Technical Manual

ACSON International
Air Conditioners

A5VR
CAREFREE SERIES

A5VR030DRM • A5VR035DRM •
A5VR040DRM • A5VR050DRM •
A5VR060DRM • A5VR065DRM •
A5VR070DRM • A5VR080DRM

CONTENTS

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* All specifications stated in this technical manual are for Cooling Only unit.
Please contact us for more information about Heat Pump unit.

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NOMENCLATURE

A5VR Carefree series units are most suitable for commercial building, office room, hotel, which includes the outdoor units and multi-indoor units. The advantage of this product range is unique outdoor units with inverter compressor. To meet different requirements, there are many indoor units to be chosen: ceiling concealed, ceiling cassette, wall mounted, ducted blower and ceiling mounted;

Outdoor Units: A5VR-DRM Series

Product range: A5VR030DRM, A5VR035DRM, A5VR040DRM, A5VR050DRM, A5VR060DRM, A5VR065DRM, A5VR070DRM, A5VR080DRM

Feature: The outdoor units are compact, and elegant design with low noise; the compressor is with advanced technology of inverter, can meet the stageless energy level adjustment from 50% to 130%;

Nomenclature

A 5 VR 030 D R M - A BA E

- E: Applied region (Omitted: China, D:Hong Kong, E:Other region)
- BA: Description of the unit
- A: Power supply features A:220V~/50Hz; F:380V/3N~/50Hz
- M: Carefree Series
- R: Type R:Heatpump Omitted if cooling only
- D: Series D: D series
- 030: Capacity 030:30,000 Btu/h
- VR: Model VR: Variable Refrigerant
- 5: Refrigerant 5:R410A
- A: Brand A: Acson

Ceiling Concealed Indoor Units: A5VCC-V Series

Product Range: A5VCC022V, A5VCC025V, A5VCC028V, A5VCC032V, A5VCC036V, A5VCC040V, A5VCC045V, A5VCC050V, A5VCC056V, A5VCC063V, A5VCC071V, A5VCC080V, A5VCC090V, A5VCC100V, A5VCC112V, A5VCC125V, A5VCC140V, A5VCC160V

Feature: Concealed type, space saving, ESP is multiple;

Nomenclature

A 5 V CC 022 V - 10 R B X A IA E

- A: Brand A: Acson
- 5: Refrigerant 5: R410A
- V: V : Design for AVR
- CC: ModelCC: Ceiling Concealed
- 022: Capacity 022:2200W
- V: Series V: V series
- 10: Type of additional heater 10-10X100W electric heater Omitted-no additional heater
- R: Type of connecting pipe R: right connecting pipe, L: left connecting pipe
- B: Air return model B: rear air return plenum, D: lower air return plenum
- X: Feature of control, filter, and pump
- A: Power supply features A:220V~/50Hz
- IA: Description of the unit
- E: Applied region (Omitted: China, D:Hong Kong, E:Other region)

Ceiling Cassette Indoor Units: A5VCK-V Series

Product Range: A5VCK028V, A5VCK032V, A5VCK036V, A5VCK040V, A5VCK045V, A5VCK050V, A5VCK056V, A5VCK063V, A5VCK071V, A5VCK080V, A5VCK090V, A5VCK100V, A5VCK112V, A5VCK125V, A5VCK140V

Feature: 4 ways air supply evenly, streamlined design, in-build high efficiency filter;

Nomenclature

A 5 V CK 028 V - 07 A IA E

- E — Applied region (Omitted: China, D:Hong Kong, E:Other region)
- IA — Description of the unit
- A — Power supply features A:220V~/50Hz
- 07 — Type of additional heater 07-07X100W electric heater Omitted-no additional heater
- V — Series V: V series
- 028 — Cooling capacity 028: 2800W
- CK — Model CK: Ceiling casette
- V — V : Design for AVR
- 5 — Refrigerant 5:R410A
- A — Brand A: Acson

Wall Mounted Indoor Units: A5VWM-W Series

Product Range: A5VWM022W, A5VWM028W, A5VWM036W, A5VWM045W, A5VWM056W, A5VWM071W

Feature: elegant design, friendly installation, In-build high efficiency and mould proof filter, easy to detach and clean.

Nomenclature

A 5 V WM 022 W - A IA E

- E — Applied region (Omitted: China, D:Hong Kong, E:Other region)
- IA — Description of the unit
- A — Power supply features A:220V~/50Hz
- W — Series W: W series
- 022 — Capacity 022: 2200W
- WM — Model WM: Wall mounted
- V — V : Design for AVR
- 5 — Refrigerant 5:R410A
- A — Brand A: Acson

Ducted Blower Indoors Units: A5VDB-V Series

Product Range: A5VDB125V, A5VDB140V, A5VDB224V

Feature:
Installed above ceiling with air supply duct working, meet the requirement for long distance air supply;

Nomenclature

A 5 V DB 125 V - A IA E

- E: Applied region (Omitted: China, D:Hong Kong, E:Other region)
- IA: Description of the unit
- A: Power supply features A:220V~/50Hz
- V: Series V: V series
- 125: Cooling capacity 125: 12500W
- DB: Model DB: Ducted Blower
- V: V : Design for AVR
- 5: Refrigerant 5:R410A
- A: Brand A: Acson

Ceiling Mounted Indoor Units: A5VCM-V Series

Product Range: A5VCM056V, A5VCM071V, A5VCM112V, A5VCM125V

Feature: elegant design, friendly installation;

Nomenclature

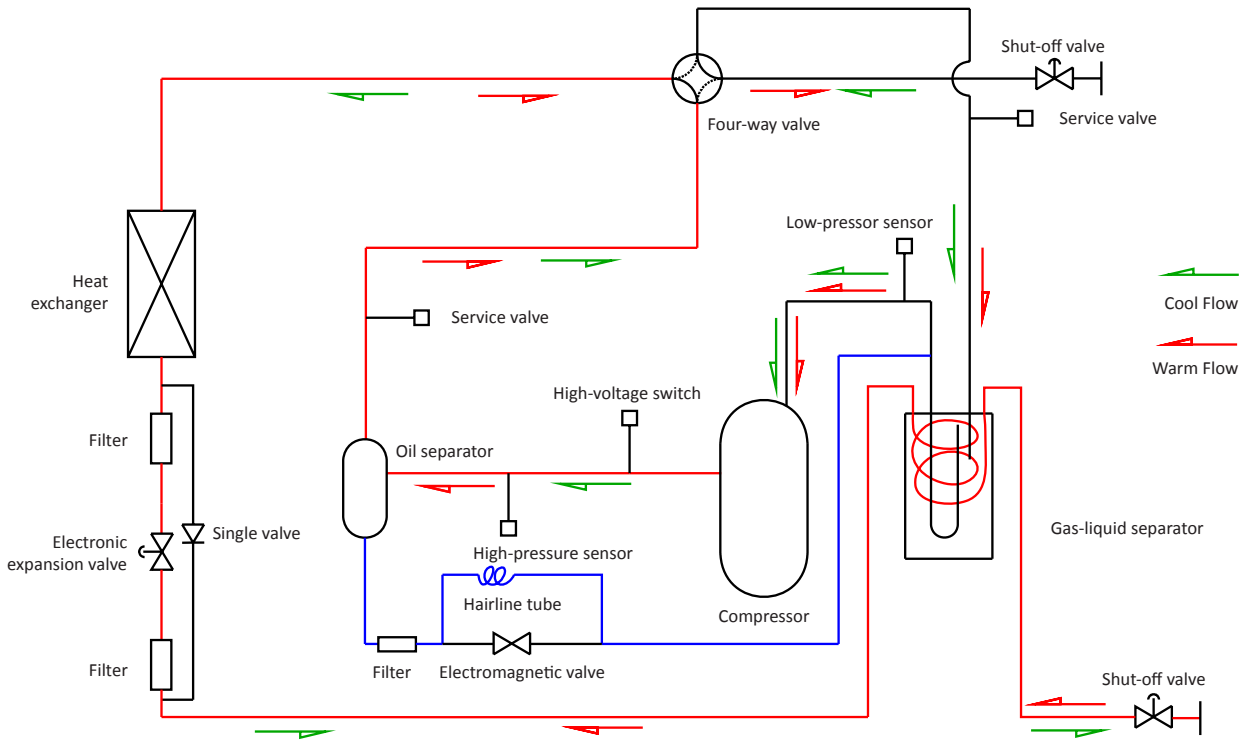
A 5 V CM 056 V - A IA E

- E: Applied region (Omitted: China, D:Hong Kong, E:Other region)
- IA: Description of the unit
- A: Power supply features A:220V~/50Hz
- V: Series V: V series
- 056: Cooling capacity 056: 5600W
- CM: Model CM: Ceiling Mounted
- V: V : Design for AVR
- 5: Refrigerant 5:R410A
- A: Brand A: Acson

APPLICATION INFORMATION

2.1 Refrigerant Circuit Diagram

A5VR030/035/040/050/060/065/070/080DRM System Diagram



Circulatory system of refrigeration and heating systems

2.2 Installation Guideline (Outdoor Clearance)

Space for installation of outdoor units

Single outdoor unit can be installed in one place, and multiple outdoor units can be installed together in one larger place. Please reserve the minimum installation space, the units may not operate properly if the space is smaller than required.

2.2.1 An obstacle exists at the air intake side:

No obstacle exists at upper side

a. Single unit installation

- Only one obstacle exists at the air intake side (see Figure 1)
- Obstacles exist at the both sides (see Figure 2)

b. Group units installation (more than two units)

- Obstacles exist at the both sides (see Figure 3)

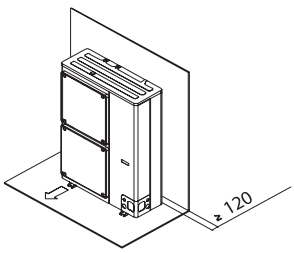


Figure 1

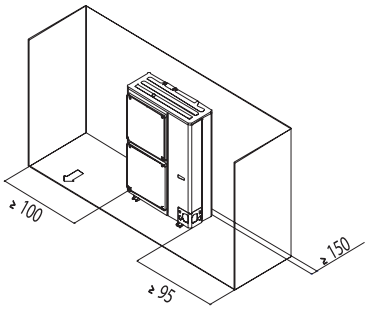


Figure 2

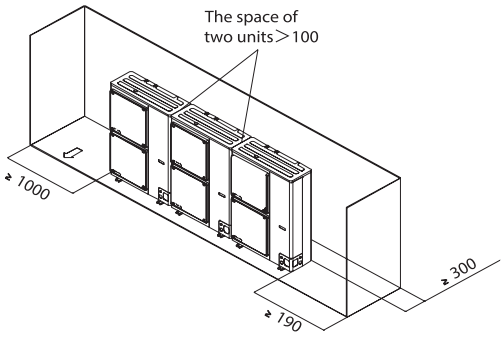


Figure 3

Obstacle exists at upper side

a. Single unit installation

- One obstacle exists at the air intake side (see Figure 4)
- Obstacles exist at the air intake ,left and right side (see Figure 5)

b. Group units installation (more than two units)

- Obstacles exist at the air intake ,left and right side (see Figure 6)

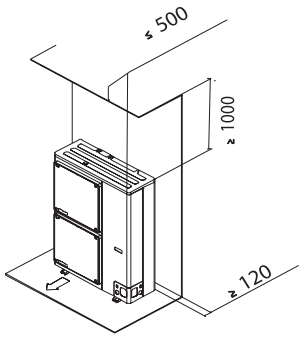


Figure 4

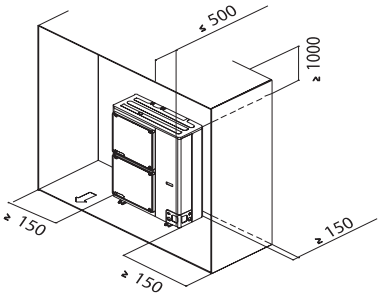


Figure 5

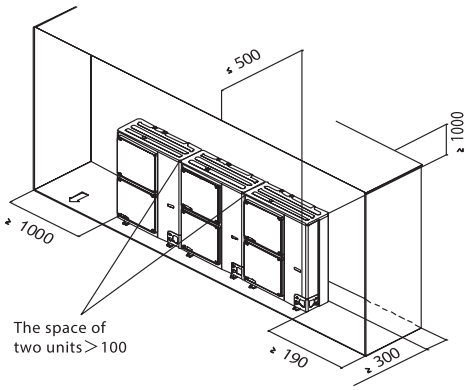


Figure 6

2.2.2 Obstacle exists at the air exhaust side

No obstacle exists at upper side

a. Single unit installation (see Figure 7)

b. Group units installation (more than two units) (see Figure 8)

• Obstacle exists at upper side

a. Single unit installation (see Figure 9)

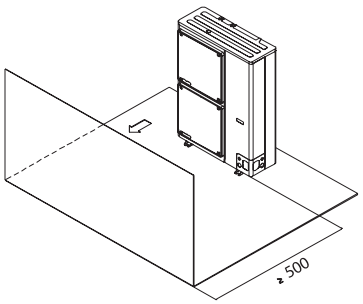


Figure 7

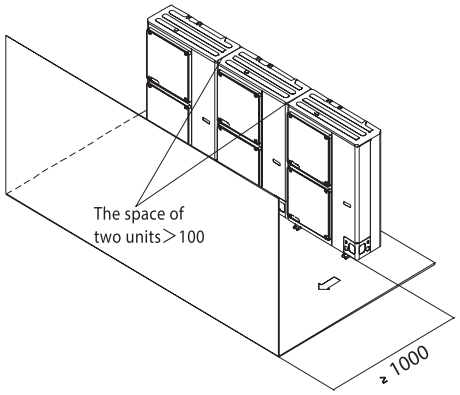


Figure 8

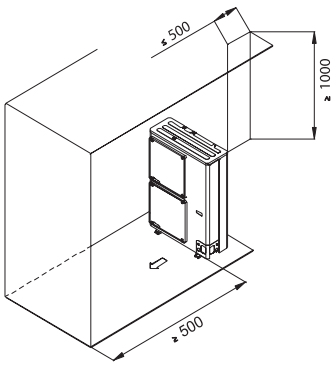


Figure 9

b. Group units installation (more than two units)(see Figure 10)

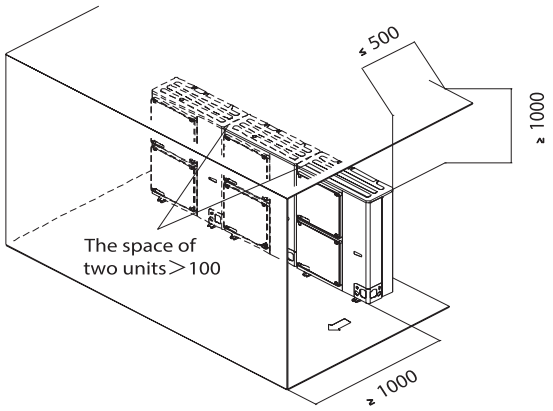


Figure 10

2.2.3 Obstacles exist at the air exhaust and intake side

Model 1: The height of obstacle at intake side is absolute ,when the obstacle at exhaust side is higher than units.

