Air conditioner

Installation manual

AC***RNADKG / AC***RNTDKG

- 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 on Installation

⚠ 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.
- Carefully follow the precautions listed below because they are essential to guarantee the safety of the equipment.

⚠ WARNING

- Always disconnect the air conditioner from the power supply before servicing it or accessing its internal components.
- Verify that installation and testing operations are performed by qualified personnel.
- Verify that the air conditioner is not installed in an easily accessible area.

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.
- 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.
- Wear protective equipment (such as safety gloves, goggles, and headgear) during installation and maintenance works. Installation/repair technicians may be injured if protective equipment is not properly equipped.
- 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.

Safety Information on Installation

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 2.4 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.

Preparation

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
AC026/035RNADKG	3	20	15
AC052RNADKG	3	30	20
AC071RNADKG AC100RNTDKG	3	50	30

Outdoor Unit

Outer wall

Indoor Unit

⚠ 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.

Cut insulation to have rainwater drained

⚠ 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*RNADKG**

Installation plate (1) **026/035** (01 frame)	Installation plate (1) **052** (04 frame)
Installation plate (1) **071** (05 frame)	Remote control (1)
Remote control battery (2)	User Manual (1)
Installation Manual (1)	Cap screw (3)
Remote Control Holder (1)	M4 x 16 Tapped Screws (2)
Guide Left(1)	Guide Right(1)

Installation

AC***RNTDKG

Installation plate (1) **100**	Remote control (1)
Remote control battery (2)	User Manual (1)
Installation Manual (1)	Remote Control Holder (1)
M4 x 16 Tapped Screws (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

Step 1.3 Drilling a hole through the wall
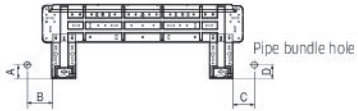
Before fixing the installation plate to a wall and then fixing the indoor unit to the installation plate, a window frame, or a gypsum board, you must determine the position of a hole (with 65 mm inner diameter) through which the pipe bundle (consisting of power and communication cables, refrigerant pipes, and drain hose) will pass and then drill that hole.

1   Determine the position of a 65 mm hole in consideration of the possible directions of the pipe bundle and the minimum distances between the hole and the installation plate.

Left ← → Right
Rear right or left
Bottom right

<Possible directions of the pipe bundle>
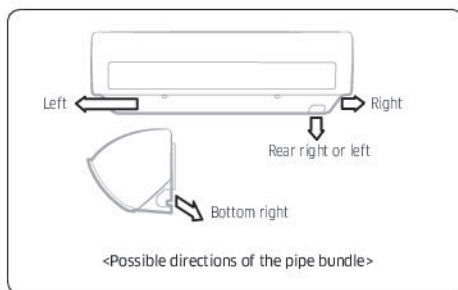
⚠ CAUTION

- If changing the pipe direction from left to right, do not drastically bent it but slowly turn it in the opposite direction as shown. Otherwise, the pipe may be damaged in the process.

Pipe bundle hole

<Minimum distances between the hole and the installation plate>

(Unit : mm)

Model	A	B	C	D
AC026RNADKG AC035RNADKG	36	60	65	36
AC052RNADKG	36	190	81	36
AC071RNADKG	33	110	110	33

Pipe bundle hole: Ø 65 mm

Installation

Preparation

<Minimum distances between the hole and the installation plate>
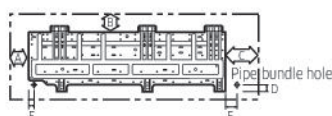
(Unit : mm)

Model	A	B	C	D	E	F
AC100RNTDKG	156	67	364	34.5	64.5	19.5

Pipe bundle hole: Ø 65 mm

2   Drill the hole.

⚠ CAUTION

- Be sure to drill only one hole.
- Make sure that the hole slants downwards so that the drain hose slants downwards to drain water well.


<The hole slants downwards>
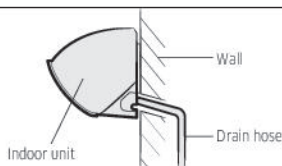
Step 1.4 Performing leak test

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.
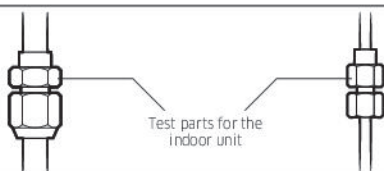
Test parts for the indoor unit

⚠ CAUTION

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

Step 1.5 Wrapping the pipes with the insulation

After checking for gas leaks in the system, insulate the pipe, hose and cables. Then place the indoor unit on the installation plate.

1   To avoid condensation problems, place heat-resistant poly-ethylene foam separately around each refrigerant pipe in the lower part of the indoor unit.

2   Wrap the refrigerant pipe and the drain hose in the rear of the indoor unit with the absorbent pad.

📄 NOTE

- Wind the pipe and hose three times to the end of the indoor unit with the absorbent pad. (20mm interval)

3   Wind the pipe, assembly cable and drain hose with insulation tape.

4   Place the bundle (the pipe, assembly cable and drain hose) in the lower part of the indoor unit carefully so it doesn't project from the rear of the indoor unit.

Installation plate
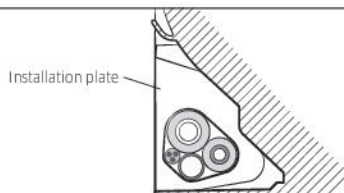
5   Hook the indoor unit to the installation plate and move the unit to the right and left until it is securely in place.

