

INSTALLATION MANUAL

AIR CONDITIONER

Please read this installation manual completely before installing the product.
Installation work must be performed in accordance with the national wiring standards by authorized personnel only.
Please retain this installation manual for future reference after reading it thoroughly.

Ceiling Cassette – 4Way

Original instruction

ARNU09GTRA2 ARNU12GTRA2 ARNU15GTQA2 ARNU18GTQA2
ARNU24GTPA2 ARNU36GTNA2 ARNU42GTMA2



P/NO : MFL69446303

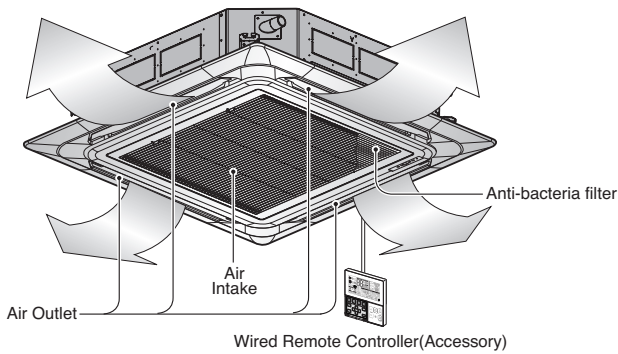
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Installation Parts



Installation Tool

Name	Drain hose	Clamp metal	Washer for hanging bracket	Clamp (Tie Wrap)	Insulation for fitting	(Other)
Quantity	1 EA	2 EA	8 EA	4 EA	1 SET	
Shape					 for gas pipe  for liquid pipe	• Paper pattern for installation • Owner's manual • Installation manual

- Screws for fixing panels are attached to decoration panel.

Safety Precautions

To prevent injury to the user or other people and property damage, the following instructions must be followed.

- Be sure to read before installing the air conditioner.
- Be sure to observe the cautions specified here as they include important items related to safety.
- Incorrect operation due to ignoring instruction will cause harm or damage. The seriousness is classified by the following indications.

 **WARNING** This symbol indicates the possibility of death or serious injury.

 **CAUTION** This symbol indicates the possibility of injury or damage to properties only.

■ Meanings of symbols used in this manual are as shown below.

	Be sure not to do.
	Be sure to follow the instruction.

WARNING

■ Installation

Do not use a defective or underrated circuit breaker. Use this appliance on a dedicated circuit.

- There is risk of fire or electric shock.

For electrical work, contact the dealer, seller, a qualified electrician, or an Authorized Service Center.

- Do not disassemble or repair the product. There is risk of fire or electric shock.

Always ground the product.

- There is risk of fire or electric shock.

Install the panel and the cover of control box securely.

- There is risk of fire or electric shock.

Always install a dedicated circuit and breaker.

- Improper wiring or installation may cause fire or electric shock.

Use the correctly rated breaker or fuse.

- There is risk of fire or electric shock.

Do not modify or extend the power cable.

- There is risk of fire or electric shock.

Do not let the air conditioner run for a long time when the humidity is very high and a door or a window is left open.

- Moisture may condense and wet or damage furniture.

Be cautious when unpacking and installing the product.

- Sharp edges could cause injury. Be especially careful of the case edges and the fins on the condenser and evaporator.

For installation, always contact the dealer or an Authorized Service Center.

- There is risk of fire, electric shock, explosion, or injury.

Do not install the product on a defective installation stand.

- It may cause injury, accident, or damage to the product.

Be sure the installation area does not deteriorate with age.

- If the base collapses, the air conditioner could fall with it, causing property damage, product failure, and personal injury.

Use a vacuum pump or inert (nitrogen) gas when doing leakage test or air purge. Do not compress air or oxygen, and do not use flammable gases. Otherwise, it may cause fire or explosion.

- There is the risk of death, injury, fire or explosion.

Do not turn on the breaker or power under condition that front panel, cabinet, top cover, control box cover are removed or opened.

- Otherwise, it may cause fire, electric shock, explosion or death.

■ Operation

Do not store or use flammable gas or combustibles near the product.

- There is risk of fire or failure of product.

⚠ CAUTION

■ Installation

Always check for gas (refrigerant) leakage after installation or repair of product.

- Low refrigerant levels may cause failure of product.

Install the drain hose to ensure that water is drained away properly.

