SAMSUNG

VRF Technical Data Book

Duct for Europe (R410A, 50Hz)

Model: AM160DNMPKH/EU

History

Version	Modification	Date	Remark
Ver. 1.0	Release Duct TDB for Europe	23.10.11	-

Nomenclature

Indoor Unit

Model Names

AM	160	D	N	M	P	K	H	/	EU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

(1) Classification

AM	VRF

(2) Capacity

x 1/10 kW (3 digits)

(3) Version

D	2024

(4) Product Type

N	Indoor Unit(NASA)

(5) Product Notation

M	MSP Duct

(6) Feature

P	Premium

(7) Rating Voltage

K	220~240V, 50/60Hz, 1Ø

(8) Mode

H	Heat Pump(R410A)

Features & Benefits

Duct

Install anywhere and maintain easily

Small & lightweight

Fit your air conditioner into even the smallest spaces. A lightweight and compact Slim Fit design is 30% smaller and 42% lighter than conventional air conditioners*. It makes it much easier to handle and set up, and means it can be installed almost anywhere in a building with little difficulty.

Low Static Pressure

Middle Static Pressure

High Static Pressure

* Based on internal testing compared to competing air conditioners.

Simple set up, automatically even cooling

Auto ESP Adjustment

Enjoy maximum comfort and efficiency with minimum effort. The Auto ESP Adjustment automatically optimizes the air volume and pressure and minimizes noise, ensuring consistent cooling and heating in any situation. The external static pressure (ESP) can also be adjusted using a remote control.

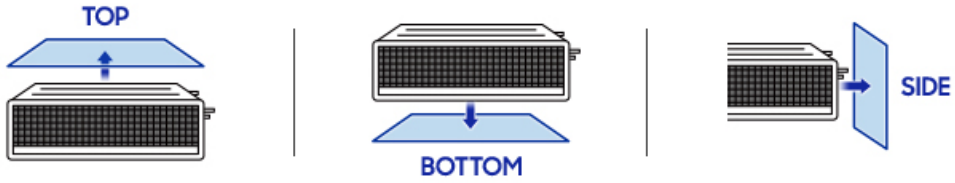
Features & Benefits

Duct

Simple to service in various locations

3-way Service Access

Install your ducted air conditioner in various locations, but still enjoy easy access for servicing. It can be accessed from three directions–top, side and bottom–using an easy to remove Slide Fit cover. So it's simple to maintain wherever it's installed in, which saves you time and money.



World-class energy efficiency & savings

Smart Inverter System

Save money without sacrificing performance with its outstanding energy efficiency, earning it a Top-level Energy Efficiency Ratio. A large Sirocco Fan with aerodynamic blades and a DC Fan Motor expels more air, with less noise*. And the Twin Rotary BLDC Compressor is quieter and more reliable.

* Based on internal testing compared to conventiona air conditioners. Results may vary depending on environmental factors and individual use.

Line-up

Indoor unit

Capacity (kW)	
16.0	
Image	

Contents

1. Specification

Duct

Type				Duct S
Model Name				AM160DNMPKH/EU
Power Supply			Φ, #, V, Hz	1,2,220-240,50
Performance	Capacity	Cooling	kW	16.0
			Btu/h	54,600
		Heating	kW	18.0
			Btu/h	61,400
Power	Power Input	Cooling	W	300.0
		Heating		300.0
	Current Input	Cooling	A	2.5
		Heating		2.5
	Current	MCA	A	3.60
		MFA		15
Heat exchanger	Type		-	F&T
	Material	Fin	-	Al
		Tube	-	Cu
	Fin Treatment		-	Green Hydrophile
Fan	Type		-	Sirocco Fan
	Quantity		EA	3
	Air Flow Rate	H/M/L	m³/min	45.00/35.00/25.00
			l/s	750/583/417
	External Pressure	Min/Std/Max	㎜Aq	0/5.2/15
			Pa	0.00/51.00/147.10
Fan Motor	Type		-	BLDC
	Output x n		W	350
Piping Connections	Liquid Pipe		Type	Flare connection
			Φ, ㎜ (inch)	9.52 (3/8)
	Gas Pipe		Type	Flare connection
			Φ, ㎜ (inch)	15.88 (5/8)
	Drain Pipe		Φ,mm	VP25 (OD 32,ID 25)
Wiring connections	Communication	Min.	㎟	0.75
		Remark	-	F1,F2
Refrigerant	Type		-	R410A
	Control Method		-	EEV INCLUDED
Sound Level	Sound Pressure Level	H/M/L	dB(A)	43/39/35
	Sound Power Level	Cooling		65
Dimensions	Net Weight		kg	44.6
	Shipping Weight		kg	51.1
	Net Dimensions (W×H×D)		mm	1,300x300x700
	Shipping Dimensions (W×H×D)		mm	1,529x370x779
Casing	Material		-	GI Steel plate
Additional Accessories	Drain Pump	External Model	-	-
		Internal Model	-	Built In
		Max. lifting Height / Displacement	㎜ / Liter/h	750 / 24
	Air Filter		-	-

NOTE

- Specification may be subject to change without prior notice.
  1) Performances are based on the following test conditions.
     - Cooling : Indoor temperature 27°C DB, 19°C WB, Outdoor temperature 35°C DB, 24°C WB
     - Heating : Indoor temperature 20°C DB, 15°C WB, Outdoor temperature 7°C DB, 6°C WB
     - Equivalent refrigerant piping length 7.5m, Level differences 0m
  2) Sound pressure level is obtained in an anechoic room.
     - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  3) Sound pressure level may differ depending on operation condition.
     - dBA = A-weighted sound pressure level, - Reference acoustic pressure 0 dB = 20uPa
  4) Sound power level is an absolute value that a sound source generates.
     - dBA = A-weighted sound power level, - Reference power : 1pW, - Measured according to ISO 3741
  5) Select wire size based on the value of MCA

2. Summary Table

Duct

Performance Characteristics

Model Code	Nominal Capacity [kW]			Fan Speed	Airflow [CMM]	Sound Pressure [dBA]	Sound Power [dBA]	Static Pressure (Min/Std/Max) [mmAq]
	Cooling	Sensible	Heating					
AM160DNMPKH/EU	16.0	12.1	18.0	High	45.0	43	65	0 / 5.2 / 15
	12.8	9.7	15.9	Mid	35.0	39	-	
	9.1	6.9	13.4	Low	25.0	35	-	

Electrical Characteristics

Model Code	Power Supply (Φ, #, V, Hz)	Power Input (W)	Current Input (A)	MCA (A)	MFA (A)	FLA (A)
AM160DNMPKH/EU	1,2,220~240,50	300.0	2.5	3.60	15	2.88

NOTE

- MCA : Minimum circuit amperes
- MFA: Maximum fuse amperes
- FLA: Full load amperes
- Select wire size based on the value of MCA

