Quality People. Building Solutions.

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Date: 4/11/2023
Return Request: 4/21/2023
Project: Pine Bluff – 6th Avenue Plaza
Supplier: Powers of Arkansas
Submittal: Split Systems
Submittal Number: 23 00 00-01
Drawing # and Installation: Mechanical Drawings

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CSUSA PROJECT NO.
23-1009
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CREATING CUSTOMERS FOR LIFE

POWERS

IOM

PRODUCT	SPLIT SYSTEMS
MANUFACTURER	SAMSUNG
JOB NAME	PINE BLUFF 6TH AVENUE PLAZA
LOCATION	PINE BLUFF
ENGINEER	
CONTRACTOR	CSUSA
CONTRACTOR POC	JON DAVIS
DATE	10/30/2023
SUBMITTED BY	ERIC BLAYLOCK

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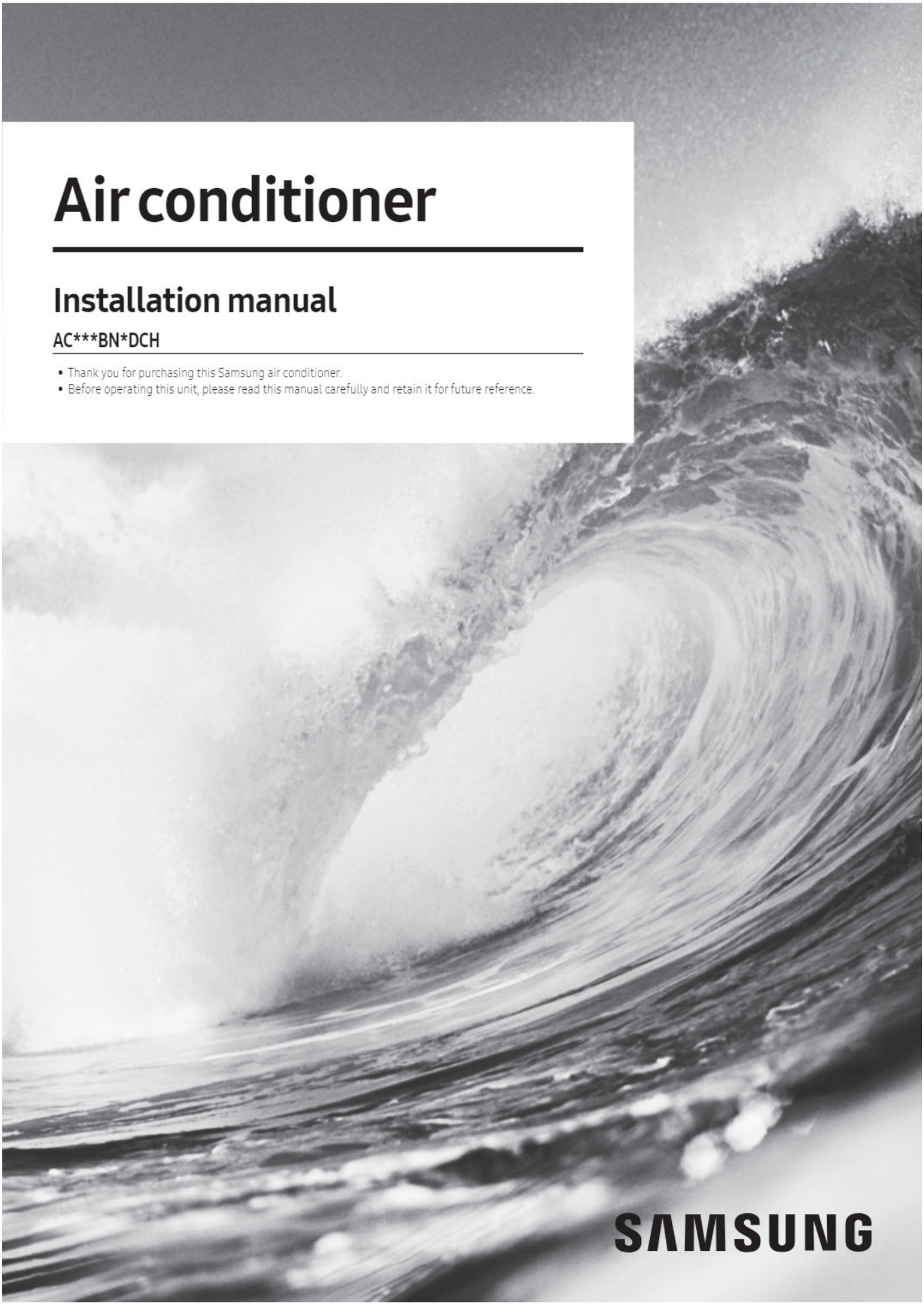
Air conditioner

Installation manual

AC***BN*DCH

- Thank you for purchasing this Samsung air conditioner.
- Before operating this unit, please read this manual carefully and retain it for future reference.



Contents

IMPORTANT
- This product has been designed and manufactured to meet ENERGY STAR criteria for energy efficiency when matched with appropriate coil components. However, proper refrigerant charge and proper air flow are critical to achieve rated capacity and efficiency. Installation of this product should follow the manufacturer's refrigerant charging and air flow instructions. Failure to confirm proper charge and airflow may reduce energy efficiency and shorten equipment life.

Safety Information

California Proposition 65 Warning (US)

⚠ WARNING

Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

⚠ WARNING

- Hazards or unsafe practices that may result in severe personal injury or death.

⚠ CAUTION

- Hazards or unsafe practices that may result in minor personal injury or property damage.
- Carefully follow the precautions listed below because they are essential to guarantee the safety of the equipment.

⚠ WARNING

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

General information

⚠ WARNING

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

Installing the unit

⚠ WARNING

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

- Always disassemble the electric lines before the refrigerant tubes.
- Upon receipt, inspect the product to verify that it has not been damaged during transport. If the product appears damaged, DO NOT INSTALL it and immediately report the damage to the carrier or retailer (if the installer or the authorized technician has collected the material from the retailer.)

Safety Information

- 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.
- Excessive indoor humidity or clogged condensate drain lines may cause water to drip from indoor units. Do not install the indoor unit where dripping could result in damage to property, such as above electronic equipment or other sensitive instruments
- 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.
- Auxiliary devices which may be a potential ignition source shall not be installed in the duct work.
- 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.
- AC***BNLDCH indoor unit is intended for free-air discharge or for connection to a duct supplying only one room. Improper installation could contribute to the spread of smoke or flame in the event of a fire.

Power supply line, fuse or circuit breaker

⚠ WARNING

- Always make sure that the power supply is compliant with current safety standards. Always install the air conditioner in compliance with current local safety standards.
- Always verify that a suitable grounding connection is available.
- Verify that the voltage and frequency of the power supply comply with the specifications and that the installed power is sufficient to ensure the operation of any other domestic appliance connected to the same electric lines.
- Always verify that the cut-off and protection switches are suitably dimensioned.
- Verify that the air conditioner is connected to the power supply in accordance with the instructions provided in the wiring diagram included in the manual.
- Always verify that electric connections (cable entry, section of leads, protections...) are compliant with the electric specifications and with the instructions provided in the wiring scheme. Always verify that all connections comply with the standards applicable to the installation of air conditioners.
- Devices disconnected from the power supply should be completely disconnected in the condition of overvoltage category.
- Be sure not to perform power cable modification, extension wiring, and multiple wire connection.
  - It may cause electric shock or fire due to poor connection, poor insulation, or current limit override.
  - When extension wiring is required due to power line damage, refer to "Step 14 Optional: Extending the power cable" in the installation manual.

⚠ CAUTION

Make sure that you earth the cables.

- Do not connect the earth wire to the gas pipe, water pipe, lighting rod or telephone wire. If earthing is not complete, electric shock or fire may occur.

Install the circuit breaker.

- If the circuit breaker is not installed, electric shock or fire may occur.

Make sure that the condensed water dripping from the drain hose runs out properly and safely.

Install the power cable and communication cable of the indoor and outdoor unit at least 1m away from the electric appliance.

Install the indoor unit away from lighting apparatus using the ballast.

- If you use the wireless remote control, reception error may occur due to the ballast of the lighting apparatus.

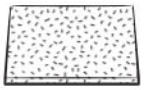
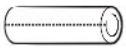
Do not use the indoor unit for preservation of food items, plants, equipment, and art works. This may cause deterioration of their quality.

Do not install the indoor unit if it has any drainage problem.

Installation Procedure

Step 1 Checking and preparing 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)	Thermal insulation sponge A (1)
	
Cable-tie (AC***BNLDCH : 4EA, AC***BNHDCH : 8EA)	Thermal insulation sponge B (1)
	
Rubber (4)	Thermal insulation sponge C (1)
	
Reducer(1)	
	

Step 2 Choosing the installation location

Installation location requirements

- There must be no obstacles near the air inlet and outlet.
- Install the indoor unit on a ceiling that can support its weight.
- Maintain sufficient clearance around the indoor unit.
- Before installing the indoor unit, be sure to check whether the chosen location is well-drained.
- The indoor unit must be installed such that it is beyond public access and is not touchable by users.

⚠ CAUTION

Do not install the air conditioner in following places.

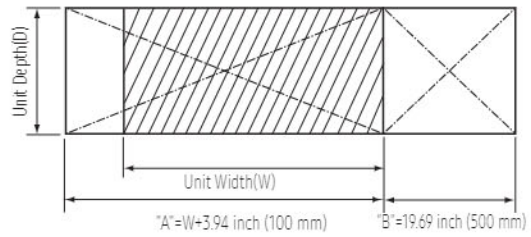
- The place where there is mineral oil or arsenic acid. Resin parts flame and the accessories may drop or water may leak. The capacity of the heat exchanger may reduce or the air conditioner may be out of order.
- The place where corrosive gas such as sulfurous acid gas generates from the vent pipe or air outlet. The copper pipe or connection pipe may corrode and refrigerant may leak.
- The place where there is a machine that generates electromagnetic waves. The air conditioner may not operate normally due to control system.
- The place where there is a danger of existing combustible gas, carbon fiber or flammable dust.
- The place where thinner or gasoline is handled. Gas may leak and it may cause fire.

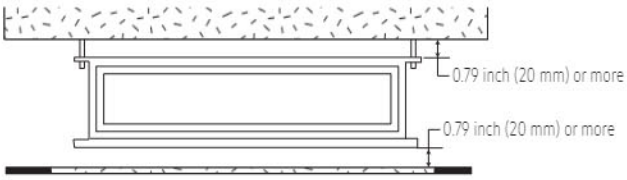
Installation Procedure

Spacing requirements

Space requirements for installation & service.
Construction Standard for Inspection opening
An inspection opening is required for service and unit replacement.
1) If the ceiling is a grid type, an inspection opening is not required.
2) If the ceiling is plaster board, an inspection opening is required. The size of the opening will vary based on the height inside the ceiling.

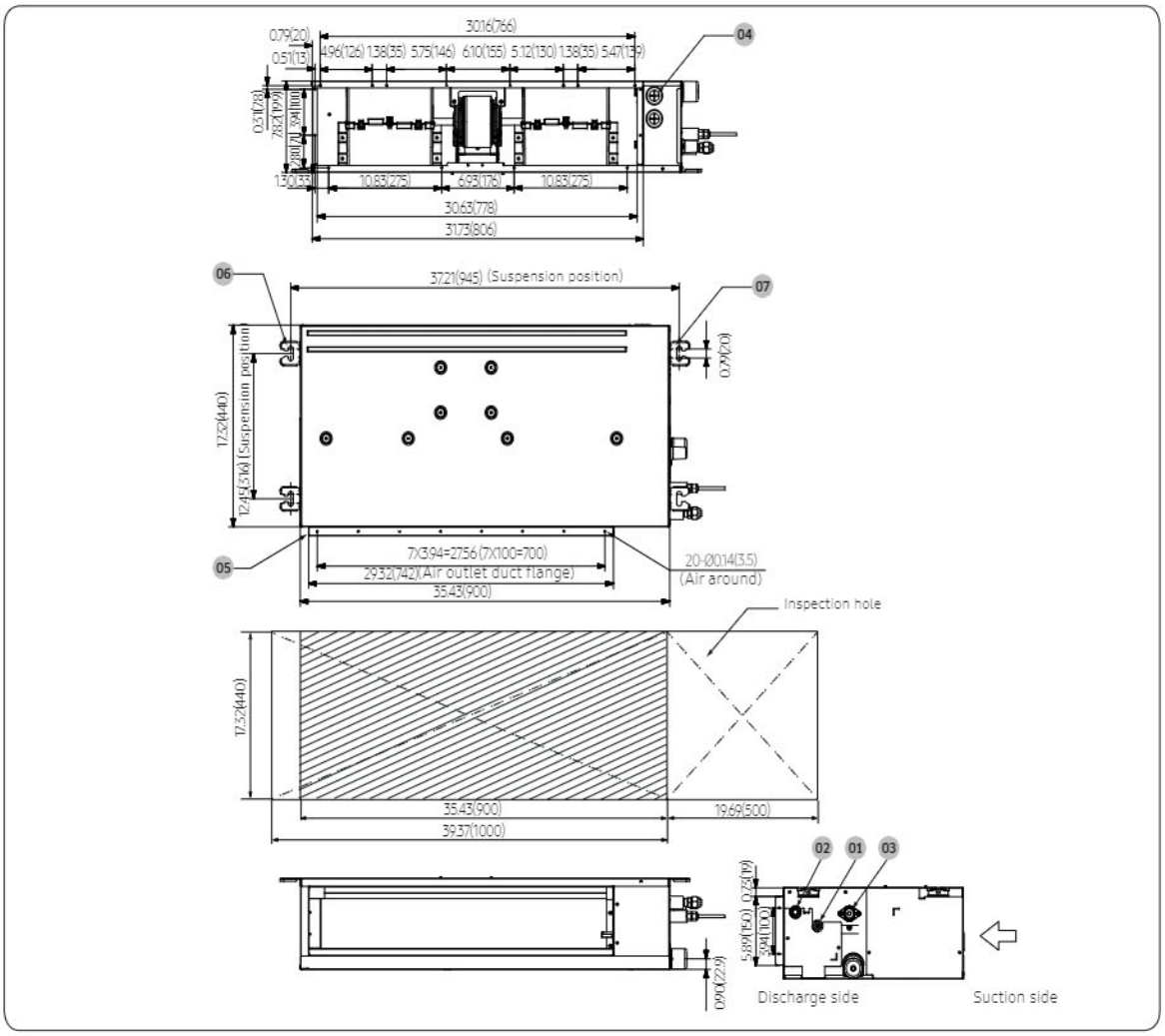
a. Height is more than 1.64ft (0.5m): Only "B" [Inspection for PBA] is applied.
b. Height is less than 1.64ft (0.5m): Both "A"&"B" are applied.
c. "A"&"B" are inspection opening .





- You must have 0.79 inch (20 mm) or more space between the ceiling and the bottom of indoor unit to prevent transmission of noise and vibration from the unit into the space.
- It is possible to install the unit at an height of between 7.2~8.2 ft (2.2~2.5m) from the ground,if the unit has a duct with a well defined lenght [11.81inch (300 mm) 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 0.39 inch (10mm) of polyethylene foam or other insulation with similar material on the body of the indoor unit.

AC009BNLDCH/AC012BNLDCH **Unit : inch(mm)**

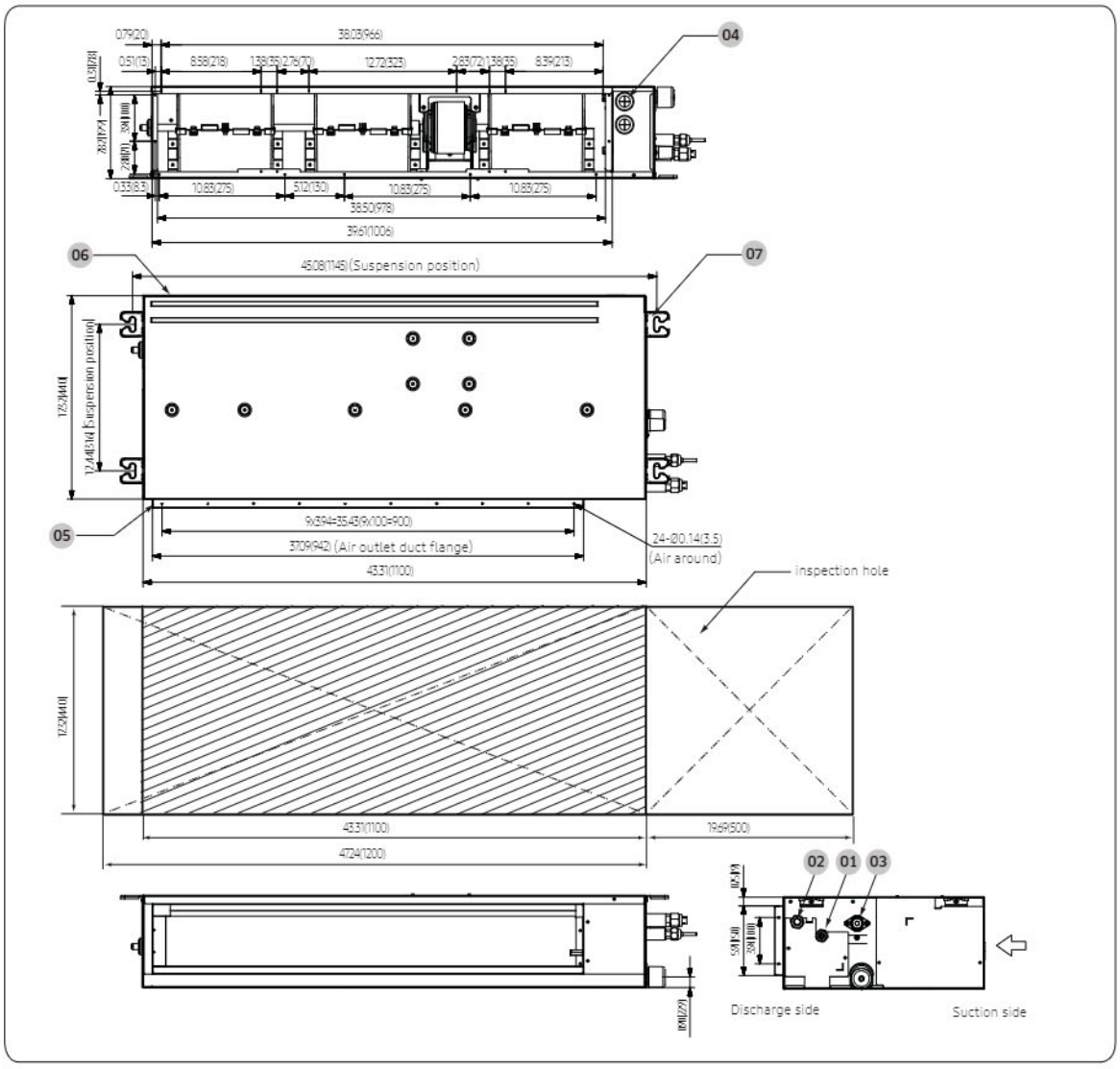


No.	Name	Description
01	Liquid pipe connection	Ø1/4 inch (6.35 mm)
02	Gas pipe connection	Ø3/8 inch (9.52mm)
03	Drain pipe connection	3/4 inch (OD 1.05 inch (26.67 mm))
04	Power supply connection	
05	Air discharge flange	
06	Suction flange	Air filter
07	Hook	M8~M10

Installation Procedure

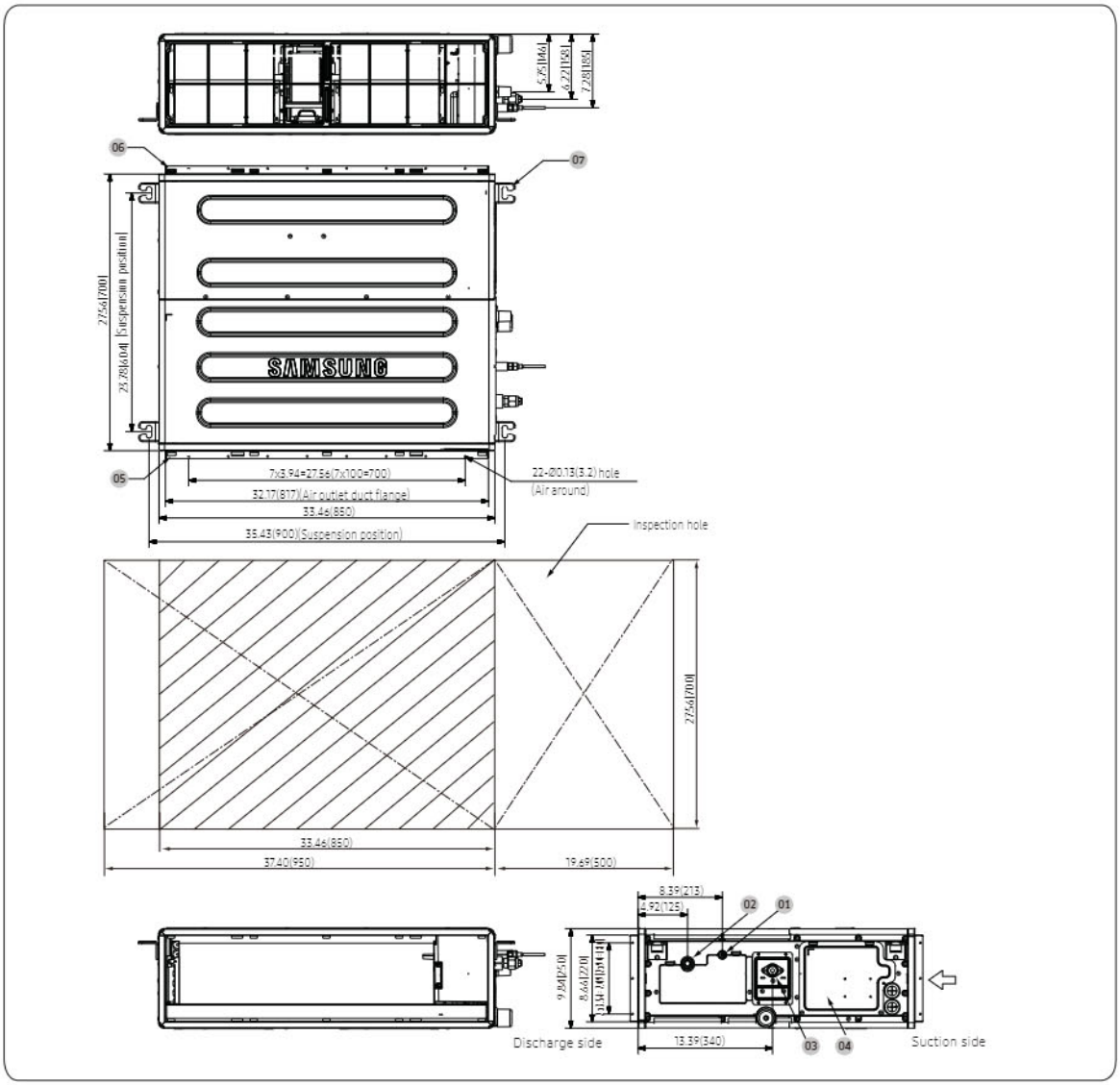
AC018BNLDCH

Unit : inch(mm)



No.	Name	Description
01	Liquid pipe connection	Ø1/4 inch (6.35 mm)
02	Gas pipe connection	Ø1/2 inch (12.70 mm)
03	Drain pipe connection	3/4 inch (OD 1.05 inch (26.67 mm))
04	Power supply connection	
05	Air discharge flange	
06	Suction flange	Air filter
07	Hook	M8~M10

AC009BNHDCH/AC012BNHDCH **Unit : inch(mm)**

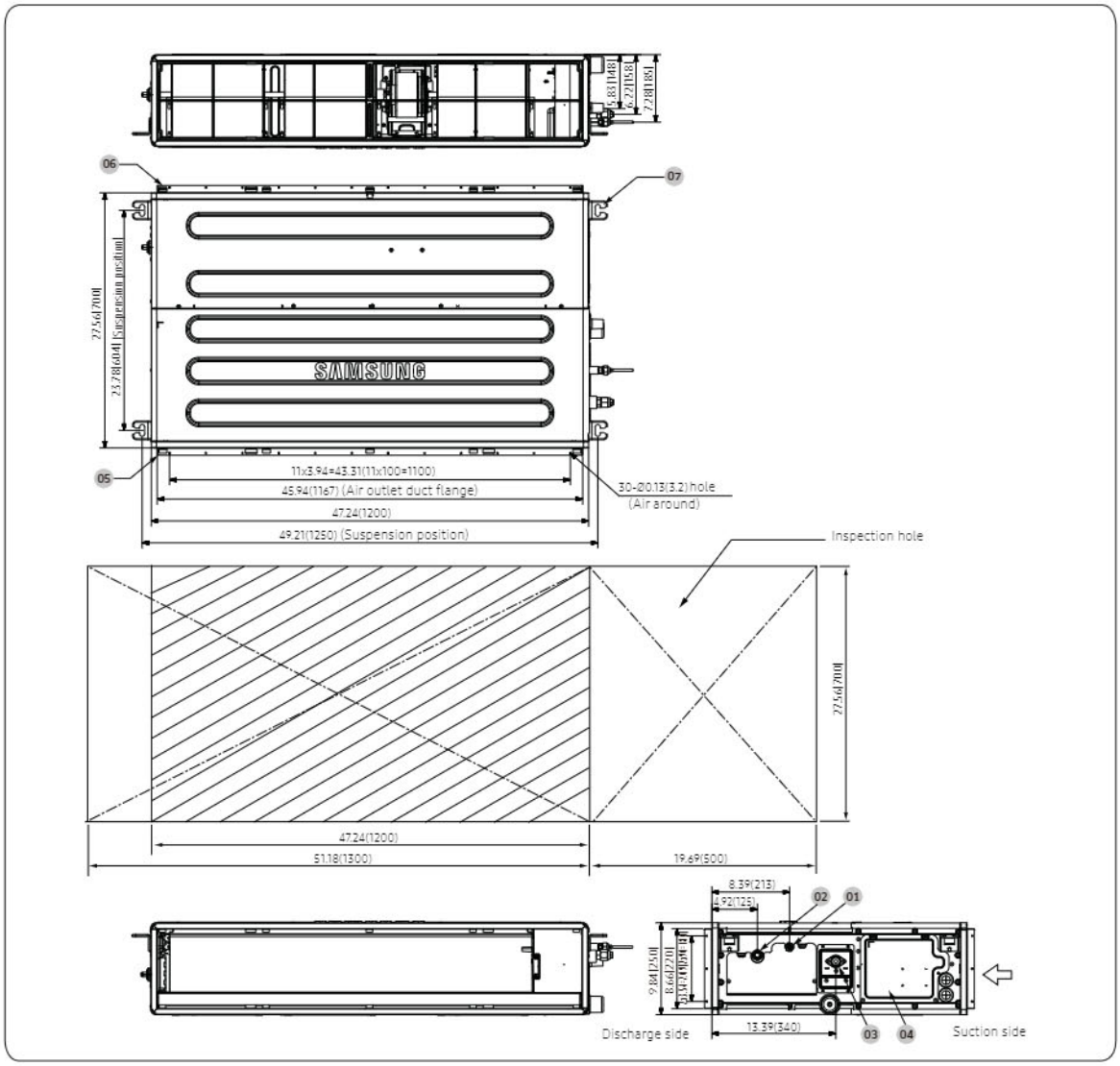


No.	Name	Description
01	Liquid pipe connection	Ø1/4 inch (6.35 mm)
02	Gas pipe connection	Ø3/8 inch (9.52 mm)
03	Drain pipe connection	3/4 inch (OD 1.05 inch (26.67 mm))
04	Power supply connection	
05	Air discharge flange	
06	Suction flange	Air filter
07	Hook	M8~M10

Installation Procedure

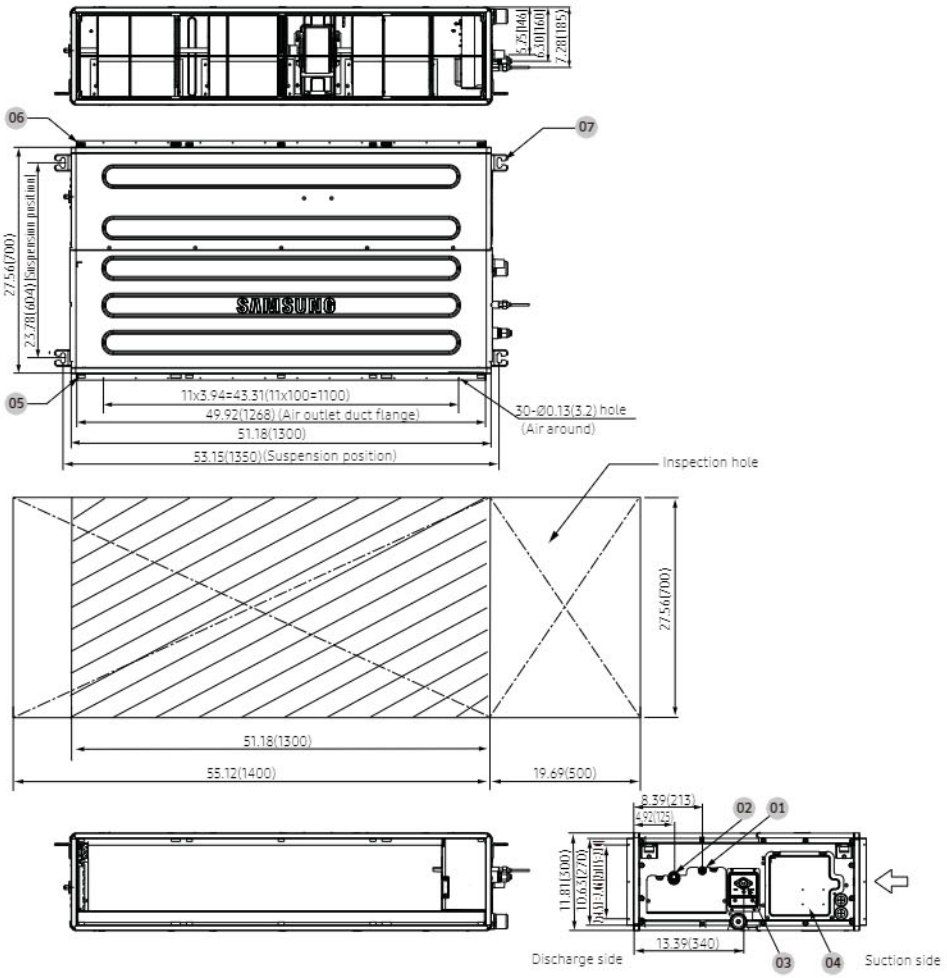
AC018BNHDCH/ AC024BNHDCH/ AC030BNHDCH

Unit : inch(mm)



No.	Name	Description		
		AC018BNHDCH	AC024BNHDCH	AC030BNHDCH
01	Liquid pipe connection	Ø1/4 inch (6.35 mm)		Ø3/8 inch (9.52 mm)
02	Gas pipe connection	Ø1/2 inch (12.70mm)	Ø5/8 inch (15.88 mm)	
03	Drain pipe connection	3/4 inch (OD 1.05 inch (26.67 mm))		
04	Power supply connection			
05	Air discharge flange			
06	Suction flange			
07	Hook	M8~M10		

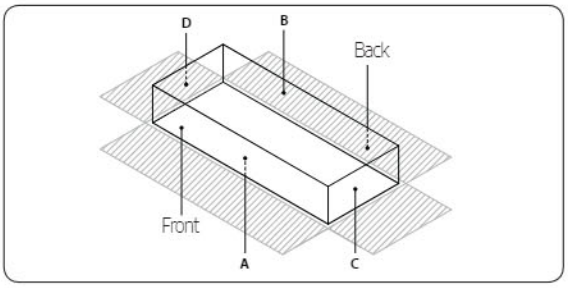
AC036BNHDCH/AC042BNHDCH/AC048BNHDCH **Unit : inch(mm)**



No.	Name	Description
01	Liquid pipe connection	Ø3/8 inch (9.52 mm)
02	Gas pipe connection	Ø5/8 inch (15.88 mm)
03	Drain pipe connection	3/4 inch (OD 1.05 inch (26.67 mm))
04	Power supply connection	
05	Air discharge flange	
06	Suction flange	Air filter
07	Hook	M8~M10

Installation Procedure

Step 3 Optional: Insulating the body of the indoor unit



Thickness: more than 0.39 inch(10mm)

Indoor Unit	AC009BNLDCH AC012BNLDCH	AC018BNLDCH
	35.43X17.32X7.83 (900X440X199)	43.31X17.32X7.83 (1100X440X199)
A	35.43X7.83 (900X199)	43.31X7.83 (1100X199)
B	35.43X7.83 (900X199)	43.31X7.83 (1100X199)
C	17.32X7.83 (440X199)	17.32X7.83 (440X199)
D	17.32X7.83 (440X199)	17.32X7.83 (440X199)
Front/ Back	Insulate the front and back side in proper size at the same time when insulating the suction duct and discharge duct.	

Unit: inch(mm)

Indoor Unit	AC009BNHDCH AC012BNHDCH	AC018BNHDCH AC024BNHDCH AC030BNHDCH	AC036BNHDCH AC042BNHDCH AC048BNHDCH
	33.46X27.56X9.84 (850X700X250)	47.24X27.56X9.84 (1200X700X250)	51.18X27.56X11.81 (1300X700X300)
A	33.46X27.56 (850X700)	47.24X27.5 (1200X700)	51.18X27.56 (1300X700)
B	33.46X27.56 (850X700)	47.24X27.5 (1200X700)	51.18X27.56 (1300X700)
C	27.56X9.84 (700X250)	27.56X9.84 (700X250)	27.56X11.81 (700X300)
D	27.56X9.84 (700X250)	27.56X9.84 (700X250)	27.56X11.81 (700X300)
Front/ Back	Insulate the front and back side in proper size at the same time when insulating the suction duct and discharge duct.		

Unit: inch(mm)

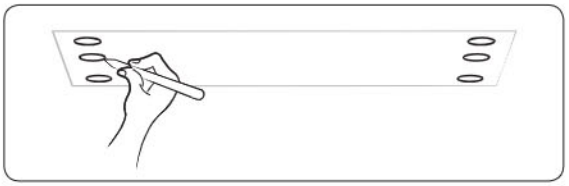
NOTE

- 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.

Step 4 Installing the indoor unit

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

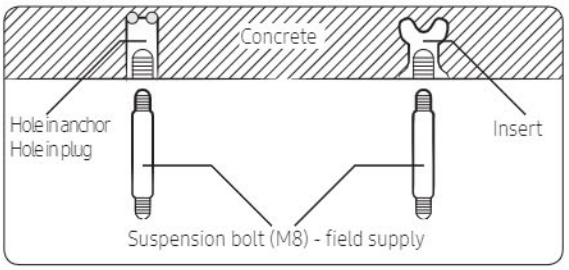
1 Place the pattern sheet on the ceiling at the spot where you want to install the indoor unit.



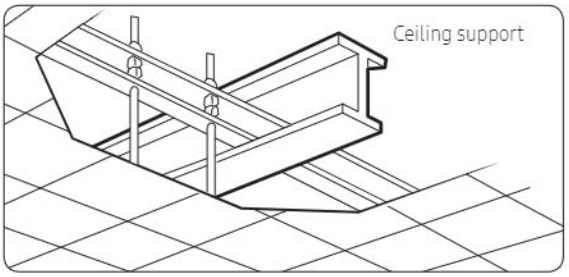
NOTE

- 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.

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.



⚠ CAUTION

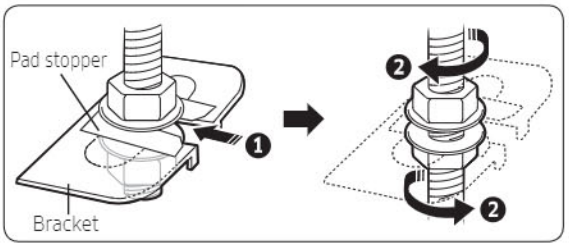
- Ensure that the ceiling is strong enough to support the weight of the indoor unit. Before hanging the unit, test the strength of each attached suspension bolt.
- If the length of suspension bolt is more than 4.92 ft (1.5m), it is required to prevent vibration.
- If this is not possible, create an opening 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.

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



⚠ CAUTION

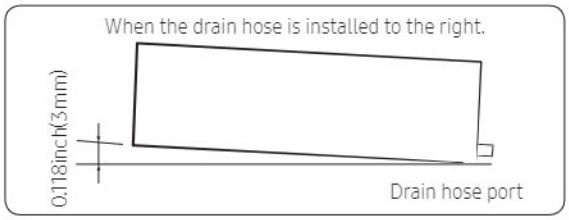
- Piping must be laid and connected inside the ceiling when suspending the unit. If the ceiling is already constructed, lay the piping into position for connection to the unit before placing the unit inside the ceiling.

6 Screw the nuts to suspend the unit.

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

⚠ CAUTION

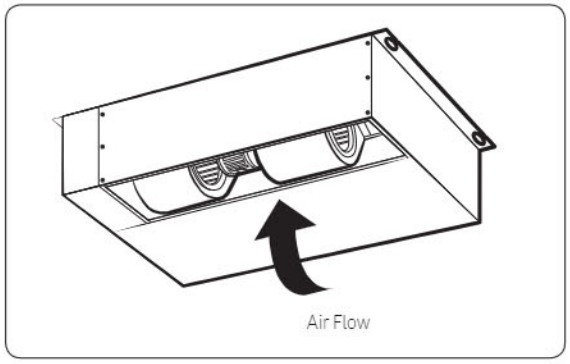
- For proper drainage of condensate, give a 0.118 inch (3mm) slant to the left or right side of the unit which will be connected with the drain hose, as shown in the figure. Make a tilt when you wish to install the drain pump, too.



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

⚠ CAUTION

- Noise will increase 3~6 dB(A) when the air flow enters from the bottom side (Only for AC***BNLDCH indoor unit product).



Installation Procedure

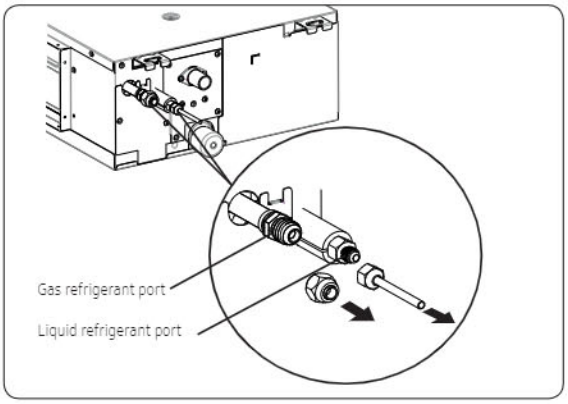
Step 5 Purging inert gas from the indoor unit

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

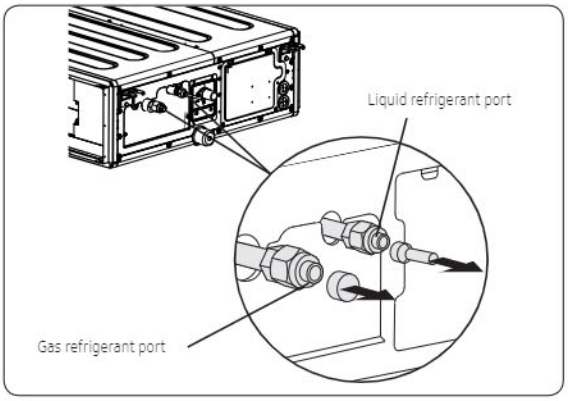
Unscrew the pinch pipe at the end of each refrigerant pipe.

Result : All inert gas escapes from the indoor unit.

AC*BNLDCH**



AC*BNHDCH**



NOTE

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

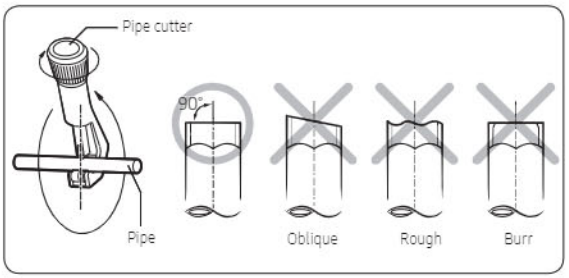
⚠ CAUTION

- 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 hydro-sanitary 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.

Step 6 Cutting and flaring the pipes

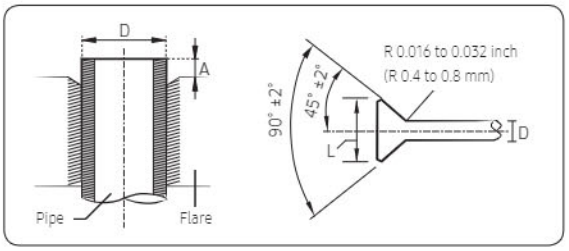
1 Make sure that you have the required tools available. (pipe cutter, reamer, flaring tool and pipe holder)

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.

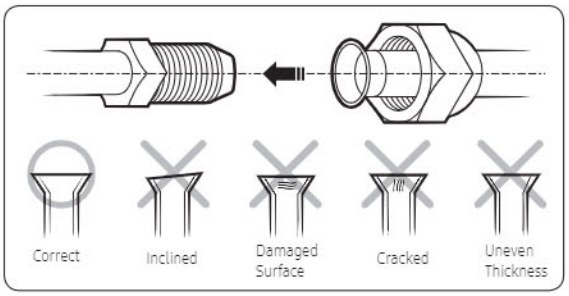
4 Slide a flare nut on to the pipe and modify the flare.



Outer Diameter (D)	Depth (A)	Flare dimension (L)
Ø1/4 (6.35)	0.051 (1.3)	0.34~0.36 (8.7~9.1)
Ø3/8 (9.52)	0.071 (1.8)	0.50~0.52 (12.8~13.2)
Ø1/2 (12.70)	0.079 (2.0)	0.64~0.65 (16.2~16.6)
Ø5/8 (15.88)	0.087 (2.2)	0.76~0.78 (19.3~19.7)
Ø3/4(19.05)	0.087 (2.2)	0.93~0.94 (23.6~24.0)

Unit: inch(mm)

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



⚠ CAUTION

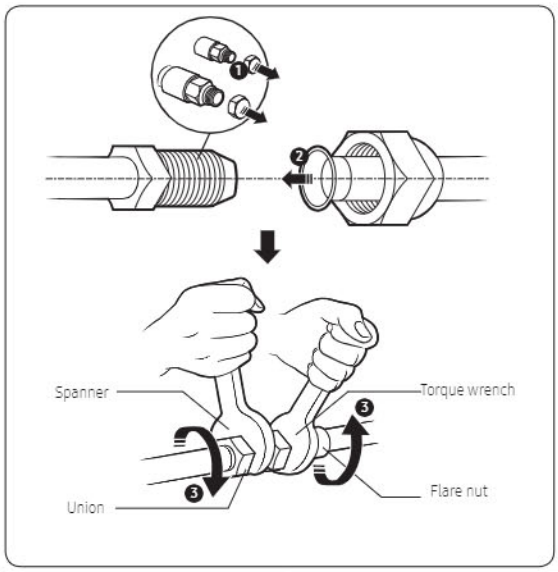
- If the pipes require brazing ensure that OFN (Oxygen Free Nitrogen) is flowing through the system.
- Nitrogen blowing pressure range is 0.02 ~ 0.05MPa.

Step 7 Connecting the assembly pipes to the refrigerant pipes

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.



Outer Diameter		Torque	
mm	inch	N•m	lbf.ft
Ø6.35	1/4	14 to 18	10.3 to 13.3
Ø9.52	3/8	34 to 42	25.1 to 31.0
Ø12.70	1/2	49 to 61	36.1 to 45.0
Ø15.88	5/8	68 to 82	50.2 to 60.5
Ø19.05	3/4	100 to 120	73.8 to 88.5

(1 N•m=10 kgf•cm)

NOTE

- If the pipes must be shortened refer to page **14**, **Step 6 Cutting and flaring the pipes**
- Tighten the nuts to the specified torques. If overtightened, the nuts could be broken so refrigerant may leak.

Installation Procedure

2 Be sure to 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[0.39 inch (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.

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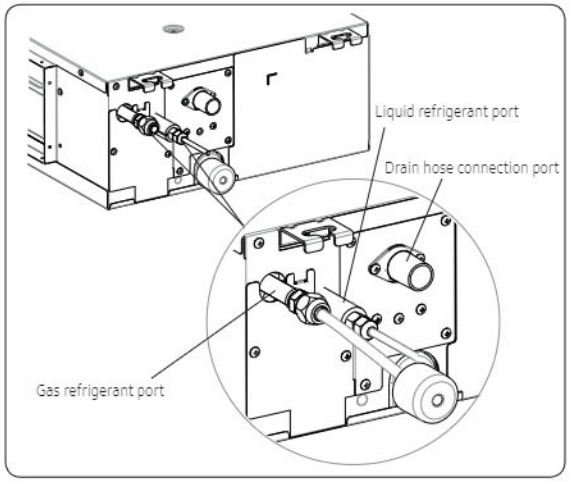

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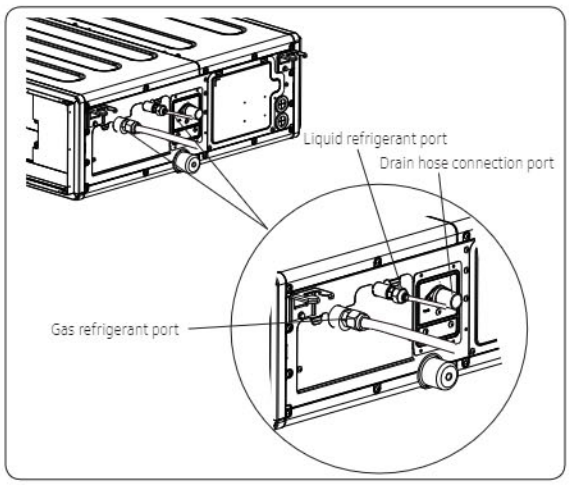

NOTE

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

Step 8 Performing the gas leak test

Pressure check the refrigerant system using high pressure nitrogen in order to detect basic refrigerant leaks. Before performing the vacuum process and releasing the factory R-410A charge into the refrigerant pipes, it is the responsibility of the installer to pressurize the whole system with nitrogen (using a cylinder with pressure reducer) at a pressure above 580.2 psi(4 Mpa) (gauge).

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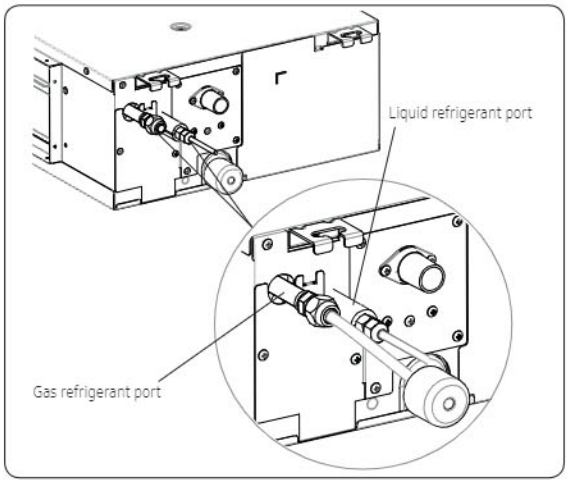

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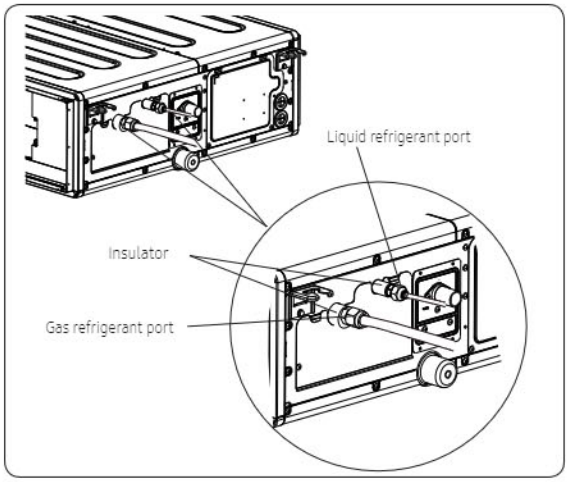
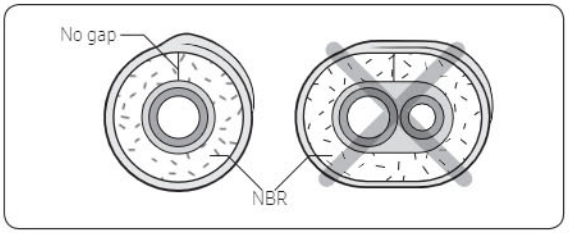


Step 9 Insulating the refrigerant pipes

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

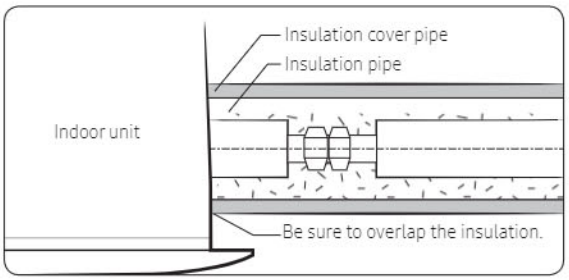
1 To avoid condensation problems, place Acrylonitrile Butadien Rubber separately around each refrigerant pipe.



NOTE

- Always make the seam of pipes face upwards.

2 Wind insulating tape around the pipes and drain hose avoiding compressing the insulation too much.



⚠ CAUTION

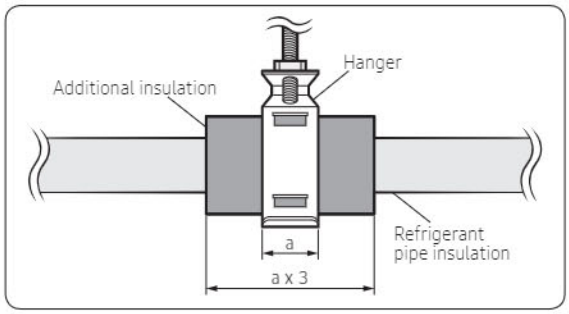
- Be sure to wrap insulation tightly without any gaps.

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.

⚠ CAUTION

- Make sure that all refrigerant connection must be accessible for easy maintenance and detachment.
- 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.



5 Select the insulation of the refrigerant pipe.

- Insulate the gas side and liquid side pipe, noting the insulation thickness that must differ according to the pipe size.
- Standard: Less than an indoor temperature of 86°F(30°C), with humidity at 85%. If installing in a high humidity environment, use one grade thicker insulator by referring to the table below. If installing in an unfavourable environment, use thicker one.
- The heat-resistance temperature of the insulator must be more than 248°F(120°C).

Installation Procedure

Pipe	Outer diameter		Insulation Type (Cooling, Heating)				Remarks
			General [86°F(30°C), 85%]		High humidity [86°F(30°C), over 85%]		
			EPDM, NBR				
	mm	inch	mm	inch	mm	inch	
Liquid pipe	6.35~9.52	1/4~3/8	9	3/8	9	3/8	The internal temperature is higher than 248°F(120°C)
	12.7~50.80	1/2~2	13	1/2	13	1/2	
Gas pipe	6.35	1/4	13	1/2	19	3/4	
	9.52~25.4	3/8~1	19	3/4	25	1	
	28.58~44.45	1 1/8~1 3/4	19	3/4	32	1 1/4	
	50.8	2	25	1	38	1 1/2	

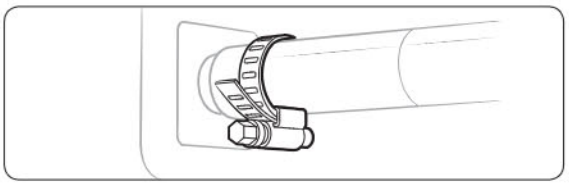
- When installing insulation in the places and conditions below, use the same insulation that is used for high humidity conditions.

<Geological condition>
High humidity locations such as shorelines, hot springs, lake or riversides, and ridges (when part of the building is covered by earth and sand)
<Operation purpose condition>
Restaurant ceiling, sauna, swimming pool etc.
<Building construction condition>
Ceilings frequently exposed to moisture and cooling are not covered. For example, pipes installed at a corridor of a dormitory and studio or near an exit that opens and closes frequently. Places (where the pipes are installed) that are highly humid due to a lack of ventilation.

Step10 Installing the drain hose and drain pipe

1 Push the supplied drain hose as far as possible over the drain socket.

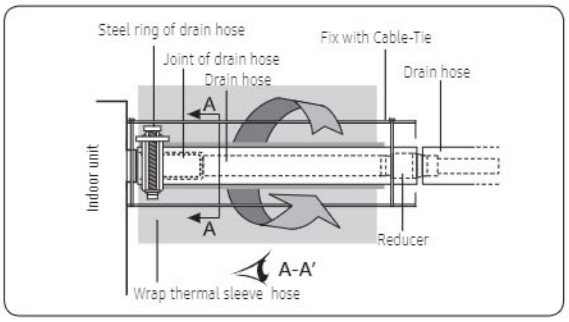
2 Tighten the metal clamp as shown in the picture.



3 Wrap the supplied large sealing pad over the metal clamp and drain hose to insulate and fix it with clamps.

4 Insulate the complete drain piping inside the building (field supply).If the drain hose cannot be sufficiently set on a slope, fit the hose with drain raising piping (field supply).

5 Push the drain hose up to insulation when connecting the drain hose to drain socket.

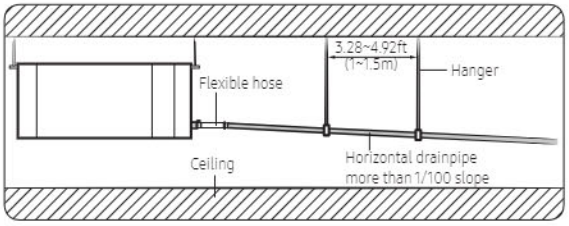


Without the drain pump

1 Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 3.28~4.92ft(1~1.5m).

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.



With the drain pump

1 The drain pipe should be installed within 11.81inch(300mm) to 21.65inch(550mm) from the flexible hose and then lift down 0.79inch(20mm) or more.

2 Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 3.28~4.92ft(1~1.5m).

3 Install the air vent in the horizontal drainpipe to prevent water flow back to the indoor unit.

NOTE

- You may not need to install it if there were proper slope in the horizontal drainpipe.

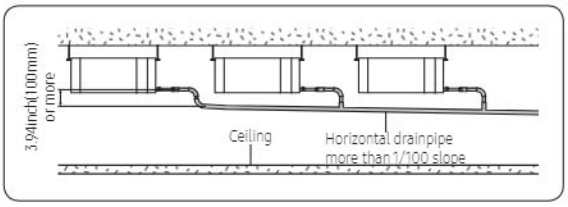
4 The flexible hose should not be installed upward position, it may cause water flow back to the indoor unit.

Installation Procedure

Centralized drainage without the drain pump

1 Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 3.28~4.92ft(1~1.5m).

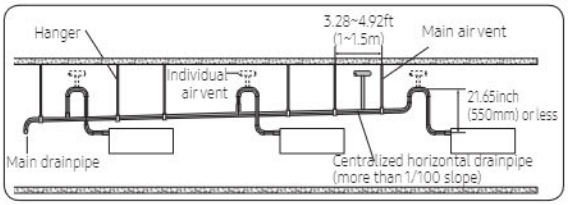
2 Install U-trap at the end of the drainpipe to prevent a nasty smell to reach the indoor unit.



Centralized drainage with the drain pump

1 Install main air vent at the front of the farthest indoor unit from the main drain when installed indoor units are more than 3.

2 You may need to install individual air vent to prevent water flow back at the top of each indoor unit drainpipe.



Step 11 Performing the drainage test

Prepare a little water about 0.53 gallons(2 liters).

1 Loosen screws and take out the side cover plate.

2 Pour water into the indoor unit as shown in figure.

NOTE

- Drainage test should be done after installation has been finished. To avoid water overflow from the indoor unit because the drain tube is blocked.

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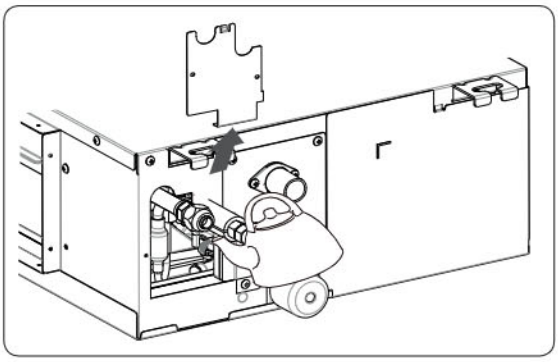

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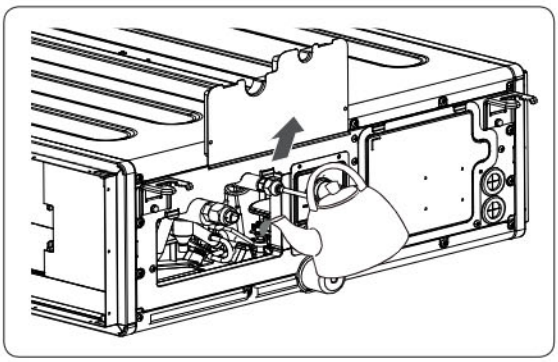


※The designs and shape are subject to change according to the model.

3 Confirm that the water flows out through the drain hose.

4 When the drain pump is installed, operate the unit as cooling mode and check a drain pump pumping.

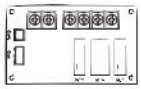
5 Check drain water drops at the end of the drain pipe.

6 Make sure there is no water leak at the drainage.

7 Reinstall the side cover plate.

Step 12 Optional: Installing external controller

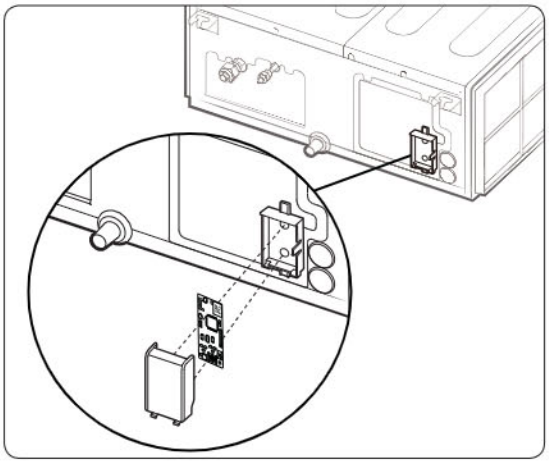
Accessories (External controller : MIM-B14)

External Controller	PCB Case
	
Haness Wire	**Haness Wire**
	
Screw	
	

1 Fix the case at with bolts on the side of the control box in the indoor unit.(See the picture).

2 Attach the external controller PCB to the case in the control box of the indoor unit.

3 Connect the harness wires.



Step 13 Connecting the power and communication cables

⚠ CAUTION

- 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. Use a crimp ring terminal at the end of each wire.

The indoor unit is powered through the outdoor unit by means of a H05RN-F connection cable (or a more power model), with insulation in synthetic rubber and a jacket in polychloroprene (neoprene), in accordance with the requirements specified in the standard EN 60335-2-40.

1 Remove the screw on the electrical component box and remove the cover plate.

2 Route the connection cord through the side of the indoor unit and connect the cable to the terminals refer to the figure below.

3 Route the other end of the cable to the outdoor unit through the ceiling & the hole on the wall.

4 Reassemble the electrical component box cover, carefully tightening the screw.

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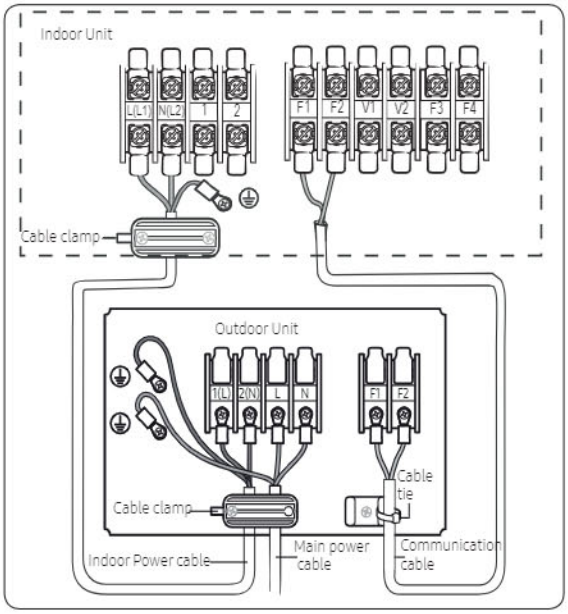
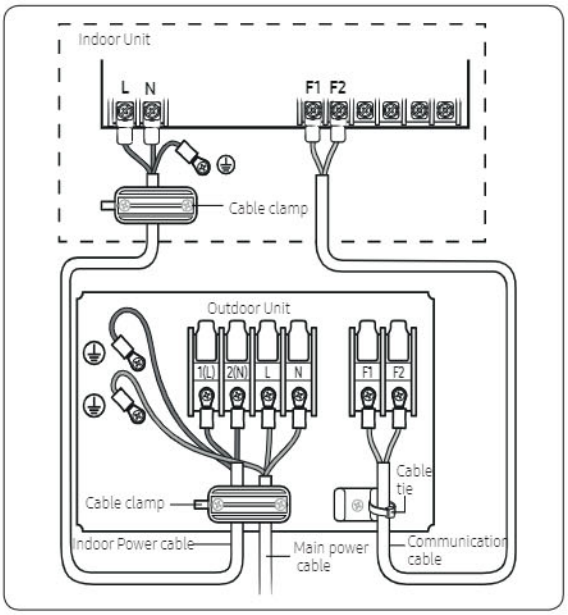


Installation Procedure

Installation Procedure

AC***BNHDCH



NOTE

- Terminal Block of the outdoor unit may be different from the diagram depending on the model. Refer to the manual of the outdoor unit for the configuration of the terminal block of the outdoor unit.

Indoor power supply		
Power supply	**Max/Min(V)**	**Indoor power cable**
208 to 230V, 60 Hz	±10%	0.0023 inch² ↑ (1.5mm² ↑), 3 wires
Communication cable		
0.0012 inch²↑ (0.75mm² ↑), 2 wires		

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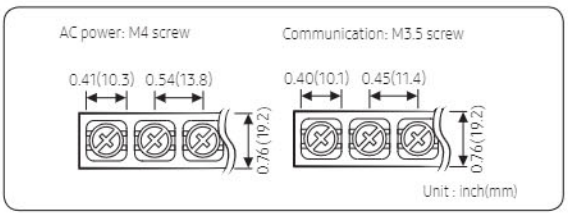

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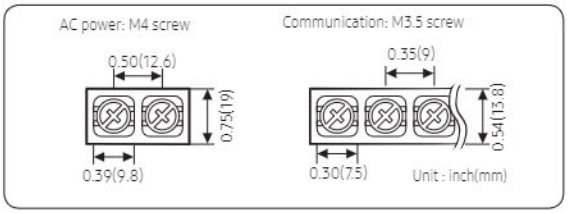

Tightening torque lbf·ft (kgf • cm)	
M3.5	0.58 to 0.87 (8.0 to 12.0)
M4	0.87 to 1.30 (12.0 to 18.0)

- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord.
  –Code designation
  [1-phase] IEC: 60245 IEC 57 / CENELEC: H05RN-F grade or more
- Be sure to run the power supply cable and the communication cable through electrical conduit as seen in the picture.

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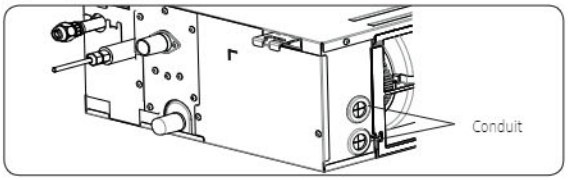
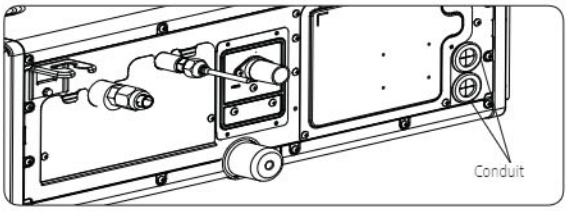
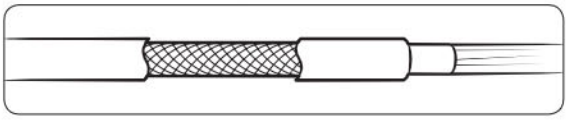


AC***BNHDCH



⚠ CAUTION

- Be sure not to put your finger into the conduit.
- Since it has the external power supply, refer to the outdoor unit installation manual for MAIN POWER.



⚠ CAUTION

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

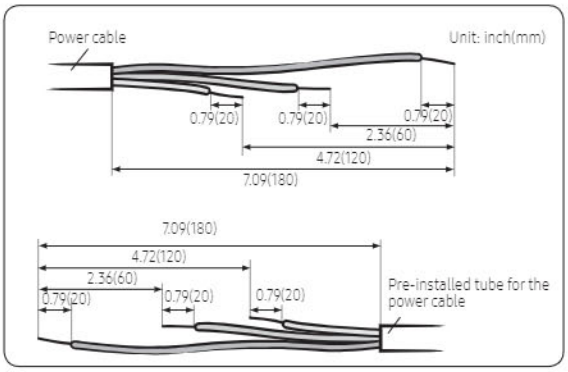
Step 14 Optional: Extending the power cable

1 Prepare the following tools.

Tools	Spec	Shape
Crimping pliers	MH-14	
Connection sleeve	0.79xØ0.26inch (20xØ6.5mm) (HxOD)	
Insulation tape	Width 0.75inch(19mm)	
Contraction tube	2.76xØ0.31 inch (70xØ8.0mm) (LxOD)	

2 As shown in the figure, peel off the shields from the rubber and wire of the power cable.

- Peel off 0.79 inch (20 mm)of cable shields from the pre-installed tube.

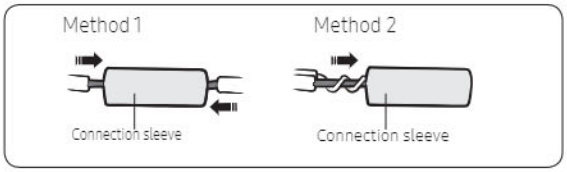


⚠ CAUTION

- For information about the power cable specifications for indoor and outdoor units, refer to the installation manual.
- After peeling off cable wires from the pre-installed tube, insert a contraction tube.

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.

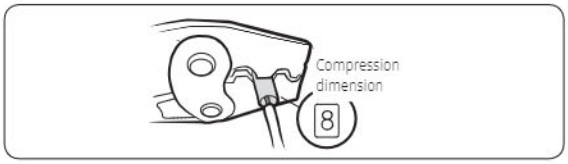


⚠ CAUTION

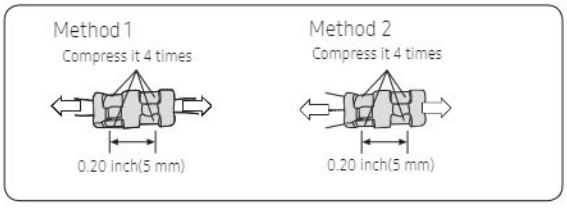
- If cable wires are connected without using connecting sleeves, their contact area becomes reduced, or corrosion develops on the outer surfaces of the wires (copper wires) over a long time. This may cause an increase of resistance (reduction of passing current) and consequently may result in a fire.

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 0.31 inch (8.0 mm).



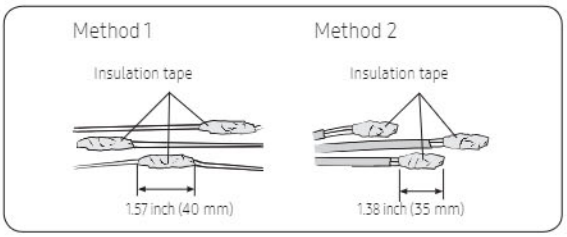
- After compressing it, pull both sides of the wire to make sure it is firmly pressed.



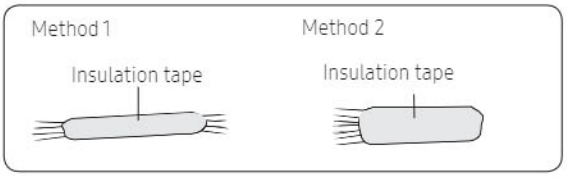
5 Apply heat to the contraction tube to contract it.

Installation Procedure

6 Wrap it with the insulation tape twice or more and position your contraction tube in the middle of the insulation tape.
Three or more layers of insulation are required.



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

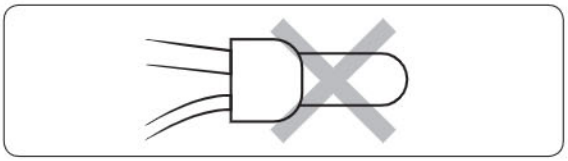


⚠ CAUTION

- Make sure that the connection parts are not exposed to outside.
- Be sure to use insulation tape and a contraction tube made of approved reinforced insulating materials that have the same level of withstand voltage with the power cable. (Comply with the local regulations on extensions.)

⚠ WARNING

- In case of extending the electric wire, please DO NOT use a round-shaped Pressing socket.
  - Incomplete wire connections can cause electric shock or a fire.



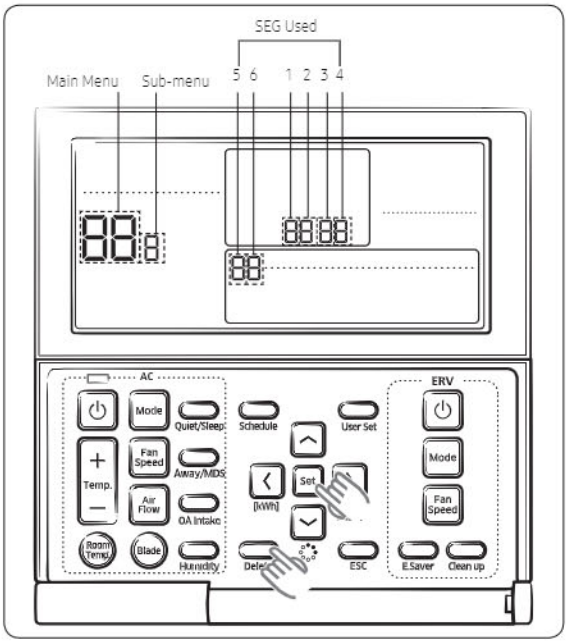
Step 15 Setting additional functions of wired remote control

Automatic Air-Volume (This function can't be used at AC*BNLDCH model)**

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.

1 Press the Set and Delete buttons at the same time for more than 3 seconds and then a Main menu will be displayed.

2 Press the ∧ / ∨ button to select 8 and then press › button to enter a sub-menu setting screen.

3 Press the ∧ / ∨ button to select 2 and then press › button to enter a automatic air-volume setting screen.

Installation Procedure

4 Press the ∧ / ∨ button to select 1 to enable automatic air-volume operation.

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

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

- Do not adjust the dampers during fan operation for Automatic Air-Volume adjustment.

7 Press ESC button to escape setting mode.
(During the automatic air-volume adjustment,[Main Menu] will be displayed → → → repetitively)

8 After1 to 8 minutes, the air conditioning unit stops operating automatically when Automatic Air-Volume adjustment has been carried out (fan operation icon will be off.)

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
8	1	Automatic Air-Volume State Return	1	0	0 - OFF (Fail or Disable) 1 - Completion. 2 - Running Automatic Air-Volume.
	2	Automatic Air-Volume Operation	1	0	0 - Disable 1 - Enable

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.

External Static Pressure (ESP) 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	AC009BNLDCH	AC012BNLDCH
Static Pressure	Option Code for Indoor Unit	
0.3≤P≤1.5	01C3FC-1C5407-271A23-370000	01C3FC-1C54BC-272328-370000
1.5<P≤2.6	01C3FC-1C546B-271A23-370000	01C3FC-1C55F0-272328-370000
2.6<P≤4.0	01C3FC-1C55C0-271A23-370000	01C3FC-1C5944-272328-370000
4.0<P≤5.0	01C3FC-1C5903-271A23-370000	01C3FC-1C5986-272328-370000
5.0<P≤6.0	01C3FC-1C5945-271A23-370000	01C3FC-1C59B9-272328-370000

Model	AC018BNLDCH
Static Pressure	Option Code for Indoor Unit
0.3≤P≤1.5	01C3FC-1C54FB-23343C-370000
1.5<P≤2.6	01C3FC-1C583D-23343C-370000
2.6<P≤4.0	01C3FC-1C5980-23343C-370000
4.0<P≤5.0	01C3FC-1C59B2-23343C-370000
5.0<P≤6.0	01C3FC-1C59F5-23343C-370000

Model	AC009BNHDCH	AC012BNHDCH
Static Pressure	Option Code for Indoor Unit	
2.5≤P≤5	01B3FC-1C50D3-271A23-370000	01B3FC-1C5404-272328-370000
5<P≤7.5	01B3FC-1C5466-271A23-370000	01B3FC-1C5477-272328-370000
7.5<P≤10	01B3FC-1C54D9-271A23-370000	01B3FC-1C54EA-272328-370000
10<P≤12.5	01B3FC-1C582C-271A23-370000	01B3FC-1C583D-272328-370000
12.5<P≤15	01B3FC-1C5970-271A23-370000	01B3FC-1C5981-272328-370000

Installation Procedure

Model	AC018BNHDCH	AC024BNHDCH
Static Pressure	Option Code for Indoor Unit	
2.5≤P≤5	01B3FC-1C5416-2F343C-370020	01B3FC-1C542A-27484F-370020
5<P≤7.5	01B3FC-1C547A-2F343C-370020	01B3FC-1C548E-27484F-370020
7.5<P≤10	01B3FC-1C54DF-2F343C-370020	01B3FC-1C55E1-27484F-370020
10<P≤12.5	01B3FC-1C5933-2F343C-370020	01B3FC-1C5935-27484F-370020
12.5<P≤15	01B3FC-1C5997-2F343C-370020	01B3FC-1C5998-27484F-370020
15<P≤17.5	01B3FC-1C59FB-2F343C-370020	01B3FC-1C59FC-27484F-370020
17.5<P≤20	01B3FC-1C5E50-2F343C-370020	01B3FC-1C5D5F-27484F-370020

Model	AC030BNHDCH	AC036BNHDCH
Static Pressure	Option Code for Indoor Unit	
2.5≤P≤5	01B3FC-1C547B-275A5E-370020	01B3FC-1C5439-276975-370045
5<P≤7.5	01B3FC-1C54DE-275A5E-370020	01B3FC-1C548C-276975-370045
7.5<P≤10	01B3FC-1C5922-275A5E-370020	01B3FC-1C54CE-276975-370045
10<P≤12.5	01B3FC-1C5967-275A5E-370020	01B3FC-1C55F1-276975-370045
12.5<P≤15	01B3FC-1C59B9-275A5E-370020	01B3FC-1C5933-276975-370045
15<P≤17.5	01B3FC-1C59FC-275A5E-370020	01B3FC-1C5965-276975-370045
17.5<P≤20	01B3FC-1C5D3E-275A5E-370020	01B3FC-1C59A6-276975-370045

Model	AC042BNHDCH	AC048BNHDCH
Static Pressure	Option Code for Indoor Unit	
2.5≤P≤5	01B3FC-1C5449-277D8A-370045	01B3FC-1C545A-278C9B-370045
5<P≤7.5	01B3FC-1C549C-277D8A-370045	01B3FC-1C54AD-278C9B-370045
7.5<P≤10	01B3FC-1C54DE-277D8A-370045	01B3FC-1C54EF-278C9B-370045
10<P≤12.5	01B3FC-1C5901-277D8A-370045	01B3FC-1C5912-278C9B-370045
12.5<P≤15	01B3FC-1C5943-277D8A-370045	01B3FC-1C5954-278C9B-370045
15<P≤17.5	01B3FC-1C5975-277D8A-370045	01B3FC-1C5986-278C9B-370045
17.5<P≤20	01B3FC-1C59B6-277D8A-370045	01B3FC-1C59C7-278C9B-370045

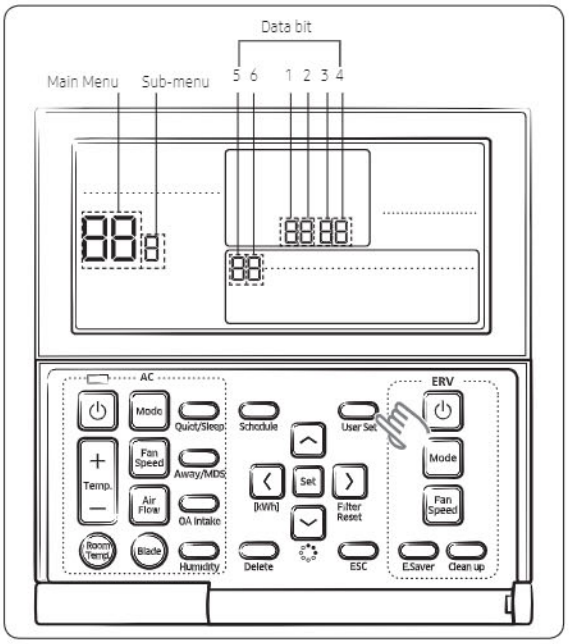
NOTE

- 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.

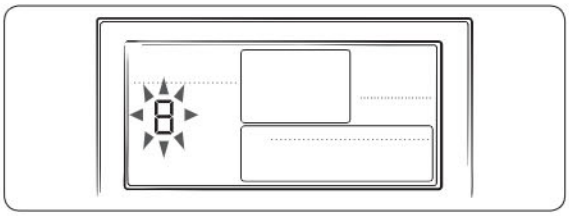
EASY Tuning

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.

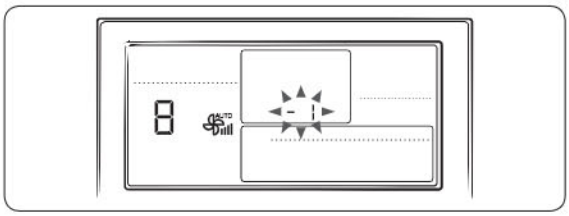
Indoor unit airflow rate for high, mid, low mode increases or decreases for +2 ~ -2 Steps with wired remotecontrol.



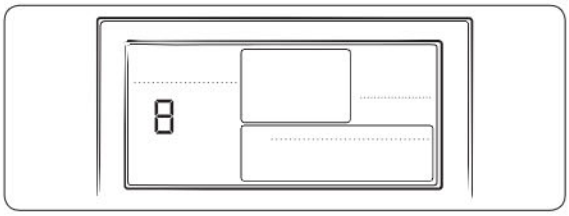
1 Press the User Set button.
(Main Menu) will be displayed, and you can press the [∧]/[∨] buttons to select No. 8, which will set the Easy Tuning.



2 Press the [›] button to select airflow step.
Press the [∧]/[∨] 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 Set button to complete the Easy Tuning.
(When the Easy Tuning setting complete, AC Fan Speed icon will be off)



4 Press the ESC button to to exit to normal mode.

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

NOTE

- Press the ESC button anytime during setup to exit without setting.
- According to airflow changed from the Easy Tuning, Air conditioning performance reducing is possible.

Installation Procedure

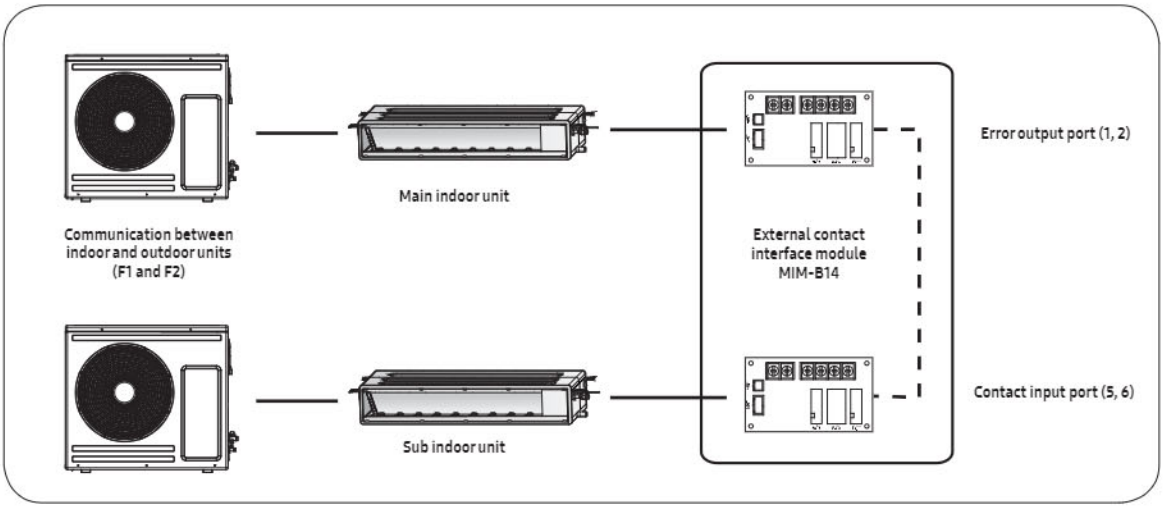
Step 16 Optional : Setting the Emergency Temperature Output (ETO) function

Emergency Temperature Output (ETO) function (for the multi system, this function is not supported.)

⚠ CAUTION

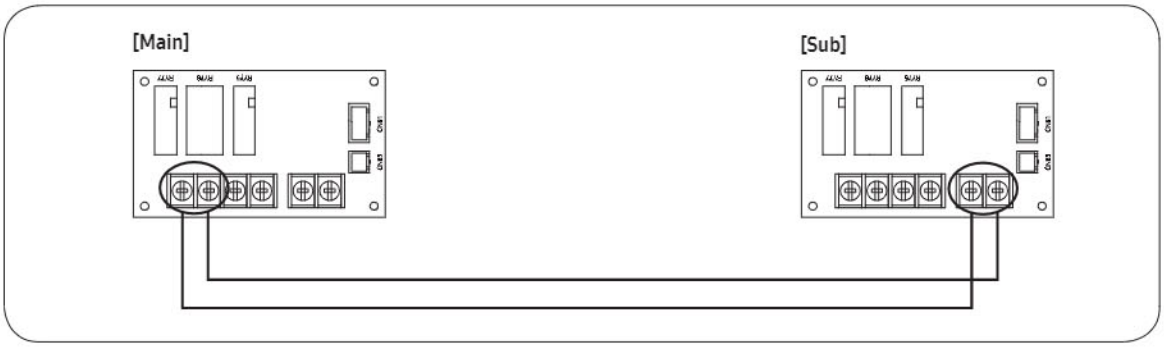
- In order to deploy the ETO function, the MIM-B14, an external contact interface module, must be installed in each indoor unit.
- The ETO is a concept of emergency operation of indoor units. If the indoor unit 1 (main indoor unit) stops because of an error, the indoor unit 2 (sub indoor unit) starts to operate.
- Basically, the indoor unit 2 operates in the previous mode. [For the first time operation, it starts in 24 °C (75 °F) Auto mode.]
- To set more detailed operation conditions for the indoor unit 2, use the S-net Pro.

Setting up the ETO



1 Main indoor unit
   - Disable the external contact control (Default).
   - Connect the S-net pro2 to F1 and F2.
   - Enable the ETO function and set the temperature and time.

2 Sub indoor unit
   - (Required) Enable the external contact control (with the installation option SEG14 - Reverse Control).
   - Connect the S-net pro2 to F1 and F2.
   - Enable the entrance control and set the mode, set temperature, and fan speed.



ETO operation specifications

1 Main indoor unit
- Based on the external contact control settings, the main indoor unit decides whether to generate output when an error (indoor unit stop) occurs.
- Based on the ETO settings, the main indoor unit decides whether to generate output according to the temperature and time conditions.

2 Sub indoor unit
- Based on the entrance control settings, the sub indoor unit decides the mode, set temperature, and fan speed when contact inputs are given.

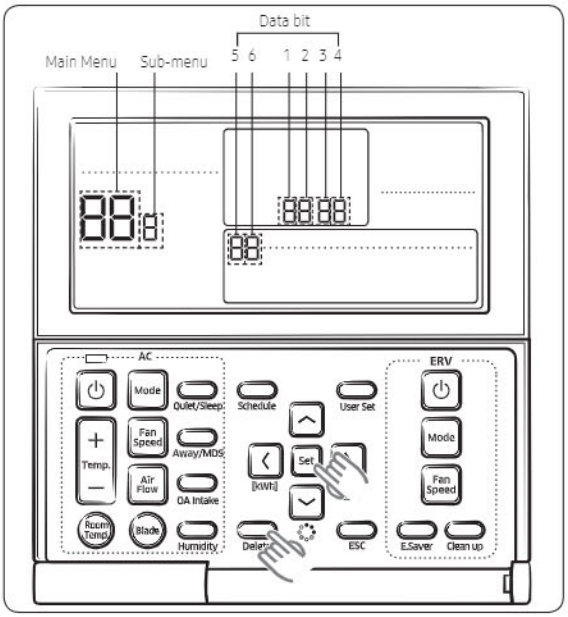
	Enable of ETO	Enable of external contact	Error port output
Main indoor unit	X	X	N/A
	X	O	Output due to an error
	O	X	Output by ETO entrance conditions (temperature / time / error occurrence)
	O	O	Output by ETO entrance conditions (temperature / time / error occurrence) ❇ Ready to control the main contact input

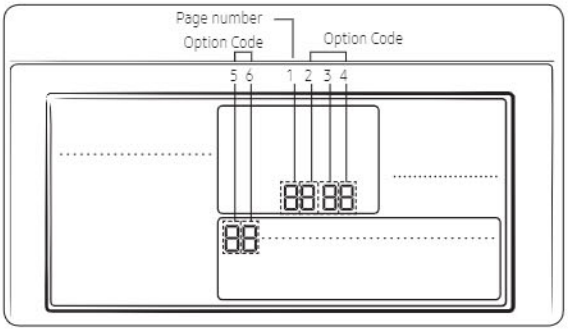
	Enable of entrance control	Enable of external contact	Operation when outputting Main
Sub indoor unit	X	X	N/A
	X	O	On with the previous operation conditions
	O	O	On with the entrance control enabled

Installation Procedure

Step 17 Setting the indoor unit option code with wired remote controller

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





SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	*	*	*	*	*
Page number					
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	*	*	*	*	*
Page number					
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	*	*	*	*	*
Page number					
SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
3	*	*	*	*	*

Page number

1 Press the Set and Delete buttons at the same time for more than 3 seconds and then a Main menu will be displayed.

2 Press the ∧ / ∨ button to select 4 and then press the › button to enter a Sub-menu setting screen.

3 Press the ∧ / ∨ button to select 2 and then press the › button to enter a Indoor unit option code setting screen.

NOTE

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

4 Press the ∧ / ∨ button to set the option code in order. Press › button to go to the next page.

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

6 Press the ESC button to exit to normal mode.

NOTE

- Press the ESC button anytime during setup to exit without setting.

⚠ CAUTION

- Option code will not be applied if you don't press the Set
- Setting indoor unit option code is only possible in Main wired remote controller. You can only check the indoor unit option code in Sub 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 Main indoor unit option code.

Step 18 Setting indoor unit addresses and installation options with wired remote controller

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.

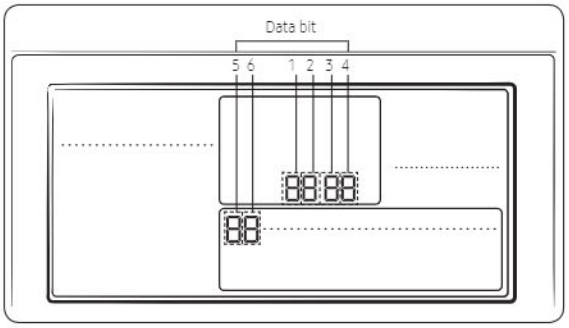
Setting an indoor unit address

1 Press the Set and Delete buttons at the same time for more than 3

seconds and then a Main menu will be displayed.

2 Press the ∧ / ∨ button to select 4 and then press › button to enter a Sub-menu setting screen.

3 Press the ∧ / ∨ button to select 1 and then press › button to enter a Indoor Address setting screen.



NOTE

- The Main/RMC Address which is currently setting will flicker.
- 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.(Refer to the Indoor Unit Address Options table on page 38)

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

6 Press the ESC button to exit to normal mode.

NOTE

- Press the ESC button anytime during setup to exit without setting.
- 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 Main wired remote controller.

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 Set and Delete buttons at the same time for more than 3 seconds and then a Main menu will be displayed.

2 Press the ∧ / ∨ button to select 4 and then press › button to enter a Sub-menu setting screen.

3 Press the ∧ / ∨ button to select 3 and then press › button to enter a Indoor unit installation option code setting screen.

NOTE

- 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 ∧ / ∨ button to set the installation option code in order. Press › button to go to the next page.(Refer to the Indoor Unit Install Options table on page 39)

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	2	RESERVED	Exterior temperature sensor	Central control	RESERVED
SEG7	**SEG8**	**SEG9**	**SEG10**	**SEG11**	**SEG12**
1	Drain pump	Hot Coil	Auxiliary heater	Controller variables for auxiliary heater	RESERVED
SEG13	**SEG14**	**SEG15**	**SEG16**	**SEG17**	**SEG18**
2	External control	External control output	RESERVED	Buzzer	Maximum filter usage time
SEG19	**SEG20**	**SEG21**	**SEG22**	**SEG23**	**SEG24**
3	Individual control of a remote controller	Heating setting compensation	RESERVED	Away Set OFF Timer	RESERVED

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

6 Press the ESC button to exit to normal mode.

NOTE

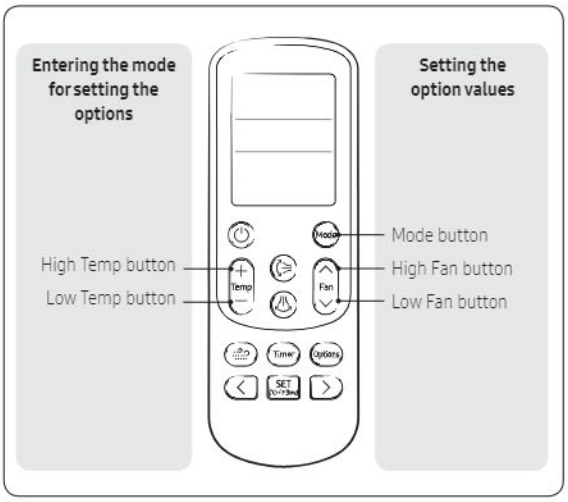
- Press ESC button anytime during setup to exit without setting.
- Option code will not be applied if you don't press Set button.
- Setting Installation option code is available only with a Main wired remote controller.
- Setting Installation option code is available when there is one on one connection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

Installation Procedure

Step 19 Optional : Setting the indoor unit addresses and the installation options with wireless remote controller

You cannot set both the indoor unit addresses and the installation options at the same time.
Receiver & display unit must be connected to the indoor unit to set options with the wireless remote control.

Common steps for setting the addresses and options



NOTE

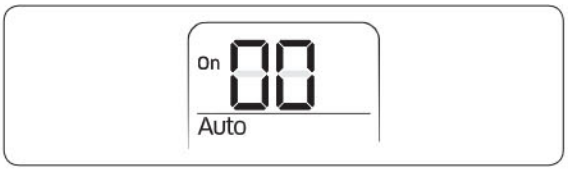
- The remote control display and buttons may vary depending on the model.

1 Enter the mode for setting the options:

a Remove the batteries from the remote control, and then insert them again.

b While holding down the (High Temp) and (Low Temp) buttons simultaneously, insert the batteries into the remote control.

c Make sure that you are entered to the mode for setting the options:



2 Set the option values.

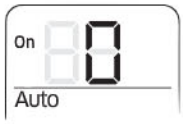
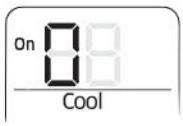
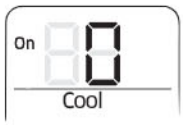
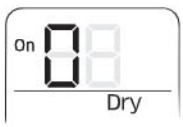
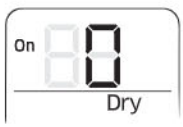
⚠ CAUTION

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

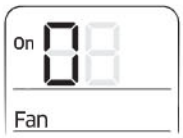
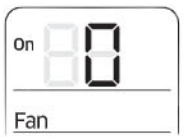
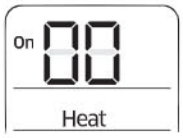
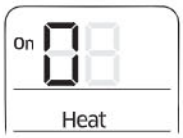
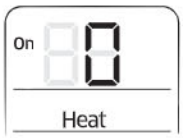
SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	X	X	X	X	X
SEG7	**SEG8**	**SEG9**	**SEG10**	**SEG11**	**SEG12**
1	X	X	X	X	X
SEG13	**SEG14**	**SEG15**	**SEG16**	**SEG17**	**SEG18**
2	X	X	X	X	X
SEG19	**SEG20**	**SEG21**	**SEG22**	**SEG23**	**SEG24**
3	X	X	X	X	X

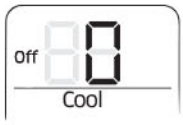
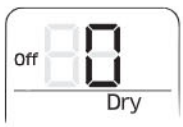
On (SEG1 to SEG12)	Off (SEG13 to SEG24)
	

Take the steps presented in the following table:

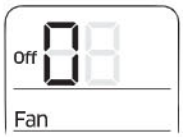
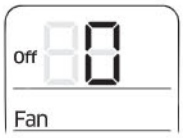
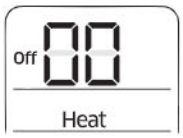
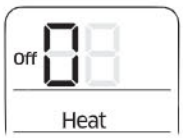
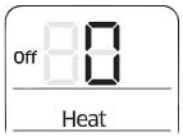
Steps	Remote control display
1 Set the SEG2 and SEG3 values: a Set the SEG2 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display.	 SEG2
b Set the SEG3 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG3
2 Press the (Mode) button. **Cool** and **On** appear on the remote control display.	
3 Set the SEG4 and SEG5 values: a Set the SEG4 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display.	 SEG4
b Set the SEG5 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG5
4 Press the (Mode) button. **Dry** and **On** appear on the remote control display.	
5 Set the SEG6 and SEG8 values: a Set the SEG6 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display.	 SEG6
b Set the SEG8 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG8

Installation Procedure

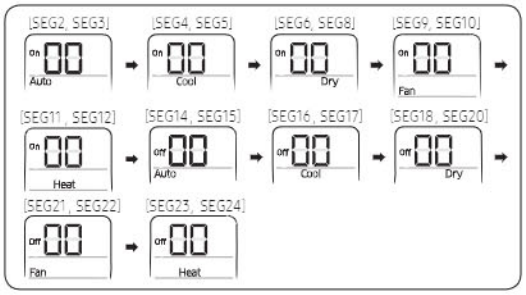
Steps	Remote control display
6 Press the (Mode) button. **Fan** and **On** appear on the remote control display.	
7 Set the SEG9 and SEG10 values: a Set the SEG9 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display.	 SEG9
b Set the SEG10 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG10
8 Press the (Mode) button. **Heat** and **On** appear on the remote control display.	
9 Set the SEG11 and SEG12 values: a Set the SEG11 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display.	 SEG11
b Set the SEG12 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG12
10 Press the (Mode) button. **Auto** and **Off** appear on the remote control display.	

Steps	Remote control display
11 Set the SEG14 and SEG15 values: a Set the SEG14 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display.	 SEG14
b Set the SEG15 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG15
12 Press the (Mode) button. **Cool** and **Off** appear on the remote control display.	
13 Set the SEG16 and SEG17 values: a Set the SEG16 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display.	 SEG16
b Set the SEG17 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG17
14 Press the (Mode) button. **Dry** and **Off** appear on the remote control display.	
15 Set the SEG18 and SEG20 values: a Set the SEG18 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display.	 SEG18
b Set the SEG20 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG20

Installation Procedure

Steps	Remote control display
16 Press the (Mode) button. **Fan** and **Off** appear on the remote control display.	
17 Set the SEG21 and SEG22 values: a Set the SEG21 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display.	 SEG21
b Set the SEG22 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG22
18 Press the (Mode) button. **Heat** and **Off** appear on the remote control display.	
19 Set the SEG23 and SEG24 values: a Set the SEG23 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display.	 SEG23
b Set the SEG24 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG24

3 Check whether the option values that you have set are correct by pressing the (Mode) button repeatedly



4 Save the option values into the indoor unit:
Point the remote control to the remote control sensor on the indoor unit and then press the (Power) button on the remote control twice. Make sure that this command is received by the indoor unit. When it is successfully received, you can hear a short sound from the indoor unit. If the command is not received, press the (Power) button again.

5 Check whether the air conditioner operates in accordance with the option values you have set:

a Reset the indoor unit by disconnecting and then reconnecting the power cable of the indoor unit or by pressing the RESET button on the outdoor unit.

b Remove the batteries from the remote control, insert them again, and then press the (Power) button on the remote control.Setting the indoor unit address and installation option

Installation Procedure

Setting the indoor unit address and installation option

1 Make sure that the power is supplied to the indoor unit.
- If the indoor unit is not plugged in, it must include a power supply.

2 Set an address and installation option for each indoor unit using the remote control, according to your air conditioning system plan.

Setting an indoor unit address (MAIN/RMC)

- The indoor unit address are set to 0A0000-100000-200000-300000 by default.

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

Option	SEG1		SEG2		SEG3		SEG4	SEG5		SEG6	
Explanation	Page		Mode		Setting main address		Reserved	10-digit of indoor unit		A single digit of indoor unit	
Indication and details	Indication	Details	Indication	Details	Indication	Details		Indication	Details	Indication	Details
	0		A		0	No main address		0~9	10-digit	0~9	A single digit
					1	Main address setting mode					

Option	SEG7		SEG8	SEG9		SEG10	SEG11		SEG12	
Explanation	Page		Reserved	Setting RMC address		Reserved	Group channel(*16)		Group address	
Indication and details	Indication	Details		Indication	Details		Indication	Details	Indication	Details
	1			0	No RMC address		RMC1	1~F	RMC2	1~F
				1	RMC address setting mode					

✳ You must set RMC address setting mode when using the centralized Control.

⚠ CAUTION

- When "A"~"F" is entered to SEG4~6, 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 SEG4~6.
- 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.

Setting the installation options

- **The installation options of indoor units are set to 020010-120000-200000-300000 by default.**

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

Option	SEG1		SEG2		SEG3	SEG4		
Explanation	PAGE		MODE			Use of external room temperature sensor / Minimizing fan operation when thermostat is off		
	Indication	Details	Indication	Details		Indication	Details	
							Use of external room temperature sensor	Minimizing fan operation when thermostat is off [1]
Indication and Details	0		2		RESERVED	0	Disuse	Disuse
						1	Use	Disuse
						2	Disuse	Use(Heating)
						3	Use	Use(Heating)
						4	Disuse	Use(Cooling)
						5	Use	Use(Cooling)
						6	Disuse	Use (Cooling/Heating)
						7	Use	Use (Cooling/Heating)
						8	Disuse	Use (Cooling Ultra low speed)
						9	Use	Use (Cooling Ultra low speed)
						A	Disuse	Use (Heating/Cooling Ultra low speed)
						B	Use	Use (Heating/Cooling Ultra low speed)

Option	SEG5		SEG6	SEG7		SEG8	
Explanation	Use of central control			PAGE		Use of drain pump	
	Indication	Details		Indication	Details	Indication	Details
Indication and Details	0	Disuse	RESERVED	1		0	Disuse
	1	Use				1	Use
						2	Use + 3minute delay

Installation Procedure

Option	SEG9		SEG10		SEG11			SEG12
Explanation	Use of Hot Coil		Use of auxiliary heater		Controller variables for auxiliary heater			
	Indication	Details	Indication	Details	Indication	Details		
						Set temperature for auxiliary heat on	Time delay for auxiliary heat on	
Indication and Details	0	Disuse	0	Disuse	0	No temperature offset	No delay	RESERVED
					1	No temperature offset	10 minutes	
					2	No temperature offset	20 minutes	
	1	Use	1	Use	3	2.7°F(1.5°C)	No delay	
					4	2.7°F(1.5°C)	10 minutes	
					5	2.7°F(1.5°C)	20 minutes	
					6	5.4°F(3°C)	No delay	
					7	5.4°F(3°C)	10 minutes	
					8	5.4°F(3°C)	20 minutes	
	-	-	2	Use (Heater time delay)	9	8.1°F(4.5°C)	No delay	
					A	8.1°F(4.5°C)	10 minutes	
					B	8.1°F(4.5°C)	20 minutes	
					C	10.8°F(6°C)	No delay	
					D	10.8°F(6°C)	10 minutes	
					E	10.8°F(6°C)	20 minutes	

<table>
<tr><th>Option</th><th colspan="2">SEG13</th><th colspan="3">SEG14</th><th colspan="2">SEG15</th><th colspan="2">SEG16</th></tr>
<tr><th>Explanation</th><th colspan="2">PAGE</th><th colspan="3">Use of external control</th><th colspan="2">Setting the output of external control</th><th colspan="2" rowspan="3">RESERVED</th></tr>
<tr><td rowspan="17">Indication and Details</td><td>Indication</td><td>Details</td><td>Indication</td><td colspan="2">Details</td><td>Indication</td><td>Details</td></tr>
<tr><td colspan="2" rowspan="16">2</td><td>0</td><td>Disuse</td><td rowspan="4">Sub, Existing Control</td><td rowspan="8">0</td><td rowspan="8">Thermo on</td></tr>
<tr><td>1</td><td>On/Off</td></tr>
<tr><td>2</td><td>Off</td></tr>
<tr><td>3</td><td>Window</td></tr>
<tr><td>4</td><td>Disuse</td><td rowspan="4">Main, Existing Control</td></tr>
<tr><td>5</td><td>On/Off</td></tr>
<tr><td>6</td><td>Off</td></tr>
<tr><td>7</td><td>Window</td></tr>
<tr><td>8</td><td>Disuse</td><td rowspan="4">Sub, Reverse Control</td><td rowspan="8">1</td><td rowspan="8">Operation on</td></tr>
<tr><td>9</td><td>On/Off</td></tr>
<tr><td>A</td><td>Off</td></tr>
<tr><td>B</td><td>Window</td></tr>
<tr><td>C</td><td>Disuse</td><td rowspan="4">Main, Reverse Control</td></tr>
<tr><td>D</td><td>On/Off</td></tr>
<tr><td>E</td><td>Off</td></tr>
<tr><td>F</td><td>Window</td></tr>
<tr><th>Option</th><th colspan="2">SEG17</th><th colspan="2">SEG18</th><th colspan="2">SEG19</th><th colspan="2">SEG20</th></tr>
<tr><th>Explanation</th><th colspan="2">Buzzer control</th><th colspan="2">Maximum filter usage time [2]</th><th colspan="2">PAGE</th><th colspan="2">Individual control with remote control [3]</th></tr>
<tr><td rowspan="5">Indication and Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td></tr>
<tr><td>0</td><td>Use of buzzer</td><td>2</td><td>1000 Hour</td><td colspan="2" rowspan="4">3</td><td>0 or1</td><td>Indoor1</td></tr>
<tr><td rowspan="3">1</td><td rowspan="3">Disuse</td><td rowspan="3">6</td><td rowspan="3">2000 Hour</td><td>2</td><td>Indoor 2</td></tr>
<tr><td>3</td><td>Indoor 3</td></tr>
<tr><td>4</td><td>Indoor 4</td></tr>
<tr><th>Option</th><th colspan="2">SEG21</th><th colspan="2">SEG22</th><th colspan="2">SEG23</th><th colspan="2">SEG24</th></tr>
<tr><th>Explanation</th><th colspan="2">Heating setting compensation[4]</th><th colspan="2" rowspan="5">RESERVED</th><th colspan="2">Away Set OFF Timer</th><th colspan="2" rowspan="5">RESERVED</th></tr>
<tr><td rowspan="4">Indication and Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td></tr>
<tr><td>0</td><td>Disuse</td><td>0 or1</td><td>Auto Set OFF 30Min.</td></tr>
<tr><td>1</td><td>3.6°F(2°C)</td><td>2</td><td>Auto Set OFF 60Min.</td></tr>
<tr><td>2</td><td>9°F(5°C)</td><td>3</td><td>Auto Set OFF 120Min.</td></tr>
<tr><td colspan="4"></td><td>4</td><td>Auto Set OFF 180Min.</td></tr>
</table>

- 1) SEG4
  By SEG4 setting, Minimizing fan operation when thermostat is off.
  - Fan operates for 20 seconds at an interval of 5 minutes in heat mode.
  - Fan stops or operates Ultra low in Cooling when thermostat is off.
- 2) SEG18
  If you set the Maximum filter usage time option to a value other than 2 and 6, it is automatically set to 2 (1000 hours).
- 3) SEG20
  If you set the Individual control with remote control option to a value other than 0 to 4, it is automatically set to 0 (Indoor1)
- 4) SEG21
  Default value of Heating setting compensation is 3.6°F(2°C).

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.

Abnormal conditions	Indicators					Remarks
	Concealed Type					
	Green	Red				
	Standard Type					
Power reset	◑	X	X	X	X	
Error of Room sensor in the indoor unit(Open/Short)	X	X	◑	X	X	
Error of EVA-IN,EVA-OUT sensor in the indoor unit(Open/ Short)	◑	X	◑	X	X	
Error of Fan motor in the indoor unit	X	X	X	◑	X	
Error of Outdoor or Terminal Block Thermal Fuse(Open)	X	X	◑	◑	◑	
Clogging of outdoor's service valve	◑	X	X	◑	◑	
Detection of the float switch	X	X	X	◑	◑	
Error of EEPROM or OPTION SETTING	◑	◑	◑	◑	◑	
1. No communication for 2 minutes between indoor units (Communication error for more than 2 minutes) 2. Indoor unit receiving the communication error from outdoor unit 3. Outdoor unit tracking 3 minutes error 4. 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 minutes)	X	X	◑	◑	X	1. Indoor unit error (Display is unrelated with operation) 2. Outdoor unit error (Display is unrelated with operation)

● On ◑ Flickering **X** Off

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

Appendix

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

Display	Explanation	Remark
101	Communication Error between indoor and outdoor unit	
121	Error of Room sensor in the indoor unit(Open/Short)	
122	Error of Eva In sensor in the indoor unit(Open/Short)	
123	Error of Eva Out sensor in the indoor init(Open/Short)	
153	2nd Detection of the float switch	
154	Error of Fan motor in the indoor unit	
162	EEPROM error	
163	EEPROM option setting error	
198	Error of Terminal Block's Thermal Fuse(Open)	
202	No communication for 2minutes betwwen indoor units(Communication error for more than 2minutes)	
422	Clogging of outdoor's service valve	
557	Option code miss matching among the indoors (only for DPM)	Check indoor option code
601	Error of communication down between the indoor unit and wired remote controller after 3minutes.	Wired remote controller error
604	Error of communication down between the indoor unit and wired remote controller after completion of 10 times tracking.	
606	COM1/COM2 Cross-installed error	
607	Error of Main wired remote controller and Sub wired remote controller setting	

SAMSUNG

Air conditioner

User manual

AC*BNLDCH, AC***BNHDCH**

- Thank you for purchasing this Samsung air conditioner.
- Before operating this unit, please read this user manual carefully and retain it for future reference.

SAMSUNG

Contents

ENERGY STAR qualified model only
- Proper sizing and installation of equipment is critical to achieve optimal performance. Split system air conditioners and heat pumps (excluding ductless systems) must be matched with appropriate coil components to meet ENERGY STAR criteria. Ask your contractor for details or visit www.energystar.gov.

Qualified model list (Indoor/Outdoor):
AC009BNHDCH / AC009BXADCH
AC009BNLDCH / AC009BXADCH
AC012BNHDCH / AC012BXADCH
AC018BNHDCH / AC018BXADCH
AC024BNHDCH / AC024BXADCH

Safety Information

California Proposition 65 Warning (US)

⚠ WARNING

Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

Before using your new air conditioner, please read this manual thoroughly to ensure that you know how to safely and efficiently operate the extensive features and functions of your new appliance.

Because the following operating instructions cover various models, the characteristics of your air conditioner may differ slightly from those described in this manual. If you have any questions, call your nearest contact centre or find help and information online at www.samsunghvac.com.

⚠ WARNING

Hazards or unsafe practices that may result in severe personal injury or death.

⚠ CAUTION

Hazards or unsafe practices that may result in minor personal injury or property damage.

- Follow directions.
- Do NOT attempt.
- Make sure the machine is grounded to prevent electric shock.
- Cut-off the power supply.
- Do NOT disassemble.

FOR INSTALLATION

⚠ WARNING

- **Use the power line with the power specifications of the product or higher and use the power line for this appliance only. In addition, do not use an extension line.**

Safety Information

- Extending the power line may result in electric shock or fire.
- Do not use an electric transformer. It may result in electric shock or fire.
- If the voltage/frequency/rated current condition is different, it may cause fire.

The installation of this appliance must be performed by a qualified technician or service company.

- Failing to do so may result in electric shock, fire, explosion, problems with the product, or injury and may also void warranty on the installed product.

Install a switch and circuit breaker dedicated to the air conditioner.

- Failing to do so may result in electric shock or fire.

Fix the outdoor unit firmly so that the electric part of the outdoor unit is not exposed.

- Failing to do so may result in electric shock or fire, explosion, or problems with the product.

Do not install this appliance near a heater, inflammable material. Do not install this appliance in a humid, oily or dusty location, in a location exposed to direct sunlight and water (rain drops). Do not install this appliance in a location where gas may leak.

- This may result in electric shock or fire.

Never install the outdoor unit in a location such as on a high external wall where it could fall.

- If the outdoor unit falls, it may result in injury, death or property damage.

This appliance must be properly grounded. Do not ground the appliance to a gas pipe, plastic water pipe, or telephone line.

- Failure to do so may result in electric shock, fire, an explosion, or other problems with the product.

⚠ CAUTION

Install your appliance on a level and hard floor that can support its weight.

- Failing to do so may result in abnormal vibrations, noise, or problems with the product.

Install the draining hose properly so that water is drained correctly.

- Failing to do so may result in water overflowing and property damage. Avoid adding drain to waste pipes as odours may arise in the future.

When installing the outdoor unit, make sure to connect the draining hose so that draining is performed correctly.

- The water generated during the heating operation by the outdoor unit may overflow and result in property damage.
  In particular, in winter, if a block of ice falls, it may result in injury, death or property damage.

FOR POWER SUPPLY

⚠ WARNING

When the circuit breaker is damaged, contact your nearest service centre.

Do not pull or excessively bend the power line. Do not twist or tie the power line. Do not hook the power line over a metal object, place a heavy object on the power line, insert the power line between objects, or push the power line into the space behind the appliance.

- This may result in electric shock or fire.

⚠ CAUTION

When not using the air conditioner for a long period of time or during a thunder/lightning storm, cut the power at the circuit breaker.

- Failing to do so may result in electric shock or fire.

Safety Information

FOR USING

⚠ WARNING

If the appliance is flooded, please contact your nearest service centre.

- Failing to do so may result in electric shock or fire.

If the appliance generates a strange noise, a burning smell or smoke, cut-off the power supply immediately and contact the nearest service center.

- Failing to do so may result in electric shock or fire.

In the event of a gas leak (such as propane gas, LP gas, etc.), ventilate immediately without touching the power line. Do not touch the appliance or power line.

- Do not use a ventilating fan.
- A spark may result in an explosion or fire.

To reinstall the air conditioner, please contact your nearest service centre.

- Failing to do so may result in problems with the product, water leakage, electric shock, or fire.
- A delivery service for the product is not provided. If you reinstall the product in another location, additional construction expenses and an installation fee will be charged.
- Especially, when you wish to install the product in an unusual location such as in an industrial area or near the seaside where it is exposed to the salt in the air, please contact your nearest service centre.

Do not touch the circuit breaker with wet hands.

- This may result in electric shock.

Do not turn the air conditioner off with the circuit breaker while it is operating.

- Turning the air conditioner off and then on again with the circuit breaker may cause a spark and result in electric shock or fire.

After unpacking the air conditioner, keep all packaging materials well out of the reach of children, as packaging materials can be dangerous to children.

- If a child places a bag over its head, it may result in suffocation.

Do not touch the front panel with your hands or fingers during the heating operation.

- This may result in electric shock or burns.

Do not insert your fingers or foreign substances into the outlet when the air conditioner is operating or the front panel is closing.

- Take special care that children do not injure themselves by inserting their fingers into the product.

Do not insert your fingers or foreign substances into the air inlet/outlet of the air conditioner.

- Take special care that children do not injure themselves by inserting their fingers into the product.

Do not strike or pull the air conditioner with excessive force.

- This may result in fire, injury, or problems with the product.

Do not place an object near the outdoor unit that allows children to climb onto the machine.

- This may result in children seriously injuring themselves.

Do not use this air conditioner for long periods of time in badly ventilated locations or near infirm people.

- Since this may be dangerous due to a lack of oxygen, open a window at least once an hour.

If any foreign substance such as water has entered the appliance, cut-off the power supply and contact the nearest service center.

- Failing to do so may result in electric shock or fire.

Do not attempt to repair, disassemble, or modify the appliance yourself.

- Do not use any fuse (such as copper, steel wire, etc.)other than the standard fuse.
- Failing to do so may result in electric shock, fire, problems with the product, or injury.

Safety Information

⚠ CAUTION

Do not place objects or devices under the indoor unit.
- Water dripping from the indoor unit may result in fire or property damage.

Check that the installation frame of the outdoor unit is not broken at least once a year.
- Failing to do so may result in injury, death or property damage.

Do not stand on top of the appliance or place objects (such as laundry, lighted candles, lighted cigarettes, dishes, chemicals, metal objects, etc.) on the appliance.
- This may result in electric shock, fire, problems with the product, or injury.

Do not operate the appliance with wet hands.

This may result in electric shock. Do not spray volatile material such as insecticide onto the surface of the appliance.
- As well as being harmful to humans, it may also result in electric shock, fire or problems with the product.

Do not spray volatile material such as insecticide onto the surface of the appliance.
- As well as being harmful to humans, it may also result in electric shock, fire or problems with the product.

Do not drink the water from the air conditioner.
- The water may be harmful to humans.

Do not apply a strong impact to the remote controller and do not disassemble the remote controller.

Do not touch the pipes connected with the product.
- This may result in burns or injury.

Do not use this air conditioner to preserve precision equipment, food, animals, plants or cosmetics, or for any other unusual purposes.
- This may result in property damage.

Avoid directly exposing humans, animals or plants from the air flow from the air conditioner for long periods of time.

- This may result in harm to humans, animals or plants.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

FOR CLEANING

⚠ WARNING

⊘ **Do not clean the appliance by spraying water directly onto it. Do not use benzene, thinner, alcohol or acetone to clean the appliance.**

- This may result in discoloration, deformation, damage, electric shock or fire.

Before cleaning or performing maintenance, cut-off the power supply and wait until the fan stops.

- Failing to do so may result in electric shock or fire.

⚠ CAUTION

❗ **Take care when cleaning the surface of the heat exchanger of the outdoor unit since it has sharp edges.**

- To avoid cutting your fingers, wear thick cotton gloves when cleaning it.
- This should be done by a qualified technician please contact your installer or service centre.

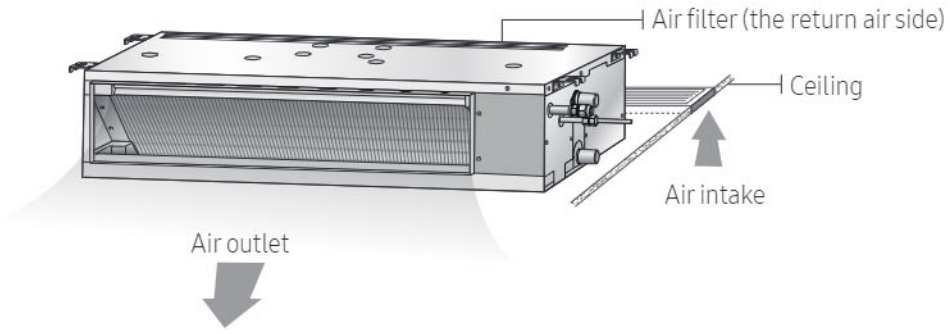
⊘ **Do not clean the inside of the air conditioner by yourself.**

- For cleaning inside the appliance, contact your nearest service centre.
- When cleaning the internal filter, refer to the descriptions in the 'Cleaning and Maintaining' section.
- Failure to do may result in damage, electric shock or fire.
- Make sure to prevent any injury from sharp edges of the surface when handling the heat exchanger.