6   Wrap the rest of the pipe with vinyl tape.

7   Attach the pipe to the wall using clamps (optional).
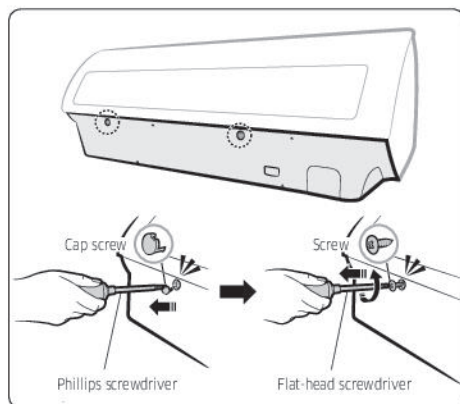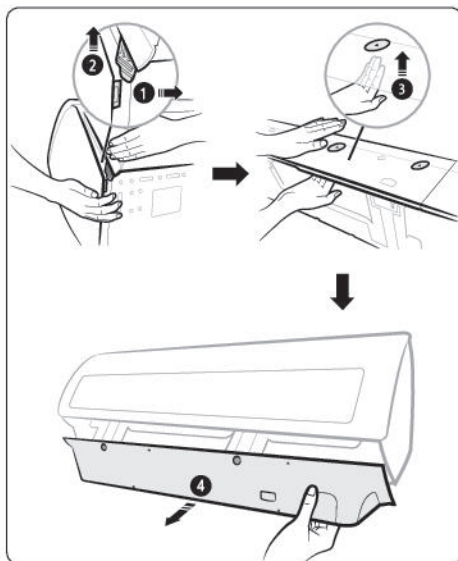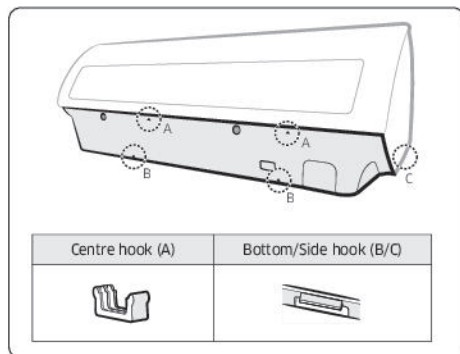
Indoor Unit Installation

Please scan this QR code for detail video of indoor unit installation.
(This QR code only for AC***RNADKG)

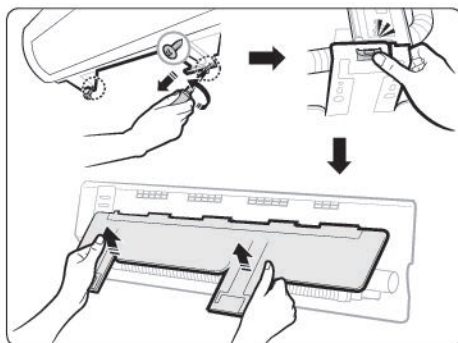## Step 2.1 Disassembling the cover panel (Only for AC***RNADKG)

1   Remove the cap screws, then the screws.

Cap screw   Screw

Phillips screwdriver   Flat-head screwdriver

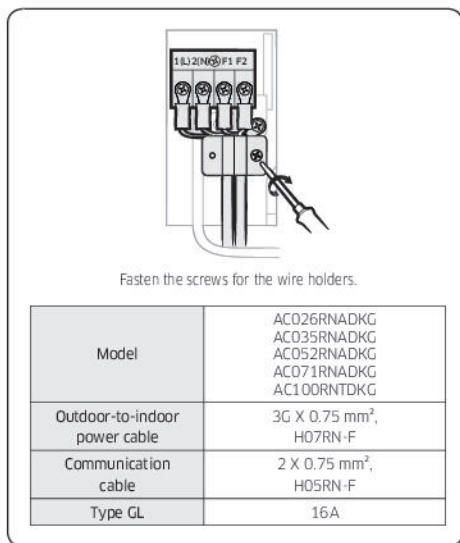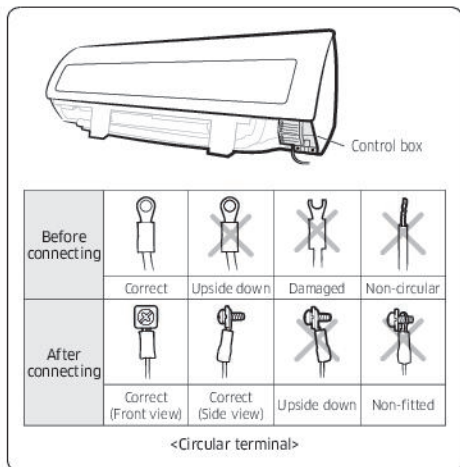2   Unlock the side hooks (❶, ❷), then centre hooks (❸). Then unlock the bottom hooks (❹) to pull out the cover panel.

Centre hook (A)	Bottom/Side hook (B/C)

Step 2.2 Disassembling the installation plate

Indoor Unit Installation

Step 2.3 Connecting the power and communication cables (assembly cable)

Control box

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

<Circular terminal>

Fasten the screws for the wire holders.

Model	AC026RNADKG AC035RNADKG AC052RNADKG AC071RNADKG AC100RNTDKG
Outdoor-to-indoor power cable	3G X 0.75 mm², H07RN-F
Communication cable	2 X 0.75 mm², H05RN-F
Type GL	16A

• When performing electrical and earthing works, be sure to comply with the 'technical standards of electrical installations' and the 'wiring regulations' in the local regulations.

• Tighten the terminal block screw to 1.2-1.8 N•m (12-18 kgf•cm).

📄 NOTE

• Each wire is labelled with the corresponding terminal number.

• Use shield cable (Category 5; less than 50pF/m) for noisy environmental site.

• Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (Code designation IEC: 60245 IEC 66/ CENELEC: H07RN-F, IEC: 60245 IEC 57/CENELEC: H05RN-F)

⚠ 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 due to overheating of the electrical contact during installation.

• Do not connect two or more different cables to extend the length. This connection may cause fire.

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

• After connecting the cables, make sure that terminal numbers on the indoor and outdoor units match.

• Ensure that power and communication cables are separated, they must not be in the same cable.

• 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.

⚠ WARNING

• Connect the wires firmly so that wires cannot be pulled out easily. (If they are loose, it could cause burn-out of the wires.)

