TOSHIBA

AIR CONDITIONER (MULTI TYPE)

Installation Manual

R32 or R410A

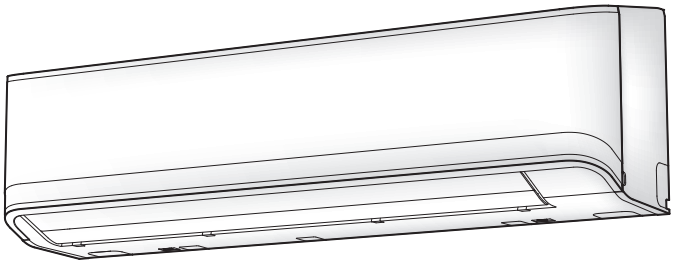
Indoor Unit

Model name:

For commercial use

High-Wall Type

MMK-UP0271HP-E
MMK-UP0301HP-E
MMK-UP0361HP-E



1130550198-1

Original instruction

Please read this Installation Manual carefully before installing the Air Conditioner.
- This Manual describes the installation method of the indoor unit.
- For installation of the outdoor unit, follow the Installation Manual attached to the outdoor unit.
- For precaution for safety, follow the Installation Manual attached to the outdoor unit.

ADOPTION OF R32 or R410A REFRIGERANT

This Air Conditioner has adopted a refrigerant HFC (R32 or R410A) which does not destroy the ozone layer.
Be sure to check the refrigerant type for outdoor unit to be combined, and then install it.

Information
If U series models (TU2C-Link) are combined with models other than U series (TCC-Link), the wiring specifications and maximum number of connectable indoor units will be changed. Pay attentions to their communication specifications when carrying out the installation, maintenance, or repair. For its details, refer to the **"Electrical connection"** in this Manual.

Product information of ecodesign requirements. (Regulation (EU) 2016/2281)
http://ecodesign.toshiba-airconditioning.eu/en

Contents

Thank you for purchasing this Toshiba air conditioner.
Please read carefully through these instructions that contain important information which complies with the Machinery Directive (Directive 2006/42/EC), and ensure that you understand them.
After completing the installation work, hand over this Installation Manual as well as the Owner's Manual provided to the user, and ask the user to keep them in a safe place for future reference.

Generic Denomination: Air Conditioner

Definition of Qualified Installer or Qualified Service Person
The air conditioner must be installed, maintained, repaired and removed by a qualified installer or qualified service person. When any of these jobs is to be done, ask a qualified installer or qualified service person to do them for you.
A qualified installer or qualified service person is an agent who has the qualifications and knowledge described in the table below.

Agent	Qualifications and knowledge which the agent must have
Qualified installer (*1)	• The qualified installer is a person who installs, maintains, relocates and removes the air conditioners made by Toshiba Carrier Corporation. He or she has been trained to install, maintain, relocate and remove the air conditioners made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such operations by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to these operations. • The qualified installer who is allowed to do the electrical work involved in installation, relocation and removal has the qualifications pertaining to this electrical work as stipulated by the local laws and regulations, and he or she is a person who has been trained in matters relating to electrical work on the air conditioners made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work. • The qualified installer who is allowed to do the refrigerant handling and piping work involved in installation, relocation and removal has the qualifications pertaining to this refrigerant handling and piping work as stipulated by the local laws and regulations, and he or she is a person who has been trained in matters relating to refrigerant handling and piping work on the air conditioners made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work. • The qualified installer who is allowed to work at heights has been trained in matters relating to working at heights with the air conditioners made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work.
Qualified service person (*1)	• The qualified service person is a person who installs, repairs, maintains, relocates and removes the air conditioners made by Toshiba Carrier Corporation. He or she has been trained to install, repair, maintain, relocate and remove the air conditioners made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such operations by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to these operations. • The qualified service person who is allowed to do the electrical work involved in installation, repair, relocation and removal has the qualifications pertaining to this electrical work as stipulated by the local laws and regulations, and he or she is a person who has been trained in matters relating to electrical work on the air conditioners made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work. • The qualified service person who is allowed to do the refrigerant handling and piping work involved in installation, repair, relocation and removal has the qualifications pertaining to this refrigerant handling and piping work as stipulated by the local laws and regulations, and he or she is a person who has been trained in matters relating to refrigerant handling and piping work on the air conditioners made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work. • The qualified service person who is allowed to work at heights has been trained in matters relating to working at heights with the air conditioners made by Toshiba Carrier Corporation or, alternatively, he or she has been instructed in such matters by an individual or individuals who have been trained and is thus thoroughly acquainted with the knowledge related to this work.

Definition of Protective Gear

When the air conditioner is to be transported, installed, maintained, repaired or removed, wear protective gloves and 'Safety' work clothing.

In addition to such normal protective gear, wear the protective gear described below when undertaking the special work detailed in the table below.

Failure to wear the proper protective gear is dangerous because you will be more susceptible to injury, burns, electric shocks and other injuries.

Work undertaken	Protective gear worn
All types of work	Protective gloves 'Safety' working clothing
Electrical-related work	Gloves to provide protection for electricians and from heat Insulating shoes Clothing to provide protection from electric shock
Work done at heights (50 cm or more)	Helmets for use in industry
Transportation of heavy objects	Shoes with additional protective toe cap
Repair of outdoor unit	Gloves to provide protection for electricians and from heat

These safety cautions describe important matters concerning safety to prevent injury to users or other people and damages to property. Please read through this manual after understanding the contents below (meanings of indications), and be sure to follow the description.

Indication	Meaning of Indication
⚠ **WARNING**	Text set off in this manner indicates that failure to adhere to the directions in the warning could result in serious bodily harm (*1) or loss of life if the product is handled improperly.
⚠ **CAUTION**	Text set off in this manner indicates that failure to adhere to the directions in the caution could result in slight injury (*2) or damage (*3) to property if the product is handled improperly.

*1: Serious bodily harm indicates loss of eyesight, injury, burns, electric shock, bone fracture, poisoning, and other injuries which leave aftereffect and require hospitalization or long-term treatment as an outpatient.

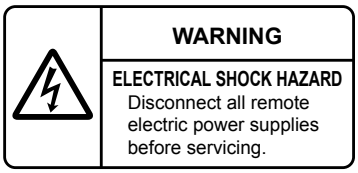
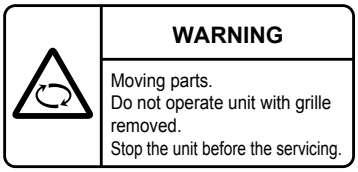
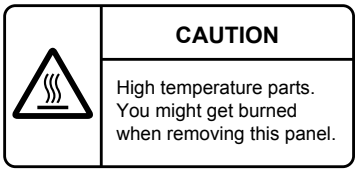
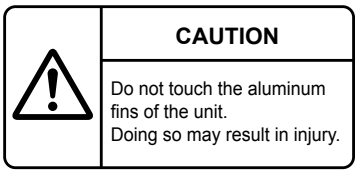
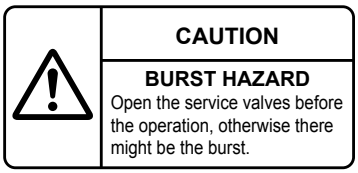
*2: Slight injury indicates injury, burns, electric shock, and other injuries which do not require hospitalization or long-term treatment as an outpatient.

*3: Damage to property indicates damage extending to buildings, household effects, domestic livestock, and pets.

MEANINGS OF SYMBOLS DISPLAYED ON THE UNIT

	**WARNING** (Risk of fire)	This mark is for R32 refrigerant only. In case that refrigerant type is R32, this unit uses a flammable refrigerant. If refrigerant leaks and comes in contact with fire or heating part, it will create harmful gas and there is risk of fire.
	Read the OWNER'S MANUAL carefully before operation.	
	Service personnel are required to carefully read the OWNER'S MANUAL and INSTALLATION MANUAL before operation.	
	Further information is available in the OWNER'S MANUAL, INSTALLATION MANUAL, and the like.	

■ Warning indications on the air conditioner unit

Warning indication	Description
	**WARNING** **ELECTRICAL SHOCK HAZARD** Disconnect all remote electric power supplies before servicing.
	**WARNING** Moving parts. Do not operate unit with grille removed. Stop the unit before the servicing.
	**CAUTION** High temperature parts. You might get burned when removing this panel.
	**CAUTION** Do not touch the aluminium fins of the unit. Doing so may result in injury.
	**CAUTION** **BURST HAZARD** Open the service valves before the operation, otherwise there might be the burst.

1 PRECAUTIONS FOR SAFETY

- Ensure that all Local, National and International regulations are satisfied.
- Read this “PRECAUTIONS FOR SAFETY” carefully before Installation.
- The precautions described below include the important items regarding safety. Observe them without fail.
- After the installation work, perform a trial operation (test run) to check for any problem.
  Follow the Owner’s Manual to explain how to use and maintain the unit to the customer.
- Turn off the main power supply switch (or breaker) before the unit maintenance.
- Ask the customer to keep the Installation Manual together with the Owner’s Manual.

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

⚠ WARNING

General

- Before starting to install the air conditioner, read through the Installation Manual carefully, and follow its instructions to install the air conditioner.
- Only a qualified installer(*1) or qualified service person(*1) is allowed to do installation work. Inappropriate installation may result in water leakage, electric shock or fire.
- Do not use any refrigerant different from the one specifled for complement or replacement. Otherwise, abnormally high pressure may be generated in the refrigeration cycle, which may result in a failure or explosion of the product or an injury to your body.
- Before opening the front panel of the indoor unit or service panel of the outdoor unit, set the circuit breaker to the OFF position. Failure to set the circuit breaker to the OFF position may result in electric shocks through contact with the interior parts. Only a qualified installer(*1) or qualified service person(*1) is allowed to remove the front panel of the indoor unit or service panel of the outdoor unit and do the work required.
- Before carrying out the installation, maintenance, repair or removal work, be sure to set the circuit breaker to the OFF position. Otherwise, electric shocks may result.
- Place a “Work in progress” sign near the circuit breaker while the installation, maintenance, repair or removal work is being carried out. There is a danger of electric shocks if the circuit breaker is set to ON by mistake.

- Only a qualified installer(*1) or qualified service person(*1) is allowed to undertake work at heights using a stand of 50 cm or more or to remove the front panel of the indoor unit to undertake work.
- Wear protective gloves and safety work clothing during installation, servicing and removal.
- Do not touch the aluminium fin of the unit. You may injure yourself if you do so. If the fin must be touched for some reason, first put on protective gloves and safety work clothing, and then proceed.
- Do not climb onto or place objects on top of the outdoor unit. You may fall or the objects may fall off of the outdoor unit and result in injury.
- When work is performed at heights, use a ladder which complies with the ISO 14122 standard, and follow the procedure in the ladder's instructions. Also wear a helmet for use in industry as protective gear to undertake the work.
- Before cleaning the filter or other parts of the outdoor unit, set the circuit breaker to OFF without fail, and place a "Work in progress" sign near the circuit breaker before proceeding with the work.
- Before working at heights, put a sign in place so that no-one will approach the work location, before proceeding with the work. Parts and other objects may fall from above, possibly injuring a person below. While carrying out the work, wear a helmet for protection from falling objects.
- Do not use the refrigerant other than R32 or R410A.
  For the refrigerant type, check the outdoor unit to be combined.
- The refrigerant used by this air conditioner, follow to the outdoor unit.
- The air conditioner must be transported in stable condition. If any part of the product is broken, contact the dealer.
- When the air conditioner must be transported by hand, carry it by two or more people.
- Do not move or repair any unit by yourself. There is high voltage inside the unit. You may get electric shock while removing the cover and main unit.
- This appliance is intended to be used by expert or trained users in shops, in light industry, or for commercial use by lay persons.

Selection of installation location

- When the air conditioner is installed in a small room, provide appropriate measures to ensure that the concentration of refrigerant leakage occur in the room does not exceed the critical level.
- Do not install the air conditioner in a location that may be subject to a risk of exposure to a combustible gas. If a combustible gas leaks and becomes concentrated around the unit, a fire may occur.
- To transport the air conditioner, wear shoes with additional protective toe caps.

- To transport the air conditioner, do not take hold of the bands around the packing carton. You may injure yourself if the bands should break.
- Do not place any combustion appliance in a place where it is directly exposed to the wind of air conditioner, otherwise it may cause imperfect combustion.
- Do not install in a location where flammable gas leaks are possible. If the gas leak and accumulate around the unit, it may ignite and cause a fire.
- Install the indoor unit at least 2.5 m above the floor level since otherwise the users may injure themselves or receive electric shocks if they poke their fingers or other objects into the indoor unit while the air conditioner is running.

Installation

- Install the air conditioner securely in a location where the base can sustain the weight adequately. If the strength is not enough, the unit may fall down resulting in injury.
- Follow the instructions in the Installation Manual to install the air conditioner. Failure to follow these instructions may cause the product to fall down or topple over or give rise to noise, vibration, water leakage or other trouble.
- Carry out the specied installation work to guard against the possibility of high winds and earthquake. If the air conditioner is not installed appropriately, a unit may topple over or fall down, causing an accident.
- If refrigerant gas has leaked during the installation work, ventilate the room immediately. If the leaked refrigerant gas comes in contact with fire, noxious gas may generate.
- Use forklift to carry in the air conditioner units and use winch or hoist at installation of them.

Refrigerant piping

- Install the refrigerant pipe securely during the installation work before operating the air conditioner. If the compressor is operated with the valve open and without refrigerant pipe, the compressor sucks air and the refrigeration cycles is over pressurized, which may cause a injury.
- Tighten the flare nut with a torque wrench in the specified manner. Excessive tighten of the flare nut may cause a crack in the flare nut after a long period, which may result in refrigerant leakage.
- After the installation work, confirm that refrigerant gas does not leak. If refrigerant gas leaks into the room and flows near a fire source, such as a cooking range, noxious gas may be generated.

- When the air conditioner has been installed or relocated, follow the instructions in the Installation Manual and purge the air completely so that no gases other than the refrigerant will be mixed in the refrigerating cycle. Failure to purge the air completely may cause the air conditioner to malfunction.
- Nitrogen gas must be used for the airtight test.
- The charge hose must be connected in such a way that it is not slack.
- If refrigerant gas has leaked during the installation work, ventilate the room immediately. If the leaked refrigerant gas comes in contact with fire, noxious gas may be generated.

Electrical wiring

- Only a qualified installer(*1) or qualified service person(*1) is allowed to carry out the electrical work of the air conditioner. Under no circumstances must this work be done by an unqualified individual since failure to carry out the work properly may result in electric shocks and/or electrical leaks.
- To connect the electrical wires, repair the electrical parts or undertake other electrical jobs, wear gloves to provide protection for electricians and from heat, insulating shoes and clothing to provide protection from electric shocks. Failure to wear this protective gear may result in electric shocks.
- Use wiring that meets the specifications in the Installation Manual and the stipulations in the local regulations and laws. Use of wiring which does not meet the specifications may give rise to electric shocks, electrical leakage, smoking and/or a fire.
- Connect earth wire. (grounding work)
  Incomplete grounding causes an electric shock.
- Do not connect earth wires to gas pipes, water pipes, and lightning conductor or telephone earth wires.
- After completing the repair or relocation work, check that the earth wires are connected properly.
- Install a circuit breaker that meets the specifications in the Installation Manual and the stipulations in the local regulations and laws.
- Install the circuit breaker where it can be easily accessed by the agent.
- When installing the circuit breaker outdoors, install one which is designed to be used outdoors.
- Under no circumstances the power wire must not be extended.
  Connection trouble in the places where the wire is extended may give rise to smoking and/or a fire.
- Electrical wiring work shall be conducted according to law and regulation in the community and Installation Manual. Failure to do so may result in electrocution or short circuit.

