Technical & Service Manual

DC Inverter Free Match R32

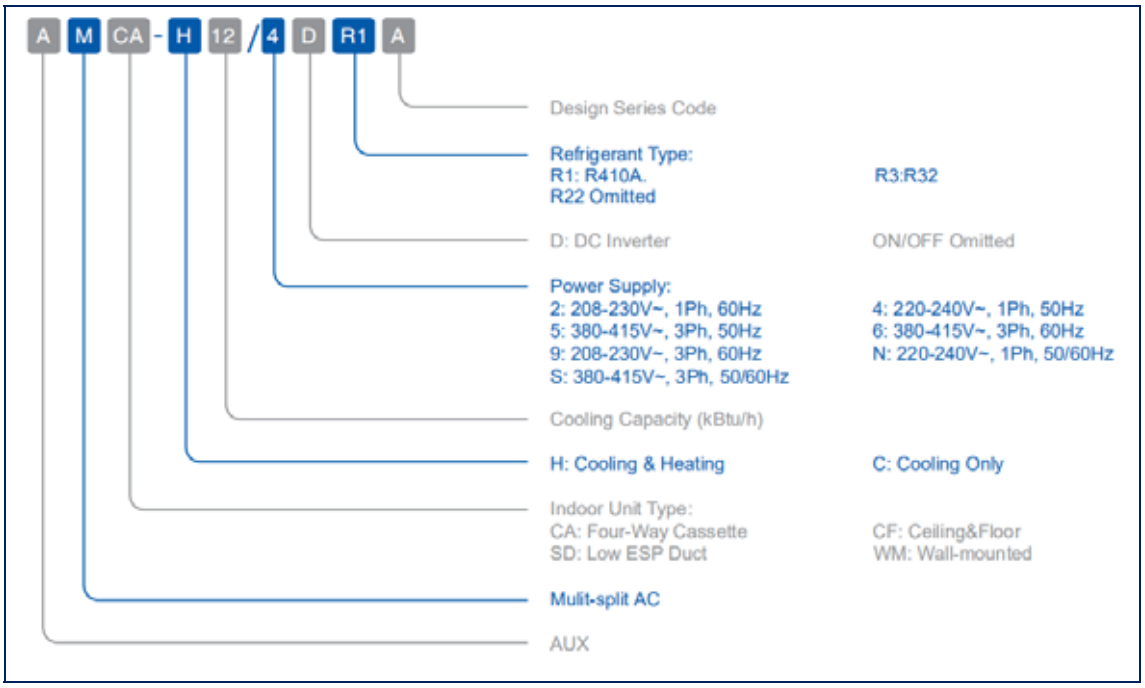
Version16 2023.07

Contents

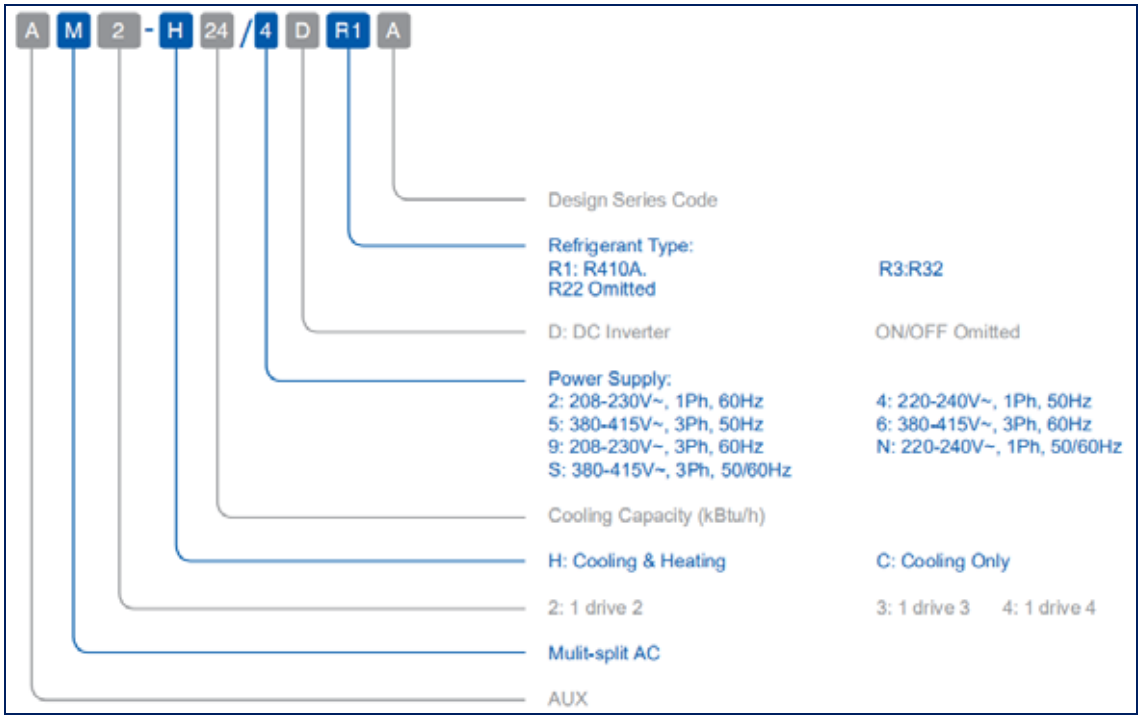
Part1 General Information

1. Nomenclature

Indoor Unit

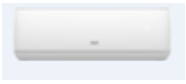
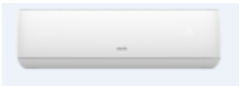
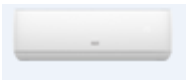
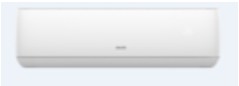


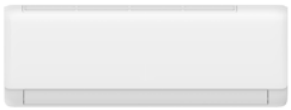
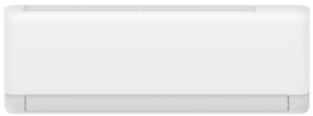
Outdoor Unit：



2. Unit appearance

2.1 Wall - Mounted

Series	Picture	Launch Time	Capacity Range / Mode	
F Series		2023.06	07 K Btu/h	AMWM-H07/4R3C(F*)
			09 K Btu/h	AMWM-H09/4R3C(F*)
			12 K Btu/h	AMWM-H12/4R3C(F*)
			18 K Btu/h	AMWM-H18/4R3C(F*)
		2023.01	09 K Btu/h	AMWM-H09/4R3B(F*)
		2018.01	07 K Btu/h	AMWM-H07/4R3A(F*)
			09 K Btu/h	AMWM-H09/4R3A(F*)
			12 K Btu/h	AMWM-H12/4R3A(F*)
			18 K Btu/h	AMWM-H18/4R3A(F*)
			24K Btu/h	AMWM-H24/4R3A(F*)
J Series		2023.06	07 K Btu/h	AMWM-H07/4R3C(J*)
			09 K Btu/h	AMWM-H09/4R3C(J*)
			12 K Btu/h	AMWM-H12/4R3C(J*)
			18 K Btu/h	AMWM-H18/4R3C(J*)
		2018.10	07 K Btu/h	AMWM-H07/4R3A (J*)
			09 K Btu/h	AMWM-H09/4R3A(J*)
			12 K Btu/h	AMWM-H12/4R3A(J*)
			18 K Btu/h	AMWM-H18/4R3A(J*)
			24K Btu/h	AMWM-H24/4R3A(J*)

Series	Picture	Launch Time	Capacity Range / Mode	
H Series		2023.06	07 K Btu/h	AMWM-H07/4R3C(H*)
			09 K Btu/h	AMWM-H09/4R3C(H*)
			12 K Btu/h	AMWM-H12/4R3C(H*)
			18 K Btu/h	AMWM-H14/4R3C(H*)
		2020.08	07 K Btu/h	AMWM-H07/4R3A(H*)
			09 K Btu/h	AMWM-H09/4R3A(H*)
			12 K Btu/h	AMWM-H12/4R3A(H*)
		2020.08	18 K Btu/h	AMWM-H18/4R3A(H*)
			24K Btu/h	AMWM-H24/4R3A(H*)
Q Series		2023.01	07 K Btu/h	AMWM-H07/4R3B(Q*)
		2022.11		AMWM-H07/4R3A(Q*)
		2023.01	09 K Btu/h	AMWM-H09/4R3B(Q*)
		2022.11		AMWM-H09/4R3A(Q*)
		2022.11	12 K Btu/h	AMWM-H12/4R3A(Q*)
		2022.11	18 K Btu/h	AMWM-H18/4R3A(Q*)
		2022.11	24K Btu/h	AMWM-H24/4R3A(Q*)

2.2 Cassette

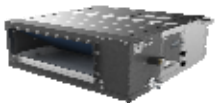
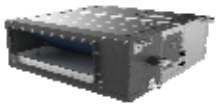
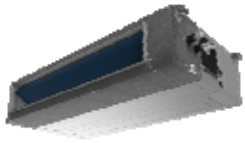
Picture	Panel	Launch Time	Capacity Range / Mode	
 Y type Compact		2022.11	09 K Btu/h	AMCA-H09/4R3YAA
			12 K Btu/h	AMCA-H12/4R3YAA
			18 K Btu/h	AMCA-H18/4R3YAA
		2021.09	18 K Btu/h	AMCA-H18/4R3YA
 Y type		2020.01	24 K Btu/h	AMCA-H24/4R3B

2.3 Ceiling Floor

/	Picture	Launch Time	Capacity Range / Mode	
Ceiling Floor (F Type)		2020.07	09 K Btu/h	AMCF-H09/4R3F
			12 K Btu/h	AMCF-H12/4R3F
			18 K Btu/h	AMCF-H18/4R3F

2.4 Duct

/	Picture	Launch Time	Capacity Range / Mode	
DUCT (Y Type)		2019.12	07 K Btu/h	AMSD-H07/4R3AA
			09 K Btu/h	AMSD-H09/4R3AA
			12 K Btu/h	AMSD-H12/4R3AA
			18 K Btu/h	AMSD-H18/4R3AA
			24 K Btu/h	AMSD-H24/4R3AA

/	Picture	Launch Time	Capacity Range / Mode	
DUCT (M Type)		2023.05	12 K Btu/h	AUMD-H12/NDR3HM2B
			18 K Btu/h	AUMD-H18/NDR3HM2B
			24 K Btu/h	AUMD-H24/NDR3HM2B

2.5 Console

/	Picture	Launch Time	Capacity Range / Mode	
CONSOLE		2022.10	09 K Btu/h	AMCO-H09/4R3B
			12 K Btu/h	AMCO-H12/4R3B
			16 K Btu/h	AMCO-H16/4R3B

2.6 Outdoor Unit

Capacity (Btu/h)	1 drive 2 ：14k/18k		1 drive 3 ：21k/27k	
	AM2-H18/4DR3 AM2-H18/4DR3A	AM2-H14/4DR3C AM2-H14/4DR3C-U AM2-H18/4DR3C AM2-H18/4DR3C-U	AM3-H27/4DR3 AM3-H27/4DR3A	AM3-H21/4DR3C AM3-H21/4DR3C-U AM3-H27/4DR3C AM3-H27/4DR3C-U
Picture	 2018.01	 2022.08	 2018.01	 2022.08

Capacity (Btu/h)	1 drive 4: 36k	1 drive 5: 42k
	AM4-H36/4DR3 AM4-H36/4DR3A	AM5-H42/4DR3 AM5-H42/4DR3A
Picture	 2018.11	 2018.11

A or -U：optional electric heater on chassis

3. Combination Table

14K：

	Suggested Combination		
1 drive 2	One Unit	Two Units	
	7	7+7	—
	9	7+9	—
	12	9+9	—
	18	—	—

18K：

	Suggested Combination		
1 drive 2	One Unit	Two Units	
	7	7+7	9+12
	9	7+9	—
	12	7+12	—
	18	9+9	—

21K：

	Suggested Combination				
1 drive 3	One Unit	Two Units		Three Units	
	18	7+7	9+12	7+7+7	—
	—	7+9	9+18	7+7+9	—
	—	7+12	12+12	7+7+12	—
	—	7+18	—	7+9+9	—
	—	9+9	—	9+9+9	—

27K：

	Suggested Combination				
1 drive 3	One Unit	Two Units		Three Units	
	18	7+7	9+18	7+7+7	7+9+18
	—	7+9	12+12	7+7+9	7+12+12
	—	7+12	12+18	7+7+12	9+9+9
	—	7+18	—	7+7+18	9+9+12
	—	9+9	—	7+9+9	9+12+12
	—	9+12	—	7+9+12	—

