# Air conditioner

## Installation manual

AC***TNXDKG

- Thank you for purchasing this Samsung air conditioner.
- Before operating this unit, please read this Installation manual carefully and retain it for future reference.

**SAMSUNG**

# Contents

# Safety Information

## ⚠ WARNING: Read This Manual

- Read and follow all safety information and instructions before installation, use, or maintenance of this appliance. Incorrect installation, use, or maintenance of this appliance can result in death, serious injury, or property damage. Keep these instructions with this appliance. This manual is subject to change. For the latest version, visit www.samsung.com.

## Notices and notes

To make you aware of safety messages and highlighted information, we use the following notices and notes throughout this manual:

### ⚠ WARNING

Hazards or unsafe practices that may result in severe personal injury or death.

### ⚠ CAUTION

Hazards or unsafe practices that may result in minor personal injury or property damage.

### 📖 IMPORTANT

Information of special interest

### 📖 NOTE

Supplementary information that may be useful

|  |  |
|---|---|
| ⚠ | WARNING: Low burning velocity material (This appliance is filled with R-32.) |
| 📖 | The user and installer guides should be read carefully. |
| 📖 | The user and installer guides should be read carefully. |
| 🔧 | The service guide should be read carefully. |

## ⚠ WARNING

The installation and testing of this appliance must be performed by a qualified technician.

- The instructions in this manual are not intended as a substitute for proper training or adequate experience in the safe installation of the appliance.

Always install the air conditioner in compliance with current local, state, and federal safety standards.

This unit is a partial unit air conditioner, complying with partial unit requirements of this International Standard, and must only be connected to other units that have been confirmed as complying with corresponding partial unit requirements of this International Standard.

## General information

### ⚠ WARNING

- Carefully read the content of this manual before installing the air conditioner and store the manual in a safe place in order to be able to use it as reference after installation.
- For maximum safety, installers should always carefully read the following warnings.
- Store the operation and installation manual in a safe location and remember to hand it over to the new owner if the air conditioner is sold or transferred.
- This manual explains how to install an indoor unit with a split system with two SAMSUNG units. The use of other types of units with different control systems may damage the units and invalidate the warranty. The manufacturer shall not be responsible for damages arising from the use of non compliant units.
- The manufacturer shall not be responsible for damage originating from unauthorized changes or the improper connection of electric and requirements set forth in the "Operating limits" table, included in the manual, shall immediately invalidate the warranty.
- The air conditioner should be used only for the applications for which it has been designed: the indoor unit is not suitable to be installed in areas used for laundry.
- Do not use the units if damaged. If problems occur, switch the unit off and disconnect it from the power supply.

# Safety Information

- In order to prevent electric shocks, fires or injuries, always stop the unit, disable the protection switch and contact SAMSUNG's technical support if the unit produces smoke, if the power cable is hot or damaged or if the unit is very noisy.

- Always remember to inspect the unit, electric connections, refrigerant tubes and protections regularly. These operations should be performed by qualified personnel only.

- The unit contains moving parts, which should always be kept out of the reach of children.

- Do not attempt to repair, move, alter or reinstall the unit. If performed by unauthorized personnel, these operations may cause electric shocks or fires.

- Do not place containers with liquids or other objects on the unit.

- All the materials used for the manufacture and packaging of the air conditioner are recyclable.

- The packing material and exhaust batteries of the remote controller(optional) must be disposed of in accordance with current laws.

- The air conditioner contains a refrigerant that has to be disposed of as special waste. At the end of its life cycle, the air conditioner must be disposed of in authorised centres or returned to the retailer so that it can be disposed of correctly and safely.

- Do not use means to accelerate the defrost operation or to clean, other than those recommended by Samsung.

- Do not pierce or burn.

- Be aware that refrigerants may not contain an odour.

## Installing the unit

### ⚠ WARNING

IMPORTANT: When installing the unit, always remember to connect first the refrigerant tubes, then the electrical lines.

- Always disassemble the electric lines before the refrigerant tubes.

- Upon receipt, inspect the product to verify that it has not been damaged during transport. If the product appears damaged, DO NOT INSTALL it and immediately report the damage to the carrier or retailer (if the installer or the authorized technician has collected the material from the retailer.)

- After completing the installation, always carry out a functional test and provide the instructions on how to operate the air conditioner to the user.

- Do not use the air conditioner in environments with hazardous substances or close to equipment that release free flames to avoid the occurrence of fires, explosions or injuries.

- Our units should be installed in compliance with the spaces shown in the installation manual, to ensure accessibility from both sides and allow repairs or maintenance operations to be carried out. The unit's components should be accessible and easy to disassemble without endangering people and objects. For this reason, when provisions of the installation manual are not complied with, the cost required to access and repair the units (in SAFETY CONDITIONS, as set out in prevailing regulations) with harnesses, ladders, scaffolding or any other elevation system will NOT be considered part of the warranty and will be charged to the end customer.

## Power supply line, fuse or circuit breaker

### ⚠ WARNING

- Always make sure that the power supply is compliant with current safety standards. Always install the air conditioner in compliance with current local safety standards.
- Always verify that a suitable grounding connection is available.
- Verify that the voltage and frequency of the power supply comply with the specifications and that the installed power is sufficient to ensure the operation of any other domestic appliance connected to the same electric lines.
- Always verify that the cut-off and protection switches are suitably dimensioned.
- Verify that the air conditioner is connected to the power supply in accordance with the instructions provided in the wiring diagram included in the manual.
- Always verify that electric connections (cable entry, section of leads, protections...) are compliant with the electric specifications and with the instructions provided in the wiring scheme. Always verify that all connections comply with the standards applicable to the installation of air conditioners.
- Devices disconnected from the power supply should be completely disconnected in the condition of overvoltage category.
- Be sure not to perform power cable modification, extension wiring, and multiple wire connection.
  - It may cause electric shock or fire due to poor connection, poor insulation, or current limit override.
  - When extension wiring is required due to power line damage, refer to "Step 2-5  Optional: Extending the power cable" in the installation manual.

### ⚠ CAUTION

**Make sure that you earth the cables.**

- Do not connect the earth wire to the gas pipe, water pipe, lighting rod or telephone wire. If earthing is not complete, electric shock or fire may occur.

**Install the circuit breaker.**

- If the circuit breaker is not installed, electric shock or fire may occur.

**Make sure that the condensed water dripping from the drain hose runs out properly and safely.**

**Install the power cable and communication cable of the indoor and outdoor unit at least 1m away from the electric appliance.**

**Install the indoor unit away from lighting apparatus using the ballast.**

- If you use the wireless remote control, reception error may occur due to the ballast of the lighting apparatus.

**Do not use the indoor unit for preservation of food items, plants, equipment, and art works. This may cause deterioration of their quality.**

**Do not install the indoor unit if it has any drainage problem.**

# Preparation

## Step 1-1 Choosing the installation location

### Installation location requirements

- There must be no obstacles near the air inlet and outlet.
- Install the indoor unit on a ceiling that can support its weight.
- Maintain sufficient clearance around the indoor unit.
- Before installing the indoor unit, be sure to check whether the chosen location is well-drained.