Step 2.4 Optional: Extending the power cable

1 Prepare the following tools.

Tools	Spec	Shape
Crimping pliers	MH-14	
Connection sleeve (mm)	20x∅6.5 (HxOD)	
Insulation tape	Width 19 mm	
Contraction tube (mm)	70x∅8.0 (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.
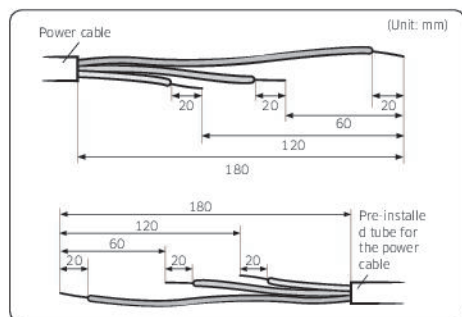
3 Insert both sides of core wire of the power cable into the connection sleeve.

• **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.
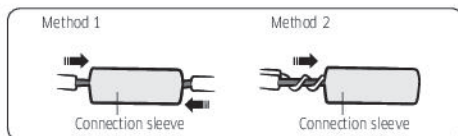
4 Using a crimping tool, compress the two points and flip it over and compress another two points in the same location.
  • The compression dimension should be 8.0.
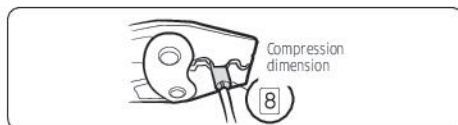
• After compressing it, pull both sides of the wire to make sure it is firmly pressed.
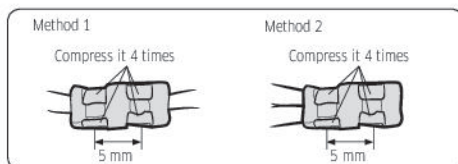
5 Apply heat to the contraction tube to contract it.
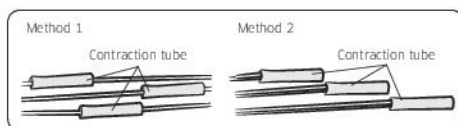
6 Wrap it with the insulation tape twice or more and position your contraction tube in the middle of the insulation tape.

Three or more layers of insulation are required.
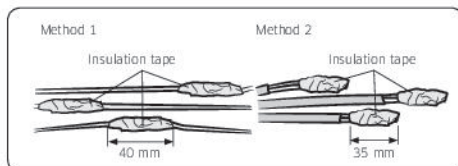
Indoor Unit Installation

7 After tube contraction work is completed, wrap it with the insulation tape to finish.

Method 1 — IInsulation tape
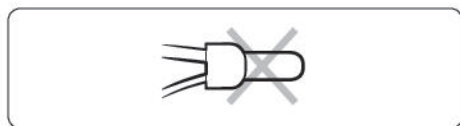Method 2 — IInsulation tape
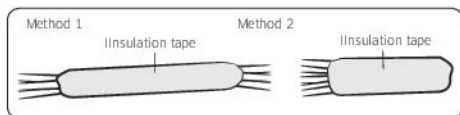
⚠ CAUTION

- 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.)
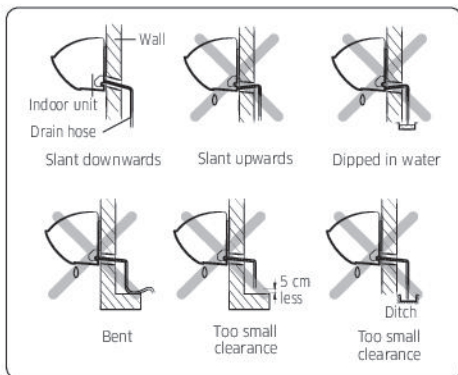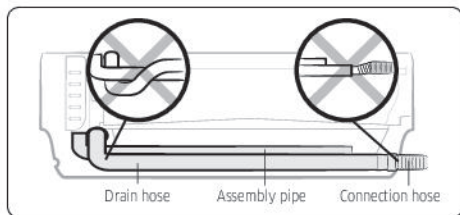
⚠ WARNING

- 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 2.5 Installing and connecting the drain hose

1 Install the drain hose.

Drain hose   Assembly pipe   Connection hose

Wall
Indoor unit
Drain hose
Slant downwards   Slant upwards   Dipped in water
Bent   Too small clearance   5 cm less   Ditch   Too small clearance

2 Pour water into the drain pan. Check whether the hose is well drained.
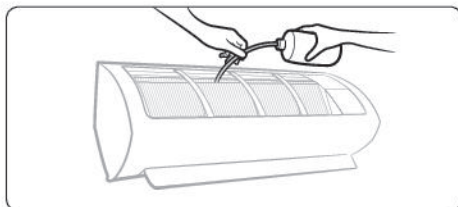
⚠ CAUTION

- Make sure that the indoor unit is in upright position when you pour water to check for leakage. Make sure that the water does not overflow onto the electrical part.
- If the diameter of the connection hose is smaller than the product's drain hose, water leakage may occur.
- Inadequate installation may cause water leakage.
- If the drain hose is routed inside the room, insulate the hose so that dripping condensation does not damage the furniture or floors.
- Do not box in or cover the drain hose connection. Drain hose connection must be easily accessible and serviceable.

Installation

Step 2.6 Optional: Extending the drain hose


Drain hose (A)   Extension drain hose (B)

40~45mm

(A)   (B)

Drain hose   Extension drain hose

20 mm or more

Foam insulation

Vinyl tape
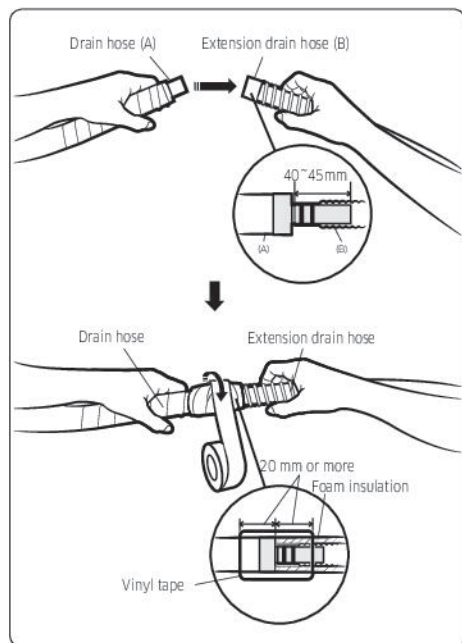
Step 2.7 Optional: Changing the direction of the drain hose

AC***RNADKG

Drain pan outlet

Rubber cap

Pour water in the direction of arrow.

