

[Fig. 2]
Filter dryer installation diagram (Installation inside the unit)

![Enlarged diagram of Fig. 2](image)

Pipe (liquid side)
② Connection pipe
① Filter dryer
③ Heat insulator

[Fig. 3]
Filter dryer installation diagram (horizontal installation inside the unit)

![Enlarged diagram of Fig. 3](image)

Pipe (liquid side)
② Connection pipe (liquid side)
① Filter dryer
③ Heat insulator
④ Nut (on site arrangement)

2) When installing outside of the unit, install it at optional position of extension pipe. Make and arrange connection pipe on the site. (See Fig. 4.)

[Fig. 4]
Filter dryer installation diagram (Installation outside of the unit)

![Enlarged diagram of Fig. 4](image)

Pipe (liquid side)
② Connection pipe (liquid side)
① Filter dryer
③ Heat insulator
④ Nut (on site arrangement)

3) Perform heat insulation work. (To prevent dewdrops forming)
   * After dryer is installed, wrap heat insulator around dryer section.
   ※ Apply taping to joint of heat insulator ensuring that there is no gap. Also wrap heat insulator around pipe.

3 Filter dryer installation is now complete. Reattach service panel as it was.

4 Test run

1) Perform test run according to the installation manual of the unit, and be sure to perform gas leak check and operation check.
Filter Dryer (for Liquid Pipe of Φ 9.52) PAC-SG82DR-E

Photo

Descriptions

Removes minute dirt particles in the refrigerant pipe, when replacing an air-conditioning unit. (for Liquid Pipe of Φ 9.52)

Applicable Models

- PUHZ-RP60
- PUHZ-RP71
- PUHZ-RP100
- PUHZ-RP125
- PUHZ-RP140
- MXZ-8A140VA
- PUHZ-P200
- PUHZ-HRP71
- PUHZ-HRP100
- PUHZ-HRP125
- PUHZ-RP200

Specifications

<table>
<thead>
<tr>
<th>Pipe size</th>
<th>Liquid side: Φ 9.52 flare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R407C / R410A</td>
</tr>
</tbody>
</table>

Dimensions

Unit: mm

- 151 ± 1.6
- 97 ± 1.5
- Φ 67 ± 0.8
How to Use / How to Install

Make sure that you have all the following parts.

<table>
<thead>
<tr>
<th>Filter dryer</th>
<th>Connection pipe</th>
<th>Heat insulator</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAC-SG81DR-E</td>
<td>PAC-SG81DR-E</td>
<td>PAC-SG81DR-E</td>
</tr>
<tr>
<td>(for diameter of Φ6.35)</td>
<td>(for diameter of Φ9.52)</td>
<td>(for diameter of Φ6.35)</td>
</tr>
<tr>
<td>PAC-SG82DR-E</td>
<td>PAC-SG82DR-E</td>
<td>PAC-SG82DR-E</td>
</tr>
<tr>
<td>(for diameter of Φ9.52)</td>
<td>(for diameter of Φ9.52)</td>
<td>(for diameter of Φ9.52)</td>
</tr>
</tbody>
</table>

For diameter of 6.35 or 9.52

One piece

Installation Procedures (carefully read the following before installation.)

Cautions:
1) This optional part is used to remove moisture within refrigerant pipe to prevent compressor failures. However, if too much impurity inside refrigerant cycle has accumulated, such as amount of mixed moisture, dryer must be replaced after one season elapses. (Amount of allowable moisture absorption: 3 - 7 cc)
2) Install the filter dryer to refrigerant pipe mid way on liquid side.
3) Filter dryer can be installed outside of the unit. Installation inside the unit is possible only when installation space can be secured.

1）Preparation for installation

In the following parts, the installation for PUHZ-RP3VHA is highlighted as a representive.

• 1) Refer to the installation manual of the unit for procedure of refrigerant piping and vacuuming, etc.
   Remove the panel from outdoor unit. (See Fig. 1.)
   • 2) Removing the panel
   Remove the service panel, front pipe cover and back pipe cover.
   Remove back pipe cover only when taking it from back pipe.
   • 3) Pipe connection
   • When bending pipe, take bending R (R100 ~ R150) just enough, and take care that pipe does not fold.
   • Apply pipe processing without touching compressor. (If the pipe touches, it may cause abnormal sound or vibration.)
   • Apply flare processing to connection pipe, arranging this on site.
   • Thinly apply refrigerator oil (locally procured) to flare sheet surface.

[Fig. 1]
Panel disassembly diagram

Proper tightening torque using torque wrench

<table>
<thead>
<tr>
<th>Outer diameter of copper pipe (mm)</th>
<th>B size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ø 6.35</td>
<td>0.0 ~ 0.5</td>
</tr>
<tr>
<td>ø 9.52</td>
<td>0.0 ~ 0.5</td>
</tr>
</tbody>
</table>

When flare processing for refrigerant R410A is applied using current tool, refer to the tables above. B size can be secured using copper pipe gauge for margin adjustment.

MITSUBISHI ELECTRIC CORPORATION

D-35
2 Installation of Filter dryer

Be sure to install filter dryer on liquid side (narrow side).

1) When filter dryer is being installed inside the unit, refer to Figs 2 and 3, according to the installation space for dryer. If installation space for dryer cannot be secured, install it outside of the unit. Install referring to Item 2-ii).

2) When installing outside of the unit, install it at optional position of extension pipe. Make and arrange connection pipe on the site. (See Fig. 4.)

3) Perform heat insulation work. (To prevent dewdrops forming)
   * After dryer is installed, wrap heat insulator around dryer section.
   ※ Apply taping to joint of heat insulator ensuring that there is no gap. Also wrap heat insulator around pipe.

3 Filter dryer installation is now complete. Reattach service panel as it was.

4 Test run

1) Perform test run according to the installation manual of the unit, and be sure to perform gas leak check and operation check.
Filter Dryer (for Liquid Pipe of Φ 12.7)  PAC-SG85DR-E

Photo

Descriptions
Removes minute dirt particles in the refrigerant pipe. Is used when replacing an air-conditioning unit. (for Liquid Pipe of Φ 12.7)

Applicable Models
- PUHZ-RP250
- PUHZ-P250

Specifications

<table>
<thead>
<tr>
<th>Pipe size</th>
<th>Liquid side: Φ 12.7 flare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Applicable refrigerant</td>
</tr>
<tr>
<td></td>
<td>R407C / R410A</td>
</tr>
</tbody>
</table>

Dimensions
Unit: mm

---

MITSUBISHI ELECTRIC CORPORATION
How to Use / How to Install

Make sure that you have all the following parts.

1. Filter dryer
2. Connection pipe
3. Heat insulator

Installation Procedures (carefully read the following before installing)

Cautions
1. This optional part is used to remove moisture inside the refrigerant pipe and prevent fault of compressor. However, if there is excessive contamination inside the refrigerant cycle, such as a large amount of mixed moisture, etc., the dryer must be replaced after it is used during one season (the amount of allowable moisture absorption: 3-7 cc).
2. Install the filter dryer to refrigerant pipe midway on liquid side, using flare connection.
3. The filter dryer can be attached outside the unit. It can also be attached to the inside of unit only if the space for installation can be secured

1. Preparations for Installation
i) Refer to the installation manual of outdoor unit for the procedures of removing outdoor unit panel, refrigerant piping, vacuuming, etc.
ii) Connecting pipes
   * Remove the service panel and cover.
   * When bending pipe, allow enough bending R (R100-150), and take care that the pipe is not folded.
   * Lay out the pipe so that it does not come into contact with the compressor. (Being in contact could cause abnormal sound or vibrations.)
   * Apply flare processing to the connection pipe procured at local site.
   * Thinly coat the flare sheet surface with refrigerant oil (procured at local site).

<table>
<thead>
<tr>
<th>Outer diameter of copper pipe (mm)</th>
<th>Processing size of flare portion A (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 6.35</td>
<td>8.7~9.1</td>
</tr>
<tr>
<td>Ø 9.52</td>
<td>12.6~13.2</td>
</tr>
<tr>
<td>Ø 12.7</td>
<td>16.2~16.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pipe diameter (mm)</th>
<th>R410A flare tool</th>
<th>R22/R407C flare tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 6.35 (1/4&quot;)</td>
<td>0~0.5</td>
<td>1.0~1.5</td>
</tr>
<tr>
<td>Ø 9.52 (3/8&quot;)</td>
<td>0~0.5</td>
<td>1.0~1.5</td>
</tr>
<tr>
<td>Ø 12.7 (1/2&quot;)</td>
<td>0~0.5</td>
<td>1.0~1.5</td>
</tr>
</tbody>
</table>

3. Installing Filter Dryer
Be sure to attach the filter dryer on the liquid pipe (narrower one)

i) When installing the filter dryer inside the unit, refer to Fig. 1 or Fig. 2 according to the space in unit and install it. If there is no space for the dryer to be installed in unit, install it outside the unit (see Fig. 3).
Perform test run according to the installation manual of unit, and be sure to execute gas leakage check and operation check.

When installing the filter dryer outside the unit, attach it to any position of extended pipe. Procure the connection pipe at local site.

Heat insulation (to prevent dripping)
- After attaching the filter dryer, wrap the heat insulator around the dryer.
  ※ Tape the seam of heat insulator so that no gap is produced.
- Also wrap heat insulator around other pipes.

3 The attachment of filter dryer is now complete.
Reattach the service panels, etc. to the original position.

4 Test Run
i ) Perform test run according to the installation manual of unit, and be sure to execute gas leakage check and operation check.
Enables outdoor installation of branch box in case its installation is impossible.

Applicable Models
- MXZ-8A140VA
- PAC-AK30BC
- PAC-AK50BC

Specifications

<table>
<thead>
<tr>
<th>Exterior</th>
<th>Color (Munsell)</th>
<th>Ivory (3.0Y 7.8/1.1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface treatment</td>
<td>Acrylic resin coating</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>Alloy hot-dip Zinc-coated carbon steel sheet</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>3.5kg</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions

*1 Minimum dimension 330mm is required when distribution pipe is bent 90°

Branch Box completed view

- hanger bolt pitch
- 4-hole
- rear opening
- front
- rear

Dimensions in mm:
- min230
- 320
- 43
- (190)
- 280
- 63
- 15
- 13
- 100
- min198
- 553
- min300
- min250
- 776
- min250
- 402
- 450
- 53
- 77
- (273)
How to Use / How to Install

Please check if you have all the following parts in the packing before installation:

<table>
<thead>
<tr>
<th>PARTS</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOP COVER</td>
<td>1 pc</td>
</tr>
<tr>
<td>SIDE COVER-L</td>
<td>1 pc</td>
</tr>
<tr>
<td>SIDE COVER-R</td>
<td>1 pc</td>
</tr>
<tr>
<td>UNDER COVER</td>
<td>1 pc</td>
</tr>
<tr>
<td>FRONT COVER</td>
<td>1 pc</td>
</tr>
<tr>
<td>SCREW(5 x 12)</td>
<td>6 pcs</td>
</tr>
<tr>
<td>WASHER(insulated)</td>
<td>8 pcs</td>
</tr>
<tr>
<td>HANGER</td>
<td>2 pcs</td>
</tr>
<tr>
<td>This sheet</td>
<td>1 sheet</td>
</tr>
</tbody>
</table>

Installation:

1. Install hanger bolts to match with the holes on the Branch Box (and the outer cover).
2. Put a nut (to be locally purchased) and a WASHER to each hanger bolts.
3. Fix the TOP COVER to the hanger bolts with a WASHER and a nut. [fig. 2]

Make sure to level the TOP COVER before fixing.
4. Put one insulated WASHER each (which come with the Branch Box) to 4 hanger bolts. [fig. 3]
5. Put one WASHER and one nut each (which come with the Branch Box) to 2 hanger bolts either at front side or back side. [fig. 3]

6. Hook two LEGs on the pre-fixed WASHERs and nuts first. Then insert hanger bolts to two LEGs on the opposite side and fix them with WASHERs and nuts (which come with the Branch Box). [fig. 4]

Make sure to level the Branch Box before fixing it.
7. Make sure that all 16 nuts are tightly fixed.
8. Install pipings and wirings etc, following the installation manual of the Branch Box.
9. Piping must be installed within the Outer Cover.
10. Fix the SIDE COVERs on both sides to the TOP COVER with SCREWS. First, put SCREWS to holes in the TOP COVER, then hook them to the key holes on the TOP COVER.
11. Fix the UNDER COVER to the SIDE COVERs with SCREWS. Hook HANGERS first to the rear holes on the SIDE COVERs, and then hook the other end of the HANGERS to the rear hole on the UNDER COVER. Thus you can avoid the UNDER COVER falling and the installation work will be easier (facilitated).
12. Fix the FRONT COVER to the TOP COVER and the UNDER COVER with SCREWS. Make sure that all 20 SCREWS are tightly fixed.

Make sure to level the TOP COVER and the UNDER COVER before fixing.
Air Outlet Guide

Photo

Descriptions
A part for changing the air direction from outdoor unit. Can also be used to prevent short cycles.

Applicable Models
- MUZ-FD-VA(BH)
- MUZ-HC-VA
- MUZ-GC-VA(H)
- MU(H)-GA-VB
- MUZ-GB50VA
- MXZ-2A/3A
- MUZ-GA-VA(H)
- MXZ-4A71

Specifications

<table>
<thead>
<tr>
<th>Exterior</th>
<th>Color (Munsell)</th>
<th>Material</th>
<th>Surface treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ivory (3.0Y 7.8/1.1)</td>
<td>Alloy hot-dip zinc-coated carbon steel sheet</td>
<td>Polyester resin coating</td>
</tr>
<tr>
<td>Weight</td>
<td>2.8kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dimensions
Unit: mm

[Diagram of dimensions]
How to Use / How to Install

Selecting the installation location

To select a location for installation, refer to "Selecting the installation location" in the installation manual included with the unit.

1. Preparations before installation to the unit

(Depending on the size of the outdoor unit, the locations for the screw holes are different.)

For 800(W)x550(H)x285(D) outdoor units

• Remove the front panel from the outdoor unit.
• Drill Ø4.0mm screw holes in the front panel at the 4 locations shown at the right. (Be sure to remove the front panel before drilling the holes. Otherwise, the heat exchanger and electrical components could be damaged if the drill bit travels too far into the unit).

For 710(W)x540(H)x255(D) outdoor units

• Remove the front panel from the outdoor unit.
• Drill Ø4.0mm screw holes in the front panel at the 4 locations shown at the right. (Be sure to remove the front panel before drilling the holes. Otherwise, the heat exchanger and electrical components could be damaged if the drill bit travels too far into the unit).
For 800(W)x600(H)x300(D) outdoor units
• Remove the front panel from the outdoor unit.
• Drill Ø4.0mm screw holes in the front panel at the 4 locations shown at the right.
(Be sure to remove the front panel before drilling the holes. Otherwise, the heat exchanger and electrical components could be damaged if the drill bit travels too far into the unit).

For 684(W)x540(H)x255(D) outdoor units
• Peel off the trademark.
• Remove the front panel from the outdoor unit.
• Drill Ø4.0mm screw holes in the front panel at the 4 locations shown at the right.
(Be sure to remove the front panel before drilling the holes. Otherwise, the heat exchanger and electrical components could be damaged).

2. Installation to the unit
• Install the front panel to the outdoor unit.
• Install the air outlet guide to the outdoor unit using the 4 included screws.*
(Install the guide so that the air will be directed upward.)
*For 684(W)x540(H)x255(D) outdoor units, use oval holes for the upper right and lower left holes.
• Affix the trademark (for 684(W)x540(H)x255(D) outdoor units).
Affix the included trademark at the location of the stamped marks shown at the right.

Note
• Be sure to securely tighten the screws. Otherwise, a chattering sound could be produced due to vibration if the screws are loose.
A part to change air direction from outdoor unit. Can also be used to prevent short cycles.

### Specifications

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Exterior</td>
<td>Color (Munsell)</td>
</tr>
<tr>
<td>Surface treatment</td>
<td>Acrylic resin coating</td>
</tr>
<tr>
<td>Material</td>
<td>Alloy hot-dip zinc-coated carbon steel sheet</td>
</tr>
<tr>
<td>Weight</td>
<td>2.3kg</td>
</tr>
</tbody>
</table>

### How to Use / How to Install

1. **Installation preparation for unit**
   - Five fixed screws of a Top panel and Front panel are removed.
   - (The detached screw is not used again and do not throw it away please.)

2. **Installation on unit**
   - Air outlet guide is obtained for the unit with the screw.

   **Notice**
   - Please tighten the screw enough.
   - When the screw is loose, the fluttering sound might be generated by vibration.

3. **Installation completion**
**Descriptions**

A part for changing the air direction from outdoor unit. Can also be used to prevent short cycles.

**Applicable Models**

- PU-P71-140HA
- PUH-P71-140HA

2 pieces required for P100/125/140

**Specifications**

<table>
<thead>
<tr>
<th>Exterior</th>
<th>Color (Munsell)</th>
<th>Ivory (5Y 8/1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>Air outlet grille: AES resin</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>3.5kg</td>
<td></td>
</tr>
<tr>
<td>Air outlet direction</td>
<td>Changeable between up, down or sideways</td>
<td></td>
</tr>
<tr>
<td>Accessory name x Qty.</td>
<td>Support x 2 (Alloy hot-dip zinc-coated carbon steel sheet / Acrylic resin coating) Washer faced screw (M5x15) x 8 (Iron wire (SWCH18A)/Zinc nickel plated)</td>
<td></td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

- Air outlet grille: 575 x 559
- Support: 560 (Installation pitch of support and outdoor unit)
- 4-Φ6 hole: 20 x 24 (max)
How to Use / How to Install

Note that two sets of this product are necessary for P4 outdoor unit or higher number models.

1 Checking provided parts
Make sure that you have the following parts as well as the installation sheet:

<table>
<thead>
<tr>
<th>1: Blow-off guide × 1</th>
<th>2: Supports × 2</th>
<th>3: Screws × 8</th>
</tr>
</thead>
</table>

2 Checking Installation Space

Secure the necessary surrounding space shown below and select a place with less obstacles, to prevent a short cycle.

1) Surrounding space needed when installing one unit
   - Do not use “upward discharge” in cases of figures (4) and (5) below.

   (1) Obstacle at front (open at back, sides and top)
   (2) Obstacles at back and front (open at sides and top)
   (3) Obstacles at back and top (open at front and sides)
   (4) Obstacles at back, and side (open at front and top)

   (5) Obstacles at back, sides and top (open at front)

2) Surrounding space needed when installing multiple units
   - When installing units horizontally in series, leave at least 10 mm space between units.
   - Do not use “upward discharge” in case of figure (3) below.

   (1) Obstacle at front (open at back, sides and top)
   (2) Obstacles at back and front (open at sides and top)
   (3) Obstacles at back and top (open at front and sides)

※Limit of 3 units can be installed horizontally in series. When installing a larger number of units, maintain the space between units shown above.
### 3 Installation Complete Diagrams

![Diagram of installation complete diagrams](image)

### 4 Installation Method

1. Use 4 screws to attach two supports to the outdoor unit.
   - Referring to the installation complete diagram in item 3, insert the support into the lower side of fan guard, align the two holes in the top and bottom of support with the black plastic concave sections of outdoor unit, and then tighten them with screws.

2. Use 4 screws to attach discharge guide to supports.
   - Four discharge directions can be selected. Make sure of the orientation of discharge vane, and attach the guide with orientation that suits the conditions at local site.

<table>
<thead>
<tr>
<th>Setting blow-off direction</th>
<th>Upward</th>
<th>Downward</th>
<th>Sideways (to left or right)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge vane</td>
<td><img src="image" alt="Image" /></td>
<td><img src="image" alt="Image" /></td>
<td><img src="image" alt="Image" /></td>
</tr>
<tr>
<td>Blow-off guide</td>
<td><img src="image" alt="Image" /></td>
<td><img src="image" alt="Image" /></td>
<td><img src="image" alt="Image" /></td>
</tr>
</tbody>
</table>
**Photo**

**Descriptions**

A part to change air direction from outdoor unit. Can also be used to prevent short cycles.

**Applicable Models**

- **PUHZ-RP35/50**
  - only 1 piece required

**Specifications**

<table>
<thead>
<tr>
<th>Exterior</th>
<th>Color (Munsell)</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ivory (3.0Y 7.8/1.1)</td>
<td>Air outlet grille: PP resin</td>
</tr>
<tr>
<td>Weight</td>
<td></td>
<td>2.0kg</td>
</tr>
<tr>
<td>Air outlet direction</td>
<td>Changeable between up, down or sideways</td>
<td></td>
</tr>
<tr>
<td>Accessory name x Qty.</td>
<td>Support x 4 (Alloy hot-dip zinc-coated carbon steel sheet / Acrylic resin coating)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Screw (M5x10) x 4 (Iron/Zinc nickel alloy plated)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Screw (M4x10) x 8 (Iron/Zinc nickel alloy plated)</td>
<td></td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

- **Air outlet grille:**
  - Changeable between up, down or sideways

- **Support x 4** (Alloy hot-dip zinc-coated carbon steel sheet / Acrylic resin coating)

- **Color (Munsell):** Ivory (3.0Y 7.8/1.1)

- **Material:** Air outlet grille: PP resin

- **Weight:** 2.0kg

**CAUTION**

- Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling operation is to be performed in outdoor temperature of -5°C or lower (down to -15°C).

Note the followings when installing this guide:

1) Be sure not to use "upward discharge" in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.

2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).

3) Do not use "upward discharge" when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit). This could cause a short cycle.

4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.

5) Do not install this unit in a place where wind directly blows to the back of the unit.
How to Use / How to Install

1 Checking provided parts

Make sure that you have the following parts:

<table>
<thead>
<tr>
<th>Parts</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Discharge guide</td>
<td>×1</td>
</tr>
<tr>
<td>PAC-SG58SG-E (Screw hole × 6)</td>
<td></td>
</tr>
<tr>
<td>Support (For the upper and lower sides)</td>
<td>×2</td>
</tr>
<tr>
<td>PAC-SG58SG-E (Screw hole × 2)</td>
<td></td>
</tr>
<tr>
<td>Support (For right and left)</td>
<td>×2</td>
</tr>
<tr>
<td>PAC-SG58SG-E (5 × 10)</td>
<td></td>
</tr>
<tr>
<td>PAC-SG59SG-E (5 × 35)</td>
<td></td>
</tr>
<tr>
<td>Attachment screw</td>
<td>×4</td>
</tr>
<tr>
<td>PAC-SG59SG-E</td>
<td></td>
</tr>
<tr>
<td>Spacer</td>
<td>×4</td>
</tr>
<tr>
<td>PAC-SG58SG-E (4 × 10)</td>
<td></td>
</tr>
</tbody>
</table>

Note that two sets of this product are necessary for RP4, RP5, RP6.

2 Checking installation space

In the following diagrams, dimensions in parentheses are for RP4 and higher number models. (Dimensions not in parentheses are common for all series models. Unit: mm)

- Secure the necessary surrounding space shown below and select a place with less obstacles, to prevent a short cycle.

Do not use "upward discharge" in cases of figures (3) and (5) below.

1) Surrounding space needed when installing one unit
   - Do not use "upward discharge" in cases of figures (3) and (5) below.
   - Obstacles at front (open at back, sides and top)
   - Obstacles at back and front (open at sides and top)
   - Obstacles at back and top (open at front and sides)
   - Obstacles at back, and sides (open at front and top)
   - Obstacles at back, sides and top (open at front)

2) Surrounding space needed when installing multiple units
   - When installing units horizontally in a series, leave at least 350 mm space between units for 56-type or lower models, and at least 10 mm for 63-type or higher models.
   - Do not use "upward discharge" in case of figure (3) below.

- Limit of 3 units can be installed horizontally in series. When installing a larger number of units, maintain the space between units shown above.

- Keep at least 1000 (2000) when using discharge guide in directions other than "upward discharge".

- Keep at least 2000 (3000) when using discharge guide in directions other than "upward discharge".

- Keep at least 1000 (2000) when using discharge guide in directions other than "upward discharge".

- Keep at least 1000 (2000) when using discharge guide in directions other than "upward discharge".

Air Outlet Guide to change air blowing directions PAC-SG58SG-E
3 Installation Complete Diagrams

4 Installation Method

For RP1.6 or 2:
1) Fix the two supports (2) and two supports (3), using four screws (5) to make a frame.
2) Attach the assembled supports to the outdoor unit using four screws (6), and then attach blowout guide (1) to the support (2), using four screws (4).

- Four blowout directions can be selected: Check the orientation of blowout vane, and attach the blowout guide in the direction that matches the situation at local site.

For RP2.5 - 6: (Two sets of support and blowout guide are necessary for two-fan type models.)
1) Remove the 4 screws that hold the existing fan guard.
2) Fit the 4 spacers * into the hole in fan guard, and then use the 4 screws * to install the provided blowout guide * to the outdoor unit above the existing fan guard.

- The four blowout directions can be selected: Check the orientation of blowout vane, and install the blowout guide in the direction that matches the circumstance at local site. (Two sets of fan guide are necessary for RP4 and higher models.)
Air Outlet Guide (to charge air blowing direction)  PAC-SG59SG-E

Photo

Descriptions
A part to change air direction from outdoor unit. Can also be used to prevent short cycles.

Applicable Models
- PUHZ-RP60/71
  1 piece required
- PUHZ-RP100/125/140VA
  2 pieces required
- PUHZ-P100
  1 piece required
- PUHZ-P125-250
  2 pieces required

Specifications

<table>
<thead>
<tr>
<th>Exterior</th>
<th>Color (Munsell)</th>
<th>Material</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ivory (3.0Y 7.8/1.1)</td>
<td>Air outlet grille: PP resin</td>
<td>1.2kg</td>
</tr>
</tbody>
</table>

Dimensions

Unit: mm

571.4
559 (Installation pitch of air outlet grille and support)

4-6 x 8 hole

CAUTION

* Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling operation is to be performed in outdoor temperature of -5°C or lower (down to -15°C).

Note the followings when installing this guide:
1) Be sure not to use "upward discharge" in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3) Do not use "upward discharge" when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit). This could cause a short cycle.
4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5) Do not install this unit in a place where wind directly blows to the back of the unit.
How to Use / How to Install

Note that two sets of this product are necessary for RP100, RP125, RP140, (RP4, RP5, RP6).

1 Checking provided parts

Make sure that this package has the following parts as well as the installation sheet:

<table>
<thead>
<tr>
<th>1) Air Discharge guide x 1</th>
<th>2) Support x 2 (For the upper and lower sides)</th>
<th>3) Support x 2 (For right and left)</th>
<th>4) Attachment screw x 4</th>
<th>5) Spacer x 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Air Discharge guide" /></td>
<td><img src="image2" alt="Support" /></td>
<td><img src="image3" alt="Support" /></td>
<td><img src="image4" alt="Attachment screw" /></td>
<td><img src="image5" alt="Spacer" /></td>
</tr>
</tbody>
</table>

2 Checking Installation Space

(1) Obstacle at front
(2) Obstacles at back and front
(3) Obstacles at back and top
(4) Obstacles at back, and sides
(5) Obstacles at back, sides and top

- Do not use "upward discharge" in cases of figures (3) and (5) below.

2) Surrounding space needed when installing multiple units

- When installing units horizontally in a series, leave at least 350 mm space between units for RP2, 50 type or lower models, and at least 10 mm for RP2.5, 60 type or higher models.

- Do not use "upward discharge" in case of figure (3) below.

3 Installation Complete Diagrams

4 Installation Method

For RP1.6, 2, 35, 50
1) Fix the two supports (2) and two supports (3), using four screws (5) to make a frame.
2) Attach the assembled supports to the outdoor unit using four screws (5), and then attach blowout guide (1) to the support (2), using four screws (4).

- Four blowout directions can be selected: Check the orientation of blowout vane, and attach the blowout guide in the direction that matches the situtation at local site.

For RP2.5~6, 60~140: (Two sets of support and blowout guide are necessary for two-fan type models.)
1) Remove the 4 screws that hold the existing fan guard.
2) Fit the 4 spacers * into the hole in fan guard, and then use the 4 screws * to install the provided blowout guide * to the outdoor unit above the existing fan guard.

- The four blowout directions can be selected: Check the orientation of blowout vane, and install the blowout guide in the direction that matches the circulation at local site. (Two sets of fan guide are necessary for RP4, 100 and higher models.)
Enables operation even when the outside temperature is low. Protect the unit from cold wind.

### Applicable Models
- **PUHZ-RP35/50**
  - only 1 piece required

### Specifications

<table>
<thead>
<tr>
<th>Exterior</th>
<th>Color (Munsell)</th>
<th>Acrylic resin coating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface treatment</td>
<td>Alum. hot-dip zinc-coated carbon steel sheet</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>3.4kg</td>
<td></td>
</tr>
</tbody>
</table>

### Accessories
- Washer faced screw (M4x10) x 18

### Description
- PAC-SG56AG-E

### Dimensions

**Unit**: mm

<table>
<thead>
<tr>
<th>Board</th>
<th>Hole</th>
<th>Hole</th>
<th>Hole</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Plenty of Way

- **Outdoor unit installation side**

---

**CAUTION**

* Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling operation is to be performed in outdoor temperature of -5°C or lower (down to -15°C).

Note the followings when installing this guide:
1. Be sure not to use “upward discharge” in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2. Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3. Do not use “upward discharge” when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit). This could cause a short cycle.
4. To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5. Do not install this unit in a place where wind directly blows to the back of the unit.
How to Use / How to Install

For 2-fan type outdoor unit, two pieces are required.

1 Checking parts

Make sure that all the following parts, in addition to this manual, are in this box:

- Front plate
- Side plate
- Connecting plate
- Mounting screw (5x35)
- Spacer
- Washer (for screw 3)
- Mounting screw (10)
- Mounting screw (4x12)
- Washer (for screw 5)

2 Requirements of space for installation

(1) One unit installation:

- 150 or more
- 500 or more
- 150 or more
- 500 or more
- 500 or more
- 500 or more

(2) Multiple unit installation: *Installation of multiple units in series must be no more than five units.

3 Installation procedure

For RP1.6, 2, 35, 50

(1) Fix side plates 2 and 3 (two each) using four screws 6 and attach them to outdoor unit using holes on side plate 1.

For other models:

(1) Fix side plates 2 and 3 (two each) using four screws 6 and attach them to outdoor unit using holes on side plate 1.

(2) Attach two connecting plates 4 to side plate 2, using four screws 8 with four washers 9.

(3) Attach front plate 1 to side plate 2, using six screws 6.

(4) Fix side plates 2 and 3 (two each) using four screws 6 and attach them to outdoor unit using holes on side plate 1.

(5) Attach two connecting plates 4 to side plate 2, using four screws 8 with four washers 9.

(6) Attach front plate 1 to side plate 2, using six screws 6.
Air Protect Guide  
(for cooling at -15°C)  
PAC-SH63AG-E *

* model change from PAC-SG57AG-E from Sep 2005

Enables operation even when the outside temperature is low. Protect the unit from cold wind.

### Applicable Models
- PUHZ-RP60/71  
  only 1 piece required
- PUHZ-RP100/125/140  
  2 pieces required
- PUHZ-P100  
  only 1 piece required
- PUHZ-P125-250  
  2 pieces required
- MXZ-8A140VA  
  2 pieces required
- PUHZ-HRP71/100/125  
  2 pieces required
- PU(H)-P71/100  
  only 1 piece required
- PU(H)-P125/140  
  2 pieces required

### Specifications

<table>
<thead>
<tr>
<th>Exterior</th>
<th>Color (Munsell)</th>
<th>Material</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ivory (3.0Y 7.8/1.1)</td>
<td>Alloy hot-dip zinc-coated carbon steel sheet</td>
<td>3.3kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessory name x Qty.</th>
<th>Material/Surface treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washer faced screw (M5x15) x 4</td>
<td>Acrylic resin coating</td>
</tr>
</tbody>
</table>

### Dimensions

Unit : mm (inch)

---

**CAUTION**

* Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling operation is to be performed in outdoor temperature of -5°C or lower (down to -15°C).

Note the followings when installing this guide:
1) Be sure not to use "upward discharge" in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3) Do not use "upward discharge" when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit): This could cause a short cycle.
4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5) Do not install this unit in a place where wind directly blows to the back of the unit.
How to Use / How to Install

MITSUBISHI

Package air-conditioner Optional parts
Installation Manual for Air Guide

Always observe for safety

- Carefully read this section 'Always observe for safety', and securely install the optional parts.
- Be sure to observe the cautions described here. They include critical contents for safety.
- The following indications show the classifications for danger, and possible consequences following incorrect handling.

**WARNING** Incorrect handling could lead to death or serious injury.

**CAUTION** Incorrect handling could lead to injury or damage to house and household articles.

- After installation, perform a test run and make sure that there is no abnormality, and ask your customer to keep this installation sheet with the instruction manual at all times. Also ask the customer to transfer these manuals to a new user if the user changes.

![Warning and Caution Diagram]

Before performing installation (moving) and electrical work

**WARNING**
- Ask the dealer or specialist for installation.
- If installed incorrectly by user, water leak, electric shock, fire, etc. could result.
- Carefully install the panel according to the installation sheet.
- Incorrect installation could cause water leak, electric shock, fire, etc.

**CAUTION**
- Do not place polyethylene bags in reach of young children.
- Putting them over the head will block breathing passages, which could result in suffocation.
- Do not install unit in or near water, or where wind directly blows at the back of the unit.
- Installing of this product will reduce the capacity of the unit (approx. 2 or 3%) and increase the noise of outdoor unit (approx. 1 or 2dB).
- Do not use this product where there is any obstacle at either side or above the outdoor unit (discharged air will be blocked). This may cause a short cycle.

This Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as in a typhoon, wind blowing through tall buildings, etc., directly strike the at air outlet.

In addition, installation of this product is necessary when cooling operation is to be performed in outside-air temperature of -5°C or lower (down to -15°C).

Pay attention to the following points when installing this product:
1) To eliminate the effects of external wind, be sure to install this unit with back surface facing wall side.
2) Do not install this unit in orientation or site where wind directly blows at the back of the unit.
3) Installing of this product will reduce the capacity of the unit (approx. 2 or 3%) and increase the noise of outdoor unit (approx. 1 or 2dB).
4) Do not use this product where there is any obstacle at either side or above the outdoor unit (discharged air will be blocked). This may cause a short cycle.

*When 2-fan type outdoor unit is used, note that two sets of this product will be necessary.*

### 1 Checking parts

Make sure that all the following parts, in addition to this manual, are in this box:

- AIR GUIDE 1
- Mounting screw 5×15 4
- WASHER 4
- SPRING WASHER 4

---

MITUBIISH ELECTRIC CORPORATION

D-57
2. Requirements of space for installation

(1) One unit installation:

(2) Multiple unit installation: ※Installation of multiple units in series must be no more than five units.

3. Installation procedure

(1) Remove the fan guard fixing screws (five screws on circumference), and then remove the fan guard.

(2) Insert the fan guard stoppers into the square holes on the air guide.

(3) Insert the stoppers (four locations) of the fan guard into the installation holes on the outdoor unit.

(4) Install the air guide on the outdoor unit using washers (3), spring washers (4) and screws (2). ※Use existing screws for handle section.
Enables operation even when the outside temperature is low. Protect the unit from cold wind.

Applicable Models
- PUHZ-RP200/250 YHA (For vertical blow model)

Specifications

<table>
<thead>
<tr>
<th>Exterior</th>
<th>Color (Munsel)</th>
<th>Ivory (3.0Y 7.8/1.1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface treatment</td>
<td>Acrylic resin coating</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>Alloy hot-dip zinc-coated carbon steel sheet</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>6.5kg</td>
<td></td>
</tr>
</tbody>
</table>

Accessory name x Qty.
- Washer faced screw (M5x10) x 12
- Iron wire (SWCH18A)/Zinc nickel plated

* Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling operation is to be performed in outdoor temperature of -5°C or lower (down to -15°C).

Note the followings when installing this guide:
1) Be sure not to use "upward discharge" in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3) Do not use "upward discharge" when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit). This could cause a short cycle.
4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5) Do not install this unit in a place where wind directly blows to the back of the unit.
# How to Use / How to Install

## 1 Checking parts

Make sure that you have all the following parts, in addition to this manual in this box:

1. Front plate x 1
2. Side plate x 2
3. Support x 1
4. Support x 1
5. Setscrew 5 x 16 x 2
6. Washer x 8

*PAC-SG86AG-E only*

## 2 Requirements of space for installation

(Unit: mm)

**Front side**
- Wind: 900 or more
- Blowing outlet: 900 or more

**Rear side**
- Wind: 900 or more
- Blowing outlet: 900 or more

*If there is any obstacle above the unit or if the outdoor unit is surrounded by walls, refer to the manual attached to the outdoor unit.*

## 3 Installation procedure

For PAC-SG86AG-E and PAC-SG87AG-E, installation position for the outdoor unit is different.

**For PAC-SG86AG-E**

1. (1) Remove screws (shown by dotted circles) from front panel/service panel, and install supports 3 and 4 using screws 5 (one screw for each) and washers 6 (one washer for each) on outdoor unit. When the Air guide is to be installed on rear side, remove screws (shown by dotted circles) from rear guard/rear panel, and install supports in the same way. Removed screws are not re-used.

2. (2) Install two side plates 2 using washers 6 (3 washers for each) screws 5 (3 screws for each) on the outdoor unit.

3. (3) Install front plate 1 on side plates 2 and supports 3 and 4, using eight screws 5.

**For PAC-SG87AG-E**

1. (1) Remove screw (shown by dotted circles) from side panel, and install support 3 on outdoor unit, using one washer 6 and one screw 5. Removed screw is not re-used.

2. (2) Install two side plates 2 using washers 6 (3 washers for each) screws 5 (3 screws for each) on the outdoor unit.

3. (3) Install front plate 1 on side panel 2 and support 3, using seven screws 5.
Enables operation even when the outside temperature is low. Protect the unit from cold wind.

Applicable Models

- PUHZ-RP200/250 YHA (For vertical blow model)

Specifications

<table>
<thead>
<tr>
<th>Exterior</th>
<th>Color (Munsell)</th>
<th>Acrylic resin coating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>Alloy hot-dip zinc-coated carbon steel sheet</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>5.5kg</td>
<td></td>
</tr>
<tr>
<td>Accessory name x Qty.</td>
<td>Washer faced screw (M5x10) x 12</td>
<td></td>
</tr>
<tr>
<td>&lt;Material/Surface treatment&gt;</td>
<td>Iron wire (SWCH18A)/Zinc nickel plated</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions

Unit: mm

CAUTION

* Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling operation is to be performed outdoors in temperature of -5°C or lower (down to -15°C).

Note the followings when installing this guide:
1) Be sure not to use “upward discharge” in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3) Do not use “upward discharge” when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit). This could cause a short cycle.
4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5) Do not install this unit in a place where wind directly blows to the back of the unit.
# How to Use / How to Install

## 1 Checking parts
Make sure that you have all the following parts, in addition to this manual in this box:

<table>
<thead>
<tr>
<th>Part</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front plate</td>
<td>x 1</td>
</tr>
<tr>
<td>Side plate</td>
<td>x 2</td>
</tr>
<tr>
<td>Support</td>
<td>x 1</td>
</tr>
<tr>
<td>Support</td>
<td>x 1</td>
</tr>
<tr>
<td>Washers</td>
<td>x 8</td>
</tr>
<tr>
<td>Screws</td>
<td>x 1</td>
</tr>
<tr>
<td>Setscrews</td>
<td>x 16</td>
</tr>
<tr>
<td>(Optional)</td>
<td></td>
</tr>
</tbody>
</table>

## 2 Requirements of space for installation
(Unit: mm) ※The following figures show the view from the top.

1. **One unit installation (circumference not blocked)**
   - Install the Air guide according to the orientation of where wind strikes the unit.
   - When installing PAC-SG86AG-E:
   - When installing PAC-SG87AG-E:

2. **Multiple unit installation (circumference not blocked)**
   - Install the Air guide according to the orientation of where wind strikes the unit.
   - ※If there is any obstacle above the unit or if the outdoor unit is surrounded by walls, refer to the manual attached to the outdoor unit.

## 3 Installation procedure

For PAC-SG86AG-E and PAC-SG87AG-E, installation position for the outdoor unit is different. Make sure before installation: The following figures show the example of installation on the front and right sides; perform installation on the rear or left side in the same way.

### For PAC-SG86AG-E

1. Remove screws (shown by dotted circles) from front panel/service panel, and install supports 3 and 4 using screws 5 (one screw for each) and washers 6 (one washer for each) on outdoor unit. When the Air guide is to be installed on rear side, remove screws (shown by dotted circles) from rear guard/rear panel, and install supports in the same way. Removed screws are not re-used.

### For PAC-SG87AG-E

1. Remove screw (shown by dotted circles) from side panel, and install support 3 on outdoor unit, using one washer 6 and one screw 5. Removed screw is not re-used.

2. Install two side plates 2 using washers 6 (3 washers for each) screws 5 (3 screws for each) on the outdoor unit.

3. Install front plate 1 on side plates 2 and supports 3 and 4, using eight screws 5.
Cap the unnecessary holes on the outdoor unit (bottom) and centralize the drainage when using a drain pipe.

### Applicable Models
- PU(H)-P71-140V(Y)-HA

### Specifications

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drain socket</td>
<td>Drain socket x 1, Drain cap x 5, Heat insulator x 3 (1 for liquid pipe, 1 large and 1 small insulator for gas pipe), Band x 8</td>
</tr>
<tr>
<td>Drain cap</td>
<td></td>
</tr>
</tbody>
</table>

- **Drain pipe**: PVC VP-25 or vinyl hose (ID: 25mm)
- **Operating conditions**: No freezing allowed (Never to be used in cold climates)
- **Material**: EPT rubber

### Dimensions

<table>
<thead>
<tr>
<th>Component</th>
<th>Dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drain socket</td>
<td>Φ47 X 25</td>
</tr>
<tr>
<td>Drain cap</td>
<td>Φ47 X 25</td>
</tr>
</tbody>
</table>

(Drain pipe connection)
How to Use / How to Install

1 Accessory
Be aware that the following parts are put in the package together with the instruction manual.

<table>
<thead>
<tr>
<th>Parts</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drain socket</td>
<td>1 pcs</td>
</tr>
<tr>
<td>Drain cap</td>
<td>5 pcs</td>
</tr>
<tr>
<td>Insulation part (for liquid pipe)</td>
<td>1 pc</td>
</tr>
<tr>
<td>Insulation part (for gas pipe)</td>
<td>1 pc</td>
</tr>
<tr>
<td>Band</td>
<td>8 pcs</td>
</tr>
</tbody>
</table>

2 Installation method for drain unit
*Prepare the adhesive in the field.

(1) Glue the drain socket ① to the hole that is used to centralize the drainage among several holes at the bottom of the unit with the glue (Prepared in the field)
(2) Glue the drain caps ② to close all the other unnecessary holes with the glue (Prepared in the field)
(Note) Apply the glue securely, as the glue will work as seal to prevent water from leaking.
(Note) Use the adhesive for the rubber and metal.
(Recommended product)
Supper X sirees made by CEMEDINE Co., Ltd.
(3) Insert a vinyl tube of which inner diameter 25 mm available commercially or a hard vinyl tube VP25 to the drain socket ①.

3 Installation method for insulation parts
Install the insulation parts to stop valve of the outdoor unit.
*The insulation parts should be installed after the tube has been connected to the unit.
*Some units are provided with a check valve near stop valve. In this case, cut the insulation parts ③ and ④ so that they will fit the stop valve properly.
(1) Install the insulation part ③ with 2 holes to the liquid pipe side so that the holes fit the valve caps and cover the stop valve entirely.
(2) Fix the insulation part ③ securely with bands ⑤.
Install the other insulation part ④ to the gas pipe side with the same procedure.

*Cut both ends of the insulation part ④ for gas tube side for the model 3GA or less.
Cap the unnecessary holes on the outdoor unit (bottom) and centralize the drainage when using a drain pipe.

### Applicable Models
- PUHZ-RP35VA
- PUHZ-RP50VA
- PUHZ-RP60VA
- PUHZ-RP71VA
- PUHZ-RP100VA
- PUHZ-RP125VA
- PUHZ-RP140VA
- MXZ-8A140VA
- PUHZ-HRP71/100/125VA
- PUHZ-P100/125/140/200/250

### Specifications
<table>
<thead>
<tr>
<th>Component</th>
<th>Unit : mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drain socket</td>
<td>EPT rubber, Heat insulator x 3 (1 for liquid pipe, 1 large and 1 small insulator for gas pipe), Band x 8</td>
</tr>
<tr>
<td>Drain cap</td>
<td>EPT rubber, Heat insulator x 3 (1 for liquid pipe, 1 large and 1 small insulator for gas pipe), Band x 8</td>
</tr>
</tbody>
</table>

### Dimensions
- **Drain socket**
  - φ 47
  - φ 33
  - φ 20
  - φ 25
- **Drain cap**
  - φ 47
  - φ 33
  - φ 20
  - φ 25
  - (Drain pipe connection)
How to Use / How to Install

1. **Accessory**
   Make sure that the following parts are put in the package.

<table>
<thead>
<tr>
<th>* Drain socket</th>
<th>* Drain cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 pcs</td>
<td>5 pcs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>* Insulation part (for liquid pipe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 pc</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>* Insulation part (for gas pipe)</th>
<th>* Band</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 pc</td>
<td>8 pcs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Small size</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

<table>
<thead>
<tr>
<th>Large size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

2. **Installation method for drain unit** ☆Prepare the adhesive in the field.

   (1) Glue the drain socket① to the hole that is used to centralize the drainage among several holes at the bottom of the unit with the glue (Prepare in the field).
   (2) Glue the drain caps ② to close all the other unnecessary holes with the glue (Prepare in the field).
   (Note) Apply the glue securely, as the glue (Prepare in the field) will work as seal to prevent water from leaking.
   (Note) Use the adhesive for the rubber and metal.
   (Recommended product) Supper X series made by CEMEDINE CO., Ltd.

   (3) Insert a vinyl tube of which inner diameter 25 mm available commercially or a hard vinyl tube VP25 to the drain socket ①.

3. **Installation method for insulation parts**

   Install the insulation parts to stop valve of the outdoor unit.
   ※The insulation parts should be installed after the tube has been connected to the unit.
   ※Some units are provided with a check valve near stop valve. In this case, cut the insulation parts ③ and ④ so that they will fit the stop valve properly.
   (1) Install the insulation part ③ with 2 holes to the liquid pipe side so that the holes fit the valve caps and cover the stop valve entirely.
   (2) Fix the insulation part ③ securely with bands ⑤.
   Install the other insulation part ④ to the gas pipe side with the same procedure.
A drain pan for the drain water generated from the outdoor unit.

**Applicable Models**
- PUHZ-RP35
- PUHZ-RP50

**Specifications**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drain outlet size</td>
<td>R3/4 screw (20A)</td>
</tr>
<tr>
<td>Exterior</td>
<td>Color (Munsell) Ivory (3.0Y 7.8/1.1)</td>
</tr>
<tr>
<td></td>
<td>Surface treatment Acrylic resin coating</td>
</tr>
<tr>
<td>Material</td>
<td>Alloy hot-dip zinc-coated carbon steel sheet (t1.6)</td>
</tr>
<tr>
<td>Weight</td>
<td>6.3kg</td>
</tr>
<tr>
<td>Mounting bolt</td>
<td>M10 (or W3/8); length: 48mm or less extrusion from drain pan's undersurface</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit : mm

- **Outdoor unit** (shown by line with two dots) 810
- **Four 12x17 long holes for installation bolts**
- **Drain socket 3/4B (20A), external thread**

![Diagram of Centralized Drain Pan](image-url)
## How to Use / How to Install

### 1 Installation Method

1. When installing on installation frame
   1. The installation frame must have structure and strength that can sufficiently support the outdoor unit and drain pan. Securely install the outdoor unit and drain pan so that they cannot fall or drop as a result of earthquake, strong wind, etc.
   2. The drain socket of drain pan is at the center in the longitudinal direction.
   3. The drain pan is tightened with the outdoor unit. Punch approx. \( \Phi 13 \) holes in the installation frame at pitches to install the outdoor unit.
   4. Fix the frame, drain pan and outdoor unit together to join them firmly (at the 4 points). The bolt length must be no more than 60 mm.

2. When installing on foundation
   - Since concentrated drain disposal is necessary, make the foundation at least 150 mm high measured from the ground as shown in the figure below. If it is less than 150 mm, drain piping will not be possible because the drain socket protrudes 48 mm.

### 2 Drain Piping

1. When connecting steel pipe:
   - Connect 3/4B internally threaded pipe.

2. When connecting vinyl pipe (soft):
   - Use a \( \Phi 25 \) mm internal dia. pipe, and fix the connected section with a hose band, etc.

3. When connecting PVC pipe (hard):
   - Use VP-20 and connect with a joint for PVC pipe.
   - In all cases, seal the socket threaded section securely with a seal tape, etc., and make sure that water does not leak.

### 3 Refrigerant Piping

- The refrigerant pipe can be laid in from four directions: front, right, rear and bottom. When laying, be sure to perform the following:

1. (1) Piping from the bottom:
   - Cut out the rubber bush to match the thickness of refrigerant pipe insulator. Pass the refrigerant pie through the rubber bush and fit it into the burring hole. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.

   (2) Piping from other directions:
   - Block the burring hole of the bottom piping section in the drain pan with rubber bush. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.
Centralized Drain Pan

**Photo**

A drain pan for the drain water generated from the outdoor unit.

**Descriptions**

**Applicable Models**

- PUHZ-HRP71/100/125
- PUHZ-RP60
- PUHZ-RP71
- PUHZ-RP100
- PUHZ-P100-250
- PUHZ-RP125
- PUHZ-RP140
- MXZ-8A140VA

**Specifications**

<table>
<thead>
<tr>
<th>Drain outlet size</th>
<th>R3/4 screw (20A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exterior Color</td>
<td>Ivory (3.0Y 7.8/1.1)</td>
</tr>
<tr>
<td>Surface treatment</td>
<td>Acrylic resin coating</td>
</tr>
<tr>
<td>Material</td>
<td>Alloy hot-dip zinc-coated carbon steel sheet (0.11)</td>
</tr>
<tr>
<td>Weight</td>
<td>7.8kg</td>
</tr>
<tr>
<td>Mounting bolt</td>
<td>M10 (or W3/8), length: 60mm or less extrusion from drain pan's undersurface</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

- Drain outlet size: 950 x 600 mm
- Drain socket 3/4B (20A), external thread

- Refrigerant pipe bottom intake (burring hole)
  - Only in case of PAC-SG64DP-E
  - With rubber bush

- Outdoor unit (shown by line with two dots)
  - Four 12x17 long holes for installation bolts

- Front View of Unit

**Unit**

- 59 mm
- 330 mm
- 439.3 mm
- 36.7 mm
- 950 mm
- 600 mm

**Rubber bush**

**D-69**

MITSUBISHI ELECTRIC CORPORATION
How to Use / How to Install

1 Installation Method

(1) When installing on installation frame
   1) The installation frame must have structure and strength that can sufficiently support the outdoor unit and drain pan. Securely install the outdoor unit and drain pan so that they cannot fail or drop as a result of earthquake, strong wind, etc.
   2) The drain socket of drain pan is at the center in the longitudinal direction. When constructing the installation frame, be careful that no part of the frame interferes with the socket.
   3) The drain pan is tightened with the outdoor unit. Punch approx. $\phi 13$ holes in the installation frame at pitches to install the outdoor unit.
   4) Fix the frame, drain pan and outdoor unit together to join them firmly (at the 4 points). The bolt length must be no more than 60 mm.

(2) When installing on foundation
   • Since concentrated drain disposal is necessary, make the foundation at least 150 mm high measured from the ground as shown in the figure below.
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2 Drain Piping

(1) When connecting steel pipe:
   Connect 3/4B internally threaded pipe.
(2) When connecting vinyl pipe (soft):
   Use a $\phi 25$ mm internal dia. pipe, and fix the connected section with a hose band, etc.
(3) When connecting PVC pipe (hard):
   Use VP-20 and connect with a joint for PVC pipe.
   ※ In all cases, seal the socket threaded section securely with a seal tape, etc., and make sure that water does not leak.

