Floor Standing Unit AM***FNFDEH* AM***FBFDEH*

Air Conditioner installation manual

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imagine the possibilities

Thank you for purchasing this Samsung product.



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Safety Precautions

The following safety precautions must be taken when using your air conditioner.

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WARNING

- Risk of electric shock can cause injury or death. Disconnect all remote electric power supplies before servicing, installing or cleaning.
- Installation must be done by the manufacturer or service agent or a similar qualified person in order to avoid a hazard.

INSTALLING THE UNIT

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- The unit should not be installed by the user. Ask the dealer or authorized company to install the units.
- If the unit is installed improperly, water leakage, electric shock or fire may result.
- Mount with the lowest moving parts at least 2.5 m above the floor or grade level. (If applicable)
- The manufacturer does not assume responsibility for accidents or injury caused by an incorrectly installed air conditioner. If you are unsure about installation, contact an installation specialist.
- When installing the built-in type air conditioner, keep all electrical cables such as the power cable and the connection cord in pipe, ducts, cable channels e.t.c to protect them against liquids, outside impacts and so on. The air conditioner should be used only for the applications for which it has been designed: the indoor unit is not suitable to be installed in areas used for laundry.
- This appliance is not accessible to the general public. This appliance should be installed according to the provided installation instruction.
- When installing the air conditioner in a small room, the measure not to exceed the dangerous density is needed.
 When refrigerant leaks and exceeds the dangerous density, suffocation may occur.
- If any gas or impurities except R-410A refrigerant come into the refrigerant pipe, serious problem may occur and it
 may cause injury.



Safety Precautions(Continued)

Use only rated accessories and install the air conditioner with rated equipments.
 If you dont't use the rated accessories, the air conditioner may drop from its place, water may leak or electric shock or fire may occur.

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- Ventilate your room when refrigerant gas leaks during installation.
 Toxic gas may generate when refrigerant gas contacts with heat.
- Our units must be installed in compliance with the spaces indicated in the installation manual to ensure either accessibility from both sides or ability to perform routine maintenance and repairs. The units' components must be accessible and that can be disassembled in conditions of complete safety either for people or things. For this reason, where it is not observed as indicated into the Installation Manual, the cost necessary to reach and repair the unit (in safety, as required by current regulations in force) with slings, trucks, scaffolding or any other means of elevation won't be considered in-warranty and charged to end user.

POWER SUPPLY LINE OR CIRCUIT BREAKER

- If the power cable of this air conditioner is damaged, it must be replaced by service agent or similarly qualified
 persons in order to avoid a hazard.
- The unit must be plugged into an independent circuit if applicable or connect the power cable to the auxiliary circuit breaker. An all pole disconnection from the power supply must be incorporated in the fixed wiring with a contact opening of >3mm.
- The air conditioner must be installed in accordance with national wiring regulations and safety regulations wherever applicable.
- The electric work must be done by service agent or similarly qualified persons according to national wiring
 regulations and use only rated cable.

- If the capacity of the power cable is insufficient or electric work is not properly completed, electric shock or fire may occur.

- Install the cables with supplied cables firmly. Fix them securely so that external force is not exerted to the terminal board.
 - If the connection or fixing is incomplete, heat generation, electric shock or fire may occur.
- Connect the power cable between the indoor and outdoor unit properly so that the electrical component box cover is not get loosen and attach the cover securely.
 - If the the cover is attached incompletely, heat generation, electric shock or fire of the terminal board may occur.



- Make sure that you earth the cables.
 - Do not connect the earth wire to the gas pipe, water pipe, lighting rod or telephone wire. If earthing is not complete, electric shock or fire may occur.
- Install the circuit breaker.
- If the circuit breaker is not installed, electric shock or fire may occur.
- Make sure that the condensed water dripping from the drain hose runs out properly and safely.
- Install the power cable and communication cable of the indoor and outdoor unit at least 1m away from the electric appliance.
- Install the indoor unit away from lighting apparatus using the ballast.
- If you use the wireless remote control, reception error may occur due to the ballast of the lighting apparatus.
 Do not install the air conditioner in following places.
- Place where there is mineral oil or arsenic acid. Resin parts flame and the accessories may drop or water may leak. The capacity of the heat exchanger may reduce or the air conditioner may be out of order.
 - The place where corrosive gas such as sulfurous acid gas generates from the vent pipe or air outlet.
 - The copper pipe or connection pipe may corrode and refrigerant may leak.
 - The place where there is a machine that generates electromagnetic waves.
 - The air conditioner may not operate normally due to control system.
 - The place where there is a danger of existing combustible gas, carbon fiber or flammable dust. The place where thinner or gasoline is handled.
 - Gas may leak and it may cause fire.

Accessories

Extension pipe type	Liquid pipe	Gas pipe
AM036***DEH	Ф6.35	Ф12.7
AM056***DEH	Ф6.35	Ф12.7
AM071***DEH	Φ9.52	Ф15.88

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The following accessories are supplied with the indoor unit. The type and quantity may differ depending on the specifications.



Selecting the Installation Location

Decide the installation location, with the consideration of the following conditions, under user's approval.

Place where air flow is not disturbed.

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- Place with flat surface and where structure can bear the weight and vibration of the indoor unit. (If the structure is not strong enough, indoor unit may fall and get damaged or cause personal injury.)
- Place where sufficient space can be guaranteed for maintenance and other services.
- Place where condensation can be drained easily.
- ▶ Place that allows refrigerant pipe connection within allowable distance.
- Place where indoor unit will not be exposed to direct sunlight.
- Place that can keep the distance of at least 1m between power/ communication cable and any electronic devices. (Depending on the circumstances, problem may occur even if you secure 1m of distance.)