### ⚠ WARNING

- If appliances contain R-32 refrigerant, then the floor area of the room in which the appliances are installed, operated and stored must be larger than the minimum floor area defined in table below A (m²).

| Minimum required room area (A, m²) | |
|---|---|
| m (kg) | Wall-mounted type |
| ≤1.842 | No requirement |
| 1.843 | 4.45 |
| 1.9 | 4.58 |
| 2.0 | 4.83 |
| 2.2 | 5.31 |
| 2.4 | 5.79 |
| 2.6 | 6.39 |
| 2.8 | 7.41 |
| 3.0 | 8.51 |
| 3.2 | 9.68 |
| 3.4 | 10.9 |
| 3.6 | 12.3 |
| 3.8 | 13.7 |
| 4.0 | 15.1 |
| 4.2 | 16.7 |
| 4.4 | 18.3 |
| 4.6 | 20.0 |
| 4.8 | 21.8 |
| 5.0 | 23.6 |

- m : Total refrigerant charge in the system
- A : Minimum required room area

- IMPORTANT: it's mandatory to consider either the table 1 or taking into consideration the local law regarding the minimum living space of the premises.
- Minimum installation height of indoor unit is 0.6 m for floor mounted, 1.8 m for wall, 2.2 m for ceiling.
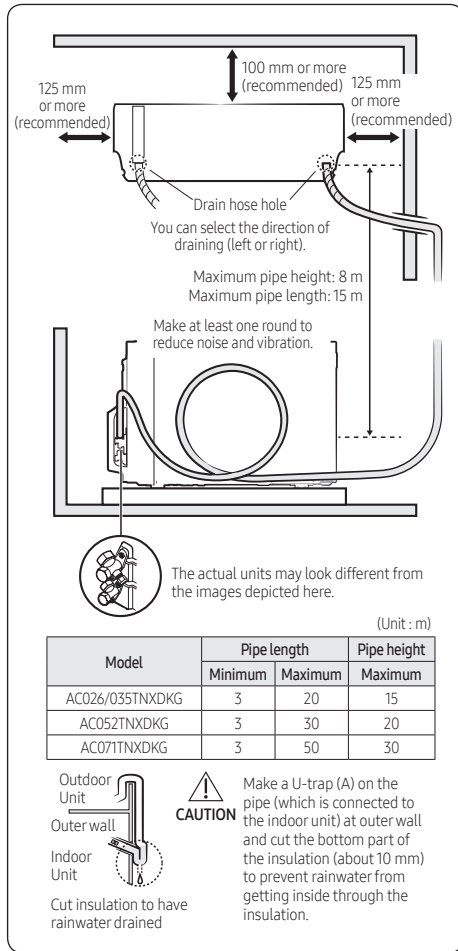
### ⚠ CAUTION

Do not install the air conditioner in following places.

- The place where there is mineral oil or arsenic acid. Resin parts flame and the accessories may drop or water may leak. The capacity of the heat exchanger may reduce or the air conditioner may be out of order.
- The place where corrosive gas such as sulfurous acid gas generates from the vent pipe or air outlet. The copper pipe or connection pipe may corrode and refrigerant may leak.
- The place where there is a machine that generates electromagnetic waves. The air conditioner may not operate normally due to control system.
- The place where there is a danger of existing combustible gas, carbon fiber or flammable dust.
- The place where thinner or gasoline is handled. Gas may leak and it may cause fire.
- The place where animals may urinate on the product. Ammonia may be generated.
- The place where is close to heat sources.

## Overview of installation location requirements



100 mm or more (recommended)

125 mm or more (recommended)

125 mm or more (recommended)

Drain hose hole
You can select the direction of draining (left or right).

Maximum pipe height: 8 m
Maximum pipe length: 15 m

Make at least one round to reduce noise and vibration.

The actual units may look different from the images depicted here.

(Unit : m)

| Model | Pipe length | | Pipe height |
| | Minimum | Maximum | Maximum |
|---|---|---|---|
| AC026/035TNXDKG | 3 | 20 | 15 |
| AC052TNXDKG | 3 | 30 | 20 |
| AC071TNXDKG | 3 | 50 | 30 |

Outdoor Unit

Outer wall

Indoor Unit

Cut insulation to have rainwater drained

⚠ **CAUTION** Make a U-trap (A) on the pipe (which is connected to the indoor unit) at outer wall and cut the bottom part of the insulation (about 10 mm) to prevent rainwater from getting inside through the insulation.

## ⚠ CAUTION

- Comply with the length and height limits described in the figure above.
- For the product that uses the R-32 refrigerant, Install the indoor unit on the wall 1.8 m or higher from the floor.

## Step 1-2 Checking and preparing accessories and tools

### Accessories

#### Accessories in the indoor unit package

#### AC***TNXDKG

| Mounting bracket (1) AC026/035TNXDKG | Mounting bracket (1) AC052/071TNXDKG |
|---|---|
| | |
| Remote control (1) | Remote control battery (2) |
| | |
| General information (1) | Quick guide (1) |
| | |
| Installation manual (1) | Holder remocon (1) |
| | |
| Extra M4 x 12 tapping screw (2) | |
| | |

### Tools

#### General tools

- Vacuum pump (Backward flowing prevention)
- Manifold gauge
- Stud finder
- Torque wrench
- Pipe cutter
- Reamer

- Pipe bender
- Spirit level
- Screwdriver
- Spanner
- Drill
- L-wrench
- Measuring tape

#### Tools for test operation

- Thermometer
- Resistance meter

- Electroscope

# Indoor Unit Installation

## Step 2-1  Attaching the mounting bracket to the wall

**1** Hold the mounting bracket against the wall at the selected installation position (Step 1-1 on page 6), making sure that the screw holes align with the center of the studs in the wall. If the screw locations do not align with the studs, use wall anchors.
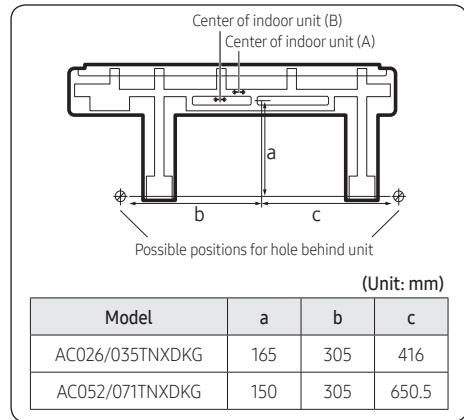
### ⚠ CAUTION

- The recommended best practice is to attach the mounting bracket directly to the studs in the wall. If you did not find a suitable location with studs (in Step 1-1 on page 6), or if the wall is concrete, you must use wall anchors of a suitable type and weight capacity, and install them according to the manufacturer's instructions. Failure to do so may cause the material surrounding the joints to crumble over time and the screws to be loosened and stripped. This may result in the unit falling from the wall, which could cause physical injury or equipment damage.

**2** Using a level, make sure that the mounting bracket is level, then mark the location of the screw holes on the wall.

**3** If using wall anchors, install them at the screw hole positions, following the manufacturer's instructions.

**4** Using six field-supplied mounting screws and anchors (if applicable), attach the bracket to the wall.



Level

Screw Location x 4ea
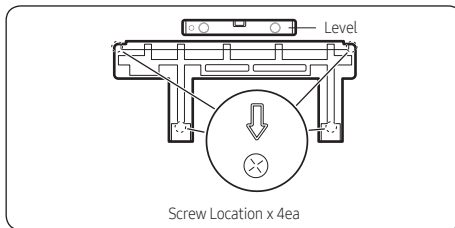
## Step 2-2  Drilling the wall penetration

**1** Determine the position of the hole through which the piping bundle (consisting of power and communication cables, refrigerant pipes, and the drain hose) will pass. Consider the following:

- The hole inner diameter must be 65 mm.

- The recommended hole location is behind the unit so that the hole and the piping bundle will not be visible in the room. The minimum distances between the hole and the mounting bracket are:



Center of indoor unit (B)
Center of indoor unit (A)

a

b          c

Possible positions for hole behind unit

(Unit: mm)

| Model | a | b | c |
|---|---|---|---|
| AC026/035TNXDKG | 165 | 305 | 416 |
| AC052/071TNXDKG | 150 | 305 | 650.5 |

- If the hole cannot be positioned behind the unit, find a position as close to the unit as possible. The piping bundle that exits the unit and extends to the hole will need to be attached to the wall and will be visible inside the room.