3 Refrigerant Piping

※ For PAC-SG64DP-E only

• The refrigerant pipe can be laid in from four directions: front, right, rear and bottom. When laying, be sure to perform the following:

(1) Piping from the bottom:
   Cut out the rubber bush to match the thickness of refrigerant pipe insulator. Pass the refrigerant pipe through the rubber bush and fit it into the burring hole. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.

(2) Piping from other directions:
   Block the burring hole of the bottom piping section in the drain pan with rubber bush. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.
A drain pan for the drain water generated from the outdoor unit.

**Applicable Models**
- PUHZ-RP200 YHA (Vertical blow model)
- PUHZ-RP250 YHA (Vertical blow model)

**Specifications**

<table>
<thead>
<tr>
<th>Drain Outlet Size</th>
<th>VP25 Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exterior</strong></td>
<td></td>
</tr>
<tr>
<td>Color (Munsell)</td>
<td>Ivory (3.0Y 7.8/1.1)</td>
</tr>
<tr>
<td>Surface Treatment</td>
<td>Acrylic resin coating</td>
</tr>
<tr>
<td>Material</td>
<td>Alloy hot-dip zinc-coated carbon steel sheet (1.0)</td>
</tr>
<tr>
<td>Weight</td>
<td>2.5kg</td>
</tr>
<tr>
<td>Tapping Screw (Accessory)</td>
<td>SUS(5x15) x 5</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

- Drain pan(PVC:hard)
- Drain pan case
- Drain outlet(Valve pipe:VP25)
- Drain pan side connection(PVC:hard)
- Flexible hose outline
- Flexible hose(PVC:soft)
- Local construction side connection (PVC:doft):VP25 pipe

**Installation state figure**

- Accumulator
- Back side
- Drain duct
- Drain kit
- Compressor
- Base
- Front side
- Tapping screw for installation (accessory) (SUS 5x15, 5PCS)
- For closing material (accessory) (PE : 3t x 24 x 24)
How to Use / How to Install

Centralized Drain Kit

PAC-SG92DS-E

1. Cautions on installation

For installing this product, note the following restrictions:
- Do not use this product in cold districts. Inside drain pipe may freeze.
- Be sure to leave a space of at least 160 mm under the bottom surface of outdoor unit, since this kit is to be installed there.
- If there is no space for installation work at the back of the outdoor unit, install this product before installing the outdoor unit.
- Be sure to apply incline of at least 1/100 to drain pipe.
- Be sure to secure the connection section of drain pipes using silicone sealing agent or PVC adhesive.

2. Installation procedure

* Removal of front and rear panels
Following Figs. 1 and 2, remove the service panel and rear panel from the outdoor unit.

* Assembling of Drain hose
Install the drain hose ② in the socket of the drain pan kit ①. Be sure to use PVC adhesive (locally available) to connect drain hose at this time. (See Fig. 4.)
※Pipe locally used corresponds to VP25. (OD.32mm)
Required pipe must be locally acquired.

* Installation of this product
After above step (③) is completed, match the drain pan with installation holes at the bottom of the outdoor unit and secure using provided setscrews ③ at 5 locations from inside.

* Installation of hole blocking material and confirmation of drain pan kit installation hole position
Fig. 3 shows the state of bottom surface (base) after service panel and rear panel have been removed. Install the hole blocking material ④ from the front side. Confirm the position of installation hole for drain pan kit ①, and then perform the next step.

3. Re-assembly

After installation and confirmation of drainage have been completed, install the disassembled parts in the reverse procedure of disassembly.

**WARNING**
Incorrect installation of external panels could cause electric shock or fire, due to dust, water leakage, etc.
A-control Mr. SLIM models can be connected to "M-NET" through optional M-NET converter so that they can be monitored / controlled effectively and meticulously.

**Applicable Models**
- All PU(H)-P GA
- All PUHZ-RP
- All PUHZ-P outdoor Units (A-control)
- All PUHZ-HRP

**Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>Supplied from control board</td>
</tr>
<tr>
<td>Power consumption</td>
<td>0.6W (at 5V DC, 12V DC)</td>
</tr>
<tr>
<td>Operating conditions</td>
<td>Mounted inside the electrical utility box of outdoor unit. (Temperature: -20 to 60°C, humidity: 90% or less (no condensation))</td>
</tr>
<tr>
<td>Weight</td>
<td>0.3kg</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit : mm

**Diagram**

- CN5 (Connect to outdoor controller board)
- SW11 (M-NET Address<1st digit>)
- SW12 (M-NET Address<2nd digit>)
- CN2M (M-NET)
- CND (Connect to outdoor controller board)
**INSTALLATION MANUAL FOR A-M CONVERTER**

This manual is written only for the models

<table>
<thead>
<tr>
<th>A:</th>
<th>PUHZ-RP1.6/2VHA, RP35/50VHA</th>
<th>B:</th>
<th>PUHZ-RP2.5<del>6VHA (A), RP60</del>140VHA (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PUHZ-RP35/50VHA, RP35/50VHA2</td>
<td></td>
<td>PUHZ-RP60<del>140VHA (A), RP60</del>140VHA2</td>
</tr>
<tr>
<td></td>
<td>PLZ-A18NHA, PLUY-A12/18NHA</td>
<td></td>
<td>PUHZ-RP24<del>42NHA, PLUY-A24</del>42NHA</td>
</tr>
<tr>
<td>C:</td>
<td>PU (H) -P1<del>4VGA (A), P25</del>100VGA</td>
<td>D:</td>
<td>PUH-P8/10TE, PB10MTA, P200/250MYA</td>
</tr>
<tr>
<td></td>
<td>PU(H) -P1.6<del>6YGA (A), P35</del>140YGA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**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 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.

- Unperfect connections can cause heat or fire.

### CAUTION

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.

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

- Unperfect 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.

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

Never try any modification.

- For repair, ask your dealer.
- If the machine is modified or repaired unperfectly, 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.

---

### 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.
- Wires must not have tension.
  - It can cause snipping, heat, or fire.
- Put ground wire.
  - Never ground to gas pipe, water pipe, lightning conductor, or telephone ground wire.
  - Unperfect ground can cause short-circuit.
- Use proper fuses
  - If you use larger size fuses or needle wire, it can cause failure 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.
# 1. Parts List

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Figure</th>
<th>Q'ty</th>
<th>Applicable models</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>M-NET board (with insulation sheets and supports)</td>
<td><img src="image1.png" alt="image" /></td>
<td>1</td>
<td>A B C D E F G</td>
<td></td>
</tr>
<tr>
<td>②</td>
<td>Plate (For mounting circuit board)</td>
<td><img src="image2.png" alt="image" /></td>
<td>1</td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>③</td>
<td>Insulation sheets S, M, L</td>
<td><img src="image3.png" alt="image" /></td>
<td>1</td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>④</td>
<td>Terminal base</td>
<td><img src="image4.png" alt="image" /></td>
<td>1</td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>⑤</td>
<td>Screw (M4 × 8)</td>
<td><img src="image5.png" alt="image" /></td>
<td>2</td>
<td>O (1) O (1)</td>
<td>Wire Marking : INV Type Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.</td>
</tr>
<tr>
<td>⑥</td>
<td>Terminal block (M-NET)</td>
<td><img src="image6.png" alt="image" /></td>
<td>1</td>
<td>O O O O O</td>
<td></td>
</tr>
<tr>
<td>⑦</td>
<td>Terminal screw (M3 × 20)</td>
<td><img src="image7.png" alt="image" /></td>
<td>1</td>
<td>O O O O O</td>
<td></td>
</tr>
<tr>
<td>⑧</td>
<td>Label</td>
<td><img src="image8.png" alt="image" /></td>
<td>1</td>
<td>O O O O O</td>
<td>Wire Marking : NON-INV Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.</td>
</tr>
<tr>
<td>⑨</td>
<td>Lead wire-A (5 wires)</td>
<td><img src="image9.png" alt="image" /></td>
<td>1</td>
<td>O O</td>
<td></td>
</tr>
<tr>
<td>⑩</td>
<td>Lead wire-B (5 wires)</td>
<td><img src="image10.png" alt="image" /></td>
<td>1</td>
<td>O O</td>
<td></td>
</tr>
<tr>
<td>⑪</td>
<td>Lead wire-C (3 wires)</td>
<td><img src="image11.png" alt="image" /></td>
<td>1</td>
<td>O O O O O</td>
<td></td>
</tr>
<tr>
<td>⑫</td>
<td>Lead wire-D (2 wires)</td>
<td><img src="image12.png" alt="image" /></td>
<td>1</td>
<td>O O O O O</td>
<td></td>
</tr>
<tr>
<td>⑬</td>
<td>Ground wire and screw (M4 × 8)</td>
<td><img src="image13.png" alt="image" /></td>
<td>1</td>
<td>O O O O O O</td>
<td></td>
</tr>
<tr>
<td>⑭</td>
<td>Pull tight</td>
<td><img src="image14.png" alt="image" /></td>
<td>2</td>
<td>O O O O O O</td>
<td></td>
</tr>
<tr>
<td>⑮</td>
<td>Plate 2 (For mounting circuit board)</td>
<td><img src="image15.png" alt="image" /></td>
<td>1</td>
<td>O</td>
<td></td>
</tr>
</tbody>
</table>
2. 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.

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

2. Starting from the bottom, mount Insulation Sheet ② to the “L” bend section on the back of the noise filter mounting panel.

3. Position the chamfered section of Plate ① so that it faces the fan side (the left side of the drawing) and mount it using Screw ⑤.

4. 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”

5. Use terminal screw ⑥ to secure terminal block ⑧
   # Terminal block ⑥ 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/NV 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 ⑪ to connect CND of M-NET board ① connection and CNVMNT of outdoor control board.

9. Use lead wire-D ⑫ to connect CN2M of M-NET board ① connection and terminals A and B of terminal block ⑫
   # Polarity is not a concern.
   # 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 pull tight and not to loose.
    # Wiring length is adjusted according to apparatus.

It progresses to the xx 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 procedure  [Applicable model : Group B]

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

(When viewed from the side of Electric box)

①M-NET board

Control board

(When viewed from the side of Electric parts box)

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

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”.

Use terminal screw ⑥ to secure terminal block⑥.
*Terminal block⑥ has a round boss for positioning: Fit the round boss into the positioning hole in steel-plate.

Paste label ① under terminal block ⑥.

Use lead wire-A ⑦ to connect CN5 of M-NET board ① connection and CNVMNT 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.

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

Use lead wire-D ⑦ 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 ⑥ 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 ⑦ 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 procedure [Applicable model : Group C]

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) ② 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 ⑨.
3. Put the Label ③ 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 ⑤ to both the connector CN5 on the M-NET board ① and the connector CNMNT on the 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.
6. Connect the lead wire-C ⑥ 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 ⑦ to both the connector CN2M on the M-NET board ① and the terminals A & B on the terminal block (M-NET) ⑧.
8. The lead wires should be tied together with the other lead wires with the pull tight ⑨ not to loose. Wiring length is adjusted according to apparatus.

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

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 in installing panels.
2. Installation procedure [Applicable model : Group D]

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 ⑨ on the base of the electric box.

4. Connect the lead wire-B ③ to both the connector CN5 on the M-NET board ① and the connector CNMNT on the control board. ※Caution

   Wire Marking: NON-IN, 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 ⑧ to both the connector CN2M on the M-NET board ① and the terminals A & B on the terminal block (M-NET) ⑥.

6. Connect the lead wire-D ④ to both the connector CNMNT on the M-NET board ① and Control board (CNVMNT) on the control board.

7. The lead wires should be tied together with the other lead wires with the pull tight ⑤ not to loose. Wiring length is adjusted according to apparatus.

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

Note1: Use ground wire and screw ② 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 procedure [Applicable model : Group E]

1. Attach the Plate 2 ⑨, using two screws ⑩.
2. Install M-NET board ① (with insulation sheets and supports) on the Plate2 ⑨.
   ※ 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 ①.
5. Use lead wire-A ⑪ to connect CN5 of M-NET board ① connection and CNVMNT 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 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 ④ not to loose.
   Wiring length is adjusted according to apparatus.

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

Note1: Use ground wire and screw ⑤ 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 procedure [Applicable model: Group F]

- 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”.

- Use terminal screw ② to secure terminal block⑥. Terminal block⑥ has a round boss for positioning. Fit the round boss into the positioning hole in steel-plate.

- Paste label ⑧ under terminal block ⑥.

- Use lead wire-A ⑦ 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.

- Use lead wire-C ⑩ to connect CN2D of M-NET board ① connection and CNVMNT of outdoor control board.

- Use lead wire-D ⑧ 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 is not to loose. Wiring length is adjusted according to apparatus.

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

Note1: Use ground wire and screw ③ 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 procedure  [Applicable model : Group G]

The M-NET board ① is installed in the bottom of electric box so that the DIP switches (SW11, SW12) come front.  
Push it firmly until you hear it “click”.

Use terminal screw ② to secure terminal block③.  
Terminal block③ has a round boss for positioning:Fit the round boss into the positioning hole in steel-plate.

Paste label ④ under terminal block ③.

Use lead wire-B ⑤ to connect CN5 of M-NET board ① connection and CNMINT of outdoor control board.  
Caution  
Wire Marking:NON-INVERTED, Connector color:White Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.

Use lead wire-C ⑥ to connect CND of M-NET board ① connection and CNVMINT of outdoor control board.  
Use lead wire-D ⑦ 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 ⑧ not to loose.  
Wiring length is adjusted according to apparatus.

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

Note1. Use ground wire and screw ⑨ 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 (TB?) 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.

![Diagram of wiring method for M-NET]

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.

<table>
<thead>
<tr>
<th></th>
<th>A control slim</th>
<th>City Multi (M-NET)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indoor unit</td>
<td></td>
<td>1~50</td>
</tr>
<tr>
<td>Outdoor unit</td>
<td>1~50</td>
<td>51~100</td>
</tr>
<tr>
<td>Remote controller</td>
<td></td>
<td>101~150</td>
</tr>
<tr>
<td>System controller</td>
<td>201~250</td>
<td></td>
</tr>
<tr>
<td>Group remote controller</td>
<td>201~250</td>
<td></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 dip switch SW1 (3-6) on the outdoor controller of the outdoor unit.
(Factoy 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)

※ 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.
Control / Service Tool

PAC-SK52ST

Photo

Descriptions

This item is used to display operation and self-diagnosis state.

Applicable Models

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

Specifications

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>5V DC (supplied from outdoor unit control board)</td>
</tr>
<tr>
<td>Temperature</td>
<td>-20 to 60°C, Humidity: 90%RH or less (no condensation)</td>
</tr>
<tr>
<td>External dimensions</td>
<td>69 (W) x 91 (H) x 27 (D) (mm), excluding lead wires</td>
</tr>
<tr>
<td>Weight</td>
<td>0.05kg</td>
</tr>
</tbody>
</table>

How to Use / How to Install

- **Notes on Use**
  - Before installing / removing a control / service tool, make sure that the main power to this unit is turned OFF.
  - The connector for control / service tool has a lock. Connection / removal of the connector must be done with the locking lever pressed.

- **How to Use**
  1. Connect the control / service tool connector to the [CNM] connector on the outdoor unit control board.
  2. Operating the control / service tool’s DIP switch "SW2" causes "LED1" to display the operation state and inspection code description using 2-digit value and symbols. "SW2" setting varies with the unit to be connected. For details of the display content, refer to the appropriate service handbook.
  3. After the control / service tool has been used, remove it from the outdoor unit control board.
This adapter connects the relay circuit and the outdoor unit control board to enable low noise mode or demand function using external input.

- All parts besides the wires for connection (timer, switch, relay, etc.) must be procured locally.

### Applicable Models
- PUHZ-HRP·HA
- PUHZ-RP·HA2
- PUHZ-P·HA2

### Specifications

<table>
<thead>
<tr>
<th>Function</th>
<th>Inputs signal of low noise mode or demand function to the outdoor unit control board.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input signal</td>
<td>No-voltage contact (ON/OFF level signal)</td>
</tr>
<tr>
<td>Connector</td>
<td>3P(connector to CNDM,CN3D,CN3S on outdoor unit control board)</td>
</tr>
<tr>
<td>Cable type</td>
<td>3-wire cable, for extension: sheathed vinyl cord or cable (0.5 to 1.25 mm²)</td>
</tr>
<tr>
<td>Cable length</td>
<td>3m (max. 10m when extended locally)</td>
</tr>
</tbody>
</table>

### How to Use / How to Install

#### Low noise mode (on-site modification) (Fig. 1)
By performing the following modification, operation noise of the outdoor unit can be reduced by about 3-4 dB.

- The low noise mode will be activated when a commercially available timer or the contact input of an ON/OFF switch is added to the CNDM connector (option) on the control board of the outdoor unit.
- The ability varies according to the outdoor temperature and conditions, etc.

1. Complete the circuit as shown when using the external input adapter (PAC-SC36NA). (Option)
2. SW1 ON: Low noise mode
3. SW1 OFF: Normal operation

#### Demand function (on-site modification) (Fig. 2)
By performing the following modification, energy consumption can be reduced to 0 – 100% of the normal consumption.

- The demand function will be activated when a commercially available timer or the contact input of an ON/OFF switch is added to the CNDM connector (option) on the control board of the outdoor unit.
- By setting SW7-1 and SW7-2 on the control board of the outdoor unit, the energy consumption (compared to the normal consumption) can be limited as shown below.

<table>
<thead>
<tr>
<th>SW7-1</th>
<th>SW7-2</th>
<th>Energy consumption (SW2 ON)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>0% (off)</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>50%</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>75%</td>
</tr>
</tbody>
</table>

- By setting SW7-1 and SW7-2 on the control board of the outdoor unit, the energy consumption (compared to the normal consumption) can be limited as shown below.
Air Cleaning Filter

Photo

Descriptions

- Air Cleaning Filter removes fine dust of 0.01 micron from air by means of static electricity.
- DO NOT reuse Air Cleaning Filter even if it is washed.

Applicable Models

MSC-GA20VB    MSZ-CA25VB
MSC-GA25VB    MSZ-CA35VB
MSC-GA35VB   

Specifications

Dimensions

- Unit: mm

How to Use / How to Install

REPLACEMENT OF THE AIR CLEANING FILTER
When the capacity is lowered because of dirt, etc., it is necessary to replace the air cleaning filter.

Air cleaning filter replacement (about once every 4 months)

1. Remove the catechin air filter.

2. Remove the air cleaning filter (White bellows type).

3. Install a new air cleaning filter.

4. Install the catechin air filter and securely.

- If the air cleaning filter is clogged, it may lower the unit's capacity or cause condensation at the air outlet.
- The air cleaning filter is disposable. The standard usable term is about 4 months. However, if the colour of the filter turns to dark brown, replace the filter at once.
**Air Cleaning Filter**

**Photo**

![Air Cleaning Filter Image]

**Descriptions**

- Air Cleaning Filter removes fine dust of 0.01 micron from air by means of static electricity.
- DO NOT reuse Air Cleaning Filter even if it is washed.

**Applicable Models**

- MS-GA50VB
- MS-GA60VB
- MS-GA60VB
- MS-GA80VB
- MSH-GA50VB
- MSH-CA50VB
- MSH-GA80VB
- MSH-CA50VB

**Specifications**

**Dimensions**

Unit: mm

**How to Use / How to Install**

**REPLACEMENT OF THE AIR CLEANING FILTER (OPTION)**

When the capacity is lowered because of dirt, etc., it is necessary to replace the air cleaning filter.

**Air cleaning filter replacement**

1. Remove the catechin air filter.

2. Remove the air cleaning filter (White bellows type).

**About once every 4 months**

1. Install a new air cleaning filter.

2. Install the catechin air filter and securely close the front panel.

**Air cleaning filter**

- If the air cleaning filter is clogged, it may lower the unit’s capacity or cause condensation at the air outlet.
- The air cleaning filter is disposable. The standard usable term is about 4 months. However, if the colour of the filter turns to dark brown, replace the filter at once.
Minimum holes as small as 1 nanometer on a surface of approximately 3,000m² can capture small foul-smelling substances in the air, then break down the source of the odors with the power of the ozone generated in a plasma electrode unit and the platinum catalyst contained in the filter.

**Applicable Models**

- MSZ-FD25VA
- MSZ-FD25VAS
- MSZ-FD35VA
- MSZ-FD35VAS
- MSZ-FD50VA
- MSZ-FD50VAS

**Specifications**

**Dimensions**

Unit: mm

*How to Use / How to Install*

**Front panel**

1. Lift the front panel until a “click” is heard.
2. Hold the hinges and pull to remove as shown in the above illustration.
   - Wipe with a soft dry cloth or wash it with water.
   - Do not soak it in water for more than two hours.
   - Dry it well in shade before installing it.
3. Install the panel by following the removal procedure in reverse. Close the front panel securely and press the positions indicated by the arrows.

**Every 3 months:**

- Remove dirt by a vacuum cleaner, or soak the filter in lukewarm water (30 to 40°C) for about 15 minutes. Rinse well.
- After washing, dry it well in shade and put it back to its original position.
- Deodorizing feature recovers by cleaning the filter.

*When dirt or smell cannot be removed by cleaning:*

- Replace it with a new air cleaning filter.
- Parts Number: [MAC-307FT-E](#)

---

MITSUBISHI ELECTRIC CORPORATION

D-90
This filter catches dead mites and their droppings, pollen and other allergens on the filter filament, then decomposes them with artificial enzymes.
(Artificial enzyme catalyst on the filament catches the allergens and helps the chemical reaction with Oxygen and severs the S-S* bonds. *S=Sulfur atoms)

### Applicable Models
- MSZ-GA50VA
- MSZ-GA60VA
- MSZ-GA71VA

### Specifications
<table>
<thead>
<tr>
<th>Color</th>
<th>Frame: White, Filter: Light blue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>Frame: PP, Filter: Polyester, rayon</td>
</tr>
<tr>
<td>Weight</td>
<td>16g</td>
</tr>
</tbody>
</table>

### Dimensions
Unit: mm

### How to Use / How to Install

**Replacement of the air cleaning filter**

(1) Remove the catechin air filter(left one)
The air cleaning filter is not attached to the right side catechin air filter

(2) Remove the air cleaning filter(Blue bellows type) from the catechin air filter.
This filter catches dead mites and their droppings, pollen and other allergens on the filter filament, then decomposes them with artificial enzymes.

(Artificial enzyme catalyst on the filament catches the allergens and helps the chemical reaction with Oxygen and severs the S-S* bonds. *S=Sulfur atoms)

**Specifications**

<table>
<thead>
<tr>
<th>Applicable Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSZ-GA22VA</td>
</tr>
<tr>
<td>MSZ-GA25VA</td>
</tr>
<tr>
<td>MSZ-GA35VA</td>
</tr>
<tr>
<td>MSZ-CB22VA</td>
</tr>
<tr>
<td>MSZ-CB25VA</td>
</tr>
<tr>
<td>MSZ-CB35VA</td>
</tr>
<tr>
<td>MSZ-GB50VA</td>
</tr>
<tr>
<td>MFZ-KA25VA</td>
</tr>
<tr>
<td>MFZ-KA35VA</td>
</tr>
<tr>
<td>MFZ-KA50VA</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

- Width: 333 mm
- Height: 343 mm
- Thickness: 7.4 mm
- Weight: 16 g

**How to Use / How to Install**

1. Unlock the knobs on both sides of the front panel and lift the panel up until a “click” is heard.
2. Holding the tab on the air filter, pull up the filter slightly to remove. (Only remove the left one.)
3. Remove the Anti-Allergy Enzyme from the back side of the air filter by pulling up the tabs on both sides of the Anti-Allergy Enzyme with your fingers.
4. Attach a new Anti-Allergy Enzyme filter to the back side of the air filter by pulling up the tabs on both sides of the Anti-Allergy Enzyme filter with your fingers.
5. Install the air filter to the unit. Be sure to install its tab securely.
6. Close the front panel securely by pressing the positions indicated by arrows until a “click” is heard.
Anti-Allergy Enzyme Filter

Mac-408FT-E

Photo

Description

This filter catches dead mites and their droppings, pollen and other allergens on the filter filament, then decomposes them with artificial enzymes. (Artificial enzyme catalyst on the filament catches the allergens and helps the chemical reaction with Oxygen and severs the S-S* bonds. *S=Sulfur atoms)

Applicable Models

- MSZ-GC22VA
- MSZ-GC25VA
- MSZ-GC35VA

Specifications

<table>
<thead>
<tr>
<th>Material</th>
<th>Filter: Polyester, rayon, acetylicresin</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frame: Polypropylen</td>
</tr>
<tr>
<td>Color (Filter)</td>
<td>Light blue</td>
</tr>
</tbody>
</table>

Dimensions

Unit: mm

Back side of air filter

- Clean every 3 months.
- Soak the filter together with its frame in lukewarm water and wash it.
- After washing, dry it well in shade and put it back to its original position.
- Install all tabs of the air filter.
- Replace it with a new air cleaning filter every year for best performance.

Parts Number: MAC-408FT-E

What is “Catechin air filter”?

Catechin is a bioflavonoid that is found in green tea that has both antiviral and antioxidant qualities. In addition to these benefits, Catechin also offers excellent deodorizing characteristics. Catechin air filter uses this compound to not only improve air quality but also prevent the spread of bacteria and viruses in the room.

How to Use / How to Install

Front panel

1. Lift the front panel until a “click” is heard.
2. Hold the hinges and pull to remove as shown in the above illustration.
   - Wipe with a soft dry cloth or wash it with water.
   - Do not soak it in water for more than two hours.
   - Dry it well in shade before installing it.
3. Install the panel by following the removal procedure in reverse. Close the front panel securely and press the positions indicated by the arrows.

Back side of air filter

Pull to remove from the air filter

Parts Number: MAC-408FT-E
Anti-Allergy Enzyme Filter

**Photo**

**Descriptions**

This filter catches dead mites and their droppings, pollen and other allergens on the filter filament, then decomposes them with artificial enzymes. (Artificial enzyme catalyst on the filament catches the allergens and helps the chemical reaction with Oxygen and severs the S-S* bonds. *S=Sulfur atoms)

**Applicable Models**

- MLZ-KA25VA
- MLZ-KA35VA
- MLZ-KA50VA

**Specifications**

<table>
<thead>
<tr>
<th>Color</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface treatment</td>
<td>Foundation</td>
</tr>
</tbody>
</table>
| Material | Frame: PP resin  
Filter: Transformation system, Polypropylene,  
unwoven cloth. |
| Weigh | 50g/piece (2piece/1unit) |

**Dimensions**

Unit: mm

**How to Use / How to Install**

**Intake grille**

1. Press **PUSH** indicated on the intake grille until a “click” is heard.
2. Hold the tabs on both ends of the intake grille, and pull down to open.

**Air cleaning filter**

(Anti-Allergy Enzyme Filter, option)

**Back side of air filter**

- Clean every 3 months.
- Soak the filter together with its frame in lukewarm water and wash it.
- After washing, dry it well in shade and put it back to its original position.
- Install all tabs of the air filter.
- Replace it with a new air cleaning filter every year for best performance.

**Parts Number** MAC-171FT-E

---

**What is “Catechin air filter” ?**

Catechin is a bioflavonoid that is found in green tea that has both antiviral and antioxidant qualities. In addition to these benefits, Catechin also offers excellent deodorizing characteristics. Catechin air filter uses this compound to not only improve air quality but also prevent the spread of bacteria and viruses in the room.
The power of the static electricity charged in the filter and the plasma generated in the plasma electrode unit team up to capture the bacteria, pollen and other allergens in the air, which are then neutralized with the enzyme in the filter.

**Applicable Models**

- MSZ-FD25VA
- MSZ-FD25VAS
- MSZ-FD35VA
- MSZ-FD35VAS
- MSZ-FD50VA
- MSZ-FD50VAS

**Specifications**

**Dimensions**

Unit: mm

**How to Use / How to Install**

1. Lift the front panel until a “click” is heard.
2. Hold the hinges and pull to remove as shown in the above illustration.
   - Wipe with a soft dry cloth or wash it with water.
   - Do not soak it in water for more than two hours.
   - Dry it well in shade before installing it.
3. Install the panel by following the removal procedure in reverse. Close the front panel securely and press the positions indicated by the arrows.

Every 3 months:
- Remove dirt by a vacuum cleaner, or soak the filter in lukewarm water (30 to 40°C) for about 15 minutes. Rinse well.
- After washing, dry it well in shade and put it back to its original position.
- Deodorizing feature recovers by cleaning the filter.

When dirt or smell cannot be removed by cleaning:
- Replace it with a new air cleaning filter.
- Parts Number: MAC-417FT-E
Catechin is a bioflavonoid that is found in green tea that has both antiviral and antioxidtant qualities. In addition to these benefits, Catechin also offers excellent deodorizing characteristics. Catechin air filter uses this compound to not only improve air quality but also prevent the spread of bacteria and viruses in the room.

**Applicable Models**
- MSZ-HC25VA
- MSZ-HC35VA
- MSZ-HC35VAB

**Specifications**

**How to Use / How to Install**

1. Holding the knob on the air filter, pull up the filter slightly and then pull down to remove.

2. Remove dirt from the air filter using a vacuum cleaner or by washing the filter with water.
   - Do not wash with scrubbing brush or hard surface of sponge. Otherwise, the filter may deform.
   - If the dirt is noticeable, wash the filter with a solution of mild detergent diluted in lukewarm water.
   - If hot water (50°C or more) is used, the filter may be deformed.

3. After washing with water/lukewarm water, dry the air filter well in the shade.
   - Do not expose the air filter to direct sunlight or heat from a fire when drying it.

4. Install the air filter.
   (Securely install its tabs.)

**What is “Catechin air filter”?**

The air filter is dyed with a natural material, catechin, that is contained in tea. The catechin air filter deodorizes odor and noxious gases such as formaldehyde, ammonia, and acetaldehyde. Moreover, it restraints the activity of the viruses adhering to the filter.
Catechin Air Filter

How to Use / How to Install

Intake grille
(1) Press [PUSH] indicated on the intake grille until a “click” is heard.
(2) Hold the tabs on both ends of the intake grille, and pull down to open.

Replacement of the air cleaning filter
(1) Remove the catechin air filter.
(2) Install a new catechin air filter.
Be sure to install the tabs into the intake grille hole.

(3) Securely close the intake grille.

Specifications

Unit : mm

Dimensions

Descriptions
Catechin air filter uses this compound to not only improve air quality but also prevent the spread and viruses in the room.

Applicable Models
- MLZ-KA25VA
- MLZ-KA35VA
- MLZ-KA50VA
High Efficiency Filter

**Photo**

![Photo of High Efficiency Filter]

**Descriptions**

- High Efficiency Filter is a part that removes dust in the air.
- Dust collection efficiency: 70% (Weighing method)
- It is the best for the air-conditioning of the stove where a lot of going of the person in and out exists.

**Applicable Models**

- PCA-RP50GA
- PCH-P50GAH

**Specifications**

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust collection efficiency</td>
<td>70% (weighing method)</td>
</tr>
<tr>
<td>Filter material</td>
<td>PP fiber (antibacterial + mildew-proof), honeycomb weave (Identification: gray yarn woven)</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Approx. 2,500 hours (varies with operating conditions)</td>
</tr>
<tr>
<td>Parts composition</td>
<td>Filter (large) 1</td>
</tr>
<tr>
<td></td>
<td>Filter (small) 1</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

**Filter (large)**

- 213 (Filter part)
- 582 (Filter part)
- 608
- Air intake

**Filter (small)**

- 221
- 277 (Filter part)
- 301
- Air intake

**How to Use / How to Install**

1. Open the intake grille.
2. Hold the knob on the filter then pull the filter up in the direction of an arrow. To replace the filter after cleaning, be sure to insert the filter far enough until it fits into the stopper.

A: Filter  B: Intake Grille  C: Knob  D: Stopper
**High Efficiency Filter**

**PAC-SE81KF-E**

### Descriptions
- High Efficiency Filter is a part that removes dust in the air. Dust collection efficiency: 70% (Weighing method)
- It is the best for the air-conditioning of the stove where a lot of people go in and out.

### Applicable Models
- PCA-RP60GA
- PCH-P60GAH
- PCA-RP71GA
- PCH-P71GAH
- PCA-RP100GA
- PCHR100GAH

### Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust collection efficiency</td>
<td>70% (weighing method)</td>
</tr>
<tr>
<td>Filter material</td>
<td>PP fiber (antibacterial + mildew-proof), honeycomb weave (Identification: gray yarn woven)</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Approx. 2,500 hours (varies with operating conditions)</td>
</tr>
<tr>
<td>Parts composition</td>
<td>Filter (large) 2 Filter (small) -</td>
</tr>
</tbody>
</table>

### Dimensions

**Filter (large)**

- Unit: mm
- 221 x 213 (Filter part)
- 582 x 608 (Filter part)
- Air intake

### How to Use / How to Install

1. Open the intake grille.
2. Hold the knob on the filter then pull the filter up in the direction of an arrow. To replace the filter after cleaning, be sure to insert the filter far enough until it fits into the stopper.

- A Filter  B Intake Grille  C Knob  D Stopper

---

**MITSUBISHI ELECTRIC CORPORATION**

D-99
High Efficiency Filter

Photo

Specifications
- PCA-RP125GA
- PCA-RP140GA
- PCH-P125GAH
- PCH-P140GAH

Descriptions
- High Efficiency Filter is a part that removes dust in the air.
- Dust collection efficiency: 70% (Weighing method)
- It is the best for the air-conditioning of the stove where a lot of going of the person in and out exists.

Applicable Models
- Filter material: PP fiber (antibacterial + mildew-proof), honeycomb weave (Identification: gray yarn woven)
- Maintenance: Approx. 2,500 hours (varies with operating conditions)
- Parts composition: Filter (large) 2, Filter (small) 1

Dimensions

Filter (large)

Filter (small)

How to Use / How to Install
1. Open the intake grille.
2. Hold the knob on the filter then pull the filter up in the direction of an arrow. To replace the filter after cleaning, be sure to insert the filter far enough until it fits into the stopper.

A Filter  B Intake Grille  C Knob  D Stopper
Filter Element (12 Pieces) for ceiling suspended models for professional kitchen use.

Applicable Models
- PCA-RP71HA
- PCA-RP125HA

Specifications

<table>
<thead>
<tr>
<th>Material</th>
<th>Modacrylic fiber / Polyester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Black</td>
</tr>
<tr>
<td>Temperature</td>
<td>60°C or less</td>
</tr>
<tr>
<td>Reproduction</td>
<td>Disposable (Reproduction not possible)</td>
</tr>
<tr>
<td>Packing</td>
<td>12 elements per bag</td>
</tr>
</tbody>
</table>

Note: Only the filter element must be replaced (the filter frame provided on the main body must be used)

Dimensions

Unit: mm

State of installation to filter frame

Filter Frame

Filter element suppression metal fittings (V type: 2PCS)
How to Use / How to Install

Cleaning the oil filter

1) Removing the oil filter
① Remove the filter by sliding it in the direction of an arrow.

2) Replacing the filter element
① Remove the oil filter by sliding it in the direction of an arrow.
② Remove the two metal fittings for filter element according to the following procedure. Bend the metal fittings towards ① side (Inside) and then slide them in the direction of ② to remove.
③ Replace the filter element (disposable).

Note:
Install the filter element within the frame securely.
④ Install the metal fittings for filter element in their original positions.
⑤ Turn the side of oil filter that the metal fittings are installed downward and install the filter in the unit.

3) Cleaning the frame of the oil filter

Tools to be prepared
- Protective goods such as a rubber glove
- Scrubbing brush or brush

Note:
Avoid using a metal scrubbing brush or brush since the aluminum materials could be damaged.
- Household neutral detergent or alkaliescent detergent (for washing dishes or clothes)

Note:
If alkaline detergent is used for cleaning, the part made of aluminum could discolor.

Make sure the filter element is removed when cleaning the oil filter.
① If the filter is not so dirty. (If the filter is cleaned once a week (once per 100 operating hours).) Wash the filter with water and above-mentioned detergent using a scrubbing brush or brush, etc. (It is more effective to wash the filter with lukewarm water.)
② If the filter is extremely dirty. Put the previously-mentioned detergent (its strength should be about 1/10 of undiluted solution) into hot water whose temperature is 50°C or less, and soak the filter for 1 hour or more before washing.

⚠️ Warning:
To prevent your hand from burning, start washing the filter after the hot water gets cold.
### High efficiency filter element

#### PAC-SH59KF-E

#### Photo

![Filter Element Image]

#### Descriptions

High Efficiency Filter is part that remove dust in air. PAC-SH53TM-E (multi-function casement) is required for installation.

#### Applicable Models

- PLA-RP-BA

#### Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter material</td>
<td>Electrostatic polyolefin fiber</td>
</tr>
<tr>
<td>Dust collection efficiency</td>
<td>Colorimetric method 65% (JIS 11 class)</td>
</tr>
<tr>
<td>Life</td>
<td>Approx 2,500 hours (at dust density 0.15 mg/m³)</td>
</tr>
<tr>
<td>Parts composition</td>
<td>This element x 1</td>
</tr>
<tr>
<td>*Reproduction not possible</td>
<td></td>
</tr>
</tbody>
</table>

#### Dimensions

Unit: mm

- Filter: 510 x 510
- Frame: 65 x 510
- Label (direction of air flow and model name display)
How to Use / How to Install

1 Parts check.
(The unit is provided with this manual and following parts in the box.)

<table>
<thead>
<tr>
<th>Part #</th>
<th>Name</th>
<th>Qty</th>
<th>Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High-efficiency filter element</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

NOTICE
(1) In case that the High-efficiency filter element is installed, it should be installed on the Multi-functional casement which is option. Be sure to purchase the Multi-functional casement.

2 Installation of High-efficiency filter element (same procedure for replacement)

- Remove the intake grille of the Decorative panel in advance. (See the “installation instructions of decoration panel” for details.)
- Loosen the four screws of bracket for installation of the High-efficiency filter element of the Multi-functional casement as shown right. Then, slide them outside.
- Set the High-efficiency filter element in Multi-functional casement, slide the plate inward, and then tighten the four screws securely.
- When the indoor unit is used with "2 ways" air outlet, the High-efficiency filter element is not available.
- When the High-efficiency filter element is installed, the operation noise can be larger.
- When attaching the High-efficiency filter element, check the direction of air flow, referring to the stamp on the side.

3 Air flow volume setting when High-efficiency filter element is installed

- When the High-efficiency filter element is attached for the first time, the setting for increase in airflow rate must be performed.
- This setting is necessary only when the element is newly attached: No setting is required when the filter is replaced.

<table>
<thead>
<tr>
<th>Set up for increasing air flow volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the set up is not done correctly, the air flow volume will decrease and it can lower the performance and cause dew drop.</td>
</tr>
</tbody>
</table>

1) If the indoor unit to be combined is BA series:
- Setting must be performed from the remote control: See the pages of “Function Selection” in the installation manual provided with the remote control. (Set optional assembly to “Yes”.)
2) If the indoor unit to be combined is other than above:
- Set switch “SWC” on the address board in indoor unit to the “option” side (“standard” at the factory).

4 Replacement Period

- The High-efficiency filter element is single-use (not recyclable).
- The reference for operation time is 2,500 hours (depending on the environment in which the air-conditioner is installed).

CAUTION
Do not wash with water.
- Washing with water will degrade the performance and could cause the element to become unusable.
### I-SEE sensor corner panel

#### Descriptions
- Both floor and inlet temperatures are measured to provide a comfort sensation fully in a room covering from the ceiling to the floor surfaces.
- Install the I-SEE sensor corner panel to the corner of the decorative panel (the opposite side of refrigerant piping).

#### Applicable Models
- PLA-RP-BA
- PLA-RP-BA2

#### Specifications

<table>
<thead>
<tr>
<th>Adapter wiring</th>
<th>Connect the 9-core cord with connector to the indoor controller board of the indoor unit.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exterior</td>
<td>ABS resin (Munsell No.B 4.4Y 8/0.4)</td>
</tr>
<tr>
<td>I-SEE sensor operation</td>
<td>When there is great difference between the room temperature and the set temperature, temperatures of four areas are measured once in two minutes. When the room temperature is stable, the i-see sensor rotates.</td>
</tr>
</tbody>
</table>

#### Dimensions

Unit: mm

- 196
- 196
- 296

---

MITSUBISHI ELECTRIC CORPORATION

D-105
# I-SEE sensor corner panel PAC-SA1ME-E

## How to Use / How to Install

### 1. Included parts

(This manual and following parts are included.)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I-SEE sensor corner panel</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Plastic fastener</td>
<td>2</td>
</tr>
</tbody>
</table>

### 2. Preparation before installing the decorative panel

- **Signal receiver for the remote controller of the up/down machine**
  - **Installation location for the I-SEE sensor corner panel**
  - **Installation location cannot be changed.**

**Warning**

- Turn off the main power.
- If the main power is not turned off, injury or electric shock may result.

**Removing the corner panel**

- It can only be installed at this location with corner panel.
- If the corner panel with sensor is removed, a problem may occur when installing the decorative panel.
- Remove the screw on the corner, slide the panel in the direction of the arrow (1) in the figure and remove the corner panel.

### 3. Installation of corner panels and air intake grille

- You can set the direction of the air intake grille such as grids when installing multiple units as desired. If forced to be set at other than the position shown in the figure, failure may result.

**Installation of I-SEE sensor corner panel**

Optional part: PAC-SA1ME-E
- Take CN4Y* (white) and CN5Y (red), lead wires of the I-SEE sensor corner panel ① from the side of the electric box on the unit and make sure to connect them to the connector of the control board.
- Lead wires of the I-SEE sensor corner panel ① should be fixed at the rib of the decorative panel with the plastic fastener ② so that there is no slack.
- Lead wires should be held together with the lead wires of the unit and fixed with two of the plastic fastener ② so that there is no slack.
- Put the cover back on the electric box with three screws.
- Make sure wires are not caught in the cover of electric box. If they get caught, they will be cut off.
- Adverse procedure of "Preparation before installing the decorative panel" in the Section 2 will be taken for installing the I-SEE sensor corner panels.
- The I-SEE sensor corner panel should be fixed onto the decorative panel with screw.

### 4. Verification

- For optional part PAC-SA1ME-E, check the rotating movement of the I-SEE sensor. If the I-SEE sensor does not rotate, review the procedure in "Installation of I-SEE sensor corner panel" in section 3.

After verifying all the items above, hand all the documents including this manual and the manuals for the unit and separately sold parts to the user. Be sure to explain the descriptions of cleaning the filters and how to use the air intake grille up/down function (remote controller operation) in the operation manual of the decorative panel to the user.
Air outlet shutter panel

Part to block the air outlet of a cassette-type indoor unit.

**Specifications**

<table>
<thead>
<tr>
<th>Air outlet pattern</th>
<th>Number of shutter plates</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 directions → 3 directions</td>
<td>1</td>
</tr>
<tr>
<td>4 directions → 2 directions</td>
<td>2</td>
</tr>
</tbody>
</table>

*(Change to 1 direction is not possible.)*

- **Note 1:** Selecting “2 directions” requires cleaning of the filter approximately once.
- **Note 2:** Selecting “3 directions” or “2 directions” may increase operating sound.
- **Note 3:** “2 directions” should not be selected when operating in high-temperature/high-humidity environment. (Dew formation or dewdrop may result.)

**Material**
Foamed polyethylene + Foamed urethane

**Color**
Black

**Installation method**
Glued to the air outlet of the indoor unit.

**Dimensions**

Unit: mm

- 520
- 80

Release coated paper
Adhesive fase
Formed polyethylene
Formed urethane
How to Use / How to Install

Checking for provided parts
Make sure that the parts shown on the right are in this bag, along with the instruction sheet.

Air Outlet Shutter Panel

1. Locate the Shutter Plate Installation position
   - This is a part which is used to control the number of air-outlets from "4 ways" to "3 ways" or "2 ways".
   - Select the outlet direction and decide the outlet to be closed (Indoor unit).
   - When the number of outlet is selected to "2 ways", be sure to explain to the customer that the filter should be cleaned once a month. (Otherwise, the filter will be clogged, and the performance of the cooling and heating can be lower.)
   - When the number of outlet is selected to "3 ways" or "2 ways", the operation noise can be larger.
   - Never to select "2 ways" in the environment of high temperature and high humidity, (It can cause dew.)

2. Installation of shutter plate (Fig.1)
   - Install the shutter plate to the indoor unit so that it can fit the air-outlet concave portion.
   - Install one piece of shutter plate per one air-outlet.
   - The installation should be done before the decorative panel is installed.
   - The shutter plate must be installed not to cause wrinkle or gap. (It can cause dew drops.)
   - When attaching the duct flange to the blow outlet (marked *) between the refrigerator pipe and drain pipe, cut off the shutter plate at the slip portion of release paper, and then attach it.

3. Function selection
   - When the number of air-outlet is changed, it is necessary to make function selection.
   - For the selection method, refer to the manual for installation of the indoor unit.

4. Setting of the auto vane (Fig.2)
   - It is possible to fix the auto vane of the decorative panel to the totally closed position, which is applied to the air-outlet installed on the shutter plate.
   - Once the auto vane is fixed, the operation of a remote control and all of automatic control will not be available. Also, the LCD of the remote control will not work.
Multi-functional casement

Photo

A part required installation of a high-efficiency filter element. Can also be used for introducing fresh air from outdoor.

Applicable Models

- PLA-RP-BA

Specifications

<table>
<thead>
<tr>
<th>Connected duct diameter (mm)</th>
<th>Fresh air intake</th>
<th>Number of intakes</th>
<th>Any 2 corners or less (among four corners)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Input volume</td>
<td></td>
<td>20% or less of indoor units air volume</td>
</tr>
<tr>
<td></td>
<td>High-performance filter element</td>
<td></td>
<td>Colorimetric method (65%)</td>
</tr>
</tbody>
</table>

Dimensions

Unit : mm

See from the panel side

Installation dimension

Note that the space between ceiling surface of the unit and ceiling slab, etc. must be 10 to 15mm.
How to Use / How to Install

1 Parts check. (The unit is provided with this manual and following parts in the box.)

MULTI-FUNCTIONAL CASEMENT

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Name</th>
<th>Qty</th>
<th>Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Multi-functional casement</td>
<td>1</td>
<td><img src="image" alt="Multi-functional Casement" /></td>
</tr>
<tr>
<td>2</td>
<td>Screw with washer (black)</td>
<td>4</td>
<td><img src="image" alt="Screw with washer" /></td>
</tr>
<tr>
<td>3</td>
<td>Screw</td>
<td>8</td>
<td><img src="image" alt="Screw" /></td>
</tr>
<tr>
<td>4</td>
<td>Decorative panel securing bracket</td>
<td>4</td>
<td><img src="image" alt="Decorative panel securing bracket" /></td>
</tr>
<tr>
<td>5</td>
<td>Insulator A for Decorative panel</td>
<td>1</td>
<td><img src="image" alt="Insulator A" /></td>
</tr>
<tr>
<td>6</td>
<td>Insulator B for Decorative panel</td>
<td>1</td>
<td><img src="image" alt="Insulator B" /></td>
</tr>
</tbody>
</table>

NOTICE

(1) When taking in external air, use the PAC-SH65OF-E duct flange (optional) and duct (to be procured at local site).
   ※ It is available of fresh-air intake even when the High-efficiency filter element is installed.
(2) Follow the procedure in this manual for installation of the Multi-functional casement ①.
   Otherwise, it is possible that installation of refrigerant tubes, drain tubes, and electrical wiring will not be available.

2 Installation of Indoor unit.

● Follow the description in the installation manual which is attached to the indoor unit.

3 Installation of Multi-functional casement.

Preparation before installation

● If it is necessary to change the number of air outlet, the optional parts Air Outlet Shutter Plate should be installed on the indoor unit.
   Therefore, the installation should be done before the Multi-functional casement ① is installed on the indoor unit.

● The Multi-functional casement ① has four knockout on each side so that the air can be taken from any of four sides.
   Select any one or two sides in advance and make knockout holes on the Multi-functional casement ①.

Knockout hole position for fresh-air intake.

Making knockout holes

Remove the plate with heat insulating material

Φ100mm (Φ3-15/16in.)

● Be sure to use the PAC-SH65OF-E (optional) for duct flange.
3 Installation of Multi-functional casement.

Wiring indoor unit

- Be sure to do the wiring (indoor/outdoor connection cables, remote control cable, etc.) before attaching the Multi-functional casement.
  ※ Wiring after attaching the Multi-functional casement will be difficult.

Hand tightening

- Be sure to use two persons for this work.
- Fix the two screw with washer (black) ② to each position. (drain tube corner position and to its opposite angle).
- Hook the hole of the Multi-functional casement ① to the screw with washer (black) ② and hand tight.

Fixing

- Temporarily secure the two screws with washers ②, and also the other two screws with washers ②, and then tighten these screws with washers ② after making sure that the position of Multi-functional casement ① is correct.

⚠️ Caution

- Temporarily secure the four screws with washers.
- Tightening the screws without temporarily securing them could damage the screws with washers, or cause air leak.

Attaching bracket for securing decorative panel

- Use eight screws ③ to secure the four brackets for securing decorative panel ④ to each corner of Multi-functional casement ①. (See the figure below.)

Height adjustment

- It is recommended to make this adjustment before installation of duct when fresh air intake.
- Readjust the height of the Multi-functional casement ① with the gauge which is attached to the decorative panel as shown right.

The gap must be in a range from 17mm(11/16in.) to 22mm(7/8in.). If out of range, it can cause malfunction.
4 Installation of duct (in case of fresh air intake)

Installation of duct flange

- Install the optional duct flange referring to the installation manual provided with it.

Caution

Linkage of duct fan and air conditioner

- In case that a duct fan is used, be sure to make it linked with the air conditioner when outside air is taken. Do not run the duct fan only. It can cause dew drop.

![Diagram of installation of duct flange]

Installation of duct (should be prepared locally)

- Prepare a duct of which inner diameter fits into the outer diameter of the duct flange.
- In case that the environment above the ceiling is high temperature and high humidity, wrap the duct in a heat insulator to avoid causing dew drop on the wall.

5 Installation of Decorative panel

Preparation for installation

- Paste insulator A ⑤ and insulator B ⑥ on the Decorative panel as shown in the figure. See the installation manual provided with the Decorative panel for how to remove the corner panel, etc.

Caution

Paste insulators on Decorative panel.

- Be sure to paste on insulators A and B: Operation without pasting the insulators could cause dribbling of water.

![Diagram of installation of Decorative panel]

- Indoor unit refrigerant pipe
- Insulator A for Decorative panel
- Drain socket portion
- Paste insulator A ⑤ for Decorative panel overlapping over the pasted insulator.
- ⑤Insulator A for Decorative panel
- Drain socket portion
- Paste insulator A ⑤ for Decorative panel overlapping over the pasted insulator.
- Indoor unit refrigerant pipe
- Insulator B for Decorative panel
- ⑥Insulator B for Decorative panel
5 Installation of Decorative panel

Attaching Decorative panel

- Attach the Decorative panel, referring to the installation manual provided with the Decorative panel.
- Be sure to align the drain socket of Decorative panel with the drain pipe of indoor unit for attachment: Improper attachment could cause dripping of water.

- Connect the leads of Decorative panel and optional Signal receiver to the indoor unit through the bush of Multi-functional casement.
Part to attach duct to take in fresh air from outdoors.