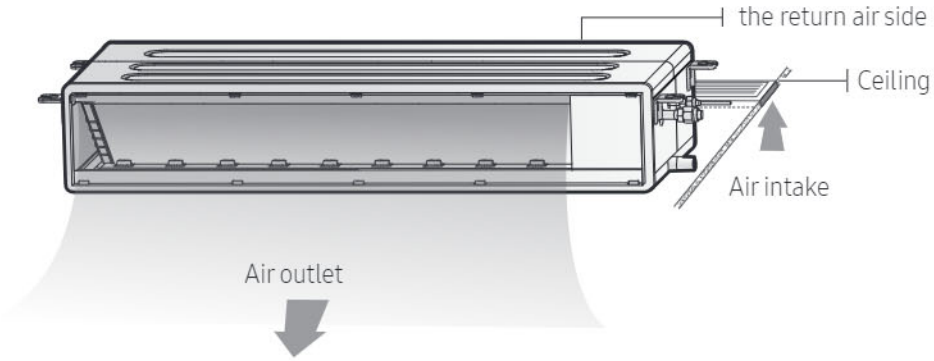
Indoor Unit Overview

Congratulations on the purchase of the air conditioner. We hope you enjoy the features of your air conditioner and stay cool or warm with optimal efficiency.
Please read the user manual to get started and to make the best use of the air conditioner.

AC***BNLDCH



AC***BNHDCH



NOTE

- Your air conditioner and display may look slightly different from the illustration shown above depending on your model.

Cleaning the Air Conditioner

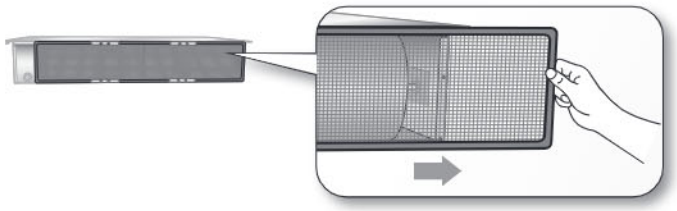
Cleaning the air filter

For optimal performance clean the filter periodically. For your safety, when cleaning the filter make sure the unit is off.

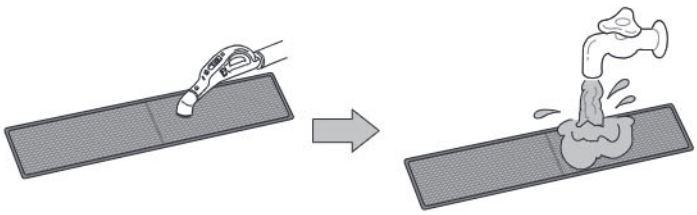
When cleaning the filter, make sure to cut-off the power supply. Washable foam based Air filter captures large particles from the air. The filter is cleaned with a vacuum or by hand washing.

AC***BNLDCH

1. Slide out the Air filter on the rear side panel to the right side.

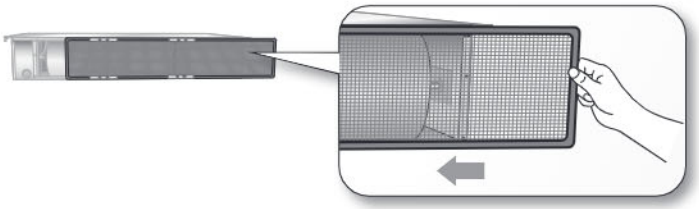


2. Clean the Air filter with a vacuum cleaner or soft brush. If dust is too heavy, then rinse it with running water and dry it in a ventilated area.



- For best conditions, repeat every two weeks.
- If the Air filter dries in a confined (or humid) area, odors may generate. If it occurs, re-clean and dry it in a ventilated area.

3. Insert the Air filter back in its original position.



NOTE

- The illustration shown above may differ from yours depending on your model.
- After cleaning the filter, press the Filter Reset button on the remote control for 2 seconds to reset the filler schedule. Filter sign indicator will be on for cleaning time.
- AC***BNHDCH model does not provide filter by default.

Maintaining the Air Conditioner

If the air conditioner will not be used for an extended period of time, dry the air conditioner to maintain in best conditions.

1. Dry the air conditioner thoroughly by operating in Fan mode for 3 to 4 hours and then turn off the power. There may be internal damage if moisture is left in components.
2. Before using the air conditioner again, dry the inner components of the air conditioner again by running in Fan mode for 3 to 4 hours. This helps remove odours that may have generated from dampness.

Periodical checks

Refer to the following chart to maintain the air conditioner properly.

Type	Description	Monthly	Every 4 months	Once a year
Indoor unit	Clean the air filter (1).	●		
	Clean the condensate drain pan (2).			●
	Thoroughly clean the heat exchanger (2).			●
	Clean the condensate drain pipe (2).		●	
	Replace the remote control batteries (1).			●
Outdoor unit	Clean the heat exchanger on the outside of the unit (2).		●	
	Clean the heat exchanger on the inside of the unit (2).			●
	Clean the electric components with jets of air (2).			●
	Verify that all the electric components are firmly tightened (2).			●
	Clean the fan (2).			●
	Verify that all the fan assembly is firmly tightened (2).			●
	Clean the condensate drain pan (2).			●

NOTE

- The checks and maintenance operations described above are essential to guarantee the efficiency of the air conditioner. The frequency of these operations may vary depending on the characteristics of the area, the amount of dust, etc.
  1. The above mentioned operations should be performed more frequently if the area of installation is very dusty.
  2. These operations must always be performed by qualified personnel. For more detailed information, refer to Installation Manual.

Internal protections via the unit control system

The air conditioner control system has internal protections for user comfort and system faults.

Type	Description
Cold air prevention	While in heat mode, the internal fan will not operate while the indoor unit coil is warming up to prevent circulation of cold air.
De-ice cycle	While the heat pump defrosts, the internal fan will not operate to prevent circulation of cold air.
Anti-protection of internal battery	The compressor will be off to protect internal battery when the air conditioner operates in Cool mode.
Protect compressor	The air conditioner does not start operating immediately to protect the compressor of the outdoor unit after it has been started.

NOTE

- If the heat pump is operating in Heat mode, the de-ice cycle is actuated to remove frost from an outdoor unit that may have deposited at low temperatures.
- The internal fan is switched off automatically and restarted only after the de-ice cycle is completed.
- When the de-ice cycle is operating,it may generate strange sound. It is normal operation for product safety.

Troubleshooting

Refer to the following chart if the air conditioner operates abnormally. This may save time and unnecessary expense.

Problem	Solution
The air conditioner does not operate immediately after it has been restarted.	• Because of the protective mechanism, the appliance does not start operating immediately to keep the unit from overloading. The air conditioner will start in 3 minutes.
The air conditioner does not operate at all.	• Check whether the power is turned on, and then operate the air conditioner again. • Check whether the auxiliary power switch (MCCB, ELB) is turned on. • If the auxiliary power switch (MCCB, ELB) is turned off, the air conditioner does not work although you press the (Power) button. • When you clean the air conditioner or do not use it for an extended period of time, turn off the auxiliary power switch (MCCB, ELB). • After the air conditioner is not used for an extended period of time, be sure to turn on the auxiliary power switch (MCCB, ELB) 6 hours before starting operation. **NOTE** • The auxiliary power switch (MCCB, ELB) is sold separately. • Make sure that auxiliary power switch (MCCB, ELB) is installed in the distribution box inside the building. • If the air conditioner is turned off by the Timed off function, turn on the air conditioner again by pressing the (Power) button.
The temperature does not change.	• Check whether the Fan mode is running. In the Fan mode, the air conditioner controls the set temperature automatically, and you cannot change the set temperature.
Warm air does not come out of the air conditioner.	• Check whether the outdoor unit is designed for cooling only. In this case, warm air does not come out although you select the Heat mode. • Check whether the remote control is designed only for cooling only. Use a remote control that supports both cooling and heating.
The fan speed does not change.	• Check whether the Auto or Dry mode is running. In these modes, the air conditioner controls the fan speed automatically, and you cannot change the fan speed.
The wireless remote control does not operate.	• Check whether the batteries are discharged. Replace the batteries with new ones. • Make sure that nothing is blocking the remote control sensor. • Check whether any strong lighting sources are near the air conditioner. Strong light which comes from fluorescent bulbs or neon signs may interfere with the remote control.

Problem	Solution
The wired remote control does not operate.	• Check whether the indicator is displayed at the bottom right of the remote control display. In this case, turn off both the air conditioner and the auxiliary power switch, and then contact a service centre.
The air conditioner is not turned on or off immediately with the wired remote control.	• Check whether the wired remote control is set for group control. In this case, the air conditioners connected to the wired remote control are turned on or off sequentially. This operation takes up to 32 seconds.
The Timed on/off function does not operate.	• Check whether you pressed the (SET) button on the remote control after setting the on/off time. Set the on/off time.
The indoor unit display blinks continuously.	• Turn on the air conditioner again by pressing the (Power) button. • Turn off and then turn on the auxiliary power switch, and then turn on the conditioner. • If the indoor unit display is still blinking, contact a service centre.
I want to get cooler air.	• Operate the air conditioner with a electric fan to save energy and enhance the cooling efficiency.
The air is not cool or warm enough.	• In the Cool mode, cool air does not come out if the set temperature is higher than the current temperature. – Remote control: Press the Temperature button repeatedly until the set temperature [minimum: 64°F(18°C)] is set to lower than the current temperature. • In the Heat mode, warm air does not come out if the set temperature is lower than the current temperature. – Remote control: Press the Temperature button repeatedly until the set temperature [maximum: 86°F(30°C)] is set to higher than the current temperature. • Both cooling and heating do not operate in the Fan mode. Select the Cool, Heat, Auto, or Dry mode. • Check whether the air filter is blocked with dirt. A dusty filter may decrease the cooling and heating efficiencies. Clean the air filter frequently. • If a cover is on the outdoor unit or any obstacle is present near the outdoor unit, remove them. • Install the outdoor unit in a well-ventilated place. Avoiding places exposed to direct sunlight or close to a heating appliance. • Place a sunscreen over the outdoor unit to protect it from direct sunlight. • If the indoor unit is installed in a place exposed to direct sunlight, pull the curtains on the windows.

Troubleshooting

Problem	Solution
The air is not cool or warm enough.	• Close the windows and doors to maximize the cooling and heating efficiencies. • If the Cool mode is stopped and then started immediately, cool air comes out after about 3 minutes to protect the compressor of the outdoor unit. • When the Heat mode is started, warm air does not come out immediately to prevent cool air from coming out at the beginning. • If the refrigerant pipe is too long, the cooling and heating efficiencies may be decreased. Avoid exceeding the maximum pipe length.
The air conditioner makes strange noises.	• In certain conditions [especially, when the outdoor temperature is lower than 68°F(20°C)], a hissing, rumbling, or splashing sound may be heard while the refrigerant is circulating through the air conditioner. This is a normal operation. • When you press the (Power) button on the remote control, noise may be heard from the drain pump inside the air conditioner. This noise is a normal sound.
Unpleasant odours permeate the room.	• If the air conditioner is running in a smoky area or if there is a smell entering from outside, ventilate the room properly. • If both indoor temperature and indoor humidity are high, operate the air conditioner in the Clean or Fan mode for 1 to 2 hours. • If the air conditioner has not been operated for an extended period of time, clean the indoor unit and then operate the air conditioner in the Fan mode for 3 to 4 hours to dry the inside of the indoor unit for removal of unpleasant odours. • If the air filter blocked with dirt, clean the air filter.
Steam is produced on the indoor unit.	• In winter, if the indoor humidity is high, steam may be produced around the air outlet while the defrost function is running. This is a normal operation.
The outdoor unit fan continues to operate when the air conditioner is turned off.	• When the air conditioner is turned off, the outdoor unit fan may continue to operate to reduce noise of the refrigerant gas. This is a normal operation.
Water drops from the piping connections of the outdoor unit.	• Condensation may develop due to the difference in temperature. This is a normal condition.
Steam is produced on the outdoor unit.	• In winter, when the air conditioner runs in the Heat mode, the frost on the heat exchanger melts and steam may be produced. This is a normal operation, neither product malfunction nor a fire.

Operation Features

Operating temperature and humidity

When using the air conditioner follow the operating temperature and humidity ranges.

Indoor unit / Outdoor unit : AC***BN*DCH / AC***BXADCH

Mode	Indoor temperature	Outdoor temperature	Indoor humidity	If out of conditions
Cooling	64°F to 90°F (18°C to 32°C)	0°F to 122°F (-18°C to 50°C)	80% or less	Condensation may occur on the indoor unit with risk to have either water blow off or drops on the floor. Internal protection triggers and the air conditioner will stop.
Drying	64°F to 90°F (18°C to 32°C)	0°F to 122°F (-18°C to 50°C)	80% or less	
Heating	86°F or less (30°C or less)	AC009/012/018/024BN*DCH -13°F to 75°F (-25°C to 24°C) AC030/036/042/048BN*DCH -4°F to 75°F (-20°C to 24°C)	-	Internal protection triggers and the air conditioner will stop.

Indoor unit / Outdoor unit : AC***BN*DCH / AJ***BX**CH

Mode	Indoor temperature	Outdoor temperature	Indoor humidity	If out of conditions
Cooling	64°F to 90°F (18°C to 32°C)	Depending on the outdoor unit specifications	80% or less	Condensation may occur on the indoor unit with risk to have either water blow off or drops on the floor. Internal protection triggers and the air conditioner will stop.
Drying	64°F to 90°F (18°C to 32°C)		80% or less	
Heating	86°F or less (30°C or less)		-	Internal protection triggers and the air conditioner will stop.

⚠ CAUTION

- If you use the air conditioner at a relative humidity above 80%, it may cause a formation of condensation and a leakage of water on the floor.
- The standardized temperature for heating is 45˚F (7˚C). If the outdoor temperature drops to 32˚F (0˚C) or below, the heating capacity can be reduced depending on the temperature condition. If the cooling operation is used at over 90˚F (32˚C) (indoor temperature), it does not cool at its full capacity.
- If the indoor unit is out of the operating temperature and humidity range, the safery device may operate and the air conditioner may stops.

SAMSUNG

QUESTIONS OR COMMENTS?

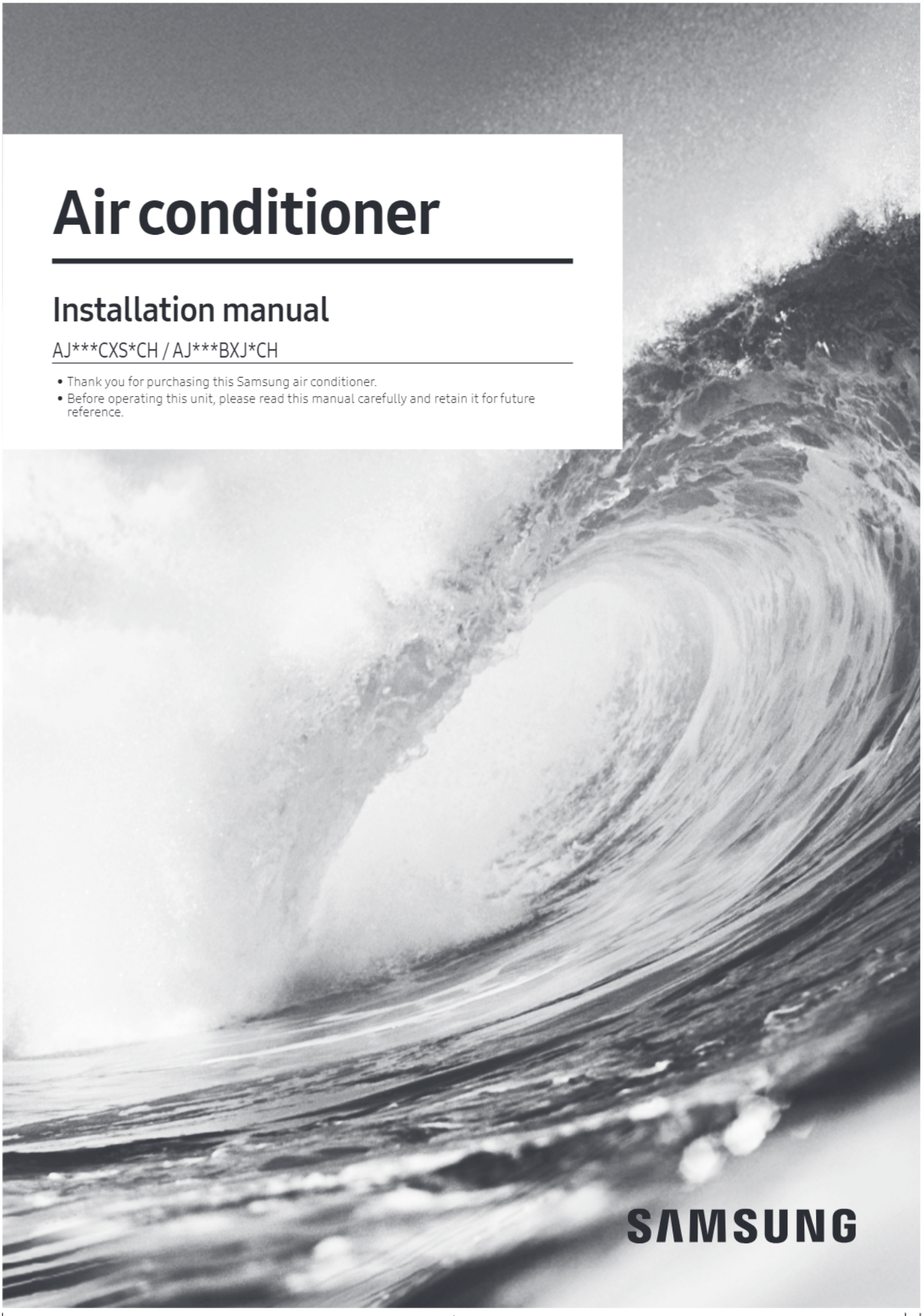
COUNTRY	CALL	OR VISIT US ONLINE AT
AMERICA	888-699-6067 (Samsung HVAC)	www.samsunghvac.com

Air conditioner

Installation manual

AJ***CXS*CH / AJ***BXJ*CH

- Thank you for purchasing this Samsung air conditioner.
- Before operating this unit, please read this manual carefully and retain it for future reference.



SAMSUNG

Contents

IMPORTANT – This product has been designed and manufactured to meet ENERGY STAR criteria for energy efficiency when matched with appropriate coil components.
However, proper refrigerant charge and proper air flow are critical to achieve rated capacity and efficiency.
Installation of this product should follow the manufacturer's refrigerant charging and air flow instructions.
Failure to confirm proper charge and airflow may reduce energy efficiency and shorten equipment life.

Safety Information

California Proposition 65 Warning (US)

⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

⚠ WARNING

- Hazards or unsafe practices that may result in severe personal injury or death.

⚠ CAUTION

- Hazards or unsafe practices that may result in minor personal injury or property damage.

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

⚠ WARNING

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

General information

⚠ WARNING

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

Safety Information

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

Installing the unit

⚠ WARNING

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

- Connecting one indoor unit to this product is prohibited.
- 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.
- Make sure that the condensed water runs well out of the unit at low ambient temperature. Drain pipe and cond heater can frost/ice can not grow. If drain work is not effective for releasing condensed water, it can make the units get damaged by massive ice and system can be stop, covered by ice. (For AJ***CXS*CH models)
- Do not disassemble and alter the heater at your own discretion. (For AJ***CXS*CH models)

Power supply line, fuse or circuit breaker

⚠ WARNING

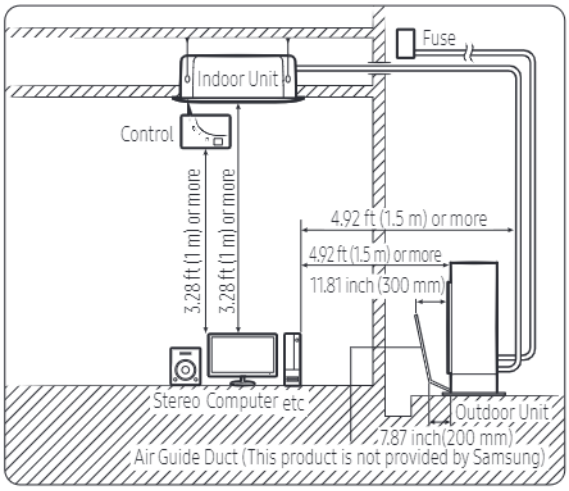
- Always make sure that the power supply is compliant with current safety standards. Always install the air conditioner in compliance with current local safety standards.
- Always verify that a suitable earthing connection is available.
- Verify that the voltage and frequency of the power supply comply 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.

Installation Procedure

Step 1 Choosing the installation location

Installation location requirements

- Do not place the outdoor unit on its side or upside down. Failing to do so may cause the compressor lubrication oil to run into the cooling circuit and lead to serious damage to the unit.
- Install the unit in a well-ventilated location away from direct sunlight or strong winds.
- Install the unit in a location that would not obstruct any passageways or thoroughfares.
- Install the unit in a location that would not inconvenience or disturb your neighbors, as they could be affected by the noise or the airflow coming from the unit.
- Install the unit in a location where the pipes and the cables can be easily connected to the indoor unit.
- Install the unit on a flat, stable surface that can withstand the weight of the unit. Otherwise, the unit can generate noise and vibration during operation.
- Install the unit so that the air flow is directed towards the open area.
- Maintain sufficient clearance around the outdoor unit, especially from a radio, computer, stereo system, etc.

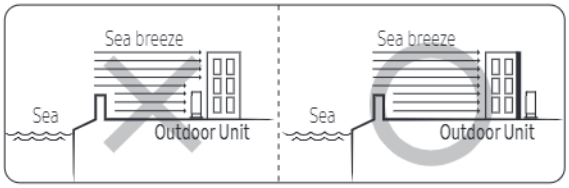


- Install the unit at a height where its base can be firmly fixed in place.
- Make sure that the water dripping from the drain hose runs away correctly and safely.

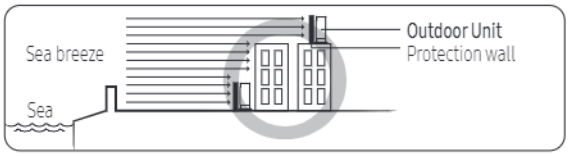
⚠ CAUTION

- You have just purchased a system air conditioner and it has been installed by your installation specialist.
- This device must be installed according to the national electrical rules.
- If your outdoor unit exceeds a net weight of 132.2 lb (60 kg), do not install it on a suspended wall, but stand it on a floor.
- The reliability of our product cannot be guaranteed under conditions of -13 °F (-25 °C) or less.

- When installing the outdoor unit at the seaside, make sure that it is not directly exposed to sea breeze. If you cannot find an adequate place free from direct sea breeze, construct a protection wall or a protective fence.
  - Install the outdoor unit in a place (such as near buildings etc.) where it can be prevented from sea breeze. Failure to do so may cause a damage to the outdoor unit.



- If you cannot avoid installing the outdoor unit at the seaside, construct a protection wall around to block the sea breeze.
- Construct a protection wall with a solid material such as concrete to block the sea breeze. Make sure that the height and the width of the wall are 1.5 times larger than the size of the outdoor unit. Also, secure a space larger than 27.6 inch (700 mm) between the protection wall and the outdoor unit for exhausted air to ventilate.



⚠ CAUTION

- Depending on the condition of the power supply, unstable power or voltage may cause malfunction of parts or control system (example: on a boat or places using power supplied from electric generator, etc.).

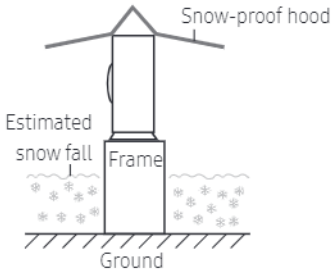
Installation Procedure

- Install the unit in a place where water can drain smoothly.
- If you have any difficulty finding installation location as prescribed above, contact your manufacturer for details.
- Consider that the salinity particles clinging to the external panels should be sufficiently washed out. Be sure to clean sea water and dust from the outdoor unit heat exchanger and apply a corrosion inhibitor on it at least once a year.
- Because the residual water at the bottom of the outdoor unit significantly promotes corrosion, make sure that the slope does not disturb drainage.
  - Keep the floor level so that rain does not accumulate.
  - Be careful not to block the drain hole due to foreign substance.
- Check the condition of the product periodically.
  - Check the installation site every 3 months and perform anti-corrosion treatment such as R-Pro supplied by SAMSUNG (Code : MOK-220SA) or commercial water repellent grease and wax, etc., based on the product condition.
  - When the product is to be shut down for a long period of time, such as off-peak hours, take appropriate measures like covering the product.
- If the product installed within 1640.4 ft (500 m) of seashore, special anti-corrosion treatment is required.

  ※ Please contact your local SAMSUNG representative for further details.

⚠ CAUTION

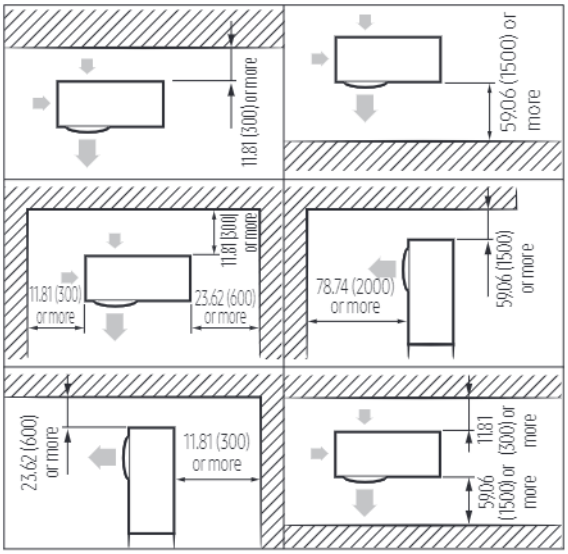
- In areas with heavy snow fall, piled snow could block the air intake. To avoid this incident, install a frame that is higher than estimated snow fall. In addition, install a snow-proof hood to avoid snow from piling on the outdoor unit.



Minimum clearances for the outdoor unit

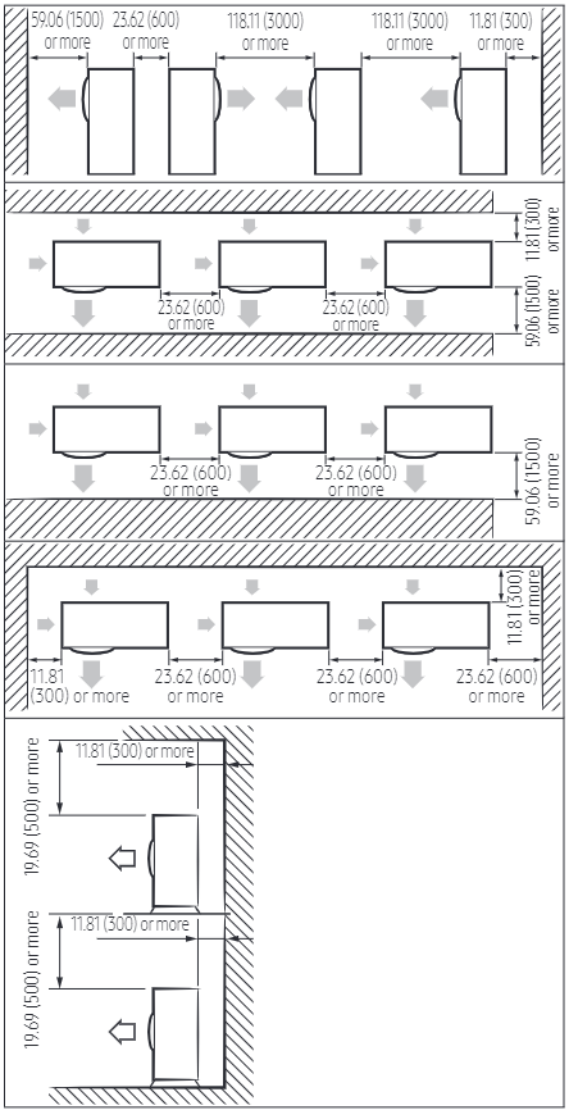
When installing 1 outdoor unit

Unit: inch (mm)



When installing more than 1 outdoor unit

Unit: inch (mm)



⚠ CAUTION

- The outdoor unit must be installed according to the specified distances in order to permit accessibility from each side, to guarantee correct operation, maintenance, and repair of the unit.
  The components of the outdoor unit must be reachable and removable under safe conditions for people and the unit.

Step 2 Checking and preparing accessories and tools

3-wire Power Cable (option)	2-wire Assembly Cable (option)
	
Drain Plug	Energy Label
	
Rubber Leg	Installation Manual
	
Flare Nuts, 5/8 inch (15.88 mm) outer pipe diameter (AJ030CXS4CH, AJ036CXS4CH, AJ036BXJ4CH, AJ048BXJ5CH)	Flare Nuts, 3/8 inch (9.52 mm) outer pipe diameter (AJ024CSX4CH, AJ030CXS4CH, AJ036CXS4CH, AJ036BXJ4CH, AJ048BXJ5CH)
	
Tube connector [Pipe 1/2 inch (12.7 mm); Bolt 3/8 inch (9.52 mm)] (AJ024CSX4CH, AJ030CXS4CH, AJ036CXS4CH, AJ036BXJ4CH, AJ048BXJ5CH)	Tube connector [Pipe 1/2 inch (12.7 mm); Bolt 5/8 inch (15.88 mm)] (AJ030CXS4CH, AJ036CXS4CH, AJ036BXJ4CH, AJ048BXJ5CH)
	
Drain Cap	
	

NOTE

- Wire assembly cables are optional. If they are not supplied, use standard cables.
- The drain plug and the rubber legs are included only when the air conditioner is supplied without assembly pipes.
- If these accessories are supplied, they are in the accessory package or outdoor unit package.

Installation Procedure

Installation Procedure

Step 3 Fixing the outdoor unit in place

Install the outdoor unit on a rigid and stable base to prevent disturbance from any noise caused by vibration. When installing the unit on tall stands or in a location exposed to strong winds, fix the unit securely to the ground or structure.

1 Position the outdoor unit so that the air flow is directed towards the outside, as indicated by the arrows on the top of the unit.

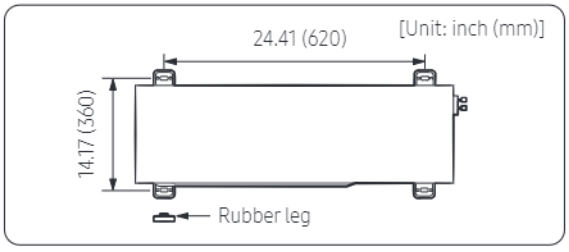
2 Attach the outdoor unit to the appropriate support using anchor bolts.

- The ground wire for the telephone line cannot be used to ground the air conditioner.

3 DIf the outdoor unit is exposed to strong winds, install shield plates around the outdoor unit, so that the fan can operate correctly.

NOTE

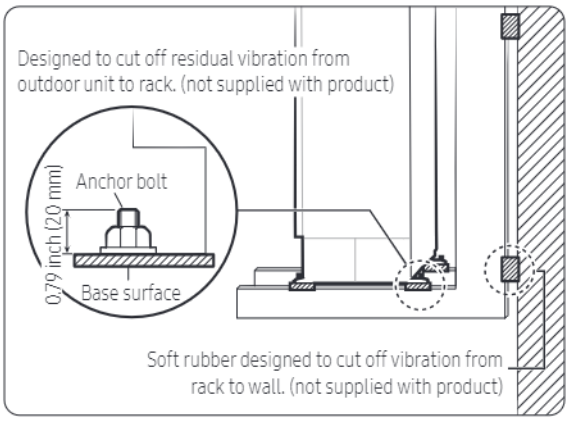
- Install provided rubber legs to prevent vibration and noise.



⚠ CAUTION

- Install a drain outlet at the lowest end around the base for outdoor unit drainage
- When installing the outdoor unit on the roof, waterproof the unit and check the ceiling strength.

Optional: Fixing the outdoor unit to a wall with a rack



- Install a proper grommet in order to reduce noise and residual vibration transferred by the outdoor unit towards the wall.

⚠ CAUTION

- When installing an air guide duct, be sure to check the following:
  - The screws do not damage the copper pipe.
  - The air guide duct is fixed firmly on the guard fan.

Step 4 Connecting the power cables, communication cable, and controllers

You must connect the following three electrical cables to the outdoor unit:

- The main power cable between the auxiliary circuit breaker and the outdoor unit.
- The outdoor-to-indoor power cable between the outdoor unit and the indoor unit.
- The communication cable between the outdoor unit and the indoor unit.

⚠ CAUTION

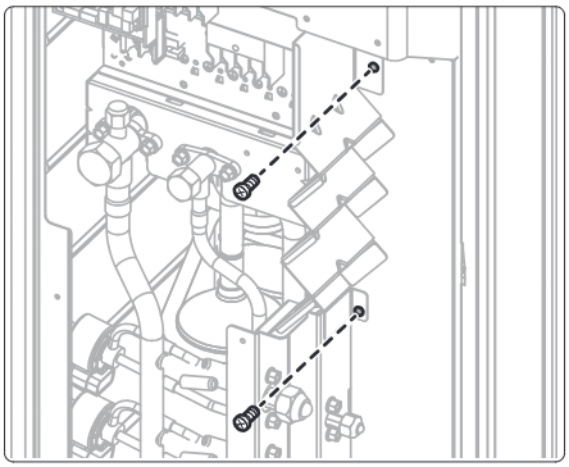
- During installation, make first the refrigerant connections and then the electrical connections. If the unit is being removed, first disconnect the electrical cables and then the refrigerant connections.

- Connect the air conditioner to the earthing system before making the electrical connections.

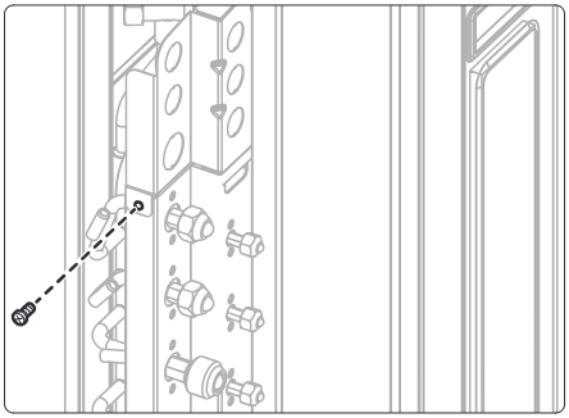
Connecting wire conduits

When connecting cables between the indoor unit and the outdoor unit, use conduits to protect the cables.

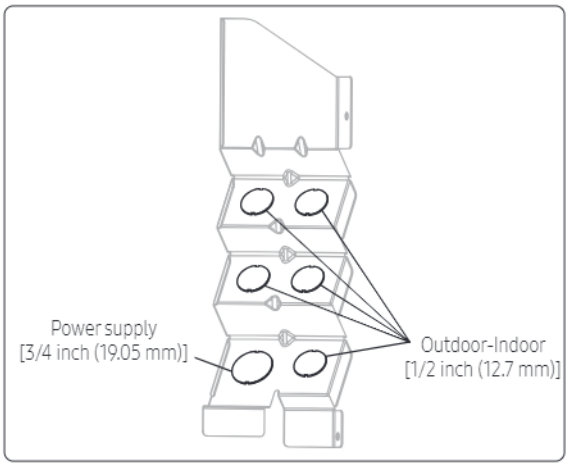
1 Remove the conduit plate from the product.
   - AJ036BXJ4CH



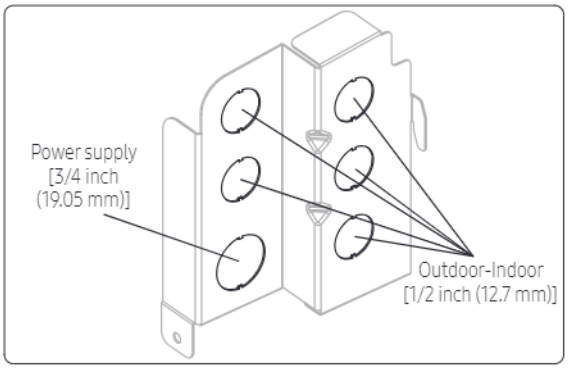
   - AJ020CXS3CH / AJ024CXS4CH / AJ030CXS4CH / AJ036CXS4CH / AJ048BXJ5CH



2 Remove conduit knock-outs for the required number of connections.
   - AJ036BXJ4CH

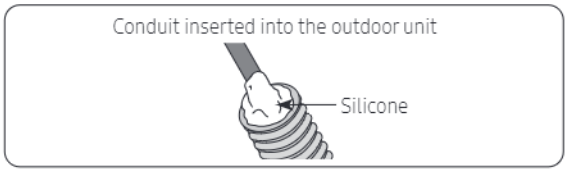


   - AJ020CXS3CH / AJ024CXS4CH / AJ030CXS4CH / AJ036CXS4CH / AJ048BXJ5CH



3 Insert the cables through the conduits, and then fix the conduits to the conduit plate with the lock nuts.

4 Apply silicone to the end of the hose to prevent rain from entering the hose.



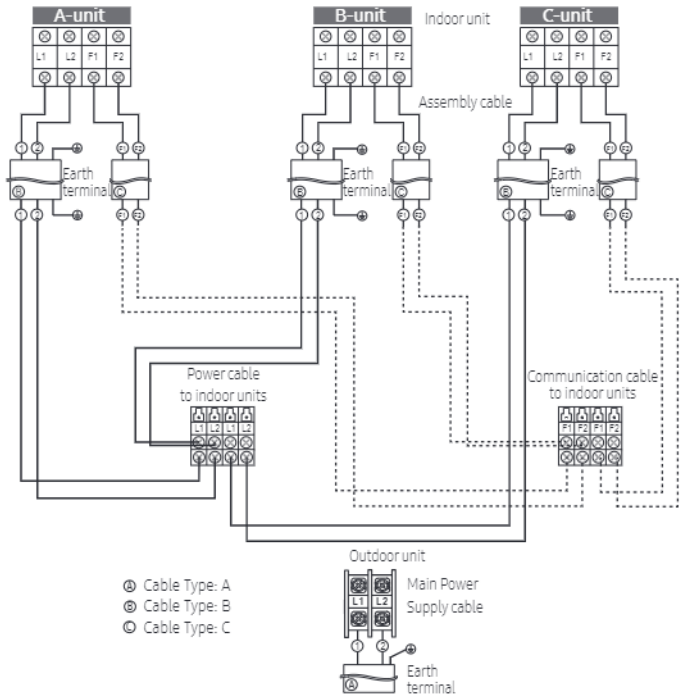
5 Connect the cables to the outdoor units.
For how to connect the cables, refer to the next page.

6 Attach the conduit plate to the product.

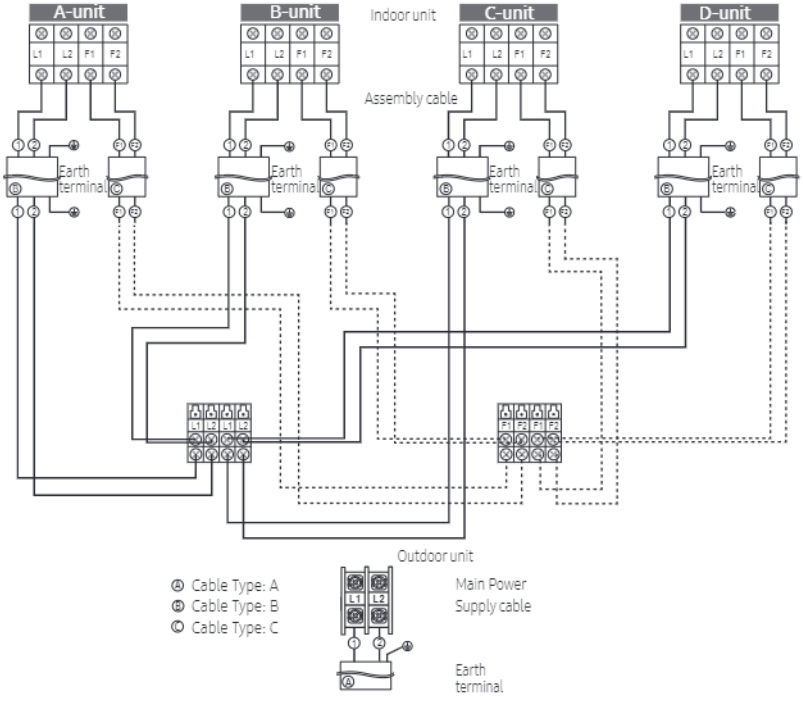
Installation Procedure

Connecting the cables to the outdoor unit

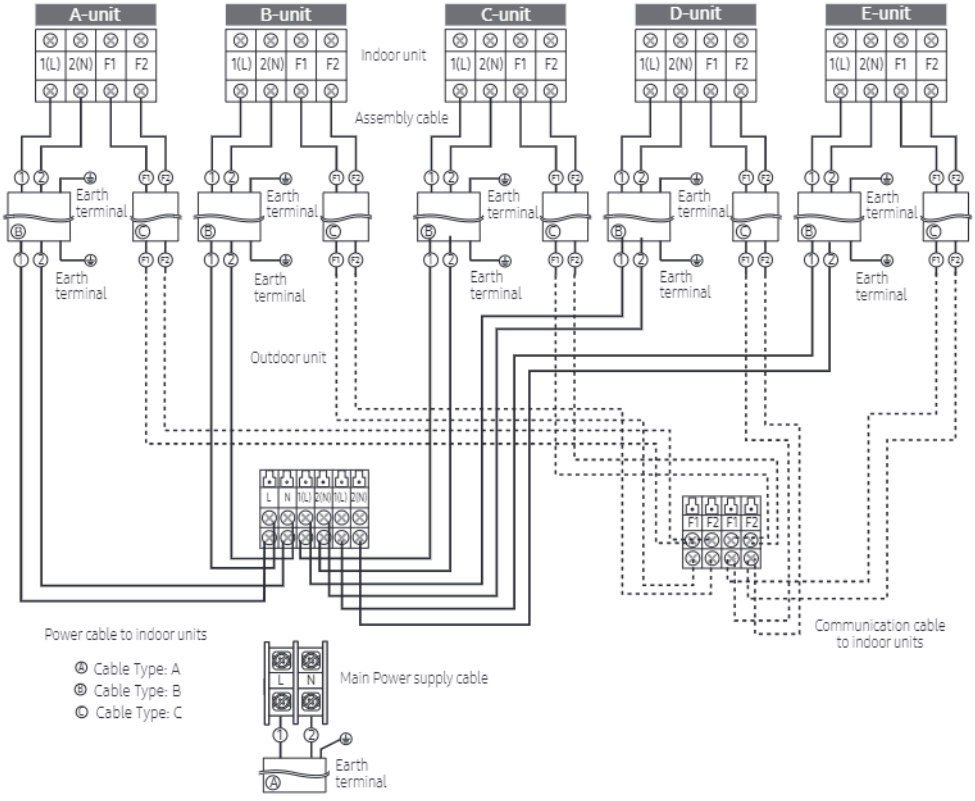
- AJ****X*3CH



- AJ****X*4CH



- AJ****X*5CH



Installation Procedure

Specification for circuit breaker and power supply cord

- Power supply cord is not supplied with air conditioner.
- Select the power supply cord in accordance with relevant local and national regulations.
- Wire size must comply with the applicable local and national code.
- Specifications for local wiring power supply cord and branch wiring are in compliance with local cord.

The specification for cables

Model	Main Power Supply Cable		Indoor Power Supply Cable		Communication Cable		FUSE	MCCB	Type GL
	Specification	Type	Specification	Type	Specification	Type			
AJ036BXJ4CH	3G, 4.0 mm² (8Kcmil or 0.0062 inch² or 10AWG), H05RN-F grade or more	A	3G, 1.5 mm² (3Kcmil or 0.0023 inch² or 14AWG), H05RN-F grade or more	B	2G, 0.75 mm² (1.5Kcmil or 0.0012 inch² or 18AWG), H05RN-F grade or more	C	30A	Frame: 35A Trip: 30A	30A
AJ020CXS3CH AJ024CXS4CH AJ030CXS4CH AJ036CXS4CH AJ048BXJ5CH	3G, 6.0 mm² (12Kcmil or 0.0093 inch² or 8AWG), H05RN-F grade or more						40A	Frame: 50A Trip: 40A	40A

- 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 ≥0.12 inch (3 mm).

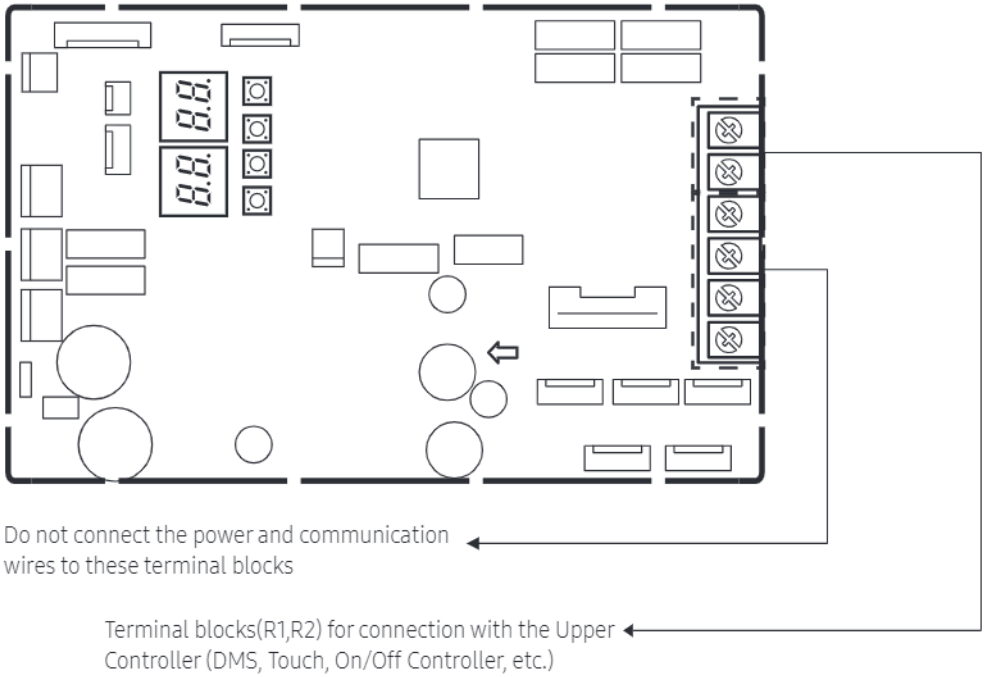
Tightening power terminal

- Connect the cables to the terminal board using the compressed ring terminal.
- Use rated cables only.
- Connect the cables with driver and wrench that can apply the rated torque to the screws.
- Make sure that appropriate tightening torque is applied for cable connection. If the terminal is loose, arc heat may occur and cause fire and if the terminal is connected too firmly, terminal may get damaged.

Screw	Tighten Torque [lbf·ft (kgf·cm)]
M4	0.87 ~1.30 (12.0 ~ 18.0)

Central control connection (optional)

PCB MAIN - OUT



1 Turn the power off and take off the cover of the outdoor units.

2 Connect R1/R2 lines which are upper controller communication cables referring to upper figure. (Upper controller power should be off.)

3 Assemble a cover of the outdoor unit and turn the power on.

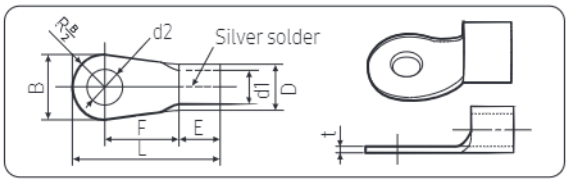
4 Check the communication status.

5 If you install a upper controller to the outdoor unit, every indoor unit which is connected to the outdoor unit can be controlled simultaneously.

Installation Procedure

Outdoor-to-indoor power terminal specifications

- Connect the cables to the terminal board using the compressed ring terminal.
- Cover a solderless ring terminal and a connector part of the power cable and then connect it.



Nominal dimensions for cable [inch² (mm²)]	Nominal dimensions for screw [inch (mm)]	B		D		d1		E	F	L	d2		t
		Standard dimension [inch (mm)]	Allowance [inch (mm)]	Standard dimension [inch (mm)]	Allowance [inch (mm)]	Standard dimension [inch (mm)]	Allowance [inch (mm)]	Min. [inch (mm)]	Min. [inch (mm)]	Max. [inch (mm)]	Standard dimension [inch (mm)]	Allowance [inch (mm)]	Min. [inch (mm)]
0.002 (1.5)	0.15 (4)	0.260 (6.6)	±0.008 (±0.2)	0.134 (3.4)	+0.012 (+0.3) -0.008 (-0.2)	0.067 (1.7)	±0.008 (±0.2)	0.161 (4.1)	0.236 (6)	0.630 (16)	0.169 (4.3)	+0.008 (+0.2) 0 (0)	0.028 (0.7)
		0.315 (8)											
0.004 (2.5)		0.260 (6.6)	±0.008 (±0.2)	0.165 (4.2)	+0.012 (+0.3) -0.008 (-0.2)	0.091 (2.3)	±0.008 (±0.2)	0.236 (6)	0.236 (6)	0.689 (17.5)	0.169 (4.3)	+0.008 (+0.2) 0 (0)	0.031 (0.8)
		0.335 (8.5)											
0.006 (4)		0.374 (9.5)	±0.008 (±0.2)	0.220 (5.6)	+0.012 (+0.3) -0.008 (-0.2)	0.134 (3.4)	±0.008 (±0.2)	0.236 (6)	0.197 (5)	0.787 (20)	0.169 (4.3)	+0.008 (+0.2) 0 (0)	0.035 (0.9)

- Connect the rated cables only.
- Connect using a driver which is able to apply the rated torque to the screws.
- If the terminal is loose, fire may occur caused by arc. If the terminal is connected too firmly, the terminal may be damaged.

Tightening torque [lbf·ft (kgf·cm)]	
M4	0.87 to 1.30 (12.0 ~ 18.0)
M5	1.45 to 2.17 (20.0 ~ 30.0)

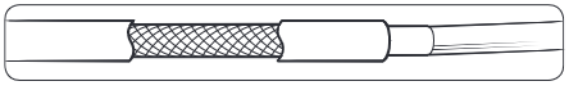
⚠ CAUTION

- When connecting cables, you can connect the cables to the electrical part or connect them through the holes below depending on the spot.
- Connect the communication cable 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.
- Remove all burrs at the edge of the knock-out hole and secure the cable to the outdoor knock-out using lining and bushing with an electrical insulation such as rubber and so on.
- Must keep the cable in a protection tube.
- Keep distances of 1.97 inch (50 mm) or more between power cable and communication cable.
- When the cables are connected through the hole, remove the Plate bottom.

Outdoor-to-indoor power and communication cables specifications

Indoor power supply		
Power supply	Max/Min (V)	Indoor power cable
1Φ, 208-230V~, 60Hz	±10%	0.0039 inch² ↑ (2.5 mm² ↑), 3 wires
Communication cable		
0.0012 to 0.0023 inch² (0.75 to 1.5 mm²), 2 wires		

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

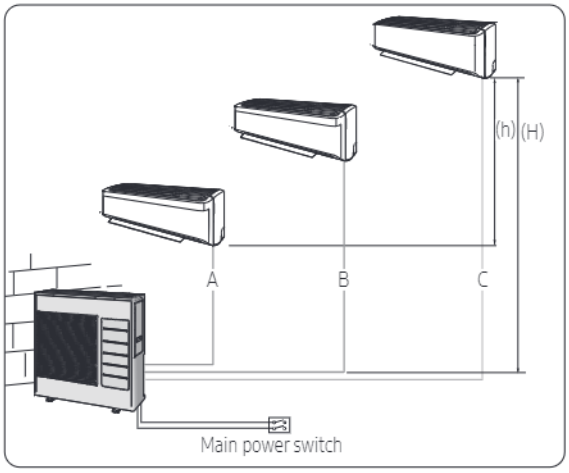


Step 5 Connecting the refrigerant pipe

◆ AJ020CXS3CH

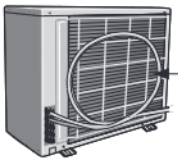
1 Piping outside diameter.

Indoor unit	Out unit	Power supply Ø, V, Hz	Outside diameter	
			Liquid	Gas
07/09/12/009/012, AR15**	AJ020CXS3CH	1,208-230,60	1/4"	3/8"
AJ015**, AC015**				1/2"



2 Piping length and the height.

	1 Room max length	3 Room total max length	Max height between indoor unit & outdoor unit	Max height between indoor units
Dimension	82.0 ft (25 m)	229.7 ft (70 m)	49.2 ft (15 m)	24.6 ft (7.5 m)
Composition	A,B,C	A+B+C	(H)	(h)



⚠ CAUTION

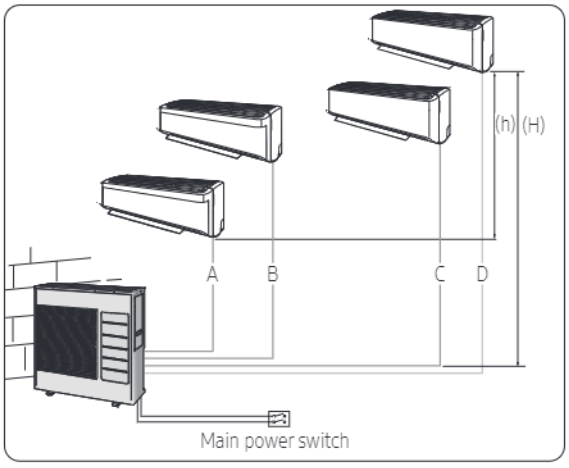
- Minimum pipe length is 10 ft (3 m) to reduce noise and vibration.
- The appearance of the unit may be different from the diagram depending on the model.

Installation Procedure

◆ AJ024CXS4CH

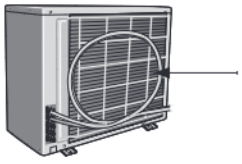
1 Piping outside diameter.

Indoor unit	Out unit	Power supply Ø, V, Hz	Outside diameter	
			Liquid	Gas
07/09/12/009/012, AR15**	AJ024CXS4CH	1,208-230,60	1/4"	3/8"
18/018 AJ015**, AC015**				1/2"



2 Piping length and the height.

	1 Room max length	4 Room total max length	Max height between indoor unit & outdoor unit	Max height between indoor units
Dimension	82.0 ft (25 m)	229.7 ft (70 m)	49.2 ft (15 m)	24.6 ft (7.5 m)
Composition	A,B,C,D	A+B+C+D	(H)	(h)



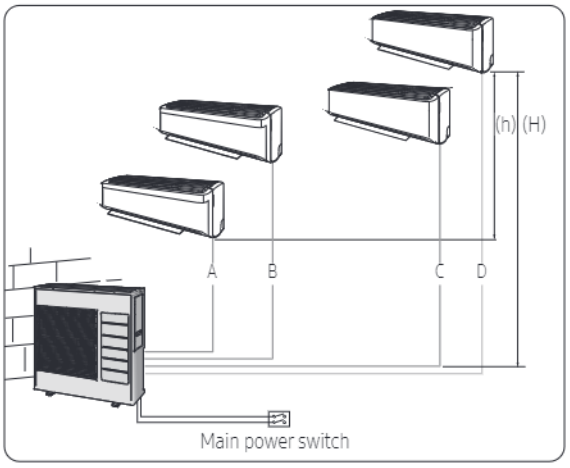
⚠ CAUTION

- Minimum pipe length is 10 ft (3 m) to reduce noise and vibration.
- The appearance of the unit may be different from the diagram depending on the model.

◆ AJ030CXS4CH / AJ036CXS4CH / AJ036BXJ4CH

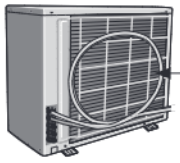
1 Piping outside diameter.

Indoor unit	Out unit	Power supply Ø, V, Hz	Outside diameter	
			Liquid	Gas
07/09/12/009/012, AR15**	AJ030CXS4CH / AJ036CXS4CH / AJ036BXJ4CH	1,208-230,60	1/4"	3/8"
18/018 AJ015**, AC015**				1/2"
24/024				5/8"



2 Piping length and the height.

	1 Room max length	4 Room total max length	Max height between indoor unit & outdoor unit	Max height between indoor units
Dimension	82.0 ft (25 m)	229.7 ft (70 m)	49.2 ft (15 m)	24.6 ft (7.5 m)
Composition	A,B,C,D	A+B+C+D	(H)	(h)



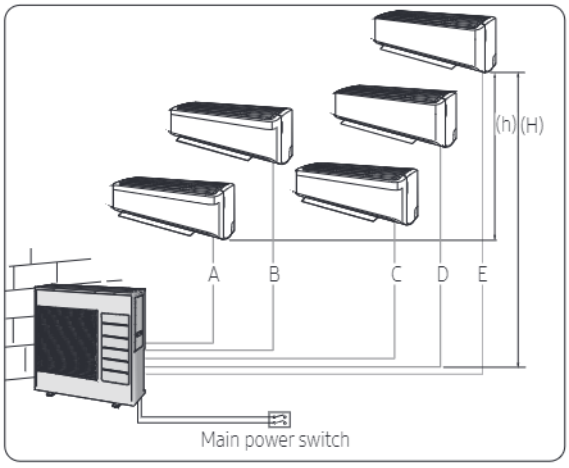
⚠ CAUTION

- Minimum pipe length is 10 ft (3 m) to reduce noise and vibration.
- The appearance of the unit may be different from the diagram depending on the model.

◆ AJ048BXJ5CH

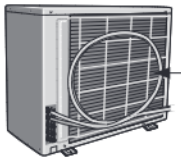
1 Piping outside diameter

Indoor unit	Out unit	Power supply Ø, V, Hz	Outside diameter	
			Liquid	Gas
07/09/12/009/012, AR15**	AJ048BXJ5CH	1,208-230,60	1/4"	3/8"
18/018 AJ015**, AC015**				1/2"
24/024				5/8"



2 Piping length and the height.

	1 Room max length	5 Room total max length	Max height between indoor unit & outdoor unit	Max height between indoor units
Dimension	82.0 ft (25 m)	229.7 ft (70 m)	49.2 ft (15 m)	24.6 ft (7.5 m)
Composition	A,B,C,D,E	A+B+C+D+E	(H)	(h)



⚠ CAUTION

- Minimum pipe length is 10 ft (3 m) to reduce noise and vibration.
- The appearance of the unit may be different from the diagram depending on the model.

⚠ CAUTION

- If the indoor unit combination includes AJ***BNHDCH / AC***BNZDCH indoor units, select a combination according to the guide in the Technical Data Book.
- If error code E563 occurs, Cool Mode Try run and Pipe Check operations are still possible.

NOTE

- You can use the Cool and Heat modes in the following conditions :

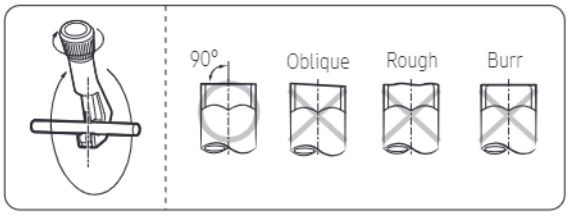
Mode	Cool	Heat	
		AJ***BXJ*CH	AJ***CXS*CH
Outdoor temperature	14 °F to 114.8 °F (-10 °C to 46 °C)	5 °F to 75.2 °F (-15 °C to 24 °C)	-13 °F to 75.2 °F (-25 °C to 24 °C)

- It could take maximum 60 minutes to operate for the protection of the compressor, if the outdoor temperature is below 23 °F (-5 °C).

Step 6 Optional: Cutting and flaring the pipes

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

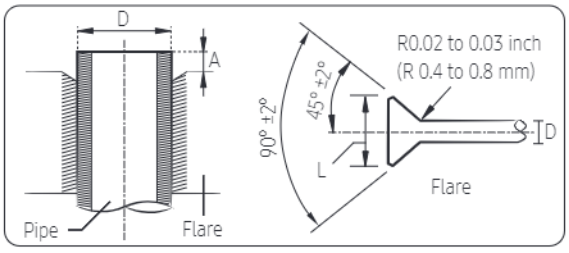
2 If you wish to shorten the pipes, cut it with a pipe cutter, taking care to ensure that the cut edge remains at a 90° angle with the side of the pipe. Refer to the illustrations below for examples of edges cut correctly and incorrectly.



3 To prevent any gas from leaking out, remove all burrs at the cut edge of the pipe, using a reamer.

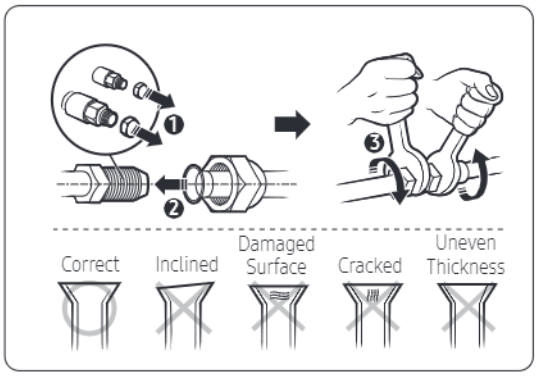
Installation Procedure

4 Slide a flare nut on to the pipe and flare the pipe.



Outer Diameter (D)		Depth (A)		Flare dimension (L)	
mm	inch	mm	inch	mm	inch
Ø6.35	1/4	1.3	0.051	8.7 to 9.1	0.34 to 0.36
Ø9.52	3/8	1.8	0.071	12.8 to 13.2	0.50 to 0.52
Ø12.70	1/2	2.0	0.079	16.2 to 16.6	0.64 to 0.65
Ø15.88	5/8	2.2	0.087	19.3 to 19.7	0.76 to 0.78

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



⚠ CAUTION

- If the pipes require brazing ensure that OFN (Oxygen Free Nitrogen) is flowing through the system.
- Nitrogen blowing pressure range is 2.9 to 7.3 psi (0.02 to 0.05 MPa).

Step 7 Connecting refrigerant pipes and vacuuming

⚠ WARNING

- When installing, make sure there is no leakage. When recovering the refrigerant, ground the compressor first before removing the connection pipe. If the refrigerant pipe is not properly connected and the compressor works with the service valve open, the pipe inhales the air and it makes the pressure inside of the refrigerant cycle abnormally high. It may cause explosion and injury.

The outdoor unit is loaded with sufficient R-410A refrigerant. Do not vent R-410A into atmosphere: it is a fluorinated greenhouse gas, covered by Kyoto Protocol, with a Global Warming Potential (GWP) = 2088.

You should purge the air in the indoor unit and in the pipe. If air remains in the refrigerant pipes, it affects the compressor. It may cause reduction of cooling capacity and malfunction. Refrigerant for air purging is not charged in the outdoor unit. Use Vacuum Pump as seen in the picture.

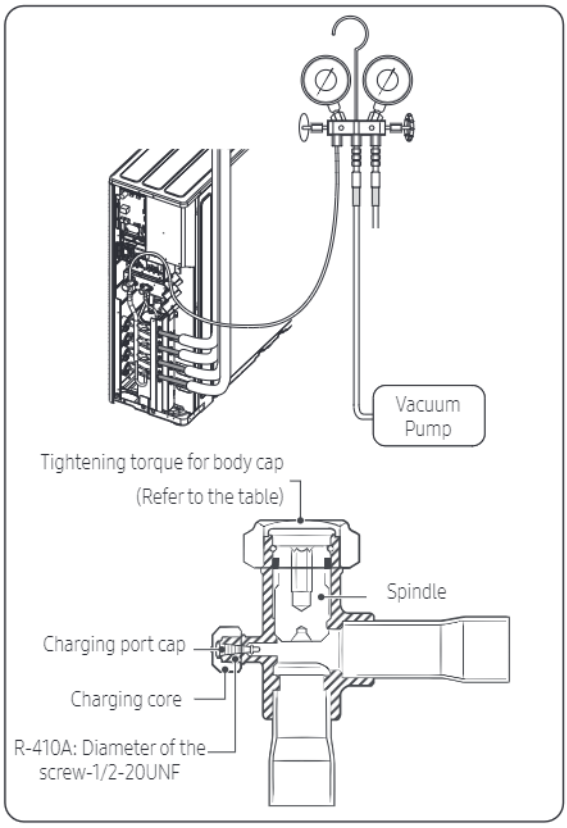
1 Check the piping connections.

2 Connect the charging hose of low pressure side of manifold gauge to the stop valve having a service port.

Model Name	Valve	
	3/8"	1/2"
AJ020CXS3CH	3	-
AJ024CXS4CH	2	2
AJ030CXS4CH		
AJ036CXS4CH		
AJ036BXJ4CH		
AJ048BXJ5CH		3

⚠ CAUTION

- Make the electrical connection and leave the system into "stand by mode". Do not turn on the system! This is necessary for better vacuum operation (full OPEN position of Electronic Expansion Valve - EEV -).



3 Open the valve of the low pressure side of manifold gauge counter clockwise.

4 Purge the air from the system using vacuum pump for about 30 minutes.
   - Close the valve of the low pressure side of manifold gauge clockwise.
   - Make sure that pressure gauge show -14.5 psi (-0.1 MPa). after about 30 minutes. This procedure is very important in order to avoid gas leak.
   - Turn off the vacuum pump.
   - Remove the hose of the low pressure side of manifold gauge.

5 Set spindle of both liquid side and gas side of stop valve to the open position.

6 Mount the valve stem nuts and the service port cap to the valve, and tighten them with a torque wrench.

Outer Diameter [inch (mm)]	Tightening torque	
	Body cap [(lbf·ft (N•m)]	Charging port cap [(lbf·ft (N•m)]
Φ1/4 (Ø 6.35)	14.8 to 18.4 (20 to 25)	7.4 to 8.9 (10 to 12)
Φ3/8 (Ø 9.52)		
Φ1/2 (Ø 12.70)	18.4 to 22.1 (25 to 30)	
Φ5/8 (Ø 15.88)	22.1 to 25.8 (30 to 35)	

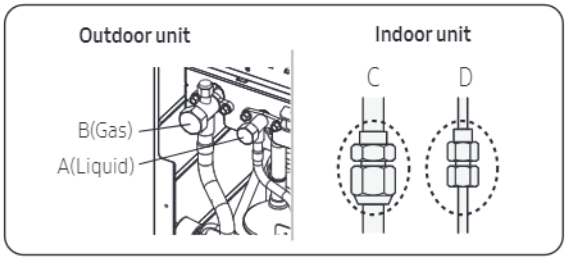
※ The designs and shape are subject to change according to the model.

Installation Procedure

Step 8 Performing the gas leak test

Before completing the installation (insulation of the cables, hose and piping and fixing of the indoor unit to the installation plate), you must check that there are no gas leaks.

To check for gas leaks on the...	Then, using a leak detector,check the ...
Outdoor unit	Valves on sections A and B.
Indoor unit	Flare nuts at the end of sections C and D.



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

LEAK TEST WITH NITROGEN (before opening valves)

Pressure check the refrigerant system using high pressure nitrogen in order to detect basic refrigerant leaks Before performing the vacuum process and releasing the factory R-410A charge into the refrigerant pipes, it is the responsibility of the installer to pressurize the whole system with nitrogen (using a cylinder with pressure reducer) at a pressure above 580.2 psi (4 MPa) (gauge).

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.

Once you have completed all the connections, check for possible leaks using leak detector specifically designed for HFC refrigerants.

Step 9 Adding refrigerant (R-410A)

Calculating the quantity of refrigerant to add

The quantity of additional refrigerant is variable according to the installation situation. Thus, make sure the outdoor unit situation before adding refrigerant.

If you install the excessive length of pipe, add additional refrigerant as 0.11 oz or 0.22 oz per unit ft ; refer to the table below.

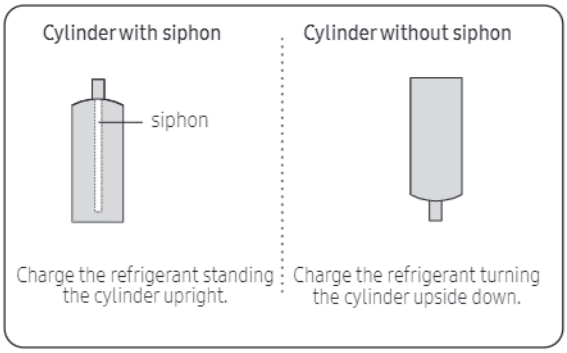
Refer to the Service Manual for more details on this operation.

Model Name	Total connecting pipe lengh (L)		Adding refrigerant
AJ036BXJ4CH	(LT) ft	≤131.2 ft	Chargeless
		>131.2 ft	(LT-131.2) ft x 0.22 oz
	(LT) m	≤ 40 m	Chargeless
		> 40 m	(LT- 40) m x 20 g
AJ***CXS*CH	(LT) ft	≤164.0 ft	Chargeless
		>164.0 ft	(LT-164.0) ft x 0.22 oz
	(LT) m	≤ 50 m	Chargeless
		> 50 m	(LT - 50) m x 20 g
AJ048BXJ5CH	(LT) ft	≤164.0 ft	Chargeless
		>164.0 ft	(LT-164.0) ft x 0.11 oz
	(LT) m	≤ 50 m	Chargeless
		> 50 m	(LT - 50) m x 10 g

Charging the system with liquid refrigerant

R-410A is a mixed type of refrigerant. It is necessary for recharging under conditions of liquid. When recharging refrigerant from the refrigerant cylinder to the equipment, follow the instructions below.

- Before recharging, check whether the cylinder has a siphon or not. There are two ways to recharge the refrigerant.



NOTE

- If R-410A refrigerant is charged with gas, the composition of the charged refrigerant changes and the characteristics of the equipment vary.
- While adding refrigerant use an electronic scale to measure the volume added. If the refrigerant cylinder doesn't have a siphon, turn it upside-down.

Step 10 Connecting the drain hose to the outdoor unit

When heating, ice may accumulate. During the process of defrosting, check if condensation draining is adequate.

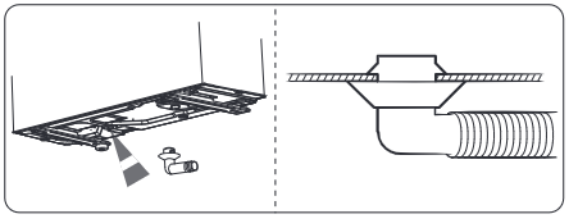
For adequate draining, do the following :

(For AJ***CXS*CH model, do not install a drain hose and a drain plug, drain caps.)

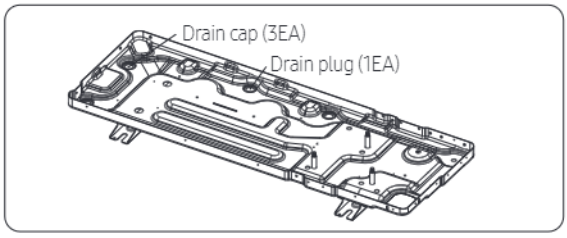
1 Insert the drain plug into the drain hole on the underside of the outdoor unit.

2 Connect the drain hose to the drain plug.

3 Ensure that condensation draining is adequate.



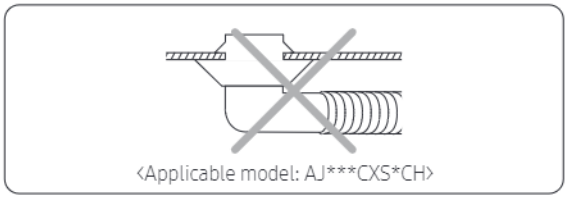
4 Be sure to plug the rest of drain holes not connected with drain plugs using drain caps.



- When installing the product, make sure that the rack is not placed under the drain hole.
- If the product is installed in a region of heavy snow, allow enough separation distance between the product and the ground.

⚠ CAUTION

- For AJ***CXS*CH model, do not install a drain hose and a drain plug.
  - Let the water drain naturally.
- Ice may form on the ground. Take appropriate measures to prevent ice formation.



Step 11 Checking the earthing

If the power distribution circuit does not have a earthing or the earthing does not comply with specifications, an earthing electrode must be installed. The corresponding accessories are not supplied with the air conditioner.

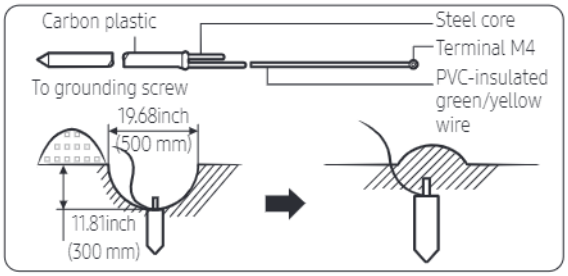
1 Select an earthing electrode that complies with the specifications given in the illustration.

2 Connect the flexible hose to the flexible hose port.

- In damp hard soil rather than loose sandy or gravel soil that has a higher earthing resistance.
- Away from underground structures or facilities, such as gas pipes, water pipes, telephone lines and underground cables.
- At least 6.56 ft (2 m) away from a lightening conductor earthing electrode and its cable.

NOTE

- The earthing wire for the telephone line cannot be used to ground the air conditioner.



Installation Procedure

3 Finish wrapping insulating tape around the rest of the pipes leading to the outdoor unit.

4 Install a green/yellow colored earthing wire:
- If the earthing wire is too short, connect an extension lead in a mechanical way and wrap it with insulating tape (do not bury the connection).
- Secure the earthing wire in position with staples.

NOTE

- If the earthing electrode is installed in an area with heavy traffic, its wire must be connected securely.

5 Carefully check the installation by measuring the earthing resistance with a earth resistance tester. If the resistance is above the required level, drive the electrode deeper into the ground or increase the number of earthing electrodes.

6 Connect the earthing wire to the electrical component box inside of the outdoor unit.

Step 12 Setting an indoor unit address and installation option

Setting the indoor unit addresses manually

1 Review all the following elements in the installation:
- Installation site strength
- Piping connection tightness to detect any gas leakage
- Connection wiring
- Heat-resistant insulation of the piping
- Drainage
- Earthing wire connection

2 Manually set options in each room's the indoor unit by referring to page 26~31.

3 Press the K3 button once or reset the outdoor unit.

NOTE

- The Display 1/2 indications are the same as in the automatic address setting mode.

Setting Key and Display of the outdoor unit

- Key option of the outdoor unit
  - K1: Function button - K3: Reset button

Push \ Key	K1	K3
1	Pipe Checking Operation	Reset
2	Cool Mode Try run	
3	Heat Mode Try run	
4	Pump Down	
5	Inverter Fault Detection (Comp#1) [1]	
6	Auto Mode Try run	
7	Finish Key Operation	

[1] Indication on the display and action to take when an inverter fault is detected

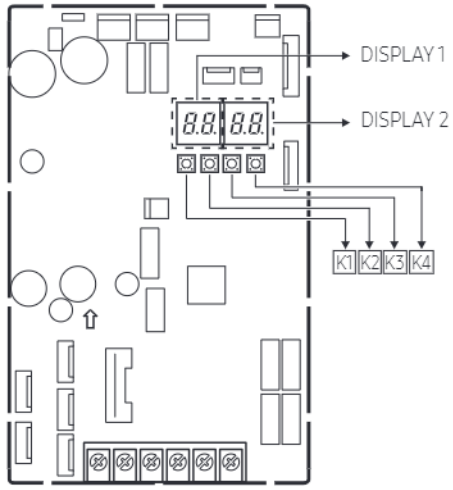
	SEG1	SEG2	SEG3	SEG4	Action to take
Fault detection is in progress	8	8	8	8	-
OK	8	8	0	H	-
NG	8	8	A	C	PBA defect: Replace the PBA
Check	8	8	C	H	Manual inspection is required
Going into fault detection mode failed	8	8	F	L	Try fault detection again

※ For more information of the Cool or Heat or Auto mode Try run test, refer to page 31.

- K4 View mode Display changes

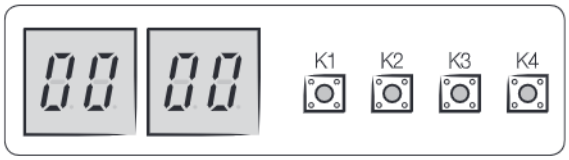
Push	Display Explanation	Push	Display Explanation
1	Present Compressor Frequency	9	Discharge temperature
2	Target Compressor Frequency	10	OLP temperature
3	EEV0 current step	11	Condenser temperature
4	EEV1 current step	12	Outdoor temperature
5	EEV2 current step	13	Running current
6	EEV3 current step	14	Target Discharge temperature
7	EEV4 current step	15	Total capacity of the indoor units
8	Fan RPM (H: high, L: low, Blank: off)	16	Safety Control (just For Service Technician)

PCB MAIN - OUT



Setting the outdoor option

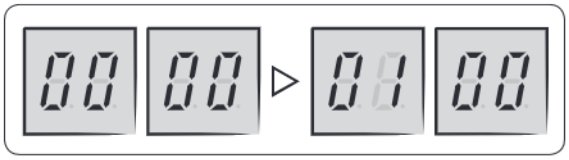
- Press and hold K2 to enter the option setting.
  (Only available when the operation is stopped)
  - If you enter the option setting, display will show the following.



  - Seg 1 and Seg 2 will display the number for selected option.
  - Seg 3 and Seg 4 will display the number for set value of the selected option.
- If you have selected desired option, you can shortly press the K1 switch to adjust the value of the Seg 1, Seg 2 and change the function for the selected option.

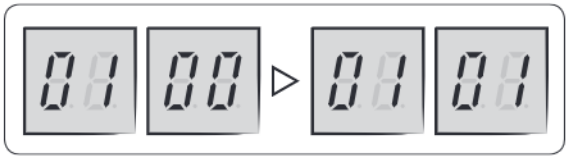
Installation Procedure

Example)



- If you have selected desired option, you can shortly press the K2 switch to adjust the value of the Seg 3, Seg 4 and change the function for the selected option.

Example)



- After selecting the function for options, press and hold the K2 switch for 2 seconds. Edited value of the option will be saved when entire segments blinks and tracking mode begins.

Option item	Input unit	SEG1	SEG2	SEG3	SEG4	Function
Setting to Cool or Heat only mode	Main	0	0	0	0	Cooling and Heating (Factory default)
				0	1	Only Cooling
				0	2	Only Heating
Unused option	Main	0	1	0	0	Unused option
				0	1	Unused option
Mixed mode indoor input	Main	0	2	0	0	Disabled (Factory default)
				0	1	Enabled
Auto Change Over	Main	0	3	0	0	Disabled
				0	1	Enabled (Factory default)
Channel address	Main	0	4	A	U	Automatic setting (Factory default)
				00 ~ 15		Manual setting

⚠ CAUTION

- Edited option will not be saved if you do not end the option setting as explained in above instruction.

※ While you are setting the option, you may press and hold the K1 button to reset the value to previous setting.

※ If you want to restore the setting to factory default, press and hold the K4 button while you are in the option setting mode.

- If you press and hold the K4 button, setting will be restored to factory default but it doesn't mean that restored setting is saved. Press and hold the K2 button. When the segments shows that tracking mode is in progress, setting will be saved.

Setting Option

Entering mode for setting option

<AR**CSDAFWKN /
AR**CSDABWKN /
AR**CSFCMWKN /
AR**CSKCPWKN>

High Temp button ❷
Low Temp button ❸

Option setting mode

❶ Mode button
❹ Fast button
❺ WindFree button

<AC***BN*DCH /
AJ***BNHDCH>

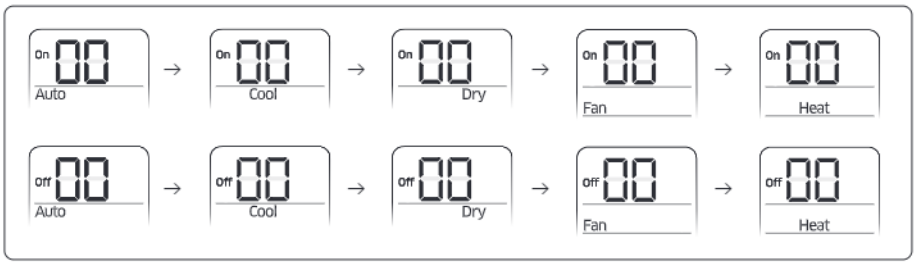
High Temp button ❷
Low Temp button ❸

❶ Mode button
❹ High Fan button
❺ Low Fan button

Installation Procedure

Setting Option

1 Remove batteries from the remote controller
2 Insert batteries and enter the option setting mode while pressing ❷ button and ❸ button.
3 Each time you press ❺ button, 7-seg on left side is increased by "1" and each time you press ❹ button, 7-seg on right side is increased by "1"
4 You press ❶ button to move to the next setting page.
5 After setting option, press ❶ button to check whether the option code you input is correct or not.



6 Press operation button ⏻ with the direction of remote control for set.

⚠ CAUTION

- SEG1, SEG7, SEG13, SEG19 are not set as page option.
- Set the SEG1, SEG7 as ON status and SEG13, SEG19 as OFF status.
  - Set the each option separately since you cannot set the ADDRESS setting and indoor unit installation setting option at the same time.

The procedure of setting option

Operation	Indication
Step 1 1 Remove the batteries from the remote controller. 2 Insert batteries while pressing ❷ Button and ❸ Button.	
Step 2 1 Press ❺ button to enter SEG2 value. 2 Press ❹ button to enter SEG3 value.	
Step 3 Press ❶ button to be change to Cool mode in the ON status. 1 Press ❺ button to enter SEG4 value. 2 Press ❹ button to enter SEG5 value.	

Operation	Indication
Step 4 Press ❶ button to be changed to DRY mode in the ON status. 1 Press ❺ button to enter SEG6. 2 Press ❹ button to enter SEG8.	
Step 5 Press ❶ button to be changed to FAN mode in the ON status. 1 Press ❺ button to enter SEG9 value. 2 Press ❹ button to enter SEG10 value.	
Step 6 Press ❶ button to be changed to HEAT mode in the ON status. 1 Press ❺ button to enter SEG11 value. 2 Press ❹ button to enter SEG12 value	
Step 7 Press ❶ button to be changed to AUTO mode in the OFF status. 1 Press ❺ button to enter SEG14 value. 2 Press ❹ button to enter SEG15 value.	
Step 8 Press ❶ button to be changed to Cool mode in the OFF status. 1 Press ❺ button to enter SEG16 value. 2 Press ❹ button to enter SEG17 value.	
Step 9 Press ❶ button to be changed to DRY mode in the OFF status. 1 Press ❺ button to enter SEG18 value. 2 Press ❹ button to enter SEG20 value.	
Step 10 Press ❶ button to be changed to FAN mode in OFF status 1 Press ❺ button to enter SEG21 value. 2 Press ❹ button to enter SEG22 value.	

Installation Procedure

Operation	Indication
Step 11 Press ❶ button to be changed to HEAT mode in the OFF status 1 Press ❺ button to enter SEG23 value. 2 Press ❹ button to enter SEG24 value.	
Step 12 Press ❶ button to check whether the option code you entered is correct or not. Press operation button ⏻ to enter option.	

Setting the indoor unit addresses automatically

NOTE

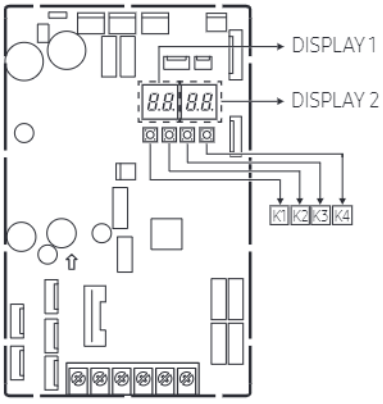
- For the best results, make sure that electrical wiring is done properly.
- For the best results, the outdoor temperature should be between 41 to 104 ˚F (*) and the indoor temperature 60.8 ˚F or higher (*).

※ (*) Auto addressing may fail when the temperature is out of the range above. In this case, set the address manually.

⚠ CAUTION

- Connecting one indoor unit to this product is prohibited. Don't use pipe checking operation and auto addressing mode when only one indoor unit is installed.

PCB MAIN - OUT



1 Turn on the outdoor unit, and then check whether the display 1/2 indications are displayed "E199" code.
※ During the initial , display 1 shows " Ad" and display 2 shows the connected indoor number.
- If different display code is shown, see **Troubleshooting** on page 34 and take corrective actions.

2 Push once the K1 button.

3 After the operations described above have been performed, the system starts in Cooling or Heating mode, depending on the external ambient temperature. After a few minutes (from a minimum of 3 to 5 minutes for the internal unit), the system stops automatically, completing the self-test and addressing procedure. " t Iot " appears on the display of the outdoor unit.

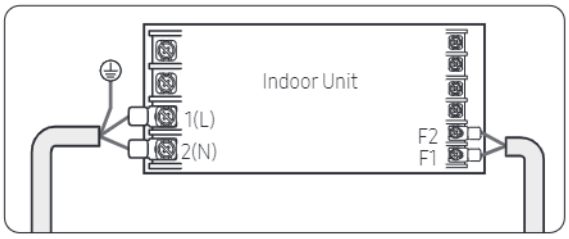
4 If you press the K1 button one more time, " t Iot " disappears and inspection is complete.

NOTE

- At this point it is possible to start the internal units in the desired mode.
※ If " t Iot "doesn't display, the procedure has failed and it is therefore necessary to read ALL the operator's manual before repeating the operating described in steps 1-2-3-4.

Setting an indoor unit address (MAIN/RMC)

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

4 Assign an indoor unit address by wireless remote controller.
- The initial setting status of indoor unit ADDRESS(MAIN/RMC) is "0A0000-100000-200000-300000"
- There is no need to assign extra ADDRESS for 1:1 installation between indoor unit and outdoor unit.

Installation Procedure

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

Option	SEG1		SEG2		SEG3		SEG4		SEG5		SEG6	
Explanation	Page		Mode		Setting main address		100-digit of indoor unit address		10-digit of indoor unit		A single digit of indoor unit	
Indication and details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
	0		A		0	No Main address	0~9	100-digit	0~9	10-digit	0~9	A single digit
					1	Main address setting mode						
Option	SEG7		SEG8		SEG9		SEG10		SEG11		SEG12	
Explanation	PAGE				Setting RMC address				Group channel(*16)		Group address	
Indication and Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
	1				0	No RMC address			RMC1	1~F	RMC2	1~F
					1	RMC address setting mode						

※ You must set RMC address setting mode when using the centralized Control.

⚠ CAUTION

- When "A"~"F" is entered to SEG 4~6, 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 SEG 4~6.
- If you set the SEG 9 as 0, the indoor unit will maintain previous RMC ADDRESS even if you input the option value of SEG 11~12.

5 The MAIN address is for commnication between the indoor unit and the outdoor unit. Therefore, you must set it to operate the air conditioner properly.

Step 13 Cool and Heat modes operation test

After installing the outdoor and indoor units, test the **Cool** and **Heat** modes.

- When you test the **Cool** mode, set the set temperature of the indoor unit to the lowest one. And when you test the **Heat** mode, set the set temperature of the indoor unit to the highest one.
- Check if each indoor unit operates normally and then also check if all indoor units operate normally together.
  - Check both of the Cool and Heat modes.
- About 20 minutes after the air conditioner is started, check the temperature difference between the air inlet and outlet of the indoor unit. If the temperature difference is larger than the value given in the following table, the operation is normal.

Mode	Temperature
Cool	Approximately 14.4 °F (-10 °C)
Heat	Approximately 21.6 °F (-6 °C)

⚠ CAUTION

- If the outdoor unit is turned off and then immediately turned on again, the compressor does not operate for about 3 minutes.
- During the Cool mode, frost may temporarily develop on valves and other parts.

NOTE

- You can also test the Cool or Heat Try run using K1 button.
  - Cool mode try-run: Push the [K1] button twice.
  - Heat mode try-run: Push the [K1] button three times.
  - Auto mode try-run: Push the [K1] button six times. Automatically select mode according to outdoor temperature.

Step 14 Optional: Setting to Cool or Heat only mode

This function enables the indoor units connected to the outdoor unit to operate in a specific mode.

You can set each mode with Keys on the Main PCB in the outdoor unit.

Set mode	SEG1	SEG2	SEG3	SEG4
Cooling and Heating	0	0	0	0
Only Cooling			0	1
Only Heating			0	2

- Default value: Cooling and Heating mode

Extra Procedures

Pumping down refrigerant

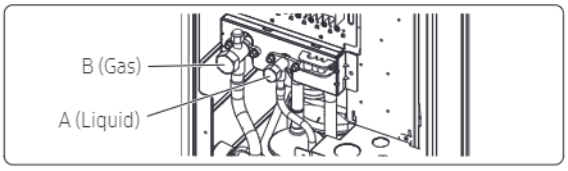
⚠ WARNING

- After installing the product, be sure to perform leak tests on the piping connections. After pumping down refrigerant to inspect or relocate the outdoor unit, be sure to stop the compressor and then remove the connected pipes.
  - Do not operate the compressor while a valve is open due to refrigerant leakage from a pipe or an unconnected or incorrectly connected pipe. Failure to do so may cause air to flow into the compressor and too a high pressure to develop inside the refrigerant circuit, leading to an explosion or product malfunction.

Pump-down is an operation intended to collect all the system refrigerant in the outdoor unit.

This operation must be carried out before disconnecting the refrigerant pipe in order to avoid refrigerant loss to the atmosphere.

1. Turn the system on in cooling with fan operating at high velocity and then let the compressor run for more than 5 minutes. (Compressor will immediately start, provided 3 minutes have elapsed since the last stop.)
2. Release the valve caps on High and Low pressure side.
3. Use L-wrench to close the valve on the high pressure side.
4. After approximately 2 minute, close the valve on the low pressure side.
5. Stop operation of the air conditioner by pressing the (Power) button on the indoor unit or remote control.
6. Disconnect the pipes.



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

Relocating the indoor and outdoor units

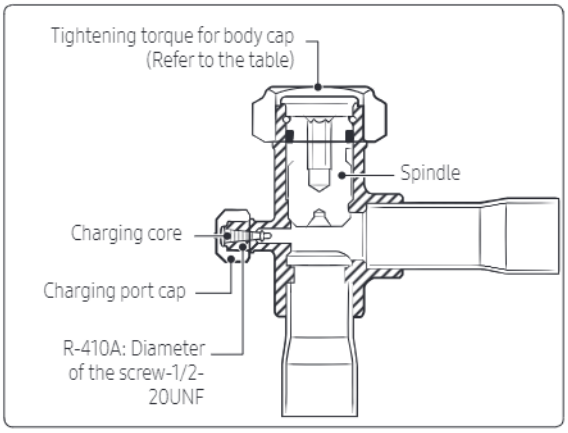
1. Pump down refrigerant. See **Pumping down refrigerant** on page 32.
2. Remove the power cord.
3. Disconnect the assembly cable from the indoor and outdoor units.
4. Remove the flare nuts connecting the indoor units and the pipes. At this time, cover the pipes of the indoor unit and the other pipes using a cap or vinyl plug to avoid foreign material entering.
5. Disconnect the pipes connected to the outdoor units. At this time, cover the valve of the outdoor units and the other pipes using a cap or vinyl plug to avoid foreign material entering.

   Note: Make sure you do not bend the connection pipes in the middle and store together with the cables.
6. Move the indoor and outdoor units to a new location.
7. Remove the mounting plate for the indoor unit and move it to a new location.

Using the stop valve

Opening the stop valve

1. Open the cap and turn the stop valve anticlockwise by using a hexagonal wrench.
2. Turn it until the axis is stopped.



3 Tighten the cap securely.

Outer Diameter [inch (mm)]	Tightening torque	
	Body cap [(lbf·ft (N•m)]	Charging port cap [(lbf·ft (N•m)]
Φ1/4 (Ø 6.35)	14.8 to 18.4 (20 to 25)	7.4 to 8.9 (10 to 12)
Φ3/8 (Ø 9.52)		
Φ1/2 (Ø 12.70)	18.4 to 22.1 (25 to 30)	
Φ5/8 (Ø 15.88)	22.1 to 25.8 (30 to 35)	

NOTE

- Do not apply excessive force to the stop valve and always use special instruments. Otherwise, the stopping box can be damaged and the back sheet can leaks.
- If the watertight sheet leaks, turn the axis back by half, tighten the stopping box, then check the leakage again. If there is no leakage any more, tighten the axis entirely.

Closing the stop valve

1 Remove the cap.
2 Turn the stop valve clockwise by using a hexagonal wrench.
3 Tighten the axis until the valve reached the sealing point.
4 Tighten the cap securely.

⚠ CAUTION

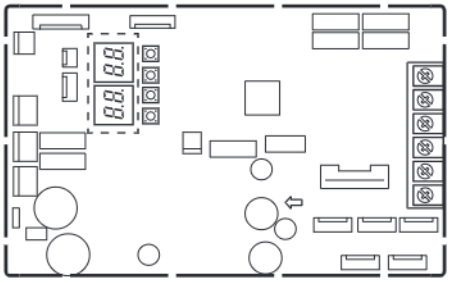
- When you use the service port, always use a charging hose, too.
- Check the leakage of refrigerant gas after tightening the cap.
- Must use a spanner and wrench when you open/ tighten the stop valve.

Appendix

Troubleshooting

- The table below list the self-diagnostic routines. For some of error, you must contact an authorized service center.
- If an error occurs during the operation, it is displayed on the outdoor unit PCB MAIN-OUT.

PCB MAIN - OUT

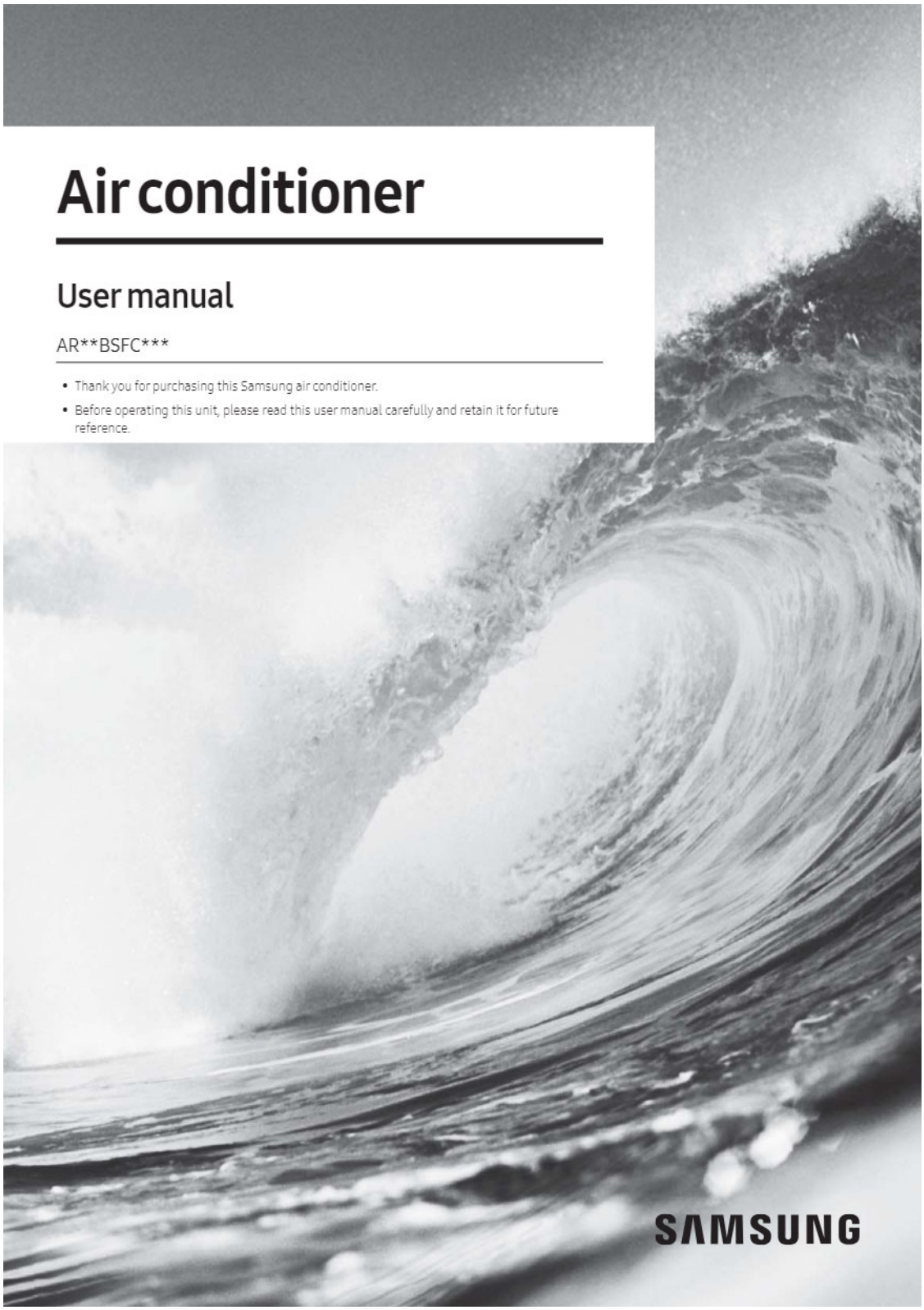


88 SEG DISPLAY

Error Code	Explanation	Remark
E108	ERROR DUE TO REPEATED ADDRESS SETTING(WHEN 2 OR MORE DEVICES HAS THE SAME ADDRESS WITHIN THE NETWORK)	
E190	PIPE CHECK ERROR	
E199	PIPE CHECK OPERATION HAS NOT BEEN COMPLETED	
E201	COMMUNICATION ERROR BETWEEN INDOOR AND OUTDOOR UNIT(INSTALLATION NUMBER SETTING ERROR, REPEATED INDOOR UNIT ADDRESS, INDOOR UNIT COMM	
E202	COMMUNICATION ERROR BETWEEN INDOOR AND OUTDOOR UNIT(COMMUNICATION ERROR ON ALL INDOOR UNITS, OUTDOOR UNIT COMMUNICATION CABLE ERROR)	
E203	COMMUNICATION ERROR BETWEEN INVERTER PBA AND MAIN PBA	
E221	ERROR ON AMBIENT TEMPERATURE SENSOR (SHORT OR OPEN)	
E237	ERROR ON CONDENSOR TEMPERATURE SENSOR(SHORT OR OPEN)	
E251	ERROR ON DISCHARGE TEMPERATURE SENSOR(SHORT OR OPEN)	
E320	ERROR ON COMPRESSOR OLP TEMPERATURE SENSOR(SHORT OR OPEN)	
E330	ERROR ON PIPE IN-A TEMPERATURE SENSOR(SHORT OR OPEN)	
E331	ERROR ON PIPE IN-B TEMPERATURE SENSOR(SHORT OR OPEN)	
E332	ERROR ON PIPE IN-C TEMPERATURE SENSOR(SHORT OR OPEN)	
E333	ERROR ON PIPE IN-D TEMPERATURE SENSOR(SHORT OR OPEN)	
E334	ERROR ON PIPE IN-E TEMPERATURE SENSOR(SHORT OR OPEN)	
E335	ERROR ON PIPE OUT-A TEMPERATURE SENSOR(SHORT OR OPEN)	
E336	ERROR ON PIPE OUT-B TEMPERATURE SENSOR(SHORT OR OPEN)	
E337	ERROR ON PIPE OUT-C TEMPERATURE SENSOR(SHORT OR OPEN)	
E338	ERROR ON PIPE OUT-D TEMPERATURE SENSOR(SHORT OR OPEN)	
E339	ERROR ON PIPE OUT-E TEMPERATURE SENSOR(SHORT OR OPEN)	

Error Code	Explanation	Remark
E401	OUTDOOR UNIT FREEZING-SAFETY CONTROL(COMPRESSOR STOP)	
E404	OUTDOOR UNIT OVERLOAD-SAFETY CONTROL(COMPRESSOR STOP)	
E416	COMPRESSOR OPERATION STOP DUE TO DISCHARGE TEMPERATURE PROTECTION CONTROL	
E422	HIGH PRESSURE BLOCKAGE CONTROL	
E440	HEATING MODE RESTRICTION DUE TO HIGH AIR TEMPERATURE	
E441	COOLING MODE RESTRICTION DUE TO LOW AIR TEMPERATURE	
E458	FAN MOTOR ERROR	
E461	OPERATION FAILURE OF COMPRESSOR	
E462	COMPRESSOR OPERATION STOP DUE TO FULL LOAD CURRENT CONTROL	
E463	COMPRESSOR OPERATION STOP DUE TO OLP TEMPERATURE CONTROL	
E464	ERROR DUE TO OVER-CURRENT OF COMPRESSOR	
E465	VOLTAGE-LIMIT ERROR OF COMPRESSOR	
E466	ERROR DUE TO LOW/OVER VOLTAGE OF DC LINK IN INVERTER PBA	
E467	ABNORMAL RPM IN COMPRESSOR OR WIRE FOR COMPRESSOR HAS NOT BEEN CONNECTED	
E468	ERROR DUE TO OUTPUT CURRENT SENSOR OF INVERTER PBA(SHORT/OPEN)	
E469	ERROR DUE TO DC LINK VOLTAGE SENSOR OF INVERTER PBA(SHORT/OPEN)	
E470	OUTDOOR UNIT EEPROM READ/WRITE ERROR	
E471	OUTDOOR UNIT EEPROM READ/WRITE ERROR(OTP)	
E474	ERROR ON IPM/PFCM TEMPERATURE SENSOR OF INVERTER PBA(SHORT OR OPEN)	
E475	FAN2 MOTOR ERROR	
E483	OVERVOLTAGE OF H/W DETECT DC LINK	
E484	PFC OVERLOAD(OVER CURRENT) ERROR	
E485	ERROR DUE TO INPUT CURRENT SENSOR OF INVERTER PBA(SHORT/OPEN)	
E488	INCOMING VOLTAGE SENSOR ERROR	
E500	IPM/PFCM OVERHEAT ERROR	
E554	THE REFRIGERANT LEAKS COMPLETELY FROM THE OUTDOOR UNIT	
E563	ERROR DUE TO INDOOR UNIT SOFTWARE VERSION COMBINATION(INCOMPATIBLE INDOOR UNIT SOFTWARE ON A SYSTEM	
E590	INVERTER EEPROM CHECKSUM ERROR	

SAMSUNG


Air conditioner
User manual
AR**BSFC***
• Thank you for purchasing this Samsung air conditioner.
• Before operating this unit, please read this user manual carefully and retain it for future reference.
SAMSUNG

Contents

Safety Information

WARNING: Read This Manual

Read and follow all safety information and instructions before installation, use, or maintenance of this appliance. Incorrect installation, use, or maintenance of this appliance can result in death, serious injury, or property damage. Keep these instructions with this appliance. This manual is subject to change. For the latest version, www.samsunghvac.com.

Because the instructions in this manual cover various models, the characteristics of your air conditioner may differ slightly from those described. If you have any questions, please contact your service provider or visit www.samsunghvac.com.

This device complies with Industry Canada license exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation. This Class B digital apparatus complies with Canadian ICES-003.

ENERGY STAR qualified model only

- Proper sizing and installation of equipment is critical to achieve optimal performance. Split system air conditioners and heat pumps (excluding ductless systems) must be matched with appropriate coil components to meet ENERGY STAR criteria. Ask your contractor for details or visit www.energystar.gov.

Qualified model list (Indoor/Outdoor):

- AR09BSFCMWKN/AR09BSFCMWKX

Notices and notes

To make you aware of safety messages and highlighted information, we use the following notices and notes throughout this manual:

WARNING

Hazards or unsafe practices that may result in severe personal injury or death.

CAUTION

Hazards or unsafe practices that may result in minor personal injury or property damage.

IMPORTANT

Information of special interest

NOTE

Supplementary information that may be useful

FOR GENERAL

California Proposition 65 Warning (US)

⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

FOR INSTALLATION

⚠ **WARNING**

Use a power cord with this product's power specifications or higher and use the power cord for this appliance only. In addition, do not use an extension cord.

- Extending the power cord may result in electric shock or fire.
- Do not use an electric transformer. This may result in electric shock or fire.
- If the voltage/frequency/rated current condition is different, it may cause fire.

The installation of this appliance must be performed by a qualified technician or service company.

- Failing to do so may result in electric shock, fire, explosion, problems with the product, or injury and may also void warranty on the installed product.

Install an Isolation Switch next to the Air Conditioner (but not on the panels of the Air Conditioner) and circuit breaker dedicated to the air conditioner.

- Failing to do so may result in electric shock or fire.

Safety Information

Fix the outdoor unit firmly so that the electric part of the outdoor unit is not exposed.

- Failing to do so may result in electric shock, fire, explosion, or problems with the product.

Do not install this appliance near a heater, or inflammable material. Do not install this appliance in a humid, oily or dusty location, in a location exposed to direct sunlight and water (or rain). Do not install this appliance in a location where gas may leak.

- This may result in electric shock or fire.

Never install the outdoor unit in a location such as on a high external wall where it could fall.

- If the outdoor unit falls, it may result in injury, death or property damage.

This appliance must be properly grounded. Do not ground the appliance to a gas pipe, plastic, water pipe, or telephone line.

- Failing to do so may result in electric shock, fire, and explosion.
- Make sure to use a socket-outlet with ground.

⚠ CAUTION

Install your appliance on a level and hard floor that can support its weight.

- Failing to do so may result in abnormal vibrations, noise, or problems with the product.

Install the drain hose properly so that water drains correctly.

- Failing to do so may result in water overflowing and property damage. Avoid adding drain to waste pipes as odours may arise in the future.

When installing the outdoor unit, make sure to connect the drain hose so that draining is performed correctly.

- The water generated during heating by the outdoor unit may overflow and result in property damage.
  In particular, in winter, if a block of ice falls, it may result in injury, death or property damage.

Do not install the product in a place where thermo-hygrostat is needed (such as server room, machinery room, computer room, etc.)

- Those places do not provide guaranteed operation condition of the product therefore performance can be poor in these places.

FOR POWER SUPPLY

⚠ WARNING

When the circuit breaker is damaged, contact a qualified installer or HVAC service company.

Do not pull or excessively bend the power line. Do not twist or tie the power line. Do not hook the power line over a metal object, place a heavy object on the power line, insert the power line between objects, or push the power line into the space behind the appliance.

- This may result in electric shock or fire.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

⚠ CAUTION

When not using the air conditioner for a long period of time or during a thunder/lightning storm, cut the power at the circuit breaker.

- Failing to do so may result in electric shock or fire.

FOR USING

⚠ WARNING

If the appliance is flooded, please contact a qualified installer or HVAC service company.

- Failing to do so may result in electric shock or fire.

If the appliance generates a strange noise, a burning smell or smoke, cut off the power supply immediately and contact a qualified installer or HVAC service company.

- Failing to do so may result in electric shock or fire.

In the event of a gas leak (such as propane gas, LP gas, etc.), ventilate immediately without touching the power line. Do not touch the appliance or power line.

- Do not use a ventilating fan.
- A spark may result in an explosion or fire.

Safety Information

To reinstall the air conditioner, please contact a qualified installer or HVAC service company.

- Failing to do so may result in problems with the product, water leakage, electric shock, or fire.
- Delivery service for the product is not provided. If you reinstall the product in another location, additional construction expenses and an installation fee will be charged.
- Especially, when you wish to install the product in an unusual location such as in an industrial area or near the seaside where it is exposed to salt in the air, please contact a qualified installer or HVAC service company.

Do not touch the circuit breaker with wet hands.

- This may result in electric shock.

Do not turn the air conditioner off with the circuit breaker while it is operating.

- Turning the air conditioner off and then on again with the circuit breaker may cause a spark and result in electric shock or fire.

After unpacking the air conditioner, keep all packaging materials well out of the reach of children, as packaging materials can be dangerous to children.

- If a child places a bag over its head, it may result in suffocation.

Do not touch the airflow blade with your hands or fingers during heating.

- This may result in electric shock or burns.

Do not insert your fingers or foreign substances into the air inlet/outlet of the air conditioner.

- Take special care that children do not injure themselves by inserting their fingers into the product.

Do not strike or pull the air conditioner with excessive force.

- This may result in fire, injury, or problems with the product.

Do not place an object near the outdoor unit that allows children to climb onto the machine.

- This may result in children seriously injuring themselves.

Do not use this air conditioner for long periods of time in badly ventilated locations or near infirm people.

- Since this may be dangerous due to a lack of oxygen, open a window at least once an hour.

If any foreign substance such as water has entered the appliance, cut off the power supply and contact a qualified installer or HVAC service company.

- Failing to do so may result in electric shock or fire.

Do not attempt to repair, disassemble, or modify the appliance yourself.

- Do not use any fuse (such as copper, steel wire, etc.) other than the standard fuse.
- Failing to do so may result in electric shock, fire, problems with the product, or injury.

⚠ CAUTION

Do not place objects or devices under the indoor unit.

- Water dripping from the indoor unit may result in fire or property damage.

Check that the installation frame of the outdoor unit is not broken at least once a year.

- Failing to do so may result in injury, death or property damage.

To prevent personal injury, make sure that you change the directions of the horizontal airflowblades after stopping the movements of the vertical airflowblade. (In case of adjusting the horizontal airflow manually)

Do not install the product in a ship or a vehicle (such as a campervan).

- Salt, vibration or other environmental factor may cause the product malfunction, electric shock or fire.

Do not stand on top of the appliance or place objects (such as laundry, lighted candles, lighted cigarettes, dishes, chemicals, metal objects, etc.) on the appliance.

- This may result in electric shock, fire, problems with the product, or injury.

Do not operate the appliance with wet hands.

- This may result in electric shock.

Do not spray volatile material such as insecticide onto the surface of the appliance.

- As well as being harmful to humans, it may also result in electric shock, fire or problems with the product.

Do not drink the water from the air conditioner.

- The water may be harmful to humans.

Do not hit, shake, drop, or attempt to disassemble the remote control.

When replacing the remote control batteries, keep them out of the reach of infants.

- If an infant eats batteries, contact a doctor immediately.

When replacing the remote control batteries, be careful not to get the battery fluid on your skin.

- Battery fluid is harmful to humans.

Safety Information

Do not touch the pipes connected with the product.

- This may result in burns or injury.

Do not use this air conditioner to preserve precision equipment, food, animals, plants or cosmetics, or for any other unusual purposes.

- This may result in property damage.

Avoid directly exposing humans, animals or plants to the airflowfrom the air conditioner for long periods of time.

- This may result in harm to humans, animals or plants.

FOR CLEANING

⚠ WARNING

Do not clean the appliance by spraying water directly onto it. Do not use benzene, thinner or alcohol to clean the appliance.

- This may result in discolouration, deformation, damage, electric shock or fire.

Before cleaning or performing maintenance, cut off the power supply and wait until the fan stops.

- Failing to do so may result in electric shock or fire.

⚠ CAUTION

Take care when cleaning the surface of the heat exchanger of the outdoor unit since it has sharp edges.

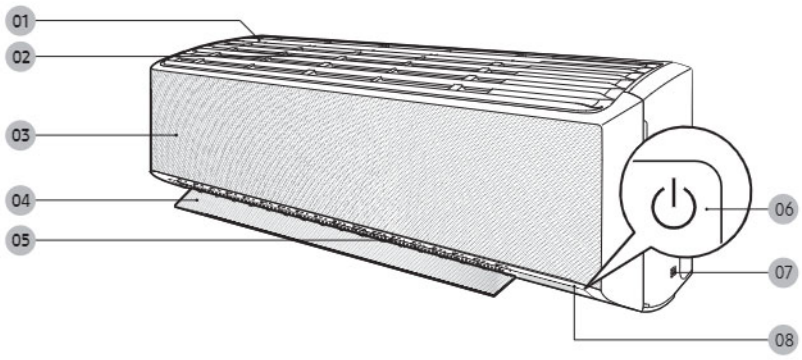
- This should be done by a qualified technician. Please contact a qualified installer or HVAC service company.

Do not clean the inside of the air conditioner by yourself.

- For cleaning inside the appliance, contact a qualified installer or HVAC service company.
- When cleaning the filter, refer to the descriptions in the 'Cleaning' section.
- Failing to do so may result in damage, electric shock or fire.
- Make sure to prevent any injury from sharp edges of the surface when handling the heat exchanger.

Indoor Unit Overview

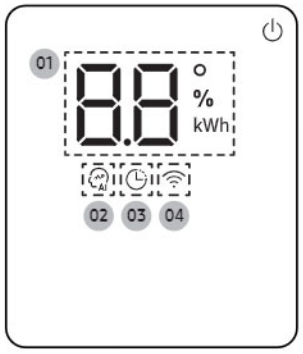
The appearance of the actual product may differ slightly from the image below.



01 Air intake
02 Air filter
03 WindFree panel
04 Airflow blade (up and down)
05 Airflow blade (left and right)
06 Power button/Remote control receiver
07 Room temperature sensor
08 Display

Indoor Unit Overview

Display



01 Temperature indicator (numeric)
Filter reset indicator (CF)
Electricity consumption indicator (numeric)
Auto clean indicator (C 1)
Defrost indicator (dF)

02 AI Auto indicator

03 Timer indicator
good'sleep indicator

04 Wi-Fi indicator

NOTE

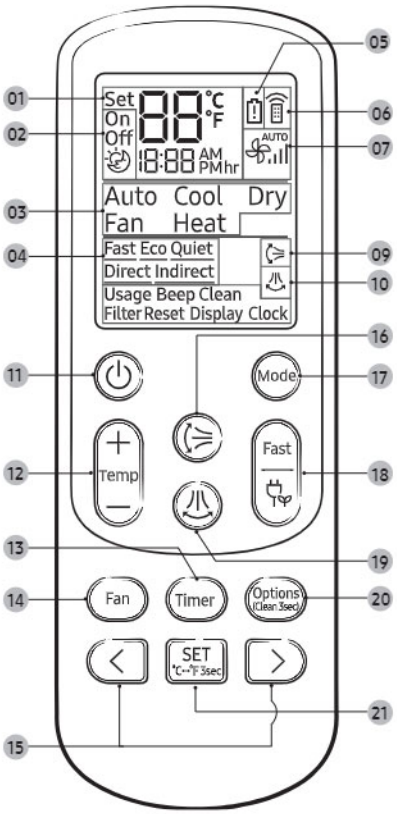
- When the Wi-Fi is turned on, the indicator blinks three times and then turn on.

NOTE

- If the Wi-Fi indicator blinks for 10 seconds when operation starts, it means that the air conditioner is not connected to Wi-Fi. See "SmartThings app" on page 37 and connect the air conditioner to Wi-Fi.
- When connected to Wi-Fi, the air conditioner can gather and learn your user patterns so that it can run in AI Auto mode.

Remote Control Overview

Most operating instructions in this manual require using the remote control.

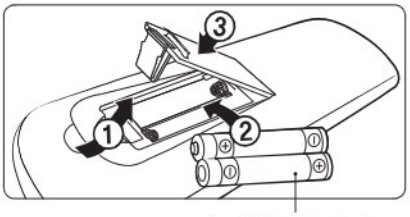


01 Set temperature indicator
02 Timer option indicator
03 Operation mode indicator
04 Options indicator
05 Low battery indicator
06 Transmit indicator
07 Fan speed indicator
08 WindFree indicator
09 Vertical air swing indicator
10 Horizontal air swing indicator
11 Power button
12 Temperature button
13 Timer button
14 Fan speed button
15 Direction button/Selection button
16 Vertical air swing button
17 Mode button
18 Fast/WindFree button
19 Horizontal air swing button
20 Options/Clean button
21 SET button/Temperature type button(°C↔°F)

NOTE

- Although **Purify**, **Direct** and **Indirect** appear on the remote control display, they are not available on this model.

Replacing the remote control batteries



Two 1.5V AAA batteries

Remote Control Operation

You can use the air conditioner easily by selecting a mode and then by controlling the temperature, fan speed, and air direction.

Selecting an operation mode

To change the current mode between Auto, Cool, Dry, Fan, and Heat, press the (Mode) button.

You can use AI Auto mode after Wi-Fi is connected.

NOTE

You can use the Cool, Dry, and Heat modes in the following operation range.

Mode	Cool	Dry	Heat
Indoor temperature	61 ˚F to 90 ˚F (16 °C to 32 °C)	65 ˚F to 90 ˚F (18 °C to 32 °C)	81 ˚F or less (27 °C or less)
Outdoor temperature	14 °F to 115 °F (-10 °C to 46 °C)	14 °F to 115 °F (-10 °C to 46 °C)	-5.1 °F to 76 °F[1] (-20.6 °C to 24 °C)
Indoor humidity	Relative humidity of 80 % or less[2]	-	-

[1] If the outdoor temperature drops to -5.1 °F(-20.6 °C), the heating capacity may decrease by as much as 60-70 %.

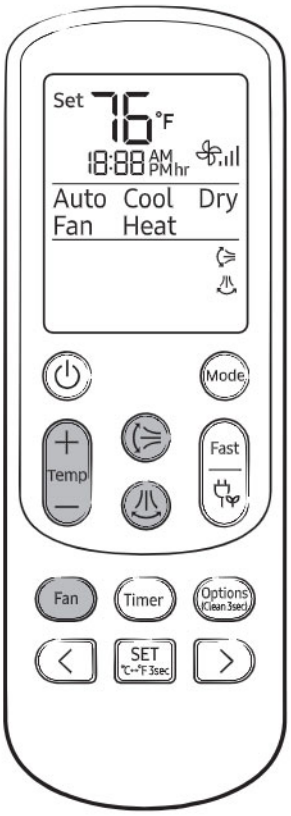
[2] If the air conditioner operates in Cool mode in a high-humidity environment for an extended period of time, condensation may occur.

