Contents

Safety precautions

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



• Always disconnect the air conditioner from the power supply before servicing it or accessing its internal components.

• Verify that installation and testing operations are performed by qualified personnel. • Verify that the air conditioner is not installed in an easily accessible area.

General information

- Carefully read the content of this manual before installing the air conditioner and store the manual in a safe place in order to be able to use it as reference after installation.
- ▶ For maximum safety, installers should always carefully read the following warnings.
- Store the operation and installation manual in a safe location and remember to hand it over to the new owner if the air conditioner is sold or transferred.
- This manual explains how to install an indoor unit with a split system with two SAMSUNG units. The use of other types of units with different control systems may damage the units and invalidate the warranty. The manufacturer shall not be responsible for damages arising from the use of non compliant units.
- The manufacturer shall not be responsible for damage originating from unauthorized changes or the improper connection of electric and requirements set forth in the "Operating limits" table, included in the manual, shall immediately invalidate the warranty.
- The air conditioner should be used only for the applications for which it has been designed: the indoor unit is not suitable to be installed in areas used for laundry.
- > Do not use the units if damaged. If problems occur, switch the unit off and disconnect it from the power supply.
- In order to prevent electric shocks, fires or injuries, always stop the unit, disable the protection switch and contact SAMSUNG's technical support if the unit produces smoke, if the power cable is hot or damaged or if the unit is very noisy.
- Always remember to inspect the unit, electric connections, refrigerant tubes and protections regularly. These operations should be performed by qualified personnel only.
- ▶ The unit contains moving parts, which should always be kept out of the reach of children.
- Do not attempt to repair, move, alter or reinstall the unit. If performed by unauthorized personnel, these operations may cause electric shocks or fires.
- Do not place containers with liquids or other objects on the unit.
- All the materials used for the manufacture and packaging of the air conditioner are recyclable.
- ▶ The packing material and exhaust batteries of the remote controller(optional) must be disposed of in accordance with current laws.
- The air conditioner contains a refrigerant that has to be disposed of as special waste. At the end of its life cycle, the air conditioner must be disposed of in authorized centers or returned to the retailer so that it can be disposed of correctly and safely.

Installing the unit

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

- Upon receipt, inspect the product to verify that it has not been damaged during transport. If the product appears damaged, DO NOT INSTALL it and immediately report the damage to the carrier or retailer (if the installer or the authorized technician has collected the material from the retailer.)
- After completing the installation, always carry out a functional test and provide the instructions on how to operate the air conditioner to the user.
- Do not use the air conditioner in environments with hazardous substances or close to equipment that release free flames to avoid the occurrence of fires, explosions or injuries.
- Our units should be installed in compliance with the spaces shown in the installation manual, to ensure accessibility from both sides and allow repairs or maintenance operations to be carried out. The unit's components should be accessible and easy to disassemble without endangering people and objects.

For this reason, when provisions of the installation manual are not complied with, the cost required to access and repair the units (in SAFETY CONDITIONS, as set out in prevailing regulations) with harnesses, ladders, scaffolding or any other elevation system will NOT be considered part of the warranty and will be charged to the end customer.

Power supply line, fuse or circuit breaker

- Always make sure that the power supply is compliant with current safety standards. Always install the air conditioner in compliance with current local safety standards.
- Always verify that a suitable grounding connection is available.
- Verify that the voltage and frequency of the power supply comply with the specifications and that the installed power is sufficient to ensure the operation of any other domestic appliance connected to the same electric lines.
- Always verify that the cut-off and protection switches are suitably dimensioned.
- Verify that the air conditioner is connected to the power supply in accordance with the instructions provided in the wiring diagram included in the manual.
- Always verify that electric connections (cable entry, section of leads, protections...) are compliant with the electric specifications and with the instructions provided in the wiring scheme. Always verify that all connections comply with the standards applicable to the installation of air conditioners.
- Devices disconnected from the power supply should be completely disconnected in the condition of overvoltage category.
- Be sure not to perform power cable modification, extension wiring, and multiple wire connection.
 - It may cause electric shock or fire due to poor connection, poor insulation, or current limit override.
 - When extension wiring is required due to power line damage, refer to "Step 2.4 Optional:Extending the power cable" in the installation manual.



- 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 controller, 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.

Preparation for installation

When deciding on the location of the air conditioner with the owner, the following restrictions must be taken into account.

General

Do NOT install the air conditioner in a location where it will come into contact with the following elements :

- Combustible gases
- Saline air
- Machine oil
- Sulphide gas
- Special environmental conditions

If you must install the unit in such conditions, first consult your dealer.