Model	"A"	"B"	"C"
036	945 mm	730 mm	700 mm
056/071	1225 mm	1010 mm	980 mm

No.	Name	Description			
1	Liquid pipe connection	**036/056**:ø6.35 **071**:ø9.52			
2	Gas pipe connection	**036/056**:ø12.7 **071**:ø15.88			
3	Drain pipe connection	ID ø18			
4	Power wiring	-			
5	Air intake	-			
6	Air outlet	-			

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Indoor Unit installation



Refrigerant pipe work must be done before installing the indoor unit.

- 1 Check the product and the location where it will be installed.
- 2 Check the required installation conditions.

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3 Drill a hole on a floor or a wall and insert bolt anchors as shown in the figure.
 Use a Φ9.52 or M10 bolts for installation.
 At least 2 anchor bolts must be used for fixing the indoor unit.



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- All the part must be purchased separately. Service space must be secured.
- **4** Select a location with no obstacles in surrounding area while allowing easy pipe and electrical installation, and also consider a place where it may not fall or get shaken by vibration or any other external force.
- 5 Drill a hole for the drain on the bottom or rear side of the indoor unit with a diameter between 60~65mm.
- 6 Make sure that product is in level.Check the horizontality by using a level or a vinyl tube with water etc.

If the indoor unit is not installed in level, drain water may get in to the indoor unit due to incorrect measurement of water level.

7 Fix the indoor unit by connecting it to the anchor bolt.



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Purging the Unit

On delivery, the indoor unit is loaded with inert gas. All this gas must therefore be purged before connecting the assembly piping. To purge the inert gas, proceed as follows.

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Unscrew the pinch pipe at the end of each refrigerant pipe.

<u>Result:</u> All inert gas escapes from the indoor unit.

Not a ready to connect the piping.



* The designs and shape are subject to change according to the model.

Connecting the Refrigerant Pipe

There are two refrigerant pipes of differing diameters:

- A smaller one for the liquid refrigerant
- A larger one for the gas refrigerant
- The inside of copper pipe must be clean & has no dust.

The connection procedure for the refrigerant pipes varies according to the exit position of the pipes from the indoor unit, as seen when facing the indoor in the "A" side.

- Liquid refrigerant port
- Gas refrigerant port
- Drain hose port

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1 Remove the pinch pipe on the pipes and connect the assembly pipes to each pipe, tightening the nuts, first manually and then with a torque wrench, a spanner applying the following torque.

Outer Diameter	Torque				
(mm)	kgf•cm	N∙m			
6.35	140~180	14~18			
9.52	350~430	34~42			
12.7	500~620	49~61			
15.88	690~830	68~82			

Not Must apply refrigerant oil on the flaring area to prevent a leak.

2 Be sure that there must be no crack or kink on the bended area.



The designs and shape are subject to change according to the model.





Cutting/Flaring the Pipes

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1 Make sure that you prepared the required tools. (pipe cutter, reamer, flaring tool and pipe holder)

If you want to shorten the pipe, cut it using a pipe cutter ensuring that 2 the cut edge remains at 90° with the side of the pipe. There are some examples of correctly and incorrectly cut edges below.



To prevent a gas leak, remove all burrs at the cut edge of the pipe using 3 a reamer.



Outen d'annatan	Depth [A(mm)]							
Outer diameter [D(mm)]	Flare tool for	Conventional flare tool						
[2(1111)]	R-410A clutch type	Clutch type	Wing nut type					
6.35	0~0.5	1.0~1.5	1.5~2.0					
9.52	0~0.5	1.0~1.5	1.5~2.0					
12.70	0~0.5	1.0~1.5	1.5~2.0					
15.88	0~0.5	1.0~1.5	1.5~2.0					

Check if you flared the pipe correctly. There are some examples of 5 incorrectly flared pipes below

Inclined Damaged Surface Cracked Uneven Thickness Correct

Align the pipes and tighten the flare nuts first manually and then with a 6 torque wrench, applying the following torque.

Outer diameter	Connectio	on Torque	Flare dimension	Flare shape
(D mm)	kgf•cm	N∙m	(A mm)	(mm)
6.35	140~180	14~18	8.70~9.10	\sim
9.52	300~430	34~42	12.80~13.20	(J
12.70	500~620	49~61	16.20~16.60	
15.88	690~830	68~82	19.30~19.70	×

 \triangle In case of needing brazing, you must work with Nitrogen gas blowing.

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Performing Leak Test & Insulation

Leak test

LEAK TEST WITH NITROGEN (before opening valves)

In order to detect basic refrigerant leaks, before recreating the vacuum and recirculating the R-410A, it's responsible of installer to pressurize the whole system with nitrogen (using a pressure regulator) at a pressure above 4.1MPa (gauge).

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LEAK TEST WITH R-410A (after opening valves)

Before opening valves, discharge all the nitrogen into the system and create vacuum. After opening valves check leaks using a leak detector for refrigerant R-410A.



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



Insulation

Once you have checked that there are no leaks in the system, you can insulate the piping and hose.

- 1 To avoid condensation problems, place **T13.0 or thicker Acrylonitrile Butadien Rubber** separately around each refrigerant pipe.
 - Note Always make the seam of pipes face upwards.
- **2** Wind insulating tape around the pipes and drain hose avoiding to compress the insulation too much.
- **3** Finish wrapping insulating tape around the rest of the pipes leading to the outdoor unit.
- **4** The pipes and electrical cables connecting the indoor unit with the outdoor unit must be fixed to the wall with suitable ducts.

All refrigerant connection must be accessible, in order to permit either unit maintenance or removing it completely.







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- **5** Select the insulation of the refrigerant pipe.
 - Insulate the gas side and liquid side pipe referring to the thickness according to the pipe size.
 - Indoor temperature of 30°C and humidity of 85% is the standard condition. If install in a high humidity condition, use one grade thicker insulator by referring to the table below.