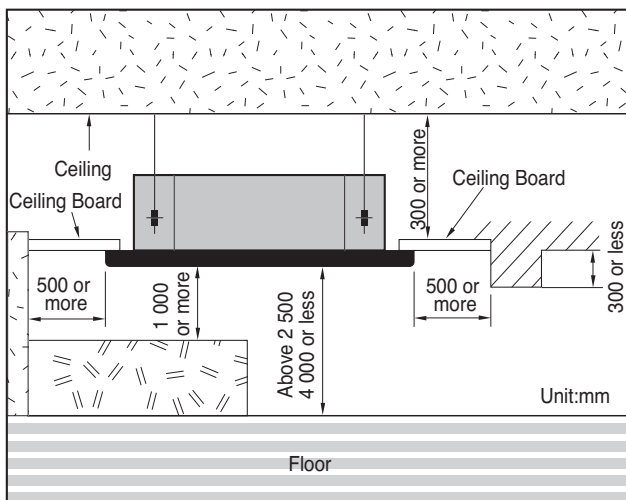
- A bad connection may cause water leakage.

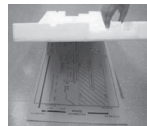
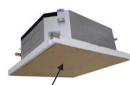
Keep level even when installing the product.

- To avoid vibration or water leakage.

Use two or more people to lift and transport the product.

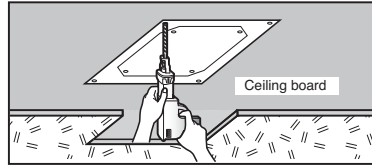
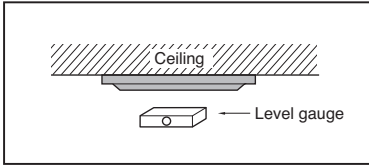
- Avoid personal injury.



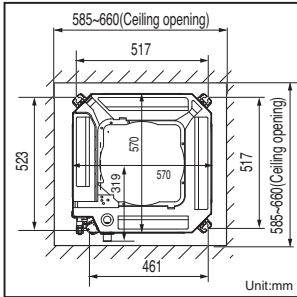


Ceiling dimension and hanging bolt location

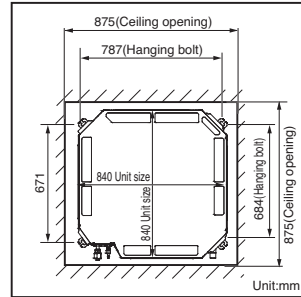
- The dimensions of the paper model for installation are the same as those of the ceiling opening dimensions.



TQ/TR Chassis



TM/TN/TP Chassis

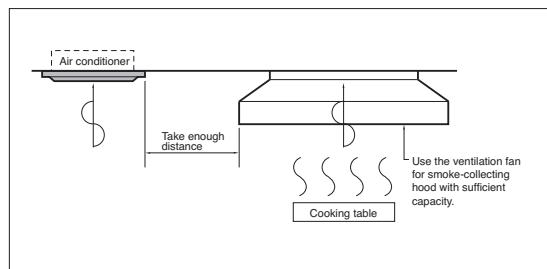


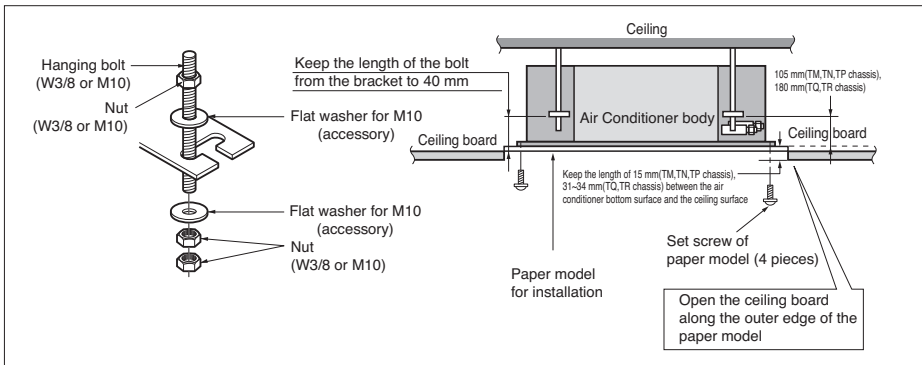
CAUTION :

- This air-conditioner uses a drain pump.
- Install the unit horizontally using a level gauge.
- During the installation, care should be taken not to damage electric wires.
- Select and mark the position for fixing bolts and piping hole.
- Decide the position for fixing bolts slightly tilted to the drain direction after considering the direction of drain hose.
- Drill the hole for anchor bolt on the wall.