Test run

- Before operating the air conditioner after having completed the work, check that the electrical control box cover of the indoor unit and service panel of the outdoor unit are closed, and set the circuit breaker to the ON position. You may receive an electric shock if the power is turned on without first conducting these checks.
- If there is any kind of trouble (such as an error display has appeared, smell of burning, abnormal sounds, the air conditioner fails to cool or heat or water is leaking) has occurred in the air conditioner, do not touch the air conditioner yourself but set the circuit breaker to the OFF position, and contact a qualified service person. Take steps to ensure that the power will not be turned on (by marking “out of service” near the circuit breaker, for instance) until qualified service person(*1) arrives. Continuing to use the air conditioner in the trouble status may cause mechanical problems to escalate or result in electric shocks or other trouble.
- After the work has finished, use an insulation tester set (500V Megger) to check the resistance is 1MΩ or more between the charge section and the non-charge metal section (earth section). If the resistance value is low, a disaster such as a leak or electric shock is caused at user’s side.
- Upon completion of the installation work, check for refrigerant leaks and check the insulation resistance and water drainage. Then conduct a test run to check that the air conditioner is operating properly.

Explanations given to user

- Upon completion of the installation work, tell the user where the circuit breaker is located. If the user does not know where the circuit breaker is, he or she will not be able to turn it off in the event that trouble has occurred in the air conditioner.
- If the fan grille is damaged, do not approach the outdoor unit but set the circuit breaker to the OFF position, and contact a qualified service person(*1) to have the repairs done. Do not set the circuit breaker to the ON position until the repairs are completed.
- After the installation work, follow the Owner’s Manual to explain to the customer how to use and maintain the unit.

Relocation

- Only a qualified installer(*1) or qualified service person(*1) is allowed to relocate the air conditioner. It is dangerous for the air conditioner to be relocated by an unqualified individual since a fire, electric shocks, injury, water leakage, noise and/or vibration may result.
- While carrying out the pump-down work shut down the compressor before disconnecting the refrigerant pipe. Disconnecting the refrigerant pipe with the service valve left open and the compressor still operating will cause air or other gas to be sucked in, raising the pressure inside the refrigeration cycle to an abnormally high level, and possibly resulting in rupture, injury or other trouble.

⚠ CAUTION

This Air Conditioner has adopted a refrigerant HFC (R32 or R410A) which does not destroy the ozone layer.

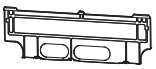
- As the R32 or R410A refrigerant is easily affected by impurities such as moisture, oxidized film, oil, etc., due to the high pressure, be careful not to allow the moisture, dirt, existing refrigerant, refrigerating machine oil, etc., to get mixed up in the refrigeration cycle during the installation work.
- A special tool for the R32 or R410A refrigerant is required for installation.
- Use a new and clean piping materials for the connecting pipe so that moisture and dirt are not mixed together during the installation work.
- When using existing pipes, follow the Installation Manual enclosed with the outdoor unit.

The installation fuse (all types can be used) must be used for the power supply line of this air conditioner.

Install the indoor unit at least 2.5 m above the floor level since otherwise the users may injure themselves or receive electric shocks if they poke their fingers or other objects into the indoor unit while the air conditioner is running.

(*1) Refer to the “Definition of Qualified Installer or Qualified Service Person.”

2 ACCESSORY PARTS

Part name	Q'ty	Shape	Usage
Installation Manual	1	This manual	(Hand over to customers) (For other languages that do not appear in this Installation Manual, please refer to the enclosed CD-R.)
Owner's Manual	1		(Hand over to customers) (For other languages that do not appear in this Owner's Manual, please refer to the enclosed CD-R.)
CD-ROM	1	–	Owner's Manual and Installation Manual.
Installation plate	1		
Wireless remote controller	1		
Battery	2		
Remote controller holder	1		
Mounting screw Ø4 × 25 ℓ	6		
Flat head wood screw Ø3.1 × 16 ℓ	2		
Screw Ø4 × 10 ℓ	3		
Heat insulator	1		

3 SELECTION OF INSTALLATION PLACE

⚠ WARNING

- **Install the air conditioner at enough strong place to withstand the weight of the unit.**
  If the strength is not enough, the unit may fall down resulting in injury.

⚠ CAUTION

- **Do not install in a location where flammable gas may leaks are possible.**
  If the gas leak and accumulate around the unit, it may ignite and cause a fire.
- **When an outdoor unit using R32 refrigerant is combined with indoor unit, be attention to the floor area in the room to be installed.**
  Indoor units cannot be installed in rooms with a floor area less than the minimum floor area.
  For details, follow the Installation Manual to the outdoor unit.

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

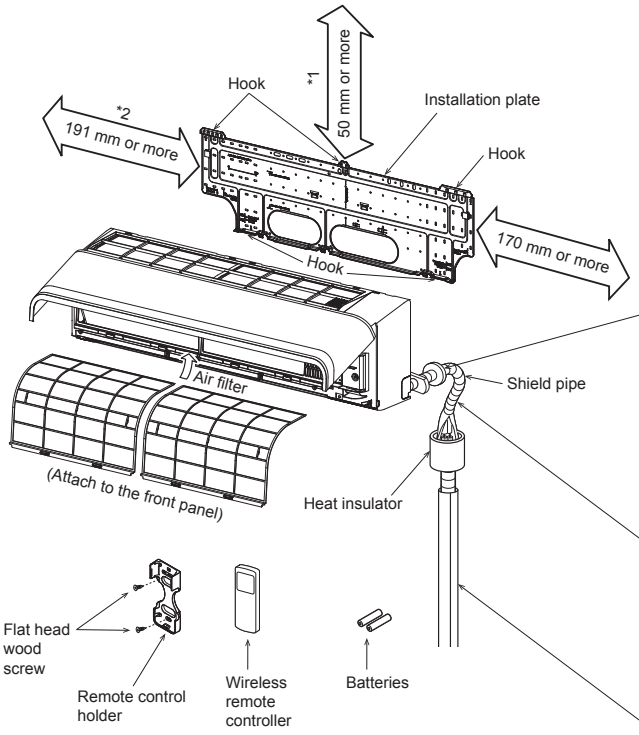
- Place where the unit can be installed horizontally.
- Place where a sufficient servicing space can be ensured for safety maintenance and check.
- Place where drained water will not cause any problem.

Avoid installing in the following places.

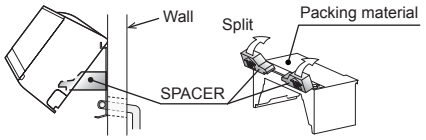
Select a location for the indoor unit where the cool or warm air will circulate evenly.
Avoid installation in the following kinds of locations.

- Saline area (coastal area).
- Locations with acidic or alkaline atmospheres (such as areas with hot springs, factories where chemicals or pharmaceuticals are made and places where the exhaust air from combustion appliances will be sucked into the unit).
  Doing so may cause the heat exchanger (its aluminum fins and copper pipes) and other parts to become corroded.
- Locations with atmospheres with mist of cutting oil or other types of machine oil.
  Doing so may cause the heat exchanger to become corroded, mists caused by the blockage of the heat exchanger to be generated, the plastic parts to be damaged, the heat insulators to peel off, and other such problems to result.
- Places where iron or other metal dust is present. If iron or other metal dust adheres to or collects on the interior of the air conditioner, it may spontaneously combust and start a fire.
- Locations where vapors from food oils are formed (such as kitchens where food oils are used).
  Blocked filters may cause the air conditioner's performance to deteriorate, condensation to form, the plastic parts to be damaged, and other such problems to result.
- Locations near obstructions such as ventilation openings or lighting fixtures where the flow of the blown air will be disrupted (a disruption of the air flow may cause the air conditioner's performance to deteriorate or the unit to shut down).
- Locations where an in-house power generator is used for the power supply.
  The power line frequency and voltage may fluctuate, and the air conditioner may not work properly as a result.
- On truck cranes, ships or other moving conveyances.
- The air conditioner must not be used for special applications (such as for storing food, plants, precision instruments or art works).
  (The quality of the items stored may be degraded.)
- Locations where high frequencies are generated (by inverter equipment, in-house power generators, medical equipment or communication equipment).
  (Malfunctioning or control trouble in the air conditioner or noise may adversely affect the equipment's operation.)
- Locations where there is anything under the unit installed that would be compromised by wetness.
  (If the drain has become blocked or when the humidity is over 80%, condensation from the indoor unit will drip, possibly causing damage to anything underneath.)
- In the case of the wireless type of system, rooms with the inverter type of fluorescent lighting or locations exposed to direct sunlight.
  (The signals from the wireless remote controller may not be sensed.)
- Locations where organic solvents are being used.
- The air conditioner cannot be used for liqueed carbonic acid cooling or in chemical plants.
- Location near doors or windows where the air conditioner may come into contact with high-temperature, high-humidity outdoor air.
  (Condensation may occur as a result.)
- Locations where special sprays are used frequently.

■ Installation diagram of Indoor unit

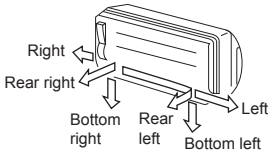


For the rear left, bottom left and left piping



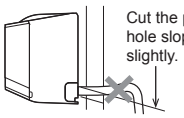
Split out 2 pieces of SPACER from indoor unit packing material, insert between the indoor unit and wall to tilt the indoor unit for better operation.

The auxiliary piping can be connected to the left, rear left, rear right, right, bottom right or bottom left.



Do not allow the drain hose to get slack.

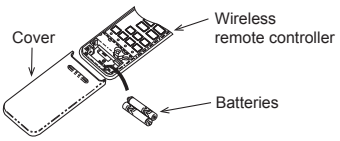
Make sure to run the drain hose sloped downward.



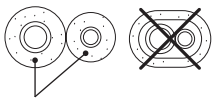
Refrigerant piping must be protected from physical damage. Install a plastic cover or equivalent.

Before installing the wireless remote controller

1. Remove the battery cover.
2. Insert 2 new batteries (R03 [AAA] type) following the (+) and (−) positions.



Insulate the refrigerant pipes separately with insulation, not together.



6 mm thick heat resisting polyethylene foam

■ Installation space

The indoor unit shall be installed at least 2.5 m height.
Also it must be avoided to put anything on top of the indoor unit.

*1 Reserve space required to install the indoor unit and for service work.
Keep 50 mm or more for clearance between top plate of the indoor unit and the ceiling surface.

*2 Provide a space as shown for service clearance for the cross flow fan.

■ Installation place

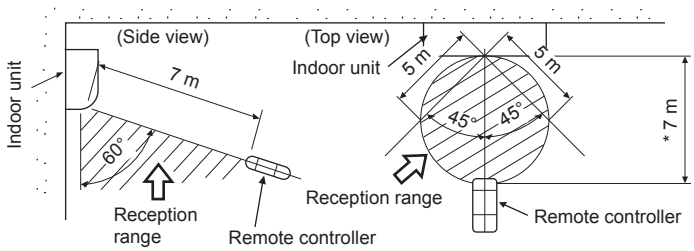
- A place which provides the spaces around the indoor unit as shown in the above diagram.
- A place where there is no obstacle near the air inlet and outlet.
- A place that allows easy installation of the piping to the outdoor unit.
- A place which allows the front panel to be opened.

⚠ CAUTION

- Direct sunlight to the indoor unit's wireless receiver should be avoided.
- The microprocessor in the indoor unit should not be too close to RF noise sources. (For details, see the owner's manual.)

■ Wireless remote controller

- A place where there are no obstacles such as a curtain that may block the signal from the indoor unit.
- Do not install the remote controller in a place exposed to direct sunlight or close to a heating source, such as a stove.
- Keep the remote controller at least 1 m apart from the nearest TV set or stereo equipment. (This is necessary to prevent image disturb-bounces or noise interference.)
- The location of the remote controller should be determined as shown below.



* : Axial distance

4 INSTALLATION OF INDOOR UNIT

⚠ WARNING

Install the air conditioner certainly to sufficiently withstand the weight.
If the strength is insufficient, the unit may fall down resulting in human injury.
Perform a specified installation work to guard against strong wind or earthquake.
An incomplete installation can cause accidents by the units falling and dropping.

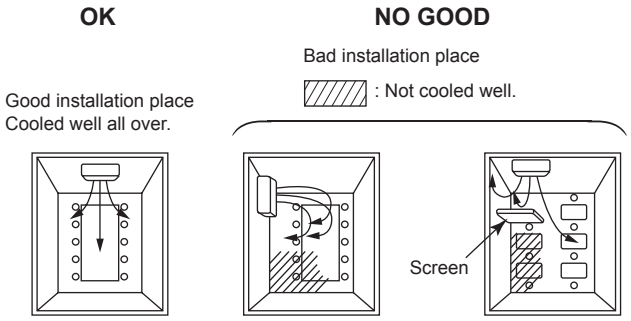
REQUIREMENT

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

- Do not put a heavy article on the indoor unit. (Even units are packaged)
- Carry in the indoor unit as it is packaged if possible. If carrying in the indoor unit unpacked by necessity, be sure to use buffering cloth, etc. to not damage the unit.
- To move the indoor unit, do not apply force to the refrigerant pipe, drain pan, foamed parts, or resin parts, etc.
- Carry the package by two or more persons, and do not bundle it with plastic band at positions other than specified.

Be careful to the following items when installating the unit.

- Considering air discharge direction, select an installation place where discharge air can circulate evenly in a room. Avoid to install the unit at place with **"NO GOOD"** mark in the right figure.

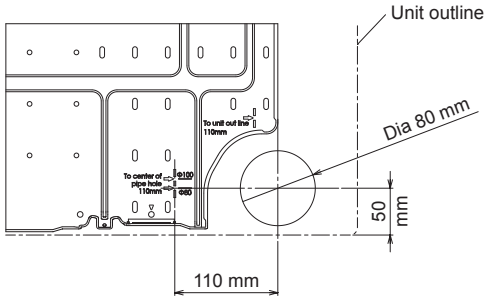


5 CUTTING A HOLE AND MOUNTING INSTALLATION PLATE

■ Cutting a hole

In case of installing the refrigerant pipes from the rear:

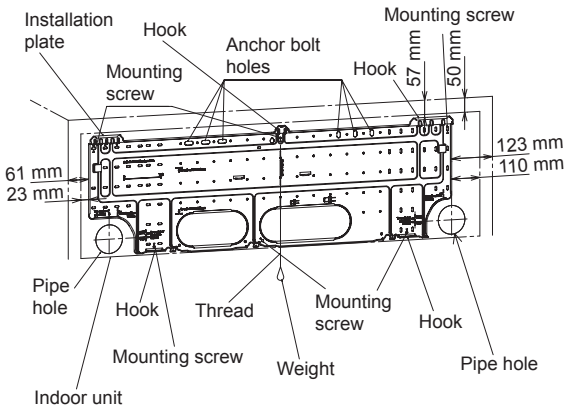
1 Decide the hole position for piping at 110 mm from the arrow mark (⇨) on the installation plate and drill a hole at a slight downward slant toward outdoor side.