**Applicable Models**
- PLA-RP•BA
- PLA-RP•BA2

**Specifications**

<table>
<thead>
<tr>
<th>Connection duct diameter (mm)</th>
<th>200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>Hot-dip zinc-coated carbon steel sheet (t0.8)</td>
</tr>
<tr>
<td>Accessory</td>
<td>Insulator, Fixing screw (ST4x10)x3</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm
How to Use / How to Install

1. Checking Parts
   (This box contains the instruction sheet and the following parts)

<table>
<thead>
<tr>
<th>Part</th>
<th>Qty</th>
<th>Duct flange</th>
<th>Insulator</th>
<th>Screws (M4×10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duct flange</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insulator</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screws (M4×10)</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Attaching Duct Flange for External Air Input

1) Punch an opening for the duct flange.
   <When attaching to indoor unit>
   • Cut the slit of the #100 cut-out hole to which the duct flange is to be attached.
   • Cut out enough internal polystyrene foam to match the #100 hole. (Remove the cut powder completely: Neglecting this could cause a fault.)

   <When attaching to multi-functional casement>
   • Remove the #100 knockout hole to which the duct flange is to be attached.
   2) Paste insulator ② on the duct flange ① (see the figure on the right).
   3) Use three screws ③ to attach duct flange ① (see the figure below).

   ※ When attaching to the indoor unit, be sure to remove the insulator that is pasted on the location of indoor unit (shown in the figure below).
   ※ When attaching to multi-functional casement, be sure to set the concave portion of duct flange ① toward the panel attachment surface when attaching it. (If the duct flange is attached to a location other than the specified one, the decoration panel cannot be attached.)

   When attaching to indoor unit

   Refrigerant pipe portion
   Drain pipe portion

   Indoor unit

   Insulator to be removed
   Duct flange attachment portion

   When attaching to multi-functional casement

   Panel surface to which flange is attached

   Arrow views (4 portions) Duct flange attachment portions

   Panel surface to which flange is attached

   Set the concave portion (panel set screw escape section) toward the panel surface to which flange is attached.

   Screws ③
Duct Flange for Fresh Air

Part to attach a duct to take in fresh air from outdoors.

Applicable Models
- PCA-RP71HA
- PCA-RP125HA

Specifications
- Connecting duct diameter (mm): 200
- Material: Hot-dip zinc-coated carbon steel sheet (0.8)
- Accessory: Fixing screw (ST4x10) x 4

Dimensions
Unit: mm

How to Use / How to Install

1. Checking Provided Parts
   ※Make sure that you have all the following parts before installation:

2. Duct Flange Installation Procedure
   1. Punch out the knockout opening for installing duct on indoor unit.
   2. Use the provided tapping screws ② to secure duct flange ①.

3. Duct Installation Procedure
   1. Securely fix the duct (with inner diameter 200 mm) procured at local site to the duct flange, using screws or band.
Space panel

Descriptions

Enables to install cassette-type indoor units even if the ceiling height is low.
A part to the panel 40 millimeters lower than the ceiling surface.

Applicable Models

- PLA-RP-BA
- PLA-RP-BA2

Specifications

<table>
<thead>
<tr>
<th>Exterior</th>
<th>Color (Mansell No.)</th>
<th>Pure White (6.4Y 8.9/0.4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface treatment</td>
<td>Coating</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>Styrofoam</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions

Unit : mm

Installation dimension

Ceiling hole 860×860~910×910 (840)

Indoor unit lower side

30

Decorative panel 950

Space panel 977

Indoor unit

230

Ceiling surface

30
How to Use / How to Install

1. Checking packed parts

Make sure that you have all the following parts, in addition to this manual in this box:

<table>
<thead>
<tr>
<th>Part No. / Part name</th>
<th>① Space panel</th>
<th>② Gauge for installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td>2</td>
<td>1 (Split this into four pieces)</td>
</tr>
<tr>
<td>Shape</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Installing space panel

● Install before installing decorative panel.
● This space panel is to be installed on decorative panel before installing on unit body.
  (If decorative panel has already been installed, remove it.)

**Preparation for installation**

1. Checking size of opening in ceiling
   ● Make sure that opening in ceiling is within the range shown below:
     860 x 860 ~ 910 x 910

2. Positioning of ceiling surface and unit body
   ● Divide the provided gauge for installation ② into four parts, and insert it into the unit or outlet of Multi-functional casement.
   Place the unit in the center of opening in ceiling, referring to the figure below.

● Using provided gauge for installation ②, position the ceiling surface and unit body.
If position of ceiling surface and unit body does not match, it may result in leak of draft, drip of dewdrops and incorrect operation of horizontal vane of decorative panel, etc.

**Setting the decorative panel and space panel**

● Place the space panel ① (two locations), matching the flange section of decorative panel, and assemble space panel ① on the decorative panel and then set them.
   ※ Be sure to assemble space panel ① on the decorative panel:
   If assembled incorrectly, space panel ① may break.

**Installing on the unit body**

● The procedures are the same as those for decorative panel.
Install the assembled set, referring to the installation manual for decorative panel.
Quick Clean Kit can be easily connected to a household vacuum cleaner for quick, convenient cleaning of the units*.

* It is highly recommended to wear rubber gloves when cleaning the heat exchanger. Touching the heat exchanger with the bare hands can cause injury.

### Applicable Models
- MSZ-FA25VA
- MSZ-GC25VA
- MSZ-FA35VA
- MSZ-GC35VA
- MSZ-GA25VA
- MSZ-GA35VA
- MSZ-GA22VA
- MSZ-GB50VA
- MSZ-GA35VA
- MSZ-FD35VA
- MSZ-CA25VB
- MSZ-FD50VA
- MSZ-CA35VB
- MSZ-FD25VAS
- MSZ-GC22VA
- MSZ-FD50VAS

---

### Specifications

<table>
<thead>
<tr>
<th>Material</th>
<th>HEAD ASSY: ABS + nylon</th>
<th>HEAD-2 ASSY: ABS + Plasticized PVC + nylon</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HOSE ASSY: ABS + PE</td>
<td>HOSE ASSY: ABS</td>
</tr>
<tr>
<td>Color</td>
<td>HEAD ASSY: gray + black</td>
<td>HEAD-2 ASSY: gray + black</td>
</tr>
<tr>
<td></td>
<td>HOSE ASSY: gray</td>
<td>HOSE ASSY: gray</td>
</tr>
</tbody>
</table>

### Dimensions

Unit: mm

![Diagram](image-url)
How to Use / How to Install

CLEANING USES

- Front panel access models
  The heat exchanger can be cleaned.

- Quick-clean models
  Example: Access to the fan is possible.
  The fan can be cleaned.

CLEANING METHODS

Only available for the hose diameter of vacuum cleaner: 32 - 39 mm (inside diameter).

1. Before cleaning
Before cleaning the air conditioner, switch it off and turn off the breaker and/or remove the power supply plug to ensure safety.

2. Connection with a vacuum cleaner
- Insert the end of the connection hose into one of the special-made brushes.
  Use the special-made brush (large) for overall cleaning and use the special-made brush (small) to access narrow spaces.
- While twisting the connection hose, insert it securely into the vacuum cleaner tube.
  Use the universal adapter if necessary.

3. Cleaning of the heat exchanger
- Let the heat exchanger dry completely before cleaning it.
  (If the heat exchanger is wet, you may not be able to vacuum up the dust.)
- Open the front panel and remove the air filter to expose the heat exchanger.
  Do not touch the heat exchanger directly with your bare hands; injury may result. Wear a pair of gloves to protect your hands.
- Clean the heat exchanger vertically, moving the brush along the fins of the heat exchanger. (The heat exchanger may be damaged if it is cleaned horizontally.)
  Use the special-made brush (small) to clean the hard to reach, narrow spaces such as the top and bottom of the heat exchanger.

4. Cleaning of the fan
- Remove the horizontal vane and swing out the vertical vane. Clean the fan horizontally, moving the brush along the blades of the fan.
  (Please refer to the operating instructions about the way to remove the horizontal vane and swing out the vertical vane.)

**CAUTION:**
- Some vacuum cleaners are equipped for overload protection devices, which might work if the airflow thought the vacuum cleaner hose is restricted. In that case, use them at the low power setting.
- If the special-made brushes become dirty, wash them with water and let them dry completely out of direct sunlight.
- When cleaning the air conditioner, do not stand on an unstable bench or chair. This may cause an injury, etc., if you fall down.
- Please refer to the operating instructions of the air conditioner for more details.
This connection pipe is used when refrigerant pipe (gas pipe) is to be drawn out to the left, the left rear, the right, or the right rear on the wall type indoor unit.

### Descriptions

**L-shape Connection Pipe**

**PAC-SC84PI-E**

**Photo**

**Descriptions**

**Applicable Models**

- PKA-RP50FAL2
- PKA-RP60FAL
- PKA-RP71FAL

**Specifications**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipe diameter (mm)</td>
<td>Ø15.88</td>
</tr>
<tr>
<td>Number of pipes</td>
<td>1 (for gas)</td>
</tr>
<tr>
<td>Pipe material</td>
<td>Phosphate deoxidized copper C1220T-OL (JIS H3300)</td>
</tr>
<tr>
<td>Heat insulator</td>
<td>EPT sponge rubber</td>
</tr>
</tbody>
</table>

**Dimensions**

**Size**

- Onsite piping side
  - Ø 15.88

**Refrigerant pipe (gas pipe) position**

- Left/left rear direction
  - 1004
  - (396)

- Right/right rear direction
  - 284

- Bottom direction
  - 262

---

**MITSUBISHI ELECTRIC CORPORATION**

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**OPTIONAL PARTS**
How to Use / How to Install

- This connection pipe is used when refrigerant pipe (gas pipe) is to be drawn out to the left, the left rear, the right, or the right rear on the wall type indoor unit.

1. Make sure that you have all the following parts, in addition to this manual in this box:

<table>
<thead>
<tr>
<th>1. Connection pipe (gas pipe)</th>
<th>2. Pipe cover</th>
<th>3. Band</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAC-SC84PI-E ( \bar { \phi } ) 15.88</td>
<td>( \bar { \phi } ) 15.88</td>
<td>( \bar { \phi } ) 19.05</td>
</tr>
</tbody>
</table>

2. Installation method
   - **Connection side to onsite pipe**
     1. Remove flare nut and cap of connection pipe ①.
     2. Apply flare processing to onsite pipe and apply refrigerant oil (locally supplied) to flare sheet surface.
     3. Connect flare connection part of connection pipe to onsite pipe. ※ Be sure to use double spanner to tighten flare nut.
     4. Wrap pipe cover (2) around flare connection part so that it is not exposed.
     5. Tighten both ends (15〜20mm) of pipe cover using provided band ③.

   - **Connection to the indoor unit (refer to installation manual of indoor unit.)**
     1. Remove flare nut and cap of indoor unit.
     2. Apply refrigerant oil (locally supplied) to flare sheet surface.
     3. Quickly connection pipe to flare connection part of indoor unit. ※ Be sure to use double spanner to tighten flare nut.
     4. Wrap pipe cover around flare connection part of indoor unit so that it is not exposed.
     5. Tighten both ends (15〜20mm) of pipe cover using provided band (large).

When pipe is housed in piping space of the unit (drawn out to the left/left rear):
※ To prevent drip of dewdrops, wrap felt tape around the pipe in the area where it is housed inside the piping space of the unit.
※ Overlap of felt tape must be within 1/2 of tape width.
※ Secure the end of wrapped tape using bandage clip, etc.

Pipe cover provided attached to indoor unit
Band (large) attached to indoor unit
Connection pipe ①
Pipe cover ②
※ Tighten using two bands ③. (Apply heat insulation processing to flare connection part.)
This connection pipe is used when refrigerant pipe (gas pipe) is to be drawn out to the left, the left rear, the right, or the right rear on the wall type indoor unit.

### Applicable Models
- PKA-RP100FAL
  for R410A Inverter use

### Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipe diameter (mm)</td>
<td>φ15.88</td>
</tr>
<tr>
<td>Number of pipes</td>
<td>1 (for gas)</td>
</tr>
<tr>
<td>Pipe material</td>
<td>Phosphate deoxidized copper C1220T-OL (JIS H3300)</td>
</tr>
<tr>
<td>Heat insulator</td>
<td>EPT sponge rubber</td>
</tr>
</tbody>
</table>

### Dimensions

**Size**

Onsite piping side

- φ 15.88

Refrigerant pipe (gas pipe) position

- **Left/left rear direction**
  - 1284 mm
  - (396 mm)

- **Right/right rear direction**
  - 284 mm

- **Bottom direction**
  - 25 mm
How to Use / How to Install

• This connection pipe is used when refrigerant pipe (gas pipe) is to be drawn out to the left, the left rear, the right, or the right rear on the wall type indoor unit.

1. Make sure that you have all the following parts, in addition to this manual in this box:

<table>
<thead>
<tr>
<th></th>
<th>Part Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Connection pipe (gas pipe)</td>
<td>PAC-SC84PI-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ø 15.88</td>
</tr>
<tr>
<td>2</td>
<td>Pipe cover</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Band</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>PAC-SC86PI-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ø 15.88</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>PAC-SC85PI-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ø 19.05</td>
</tr>
</tbody>
</table>

2. Installation method

• Connection side to onsite pipe
  1. Remove flare nut and cap of connection pipe ①.
  2. Apply flare processing to onsite pipe and apply refrigerant oil (locally supplied) to flare sheet surface.
  3. Connect flare connection part of connection pipe to onsite pipe. ※ Be sure to use double spanner to tighten flare nut.
  4. Wrap pipe cover (2) around flare connection part so that it is not exposed.
  5. Tighten both ends (15〜20mm) of pipe cover using provided band ③.
     Apply refrigerant oil to entire circumference of flare sheet surface.

• Connection to the indoor unit (refer to installation manual of indoor unit.)
  1. Remove flare nut and cap of indoor unit.
  2. Apply refrigerant oil (locally supplied) to flare sheet surface.
  3. Quickly connection pipe to flare connection part of indoor unit. ※ Be sure to use double spanner to tighten flare nut.
  4. Wrap pipe cover around flare connection part of indoor unit so that it is not exposed.
  5. Tighten both ends (15〜20mm) of pipe cover using provided band (large).

When pipe is housed in piping space of the unit (drawn out to the left/left rear):

※ To prevent drip of dewdrops, wrap felt tape around the pipe in the area where it is housed inside the piping space of the unit.
※ Overlap of felt tape must be within 1/2 of tape width.
※ Secure the end of wrapped tape using bandage clip, etc.
Drain Pump for Ceiling Concealed models PAC-KE03DM-F*

Model change to PAC-KE03DM-G

Photo

Descriptions

 Raises drain generated during unit's operation to secure the appropriate angle of the drain pipe.

Applicable Models

- PEAD-RP EAx
- PEAD-RP GA
- PEHD-P EA
- PEHD-P EAH

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>200-240V 50Hz / 220V 60Hz</td>
</tr>
<tr>
<td>Power consumption</td>
<td>8.75W</td>
</tr>
<tr>
<td>Open current</td>
<td>0.08 / 0.075A</td>
</tr>
<tr>
<td>Discharge lift</td>
<td>Max. 550mm from indoor unit's top surface</td>
</tr>
</tbody>
</table>

Dimensions Unit: mm

In case of rear inlet

- Keep duct-work length 850mm or more.
- Be sure to apply the air filter near the air inlet grille.

- Refrigerant piping flare connection (liquid Φ F copper tube): HP
- Refrigerant piping flare connection (gas Φ G copper tube): LP
- Drain R1 (External thread)
- Electrical parts box
- Drain Pump (Option)
- Drain Pipe (Option) ... Flexible joint VP-25 (I.D. Φ 32) Set
- Filter
**Photo**

**Descriptions**

Raises drain generated during unit’s operation to secure the appropriate angle of the drain pipe.

**Applicable Models**

- PEAD-RP EA
- PEAD-RP EA2
- PEAD-RP GA
- PEHD-P EA
- PEHD-P EAH

**Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>200-240V 50Hz / 220V 60Hz</td>
</tr>
<tr>
<td>Power consumption</td>
<td>8.75W</td>
</tr>
<tr>
<td>Open current</td>
<td>0.08 / 0.075A</td>
</tr>
<tr>
<td>Discharge lift</td>
<td>Max. 550mm from indoor unit’s top surface</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

In case of rear inlet:

- Be sure to apply the air filter near the air inlet grille.
- Keep duct-work length 850mm or more.

**Refrigerant piping flare connection (liquid Φ F copper tube): HP**

**Refrigerant piping flare connection (gas Φ G copper tube): LP**

**Drain R1 (External thread)**

**Electrical parts box**

**Drain Pump (Option)**

**Drain Pipe (Option) ... Flexible joint VP-25 (I.D. Φ 32)**

Set

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MITSUBISHI ELECTRIC CORPORATION
Safety Precautions

Before beginning installation, please read and understand these "Safety Precautions."
The following system is used to stress the importance of the safety-related item. Always read and follow them.

⚠️ WARNING
There is a high potential that an error in handling could result in serious injury or death.

⚠️ CAUTION
There is the potential that an error in handling could result in serious injury corresponding to a condition.

After reading this manual, pass it on to others who will be using the equipment.
Those who will be operating the equipment should store this manual in a safe place where it is easily accessible for reference. This manual should also be provided to anyone moving or repairing the equipment.

⚠️ 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.

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

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

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

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

<table>
<thead>
<tr>
<th>CAUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Never use for special applications such as storing food, plants, precision equipment or art.</strong></td>
</tr>
<tr>
<td>• The quality of these items may deteriorate.</td>
</tr>
<tr>
<td><strong>Never use the unit in special environments.</strong></td>
</tr>
<tr>
<td>• Special environments with high concentrations of oil, steam or sulphuric gases will reduce the performance of the air conditioning unit and cause its parts to deteriorate.</td>
</tr>
<tr>
<td><strong>Always provide adequate signal noise protection when installing in facilities such as hospitals and communication stations.</strong></td>
</tr>
<tr>
<td>• 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 to patients or cause disturbances or interference in video broadcasting equipment.</td>
</tr>
<tr>
<td><strong>Never install the unit where run-off could result in damage.</strong></td>
</tr>
<tr>
<td>• 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 and drain for the outdoor unit.</td>
</tr>
</tbody>
</table>

## PRECAUTIONS BEFORE REMOVAL AND ELECTRIC WORK

<table>
<thead>
<tr>
<th>CAUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Route wiring so that there is no tension.</strong></td>
</tr>
<tr>
<td>• Tension could cause the wire to break and this could result in excessive heat or fire.</td>
</tr>
<tr>
<td><strong>Dispose of packing materials properly.</strong></td>
</tr>
<tr>
<td><strong>Use care when transporting the unit.</strong></td>
</tr>
<tr>
<td>• Always use two or more people for lifting a product weighing 20 kg. or more.</td>
</tr>
<tr>
<td>• Some products are packaged with plastic wrapping bands. Never use these for lifting or transporting the product.</td>
</tr>
<tr>
<td>• Never touch the fins on the heat exchanger. They are sharp and could cause cuts.</td>
</tr>
<tr>
<td>• 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.</td>
</tr>
</tbody>
</table>

## PRECAUTIONS BEFORE TEST RUN

<table>
<thead>
<tr>
<th>CAUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Never touch the switch with wet hands.</strong></td>
</tr>
<tr>
<td>• Electric shock could occur.</td>
</tr>
<tr>
<td><strong>Never operate the air conditioner with the air filter removed.</strong></td>
</tr>
<tr>
<td>• Particles will enter into the air conditioner and cause damage.</td>
</tr>
<tr>
<td><strong>Never operate the air conditioner with the panel or guard removed.</strong></td>
</tr>
<tr>
<td>• Due to the high risk of personnel injury through contact with electrical, rotating and high temperature components.</td>
</tr>
<tr>
<td><strong>Never turn off the power supply immediately after stopping the unit.</strong></td>
</tr>
<tr>
<td>• 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.</td>
</tr>
</tbody>
</table>
# Model name

<table>
<thead>
<tr>
<th>Model grouping</th>
<th>Control class</th>
<th>Performance type</th>
<th>Target models</th>
</tr>
</thead>
<tbody>
<tr>
<td>group A1</td>
<td>M-NET, A control model</td>
<td>20~80</td>
<td>PEFY-P20VMM-E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PEFY-P25VMM-E</td>
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<td>PEFY-P32VMM-E</td>
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<td>PEFY-P40VMM-E</td>
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<td>PEFY-P50VMM-E</td>
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<td></td>
<td>PEFY-P63VMM-E</td>
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<td>PEFY-P71VMM-E</td>
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<td></td>
<td>PEFY-P80VMM-E</td>
</tr>
<tr>
<td>group A2</td>
<td>M-NET, A control model</td>
<td>100~140</td>
<td>PEFY-P100VMM-E</td>
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<td>PEFY-P125VMM-E</td>
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<td>PEFY-P140VMM-E</td>
</tr>
<tr>
<td>group B1</td>
<td>New A control model</td>
<td>20~71</td>
<td>PEAD-RP35EA,</td>
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<td></td>
<td></td>
<td></td>
<td>PEHD-P35EAH</td>
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<td>PEAD-RP35EA2</td>
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<td>PEAD-RP71EA,</td>
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<td></td>
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<td></td>
<td>PEHD-P71EA</td>
</tr>
<tr>
<td>group B2</td>
<td>New A control model</td>
<td>100~140</td>
<td>PEAD-RP100EA,</td>
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<td>PEHD-P100EAH</td>
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<td></td>
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</tr>
<tr>
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</table>

## Provided Parts

In addition to this Installation Manual, the following parts are provided with the accessory. Please check that all of the parts are available.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>① DRAIN PUMP ASSY.</th>
<th>② PUMP COVER ASSY.</th>
<th>③ DRAIN PAN COVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHAPE</td>
<td><img src="image" alt="" /></td>
<td><img src="image" alt="" /></td>
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<tr>
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<table>
<thead>
<tr>
<th>Target models</th>
<th>group A1</th>
<th>group A2</th>
<th>group B1</th>
<th>group B2</th>
</tr>
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<tbody>
<tr>
<td>group A1</td>
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<td>O</td>
<td>O</td>
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<tr>
<td>group A2</td>
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<td>O</td>
<td>O</td>
<td>O</td>
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<tr>
<td>group B1</td>
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<td>O</td>
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<tr>
<td>group B2</td>
<td>O</td>
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</table>
## Drain Pump for Ceiling Concealed models  PAC-KE03DM-G

<table>
<thead>
<tr>
<th>ITEM</th>
<th>① DRAIN PAN COVER</th>
<th>② RUBBER PLUG</th>
<th>③ INSULATION PIPE</th>
<th>④ DRAIN HOSE SET</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHAPE</td>
<td><img src="image" alt="DRAIN PAN COVER" /></td>
<td><img src="image" alt="RUBBER PLUG" /></td>
<td><img src="image" alt="INSULATION PIPE" /></td>
<td><img src="image" alt="DRAIN HOSE SET" /></td>
</tr>
<tr>
<td>Q'TY</td>
<td>1</td>
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<td>1</td>
</tr>
<tr>
<td>group A1</td>
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<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>group A2</td>
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<td>○</td>
<td>○</td>
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<tr>
<td>group B1</td>
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<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>group B2</td>
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### Lead Wire

<table>
<thead>
<tr>
<th>ITEM</th>
<th>⑤ LEAD WIRE(PUMP)</th>
<th>⑥ LEAD WIRE(SENSOR)</th>
<th>⑦ LEAD WIRE(SENSOR)</th>
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<tbody>
<tr>
<td>SHAPE</td>
<td><img src="image" alt="LEAD WIRE(PUMP)" /></td>
<td><img src="image" alt="LEAD WIRE(SENSOR)" /></td>
<td><img src="image" alt="LEAD WIRE(SENSOR)" /></td>
</tr>
<tr>
<td>Q'TY</td>
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<td>1</td>
<td>1</td>
</tr>
<tr>
<td>group A1</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>group A2</td>
<td>○</td>
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<td>○</td>
</tr>
<tr>
<td>group B1</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>group B2</td>
<td>○</td>
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</tbody>
</table>

### Band and PTT Screw

<table>
<thead>
<tr>
<th>ITEM</th>
<th>⑧ BAND</th>
<th>⑨ PTT SCREW 4X10</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHAPE</td>
<td><img src="image" alt="Band" /></td>
<td><img src="image" alt="PTT Screw 4X10" /></td>
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<tr>
<td>Q'TY</td>
<td>3</td>
<td>8+1(RESERVE)</td>
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<td>○</td>
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</tr>
<tr>
<td>group A2</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>group B1</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>group B2</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
3 Drain piping

(1) The drain piping should be set so that it has a gradient of more than 1/100 from the discharge side. Use care in routing the pipe so that no traps or rises are formed in the layout. (Please refer to Fig. 3-1)

(2) The drain should not extend for more than 20 meters laterally (not including the difference between low and high points). In addition, if the drain piping is long, make sure to use support brackets along the way to eliminate dipping in the piping. Don’t connect to air leakage pipe. There are times when the water will spurt out of the drain.

(3) Use hard vinyl piping for the drain piping. (This is the common VP-25 type with an external diameter of ø32.) Always use a vinyl-based adhesive at all joints to prevent leakage.

(4) If there is a collector pipe, as shown in Fig. 3-2, position the collector pipe 10 cm lower than the drain port of this unit. In addition, make sure the collector pipe has a gradient of more than 1/100.

(5) Do not install a vapor trap (odor lock) at the discharge port of the drain piping.

(6) Carefully position the discharge port of the drain pipe so that there will be no possibility of odors being created.

(7) Do not insert the drain pipe into a sewer (soil) pipe.

(8) The mounting port for the drain pipe can be up to 500 mm higher than the lower surface of the indoor unit. If there is some obstruction in the ceiling, carefully route the drain pipe around it with minimal rise. (Refer to Fig. 3-3)

(9) Always use the drain hose for the indoor unit that has been provided. Do not apply unreasonable force to the drain hose.

Caution: Keep the rise in the drain pipe to an absolute minimum. If there is a long rise, water will flow back when the power is turned off. If the unit is left off for a season, fungus and algae could develop and cause odors.

(10) Always use insulation on the drain pipe.

⚠️ CAUTION

Route the drain piping so that it ensures proper drainage. Ensure that there is enough warmth to prevent dewing. Improper piping insulation can result in water leakage which could damage the area where the unit has been installed.
4 Confirm Drainage

Confirm that the DRAIN-UP system is operating properly in both heating and cooling cycles and that drainage is being performed correctly. Also check during operation that there is no water leaking from any of the joints.

* If the unit is being installed in a new site, it is best to do the installation before the ceiling is built.

(1) Use a water feed pump or other method to pour some water into the drain pan. When doing this, make sure that no water spills from the drain pan. Also use care not to splash water on the drain pump or drain sensor at this time.

(2) Turn on the power for the indoor unit. Use the remote controller to select "Test Operation" mode. (Refer to the Installation Manual provided with the indoor unit for details.) Press the "Change Operation" button and set the unit to "Cooling." Confirm that drainage is taking place by looking at the clear hose.

(3) After confirmation has been made, turn off the power. If it's during the heating season, remove the Rubber plug and allow the water to drain out. Be sure to replace the plug once the water has been drained out.

Please double check the installation.
1 Installing the Drain Pump

The Drain Pump must be fitted before installing the indoor unit.

1. Removing the Drain pan

(1) Remove the screw that fixes the drain pan.
(2) Slide the drain pan in the direction (a), and unhook the drain pan catch near the drain pipe.
(3) Slide the drain pan in the direction (b), and unhook the drain pan catch on the other side.
(4) Remove the 2 screws that fix the drain pan cover, and remove it.

2. Installing the Drain pump

(1) Use five PTT Screws to fit the Drain pump assy.
(2) Use two PTT Screws to fit the Pump cover assy.
(3) Use one PTT Screw to fit the Drain pan cover.

<Caution> At this time, install drain pan cover onto P20 to 80 models, and drain pan cover on P100 to 140 models.
(4) Install the drain hose set onto the drain socket. Insert the drain hose into the socket, and fix with the hose band. After connecting the drain pipe, insulate with insulation pipe. (Fix with the enclosed band.)

3. Plug the original drain port with the Rubber plug.

(1) Put insulation pipe round the drain pipe to prevent dewing.
(2) Plug the original drain port with Rubber plug.
(3) Tie Rubber plug securely on the drain port by Band in order to prevent leakage.
2 Wiring

(1) Wiring connection

<table>
<thead>
<tr>
<th>For group A1, A2</th>
<th>For group B1, B2</th>
<th>Ground Wire Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Diagram" /></td>
<td><img src="image2.png" alt="Diagram" /></td>
<td><img src="image3.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

Connect the drain sensor connector to CN31. Connect the drain pump to CNP with lead wire ③.

Screw the ground wire to the ground screw together with the ground wire on the unit.

(2) Once the wiring has been completed, use Band ① to bundle the excess wiring. Make sure that the lead connectors do not come in contact with the edge sections of the sheet metal.

Fasten the pump wire and the wire from the unit to the control box using the cable clamp on the control box.

Do not put the excess pump wire in the drain pan. Bundle excess wire outside of the drain pan.
Drain Pump for Wall Mounted models

PAC-SE90DM-E

Photo

Descriptions

Raising drain generated during unit's operation to secure the appropriate angle of the drain pipe.

Applicable Models

- PKA-RP60FAL
- PKA-RP71FAL
- PKA-RP100FAL
- PKH-P60FALH
- PKH-P71FALH
- PKH-P100FALH

Specifications

- Rated voltage: 200-240V 50Hz / 220V 60Hz
- Power consumption: 1.7 / 1.5W
- Open current: 0.17 / 0.15A
- Discharge lift: Max. 460mm from indoor unit's top surface
- Discharge rate: 24/h or higher (when operated with lift 800mm and water level 13mm)
- External dimensions (mm): 300 (H) x 300 (W) x 184 (D)
- Exterior: Cover: ABS resin (Munsell 3.2Y 8.3/1.0)
- Operating conditions:
  - Drain water temperature: 0 to 50°C (no freezing)
  - Ambient temperature: 10 to 50°C
  - Ambient humidity: 95%RH or less
- Driving motor: Single, shading type (Class E insulation)
- Drain piping: Connected to drain outlet. PVC pipe VP-20 (ED:Φ 26) can be used

Dimensions

- Unit: mm

- Knock out hole for piping
- Flexible drain tube (VP20) port (female)
- Refrigerant pipe (Two pipes can be raised together)
- Hole for Indoor unit piping

- Required space for installation of Drain Up Mecha (Maintenance space)
  *In case that there is a rim at the corner of ceiling, consider the dimension of the rim before installation.

| Models | A | Rate
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5, 3 / 60, 71</td>
<td>1400</td>
<td>0.17A</td>
</tr>
<tr>
<td>4 / 100</td>
<td>1680</td>
<td>0.15A</td>
</tr>
</tbody>
</table>

- 2 φ 12 dia. hole
- 5 φ 5 dia. hole
- Paper pattern

- Dimension of Mounting plate

- Indoor unit
  - Tube band position

- Outdoor unit

- Drain Up Mecha
  - Flush the bottom line to the indoor unit.
## How to Use / How to Install

### 1. Before installation of the Drain Pump (※Position the indoor unit first.)

#### 1-1 Set up of the Drain Up Mecha

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover</td>
<td>Screws (4 pcs), Mounting plate, Screws (4 pcs), Drain Up Mecha</td>
</tr>
<tr>
<td>Screws (4 pcs)</td>
<td></td>
</tr>
<tr>
<td>Mounting plate</td>
<td></td>
</tr>
<tr>
<td>Pull tight (F)</td>
<td></td>
</tr>
</tbody>
</table>

※The screws removed will be used later. Keep them not to lose.

#### 1-2 Set up and installation of the indoor unit (※See the item of piping connection set up in the installation manual of the indoor unit.)

1. Make the knock out hole for left side piping on the left side panel.

2. Remove the drain hose (will not be used) of the indoor unit and replace the drain rubber cap from left side to right side.

3. Connect the drain tube(G) attached to the left side drain port, and fix it with the tube clip which was removed from right side.

4. Install the indoor unit.

※The indoor unit must be installed horizontally. Otherwise, the water can leak and it will make the wall dirty.

※After the indoor unit has been installed, install the left side panel.

### 2. Installation of the Drain Up Mecha

#### 2-1 Fixing of the mounting plate

1. Decide the installation position of the mounting plate by using the paper pattern(H) attached.

   (※The left end of the indoor unit should be marked in advance.)

   - Fix the paper pattern on the wall with the screw (M4x16) attached with putting it to the left side panel of the indoor unit for positioning of the Drain Up Mecha as shown in the drawing.
   - Position the mounting plate with pushing it against the paper pattern.

2. Fix the mounting plate with the screws (M4x35) attached.

   (5 locations pointed by arrows in the drawing.)

   In case that the mounting plate is fixed by fixing bolts (through bolts, bolt anchors, or nut anchors), get M10 or W3/8 screws locally and put them into 2 x 12 dia. holes of the mounting plate to fix it.

3. When the mounting plates is installed, remove the paper pattern.
2-2 Installation of the Drain Pump

- Fix the Drain Up Mecha on the mounting plate
  - Install the screws to the 2 upper holes (pointed by arrows in the drawing) of the mounting plate by hand tight and hook the Drain Up Mecha on the screws.
  - Level the Drain Up Mecha by using a spirit level. Then tighten the 4 screws securely to fix the Drain Up Mecha.

※The Drain Up Mecha must be leveled. Otherwise, the water leaks and it makes wall dirty.

3. Installation of refrigerant piping

- See the item of refrigerant piping connection in the installation manual of the indoor unit.

(1) Remove the right and left side panels of the indoor unit.
(2) Remove the bottom panel of the indoor unit.
(3) Install the tube by the way of left piping.
(4) In case that the refrigerant tube is raised together with the drain tube, run the both pipes in the space for tube.
  - Be sure that the indoor unit must be positioned at the place where was marked at 4-1.
  - The bending radius of the refrigerant pipe must be R80 or less.
  - The tube raised should be fixed with the pull tight which was put through the square hole of the mounting plate.
(5) The refrigerant pipe should be arranged in the left piping space of the indoor unit like the right drawing.

4. Installation of drain piping

4-1 Connection of drain tube

(1) Connect the drain tube which is installed to the left side drain port of the indoor unit to the drain port of the Drain Up Mecha.
(2) Fix the connection port securely with the tube clip attached.
(3) Connect the flexible drain tube which is run from top panel of the Drain Up Mecha with the drain tube at the place.
  The part connected must be closed by vinyl chloride type glue.
(4) Insulate the flexible drain tube runs from Drain Up Mecha with the drain tube cover attached.

4-2 Installation of drain piping

(1) The drain pipe should be installed in accordance with the following procedure.
  - The drain pipe should be installed so that the outdoor side (drain side) becomes falling slope (1/100 or more) and do not make trap or go up.
  - The horizontal run of the drain pipe should be 20 m or less. In case that the tube is horizontally run for long distance, some support brackets should be installed to prevent the pipe from being wavy. Never install the air drain pipe. The drain will blow out.
  - The hard vinyl chloride pipe VP20 (outer dia. 26mm) should be used for the drain pipe. And the part connected must be closed by vinyl chloride type glue to prevent water leak.
  - Be sure to wrap the drain pipe with adiabatic material (foam polyethylene : specific gravity 0.03, thickness 9 mm or more).available on the market.
  - Do not install stink trap to the outlet of the drain pipe.
  - The outlet of the drain pipe should be installed the place where it is not possible to cause stink.
  - In case that plural drain pipes are installed, install the main pipe so that it comes approximately 10 cm lower than the drain outlet and the pipes must be made of material of VP30 or similar and they should be falling slope (1/100 or more).
  - It is possible to raise the outlet of the drain pipe (pop lift) to 80 cm from bottom face of the indoor unit. However, if there is horizontal part, the water will over flows from drain pan, because the too much water flow back when the operation stops. Therefore, the drain pipe must be raised vertically. Also, install the flow back stop at the heights point to prevent the water from flow back from the horizontal part of the pipe. See the drawing below.
5. Electric wiring

5-1 Set up of the indoor unit (※See the item of electric wiring in the installation manual of the indoor unit.)

(1) Remove the board cover and terminal cover from the electric box.

5-2 Electric wiring

※The electric wires should be run to the electric box together with the lead wires for bane motor through the left tubing space of the indoor unit as the drawing below.
※The electric wires should be tightened together with refrigerant tube by vinyl band which is attached to the left tubing space of the indoor unit.

5-3 Electric wiring operation

※The power wires (lead wires with round terminal) should be connected to the terminals S1 and S2 of the terminal block for inner/outer connecting line.
※The lead wire with connector should be connected to the connectors "CN27" and "CN31" each. At this time, remove the bypass connector (will be unused) from the terminal CN31 of the control board.
※Be sure not to have the lead wires touch the heat generator (heat sink) on the control board.

Electric circuit diagram

Symbol | Name | Symbol | Name
--- | --- | --- | ---
TB4 | Terminal block (inner/outer connecting line) | DP | Drain pump
1B | Indoor control board | DS | Drain sensor
CN27 | Connector (Pump) | XP | Relay (Drain pump)
CN31 | Connector (D.Sensor) |  |

Electric wiring (around electric box)

Wiring plate

Symbol stands for terminal connection.
Symbol stands for connector joint.

When the wiring has been completed, put the each cover of the indoor unit and right side panel back in place.

6. Test run

★After the installation of the Drain Up Mecha has been completed, make sure that the drain works correctly and the water does not leak from any part of connection.

(1) Pour water
Remove the left side panel of the indoor unit and pour water approximately 800cc to the drain pan. ※If the water is poured too much, it is possible that the drainage does not work due to alarm stop by activation of drain over flow protection device.

(2) Test run
In accordance with the procedure for test run in the installation manual for the indoor unit, operate the air cooling and make sure that the drainage works and the water does not leak.
※When the Drain Up Mecha is installed in winter season, the water must be drained.
To drain water, remove the drain plug under the Drain Up Mecha. Use the drain pan. When the drainage has been completed, put the drain plug back in place.

(3) After checking, put the side panel and cover back in place in order.
※Install the indoor unit left side panel first and make sure that the left end of the indoor unit perfectly comes on the point marked at 4-1. (If they do not match, it causes problem that it will not be able to the cover or there will be gap between the cover and the indoor unit.)
Drain Pump for Ceiling Suspended models PAC-SH20DM-E

Photo

Specifications

Drain Pump

PAC-SH20DM-E

Unit : mm

Descriptions

Raises drain generated during unit's operation to secure the appropriate angle of the drain pipe.

Applicable Models

- PCA-RP50GA
- PCA-RP50GA2
- PCA-RP60GA
- PCA-RP60GA

Specifications

- Rated power: 200V AC, single-phase, 50/60Hz
- Power consumption: 10.9/9W
- Operating current: 0.12/0.10A
- Drain lift: Max. 400mm from indoor unit's top surface
- Discharge rate: 381/h or higher (when operated with lift 600mm and water level 13mm)
- Liquid temperature: 0 to 50°C (no freezing)
- Ambient temperature: -10°C to 50°C
- Ambient humidity: RH95% or less
- Driving motor: Shading type (Class E insulation)
- Drain piping: Connected to drain outlet. PVC pipe VP-20 (ED: Φ26) can be used.

Accessory

- Piping hole cover, Drain hose (between this device and indoor unit), VP-20 pipe (300mm), L-shape connection pipe (liquid, gas), Metal fittings for installation, Fixing screw (ST4x10), Heat insulator (for drain hose, VP-20 pipe, L-shape connection pipe/VP-20 (ED: Φ26) can be used.

Discharge rate: 36l/h or higher (when operated with lift 600mm and water level 13mm)

Dimensions

Unit : mm

Drainage pipe connection

(Pipe size)

<table>
<thead>
<tr>
<th>Item</th>
<th>Liquid</th>
<th>Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piping diameter (Flare size)</td>
<td>φ 6.35 (1/4”)</td>
<td>φ 12.7 (1/2”)</td>
</tr>
<tr>
<td>A</td>
<td>55</td>
<td>68</td>
</tr>
</tbody>
</table>

L shape connection pipe

(To the edge of the pipe)
**How to Use / How to Install**

### 1 Confirming Supplied Accessories

<table>
<thead>
<tr>
<th>1 Drain lift up mechanism</th>
<th>2 Attachment</th>
<th>3 Screws (4 x 10)</th>
<th>4 VP-20 pipe</th>
<th>5 Pipe cover</th>
<th>6 Flexible hose</th>
<th>7 Fastener</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Drain lift up mechanism" /></td>
<td><img src="image2" alt="Attachment" /></td>
<td><img src="image3" alt="Screws" /></td>
<td><img src="image4" alt="VP-20 pipe" /></td>
<td><img src="image5" alt="Pipe cover" /></td>
<td><img src="image6" alt="Flexible hose" /></td>
<td><img src="image7" alt="Fastener" /></td>
</tr>
</tbody>
</table>

* Before starting installation, make sure that the following accessories are present.

### 2 Installation Diagram of the Drain Pump

* This drain lift up mechanism must be installed inside an indoor unit.
* Installing this drain lift up mechanism enables upward discharge of drainage and refrigerant.
* To facilitate installation of the drain lift up mechanism, it should be installed before indoor unit.
* The size of the plumbing that must connect, by the refrigerant kind of the indoor unit that corresponds in the case of PAC-SH16, 17, 20, 22DM-E, changes.
* Please refer to the installation manual of an indoor unit for details.
* The L-shaped pipes there are bringing are corresponding to either refrigerant

**Unit:mm**

![Diagram of the Drain Pump](image8)

**Table 1**

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Drain lift up mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>φ12.7</td>
<td>210</td>
<td>210</td>
<td>38</td>
<td>Max 400</td>
<td>PAC-SER4</td>
</tr>
<tr>
<td>φ15.88</td>
<td>210</td>
<td>210</td>
<td>38</td>
<td>Max 400</td>
<td>PAC-SER5 / SH21</td>
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<tr>
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<td>150</td>
<td>98</td>
<td>Max 350</td>
<td>PAC-SER6</td>
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<tr>
<td>φ12.7 / φ15.88</td>
<td>210</td>
<td>210</td>
<td>38</td>
<td>Max 400</td>
<td>PAC-SH16 / 20</td>
</tr>
<tr>
<td>φ15.88 / φ19.05</td>
<td>270</td>
<td>150</td>
<td>98</td>
<td>Max 350</td>
<td>PAC-SH17 / 22</td>
</tr>
</tbody>
</table>

![Viewed from the Top](image9)

![Viewed from the Front](image10)

![Viewed from the Right](image11)

**Positions of Holes on the Ceiling**

- Rear side of the indoor unit
- Right side of the indoor unit
- Ceiling hole (2-φ100)

**For internal insulation**

- For the insulation of L-shaped pipes and the refrigerant pipes.

**For external insulation**

- For the insulation of VP20 pipe.

**For the insulation of drain-up machine fixture**

- For the insulation of L-shaped pipes and the refrigerant pipes.
3 Installing the Drain Pump

1. Remove the intake grille and side panel. (Refer to the indoor unit installation manual.)
2. Prepare the knockout hole to be used for the upper piping of the indoor unit.
3. Fix the attachment ② with the fixing screws ③(×2).
   Attach the screw caps ①(×2) in the screws that is exposing it in the reverse side of the Air passage separator, after the Attachment fixed it.
4. Fix the drain lift up mechanism ① with the fixing screws ③(×4)
5. Fit the rear side hole cover ① into the piping hole on the rear side panel.

4 Refrigerant Piping

*For details on piping, refer to the installation manual of the indoor unit.
[With the stop valve of the outdoor unit fully closed]
1. Apply lubricant to the flare sheet of the L-shaped pipes (gas pipe, liquid pipe) ⑧ ⑨
2. Remove the flare nut and cap from the indoor unit.
3. Apply lubricant to the flare sheet connecting section of the indoor unit.
4. Connect the L-shaped pipes (gas pipe, liquid pipes) ⑧ ⑨ quickly.
5. Fit the removed flare nut to the existing pipes and carry out flaring.
6. Connect the L-shaped pipes with the existing pipes in the same way.
7. Cover each connection with heat insulator ⑩⑪
   [After the refrigerant circuit is complete]
8. Purge the air from the stop valve service port of the outdoor unit.
9. Fully open the stop valves (both liquid and gas).
* The method for handling the stop valve is described on the outdoor unit.

---

---
5 Drain Piping

1. Apply vinyl chloride type adhesive to the drainage outlet of the drain lift up mechanism, then insert the VP-20 pipe into it, (30mm deep).
2. Connect the insert the VP20 pipe and existing drain pipe using a 90-degree elbow etc. and adhesive.
3. Cover the VP-20 pipe with the pipe cover.
4. Apply vinyl chloride type adhesive to the drain lift up mechanism and drain connecting hole on the indoor unit, then insert the flexible hose into them.

Take care that the hose does not twist.

*Insulate all pipes, form the drain lift up mechanism up to the outside.

[Make sure to follow the following points during drain piping.]

* Keep the max. length of “D” within the requirement shown on table 1.
* Incline the drain pipe downwards (1/100 or larger) to the drainage side (outdoor).
* Do not create traps or peaks.
* Keep the horizontal piping within 20m. Use fixtures to prevent the pipe from waving.
* Do not install air vent pipes. The drainage may spout out.
* Use general-purpose hard vinyl chloride pipes (outer diameter: Ø26) and apply vinyl chloride type adhesive to prevent any leakage.
* Cover with insulator (made of foamed polyethylene, with specific gravity of 0.03 thickness of 9mm or more).
* Do not install odor trap at the drain outlet.
* Locate the end of pipe at a point where odor is unlikely to occur.
* Do not insert the pipe directly into a drainage ditch where sulfur gas may be produced.
* Use VP-30 pipes for centralized piping. Install the centralized drain pipe approximately 10cm below the output of pipes connected from the drain lift up mechanism.
6 Electric Wiring

*Refer to the installation manual of the indoor unit together with this manual.
*Perform the work after checking that the power supply is off.

1. Remove the beam.
2. Remove the electric parts cover.
3. Pull the electric parts box downwards.
4. Pass the lead wire of drain lift up mechanism ① through the rubber bush on the air passage separator.
5. Connect each lead wire to the CNP and CN50 or CN31 connectors provided on the control PCB of the indoor unit.
6. Tie up the lead wires with the fastener ⑦ so that the wires do not come apart inside the electric parts box.
7. When the wiring is finished, re-install the electric parts box, its cover and the beam.

An electric wiring diagram is provided on the back.

Control PCB

Fastener ⑦

Clamp the lead wire

After the box is re-installed, secure the excess part of the lead wire with the clamp located on the right of the electric parts box.

<table>
<thead>
<tr>
<th>Drain sensor</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN50 (red connector)</td>
<td>PAC-SE84~86DM-E</td>
</tr>
<tr>
<td>CN31 (white connector)</td>
<td>PAC-SE84<del>86DMA-E, PAC-SH16, 17DM-E, PAC-SH20</del>22DM-E</td>
</tr>
</tbody>
</table>

*The positions of the connectors which must be connected to the control PCB in certain models differ from those specified in the above diagram. Make sure that the lead wires are connected to CNP and CN50 or CN31 connectors.
7 Test Run

*Through this test run, check that drainage is discharged properly and that there is no water leakage from any of the connections.
*Refer to the installation manual of the indoor unit together with this manual.

1. Supplying water

Remove the inspection panel from the right-side panel. Supply approximately 1000cc of water to the inspection hole.

![Inspection panel](image)

2. Carrying out a test run

Turn the power ON.
Press the TEST RUN button on the remote controller twice.
Press the MODE button to select cooling mode.
*The drain lift up mechanism will be activated to start discharging the water.
Check whether water is discharged properly.
Press the POWER ON/OFF button to cancel the test run.
Turn the power OFF.

3. Re-install each part after checking.

*If the drain lift up mechanism is installed at the time of the year when heating is used, make sure that the drainage has been removed.
After removal of the drainage, reinstall the drainage plug.
Raising drain generated during unit’s operation to secure the appropriate angle of the drain pipe.

### Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Liquid</th>
<th>Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piping diameter (Flare size)</td>
<td>φ0.52 (5/32&quot;)</td>
<td>φ1.188 (3/8&quot;)</td>
</tr>
<tr>
<td>A</td>
<td>45</td>
<td>65</td>
</tr>
</tbody>
</table>

**Rated power**: 200V AC, single-phase, 50/60Hz

**Power consumption**: 10.9/9W

**Operating current**: 0.12/0.10A

**Drain lift**: Max. 400mm from indoor unit’s top surface

**Discharge rate**: 36l/h or higher (when operated with lift 600mm and water level 13mm)

**Liquid temperature**: 0 to 50°C (no freezing)

**Ambient temperature**: -10°C to 50°C

**Ambient humidity**: RH95% or less

**Driving motor**: Shading type (Class E insulation)

**Drain piping**: Connected to drain outlet. PVC pipe VP-20 (ED: Φ26) can be used.

**Accessory**: Piping hole cover, Drain hose (between this device and indoor unit), VP-20 pipe (300mm), L-shape connection pipe (liquid, gas), Metal fittings for installation, Fixing screw (ST4x10), Heat insulator (for drain hose, VP-20 pipe, L-shape connection pipe) VP-20 (ED: Φ26) can be used.

**Discharge rate**: 36l/h or higher (when operated with lift 600mm and water level 13mm)
**How to Use / How to Install**

1. **Confirming Supplied Accessories**
   * Before starting installation, make sure that the following accessories are present.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drain lift up mechanism</td>
<td>x1</td>
</tr>
<tr>
<td>Attachment</td>
<td>x1</td>
</tr>
<tr>
<td>Screws (4 x 10)</td>
<td>x6</td>
</tr>
<tr>
<td>VP-20 pipe</td>
<td>x1</td>
</tr>
<tr>
<td>Pipe cover</td>
<td>x1</td>
</tr>
<tr>
<td>Flexible hose</td>
<td>x2</td>
</tr>
<tr>
<td>Fastener</td>
<td>x2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-shaped pipe (gas pipe)</td>
<td>x1</td>
</tr>
<tr>
<td>L-shaped pipe (liquid pipe)</td>
<td>x1</td>
</tr>
<tr>
<td>Insulator A</td>
<td>x1</td>
</tr>
<tr>
<td>Insulator B</td>
<td>x2</td>
</tr>
<tr>
<td>Rear side hole cover</td>
<td>x2</td>
</tr>
<tr>
<td>Screw cap</td>
<td>x1</td>
</tr>
</tbody>
</table>

2. **Installation Diagram of the Drain Pump**
   * This drain lift up mechanism must be installed inside an indoor unit.
   * Installing this drain lift up mechanism enables upward discharge of drainage and refrigerant.
   * To facilitate installation of the drain lift up mechanism, it should be installed before indoor unit.
   * The size of the plumbing that must connect, by the refrigerant kind of the indoor unit that corresponds in the case of PAC-SH16, 17, 20, 22DM-E, changes.
   * Please refer to the installation manual of an indoor unit for details.
   * The L-shaped pipes there are bringing are corresponding to either refrigerant

Unit:mm

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>φ 12.7</td>
<td>6.35</td>
</tr>
<tr>
<td>φ 15.88</td>
<td>9.52</td>
</tr>
<tr>
<td>φ 18.05</td>
<td>9.52</td>
</tr>
<tr>
<td>φ 12.7/φ 15.88</td>
<td>9.52</td>
</tr>
<tr>
<td>φ 15.88/φ 19.05</td>
<td>9.52</td>
</tr>
</tbody>
</table>

**Drain Lift Up Mechanism Model**
- PAC-SE84
- PAC-SE85 / SH21
- PAC-SE86
- PAC-SH16 / 20
- PAC-SH17 / 22

**Viewed from the Top**

**Viewed from the Front**

**Viewed from the Right**

**Positions of Holes on the Ceiling**

**Confirming Supplied Accessories**

- Drain lift up mechanism
- Attachment
- Screws (4 x 10)
- VP-20 pipe
- Pipe cover
- Flexible hose
- Fastener

- L-shaped pipe (gas pipe)
- L-shaped pipe (liquid pipe)
- Insulator A
- Insulator B
- Rear side hole cover
- Screw cap

**Table 1**

- Gas pipe | Liquid pipe | A | B | C | D (Drain lift up mechanism Model)
- φ 12.7    | φ 6.35      | 210 | 210 | 38 | Max.400 PAC-SE84
- φ 15.88   | φ 9.52      | 210 | 210 | 38 | Max.400 PAC-SE85 / SH21
- φ 18.05   | φ 9.52      | 270 | 150 | 98 | Max.350 PAC-SE86
- φ 12.7/φ 15.88 | φ 9.52 | 210 | 210 | 38 | Max.400 PAC-SH16 / 20
- φ 15.88/φ 19.05 | φ 9.52 | 270 | 150 | 98 | Max.350 PAC-SH17 / 22
3 Installing the Drain Pump

1. Remove the intake grille and side panel. (Refer to the indoor unit installation manual.)
2. Prepare the knockout hole to be used for the upper piping of the indoor unit.
3. Fix the attachment 2 with the fixing screws 3 (x 2).
   Attach the screw caps 1 (x 2) in the screws that are exposing it in the reverse side of the Air passage separator, after the Attachment fixed it.
4. Fix the drain lift up mechanism 1 with the fixing screws 3 (x 4)
5. Fit the rear side hole cover 3 into the piping hole on the rear side panel.