• No obstacle exists at upper side

a. Single unit installation (see Figure 11)

b. Group units installation (more than two units)(see Figure 12)

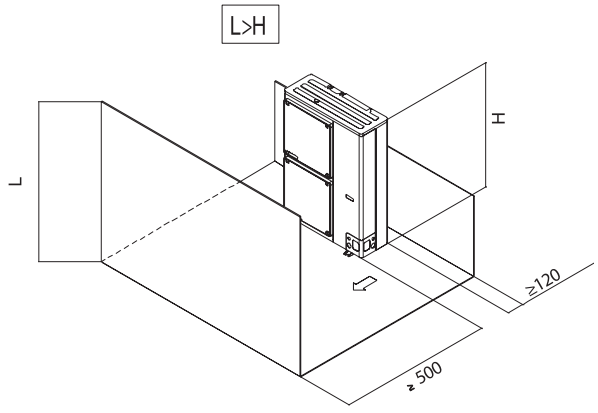


Figure 11

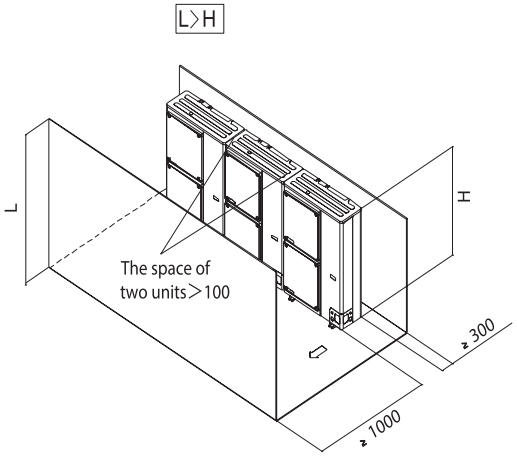


Figure 12

• Obstacles exist at upper side

a. Single unit installation (see Figure 13)

The relation of H, A, L is as follows:

	L	A
L ≤ H	0 < L ≤ 1/2H	750
	1/2H < L ≤ H	1000
H < L	The setting of foundation is L ≤ H	

Seal the bottom of foundation to prevent the exhausted air from crossing the unit.

b. Group units installation (more than two units)(see Figure 14)

The relation of H, A, L is as follows:

	L	A
L ≤ H	0 < L ≤ 1/2H	1000
	1/2H < L ≤ H	1250
H < L	The setting of foundation is L ≤ H	

Seal the bottom of foundation to prevent the exhausted air from crossing the unit,
Only install two units in the way.

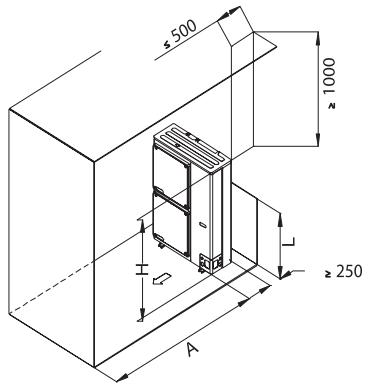


Figure 13

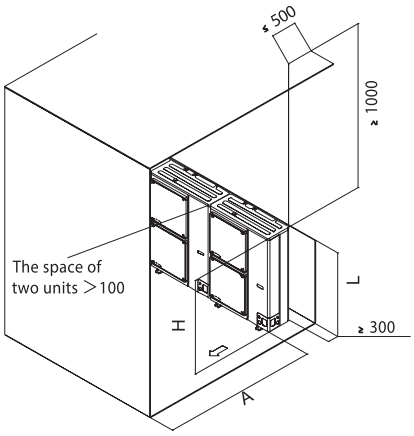


Figure 14

Model 2: The height of obstacle at intake side is absolute ,when the obstacle at exhaust side is lower than units.

• No obstacle exists at upper side

a. Single unit installation (see Figure 15)

L ≤ H

b. Group units installation (more than two units)(see Figure 16)

The relation of H, A, L is as follows:

L	A
0 < L ≤ 1/2H	250
1/2H < L ≤ H	300

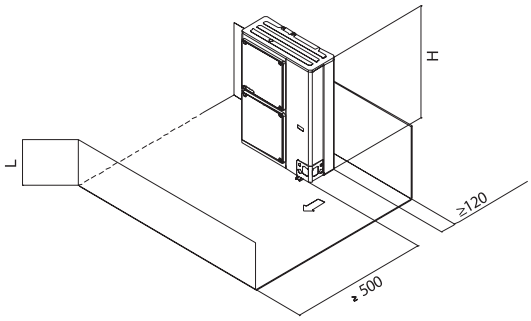


Figure 15

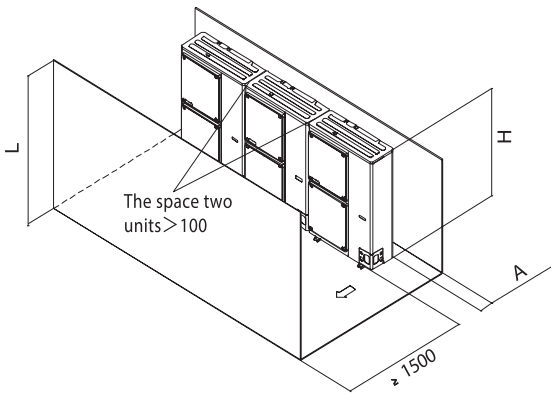


Figure 16

• Obstacles exist at upper side

a. Single unit installation (see Figure 17)

The relation of H, A, L is as follows:

	L	A
L ≤ H	0 < L ≤ 1/2H	120
	1/2H < L ≤ H	200
H < L	The setting of foundation is L ≤ H	

Seal the bottom of foundation to prevent the exhausted air from crossing the unit.

b. Group units installation (more than two units)(see Figure 18)

The relation of H, A, L is as follows:

	L	A
L ≤ H	0 < L ≤ 1/2H	250
	1/2H < L ≤ H	300
H < L	The setting of foundation is L ≤ H	

Seal the bottom of foundation to prevent the exhausted air from crossing the unit,
Only install two units in the way.

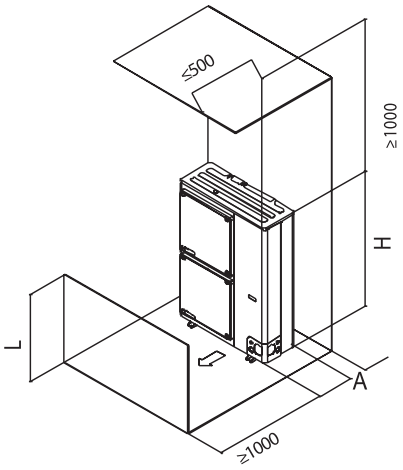


Figure 17

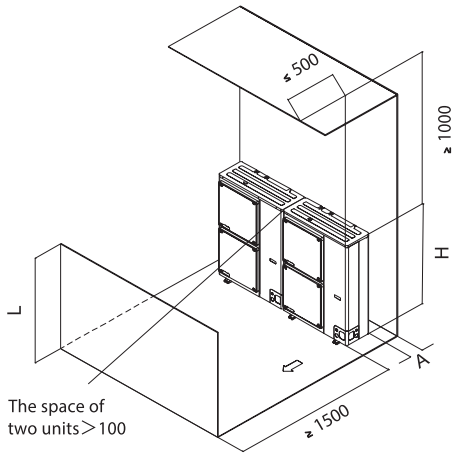


Figure 18

2.2.4 Double-layer Installation

• An obstacle exists at the air exhaust side (see Figure 19)

Seal opening A to prevent the exhausted air from crossing the unit. The drainage construction space required for the upper outdoor unit is about 100 mm. Water generated from the outdoor unit at the upper layer cannot be directly drained to the outdoor unit at the lower layer. The overlaid units cannot exceed 2.

• An obstacle exists at the air intake side (see Figure 20)

Seal opening A to prevent the exhausted air from crossing the unit. The drainage pipe construction space required for the upper outdoor unit is about 100 mm. The overlaid units cannot exceed 2.

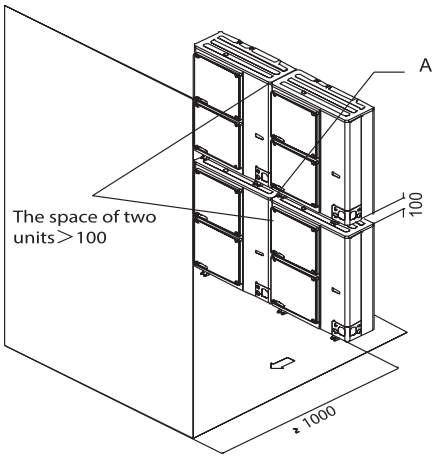


Figure 19

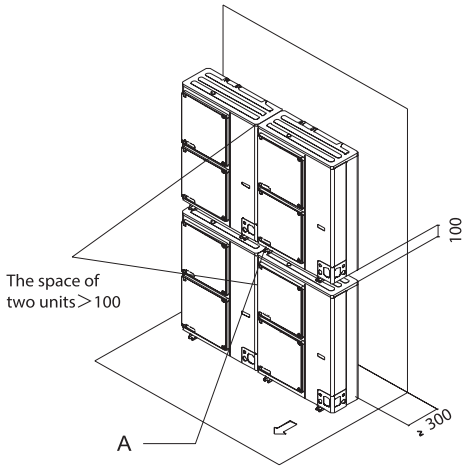


Figure 20

2.2.5 Multi-lined group installation (In the roof, etc.)

- Multi-lined single installation (see Figure 21)
- Multi-lined group installation (more than two units a group)(see Figure 22)

  The relation of H, A, L is as follows:

	L	A
L ≤ H	0 < L ≤ 1/2H	250
	1/2H < L ≤ H	300
H < L	Can not be installed	

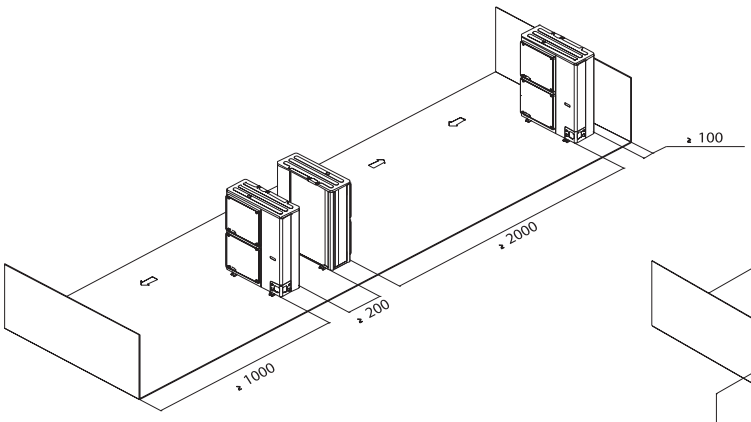


Figure 21

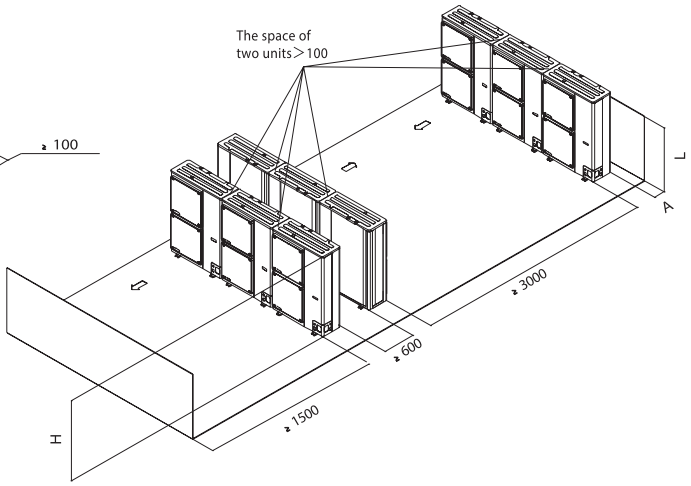


Figure 22

2.2 Installation Guideline (Cable size)

Carefree Series Outdoor Units

Model		A5VR 030DRM	A5VR 035DRM	A5VR 040DRM	A5VR 050DRM	A5VR 050DRM(3)	A5VR 060DRM	A5VR 060DRM(3)	A5VR 065DRM	A5VR 070DRM	A5VR 080DRM
Power Supply		220V~/50Hz				380V/3N ~/50Hz	220V ~/50Hz	380V/3N ~/50Hz	220V ~/50Hz	380V/3N~/50Hz	
Maximum Operating Current (A)		23.9	24.3	24.6	34.3	16.1	34.3	16.1	34.3	18.7	18.7
Cable	Intersection Surface(mm^2)	4	4	4	6	4	6	4	6	4	4
	Quantities	3	3	3	3	5	3	5	3	5	5

Note:
- The lead-in position of power cable must be provided a short circuit device with a sufficient capacity. This device has a contact separation of 3 mm at least.
- All cable shall be connected and fixed tightly, and connecting wires must be fixed on the line card.
- All wires must not touch the refrigerant pipes and compressors, motors and other moving parts, and all the conducting wires must undergo safety measures to prevent water, dust, corrosion, vibration and rodents.
- All above intersection surface of power wires are minimum requirements. The actual specifications Influenced by radiation, temperature, length etc, please adjust it according to the related electric manual.

Ceiling Concealed Indoor Units

Model			A5VCC 022V	A5VCC025V A5VCC028V	A5VCC032V A5VCC036V	A5VCC040V A5VCC045V	A5VCC050V A5VCC056V	A5VCC 063V	A5VCC 071V
Power Supply			220V~/50Hz						
Cable	Intersection Surface(mm^2)	Normal	1.5						
		Electrical heater	1.5			2.5			
	Quantities		3						

Model			A5VCC 080V	A5VCC 090V	A5VCC 100V	A5VCC 112V	A5VCC 125V	A5VCC 140V	A5VCC 160V
Power Supply			220V~/50Hz						
Cable	Intersection Surface(mm^2)	Normal	1.5						
		Electrical heater	2.5		4				
	Quantities		3						

Note:
- The lead-in position of power cable must be provided a short circuit device with a sufficient capacity. This device has a contact separation of 3 mm at least.
- All cable shall be connected and fixed tightly, and connecting wires must be fixed on the line card.
- All wires must not touch the refrigerant pipes and compressors, motors and other moving parts, and all the conducting wires must undergo safety measures to prevent water, dust, corrosion, vibration and rodents.
- All above intersection surface of power wires are minimum requirements. The actual specifications Influenced by radiation, temperature, length etc, please adjust it according to the related electric manual.

Ceiling Cassette Indoor Units

Model			A5VCK 028V	A5VCK 032V	A5VCK 036V	A5VCK 040V	A5VCK 045V	A5VCK 050V	A5VCK 056V	A5VCK 063V	A5VCK 071V
Power Supply			220V~/50Hz								
Cable	Intersection Surface(mm^2)	Normal	1.5								
		Electrical heater	2.5								
	Quantities		3								

Model			A5VCK 080V	A5VCK 090V	A5VCK 100V	A5VCK 112V	A5VCK 125V	A5VCK 140V
Power Supply			220V~/50Hz					
Cable	Intersection Surface(mm^2)	Normal	1.5					
		Electrical heater	4					
	Quantities		3					

Note:
- The lead-in position of power cable must be provided a short circuit device with a sufficient capacity. This device has a contact separation of 3 mm at least.
- All cable shall be connected and fixed tightly, and connecting wires must be fixed on the line card.
- All wires must not touch the refrigerant pipes and compressors, motors and other moving parts, and all the conducting wires must undergo safety measures to prevent water, dust, corrosion, vibration and rodents.
- All above intersection surface of power wires are minimum requirements. The actual specifications Influenced by radiation, temperature, length etc, please adjust it according to the related electric manual.

Wall Mounted Indoor Units

Model		A5VWM022W	A5VWM028W	A5VWM036W	A5VWM045W	A5VWM056W	A5VWM071W
Power Supply		220V~/50Hz					
Cable	Intersection Surface(mm^2)	1.5					
	Quantities	3					

Note:
- The lead-in position of power cable must be provided a short circuit device with a sufficient capacity. This device has a contact separation of 3 mm at least.
- All cable shall be connected and fixed tightly, and connecting wires must be fixed on the line card.
- All wires must not touch the refrigerant pipes and compressors, motors and other moving parts, and all the conducting wires must undergo safety measures to prevent water, dust, corrosion, vibration and rodents.
- All above intersection surface of power wires are minimum requirements. The actual specifications Influenced by radiation, temperature, length etc, please adjust it according to the related electric manual.