3. Capacity Table

Duct

AM160DNMPKH/EU

Cooling

TC: Total Capacity, SHC: Sensible Heat Capacity

Outdoor Air Temp. (°C,DB)	Indoor temperature													
	20(°C,DB) 14(°C,WB)		23(°C,DB) 16(°C,WB)		26(°C,DB) 18(°C,WB)		27(°C,DB) 19(°C,WB)		28(°C,DB) 20(°C,WB)		30(°C,DB) 22(°C,WB)		32(°C,DB) 24(°C,WB)	
	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-5	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.7	12.2	17.9	12.3	19.2	12.2
-4	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.7	12.2	17.9	12.3	19.2	12.2
-2	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.7	12.2	17.9	12.3	19.2	12.2
0	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.7	12.2	17.9	12.3	19.2	12.2
2	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.7	12.2	17.9	12.3	19.2	12.2
4	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.7	12.2	17.9	12.3	19.2	12.2
6	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.7	12.2	17.9	12.3	19.2	12.2
8	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.7	12.2	17.9	12.3	19.2	12.2
10	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.7	12.2	17.9	12.3	19.2	12.2
12	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.6	12.1	17.8	12.2	19.1	12.1
14	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.6	12.1	17.8	12.2	19.1	12.1
16	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.6	12.1	17.8	12.2	19.0	12.0
18	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.6	12.1	17.7	12.1	19.0	12.0
20	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.6	12.1	17.7	12.1	18.9	11.9
21	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.6	12.1	17.7	12.1	18.9	11.9
23	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.6	12.1	17.7	12.1	18.9	11.9
25	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.6	12.1	17.7	12.1	18.9	11.9
27	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.6	12.1	17.7	12.1	18.9	11.9
29	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.6	12.1	17.7	12.1	18.9	11.9
31	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.6	12.1	17.7	12.1	18.9	11.9
33	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.6	12.1	17.7	12.1	18.9	11.9
35	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.6	12.1	17.7	12.1	18.9	11.9
37	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.6	12.1	17.6	12.0	18.6	11.8
39	11.1	9.6	13.0	10.9	15.0	11.8	16.0	12.1	16.5	12.0	17.3	11.8	18.2	11.5
42	11.1	9.6	13.0	10.9	14.9	11.7	15.8	12.0	16.2	11.9	16.9	11.5	17.7	11.2
44	11.1	9.6	13.0	10.9	14.5	11.3	15.3	11.5	15.8	11.5	16.2	11.1	17.1	10.9
46	11.1	9.6	12.9	10.8	14.2	11.2	14.7	11.2	15.3	11.2	15.8	10.8	16.7	10.5
48	11.0	9.5	12.7	10.6	13.9	11.0	14.4	10.9	15.0	11.0	15.3	10.4	16.1	10.2
50	11.0	9.5	12.7	10.6	13.9	11.0	14.4	10.9	15.0	11.0	15.2	10.3	16.0	10.1

Heating

TC: Total Capacity

Outdoor Air Temp. (°C)		Indoor temperature (°C,DB)						
		14(°C,DB)	16(°C,DB)	18(°C,DB)	20(°C,DB)	22(°C,DB)	24(°C,DB)	27(°C,DB)
		TC	TC	TC	TC	TC	TC	TC
DB	WB	kW	kW	kW	kW	kW	kW	kW
-25	-25.1	10.4	10.4	10.4	10.4	10.2	10.2	10.1
-22	-22.2	10.6	10.6	10.6	10.5	10.5	10.4	10.4
-19.8	-20	10.7	10.7	10.7	10.6	10.6	10.5	10.4
-18.8	-19	10.9	10.9	10.9	10.7	10.7	10.5	10.4
-16.7	-17	11.6	11.5	11.3	10.9	10.8	10.6	10.5
-14.7	-15	12.2	12.2	11.8	11.5	11.1	10.8	10.6
-12.6	-13	12.6	12.5	12.3	12.0	11.7	11.4	10.9
-10.5	-11	13.2	13.1	12.9	12.7	12.5	12.3	11.8
-9.5	-10	13.6	13.3	13.2	12.9	12.8	12.6	12.2
-8.5	-9.1	13.7	13.6	13.4	13.3	13.1	12.7	12.3
-7	-7.6	14.1	14.0	13.7	13.6	13.3	12.9	12.5
-5	-5.6	14.9	14.7	14.5	14.3	13.8	13.5	13.1
-3	-3.7	15.9	15.5	15.3	15.1	14.5	14.0	13.5
0	-0.7	16.4	16.2	16.0	15.8	15.1	14.4	13.8
3	2.2	17.2	17.0	16.8	16.5	15.9	15.2	14.5
5	4.1	18.1	17.8	17.6	17.2	16.2	15.2	14.5
7	6	18.8	18.6	18.2	18.0	16.7	15.2	14.5
9	7.9	19.4	19.1	18.6	18.0	16.7	15.2	14.5
11	9.8	20.0	19.7	18.8	18.0	16.7	15.2	14.5
13	11.8	20.5	20.3	19.1	18.0	16.7	15.2	14.5
15	13.7	21.2	20.8	19.4	18.0	16.7	15.2	14.5
18	16.6	21.2	20.9	19.4	18.0	16.8	15.3	14.6
20	18.5	21.3	20.9	19.6	18.1	16.8	15.3	14.6
22	20.4	21.4	21.0	19.6	18.2	16.9	15.4	14.6
24	22.4	21.5	21.0	19.7	18.2	16.9	15.4	14.7

NOTE

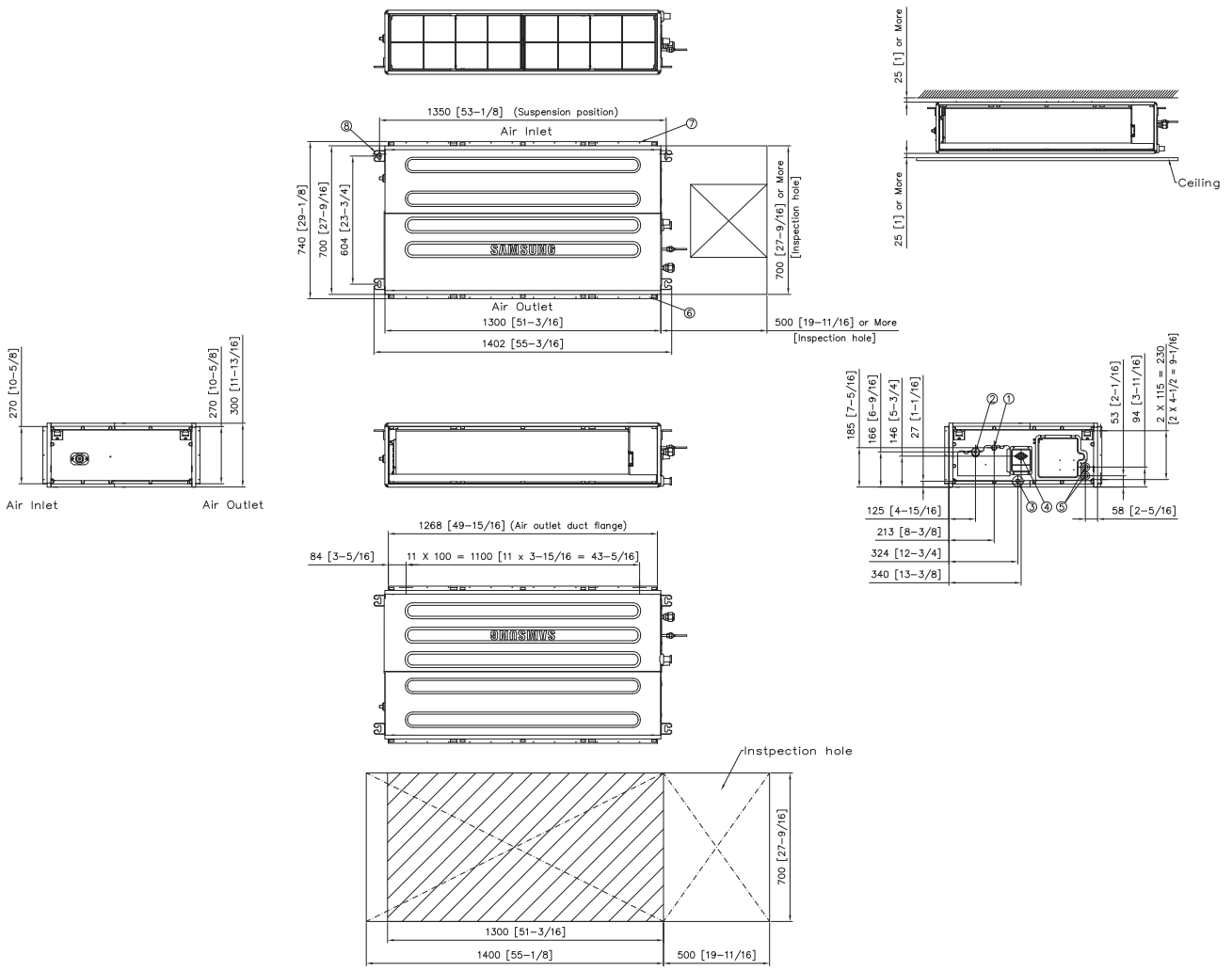
The performance table shows the average value of each conditions.