Avoid installing the air conditioner :

- In areas where it is exposed to direct sunlight. Close to heat sources.
- In damp areas or locations where it could come into contact with water. (for example rooms used for laundry)
- In areas where curtains and furniture could affect the supply and discharge of air.
- Without leaving the required minimum space around the unit. (as shown in the drawing)
- In scarcely ventilated areas.
- On surfaces that are unable to support the weight of the unit without deforming, breaking or causing vibrations during the use of the air conditioner.
- In a position that does not enable the condensate drainage pipe to be correctly installed. (at the end of the
 installation. It is always essential to check the efficiency of the drainage system)

Accessories

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

User manual(1)	Installation manual(1)	Clamp hose(1)	Flexible hose (1)	Insulation drain (1)
\square	\square	$\mathbf{Q}_{\mathbf{\beta}}$		
Thermal insulation sponge A (1)	Thermal insulation sponge B (1)	Thermal insulation sponge C (1)	Cable-tie(8)	Rubber(8)
O	<u> </u>	0	<u> </u>	

Deciding on where to install the indoor unit

Indoor unit

- There must be no obstacles near the air inlet and outlet.
- Install the indoor unit on a ceiling that can support its weight.
- Maintain sufficient clearance around the indoor unit.
- Make sure that the water dripping from the drain hose runs away correctly and safely.
- The indoor unit must be installed in this way, that they are out of public access. (Not touchable by the users)
- After connecting a chamber, insulate the connection part between the indoor unit and the chamber with t10
 or thicker insulation. Otherwise, there can be air leak or dew from the connection part.

Space requirements for installation & service

- Construction Standard for Inspection Hole
- 1) In case, the ceiling is tex tile, Inspection hole dose not need.
- 2) In case, the ceiling is plaster board, Inspection hole depends on Inside height of the ceiing.
- a. Height is more than 0.5m : Only "B" [Inspection for PBA] is applied.
- b. Height is less than 0.5m : Both "A"&"B" are applied.
- c. "A"&"B" are inspection holes .



- You must have20mm or more space between the ceiling and the bottom of indoor unit. Otherwise, the noise from the vibration of indoor unit may bother the user.When the ceiling is under construction, the hole for check-up must be made to take service, clean and repair the unit.
- It is possible to install the unit at an height of between 2.2~2.5m from the ground, if the unit has a duct with a well defined lenght (300mm or more), to avoid fan motor blower contact.
- If you install the cassette or duct type indoor unit on the ceiling with humidity over 80%, you must apply extra 10mm of polyethylene foam or other insulation with similar material on the body of the indoor unit.

Deciding on where to install the indoor unit

Insulation Guide



Thickness: more than 10mm

Indoor Unit		А	В	С	D	Front/Back
AC***JNHPKH AC***KNHPKH	1350 x 850 x 450	1350 x 450	1350 x 450	850 x 450	850 x 450	Insulate the front and back side in proper size at the same time when insulating the suction duct and discharge duct.

• Insulate the end of the pipe and some curved area by using separate insulator.

◆ Insulate the discharge and suction part at the same time when you insulate connection duct.

AC***JNHPKH/AC***KNHPKH

Unit:mm



No.	Name	Description
1	Liquid pipe connection	ø9.52(3/8")
2	Gas pipe connection	AC180JNHPKH / AC200KNHPKH : ø19.05(3/4") ; AC250KNHPKH : ø22.23(7/8")
3	Drain pipe connection	OD25 ID20(without drain pump)
4	Power supply connection	
5	Air discharge flange	
6	Hook	M10

Indoor unit installation

When deciding on the location of the air conditioner with the owner, the following restrictions must be taken into account.

- 1 Place the pattern sheet on the ceiling at the spot where you want to install the indoor unit.
 - I Since the diagram is made of paper, it may shrink or stretch slightly due to temperature or humidity. For this reason, before drilling the holes maintain the correct dimensions between the markings.



Concrete

Suspension bolt(M10)-field supply

Ceiling support

Hole in anchor

hole in plug

Insert

- 2 Insert bolt anchors. Use existing ceiling supports or construct a suitable support as shown in figure.
- 3 Install the suspension bolts depending on the ceiling type.

•Ensure that the ceiling is strong enough to support the weight of the indoor unit. Before hanging the unit, test the strength of each attached suspension bolt.

 If the length of suspension bolt is more than 1.5m, it is required to prevent vibration.

 If this is not possible, create an opening on the false ceiling in order to be able to use it to perform the required operations on the indoor unit.

4 Screw eight nuts to the suspension bolts making space for hanging the indoor unit.



NOTE

•You must install all the suspension rods.