- In relation to the bracket shown above, the unit is shipped with the drain hose connection on the right, the drain hose exits the unit on the left, and the refrigerant pipes are bent to exit on the left. Thus, positioning the hole to the left requires the least effort. If you position the hole to the right or below the unit, you will need to move the drain hose connection to the left and bend the pipes so that the hose and pipes exit to the right or bottom. See the figure in step 3 on page 9.
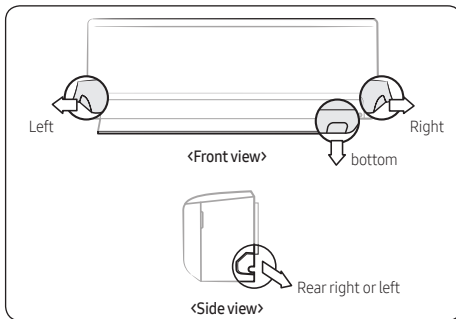
**2**  Use a standard 65 mm hole saw to drill one hole at the selected location, at a 15° downward angle so that the drain hose will drain properly.
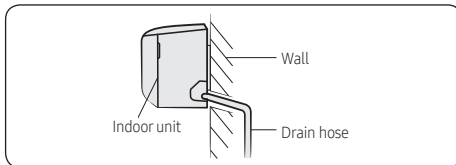


**3**  Based on the hole location, determine where the piping bundle (drain hose, refrigerant pipes, and cables) will exit the unit.



📄 **NOTE**

• The left, right, or bottom exit will only be used if the hole is not positioned behind the unit.

## Step 2-3  Connecting the refrigerant pipes

Connect indoor and outdoor units with field-supplied copper pipes by means of flare connections. Use insulated seamless refrigeration grade pipe only, (Cu DHP type according to ISO1337), degreased and deoxidized, suitable for operating pressures of at least 4200 kPa and for burst pressure of at least 20700 kPa. Under no circumstances must sanitary type copper pipe be used.

📄 **IMPORTANT**

• When installing the unit, always connect the refrigerant pipes first, followed by the electrical cables. For disassembly, always disassemble the electric cables before the refrigerant pipes.

Two short refrigerant pipes are already attached to the air conditioner:

• The smaller-diameter pipe is for the high-pressure, two-phase refrigerant.

• The larger-diameter pipe is for the low-pressure refrigerant vapor.
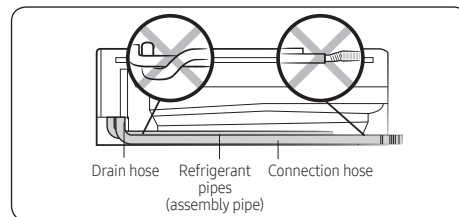


In Step 2-2, step 3 you determined the exit position for the piping bundle. The unit has three knockouts available for the left, right, and bottom exits. When the bundle exits directly from the rear, none of the knockouts are used.

**1**  If the pipes will exit directly from the rear, skip to step 3. Otherwise, cut out the appropriate knockout piece (left, right, or bottom).

**2**  Use a razor knife to clean the cut edges (flashing).

**3**  The left exit is the only position that does not require bending the pipes. For other positions, bend the pipes so that they will exit in the selected exit position.

  - The bending radius should be greater than 100 mm.

  - Bend the smaller pipe gradually to prevent kinking. The larger pipe has a preinstalled spring bender to prevent kinking.

  - Make sure that the pipes do not protrude from the back of the unit in a way that will make it difficult to attach the unit to the mounting bracket.

  - For right and bottom exits, pull the pipes out through the selected knockout opening. For left exits, the piping connections will be made in the service space behind the indoor unit (under the cover panel).
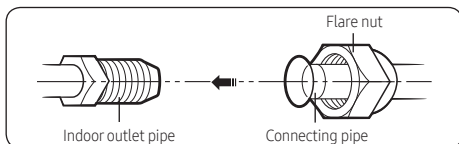
Installation

English **9**

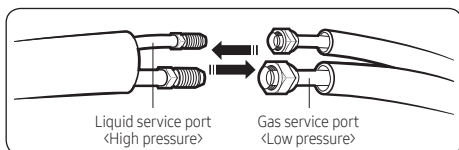# Indoor Unit Installation

**NOTE**

- If you are using the right rear exit, the pipes should be long enough to extend through the wall without needing to connect the line set first. It may be easier to connect the line set outside of the building, after you have bundled the pipes and cables and passed the bundle through the wall. In this case, do not connect the line set now. Instead, complete Step 2-4 through Step 2-7, then go outside and connect the line set as described below.

**4** Slowly remove the protective caps on the refrigerant pipe connections to relieve the nitrogen holding charge.

**5** Connect the line set to each pipe.



Flare nut

Indoor outlet pipe          Connecting pipe

**6** Hand-tighten the flare nuts to make sure that they do not become stripped.



Liquid service port          Gas service port
⟨High pressure⟩              ⟨Low pressure⟩

**7** Torque the flare connections to the following values:

| Outer diameter (mm) | Torque (N·m) |
|---|---|
| ø 6.35 | 14–18 |
| ø 9.52 | 34–42 |
| ø 12.70 | 49–61 |
| ø 15.88 | 68–82 |

⚠ **CAUTION**

- Tighten the flare nuts only to the specified torque. If a flare nut is overtightened, the flare face may crack, causing refrigerant leakage.

**8** Do not box in or cover the pipe connections. Make sure that the connections are accessible for testing later in the installation process and for future servicing.

**9** Tape over the end of the pipes so that debris will not enter the piping when it is passed through the wall. The pipes will be insulated later in the installation process.

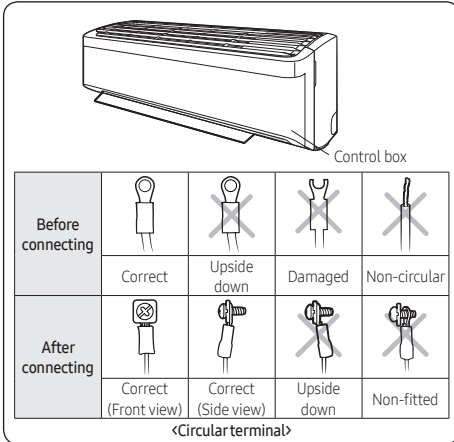## Step 2-4 Connecting the power and communication cables

If using a multi system, install as described in the installation manual supplied with the outdoor unit.
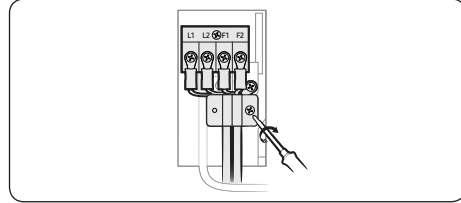
⚠ **WARNING**

- Do not modify the power cable in any way. Doing so may cause electric shock or fire due to poor connection, poor insulation, or current limit override. Make sure to comply with the technical standards of electrical installations and the wiring regulations in the local area.

- This appliance must be properly grounded. Do not ground the appliance to a gas pipe, plastic water pipe, or telephone line. Failure to comply may result in electric shock, fire, and explosion.

- Make sure that cabling is not subject to wear, corrosion, excessive pressure, vibration, sharp edges, or adverse environmental effects. Take into account the effects of aging or continual vibration from sources such as compressors or fans.

**1** Connect each wire to its corresponding terminal number.

| Model | AC026/035/052TNXDKG | AC071TNXDKG |
|---|---|---|
| **Power cable (Outdoor unit)** | 3G X 2.5 mm², H05RN-F | 3G X 2.5 mm², H05RN-F |
| **Outdoor-to-indoor power cable** | 3G X 0.75~1 mm², H05RN-F | 3G X 0.75~1 mm², H05RN-F |
| **Communication cable** | 3G X 0.75 mm², H05RN-F | 3G X 0.75 mm², H05RN-F |
| Type GL ▭▭ | 16 A | 20 A |

Installation

Control box

| Before connecting | <image> | <image> | <image> | <image> |
|---|---|---|---|---|
| | Correct | Upside down | Damaged | Non-circular |
| After connecting | <image> | <image> | <image> | <image> |
| | Correct (Front view) | Correct (Side view) | Upside down | Non-fitted |

‹Circular terminal›

## ⚠ CAUTION

- Connect the wires firmly so that wires cannot be pulled out. Loose wires can cause the connection to overheat.

  Each circular terminal must match the size of its corresponding screw in the terminal block.

## ⚠ CAUTION

- For the terminal block wiring, use a wire with a ring terminal socket only. Regular wires without a ring terminal socket may become a hazard as the connections may loosen during operation.