4. Dimensional Drawing

Duct

AM160DNMPKH/EU

(Unit: mm)

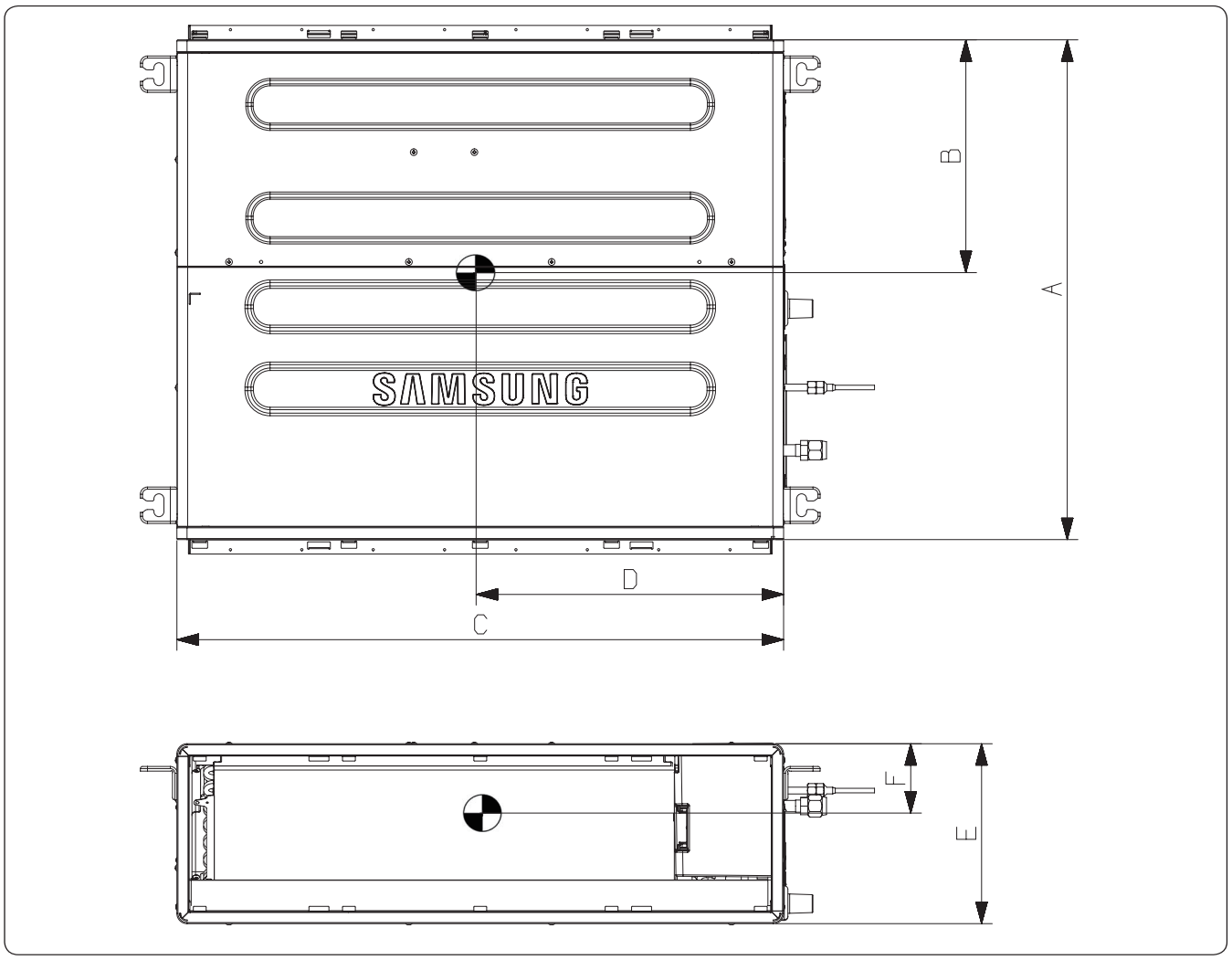


No.	Name	Description
①	Liquid pipe connection	Ø9.52 (3/8)
②	Gas pipe connection	Φ15.88 (5/8)
③	Drain pipe connection (Without drain pump)	VP25 (OD 32, ID 25)
④	Drain pipe connection (With drain pump)	-
⑤	Power & Communication Conduits	-
⑥	Air discharge grille flange	-
⑦	Air suction flange	-
⑧	Hook	Use M8~M10 bolt(4ea)

5. Center of Gravity

Duct

(Unit: mm)

