Indoor Unit
Model name: 4-way Cassette type

MMU-AP0072H2UL
MMU-AP0092H2UL
MMU-AP0122H2UL
MMU-AP0152H2UL
MMU-AP0182H2UL
MMU-AP0212H2UL
MMU-AP0242H2UL
MMU-AP0362H2UL
MMU-AP0422H2UL
Please read this manual thoroughly before installation work and install the products correctly.

- This Manual describes the installation method of the indoor unit.
- For installation of the outdoor unit, refer to the Installation Manual of the outdoor unit.

**ADOPTION OF NEW REFRIGERANT**

This Air Conditioner uses R410A an environmentally friendly refrigerant.

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#### Accessory parts

<table>
<thead>
<tr>
<th>Part name</th>
<th>Qty</th>
<th>Shape</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation Manual</td>
<td>1</td>
<td>This manual</td>
<td>Hand over to customers</td>
</tr>
<tr>
<td>Heat insulating pipe</td>
<td>2</td>
<td></td>
<td>For heat insulation of pipe connecting section</td>
</tr>
<tr>
<td>Installation pattern</td>
<td>1</td>
<td>—</td>
<td>For confirmation of ceiling opening and indoor unit position</td>
</tr>
<tr>
<td>Installation gauge</td>
<td>—</td>
<td>—</td>
<td>For positioning of ceiling position</td>
</tr>
<tr>
<td>Washer</td>
<td>4</td>
<td></td>
<td>For hanging-down unit</td>
</tr>
<tr>
<td>Eccentric washer</td>
<td>4</td>
<td></td>
<td>For hanging-down unit</td>
</tr>
<tr>
<td>Hose band</td>
<td>1</td>
<td></td>
<td>For connecting drain pipe</td>
</tr>
<tr>
<td>Heat insulator</td>
<td>1</td>
<td></td>
<td>For heat insulation of drain connecting section</td>
</tr>
<tr>
<td>Flexible hose</td>
<td>1</td>
<td></td>
<td>For adjusting center of drain pipe</td>
</tr>
</tbody>
</table>

#### Separate sold parts

- The Ceiling panel and remote control are sold separately. For the installation of these products, follow the Installation Manuals supplied with them.
- The wireless type remote control is designed to be installed by attaching a wireless remote control kit (sold separately) to the standard panel. (The wireless remote control kit consists of a wireless remote control and adjust corner caps with a signal receiving unit.)
2 Precautions for safety

Installing, starting up, and servicing air–conditioning equipment can be hazardous due to system pressures, electrical components, and equipment location (roofs, elevated structures, etc.).

Only trained, qualified installers and service mechanics should install, start–up, and service this equipment. Untrained personnel can perform basic maintenance functions such as cleaning heat exchanger. All other operations should be performed by trained service personnel.

Before working on the equipment, observe precautions in the literature and on tags, stickers, and labels attached to the equipment.

Follow all safety codes. Wear safety glasses and work gloves. Keep quenching cloth and fire extinguisher nearby during brazing. Use care in handling, rigging, and setting bulky equipment.

Read these instructions thoroughly and follow all warnings or cautions included in literature and attached to the unit. Consult local building codes and National Electrical Code (NEC) for special requirements. Recognize safety information. This is the safety–alert symbol . When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury. Understand these signal words: DANGER, WARNING, and CAUTION. These words are used with the safety–alert symbol.

DANGER identifies the most serious hazards which will result in severe personal injury or death. WARNING signifies hazards which could result in personal injury or death. CAUTION is used to identify unsafe practices which may result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which will result in enhanced installation, reliability, or operation.

The manufacturer shall not assume any liability for the damage caused by not observing the description of this manual.

WARNING

- Only a qualified installer or service person is allowed to do installation work.
- Inappropriate installation may result in water leakage, electric shock or fire.
- Do not use any refrigerant different from the one specified for complement or replacement.
- Otherwise, abnormally high pressure may be generated in the refrigeration cycle, which may result in a failure or explosion of the product or an injury to your body.
- Connect ground wire. (grounding work)
- Incomplete grounding may cause an electric shock.
- Do not connect ground wires to gas pipes, water pipes, lightning rods or ground wires for telephone wires.
- Turn off all the circuit breaker before attempting any electrical work.
- Failure to do so may cause electric shock.
- Install the refrigerant pipe securely during the installation work before operating the air conditioner.
- If the air conditioner is operated with the valve open and without the refrigerant pipe, the compressor sucks air and the refrigeration cycle is over pressurized, which may cause a burst or injury.
- When moving the air conditioner for the installation into another place, do not enter any gaseous matter other than the specified refrigerant into the refrigeration cycle.
- If air or any other gas is mixed in the refrigerant, the gas pressure in the refrigeration cycle becomes abnormally high and it resultingly causes pipe burst and injuries on persons.
- Perform installation work properly according to the Installation Manual.
- Improper installation may result in water leakage, electric shock or fire.
- When the air conditioner is installed in a small room, provide appropriate measures to ensure that the concentration of refrigerant leakage occur in the room does not exceed the critical level.
- Install the air conditioner securely in a location where the base can sustain the weight adequately.
- Perform the specified installation work to guard against an earthquake.
- If the air conditioner is not installed appropriately, accidents may occur due to the falling unit.
- If refrigerant gas has leaked during the installation work, ventilate the room immediately.
- If the leaked refrigerant gas comes in contact with fire, noxious gas may generate.
- After the installation work, confirm that refrigerant gas does not leak.
- If refrigerant gas leaks into the room and flows near a fire source, such as a cooking range, noxious gas might generate.

CAUTION

- Electrical work must be performed by a qualified electrician in accordance with the Installation Manual. Use an exclusive power supply for the air conditioner at the rated voltage. An insufficient power supply capacity or inappropriate installation may cause fire.
- Use the specified wires for wiring connect the terminals. Securely fix them to prevent external forces applied to the terminals from affecting the terminals.
- Conform to the regulations of the local electric company when wiring the power supply.
- For the refrigerant recovery work (collection of refrigerant from the pipe to the compressor), stop the compressor before disconnecting the refrigerant pipe.
- If the refrigerant pipe is disconnected while the compressor is working with the valve open, the compressor sucks air and the refrigeration cycle is over pressurized, which may cause a burst or injury.