NOTICE

- Avoid the following installation location.
 - Such places as restaurants and kitchen where considerable amount of oil steam and flour is generated. These may cause heat exchange efficiency reduction, or water drops, drain pump mal-function. In these cases, take the following actions;
 - Make sure that ventilation fan is enough to cover all noxious gases from this place.
 - Ensure enough distance from the cooking room to install the air conditioner in such a place where it may not suck oily steam.
 - Avoid installing air conditioner in such places where cooking oil or iron powder is generated.
 - Avoid places where inflammable gas is generated.
 - Avoid place where noxious gas is generated.
 - Avoid places near high frequency generators.





• The following parts are local purchasing.

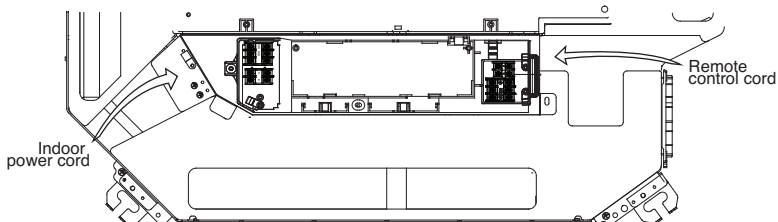
- ① Hanging Bolt - W 3/8 or M10
- ② Nut - W 3/8 or M10
- ③ Spring Washer - M10
- ④ Plate Washer - M10



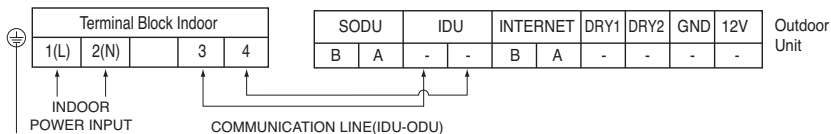
CAUTION : Tighten the nut and bolt to prevent the unit from falling.

Wiring Connection

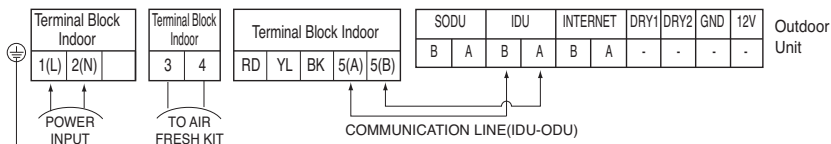
- Connect the wires to the terminals on the control box individually according to the outdoor unit connection.
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.



• TR/TQ/TE Chassis



• TM/TN/TP Chassis



**CAUTION:**

After the confirmation of the above conditions, prepare the wiring as follows:

- 1) **Never fail to have separate power specially for the air conditioner. As for the method of wiring, follow the circuit diagram pasted on the inside of control box cover.**
- 2) **Provide a circuit breaker switch between power source and the unit.**
- 3) **The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could give rise to burn-out of the wires.)**
- 4) **Confirm the Specification of power source**
- 5) **Confirm that electrical capacity is sufficient.**
- 6) **Be sure that the starting voltage is maintained at more than 90 % of the rated voltage marked on the name plate.**
- 7) **Confirm that the cable thickness is as specified in the power sources specification. (Particularly note the relation between cable length and thickness.)**
- 8) **Do not install the leakage breaker in a place which is wet or moist. Water or moist may cause short circuit.**
- 9) **The following troubles would be caused by voltage drop-down.**
 - Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
 - Proper starting power is not given to the compressor.