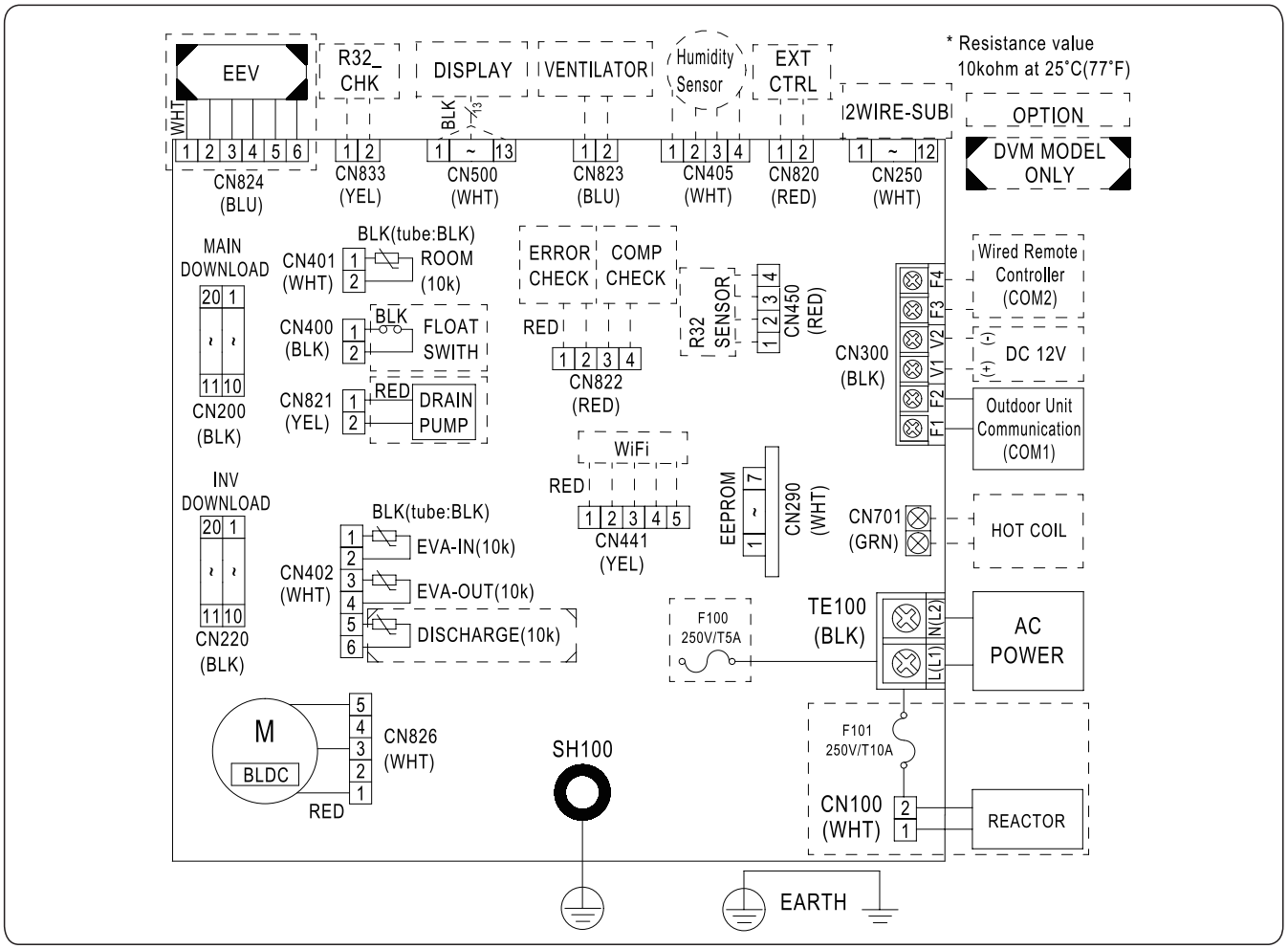


Model	A	B	C	D	E	F
AM160DNMPKH/EU	700 [27-9/16]	265 [10-7/16]	1300 [51-3/16]	625 [24-39/64]	300 [11-13/16]	150 [5-15/16]

6. Electrical Wiring Diagram

Duct

AM160DNMPKH/EU



F100/F101	Fuse	M-BLDC	Motor for indoor Fan	DISPLAY	LED display
ERROR CHECK	Contact output port for error check	COMP CHECK	Contact output port for compressor operation check	EEPROM	EEPROM SUB PBA
2WIRE-SUB	SUB PBA for wired remote control communication	VENTILATOR	Contact output port for Ventilator control	ROOM TEMP	Thermistor (ROOM_10Kohm)
DISCHARGE TEMP	Thermistor (DISCHARGE_10Kohm)	EVA IN TEMP	Thermistor (EVA IN_10Kohm)	EVA OUT TEMP	Thermistor (EVA OUT_10Kohm)
EEV	Electronic expansion valve	EXTERNAL CTRL	Input port for external contact control		

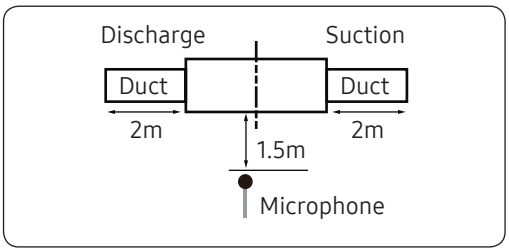
NOTE

- This wiring diagram applies only to the Indoor unit.
- Symbols show as follow :
  BLK: black, RED: red, BLU: blue, WHT white, YEL: yellow, BRN: brown, SKY: skyblue: GRN: green
- For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
- ⏚ Protective earth(screw), ▭▭▭ : connector, N : The wire quantity

7. Sound Data

Duct

Sound pressure level

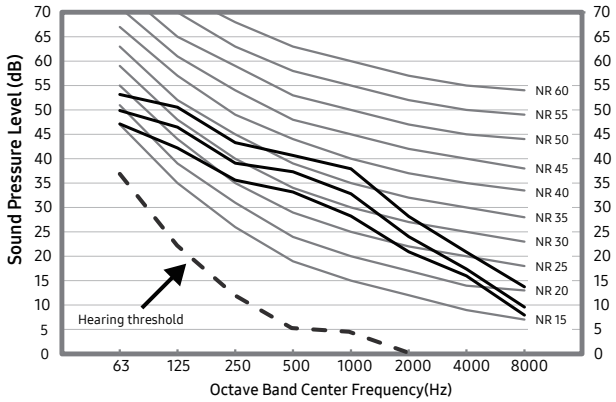


Unit: dB(A)

Model	High	Mid	Low
AM160DNMPKH/EU	43	39	35

- NR Curve

  1) AM160DNMPKH/EU



NOTE

- Specifications may be subject to change without prior notice.
  - Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dBA = A weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20μPa

7. Sound Data

Duct

Sound Power level

NOTE

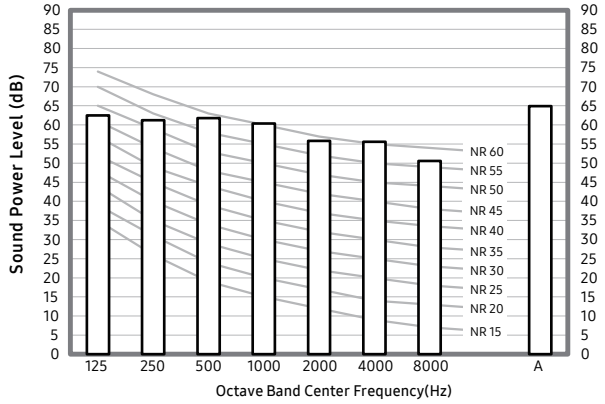
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

Unit: dB(A)