36K：

	Suggested Combination					
1 drive4	One Unit	Two Units		Three Units		
	24	7+7	9+18	7+7+7	7+9+18	9+12+18
	—	7+9	9+24	7+7+9	7+9+24	9+12+24
	—	7+12	12+12	7+7+12	7+12+12	12+12+12
	—	7+18	12+18	7+7+18	7+12+18	12+12+18
	—	7+24	12+24	7+7+24	7+12+24	—
	—	9+9	18+18	7+9+9	9+9+9	—
	—	9+12	—	7+9+12	9+9+12	—
1 drive4	Four Units					
	7+7+7+7	7+7+12+12		9+9+9+9	—	—
	7+7+7+9	7+7+12+18		9+9+9+12	—	—
	7+7+7+12	7+9+9+9		9+9+9+18	—	—
	7+7+7+18	7+9+9+12		9+9+12+12	—	—
	7+7+9+9	7+9+9+18		9+12+12+12	—	—
	7+7+9+12	7+9+12+18		—	—	—
	7+7+9+18	7+12+12+12		—	—	—

42K：

	Suggested Combination		
1 drive5	One Unit	Two Units	
	24	7+7	9+24
	—	7+9	12+12
	—	7+12	12+18
	—	7+18	12+24
	—	7+24	18+18
	—	9+9	18+24
	—	9+12	—
	—	9+18	—

	Suggested Combination			
1 drive5	Three Units			
	7+7+7	7+9+24	9+9+24	12+18+18
	7+7+9	7+12+12	9+12+12	12+18+24
	7+7+12	7+12+18	9+12+18	18+18+18
	7+7+18	7+12+24	9+12+24	—
	7+7+24	7+18+18	9+18+18	—
	7+9+9	9+9+9	12+12+12	—
	7+9+12	9+9+12	12+12+18	—
	7+9+18	9+9+18	12+12+24	—

	Suggested Combination		
1 drive5	Four Units		
	7+7+7+7	7+7+9+24	7+9+12+24
	7+7+7+9	7+7+12+12	7+12+12+12
	7+7+7+12	7+7+12+18	9+9+9+9
	7+7+7+18	7+7+12+24	9+9+9+12
	7+7+7+24	7+9+9+9	9+9+9+18
	7+7+9+9	7+9+9+12	9+9+12+12
	7+7+9+12	7+9+9+18	9+12+12+12
	7+7+9+18	7+9+12+18	12+12+12+12

	Suggested Combination			
1 drive5	Five Units			
	7+7+7+7+7	7+7+7+12+18	7+9+9+9+12	9+9+12+12+12
	7+7+7+7+9	7+7+9+9+9	7+9+9+9+18	—
	7+7+7+7+12	7+7+9+9+12	7+9+9+12+12	—
	7+7+7+7+18	7+7+9+9+18	7+9+12+12+12	—
	7+7+7+9+9	7+7+9+12+12	9+9+9+9+9	—
	7+7+7+9+12	7+7+9+12+18	9+9+9+9+12	—
	7+7+7+9+18	7+7+12+12+12	9+9+9+9+18	—
	7+7+7+12+12	7+9+9+9+9	9+9+9+12+12	—

Note：

All above indoor units can be freely matched and combined, but must be installed strictly according to the above table or the cooling capacity and stability would be decreased.

When it comes to the console, ’18’ means ‘AMCO-H16/4R3A’

4. Accessories Included

4.1 Outdoor Units

N°	Name	QUANTITY					
		14K	18K	21K	27K	36K	42K
1	Installer manual	1	1	1	1	1	1
2	Drainage connector	1	1	1	1	1	1
3	Pipe adaptor	0	0	0	0	0	0
4	copper nuts	8	8	12	12	16	20

4.2 Indoor Units

N°	Name	QUANTITY				
		Wall Mounted	Duct	Cassette	Ceiling & Floor	Console
1	User manual	1	1	1	1	1
2	Remote control	1	0	1	1	1
3	Batteries for Remote Control	2	0	2	2	2
4	Touch screen wired Control	0	1	0	0	0
5	Panel screw	0	0	4	0	0
6	Drainage tube	0	1	1	1	1
7	Pipe adaptor	0	1	1	1	0
8	Thermal insulation pipe	0	2	2	2	2

Part2 Features

1. Outdoor Units

Easy for installation

There are multiple valves on outdoor unit, no need branch pipes and welding between indoor and outdoor units, no need to set the IDU address

Power supply to ODU, multi- terminal board be designed on ODU to connect to multi IDUs

Wide operation Range

No matter when it is as high as 52℃ in hot summer or -15℃ in cold winter, the unit could operate perfectly, making you feel like spring all year around

Restart Function

Recover the former operation state when power is restored, no need to restart the unit manually

long piping length

main components

DC inverter compressor & DC fan motor have good efficiency in part load condition, more energy saving; EXV can precisely control refrigerant flow, ensure quickly cooling and heating, less temperature fluctuation

Independent EXV control

Each IDU Adjusted by an EXV, whole unit could achieve quick cooling/heating. EXV was designed in outdoor unit, decrease throttling noise of indoor unit

Chassis electric heater

Chassis electric heater will work when environment Tao ＜1℃ or during defrosting process , so can avoid Freeze on the chassis

Multi Protection

System protection

Drive module protection

2. Wall Mounted

2.1 J series

Superb craftsmanship

0.3 mm seam, appearance integration

High strength load bearing design

Resistance ↑15%, transportation damage ↓30%

Demountable Underjaw

Installation engineers decreased from 2 to 1

Switch type sealing knob

replacement screws, easy to disassemble and install

PCB pluggable and maintenance

Efficient and quick maintenance, remove the medium frame wiring cover, PCB can be repaired

Wave - shaped left - right limit wind blade

air flow is more uniform, and longer

Fin guide

Optimize the air duct, improve the air supply distance

2.2 H series

Elegant appearance

High density filter

High strength bearing design

Thrives on pressure↑15% Transportation damage rate ↓30%

PCB pluggable maintenance

Efficient and fast maintenance method, remove middle frame wiring cap, then PCB circuit board can be maintained.

Nanoscale chassis protection foam

Integrated protection foam , effectively prevent moisture and preserve heat.

Switch-type sealing knob

Replace screw , easy for disassembly and assembly ,reduce installation workload

Wave-shaped left and right limited swing blades

Cooperative control of the fin guide page, compared with direct outflow, the airflow is more uniform, the duct is concentrated and longer.

Fin guide

Optimize the air duct， improve the air supply distance

2.3 Q series

MIRROR POLISHED PANEL

Glossier with smooth texture

None-aging and anti-dusting with durable aesthetic feeling

OVERALL ROUNDNESS DESIGN

AERODYNAMIC MICRO-ARC DEFLECTOR

Coolness reaching every corner of the room as far as 15 meters, provide more comfortable environment

PREVENT-COLD-WIND

No need to worry about the sudden coldness in heating mode

REMOVABLE SILVER-ION ANTIBACTERIAL FILTER

Dismantle within 1 second and easy to clean silver-ion added with

Sterilization and anti-fungus rate higher than 99%

FAULT CODE INDICATION

When the machine operates with problems, display section will show

the corresponding fault code to make after-sales service more convenient and faster

3. Cassette

Y compact series

Large air flow

Optimized structure of air guide ring, Insertion depth design of guide ring through simulation technology, ensure large air flow, improve cooling & heating comfort

Equally spaced of boom hook

Compared with unequally spaced of boom hook, once fixed 1 supports hook , other supports will more easier to be located due to equally space , so saving time during install the support hook

External control box

Compared with the built-in electric control box design of old E model, the external electric control box design of new Y model becomes more convenient during maintenance without removing the grille

Easy to remove fan motor

Optimized structure design, no need to remove whole panel and electrical control box , Able to replace new Turbo type Fan and fan motor after grill and air guide ring be removed

Anti resonance of chassis

Through simulation technology analysis, design a new structure chassis, no resonance frequency point after simulation, ensure that the chassis is stable and no abnormal noise

Anti resonance of turbo type fan

The simulation analysis technology is used to identify the resonance frequency points, and the damping design is done in advance to ensure the stable operation of the fan wheel

Anti abnormal noise of water pump

Newly designed drainage pump assembly, optimizing the supporting surface at the center gravity of the water pump to ensure that the noise of the water pump will be minimized

Anti condensation of full foam structure

Optimized foam full package structure design, which ensures the body's thermal insulation is reliable and effective prevent condensation water

Anti water leakage function

Industry-leading anti-water leakage function due to height of 76mm drainage pan and 3.2L volume water storage. and the air outlet is covered with thermal insulation cotton can effectively prevent condensation water

Anti-shake of hook

Optimized structure design of the hook, increase the positioning point of the hook, and place the hook hole at the same center of gravity as the body to ensure stable operation and prevent abnormal vibration

optional moisture proof insulation cotton

The four sides and chassis can be covered with moisture-proof insulation cotton to prevent condensation and dripping on the surface of the shell. It is suitable for high humidity and high heat areas

optional Hangers and bolts

More convenient for customers to save time in purchasing and processing installation materials

Fresh air intake

Fresh air intake hole design can introduce fresh air to ensure high air quality in the room.

Y series

Fire-proof electric control box

Integrated electric control box, the E-box is safely covered by metal plate, for better fire-resistance

Built-in drain pump

The built-in drain pump can lift water up to 1200 mm high from drainage pan

Fresh air intake

Fresh air makes indoor air healthy and comfortable

Digital Tube Display

Clearly to check the running status, more convenient for troubleshooting. Color display is standard, white display is optional

Hangers and bolts options

Multiple panel options

Optional round flow panels improve comfort, meet customized demand

4. Ceiling Floor

Moisture-proof design of display board

The display board is beautiful built-in design, with good sealing, moisture-proof and long reliable life

Moisture-proof design of stepper motor

Effectively seal the gap to solve the condensation problem, Improve the smoothness when the

air guide rotates

Fresh air intake

Fresh air intake hole design can introduce fresh air to ensure high air quality in the room.

Optional filter module

A variety of health filters can be selected to improve room air quality

Two ways of installation

suspended ceiling and vertical installation

Easy to install

The slider can be adjusted up and down to adjust the horizontal angle of machine hoisting, so ensure condensate water is more easily drained

5. Duct

Slim Design

The thickness is only 200 mm,

save installation space

Flexible air Intake

Air intake from rear as standard,

from bottom as optional

Optional water pump

Lift head of water pump is 1200 mm

Optional air outlet panel

Digital tube displays, clearly to check the running status, more convenient for trouble-shooting

Fresh air intake

About 10% fresh air of rated air volume is allowed to intake improve air quality

Flexible air supply duct (30Pa)

Air supply distance can up to 4~6m， suitable for kinds of application site

Prevent leakage

The integrated design of water nozzle and water plate improves the strength of the water plate and causes water leakage. Meanwhile, in order to ensure the heat preservation effect of the water plate, the foam is covered on the back to prevent condensation of the unit

Easy drainage

Double drainage design on the left and right side of the water plate, flexible to adapt to the

installation site

6. Console

Strong heating capacity

Full DC inverter air source heat pump heater

It can easily cope with various harsh outdoor environment in winter and create a warm and healthy home for you

Approximate to Floor heating

The wind blows from the bottom, and the feet are warm; the wind blows from the top, it heats up quickly the temperature rise rate is faster than conventional floor heating. Bring comfortable heating enjoyment

Continuous heating

Under low temperature conditions, it can be continuously heated for a long time without defrosting, no obvious temperature fluctuations, and enjoy a comfortable heating.