For the product that uses the R-32 refrigerant, be cautious not to generate a spark by keeping the following requirements:

- - Do not remove the fuses with power on.
- - Do not disconnect the power plug from the wall outlet with power on.
- - It is recommended to locate the outlet in a high position. Place the cords so that they are not tangled.

**2** Tighten the terminal block screw.



**3** In Step 2-2, step 3 you determined the exit position for the piping bundle. If using the left, right, or bottom exits, pass the cables through the selected knockout.

### 📄 NOTE

- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (Code designation IEC: 60245 IEC66/ CENELEC: H07RN-F, IEC: 60245 IEC57 CENELEC: H05RN-F, IEC: 60227 IEC53: H05VV-F)
- Power & Communication cable shall not exceed 30 m.

Installation

# Indoor Unit Installation

## Step 2-5  Optional: Extending the power cable

1   Prepare the following tools.

| Tools | Spec | Shape |
|---|---|---|
| Crimping pliers | MH-14 | |
| Connection sleeve (mm) | 20xØ6.5 (HxOD) | |
| Insulation tape | Width 19 mm | |
| Contraction tube (mm) | 70xØ8.0 (LxOD) | |

2   As shown in the figure, peel off the shields from the rubber and wire of the power cable.

- Peel off 20 mm of cable shields from the pre-installed tube.

### ⚠ CAUTION

- For information about the power cable specifications for indoor and outdoor units, refer to the installation manual.
- After peeling off cable wires from the pre-installed tube, insert a contraction tube.
- If cable wires are connected without using connecting sleeves, their contact area becomes reduced, or corrosion develops on the outer surfaces of the wires (copper wires) over a long time. This may cause an increase of resistance (reduction of passing current) and consequently may result in a fire.
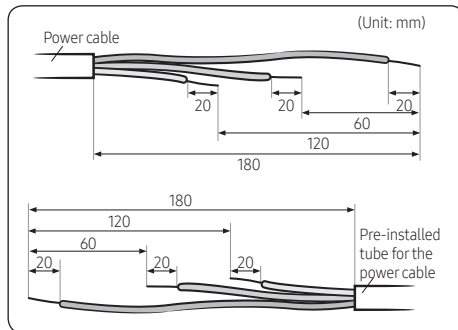


3   Insert both sides of core wire of the power cable into the connection sleeve.

- **Method 1**: Push the core wire into the sleeve from both sides.
- **Method 2**: Twist the wire cores together and push it into the sleeve.
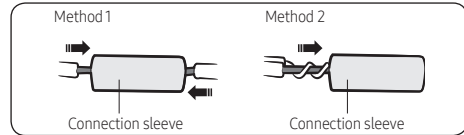


4   Using a crimping tool, compress the two points and flip it over and compress another two points in the same location.
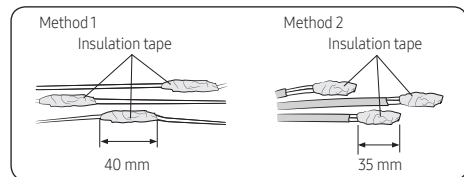
- The compression dimension should be 8.0.
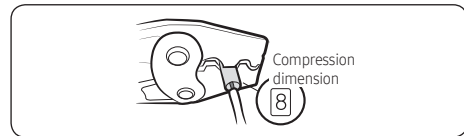


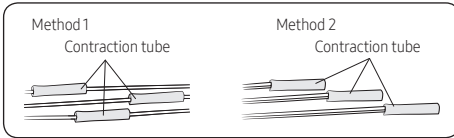- After compressing it, pull both sides of the wire to make sure it is firmly pressed.
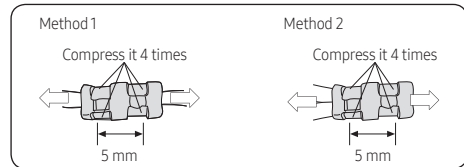


5   Wrap it with the insulation tape twice or more and position your contraction tube in the middle of the insulation tape.
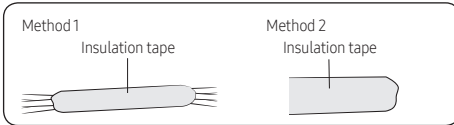
**6** Apply heat to the contraction tube to contract it.



**7** After tube contraction work is completed, wrap it with the insulation tape to finish.
Three or more layers of insulation are required.



## ⚠ CAUTION

- Make sure that the connection parts are not exposed to outside.

- Be sure to use insulation tape and a contraction tube made of approved reinforced insulating materials that have the same level of withstand voltage with the power cable. (Comply with the local regulations on extensions.)

## ⚠ WARNING

- In case of extending the electric wire, please DO NOT use a round-shaped Pressing socket.
    - Incomplete wire connections can cause electric shock or a fire.
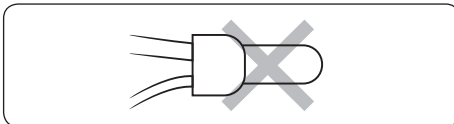


## Step 2-6  Connecting the drain hose

**1** In Step 2-2, step 3 you determined the exit position for the piping bundle. If using the right, bottom, or right rear exit, change the drain hose connection from the right to the left so that the drain hose will lie along the inside of the unit and exit to the right.
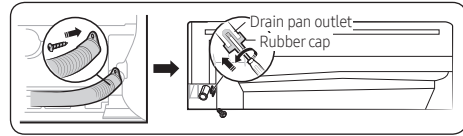


## ⚠ CAUTION

- Be careful not to puncture the plug with the screwdriver when installing it.

**2** If using the left, right, or bottom exit, pass the drain hose through the selected knockout.
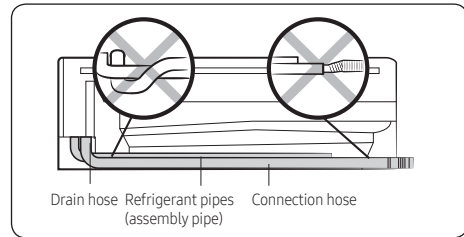


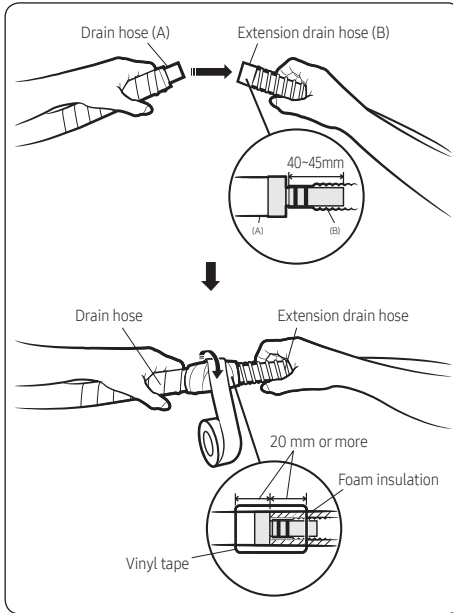**3** Connect a 15.88 mm ID extension drain hose to the main drain hose.

# Indoor Unit Installation

## ⚠ CAUTION

- If the diameter of the connection hose is smaller than the product's drain hose, leakage may occur.



Drain hose (A)    Extension drain hose (B)

40~45mm

(A)        (B)

Drain hose            Extension drain hose

20 mm or more

Foam insulation

Vinyl tape

4    Do not box in or cover the drain hose connection. It must be accessible for testing later in the installation process and for future servicing.

5    If the drain hose is routed inside the room, insulate the hose so that dripping condensation does not damage the furniture or floors.

## Step 2-7  Taping the pipes, cables, and drain hose

1    Wrap foam insulation around the refrigerant pipes, up to the connection points. The connections must remain accessible for testing later in the installation process. Either leave slits in the insulation or do not cover the connections.