- This air conditioner adopts the new HFC refrigerant (R410A) which does not destroy ozone layer.
- The characteristics of R410A refrigerant are; easy to absorb water, oxidizing membrane or oil, and its pressure is approx. 1.6 times higher than that of refrigerant R22. Accompanied with the new refrigerant, refrigerating oil has also been changed. Therefore, during installation work, be sure that water, dust, former refrigerant, or refrigerating oil does not enter the refrigerating cycle.
- To prevent charging an incorrect refrigerant and refrigerating oil, the sizes of connecting sections of charging port of the main unit and installation tools are changed from those for the conventional refrigerant.
- Accordingly the exclusive tools are required for the new refrigerant (R410A).
- For connecting pipes, use new and clean piping designed for R410A, and please care so that water or dust does not enter.
- Tighten the flare nut with a torque wrench in the specified manner. Excessive tightening of the flare nut may cause a crack in the flare nut after a long period, which may result in refrigerant leakage.
- Wear heavy gloves during the installation work to avoid injury.
3 Selection of installation place

**WARNING**

- Install the air conditioner securely in a location where the base can sustain the weight adequately.
  - If the strength is not enough, the unit may fall down resulting in injury.
- Install the air conditioner at a height 8' (2.4 m) or more from the floor.
  - If you insert your hands or others directly into the unit while the air conditioner operates, it is dangerous because you may contact with revolving fan or active electricity.

**CAUTION**

- Do not install in a location where flammable gas may leaks are possible.
  - If the gas leak and accumulate around the unit, it may ignite and cause a fire.

Upon approval of the customer, install the air conditioner in a place that satisfies the following conditions.

- Place where the unit can be installed horizontally.
- Place where a sufficient servicing space can be ensured for safety maintenance and check.
- Place where drained water will not cause any problem.

Avoid installing in the following places.

- Place exposed to air with high salt content (seaside area), or place exposed to large quantities of sulfide gas (hot spring). (Should the unit be used in these places, special protective measures are needed.)
- Places where iron or other metal dust is present. If iron or other metal dust adheres to or collects on the interior of the air conditioner, it may spontaneously combust and start a fire.
- Place close to a machine generating high frequency.
- Place where the discharged air blows directly into the window of the neighbor house. (Outdoor unit)
- Place where noise of the outdoor unit is easily transmitted.
  - (When the outdoor unit is installed on the boundary with the neighbor, pay due attention to the level of noise.)
- Place with poor ventilation. (Before air duct work, check whether value of fan speed, static pressure and duct resistance are correct.)
- Do not use the air conditioner for special purposes such as preserving food, precision instruments, or art objects, or where breeding animals or growing plants are kept. (This may degrade the quality of preserved materials.)
- Place where any of high-frequency appliances (including inverter devices, private power generators, medical equipment, and communication equipment) and inverter-type fluorescent light is installed.
  - (A malfunction of the air conditioner, abnormal control, or problems due to noise to such appliances/equipment may occur.)
- Place where the wireless remote control is used in a room equipped with an inverter-type fluorescent light or at a place exposed to direct sunlight, signals from the remote control may not be received correctly.
- Place where organic solvent is used.
- Place near a door or window exposed to humid outside air (Dew drop may form.).
- Place where special spray is used frequently.

**Selection of installation place**

Continual operation of the indoor unit under high-humidity conditions as described below, dew may condense and water may drop.

E specially, high-humidity atmosphere (dew point temperature: 73.4 °F (23 °C) or more) may generate dew inside the ceiling.
1. Unit is installed inside the ceiling with slated roof.
2. Unit is installed at a location using inside of the ceiling as fresh air take-in path.
3. Kitchen

**Advice**

- Set a service check opening panel at right side of the unit (size: 17.7" × 17.7" (450 × 450 mm) or more) for piping, maintenance, and servicing.
- If installing a unit at such place, put insulating material (glass wool, etc.) additionally on all the positions of the indoor unit which come to contact with high-humidity atmosphere.

**REQUIREMENT**

When the humidity inside the ceiling seems to be higher than 80%, attach a heat insulator to the side (top) surface of the indoor unit. (Use a heat insulator that is 0.4" (10 mm) or more thick.)
Ceiling height

When the height of the ceiling exceeds the distance of the item Standard/4-way in below table, the warm air is difficult to reach the floor. It is necessary to change the setup value of the high ceiling setting or discharge direction.

Height list of ceiling possible to be installed

<table>
<thead>
<tr>
<th>Model MMU</th>
<th>AP007, AP009 Type</th>
<th>AP012, AP015, AP018 Type</th>
<th>AP021, AP024, AP030 Type</th>
<th>AP036, AP042 Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4-way</td>
<td>3-way</td>
<td>2-way</td>
<td>4-way</td>
</tr>
<tr>
<td>Standard (Factory default)</td>
<td>8'10&quot; (2.7)</td>
<td>9'2&quot; (2.8)</td>
<td>9'10&quot; (3.0)</td>
<td>10'6&quot; (3.2)</td>
</tr>
<tr>
<td>High ceiling (1)</td>
<td>—</td>
<td>—</td>
<td>10'6&quot; (3.2)</td>
<td>11'6&quot; (3.5)</td>
</tr>
<tr>
<td>High ceiling (2)</td>
<td>—</td>
<td>—</td>
<td>11'6&quot; (3.5)</td>
<td>12'6&quot; (3.8)</td>
</tr>
</tbody>
</table>

Discharge direction

As shown in the figure below, air discharge directions can be selected according to the shape of the room and the location of the indoor unit installation.
4 Installation

**Requirement**

Strictly comply with the following rules to prevent damage of the indoor units and human injury.