<u>/</u>!

CAUTION

Hang the indoor unit to the suspension bolts between two nuts.

Autom ¹-Piping must be laid and connected inside the ceiling when suspending the unit. If the ceiling is already constructed, lay the piping into position for connection to the unit before placing the unit inside the ceiling.

6 Screw the nuts to suspend the unit.

7 Adjust level of the unit by using measurement plate for all 4 sides.

•For proper drainage of condensate, give a 3mm slant to the left or right side of the unit which will be connected with the drain hose, as shown in the figure. Make a tilt when you wish to install the drain pump, too.

•When installing the indoor unit, make sure it is not tilted toward front or back side.







Purging the unit

From factory the unit is supplied and set with a pre-charge of nitrogen gas. (insert gas) Therefore, all insert gas must be purged before connecting the assembly piping.

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

RESULT : All inert gas escapes from the indoor unit.

NOIL	

 To prevent dirt or foreign objects from getting into the pipes during installation, do NOT remove the pinch pipe completely until you are ready to connect the piping.



• Connect the indoor and outdoor units using pipes with flared connections(not supplied). For the lines, use insulated, unwelded, degreased and deoxidized copper pipe (Cu DHP type to ISO 1337 or UNI EN 12735-1), suitable for operating pressures of at least 4200kPa and for a burst pressure of at least 20700kPa. Copper pipe for hydrosanitary applications is completely unsuitable.

• For sizing and limits (height difference, line length, max. bends, refrigerant charge, etc.) see the outdoor unit installation manual.

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



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

Connecting the refrigerant pipe

There are two refrigerant pipes of different 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
- 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.



- NOTE If the pipes must be shortened relet to page 11.
- 2. Must use insulator which is thick enough to cover the refrigerant tube to protect the condensate water on the outside of pipe falling onto the floor and the efficiency of the unit will be better.
- 3. Cut off any excess foam insulation.
- 4. Be sure that there must be no crack or wave on the bended area.
- 5. It would be necessary to double the insulation thickness(10mm or more) to prevent condensation even on the insulator when if the installed area is warm and humid.
- 6. Do not use joints or extensions for the pipes that connect the indoor and outdoor unit. The only permitted connections are those for which the units are designed.



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

Cutting/Flaring the pipes

- 1. Make sure that you have the required tools available. (pipe cutter, reamer, flaring tool and pipe holder)
- 2. If you wish to shorten the pipes, cut it with a pipe cutter, taking care to ensure that the cut edge remains at a 90° angle with the side of the pipe. Refer to the illustrations below for examples of edges cut correctly and incorrectly.



- 3. To prevent any gas from leaking out, remove all burrs at the cut edge of the pipe, using a reamer.
- 4. Slide a flare nut on to the pipe and modify the flare.

	Outer Diameter (D)	Depth (A)
A	ø6.35 mm	1.3 mm
	ø9.52 mm	1.8 mm
	ø12.70 mm	2.0 mm
	ø15.88 mm	2.2 mm
Pipe Flare	ø19.05 mm	2.2 mm

5. Check that the flaring is correct, referring to the illustrations below for examples of incorrect flaring.



Correct









Uneven Thickness

Outer diameter (D,mm)	Connection torque (N·m)	Flare dimension (L,mm)	Flare shape (mm)
Ø 6.35	14~18	8.7~9.1	
Ø 9.52	34~42	12.8~13.2	κ 0.4~0.8
Ø 12.70	49~61	16.2~16.6	
Ø 15.88	68~82	19.3~19.7	
Ø 19.05	100~120	23.6~24.0	



If the pipes require brazing ensure that OFN (Oxygen Free Nitrogen) is flowing through the system.
 Nitrogen blowing pressure range is 0.02 ~ 0.05MPa.

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 R410A, it's responsable of installer to pressurize the whole system with nitrogen (using a cylinder with pressure reducer) at a pressure above 40 bar (gauge).

LEAK TEST WITH R410A (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 R410A.