<Front view>

Direction of the drained water

<Side view>
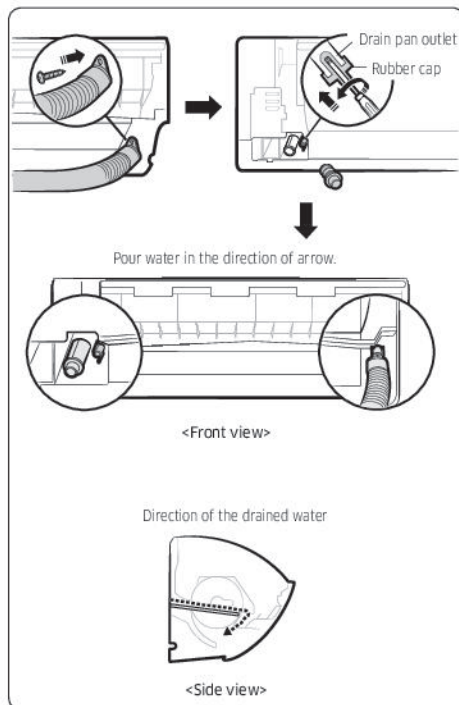
AC***RNTDKG

Change the direction only when it is necessary.

1   Detach the rubber cap with the flyer.

Screw hole
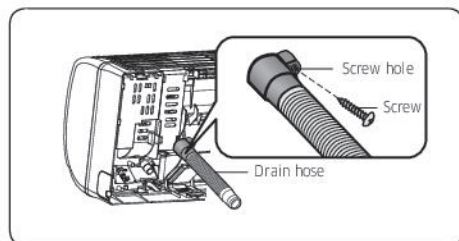
Screw

Drain hose

Indoor Unit Installation

2 Detach the drain hose by pulling it and turning to the left.

3 Insert the drain hose by fixing it into the groove of the drain hose and the outlet of the drain pan.

Drain pan outlet
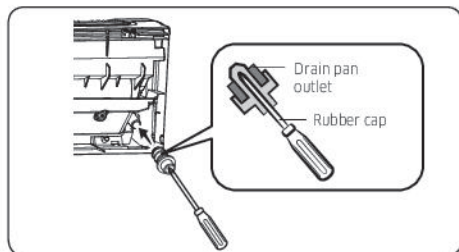
Rubber cap

4 Attach the rubber cap with a screwdriver by turning it to the right until it fixes to the end of the groove.

5 Check for leakage on both side of the drain outlet.
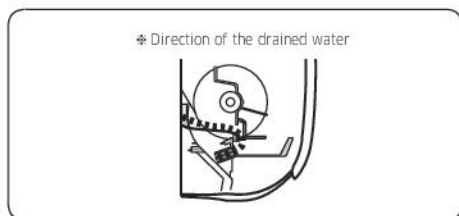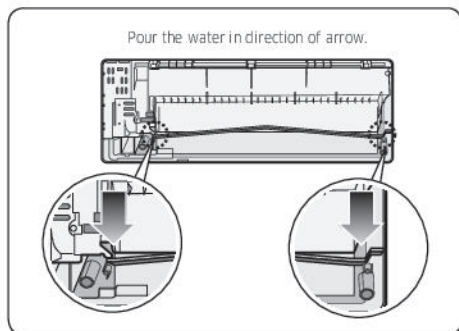
Pour the water in direction of arrow.

❋ Direction of the drained water

⚠ CAUTION

- Make sure that the indoor unit is in upright position when you pour water to check for leakage. Make sure that the water does not overflow onto the electrical part.

Step 2.8 Installing and connecting the assembly pipes to the refrigerant pipes (assembly pipe)

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.

There are 2 refrigerant pipes of different diameters:

- The smaller one is for the liquid refrigerant
- The larger one is for the gas refrigerant

A short liquid refrigerant pipe and a short gas refrigerant pipe are already fitted to the air conditioner. The connection procedure for the refrigerant pipes varies according to the exit position of each pipe when facing the wall:

Left(A)

1 <Front view>

Right(B)

Underside(C)

Screw

Guide right or left

2 <Assembling the hanger screw>

3 <Side view>
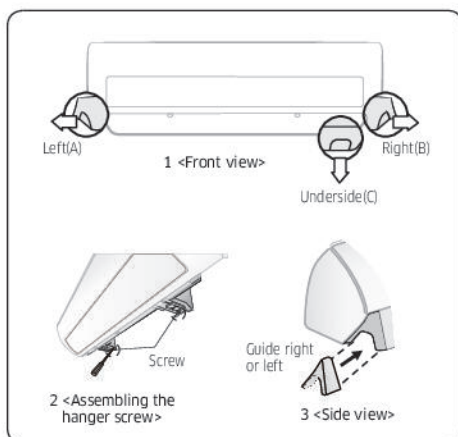
1 Cut out the appropriate knock-out piece (A, B, C) on the rear of the indoor unit unless you connect the pipe directly from the rear.

2 Smooth the cut edges.

3 Remove the protection caps of the pipes and connect the assembly pipe to each pipe. Tighten the nuts first with your hands, and then with a torque wrench, applying the following torque:

Outer diameter (mm)	Torque (N•m)	Torque (kgf•cm)
ø 6.35	14 to 18	140 to 180
ø 9.52	34 to 42	350 to 430
ø 12.70	49 to 61	500 to 620
ø 15.88	68 to 82	690 to 830

📄 **NOTE**

- If you want to shorten or extend the pipes, see **Step 2.10 Shortening or extending the refrigerant pipes (assembly pipe)** on page **15**.
- Tighten the nuts to the specified torques. If overtightened, the nuts could be broken so refrigerant may leak.