Strong heating capacity

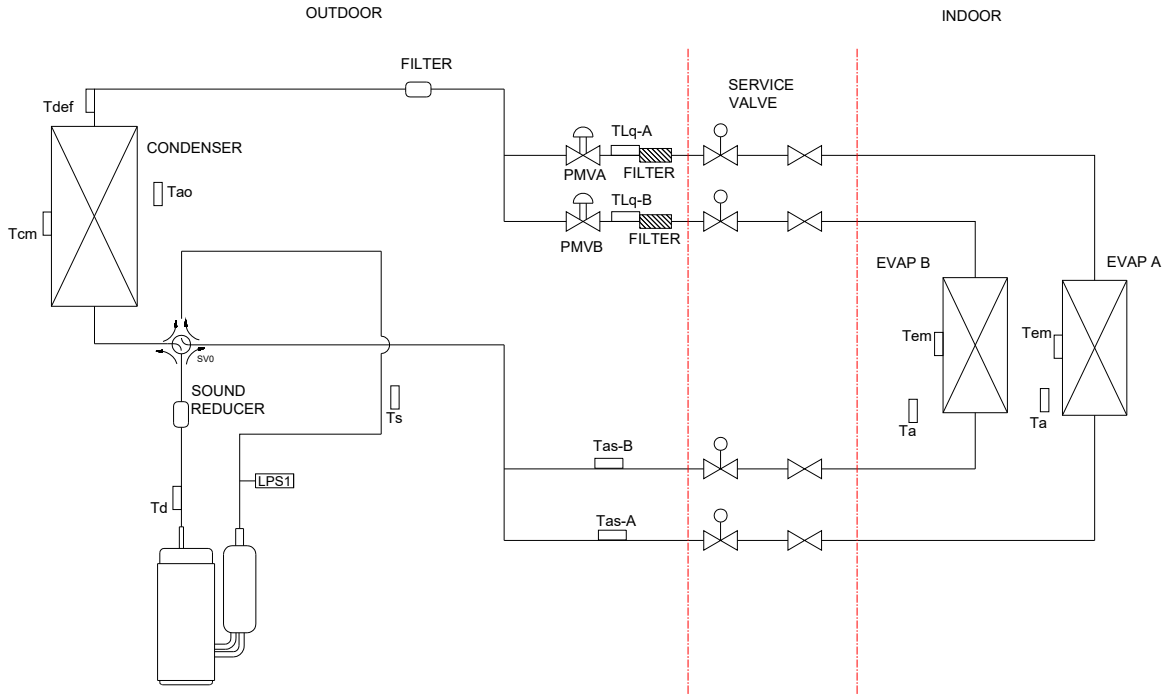
Purify first

The console has a long-lasting air filter, making the air fresher and healthier, creating a healthy home for you.

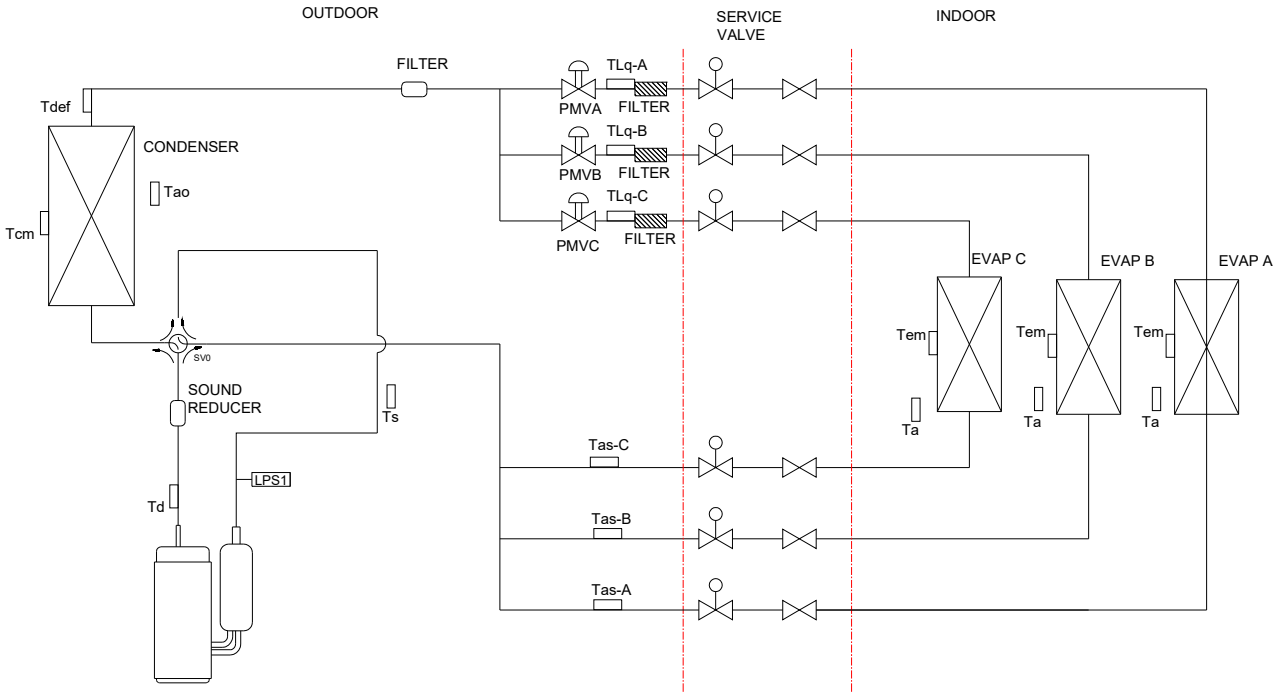
Note ：please refer to the brochure for more information of product features

Part3 Piping System

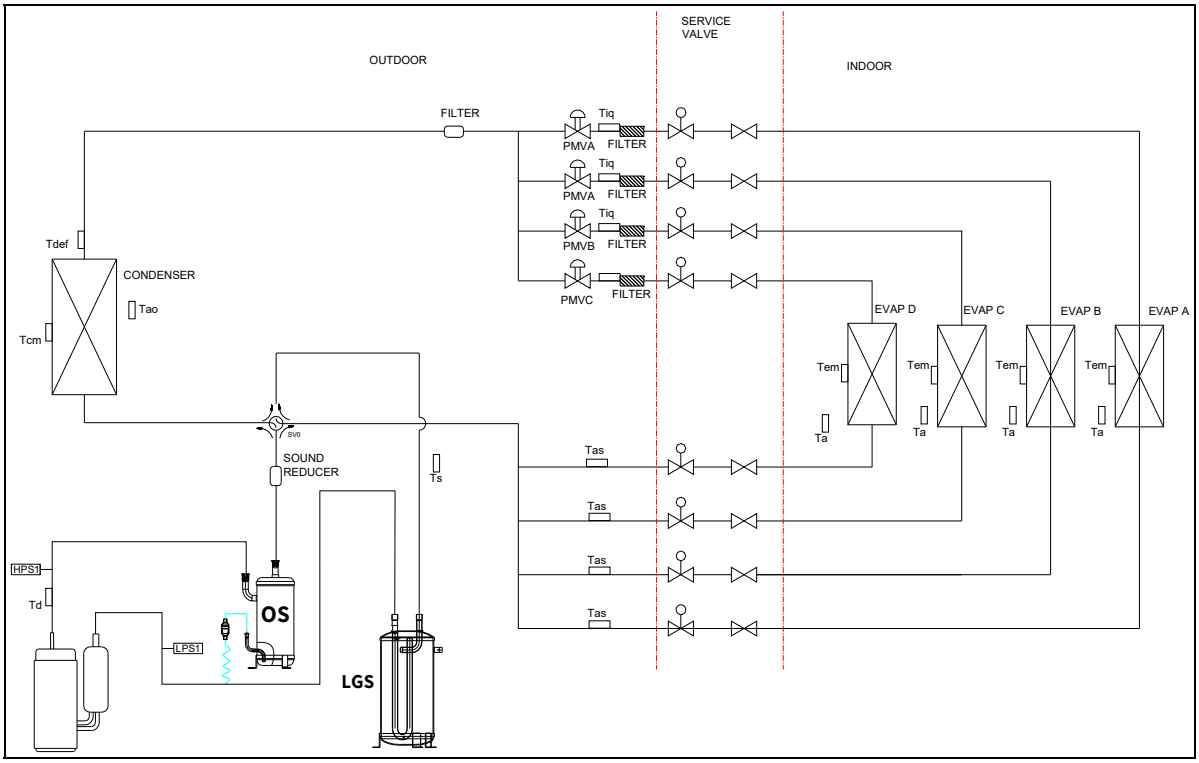
1. 14K, 18K



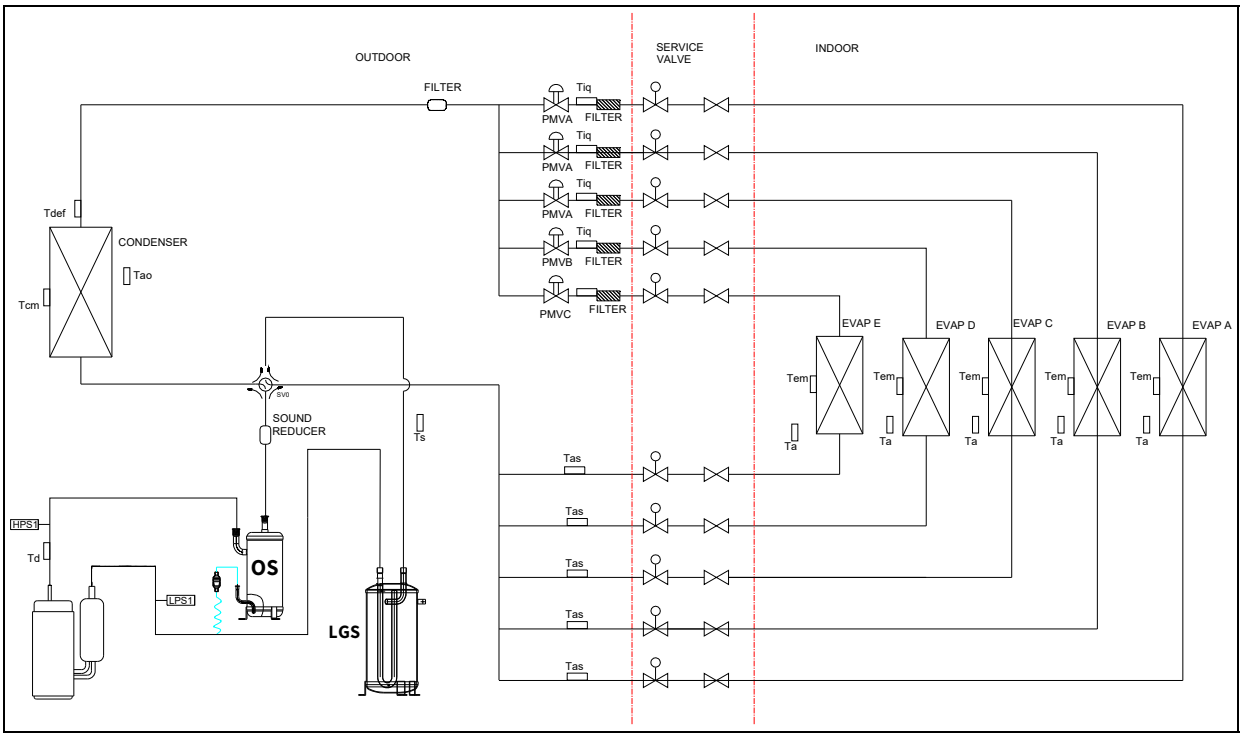
2. 21K, 27K



3. 36K


SERVICE VALVE
OUTDOOR
INDOOR
FILTER
Tiq
PMVA
FILTER
PMVA
PMVB
PMVC
Tdef
CONDENSER
Tao
Tcm
EVAP D
EVAP C
EVAP B
EVAP A
Tem
Ta
SVO
SOUND REDUCER
Ts
Tas
HPS1
Td
OS
LPS1
LGS

4.42K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SERVICE VALVE
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FILTER
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PMVC
Tdef
CONDENSER
Tao
Tcm
EVAP E
EVAP D
EVAP C
EVAP B
EVAP A
Tem
Ta
SVO
SOUND REDUCER
Ts
Tas
HPS1
Td
OS
LPS1
LGS