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

Insulation

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

To avoid condensation problems, place T13.0 or thicker Acrylonitrile Butadien Rubber separately around each refrigerant 1

hihe.		1
NOTE .	Always make the seam of pipes face upwards.	No g
CAUTION .	The insulation has to be produced in full compliance of European regulation reg. EEC / EU 2037/ 2000 that requires the use of sheaths insulation form without using CFC and HCFC gases for health and the environment.	
2 Wind the in	insulating tape around the pipes and drain hose avoiding to compress sulation too much.	Insulation
3 Finish unit.	wrapping insulating tape around the rest of the pipes leading to the outdoor	
4 The p unit n	ipes and electrical cables connecting the indoor unit with the outdoor nust be fixed to the wall with suitable ducts.	Indoor unit
	All refrigerant connection must be accessible, in order to permit either unit maintenance or removing it completely.	B th
5 Select ♦ Ins acc	t the insulation of the refrigerant pipe. sulate the gas side and liquid side pipe referring to the thickness ording to the pipe size.	CAUTION · Must fit ti body with
◆ Inc Ifi Ifi	noor temperature of 30°C and numidity of 85% is the stan dard condition. nstalling in a high humidity condition, use one grade thicker insulator by referent nstalling in an unfavorable conditions, use thicker one.	rring to the table below.

Insulator's heat-resistance temperature should be more than 120°C.





2

3

4

5

Performing leak test & insulation

		Insulation Type		
Pipe	Pipe size	Standard [30°C, 85%]	High humidity [30°C, over 85%]	Remarks
		EPDI	M, NBR	
Liquid	Ø6.35 ~ Ø9.52	9t	9t	
pipe	Ø12.7 ~ Ø19.05	13t	13t	
	Ø6.35	13t	19t	
	Ø9.52			Internal temperature is
pipe	Ø12.70	19t	25t	nigner than 120 C
	Ø15.88			
	Ø19.05			

• 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.

Drainpipe and drain hose installation

Care must be taken when installing the drain hose for the indoor unit to ensure that any condensate water is correctly drained outside. The drain hose can be installed to the right of the base pan.

- 1 Installing the drain hose should be the shorter, the better.
 - ◆ In order to discharge condensation water, the drain hose should keep tilted.
 - ◆ Fix the drain hose with Cable-Tie, so that it will not separate from the machine.
 - While using draining pump, connect the end with draining pump.
- 2 Insulate and fix the drain hose according to the figure.
 - ◆ Insert the drain hose to bottom of the outfall of water basin.
 - Lock steel ring of the drain hose according to the figure.
 - Wind and wrap steel ring and drain hose fully with thermal insulation sponge; fix both ends of external layer with ribbon for thermal insulation.
 - ◆ After being installed, drain hose must be insulated fully by heat insulating material. (To be provided at site.)



Drainpipe Connection

Without the drain pump

14

- 1. Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 1.0~1.5m.
- 2. Install U-trap at the end of the drainpipe to prevent a nasty smell to reach the indoor unit.
- 3. Do not install the drainpipe to upward position. It may cause water flow back to the unit.



Drainpipe and drain hose installation

With the drain pump

- 1. The drain pipe should be installed within 300mm to 550mm from the flexible hose and then lift down 20mm or more.
- 2. Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 1.0~1.5m.
- 3 Install the air vent in the horizontal drainpipe to prevent water flow back to the indoor unit.

 \mathbf{E}^{\dagger} You may not need to install it if there were proper slope in the horizontal drainpipe.

4 The flexible hose should not be installed upward position, it may cause water flow back to the indoor unit.



Testing the drainage

Prepare a little water about 2 liter.

- 1 Pour water into the base pan in the indoor unit as shown in figure.
- 2 Confirm that the water flows out through the drain hose.



Interface module Installation (Optional)

Accessories (Interface module : MIM-B13D)



Accessories (Interface module : MIM-B14)



- 1. Fix the case at with bolts on the side of the control box in the indoor unit.(See the picture)
- Attach the Interface module PCB to the case in the control box of the indoor unit, then connect the power and the communication cable between the Interface module and the indoor unit;
- If you install a Interface module to an indoor unit, every outdoor unit which is connected to an indoor unit can be controlled simultaneously.
- 4. Each indoor unit connected to the same centralized controller has its own Interface module.

Accessories (SPI module : MSD-EAN1)

Refer to the $\ensuremath{\text{SPI}}$ module(MSD-EAN1) installation manual for the more information.





Connecting the connection cord

- Always remember to connect the refrigerant pipes before performing the electric connections. When disconnecting the system, always disconnect the electric cables before disconnecting the refrigerant pipes. CAUTION
 - Always remember to connect the air conditioner to the grounding system before performing the electric connections.

The indoor unit is powered by the outdoor unit by means of a H07 RN-F connection cable (or a more power model),

- with insulation in synthetic rubber and jacket in polychloroprene(neoprene), in accordance with the requirements of standard EN 60335-2-40.
- Remove the screw on the electrical component box and remove the cover plate. 1.
- 2. Route the connection cord through the side of the indoor unit and connect the cable to terminals; refer to the figure below.
- Route the other end of the cable to the outdoor unit through the ceiling & the hole on the wall. 3.
- 4. Reassemble the electrical component box cover, carefully tightening the screw.