4 Refrigerant Piping

*For details on piping, refer to the installation manual of the indoor unit.
[With the stop valve of the outdoor unit fully closed]
1. Apply lubricant to the flare sheet of the L-shaped pipes (gas pipe, liquid pipe) 8, 9
2. Remove the flare nut and cap from the indoor unit.
3. Apply lubricant to the flare sheet connecting section of the indoor unit.
4. Connect the L-shaped pipes (gas pipe, liquid pipes) 8 and 9 quickly.
5. Fit the removed flare nut to the existing pipes and carry out flaring.
6. Connect the L-shaped pipes with the existing pipes in the same way.
7. Cover each connection with heat insulator A 10, 11
   [After the refrigerant circuit is complete]
8. Purge the air from the stop valve service port of the outdoor unit.
9. Fully open the stop valves (both liquid and gas).
   * The method for handling the stop valve is described on the outdoor unit.

---

Diagram of the drain pump installation and refrigerant piping.
5 Drain Piping

1. Apply vinyl chloride type adhesive to the drainage outlet of the drain lift up mechanism, then insert the VP-20 pipe into it, (30mm deep).
2. Connect the insert the VP20 pipe and existing drain pipe using a 90-degree elbow etc. and adhesive.
3. Cover the VP-20 pipe with the pipe cover.
4. Apply vinyl chloride type adhesive to the drain lift up mechanism and drain connecting hole on the indoor unit, then insert the flexible hose into them.
Take care that the hose does not twist.
*Insulate all pipes, form the drain lift up mechanism up to the outside.

[Make sure to follow the following points during drain piping.]
*Keep the max. length of "D" within the requirement shown on table1.
*Incline the drain pipe downwards (1/100 or larger) to the drainage side (outdoor).
*Do not create traps or peaks.
*Keep the horizontal piping within 20m. Use fixtures to prevent the pipe from waving.
*Do not install air vent pipes. The drainage may spout out.
*Use general-purpose hard vinyl chloride pipes (outer diameter: Ǿ 26) and apply vinyl chloride type adhesive to prevent any leakage.
*Cover with insulator (made of foamed polyethylene, with specific gravity of 0.03 thickness of 9mm or more).
*Locate the end of pipe at a point where odor is unlikely to occur.
*Do not insert the pipe directly into a drainage ditch where sulfur gas may be produced.
*Use VP-30 pipes for centralized piping. Install the centralized drain pipe approximately 10cm below the output of pipes connected from the drain lift up mechanism.

[Example of centralized piping]

D-148
6 Electric Wiring

*Refer to the installation manual of the indoor unit together with this manual.
*Perform the work after checking that the power supply is off.
1. Remove the beam.
2. Remove the electric parts cover.
3. Pull the electric parts box downwards.
4. Pass the lead wire of drain lift up mechanism through the rubber bush on the air passage separator.
5. Connect each lead wire to the CNP and CN50 or CN31 connectors provided on the control PCB of the indoor unit.
6. Tie up the lead wires with the fastener so that the wires do not come apart inside the electric parts box.
7. When the wiring is finished, re-install the electric parts box, its cover and the beam.

*The positions of the connectors which must be connected to the control PCB in certain models differ from those specified in the above diagram. Make sure that the lead wires are connected to CNP and CN50 or CN31 connectors.

<table>
<thead>
<tr>
<th>Drain sensor</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN50 (red connector)</td>
<td>PAC-SE84~86DM-E</td>
</tr>
<tr>
<td>CN31 (white connector)</td>
<td>PAC-SE84~86DMA-E</td>
</tr>
<tr>
<td></td>
<td>PAC-SH16, 17DM-E</td>
</tr>
<tr>
<td></td>
<td>PAC-SH20~22DM-E</td>
</tr>
</tbody>
</table>
7 Test Run

*Through this test run, check that drainage is discharged properly and that there is no water leakage from any of the connections.
*Refer to the installation manual of the indoor unit together with this manual.

1. Supplying water

Remove the inspection panel from the right-side panel. Supply approximately 1000cc of water to the inspection hole.

2. Carrying out a test run

Turn the power ON.
Press the TEST RUN button on the remote controller twice.
Press the MODE button to select cooling mode.
*The drain lift up mechanism will be activated to start discharging the water.
Check whether water is discharged properly.
Press the POWER ON/OFF button to cancel the test run.
Turn the power OFF.

3. Re-install each part after checking.

*If the drain lift up mechanism is installed at the time of the year when heating is used, make sure that the drainage has been removed.
After removal of the drainage, reinstall the drainage plug.
Drain Pump for Ceiling Suspended models

**Photo**

**Descriptions**

Raises drain generated during unit’s operation to secure the appropriate angle of the drain pipe.

**Applicable Models**

- PCA-RP100GA  - PCH-P100GAH
- PCA-RP125GA  - PCH-P125GAH
- PCA-RP140GA  - PCH-P140GAH

**Specifications**

- **Rated power**: 200V AC, single-phase, 50/60Hz
- **Power consumption**: 10.9/9W
- **Operating current**: 0.12/0.10A
- **Drain lift**: Max. 400mm from indoor unit’s top surface
- **Discharge rate**: 38l/h or higher (when operated with lift 600mm and water level 13mm)
- **Liquid temperature**: 0 to 50°C (no freezing)
- **Ambient temperature**: -10°C to 50°C
- **Ambient humidity**: RH95% or less
- **Driving motor**: Shading type (Class E insulation)
- **Drain piping**: Connected to drain outlet. PVC pipe VP-20 (ED: Φ26) can be used.
- **Accessory**: Piping hole cover, Drain hose (between this device and indoor unit), VP-20 pipe (300mm), L-shape connection pipe (liquid, gas). Metal fittings for installation, Fixing screw (ST4x10), Heat insulator (for drain hose, VP-20 pipe, L-shape connection pipe)VP-20 (ED: Φ26) can be used.

**Dimensions**

<table>
<thead>
<tr>
<th>Drain pump</th>
<th>Unit : mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hole for installation</td>
<td>26</td>
</tr>
<tr>
<td>Metal fittings for installation</td>
<td>28mm ID</td>
</tr>
<tr>
<td>Drainage pipe connection</td>
<td>50</td>
</tr>
<tr>
<td>Drain pipe pull out</td>
<td>30</td>
</tr>
<tr>
<td>Drainage hose connection (Between indoor unit)</td>
<td>28</td>
</tr>
<tr>
<td>Drain senor</td>
<td>40</td>
</tr>
<tr>
<td>Drain pull out</td>
<td>60</td>
</tr>
<tr>
<td>Knock out hole (For upward piping)</td>
<td>60</td>
</tr>
<tr>
<td>Piping hole cover</td>
<td>95</td>
</tr>
<tr>
<td>Drain pipe</td>
<td>12</td>
</tr>
<tr>
<td>Gas pipe</td>
<td>13</td>
</tr>
<tr>
<td>Liquid pipe</td>
<td>138</td>
</tr>
<tr>
<td>In door unit rear side</td>
<td>101</td>
</tr>
<tr>
<td>In door unit right edge side</td>
<td>95</td>
</tr>
<tr>
<td>L shape connection pipe</td>
<td>To the edge of the pipe</td>
</tr>
<tr>
<td>Piping diameter (Flare size)</td>
<td>Liquid</td>
</tr>
<tr>
<td>φ9.52 (3/8 F)</td>
<td>45</td>
</tr>
<tr>
<td>φ15.88 (5/8 F)</td>
<td>65</td>
</tr>
</tbody>
</table>
How to Use / How to Install

1 Confirming Supplied Accessories

* Before starting installation, make sure that the following accessories are present.

<table>
<thead>
<tr>
<th>1 Drain lift up mechanism</th>
<th>2 Attachment</th>
<th>3 Screws (4 x 10)</th>
<th>4 VP-20 pipe</th>
<th>5 Pipe cover</th>
<th>6 Flexible hose</th>
<th>7 Fastener</th>
</tr>
</thead>
<tbody>
<tr>
<td>x1</td>
<td>x1</td>
<td>x5</td>
<td>x1</td>
<td>x1</td>
<td></td>
<td>x2</td>
</tr>
</tbody>
</table>

8 L-shaped pipe (gas pipe) 9 L-shaped pipe (liquid pipe) 10 Insulator A 11 Insulator B 12 Rear side hole cover 13 Screw cap

* x2

2 Installation Diagram of the Drain Pump

* This drain lift up mechanism must be installed inside an indoor unit.
* Installing this drain lift up mechanism enables upward discharge of drainage and refrigerant.
* To facilitate installation of the drain lift up mechanism, it should be installed before indoor unit.
* The size of the plumbing that must connect, by the refrigerant kind of the indoor unit that corresponds in the case of PAC-SH16, 17, 20, 22DM-E, changes.
* Please refer to the installation manual of an indoor unit for details.
* The L-shaped pipes there are bringing are corresponding to either refrigerant

Unit:mm

Viewed from the Top

Viewed from the Front

Positions of Holes on the Ceiling

Table 1

<table>
<thead>
<tr>
<th>Gas pipe (outer diameter)</th>
<th>Liquid Pipe</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Drain lift up mechanism Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>φ12.7</td>
<td>φ6.35</td>
<td>210</td>
<td>210</td>
<td>38</td>
<td>Max.400</td>
<td>PAC-SE84</td>
</tr>
<tr>
<td>φ15.88</td>
<td>φ9.52</td>
<td>210</td>
<td>210</td>
<td>38</td>
<td>Max.400</td>
<td>PAC-SE85 / SH21</td>
</tr>
<tr>
<td>φ19.05</td>
<td>φ9.52</td>
<td>270</td>
<td>150</td>
<td>98</td>
<td>Max.350</td>
<td>PAC-SE86</td>
</tr>
<tr>
<td>φ12.7 / φ15.88</td>
<td>φ9.52</td>
<td>210</td>
<td>210</td>
<td>38</td>
<td>Max.400</td>
<td>PAC-SH16 / 20</td>
</tr>
<tr>
<td>φ15.88 / φ19.05</td>
<td>φ9.52</td>
<td>270</td>
<td>150</td>
<td>98</td>
<td>Max.350</td>
<td>PAC-SH17 / 22</td>
</tr>
</tbody>
</table>
3 Installing the Drain Pump

1. Remove the intake grille and side panel. (Refer to the indoor unit installation manual.)
2. Prepare the knockout hole to be used for the upper piping of the indoor unit.
3. Fix the attachment ② with the fixing screws ③ (×2).
   Attach the screw caps ④ (×2) in the screws that are exposing it in the reverse side of the Air passage separator, after the Attachment fixed it.
4. Fix the drain lift up mechanism ① with the fixing screws ③ (×4)
5. Fit the rear side hole cover ③ into the piping hole on the rear side panel.

4 Refrigerant Piping

*For details on piping, refer to the installation manual of the indoor unit.
[With the stop valve of the outdoor unit fully closed]
1. Apply lubricant to the flare sheet of the L-shaped pipes (gas pipe, liquid pipe) ⑤ ⑨
2. Remove the flare nut and cap from the indoor unit.
3. Apply lubricant to the flare sheet connecting section of the indoor unit.
4. Connect the L-shaped pipes (gas pipe, liquid pipes) ⑥ and ⑨ quickly.
5. Fit the removed flare nut to the existing pipes and carry out flaring.
6. Connect the L-shaped pipes with the existing pipes in the same way.
7. Cover each connection with heat insulator ⑩ ⑩①
   [After the refrigerant circuit is complete]
8. Purge the air from the stop valve service port of the outdoor unit.
9. Fully open the stop valves (both liquid and gas).
* The method for handling the stop valve is described on the outdoor unit.
5 Drain Piping

1. Apply vinyl chloride type adhesive to the drainage outlet of the drain lift up mechanism ①, then insert the VP-20 pipe ④ into it. (30mm deep)
2. Connect the insert the VP20 pipe ④ and existing drain pipe using a 90-degree elbow etc. and adhesive.
3. Cover the VP-20 pipe ④ with the pipe cover ⑤.
4. Apply vinyl chloride type adhesive to the drain lift up mechanism ① and drain connecting hole on the indoor unit, then insert the flexible hose ⑥ into them.

Take care that the hose does not twist.

*Insulate all pipes, form the drain lift up mechanism up to the outside.

[Make sure to follow the following points during drain piping.]

* Keep the max. length of "D" within the requirement shown on table 1.
* Incline the drain pipe downwards (1/100 or larger) to the drainage side (outdoor).
* Do not create traps or peaks.
* Keep the horizontal piping within 20m. Use fixtures to prevent the pipe from waving.
* Do not install air vent pipes. The drainage may spout out.
* Use general-purpose hard vinyl chloride pipes (outer diameter: Ø 26) and apply vinyl chloride type adhesive to prevent any leakage.
* Cover with insulator (made of foamed polyethylene, with specific gravity of 0.03 thickness of 9mm or more).
* Locate the end of pipe at a point where odor is unlikely to occur.
* Do not insert the pipe directly into a drainage ditch where sulfur gas may be produced.
* Use VP-30 pipes for centralized piping. Install the centralized drain pipe approximately 10cm below the output of pipes connected from the drain lift up mechanism.

---

Viewed from the Right

---

[Example of centralized piping]
6 Electric Wiring

*Refer to the installation manual of the indoor unit together with this manual.
*Perform the work after checking that the power supply is off.
1. Remove the beam.
2. Remove the electric parts cover.
3. Pull the electric parts box downwards.
4. Pass the lead wire of drain lift up mechanism ① through the rubber bush on the air passage separator.
5. Connect each lead wire to the CNP and CN50 or CN31 connectors provided on the control PCB of the indoor unit.
6. Tie up the lead wires with the fastener ⑦ so that the wires do not come apart inside the electric parts box.
7. When the wiring is finished, re-install the electric parts box, its cover and the beam.

*The positions of the connectors which must be connected to the control PCB in certain models differ from those specified in the above diagram. Make sure that the lead wires are connected to CNP and CN50 or CN31 connectors.

<table>
<thead>
<tr>
<th>Drain sensor</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN50 (red connector)</td>
<td>PAC-SE84~86DM-E</td>
</tr>
<tr>
<td>CN31 (white connector)</td>
<td>PAC-SE84<del>86DMA-E, PAC-SH16, 17DM-E, PAC-SH20</del>22DM-E</td>
</tr>
</tbody>
</table>


**7 Test Run**

*Through this test run, check that drainage is discharged properly and that there is no water leakage from any of the connections. *Refer to the installation manual of the indoor unit together with this manual.

1. **Supplying water**

   Remove the inspection panel from the right-side panel. Supply approximately 1000cc of water to the inspection hole.

![Inspection panel (Fixed with one screw)](image)

2. **Carrying out a test run**

   Turn the power ON. 
   Press the TEST RUN button on the remote controller twice. 
   Press the MODE button to select cooling mode. 
   *The drain lift up mechanism will be activated to start discharging the water. 
   Check whether water is discharged properly. 
   Press the POWER ON/OFF button to cancel the test run. 
   Turn the power OFF.

3. **Re-install each part after checking.**

   *If the drain lift up mechanism is installed at the time of the year when heating is used, 
   make sure that the drainage has been removed. 
   After removal of the drainage, reinstall the drainage plug.

![Drainage plug](image)
Installation figure

Descriptions

Raisers drain generated during unit's operation to secure the appropriate angle of the drain pipe.

Applicable Models

- SEZ-KD35VA
- SEZ-KD50VA
- SEZ-KD60VA
- SEZ-KD71VA

Specifications

- External type
- 220-240V AC
- Liquid level detection: Float switch

Provided parts

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

<table>
<thead>
<tr>
<th>Item</th>
<th>① DRAIN PUMP</th>
<th>② ATTACHMENT</th>
<th>③ DRAIN HOSE 1</th>
<th>④ PIPE COVER 1</th>
<th>⑤ PIPE COVER 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Shape</td>
<td><img src="image1.png" alt="DRAIN PUMP ATTACHMENT" /></td>
<td><img src="image2.png" alt="ATTACHMENT" /></td>
<td><img src="image3.png" alt="DRAIN HOSE 1" /></td>
<td><img src="image4.png" alt="PIPE COVER 1" /></td>
<td><img src="image5.png" alt="PIPE COVER 2" /></td>
</tr>
<tr>
<td>Item</td>
<td>⑥ HOSE BAND</td>
<td>⑦ SCREW</td>
<td>⑧ CLAMP</td>
<td>⑨ FERRITE CLAMP</td>
<td>⑩ BAND 1</td>
</tr>
<tr>
<td>Quantity</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Shape</td>
<td><img src="image6.png" alt="HOSE BAND" /></td>
<td><img src="image7.png" alt="SCREW" /></td>
<td><img src="image8.png" alt="CLAMP" /></td>
<td><img src="image9.png" alt="FERRITE CLAMP" /></td>
<td><img src="image10.png" alt="BAND 1" /></td>
</tr>
<tr>
<td>Item</td>
<td>⑪ DRAIN HOSE 2</td>
<td>⑫ PIPE COVER 3</td>
<td>⑬ BAND 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shape</td>
<td><img src="image11.png" alt="DRAIN HOSE 2" /></td>
<td><img src="image12.png" alt="PIPE COVER 3" /></td>
<td><img src="image13.png" alt="BAND 2" /></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

MITSUBISHI ELECTRIC CORPORATION

D-157
Decoration Covers

Descriptions

A decoration cover to be attached to the upper section of ceiling suspended models. Possible to prevent dust accumulation.

Applicable Models

- PCA-RP71HA

Specifications

<table>
<thead>
<tr>
<th>Material</th>
<th>SUS304 (0.8t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parts composition</td>
<td></td>
</tr>
<tr>
<td>Front cover x 1</td>
<td></td>
</tr>
<tr>
<td>Suspension bracket cover x 4</td>
<td></td>
</tr>
<tr>
<td>Tapping screw (4x10, with nylon washer) x 4</td>
<td></td>
</tr>
<tr>
<td>Washer x 8 (hot-dip zinc-coated carbon steel sheet (t1.2))</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions

Front cover

Unit: mm

- Front cover
  - 216
  - 9
  - 1,140
  - 90

Suspension bracket cover

- 48
- 51
- 52
How to Use / How to Install

1. Checking Provided Parts

<table>
<thead>
<tr>
<th>Parts</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front cover</td>
<td>1 x</td>
</tr>
<tr>
<td>Suspending bracket covers</td>
<td>4 x</td>
</tr>
<tr>
<td>Tapping screws (4x10)</td>
<td>4 x</td>
</tr>
<tr>
<td>Washers</td>
<td>6 x</td>
</tr>
</tbody>
</table>

2. Front Cover Installation Procedure

- The following procedure shows how to attach the front cover after installing air-conditioner.

1. Loosen the nuts of bolts suspending the unit, and lower the unit by approx. 5 mm.
   - When lowering the unit, be careful not to damage the wires, coolant pipe or drain pipe.
2. Remove the screws that secure the front panel and top panel to the unit (at 4 points).
   - (The provided tapping screws are spares for these screws.)
3. Put front cover over the unit.
   - Be careful not to damage the insulation sheets pasted on the top surface of unit and the inside of front cover.
4. Use the screws removed in step 2 to temporarily secure front cover.
   - (Do not tighten the screws at this time.)
5. Tighten the nuts of bolts suspending the unit, and fit the unit onto ceiling.
   - Make sure that front cover holds the insulation sheet on the top surface of unit, and that the cover fits securely on the top surface of unit before tightening the screws.
6. Tighten the screws that were temporarily secured in step 4.
   - Make sure that the unit is correctly installed, and then tighten the nuts of bolts suspending the unit.
   - (CAUTION) Do not tighten the lower double nuts yet, because installing suspending bracket covers must now be done.

[CAUTION] If you attach the front cover before installing the unit, perform the procedure in steps 2 and 3, and then fully tighten the 2 screws on each side (4 in total).

3. Suspending Bracket Installation Procedure

- Attach the suspending bracket covers in succession.

1. Remove the lower double nuts (from 4 points) from the suspending bolts.
2. Put the provided washers (tops and bottoms of suspending bracket covers) and suspending bracket covers through suspending bolts.
3. Tighten the nuts removed in step 1 for the suspending bolts.
   - Make sure that the suspending bracket covers are in close contact with the unit and ceiling.

4. Test Run

[CAUTION] Also refer to the installation manual of indoor unit.

1. Turn power on.
2. Press the TEST RUN button on remote controller twice.
3. Press the MODE button on remote controller to set to the fan mode.
   - This fan will rotate to blow out air.
4. Make sure that no abnormal sound, such as vibrations, fluttering sound, etc. is heard.
5. Press the ON/OFF button on remote controller to release test run.
6. Turn power off.
A decoration cover to be attached to the upper section of ceiling suspended models. Possible to prevent dust accumulation.

### Applicable Models

- PCA-RP125HA

### Specifications

<table>
<thead>
<tr>
<th>Material</th>
<th>Front &amp; Suspension Bracket Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUS304 (0.8t)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parts composition</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Front cover</td>
<td>Front cover x 1</td>
</tr>
<tr>
<td>Suspension bracket</td>
<td>Suspension bracket cover x 4</td>
</tr>
<tr>
<td>Tapping screw</td>
<td>Tapping screw (4x10, with nylon washer) x 4</td>
</tr>
<tr>
<td>Washer</td>
<td>Washer x 8 (hot-dip zinc-coated carbon steel sheet (t1.2))</td>
</tr>
</tbody>
</table>

### Dimensions

**Front cover**

Unit: mm

- Length: 216 mm
- Width: 90 mm
- Height: 1,524 mm

**Suspension bracket cover**

- Length: 52 mm
- Width: 51 mm
- Height: 48 mm
How to Use / How to Install

1. Checking Provided Parts

- Make sure that you have all the following parts before installation:
  1. Front cover
  2. Suspending bracket covers
  3. Tapping screws (4x10)
  4. Washers

2. Front Cover Installation Procedure

- The following procedure shows how to attach the front cover after installing the air-conditioner:
  1. Loosen the nuts of bolts suspending the unit, and lower the unit by approx. 5 mm.
  2. When lowering the unit, be careful not to damage the wires, coolant pipe or drain pipe.
  3. Put front cover (1) over the unit.
     - Be careful not to damage the insulation sheets pasted on the top surface of unit and the inside of front cover (1).
  4. Use the screws removed in step 2 to temporarily secure front cover (1).
     - Do not tighten the screws at this time.
  5. Tighten the nuts of bolts suspending the unit, and fit the unit onto ceiling.
     - Tighten the nuts while carefully watching the attached status of front cover (1).
  6. Tighten the screws that were temporarily secured in step 4.
     - Make sure that the suspending bracket covers are in close contact with the unit and ceiling.
     - Also refer to the installation manual of indoor unit.
     - Do not tighten the lower double nuts yet, because installing the suspending bracket covers must now be done.

3. Suspending Bracket Installation Procedure

- Attach the suspending bracket covers in succession:
  1. Pass onto bolt in this order:
  2. Remove the lower double nuts.
  3. Tighten the nuts removed in step 1 for the suspending bolts.
     - Make sure that the suspending bracket covers are in close contact with the unit and ceiling.
     - Make sure that the unit is correctly installed, and then tighten the nuts of bolts suspending the unit.

4. Test Run

- Refer to the installation manual of indoor unit.
- Make sure that test run is performed without any abnormal sound, such as vibrations, fluttering sound, etc.
- The fan will rotate to blow out air.
- Make sure that no abnormal sound, such as vibrations, fluttering sound, etc. is heard.
- Turn power off.
Photo Specifications

**MA & Contact Terminal Interface**

**MAC-397IF-E**

**Photo**

Enables to control multiple air conditioners from a (remote) location by connecting the On/Off contact point. It can also control the operation of the relay with error signals by connecting the MA remote controller PAR-21MAA.

**Descriptions**

**Applicable Models**

- MSZ-FA/GA•VA
- MSZ-GC•VA
- MFZ-KA•VA
- MSZ-FD•VA(S)
- SEZ-KA•VA(L)
- MSZ-GB•VA
- SLZ-KA•VA(L)
- MLZ-KA•VA
- SEZ-KD•VA(L)
- P-series: In the case the outdoor unit is SUZ or MXZ, the indoor of P-series can be connected.

**Specifications**

<table>
<thead>
<tr>
<th>Power</th>
<th>12V DC (supplied from indoor unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating conditions</td>
<td>Indoor only (ambient temperature: 0 to 40°C, no condensation)</td>
</tr>
<tr>
<td>Connection of centralized controller</td>
<td>Communication cable</td>
</tr>
<tr>
<td>Communication cable distance</td>
<td>Max. 100m</td>
</tr>
<tr>
<td>Connection of MA smooth remote controller / MA deluxe remote controller</td>
<td>Communication cable</td>
</tr>
<tr>
<td>Communication cable distance</td>
<td>Max. 10m</td>
</tr>
<tr>
<td>Indoor unit connecting cable</td>
<td>Dedicated 5-wire cable</td>
</tr>
<tr>
<td>Weight</td>
<td>300g (including indoor unit connecting cable)</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

```
+----------------+------------------+
|                |                  |
| 2000           | 160              |
|                |                  |
| 15             |                  |
| 40             |                  |
| 10             |                  |
| 140            |                  |
| 70             |                  |
| 30             |                  |
+----------------+------------------+
```

MITSUBISHI ELECTRIC CORPORATION
How to Use / How to Install

1. Before Installation

1.1. How to Use the MA & CONTACT TERMINAL Interface

- Functions

Centralized control (Fig. 2-1)
You can turn multiple air conditioners on and off from one location. (MAC-821SC-E (8-Room))

Use as wired remote controller (Fig. 2-2)
You can use the MA remote controller as a wired remote controller. (PAR-21MAA)

Remote control (Fig. 2-3)
You can turn on and off an air conditioner from a remote location by connecting the ON/OFF contact point.

Status indicator output (Fig. 2-4)
You can control the operation of the relay with either of the on/off or error/ok status output signals.

- Sample System Configuration

Fig. 2-1

Fig. 2-2

Fig. 2-3

Fig. 2-4

1: Centralized controller
2: MA & CONTACT TERMINAL Interface
3: RAC
4: MA remote controller
5: Contact point
6: Relay
7: Coil
8: Breaker
1.2. Parts

Before installing the unit, make sure that you have all the necessary parts.

**Accessory**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Interface unit</td>
<td>1</td>
</tr>
<tr>
<td>(2)</td>
<td>Wall mounting brackets</td>
<td>1</td>
</tr>
<tr>
<td>(3)</td>
<td>Screws (black) for mounting (3.5 x 12)</td>
<td>4</td>
</tr>
<tr>
<td>(4)</td>
<td>Mounting cord clamp (small)</td>
<td>2</td>
</tr>
<tr>
<td>(5)</td>
<td>Mounting cord clamp (medium)</td>
<td>2</td>
</tr>
<tr>
<td>(6)</td>
<td>Mounting cord clamp (large)</td>
<td>2</td>
</tr>
<tr>
<td>(7)</td>
<td>Screws (black) for mounting (8)</td>
<td>* Use when attaching the clamps to the interface unit</td>
</tr>
<tr>
<td>(8)</td>
<td>Screws (black) for mounting (9)</td>
<td>* Use when mounting the clamps on or near the RAC</td>
</tr>
<tr>
<td>(9)</td>
<td>Screws for mounting (10)</td>
<td>* Use when mounting the clamps and electrical wire mounting bracket</td>
</tr>
<tr>
<td>(10)</td>
<td>Fasteners for joining the lead wires</td>
<td>5</td>
</tr>
<tr>
<td>(11)</td>
<td>Wiring cord clamp</td>
<td>5</td>
</tr>
<tr>
<td>(12)</td>
<td>Screws (black) for mounting (13)</td>
<td>3.5 x 12</td>
</tr>
<tr>
<td>(13)</td>
<td>Screws (black) for mounting (14)</td>
<td>3.5 x 12</td>
</tr>
<tr>
<td>(14)</td>
<td>Lead wires (6)</td>
<td>1</td>
</tr>
</tbody>
</table>

**Items to Prepare at the Installation Site**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>Signal wire extension cable (if necessary)</td>
<td>Shield wiring CVVS/ CPEVS</td>
</tr>
<tr>
<td>(B)</td>
<td>Switch, relay, coin timer, etc. (if necessary)</td>
<td>* Please use products with supplementary insulation.</td>
</tr>
<tr>
<td>(C)</td>
<td>Related products sold separately</td>
<td>* Prepare the necessary number of parts sold separately as needed for your system.</td>
</tr>
<tr>
<td>(D)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* CPEVS; PE insulated PVC jacketed shielded communication cable
* CVVS; PVC insulated PVC jacketed shielded control cable
PE: Polyethylene  PVC: Polyvinyl chloride

2. Connecting the MA & CONTACT TERMINAL Interface to RAC

- Connect the interface unit and the RAC indoor control board using the connecting cable that came with the interface.
- Extending or shortening the connecting cable that comes out of the interface may cause it to malfunction. Also, keep the connecting cable as far as possible away from the electrical wires and ground wire. Do not bundle them together.

- When this interface unit is connected to a RAC, timer operation cannot be set from a wireless remote controller.
- When this interface unit is connected to a RAC, i-see sensor control cannot be used. Normal cooling or heating operation is performed. (MSZ-FA Series only)
3. Connecting the MA & CONTACT TERMINAL Interface with each system

(For details on each system, see the relevant instruction manual.)

- Replace the interface unit (1) mounting cord clamp with a supplied mounting cord clamp (5) – (7) based on the thickness of the connecting cable used for each system.

- The cables connected to the RAC should be mounted on or near the RAC. If the connecting cable is not securely mounted, the connector may detach, break, or malfunction.

- Set the interface dip switch (SW500 – 502) settings before turning on the power. If the interface dip switch (SW500 – 502) settings are not set correctly, the system will not function properly.

3.1. Centralized Control (When Connecting to a Centralized on-off remote Controller)

Dip switch settings

■ SW500

<table>
<thead>
<tr>
<th>Setting required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7 8</td>
</tr>
</tbody>
</table>

■ SW501 and SW502 do not have to be set.

SW501

<table>
<thead>
<tr>
<th>Setting required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6</td>
</tr>
</tbody>
</table>

SW502

<table>
<thead>
<tr>
<th>Setting required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7 8</td>
</tr>
</tbody>
</table>
3.2. Use as a Wired Remote Controller (Using the MA Remote Controller)

**Note:**
1. Be sure the Auto Heating/Cooling Display Setting on the MA remote controller is set to OFF before use.
   - For information on how to set the Auto/Heating Cooling Display Setting, see the MA remote controller instruction manual.
   - The actual operating status of the unit may differ from what is shown on the remote controller display.
2. A test run cannot be initiated using the test run switch on the MA remote controller.
3. The horizontal vanes on the unit cannot be operated using the louver switch.
4. The range of room temperature indication is between 10°C and 38°C.

![Diagram of MA & Contact Terminal Interface](image)

**Dip switch settings**
- SW500 does not have to be set.
- SW501:
  - SW501- No. 1D4: Refrigerant address
    - Set this switch when multiple indoor units (and interfaces) are connected to a single MA remote controller.
    - Always start the refrigerant address at "0".
    - Even when connecting multiple outdoor RAC units, set a different refrigerant address for each indoor unit.

![Switch diagram](image)

- SW501- No. 5-6
  - No. 5 and 6 should normally be set to OFF.
  - Under the following conditions, however, they should be switched to ON.
    - Only turn this ON when the indoor units in the same group include models where the MA remote controller and indoor unit are directly connected.
    - Set them to ON only when using the room temperature sensor installed in the MA remote controller.
      - This can be switched when an accurate room temperature cannot be detected by the air conditioner unit.
      - MSZ-GA and MSZ-FA Series models do not have a room temperature sensor on their MA remote controllers.
      - (Some RAC models will not allow the use of the MA remote controller room temperature sensor.)
SW502:
- Set this switch based on the functions of the RAC connected to the interface.
- See the Page 12 table and set the switch after checking the functions using the wireless remote control that came with the RAC.

3.3. Remote Control (Turning RAC On and Off from the Contact Point)
- You can turn RAC on and off using an on/off switch like a light switch.
- Connect the supplied lead wires (6) to the connector CN591 on the interface board.
- Wire the remote control components, including the switches, at the installation site.
- Please use extension cords with reinforced insulation.

```

* Lead wires (6)

Brown
Red

Switch (contact point a)
(about 10 mA) (B)

Extend the cord using the extension cord (A) at the installation site.

100 m max.

* When the switch contact point is closed (ON), the air conditioner will turn on, and when the switch contact point is open (OFF), the air conditioner will turn off.

* When connecting the connector and the lead wire, connect them using a closed end connector as shown below.

Dip switch settings

SW500

ON

[Switch settings diagram]

Setting required

SW501 and SW502 do not have to be set.
```
3.4. Restricting RAC Operations from the Contact Point

- You can use a coin timer or light switch to ensure that RAC will not operate.
- Connect the supplied lead wires (6) to the connector CN591 on the interface board.
- Wire the remote control components, including the coin timers or switches, at the installation site.
- Please use extension cords with reinforced insulation.

* When the contact point is open, the unit will turn off and will not be operable from the remote control. When the contact point is closed, the unit will turn on and will be operable from the remote control.

Dip switch settings

SW500

Setting required

SW501 and SW502 do not have to be set.

3.5. Status Signal Output Using the Relay

- You can set the external relay to ON/OFF based on whether the RAC is set to either on/off or error/ok.
- Set up and wire the relay and extension cables at the installation site.
- Please use relays with reinforced insulation.
Dip switch settings

### SW500

1. When outputting the RAC on/off

   - The relay is ON when the unit is running, and OFF when it is not.

   ![ON](ON)

   Setting required

2. When outputting the RAC error/ok

   - The relay is ON when an error has occurred, and OFF when the unit is functioning properly.

   ![ON](ON)

   Setting required

- **SW501 and SW502 do not have to be set.**

### 4. Dip Switch Details

#### SW500 - Input/Output Mode Settings

<table>
<thead>
<tr>
<th>SW No.</th>
<th>Functions</th>
<th>OFF</th>
<th>ON</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 1</td>
<td>Not in use</td>
<td>Set to OFF</td>
<td>-</td>
<td>Be sure to set these to OFF. (When set to OFF, the unit cannot communicate with the air conditioner.)</td>
</tr>
<tr>
<td>No. 2</td>
<td>HA terminal (CN504) input switch</td>
<td>Pulse input</td>
<td>Continuous input</td>
<td>There is a switch between TC1 and 2 input on the TB571.</td>
</tr>
<tr>
<td>No. 3</td>
<td>HA terminal (CN504) output switch</td>
<td>Static mode</td>
<td>Dynamic mode</td>
<td></td>
</tr>
<tr>
<td>No. 4</td>
<td>Remote control (CN591) mode switch 1</td>
<td>See the next page</td>
<td>See the next page</td>
<td></td>
</tr>
<tr>
<td>No. 5</td>
<td>Remote control (CN591) mode switch 2</td>
<td>See the next page</td>
<td>See the next page</td>
<td></td>
</tr>
<tr>
<td>No. 6</td>
<td>Remote control (CN591) mode switch 3</td>
<td>On/Off output</td>
<td>Error/Ok output</td>
<td>When there is a problem while the unit is running, it will output a relay ON signal.</td>
</tr>
<tr>
<td>No. 7</td>
<td>Relay, extermination output mode switch</td>
<td>On/Off output</td>
<td>Error/Ok output</td>
<td>When the Auto Restart function on the air conditioner itself is set to ON, be sure to set these to OFF.</td>
</tr>
<tr>
<td>No. 8</td>
<td>Turn on/off with power option</td>
<td>Turn on/off with power: No (unit remains off when the source power is turned ON)</td>
<td>Turn on/off with power: Yes (Returns the unit to the status (on/off) it was in before the power was turned off)</td>
<td></td>
</tr>
</tbody>
</table>
### Remote control (CN591) mode switch

<table>
<thead>
<tr>
<th>SW 500</th>
<th>Functions</th>
<th>Operating Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 4</td>
<td>No. 5</td>
<td>No. 6</td>
</tr>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
</tbody>
</table>
| OFF    | OFF       | ON               | On/Off Prohibited/Allowed mode 1  
Manual operations prohibited when CN591 No. 1 and No. 3 are closed, permitted when open.  
Only when No. 1 and No. 3 are closed and manual operations are prohibited.  
On when CN591 No. 1 and No. 2 are closed, when open.  
(Cannot be operated from the remote control when manual operations are permitted. Only valid when operated from the CN591.) |
| OFF    | ON        | OFF              | On/Off Prohibited/Allowed mode 2  
(level input)  
On when CN591 No. 1 and No. 2 are closed, when open.  
Manually operated when CN591 No. 1 and No. 3 are closed, permitted when open.  
(Cannot be operated from the remote control when manual operations are permitted. Only valid when operated from the CN591.) |
| OFF    | ON        | ON               | On/Off Prohibited/Allowed mode 3  
(pulse input)  
On when CN591 No. 1 and No. 2 are closed, when open.  
Manually operated when CN591 No. 1 and No. 3 are closed, permitted when open.  
(Same as when they are open.) |
| ON     | OFF       | OFF              | Coin timer mode 1  
(for a no-voltage contact point a)  
Permitted and on when CN591 No. 1 and No. 2 are closed, manual operations prohibited and off when open.  
(When permitted, the unit can be operated from the remote control.) |
| ON     | OFF       | ON               | Coin timer mode 2  
(for a no-voltage contact point b)  
Manual operations prohibited and off when CN591 No. 1 and No. 2 are closed, permitted and on when open.  
(When permitted, the unit can be operated from the remote control.) |
| ON     | ON        | OFF              | Cooling-Heating/Temperature settings  
mode 1 (3 temperature patterns)  
On when CN591 No. 1 and No. 2 are closed, when open.  
When No. 1 and No. 3 are closed 20°C  
When No. 1 and No. 4 are closed 24°C  
When No. 1 and No. 5 are closed 28°C  
(When multiple switches No. 3, 4, and 5 are closed, the highest temperature will be selected.)  
Heat when No. 1 and No. 6 are closed, cool when open.  
(Remote control operations are valid as always.) |
| ON     | ON        | ON               | Cooling-Heating/Temperature settings  
mode 2 (8 temperature patterns)  
On when CN591 No. 1 and No. 2 are closed, when open.  
| No. 1 and No. 3 | No. 4 | No. 5 | Temperature settings |
| Open   | Open      | Open             | 16°C |
| Closed | Open      | Open             | 18°C |
| Open   | Closed    | Open             | 20°C |
| Closed | Closed    | Open             | 22°C |
| Open   | Open      | Closed            | 24°C |
| Closed | Open      | Closed            | 26°C |
| Open   | Closed    | Closed            | 28°C |
| Closed | Closed    | Closed            | 30°C |

Heat when No. 1 and No. 6 are closed, cool when open.  
(Remote control operations are valid as always.)
### SW501: Settings when connecting an MA remote controller

<table>
<thead>
<tr>
<th>SW No.</th>
<th>Functions</th>
<th>OFF</th>
<th>ON</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. 4</td>
<td>Refrigerant address 0</td>
<td></td>
<td></td>
<td>Only specify these settings when connecting an MA remote controller.</td>
</tr>
<tr>
<td></td>
<td>Refrigerant address 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerant address 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerant address 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerant address 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerant address 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerant address 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerant address 7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerant address 8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerant address 9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerant address 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerant address 11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerant address 12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerant address 13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerant address 14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerant address 15</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SW No.</th>
<th>Functions</th>
<th>OFF</th>
<th>ON</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 5</td>
<td>Room temperature detector</td>
<td>Indoor unit</td>
<td>Remote control</td>
<td>This should normally be set to OFF.</td>
</tr>
<tr>
<td>No. 6</td>
<td>MA remote controllers are directly connected to indoor units within the same group.</td>
<td>Not mixed</td>
<td>Mixed</td>
<td></td>
</tr>
</tbody>
</table>
MA & Contact Terminal Interface

**SW502 : Air Conditioner Function Settings**

(Set this switch based on the functions of the RAC connected to this device.)

<table>
<thead>
<tr>
<th>SW No.</th>
<th>Functions</th>
<th>OFF</th>
<th>ON</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 1</td>
<td>Availability of a heating mode</td>
<td>Combined cooler and heater</td>
<td>Cooling unit only</td>
<td></td>
</tr>
<tr>
<td>No. 2</td>
<td>Not in use</td>
<td>-</td>
<td>-</td>
<td>Permanently set to OFF.</td>
</tr>
<tr>
<td>No. 3</td>
<td>Not in use</td>
<td>-</td>
<td>-</td>
<td>Permanently set to OFF.</td>
</tr>
<tr>
<td>No. 4</td>
<td>Not in use</td>
<td>-</td>
<td>-</td>
<td>Permanently set to OFF.</td>
</tr>
<tr>
<td>No. 5</td>
<td>Not in use</td>
<td>-</td>
<td>-</td>
<td>Permanently set to OFF.</td>
</tr>
<tr>
<td>No. 6</td>
<td>Not in use</td>
<td>-</td>
<td>-</td>
<td>Permanently set to OFF.</td>
</tr>
<tr>
<td>No. 7</td>
<td>Not in use</td>
<td>-</td>
<td>-</td>
<td>Permanently set to OFF.</td>
</tr>
<tr>
<td>No. 8</td>
<td>Availability of a fan (Cooling model only)</td>
<td>Has a fan or mode OFF</td>
<td>No fan or mode ON</td>
<td></td>
</tr>
</tbody>
</table>

5. Test Run (Check Operations)

**Interface status monitor**

You can check the status of the interface by the LED lamp on the interface unit board.

<table>
<thead>
<tr>
<th>LED lamp no.</th>
<th>Lamp off</th>
<th>Lamp on</th>
<th>Blinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED521</td>
<td>DC 12 V is not being supplied from the air conditioner.</td>
<td>DC 12 V is being supplied from the air conditioner.</td>
<td></td>
</tr>
<tr>
<td>LED522</td>
<td>Device is not communicating properly with the air conditioner.</td>
<td>-</td>
<td>Blinking at approx. 1 second intervals: Device is communicating normally with the air conditioner.</td>
</tr>
<tr>
<td>LED523</td>
<td>Device is not communicating properly with the MA remote controller.</td>
<td>-</td>
<td>Blinking at approx. 8 second intervals: Device is communicating normally with the MA remote controller.</td>
</tr>
</tbody>
</table>

* Use the table above to check the device operations.

6. Mounting the MA & CONTACT TERMINAL Interface Unit

When mounting the interface to the back-side dent of MFZ-KA model, be sure to apply insulation material to prevent condensation from forming.

The Interface unit should be placed in a location where the connecting cable from the interface can reach an indoor unit. The device will not function properly if the connecting cable is extended so the connecting cable should not be extended. Mount the interface unit securely to a pillar or wall using 2 or more screws.

**When Using Wall Mounting Brackets (2)**

1. Attach the wall mounting brackets (2) to the interface unit (1) using 2 mounting screws (3).

2. Mount the unit to a pillar or wall using 2 mounting screws (3).
When Mounting Directly to a Wall

Mount the interface unit (1) case to the wall using the mounting screws (3).

* When mounting the interface unit (1) using a cushioning material (3), be sure to mount it in a location where it will not fall.

When mounting the interface unit (1) inside a ceiling or wall, install an access door to facilitate maintenance.

When the interface unit (1) is mounted above an indoor RAC unit, it should be positioned 40 mm or more away from the unit to ensure that ceiling grills can be removed.

Attach the interface unit (1) connecting cable here. Store extra connecting cable in the ductwork space behind the indoor RAC unit.

* If there is any slack in the connecting cable, use a fastener (1) to keep it in place.
**M-NET Interface**

**Photo**

**Descriptions**

Enables centralized and individual control of M series and S series models with new-A control using M-NET.

**Applicable Models**

- MSZ-FA/GA
- MSZ-FD
- MFZ-KA
- SEZ-KA
- SLZ-KA

**Specifications**

<table>
<thead>
<tr>
<th>Power</th>
<th>12V DC (supplied from indoor unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating conditions</td>
<td>Indoor only (ambient temperature: 0 to 40°C, no condensation)</td>
</tr>
<tr>
<td>Indoor unit connecting cable</td>
<td>Dedicated 5-wire cable</td>
</tr>
<tr>
<td>Weight</td>
<td>350g (including indoor unit connecting cable)</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

```
2000

160

10

140

54
```
How to Use / How to Install

1. Before Installation

1.1. How to Use the M-NET Interface

**Caution**
When using a packaged air conditioner (city-multi) system remote controller, you cannot register packaged air conditioners and room air conditioners in the same group. In this case, register the Packaged and room air conditioner in different groups.

**Functions**
Centralized and individual management of M/P/S series using M-NET(*).
* A type of packaged air conditioner control (city-multi)

**Related Products Sold Separately**
- ME Remote Controller PAR-F27MEA
- Centralized Controller G-50A
- System Remote Controller PAC-SF44SRA
- ON/OFF Remote Controller PAC-YT40ANRA
- Schedule Timer (M-NET) PAC-YT34STA
- Power supply unit PAC-SC50KUA

**Sample of System Configuration (only M/S series outdoor-unit)**
Sample configuration of a system using a centralized controller

1.2. Accessory
Before installing the device, make sure you have all the necessary parts.

**Accessory**

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface unit (with 5-core connecting cable)</td>
<td>1</td>
</tr>
<tr>
<td>Mounting brackets</td>
<td>1</td>
</tr>
<tr>
<td>Screws for mounting 3.5 x 2</td>
<td>4</td>
</tr>
<tr>
<td>Cushioning material (with adhesive)</td>
<td>1</td>
</tr>
<tr>
<td>Cord clamp for mounting (small)</td>
<td>2</td>
</tr>
<tr>
<td>Mounting cord clamp (large)</td>
<td>2</td>
</tr>
<tr>
<td>Screws for mounting 3.5 x 2</td>
<td>1</td>
</tr>
<tr>
<td>Screw for mounting 4 x M10</td>
<td>1</td>
</tr>
<tr>
<td>* Use this when mounting cord clamp to and around M series.</td>
<td></td>
</tr>
<tr>
<td>Screw for mounting 4 x M6</td>
<td>1</td>
</tr>
<tr>
<td>* Use this when mounting cord clamp together with the parts of M series.</td>
<td></td>
</tr>
<tr>
<td>Cable ties</td>
<td>4</td>
</tr>
<tr>
<td>Fasteners (for joining the lead wires)</td>
<td>5</td>
</tr>
<tr>
<td>Cord clamp for wiring</td>
<td>5</td>
</tr>
<tr>
<td>Screws for mounting 3.5 x 2</td>
<td>5</td>
</tr>
<tr>
<td>Interface case mounting screws 3.5 x 2</td>
<td>2</td>
</tr>
</tbody>
</table>

**Items to Prepare at the Installation Site**

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection wiring (centralized controller)</td>
<td>1</td>
</tr>
<tr>
<td>Shield wiring CVVS/CPEVS</td>
<td>1</td>
</tr>
<tr>
<td>Connection wiring (for connecting the ME Remote Controller)</td>
<td>1</td>
</tr>
<tr>
<td>Remote control wires (2-core sheath wire 0.3 mm²)</td>
<td>1</td>
</tr>
<tr>
<td>Related parts sold separately</td>
<td>1</td>
</tr>
<tr>
<td>* Prepare the necessary number of parts sold separately as needed for your system.</td>
<td></td>
</tr>
</tbody>
</table>

* CPEVS; PE insulated PVC jacketed shielded communication cable
* CVVS; PVC insulated PVC jacketed shielded control cable
PE; Polyethylene  PVC; Polyvinyl chloride
2. Mounting the M-NET Interface Unit

The M-NET Interface unit should be placed in a location where the 5-core connecting cable from the interface can reach an indoor unit. Do not extend the 5-core connecting cable. This will cause the device to malfunction.

Mount the interface unit securely to a pillar or wall using 2 or more screws.

**When Using Wall Mounting Brackets**  
1. Attach the wall mounting brackets to the interface unit using 2 mounting screws.

**When Mounting Directly to a Wall**  
Mount the interface case to the wall using the mounting screws.

* When mounting the interface unit using a cushioning material, be sure to mount it in a location where it will not fall.

Attach the 5-core connecting cable of the interface unit here. Store extra 5-core connecting cable in the ductwork space behind the indoor unit.

* If there is any slack in the 5-core connecting cable, use a fastener to keep it in place.
3. Setting the Switches

If the system is not configured correctly, the unit will not function properly. You may be unable to control the functions of the RAC from the System Controller/ME Remote Controller or functions not available on your RAC could appear on the System Controller/ME Remote Controller display. You should therefore ensure that the system is properly configured before connecting the power supply.

■ SW500 No. 1, No. 2 - Not in use
These should be set to OFF (if set to ON, the device will not communicate properly with the System Controller).

■ SW500 No. 3 - Power On/Off Settings
This setting indicates whether the RAC should be turned off or on when power is supplied to the RAC or M-NET Interface.

Turn on with power No
[Unit remains off when the power is supplied.]

Turn on with power Yes
[Unit turns on when the power is supplied.]

■ SW500 No. 4 - Availability of RAC purifier or fan mode
If there is no "Purifier" button on the wireless remote control, and if the word "Fan" does not appear when the "Mode" button is pressed, the purifier and fan modes are not available (set to OFF).

Does not have a purifier or fan mode

Has a purifier or fan mode

■ SW500 No. 5-8 - RAC Function Check

<table>
<thead>
<tr>
<th>SW500</th>
<th>Function description</th>
<th>How to check a function</th>
<th>OFF</th>
<th>ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 5</td>
<td>Availability of automatic operation mode (a mode that allows the air conditioner to determine whether to select cooling or heating).</td>
<td>If &quot;Auto&quot; is not displayed when you push the &quot;Mode&quot; button on the wireless remote control, the auto operation mode is not available (OFF).</td>
<td>Does not have an auto operation mode</td>
<td>Does have an auto operation mode</td>
</tr>
<tr>
<td>No. 6</td>
<td>Availability of a fan oscillation setting</td>
<td>If &quot;Oscillate&quot; is displayed when you push the &quot;Fan Direction&quot; button on the wireless remote control, the fan oscillation setting is available (OFF). (If there is no &quot;Fan Direction&quot; button, the setting is OFF.)</td>
<td>Has a fan oscillation setting</td>
<td>Does not have a fan oscillation setting</td>
</tr>
<tr>
<td>No. 7</td>
<td>Availability of a fan direction setting</td>
<td>If there is a Fan Direction button on the wireless remote control, the fan direction setting is available (OFF).</td>
<td>Has a fan direction setting</td>
<td>Does not have a fan direction setting</td>
</tr>
<tr>
<td>No. 8</td>
<td>Availability of a heating mode</td>
<td>If &quot;Heat&quot; appears when you push the &quot;Mode&quot; button on the wireless remote control, the unit is a model that offers both cooling and heating (OFF).</td>
<td>Dual cooling and heating model</td>
<td>Cooling unit only</td>
</tr>
</tbody>
</table>

■ SW510, SW501 - Address settings
Specifies the address settings for centralized management (address settings can be set from 01-50).

Self-Address

SW510 sets the 10s position of the address and SW501 sets the 1s position of the address. For example, to set a unit to the address 25, set SW510 to “2” and SW501 to “5”.