You can switch between Celsius and Fahrenheit indications on the remote control.

SET °C↔°F 3sec ▶ **Press and hold for 3 or more seconds.**

NOTE

- The temperature indications on the indoor unit are not switched.
- This function is canceled when the remote control batteries are replaced. In this case, run this function again.



To set the temperature

To control the temperature in each mode, press the (Temperature) button:

Mode	Temperature control
AI Auto/Auto/ Cool	Adjust by 1 °F from 61 °F to 86 °F (16 °C to 30 °C).
Heat	Adjust by 1 °F from 47 °F to 86 °F (8 °C to 30 °C).
Dry	Adjust by 1 °F from 65 °F to 86 °F (18 °C to 30 °C).
Fan	No temperature control.

To adjust the fan speed

Select from the following fan speeds in each mode:

Mode	Available fan speeds
AI Auto/Auto/ Dry	(Auto)
Cool/Heat	(Auto), (Low), (Med), (High), (Turbo)
Fan	(Low), (Med), (High), (Turbo)

To adjust the airflow direction

Keep the airflow in a constant direction by stopping the movements of the vertical and horizontal airflow blades.

In operation ▶ or

NOTE

- If you adjust the vertical airflow blade manually, it may not close completely when you turn off the air conditioner.
- Always use the remote control to adjust the airflow blades. Do not move the blades by hand. They may not operate normally.
- You cannot control the vertical airflow direction in Cool mode when the good'sleep function is on.

Remote Control Operation

Setting the Current time

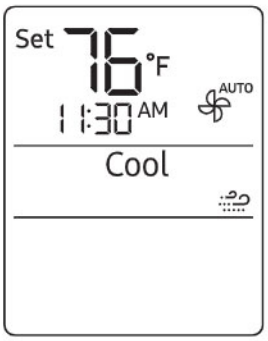
Before using the functions of the air-conditioner, set the current time.

Options (Clean 3sec) ▶ < > ▶ Select Clock. ▶ SET °C↔°F 3sec ▶ < > ▶ Set the time. ▶ SET °C↔°F 3sec

NOTE

- You can set the time in hourly units from 1 hour to 12 hours according to AM, PM and in minute units from 0 to 59 minutes.
- Current time setting will be cancelled if you don't press the SET °C↔°F 3sec (SET) button within 10 seconds after setting the time. Therefore, check for the current time on the remote controller display.

Power Smart Features



WindFree Cooling function

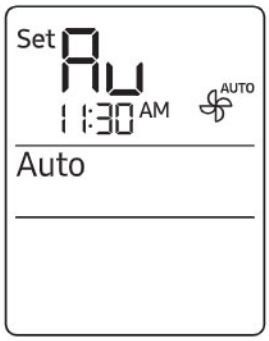
Use the WindFree Cooling function to enjoy a mild breeze coming through fine holes in the WindFree panel instead of air coming directly through the airflow blades.

In Cool/Dry/Fan mode ▶

NOTE

- To cancel this function, press the (WindFree) button again.
- When the WindFree Cooling function is on, the air conditioner automatically controls the temperature and fan speed to keep your room mild and comfortable.
- When the WindFree Cooling function is canceled, the air conditioner returns to the original fan speed and air comes out of the airflow blades.
- In Cool mode, the recommended set temperature during the WindFree Cooling operation is 76 °F to 79 °F (24 °C to 26 °C).
- You can use the WindFree Cooling function in Cool, Dry, or Fan mode.
- You cannot select the Quiet function during the WindFree Cooling operation.
- Selecting the WindFree Cooling function cancels the Fast, Eco, and airflow direction (,) functions.

Power Smart Features



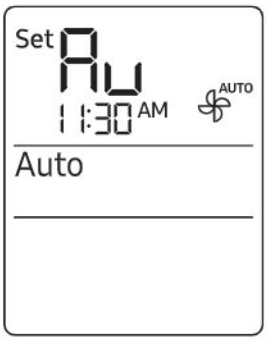
AI Auto mode

Use AI Auto mode to automatically operate any of Cool, Dry, Heat, and WindFree Cooling modes depending on the learned user patterns gathered from an external server via Wi-Fi module. The favourite temperature and operation mode are also set based on the current temperatures (indoor/outdoor) and the gathered user patterns.

(Power) ▶ (Mode) ▶ Select Auto.

NOTE

- You can use this mode after Wi-Fi is connected. Otherwise, Auto mode is activated.
- In AI Auto mode, the (AI Auto) and (Wi-Fi) indicators appears on the display of the indoor unit.
- If the gathered user patterns are not sufficient, the set temperature is set to 76 °F(24 °C).
- The set temperature is controlled within the range of 72 °F to 79 °F(22 °C to 26 °C) in AI Auto mode. You can also change it manually.
- When you press (Mode) in AI Auto mode, the mode is cancelled.
- If you change the set temperature in AI Auto mode, it automatically changes back to the AI comfort temperature after 1 hour.



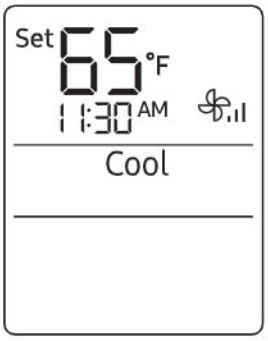
Auto mode

Use Auto mode to perform the powerful cooling or heating function to automatically reach the desired temperature. When the difference between the room temperature and the set temperature decreases, the air conditioner controls the fan speed and airflow direction.

▶ Mode ▶ Select Auto.

NOTE

- If Wi-Fi cannot be connected or the Wi-Fi function is not supported, this Auto mode is automatically activated instead of AI Auto mode.
- When the room temperature is higher than the set temperature, the air conditioner automatically produces cool air.
- When the room temperature is lower than the set temperature, the air conditioner automatically produces warm air.



Cool mode

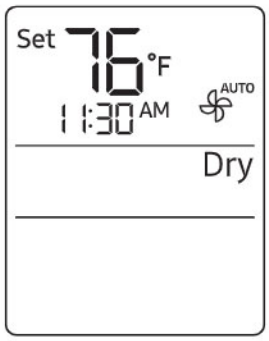
Use Cool mode to stay cool in hot weather.

▶ Mode ▶ Select Cool.

NOTE

- For comfort, keep the temperature difference between the indoor and outdoor air within 9 °F (5 °C).
- After selecting Cool mode, select the desired function, temperature, and fan speed.
  - To cool more quickly, select a lower temperature and a faster fan speed.
  - To save energy, select a higher temperature and a slower fan speed.
  - As the room temperature nears the set temperature, the compressor motor will slow down to save energy.

Power Smart Features



Dry mode

Use Dry mode in rainy or humid weather.

Mode ▶ Select Dry.

NOTE

- The proper set temperature range for dehumidifying operation is 76 °F to 79 °F(24 °C to 26 °C). If you feel that the current humidity seems high, use a lower set temperature.
- You cannot use Dry mode for heating. Dry mode is designed to produce a cooling side-effect.

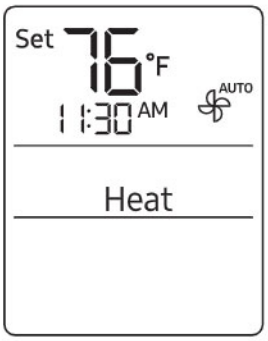
Fan mode

Use Fan mode to run the air conditioner like a floor fan, providing a breeze without heating or cooling.

Mode ▶ Select Fan.

NOTE

- If the air conditioner will not be used for an extended period of time, run it in Fan mode for 3 to 4 hours to dry the internal components.
- The outdoor unit does not operate in Fan mode. This is normal and not a fault with the air conditioner.



Heat mode

Use Heat mode to stay warm.

▶ Mode ▶ Select Heat.

NOTE

- While the air conditioner warms up, the fan may not operate for about 3 to 5 minutes at the beginning to prevent cold blasts.
- If the air conditioner heats insufficiently, use an additional heating appliance in combination with the air conditioner.

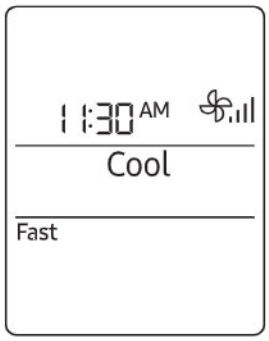
Automatic defrost

When the outdoor temperature is low and the humidity is high, frost may develop on the outdoor heat exchanger, which may decrease heating efficiency. When these conditions are met while Heat mode is on, the air conditioner runs the Defrost function for 5 to 12 minutes to remove frost from the outdoor heat exchanger.

NOTE

- When the Defrost function is on, the dF (Defrost) indicator appears on the indoor unit display, steam is produced on the outdoor unit, the air conditioner moves the airflow blades to the lowest position to prevent cold air from coming out from the indoor unit.
- You cannot select other functions with the remote control until the Defrost function is finished.

Variety Smart Features



Fast function

Use the Fast function to quickly cool or heat your room. This function is the most powerful cooling and heating function provided by the air conditioner. You can select this function in Cool or Heat mode.

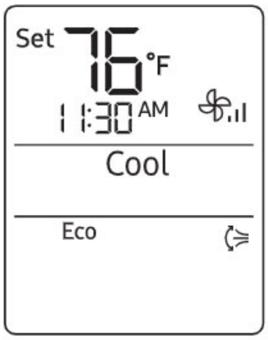
In Cool or Heat mode ▶ Fast

NOTE

- You can change the airflow direction, but you cannot change the set temperature and the fan speed.
- When you select the Fast function in Heat mode, you may not be able to increase the fan speed for 3 to 5 minutes while the unit heats up.
- Selecting the Fast function cancels the WindFree Cooling, Eco, good'sleep, and Quiet functions.
- You can also start the Fast function from the Options menu:

In Cool or Heat mode ▶ Options (Clean 3sec) ▶ < > ▶

Select Fast. ▶ SET °C↔°F 3sec



Eco function

For the multi system, this function is not supported.

Use the Eco function to reduce electricity consumption while staying cool or warm. You can select this function in Cool or Heat mode.

In Cool or Heat mode ▶ Options (Clean 3sec) ▶ < > ▶

Select Eco. ▶ SET °C↔°F 3sec

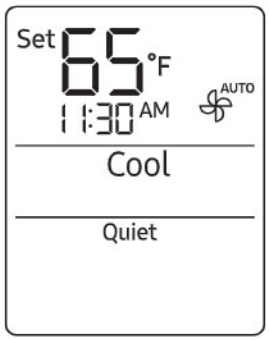
NOTE

- When the Eco function starts, the pattern appears on the remote control for a few seconds and vertical air swing begins.
- You can change the set temperature, airflow direction, and fan speed.
- The allowed set temperatures while the Eco function is on are:

Mode	Minumum set temperature	Maximum set temperature
Cool	76 °F (24 °C)	86 °F (30 °C)
Heat	47 °F (8 °C)	86 °F (30 °C)

- If you change the set temperature to be outside the allowed range for the current mode, the set temperature is automatically reset to be within the range.
- When you turn off the Eco function, the air swing continues. Use the (Vertical air swing) or (Horizontal air swing) button to turn it off.
- Selecting the Eco function cancels the Wind-Free Cooling, good'sleep, Fast, and Quiet functions.

Variety Smart Features



Quiet function

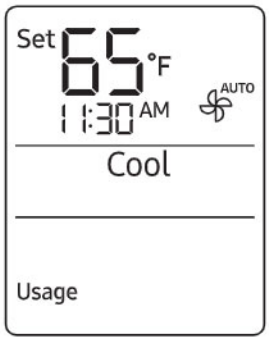
Use the Quiet function to reduce the unit's operating noise. You can select this function in Cool or Heat mode.

In Cool or Heat mode ▶ Options (Clean 3sec) ▶ < > ▶

Select Quiet. ▶ SET °C↔°F 3sec

NOTE

- You can change the set temperature and the airflow direction, but you cannot change the fan speed.
- Selecting the Quiet function cancels the WindFree Cooling, Eco, good'sleep, and Fast functions.



Electricity consumption check

For the multi system, this function is not supported.

Use the Usage function to check the amount of electricity consumed by using the air conditioner. The amount consumed is displayed on the indoor unit display for a few seconds, and the set temperature appears.

In operation ▶ Options (Clean 3sec) ▶ < > ▶

Select Usage. ▶ SET °C↔°F 3sec

The value range displayed is between 0.1 kWh and 99 kWh. Electricity consumption is calculated from the moment the air conditioner turns on. The value is reset when the air conditioner turns off.

NOTE

- The usage shown on the indoor unit display may slightly differ from the amount of electricity actually consumed.
- You can view electricity consumption only when the air conditioner is operating.

Usage time check

For the single system, this function is not supported.

Use the Usage time function to check the operation duration from the moment when the air conditioner is turned on to the moment when the Usage time function is selected. The usage time is displayed on the indoor unit display for a few seconds, and the set indoor temperature appears.

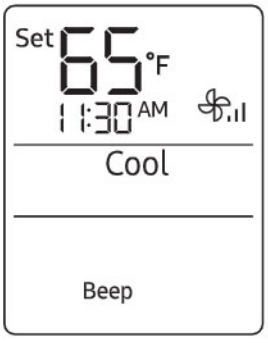
In operation ▶ Options (Clean 3sec) ▶ < > ▶

Select Usage. ▶ SET °C↔°F 3sec

The usage time is displayed in units of hour. For example, 0.1 is equivalent to 6 minutes; 2.5, 2 hours and 30 minutes; 3.7, 3 hours and 42 minutes. The value range displayed is between 0.0 and 99. The value is reset when the air conditioner turns off.

NOTE

- The usage time shown on the indoor unit display may a little differ from the actual operation time of the air conditioner.
- You can view the usage time only when the air conditioner is operating.



Beep function

Use the Beep function to turn on or off the beep that sounds when you press a button on the remote control.

Options (Clean 3sec) ▶ < > ▶ Select Beep. ▶ SET °C↔°F 3sec

Variety Smart Features

Auto clean function

Use the Auto clean function if the indoor unit produces odors.

Activating Auto clean

To activate Auto clean, press the (Options) button for at least 3 seconds.

The indoor unit display shows:

If the air conditioner is off, Auto clean starts immediately. If the air conditioner is running, Auto clean starts as soon as the air conditioner turns off.

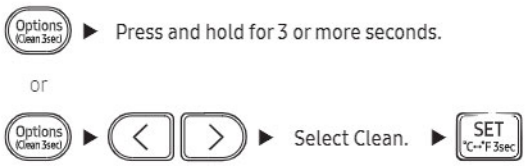
NOTE

- You can also activate Auto clean from the Options menu:

- Once Auto clean is selected, it is always activated whenever the air conditioner turns off.
- Auto clean runs for 10 to up to 30 minutes depending on internal dry conditions. The indoor unit display shows the cleaning progress from 1% to 99%.
- If you start another function while Auto clean is progressing, Auto clean pauses and will resume when the other function stops.
- When Auto clean completes, the air conditioner turns off.
- Auto clean does not run after Heat or Fan mode.

Canceling Auto clean

To cancel Auto clean while it is running, follow the procedure below:



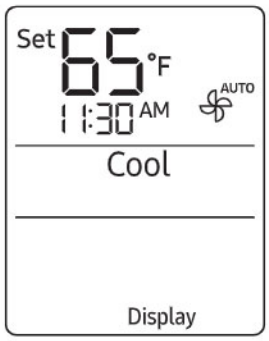
NOTE

- Canceling Auto clean does not deactivate it.

Deactivating Auto clean

To deactivate Auto clean, follow the procedure below while the air conditioner is in operation or turned off:

Variety Smart Features



Display lighting function

Use the Display lighting function to turn on or off the lighting of the indoor unit display.

Options (Clean 3sec) ▶ < > ▶ Select Display. ▶ SET (°C↔°F 3sec)

NOTE

- If you change the current mode or function when the Display lighting function is on, the display lighting turns on for 5 seconds and then turns off again.
- To turn off the Display lighting function, run the method above again or turn the product off and on.

Wi-Fi function (SmartThings app)

Turn on the Wi-Fi function to pair your smartphone with the air conditioner.

Timer ▶ Press and hold for 5 or more seconds.

NOTE

- When you turn on the Wi-Fi function, your smartphone pairs with the air conditioner, the (Transmit) indicator blinks, and AP appears on the remote control display for a few seconds.
- Once your smarphone is connected with the air conditioner, you can control it via the wireless Internet using the SmartThings app installed on your smartphone.
- For more information about how to prepare your smartphone for connection and how to control the air conditioner using the SmartThings app, see "SmartThings app" on page 47.
- To turn on or off the Wi-Fi, press and hold Mode (Mode) and < for 5 seconds.
  - In order to launch the SmartThings app, press and hold the Timer (Timer) button for 5 seconds, which enables to connect the air conditioner.

Time scheduling

Timed on/ Timed off function

Use the Timed on/off function to turn the air conditioner on or off after a duration. Scheduling durations before the air conditioner turns on or off helps use the air conditioner economically.

- Check the current time on the remote controller before using this function.
- The default time is 1 AM on the remote controller. The current time is reset to default time after changing the batteries.

Timer ▶ Select On or Off ▶

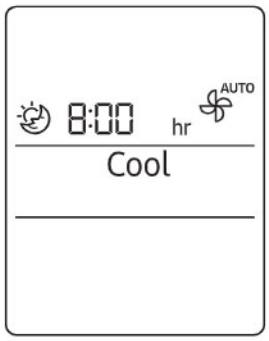
< > (Set the duration.) ▶ SET

NOTE

- You can set the time in hourly units from 1 hour to 12 hours according to AM, PM and in minute units from 0 to 59 minutes. Set the time interval to - : -- to cancel the Timed on/off function.
- When you start the Timed on/off function, the (Timer) indicator appears on the indoor unit display.
- After starting the Timed on function, you can change the mode and the set temperature. You cannot change the set temperature while the Fan mode is running.
- You cannot set the same duration for both Timed on and Timed off functions.

Combining Timed on and Timed off	
When the air conditioner is off	Example: Timed on 3 hours, Timed off 5 hours The air conditioner turns on 3 hours after the last time you press the SET (SET) button to start the Timed on/off function, remains on for 2 hours, then turns off again.
When the air conditioner is on	Example: Timed on 3 hours, Timed off 1 hour The air conditioner turns off 1 hour after the last time you press the SET (SET) button to start the Timed on/off function, remains off for 2 hours, then turns on again.

Time scheduling



good'sleep function

Use the good'sleep function to save energy while you are sleeping. You can select this function in Cool or Heat mode.

In Cool or Heat mode ▶ Timer (Select) ▶

(Set the duration.) ▶ SET °C↔°F 3sec

NOTE

- You can adjust the set temperature by 1 °F between 61 °F(16 °C) and 86 °F(30 °C) (Cool) / 47 °F(8˚C) and 86 °F(30˚C) (Heat).
- When you start the good'sleep function, the (Timer) indicator appears on the indoor unit display.
- You can set the time in half hour unit from 30 minutes to 3 hours and hour unit from 3 to 12 hours. Set the operation time to - : -- to cancel the good'sleep function.
- The recommended set temperatures while the good'sleep function is on are:

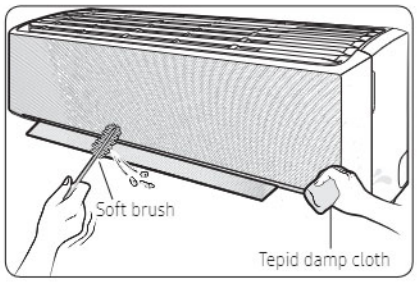
Mode	Recommended set temperature	Optimal set temperature
Cool	77 °F to 81 °F (25 °C to 27 °C)	79 °F (26 °C)
Heat	70 °F to 73 °F (21 °C to 23 °C)	72 °F (22 °C)

- The default operation time for the good'sleep function is 8 hours. If the operation time is set to over 5 hours, the Wake up function begins 1 hour before the set time. The air conditioner stops automatically when the operation time expires in the Cool mode,the air conditioner will run the function that you have started most recently in the Heat mode.
- When the Timed on, Timed off, and good'sleep functions are overlapped, the air conditioner operates its timer with only the function that you have started most recently.
- The good'sleep function can operate while the WindFree Cooling function is on.
- Selecting the good'sleep function cancels Eco, Fast, and Quiet functions.

Schedule

Task	How often	By whom	Instruction
Run the Auto clean function.	As needed	Owner	"Auto clean function" on page 26.
Clean the filter.	Once every two weeks	Owner	"Cleaning the filter" on page 33.
Clean the WindFree panel	At least once a month	Owner	"Cleaning the WindFree panel" on page 34.
Clean the exterior of the indoor unit.	As needed	Owner	"Cleaning the outside of the indoor unit" on page 32.
Clean the exterior of the outdoor unit.	At least once a year	Owner	"Cleaning the heat exchanger on the outdoor unit" on page 32.
Replace the remote control batteries	As needed	Owner	"Replacing the remote control batteries" on page 13.
Apply corrosion inhibitor on outdoor unit. (Only if installed near salt water such as an ocean)	At least once a year	Qualified technician	Contact your service provider.
Clean inside the indoor or outdoor unit.	Once a year	Qualified technician	Contact your service provider.
Inspect the units, electrical connections, refrigerant tubes, and protections.	Once a year	Qualified technician	Contact your service provider.

Cleaning



Cleaning the outside of the indoor unit

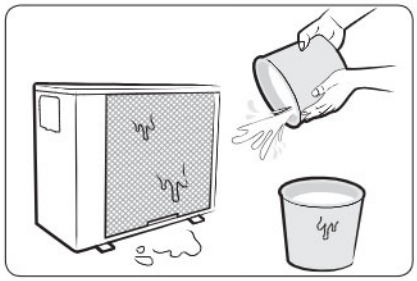
1 Turn off the air conditioner and wait until the fan stops.
2 Disconnect the power supply.
3 Use a soft brush or tepid damp cloth to clean the exterior.

WARNING

- Do not clean the appliance by spraying water directly onto it. Water entering the unit may result in electric shock or fire that could cause death, serious injury, or property damage:

CAUTION

- Do not use an alkaline detergent to clean the indoor unit display.
- Do not use sulphuric acid, hydrochloric acid, or organic solvents such as paint thinner, kerosene, acetone, benzene, or alcohol to clean the unit surfaces.



Cleaning the heat exchanger on the outdoor unit

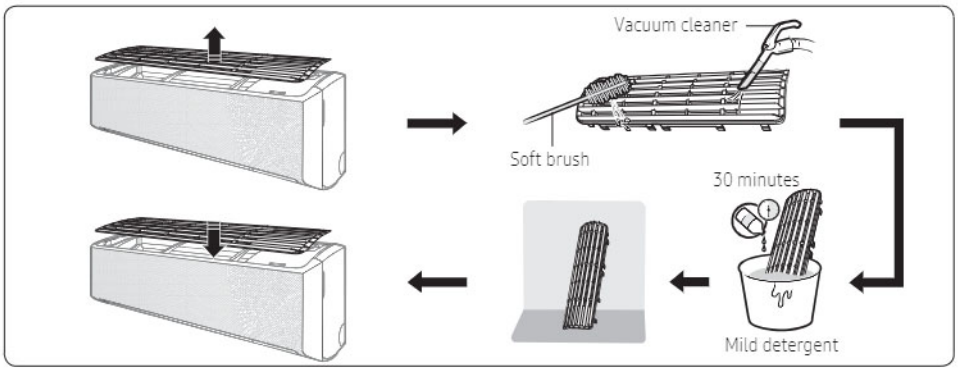
1 Turn off the air conditioner and wait until the fan stops.
2 Disconnect the power supply.
3 Spray water on the heat exchanger to remove dust and other debris.

CAUTION

- Do not use sulphuric acid, hydrochloric acid, or organic solvents such as paint thinner, kerosene, acetone, benzene, or alcohol to clean the unit surfaces.
- If you need to inspect or clean the inside of the heat exchanger on the outdoor unit, contact a local service centre for help.

Cleaning the filter

Clean the air filter every two weeks or when the CF (filter-cleaning reminder) appears on the indoor unit display. The time between cleanings may vary, depending on the usage and environmental conditions.



1 Slide the filter off of the unit.
2 Use a soft brush or vacuum cleaner to remove any dust or debris on the filter.
3 Soak the filter in a solution of water and mild detergent for 30 minutes.
4 Rinse the filter and let it air dry in a well-ventilated area that is out of direct sunlight.
5 Reinstall the filter.
6 Reset the filter-cleaning reminder:

In operation ▶ Options (Clean 3sec) ▶ < > ▶ Select Filter Reset. ▶ SET °C↔°F 3sec

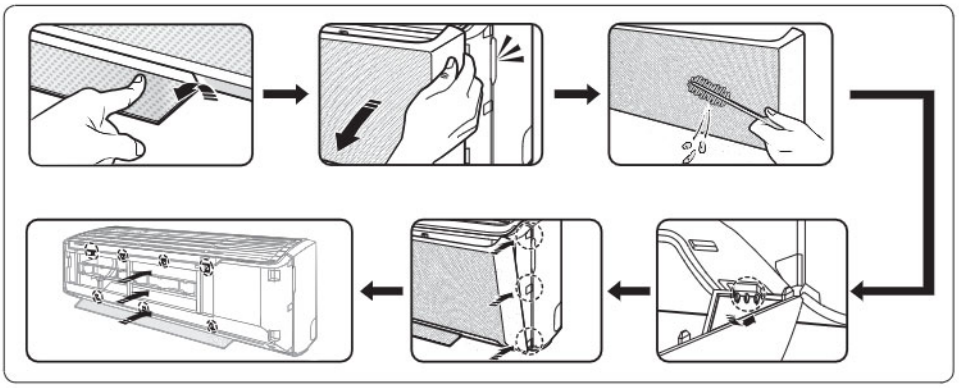
⚠ CAUTION

- Take care not to damage the filter during cleaning.
- Do not scrub the air filter with a hard-bristle brush or another cleaning utensil.
- Do not expose the air filter to direct sunlight when drying it.

Cleaning

Cleaning the WindFree panel

Clean the WindFree panel at least once a month.



1 Pull the airflow blade open.
2 Hold and pull both sides of the WindFree panel until it comes free from the air conditioner.
3 Use a soft brush or vacuum cleaner to remove any dust.
4 Hang the WindFree panel in the grooves at the bottom left and right.
5 Align the projections of the WindFree panel with the grooves at the top, middle, and bottom of the front panel.
6 After inserting the WindFree panel, press the top 4 places and the bottom 3 places by hand so that there is no gap to the panel.

⚠ CAUTION

- If you attach the WindFree panel without the airflow blade being open, it may become obstructed by the WindFree panel and may not open properly.

Troubleshooting

If the air conditioner is not operating normally, refer to the troubleshooting guide below.

Problem	Solution
The air conditioner stops working.	• Make sure the unit is receiving power. • Check the circuit breaker. If it is flipped off, flip it on again and restart the unit. If the problem persists, contact your service provider. • The Timed off function may have turned off the unit. Turn on the unit again.
Cannot change the temperature.	• Check if the unit is in Fan or Fast mode. If so, you cannot change the set temperature; the unit automatically controls the set temperature.
Improper airflow temperature.	• Check the set temperature. In Cool mode, cooling occurs only when the set temperature is lower than the current temperature. In Heat mode, heating occurs only when the set temperature is higher than the current temperature. • Use the (Temperature) button on the remote control to change the set temperature. • Check if the air filter is blocked with dirt or debris. If the air filter is blocked, the cooling and heating performance may decrease. Clean the air filter regularly (page 33). • Check if the outdoor unit is covered or is installed near obstacles. Remove the coverings and obstacles. • Check if the Defrost function is on (page 21). During defrost, the fan stops and warm air does not come out. • Check if doors or windows are open. This may cause poor circulation or performance. Close all doors and windows. • Check if the pipe length between the units exceeds the maximum pipe length (see "Typical installation" in the Installation manual). If so, the cooling and heating performance may decrease.
Cannot change the airflow direction.	• Check if the good'sleep function is on in Cool mode. If so, you cannot control the airflow direction.
Cannot change the fan speed.	• Check if the unit is in Auto, Dry, or Fast mode or the good'sleep function is on in Cool mode. In these conditions, you cannot control the fan speed; the unit automatically controls the fan speed.

Troubleshooting

Problem	Solution
The remote control does not work.	• Replace the batteries in the remote control. • Make sure the remote control can send an unobstructed signal to the unit. • Keep bright lights away from the unit. Light from fluorescent bulbs or neon signs may interrupt the signal from the remote control.
The Timed on/off function does not work.	• Make sure to press the SET (SET) button on the remote control when setting the timer.
The indicator on the remote control blinks continuously.	• Press the (Power) button to turn off the unit, or disconnect the power plug. • If the indicator light on the remote control continues blinking, contact your service provider.
Odors are coming from the unit during regular operation.	• If the unit is operating in a smoky area, ventilate the room or operate the unit in Fan mode for 3 to 4 hours. There are no components in the unit that produce a strong odor. • Check if the drain lines are clean. Clean them regularly.
The remote control display shows an error message.	• If the indoor unit indicator blinks, write down the error code. Contact your service provider and provide them with the error code.
The unit is generating noise.	• It is normal for the unit to generate some noise while operating. If the pipe length between the units is less than 3 m and no coil was used (see "Typical installation" in the Installation manual), additional noise may be transmitted from the outdoor unit to the indoor unit via the piping.
Smoke is coming from the outdoor unit.	• In winter, most likely this is steam coming from the outdoor heat exchanger while the Defrost function is on.
Water drips from the pipe connections on the outdoor unit.	• Condensation may develop when the ambient temperature or humidity changes significantly. This is normal.

SmartThings app

The SmartThings app may change without prior notice to improve product usability and performance.

Use the SmartThings app on your smartphone to control the air conditioner via the wireless Internet.

To remotely control the air conditioner, you need to connect your smartphone to the air conditioner. If already connected, skip to "Step 6. Controlling the air conditioner with your smartphone" on page 38.

Step 1. Checking the requirements for connection

Before connecting your smartphone with the air conditioner, make sure that the following requirements are met:

- Wi-Fi access point: 2.4 GHz Wi-Fi access point only
- The air conditioner and you smartphone must be within the coverage of the same Wi-Fi access point and connected to it. After the connection, you can control the air conditioner from any place via various wireless networks such as Wi-Fi, 3G, LTE and 5G.
- Recommended Android phones: Android 6.0 or later, at least 2 GB RAM
- Supported Apple phones: iOS 10.0 or later, iPhone 6 or later
- Android tablets and iPads are not supported.

Step 2. Connecting your smartphone to the Wi-Fi network

1 Turn on the Wi-Fi access point.

2 Tap **Settings** → **Wi-Fi** on your smartphone.

3 Tap the **Wi-Fi** switch to activate it, and then select the 2.4 GHz Wi-Fi access point to connect to.

4 If needed, enter the password for the access point.

5 Tap **Advanced**.

6 Top the **Switch to mobile data** switch to deactivate it.

Step3. Installing the SmartThings app

If the SmartThings app is not installed on your smartphone, follow the procedure below. If installed, skip to "Step 4. Configuring the SmartThings app" on page 37.

1 Launch **Play Store** or **App Store**.

2 Tap the search field, and then search for "SmartThings".

3 Tap **INSTALL** for the found SmartThings app item.

4 Select **Agree**.

Step 4. Configuring the SmartThings app

After the SmartThings app is installed, follow the procedure below to configure it. If already configured, skip to "Step 5. Connecting your smartphone to the air conditioner" on page 38.

1 Launch the **SmartThings** app.

2 When you see pop-up windows asking for location, Wi-Fi, Bluetooth permissions, tap **Start**.

3 Tap **Log In**.

4 If you have no Samsung account, tap **Add account** to create your Samsung account.

5 Log in to your Samsung account.

6 Consent to **TERMS AND CONDITIONS**.

7 When you see a pop-up window asking for access permission to location information, tap **ALLOW**.

SmartThings app

Step 5. Connecting your smartphone to the air conditioner

1 Plug in the power cord of the air conditioner, and then turn on the power.

2 Launch the **SmartThings** app.

3 Tap **Add device** on the home screen of the SmartThings app.

4 Tap **ADD DEVICE MANUALLY**.

5 Tap **Air conditioner** > **Room air conditioner**.

6 Press the Timer (Timer) button on the remote control for at least 4 seconds.

To notify that registration of the selected air conditioner to your Samsung account is in progress, the (Transmit) indicator blinks for several seconds and AP appears on the remote control display. When the connection is finished, the (Transmit) indicator turns off and AP disappears. A new device card for the selected air conditioner is added to the home screen of the SmartThings app.

Step 6. Controlling the air conditioner with your smartphone

1 Launch the **SmartThings** app.

2 On the home screen of the SmartThings app, tap the device card for the air conditioner, which was added when you proceeded with "Step 5. Connecting your smartphone to the air conditioner" on page 38.

3 Refer to the table on the next page and remotely control the air conditioner with your smartphone.

⚠ WARNING

- RF exposure warning statement – for keeping 20cm distance when installing this module.
- Warning that this module should not be installed and operating simultaneously with other radio without additional evaluation or FCC filing.
- Your device uses non-harmonised frequency and is intended for use in all European countries. The WLAN can be operated in the EU without restriction indoors, but cannot be operated outdoors in France.

Specifications

Wi-Fi	
Frequency Range	Transmitter Power(Max)
2412 - 2472 MHz	20 dBm

Open Source Announcement

The software included in this product contains open source software. You may obtain the complete corresponding source code for a period of three years after the last shipment of this product by sending an email to mailto:oss.request@samsung.com.

It is also possible to obtain the complete corresponding source code in a physical medium such as a CD-ROM; a minimal charge will be required.

The following URL http://opensource.samsung.com/opensource/SMART_AT_051/seq/0 leads to the download page of the source code made available and open source license information as related to this product. This offer is valid to anyone in receipt of this information.

Category	Function	Description
Monitoring	Set temperature	Displays the set temperature.
	Current temperature	Displays the current temperature.
Control	Power	Turns the air conditioner on or off.
	Mode	Selects the desired operation.
	Temperature	Adjusts the indoor set temperature.
	Fan Speed	Sets the fan speed of operation mode.
	Wind direction	Sets the fan directions of operation mode.
	WindFree Cooling	Turns the WindFree Cooling function on or off.
	Schedule	Sets the Timed on/off function. • The maximum number of schedules you can set using the Timed on/off function is 10. • The set times for the Timed on and Timed off functions must be different. • Once the Timed on/off function is set, the setting remains even if you unplug the air conditioner and plug in it again.
	Options	Selects an option function of operation mode. • The available options might be different depending on the air conditioner model. • The fan speed and airflow direction are set automatically according to the selected options. • For detailed information on the options of the product, see page 17 ~ 24.
	Settings	Sets additional functions. • Press the Settings button on the control screen to check or set detailed information of air conditioner. • The functions of Clean, Filter, and Beep can be set. – When the Beep function is off, the beep sound from the device will be mute.

SAMSUNG

Air conditioner

Installation manual

AC***BX**C*

- Thank you for purchasing this Samsung air conditioner.
- Before operating this unit, please read this manual carefully and retain it for future reference.

SAMSUNG

Contents

IMPORTANT – This product has been designed and manufactured to meet ENERGY STAR criteria for energy efficiency when matched with appropriate coil components.
However, proper refrigerant charge and proper air flow are critical to achieve rated capacity and efficiency.
Installation of this product should follow the manufacturer's refrigerant charging and air flow instructions.
Failure to confirm proper charge and airflow may reduce energy efficiency and shorten equipment life.

Safety Information

California Proposition 65 Warning (US)

⚠ WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

⚠ WARNING

- Hazards or unsafe practices that may result in severe personal injury or death.

⚠ CAUTION

- Hazards or unsafe practices that may result in minor personal injury or property damage.

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

⚠ WARNING

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

General information

⚠ WARNING

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

Safety Information

Installing the unit

⚠ WARNING

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

- Connecting one indoor unit to this product is prohibited.
- 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.
- Make sure that the condensed water runs well out of the unit at low ambient temperature. Base heater can frost/ ice can not grow. If drain work is not effective for releasing condensed water, it can make the units get damaged by massive ice and system can be stop, covered by ice. (AC018/024BXADCH, AC030/036BXSCCH models)
- Do not disassemble and alter the heater at your own discretion. (For AC018/024BXADCH, AC018/024/030/036BXSCCC, AC030/036BXSCCH models)

Power supply line, fuse or circuit breaker

⚠ WARNING

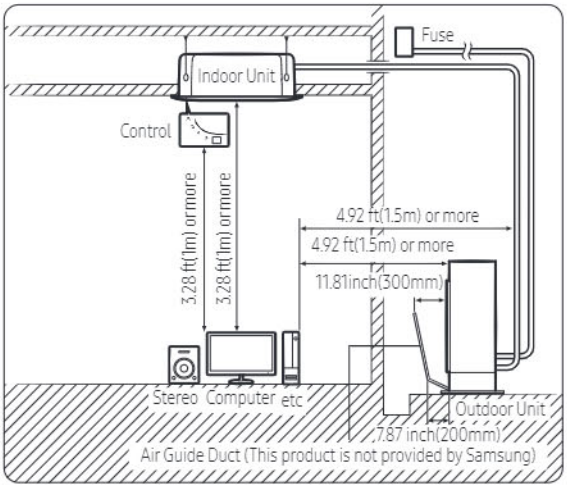
- Always make sure that the power supply is compliant with current safety standards. Always install the air conditioner in compliance with current local safety standards.
- Always verify that a suitable earthing connection is available.
- Verify that the voltage and frequency of the power supply comply 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 5 Optional: Extending the power cable" in the installation manual.

Installation Procedure

Step 1 Choosing the installation location

Installation location requirements

- Do not place the outdoor unit on its side or upside down. Failing to do so may cause the compressor lubrication oil to run into the cooling circuit and lead to serious damage to the unit.
- Install the unit in a well-ventilated location away from direct sunlight or strong winds.
- Install the unit in a location that would not obstruct any passageways or thoroughfares.
- Install the unit in a location that would not inconvenience or disturb your neighbors, as they could be affected by the noise or the airflow coming from the unit.
- Install the unit in a location where the pipes and the cables can be easily connected to the indoor unit.
- Install the unit on a flat, stable surface that can withstand the weight of the unit. Otherwise, the unit can generate noise and vibration during operation.
- Install the unit so that the air flow is directed towards the open area.
- Maintain sufficient clearance around the outdoor unit, especially from a radio, computer, stereo system, etc.

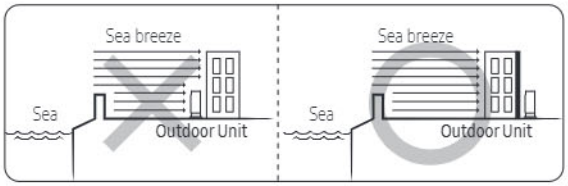


⚠ CAUTION

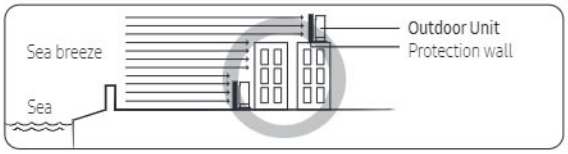
- You have just purchased a system air conditioner and it has been installed by your installation specialist.
- This device must be installed according to the national electrical rules.
- If your outdoor unit exceeds a net weight of 132.2 lb(60 kg), do not install it on a suspended wall, but stand it on a floor.
- The reliability of our product cannot be guaranteed under conditions of "A" or less.

Outdoor Model	"A"
AC018/024BXADCH, AC030/036BXSCCH	-13°F(-25°C)
AC030/036/042/048BXADCH	-4°F(-20°C)
AC018/024/030/036BXSCCC	-40°F(-40°C)

- If the indoor unit is installed in an IT room (for example, computer room), a separate back-up system must be installed.
- When installing the outdoor unit at the seaside, make sure that it is not directly exposed to sea breeze. If you cannot find an adequate place free from direct sea breeze, construct a protection wall or a protective fence.
  - Install the outdoor unit in a place (such as near buildings etc.) where it can be prevented from sea breeze. Failure to do so may cause a damage to the outdoor unit.



- If you cannot avoid installing the outdoor unit at the seaside, construct a protection wall around to block the sea breeze.
- Construct a protection wall with a solid material such as concrete to block the sea breeze. Make sure that the height and the width of the wall are 1.5 times larger than the size of the outdoor unit. Also, secure a space larger than 27.6 inch(700mm) between the protection wall and the outdoor unit for exhausted air to ventilate.



⚠ CAUTION

- Depending on the condition of the power supply, unstable power or voltage may cause malfunction of parts or control system (example: on a boat or places using power supplied from electric generator, etc.).

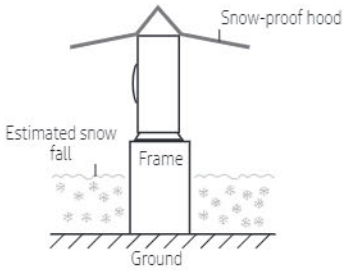
Installation Procedure

- Install the unit in a place where water can drain smoothly.
- If you have any difficulty finding installation location as prescribed above, contact your manufacturer for details.
- Consider that the salinity particles clinging to the external panels should be sufficiently washed out. Be sure to clean sea water and dust from the outdoor unit heat exchanger and apply a corrosion inhibitor on it at least once a year.
- Because the residual water at the bottom of the outdoor unit significantly promotes corrosion, make sure that the slope does not disturb drainage.
  - Keep the floor level so that rain does not accumulate.
  - Be careful not to block the drain hole due to foreign substance.
- Check the condition of the product periodically.
  - Check the installation site every 3 months and perform anti-corrosion treatment such as R-Pro supplied by SAMSUNG (Code : MOK-220SA) or commercial water repellent grease and wax, etc., based on the product condition.
  - When the product is to be shut down for a long period of time, such as off-peak hours, take appropriate measures like covering the product.
- If the product installed within 1640.4 ft (500 m) of seashore, special anti-corrosion treatment is required.

  ※ Please contact your local SAMSUNG representative for further details.

⚠ CAUTION

- In areas with heavy snow fall, piled snow could block the air intake. To avoid this incident, install a frame that is higher than estimated snow fall. In addition, install a snow-proof hood to avoid snow from piling on the outdoor unit.

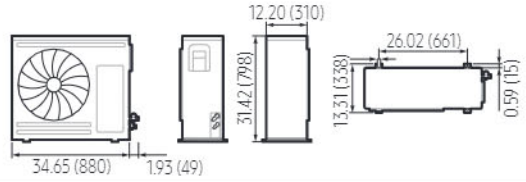


Outdoor unit dimensions

Unit : inch (mm)

A Type

AC018BXADCH, AC024BXSCCC



B Type

AC024BXADCH, AC030BXADCH, AC030BXSCCC, AC036BXSCCC

C Type

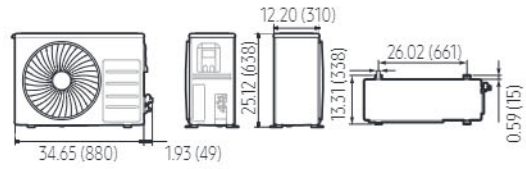
AC036BXADCH, AC042BXADCH, AC048BXADCH

D Type

AC030BXSCCH, AC036BXSCCH

E Type

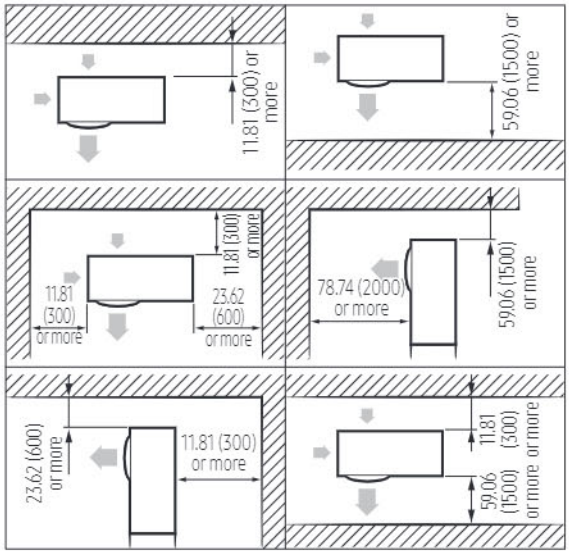
AC018BXSCCC



Minimum clearances for the outdoor unit

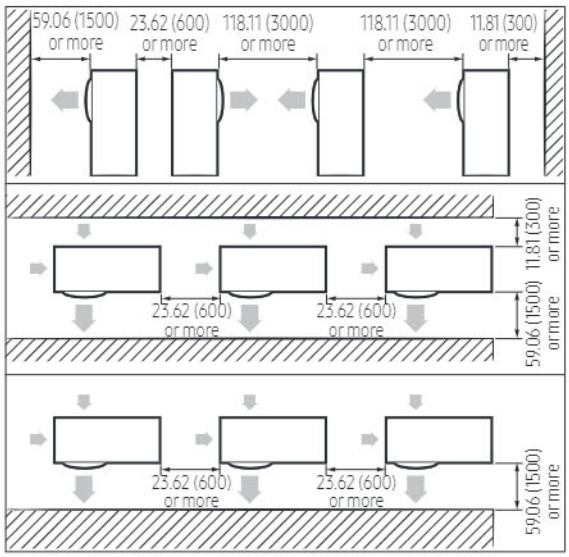
When installing 1 outdoor unit

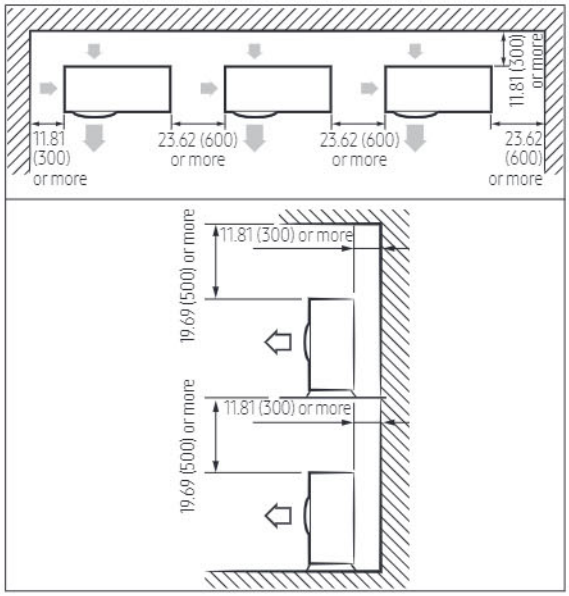
Unit : inch (mm)



When installing more than 1 outdoor unit

Unit : inch (mm)



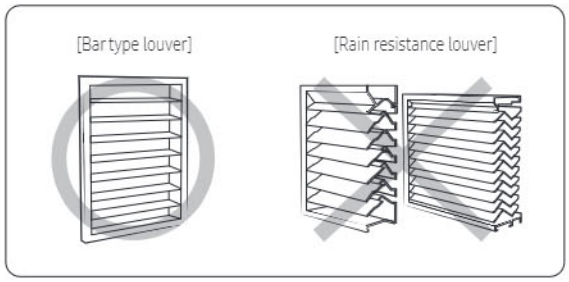


⚠ CAUTION

- The outdoor unit must be installed according to the specified distances in order to permit accessibility from each side, to guarantee correct operation, maintenance, and repair of the unit.
  The components of the outdoor unit must be reachable and removable under safe conditions for people and the unit.

⚠ WARNING

- Should adopt bar type louver. Don't use a type of rain resistance louver.



- Louver specifications.
  - Angle criteria : less than 20°
  - Opening ratio criteria : greater than 80%

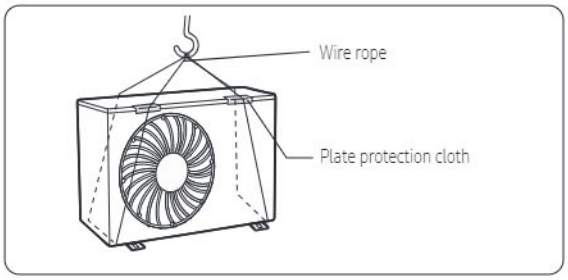
Installation Procedure

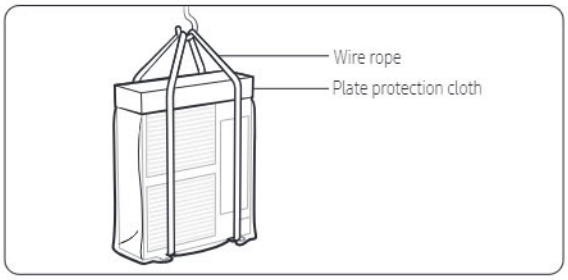
Moving the outdoor unit with wire rope

1 Before carrying the outdoor unit, fasten two wire ropes of 26.25 ft (8m) or longer, as shown in the figure.

2 To prevent damages or scratches effectively, insert a piece of cloth between the outdoor unit and the ropes.

3 Move the outdoor unit.





Step 2 Checking and preparing accessories and tools

Drain Plug [1]	Energy Label
	
Rubber Leg	**Installation Manual**
	
Drain Cap [1]	
	

[1] AC018/024/030/036BXSCCC, AC030/036BXSCCH model is not included.

NOTE

- Wire assembly cables are optional. If they are not supplied, use standard cables.
- The drain plug and the rubber legs are included only when the air conditioner is supplied without assembly pipes.
- If these accessories are supplied, they are in the accessory package or outdoor unit package.

Step 3 Fixing the outdoor unit in place

Install the outdoor unit on a rigid and stable base to prevent disturbance from any noise caused by vibration. When installing the unit on tall stands or in a location exposed to strong winds, fix the unit securely to the ground or structure.

1 Position the outdoor unit so that the air flow is directed towards the outside, as indicated by the arrows on the top of the unit.

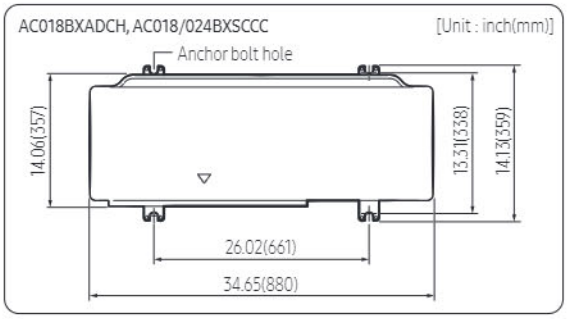
2 Attach the outdoor unit to the appropriate support using anchor bolts.

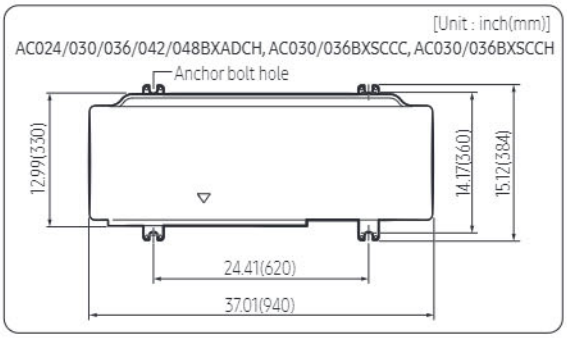
- The ground wire for the telephone line cannot be used to ground the air conditioner.

3 DIf the outdoor unit is exposed to strong winds, install shield plates around the outdoor unit, so that the fan can operate correctly.

NOTE

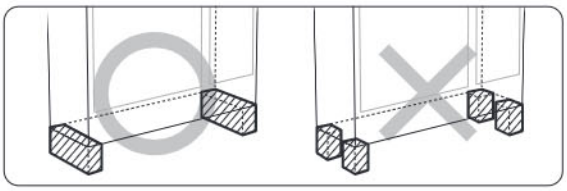
- Install provided rubber legs to prevent vibration and noise.



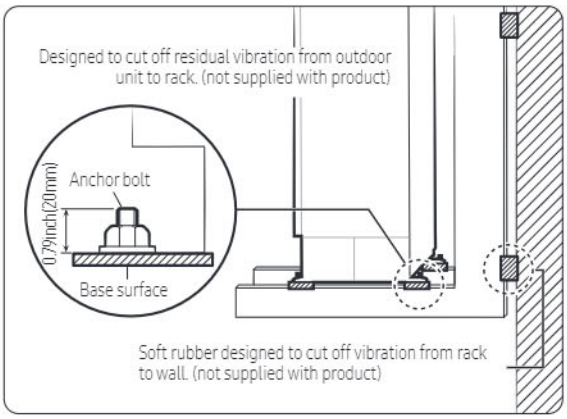


⚠ CAUTION

- Install a drain outlet at the lowest end around the base for outdoor unit drainage
- When installing the outdoor unit on the roof, waterproof the unit and check the ceiling strength.



Optional: Fixing the outdoor unit to a wall with a rack



- Install a proper grommet in order to reduce noise and residual vibration transferred by the outdoor unit towards the wall.

⚠ CAUTION

- Make sure that the wall can support the weights of the rack and the outdoor unit.
- Install the rack close to the column as much as possible.
- When installing an air guide duct, be sure to check the following:
  - The screws do not damage the copper pipe.
  - The air guide duct is fixed firmly on the guard fan.

Step 4 Connecting the power cables, communication cable, and controllers

You must connect the following three electrical cables to the outdoor unit:

- The main power cable between the auxiliary circuit breaker and the outdoor unit.
- The outdoor-to-indoor power cable between the outdoor unit and the indoor unit.
- The communication cable between the outdoor unit and the indoor unit.

⚠ CAUTION

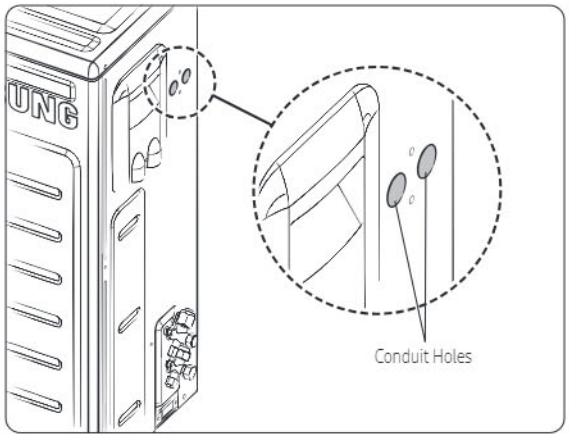
- During installation, make first the refrigerant connections and then the electrical connections. If the unit is being removed, first disconnect the electrical cables and then the refrigerant connections.
- Connect the air conditioner to the earthing system before making the electrical connections.

Installation Procedure

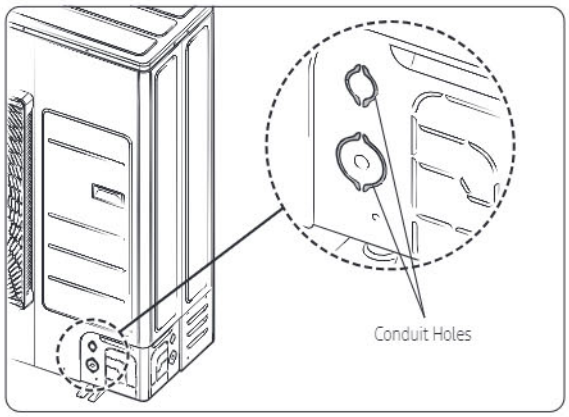
Connecting wire conduits

When connecting cables between the indoor unit and the outdoor unit, use conduits to protect the cables.

1 Drill holes on the conduit plate in accordance with their use and quantity.
   - AC018BXADCH, AC018/024BXSCCC
     – Drill conduit holes on the side cabinet. (knock out holes)



   - AC024/030/036/042/048BXADCH, AC030/036BXSCCC, AC030/036BXSCCH
     – Use a nipper to remove conduit holes from the lower part of the cabinet.
     (Do not remove it by hammering.)



2 Insert the cables through the conduits, and then fix the conduits to the conduit plate with the lock nuts.

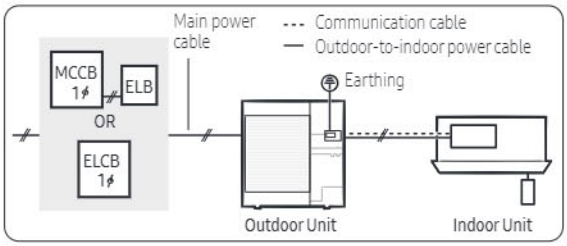
3 Apply silicone to the end of the hose to prevent rain from entering the hose.

4 Connect the cables to the outdoor units.
For how to connect the cables, refer to the next page.

5 Attach the conduit plate to the product.

Air conditioning system examples

When using earth leakage circuit breaker (ELCB) for a single phase



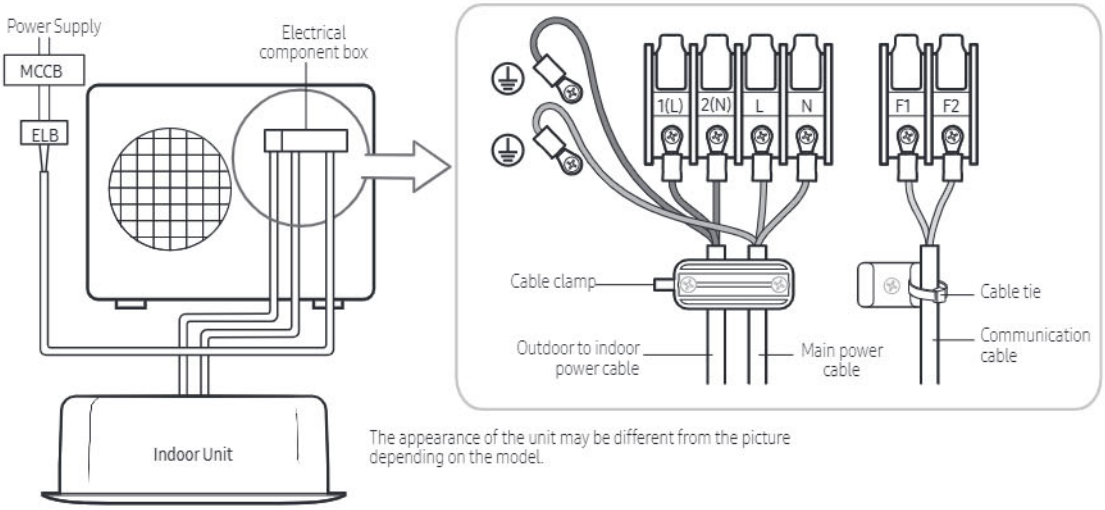
※ The appearance of the unit may be different from the picture depending on the model.

⚠ CAUTION

- If the outdoor unit is installed in a location vulnerable to an electric leak or submergence, make sure to install an ELCB.
- AC018/024BXADCH, AC030/036BXSCCH: ELCB must be installed since this product is equipped with a base heater.

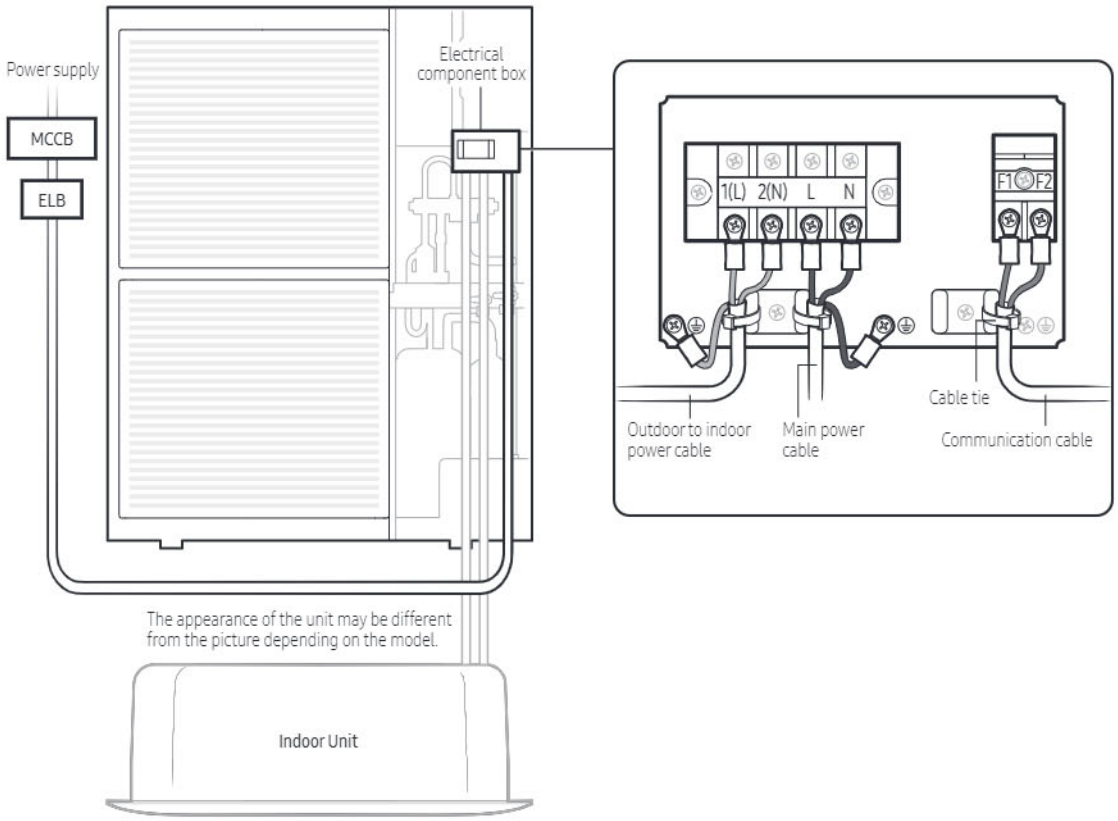
Connecting the main power cable

When using ELB for AC018BXADCH, AC018/024BXSCCC (1-phase)



The appearance of the unit may be different from the picture depending on the model.

When using ELB for AC024/030/036/042/048BXADCH, AC030/036BXSCCC, AC030/036BXSCCH (1-phase)



The appearance of the unit may be different from the picture depending on the model.

Installation Procedure

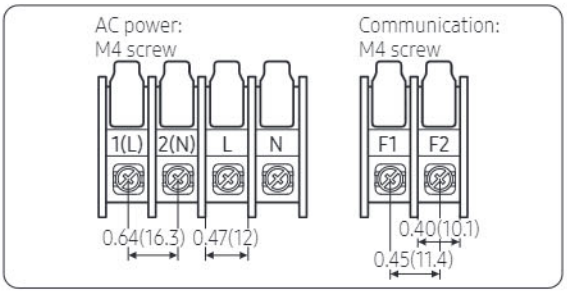
⚠ CAUTION

- You should connect the power cable into the power cable terminal and fasten it with a clamp.
- The unbalanced power must be maintained within 2% of supply rating.
- If the power is unbalanced greatly, it may shorten the life of the condenser. If the unbalanced power is exceeded over 4% of supply rating, the indoor unit is protected, stopped and the error mode indicates.
- To protect the product from water and possible shock, you should keep the power cable and the connection cord of the indoor and outdoor units within ducts. (with appropriate IP rating and material selection for your application)
- Ensure that main supply connection is made through a switch that disconnects all poles, with contact gap of a least 0.12 inch(3mm).
- Devices disconnected from the power supply should be completely disconnected in the condition of overvoltage category.
- Keep distances of 1.97 inch(50mm) or more between power cable and communication cable.

Main power terminal block specifications

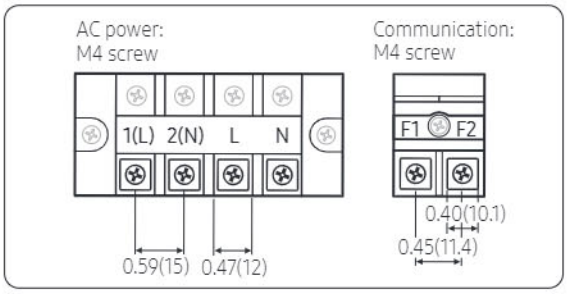
- AC018BXADCH, AC018/024BXSCCC (1-phase)

[Unit : inch(mm)]



- AC024/030/036/042/048BXADCH, AC030/036BXSCCC, AC030/036BXSCCH (1-phase)

[Unit : inch(mm)]



Main power cable specifications

The power cable is not supplied with air conditioner.

- Select the power supply cable in accordance with relevant local and national regulations.
- Wire size must comply with the applicable local and national code.
- Specifications for local wiring power cord and branch wiring are in compliance with local cord.

Model		Power Source	RLA (A)	Outdoor		Indoor	MCA (A)	MOP (A)
Outdoor	Indoor			MOC		Rated input current of the power conversion equipment		
				FAN1(A)	FAN2(A)	FAN(A)		
AC018BXADCH	AC018BN1DCH	208~230V/60Hz	12.7	1.25	-	0.42	18.4	25.0
	AC018BN4DCH					0.79	18.8	25.0
	AC018BN6DCH					0.79	18.8	25.0
	AC018BNADCH					0.42	18.4	25.0
	AC018BNHDCH					2.10	20.1	25.0
	AC018BNJDCH					0.49	18.5	25.0
	AC018BNLDCH					1.06	19.1	25.0
	AC018BNNDCH					0.30	18.3	25.0
	AC018BNZDCH					1.50	19.5	25.0
	AC018KNZDCH					0.72	18.7	25.0
AC024BXADCH	AC024BN4DCH		15.9	1.25	-	0.79	22.8	30.0
	AC024BN6DCH					0.79	22.8	30.0
	AC024BNADCH					0.42	22.4	30.0
	AC024BNHDCH					2.10	24.1	30.0
	AC024BNZDCH					2.10	24.1	30.0
	AC024KNZDCH					0.72	22.7	30.0
AC030BXADCH	AC030BN4DCH		16.2	1.25	-	0.79	22.3	30.0
	AC030BN6DCH					0.79	22.3	30.0
	AC030BNHDCH					2.10	23.6	30.0
	AC030BNTDCH					0.51	22.1	30.0
	AC030BNZDCH					2.50	24.0	30.0
	AC030KNZDCH					1.66	23.2	30.0
AC036BXADCH	AC036BN4DCH		14.7	1.25	1.25	0.79	21.7	35.0
	AC036BN6DCH					0.79	21.7	35.0
	AC036BNHDCH					3.50	24.4	35.0
	AC036BNTDCH					0.51	21.4	35.0
	AC036BNZDCH					3.60	24.5	35.0
	AC036KNZDCH					1.66	22.6	35.0
AC042BXADCH	AC042BN4DCH		20.9	1.25	1.25	0.79	29.5	40.0
	AC042BN6DCH					0.79	29.5	40.0
	AC042BNHDCH					3.50	32.2	40.0
	AC042BNZDCH					3.40	32.1	40.0
	AC042KNZDCH					1.66	30.3	40.0
AC048BXADCH	AC048BN4DCH		20.9	1.25	1.25	0.79	29.5	40.0
	AC048BN6DCH					0.79	29.5	40.0
	AC048BNHDCH					3.50	32.2	40.0
	AC048BNZDCH					4.10	32.8	40.0
	AC048KNZDCH					2.09	30.8	40.0

Installation Procedure

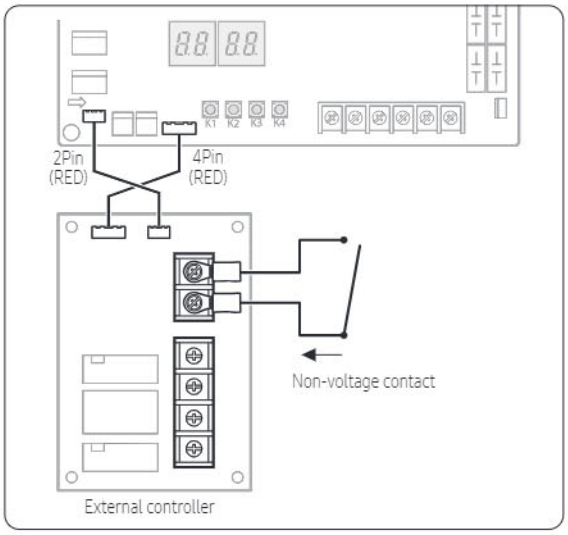
Model		Power Source	RLA (A)	Outdoor		Indoor	MCA (A)	MOP (A)
Outdoor	Indoor			MOC		Rated input current of the power conversion equipment		
				FAN1(A)	FAN2(A)	FAN(A)		
AC018BXSCCC	AC018BN4DCH	208~230V/60Hz	8.2	0.97	-	0.79	12.2	15.0
	AC018BNADCH					0.42	11.8	15.0
	AC018BNHDCH					2.10	13.5	15.0
AC024BXSCCC	AC024BN4DCH		13.5	0.97	-	0.79	18.8	25.0
	AC024BNADCH					0.42	18.4	25.0
	AC024BNHDCH					2.10	20.1	25.0
AC030BXSCCC	AC030BN4DCH		16.2	0.97	-	0.79	22.2	30.0
	AC030BNHDCH					2.10	23.5	30.0
	AC030BNTDCH					0.51	21.9	30.0
AC036BXSCCC	AC036BN4DCH		16.2	0.97	-	0.79	22.2	30.0
	AC036BNHDCH					3.50	24.9	30.0
	AC036BNTDCH					0.51	21.9	30.0
AC030BXSCCH	AC030BN4DCH		21.0	1.25	1.25	0.79	30.4	40.0
	AC030BNHDCH					2.10	31.7	40.0
	AC030BNZDCH					2.50	32.1	40.0
	AC030KNZDCH					1.66	31.3	40.0
AC036BXSCCH	AC036BN4DCH		21.0	1.25	1.25	0.79	30.4	40.0
	AC036BNHDCH					3.50	33.1	40.0
	AC036BNZDCH					3.60	33.2	40.0
	AC036KNZDCH					1.66	31.3	40.0

NOTE

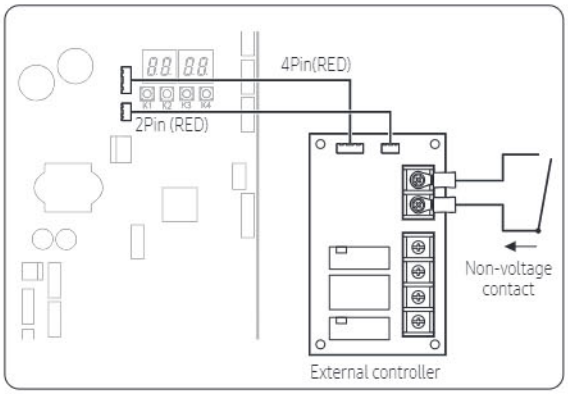
- RLA is based on AHRI 210/240 cooling standard condition [Indoor temp. : 26.7 °C / 80 °F(DB) / 19.46 °C / 67 °F(WB), Outdoor temp. : 35 °C / 95 °F(DB)]
- Voltage tolerance is ± 10 %.
- Maxium allowable voltage between phases is 2 %.
- Symbols
  - RLA: Rated Load Ampere (A)
  - MOC: Maximum Operating Current (A)
  - MCA: Minumum Circuit Ampere (A)
  - MOP: Maximum Overcurrent Protective Device (A)
- Voltage range
  - Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
- Maximum allowable voltage variation between phases is 2%.
- Wire size & type must comply with the applicable local and national code.
  - Wire size: Based on the value of MCA.
  - Wire type:
    1-phase: 60245 IEC57(IEC) or H05RN-F(CENELEC) grade or more

Silence mode controller wiring diagram with External controller

- AC018BXADCH, AC018/024BXSCCC



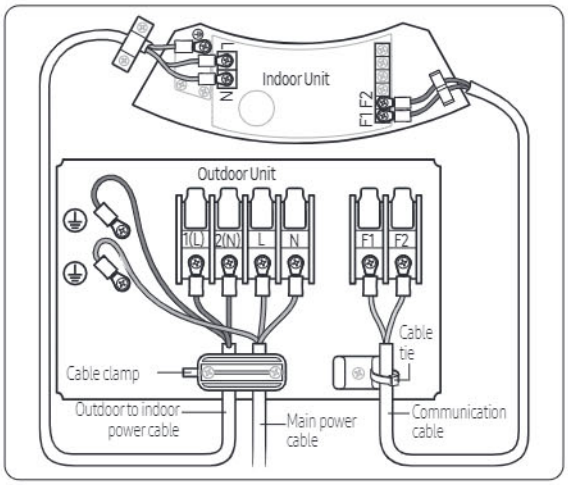
- AC024/030/036/042/048BXADCH, AC030/036BXSCCC, AC030/036BXSCCH



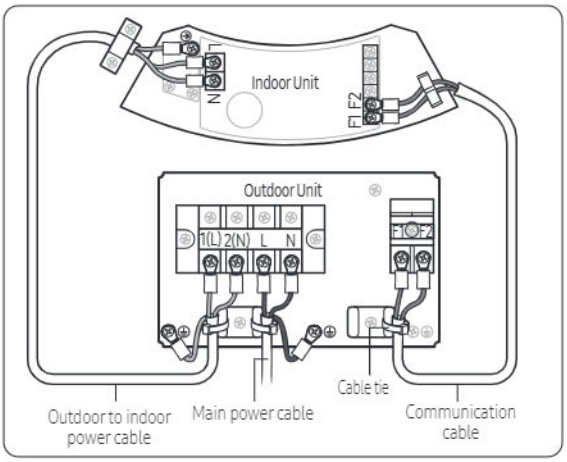
Installation Procedure

Connecting the outdoor-to-indoor power cable and the communication cable

- AC018BXADCH, AC018/024BXSCCC



- AC024/030/036/042/048BXADCH, AC030/036BXSCCC, AC030/036BXSCCH

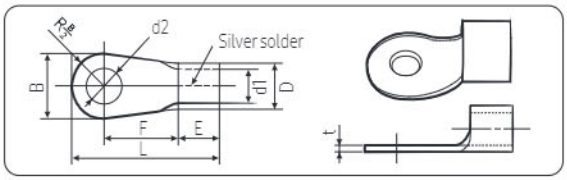


NOTE

- Lay the electrical wiring so that the front cover does not rise up when doing wiring work and attach the front cover securely.
- Ground wire for the indoor unit and outdoor unit connection cable must be clamped to a soft copper tin-plated eyelet terminal with M4 screw hole(NOT SUPPLIED WITH UNIT ACCESSORIES).
- The appearance of the unit may be different from the picture depending on the model.

Outdoor-to-indoor power terminal specifications

- Connect the cables to the terminal board using the compressed ring terminal.
- Cover a solderless ring terminal and a connector part of the power cable and then connect it.



Nominal dimensions for cable [mm²(inch²)]	Nominal dimensions for screw [mm(inch)]	B		D		d1		E	F	L	d2		t
		Standard dimension [mm(inch)]	Allowance [mm(inch)]	Standard dimension [mm(inch)]	Allowance [mm(inch)]	Standard dimension [mm(inch)]	Allowance [mm(inch)]	Min. [mm (inch)]	Min. [mm (inch)]	Max. [mm (inch)]	Standard dimension [mm(inch)]	Allowance [mm(inch)]	Min. [mm (inch)]
4/6 (0.006/ 0.009)	4(3/8)	9.5(3/8)	±0.2 (±0.007)	5.6(1/4)	+0.3(+0.011) -0.2(-0.007)	3.4(1/8)	±0.2 (±0.007)	6 (1/4)	5 (3/16)	20 (3/4)	4.3 (3/16)	+0.2 (+0.007) 0(0)	0.9 (0.03)
	8(3/16)	15(9/16)							9 (3/8)	28.5 (1-1/8)	8.4 (1-3/16)	+0.4 (+0.015) 0(0)	
10(0.01)	8(3/16)	15(9/16)	±0.2 (±0.007)	7.1(1/4)	+0.3(+0.011) -0.2(-0.007)	4.5(3/16)	±0.2 (±0.007)	7.9 (5/16)	9 (3/8)	30 (1-3/16)	8.4 (1-3/16)	+0.4 (+0.015) 0(0)	1.15 (0.04)
16(0.02)	8(3/16)	16(10/16)	±0.2 (±0.007)	9(3/8)	+0.3(+0.011) -0.2(-0.007)	5.8(1/4)	±0.2 (±0.007)	9.5 (5/16)	13 (1/2)	33 (1-5/16)	8.4 (1-3/16)	+0.4 (+0.015) 0(0)	1.45 (0.05)
25(0.03)	8(3/16)	12(1/2)	±0.3 (±0.011)	11.5(7/16)	+0.5(+0.019) -0.2(-0.007)	7.7(5/16)	±0.2 (±0.007)	11 (3/8)	15 (5/8)	34 (1-3/8)	8.4 (1-3/16)	+0.4 (+0.015) 0(0)	1.7 (0.06)
	8(3/16)	16.5(10/16)							13 (1/2)		8.4 (1-3/16)		
35(0.05)	8(3/16)	16(10/16)	±0.3 (±0.011)	13.3(1/2)	+0.5(+0.019) -0.2(-0.007)	9.4(3/8)	±0.2 (±0.007)	12.5 (1/2)	13 (1/2)	38 (1-1/2)	8.4 (1-3/16)	+0.4 (+0.015) 0(0)	1.8 (0.07)
	8(3/16)	22(7/8)							13 (1/2)	43 (1-11/16)	8.4 (1-3/16)		
50(0.07)	8(3/16)	22(7/8)	±0.3 (±0.011)	13.5(1/2)	+0.5(+0.019) -0.2(-0.007)	11.4(7/16)	±0.3 (±0.011)	17.5 (11/16)	14 (9/16)	50 (2)	8.4 (1-3/16)	+ 0.4(+0.015) 0(0)	1.8 (0.07)
70(0.10)	8(3/16)	24(1)	±0.4 (±0.015)	17.5(11/16)	+0.5(+0.019) -0.4(-0.015)	13.3(1/2)	±0.4 (±0.015)	18.5 (3/4)	20 (3/4)	51 (2)	8.4 (1-3/16)	+ 0.4(+0.015) 0(0)	2.0 (0.078)

- Connect the rated cables only.
- Connect using a driver which is able to apply the rated torque to the screws.
- If the terminal is loose, fire may occur caused by arc. If the terminal is connected too firmly, the terminal may be damaged.

	Tightening torque	
	lbf•ft	N•m
M4	0.87 to 1.30	0.8 to 1.2
M5	1.45 to 2.17	2.0 to 3.0

⚠ CAUTION

- When connecting cables, you can connect the cables to the electrical part or connect them through the holes below depending on the spot.
- Connect the communication cable 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.
- Remove all burrs at the edge of the knock-out hole and secure the cable to the outdoor knock-out using lining and bushing with an electrical insulation such as rubber and so on.
- Must keep the cable in a protection tube.
- Keep distances of 1.97 inch(50mm) or more between power cable and communication cable.
- When the cables are connected through the hole, remove the Plate bottom.

Installation Procedure

Outdoor-to-indoor power and communication cables specifications

- Indoor unit :
  1WAY CST(AC***BN1***)
  360CST(AC***BN6***)
  4WAY CST(AC***BN4***)
  Mini4way CST(AC***BNN***)
  Console(AC***BNJ***)
  RAC(AC***BNT***, AC***BNA***)

Indoor power supply		
Power supply	Max/Min (V)	Indoor power cable
1Φ, 208-230V~, 60Hz	±10%	0.0012 inch²↑ (0.75mm² ↑), 3 wires
Communication cable		
0.0012 inch²↑ (0.75mm² ↑), 2 wires		

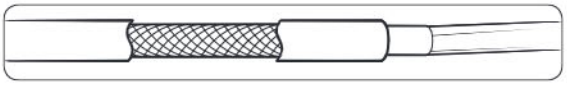
- Indoor unit :
  Duct(AC***BNL***, AC***BNH***)

Indoor power supply		
Power supply	Max/Min (V)	Indoor power cable
1Φ, 208-230V~, 60Hz	±10%	0.0023 inch² ↑ (1.5mm² ↑), 3 wires
Communication cable		
0.0012 inch²↑ (0.75mm² ↑), 2 wires		

- Indoor unit :
  MPAH(AC***BNZ***, AC***KNZ***)

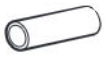
Indoor power supply		
Power supply	Max/Min (V)	Indoor power cable
1Φ, 208-230V~, 60Hz	±10%	0.0039 inch² ↑ (2.5mm² ↑), 3 wires
Communication cable		
0.0012 inch²↑ (0.75mm² ↑), 2 wires		

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

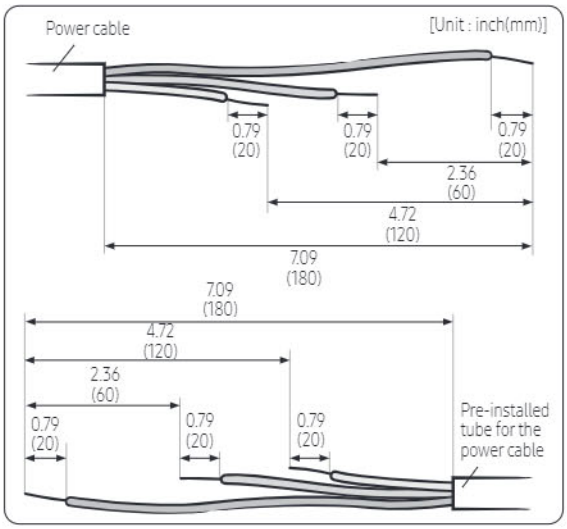


Step 5 Optional: Extending the power cable

1 Prepare the following tools.

Tools	Spec	Shape
Crimping pliers	MH-14	
Connection sleeve [Inch(mm)]	0.78 (20)x Ø0.25 (6.5) (HxOD)	
Insulation tape	Width 19 mm	
Contraction tube [Inch(mm)]	2.75 (70)x Ø0.31 (8.0) (LxOD)	

2 As shown in the figure, peel off the shields from the rubber and wire of the power cable.
- Peel off 0.79 inch (20 mm) of cable shields from the pre-installed tube.

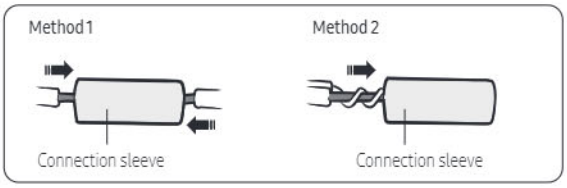


⚠ CAUTION

- For information about the power cable specifications for indoor and outdoor units, refer to the installation manual.
- After peeling off cable wires from the pre-installed tube, insert a contraction tube.

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.

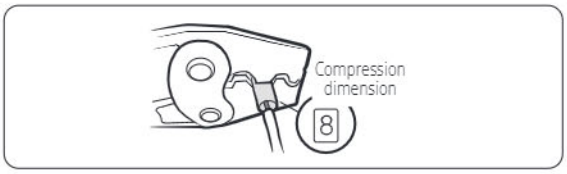


⚠ CAUTION

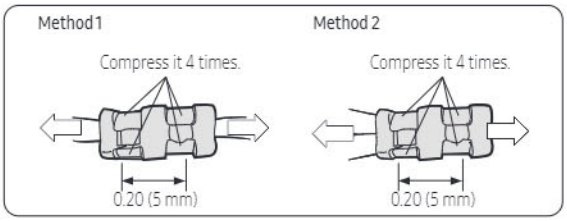
- If cable wires are connected without using connecting sleeves, their contact area becomes reduced, or corrosion develops on the outer surfaces of the wires (copper wires) over a long time. This may cause an increase of resistance (reduction of passing current) and consequently may result in a fire.

4 Using a crimping tool, compress the two points and flip it over and compress another two points in the same location.

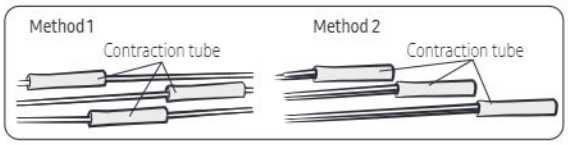
- The compression dimension should be 8.0.



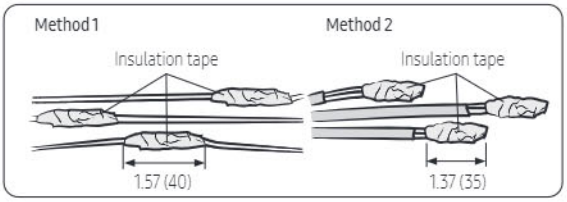
- After compressing it, pull both sides of the wire to make sure it is firmly pressed.



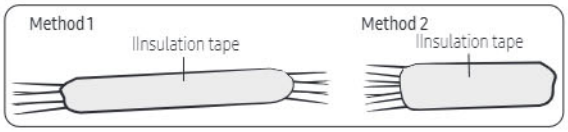
5 Apply heat to the contraction tube to contract it.



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



7 After tube contraction work is completed, wrap it with the insulation tape to finish.
Three or more layers of insulation are required.

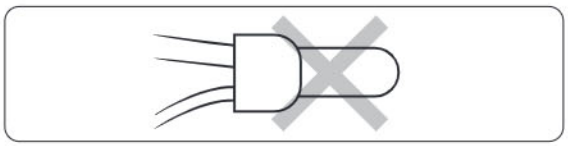


⚠ CAUTION

- Make sure that the connection parts are not exposed to outside.
- Be sure to use insulation tape and a contraction tube made of approved reinforced insulating materials that have the same level of withstand voltage with the power cable. (Comply with the local regulations on extensions.)

⚠ WARNING

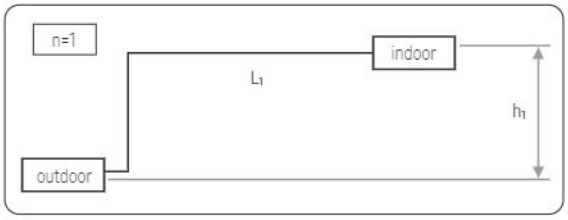
- In case of extending the electric wire, please DO NOT use a round-shaped Pressing socket.
  - Incomplete wire connections can cause electric shock or a fire.



Installation Procedure

Step 6 Connecting the refrigerant pipe

Items	Maximum allowable length [ft(m)]		
Applicable outdoor unit models	AC018BXSCCC	AC018BXADCH AC024BXADCH AC024BXSCCC AC030BXADCH AC030BXSCCC AC036BXSCCC	AC030BXSCCH AC036BXADCH AC036BXSCCH AC042BXADCH AC048BXADCH
Main pipe (L1)	98.4(30)	164.0(50)	246.0(75)
Max. height difference between outdoor and indoor units (h1)	65.6(20)	98.4(30)	98.4(30)



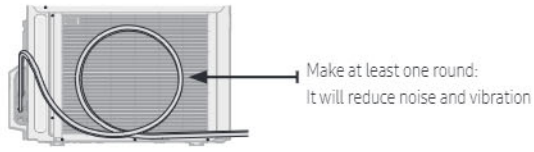
- Temper grade and minimum thickness of the refrigerant pipe

Outer diameter [inch(mm)]	Minimum thickness [inch(mm)]	Temper grade
ø1/4(6.35)	0.0276(0.7)	C1220T-O
ø3/8(9.52)	0.0276(0.7)	
ø1/2(12.7)	0.0315(0.8)	
ø5/8(15.88)	0.0394(1.0)	
ø5/8(15.88)	0.0315(0.8)	C1220T-1/2H OR C1220T-H
ø3/4(19.05)	0.0354(0.9)	
ø7/8(22.23)	0.0354(0.9)	

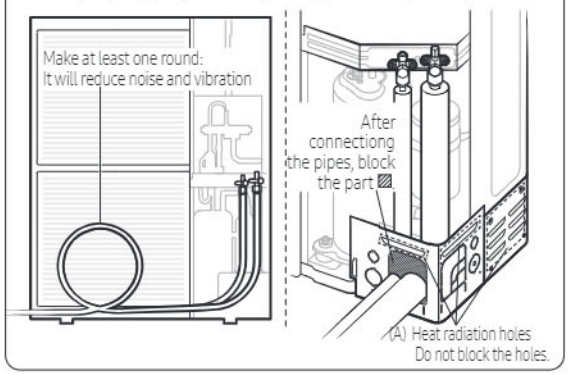
⚠ CAUTION

- Be sure to use C1220T-1/2H (Semi-hard) pipe for more than Ø19.05 mm. If you use C1220T-O (Soft) pipe for Ø19.05 mm, the pipe may be broken, which can result in an injury.

AC018BXADCH, AC018/024BXSCCC

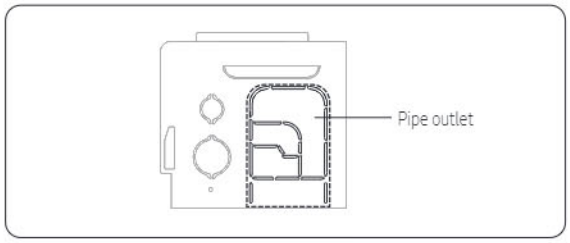


AC024/030/036/042/048XADCH, AC030/036BXSCCC, AC030/036BXSCCH



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

⚠ CAUTION

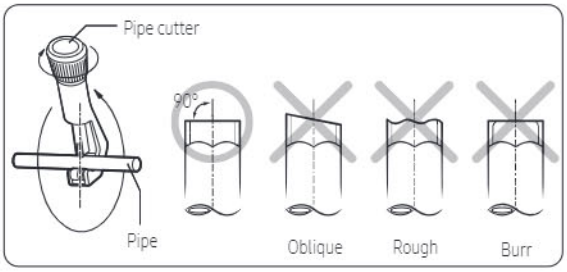


- Cut the pipe outlet to the exact pipe size. In addition, remove foreign substances and burres aroud the outlet.
- Perform cutting with only a cutter (ex. nipper) and never tap with a hammer near the pipe outlet. Otherwise, it may cause product damage such as warping of the cabinet.
- After connecting the pipes with Pipe outlet, plug the space around the pipes.
- After connecting the pipes, proceed exactly as directed in the guide to prevent interference with the internal parts.
- Tighten the nuts to the specified torques. If overtightened, the nuts could be broken so refrigerant may leak.
- Protect or enclose refrigerant tubing to avoid mechanical damage.
- After installing pipes, block the unused knock hole to prevent small animal from entering. However, the radiant heat hole(A) should be able to intake air.

Step 7 Optional: Cutting and flaring the pipes

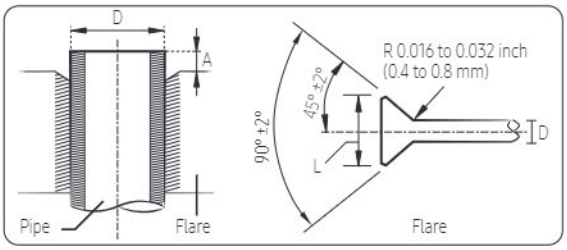
1 Make sure that you have the required tools available. (pipe cutter, reamer, flaring tool, and pipe holder)

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.



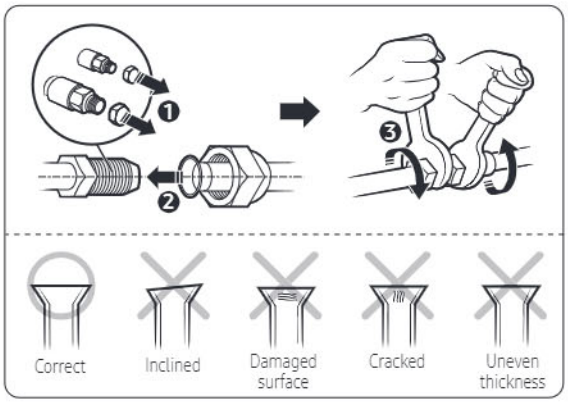
3 To prevent any gas from leaking out, remove all burrs at the cut edge of the pipe, using a reamer.

4 Slide a flare nut on to the pipe and modify the flare.



Outer Diameter (D)		Depth (A)		Flare dimension (L)	
mm	inch	mm	inch	mm	inch
Ø6.35	1/4	1.3	0.051	8.7 to 9.1	0.34 to 0.36
Ø9.52	3/8	1.8	0.071	12.8 to 13.2	0.50 to 0.52
Ø12.70	1/2	2.0	0.079	16.2 to 16.6	0.64 to 0.65
Ø15.88	5/8	2.2	0.087	19.3 to 19.7	0.76 to 0.78
Ø19.05	3/4	2.2	0.087	23.6 to 24.0	0.93 to 0.94

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



⚠ CAUTION

- Keep the piping length at a minimum to minimize the additional refrigerant charge due to piping extension.
- When connecting the pipes, make sure that surrounding objects do not interfere with or contact them to prevent refrigerant leakage due to physical damage.
- Make sure that the spaces where the refrigerant pipes are installed comply with national gas regulations.
- Be sure to perform works such as additional refrigerant charging and pipe welding under the conditions of good ventilation.
- Be sure to perform welding and piping works for mechanical connections under the conditions that the refrigerant does not circulate.
- When reconnecting the pipes, make sure to perform flared-jointing newly to prevent refrigerant leakage.

Installation Procedure

- When working on the refrigerant pipes and the flexible refrigerant connectors, be careful that they are not damaged physically by surrounding objects.
- During tests never pressurize the appliances with a pressure higher than the maximum allowable pressure(as indicated on the nameplate of the unit).
- Never directly touch any accidental leaking refrigerant. This could result in severe wounds caused by frostbite.
- Never install a dryer to this unit in order to guarantee its lifetime.
- If the pipes require brazing ensure that OFN(Oxygen Free Nitrogen) is flowing through the system.
- Nitrogen blowing pressure range is 2.9 to 7.3 psi(0.02 to 0.05 MPa).
- If you need a pipe longer than specified in piping codes and standards, you must add refrigerant to the pipe. Otherwise, the indoor unit may freeze.
- While removing burrs, put the pipe face down to make sure that the burrs do not get in to the pipe.

Step 8 Connecting up and removing air in the circuit

⚠ CAUTION

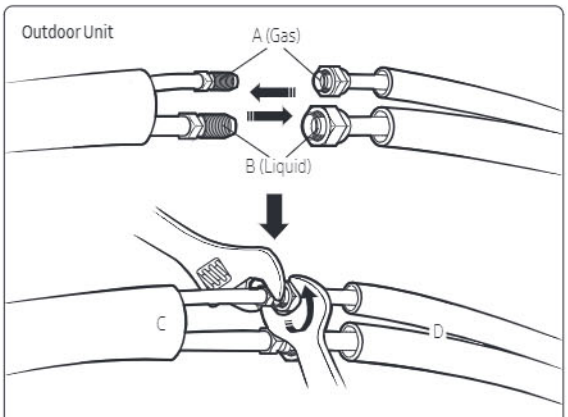
- When installing, make sure there is no leakage. When recovering the refrigerant, ground the compressor first before removing the connection pipe. If the refrigerant pipe is not properly connected and the compressor works with the service valve open, the pipe inhales the air and it makes the pressure inside of the refrigerant cycle abnormally high. It may cause explosion and injury.

The outdoor unit is loaded with sufficient R-410A refrigerant. Do not vent R-410A into atmosphere: it is a fluorinated greenhouse gas, covered by Kyoto Protocol, with a Global Warming Potential (GWP) = 2088.

You should purge the air in the indoor unit and in the pipe. If air remains in the refrigerant pipes, it affects the compressor. It may cause reduction of cooling/heating capacity and malfunction. Refrigerant for air purging is not charged in the outdoor unit. Use Vacuum Pump as seen in the picture.

1 Connect each assembly pipe to the appropriate valve on the outdoor unit and tighten the flare nut.

2 Referring to the illustration below, tighten the flare nut on section D first manually and then with a torque wrench, applying the following torque.



Outer Diameter (D)	Torque [lbf•ft(N•m)]
ø1/4"(6.35mm)	10.3~13.3(14~18)
ø3/8"(9.52mm)	25.1~31.0(34~42)
ø1/2"(12.70mm)	36.1~45.0(49~61)
ø5/8"(15.88mm)	50.2~60.5(68~82)
ø3/4"(19.05mm)	73.8~88.5(100~120)

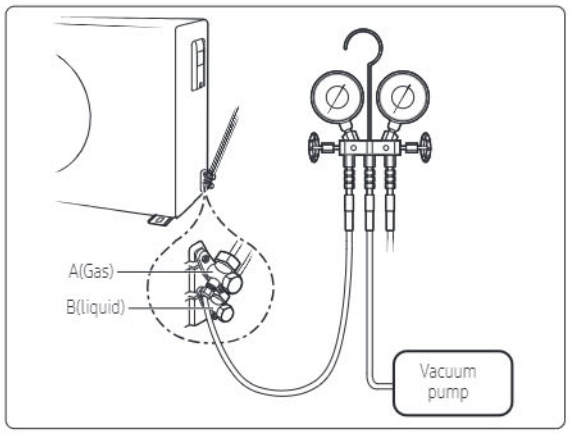
3 Connect the charging hose of low pressure side of manifold gauge to the packed valve having a service port as shown at the figure.

⚠ CAUTION

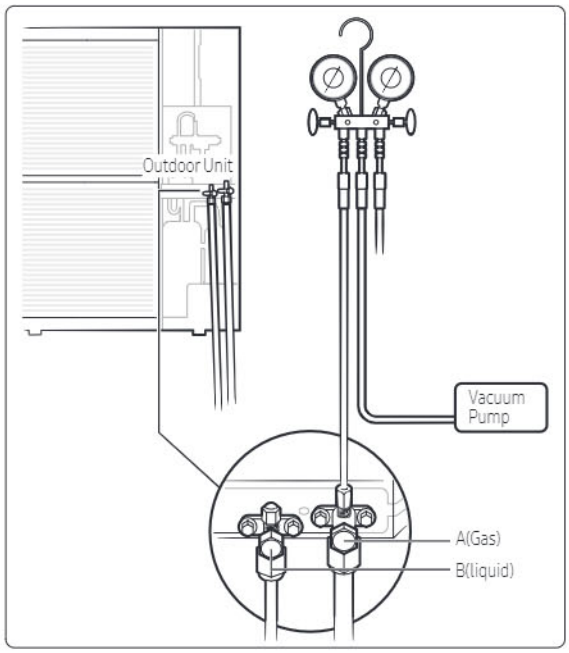
- The designs and shape are subject to change according to the model.

4 Open the valve of the low pressure side(A) of manifold gauge anticlockwise.

- AC018BXADCH, AC018/024BXSCCC



- AC024/030/036/042/048BXADCH, AC030/036BXSCCC, AC030/036BXSCCH



5 Purge the air from the system using vacuum pump for about 10 minutes.

- Close the valve of the low pressure side of manifold gauge clockwise.
- Make sure that pressure gauge shows -0.1 MPa (-76 cmHg) after about 10 minutes. This procedure is very important to avoid a gas leak.
- Turn off the vacuum pump.
- Remove the hose of the low pressure side of manifold gauge.

6 Open the stop valve of both liquid and gas sides.

7 Mount the valve stem nuts and the service port cap to the valve, and tighten them at the torque of 158.8 lbf•in (183 kgf•cm) with a torque wrench.

8 Check for gas leakage.

- At this time, especially check for gas leakage from the 3-way valve's stem nuts(A port), and from the service port cap.

⚠ CAUTION

- 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 4200 kPa and for a burst pressure of at least 20700 kPa. Copper pipe for hydro-sanitary applications is completely unsuitable.
- For sizing and limits (height difference, line length, max. bends, refrigerant charge, etc.) see "Connecting refrigerant pipe section".

Installation Procedure

Step 9 Performing the gas leak test

LEAK TEST WITH NITROGEN (before opening valves)

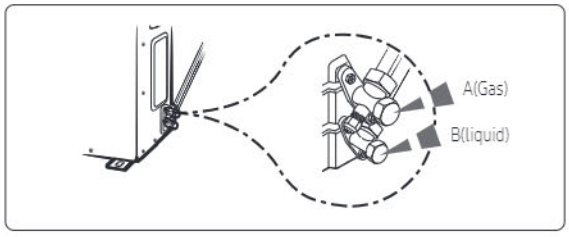
In order to detect basic refrigerant leaks, before recreating the vacuum and recirculating the R-410A, it is the responsibility of the installer to pressurize the whole system with nitrogen (using a cylinder with pressure reducer) at a pressure above 0.2MPa, less than 4MPa (gauge).

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

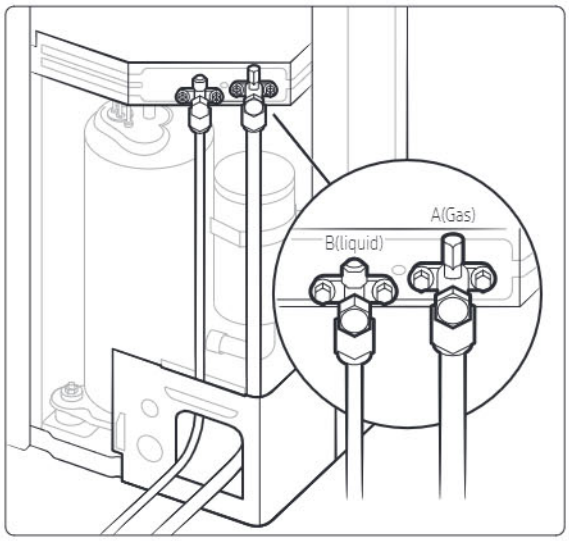
Before opening valves, discharge all the nitrogen into the system and create vacuum. After opening valves check leaks using a leak detector for refrigerant R-410A.

Once you have completed all the connections, check for possible leaks using leak detector specifically designed for HFC refrigerants.

- AC018BXADCH, AC018/024BXSCCC



- AC024/030/036/042/048BXADCH, AC030/036BXSCCC, AC030/036BXSCCH



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

Step 10 Adding refrigerant (R-410A)

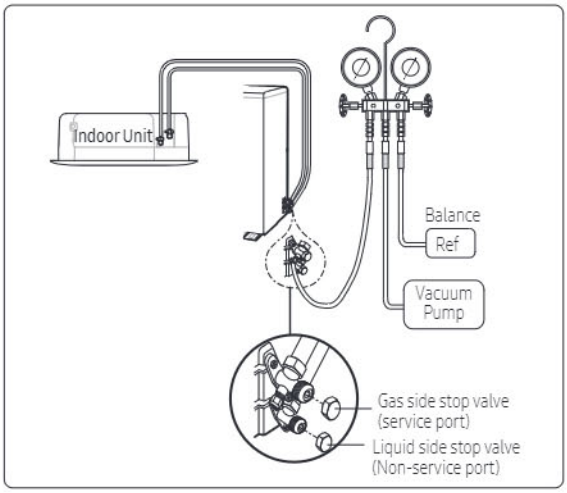
The outdoor unit is loaded with sufficient refrigerant for the standard piping. Thus, refrigerant must be added if the piping is lengthened. This operation can only be performed by a qualified refrigeration specialist. To determine the quantity of refrigerant charge, see **Calculating the quantity of refrigerant to add** on page 25.

- AC018BXADCH, AC018/024BXSCCC

1 Open the liquid stop valve and gas stop valve.

2 Operate the air conditioner by pressing the K2 button on the outdoor unit PCB.

3 After about 30 minutes, charge the refrigerant through the service port of the gas stop valve.



- AC024/030/036/042/048BXADCH, AC030/036BXSCCC, AC030/036BXSCCH

1 Check if the stop valve is closed completely.

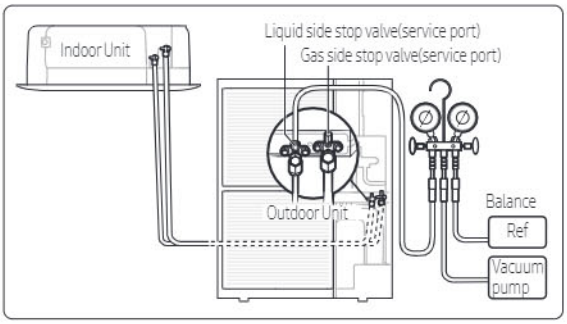
2 Charge the refrigerant through the service port of the liquid stop valve.

NOTE

- Do not charge the refrigerant through the service port of the gas stop valve.

3 If you have any difficulty charging the refrigerant as described in the steps above, take the following steps:

- **a** Open the liquid stop valve and gas stop valve.
- **b** Operate the air conditioner by pressing the K2 button on the outdoor unit PCB.
- **c** After about 30 minutes, charge the refrigerant through the service port of the gas stop valve.



Calculating the quantity of refrigerant to add

The quantity of additional refrigerant is variable according to the installation situation. Thus, make sure the outdoor unit situation before adding refrigerant. This operation can only be performed by a qualified refrigeration specialist.

Model	Inter-connection pipe length [ft(m)]	
	0~24.6(0~7.5)	24.6~98.4(7.5~30)
AC018BXSCCC	0	+0.161 oz/ft over 24.6ft (+15g/m over 7.5 m)

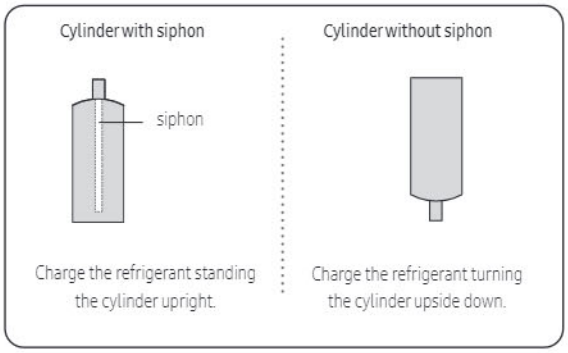
Model	Inter-connection pipe length [ft(m)]	
	0~24.6(0~7.5)	24.6~164.0(7.5~50)
AC018BXADCH AC024BXSCCC	0	+0.108 oz/ft over 24.6ft (+10g/m over 7.5 m)
AC024BXADCH AC030BXADCH AC030BXSCCC AC036BXSCCC	0	0.323 oz/ft over 24.6ft (+30g/m over 7.5 m)

Model	Inter-connection pipe length [ft(m)]	
	0~24.6(0~7.5)	24.6~246.1(7.5~75)
AC030BXSCCH AC036BXADCH AC036BXSCCH AC042BXADCH AC048BXADCH	0	0.323 oz/ft over 24.6ft (+30g/m over 7.5 m)

Charging the system with liquid refrigerant

R-410A is a mixed type of refrigerant. It is necessary for recharging under conditions of liquid. When recharging refrigerant from the refrigerant cylinder to the equipment, follow the instructions below.

- Before recharging, check whether the cylinder has a siphon or not. There are two ways to recharge the refrigerant.



NOTE

- If R-410A refrigerant is charged with gas, the composition of the charged refrigerant changes and the characteristics of the equipment vary.
- While adding refrigerant use an electronic scale to measure the volume added. If the refrigerant cylinder doesn't have a siphon, turn it upside-down.
- The designs and shape are subject to change according to the model.

Installation Procedure

Step 11 Connecting the drain hose to the outdoor unit

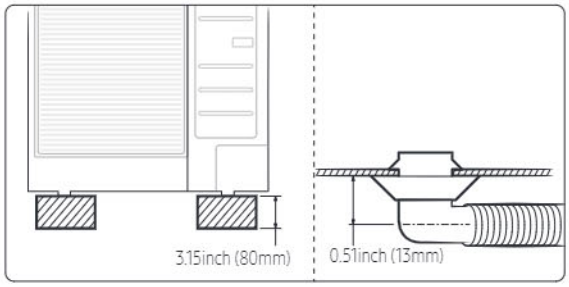
- When using the air conditioner in the heating mode, ice may accumulate . During de-icing (defrost operation), the condensed water must be drained off safely. Consequently, you must install a drain hose on the outdoor unit, following the instructions below. (For AC018/024BXADCH, AC018/024/030/036BXSCCC, AC030/036BXSCCH model, do not install a drain hose and a drain plug.)

1 Make space more than 80 mm between the bottom of the outdoor unit and the ground for installation of the drain hose, as shown in figure.

2 Insert the drain plug into the hole on the underside of the outdoor unit.

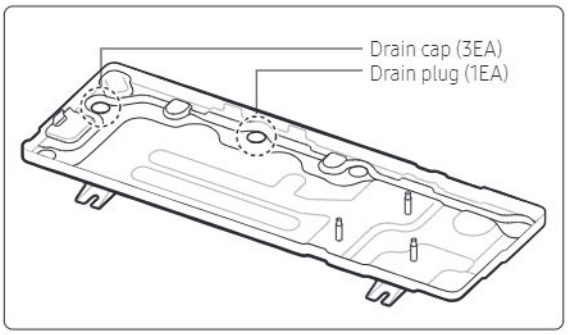
3 Connect the drain hose to the drain plug.

4 Ensure that the drained water runs off correctly and safely.



5 Be sure to plug the rest of drain holes not connected with drain plugs using drain caps.

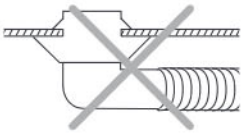
- AC030/036/042/048BXADCH



- When installing the product, make sure that the rack is not placed under the drain hole.
- If the product is installed in a region of heavy snow, allow enough separation distance between the product and the ground.

⚠ CAUTION

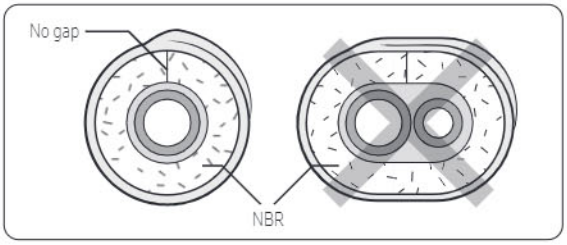
- For AC018/024BXADCH, AC018/024/030/036BXSCCC, AC030/036BXSCCH model, do not install a drain hose and a drain plug, drain cap. (Let the water drain naturally.)
- Ice may form on the ground. Take appropriate measures to prevent ice formation.



<Applicable model : AC018/024BXADCH, AC018/024/030/036BXSCCC, AC030/036BXSCCH>

Step 12 Insulating the refrigerant pipes

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



NOTE

- When insulate the pipe, be sure to overlap the insulation.
- 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.

⚠ CAUTION

- When insulating the pipe, use non-slit insulator.

2 Select the insulation of the refrigerant pipe.

- Insulate the gas side and liquid side pipe referring to the thickness according to the pipe size.
- Less than Indoor temperature of 86°F(30°C) and humidity of 85% is the standard condition. If installing in a high humidity condition, use one grade thicker insulator by referring to the table below. If installing in an unfavourable conditions, use thicker one.
- Insulator's heat-resistance temperature should be more than 248°F(120°C).

Pipe	Outer diameter		Insulation Type (Cooling, Heating)				Remarks
			General [86°F(30°C), 85%]		High humidity [86°F(30°C), over 85%]		
			EPDM, NBR				
	mm	inch	mm	inch	mm	inch	
Liquid pipe	6.35~9.52	1/4~3/8	9	3/8	9	3/8	Heating resisting temperature over 248°F(120°C)
	12.7~50.80	1/2~2	13	1/2	13	1/2	
Gas pipe	6.35	1/4	13	1/2	19	3/4	
	9.52~25.4	3/8~1	19	3/4	25	1	
	28.58~44.45	11/8~1 3/4	19	3/4	32	11/4	
	50.8	2	25	1	38	11/2	

- 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.)

<Geological 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.

Step 13 Checking the earthing

If the power distribution circuit does not have a earthing or the earthing does not comply with specifications, an earthing electrode must be installed. The corresponding accessories are not supplied with the air conditioner.

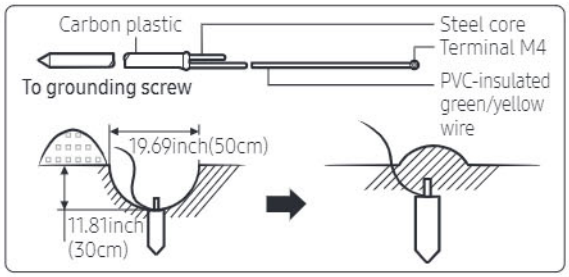
1 Select an earthing electrode that complies with the specifications given in the illustration.

Installation Procedure

2 Connect the flexible hose to the flexible hose port.
- In damp hard soil rather than loose sandy or gravel soil that has a higher earthing resistance.
- Away from underground structures or facilities, such as gas pipes, water pipes, telephone lines and underground cables.
- At least two metres away from a lightening conductor earthing electrode and its cable.

NOTE

- The earthing wire for the telephone line cannot be used to ground the air conditioner.



3 Finish wrapping insulating tape around the rest of the pipes leading to the outdoor unit.

4 Install a green/yellow coloured earthing wire:
- If the earthing wire is too short, connect an extension lead in a mechanical way and wrap it with insulating tape (do not bury the connection).
- Secure the earthing wire in position with staples.

NOTE

- If the earthing electrode is installed in an area with heavy traffic, its wire must be connected securely.

5 Carefully check the installation by measuring the earthing resistance with a earth resistance tester. If the resistance is above the required level, drive the electrode deeper into the ground or increase the number of earthing electrodes.

6 Connect the earthing wire to the electrical component box inside of the outdoor unit.

Step 14 Performing final check and trial operation

1 Check the power supply between the outdoor unit and the auxiliary circuit breaker.
- 1 phase power supply : L, N

2 Check the indoor unit.

a Check that you have connected the power and communication cables correctly. (If the power cable and communication cables one mixed up or connected incorrectly, the PCB will be damaged.)

b Check that the thermistor sensor, drain pump/ hose, and display are connected correctly.

3 Press K1 or K2 on the outdoor unit PCB to run the test mode and stop.
(※ AC***BXSCCC models are cooling-only models, in which running the test mode using K1 is not possible.)

Key	Push type		Mode	Display			
				SEG 1	SEG 2	SEG 3	SEG 4
K1	Short	1st	Heating test mode	F	1	8	8
		2nd	Defrost test mode [1]	F	3	8	8
		3rd	End Key operation	8	8	8	8
K2	Short	1st	Cooling test mode	F	2	8	8
		2nd	Inverter check	F	4	8	8
		3rd	Pump down	F	6	8	8
		4th	Unuesal	F	8	8	8
		5th	Inverter Fault Detection (Comp#1) [2]	F	A	8	8
		6th	Auto trial operation	F	C	8	8
		7th	Auto check [3] (Installtion commissioning mode)	F	E	8	8
		8th	End Key operation	8	8	8	8
K3	Short	1st	Reset Release Eco mode	8	8	8	8

1) Defrost test mode

Condition 1: The outdoor temperature is below 10°C.

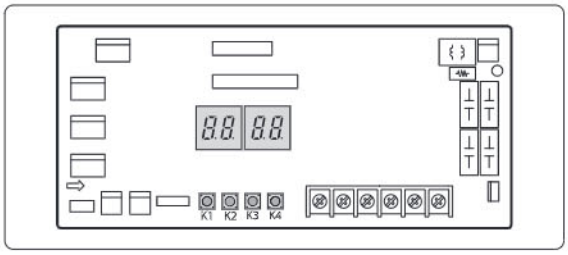
Condition 2: All the temperature conditions should meet the defrost conditions.

2) Indication on the display and action to take when an inverter fault is detected

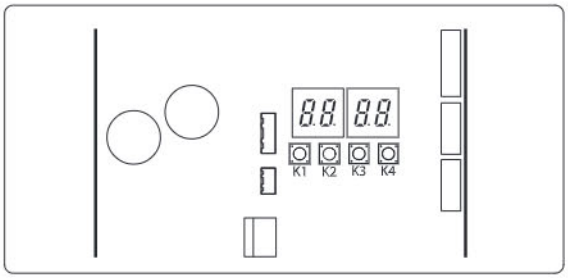
	SEG1	SEG2	SEG3	SEG4	Action to take
Fault detection is in progress	7	1	-	-	-
OK	7	1	0	P	-
NG	7	1	n	G	PBA defect: Replace the PBA
Check	7	1	C	h	Manual inspection is required
Going into fault detection mode failed	7	1	F	L	Try fault detection again

3) Auto check (Installation commissioning mode)
To ensure normal operation of the product, first make sure to complete auto check. See step 15.

- AC018BXADCH, AC018/024BXSCCC



- AC024/030/036/042/048BXADCH, AC030/036BXSCCC, AC030/036BXSCCH



4 After 12 minutes operation check discharged air temperature of indoor unit

- Cooling mode (indoor unit check) → Inlet air temp. - Outlet air temp.: From 50°F(10°C) to 53.6°F(12°C)
- Heating mode (indoor unit check) → Outlet air temp. - Inlet air temp.: 51.8°F(11°C) to 57.2°F(14°C)
- In heating mode, the indoor fan motor can remain off to avoid cold air blown into air-conditioned space. (※ AC***BXSCCC models are cooling-only models and do not support heating mode.)

5 How to reset the power supply of the outdoor unit and deactivate the eco mode (standby mode):

- Press K3 button over 1 sec to reset the power supply of the outdoor unit and deactivate the eco mode (standby mode).

※ Eco mode : Standby for minimizing power consumption

Installation Procedure

6 View mode: When the K4 switch is pressed, you can see information about our system state as below.

- For a function that is not supported, "-" is shown for SEG2, SEG3 or SEG4.