Wiring diagram

3 phase(*180*)

 Λ



3 phase(*200/250*)



power cable (AC 380V)

Connecting the connection cord

Between Indoor and Outdoor Connection cable Specifications(Common in use)

	Communication Cable		
Power Supply	Max/Min(V)	Indoor Power cable	communication cable
220-240V~, 50Hz	±10%	2.5mm ² † ,3wires	0.75~1.25mm ² ,2wires

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

* Screws on terminal block must not be unscrewed with the torque less than 12 kgf•cm.

* Since it has the external power supply, refer to the outdoor unit installation manual for MAIN POWER.

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When installing the indoor unit in a computer room, use the double shielded(Tape aluminum / polyester braid + copper) cable of FROHH2R type.

Terminal Block SPEC (Indoor)

AC POWER : M4 SCREW

I









Adjusting air flow

Automatic Air-Volume (Only for AC***KNHPKH)

When DPM is installed, Automatic Air-Volume function cannot be performed simultaneously for all indoor units. Automatic Air-Volume function must be performed for each indoor unit with the wired remote control attached. With its BLDC motor, you can use smart adjust the indoor unit fan speed depending on the installation condition. If the external static pressure is high so that the duct becomes longer or if the external static pressure is low so that the duct becomes shorter, Using the Automatic Air-Volume function, the volume of exhaust air has been adjusted to the rated volume flow rate automatically.

Performing the Automatic Air-Volume function.

- Check the air conditioning unit stop.

Press the Power button to stop the air conditioner

- Go to Service setting mode with remote controller.

Performing the Automatic Air-Volume function.

- Check the air conditioning unit stop.

Press the Power button to stop the air conditioner

- Go to Service setting mode with remote controller.

1).Press the same time for more than 3 seconds and then a Main menu will be displayed.

2).Press the A/ Sutton to select and then press

button to enter a Sub-menu setting screen.

3).Press the \bigcirc / \bigcirc button to select \Box and then press) button to enter a automatic air-volume setting screen.

4).Press the A/ button to select 1 to enable automatic air-volume operation.

5). Select mode No. 8.2 , and set to "1".

6). Press the 🗐 button, then the air conditioning unit will start the fan operation for Automatic Air-Volume adjustment.

 $\ensuremath{\#}$ Do not adjust the dampers during fan operation for Automatic Air-Volume adjustment.

7). Press c button to escape setting mode.

9). When the air conditioning unit has stopped, check the Mode No. 8.1 is "1" for completion of Automatic Air-Volume.

If the Mode No. 8.1 is "0", Automatic Air-Volume adjustment is fail. Then adjust the fan speed by referring the E. S. P(External Static Pressure) setting table.

Main menu	Sub menu	Functions	SEG used	Default	Range
	1	Automatic Air-Volume State Return	1	0	0 - OFF (Fail or Disable) 1 - Completion. 2 - Running Automatic Air-Volume.
8	2	Automatic Air-Volume Operation	1	0	0 - Disable 1 - Enable
	3	Automatic Air-Volume Voltage Setting	1	-	-



Adjusting air flow

NOTE

• If the coil is not dry, run the unit for 2 hours with fan only to dry the coil.

• The air filter is properly attached into the air passage on the air suction side of the air conditioning unit.

- Adjust the dampers so that each air inlet and outlet exhusts the designed airflow rate.
- If using booster fans(an outdoor air processing unit or ERV via duct), do not use Automatic Air-Volume function.
- If the duct configurations have been changed, automatic air-volume function perform again.

• The product can be used within the range of rated voltage 220 V/230 V/240 V \pm 5 V. If the product needs to be installed in the condition that is out of the rated voltage stated above, additional setting with installation option is required.

E. S. P(External Static Pressure) setting for phase control motor

With its phase control motor, you can adjust the indoor unit fan speed depending on the installation condition. If the external static pressure is high so that the duct becomes longer or if the external static pressure is low so that the duct becomes shorter, adjust the fan speed by referring the following table.