Model	Power
AM160DNMPKH/EU	65

- NR Curve

  AM160DNMPKH/EU

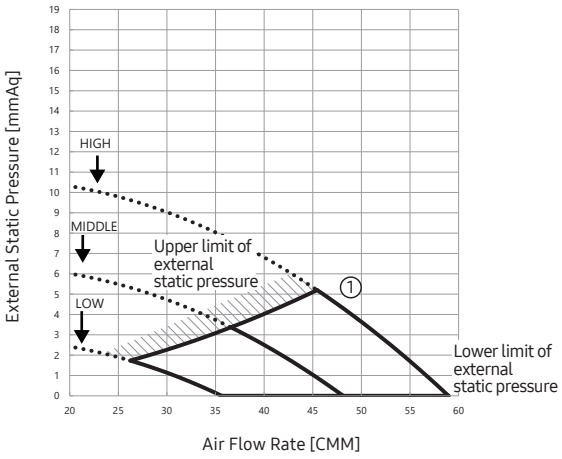


8. Fan Characteristics

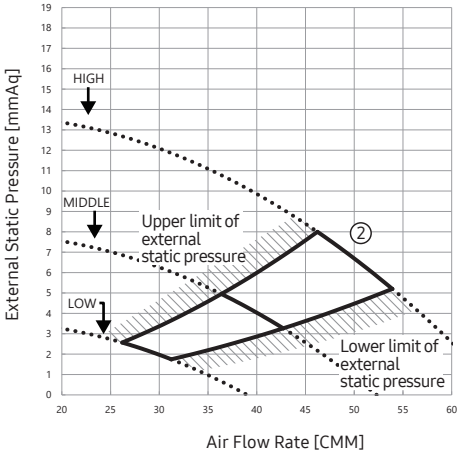
Duct

1) AM160DNMPKH/EU

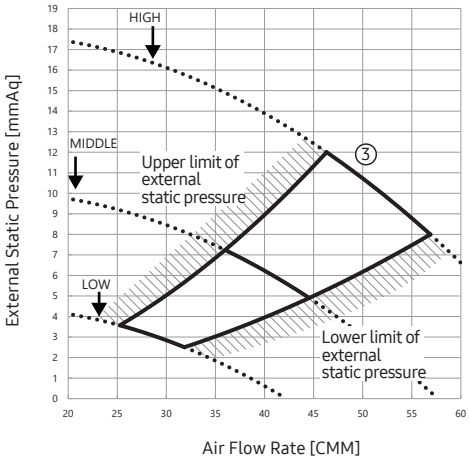
①	External Static Pressure(mmAq)	Option Code
	0≤SP≤5.2	010054-1E54B9-20A0A0-331120



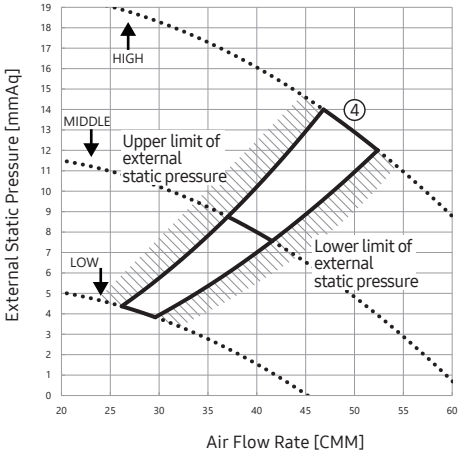
②	External Static Pressure(mmAq)	Option Code
	5.2<SP≤8	010054-1E580A-20A0A0-331120



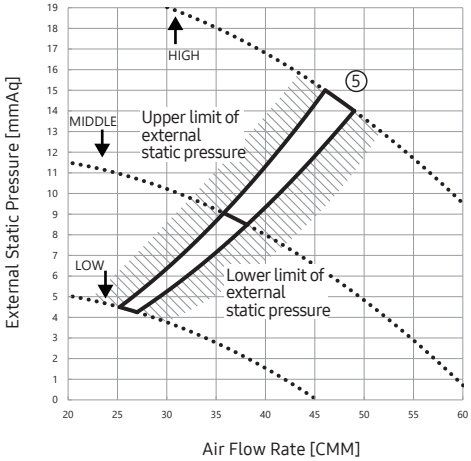
③	External Static Pressure(mmAq)	Option Code
	8<SP≤12	010054-1E583C-20A0A0-331120



④	External Static Pressure(mmAq)	Option Code
	12<SP≤14	010054-1E586D-20A0A0-331120



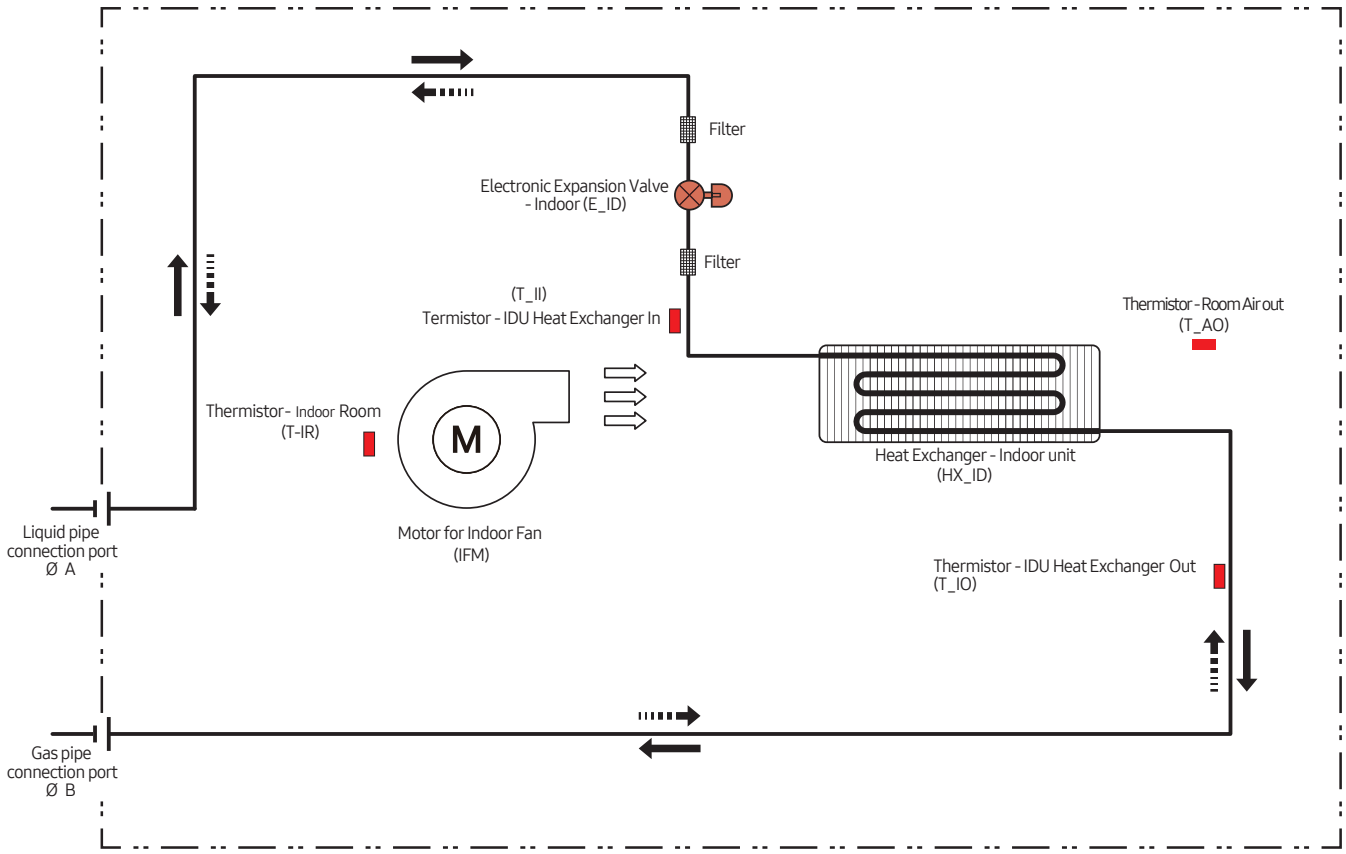
⑤	External Static Pressure(mmAq)	Option Code
	14<SP≤15	010054-1E589E-20A0A0-331120