MITSUBISHI ELECTRIC CORPORATION
4. Connecting the M-NET Interface

Connect the M-NET Interface board to the RAC indoor control board.

- The cables connected to the RAC should be mounted on or near the RAC. If the connecting cable is not securely mounted, the connector may detach, break, or malfunction.
5. Connecting the M-NET Interface, the Power Supply, and the ME Remote Controller

- When connecting the unit to a system controller or ME Remote Controller, connect the transmission line of the M-NET to the control signal terminal.
- Connect the 2-core connection wrings (A) to A1/B1 or A2/B2 (they can be connected to either).
- Cross the shield portion of each connecting wire using the S terminal only when cross wiring the connection wires.
- When connecting the connection wrings (A) and the ME Remote Controller connection wrings (B) to the terminal board, there is no need to worry about polarity.

**When the connection wrings (A) are not cross-wired**

![Diagram of connection when wrings are not cross-wired]

**When the connection wrings (A) are cross-wired**

![Diagram of connection when wrings are cross-wired]

- After completing the wiring, securely affix a cord clamp to each electrical wire.

**When the connection wrings (A) are cross-wired**

![Diagram of cross-wiring]

- Bare wire size

![Diagram of bare wire size]

**Caution**

- Electrical work should be performed in accordance with the Technical Standards Regarding Electrical Equipment and the Interior Wiring Standards.
- Connection wiring and remote control wiring should be located as far away from other electrical wiring as possible. Placing them too closely together could cause a malfunction.

1. Screws
2. Cord clamp (large)
3. Cut with nippers at the notches.
   Make sure the cut surface is free of any burr so that the connection wire does not get damaged.

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6. Notes Regarding Use

Please read this information carefully before attempting a test run.
The following control information should be thoroughly explained and provided to the users of this device. (Please provide these instructions to the user once the installation is complete.)

* This M-NET Interface operates RACs using the controls of a packaged air conditioner (city-multi), but there are several limitations imposed as a result of the functional differences between RACs and packaged air conditioners.
1. When operating the system using a system controller or ME Remote Controller, these operations will not appear on the display of the wireless remote controller.
2. The dehumidifying modes of individual RACs cannot be operated using the ME Remote Controller/System Controller. When an independent dehumidifying mode is set using the remote controller that came with the RAC, "Dry" will appear on the display because there is no corresponding mode on the ME Remote Controller/System Controller.
3. Functions that are available on the ME Remote Controller/System Controller but that are not available on the RAC can be operated by switching to a predetermined separate operation mode. (See the "Table of RAC Functions Activated from the ME Remote Controller/System Controller.")
4. Functions that are available on the remote controller of the RAC but are not available on the ME Remote Controller/System Controller will produce a predetermined display. In this case, the actual operation and the display may differ. (If the fan speed is automatically set using the remote controller that came with the RAC, the setting "High" will appear on the ME Remote Controller/System Controller. Likewise, if the fan direction is set to automatic, the setting “Downward Air Flow 80%” will appear on the ME Remote Controller/System Controller.)
5. Because the temperature range of the RAC is broader than the ME Remote Controller/System Controller, when the RAC is set to lower than 17°C or higher than 30°C, the temperature display on the ME Remote Controller/System Controller will show the minimum or maximum temperature that can be set. (For example, even if the room air conditioner is set to cool a room to 16°C, the display on the ME Remote Controller/System Controller may read "17°C.")
   The RAC operates according to the room temperature detected by the RAC unit.
6. Timer operations should be set using only the remote controller that came with the RAC or the ME Remote Controller/System Controller. If both are used to set the timer to the same time, the timer will not function properly.
7. When the timer is set using the remote controller that came with the RAC, the timer information will not be displayed on the ME Remote Controller/System Controller.
8. If the timer is set using the ME Remote Controller/System Controller, the timer set using that device will not be cancelled even if the unit is turned off using the remote controller that came with the RAC.
9. When manual operations using the system controller are prohibited, the remote controller that came with the RAC will not function, but the beeping sound that is emitted when it is operating normally will still sound.
10. To clear an error message from the display of the ME Remote Controller/System Controller, briefly turn off the unit using the ME Remote Controller/System Controller or the remote controller that came with the RAC. (The error display on the air conditioner unit may be cleared automatically, but it will not clear from the ME Remote Controller/System Controller until the unit is turned off.)
11. The room temperature sensor installed in the ME Remote Controller cannot be used.
This table shows the RAC functions that can be activated by the ME Remote Controller/System Controller.

<table>
<thead>
<tr>
<th>ME Remote Controller/System Controller operations/display</th>
<th>RAC response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power</strong></td>
<td></td>
</tr>
<tr>
<td>On/Off</td>
<td>On/Off</td>
</tr>
<tr>
<td><strong>Mode</strong></td>
<td></td>
</tr>
<tr>
<td>Fan</td>
<td>Fan</td>
</tr>
<tr>
<td>Auto Cool</td>
<td>Cool</td>
</tr>
<tr>
<td>Auto Heat</td>
<td>Heat</td>
</tr>
<tr>
<td>Cool</td>
<td>Cool</td>
</tr>
<tr>
<td>Heat</td>
<td>Heat</td>
</tr>
<tr>
<td>Dry</td>
<td>Dry</td>
</tr>
<tr>
<td>Temperature settings</td>
<td></td>
</tr>
<tr>
<td>17-30 °C</td>
<td>17-30 °C</td>
</tr>
<tr>
<td><strong>Fan speed settings</strong></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Medium 1</td>
<td>Medium</td>
</tr>
<tr>
<td>Medium 2</td>
<td>Medium</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td><strong>Air directional settings</strong></td>
<td></td>
</tr>
<tr>
<td>Position 1 (Horiz.)</td>
<td>Position 1 (Horiz.)</td>
</tr>
<tr>
<td>Position 2</td>
<td>Position 3</td>
</tr>
<tr>
<td>Position 3</td>
<td>Position 4</td>
</tr>
<tr>
<td>Position 4</td>
<td>Position 5</td>
</tr>
<tr>
<td>Swing</td>
<td>Swing</td>
</tr>
</tbody>
</table>

* Some items may not be displayed, depending on the switch settings.
* When operating the unit using the remote controller that came with the RAC, the operation shown on the remote is the one that will be activated on the actual RAC unit. In this case, the information shown on the display of the ME Remote Controller/System Controller may not accurately reflect the unit's actual operations (see the "Notes Regarding Use").
Centralized On/Off Remote Controller

**MAC-821SC-E**

*MAC-397IF-E required*

### Photo

![Remote Controller Image](image)

### Descriptions

Enables regulate up to 8 indoor units from one single remote controller. ON/OFF selection and operation status confirmation is possible.

### Applicable Models

- MSZ-FA
- MSZ-GA
- MFZ-KA
- SEZ-KA
- SLZ-KA
- SEZ-KD

### Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of controlled air conditioners</td>
<td>8 Units</td>
</tr>
<tr>
<td>Power</td>
<td>~220-240 V 50/60 Hz</td>
</tr>
<tr>
<td>Power consumption</td>
<td>4 W</td>
</tr>
<tr>
<td>Current</td>
<td>0.02 A</td>
</tr>
<tr>
<td>Ambient Tempreature</td>
<td>0 - 40 C</td>
</tr>
<tr>
<td>Dimensions (H x W x D mm)</td>
<td>120 x 120 x 15</td>
</tr>
<tr>
<td>Weight</td>
<td>910 g</td>
</tr>
</tbody>
</table>

### Dimensions

Unit: mm

![Dimensions Diagram](image)
How to Use / How to Install

1. Accessory

Before installing the unit, make sure that you have all the necessary parts.

<table>
<thead>
<tr>
<th>Centralized controller</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Cover</td>
<td>Remove the cover with a flathead screwdriver.</td>
</tr>
<tr>
<td>B Screw</td>
<td>1</td>
</tr>
<tr>
<td>Base plate</td>
<td>1</td>
</tr>
<tr>
<td>Switch box</td>
<td>1</td>
</tr>
<tr>
<td>Room name stickers</td>
<td>1</td>
</tr>
<tr>
<td>Rubber seal (large)</td>
<td>2</td>
</tr>
<tr>
<td>Rubber seal (small)</td>
<td>1</td>
</tr>
<tr>
<td>Sealing material (adhesive)</td>
<td>4</td>
</tr>
<tr>
<td>Mounting screw M4 x 30</td>
<td>2</td>
</tr>
</tbody>
</table>

Items to Prepare at the Installation Site

- **MA & Contact terminal interface (MAC-397IF-E)**: One per air conditioner
- **Power supply wire (2-core + ground) 1.5 mm², in conformity with Design 245 IEC 57.**
- **Connection wire**
  - Wire specification
  - CVV (3-core) 0.5 mm² or equivalent
    - CVV is a control cable which is sheathed in polyvinyl chloride with polyvinyl insulated wires inside.
  - One per air conditioner
- **Ring tongue terminal for M4**
- **PG connection**

Mounting Wall

This centralized controller can be mounted on a wall with a thickness of 6-30 mm.

Since the maximum wall thickness for the centralized controller mounting screw M4 x 30 is 17 mm, use screws of the appropriate length for the wall thickness if the wall is between 17 mm and 30 mm thick.

(The best length for an M4 mounting screw is the wall thickness plus 13 mm.)

1-1. Connection Requirements

The MA & Contact terminal interface (MAC-397IF-E) is necessary to connect MAC-821SC-E with RAC.

- Power supply wire
- Connection wire

Breaker capacity | 10 A
--- | ---
Connect to the supply terminals and leave a contact separation of at least 3 mm at each pole to disconnect the source power pole.
(When the power switch is shut off, it must disconnect all poles.)
1-2. Selecting an Installation Site

• The centralized controller is an exposed, wall-mounted model. Install the unit in a dry location.
• For information on selecting a mounting wall, see the “Mounting Wall” in section 2.

Switch Box

The centralized controller power and connection wiring is generally direct wired. The switch box supplied (with switch box covers for 2 units) should therefore be used for installing the centralized controller.

1-3. Electrical Work

• Use 1.5 mm² power supply wire (2-core + ground).
• For the connection wire, use a control cable CVV (0.5 mm² 3-core) or equivalent product.
• CVV is a control cable which is sheathed in polyvinyl chloride with polyvinyl insulated wires inside.
• Complete the power supply wire and connection wire work before mounting the centralized controller.
• The electrical work should be performed in accordance with the Technical Standards Regarding Electrical Equipment and the Interior Wiring Standards.

1-4. Assigning Air Conditioner Device Numbers

• The numbers (1B8) displayed on the control panel of the centralized controller correspond to the numbers of each connected air conditioner (device number).
• Assign air conditioner device numbers that correspond to the numbers shown on the control panel based on the structure of the building or the layout of the rooms in which the air conditioners are installed.

1-5. Sample of Configuration

This figure shows a sample 4-unit configuration.

1-6. Mounting Diagram
2. Mounting the Centralized Controller/Direct Wiring

2-1. Mounting Preparations

1. Remove 2 screws, and remove the base plate $2$ from the switch box $3$. Set the 2 screws aside, as they will be used in the section on "4-1. Mounting the Base Plate" under "Mounting the Centralized Controller".

2. Insert the switch box $3$ into the wall. Size the hole in the wall to ensure that there is no gap between the switch box $3$ and the wall surface. Use the switch box $3$ wall installation dimensions and opening dimensions shown in the figure below.

3. Feed the power supply wire $5$, connection wire $C$, and ground wire from inside of the wall, and pull them through the switch box $3$ into the room about 150 mm. In addition, when not using a conduit for a connection wire $C$, be sure to install a rubber seal (large) $5$ or rubber seal (small) $5$ into the hole in the switch box $3$ before feeding the connection wire $C$ through the hole. Use the PG connection $E$ prepared at the installation site to secure the power supply wire $5$ in the hole in the switch box $3$.

4. After the screws have been removed from the cover of the centralized controller $1$, remove the cover using a flathead screwdriver.

2-2. Connecting the Connection Wire

1. Connect the power supply wire (2-core + ground) $5$ to the power terminal. After they are connected, check that the wires cannot be easily pulled off.

Work on Power Supply Wire End
- Be sure to use 1.5 mm² power supply wire $5$ (2-core + ground).
- The work on power supply wire end should be performed as shown in the figure below.
2. Mount the ground wire using the ground wire mounting screws.

3. Connect the connection wire (3-core) to the MA & Contact terminal interface (MAC-397IF-E), (sold separately) corresponding to the air conditioner device number of each unit on the signal terminal.
   - One signal terminal can be used for connecting 4 rooms.

   ![Diagram showing signal terminal connections](image)

   - Connect the devices corresponding to their display number on the control panel.
   - Connect the centralized controller to the adapters as shown below.

   ![Diagram showing centralized controller connections](image)

3. Mounting the Centralized Controller

3-1. Mounting the Base Plate

   Insert the base plate into the switch box, and remount it using the screws removed in the "3-1 Mounting Preparations". Be sure to mount the base plate so the up arrow is facing upward.
   Also, be careful not to damage the wires by getting them caught between plate and the switch box.

3-2. Mounting the Centralized controller

1. Before mounting the unit, apply the supplied sealing materials to the base plate, and fill in the space between the switch box and the hole in the wall (a gap here could result in dew condensation). Cut the sealing material to a length such that it can be wrapped around the hole in the wall based on the fixed position.

2. Connect the connection cord from the base plate through the slot in the centralized controller.

3. Mount the centralized controller to the base plate using the supplied mounting screw. Be careful not to damage the connection wires by getting them caught in the wailing materials.

4. Using the supplied screw, attach the cover to the centralized controller.

5. To attach the cover to the centralized controller, fit the tabs along the top of the cover into the holes in the centralized controller and then push the lower portion of the cover into place.
4. Test Run

A test run should be performed after the centralized controller and the MA & Contact terminal interface (MAC-397IF-E) have all been installed.

1. Turn the power switch on each air conditioner to ON.

2. Press the ON/OFF button on the wireless remote controller for each air conditioner to make sure the air conditioner turns on, and then press the button again to turn each unit off.

3. Supply power (AC 220-240 V) to the centralized controller.

4. Press the ON/OFF button on the upper part of the control panel of the centralized controller, and confirm that the (green) operation indicator lamp for that device number comes on. Also confirm that the corresponding air conditioner has turned on (the operation indicator lamp will not come on if the air conditioner is not connected).

5. Press the ON/OFF button again, and confirm that the operation indicator lamp goes out and that the air conditioner unit turns off.

6. Repeat steps 4 and 5 again for each device number.

7. Press the All OFF button, and confirm that all the (green) operation indicator lamps go out and that all the air conditioners turn off.

5. Room Name Display

Select the appropriate stickers from the room name stickers supplied, and affix them to the display section of the panel.
This kit (L/N/Earth) is used when the power supply of the indoor unit and the outdoor unit is separated. (For PUHZ applications only)

**Applicable Models**
- PLA-RP AA
- PKA-RP35/50GAL
- PKA-RP50FAL2
- PKA-RP50/60/71/100FAL
- PSA-RP71/100/125/140GAL
- PCA-RP GA
- PCA-RP50GA2
- PEAD-RP EA(2)
- PEAD-RP GA

**Specifications**

<table>
<thead>
<tr>
<th>Terminal block capacity</th>
<th>30A/330V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminal block material</td>
<td>Denatured melamine</td>
</tr>
<tr>
<td>Parts composition</td>
<td>Terminal block (with lead wires connected) x 1, Screw x 1, Fastener (for binding lead wires)</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

- Connector 2P (Blue)
- 53.8 mm
- 39.2 mm
- 120 mm
- 24 mm
How to Use / How to Install

1. Overview
This kit is used when the power supply of the indoor unit and the outdoor unit is separated.
(for PUHZ applications only)
Refer to the installation manual of the indoor unit as well.

2. Provided parts
Confirm the following parts are included.

<table>
<thead>
<tr>
<th>Terminal block (lead wires already wired) x 1</th>
<th>Screw (to attach terminal block) x 1</th>
<th>Fastener (to tie lead wires) x 1</th>
<th>Screw (to secure ground wire) x 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>For PAC-SG96HR-E</td>
<td>For PAC-SG97HR-E</td>
<td></td>
<td>For PAC-SG96HR-E only</td>
</tr>
</tbody>
</table>

1:1 System

(For models without heater)
• The indoor power supply terminal kit is required.

Simultaneous twin/triple/four system

(For models without heater)
• The indoor power supply terminal kits are required.

* Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.
3. Attachment method

**PAC-SG96HR**

4-way ceiling cassette, PLA-RP.AA type:

1. Remove the cover of electric parts box.

2. Attach terminal block ① using screw ② in the direction shown in the figure.

3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

Ceiling suspended, PCA-RP.GA type:

1. Remove the cover of electric parts box.

2. Attach terminal block ① using screw ② in the direction shown in the figure.

3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

Wall mounted, PKA-RP.GAL type:

1. Remove the terminal block cover of electric parts box.

2. Attach terminal block ① using screw ② in the direction shown in the figure.

3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

Wall mounted, PKA-RP.FAL type:

1. Remove the terminal block cover of electric parts box.

2. Attach terminal block ① using screw ② in the direction shown in the figure.

3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.
PAC-SG96HR
Ceiling concealed, PEAD-RP.EA type:
1. Remove the cover of electric parts box.
2. Attach terminal block ① using screw ② in the direction shown in the figure.
3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

PAC-SG97HR
Ceiling suspended for kitchens, PCA-RP.HA type:
1. Remove the terminal block cover of electric parts box.
2. Attach terminal block ① using screw ② in the direction shown in the figure.
3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

4. Electric wiring
Be sure to do the electric wiring following the steps in each indoor unit installation manual.

5. Paste the labels enveloped in the instruction document of indoor unit near the electric wiring diagrams of both indoor and outdoor units.
Three types of labels (labels A-C) are provided: Paste the label B.
(Separate indoor unit/outdoor unit power supplies... Label B)

6. DIP switch settings of the outdoor unit control board
It is necessary to change the settings of DIP switch on the outdoor unit control board.

<table>
<thead>
<tr>
<th>Outdoor unit DIP switch settings (when using separate indoor unit / outdoor unit power supplies only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON</td>
</tr>
</tbody>
</table>

7. Test run
Perform a test run following the steps in the installation manual.
**Power Supply Terminal Kit for new A-Control Indoor units (L/N/Earth) PAC-SG96HR-E**

**Floor standing, PSA-RP.GA type:**
1. Remove the terminal block cover of electric parts box.

2. Attach terminal block ① using screw ② in the direction shown in the figure.

3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

**Ceiling concealed, PEAD-RP.GA type:**
1. Remove the terminal block cover of electric parts box.

2. Attach terminal block ① using screw ② in the direction shown in the figure.

3. Change the relay connectors of blue and yellow lead wires.

---

**Change of connectors**

- Indoor unit power supplied from outdoor unit (when shipped from factory)
- Separate indoor unit / outdoor unit power supplies
This kit (L/N) is used when the power supply of the indoor unit and the outdoor unit is separated. (For PUHZ applications only)

**Applicable Models**
- PCA-RP HA
  - only for kW basis models

**Specifications**

<table>
<thead>
<tr>
<th>Specifications</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminal block capacity</td>
<td>15A/264V</td>
</tr>
<tr>
<td>Terminal block material</td>
<td>Denatured melamine</td>
</tr>
<tr>
<td>Parts composition</td>
<td>Terminal block (with lead wires connected) x 1, Screw x 1, Fastener (for binding lead wires)</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

- Connector 2P (Blue)
  - Width: 36 mm
  - Length: 80 mm
  - Height: 18.5 mm
# How to Use / How to Install

## 1. Overview
This kit is used when the power supply of the indoor unit and the outdoor unit is separated. (for PUHZ applications only)
Refer to the installation manual of the indoor unit as well.

## 2. Provided parts
Confirm the following parts are included.

<table>
<thead>
<tr>
<th>Terminal block (lead wires already wired) x 1</th>
<th>Screw (to attach terminal block) x 1</th>
<th>Fastener (to tie lead wires) x 1</th>
<th>Screw (to secure ground wire) x 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>For PAC-SG96HR-E</td>
<td></td>
<td></td>
<td>For PAC-SG96HR-E only</td>
</tr>
</tbody>
</table>

### 1:1 System
- The indoor power supply terminal kit is required.

- Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.

### Simultaneous twin/triple/four system
- The indoor power supply terminal kits are required.

- Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.
3. Attachment method

**PAC-SG96HR**

4-way ceiling cassette, PLA-RP.AA type:
1. Remove the cover of electric parts box.
2. Attach terminal block ① using screw ② in the direction shown in the figure.
3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

Ceiling suspended, PCA-RP.GA type:
1. Remove the cover of electric parts box.
2. Attach terminal block ① using screw ② in the direction shown in the figure.
3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

Wall mounted, PKA-RP.FAL type:
1. Remove the terminal block cover of electric parts box.
2. Attach terminal block ① using screw ② in the direction shown in the figure.
3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

Wall mounted, PKA-RP.GAL type:
1. Remove the terminal block cover of electric parts box.
2. Attach terminal block ① using screw ② in the direction shown in the figure.
3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.
4. Electric wiring
Be sure to do the electric wiring following the steps in each indoor unit installation manual.

5. Paste the labels enveloped in the instruction document of indoor unit near the electric wiring diagrams of both indoor and outdoor units.
Three types of labels (labels A-C) are provided: Paste the label B.
(Separate indoor unit/outdoor unit power supplies... Label B)

6. DIP switch settings of the outdoor unit control board
It is necessary to change the settings of DIP switch on the outdoor unit control board.

<table>
<thead>
<tr>
<th>Outdoor unit DIP switch settings (when using separate indoor unit / outdoor unit power supplies only)</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

7. Test run
Perform a test run following the steps in the installation manual
Floor standing, PSA-RP.GA type:
1. Remove the terminal block cover of electric parts box.
2. Attach terminal block ① using screw ② in the direction shown in the figure.
3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

Ceiling concealed, PEAD-RP.GA type:
1. Remove the terminal block cover of electric parts box.
2. Attach terminal block ① using screw ② in the direction shown in the figure.
3. Change the relay connectors of blue and yellow lead wires.

Change of connectors

Indoor unit power supplied from outdoor unit (when shipped from factory)
Separate indoor unit / outdoor unit power supplies
Indoor power supply terminal kit

**Photo**

**Descriptions**

This kit is used when the power supply of the indoor unit and the outdoor unit is separated. (for PLA-RP•BA(2) applications only)

**Applicable Models**

- PLA-RP•BA
- PLA-RP•BA2

**Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminal block capacity</td>
<td>5A/250V</td>
</tr>
<tr>
<td>Terminal block material</td>
<td>Denatured melamine</td>
</tr>
<tr>
<td>Parts composition</td>
<td>Terminal block (With lead wires connected) x1, Screw x1, Fasterner (for binding lead wires)x1</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

```
82
310
```

Connector 2P(Blue)
How to Use / How to Install

1. Overview
   This kit is used when the power supply of the indoor unit and the outdoor unit is separated. (for PLA-RP, BA applications only)
   Refer to the installation manual of the indoor unit as well.

2. Provided parts
   Confirm the following parts are included.

<table>
<thead>
<tr>
<th>① Terminal block (lead wires already wired) x 1</th>
<th>② Cover x 1</th>
<th>③ Screw x 3</th>
<th>④ Fastener (to tie lead wire) x 2</th>
<th>⑤ Seal x 1</th>
</tr>
</thead>
</table>

3. Attachment method

   1. Remove the cover of electric parts box.

   2. Use the two screws ③ to attach the terminal block ① in the direction shown in the figure, and wire the leads to electric parts box.

   3. Attach the terminal block ① in the direction shown in the figure, and wire the leads to electric parts box.

   4. Hook cover ② onto terminal block ① (1 Piece) to attach the cover, and use screw ③ to secure it to the indoor unit.

   5. Remove the screw, and then secure the ground wire.

   6. Exchange the blue and yellow relay connectors of leads, and use fastener ④ to bundle the leads.

   7. Screw ③: To secure the ground wire.

   8. Screw ③ (1 Piece)

   9. Exchange the blue and yellow relay connectors.

   10. Fastener ④ (1 Piece)

   11. Remove the screw, and then secure the ground wire.

   12. Portion to be hooked

   13. Cover ②
Indoor power supply terminal kit PAC-SH52HR-E

**Change of connectors**

* Indoor unit power supply from outdoor unit
  * BLACK wire
  * Indoor unit control board

Separate indoor unit / outdoor unit power supplies

### 1:1 System
- The indoor power supply terminal kit is required.

1. Outdoor unit power supply
2. Earth leakage breaker
3. Wiring circuit breaker or isolating switch
4. Outdoor unit
5. Indoor unit / outdoor unit connecting cords
6. Remote controller
7. Indoor unit
8. Option
9. Indoor unit power supply

- Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.

### Simultaneous twin/triple/four system
- The indoor power supply terminal kits are required.

1. Outdoor unit power supply
2. Earth leakage breaker
3. Wiring circuit breaker or isolating switch
4. Outdoor unit
5. Indoor unit / outdoor unit connecting cords
6. Remote controller
7. Indoor unit
8. Option
9. Indoor unit power supply

- Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.

4. **Electric wiring**
   
   Be sure to do the electric wiring following the steps in each indoor unit installation manual.

5. **Paste the labels** enveloped in the instruction document of indoor unit near the electric wiring diagrams of both indoor and outdoor units.
   
   Three types of labels (labels A-C) are provided. Paste the label B. (Separate indoor unit/outdoor unit power supplies... Label B)

6. **Paste the seal** ⑤ on the surface of the indoor electric cover.

7. **DIP switch settings** of the outdoor unit control board
   
   It is necessary to change the settings of DIP switch on the outdoor unit control board.
Advanced MA remote controller with the large size dot liquid crystal display. Multi-language display and weekly timer function are available.

### Applicable Models
- MSZ-FD
- MSZ-GC/GB/GA
- MSZ-HC
- MFZ-KA
- MLZ-KA

### Specifications

<table>
<thead>
<tr>
<th>External colors</th>
<th>Cover</th>
<th>LCD periphery area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pure white (Munsell 6.9Y 8.9/0.4)</td>
<td>Medium gray</td>
</tr>
</tbody>
</table>

### Dimensions

Unit: mm

- 120 x 130 mm
- 46 mm
- 19 mm
- 83.5 mm
How to Use / How to Install

1 Confirming the Supplied Parts

Confirm that the box includes the following parts, in addition to this installation manual:
1. Remote controller (cover, body) ................................................................. 1
2. Cross recessed pan head screw (M4 ×30) ............................................... 2
3. Wood screw (4.1 ×16, used for directly hooking to the wall) ....................... 2
4. Caution label (in 12 languages) ................................................................. 1
   *1 For the remote control, obtain a 2-core cable between 0.3 and 1.25 mm² at the site.
   *2 PAC-YT32PTA cannot be connected.

2 How To Install

1. Choose a place in which to install the remote controller (switch box).
   Be sure to observe the following steps:
   (1) Temperature sensors are provided with both the remote controller and the indoor units. When using the remote controller temperature sensor, the master remote controller detects the room temperature. Install the master remote controller in a place where the average room temperature can be detected and which is not affected by any heat source from direct sunlight or air blown from air conditioning units.

   CAUTION The place where (when) the difference between the room temperature and the wall temperature is large, the wall temperature that is affected by the temperature of the wall on which the remote controller is installed is measured. Therefore, the difference between the room temperature and the measured wall temperature may be large. When the installation site is one of the followings, use of a temperature sensor for an indoor unit is recommended:
   - When the room is not well-ventilated and the air does not reach the wall on which the remote controller is installed.
   - When the difference between the temperature of the wall on which the remote controller is installed and the room temperature.
   - When the backside of the wall on which the remote controller is installed is exposed to the outdoor air.
   When the temperature changes drastically, the temperature may not be measured accurately.

   NOTE: Make sure that there is no wiring or wire near the remote controller sensor. If there is, the remote controller cannot detect the exact room temperature.

2. Seal the remote controller cord with putty in order to prevent the possible entry of dew, water droplets, cockroaches, other insects, etc.

   When using the switch box
   • When installing on the switch box, seal the connections between the switch box and wiring pipe with putty.

   When installing directly on the wall
   • When opening a hole using a drill for the remote controller cord (or when taking the cord out of the back of the remote controller), seal the hole with putty.
   • When routing the cord via the portion cut off from the upper cover, similarly seal that portion with putty.
   • When taking the remote controller cord from back of the controller, use surface raceways.

3. Remove the remote controller cover.
   • Insert a minus screwdriver into one of the open slots and move the screwdriver in the arrow direction.

   CAUTION Do not turn the screwdriver in the slot. Doing so may damage the slot.
Wired Remote Controller (with Weekly Timer Function)  PAR-21MAA-J

4. Install the lower case on the switch box or directly on the wall.
   - When using the switch box
   - When installing directly on the wall

5. Connect the remote control cord to the remote controller terminal block.

6. Wiring hole for installing directly on the wall (or open wiring)
   - Cut off the shaded area from the upper cover using a knife, nippers, etc.
   - Take out the remote control cord connected to the terminal block via this portion.

7. Install the cover to the remote controller.
   - First, hook the cover to the two upper claws and then fit it to the remote controller.

CAUTION: Do not use crimp terminals to connect to remote controller terminal blocks. The terminals may contact the board and cause trouble or contact the cover and damage the cover.

CAUTION: Prevent remote cord chips from getting into the remote controller. Electric shock or malfunction may result.

3 Test Run
   1. Before making a test run, refer to the "Test Run" section of the indoor unit installation manual.
   2. Press the [TEST] button twice successively within three seconds. Test run starts.
   3. Stop the test run by pressing the [ON/OFF] button.

NOTE: A protection sheet is stuck to the operation section. Peel off this protection sheet before use.

4 Ventilation Setting
   Make this setting only when interlocked operation with LOSSNAY is necessary with CITY MULTI models.
   *(This setting cannot be made with Mr. SLIM air conditioners.)*

   * When the upper controller is connected, make the setting using the upper controller.

   NOTE: When using LOSSNAY units in conjunction, interlock the addresses of all indoor units within the group and address of LOSSNAY units.

   Perform this operation when you want to register the LOSSNAY, confirm the registered units, or delete the registered units controlled by the remote controller.

   The following uses indoor unit address 05 and LOSSNAY address 30 as an example to describe the setting procedure.

   **Setting Procedure**
   1. Stop the air conditioner using the remote controller [ON/OFF] button.
      If the OFF display shown below does not appear at this time, step 2 cannot be performed.
   2. Press and hold down the [FILTER] and [ ] buttons at the same time for two seconds. The display shown below appears. The remote controller confirms the registered LOSSNAY addresses of the currently connected indoor units.
Registration confirmation result
- The indoor unit address and registered LOSSNAY address are displayed alternately.

<Indoor unit address and indoor unit display> <LOSSNAY address display and LOSSNAY display>
- WHEN LOSSNAY are not registered

If registration is unnecessary, end registration by pressing and holding down the [FILTER] and [ ] buttons at the same time for two seconds. If a new LOSSNAY must be registered, go to step 1. Registration procedure. If you want to confirm another LOSSNAY, go to step 2. Confirmation procedure. To delete a registered LOSSNAY, go to step 3. Deletion procedure.

1. Registration procedure
Set the address of the LOSSNAY and the indoor unit connected by the remote controller you want to register using the [ ] buttons. (01 to 50)
Set the address of the LOSSNAY you want to register using the [CLOCK () and ] buttons. (01 to 50)
Press the [TEST] button, and register the set indoor unit address and LOSSNAY address.
- Registration end display
  The indoor unit address and "IC" and LOSSNAY address and "LC" are alternately displayed.
- Registration error display
  If the address was not correctly registered, the indoor unit address and registered LOSSNAY address are alternately displayed.

Cannot be registered because the registered indoor unit or LOSSNAY does not exist.

2. Confirmation procedure
Set the address of the indoor unit connected by the remote controller whose LOSSNAY you want to confirm using the [ ] buttons. (01 to 50)
Press the [MENU] button and confirm the LOSSNAY address registered at the set indoor unit address.
- Confirmation end display (When LOSSNAY is connected.)
  The indoor unit address and "IC" and registered LOSSNAY address and "LC" are alternately displayed.
- Confirmation end display (When LOSSNAY is not connected.)
  Registered indoor unit address does not exist.

3. Deletion procedure
Use this procedure when you want to delete registration of indoor units connected by the remote controller and LOSSNAY.
Confirm (see 2. Confirmation procedure) the LOSSNAY you want to delete and display the indoor units and LOSSNAY confirmation results.
Press the [ON/OFF] button twice and delete registration of the LOSSNAY registered at the set indoor unit.
- Deletion end display
  Indoor unit address and "---" and registered LOSSNAY address and "---" are alternately displayed.
- Deletion error display
  When deletion was not performed properly.
5 | Function Selection

(1) Function selection of remote controller

The setting of the following remote controller functions can be changed using the remote controller function selection mode. Change the setting when needed.

<table>
<thead>
<tr>
<th>Item 1</th>
<th>Item 2</th>
<th>Item 3 (Setting content)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Change Language (&quot;CHANGE LANGUAGE&quot;)</td>
<td>Language setting to display</td>
<td>Display in multiple languages is possible</td>
</tr>
<tr>
<td>2. Function limit (&quot;FUNCTION SELECTION&quot;)</td>
<td>(1) Operation function limit setting (operation lock) (&quot;LOCKING FUNCTION&quot;)</td>
<td>Setting the range of operation limit (operation lock)</td>
</tr>
<tr>
<td></td>
<td>(2) Use of automatic mode setting (&quot;SELECT AUTO MODE&quot;)</td>
<td>Setting the use or non-use of automatic operation mode</td>
</tr>
<tr>
<td></td>
<td>(3) Temperature range limit setting (&quot;LIMIT TEMP FUNCTION&quot;)</td>
<td>Setting the temperature adjustable range (maximum, minimum)</td>
</tr>
<tr>
<td>3. Mode selection (&quot;MODE SELECTION&quot;)</td>
<td>(1) Remote controller main/sub setting (&quot;CONTROLLER MAIN/SUB&quot;)</td>
<td>Selecting man or sub remote controller</td>
</tr>
<tr>
<td></td>
<td>* When two remote controllers are connected to one group, one controller must be set to sub.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2) Use of clock setting (&quot;CLOCK&quot;)</td>
<td>Setting the use or non-use of clock function</td>
</tr>
<tr>
<td></td>
<td>(3) Timer function setting (&quot;WEEKLY TIMER&quot;)</td>
<td>Setting the timer type</td>
</tr>
<tr>
<td></td>
<td>(4) Contact number setting for error situation (&quot;CALL&quot;)</td>
<td>Contact number display in case of error</td>
</tr>
<tr>
<td>4. Display change (&quot;DISP MODE SETTING&quot;)</td>
<td>(1) Temperature display &quot;C/F setting (&quot;TEMP MODE&quot; C/F&quot;)</td>
<td>Setting the temperature unit (°C or °F) to display</td>
</tr>
<tr>
<td></td>
<td>(2) Button at temperature display setting (&quot;ROOM TEMP DISP SELECT&quot;)</td>
<td>Setting the use or non-use of the display of indoor (suction) air temperature</td>
</tr>
<tr>
<td></td>
<td>(3) Automatic cooling/heating display setting (&quot;AUTO MODE DISP CH&quot;)</td>
<td>Setting the use or non-use of the display of &quot;Cooling&quot; or &quot;Heating&quot; display during operation with automatic mode</td>
</tr>
</tbody>
</table>

[Function selection flowchart]


Normal display (Display when the air condition is not running) : Press the button. | Dot display (The language that is selected on the dot display) : Press the button.

[Detailed setting]

[4]-1. CHANGE LANGUAGE setting

The language that appears on the dot display can be selected.
- ① Japanese (JP), ② English (GB), ③ German (D), ④ Spanish (E), ⑤ Russian (RU), ⑥ Italian (I), ⑦ Chinese (CH), ⑧ French (F)

[4]-2. Function limit

(1) Operation function limit setting (operation lock)
- To switch the setting, press the [⑤ ON/OFF] button.
  - ① no1 : Operation lock setting is made on all buttons other than the [⑤ ON/OFF] button.
  - ② no2 : Operation lock setting is made on all buttons.
  - ③ OFF (Initial setting value) : Operation lock setting is not made.
- To make the operation lock setting valid on the normal screen, it is necessary to press buttons (Press and hold down the [FILTER] and [⑤ ON/OFF] buttons at the same time for two seconds.) on the normal screen after the above setting is made.

(2) Use of automatic mode setting

When the remote controller is connected to the unit that has automatic operation mode, the following settings can be made.
- To switch the setting, press the [⑤ ON/OFF] button.
  - ① ON (Initial setting value) : The automatic mode is displayed when the operation mode is selected.
  - ② OFF : The automatic mode is not displayed when the operation mode is selected.

(3) Temperature range limit setting

After this setting is made, the temperature can be changed within the set range.
- To switch the setting, press the [⑤ ON/OFF] button.
  - ① LIMIT TEMP COOL MODE : The temperature range can be changed on cooling/dry mode.
  - ② LIMIT TEMP HEAT MODE : The temperature range can be changed on heating mode.
  - ③ LIMIT TEMP AUTO MODE : The temperature range can be changed on automatic mode.

[4]-3. Mode selection

(1) Remote controller main/sub setting

- To switch the setting, press the [⑤ ON/OFF] button.
  - ① Main : The controller will be the main controller.
  - ② Sub : The controller will be the sub controller.
**Wired Remote Controller (with Weekly Timer Function)**

**PAR-21MAA-J**

---

(2) Use of clock setting
- To switch the setting, press the [ON/OFF] button.
- ON: The clock function can be used.
- OFF: The clock function cannot be used.

(3) Timer function setting
- To switch the setting, press the [ON/OFF] button (Choose one of the followings).
  - WEEKLY TIMER (initial setting on MA deluxe):
    - The weekly timer can be used.
  - AUTO OFF TIMER: The auto off timer can be used.
  - SIMPLE TIMER (Default setting on MA smooth):
    - The simple timer can be used.
  - TIMER MODE OFF: The timer mode cannot be used.
- When the use of clock setting is OFF, the "WEEKLY TIMER" cannot be used.

(4) Contact number setting for error situation
- To switch the setting, press the [ON/OFF] button.
  - CALL OFF: The set contact numbers are not displayed in case of error.
  - CALL **** * ****: The set contact numbers are displayed in case of error.

---

**2. Unit Function Selection**

Perform only when change is necessary with Mr. SLIM air conditioner.

(Cannot be performed with CITY MULTI control system.)

Set the functions of each indoor unit from the remote controller, as required. The functions of each indoor unit can be selected only from the remote controller.

Set the functions by selecting the necessary items from Table 1.

Set the functions of each indoor unit from the remote controller, as required. The functions of each indoor unit can be selected only from the remote controller.

---

(2) **Unit Function Selection**

Perform only when change is necessary with Mr. SLIM air conditioner.

(Cannot be performed with CITY MULTI control system.)

Set the functions of each indoor unit from the remote controller, as required. The functions of each indoor unit can be selected only from the remote controller.

Set the functions by selecting the necessary items from Table 1.

**Table 1. Function selection contents (For a detailed description of the factory settings and mode of each indoor unit, refer to the indoor unit installation manual.)**

<table>
<thead>
<tr>
<th>Function</th>
<th>Settings</th>
<th>Mode No.</th>
<th>Setting No.</th>
<th>Check</th>
<th>Object unit address No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power failure automatic recovery</td>
<td>Not available</td>
<td>01</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indoor temperature detecting</td>
<td>Indoor unit operating average</td>
<td>02</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOSSNAY connectivity</td>
<td>Not Supported</td>
<td>03</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUTO mode</td>
<td>Energy saving cycle automatically enabled</td>
<td>05</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filter sign</td>
<td>100 Hz</td>
<td>07</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fan speed</td>
<td>Quiet</td>
<td>08</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of air outlets</td>
<td>Standard</td>
<td>08</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installed options</td>
<td>High ceiling</td>
<td>08</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up/down vane setting</td>
<td>4 directions</td>
<td>09</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy saving air flow</td>
<td>Equipped with vanes (No. 1 set)</td>
<td>11</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humidifier</td>
<td>Not supported</td>
<td>13</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**NOTE:** When the indoor unit functions were changed using the function selection after installation is complete, always indicate the set contents by entering O or other mark in the appropriate check field of Table 1.

---

**Function selection flow**

First grasp the function selection flow. The following describes setting of "Room temperature detection position" of Table 1 as an example. (For the actual setting procedure, see [Setting procedure] 1 to 8.)

---

**Setting procedure**

1. Check the function selection set contents.
2. Switch to the FUNCTION SELECTION mode. (Press  and  simultaneously in the remote controller OFF state.)
3. Refrigerant address specification (Outdoor unit specification) (Unnecessary for single refrigerant system.)
   - Press button  and  (Specified outdoor unit registration)
4. Unit address No. specification (Indoor unit specification)
   - Press button  and  (Specified indoor unit Fan operation)
5. Mode No. Selection
   - User unit address No.?
7. Setting No. selection (remote controller fixed)
   - (Buttons  and  operation)
8. Registration (Press button )
9. Ending function display (Press buttons  and  simultaneously)

---

**Diagram**

![Diagram of Indoor Unit and Remote Controller](image-url)
Check the set contents of each mode. When the set contents of a mode were changed by function selection, the functions of that mode also change.

1. Set the remote controller to OFF.
2. Press and hold down the \[FILTER\] and \[TEST\] buttons at the same time for two seconds or longer.
3. Set the outdoor unit refrigerant address No.
4. Set the indoor unit address No.
5. Press the \[ON/OFF\] button. The unit address No. display "- -" flashes.
6. Press the \[CLOCK\] button. When the \[ON/OFF\] and \[CLOCK\] buttons are pressed, the refrigerant address No. decreases and increases between 00 and 15. Set it to the refrigerant address No. whose function you want to select.
7. Press the \[ON/OFF\] button. When setting modes 1 to 3, set the unit address No. to "00".
8. Press the \[ON/OFF\] button. When setting mode 1 to 3, set the unit address No. to "01-04".
9. Press the \[ON/OFF\] button. When batch setting for all indoor units, set the unit address No. to "AL".
10. Press the \[ON/OFF\] button. When setting for each indoor unit, set the unit address No. to "01-04".
11. Press the \[ON/OFF\] button. When rechecking the refrigerant address at the outdoor unit rotary switches, set it to the refrigerant address set here is probably duplicated.
12. Press and hold down the \[FILTER\] and \[TEST\] buttons at the same time for two seconds or longer.
13. End function selection.

NOTE: When a mistake during operation, end function selection by step 11 and repeat selection from step 2.

Recheck the refrigerant address at the outdoor unit rotary switches.

Rerech the set contents as described in steps 10 and 11.

When the \[CLOCK\] (\(\Upsilon\)) and (\(\Delta\)) buttons are pressed, the refrigerant address No. changes in 00 \(\rightarrow\) 01 \(\rightarrow\) 02 \(\rightarrow\) 03 \(\rightarrow\) 04 \(\rightarrow\) AL order. Set it to the unit address No. of the indoor unit whose functions you want to set.

Recheck the refrigerant address at the outdoor unit rotary switches.

When the \[FILTER\] (\(\Upsilon\)) and \[TEST\] (\(\Delta\)) buttons at the same time for two seconds or longer.

* Do not operate the air conditioner from the remote controller for 30 seconds after the end of function selection.

When setting modes 1 to 3, set the unit address No. to "00".

When setting modes 7 to 11:

* When setting mode 1 to 3, set the unit address No. to "00".
* When setting mode 7 to 11:
  - When setting for each indoor unit, set the unit address No. to "01-04".
  - When batch setting for all indoor units, set the unit address No. to "AL".

When the \[ON/OFF\] button at the same time for two seconds or longer.

* Do not operate the air conditioner from the remote controller for 30 seconds after the end of function selection.

When the \[CLOCK\] (\(\Upsilon\)) and \[ON/OFF\] (\(\Delta\)) buttons are pressed, the unit address No. display the registered indoor unit begins fan operation. When you want to know the location of the indoor units of the unit address No. whose functions were selected, check here. When the unit address No. is 00 or AL, all the indoor units of the selected refrigerant address perform the fan operation.

When registered using the \[CLOCK\] button, the registered indoor unit begins fan operation. When you want to know the location of the indoor units of the unit address No. whose functions were selected, check here. When the unit address No. is 00 or AL, all the indoor units of the selected refrigerant address perform the fan operation.

Check the set contents as described in steps 10 and 11.

End function selection.

Press and hold down the \[FILTER\] and \[TEST\] buttons at the same time for two seconds or longer.

After a while, the function selection display disappears and the remote controller returns to the air conditioner off display.

NOTE: When a mistake during operation, end function selection by step 11 and repeat selection from step 2.

Recheck the refrigerant address at the outdoor unit rotary switches.

Recheck the set contents as described in steps 10 and 11.

End function selection.

Press and hold down the \[FILTER\] and \[TEST\] buttons at the same time for two seconds or longer.

After a while, the function selection display disappears and the remote controller returns to the air conditioner off display.

NOTE: When a mistake during operation, end function selection by step 11 and repeat selection from step 2.

Recheck the refrigerant address at the outdoor unit rotary switches.

End function selection.

Press and hold down the \[FILTER\] and \[TEST\] buttons at the same time for two seconds or longer.

After a while, the function selection display disappears and the remote controller returns to the air conditioner off display.

NOTE: When a mistake during operation, end function selection by step 11 and repeat selection from step 2.

Recheck the refrigerant address at the outdoor unit rotary switches.

End function selection.

Press and hold down the \[FILTER\] and \[TEST\] buttons at the same time for two seconds or longer.

After a while, the function selection display disappears and the remote controller returns to the air conditioner off display.
6 Self check
Retrieve the error history of each unit using the remote controller.

1. Switch to the self check mode. When the [CHECK] button is pressed twice successively within three seconds, the display shown below appears.

2. Set the address or refrigerant address No. you want to self check. When the [TEMP (↑) and (↓)] buttons are pressed, the address decreases and increases between 01 and 50 or 00 and 15. Set it to the address No. or refrigerant address No. you want to self check.

3. Self check result display <Error history> (For the contents of the error code, refer to the indoor unit installation manual or service handbook.)

4. Error history reset
The error history is displayed in the self check result display.

5. Self check reset
There are the following two ways of resetting self check.
Press the [CHECK] button twice successively within three seconds. Resets self check and returns to the state before self check.
Press the [ON/OFF] button. Self check resets and indoor units stop.
(When operation is prohibited, this operation is ineffective.)

7 Remote Controller Check
When the air conditioner cannot be controlled from the remote controller, use this function to check the remote controller.

1. First check the power mark. When normal voltage (DC12V) is not applied to the remote controller, the power mark goes off. When the power mark is off, check the remote controller wiring and the indoor unit.

2. Switch to the remote controller check mode. When the [CHECK] button is held down for five seconds or longer, the display shown below appears.

3. Remote controller check result
When remote controller is normal
Since there is no problem at the remote controller, check for other causes.

When the problem is other than the checked remote controller
[Error code 2] “E3” “6833” “6832” flash → Cannot send

There is noise on the transmission line, or the indoor unit or another remote controller is faulty. Check the transmission line and the other remote controllers.

4. Remote controller check reset
When the [CHECK] button is held down for five seconds or longer, remote controller check resets and the "PLEASE WAIT" and RUN lamp flash. Approximately 30 seconds later, the remote controller returns to the state before remote controller check.
**Wired Remote Controller Kit for Wall Mounted models PAR-21MAAT-E**

**Photo**

[Image of a wall-mounted remote controller kit]

**Descriptions**

Enables the use of new MA remote controller (PAR-21MAA) for wall mounted models.

**Applicable Models**

- PKA-RP
- PKH-P

**Specifications**

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminal block capacity</td>
<td>10A/250V</td>
</tr>
<tr>
<td>Applicable wire</td>
<td>Φ1.6mm or less</td>
</tr>
<tr>
<td>Terminal block material</td>
<td>Phenol resin</td>
</tr>
<tr>
<td>Parts composition</td>
<td>Terminal block (TB5) x 1, Fixing screw x 1, Lead wire A x 1, Lead wire B x 1</td>
</tr>
</tbody>
</table>

* Not compatible with PAC-SF1STC.

**Dimensions**

Unit : mm

---

**MITSUBISHI ELECTRIC CORPORATION**
1 Confirming the Supplied Parts

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

<table>
<thead>
<tr>
<th>Parts Name</th>
<th>PAR-21MAAT-E</th>
</tr>
</thead>
<tbody>
<tr>
<td>① Terminal block</td>
<td>1</td>
</tr>
<tr>
<td>② Cross-recessed tapping screw</td>
<td>1</td>
</tr>
<tr>
<td>③ Lead wire A (l = 340 mm)</td>
<td>1</td>
</tr>
<tr>
<td>④ Lead wire B (l = 200 mm)</td>
<td>1</td>
</tr>
<tr>
<td>⑤ Remote controller (Upper case/Lower case)</td>
<td>1</td>
</tr>
<tr>
<td>⑥ Remote controller cord</td>
<td>1</td>
</tr>
<tr>
<td>⑦ Cross-recessed pan-head screw</td>
<td>2</td>
</tr>
<tr>
<td>⑧ Wood screw (Use for installing on the wall)</td>
<td>2</td>
</tr>
</tbody>
</table>

2 Installing the terminal block

(1) PKH-P · GALH/PKA-RP · GAL

① Open the front grille and remove the screw (×1) to remove the terminal block cover.
② Disconnect the connector which is a wireless remote controller relay line. (with pressing the hook)
③ Remove the screw cap and screw (×3).
④ Place the Auto vane as illustrated and remove the bottom of the front panel first.
⑤ Remove the screw (×1) to remove the p.c. board cover.
⑥ Secure the terminal block (TBS) to the electrical box with cross-recessed tapping screws.
⑦ Connect the lead wire A to the terminal block (TBS) and the connector (CN22) in the indoor p.c. board.
   (Lead wire should be run though the clamp pointed by the arrow.)
⑧ Connect the transmission lines of the wired remote controller and 2 or group remote controller to the bottom of the terminal block (TBS) (screw terminal).
⑨ Install the panel, terminal block cover, p.c. board or connector as they had formed first.

(2) PKH-P · FALH/PKA-RP · FAL

① Remove the side panel screws (×2) to remove the side panel.
② Remove the side panel and disconnect the remote controller relay connector.
③ Remove the screw (×1) and terminal block (TBS) cover.
④ Remove the screw (×1) and p.c. board cover.
⑤ Remove the screw (×1) and terminal block cover installing piece.
⑥ Secure the terminal block (TBS) to the electrical box with cross-recessed tapping screw.
⑦ Connect the lead wire B to the terminal block (TBS) and connector (CN22) in the indoor p.c. board.
⑧ Connect the transmission lines of the wired remote controller and 2 or group remote controller to the bottom of the terminal block (TBS) (screw terminal block).
⑨ Install the panel, terminal block cover, p.c. board cover or connector as they had formed first.
3 Transmission line wiring

As system configurations differ for remote controller wiring, execute wiring in accordance with the following example.

- The numbers 1, 2, and 3 in the chart correspond to items 1, 2, and 3 below.

1) When remote controllers are connected to each refrigerant system
(Standard 1:1, simultaneous twin, and simultaneous triple)

[Example]

![Diagram of connections for simultaneous twin and simultaneous triple systems]

- Outdoor unit
- Indoor unit
- Main remote controller
- Subordinate remote controller

2) Other refrigerant system groupings
- Set the refrigerant address using the DIP switch of the outdoor unit. (See the technical manual for details.)
- In this case, all the indoor units enclosed in the broken-line can be controlled as one group.

- Wiring from the Remote Control
  - This wire is connected to TBS (terminal block for remote controller) of the indoor unit (non-polar).
  - If different types of indoor units are mixed together in the simultaneous multiple group, surely connect the remote controller to the indoor unit with the most functions (fan speed, vane, louer, etc.).