Ducted Blower Indoor Units

Model			A5VDB125V	A5VDB140V	A5VDB224V
Power Supply			220V~/50Hz		380V/3N~/50Hz
Cable	Intersection Surface(mm^2)	Normal	1.5		2.5
	Quantities		3		5

Note:
- The lead-in position of power cable must be provided a short circuit device with a sufficient capacity. This device has a contact separation of 3 mm at least.
- All cable shall be connected and fixed tightly, and connecting wires must be fixed on the line card.
- All wires must not touch the refrigerant pipes and compressors, motors and other moving parts, and all the conducting wires must undergo safety measures to prevent water, dust, corrosion, vibration and rodents.
- All above intersection surface of power wires are minimum requirements. The actual specifications Influenced by radiation, temperature, length etc, please adjust it according to the related electric manual.

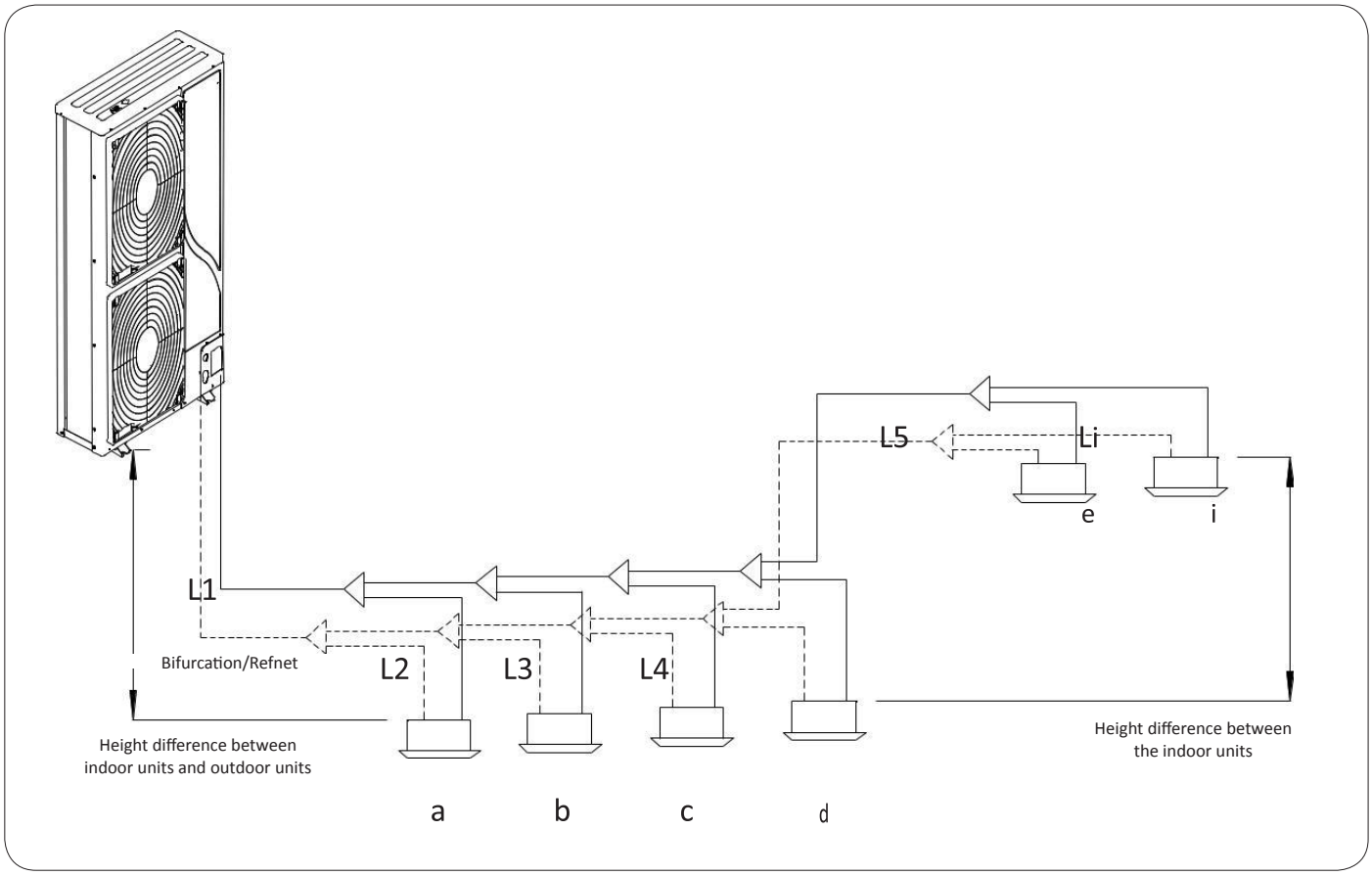
Ceiling Mounted Indoor Units

Model			A5VCM056V	A5VCM071V	A5VCM112V	A5VCM125V
Power Supply			220V~/50Hz			
Cable	Intersection Surface(mm^2)	Normal	1.5			
	Quantities		3			

Note:
- The lead-in position of power cable must be provided a short circuit device with a sufficient capacity. This device has a contact separation of 3 mm at least.
- All cable shall be connected and fixed tightly, and connecting wires must be fixed on the line card.
- All wires must not touch the refrigerant pipes and compressors, motors and other moving parts, and all the conducting wires must undergo safety measures to prevent water, dust, corrosion, vibration and rodents.
- All above intersection surface of power wires are minimum requirements. The actual specifications Influenced by radiation, temperature, length etc, please adjust it according to the related electric manual.

2.2 Installation Guideline (Refrigerant Piping)

Refrigerant piping length limitations



					Pipe Parts
Pipe Length	Total length	Actual length	A5VR030DRM	≤80m	L1+L2+... +Li+a+b+...+i
			A5VR040~A5VR080DRM	≤120m	
	Longest pipe length	Actual length	A5VR030DRM	≤50m	L1+L2+... +Li+i
			A5VR040~A5VR080DRM	≤75m	
		Equivalent length	A5VR030DRM	≤60m	
			A5VR040~A5VR080DRM	≤85m	
	Equivalent length from first bifurcation/refnet to furthest piping section			≤20m	L2+... +Li+i
Height difference	Maximum height difference between indoor units and outdoor units			≤20m	-
	Maximum height difference between the indoor units			≤15m	-

Equivalent length refers to the elbow and other parts of the tube with consideration to the pressure lost after the conversion length.

The formula is as follows:
Equivalent length = actual length of pipe + number of elbows x Equivalent length of various elbows

The length of each branch is 0.5m, with the equivalent length of the elbow as follows:

Diameter	Equivalent length	Diameter	Equivalent length
	Elbow(m)		Elbow(m)
ϕ9.52	0.18	ϕ28.6	0.50
ϕ12.7	0.20	ϕ31.8	0.55
ϕ15.88	0.25	ϕ34.9	0.60
ϕ19.05	0.35	ϕ38.1	0.65
ϕ22.23	0.40	ϕ41.3	0.70
ϕ25.4	0.45		

Note:
The equivalent length of elbow in the table above aims to fulfill installation standards: the pipe bending radius of curvature is R ≥ 3.5D (D for the pipe diameter), about ≥ 3/4 of the original diameter before the pipe bending deformation. If the elbow bending radius does not meet the above installation standards, the equivalent length is to be calculated separately (the smaller the bending radius, the longer the equivalent length).

• Maximum number of outdoor units that are compatible with the outdoor unit models:

Outdoor unit	Maximum number of outdoor units
A5VR030DRM	5
A5VR035DRM	6
A5VR040DRM	6
A5VR050DRM	8
A5VR060DRM	9
A5VR065DRM	11
A5VR070DRM	11
A5VR080DRM	13

ENGINEERING & PHYSICAL DATA

Carefree Series Outdoor Units

Model		A5VR030 DRM	A5VR035 DRM	A5VR040 DRM	A5VR 050DRM	A5VR 050DRM(3)	A5VR 060DRM	A5VR 060DRM(3)	A5VR065 DRM	A5VR070 DRM	A5VR080 DRM
Cooling capacity (kW)		8.0	10.0	11.2	14.0		15.5	16.0	18.0	20.0	22.4
Heating capacity (kW)		9.0	11.2	12.5	16.0		18.0	18.0	20.0	22.4	24.0
Power		220V~/50Hz				380V/3N ~/50Hz	220V ~/50Hz	380V/3N ~/50Hz	220V ~/50Hz	380V/3N~/50Hz	
Noise dB(A)		54	55	55	57		59		59	62	
W×D×H(mm)		900*320*782		900*320*1222					900*320*1354		
Weight (kg)		71	76	102	110	107	110	107	120	128	128
Power consumption in cooling (kW)		2.34	3.12	3.2	4.24	3.70	4.69	4.40	5.29	5.40	6.59
Ampere in cooling (A)		11.9	15.2	15.3	20.3	7.4	23.0	8.0	27.0	9.6	11.9
Power consumption in heating (kW)		2.32	2.66	3.25	4.36	3.90	4.84	4.20	5.16	5.70	6.00
Ampere in heating (A)		11.8	13.0	16.1	20.6	7.6	24.0	7.8	26.3	10.1	10.5
Max.indoors-quantity		5	6	6	8		9		11	11	13
Refrigerant		R410A									
Connecting Pipe	gas	expanded copper tube									
	liquid	expanded copper tube									
LiquidΦ(mm(in))		9.52 (3/8”)							9.52 (3/8”)		
GasΦ(mm(in))		15.88 (5/8”)							19.05 (3/4”)		

Note:

1. Cooling condition: Indoor D/W bulb Temp. 27/19°C,outdoor temperature: D/W bulb Temp.35/24°C;
2. Heating condition: Indoor D/W bulb Temp. 20/15°C,outdoor temperature: D/W bulb Temp.7/6°C;
3. The noise level is tested in the incomplete anechoic lab under the standard refrigeration condition and got from the average values from three points, 1 meter in front of the unit, 1 meter from two sides of the unit and half of the unit height plus I meter. The real noise value in operation may be a little higher than the tested value due to the influence of the actual environment;
4. The width is just for the unit, not including the width of bottom edge.

Ceiling Concealed Indoor Units

Model		A5VCC 022V	A5VCC 025V	A5VCC 028V	A5VCC 032V	A5VCC 036V	A5VCC 040V	A5VCC 045V	A5VCC 050V	A5VCC 056V
Cooling capacity (kW)		2200	2500	2800	3200	3600	4000	4500	5000	5600
Heating capacity (kW)		2500	2800	3200	3600	4000	4500	5000	5600	6300
Power		220V~/50Hz								
Sound level dB(A)		29	31		32		34		37	
W×D×H(mm)		900*599*199								
Weight (kg)		26	26		27		28		28	
Power input(W)		43	47		57		62		96	
Fan number		2								
Air flow	H: m³/h	430	600		630		730		900	
ESP(Pa)		10Pa ,(0/30Pa adjustable)								
Drain Φ(mm(in))		20.5(4/5”)								
Protection		Anti-freezing, overload								
Pump head		700								
Connecting Pipe	gas	expanded copper tube								
	liquid	expanded copper tube								
LiquidΦ(mm(in))		6.35 (1/4”)								
GasΦ(mm(in))		9.52 (3/8”)			12.7 (1/2”)					

Model		A5VCC 063V	A5VCC 071V	A5VCC 080V	A5VCC 090V	A5VCC 100V	A5VCC 112V	A5VCC 125V	A5VCC 140V	A5VCC 160V
Cooling capacity (kW)		6300	7100	8000	9000	10000	11200	12500	14000	16000
Heating capacity (kW)		7100	8000	9000	10000	11200	12500	14000	16000	18000
Power		220V~/50Hz								
Sound level dB(A)		37	40	43		46	47		49	
W×D×H(mm)		1100*599*199		1384*490*250	1734*490*250				1994*490*250	
Weight (kg)		33	33	30	41				47	
Power input(W)		98	138	157	210	246	276		377	
Fan number		3		2	3				4	
Air flow	H: m³/h	1050	1200	1200	1400	1700	1900	1900	2500	
ESP(Pa)		10Pa ,(0/30Pa adjustable)		30(15)	50(30)					
Drain Φ(mm(in))		20.5(4/5”)		R3/4						
Protection		Anti-freezing, overload								
Pump head		700								
Connecting Pipe	gas	expanded copper tube								
	liquid	expanded copper tube								
LiquidΦ(mm(in))		9.52 (3/8”)								
GasΦ(mm(in))		15.88 (5/8”)								

Ceiling Cassette Indoor Units

Model		A5VCK 028V	A5VCK 032V	A5VCK 036V	A5VCK 040V	A5VCK 045V	A5VCK 050V	A5VCK 056V	A5VCK 063V	A5VCK 071V
Cooling capacity	W	2800	3200	3600	4000	4500	5000	5600	6300	7100
Heating capacity	W	3200	3600	4000	4500	5000	5600	6300	7100	8000
Power		220V~/50Hz								
Sound level dB(A)		30	31		34		39		40	
W×D×H(mm)		990*990*340								
Weight	kg	26	26		30		30		31	
Power consumption (W)		55	55		72		92		102	
Number of fan		1								
Air flow	H: m³/h	600	640		800		1000		1200	
Drain Φ(mm(in))		20.5(4/5")								
Protection		Anti-freezing , overheat								
Connecting Pipe	gas	expanded copper tube								
	liquid	expanded copper tube								
LiquidΦ(mm(in))		6.35 (1/4")							9.52 (3/8")	
GasΦ(mm(in))		9.52 (3/8")	12.7 (4/8")						15.88 (5/8")	

Model		A5VCK 080V	A5VCK 090V	A5VCK 100V	A5VCK 112V	A5VCK 125V	A5VCK 140V
Cooling capacity	W	8000	9000	10000	11200	12500	14000
Heating capacity	W	9000	10000	11200	12500	14000	15700
Power		220V~/50Hz					
Sound level dB(A)		42	42	43	45	48	50
W×D×H(mm)		990*990*390					
Weight	kg	35	35	35	36	36	36
Power consumption (W)		142	142	144	155	171	204
Number of fan		1					
Air flow	H: m³/h	1300	1300	1360	1530	1600	1800
Drain Φ(mm(in))		20.5(4/5")					
Protection		Anti-freezing , overheat					
Connecting Pipe	gas	expanded copper tube					
	liquid	expanded copper tube					
LiquidΦ(mm(in))		9.52 (3/8")					
GasΦ(mm(in))		15.88 (5/8")					

Wall Mounted Indoor Units

Model		A5VWM 022W	A5VWM 028W	A5VWM 036W	A5VWM 045W	A5VWM 056W	A5VWM 071W
Cooling capacity	W	2200	2800	3600	4500	5600	7100
Heating capacity	W	2500	3200	4000	5000	6200	7800
Power		220V~/50Hz					
Sound level dB(A)		35	35	37	40	43	46
W×D×H(mm)		990*205*282				1080*221*304	
Weight	kg	12	12	12	12	16	16
Power consumption (W)		33	33	34	34	35	55
Number of fan		1					
Air flow	H: m³/h	450	480	540	600	800	920
Drain Φ(mm(in))		20					
Protection		Anti-freezing , overload					
Connecting Pipe	gas	expanded copper tube					
	liquid	expanded copper tube					
LiquidΦ(mm(in))		6.35 (1/4")					9.52 (3/8")
GasΦ(mm(in))		9.52 (3/8")		12.7 (1/2")			15.88 (5/8")

Note:
1. Cooling condition: Indoor D/W bulb Temp. 27/19°C,outdoor temperature: D/W bulb Temp.35/24°C;
2. Heating condition: Indoor D/W bulb Temp. 20/15°C,outdoor temperature: D/W bulb Temp.7/6°C;
3. Testing power supply: 220V~/50Hz.
4. The noise level value is got from the testing point -0.8 meter downwards and 1 meter in front of the unit in the incomplete anechoic lab.
   In the actual operation. The noise level may be a little higher influenced by the environment.