9. Piping Diagram

Duct

EEV included Model



Refrigerant flow	
Cooling	Heating
→	⇢

Unit : mm (inch)

Model	A	B
AM160DNMDKH1TK	9.52 (3/8)	15.88 (5/8)

10. Installation

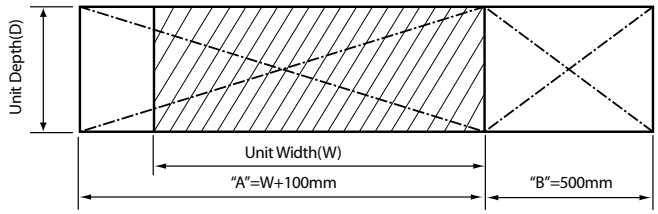
Duct

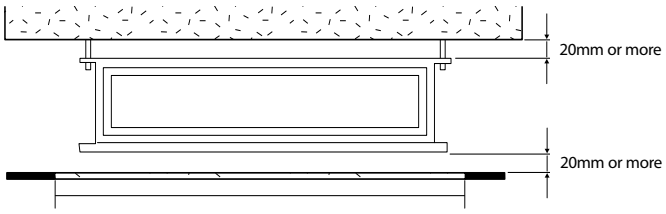
Indoor Unit

- There must be no obstacles near the air inlet and outlet.
- Install the indoor unit on a ceiling that can support its weight.
- Maintain sufficient clearance around the indoor unit.
- Make sure that the water dripping from the drain hose runs away correctly and safely.
- The indoor unit must be installed in this way, that they are out of public access. (Not touchable by the users)
- After connecting a chamber, insulate the connection part between the indoor unit and the chamber with t10 or thicker insulation. Otherwise, there can be air leak or dew from the connection part.
- Rigid wall without vibration.
- Where it is not exposed to direct sunshine.
- Where the air filter can be removed and cleaned easily.

Space requirements for installation & service

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

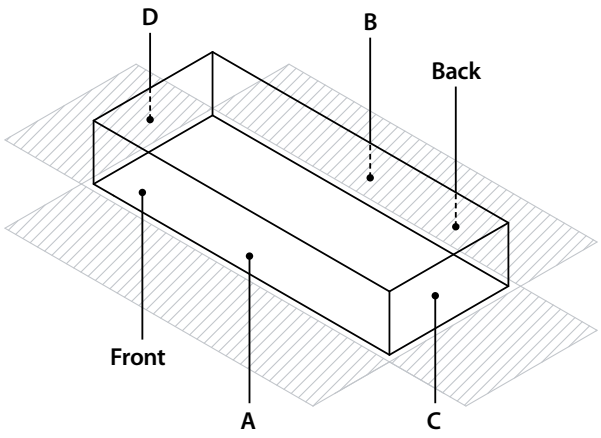




- You must have 20mm or more space between the ceiling and the bottom of indoor unit. Otherwise, the noise from the vibration of indoor unit may bother the user.When the ceiling is under construction, the hole for check-up must be made to take service, clean and repair the unit.
- It is possible to install the unit at an height of between 2.2~2.5m from the ground, if the unit has a duct with a well defined lenght (300mm or more), to avoid fan motor blower contact.
- If you install the cassette or duct type indoor unit on the ceiling with humidity over 80%, you must apply extra
- 10mm of polyethylene foam or other insulation with similar material on the body of the indoor unit.

Insulation Guide

- I nsulate the end of the pipe and some curved area by using separate insulator.
- I nsulate the discharge and suction part at the same time when you insulate connection duct.
- If the humidity is over 80%, it is required to add 10mm polyethylene foam or other similar insulation to the indoor unit when installing belt or pipe type indoor unit on the ceiling.



10. Installation

Duct

Indoor unit		A	B	C	D	Front / Back
AM160DNMPKH/EU	1300x700x300	1300x300	1300x300	700x300	700x300	Insulate the front and back side in proper size at the same time when insulating the suction duct and discharge duct.

- Insulate the end of the pipe and some curved area by using separate insulator.
- Insulate the discharge and suction part at the same time when you insulate connection duct.
- If the humidity is over 80%, it is required to add 10mm polyethylene foam or other similar insulation to the indoor unit when installing belt or pipe type indoor unit on the ceiling.

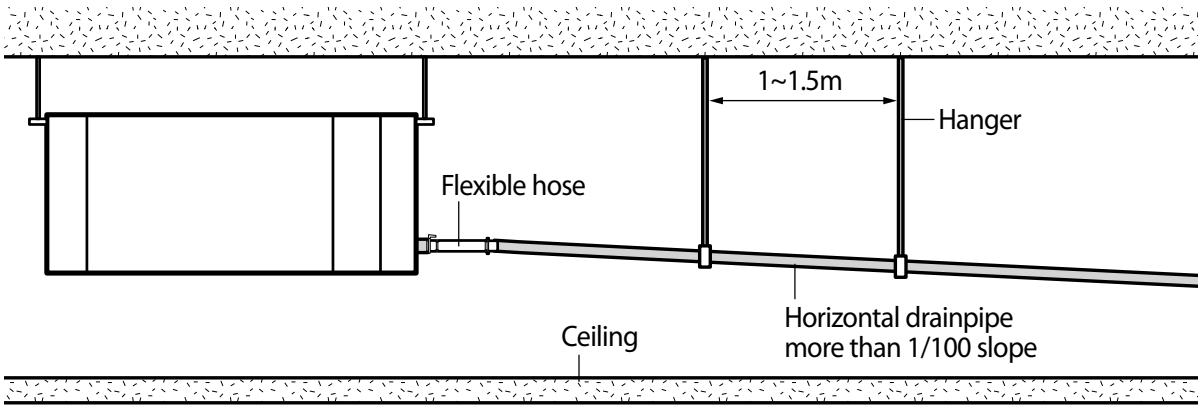
Drainpipe Connection

Without the drain pump

1 Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 1.0~1.5m.