- Do not put a heavy article on the indoor unit.
- Carry in the indoor unit as it is packaged. (Even units are packaged)
- Carry the package by two or more persons, and do not bundle it with plastic band at positions other than specified.

**External View**

![External View Diagram](image)

**Opening a ceiling and installation of hanging bolts**

- Consider the piping/wiring after the unit is hung to determine the location of the indoor unit installation and orientation.
- After the location of the indoor unit installation has been determined, open the ceiling and install hanging bolts.
- The dimensions of the ceiling opening and hanging bolt pitches are given in the outline drawing and the attached installation pattern.
- When a ceiling already exists, lay the drain pipe, refrigerant pipe, control wires, and remote control wires to their connection locations before hanging the indoor unit.

**Procure hanging bolts and nuts for installing the indoor unit (these are not supplied).**

**Installation of hanging bolt**

Use 3/8" (M10) hanging bolts (4 pcs, locally procured). Matching to the existing structure, set pitch according to size in the unit external view as shown below.

<table>
<thead>
<tr>
<th>Model MMU-</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP007 Type</td>
<td>10.1&quot; (256) Ø1/4&quot; (6.4) Ø3/8&quot; (9.5) Ø5/8&quot; (15.9)</td>
<td>10.1&quot; (256) Ø1/4&quot; (6.4) Ø3/8&quot; (9.5) Ø5/8&quot; (15.9)</td>
<td></td>
</tr>
<tr>
<td>AP012 Type</td>
<td>10.1&quot; (256) Ø1/4&quot; (6.4) Ø3/8&quot; (9.5) Ø5/8&quot; (15.9)</td>
<td>10.1&quot; (256) Ø1/4&quot; (6.4) Ø3/8&quot; (9.5) Ø5/8&quot; (15.9)</td>
<td></td>
</tr>
<tr>
<td>AP015 Type</td>
<td>10.1&quot; (256) Ø1/4&quot; (6.4) Ø3/8&quot; (9.5) Ø5/8&quot; (15.9)</td>
<td>10.1&quot; (256) Ø1/4&quot; (6.4) Ø3/8&quot; (9.5) Ø5/8&quot; (15.9)</td>
<td></td>
</tr>
</tbody>
</table>

**Treatment of ceiling**

The ceiling differs according to structure of building. For details, consult your constructor or interior finish contractor. In the process after the ceiling board has been removed, it is important to reinforce ceiling foundation (frame) and to keep horizontal level of installed ceiling correctly in order to prevent vibration of ceiling board.

1. Cut and remove the ceiling foundation.
2. Reinforce the cut surface of ceiling foundation, and add ceiling foundation for fixing the end of ceiling board.

**Installation of hanging bolt**

Use 3/8" (M10) hanging bolts (4 pcs, locally procured). Matching to the existing structure, set pitch according to size in the unit external view as shown below.

- **New concrete slab**
  - Install the bolts with insert brackets or anchor bolts.
  - Use existing angles or install new support angles.
  - Use existing angles or install new support angles.
  - Use existing angles or install new support angles.

- **Existing concrete slab**
  - Use a hole-in anchors, hole-in plugs, or a hole-in bolts.

**Using the installation pattern (accessory)**

The installation pattern is provided inside the packaging cap.

- **For existing ceiling**
  - Use the installation pattern positioning a ceiling opening and hanging bolts.

- **For new ceiling**
  - Use the installation pattern to position the ceiling opening when a ceiling is hung.
  - Hook the four holes in the installation pattern to the panel fixing screws of the indoor unit.
  - Before hanging a ceiling, open the ceiling along the outside dimensions of the installation pattern.
**Installation of ceiling opening and hanging bolt**

- Attach a nut (3/8" (M10): not supplied) and the Ø1.3" (34 mm) washer (supplied) to each hanging bolt.
- Insert a washer on both sides of the T groove of the hanging bracket of the indoor unit, and hang the indoor unit.
- Check that the four sides of the indoor unit are level using a level vial (levelness: 0.2" (5 mm) or less).
- Detach the installation gauge (accessory) from the installation pattern.
- Using the installation gauge, check and adjust the positional relation between the indoor unit and the ceiling opening (1) (0.4" - 1.4" (10 - 35 mm): 4 sides) and the hanging-up height (2) (0.5" - 0.7" (12 - 17 mm): 4 corners).

**CAUTION**

Before installation of the indoor unit, remove the tape that holds the fan and bell mouth. Running the unit without removing the tape may damage the fan motor.

**Installation of remote control**

(Sold separately)

For installation of the wired remote control, follow the Installation Manual attached with the remote control.
- Pull out the remote control cord together with the refrigerant pipe or drain pipe.
- Pass the remote control cord through upper side of the refrigerant pipe and drain pipe.
- Do not leave the remote control at a place exposed to the direct sunlight and near a stove.

**Wireless remote control**

The sensor of indoor unit with wireless remote control can receive a signal by distance within approx. 23' (7 m). Based upon it, determine a place where the remote control is operated and the installation place.
- Operate the remote control, confirm that the indoor unit receives a signal surely, and then install it.
- Keep 3'3" (1 m) or more from the devices such as television, stereo, etc. (Disturbance of image or noise may generate.)
- To prevent a malfunction, select a place where is not influenced by a fluorescent light or direct sunlight.
- Two or more (Up to 6 units) indoor units with wireless type remote control can be installed in the same room.

**Installation of ceiling panel**

(sold separately)

Install the ceiling panel according to Installation Manual attached with it after piping/wiring work has completed.
Check that installation of indoor unit and ceiling opening part is correct, and then install it.

**REQUIREMENT**

- Joint the connecting sections of ceiling panel, ceiling surface, ceiling panel and indoor unit closely. Any gap between them will cause air leakage and the generate condensation or water leakage.
- Remove the adjust corner caps at the four corners of the ceiling panel, and then install the ceiling panel onto the indoor unit.
- Securely fix the claws of the four adjust corner caps. Improper fitting of the claws may cause water leakage.
5 Drain piping work

CAUTION
• Following the Installation Manual, perform the drain piping work so that water is properly drained, and apply a heat insulation so as not to cause a dew drop.