Ducted Blower Indoor Units

Model		A5VDB125V	A5VDB140V	A5VDB224V
Cooling capacity	W	12500	14000	22400
Heating capacity	W	14000	16000	25000
Power		220V~/50Hz		380V/3N~/50Hz
Sound level dB(A)		46	50	54
W×D×H(mm)		1227*830*350	1427*830*350	1760*958*515
Weight	kg	60	69	131
Power consumption (W)		481	620	910
Current (A)		2.1	2.5	2.08
Number of fan		2		
Air flow	H: m³/h	2300	2750	4100
ESP (Pa)		100		200
Drain Φ(mm(in))		19.05 (3/4")		R1
Protection		Anti-freezing, overload		
Connecting Pipe	gas	expanded copper tube		
	liquid	expanded copper tube		
LiquidΦ(mm(in))		9.52 (3/8")		
GasΦ(mm(in))		15.88 (5/8")		22.23 (7/8")

Note: 1. Cooling condition: Indoor D/W bulb Temp. 27/19°C,outdoor temperature: D/W bulb Temp.35/24°C;
2. Heating condition: Indoor D/W bulb Temp. 20/15°C,outdoor temperature: D/W bulb Temp.7/6°C;
3. Testing power supply: 220V~/50Hz or 380V/3N~/50Hz.
4. The noise level value is got from the testing point -1.4 meter under the unit in the incomplete anechoic lab.
   In the actual operation, the noise level may be a little higher influenced by the environment.

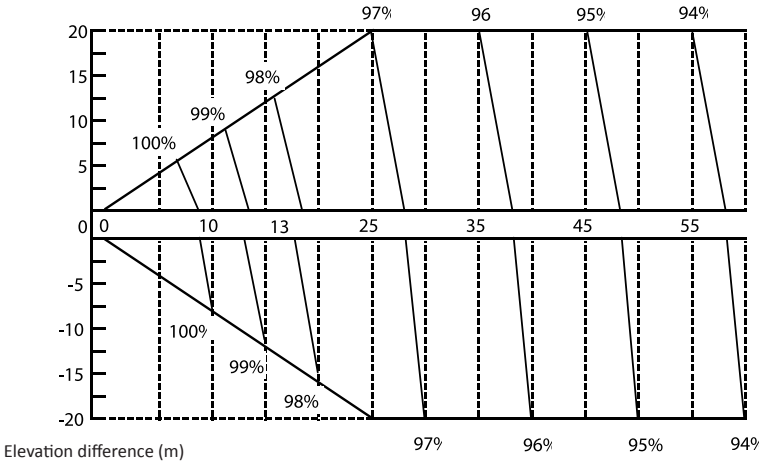
Ceiling Mounted Indoor Units

Model		A5VCM056V	A5VCM071V	A5VCM112V	A5VCM125V
Cooling capacity	W	5600	7100	11200	12500
Heating capacity	W	6300	8000	12500	14000
Power		220V~/50Hz			
Sound level dB(A)		48	50	52	
W×D×H(mm)		1214*670*214	1214*670*249	1714*670*249	
Weight	kg	39	44	64	
	lb	86	97	141	
Power consumption (W)		81	116	161	
Current (A)		0.40	0.55	0.70	
Number of fan		2	3	4	
Air flow	H: m^3/h	1100	1300	1850	
Drain Φ(mm(in))		20.5 (4/5")			
Protection		Anti-freezing, overload			
Connecting Pipe	gas	expanded copper tube			
	liquid	expanded copper tube			
LiquidΦ(mm(in))		6.35(1/4")	9.52(3/8")		
GasΦ(mm(in))		12.7(1/2")	15.88(5/8")		
Model of AEX		AEX-18-2SAP-C	AEX-22-3SAP-C		

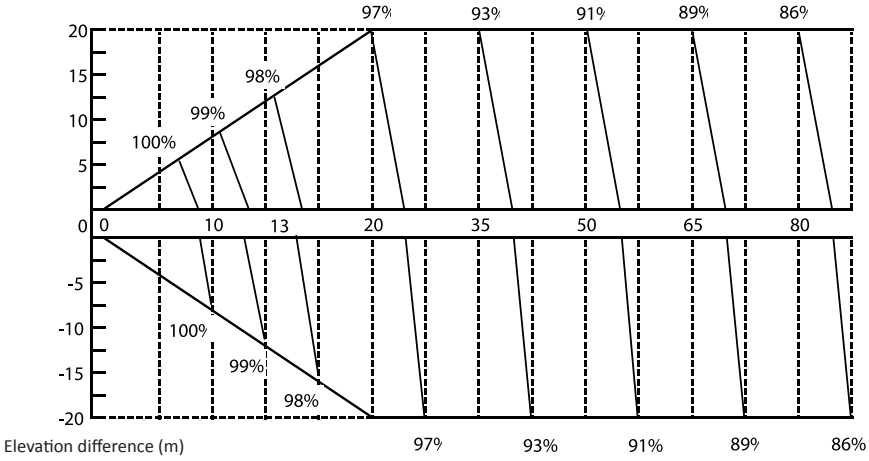
Note: 1. Cooling condition: Indoor D/W bulb Temp. 27/19°C,outdoor temperature: D/W bulb Temp.35/24°C;
2. Heating condition: Indoor D/W bulb Temp. 20/15°C,outdoor temperature: D/W bulb Temp.7/6°C;
Heating capacity in low ambient temp condition: outdoor temperature: Dry bulb Temp.-12°C;
3. Testing power supply: 220V~/50Hz.
4. The noise level value is got from the testing point -1 meter downwards and 1 meter in front of the unit in the incomplete anechoic lab.
In the actual operation, the noise level may be a little higher influenced by the environment.

PERFORMANCE DATA

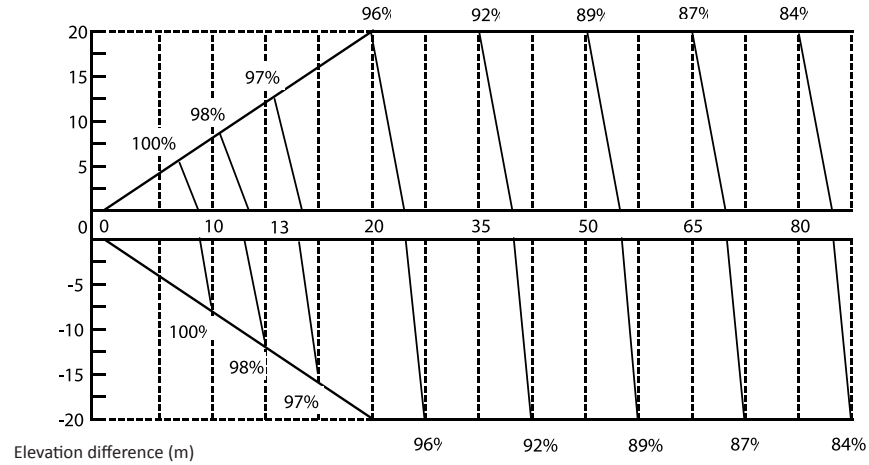
Capacity Drop Diagram



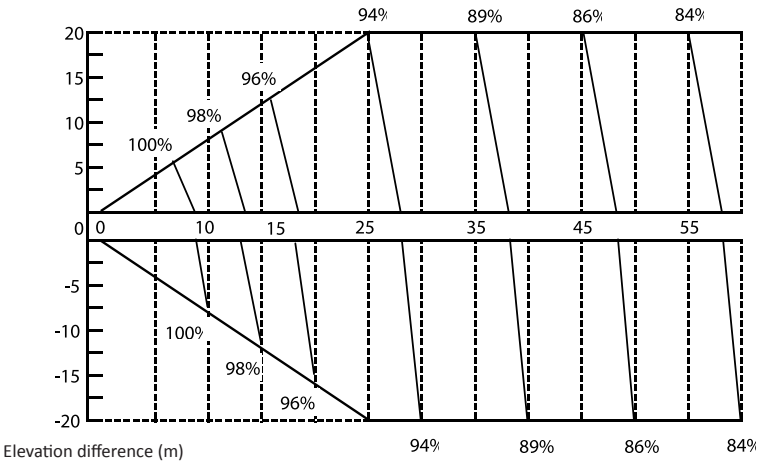
A5VR030DRM-Cooling
Capacity Drop-Piping diagram



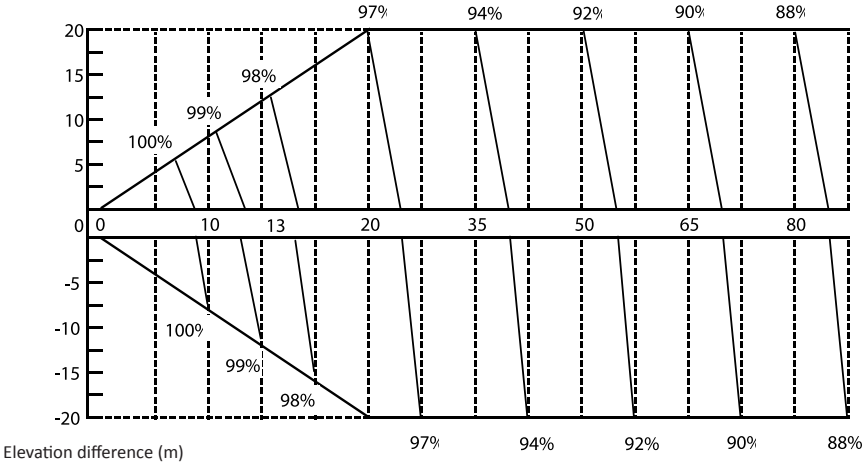
A5VR035DRM-Cooling
Capacity Drop-Piping diagram



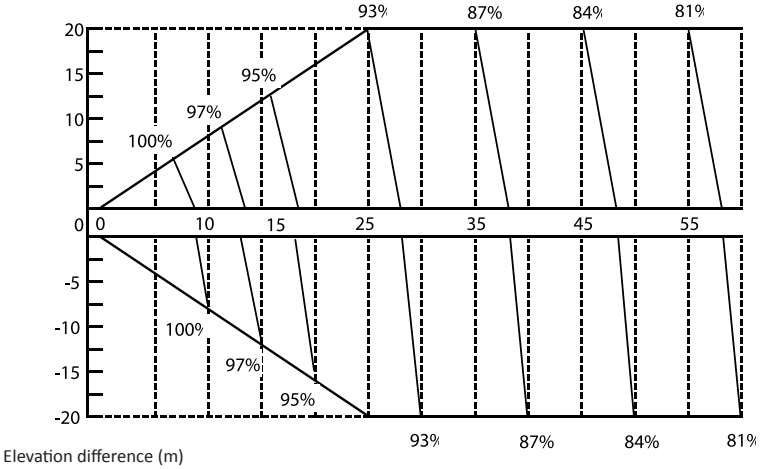
A5VR040DRM-Cooling
Capacity Drop-Piping diagram



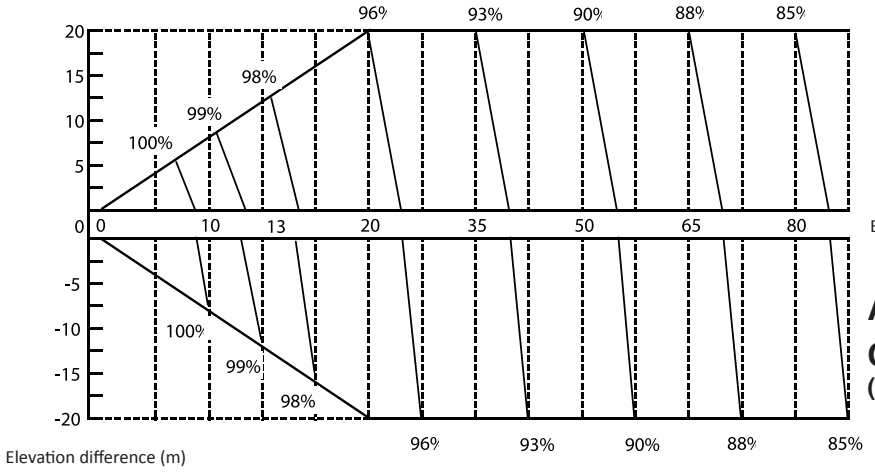
A5VR050DRM-Cooling
Capacity Drop-Piping diagram



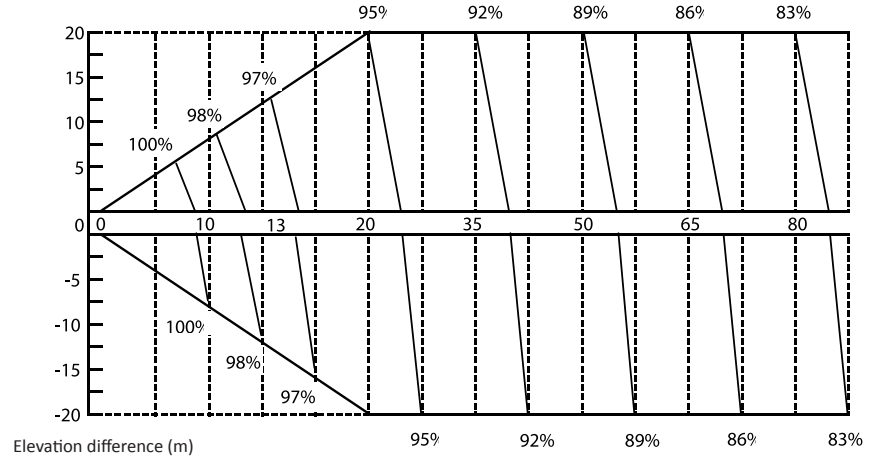
A5VR050DRM-Cooling
Capacity Drop-Piping diagram
(Bifurcation / Refnet increase by one size)



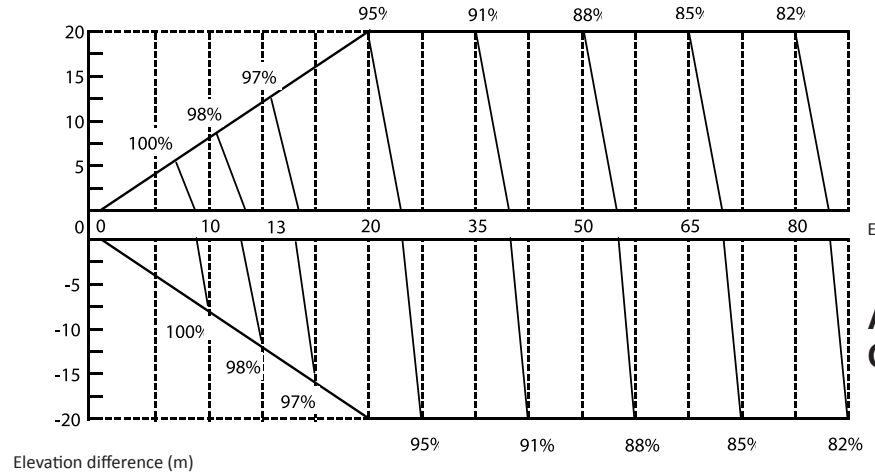
A5VR060DRM-Cooling
Capacity Drop-Piping diagram



A5VR060DRM-Cooling Capacity Drop-Piping diagram
(Bifurcation / Refnet increase by one size)