Insulation

Refrigerant pipes



Test parts for the indoor unit
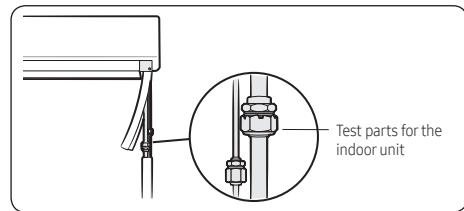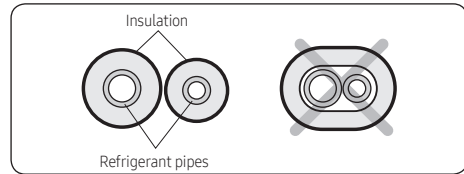
2    Make a piping bundle by using vinyl tape to wrap together the refrigerant pipes, power cable, communication cable, and drain hose, up to the connection points. Connection points must remain accessible for testing later in the installation process.



Refrigerant pipes (assembly pipe)

Mounting bracket

Vinyl tape

Power and communication cables (assembly cable)

Drain hose
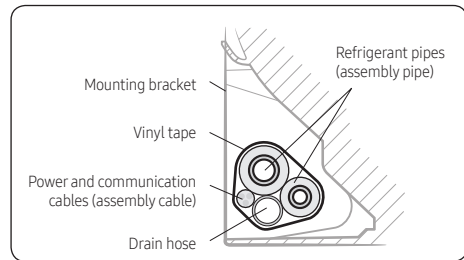
## Step 2-8  Performing leak test

### Leak test

LEAK TEST WITH NITROGEN (before opening valves)
In order to detect basic refrigerant leaks, before recreating the vacuum and recirculating the R-32, it's responsible of installer to pressurize the whole system with nitrogen (using a pressure regulator) at a pressure above 4.1MPa (gauge).

LEAK TEST WITH R-32 (after opening valves)
Before opening valves, discharge all the nitrogen into the system and create vacuum. After opening valves check leaks using a leak detector for refrigerant R-32.
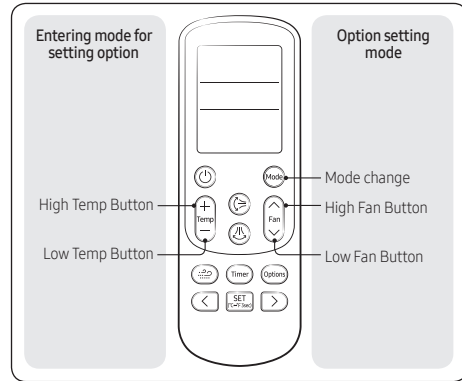


Test parts for the indoor unit
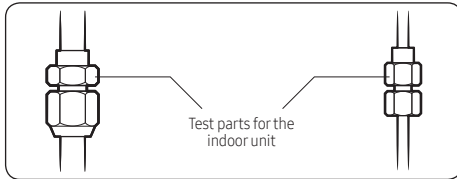
### ⚠ CAUTION

• Discharge all the nitrogen to create a vacuum and charge the system.

## Step 2-9 Commissioning the unit

### Common steps for setting the addresses and options



Entering mode for setting option

Option setting mode

Mode change

High Temp Button

High Fan Button

Low Temp Button

Low Fan Button

### 📄 NOTE

• The remote control display and buttons may vary depending on the model.

1   Enter the mode for setting the options:
   **a**   Remove the batteries from the remote control, and then insert them again.
   **b**   While holding down the ⊞ (High Temp) and ⊟ (Low Temp) buttons simultaneously, insert the batteries into the remote control.
   **c**   Make sure that you are entered to the mode for setting the options:



On

Auto
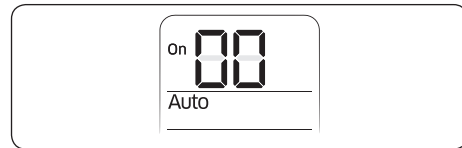
# Indoor Unit Installation

**2**  Set the option values.

## ⚠ CAUTION

- The total number of available options are 24: SEG1 to SEG24.
- Because SEG1, SEG7, SEG13, and SEG19 are the page options used by the previous remote control models, the modes to set values for these options are skipped automatically.
- Set a 2-digit value for each option pair in the following order: SEG2 and SEG3 → SEG4 and SEG5 → SEG6 and SEG8 → SEG9 and SEG10 → SEG11 and SEG12 → SEG14 and SEG15 → SEG16 and SEG17 → SEG18 and SEG20 → SEG21 and SEG22 → SEG23 and SEG24
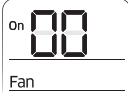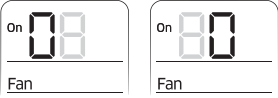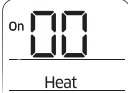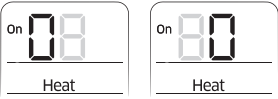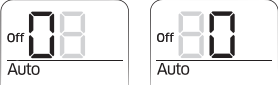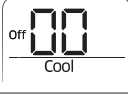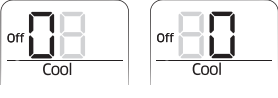
| SEG1 | SEG2 | SEG3 | SEG4 | SEG5 | SEG6 |
|------|------|------|------|------|------|
| 0 | X | X | X | X | X |
| SEG7 | SEG8 | SEG9 | SEG10 | SEG11 | SEG12 |
| 1 | X | X | X | X | X |
| SEG13 | SEG14 | SEG15 | SEG16 | SEG17 | SEG18 |
| 2 | X | X | X | X | X |
| SEG19 | SEG20 | SEG21 | SEG22 | SEG23 | SEG24 |
| 3 | X | X | X | X | X |

| On (SEG1 to SEG12) | Off (SEG13 to SEG24) |
|---|---|
| On ⬛⬛ Auto | Off ⬛⬛ Auto |

Take the steps presented in the following table:

| Option setting | Status |
|---|---|
| **1**  Setting SEG2, SEG3 option<br>**a**  Press Low Fan button to enter SEG2 value.<br>**b**  Press High Fan button to enter SEG3 value.<br>Each time you press the button, 0 → 1 → ··· E → F will be selected in rotation. | On ⬛⬛ Auto (SEG2)  On ⬛⬛ Auto (SEG3) |
| **2**  Setting **Cool** mode<br>Press **Mode** button to be changed to **Cool** mode in the ON status. | On ⬛⬛ Cool |
| **3**  Setting SEG4, SEG5 option<br>**a**  Press Low Fan button to enter SEG4 value.<br>**b**  Press High Fan button to enter SEG5 value.<br>Each time you press the button, 0 → 1 → ··· E → F will be selected in rotation. | On ⬛⬛ Cool (SEG4)  On ⬛⬛ Cool (SEG5) |
| **4**  Setting **Dry** mode<br>Press **Mode** button to be changed to **Dry** mode in the ON status. | On ⬛⬛ Dry |
| **5**  Setting SEG6, SEG8 option<br>**a**  Press Low Fan button to enter SEG6 value.<br>**b**  Press High Fan button to enter SEG8 value.<br>Each time you press the button, 0 → 1 → ··· E → F will be selected in rotation. | On ⬛⬛ Cool (SEG6)  On ⬛⬛ Cool (SEG8) |