Part4 Dimension

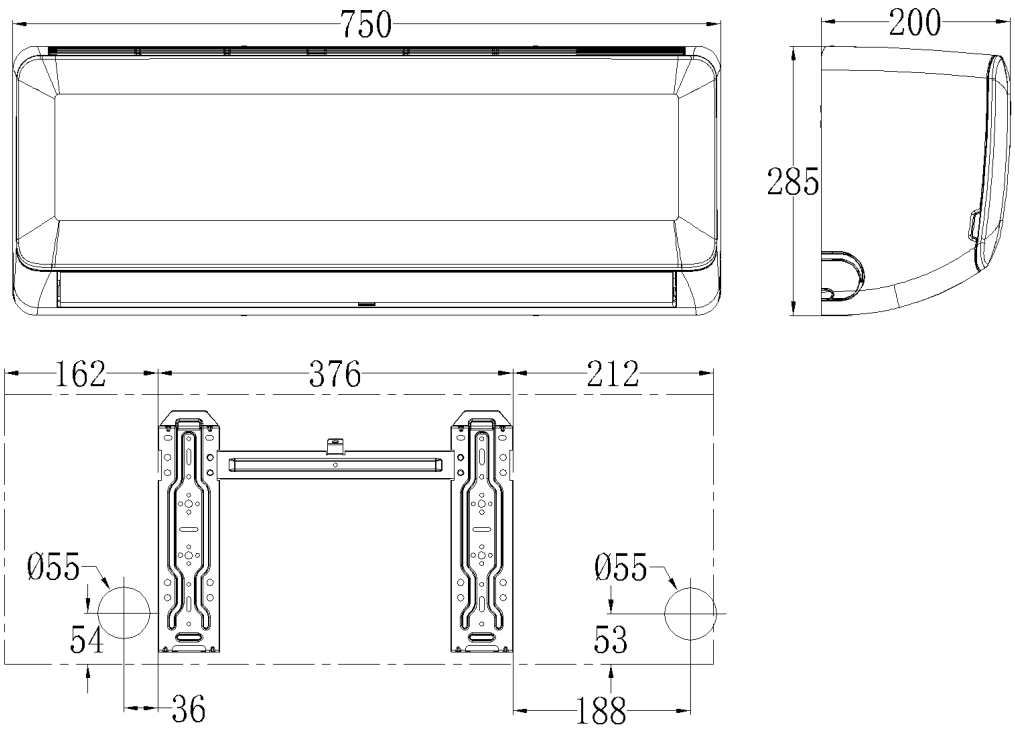
1. Wall Mounted

1.1 F type

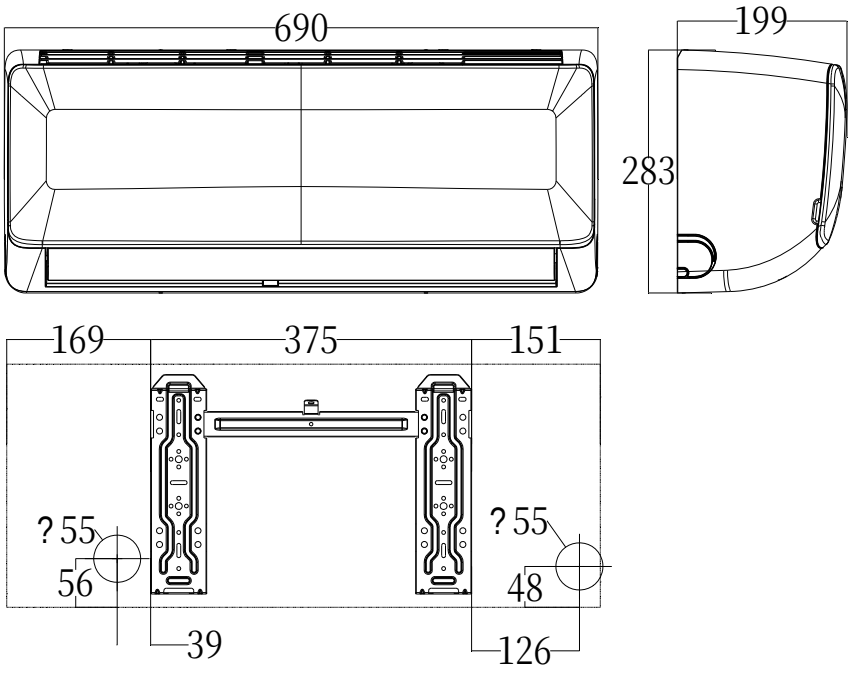
07K(AMWM-H07/4R3A(F*); AMWM-H07/4R3C(F*))

09K(AMWM-H09/4R3A(F*); AMWM-H09/4R3C(F*))

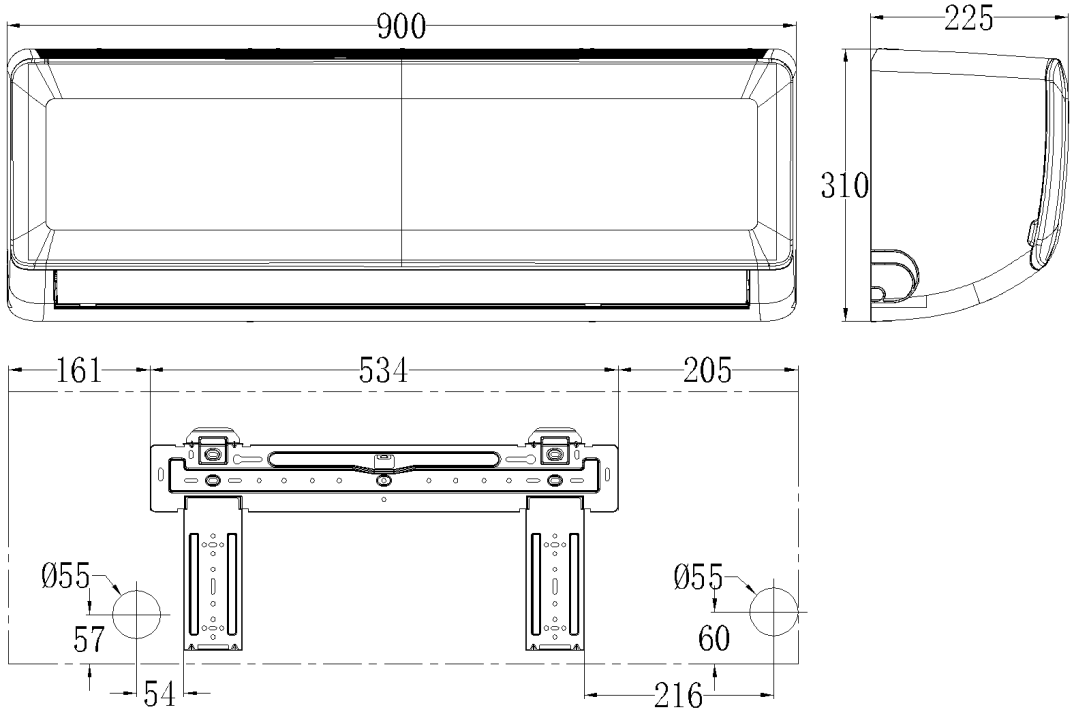
12K(AMWM-H12/4R3A(F*); AMWM-H12/4R3C(F*))



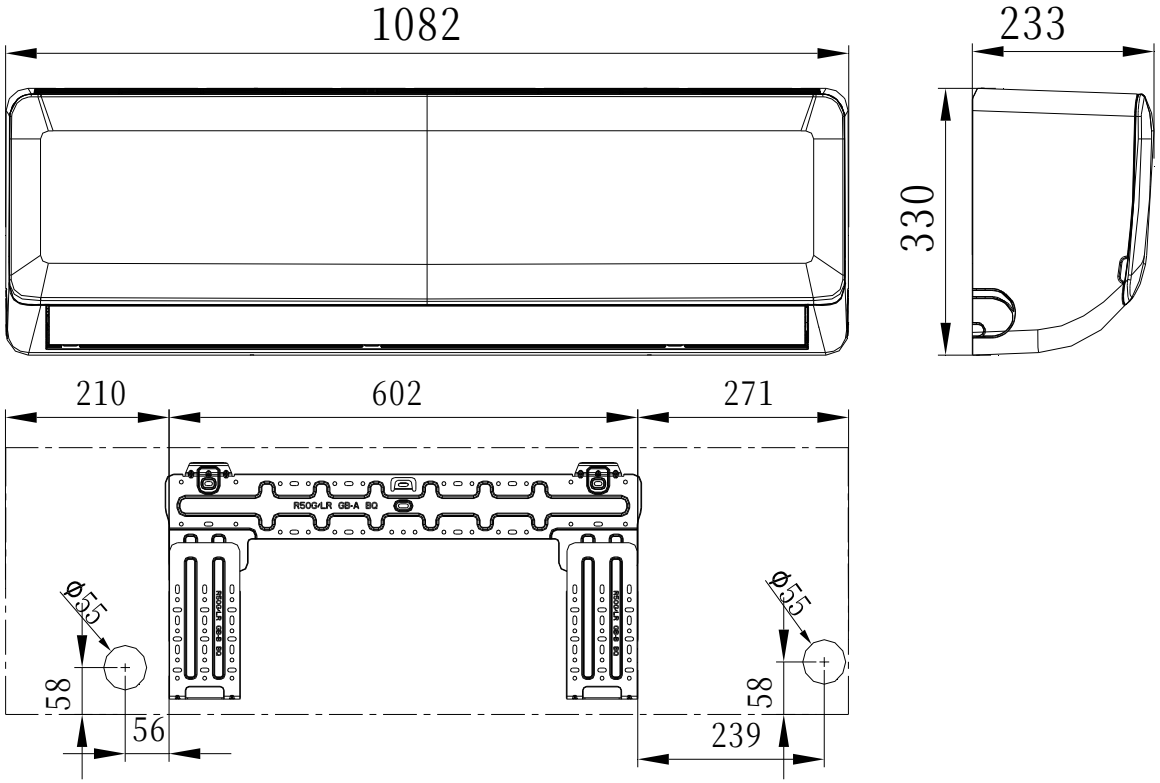
09K (AMWM-H09/4R3B(F*))



18K(AMWM-H18/4R3A(F*); AMWM-H18/4R3C(F*))



24K(AMWM-H24/4R3A(F*))