NOTE

- When drilling a wall that contains a metal lath, wire lath or metal plate, be sure to use a pipe hole brim ring sold separately.

■ Mounting the installation plate

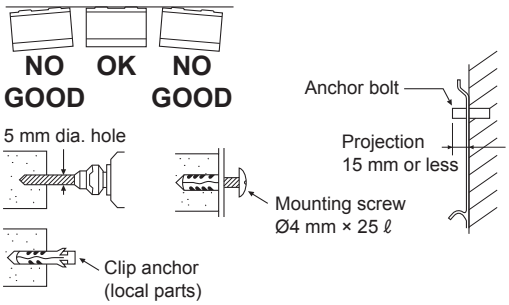


■ When the installation plate is directly mounted on the wall

1. Securely fit the installation plate onto the wall by screwing it in the upper and lower parts to hook up the indoor unit.
2. To mount the installation plate on a concrete wall with anchor bolts, utilize the anchor bolt holes as illustrated in the above figure.
3. Install the installation plate horizontally in the wall.

⚠ CAUTION

When installing the installation plate with a mounting screw, do not use the anchor bolt hole. Otherwise the unit may fall down and result in personal injury and property damage.



⚠ CAUTION

Failure to firmly install the unit may result in personal injury and property damage if the unit falls.

- In case of block, brick, concrete or similar type walls, make 5 mm dia. holes in the wall.
- Insert clip anchors for appropriate mounting screws.

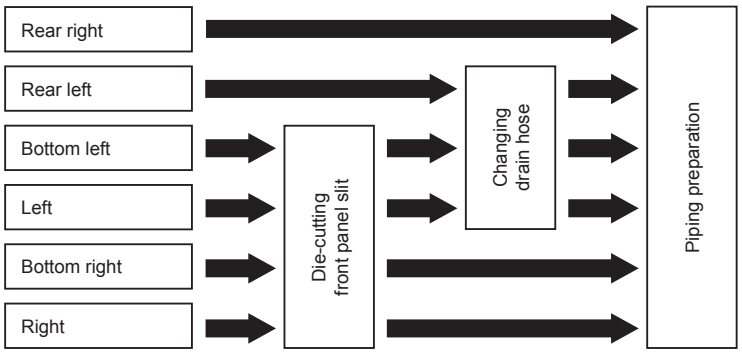
NOTE

- Secure four corners and lower parts of the installation plate with 6 mounting screws to install it.

6 PIPING AND DRAIN HOSE INSTALLATION

■ Piping and drain hose forming

* Since dewing results in a machine trouble, make sure to insulate both connecting pipes. (Use polyethylene foam as insulating material.)



1. Die-cutting front panel slit

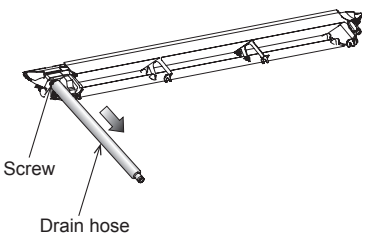
Cut out the slit on the left or right side of the front panel for the left or right connection and the slit on the bottom left or right side of the front panel for the bottom left or right connection with a pair of nippers.

2. Changing drain hose

For leftward connection, bottom-leftward connection and rear-leftward connection's piping, it is necessary to change the drain hose and drain cap.

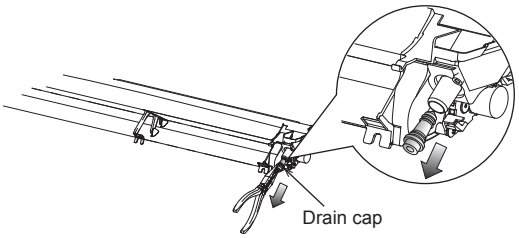
How to remove the drain hose

- The drain hose can be removed by removing the screw securing the drain hose and then pulling out the drain hose.
- When removing the drain hose, be careful of any sharp edges of steel plate. The edges can injuries.
- To install the drain hose, insert the drain hose firmly until the connection part contacts with heat insulator, and then secure it with original screw.



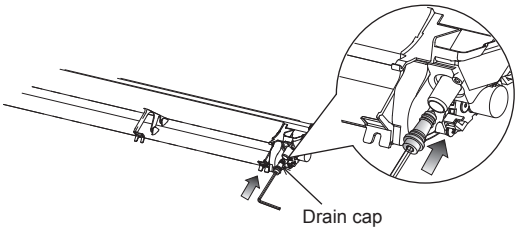
How to remove the drains cap

Clip the drain cap by needle-nose pliers and pull out.

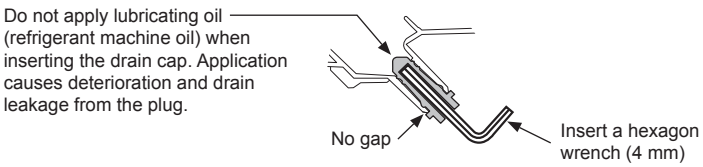


How to fix the drains cap

1) Insert hexagonal wrench (dia. 4 mm) in a centre head.



2) Firmly insert drains cap.



⚠ CAUTION

Firmly insert the drain hose and drain cap; otherwise, water may leak.

How to remove the drain hose

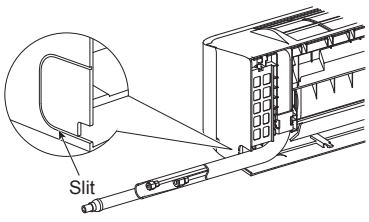
1) Remove the front panel.
2) Remove the screws of drain hose.
3) Pull out the drain hose.

How to fix the drain hose

1) Put the drain hose.
2) Screw the drain hose to the indoor unit.
3) Install the front panel.

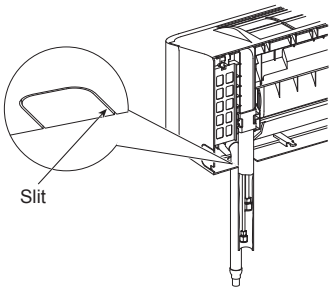
▼ In case of right or left piping

- After scribing slits of the front panel with a knife or a marking-off pin, cut them with a pair of nippers or an equivalent tool.



▼ In case of bottom right or bottom left piping

- After scribing slits of the front panel with a knife or a marking-off pin, cut them with a pair of nippers or an equivalent tool.

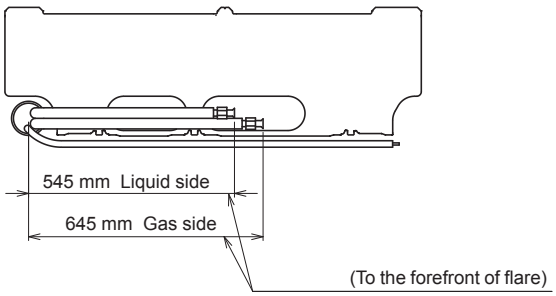


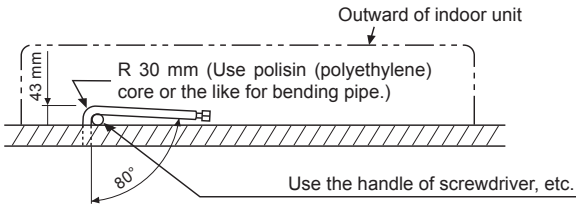
▼ Left-hand connection with piping

Bend the connecting pipe so that it is laid within 43 mm above the wall surface. If the connecting pipe is laid exceeding 43 mm above the wall surface, the indoor unit may unstably be set on the wall. When bending the connecting pipe, make sure to use a spring bender so as not to crush the pipe.

Bend the connecting pipe within a radius of 30 mm.

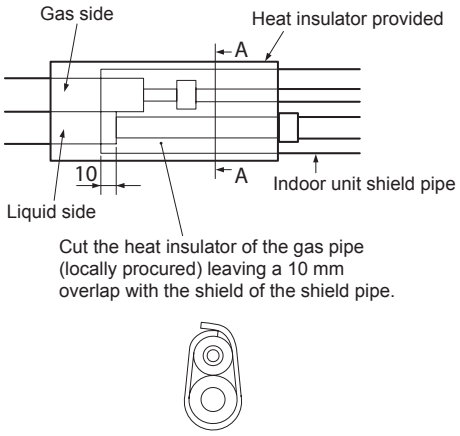
To connect the pipe after installation of the unit (figure)





NOTE

If the pipe is bent incorrectly, the indoor unit may unstably be set on the wall.
After passing the connecting pipe through the pipe hole, connect the connecting pipe to the auxiliary pipes and wrap the facing tape around them.



Heat insulator wrapping cross section A-A
Make the slit part of heat insulator to upward.

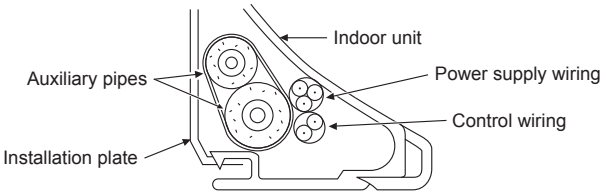
▼ Insulating the pipes
Insulate the indoor unit completely so there are no gaps using the heat insulator provided.

⚠ CAUTION

Securely apply insulation all the way up to the pipe connecting section of the indoor unit so that there is no exposed area. (the pipe exposed to the outside causes water leak.)
When wrapping the heat insulator around pipes, make sure the slit aperture toward the ceiling surface.

⚠ CAUTION

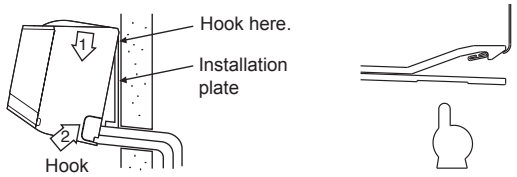
- Bind the auxiliary pipes (two) and power supply wiring and control wiring with facing tape tightly.
  In case of leftward piping and rear-leftward piping, bind the auxiliary pipes (two) only with facing tape.



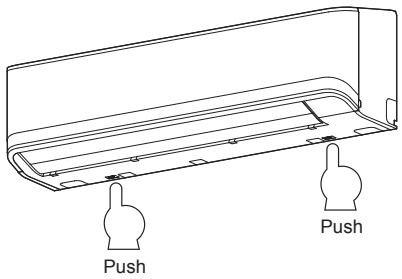
- Carefully arrange pipes so that any pipe does not stick out of the rear plate of the indoor unit.
- Carefully connect the auxiliary pipes and connecting pipes to one another and cut off the insulating tape wound on the connecting pipe to avoid double-taping at the joint; moreover, seal the joint with the vinyl tape, etc.
- Since dew results in a machine trouble, make sure to insulate both the connecting pipes.
  (Use polyethylene foam as insulating material.)
- When bending a pipe, carefully do it, not to crush it.

7 INDOOR UNIT FIXING

1. Pass the pipe through the hole in the wall, and hook the indoor unit on the installation plate at the upper hooks.
2. Swing the indoor unit to right and left to confirm that it is firmly hooked up on the installation plate.
3. While pressing the indoor unit onto the wall, hook it at the lower part on the installation plate. Pull the indoor unit toward you to confirm that it is firmly hooked up on the installation plate.

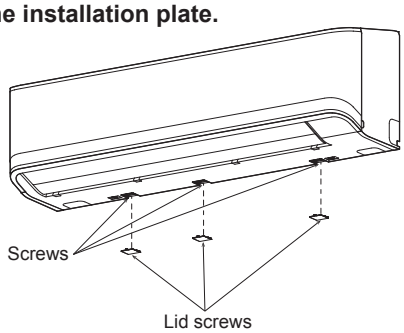


- For detaching the indoor unit from the installation plate, pull the indoor unit toward you while pushing its bottom up at the specified parts.



REQUIREMENT

The lower part of indoor unit may float, due to the condition of piping and you cannot fix it to the installation plate. In that case, use the screws provided to fix the unit and the installation plate.
Especially when the pipes are pulled out from the left side, the unit must be screwed to the installation plate.



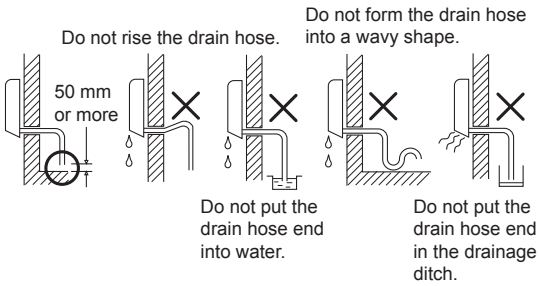
8 DRAINAGE

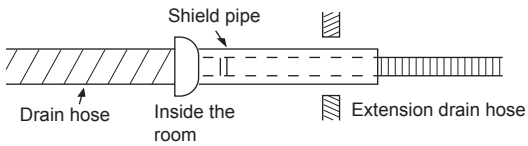
1. Run the drain hose sloped downwards.

NOTE

- Hole should be made at a slight downward slant on the outdoor side.

2. Put water in the drain pan and make sure that the water is drained out of doors.
3. When connecting extension drain hose, insulate the connecting part of extension drain hose with shield pipe.

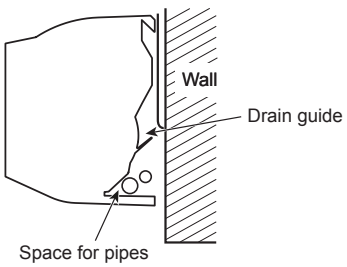




⚠ CAUTION

Arrange the drain pipe for proper drainage from the unit.
Improper drainage can result in dew-dropping.

This air conditioner has the structure designed to drain water collected from dew, which forms on the back of the indoor unit, to the drain pan. Therefore, do not store the power cord and other parts at a height above the drain guide.



9 REFRIGERANT PIPING

⚠ CAUTION

Use flare nuts that are included with the unit. Using different flare nuts may cause refrigerant gas leakage.

■ Refrigerant piping

Use the following item for the refrigerant piping.
Material: Seamless phosphorous de-oxidized copper pipe.
6.35, 9.52 and 12.7 wall thickness 0.8 mm or more.
15.88 wall thickness 1.0 mm or more.

REQUIREMENT

When the refrigerant pipe is long, provide support brackets at intervals of 2.5 - 3 m to clamp the refrigerant pipe. Otherwise, abnormal sound may be generated.

⚠ CAUTION

IMPORTANT 4 POINTS FOR PIPING WORK

1. Reusable mechanical connectors and flared joints are not allowed indoors. When mechanical connectors are reused indoors, sealing parts shall be renewed. When flared joints are reused indoors, the flare part shall be re-fabricated.
2. Tight connection (between pipes and unit)
3. Evacuate the air in the connecting pipes by using VACUUM PUMP.
4. Check the gas leakage. (Connected points)

■ Pipe size

(dia. : mm)

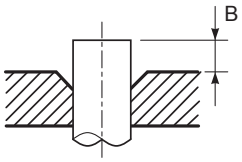
MMK-	PIPE SIZE (mm)	
	Gas side	Liquid side
UP027 to UP036 type	15.9	9.5

■ Permissible Piping Length and Height Difference

They vary according to the outdoor unit.
For details, refer to the Installation Manual attached to the outdoor unit.