K4 short push	Display contents	SEG1	SEG2	SEG3	SEG4	Unit
1	Order frequency	1	Hundreds digit	Tens digit	Units digit	Hz
2	Current frequency	2	Hundreds digit	Tens digit	Units digit	Hz
3	The number of preset indoor units	3	Hundreds digit	Tens digit	Units digit	EA
4	Ambient temperature sensor	4	Hundreds digit or "-" 1)	Tens digit	Units digit	°C or °F 2)
5	Compressor discharge sensor	5	Hundreds digit	Tens digit	Units digit	°C or °F 2)
6	Eva-Mid sensor	6	Hundreds digit or "-" 1)	Tens digit	Units digit	°C or °F 2)
7	Condensor sensor	7	Hundreds digit or "-" 1)	Tens digit	Units digit	°C or °F 2)
8	Current	8	Tens digit	Units digit	The first place of decimals	A
9	Outdoor fan RPM	9	Thousands digit	Hundreds digit	Tens digit	rpm
10	Target discharge temperature	A	Hundreds digit or "-" 1)	Tens digit	Units digit	°C or °F 2)
11	EEV	B	Hundreds digit	Tens digit	Units digit	step
12	The capacity sum of indoor units	C	Tens digit	Unit digit	The first place of decimals	kW or kBtu/h 3)
13	Protective control	D	0: Cooling 1: Heating	Protective control 0: No Protective control 1: Freezing 2: Non-stop defrosting 3: Over-load 4: Discharge 5: Total electric current	Frequency status 0: Normal 1: Hold 2: Down 3: Up_limit 4: Down_limit	-
14	IPM temperature	E	Hundreds digit or "-" 1)	Tens digit	Units digit	°C or °F 2)
15	The number of connected indoor units	F	Hundreds digit	Tens digit	Units digit	EA
16	ESC EEV(CAM)	G	Hundreds digit	Tens digit	Units digit	step
17	ESC IN sensor	H	Hundreds digit or "-" 1)	Tens digit	Units digit	°C or °F 2)
18	ESC OUT sensor	I	Hundreds digit or "-" 1)	Tens digit	Units digit	°C or °F 2)
19	View mode end	BLANK	BLANK	BLANK	BLANK	

1) Sub-zero temperatures are expressed as a minus, instead of hundreds digit.

2) The temperature unit can be switched between Celsius and Fahrenheit through Setting outdoor unit option switches. (Default value is Celsius.)

3) If the temperature unit is set to Fahrenheit through Setting outdoor unit option switches, the value is expressed in the unit of kBtu/h.

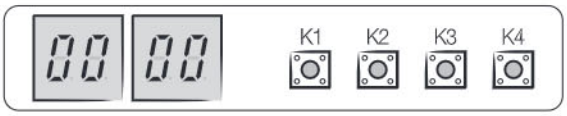
		Display contents	SEG1	SEG2	SEG3	SEG4
K4 long push	-	Main micom version	Year (Dec)	Month (Hex)	Date (Tens digit)	Date (Units digit)
	After short push 1	Inverter micom version	Year (Dec)	Month (Hex)	Date (Tens digit)	Date (Units digit)
	After short push 2	E2P version	Year (Dec)	Month (Hex)	Date (Tens digit)	Date (Units digit)
	After short push 3	Page 1 - AUTO Page 2 - (SEG1,2 - Indoor : "A","0") (SEG3,4 - Address : ex) 00)				
	After short push 4	Page 1 - MANU Page 2 - (SEG1,2 - Indoor : "A","0") (SEG3,4 - Address : ex) 00)				

Long push K4 (Main micom ver.) → short push 1 more (Inv. micom ver.) → short push 1 more (E2P. ver.) → short push 1 more (Automatic address) → short push 1 more (Manual address) → short push 1 more (Main micom ver.) → ..... → Long push K4 (View mode end)

7 Setting outdoor unit option switch and address manually

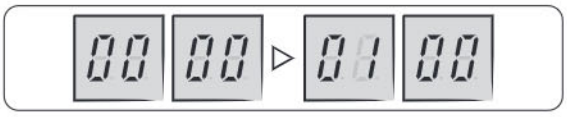
a Setting the option

- Press and hold K2 to enter the option setting. (Only available when the operation is stopped)
  - If you enter the option setting, display will show the following.



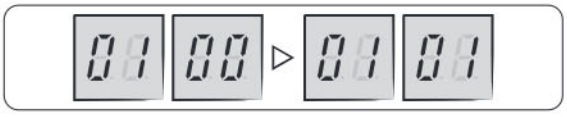
  - Seg 1 and Seg 2 will display the number for selected option.
  - Seg 3 and Seg 4 will display the number for set value of the selected option.
- If you have entered option setting, you can shortly press the K1 switch to adjust the value of the Seg 1, Seg 2 and select the desired option.

Example)



- If you have selected desired option, you can shortly press the K2 switch to adjust the value of the Seg 3, Seg 4 and change the function for the selected option.

Example)



- After selecting the function for options, press and hold the K2 switch for 2 seconds. Edited value of the option will be saved when entire segments blinks and tracking mode begins.

Option item	Input unit	SEG1	SEG2	SEG3	SEG4	Function
Channel address	Main	0	0	A	U	Automatic setting (Factory default)
				00~15		Manual setting
Snow accumulation prevention control	Main	0	1	0	0	Disabled (Factory default)
				0	1	Enabled
Step for Silence mode	Main	0	2	0	0	Disabled (Factory default)
				0	1	Step1
				0	2	Step2
				0	3	Step3
Type of Silence mode	Main	0	3	0	0	Automatic Silence mode (Factory default)
				0	1	Manual Silence mode
Temperature unit	Main	0	4	0	0	Celsius (default)
				0	1	Fahrenheit
Not applicable	Main	0	5	0	0	Not applicable
				0	1	Not applicable

Installation Procedure

Option item	Input unit	SEG1	SEG2	SEG3	SEG4	Function
Current restriction rate [1]	Main	0	6	0	0	100% (Factory default)
				0	1	95%
				0	2	90%
				0	3	85%
				0	4	80%
				0	5	75%
				0	6	70%
				0	7	65%
				0	8	60%
				0	9	55%
				1	0	50%
				1	1	100%
Dedicated mode for cooling/ heating [2]	Main	0	7	0	0	Cooling / Heating operation (default)
				0	1	Cooling operation only
				0	2	Heating operation only

- [1] Current restriction rate : When restriction option is set, cooling and heating performance may decrease.
- [2] AC***BXSCCC models are cooling-only models and do not support heating mode. These models operate in cooling mode only, even if "heating operation only" mode is enabled.

⚠ CAUTION

- Edited option will not be saved if you do not end the option setting as explained in above instruction.

※ While you are setting the option, you may press and hold the K1 button to reset the value to previous setting.

※ If you want to restore the setting to factory default, press and hold the K4 button while you are in the option setting mode.

– If you press and hold the K4 button, setting will be restored to factory default but it doesn't mean that restored setting is saved. Press and hold the K2 button. When the segments shows that tracking mode is in progress, setting will be saved.

Step 15. Auto check(Installation commissioning mode)

- This is a self-diagnosis function to determine the installation status and product integrity in the initial installation. (This model requires the Auto check to be implemented in the installation step before its normal operation is initiated.)
- Procedures of Auto check

1 Check the product installation status.
   – Check the power supply, communication cables, service valve openings, and quantity of additional refrigerant.
   – In the initial power supply after installation, the warning of non-fulfilment of Auto check (UP) will be indicated on the outdoor unit and the system will not function properly.

2 Enter the mode of Auto check.
   – Press the K2 button 7 times consecutively.
   – During the Auto check, the display will show " F " " E " BLANK" "BLANK" and it will take about 10 to 30 minutes for completion.

3 The mode of Auto check will then be completed.
   – Successful Auto check: After checking the blinking that indicates installation completion on the display (PASS), press the K1 or K2 button to turn the status to the standby mode for normal operation.
   – Failure of Auto check: An error code blinks on the display. Resolve the error by referring to the details on the Troubleshooting page about how to troubleshoot for each error code, and then perform the Auto check again.

NOTE

- If you intend to install more refrigerant piping prior to entering the mode of Auto check, make sure that the refrigerant to be added meets the related requirements.
  In this process, it is possible to test the cooling test mode (K2 switch: once) and heating test mode (K1 switch: once).
  (※ AC***BXSCCC models are cooling-only models and do not support heating test mode.)
- You may stop the mode of test operation for installation by pressing the K3 switch during the test operation. (After it stops, UP (the warning of incomplete Auto check) will be displayed)
- During the Auto check, it is possible to refer to the system status by pressing the K4 switch.
- In the case that there is an error during the Auto check, the Auto check will stop. In this case, take a measure for the error and then try the test operation again.
- If the test operation is not completed properly, the product will not function in the intended way. UP (no implementation of Auto check) will be displayed. Be sure to solve the trouble and complete the test operation for installation properly.
- UP indicates, not that the unit is out of order, but that the Auto check has yet to be implemented as an essential step of installation.

Extra Procedures

Pumping down refrigerant

⚠ WARNING

- After installing the product, be sure to perform leak tests on the piping connections. After pumping down refrigerant to inspect or relocate the outdoor unit, be sure to stop the compressor and then remove the connected pipes.
  - Do not operate the compressor while a valve is open due to refrigerant leakage from a pipe or an unconnected or incorrectly connected pipe. Failure to do so may cause air to flow into the compressor and too a high pressure to develop inside the refrigerant circuit, leading to an explosion or product malfunction.

Pump-down is an operation intended to collect all the system refrigerant in the outdoor unit. This operation must be carried out before disconnecting the refrigerant pipe in order to avoid refrigerant loss to the atmosphere.

1 Turn the system on in cooling with fan operating at high velocity and then let the compressor run for more than 5 minutes. (Compressor will immediately start, provided 3 minutes have elapsed since the last stop.)

2 Release the valve caps on High and Low pressure side.

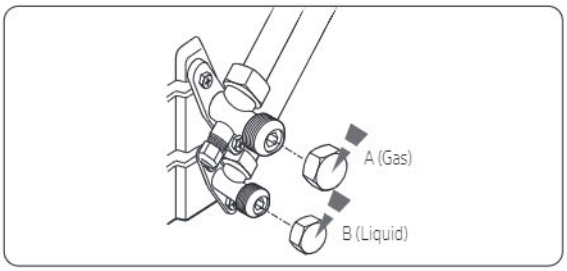
3 Use L-wrench to close the valve on the high pressure side.

4 After approximately 2 minute, close the valve on the low pressure side.

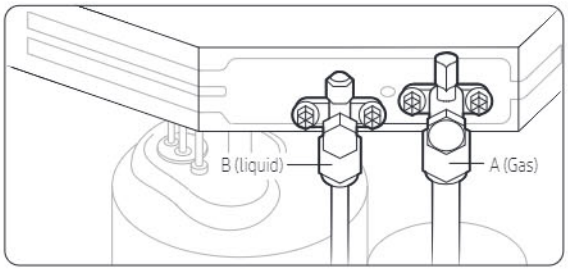
5 Stop operation of the air conditioner by pressing the (Power) button on the indoor unit or remote control.

6 Disconnect the pipes.

- AC018BXADCH, AC018/024BXSCCC



- AC024/030/036/042/048BXADCH, AC030/036BXSCCC, AC030/036BXSCCH



Relocating the indoor and outdoor units

1 Pump down refrigerant. See Pumping down refrigerant on page 33.

2 Remove the power cord.

3 Disconnect the assembly cable from the indoor and outdoor units.

4 Remove the flare nuts connecting the indoor units and the pipes. At this time, cover the pipes of the indoor unit and the other pipes using a cap or vinyl plug to avoid foreign material entering.

5 Disconnect the pipes connected to the outdoor units. At this time, cover the valve of the outdoor units and the other pipes using a cap or vinyl plug to avoid foreign material entering.

NOTE

- Make sure you do not bend the connection pipes in the middle and store together with the cables.

6 Move the indoor and outdoor units to a new location.

7 Remove the mounting plate for the indoor unit and move it to a new location.

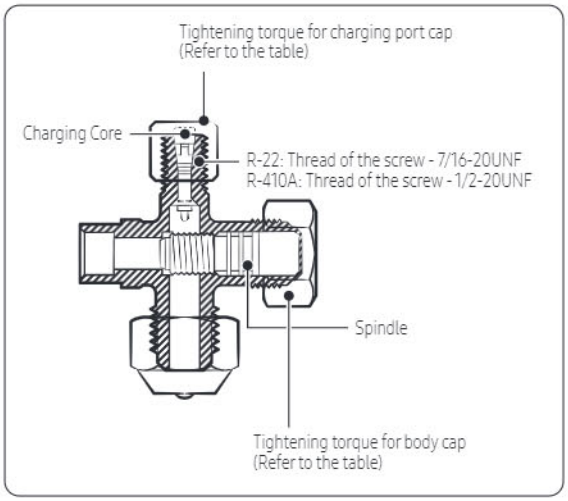
Extra Procedures

Using the stop valve

Opening the stop valve

1 Open the cap and turn the stop valve anticlockwise by using a hexagonal wrench.

2 Turn it until the axis is stopped.



3 Tighten the cap securely.

Outer Diameter (mm)	Tightening torque	
	Body cap (N•m)	Charging port cap (N•m)
Ø 6.35	20 to 25	10 to 12
Ø 9.52	20 to 25	
Ø 12.70	25 to 30	
Ø 15.88	30 to 35	
Over Ø 19.05	35 to 40	

- (1 N•m=10 kgf•cm)

NOTE

- Do not apply excessive force to the stop valve and always use special instruments. Otherwise, the stopping box can be damaged and the back sheet can leaks.
- If the watertight sheet leaks, turn the axis back by half, tighten the stopping box, then check the leakage again. If there is no leakage any more, tighten the axis entirely.

Closing the stop valve

1 Remove the cap.

2 Turn the stop valve clockwise by using a hexagonal wrench.

3 Tighten the axis until the valve reached the sealing point.

4 Tighten the cap securely.

⚠ CAUTION

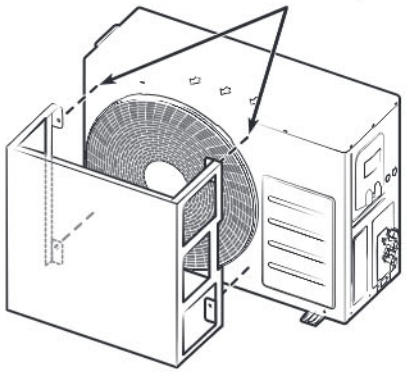
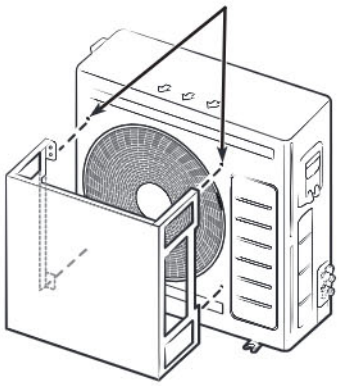
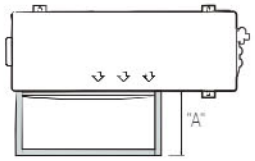
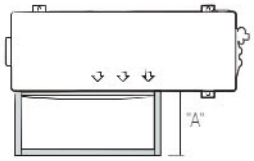
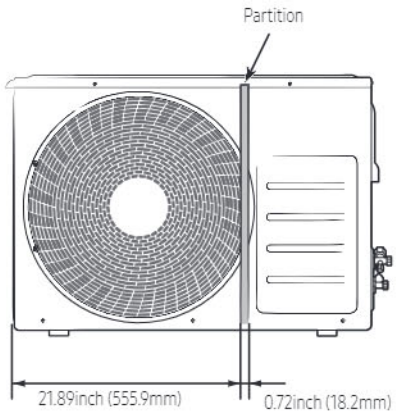
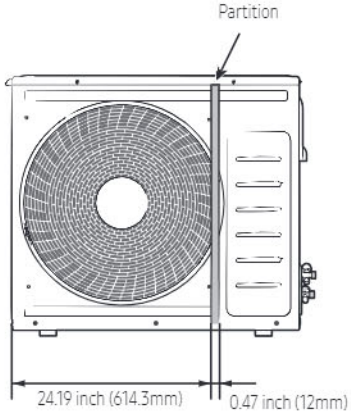
- When you use the service port, always use a charging hose, too.
- Check the leakage of refrigerant gas after tightening the cap.
- Must use a spanner and wrench when you open/tighten the stop valve.

Installing the wind baffle

If you operate the cooling operation of air conditioner in the condition where ambient temperature is lower than 23 °F DB(Dry bulb), or the outdoor unit might be faced with strong wind directly, the wind baffle should be installed to prevent the outdoor unit fan from operating in reverse way.

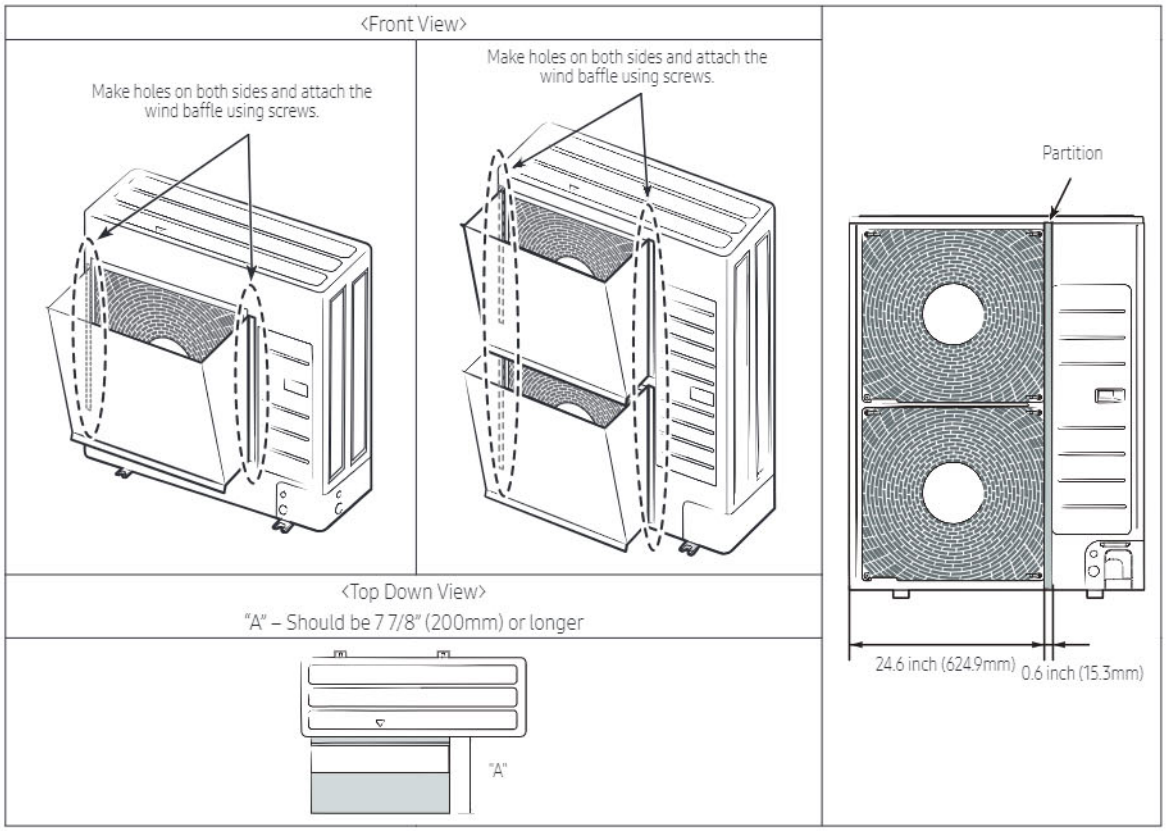
※ Wind baffle is not supplied with the product.

- AC018BXADCH, AC018/024BXSCCC

AC018BXSCCC	AC018BXADCH, AC024BXSCCC
<Front View>	<Front View>
Make holes on the front side and attach the wind baffle using screws. 	Make holes on the front side and attach the wind baffle using screws. 
<Top Down View> "A" – Should be 7 7/8" (200mm) or longer	<Top Down View> "A" – Should be 7 7/8" (200mm) or longer
	
	

Installing the wind baffle

- AC024/030/036/042/048BXADCH, AC030/036BXSCCC, AC030/036BXSCCH



⚠ CAUTION

- When attaching the wind baffle using screws, be careful that the screws do not damage the partition and the heat exchanger.

NOTE

- Install outdoor units with the back surface facing wall side to eliminate the effects of external wind.

Appendix

Troubleshooting

The table below list the self-diagnostic routines. For some of error codes, you must contact an authorized service centre. If an error occurs during the operation, it is displayed on the outdoor unit PCB LED, both MAIN PCB and INVERTER PCB.

No.	Error Code	Meaning	Remarks
1	E108	Error due to duplicated communication address	Check on repeated indoor unit main address
2	E121	Error on room temperature sensor of indoor unit (Short or Open)	Indoor unit Room Thermistor Open/Short
3	E122	Error on EVA IN sensor of indoor unit (Short or Open)	Indoor unit EVA_IN Thermistor Open/Short
4	E123	Error on EVA OUT sensor of indoor unit (Short or Open)	Indoor unit EVA_OUT Thermistor Open/Short
5	E153	Error on float switch (2nd detection)	Indoor unit Float Switch Open/Short Drain Pump operation Check
6	E154	Indoor fan error	Check on indoor unit indoor Fan operation
7	E198	Error on thermal fuse of indoor unit (Open)	Thermal Fuse Open Check of indoor unit Terminal Block
8	E201	Communication error between the indoor unit and outdoor unit (Pre-tracking failure or when the actual number of indoor units are different from the indoor unit quantity setting on the outdoor unit) Error due to communication tracking failure after initial power is supplied (The error occurs regardless of the number of units.)	Check indoor quantity setting in outdoor
9	E202	Communication error between indoor unit and outdoor unit (When there is no response from indoor units after tracking is completed)	Check electrical connection and setting between indoor unit and outdoor unit
10	E203	Communication error between the outdoor unit and main micom (For PF #4 to #6 controllers, error will be determined from the time when the compressor is turned on.)	Check electrical connection and setting between outdoor unit MAIN PBA - INVERTER PBA
11	E221	Error on outdoor temperature sensor (Short or Open)	Check Outdoor sensor Open / Short
12	E231	Error on outdoor COND OUT sensor (Short or Open)	Check Cond-Out sensor Open / Short
13	E251	Error on discharge temperature sensor of compressor1 (Short or Open)	Check Discharge sensor Open / Short
14	E320	Error on OLP sensor (Short or Open)	Check OLP sensor Open / Short
15	E321	Error on ESC IN temperature sensor (Short or Open)	Check ESC IN sensor Open / Short
16	E322	Error on ESC OUT temperature sensor (Short or Open)	Check ESC OUT sensor Open / Short
17	E403	Compressor down due to freeze protection control	Check Outdoor Cond.
18	E404	System stop due to overload protection control	Check Comp. when it starts
19	E416	System stop due to discharge temperature	-
20	E422	Blockage detected on high pressure pipe during cooling operation	1. Check if the service valve is open 2. Check for refrigerant leakage (pipe connections, heat exchanger) and charge refrigerant if necessary 3. Check if there's any blockage on the refrigerant cycle (indoor unit/outdoor unit) 4. Check if additional refrigerant has been added after pipe extension
21	E425	Reverse phase or open phase	Check whether 3 phase is reversed or opened.
22	E440	Heating operation restricted at outdoor temperature over Theat_high value (default:30°C)	1. Check the range of temperature limited for heating operation 2.Check the outdoor temperature sensor

Appendix

No.	Error Code	Meaning	Remarks
23	E441	Cooling operation restricted at outdoor temperature below Tcool_low value (default:0°C)	1. Check the range of temperature limited for cooling operation 2. Check the outdoor temperature sensor
24	E458	Fan speed error	FAN1 ERROR
25	E461	Error due to operation failure of inverter compressor	-
26	E462	System stop due to full current control	-
27	E463	Over current trip / PFC over current error	Check OLP sensor
28	E464	IPM Over Current(O.C)	1. Check if the service valve is open 2. Check the state of refrigerant 3. Check if connecting wire and the pipe are OK 4. Check the compressor
29	E465	Comp. Over load error	-
30	E466	DC-Link voltage under/over error	Check AC Power and DC Link Voltage
31	E467	Error due to abnormal rotation of the compressor or unconnected wire of compressor	Check Comp wire
32	E468	Error on current sensor (Short or Open)	Check Outdoor Inverter PBA.
33	E469	Error on DC-Link voltage sensor (Short or Open)	-
34	E470	Outdoor unit EEPROM Read/Write error (Option)	Check Outdoor EEPROM Data
35	E471	Outdoor unit EEPROM Read/Write error (H/W)	Check Outdoor EEPROM PBA
36	E474	Error on IPM Heat Sink sensor of inverter1 (Short or Open)	Check Outdoor Inverter PBA.
37	E475	Error on inverter fan 2	FAN2 ERROR
38	E483	Overvoltage of H/W detect DC link	Check AC Power
39	E484	PFC Overload (Over current) Error	Check Outdoor Inverter PBA.
40	E485	Error on input current sensor of inverter1 (Short or Open)	Check Outdoor EEPROM PBA
41	E488	Inverter input voltage sensor error	Check Outdoor Inverter PBA
42	E500	IPM over heat error on inverter1	Check Outdoor Inverter PBA.
43	E508	Smart install is not installed	-
44	E534	Blockage detected on high pressure pipe during heating operation.	1. Check if the service valve is open 2. Check if there's any blockage on the refrigerant cycle (indoor unit/outdoor unit) 3. Check the EEV connection and operation 4. Check if connecting wire and the pipe are OK 5. Check the compressor
45	E554	Gas leak detected	Check the refrigerant
46	E556	Error due to mismatching capacity of indoor and outdoor unit	Check the indoor and outdoor unit capacity
47	E557	DPM remote controller option error	Check the indoor option code
48	E563	Error due to mismatching indoor and outdoor unit	Check the outdoor EEPROM data and indoor option code
49	E590	Inverter EEPROM Checksum error	-

Memo

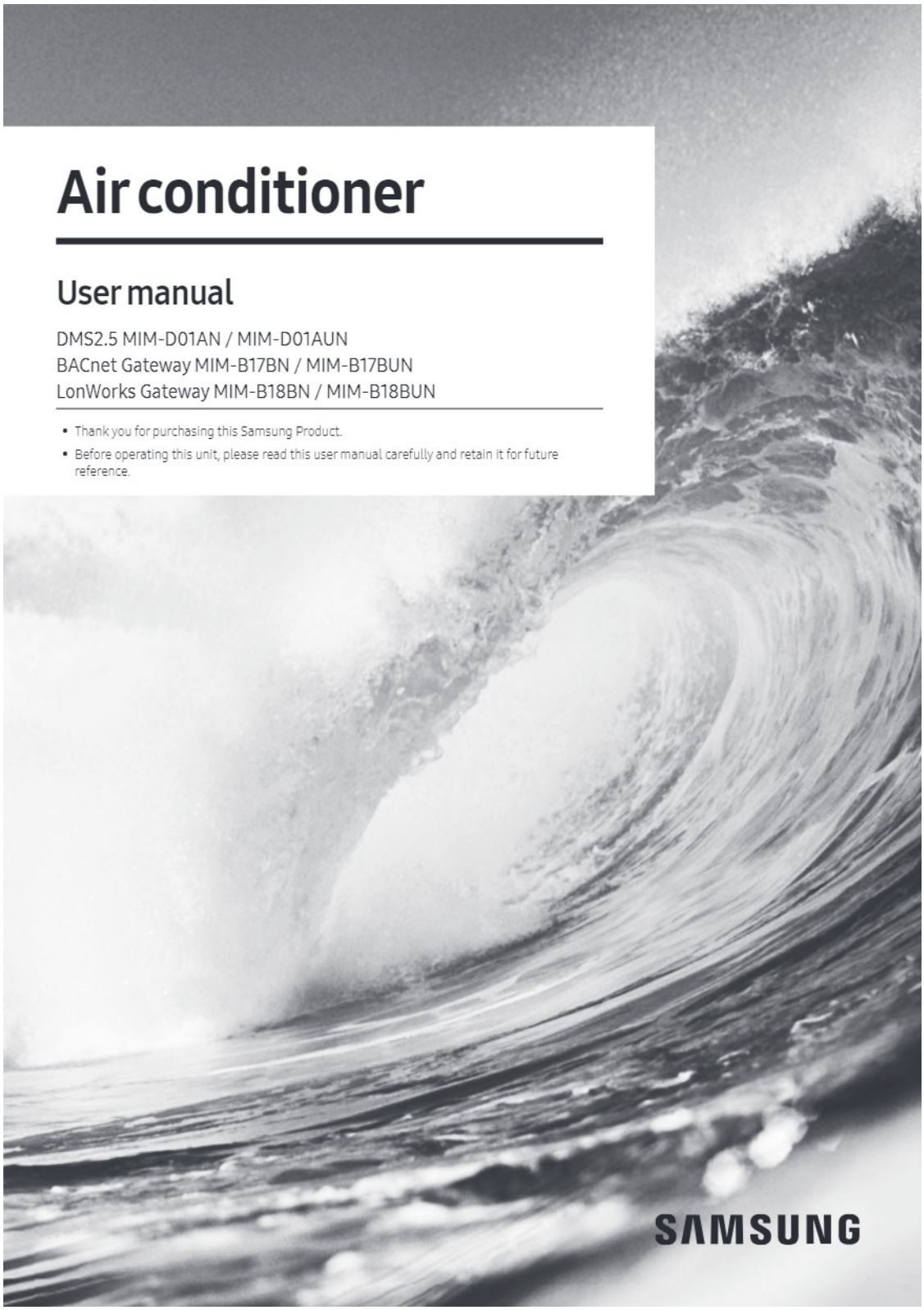
SAMSUNG

Air conditioner

User manual

DMS2.5 MIM-D01AN / MIM-D01AUN
BACnet Gateway MIM-B17BN / MIM-B17BUN
LonWorks Gateway MIM-B18BN / MIM-B18BUN

- Thank you for purchasing this Samsung Product.
- Before operating this unit, please read this user manual carefully and retain it for future reference.



Safety Precautions English

- ***Before using the DMS2.5, BACnet Gateway, LonWorks Gateway, read carefully these instructions.***
- ***After reading the instructions, keep this user's manual in a handy and safe place. If a user is changed, you must hand over the manuals.***
- ***Never attempt to install the air conditioning system or to move the product by yourself.***

⚠ WARNING

- ◆ Do not attempt to install or repair the product by yourself.
- ◆ The product contains no user-serviceable parts. Always consult authorized service personnel for repairs.
- ◆ When moving, consult authorized service personnel for disconnection and installation of the product.
- ◆ Ensure that the wall is strong enough to support the weight of the product.
- ◆ Must install the product with rated power supply.
- ◆ In the event of a malfunction (burning smell, etc.), immediately stop operation, turn off the electrical breaker, and consult authorized service personnel.

⚠ CAUTION

- ◆ Do not use inflammable gases near the product.
- ◆ Do not spill water into the product.
- ◆ Do not operate the product with wet hands.
- ◆ Do not install the product in a location where it will come into contact with the combustible gases, machine oil, sulphide gas, etc.
- ◆ Do not press buttons with a pointed thing.
- ◆ Do not pull or bend the product cable excessively.
- ◆ Do not use the product for other purpose.
- ◆ Do not spray an insecticide or other combustible things on the product.
- ◆ Do not clean the product with benzene, solvents or other chemicals.
- ◆ Do not give a shock to the product or disassemble it by yourself.

Consignes de sécurité Français

- ***Avant d'utiliser le DMS2.5, BACnet Gateway, LonWorks Gateway, lisez attentivement ces consignes.***
- ***Après en avoir pris connaissance, conservez ce manuel d'utilisation dans un lieu sûr et à portée de main. En cas de changement d'utilisateur, vous devez remettre les manuels.***
- ***Ne tentez jamais d'installer le climatiseur ou de déplacer le produit par vous-même.***

⚠ AVERTISSEMENT

- ◆ Ne tentez pas d'installer ou de réparer vous-même le produit.
- ◆ Le produit ne contient aucun composant interne susceptible d'être réparé par l'utilisateur. Consultez toujours le personnel d'entretien agréé pour toute réparation.
- ◆ En cas de déplacement, consultez le personnel d'entretien agréé pour tout débranchement et toute installation du produit.
- ◆ Assurez-vous que le mur est suffisamment résistant pour supporter le poids du produit.
- ◆ Vous devez raccorder le produit à une installation supportant sa puissance nominale.
- ◆ En cas de dysfonctionnement (odeur de brûlé, etc.), arrêtez immédiatement le fonctionnement, coupez le disjoncteur électrique et consultez le personnel d'entretien qualifié.

⚠ ATTENTION

- ◆ N'utilisez pas de gaz inflammable à proximité du produit.
- ◆ Ne renversez pas d'eau dans le produit.
- ◆ Ne manipulez pas le produit si vous avez les mains mouillées.
- ◆ N'installez pas le produit dans un lieu où il sera en contact avec des gaz combustibles, de l'huile de machine, de l'hydrogène sulfuré, etc.
- ◆ N'appuyez pas sur les boutons avec un objet pointu.
- ◆ Ne tirez pas sur le cordon d'alimentation du produit et ne le pliez pas excessivement.
- ◆ N'utilisez pas le produit dans un autre but que celui auquel il est destiné.
- ◆ Ne vaporisez pas d'insecticide ou autre produit combustible sur le produit.
- ◆ Ne nettoyez pas le produit en utilisant du benzène, des solvants ou autres produits chimiques.
- ◆ N'appliquez pas de choc sur le produit et ne le désassemblez pas non plus vous-même.

Contents

Note ◆ The contents and pictures used in this user manual may be changed without advance notice for the functional reinforcement and improvement of a product.

CAUTION

This System is strictly restricted to authorized user.
Any illegal access shall be punished with a related-law.

COMMISSION REGULATION (EU) 2019/1782 Ecodesign requirements for external power supplies :
www.samsung.com/global/ecodesign_component

General Description

Introduction of DMS2.5 (Data Management Server2.5)

The DMS2.5 is an Ethernet based device for central management of Samsung system air-conditioners. It operates 24 hours without a separate management (PC).

Advantages of DMS2.5 System

The DMS2.5 provides the following advantages:

- Everyday Device–The DMS2.5 is operational all year long 24 hours.
- Independent Operation–The DMS2.5 can operate schedule control and power distribution without a PC.

  Note In order to run power distribution, relevant controllers need to be installed.
- Remote Control
  - ✔ Web – The DMS2.5 has a built-in web server function and can be accessed from a remote location to operate status monitoring, control, trouble history, and schedule setting of the system air-conditioners.
  - ✔ Using an Upper Level Controller–When a separate upper level controller (S-NET series) is used, a number of DMS2.5 can be controlled with one central management system.
- Data Storage–The DMS2.5 has its own database built-in, therefore, trouble history, indoor unit installation information, and power distribution data can be saved and retrieved.
- Large Scale Management–At most 256 indoor units can be connected to one DMS2.5 and therefore, only one DMS2.5 can manage small and medium size buildings.
- Automatic "e-mail" sending–When an error is occurred, inform the error details to an e-mail saved on DMS2.5.

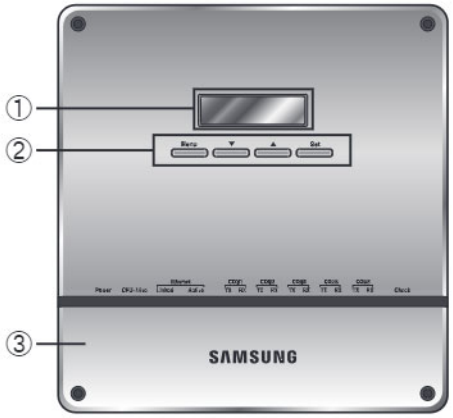
Note
- Please be advised that once you are permitted access to the system, you will be deemed to have consented to having software relating this system automatically updated or modified on a periodic basis. You will be deemed to have consented to having software relating this system automatically updated or modified on a periodic basis.

Terms

- DMS2.5: The abbreviation of Data Management Server2.5.
- Upper Controller: S-NET 3, RMS and DMS2.5 which allows controlling by accessing to a web page.
- OnOff Controller: A device that controls 16 groups of the DVM air conditioner. A central control device of a DVM system which is located between a DMS2.5 and an outdoor unit.
- AHU(Air Handling Unit): Executes heat exchange between air and cooling unit using central air conditioning duct method.
- ERV(Energy Recovery Ventilator): Ventilating system using heat recovery function.

Viewing the Parts

Front View



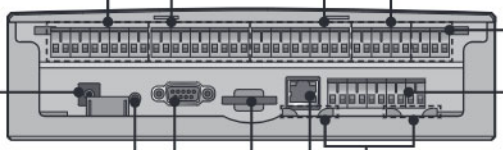
No.	Name	Description
①	LCD Display	Display current time/ Check menu
②	Menu button	Access to main menu
	▼/▲ button	Select the function you want and set detailed functions in main menu
	Set button	Check the function you want from main menu and select it
③	Bottom cover	Unfasten 2 screws on the bottom and separate the bottom cover from DMS2.5. Then check cable connection part.

Indicator

Name	Description
Power	Turns blue when the power is supplied.
CPU Alive	Blinks in orange with 1 second intervals during normal operation.
Ethernet–Linked	Turns green during normal connection.
Ethernet–Active	Blinks in orange during normal transmission/reception.
COM1~5 – TX	Blinks in green during normal transmission.
COM1~5 – RX	Blinks in green during normal reception.
Check	Turns green when notice occurs.

Bottom View

◆ Separate bottom cover by unfastening 2 screws on the bottom.



DI Terminal2
Connect Digital Input
- Channel 6~Channel10

DI Terminal1
Connect Digital Input
- Channel 1~Channel 5

DO Terminal1
Connect Digital Output
- Channel 1~Channel 5

DO Terminal 2
Connect Digital Output
- Channel 6~Channel 8

Reserved

Power Terminal
Connect
DMS2.5 adapter

RS485 Communication terminal
Connect for RS485 communication with devices such as OnOff Controller/Outdoor unit
- COM1 ~ COM5

Reset Button
Reset DMS2.5

Serial Terminal
Service agent checks error status

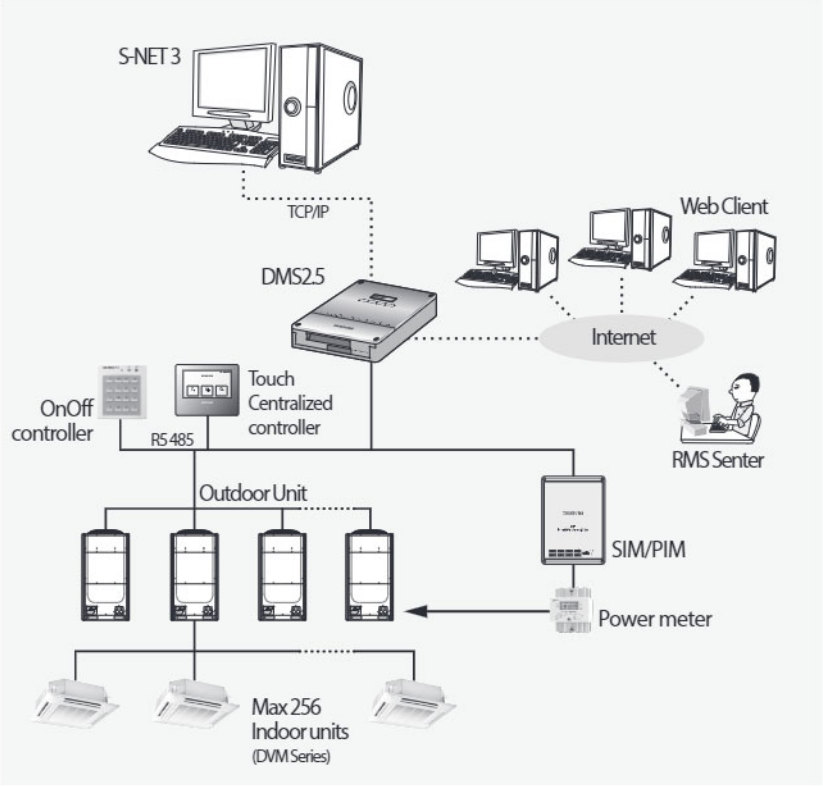
Cable tie groove
Arrange cables connected to DMS2.5

SD Card Socket
Socket for sub memory (SD or MMC)
(Sub memory is for DMS2.5 program update and set information saving)
※ Purchase SD card separately.

LAN Terminal
Connect LAN cable

Before Use

System Configuration



◆ Connecting outdoor unit and DMS2.5
- You can control up to 80 outdoor units and 256 indoor units by using DMS2.5.

※ You can connect up to 16 (outdoor) units per each communication channel of the DMS2.5.

- If the number of connected outdoor unit increases, it may take long time for tracking. (Max. 30 minutes)

CAUTION

- ***For devices that support new communication, you must set the communication mode of the channel to 'NEW' from [System settings → Tracking] menu. Set of Indoor/outdoor units, with conventional communication type, cannot be connected to DMS2.5 with new communication.***
- ***When 'NEW' is set as communication mode of the channel, virtual OnOff controller address will be assigned.***
  (Channel 0: Virtual OnOff controller 11, Channel 1: Virtual OnOff controller 12, Channel 2: Virtual OnOff controller 13, Channel 3: Virtual OnOff controller 14, Channel 4: Virtual OnOff controller 15)
- ***The maximum number of indoor units that can be connected to each communication channel of DMS2.5 RS485 is 128.***

Web Browser Specification

- Windows 7 or later version
- Install Internet Explorer 11 or later version
- Install Silverlight 2.0 or later version

Note

- Visit internet homepage (http://www.microsoft.com/silverlight/) to download Silverlight. Or you can download it through the download link which is noticed automatically when the PC is connected to the Internet and you access to DMS2.5 for the first time.
- Silverlight operates normally with Windows 7 or later version. It may not operate normally with former version of Windows.

Computer Settings for DMS2.5 Connection

All settings of DMS2.5 will be arranged in web page which built in DMS2.5.
You should access to DMS2.5 IP to use DMS2.5 web page.
There are 2 ways to access DMS2.5 IP.
(For about settings, refer to installation manual.)

- Static IP setting
- Dynamic IP(DHCP) setting
- Basically, only Private IP can be set to IP address. To use Public IP, you must set Enable public IP as 'Enable' from the menu [System Settings] → [System environment setting].
  - Private IP range: 10.0.0.0 ~ 10.255.255.255, 172.16.0.0 ~ 172.31.255.255, 192.168.0.0 ~ 192.168.255.255

CAUTION

- ***Use this product only in a separate dedicated network. Samsung electronics is not liable for any problems caused by connecting it to the Internet or an intranet.***

Main Function

Interface with Upper Level Controller

The DMS2.5 receives/manages setting and control data from the upper level controller and sends the received data to the lower level system.

- Upper controller: S-NET 3, RMS and DMS2.5 which allows controlling by accessing to a web page.
- S-NET 3: System air conditioner controlling and monitoring program that is used by installing on a PC.
- RMS: A device which supervises operation status and break down status by connecting to DMS2.5 for system air conditioner remote service. If break down is detected, it notifies service agent and makes fast service possible.

Save Trouble History

The DMS2.5 saves at most 1024 cases of trouble history.
If the number of errors exceeds 1024, only the latest 1024 cases are stored by deleting the oldest trouble history.

- Device name, address, error occurrence time, error solvation time, trouble history will be saved. You can check it in web page or upper controller.
- When an error occurs, it sends trouble history to e-mail saved in DMS2.5.
- Some functions available on DMS2.5 web page may not be functional at BACnet Gateway and Lonworks Gateway. For detailed function, refer to the installation manual or contact Samsung Electronics.

Device	Type
Indoor Unit	Indoor unit communication error Indoor unit sensor related error Other errors
Outdoor Unit	Outdoor unit communication error Pipe inspection error Outdoor unit sensor related error Outdoor unit related other errors
Communication error such as OnOff controller	Control device related communication error

Set and Run Schedule

The schedule function of the DMS2.5 can be set through the Web or using the upper level controller. 1day/Everyday/Every week schedules can be set.

- ◆ Each schedule can be used selectively by using the run schedule/stop schedule order.
- ◆ At most 256 schedules can be set.
- ◆ Indoor unit control is possible at least 1 minute of interval by set schedule.

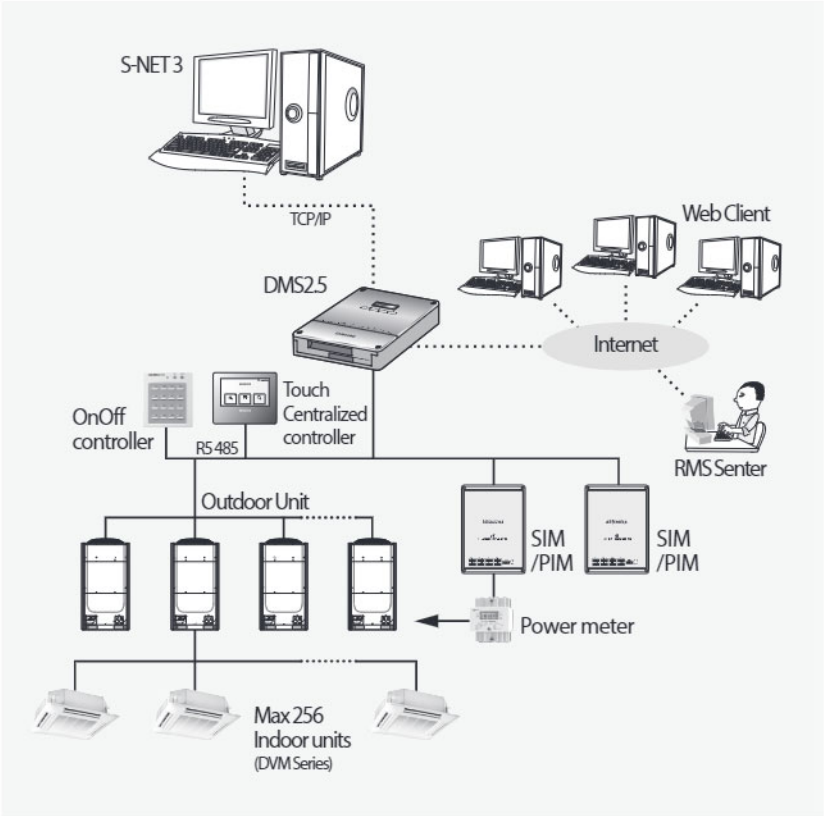
Item	Content	Remark
Schedule Period	Starting and ending date of a schedule	
Exception Day Setup	Set an exception day within a schedule period to ignore the schedule control	
Devices to be applied	Select devices to receive schedule control	
Event	Set indoor unit operation modes - Device On time - Device Off time - Desired temperature - Operation mode: Auto/Cool/Dry/Fan/Heat/Off - Remote control usage Enable RC/ Disable RC/ Cond.RC - Fan speed: Auto/Low/Mid/High/Turbo - Air flow: None/Vertical/Horizontal/All - ERV operation mode: Auto/HeatEx/ByPass/Sleep - ERV Fan speed: Low/High/Turbo	Weekly Repeat: Maximum 30 events per day Daily Repeat: Maximum 70 events

Main Function (Continued)

Save Integrated Power Distribution Data

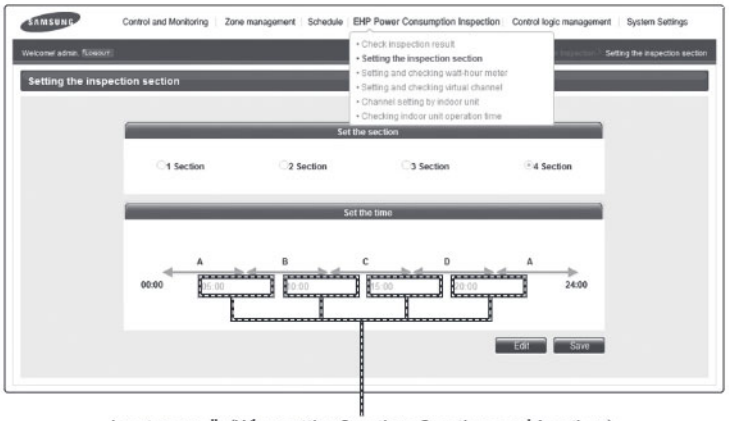
The DMS2.5 calculates and distributes the power consumed by each indoor unit by receiving the total power usage from the watt-hour meter interface modules (SIM/PIM) and taking into account the operation status of the indoor units.
The DMS2.5 saves at most 1 year of data. After a year, the oldest data is deleted and the latest data is saved. This data can be checked through the built-in Web page of the DMS2.5 or by S-NET 3.

System Architecture



Time Segmentation

- Time segmentation is used to divide 24 hours into different sections and to distribute power according to each section.
- This function is used when the power consumption fee is different according to different time slots or when a building is charged differently depending on the consumption time.
- 1 section (A) is set as 24hours, and the factory default setting is set as 1 section. The time, 24hours, can also be divided into 2 sections (A,B,A), 3 sections (A,B,C,A) or 4 sections (A,B,C,D,A)
- DMS2.5 shows the result of the power distribution for each section you set.



Input manually (When setting 2 sections, 3 sections, and 4 sections)

CAUTION

If communication error occurs between DMS and the lower level controllers, actual power consumption and the result of power distribution value may not be same. Make sure to solve communication error status.

- Example of communication error : Communication error between DMS2.5 and SIM(PIM)/SIM(PIM) and watt hour meter/ DMS2.5 and outdoor unit/indoor and outdoor units.

Starting DMS2.5

Current time setting

Set the current time of DMS2.5 system.

◆ "2016/01/01 01:01:01" is factory setting. Set the current time as DMS2.5 system time. You can set DMS2.5 time in [System Settings] → [System environment setting] (Refer to page 140~141)

CAUTION

If DMS2.5 time does not set as the current time, DMS2.5 may cause malfunction when using Schedule or control logic management.

Connecting OnOff controller & outdoor unit

Connecting devices

(1) Make sure the connection of communication cables(R1/R2) between DMS2.5 and other devices such as outdoor units, control devices.

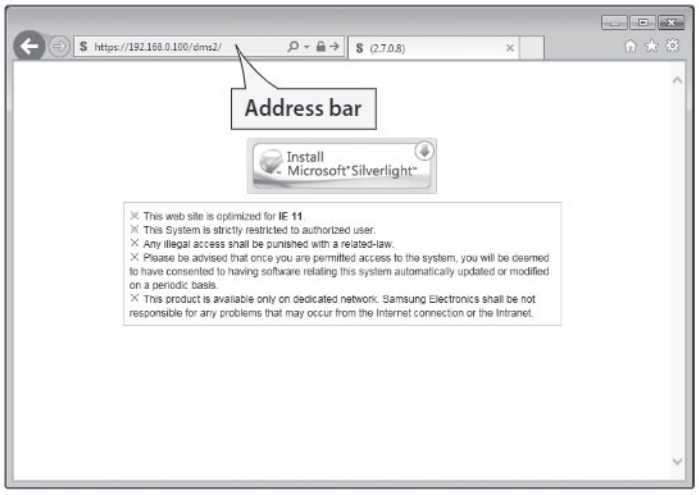
(2) Execute tracking.

◆ DMS2.5 communicates with outdoor unit and brings information about installed indoor unit and outdoor unit.

◆ After tracking, you can use indoor unit control and other menu.

◆ For tracking, refer to [System Settings] → [Tracking] (Refer to page 161~165)

Access to DMS2.5 & Login



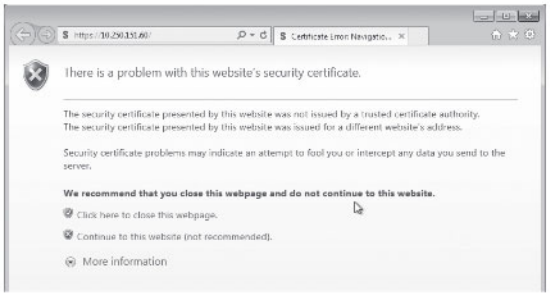
1 Run internet explorer on your computer.

2 Enter IP address (https://192.168.0.100) on the address bar, and then press [ENTER].

◆ If it is the first access to DMS2.5, "Install Microsoft Silverlight" message will be displayed.

- The message will not appear if Microsoft Silverlight have already installed.
  If the message window and login screen does not appear, check PC setting status.

1) At initial access, security certificate warning popup message will appear as shown. This message appears since DMS2.5 used the certificate of its own, so it will not appear if DMS2.5 certificate is registered on web browser. DMS2.5 certificate must be registered because the message will appear every time and it is not safe for security if it is not registered. Also, it should be registered to all PCs that are connecting to DMS2.5.

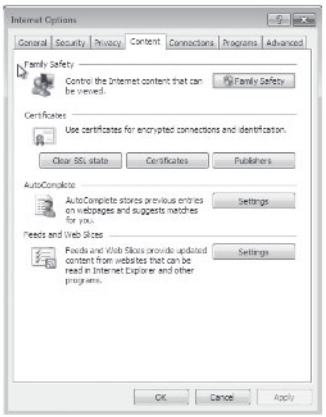


CAUTION

You must stop connecting due to security problem if the message appears even if you registered DMS2.5 certificate.

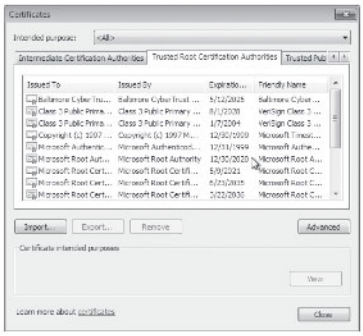
2) Registering DMS2.5 certificate on web browser

A. Select 'Content' tap in 'Tools' ➔ 'Internet options', and click 'Certificates'.



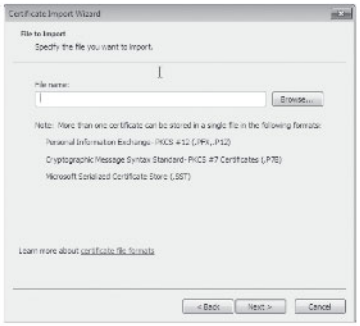
Starting DMS2.5 (Continued)

B. Select 'Trusted Root Certification Authorities' and click 'Import'.

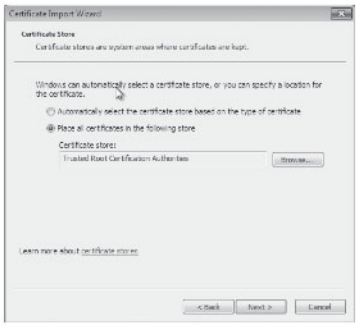


C. Click 'Next'.

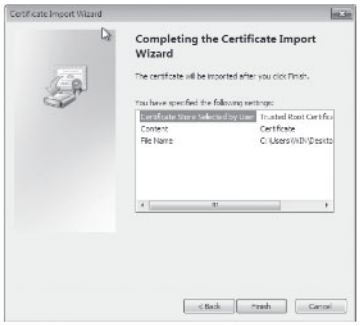
D. Select 'Browse' and find DMS2.5 certificate, and click 'Next'. DMS2.5 certificate can be downloaded from [System environment setting].

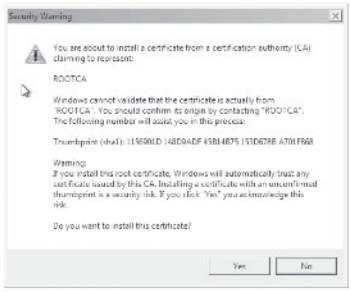


E. Select 'Place all certificates in following drive' and click 'Next'.



F. Click 'Finish', and click 'Yes' when security warning appears.

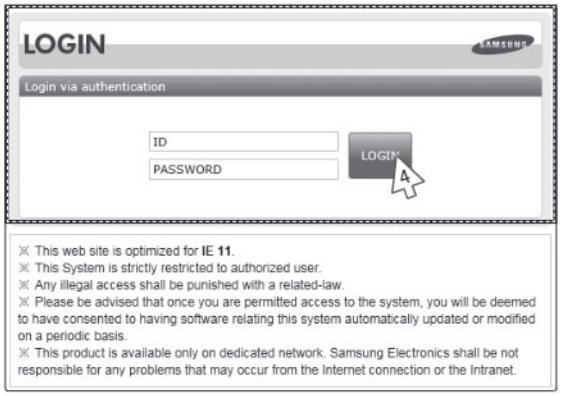




3 Click [Run] and continue installation.

◆ Access to DMS2.5 again after installation.

Starting DMS2.5 (Continued)



4 Enter ID and password when DMS2.5 main web page appears.
Then click [LOGIN].

- ◆ The default DMS2.5 user ID is 'admin' and password is 'ac0530'.
- ◆ Depending on authorization settings which set by the administrator, access to some functions may be restricted.
- ◆ To edit user authorization, refer to [System Settings]→ [User authorization management]. (Refer to page 123)

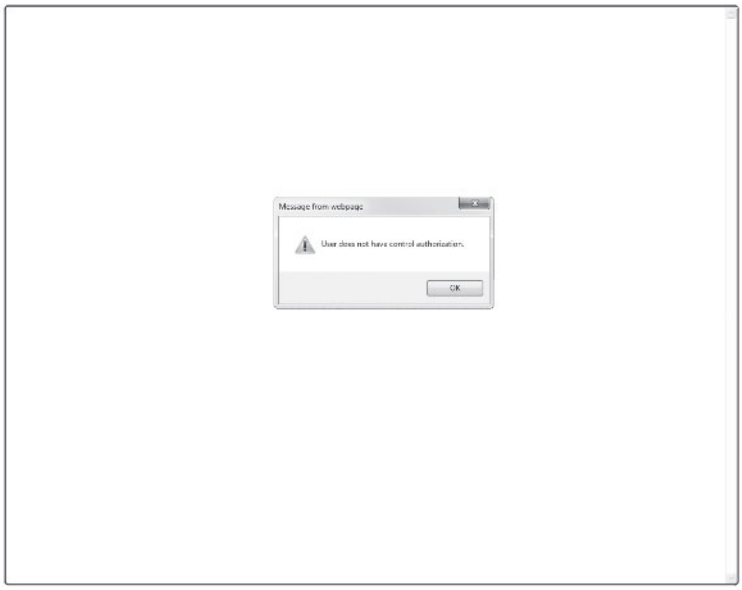
Note

- ◆ *Only authorized users can access to web page.*
- ◆ *Fewer than 5 concurrent users are recommended because connection speed may slow down.*
- ◆ *DMS2.5 manager should change ID and password for security and management. (Refer to page 121)*
- ◆ *Logout: To log out, click [LOGOUT] on the top of the menu.*

CAUTION

Silverlight will run normally with Windows 7 or later version. With former version of Windows, DMS2.5 may not operate normally.

Logged-in User with No Authorization



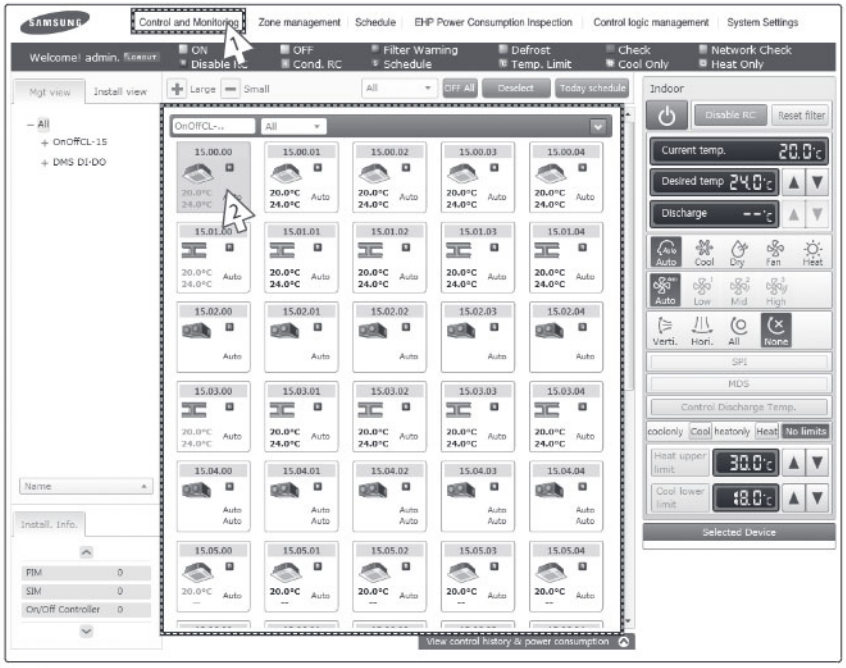
1 When the screen above appears, ask for manager.
- ◆ Depending on control authorization setting, there can be a user who does not have control authorization.
- ◆ Above screen will appear when the logged-in user does not have control authorization.

Control and Monitoring

Devices controlled and monitored by DMS2.5

Type	Display	Remote controller (Controlling range)	Type	Display	Remote controller (Controlling range)
Indoor unit display icon			DI (Digital Input) display icon		
ERV display icon			DO (Digital Output) display icon		
AHU display icon			Hydro Unit HT, display icon		
ERV PLUS display icon			FCU Kit display icon		
Hydro Unit, EHS display icon			DVM CHILLER display icon		
Fresh duct display icon					

Monitoring Indoor Unit Operation Status



1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.
- ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Check the current status of all devices.
- ◆ You can check the current controlling status of all installed indoor units, ERV, AHU, ERV PLUS, Fresh duct, Hydro Unit, Hydro Unit HT, EHS, DVM CHILLER, FCU Kit and other devices.
- ◆ If the SPI or MDS option is set for an indoor unit, the i icon appears on the indoor unit picture as shown in the following figure:

- ◆ If the outdoor unit is in emergency operation or the MTFC is operating, the siren icon appears as shown in the following figure:

Control and Monitoring (Continued)

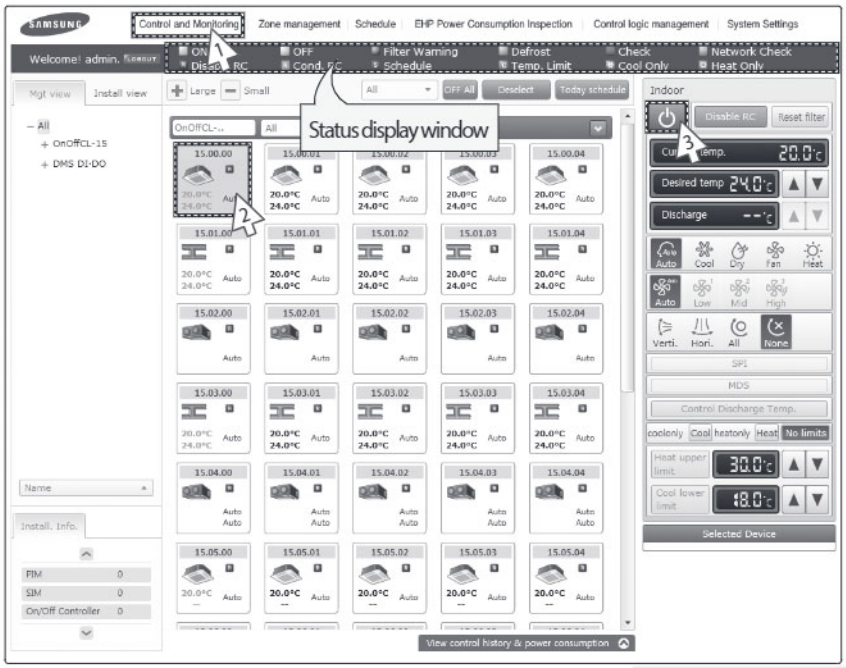
Note

- *When the advanced functions (such as Sleep mode, Energy saving function) are selected through wired/wireless remote controllers or indoor unit panel, set operation mode on the remote controllers and DMS2.5 may be displayed differently. Also, when controlling by DMS2.5, additional functions will be canceled.*
- *Depending on the model of indoor unit, Horizontal/All air flow direction control may not be possible. In this case, vertical or fixed flow will be displayed depending on indoor unit's basic operation specification.*

CAUTION

Some functions available on DMS2.5 web page may not be functional at BACnet Gateway and LonWorks Gateway. For detailed function, refer to the installation manual or contact Samsung Electronics.

Controlling an Indoor Unit



1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.

◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Select an indoor unit to control.

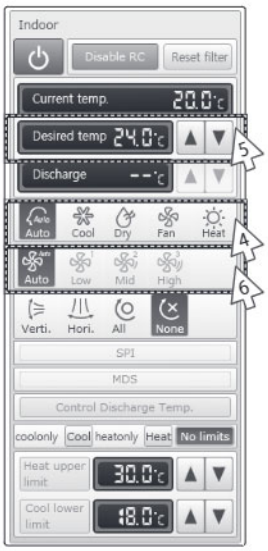
◆ Check the indoor unit status through status display window.

◆ When the selected indoor unit is switched on, the remote controller panel will be automatically activated.

3 Turn the indoor unit on by clicking [⏻].

◆ Remote controller panel will be activated.

Control and Monitoring (Continued)



4 Select the operation mode.

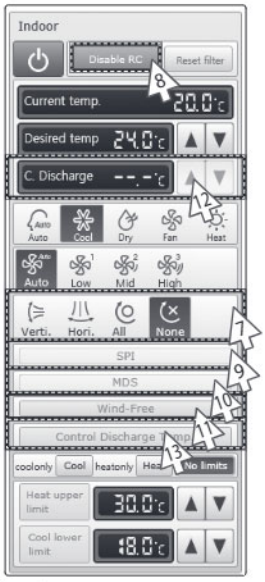
- ◆ You can select Auto, Cool, Dry, Fan and Heat operation mode.

5 Click [▲][▼] to set the desired temperature.

- ◆ Each time you press the buttons, the temperature will be adjusted by 1 or 0.1°C (or by 1°F).
- ◆ You cannot adjust the desired temperature in Fan mode.
- ◆ When the indoor unit is in the Cool or Dry mode, you cannot set the desired temperature to none of a temperature higher than the upper temperature limit for cooling and a temperature lower than the lower temperature limit for cooling.
- ◆ When the indoor unit is in the Heat mode, you cannot set the desired temperature to none of a temperature higher than the upper temperature limit for heating and a temperature lower than the lower temperature limit for heating.
- ◆ If the indoor unit supports the Dual Set Point function and this function is enabled in the [System Settings] → [Dual Set Point setting] web page, you can individually set the cooling and heating set temperatures in the Auto mode.

6 Select the fan speed.

- ◆ You can select Auto, Low, Mid and High.
- ◆ If Auto/Dry mode is in operation, fan speed will be set as Auto fan speed.
- ◆ If Fan mode is in operation, you cannot select Auto fan speed.
- ◆ When the Turbo fan speed is available, the Turbo icon is displayed and you can select and control the Turbo fan speed.



7 Select the air flow.

- ◆ You can select Vertical, Horizontal, All and None air flow direction.
- ◆ When the 360 Cassette air conditioner is connected, icons are changed to Spot, Mid, Wide, and Swing.

8 Set remote controller settings.

- ◆ You can select Enable RC, Disable RC, and Cond. RC.
- ◆ When selecting [Disable RC], indoor unit control by wired/wireless remote controller and indoor unit panel is not possible. Indoor unit control is only available in DMS2.5 web page.
- ◆ Click [⏻] when you want to use wired remote controller in each room.

9 Select SPI setting.

- ◆ You can set SPI through button activation / non activation.

Control and Monitoring (Continued)

10 Select MDS setting .
- ◆ You can set MDS(Motion Detection Sensor) through button activation / non activation.
- ◆ When MDS is activated, you can set the Indirect/Direct function.

11 Select [Wind-Free].
- ◆ When an indoor unit supporting the wind-free feature is connected, use this button to activate or deactivate the wind-free feature.
- ◆ The wind-free feature can be activated only in Cool, Dry, and Fan modes. While the wind-free feature is running, you cannot control the fan speed and the air flow direction.
- ◆ If the mode changes, the wind-free feature is deactivated.

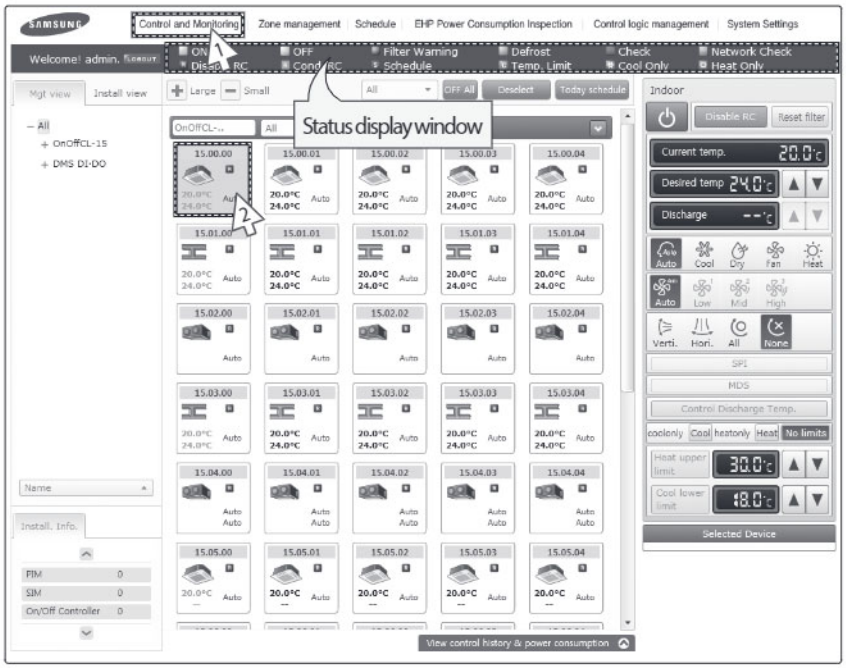
12 Set cooling/heating discharge temperature by clicking [▲] and [▼].
- ◆ When the indoor unit is in Cool mode, you can adjust cooling discharge temperature and when the indoor unit is in Heat mode, you can adjust the heating discharge temperature.
- ◆ When the indoor unit is in Auto, Dry or Fan mode, you cannot adjust the discharged temperature.

13 Select [Control Discharge Temp].
- ◆ You can enable/disable button to decide whether to use discharge temperature adjustment.

Note ***When filter warning sign is displayed on indoor unit status window***
Select the indoor unit and click [Reset filter].
Filter warning will be released.

- ◆ *Make sure that each indoor unit must be turned on to control.*
- ◆ *Selecting remote controller, reset filter, operation mode limits, setting lower/upper temperature limit are possible even if the power of indoor unit is off.*
- ◆ *Some air flow direction option may be restricted depending on the indoor unit model.*
- ◆ *SPI, MDS and discharge temperature functions can be operated normally when corresponding optional functions are installed to the selected indoor unit.*

Indoor Unit Operation Mode Limit



You can monitor the operation status of all indoor units or have individual or whole control of the indoor units.

1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.

- ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Select an indoor unit to control.

- ◆ Check the indoor unit status through status display window.
- ◆ When the selected indoor unit is switched on, the remote controller panel will be automatically activated.

Control and Monitoring (Continued)

3 Set operation mode limit.

◆ You can select [coolonly (Cool)], [heatonly (Heat)], and [No limits].
- No limits : You can use cool mode and heat mode with no limits.

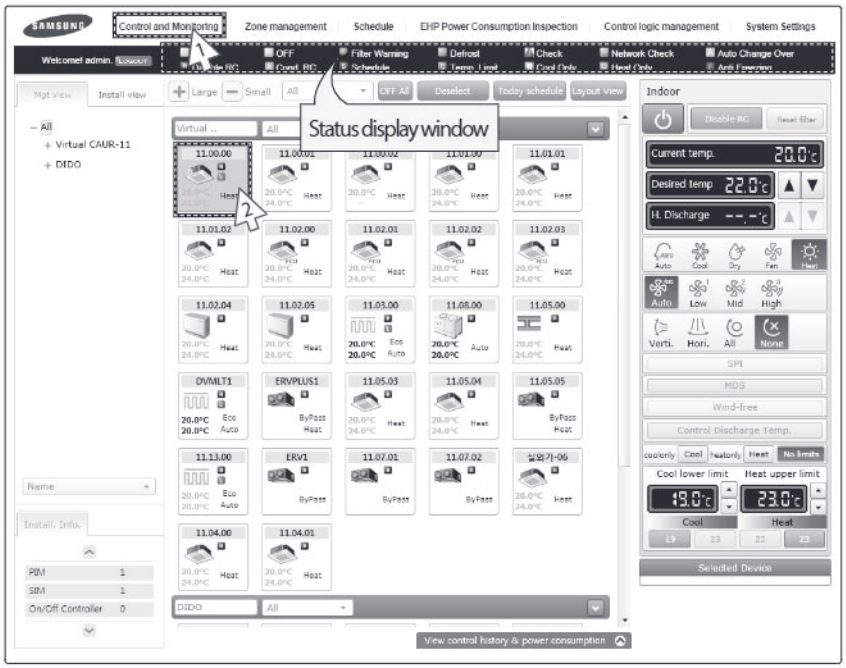
Note ◆ *Operation mode limits setting is not available in ERV and DVM CHILLER.*

CAUTION

◆ ***If you set the operation mode limit, DMS2.5 will automatically change the operation mode limit setting of all the indoor units connected to same outdoor unit.***

◆ ***If the indoor unit is cooling only model, you cannot set the operation mode limit to 'heatonly'.***

Setting Upper and Lower Temperature Limits for Cooling and Heating of the Indoor Unit



You can monitor the operation status of all indoor units, and control the indoor units as a whole, or as individual units.

1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.

- ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Select an indoor unit to control.

- ◆ Check the indoor unit status through status display window.
- ◆ When the selected indoor unit is switched on, the remote controller panel will be automatically activated.

Control and Monitoring (Continued)

3 Set the upper and lower temperature limits for cooling by pressing [▲] and [▼].

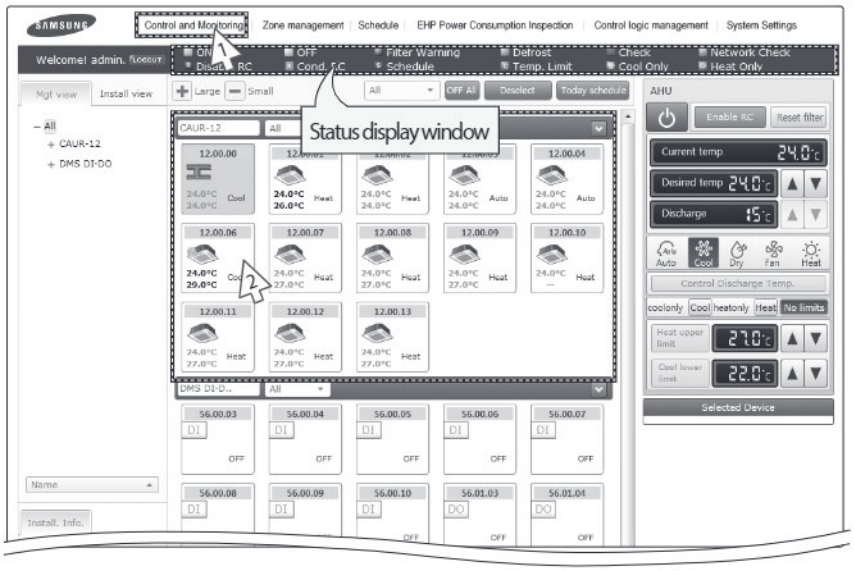
◆ When the indoor unit is in the Cool or Dry mode, you cannot set the desired temperature to none of a temperature higher than the upper temperature limit for cooling and a temperature lower than the lower temperature limit for cooling.

4 Set the upper and lower temperature limits for heating by pressing [▲] and [▼].

◆ When the indoor unit is in the Heat mode, you cannot set the desired temperature to none of a temperature higher than the upper temperature limit for heating and a temperature lower than the lower temperature limit for heating.

Note ◆ *You cannot set the upper and lower temperature limits for cooling and heating of ERV, ERV PLUS, Fresh duct, DVM CHILLER.*

Monitoring AHU Operation Status



You can monitor the operation status of AHU, and control AHU as a whole, or as individual units.

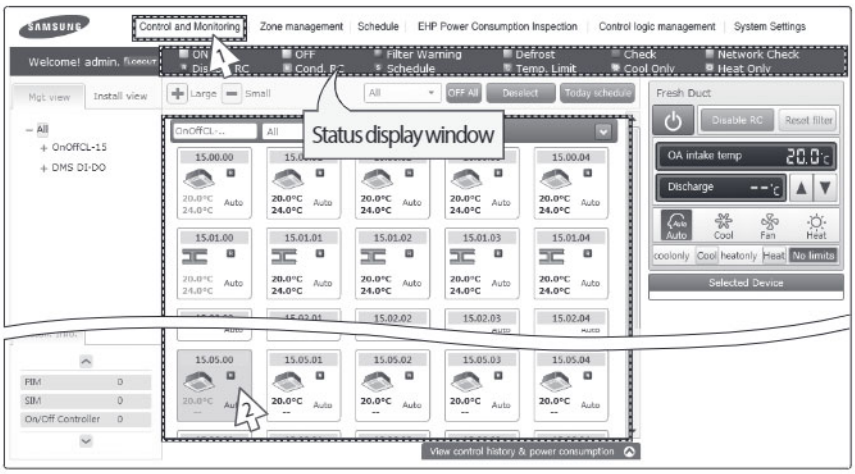
1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.
- ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Check current status of AHU.
- ◆ Check AHU status through status display window.
- ◆ When the selected AHU is switched on, the remote controller panel will be automatically activated.

Note
- ◆ *To control AHU, refer to the 'Controlling an indoor unit' steps. (Refer to the page 23~26)*
- ◆ *AHU's fan speed is fixed as high.*
- ◆ *You cannot set air flow direction of AHU.*
- ◆ *To set the operation mode limit of AHU, refer to the 'Indoor unit operation mode limit' steps. (Refer to the page 27~28)*
- ◆ *To set the lower/upper temperature limit of AHU, refer to the 'Setting Upper and Lower Temperature Limits for Cooling and Heating of the Indoor Unit' steps. (Refer to the page 29)*
- ◆ *To set the cooling/heating discharge temperature, refer to the step 12~13 of 'Controlling and indoor unit'. (Refer to the page 26)*

Control and Monitoring (Continued)

Monitoring Fresh duct operation status

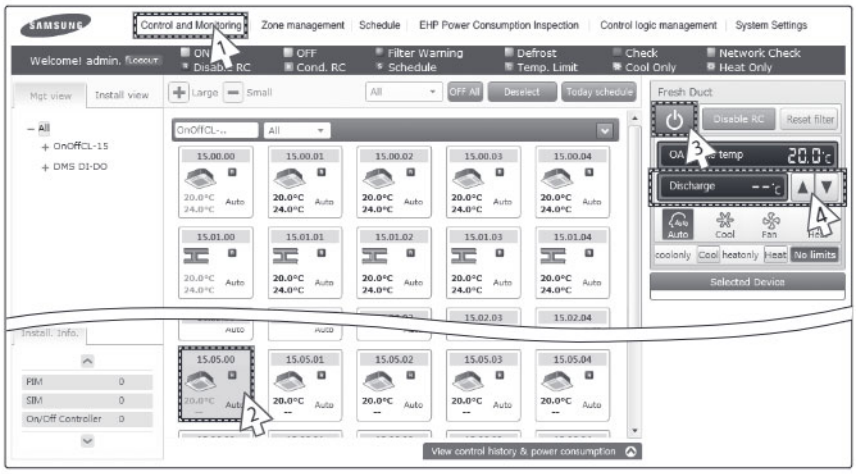


You can monitor the operation status of Fresh duct, and control the Fresh duct as a whole, or as individual units.

1 Click [Control and Monitoring] when DMS2.5 web page menu screen appear.
- ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Check the current status of a Fresh duct.
- ◆ Check the status of a Fresh duct through the status display window.
- ◆ When the selected Fresh duct is switched on, the remote controller panel will be automatically activated.

Controlling a Fresh duct



1 Click [Control and Monitoring] when DMS2.5 web page menu screen appear.

- ◆ [Control and Monitoring] screen will appear when you log-in to DMS web page.

2 Check the current status of a Fresh duct.

- ◆ Check the status of a Fresh duct through the status display window.
- ◆ When the selected Fresh duct is switched on, the remote controller panel will be automatically activated.

3 Turn the Fresh duct on by clicking [⏻].

- ◆ Remote controller panel will be activated.

4 Set cooling/heating discharge temperature by clicking [▲]and[▼].

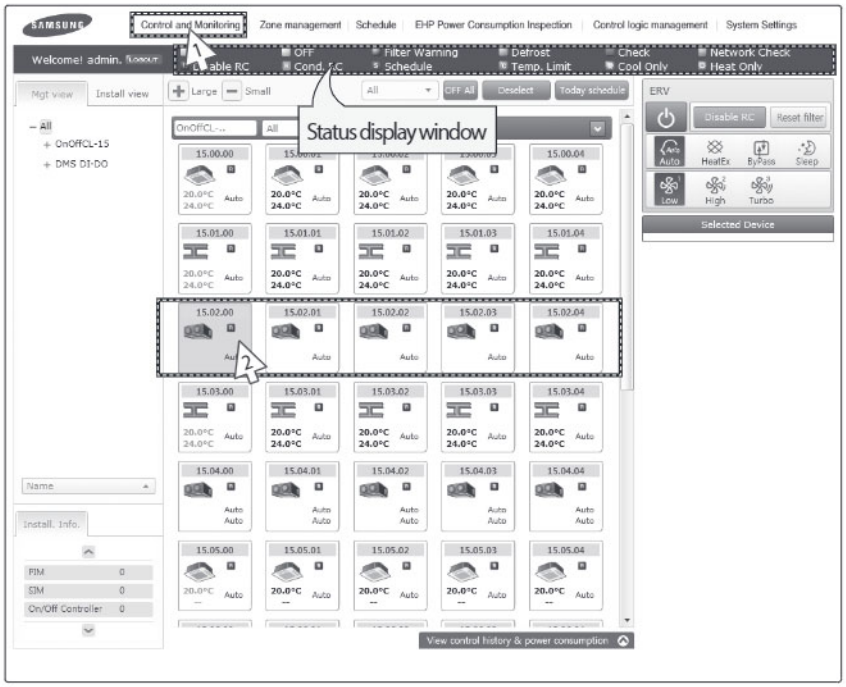
- ◆ When the Fresh duct is in Cool mode, the Fresh duct can be set as cooling discharge temperature and when the Fresh duct is in Heat mode, the Fresh duct can be set as heating discharge temperature.
- ◆ When the Fresh duct is in Auto or Fan mode, the discharge temperature cannot be adjusted.

Control and Monitoring (Continued)

Note

- *Refer to the 'OnOff controller' for Fresh duct control. (Refer to page 23~26)*
- *The fan speed of a Fresh duct is fixed as 'High'.*
- *Setting air flow direction of a Fresh duct is not available.*
- *Refer to the 'Indoor unit operation mode limit' for Fresh duct operation mode limit. (Refer to page 27~28)*

Monitoring ERV Operation Status



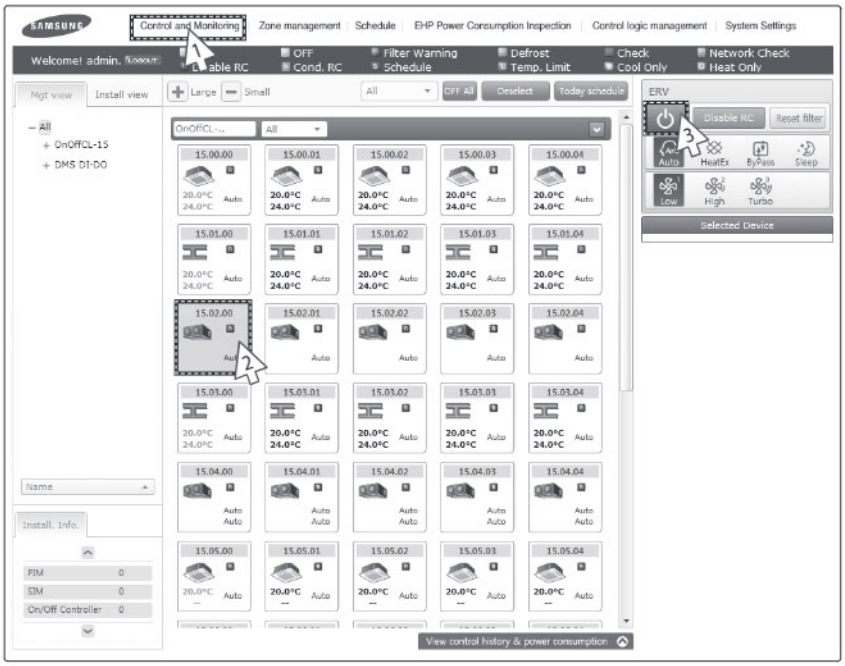
You can monitor the operation status of ERV, and control the ERV as a whole, or as individual units.

1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.
- ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Check current status of ERV.
- ◆ Check the status of ERV through the status display window.
- ◆ When the selected ERV is switched on, the remote controller panel will be automatically activated.

Control and Monitoring (Continued)

Controlling ERV

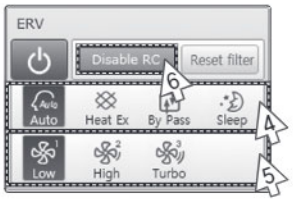


You can monitor the operation status of ERV, and control the ERV as a whole, or as individual units.

1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.
   - ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Select an ERV to control.
   - ◆ When the selected ERV is switched on, the remote controller panel will be automatically activated.

3 Turn ERV on by pressing [⏻].
   - ◆ The remote controller panel will be activated.



4 Select the operation mode.

- ◆ You can select Auto, HeatEx, By pass and Sleep.
- ◆ Only the buttons that the ERV supports are enabled.

5 Select the fan speed.

- ◆ You can select Low, High and Turbo.
- ◆ Fan speed is set to Low in Sleep mode.

6 Set remote controller settings.

- ◆ You can select Enable RC, Disable RC, and Cond. RC.
- ◆ When selecting [Enable RC], indoor unit control by wired/ wireless remote controller is not possible. Indoor unit control is only available in DMS2.5 web page.
- ◆ Click [⏻] when you want to use wired remote controller in each room.

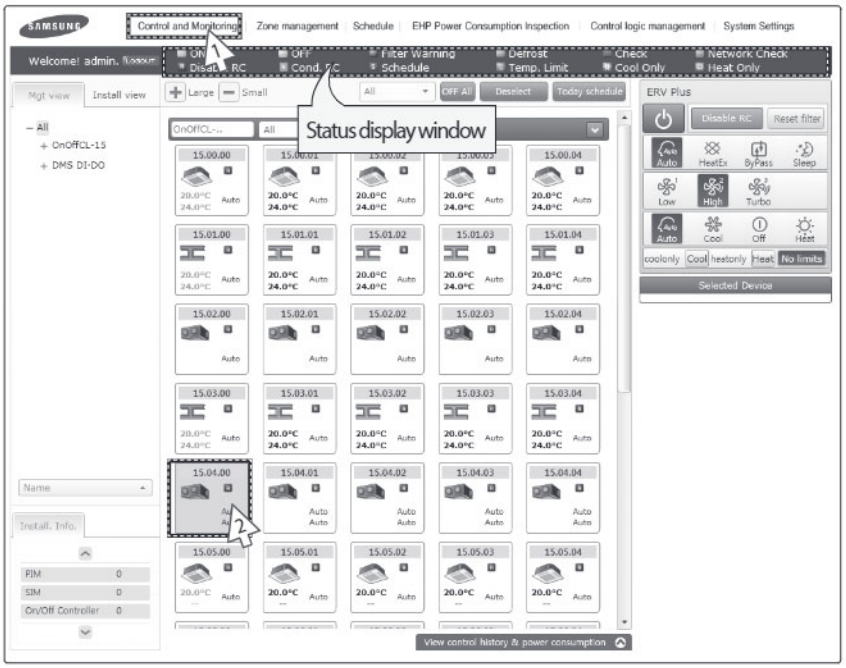
Note

- ◆ ***When filter warning sign is displayed on ERV status window***
  Select the ERV and click [Reset filter]. Filter warning will be released.

- ◆ ***Make sure that ERV must be turned on to control.***
- ◆ ***Selecting remote controller and filter reset are possible even if the power of indoor unit is off.***

Control and Monitoring (Continued)

Monitoring ERV PLUS operation status

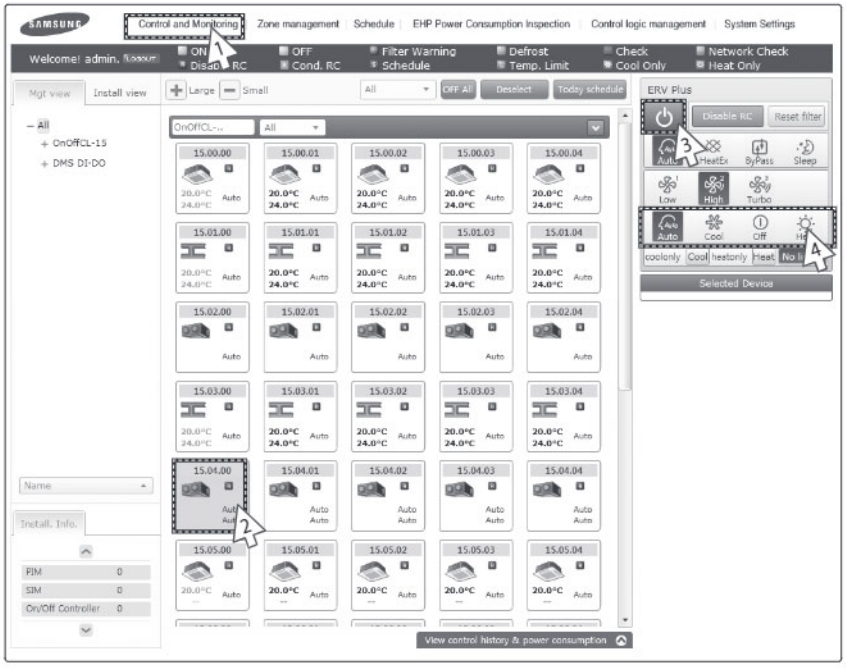


You can monitor the operation status of ERV PLUS, and control the ERV PLUS as a whole, or as individual units.

1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.
- ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Check the current status of ERV PLUS.
- ◆ Check the status of ERV PLUS through the status display window.
- ◆ When the selected ERV PLUS is switched on, the remote controller panel will be automatically activated.

Controlling ERV PLUS



1 Click [Control and Monitoring] when DMS2.5 web page menu screen appear.
- ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Select ERV PLUS to control.
- ◆ Check the status of ERV PLUS through the status display window.
- ◆ When the selected ERV PLUS is switched on, the remote controller panel will be automatically activated.

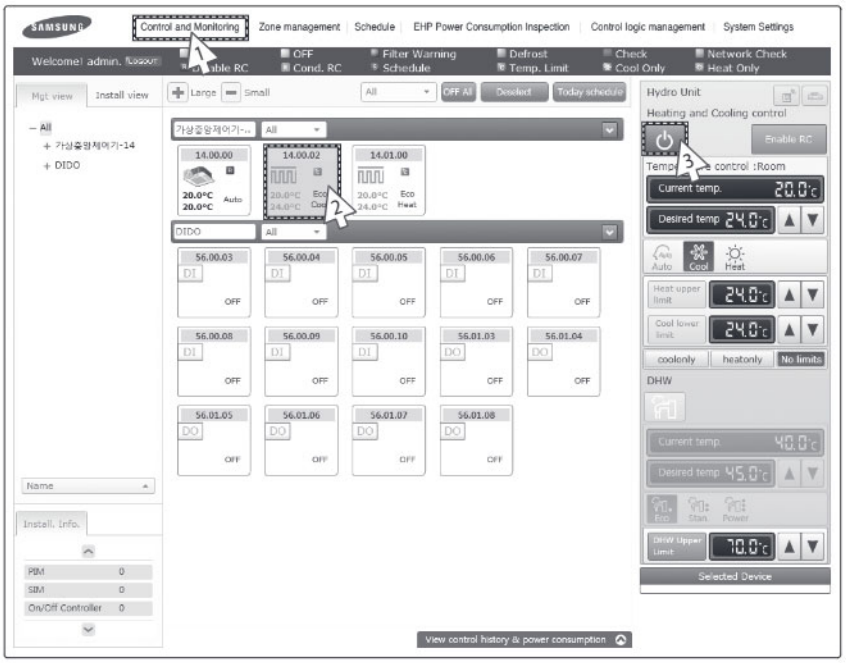
3 Turn the ERV PLUS on by clicking [⏻].
- ◆ Remote controller panel will be activated.

4 Select the operation mode
- ◆ You can select Auto, Cool, Off and Heat mode.

Note
- ◆ *Refer to the 'Controlling ERV' for ERV PLUS control. (Refer to page 36~37)*
- ◆ *Refer to the 'Indoor unit operation mode limit' for ERV PLUS operation mode limit. (Refer to page 27~28)*

Control and Monitoring (Continued)

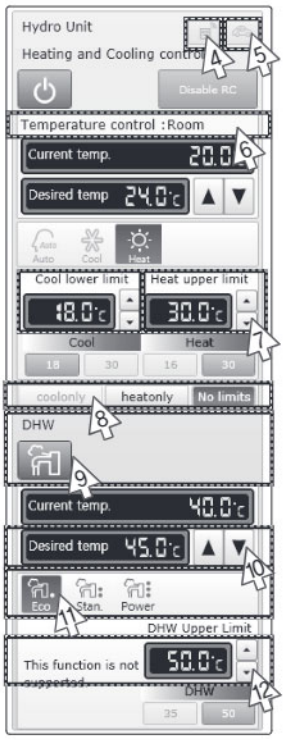
Controlling Hydro unit



1 Click [Control and Monitoring] when DMS2.5 web page menu screen appear.
- ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Select a Hydro unit to control.
- ◆ When the selected Hydro unit is switched on, the remote controller panel will be automatically activated.
- ◆ Hydro unit does not support multiple selection with other devices and you can only control and monitor the Hydro unit individually. When you select Hydro unit while multiple devices are already selected, previously selection (of multiple devices) will be canceled.

3 Turn the Hydro unit on by clicking [⏻].
- ◆ Remote controller panel will be activated.



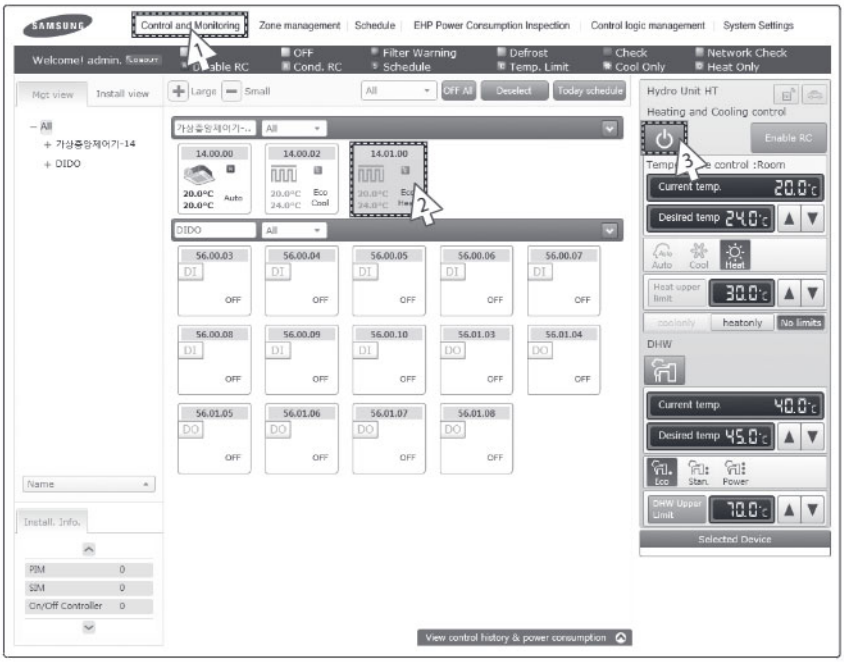
4	Icon will be activated when either Thermostat 1 or Thermostat 2 is on.
5	Icon will be activated when the Outing mode is on.
6	Type of temperature control will be displayed. Control and monitoring status of current temperature, desired temperature, operation mode, the upper and lower temperature limits for cooling and heating will be changed depending on the type of temperature control. ◆ Room: You can only control Cool and Heat mode. ◆ Water out: You cannot adjust the desired temperature in Auto mode.

Control and Monitoring (Continued)

7	Select the upper and lower temperature limits for cooling and heating by clicking [▲] [▼].
8	Select [coolonly] or [heatonly] button.
9	Click the button to turn on/off the power for direct heat water. ◆ You can turn on the power for direct hot water only when the operation mode is on Auto or Heat mode.
10	Select desired temperature for hot water by clicking [▲] [▼].
11	Select desired operation mode for hot water. ◆ Select the operation mode from Eco/Standard/Power.
12	Select the upper and lower temperature limits for DHW by clicking [▲] [▼].

Note ◆ ***Since the Hydro Unit and Hydro Unit HT does not have any filters, filter monitoring and filter reset is not available.***

Controlling Hydro Unit HT

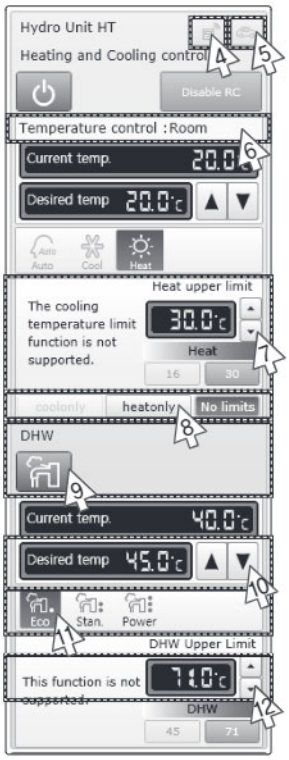


1 Click [Control and Monitoring] when DMS2.5 web page menu screen appear.
- ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Select a Hydro Unit HT to control.
- ◆ When the selected Hydro Unit HT is switched on, the remote controller panel will be automatically activated.
- ◆ Hydro Unit HT does not support multiple selection with other devices and you can only control and monitor the Hydro Unit HT individually. When you select Hydro Unit HT while multiple devices are already selected, previously selection (of multiple devices) will be canceled.

3 Turn the Hydro Unit HT on by clicking [⏻].
- ◆ Remote controller panel will be activated.

Control and Monitoring (Continued)



4	Icon will be activated when either Thermostat 1 or Thermostat 2 is on.
5	Icon will be activated when the Outing mode is on.
6	Type of temperature control will be displayed. Control and monitoring status of current temperature, desired temperature, operation mode, the upper and lower temperature limits for heating will be changed depending on the type of temperature control. ◆ Room: You can only control Heat mode. ◆ Water out: You can only control Auto and Heat mode. You cannot adjust the desired temperature in Auto mode.

7 Select the upper and lower temperature limits for heating by clicking [▲] [▼].

8 To select exclusive operation mode, select [heatonly] or [No limits].

9 Click the button to turn on/off the power for direct heat water.
- ◆ You can turn on the power for direct hot water only when the operation mode is on Auto or Heat mode.

10 Select desired temperature for hot water by clicking [▲] [▼].

11 Select desired operation mode for hot water.
- ◆ Select the operation mode from Eco/Standard/Power/ Force.

12 Select the upper and lower temperature limits for DHW by clicking [▲] [▼].

Note
- ◆ *Since the Hydro Unit HT does not have any filters, filter monitoring and filter reset is not available.*
- ◆ *Hydro Unit HT does not support temperature in Fahrenheit.*

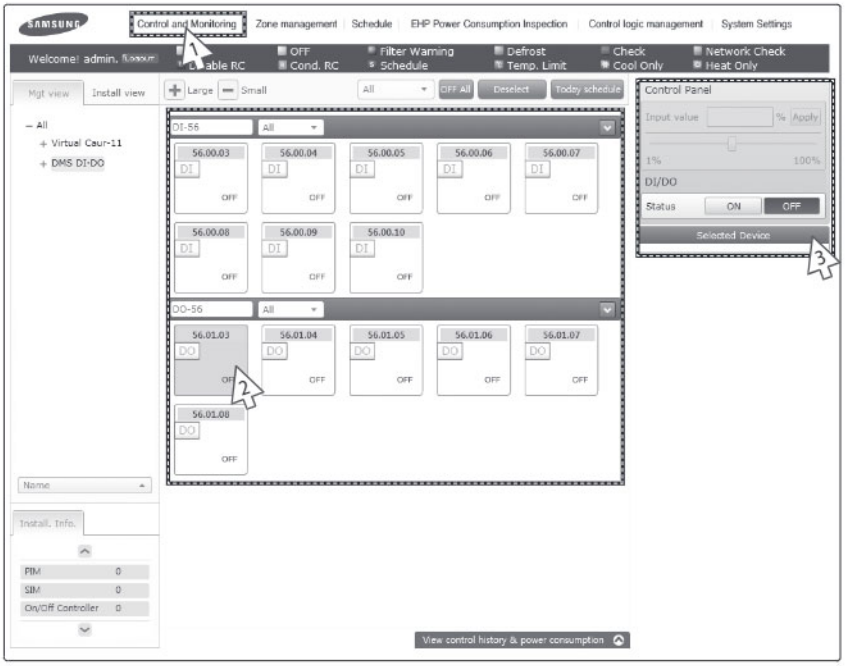
Controlling EHS

1 Basic control operating procedures are the same as 'Hydro Unit', and others are as follows:
- ◆ 'Force' is added to the hot water mode.
- ◆ The hot water thermostat is also considered when the thermostat icon is activated.

2 Basic control operating procedures are the same as 'Hydro Unit HT' in case of EHS HT.

Control and Monitoring (Continued)

Monitoring DMS DI/DO Operation Status



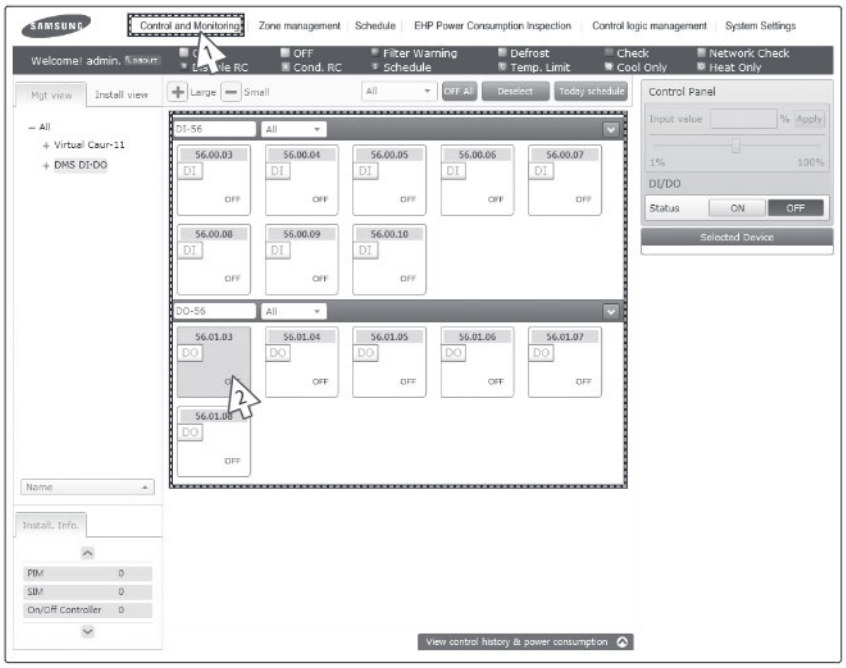
1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.
- ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Check the current status of DI and DO device.

3 Monitor the device through the control panel.

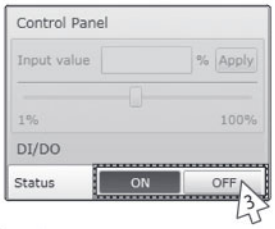
Note
- ◆ *Entering OnOff becomes impossible for DI device.*
- ◆ *Entering OnOff becomes possible for DO device.*
- ◆ *Entering control value becomes impossible for DI/DO device.*
- ◆ *You can control and monitor DI/DO which built-in DMS2.5. However, DI 1, 2 and DO 1, 2, 9, 10 are excluded from controlling and monitoring because they are used for the internal function of DMS.*

Controlling DMS DO



1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.
◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Select DO device to control when control and monitoring screen appears.
◆ Check the status of DI or DO device.

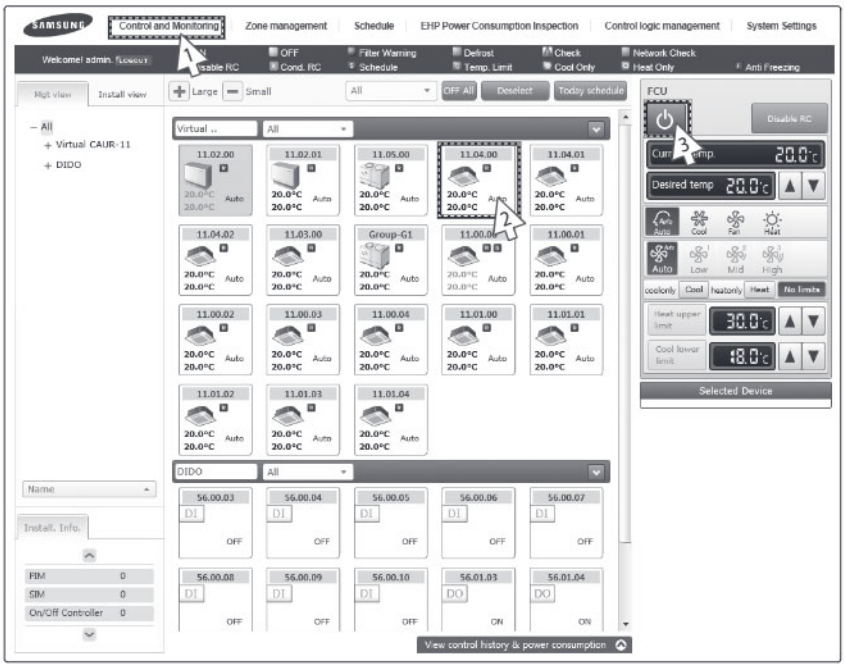


3 Turn DO device on by clicking [ON]/[OFF] button on the control panel.

Note ***Remote controller setting is not possible for DI/DO device.***

Control and Monitoring (Continued)

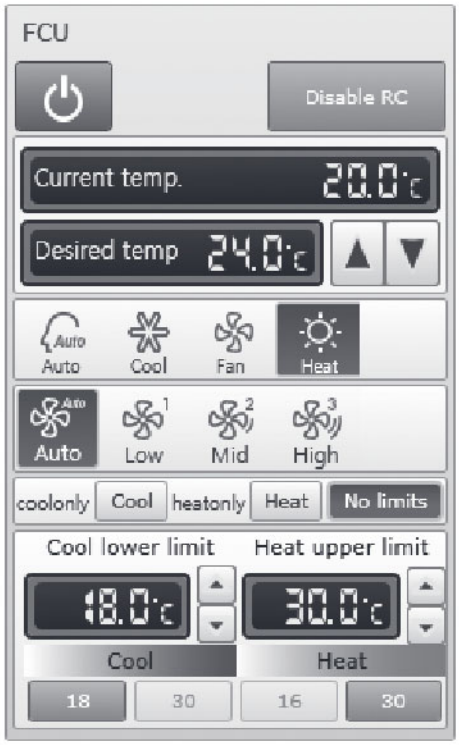
Controlling FCU Kit



1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.
- ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Select FCU to control when control and monitoring screen appears.
- ◆ Check the status of an indoor unit through status display window.
- ◆ When the selected indoor units are switched on, the remote controller panel will be automatically activated.

3 Turn the selected indoor units on by clicking [⏻].
- ◆ Remote controller panel will be activated.

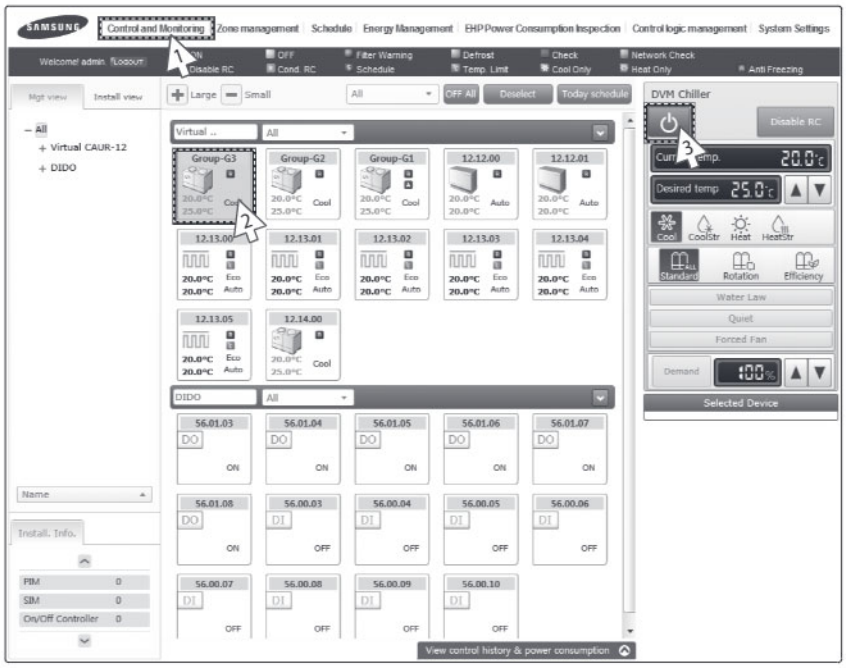


Note

- *Refer to the 'Controlling an indoor units' steps for FCU Kit control. (Refer to page 23~26)*
- *Refer to the 'Indoor unit operation mode limit' for FCU Kit operation mode limit. (Refer to page 27~28)*
- *Refer to 'Setting Upper and Lower Temperature Limits for Cooling and Heating of the Indoor Unit' for FCU Kit temperature limits. (Refer to page 29)*
- *When a FCU manufactured by Samsung is connected, the indoor unit icon appears as shown in the figure below. The control and monitoring items are the same with normal indoor units, except that you cannot control Auto and Dry modes.*

Control and Monitoring (Continued)

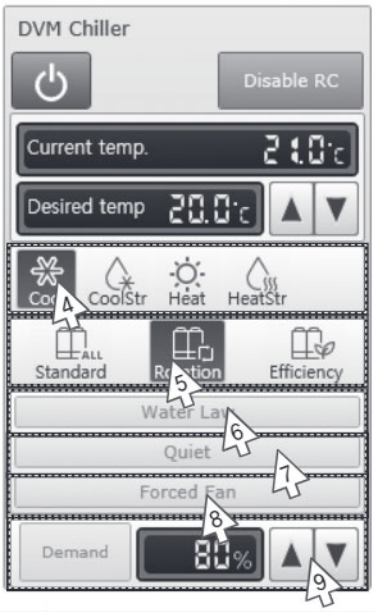
Controlling DVM CHILLER



1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.
- ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Select DVM CHILLER to control when control and monitoring screen appears.
- ◆ Check the status of an indoor unit through status display window.
- ◆ When the selected indoor units are switched on, the remote controller panel will be automatically activated.

3 Turn the selected indoor units on by clicking [⏻].
- ◆ Remote controller panel will be activated.

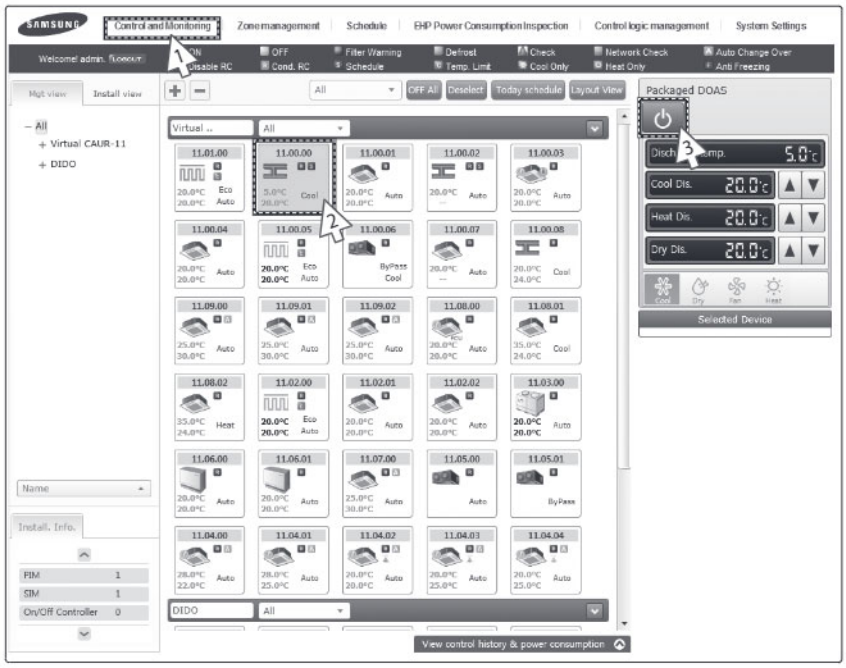


4	Select the operation mode. ◆ You can select Cool, Cool Storage, Heat, and Hot Water mode.
5	Select the operation pattern. ◆ You can select Standard, Rotation, Efficiency pattern.
6	Select Water Law setting. ◆ You can enable/disable button to select Water Law. ◆ You cannot adjust the desired temperature in Water Law.
7	Select Quiet function. ◆ You can enable/disable button to select Quiet function.
8	Select Forced Fan function. ◆ You can enable/disable button to select Forced Fan function.
9	Select Demand level by clicking [▲] [▼]. ◆ You can select Demand level in range of 50%~100%.

Note ◆ ***Power, desired temperature, operation mode, operation pattern, Water Law, Quiet function, Forced Fan function, Demand function can be controlled and monitored properly when the options are installed on DVM CHILLER.***

Control and Monitoring (Continued)

Controlling Packaged DOAS



1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.
- ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

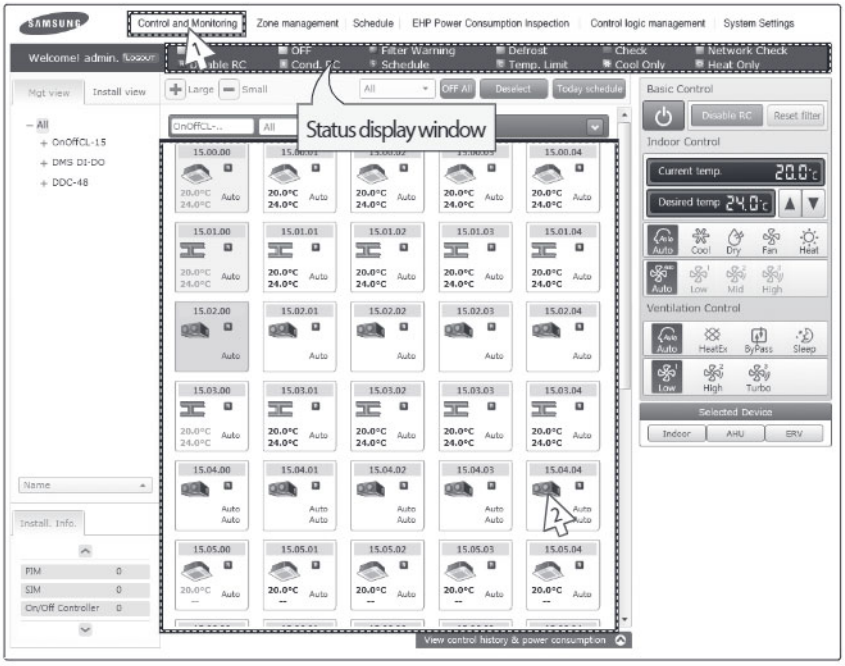
2 Check the current status of Packaged DOAS when control and monitoring screen appears.
- ◆ Check the status of Packaged DOAS through status display window.
- ◆ When the selected indoor units are switched on, the remote controller panel will be automatically activated.

3 Turn the Packaged DOAS on by clicking [⏻].
- ◆ Remote controller panel will be activated.

4	Check the current discharge temperature.
5	Set the cool, heat, and dry discharge temperatures by clicking [▲] [▼].
6	Check the current operation mode. You cannot control operation modes in Packaged DOAS.