4 Cut off the remaining foam insulation.

5 If necessary, bend the pipe to fit along the bottom of the indoor unit. Then pull it out through the appropriate hole.
- The pipe should not project from the rear of the indoor unit.
- The bending radius should be 100 mm or more.

6 Pass the pipe through the hole in the wall.

7 Fix the indoor unit on the wall.Pass the cables, pipes and hose through the knock-out hole which would be connected to the outdoor unit .

8 Use 2 screws to fix the indoor unit as shown in the picture 2.

9 Assemble the Guide into the position of A or B as shown in the picture 3.

📄 **NOTE**

- The pipe will be insulated and fixed permanently into position after finishing the installation and the gas leak test.

⚠ **CAUTION**

- Tighten the flare nut with a torque wrench according to specified method. If the flare nut is over-tightened, the flare may break and cause refrigerant gas leakage.
- Do not box in or cover the pipe connection. All refrigerant pipe connection must be easily accessible and serviceable.

Step 2.9 Optional: Installing DPM

📄 **NOTE**

To find DPM allowable indoor unit models according to outdoor unit models, refer to outdoor installation manual.

- When installing DPM, you should set "DPM setting" to the outdoor unit.
- You do not need to set the address manually for the indoor unit.
- If DPM model is not set, communication error may occur.
- While the outdoor unit is tracking the indoor unit for one minute after the power supply is turned on. The operation may stop if the remote control reception signal of the installed indoor unit is different.
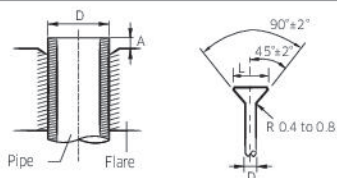- To enable Level contol with the centralized controller, refer to page **28**.

⚠ **CAUTION**

- When installing DPM, only one external controller can be connected.

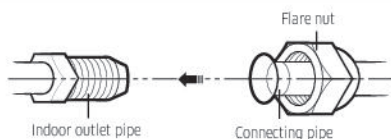## Step 2.10 Shortening or extending the refrigerant pipes (assembly pipe)
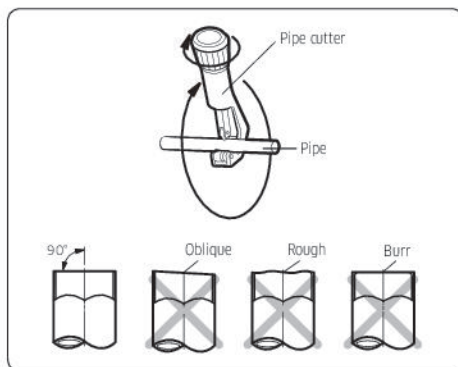
Indoor Unit Installation

(Unit: mm)

Outer diameter (D)	Depth (A)	Flare dimension (L)
ø 6.35	1.3	8.7 to 9.1
ø 9.52	1.8	12.8 to 13.2
ø 12.70	2.0	16.2 to 16.6
ø 15.88	2.2	19.3 to 19.7

(Unit: mm)

Outer diameter (mm)	Torque (N•m)	Torque (kgf•cm)
ø 6.35	14 to 18	140 to 180
ø 9.52	34 to 42	350 to 430
ø 12.70	49 to 61	500 to 620
ø 15.88	68 to 82	690 to 830

⚠ CAUTION

- If you need a pipe longer than specified in piping codes and standards, you must add refrigerant to the pipe. Otherwise, the indoor unit may freeze.
- While removing burrs, put the pipe face down to make sure that the burrs do not get in to the pipe.
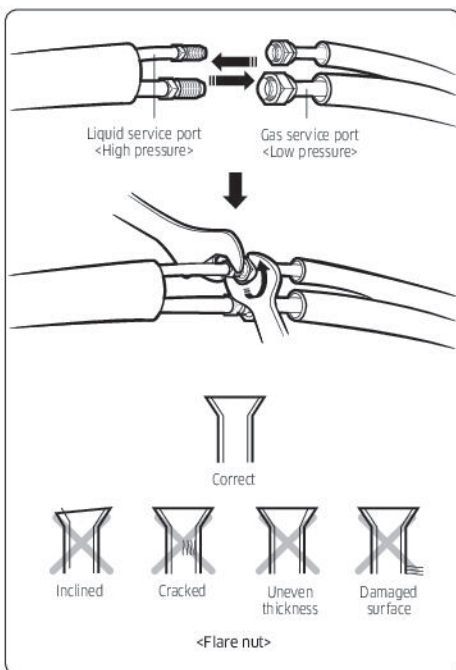
📄 NOTE

- Excessive torque may cause gas leakage. When extending the pipe with welding or brazing, ensure that nitrogen is used during the welding or brazing process. The joint must be accessible and serviceable.

⚠ CAUTION

- Tighten the flare nut at the specified torque. If the flare nut is over-tightened, it may break to cause leakage of refrigerant gas.

Step 2.11 Fixing the installation plate
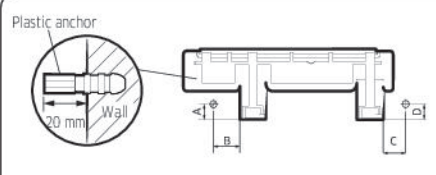
You can install the indoor unit on a wall, window frame, or gypsum board.

⚠ WARNING

- Make sure that the wall, window frame, or gypsum board can withstand the weight of the indoor unit. If you install the indoor unit in a place where it is not strong enough to withstand the unit's weight, the unit could fall and cause injury.

When fixing the indoor unit on a wall
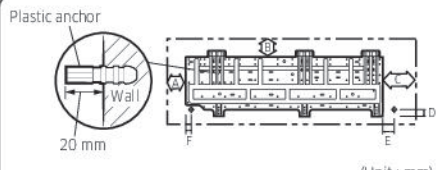
Fix the installation plate to the wall giving attention to the weight of the indoor unit.