If installing in an unfavorable conditions, use thicker one.

 \bullet Insulation's heat-resistance temperature should be more than 120 $^\circ\!\!\mathbb{C}$.

		Insulation Type	(Heating/Cooling)	
Pipe	Pipe size Standard High humidity [30°C, 85%] [30°C, over85%]		Remarks	
		EPD		
Liquid	ø6.35~ø9.52	9t	9t	
pipe	ø12.70~ø50.80	13t	13t	
	ø6.35	13t	19t	Internal temperature
Gas	ø9.52~ø25.40	19t	25t	is higher than 120°C
Pipe	ø28.58~ø44.45	190	32t	
	ø50.80	25t	38t	

- When installing insulation in places and conditions below, use the same insulation that is used for high humidity conditions.
 - <Geological condition>

- High humidity places such as shoreline, hot spring, near lake or river, and ridge (when the part of the building is covered by earth and sand.)

- <Operation purpose condition>
- Restaurant ceiling, sauna, swimming pool etc.
- <Building construction condition>
- The ceiling frequently exposed to moisture and cooling is not covered. e.g. The pipe installed at a corridor of a dormitory and studio or near an exit that opens and closes frequently.
- The place where the pipe is installed is highly humid due to the lack of ventilation system.

Refrigerant pipe before EEV kit and MCU or without EEV kit and MCU

- You can contact the gas side and liquid side pipes but the pipes should not be pressed.
- When contacting the gas side and gas side pipe, use 1 grade thicker insulation.

Refrigerant pipe after EEV kit and MCU

- Install the gas side and liquid side pipes, leave 10mm of space.
- When contacting the gas side and liquid side pipe, use 1 grade thicker insulation.

- Install the insulation not to get wider and use the adhesives on the connection part of it to prevent moisture from entering.
- Wind the refrigerant pipe with insulation tape if it is exposed to outside sunlight.
- Install the refrigerant pipe respecting that the insulation does not get thinner on the bent part or hanger of pipe.
- Add the additional insulation if the insulation plate gets thinner.





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Gas pipe

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Drain pipe and Drain hose Installation

- 1 Install a drain pipe according to following instruction.
- 2 When you complete the drain hose installation, pour water to make sure water is drained properly.

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- Make sure to keep the drain hose from getting tangled or loosed (on the connection part).
- If it is necessary, connect a extension hose (drain hose) to drain hose for indoor unit and insulate the external surface of the extension hose if it is connected in indoor.
- If you installed a drain pipe underneath the refrigerant pipe, make sure to fix the drain hose firmly.
- If you install the drain hose by drilling a hole on a wall, make sure that slope is downward.
- **3** When passing the drain hose through the hole drilled in the wall, make sure to avoid following cases.



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- Since the draining is of natural drain type, install the drain hose in downward direction.
- If you do not tie the drain hose with a cable tie, leakage may occur.
- Drain pipe may get clogged if there is any foreign substances within the drain pan, so you must remove any foreign substances after completing the installation.
- Do not use the drain hose (extension hoses) that is connected by number of hoses together.
 - Water may leak from the connection part, therefore install the drain hose in one piece. However, if the length is too short and you cannot avoid connecting number of drain hoses together, make sure to use silicone sealant or other material for water-proofing measures. (Do not use insulating tape.)







drain hose and the ground is too close End of the drain hose is in a sewage ۲

Water leakage test

- 1 Pour water to the hole for the drain test or drain pan of the indoor unit as shown in the figure. (About 1ℓ)
- 2 Make sure that draining is done properly by checking end of the drain pipe.
- **3** If water leakage occurs, check the horizontality of the indoor unit, connection part of the drain hose/drain pipe and take measure to stop the leakage.

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- After connecting the drain pipe to the indoor unit, you must perform leakage test. If the drain test has not done properly, water may get into the indoor and cause property damage.
- Empty the condensation water in the drain pan before any repair/ maintenance service.







Wiring Work(Continued)

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- 1 Before wiring work, you must turn off all power source.
- 2 Indoor unit power should be supplied through the breaker (ELCB or MCCB+ELB) separated by the outdoor power. ELCB: Earth Leakage Circuit Breaker MCCB: Molded Case Circuit Breaker ELB: Earth Leakage Breaker
- 3 The power cable should be used only copper wires.
- **4** Connect the power cable{1(L), 2(N)} among the units within maximum length and communication cable(F1, F2) each.

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5 Connect F3, F4(for communication) when installing the wired remote control.



- ℁ ELCB : Essential Installation
 - WARNING :

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Power off before connecting any wires;

Indoor PBA will be damaged while V1,V2,F3,F4 short each other.

Connecting power for optional product

When installing optional product, make sure to follow below current capacity.

* Optional product is not supplied by manufacturer.



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Wiring Work (Continued)

Selecting compressed ring terminal



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	В		3	D		d1		Е	F	L	d	2	t
Norminal dimensions for cable (mm²)	Norminal dimensions for screw (mm)	Standard dimension (mm)	Allowance (mm)	Standard dimension (mm)	Allowance	Standard dimension (mm)	Allowance	Min.	Min.	Max.	Standard dimension (mm)	Allowanco	Min.
1.5	4	6.6	±0.2	3.4	+0.3	1.7	±0.2	4.1	6	16	4.3	+0.2	0.7
1.5	4	8	-0.2	5.4	-0.2	1.7	-0.2	7.1	0	10	ч.5	0	0.7
2.5	4	6.6	±0.2	4.2	+0.3	2.3	±0.2	6	6	17.5	4.3	+0.2	0.8
2.5	4	8.5	±0.2	4.2	-0.2	2.5	±0.2	6	6	17.5	4.5	0	0.0
4	4	9.5	±0.2	5.6	+0.3 -0.2	3.4	±0.2	6	5	20	4.3	+0.2 0	0.9

Specification of electronic wire

Power supply	МССВ	ELB or ELCB	Power cable	Earth cable	Communication cable
Max : 242V Min : 198V	ΧA	X A, 30mmA 0.1 s	2.5mm ²	2.5mm ²	0.75~1.5mm ²

Run transmission wiring between the indoor and outdoor units through a conduit to protect against external forces, and feed the conduit through the wall together with refrigerant piping.