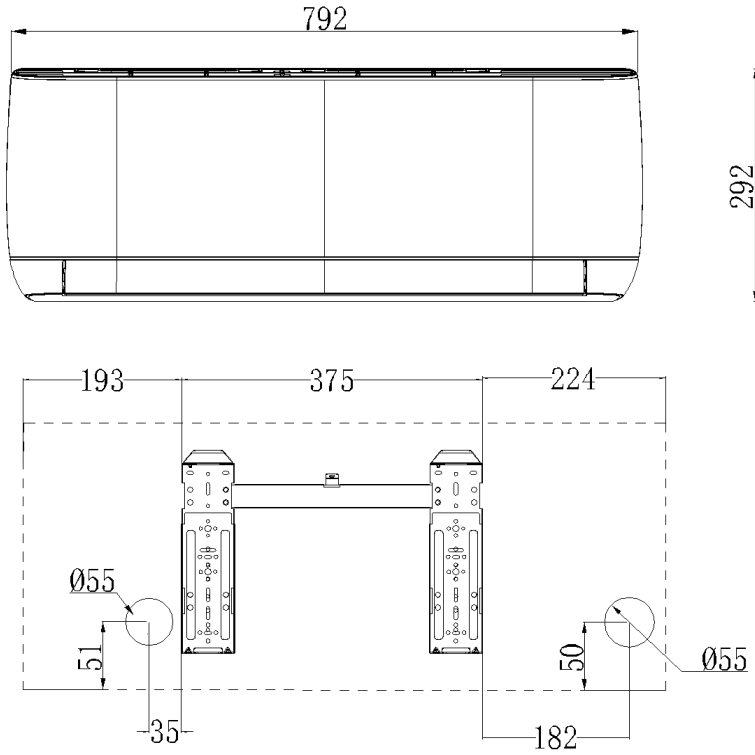


1.2 J type

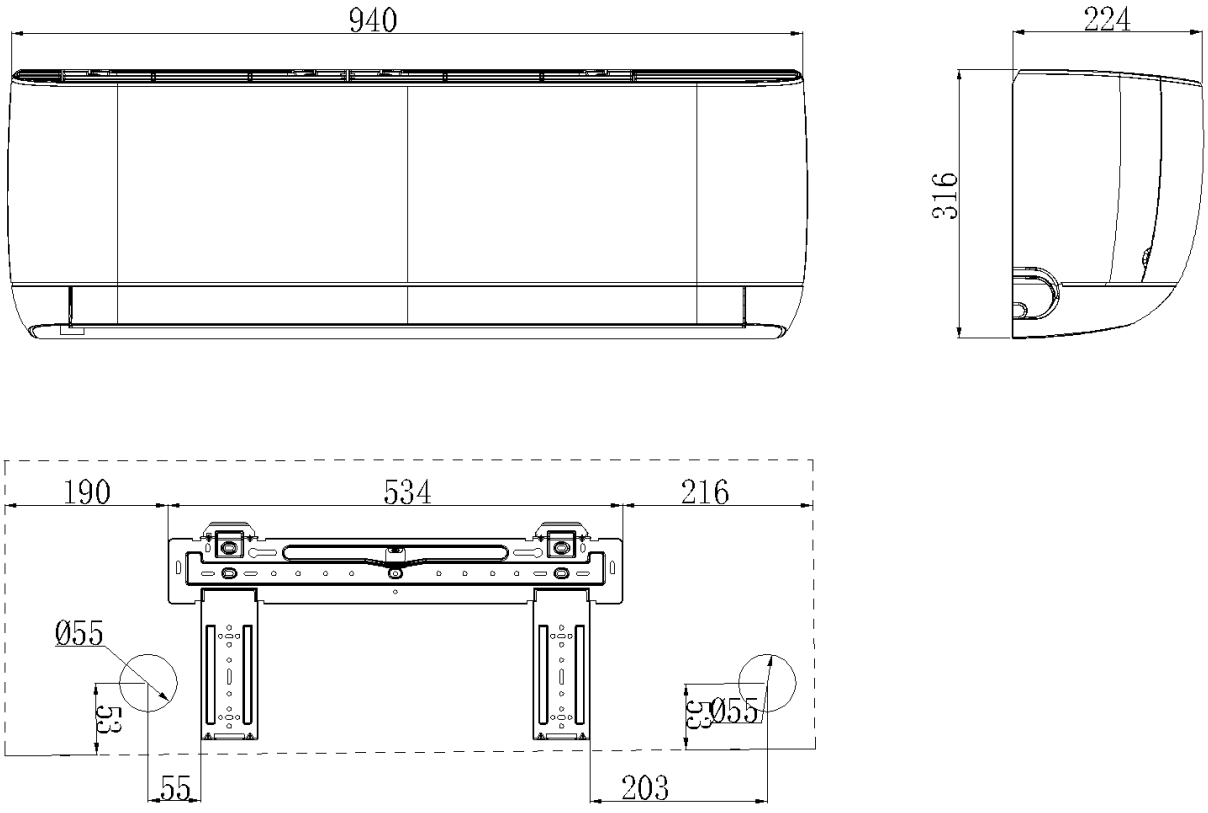
07K(AMWM-H07/4R3A(J*); AMWM-H07/4R3C(J*))

09K(AMWM-H09/4R3A(J*); AMWM-H09/4R3C(J*))

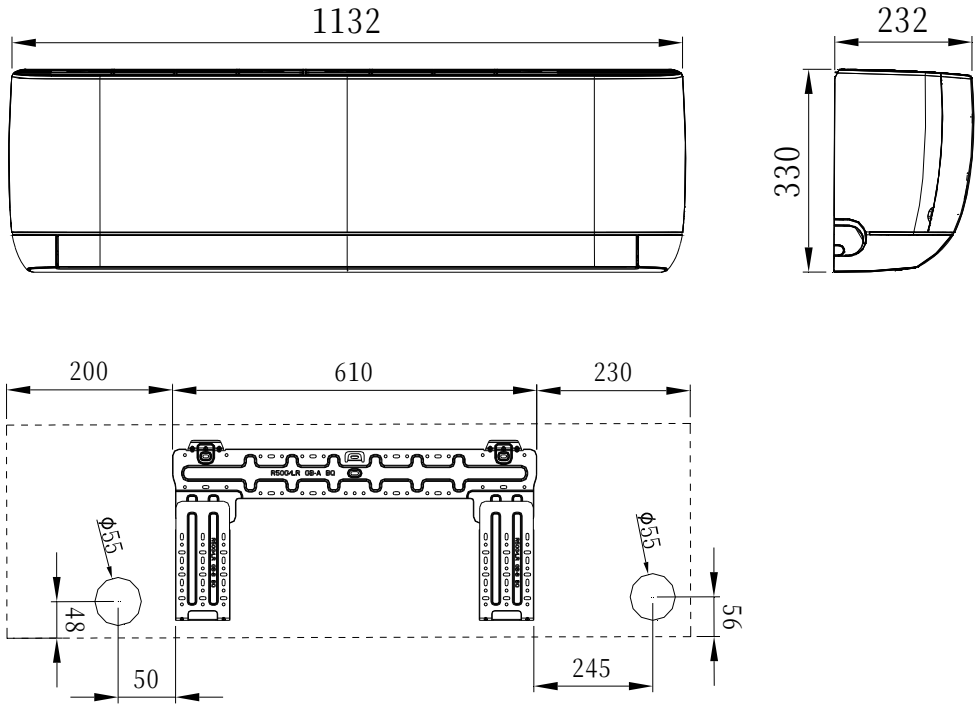
12K(AMWM-H12/4R3A(J*); AMWM-H12/4R3C(J*))



18K(AMWM-H18/4R3A(J*); AMWM-H18/4R3C(J*))



24K(AMWM-H24/4R3A(J*)) :

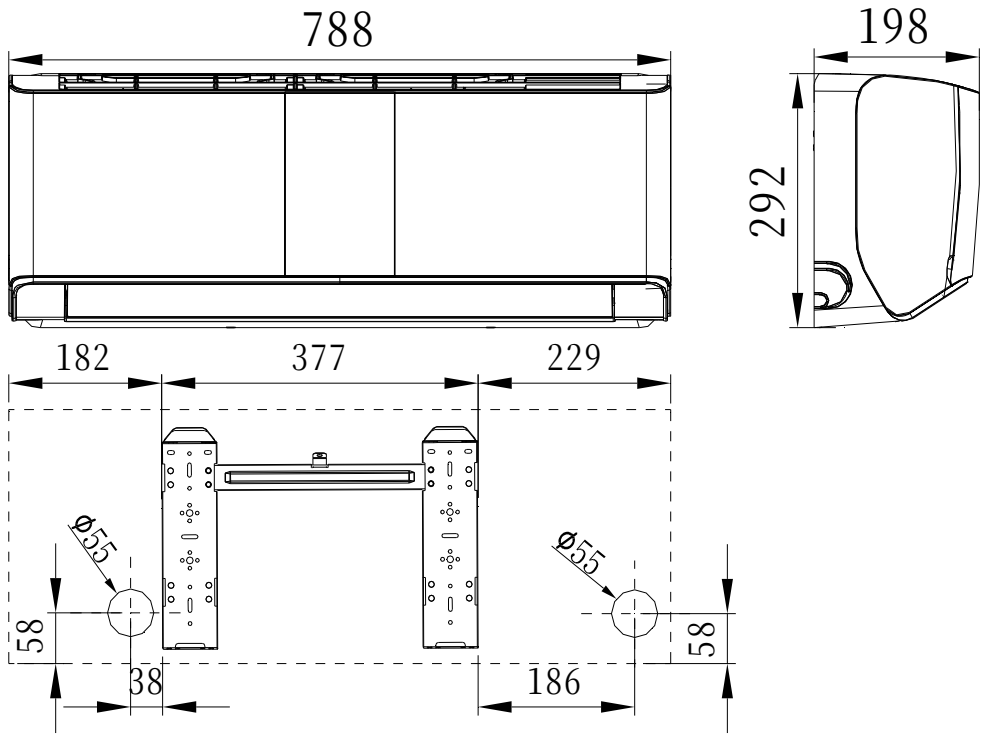


1.3 H type

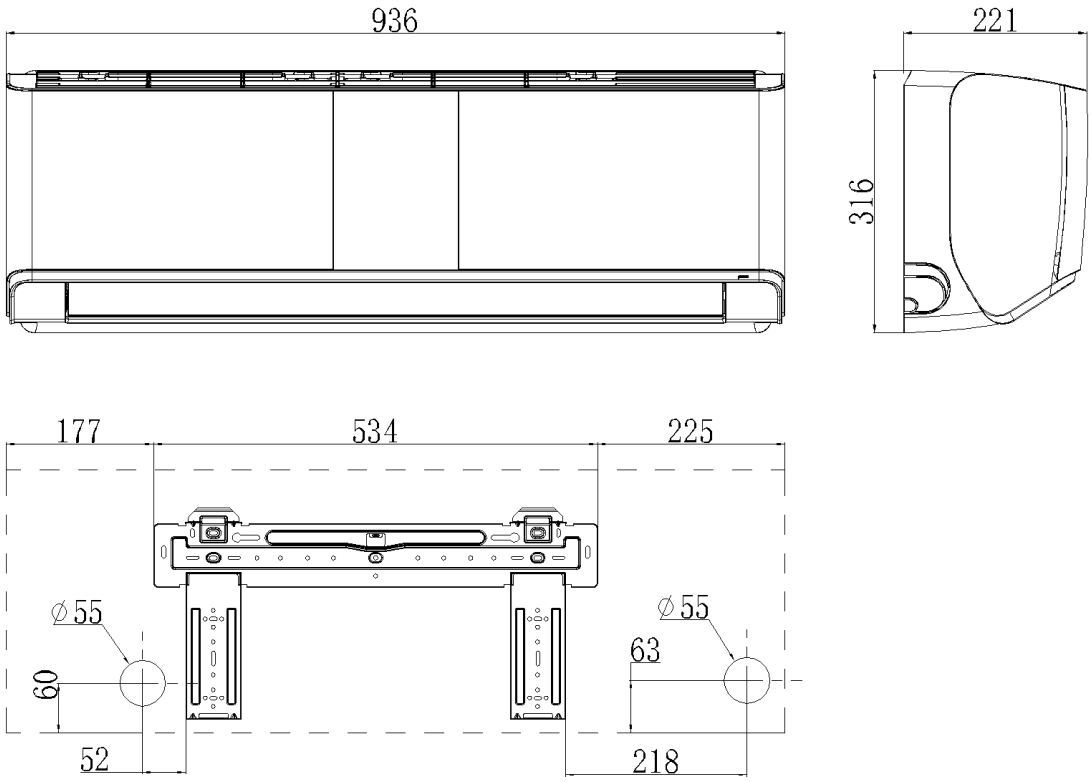
07K(AMWM-H07/4R3A(H*); AMWM-H07/4R3C(H*))

09K(AMWM-H09/4R3A(H*); AMWM-H09/4R3C(H*))

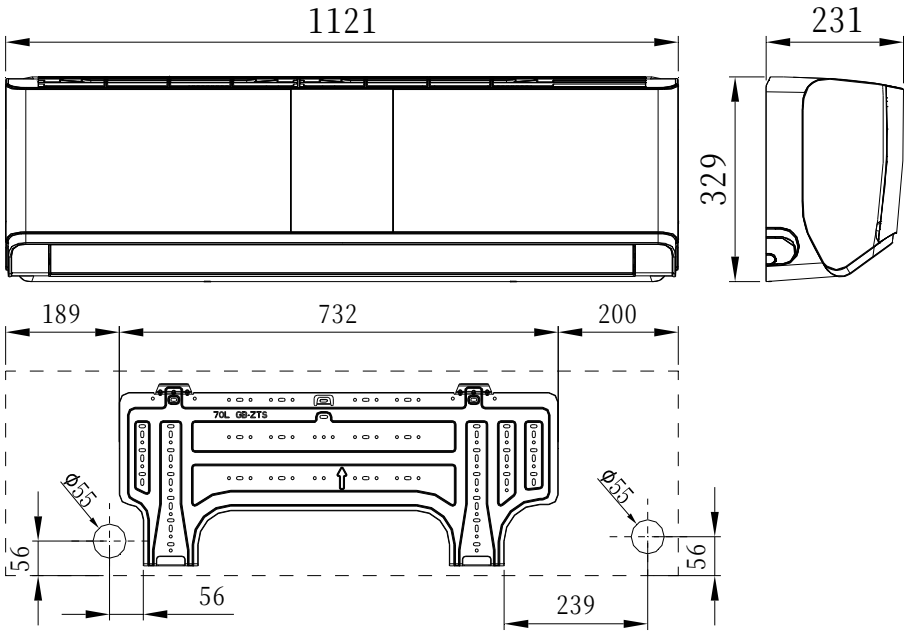
12K(AMWM-H12/4R3A(H*); AMWM-H12/4R3C(H*))



18K(AMWM-H18/4R3A(H*); AMWM-H18/4R3C(H*))