- When a Different Refrigerant System Grouping is Used.
  - Group the system using the remote controller wiring. Execute crossover wiring of the remote controller wire to any single indoor unit of the refrigerant system to be grouped.
  - If different types of indoor units are mixed together in the same group, be sure to make the main unit (refrigerant address = 00) the indoor unit with the most functions (fan speed, vane, louer, etc.).
  - Also if new type belongs to simultaneous multiple group, be sure to fulfill the above conditions 1).
  - Up to 16 refrigerant systems can be controlled as one group using the slim A remote controller.

NOTES:
- Crossover wiring to the indoor unit (TBS) of the same refrigerant system is not allowed. If such crossover wiring is executed, the system will not operate correctly.
- Crossover wiring between remote controllers is not allowed. There is only one terminal block on the remote controller for wiring.

- Up to two remote controllers can be connected to a single group.
  - Be sure to designate the main remote controller and the subordinate remote controller if two remote controllers are used in one group.
  - If a group only has a single remote controller, it automatically becomes the main controller. But if a group has two remote controllers, one must be designated as the main remote controller and the other as the subordinate remote controller. (For how to set the main and subordinate switch, see step (2) in [Function Settings].)
  - Remote controller wiring can be extended up to a maximum of 500 meters. Note, however, that the supplied remote controller cord is 3 meters or less. A 0.3 mm² to 1.25 mm² power cable must be acquired locally if more than 3 meters is needed.

CAUTION
- Remote controller wiring
  - Avoid using multicores cable as malfunctions may occur.
  - As much as possible, keep the remote controller wire away from grounding items (steel frames of buildings or metal, etc.).
4 How To Install

1. Choose a place in which to install the remote controller (switch box). Be sure to observe the following steps:
   - Temperature sensors are provided with both the remote controller and the indoor units. When using the remote control temperature sensors, the main remote controller detects the room temperature. Install the main remote controller in a place where the average room temperature can be detected and also which is not affected by any heat source from direct sunlight or air blown from air conditioning units. (For how to set the main/subordinate remote controller, see step (2) in Function Settings.)
   - When installing on either the switch box or the wall, allow extra space around the remote controller as shown in the figure on the right. (When using it in combination with a Program timer, see the installation manual for the Program timer.)

   NOTE: Make sure that there is no wiring or wire near the remote controller sensors. If there is, the remote controller cannot detect the exact room temperature.

2. Procure the following Parts locally.
   - Switch box for two units
   - Thin copper conduit tube
   - Lock nuts and bushings

3. Seal the remote controller cord lead-in hole with putty in order to prevent the possible entry of dew, water droplets, cockroaches, other insects, etc.
   - When installing on the switch box, seal the connections between the switch box and wiring pipe with putty.
   - When opening a hole using a drill for the remote control cord (or taking the cord out of the back of the remote control), seal that hole with putty.
   - When routing the cord via the portion cut off from the upper case, equally seal that portion with putty.
(3) Install the lower case on the switch box or directly on the wall.

**CAUTION** Do not tighten the screws too much. Doing so may result in a deformation or crack of the lower case.

**NOTES:**
- Choose a flat plane for installation.
- Fix the switch box at more than two places when installing directly on the wall.

![Diagram of switch box installation](image)

**When using the switch box**
- Switch box for two units
- Remote control cord
- Cross recessed pan head screw
- Seal the remote control cord lead-in hole with putty. (See (2) above)

**When installing directly on the wall**
- Remote control cord
- Wood screw

(4) Connect the remote control cord to the remote controller terminal block.

Wire correctly referring to the following figure.

**CAUTION** Do not use crimp terminals to connect to remote controller terminal blocks. The terminals may contact the board and cause trouble or contact the cover and damage the cover.

![Diagram of remote control cord connection](image)

To indoor unit MA remote controller or A control terminal block

There is no polarity.

(5) Wiring hole for installing directly on the wall (or open wiring)
- Cut off the shaded area from the upper cover using a knife, nippers, etc.
- Take out the remote control cord connected to the terminal block via this portion.

(6) Install the cover to the remote controller.

First, hook the cover to the two upper claws and then fit it to the remote controller.

**CAUTION**
- Press the cover until it snaps shut. If not, it may fall off.
- Do not force the screwdriver in the slot. Doing so may damage the slot.

**NOTE:** A protection sheet is stuck to the operation section. Peel off this protection sheet before use.

(7) Affix a caution label.

A caution label in English is supplied on the back surface of the control panel door. Affix another caution label in the language of a country where you use the remote control over the English one.
5 Test Run

(1) Before test run

- After completing installation and the wiring and piping of the indoor and outdoor units, check for refrigerant leakage, looseness in the power supply or control wiring, wrong polarity, and no disconnection of one phase in the supply.
- Use a 500-volt megohmmeter to check that the resistance between the power supply terminals and ground is at least 1.0 MΩ.
- Do not carry out this test on the control wiring (low voltage circuit) terminals.

**WARNING** Do not use the air conditioner if the insulation resistance is less than 1.0 MΩ.

(2) Test run

- ON/OFF button
- Test run display
- Indoor temperature liquid line temperature display
- ON/OFF lamp
- Power display
- Error code display
- Test run remaining time display
- Set temperature button
- Mode selection button
- Fan speed button
- TEST button

1. Turn on the power at least 12 hours before the test run.
2. Press the [TEST] button twice. ➔ "TEST RUN" liquid crystal display
3. Press the [Mode selection] button. ➔ Make sure that wind is blown out.
4. Press the [Mode selection] button and switch to the cooling (or heating) mode. ➔ Make sure that cold (or warm) wind is blown out.
5. Press the [Fan speed] button. ➔ Make sure that the wind speed is switched.
6. Check operation of the outdoor unit fan.
7. Release test run by pressing the [ON/OFF] button. ➔ Stop
8. Register a telephone number.
   The telephone number of the repair shop, sales office, etc., to contact if an error occurs can be registered in the remote controller. The telephone number will be displayed when an error occurs. For registration procedures, refer to the operation manual for the indoor unit.

**NOTE:** It is not possible to run the in FAN, DRY or AUTO mode.

6 Function Settings

(1) Function setting on the unit (Selecting the unit functions)

Changing the power voltage setting

- Be sure to change the power voltage setting depending on the voltage used.

1. Go to the function setting mode. Switch OFF the remote controller. Press the [2] and [3] buttons simultaneously and hold them for at least 2 seconds. FUNCTION will start to flash.
2. Use the [2] button to set the refrigerant address (III) to 00.
3. Press [2] and [-] will start to flash in the unit number (IV) display.
4. Use the [2] button to set the unit number (IV) to 00.
5. Press the [2]MODE button to designate the refrigerant address/unit number. [-] will flash in the mode number (I) display momentarily.
6. Press the [2] buttons to set the mode number (I) to 04.
7. Press the [2] button and the current set setting number (II) will flash. Use the [2] button to switch the setting number in response to the power supply voltage to be used.

Power supply voltage

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Setting number</th>
</tr>
</thead>
<tbody>
<tr>
<td>240 V</td>
<td>1</td>
</tr>
<tr>
<td>220 V, 230 V</td>
<td>2</td>
</tr>
</tbody>
</table>
8. Press the MODE button [3] and mode and the setting number (I) and (II) will change to being on constantly and the contents of the setting can be confirmed.
9. Press the FILTER A and TEST RUN B buttons simultaneously for at least two seconds. The function selection screen will disappear momentarily and the air conditioner OFF display will appear.
### Function table
Select unit number 00

<table>
<thead>
<tr>
<th>Mode</th>
<th>Settings</th>
<th>Mode no.</th>
<th>Setting no.</th>
<th>Initial setting</th>
<th>setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power failure automatic recovery</td>
<td>Not available</td>
<td>01</td>
<td>1</td>
<td>2</td>
<td>*2</td>
</tr>
<tr>
<td></td>
<td>Available</td>
<td></td>
<td>2</td>
<td></td>
<td>*2</td>
</tr>
<tr>
<td>Indoor temperature detecting</td>
<td>Indoor unit operating average</td>
<td>02</td>
<td>1</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Set by indoor unit's remote controller</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remote controller's internal sensor</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOSSNAY connectivity</td>
<td>Not Supported</td>
<td>03</td>
<td>1</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Supported (indoor unit is not equipped with outdoor air intake)</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supported (indoor unit is equipped with outdoor air intake)</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power voltage</td>
<td>240 V</td>
<td>04</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>220 V, 230 V</td>
<td></td>
<td>2</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Auto mode (only for PUHZ)</td>
<td>Energy saving cycle automatically enabled</td>
<td>05</td>
<td>1</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Energy saving cycle automatically disabled</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Select unit numbers 01 to 03 or all units (AL [wired remote controller])

<table>
<thead>
<tr>
<th>Mode</th>
<th>Settings</th>
<th>Mode no.</th>
<th>Setting no.</th>
<th>Initial setting</th>
<th>setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter sign</td>
<td></td>
<td>07</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>100Hr</td>
<td></td>
<td>2</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2500Hr</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No filter sign indicator</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1 When the power supply returns, the air conditioner will start 3 minutes later.
*2 Power failure automatic recovery initial setting depends on the connecting outdoor unit.

### (2) Function selection of remote controller

The setting of the following remote controller functions can be changed using the remote controller function selection mode. Change the setting when needed.

<table>
<thead>
<tr>
<th>Item 1</th>
<th>Item 2</th>
<th>Item 3 (Setting content)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Change Language</td>
<td>Language setting to display</td>
<td>* Display in multiple languages is possible</td>
</tr>
<tr>
<td>(&quot;CHANGE LANGUAGE&quot;)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Function limit</td>
<td>(1) Operation function limit setting (operation lock)</td>
<td>* Setting the range of operation limit (operation lock)</td>
</tr>
<tr>
<td>(&quot;FUNCTION SELECTION&quot;)</td>
<td>(&quot;LOCKING FUNCTION&quot;)</td>
<td></td>
</tr>
<tr>
<td>2. Function limit</td>
<td>(2) Use of automatic mode setting</td>
<td>* Setting the use or non-use of &quot;automatic&quot; operation mode</td>
</tr>
<tr>
<td>(&quot;FUNCTION SELECTION&quot;)</td>
<td>(&quot;SELECT AUTO MODE&quot;)</td>
<td></td>
</tr>
<tr>
<td>2. Function limit</td>
<td>(3) Temperature range limit setting</td>
<td>* Setting the temperature adjustable range (maximum, minimum)</td>
</tr>
<tr>
<td>(&quot;FUNCTION SELECTION&quot;)</td>
<td>(&quot;LIMIT TEMP FUNCTION&quot;)</td>
<td></td>
</tr>
<tr>
<td>3. Mode selection</td>
<td>(1) Remote controller main/sub setting</td>
<td>* Selecting main or sub remote controller</td>
</tr>
<tr>
<td>(&quot;MODE SELECTION&quot;)</td>
<td>&quot;CONTROL-MAIN-SUB&quot;)</td>
<td>* When two remote controllers are connected to one group, one controller must be set to sub.</td>
</tr>
<tr>
<td>3. Mode selection</td>
<td>(2) Use of clock setting</td>
<td>* Setting the use or non-use of clock function</td>
</tr>
<tr>
<td>(&quot;MODE SELECTION&quot;)</td>
<td>(&quot;CLOCK&quot;)</td>
<td></td>
</tr>
<tr>
<td>3. Mode selection</td>
<td>(3) Timer function setting</td>
<td>* Setting the timer type</td>
</tr>
<tr>
<td>(&quot;MODE SELECTION&quot;)</td>
<td>(&quot;WEEKLY TIMER&quot;)</td>
<td></td>
</tr>
<tr>
<td>3. Mode selection</td>
<td>(4) Contact number setting</td>
<td>* Contact number display in case of error</td>
</tr>
<tr>
<td>(&quot;MODE SELECTION&quot;)</td>
<td>for error situation (&quot;CALL&quot;)</td>
<td>* Setting the telephone number</td>
</tr>
<tr>
<td>4. Display change</td>
<td>(1) Temperature display C°/F setting</td>
<td>* Setting the temperature unit (°C or °F) to display</td>
</tr>
<tr>
<td>(&quot;DISP MODE SETTING&quot;)</td>
<td>(&quot;TEMP MODE C°/F&quot;)</td>
<td></td>
</tr>
<tr>
<td>4. Display change</td>
<td>(2) Suction air temperature display</td>
<td>* Setting the use or non-use of the display of indoor (suction) air temperature</td>
</tr>
<tr>
<td>(&quot;DISP MODE SETTING&quot;)</td>
<td>setting display (&quot;ROOM TEMP DISP SELECT&quot;)</td>
<td></td>
</tr>
<tr>
<td>4. Display change</td>
<td>(3) Automatic cooling/heating display setting (&quot;AUTO MODE DISP C/H&quot;)</td>
<td>* Setting the use or non-use of the display of &quot;Cooling&quot; or &quot;Heating&quot; display during operation with automatic mode</td>
</tr>
</tbody>
</table>

MITSUBISHI ELECTRIC CORPORATION
D-215
Wired Remote Controller Kit for Wall mounted models PAR-21MAAT-E

[Function selection flowchart]
Setting language (English)

Normal display (Display when the air condition is not running)
Hold down the button and press the button for 2 seconds.

Dot display

Item 1: Change Language
- English
- German
- Spanish
- Russian
- Italian
- Chinese
- French
- Japanese

Item 2: Remote controller function selection mode
- ON/OFF
- AUTO MODE
- LIGHT TEMP FUNCTION
- LIGHT TEMP AUTO MODE
- TIMER SET
- WEEKLY TIMER
- AUTO OFF
- SIMPLE TIMER
- TIMER MODE

Item 3: Display mode selection
- 7°C
- 73°F
- RHEOSTAT SELECT
- AUTO MODE SELECT

Operation lock setting is not used.
(Initial setting value)
Operation lock setting is except On/Off buttons.
Operation lock setting is All buttons.
The automatic mode is displayed when the operation mode is selected.
(Initial setting value)
The automatic mode is not displayed when the operation mode is selected.
The temperature range limit is not active.
(Initial setting value)
The temperature range can be changed on cooling/dry mode.
The temperature range can be changed on heating mode.
The temperature range can be changed on automatic mode.
The remote controller will be the main controller.
(Initial setting value)
The remote controller will be the sub controller.
The clock function can be used.
(Initial setting value)
The clock function can not be used.
Weekly timer can be used.
(Initial setting value)
Auto off timer can be used.
Simple timer can be used.
Timer mode can not be used.
The set contact numbers are not displayed in case of error.
(Initial setting value)
The set contact numbers are displayed in case of error.
The temperature unit °C is used.
(Initial setting value)
The temperature unit °F is used.
Room air temperature is displayed.
(Initial setting value)
Room air temperature is not displayed.
One of “Automatic cooling” and “Automatic heating” is displayed under the automatic mode is running.
(Initial setting value)
Only “Automatic” is displayed under the automatic mode.
[Detailed setting]

[4]-1. CHANGE LANGUAGE setting
The language that appears on the dot display can be selected.
- Press the [MENU] button ① to change the language.
  ① English (GB), ② German (D), ③ Spanish (E), ④ Russian (RU), ⑤ Italian (I), ⑥ Chinese (CH), ⑦ French (F), ⑧ Japanese (JP)
  Refer to the dot display table.

[4]-2. Function limit
(1) Operation function limit setting (operation lock)
- To switch the setting, press the [ON/OFF] button ③.
  ① no1 : Operation lock setting is made on all buttons other than the [ON/OFF] button.
  ② no2 : Operation lock setting is made on all buttons.
  ③ OFF (Initial setting value): Operation lock setting is not made.
* To make the operation lock setting valid on the normal screen, it is necessary to press buttons (Press and hold down the [FILTER] and [ON/OFF] buttons at the same time for two seconds,) on the normal screen after the above setting is made.

(2) Use of automatic mode setting
When the remote controller is connected to the unit that has automatic operation mode, the following settings can be made.
- To switch the setting, press the [ON/OFF] button ③.
  ① ON (Initial setting value):
    The automatic mode is displayed when the operation mode is selected.
  ② OFF:
    The automatic mode is not displayed when the operation mode is selected.

(3) Temperature range limit setting
After this setting is made, the temperature can be changed within the set range.
- To switch the setting, press the [ON/OFF] button ③.
  ① LIMIT TEMP COOL MODE:
    The temperature range can be changed on cooling/dry mode.
  ② LIMIT TEMP HEAT MODE:
    The temperature range can be changed on heating mode.
  ③ LIMIT TEMP AUTO MODE:
    The temperature range can be changed on automatic mode.
  ③ OFF (initial setting):
The temperature range limit is not active.
* When the setting, other than OFF, is made, the temperature range limit setting on cooling, heating and automatic mode is made at the same time. However, the range cannot be limited when the set temperature range has not changed.
- To increase or decrease the temperature, press the [TEMP. (V) or (A)] button ⑦.
- To switch the upper limit setting and the lower limit setting, press the [set] button ⑧. The selected setting will flash and the temperature can be set.
- Settable range

<table>
<thead>
<tr>
<th>Cooling/Dry mode:</th>
<th>Heating mode:</th>
<th>Automatic mode:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower limit: 19℃ ~ 30℃</td>
<td>Lower limit: 17℃ ~ 28℃</td>
<td>Lower limit: 19℃ ~ 28℃</td>
</tr>
<tr>
<td>Upper limit: 30℃ ~ 19℃</td>
<td>Upper limit: 28℃ ~ 17℃</td>
<td>Upper limit: 28℃ ~ 19℃</td>
</tr>
</tbody>
</table>
3. Mode selection setting

1. Remote controller main/sub setting
   - To switch the setting, press the [ON/OFF] button.
     ① Main: The controller will be the main controller.
     ② Sub: The controller will be the sub controller.

2. Use of clock setting
   - To switch the setting, press the [ON/OFF] button.
     ① ON: The clock function can be used.
     ② OFF: The clock function cannot be used.

3. Timer function setting
   - To switch the setting, press the [ON/OFF] button (Choose one of the followings).
     ① WEEKLY TIMER (initial setting value):
       The weekly timer can be used.
     ② AUTO OFF TIMER:
       The auto off timer can be used.
     ③ SIMPLE TIMER:
       The simple timer can be used.
     ④ TIMER MODE OFF:
       The timer mode cannot be used.

   When the use of clock setting is OFF, the "WEEKLY TIMER" cannot be used.

4. Contact number setting for error situation
   - To switch the setting, press the [ON/OFF] button.
     ① CALL OFF:
       The set contact numbers are not displayed in case of error.
     ② CALL **** ****:
       The set contact numbers are displayed in case of error.
       CALL 3:
       The contact number can be set when the display is as shown on the left.

   Setting the contact numbers
   - To set the contact numbers, follow the following procedures.
     Move the flashing cursor to set numbers. Press the [TEMP, (△) and (△)] button to move the cursor to the right (left). Press the [LOCK (△) and (△)] button to set the numbers.

4. Display change setting

1. Temperature display °C/°F setting
   - To switch the setting, press the [ON/OFF] button.
     ① °C: The temperature unit °C is used.
     ② °F: The temperature unit °F is used.

2. Suction air temperature display setting
   - To switch the setting, press the [ON/OFF] button.
     ① ON: The suction air temperature is displayed.
     ② OFF: The suction air temperature is not displayed.

3. Automatic cooling/heating display setting
   - To switch the setting, press the [ON/OFF] button.
     ① ON:
       One of "Automatic cooling" and "Automatic heating" is displayed under the automatic mode is running.
     ② OFF:
       Only "Automatic" is displayed under the automatic mode.
### Wired Remote Controller Kit for Wall mounted models PAR-21MAAT-E

#### Selecting language

<table>
<thead>
<tr>
<th>Function</th>
<th>English</th>
<th>German</th>
<th>Spanish</th>
<th>Russian</th>
<th>Italian</th>
<th>Chinese</th>
<th>French</th>
<th>Japanese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiting for start-up</td>
<td>PLEASE UNIT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation mode</td>
<td>Cool</td>
<td>Kühlen</td>
<td>OFIO</td>
<td>ОСОЛ</td>
<td>ОСОЛ</td>
<td>ОСОЛ</td>
<td>ОСОЛ</td>
<td>ОСОЛ</td>
</tr>
<tr>
<td></td>
<td>Dry</td>
<td>Осух</td>
<td>DESCUNI</td>
<td>ОСУЧКА</td>
<td>ОСУЧКА</td>
<td>ОСУЧКА</td>
<td>ОСУЧКА</td>
<td>ОСУЧКА</td>
</tr>
<tr>
<td></td>
<td>Heat</td>
<td>Затопник</td>
<td>ОФИО</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
</tr>
<tr>
<td></td>
<td>Auto</td>
<td>Авто</td>
<td>ОФИО</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
</tr>
<tr>
<td></td>
<td>Auto(Cool)</td>
<td>ОФИО</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
</tr>
<tr>
<td></td>
<td>Auto(Hot)</td>
<td>ОФИО</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
<td>ОТУРУ</td>
</tr>
<tr>
<td>Fan</td>
<td>FAN</td>
<td>Lüfter</td>
<td>ВЕНТИЛЯТОР</td>
<td>ВЕНТИЛЯТОР</td>
<td>ВЕНТИЛЯТОР</td>
<td>ВЕНТИЛЯТОР</td>
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<td>ВЕНТИЛЯТОР</td>
</tr>
<tr>
<td>Ventilation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stand by</td>
<td>STAND BY</td>
<td>СТАНДАРТ</td>
<td>STANDBY</td>
<td>STANDBY</td>
<td>STANDBY</td>
<td>STANDBY</td>
<td>STANDBY</td>
<td>STANDBY</td>
</tr>
<tr>
<td>Defrost</td>
<td>ДЕФРОСТ</td>
<td>ДЕФРОСТ</td>
<td>ДЕФРОСТ</td>
<td>ДЕФРОСТ</td>
<td>ДЕФРОСТ</td>
<td>ДЕФРОСТ</td>
<td>ДЕФРОСТ</td>
<td>ДЕФРОСТ</td>
</tr>
<tr>
<td>Set temperature</td>
<td>SET TEMP</td>
<td>СЕТ ТЕМП</td>
<td>СЕТ ТЕМП</td>
<td>СЕТ ТЕМП</td>
<td>СЕТ ТЕМП</td>
<td>СЕТ ТЕМП</td>
<td>СЕТ ТЕМП</td>
<td>СЕТ ТЕМП</td>
</tr>
<tr>
<td>Fan speed</td>
<td>FAN SPEED</td>
<td>ВЕНТИЛЯТОР</td>
<td>ВЕНТИЛЯТОР</td>
<td>ВЕНТИЛЯТОР</td>
<td>ВЕНТИЛЯТОР</td>
<td>ВЕНТИЛЯТОР</td>
<td>ВЕНТИЛЯТОР</td>
<td>ВЕНТИЛЯТОР</td>
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<tr>
<td>Not used button</td>
<td>NOT USED</td>
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<td>НЕ ИСПОЛЬЗУЕТСЯ</td>
<td>НЕ ИСПОЛЬЗУЕТСЯ</td>
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<tr>
<td>Check (Error)</td>
<td>CHECK</td>
<td>ПРОВЕРКА</td>
<td>ПРОВЕРКА</td>
<td>ПРОВЕРКА</td>
<td>ПРОВЕРКА</td>
<td>ПРОВЕРКА</td>
<td>ПРОВЕРКА</td>
<td>ПРОВЕРКА</td>
</tr>
<tr>
<td>Test run</td>
<td>TEST RUN</td>
<td>ТЕСТ РУН</td>
<td>ТЕСТ РУН</td>
<td>ТЕСТ РУН</td>
<td>ТЕСТ РУН</td>
<td>ТЕСТ РУН</td>
<td>ТЕСТ РУН</td>
<td>ТЕСТ РУН</td>
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<tr>
<td>Self check</td>
<td>SELF CHECK</td>
<td>САМОПРОВЕРКА</td>
<td>САМОПРОВЕРКА</td>
<td>САМОПРОВЕРКА</td>
<td>САМОПРОВЕРКА</td>
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<tr>
<td>Unit function selection</td>
<td>FUNCTION</td>
<td>ВЫБОР ФУНКЦИИ</td>
<td>ФУНКЦИЯ</td>
<td>ФУНКЦИЯ</td>
<td>ФУНКЦИЯ</td>
<td>ФУНКЦИЯ</td>
<td>ФУНКЦИЯ</td>
<td>ФУНКЦИЯ</td>
</tr>
<tr>
<td>Setting of ventilation</td>
<td>SETTING OF VENTILATION</td>
<td>НАСТРОЙКА ВЕНТИЛЯТОРА</td>
<td>НАСТРОЙКА ВЕНТИЛЯТОРА</td>
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</tbody>
</table>

### Change language

<table>
<thead>
<tr>
<th>Function selection</th>
<th>Function selection</th>
<th>Function selection</th>
<th>Function selection</th>
<th>Function selection</th>
<th>Function selection</th>
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</thead>
<tbody>
<tr>
<td>Change language</td>
<td>Change language</td>
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</tr>
<tr>
<td>LOCKING</td>
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<td>LOCKING</td>
<td>LOCKING</td>
<td>LOCKING</td>
<td>LOCKING</td>
</tr>
<tr>
<td>Use of automatic mode setting</td>
<td>Use of automatic mode setting</td>
<td>Use of automatic mode setting</td>
<td>Use of automatic mode setting</td>
<td>Use of automatic mode setting</td>
<td>Use of automatic mode setting</td>
</tr>
<tr>
<td>DRY</td>
<td>DRY</td>
<td>DRY</td>
<td>DRY</td>
<td>DRY</td>
<td>DRY</td>
</tr>
<tr>
<td>Heat</td>
<td>Heat</td>
<td>Heat</td>
<td>Heat</td>
<td>Heat</td>
<td>Heat</td>
</tr>
<tr>
<td>Auto</td>
<td>Auto</td>
<td>Auto</td>
<td>Auto</td>
<td>Auto</td>
<td>Auto</td>
</tr>
<tr>
<td>Auto(Cool)</td>
<td>Auto(Cool)</td>
<td>Auto(Cool)</td>
<td>Auto(Cool)</td>
<td>Auto(Cool)</td>
<td>Auto(Cool)</td>
</tr>
<tr>
<td>Auto(Hot)</td>
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<td>Auto(Hot)</td>
<td>Auto(Hot)</td>
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<tr>
<td>Remote controller setting</td>
<td>Remote controller setting</td>
<td>Remote controller setting</td>
<td>Remote controller setting</td>
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<tr>
<td>Mode selection</td>
<td>Mode selection</td>
<td>Mode selection</td>
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<tr>
<td>Temperature range limit setting</td>
<td>Temperature range limit setting</td>
<td>Temperature range limit setting</td>
<td>Temperature range limit setting</td>
<td>Temperature range limit setting</td>
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</tr>
<tr>
<td>Limit temperature cooling/day mode</td>
<td>Limit temperature cooling/day mode</td>
<td>Limit temperature cooling/day mode</td>
<td>Limit temperature cooling/day mode</td>
<td>Limit temperature cooling/day mode</td>
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<tr>
<td>Limit temperature heating mode</td>
<td>Limit temperature heating mode</td>
<td>Limit temperature heating mode</td>
<td>Limit temperature heating mode</td>
<td>Limit temperature heating mode</td>
<td>Limit temperature heating mode</td>
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<tr>
<td>Limit temperature auto mode</td>
<td>Limit temperature auto mode</td>
<td>Limit temperature auto mode</td>
<td>Limit temperature auto mode</td>
<td>Limit temperature auto mode</td>
<td>Limit temperature auto mode</td>
</tr>
<tr>
<td>Use of clock setting</td>
<td>Use of clock setting</td>
<td>Use of clock setting</td>
<td>Use of clock setting</td>
<td>Use of clock setting</td>
<td>Use of clock setting</td>
</tr>
<tr>
<td>Setting the day of the week and time</td>
<td>Setting the day of the week and time</td>
<td>Setting the day of the week and time</td>
<td>Setting the day of the week and time</td>
<td>Setting the day of the week and time</td>
<td>Setting the day of the week and time</td>
</tr>
<tr>
<td>Timer set</td>
<td>Timer set</td>
<td>Timer set</td>
<td>Timer set</td>
<td>Timer set</td>
<td>Timer set</td>
</tr>
<tr>
<td>Timer active</td>
<td>Timer active</td>
<td>Timer active</td>
<td>Timer active</td>
<td>Timer active</td>
<td>Timer active</td>
</tr>
<tr>
<td>Weekly timer</td>
<td>Weekly timer</td>
<td>Weekly timer</td>
<td>Weekly timer</td>
<td>Weekly timer</td>
<td>Weekly timer</td>
</tr>
<tr>
<td>Timer mode off</td>
<td>Timer mode off</td>
<td>Timer mode off</td>
<td>Timer mode off</td>
<td>Timer mode off</td>
<td>Timer mode off</td>
</tr>
<tr>
<td>Auto off timer</td>
<td>Auto off timer</td>
<td>Auto off timer</td>
<td>Auto off timer</td>
<td>Auto off timer</td>
<td>Auto off timer</td>
</tr>
<tr>
<td>Simple timer</td>
<td>Simple timer</td>
<td>Simple timer</td>
<td>Simple timer</td>
<td>Simple timer</td>
<td>Simple timer</td>
</tr>
<tr>
<td>Contact number setting of error situation</td>
<td>Contact number setting of error situation</td>
<td>Contact number setting of error situation</td>
<td>Contact number setting of error situation</td>
<td>Contact number setting of error situation</td>
<td>Contact number setting of error situation</td>
</tr>
<tr>
<td>Display change</td>
<td>Display change</td>
<td>Display change</td>
<td>Display change</td>
<td>Display change</td>
<td>Display change</td>
</tr>
<tr>
<td>Temperature display °C/F setting</td>
<td>Temperature display °C/F setting</td>
<td>Temperature display °C/F setting</td>
<td>Temperature display °C/F setting</td>
<td>Temperature display °C/F setting</td>
<td>Temperature display °C/F setting</td>
</tr>
<tr>
<td>Mode air temperature display setting</td>
<td>Mode air temperature display setting</td>
<td>Mode air temperature display setting</td>
<td>Mode air temperature display setting</td>
<td>Mode air temperature display setting</td>
<td>Mode air temperature display setting</td>
</tr>
<tr>
<td>Automatic cooling/heating display setting</td>
<td>Automatic cooling/heating display setting</td>
<td>Automatic cooling/heating display setting</td>
<td>Automatic cooling/heating display setting</td>
<td>Automatic cooling/heating display setting</td>
<td>Automatic cooling/heating display setting</td>
</tr>
</tbody>
</table>
## Check

1. Turn on the power.
2. Press the [CHECK] button twice.
3. Set refrigerant address with [TEMP] button if system control is used.
4. Press the [ON/OFF] button to stop the self-check.

### Errors detected by indoor unit

<table>
<thead>
<tr>
<th>Wired remote controller</th>
<th>Symptom</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>Intake sensor error</td>
<td></td>
</tr>
<tr>
<td>P2, P9</td>
<td>Pipe (Liquid or 2-phase pipe) sensor error</td>
<td></td>
</tr>
<tr>
<td>E6, E7</td>
<td>Indoor/outdoor unit communication error</td>
<td></td>
</tr>
<tr>
<td>P4</td>
<td>Drain sensor error</td>
<td></td>
</tr>
<tr>
<td>P5</td>
<td>Drain pump error</td>
<td></td>
</tr>
<tr>
<td>P6</td>
<td>Freezing/Overheating safeguard operation</td>
<td></td>
</tr>
<tr>
<td>EE</td>
<td>Communication error between indoor and outdoor units</td>
<td></td>
</tr>
<tr>
<td>P8</td>
<td>Pipe temperature error</td>
<td></td>
</tr>
<tr>
<td>E4, E5</td>
<td>Remote controller signal receiving error</td>
<td></td>
</tr>
<tr>
<td>Fb</td>
<td>Indoor unit control system error (memory error, etc.)</td>
<td></td>
</tr>
<tr>
<td>--</td>
<td>No corresponding</td>
<td></td>
</tr>
<tr>
<td>E0, E3</td>
<td>Remote controller transmission error</td>
<td></td>
</tr>
<tr>
<td>E1, E2</td>
<td>Remote controller control board error</td>
<td></td>
</tr>
</tbody>
</table>

### Errors detected by unit other than indoor unit (outdoor unit, etc.)

<table>
<thead>
<tr>
<th>Wired remote controller</th>
<th>Symptom</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>E9</td>
<td>Indoor/outdoor unit communication error (Transmitting error) (Outdoor unit)</td>
<td></td>
</tr>
<tr>
<td>UP</td>
<td>Compressor overcurrent interruption</td>
<td></td>
</tr>
<tr>
<td>U3, U4</td>
<td>Open/short of outdoor unit thermistors</td>
<td></td>
</tr>
<tr>
<td>UF</td>
<td>Compressor overcurrent interruption (When compressor locked)</td>
<td>For details, check the LED display of the outdoor controller board.</td>
</tr>
<tr>
<td>U2</td>
<td>Abnormal high discharging temperature/49°C worked/Insufficient refrigerant</td>
<td></td>
</tr>
<tr>
<td>U1, Ud</td>
<td>Abnormal high pressure (63H worked)/Overheating safeguard operation</td>
<td></td>
</tr>
<tr>
<td>U5</td>
<td>Abnormal temperature of heat sink</td>
<td></td>
</tr>
<tr>
<td>U8</td>
<td>Outdoor unit fan safeguard stop</td>
<td></td>
</tr>
<tr>
<td>U6</td>
<td>Compressor overcurrent interruption/Abnormal of power module</td>
<td></td>
</tr>
<tr>
<td>U7</td>
<td>Abnormality of super heat due to low discharge temperature</td>
<td></td>
</tr>
<tr>
<td>U9, UH</td>
<td>Abnormality such as overvoltage or voltage shortage and abnormal synchronous signal to main circuit/Current sensor error</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>Other errors (Refer to the technical manual for the outdoor unit.)</td>
<td></td>
</tr>
</tbody>
</table>

- On wired remote controller
  Check code displayed in the LCD.
Descriptions

Enables the use of wireless remote controller for SEZ series.

Applicable Models

- SEZ-KC25VA
- SEZ-KA35/50/60/71VA

Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>external dimensions</td>
<td>140(H)×57(W)×17.5(D) mm</td>
</tr>
<tr>
<td>Power</td>
<td>DC3V (AAA cell battery × 2)</td>
</tr>
<tr>
<td>Use environment</td>
<td>Temperatures: 0 ~ 40°C</td>
</tr>
<tr>
<td></td>
<td>Humidity: 30 ~ 90%RH (non condensing)</td>
</tr>
<tr>
<td>Storing environment</td>
<td>Temperatures: -20 ~ 70°C</td>
</tr>
</tbody>
</table>

Dimensions

Unit: mm

[Diagram of the remote controller with dimensions labeled]
How to Use / How to Install

MITSUBISHI ELECTRIC
Mitsubishi Package Air-Conditioner
Wireless Remote Controller
PAR-SL9CA-E
Operation Manual

1 | Safety Precautions

- Before installing the unit, make sure you read all the "Safety precautions".
- The "Safety precautions" provide very important points regarding safety. Make sure you follow them.
- Please report to or take consent by the supply authority before connection to the system.

Symbols used in the text
⚠️ Warning:
Describes precautions that should be observed to prevent danger of injury or death to the user.
⚠️ Caution:
Describes precautions that should be observed to prevent damage to the unit.

Symbols used in the illustrations
☐: Indicates an action that must be avoided.
!: Indicates that important instructions must be followed.
□: Indicates a part which must be grounded.
⚠️⚠️: Indicates that caution should be taken with rotating parts.
⚠️$: Indicates that the main switch must be turned off before servicing.
⚠️⚠️⚠️: Beware of electric shock.
⚠️⚠️⚠️⚠️: Beware of hot surface.

⚠️ Warning:
Carefully read the labels affixed to the main unit.

⚠️ Warning:
- The unit should not be installed by the user. Ask the dealer or an authorized company to install the unit. If the unit is installed improperly, water leakage, electric shock or fire may result.
- Do not stand on or place any items on the unit.
- Do not splash water over the unit and do not touch the unit with wet hands. An electric shock may result.
- Do not place a gas heater or any other open-flame appliance where it will be exposed to the air discharged from the unit. Incomplete combustion may result.
- Ventilate the room if refrigerant leaks during operation.
- If the refrigerant comes in contact with a flame, poisonous gases will be released.
- Do not remove the front panel or the fan guard from the outdoor unit when it is running. You could be injured if you touch rotating, hot or high-voltage parts.
- Never insert fingers, sticks etc. into the intakes or outlets, otherwise injury may result, since the fan inside the unit rotates at high speed.
- If you detect odd smells, stop using the unit, turn off the power switch and consult your dealer.
- This air conditioner is NOT intended for use by children or infirm persons without supervision.
- Young children should be supervised to ensure that they do not play with the air conditioner.

⚠️ Caution:
- Do not use any sharp object to push the buttons, as this may damage the remote controller.
- Never block or cover the indoor or outdoor unit’s intakes or outlets.

Disposing of the unit
When you need to dispose of the unit, consult your dealer. If pipes are removed incorrectly, refrigerant (fluorocarbon gas) may blow out and come into contact with your skin, causing injury. Releasing refrigerant into the atmosphere also damages the environment.
2-1. Wireless remote controller (How to set the batteries)
① Remove the back lid and insert batteries. Then reattach the back lid.
② Insert the minus pole of the batteries first.
③ Check if the polarity of the batteries is correct.
④ Press the RESET button.
⑤ If the RESET button is not pressed, the remote controller may not operate correctly.
⑥ Press using a thin stick.

2-2. Switching the unit on/off
- The power supply should not be turned off while the air conditioner is in use. This can cause the unit to break down.
- Press the ON/OFF button.
- Even if you press the ON/OFF button immediately after shutting down the operation in progress, the air conditioner will not start for about three minutes. This is to prevent the internal components from being damaged.
- For the after-mentioned operating functions of the remote controller, all items are indicated in this illustration.

Note:
The signal can travel up to approximately 7 meters (in a straight line) within 45 degrees to both right and left of the center line of the receiver. In addition, the signal may not be received if there is interference of light of fluorescent lights or strong sunlight.

2-3. Mode select
① If the unit is off, press the ON/OFF button to turn it on.
② Press the operation mode button and select the operation mode. Each time the operation mode button is pressed the ▲ moves. (⑥)

- Automatic (cooling/heating) mode
- Cooling mode
- Drying mode
- Heating mode

Information for multi system air conditioner (Outdoor unit: MXZ series)
- Multi system air conditioner (Outdoor unit: MXZ series) can connect two or more indoor units with one outdoor unit. According to the capacity, two or more units can operate simultaneously.
- When you try to operate two or more indoor units with one outdoor unit simultaneously, one for the cooling and the other for heating, the operation mode of the indoor unit that operates earlier is selected. The other indoor units that will start the operation later cannot operate, indicating an operation state. In this case, please set all the indoor units to the same operation mode.
- There might be a case that the indoor unit, which is operating in □ (AUTO) mode. Cannot change over to the operating mode (COOL→HEAT) and becomes a state of standby.
- When indoor unit starts the operation while the defrosting of outdoor unit is being done, it takes a few minutes (max. about 15 minutes) to blow out the warm air.
- In the heating operation, though indoor unit that does not operate may get warm or the sound of refrigerant flowing may be heard, they are not malfunction. The reason is that the refrigerant continuously flows into it.

2-4. Selecting a temperature
- To decrease the room temperature:
  ① Press ▼ button to set the desired temperature.
  ② The selected temperature is displayed.
  ③ Each time you press the button, the temperature value decreases by 1 °C.
- To increase the room temperature:
  ① Press ▲ button to set the desired temperature.
  ② The selected temperature is displayed.
  ③ Each time you press the button, the temperature value increases by 1 °C.
- Available temperature ranges are as follows:
  Cooling/Drying: 19 - 30 °C
  Heating: 17 - 28 °C
  Automatic: 19 - 28 °C
2-5. Selecting a fan speed

Press (A) button to select a desired fan speed.
- Each time you press the button, available options change with the display on the remote controller, as shown below.

<table>
<thead>
<tr>
<th>Fan speed</th>
<th>Remote controller display</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-stage</td>
<td></td>
</tr>
</tbody>
</table>

- Displays for the wireless remote controller are shown in parentheses.
- In the following situations, the display differs from the fan speed of the unit.
- In the case of DEFROST/STAND BY lamp lighting of the unit.
- Just after the heating mode (while waiting to change to another mode).
- When the temperature of the room is higher than the temperature setting of the unit operating in the heating mode.
- In drying mode, the indoor fan sometimes stops.
- When the temperature of the heat exchanger is low in the heating mode (e.g., immediately after heating operation starts).

2-6. Using the timer

It is convenient to set the timer when you go to bed, when you get home, when you get up, etc.

1. Select the timer mode by pressing the (B) button during operation.
- Each time this button is pressed, the timer mode is changed in sequence: 
  - OFF TIMER → ON TIMER → TIMER RELEASE
2. Set the time of the timer using the (C) button.
- Each time this button is pressed, the set time increases by 1 hour to 12 hours.

To release the timer:
- Press the (D) button until OFF TIMER and ON TIMER are not displayed.

Note:
The OFF TIMER and the ON TIMER cannot be set at the same time.

2-7. Emergency operation

When the remote controller cannot be used

When the batteries of the remote controller run out or the remote controller malfunctions, the emergency operation can be done using the emergency buttons on the grille.

- Operation lamp
- Emergency operation switch (heating)
- Emergency operation switch (cooling)

Starting operation
- To operate the cooling mode, press the (E) button ♂.
- To operate the heating mode, press the (F) button ♠.

Note:
- Details of emergency mode are as shown below.

<table>
<thead>
<tr>
<th>Operation mode</th>
<th>COOL</th>
<th>HEAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set temperature</td>
<td>24°C</td>
<td>24°C</td>
</tr>
<tr>
<td>Fan speed</td>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>

Stopping operation
- To stop operation, press the ♠ button ♠ or the ♠ button ♠.
### 3 Troubleshooting

Before you call out a repair man, check the following table to see whether there is a simple solution to your problem.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit does not operate at all.</td>
<td>Turn main power on. Then press the POWER ON/OFF button to turn the Unit on. Wait until power is restored then Press the POWER ON/OFF button to turn the unit on.</td>
<td>Unit does not start immediately.</td>
<td>Wait until the unit starts automatically. The compressor may hesitate resuming because a three-minute resume prevention circuit is incorporated in the outdoor unit for protection of the compressor.</td>
</tr>
<tr>
<td>No indication of wireless remote controller, indication is dim, or signal transmission cannot reach remote controller sensor.</td>
<td>The batteries have run out. Replace the batteries with new ones (size AAA), and then press the reset button. Though both alkaline batteries and manganese batteries can be used alkaline batteries are recommended because their service life is longer than that of manganese batteries. If indication is not detected even when new batteries have been replaced, check that the batteries have been installed properly.</td>
<td>The operating display of the wireless remote controller’s receiver is flashing.</td>
<td>A self-diagnostic function is being performed to preserve the air conditioner. Do not attempt to make repairs yourself. Turn the main switch off and contact the dealer from whom you bought the air conditioner. Provide him or her with the name of the unit and the information displayed in the remote controller.</td>
</tr>
</tbody>
</table>

In any of the following cases, turn off the main power switch and contact your local dealer for service:
- The operation lamp (on the main unit or the remote controller) flashes.
- The switches do not work properly.
- The circuit breaker trips frequently (or the fuse blows frequently).
- Water has accidentally been splashed into the unit.
- Water leaks from the unit.
- Something is accidentally dropped into the air-conditioner.
- An unusual noise is heard during operation.

### 4 Installation, relocation and inspection

**Electrical work**
- Provide an exclusive circuit for power supply of the air conditioner.
- Be sure to observe the breaker capacity.

⚠️ **Warning:**
- The customer should not install this unit. If the unit is installed incorrectly, fire, electric shock, injury due to a falling unit, water leakage, etc. may result.
- Do not connect using branched outlet or an extension cord, and do not attach many loads to one electric outlet.
- A fire or electric shock may result from poor contact, poor insulation, exceeding the permissible current, etc.
- Consult your dealer.

⚠️ **Caution:**
- Apply grounding
  - Do not connect a grounding wire to a gas pipe, water pipe, lightning rod or ground wire of a telephone.
  - If a grounding is incorrect, it may cause an electric shock.
- Install an earth leakage breaker depending on the place where the air conditioner is to be installed (humid place, etc.).
- If the earth leakage breaker is not installed, it may cause an electric shock.

**Inspection and maintenance**
- When the air conditioner is used for several seasons, the capacity may be lowered due to dirt inside the unit.
- Depending upon the conditions of use, an odor may be generated or dirt, dust, etc. may prevent proper drainage.
- It is recommended to apply inspection and maintenance (charged) by a specialist in addition to normal maintenance. Consult your dealer.

**Also consider operation sound**
- Do not put an object around the air outlet of the outdoor unit. It may cause lowering of capacity or increase operating sound.
- If abnormal sound is heard during operation, consult your dealer.

**Relocation**
- When the air conditioner is to be removed or reinstalled because of rebuilding, moving, etc., special techniques and work are required.

⚠️ **Warning:**
- Repair or relocation should not be done by the customer.
- If this is done incorrectly, it may cause a fire, electric shock, injury by dropping of the unit, water leakage, etc. Consult your dealer.

**Disposal**
- To dispose of this product, consult your dealer.

If you have any question, consult your dealer.
Enables the use of wireless remote controller for SEZ series.

### Applicable Models
- SEZ-KC25VA
- SEZ-KA35/50/60/71VA

### Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>external dimensions</td>
<td>120(H)×70(W)×22.5(D) mm</td>
</tr>
<tr>
<td>Weight</td>
<td>0.2kg</td>
</tr>
<tr>
<td>Power</td>
<td>DC12V (supplied from indoor unit control)</td>
</tr>
<tr>
<td>Temperature</td>
<td>0 ～ 40°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>30 ～ 90%RH (no condensing)</td>
</tr>
<tr>
<td>Material</td>
<td>ABS</td>
</tr>
<tr>
<td>Colour (Munsell)</td>
<td>White Grey (4.8Y7.92/0.66)</td>
</tr>
</tbody>
</table>

### Dimensions

Unit: mm

- 120(H)×70(W)×22.5(D) mm

---

MITSUBISHI ELECTRIC CORPORATION

---

D-226

MITSUBISHI ELECTRIC CORPORATION

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5 How To Install

1. Common items for "Installation on the ceiling" and "Installation on the wall"
   (i) Select the installation site.

   Placing the sensor head is observed.

   (ii) Connect the connection wire to the sensor head using the sensor head wire.

   (iii) Select the installation site where the sensor head is observed.

   (iv) Mount the sensor head on the wall using the sensor head wire.

2. Installation on the setting
   (i) Make a hole on the setting to install the sensor head.

   (ii) Install the sensor head wire to the terminal block.

3. Installation on the setting
   (i) Mount the cover on the wall directly or by using a screwdriver.

   (ii) Install the sensor head wire to the wall.

   (iii) Install the sensor head wire to the wall directly or by using a screwdriver.

6 Emergency Operation

- 70% lamp (if the lamp is installed when the sensor head is located outside the setting)

- Emergency operation
  - Make sure the sensor head is securely placed in the setting:
  - Press the sensor head wire to the terminal block.
  - When the emergency operation is performed, press the terminal block to the terminal block.

MITSUBISHI ELECTRIC CORPORATION
**Signal Receiver**

**Specifications**

- **Model name**: PAR-SA9FA-E
- **Operation indicator lamp**
  - During operation: LED (green) lights
  - Abnormal condition: LED (green) blinks
  - Preparing for heating operation: LED (orange) lights
- **Emergency operation**
  - Cooling/heating switch (operate/stop) equipped.
- **Number of controllable units**
  - Maximum 16 refrigerant systems in one group
  - (At least one wireless signal receiving kit must be installed to each refrigerant system.)
- **Adapter wiring**
  - Connect the 9-core cord with connector (attached) to CN90 of the indoor controller board of the indoor unit.
- **Signal distance**
  - Within 7m in 45 degrees range from the front of the signal receiver

**Dimensions**

- **Unit**: mm

**Descriptions**

- Integrate the signal receiver in the corner panel (the opposite side of refrigerant piping).
- Applicable only for PLA-BA, BA2 models.

**Applicable Models**

- PLA-RP35-RP140BA
- PLA-RP71-RP125BA2
How to Use / How to Install

1 Before installation ※Turn off the main power before work.

- Open the intake grill and remove the corner panel where refrigerant pipes are and where local wires are drawn into.
  ※The corner panel removed is not needed.
  ※When attaching the duct flange during installation of decoration panel, perform the following work only after connecting the wires to the decoration panel:
- The control box cover fixed by 3 screws, which is possible to hang temporarily.
- Perform setting to designate the unit to be operated by the wireless remote control.
  Set J41 and J42 (jumper wires) on the indoor controller board and pair number switch of the wireless remote control as follows:
- Setting pair number
  - Up to 4 patterns of pair number can be set.
  - Match the pair number (setting of J41 and J42) of the indoor controller board and the pair number switch of wireless remote control as shown in the table below.
  ※See the installation manual provided with the wireless remote control for details on setting method of the wireless remote control.

<table>
<thead>
<tr>
<th>Setting Pattern</th>
<th>Pair number of wireless remote controller.</th>
<th>Cut point of Jumper wires on the indoor controller board.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0</td>
<td>Don’t cut the jumper wire</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>Cut the jumper wire “J41”</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>Cut the jumper wire “J42”</td>
</tr>
<tr>
<td>D</td>
<td>One of procedures 3-9</td>
<td>Cut the jumper wire both “J41” and “J42”</td>
</tr>
</tbody>
</table>

2 Installation of signal receiving unit.

- Pull out the cable of infrared receiver from the square hole in the corner of decoration panel, the portion of corner panel that was removed in step 1.
- Pass the cable through the three hooking portions of unit and electrical parts box as shown in the figure, adjust the length of cable so that the
- Slide the receiving unit in the direction as shown and fix it by the screw which is used for the corner panel removed.

After the installation completed, set the control box cover as they were.
Wireless Remote Controller Kit for Ceiling Suspended models
PAR-SL99B-E

Photo

Specifications

Enables the use of wireless remote controller for ceiling suspended models.

Applicable Models

- PCA-RP
- PCH-P

Specifications

<table>
<thead>
<tr>
<th>Operation indication</th>
<th>During operation: LED (green) is lit, Alarm: LED (green) flashes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency operation</td>
<td>Cooler/heater button (start/stop) is provided.</td>
</tr>
<tr>
<td>Number of units controlled</td>
<td>Max. 16 refrigerant systems per group (One or more wireless light receivers must be installed for each refrigerant system.)</td>
</tr>
<tr>
<td>Adapter wiring</td>
<td>9-wire cord (standard accessory) with connector is connected to the connector (CN90) on the indoor unit control board.</td>
</tr>
<tr>
<td>Light receiver range</td>
<td>7m or less, at within 45 degrees to the front of receiver (the range varies with conditions)</td>
</tr>
<tr>
<td>Operating conditions</td>
<td>Temperature: 0 to 40°C, Humidity: 30 to 90% (no condensation)</td>
</tr>
<tr>
<td>Exterior</td>
<td>White gray (Munsell 4.5Y 7.9/0.66), ABS resin</td>
</tr>
<tr>
<td>Installation method</td>
<td>Attached to the brand label case of indoor unit.</td>
</tr>
<tr>
<td>Accessory</td>
<td>Cord clip x 2</td>
</tr>
</tbody>
</table>

Dimensions

Unit: mm

- Width: 160 mm
- Height: 55 mm
- Depth: 28 mm
- Thickness: 48 mm

Note: Dimensions are for ceiling suspended models.
How to Use / How to Install

1 Making Sure of Components

Make sure that the following components, along with this manual, are packed in the box.