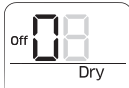| Option setting | Status |
|---|---|
| **6** Setting **Fan** mode<br><br>◎ Press **Mode** button to be changed to **Fan** mode in the ON status. | On **00** Fan |
| **7** Setting SEG9, SEG10 option<br>**a** Press Low Fan button 🔽 to enter SEG9 value.<br>**b** Press High Fan button 🔼 to enter SEG10 value.<br><br>Each time you press the button, 0 ➜ 1 ➜ ⋯ E ➜ F will be selected in rotation. | On **08**  On **00**<br>Fan      Fan<br>SEG9      SEG10 |
| **8** Setting **Heat** mode<br><br>◎ Press **Mode** button to be changed to **Heat** mode in the ON status. | On **00** Heat |
| **9** Setting SEG11, **SEG12** option<br>**a** Press Low Fan button 🔽 to enter SEG11 value.<br>**b** Press High Fan button 🔼 to enter SEG12 value.<br><br>Each time you press the button, 0 ➜ 1 ➜ ⋯ E ➜ F will be selected in rotation. | On **08**  On **00**<br>Heat      Heat<br>SEG11      SEG12 |
| **10** Setting **Auto** mode<br><br>◎ Press **Mode** button to be changed to **Auto** mode in the OFF status. | Off **00** Auto |
| **11** Setting SEG14, SEG15 option<br>**a** Press Low Fan button 🔽 to enter SEG14 value.<br>**b** Press High Fan button 🔼 to enter SEG15 value.<br><br>Each time you press the button, 0 ➜ 1 ➜ ⋯ E ➜ F will be selected in rotation. | Off **08**  Off **00**<br>Auto      Auto<br>SEG14      SEG15 |
| **12** Setting **Cool** mode<br><br>◎ Press **Mode** button to be changed to **Cool** mode in the OFF status. | Off **00** Cool |
| **13** Setting SEG16, SEG17 option<br>**a** Press Low Fan button 🔽 to enter SEG16 value.<br>**b** Press High Fan button 🔼 to enter SEG17 value.<br><br>Each time you press the button, 0 ➜ 1 ➜ ⋯ E ➜ F will be selected in rotation. | Off **08**  Off **00**<br>Cool      Cool<br>SEG16      SEG17 |
| **14** Setting **Dry** mode<br><br>◎ Press **Mode** button to be changed to **Dry** mode in the OFF status. | Off **00** Dry |

Installation

# Indoor Unit Installation

| Option setting | Status |
|---|---|
| **15** Setting SEG18, SEG20 option<br>**a** Press Low Fan button 🔽 to enter SEG18 value.<br>**b** Press High Fan button 🔼 to enter SEG20 value.<br><br>Each time you press the button, 0 ➜ 1 ➜ ⋯ E ➜ F will be selected in rotation. | Off ▢▢ Dry    Off ▢▢ Dry<br>SEG18          SEG20 |
| **16** Setting **Fan** mode<br>Ⓜ Press **Mode** button to be changed to **Fan** mode in the OFF status. | Off ▢▢<br>Fan |
| **17** Setting SEG21, SEG22 option<br>**a** Press Low Fan button 🔽 to enter SEG21 value.<br>**b** Press High Fan button 🔼 to enter SEG22 value.<br><br>Each time you press the button, 0 ➜ 1 ➜ ⋯ E ➜ F will be selected in rotation. | Off ▢▢ Fan    Off ▢▢ Fan<br>SEG21          SEG22 |
| **18** Setting **Heat** mode<br>Ⓜ Press **Mode** button to be changed to **Heat** mode in the OFF status. | Off ▢▢<br>Heat |
| **19** Setting SEG23, SEG24 option<br>**a** Press Low Fan button 🔽 to enter SEG23 value.<br>**b** Press High Fan button 🔼 to enter SEG24 value.<br><br>Each time you press the button, 0 ➜ 1 ➜ ⋯ E ➜ F will be selected in rotation. | Off ▢▢ Heat    Off ▢▢ Heat<br>SEG23          SEG24 |

**3** Check whether the option values that you have set are correct by pressing the Ⓜ button repeatedly.

[SEG2, SEG3]  [SEG4, SEG5]  [SEG6, SEG8]  [SEG9, SEG10]  [SEG11, SEG12]  [SEG14, SEG15]  [SEG16, SEG17]  [SEG18, SEG20]

On ▢▢ Auto ➡ On ▢▢ Cool ➡ On ▢▢ Dry ➡ On ▢▢ Fan ➡ On ▢▢ Heat ➡ Off ▢▢ Auto ➡ Off ▢▢ Cool ➡ Off ▢▢ Dry ➡

[SEG21, SEG22]  [SEG23, SEG24]

Off ▢▢ Fan ➡ Off ▢▢ Heat
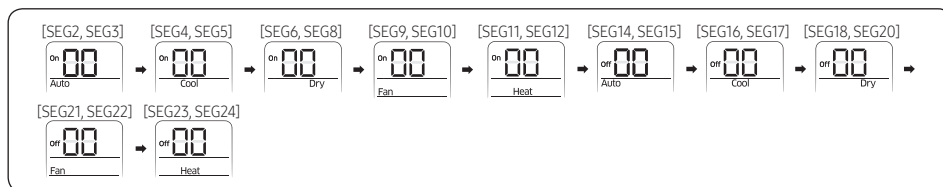
**4** Save the option values into the indoor unit:

Press the ⏻ button with the direction of remote control for set. For correcting option values, input the option values twice.

**5** Check whether the air conditioner operates in accordance with the option values you have set:

**a** Reset the indoor unit by pressing the Reset button on the indoor or outdoor unit.

**b** Remove the batteries from the remote control, insert them again, and then press the ⏻ button on the remote control.

## Emergency Temperature Output (ETO) function

### ⚠ CAUTION

- In order to deploy the ETO function, the MIM-B14, an external contact interface module, must be installed in each indoor unit.
  - The ETO is a concept of emergency operation of indoor units. If the indoor unit 1 (main indoor unit) stops because of an error, the indoor unit 2 (sub indoor unit) starts to operate.
  - Basically, the indoor unit 2 operates in the previous mode. [For the first time operation, it starts in 24 °C (75 °F) Auto mode.]
  - To set more detailed operation conditions for the indoor unit 2, use the S-net Pro.

### Setting up the ETO



Communication between indoor and outdoor units (F1 and F2)

Main indoor unit

Sub indoor unit

External contact interface module MIM-B14

Error output port (1, 2)

Contact input port (5, 6)
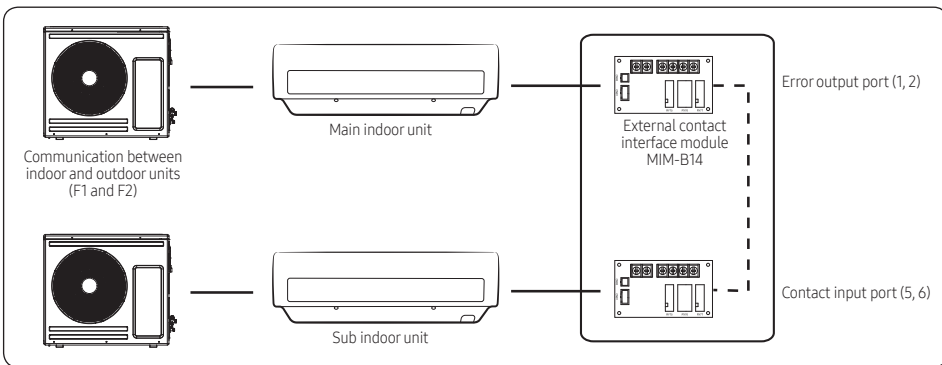
1  Main indoor unit
   - Disable the external contact control (Default).
   - Connect the S-net pro2 to F1 and F2.
   - Enable the ETO function and set the temperature and time.
2  Sub indoor unit
   - (Required) Enable the external contact control (with the installation option SEG14 - Reverse Control).
   - Connect the S-net pro2 to F1 and F2.
   - Enable the entrance control and set the mode, set temperature, and fan speed.

# Indoor Unit Installation
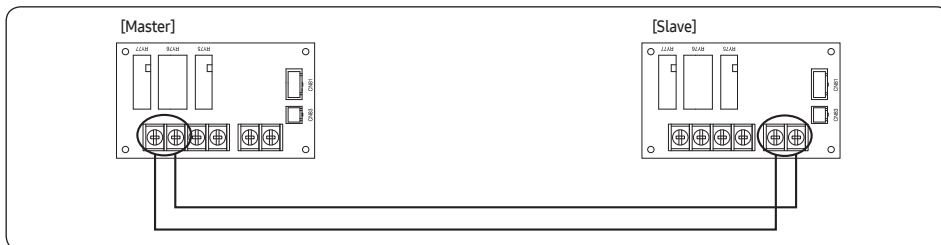


## ETO operation specifications

**1** Main indoor unit
- Based on the external contact control settings, the main indoor unit decides whether to generate output when an error (indoor unit stop) occurs.
- Based on the ETO settings, the main indoor unit decides whether to generate output according to the temperature and time conditions.