Flaring

- Cut the pipe with a pipe cutter.
  Remove burrs completely.
  Remaining burrs may cause gas leakage.
- Insert a flare nut into the pipe, and flare the pipe.
  As the flaring sizes of R32 or R410A differ from those of refrigerant R22, the flare tools newly manufactured for R32 or R410A are recommended.
  However, the conventional tools can be used by adjusting projection margin of the copper pipe.



▼ Projection margin in flaring: B (Unit: mm)

RIDGID (Clutch type)

Outer dia. of copper pipe	Tool used	Conventional tool used
6.4 , 9.5	0.5 to 1.0	1.0 to 1.5
12.7 , 15.9	0.5 to 1.1	1.5 to 2.0

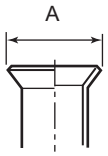
▼ Flaring dia. meter size: A (Unit: mm)

Outer dia. of copper pipe	$A^{+0}_{-0.4}$
6.4	9.1
9.5	13.2
12.7	16.6
15.9	19.7

⚠ CAUTION

- Do not scratch the inner surface of the flared part when removing burrs.
- Flare processing under the condition of scratches on the inner surface of flare processing part will cause refrigerant gas leak.
- Check that the flared part is not scratched, deformed, stepped, or flattened, and that there are no chips adhered or other problems, after flare processing.
- Do not apply refrigerating machine oil to the flare surface.

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



Tightening connection

⚠ CAUTION

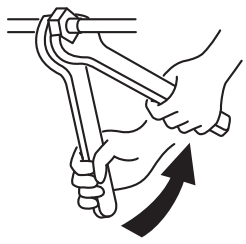
- Do not apply excessive torque. Otherwise, the nut may crack depending on the conditions.

(Unit: N•m)

Outer dia. of copper pipe	Tightening torque
6.4 mm (dia.)	14 to 18 (1.4 to 1.8 kgf•m)
9.5 mm (dia.)	33 to 42 (3.3 to 4.2 kgf•m)
12.7 mm (dia.)	50 to 62 (5.0 to 6.2 kgf•m)
15.9 mm (dia.)	68 to 82 (6.8 to 8.2 kgf•m)

▼ Tightening torque of flare pipe connections

Incorrect connections may cause not only a gas leak, but also a trouble of the refrigeration cycle. Align the centres of the connecting pipes and tighten the flare nut as far as possible with your fingers. Then tighten the nut with a spanner and torque wrench as shown in the figure.



Work using double spanner

REQUIREMENT

Tightening with an excessive torque may crack the nut depending on installation conditions. Tighten the nut within the specified tightening torque.

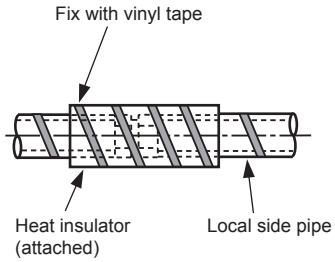
Piping with outdoor unit

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

Heat insulation

Heat insulation for the pipes should be done separately for the liquid side and gas side. Because both of the liquid and gas side pipes become a low temperature during cooling operation, sufficient heat insulation should be done to prevent condensation.

- Heat insulator with a heat resistance of 120°C or more must be used for the gas side pipe.
- The pipe connection section of the indoor unit must be heat insulated securely and compactly with the attached heat insulator.



REQUIREMENT

Apply the heat insulation to the pipe connecting section of the indoor unit securely up to the root without exposure of the pipe. (the pipe exposed to the outside causes water leak.)

■ Airtight test / Air purge, etc.

For air tightness test, vacuum drying and adding refrigerant, refer to the Installation Manual attached to the outdoor unit.

⚠ CAUTION

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

■ Open fully valves of the outdoor unit

Open the valve of the outdoor unit fully.
A hexagonal wrench is required for opening the valve.
For details, refer to the Installation Manual attached to the outdoor unit.

■ Gas leak check

Check with a leak detector or soap water whether gas leaks or not, from the pipe connecting section or cap of the valve.

REQUIREMENT

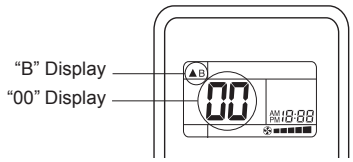
Use a leak detector manufactured exclusively HFC refrigerant (R410A, R134a, R32, etc.).

■ Wireless remote controller A-B selection

Using 2 wireless remote controllers for the respective air conditioners, when the 2 air conditioners are closely installed.

Wireless remote controller B setup

1. **Push RESET button on the indoor unit to turn the air conditioner ON.**
2. **Point the wireless remote controller at the indoor unit.**
3. **Push and hold CHK● button on the wireless remote controller by the tip of the pencil. “00” will be shown on the display.**
4. **Push MODE during pushing CHK● . “B” will be shown on the display and “00” will be disappear and the air conditioner will turn OFF. The wireless remote controller B is memorized.**



NOTE

- Repeat above step to reset wireless remote controller to be A.
- The wireless remote controllers do not display “A”.
- The factory default of the wireless remote controllers is “A”.

10 ELECTRICAL CONNECTION

⚠ WARNING

1. **Using the specified wires, ensure to connect the wires, and fix wires securely so that the external tension to the wires do not affect the connecting part of the terminals.**
   Incomplete connection or fixation may cause a fire, etc.
2. **Be sure to connect earth wire. (grounding work)**
   Incomplete grounding cause an electric shock. Do not connect ground wires to gas pipes, water pipes, lightning rods or ground wires for telephone wires.
3. **Appliance shall be installed in accordance with national wiring regulations.**
   Capacity shortage of power circuit or incomplete installation may cause an electric shock or a fire.

⚠ CAUTION

- **For communication line, use wires with the same type and size. If each wire has a different type and size from another one, it will cause a communication trouble.**
- If incorrect / incomplete wiring is carried out, it will cause an electrical fire or smoke.
- Install an earth leakage breaker that is not tripped by shock waves.
  If an earth leakage breaker is not installed, an electric shock may be caused.
- Use the cord clamps attached to the product.
- Do not damage or scratch the conductive core and inner insulator of power and control wires when peeling them.
- Use the power supply wire and control wires of specified thickness, type, and protective devices required.
- Do not connect 208-240V power to the terminal blocks (Uv (U1)), (Uv (U2)), (A), (B) for control wiring. (Otherwise, the system will fail.)
- Perform the electric wiring so that it does not come to contact with the high-temperature part of the pipe.
  The coating may melt resulting in an accident.

REQUIREMENT

- For power supply wiring, strictly conform to the Local Regulation in each country.
- For wiring of power supply of the outdoor units, follow the Installation Manual of each outdoor unit.
- Perform the electric wiring so that it does not come to contact with the high-temperature part of the pipe.
  The coating may melt resulting in an accident.
- After connecting wires to the terminal blocks, provide a trap and fix wires with the cord clamp.
- Run the refrigerant piping line and control wiring line in the same line.
- Do not turn on the power of the indoor unit until vacuuming of the refrigerant pipes completes.

■ Power supply wire and communication wires specifications

Power supply wire and communication wires are procured locally.
For the power supply specifications, follow the table below. Power supply wiring and communication wiring are to be procured locally.
For specifications of the power capacity of the outdoor unit and the power supply wires, refer to the Installation Manual supplied with the outdoor unit.

Indoor unit power supply

- Prepare an exclusive power supply for the indoor unit independently of the outdoor unit.
- Arrange the power supplies to the indoor and outdoor units, so that a common earth leakage breaker and main switch can be used.
- Power supply wire specification: Cable 3-core 2.5 mm², **in conformity with Design H07RN-F or 60245 IEC 57.**

▼ Power supply

Power supply	220 - 240V ~, 50 Hz 208 - 230V ~, 60 Hz	
Power supply switch / Earth leakage breaker or power supply wiring / fuse rating for indoor units should be selected by the accumulated total current values of the indoor units.		
Power supply wiring	Below 50 m	2.5 mm²

Control wiring, Central controller wiring

- Use a 2 core non polarity wire.
- To prevent any possible noise issues, use a shielded 2 core wire.
- The total stated length of communication wiring is determined by the interconnecting length of indoor to outdoor wire plus the length of the central control communication wire.

▼ Communication line

TU2C-Link models (U series) can be combined with TCC-Link models (other than U series).
For details of communication type, refer to the following table.

Communication type and model names

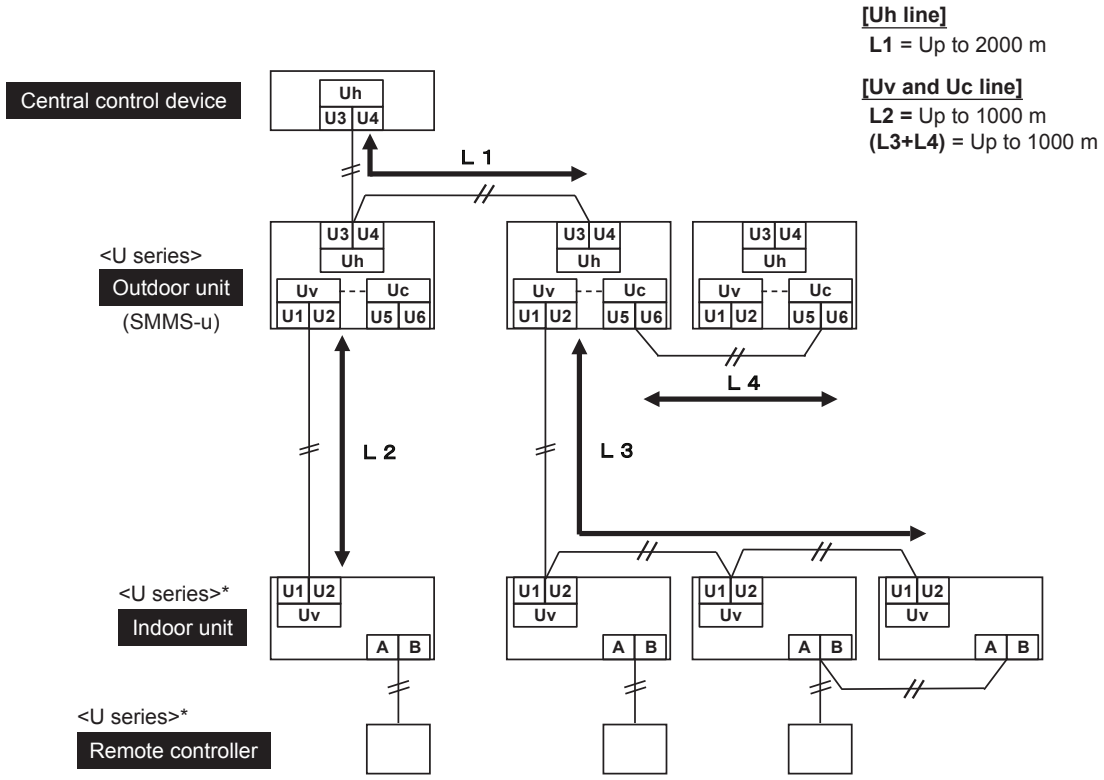
Communication type	TU2C-Link (U series and future models)	TCC-Link (Other than U series)
Outdoor unit	MMY-MUP＊＊＊ ↑ This letter indicates U series model.	Other than U series MMY-MHP＊＊＊ MCY-MHP＊＊＊ MMY-MAP＊＊＊
Indoor unit	MM＊-UP＊＊＊ ↑ This letter indicates U series model.	Other than U series MM＊-AP＊＊＊
Wired remote controller	RBC-ASCU＊＊＊ ↑ This letter indicates U series model.	Other than U series
Wireless remote controller kit & receiver unit	RBC-AXU＊＊＊ ↑ This letter indicates U series model.	Other than U series

U series outdoor unit : SMMS-u (MMY-MUP＊＊＊)
Other than U series outdoor unit : SMMS-i, SMMS-e etc. (MMY-MHP＊＊＊)

<In the case of combining with outdoor units of Super Modular Multi System u series (SMMS-u)>

Uv line and **Uc** line **(L2, L3, L4)** (2-core shield wire, non-polarity)	Wire size :	0.5 mm² 0.75 to 1.25 mm²	(Up to 500 m) (Up to 1000 m)
Uh line **(L1)** (2-core shield wire, non-polarity)	Wire size :	0.75 to 1.25 mm² 2.0 mm²	(Up to 1000 m) (Up to 2000 m)

- **U (v, h, c)** line means of control wiring.
  Uv line : Between indoor and outdoor units.
  Uh line : Central control line.
  Uc line : Between outdoor and outdoor units.
- **Uv** line and **Uc** line are independent from another refrigerant line. Total length of **Uv** and **Uc** lines **(L3+L4)** in each refrigerant line is up to 1000 m.

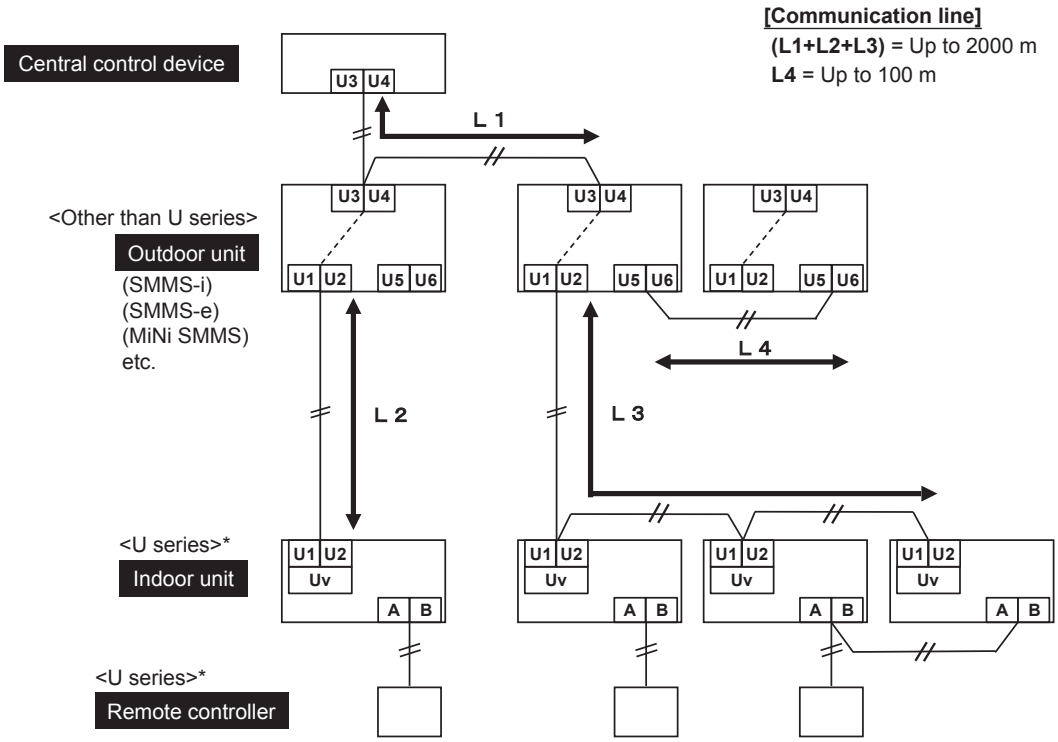


* Even if the indoor unit and the remote controller are “other than U series”, the wiring specification are the same.