(Unit : mm)

Model	A	B	C	D
AC026RNADKG AC035RNADKG	36	60	65	36
AC052RNADKG	36	190	81	36
AC071RNADKG	33	110	110	33

Pipe bundle hole: Ø 65 mm

(Unit : mm)

Model	A	B	C	D	E	F
AC100RNTDKG	156	67	364	34.5	64.5	19.5

Pipe bundle hole: Ø 65 mm

📄 NOTE

- If you mount the plate to a concrete wall using plastic anchors, make sure that gaps between the wall and the plate, created by projected anchor, is less than 20 mm.

When fixing the indoor unit on a window frame

1. Determine the positions of the wooden uprights to be attached to the window frame.
2. Attach the wooden uprights to the window frame giving attention to the weight of the indoor unit.
3. Attach the installation plate to the wooden upright using tapping screws.

When fixing the indoor unit on a gypsum board

1. Use stud finder to find out locations of the studs.
2. Fix the plate hanger on two studs.

⚠ CAUTION

- If you fix the indoor unit on a gypsum board, use only specified anchor bolts on reference positions. Otherwise, the gypsum surrounding the joints may crumble over time and cause the screws to be loosened and stripped. This may lmead to physical injury or equipment damage.
- Search for other spots if there are less than two studs, or the distance between the studs are different from the plate hanger.
- Fix the installation plate without inclining to one side.

Indoor Unit Installation

Step 2.12 Fixing the indoor unit to the installation plate
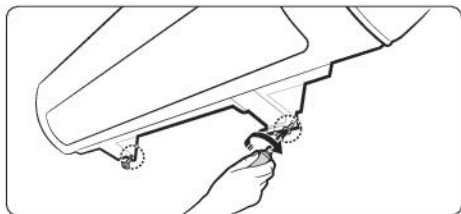
⚠ CAUTION

- Make sure that the pipe bundle does not move when you install the indoor unit onto the installation plate.

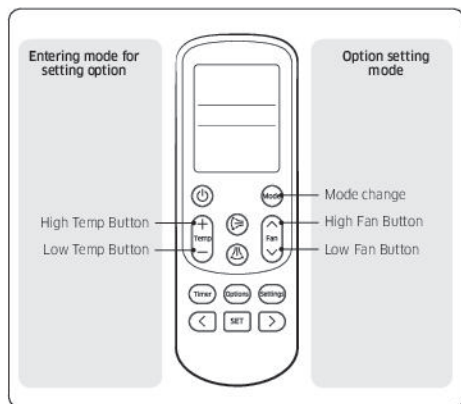## Step 2.13 Assembling the cover panel

(Only for AC***RNADKG)

1 Lock the side hooks (D), then centre hooks (B). Then lock the bottom hooks (C) to engage the cover panel in place.

2 Fasten the screw (A-❶), then assemble the cap screws (A-❷).
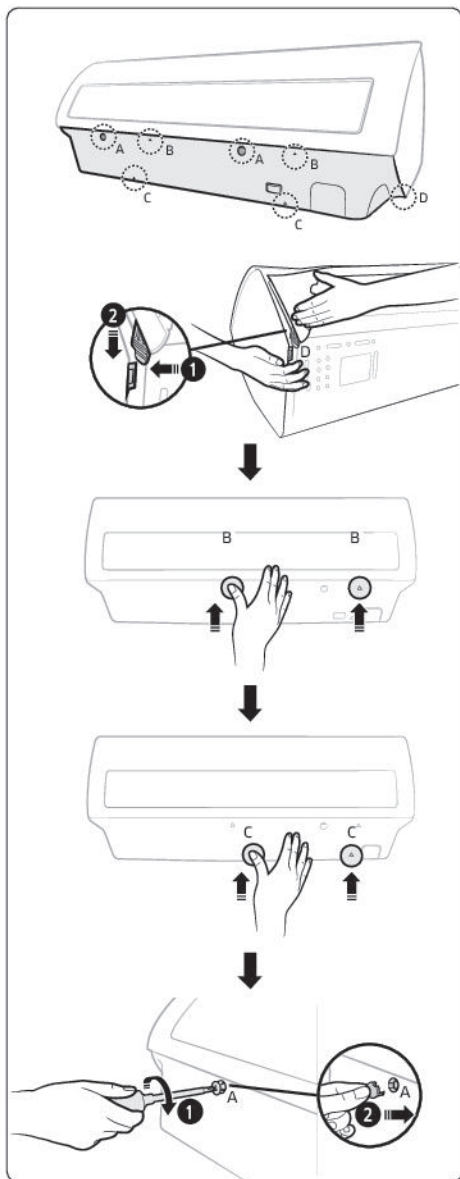
Setting an indoor unit address and installation option

- Set the indoor unit address and installation option with remote controller option. Set the each option separately since you cannot set the ADDRESS setting and indoor unit installation setting option at the same time. You need to set twice when setting indoor unit address and installation option.
- Please use the proper wireless remote controller which can set 24 digit option code.
- Please refer to the wired remote controller installation manual for setting with the wired remote controller.

Common steps for setting the addresses and options

Entering mode for setting option

Option setting mode

Mode change
High Fan Button
Low Fan Button

High Temp Button
Low Temp 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:
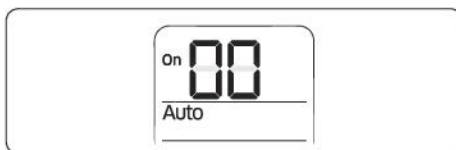
2 Set the option values.