• Decide the capacity of ELCB(or MCCB+ELB) by below formula.

The capacity of ELCB(or MCCB+ELB) $X[A] = 1.25 \times 1.1 \times \Sigma Ai$

* X : The capacity of ELCB(or MCCB+ELB).

 $* \Sigma Ai$: Sum of Rating currents of each indoor unit.

* Refer to each installation manual about the rating current of indoor unit.

 Decide the power cable specification and maximum length within 10% power drop among indoor units.

$$\sum_{k=1}^{n} (\underbrace{Coef \times 35.6 \times Lk \times ik}_{1000 \times Ak}) < 10\% \text{ of input}_{voltage[V]}$$

$$\notin \text{ coef: 1.55}$$

$$\notin Lk: \text{ Distance among each indoor unit[m]}_{Ak: \text{ Power cable specification[mm^2]}_{ik: \text{ Running current of each unit[A]}}$$

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Wiring Work (Continued)

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How to connect your extended power cables

1 Prepare a compressor and the following tools.

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

- **2** As shown in the figure, peel off the shields from the rubber or wire of the power cable.
 - Peel off 20 mm of the wire shields of the tube installed already.
 - - After peeling off the tube wire, you must insert a contraction tube.
 For information about the power cable specifications for indoor and outdoor units, refer to the installation manual.
- **3** Insert both sides of core wire of the power cable into the connection sleeve.
 - Method 1 Push the core wire into the sleeve from both sides.
- Method 2 Twist the wire cores together and push it into the sleeve.





Connection sleeve

- **4** Using a compressor, compress the two points and flip it over and compress another two points in the same location.
 - The compression dimension should be 8.0.
 - After compressing it, pull both sides of the wire to make sure it is firmly pressed.











Wiring Work (Continued)

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Wrap it with the insulation tape twice or more and position your contraction tube in the middle of the insulation tape.A total of three or more layers of insulation is required.



- Incomplete wire connections can cause electric shock or a fire.



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Setting an indoor unit address and installation option

■ AM ** *FNFDEH * Series

Set the indoor unit address and installation option with remote controller option. Set the each option separately since you cannot set the ADDRESS setting and indoor unit installation setting option at the same time. You need to set twice when setting indoor unit address and installation option.

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The procedure of option setting



* The display of the remote controller may be different depending on the model.

Step 1. Entering mode to set option

1. Remove batteries from the remote controller.

2. Insert batteries and enter the option setting mode while pressing High Temp button and Low Temp button.



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Check if you have entered the option setting status.

Step 2. The procedure of option setting

After entering the option setting status, select the option as listed below.

Optic	on set	ting	is ava	iilabl	e fror	n SEC	51 to	SEG 2	24				
	 SEG1, SEG7, SEG13, SEG19 are not set as page option. Set the SEG2~SEG6, SEG8~SEG12 as ON status and SEG14~18, SEG20~24 as OFF status. 												
				-									1
SEG1	SEG2	SEG3	SEG4	SEG5	SEG6	SEG7	SEG8	SEG9	SEG10	SEG11	SEG12	On(SEG1~12) Off(SEG13~24)	
0	Х	Х	Х	Х	Х	1	Х	Х	Х	Х	Х		
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18	SEG19	SEG20	SEG21	SEG22	SEG23	SEG24		
2	Х	Х	Х	Х	Х	3	Х	Х	Х	Х	Х		
-						·							

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Setting an indoor unit address and installation option(Continued)

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Option setting	Status
1. Setting SEG2, SEG3 option Press Low Fan button(\vee) to enter SEG2 value. Press High Fan button(\wedge) to enter SEG3 value. Each time you press the button, $\square \to \square \to \dots \square \to \square$ will be selected in rotation.	on on Auto SEG2 SEG3
2. Setting Cool mode Press Mode button to be changed to Cool mode in the ON status.	
3. Setting SEG4, SEG5 option Press Low Fan button(\vee) to enter SEG4 value. Press High Fan button(\wedge) to enter SEG5 value. Each time you press the button, $\square \to \square \to \cdots \square \to \square$ will be selected in rotation.	On On Cool Cool SEG4 SEG5
4. Setting Dry mode Press Mode button to be changed to DRY mode in the ON status.	On Dry
5. Setting SEG6, SEG8 option Press Low Fan button(\vee) to enter SEG6 value. Press High Fan button(\wedge) to enter SEG8 value. Each time you press the button, $\square \to \square \to \cdots \square \to \square$ will be selected in rotation.	On On Dry On SEG6 SEG8
6. Setting Fan mode Press Mode button to be changed to FAN mode in the ON status.	On TT Fan
7. Setting SEG9, SEG10 option Press Low Fan button(\vee) to enter SEG9 value. Press High Fan button(\wedge) to enter SEG10 value. Each time you press the button, $\square \to \square \to \cdots \square \to \square$ will be selected in rotation.	on on Fan SEG9 SEG10
8. Setting Heat mode Press Mode button to be changed to HEAT mode in the ON status.	On Heat
9. Setting SEG11, SEG12 option Press Low Fan button(\vee) to enter SEG11 value. Press High Fan button(\wedge) to enter SEG12 value. Each time you press the button, $\square \to \square \to \cdots \square \to \square$ will be selected in rotation.	On On Heat Heat SEG11 SEG12
10. Setting Auto mode Press Mode button to be changed to AUTO mode in the OFF status.	orr Auto
11. Setting SEG14, SEG15 option Press Low Fan button(\vee) to enter SEG14 value. Press High Fan button(\wedge) to enter SEG15 value. Each time you press the button, $\square \rightarrow \square \rightarrow \dots \square \rightarrow \square$ will be selected in rotation.	Off Auto SEG14 SEG15