<In the case of combining with outdoor units other than Super Modular Multi System u series (SMMS-u)>

Control wiring between indoor units, and outdoor unit **(L2, L3)** (2-core shield wire, non-polarity)	Wire size :	1.25 mm²	(Up to 1000 m)
Central control line wiring **(L1)** (2-core shield wire, non-polarity)		2.0 mm²	(Up to 2000 m)
Control wiring between outdoor units **(L4)** (2-core shield wire, non-polarity)	Wire size :	1.25 to 2.0 mm²	(Up to 100 m)

- The length of the communication line **(L1+L2+L3)** means the total length of the inter-unit wire length between indoor and outdoor units added with the central control system wire length.



* Even if the indoor unit and the remote controller are “other than U series”, the wiring specification are the same.

Wired remote controller wiring

This wiring is not required when using the supplied wireless remote controller.

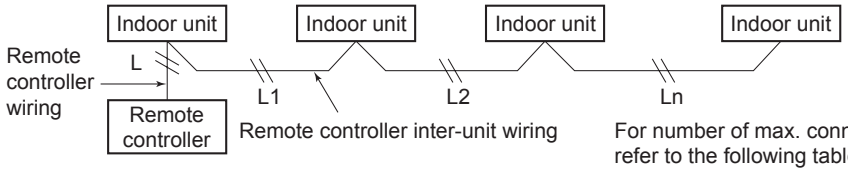
- For wiring remote controllers a 2 core non polarity wire must be used.

Wired remote controller wiring, remote controller inter-unit wiring	Wire size: 0.5 mm² to 2.0 mm²

Total wire length of wired remote controller wiring and remote controller inter-unit wiring = L + L1 + L2 + … Ln	In case of wired type only	Up to 500 m
	In case of wireless type included	Up to 400 m
Total wire length of wired remote controller inter-unit wiring = L1 + L2 + … Ln		Up to 200 m

⚠ CAUTION

- **The remote controller wire (Communication line) and AC 208-240V wires cannot be parallel to contact each other and cannot be stored in the same conduits. If doing so, a trouble may be caused on the control system due to noise or other factor.**
- If U series models (TU2C-Link) are combined with models other than U series (TCC-Link), the wiring specifications and maximum number of connectable indoor units will be changed. Pay attentions to their communication specifications when carrying out the installation, maintenance, or repair.
  For its details, refer to the “Communication line” in **10 Electrical connection.**



Max. number of connectable indoor units, and communication type

	Unit type							
Outdoor unit	U series	U series	U series	U series	∗	∗	∗	∗
Indoor unit	U series	U series	∗	∗	U series	U series	∗	∗
Remote controller	U series	∗	U series	∗	U series	∗	U series	∗
Communication type	TU2C-Link	TCC-Link						
Max. number of connectable unit	16	8						

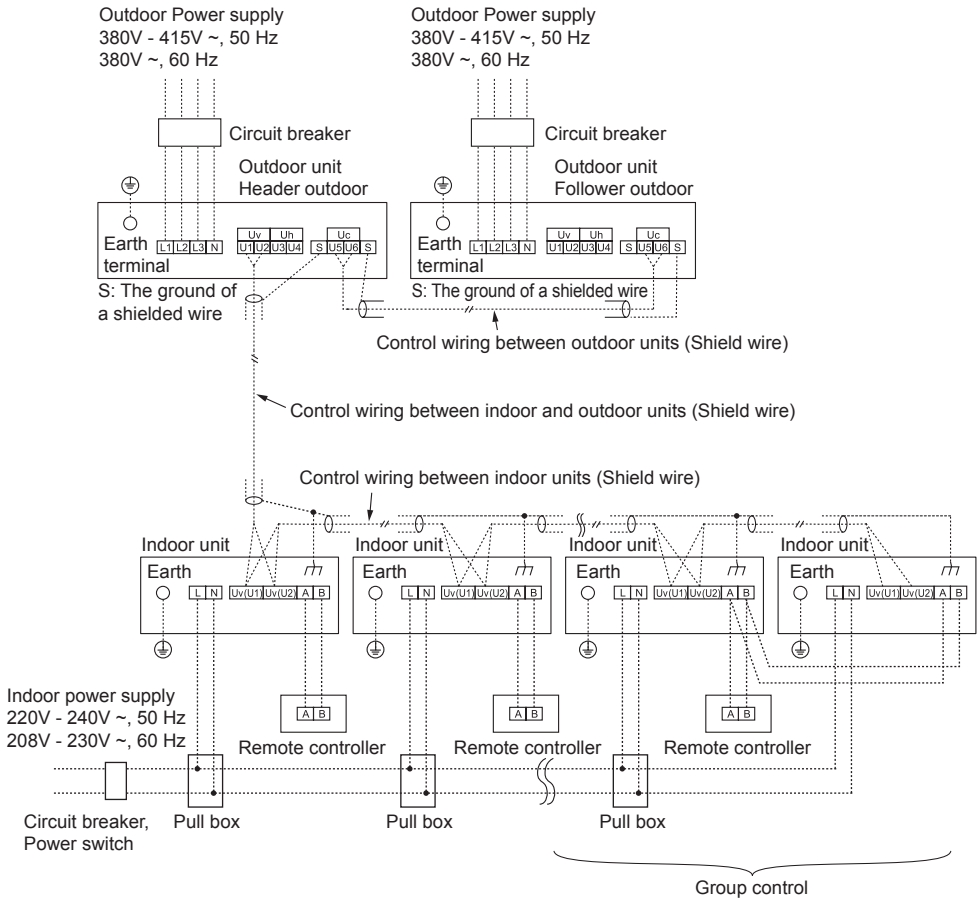
∗ : Other than U series

■ Wiring between indoor and outdoor units

NOTE

- A wiring diagram below is an example for connection to SMMS-u series. For connecting to other outdoor unit series, refer to the Installation Manual attached to the outdoor unit to be connected.

▼ **Wiring example**



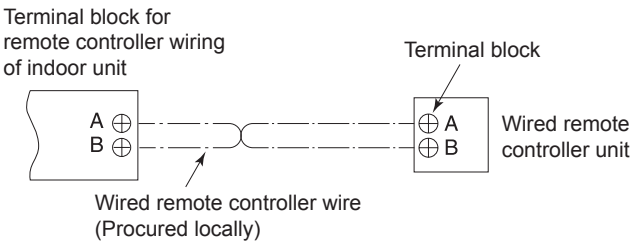
■ Address setup

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

■ Wired remote controller wiring

- As the wired remote controller wire has non-polarity, there is no problem if connections to indoor unit terminal blocks A and B are reversed.

▼ **Wiring diagram**



■ Wiring Connection

How to connect the power supply wiring and control wiring

The power supply wire and the control wire can be connected without removing the front panel.

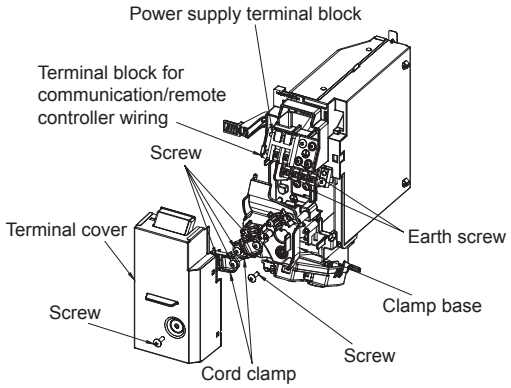
REQUIREMENT

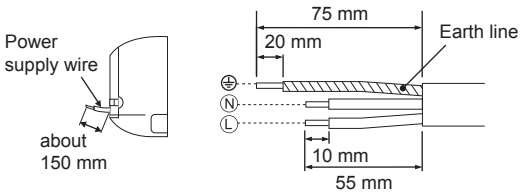
Connect the power supply wire after connecting the control wire for this model.

1. Remove the air inlet grille.
   Open the air inlet grille upward and pull it toward you.
2. Remove the terminal cover and the clamp base.
3. Insert the power supply wire and control wire (according to the local rule) into the pipe hole on the wall.
4. Take the power supply wire out of the cable slot on the rear panel so that it protrudes about 150 mm from the front.
5. Insert the control wire fully into the control/wired remote controller terminal block (Uv (U1)), (Uv (U2)), (A), (B) and secure it tightly with screws.
6. Clamp the control wire with the cord clamp.
7. Install the clamp base with a screw.
8. Insert the power supply wire fully into the terminal block and secure it tightly with screws.
   Tightening torque: 1.2 N·m (0.12 kgf·m)
   Secure the earth line with the earth screw.
9. Clamp the power supply wire with the cord clamp.
10. Attach the terminal cover and the air inlet grille to the indoor unit.

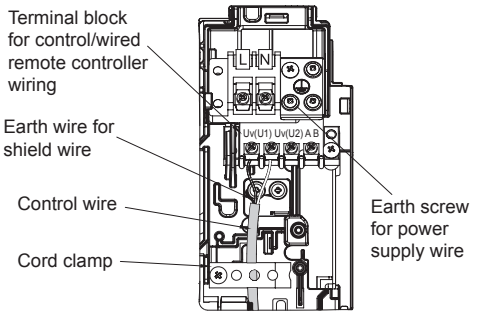
⚠ CAUTION

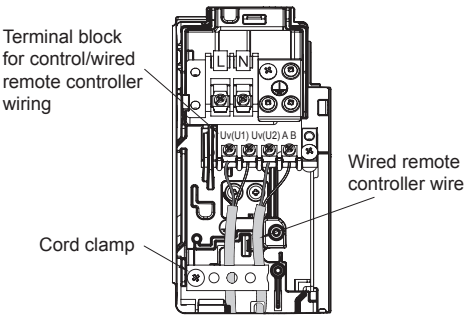
- Be sure to refer to the wiring diagram attached inside the front panel.
- Check local electrical cords an also any specific wiring instructions and limitations.
- Do not catch the control wire when installing the clamp base.



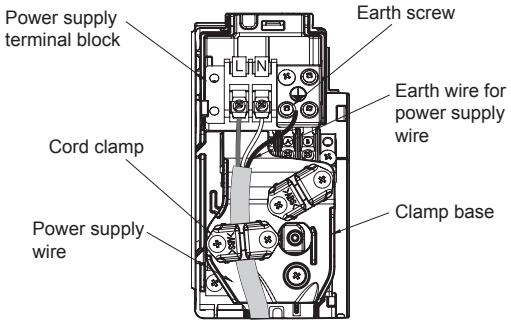


<Stripping length of the power supply wire>





<Connecting wired remote controller wire>

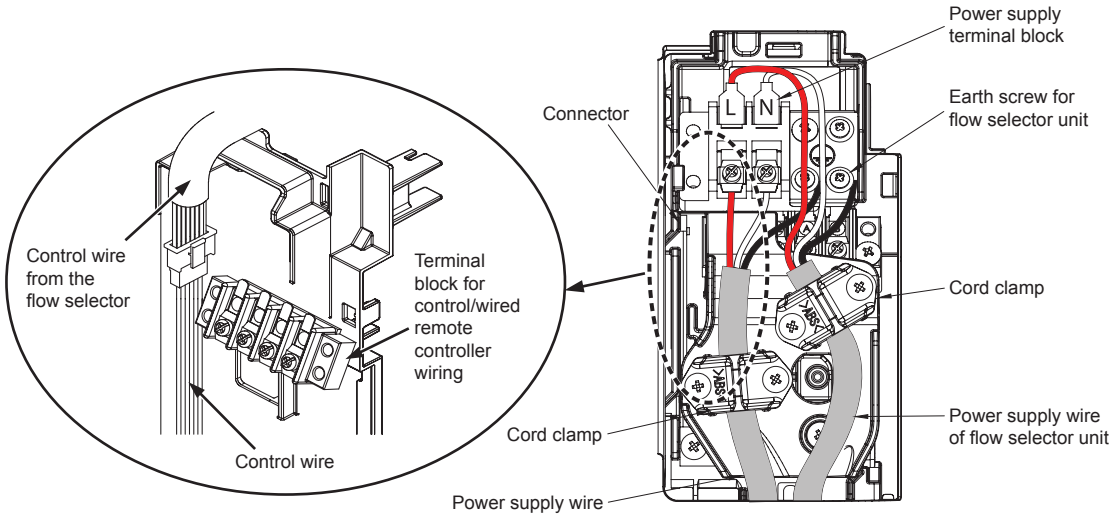


■ Wiring connection for flow selector unit

How to connect the wiring of flow selector unit

Connect the power supply wire and the communication wire supplied with the flow selector unit to the indoor unit.

1. Remove the air inlet grille.
   Open the air inlet grille upward and pull it toward you.
2. Remove the terminal cover and the clamp base.
3. Insert the control wire fully into the control/wired remote controller terminal block and secure it tightly with screws.
4. Connect the control wire connector of the flow selector unit to the lead with a connector to the left of the control/wired remote controller terminal block.
5. Clamp the control wire and the control wire of the flow selector unit with the cord clamp.
6. Install the clamp base with a screw.
7. Insert the power supply wire fully into the terminal block and secure it tightly with screws.
   Tightening torque: 1.2 N·m (0.12 kgf·m)
   Secure the earth line with the earth screw.
8. Clamp the power supply wire with the cord clamp.
9. Insert the power supply wire fasten terminal of the flow selector unit into the power supply terminal.
   Secure the earth line with the earth screw.
10. Clamp the power supply wire of the flow selector unit tight with the cord clamp.
11. Attach the terminal cover, the front panel and the air inlet grille to the indoor unit.



⚠ CAUTION

Confirm that every wires are stored in the electric parts box without getting caught before attaching the terminal cover.

11 APPLICABLE CONTROLS

REQUIREMENT

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

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

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

* The settings cannot be changed using only a wireless remote controller and simple remote controller by itself so install a wired remote controller separately as well.

■ Applicable controls setup (settings at the site)

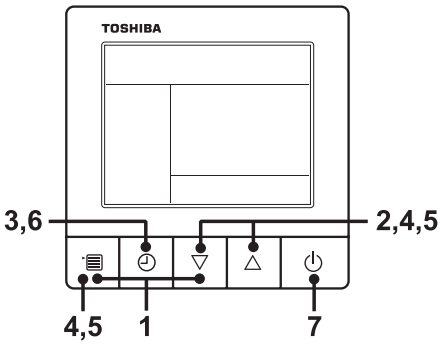
Remote controller model name: RBC-ASCU11-E

Basic procedure

Be sure to stop the air conditioner before making settings.
(Change the setup while the air conditioner is not working.)

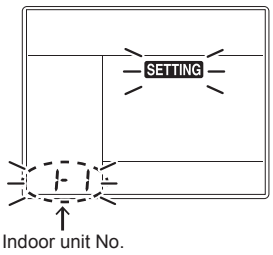
⚠ CAUTION

Set only the Code No. shown in the following table:
Do NOT set any other Code No.
If a Code No. not listed is set, it may not be possible to operate the air conditioner or other trouble with the product may result.