<table>
<thead>
<tr>
<th>Component</th>
<th>PAR-SL99B-E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless remote controller</td>
<td>1</td>
</tr>
<tr>
<td>Receiver board</td>
<td>1</td>
</tr>
<tr>
<td>Remote control holder</td>
<td>1</td>
</tr>
<tr>
<td>“AAA” LR03 alkaline batteries</td>
<td>2</td>
</tr>
<tr>
<td>4.1x16 wood screws</td>
<td>2</td>
</tr>
<tr>
<td>Cord retaining clips</td>
<td>2</td>
</tr>
<tr>
<td>Connection cord fixing seal (12x30 size)</td>
<td>1</td>
</tr>
</tbody>
</table>

NOTE: The remote signal will reach the receiver over a distance of approx. 7 m in a straight line and approx. 45° left or right. If the infrared receiver is affected by fluorescent light (especially, inverter type), it may not be able to receive the signal. Take this into consideration when installing fluorescent lights or replacing them.

2 How to Install

※Be sure to turn power off before installing.

(1) Receiver board

① Removing intake grille and right side panel
  - Slide the catch holding the intake grille backwards to open the grille. Remove the screw holding the side panel, and then slide the side panel forward to remove it.

② Removing existing brand label case
  - Remove the brand label case (name plate with characters Mr.SLIM) from the bottom right of unit. The brand label case is not needed. If it is difficult to remove the case, use a flat bladed screwdriver, etc., taking care that the panel is not damaged.
3 Installing receiver board
   - Pass the receiver board connector through the right side of the square hole to which the brand label case was attached, and then pull the connector and cord through the slit in the right side of the bottom panel.
   - Fit the infrared receiver into the square hole where the brand label case was attached.
   - Use the connection cord fixing seal (provided) to block the slit in the right side of bottom panel so that the cord will not move.

4 Attaching cord retaining clips and laying out cord
   - Insert the cord retaining clips into the holes (Φ 5) in the bottom middle of the metal plate on the unit right side.
   - Using the clips to retain the cord, pass it through the retaining band and tighten the band.
   - Lay out the cord over the refrigerant pipe and pass it through the bush attached to the inner metal plate.

5 Removing beam and electrical parts cover
   - Remove the beam.
   - Loosen the two screws at the bottom of electrical parts cover, and then slide the cover to the left to remove it.

6 Connecting receiver board connector to control circuit board.
   - Pass the cord through the bush at the top right of electrical parts case.
   - Connect the connector to CN90 on the right of the control board.
   - If the cord is loose, bundle it using the clamp under the above bush.

7 Reinstalling removed components
   - Reinstall the removed components in reverse order.
(2) Remote control holder

- To install the wireless remote controller on a wall, first attach the remote control holder to a wall.

![Remote control holder illustration]

Fitting remote control into holder

1. Fix the remote control holder to the wall using the two wood screws provided.
2. Insert the remote control into the holder.
3. Push the remote control against the wall.

Removing remote control

- Pull the top of remote control forward.

3 Model Select

This remote controller needs model number setting before use.
Set the model number in the following order.
Without setting the air conditioner will not work properly.
(The factory setting of model number is "001").

1. Insert batteries.
2. Press the SET button with something sharp at the end.
    - MODE SELECT blinks and Model No. is lighted.
3. Press the temp button to set the Model No.
4. Press the SET button with something sharp at the end.
    - MODE SELECT and Model No. are lighted for three seconds, then turned off.

<table>
<thead>
<tr>
<th>Indoor</th>
<th>Outdoor</th>
<th>* Model No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCH</td>
<td>PUH</td>
<td>001</td>
</tr>
<tr>
<td></td>
<td>PUHZ</td>
<td>001</td>
</tr>
<tr>
<td>PCA</td>
<td>SUZ</td>
<td>001</td>
</tr>
<tr>
<td></td>
<td>PU</td>
<td>033</td>
</tr>
</tbody>
</table>

4 Test Run

Measure an impedance between the power supply terminal block on the outdoor unit and the ground with a 500 V Megger and check that it is equal to or greater than 1.0 MΩ.

1. Turn on the main power to the unit.
2. Press the TEST RUN button twice continuously.
   - (Start this operation from the status of remote controller display turned off.)
   - MODE select and current operation mode are displayed.
3. Press the COOL button to activate COOL mode, then check whether cool air is blown out from the unit.
4. Press the HEAT button to activate HEAT mode, then check whether warm air is blown out from the unit.
5. Press the VANE button and check whether strong air is blown out from the unit.
6. Press the VANE button and check whether the auto vane operates properly.
7. Press the ON/OFF button to stop the test run.

NOTE:
- Point the remote controller towards the indoor unit receiver while following steps 2 to 7.
- It is not possible to run the in FAN, DRY or AUTO mode.
5 Pair Number Setting

- This is the setting to specify the unit to operate with the wireless remote controller.
- Make setting for J41, J42 (Jumper wire) of indoor controller board and the pair number of wireless remote controller.
- The pair number setting is available with the 4 patterns as shown in the "<Table 2>" from A to D. Make setting for the pair number (J41, J42) of indoor controller board and the pair number of wireless remote controller which is used as shown in the "<Table 2>". *The factory setting is pattern A.

1. Press the SET button with something sharp at the end.
   Start this operation from the status of remote controller display turned off.
   MODEL SELECT blinks and Model No.is lighted.
2. Press the button twice continuously.
   pair No. “0” blinks.
3. Press the temp button to set the pair number you want to set .
4. Press the SET button with something sharp at the end.
   Set pair number is lighted for three seconds then turned off.

6 Function Selection

[Changing the setting of the supply voltage for the indoor unit for A-control series.]
The setting of the supply voltage is done by the remote controller.
Be sure to change the power voltage setting depending on the voltage used.

1. Go to the function select mode
   Press the CHECK button twice continuously.
   (Start this operation from the status of remote controller display turned off.)
   CHECK is lighted and “00” blinks.
   Press the temp button once to set “50”. Direct the wireless remote controller toward the receiver of the indoor unit and press the button.
2. Setting the unit number
   Press the temp button and to set the unit number “00”. Direct the wireless remote controller toward the receiver of the indoor unit and press the button .
3. Selecting a mode
   Enter 04 to change the power voltage setting using the and buttons. Direct the wireless remote controller toward the receiver of the indoor unit and press the button .
   Current setting number:
   \[1=1\ \text{beep (one second)}\]
   \[2=2\ \text{beeps (one second each)}\]
   \[3=3\ \text{beeps (one second each)}\]
   * If a mode number that can not be recognized by the unit is entered, three beeps (3 beeps of 0.4 seconds duration) will be heard.
   Reenter the mode number selecting.
   * If the signal was not received by the sensor or an error occurred during transmission, you will not hear a beep or a “double beep” may be heard.
   Press the button again.
4. Selecting the setting number
   Use the and buttons to change the power voltage setting to 01 (240 V). Direct the wireless remote controller toward the sensor of the indoor unit and press the button .
   \[\text{At this time, current setting number for selected mode number will be output by the interrupted buzzer sounds and the blinks of operation indicator.}\]
   Output : setting number = \[1\ \text{beep beep (0.4 second+0.4 second) } \times 1\]
   \[2\ \text{beep beep (0.4 second+0.4 second) } \times 2\]
   \[3\ \text{beep beep (0.4 second+0.4 second) } \times 3\]
Other function selections

Now that you know how to change the power voltage setting, there are several other settings that can be changed as well. The following table lists the various settings that can be changed through the remote controller and the default settings.

<table>
<thead>
<tr>
<th>Function</th>
<th>Settings</th>
<th>PCA-RP-GA / PCH-P-GAH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power failure automatic recovery</td>
<td>Not available</td>
<td>PCA-RP-GA / PCH-P-GAH</td>
</tr>
<tr>
<td></td>
<td>Available</td>
<td>PCA-RP-GA / PCH-P-GAH</td>
</tr>
<tr>
<td>Indoor temperature detecting</td>
<td>Indoor unit operating average</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Set by indoor unit’s remote controller</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remote controller’s internal sensor</td>
<td></td>
</tr>
<tr>
<td>LOSSNAY connectivity</td>
<td>Not supported</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supported (indoor unit is not equipped with outdoor-air intake)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not supported (indoor unit is not equipped with outdoor-air intake)</td>
<td></td>
</tr>
<tr>
<td>Power voltage</td>
<td>240V</td>
<td></td>
</tr>
<tr>
<td></td>
<td>220V, 230V</td>
<td></td>
</tr>
<tr>
<td>Auto mode (only for PUHZ)</td>
<td>Energy saving cycle automatically enabled</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Energy saving cycle automatically disabled</td>
<td></td>
</tr>
<tr>
<td>Filter sign</td>
<td>100Hr</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2500Hr</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No filter sign indicator</td>
<td></td>
</tr>
<tr>
<td>Fan speed</td>
<td>Quiet</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High ceiling</td>
<td></td>
</tr>
<tr>
<td>No. of air outlets</td>
<td>4 directions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 directions</td>
<td></td>
</tr>
<tr>
<td>Installed options (high-performance filter)</td>
<td>Not supported</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supported</td>
<td></td>
</tr>
<tr>
<td>Up/down vane setting</td>
<td>No vanes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equipped with vanes (No. 1 set)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equipped with vanes (No. 2 set)</td>
<td></td>
</tr>
<tr>
<td>Energy saving air flow (Heating mode)</td>
<td>Disabled</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enabled</td>
<td></td>
</tr>
<tr>
<td>Humidifier (Direct Add-on type)</td>
<td>Not supported</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supported</td>
<td></td>
</tr>
</tbody>
</table>

*1 Power failure automatic recovery initial setting depends on the connecting outdoor unit.

Things to remember when entering function selections:

The basic procedure for entering function selections is the same as described for switching between power voltages. However, there are some differences at step ② for selecting the unit number, step ③ for selecting the mode number and step ④ for selecting the setting number.

The following Tables (4) and (5) list the various function settings, mode numbers and setting numbers. Table (2) details the functions of the entire refrigerant system while Table (5) shows the functions that can be set for the indoor unit.
Table 4. Itemized functions of the entire refrigerant system (select unit number 00)

<table>
<thead>
<tr>
<th>Mode</th>
<th>Settings</th>
<th>Mode no.</th>
<th>Setting no.</th>
<th>Check</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power failure automatic recovery</td>
<td>Not available</td>
<td>01</td>
<td>1</td>
<td></td>
<td>Approx. 4-minute wait-period after power is restored.</td>
</tr>
<tr>
<td></td>
<td>Available (Approximately 4-minutes wait-period after power is restored.)</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indoor temperature detecting</td>
<td>Indoor unit operating average</td>
<td>02</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Set by indoor unit’s remote controller</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remote controller’s internal sensor</td>
<td>03</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supported (indoor unit is not equipped with outdoor-air intake)</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not supported (indoor unit is equipped with outdoor-air intake)</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOISSNAY connectivity</td>
<td>Not Supported</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supported (indoor unit is not equipped with outdoor-air intake)</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power voltage</td>
<td>240V</td>
<td>04</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>220V, 230V</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto mode (only for PUHZ)</td>
<td>Energy saving cycle automatically enabled</td>
<td>05</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Energy saving cycle automatically disabled</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5. Itemized functions of the indoor unit (select unit numbers 01 to 03 or 07)

<table>
<thead>
<tr>
<th>Mode</th>
<th>Settings</th>
<th>Mode no.</th>
<th>Setting no.</th>
<th>Check</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter sign</td>
<td>100Hr</td>
<td>07</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2500Hr</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No filter sign indicator</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fan speed</td>
<td>Quiet</td>
<td>08</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>High ceiling</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of air outlets</td>
<td>Standard</td>
<td>09</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>High ceiling</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installed options (high performance filter)</td>
<td>Not supported</td>
<td>10</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supported</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up/down vane setting</td>
<td>No vanes</td>
<td>11</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equipped with vanes(No.1 set)</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equipped with vanes(No.2 set)</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy saving air flow (Heating mode)</td>
<td>Disable</td>
<td>12</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enable</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humidifier (Direct Add-on type)</td>
<td>Not supported</td>
<td>13</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supported</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Setting the unit numbers
Set “00” as the unit number when setting functions from Table 4.
When setting functions from Table 5:
- When setting functions for an indoor unit in an independent system, set the unit number to 01.
- When setting functions for a simultaneous-Twin Triple indoor unit system, assign unit numbers from 01 to 03 to each indoor unit.
- When setting the same functions for an entire simultaneous Twin Triple-indoor unit system, assign “07” as the unit number.

Selecting the mode number
Select from Table 4 and Table 5.

Selecting the setting number.

**7 Self-Check**

1. Turn on the main power to the unit.
2. Press the CHECK button twice continuously.
   (Start this operation from the status of remote controller display turned off.)
   A CHECK begins to light.
   B “00” begins to blink.
3. While pointing the remote controller toward the unit’s receiver, press the button. The check code will be indicated by the number of times that the buzzer sounds from the receiver section and the number of blinks of the operation lamp.
4. Press the ON / OFF button to stop the self-check.
Refer to the following tables for details on the check codes.

### Output Pattern A

<table>
<thead>
<tr>
<th>Beep sounds</th>
<th>OPERATION INDICATOR lamp flash pattern</th>
<th>Symptom</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beep</td>
<td>Off Approx. 2.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>Off Approx. 2.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>Off Approx. 2.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>Off Approx. 2.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>Off Approx. 2.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>Off Approx. 2.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of flashes/beeps in pattern indicates the check code in the following table (i.e., n=5 for “P5”)

### Output Pattern B

<table>
<thead>
<tr>
<th>Beep sounds</th>
<th>OPERATION INDICATOR lamp flash pattern</th>
<th>Symptom</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beep</td>
<td>Off Approx. 2.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>Off Approx. 2.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>Off Approx. 2.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>Off Approx. 2.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>Off Approx. 2.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>Off Approx. 2.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beep</td>
<td>On Approx. 0.5 sec.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of flashes/beeps in pattern indicates the check code in the following table (i.e., n=5 for “P5”)

### Output Pattern A Errors detected by indoor unit

<table>
<thead>
<tr>
<th>Wireless remote controller</th>
<th>Wired remote controller</th>
<th>Check code</th>
<th>Symptom</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>P1</td>
<td>Intake sensor error</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>P2, P9</td>
<td>Pipe (Liquid or 2-phase pipe) sensor error</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>E6, E7</td>
<td>Indoor / outdoor unit communication error</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>P4</td>
<td>Drain sensor error</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>P5</td>
<td>Drain pump error</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>P6</td>
<td>Freezing / Overheating safeguard operation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>EE</td>
<td>Communication error between indoor and outdoor units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>P8</td>
<td>Pipe temperature error</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>E4</td>
<td>Remote controller signal receiving error</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>11</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>12</td>
<td>Fb</td>
<td>Indoor unit control system error (memory error, etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No sound</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

### Output Pattern B Errors detected by unit other than indoor unit (outdoor unit, etc.)

<table>
<thead>
<tr>
<th>Wireless remote controller</th>
<th>Wired remote controller</th>
<th>Check code</th>
<th>Symptom</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>E9</td>
<td>Indoor/outdoor unit communication error (Transmitting error)/(Outdoor unit)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>UP</td>
<td>Compressor overcurrent interruption</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>U3, U4</td>
<td>Open / short of outdoor unit thermistors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>UF</td>
<td>Compressor overcurrent interruption (When compressor locked)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>U2</td>
<td>Abnormal high discharging temperature/49°C worked/insufficient refrigerant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>U1,Ud</td>
<td>Abnormal high pressure (63H worked)/Overheating safeguard operation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>U5</td>
<td>Abnormal temperature of heat sink</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>U8</td>
<td>Outdoor unit fan safeguard stop</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>U6</td>
<td>Compressor overcurrent interruption/Abnormal of power module</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>U7</td>
<td>Abnormality of super heat due to low discharge temperature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>U9,UH</td>
<td>Abnormality such as overvoltage or voltage shortage and abnormal synchronous signal to main circuit/Current sensor error</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>13</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>14</td>
<td>Others</td>
<td>Other errors (Refer to the technical manual for the outdoor unit.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1 If the beeper does not sound again after the initial two beeps to confirm the self-check start signal was received and the OPERATION INDICATOR lamp does not come on, there are no error records.

*2 If the beeper sounds three times continuously “beep, beep, beep (0.4+0.4+0.4 sec.)” after the initial two beeps to confirm the self-check start signal was received, the specified refrigerant address is incorrect.

- On wireless remote controller
  The continuous buzzer sounds from receiving section of indoor unit.
  Blink of operation lamp
- On wired remote controller
  Check code displayed in the LCD.
Controller Holder for Wireless remote controller  MAC-1200RC

Photo

Descriptions

- Please use it for the prevention of leaving behind of wireless remote controller.
- Please use this item when you put remote controller on the wall etc.

Applicable Models

- MSZ-HC25VA
- MSZ-HC35VA
- MSZ-HC35VAB

Specifications

<table>
<thead>
<tr>
<th>Material</th>
<th>Polystyrene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>White</td>
</tr>
</tbody>
</table>

Dimensions

Unit : mm

How to Use / How to Install

Installation area

1) Installation area
- Area in which the remote controller is not exposed to direct sunshine.
- Area in which there is no nearby heating source.
- Area in which the remote controller is not exposed to cold (or hot) winds.
- Area in which the remote controller can be operated easily.
- Area in which the remote controller is beyond the reach of children.

2) Installation method
  1. Attach the remote controller holder to the desired location using two tapping screws.
  2. Place the lower end of the controller into the holder.
  3. Remote controller
  4. Wall
  5. Display panel
  6. Receiver
- The signal can travel up to approximately 7 meters (in a straight line) within 45 degrees to both right and left of the center line of the receiver.

Remote controller (Controller holder)

Range of Receiver

60°

Ceiling

Wall

D-238

MITSUBISHI ELECTRIC CORPORATION
Remote Sensor

Optional Parts

Photo

Enables to pick up the room temperature at the remote position.

Descriptions

Applicable Models

- SLZ-KA VA(L)
- SEZ-KD VA(L)
- PLA-RP BA(2)
- PEA-RP GA
- PKA-RP GA/L/FAL(2)
- PKH-P FAH
- PCA-RP GA(2)/HA
- PEAD-RP EA(2)/GA
- PEAD-P EAH
- PSA-RP GA
- PSH-P GAH
- PCH-P GAH

Specifications

<table>
<thead>
<tr>
<th>External dimensions (mm)</th>
<th>120 (H) x 70 (W) x 15 (D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exterior</td>
<td>White gray (Munsell 4.48Y 7.92/0.66)</td>
</tr>
<tr>
<td>Material</td>
<td>ABS resin</td>
</tr>
<tr>
<td>Operating conditions</td>
<td>Temperature: -20 to 65°C, Humidity: 30 to 90%RH (no condensation)</td>
</tr>
<tr>
<td>Installation method</td>
<td>Mounting on single-type switch box (JIS C8336) or directly mounting on wall</td>
</tr>
<tr>
<td>Accessory</td>
<td>2-wire cable (12m), Connector with post, Fixing screw (x2)</td>
</tr>
<tr>
<td>When combining with environmental measurement controller</td>
<td></td>
</tr>
<tr>
<td>Temperature measuring range</td>
<td>-20 to 65°C</td>
</tr>
<tr>
<td>Measurement resolution</td>
<td>0.1°C (10 to 35°C), 0.5°C (other temperature ranges)</td>
</tr>
</tbody>
</table>

Dimensions

Unit: mm

[Diagram of dimensions with labels: Cover, Base, Cord entrance, φ6 hole Cord entrance, 120, 70, 15]
## How to Use / How to Install

### 1 How to Install

1. **Determine the installation of the remote sensor (switch box).**
   - Select a place where the remote sensor will detect an average temperature of the room, and where the sensor will not be subject to direct sunlight, heat sources, or the blow-off from the air conditioner, etc.
   - Install the sensor within the length of the cable provided (12m).
   - The cable cannot be extended. If extended, it may cause misoperation due to noise.
   - The following parts must be procured at the site:
     - Cross-recessed pan head screw
     - Single switch box
     - Thin steel conduit
     - Lock nut, bushing

2. **Connect the wires.**
   - Connect the 2-core cable to the terminal block in the lower case.
   - Peel the sheath of the 2-core cable as shown in Fig.1, and correctly wire it as shown in Fig.2.

   ![Fig.1](image1)
   ![Fig.2](image2)

   - The wiring connection of the indoor unit's electrical box and remote sensor is as shown in Fig.3. There are three methods of connecting the 2-core cable to the electrical box.
     - Exchanging 2-core cable (connector 20)
     - When using the connector attached to the end of the 2-core cable as it is.
     - When cutting the connector attached to the end of the 2-core cable and connecting the cable to the terminal block in the I.B. (Indoor Board).
     - When using the enclosed front for connection and convert cable.
   - The above three methods are used according to the indoor unit being used. If the 2-core cable is to be embedded in the wall, follow Fig.4.

   ![Fig.3](image3)
   ![Fig.4](image4)

3. **Install the lower case on the wall or switch box.**
   - The recommended tightening torque for installing the 2-core cable to the terminal block is 1.17N·m.
   - **CAUTION** If the screws are tightened too hard, the case may break or deform.
   - Install the sensor on a flat wall. If installed on a bumpy wall, the case may break or trouble may occur.

   ![Fig.5](image5)

4. **Fit the upper case.**
   - Catch the two upper claws first, and fit the case as shown on the left.
   - **CAUTION** Securely fit the case until a catching sound is heard. It may drop off if it is not fitted securely.

   ![Fig.6](image6)

5. **Wiring hole for direction installation on wall, etc.**
   - Cut the thin section (shaded section) of the lower case with a knife or pair of nippers, etc. The 2-core cable connected to the terminal block is laid out from here.

   ![Fig.7](image7)

6. **Securely seal the wiring lead hole with putty or silicon to prevent dew, water drops, cockroaches and other insects from entering.**
   - When installing directly on the wall, seal the section cut on the lower case with putty or silicon.
   - When the wiring is to be passed through a hole in the wall (when leading the wiring from the rear of the remote sensor), seal the hole in the same manner.
   - When installing on a switch box, seal the connection of the switch box and conduit with putty or silicon.

   ![Fig.8](image8)

### 2 Setting of indoor unit

When the remote sensor is connected to the indoor unit and room temperature detection position is changed, reset the setting of "Set temp. 4-deg. up" in the heating mode as shown below:

1. **K control models**: DIP switch Nos 1-6 on the control PCB of the indoor unit.
2. **M-NET control models**: DIP switch Nos 3-6 on the control PCB of the indoor unit.
3. **A control models**: Refer to A-control air-conditioner SERVICE TECHNICAL GUIDE.
Remote On/Off Adapter

PAC-SE55RA-E

Photo

Specifications

<table>
<thead>
<tr>
<th>Function</th>
<th>ON/OFF by external signal / OFF (remote control disabled) / OFF (remote control enabled) switchable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input signal</td>
<td>No-voltage contact (ON/OFF level signal)</td>
</tr>
<tr>
<td>Connector</td>
<td>3P (connected to CN32 on outdoor unit control board)</td>
</tr>
<tr>
<td>Cable type</td>
<td>3-wire cable, for extension: Sheathed vinyl cord or cable (0.5 to 1.25mm²)</td>
</tr>
<tr>
<td>Cable length</td>
<td>2m (max. 10m when extended locally)</td>
</tr>
</tbody>
</table>

Dimensions

- Heat contraction insulation tube
- Resistor
- Orange
- Red
- Brown
- 2000

Applicable Models

- SLZ-KA VA(L)
- SEZ-KD VA(L)
- PLA-RP BA(2)
- PEA-RP GA
- PKA-RP GAL/FAL(2)
- PKH-P FAH
- PCA-RP GA(2)/HA
- PEAD-RP EA(2)/GA
- PEAD-P EAH
- PSA-RP GA
- PSH-P GAH
- PCH-P GAH

Operation other than ON/OFF (adjustment of temperature, fan speed, and air direction, for example) can be performed even when remote controller operation is prohibited.
How to Use / How to Install

1 Connecting to the Indoor Unit
1. Connect to the connector CN32 on the indoor controller board.
2. Press the connector for the remote ON/OFF adaptor into the CN32 connector.
   The connector can only be connected in one direction only. Do not force the connection.

2 Locally Procured Wiring
With the remote ON/OFF adaptor, variations of connection method with the locally installed circuit will provide different types of operation configurations.
Example: External timer operation, remote control operation
1. Basic Connection Method
   SW1 - Operating switch
   Performs operation/stopping of indoor unit.
   SW2 - Selecting switch
   For selecting whether the operation/stopping is to be performed by external circuit or remote control.
   * Also includes system controller (central controller).
2. Switch Settings (Refer to table at right for details.)
   SW2 - If on:
   • Operation/stopping cannot be controlled from remote controller.
   Other operations (such as temperature settings and changing fan speed) can be performed.
   • Operation/stopping can be performed by SW1.
   SW2 - If off:
   • Operations can be performed from remote controller.
   • Operation/stopping cannot be performed.

3 Examples of Usage
In either case, there is a 5 to 6 second delay from the time the operating command is sent until the unit operates.
1. To perform operation/stopping by only remote operation or external timer and to prohibit operation/stopping by the remote controller, use the following circuits.

2. To perform operation/stopping by remote operation or external timer and allow operation/stopping by the remote controller, use the following circuits.

3. To start operation by remote operation and then freely use remote controller, use the following circuit.

4. To permit/prohibit the use of the remote controller by an external circuit.

4 Wiring Restrictions
Keep the length of wire from the circuit board of the indoor unit within 10 meters. Excessive length could cause improper operation.
Use a transistor relay when extending wiring such as remote wiring.
Remote Operation Adapter PAC-SF40RM-E

Descriptions

Extraction of non-voltage contact output.
*Use of optional [Remote Operation Adapter] and "remote display panel" Part to be provided at your site) provides non-voltage contact outputs of signals (operation, error) and operation/stop input function.

Applicable Models

- SLZ-KA VA(L)
- SEZ-KD VA(L)
- PLA-RP BA(2)
- PEAD-RP EA(2)/GA
- PEHD-P EAH
- PEA-RP GA
- PCA-RP GA(2)/HA
- PCH-P GAH
- PSA-RP GA
- PSH-P GAH

Specifications

- Power: Supplied from indoor unit
- External dimensions (mm): 160 x 70 x 30
- Exterior: Material: ABS resin, Color: Gray (Munsell 3.07Y 6.16/0.33)
- Weight: 200g
- Operating conditions: Indoor only Temperature: 0 to 40°C, Humidity: 35 to 85%RH (no condensation)
- Connecting cable: (indoor unit) 5-wire (3 + 2) cable with connector (9-pin, 4-pin)
- Output signal: Non-voltage "a" contact (relay contact method)
- Number of Contacts: 2 (Operation / Alarm)
- Contact capacity: 200V AC (30V DC)/1A or less
- Minimum load: 10mA
- Input signal: Pulse signal (instantaneous non-voltage "a" contact), pulse width: 200ms or more
- Number of Contacts: 1 (start/stop)
- Input/output signal cable (locally prepared) Type: CV, CVS, or equivalent sheathed vinyl cord/cable
- Diameter: Twisted: 0.5 to 1.25mm², Single: Ø0.65 to Ø1.2mm
- Distance: Output signal cable: Max. 100m
  Input signal cable: Max. 10m (Extension relay must be used when exceeding 10m)

Dimensions

Unit: mm

*This kit cannot be used with a wireless remote controller.
Water leakage alarm will not be displayed if the unit is built into the ceiling (PDH)
1 Confirming the Supplied Parts

(1) Parts Provided
Check that the box includes the following parts in addition to this installation manual.

<table>
<thead>
<tr>
<th>Parts</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>① Remote operation adaptor unit</td>
<td>1</td>
</tr>
<tr>
<td>② Cord clamp</td>
<td>1</td>
</tr>
<tr>
<td>③ Wall mount bracket</td>
<td>1</td>
</tr>
<tr>
<td>(with 2 meter wire for connecting with indoor unit)</td>
<td></td>
</tr>
<tr>
<td>(Use this clamp if the local wiring is too thick to be held by the clamp inside the main unit.)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parts</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>④ Screws for mounting ⑤</td>
<td>1</td>
</tr>
<tr>
<td>⑥ Cushion material</td>
<td>5</td>
</tr>
<tr>
<td>⑦ Tie-wrap</td>
<td></td>
</tr>
<tr>
<td>(With adhesive on both sides.)</td>
<td></td>
</tr>
<tr>
<td>(Use this for bundling lead wires.)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parts</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>⑧ Cord clamp</td>
<td>5</td>
</tr>
<tr>
<td>⑨ Screws for mounting ⑩</td>
<td>2</td>
</tr>
<tr>
<td>⑪ Screws for mounting main unit</td>
<td></td>
</tr>
<tr>
<td>3.5 x 12 (Black)</td>
<td></td>
</tr>
<tr>
<td>3.5 x 12 (Black)</td>
<td></td>
</tr>
</tbody>
</table>

(2) Locally Procured Parts
Note: Please keep LVD. LVD: Low Voltage Directive (EC Directive of Europe)
Apply some countermeasure for wiring and relay not to be touched from outside.
⑧ Wiring should be covered by the insulation tube. ⑨ Use relay with EU regulation.

<table>
<thead>
<tr>
<th>Item</th>
<th>Part Name</th>
<th>Model &amp; Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>External output function</td>
<td>External signal output wire</td>
<td>Use a vinyl cord with sheath or cable&lt;br&gt;Electric wire type: CV, CVS or equivalent&lt;br&gt;Electric wire size: 0.5 mm² to 1.25 mm²&lt;br&gt;Single wire: ø0.65 mm to ø1.2 mm</td>
</tr>
<tr>
<td>Display lamp, etc.</td>
<td></td>
<td>No-voltage contact AC 220 to 240 V (DC30V), 1A or less</td>
</tr>
<tr>
<td>External input function</td>
<td>External signal input wire</td>
<td>Use a vinyl cord with sheath or cable&lt;br&gt;Electric wire type: CV, CVS or equivalent&lt;br&gt;Electric wire size: 0.5 mm² to 1.25 mm²&lt;br&gt;(Single wire: ø0.65 mm to ø1.2 mm)</td>
</tr>
<tr>
<td>Switch</td>
<td></td>
<td>No-voltage momentary contact&lt;br&gt;(Operation ⑫ Stop is switched by input of a pulse of 200 ms or more)</td>
</tr>
</tbody>
</table>

2 External Dimension Drawing

---

Holes for mounting to wall<br>(2 locations ) ⑫ mark

For routing locally procured cable.
3 Wiring

![Wiring Diagram]

**Caution**
1) TB3 is a dedicated terminal for contact input. Do not apply voltage. Applying voltage will cause damage to the circuit board inside the for the indoor unit controller.
2) Always use the cable provided for connecting the unit to the indoor unit. Never make modifications to extend this cable. Extensions could cause the cable to be affected by external noise which could lead to mis-operation.
   If an extension is needed, refer to specification chart in "6. Product Specifications" a follow it when extending the external signal wire.

<Connecting to the indoor unit>
- If external output functions are used — Insert the 9-electrode (3 core) side of the cable provided into CN90 on the controller circuit board for the indoor unit.
- If external input functions are used — Insert the 4-electrode (2 core) side of the cable provided into CN41 on the controller circuit board for the indoor unit.
   ※ The connector can only be inserted in one direction. Be sure to check that the connector is in the proper direction before inserting. Forcing the connector will cause damage.

4 How to Install

There are three ways to mount the remote operation adaptor main unit: [A] Using mounting bracket, [B] Mounting directly, and [C] Using the cushion material.

(1) Installation Example (Suspended Type)

![Installation Example Diagram]

**Caution**
1) When mounting the remote operation adaptor main unit, be sure to use the mounting hardware to mount it to a wall or beam so that an inspection port is available for servicing.
2) If there is any loose remaining wire after installation, use a tie-wrap to bundle it.
(2) Installation Example 2 [Cassette Type]

\[ \text{[A] If recess-mounted into ceiling} \]

- Use tie-wrap to bundle wire
- Ceiling surface
- Wiring routing hole
- Outer panel
- Remote operation adaptor main unit

\[ \text{Caution} \]

1. When mounting the remote operation adaptor main unit, be sure to use the mounting hardware to mount it to a wall or beam so that an inspection port is available for servicing.
2. If there is any loose wire remaining wire after installation, use a tie-wrap to bundle it.

(3) Installation Example 3 [Wall-mounted Type]

\[ \text{[A] Mounting to wall mounting bracket} \]

- Remote operation adaptor main unit
- Wall mount bracket
- Mounting screws

\[ \text{[B] Mounting directly to wall} \]

- Screws for mounting case (Provided with main unit)

\[ \text{[C] Mounting using cushion material} \]

- Cushion material

\[ \text{Caution} \]

1. When mounting the remote operation adaptor main unit, be sure to use the mounting hardware to mount it to a wall or beam so that an inspection port is available for servicing.
2. If there is any loose wire remaining wire after installation, use a tie-wrap to bundle it.
**Photo**

![Connector Cable For Remote Display PAC-SA88HA-E](image)

**Descriptions**

- This adapter enables control of several units with a multiple remote control display.

**Applicable Models**

- SLZ-KA VA(L)
- SEZ-KD VA(L)
- PLA-RP BA(2)
- PEA-RP GA
- PKA-RP GAL/FAL(2)
- PKH-P FAH
- PCA-RP GA(2)/HA
- PEAD-RP EA(2)/GA
- PEAD-P EAH
- PSA-RP GA
- PSH-P GAH
- PCH-P GAH

**Specifications**

<table>
<thead>
<tr>
<th>Function</th>
<th>Connecting cable to output status signal of the air conditioner, and ON/OFF by external (pulse) signal.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input signal</td>
<td>Pulse signal (no voltage instantaneous ON contact)</td>
</tr>
<tr>
<td></td>
<td>Pulse duration 200m/s or more.</td>
</tr>
<tr>
<td>Connector</td>
<td>5P (connector to CN51 or CN52 on indoor unit control board)</td>
</tr>
<tr>
<td>Cable type</td>
<td>5-wire vinyl cable, for extension: sheathed vinyl cord or cable (0.5 to 1.25mm²)</td>
</tr>
<tr>
<td>Cable length</td>
<td>2m (max. 10m when extended locally)</td>
</tr>
<tr>
<td>Output capacity</td>
<td>DC12V 75mA (Max 0.9W)</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

Cable length 2000

---

*MITSUBISHI ELECTRIC CORPORATION*  
D-247
MULTIPLE REMOTE CONTROL DISPLAY

You can control several units with a multiple remote control display, by wiring an optional multiple remote controller adapter (PAC-SA88HA-E) with relays and lamps on the market.

How to wire

(1) Connect the multiple remote controller adapter to the connector CN51 on the indoor controller board.

(2) Wire three of the five wires from the multiple remote controller adapter as shown in the figure below.

<Notes on Signs>
- X1: Relay (for operation lamp)
- X2: Relay (for check lamp)
- RL: Operation Lamp
- GL: Check Lamp

<System>

<Wiring diagram>

[Field supplied parts]
- Relays: 12V DC with rated coil power consumption below 0.9W.
- Lamps: Matching to power supply voltage.

[Optional parts]
- Relays: 12V DC with rated coil power consumption below 0.9W.
- Lamps: Matching to power supply voltage.

Field supplied parts

3 wires
3 wires
3 wires
2 wires

Multiple remote control
ON-OFF display
(Internal supply)

Remote controller
cable

Remote controller

Remote controller

Remote controller

Relay box

Power supply

No.1 unit

No.2 unit

No.3 unit

X1-1

X2-1

X1-2

X2-2

X1-3

X2-3

<Operation check>
### Optional Parts

**Photo**

![Decorative Panel Without Remote Controller](Image)

### Descriptions

- Verify that there is no gap between the unit and the decorative panel or panel or between the decorative panel and the ceiling surface.
- If there is a gap, dew formation or dew fall may result.
- Decorative Panel is a special panel mode is PLA-RP-BA(2).

### Applicable Models

- PLA-RP35~RP140BA
- PLA-RP71~RP125BA2

### Specifications

<table>
<thead>
<tr>
<th>Exterior Color (Munsell)</th>
<th>Pure White (6.4Y 8.9/0.4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>ABS resin</td>
</tr>
<tr>
<td>Weight</td>
<td>6kg</td>
</tr>
</tbody>
</table>

### Dimensions

Unit: mm

- Indoor unit
- Decorative Panel
- Ceiling

*In case of standard grille: PLP-6BA / PLP-6BAMD*
1. **Included parts** (This manual and following parts are included.)

<table>
<thead>
<tr>
<th>Part Number/Name</th>
<th>Quantity</th>
<th>Shapes/ Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decorative panel 1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Screw with washer 2</td>
<td>4 ×8</td>
<td></td>
</tr>
<tr>
<td>Installation gauge 3</td>
<td>1</td>
<td>(Used split into four pieces)</td>
</tr>
<tr>
<td>Plastic fastener 4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Tag 5</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part Number/Name</th>
<th>Quantity</th>
<th>Shapes/ Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screw 6</td>
<td>4 ×12</td>
<td>Only three are used</td>
</tr>
<tr>
<td>Screw 7</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Screw 8</td>
<td>1 ×10</td>
<td></td>
</tr>
</tbody>
</table>

* Never force pressure on the vane, it may result in damage.

2. **Preparation before installing the decorative panel**

**Confirming the location of the unit**
- Check whether the opening holes of the ceiling are within the following range: 860 ×860 - 910 ×910
- Using included installation gauge 3, locate the ceiling surface and the unit. If location of the ceiling surface and the unit does not match, wind leakage, dew fall or damage of the vane may result.
- Turn off the main power (short circuit breaker).

**Warning**
* Turn off the main power.

* If the main power is not turned off, injury or electric shock may result.

**Location for installing the wired remote controller**
- There are two methods for controlling the air intake grille up/down function: use the up/down function for all the units which are controlled by the remote controller at one time, and use the up/down function for each unit individually. (Please refer to the operation manual for the operation method.) When using the up/down function for all units at the same time, a lowering grille may come in contact with a person or object and may cause damage if the unit cannot be seen from where the remote controller is. Install the remote controller where all the units can be seen.

* The air intake grille up/down function can also be controlled with the wired remote controller. (Depend on the connected outdoor unit, operation may not be possible.)

**Removing the air intake grille**
- Remove the tape that secures the air intake grille and remove the air intake grille from the decorative panel.
* You will find the limit switch for storing and detecting air intake grille shown in the right figure. Make sure you do not damage the limit switch when operating.

**Removing the corner panel**
- Remove all corner panels except for the one with sensor.
* If the corner panel with sensor is removed, a problem may occur when installing the decorative panel.
- Remove the screw on the corner, slide the panel in the direction of the arrow (1) in the figure and remove the corner panel.
3. **Selection of air outlet location**

- You can select 11 different patterns of air outlet directions on this decorative panel. Select them depending on the location the panel is installed.
  
  - Factory default
  - Number of air outlets: four directions
  - Air volume: Standard

- Select a pattern of air outlet directions. **More than two directions must be selected.**
  - When changing the number of directions, you need an air outlet shutter plate, which is sold separately. An air outlet shutter plate will be attached to the indoor unit; configuration must be done before attaching the decorative panel on the unit.
  - Do not select two directions in a hot and humid environment. (Dew formation or dewfall may result.)

<table>
<thead>
<tr>
<th>Patterns of air outlet directions</th>
<th>Four directions</th>
<th>Three directions</th>
<th>Two directions</th>
</tr>
</thead>
<tbody>
<tr>
<td>One pattern</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factory default</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Change the settings depending on the number of air outlets and the ceiling height where the unit is installed.
  - **If not changed, failure may result or users may feel discomfort.**

1) **BA Type Indoor Unit**

Configuration will be done on the remote controller. Refer to the section “Function Selection” in the installation manual of the remote controller or the section “Function Selection by Remote Controller” in the installation manual of the unit.

2) **BM Type Indoor Unit**

Set up the slide switches on address board of the indoor unit as shown in the following table.

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>32 - 80 Type</th>
<th>100 - 140 Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWB SWA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four directions</td>
<td>2.5 m</td>
<td>2.7 m</td>
</tr>
<tr>
<td>Three directions</td>
<td>2.7 m</td>
<td>3.0 m</td>
</tr>
<tr>
<td>Two directions</td>
<td>3.0 m</td>
<td>3.3 m</td>
</tr>
</tbody>
</table>

- Slide switch setting is necessary except for the column highlighted in gray.
  - (Column highlighted in gray is the factory default).
  - SWA - Compatible with ceiling height
  - SWB - Compatible with number of air outlets

- Do not set up for low ceilings in a hot and humid environment. (Dew formation or dewfall may result.)

4. **Installing decorative panel**

1) **Preparation for pre-installation**

- Put two of the included screws with a washer on the unit as shown in the right figure (across from the corner of drain pipe).

2) **Pre-installation of decorative panel**

- Join the corner of drain pipe on the unit with the corner with socket on the decorative panel and put them together temporarily with slots on the decorative panel.

- Make sure the lead wires of the decorative panel do not get caught between the unit and the decorative panel (Refer to the figure on the next page).
4. **Installing decorative panel** (continued from the previous page)

3) Fixing the decorative panel

- Remove the corner panel with the wireless signal receiver.
- By tightening the pre-installed screws with a washer and the remaining two screws with a washer, fix the decorative panel onto the unit.
- Make sure there is no gap between the unit and the decorative panel or between the decorative panel and the ceiling surface.

![Diagram showing unit, decorative panel, and ceiling surface with no gap between them](image)

- If there is a gap between the decorative panel and the ceiling: With the decorative panel attached, slightly adjust the installation height of the unit and clear the gap.

![Diagram showing slight adjustment of screw nut on unit](image)

4) Wiring connections

**Wiring connections for vane motor**

- Remove the plastic fastener banding four wires together.
- Open the electric box by unscrewing the three screws that fix the cover of the electric box of the unit.
- Make sure to connect a connector for vane motor (white, 20 poles) with CNV connector on the control board of the unit.
- Lead wires that lead off the decorative panel should be put through the bellmouth hooks of the unit so that there is no slack. Extra lead wires should be held together by a clamp on the unit.
- Lead wires of the decorative panel should be held together by a clamp on the unit so that they do not contact the wires.
- Do not place the extra lead wires in the electric box of the unit.
5. **Installation of corner panels and air intake grille**

* You can set the direction of the air intake grille such as grids when installing multiple units as desired. If forced to be set at other than the position shown in the figure, failure may result.

**Installation of corner panels**

* Adverse procedure of “Preparation before installing the decorative panel” in the Section 2 will be taken for installing the corner panels. For the corner panels with a safety cord, the cord should be fixed at the position shown in the right figure with the included screw onto the decorative panel.

* If not fixed, corner panels may fall during operation.

6. **Verification**

* Verify that there is no gap between the unit and the decorative panel or between the decorative panel and the ceiling surface.
  * If there is a gap, dew formation or dewfall may result.
* Verify that wires are properly connected.
  * If any are improperly connected, problems may result; vane does not move, dew formation or dewfall may occur or the air intake grille does not rise/lower.
* If the model has a wireless remote controller compatible (for operating the unit), check whether the pair numbers of the remote controller and the unit match.
* Make sure if the lowering distance of air intake grille is given as requested by the user and if the up/down movement is smooth.

After verifying all the items above, hand all the documents including this manual and the manuals for the unit and separately sold parts to the user. Be sure to explain the descriptions of cleaning the filters and how to use the air intake grille up/down function (remote controller operation) in the operation manual of the decorative panel to the user.
Decorative Panel With Wireless Remote Controller

PLP-6BALM

Photo

Descriptions

- Verify that there is no gap between the unit and the decorative panel or between the decorative panel and the ceiling surface.
- If there is a gap, dew formation or dewfall may result.
- Decorative panel is a special panel models PLA-RP-BA(2).

Applicable Models

- PLA-RP35-RP140BA
- PLA-RP71-RP125BA2

Specifications

<table>
<thead>
<tr>
<th>Exterior</th>
<th>Color (Munsell)</th>
<th>Pure White (6.4Y 8.9/0.4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>Material</td>
<td>ABS resin</td>
</tr>
<tr>
<td>Weight</td>
<td></td>
<td>6kg</td>
</tr>
</tbody>
</table>

Dimensions

Unit: mm

In case of standard grille:
PLP-6BA / PLP-6BAMD

Wireless Remote Controller
1. **Included parts** (This manual and following parts are included.)

<table>
<thead>
<tr>
<th>Part Number/Name</th>
<th>Quantity</th>
<th>Shapes/Sizes</th>
<th>Part Number/Name</th>
<th>Quantity</th>
<th>Shapes/Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td>① Decorative panel</td>
<td>1</td>
<td></td>
<td>⑥ Screw</td>
<td>4</td>
<td>Only three are used</td>
</tr>
<tr>
<td>② Screw with washer</td>
<td>4</td>
<td>M5 ×0.8 ×25</td>
<td>⑦ Screw</td>
<td>4</td>
<td>×12</td>
</tr>
<tr>
<td>③ Installation gauge</td>
<td>1</td>
<td>(Used split into four pieces)</td>
<td>⑧ Screw</td>
<td>1</td>
<td>M5 ×10</td>
</tr>
<tr>
<td>④ Plastic fastener</td>
<td>3</td>
<td></td>
<td>⑨ Wireless remote controller</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

2. **Preparation before installing the decorative panel**

**Confirming the location of the unit**
- Check whether the opening holes of the ceiling are within the following range: 860 ×860 - 910 ×910
- Using included installation gauge ③, locate the ceiling surface and the unit. If location of the ceiling surface and the unit does not match, wind leakage, dew fall or damage of the vane may result.
- Turn off the main power (short circuit breaker).

**Warning**
- Turn off the main power.
  - If the main power is not turned off, injury or electric shock may result.

**Location for installing the wired remote controller**
- There are two methods for controlling the air intake grille up/down function: use the up/down function for all the units which are controlled by the remote controller at one time, and use the up/down function for each unit individually. (Please refer to the operation manual for the operation method.) When using the up/down function for all units at the same time, a lowering grille may come in contact with a person or object and may cause damage if the unit cannot be seen from where the remote controller is. Install the remote controller where all the units can be seen.
  - The air intake grille up/down function can also be controlled with the wired remote controller. **(Depending on the connected outdoor unit, operation may not be possible.)**

**Removing the air intake grille**
- Remove the tape that secures the air intake grille and remove the air intake grille from the decorative panel.
  - You will find the limit switch for storing and detecting air intake grille shown in the right figure. Make sure you do not damage the limit switch when operating.

**Removing the corner panel**
- Remove all corner panels except for the one with sensor.
  - If the corner panel with sensor is removed, a problem may occur when installing the decorative panel.
- Remove the screw on the corner, slide the panel in the direction of the arrow (1) in the figure and remove the corner panel.
3. **Selection of air outlet location**

- You can select 11 different patterns of air outlet directions on this decorative panel. Select them depending on the location the panel is installed.
  
  * Factory default
  
  - Number of air outlets: four directions
  - Air volume: Standard

- Select a pattern of air outlet directions. **More than two directions must be selected.**
  
  * When changing the number of directions, you need an air outlet shutter plate, which is sold separately. An air outlet shutter plate will be attached to the indoor unit; configuration must be done before attaching the decorative panel on the unit.
  
  * Do not select two directions in a hot and humid environment. (Dew formation or dewfall may result.)

<table>
<thead>
<tr>
<th>Patterns of air outlet directions</th>
<th>Four directions</th>
<th>Three directions</th>
<th>Two directions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factory default</td>
<td>One pattern</td>
<td>Four patterns</td>
<td>Six patterns</td>
</tr>
<tr>
<td></td>
<td>Block one of the air outlets on the unit with shutter plate.</td>
<td>Block two of the air outlets on the unit with shutter plate.</td>
<td></td>
</tr>
</tbody>
</table>

- Change the settings depending on the number of air outlets and the ceiling height where the unit is installed.
  
  * If not changed, failure may result or users may feel discomfort.

1) **BA Type Indoor Unit**

Configuration will be done on the remote controller. Refer to the section “Function Selection” in the installation manual of the remote controller or the section “Function Selection by Remote Controller” in the installation manual of the unit.

2) **BM Type Indoor Unit**

Set up the slide switches on address board of the indoor unit as shown in the following table.

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>32 - 80 Type</th>
<th>100 - 140 Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low ceiling</td>
<td>Standard</td>
</tr>
<tr>
<td>SWB SWA</td>
<td>High ceiling</td>
<td>Low ceiling</td>
</tr>
<tr>
<td>Four directions</td>
<td>2.5 m</td>
<td>2.7 m</td>
</tr>
<tr>
<td>Three directions</td>
<td>2.7 m</td>
<td>3.0 m</td>
</tr>
<tr>
<td>Two directions</td>
<td>3.0 m</td>
<td>3.3 m</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>100 - 140 Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low ceiling</td>
</tr>
<tr>
<td>SWB SWA</td>
<td>High ceiling</td>
</tr>
<tr>
<td>Four directions</td>
<td>2.7 m</td>
</tr>
<tr>
<td>Three directions</td>
<td>3.0 m</td>
</tr>
<tr>
<td>Two directions</td>
<td>3.3 m</td>
</tr>
</tbody>
</table>

* Slide switch setting is necessary except for the column highlighted in gray.
  
  (Column highlighted in gray is the factory default).
  
  * SWA - Compatible with ceiling height
  
  * SWB - Compatible with number of air outlets

* Do not set up for low ceilings in a hot and humid environment. (Dew formation or dewfall may result.)

4. **Installing decorative panel**

1) **Preparation for pre-installation**

- Put two of the included screws with a washer on the unit as shown in the right figure (across from the corner of drain pipe).

2) **Pre-installation of decorative panel**

- Join the corner of drain pipe on the unit with the corner with socket on the decorative panel and put them together temporarily with slots on the decorative panel.
  
  * Make sure the lead wires of the decorative panel do not get caught between the unit and the decorative panel (Refer to the figure on the next page).
4. Installing decorative panel (continued from the previous page)

3) Fixing the decorative panel
- Remove the corner panel with the wireless signal receiver.
- By tightening the pre-installed screws with a washer and the remaining two screws with a washer, fix the decorative panel onto the unit.
  * Make sure there is no gap between the unit and the decorative panel or between the decorative panel and the ceiling surface.

![Diagram of unit, decorative panel, and ceiling surface with no gap]

- If there is a gap between the decorative panel and the ceiling:
  With the decorative panel attached, slightly adjust the installation height of the unit and clear the gap.

4) Wiring connections

Wiring connections for vane motor
- Remove the plastic fastener banding four wires together.
- Open the electric box by unscrewing the three screws that fix the cover of the electric box of the unit.
- Make sure to connect a connector for vane motor (white, 20 poles) with CNV connector on the control board of the unit.
- Lead wires that lead off the decorative panel should be put through the bellmouth hooks of the unit so that there is no slack. Extra lead wires should be held together by a clamp on the unit.
  * Lead wires of the decorative panel should be held together by a clamp on the unit so that they do not contact the wires.
  * Do not place the extra lead wires in the electric box of the unit.

Wiring connections for the signal receiver board of the wireless remote controller
- Make sure to connect lead wires for the signal receiver board for the wireless remote controller of the unit (white, nine poles) to CN90, control board of the unit.
- Lead wires on the dressing panel should be put through the bellmouth hooks of the unit so that there is no slack and extra lead wires should be held together by the clamp on the unit.
  * With the i-see sensor panel, the cover of electric box should be put on after installing i-see sensor corner panel.
  * Make sure wires are not caught in the cover of electric box. If they get caught, they will be cut off.
5. **Wireless remote controller compatible (for operating the unit)**

- The pair number configuration is a configuration to assign the unit to be operated by a wireless remote controller. **If a specific assignment is not necessary, you do not need this configuration.** (In the factory default, pair numbers on the indoor unit (signal receiver side) and the wireless remote controller are set "0".)
- If an assignment is necessary, set up pair numbers on the indoor unit (signal receiver side) and the wireless remote controller as shown in the right table.

### Setting up the pair numbers of wireless remote controller

1) **Press “Set” button. (Press it with a fine tip.)**
   Operate when the display is turned off.
   - **MODEL SELECT** will blink and the model number (three digit numbers) will light up.
2) **Press ** button twice. Pair number will blink.**
3) **Use temperature buttons ** and ** to adjust the pair number you need.**
   - * If you make a mistake, press ** button and start over from 2).**
4) **Press “Set” button. (Press it with a fine tip.)**
   - The pair number you set up will blink for three seconds and turn off.
   - * Depending on the connected outdoor unit, operation may not be possible.