**2** Sub indoor unit
- Based on the entrance control settings, the sub indoor unit decides the mode, set temperature, and fan speed when contact inputs are given.

| | Enable of ETO | Enable of external contact | Error port output |
|---|---|---|---|
| Main indoor unit | X | X | N/A |
| | X | O | Output due to an error |
| | O | X | Output by ETO entrance conditions (temperature / time / error occurrence) |
| | O | O | Output by ETO entrance conditions (temperature / time / error occurrence) ※ Ready to control the main contact input |

| | Enable of entrance control | Enable of external contact | Operation when outputting Main |
|---|---|---|---|
| Sub indoor unit | X | X | N/A |
| | X | O | On with the previous operation conditions |
| | O | O | On with the entrance control enabled |

## Setting the indoor unit addresses

1 Make sure that the power is supplied to the indoor unit. If the indoor unit is not plugged in, it must include a power supply.

2 The panel(display ) should be connected to an indoor unit to receive option.

3 Before installing the indoor unit, assign an address to the indoor unit according to the air conditioning system plan.

4 Assign an indoor unit address by wireless remote controller.
   - The initial indoor unit ADDRESS is set as "MAIN : 0, RMC : 0".
   - Set Main and RMC Address only the setting is required.
   - There is no need to assign the indoor unit Main Address if the outdoor unit is addressing automatically.
     The indoor unit Main address will follow the outdoor unit's automatically.
   - Assign 12 digit when setting the indoor unit address.
   - No need to assign SEG4, 5, 8, 10 which are non applicable. Even though those segments are set, they will be ignored.
   - If you set the applicable segments with numbers other than the indiciated, the initial setting will be maintained.

---

Option No. :  0AXXXX-1XXXXX-2XXXXX-3XXXXX

| Option | SEG1 | | SEG2 | | SEG3 | | SEG4 | SEG5 | | SEG6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Explanation | PAGE | | MODE | | Setting Main address | | | Indoor unit number | | Indoor unit number | |
| Indication and Details | Indication | Details | Indication | Details | Indication | Details | RESERVED | Indication | Details | Indication | Details |
| | 0 | | A | | 0 | No Main address | | 0 to 1 | Tens digit | 0 to 9 | Units digit |
| | | | | | 1 | Main address setting mode | | | | | |

| Option | SEG7 | | SEG8 | SEG9 | | SEG10 | SEG11 | | SEG12 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Explanation | PAGE | | | Setting RMC address | | | Group channel (*16) | | Group address | |
| Indication and Details | Indication | Details | RESERVED | Indication | Details | RESERVED | Indication | Details | Indication | Details |
| | 1 | | | 0 | No RMC address | | RMC 1 | 0~2 | RMC 2 | 0~F |
| | | | | 1 | RMC address setting mode | | | | | |

## ⚠ CAUTION

- When "A"~"F" is entered to SEG5~6, the indoor unit MAIN ADDRESS is not changed.
- If you set the SEG 3 as 0, the indoor unit will maintain the previous MAIN ADDRESS even if you input the option value of SEG6.
- If you set the SEG 9 as 0, the indoor unit will maintain previous RMC ADDRESS even if you input the option value of SEG11~12.

# Indoor Unit Installation

Example) If you want to set as "MAIN: 3, CHANNEL: 1, RMC: B",

| SEG1 | SEG2 | SEG3 | SEG4 | SEG5 | SEG6 |
|------|------|------|------|------|------|
| 0 | A | 1 | - | - | 3 |
| SEG7 | SEG8 | SEG9 | SEG10 | SEG11 | SEG12 |
| 1 | - | 1 | - | 1 | B |

Assign option codes except SEG 1, 7 which are page options.
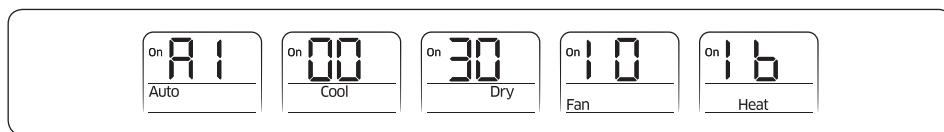


## Setting the installation options in a batch

**1** Make sure that the power is supplied to the indoor unit. If the indoor unit is not plugged in, it must include a power supply.

**2** The panel(display ) should be connected to an indoor unit to receive option.

**3** Set the installation option according to the installation condition of an air conditioner.
- The default setting of an indoor unit installation option is "02000-100000-200000-300000".
- Individual control of a remote controller(SEG20) is the function that controls an indoor unit individually when there is more than one indoor unit.
- No need to assign SEG3, 6, 9, 10, 11, 16, 21, 22, 23, 24 which are non applicable. Even though those segments are set, they will be ignored.
- If you set the applicable segments with numbers other than the indiciated, the initial setting will be maintained.

**4** Set the indoor unit option by wireless remote controller.

Option No. :  02XXXX-1XXXXX-2XXXXX-3XXXXX

| Option | SEG1 | | SEG2 | | SEG3 | | SEG4 | | SEG5 | | SEG6 |
|--------|------|---|------|---|------|---|------|---|------|---|------|
| Explanation | PAGE | | MODE | | Auto cleaning | | Use of external temperature sensor | | Use of central control | | |
| | Indication | Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | |
| Indication and details | 0 | | 2 | | 0 | Indoor drying disuse | 0 | Disuse | 0 | Disuse | RESERVED |
| | | | | | 2 | Indoor drying 5min | Auto cleaning disuse | | | | |
| | | | | | 4 | Indoor drying 10min | | 1 | Use | 1 | Use |
| | | | | | 6 | Indoor drying 30min | | | | | |
| | | | | | 8 | Indoor drying disuse | Auto cleaning use | | | | |

**SEG7 – SEG12**

| Option | SEG7 | | SEG8 | | SEG9 | SEG10 | SEG11 | SEG12 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Explanation | PAGE | | Use of drain pump | | | | | Dew removal operation in Wind-Free mode/ Wind-Free mode in Auto cleaning/ Smart Comfort in Auto mode | | | |
| Indication and details | Indication | Details | Indication | Details | RESERVED | RESERVED | RESERVED | Indication | Details | | |
| | 1 | | 0 | Disuse | | | | 0 | Maintain blade | Wind-Free disuse | Smart Comfort use |
| | | | 8 | Use external pump | | | | 1 | Open blade | Wind-Free disuse | |
| | | | | | | | | 2 | Maintain blade | Wind-Free use | |
| | | | | | | | | 3 | Open blade | Wind-Free use | |
| | | | | | | | | 4 | Maintain blade | Wind-Free disuse | Smart Comfort disuse |
| | | | | | | | | 5 | Open blade | Wind-Free disuse | |
| | | | | | | | | 6 | Maintain blade | Wind-Free use | |
| | | | | | | | | 7 | Open blade | Wind-Free use | |

**SEG13 – SEG18**

| Option | SEG13 | | SEG14 | | SEG15 | | SEG16 | SEG17 | | SEG18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Explanation | PAGE | | Use of external control | | Setting the output of external control | | | Buzzer control | | Maximum filter usage time | |
| Indication and details | Indication | Details | Indication | Details | Indication | Details | RESERVED | Indication | Details | Indication | Details |
| | 2 | | 0 | Disuse | 0 | Thermo on | | 0 | Use | 2 | 1000 hours |
| | | | 1 | On/Off — Slave, Existing Control | | | | | | | |
| | | | 2 | Off | | | | | | | |
| | | | 3 | Window | | | | | | | |
| | | | 4 | Disuse | | | | | | | |
| | | | 5 | On/Off — Master, Existing Control | | | | | | | |
| | | | 6 | Off | | | | | | | |
| | | | 7 | Window | | | | | | | |
| | | | 8 | Disuse | 1 | Operation on | | 1 | Disuse | 6 | 2000 hours |
| | | | 9 | On/Off — Slave, Reverse Control | | | | | | | |
| | | | A | Off | | | | | | | |
| | | | B | Window | | | | | | | |
| | | | C | Disuse | | | | | | | |
| | | | D | On/Off — Master, Reverse Control | | | | | | | |
| | | | E | Off | | | | | | | |
| | | | F | Window | | | | | | | |

**SEG19 – SEG24**

| Option | SEG19 | | SEG20 | | SEG21 | | SEG22 | SEG23 | SEG24 |
|---|---|---|---|---|---|---|---|---|---|
| Explanation | PAGE | | Individual control of a remote controller | | Heating setting compensation | | | | |
| Indication and details | Indication | Details | Indication | Details | Indication | Details | RESERVED | RESERVED | RESERVED |
| | 3 | | 0 or 1 | Indoor 1 | 0 | Disuse | | | |
| | | | 2 | Indoor 2 | | | | | |
| | | | 3 | Indoor 3 | | | | | |
| | | | 4 | Indoor 4 | 1 | 2 °C | | | |
| | | | | | 2 | 5 °C | | | |

# Indoor Unit Installation

- The external output of SEG15 is generated by MIM-B14 connection. (Refer to the manual of MIM-B14.)