1 Push and hold menu button and [▽] setting button simultaneously for 10 seconds or more.

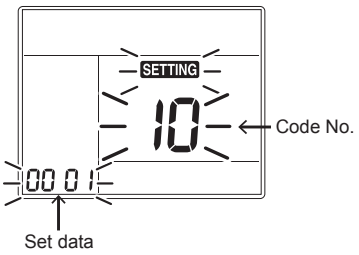
- After a while, the display flashes as shown in the figure. “ALL” is displayed as indoor unit numbers during initial communication immediately after the power has been turned on.



2 Each time [▽] [△] setting button is pushed, indoor unit numbers in the group control change cyclically. Select the indoor unit to change settings for.

- The fan of the selected indoor unit runs. The indoor unit can be confirmed for which to change settings.

3 Push OFF timer button to confirm the selected indoor unit.



4 Push the menu button to make Code No. [✳✳] flash. Change Code No. [✳✳] with [▽] [△] setting button.

5 **Push the menu button to make Set data [✳✳✳✳] flash. Change Set data [✳✳✳✳] with [▽] [△] setting button.**

6 **Push OFF timer button.**
By doing so, the setup is completed.
- To change other settings of the selected indoor unit, repeat from Procedure ***4***.

7 **When all the settings have been completed, push ON/OFF button to determine the settings.**
"SETTING" flashes and then the display content disappears and the air conditioner enters the normal stop mode. (The remote controller is unavailable while "SETTING" is flashing.)
- To change settings of another indoor unit, repeat from Procedure ***1***.

■ Change of lighting time of filter sign

According to the installation condition, the lighting time of the filter sign (Notification of filter cleaning) can be changed.
Follow to the basic operation procedure (***1*** → ***2*** → ***3*** → ***4*** → ***5*** → ***6***).
- For the CODE No. in Procedure ***4***, specify [01].
- For the [SET DATA] in Procedure ***5***, select the SET DATA of filter sign lighting time from the following table.

SET DATA	Filter sign lighting time
0000	None
0001	150H (Factory setting)
0002	2500H
0003	5000H
0004	10000H

■ To secure better effect of heating

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

SET DATA	Detection temp shift value
0000	No shift
0001	+1°C
0002	+2°C (Factory setting)
0003	+3°C
0004	+4°C
0005	+5°C
0006	+6°C

■ Adjustment of air direction

1. Using the remote controller switch, change the up/down air direction by moving the horizontal louver.
2. Adjust the right/left air direction by bending the vertical grille inside of the air outlet port with hands.

REQUIREMENT

Do not touch the horizontal louver directly with hands; otherwise a trouble may be caused.
For handling of the horizontal louver, refer to "Owner's Manual" attached to the outdoor unit.

■ Group control

In a group control, a remote controller can control up to maximum 8 or 16 units. (Depending on the outdoor unit.)

- The wired remote controller only can control a group control. The wireless remote controller is unavailable for this control.
- For cabling procedure and cables of the individual line (Identical refrigerant line) system, refer to "Electrical connection" in this Manual.
- Cabling between indoor units in a group is performed in the following procedure.
  Connect the indoor units by connecting the remote controller inter-unit cables from the remote controller terminal blocks (A, B) of the indoor unit connected with a remote controller to the remote controller terminal blocks (A, B) of the other indoor unit. (Non-polarity)
- For address setup, refer to the Installation Manual attached to the outdoor unit.

NOTE

Network adapter (Model TCB-PCNT20E) can not connect to this High Wall type air conditioner.

12 TEST RUN

■ Before test run

- Before turning on the circuit breaker, carry out the following procedure.
  1) By using insulation tester (500VMΩ), check that resistance of 1MΩ or more exists between the terminal block L to N and the earth (grounding).
     If resistance of less than 1MΩ is detected, do not run the unit.
  2) Check the valve of the outdoor unit being opened fully.
- To protect the compressor at activation time, leave power-ON for 12 hours or more for operating.
- Before starting a test run, be sure to set addresses following the Installation Manual supplied with the outdoor unit.

◆ Requirements for turning thermostat OFF

Cooling operation

- When the outdoor/suction air temperature is lower than or equal to 19°C.
- When the outdoor/suction air temperature is lower than or equal to 3°C above the set temperature.

Heating operation

- When the outdoor/suction air temperature is lower than or equal to -10°C.
- When the outdoor/suction air temperature is higher than or equal to 15°C.
- When the outdoor/suction air temperature is higher than or equal to 3°C above the set temperature.

■ Execute a test run

- When a fan operation is to be performed for an individual indoor unit, turn off the power, short circuit CN72 on the circuit board, and then turn the power back on. (Set the operation mode to “fan” to operate the unit.) When the test run has been performed using this method, be sure to release the short circuit of CN72 after the test run is completed.

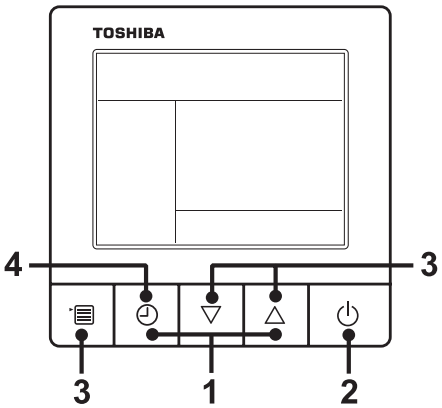
Operate the unit with the remote controller as usual.
For the procedure of the operation, refer to the Owner’s Manual attached to the outdoor unit.
A forced test run can be executed in the following procedure even if the operation stops by thermostat-OFF.
In order to prevent a serial operation, the forced test run is released after 60 minutes have passed and returns to the usual operation.

⚠ CAUTION

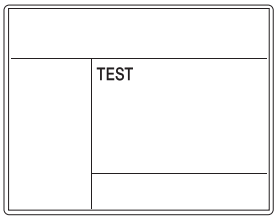
- Do not use the forced test run for cases other than the test run because it applies an excessive load to the devices.

Wired remote controller

Be sure to stop the air conditioner before making settings.
(Change the setup while the air conditioner is not working.)



1 **Push and hold OFF timer button and [△] setting button simultaneously for 10 seconds or more. [TEST] is displayed on the display part and the test run is permitted.**

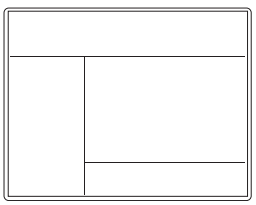


2 **Push ON/OFF button.**

3 **Push menu button to select the operation mode. Select [☼ Cool] or [☀ Heat] with [▽] [△] setting button, and then push menu button (three times) again to determine the operation mode.**

- Do not run the air conditioner in a mode other than [Cool] or [Heat].
- The temperature setting function does not work during test run.
- The check code is displayed as usual.

4 **After the test run, push OFF timer button to stop a test run.**
([TEST] disappears on the display and the air conditioner enters the normal stop mode.)



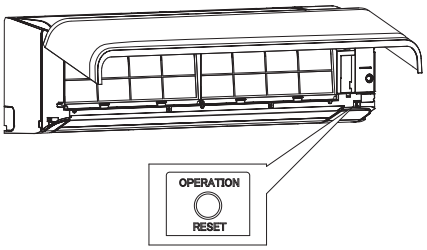
In case of wireless remote controller (Forced test operation is performed in a different way.)

REQUIREMENT

- For the operation procedure, be sure to follow the Owner's Manual.
- Finish the forced cooling operation in a short time because it applies excessive strength to the air conditioner.
- A test operation of forced heating is unavailable. Perform a test operation by heating operation using the switches of the remote controller.
  However heating operation may be not carried out according to the temperature conditions.

- **Check wiring/piping of indoor and outdoor units**

1. When pushing [RESET] button for 10 seconds or more and detach [RESET] button, "Pi!" sound is heard and the operation changes to a forced cooling operation. After approx. 3 minutes, a cooling operation starts forcedly.
   Check cool air starts blowing. If the operation does not start, check wiring again.
2. To stop a test operation, push [RESET] button once again (Approx. 1 second).
   The louver closes and the operation stops.



OPERATION / RESET button

- **Check transmission of remote controller**

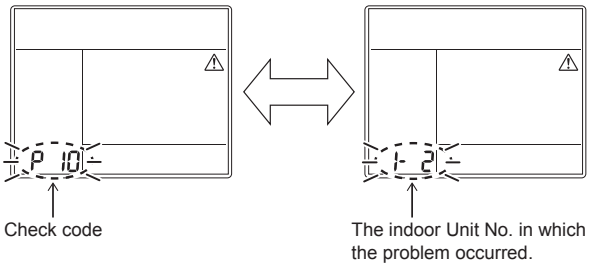
1. Push "START/STOP" button of the remote controller to check an operation can also start by the remote controller.
   - "Cooling" operation by the remote controller may be unavailable according to the temperature conditions.
     Check wiring/piping of the indoor and outdoor units in forced cooling operation.

13 TROUBLESHOOTING

A wired remote controller is necessary for this function. This function cannot be operate with a wireless remote controller.

■ Confirmation and check

If a problem occurs with the air conditioner, the OFF timer indicator alternately shows the check code and the indoor Unit No. in which the problem occurred.

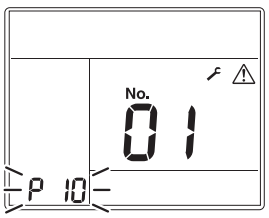


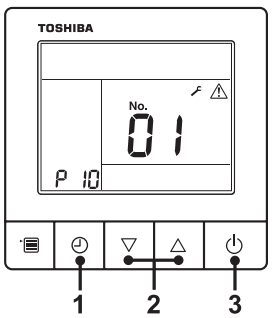
■ Troubleshooting history and confirmation

You can check the troubleshooting history with the following procedure if a problem occurs with the air conditioner.
(The troubleshooting history records up to 4 incidents.)
You can check it during operation or when operation is stopped.

- If you check the troubleshooting history during OFF timer operation, the OFF timer will be canceled.

Procedure	Description of operation
1	Push the OFF timer button for over 10 seconds and the indicators appear as an image indicating the troubleshooting history mode has been entered. If [🔧 Service check] is displayed, the mode enters in the troubleshooting history mode. • [01: Order of troubleshooting history] appears in the temperature indicator. • The OFF timer indicator alternately shows the [check code] and the [indoor Unit No.] in which the problem occurred.
2	Each time the setting button is pushed, the recorded troubleshooting history is displayed in sequence. The troubleshooting history appears in order from [01] (newest) to [04] (oldest). **⚠ CAUTION** In the troubleshooting history mode, DO NOT push the Menu button for over 10 seconds, doing so deletes the entire troubleshooting history of the indoor unit.
3	After you have finished checking, push the ON/OFF button to return to the regular mode. • If the air conditioner is operating, it remains operated even after the ON/OFF button has been pushed. To stop its operation, push the ON/OFF button again.





■ Check method

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

■ Check code list

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

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

○ : Lighting, ¤ : Flashing, ● : Goes off
ALT: Flashing is alternately when there are two flashing LED.
SIM: Simultaneous flashing when there are two flashing LED.
Inverter: Compressor / Fan inverter P.C. Board
I/F: Interface P.C. Board

Check code			Wireless remote controller				Check code name	Judging device
Wired remote controller display	Outdoor unit 7-segment display		Sensor block display of receiving unit					
		Auxiliary code	Operation	Timer	Ready	Flash		
E01	—	—	¤	●	●		Communication trouble between indoor unit and remote controller (Detected at remote controller side)	Remote controller
E02	—	—	¤	●	●		Remote controller transmission trouble	Remote controller
E03	—	—	¤	●	●		Communication trouble between indoor unit and remote controller (Detected at indoor unit side)	Indoor unit
E04	—	—	●	●	¤		Communication circuit trouble between indoor / outdoor unit (Detected at indoor unit side)	Indoor unit
E06	E06	No. of indoor units in which sensor has been normally received	●	●	¤		Decrease of No. of indoor units	I/F
—	E07	—	●	●	¤		Communication circuit trouble between indoor / outdoor unit (Detected at outdoor unit side)	I/F
E08	E08	Duplicated indoor unit addresses	¤	●	●		Duplicated indoor unit addresses	Indoor unit, I/F
E09	—	—	¤	●	●		Duplicated master remote controllers	Remote controller
E10	—	—	¤	●	●		Communication trouble between indoor unit MCU	Indoor unit
E11	—	—	¤	●	●		Communication trouble between Application control kit and Indoor unit	Indoor unit Application control kit
E12	E12	01: Indoor/Outdoor units communication 02: Outdoor/Outdoor units communication	¤	●	●		Automatic address start trouble	I/F
E15	E15	—	●	●	¤		No indoor unit during automatic addressing	I/F
E16	E16	00: Capacity over 01: No. of connected units	●	●	¤		Capacity over / No. of connected indoor units	I/F
E17	—	—	¤	●	●		Communication trouble between indoor unit and Flow Selector unit	Indoor unit

Check code			Wireless remote controller				Check code name	Judging device
Wired remote controller display	Outdoor unit 7-segment display		Sensor block display of receiving unit					
		Auxiliary code	Operation	Timer	Ready	Flash		
E18	—	—	¤	●	●		Communication trouble between header and follower units Indoor unit	Indoor unit
E19	E19	00: Header is not detected 02: Two or more header units	●	●	¤		Outdoor header units quantity trouble	I/F
E20	E20	01: Outdoor unit of other line connected 02: Indoor unit of other line connected	●	●	¤		Other line connected during automatic address	I/F
E23	E23	—	●	●	¤		Sending trouble in communication between outdoor units Trouble in number of heat storage units (trouble with reception)	I/F
E25	E25	—	●	●	¤		Duplicated follower outdoor addresses	I/F
E26	E26	No. of outdoor units which received signal normally	●	●	¤		Decrease of No. of connected outdoor units	I/F
E28	E28	Detected outdoor unit number	●	●	¤		Follower outdoor unit trouble	I/F
E31	E31	*1 Inverter quantity information	●	●	¤		Inverter communication trouble	I/F
F01	—	—	¤	¤	●	ALT	Indoor unit TCJ sensor trouble	Indoor unit
F02	—	—	¤	¤	●	ALT	Indoor unit TC2 sensor trouble	Indoor unit
F03	—	—	¤	¤	●	ALT	Indoor unit TC1 sensor trouble	Indoor unit
F04	F04	—	¤	¤	○	ALT	TD1 sensor trouble	I/F
F05	F05	—	¤	¤	○	ALT	TD2 sensor trouble	I/F
F06	F06	01: TE1 sensor 02: TE2 sensor 03: TE3 sensor	¤	¤	○	ALT	TE1,TE2 or TE3 sensor trouble	I/F
F07	F07	01: TL1 sensor 02: TL2 sensor 03: TL3 sensor	¤	¤	○	ALT	TL1,TL2 or TL3 sensor trouble	I/F
F08	F08	—	¤	¤	○	ALT	TO sensor trouble	I/F
F09	F09	01: TG1 sensor 02: TG2 sensor 03: TG3 sensor	¤	¤	○	ALT	TG1,TG2 or TG3 sensor trouble	I/F
F10	—	—	¤	¤	●	ALT	Indoor unit TA sensor trouble	Indoor unit
F11	—	—	¤	¤	●	ALT	TF sensor trouble	Indoor unit
F12	F12	01: TS1 sensor 03: TS3 sensor 04: TS3 sensor disconnect	¤	¤	○	ALT	TS1 or TS3 sensor trouble	I/F
F13	F13	1 ∗ : Comp. 1 side 2 ∗ : Comp. 2 side	¤	¤	○	ALT	TH sensor trouble	Inverter
F15	F15	—	¤	¤	○	ALT	Outdoor unit temp. sensor miswiring (TE, TL)	I/F
F16	F16	—	¤	¤	○	ALT	Outdoor unit pressure sensor miswiring (Pd, Ps)	I/F
F22	F22	—	¤	¤	○	ALT	TD3 sensor trouble	I/F
F23	F23	—	¤	¤	○	ALT	Ps sensor trouble	I/F
F24	F24	—	¤	¤	○	ALT	Pd sensor trouble	I/F
F29	—	—	¤	¤	●	SIM	Indoor unit other trouble	Indoor unit
F30	F30	—	¤	¤	○	SIM	Occupancy sensor trouble	Indoor unit
F31	F31	—	¤	¤	○	SIM	Indoor unit EEPROM trouble	I/F
H01	H01	1 ∗ : Comp. 1 side 2 ∗ : Comp. 2 side	●	¤	●		Compressor break down	Inverter
H02	H02	1 ∗ : Comp. 1 side 2 ∗ : Comp. 2 side	●	¤	●		Compressor trouble (lock)	Inverter