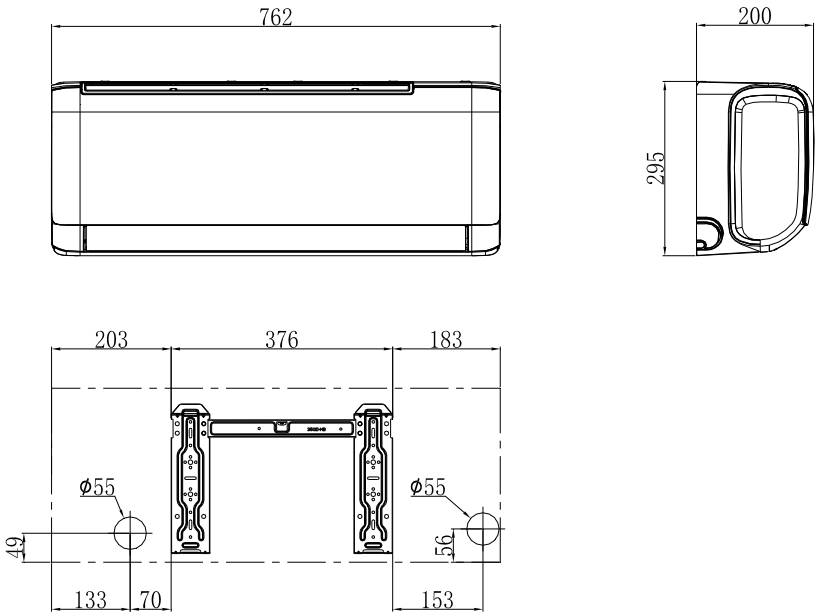


24K(AMWM-H24/4R3A(H*)) :

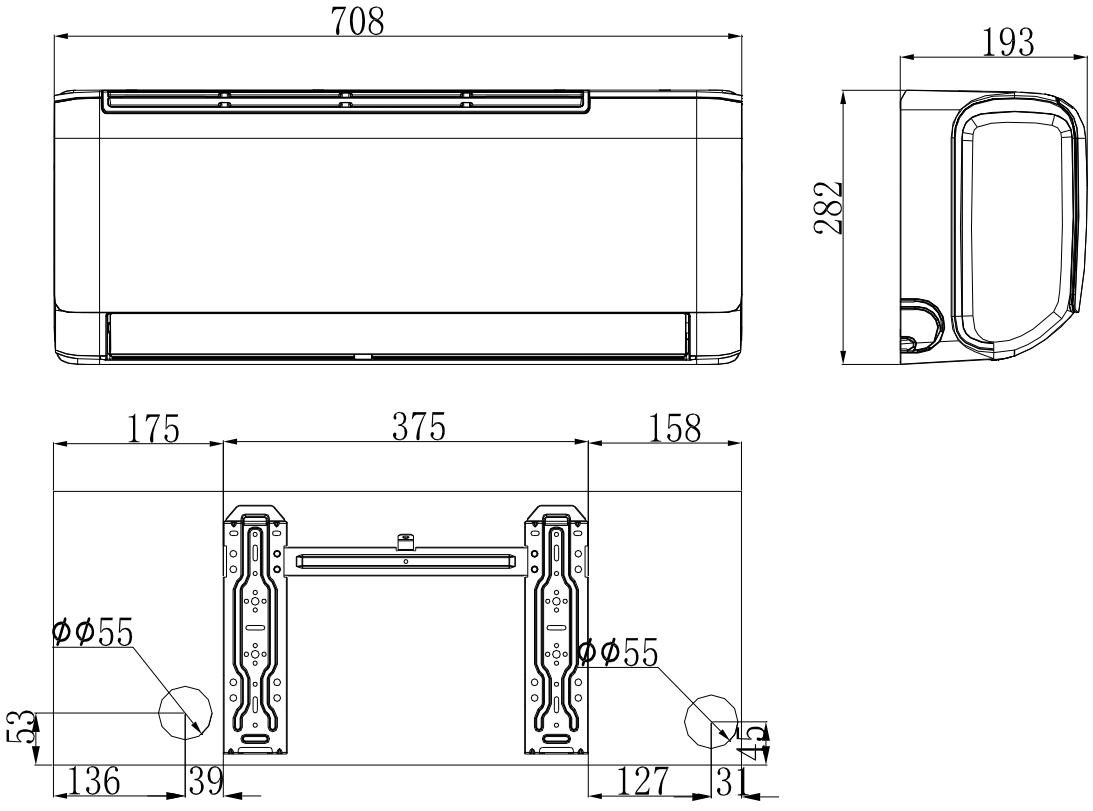


1.4 Q type

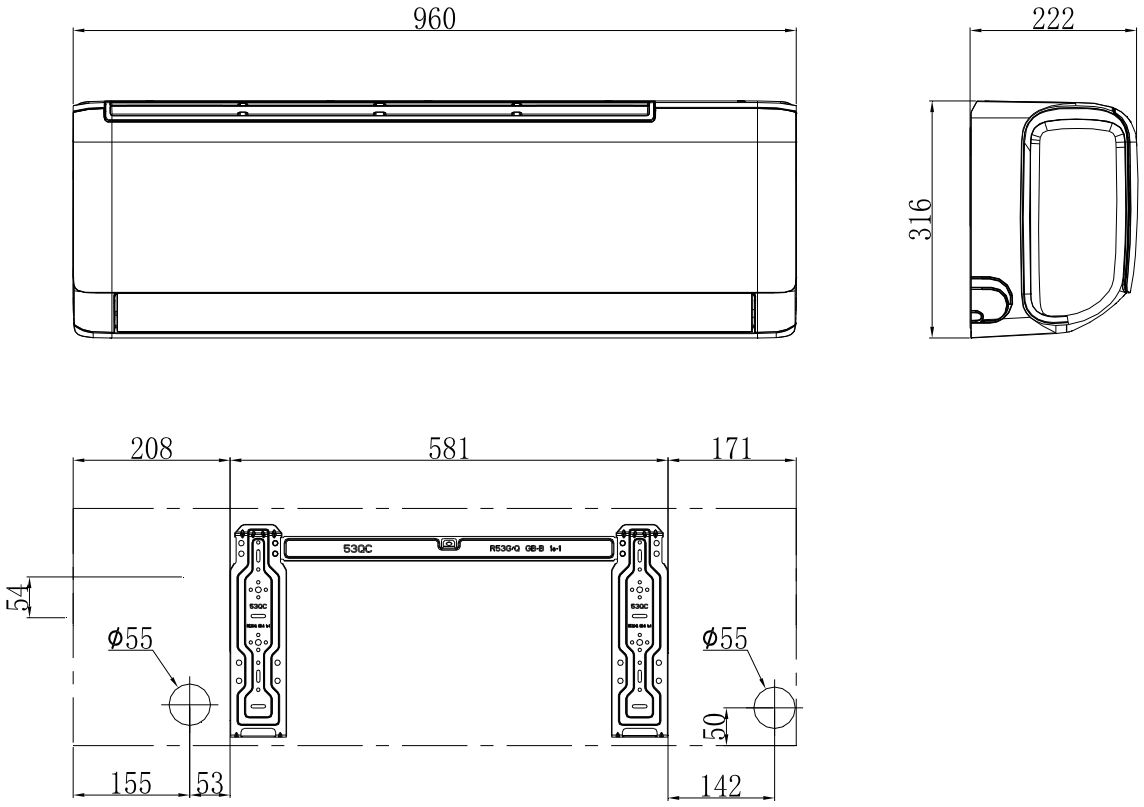
07K(AMWM-H07/4R3A(Q*))、09K(AMWM-H09/4R3A(Q*))、12K(AMWM-H12/4R3A(Q*)) :



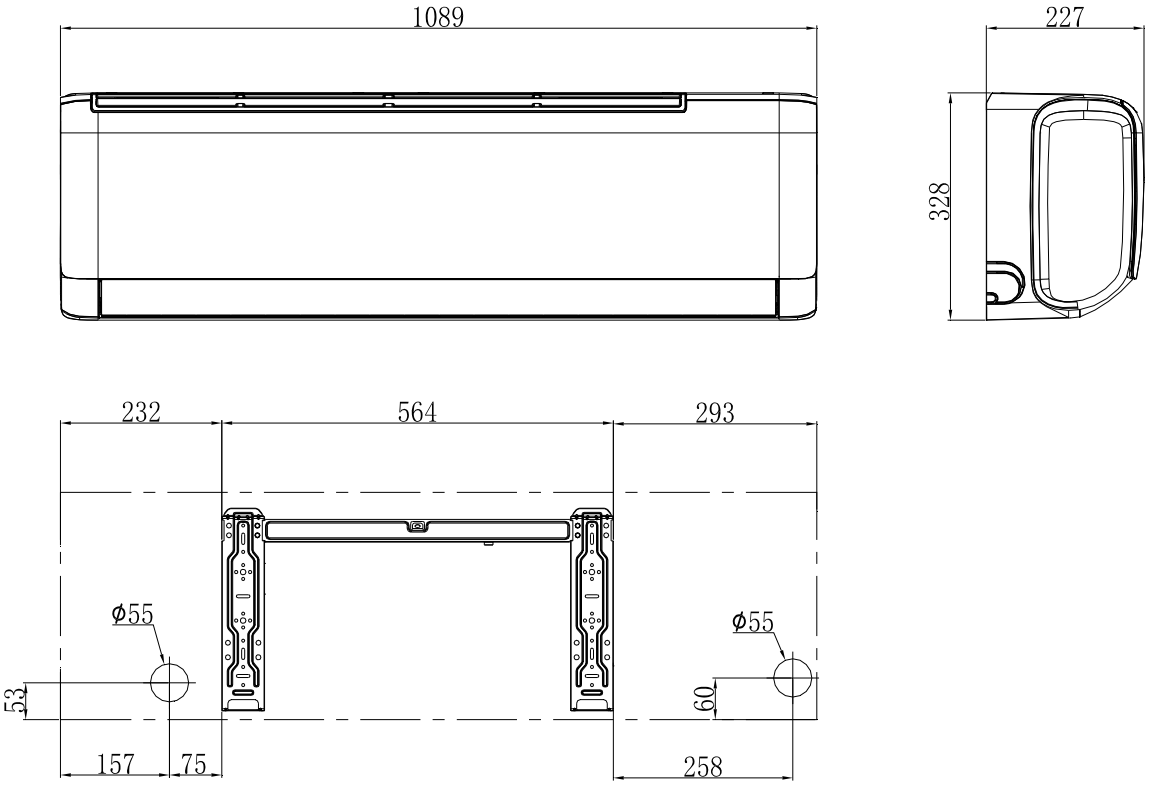
07K AMWM-H07/4R3B(Q*)、09K AMWM-H09/4R3B(Q*)



18K(AMWM-H18/4R3A(Q*)) :



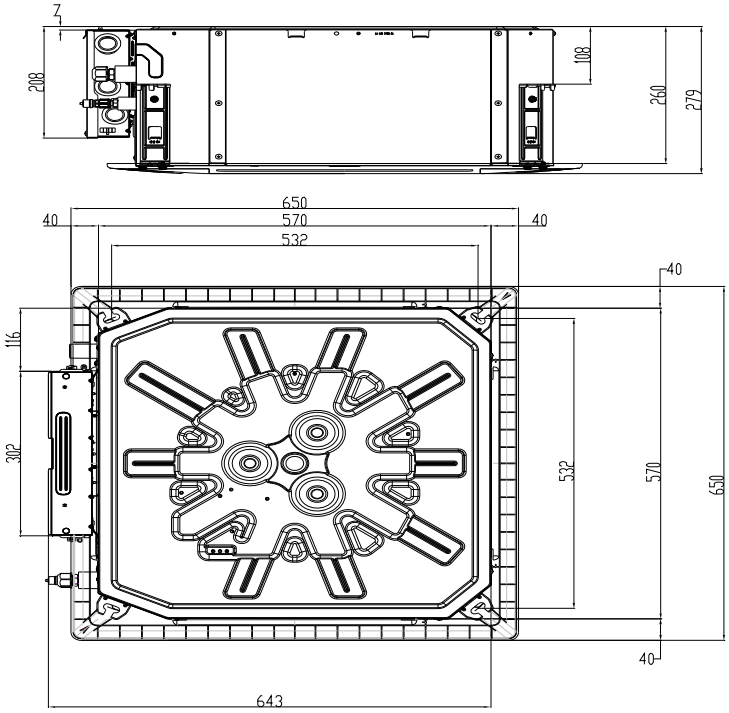
24K(AMWM-H24/4R3A(Q*)) :