HAND OVER

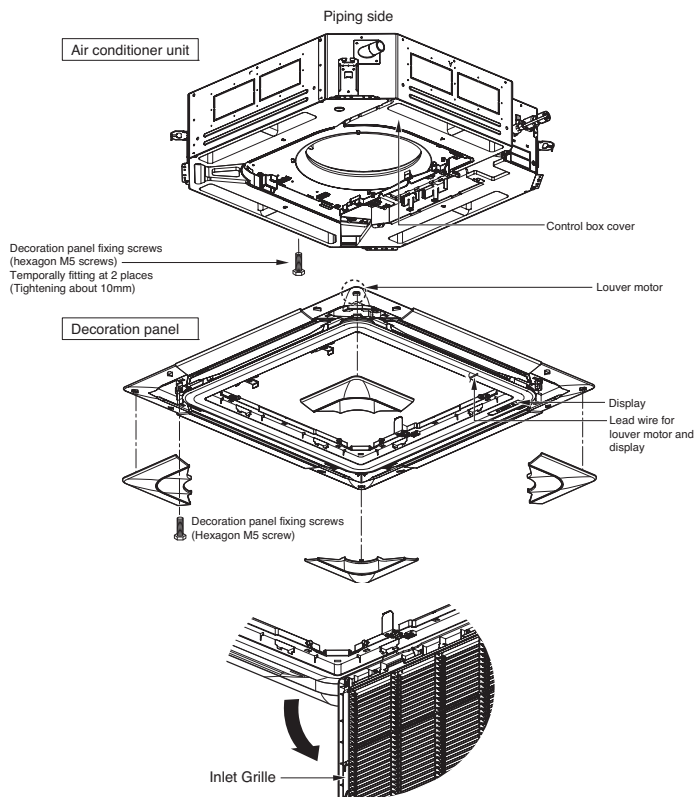
Teach the customer the operation and maintenance procedures, using the operation manual. (air filter cleaning, temperature control, etc.)

Installation of Decoration Panel

The decoration panel has its installation direction.

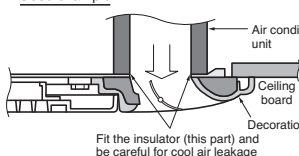
Before installing the decoration panel, always remove the paper template.

1. Temporarily fix two decoration panel fixing screws (hexagon M5 screw) on the unit body. (Tighten by amount 10 mm in length.)
The fixing screws (hexagon M5 screw) are included in the indoor unit box.
2. Remove the air inlet grille from the decoration panel. (Remove the hook for the air inlet grille cord.)
3. Hook the decoration panel key hole () on the screws fixed in step above, and slide the panel so that the screws reach the key hole edge.
4. Retighten completely two temporarily fixed screws and other two screws. (Total 4 screws)
5. Connect the louver motor connector and display connector.
6. After tightening these screws, install the air inlet grille (including the air filter).

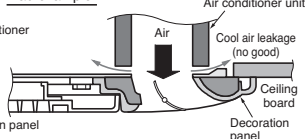


CAUTION : Install certainly the decoration panel.
Cool air leakage causes sweating.
☞ Water drops fall.

Good example



Bad example



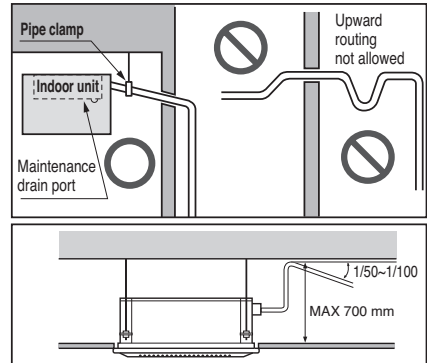
Drain Piping

- Drain piping must have down-slope (1/50 to 1/100): be sure not to provide up-and-down slope to prevent reversal flow.
- During drain piping connection, be careful not to exert extra force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit is 32 mm.

Piping material: Polyvinyl chloride pipe VP-25 and pipe fittings

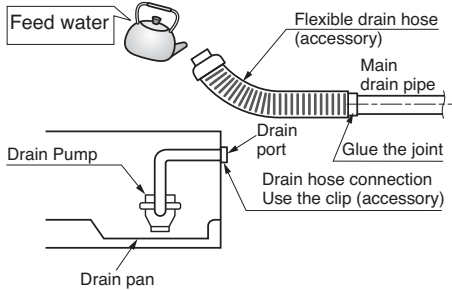
- Be sure to install heat insulation on the drain piping.

Heat insulation material: Polyethylene foam with thickness more than 8 mm.