Check code			Wireless remote controller				Check code name	Judging device
Wired remote controller display	Outdoor unit 7-segment display		Sensor block display of receiving unit					
		Auxiliary code	Operation	Timer	Ready	Flash		
H03	H03	1 ∗ : Comp. 1 side 2 ∗ : Comp. 2 side	●	¤	●		Current detect circuit system trouble	Inverter
H04	H04	—	●	¤	●		Comp. 1 case thermostat operation	I/F
H05	H05	—	●	¤	●		TD1 sensor miswiring	I/F
H06	H06	—	●	¤	●		Low pressure protective operation	I/F
H07	H07	—	●	¤	●		Oil level down detective protection	I/F
H08	H08	01: TK1 sensor trouble 02: TK2 sensor trouble 03: TK3 sensor trouble 04: TK4 sensor trouble 05: TK5 sensor trouble	●	¤	●		Oil level detective temp. sensor trouble	I/F
H14	H14	—	●	¤	●		Comp. 2 case thermostat operation	I/F
H15	H15	—	●	¤	●		TD2 sensor miswiring	I/F
H16	H16	01: TK1 oil circuit system trouble 02: TK2 oil circuit system trouble 03: TK3 oil circuit system trouble 04: TK4 oil circuit system trouble 05: TK5 oil circuit system trouble	●	¤	●		Oil level detective circuit trouble	I/F
H17	H17	1 ∗ : Compressor 1 side 2 ∗ : Compressor 2 side	●	¤	●		Compressor trouble (Step out)	I/F
H25	H25	—	●	¤	●		TD3 sensor miswiring	I/F
J02	—	—	●	¤	¤	SIM	Communication trouble between control boards in Flow Selector unit	Indoor unit
J03	—	—	●	¤	¤	SIM	Duplicated Flow Selector unit addresses	Indoor unit
J10	J10	Detected indoor unit address	●	¤	¤	SIM	Flow Selector unit overflow trouble	Indoor unit
J11	—	—	●	¤	¤	SIM	Flow Selector unit temperature sensor (TCS) trouble	
J29	—	—	●	¤	¤	SIM	Refrigerant leak detection sensor trouble	Indoor unit
J30	J30	Detected indoor unit address * Not displayed depending on the DN code (I.DN) setting	●	¤	¤	SIM	Refrigerant leak detection	Indoor unit
J31	—	—	●	¤	¤	SIM	Refrigerant leak detection sensor exceeding its life of the product	Indoor unit
L02	L02	Detected indoor unit address	¤	●	¤	SIM	Model mismatch of indoor and outdoor unit Indoor unit incompatible with A2L (R32) refrigerant	I/F
L03	—	—	¤	●	¤	SIM	Indoor unit centre unit duplicated	Indoor unit
L04	L04	—	¤	○	¤	SIM	Outdoor unit line address duplicated	I/F
L05	—	—	¤	●	¤	SIM	Duplicated indoor units with priority (Displayed in indoor unit with priority)	I/F
L06	L06	No. of indoor units with priority	¤	●	¤	SIM	Duplicated indoor units with priority (Displayed in unit other than indoor unit with priority)	I/F
L07	—	—	¤	●	¤	SIM	Group line in individual indoor unit	Indoor unit
L08	L08	—	¤	●	¤	SIM	Indoor unit group/Address unset	Indoor unit, I/F
L09	—	—	¤	●	¤	SIM	Indoor unit capacity unset	Indoor unit
L10	L10	—	¤	○	¤	SIM	Outdoor unit capacity unset	I/F
L11	L11	Detected indoor unit address	¤	○	¤	SIM	Flow Selector unit not connected	I/F
L12	L12	01: Flow Selector unit installation trouble	¤	○	¤	SIM	Flow Selector unit system trouble	I/F

Check code			Wireless remote controller				Check code name	Judging device
Wired remote controller display	Outdoor unit 7-segment display		Sensor block display of receiving unit					
		Auxiliary code	Operation	Timer	Ready	Flash		
L13	L13	Detected indoor unit address	☼	○	☼	SIM	Safety device setting unmatch	I/F
L14	L14	Detected indoor unit address	☼	○	☼	SIM	Safety device nonconformity	I/F
L17	L17	—	☼	○	☼	SIM	Outdoor unit type mismatch trouble	I/F
L18	L18	Detected indoor unit address	☼	○	☼	SIM	Flow Selector unit trouble	I/F
L20	—	—	☼	○	☼	SIM	Duplicated central control addresses	Indoor unit
L22	—	—	☼	○	☼	SIM	There is a DX-kit (heat source capacity command) non-compliant machine in the group (DDC control, TA control and TF control are mixed)	Indoor unit
L24	L24	01: Duplication of Flow Selector unit address 02: Indoor unit operation mode priority setting	☼	○	☼	SIM	Flow Selector unit setting trouble	I/F
L28	L28	—	☼	○	☼	SIM	Too many outdoor units connected	I/F
L29	L29	*1 Inverter quantity information	☼	○	☼	SIM	No. of inverter trouble	I/F
L30	L30	Detected indoor unit address	☼	○	☼	SIM	Indoor unit outside interlock	Indoor unit
—	L31	—	—				Extended I/C trouble	I/F
P01	—	—	●	☼	☼	ALT	Indoor fan motor trouble	Indoor unit
P03	P03	—	☼	●	☼	ALT	Discharge temp. TD1 trouble	I/F
P04	P04	1 ∗ : Comp. 1 side 2 ∗ : Comp. 2 side	☼	●	☼	ALT	High-pressure SW system operation	Inverter
P05	P05	1 ∗ : Comp. 1 side 2 ∗ : Comp. 2 side	☼	●	☼	ALT	Phase missing detection/Power failure detection Inverter DC voltage trouble (comp.)	I/F
P07	P07	1 ∗ : Comp. 1 side 2 ∗ : Comp. 2 side 04: Heat sink	☼	●	☼	ALT	Heatsink overheat trouble Heatsink dew condensation trouble	Inverter, I/F
P10	P10	Detected indoor unit address	●	☼	☼	ALT	Indoor unit overflow trouble	Indoor unit
P11	P11	—	●	☼	☼	ALT	Outdoor heat exchanger freezing trouble	I/F
P12	—	—	●	☼	☼	ALT	Indoor unit fan motor trouble	Indoor unit
P13	P13	—	●	☼	☼	ALT	Outdoor liquid back detection trouble	I/F
P15	P15	01: TS condition 02: TD condition	☼	●	☼	ALT	Gas leak detection	I/F
P16	P16	01: PMV5 02: PMV6 03: SV7	☼	●	☼	ALT	Injection circuit trouble	I/F
P17	P17	—	☼	●	☼	ALT	Discharge temp. TD2 trouble	I/F
P18	P18	—	☼	●	☼	ALT	Discharge temp. TD3 trouble	I/F
P19	P19	0#: 4-way valves 1#: 4-way valve1 2#: 4-way valve2 * Put in outdoor unit No. in [#] mark.	☼	●	☼	ALT	4-way valve inverse trouble	I/F
P20	P20	—	☼	●	☼	ALT	High-pressure protective operation	I/F
P22	P22	1 ∗ : Compressor 1 side 2 ∗ : Compressor 2 side	☼	●	☼	ALT	Outdoor unit fan inverter trouble	Inverter
P26	P26	01 ∗ : Comp. 1 side 02 ∗ : Comp. 2 side	☼	●	☼	ALT	IPM short protection trouble	Inverter
P29	P29	01 ∗ : Comp. 1 side 02 ∗ : Comp. 2 side	☼	●	☼	ALT	Comp. position detective circuit system trouble	Inverter
P31	—	—	☼	●	☼	ALT	Other indoor unit trouble (Group follower indoor unit trouble)	Indoor unit

• For details about check codes determined with an Interface P.C. Board or an Inverter P.C. Board, refer to the Installation Manual of the outdoor unit.

***1 Inverter quantity information**

(Super Modular Multi System e and u series (SMMS-e, SMMS-u, SHRM-A))

No.	Comp. Inverter		Fan Inverter		Trouble
	1	2	1	2	
01	○				Comp. 1
02		○			Comp. 2
03	○	○			Comp. 1 + Comp. 2
08			○		Fan 1
09	○		○		Comp. 1 + Fan 1
0A		○	○		Comp. 2 + Fan 1
0B	○	○	○		Comp. 1 + Comp. 2 + Fan 1
10				○	Fan 2
11	○			○	Comp. 1 + Fan 2
12		○		○	Comp. 2 + Fan 2
13	○	○		○	Comp. 1 + Comp. 2 + Fan 2
18			○	○	Fan 1 + Fan 2
19	○		○	○	Comp. 1 + Fan 1 + Fan 2
1A		○	○	○	Comp. 2 + Fan 1 + Fan 2
1B	○	○	○	○	All
○ : Inverter trouble					

Trouble detected by central control device

Check code			Wireless remote controller				Check code name	Judging device
Central control device indication	Outdoor unit 7-segment display		Sensor block display of receiving unit					
		Auxiliary code	Operation	Timer	Ready	Flash		
C05	—	—	—				Sending trouble in central control device	Central control device
C06	—	—	—				Receiving trouble in central control device	Central control device
C12	—	—	—				Batch alarm of general-purpose equipment control interface	General-purpose equipment I/F
P30 (L20)	Differs according to trouble contents of unit with occurrence of alarm						Group control follower unit trouble	Central control device
	—	—	(L20 is displayed.)				• Duplication addresses of indoor units in central control device • With the combination of air conditioning system, the indoor unit may detect the check code of L20	
S01	—	—	—				Receiving trouble in central control device	Central control device

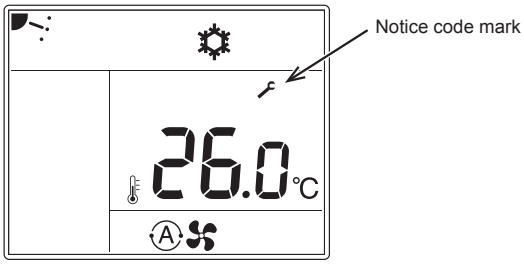
14 SPECIFICATIONS

Model	Sound power level (dBA)		Weight (kg)
	Cooling	Heating	
MMK-UP0271HP-E	*	*	21
MMK-UP0301HP-E	*	*	21
MMK-UP0361HP-E	*	*	21

* Under 70 dBA

15 NOTICE CODE

- Notice code is a function only in TC2U-Link communication.
- When the outdoor or indoor unit detects its conditions requiring caution or maintenance, this function notices you to check your units with the spanner mark (Notice code mark) on the wired remote controller or central controller display.
- Even while the notice code mark is displayed, the air conditioner can operate normally.
- A maximum of 5 notice codes can be issued simultaneously in one system (line).



■ How to check Notice code No.

1 Stop the operation of the air conditioner and push the Menu button and OFF timer button at the same time for 10 seconds or more.

2 The unit number of the indoor unit is displayed at the bottom left of the screen. Change it with the [▽] [△] setting button and push the OFF timer button to confirm.

3 The history number is displayed in the center of the screen, and the Notice code No. is displayed in the lower left.
[▽] [△] You can switch the history with the setting button (a maximum of 5 notice codes).

4 Push the ON / OFF button to return to the operation stop screen.

■ Notice code list

Notice code No.	Item	Content
203	Flow Selector unit battery dead	The battery kit connected to the Flow Selector unit has reached the end of its life.
204	Leak detector life advance display	The leak detector will soon reach the end of its life.

16 APPENDIX

Work instructions

The existing R22 and R410A piping can be reused for inverter R32 product installations.

⚠ WARNING

Confirming the existence of scratches or dents on the existing pipes and confirming the reliability of the pipe strength are conventionally referred to the local site. If the specified conditions can be cleared, it is possible to update existing R22 and R410A pipes to those for R32 models.

Basic conditions needed to reuse existing pipes

Check and observe the presence of three conditions in the refrigerant piping works.

1. **Dry** (There is no moisture inside of the pipes.)
2. **Clean** (There is no dust inside of the pipes.)
3. **Tight** (There are no refrigerant leaks.)

Restrictions for use of existing pipes

In the following cases, the existing pipes should not be reused as they are. Clean the existing pipes or exchange them with new pipes.

1. When a scratch or dent is heavy, be sure to use new pipes for the refrigerant piping works.
2. When the existing pipe thickness is thinner than the specified “Pipe diameter and thickness,” be sure to use new pipes for the refrigerant piping works.
   - The operating pressure of refrigerant is high. If there is a scratch or dent on the pipe or a thinner pipe is used, the pressure strength may be inadequate, which may cause the pipe to break in the worst case.

*** Pipe diameter and thickness (mm)**

Pipe outer diameter		Ø6.4	Ø9.5	Ø12.7	Ø15.9
Thickness	R32, R410A	0.8	0.8	0.8	1.0
	R22				

3. When the outdoor unit was left with the pipes disconnected, or the gas leaked from the pipes and the pipes were not repaired and refilled.
   - There is the possibility of rain water or air, including moisture, entering the pipe.
4. When refrigerant cannot be recovered using a refrigerant recovery unit.
   - There is the possibility that a large quantity of dirty oil or moisture remains inside the pipes.
5. When a commercially available dryer is attached to the existing pipes.
   - There is the possibility that copper green rust has been generated.
6. When the existing air conditioner is removed after refrigerant has been recovered. Check if the oil is judged to be clearly different from normal oil.
   - The refrigerator oil is copper rust green in color: There is the possibility that moisture has mixed with the oil and rust has been generated inside the pipe.
   - There is discolored oil, a large quantity of residue, or a bad smell.
   - A large quantity of shiny metal dust or other wear residue can be seen in the refrigerant oil.
7. When the air conditioner has a history of the compressor failing and being replaced.
   - When discolored oil, a large quantity of residue, shiny metal dust, or other wear residue or mixture of foreign matter is observed, trouble will occur.
8. When temporary installation and removal of the air conditioner are repeated such as when leased etc.
9. If the type of refrigerator oil of the existing air conditioner is other than the following oil (Mineral oil), Suniso, Freol-S, MS (Synthetic oil), alkyl benzene (HAB, Barrel-freeze), ester series, PVE only of ether series.
   - The winding-insulation of the compressor may deteriorate.