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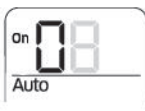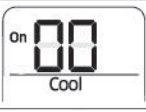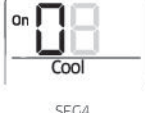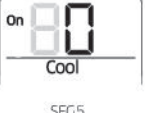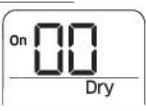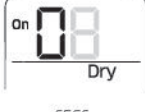
- The total number of available options are 24: SEG1 to SEG24.
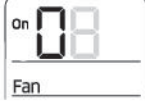- Because SEG1, SEG7, SEG13, and SEG19 are the page options used by the previous remote control models, the modes to set values for these options are skipped automatically.
- Set a 2-digit value for each option pair in the following order: SEG2 and SEG3 → SEG4 and SEG5 → SEG6 and SEG8 → SEG9 and SEG10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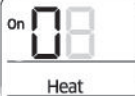
SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	X	X	X	X	X
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	X	X	X	X	X
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	X	X	X	X	X
SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
3	X	X	X	X	X

On (SEG1 to SEG12)	Off (SEG13 to SEG24)
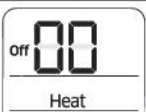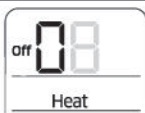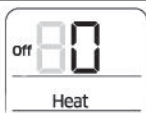
Setting an indoor unit address and installation option

Take the steps presented in the following table:

Option setting	Status
1 Setting SEG2, SEG3 option Press Low Fan button to enter SEG2 value. Press High Fan button to enter SEG3 value. Each time you press the button, 0 → 1 → ... E → F will be selected in rotation.	On [SEG2 display] Auto On [SEG3 display] Auto SEG2 SEG3
2 Setting Cool mode Press Mode button to be changed to Cool mode in the ON status.	On [display] Cool
3 Setting SEG4, SEG5 option Press Low Fan button to enter SEG4 value. Press High Fan button to enter SEG5 value. Each time you press the button, 0 → 1 → ... E → F will be selected in rotation.	On [SEG4 display] Cool On [SEG5 display] Cool SEG4 SEG5
4 Setting Dry mode Press Mode button to be changed to DRY mode in the ON status.	On [display] Dry
5 Setting SEG6, SEG8 option Press Low Fan button to enter SEG6 value. Press High Fan button to enter SEG8 value. Each time you press the button, 0 → 1 → ... E → F will be selected in rotation.	On [SEG6 display] Dry On [SEG8 display] Dry SEG6 SEG8
6 Setting Fan mode Press Mode button to be changed to FAN mode in the ON status.	On [display] Fan
7 Setting SEG9, SEG10 option Press Low Fan button to enter SEG9 value. Press High Fan button to enter SEG10 value. Each time you press the button, 0 → 1 → ... E → F will be selected in rotation.	On [SEG9 display] Fan On [SEG10 display] Fan SEG9 SEG10
8 Setting Heat mode Press Mode button to be changed to HEAT mode in the ON status.	On [display] Heat

Option setting	Status
9 Setting SEG11, SEG12 option Press Low Fan button 🔽 to enter SEG11 value. Press High Fan button 🔼 to enter SEG12 value. Each time you press the button, **0 ▸ 1 ▸ ⋯ E ▸ F** will be selected in rotation.	On ▯▯ Heat On ▯▯ Heat SEG11 SEG12
10 Setting Auto mode 🔘 Press Mode button to be changed to AUTO mode in the OFF status.	Off ▯▯ Auto
11 Setting SEG14, SEG15 option Press Low Fan button 🔽 to enter SEG14 value. Press High Fan button 🔼 to enter SEG15 value. Each time you press the button, **0 ▸ 1 ▸ ⋯ E ▸ F** will be selected in rotation.	Off ▯▯ Auto Off ▯▯ Auto SEG14 SEG15
12 Setting Cool mode 🔘 Press Mode button to be changed to Cool mode in the OFF status.	Off ▯▯ Cool
13 Setting SEG16, SEG17 option Press Low Fan button 🔽 to enter SEG16 value. Press High Fan button 🔼 to enter SEG17 value. Each time you press the button, **0 ▸ 1 ▸ ⋯ E ▸ F** will be selected in rotation.	Off ▯▯ Cool Off ▯▯ Cool SEG16 SEG17
14 Setting Dry mode 🔘 Press Mode button to be changed to Dry mode in the OFF status.	Off ▯▯ Dry
15 Setting SEG18, SEG20 option Press Low Fan button 🔽 to enter SEG18 value. Press High Fan button 🔼 to enter SEG20 value. Each time you press the button, **0 ▸ 1 ▸ ⋯ E ▸ F** will be selected in rotation.	Off ▯▯ Dry Off ▯▯ Dry SEG18 SEG20
16 Setting Fan mode 🔘 Press Mode button to be changed to Fan mode in the OFF status.	Off ▯▯ Fan

Option setting	Status
17 Setting SEG21, SEG22 option Press Low Fan button [Fan] to enter SEG21 value. Press High Fan button [Fan] to enter SEG22 value. Each time you press the button, 0 → 1 → ⋯ E → F will be selected in rotation.	Off `08` Fan Off `80` Fan SEG21 SEG22
18 Setting Heat mode [Mode] Press Mode button to be changed to HEAT mode in the OFF status.	Off `00` Heat
19 Setting SEG23, SEG24 option Press Low Fan button [Fan] to enter SEG23 value. Press High Fan button [Fan] to enter SEG24 value. Each time you press the button, 0 → 1 → ⋯ E → F will be selected in rotation.	Off `08` Heat Off `80` Heat SEG23 SEG24

3   Check whether the option values that you have set are correct by pressing the [Mode] button repeatedly.
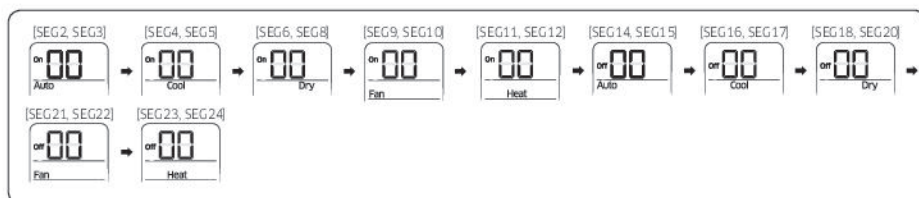
4   Save the option values into the indoor unit:

    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 ℃ (75 ℉) Auto mode.]