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Option setting	Status
12. Setting Cool mode Press Mode button to be change to Cool mode in the OFF status.	Off
13. Setting SEG16, SEG17 option Press Low Fan button(\lor) to enter SEG16 value. Press High Fan button(\land) to enter SEG17 value. Each time you press the button, $\square \to \square \to \cdots \square \to \square$ will be selected in rotation.	off off off Cool Cool SEG16 SEG17
14. Setting Dry mode Press Mode button to be change to Dry mode in the OFF status.	Orf Dry
15. Setting SEG18, SEG20 option Press Low Fan button(\lor) to enter SEG18 value. Press High Fan button(\land) to enter SEG20 value. Each time you press the button, $\square \to \square \to \cdots \square \to \square$ will be selected in rotation.	orf Dry SEG18 SEG20
16. Setting Fan mode Fress Mode button to be change to Fan mode in the OFF status.	orr
17. Setting SEG21, SEG22 option Press Low Fan button(\lor) to enter SEG21 value. Press High Fan button(\land) to enter SEG22 value. Each time you press the button, $\square \to \square \to \cdots \square \to \square$ will be selected in rotation.	orf Image: Constraint of the second
18. Setting Heat mode Press Mode button to be change to HEAT mode in the OFF status.	orr Heat
19. Setting SEG23, SEG24 mode Press Low Fan button(\lor) to enter SEG23 value. Press High Fan button(\land) to enter SEG24 value. Each time you press the button, $\square \to \square \to \cdots \square \to \square$ will be selected in rotation.	orr Image: Constraint of the second

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Step 3. Check the option you have set

After setting option, press Mode button to check whether the option code you input is correct or not.



Step 4. Input option

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Press operation button () with the direction of remote control for set. For the correct option setting, you must input the option twice.

Step 5. Check operation

1. Reset the indoor unit by pressing the RESET button of indoor unit or outdoor unit.

2. Take the batteries out of the remote controller and insert them again and then press the operation button.

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Setting an indoor unit address and installation option(Continued)

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Setting an indoor unit address (MAIN/RMC)

- Check whether power is supplied or not.
 When the indoor unit is not plugged in, there should be additional power supply in the indoor unit.
- 2. The panel(display) should be connected to an indoor unit to receive option.
- **3.** Before installing the indoor unit, assign an address to the indoor unit according to the air conditioning system plan.
- Assign an indoor unit address by wireless remote controller.
 The initial setting status of indoor unit ADDRESS(MAIN/RMC) is "0A0000-100000-200000-300000".

option no.			~~~~~	<i>X-3XXX</i>	1/1							
Option	SEG	1	SEC	52	SEG	G3	SE	G4	SEG	35	SEG	i6
Explanation	PAG	E	MODE		Setting Main address		100-digit of indoor unit address		10-digit of indoor unit		The unit digit of an indoor unit	
Remote Controller Display			on Auto		on B Auto		On Cool		On Cool		on Dry	
	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
Indication					0	No Main address						
and Details	0		A	,	1	Main address setting mode	0~9	100-digit	0~9	10-digit	0~9	A unit digit
Option	SEG	7	SEC	<u>58</u>	SEG	<u> </u>	SEG	510	SEG	i11	SEG	12
Explanation	PAG	E			Setting RM	IC address			Group cha	nnel(*16)	Group a	ddress
Remote Controller Display					on B		-		On B	at	On Heat	
	Indication	Details	-		Indication	Details	-		Indication	Details	Indication	Details
Indication					0	No RMC address						
and Details	1				1	RMC address setting mode			RMC1	0~F	RMC2	0~F

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



- When "A"~"F" is entered to SEG5~6, the indoor unit MAIN ADDRESS is not changed.
- ♦ If you set the SEG 3 as 0, the indoor unit will maintain the previous MAIN ADDRESS even if you input the option value of SEG5~6.
- If you set the SEG 9 as 0, the indoor unit will maintain previous RMC ADDRESS even if you input the option value of SEG11~12.
- You cannot set SEG11 and SEG12 as F value at the same time.

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Setting an indoor unit installation option (suitable for the condition of each installation location)

- 1. Check whether power is supplied or not.
 - When the indoor unit is not plugged in, there should be additional power supply in the indoor unit.
- 2. The panel(display) should be connected to an indoor unit to receive option.
- **3.** Set the installation option according to the installation condition of an air conditioner.
 - The default setting of an indoor unit installation option is
 - "020010-100000-200000-300000".
 - Individual control of a remote controller(SEG20) is the function that controls an indoor unit individually when there is more than one indoor unit.
- 4. Set the indoor unit option by wireless remote controller.

02 series installation option



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• 1WAY/2WAY/4WAY MODEL : Drain pump(SEG8) will be set to 'USE + 3minute delay' even if the drain pump is set to 0.

- 1 WAY/2WAY/4WAY,DUCT MODEL : Number of hours using filter(SEG18) will be set to '1000hour' even if the SEG18 is set to except for 2 or 6.
- ◆ When setting the option other than above SEG values, the option will be set as "0".
- SEG5 central control option is basically set as 1 (Use), so you don't need to set the central control option additionally. However, if the central control is not connected but it doesn't indicate an error message, you need to set the central control option as 0 (Disuse) to exclude the indoor unit from the central control.
- The output of hot water heater in SEG9 is generated from the hot coil part of the terminal board in duct models.