Control and Monitoring (Continued)

Monitoring the selected multiple devices operation status



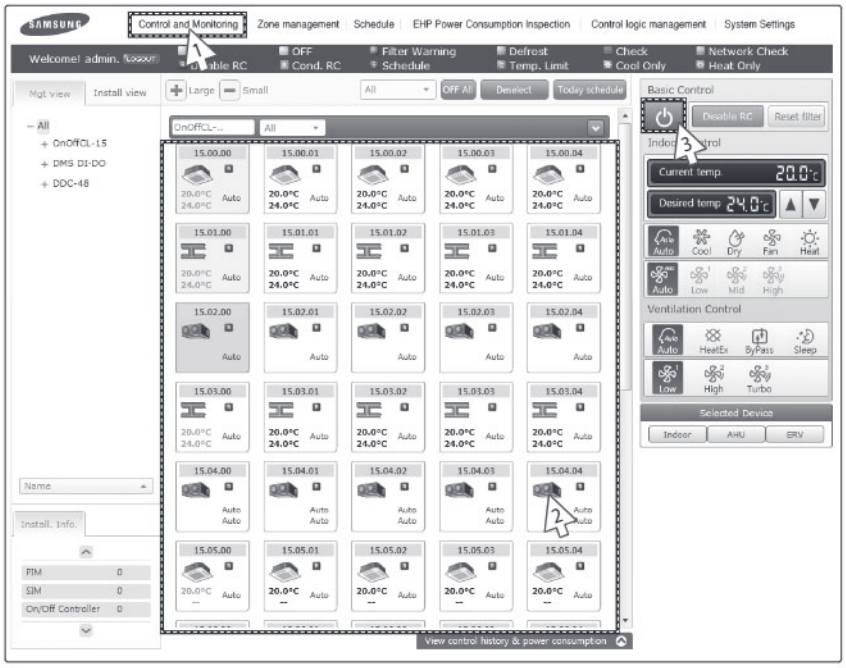
You can monitor the operation status of other type devices, and control other type devices as a whole, or as individual units.

1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.
- ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Check the status of the selected multiple devices.
- ◆ Check the status of an indoor unit through status display window.
- ◆ When the selected devices are switched on, the remote controller panel will be automatically activated.

Note
- ◆ *When users select multiple devices, 'Basic Control' will be displayed on the screen. (This is when different types of multiple devices are selected.)*
- ◆ *The current status of last selected indoor unit type devices (Indoor unit, AHU, Fresh duct) will be displayed on the 'Indoor control'.*
- ◆ *The status of last selected ERV type devices (ERV, ERV PLUS) will be displayed on the 'Ventilation Control'.*
- ◆ *The list of the selected multiple devices will be displayed on the 'Selected Device'.*
- ◆ *Hydro Unit, Hydro unit HT and EHS do not support multiple selection with other devices and you can only control and monitor the Hydro Unit, Hydro Unit HT and EHS individually. When you select Hydro Unit or Hydro Unit HT or EHS while multiple devices are already selected, previously selection (of multiple devices) will be canceled.*

Controlling the selected multiple devices

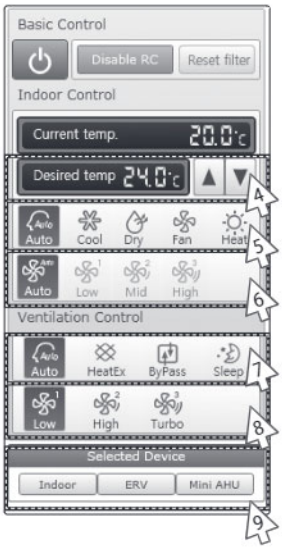


1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.
- ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Check the status of the selected devices.
- ◆ Check the status of an indoor unit through status display window.
- ◆ When the selected devices are switched on, the remote controller panel will be automatically activated.

3 Turn the selected devices on by clicking [⏻].
- ◆ Remote controller panel will be activated.

Control and Monitoring (Continued)



4 Select the desired temperature by clicking [▲][▼].

- ◆ Each time you press the buttons, the temperature will be adjusted by 1 or 0.1°C (or by 1°F).
- ◆ You cannot adjust the desired temperature in Fan mode.
- ◆ When the indoor unit is in the Cool or Dry mode, you cannot set the desired temperature to none of a temperature higher than the upper temperature limit for cooling and a temperature lower than the lower temperature limit for cooling.
- ◆ When the indoor unit is in the Heat mode, you cannot set the desired temperature to none of a temperature higher than the upper temperature limit for heating and a temperature lower than the lower temperature limit for heating.

5 Select the operation mode.

- ◆ You can select Auto, Cool, Dry, Fan and Heat mode.

6 Select the fan speed.

- ◆ You can select Auto, Low, Mid and High.
- ◆ If Auto/Dry mode is in operation, fan speed will be set as Auto fan speed.
- ◆ If Fan mode is in operation, you cannot select Auto fan speed.

7 Select the ERV operation mode.
- ◆ You can select Auto, Heat Ex, By pass and Sleep mode.

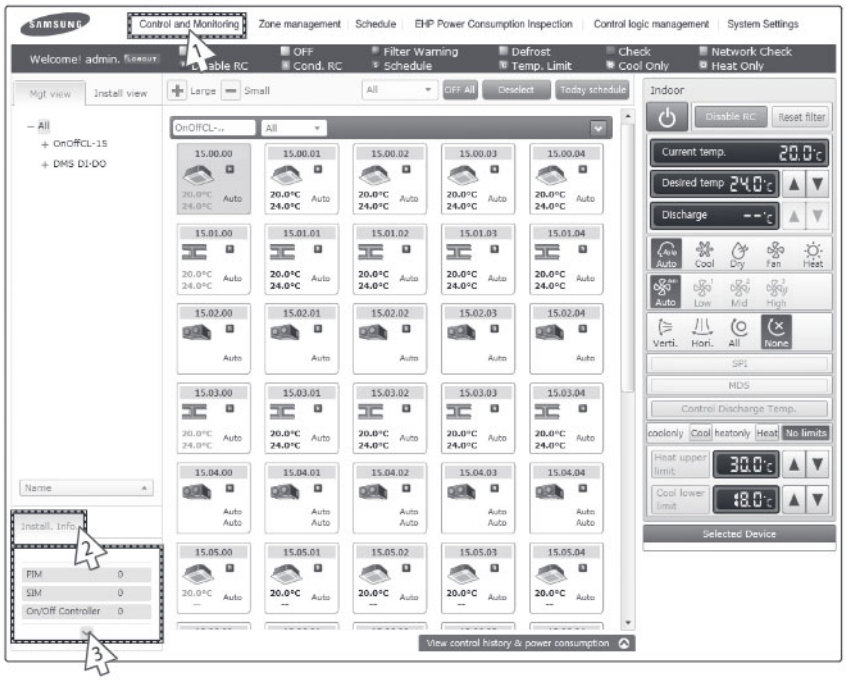
8 Select the fan speed.
- ◆ You can select Low, high and Turbo.
- ◆ If Sleep mode is in operation, the fan speed will be set as Low fan speed.

9 When controlling certain types of devices in detail, select the device you want to control on the list of the 'Selected Device'.

Note
- ◆ *If the ERV type devices are not on the list of the 'Selected Device', ventilation control will not be activated.*
- ◆ *If the indoor unit type devices are not on the list of the 'Selected Device', Indoor control will not be activated.*
- ◆ *When controlling an indoor unit, ERV devices (ERV, ERV PLUS) cannot be controlled.*
- ◆ *When controlling ERV devices, Indoor unit (Indoor unit, AHU, Fresh duct) cannot be controlled.*
- ◆ *You can select power OnOff, Disable RC, Reset filter, Indoor Control (Desired temp, operation mode, fan speed) and ERV Control in the 'Basic control'.*
- ◆ *Power OnOff, Disable RC and Reset filter are controlled to all the devices.*
- ◆ *When selecting multiple devices, the list of the selected devices will be displayed at the bottom of the remote controller. When selecting the device you want to control, the remote control panel of the selected device will be activated and you can control the selected device in detail. However, the rest of the devices cannot be controlled other than the selected device.*
- ◆ *DVM CHILLER cannot be selected with other types of devices and can be selected with DVM CHILLERs only.*

Control and Monitoring (Continued)

Checking the Installation Information



You can check the installation status of currently connected device.

1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.

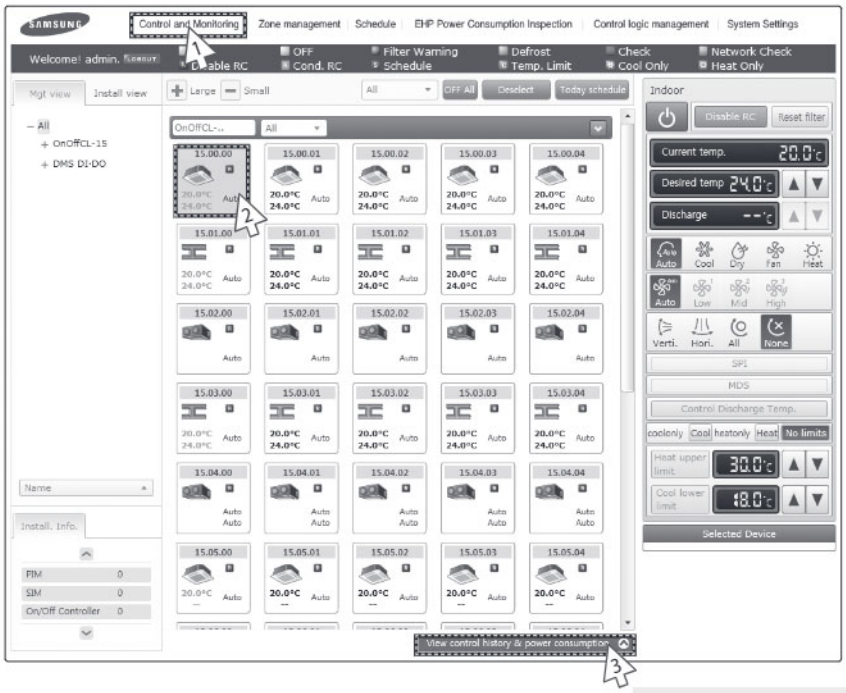
◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Click 'Install.Info'. tab at the bottom left of the screen.

3 Check installation status of currently connected device in the installation information tab.

◆ You can check installation information by pressing [∧] and [∨] buttons.

View the Control History & Power Consumption



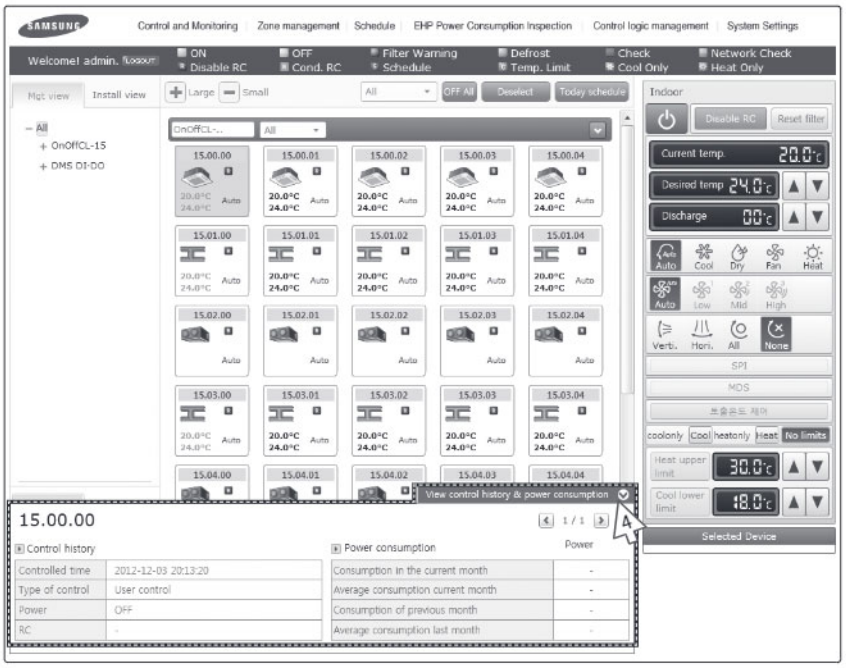
You can select a device and view control history and power consumption information.

1 Click [Control and Monitoring] when DMS2.5 web page menu screen appears.
   - ◆ [Control and Monitoring] screen will appear when you log-in to DMS2.5 web page.

2 Select a device you want to view control history and power consumption.

3 Click [View control history & power consumption]tab and wait for a while.
   - ◆ Control history and power consumption information are received from DMS2.5.
   - ◆ 'Data receiving' message will appear on the bottom right of the tab.

Control and Monitoring (Continued)

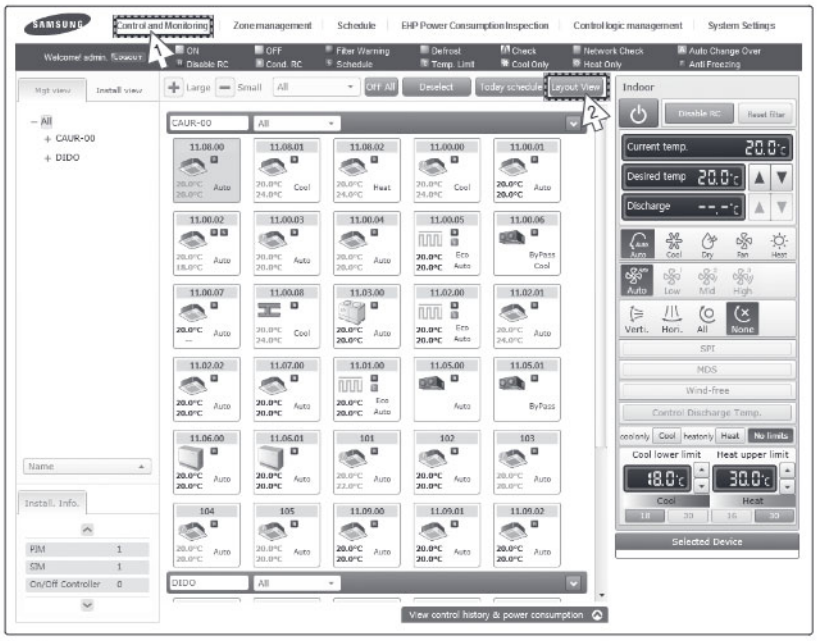


4 When data reception is completed from DMS2.5, check control history and power consumption of selected device.

Note

- ◆ *In 'Control history', you can check power control and remote controller usage status.*
- ◆ *Operation mode, desired temperature, air flow and fan speed control shows you the controlled time and type of control only.*
- ◆ *If SIM/PIM is not installed, power consumption information may not be correct.*
- ◆ *Power consumption information is displayed only when SIM/PIM is installed.*
- ◆ *If SIM/PIM is removed, value measured with SIM/PIM will be displayed.*

Adding a 2D Layout Drawing



1 When the DMS2.5 web page menu screen appears, click [Control and Monitoring].

◆ When you log in to the DMS2.5 web page for the first time, the [Control and Monitoring] screen appears.

2 When the [Control and Monitoring] screen appears, click the [Layout View] button.

◆ You are moved to the drawing view screen.

3 In the current view mode, click the [Edit] button to switch to the Edit mode.

◆ When the Edit mode is entered, additional editing menus appear.

4 Click the [+] button to add a zone.

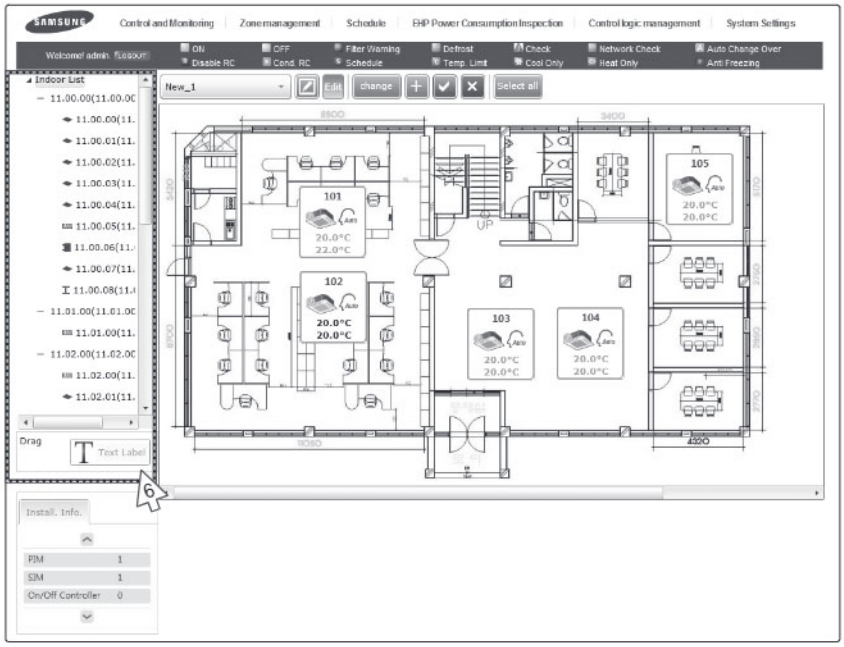
5 Click the [Add] button. You can select a drawing file to display in the zone.

◆ When the drawing is added, this button changes to the [change] button.

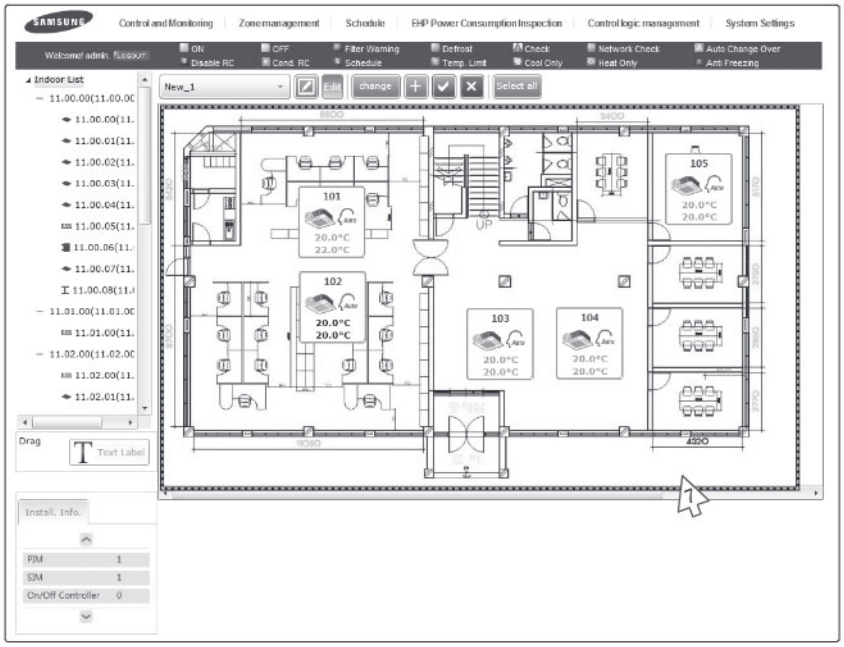
Control and Monitoring (Continued)

6 Drag and drop the units that you want to display on the drawing from the installation information pane at the left of the screen to the drawing pane.

◆ To display a text, drag and drop [Text Label] from the bottom of the installation information pane to the drawing pane.



7 Drag the indoor unit icons to adjust the indoor unit positions in detail.
- ◆ After adjusting a text position, double-click the text label to edit the text.
- ◆ When a popup window appears, enter a new text.
- ◆ To adjust the text size, click the [+ / -] button.



8 To delete an indoor unit from the drawing, select the indoor unit, and then click the Delete icon from the menu.
- ◆ To delete a text label from the drawing, click the [X] button at the right to the text label.

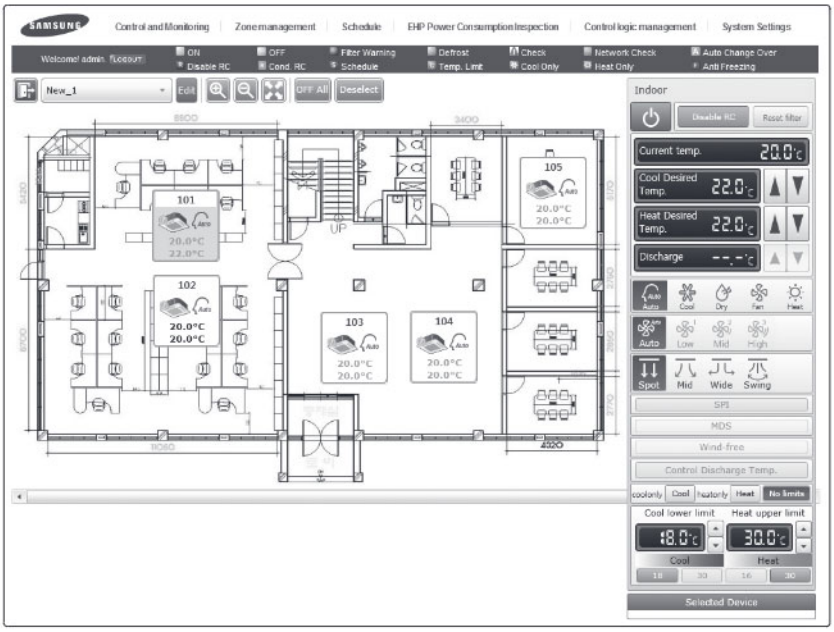
9 To rename the zone, click the Rename zone icon.
- ◆ When a popup window appears, enter a new text.

Control and Monitoring (Continued)

10 To complete the drawing addition, click the Save icon from the menu

11 Click the [Edit] button to switch to the View mode so that you can control and monitor the indoor units.

12 Click an indoor unit in the drawing. A control panel appears, and you can control the indoor unit from it.



13 If scroll bars appear because the drawing file is large, drag the drawing to move to the positions you want.

- To move left or right, press and hold the left Shift key and turn the mouse wheel.
- To move up or down, press and hold the left Ctrl key and turn the mouse wheel.
- To zoom or out, turn the mouse wheel when the mouse pointer is over the drawing.
- You can also zoom in or out by clicking the corresponding buttons in the menu bar at the top.

14 To view the drawing in full scree mode, click the Full screen button from the menu bar at the top.
- ◆ The 2D Layout screen appears in full screen mode.

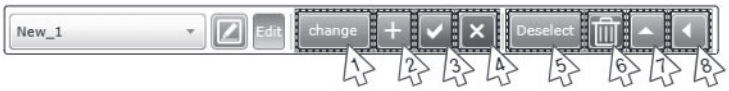
Note
- ◆ *You can add only image files in jpg, gif, or png format that are 1.8 MB or less.*
- ◆ *If none of zone and drawing file exist, you can add neither indoor unit nor text box.*
- ◆ *To exit full screen mode, click Add drawing, or press the ESC or Backspace key. If you are using dual monitors, you can exit full screen mode by pressing another program that is running. An indoor unit can belong to only one zone.*
- ◆ *You can enter only up to 30 characters in a text label.*
- ◆ *You can zoom in up to 1.5 times of the original image.*
- ◆ *You can zoom out up to 0.5 times of the original image.*
- ◆ *You can control and monitor an indoor unit only in the View mode.*
- ◆ *Even if you go back to Control and Monitoring by pressing the Backspace key while editing in the 2D Layout screen, your changes remain temporarily. However, if you refresh or enter another menu, your changes are lost.*

2D Layout View Mode Functions

1	Returns to the basic Control and Monitoring screen from the Drawing View screen.
2	Displays the currently added zones. You can select a zone.
3	Switches from the View mode to the Edit mode.
4	Zooms in or out on the screen.
5	Displays the 2D Layout screen is in full screen mode.
6	Turns off all indoor units connected to the DMS.
7	Selects all indoor units displayed in the current zone. ◆ Only some indoor units may be selected depending on their types.

Control and Monitoring (Continued)

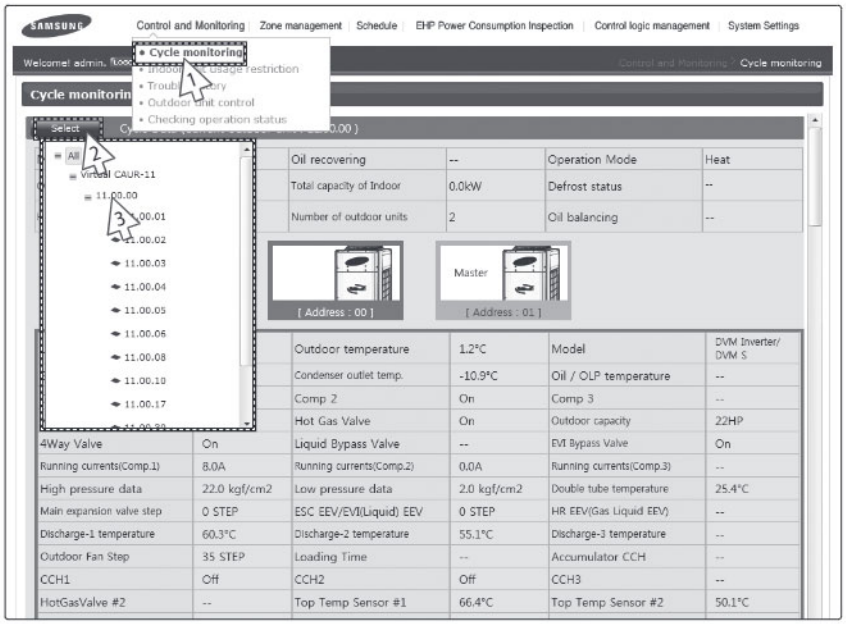
2D Layout Edit Mode Functions



1	Allows you to change the drawing file of the currently selected zone.
2	Click to add a new zone.
3	Saves the changes you made, such as added and deleted indoor units, added and deleted text labels, indoor unit relocations, or drawing file changes.
4	Deletes the currently selected zone.
5	Selects or deselects all indoor units placed in the drawing.
6	Click to delete the selected indoor units from the drawing. The deleted indoor units appear again in the left tree. ◆ This button appears in the menu bar only if at least one indoor unit is selected.
7	Click to top-align the selected indoor units. Because the selected indoor units are aligned according to the top of the indoor unit positioning at the topmost, they may overlap. ◆ This button appears in the menu bar only if at least two indoor unit is selected.
8	Click to left-align the selected indoor units. Because the selected indoor units are aligned according to the left of the indoor unit positioning at the leftmost, they may overlap. ◆ This button appears in the menu bar only if at least two indoor unit is selected.

Note
- ◆ *You can top-align or left-align only indoor units. You cannot align text labels automatically.*
- ◆ *If you delete a zone, the indoor units that were placed appear again in the left tree.*

Cycle Monitoring



You can select an indoor unit and check cycle information.

1 Click [Control and Monitoring] → [Cycle Monitoring] when DMS2.5 web page menu screen appears.

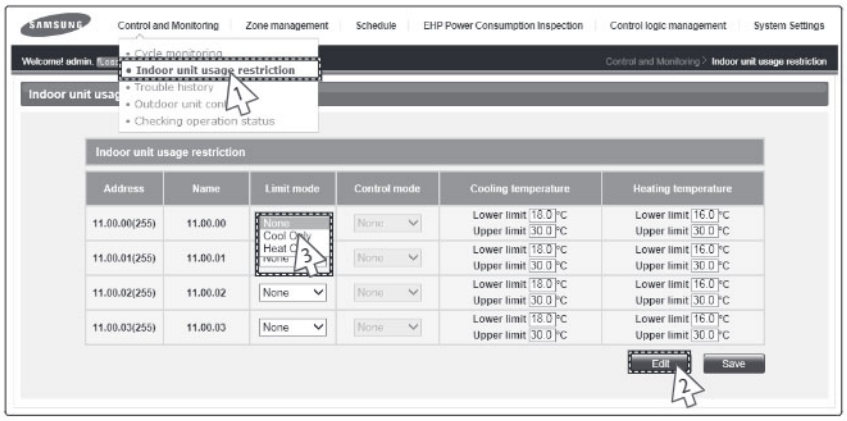
2 Click [Select].
- ◆ DMS2.5 installation information will be displayed.

3 Select a device to check cycle information.
- ◆ If you select OnOff controller, its subordinate outdoor unit which has the earliest address will be selected.
- ◆ If you select an outdoor unit, all the information of the module (that are connected to the selected outdoor unit) will be displayed.
- ◆ If you select indoor unit, upper outdoor unit will be selected.

4 Cycle information of selected outdoor unit and subordinate indoor units.
- ◆ If the status of outdoor unit and indoor unit is changed, status value turns into blue.

Control and Monitoring (Continued)

Indoor Unit Usage Restriction_Operation Limit



You can set the operation of indoor unit as cooling only and heating only.

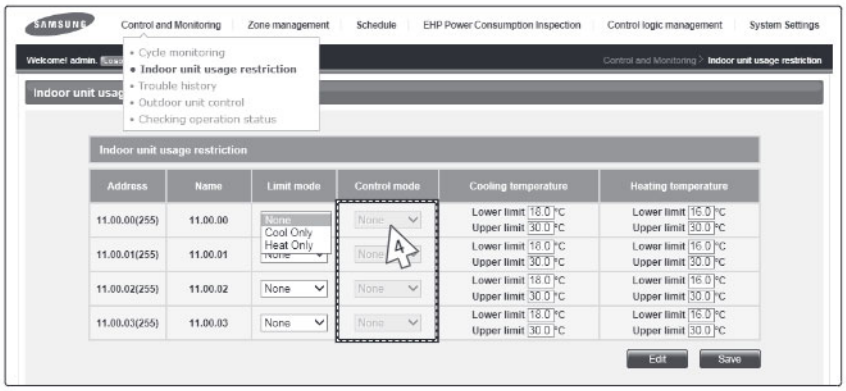
1 Click [Control and Monitoring] → [Indoor unit usage restriction] when DMS2.5 web page menu screen appears.

2 Press [Edit] button.

3 Set the limit mode.

◆ You can select 'Cool-only', 'Heat-only' or 'None'.

- For cooling only indoor unit, you can select cool, dry and fan modes only.
- For heating only indoor unit, you can select heat and fan modes only.



4 Set the control mode.

- ◆ Control mode is used for DMS2.5 to set either 'cool only' or 'heat only' mode to indoor and outdoor units.

Note

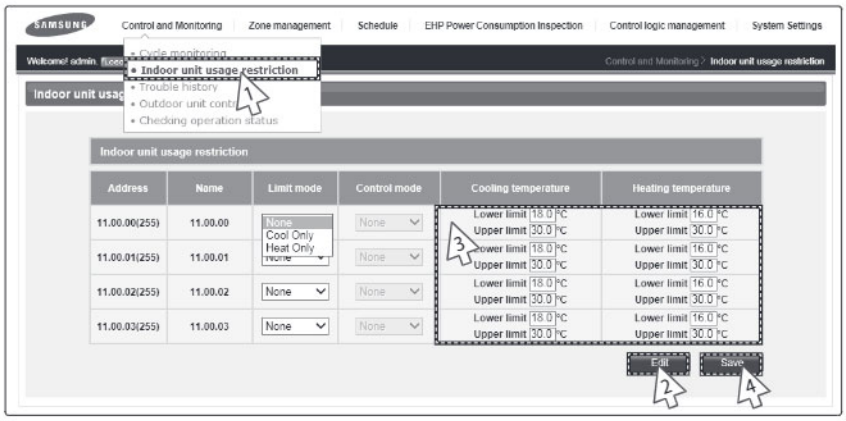
- ◆ *Mixed operation can occur even if you set limit mode.*
- ◆ *If the indoor unit with operation mode limit is in mixed operation, DMS2.5 will solve the problem automatically by controlling it in control mode.*
- ◆ *Since Hydro unit HT does not support Cool mode, control mode for Hydro unit HT can only be set as 'Heat only' or 'None'.*

CAUTION

- ◆ *When you set the operation mode limit, and if the outdoor unit is HP (Heat pump) type, DMS2.5 will automatically change the operation mode limit setting of all the indoor units connected to same outdoor unit.*
- ◆ *If the indoor unit is cooling only model, you cannot set the operation mode limit to 'heatonly'.*
- ◆ *DVM CHILLER cannot set 'only' mode.*

Control and Monitoring (Continued)

Indoor Unit Usage Restriction_Upper and Lower Temperature Limits for Cool/Heat mode



You can set temperature lower/upper temperature limit in cool/heat mode.

1 Click [Control and Monitoring] → [Indoor unit usage restriction] when DMS2.5 web page menu screen appears.

2 Press [Edit] button.

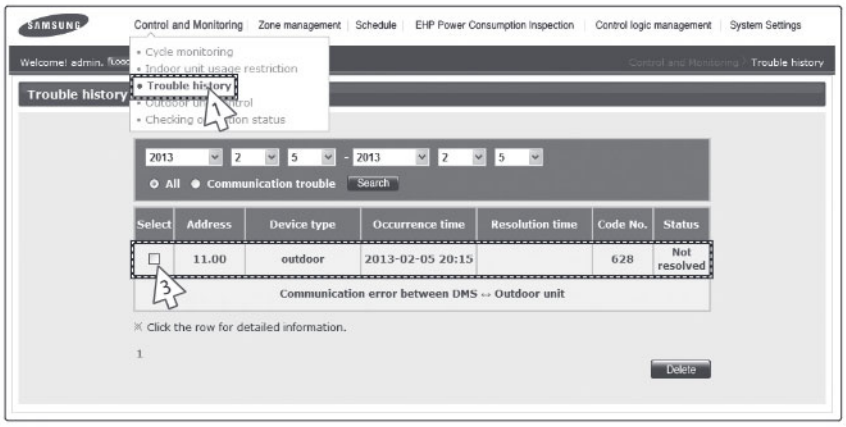
3 Set the lower/upper temperature limit.

- ◆ ERV PLUS and Fresh Duct cannot set the upper and lower temperature limits in the Cool and Heat mode.
- ◆ For Hydro unit and EHS, if the temperature control is set as 'Room', you can set the upper and lower temperature limits in the Cool and Heat modes. If the temperature control of Hydro unit is set as 'Water out', you can set the upper and lower temperature limits in the Cool and Heat modes.
- ◆ For Hydro unit HT, if the temperature control is set as 'Room', you can set the upper and lower temperature limits in the Heat mode according to room temperature. If the temperature control of Hydro unit is set as 'Water out', you can set the upper and lower temperature limits in the Heat mode according to water out temperature.
- ◆ DVM CHILLER cannot set the lower temperature limit in Cool mode or upper temperature limit in Heat mode.

4 Click [Save].

- ◆ Indoor unit usage restriction setting will be saved.

Checking the Trouble History



1 Click [Control and Monitoring] → [Trouble history] when DMS2.5 web page menu screen appears.

2 Check all the trouble history.

◆ You can check address, device type, occurrence time, resolution time, code number and status.

3 You can check detailed information on trouble history by selecting the item in the list.

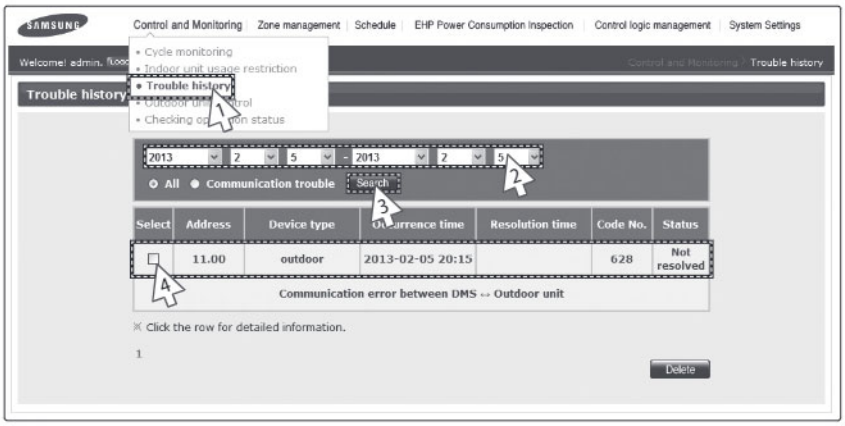
Note

◆ *DMS2.5 saves maximum 1024 trouble histories. If the number of history exceeds 1024, DMS2.5 will delete the oldest history first.*

◆ *If the same code trouble is detected repeatedly in the same device on the same day, trouble history will be shown as 1 case. If it occurs more than 2 times, 'Resolution time' may change every time you check. And the number of repetition will be displayed in 'Status' field.*

Control and Monitoring (Continued)

Checking the Trouble History by Date



DMS2.5 saves maximum 1024 trouble histories. If the number of history exceeds 1024, DMS2.5 will delete the oldest history first.

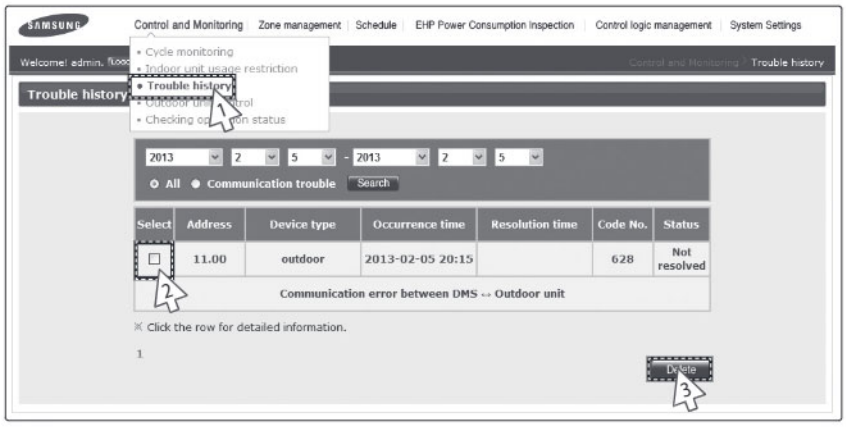
1 Click [Control and Monitoring] → [Trouble history] when DMS2.5 web page menu screen appears.

2 Enter the time period you want to check.
- ◆ Enter year/month/day in order.

3 Click [Search].
- ◆ You can check address, device type, occurrence time, resolution time, code number and status in the entered period.

4 You can check detailed information on trouble history by selecting the item in the list.

Deleting the Trouble History



1 Click [Control and Monitoring] → [Trouble history] when DMS2.5 web page menu screen appears.

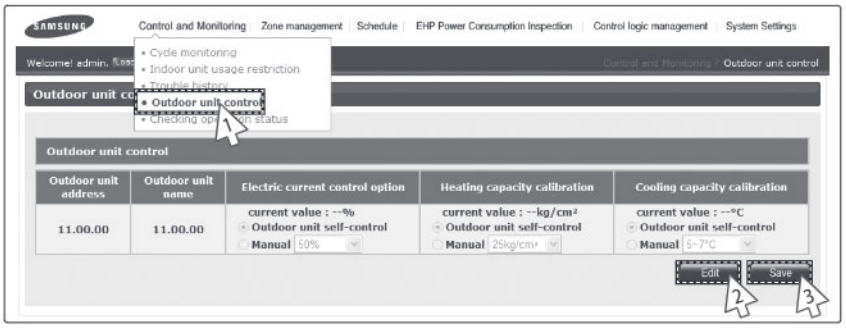
2 Select trouble history you want to delete.

3 Click [Delete].

◆ Click [OK] from the confirm window. Selected trouble history will be deleted.

Control and Monitoring (Continued)

Outdoor unit control



1 Click [Control and Monitoring] → [Outdoor unit control] when DMS2.5 web page menu screen appears.

2 Click [Edit] and select the desired setting for Electric current control option, Heating capacity calibration and Cooling capacity calibration.
- ◆ Outdoor unit self-control: Outdoor unit controls the value itself.
- ◆ Manual: Outdoor will be controlled at value set by the user.

3 Click [Save] and the outdoor unit will be controlled at set value.
- ◆ If the value was set manually on DMS2.5, outdoor unit will always operate at set value.

Note
- ◆ *Outdoor unit control is supported on certain models only, and the 'Outdoor unit control page' only appears on those supported models.*

Control for Occupied/Vacant room

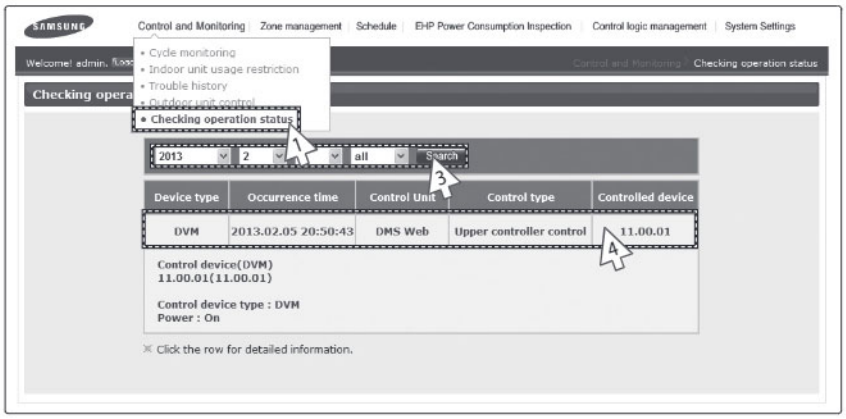
1 Click [Control and Monitoring] → [Occupied/Vacant room control] when DMS2.5 web page menu screen appears.

2 Click [Edit] and select the desired setting for Mode, Desired temperature, Fan speed and Apply.

3 Click [Save] and the unoccupied room will be controlled at set value.

Note
- ◆ *The 'Occupied/Vacant room control page' only appears on those supported models.*
- ◆ *will appear on the indoor unit icon on [Control and Monitoring] screen, if the indoor unit is unoccupied.*

Checking the Operation Status



You can check operation status of indoor unit which is controlled by DMS2.5.

1 Click [Control and Monitoring] → [Checking operation status] when DMS2.5 web page menu screen appears.

2 Check the operation history.

- ◆ You can check the device type, occurrence time, control unit, control type, and controlled device address of indoor unit which is controlled by DMS2.5 and subordinate controller.

3 You can check operation status by entering date.

- ◆ Enter year/month/day then click [Search]. You can check control history that occurred on the entered date.

4 You can check detailed control history which is controlled by the command by pressing control history in the list.

Note ***DMS2.5 saves the information of operation history for 180 days. However, it varies depending on saving space of DMS2.5.***

Zone Management

Zone Setting & Edit – Individual/Group Initialization

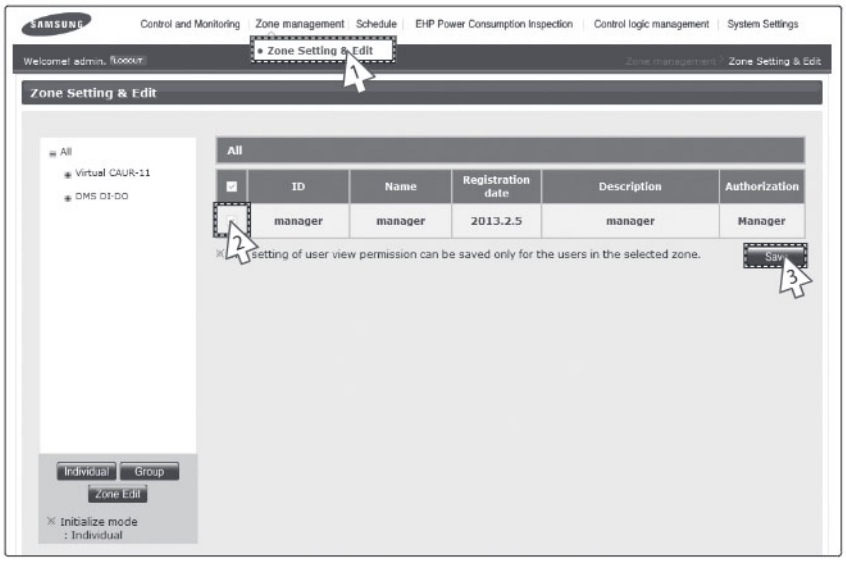
1 Click [Zone management] ➔ [Zone Setting & Edit] when DMS2.5 web page menu screen appears.
- ◆ Same screen will be displayed even if you click [Zone management] only.

2 Initialize the indoor unit organization as individual by clicking [Individual].
- ◆ Individual initialization reorganizes connected indoor unit based on installation address.

3 Initialize the indoor unit organization as group by clicking [Group].
- ◆ Group initialization reorganizes connected indoor unit based on RMC address.
- ◆ After group initialization, indoor units are displayed as one device when upper zone is selected in the [Control and Monitoring] screen.
- ◆ When editing zone after group initialization, moving in group is only allowed.
- ◆ After group initialization, subordinate devices cannot be moved individually to the other zone.

Note
- ◆ *Only the user who has authorization to edit all zones can use zone initialization.*
  - To the user who has no authorization to use zone initialization and manage structure, button will not be displayed.
- ◆ *If the user does not have authorization to edit zone, [Individual], [Group] and [Zone edit] will not be displayed.*

Zone Setting & Edit – Setting the User Authorization



1 Click [Zone management] → [Zone Setting & Edit] when DMS2.5 web page menu screen appears.
- ◆ Same screen will be displayed even if you press [Zone management] only.

2 Set user authorization for each zone.
- ◆ If the user has no authorization for the zone, controlling and monitoring of the zone is restricted.
- ◆ The user who is allowed to control and monitor zone has '☑' sign.

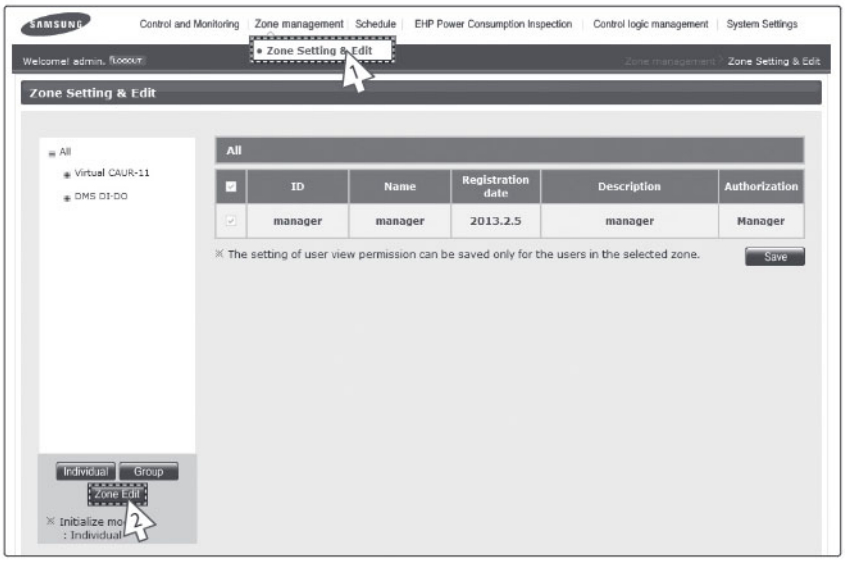
3 Click [Save] to save.
- ◆ The user of currently selected zone is selected in the screen.

CAUTION

- ◆ ***You should set the authorization for controlling and monitoring the zone when the user is added.***
- ◆ ***If you do not set the authorization for zone after adding a user, the zone will not be displayed even if the user logged in.***
- ◆ ***Setting the user authorization is valid only for the zone displayed on the screen. If you select the other zone setting without clicking save button after changing the setting, user authorization for previously selected zone will be gone.***
- ◆ ***When initializing zone, all rights are given to all users.***

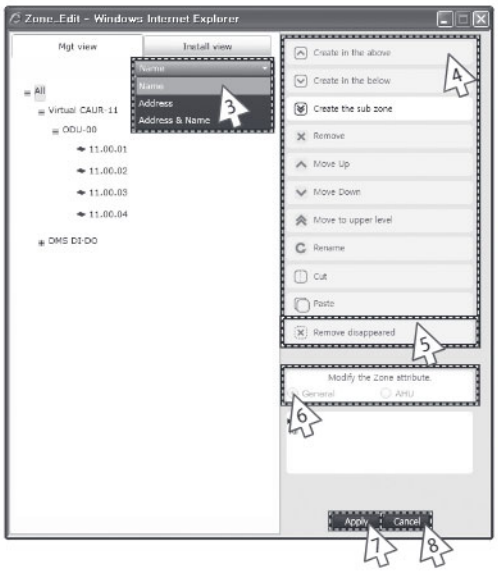
Zone Management (Continued)

Zone Setting & Edit – Zone Edit



1 Click [Zone management] → [Zone Setting & Edit] when DMS2.5 web page menu screen appears.
- ◆ Same screen will be displayed even if you press [Zone management] only.

2 Click [Zone Edit].
- ◆ Zone edit screen will be displayed.



3 Click [▼] to set viewing option of zone edit list.
◆ You can select from viewing by 'Name', 'Address' and 'Address & Name'.

4 Edit item you want.

Create in the above	Create a new zone on top of the selected zone.
Create in the below	Create a new zone under the selected zone.
Create the sub zone	Create a zone one step lower than the user selected. You cannot create a zone under 5 steps in zone edit.
Remove	Remove selected zone. If the selected zone includes device, the device will move to the top step.
Move up	Move up the selected zone or indoor unit.
Move down	Move down the selected zone or indoor unit.
Move to upper level	Move the selected zone or indoor unit to the upper level.
Rename	Rename the selected zone or indoor unit.
Cut	Cut to move the selected zone or indoor unit,
Paste	Move the cut zone or indoor unit to the selected zone.

Zone Management (Continued)

5 Click [Remove disappeared] to remove all disappeared devices which were found after tracking.

6 Change zone properties.

◆ You can select "General", "AHU", and "Group".

Mode	Property name	Description	Remarks
Individual initialization mode	General	■ Virtual group which is managed by installation address, not by RMC address ■ The user can create and delete zone.	-
	Group	Not applicable. (Only supported in group initialization mode.)	Not applicable. (Only supported in group initialization mode.)
	AHU	■ Virtual group which manages AHU kit in general zone. ■ The user can create and delete.	■ It will be displayed as single device in the control and monitoring screen, and it can be controlled as single device. ■ You cannot move subordinate device to the other zone.
Group initialization mode	General	■ Virtual group which is set and managed by the user. ■ The user can create and delete.	-
	Group	■ Virtual group which is managed by installation address, not by RMC address. ■ The user cannot create and delete. DMS2.5 creates it automatically.	■ It is displayed like as one device in the control and monitoring screen and can be controlled. ■ You cannot move subordinate device to the other zone.
	AHU	■ Virtual group which manages AHU kit in general zone. ■ The user can create and delete.	■ It is displayed like as one device in the control and monitoring screen and can be controlled. ■ You cannot move subordinate device to the other zone.

7 Click [Apply].

◆ Edited zone structure will be applied.

8 To cancel the setting, click [Cancel].

Schedule

Creating New schedule

You can set, edit, delete and use the schedules for air conditioner control.

1 Click [Schedule] ➔ [Schedule setting] when DMS2.5 web page menu screen appears.

2 Click [New] in the schedule setting screen.

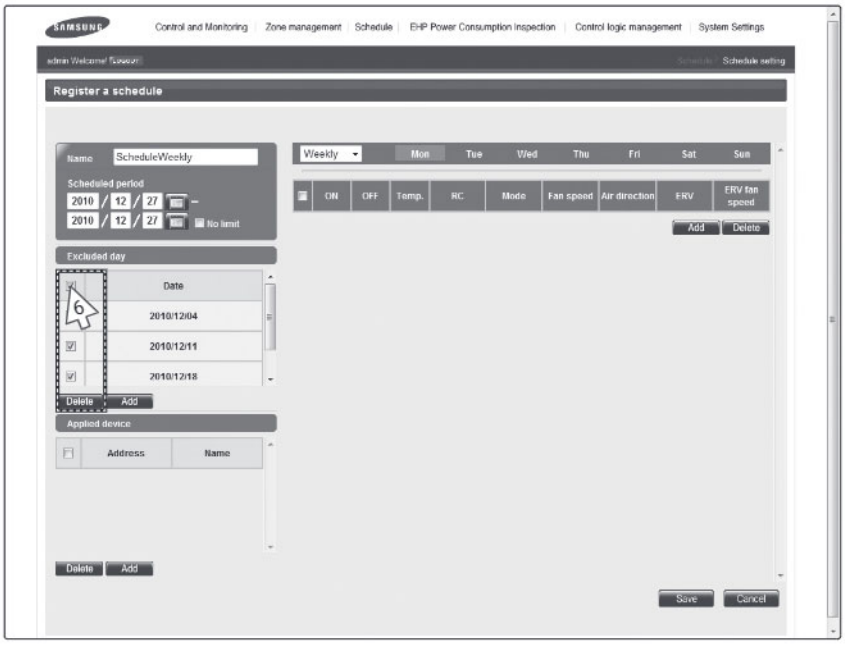
Note ***It is not available to provide the schedule information to BMS system.***

3 Enter the schedule name when the schedule setting screen appears.

4 Select schedule period you want by clicking calendar.
- ◆ If you select 'No limit' when setting end date, it means there is no period and it displays Dec 31st, 9999. To set the end date, remove the check of 'No limit' or select calendar icon which is on the right side of date.

5 To set an exception date in the schedule period, click [Add] and select date(month/day) you want.
- ◆ Select an exception date on the calendar window.

Schedule (Continued)



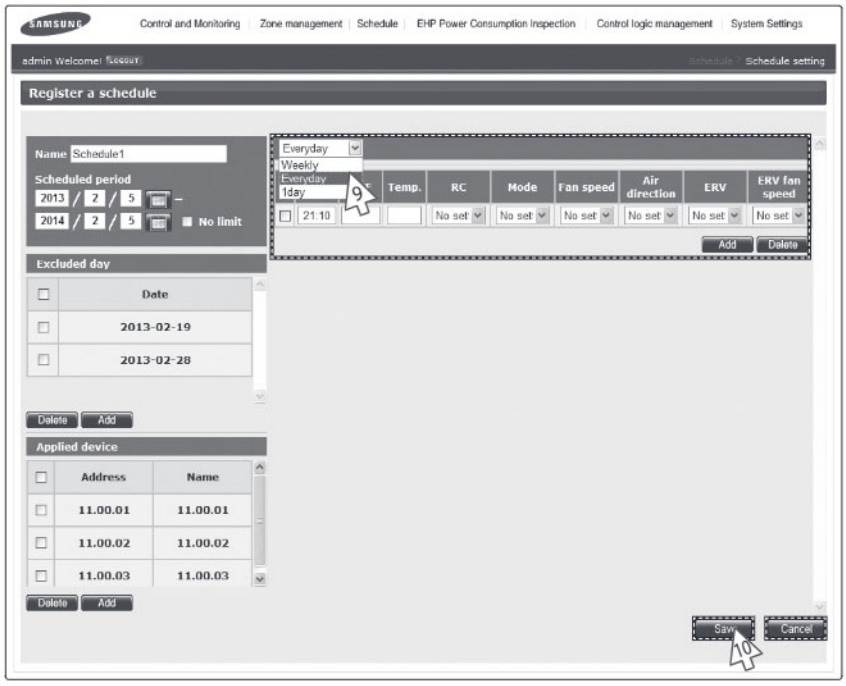
6 To cancel the added exception date, select the exception date it(☑) and click [Delete].

◆ Maximum 365 exception dates can be saved.

7 Click [Add] to select a device to apply.
- ◆ The list of all the connected devices will be displayed.
- ◆ You can register a schedule for DMS DO as well.
- ◆ You cannot select DVM CHILLER and other devices simultaneously.

8 To cancel the selected device, select (☑) the device again and click [Delete].

Schedule (Continued)



9 Click [∨] to select repeat schedule you want and set an event.

- ◆ You can select 'Weekly', 'Everyday' and '1day'.
  However, the starting and end date should be same when you select '1day'.
- ◆ Enter 4 digits for OnOff time setting.
  Ex) 8:00 → 0800, 9:30 → 0930
- ◆ Remote controller setting is as follows.
  - ● Enable RC: Controlling indoor unit using wired/wireless remote controller or indoor unit panel in each room is possible.
  - ● Disable RC: Controlling indoor unit using wired/wireless remote controller or indoor unit panel in each room is not possible.
  - ● Cond. RC
    - ON by OnOff controller, DMS2.5: Controlling indoor unit using wired/wireless remote controller or indoor unit panel in each room is possible.
    - OFF by OnOff controller, DMS2.5: Controlling indoor unit using wired/wireless remote controller or indoor unit panel in each room is not possible.
- ◆ Click [Add] to add event.
- ◆ To delete event, select an event(☑) and click [Delete].
- ◆ Maximum 70 events can be set per 1 schedule. In case of week schedule, 30 events per 1 day can be set.
- ◆ If starting and end time of schedule event are repeated, only the schedule event which is made earlier will be executed.

10 Click [Save].
- ◆ Set schedule information is saved in DMS2.5.
- ◆ Click [Cancel] to cancel schedule setting.

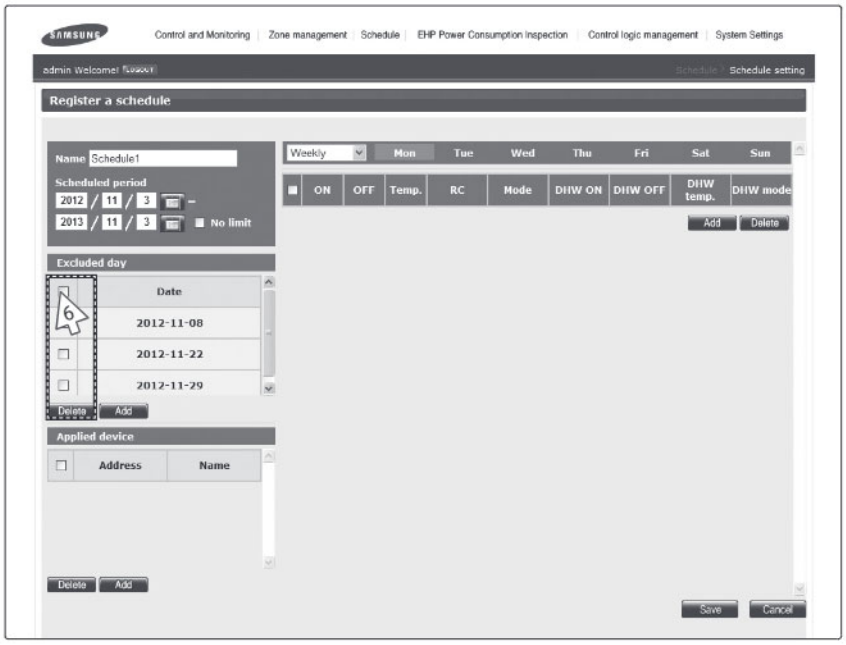
Note
- ◆ *If you select dry mode among basic modes, auto fan speed is only available.*
- ◆ *When the operation mode is 'Auto', fan speed is always set to 'Auto'.*
- ◆ *When the operation mode is 'Fan', you cannot control fan speed as 'Auto'.*
- ◆ *When the operation mode is 'Dry', fan speed is always set to 'Auto'.*
- ◆ *When you select sleep mode among ERV modes, 'Mid' fan speed is only available.*
- ◆ *If the tracking is not completed, schedule setting is not possible. To use proper schedule function, make sure to complete tracking with installation engineer.*
- ◆ *'Off' operation works only with ERV PLUS.*
- ◆ *'Cool Storage' and 'Hot Water' mode works by DVM CHILLER only.*
- ◆ *The Turbo fan speed is available only in the devices that support the Turbo fan speed. For the devices that do not support the Turbo fan speed, the Auto or High fan speed operates, even though the Turbo fan speed is selected.*
- ◆ *Spot, Mid, Wide, and Swing are available only for the 360 Cassette air conditioner, None, Verti., Hori., and All is not available for 360 Cassette air conditioner.*
- ◆ *If the indoor unit supports the Dual Set Point function and this function is enabled in the [System Settings] → [Dual Set Point setting] web page, you can additionally set the cooling and heating set temperatures in the Auto mode.*

11 Click [Add Excel], and then register an Excel schedule template. The schedules are created automatically.

Schedule (Continued)

Creating new schedule for EHS

1	Click [Schedule] ➔ [Schedule setting] when DMS2.5 web page menu screen appears.
2	Click [New EHS] in the schedule setting screen.
3	Enter the schedule name when the schedule setting screen appears.
4	Select schedule period you want by clicking calendar. ◆ If you select 'No limit' when setting end date, it means there is no period and it displays Dec 31st, 9999. To set the end date, remove the check of 'No limit' or select calendar icon which is on the right side of date.
5	To set an exception date in the schedule period, click [Add] and select date(month/day) you want. ◆ Select an exception date on the calendar window.

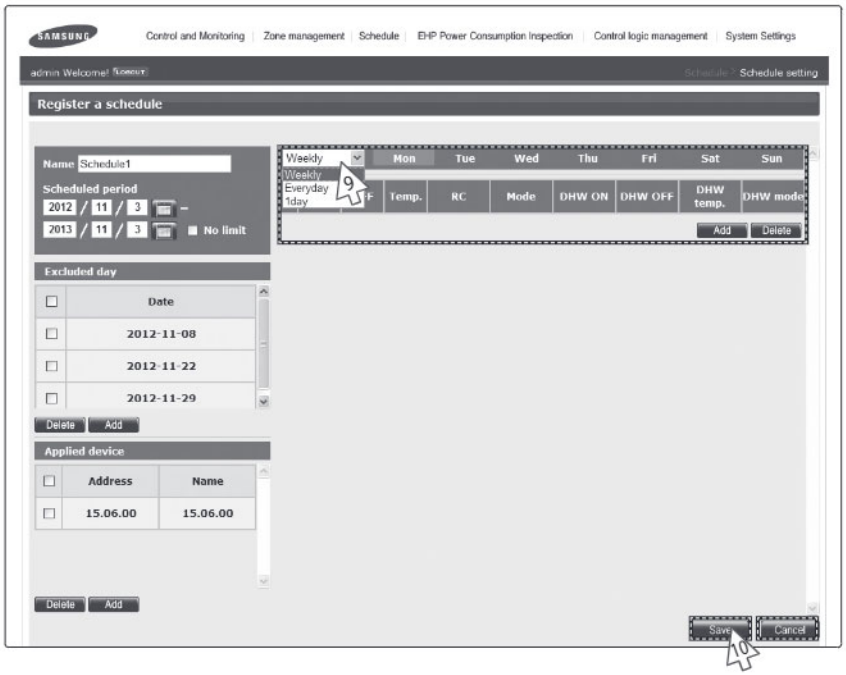


6 To cancel the added exception date, select the exception date (☑) and click [Delete].
◆ Maximum 365 exception dates can be saved.

Schedule (Continued)

7 Click [Add] to select a device to apply.
- ◆ The list of all the connected devices will be displayed. Select a device and click [OK].
- ◆ You can only select one device.

8 To cancel the selected device, select (☑) the device again and click [Delete].



9 Click [∨] to select repeat schedule you want and set an event.

- ◆ You can select 'Weekly', 'Everyday' and '1day'. However, the starting and end date should be same when you select '1day'.
- ◆ Enter 4 digits to set the time for turning ON/OFF the EHS and the Hot water. Ex) 8:00 → 0800, 9:30 → 0930
- ◆ Remote controller setting is as follows.
  - ● Enable RC: Controlling indoor unit using wired/wireless remote controller or indoor unit panel in each room is possible.
  - ● Disable RC: Controlling indoor unit using wired/wireless remote controller or indoor unit panel in each room is not possible.
  - ● Cond. RC
    - ON by OnOff controller, DMS2.5: Controlling indoor unit using wired/wireless remote controller or indoor unit panel in each room is possible.
    - OFF by OnOff controller, DMS2.5: Controlling indoor unit using wired/wireless remote controller or indoor unit panel in each room is not possible.
- ◆ Click [Add] to add event.
- ◆ To delete event, select an event(☑) and click [Delete].
- ◆ Maximum 70 events can be set per 1 schedule. In case of week schedule and 10 events per 1 day can be set.
- ◆ If starting and end time of schedule event are repeated, only the schedule event which is made earlier will be executed.

Schedule (Continued)

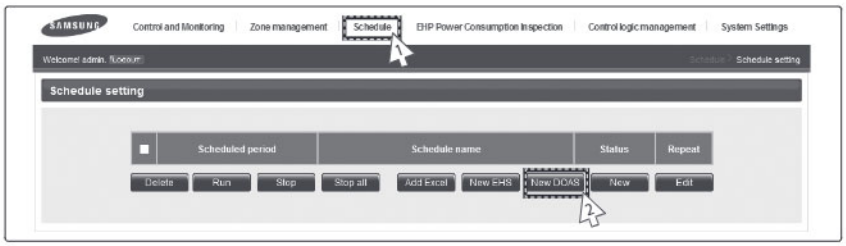
10 Click [Save].

- ◆ Created schedule information will be saved in DMS2.5.
- ◆ Click [Cancel] to cancel schedule setting.

Note

- ◆ *Since Hydro unit HT does not support Cool mode, you should not add any schedules related to Cool mode.*
- ◆ *If the desired temperature is set when the operation mode is 'None', when the actual schedule should start working, it may not work at desired temperature setting depending on control type and mode.*
- ◆ *Do not input the desired temperature when the operation mode is set to 'Auto'.*
- ◆ *Do not turn on the power for direct hot water when the operation mode is set to 'Cool'.*
- ◆ *Schedule setting is not available when the tracking is not completed. To use the schedule function normally, complete the tracking with the installation expert.*
- ◆ *When Thermostat #1 or Thermostat #2 is ON, the desired temperature and operation mode cannot be controlled.*
- ◆ *When the hot water thermostat is ON, the schedule of the hot water temperature cannot be controlled.*

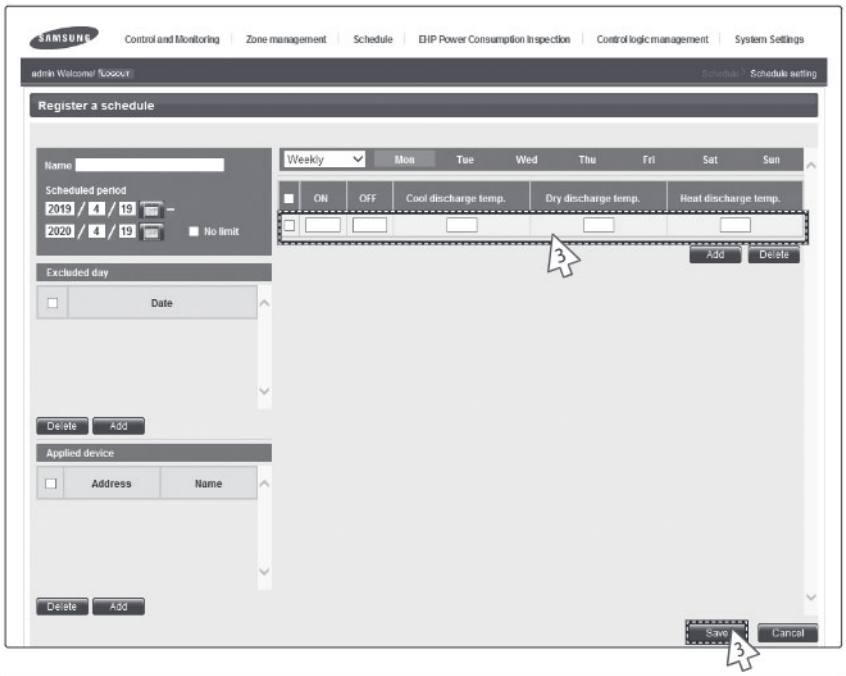
Creating new schedule for Packaged DOAS



1 Click [Schedule] → [Schedule setting] when DMS2.5 web page menu screen appears.

2 Click [New DOAS] in the schedule setting screen.

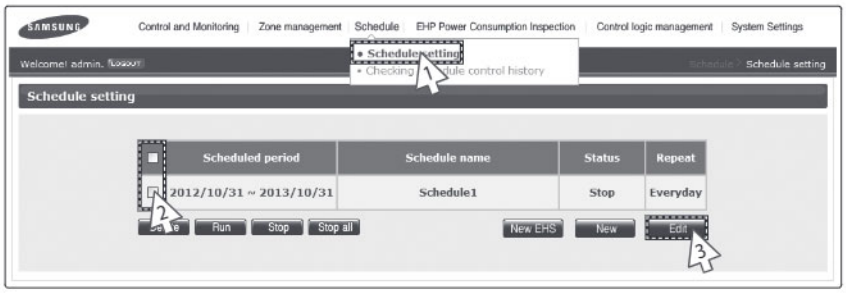
Schedule (Continued)



3 Enter the ON time, OFF time, and cool, heat, and dry discharge temperatures that you want.

4 The other settings are the same as the general schedule settings.

Editing Schedule



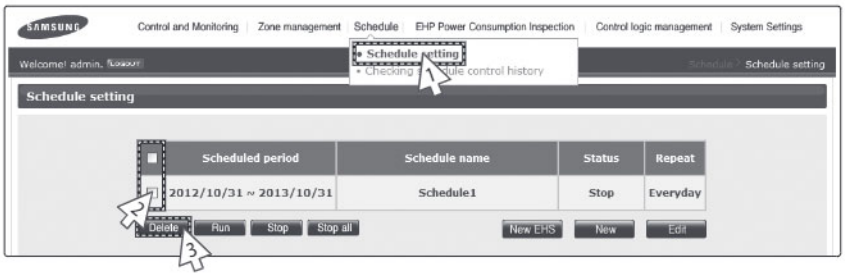
1 Click [Schedule] → [Schedule setting] when DMS2.5 web page menu screen appears.

2 Select the schedule to edit.
- ◆ For the currently operating schedule, you can only check it.

3 Click [Edit].
- ◆ Edit schedule when the schedule edit screen appears.
- ◆ Editing schedule method is same as "Creating New Schedule". (Refer to page 81~85)

Schedule (Continued)

Deleting Schedule

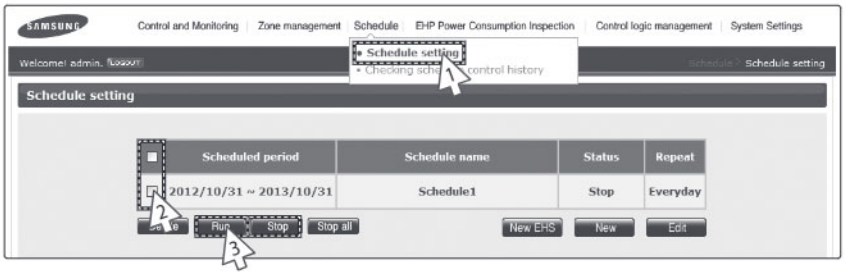


1 Click [Schedule] → [Schedule setting] when DMS2.5 web page menu screen appears.

2 Select the schedule to delete.

3 Click [Delete].
- ◆ Click [OK] in confirm window and selected schedule will be deleted.
- ◆ Deleting schedule is possible only when the schedule is in stop status. If you want to delete schedule which is currently applied, stop applying the schedule first.

Applying schedule



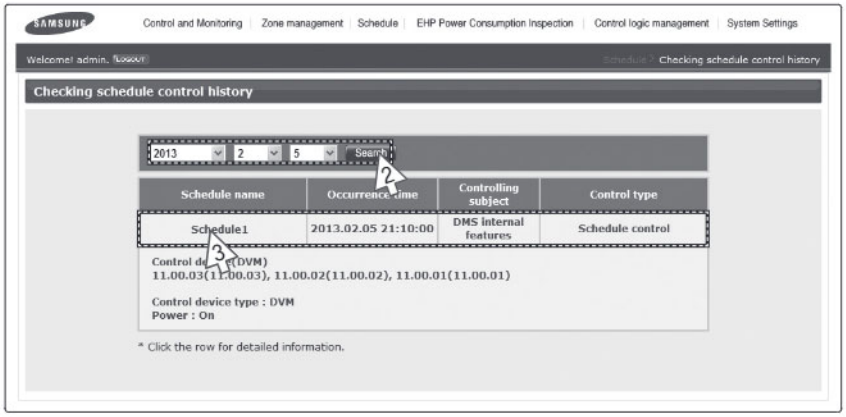
1 Click [Schedule] → [Schedule setting] when DMS2.5 web page menu screen appears.

2 Select the schedule you want to use.

3 Use schedule functions by clicking [Run] and [Stop].
- ◆ To apply the selected schedule, click [Run].
- ◆ To stop the selected schedule, click [Stop].

Note *To stop all schedules, click [Stop all].*
- Currently applied schedule will be stopped.

Checking Schedule Control History



1 Click [Schedule] ➔ [Checking schedule control history] when DMS2.5 web page menu screen appears.

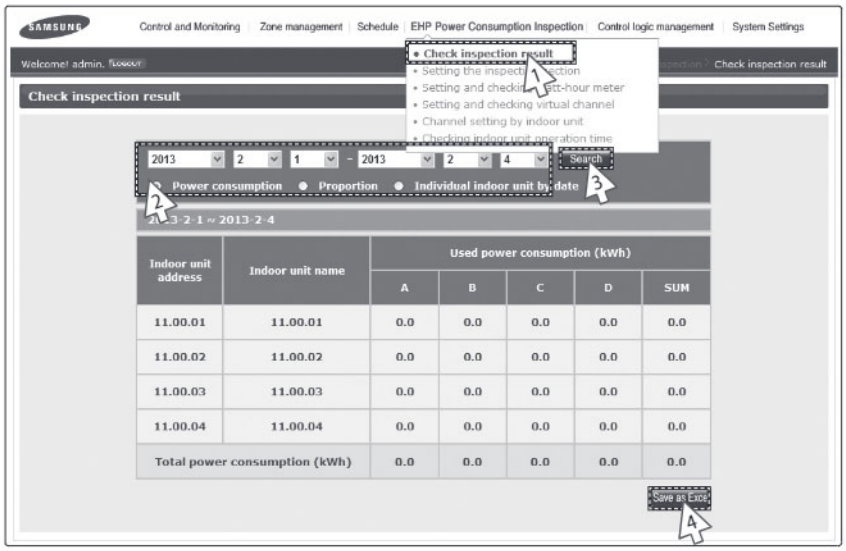
2 Select a date to check and then click [Search].
◆ Only executed schedules can be searched.

3 You can check detailed setting by clicking the schedule name.

Note *DMS2.5 saves the information or schedule control history for 180 days.*
However, it varies depending on saving space of DMS2.5.

EHP Power Consumption Inspection

Checking Inspection Result (with SIM/PIM)



You can check the operation history and power consumption saved in DMS for each indoor unit.

1 Click [EHP Power Consumption Inspection] ➔ [Check inspection result] when DMS2.5 web page menu screen appears.

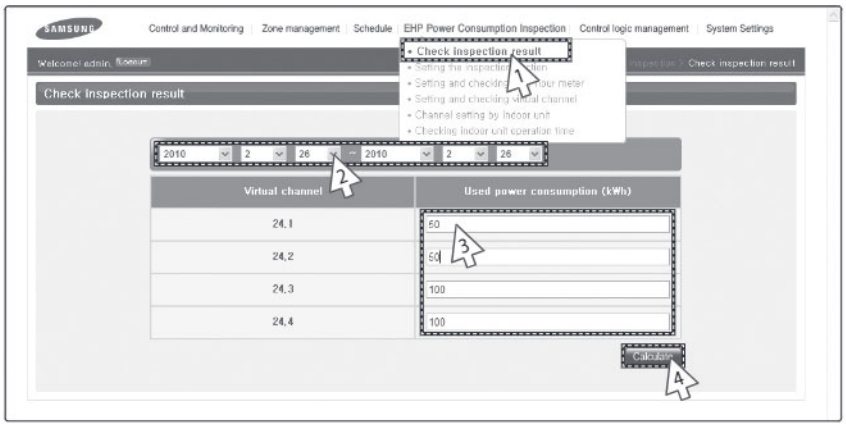
2 Set date and search condition (power consumption/proportion/individual indoor unit by date) when inspection result screen appears.
- ◆ Select year/month/day in order.
- ◆ Based on DMS2.5 time, you can check up to 365 days of watt-hour meter value.

3 Click [Search].
- ◆ Inspection result will be displayed depending on set period and searching condition.
- ◆ You can check power consumption only when watt-hour meter is connected. If watt-hour meter is not connected, you can check operating proportion by indoor unit only .

4 Click [Save as Excel].
- ◆ Searched inspection result will be saved as MS Excel file.

Note
- ◆ *For data management, it is recommended to save indoor unit inspection result periodically.*
- ◆ *Power consumption inspection result is for reference only and should not be used for official financial transactions.*

Checking Inspection Result (without SIM/PIM)



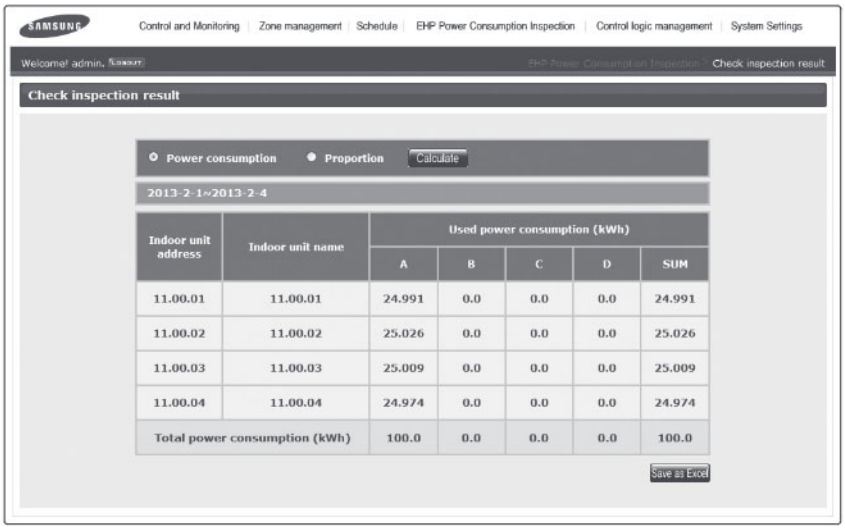
1 Click [EHP Power Consumption Inspection] → [Check inspection result] when DMS2.5 web page menu screen appears.
- ◆ Channel setting by indoor unit must be done in advance.

2 Set date when inspection result screen appears.
- ◆ Select year/month/day in order.
- ◆ Based on DMS2.5 time, You can check up to 365 days of inspection results.

3 Enter power consumption value during the period.
- ◆ Virtual channel is value which is set in channel setting by indoor unit.

4 Click [Calculate].
- ◆ Power consumption by indoor unit during the period will be displayed.

EHP Power Consumption Inspection (Continued)



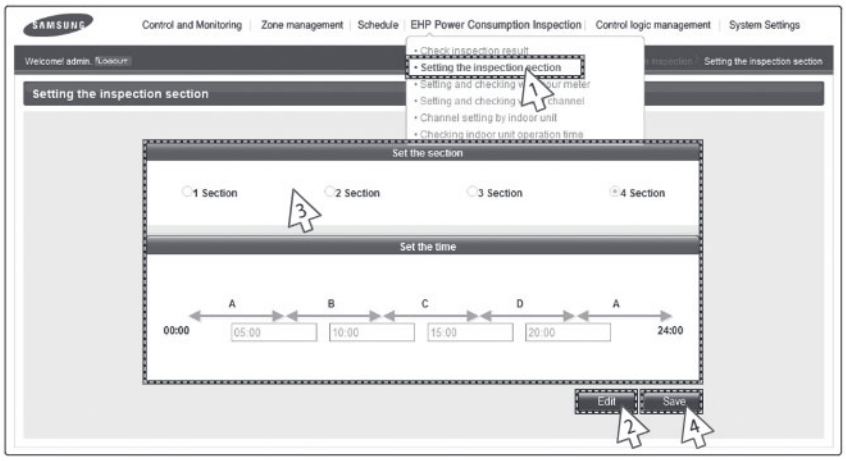
5 Check the power consumption result of the selected period.

- ◆ Due to rounding the actual values, actual input value and result value may different to each other.
- ◆ If you want to save the consumption result for selected period as MS Excel file, click [Save as Excel].
- ◆ Click [Calculate] to go back to inspection result screen.

Note

- ◆ *For data management, it is recommended to save indoor unit inspection result periodically.*
- ◆ *Power consumption inspection result is for reference only and should not be used for official financial transactions.*

Setting the Inspection Section



1 Click [EHP Power Consumption Inspection] → [Setting the inspection section] when DMS2.5 web page menu screen appears.

2 Click [Edit] when inspection result screen appears.
- ◆ 1 section is set as default.

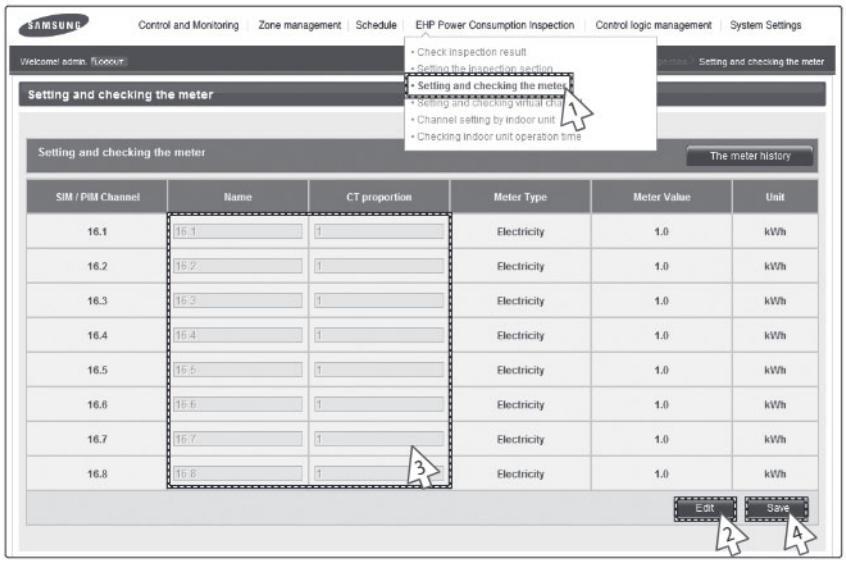
3 Select a section and enter time by section.
- ◆ You should enter time of section B when selecting 2 sections and enter time of section B and section C when selecting 3 sections and enter time of section B, section C, and section D when selecting 4 sections.
- ◆ Correct format of time is HH:MM.
  Ex) 4:30 in the afternoon → 16:30

4 Click [Save].
- ◆ Set power section will be saved in DMS2.5.
- ◆ If you do not click [Save], changed setting will not be saved.

Note ◆ *Ex) When selecting 2 sections (A, B, A)*
If the border time between A and B is 08:00 and 18:00, section A is 00:00 ~ 08:00, section B is 08:01 ~ 18:00, and second section A again is 18:01 ~ 24:00.

EHP Power Consumption Inspection (Continued)

Setting and Checking the meter



1 Click [EHP Power Consumption Inspection] ➔ [Setting and checking the meter] when DMS2.5 web page menu screen appears.
- ◆ Setting watt-hour meter is possible only when SIM/PIM is installed.

2 Click [Edit] when the Setting and checking the meter screen appears.
- ◆ CT proportion '1' is set as default.

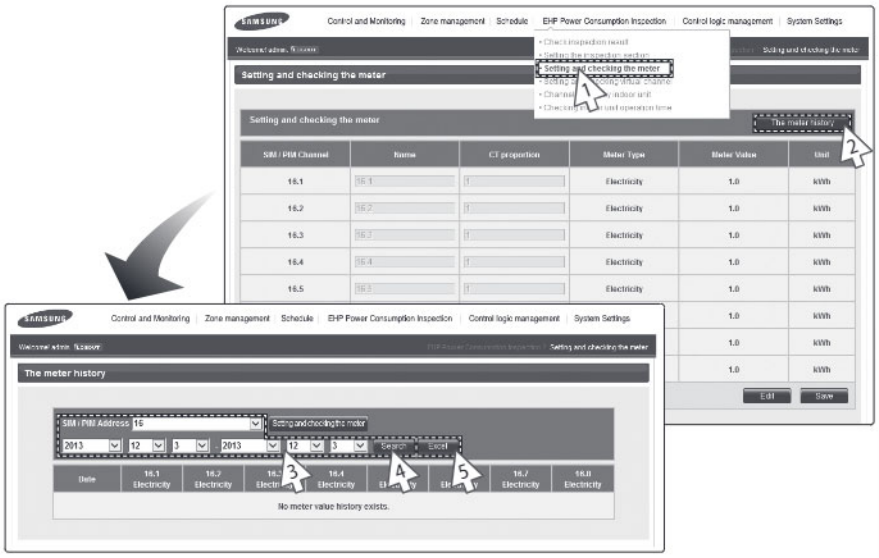
3 Set name and CT proportion of watt-hour meter.
- ◆ You can use maximum 16 letters.
- ◆ The range of CT proportion value is positive number from 1 to 5000.
- ◆ CT proportion setting is required only when the meter type is 'electricity'.

4 Click [Save].
- ◆ Set the meter information will be saved in DMS2.5.
- ◆ If you do not click [Save], changed setting will not be saved.
- ◆ Watt-hour meter value shows actual value of currently connected watt-hour meter. Watt-hour meter value will be updated automatically.

⚠ CAUTION

When using CT watt-hour meter, be careful that there can be difference with actual power consumption as much as CT ratio error.

The meter history



1 Click [EHP Power Consumption Inspection] ➔ [Setting and checking the meter] when DMS2.5 web page menu screen appears.

2 Click [The meter history] when the setting and checking the meter screen appears.

3 Select SIM/PIM address and date you want when the meter history screen appears.
- ◆ Enter year/month/day in order.
- ◆ Based on DMS2.5 time, you can check up to 365 days of meter value history.

4 Click [Search].
- ◆ Meter value history of set period will be displayed.

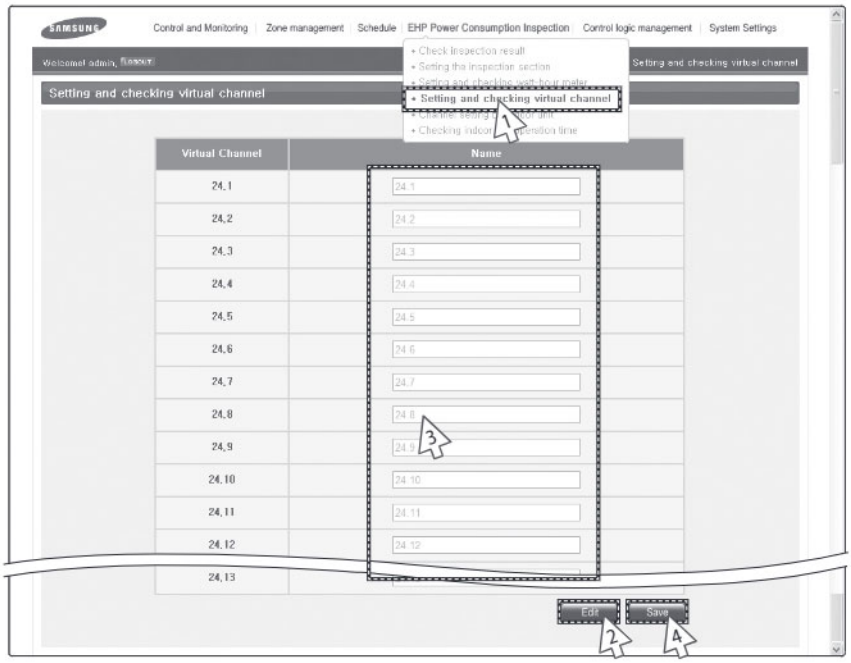
5 Click [Excel].
- ◆ When you click the [Excel] button, meter value of all SIM/PIM throughout the selected dates will be saved as MS Excel file.

CAUTION

For PIM, channel status should be set as "Enable" in order to save the meter history in Excel file. (Refer to page 172~173)

EHP Power Consumption Inspection (Continued)

Setting and Checking Virtual Channel



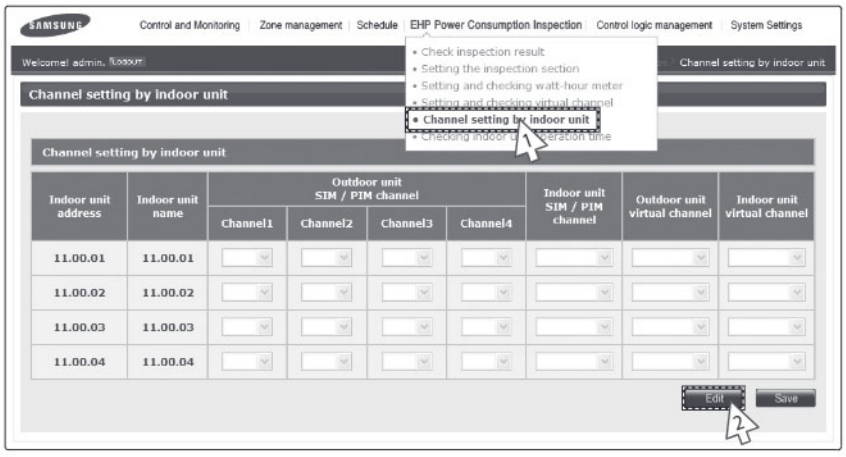
1 Click [EHP Power Consumption Inspection] → [Setting and checking virtual channel] when DMS2.5 web page menu screen appears.
- ◆ Maximum 128 virtual channels can be set. Virtual channel is written in (24 ~ 31).(1 ~ 16) format address. Ex) 24.1, 25.2, 31.8

2 Click [Edit] when the setting and checking virtual channel screen appears.

3 Set the name of virtual channel.
- ◆ You can use maximum 16 letters.

4 Click [Save].
- ◆ Set virtual channel name will be saved in DMS2.5.
- ◆ If you do not click [Save], changed setting will not be saved.

Channel Setting by Indoor Unit



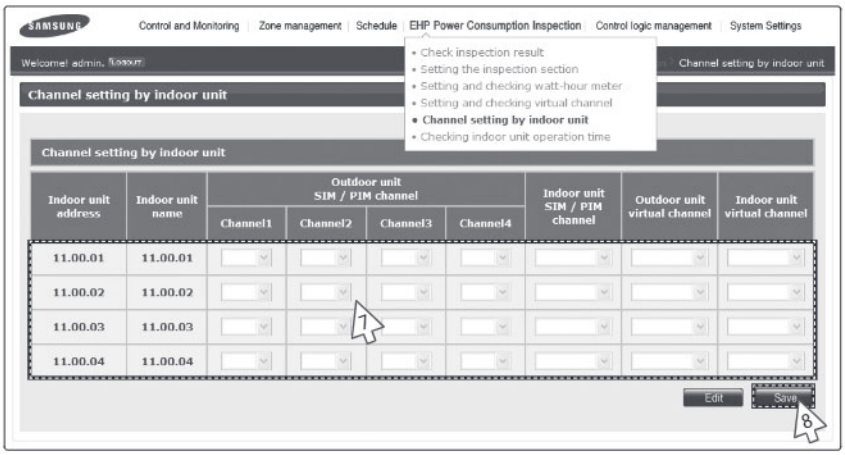
1 Click [EHP Power Consumption Inspection] → [Channel setting by indoor unit] when DMS2.5 web page menu screen appears.

2 Click [Edit] when the setting channel by indoor unit screen appears.

CAUTION

Some functions available on DMS2.5 web page may not be functional at BACnet Gateway and LonWorks Gateway. For detailed function, refer to the installation manual or contact Samsung Electronics.

EHP Power Consumption Inspection (Continued)



3 Check the address and channel information of SIM/PIM which is connected to watt-hour meter.

- ◆ If 0~7 SIM/PIM units execute tracking, it will be displayed as 16~23 in DMS2.5.

4 Check the information of indoor/outdoor unit which is connected to watt-hour meter.

5 Check the SIM/PIM channel(watt-hour meter) information of indoor/outdoor unit.

- ◆ You can set the channel when SIM/PIM is installed in DMS2.5.
- ◆ When bringing indoor unit's power from outdoor unit, set the 'Outdoor unit SIM channel' information only.
  ('Outdoor unit SIM channel' is referring to watt-hour meter which is connected to outdoor unit.)
- ◆ When bringing indoor unit's power from the other device, not from outdoor unit, set the 'Outdoor unit SIM channel' and 'Indoor unit SIM channel' information.
  ('Indoor unit SIM channel' is referring to watt-hour meter which is connected to indoor unit.)
- ◆ Power distribution will be executed automatically. The user does not need to check the value of watt-hour meter.
- ◆ The maximum number of SIM channels for an outdoor unit is 4.

6 Check the virtual channel information of indoor/outdoor unit.

- ◆ To execute power distribution without SIM/PIM, you should set virtual channel.
- ◆ When bringing indoor unit's power from outdoor unit, set the 'Outdoor unit virtual channel' information only.
  ('Outdoor unit virtual channel' is referring to watt-hour meter which is connected to outdoor unit.)
- ◆ When bringing indoor unit's power from the other device, not from outdoor unit, set the 'Outdoor unit virtual channel' and 'Indoor unit virtual channel' information.
  ('Indoor unit virtual channel' is referring to watt-hour meter which is connected to indoor unit.)
- ◆ The number of virtual channel varies depending on the number of outdoor unit
- ◆ To execute power distribution, you need to check watt-hour meter value manually.
- ◆ Power distribution using SIM/PIM is more accurate than using indoor/outdoor unit virtual channel. Therefore, it is recommended to execute power distribution using SIM/PIM.

7 Set indoor unit to execute power distribution.

- ◆ If you do not set the watt-hour meter information, the power distribution result of the indoor unit will be displayed as '0'.

8 Click [Save].

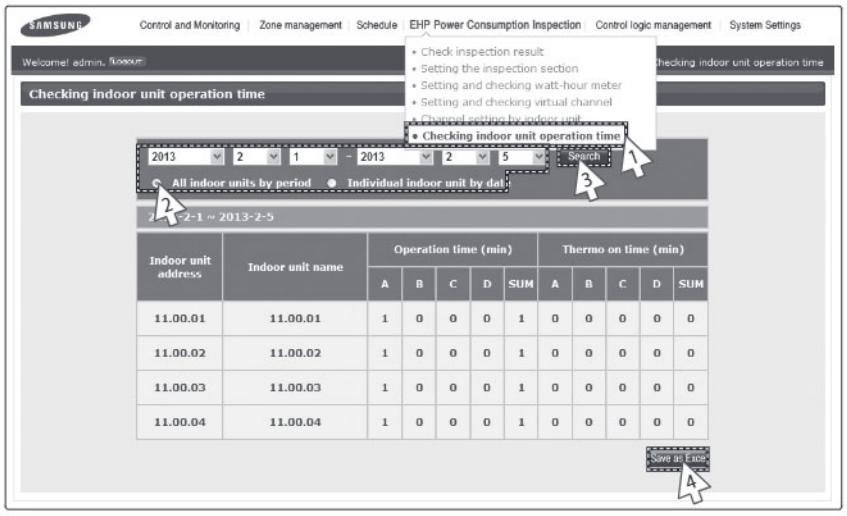
- ◆ Set channel information will be saved in DMS2.5.
- ◆ If you do not click [Save], changed setting will not be saved.

⚠ CAUTION

- ◆ ***Information of watt-hour meter connected to indoor/outdoor unit should be accurate. If the watt-hour meter information is not accurate when you set channel information of indoor unit, error may occur in the power distribution result.***
- ◆ ***You should set SIM/PIM channel information in the indoor unit if you want to execute power distribution using SIM/PIM. If not, it means that you do not execute power distribution. In this case, the power distribution result of the indoor unit will be '0'.***
- ◆ ***If the information of watt-hour meter connected to indoor/outdoor unit is changed, consult with installation engineer.***
- ◆ ***DMS2.5 executes power distribution based on set information.***
- ◆ ***Virtual channel is not available when you use BACnet or LonWorks Gateway function.***
- ◆ ***DVM CHILLER and FCU Kit are excluded for power distribution devices.***

EHP Power Consumption Inspection (Continued)

Checking Indoor Unit Operation Time



1 Click [EHP Power Consumption Inspection] → [Checking indoor unit operation time] when DMS2.5 web page menu screen appears.

2 Select search condition (All indoor units by period/ Individual indoor unit by date) when Checking indoor unit operating time screen appears.

- ◆ Select year/month/day in order.
- ◆ Based on DMS2.5 time, you can check up to 365 days of operation time.

3 Click [Search].

- ◆ Operation time will be displayed depending on set period and condition.

4 Click [Save as Excel].

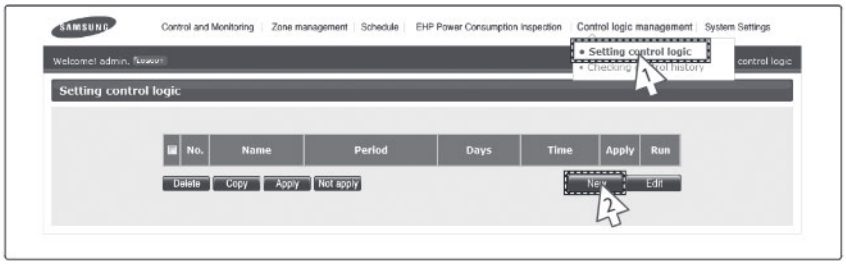
- ◆ Searched operation time result will be saved as MS Excel file.

Note ***For data management, it is recommended to save indoor unit operation time result periodically.***

Control Logic Management

Setting Control Logic

■ Control logic is used in the following situations.
Ex) The current temperature of the lab is higher than 29℃ and you want cooling operation,
The current temperature of the office is lower than 10℃ and you want heating operation
■ Period, day and time are included in specific conditions.



You can set, edit, delete and use control logic for controlling device which is connected to DMS2.5.

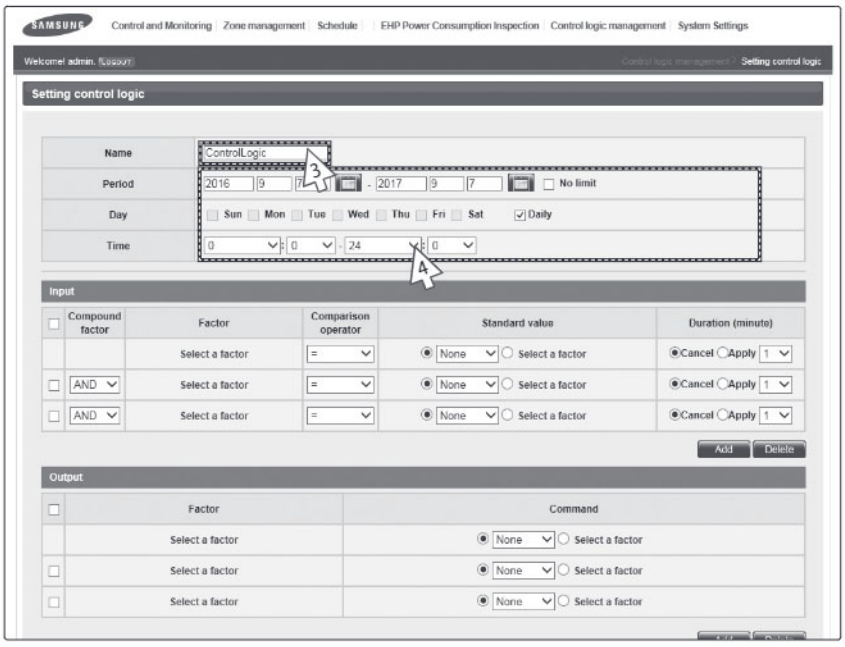
1 Click [Control logic management] → [Setting control logic] when DMS2.5 web page menu screen appears.
- ◆ Apply: Indicates control logic usage status.
- ◆ Run: Indicates If the control logic is applied and whether the operation conditions are met.

Ex) If there is logic which says 'If the current temperature of indoor unit is higher than 29°C, control indoor unit as cool mode.', 'Yes' will be displayed when the indoor unit's current temperature is higher than 29°C. 'No' will be displayed when the indoor unit's current temperature is lower than 29°C.

2 Click [New] when setting control logic screen appears.
- ◆ Setting screen is composed of 4 categories.
  - Name & time: Set the name and time(period, days, time) to apply of control logic.
  - Factor edit: You can edit factor selection which is components of input/output.
  - Input: Set the condition which makes control logic perform.
  - Output: Set items to be controlled when the conditions of input are met.

Note
- ◆ *If different value is set for same control item of same address' device, the indoor unit follows the first control logic set among running control logics.*
- ◆ *It is not available to provide the control logic management information to BMS system.*

EHP Power Consumption Inspection (Continued)

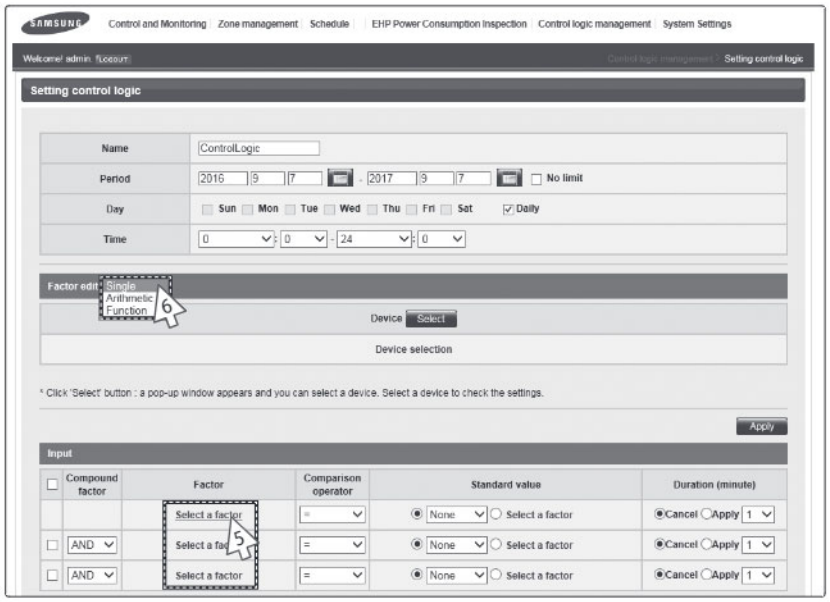


3 Enter control logic name in the name field when the new control logic setting screen appears.

- ◆ You can use maximum 16 letters.

4 Set period, day and time in control logic screen.

- ◆ Select year/month/day in order.
- ◆ Select a day to run during the control period.
- ◆ Control logic will be applied only when period, day and time are united.
- ◆ If you select 'Daily' in day selection, control logic will run regardless of day.



5 Select a factor in the input list.

◆ Factor means the target to be controlled or standard item of logic decision.

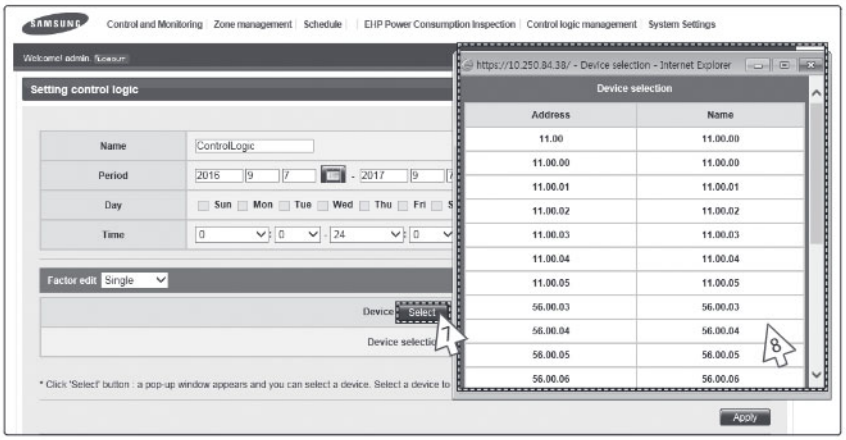
6 Select the type of factor.

◆ Single: It means 1 device.
Ex) Desired temperature of indoor unit

◆ Arithmetic: It means 2 devices are connected by arithmetic operator.
Ex) Desired temperature of indoor unit 1 – Desired temperature of indoor unit 2

◆ Function: It means several devices are using as value of function.
Ex) Average(Current temperature of Indoor unit 1, Current temperature of Indoor unit 2, Current temperature of Indoor unit 3)

Control Logic Management (Continued)



7 Click 'Select'.

◆ List of device which you can select will be displayed.

8 Select the device to use as factor.

◆ Control and monitoring items will be displayed depending on selected device.

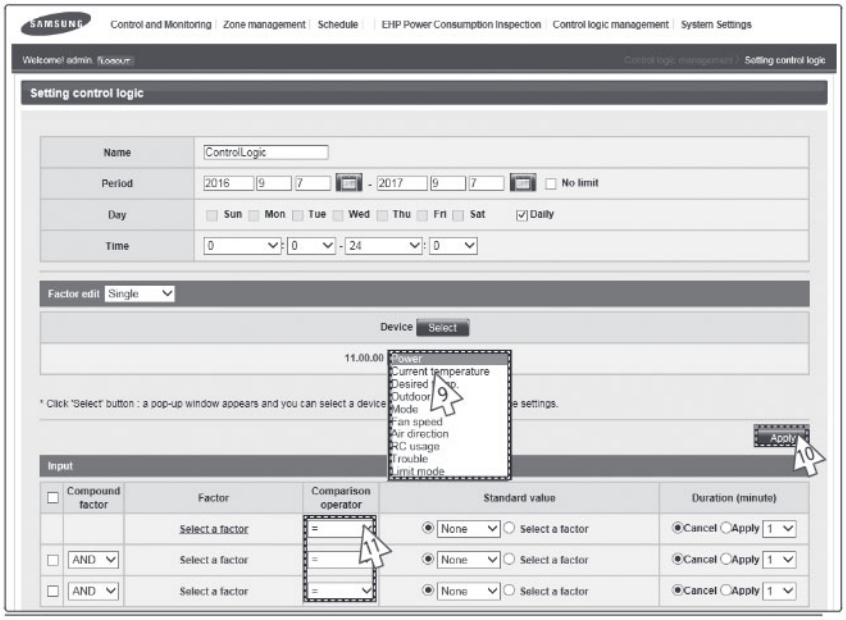
◆ Control and monitoring items are as follows.

Type	Item	Value	Remarks
Outdoor unit	Current electric control option	50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95%, 100%	Control impossible
	Current heating capacity calibration	25kg/cm², 26kg/cm², 27kg/cm², 28kg/cm², 29kg/cm², 30kg/cm², 31kg/cm², 32kg/cm², 33kg/cm²	Control impossible
	Current cooling capacity calibration	5~7°C(41~45°F), 7~9°C(45~48°F), 9~11°C(48~52°F), 10~12°C(50~54°F), 11~13°C(52~55°F), 12~14°C(54~57°F), 13~15°C(55~59°F)	Control impossible
	Electric control option	50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95%, 100%	
	Heating capacity calibration	25kg/cm², 26kg/cm², 27kg/cm², 28kg/cm², 29kg/cm², 30kg/cm², 31kg/cm², 32kg/cm², 33kg/cm²	
	Cooling capacity calibration	5~7°C(41~45°F), 7~9°C(45~48°F), 9~11°C(48~52°F), 10~12°C(50~54°F), 11~13°C(52~55°F), 12~14°C(54~57°F), 13~15°C(55~59°F)	
	Error detection	True, False	Control impossible
	Limit operation mode	None, Cool only, Heat only	-
Indoor unit	Power	On, Off	-
	Current temp.	Number	Control impossible
	Desired temp.	Number	-
	Outdoor temp.	Number	Control impossible
	Operation mode	Auto, Cool, Dry, Fan, Heat	-
	Fan speed	Auto, Low, Mid, High	Turbo is available when the device supports the Turbo fan speed.
	Air direction	Vertical, Horizontal, All, None	In case of the 360 Cassette air conditioner, it is changed to Spot, Mid, Wide, and Swing.
	RC usage	Enable RC, Disable RC, Cond. RC	-
	Error detection	True, False	Control impossible
	Limit operation mode	None, Cool only, Heat only	-
	Auto cool temp., Auto heat temp.	Number	Dual Set Point Displayed when Dual Set Point is enabled, and used in the Auto mode
ERV	Power	On, Off	-
	Operation mode	Auto, HeatEx, Bypass, Sleep	-
	Fan speed	Low, High, Turbo	-
	RC usage	Enable RC, Disable RC, Cond. RC	-
	Error detection	True, False	Control impossible
	Limit operation mode	None, Cool only, Heat only	-
ERV PLUS	Power	On, Off	-
	Outdoor temp.	Number	Control impossible
	ERV mode	Auto, HeatEX, Bypass, Sleep	-
	ERV fan speed	Low, High, Turbo	-
	Operation mode	Auto, Cool, Heat, Off	-
	RC usage	Enable RC, Disable RC, Cond. RC	-
	Error detection	True, False	Control impossible
	Limit operation mode	None, Cool only, Heat only	-

Type	Item	Value	Remarks
Fresh duct	Power	On, Off	-
	Operation mode	Auto, Cool, Fan, Heat	-
	OA intake temp.	Number	Control impossible
	Outdoor temperature	Number	Control impossible
	Cool discharge temp.	Number	-
	Heat discharge temp	Number	-
	RC usage	Enable RC, Disable RC, Cond. RC	-
	Power	On, Off	-
	Error detection	True, False	Control impossible
	Limit operation mode	None, Cool only, Heat only	-
AHU	Current temp.	Number	Control impossible
	Desired temp.	Number	-
	Outdoor temp.	Number	Control impossible
	Operation mode	Auto, Cool, Dry, Fan, Heat	-
	RC usage	Enable RC, Disable RC, Cond. RC	-
	Power	On, Off	-
	Error detection	True, False	Control impossible
	Limit operation mode	None, Cool only, Heat only	-
	Auto cool temp., Auto heat temp.	Number	Dual Set Point Displayed when Dual Set Point is enabled, and used in the Auto mode
DI	Status	On, Off	Control impossible
	Error detection	True, False	Control impossible
	Limit operation mode	None, Cool only, Heat only	-
DO	Status	On, Off	-
	Error detection	True, False	Control impossible
	Limit operation mode	None, Cool only, Heat only	-
Hydro Unit, Hydro Unit HT, EHS	Status	On, Off	Control impossible
	Status	On, Off	-
	Power	On, Off	-
	Current temp.	Number	Control impossible
	Desired temp.	Number	-
	Current water out temp.	Number	Control impossible
	Desired water out temp.	Number	-
	Outdoor temp.	Number	Control impossible
	Operation mode	Auto, Cool, Heat	Hydro unit HT cannot set Cool mode
	DHW power	On, Off	-
	Current DHW temp.	Number	Control impossible
	Desired water out temp.	Number	-
	DHW mode	Eco, Standard, Power, Force	'Force' is only for EHS
	RC usage	Enable RC, Disable RC, Cond. RC	-
	Error detection	True, False	Control impossible
	Limit operation mode	None, Cool only, Heat only	-

Type	Item	Value	Remarks
DVM CHILLER	Power	On, Off	-
	Current temp.	Number	Control impossible
	Desired temp.	Number	-
	Outdoor temp.	Number	Control impossible
	Operation mode	Cool, Cool Storage, Heat, Hot Water	-
	RC usage	Enable RC, Disable RC, Cond. RC	-
	Error detection	True, False	Control impossible
Packaged DOAS	Power	On, Off	
	Cool discharge temp.	Number	
	Heat discharge temp.	Number	
	Dry discharge temp.	Number	
	Current discharge temp.	Number	Control impossible
	Mode	Cool, Dry, Fan, Heat	Control impossible

Type	Item	Value	Remarks
FCU Kit	Power	On, Off	-
	Current temp.	Number	Control impossible
	Desired temp.	Number	-
	Operation mode	Auto, Cool, Fan, Heat	For the FCU manufactured by Samsung, Auto mode is not available.
	Fan speed	Auto, Low, Mid, High	-
	RC usage	Enable RC, Disable RC, Cond. RC	-
	Error detection	True, False	Control impossible
	Limit operation mode	None, Cool only, Heat only	-



9 Select detailed item of factor.

◆ Detailed item may be different depending on the type of selected device.

10 Click [Apply].

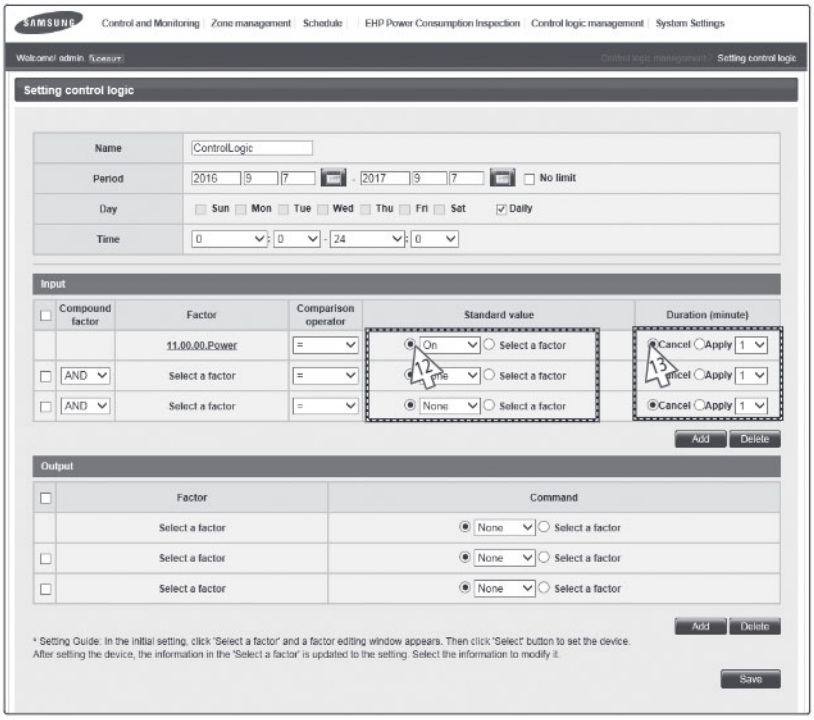
◆ If you do not click [Apply], changed setting will not be saved.

11 Select comparison operator.

◆ Types of comparison operators: = , =< , => , < , >, ≠

◆ Comparison operator compares factor to standard factor.

Control Logic Management (Continued)



12 Select standard value.

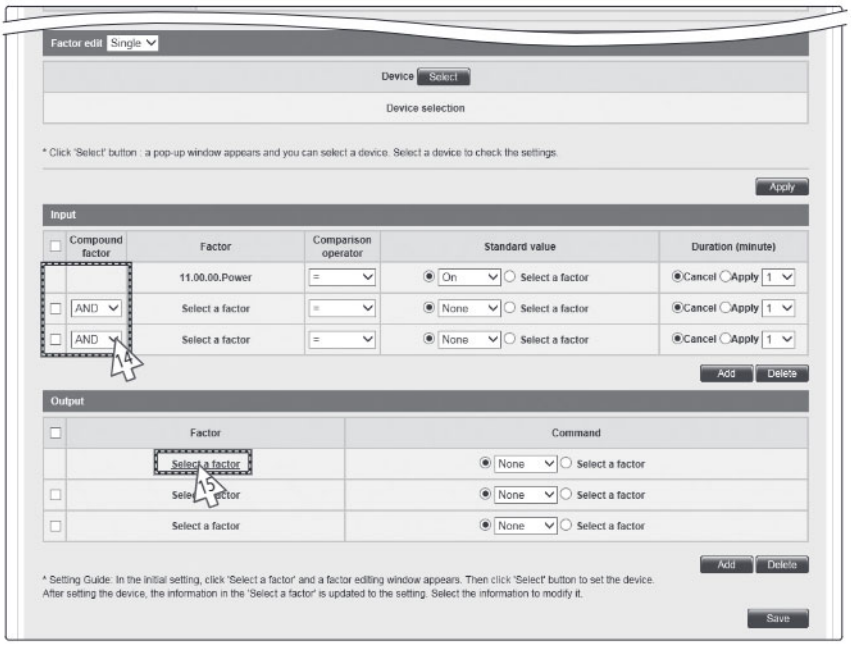
- ◆ Select detailed item value of selected factor or factor.
- ◆ The item varies depending on the left factor when selecting detailed item value from standard value.
  Ex1) Factor : Current temperature of indoor unit 1,
  Value of standard value : Enter 29
  Ex2) Factor : Remote controller usage of indoor unit 1,
  Value of standard value : Select one among Enable RC, Disable RC and Cond. RC.
- ◆ When selecting factor from standard value, it must be same with control item of left factor.
  Ex1) Factor : Power of indoor unit 1,
  Factor of standard value : Power of indoor unit 2
  Ex2) Factor : Current temperature of indoor unit 1,
  Factor of standard value : Average current temperature of indoor unit 1 and 2

13 Select duration time usage.

- ◆ Duration time means the time which the comparing conditions satisfy 'True'.
- ◆ The duration time can be set from 1 to 60.
- ◆ If you select duration time apply, the comparing condition will be 'True'.
  To execute, maintain 'True' for duration time.