Model	AC180JNHPKH	AC200KNHPKH	AC250KNHPKH			
Static Pressure(mmAq)	Option code for indoor unit					
5≤ESP<7.5	01107C-1C50B0-	011074-1C50C0-	011074-1C50F0-			
	27B414-370060	27C8E6-372000	270014-373800			
7.5≤ESP<10	7.5≤ESP<10 01107C-1C50E3- 27B414-370060		011074-1C50F3- 270014-373800			
10≤ESP<12.5	01107C-1C50F5-	011074-1C50F5-	011074-1C5435-			
	27B414-370060	27C8E6-372000	270014-373800			
12.5≤ESP<15	01107C-1C5436-	011074-1C5436-	011074-1C5466-			
	27B414-370060	27C8E6-372000	270014-373800			
15≤ESP<17.5 278414-370060		011074-1C5458- 27C8E6-372000	011074-1C5487- 270014-373800			
17.5≤ESP≤20	01107C-1C548E-	011074-1C548E-	011074-1C54BB-			
	27B414-370060	27C8E6-372000	270014-373800			

represents E. S. P(External Static Pressure) range of factory setting.

You don't have to adjust the fan speed separately if the external static pressure of the installation place is in . When it is out of , input the appropriate option code.

• If you input the inappropriate option code, error may occur or the air conditioner is out of order. The option code must be inputted correctly by the installation specialist or service agent.

Easy Tuning

EASY Tuning

If the more cooling and heating airflow rate which set up when installing is wanted, or if the more Silent operation which sets up when installing is wanted, air conditioner is tuned for comfort.

Indoor unit airflow rate for high, mid, low mode increases or decreases for +2 ~ -2 Steps with wired remocon.



1. Press the User Set button.

► (Main Menu) will be displayed, and you can press the [Λ]/ [V] buttons to select No. 8, which will set the Easy Tuning.



2. Press the [>] button to select airflow step.

▶ Press the [A]/[V] buttons to select airflow step(-2,-1,0,1,2) tuning (During the Easy Tuning setting, AC Fan Speed icon will be displayed)



3) Press the 🗺 button to complete the Easy Tuning.

(When the Easy Tuning setting complete, AC Fan Speed icon will be off)

4) Press the \bigoplus_{ESC} button to to exit to normal mode.

Main menu	Sub menu	Functions	SEG used	Default	Range
8	-	EasyTuning	1,2	0	-2 : -2 Step -1 : -1 Step 0 : No Use 1 : +1 Step 2 : +2 Step

NOTE

Press the button anytime during setup to exit without setting.

 According to airflow changed from the Easy Tuning, Air conditioning performance reducing is possible.



Setting the indoor unit option code

In order to set the indoor unit option code use the wired remote controller and follow the directions below.



Page nu	nber Option Code 1234 56

SEG1 SEG2 SEG3 SEG4 SE	G5 SEG6
0 * * * *	* *

Page number

SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	*	*	*	*	*

Page number

SEG13	SEG14	SEG15	SEG16	SEG17	SEG18			
2	*	*	*	*	*			
D								

Page number

SEG19	SEG20	SEG21	SEG22	SEG23	SEG24			
3	*	*	*	*	*			
Page number								

- 1) Press the 🗐 and 🚍 buttons at the same time for more than 3 seconds and then a Main menu will be displayed.
- 2) Press the A/ button to select and then press button to enter a Sub-menu setting screen.
- 3) Press the A/ button to select and then press button to enter a Indoor unit option code setting screen.

P • The first digit represents the page number and the remaining five digits are option codes. NOTE • The option code which is currently setting will flicker.

- 4) Press the // button to set the option code in order. Press b button to go to the next page.
- 5) Press the set button to save and complete the option setting.
- 6) Press the 💬 button to exit to normal mode.

• Press the 💬 button anytime during setup to exit without setting. NOTE

/!\ Option code will not be applied if you don't press the [set] CAUTION Setting indoor unit option code is only possible in Master wired remote controller. You can only check the indoor unit option code in Slave wired remote controller. Setting indoor unit option code is possible when one indoor unit is connected. If more than 2 indoor units are connected, you can only check the Master indoor unit option code.

Setting an indoor unit address and installation option

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

Setting an indoor unit address

- 1) Press the 🖼 and 💬 buttons at the same time for more than 3 seconds and then a Main menu will be displayed.
- 2) Press the A/ button to select and then press button to enter a Sub-menu setting screen.
- 3) Press the A/ button to select and then press D button to enter a Indoor Address setting screen.



- The Main/RMC Address which is currently setting will flicker.
- NOTE Data bit 1 and 2 present Indoor unit main address checking
 - Data bit 3 and 4 present Indoor unit main address setting(outdoor unit reset is needed to set).
 - Data bit 5 and 6 present Indoor unit RMC address setting/checking.
- 4) Press the / button to set the Indoor unit Main/RMC Address.
- 5) Press the Set button to save and complete the option setting.
- 6) Press the \bigoplus_{BC} button to exit to normal mode.
 - I Press the Determine during setup to exit without setting.

NOTE

- Address will not be applied if you don't press Set button.
- Setting Main/RMC Address of an Indoor unit is available only with a master wired remote controller.