### Pair number set up for wireless remote controller

<table>
<thead>
<tr>
<th>Pair number set up for wireless remote controller</th>
<th>Set Up on Indoor Unit Which jumper wires (J41 and J42) on the indoor control board will be cut</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 None</td>
<td>J41 and J42</td>
</tr>
<tr>
<td>1 J41 only</td>
<td>J42 only</td>
</tr>
<tr>
<td>3 - 9 J41 and J42</td>
<td>None</td>
</tr>
</tbody>
</table>

6. **Installation of corner panels and air intake grille**

- You can set the direction of the air intake grille such as grids when installing multiple units as desired. If forced to be set at other than the position shown in the figure, failure may result.

### Installation of corner panels

- Adverse procedure of “Preparation before installing the decorative panel” in the Section 2 will be taken for installing the corner panels. For the corner panels with a safety cord, the cord should be fixed at the position shown in the right figure with the included screw onto the decorative panel.
- **If not fixed, corner panels may fall during operation.**
7. Verification

- Verify that there is no gap between the unit and the decorative panel or between the decorative panel and the ceiling surface.
  * If there is a gap, dew formation or dewfall may result.
- Verify that wires are properly connected.
  * If any are improperly connected, problems may result; vane does not move, dew formation or dewfall may occur or the air intake grille does not rise/lower.
- If the model has a wireless remote controller compatible (for operating the unit), check whether the pair numbers of the remote controller and the unit match.
- Make sure if the lowering distance of air intake grille is given as requested by the user and if the up/down movement is smooth.

After verifying all the items above, hand all the documents including this manual and the manuals for the unit and separately sold parts to the user. Be sure to explain the descriptions of cleaning the filters and how to use the air intake grille up/down function (remote controller operation) in the operation manual of the decorative panel to the user.
**Dicorative Panel**

**With Wired Remote Controller**

**Photo**

**Descriptions**

- Verify that there is no gap between the unit and the decorative panel or panel or between the decorative panel and the ceiling surface.
- If there is a gap, dew formation or dewfall may result.
- Decorative panel is a special panel models PLA-RP-BA(2)

**Applicable Models**

- PLA-RP35–RP140BA
- PLA-RP71–RP125BA2

**Specifications**

<table>
<thead>
<tr>
<th>Exterior Color (Munsell)</th>
<th>Pure White (6.4Y 8.9/0.4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>ABS resin</td>
</tr>
<tr>
<td>Weight</td>
<td>6kg</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

In case of standard grille:
PLP-6BA / PLP-6BAMD

---

*OEPPSVOJU %FDPSBUJWF1BOFM*
1. **Included parts**  
(This manual and following parts are included.)

<table>
<thead>
<tr>
<th>Part Number/ Name</th>
<th>Quantity</th>
<th>Shapes/ Sizes</th>
<th>Number/ Name</th>
<th>Quantity</th>
<th>Shapes/ Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Decorative panel</td>
<td>1</td>
<td>Vane</td>
<td>6 Screw</td>
<td>4</td>
<td>Only three are used</td>
</tr>
<tr>
<td>2 Screw with washer</td>
<td>4</td>
<td>M5 ×0.8 ×25</td>
<td>7 Screw</td>
<td>4 ×8</td>
<td></td>
</tr>
<tr>
<td>3 Installation gauge</td>
<td>1</td>
<td>(Used split into four pieces)</td>
<td>8 Screw</td>
<td>1 ×12</td>
<td></td>
</tr>
<tr>
<td>4 Plastic fastener</td>
<td>3</td>
<td></td>
<td>9 Wired remote controller</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5 Tag</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Never force pressure on the vane, it may result in damage.

2. **Preparation before installing the decorative panel**

**Confirming the location of the unit**
- Check whether the opening holes of the ceiling are within the following range.
  - 860 × 860 - 910 × 910
- Using included installation gauge 3, locate the ceiling surface and the unit. If location of the ceiling surface and the unit does not match, wind leakage, dew fall or damage of the vane may result.
- Turn off the main power (short circuit breaker).

**Warning**
- Turn off the main power.
  - If the main power is not turned off, injury or electric shock may result.
- The gap must be in the range of 17 to 22. If it exceeds or falls below the range, damage may result.

**Location for installing the wired remote controller**
- There are two methods for controlling the air intake grille up/down function: use the up/down function for all the units which are controlled by the remote controller at one time, and use the up/down function for each unit individually. (Please refer to the operation manual for the operation method.) When using the up/down function for all units at the same time, a lowering grille may come in contact with a person or object and may cause damage if the unit cannot be seen from where the remote controller is. Install the remote controller where all the units can be seen.
  - The air intake grille up/down function can also be controlled with the wired remote controller. **(Depending on the connected outdoor unit, operation may not be possible.)**

**Removing the air intake grille**
- Remove the tape that secures the air intake grille and remove the air intake grille from the decorative panel.
  - You will find the limit switch for storing and detecting air intake grille shown in the right figure. Make sure you do not damage the limit switch when operating.

**Removing the corner panel**
- Remove all corner panels except for the one with sensor.
  - If the corner panel with sensor is removed, a problem may occur when installing the decorative panel.
- Remove the screw on the corner, slide the panel in the direction of the arrow (1) in the figure and remove the corner panel.
3. **Selection of air outlet location**

- You can select 11 different patterns of air outlet directions on this decorative panel. Select them depending on the location the panel is installed.
  
  * Factory default
  
  **Number of air outlets**
  - four directions
  - Air volume
  - Standard

- Select a pattern of air outlet directions. **More than two directions must be selected.**
  
  * When changing the number of directions, you need an air outlet shutter plate, which is sold separately. An air outlet shutter plate will be attached to the indoor unit; configuration must be done before attaching the decorative panel on the unit.
  * Do not select two directions in a hot and humid environment. (Dew formation or dewfall may result.)

<table>
<thead>
<tr>
<th>Patterns of air outlet directions</th>
<th>Four directions</th>
<th>Three directions</th>
<th>Two directions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factory default</td>
<td>One pattern</td>
<td>Four patterns</td>
<td>Six patterns</td>
</tr>
<tr>
<td></td>
<td>Block one of the air outlets on the unit with shutter plate.</td>
<td>Block two of the air outlets on the unit with shutter plate.</td>
<td></td>
</tr>
</tbody>
</table>

- Change the settings depending on the number of air outlets and the ceiling height where the unit is installed.
  
  * If not changed, failure may result or users may feel discomfort.

1) **BA Type Indoor Unit**

   Configuration will be done on the remote controller. Refer to the section “Function Selection” in the installation manual of the remote controller or the section “Function Selection by Remote Controller” in the installation manual of the unit.

2) **BM Type Indoor Unit**

   Set up the slide switches on address board of the indoor unit as shown in the following table.

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>32 - 80 Type</th>
<th>100 - 140 Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBW SWA</td>
<td>Low ceiling</td>
<td>Low ceiling</td>
</tr>
<tr>
<td></td>
<td>Standard</td>
<td>Standard</td>
</tr>
<tr>
<td>Four directions</td>
<td>2.5 m</td>
<td>2.7 m</td>
</tr>
<tr>
<td>Three directions</td>
<td>2.7 m</td>
<td>3.0 m</td>
</tr>
<tr>
<td>Two directions</td>
<td>3.0 m</td>
<td>3.3 m</td>
</tr>
</tbody>
</table>

* Slide switch setting is necessary except for the column highlighted in gray.
  
  (Column highlighted in gray is the factory default).
  * SWA - Compatible with ceiling height
  * SWB - Compatible with number of air outlets

* Do not set up for low ceilings in a hot and humid environment. (Dew formation or dewfall may result.)

4. **Installing decorative panel**

1) **Preparation for pre-installation**

   * Put two of the included screws with a washer on the unit as shown in the right figure (across from the corner of drain pipe).

2) **Pre-installation of decorative panel**

   * Join the corner of drain pipe on the unit with the corner with socket on the decorative panel and put them together temporarily with slots on the decorative panel.

   * Make sure the lead wires of the decorative panel do not get caught between the unit and the decorative panel (Refer to the figure on the next page).
4. Installing decorative panel

3) Fixing the decorative panel

• Remove the corner panel with the wireless signal receiver.
• By tightening the pre-installed screws with a washer (2) and the remaining two screws with a washer (2), fix the decorative panel onto the unit.
  * Make sure there is no gap between the unit and the decorative panel or between the decorative panel and the ceiling surface.

• If there is a gap between the decorative panel and the ceiling:
  With the decorative panel attached, slightly adjust the installation height of the unit and clear the gap.

4) Wiring connections

Wiring connections for vane motor

• Remove the plastic fastener banding four wires together.
• Open the electric box by unscrewing the three screws that fix the cover of the electric box of the unit.
• Make sure to connect a connector for vane motor (white, 20 poles) with CNV connector on the control board of the unit.
• Lead wires that lead off the decorative panel should be put through the bellmouth hooks of the unit so that there is no slack. Extra lead wires should be held together by a clamp on the unit.
  * Lead wires of the decorative panel should be held together by a clamp on the unit so that they do not contact the wires.
  * Do not place the extra lead wires in the electric box of the unit.
5. **Installation of corner panels and air intake grille**

* You can set the direction of the air intake grille such as grids when installing multiple units as desired. If forced to be set at other than the position shown in the figure, failure may result.

**Installation of corner panels**

- Adverse procedure of “Preparation before installing the decorative panel” in the Section 2 will be taken for installing the corner panels. For the corner panels with a safety cord, the cord should be fixed at the position shown in the right figure with the included screw onto the decorative panel.

* If not fixed, corner panels may fall during operation.

6. **Verification**

- Verify that there is no gap between the unit and the decorative panel or between the decorative panel and the ceiling surface.
  * If there is a gap, dew formation or dewfall may result.

- Verify that wires are properly connected.
  * If any are improperly connected, problems may result; vane does not move, dew formation or dewfall may occur or the air intake grille does not rise/lower.

- If the model has a wireless remote controller compatible (for operating the unit), check whether the pair numbers of the remote controller and the unit match.

- Make sure if the lowering distance of air intake grille is given as requested by the user and if the up/down movement is smooth.

After verifying all the items above, hand all the documents including this manual and the manuals for the unit and separately sold parts to the user. Be sure to explain the descriptions of cleaning the filters and how to use the air intake grille up/down function (remote controller operation) in the operation manual of the decorative panel to the user.
**Photo**

**Specifications**

<table>
<thead>
<tr>
<th>Model name</th>
<th>PLP-6BAJ</th>
<th>Material of wire for elevation</th>
<th>Polyester series Ø0.6mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exterior</td>
<td>Color</td>
<td>Weight</td>
<td>8kg</td>
</tr>
<tr>
<td></td>
<td>Pure White</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Munsell No.</td>
<td>6.4Y6.9/0.4</td>
<td>Power consumption</td>
<td>18W (One panel, normal second)</td>
</tr>
<tr>
<td>Material</td>
<td>ABS resin</td>
<td>Power</td>
<td>AC200V (50/60HZ)</td>
</tr>
<tr>
<td>DC motor drive system</td>
<td>2 motors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating method</td>
<td>Elevation grille remote controller (option) or wired remote controller</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevating object</td>
<td>Air intake grille + L.L. Filter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevating speed (ascend/descend)</td>
<td>2.0m/min. (both ascend/descend)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevating distance</td>
<td>1.2m/1.6m/2.0m/2.4m/2.8m/3.2m/3.6m/4.0m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External dimension</td>
<td>950x950x35x(17)</td>
<td>Dimension inside the ceiling is the same as standard types.</td>
<td></td>
</tr>
</tbody>
</table>

**Applicable Models**

- PL-A-RP35~RP140BA
- PL-A-RP71~RP125BA2

**Descriptions**

- Air intake grille can be lowered automatically by both wired remote controller and exclusive wireless remote controller, enabling to easily clean the air filter.
- Air intake grille can be descended in 8 steps down to 4m in accordance with the ceiling height.

**Dimensions**

**Installation dimension**
How to Use / How to Install

MITSUBISHI ELECTRIC Package Air-Conditioner Decorative Panel (Optional Part)  
Automatic Filter Elevation Panel Operation Manual  
[PLP-6BAJ Series]  
* Wired/Wireless Remote Controller Enabled

Thank you for purchasing MITSUBISHI ELECTRIC Package Air-Conditioner Automatic Filter Elevation Panel.

• For correct and safe use, read this manual thoroughly before using this product.
• In addition to this manual, read the operation manual for the air-conditioner.
• Users must keep this manual readily at hand, together with the operation manual for the air-conditioner, the installation manual for the indoor unit and the installation manual for the decorative panel.

Safety precautions that must be followed

• Symbols used in this manual are categorized as follows according to the degree of risk when used improperly:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>!</td>
<td>Warning - Describes precautions that should be observed to prevent serious consequences such as serious injury or death of the user.</td>
</tr>
<tr>
<td>!</td>
<td>Caution - Describes precautions that should be observed to prevent the danger of injury or damage to the premises and/or contents thereof.</td>
</tr>
</tbody>
</table>

• Symbols used in the figures indicate the following:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>!</td>
<td>Absolutely not</td>
</tr>
<tr>
<td>!</td>
<td>Must be done as instructed</td>
</tr>
</tbody>
</table>

Precautions when using

Warning

Do not hang on the lowered air intake grille or place any objects other than the filter on the grille.

- Doing so may cause injury due to a drop or a fall.

Stop the unit before performing up/down operation.

- Doing so may cause the air intake grille to drop off.

Caution

Perform the up/down operation only to clean the filter and the air intake grille.

- Doing so may cause injury or failure.

Do not touch or swing the wire (suspender) and the air intake grille during a up/down operation.

- Doing so may cause a collision of the air intake grille or twining of the wire, resulting in an injury or a failure of the up/down device.

Do not apply downward force on the air intake grille when cleaning the filter.

- Doing so may cause a failure of the up/down device.

Keep the wireless remote controller away from children.

- Otherwise, it may cause an injury.
- Prevent children from accidentally swallowing batteries.

Do not perform up/down operations consecutively or repeatedly. Do not leave the air intake grille lowered.

- Doing so may cause an injury or a failure of the up/down device.

Do not bend the wire, or put objects such as an edge tool or lit cigarette on the wire.

- Doing so may cause the air intake grille or the filter to drop off due to wire breakage, resulting in an injury.

* Wired/Wireless Remote Controller Enabled
How to handle the wireless remote controller for Automatic Filter Elevation Panel

- When using the wireless remote controller, point it towards the sensor from right under the decorative panel.
- The receiver blips to inform you that the signal transmitted from the remote controller has been received. Signals can be received up to approximately 3 meters in a straight line from the controller in an area approximately 30 degrees to the left and right of the controller. However, illumination such as fluorescent lights and strong light can affect the ability to receive signals.

- Handle the wireless remote controller carefully! Do not drop the remote controller or subject it to strong shocks. In addition, do not get the remote controller wet or leave it in a location with high humidity.
- To avoid misplacing the remote controller, secure it to something such as a wall using the provided hook and loop fastener. Be sure to place the remote controller back in place after use.

How to set battery

- Press and hold the remote controller with a sharp object such as a ballpoint pen (in the direction of the arrow (1)) and slide toward the direction of the arrow (2) to remove the battery case.
- Use the lithium battery (CR2025, 3V).
- Insert the battery into the battery case with the positive side up and install the case back onto the remote controller.
How to perform the up/down operation of the air intake grille

Using Wireless remote controller:

1) Ensure that the air-conditioner is not running.
2) Press the “Down” button to lower the air intake grille.
   * By default, the air intake grille will automatically stop at a lowering distance of 1.6 m from the ceiling level. If you want to change the default lowering distance, contact your dealer. (The distance can be changed to 1.2 m, 2.0 m, 2.4 m, 2.8 m, 3.2 m, 3.6 m and 4.0 m. These should be used only as a guide. You should lower the air intake grille yourself to check the exact distance.)
   * When you want to stop the air intake grille while it is lowering, press the “Stop” or “Up” button on the remote controller to stop at that position.
3) Remove the filter or air intake grille and clean them. (Refer to the section on how to clean up.)
4) Press the “Up” button on the remote controller to put the air intake grille in place.
   * If the air intake grille is not placed in the correct position at a time, the operation is automatically retried.
   * When you want to stop the air intake grille while it is rising, press the “Stop” or “Down” button on the remote controller to stop at that position.

Using Wired remote controller:

* Depending on the connected outdoor unit, operation may not be possible.

General Operation
* Raise or lower all the air intake grilles managed by the remote controller at the same time. Install the remote controller in a place where you can observe all the air-conditioners. Otherwise, the lowering grille may make contact with something and cause damage to it.

1) Ensure that the air-conditioner is not running.
   * The up/down operation mode is only available when the air conditioner is “OFF”.
2) Press both the “FILTER” and “Ventilation” buttons simultaneously for 2 seconds or more to enter the up/down operation mode.
   “Up/down operation mode” display
3) Press the TEMP. (segue) button. After a while, the air intake grille will begin lowering.
   “Stand by for lowering” display
   “Lowering” display (blinking)
   “Stopped” display (when finished lowering)
   [Note: ]
   • You cannot stop the operation while the air intake grille is lowering.
   * If you press the (segue) button while moving down, the air intake grille may stop lowering, but it will not stop immediately.
   * By default, the air intake grille will automatically stop at the lowering distance of 1.6 m from the ceiling level.
   * If you want to change the default lowering distance, contact your dealer. (The distance can be changed to 1.2 m, 2.0 m, 2.4 m, 2.8 m, 3.2 m, 3.6 m, and 4.0 m. These should be used only as a guide. You should lower the air intake grille yourself to check the exact distance.)
4) Remove the filter and/or air intake grille to clean them.
   (Refer to the section on how to clean up.)
5) Press the TEMP. (segue) button. After a while, the air intake grille will begin to rise and then be put back into place.
   “Stand by for lowering” display
   “Raising” display (blinking)
   “Stopped” display (when the air intake grille has been put back into place)
   [Note: ]
   • You cannot stop the operation while the air intake grille is rising.
   * If you press the (segue) button while moving up, the air intake grille may stop rising, but it will not stop immediately.
6) Exit the up/down mode either by pressing the “ON/OFF” button or by holding down both the “FILTER” and “Ventilation” buttons simultaneously for 2 seconds or more.
   * After exiting the up/down mode, wait for about 30 seconds to perform the next operation. The remote controller will not accept any operation for that period.
1) Ensure that the air-conditioner is not running.
   - The up/down operation mode is only available when the air-conditioner is “OFF”.

2) Press both the “FILTER” and “Ventilation” buttons simultaneously for 2 seconds or more to enter the up/down operation mode.

3) Press the “Ventilation” button. After a while, it will switch to the “individually-specified up/down operation mode”.

4) If you press the “FILTER” button when the “Machine No.” or “Refrigerant address No.” is blinking, after a while, the up/down airflow direction of the displayed air-conditioner will be switched downward; and the airflow direction of the other vents will all be blocked.
   - In Step 5) described below, identify the target air-conditioner by changing the “Machine No.” and “Refrigerant address No.” and by pressing the “FILTER” button to check the up/down airflow direction.

5) Select the “Machine No.” and “Refrigerant address No.”.
   - “Machine No.” and “Refrigerant address No.” can be changed by using the “TEMP.” buttons (   ) (   ) when the panel displays (a) or (b).
   - Every time you press the “Mode selection” button, the target of operation will change as illustrated below.

6) Continue to press the “Mode selection” button until “Waiting for up/down operation” is displayed.

The following steps are the same as steps 3) - 6) described in the “General Operation” section. Refer to that section.
1) Ensure that the air-conditioner is not running. *The up/down operation mode is only available when the air-conditioner is “OFF”.

2) Press both the “FILTER” and “Ventilation” buttons simultaneously for 2 seconds or more to enter the up/down operation mode.

3) Press the “Ventilation” button. After a while, it will switch to the “individually-specified up/down operation mode”.

4) If you press the “FILTER” button when the “Address No. of indoor unit” is blinking, after a while, the up/down airflow direction of the displayed air-conditioner will be switched downward; and the airflow direction of the other vents will all be blocked.

5) Select the “Address No. of indoor unit”. *Address No. of indoor unit” can be changed by using the “TEMP.” buttons (   ) (   ) when the panel displays (a) or (b).

6) Continue to press the “Mode selection” button until “Waiting for up/down operation” is displayed.

The following steps are the same as steps 3) - 6) described in the “General Operation” section. Refer to that section.
How to perform up/down operation of air intake grille (continued)

Precautions when operating

- The air intake grille can be raised or lowered only if it is suspended with four wires.
- Do not attempt to pull down the air intake grille manually and forcibly. (Doing so may cause failure.)
- Do not perform the up/down operations consecutively or repeatedly. Do not leave the air intake grille lowered. (Doing so may cause a failure.)
- When you lower the air intake grille, ensure that no obstacles are situated under the grille.
- If you fail to reinstall the air intake grille correctly after cleaning the filter, the air intake grille will not be fixed in the right place. This may also cause failure.

How to clean up

Cleaning the filter

1) Pull down the lever of the air intake grille to remove the filter.

2) Remove dust on the filter by either vacuuming off or washing with water.
   - If the filter is extremely dirty, wash it with lukewarm water containing a mild detergent.
   - Do not wash the filter with hot water (50°C or higher), as this may warp the filter.

3) When finished, dry the filter enough in the shade.
   - Do not dry the filter in direct sunlight or by using a heat source, as this may warp the filter.
4) Install the filter on the air intake grille (by reverse procedure for removal).
   - Be sure to install it in the correct direction. (180-degree counterturn is acceptable: Reversing the front and back sides is not acceptable.)

Cleaning the air intake grille

1) On the corner part of the air intake grille, slide the screw hooks at the end of the wires in the direction of the arrow to remove all of four hooks from the circular holes of the grille support.

   * Never pull the wire as doing so may cause a failure.

2) Wash the air intake grille with water.
   - Wash it as you wipe gently using a soft cloth. When finished, wipe off moisture with a soft cloth and dry the air intake grille in the shade.
   - When using a mild household detergent (for dishes or clothing), take care to rinse off any detergent thoroughly.
   - Do not use gasoline, paint thinner, polishing powder or acidic/alkaline detergent as these may damage the air intake grille.
   - Do not soak the air intake grille in water or lukewarm water for a long time (2 hours or longer).
   - Do not dry the air intake grille in direct sunlight or by using a heat source: this may warp or discolor it.
3) Reinstall the air intake grille (by reverse procedure for removal).
   * There is no constraint on the direction.
## Emergency Up/Down Operation

- When the wireless remote controller cannot be used (in the case of battery discharge, misplacing of the wireless remote controller, malfunctioning and so on), the emergency switch on the sensor can be used as an alternative.
  * When doing this, particular caution must be taken not to fall.

  To lower the air intake grille: Press the [ ] button once.
  (For emergency heating operation, hold down this button.)

  To raise the air intake grille: Press the [ ] button once.
  (For emergency cooling operation, hold down this button.)

- To stop the air intake grille from moving, use the opposite buttons to those used to initiate movement.
  (To stop it from lowering, press the “UP” button; To stop it from rising, press the “Down” button.)

## Troubleshooting

- Check the following points before contacting your dealer.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Reason</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air intake grille does not function with operation of the wireless remote controller.</td>
<td>Air-conditioner is running.</td>
<td>Stop running the air-conditioner and try again.</td>
</tr>
<tr>
<td></td>
<td>Power failure.</td>
<td>After recovering from power failure, try again.</td>
</tr>
<tr>
<td></td>
<td>Batteries are not inserted into the wireless remote controller.</td>
<td>Install or replace the battery.</td>
</tr>
<tr>
<td></td>
<td>Or battery power is running low.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>There is something on the air intake grille.</td>
<td>Remove the objects or obstacles from the air intake grille.</td>
</tr>
<tr>
<td></td>
<td>Or something is stuck in the air intake grille.</td>
<td>Or, remove the stuck object.</td>
</tr>
<tr>
<td>Air intake grille cannot be fixed in place.</td>
<td>There is something on the air intake grille.</td>
<td>Remove the objects or obstacles from the air intake grille.</td>
</tr>
<tr>
<td></td>
<td>Filter is not properly installed.</td>
<td>Lower the air intake grille again and check whether the filter is installed in the correct position.</td>
</tr>
<tr>
<td></td>
<td>Air intake grille is not hung with all four hooks.</td>
<td>Lower the air intake grille again and hook on the air intake grille.</td>
</tr>
<tr>
<td>Air intake grille stops lowering. (Air intake grille would not lower any further.)</td>
<td>The air intake grille has finished lowering to the auto-stop position.</td>
<td>This is normal. * If you want to change the setting for the lowering distance, contact your dealer.</td>
</tr>
<tr>
<td>Noises are made during up/down operation. (While air intake grille is moving up/down.)</td>
<td>This is the noise made when the wire is wounded and unwound.</td>
<td></td>
</tr>
<tr>
<td>Noises are made while putting the air intake grille into place.</td>
<td>This is the operational noise for putting the air intake grille into place.</td>
<td>This is normal.</td>
</tr>
<tr>
<td>Air intake grille repeats rising and lowering several times while being put into place.</td>
<td>This is the operation for putting the air intake grille into place.</td>
<td></td>
</tr>
<tr>
<td>Air intake grille leans toward one side during the up/down operation.</td>
<td>The speeds of winding/unwinding wires are slightly different for each wire.</td>
<td></td>
</tr>
</tbody>
</table>

* If you still have problems after checking the points described above, consult your dealer. Do not try to repair it yourself.
Safety precautions that must be followed

• Before installing the unit, make sure you read all the “Safety precautions that must be followed”.  The precautions herein provide very important points regarding safety. Make sure you follow them.

• Symbols used in this manual are categorized as follows according to the degree of risk when used improperly:

  - **Warning** Describes precautions that should be observed to prevent danger of serious injury or death of the user.

  - **Caution** Describes precautions that should be observed to prevent danger of injury or damage to the premises and/or contents thereof.

• After installation, describe the user “Safety Precautions”, how to use, and how to care for and clean the unit following the operation manual, and test run the unit to confirm whether there are any problems.  In addition, direct the user to keep this installation manual together with the operation manual, and, should the users change, to give the manuals to the new user.

### Warning

- **The unit must not be installed by the user. Ask the dealer or an authorized company to install the unit.**
  - If the unit is installed improperly, water leakage, electric shock or fire may result.

- **Installation must be properly done following this installation manual.**
  - If the unit is installed improperly, water leakage, electric shock or fire may result.

- **Installation must be done in proper order in case of strong wind such as storms and earthquakes.**
  - If the unit is installed improperly, there is a risk that a fall may result.

- **The unit must be installed on a surface that is able to support the weight of the unit.**
  - If the surface does not have sufficient strength, accidents may result due to falling of the unit.

- **If the unit is to be installed in a small room, take measures to prevent exceeding the concentration limit of refrigerant in the case of refrigerant leakage.**

- **Ventilate the room if refrigerant leaks out during installation.**
  - When refrigerant comes in contact with fire, noxious fumes may be produced.

- **Electrical work must be done by an authorized engineer following “Technical standards for electrical equipment”, “Extension Code” and this installation manual and using dedicated communication circuit and rated power voltage/circuit breakers.**

- **Use genuine Mitsubishi parts such as humidifier and high-performance filters (sold separately).**

- **Never make alterations to the unit.**
  - Consult with a dealer for repairs. If alterations are done on the unit or the unit is repaired improperly, water leakage, electric shock, or fire may result.

- **The unit must not be moved or reinstalled by the user.**
  - If the unit is installed improperly, water leakage, electric shock, or fire may result.

- **Make sure the refrigerant has not leaked after installation.**
  - Never make alterations to the unit.

- **The unit must be installed on a surface that is able to support the weight of the unit.**
  - If the surface does not have sufficient strength, accidents may result due to falling of the unit.

- **If the terminal board cover (panel) is installed improperly, fire or electric shock may result due to dust or water.**

- **If air or other substances mix in, abnormal high-pressure will occur in the refrigerant cycle when installing and/or moving the unit.**

- **If the terminal board cover (panel) is installed improperly, fire or electric shock may result due to dust or water.**

- **Do not mix substances other than the designated refrigerant in the refrigerant cycle when installing and/or moving the unit.**
  - If air or other substances mix in, abnormal high-pressure will occur in the refrigerant cycle, which may cause explosion.

### Caution

- **This product must not be used in certain environments.**
  - If used in an environment with a large amount of grease (including mechanical oil), steam, or sulfidizing gas or where it is high in salt content such as a seashore where the outdoor unit may become blocked by snow, performance may drop significantly or parts may become damaged.

- **Do not install the unit in an area where flammable gas may be generated, flow in, be retained or leaked.**
  - In case gas leaks around the unit, fire or explosion may result.

- **If the unit is installed in a hospital or telecommunications office, preparation for noise must be adequately completed.**
  - The effect of inverter equipment, private power generators, high-frequency medical devices and radio communication devices may result in malfunctions and/or damage of the air-conditioner. Air-conditioners may affect medical devices or telecommunications devices to interfere with medical treatment or cause adverse effects such as disturbance of broadcasting and/or noise bursts.
Before installation (relocation)

⚠️ Caution ⚠️

- **Transport of the product must be done carefully.**
  - In principle, products over 20 kg must be carried by two or more people. Make sure you move the product holding the designated handles such as a PP band. Use protectors to prevent injury; do not touch the fins with your bare hands.

- **Drain piping must be done properly according to the installation manual to drain water and must be kept warm to prevent bedewing.**
  - If piping is not properly installed, water leakage may result, which will make the ceilings, floors or other household items wet.

- **Appropriately dispose of packages.**
  - Packaging may contain metal objects such as “nails” and wood chips. So injury may result if disposal is neglected.

- **Do not neglect damaged platforms.**
  - If left damaged, the unit may fall and result in injury.

- **Make sure heat insulation for refrigerant piping is properly installed to prevent bedewing.**
  - If heat insulation is not done properly, bedewing of the surfaces such as piping may result, which will make the ceilings, floors or other valuable items wet.

- **Do not wash the air-conditioner.**
  - Doing so may cause electric shock.

Before electrical work

⚠️ Caution ⚠️

- **Install short circuit breakers depending on the installation area (area with high moisture content).**
  - If a short circuit breaker is not installed, electric shock may result.

- **Unit must be grounded.**
  - Do not connect the ground wires with ground wires for gas pipes, water pipes, conductor rods or telephones. If the unit is not properly grounded, electric shock may result.

- **Use proper electrical cables to meet the standard for current capacity.**
  - If proper electrical cables are not used, short circuit, electric shock or fire may result.

- **Use fuses with appropriate capacity.**
  - If fuses, wires and copper wires with larger capacities are used, damage or fire may result.

- **Electrical wiring must be done without tension.**
  - If there is tension on the cables, wire disconnection, electric shock or fire may result.

Before test runs

⚠️ Caution ⚠️

- **Turn it on more than 12 hours before operation.**
  - If operation starts as soon as the unit is turned on, damage may result. Do not turn it off during the season.

- **Do not operate the unit without the panel or guard.**
  - If you touch rotating, hot or high-voltage parts of the equipment, injury may result from being snagged or burnt, or from electric shock.

- **Do not operate the unit without air filters.**
  - Dirt may get clogged inside and may result in damage.

- **Do not operate the unit with wet hands.**
  - Electric shock may result.

- **Do not touch refrigerant piping when operating with bare hands.**
  - Refrigerant piping when operating becomes cold and hot, depending on the condition of the flowing refrigerant. If touched with bare hands, frostbite or burns may result.

- **Do not turn the unit off soon after operation stops.**
  - Make sure you wait for more than five minutes. If it is turned off too soon, water leakage or damage may result.
1. **Included parts**  
(This manual and following parts are included.)

<table>
<thead>
<tr>
<th>Part Number/ Name</th>
<th>Quantity</th>
<th>Shapes/ Sizes</th>
<th>Part Number/ Name</th>
<th>Quantity</th>
<th>Shapes/ Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Decorative panel</td>
<td>1</td>
<td></td>
<td>2 Screw with washer</td>
<td>4</td>
<td>M5 × 0.8 × 25</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 Installation gauge</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 Plastic fastener</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5 Tag</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Never force pressure on the vane, it may result in damage.

2. **Preparation before installing the decorative panel**

**Confirming the location of the unit**

- Check whether the opening holes of the ceiling are within the following range.
  860 × 860 - 910 × 910
- Using included installation gauge 3, locate the ceiling surface and the unit. If location of the ceiling surface and the unit does not match, wind leakage, dew fall or damage of the vane may result.
- Turn off the main power (short circuit breaker).

**Warning**

**Turn off the main power.**

- If the main power is not turned off, injury or electric shock may result.

**Location for installing the wired remote controller**

- There are two methods for controlling the air intake grille up/down function: use the up/down function for all the units which are controlled by the remote controller at one time, and use the up/down function for each unit individually. (Please refer to the operation manual for the operation method.) When using the up/down function for all units at the same time, a lowering grille may come in contact with a person or object and may cause damage if the unit cannot be seen from where the remote controller is. Install the remote controller where all the units can be seen.
- The air intake grille up/down function can also be controlled with the wired remote controller. *(Depending on the connected outdoor unit, operation may not be possible.)*

**Removing the air intake grille**

- Remove the tape that secures the air intake grille and remove the air intake grille from the decorative panel.
  - You will find the limit switch for storing and detecting air intake grille shown in the right figure. Make sure you do not damage the limit switch when operating.

**Removing the corner panel**

- Remove all corner panels except for the one with sensor.
  - If the corner panel with sensor is removed, a problem may occur when installing the decorative panel.
- Remove the screw on the corner, slide the panel in the direction of the arrow (1) in the figure and remove the corner panel.
3. **Selection of air outlet location**

- You can select 11 different patterns of air outlet directions on this decorative panel. Select them depending on the location the panel is installed.

  - Factory default
    - Number of air outlets: four directions
    - Air volume: Standard

- Select a pattern of air outlet directions. **More than two directions must be selected.**

  - When changing the number of directions, you need an air outlet shutter plate, which is sold separately. An air outlet shutter plate will be attached to the indoor unit; configuration must be done before attaching the decorative panel on the unit.

  - Do not select two directions in a hot and humid environment. (Dew formation or dewfall may result.)

<table>
<thead>
<tr>
<th>Patterns of air outlet directions</th>
<th>Four directions</th>
<th>Three directions</th>
<th>Two directions</th>
</tr>
</thead>
<tbody>
<tr>
<td>One pattern</td>
<td>Four patterns</td>
<td>Six patterns</td>
<td></td>
</tr>
<tr>
<td>Factory default</td>
<td>Block one of the air outlets on the unit with shutter plate.</td>
<td>Block two of the air outlets on the unit with shutter plate.</td>
<td></td>
</tr>
</tbody>
</table>

- Change the settings depending on the number of air outlets and the ceiling height where the unit is installed.

  * If not changed, failure may result or users may feel discomfort.

1) **BA Type Indoor Unit**

Configuration will be done on the remote controller. Refer to the section “Function Selection” in the installation manual of the remote controller or the section “Function Selection by Remote Controller” in the installation manual of the unit.

2) **BM Type Indoor Unit**

Set up the slide switches on address board of the indoor unit as shown in the following table.

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>32 - 80 Type</th>
<th>100 - 140 Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWB</td>
<td>Low ceiling</td>
<td>High ceiling</td>
</tr>
<tr>
<td>SWA</td>
<td>Standard</td>
<td></td>
</tr>
<tr>
<td>Four directions</td>
<td>2.5 m</td>
<td>3.5 m</td>
</tr>
<tr>
<td>Three directions</td>
<td>2.7 m</td>
<td>3.3 m</td>
</tr>
<tr>
<td>Two directions</td>
<td>3.0 m</td>
<td>3.3 m</td>
</tr>
</tbody>
</table>

* Slide switch setting is necessary except for the column highlighted in gray.
  - (Column highlighted in gray is the factory default).
  - SWA - Compatible with ceiling height
  - SWB - Compatible with number of air outlets

* Do not set up for low ceilings in a hot and humid environment. (Dew formation or dewfall may result.)

4. **Installing decorative panel**

1) **Preparation for pre-installation**

   - Put two of the included screws with a washer on the unit as shown in the right figure (across from the corner of drain pipe).

2) **Pre-installation of decorative panel**

   - Join the corner of drain pipe on the unit with the corner with socket on the decorative panel and put them together temporarily with slots on the decorative panel.

   * Make sure the lead wires of the decorative panel do not get caught between the unit and the
4. **Installing decorative panel** (continued from the previous page)

3) Fixing the decorative panel

- Remove the corner panel with the wireless signal receiver.
- By tightening the pre-installed screws with a washer [2] and the remaining two screws with a washer [2], fix the decorative panel onto the unit.
- Make sure there is no gap between the unit and the decorative panel or between the decorative panel and the ceiling surface.

4) Wiring connections

**Wiring connections for vane motor**

- Remove the plastic fastener banding four wires together.
- Open the electric box by unscrewing the three screws that fix the cover of the electric box of the unit.
- Make sure to connect a connector for vane motor (white, 20 poles) with CNV connector on the control board of the unit.
- Lead wires that lead off the decorative panel should be put through the bellmouth hooks of the unit so that there is no slack. Extra lead wires should be held together by a clamp on the unit.
- Lead wires of the decorative panel should be held together by a clamp on the unit so that they do not contact the wires.
- Do not place the extra lead wires in the electric box of the unit.
- With the i-see sensor panel, the cover of electric box should be put on after installing i-see sensor corner panel.

**Wiring connections for up/down machine**

- Take CNAC (white) and CN3G (black), lead wires of the up/down machine of the decorative panel from the side of the electric box on the unit.
- Make sure to connect them to CNAC (white) and CN3G (black) on the control board.
- CNAC, lead wires of the decorative panel should be held together with the included plastic fastener [4] in the electric box of the unit.
- Ground wire of CNAC, lead wires of the decorative panel should be fixed with the included screws [8] in the electric box of the unit.
- CN3G, lead wires of the decorative panel should be put through the bellmouth hooks of the unit so that there is no slack and extra lead wires should be held together by the clamp on the unit.

If there is a gap between the decorative panel and the ceiling:
With the decorative panel attached, slightly adjust the installation height of the unit and clear the gap.

Slightly adjust the screw nut on the unit with a tool such as screw wrench from "Easy corner pocket".
4. **Installing decorative panel** (continued from the previous page)

Wiring connections for the signal receiver board of the wireless remote controller

- Make sure to connect lead wires for the signal receiver board for the wireless remote controller of the unit (white, nine poles) to CN90, control board of the unit.
- Lead wires on the dressing panel should be put through the bellmouth hooks of the unit so that there is no slack and extra lead wires should be held together by the clamp on the unit.
  * With the i-see sensor panel, the cover of electric box should be put on after installing i-see sensor corner panel.
  * Make sure wires are not caught in the cover of electric box. If they get caught, they will be cut off.

5. **Setting up the lowering distance of air intake grille**

- You can set up eight different stages of lowering distance for the air intake grille according to the set up location if desired.
  * As a factory default, the decorative panel will automatically stop at 1.6 m from the ceiling surface. The distance is a rough indication, check by actually lowering it.
  1) Take the cover off the electric box. (Two screws)
  2) Set up the dip switches of SW22 on the control board as followed.
  3) Put the cover back on the electric box.

<table>
<thead>
<tr>
<th>Lowering distance</th>
<th>Rough Indication of the Ceiling Height</th>
<th>ON</th>
<th>OFF</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2 m</td>
<td>2.4 m - 2.8 m</td>
<td>1234567890</td>
<td></td>
<td>1234567890</td>
<td></td>
</tr>
<tr>
<td>2.0 m</td>
<td>2.4 m</td>
<td>1234567890</td>
<td></td>
<td>1234567890</td>
<td></td>
</tr>
<tr>
<td>2.8 m - 3.2 m</td>
<td>3.2 m - 3.6 m</td>
<td>1234567890</td>
<td></td>
<td>1234567890</td>
<td></td>
</tr>
<tr>
<td>3.6 m - 4.0 m</td>
<td>4.0 m - 4.4 m</td>
<td>1234567890</td>
<td></td>
<td>1234567890</td>
<td></td>
</tr>
<tr>
<td>4.4 m - 4.8 m</td>
<td>4.8 m - 5.2 m</td>
<td>1234567890</td>
<td></td>
<td>1234567890</td>
<td></td>
</tr>
</tbody>
</table>

* Airflow outreach distance is different depending on indoor units, number of air outlets and air volume (ceiling height), airflow may not reach the indicated ceiling height as shown in the left table.

6. **Wireless remote controller compatible (for operating the unit)**

- The pair number configuration is a configuration to assign the unit to be operated by a wireless remote controller. **If a specific assignment is not necessary, you do not need this configuration.** In the factory default, pair numbers on the indoor unit (signal receiver side) and the wireless remote controller are set “0”.
- If an assignment is necessary, set up pair numbers on the indoor unit (signal receiver side) and the wireless remote controller as shown in the right table.

<table>
<thead>
<tr>
<th>Pair number set up for wireless remote controller</th>
<th>Set Up on Indoor Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>1</td>
<td>J41 only</td>
</tr>
<tr>
<td>2</td>
<td>J42 only</td>
</tr>
<tr>
<td>3 - 9</td>
<td>J41 and J42</td>
</tr>
</tbody>
</table>

- Pair number configuration is a configuration to assign the unit to be operated by a wireless remote controller. **If a specific assignment is not necessary, you do not need this configuration.** In the factory default, pair numbers on the indoor unit (signal receiver side) and the wireless remote controller are set “0”.
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* If an assignment is necessary, set up pair numbers on the indoor unit (signal receiver side) and the wireless remote controller as shown in the right table.
6. **Wireless remote controller compatible (for operating the unit)** (continued from the previous page)

Setting up the pair numbers of wireless remote controller

1) Press “Set” button. (Press it with a fine tip.)
Operate when the display is turned off.

- **MODEL SELECT** will blink and the model number (three digit numbers) will light up.

2) Press **PAIR** button twice. Pair number will blink.

3) Use temperature buttons and to adjust the pair number you need.
   - If you make a mistake, press **PAIR** button and start over from 2).

4) Press “Set” button. (Press it with a fine tip.)
The pair number you set up will blink for three seconds and turn off.

* Depending on the connected outdoor unit, operation may not be possible.

7. **Installation of corner panels and air intake grille**

* You can set the direction of the air intake grille such as grids when installing multiple units as desired. If forced to be set at other than the position shown in the figure, failure may result.

**Installation of corner panels**

- Adverse procedure of “Preparation before installing the decorative panel” in the Section 2 will be taken for installing the corner panels. For the corner panels with a safety cord, the cord should be fixed at the position shown in the right figure with the included screw onto the decorative panel.

* If not fixed, corner panels may fall during operation.

**Installation of i-see sensor corner panel**

Optional part: PAC-SA1ME-E
- Take CN4Y (white) and CN6Y (red), lead wires of the i-see sensor corner panel from the side of the electric box on the unit and make sure to connect them to the connector of the control board.
- Lead wires of the i-see sensor corner panel should be fixed at the rib of the decorative panel with the plastic fastener so that there is no slack.
- Lead wires should be held together with the lead wires of the unit and fixed with two of the plastic fastener so that there is no slack.
- Put the cover back on the electric box with three screws.
- Make sure wires are not caught in the cover of electric box. If they get caught, they will be cut off.

* Adverse procedure of “Preparation before installing the decorative panel” in the Section 2 will be taken for installing the i-see sensor corner panels.
* The i-see sensor corner panel should be fixed onto the decorative panel with screw.
7. **Installation of corner panels and air intake grille**

--- **Installation of Air Intake Grille** ---

- After electronic power is supplied –
  - Slide the hook tip of the wire in the direction of the arrow and attach all four parts to the round hole on the corner of the air intake grille.
  - Never pull the wire as it may cause damages.

--- **Storage of air intake grille** ---

- The air intake grille will be stored when you press “UP” button on the remote controller or the signal receiver for the remote controller.
- **Temporary Fixation of the Air Intake Grille before electronic power is supplied (The same procedure should be taken in the maintenance.)** –
  - Hold the four wires together so that they do not get tangled and fix them by the clamp for fixing lead wires on the decorative panel.
  - Fix the wires so that there is no slack, as the unit may be operated with wires fixed temporarily during the maintenance.
  - Remove the temporary fixing hooks and the safety cords, which are screwed onto the decorative panel shown in the right figure.
  - Using the screws which have fixed the temporary fixing hooks, attach the temporary fixing hooks onto two parts of the air intake grille.
  - Hook the snap hook of one end of the safety cord in the hole on the air intake grille and hook that of the other end in the hole on the decorative panel.

--- **Warning** ---

Take measures to prevent falling of the air intake grille.

- If the air intake grille falls, accident may result.

- Set the air intake grille in the decorative panel.
  - Make sure the safety cord does not get caught.
  - If you are temporarily fixing the air intake grille during installing the decorative panel, attach included tag ⑤ to one of the grids on the air intake grille and let everyone know the air intake grille is fixed temporarily.
  - There will be no tag ⑤ during the maintenance, in case the service technician changes make sure the new service technician knows that it is fixed temporarily.
  - Take the tag ⑤ off after electronic power is supplied or the maintenance is finished, take the air intake grille following the adverse procedure of the previous procedure, and attach the temporary fixing hook and the safety cord back to their original position. (They will be reused.)

8. **Verification**

- Verify that there is no gap between the unit and the decorative panel or between the decorative panel and the ceiling surface.
  - If there is a gap, dew formation or dewfall may result.
- Verify that wires are properly connected.
  - If any are improperly connected, problems may result; vane does not move, dew formation or dewfall may occur or the air intake grille does not rise/lower.
- If the model has a wireless remote controller compatible (for operating the unit), check whether the pair numbers of the remote controller and the unit match.
- Make sure if the lowering distance of air intake grille is given as requested by the user and if the up/down movement is smooth.
- For optional part PAC-SA1ME-E, check the rotating movement of the i-see sensor. If the i-see sensor does not rotate, review the procedure in “installation of i-see sensor corner panel” in section 7.

After verifying all the items above, hand all the documents including this manual and the manuals for the unit and separately sold parts to the user. Be sure to explain the descriptions of cleaning the filters and how to use the air intake grille up/down function (remote controller operation) in the operation manual of the decorative panel to the user.
**Before installing these optional parts, be sure to read the installation manual attached to the outdoor unit and observe instructions given there.**

### WARNING

- **Ask dealer or specialist for installation.**
  - If installed incorrectly by user, water leak, electric shock, fire, etc. could happen.

- **Securely perform installation using tools and piping parts specially made for the refrigerant R410A, referring to this installation manual.**
  - Since pressure of HFC type refrigerant R410A is about 1.6 times higher than the conventional refrigerant, if specified piping parts are not used or installation is not correct, it could cause explosion or injury, and even in less severe cases, water leak, electric shock or fire can happen.

- **When installing or reinstalling the unit, do not mix anything into the refrigerant cycle other than the specified refrigerant (R410A).**
  - If air, etc. is mixed, pressure within the refrigerant cycle may become abnormally high, which could cause explosion, etc.

- **When the unit is installed in a small room, make sure to keep density not exceed even when refrigerant leaks.**
  - Consult your dealer for proper countermeasures to keep the density. If the density exceeds, oxygen may leak.

- **Ventilate when refrigerant leaks.**
  - If refrigerant touches heat source, it could produce harmful gas.

- **Never remodel.**
  - Consult your dealer for repair. If remodeled or repaired incorrectly by user, it may cause water leak, electric shock or fire.

- **Do not move and reinstall by yourself.**
  - If installation is not correct, it may cause water leak, electric shock or fire. Ask your dealer or vendor.

- **After installation is completed, make sure that refrigerant does not leak.**
  - If refrigerant leaks in the room and reaches heat source such as fan heater, oil heater, etc., harmful gas may be produced.

### CAUTION

#### Before installation

- **Do not use in unusual circumstances**
  - Do not use in a place where there is much oil (including machine oil), steam, sulfation gas, or high salt content (seaside area), or where outdoor unit can be covered with snow. This could affect the performance of unit and parts may be broken.

- **Do not install in a place where flammable gas could be generated, flow in, remain or leak.**
  - Gas accumulating around the unit could cause fire or explosion.

#### Before test run

- **Do not touch refrigerant pipe with a bare hand during operation.**
  - Refrigerant pipe becomes hot or cold according to the flow condition of refrigerant. Touching pipe with a bare hand could cause frost or burn injury.

- **Turn on the power at least 12 hours before starting test run.**
  - If test run is started immediately after power is turned on, it may cause trouble. Do not turn off power during the season when the unit is being used.

- **Do not touch refrigerant pipe with a bare hand during operation.**
  - If refrigerant piping is necessary, insulate pipes properly so that condensation does not occur.
    - Incomplete insulation will cause condensation on surface of pipes, etc. and moisture will drip, which could wet ceiling, floor or other areas.

#### Before performing installation and electrical construction:

- **Securely apply heat-insulation to refrigerant pipe so that no condensation occurs.**
  - If heat-insulation is insufficient, condensation could occur on the surface of pipes and dew drops could accumulate on ceiling, floor or important goods.

- **Tighten flare nuts using torque wrench with the specified method.**
  - If tightened too strongly, there could occur breakage of flare nut or leakage of refrigerant after a long period.

- **Do not place polyethylene bags in reach of children.**
  - Putting it over the head could result in suffocation.
<table>
<thead>
<tr>
<th><strong>CAUTION</strong></th>
<th></th>
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<tbody>
<tr>
<td><strong>Cautions on use of the units with refrigerant R407C/R410A</strong></td>
<td></td>
</tr>
<tr>
<td><strong>When existing pipes are to be used, take care to secure cleanliness and gas leakage prevention.</strong></td>
<td><strong>Use ester oil, etheral oil or alkyl bezel oil (small quantity) as refrigerant oil applied to flare section.</strong></td>
</tr>
<tr>
<td>● Refer to the installation manual to check whether or not the current pipes can be used.</td>
<td>● If too much mineral oil is mixed, it may cause deterioration of refrigerant oil.</td>
</tr>
<tr>
<td>● Do not reuse flare nut, to prevent gas leakage. Replace with a new flare nut suitable for refrigerant specified by the outdoor unit, and also apply flare processing suitable for newly specified refrigerant.</td>
<td></td>
</tr>
<tr>
<td><strong>Use phosphor deoxidized copper for refrigerant pipe. Make sure that inner surface of pipe is clean and there is no harmful material, such as Sulfur, oxide, dirt, swarf, etc. (contamination).</strong></td>
<td><strong>Do not use any refrigerant other than those specified by outdoor unit.</strong></td>
</tr>
<tr>
<td>● If any contamination found within refrigerant pipes, it may cause deterioration of refrigerant oil, etc.</td>
<td>● Never use inappropriate refrigerant (R22, etc.), it may cause deterioration of refrigerant oil with chlorine.</td>
</tr>
<tr>
<td><strong>Keep pipes used for installation indoors and apply seal to both ends just before brazing. (Keep joints, such as elbow, packed in plastic bag.)</strong></td>
<td><strong>Use appropriate tools for refrigerant filled in outdoor unit.</strong></td>
</tr>
<tr>
<td>● If dirt, dust or water enter the refrigerant cycle, it may cause deterioration of oil or compressor.</td>
<td>● Check the installation manual attached to the outdoor unit for special tools to be used.</td>
</tr>
<tr>
<td></td>
<td><strong>Pay attention to control tools.</strong></td>
</tr>
<tr>
<td></td>
<td>● If dirt, dust or water, etc. enters into refrigerant cycle, it may cause deterioration of refrigerant oil.</td>
</tr>
</tbody>
</table>

* When the outdoor unit is installed in front of a building or in a street, this air discharge guide can be used to change the discharge direction of warm air (in cooling mode) or cool-failine air (in heating mode) from the outdoor unit. The outlet air can be directed upwards, downwards or to both sides. This guide is also effective to protect the unit installed in a place where high winds may blow towards the air outlet.