2. Cassette

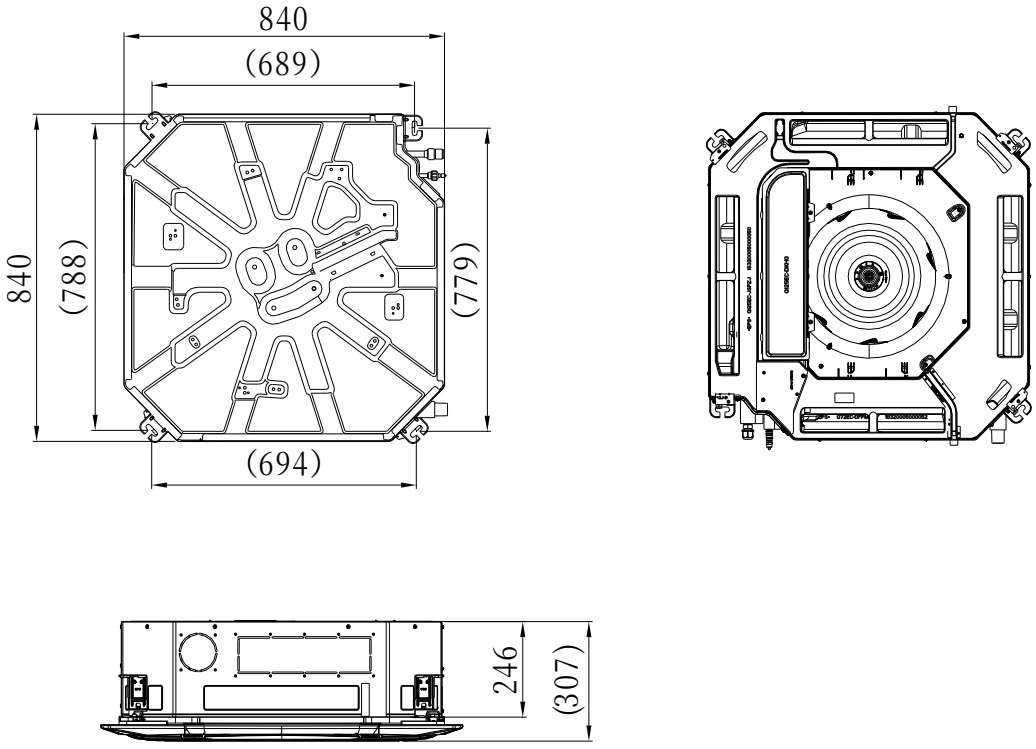
2.1 Compact cassette

09、12、18K (Y type):



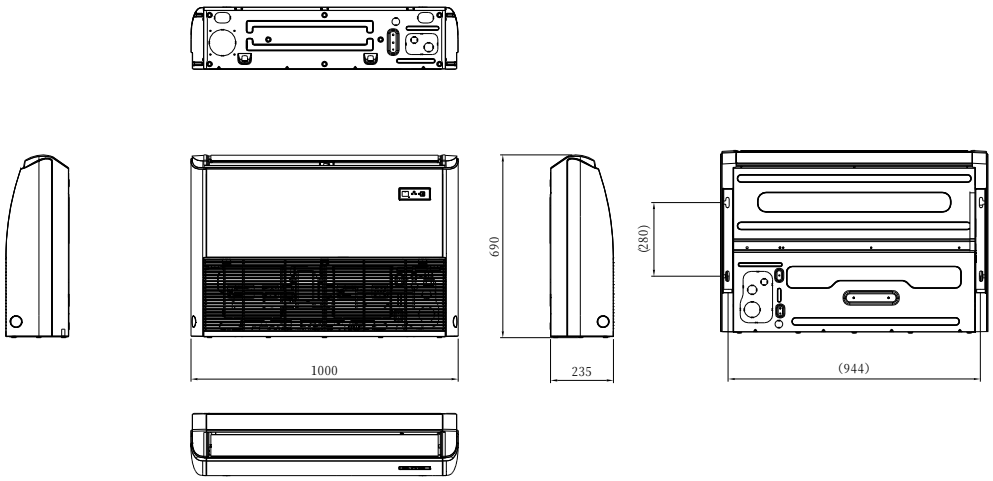
2.2 Round-flow cassette

24K(Y type)



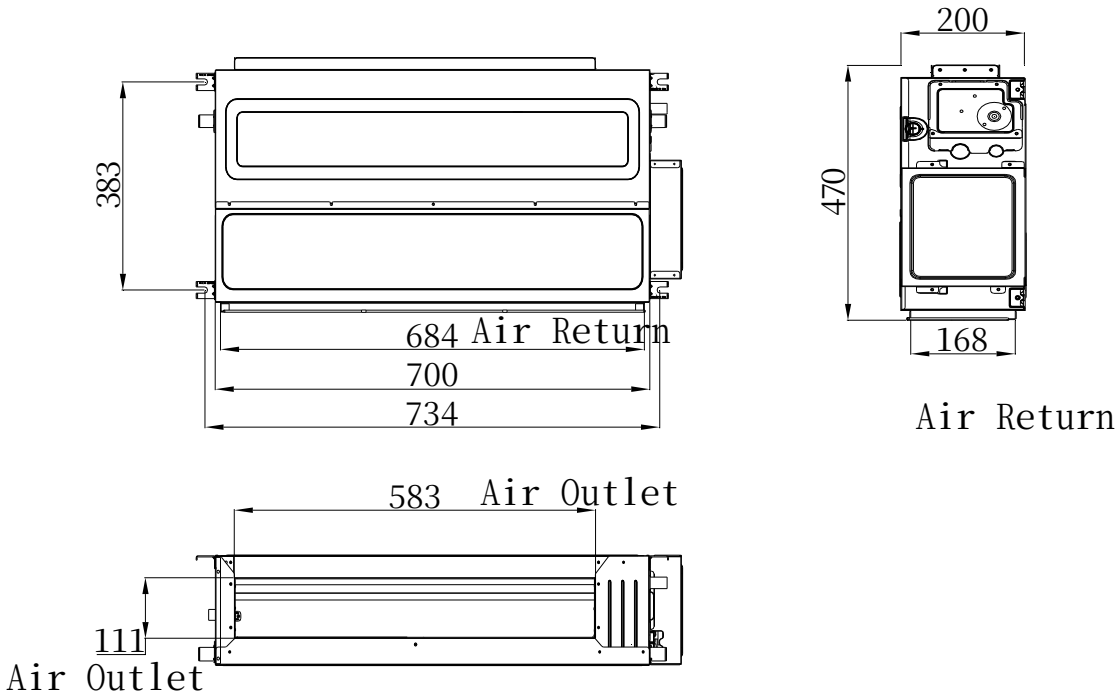
3.Ceiling Floor(F)