Note

- ◆ ***Only 1 duration time can be set per control logic.***
- ◆ ***The tolerance range of duration time is maximum 1 minute. If you set the duration time as 2 minutes, operation will be started between 2 and 3 minutes.***



14 Select compound factor setting usage.

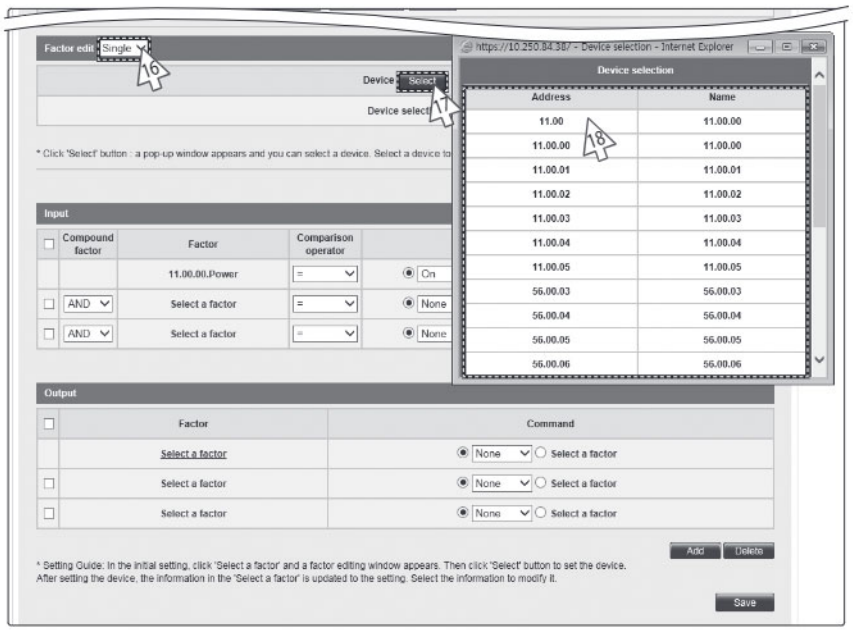
- ◆ You can use compound factor setting when you give conditions to 2 and 3 input items.
- ◆ You can select 1 compound factor from 'AND' and 'OR'.
- ◆ Select 'AND' if all the input items each should be 'True'.
- ◆ Select 'OR' if just 1 input item needs to be 'True'.
- ◆ Compound factor has priorities in order.

For example, if you set 'OR', 'AND' in order, it means '(input item 1 OR input item 2) AND input item 3'.

After selecting the compound factor, you must tick the check box on the left side.

15 Select 'Select a factor' in the Output list.

Control Logic Management (Continued)



16 Select type of factor.

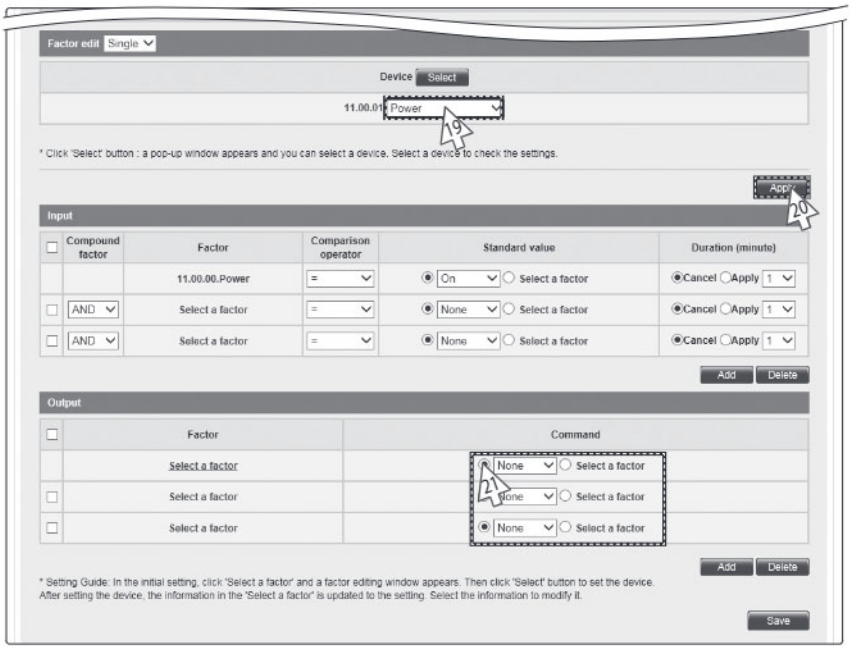
◆ Single factor can be set for the left factor of output.

- Single factor: It means 1 device.
  Ex) Desired temperature of indoor unit

17 Click 'Select'.

◆ List of device which can be selected will be displayed.

18 Select the device to use as factor.



19 Select detailed item of factor.

- ◆ Detailed item may be different depending on the type of selected device.

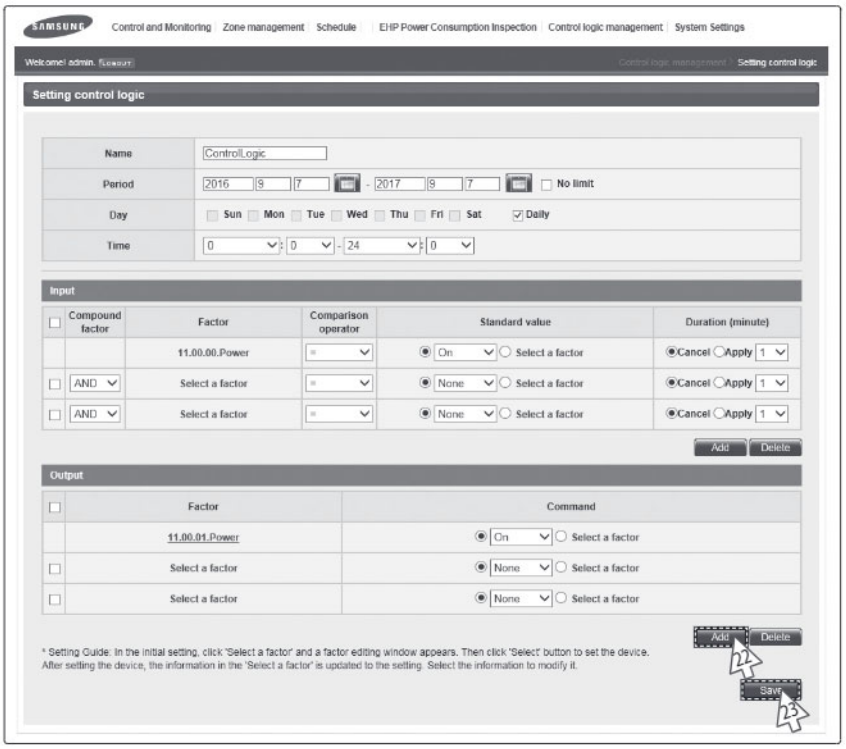
20 Click [Apply].

- ◆ If you do not click [Apply], changed setting will not be saved.

21 Select command value.

- ◆ The value may vary depending on the detailed item of selected factor.
- ◆ You can select value of selected item or new factor.
- ◆ You can set single factor, arithmetic factor and function factor.

Control Logic Management (Continued)



22 To add output, click [Add].
After adding the output, you must tick the check box.

- ◆ If you want to delete output which you don't use anymore, select it and then click [Delete].

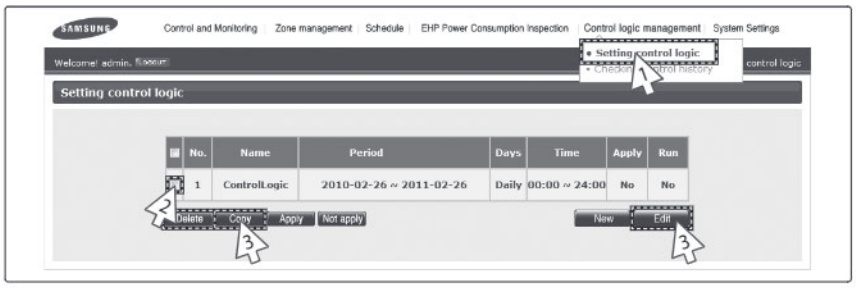
23 Click [Save].

- ◆ Set control logic will be saved in DMS2.5.
- ◆ If you do not click [Save], changed setting will not be saved.

Note

- ◆ *Control logic input items consist of factor, comparison operator, standard value and duration time.*
- ◆ *You can enter up to 24 input items of control logic, and the items can be connected with compound factor.*
- ◆ *Output item of control logic consists of factor and command value.*
- ◆ *You can enter up to 20 output items of control logic.*
- ◆ *You can create up to 256 control logics.*

Editing/Deleting/Copying Control Logic



1 Click [Control logic management] ➔ [Setting control logic] when DMS2.5 web page menu screen appears.

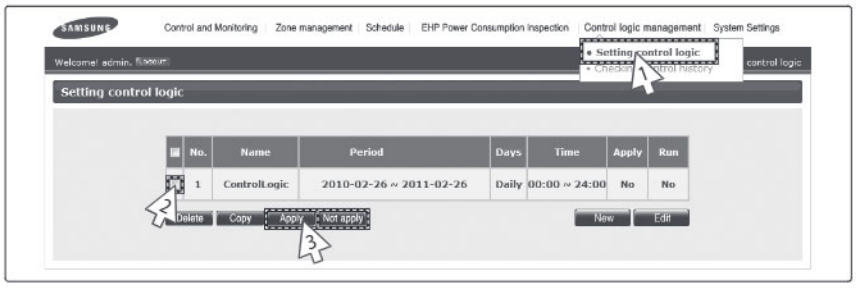
2 Select control logic when control logic screen appears.

3 Click [Edit]/[Delete]/[Copy].

- ◆ To edit control logic, refer to 'Setting control logic' steps. (Refer to page 107~116)
- ◆ Click [Delete] to delete the selected control logic.
- ◆ Click [Copy] to copy the selected control logic.

Control Logic Management (Continued)

Enable/Disable Control Logic



1 Click [Control logic management] → [Setting control logic] when DMS2.5 web page menu screen appears.

2 Select control logic when control logic screen appears.

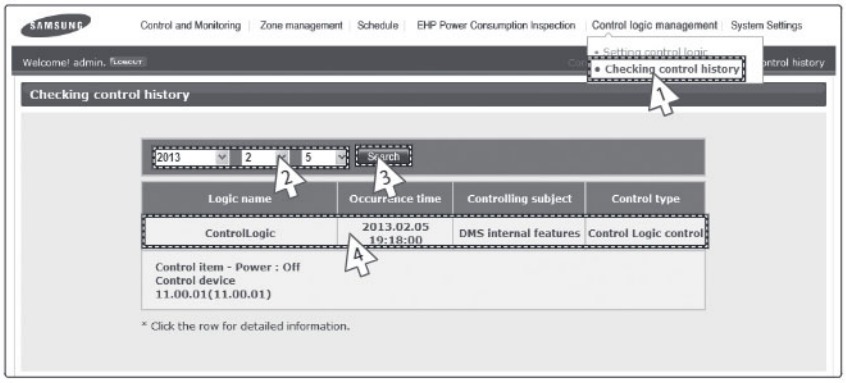
3 Click [Apply]/[Not apply].

- ◆ The selected control logic will be applied by clicking [Apply].
- ◆ The selected control logic will not be applied by clicking [Not apply].

Note

- ◆ *When the selected device is Hydro unit, Hydro unit HT or EHS and Thermostat #1 or Thermostat #2 is ON, the control logic of the desired temperature, water out temperature and operation mode cannot be controlled.*
- ◆ *When the selected device is EHS and the hot water thermostat is ON, the control logic of the desired temperature for hot water cannot be controlled.*

Checking Control History



1 Click [Control logic management] → [Checking control history] when DMS2.5 web page menu screen appears.

2 Select the date you want when the control logic screen appears.
- ◆ Select Year/Month/Day in order.
- ◆ Based on DMS2.5 time, you can check of maximum 180 days of previous control history.

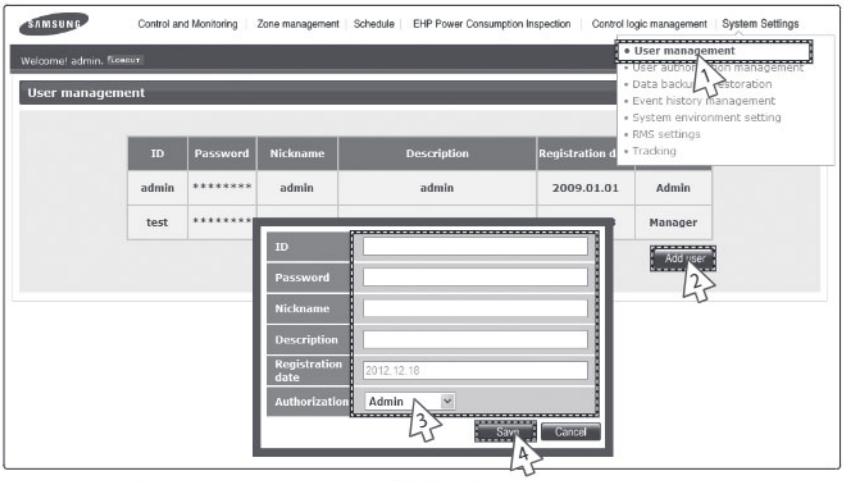
3 Click [Search].
- ◆ You can check only in daily unit.

4 Select each items to check detailed contents of control history.

Note ***DMS2.5 saves the information of control logic management control history for 180 days. However, it varies depending on saving space of DMS2.5.***

System Settings

Adding a User



You can add, edit and delete the user of DMS2.5.

1 Click [System Settings] → [User management] when DMS2.5 web page menu screen appears.

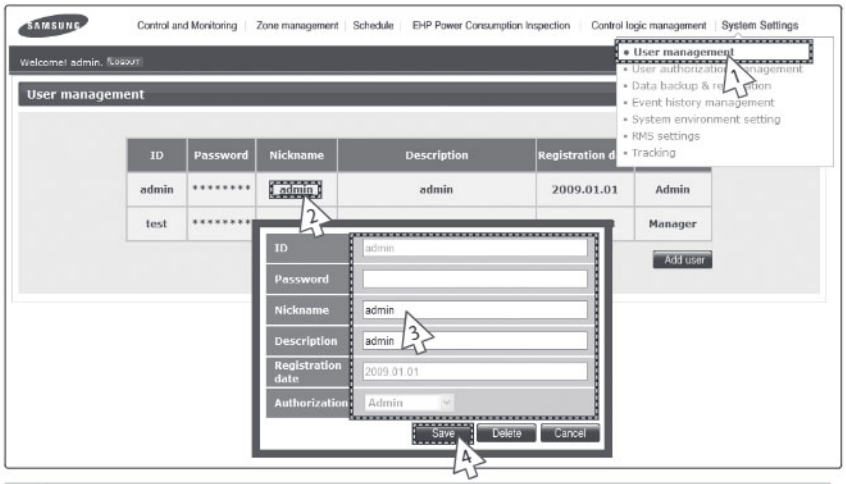
2 Click [Add user] when user management screen appears.
- ◆ User information input window will be appeared when pressing [Add user].

3 Enter ID, password, Nickname and description for new user and then select authority.
- ◆ The user ID should be between 4~12 letters and English lower case letters and numbers only can be used. (English capital letter and special symbols including space cannot be used for user ID.)
- ◆ The password should be between 8~12 letters and English capital/lower case letters, and numbers only can be used, without any spaces. In addition, the password should contain both English letters and numbers.
- ◆ Name should be within 20 letters, and description should be in 50 letters.
- ◆ Registration date will be input automatically as system date.
- ◆ Select authorization for the user from 'Admin', 'Manager' and 'Regular user'. Admin has all authorization and 'Manager'/'Regular user' has limited authorization.

4 Click [Save].
- ◆ Maximum of 256 users can be registered.
- ◆ User information will be saved in DMS2.5.

Note
- ◆ ***For security and maintenance, you should change the password of the admin account that is issued by the factory for shipping purposes.***
- ◆ ***Administrator(Admin) can change all setting of indoor/outdoor unit.***
- ◆ ***Administrator(Admin) can check all indoor/outdoor units connected to DMS2.5.***
- ◆ ***Administrator(Admin) can edit zone information and assign the zone information to manager.***
- ◆ ***A manager can check and control indoor/outdoor units which belong to assigned zones only.***

Editing a User



1 Click [System Settings] ➔ [User management] when DMS2.5 web page menu screen appears.

2 Click the Nickname to edit when user management screen appears.

- ◆ User information window will be displayed.

3 Edit user information when the user information window appears.

- ◆ You cannot change user ID.
- ◆ The password should be between 8~12 letters and English capital/lower case letters, and numbers only can be used, without any spaces. In addition, the password should contain both English letters and numbers.
- ◆ Nickname should be within 20 letters, and description should be in 50 letters.
- ◆ Registration date is input automatically as system date. Therefore you cannot edit registration date.
- ◆ Select authorization for the user from 'Admin', 'Manager' and 'Regular user'. Admin has all rights and 'Manager'/'Regular user' has some rights.

4 Click [Save].

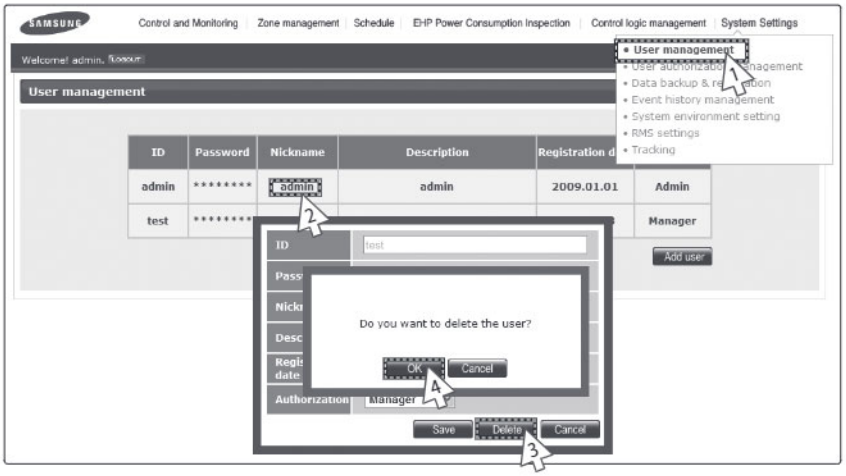
- ◆ Modified user information will be saved in DMS2.5.

Note

- ◆ ***User information can be changed only with the admin account.***
- ◆ ***Authorization of admin account cannot be modified.***
- ◆ ***Administrator(Admin) can change all setting of indoor/outdoor unit.***
- ◆ ***Administrator(Admin) can check all indoor/outdoor units connected to DMS2.5.***
- ◆ ***Administrator(Admin) can edit zone information and assign the zone information to manager.***
- ◆ ***A manager can check and control indoor/outdoor units which belong to assigned zones only.***

System Settings (Continued)

Deleting a User



1 Click [System Settings] → [User management] when DMS2.5 web page menu screen appears.

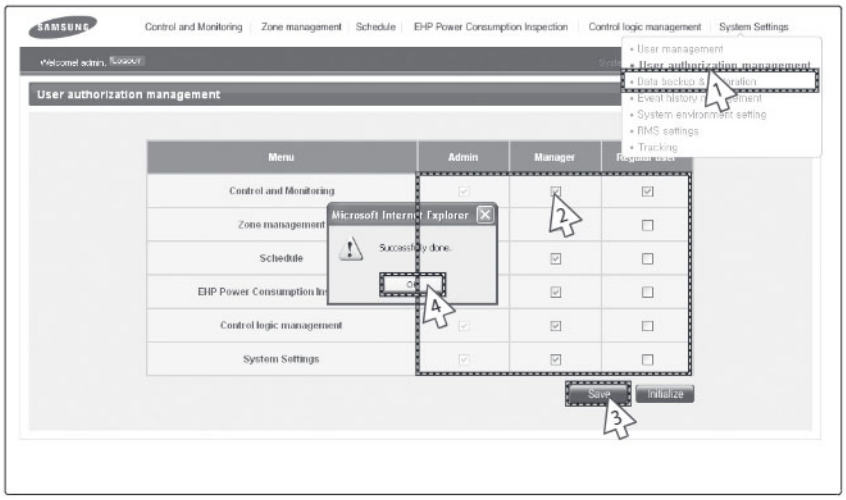
2 Click the Nickname to delete when user management screen appears.
- ◆ User information window will be displayed.

3 Click [Delete] when the user delete window appears.
- ◆ Confirm window will pop up saying, "Do you want to delete the user?"

4 Click [OK].
- ◆ Selected user information will be deleted in DMS2.5.

Note ***Admin account cannot be deleted.***

Editing User Authorization



1 Click [System Settings] ➔ [User authorization management] when DMS2.5 web page menu screen appears.

2 Select/Deselect accessible menu by authorization when the user authorization management screen appears.

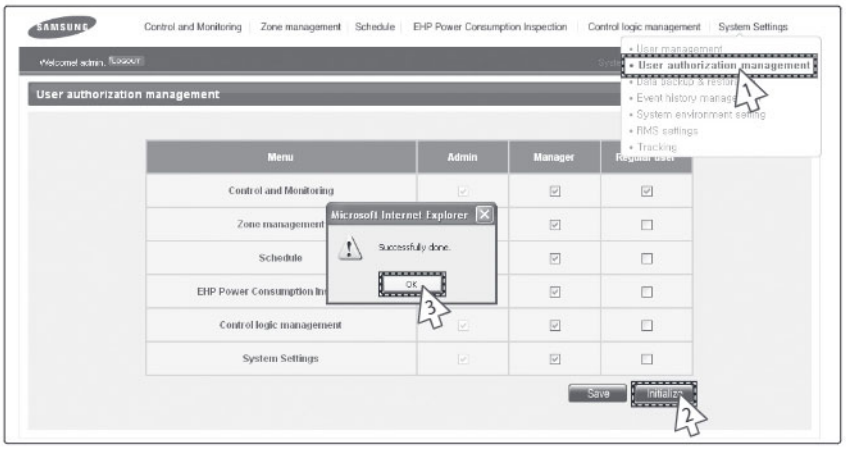
3 Click [Save] after setting is completed.

4 Click [OK] when "Successfully done." message appears.
- ◆ Changed user authorization information will be saved in DMS2.5 by clicking [OK].

Note
- ◆ *Administrator(Admin authorization) is allowed to access to all menus.*
- ◆ *You cannot edit authorization (menu access) of administrator(Admin).*

System Settings (Continued)

Initializing a User Authorization



1 Click [System Settings] → [User authorization management] when DMS2.5 web page menu screen appears.

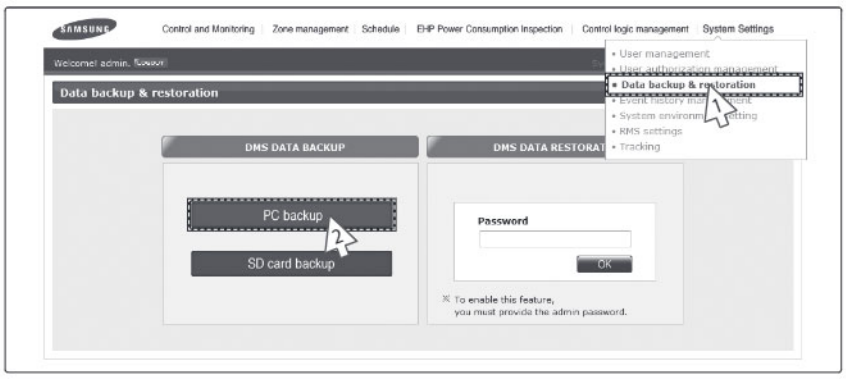
2 Click [Initialize] when user management screen appears.

3 Click [OK] when "Successfully done." message appears.

◆ User authorization information saved in DMS2.5 will be initialized by clicking [OK].

Note *You can restore user authorization information as factory setting by using initialization function.*

DMS2.5 Data Backup – PC Backup



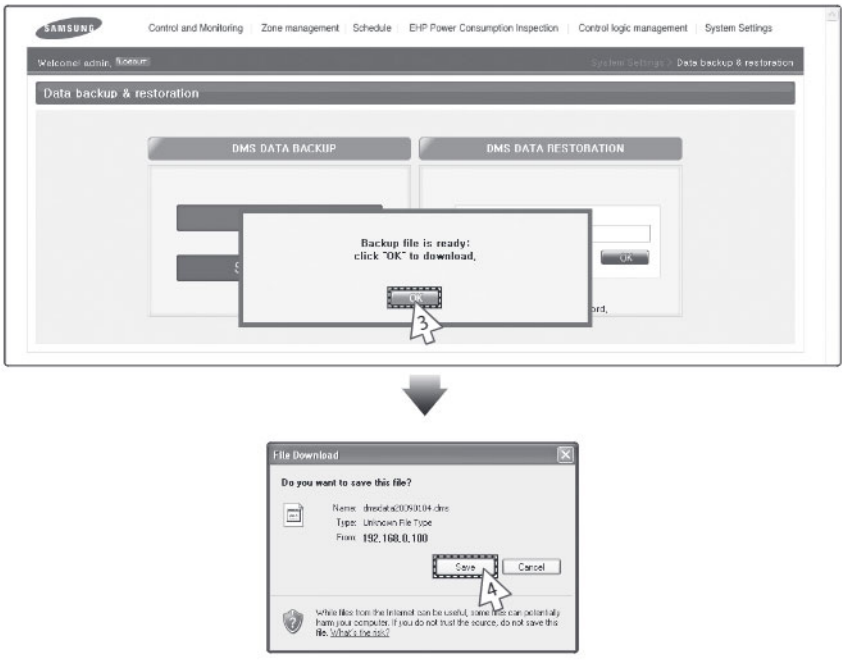
You can back up DMS2.5 data to PC or SD card.

1 Click [System Settings] → [Data backup & restoration] when DMS2.5 web page menu screen appears.

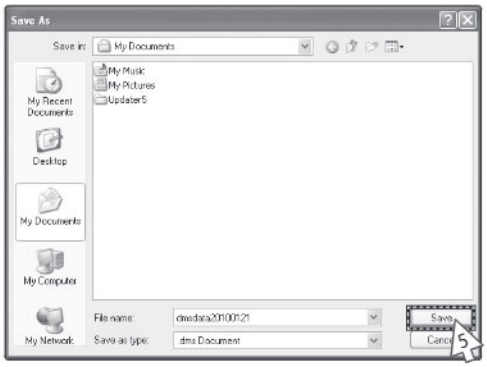
2 Click [PC backup] when DMS2.5 data backup & restoration screen appears.

- ◆ "Reading data from DMS2.5. Please wait." message will appear.
- ◆ Depending on the size of the data, backup time may vary. It will usually take few seconds.

System Settings (Continued)



3	Click [OK] when “Backup file is ready. Click "OK" to download.” message appears.
4	Click [Save] when “File download” window appears.



5 When "Save as" window appears, select saving location and file name and then click [Save].

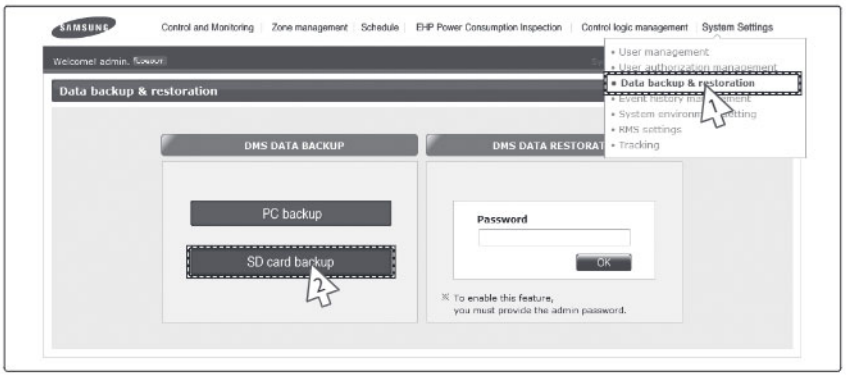
- ◆ Backup file will be saved as the name you made in the location you select by clicking [Save].
- ◆ Basic backup file name is "dmsdataYYYYMMDDhhmmss.dms". (YYYY: year, MM: month, DD: day, hh: hour, mm: minute, ss: second)
- ◆ The extension of the backup data files is ". dms".
- ◆ If you want to edit the file name, use English alphabets or numbers only.
- ◆ File name should be less than 32 letters. If the file name exceeds 32 letters, proper restoration may not be possible.

6 Click [Close] after completing the download.

Note ***Backup data includes DB data, setting data, data related indoor/outdoor unit control and various kinds of history data. They will be backed up in single unified file.***

System Settings (Continued)

DMS2.5 Data Backup – SD card backup

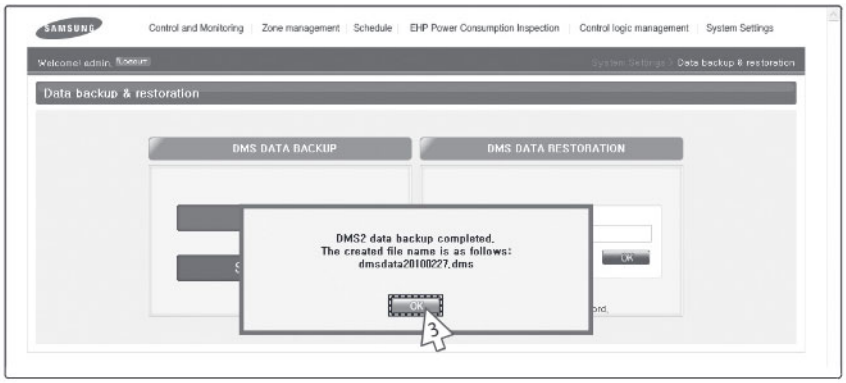


You can back up DMS2.5 data to PC or SD card.

1 Click [System Settings] → [Data backup & restoration] when DMS2.5 web page menu screen appears.

2 Click [SD card backup] when DMS2.5 data backup & restoration screen appears.

- ◆ "Reading data from DMS2.5. Please wait." message will be displayed.
- ◆ Depending on the size of the data, backup time may vary. It will usually take few seconds.



3 Click [OK] when "DMS2.5 data backup completed. The created file name is as follows: "dmsdataYYYYMMDDhhmmss.dms" message appears.

- ◆ The file name of backup file is "dmsdataYYYYMMDDhhmmss.dms" and it does not exceed maximum 21 letters. (YYYY: year, MM: month, DD: day, hh: hour, mm: minute, ss: second)
- ◆ The extension of the backup data files is ". dms".
- ◆ If "Backup failed."message appears, click [OK] . Then check if the SD card is inserted or forbidden for writing.

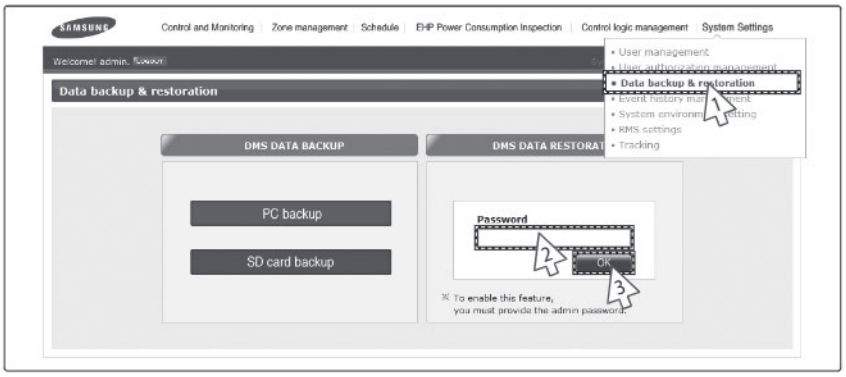
Note *Backup data includes DB data, setting data, data related indoor/outdoor unit control and various kinds of history data. They will be backed up in single unified file.*

CAUTION

- ◆ ***To use SD backup and restoration function properly, SD card which is formatted in VFAT file system is required.***
- ◆ ***If SD card is already inserted, automatic backup function will be operated and everyday data will be backed up in SD card.***
- ◆ ***If available space of SD card is smaller than 100Mbytes, deleting oldest DMS2.5 backup file process will be operated first and then auto backup function will be operated.***

System Settings (Continued)

DMS2.5 Data Restoration - PC Restore



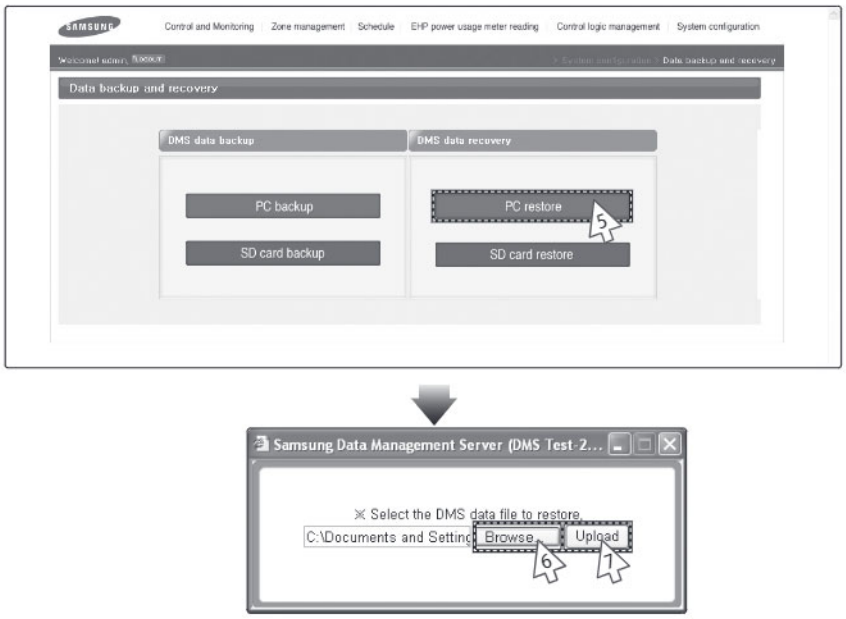
1 Click [System Settings] ➔ [Data backup & restoration] when DMS2.5 web page menu screen appears.

2 Enter the password of Admin account when DMS2.5 data backup and restoration screen appears.

◆ Data restoration function deals with the important data of the system.
To activate the function, you should enter administrator's password.

3 Click [OK].

4 Click [OK] when caution window appears.



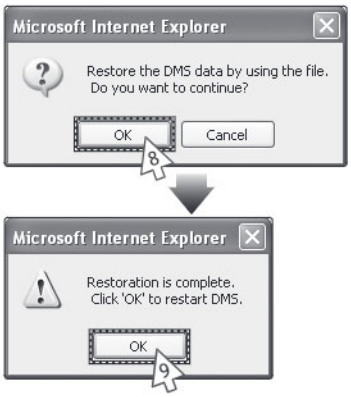
5 Click [PC restore].

6 Click [Browse].

◆ Select DMS2.5 data file to restore and then click [Open(O)] when "File selection" window appears.

7 Check if the file route and file name are correctly entered in the text box, and then click [Upload].

System Settings (Continued)



8 Click [OK] when "Restore the DMS by using the file. Do you want to continue?" message appears.

- ◆ "Reading data from DMS2.5. Please wait." message window will appear.
- ◆ Depending on the size of the data, backup time may vary. It will usually take few seconds.

9 Click [OK] when "Restoration is complete. Click 'OK' to restart DMS." confirm window appears.

- ◆ DMS2.5 will restart and restored data will be reflected.

Note

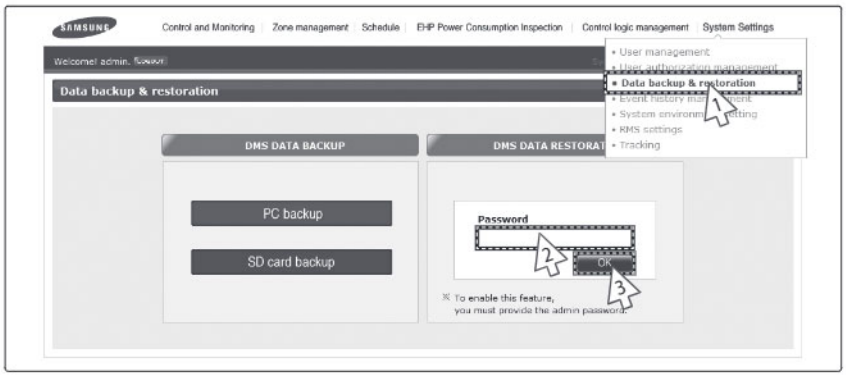
- ◆ *Backup and restoration of set event history is not available.*
- ◆ *Backup and restoration of network setting is not available.*

⚠ CAUTION

Keep in mind followings when operating restoration using backup file saved in PC.

1. ***You cannot use files bigger than 100Mbytes for restoration file.***
2. ***Restoration should be carefully executed because existing data will be deleted during restoration and the data you select will be restored. Before operating restoration, backup current data of DMS2.5 to PC or SD card.***
3. ***The name of file for restoration should be within 32 letters in English alphabet or numbers. If not, rename the file and upload it again.***

DMS2.5 Data Restoration - SD Card Restoration



1 Click [System Settings] ➔ [Data backup & restoration] when DMS2.5 web page menu screen appears.

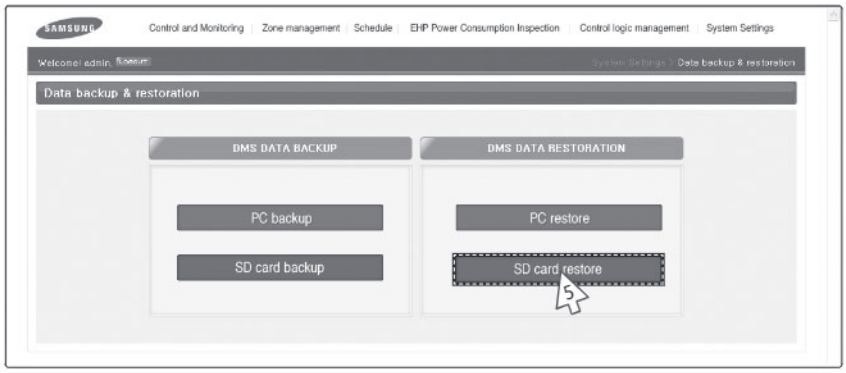
2 Enter the password of Admin account when DMS2.5 data backup and restoration screen appears.

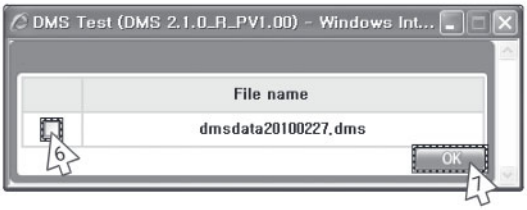
◆ Data restoration function deals with the important data of the system.
To activate the function, you should enter administrator's password.

3 Click [OK].

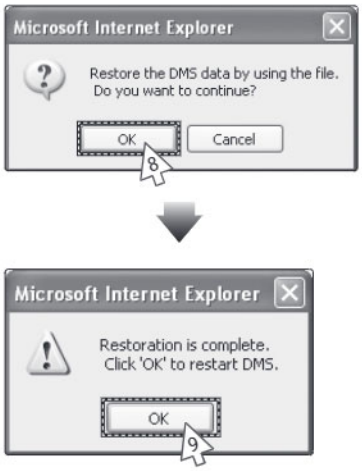
4 Click [OK] when caution window appears.

System Settings (Continued)





5	Click [SD card restore].
6	Select the check box of file to restore.
7	Click [OK].



8 Click [OK] when "Restore DMS data by using the file. Do you want to continue?" message appears.

- "Reading data from DMS2.5. Please wait." message window appears.
- Depending on the size of the data, backup time may vary. It will usually takes few seconds.

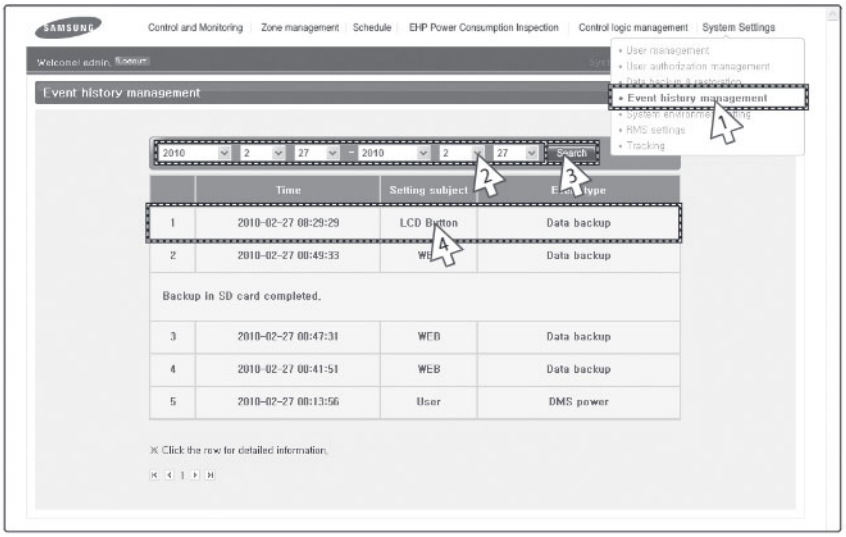
9 Click [OK] when "Restoration is complete. Click 'OK' to restart DMS." message window appears.

- DMS2.5 will restart and restored data will be reflected.

Note ***For proper restoration, unlock the forbidden writing function of SD card.***

System Settings (Continued)

Event History Management "Search(Check)"



You can search(check) all kinds of set information of event log in DMS2.5.

1 Click [System Settings] → [Event history management] when DMS2.5 web page menu screen appears.

2 Select the period of event history you want to search.

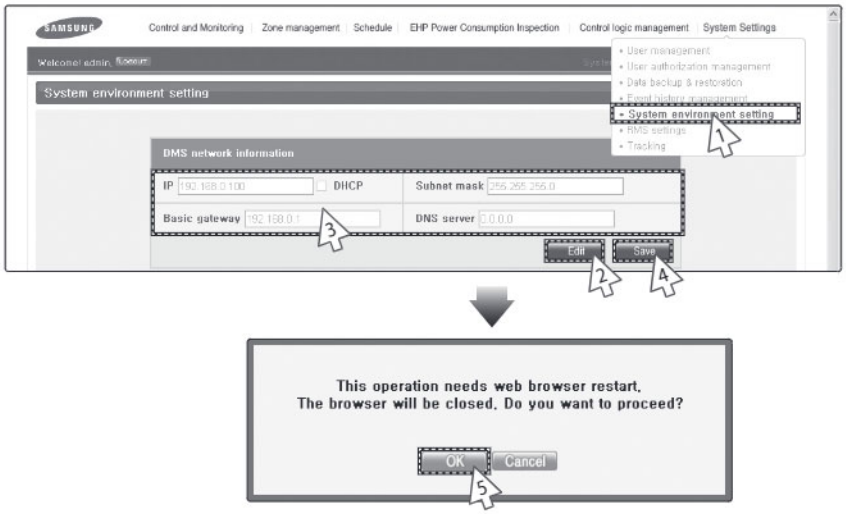
3 Click [Search].

4 List of events which occurred in the period will be displayed.
◆ You can check detailed information about the event by selecting the item you want to check.

Note *You can check following event logs using event history management.*

1. DMS2.5 power related event
2. Schedule setting related event
3. RMS service setting related event
4. Tracking related event
5. User information modification related event
6. System settings related event
7. Operation using external interface related event

DMS2.5 Network Information Setting – "Manual Setting"



You can set and check information about DMS2.5 installation operation.

1 Click [System Settings] ➔ [System environment setting] when DMS2.5 web page menu screen appears.

2 Click [Edit] from DMS2.5 network information window.

3 When text boxes of IP address, subnet mask address, default gateway and DNS server are enabled, enter values for each item.

- ◆ 15 letters can be entered for each item.
- ◆ Each item should match with the network address form.
- ◆ Basically, only Private IP can be set to IP address. To use Public IP, you must set Enable public IP as 'Enable' from the menu [System Settings] ➔ [System environment setting].
  - Private IP range: 10.0.0.0 ~ 10.255.255.255, 172.16.0.0 ~ 172.31.255.255, 192.168.0.0 ~ 192.168.255.255
  - Public IP range: IP except for Private IP range and 127.0.0.1(localhost)

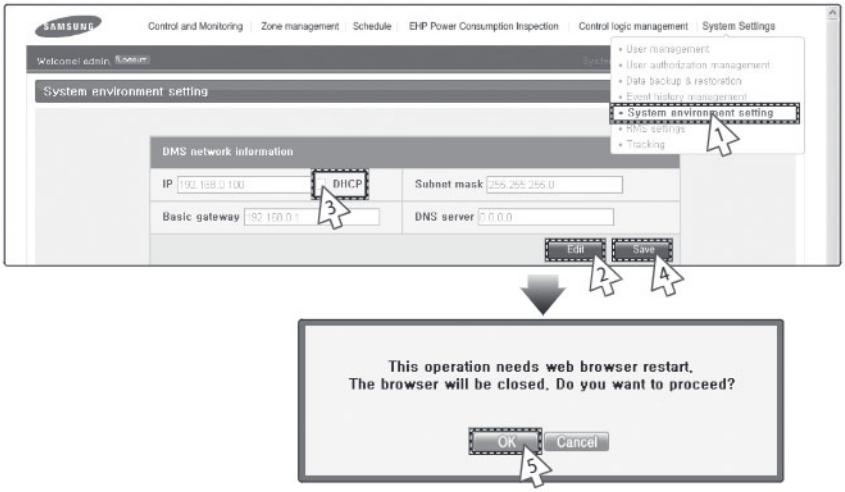
4 Click [Save] in DMS2.5 network information window.

5 Click [OK] when "This operation needs web browser restart. The browser will be closed. Do you want to proceed?" message appears.

- ◆ Click [OK] and current web browser will be closed. Run the web browser again and you can access to DMS2.5 using IP which is manually set.

System Settings (Continued)

DMS2.5 Network Information Setting – using "DHCP"



1 Click [System Settings] ➔ [System environment setting] when DMS2.5 web page menu screen appears.

2 Click [Edit] from DMS2.5 network information window.

3 Check 'DHCP'.
- ◆ The text boxes of IP address, subnet mask address, default gateway and DNS server will be disabled.
- ◆ If you want manual setting, uncheck 'DHCP' and then refer to "DMS2.5 Network information setting-manual setting" steps. (Refer to page 137)
- ◆ DMS2.5 supports DHCP. Only private IP should be assigned from DHCP. If Public IP is assigned from DHCP, you cannot access DMS2.5.
- ◆ If Public IP must be assigned from DHCP, you must set Enable public IP as 'Enable' from the menu [System Settings] ➔ [System environment setting].

4 Click [Save] in DMS2.5 network information window.

5 Click [OK] when "This operation needs web browser restart.
The browser will be closed. Do you want to proceed?" message appears.
- ◆ Click [OK] and current web browser will be closed. Run the web browser again and you can access to DMS2.5 after checking auto setting IP in the external LCD.

CAUTION

Some functions available on DMS2.5 web page may not be functional at BACnet Gateway and LonWorks Gateway. For detailed function, refer to the installation manual or contact Samsung Electronics.

Note

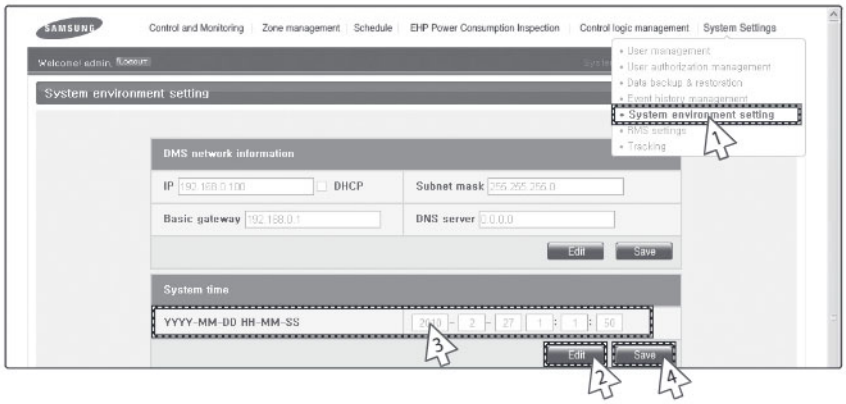
- *Factory setting is as follows.*
  1. IP address: 192.168.0.100
  2. Subnet mask address: 255.255.255.0
  3. Default gateway : 192.168.0.1
  4. DNS server: 0.0.0.0
- *DMS2.5 sets service engineer IP(192.168.0.254) internally. Therefore, it should be available all the time regardless of current IP setting.*
- *DMS2.5 gets DHCP IP address when you activate DHCP function. When connecting DMS2.5 to S-NET series, you can connect them using the IP. However the DHCP IP address can be changed by events such as network environment of restart.*
  In this case, it may cause communication failure between S-NET series and DMS2.5. Therefore it is not recommended to connect DMS2.5 using DHCP address using S-NET series.
- *You can check network information on external LCD of DMS2.5 when activating DHCP. (Refer to page 175)*
- *When DHCP is set, address from DHCP server will be set as DMS2.5 IP address.*
- *DHCP function is not available when you use BACnet Gateway function.*
- *When an IPv6 address is assigned automatically, it is displayed on the display, but you cannot change it.*

⚠ CAUTION

This product must be used in a dedicated network because it cannot respond to network attacks such as hacking and viruses. When it is connected to the Internet or an intranet (ex: an office LAN), it could be a risk of illegal approach. Also, this may change it to a harmful connection for other network devices. This is not the responsibility of Samsung Electronics and not included in compensation for the damage.

System Settings (Continued)

System Time Setting



1	Click [System Settings] ➔ [System environment setting] when DMS2.5 web page menu screen appears.
2	Click [Edit] from system time setting.
3	Enter system time(year/month/day/hour/minute/second). ◆ You can enter only numbers. ◆ Year: You can enter from 1980 to 2035. ◆ Month: You can enter from 1 to 12. ◆ Day: You can enter from 1 to 31. ◆ Hour: You can enter from 0 to 23. ◆ Minute: You can enter from 0 to 59. ◆ Second: You can enter from 0 to 59.
4	Click [Save] after setting is completed.

5 Click [OK] when "This information will be modified. Do you want to proceed?" message window appears.

6 "Reading data from DMS2.5. Please wait." message appears and saving is completed. Then, system environment setting screen appears again with all items are disabled.

Note *Time on the screen shows DMS2.5 setting time.*

Synchronizing time via the Internet

1 Set this function when you synchronize the time of DMS with an Internet time server.
- ◆ This function operates properly only when DMS is installed so that it can connect to the Internet.

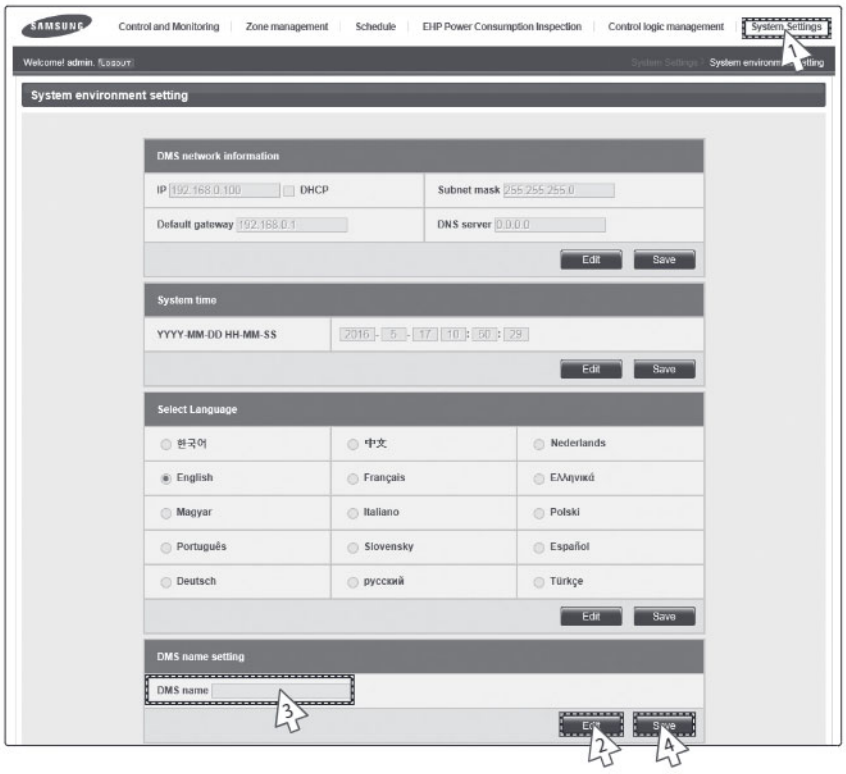
2 Click [Apply], and then set the time offset based on the Universal Time Coordinated (UTC) for the place where DMS is installed.

System Settings (Continued)

Selecting the Language

1. Click [System Settings] → [System environment setting] when DMS2.5 web page menu screen appears.
2. Click [Edit] from language selection.
3. Select a language you want then click [Save].
4. Click [OK] when "This operation needs DMS to be restarted. Do you want to apply the setting?" message appears.
   - ◆ Click [OK] and current web browser will be closed. DMS2.5 will restart and it may take approximately 1 minute.

DMS2.5 Name Setting



1 Click [System Settings] → [System environment setting] when DMS2.5 web page menu screen appears.

2 Click [Edit] from DMS2.5 name setting.

3 Enter name of DMS2.5 when DMS2.5 name field enabled.
- ◆ You can use maximum 30 letters including English alphabets and special symbols.
- ◆ When DMS2.5 name is set, the name will be displayed on the top title bar of web browser.

4 Click [Save] after setting is completed.

System Settings (Continued)

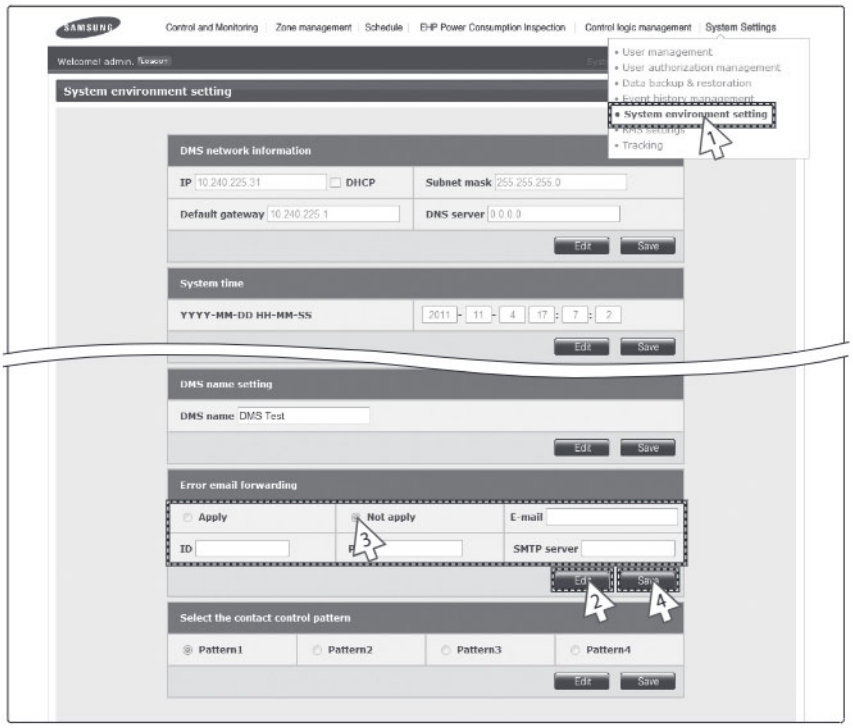
5 Click [OK] when "This information will be modified. Do you want to proceed?" message appears.

6 "Reading data from DMS2.5. Please wait." message appears and saving is completed. Then, system environment setting screen appears again with all items are disabled.

◆ You can check new DMS2.5 name on the title bar of web browser.

Note *Name of the DMS2.5 is set to blank as factory default.*

Error Mail Forwarding Setting



1 Click [System Settings] ➔ [System environment setting] when DMS2.5 web page menu screen appears.

2 Click [Edit] from error mail forwarding setting.

3 Set all the items as the value you want when all items fields are enabled.

- ◆ If you select 'Apply', you should input e-mail address, SMTP server ID, password, and SMTP server address.
- ◆ If you select 'Not apply', E-mail, ID, PW and SMTP server items will not affect on the setting.
- ◆ [Test] appears after saving all e-mail information. Click [Test] to send the test message.

4 Click [Save] after setting is completed.

System Settings (Continued)

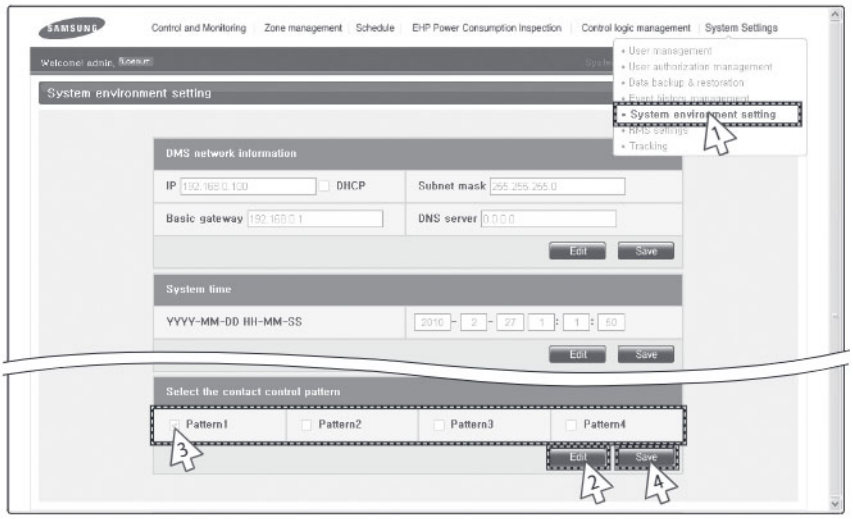
5 Click [OK] when "This information will be modified. Do you want to proceed?" message appears.

6 "Reading data from DMS2.5. Please wait." message appears and saving is completed. Then, system environment setting screen appears again with all items are disabled.

Note

- *In factory setting, 'Not apply' is checked and item fields(E-mail, ID, PW, SMTP) are blank.*
- *E-mail forwarding function only deals with the server supporting SSL.*

Contact Control Pattern Selection



1 Click [System Settings] → [System environment setting] when DMS2.5 web page menu screen appears.

2 Click [Edit] from contact point pattern selection window.

3 Select the pattern you want to check.

- ◆ Pattern 1[No external input]:
  No operation will be made when inputting contact control signal.
- ◆ Pattern 2[Level(Emergency stop)]:
  Commands that stop all operation of indoor unit and disable remote control when inputting contact control signal. In level emergency stop status, it will not be controlled even if the command is from upper controller.
- ◆ Pattern 3[Level(Operation/Stop)]:
  Level signal input timing.
  It changes operation/stop status of all indoor units.
- ◆ Pattern 4[pulse (Operation/Stop,Disable/Enable)]:
  Pulse signal. It changes operation/stop status of all indoor units.

4 Click [Save] after setting is completed.

System Settings (Continued)

5 Click [OK] when "This information will be modified. Do you want to proceed?" message appears.

6 "Reading data from DMS2.5. Please wait." message appears and saving is completed. Afterwards, system environment setting screen appears again with all items are disabled.

- ◆ If at least one of indoor unit is turned on, contact point output port 1 generates contact point signal.
- ◆ If there is breakdown, contact point output port 2 generates contact point signal.

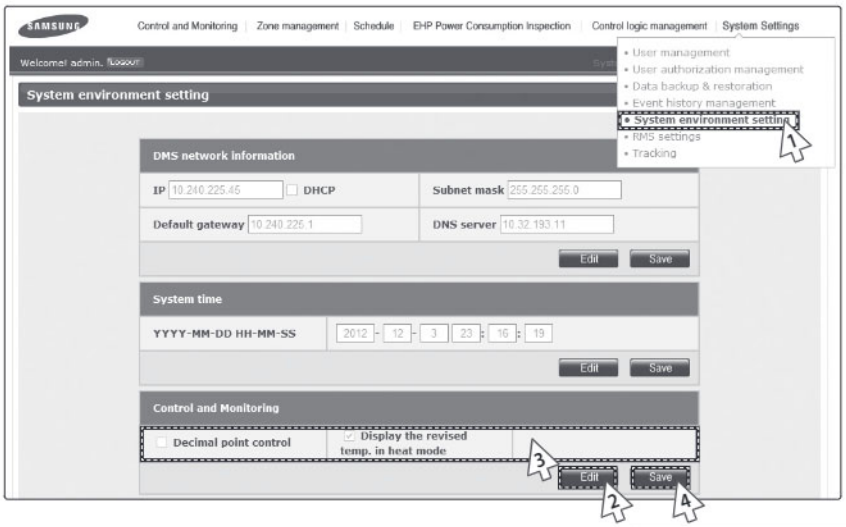
Note

- ◆ *Pattern 1 is set as factory setting of contact control pattern.*
- ◆ *Contact output*
  - *- When indoor unit is in operation, DMS2.5 which executed tracking successfully outputs signal through DO Ch1.*
  - *- If there is unsolved breakdown in DMS2.5, signal will be output through DO Ch2. You can check it through check indicator on DMS2.5.*

CAUTION

For extension, DMS2.5 has 10 DI/DO ports. Contact control and output function are assigned to Ch1 and Ch2. Ch3~Ch10 will be assigned to additional functions.
For proper contact control, connect using Ch1 and Ch2.

Setting Control and Monitoring



1 Click [System Settings] ➔ [System environment setting] when DMS2.5 web page menu screen appears.

2 Click [Edit] on Control and Monitoring section.

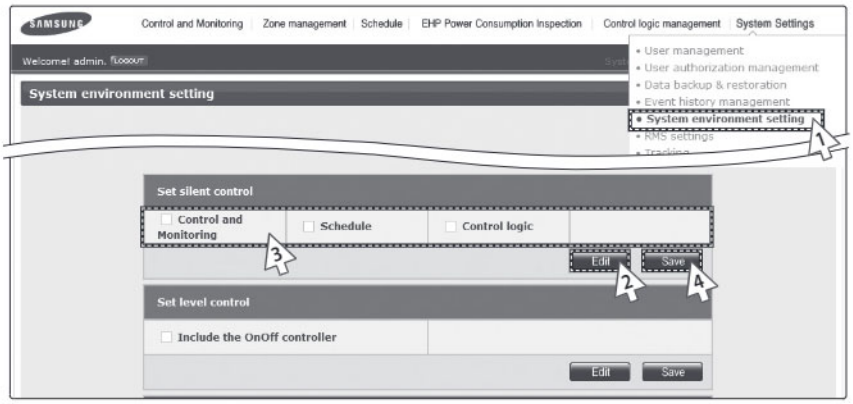
3 Select 'Decimal point control' or 'Display the revised temp. in heat mode'.

- ◆ Decimal point control: Select this function if you want to control the indoor unit in 0.1°C unit. If this is not selected, temperature will be adjusted in 1°C even if the indoor unit supports decimal point control which allows temperature adjustment in 0.1°C unit.
- ◆ Display the revised temp. in heat mode: Select this function if you want to display the revised temperature for current temperature in heat mode.

4 Click [Save].

System Settings (Continued)

Setting silent control



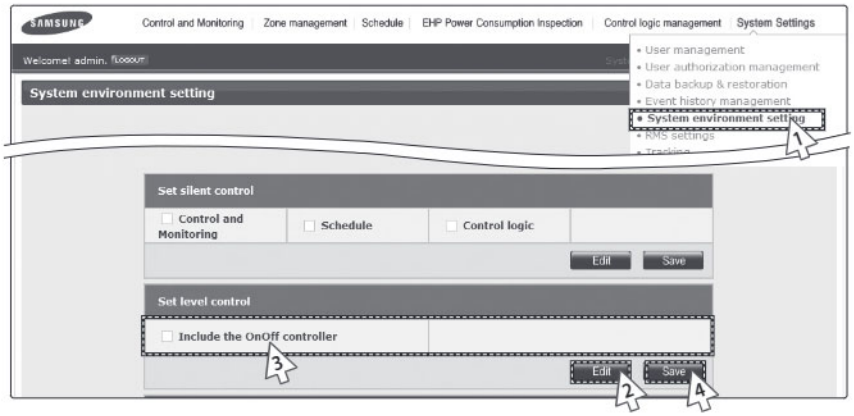
1 Click [System Settings] ➔ [System environment setting] when DMS2.5 web page menu screen appears.

2 Click [Edit] on Set silent control section.

3 Select 'Control and Monitoring' or 'Schedule' or 'Control logic'.
- ◆ Control and Monitoring: Select this if you want to control silently in 'Control and Monitoring' screen.
- ◆ Schedule: Select this if you want to perform 'Schedule' silently.
- ◆ Control logic: Select this if you want to perform 'Control logic' silently.

4 Click [Save].

Setting level control



1 Click [System Settings] ➔ [System environment setting] when DMS2.5 web page menu screen appears.

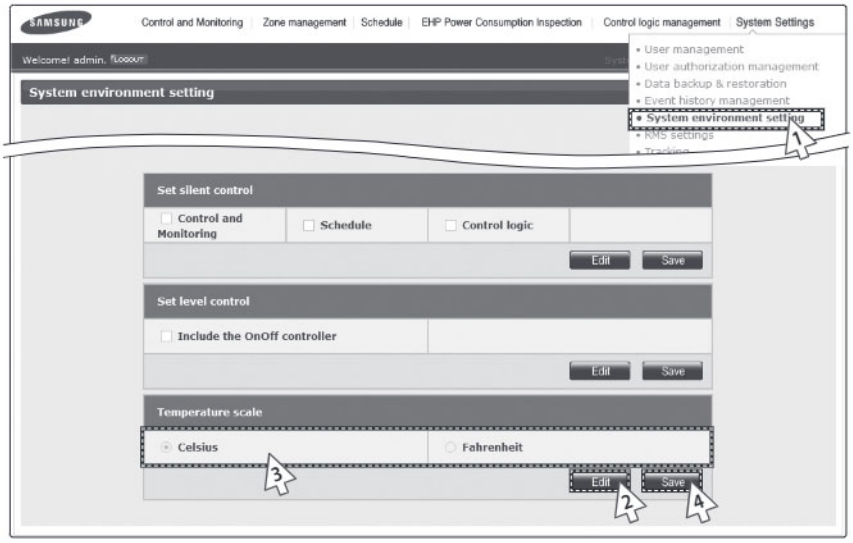
2 Click [Edit] on Set level control section.

3 Select 'Include the OnOff controller'.
◆ Include OnOff controller: Select this if you want to restrict controlling from OnOff controllers when you disable RC from the DMS2.5.

4 Click [Save].

System Settings (Continued)

Setting temperature scale



1	Click [System Settings] ➔ [System environment setting] when DMS2.5 web page menu screen appears.
2	Click [Edit] on the temperature scale.
3	Select the temperature display of DMS2.5 as Celsius or Fahrenheit.
4	Click [Save].

Setting Enable public IP

1	Click [System Settings] ➔ [System environment setting] when DMS2.5 web page menu screen appears.
2	Click [Edit] on Enable public IP section.
3	Select whether to use Public IP or not. ◆ When you select 'Enable', you must register the Public IP of PCs or network devices to access DMS2.5 from the PCs or network devices.
4	Click [Save].

Setting Public IP of upper controller

1	Click [System Settings] ➔ [System environment setting] when DMS2.5 web page menu screen appears.
2	Click [Edit] on Public IP of upper controller section.
3	Register the Public IP of PCs or network devices to access DMS2.5 from the PCs or network devices. ◆ Select 'Apply' after entering Public IP to access DMS2.5.
4	Click [Save].

Setting the time on the wired remote controller

1	Click [System Settings] ➔ [System environment setting] when DMS2.5 web page menu screen appears.
2	Click [Edit] on [Time settings on the wired remote control] in [Time sync with the wired remote control] menu. ◆ Set the time to use.
3	Click [Edit] on [Automatic time sync on the wired remote control] in [Time sync with the wired remote control] menu and click [Apply]. ◆ Be sure to click [Apply] to start auto sync.
4	Click [Save].

Note

- ◆ *Time setting is available only in some wired remote controllers that can support time setting function through the DMS.*
- ◆ *When the [Automatic time sync on the wired remote control] is applied, the time for the wired remote controller is automatically set based on the DMS time once a day.*

System Settings (Continued)

Activating [Daylight Saving Time Setting]

1	Click [System Settings] ➔ [System environment setting] when DMS2.5 web page menu screen appears.
2	Click [Edit] on [Daylight Saving Time Setting].
3	Set the Start date and End date after selecting Apply.
4	Click [Save].

Activating Extra Functions

1	Click [System Settings] ➔ [System environment setting] when DMS2.5 web page menu screen appears. ◆ Turn [Alert when PC time differs from DMS time] on or off to set whether to display a pop-up window when you log-in to DMS2.5 and your PC time differs from the DMS2.5 time. ◆ Click [Download certificate] to download a DMS2.5 certificate that you want to register to the web browser. ◆ Click [Add b.IoT Server certificate] to register a b.IoT server certificate for DMS2.5 communication with the b.IoT server.

Setting the wired remote controller

1	Click [System Settings] ➔ [System environment setting] when DMS2.5 web page menu screen appears.
2	Click [Edit] on the temperature type, select Celsius or Fahrenheit, and then click [Save].
3	Click [Edit] on the compensation temperature, enter a value between -9.9 and 9.9 degrees Celsius, and click [Save].

Note ◆ *The function for setting up the wired remote controller using DMS2.5 is only available with the product versions that support this function and are equipped with a wired remote controller that supports this function.*

Setting the calculation interval of EHP power consumption

1	Click [System Settings] ➔ [System environment setting] when DMS2.5 web page menu screen appears.
2	Click [Edit], select Once a day or Once an hour, and then click [Save]. ◆ When you save as Excel in [EHP Power Consumption Inspection] ➔ [Check inspection result], the results are displayed in the Excel file by 1 day or 1 hour according to your selection.

System Settings (Continued)

Cloud settings

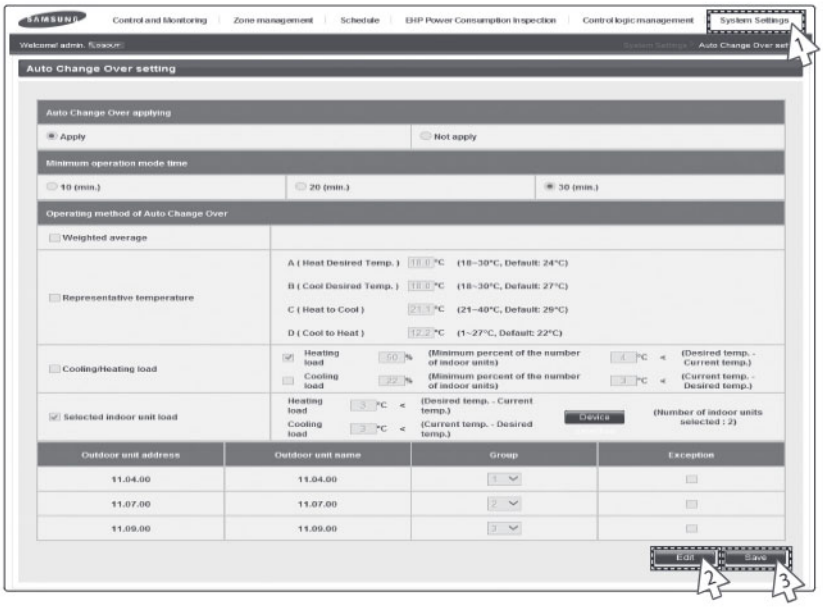
Cloud settings are available only in Korea.

The pop-up window for software update appears when you select "Cloud settings" and have an update available to the DMS2.5 software. Click Agree and then enter the admin password to update the software.

Note

- ◆ ***DMS2.5 automatically reboots once the software update has been completed. If there is a task in progress, such as tracking, complete the task before starting software update.***
- ◆ ***Software update is available only when DMS2.5 is connected to an external network.***

Setting Auto Change Over



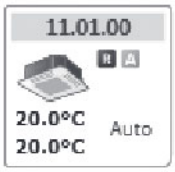
1 Click [System Settings] ➔ [Auto Change Over setting] when DMS2.5 web page menu screen appears.

- ◆ Using the 'Auto Change Over' function, DMS2.5 can control indoor units to start auto cooling or auto heating.
- ◆ When using auto cooling or heating, DMS2.5 operates the Fan ➔ Cool or Heat ➔ Auto modes in order. For ERV PLUS, it operates the Fan ➔ Cool or Heat modes in order.

2 Click [Edit] to configure the Auto Chang Over settings.

(1) [Apply] / [Not apply]

◆ When using the Auto Change Over function, 'A' appears in the [Control and Monitoring] screen on the indoor unit, and the indoor unit cannot control its operation mode separately.



(2) Minimum operation mode time

◆ You can select a period of time among 10, 20, and 30 minutes for which the operation mode is maintained after the indoor units are controlled in automatic cooling or automatic heating. However, if you turn the indoor units on or off or change the set temperatures, the internal logic can maintain the operation mode for a time less than the selected time.

(3) [Weighted average]: Configure the settings so that indoor units automatically switch between cooling and heating modes according to the set temperature, current temperature, and cooling/heating capacity of the indoor units that are turned on.

Let's assume, for example, indoor units of the same capacity have been installed. If a larger number of the units have desired temperature lower than the current temperature, all of the units automatically switch to cooling mode. If a larger number of the units have the set temperature higher than the current number, all of the units automatically switch to heating mode.

(4) [Representative temperature]: Sets to run auto cooling or heating operation, according to the average temperature of the turned-on indoor units.

◆ DMS 2.5 sets the indoor units to the auto cooling mode and keeps the temperature according to 'B (Heat Desired Temp)' when the average temperature of the units currently running is higher than 'C (Heat to Cool)'.
DMS 2.5 also sets the indoor units to the auto heating mode and keeps the temperature according to 'A (Cool Desired Temp)' when the average temperature of the units currently running is lower than 'D (Cool to Heat)'.

System Settings (Continued)

(5) Cooling/Heating load

- ◆ All indoor units that are turned on and belong to an outdoor unit group are controlled in automatic cooling or automatic heating according to the selected heating/cooling load.
- ◆When the heating load is selected, the difference between the set temperature and the current temperature is calculated for all indoor units that are turned on and belong to the same outdoor unit group. If this difference is larger than the set difference and the number of indoor units with this value is equal to or greater than the set percentage, all indoor units belonging to the same outdoor unit group is controlled in automatic heating. If this difference is larger than the set difference and the number of indoor units with this value is less than the set percentage, all indoor units belonging to the same outdoor unit group are controlled in automatic cooling.
- ◆When the cooling load is selected, the difference between the set temperature and the current temperature is calculated for all indoor units that are turned on and belong to the same outdoor unit group. If this difference is larger than the set difference and the number of indoor units with this value is equal to or greater than the set percentage, all indoor units belonging to the same outdoor unit group are controlled in automatic cooling. If this difference is larger than the set difference and the number of indoor units with this value is less than the set percentage, all indoor units belonging to the same outdoor unit group is controlled in automatic heating.

(6) Selected indoor unit load

- ◆ If all indoor units that you selected are turned on and belong to an outdoor unit group, all indoor units belonging to the same outdoor unit group are controlled in automatic cooling or automatic heating according to the selected heating/cooling load for indoor units.
- ◆The difference between the set temperature and the current temperature is calculated for all indoor units that you selected and belong to the same outdoor unit group. If this difference is larger than the set difference for all the selected indoor units and the heating load is selected, all indoor units belonging to the same outdoor unit group are controlled in automatic heating.
- ◆The difference between the set temperature and the current temperature is calculated for all indoor units that you selected and belong to the same outdoor unit group. If this difference is larger than the set difference for all the selected indoor units and the cooling load is selected, all indoor units belonging to the same outdoor unit group are controlled in automatic cooling.

(7) Outdoor unit setting

- ◆ Only Heat Pump outdoor units that support new communication mode appear in the list. However, not listed in the list are the Heat Pump outdoor units that are connected to the Fresh Duct, Hydro Unit, Hydro Unit HT, EHS, DVM CHILLER, or cooling only indoor unit, as these units are not applicable for Auto Change Over.
- ◆ The following outdoor units are not displayed in the list: the outdoor units designed solely for cooling and the outdoor units connected to the heating/cooling change-over switch if the switch is set to the cooling only mode or to the heating only mode.
- ◆ The conventional indoor and outdoor units connected to ERV interface module, FCU interface module, Heat Recovery, and compatible interface module—those units do not appear in the list, as these units are not applicable for Auto Change Over.
- ◆ Auto Change Over works for each group.
- ◆ All indoor units in a single group become the targets for calculating Auto Change Over operation, and are controlled to equally run auto cooling or auto heating.
- ◆ If you select [Exception], the outdoor unit cannot use the Auto Change Over function despite being grouped, and indoor units connected to the outdoor unit are excluded from the targets for calculating Auto Change Over operation.
- ◆ If the outdoor unit is set to cooling or heating only mode, the Auto Change Over function is not available.

3 Click [Save] after finishing the setup.

Note

- ◆ ***In the Auto mode, the indoor units for which the Dual Set Point function is enabled use the automatic heating set temperature or automatic cooling set temperature instead of the single set temperature.***
- ◆ ***When the DMS2.5 is installed in the S-Net3, Touch Centralized controller, Wi-Fi Kit product, or wired/wireless remote controllers simultaneously, the indoor unit with the Auto Change Over function cannot control operation modes through S-Net3, Touch Centralized controller, Wi-Fi Kit product, or the wired/wireless remote controller.***

Setting Dual Set Point

1 Click [System Settings] ➔ [Dual Set Point setting] when DMS2.5 web page menu screen appears.
- The Dual Set Point function allows you to set the automatic cooling and heating set temperatures only when the indoor unit is in the Auto mode.
- If you want to use the Dual Set Point function for an indoor unit, the wired remote controller connected to the indoor unit must support the Dual Set Point function and the Dual Set Point function must be also enabled (the Auto Change Over function is enabled for the wired remote controller).

2 [Click [Edit], and then select whether to enable the Dual Set Point function for each indoor unit.
- Only the indoor units that support the Dual Set Point function appear on the screen.

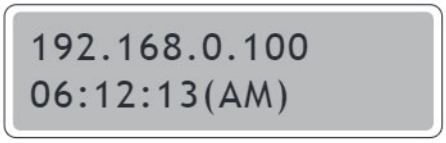
3 Click [Save].

System Settings (Continued)

Downloading user manual

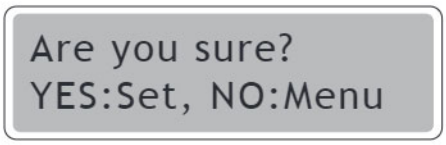
1. Click [System Settings] ➔ [User manual] when DMS2.5 web page menu screen appears.
   - ◆ You can download the user manual.

System Setting Initialization



1. Press [Menu], [▲], [▼] or [Set] on LCD if IP and current time are displayed on LCD screen.
   - ◆ Main menu screen appears.
   - ◆ Initialization is not possible in the screen which time information is displayed.

2. Press [Menu] ➔ [▼] ➔ [▲] ➔ [▼] ➔ [Menu] buttons in order in main menu screen.
   - ◆ Caution will be displayed on LCD Display.



3. Initialize DMS2.5 by clicking [Set] when caution phrase appears.
   - ◆ If you press [Menu] button, it will turn back to main menu without initialization.

CAUTION

When initializing system setting, all saved data in DMS2.5 will be deleted.
After initialization, saved data and IP address will be same as factory setting.

Tracking

◆ **What is tracking?**
Tracking is an operation that finds devices which are connected to DMS2.5.
Through tracking operation, devices which are connected to DMS2.5 can recognize if they are connecting to DMS2.5.
To supervise and control system air conditioner using DMS2.5, tracking should be done first.

◆ **Things you can do through tracking**
Checking the number of devices installed, setting communication mode by channel, DVM tracking, Renaming is possible through tracking.

◆ **Execute tracking**
(1) Connect DVM device
- Connect the device to COM1~COM5.

(2) Set communication mode by channel.
- Set proper communication mode which fits to the devices connected in step (1).
- Be careful that if communication mode is not properly set, the device will not be found through tracking.

(3) Execute tracking - Execute DVM tracking.
- DVM tracking is an operation that finds system air conditioner devices such as indoor/outdoor unit, watt-hour meter.

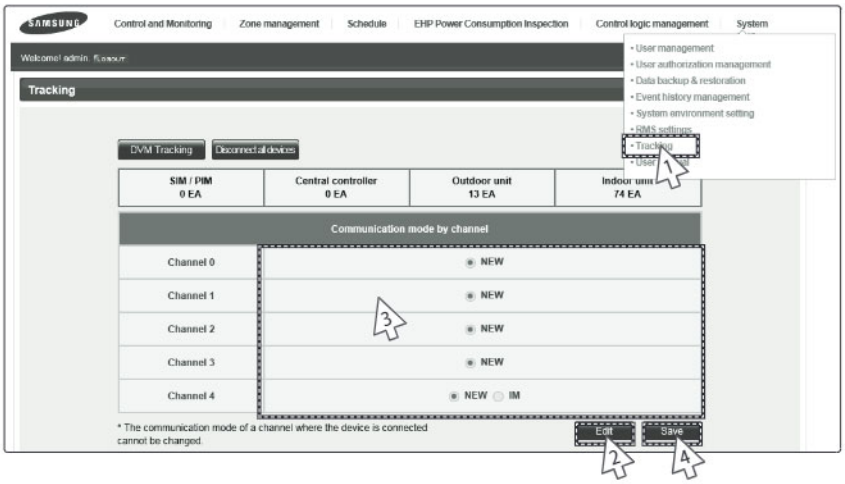
(4) Name setting for each device.
- Name setting for each device is a function that sets the name of connected devices. Set the name which shows installation location of the device.

◆ **Communication mode setting by channel**
Roles
- It records what devices are connected to COM1~ COM5 of DMS2.5.
- Through tracking, DMS2.5 searches proper devices which fits to user's setting.
- Select proper communication mode which fits to connected device.

What is communication mode?
- Outdoor unit, OnOff controller, SIM, PIM can be connected to DMS2.5.
- Following is the list of devices that can be communicated through each communication mode.
  - NEW mode: OnOff controller, outdoor units, and SIM/PIM which support new communication mode.
  - IM mode: IM mode cannot be set, but it can be used for function change or new function with an updated version.

System Settings (Continued)

Communication Mode Setting by Channel



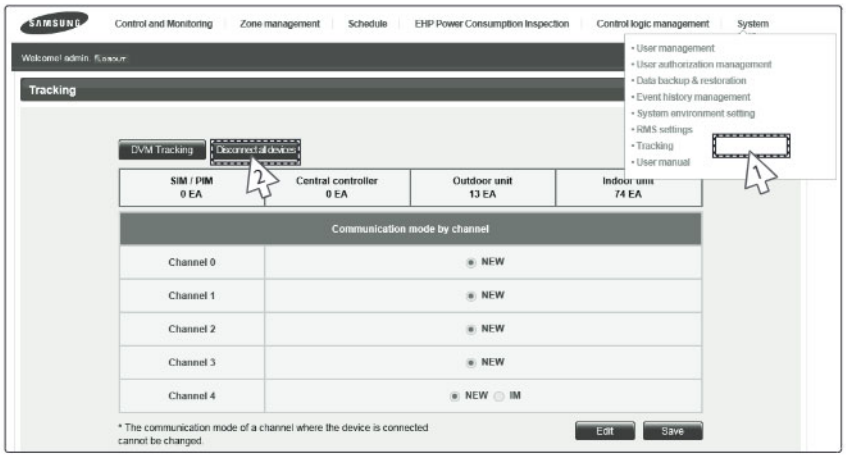
1 Click [System Settings] ➔ [Tracking] when DMS2.5 web page menu screen appears.

2 Click [Edit] from communication mode by channel setting.
- ◆ [Edit] will change to [Cancel].
- ◆ Selection buttons are enabled. However, the channels which have searched device maintains its selection button disabled.

3 When each channel is enabled, check the communication mode you want to set by channel.
- ◆ You cannot change the communication mode of channel which has currently connected device.
- ◆ When 'NEW' is set as communication mode, setting will allow tracking, monitoring and controlling devices that support NEW communication mode.
- ◆ IM mode cannot be set, but it can be used for function change or new function with an updated version.

4 Click [Save] after setting is completed.
- ◆ "Reading data from DMS2.5. Please wait." message appears and saving is completed.
  Then, tracking page with disabled items will be displayed again.
- ◆ If you click [Cancel], check boxes will be disabled and [Cancel] will change to [Edit].

DVM Tracking



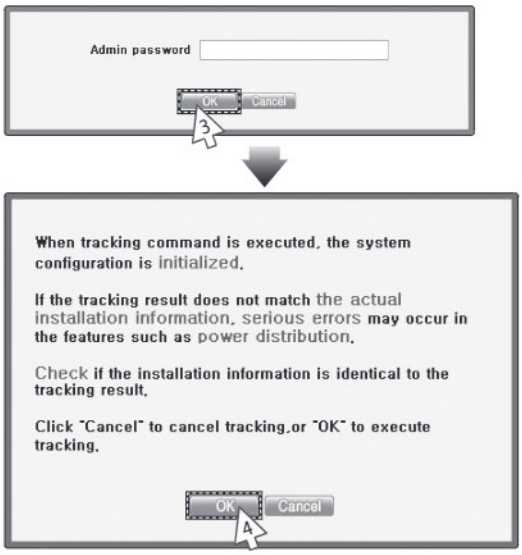
1 Click [System Settings] ➔ [Tracking] when DMS2.5 web page menu screen appears.

2 Click [DVM Tracking].
- ◆ When the addresses of the devices are collected, you can perform re-tracking without collecting detailed information.

CAUTION

Some functions available on DMS2.5 web page may not be functional at BACnet Gateway and LonWorks Gateway. For detailed function, refer to the installation manual or contact Samsung Electronics.

System Settings (Continued)



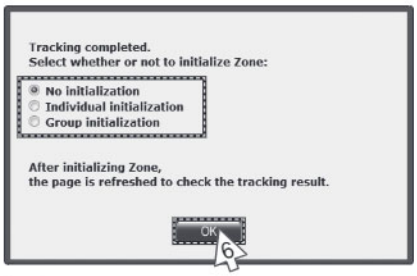
3 Enter administrator's password and then click [OK].

4 Tracking information window pops up. Check and click [OK] to continue.

- ◆ Execute tracking depending on the communication mode set by communication mode setting by channel.
  (1) When 'NEW' is set as communication mode, DMS2.5 executes tracking on devices that supports NEW communication.

5 "Tracking is in progress. Please wait." message appears.

- ◆ Tracking takes from tens of seconds to several ten minutes.
  However, it may vary depending on the number of installed controllers.



6 Tracking completed message will appear.
Select Zone initialization mode you want and click [OK].

- ◆ Not initialize: No zone information initialization will be made.
- ◆ Initialize individually: Initialize zone information as individual mode.
- ◆ Initialize by group: Initialize zone information as group mode.

Note

- ◆ *If tracking is executed successfully while NEW is set as communication mode for each channel, virtual OnOff controller will be assigned to each channel.*
- ◆ *If there is no searched outdoor unit, OnOff controller, SIM/PIM, it is regarded as DVM tracking failure.*
- ◆ *If there are devices which have same address, first searched device will be registered only.*
- ◆ *The number of OnOff controller doesn't contain the number of virtual OnOff controller that is used in NEW communication.*
- ◆ *Group initialization will not be applied to Hydro Unit, Hydro Unit HT and EHS.*

⚠ CAUTION

- ◆ ***If you execute tracking, system setting will be initialized.***
- ◆ ***If tracking result does not match with actual installation information, there can be critical error in additional functions such as power distribution.***
- ◆ ***Make sure that tracking information matches to actual installation information after tracking.***

System Settings (Continued)

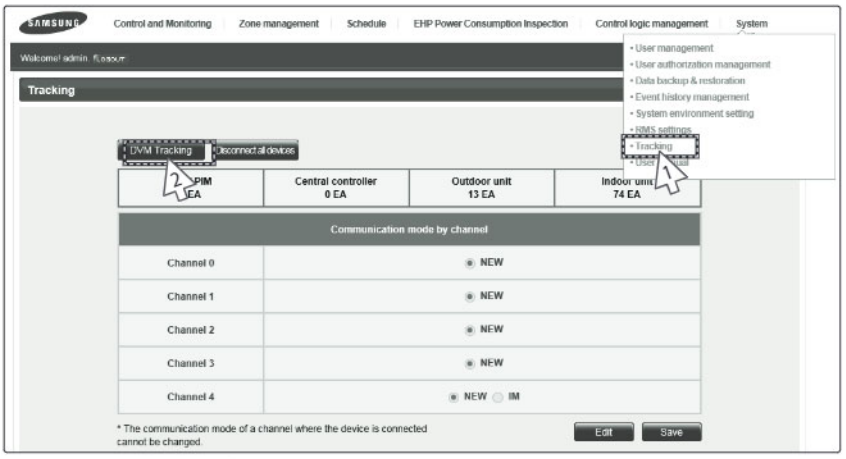
Disconnect All Devices

◆ **Function**

Initialize searched device status in DMS2.5. Using this function, monitoring and controlling of all the connected devices to DMS2.5 will be stopped.

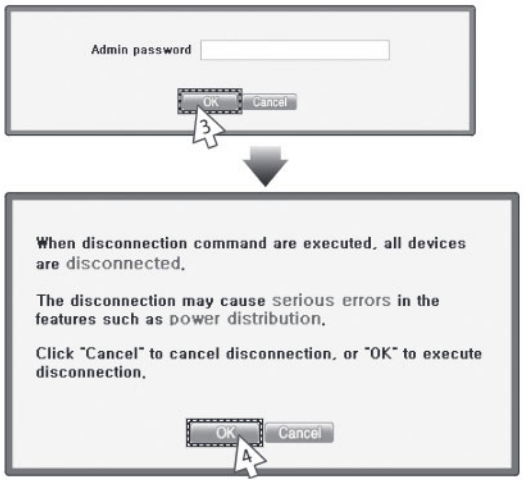
◆ **When is it needed?**

- Connect searched device to the other channel and execute tracking. If the other device is searched in the channel you want to use, use 'Disconnect all devices' function.
- If you use this function, DMS2.5 device connection status will be initialized.



1 Click [System Settings] → [Tracking] when DMS2.5 web page menu screen appears.

2 Click [Disconnect all devices].



3	Enter administrator's password and then click [OK].
4	Disconnect all devices information window pops up. Check it and click [OK] to continue.
5	"Reading data from DMS2.5. Please wait." message appears. After completing disconnect all devices operation, page will be refreshed.

Note

- ◆*After executing disconnect all devices function, device search status of DMS2.5 will be initialized.*
- ◆*You should execute tracking again after using disconnect all devices function.*

System Settings (Continued)

Renaming the Device

1 Click [System Settings] ➔ [Tracking] when DMS2.5 web page menu screen appears.

2 Click [Edit] on the bottom of tracking device list.

- ◆ [Edit] will change to [Cancel].
- ◆ When the type of the device is displayed, New communication address will be shown with it.

3 Enter the device name, which is saved in the PBA of indoor unit and outdoor unit, in the Device name field or enter the name, which is saved in the DMS2.5, in the Name field.

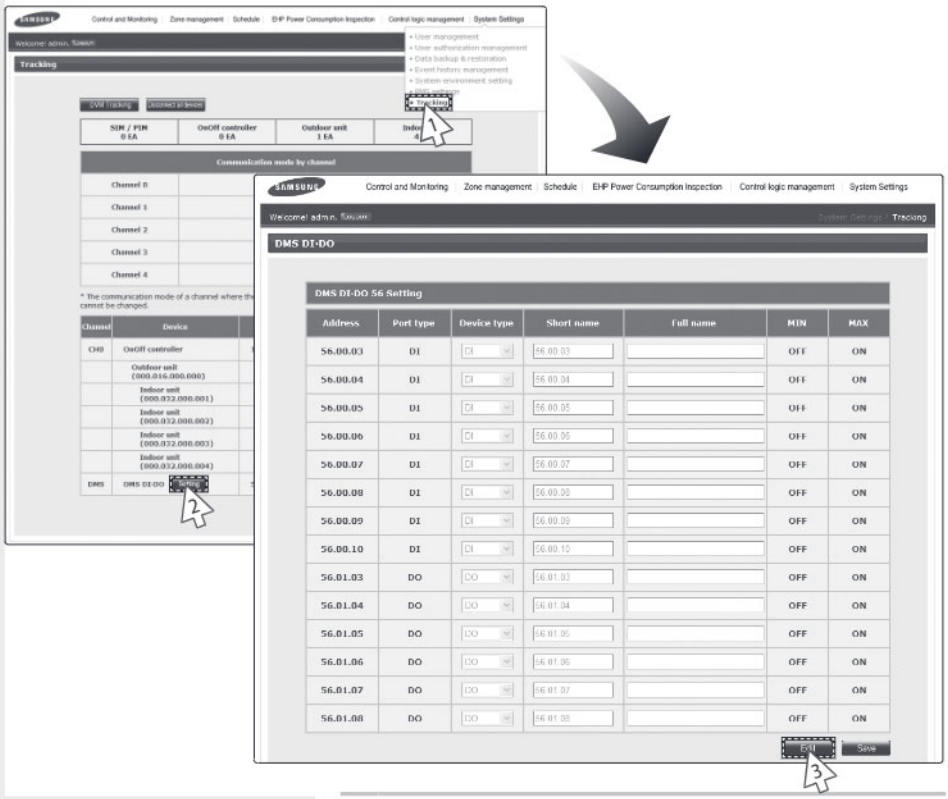
- ◆ You cannot use special symbols as Device name and Name.
- ◆ Select the check box beside 'Device name' if you want to use the name of the device (that supports NEW communication) which is saved in the PBA.

4 Click [Save] after setting is completed.

- ◆ "Reading data from DMS. Please wait." message appears and saving is completed. Then, tracking page with disabled items will be displayed again.
- ◆ If you click [Cancel], input fields are disabled and [Cancel] will change to [Edit].

System Settings (Continued)

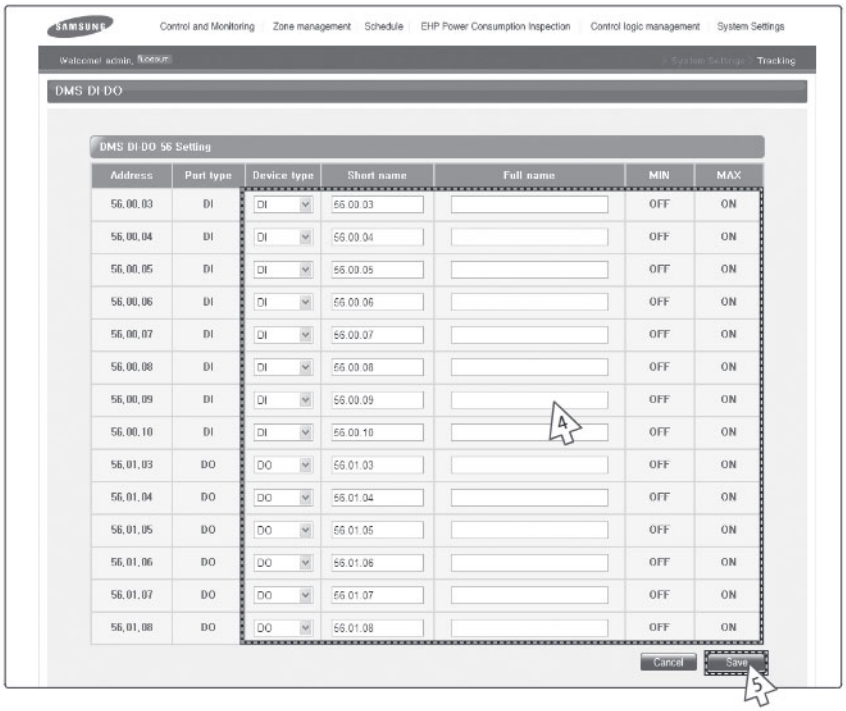
DMS DI•DO Port Setting



1 Select [System Settings] and then click [Tracking].

2 Click [Setting] which is next to DMS DI•DO of device list.

3 Click [Edit] which is on the bottom of DMS DI•DO setting page.
◆ [Edit] will change to [Cancel].



4 Edit each item when DMS DI•DO selection and input fields are enabled.

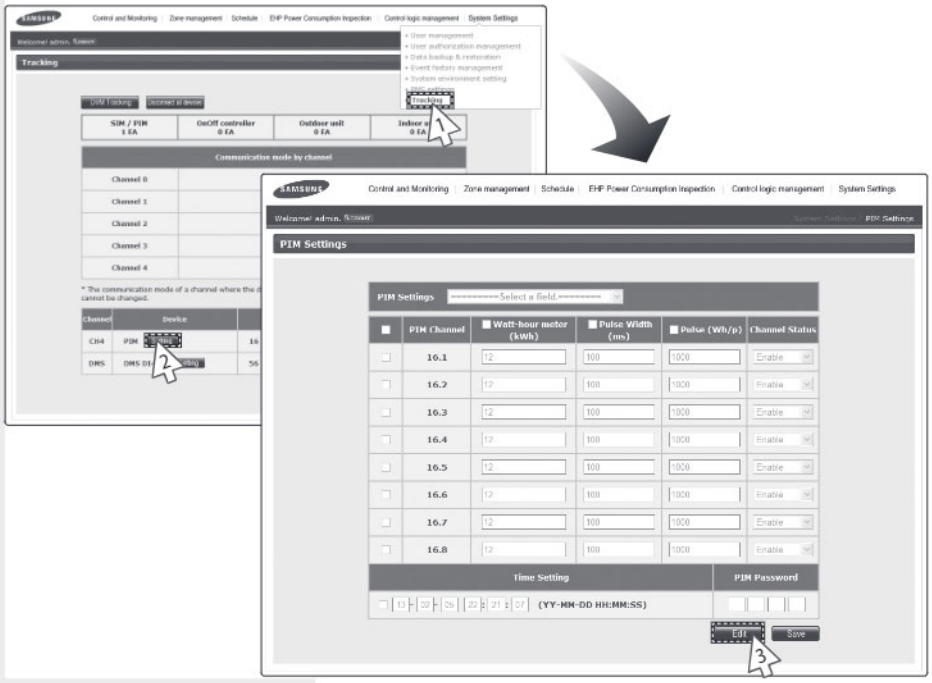
- ◆ Device type : DI or DO
- ◆ Short name : Input short name of the device.
- ◆ Full name : Input full name of the device.
- ◆ Minimum value / Maximum value : MIN value is fixed as OFF and MAX value is fixed as ON.

5 Click [Save].

- ◆ After the saving is complete, DMS DI•DO setting page with all deactivated items will appear.
- ◆ If you press [Cancel], web page will refresh and it goes back to the state before the modification.

System Settings (Continued)

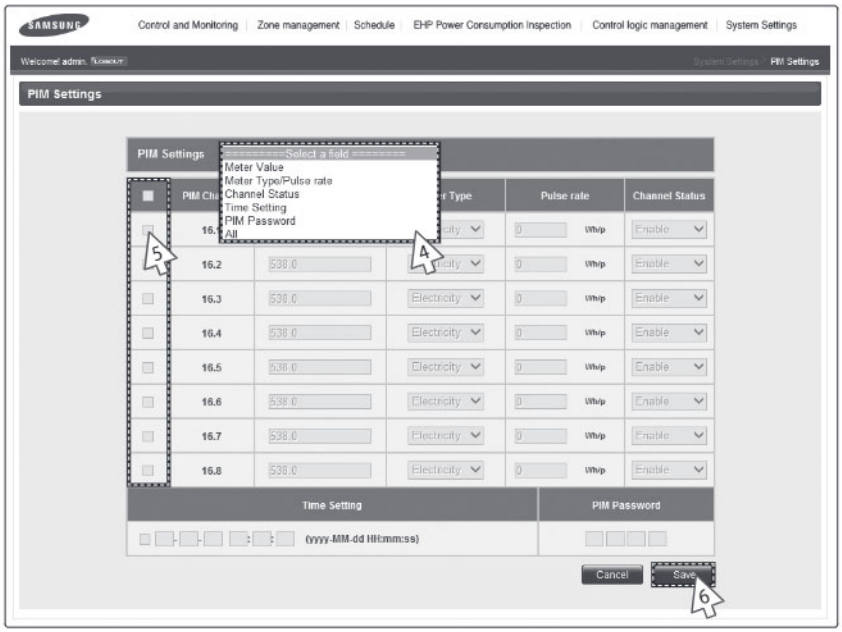
PIM Setting



1 Click [System Settings] → [Tracking] when DMS2.5 web page menu screen appears.

2 Click [Setting] which is next to PIM of device list.
◆ Enter administrator's password and then click [OK].

3 Click [Edit] which is on the bottom of PIM setting page.
◆ [Edit] will change to [Cancel].



4 Select a field you want to change.

- ◆ Meter Value (0~999999.9, to one decimal place)
- ◆ Meter Type / Pulse rate
  - Electricity (1~10000)
  - Water (1~10000)
  - Gas (0.001~10, to three decimal places)
- ◆ Channel Status
- ◆ Time Setting
- ◆ PIM Password (Number)

CAUTION

You should tick the check box of the channel you want to change.

5 Click the check boxes to select the channel applying for the setting.

6 Click [Save].

- ◆ If you press [Cancel], web page will refresh and it goes back to the state before the modification.

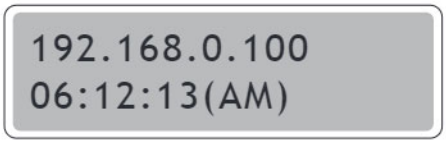
Check Before using Panel

Using LCD and LCD Button

LCD is mounted on DMS2.5 for installation and convenience of the user.

- ◆ You can search menu and change setting using [▲] and [▼] buttons.
- ◆ If you press and hold [▲] or [▼] button in some menu such as IP setting, the value changes faster.
- ◆ To go to upper menu or cancel, select [MENU] button.
- ◆ To go to sub menu, select or save, press [SET] button.
- ◆ Operates some menus with care because they are related to the proper operation of DMS2.5 system.
- ◆ If you do not use DMS2.5 buttons for long periods of time, set button lock to avoid malfunction.
- ◆ Manufacturer is not responsible for the damage caused by wrong operation.

Checking Main Menu



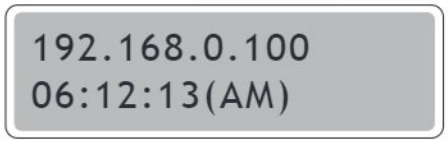
1. If IP and current time are displayed on LCD display, press [Menu], [▲], [▼] or [Set] button.
   - ◆ Main menu screen will be displayed.

2. Check menu options by pressing [▲], [▼] buttons.

1	IP Config	Network information setting
2	In/Outdoor	Checking Indoor/Outdoor unit information
3	DMS2.5 Version	Checking DMS2.5 version
4	DMS2.5 Time	Setting DMS2.5 time
5	Data Backup	Setting data backup
6	Peak Level	Checking peak level
7	Error Status	Checking error information
8	Password Reset	Password reset
9	Button Lock	Button lock function
10	Safety Halt	Safe end function

Setting Network Information

Network Information Setting(IP Config)



1. Check main menus by pressing [Menu], [▲], [▼] or [Set] button.

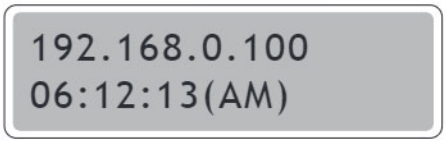
2. Select 1.IP Config by pressing [▲] and [▼] buttons, and press [Set] button.
   - ◆ Network setting screen will be displayed.

3. Select the item you want by pressing [▲] and [▼] buttons.
   - ◆ You can select from IP address, subnet mask address, gateway address, and DNS server.
   - ◆ When an IPv6 address is assigned automatically, it is displayed on the display, but you cannot change it.

4. Edit selected network information by pressing [Set] button.
   - ◆ Number to edit will blink.
   - ◆ You can change value by pressing [▲] and [▼] buttons.
     To move to next number, press [Set] button.
   - ◆ If you press and hold [▲] or [▼] button, the value changes faster.
   - ◆ After setting all the 4-digit number, press [Set] button to save the new settings.
   - ◆ To cancel the setting, press [Menu] button.

Setting Network Information (Continued)

Auto Address Setting (DHCP CONFIG)



1. Check main menus by pressing [Menu], [▲], [▼] or [Set] button.

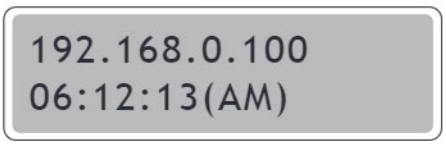
2. Select 1.IP Config by pressing [▲] and [▼] buttons, and press [Set] button.
   - ◆ Network setting screen will be displayed.

3. Select auto address setting function(DHCP CONFIG) by pressing [▼] button.
   - ◆ Auto address setting function status will be displayed.
     - Current disabled: Auto address setting function disabled
     - Current enabled: Auto address setting function enabled

4. Enable/Disable auto address setting function by pressing [Set] button.
   - ◆ If auto address setting function enabled
     - You can change it to disabled status by pressing [Set] button.
   - ◆ If auto address setting function disabled
     - You can change it to enabled status by pressing [Set] button.
   - ◆ To maintain current status, press [Menu] button.
   - ◆ DHCP function is not available when you use BACnet Gateway function.

Checking Indoor/Outdoor Unit Information

Checking Indoor/Outdoor Unit Information



1. Check main menus by pressing [Menu], [▲], [▼] or [Set] button.

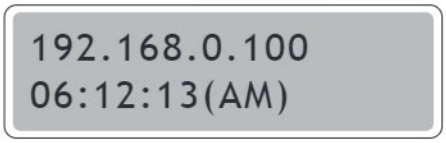
2. Select 2.In/Outdoor by pressing [▲] and [▼] buttons.

3. Press [Set] button.
   - ◆ The number of indoor units connected to DMS2.5 will be displayed.

4. Check outdoor unit information by pressing [▼] button.
   - ◆ The number of outdoor units connected to DMS2.5 will be displayed.
   - ◆ To check indoor unit information again, press [▲] button.
   - ◆ You can go back to main menu by pressing [Menu] or [Set] button.

Checking DMS2.5 Version

Checking DMS2.5 Version



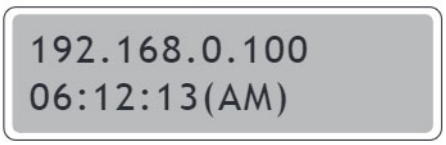
1. Check main menus by pressing [Menu], [▲], [▼] or [Set] button.

2. Select 3. Version by pressing [▲] and [▼] buttons.

3. Press [Set] button.
   - ◆ Current version of DMS2.5(DMS2.5 Version) will be displayed.
   - ◆ You can go back to main menu by pressing [Menu] or [Set] button.

Checking DMS2.5 version (Continued)

DMS2.5 Time Setting – Checking and Setting Date



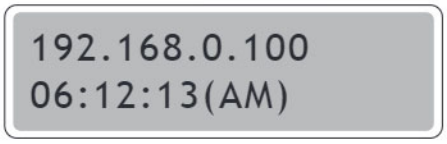
1. Check main menus by pressing [Menu], [▲], [▼] or [Set] button.

2. Select 4. Time by pressing [▲] and [▼] buttons.
   - ◆ Current set date of DMS2.5 will be displayed.

3. When 'CURRENT DATE' appears, set current data by pressing [Set] button.
   - ◆ Number to edit blinks.
   - ◆ You can change value by pressing [▲] and [▼] buttons. To move to the next number, press [Set] button.
   - ◆ Press and hold [▲], [▼] buttons to change the number continuously.
   - ◆ Set year, month and day in order, and then press [Set] button to save.
   - ◆ To cancel the setting, press [Menu] button.

Checking DMS2.5 version (Continued)

DMS2.5 Time Setting – Checking and Setting Time



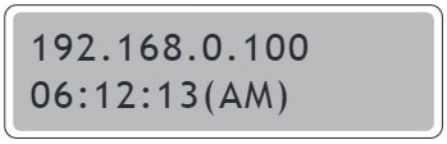
1. Check main menus by pressing [Menu], [▲], [▼] or [Set] button.

2. Select 4. Time by pressing [▲] and [▼] buttons.
◆ Current set time of DMS2.5 will be displayed.

3. Select 'CURRENT TIME' by pressing [▼] button. Then set time by pressing [Set] button.
◆ Current set time of DMS2.5 will be displayed.
◆ Number to edit blinks.
◆ You can change value by pressing [▲] and [▼] buttons. To move to the next number, press [Set] button.
◆ Press and hold [▲], [▼] buttons to change the number continuously.
◆ Set hour, minute and second in order, then press [Set] button to save.
◆ To cancel the setting, press [Menu] button.

Data Backup Setting

Data Backup

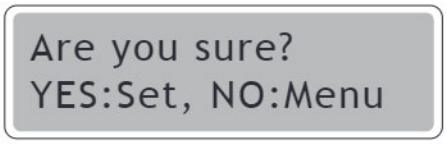


1. Check main menus by pressing [Menu], [▲], [▼] or [Set] button.

2. Select 5. Data Backup by pressing [▲] and [▼] buttons.
   - ◆ BACKUP MENU will appear.

3. Check if data backup is selected. Then press [Set] button.
   - ◆ You can start backup by pressing [Set] button again.
   - ◆ If data backup is completed successfully, screen below will be displayed.

   - ◆ To cancel backup, press [Menu] button.

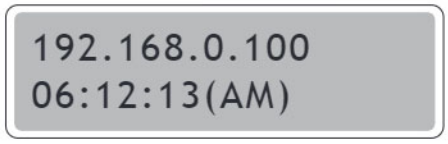


⚠ CAUTION

- ◆ ***Before executing data backup, check if SD card is inserted.***
- ◆ ***Unlock forbidding writing tab of SD card.***

Data Backup Setting (Continued)

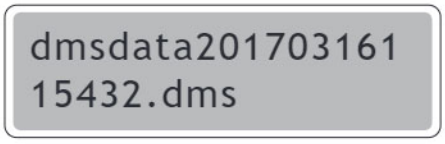
Data Restore



1. Check main menus by pressing [Menu], [▲], [▼] or [Set] button.

2. Select 5.Data Backup by pressing [▲] and [▼] buttons, and then press [Set] button.
   - ◆ BACKUP MENU will appear.

3. Check if data restore is selected by pressing [▲] button. Then select a file you want to restore by pressing [▲] and [▼] buttons.
   - ◆ Before executing data restore, check if SD card is inserted.



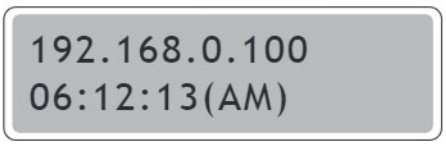
4. Start data restore by pressing [Set] button.
   - ◆ To cancel restoration, press [Menu] button.

CAUTION

- ◆ ***When controlling DMS2.5 using panel, data restore is only possible in SD card. You can execute PC restoration through web browser.***
- ◆ ***Unlock forbidding writing tab of SD card.***

Checking Error Information

Checking Error Information



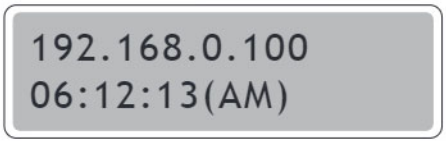
1. Check main menus by pressing [Menu], [▲], [▼] or [Set] button.

2. Select 7. Error Status by pressing [▲] and [▼] buttons, and then press [Set] button.
   - ◆ Unsolved error info will be displayed.

3. You can check the other error information by pressing [▲] and [▼] buttons.
   - ◆ You can check the next error information by pressing [▼]. To check the previous error, press [▲] button.

Reset Password

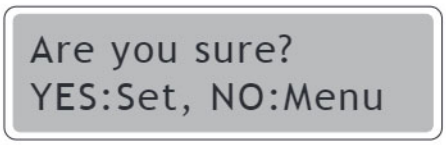
Reset Password



1. Check main menus by pressing [Menu], [▲], [▼] or [Set] button.

2. Select 8.Password Reset by pressing [▲] and [▼] buttons, and then press [Set] button.

3. When "RESET PASSWORD WAITING....." message appears, press [Menu] and [Set] buttons at the same time.
   - ◆ Button lock function will be released and confirm message for password initialization will appear.
   - ◆ If there is no button input for around 3 seconds, password reset will be failed and it will return to main menu.

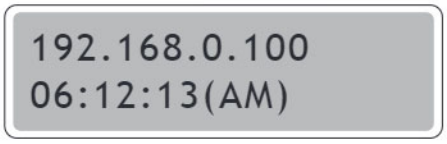


4. Reset password by pressing [Set] button.
   - ◆ Password will be reset as factory setting. (ac0530)
   - ◆ To cancel reset password, press [Menu] button.

Note ◆ If you reset the password while you are accessed to the DMS2.5 web page, you must close the browser and then re-login in order to use resetted password.

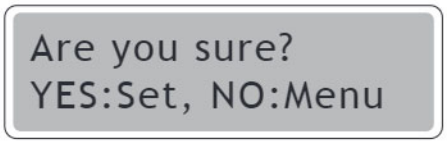
Button Lock

Button Lock



1. Check main menus by pressing [Menu], [▲], [▼] or [Set] button.

2. Select 9.Button Lock by pressing [▲] and [▼] buttons.



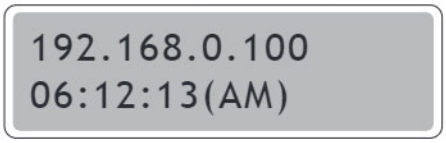
3. Press [Set] button.
   - ◆ Confirm message will appear.

4. Press [Set] button.
   - ◆ LCD operating button will be locked.
   - ◆ To cancel button lock, press [Menu] button.

5. To release button lock function, press [Menu] and [Set] button at the same time for 5 seconds.

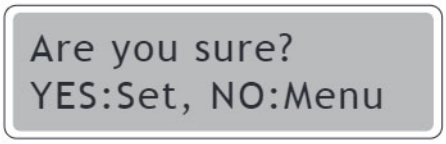
Safety Halt

Safety Halt

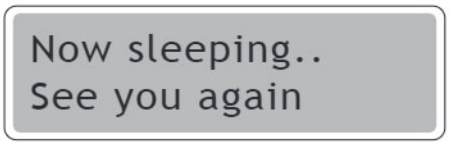


1. Check main menus by pressing [Menu], [▲], [▼] or [Set] button.

2. Select 10.Safety Halt by pressing [▲] and [▼] buttons.



3. Press [Set] button.
   - ◆ Confirm message will appear.



4. Press [Set] button.
   - ◆ All functions of DMS2.5 will stop and 'Now Sleeping..' phrase will appear.

Note

- ◆ *Safety halt function is an operation that saves data of DMS2.5 and then stops service safely. Use this function when relocation and system restart are needed.*
- ◆ *This function will not transfer DMS2.5 power to OFF status. Therefore, when the screen above appears, press [RESET] button on the bottom of DMS2.5 or remove power cable. If you do not press [RESET] button or remove power after 1 minutes passed, DMS2.5 will restart automatically.*

Troubleshooting

Problem	Check	Solution
DMS2.5 is not working.	Is there an electricity failure?	Check if the power is connected to the other interface module besides OnOff controller. Then try again.
	Isn't there a communication error in the other interface module besides OnOff controller?	Check the connection of communication cable. Then try again.
	Are the adapter and power cable connected?	Check the connection of adapter and power cable. Then try again.
Access to web page is not available.	Is Microsoft Silverlight installed?	Check the installation status. Refer to Start → Control Panel → Add/Remove Programs.
	Is Microsoft Silverlight installed properly?	Microsoft Silverlight 2.0 or later version should be installed to access web page.
Access to web page from outside is not available.	Are the network settings set?	Contact network manager first.
	Isn't the fire wall set?	
Power distribution is not executed properly.	Isn't the power of DMS2.5 disconnected?	To use power distribution function properly, the power of DMS2.5 should be connected all the time.

Troubleshooting (Continued)

Problem	Check	Solution
I forgot DMS2.5 IP.	Press [Menu] button from the main menu and "1. IP Config" will appear. Then press [Set] button.	The factory setting of DMS2.5 IP address is 192.168.0.100
Indoor unit turned on or off automatically.	Isn't the schedule control in operation?	Depending on the schedule control, indoor unit can be turned on or off automatically. It is normal operation.
	Is DMS2.5 system time different from current time?	Set the DMS2.5 system time according to current time.
DI(Digital Input) external contact point function is not working.	Is the external circuit constituted?	Check if the external circuit is constituted.
	If the contact control pattern of DMS2.5 set to 1?	Set the pattern which fits to the control pattern you want.
Tracking is not working.	Does it show 'Tracking Fail' and is there no indoor unit?	It means tracking failure. Execute tracking again.

Specifications

Items		Description
Exterior		
Size		240 X 255 X 64.8 mm (Width X Length X Height)
Weight		1.48 Kg
Power	Source	DC ADAPTOR
	INPUT Voltage	100-240V 50/60Hz 1.0A
	OUTPUT Voltage	12V 3A
Inter-face	RS-485	5 Channels
	Ethernet	10/100Mbps 1 Port
	SD CARD	Option (Purchase SD card separately)
	DI	12V Digital Input 10 Channels
	DO	12V Digital Output 8 Channels
	Etc.	Serial Port, Reset Button
Display		16-Character X 2-Line Character LCD
Input method		Menu/Up/Down/Set 4-Tact Button

License

Open Source Announcement

The software included in this product contains open source software. You may obtain the complete corresponding source code for a period of three years after the last shipment of this product by contacting our support team via http://opensource.samsung.com (Please use the "Inquiry" menu.)