* The output of hot coil terminal is AC 220 V / 230 V (The same as Indoor Unit's input Power)

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



Setting an indoor unit address and installation option(Continued)

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02 series installation option(Detailed)

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

Option	SEG	1	SE	G2		SEG3			SEG4		SE	EG5		SEG6
Explanation	PAG	E	MC	DDE	Use of	robot clea	ning		external room te linimizing fan op thermostat is	peration when	Use of cer	ntral control	FAN RPM	compensation
Remote Controller Display			on 2 Auto		On Auto	.8	_		On B Cool	_	On Co		on	Dry
Indication	Indication	Details	Indication	Details	Indication	De	tails	Indication	De Use of External room temperature sensor	tails Minimizing fan operation when thermostat is off	Indication	Details	Indication	Details
and Details	0			2	0	Dis	use	0	Disuse Use	Disuse Disuse	0	Disuse	0	Disuse RPM compensatio
					1	U	se	2	Disuse Use	Use (*1) Use (*1)	1	Use	2	High ceiling k
Option	SEG	7	SE	G8		SEG9			SEG10			G11	9	EG12
Explanation	PAG	E	Use of dra	ain pump	Use of h	ot water h	neater					ep when 1g stops		
Remote Controller Display			On	Dry	on Fan						on 🚦 He	B		
	Indication	Details	Indication	Details	Indication	De	tails	Indication	De	tails	Indication	Details	Indication	Details
			0	Disuse	0	Dis	use				0	Default value		
			1	Use	1	Use	(*2)				1	Noise decreasing setting		
Indication and Details	1		2	When an indoor unit stops, drain pump will	2		-							
				operate for 3min.	3	Use	(*2)							
Option	SEG1	3	SEC	G14		SEG15			SEG16		SE	G17	5	EG18
Explanation	PAG	E	Use of exte	rnal control	Setting the control / E				S-Plasma ior	1	Buzzer	r control		er of hours ng filter
Remote Controller Display			off 8 Auto	3	off	8	_		Off Cool	_	Off Co		off	Dry
	Indication	Details	Indication	Details	Indication	Det Setting the output of external control	External heater On/Off signal	Indication	De	tails	Indication	Details	Indication	Details
Indication and Details			0	Disuse	0	Thermo on	-	0	Dis	use	0	Use buzzer	2	1000 Hour
	2		1	ON/OFF control	1	Operation on	-				1	Disuse buzzer		
	2		2	OFF control	2	-	Use (*3)	1	– – – – – – – – – – – – – – – – – – –	se			6	2000 Hou
			3	Window ON/OFF control	3	-	Use (*3)							200011001



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Option	SEG	19	SEC	520		SEG21		SE	G22		SEG23	SEG24																										
Explanation	PAG	iΕ	Individual or remote c		Heating s conde	etting compensati nsated water in he	during oil r	f stopped unit eturn/defrost node	Motio	-																												
Remote Controller Display			Orf B Dry		orr 📘 📃			off Fan		orr Heat																												
	Indication	Details	Indication	Details	Indication	Deta Heating Setting Compensation	ails Removing Condensated Water in Heating Mode	Indication	Details	Indication	Details																											
		1	0 or 1	channel 1	0	Default (*4)	Disuse		Default	0	Disuse																											
			2	channel 2	1	2°C	Disuse	0	value	1	Turn out in 30min. without motion																											
			3	channel 3	2	5℃	Disuse			2	Turn out in 60min. without motion																											
					3	Default (*4)	Use (*5)			3	Turn out in 120min. without motion																											
Indication and Details	3		3		3		3				4	2°C	Use (*5)			4	Turn out in 180min. without motion																					
									3		3		3		3		3		3		3		3		3		3		3		3							
			4	channel 4	_	500			decreasing in defrost mode	6	Turn out in 60min. without motion or *advanced function																											
					5	5℃	Use (*5)			7	Turn out in 120min. without motion or *advanced function																											
										8	Turn out in 180min. without motion or *advanced function																											

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* Advanced function: Controlling cooling/heating current or power saving with motion detect.

 $^{\scriptscriptstyle{(*1)}}$ Minimizing fan operation when thermostat is off

- Fan operates for 20 seconds at an interval of 5 minutes in heat mode.

(*2) 1: Fan is turned on continually when the hot water heater is turned on,

3: Fan is turned off when the hot water heater is turned on with cooling only indoor unit

Cooling only indoor unit: To use this option, install the Mode Select switch (MCM-C200) on the outdoor unit and fix it as cool mode.

(*3) When the following 2 or 3 is used as external heater On/Off signal, the signal for monitoring external contact control will not be output.

2: Fan is turned on continually when the external heater is turned on,

3: Fan is turned off when the external heater is turned on with cooling only indoor unit

Cooling only indoor unit: To use this option, install the Mode Select switch (MCM-C200) on the outdoor unit and fix it as cool mode.

If Fan is set to off for cooling only indoor unit by setting the SEG9=3 or SEG15=3, you need to use an external sensor or wired remote controller sensor to detect indoor temperature exactly.

(*4) Default setting value

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- 4Way Cassette, Mini 4Way Cassette: 5 °C

- Other indoor units: 2 °C

(*5) This function can be applied to 4 Way Cassette and Mini 4 Way Cassette only. If the air conditioner operates the heating mode immediately after finishing the cooling mode, the condensated water in the drain pan becomes water vapor by the heat of the indoor unit heat exchanger. Since the water vapor might be condensed on the indoor unit, which may fall into a living space, use this function to get rid of the water vapor out of the indoor unit by operating the fan (for maximum 20 minutes) even when the indoor unit is turned off after cooling mode is turned to heating mode .