Setting an indoor unit address and installation option

Setting an indoor unit installation option

In order to check and set the indoor unit installation option code use the wired remote controller and follow the directions below.

- 1) Press the 🖼 and 💬 buttons at the same time for more than 3 seconds and then a Main menu will be displayed.
- 2) Press the A/ button to select and then press button to enter a Sub-menu setting screen.
- 3) Press the A/ button to select and then press button to enter a Indoor unit installation option code setting screen.

The first digit represents the page number and the remaining five digits are installation option.
 The total option codes are 24 digits. You can set six digits at a time and it is distinguished by page number (0, 1, 2, 3).

4) Press the A/S button to set the installation option code in order. Press button to go to the next page.

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	2	RESERVED	Exterior temperature sensor	Central control	RESERVED
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	Drain pump	Use of Hot Coil	RESERVED	RESERVED	RESERVED
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	External control	External control output	S-Plasma ion	Buzzer	Number of hours using filter
SEG19	SEG20	SEG21	SEG22	SEG23	-
3	Individual control of a remote controller	Heating setting compensation	RESERVED	RESERVED	-

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

Option	SEG	i1	SEG	G2		SEG3		SEG4		SEG4 SEG5		SEG6				
Explanation	PAG	έE	МО	DE				Use of e tempe sen	xternal rature sor	Use of cor	central trol					
	Indication	Details	Indication	Details	RES	SERV	ED	Indication	Details	Indication	Details	RES	SERVED			
Indication and Details					1			0	Disuse	0	Disuse	2				
anu Details	0		2	2				1	Use	1	Use					
Option	SEG	57	SEG	G8		SEG9)	SEC	510	SEG	G11	S	SEG12			
Explanation	PAC	έE	Use of dra	in pump	Use o	of Ho	t Coil									
	Indication	Details	Indication	Details	Indication	1	Details									
			0	Disuse	0	D	lisuse									
Indication			1	Use	1		Use	RESE	RVED	RESE	RVED	RES	SERVED			
and Details	1		2	Use + 3minute delay	-		-									
Option	SEG	13	SEG	14	SEG15		SEG16		16 SEG17		SEG18					
Explanation	PAG	έE	Use of e con	xternal trol	Setting the output of external control		S-Plasma ion		Buzzer control		Number of hours using filter					
	Indication	Details	Indication	Details	Indication	1	Details	Indication	Details	Indication	Details	Indication	Details			
			0	Disuse	0	Th	ermo on	0	Disuse	0	Use of buzzer	2	1000 Hour			
Indication			1	ON/OFF Control					1 Use							
and Details	2		2	OFF Control	1 Ope		Operation on	1		1 Use	1 Use	Use	1 Use	1	Non use of	6
			3	WINDOW ON/OFF Control							buzzer					
Option	SEG	19	SEG	20	S	EG21	1	SEC	522	SEG	G23		-			
Explanation	PAG	έE	control of contr	a remote oller	Heati comp	ng se pensa	etting ation						-			
	Indication	Details	Indication	Details	Indicatio	on	Details						-			
			0 or 1	Indoor 1	0		Disuse	DECEI		DECE						
Indication and Details	3		2	Indoor 2	1		2°C	nesei	NED.	NESE	RVED		-			
			3	Indoor 3	2		5℃									
			4	Indoor 4												

5. Press the ^{Set} button to save and complete the option setting.

6. Press the \bigoplus_{BC} button to exit to normal mode.

P

NOTE

- Press 💭 button anytime during setup to exit without setting.
- Option code will not be applied if you don't press Set button.
- Setting Installation option code is available only with a master wired remote controller.
- Setting Installation option code is available when there is one on one connection between a wired remote controller and an indoor unit.

ENGLISH

Troubleshooting

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

LED Display on the receiver & display unit

		<u>h</u>				
Abnormal conditions		Concealed Type GREEN RED Standard Type		Ś		<u>Remarks</u>
	\bigcirc	*				
Power reset		х	х	х	х	
Error of Room sensor in the indoor unit(Open/Short)	х	х		х	х	
Error of EVA-IN,EVA-OUT discharge sensor in the indoor unit(Open/Short)		х		х	х	
Error of Fan motor in the indoor unit	х	х	х		х	
1. Error of Outdoor 2. Thermal Fuse Open Error of Indoor's Terminal Block	x	х	\bullet			
 Clogging of outdoor's service valve the refrigerant leakage 		х	х			
Detection of the float switch	х	х	х			
1. Error of EEPROM 2. Error of Option setting						
1. Error of Outdoor Temp. sensor 2. Error of Cond Temp. sensor 3. Error of discharge Temp. sensor		x	x	•	x	