4 PIN : Error check (MIM-B14)

2 PIN : External ON/OFF Control(MIM-B14)

COM2(F3, F4) :

After disassembling the cover panel, you can connect the wires from the indoor unit's display to the wired remote control and MIM-B14.

Be sure to connect the wired remote control for installation after cutting the COM2 wire.
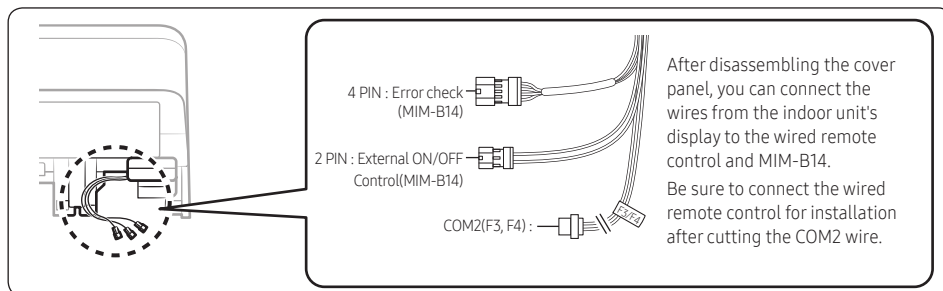
If you input a number other than 0~4 on the individual control of the indoor unit(SEG 20), the indoor is set as "Indoor 1".

Example) If you want to set as "Exterior temperature sensor : USE, External control : USE

| SEG1 | SEG2 | SEG3 | SEG4 | SEG5 | SEG6 |
|------|------|------|------|------|------|
| 0 | 2 | - | 1 | 0 | - |
| SEG7 | SEG8 | SEG9 | SEG10 | SEG11 | SEG12 |
| 1 | 0 | - | - | - | 0 |
| SEG13 | SEG14 | SEG15 | SEG16 | SEG17 | SEG18 |
| 2 | 1 | 0 | - | 0 | 0 |
| SEG19 | SEG20 | SEG21 | SEG22 | SEG23 | SEG24 |
| 3 | 0 | - | - | - | - |

Assign option codes except SEG 1, 7, 13, 19 which are page options.

* Level control : The centralized controller can limit the functions and inputs of connected products with this function enabled.
[Example: Operation mode limit (Cooling only/Heating only/No limitation), Heating temperature upper limit, Cooling temperature lower limit]
To enable 'Level control' when applying the DPM with the centralized controller, appoint the master (Set Use of external control [SEG14] option to 4 or higher).

Example : When installing DPM ( 1 Outdoor unit with 4 indoor units)

| Condition | | SEG 14 Setting | | | | Result |
|---|---|---|---|---|---|---|
| External control | Level control | Indoor 1 | Indoor 2 | Indoor 3 | Indoor 4 | |
| Default | | Not set (0) | | | | Slave (All) |
| Disuse | Use | 4 | Not set (0) | Not set (0) | Not set (0) | Master (Indoor 1), Slave (Indoor 2,3,4) |
| Use (Indoor 3) | Disuse | Not set (0) | Not set (0) | 1~3 | Not set (0) | Slave (All) |
| Use (Indoor 4) | Use | Not set (0) | Not set (0) | Not set (0) | 5~7 | Master (Indoor 4), Slave (Indoor 1,2,3) |

## Changing the addresses and options individually

You can change each digit of set option.

| Option | SEG1 | | SEG2 | | SEG3 | | SEG4 | | SEG5 | | SEG6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Explanation | PAGE | | MODE | | The option mode you want to change | | The tens' digit of an option SEG you will change | | The unit digit of an option SEG you will change | | The changed value | |
| Indication and Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details |
| | 0 | | D | | Option mode | 0~F | Tens' digit of SEG | 0~9 | Unit digit of SEG | 0~9 | The changed value | 0~F |

📄 **NOTE**

- When changing a digit of an indoor unit address setting option, set the SEG3 as 'A'.
- When changing a digit of indoor unit installation option, set the SEG3 as '2'.
  Example) When setting the 'buzzer control' into disuse status.

| Option | SEG1 | SEG2 | SEG3 | SEG4 | SEG5 | SEG6 |
|---|---|---|---|---|---|---|
| Explanation | PAGE | MODE | The option mode you want to change | The tens' digit of an option SEG you will change | The unit digit of an option SEG you will change | The changed value |
| Indication | 0 | D | 2 | 1 | 7 | 1 |

# Troubleshooting

## Detection of errors

- If an error occurs during the operation, an LED flickers and the operation is stopped except the LED.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.

LED Display on the receiver & display unit

### LED Display

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.
- When E108 error occurs, change the address and reset the system.Ex.)  When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and    indoor unit #2 will display E108, A002.

● On    ◖ Flickering    X Off

| Abnormal condition | Error code |
|---|---|
| Error on indoor temperature sensor (Short or Open) | E121 |
| 1. Error on Eva-in sensor (Short or Open) | E122 |
| 2. Error on Eva-out sensor (Short or Open) | E123 |
| 3. Discharge sensor error (Short or Open) | E126 |
| Indoor fan error | E154 |
| 1. Error on outdoor temperature sensor (Short or Open) | E221 |
| 2. Error on cond sensor | E237 |
| 3. Error on discharge sensor | E251 |
| Other outdoor unit sensor error that is not on the above list | E101 |
| 1. When there is no communication between the indoor·outdoor units for 2 minutes | E102 |
| 2. Communication error received from the outdoor unit | E202 |
| 3. 3 miniute tracking error on outdoor unit | E201 |
| 4. Communication error after tracking due to unmatching number of installed units | E108 |
| 5. Error due to repeated communication address | E109 |
| 6. Communication address not confirmed | |
| Other outdoor unit communication error that is not on the above list | |
| Self diagnosis error display | |
| 1. Error due to opened EEV (2nd detection) | E151 |
| 2. Error due to closed EEV (2nd detection) | E152 |
| 3. Eva in sensor is detached | E128 |
| 4. Eva out sensor is detached | E129 |
| 5. Thermal fuse error (Open) | E198 |

| Abnormal condition | Error code |
|---|---|
| 1. COND mid sensor is detached | E241 |
| 2. Refrigerant leakage (2nd detection) | E554 |
| 3. Abnomally high temperature on Cond (2nd detection) | E450 |
| 4. Low pressure s/w (2nd detection) | E451 |
| 5. Abnomally high temperature on discharged air on outdoor unit (2nd detection) | E416 |
| 6. Indoor operation stop due to unconfirmed error on outdoor unit | E559 |
| 7. Error due to reverse phase detection | E425 |
| 8. Comp stop due to freeze detection (6th detection) | E403 |
| 9. High pressure sensor is detached | E301 |
| 10. Low pressure sensor is detached | E306 |
| 11. Outdoor unit copression ration error | E428 |
| 12. Outdoor sump down_1 prevetion control | E413 |
| 13. Compressor down due to low pressure sensor prevention control_1 | E410 |
| 14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection) | E180 |
| 15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection) | E181 |
| Other outdoor unit self-diagnosis error that is not on the above list | |
| EEPROM error | E162 |
| External drain pump error | E665 |

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