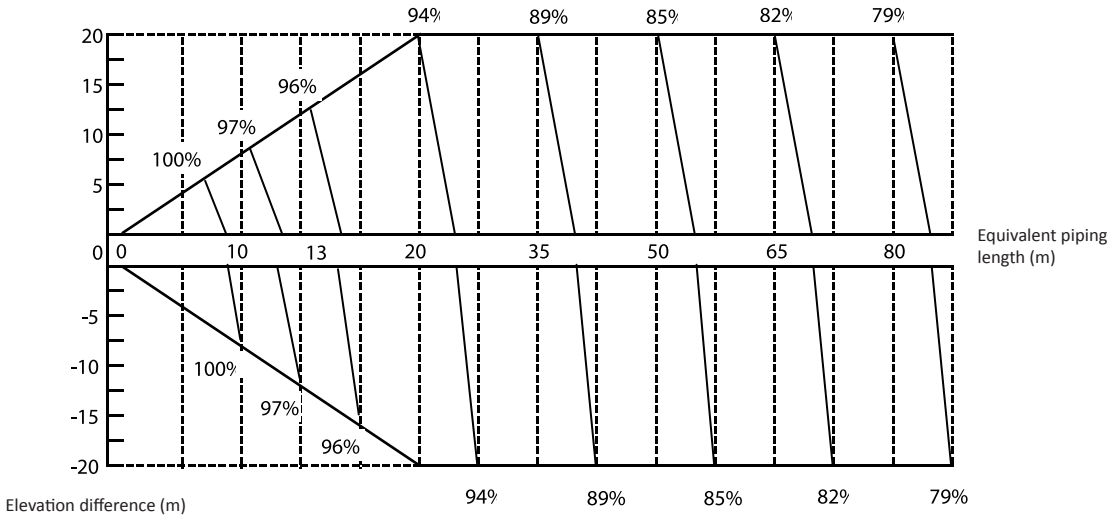


A5VR065DRM-Cooling Capacity Drop-Piping diagram

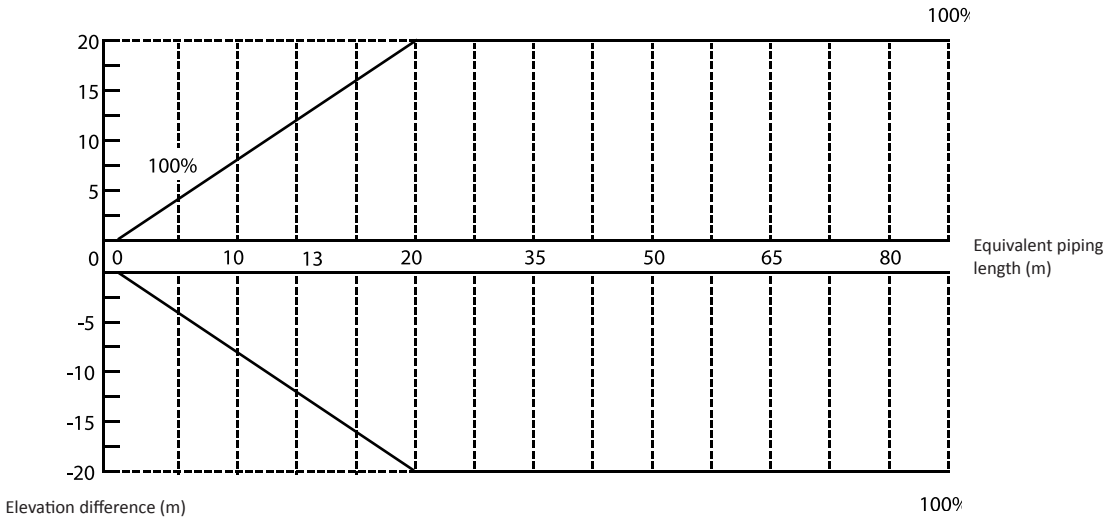


A5VR070DRM-Cooling Capacity Drop-Piping diagram

A5VR080DRM-Cooling Capacity Drop-Piping diagram



A5VR030~080DRM Heating Capacity Drop-Piping diagram

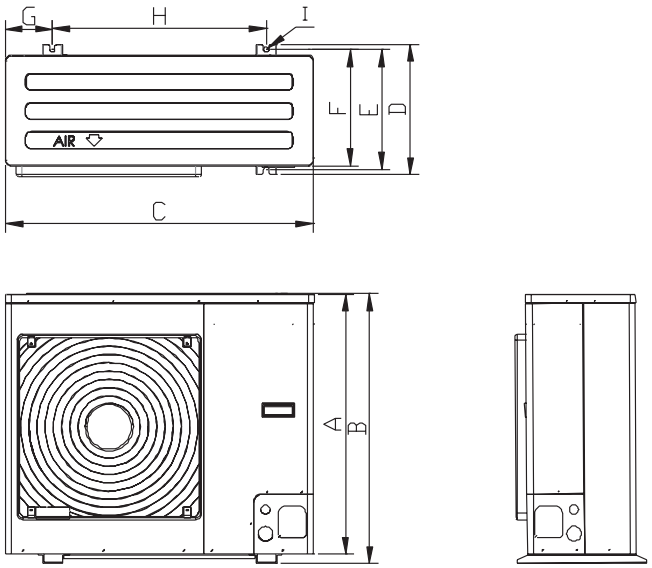


OUTLINE & DIMENSION

A5VR030/035DRM

Unit:mm

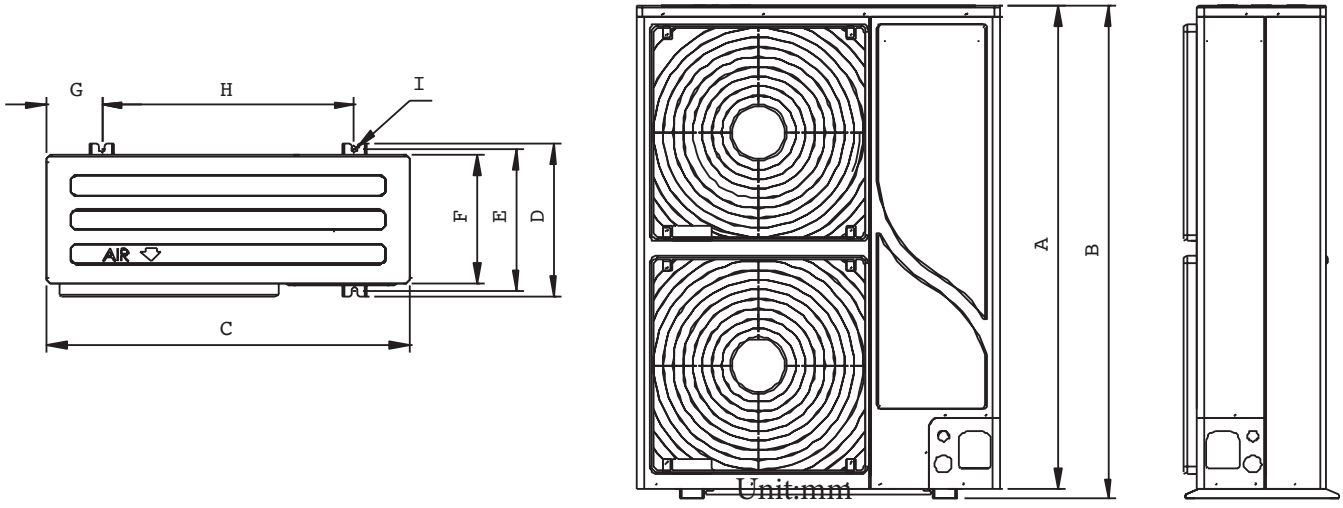
Model	A	B	C	D	E	F	G	H	I
A5VR030/035DRM	756	782	900	380	350	320	138	624	4-R7.5



A5VR040/050/060/065/070/080DRM

Unit:mm

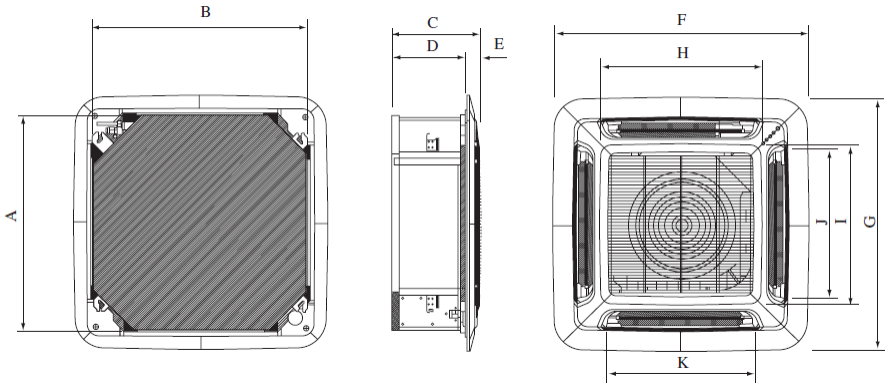
Model	A	B	C	D	E	F	G	H	I
A5VR040/050/060DRM	1196	1222	900	380	350	320	138	624	4-R7.5
A5VR065/070/080DRM	1328	1354	900	380	350	320	138	624	4-R7.5



A5VCK028/036/045/056/071/080/090/100/112/125/140V

Unit:mm

Model	A	B	C	D	E	F	G	J	K	L	M
A5VCK028/036/045/056/071V	820	820	340	265	55	990	990	627	627	607	607
A5VCK080/090/100/112/125/140V	820	820	390	335	55	990	990	627	627	607	607



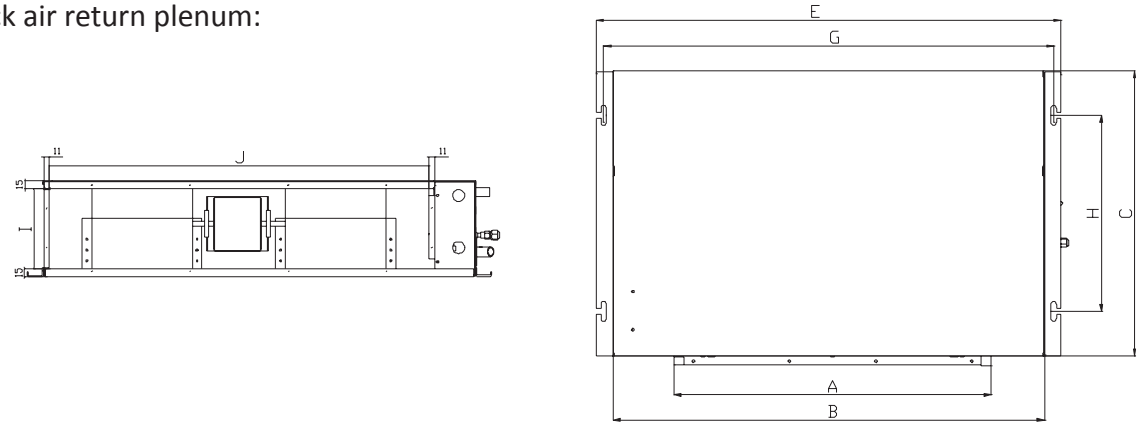
A5VCC022/025/028/032/036/040/045/050/056/063/071V (Ultra Thin)

Unit:mm

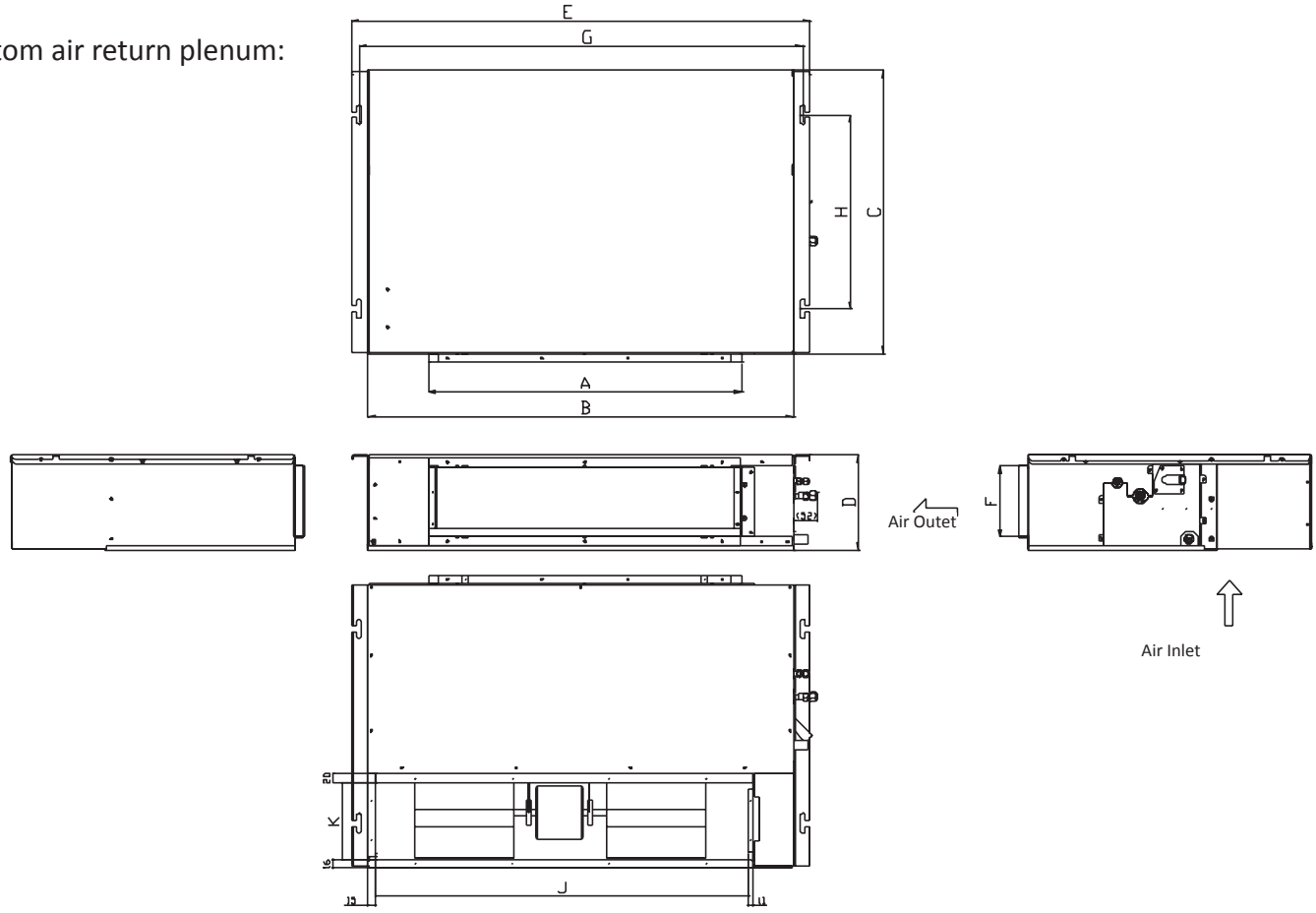
Model	A	B	C	D	E	F	G	H	I	J	K	Fan Amount
A5VCC022V	661	900	599	199	962	150	940	412	169	794	163	2
A5VCC025/028/032/036V	763.5	900	599	199	962	150	940	412	169	794	163	2
A5VCC040/045/050/056V	780	900	599	199	962	150	940	412	169	794	163	2
A5VCC063/071V	963.5	1100	599	199	1162	150	1140	412	169	994	163	3

Note: return air inlet size is Inner-space size.