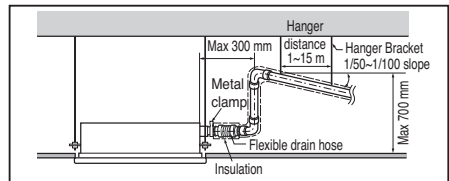
Drain test

The air conditioner uses a drain pump to drain water.
Use the following procedure to test the drain pump operation:



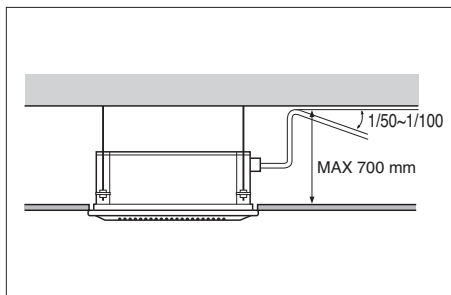
- Connect the main drain pipe to the exterior and leave it provisionally until the test comes to an end.
- Feed water to the flexible drain hose and check the piping for leakage.
- Be sure to check the drain pump for normal operating and noise when electrical wiring is complete.
- When the test is complete, connect the flexible drain hose to the drain port on the indoor unit.

CAUTION : The supplied flexible drain hose should not be curved, neither screwed. The curved or screwed hose may cause a leakage of water.

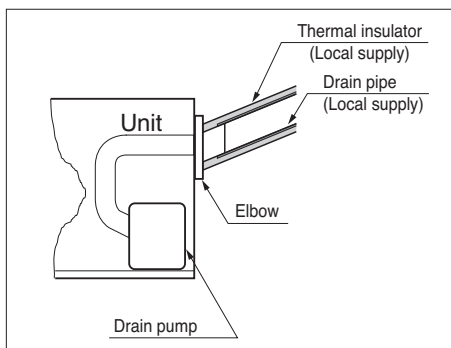


Attention

1. Possible drain-head height is up to 700 mm. So, it must be installed below 700 mm.
2. Keep the drain hose downward up to 1/50~1/100 inclination.
Prevent any upward flow or reverse flow in any part.



3. 5 mm or thicker formed thermal insulator is provided for the drain pipe.



4. Upward routing is not allowed.
5. Be sure to check the drain pump for normal operation and abnormal noise when electrical wiring is complete.

DIP Switch Setting

	Function	Description	Setting Off	Setting On	Default
SW1	Communication	N/A (Default)	-	-	Off
SW2	Cycle	N/A (Default)	-	-	Off
SW3	Group Control	Selection of Master or Slave	Master	Slave	Off
SW4	Dry Contact Mode	Selection of Dry Contact Mode	Wired/Wireless remote controller Selection of Manual or Auto operation Mode	Auto	Off
SW5	Installation	Fan continuous operation	Continuous operation Removal	-	Off
SW6	Heater linkage	N/A	-	-	Off
SW7	Ventilator linkage	Selection of Ventilator linkage	Linkage Removal	Working	Off
	Vane selection (Console)	Selection of up/down side Vane	Up side + Down side Vane	Up side Vane Only	
	Region selection	Selection tropical region	General model	Tropical model	
SW8	Etc.	Spare	-	-	Off

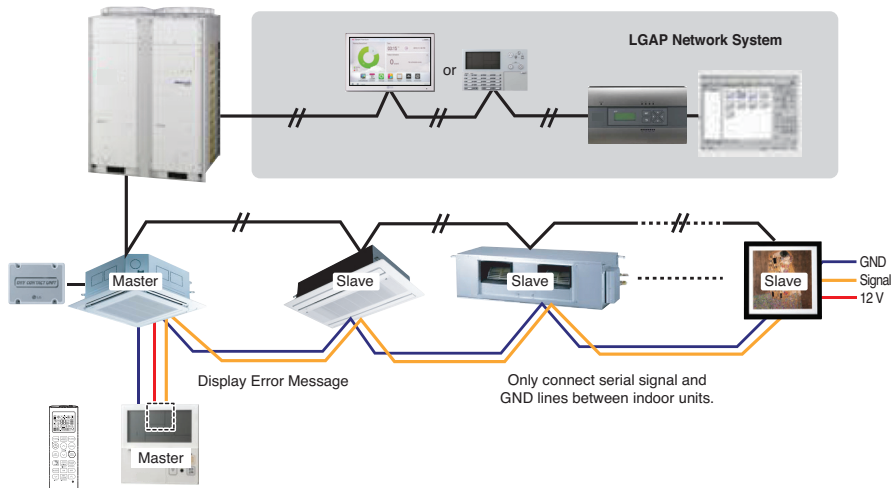
CAUTION

For Multi V Models, DIP switch 1, 2, 6, 8 must be set OFF.