Inappropriate piping work may result in water leakage in the room and wet of furniture.

Piping/Heat insulating material
Require the following materials for piping and heat insulating at site.

- **Piping**
  - Hard vinyl chloride pipe VP25 (Outer dia. Ø1.3” (32 mm))

- **Heat insulator**
  - Foam polyethylene: Thickness 0.4” (10 mm) or more

Flexible hose
Use the attached flexible hose to adjust center discrepancy of the hard vinyl chloride pipe or to adjust the angle.
- Do not use the flexible hose as stretched, or do not deform it more extent than that in the following figure.
- Fix the soft end of the flexible hose with the attached hose band.
- Use the flexible hose on a horizontal level.

REQUIREMENT
• Perform heat insulation of the drain pipes of the indoor unit.
• Perform heat insulation of the connecting part with the indoor unit.
• Set the drain pipe with downward slope (1/100 or more), and do not make swelting or trap on the piping. It may cause an abnormal sound.
• For length of the traversing drain pipe, restrict to 65’7” (20 m) or less. In case of a long pipe, provide support brackets with interval of 4’11” - 6’7” (1.5 - 2 m) in order to prevent waving.

Connecting drain pipe
- Connect a hard socket (locally procured) to the hard socket of the attached supplied flexible hose.
- Connect a drain pipe (locally procured) to the connected hard socket.

REQUIREMENT
• Connect hard vinyl chloride pipes securely using an adhesive for vinyl chloride to avoid water leakage.
• It takes some time until the adhesive is dried and hardened (refer to the manual of the adhesive). Do not apply stress to the joint with the drain pipe during this time period.

Drain up
When a down-gradient cannot be secured for the drainpipe, drain-up piping is possible.
• The height of the drain pipe must be 33.5” (850 mm) or less from the bottom of the ceiling.
• Take the drain pipe out of the drain pipe joint with the indoor unit in 11.8” (300 mm) or less, and bend up the pipe vertically.
• Immediately after the pipe is bent up vertically, lay the pipe making a down-gradient.
• Set downward grading immediately after raising up vertically.

Check the draining
In the test run, check that water drain is properly performed and water does not leak from the connecting part of the pipes.
Check draining also when the unit is installed in heating period.
By using a pitcher or hose, pour water (0.4 - 0.5 gal [1500 - 2000 cc]) into the discharge port before installation of the ceiling panel.
Pour water gradually so that water does not spread on the motor of the drain pump.

CAUTION
Pour water gently so that it does not spread around inside the indoor unit, which may cause a malfunction.
- After the electric work has finished, pour water during COOL mode operation.
- If the electric work has not yet finished, pull out the float switch connector (CN34: Red) from the electrical control box, and check draining by plugging the single phase 208/230 V power to the terminal blocks L1 and L2. If doing so, the drain pump motor operates.
- Test water drain while checking the operation sound of the drain pump motor.
  (If the operation sound changes from continuous sound to intermittent sound, water is normally drained.)
- After the check, the drain pump motor runs, connecting the float switch connector.
  (In case of check by pulling out the float switch connector, be sure to return the connector to the original position.)

**Perform heat insulating**
- As shown in the figure, cover the flexible hose and hose band with the attached heat insulator up to the bottom of the indoor unit without gap.
- Cover the drain pipe seamlessly with a heat insulator to be procured locally so that it overlaps with the attached heat insulator of the drain connecting section.

Wrap the attached heat insulator seamlessly from the surface of the indoor unit.

Heat insulator of the drain connecting section (Accessory)

Heat exchanger
Float switch connector (3P) (CN34: Red)

Tool for pouring water
Bottle
Water (0.4 - 0.5 gal (1500 - 2000 cc))

- Direct the slits and seams of the heat insulator upward to avoid water leakage.

### 6 Refrigerant piping and evacuation

**Refrigerant piping**
1. Use copper pipe with 0.03" (0.8 mm) or more thickness. (In case pipe size is Ø5/8" (15.9 mm), with 0.04" (1.0 mm) or more.)
2. Flare nut and flare works are also different from those of the conventional refrigerant.
   Take out the flare nut attached to the main unit of the air conditioner, and use it.

**Requirement**
When the refrigerant pipe is long, provide support brackets at intervals of 8’2" - 9’10" (2.5 - 3 m) to clamp the refrigerant pipe. Otherwise, abnormal sound may be generated.

**Caution**
- IMPORTANT 4 POINTS FOR PIPING WORK
  1. Remove dust and moisture from the inside of the connecting pipes.
  2. Tight connection (between pipes and unit)
  3. Evacuate the air in the connecting pipes by using VACUUM PUMP.
  4. Check the gas leakage. (Connected points)

**Pipe size**

<table>
<thead>
<tr>
<th>Model name</th>
<th>MMU-AP007, AP009, AP012 type</th>
<th>AP015, AP016 type</th>
<th>AP021, AP024, AP030, AP036, AP042 type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas side</td>
<td>3/8&quot; (9.5 mm)</td>
<td>1/2&quot; (12.7 mm)</td>
<td>3/8&quot; (15.9 mm)</td>
</tr>
<tr>
<td>Liquid side</td>
<td>1/4&quot; (6.4 mm)</td>
<td>1/4&quot; (6.4 mm)</td>
<td>3/8&quot; (9.5 mm)</td>
</tr>
</tbody>
</table>

**Flaring**
- Cut the pipe with a pipe cutter. Remove burrs completely. Remaining burrs may cause gas leakage.
- Insert a flare nut into the pipe, and flare the pipe. As the flaring sizes of R410A differ from those of refrigerant R22, the flare tools newly manufactured for R410A are recommended.