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

3 Do not install the drainpipe to upward position. It may cause water flow back to the unit.



With the drain pump

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

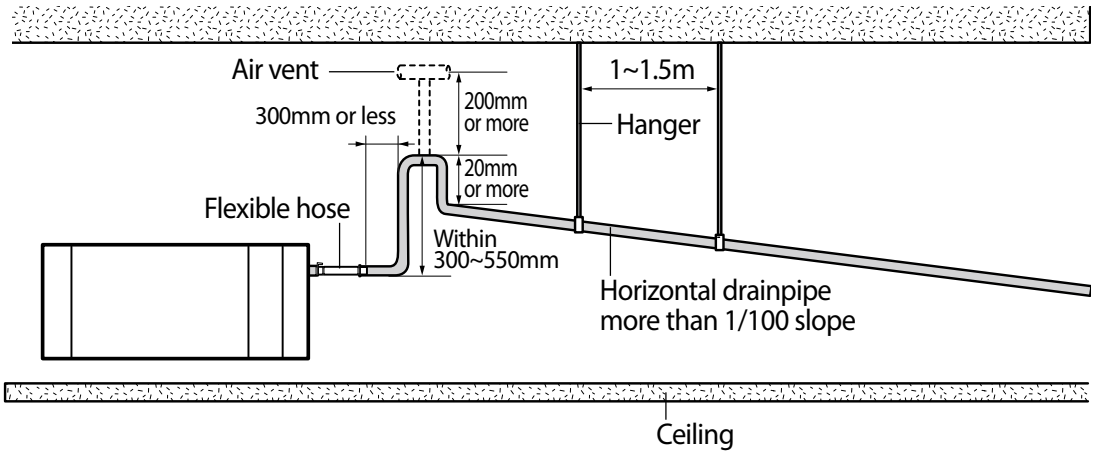
2 Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 1.0~1.5m.

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

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.



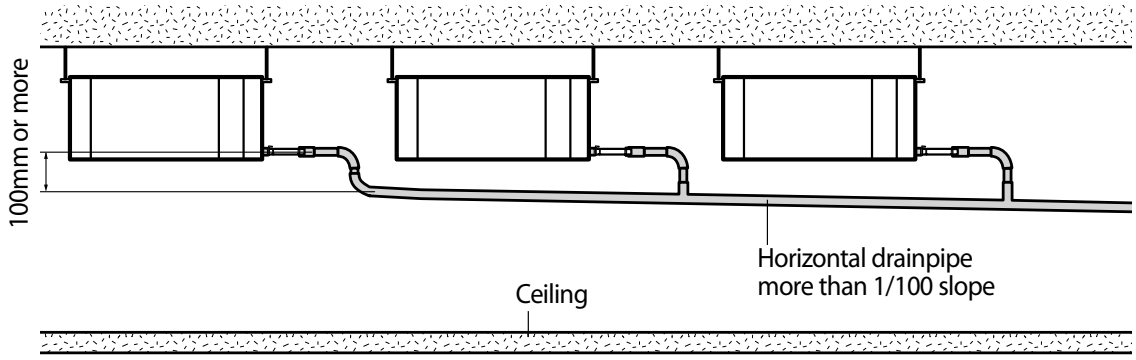
10. Installation

Duct

Centralized Drainage

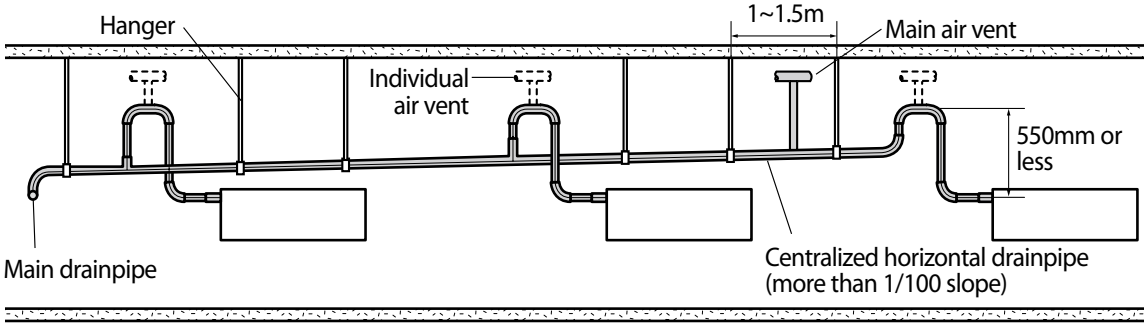
Without the drain pump

1 Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 1.0~1.5m.
2 Install U-trap at the end of the drainpipe to prevent a nasty smell to reach the indoor unit.



With the drain pump

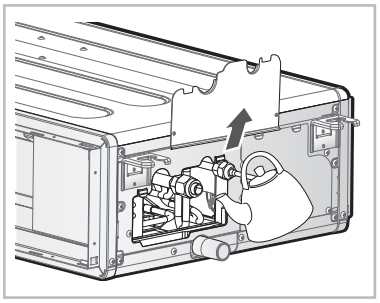
1 Install main air vent at the front of the farthest indoor unit from the main drain when installed indoor units are more than 3.
2 You may need to install individual air vent to prevent water flow back at the top of each indoor unit drainpipe.



Testing the drainage

Prepare a little water about 2 liter.