Back air return plenum:



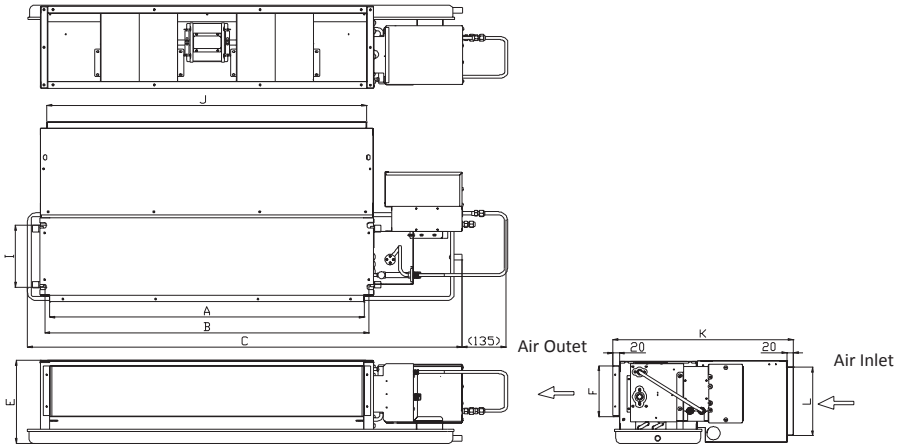
Bottom air return plenum:



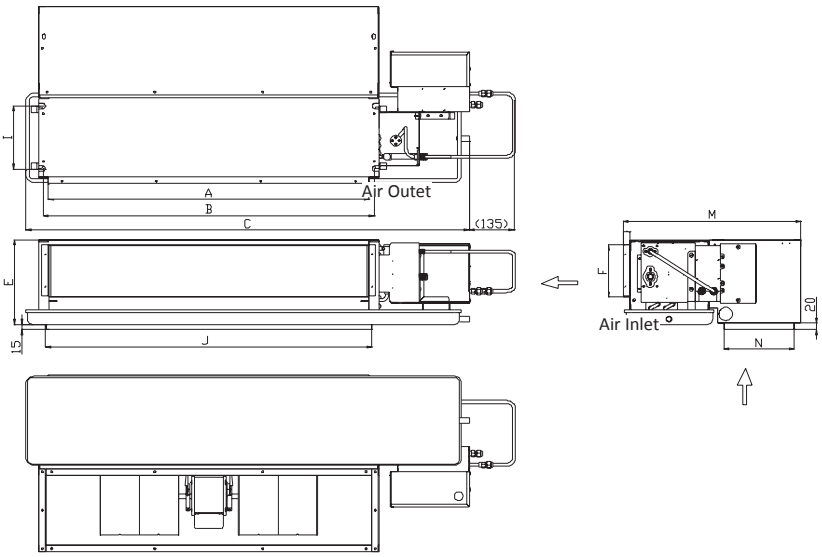
A5VCC080/090/100/112/125/140/160V (Standard Type)

Unit:mm

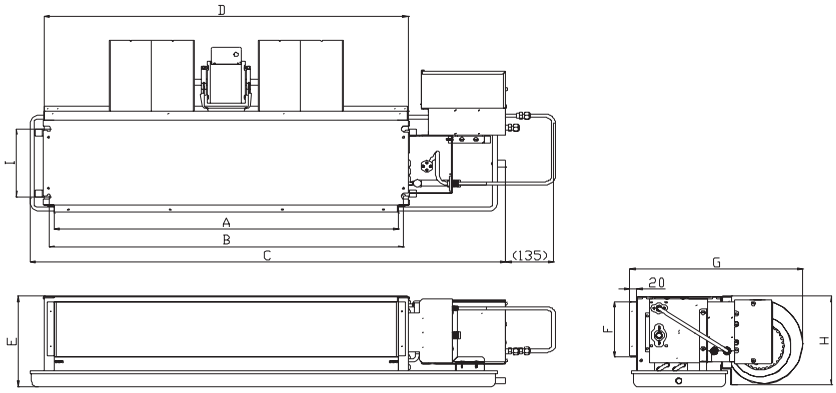
Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Fan Amount
A5VCC080V	950	981	1314	1005	250	151	490	246	187	964	550	208	530	208	2
A5VCC090/100 /112/125V	1300	1331	1664	1355	250	151	490	246	187	1314	550	208	530	208	3
A5VCC140/160V	1560	1591	1924	1615	250	151	490	246	187	1574	550	208	530	208	4



Bottom air return plenum:



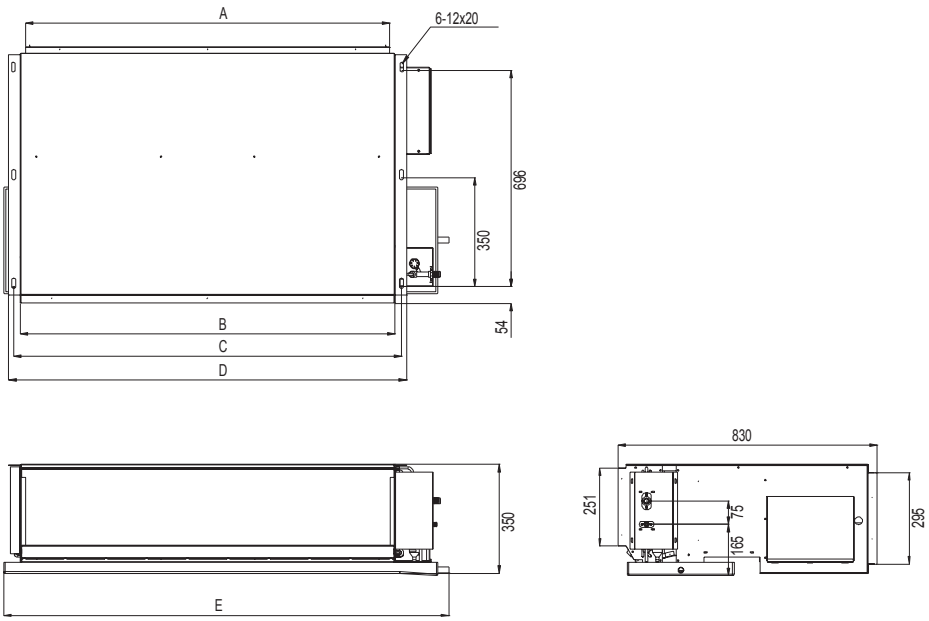
Free-stream air return plenum:



A5VDB125/140V

Unit:mm

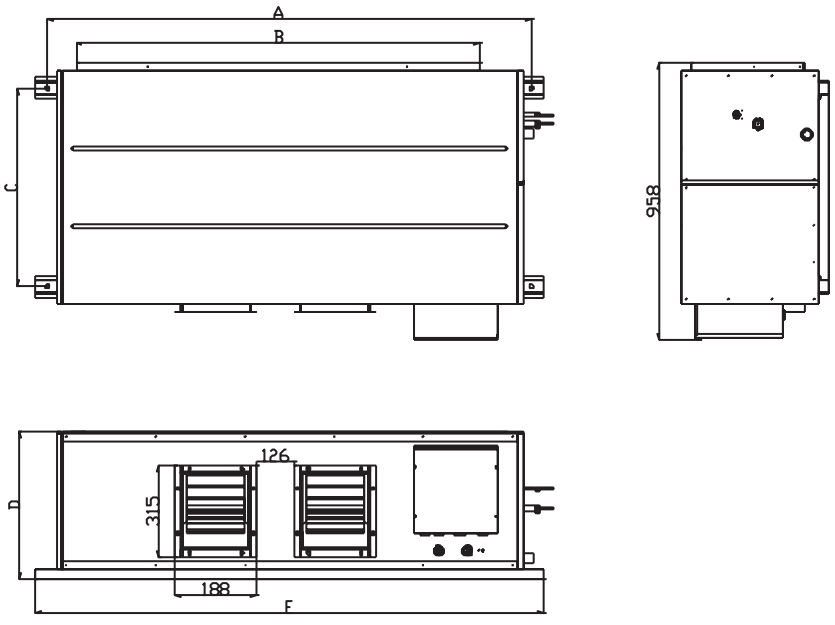
Model	A	B	C	D	E	Fan Amount
A5VDB125V	950	1004	1044	1078	1227	2
A5VDB140V	1150	1204	1244	1278	1427	2



A5VDB224V

Unit:mm

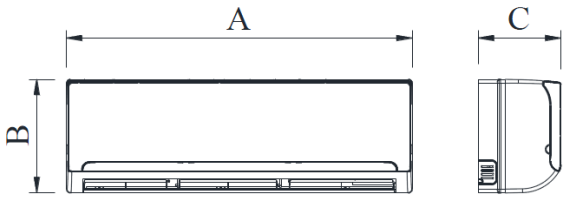
Model	A	B	C	D	E	Fan Amount
A5VDB224V	1681	1399	687	515	1760	2

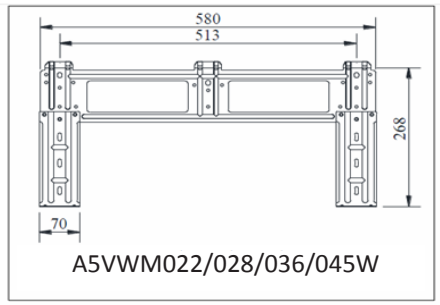


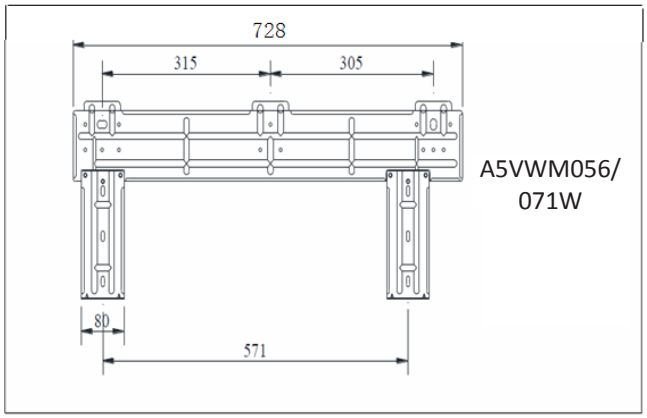
A5VWM022/028/036/045/056/071W

Unit:mm

Model	A	B	C
A5VWM022/028/036/045W	990	282	205
A5VWM056/071W	1080	304	221



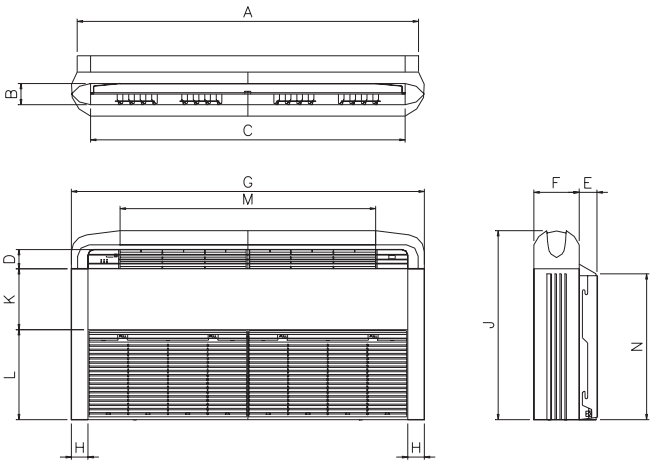




A5VCM056/071/112/125V

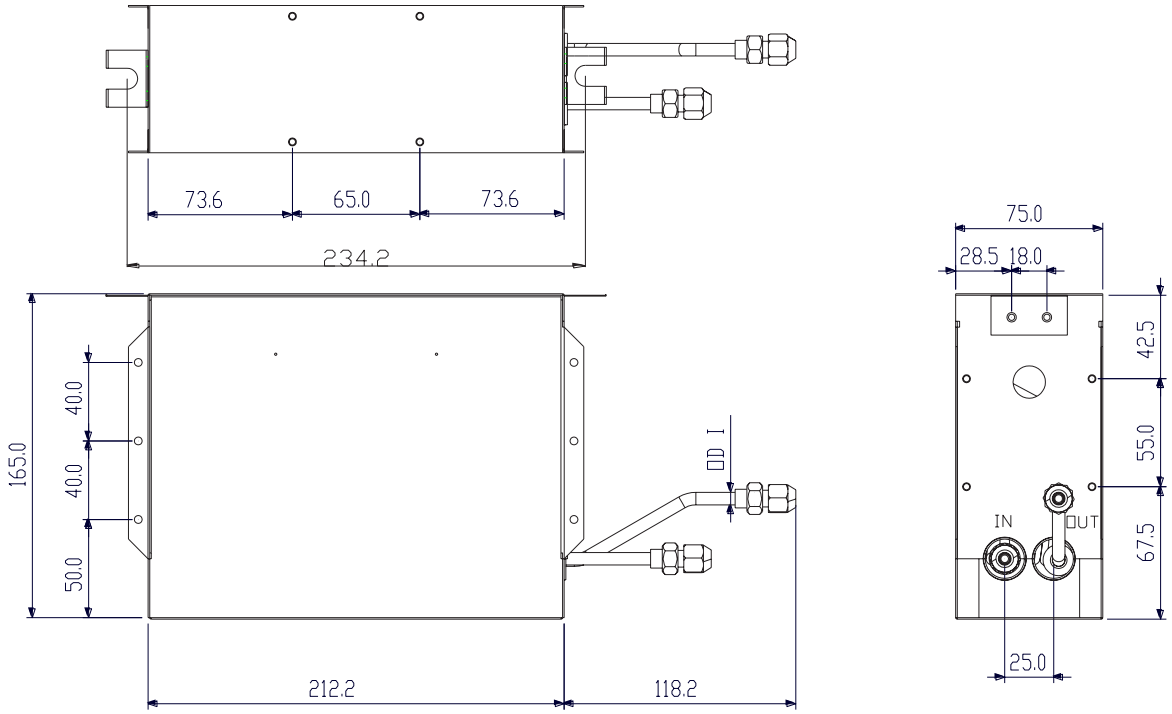
Unit:mm

Model	A	B	C	D	E	F	G	H	J	K	L	M	N
A5VCM056V	1174	75	1082	68	58	156	1214	57	670	216	319	879	517
A5VCM071V	1174	75	1082	68	93	156	1214	57	670	216	319	879	517
A5VCM112/125V	1674	75	1582	68	93	156	1714	57	670	216	319	1379	517