- To set more detailed operation conditions for the indoor unit 2, use the S-net Pro.

Setting up the ETO

Main indoor unit

Communication between indoor and outdoor units (F1 and F2)

Error output port (1, 2)

External contact interface module MIM-B14

Contact input port (5, 6)
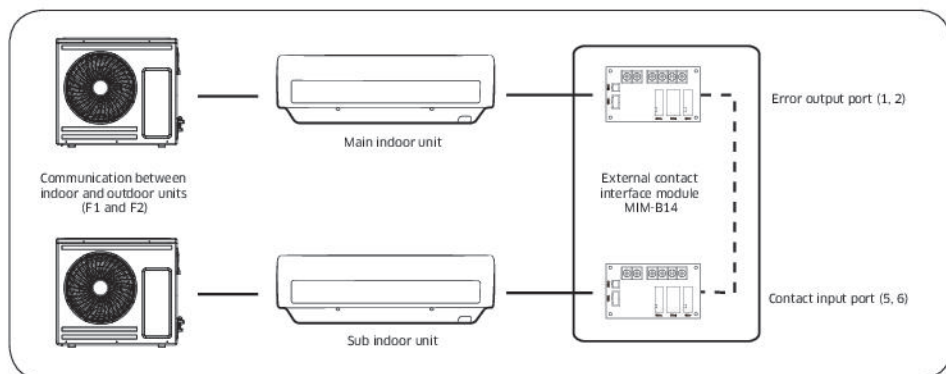
Sub indoor unit

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.

Installation

Setting an indoor unit address and installation option
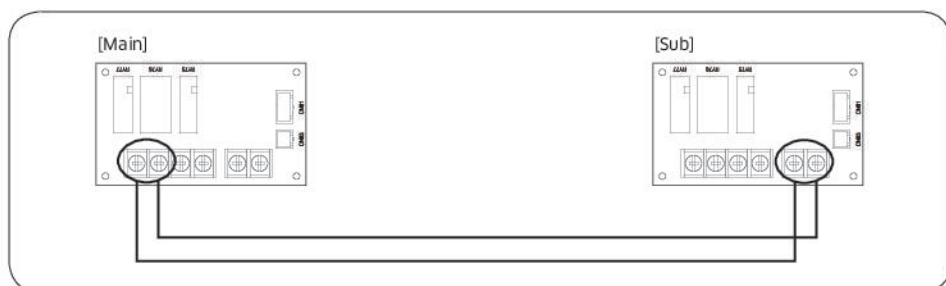
ETO operation specifications

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				The unit digit of an indoor unit	
Indication and Details	Indication	Details	Indication	Details	Indication	Details	RESERVED	RESERVED	Indication	Details
	0		A		0	No Main address			0~3(ACN*)	Details
					1	Main address setting mode			0~4 (AJN*)	A single digit

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		RMC1	0~2	RMC2	0~F
				1	RMC address setting mode					

*SEG6: AJN** models should check maximum installation indoor unit number of outdoor unit.
(Indoor1: 0, Indoor2: 1, ~)

⚠ 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.

Setting an indoor unit address and installation option

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.

| On $A1$ Auto | On 00 Cool | On 30 Dry | On 10 Fan | On $1b$ Heat |
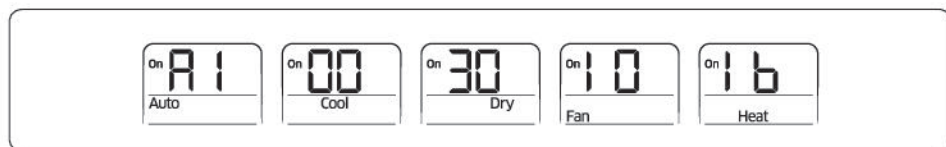
Setting the installation options in a batch

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			Use of external temperature sensor		Use of central control		
Indication and details	Indication	Details	Indication	Details	RESERVED	Indication	Details	Indication	Details	RESERVED
	0		2			0	Disuse	0	Disuse	
						1	Use	1	Use	
Option	SEG7		SEG8		SEG9	SEG10		SEG11		SEG12
Explanation	PAGE		Use of drain pump							Group address
Indication and details	Indication	Details	Indication	Details	RESERVED	RESERVED		RESERVED		Indication	Details
	1		0	Disuse						0	sub
			1	Use						1	main
			2	Use + 3minute delay							

Option	SEG13		SEG14			SEG15		SEG16		SEG17		SEG18
Explanation	PAGE		Use of external control			Setting the output of external control		S-Plasma ion		Buzzer control		
	Indication	Details	Indication	Details		Indication	Details	Indication	Details	Indication	Details	
Indication and details	2		0	Disuse		0	Thermo on	0	Disuse	0	Use	RESERVED
			1	On/Off	Sub, Existing Control							
			2	Off								
			3	Window								
			4	Disuse	Main, Existing Control							
			5	On/Off								
			6	Off								
			7	Window								
			8	Disuse	Sub, Reverse Control	1	Operation on	1	Use	1	Disuse	
			9	On/Off								
			A	Off								
			B	Window								
			C	Disuse	Main, Reverse Control							
			D	On/Off								
			E	Off								
			F	Window								

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

Setting an indoor unit address and installation option

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 main (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)				Sub (All)
Disuse	Use	4	Not set (0)	Not set (0)	Not set (0)	Main (Indoor 1), Sub (Indoor 2,3,4)
Use (Indoor 3)	Disuse	Not set (0)	Not set (0)	1~3	Not set (0)	Sub (All)
Use (Indoor 4)	Use	Not set (0)	Not set (0)	Not set (0)	5~7	Main (Indoor 4), Sub (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   ✕ Off

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

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

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This appliance is filled with R-32.