It is also possible to obtain the complete corresponding source code in a physical medium such as a CD-ROM; a minimal charge will be required.

The following URL http://opensource.samsung.com/opensource/DMS2_5/seq/1 leads to the open source license information as related to this product. This offer is valid to anyone in receipt of this information.

Memo

SAMSUNG

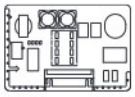
DB68-06098A-12

Remocon module installation

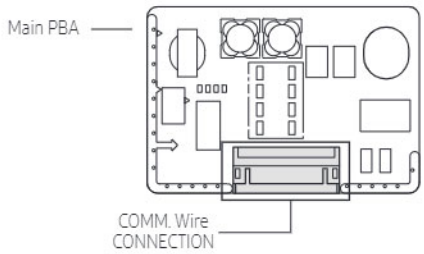
DB68-08843A-00

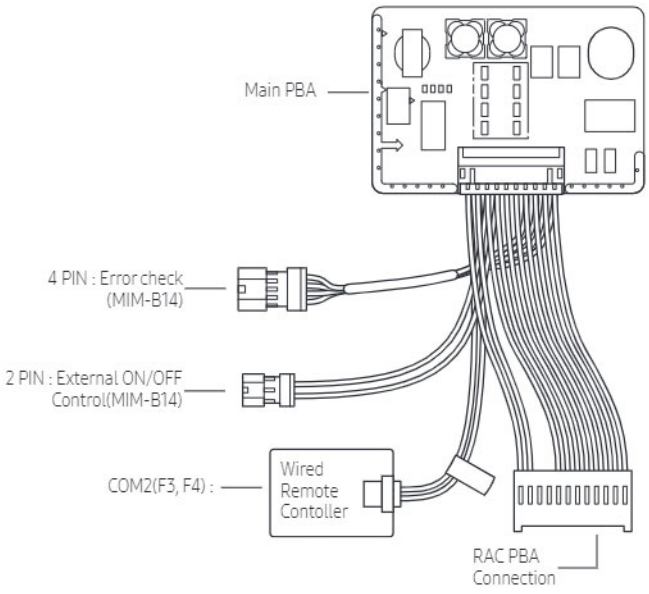
■ Model : MIM-A00N / A00UN

Components part

Product Name	Main PBA	COMM. Wire	Case
Quantity	1EA	1EA	1EA
Shape			
Code	DB92-02809A	DB93-17172A	DB61-07433A

Description





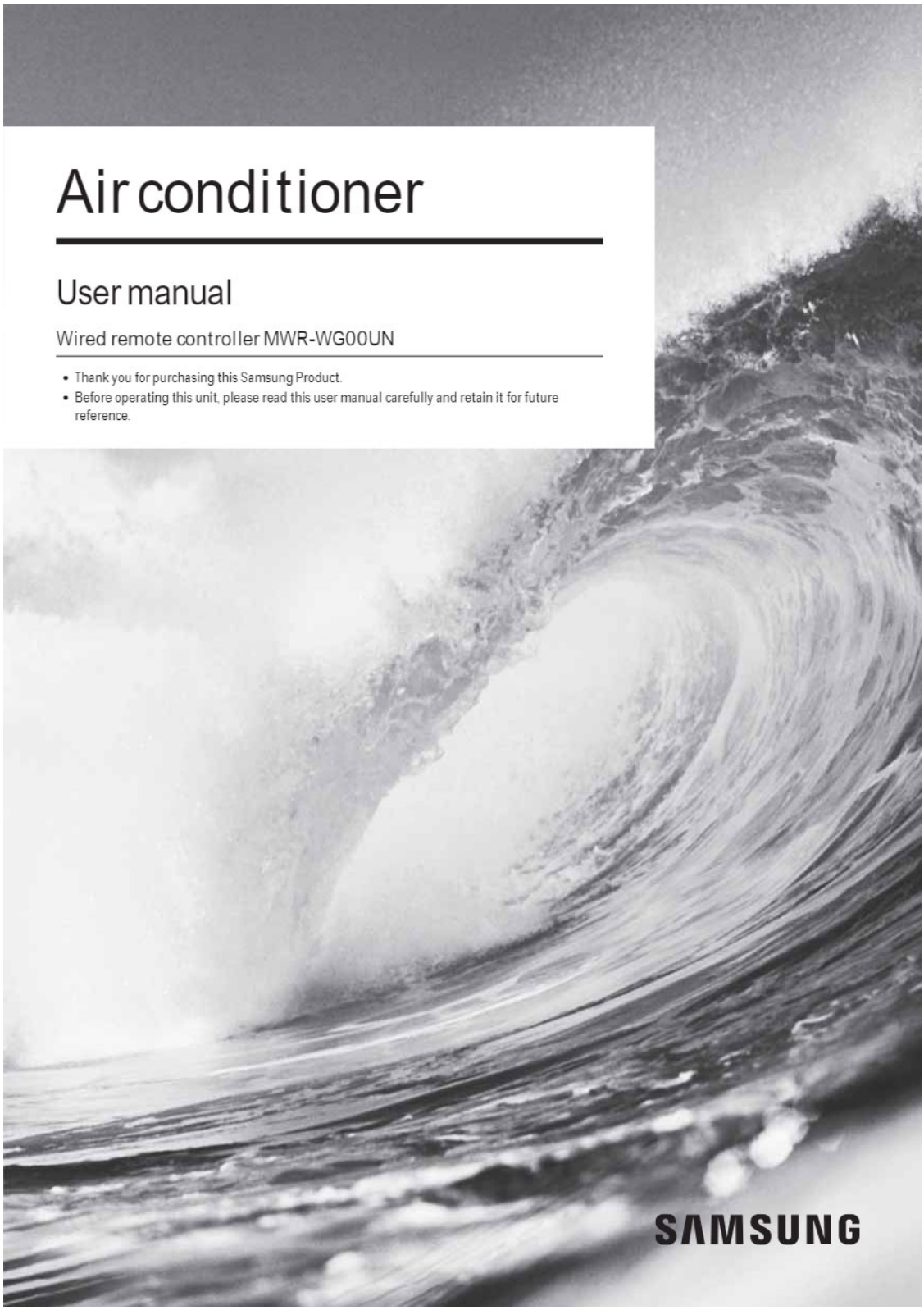
English

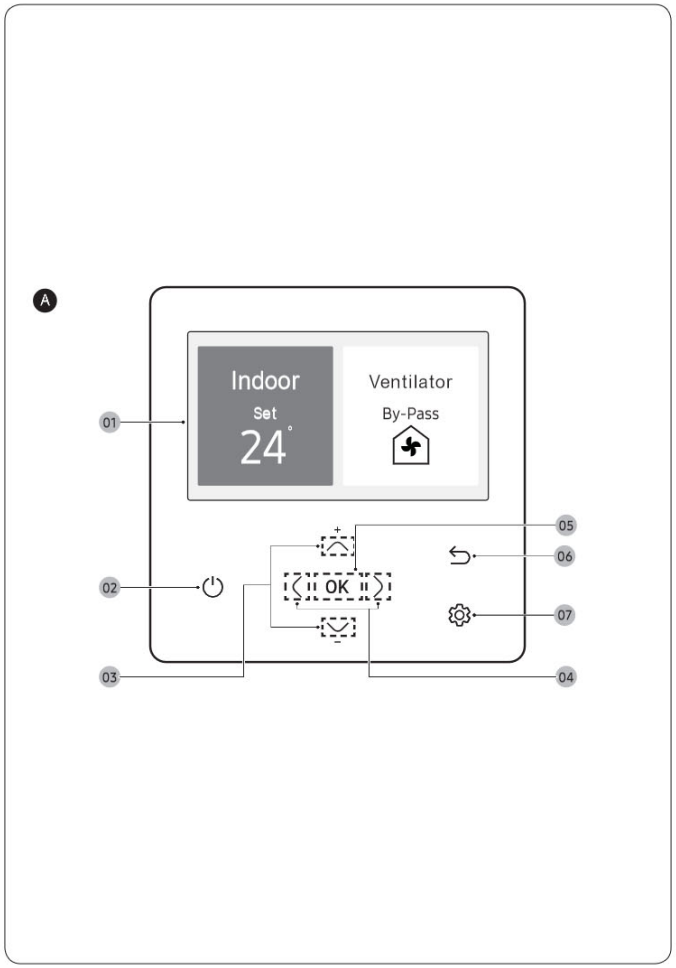
Air conditioner

User manual

Wired remote controller MWR-WG00UN

- Thank you for purchasing this Samsung Product.
- Before operating this unit, please read this user manual carefully and retain it for future reference.





A Remote Controller Overview

EN

01 Operation status display
- Displays the operation/function settings and statuses.

02 Operation On/Off button (LED display)
- Turns the air conditioner/ventilator power On/Off

03 Up/Down button
- Moves between items vertically or changes the set temperature.

04 Left/Right button
- Moves between items horizontally or changes the item value.

05 OK button
- Saves your new settings.

06 Save & Return button
- Saves your new settings and returns to the previous step.

07 Option button
- Selects the detailed setting function.

B NOTE

- The operation mode display on the remote controller changes depending on the selected language.
- Some functions may not be available, depending on the indoor unit specifications.
- You can see the operation status on the LED display.
  - ON: Operating,
    Blinking: An error occurred,
    OFF: Turns off

A Descripción general del control remoto

ES

01 Pantalla de estado de funcionamiento
- Muestra los ajustes y estados del funcionamiento o función.

02 Botón de Funcionamiento On/Off (pantalla LED)
- Apaga o enciende la alimentación del aire acondicionado o ventilador

03 Botón Arriba/Abajo
- Se mueve verticalmente entre los elementos o cambia la temperatura establecida.

04 Botón Izquierda/Derecha
- Se mueven horizontalmente entre los elementos o cambia el valor del elemento.

05 Botón OK
- Guarda sus ajustes nuevos.

06 Botón Guardar y Volver
- Guarda sus nuevos ajustes y vuelve al paso anterior.

07 Botón Opción
- Selecciona la función de ajuste detallado.

B NOTA

- La pantalla de modo de funcionamiento del control remoto cambia según el idioma seleccionado.
- Es posible que algunas funciones no estén disponibles, según las especificaciones de la unidad interna.
- Puede ver el estado de funcionamiento en la pantalla LED.
  - ENCENDIDO Funcionando,
    Parpadeando: Se ha producido un error,
    OFF: Apaga

A Aperçu de la télécommande

FR

01 Affichage de l'état de fonctionnement
- Affiche les réglages et les états du fonctionnement/de la fonction.

02 Bouton de mise en marche/arrêt (affichage LED)
- Met le climatiseur/ventilateur en marche/arrêt

03 Bouton haut/bas
- Parcourt les éléments verticalement ou modifie la température configurée.

04 Bouton gauche/droite
- Parcourt les éléments horizontalement ou modifie la valeur de l'élément.

05 Bouton OK
- Enregistre vos nouveaux réglages.

06 Bouton d'enregistrement et de retour
- Enregistre vos nouveaux réglages et retourne à l'étape précédente.

07 Bouton Option
- Sélectionne la fonction de réglage avancé.

B REMARQUE

- L'affichage du mode de fonctionnement sur la télécommande change en fonction de la langue sélectionnée.
- La disponibilité de certaines fonctions dépend des spécifications de l'unité intérieure.
- Vous pouvez voir l'état de fonctionnement sur l'affichage LED.
  - ON : En fonctionnement,
    Clignotant : Une erreur s'est produite,
    OFF : S'éteint

A Descrição geral do controlo remoto

PT

01 Visor do estado de funcionamento
- Exibe as definições e os estados de funcionamento/função.

02 Botão Ligar/Desligar funcionamento (visor LED)
- Liga/Desliga o aparelho de ar condicionado/ventilador

03 Botão Para cima/Para baixo
- Navega verticalmente entre itens ou altera a temperatura definida.

04 Botão Esquerda/Direita
- Navega horizontalmente entre itens ou altera o valor de um item.

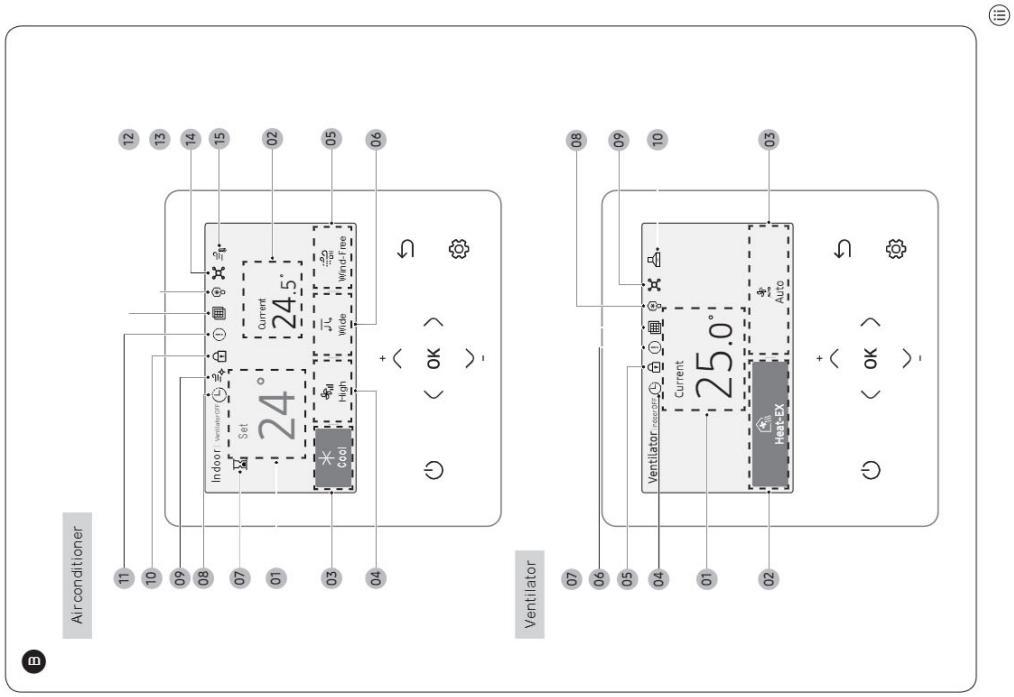
05 Botão OK
- Guarda as suas novas definições.

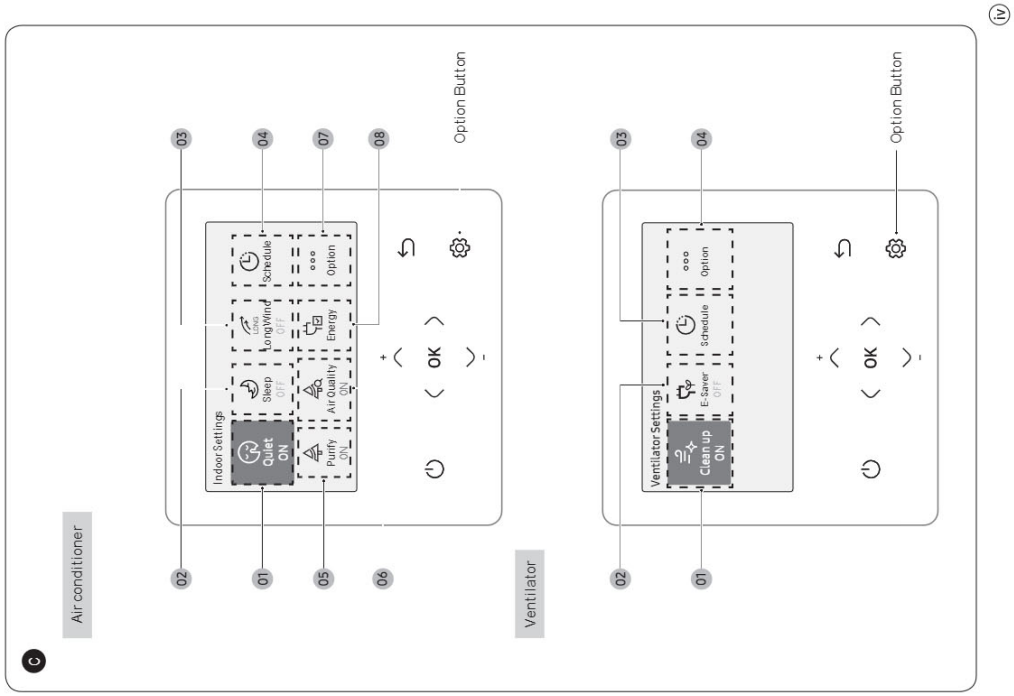
06 Botão Guardar& Voltar
- Guarda as suas novas definições e volta ao passo anterior.

07 Botão Opção
- Seleciona a função de definições detalhadas.

B NOTA

- O visor do modo de funcionamento no controlo remoto altera-se em função do idioma selecionado.
- Algumas funções poderão não estar disponíveis, dependendo das especificações da unidade interior.
- Pode ver o estado de funcionamento no visor LED.
  - LIGADO: em funcionamento,
    Intermitente: ocorreu um erro,
    OFF: desliga-se


(iii)
Air conditioner
Ventilator
Indoor
Set
24°
Current
24.5°
Cool
High
Wide
Wind-Free
Ventilator
Current
25.0°
Auto
Heat-EX


(iv)
Air conditioner
Ventilator
Option Button
Indoor Settings
Quiet ON
Sleep OFF
Air Quality ON
Purify ON
LongWind OFF
Energy
Schedule
Option
Ventilator Settings
Clean up ON
E-Saver OFF
Schedule
Option
OK

B Home Screen Overview

EN

Air conditioner

01 Set temperature display
02 Current temperature display
03 Operation mode display
- Displays any of Auto, Cool, Dry, Fan, and Heat.

04 Fan speed display
- Displays any of Auto, Turbo, High, Medium, and Low.

05 Wind-Free display
06 Air flow direction display
- Displays any of Fix, Spot, Mid, Wide, Swing, and Individual.

07 Activation Time Setting display
- When Energy Saving Timer is activated.
- When Override time is activated.

08 Schedule indicator
- When a General Schedule is set.
- When a Setback Schedule is set.

09 Clean indicator
10 Lock indicator
11 Check indicator
12 Filter reset indicator
13 Defrost indicator
14 Central Control indicator
15 Discharge temperature indicator

Ventilator

01 Current temperature display
02 Operation mode display
- Displays any of Heat-EX, Auto, By-Pass, Quiet, and Away.

03 Fan speed display
- Displays any of Auto, Turbo, High, and Low.

04 Schedule indicator
- When a General Schedule is set.
- When a Setback Schedule is set.

05 Lock indicator
06 Check indicator
07 Filter reset indicator
08 Defrost indicator
09 Central Control indicator
10 Range hood (Exhaust hood) indicator

NOTE

- Unavailable functions are marked inactive and they cannot be set.
- The locations of icons may differ depending on the function.
- When you do not press any button for 7 seconds, the function of the position is automatically selected.

C Settings Screen Overview

Press the ⚙ button to enter the Settings screen and then select the desired function or option.

Air conditioner

01 Quiet display
- Displays the Quiet function.

02 Sleep display
- Displays the Sleep function.

03 Long Wind display
- Displays the Long Wind function.

04 Schedule display
- Displays any of Timer, Weekly schedule, Yearly schedule, and Holiday.

05 Purify display
- Displays the Purify function.

06 Air Quality display
- Displays the Air Quality.

07 Option display
- Displays the Option.

08 Energy display
- Displays any of Energy Usage, Energy Saving, and Energy Settings.

Ventilator

01 Clean up display
- Displays the Clean up function.

02 E-Saver display
- Displays the E-Saver function.

03 Schedule display
- Displays any of Timer, Weekly schedule, Yearly schedule, and Holiday.

04 Option display
- Displays the Option.

NOTE

- Unavailable functions are marked inactive and they cannot be set.
- In the menu with the > in the Option menu, you can select a menu with the > button.
- When you do not press any button for 180 seconds with the option active, the settings are not saved and the Home screen appears.

B Descripción general de la pantalla de inicio

ES

Aire acondicionado

01 Pantalla temperatura establecida
02 Pantalla temperatura actual
03 Pantalla modo de funcionamiento
- Muestra cualquiera de los valores Auto, Frío, Seco, Vent o Calor.

04 Pantalla de velocidad del ventilador
- Muestra cualquiera de los valores Auto, Turbo, Alto, Medio o Bajo.

05 Pantalla de Wind-Free
06 Pantalla de dirección del flujo de aire
- Muestra cualquiera de los valore Fijo, Concentrado, Medio, Amplio, Swing o Individual.

07 Visualización de Ajustes de Activación
- Cuando se activa Temporizador de Ahorro Energético.
- Cuando se activa el tiempo de Anular.

08 Indicador de Programa
- Cuando se establece una Horario.
- Cuando se establece una Retrasar Horario.

09 Indicador de Limpiar
10 Indicador de Bloqu.
11 Indicador de comprobación
12 Indicador de Reinicio de filtor
13 Indicador de Desescarche
14 Indicador de Control central
15 Indicador de Tª de descarga

Ventilación

01 Pantalla temperatura actual
02 Pantalla modo de funcionamiento
- Muestra cualquiera de los valores Recup., Auto, By-Pass, Silencioso o Ausente.

03 Pantalla de velocidad del ventilador
- Muestra cualquiera de los valores Auto, Turbo, Alto o Bajo.

04 Indicador de Programa
- Cuando se establece una Horario.
- Cuando se establece una Retrasar Horario.

05 Indicador de Bloqu.
06 Indicador de comprobación
07 Indicador de Reinicio de filtor
08 Indicador de Desescarche
09 Indicador de Control central
10 Indicador de Extractor (Campana extractora)

NOTA

- Las funciones no disponibles se marcan como inactivas y no se pueden establecer.
- La ubicación de los iconos puede diferir según cada función.
- Si no presiona ningún botón durante siete segundos, la función de la posición se selecciona automáticamente.

C Descripción general de la pantalla de ajustes

Pulse el botón ⚙ para entrar en la pantalla de ajustes y, a continuación, seleccione la función u opción deseada.

Aire acondicionado

01 Pantalla Silen.
- Muestra la función Silen.

02 Pantalla Sleep
- Muestra la función Sleep.

03 Pantalla Long Wind
- Muestra la función Long Wind.

04 Pantalla Programa
- Muestra cualquiera de los siguientes valores: Temporizador, Programa semanal, Programa anual o Vacaciones.

05 Pantalla Lmp.
- Muestra la función Lmp.

06 Pantalla Calidad Aire
- Muestra la Calidad Aire.

07 Pantalla Opción
- Muestra la Opción.

08 Pantalla Energía
- Muestra cualquiera de los siguientes valores:Consumo de energía, Eco o Ajustes de energía.

Ventilación

01 Pantalla Lmp.
- Muestra la función Lmp..

02 Pantalla Eco
- Muestra la función Eco.

03 Pantalla Programa
- Muestra cualquiera de los siguientes valores: Temporizador, Programa semanal, Programa anual o Vacaciones.

04 Pantalla Opción
- Muestra la Opción.

NOTA

- Las funciones no disponibles se marcan como inactivas y no se pueden establecer.
- En el menú con el signo > dentro del menú Opción, podrá seleccionar un menú con el botón >.
- Si no pulsa ningún botón durante 180 segundos con la opción activa, los ajustes no se guardan y aparece la pantalla de inicio.

B Aperçu de l'écran d'accueil

FR

Climatiseur

01 Affichage de la température configurée
02 Affichage de la température actuelle
03 Affichage du mode de fonctionnement
- Affiche n'importe laquelle de ces options : Auto, Froid, Sec, Ventil, et chaud.

04 Affichage de la vitesse du ventilateur
- Affiche n'importe laquelle de ces options : Auto, Turbo, Grande, Moyenne, et Petite.

05 Affichage Wind-Free™
06 Affichage de la direction du flux d'air
- Affiche n'importe laquelle de ces options : Fixe, Fixe, Moyen, Large, Balayage, et Individuelle.

07 Affichage de Réglage Heure
- Lorsque Timer mode économie d'énergie est activé.
- Lorsque l'heure de Passer est activée.

08 Indicateur de Prog.
- Lorsqu'un Programmation est configuré.
- Lorsqu'un Retour programmation est configuré.

09 Voyant de Nettoyage
10 Voyant de Verrouillage
11 Voyant de vérification
12 Voyant de Réinitialisation du filtre
13 Voyant de Dégivrage
14 Voyant de Commande centrale
15 Voyant de Température de sortie

Ventilateur

01 Affichage de la température actuelle
02 Affichage du mode de fonctionnement
- Affiche n'importe laquelle de ces options : Récup., Auto, Dériv., Silence, et Absence.

03 Affichage de la vitesse du ventilateur
- Affiche n'importe laquelle de ces options : Auto, Turbo, Grande, et Petite.

04 Indicateur de Prog.
- Lorsqu'un Programmation est configuré.
- Lorsqu'un Retour programmation est configuré.

05 Voyant de Verrouillage
06 Voyant de vérification
07 Voyant de Réinitialisation du filtre
08 Voyant de Dégivrage
09 Voyant de Commande centrale
10 Voyant de Hotte (hotte d'évacuation)

REMARQUE

- Les fonctions indisponibles apparaissent inactives et ne peuvent être configurées.
- L'emplacement des icônes peut différer selon la fonction.
- Lorsque vous n'appuyez sur aucun bouton pendant 7 secondes, la fonction de la position est sélectionnée automatiquement.

C Aperçu de l'écran de configuration

Appuyez sur le bouton ⚙ pour accéder à l'écran de configuration puis sélectionnez la fonction ou l'option souhaitée.

Air-conditioner

01 Affichage Silence
- Affiche la fonction Silence.

02 Affichage Nuit
- Affiche la fonction Nuit.

03 Affichage Lg portée
- Affiche la fonction Lg portée .

04 Affichage Prog.
- Affiche n'importe laquelle de ces options : Minuteur, Programmation hebdo., Programmation annuelle, et Programmation Vacances.

05 Affichage Nettoyage
- Affiche la fonction Nettoyage.

06 Affichage Qualité air
- Affiche la Qualité air.

07 Affichage Option
- Affiche l'Option.

08 Affichage Énergie
- Affiche n'importe laquelle de ces options : Conso. énergétique, Économie d'énergies, et Réglages énergétiques.

Ventilateur

01 Affichage Nettoyage
- Affiche la fonction Nettoyage.

02 Affichage Éco énergie
- Affiche la fonction Éco énergie.

03 Affichage Prog.
- Affiche n'importe laquelle de ces options : Minuteur, Programmation hebdo., Programmation annuelle, et Programmation Vacances.

04 Affichage Option
- Affiche l'Option.

REMARQUE

- Les fonctions indisponibles apparaissent inactives et ne peuvent être configurées.
- Dans le menu avec > dans le menu Option, vous pouvez sélectionner un menu au moyen du bouton >.
- Lorsque vous n'appuyez sur aucun bouton pendant 180 secondes avec l'option active, les réglages ne sont pas enregistrés et l'écran d'accueil apparaît.

B Descrição geral do ecrã inicial

PT

Aparelho de ar condicionado

01 Visor da temperatura definida
02 Visor da temperatura atual
03 Visor do modo de funcionamento
- Exibe Auto, Arref., Desum., Vent e Aquec.

04 Visor da velocidade da ventoinha
- Exibe Auto, Turbo, Alto, Médio e Baixo.

05 Visor Wind-Free
06 Visor da direção do fluxo de ar
- Exibe Corrigir, Localizado, Médio, Disperso, Oscilação e Individual.

07 Visor Configuração da hora de início
- Quando Temporizador de economia de energia é ativado.
- Quando o tempo Sobreposição é ativado.

08 Indicador Programação
- Quando um Horário geral é definido.
- Quando um Horário de vazio é definido.

09 Indicador Limpar
10 Indicador Bloquear
11 Indicador de verificação
12 Indicador Reiniciar filtro
13 Indicador Descongelação
14 Indicador Controlo central
15 Indicador Temperatura de insuflação

Ventilador

01 Visor da temperatura atual
02 Visor do modo de funcionamento
- Exibe Recup., Auto, By-Pass, Silencioso e Ausente.

03 Visor da velocidade da ventoinha
- Exibe Auto, Turbo, Alto e Baixo.

04 Indicador Programação
- Quando um Horário geral é definido.
- Quando um Horário de vazio é definido.

05 Indicador Bloquear
06 Indicador de verificação
07 Indicador Reiniciar filtro
08 Indicador Descongelação
09 Indicador Controlo central
10 Indicador Exaustor

NOTA

- As funções indisponíveis estão marcadas como inativas e não podem ser definidas.
- A localização dos ícones pode diferir consoante a função.
- Se não premir qualquer botão durante 7 segundos, a função da posição é selecionada automaticamente.

C Descrição geral do ecrã de definições

Prima o botão ⚙ para entrar no ecrã de definições e, em seguida, selecione a função ou opção pretendida.

Aparelho de ar condicionado

01 Visor Silencioso
- Exibe a função Silencioso.

02 Visor Noturno
- Exibe a função Noturno.

03 Visor Long Wind
- Exibe a função Long Wind.

04 Visor Program.
- Exibe Temporizador, Programação semanal, Progr. anual e Def. Modo Férias.

05 Visor Limpeza
- Exibe a função Limpeza.

06 Visor Qualidade ar
- Exibe a Qualidade ar.

07 Visor Opção
- Exibe a Opção.

08 Visor Energia
- Exibe Utiliz. energia, Poupança energia e Definições energia.

Ventilador

01 Visor Limpeza
- Exibe a função Limpeza.

02 Visor P. energia
- Exibe a função P. energia.

03 Visor Program.
- Exibe Temporizador, Programação semanal, Progr. anual e Def. Modo Férias.

04 Visor Opção
- Exibe a Opção.

NOTA

- As funções indisponíveis estão marcadas como inativas e não podem ser definidas.
- No menu com o > no menu Opção, pode selecionar um menu com o botão >.
- Se não premir qualquer botão durante 180 segundos com a opção ativa, as definições não são guardadas e aparece o ecrã inicial.

Contents

Safety Information

California Proposition 65 Warning (US)

⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

This content is intended to protect the user's safety and prevent property damage. Please read it carefully for correct use of the product.

⚠ WARNING

Hazards or unsafe practices that may result in severe personal injury or death.

⚠ CAUTION

Hazards or unsafe practices that may result in minor personal injury or property damage.

Follow directions.

Do NOT attempt.

Make sure the machine is grounded to prevent electric shock.

Unplug the appliance.

Do NOT disassemble.

FOR INSTALLATION

⚠ WARNING

The installation of this appliance must be performed by a qualified technician or service company.

- Failing to do so may result in electric shock, fire, explosion, problems with the product, or injury.

You must connect the product with rated power upon installation.

- Failing to do so may result in problems with the product, electric shock, or fire.

Do not install this appliance near a heater, inflammable material. Do not install this appliance in a humid, oily or dusty location, in a location exposed to direct sunlight and water (rain drops). Do not install this appliance in a location where gas may leak.

- Failing to do so may result in electric shock or fire.

⚠ CAUTION

Install the product on a hard and even place that can support its weight.

- If the place cannot support its weight, the product may fall down and it may cause product damage.

FOR POWER SUPPLY

⚠ WARNING

Do not bend or pull the power cord excessively. Do not twist or tie up the power cord.

- Failing to do so may result in electric shock or fire.

Safety Information

FOR OPERATION

⚠ WARNING

If the appliance generates a strange noise, a burning smell or smoke, unplug the product immediately and contact your nearest service centre.

- Failing to do so may result in electric shock or fire.

To reinstall the air conditioner, please contact your nearest service centre.

- Failing to do so may result in problems with the product, water leakage, electric shock, or fire.
- A delivery service for the product is not provided. If you reinstall the product in another location, additional construction expenses and an installation fee will be charged.

If the malfunction diagnosis indicator appears or malfunctions, then stop operation immediately.

- If you detect any burning smells from the product or it malfunctions, then immediately turn off the air conditioner/Ventilator(ERV) and power, and then contact the service centre. Continuing to use the device in this state can cause electrical shock, fire, or damage to the product.
- If the E836 indicator appears, then it means that it is time to contact the service centre for periodic inspection. Neglecting these periodic inspections can result in malfunctions (only applicable to GHP model).

Do not attempt to repair, disassemble, or modify the product yourself.

- Failing to do so may result in electric shock, fire, product malfunction, or injury.

⚠ CAUTION

Do not allow water to enter the product.

- Failing to do so may result in fire or explosion.

Do not operate the product with wet hands.

- Failing to do so may result in electric shock.

Do not spray volatile material such as insecticide onto the surface of the product.

- As well as being harmful to humans, it may also result in electric shock, fire, or product malfunction.

Do not give a strong impact to the product and do not disassemble the product.

Do not use this product for other purposes.

- This product is designed to be used only for a system air conditioner.

Do not press the buttons with any sharp objects.

- Failing to do so may result in electric shock or part damage.

FOR CLEANING

⚠ WARNING

Do not clean the product by spraying water directly onto it. Do not use benzene, thinner, alcohol or acetone to clean the product.

- Failing to do so may result in discoloration, deformation, damage, electric shock, or fire.

Remote Controller Operation

You can use the air conditioner easily by selecting a mode and then by controlling the temperature, fan speed, and air flow direction.

Use the 〈 and 〉 buttons to select the desired menu, press the **OK** button, use the ∧, ∨ buttons to select the desired item, and then press the **OK** button.

Operation modes

You can change the current mode to Auto, Cool, Dry, Fan, and Heat.

Controlling temperature

You can control the temperature in each mode as follows:

Mode	Temperature control
Auto/Cool/Dry	Adjust by 1 °C (1 °F) between 18 °C (65 °F) and 30 °C (86 °F).
Fan	You cannot control the temperature.
Heat	Adjust by 1 °C (1 °F) between 16 °C (61 °F) and 30 °C (86 °F).

NOTE

- The set temperature range available on the remote controller may change depending on the set temperature range that indoor unit supports.

Controlling fan speed

You can select the following fan speeds in each mode:

Mode	Available fan speeds
Auto/Dry	AUTO Auto
Cool/Heat	AUTO Auto, Turbo, High, Medium, Low
Fan	Turbo, High, Medium, Low

NOTE

- Turbo appears active only on the indoor unit that supports the Turbo fan speed.

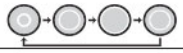
Remote Controller Operation

Controlling air flow direction

You can control air flow direction.

General models	Fix, Swing, Swing, Swing, Individual
360 cassette model	Spot, Mid, Wide, Swing 360, Individual

- For 360-cassette indoor unit

Mode	Wired remote controller display	Indoor unit indicator
Spot	Spot	
Mid	Mid	
Wide	Wide	
Swing	Swing 360	

- If 360-cassette indoor units and other indoor units are installed together, the air flow direction does not change on the indoor units other than 360-cassette when Spot, Mid, or Wide is started as the air flow direction.
- You can select individual air flow direction for each blade, when the individual indication appears active on the indoor unit that supports this mode.

NOTE

- The displayed flow direction icon may differ depending on the indoor model.
- The current air flow direction persists even if you change the current mode, or turn off and then turn on the remote controller.
- Blades that can be selected for Individual may differ depending on the product model.
- When Blade lock is set, the locked blade appears inactive.

Cooling Operation

The smart and powerful cooling functions of the Samsung air conditioner keep an enclosed space cool and comfortable.

Cool mode

Use the Cool mode to stay cool in hot weather.

NOTE

- It is recommended to set the desired temperature between 24 °C (75 °F) and 26 °C (79 °F).
- To cool your room quickly, select a low temperature and a high fan speed.
- To save energy, select a high temperature and a low fan speed.
- As the indoor temperature approaches the set temperature, the compressor will operate at a low speed to save energy.

Wind-Free function

Use the Wind-Free function to enjoy mild cool breeze exuding from fine holes on the Wind-Free panel with the air flow blade closed, instead of getting cool wind directly. The automated control of the temperature and fan speed according to the indoor temperatures keeps your room cool and pleasant.

NOTE

- If the Wind-Free function is cancelled, the air conditioner returns to the previous fan speed.
- You can adjust the set temperature during the Wind-Free function, and recommended set temperatures are 24 to 26 °C (75 to 79 °F). However, you cannot change the set temperature in the Fan mode.
- You can use the Wind-Free function when the Cool, Dry, or Fan mode is running.
- If the room temperature increases because of rise of external temperature, heat from cooking, or other reason, operate normal cooling first to lower the temperature, before operating Wind-Free to keep the desired temperature.
- If you select the Wind-Free function in the Fan mode, the compressor stops working so that cool air does not come out. However, mild breeze comes out and starts to clean the air in the room.
- During the Wind-Free operation, the cold air may be intermittently weakened depending on the temperature and humidity in the room. But the wind-free air currents are maintained and the weakened cold air is immediately recovered, consequently keeping the room comfortable. (During the Wind-Free operation, the air flow blades may open to control the indoor air condition smoothly, depending on the installation settings. In this case, as soon as the indoor temperature and humidity change, the air flow blades are closed and the Wind-Free operation restarts. For more information on the installation settings, see "Setting the indoor unit addresses and the installation options" in the installation manual of the indoor unit.)

Change of the air flow blade by temperature and humidity			
Indoor temperature and humidity	Low	High	
	Breeze is blown via the micro holes on the air flow blades	Breeze is blown via the micro holes on the air flow blades	Breeze comes from the air flow blade depending on the setting
Air flow blade	Closed	Closed (default)	Opened (according to setting)

- When the Wind-Free function runs while sleeping, you may feel cold air if the air conditioner is installed over the bed. In this case, set the desired temperature higher than the normal setting temperature.

Dehumidifying Operation

The dehumidifying function of the Samsung air conditioner keeps an enclosed space dry and comfortable.

Dry mode

Use the Dry mode in rainy or humid weather.

NOTE

- You cannot change fan speed in the Dry mode.
- The greater the difference between room temperature and set temperature, the longer the needed time to dehumidify the air is.

Air Purifying Operation

The air purification function of the Samsung air conditioner keeps the air in an enclosed space purified.

Purify function

Use the Purify function to remove harmful materials in the air to provide you a clean and healthy environment.
This function is available in the Auto, Cool, Dry, Fan, and Heat modes.

NOTE

- During the Air Purifying operation, dust is collected on the active filter panel.
- When the Purify function is additionally selected in the Fan mode, you cannot change the set temperature.
- When the Purify function is additionally selected while a specific mode is running, there is little difference in electricity consumption and operating noise.

Air purity level indications

- The indications are displayed only on the models that support the air purity level display function.
- The air purity levels for PM10, PM2.5, and PM1.0 appear as follows:

Purity level	PM10		PM2.5/PM1.0	
	Colour	Concentration (μ/m³)	Colour	Concentration (μ/m³)
Very Poor	Red	151 or more	Red	76 or more
Poor	Yellow	81-150	Yellow	36-75
Normal	Green	31-80	Green	16-35
Good	Blue	30 or less	Blue	15 or less

- When you set Air Quality to ON, the screen saver displays the current air purity level details.
  - You can set the screen saver launch time in Option > User mode.
- Air purity level can only be displayed on indoor units supporting this function.

Heating Operation

The heating functions of the Samsung air conditioner keep an enclosed space warm and comfortable.

Heat mode

Use the Heat mode to stay warm.

NOTE

- While the air conditioner warms up, the fan may not operate for a while at the beginning to prevent cold wind.
- If the outdoor temperature is low and the humidity is high while the Heat mode is running, the heating performance of the air conditioner may decrease due to frost or ice that forms on the outdoor heat exchanger. When this condition happens, the air conditioner runs the Defrost function for about 5 to 12 minutes to remove the frost and ice, both water and steam are released from the outdoor unit.
- While the Defrost function is running, the indoor unit provides no breeze to prevent cold wind.
- The operation time of the Defrost function varies depending on the amount of the frost and ice and the humidity.
- While the Defrost function is running, none of other functions will work, even if you select them on the remote controller.

Quick Smart Features

There is a variety of useful functionality provided by the Samsung air conditioner.

Auto mode

Use the Auto mode when you want the air conditioner to automatically control the mode (Heat or Cool). The air conditioner will provide the most comfortable atmosphere that it can.

NOTE

- You cannot change the fan speed.
- While the Cool mode is running, the air conditioner produces a strong cold air if there is a large difference between the set temperature and the current temperature. When the temperature difference becomes small, the air conditioner automatically changes the air flow direction and keeps the room at a comfortable temperature.

Fan mode

Use the Fan mode to run the air conditioner like a common fan. The air conditioner provides a natural breeze.

NOTE

- If the air conditioner will not be used for an extended period of time, dry the air conditioner by running it in the Fan mode between 3 and 4 hours.

Quick Smart Features

Quiet function

Quiet function decreases the operation sound in the Auto, Cool, Dry, or Heat mode.

NOTE

- You can control the set temperature, fan speed, and air flow direction.
- When you select Quiet in Wind-Free or Long Wind function, the previous function is cancelled.

Sleep function

Sleep function automatically turns off the air conditioner after 6 hours without stopping the operation in the middle of the night.

NOTE

- You can select this function only in the Cool and Heat modes.
- You can control the set temperature, fan speed, and air flow direction.
- When you select Sleep in Wind-Free or Long Wind function, the previous function is cancelled.

Long Wind function

Use the Long Wind function to quickly deliver a long reaching air flow.

NOTE

- You can select this function only in the Cool, Dry, and Fan modes.
- You cannot control the fan speed and air flow direction.
- When you select Long Wind in the Wind-Free, Quiet, or Sleep function, the previous function is cancelled.

Ventilation (ERV) Operation

Operation modes

You can select the desired mode.

Mode	Description
Heat-EX	This mode minimizes energy loss by recovering energy from the exhaust air during indoor heating or cooling.
Auto	This mode automatically adjusts the ventilation functions depending on the degree of pollution in your indoor air.
By-Pass	This mode activates the intake of external air so that it comes indoors.
Quiet	This mode reduces the sound produced by the ventilator (ERV).
Away	This mode allows you to operate the ventilator (ERV) while you are away from home.

NOTE

- Only when you select all the options of ventilator (ERV), you can use the above operation. (Only available when the wired remote controller is installed)
- If the operation status is changed by another controller, the operation mode is cancelled.

Controlling fan speed

You can select the following fan speeds in each mode:

Heat-EX/Auto/ By-Pass	AUTO Auto, Turbo, High, Medium
Quiet/Away	Medium

NOTE

- AUTO Auto appears active only on the ventilator that supports the Auto fan speed.

Ventilation (ERV) Operation

E-Saver function

Reduce your power consumption and save money on your electric bill.

- When the ventilator (ERV) and the air conditioner is connected together
  - This function compares the outdoor and indoor temperatures, and then automatically selects Heat-EX or By-Pass operation.
- When the ventilator (ERV) is installed separately (depending on the option settings at installation), it operates as follows:

ON/OFF Alternation operation	• The ventilator (ERV) turns On and Off in Quiet (Medium) mode every 30 minutes.
Outdoor air cooling operation for different temp. setting	• Operates when the View Master is for ERV+. • With the temperature control button, the default temperature for E-Saver can be set. • Depending on the set temperature, it automatically selects Heat-EX or By-Pass operation.

NOTE

- When the air conditioner is connected individually, E-Saver function is not available.

Clean up function

Prevent odor and dust from entering by making the airflow input bigger than the airflow output.

Energy-Saving Operation

The Samsung air conditioner provides functions that allow you to reduce electricity consumption.

Schedule

Press the ⚙ button, press the ∧ ∨ or 〈 〉 button to select Schedule, and then press the **OK** button.

You can set each of General Schedule, Setback Schedule, Override, Energy Saving Timer, Eco Setting, and Activation Time Setting.

Type		Description
General Schedule	Timer	• Turns the device on or off after a set time. – You can set the timer by 5 minute increments.
	Weekly schedule	• Schedules the operation of the device on a set day and at a set time. – You can schedule on the weekly basis. You can also set the values for day, time, operation on/off, scheduled device, and operation status (operation mode, set temperature, fan speed).
	Yearly schedule	• Creates groups for the desired months for scheduling – You can schedule up to 8 groups on the yearly basis.
	Holiday	• Allows you not to make use of the schedule on holidays.
Setback Schedule		• Controls the indoor unit with 4 different operation patterns. – Each pattern sets the values for time, operation (OFF, Cool, Heat, Auto), and the set temperature.
Override		Allows you to run at a specific time the operation you set using Energy Saving Timer.
Energy Saving Timer		• When set to "Turn off" – If the indoor unit is turned on, the indoor unit turns off after the set time elapses. • When set to "Eco Setting" – If the current temperature continues to differ from the reference cooling or heating temperature set in Eco Setting, the indoor unit returns to the temperature set in Eco Setting after the set time elapses. • When set to "Setback Schedule" – If the most recently operated Setback Schedule status differs from the indoor unit status, the indoor unit returns to that Setback Schedule status after the set time elapses. ※ When "Timer Reset" is set to "Enable", the set time is re-counted if the indoor unit status changes. ※ When a period of time is set in Activation Time Setting, the indoor unit only operates for that period of time.

Energy-Saving Operation

Type	Description
Eco Setting	Allows you to set the reference cooling and heating temperatures when "Energy Saving Timer" is set to "Eco Setting".
Activation Time Setting	Allows you to make the Energy Saving Timer function operate only for the period of time you set.

NOTE

- Weekly schedule and Yearly schedule can cover settings up to 49.

Energy

Press the ⚙ button, press the ∧ ∨ or 〈 〉 button to select Energy, and then press the **OK** button.
You can see and set any of Energy Usage and Energy Setting.

Classification	Type	Description
Energy Usage	-	Displays the Instantaneous Power, Weekly Energy Usage, Monthly Energy Usage, Yearly Energy Usage, Energy Usage over Last Year, and Operation Time in graph format. NOTE • For accuracy of operation time, use the DMS time synchronization. • The weekly display follows the ISO 8601 standards.
Energy Setting	Set Outdoor Capacity	Controls the outdoor unit's operation capacity.
	Target Energy Consumption	Sets the target energy consumption.
	Target Operation Time	Sets the target operation time.
	Alarm Popup	Sets whether or not to generate an alarm when the target energy consumption is reached.
	Usage Data Initialization	Initialises the entire energy function.

Setting Options

How to set the Options

1 Press the ⚙ button.
2 Press the ∧ ∨ or 〈 〉 button to select Option, and then press the **OK** button.
3 See the following pages to select the desired menu.

Major	Step 1	Step 2	Step 3	Step 4	Step 5	Description	Default
General	Button lock					ON/OFF	-
	Filter reset	Indoor					-
		Ventilator					-
	Error list						-
	Indoor unit information						-
Indoor	Blade selection					4-way cassette: Swing ON/Swing OFF 360 cassette: Spot/Mid/Wide	-
	Motion detect sensor	Set Motion detect sensor				ON/OFF	OFF
		Motion detection type				Indirect Wind/Direct Wind	Indirect Wind
Option	User mode	Language				Differs depending on the language	First value for the language pack
		Daylight Savings Time	Daylight Savings Time			ON/OFF	ON
			Unit			Day/Week	Week
			Week	Start Month		January to December	Mar
				Start Week		1st to 4th, Final (final week)	2nd
				End Month		January to December	Nov
				End Week		1st to 4th, Final (final week)	1st
			Day	Start Month		January to December	Mar
				Start Day		1~31	22
				End Month		January to December	Sep
				End Day		1~31	22
		Air Purify Display	PM10			ON/OFF	ON
			PM2.5			ON/OFF	ON
			PM1.0			ON/OFF	OFF

Setting Options

Major	Step 1	Step 2	Step 3	Step 4	Step 5	Description	Default
Option	User mode	Lock	All lock			ON/OFF	OFF
			Partial Lock Fuction	Operation Lock		ON/OFF	OFF
				Operation mode Lock	All mode Lock	ON/OFF	OFF
					Auto mode Lock	ON/OFF	OFF
					Cool mode Lock	ON/OFF	OFF
					Dry mode Lock	ON/OFF	OFF
					Heat mode Lock	ON/OFF	OFF
					Fan mode Lock	ON/OFF	OFF
				Temperature Lock		ON/OFF	OFF
				Fan speed Lock		ON/OFF	OFF
				Additional Mode Lock	Wind-Free Lock	ON/OFF	OFF
					Long Wind Lock	ON/OFF	OFF
					Quiet Lock	ON/OFF	OFF
					Sleep Lock	ON/OFF	OFF
				Schedule Lock		ON/OFF	OFF
		Wired remote controller	LED			ON/OFF	ON
			Button Mute			ON/OFF	OFF
			Wireless remote controller			ON/OFF	OFF
			Current time	Date		2000 to 2099/1 to 12/1 to 31	2018.01.01.
				Time		12-Hour/24-hour 12-hour format : 1 to 12, 24-hour format: 0 to 23, minutes: 00 to 59	12:00 PM
			Reset remote controller			-	-
			Display setting	Brightness		10 to 100%	100%
				Screen saver	Timer	10 to 60 seconds	30 sec
					Brightness	0, 10, 30, 50, 70%	30%
		Smart Reset					-
		Reset All User modes					-

Major	Step 1	Step 2	Step 3	Step 4	Step 5	Description	Default
Option	User mode	Auto changeover	Use of wired remote controller DSP			ON/OFF	ON
			Cooling Set temp./Heating Set temp.			18°C to 30°C (Set temp range for auto operation of the indoor unit)	Indoor unit status value
			Primary			0.5°C to 2°C(or 1°F to 4°F)	Indoor unit status value
			Secondary			0.5°C to 2°C(or 1°F to 4°F)	Indoor unit status value
		Temperature limits	Lower Limit			Celsius: 8 to 30°C Fahrenheit: 47 to 86°F	8°C
			Upper Limit			Celsius: 8 to 30°C Fahrenheit: 47 to 86°F	30°C
		Easy tuning				-2 to +2	0
		Indoor lighting				ON/OFF	Indoor unit status value
		Clean				ON/OFF	Indoor unit status value
		Delay time	Use of ERV delay time			ON/OFF	OFF
			ERV delay time			30 to 60 minutes	30

NOTE

- When two wired remote controllers are connected, the brightness can be set within 10 to 50%.

Current Time Setting (Example)

1 Press the ⚙ button.
2 Press the ∧ ∨ or 〈 〉 button to select Option, and then press the **OK** button.
3 Press the ∧ ∨ or 〈 〉 button to select User mode, and then press the **OK** button.
4 Press the ∧ ∨ or 〈 〉 button to select Wired remote controller, and then press the **OK** button.
5 Press the ∧ ∨ or 〈 〉 button to select Current time, and then press the **OK** button.
6 Press the ∧ ∨ or 〈 〉 button to select Time, and then press the **OK** button.
7 Press the ∧ ∨ or 〈 〉 button to select Time format, Hour, Minute, and AM/PM, and then press the **OK** button.

Memo

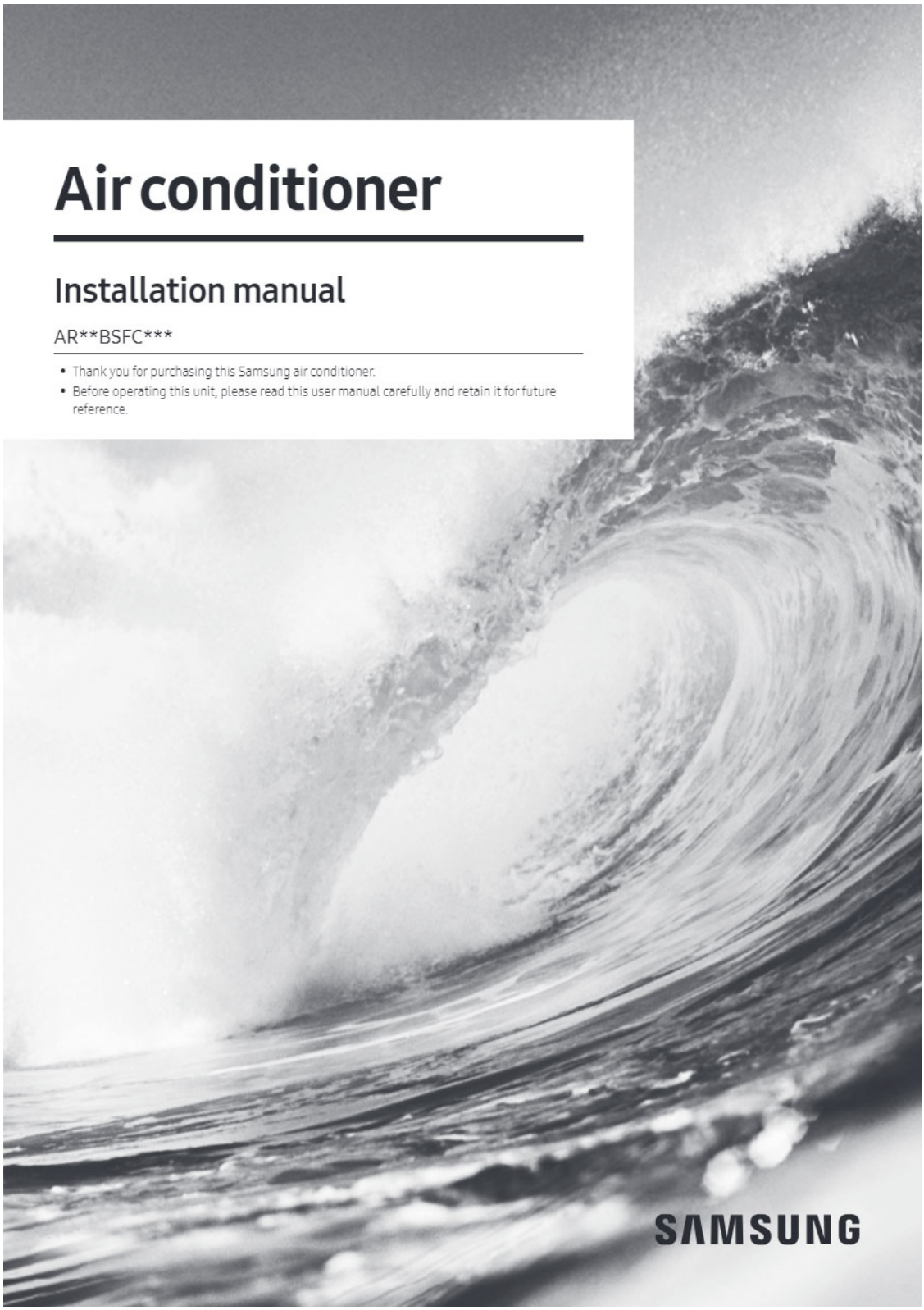
SAMSUNG

Air conditioner

Installation manual

AR**BSFC***

- Thank you for purchasing this Samsung air conditioner.
- Before operating this unit, please read this user manual carefully and retain it for future reference.



Contents

Safety Information

⚠ WARNING: Read This Manual

- Read and follow all safety information and instructions before installation, use, or maintenance of this appliance. Incorrect installation, use, or maintenance of this appliance can result in death, serious injury, or property damage. Keep these instructions with this appliance. This manual is subject to change. For the latest version, visit www.samsunghvac.com.

This manual explains how to install a split-system, ductless unit using matched indoor and outdoor units. The manufacturer shall not be responsible for damages arising from the use of non-compatible units.

For information on compatible units and unit specifications, see the submittal document for the applicable model, available at www.samsunghvac.com:

- Submittal AR09BSFCMWKXCV/AR09BSFCMWKNCV
- Submittal AR12BSFCMWKXCV/AR12BSFCMWKNCV
- Submittal AR18BSFCMWKXCV/AR18BSFCMWKNCV
- Submittal AR24BSFCMWKXCV/AR24BSFCMWKNCV

Because the instructions in this manual cover various models, the characteristics of your air conditioner may differ slightly from those described. If you have any questions, please contact your service provider or visit www.samsunghvac.com.

This device complies with Industry Canada license exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation. This Class B digital apparatus complies with Canadian ICES-003.

This equipment complies with FCC and IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 23.62 inch (600mm) between the radiator & your body. Any changes or modifications not expressly approved by the manufacturer could void manufacturer's warranty.

This product has been designed and manufactured to meet ENERGY STAR criteria for energy efficiency when matched with appropriate coil components.

However, proper refrigerant charge and proper air flow are critical to achieve rated capacity and efficiency. Installation of this product should follow the manufacturer's refrigerant charging and air flow instructions.

Failure to confirm proper charge and air flow may reduce energy efficiency and shorten equipment life.

Safety Information

Notices and notes

To make you aware of safety messages and highlighted information, we use the following notices and notes throughout this manual:

⚠ WARNING

Hazards or unsafe practices that may result in severe personal injury or death.

⚠ CAUTION

Hazards or unsafe practices that may result in minor personal injury or property damage.

IMPORTANT

Information of special interest

NOTE

Supplementary information that may be useful

FOR GENERAL

California Proposition 65 Warning (US)

⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

⚠ WARNING

The installation and testing of this appliance must be performed by a qualified technician.

- The instructions in this manual are not intended as a substitute for proper training or adequate experience in the safe installation of the appliance.

Always install the air conditioner in compliance with current local, state, and federal safety standards.

General information

- 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.

Installation of the product

- 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 will be charged to end user.

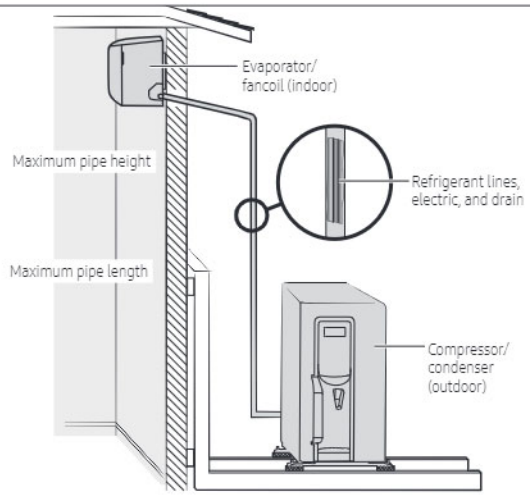
Power supply line, fuse, or circuit breaker

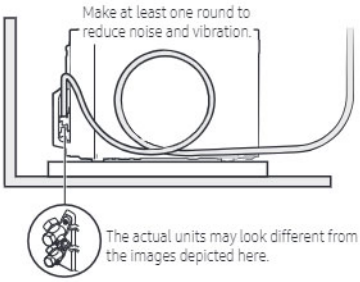
- Be sure not to perform power cable modification, extension wiring, and multiple wire connection.
  - It may cause electric shock or fire due to poor connection, poor insulation, or current limit override.
  - When extension wiring is required due to power line damage, refer to "Step 2-5 Optional: Extending the power cable" in the installation manual.

Preparation

Step 1-1 Viewing the typical installation

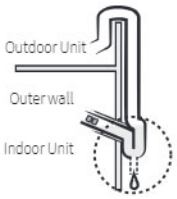
A typical installation will be similar to the one shown below.





Unit : ft(m)

Model	Pipe length			Pipe height
	Minimum	Maximum	Standard for factory charge	Maximum
09***** **12*******	9.8(3)	65.6(20)	24.6(7.5)	49.2(15)
18***** **24*******	9.8(3)	98.4(30)	24.6(7.5)	65.6(20)



Cut insulation to have
rainwater drained

CAUTION

Make a U-trap (A) on the pipe (which is connected to the indoor unit) at outer wall and cut the bottom part of the insulation (about 10 mm) to prevent rainwater from getting inside through the insulation.

Step 1-2 Verifying model numbers

Check the model numbers on the boxes to make sure that the indoor and outdoor units are compatible with each other.
For compatible units, see the model's submittal document, listed on page 3.

Nominal capacity (BTU/hour)	Indoor unit model number	Outdoor unit model number
9000	AR09BSFCMWKNCV	AR09BSFCMWKXCV
12000	AR12BSFCMWKNCV	AR12BSFCMWKXCV
18000	AR18BSFCMWKNCV	AR18BSFCMWKXCV
22000	AR24BSFCMWKNCV	AR24BSFCMWKXCV

Preparation

Step 1-3 Choosing the installation location

If using a multi system, install as described in the installation manual supplied with the outdoor unit.

⚠ WARNING

- Verify that a dedicated circuit breaker and a disconnect switch of the appropriate sizes for the air conditioner are preinstalled and available for use. See the submittal document for the model, listed on page 3.
- Verify that the voltage and frequency of the power supply comply with the rated voltage as defined on the unit name plate.
- Verify that a suitable grounding connection is available.
- Do not install this appliance in an environment containing hazardous substances or close to equipment that releases open flames.
- Do not install this appliance near a heater or flammable material.

⚠ CAUTION

- The manufacturer shall not be responsible for damage occurring as a result of the wrong voltage being applied to this air conditioner.
- The indoor and outdoor units must be installed in compliance with minimum clearances to ensure that both units are accessible from both sides and can be maintained or repaired. Insufficient clearance may reduce product performance, generate excessive noise, and reduce the life of some unit components.

IMPORTANT

- Any changes or modifications to the installation described in this manual that are not expressly approved by the manufacturer could void the manufacturer's warranty.

To determine where to locate the indoor and outdoor units, you must survey the entire site and consider many variables. The goal is to select locations that comply with all safety precautions while also minimizing the total effort involved.

Indoor unit location requirements

⚠ WARNING

- Do not install the unit in a humid, oily, or dusty location or in a location exposed to direct sunlight, water, or rain.
- Make sure that the wall can support the unit weight.

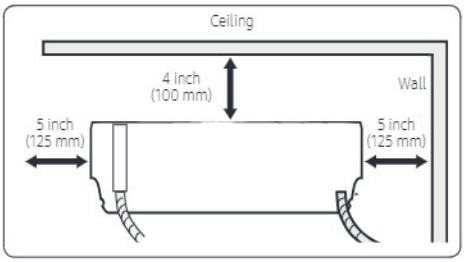
Examine the area that the customer wants to be air conditioned. Consider the following:

- What wall location will meet minimum clearances and provide optimal product performance?
- Will the wall provide adequate support for the unit weight (wall with stud construction or concrete)? If applicable, where are the studs?
- Where will you place the wall penetration for routing the piping bundle (consisting of power and communication cables, refrigerant pipes, and the drain hose) through the wall to the outdoor unit? Will the hole intersect any plumbing or wires in the wall?
- Is the location as close as possible to where the outdoor unit will be installed, to minimize the length of piping and cables?
- Will the condensate drain inside the room, through the wall penetration to the outdoor unit, or be connected to a condensate pump?

NOTE

- This manual covers a typical gravity-drain installation where the drain hose is routed to the outdoor unit through a hole in the wall.

Minimum clearances for the indoor unit



Outdoor unit location requirements

Examine the area where the outdoor unit could be located. Consider the following:

- What location will meet minimum clearances and provide optimal product performance?
- Is there an existing level and hard foundation, such as a concrete pad, that will support the unit weight and produce minimal vibration? Installation on uneven ground may result in abnormal vibrations, noise, or problems with the unit.
- Does the unit need to be mounted on the wall?
- Where are the dedicated circuit breaker and disconnect switch located? How will you connect them to the unit?
- How will you route the piping bundle from the indoor unit? Is the location as close as possible to where the indoor unit will be installed, to minimize the length of piping and cables?
- Will the unit be sheltered from the wind? In a high-wind area, you may need to build a protective fence around the unit.
- Where will the condensate drain?

⚠ WARNING

- The drain location must allow condensate to drain properly and prevent ice from forming on the unit in winter. If a block of ice falls from the unit, it may result in death, serious injury, or property damage. Improper or inadequate draining may result in water overflowing and property damage.

⚠ CAUTION

- Do not connect the drain hose to existing waste pipes as odors may arise.

Installation on an exterior wall

If the outdoor unit must be installed on an exterior wall, you will need an L-bracket to support the unit. This bracket is not included with the unit.

⚠ WARNING

- The wall must be capable of supporting the weight of both the L-bracket and the outdoor unit. If the unit falls, it may result in crushing, electric shock, fire, or explosion that could cause death, severe personal injury, or property damage.

Installation Guide at the seashore

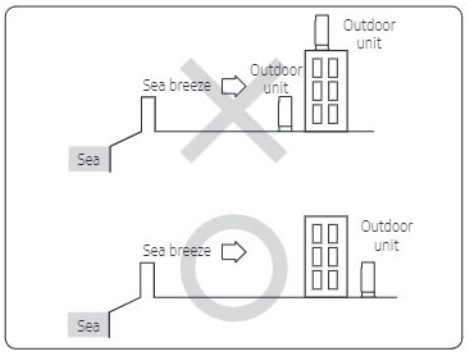
Make sure to follow below guides when installing at the seashore.

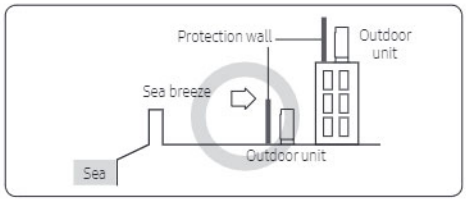
1. Do not install the product in a place where it is directly exposed to sea water and sea breeze.
   - Make sure to install the product behind a structure (such as building) that can block see breeze.
   - Even when it is inevitable to install the product in seashore, make sure that product is not directly exposed to sea breeze by installing a protection wall.
2. Consider that the salinity particles clinging to the external panels should be sufficiently washed out.
3. Because the residual water at the bottom of the outdoor unit significantly promotes corrosion, make sure that the slope does not disturb drainage.
   - Keep the floor level so that rain does not accumulate.
   - Be careful not to block the drain hole due to foreign substance.
4. When product is installed in seashore, periodically clean it with water to remove attached salinity.
5. Make sure to install the product in a place that provides smooth water drainage. Especially, ensure that the base part has good drainage.
6. If the product is damaged during the installation or maintenance, make sure to repair it.

Preparation

7 Check the condition of the product periodically.
- Check the installation site every 3 months and perform anti-corrosion treatment such as R-Pro supplied by SAMSUNG (Code : MOK-220SA) or commercial water repellent grease and wax, etc., based on the product condition.
- When the product is to be shut down for a long period of time, such as off-peak hours, take appropriate measures like covering the product.

8 If the product installed within 1640.4 ft (500 m) of seashore, special anti-corrosion treatment is required.
※ Please contact your local SAMSUNG representative for further details.

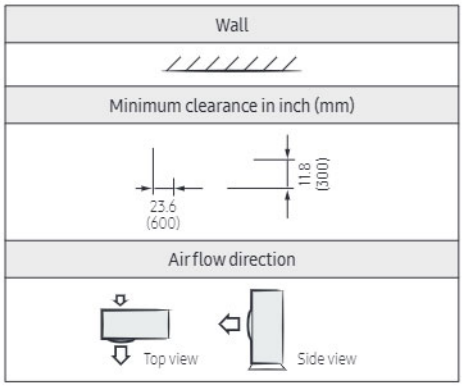




- Protection wall should be constructed with a solid material that can block the sea breeze and the height and width of the wall should be 1.5 times larger than the size of the outdoor unit. (You must secure more than 1.9685 ft (600 mm) of space between the protection wall and the outdoor unit for air circulation.)

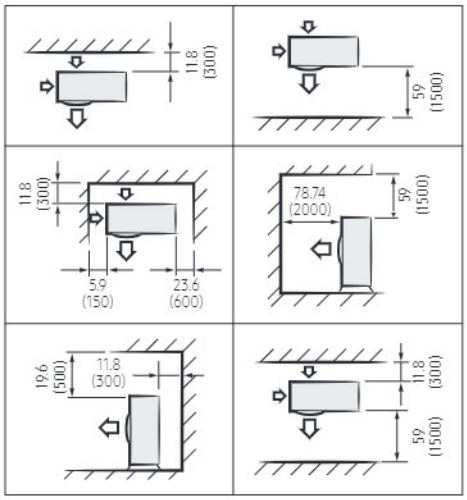
Minimum clearances for the outdoor unit

Legends:



Examples for installing one outdoor unit:

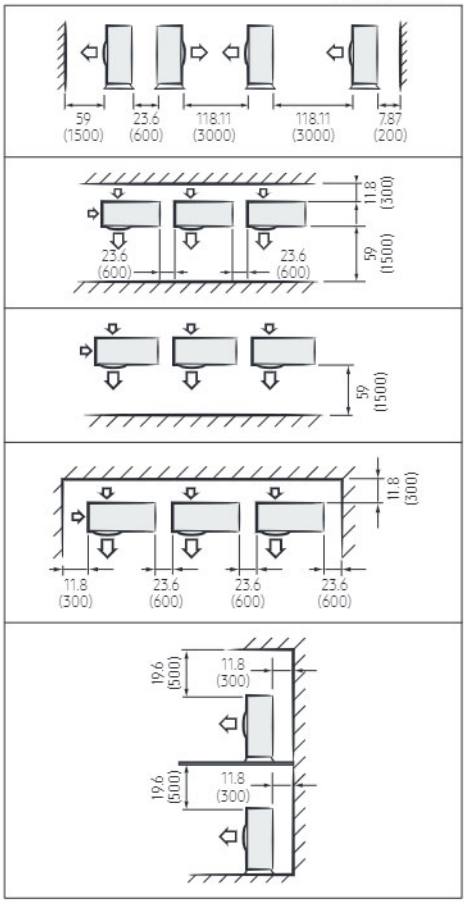
Unit: inch (mm)



Installation

Examples for installing multiple outdoor units:

Unit: inch (mm)



Step 1-4 Unpacking

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 your local Samsung distributor.

Packing material must be disposed of in accordance with local regulations.

Unpacking the indoor unit

At the selected indoor unit location:

1. Open the indoor unit package.
2. Remove the left and right cushions.
3. Carefully remove the unit from the package.
4. Place the unit on a flat surface where it will be protected from possible damage.

Unpacking the outdoor unit

At the selected outdoor unit location:

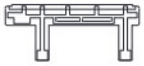
1. Remove the package.
2. Remove the top cushion.
3. Carefully remove the unit from the bottom cushion.
4. Place the unit on a flat surface where it will be protected from possible damage.

Preparation

Step 1-5 Preparing materials and tools

Materials in the indoor unit package

Make sure that the indoor unit package contains the following materials:

Mounting bracket (1) **07/09/12/15*******	Mounting bracket (1) **18/24*******
	
Remote control (1)	Remote control battery (2)
	
Quick Guide for User (1)	Quick Guide for Installer (1)
	
Extra M4 x12 tapping screw (2)	Holder remocon (1)
	
PE indoor unit cover (1)	
	

Materials in the outdoor unit package

Make sure that the outdoor unit package contains the following materials:

Rubber foot (4)	Drain plug (1)
	

If using a multi system, install as described in the installation manual supplied with the outdoor unit.

Optional accessories

For information on the accessories that are available for each model, see the submittal documents listed on page 3.

Materials supplied by the installer

Make sure you have all other materials required for the selected installation method and location.

IMPORTANT

- No mounting hardware, tubing, cables, and other materials listed below are included with the appliance.

The required materials will vary, but may include the following:

- 6-ft electrical whip for connecting the power from the installed disconnect switch to the outdoor unit
- UV-resistant vinyl line set tape for the exposed line set
- Lines-set cover and fittings, if used
- Miscellaneous pipe hangers
- Miscellaneous screws and anchors for hanging pipe hangers, the line-set cover, the indoor unit mounting plate, and so on.
- Electrical ring connectors for connecting all power and communication wiring
- Electrical tape
- Refrigerant R-410A if additional refrigerant is required due to line-set length
- Closed cell foam tape insulation (roll)
- Outdoor unit risers or L-brackets for wall installation
- Silicone caulking for sealing the wall penetration
- Rags

Piping and cables

Connecting the indoor and outdoor units requires a premanufactured refrigeration line set (recommended) or a line set assembled by the installer that includes.

- Soft-copper line set insulated with closed-cell foam insulation
- 18 shielded cable, for communication (F1/ F2) wiring
- 14/3 flexible metallic underground cable with green grounding wire, for power wiring from the outdoor unit to the indoor unit
- 5/8-inch ID drain hose with adapter fitting, for gravity drain applications that require an extension
- Make sure that the line set is longer than is needed to reach from the indoor to the outdoor unit, to allow for bends and final connections. For more on pipe lengths, see Step 1-1 Viewing the typical installation on page 6.
- If not using a premanufactured line set:

- Only use insulated seamless refrigeration-grade copper pipe (Cu DHP-type according to ISO1337), degreased and deoxidized, suitable for operating pressures of at least 609 psig (4200 kPa) and for a burst pressure of at least 3002 psig (20700 kPa).
- Do not use sanitary-type copper pipe under any circumstances.
- Use standard cables.

Cable	Terminal	Wire Specification
Power cable	L1, L2, ground	14/3 AWG
Communication cable	F1, F2	16/2 AWG Standard shield cable

NOTE

- This manual does not include instructions for extending cables. If you need to extend the cables, follow local codes.

Tools

Make sure you have the required tools available.

Safety tools

- Service disconnect lock and tag
- Circuit breaker lock and tag
- Safety glasses
- Cut-proof gloves
- Hearing protection
- Hard hat, for use in appropriate areas
- Safety vest, for visibility as required

General tools

- 36-inch spirit level
- 8-inch to 9-inch torpedo level
- Cordless drill
- #2 Phillips-bit driver for cordless drill
- Phillips screw driver
- Slotted screw driver
- Corded hammer drill, for masonry anchors if used
- Masonry drill bit, for masonry anchors if used
- Compact bandsaw, for cutting all thread and/or unistrut channel as required
- Stud finder, for stud-wall construction as required
- 2-5-inch hole saw, standard, or diamond core for concrete or cinder block construction
- Metric hex-key set
- Razor knife
- 25-ft tape measure

Electrical tools

- Clamp-on multimeter, for measuring volt AC, resistance, and amperage
- Non-contact thermometer (may be incorporated into multimeter)
- Wire strippers
- Wire connector crimping tool
- Cutting pliers

Piping tools

- Flaring tool
- Deburring tool
- Piping bender, spring type
- Tubing cutter, imp style
- Tubing cutter, standard style
- Open-end torque wrench (ft.-lbs.)
- Crescent wrench

Refrigeration tools

- Manifold set for R-410A
- 5/16-inch to ¼-inch flare adapter
- Shrader core removal tool
- 2-stage vacuum pump with oil
- Electronic refrigerant scale (lbs/oz), if additional refrigerant is required due to line length
- Recovery machine with tank, if required
- Micron vacuum gauge
- ¼-inch vacuum gauge hose tee
- Nitrogen regulator
- Nitrogen cylinder, charged

Indoor Unit Installation

Step 2-1 Attaching the mounting bracket to the wall

1 Hold the mounting bracket against the wall at the selected installation position (Step 1-3 on page 8), making sure that the screw holes align with the center of the studs in the wall. If the screw locations do not align with the studs, use wall anchors.

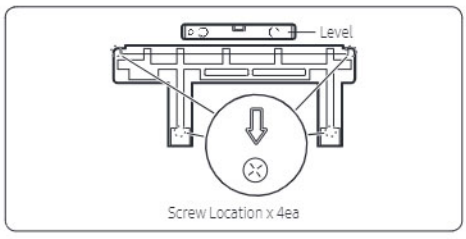
⚠ CAUTION

- The recommended best practice is to attach the mounting bracket directly to the studs in the wall. If you did not find a suitable location with studs (in Step 1-3 on page 8), or if the wall is concrete, you must use wall anchors of a suitable type and weight capacity, and install them according to the manufacturer's instructions. Failure to do so may cause the material surrounding the joints to crumble over time and the screws to be loosened and stripped. This may result in the unit falling from the wall, which could cause physical injury or equipment damage.

2 Using a level, make sure that the mounting bracket is level, then mark the location of the screw holes on the wall.

3 If using wall anchors, install them at the screw hole positions, following the manufacturer's instructions.

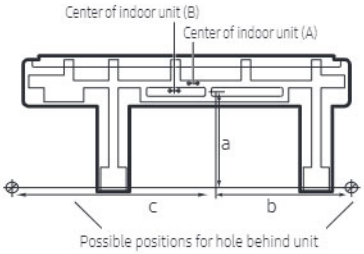
4 Using six field-supplied mounting screws and anchors (if applicable), attach the bracket to the wall.



Step 2-2 Drilling the wall penetration

1 Determine the position of the hole through which the piping bundle (consisting of power and communication cables, refrigerant pipes, and the drain hose) will pass. Consider the following:

- The hole inner diameter must be 2.5 inches (65 mm).
- The recommended hole location is behind the unit so that the hole and the piping bundle will not be visible in the room. The minimum distances between the hole and the mounting bracket are:

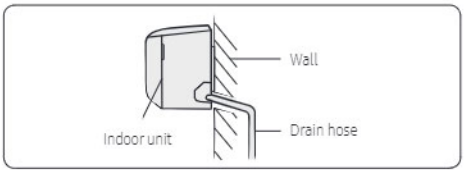


Unit: inch(mm)

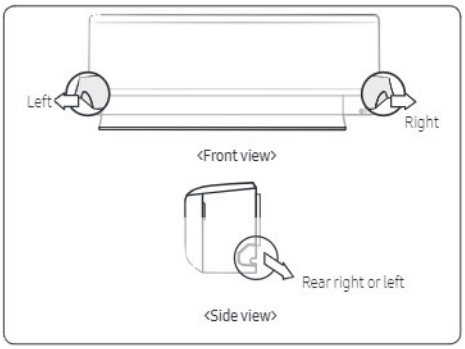
Model		a	b	c
07*****, **09*******, **12*******	A	6.49(165)	12.00(305)	16.37(416)
15*****	B	6.49(165)	12.00(305)	19.13(486)
18*****, **24*******	A	6.49(165)	13.66(347)	23.95(608.5)

- If the hole cannot be positioned behind the unit, find a position as close to the unit as possible. The piping bundle that exits the unit and extends to the hole will need to be attached to the wall and will be visible inside the room.
- In relation to the bracket shown above, the unit is shipped with the drain hose connection on the right, the drain hose exits the unit on the left, and the refrigerant pipes are bent to exit on the left. Thus, positioning the hole to the left (A/B or outside the unit) requires the least effort. If you position the hole to the right (C/D or outside the unit) or below the unit, you will need to move the drain hose connection to the left and bend the pipes so that the hose and pipes exit to the right or bottom. See the figure in step 3 on page 15.

2 Use a standard 2-5-inch (65-mm) hole saw to drill one hole at the selected location, at a 15° downward angle so that the drain hose will drain properly.



3 Based on the hole location, determine where the piping bundle (drain hose, refrigerant pipes, and cables) will exit the unit.



NOTE

- The left or right exit will only be used if the hole is not positioned behind the unit.

Step 2-3 Connecting the refrigerant pipes

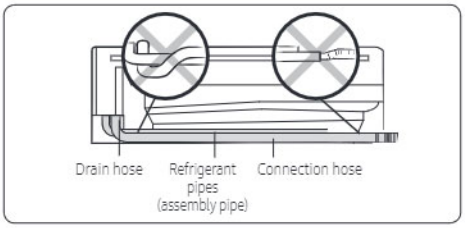
Connect indoor and outdoor units with field-supplied copper pipes by means of flare connections. Use insulated seamless refrigeration grade pipe only, (Cu DHP type according to ISO1337), degreased and deoxidized, suitable for operating pressures of at least 4200 kPa and for burst pressure of at least 20700 kPa. Under no circumstances must sanitary type copper pipe be used.

IMPORTANT

- When installing the unit, always connect the refrigerant pipes first, followed by the electrical cables. For disassembly, always disassemble the electric cables before the refrigerant pipes.

Two short refrigerant pipes are already attached to the air conditioner:

- The smaller-diameter pipe is for the high-pressure, two-phase refrigerant.
- The larger-diameter pipe is for the low-pressure refrigerant vapor.



In Step 2-3, step 3 you determined the exit position for the piping bundle. The unit has three knockouts available for the left, right, and bottom exits. When the bundle exits directly from the rear, none of the knockouts are used.

1 If the pipes will exit directly from the rear, skip to step 3. Otherwise, cut out the appropriate knockout piece (left, right, or bottom).
2 Use a razor knife to clean the cut edges (flashing).
3 The left exit is the only position that does not require bending the pipes. For other positions, bend the pipes so that they will exit in the selected exit position.
   - The bending radius should be greater than 4 inch (100 mm).
   - Bend the smaller pipe gradually to prevent kinking. The larger pipe has a preinstalled spring bender to prevent kinking.
   - Make sure that the pipes do not protrude from the back of the unit in a way that will make it difficult to attach the unit to the mounting bracket.
   - For right and bottom exits, pull the pipes out through the selected knockout opening. For left exits, the piping connections will be made in the service space behind the indoor unit (under the cover panel).

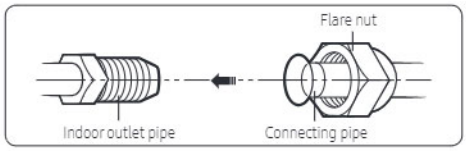
Indoor Unit Installation

NOTE

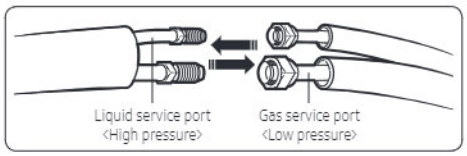
- If you are using the right rear exit, the pipes should be long enough to extend through the wall without needing to connect the line set first. It may be easier to connect the line set outside of the building, after you have bundled the pipes and cables and passed the bundle through the wall. In this case, do not connect the line set now. Instead, complete Step 2-5 through Step 2-9, then go outside and connect the line set as described below.

4 Slowly remove the protective caps on the refrigerant pipe connections to relieve the nitrogen holding charge.

5 Connect the line set to each pipe.



6 Hand-tighten the flare nuts to make sure that they do not become stripped.



7 Torque the flare connections to the following values:

Outer diameter	Torque ft·lb (N·m)
1/4 inch (6.35 mm)	10.1–13.0 (14–18)
3/8 inch (9.52 mm)	25.3–31-1 (34–42)
1/2 inch (12-70 mm)	36.2–44.8 (49–61)
5/8 inch (15.88 mm)	49.9–60.0 (68–82)

⚠ CAUTION

- Tighten the flare nuts only to the specified torque. If a flare nut is overtightened, the flare face may crack, causing refrigerant leakage.

8 Do not box in or cover the pipe connections. Make sure that the connections are accessible for testing later in the installation process and for future servicing.

9 Tape over the end of the pipes so that debris will not enter the piping when it is passed through the wall. The pipes will be insulated later in the installation process.

Step 2-4 Connecting the power and communication cables

If using a multi system,install as described in the installation manual supplied with the outdoor unit.

⚠ WARNING

- Do not modify the power cable in any way. Doing so may cause electric shock or fire due to poor connection, poor insulation, or current limit override. Make sure to comply with the technical standards of electrical installations and the wiring regulations in the local area.
- This appliance must be properly grounded. Do not ground the appliance to a gas pipe, plastic water pipe, or telephone line. Failure to comply may result in electric shock, fire, and explosion.

1 Connect each wire to its corresponding terminal number.

Cable	Terminals
Power cable	L1, L2, ground
Communication cable	F1, F2

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

<Circular terminal>

Installation

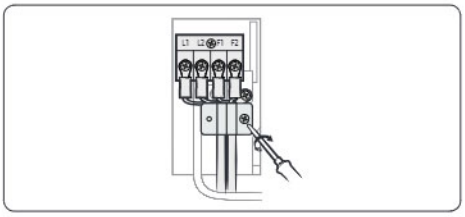
⚠ CAUTION

- Connect the wires firmly so that wires cannot be pulled out. Loose wires can cause the connection to overheat. Each circular terminal must match the size of its corresponding screw in the terminal block.

⚠ CAUTION

- For the terminal block wiring, use a wire with a ring terminal socket only. Regular wires without a ring terminal socket may become a hazard as the connections may loosen during operation.

2 Tighten the terminal block screw.



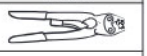
3 In Step 2-3, step 3 you determined the exit position for the piping bundle. If using the left, right, or bottom exits, pass the cables through the selected knockout.

NOTE

- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord.
- Power & Communication cable shall not exceed 98.42ft(30 m).

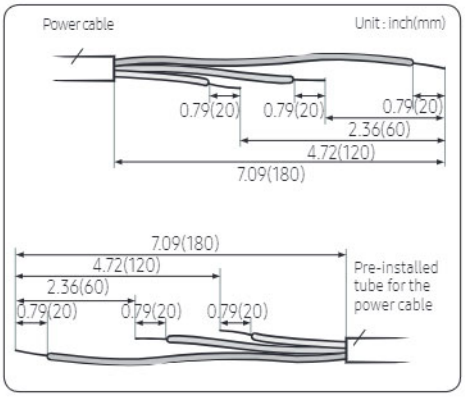
Step 2-5 Optional: Extending the power cable

1 Prepare the following tools.

Tools	Spec	Shape
Crimping pliers	MH-14	
Connection sleeve (mm)	0.78xØ0.25inch (20xØ6.5mm) (HxOD)	
Insulation tape	Width 0.74inch(19 mm)	
Contraction tube (mm)	2.75xØ0.31inch (70xØ8.0 mm) (LxOD)	

2 As shown in the figure, peel off the shields from the rubber and wire of the power cable.

- Peel off 0.79inch (20 mm) of cable shields from the pre-installed tube.

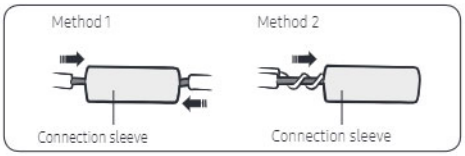


⚠ CAUTION

- For information about the power cable specifications for indoor and outdoor units, refer to the installation manual.
- After peeling off cable wires from the pre-installed tube, insert a contraction tube..

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.



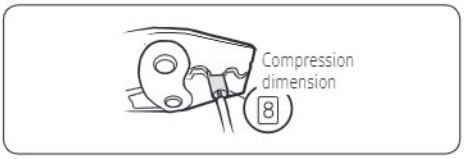
⚠ CAUTION

- If cable wires are connected without using connecting sleeves, their contact area becomes reduced, or corrosion develops on the outer surfaces of the wires (copper wires) over a long time. This may cause an increase of resistance (reduction of passing current) and consequently may result in a fire.

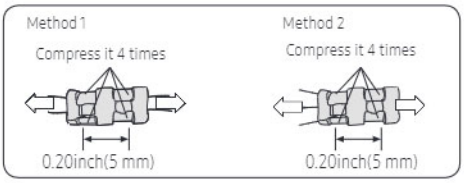
Indoor Unit Installation

4 Using a crimping tool, compress the two points and flip it over and compress another two points in the same location.

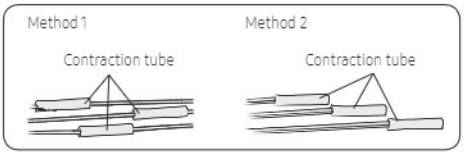
- The compression dimension should be 8.0.



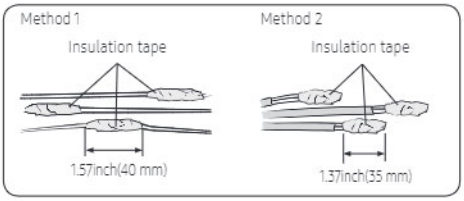
- After compressing it, pull both sides of the wire to make sure it is firmly pressed.



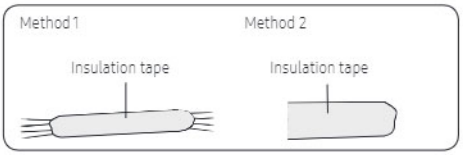
5 Apply heat to the contraction tube to contract it.



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



7 fter tube contraction work is completed, wrap it with the insulation tape to finish.
Three or more layers of insulation are required.

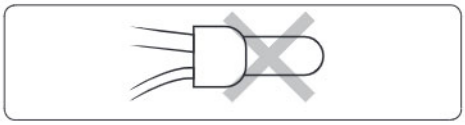


⚠ CAUTION

- Make sure that the connection parts are not exposed to outside.
- Be sure to use insulation tape and a contraction tube made of approved reinforced insulating materials that have the same level of withstand voltage with the power cable. (Comply with the local regulations on extensions.)

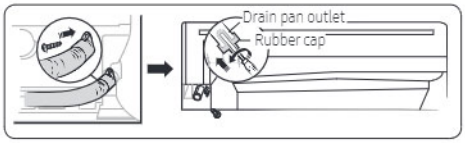
⚠ WARNING

- In case of extending the electric wire, please DO NOT use a round-shaped Pressing socket.
  - Incomplete wire connections can cause electric shock or a fire.



Step 2-6 Connecting the drain hose

1 In Step 2-3, step 3 you determined the exit position for the piping bundle. If using the right, bottom, or right rear exit, change the drain hose connection from the right to the left so that the drain hose will lie along the inside of the unit and exit to the right.

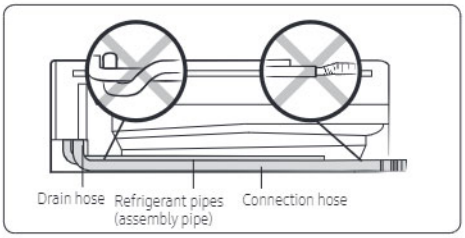


Installation

⚠ CAUTION

- Be careful not to puncture the plug with the screwdriver when installing it.

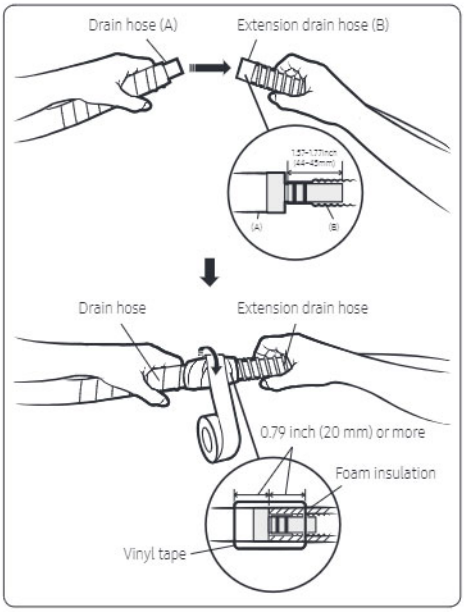
2 If using the left, right, or bottom exit, pass the drain hose through the selected knockout.



3 Connect a 5/8-inch ID extension drain hose to the main drain hose.

⚠ CAUTION

- If the diameter of the connection hose is smaller than the product's drain hose, leakage may occur.

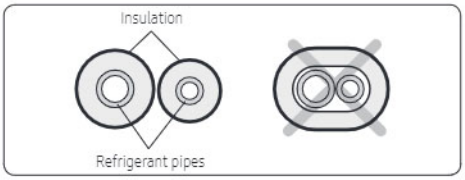


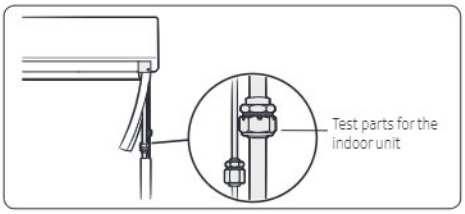
4 Do not box in or cover the drain hose connection. It must be accessible for testing later in the installation process and for future servicing.

5 If the drain hose is routed inside the room, insulate the hose so that dripping condensation does not damage the furniture or floors.

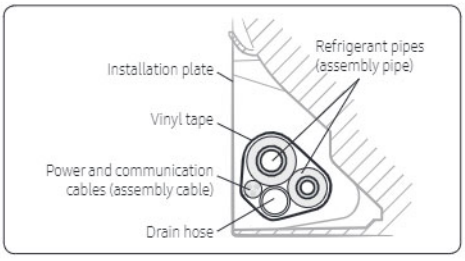
Step 2-7 Taping the pipes, cables, and drain hose

1 Wrap foam insulation around the refrigerant pipes, up to the connection points. The connections must remain accessible for testing later in the installation process. Either leave slits in the insulation or do not cover the connections.





2 Make a piping bundle by using vinyl tape to wrap together the refrigerant pipes, power cable, communication cable, and drain hose, up to the connection points. Connection points must remain accessible for testing later in the installation process.



Outdoor Unit Installation

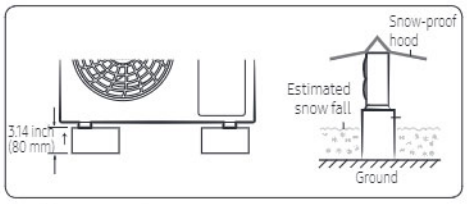
If using a multi system,install as described in the installation manual supplied with the outdoor unit.

Step 3-1 Mounting the outdoor unit

To promote proper condensate draining, the recommended installation of the outdoor unit is elevated above the ground on a mounting bracket attached to a concrete pad.

In areas where snowfall occurs, the unit must be mounted above the snow line to allow for proper heating. Snow cannot be allowed to collect on top of the unit. For promoting natural drainage in a heavy snow fall area:

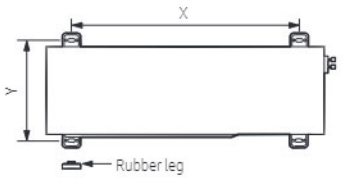
- Make space more 3.14 inch(80 mm) between the bottom of the outdoor unit and the ground for installation. (Ensure that the drained water runs off correctly and safely.)
- Allow enough separation distance between the product and the ground.



On the ground

1 Place the outdoor unit in the selected installation location (Step 1-1 on page 6), ensuring proper clearances and with the arrow on top of the unit pointing away from the wall.

2 Clip the rubber feet to the tabs to minimize sound and vibration to the structure.



Unit : ft(mm)

Model	X	Y
09***** **12*******	1.66(507)	0.96(292)
18*****	2.17(660)	1.12(340)
24*****	2.03(620)	1.18(360)

3 Level the unit, then use anchor bolts to secure it at the four mounting points.

4 For installations in locations that require seismic or hurricane tie downs, comply with local codes.

5 If the selected location is exposed to strong winds, install a protective fence around the unit so that the fan can operate correctly.

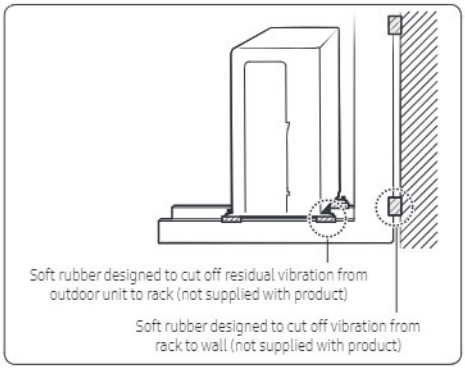
On a wall

⚠ WARNING

- The unit must be properly secured to the wall. If the unit falls, it may result in crushing, electric shock, fire, or explosion that could cause death, severe personal injury, or property damage.

1 At the selected installation location (Step 1-1 on page 6), attach the L-bracket to the wall as follows:

- Install the bracket as close to the wall as possible.
- Insert rubber isolators between the bracket and the wall to minimize sound and vibration to the structure. Do not fully compress the isolators.



- Make sure that the bracket is level.
- Use suitable bolts/washers and lock washers.

2 Place the outdoor unit on the bracket, ensuring proper clearances and with the arrow on top of the unit pointing away from the wall.

3 Clip the rubber feet to the tabs to minimize sound and vibration to the structure.

4 Level the unit, then use anchor bolts to secure it at the four mounting points.

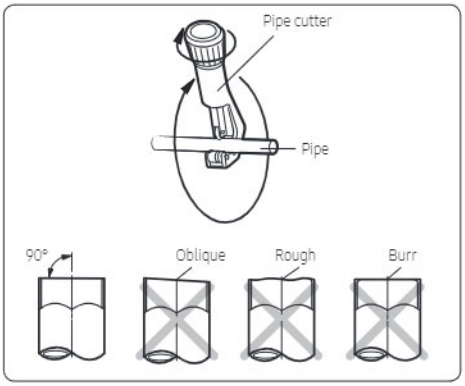
5 For installations in locations that require seismic or hurricane tie downs, comply with local codes.

Step 3-2 Connecting the cables and the pipes

1 Route the piping bundle to the outdoor unit.

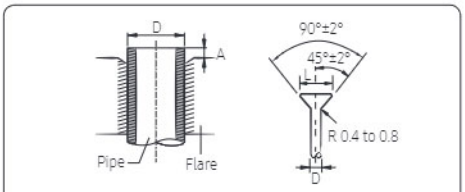
2 Use piping clamps to fasten the piping bundle to the foundation or wall.

3 Cut the refrigerant pipes to the length needed to reach the pipe connections (located behind the cover panel; see the figure in step 7).



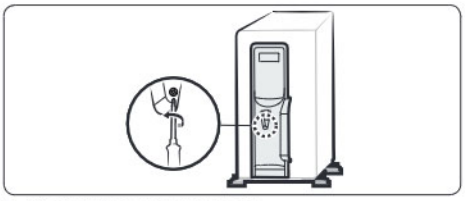
4 Remove any burrs, positioning the pipe face down to make sure that the burrs do not get into the pipe.

5 Assemble the flare connections on the cut pipe ends.

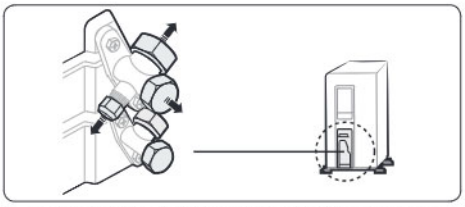


Outer diameter (D)	Depth (A)	Flare dimension (L)
1/4 inch (0.35 mm)	0.051 inch (1.3 mm)	0.3425–0.3583 inch (8.7–9.1 mm)
3/8 inch (9.52 mm)	0.071 inch (1.8 mm)	0.5039–0.5197 inch (12.8–13.2 mm)
1/2 inch (12.70 mm)	0.079 inch (2.0 mm)	0.6378–0.6535 inch (16.2–16.6 mm)
5/8 inch (15.88 mm)	0.087 inch (2.2 mm)	0.7598–0.7756 inch (19.3–19.7 mm)

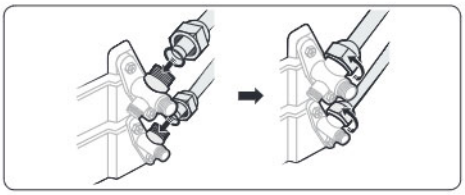
6 Remove the cover panel on the unit.



7 Remove the service valve caps.

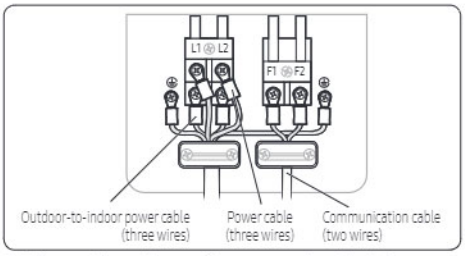


8 Connect the pipes to the service valve with the flare nuts. Hand-tighten the nuts to prevent stripping.



9 Torque the flare connections to the values in Step 2-3, step 7 on page 16.

10 Connect the power cables and secure with a cable clamp.



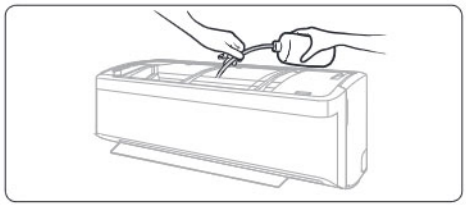
11 Connect the outdoor unit power supply cable to the preinstalled disconnect switch.

12 Leave the cover panel off for testing later in the installation process.

Installation Inspection and Testing

Step 4-1 Performing a drain leak test

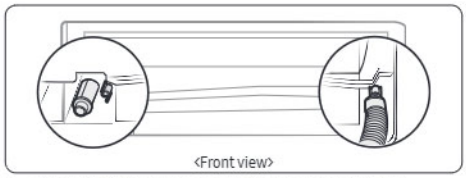
1 Pour water into the drain pan.



⚠ CAUTION

- Make sure that the water does not overflow onto the electrical connection.

2 Check for leaks at the drain connection under the cover panel.



3 Make sure that the hose is draining properly at the outdoor unit.

Step 4-2 Performing pressure tests using nitrogen

1 Install the red high-side hose of an R-410A-gauge manifold set to the larger liquid/vapor line's service port.

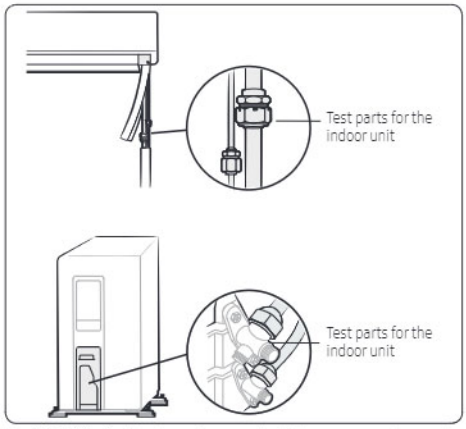
2 Attach a pressure regulator to a tank of dry nitrogen.

3 Connect the common hose of the gauge manifold set to the pressure regulator's hose connection.

4 Open the service port to connect the line set to the gauge manifold set.

5 Pressurize the line set and indoor unit with dry nitrogen to 200 psig (adjust at the pressure regulator).

6 Using a soap-bubble solution suitable for refrigeration systems, check the four flare connections for leaks.



7 Wait 10 minutes to make sure that the pressure does not drop.

8 Increase the pressure to 400 psig and repeat steps 6 and 7.

9 Increase the pressure to 600 psig and repeat steps 6 and 7.

10 A drop in pressure during steps 7 through 9 indicates a system leak in the refrigeration line set or indoor unit. Perform a thorough leak check, repair the leak(s), and then repeat this procedure.

11 Close the gauge manifold, shut off the nitrogen tank, and remove the common hose to the pressure regulator.

12 Vent the nitrogen in lines to the atmosphere to prepare for system evacuation.

Step 4-3 Evacuating the system

⚠ CAUTION

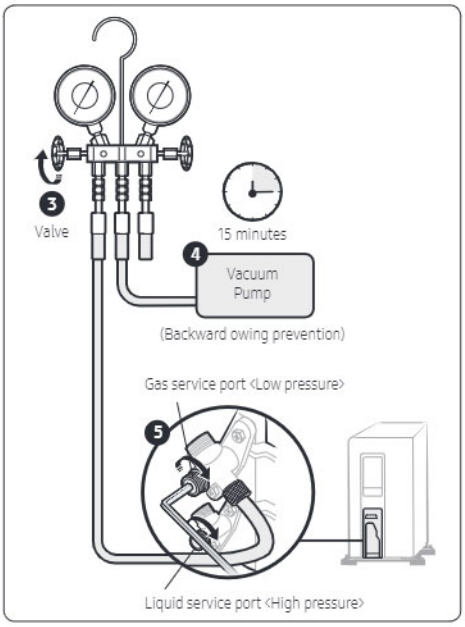
- Because the system does not have filter driers, you must perform this triple evacuation procedure to remove all noncondensables and moisture from the system before charging. Failure to do so will result in reduced performance and shorter equipment life.

The time required to perform each evacuation will depend on the capacity (CFM) of the vacuum pump used.

1 Install a micron vacuum gauge to the larger liquid/vapor line's service port on the branch of a tee.
2 Install the red high-side hose of an R-410A gauge manifold set to the smaller liquid/vapor line's service port on the run of the tee.
3 Attach a vacuum pump to the common hose of the manifold set.
4 To ensure optimal performance, verify that the vacuum pump's oil has been changed recently.
5 With the service port closed and the manifold gauge open, start the vacuum pump and make sure that the vacuum level drops below 4000 microns (as read on the micron gauge). If it is difficult to achieve a proper vacuum, a leak in the hoses is likely. Repair the leak(s) and/ or check performance of vacuum pump, then repeat this step.
6 Open the service port to connect the system to the manifold.
7 Evacuate until 4000 microns is achieved, for at least 10 minutes.
8 Close the gauge manifold valve, shut off the vacuum pump, and remove the common hose.
9 Connect the hose to the nitrogen pressure regulator and bleed the hose by opening the end of the common hose closest to the manifold.
10 Open the high-pressure manifold valve and slowly bring the system pressure to atmosphere (0 psig).
11 Close the manifold and nitrogen cylinder and remove the common hose.
12 Reconnect the common hose to the vacuum pump. Repeat steps 6 through 12, alternating between breaking the vacuum with dry nitrogen and evacuating, until system evacuation has occurred three times, to the following vacuum levels:

Evacution	Microns
First	4000
Second	2000
Third	500

13 After evacuating to at least 500 microns for the third time, close the gauge manifold valve and wait 10 minutes, making sure that the vacuum level in the system does not decrease. If it does, a small leak is likely. Repair the leak and repeat the evacuation process.



Installation Inspection and Testing

Step 4-4 Adding refrigerant (if needed)

The outdoor unit is charged with sufficient R-410A refrigerant to support up to a 24.6-ft line set. For lengths greater than 24.6 ft, you must add 0.16 oz of refrigerant per foot of additional length, after the lines are evacuated.

1 Calculate the additional refrigerant required:
Additional ounces of R-410A = (Total line set feet −24.6) × 0.16
2 Connect the common hose of the manifold gauge set to the inverted R-410A refrigerant cylinder.
3 Place the refrigerant cylinder on a scale set to measure ounces.
4 Open the valve on the tank.
5 At the manifold connection, bleed the refrigerant to remove any air that may be present in the common hose.
6 Open the gauge manifold and charge the system with the amount of refrigerant calculated in step 1.
7 Close the gauge manifold valve, close the valve on the refrigerant tank, and remove the common hose.

Step 4-5 Preparing the system for commissioning

1 Wrap the remaining refrigerant pipe lengths and connection points with foam insulation.
2 Wrap the unwrapped portions of the piping bundle with vinyl tape.
3 With the manifold gauge set still installed, open the isolation valves on the outdoor unit to connect the outdoor unit to the line set and indoor unit.
4 Remove the manifold set and vacuum gage.

Step 4-6 Commissioning the unit

The unit is commissioned using the Smart Install feature.

Smart Install can be started only with the remote control. While Smart Install is running, you cannot operate the remote control.

1 Make sure that the air conditioner is in standby status (powered up with the controller in off mode).
2 Install batteries in the remote control.
3 Hold down the (Power), (Mode), and (SET) buttons on the remote control simultaneously for 4 seconds.
4 Wait until Smart Install succeeds or fails (approximately 7 to 13 minutes).
- While Smart Install is running:

Type	88 Display
Indoor unit indicator	
	The progress is displayed as a number between 0 and 99 on the indoor unit display.

- When Smart Install succeeds: Smart Install ends with a ringing sound, and the air conditioner returns to standby status.
- When Smart Install fails: An error message is displayed on the indoor unit display, and Smart Install ends. To correct the problem, see the error table on page 25.

Error indicator 88 Display	Error	Measures for the installer to take
C 101	Communication error between indoor and outdoor units	• Check the cables between the indoor and outdoor units. See if the power cable or communication cable is crossed.
C 121	Error on indoor temperature sensor	• Make sure that the indoor temperature sensor is properly connected.
C 122, C 123	Error on indoor heat exchanger	• Make sure that the evaporator temperature sensor is properly connected.
C 154	Error on indoor fan motor	• Make sure that the evaporator motor is properly connected to the board. • Check for a foreign substance inside the unit that may be preventing the blower wheel from turning.
88, C 162, C 163	EEPROM/Option error	• Reset the option codes.
C422	Refrigerant flow blocking error	• Make sure that the service valves are completely open. • Check for any blockage in the refrigerant pipe that connects the indoor and outdoor units. • Check for refrigerant leaks.
C554	Lack of refrigerant (for inverter models only)	• Make sure a sufficient amount of refrigerant has been added for a pipe that is longer than 24.60ft (7.5 m). • Check for refrigerant leaks between the valve and pipe connection.

Step 4-7 Performing final checks and trial operation

⚠ WARNING

Stop the unit, disconnect the power, and contact Samsung technical support if any of the following occurs:

- The unit produces a burning smell or smoke.
- The power cable is hot or damaged.
- The unit is very noisy.
- Any foreign substance, such as water, has entered the appliance.
- The appliance becomes flooded.

1 Check the following:
   - Strength of the installation site
   - Tightness of pipe connection to detect gas leak
   - Electric wiring connection
   - Heat-resistant insulation of the pipe
   - Drainage
   - Grounding conductor connection
   - Correct operation (Take the following steps.)
2 Press the ⏻ (Power) button on the remote control to check the following:
   - The indicator on the indoor unit lights up.
   - The airflow blade opens and the fan gears up for operation.
3 Press the Mode (Mode) button to select Cool or Heat mode. Then take the following sub-steps:
   - In Cool mode, use the Temperature button to set the set temperature to 61 °F (16 °C)

Installation Inspection and Testing

- In Heat mode, use the Temperature button to set the set temperature to 86 °F (30 °C)
- Check whether, approximately 3 to 5 minutes later, the outdoor unit starts, and a cool or warm air blows out.
- After 12 minutes of stationary condition, check the indoor unit air treatment.

4 Press the (Air swing) button to check whether the airflow blades work properly.

5 Press the (Power) button to stop the trial operation.

Pumping down for removing the product

Pump-down is an operation intended to collect all the system refrigerant in the outdoor unit. This operation must be carried out before disconnecting the refrigerant tubing in order to avoid refrigerant loss to the atmosphere.

⚠ WARNING

- After installing the product, be sure to perform leak tests on the piping connections. After pumping down refrigerant to inspect or relocate the outdoor unit, be sure to stop the compressor and then remove the connected pipes.
  - Do not operate the compressor while a valve is open due to refrigerant leakage from a pipe or an unconnected or incorrectly connected pipe. Failure to do so may cause air to flow into the compressor and too a high pressure to develop inside the refrigerant circuit, leading to an explosion or product malfunction.

1 Hold down the (Power) button on the indoor unit for 5 seconds. Beep sounds immediately to indicate that the product is ready for pump down procedure.

2 Let the compressor run for more than 5 minutes.

3 Release the valve caps on High and Low pressure side.

4 Use L-wrench to close the valve on the high pressure side.

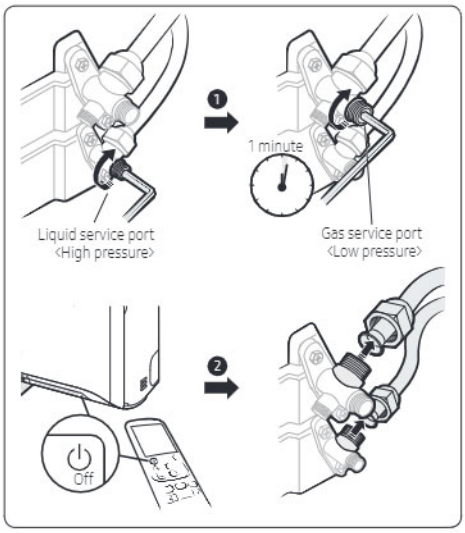
5 After approximately 1 minute, close the valve on the low pressure side.

6 Stop operation of the air conditioner by pressing the (Power) button on the indoor unit or remote control.

7 Disconnect the pipes.

⚠ CAUTION

- Compressor damage may occur if the compressor is run at a negative suction pressure.



Installation

Setting the installation options

Setting the installation options

This product has the installation options depending on the user's installation environment. Even after the product ships, it is possible to input option changes to the indoor unit using the transmission packet of the remote control.

This chapter provides a method for setting the installation options.

STEP 1. Common steps for setting the options

NOTE

- The remote control display and buttons may vary depending on the model.

1 Enter the mode for setting the options:
   - **a** Remove the batteries from the remote control, and then insert them again.
   - **b** While holding down the (High Temp) and (Low Temp) buttons simultaneously, insert the batteries into the remote control.
   - **c** Make sure that you are entered to the mode for setting the options:

2 Set the option values

⚠ CAUTION

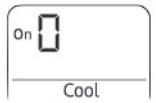
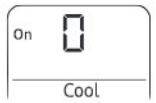
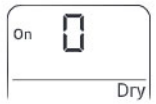
- The total number of available options are 24: SEG1 to SEG24.
- Because SEG1, SEG7, SEG13, and SEG19 are the page options used by the previous remote control models, the modes to set values for these options are skipped automatically.
- Set a 2-digit value for each option pair in the following order: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

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	X	X	X	X	X
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	X	X	X	X	X
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	X	X	X	X	X
SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
3	X	X	X	X	X

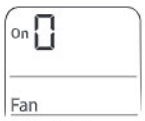
On (SEG1 to SEG12)	Off (SEG13 to SEG24)
	

Setting the installation options

Take the steps presented in the following table:

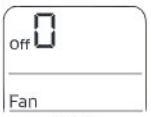
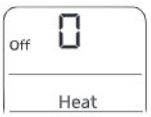
Steps	Remote control display
1 Set the SEG2 and SEG3 values: **a** Set the SEG2 value by pressing the (Wind Free) button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG3 value by pressing the (Fast) button repeatedly until the value you want to set appears on the remote control display. When you press the (Wind Free) or (Fast) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG2  SEG3
2 Press the (Mode) button. Cool and On appear on the remote control display.	
3 Set the SEG4 and SEG5 values: **a** Set the SEG4 value by pressing the (Wind Free) button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG5 value by pressing the (Fast) button repeatedly until the value you want to set appears on the remote control display. When you press the (Wind Free) or (Fast)button, values appear in the following order: 0 → 1 → ··· E → F	 SEG4  SEG5
4 Press the (Mode) button. Dry and On appear on the remote control display.	
5 Set the SEG6 and SEG8 values: **a** Set the SEG6 value by pressing the (Wind Free) button repeatedly until the value you want to set appears on the remote control display. **b** Set the SEG8 value by pressing the (Fast) button repeatedly until the value you want to set appears on the remote control display.	 SEG6  SEG8

Installation

Steps	Remote control display
When you press the (Wind Free) or (Fast) button, values appear in the following order: 0 → 1 → ··· E → F	
6 Press the (Mode) button. Fan and On appear on the remote control display.	
7 Set the SEG9 and SEG10 values: a Set the SEG9 value by pressing the (Wind Free) button repeatedly until the value you want to set appears on the remote control display. b Set the SEG10 value by pressing the (Fast) button repeatedly until the value you want to set appears on the remote control display. When you press the (Wind Free) or (Fast) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG9  SEG10
8 Press the (Mode) button. Heat and On appear on the remote control display.	
9 Set the SEG11 and SEG12 values: a Set the SEG11 value by pressing the (Wind Free) button repeatedly until the value you want to set appears on the remote control display. b Set the SEG12 value by pressing the (Fast) button repeatedly until the value you want to set appears on the remote control display. When you press the (Wind Free) or (Fast) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG11  SEG12
10 Press the (Mode) button. Auto and Off appear on the remote control display.	

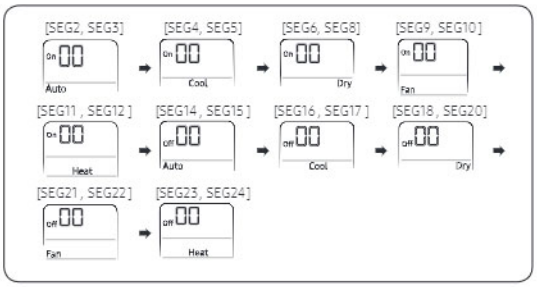
Setting the installation options

Steps	Remote control display
11 Set the SEG14 and SEG15 values: **a** Set the SEG14 value by pressing the (Wind Free) button repeatedly until the value you want to set appears on the remote control display.	 SEG14
b Set the SEG15 value by pressing the (Fast) button repeatedly until the value you want to set appears on the remote control display. When you press the (Wind Free) or (Fast) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG15
12 Press the (Mode) button. Cool and Off appear on the remote control display.	
13 Set the SEG16 and SEG17 values: **a** Set the SEG16 value by pressing the (Wind Free) button repeatedly until the value you want to set appears on the remote control display.	 SEG16
b Set the SEG17 value by pressing the (Fast)button repeatedly until the value you want to set appears on the remote control display. When you press the (Wind Free) or (Fast) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG17
14 Press the (Mode) button. Dry and Off appear on the remote control display.	
15 Set the SEG18 and SEG20 values: **a** Set the SEG18 value by pressing the (Wind Free) button repeatedly until the value you want to set appears on the remote control display.	 SEG18
b Set the SEG20 value by pressing the (Fast) button repeatedly until the value you want to set appears on the remote control display.	