**Projection margin in flaring**

<table>
<thead>
<tr>
<th>Outer dia. of copper pipe</th>
<th>R410A tool used</th>
<th>Conventional tool used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot; (6.4), 3/8&quot; (9.5)</td>
<td>0 - 0.02&quot; (0 - 0.5)</td>
<td>0.04&quot; - 0.06&quot; (1.0 - 1.5)</td>
</tr>
<tr>
<td>1/2&quot; (12.7), 5/8&quot; (15.9)</td>
<td>0.08&quot; (2.0)</td>
<td>0.10&quot; (2.5)</td>
</tr>
</tbody>
</table>

**Pipe size**

<table>
<thead>
<tr>
<th>Outer dia. of copper pipe</th>
<th>R410A tool used</th>
<th>Conventional tool used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot; (6.4)</td>
<td>0.36&quot; (9.1)</td>
<td>0.36&quot; (9.1)</td>
</tr>
<tr>
<td>3/8&quot; (9.5)</td>
<td>0.52&quot; (13.2)</td>
<td>0.52&quot; (13.2)</td>
</tr>
<tr>
<td>1/2&quot; (12.7)</td>
<td>0.65&quot; (16.6)</td>
<td>0.65&quot; (16.6)</td>
</tr>
<tr>
<td>5/8&quot; (15.9)</td>
<td>0.78&quot; (19.7)</td>
<td>0.78&quot; (19.7)</td>
</tr>
</tbody>
</table>

* In case of flaring for R410A with the conventional flare tool, pull it out approx. 0.02" (0.5 mm) more than that for R22 to adjust to the specified flare size. The copper pipe gauge is useful for adjusting projection margin size.
### Tightening connection

**CAUTION**
- Do not apply excessive torque. Otherwise, the nut may crack depending on the conditions.

#### Tightening torque of flare pipe connections

<table>
<thead>
<tr>
<th>Outer dia. of copper pipe</th>
<th>Tightening torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot; (6.4 mm)</td>
<td>10 - 13 (14 - 18)</td>
</tr>
<tr>
<td>3/8&quot; (9.5 mm)</td>
<td>24 - 31 (33 - 42)</td>
</tr>
<tr>
<td>1/2&quot; (12.7 mm)</td>
<td>37 - 46 (50 - 62)</td>
</tr>
<tr>
<td>5/8&quot; (15.9 mm)</td>
<td>46 - 57 (63 - 77)</td>
</tr>
</tbody>
</table>

**WARNING**
- Do not supply power to the indoor unit until the leak check test and evacuation are completed. (If the indoor unit is powered on, the pulse motor valve is fully closed, which extends the time for vacuuming.)

#### Open the valve fully

Open the valve of the outdoor unit fully.

#### Heat insulation process

Apply heat insulation for the pipes separately at liquid side and gas side.

**REQUIREMENT**
- Apply the heat insulation to the pipe connecting section of the indoor unit securely without gap.
- Wrap heat insulator with its slits facing up (ceiling side).
- Wrap the pipe with the attached heat insulator without any gap between the indoor unit.

#### Piping with outdoor unit

- Shape of valve differs according to the outdoor unit. For details of installation, refer to the Installation Manual of the outdoor unit.

---

### Leak check test, evacuation and other procedure

For leak check test, evacuation, addition of refrigerant, and gas leak check, refer to the Installation Manual attached to the outdoor unit.

**REQUIREMENT**
- Do not supply power to the indoor unit until the leak check test and evacuation are completed. (If the indoor unit is powered on, the pulse motor valve is fully closed, which extends the time for vacuuming.)

### Open the valve fully

Open the valve of the outdoor unit fully.

### Heat insulation process

Apply heat insulation for the pipes separately at liquid side and gas side.

**REQUIREMENT**
- Apply the heat insulation to the pipe connecting section of the indoor unit securely without gap.
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#### Piping with outdoor unit

- Shape of valve differs according to the outdoor unit. For details of installation, refer to the Installation Manual of the outdoor unit.

---

### Electrical connection

#### Power supply wire and control wires specifications

For power supply wire and interconnecting wires are procured locally.

**REQUIREMENT**
- For power supply wiring, strictly conform to the Local Regulation in each country.
- Run the refrigerant piping line and control wiring line in the same line.
Power supply wire
• Recommended wire diameter and wire length for power supply wire.

Electric characteristics

Control wire
Control wiring between indoor units, and outdoor unit (2-core shielded wire) Wire size: (Up to 3280’10’’ (1000 m)) AWG16 (Up to 6561’8’’ (2000 m)) AWG14

Remote control wiring
• 2-core with non-polarity wire is used for wiring of the remote control wiring and group remote controls wiring.

NOTE
• Use copper supply wire.
• Use UL wire rated 600 V for the power supply.
• Use UL wire rated 300 V for the remote control wires and control wires.
**Wire connection**

**REQUIREMENT**
- Connect the wires matching the terminal numbers. Incorrect connection causes a trouble.
- Pass the control wires and remote control wires through the bushing of the indoor unit.
- The low-voltage circuit is provided for the control and remote control. (Do not connect the high-voltage circuit)
- Remove the cover of the electrical control box by taking off the mounting screws (2 positions) and pushing the hooking section. (The cover of the electrical control box remains hanged to the hinge.)
- Remove the 2 screws from the wire cover.
- Attach the conduit pipe to the conduit plate with a lock nut.
- Connect the power supply wires and control wiring and remote control wire to the terminal block of the electrical control box. Secure the ground wire with the ground screw.
- Tighten the screws of the terminal block, and fix the wires with cord clamp attached to the electrical control box. (Do not apply tension to the connecting section of the terminal block.)
- Mount the cover of the electrical control box without catching the wires. (The cover after wiring on the ceiling panel)

![Diagram](image)

**Power supply wires and ground wire**

1. Strip the wire ends.
   - Power supply wire: 0.4" (10 mm)
   - Ground wire: 0.08" (2) or less
2. Match the wire colors with the terminal numbers on the indoor units' and circuit breakers' terminal blocks and firmly screw the wires to the corresponding terminals.
3. Secure the ground wire with the ground screw.
4. Fix the wires with a cord clamp.