 Electronic heater should not be installed. Discharge side Suction side Air Flow Duct Indoor unit



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Setting an indoor unit address and installation option(Continued)

■ 05 series installation option

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	5	Use of Auto Change Over for HR only in Auto mode	(When setting SEG3) Standard heating temp. Offset	(When setting SEG3) Standard cooling temp. Offset	(When setting SEG3) Standard for mode change Heating → Cooling
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	(When setting SEG3) Standard for mode change Cooling → Heating	(When setting SEG3) Time required for mode change	Compensation option for Long pipe or height difference between indoor units	-	-
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	-	-	-	-	Control variables when using hot water / external heater
SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
3	-	-	-	-	-

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■ 05 series installation option(Detailed)

Option No.: 05XXXX-1XXXXX-2XXXXX-3XXXXX

Option	SEG	l	SEG	2	SEG	i3	SEG4		SEG	5	SEC	66																
Explanation	PAGI	Ē	MODE		Use of Auto Over for H Auto m	R only in	((wne	en setting SEG3) heating temp. Offset	(When setti Standard temp. C	cooling																		
Remote Controller Display			on S Auto		on E Auto																					3		Dry
	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details																
					0	Follow product option	0	0	0	0	0	1																
							1	0.5	1	0.5	1	1.5																
Indication						Uni	2	1	2	1	2	2																
and Details	0		5			Use Auto	3	1.5	3	1.5	3	2.5																
					1	Change		2	4	2	4	3																
						Over for HR only	5	2.5	5	2.5	5	3.5																
						Tiltoniy	6	3	6	3	6	4																
							7	3.5	7	3.5	7	4.5																
Option	SEG	7	SEG	8	SEG	i9		SEG10	SEG	11	SEG	12																
Explanation	PAGI	E	(When setti Standaı mode ch Cooling →	rd for nange	(When setti Time rec for mode	quired	pipe or	ation option for Long height diffference een indoor units																				
Remote Controller Display			On	Dry	on B		-	on B																				
	Indication	Details	Indication	Details	Indication	Details	Indication	Details																				
			0	1	0	5 min.	0	Use default value																				
			1	1.5	1	7 min.		1) Height difference ^(*1)																				
			2	2	2	9 min.	1	is more than 30m or																				
Indication and Details	1		3	2.5	3	11 min.	I	2) Distance ^(*2) is longer than 110m																				
			4	3	4	13 min.		1) Height difference ^(*1)																				
			5	3.5	5	15 min.		is 15~30m																				
			6	4	6	20 min.	2	or 2) Distance ^(*2)																				
1			7	4.5	7	30 min.		is 50~110m																				



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Option	SEG13	SEG14	SEG15	SEG16	SEG17		SEG18 (*3)		
Explanation						Control variables when using hot water / external heater			
Remote Controller Display									
						Indication	Details		
						Indication	Set temp. for heater On/Off	Delay time for heater On	
						0	At the same time as thermo on	No delay	
						1	At the same time as thermo on	10 minutes	
						2	At the same time as thermo on	20 minutes	
						3	1.5 ℃	No delay	
						4	1.5 ℃	10 minutes	
						5	1.5 ℃	20 minutes	
Indication and Details						6	3.0 ℃	No delay	
Details	2					7	3.0 ℃	10 minutes	
						8	3.0 ℃	20 minutes	
						9	4.5 ℃	No delay	
						Α	4.5 ℃	10 minutes	
						В	4.5 ℃	20 minutes	
						C	6.0 ℃	No delay	
						D	6.0 °C	10 minutes	
						E	6.0 ℃	20 minutes	

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(*) Height difference : The difference of the height between the corresponding indoor unit and the indoor unit installed at the lowest place. For example, When the indoor unit is installed 40m higher than the indoor unit installed at the lowest place, select the option "1".

⁽²⁾Distance : The difference between the pipe length of the indoor unit istalled at farthest place from an outdoor unit and the pipe length of the corresponding indoor unit from an outdoor unit.

For example, when the farthest pipe length is 100m and the corresponding indoor unit is 40m away from an outdoor unit, select the option "2". (100 - 40 = 60m)

(3) Heater operation when the SEG9 of 02 series installation option is set to using hot water heater or when SEG15 is set to using external heater

e.g. 1) Setting 02 series SEG9 ="1"/ Setting 05 series SEG18 = "0": Hot water heater is turned on at the same time as the heating thermostat is on, and turned off when the heating thermostat is off.

e.g. 2) Setting 02 series SEG15 ="2" / Setting 05 series SEG18 ="A":

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Room temp. \leq set temp. + f(heating compensation temp.)

- External heater is turned on when the temperature is maintained as 4.5 $^{\circ}\mathrm{C}$ for 10 minutes.

Room temp. > set temp. + f(heating compensation temp.)

- External heater is turned off when the temperature is maintained as 4.5 °C + 1 °C (1 °C is the Hysteresis for On/Off selection.)



Setting an indoor unit address and installation option(Continued)

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SEG 3, 4, 5, 6, 8, 9 additional information

When the SEG 3 is set as "1" and follow Auto Change Over for HR only operation, it will operate as follows.



Cooling/Heating mode can be changed when Thermo Off status is maintained during the time with SEG9.

Changing a particular option

You can change each digit of set option.

Option	SEG1		SEG	2	SEG	3	SEG	4	SEG	5	SEG	6
Explanation	PAGE		MODE		The option mode you want to change		The tens' digit of an option SEG you will change		The unit digit of an option SEG you will change		The changed value	
Remote Controller Display			On J Auto		on Auto	}	On Cool		On Cool	}	On 📘	Dry
Indication	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
and Details	0		D		Option mode	1~6	Tens' digit of SEG	0~9	Unit digit of SEG	0~9	The changed value	0~F

When changing a digit of an indoor unit address setting option, set the SEG3 as 'A'.
 When changing a digit of indoor unit installation option, set the SEG3 as '2'.