		h	ndicator	<u>s</u>		
	Concealed Type			S		
Abnormal conditions	GREEN RED		٩			<u>Remarks</u>
 No communication for 2 minutes between indoor units (Communication error for more than 2 minutes) Indoor unit receiving the communication error from outdoor unit Outdoor unit tracking 3 minutes error When sending the communication error from the outdoor unit, the mismatching of the communication numbers and installed numbers after completion of tracking.(Communication error for more than 2 min- utes) 	x	х	•	•	х	1. Indoor unit error (Display is unre- lated with operation) 2. Outdoor unit error (Display is unre- lated with operation)

• On • Flickering X Off

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

Wired remote controller

If an error occurs, si is displayed on the wired remote controller.
 If you would like to see an error code, press the Test button.

Error mode	Contents	Error type
888	Indoor unit communication error	Communication error
888	Duplicated address setting error	Communication error
888	No response error address from indoor unit	Communication error
888	Indoor temperature sensor (open/short error)	Indoor sensor error
888	Indoor unit Eva In sensor (Open/Short)	Indoor sensor error
888	Indoor floating switch secondary detection	Self diagnostic error
888	Indoor/outdoor communication error (1 min)	Communication error
888	Communication error between indoor/outdoor INV↔MAIN MICOM (1 min)	Communication error
888	Outdoor temperature sensor error	Outdoor sensor error
888	COND temperature sensor error	Outdoor sensor error
858	[Inverter] Emission temperature sensor error	Outdoor sensor error
888	Detection of Indoor Freezing (when Comp. Stops)	Outdoor unit protection control error
888	Protection of Outdoor Overload (when Comp. Stops)	Outdoor unit protection control error
888	Emission temperature excessively high	Outdoor unit protection control error
888	High pressure blockage error (Refrigerant completely Leakage error)	Self diagnostic error
888	Heating operation blocked	Self diagnostic error
888	Cooling operation blocked	Self diagnostic error
858	Outdoor fan 1 error	Self diagnostic error
888	[Inverter] Compressor startup error	Outdoor unit protection control error
888	[Inverter] Total current error/PFC over current error	Outdoor unit protection control error

Error mode	Contents	Error type	
<i>983</i>	OLP Overheat and Comp. Stop	Outdoor unit protection control error	
989	[Inverter] IPM over current error	Outdoor unit protection control error	
889	Compressor V limit error	Outdoor unit protection control error	
988	DC LINK over/low voltage error	Outdoor unit protection control error	
888	[Inverter] Compressor rotation error	Outdoor unit protection control error	
888	[Inverter] Current sensor error	Outdoor unit protection control error	
888	[Inverter] DC LINK voltage sensor error	Outdoor unit protection control error	
888	EEPROM Read/Write error	Outdoor unit protection control error	
888	[Inverter] OTP error	Outdoor unit protection control error	
888	AC ZERO CROSSING SIGNAL OUT error	Outdoor unit protection control error	
888	Compressor LOCK error	Outdoor unit protection control error	
888	Outdoor fan 2 error	Self diagnostic error	
<i>988</i>	IPM Overheat Error for Outdoor Unit Inverter Comp.	Outdoor unit protection control error	
558	Gas leak error	Self diagnostic error	
<i>558</i>	Capacities not matched	Outdoor unit protection control error	
688	Communication error between the indoor unit and wired remote controller	Wired remote controller error	
<i>688</i>	Communication error between the Master and Slave wired remote controllers	Wired remote controller error	

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Extending the power cable

1. Prepare 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

- 2. As shown in the figure, peel off the shields from the rubber and wire of the power cable.
 - Peel off 20 mm of cable shields from the pre-installed tube.
- · For information about the power cable specifications for indoor <u>/ľ</u> and outdoor units, refer to the installation manual. CAUTION
 - · After peeling off cable wires from the pre-installed tube, insert a contraction tube.
- 3. Insert both sides of core wire of the power cable into the connection sleeve.
- Method 1 Push the core wire into the sleeve from both sides.
- Method 2

Twist the wire cores together and push it into the sleeve.

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



Compress it 4 times. 5 mm



Pre-installed tube for the power cable

(Unit: mm)

Power cable



5. Wrap it with the insulation tape twice or more and position your contraction tube in the middle of the insulation tape.

Three or more layers of insulation are required.

Method 1

Method 2



6. Apply heat to the contraction tube to contract it.



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



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Air Conditioner installation manual

imagine the possibilities

Thank you for purchasing this Samsung product.



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