**CAUTION**
Firmly tighten the screws of the terminal block.
Keep the wire length as shown in figure below when it is connected to the terminal block.

![Diagram](image)

**Control wires**

Because a “Wiring box” has little space, a cover of control wires (2-core shielded wire) should be removed up to 5.9" (150 mm).

![Diagram](image)

**Address setup**
Set up the addresses as per the Installation Manual supplied with the outdoor unit.

**Wiring on the ceiling panel**

According to the Installation Manual of the ceiling panel, connect the connector (20P: White) of the ceiling panel to the connector (CN510: White) on P.C. board of the electrical control box.
8 Applicable controls

**Requirement**

When the air conditioner is used for the first time, it will take some moments after the power has been turned on before the remote control becomes available for operations. This is normal and is not indicative of trouble.

- Concerning the automatic addresses (The automatic addresses are set up by performing operations on the outdoor interface circuit board.) While the automatic addresses are being set up, no remote control operations can be performed. Setup takes up to 10 minutes (usually about 5 minutes).
- When the power is turned on after automatic address setup, it takes up to 10 minutes (usually about 3 minutes) for the outdoor unit to start operating after the power has been turned on.

Before the air conditioner was shipped from the factory, all units are set to [STANDARD] (factory default). If necessary, change the indoor unit settings. The settings are changed by operating the wired remote control.

- The settings cannot be changed using only a wireless remote control, simple remote control or group control remote control by itself so install a wired remote control separately as well.

### Changing applicable control setting

#### Basic procedure for changing settings

Change the settings while the air conditioner is not working.

(Stop the air conditioner before making settings.)

1. **Procedure 1**
   - Push \( \text{設定}\) button and temp. setup \( \text{設定}\) button simultaneously for 4 seconds or more.
   - After a while, the display flashes as shown in the figure. Confirm that the CODE No. is [01].
   - If the CODE No. is not [01], push \( \text{設定}\) button to erase the display content, and repeat the procedure from the beginning.
   - (No operation of the remote control is accepted for a while after \( \text{設定}\) button is pushed.)
   - (While air conditioners are operated under the group control, \( \text{設定}\) is displayed first. When \( \text{設定}\) button is pushed, the indoor unit number displayed following "ALL" is header unit.)

2. **Procedure 2**
   - Each time \( \text{設定}\) button is pushed, indoor unit numbers in the control group change cyclically. Select the indoor unit to change settings for.
   - The fan of the selected unit runs and the louvers start swinging. The indoor unit can be confirmed for which to change settings.

3. **Procedure 3**
   - Specify CODE No. \([\text{設定}\] \) with temp. setup \( \text{設定}\) / \( \text{設定}\) buttons.

4. **Procedure 4**
   - Select SET DATA \( [\text{設定}\] \) with timer time \( \text{設定}\) / \( \text{設定}\) buttons.

5. **Procedure 5**
   - Push \( \text{設定}\) button. When the display changes from flashing to lit, the display content disappears and the air conditioner enters the normal stop mode.
   - (While "SETTING" is flashing, no operation of the remote control is accepted.)

6. **Procedure 6**
   - When settings have been completed, push \( \text{設定}\) button to determine the settings.
   - When \( \text{設定}\) button is pushed, “SETTING” flashes and then the display content disappears and the air conditioner enters the normal stop mode.
   - (While “SETTING” is flashing, no operation of the remote control is accepted.)

### Installing indoor unit on high ceiling

When an indoor unit is installed on a ceiling higher than the standard height, make the high-ceiling setting for fan speed adjustment.

Follow to the basic operation procedure \( 1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5 \rightarrow 6 \).

- For the CODE No. in Procedure 3, specify [5d].
- Select the SET DATA for Procedure 4 from the "Height list of ceiling possible to be installed" table on page 4 in this manual.

#### Remote control-less setting

Change the high-ceiling settings with the DIP switch on the receiver section P.C. board.

For details, refer to the manual of the wireless remote control kit. The settings can also be changed with the switch on the indoor P.C. board.

* However, once the setting is changed, setting to 0001 or 0003 is possible but setting to 0000 requires a SET DATA change to 0000 using the wired remote control (sold separately) with the normal switch setting (factory default).

#### Restore the factory default

To return the DIP switch settings to the factory default, set SW501-1 and SW501-2 to OFF, connect a separately sold wired remote control, and then set the data of CODE No. [5d] to "0000".
Filter sign setting
According to the installation condition, the lighting time of the filter sign (Notification of filter cleaning) can be changed.
Follow to the basic operation procedure (1 → 2 → 3 → 4 → 5 → 6).
• For the CODE No. in Procedure 3, specify [01].
• For the [Set data] in Procedure 4, select the SET DATA of filter sign lighting time from the following table.

<table>
<thead>
<tr>
<th>SET DATA</th>
<th>Filter sign lighting time</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>None</td>
</tr>
<tr>
<td>0001</td>
<td>150 H</td>
</tr>
<tr>
<td>0002</td>
<td>2500 H (Factory default)</td>
</tr>
<tr>
<td>0003</td>
<td>5000 H</td>
</tr>
<tr>
<td>0004</td>
<td>10000 H</td>
</tr>
</tbody>
</table>

To secure better effect of heating
When it is difficult to obtain satisfactory heating due to installation place of the indoor unit or structure of the room, the detection temperature of heating can be raised. Also use a circulator or other device to circulate heat air near the ceiling.
Follow to the basic operation procedure (1 → 2 → 3 → 4 → 5 → 6).
• For the CODE No. in Procedure 3, specify [06].
• For the set data in Procedure 4, select the SET DATA of shift value of detection temperature to be set up from the table below.