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

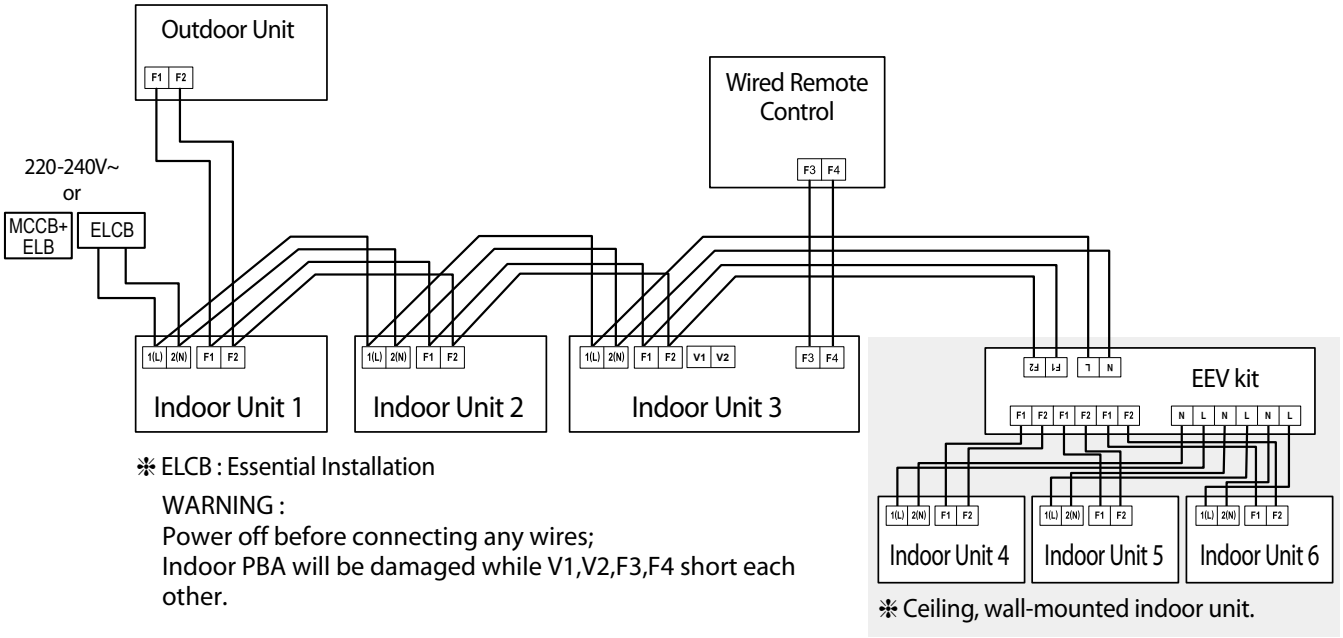


Power and communication cable connection

1 Before wiring work, you must turn off all power source.
2 Indoor unit power should be supplied through the breaker(ELCB or MCCB+ELB) separated by the outdoor power.
ELCB:Earth Leakage Circuit Breaker
MCCB:Molded Case Circuit Breaker
ELB:Earth Leakage Breaker
3 The power cable should be used only copper wires.
4 Connect the power cable{1(L), 2(N)} among the units within maximum length and communication cable(F1, F2) each.
5 Connect F3, F4(for communication) when installing the wired remote control.

10. Installation

Duct



❊ ELCB : Essential Installation

WARNING :
Power off before connecting any wires;
Indoor PBA will be damaged while V1,V2,F3,F4 short each other.

❊ Ceiling, wall-mounted indoor unit.

Specification of electronic wire

Power supply	MCCB	ELB or ELCB	Power cable	Earth cable	Communication cable
Max : 242V Min : 198V	*X* A	*X* A, 30mmA 0.1 s	2.5mm²	2.5mm²	0.75~1.5mm²

- Decide the capacity of ELCB(or MCCB+ELB) by below formula.
- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (Code designation IEC:60245 IEC 57 / CENELEC: H05RN-F or IEC:60245 IEC 66 / CENELEC: H07RN-F)

The capacity of ELCB(or MCCB+ELB) *X* [A] = 1.25 X 1.1 X ΣAi

- *X* : The capacity of ELCB(or MCCB+ELB).
- ΣAi : Sum of Rating currents of each indoor unit.
- Refer to each installation manual about the rating current of indoor unit.

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

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

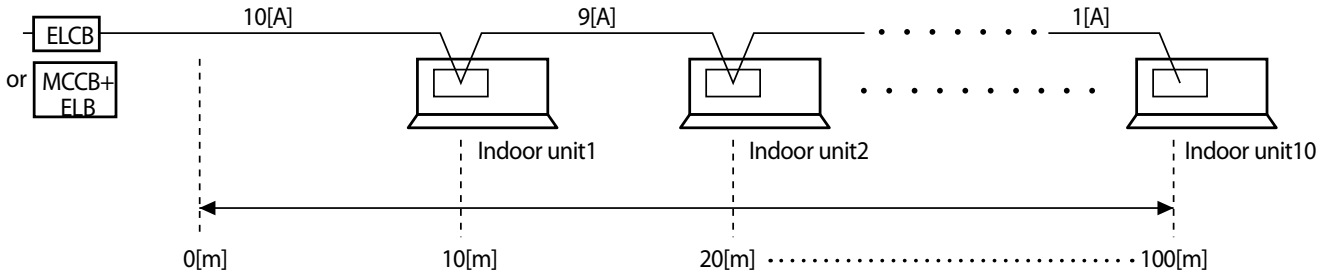
- coef: 1.55
- Lk: Distance among each indoor unit[m], Ak: Power cable specification[mm²]
  ik: Running current of each unit[A]

10. Installation

Duct

Example of Installation

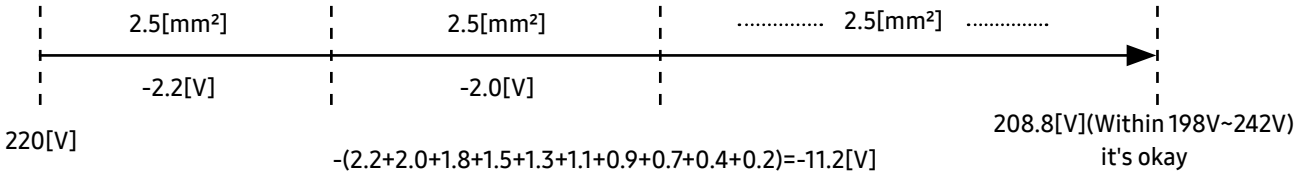
- Total power cable length L = 100(m), Running current of each units 1[A]
- Total 10 indoor units were installed



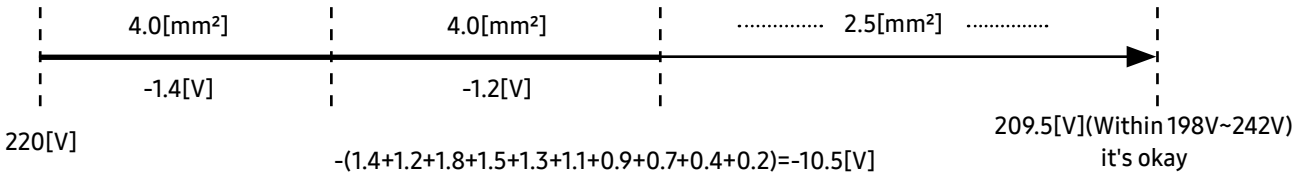
- Apply following equation.

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

- Calculation
  - Installing with 1 sort wire.



  - Installing with 2 different sort wire.



Rating current

Unit	Model	Rating current
AM*DNMPKH*	*160*	2.45A

10. Installation

Duct

⚠ CAUTION

- Select the power cable in accordance with relevant local and national regulations.
- Wire size must comply with local and national code.
- For the power cable, use the grade of H07RN-F or H05RN-F materials.
- You should connect the power cable into the power cable terminal and fasten it with a clamp.
- The unbalanced power must be maintained within 10% of supply rating among whole indoor units.
- If the power is unbalanced greatly, it may shorten the life of the condenser. If the unbalanced power is exceeded over 10% 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 in the iron pipe.
- Connect the power cable to the auxiliary circuit breaker.
- An all pole disconnection from the power supply must be incorporated in the fixed wiring(≥3mm).
- You must keep the cable in a protection tube.
- Keep distances of 50mm or more between power cable and communication cable.
- Maximum length of power cables are decided within 10% of power drop. If it exceeds, you must consider another power supplying method.
- The circuit breaker(ELCB or MCCB+ELB) should be considered more capacity if many indoor units are connected from one breaker.
- Use round pressure terminal for connections to the power terminal block.
- For wiring, use the designated power cable and connect it firmly, then secure to prevent outside pressure being exerted on the terminal board.
- Use an appropriate screwdriver for tightening the terminal screws. A screwdriver with a small head will strip the head and make proper tightening impossible.
- Over-tightening the terminal screws may break them.
- See the table below for tightening torque for the terminal screws.

	Tightening torque	
	N•m	kgf•cm
M3.5	0.8~1.0	8.0~10.0
M4	1.2~1.5	12.0~14.7

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