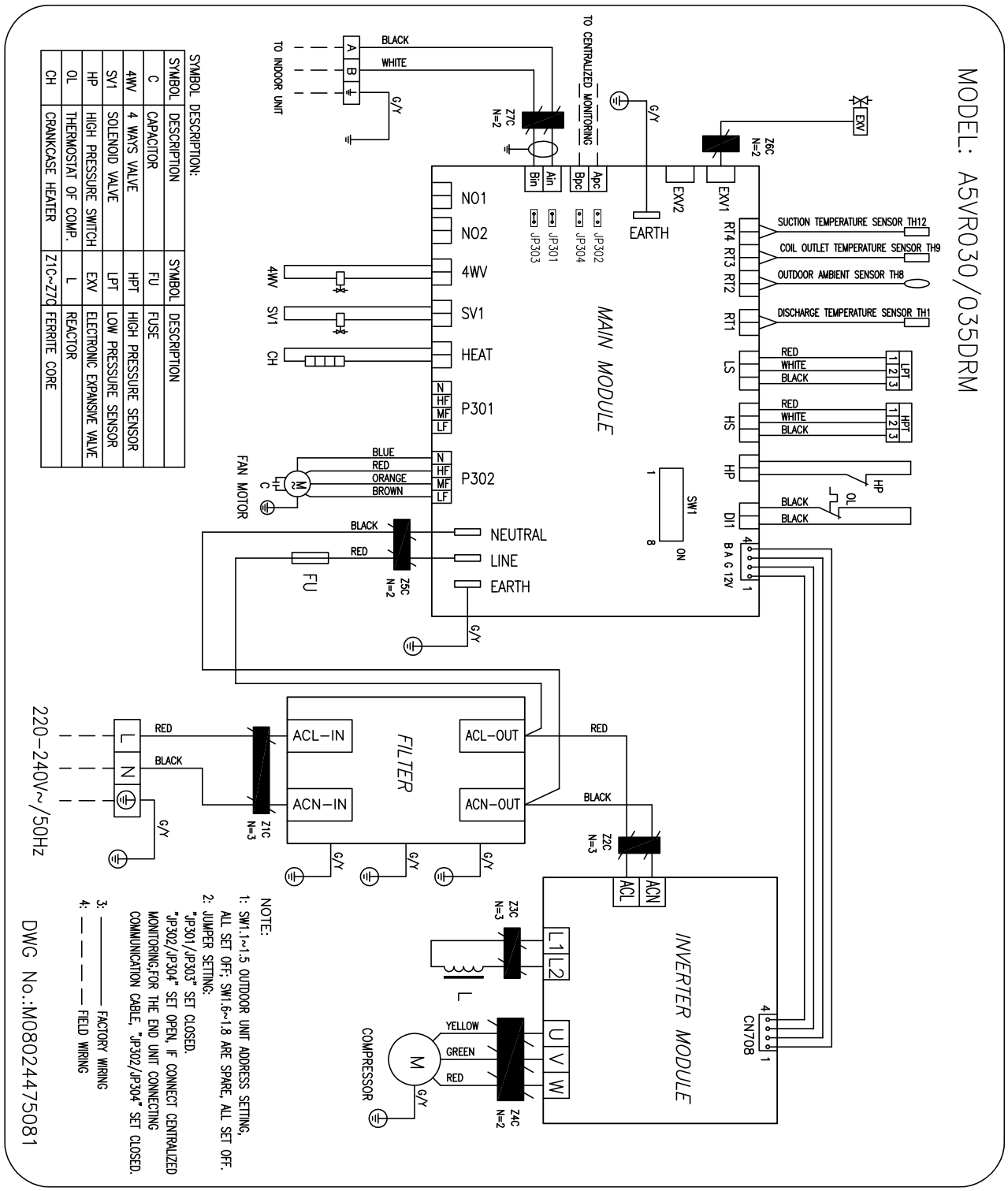


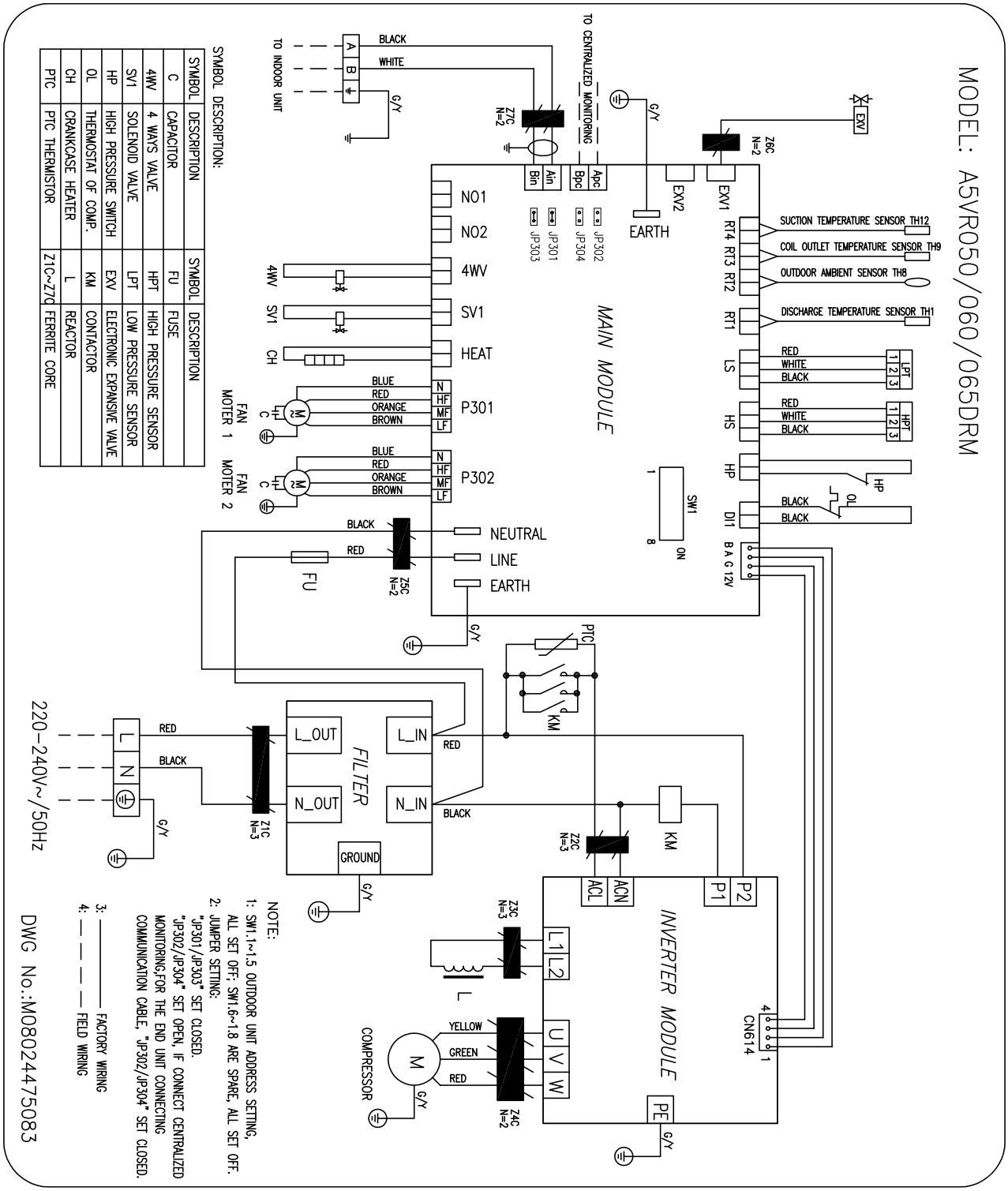
EXV BOX OF INDOOR UNITS:

Model	AEX-15-2SAP-C/D,AEX-18-2SAP-C/D	AEX-22-3SAP-C/D,AEX-24-3SAP-C
OD I(mm(inch))	6.35 (1/4”)	9.52 (3/8”)

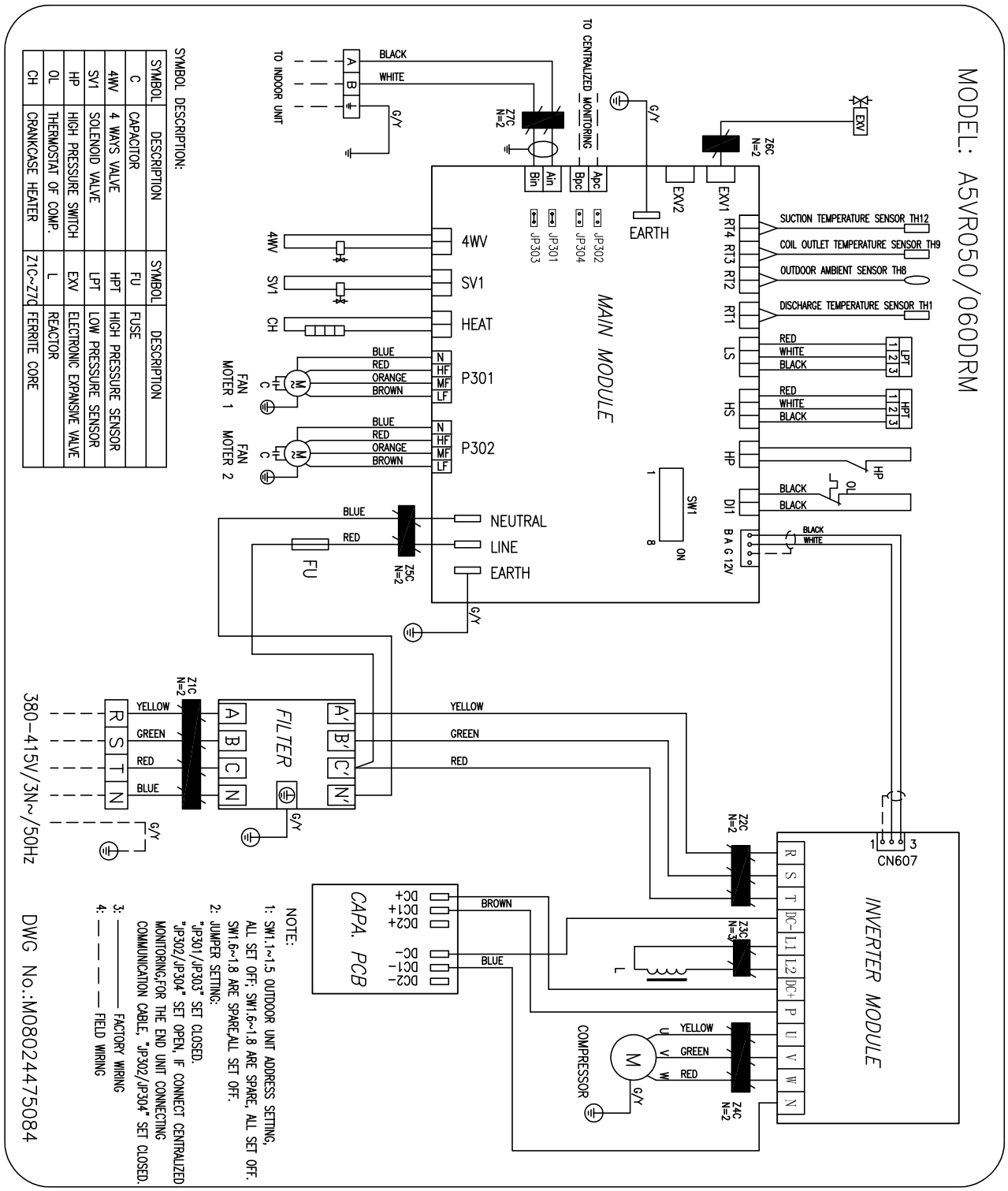


WIRING DIAGRAM





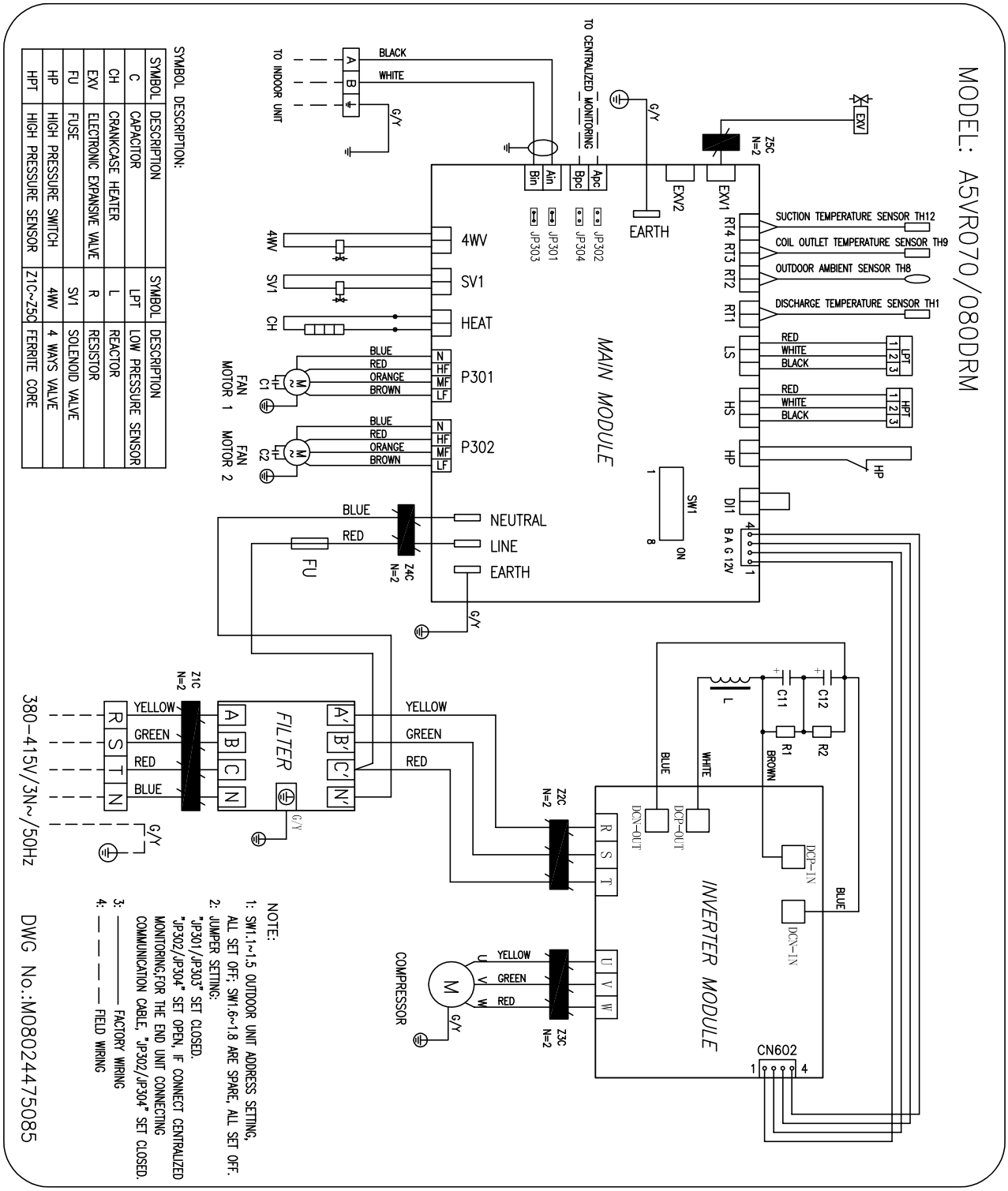
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
C	CAPACITOR	FU	FUSE
4WV	4 WAYS VALVE	HPT	HIGH PRESSURE SENSOR
SV1	SOLENOID VALVE	LPT	LOW PRESSURE SENSOR
HP	HIGH PRESSURE SWITCH	EXV	ELECTRONIC EXPANSIVE VALVE
OL	THERMOSTAT OF COMP.	KM	CONTACTOR
CH	CRANKCASE HEATER	L	REACTOR
PTC	PTC THERMISTOR	Z1C~Z7C	FERRITE CORE



SYMBOL DESCRIPTION:

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
C	CAPACITOR	FU	FUSE
4WV	4 WAYS VALVE	HPT	HIGH PRESSURE SENSOR
SV1	SOLENOID VALVE	LPT	LOW PRESSURE SENSOR
HP	HIGH PRESSURE SWITCH	EXV	ELECTRONIC EXPANSIVE VALVE
OL	THERMOSTAT OF COMP.	L	REACTOR
CH	CRANKCASE HEATER	Z1C~Z7C	FERRITE CORE

NOTE:
1: SW1.1~1.5 OUTDOOR UNIT ADDRESS SETTING, ALL SET OFF; SW1.6~1.8 ARE SPARE, ALL SET OFF.
SW1.6~1.8 ARE SPARE,ALL SET OFF.
2: JUMPER SETTING:
"JP301/JP303" SET CLOSED.
"JP302/JP304" SET OPEN, IF CONNECT CENTRALIZED MONITORING,FOR THE END UNIT CONNECTING COMMUNICATION CABLE, "JP302/JP304" SET CLOSED.
3: ——— FACTORY WIRING
4: — — — — FIELD WIRING



SYMBOL DESCRIPTION:

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
C	CAPACITOR	LPT	LOW PRESSURE SENSOR
CH	CRANKCASE HEATER	L	REACTOR
EXV	ELECTRONIC EXPANSIVE VALVE	R	RESISTOR
FU	FUSE	SV1	SOLENOID VALVE
HP	HIGH PRESSURE SWITCH	4WV	4 WAYS VALVE
HPT	HIGH PRESSURE SENSOR	Z1C~Z5C	FERRITE CORE

NOTE:
1: SW1.1~1.5 OUTDOOR UNIT ADDRESS SETTING, ALL SET OFF; SW1.6~1.8 ARE SPARE, ALL SET OFF.
2: JUMPER SETTING:
"JP301/JP303" SET CLOSED.
"JP302/JP304" SET OPEN, IF CONNECT CENTRALIZED MONITORING,FOR THE END UNIT CONNECTING COMMUNICATION CABLE, "JP302/JP304" SET CLOSED.
3: ——— FACTORY WIRING
4: — — — — FIELD WIRING

SERVICE & MAINTENANCE

Warning

Before maintenance service, please shut off the power supply and stop indoor and outdoor units

Indoor Unit Maintenance

Part	Maintenance Checking step	Times/month (Recommend)
Air filter	1. Open the grille 2. Take out the air filter 3. Use brush to clean the air filter with below 40°C water 4. After drying, the filter shall be loaded back in. Note: Do not use detergents such as gasoline, dehydrating, benzene substances or other chemicals.	1
Front Panel	1. Get rid of the dust and dirt by using cloth and detergent , clean the panel. Note: Do not use detergents such as gasoline, dehydrating, benzene substances or other chemicals. Otherwise it will cause the plastic surface deformation.	1
Drain Pan and hose	1. Check the drain pan and hose are clean or not, if it is dirty, clean it ; 2. Check there is no barrier for the condensing water flow out; 3. Pay attention to dustproof anti-blocking when the pump is connected, and it needs cleaning on time to keep smooth flow.	3
Evaporator	1. Clean the dirt of fins; 2. Clean any barrier for indoor air flow.	1
Electrical Part	1. Check the running ampere and voltage is normal or not; 2. Check the electrical connection is fixed or loose.	12

Indoor Unit Maintenance

Part	Maintenance Checking step	Times/month (Recommend)
Outdoor fan	Check the noise level	1
Outdoor condenser	1. Clean the dirt of fins 2. Remove any barrier which inhibit the air flow	1
Compressor	Check whether compressor running with noise and vibrations	1
Electrical Part	1. Check the whether running ampere and voltage is normal 2. Check the electrical connection is fixed or loose 3. Check the controller in normal working conditions	1

Note:

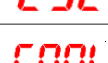
1. Do not sprinkle water or use combustible sprays, to avoid fault, leakage of power and fire;
2. Do not expose or broil the filter under the sun when cleaning, otherwise it will lead to deformation.