<table>
<thead>
<tr>
<th>SET DATA</th>
<th>Detection temp shift value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>No shift</td>
</tr>
<tr>
<td>0001</td>
<td>+1.8 °F (+1 °C)</td>
</tr>
<tr>
<td>0002</td>
<td>+3.6 °F (+2 °C) (Factory default)</td>
</tr>
<tr>
<td>0003</td>
<td>+5.4 °F (+3 °C)</td>
</tr>
<tr>
<td>0004</td>
<td>+7.2 °F (+4 °C)</td>
</tr>
<tr>
<td>0005</td>
<td>+9.0 °F (+5 °C)</td>
</tr>
<tr>
<td>0006</td>
<td>+10.8 °F (+6 °C)</td>
</tr>
</tbody>
</table>

Horizontal louver direction
1. Push \( \text{TEMP.} - \text{Louver} \) buttons for at least four seconds when the air conditioner is not working. \( \text{F0} \) flashes. Indicates CODE No. "01."
2. Select an indoor unit to be set by pushing \( \text{UNIT No.} \) button (left side of the button).
3. Change the CODE No. to "45" with \( \text{TEMP.} \) buttons.
4. Select louver direction setting with \( \text{TIME} \) buttons.
5. Push \( \text{UNIT No.} \) button to check the setting. The display state changes from flashing to lighting, and the setting is fixed.
6. Push \( \text{UNIT No.} \) button to end the setting. * When the cold draft position is selected, ceiling contamination is less reduced.

Swing mode
1. Push \( \text{UNIT No.} \) for four seconds or more when the air conditioner is not working. \( \text{F0} \) flashes. Indicates CODE No. "F0."
2. Select an indoor unit to be set with \( \text{UNIT No.} \) (left side of the button). Each time the button is pushed, unit numbers change as follows:
3. Select a swing mode with \( \text{TIME} \) buttons.
4. Push \( \text{UNIT No.} \) button.
5. Push \( \text{UNIT No.} \) button to complete the setting.

CAUTION
Do not set the swing SET DATA to "0000". (This setting may cause a failure of the louvers.)

• About “Dual swing”
“Dual” means that louvers 01 and 03 are directed and swing in one direction and louvers 02 and 04 are directed and swing in the opposite direction. (When louvers 01 and 03 are directed downward, louvers 02 and 04 are directed upward.)

• About “Cycle swing”
The four louvers swing independently at respective timings.
**Louver lock (No swing)**

1. Push (right side of the button) for four seconds or more when the air conditioner is not working.

The fan of the selected unit runs and the louvers start swinging.

2. Select an indoor unit to be set with (left side of the button).

Each time the button is pushed, unit numbers change as follows:

- When (4) or (5) is selected, dew drop may occur during cooling mode.

3. Select a louver to lock with TEMP. buttons.

4. Select the louver direction not to swing with TIME buttons.

5. Determine the setting by pushing button. When the setting has been determined, lights up.

6. Push button to complete the setting.

**Cancel louver lock**

Set the louver direction to '0000' of the louver lock setup procedure above.

**Remote control sensor**

The temperature sensor of the indoor unit senses room temperature usually. Set the remote control sensor to sense the temperature around the remote control.

Select items following the basic operation procedure (1 → 2 → 3 → 4 → 5 → 6).

- Specify [32] for the CODE No. in Procedure 3.

Select the following data for the SET DATA in Procedure 4.

When flashes, the remote control sensor is defective. Select the SET DATA [0000] (not used) or replace the remote control.

**Group control**

In a group control, a remote control can control up to maximum 8 units.

- The wired remote control only can control a group control. The wireless remote control is unavailable for this control.
- For wiring procedure and wires of the individual line (identical refrigerant line) system, refer to “Electric work” in this Manual.
- Wiring between indoor units in a group is performed in the following procedure.
- Connect the indoor units by connecting the remote control wires from the remote control terminal blocks (A, B) of the indoor unit connected with a remote control to the remote control terminal blocks (A, B) of the other indoor unit. (Non-polarity)
- For address setup, refer to the Installation Manual attached to the outdoor unit.

**Test run**

**Before test run**

- Before turning on the circuit breaker, carry out the following procedure.
  1. By using 500 V-megger, check that resistance of 1MΩ or more exists between the terminal block L1 to L2 and the ground (grounding).
  2. Check the valve of the outdoor unit being opened fully.
  3. To protect the compressor at activation time, leave power-ON for 12 hours or more be for operating.
  4. Before starting a test run, be sure to set addresses following the Installation Manual supplied with the outdoor unit.

**Execute a test run**

Operate the unit with the remote control as usual. For the procedure of the operation, refer to the attached Owner’s Manual.

A forced test run can be executed in the following procedure even if the operation stops by thermo-OFF. In order to prevent a serial operation, the forced test run is released after 60 minutes have passed and returns to the usual operation.

**CAUTION**

- Do not use the forced test run for cases other than the test run because it applies an excessive load to the devices.

**Wired remote control**

**Procedure 1**

Push button for 4 seconds or more. (TEST) is displayed on the display part and the selection of mode in the test mode is permitted.

**Procedure 2**

Push button.

**Procedure 3**

Select the operation mode with button, [COOL] or [HEAT].

- Do not run the air conditioner in a mode other than [COOL] or [HEAT].
- The temperature controlling function does not work during test run.
- The detection of error is performed as usual.
Wireless remote control

Procedure 1
Turn on the power of the air conditioner.
When power is turned on for the first time after installation, it takes approx. 5 minutes until the remote control becomes available. In the case of subsequent power-on, it takes approx. 1 minute until the remote control becomes available. Execute a test run after the predetermined time has passed.

Procedure 2
Push “ON/OFF” button on the remote control, select [COOL] or [HEAT] with “MODE” button, and then select [HIGH] with “FAN” button.

Procedure 3
Cooling test run
Set the temperature to 64°F (18 °C) with the temp. setup buttons.
Heating test run
Set the temperature to 86°F (30 °C) with the temp. setup buttons.