NOTE

The above descriptions are results have been confirmed by our company and represent our views on our air conditioners, but do not guarantee the use of the existing pipes of air conditioners that have adopted R32, R410A in other companies.

Curing of pipes

When removing and opening the indoor or outdoor unit for a long time, cure the pipes as follows:

- Otherwise rust may be generated when moisture or foreign matter due to condensation enters the pipes.
- The rust cannot be removed by cleaning, and new pipes are necessary.

Placement location	Term	Curing manner
Outdoors	1 month or more	Pinching
	Less than 1 month	Pinching or taping
Indoors	Every time	

Are there scratches or dents on the existing pipes?

YES → Existing pipes: Cannot be used.
- Use new pipes.

NO

Is it possible to operate the existing air conditioner?

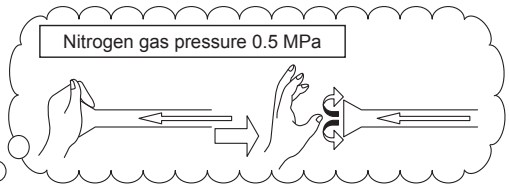
NO

YES

- After the existing air conditioner is operated in cooling mode for approx. 30 minutes or longer,* recover the refrigerant.
- For cleaning the pipes and recovering oil
  - Refrigerant recovery: Pump down method

- Remove the existing air conditioner from the piping and carry out flushing (nitrogen pressure 0.5 MPa) to remove any remains inside of the pipe.

Note: In case of twin pipes, also be sure to flush the branching pipe.



(If there is discharge of remains, it is judged that a large quantity of remains are present.)

Was largely discolored oil or a large quantity of remains discharged? (When the oil deteriorates, the color of the oil changes to a muddy or black color.)

YES → Clean the pipes or use new pipes.

NO

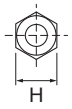
Connect the indoor / outdoor units to the existing pipe.
- Use a flare nut attached to the main unit for the indoor / outdoor units. (Do not use the flare nut of the existing pipe.)
- Re-machine the flare machining size to size for R32, R410A.

- (Airtight test), Vacuum dry, Refrigerant charge, Gas leak check

Test run

Piping necessary to change the flare nut / machining size due to pipe compression

1) Flare nut width: H



(mm)

Copper pipe outer diameter	Ø6.4	Ø9.5	Ø12.7	Ø15.9
For R32, R410A	17	22	26	29
For R22	Same as above		24	27

2) Flare machining size: A

(mm)

Copper pipe outer diameter	Ø6.4	Ø9.5	Ø12.7	Ø15.9
For R32, R410A	9.1	13.2	16.6	19.7
For R22	9.0	13.0	16.2	19.4

Becomes a little larger for R32, R410A

Do not apply refrigerator oil to the flare surface.

Declaration of Conformity

Manufacturer: Toshiba Carrier (Thailand) Co.,Ltd.
144 / 9 Moo 5, Bangkadi Industrial Park, Tivanon Road, Tambol Bangkadi,
Amphur Muang, Pathumthani 12000, Thailand

TCF holder: TOSHIBA CARRIER EUROPE S.A.S
Route de Thil 01120 Montluel FRANCE

Hereby declares that the machinery described below:

Generic Denomination: Air Conditioner

Model / type: MMK-UP0271HP-E,
MMK-UP0301HP-E,
MMK-UP0361HP-E

Commercial name: Super Modular Multi System Air Conditioner
Super Heat Recovery Multi System Air Conditioner
Mini-Super Modular Multi System Air Conditioner (MiNi-SMMS series)

Complies with the provisions of the Machinery Directive (Directive 2006/42/EC) and the regulations transposing into national law

Name: Masaru Takeyama
Position: GM, Quality Assurance Dept.
Date: 2 November, 2021
Place Issued: Thailand

NOTE

This declaration becomes invalid if technical or operational modifications are introduced without the manufacturer's consent.

Declaration of Conformity

Manufacturer: Toshiba Carrier (Thailand) Co.,Ltd.
144 / 9 Moo 5, Bangkadi Industrial Park, Tivanon Road, Tambol Bangkadi,
Amphur Muang, Pathumthani 12000, Thailand

TCF holder: TOSHIBA CARRIER UK LTD.
Porsham Close Belliver Industrial Estate Roborough Plymouth Devon
PL6 7DB United Kingdom

Hereby declares that the machinery described below:

Generic Denomination: Air Conditioner

Model / type: MMK-UP0271HP-E,
MMK-UP0301HP-E,
MMK-UP0361HP-E

Commercial name: Super Modular Multi System Air Conditioner
Super Heat Recovery Multi System Air Conditioner
Mini-Super Modular Multi System Air Conditioner (MiNi-SMMS series)

Complies with the provisions of the Supply of Machinery (Safety) Regulations 2008

Name: Masaru Takeyama
Position: GM, Quality Assurance Dept.
Date: 2 November, 2021
Place Issued: Thailand

NOTE

This declaration becomes invalid if technical or operational modifications are introduced without the manufacturer's consent.

WARNINGS ON REFRIGERANT LEAKAGE

Check of Concentration Limit

The room in which the air conditioner is to be installed requires a design that in the event of refrigerant gas leaking out, its concentration will not exceed a set limit.

Refrigerant R32

The refrigerant R32 which is used in the air conditioner is mildly flammable. In Europe and areas where IEC standards apply, EN/IEC 60335-2-40 is the applicable standard. The refrigerant R32 does not have the toxicity of ammonia, and is not restricted by laws to be imposed which protect the ozone layer.
If this appliance is connected with the outdoor unit containing R32 refrigerant, refer to the Installation and Owner's Manual attached to the outdoor unit.

Refrigerant R410A

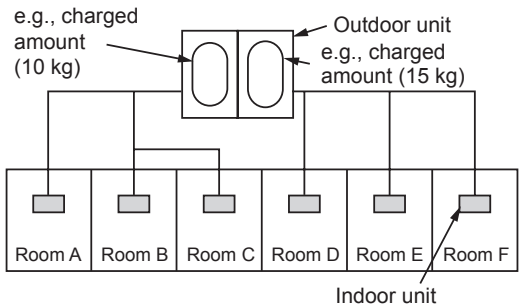
The refrigerant R410A which is used in the air conditioner is safe, without the toxicity or combustibility of ammonia, and is not restricted by laws to be imposed which protect the ozone layer. However, since it contains more than air, it poses the risk of suffocation if its concentration should rise excessively. Suffocation from leakage of R410A is almost non-existent. With the recent increase in the number of high concentration buildings, however, the installation of multi air conditioner systems is on the increase because of the need for effective use of space, individual control, energy conservation by curtailing heat and carrying power etc.
Most importantly, the multi air conditioner system is able to hold a large amount of refrigerant compared with conventional individual air conditioners. If a single unit of the multi conditioner system is to be installed in a small room, select a suitable model and installation procedure so that if the refrigerant accidentally leaks out, its concentration does not reach the limit (and in the event of an emergency, measures can be made before injury can occur).
In a room where the concentration may exceed the limit imposed by the local regulation, create an opening with adjacent rooms, or install mechanical ventilation or isolation, combined with a gas leak detection device, which complies with the local regulatory requirements.
The concentration calculation method is as given below.
Please note the concentration limit between R32 and R410A refrigerant differs.

$$\frac{\text{Total amount of refrigerant (kg)}}{\text{Min. volume of the indoor unit installed room (m}^3\text{)}} \leq \text{Concentration limit (kg/m}^3\text{)}$$

Refrigerant Concentration Limit shall be in accordance with local regulations.

▼ NOTE 1

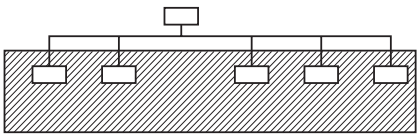
If there are 2 or more refrigerating systems in a single refrigerating device, the amounts of refrigerant should be as charged in each independent device.



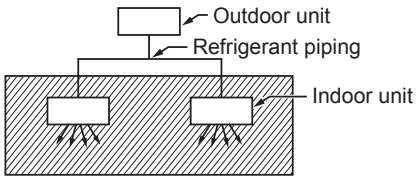
For the amount of charge in this example:
The possible amount of leaked refrigerant gas in rooms A, B and C is 10 kg.
The possible amount of leaked refrigerant gas in rooms D, E and F is 15 kg.

▼ NOTE 2

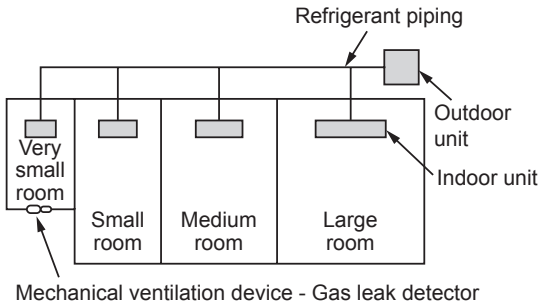
The standards for minimum room volume are as follows.
(1) No partition (shaded portion)



(2) When there is an effective opening with the adjacent room for ventilation of leaking refrigerant gas (opening without a door, or an opening 0.15% or larger than the respective floor spaces at the top or bottom of the door).



(3) If an indoor unit is installed in each partitioned room and the refrigerant piping is interconnected, the smallest room of course becomes the object.
But when a mechanical ventilation is installed interlocked with a gas leakage detector in the smallest room where the density limit is exceeded, the volume of the next smallest room becomes the object.



▼ NOTE 3

System compliance has been completed to IEC60335-2-40 Ed6. If EN378 compliance is required please refer separately to EN378 for guidance.

CONFIRMATION OF INDOOR UNIT SETUP

Prior to delivery to the customer, check the address and setup of the indoor unit, which has been installed in this time and fill the check sheet (Table below). Data of four units can be entered in this check sheet. Copy this sheet according to the No. of the indoor units. If the installed system is a group control system, use this sheet by entering each line system into each Installation Manual attached to the other indoor units.

REQUIREMENT

This check sheet is required for maintenance after installation. Be sure to fill this sheet and then pass this Installation Manual to the customers.

Indoor unit setup check sheet

Indoor unit	Indoor unit	Indoor unit	Indoor unit
Room name	**Room name**	**Room name**	**Room name**
Model	**Model**	**Model**	**Model**

Check indoor unit address. (For check method, refer to Applicable controls in this sheet.)
* In case of a single system, it is unnecessary to enter the indoor address.
(CODE No.: Line [12], Indoor [13], Group [14], Central control [03])

Line	Indoor	Group	Line	Indoor	Group	Line	Indoor	Group	Line	Indoor	Group
Central control address			**Central control address**			**Central control address**			**Central control address**		

Various setup	Various setup	Various setup	Various setup

Have you changed high ceiling setup? If not, fill check mark [x] in [NO CHANGE], and fill check mark [x] in [ITEM] if changed, respectively. (For check method, refer to Applicable controls in this sheet.) * In case of replacement of short plugs on indoor microcomputer P.C. Board, setup is automatically changed.

High ceiling setup (CODE No. [5d])	High ceiling setup (CODE No. [5d])	High ceiling setup (CODE No. [5d])	High ceiling setup (CODE No. [5d])
☐ NO CHANGE	☐ NO CHANGE	☐ NO CHANGE	☐ NO CHANGE
☐ STANDARD [0000]	☐ STANDARD [0000]	☐ STANDARD [0000]	☐ STANDARD [0000]
☐ HIGH CEILING 1 [0001]	☐ HIGH CEILING 1 [0001]	☐ HIGH CEILING 1 [0001]	☐ HIGH CEILING 1 [0001]
☐ HIGH CEILING 3 [0003]	☐ HIGH CEILING 3 [0003]	☐ HIGH CEILING 3 [0003]	☐ HIGH CEILING 3 [0003]

Have you changed lighting time of filter sign? If not, fill check mark [x] in [NO CHANGE], and fill check mark [x] in [ITEM] if changed, respectively.
(For check method, refer to Applicable controls in this sheet.)

Filter sign lighting time (CODE No. [01])	Filter sign lighting time (CODE No. [01])	Filter sign lighting time (CODE No. [01])	Filter sign lighting time (CODE No. [01])
☐ NO CHANGE	☐ NO CHANGE	☐ NO CHANGE	☐ NO CHANGE
☐ NONE [0000]	☐ NONE [0000]	☐ NONE [0000]	☐ NONE [0000]
☐ 150H [0001]	☐ 150H [0001]	☐ 150H [0001]	☐ 150H [0001]
☐ 2500H [0002]	☐ 2500H [0002]	☐ 2500H [0002]	☐ 2500H [0002]
☐ 5000H [0003]	☐ 5000H [0003]	☐ 5000H [0003]	☐ 5000H [0003]
☐ 10000H [0004]	☐ 10000H [0004]	☐ 10000H [0004]	☐ 10000H [0004]

Have you changed detected temp. shift value? If not, fill check mark [x] in [NO CHANGE], and fill check mark [x] in [ITEM] if changed, respectively. (For check method, refer to Applicable control in this sheet.)

Detected temp. shift value setup (CODE No. [06])	Detected temp. shift value setup (CODE No. [06])	Detected temp. shift value setup (CODE No. [06])	Detected temp. shift value setup (CODE No. [06])
☐ NO CHANGE	☐ NO CHANGE	☐ NO CHANGE	☐ NO CHANGE
☐ NO SHIFT [0000]	☐ NO SHIFT [0000]	☐ NO SHIFT [0000]	☐ NO SHIFT [0000]
☐ +1°C [0001]	☐ +1°C [0001]	☐ +1°C [0001]	☐ +1°C [0001]
☐ +2°C [0002]	☐ +2°C [0002]	☐ +2°C [0002]	☐ +2°C [0002]
☐ +3°C [0003]	☐ +3°C [0003]	☐ +3°C [0003]	☐ +3°C [0003]
☐ +4°C [0004]	☐ +4°C [0004]	☐ +4°C [0004]	☐ +4°C [0004]
☐ +5°C [0005]	☐ +5°C [0005]	☐ +5°C [0005]	☐ +5°C [0005]
☐ +6°C [0006]	☐ +6°C [0006]	☐ +6°C [0006]	☐ +6°C [0006]

Incorporation of parts sold separately	**Incorporation of parts sold separately**	**Incorporation of parts sold separately**	**Incorporation of parts sold separately**

Have you incorporated the following parts sold separately? If incorporated, fill check mark [x] in each [ITEM].
(When incorporating, the setup change is necessary in some cases. For setup change method, refer to Installation Manual attached to each part sold separately.)

Panel ☐ Standard panel	Panel ☐ Standard panel	Panel ☐ Standard panel	Panel ☐ Standard panel
Filter ☐ Super long life filter	Filter ☐ Super long life filter	Filter ☐ Super long life filter	Filter ☐ Super long life filter
☐ Others ( ) ☐ Others ( )	☐ Others ( ) ☐ Others ( )	☐ Others ( ) ☐ Others ( )	☐ Others ( ) ☐ Others ( )

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