Status Display Of Digital Tubes

Four 8-section 4-bit digital tubes (red) are configured for the outdoor unit. In the normal running status, the digital tube displays the current running mode or status. Once any fault occurs, the fault code is displayed first. If multiple faults occur, they are displayed in turn. For the specific fault codes, see “Troubleshooting” .

Note: The digital tube will go out when you do not operate any button within 10 minutes. Normal display is return if any button is pressed. This restriction does not take effect when any fault occurs. The digital tube will display the fault continuously.

Meanings of displayed symbols on the digital tube

No	Icon	Content
1		NULL The outdoor unit is in the standby status.
2		REST: The outdoor unit is in the reset status.
3		CST: The outdoor unit is in the cooling start process.
4		COOL: The outdoor/indoor unit is in the cooling status.
5		CSP: The outdoor unit is in the cooling stop process.
6		DST: The outdoor unit is in the defrosting start status.
7		DEF: The outdoor/indoor unit is in the defrosting status.
8		DSP: The outdoor unit is in the defrosting stop status.
9		HST: The outdoor unit is in the heating startup process.
10		HEAT: The outdoor/indoor unit is in the heating status.
11		HSP: The outdoor unit is in the heating stop process.
12		TEST: Hardware testing mode.
13		ERRO: Common error of the outdoor unit.
14		OPEN: Fully open the electronic expansion valve by force.
15		Outdoor unit DIP setting error/model setting error.
16		PARA: button setting parameter menu.
17		BOOT: prompt in software upgrade.

18	dEb	dEb: button debugging parameter menu.
19	SPEC	SPEC: special button function menu.
20	NOAE	NOAE: night noises reduction function.
21	FAC	FAC: Restore factory settings.
22	bAUd	BAUD:Set communication speed of units and PC.
23	PrEH	PreH: The compressor pre-heating status.
24	CFEE	CFEE: Set the function of household billing.
25	IGNO	IGNO: Leave alone the very unavailable unit.
26	FSPd	FSPD: Choose proper fan gear table (15/30).
27	StPr	STPR: Set static pressure.
28	HSrC	HSRC: Set heat-pump or cool-only.
29	FrAL	FRAL: Whether the fire alarm is enabled.
30	FrtP	FRTP: Select the type of antifreeze.
31	rEFC	REFC: Into the cold media charging mode.
32	CrEF	CREF: Calculate the K value of refrigerant coefficient.
33	UrEF	UREF: Refrigerant filling and frequency conversion speed limit.
34	EFAN	EFAN:The fan of outdoor unit is regulated when the indoor units is in the stop status.

Basic Character Legends for Reference

Icon	Content	Icon	Content	Icon	Content
0	0/O	8	8	H	H
1	1	9	9	L	L
2	2	A	A	n	N
3	3	b	B	P	P
4	4	C	C	r	R
5	5/S	d	D	t	T
6	6	E	E	U	U
7	7	F	F	y	Y

TROUBLESHOOTING

If the following unit malfunction occurred, please follow the below simple checking step to fix :

Symptom	Analyses	Solution
Compressor stop and fan work normally	Indoor temperature is higher (heating) or lower (cooling) than setting temperature	Re – set up the temperature
	When heating and defrost mode, indoor unit is just running	Wait for 10minutes
Units do not work	Power is not on	Check and connect the power
	Set up the re-start function	Wait or cancel timer On
	Fuse broken in main power supply	Replace the fuse
Cooling or heating not enough or too much	Air filter too dirty	Clean or replace the filter
	Barrier at return air	Remove the barrier
Remote controller unreadable	Low battery	Replace the battery
	Wrong installation of battery	Install properly
Condensing water in front panel	Humidity too high	Dehumidify
	Setting temperature too low	Set up the higher indoor temperature

- If user unable to fix the problem, please contact the local service agent for assistance, meanwhile record the malfunction code by wired controller and indication light of units self-checking function. Following is the malfunction code could display in the wired controller. Indication light twinkle related to the code of malfunction.

- When a wired controller is used for control, it displays fault codes. The following table provides fault codes on the wired controller and lamp panel. When the PC software is used to monitor operating of the inverter air conditioner unit, the PC directly displays these fault causes. These codes make maintenance rather convenient, saving both time and expense. In addition, faults of the outdoor unit are also displayed on the digital tube of the outdoor unit control board. When characters in the table are displayed on the digital tube, see Basic Character Legends for Reference. (pg. 40)

No	Fault Code	Fault Description	Displayed Fault of Lamp Panel		
			HEAT	DRY/TIMER	SLEEP/FAN
Fault codes of the indoor unit part:					
1	N0	Coil inlet sensor malfunction	On	On	Blinking
2	N1	Coil middle sensor malfunction	On	On	Blinking
3	N2	Coil outlet sensor malfunction	On	On	Blinking
4	N3	Air return/room sensor malfunction	On	On	Blinking
5	N4	Condensate pump (water level switch) malfunction	Blinking	Blinking	On
6	N5	EEPROM storage malfunction of indoor unit	Blinking	On	On
7	N8	Indoor unit and outdoor unit communication malfunction	On	Blinking	On
8	N9	DIP malfunction	Blinking	On	On
9	NA	Block running malfunction of the indoor electric motor	Blinking	On	On
10	NC	The filter of the fresh air unit is blocked	On	On	Blinking
11	NE	The environment temperature exceeds fresh-air unit's allowable range	Off	Blinking	Blinking
Fault codes of the wired controller part:					
1	NB	Keypad malfunction of Wired controller	-	-	-
2	NF	Wired controller and indoor unit communication malfunction	-	-	-
3	N6	EEPROM storage malfunction of wired controller	-	-	-
4	N7	Wired controller temperature sensor malfunction	-	-	-
Fault codes of the outdoor unit part:					
1	A1	The indoor capacity exceeds outdoor's minimum allowable range	Off	Blinking	Blinking
2	A2	Not existing model or wrong combination	Off	Off	Blinking
3	A3	The indoor amount exceeds the maximum allowable quantity	Off	Off	Blinking
4	A4	Driver board type is not suited to main controller	Off	Off	Blinking
5	C0	DC busbar under-voltage	Off	Blinking	On
6	C1	AC input under-voltage	Off	Blinking	On
7	C2	AC input over-current stop	On	Blinking	Off
8	C3	Input voltage sampling malfunction	Blinking	On	Off
9	C4	DSP and PFC communication malfunction	Blinking	On	Off
10	C5	Radiator/PIM sensor malfunction	Off	On	Blinking

11	C6	DSP and communication board communication malfunction	Blinking	On	Off
12	C7	Outdoor unit and drive board communication malfunction	Blinking	On	Off
13	C8	Compressor over-current alarm	-	-	-
14	C9	Compressor weak magnetic protection alarm	Off	On	Blinking
15	CA	Radiator overheating alarm		-	-
16	CC	AC input over-current alarm	-	-	-
17	CD	EEPROM of drive board malfunction alarm	Off	On	Blinking
18	CE	Compressor1 over-current alarm	Off	On	Blinking
19	CF	Compressor2 over-current alarm	Off	On	Blinking
20	E0	System malfunction	Off	Off	Blinking
21	E1	Exhaust temperature sensor malfunction of Compressor1 (TH2)	Off	Blinking	Blinking
22	E2	Ultra-low superheat degree protection	Off	Blinking	Blinking
23	E3	4WV/CHECK VAVLE/EXV malfunction	Blinking	Blinking	Off
24	E4	Exhaust temperature sensor malfunction of Compressor2 (TH3)	Blinking	Blinking	Off
25	E5	Communication malfunction of household billing system and outdoor units	Blinking	Blinking	Off
26	E6	The indoor capacity exceeds outdoor's maximum allowable range	Off	Off	Blinking
27	E7	All indoor units and outdoor units communication malfunction	On	Blinking	On
28	E8	IPM over-current stop	On	Blinking	Off
29	E9	Compressor drive failure	On	Off	Blinking
30	EA	Compressor over-current	On	Off	Blinking
31	EB	Open phase of compressor drive input voltage	Off	Blinking	On
32	EC	IPM current sampling malfunction	On	Blinking	Off
33	ED	Radiator or PIM overheating stop	Off	On	Blinking
34	EE	Driver's PIM precharge failure	Off	On	Blinking
35	EF	DC busbar over-voltage	Off	Blinking	On
36	F0	Master communicate fail with No.0 Slave Unit	On	Blinking	On
37	F1	Master communicate fail with No.1 Slave Unit	On	Blinking	On
38	F2	Master communicate fail with No.2 Slave Unit	On	Blinking	On
39	F4	Wrong dial setting	Off	Blinking	Blinking
40	F5	Compressor1 discharge temperature exceeds allowed range	Off	Blinking	Blinking

41	F6	Compressor2 discharge temperature exceeds allowed range	Off	Blinking	Blinking
42	F7	Compressor1 current sensor malfunction	On	Blinking	Blinking
43	F8	Compressor2 current sensor malfunction	On	Blinking	Blinking
44	FA	Fire Alarm	Blinking	On	Blinking
45	H0	Stop malfunction due to ultra-low superheat degree of air exhaust	Off	Blinking	Blinking
46	H1	Temperature sensor malfunction of main subcool outlet (TH10)	Off	Blinking	Off
47	H2	Suction temperature sensor fault(TH12)	Off	Blinking	Off
48	H3	Exhaust temperature sensor fault(TH1)	Off	Blinking	Off
49	H4	Temperature sensor malfunction of branch subcool outlet (TH11)	Off	Blinking	Off
50	H5	Outdoor heat exchanger coil outlet f malfunction (TH9)	Off	Blinking	Off
51	H6	Outdoor environment sensor malfunction (TH8)	Off	Blinking	Off
52	H7	EEPROM storage malfunction of outdoor unit	Off	Off	Blinking
53	H8	High pressure over-high/over-low fault	Blinking	Off	Blinking
54	H9	High pressure sensor malfunction	Blinking	Off	Blinking
55	HA	High pressure switch disconnection	Blinking	Off	Blinking
56	HB	Low pressure over-low malfunction	Blinking	Off	Off
57	HC	Low pressure sensor malfunction	Blinking	Off	Off
58	HD	Alarm fault due to ultra-low superheat degree of air exhaust	Off	Blinking	Blinking
59	HE	Ambient temperature exceeding the allowed range	Off	Blinking	Blinking
60	HF	Exhaust temperature exceeding the allowed range OR exhaust temperature switch disconnection	Off	Blinking	Blinking
61	P0	FAN1: over-current	Blinking	Blinking	Blinking
62	P1	FAN1:IPM malfunction	Blinking	Blinking	Blinking
63	P2	FAN1: Drive stall	Blinking	Blinking	Blinking
64	P3	FAN1: Lack phase	Blinking	Blinking	Blinking
65	P4	FAN1: Speed loss	Blinking	Blinking	Blinking
66	P5	FAN1: Over speed while startup	Blinking	Blinking	Blinking
67	P6	FAN1: Hall signal malfunction	Blinking	Blinking	Blinking
68	P7	FAN1: Hardware malfunction	Blinking	Blinking	Blinking
69	P8	FAN1: DC busbar under-voltage	Blinking	Blinking	Blinking
70	P9	FAN1:IPM overheating	Blinking	Blinking	Blinking
71	PA	FAN1:Communication malfunction	Blinking	Blinking	Blinking

72	PB	FAN1: Fatal malfunction	Blinking	Blinking	Blinking
73	PF	Outdoor unit and drive board of fan1 communication malfunction	Blinking	Blinking	Blinking
74	U0	FAN2: over-current	Blinking	Blinking	Blinking
75	U1	FAN2:IPM malfunction	Blinking	Blinking	Blinking
76	U2	FAN2: Drive stall	Blinking	Blinking	Blinking
77	U3	FAN2: Lack phase	Blinking	Blinking	Blinking
78	U4	FAN2: Speed loss	Blinking	Blinking	Blinking
79	U5	FAN2: Over speed while startup	Blinking	Blinking	Blinking
80	U6	FAN2: Hall signal malfunction	Blinking	Blinking	Blinking
81	U7	FAN2: Hardware malfunction	Blinking	Blinking	Blinking
82	U8	FAN2: DC busbar under-voltage	Blinking	Blinking	Blinking
83	U9	FAN2:IPM overheating	Blinking	Blinking	Blinking
84	UA	FAN2:Communication malfunction	Blinking	Blinking	Blinking
85	UB	FAN2: Fatal malfunction	Blinking	Blinking	Blinking
86	UF	Outdoor unit and drive board of fan2 communication malfunction	Blinking	Blinking	Blinking
87	00	Communication malfunction with indoor unit 0#	On	Blinking	On
88	01	Communication malfunction with indoor unit 1#	On	Blinking	On
89	...	...	On	Blinking	On
90	63	Communication malfunction with indoor unit 63#	On	Blinking	On

Displayed normal operating status of the lamp panel:

A5VWM	Silk-screen	⏻				◴	★
	Mode	Cool	Fan	Dry	Heat	Timing	Sleep
	LED	●	●	●	●	●	●
		Green			Red	Yellow	Red

A5VCC A5VDB	Silk-screen	Cool	Dry/Timing		Fan		Heat
	Mode	Cool	Dry	Timing	Fan	Sleep	Heat
	LED	●	●	●	●	●	●
		Green					Red

A5VCK	Silk-screen	❄	☀	💧	◴	🌀	☾
	Mode	Cool	Heat	Dry	Timing	Fan	Sleep
	LED	●	●	●	●	●	●
		Green	Red	Yellow		Red	

A5VCM	Silk-screen	❄	💧		🌀		☀
	Mode	Cool	Dry	Timing	Fan	Sleep	Heat
	LED	●	●	●	●	●	●
		Green				Red	

• The following symptoms are not faults of the units:

Sometimes odorous gases blow out of units because tobacco smoke, cosmetic odor, and odors from furniture and electrical appliances are taken into the units. You may hear fizzles when the air conditioner is cooling, heating, started, or stopped. The sounds are generated when refrigerant flows in the unit.

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TM-A5VR-DRM