Procedure 4
Cooling test run
After confirming a signal receiving sound "beep" immediately set the temperature to 66°F (19 °C) with the temp. setup buttons.
Heating test run
After confirming a signal receiving sound "beep" immediately set the temperature to 84°F (29 °C) with the temp. setup buttons.

Procedure 5
Cooling test run
After confirming a signal receiving sound "beep" immediately set the temperature to 64°F (18 °C) with the temp. setup buttons.
Heating test run
After confirming a signal receiving sound "beep" immediately set the temperature to 86°F (30 °C) with the temp. setup buttons.

Procedure 6
Repeat procedures 4 → 5 → 4 → 5.
Indicators “Operation” (green), “Timer” (green), and “Ready” (orange) in the wireless receiver section flash in approx. 10 seconds, and the air conditioner starts operation. If any of these indicators does not flash, repeat procedures 2 to 5.

Procedure 7
Upon completion of the test run, push “ON/OFF” button to stop operation.

<Overview of test run operations using the wireless remote control>

- Cooling test run:
  ON/OFF → 64 °F (18 °C) → 66 °F (19 °C) → 64 °F (18 °C) → 86 °F (30 °C) → 84 °F (29 °C) → 86 °F (30 °C)

- Heating test run:
  ON/OFF → 86 °F (30 °C) → 84 °F (29 °C) → 86 °F (30 °C) → 86 °F (30 °C) → 84 °F (29 °C) → 86 °F (30 °C) → ON/OFF

10 Troubleshooting

■ Confirmation and check
When an error occurred in the air conditioner, the check code and the indoor UNIT No. appear on the display part of the remote control.
The check code is only displayed during the operation. If the display disappears, operate the air conditioner according to the following “Confirmation of error log” for confirmation.

■ Confirmation of error log
When an error occurred on the air conditioner, the error log can be confirmed with the following procedure.
The error log is stored in memory up to 4 errors.
The log can be confirmed from both operating status and stop status.

Procedure 1
Push  and  buttons simultaneously for 4 seconds or more. If [Service check] is displayed, the mode enters in the error log mode.
• [01]: Order of error log is displayed in CODE No. window.
• [Check code] is displayed in CHECK window.
• [Indoor unit address in which an error occurred] is displayed in Unit No.

Procedure 2
Push button. The error log stored in memory is displayed in order.

Troubleshooting

- Confirmation and check
- Confirmation of error log

REQUIREMENT
Do not push button because all the error log of the indoor unit will be deleted.

1. Check the errors according to the above procedure.
2. Ask an authorized dealer or qualified service (maintenance) professional to repair or maintain the air conditioner.
### Check codes and parts to be checked

**Check method**

On the remote control (Wired remote control, Central control remote control) and the interface P.C. board of the outdoor unit (I/F), a check display LCD (Remote control) or 7-segment display (on the outdoor interface P.C. board) to display the operation is provided. Therefore the operation status can be known. With this self-diagnosis function, a trouble or position with error of the air conditioner can be found as shown in the table below.

**Check code list**

The following list shows each check code. Find the check contents from the list according to part to be checked.

- To check from indoor remote control: See “Wired remote control display” in the list.
- To check from outdoor unit: See “Outdoor 7-segment display” in the list.
- To check from indoor unit with a wireless remote control: See “Sensor block display of receiving unit” in the list.

---

<table>
<thead>
<tr>
<th>Check code</th>
<th>Check code name</th>
</tr>
</thead>
</table>

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<table>
<thead>
<tr>
<th>Check code</th>
<th>Outdoor 7-segment display</th>
<th>Sensor block display of receiving unit</th>
<th>Check code name</th>
<th>Judging device</th>
</tr>
</thead>
<tbody>
<tr>
<td>E01 —</td>
<td>—</td>
<td>Communication error between indoor and remote control (Detected at remote control side)</td>
<td>Remote control</td>
<td></td>
</tr>
<tr>
<td>E02 —</td>
<td>—</td>
<td>Remote control transmission error</td>
<td>Remote control</td>
<td></td>
</tr>
<tr>
<td>E03 —</td>
<td>—</td>
<td>Communication error between indoor and remote control (Detected at indoor side)</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E04 —</td>
<td>—</td>
<td>Communication circuit error between indoor and outdoor (Detected at outdoor side)</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E05 —</td>
<td>—</td>
<td>No of indoor units which sensor has been normally received</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E06 —</td>
<td>—</td>
<td>Increase of No. of indoor units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E07 —</td>
<td>—</td>
<td>Communication circuit error between indoor and outdoor (Detected at outdoor side)</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E08 —</td>
<td>—</td>
<td>Duplicated indoor addresses</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E09 —</td>
<td>—</td>
<td>Communication error between indoor and outdoor</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E10 —</td>
<td>—</td>
<td>Duplication of outdoor addresses</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E11 —</td>
<td>—</td>
<td>Communication circuit error between outdoor units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E12 —</td>
<td>—</td>
<td>Automatic address start error</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E13 —</td>
<td>—</td>
<td>Capacity over No. of connected units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E14 —</td>
<td>—</td>
<td>Capacity over No. of connected indoor units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E15 —</td>
<td>—</td>
<td>Increase in demand for air conditioning</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E16 —</td>
<td>—</td>
<td>Outdoor unit quantity error</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E17 —</td>
<td>—</td>
<td>Duplication of outdoor addresses</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E18 —</td>
<td>—</td>
<td>Third party controller transmission error</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E19 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E20 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E21 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E22 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E23 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E24 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E25 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E26 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E27 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E28 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E29 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E30 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E31 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E32 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E33 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E34 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E35 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E36 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td>E37 —</td>
<td>—</td>
<td>Duplication of Outdoor header units</td>
<td>Indoor</td>
<td></td>
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### Error Detected by TCC-LINK Central Control Device

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<th>Outdoor 7-Segment Display</th>
<th>Sensor Block Display of Receiving Unit</th>
<th>Check Code Name</th>
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TCC-LINK: TOSHIBA Carrier Communication Link.