Group Control Setting

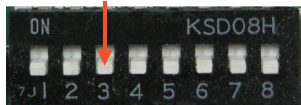
1. Group Control 1

■ Wired remote controller 1 + Standard Indoor Units

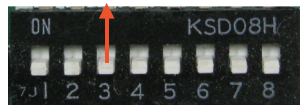


■ Dip Switch in PCB (Cassette and Duct Type indoor units)

① Master Setting - No. 3 Off



② Slave Setting - No. 3 On



Indoor Unit DIP Switch

1. It is possible to 16 indoor units(Max.) by one wired remote controller.

Set only one indoor unit to Master, set the others to Slave.

2. It is possible to connect with every type of indoor units.

3. It is possible to use wireless remote controller at the same time.

4. It is possible to connect with Dry Contact and Central controller at the same time.

- The Master indoor unit is possible to recognize Dry Contact and Central Controller only.
- In case of Central controller and Group controller at the same time, it is possible to connect standard 2series indoor units or later since Feb. 2009.
- In case of Central controller setting, the Central controller can control indoor units after setting only the address of master indoor unit.
- Slave indoor unit will be operated like master indoor unit.
- Slave indoor unit can not be individually controlled by Central controller.
- Some remote controller can't perform with Dry Contact and Central controller at the same time. So contact us further information about it.

5. In case of any error occurs at indoor unit, display on the wired remote controller.

Exception of the error indoor unit, an individual indoor unit control possibility.

6. In case of Group Control, it is possible to use following functions.

- Selection of operation options (operation/stop/mode/set temperature)
- Control of flow rate (High/Middle/Low)
- It is not possible at some functions.

※ Master/Slave setting of indoor units be set possible using a PCB Dip Switch.

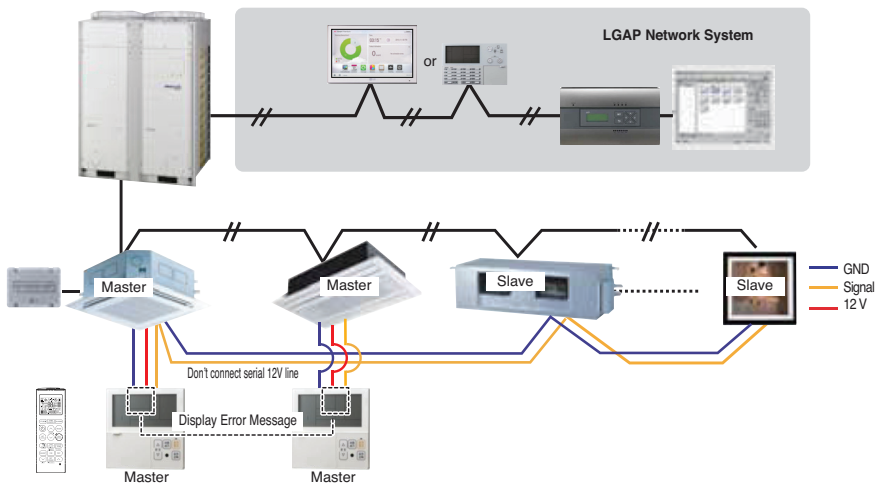
※ It is possible to connect indoor units since Feb. 2009.

In the other cases, please contact LGE.

※ It can be the cause of malfunctions when there is no setting of master and slave.