Ex) When setting the 'buzzer control' into disuse status.

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

 If you are using heat pump model, mixed operation mode (two or more indoor units operating in different operation mode simultaneously) is not available when the indoor units are connected to same outdoor unit. If you set the master indoor unit with a remote controller, outdoor unit will operate in the mode which was set in the master indoor unit.



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■ AM ** *FBFDEH * Series

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

2 The address of the indoor unit is assigned by adjusting MAIN(SW01, SW02) and RMC(SW03, SW04) rotary switches.



* The designs and shape are subject to change according to the model.

Setting Main Address

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- The MAIN address is for communication between the indoor unit and the outdoor unit. Therefore, you must set it to operate the air conditioner properly.
- You can set the MAIN address from '00' to '99' by mixing SW01 and SW02. The MAIN address from '00' to '99' should differ from each other.
- Check the indoor unit address on the plan that you are to install and set the address according to the plan.
- Note: You may not need to set main address if you selected Auto Address Setting from the outdoor unit: see details on the outdoor unit installation manual.

লি হিল্লাকৃত্তি When MAIN address is set as "12".



Setting RMC Address

- The SW03 and SW04 RMC switch is the address setting switch for controlling the indoor unit with the centralized controller.
- You must set the SW03, SW04 and K2 switch when using the centralized controller.
- You don't have to set the SW03 and SW04 RMC switch when not using the centralized controller.

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For Example When RMS address is set as "12".





Setting the function switch

■ AM***FBFDEH* Series

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Swite	h No.	Function	ON	OFF
	K1	-	-	-
SW05	K2	Centralized control	Do not use	Use
5005	K3	RPM compensation	-	-
	K4	Drain pump	-	-
	K5	Revised room temperature in heat mode	-	-
SW06	K6	Filter clean indicator	1000 hours	2000 hours
	K7	Hot water coil	-	-
	K8	Electric heater	-	-
	K9	Minimum opening of stopped EEV during heating	Fixed 80 step	0 or 80 step
SW07	K10	Displaying status of wireless remote controller	Do not use	Use
	K11	External control	Do not use	Use
	K12	-	-	-

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Final Checks and User Tips

To complete the installation, perform the following checks and tests to ensure that the air conditioner operates correctly.

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- 1 Check the followings.
 - Strength of the installation site
 - Tightness of pipe connection to detect a gas leak
 - Electric wiring connections
 - Heat-resistant insulation of the pipe
 - Drainage

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- Earth conductor connection
- Correct operation (follow the steps below)

After finishing the installation of the air conditioner, you should explain the following to the user. Refer to appropriate pages in the User's Manual.

Ma	When you complete the installation successfully have
6	How to clean and replace the filters
5	How to set the timers
4	How to adjust the airflow direction
3	How to adjust the temperature and fan speed
2	How to select the modes and functions
1	How to start and stop the air conditioner

Note When you complete the installation successfully, hand over the User's Manual and this Installation Manual to the user for storage in a handy and safe place.



Troubleshooting

Detection of errors

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

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LED Display on the receiver & display unit

LED Display

		LED Display				
Abnormal condition	Error code	\bigcirc	*	(×	
Error on indoor temperature sensor (Short or Open)	E121	×	×	•	×	×
1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open)	E122 E123	•	×	•	×	×
Indoor fan error	E154	×	×	×		×
 Error on outdoor temperature sensor (Short or Open) Error on cond sensor Error on discharge sensor Other outdoor unit sensor error that is not on the above list 	E221 E237 E251	•	×	×	•	×
 When there is no communication between the indoor-outdoor units for 2 minutes Communication error received from the outdoor unit 3 miniute tracking error on outdoor unit Communication error after tracking due to unmatching number of installed units Error due to repeated communication address Communication address not confirmed Other outdoor unit communication error that is not on the above list 	E101 E102 E202 E201 E108 E109	×	×	•	0	×
Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open)	E151 E152 E128 E129 E198	×	×	0	•	0

• On • Flickering \times Off

If you turn off the air conditioner when the LED is flickering, the LED is also turned off.

• If you re-operate the air conditioner, it operates normally at first, then detect an error again.

• When E108 error occurs, change the address and reset the system.

Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.



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LED Display(Continued)

		LED Display					
Abnormal condition	Error code	\bigcirc	*	٤	SS .		
1. COND mid sensor is detached	E241						
2. Refrigerant leakage (2nd detection)	E554						
3. Abnomally high temperature on Cond (2nd detection)	E450						
4. Low pressure s/w (2nd detection)	E451						
 Abnomally high temperature on discharged air on outdoor unit (2nd detection) 	E416						
6. Indoor operation stop due to unconfirmed error on outdoor unit	E559						
7. Error due to reverse phase detection	E425			•	•		
8. Comp stop due to freeze detection (6th detection)	E403	×	×				
9. High pressure sensor is detached	E301						
10. Low pressure sensor is detached	E306						
11. Outdoor unit copression ration error	E428						
12. Outdoor sump down_1 prevetion control	E413						
 Compressor down due to low pressure sensor prevention control_1 	E410						
 Simultaneous opening of cooling/heating MCU SOL valve (1st detection) 	E180						
15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection)	E181						
Other outdoor unit self-diagnosis error that is not on the above list							
Flowating s/w (2nd detection)	E153	×	×	×	•		
EEPROM error	E162	•	•	•	•	•	
EEPROM option error	E163	•	•	•	•		
Error due to incompatible indoor unit	E164	×	×	×	×		

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

E-33

Memo

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SAMSUNG

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"AEEE Yönetmeligine Uygundur" This product is RoHS compliant

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