Steps	Remote control display
When you press the (Wind Free) or (Fast) button, values appear in the following order: 0 → 1 → ··· E → F	SEG20
16 Press the (Mode) button. Fan and Off appear on the remote control display.	
17 Set the SEG21 and SEG22 values: **a** Set the SEG21 value by pressing the (Wind Free) button repeatedly until the value you want to set appears on the remote control display.	 SEG21
b Set the SEG22 value by pressing the (Fast) button repeatedly until the value you want to set appears on the remote control display. When you press the (Wind Free) or (Fast) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG22
18 Press the (Mode) button. Heat and Off appear on the remote control display.	
19 Set the SEG23 and SEG24 values: **a** Set the SEG23 value by pressing the (Wind Free) button repeatedly until the value you want to set appears on the remote control display.	 SEG23
b Set the SEG24 value by pressing the (Fast) button repeatedly until the value you want to set appears on the remote control display. When you press the (Wind Free) or (Fast) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG24

Setting the installation options

3 Check whether the option values that you have set are correct by pressing the (Mode) button repeatedly



4 Save the option values into the indoor unit:
Point the remote control to the remote control sensor on the indoor unit and then press the (Power) button on the remote control twice. Make sure that this command is received by the indoor unit. When it is successfully received, you can hear a short sound from the indoor unit. If the command is not received, press the (Power) button again.

STEP 2. Setting the installation options in a batch

Installation option no. for an indoor unit : 02XXXX-1XXXXX-2XXXXX-3XXXXX

The installation option can be set at the factory differently depending on the function of each model.

Various option items of each address assigned within the installation option are shown in the following table.

- Among the values expressed in each address, "Reserved" cannot be changed because it means no options are allocated or a unique function for the model is already assigned. The options SEG4, SEG5, SEG8, SEG14, SEG15, SEG17, SEG18, and SEG20 can be changed to reflect the present installation conditions, if needed.
  - Before changing the options, make sure that the power is supplied to the indoor unit. If the indoor unit is not plugged in, it must include a power supply so that the remote control's option transmission packet can be input to the indoor unit.
  - When changing the options according to the installation environment, there are two methods: changing 24 digits in a batch and changing the options individually.
  - To change in a batch, you must first know the entire 24-digit installation options of the model from the service manual. Set the installation options of indoor units by following the steps in STEP 1. Common steps for setting the options on page 27 after determining the specific address segment values required to change the installation options.
  - If you do not know the entire installation options, refer to the following section STEP 3. Changing the options individually on page 35.
  - Description of option segments with changeable values

① SEG4 : set for using "Indoor external temperature sensor" or "fan Thermo off control"
(Fan thermo off control only: 1, external sensor only: 6, using both: 7)

⚠ CAUTION

- "Fan Thermo Off control" is only available for an indoor unit for Free Joint Multi.
  When "Fan Thermo Off control" is matched with a Single Zone High-Wall system , the setting cannot be made using this option.But you can set this option by referring to the following section STEP 3. Changing the options individually on page 35.

② SEG5 : To use the central controller, enter1.

③ SEG8 : To use the external drain pump, enter 8.

NOTE

- If the SEG8 is set to 'Use', the SEG14-External Contact Control will be set to DISABLE automatically.

④ SEG14 : As an External Contact Control option, check the installation site and then select the appropriate option.

NOTE

- If SEG14 is not set to 'default', SEG8-the external drain pump will not to be available.

⑤ SEG15 : Set an output option according to external control (Thermo on - 0, Operation on - 1)

⑥ SEG17 : Control the received sound tone of the remote control of the indoor unit. (Buzzer use - 0, disuse -1)

⑦ SEG18 : Change the filter usage time of the indoor unit (500HR - 1, 1000HR - 2)

⑧ SEG20: Set this option to control an indoor unit using a specific remote control.

Setting the installation options

Option	SEG1		SEG2			SEG3	SEG4			SEG5			SEG6
Function	Page		Mode			Reserved	Use of external room temperature sensor / Fan Thermo Off control			Use of central control			Reserved
Indication and details	Indication	Details	Indication	Details	-		Indication	Details	Factory set	Indication	Details	Factory set	
	0		2	Installation	-		0	Disuse	0	0	Disuse	1	
							1	Use/Disuse					
							6	Disuse/Use		1	use		
							7	Use/Use					

Option	SEG7		SEG8			SEG9	SEG10	SEG11	SEG12
Function	Page		Use of drain pump			Reserved	Reserved	Reserved	Reserved
Indication and details	Indication	Details	Indication	Details	Factory set				
	1		0	Disuse	0				
			8	Use external drain pump					

Option	SEG13		SEG14			SEG15			SEG16	SEG17			SEG18		
Function	Page		Use of external control			Setting the output of external control			Reserved	Buzzer control (Receiving tone of indoor unit)			Use Time of Filter		
Indication and details	Indication	Details	Indication	Details	Factory set	Indication	Details	Factory set		Indication	Details	Factory set	Indication	Details	Factory set
	2		0	Disuse	0	0	Thermo on	0		0	Use	0	0	Disuse	1
			1	On/Off control		1	Operation on			1	Disuse		1	500HR	
			2	Off control		-	-			-	-		2	1000HR	
			3	Window On/Off control		-	-			-	-		-	-	
			8	Reverse control		-	-			-	-		-	-	
			9	On/off & Reverse control		-	-			-	-		-	-	
			A	Off & Reverse control		-	-			-	-		-	-	
			B	Window on/off & Reverse control		-	-			-	-		-	-	

Option	SEG19		SEG20			SEG21	SEG22	SEG23	SEG24
Function	Page		Wireless controller address			Reserved	Reserved	Reserved	Reserved
Indication and details	Indication	Details	Indication	Details	Factory set				
	3		0 or 1	Indoor1	0				
			2	Indoor2					
			3	Indoor3					
			4	Indoor4					

Installation

STEP 3. Changing the options individually

When you want to change the value of a specific option, refer to the following table and follow the steps in STEP1. Common steps for setting the options on page 27.

(Enter the set address of the installation option to change in SEG4 and SEG5 in the table below, enter the change option value in SEG6. The values of SEG1, SEG2, SEG3, and SEG4 are always 0, D, 2 in the same order as in the following table.)

Option	SEG1		SEG2		SEG3		SEG4		SEG5		SEG6	
Function	Page		Mode		Option mode to change		Tens position of the option number		Units position of the option number		New value	
Indication and details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
	0		D		2		Tens position value	0 to 9	Units position value	0 to 9	New value	0 to F

Example: Changing the Buzzer control (SEG17) option of the installation options to 1 (disuse).

Option	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
Function	Page	Mode	Option mode to change	Tens position of the option number	Units position of the option number	New value
Indication	0	D	2	1	7	1

NOTE

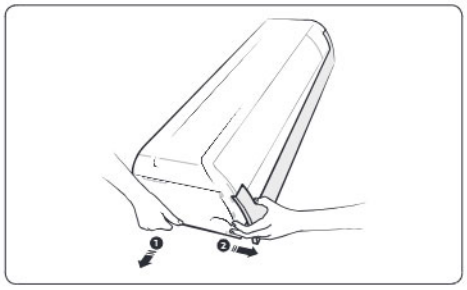
- How to set the thermo off option for a Single Zone High-Wall system is shown in the following option table:

Option	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
Function	Page	Mode	Option mode to change	Tens position of the option number	Units position of the option number	New value
Indication	0	D	1	2	4	F

Sub PCB installation(optional)

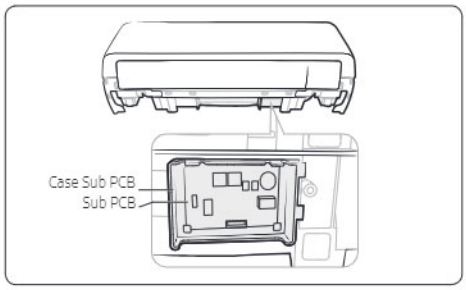
(Wired remote controller, central remote controller etc.)

1 Turn the power off and take off the cover panel of the indoor unit.

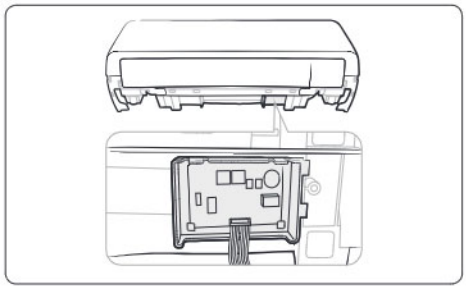


2 Attach the Sub PCB to the Case Sub PCB.

3 Assemble the Case Sub PCB to the indoor unit.



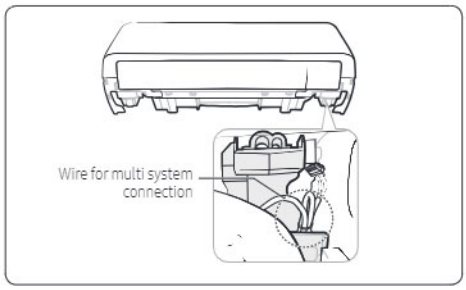
4 Find the PCB wire, and connect the wire to the Sub PCB as seen in the picture.



5 Connect the wire(remote controller, central remote controller etc) to the Sub PCB.

6 Assemble the Cover PCB and the front panel.

※ f the Sub PCB is not installed, arrange the wire for multi system (connection) as shown in the illustration.



NOTE

- The Sub PCB is attached to be controlled by the wired remote controller and central controller.

SAMSUNG

TRANSMITTAL LETTER

TAGGART ARCHITECTS

To: Mr. Ralph Moreno
Nabholz Construction Corp
1718 Aldersgate Road
Little Rock, Arkansas 72205

Project: City of Pine Bluff – 6th Avenue Plaza– Submittals

FROM: James Meyer, A.I.A.
Project Architect

Date: April 21, 2023

WE TRANSMIT to you ☒ herewith ☐ under separate cover via

☐ Drawings	☒ Approved	☐ As Requested
☐ Specifications	☐ Approved as Noted	☒ For Your Use
☐ Correspondence	☐ Revise and Resubmit	☐ For Comment or Approval
☒ Shop Drawings	☐ Not Approved	☐

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Little Rock, Arkansas 72223
501-448-0100
www.BrownEngineers.net

SUBMITTAL REVIEW

Date: 04/21/23

To:	Taggart Architects 4500 Burrow Drive North Little Rock, AR 72116		
Attention:	James Meyer, AIA		
From:	Michael J. Biebesheimer, PE		
Re:	230010 - Mechanical General – Split Systems – Product Data		
Project No.	TAG-043	Project Name:	Pine Bluff Sixth Avenue District

■	☐	☐	☐	☐	☐	☐
CODE 1 Approved	**CODE 2 Approved as Noted**	**CODE 3 Approved As Noted / Confirm**	**CODE 4 Revise and Resubmit**	**CODE 5 Not Approved**	**CODE 6 Comments Attached**	**CODE 7 Receipt Acknowledged**

1. DSCU-01: Samsung AJ024BXS4CH/AA Multi-Split Heat Pump – **Approved**
2. DSFC-01A/B/C/D: Samsung AR07BSFCMWKNCV Wall Coil – **Approved**
3. DSFC-02/03: Samsung AC024BNADCH/AA Heat Pump – **Approved**
4. DSCU-02/03: Samsung AC024BXADCH/AA Wall Coil – **Approved**
5. FC-01/02: Samsung AC024BNHDCH/AA Ducted Fan Coil – **Approved**
6. CU-01/02: Samsung AC024BXADCH/AA Heat Pump – **Approved**

SHOP DRAWING REVIEW

Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Engineer's review and approval will be only to determine if the items covered by the submittals will conform to the information given in the Contract Documents and be compatible with the design concept. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.

TRANSMITTAL LETTER

TAGGART ARCHITECTS

To: Ms. Scott Guerin
Brown Engineers
17200 Chenal Parkway, #300
Little Rock, Arkansas 72223

Project: City of Pine Bluff – 6th Avenue Plaza – Submittals

FROM: James Meyer, A.I.A.
Project Architect

Date: April 18, 2023

WE TRANSMIT to you ☒ herewith ☐ under separate cover via

☐ Drawings	☐ Approved	☐ As Requested
☐ Specifications	☐ Approved as Noted	☒ For Your Use
☐ Correspondence	☐ Revise and Resubmit	☐ For Comment or Approval
☒ Shop Drawings	☐ Not Approved	☐

Copies	Document #	Date	Description
1	230010	4/18/2023	Mechanical General – Split Systems – Product Data

Remarks: Please find enclosed the above referenced submittals for your review and comment. Please maintain a copy of the submittal for your records and return the remainder with your comments and the Taggart as well as the Nabholz Transmittals.

Copies To:

Signed By:

Billy J. Mathis, CSI, CDT
Administrative Assistant for Architecture

4500 Burrow Drive, North Little Rock, Arkansas 72116
Phone: (501) 758-7443 FAX: (501) 753-7309

Nabholz Construction - HQ
1718 Aldersgate Road
Little Rock, Arkansas 72205
P: +15012175500

Project: 04-22-3162 SIXTH AVENUE PLAZA
601 SOUTH MAIN STREET
PINE BLUFF, Arkansas 71601

Submittal #23 00 10-3.0 - Split Systems
23 00 10 - Mechanical General

Revision	0	**Submittal Manager**	Ralph Moreno (Nabholz Construction Corporation)
Status	Open	**Date Created**	Apr 18, 2023
Issue Date		**Spec Section**	23 00 10 - Mechanical General
Responsible Contractor	COMFORT SYSTEMS USA (ARK) INC	**Received From**	Matthew Aldridge (COMFORT SYSTEMS USA (ARK) INC)
Received Date		**Submit By**	
Final Due Date	May 2, 2023	**Lead Time**	
		Type	
Approvers	Brie Gregory , Billy Mathis , James Meyer		
Ball in Court	Brie Gregory , Billy Mathis , James Meyer		
Distribution			
Description			
Lead Time		**Priority**	

Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information Attachments					
Ralph Moreno		Apr 19, 2023	Apr 18, 2023	Submitted	23 00 00-01 Split Systems.pdf (Current)
Comment	Please see attached for your review.				
Brie Gregory	Apr 18, 2023	May 2, 2023		Pending	
Billy Mathis	Apr 18, 2023	May 2, 2023		Pending	
James Meyer	Apr 18, 2023	May 2, 2023		Pending	

Nabholz Construction - HQ
1718 Aldersgate Road
Little Rock, Arkansas 72205
P: +15012175500

Project: 04-22-3162 SIXTH AVENUE PLAZA
601 SOUTH MAIN STREET
PINE BLUFF, Arkansas 71601

Submittal #23 00 10-3.0 - Split Systems
23 00 10 - Mechanical General

Revision	0	**Submittal Manager**	Ralph Moreno (Nabholz Construction Corporation)
Status	Open	**Date Created**	Apr 18, 2023
Issue Date		**Spec Section**	23 00 10 - Mechanical General
Responsible Contractor	COMFORT SYSTEMS USA (ARK) INC	**Received From**	Matthew Aldridge (COMFORT SYSTEMS USA (ARK) INC)
Received Date		**Submit By**	
Final Due Date	May 3, 2023	**Lead Time**	
		Type	
Approvers	Brie Gregory , Billy Mathis , James Meyer		
Ball in Court	Ralph Moreno (Nabholz Construction Corporation)		
Distribution			
Description			
Lead Time		**Priority**	

Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information Attachments					
Ralph Moreno		Apr 19, 2023		Pending	
Brie Gregory		May 3, 2023		Pending	
Billy Mathis		May 3, 2023		Pending	
James Meyer		May 3, 2023		Pending	

CREATING CUSTOMERS FOR LIFE

POWERS

SUBMITTAL

PRODUCT	CU/FC-01, 02 DSCU/DSFC-01, 02, 03
SPECIFICATION	230000
MANUFACTURER	Samsung
JOB NAME	Pine Bluff 6th Avenue Plaza
LOCATION	Pine Bluff, AR
ENGINEER	Michael J. Biebesheimer
CONTRACTOR	Comfort Systems USA
CONTRACTOR POC	Jon Davis
DATE	3/10/2023
SUBMITTED BY	Eric Blaylock

5440 Northshore Drive – North Little Rock, Arkansas 72118 – Tel: 501.374.5420 Fax: 501.370.9298

SAMSUNG

6th Ave District - Pine Bluff, AR
AR

Submittal Data

Date Submitted : March 10, 2023 9:10 AM
Submitted to : Comfort Systems USA

Submitted by : Powers of Arkansas

Engineer : Brown Engineering

Submitted for :

For information contact : Eric Blaylock

SAMSUNG

Date submitted : 03/10/2023
Project name : 6th Ave District - Pine Bluff, AR
Submitted to : Comfort Systems USA
Submitted by : Powers of Arkansas
Manufacturer : Samsung HVAC
Submitted for :

Submittal Note

SAMSUNG

Samsung HVAC Equipment Summary

Unit Type	Unit Description	Unit Name	Unit US Code	Qty	Tag
Single Zone Indoor Unit	24K Btu/h WindFree High-wall mounted	AC024BNADCH/AA	CNH24ADB	2	
	24K Btu/h WindFree High-wall mounted	AC024BNADCH/AA	CNH24ADB	2	
	24K Btu/h HSP Duct	AC024BNHDCH/AA	CNH24HDB	1	
	24K Btu/h HSP Duct	AC024BNHDCH/AA	CNH24HDB	1	
	36K Btu/h HSP Duct	AC036BNHDCH/AA	CNH36HDB	1	
	36K Btu/h HSP Duct	AC036BNHDCH/AA	CNH36HDB	1	
	36K Btu/h HSP Duct	AC036BNHDCH/AA	CNH36HDB	1	
Multi-zone Outdoor Unit	24,000 Btu/h, 4 port, low ambient heating outdoor unit	AJ024BXS4CH/AA	JXH24S4B	1	
	24,000 Btu/h, 4 port, low ambient heating outdoor unit	AJ024BXS4CH/AA	JXH24S4B	1	
	24,000 Btu/h, 4 port, low ambient heating outdoor unit	AJ024BXS4CH/AA	JXH24S4B	1	
Multi-zone Indoor Unit	7K Btu/h High-wall mounted (WindFree 2.0e)	AR07BSFCMWKNCV	RNS07CMB	4	
Accessory	Filter Box	FB-DS2		1	
	Filter Box	FB-DS3		1	
	Wired controller sub-PCB	MIM-A00UN		4	
Control	DMS 2.5 Gateway with BACnet	MIM-B17BUN		1	
	Advanced wired controller	MWR-WG00UN		8	

SAMSUNG

SUBMITTAL AC024BNADCH/AA / AC024BXADCH/AA (CNH24ADB / CXH24ADB)

Samsung WindFree™ High-Wall Evaporator, Split System

Job Name _____ Location _____

Purchaser _____ Engineer _____

Submitted to _____ Reference _____ Approval _____ Construction _____

Unit Designation _____ Schedule # _____

Specifications

Model	Indoor Unit Model Number (US Code)		AC024BNADCH/AA (CNH24ADB)
	Outdoor Unit Model Number (US Code)		AC024BXADCH/AA (CXH24ADB)
Performance	Nominal Capacity	Cooling / Heating (Btu/h)	24,000 / 27,000
	Capacity Range	Cooling (Btu/h)	8,000 - 27,000
		Heating (Btu/h)	7,000 - 40,000
	AHRI 210-240 2017[1]	SEER	18.9
		EER	10.3
		HSPF	10.80
	AHRI 210-240 2023[2]	SEER2	19.5
		EER2	10.3
		HSPF2	8.5
Power	Voltage	ø / V / Hz	1 / 208-230 / 60
	Working Voltage Range (VAC)		187 - 253
	Operating Current (min. / std. / max.)	Cooling (A)	2.5 / 10.6 / 12.9
		Heating (A)	2.0 / 12.4 / 23.5
	Max. Breaker	Amps	30
	Min. Circuit Ampacity (A)		24.1
Dimensions	W X H X D (in.)	Indoor Unit	41 9/16 X 8 7/16 X 11 3/4
		Outdoor Unit	37 X 39 5/16 X 13
	Weight (lbs.)	Indoor Unit	28
		Outdoor Unit	158.7
Sound Pressure Level	Indoor Unit dB(A)	L / M / H	35 / 39 / 44
	Outdoor Unit dB(A)	Cooling / Heating (high)	50 / 52
Operating Temperatures	Outdoor	Cooling	23 ~ 122°F (-5 ~ 50°C)
			0 ~ 122°F (-18 ~ 50°C) W/Baffle
		Heating	-13 - 75°F (-25 - 24°C)
	Indoor	Cooling	64 ~ 90°F (16 ~ 32°C)
		Heating	T ≤ 86°F (30°C)
Pipe Connections	Indoor & Outdoor	High side	1/4"
		Low side	5/8"
	Maximum (ft.)		164
	Maximum Vertical Separation (ft.)		98.4
	Condensate Connection		11/16 in. OD
Refrigerant	Type		R410A
	Factory Charge	lbs.	5.73
	Charged for		24.6 ft.
Compressor	Manufacturer		Samsung
	Type		Inverter Driven, Twin BLDC Rotary
	RLA	Amps	15.9
Evaporator Fan	Type		BLDC With Crossflow Fan (1)
	Air Volume	CFM (L/M/H)	466 / 537 / 629
	Output	Watts	27
Condenser Fan	Motor		BLDC With Axial Type Fan (1)
	FLA / Watts / CFM (max.)		1.25A X 1 / 125W X 1 / 2,684 CFM
Safety	Certifications		UL 60335-2-40
	Devices		PCB fuses, indoor unit terminal block thermal fuse, current transformer, over-voltage protection, crankcase heating, temperature limit protection logic, compressor overload sensing

This publication reflects both the 1987 Appendix M metric (SEER) and the 2023 Appendix M1 metric (SEER2). Efficiency requirements are published at 10 C.F.R. 430.32(c). Please refer to www.AHRInet.org for more information about updated energy metrics.

[1]Performance data certified by AHRI to AHRI 210-240 (2017) with Addendum 1.
[2]Performance data certified by AHRI to AHRI 210-240 (2023). Effective January 1st, 2023.

Samsung HVAC maintains a policy of ongoing development; specifications are subject to change without notice. Refer to www.AHRIdirectory.org for current reference numbers.

* The WindFree™ unit delivers an air current that is under 0.15 m/s while in WindFree™ mode. Air velocity that is below 0.15 m/s is considered "still air" as defined by ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers)

Select models are ENERGY STAR Labeled. Proper sizing and installation of equipment is critical to achieve performance. Split system air conditioners and heat pumps (excluding ductless systems) must be matched with appropriate coil components to meet ENERGY STAR criteria. Ask your contractor for details or visit www.energystar.gov.

General Information

- The indoor unit shall feature "WindFree™" mode*. In cooling mode, as room temperature nears set temperature, the unit will close its louver and will disperse air into the space through thousands of micro-holes on the front of the indoor unit preventing cold air drafts on occupants
- The outdoor unit shall supply power to indoor unit via 14 AWG X 3 power wire
- High-voltage terminal block temperature sensor to disable unit in the event of power connection overheating
- Auto-restart after power loss
- Soft-start compressor minimizing current inrush
- Base pan heater equipped as standard
- All heat exchangers shall be mechanically bonded aluminum fin to copper tube
- The condensing unit heat exchanger salt spray test method: ISO-9227 - the heat exchanger showed no unusual rust or corrosion development to 3,000 hours.
- The system shall provide 100% heating capacity at -4°F (-20°C).

Option settings

- The outdoor unit shall have snow accumulation prevention option setting to prevent snow drifting against an idle outdoor unit.
- Night-time Quiet Mode: reduction of operational sound during evening hours *(automatic or manual activation)*
- Emergency Temperature Output (ETO) function: when indoor unit is in error status or when room temperature exceeds configurable temperature level, the system outputs a signal to an external source, e.g., backup system, building management system, alert device (ex: status light, warning lamp, buzzer)
- System can be configured as heating/cooling, cooling only, or heating only via outdoor unit option setting
- Maximum Current Control configurable from 50% - 100% via outdoor unit, wired controller, or central controls

Indoor Fan

- Indoor fan is a single crossflow type
- Three fan speed settings and auto setting
- Washable filter as standard
- The WindFree™ function will close the supply air outlet louver while in cooling mode to gently disperse cool air into the space without blowing directly onto occupants. The WindFree™ feature is optional and can be enabled using central or local control options
- The WindFree™ indoor unit has an integral humidity sensor that will open the louver for standard cool mode when space conditions could potentially cause condensation formation on the chassis surface

Construction

- Outdoor unit: Galvanized steel with a baked-on powder coated finish for durability
- Indoor unit: UL94 V0 with a galvanized steel mounting plate
- The indoor unit shall have easy access to wire, pipe, and drain connections via access panel on the front of the unit for easier installation and service

Controls

- Control wiring shall be 2 X 16 AWG
- Wireless controller included as standard
- Wired controllers must be purchased separately
- Dual set temperature support when connected to MWR-WG00UN Advanced Wired Controller or central control options
- No additional interface modules/adapters are required when connecting to Samsung central control options
- The unit shall be operated via a wireless or wired remote control with DDC type signal

Refrigerant System

- The compressor shall be hermetically sealed, inverter-controlled Twin BLDC rotary type
- Refrigerant flow shall be controlled by an electronic expansion valve at outdoor unit

Warranty

10 years compressor, 10 years parts, 1-year limited labor (conditions apply)

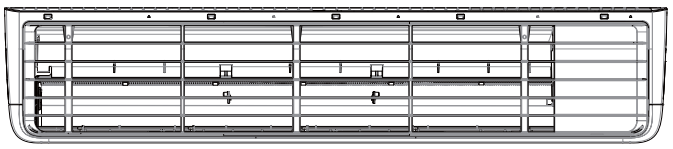
ENERGY STAR COLD CLIMATE

AHRI CERTIFIED www.ahridirectory.org Unitary Small AC AHRI Standard 210/240

Intertek

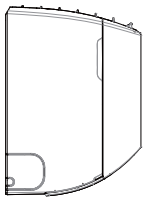
Optional Accessories

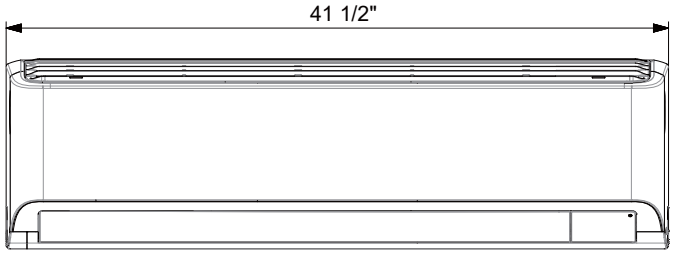
Wired Controller	Advanced	MWR-WG00UN
	Touchscreen	MWR-SH11UN
Thermostat Adaptor (for connection to a standard 24VAC thermostat)		MIM-A60UN
Wi-Fi adapter		MIM-H05UN
External Temperature Sensor		MRW-TA
External Contact Control		MIM-B14
Wall Bracket (for outdoor unit)		CKN-250
Wind Baffles	Front	WBF-2M-B
	Back	WBB-3M
Hail Guard Kit (includes back and side guards)		HGK-3
Line Sets - insulated and flared, interconnect cables included		25' - ILS-2509
		50' - ILS-5009



TOP

LEFT





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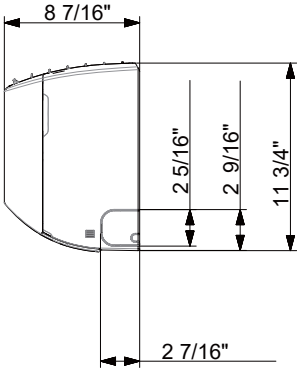
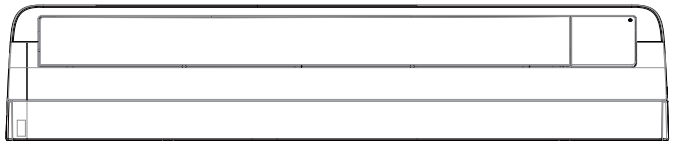
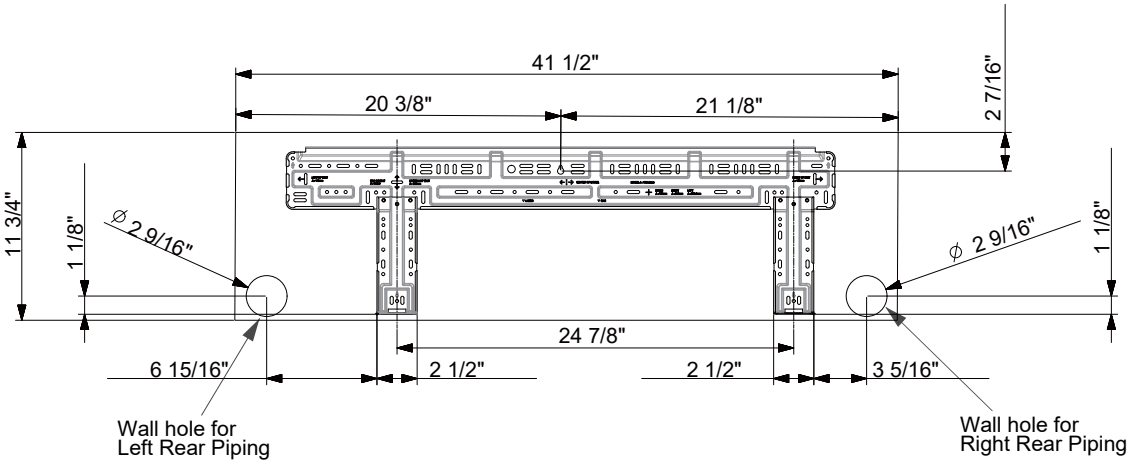


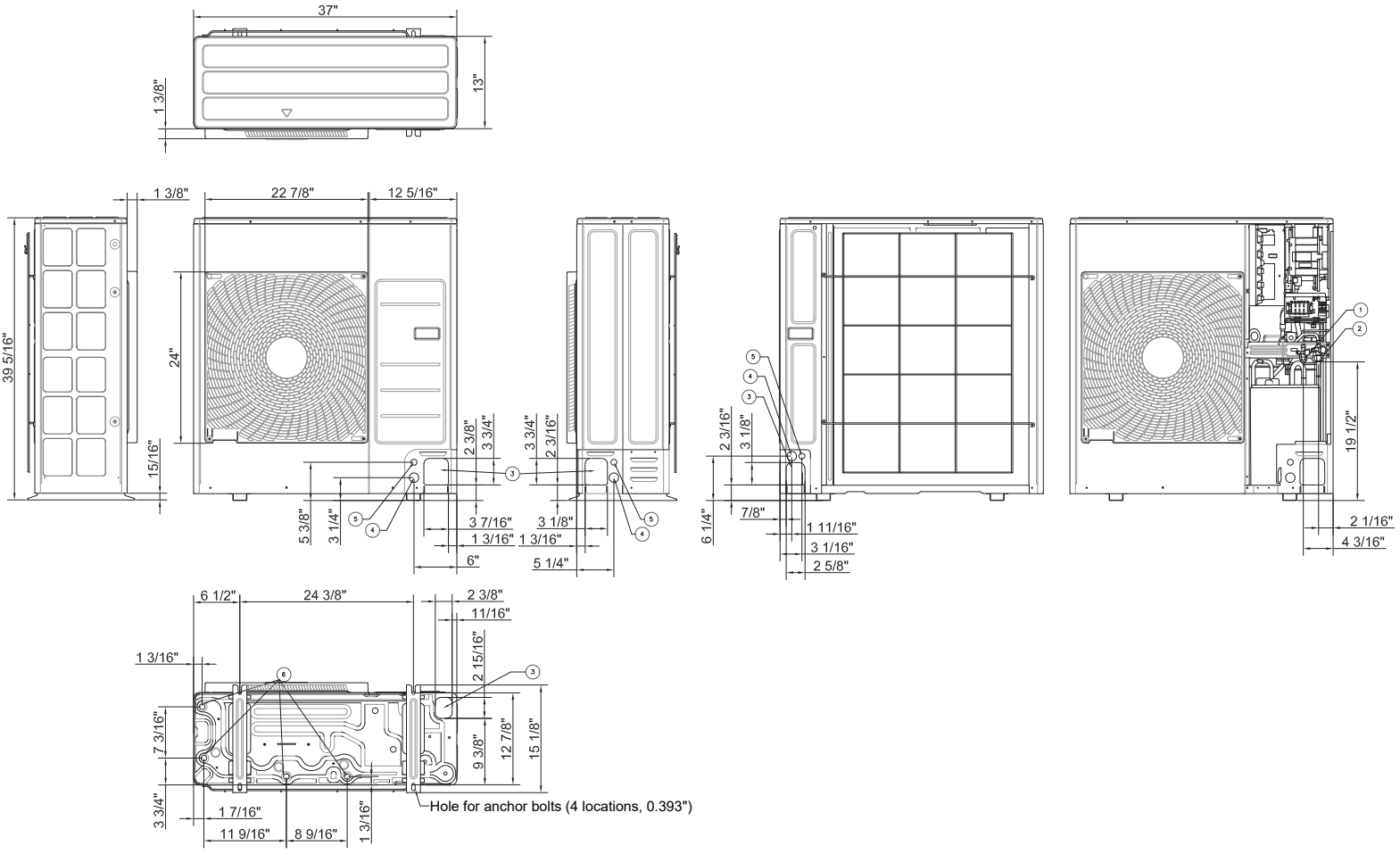
FRONT



BOTTOM



No.	Name	Description
1	Liquid pipe connection	1/4"
2	Gas pipe connection	5/8"
3	Drain pipe connection	11/16" OD
4	Power supply & Communication wiring conduit	-



No.	Name	Description
1	Liquid pipe connection	ø 1/4"
2	Gas pipe connection	ø 5/8"
3	Piping knockout hole	Front, side, rear, and bottom
4	Power supply knowkout hole	Front, side, and rear (ø 1 3/8")
5	Comm. Wiring knockout hole	Front, side, and rear (ø 7/8")
6	Drain hole	Connect using provided drain fitting

SAMSUNG

SUBMITTAL AC024BNHDCH/AA / AC024BXADCH/AA (CNH24HDB / CXH24ADB)

Samsung Duct S, Single Zone Duct, Split System

Job Name _____ Location _____

Purchaser _____ Engineer _____

Submitted to _____ Reference _____ Approval _____ Construction _____

Unit Designation _____ Schedule # _____

Specifications

Model	Indoor Unit Model Number (US Code)		AC024BNHDCH/AA (CNH24HDB)
	Outdoor Unit Model Number (US Code)		AC024BXADCH/AA (CXH24ADB)
Performance	Nominal Capacity	Cooling / Heating (Btu/h)	24,000 / 27,000
	Capacity Range	Cooling (Btu/h)	8,400 - 32,000
		Heating (Btu/h)	7,000 - 39,000
	AHRI 210-240 2017[1]	SEER	20.5
		EER	12.6
		HSPF	11.0
	AHRI 210-240 2023[2]	SEER2	19.5
		EER2	12.0
		HSPF2	8.4
Power	Voltage	ø / V / Hz	1 / 208-230 / 60
	Working Voltage Range (VAC)		187 - 253
	Operating Current (min. / std. / max.)	Cooling (A)	2.4 / 8.8 / 14.2
		Heating (A)	2.3 / 11.0 / 23.5
	Max. Breaker	Amps	30
	Min. Circuit Ampacity (A)		24.1
Dimensions	W X H X D (in.)	Indoor Unit	47 1/4 X 9 13/16 X 27 9/16
		Outdoor Unit	37 X 39 5/16 X 13
	Weight (lbs.)	Indoor Unit	77.2
		Outdoor Unit	158.7
	Duct Connections (W X H)	Supply (in.)	45 15/16 X 8 11/16
		Return (ID, in.)	45 15/16 X 8 11/16
Sound Pressure Level	Indoor Unit dB(A)	L / M / H	28 / 32 / 36
	Outdoor Unit dB(A)	Cooling / Heating (high)	50 / 52
Operating Temperatures	Outdoor	Cooling	23 ~ 122°F (-5 ~ 50°C)
			0 ~ 122°F (-18 ~ 50°C) W/Baffle
		Heating	-13 - 75°F (-25 - 24°C)
	Indoor	Cooling	64 ~ 90°F (16 ~ 32°C)
		Heating	T ≤ 86°F (30°C)
Pipe Connections	Indoor & Outdoor	High side	1/4"
		Low side	5/8"
	Maximum (ft.)		164
	Maximum Vertical Separation (ft.)		98.4
	Condensate Connection		1 1/4 in. OD, 1 in. ID
Refrigerant	Type		R410A
	Factory Charge	lbs.	5.73
	Charged for		24.6 ft.
Compressor	Manufacturer		Samsung
	Type		Inverter Driven, Twin BLDC Rotary
	RLA	Amps	15.9
Evaporator Fan	Type		BLDC (1) With Sirocco Fan (3)
	Air Volume	CFM (L/M/H)	593 / 671 / 749
	Output	Watts	153
	External Static Pressure	Standard ("WC)	0.18
		Min. / Max. ("WC)	0.1 / 0.8
Condenser Fan	Motor		BLDC With Axial Type Fan (1)
	FLA / Watts / CFM (max.)		1.25A X 1 / 125W X 1 / 2,684 CFM
Safety	Certifications		UL 60335-2-40
	Devices		PCB fuses, indoor unit terminal block thermal fuse, current transformer, over-voltage protection, crankcase heating, temperature limit protection logic, compressor overload sensing

This publication reflects both the 1987 Appendix M metric (SEER) and the 2023 Appendix M1 metric (SEER2). Efficiency requirements are published at 10 C.F.R. 430.32(c). Please refer to www.AHRInet.org for more information about updated energy metrics.

[1]Performance data certified by AHRI to AHRI 210-240 (2017) with Addendum 1.
[2]Performance data certified by AHRI to AHRI 210-240 (2023). Effective January 1st, 2023.

Samsung HVAC maintains a policy of ongoing development, specifications are subject to change without notice. Refer to www.AHRIdirectory.org for current reference numbers.

Select models are ENERGY STAR Labeled. Proper sizing and installation of equipment is critical to achieve performance. Split system air conditioners and heat pumps (excluding ductless systems) must be matched with appropriate coil components to meet ENERGY STAR criteria. Ask your contractor for details or visit www.energystar.gov.

SHA-CAC-HA024-2212A

General Information

- The outdoor unit shall supply power to indoor unit via 14 AWG X 3 power wire
- High-voltage terminal block temperature sensor to disable unit in the event of power connection overheating
- Integral condensate pump with maximum 29" lift from bottom of the unit with check valve and float switch that disables indoor should condensate overflow be detected.
- Auto-restart after power loss
- Soft-start compressor minimizing current inrush
- All heat exchangers shall be mechanically bonded aluminum fin to copper tube
- The condensing unit heat exchanger salt spray test method: ISO-9227 - the heat exchanger showed no unusual rust or corrosion development to 3,000 hours.
- Base pan heater equipped as standard
- System shall provide 100% heating capacity at -4°F(-20°C)

Option settings

- The outdoor unit shall have snow accumulation prevention option setting to prevent snow drifting against an idle outdoor unit.
- Night-time Quiet Mode: reduction of operational sound during evening hours *(automatic or manual activation).*
- Emergency Temperature Output (ETO) function: when indoor unit is in error status or when room temperature exceeds configurable temperature level, the system outputs a signal to an external source, e.g., backup system, building management system, alert device (ex: status light, warning lamp, buzzer).
- System can be set up as heating/cooling, cooling only, or heating only via outdoor unit option setting.
- Maximum Current Control configurable from 50% - 100% via outdoor unit, wired controller, or central controller

Indoor Fan

- Indoor fan is sirocco type
- Three fan speed settings and auto setting
- Smart pressure control feature that adjusts fan speed based on ESP delivering consistent heating and cooling power
- The indoor unit shall have a smart-tuning function that can provide optimized comfort by allowing the occupant to offset the fan CFM curve with a wired remote controller (MWR-WG00UN) to increase or decrease airflow.
- The indoor unit shall have automatic air volume scanning for simple setup and optimized comfort settings for the occupant.

Construction

- Outdoor unit shall be galvanized steel with a baked-on powder coated finish for durability
- Indoor Unit: Insulated, galvanized steel.

Controls

- Control wiring shall be 2 X 16 AWG
- No additional interface modules/adapters are required when connecting to Samsung central control options.
- The unit shall be operated via a wireless or wired remote control with DDC type signal
- Dual set temperature support when connected to MWR-WG00UN Advanced Wired Controller or central control options.
- Wired or wireless controllers must be purchased separately

Refrigerant System

- The compressor shall be hermetically sealed, inverter-controlled BLDC rotary type.
- Refrigerant flow shall be controlled by an electronic expansion valve at outdoor unit

Air Filtration

- Air filtration shall be field provided
- Pressure drop across field-supplied filter must be factored into the total ESP.

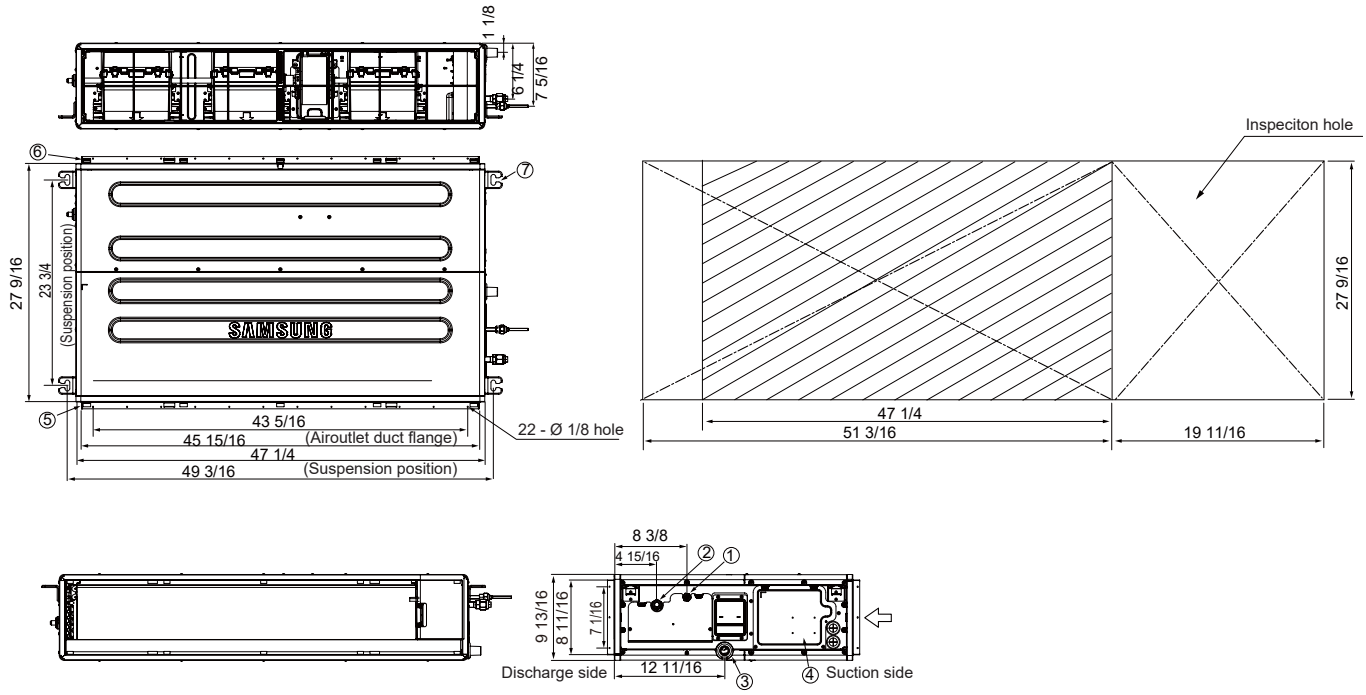
Warranty

10 Years compressor, 10 years parts, 1 year limited labor when registered

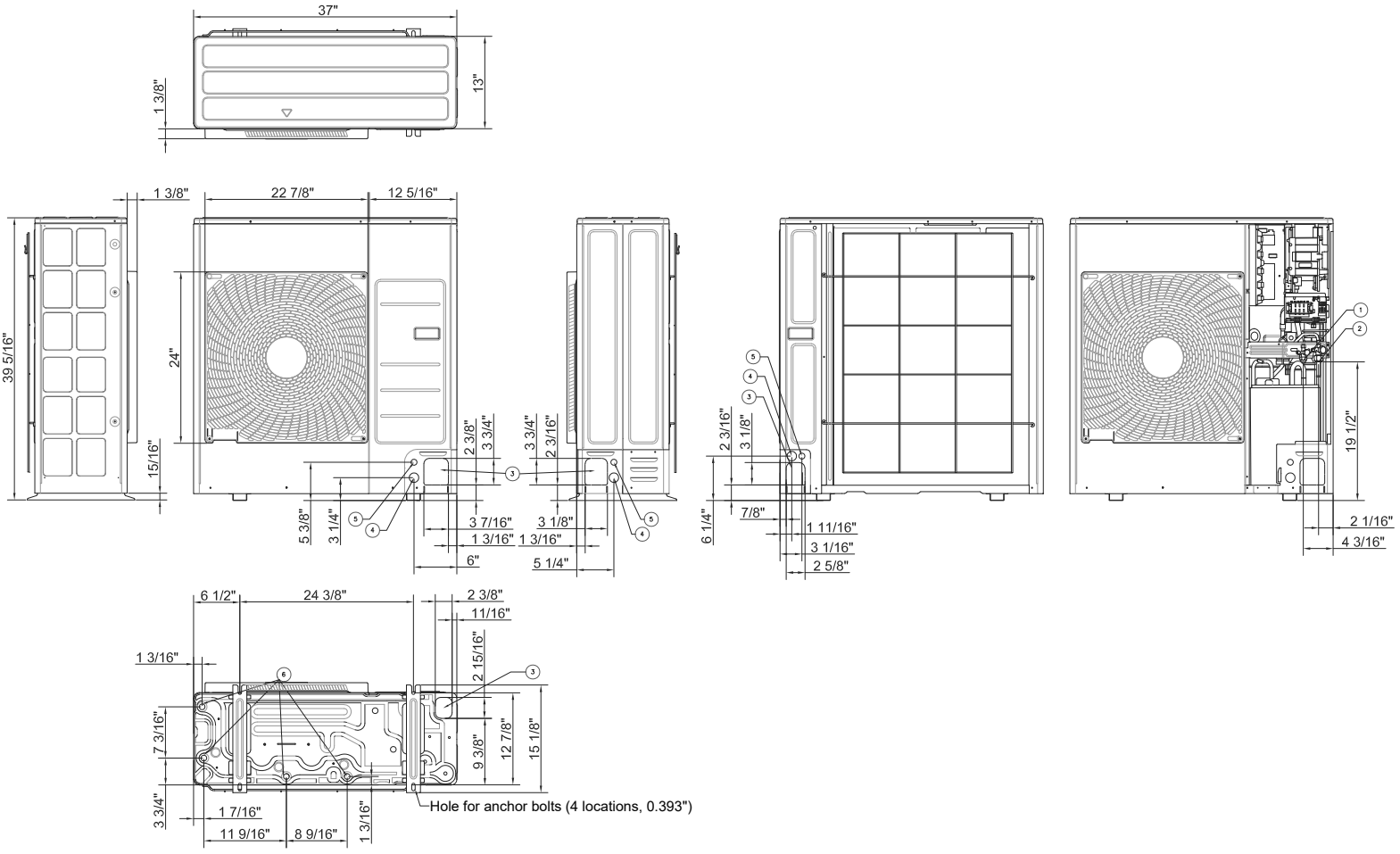
ENERGY STAR ENERGY STAR COLD CLIMATE AHRI CERTIFIED www.ahridirectory.org Unitary Small AC AHRI Standard 210/240 C US

Optional Accessories

Wired Controller	Advanced	MWR-WG00UN
	Touchscreen	MWR-SH11UN
Thermostat Adaptor (for connection to a standard 24VAC thermostat)		MIM-A60UN
Wireless Signal Control	Wireless Signal Receiver	MRK-A10N
	Wireless Controller	AR-EH04U
Wi-Fi Adapter		MIM-H05UN
External Temperature Sensor		MRW-TA
Filter Box		FB-DS2
External Contact Control		MIM-B14
Wall Bracket (for outdoor unit)		CKN-250
Wind Baffles	Front	WBF-2M-B
	Back	WBB-3M
Hail Guard Kit (includes back and side guards)		HGK-3
Line Sets - insulated and flared, interconnect cables included		25' - ILS-2509
		50' - ILS-5009



No.	Name	Description
①	Refrigerant Liquid Pipe	Ø 1/4"
②	Refrigerant Gas Pipe	Ø 5/8"
③	Condensate Drain	3/4" (OD 1.05")
④	Power & Comm. Wiring Conduits	-
⑤	Supply Air Flange	-
⑥	Return Air Flange	-
⑦	Hook	-



No.	Name	Description
1	Liquid pipe connection	ø 1/4"
2	Gas pipe connection	ø 5/8"
3	Piping knockout hole	Front, side, rear, and bottom
4	Power supply knowkout hole	Front, side, and rear (ø 1 3/8")
5	Comm. Wiring knockout hole	Front, side, and rear (ø 7/8")
6	Drain hole	Connect using provided drain fitting

SAMSUNG

SUBMITTAL AC036BNHDCH/AA / AC036BXADCH/AA (CNH36HDB / CXH36ADB)

Samsung Duct S, Single Zone Duct, Split System

Job Name _____ Location _____

Purchaser _____ Engineer _____

Submitted to _____ Reference _____ Approval _____ Construction _____

Unit Designation _____ Schedule # _____

Specifications

Model	Indoor Unit Model Number (US Code)		AC036BNHDCH/AA (CNH36HDB)
	Outdoor Unit Model Number (US Code)		AC036BXADCH/AA (CXH36ADB)
Performance	Nominal Capacity	Cooling / Heating (Btu/h)	36,000 / 40,000
	Capacity Range	Cooling (Btu/h)	11,500 - 44,000
		Heating (Btu/h)	10,500 - 56,000
	AHRI 210-240 2017[1]	SEER	19.0
		EER	10.7
		HSPF	10.0
	AHRI 210-240 2023[2]	SEER2	19.0
		EER2	10.7
		HSPF2	8.4
Power	Voltage	ø / V / Hz	1 / 208-230 / 60
	Working Voltage Range (VAC)		187 - 253
	Operating Current (min. / std. / max.)	Cooling (A)	4.8 / 15.4 / 19.3
		Heating (A)	3.5 / 15.6 / 24.0
	Max. Breaker	Amps	35
	Min. Circuit Ampacity (A)		24.5
Dimensions	W X H X D (in.)	Indoor Unit	51 3/16 X 11 13/16 X 27 9/16
		Outdoor Unit	37 X 47 11/16 X 13
	Weight (lbs.)	Indoor Unit	97
		Outdoor Unit	189.6
	Duct Connections (W X H)	Supply (in.)	49 15/16 X 10 5/8
		Return (ID, in.)	49 15/16 X 10 5/8
Sound Pressure Level	Indoor Unit dB(A)	L / M / H	35 / 39 / 43
	Outdoor Unit dB(A)	Cooling / Heating (high)	52 / 54
Operating Temperatures	Outdoor	Cooling	23 ~ 122°F (-5 ~ 50°C)
			0 ~ 122°F (-18 ~ 50°C) W/Baffle
		Heating	-4 - 75°F (-20 - 24°C)
	Indoor	Cooling	64 ~ 90°F (16 ~ 32°C)
		Heating	T ≤ 86°F (30°C)
Pipe Connections	Indoor & Outdoor	High side	3/8"
		Low side	5/8"
	Maximum (ft.)		246
	Maximum Vertical Separation (ft.)		98.4
	Condensate Connection		1 1/4 in. OD, 1 in. ID
Refrigerant	Type		R410A
	Factory Charge	lbs.	6.39
	Charged for		24.6 ft.
Compressor	Manufacturer		Samsung
	Type		Inverter Driven, Twin BLDC Rotary
	RLA	Amps	14.7
Evaporator Fan	Type		BLDC (1) With Sirocco Fan (3)
	Air Volume	CFM (L/M/H)	848 / 1,024 / 1,165
	Output	Watts	244
	External Static Pressure	Standard ("WC)	0.58
		Min. / Max. ("WC)	0.12 / 0.8
Condenser Fan	Motor		BLDC With Axial Type Fan (2)
	FLA / Watts / CFM (max.)		1.25A X 2 / 125W X 2 / 3,532 CFM
Safety	Certifications		UL 60335-2-40
	Devices		PCB fuses, indoor unit terminal block thermal fuse, current transformer, over-voltage protection, crankcase heating, temperature limit protection logic, compressor overload sensing

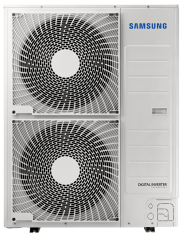
This publication reflects both the 1987 Appendix M metric (SEER) and the 2023 Appendix M1 metric (SEER2). Efficiency requirements are published at 10 C.F.R. 430.32(c). Please refer to www.AHRInet.org for more information about updated energy metrics.

[1]Performance data certified by AHRI to AHRI 210-240 (2017) with Addendum 1.
[2]Performance data certified by AHRI to AHRI 210-240 (2023). Effective January 1st, 2023.

Samsung HVAC maintains a policy of ongoing development, specifications are subject to change without notice. Refer to www.AHRIdirectory.org for current reference numbers.

Select models are ENERGY STAR Labeled. Proper sizing and installation of equipment is critical to achieve performance. Split system air conditioners and heat pumps (excluding ductless systems) must be matched with appropriate coil components to meet ENERGY STAR criteria. Ask your contractor for details or visit www.energystar.gov.

SHA-CAC-HA036-2212A



General Information

- The outdoor unit shall supply power to indoor unit via 14 AWG X 3 power wire
- High-voltage terminal block temperature sensor to disable unit in the event of power connection overheating
- Integral condensate pump with maximum 29" lift from bottom of the unit with check valve and float switch that disables indoor should condensate overflow be detected.
- Auto-restart after power loss
- Soft-start compressor minimizing current inrush
- All heat exchangers shall be mechanically bonded aluminum fin to copper tube
- The condensing unit heat exchanger salt spray test method: IS0-9227 - the heat exchanger showed no unusual rust or corrosion development to 3,000 hours.

Option settings

- The outdoor unit shall have snow accumulation prevention option setting to prevent snow drifting against an idle outdoor unit.
- Night-time Quiet Mode: reduction of operational sound during evening hours *(automatic or manual activation).*
- Emergency Temperature Output (ETO) function: when indoor unit is in error status or when room temperature exceeds configurable temperature level, the system outputs a signal to an external source, e.g., backup system, building management system, alert device (ex: status light, warning lamp, buzzer).
- System can be set up as heating/cooling, cooling only, or heating only via outdoor unit option setting.
- Maximum Current Control configurable from 50% - 100% via outdoor unit, wired controller, or central controller

Indoor Fan

- Indoor fan is sirocco type
- Three fan speed settings and auto setting
- Smart pressure control feature that adjusts fan speed based on ESP delivering consistent heating and cooling power
- The indoor unit shall have a smart-tuning function that can provide optimized comfort by allowing the occupant to offset the fan CFM curve with a wired remote controller (MWR-WG00UN) to increase or decrease airflow.
- The indoor unit shall have automatic air volume scanning for simple setup and optimized comfort settings for the occupant.

Construction

- Outdoor unit shall be galvanized steel with a baked-on powder coated finish for durability
- Indoor Unit: Insulated, galvanized steel.

Controls

- Control wiring shall be 2 X 16 AWG
- No additional interface modules/adapters are required when connecting to Samsung central control options.
- The unit shall be operated via a wireless or wired remote control with DDC type signal
- Dual set temperature support when connected to MWR-WG00UN Advanced Wired Controller or central control options.
- Wired or wireless controllers must be purchased separately

Refrigerant System

- The compressor shall be hermetically sealed, inverter-controlled BLDC rotary type.
- Refrigerant flow shall be controlled by an electronic expansion valve at outdoor unit

Air Filtration

- Air filtration shall be field provided
- Pressure drop across field-supplied filter must be factored into the total ESP.

Warranty

10 Years compressor, 10 years parts, 1 year limited labor when registered

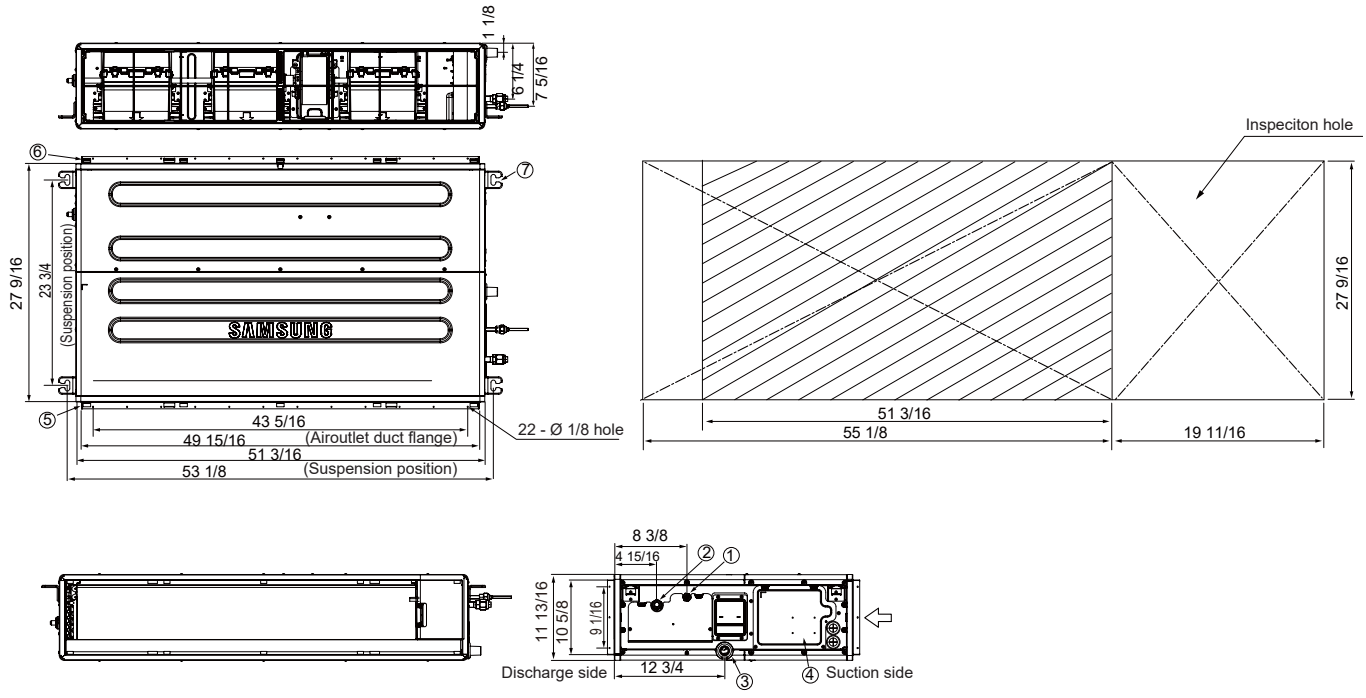
ENERGY STAR COLD CLIMATE

AHRI CERTIFIED www.ahridirectory.org Unitary Small AC AHRI Standard 210/240

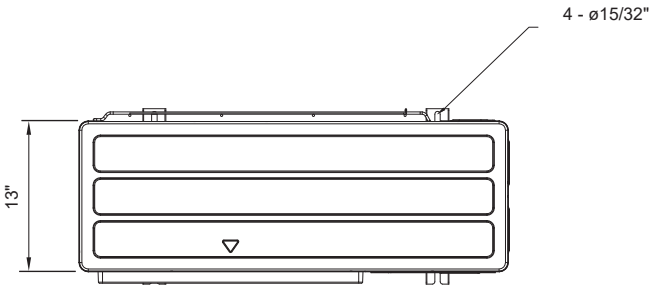
C SA US

Optional Accessories

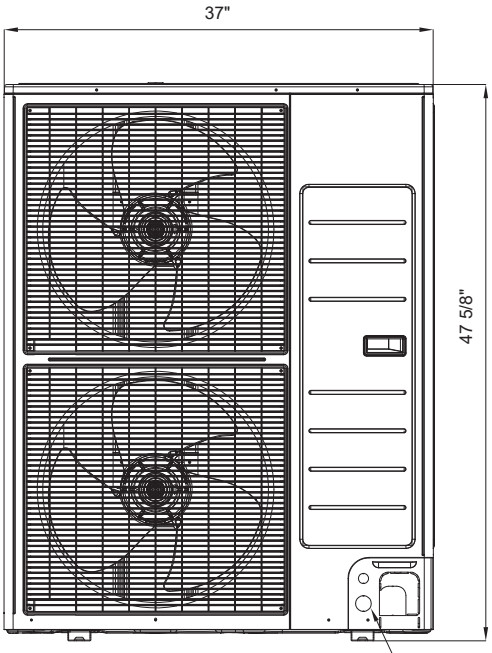
Wired Controller	Advanced	MWR-WG00UN
	Touchscreen	MWR-SH11UN
Thermostat Adaptor (for connection to a standard 24VAC thermostat)		MIM-A60UN
Wireless Signal Control	Wireless Signal Receiver	MRK-A10N
	Wireless Controller	AR-EH04U
Wi-Fi Adapter		MIM-H05UN
External Temperature Sensor		MRW-TA
Filter Box		FB-DS3
External Contact Control		MIM-B14
Wall Bracket (for outdoor unit)		CKN-250
Wind Baffles	Front	WBF-1M2
	Back	WBB-2M-B
Hail Guard Kit (includes back and side guards)		HGK-4
Line Sets - insulated and flared, interconnect cables included		25' - ILS-2510
		50' - ILS-5010



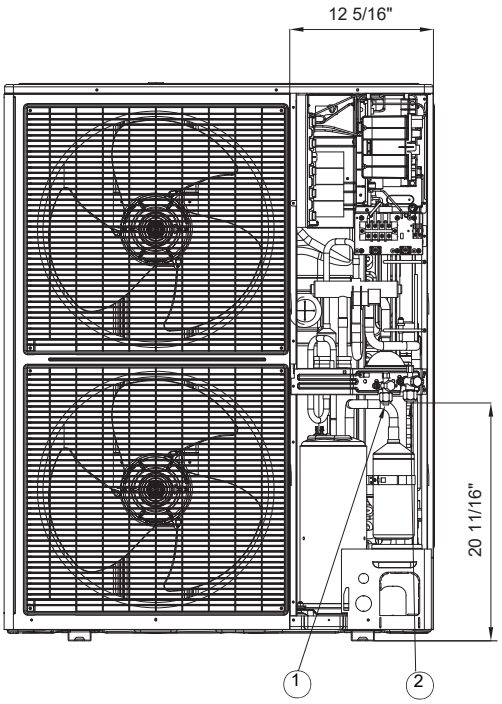
No.	Name	Description
①	Refrigerant Liquid Pipe	Ø 3/8"
②	Refrigerant Gas Pipe	Ø 5/8"
③	Condensate Drain	3/4" (OD 1.05")
④	Power & Comm. Wiring Conduits	-
⑤	Supply Air Flange	-
⑥	Return Air Flange	-
⑦	Hook	-



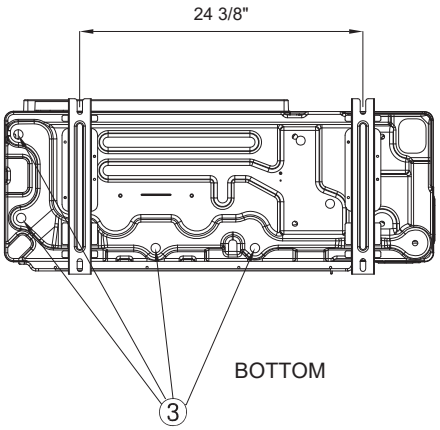
TOP



FRONT



FRONT WITHOUT SERVICE COVER



BOTTOM

No.	Name	Description
1	Refrigerant liquid pipe	Ø 3/8
2	Refrigerant gas pipe	Ø 5/8
3	Drain hole	Connect with provided drain plug

SAMSUNG

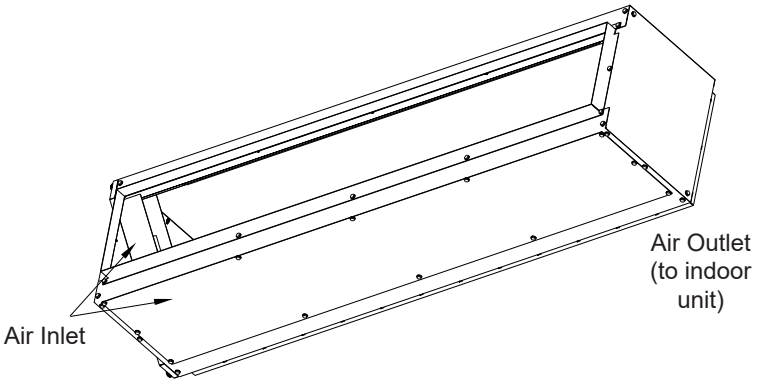
SUBMITTAL FB-DS1, FB-DS2, FB-DS3

Filter Box For Samsung Duct S Indoor Units

Job Name 6th Ave District - Pine Bluff, AR
Location Pine Bluff, AR
Purchaser POWERS OF ARKANSAS INC. (SR)
Engineer Brown Engineering
Submitted to Comfort Systems USA
Reference ☐ Approval ☑ Construction ☐
Unit Designation
Schedule # FC-01,FC-02

Model number(s) on project

	FB-DS1
✔	FB-DS2
✔	FB-DS3



Description

- Filter box for Samsung Duct S units.
- Allows simple field modification to bring air in thorough the back (default) or bottom of the filter box.

Filter Sizes (nominal, field provided)

FB DS1: 2 X (14" X 16")
FB DS2: 1 X (14" X 20") + 1 X (14" X 25")
FB DS3: 2 X (14" X 25")
Note: Filters can be 1" or 2" thick.

NOTE:

When selecting an air filter, make sure not to exceed the static pressure limitations of the indoor unit. Choose a filter that will not exceed the stated capabilities of the indoor unit.

Construction

Galvanized steel, 22 gauge

Weight (lbs.)

FB-DS1	21.2
FB-DS2	29.0
FB-DS3	28.70

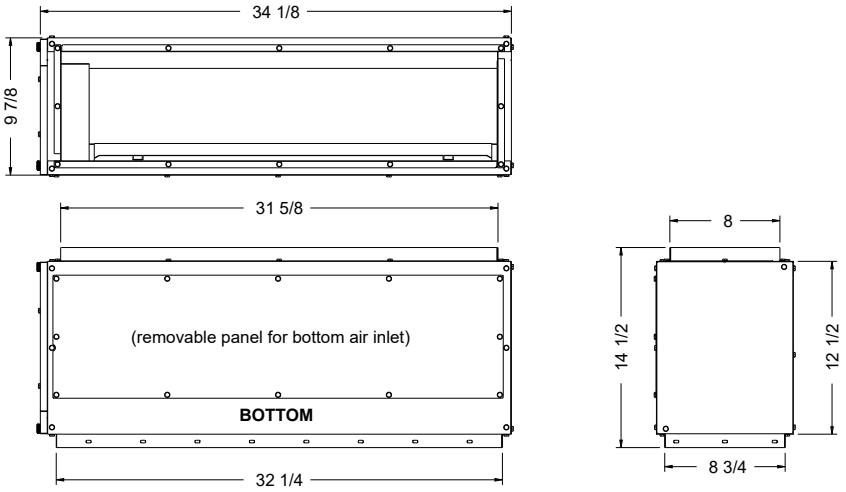
Parts Included

Assembled filter box, instruction sheet, installation screws.

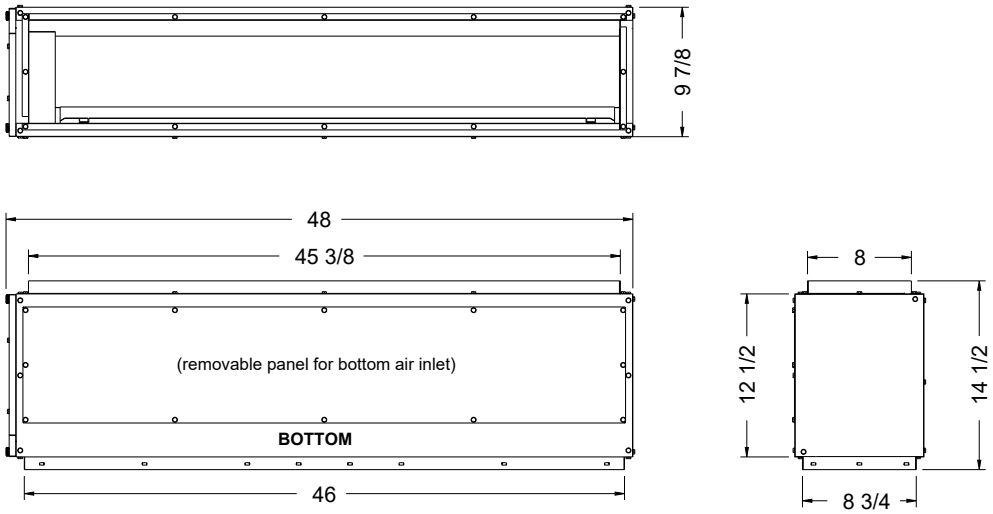
Compatible Indoor Units

Filter Box	Indoor Unit Model Number
FB-DS1	AC009BNHDCH/AA
	AC012BNHDCH/AA
	AC018MNHDCH/AA
	AM006ANMDCH/AA
	AM007ANMDCH/AA
	AM009ANMDCH/AA
	AM012ANMDCH/AA
	AM015ANMDCH/AA
	AM007MNMDCH/AA
	AM009MNMDCH/AA
	AM012MNMDCH/AA
	AM015MNMDCH/AA
	AM018MNMDCH/AA
	AM006RNMDCH/AA
	AJ009BNHDCH/AA
	AJ012BNHDCH/AA
	AJ015BNHDCH/AA
	AJ018BNHDCH/AA
FB-DS2	AC018BNHDCH/AA
	AC024BNHDCH/AA
	AC030BNHDCH/AA
	AC030MNHDCH/AA
	AC024MNHDCH/AA
	AM024ANHDCH/AA
	AM027ANHDCH/AA
	AM030ANHDCH/AA
	AM018ANMDCH/AA
	AM024MNHDCH/AA
	AM027MNHDCH/AA
	AM030MNHDCH/AA
	AM018RNMDCH/AA
FB-DS3	AC036BNHDCH/AA
	AC042BNHDCH/AA
	AC048BNHDCH/AA
	AC036MNHDCH/AA
	AC042MNHDCH/AA
	AC048MNHDCH/AA
	AM036ANHDCH/AA
	AM048ANHDCH/AA
	AM036MNHDCH/AA
	AM048MNHDCH/AA

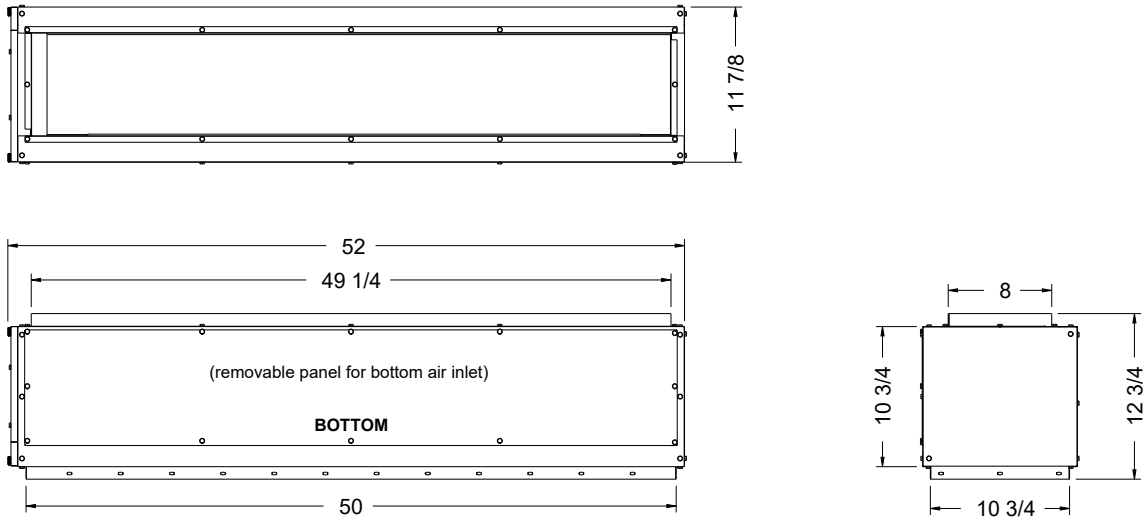
FB-DS1



FB-DS2



FB-DS3



SAMSUNG

SUBMITTAL AJ024BXS4CH/AA (JXH24S4B)

Samsung "Max Heat" FJM Series, 4 Port Condensing Unit

Job Name _____ Location _____

Purchaser _____ Engineer _____

Submitted to _____ Reference _____ Approval _____ Construction _____

Unit Designation _____ Schedule # _____

Model	US Code		JXH24S4B
	Model Number		AJ024BXS4CH/AA
Performance*	Capacity (standard / max.)	Cooling (Btu/h)	25,000 / 25,000
		Heating (Btu/h)	25,000 / 25,000
	Heating Capacity at 5°F OA, 70° Indoor DB (Btu/h)		25,000
	Heating Capacity at -13°F OA, 70° Indoor DB (Btu/h)		17,480
	Minimum Cooling Capacity (Btu/h)		6,500
	Minimum Heating Capacity (Btu/h)		7,500
	SEER (Ducted / Mixed / Non-ducted)		16.0 / 17.5 / 19.0
	EER (Ducted / Mixed / Non-ducted)		10.6 / 11.8 / 13.0
	HSPF (Ducted / Mixed / Non-ducted)		9.5 / 9.75 / 10.0
Power	Voltage	(ø/V/Hz)	1 / 208-230 / 60
	Rated Current (amps) [1]	Cooling (A)	9.2
		Heating (A)	8.8
	Max. Breaker	Amps	30
	Minimum Circuit Ampacity (A)		26.0
Dimensions	W X H X D	Inches	37 x 39 5/16 x 13
	Weight	lbs.	173.1
Noise Level	Cooling	dB (A)	54
	Heating	dB (A)	58
Operating Temperatures	Cooling		14 ~ 114.8°F (-10 ~ 46.0°C)
	Heating		-13 ~75°F (-25 ~ 24.0°C)
Pipe Connections	High Side		1/4" X 4
	Low Side (suction)		3/8" X 2 + 1/2" X 2
	Maximum Individual Line Set Length		82 ft
	Maximum Line Set Length (total)		230 ft
	Maximum Vertical Separation	Outdoor to Indoor	49 ft
		Highest to lowest indoor	25 ft
	Included Pipe Adapters		2 - 1/2" X 3/8"
Condenser Fan	Motor		BLDC With Propeller Fan (1)
	Output	Watts / FLA	125 / 1.28
		CFM	2,493
Compressor	Type		Twin BLDC Rotary Inverter
	RLA	Amps	18.4
Heat Exchanger	Type		Aluminum Fin - Copper Tube
Refrigerant	Type		R410A
	Control Method		Electronic Expansion Valve
	Factory Charge		119.9 oz
	Charged for		131 ft
	Additional Refrigerant		0.22 oz/ft over 131 ft
Accessories	Wall Bracket		CKN-250
	Wind Baffle	Front	WBF-2M-B
		Back	WBB-11M
Certifications	Safety		ETL (UL 1995)
	AHRI Certification Number	Non-Ducted	207349918
		Ducted	207350081
		Mixed	207350094
	ENERGY STAR® Certification		Applies to AHRI non ducted listing
Warranty	10 Years compressor, 10 year parts, 1 year limited labor (registration required)		

* Certified in accordance with the AHRI Unitary Small Air-Source Heat Pumps (USHP) Certification Program which is based on the latest edition of AHRI Standard 210/240. Refer to www.AHRIdirectory.org for current reference numbers.

[1] Rated current is based on highest combination ratio of non-ducted indoor units.

Samsung HVAC maintains a policy of ongoing development, specifications are subject to change without notice.

General Information

- The Samsung Max Heat system shall provide high heating capacity at -13°F outside temperature
- The outdoor unit shall supply power individually to the indoor units via 14 AWG X 3 power wire
- The outdoor unit shall have a base pan heater as standard to ensure optimal defrost cycle water drainage
- Auto-restart after power loss
- Available maximum current setting option to reduce operating current.
- System energy consumption can be viewed using Samsung SmartThings mobile app (not revenue grade, for reference only).
- Soft-start to reduce current demand during compressor start
- Auto or manual addressing of indoor units

Construction

- The outdoor unit shall be galvanized steel with a baked on powder coated finish for durability

Heat Exchanger

- The heat exchanger shall be mechanically bonded fin to copper tube

Controls

- Control signal shall be a DDC type signal
- Interconnect control wire between outdoor and indoor units shall be 16AWG X 2
- Controls shall integrate with a BMS system
- The system shall integrate with the Samsung Controls solution

Refrigerant System

- The refrigerant shall be R410A
- The compressor shall be hermetically sealed, inverter controlled, Twin BLDC Rotary
- Refrigerant flow shall be controlled by 4 separate electronic expansion valves at outdoor unit

Indoor Unit Compatibility

Will only operate with Samsung evaporator model numbers:
AR**TSFABWKNCV (RNS**ABT): 7,000 - 18,000 Btu/h models
AR**BSFCMWKNCV (RNS**CMB): 7,000 - 18,000 Btu/h models
AR**TSFYBWKNCV (RNS**YBT): 7,000 - 18,000 Btu/h models
AC0**BNNDCH/AA (CNH**NDB): 9,000 - 18,000 Btu/h models
AC0**BN1DCH/AA (CNH**1DB): 9,000 - 12,000 Btu/h models
AC0**BNJDCH/AA (CNH**JDB): 9,000 - 18,000 Btu/h models
AC0**BNLDCH/AA (CNH**LDB): 9,000 - 18,000 Btu/h models
AC0**BNZDCH/AA (CNH**ZDB): 12,000 - 18,000 Btu/h models
AJ0**BNHDCH/AA (JNH**HDB): 9,000 - 18,000 Btu/h models

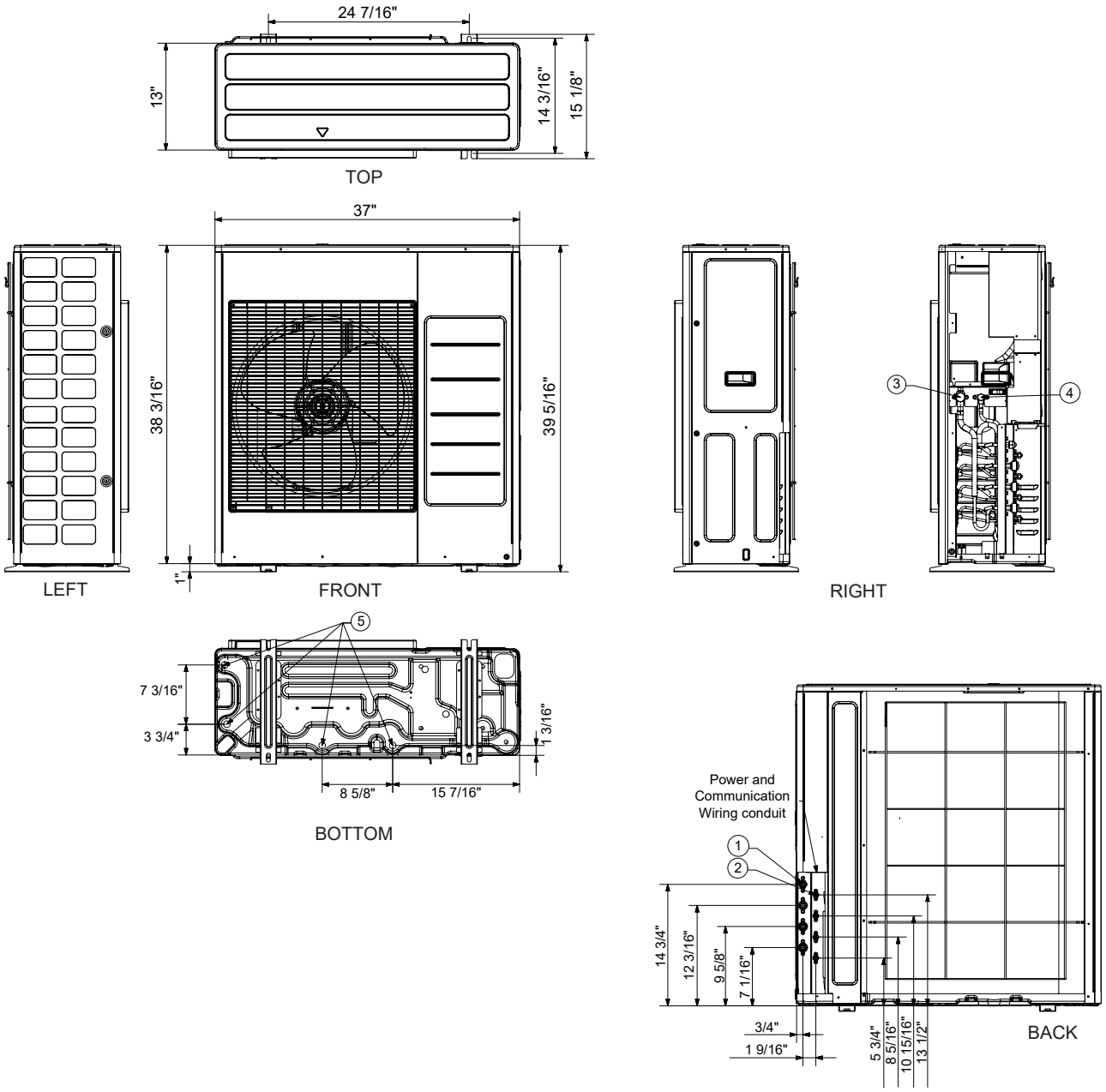
Proper sizing and installation of equipment is critical to achieve optimal performance. Split system air conditioners and (excluding ductless systems) must be matched with appropriate coil components to meet ENERGY STAR® criteria. Ask your contractor for details or visit www.energystar.gov.

888-699-6067
www.SamsungHVAC.com

SUBMITTAL AJ024BXS4CH/AA (JXH24S4B)

Samsung "Max Heat" FJM Series, 4 Port Condensing Unit

Dimensional drawing



No.	Name	Description
1	Refrigerant suction pipes	ø3/8" x 2, ø1/2" x 2
2	Refrigerant liquid pipes	ø1/4" x 4
3	Service Valve (suction)	5/8"
4	Service Valve (liquid)	3/8"
5	Drain holes	Connection with provided drain fitting

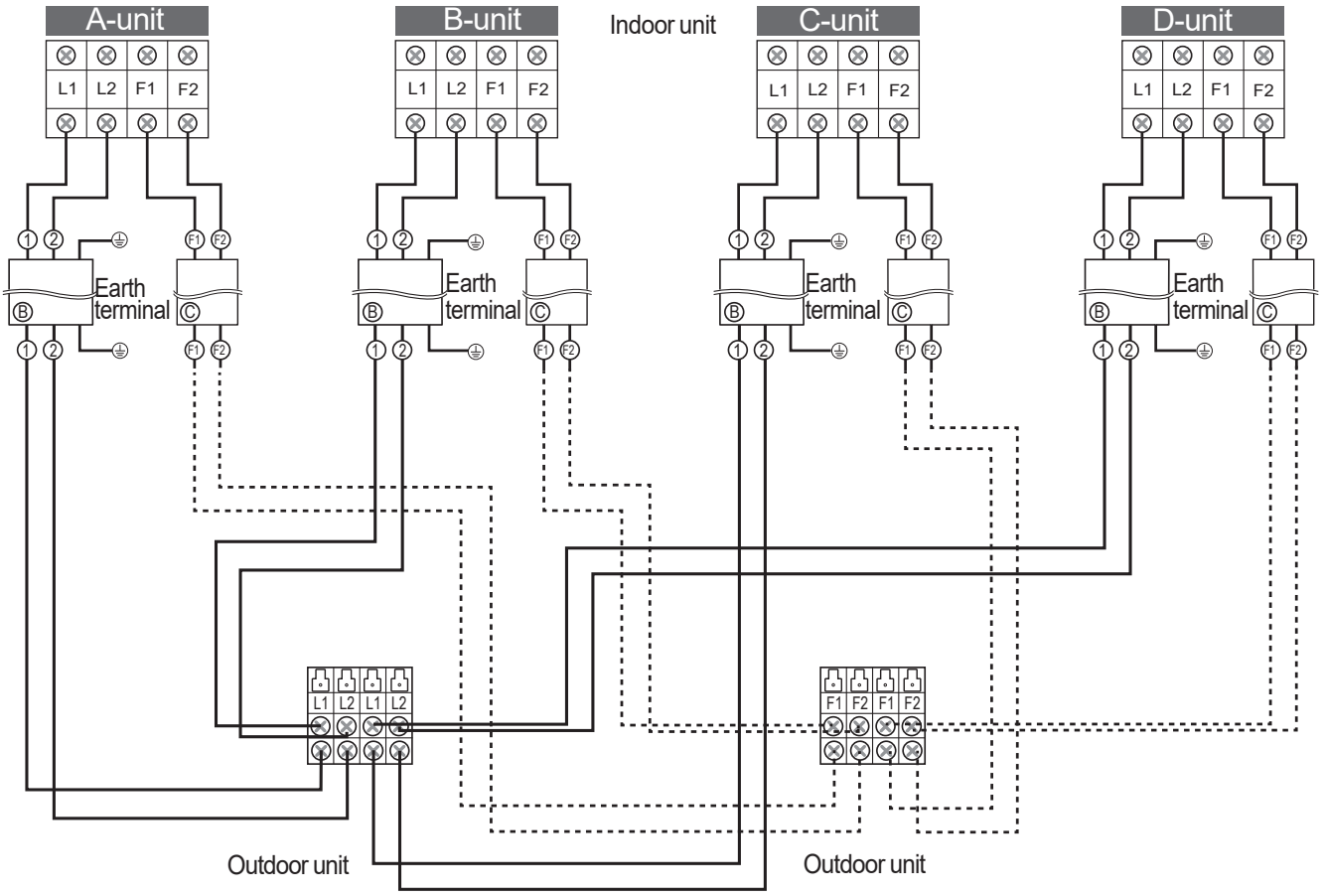
Indoor Unit Connection Options

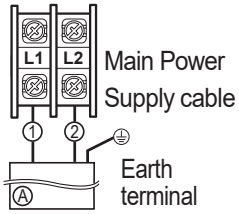
	Indoor unit Capacity (Btu/h)			
	A	B	C	D
2 Indoor Units	7,000	7,000		
	7,000	9,000		
	7,000	12,000		
	7,000	15,000		
	7,000	18,000		
	9,000	9,000		
	9,000	12,000		
	9,000	15,000		
	9,000	18,000		
	12,000	12,000		
	12,000	15,000		
	12,000	18,000		
	15,000	15,000		
3 Indoor Units	7,000	7,000	7,000	
	7,000	7,000	9,000	
	7,000	7,000	12,000	
	7,000	7,000	15,000	
	7,000	7,000	18,000	
	7,000	9,000	9,000	
	7,000	9,000	12,000	
	7,000	9,000	15,000	
	7,000	12,000	12,000	
	9,000	9,000	9,000	
	9,000	9,000	12,000	
4 Indoor Units	7,000	7,000	7,000	7,000
	7,000	7,000	7,000	9,000
	7,000	7,000	9,000	9,000

Must have a minimum of 2 indoor units connected. Will only operate with Samsung evaporator model numbers listed below:
AR**TSFABWKNCV (RNS**ABT): 7,000 - 18,000 Btu/h models
AR**BSFCMWKNCV (RNS**CMB): 7,000 - 18,000 Btu/h models
AR**TSFYBWKNCV (RNS**YBT): 7,000 - 18,000 Btu/h models
AC0**BNNDCH/AA (CNH**NDB): 9,000 - 18,000 Btu/h models
AC0**BN1DCH/AA (CNH**1DB): 9,000 - 12,000 Btu/h models
AC0**BNJDCH/AA (CNH**JDB): 9,000 - 18,000 Btu/h models
AC0**BNLDCH/AA (CNH**LDB): 9,000 - 18,000 Btu/h models
AC0**BNZDCH/AA (CNH**ZDB): 12,000 - 18,000 Btu/h models
AJ0**BNHDCH/AA (JNH**HDB): 9,000 - 18,000 Btu/h models

ATTENTION: When connecting MPAH (AC0**BNZDCH/AA) and Duct S (AJ0**BNHDCH/AA) indoor units the sum of the connected indoor unit capacity is reduced. Other conditions apply. Refer to engineering manuals/technical data books and installation manuals for more information.

Basic Wire Connection Diagram





(A) Cable Type: System power supply cable
(B) Cable Type: Power supply to indoor units
(C) Cable Type: Communication cable (16 X 2)

This simple wiring diagram is for reference only. Please refer to installation manuals for full details and requirements.

SAMSUNG

SUBMITTAL AR07BSFCMWKNCV (RNS07CMB) For Multi-Zone Systems

Samsung "WindFree™ 2.0e", wall mounted evaporator

Job Name 6th Ave District - Pine Bluff, AR
Location Pine Bluff, AR
Purchaser POWERS OF ARKANSAS INC. (SR)
Engineer Brown Engineering
Submitted to & R P I R U W 6 \ V W H P V 8 6 $
Reference ☐ Approval ☑ Construction ☐
Unit Designation
Schedule # DSFC-01A, 01B, 01C, 01D

Specifications

Model	US Code		RNS07CMB
	Model Number		AR07BSFCMWKNCV
Performance	Nominal Capacity	Cooling (Btu/h)	7,000
		Heating (Btu/h)	7,500
Power	Voltage	Ø / V / Hz	1 / 208-230 / 60
	Operating Current (Max.)	Cooling (A)	0.3
		Heating (A)	0.3
Evaporator Fan	Type		BLDC motor with cross-flow fan
	Consumption	Watts	27 X 1
	FLA	Amps	0.12
Airflow	Air Volume (L/M/H/Turbo)	Cooling (CFM)	309 / 322 / 336 / 350
		Heating (CFM)	340 / 354 / 368 / 381
Refrigerant	Type		R410A
	Control Method		Electronic Expansion Valve (at outdoor unit)
Pipe Connections	Indoor & Outdoor	High side (flare)	1/4"
		Low side (flare)	3/8"
Dimensions	W X H X D	in.	32 5/16 X 11 3/4 X 8 7/16
	Weight	lbs.	20.1
	Condensate Connection		11/16" OD
Sound Pressure Level	Low / High	dB(A)	23 / 38
Accessories	Wired Controllers [1]	Advanced	☑ MWR-WG00UN
		Simple Touch	☐ MWR-SH11UN
	Wired Controller Sub-PCB		☑ MIM-A00UN
	24VAC Thermostat Adapter [1]		☐ MIM-A60UN
	Condensate Pump	Aspen Mini Orange	☐ ASP-MO-UNIV 110-250
		Blue Diamond	☐ BD-BLUE-230
	External Temperature Sensor		☐ MRW-TA
	External Contact Control Interface Module [2]		☐ MIM-B14
	Line sets - insulated and flared, interconnect cables included		☐ 25' - ILS2506
			☐ 50' - ILS5006
Safety Certifications			ETL (UL 1995)

*The WindFree™ unit delivers an air current that is under 0.15 m/s while in WindFree™ mode. Air velocity that is below 0.15 m/s is considered "still air" as defined by ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers).

[1] Sub-PCB model MIM-A00UN is required when connecting optional wired controllers or MIM-A60UN 24VAC thermostat adapter.

[2] When applying MIM-B14 external contact control interface module, MIM-A00UN wired controller sub-PCB is required.

Samsung HVAC maintains a policy of ongoing development, specifications are subject to change without notice. Refer to www.AHRIdirectory.org for current reference numbers.

General Information
- The indoor unit shall feature WindFree™* mode. In cooling mode, as room temperature nears set temperature, the unit will close its louver and will disperse air into the space through thousands of micro-holes on the front of the indoor unit preventing cold air drafts on occupants.
- The indoor unit shall have Wi-Fi capability as standard
- The indoor unit shall be powerd by the outdoor unit

Construction
- Indoor unit chassis shall be UL94 V0 with a galvanized steel mounting bracket
- The indoor unit shall have easy-access to wire, pipe, and drain connections via access panel on the bottom of the unit for simple installation and service

Heat Exchanger
- The heat exchangers shall be mechanically bonded fin to copper tube

Indoor Fan
- The indoor fan shall be a single, antibacterial cross-flow type
- Three fan speed settings and auto setting
- Automatic (motorized) vertical swing (up/down) and horizontal swing (left/right) louvers

Controls
- The system shall have a built in Wi-Fi adapter as standard to allow control and monitoring using the Samsung SmartThings app (Android, iOS)
- Dual set temperature support when connected to MWR-WG00UN Advanced Wired Controller and supported central control options.
- The indoor unit shall have a simple connection for overflow detection devices or any other normally closed contact for simple unit shutdown
- The indoor unit shall ship with a wireless controller, holder, and batteries
- Wired controller options available
- Interconnect control wire between outdoor and indoor unit shall be 16AWG X 2

Convenience
- System energy consumption can be viewed using the Samsung SmartThings mobile app (not revenue grade, for reference only)
- Auto Clean Function
- 7-segment digital display on front of unit to display temperature and unit status
- Auto changeover
- Good sleep mode
- Quiet mode
- Dry mode
- Simple ON/OFF time function – Using the wireless controller specify the ON and/or OFF times
- Electro-static, washable, main filter as standard accessible from the top of unit
- Filter cleaning reminder

Compatibility
Will only operate with Samsung outdoor unit model numbers:
AJ020BXJ2CH/AA (JXH20J2B), AJ024BXJ3CH/AA (JXH24J3B), AJ036BXJ4CH/AA (JXH36J4B), AJ048BXJ5CH/AA (JXH48J5B), AJ020BXS3CH/AA (JXH20S3B), AJ024BXS4CH/AA (JXH24S4B), AJ030BXS4CH/AA (JXH30S4B), AJ036BXS4CH/AA (JXH36S4B), AJ020TXJ2CH/AA (JXH20J2T), AJ024TXJ3CH/AA (JXH24J3T), AJ036TXJ4CH/AA (JXH36J4T), AJ048TXJ5CH/AA (JXH48J5T), AJ020TXS3CH/AA (JXH20S3T), AJ024TXS4CH/AA (JXH24S4T), AJ030TXS4CH/AA (JXH30S4T), AJ036TXS4CH/AA (JXH36S4T)

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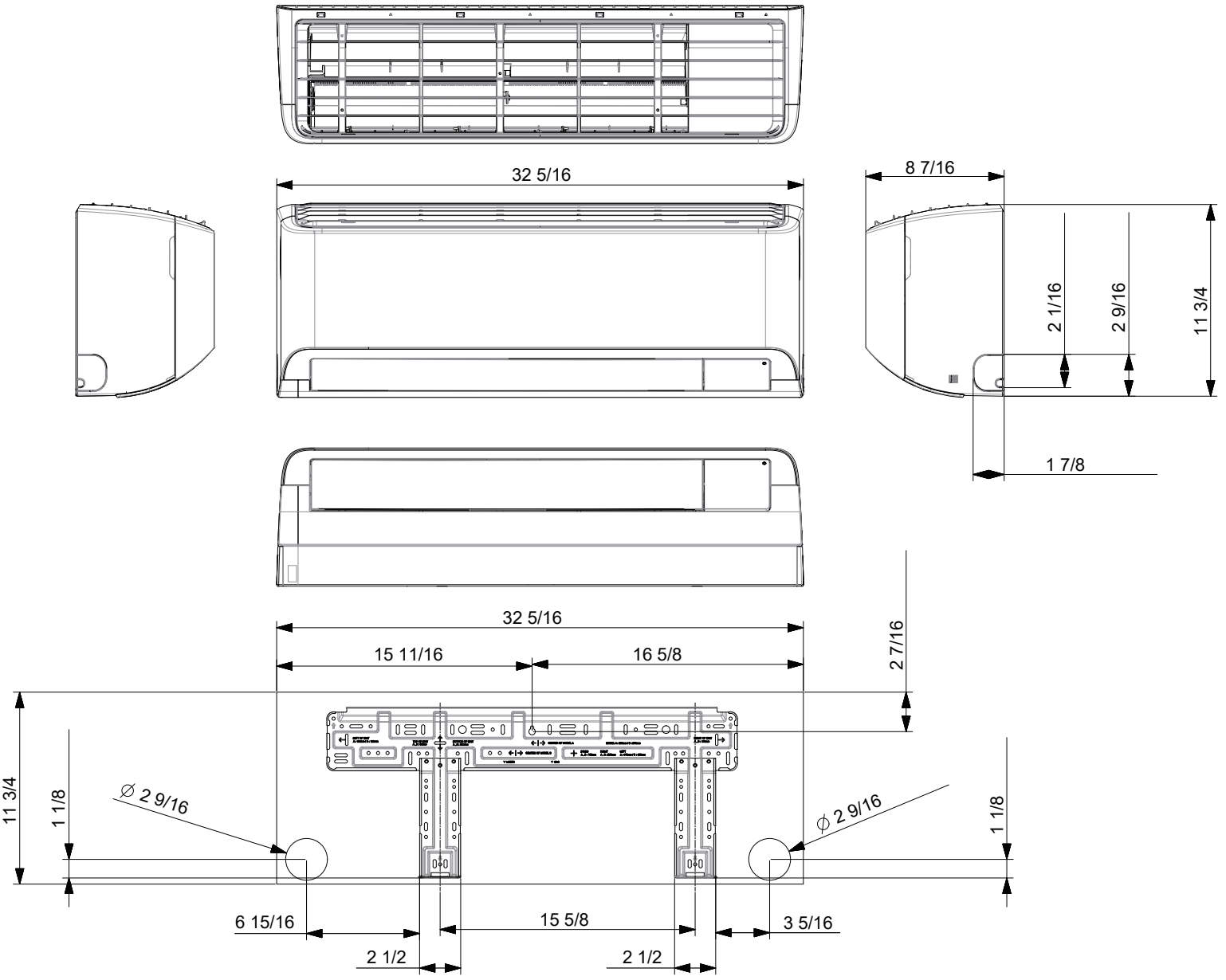
Intertek

Samsung "WindFree™ 2.0e", wall mounted evaporator

Indoor unit dimensional drawing

Unit: inches

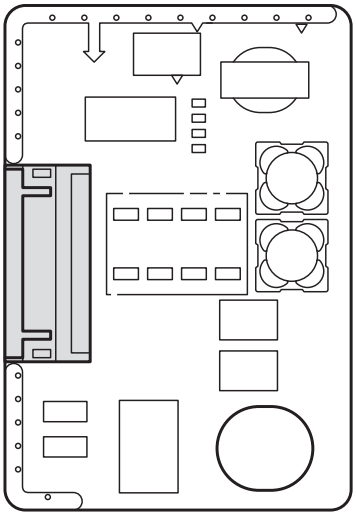


SAMSUNG

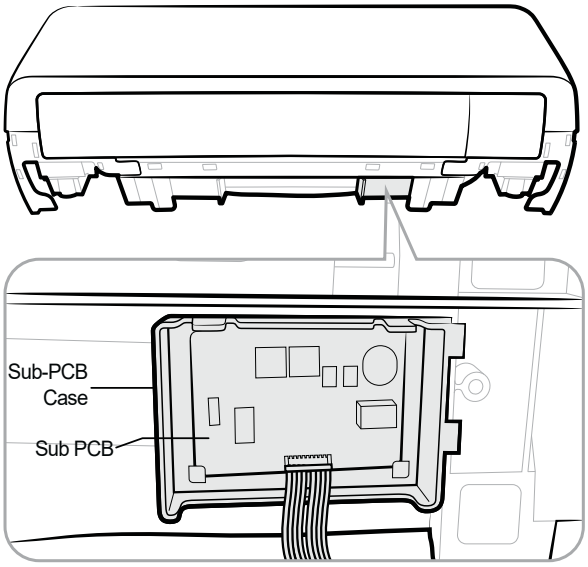
SUBMITTAL MIM-A00UN Wired Controller Sub PCB
For Samsung Single and Multi Zone, Wall Mounted Indoor Units

Job Name 6th Ave District - Pine Bluff, AR
Location Pine Bluff, AR
Purchaser POWERS OF ARKANSAS INC. (SR)
Engineer Brown Engineering
Submitted to Comfort Systems USA
Reference ☐ Approval ☑ Construction ☐
Unit Designation
Schedule # FC-01A, FC-01B, FC-01C, FC-01D

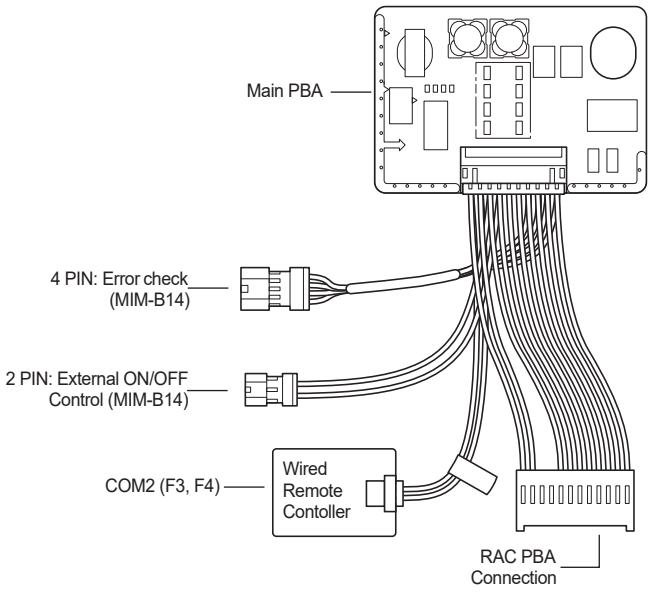
- Required to connect and control an indoor unit with wired controller models: MWR-WG00UN, MWR-SH11UN, MWR-WE13UN
- Compatible models: AR**TS*****NCV, AR**B******NCV, AR**C******NCV
- Provides 12VDC and communication to Samsung wired controllers
- Required when using MIM-B14 External Contact Control Module for simple ON/OFF control and operation/error output
- Installs in a single indoor unit
- Includes MIM-A00UN sub-PCB, wire harness, and case



MIM-A00UN installation location in RAC AND FJM indoor unit



MIM-A00UN SUB PCB



SHA-RAC-02012023

SAMSUNG

SUBMITTAL MWR-WG00UN

Samsung Advanced Wired Remote Controller

Job Name 6th Ave District - Pine Bluff, AR

Location Pine Bluff, AR

Purchaser POWERS OF ARKANSAS INC. (SR)

Engineer Brown Engineering

Submitted to Comfort Systems USA

Reference ☐ Approval ☑ Construction ☐

Unit Designation

Schedule # FC-01, 02, DSFC-01A, 01B, 01C, 01D, 02, 03

Features

Easy indoor unit control [1]

- Air handler operation ON/OFF
- Air handler operation mode, set temperature, air flow direction, fan speed
- Discharge air temperature setting (with supported indoor unit models)
- Filter replacement alarm display and reset
- Single indoor unit control or multiple unit control (maximum 16 units)
- Time synchronization with DMS2.5 gateways
- Dual Set Temperature (indoor unit firmware upgrade may be required [2])
- Advanced HP auto changeover control and configuration (indoor unit firmware upgrade may be required [2])
- Quiet and sleep modes
- Error display (up to 10 error codes with descriptions)

Energy saving operation [1]

- Upper/lower temperature restriction setting
- Occupied/unoccupied settings
- Setback function
- Energy saving operation mode
- Energy consumption monitoring and daily, weekly, monthly, and yearly energy consumption trending (for supported systems)
- Maximum current control for DVM S 3Ø outdoor units (AM****XV****AA), and CAC (AC0**BXADCH/AA) outdoor units.

Weekly operating schedule setting

- Weekly operating schedule
- Able to set desired A/C operation mode, setting temperature and fan speed to operate based on weekly schedules
- Able to apply schedule exception day

Other features [1]

- Color display screen
- Different button permission levels
- Supports multiple languages (English, Spanish, French, Portuguese)
- Partial button lock options (operation on/off, heat mode, cool mode, fan mode, dry mode, auto mode, set temperature, fan speed, scheduling, Wind-Free, Long-wind, quiet mode, and sleep mode buttons can be locked individually).
- Daylight savings clock advance option
- Temperature limit setting option
- Real-time clock function
- Built-in IR receiver for indoor unit control using a wireless controller and integral room temperature sensor
- Indoor unit operation state display
- Indoor unit service mode support
- Micro SD card slot for simple firmware updating
- Independent louver control for 4-Way and Mini 4-Way cassette units
- Airflow direction control for 360 Cassette indoor units. DVM S 360 Cassette units manufactured before 7/1/2016 will require a firmware update to use MWR-WG00UN. Contact Samsung HVAC technical support to obtain the firmware upgrade files. Firmware updating can be done using MIM-C02N communication converter/service tool.
- Adjustable heating temperature compensation values
- Wind-Free™ Control (applies to supported WindFree™ 1-Way, 4-Way, Mini 4-Way, and Wall-mounted indoor units).
- MDS (Motion Detection Sensor) Indirect/ Direct Control (applies to cassette units with optional MDS accessory (sold separately).
- Long Reach Function (for applicable indoor unit models)
- Automatic air volume enable and status viewing (for Duct S models AM0**MNMDCH/AA, AM0**MNHDCH/AA, AM0**RNMDCH/AA, and AC0***NHDCH/AA).

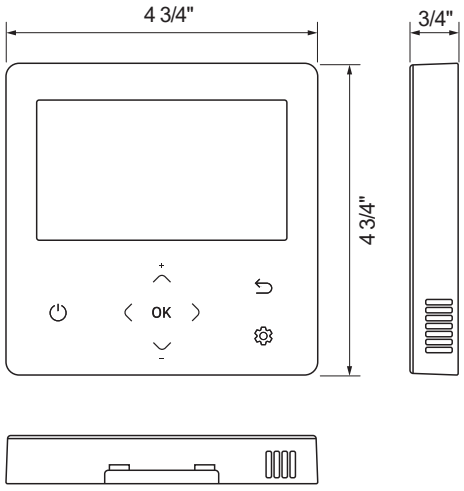
[1] Some features may not be available depending on the model of connected air handler(s)

[2] Firmware upgrade may be required for certain features. Refer to supporting technical bulletins at www.SamsungHVAC.com/downloads

bulletins at www.SamsungHVAC.com/downloads

Specifications*

- Compatible with Samsung DVM S Systems (AM**********AA, MCM-D211UN), and DVM Chiller FCU Kits (MIM-F00N), single zone wall-mounted systems (AR**T****WKNCV, AR**B****WKNCV), multi-zone systems (AJ0**TN*DCH/AA, AJ0**BN*DCH/AA), and single zone cassette, wall-mounted, and ducted systems (AC0***N****/AA)
- Can connect and control up to 16 indoor units on a single system or across multiple systems
- 2 Conductor connection
- DC 12V power supplied by indoor unit (consumption: 2W)
- PLC (power line communication) is done on F3/F4 terminals.
- Can sense temperature via internal sensor, temperature sensor inside indoor unit, or use the average temperature between controller and air handler temperature sensors



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www.SamsungHVAC.com

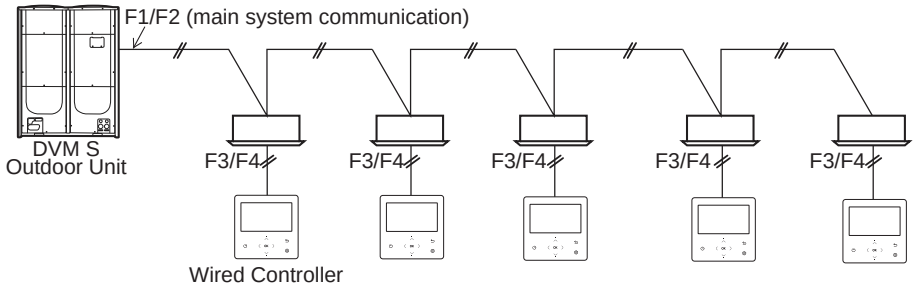
888-699-6067

SHA-DVMS-11012021

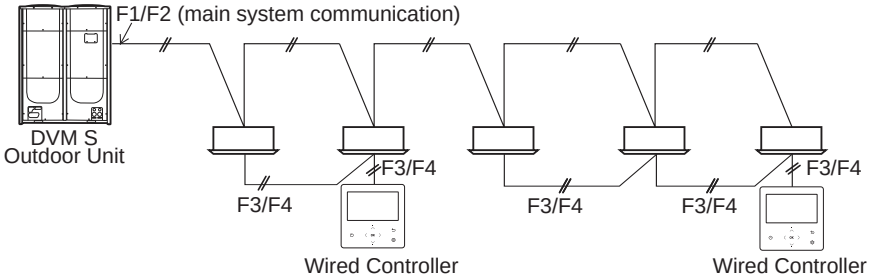
SAMSUNG

SUBMITTAL MWR-WG00UN
Samsung Standard Wired Controller
Common Controller Configurations/Options

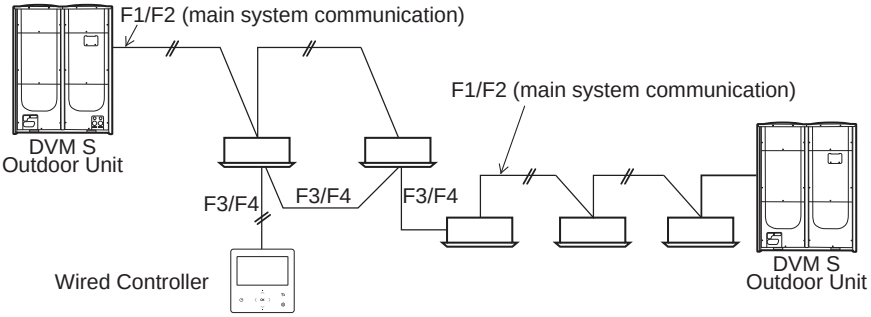
Individual control - 1 indoor unit with 1 wired control



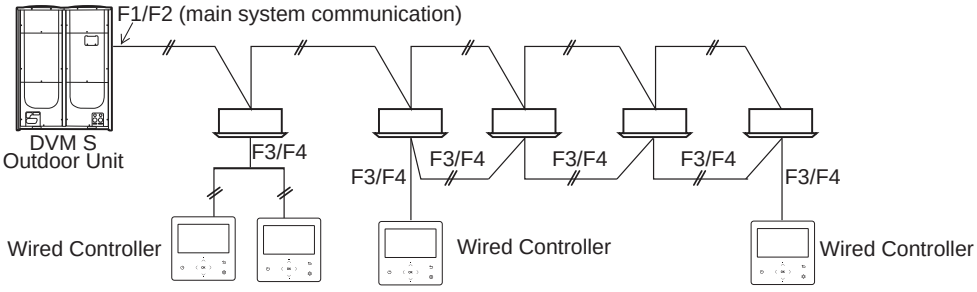
Group control - up to 16 indoor units on 1 wired controller



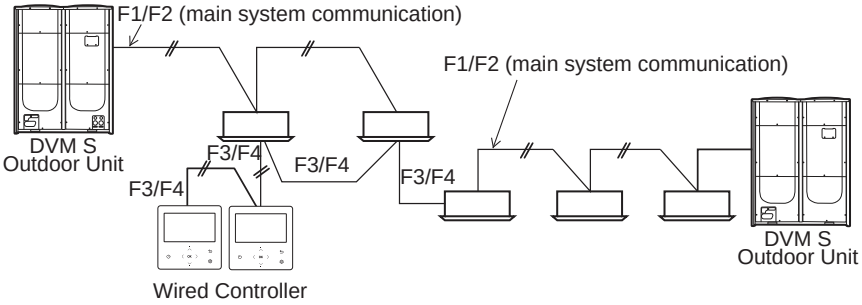
Group control - up to 16 indoor units on 1 wired controller on multiple refrigerant systems



Group control - control 1 or multiple indoor units with 2 wired controllers



Group control - up to 16 indoor units on multiple refrigerant systems with 2 wired controllers



Samsung HVAC maintains a policy of ongoing development, specifications are subject to change without notice.
The diagrams on this page are for reference only. Refer to installation manual for wiring and installation instructions. Other configurations may be possible.

SAMSUNG HVAC WARRANTY TERMS

as of 1/1/2020

PRODUCT FAMILY	PRODUCT PREFIX	STANDARD WARRANTY 5 Year Parts and 7 Year Compressor	ENHANCED WARRANTY* 10 Year Parts and 10 Year Compressor	LIMITED LABOR ONE YEAR
WIND-FREE™/ WIND-FREE 2.0™+	AR	Yes	Yes	Yes
MAX HEAT® / MAX HEAT 2.0®		Yes	Yes	Yes
QUANTUM 2.0		Yes	Yes	Yes
ALL GENERATION WHISPER /PEARL‡		Yes	Yes	Yes
STANDARD MAX 3 TON†	AQN/AQX36	Yes	Yes	Yes
FREE JOINT MULTI	AJ	Yes	Yes	Yes
ALL CAC PRODUCT EXCLUDING -40°	AC	Yes	Yes	Yes
DVM S	AM	Yes	Yes	No
CAC -40°	CAC	Yes	No	No
QUANTUM	AR	5 YEAR COMPRESSOR	No	No
NOVUS	AR	1 YEAR PARTS	No	No
OLDER MODELS	AQV/EH/DH/MH /NJ/AQN/	5 YEAR COMPRESSOR 3 YEAR PARTS	No	No

Samsung HVAC requires registration of products within 60 days of installation to secure the enhanced warranty. Without product registration, the systems will default to the standard warranty. Warranty terms vary by product.

RAC, FJM, CAC, and Eco systems are designed for comfort cooling. RAC, FJM, CAC, and Eco units installed in a non-comfort cooling application will be limited to the standard warranty.

* Enhanced Warranty requires product registration. Conditions apply.

†The Wind-Free™ unit delivers an air current that is under 0.15 m/s while in Wind-Free™ mode. Air velocity that is below 0.15 m/s is considered "still air" as defined by ASHRAE 55-2013 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers).

‡Only Whisper, Whisper Wi-Fi, Max, and Pearl models manufactured after 1/1/2015 qualify for the Enhanced Warranty (10/10/1).

RAC, Single Zone High-Wall System Nomenclature

SEGMENT NUMBER		1	2	3	4	5	6	7	8	9	10	11	12	13	14
DESCRIPTION	MODEL	Project/Series		Capacity (Btu/h)		Year	Features		Series		Color		IDU/ ODU	Export/Buyer Code	
PRODUCT NAME	Whisper	A	R	0	9	H	S	F	S	H	W	K	N/X	C	V
	Whisper Wi-Fi	A	R	0	9	H	S	F	S	J	W	K	N/X	C	V
	Smart Whisper	A	R	0	9	K	S	W	S	J	W	K	N/X	C	V
	Pearl	A	R	0	9	J	S	F	D	H	W	K	N/X	C	V
	Smart Pearl	A	R	0	9	K	S	W	D	H	W	K	N/X	C	V
	Novus 115V	A	R	0	9	J	S	A	L	B	W	K	N/X	C	V
	Novus 230V	A	R	0	9	J	S	F	L	B	W	K	N/X	C	V
	Quantum 17 SEER	A	R	0	9	K	S	F	P	D	W	Q	N/X	C	V
	Smart Whisper Max Heat™	A	R	0	9	K	S	W	S	P	W	K	N/X	C	V
	Wind-Free™*	A	R	0	9	M	S	W	X	C	W	K	N/X	C	V

*The Wind-Free™ unit delivers an air current that is under 0.15 m/s while in Wind-Free™ mode. Air velocity that is below 0.15 m/s is considered "still air" as defined by ASHRAE 55-2013 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers).

CAC/FJM System Nomenclature

SEGMENT NUMBER		1	2	3	4	5	6	7	8	9	10	11	12	13	14
DESCRIPTION	MODEL	Project/Series		Capacity (Btu/h)			Year	IDU/ ODU	Unit Type	Feature	Power	System Type		Buyer Code	
PRODUCT NAME	CAC 4-Way Cassette	A	C	0	4	8	J	N	4	D	C	H	/	A	A
	CAC 360 Cassette	A	C	0	4	8	K	N	4	D	C	H	/	A	A
	CAC Duct	A	C	0	4	8	M	N	H	D	C	H	/	A	A
	CAC Slim	A	C	0	1	8	K	N	L	D	C	H	/	A	A
	CAC Wall Mount	A	C	0	2	4	M	N	A	D	C	H	/	A	A
	CAC Multi-Position AHU	A	C	0	1	8	K	N	Z	D	C	H	/	A	A
	CAC -40°	A	C	0	1	8	M	X	C	S	S	S	/	A	A
	FJM Wall Unit	A	J	0	0	9	J	N	A	D	C	H	/	A	A
	FJM Mini 4-Way Cassette	A	J	0	0	9	J	N	N	D	C	H	/	A	A
	FJM Slim Duct	A	J	0	0	9	J	N	L	D	C	H	/	A	A
	FJM 3-Port Outdoor	A	J	0	2	4	J	C	J	3	C	H	/	A	A
	FJM 3-Port Outdoor Max Heat™	A	J	0	2	4	M	C	S	3	C	H	/	A	A