2. Group Control 2

■ Wired remote controllers + Standard Indoor Units

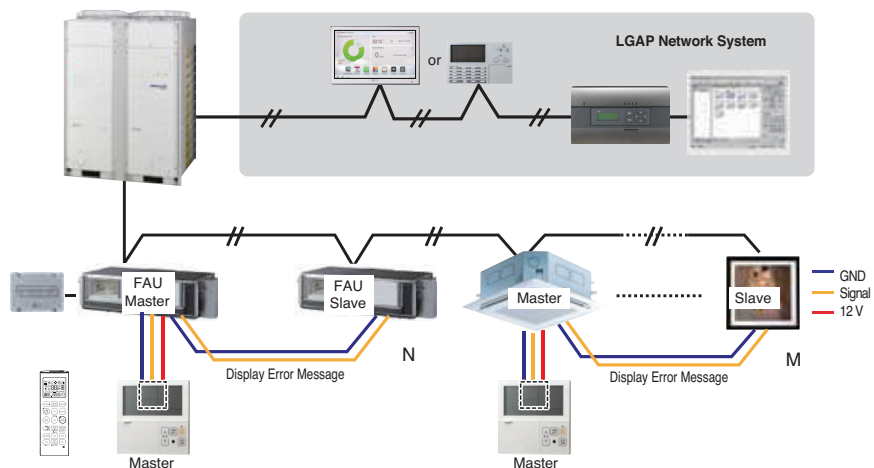


※ It is possible to control N indoor units by wired remote controller M units. ($M + N \leq 17$ Units)

Set only one indoor unit to Master, set the others to Slave.

Set only one wired remote controller to Master, set the others to Slave.

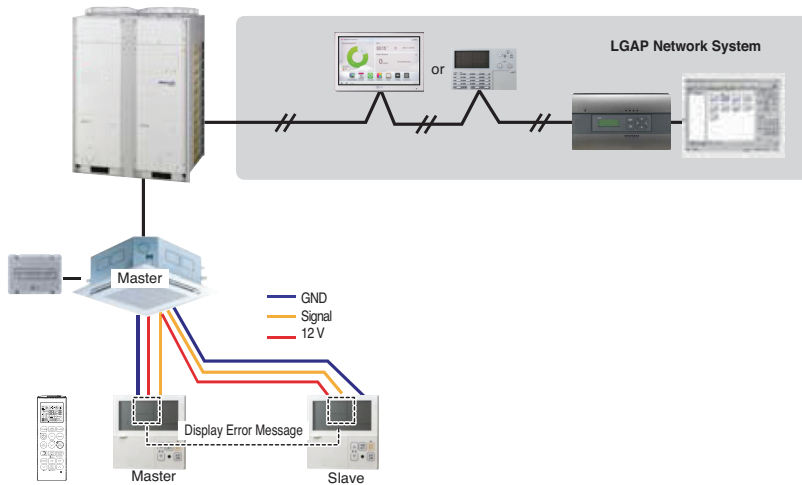
Other than those, it is same with the Group Control 1.





4. 2 Remote Control

■ Wired remote controller 2 + Indoor unit 1

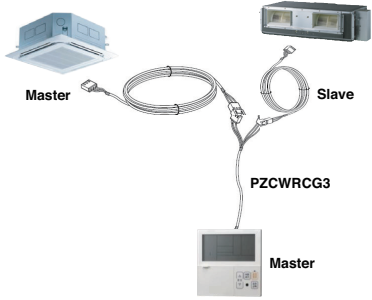
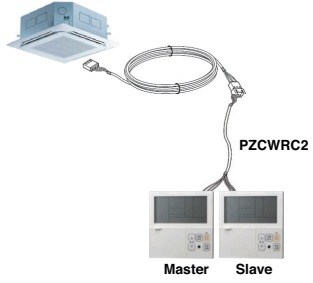


1. It is possible to connect two wired remote controllers with one indoor unit.
2. Every types of indoor unit is possible to connect two remote controller.
3. It is possible to use wireless remote controller at the same time.
4. It is possible to connect with Dry Contact and Central controller at the same time.
5. In case that any error occurs at indoor unit, the error code is displayed on the wired remote controller.
6. There isn't limits of indoor unit function.

※ Maximum 2wired remote controllers can be connected with 1 indoor unit.

5. Accessories for group control setting

It is possible to set group control by using below accessories.

Indoor unit 2 EA +Wired remote controller	Indoor unit 1 EA +Wired remote controller 2 EA
✱ PZCWRCG3 cable used for connection  The diagram illustrates a ceiling-mounted indoor unit labeled 'Master' connected to a handheld remote controller labeled 'Slave' and a floor-standing remote controller labeled 'Master'. A single cable, labeled 'PZCWRCG3', branches out from the indoor unit to connect to both remote controllers.	✱ PZCWRC2 cable used for connection  The diagram illustrates a ceiling-mounted indoor unit connected to two floor-standing remote controllers, one labeled 'Master' and one labeled 'Slave'. A single cable, labeled 'PZCWRC2', branches out from the indoor unit to connect to both remote controllers.

⚠ CAUTION

- Apply totally enclosed noncombustible conduit in case of local building code Requiring plenum cable usage.



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