09K, 12K, 18K

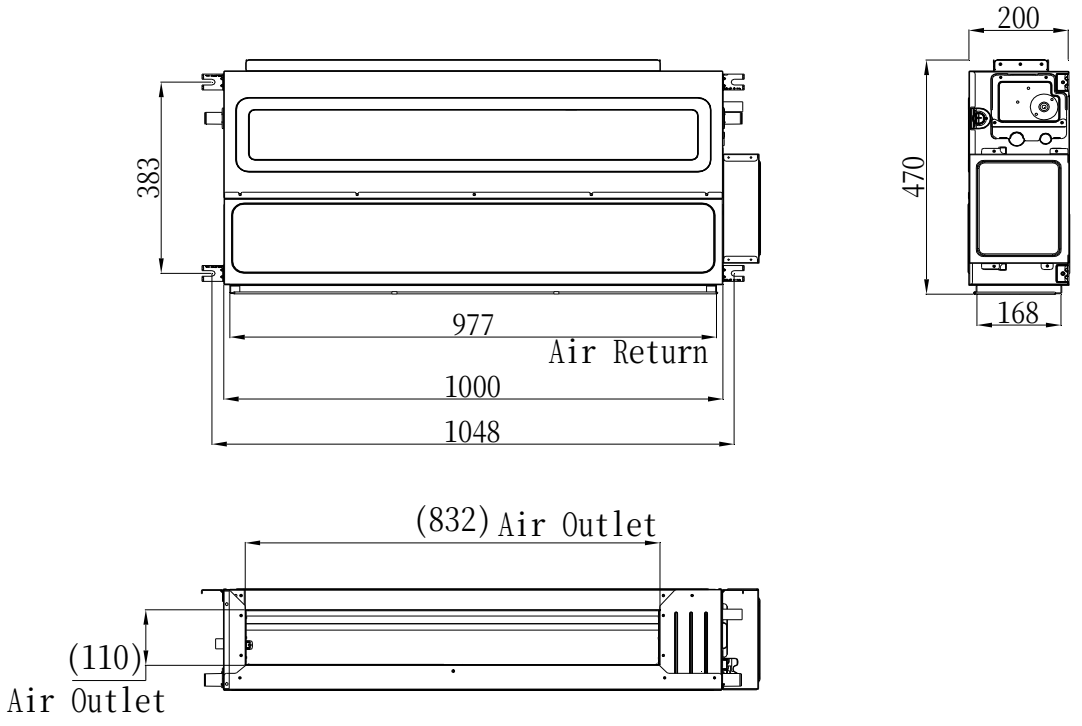


4. Duct

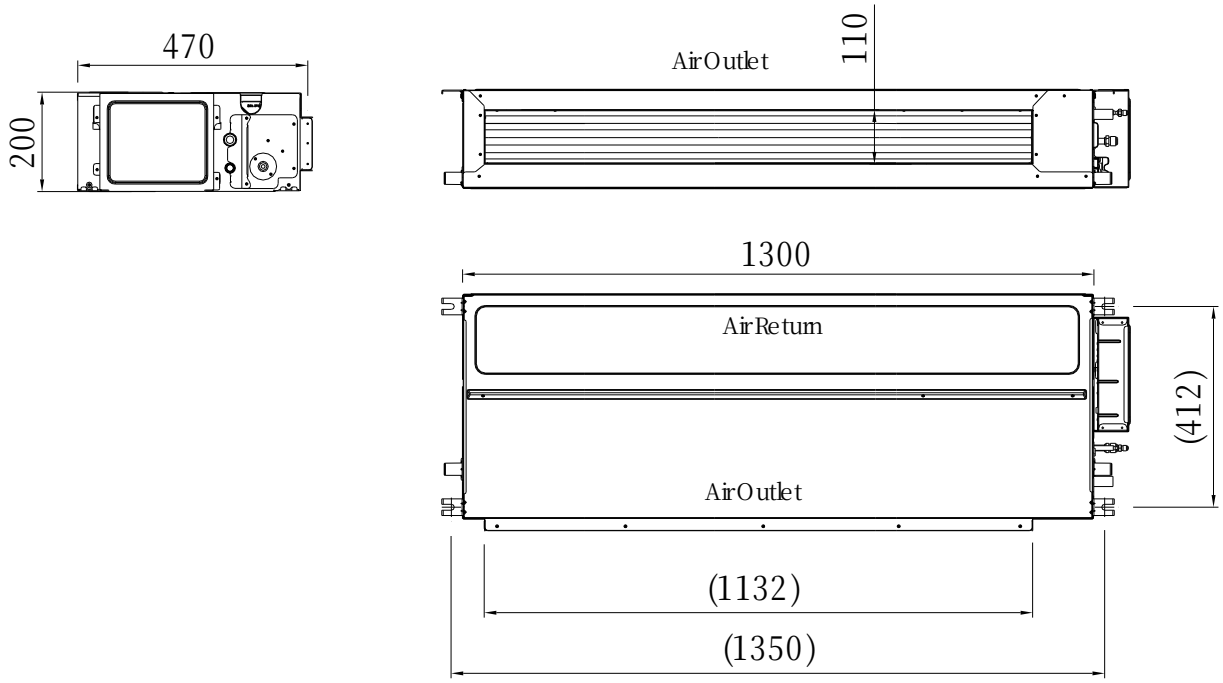
Y Type 07K 09K 12K


200
383
470
684 Air Return
700
734
168
Air Return
583 Air Outlet
111
Air Outlet

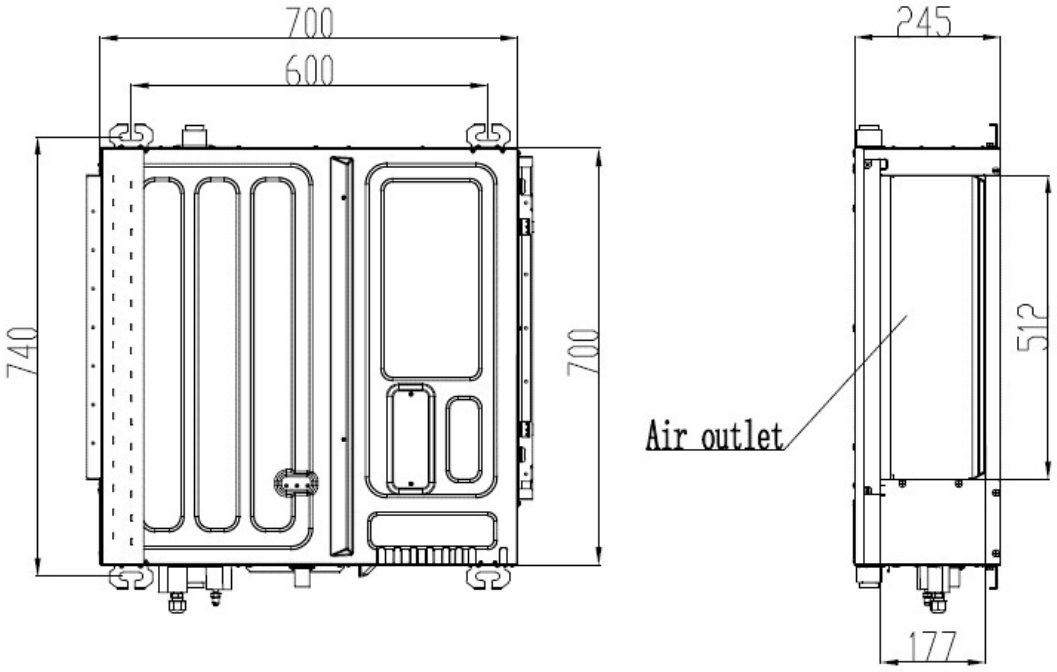
Y Type 18K


200
383
470
977
Air Return
1000
1048
168
(832) Air Outlet
(110)
Air Outlet

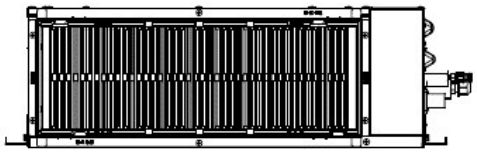
Y Type 24K



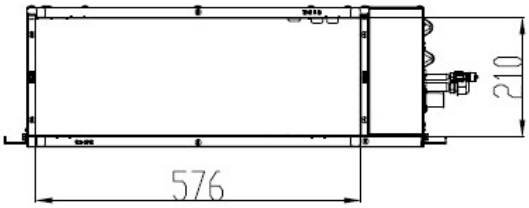
M Type 12K 18K



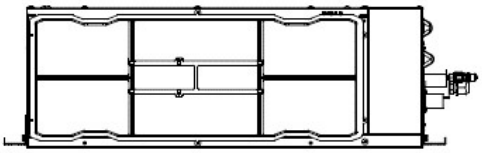
W-type filter



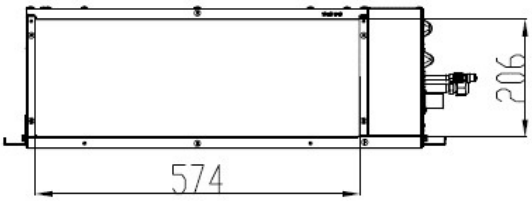
Air return (W-type filter)



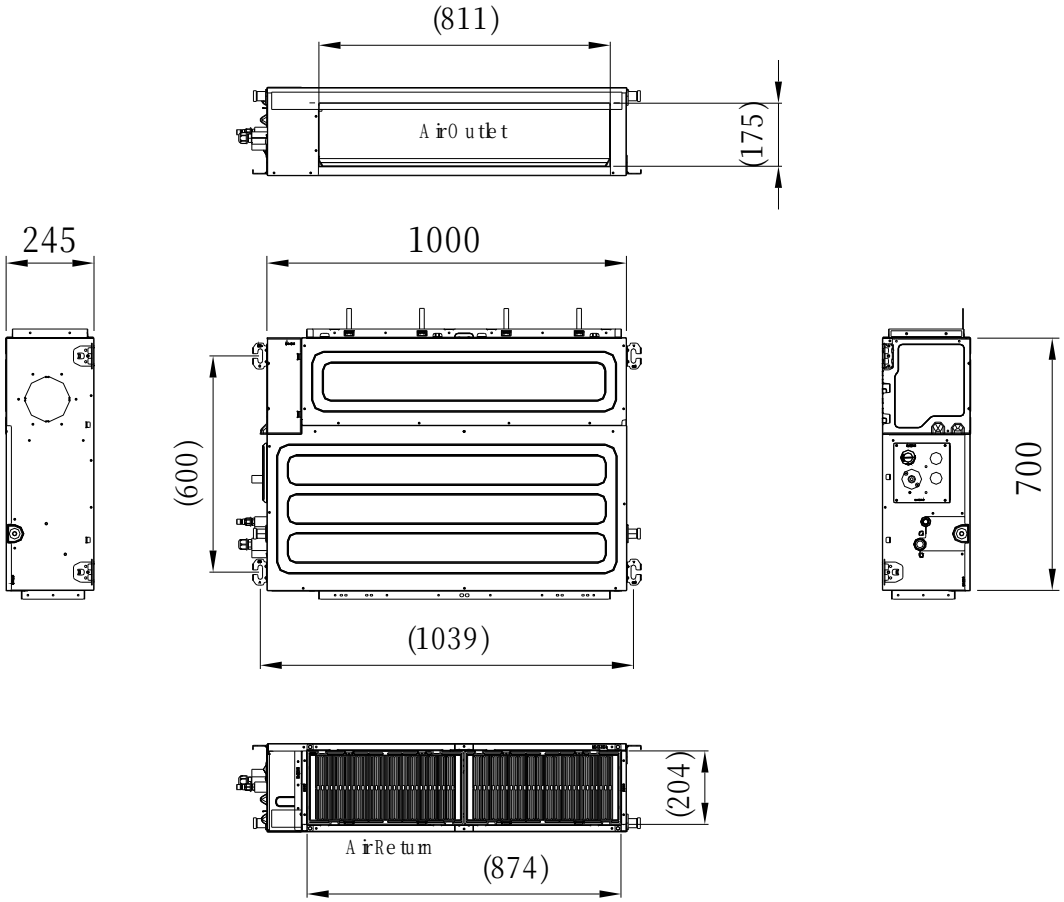
Nomal filter



Air return (Noaml filter)

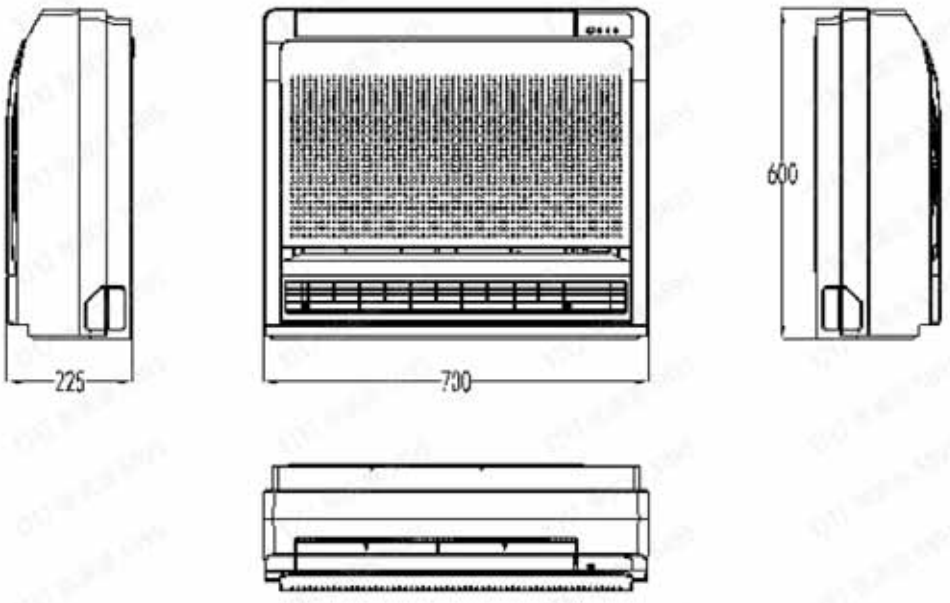


M Type 24K



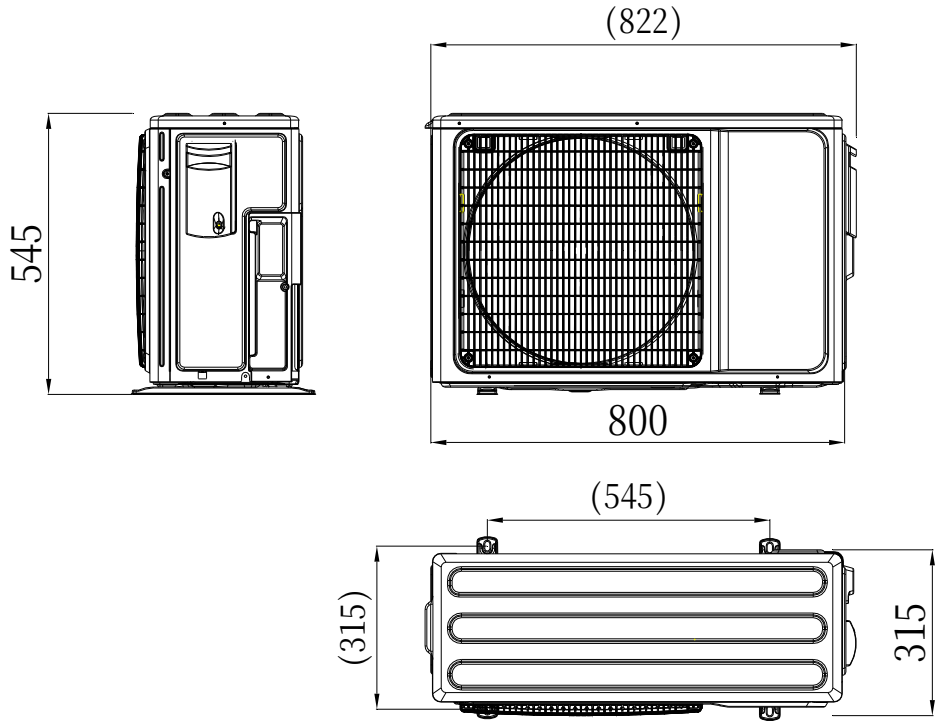
5. Console

AMCO-H09/4R3B、AMCO-H12/4R3B、AMCO-H16/4R3B

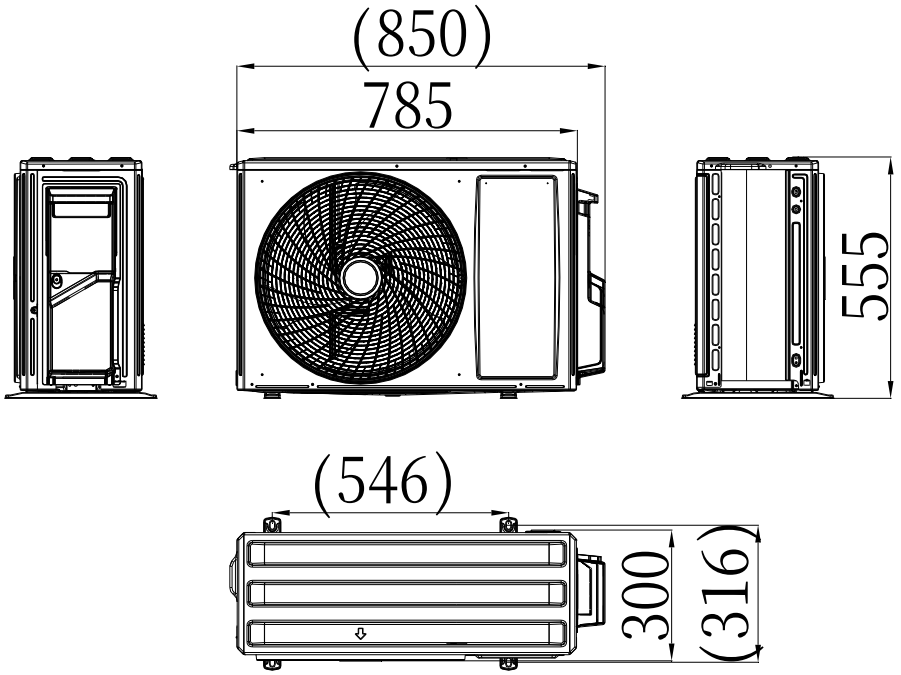


6. Outdoor Unit

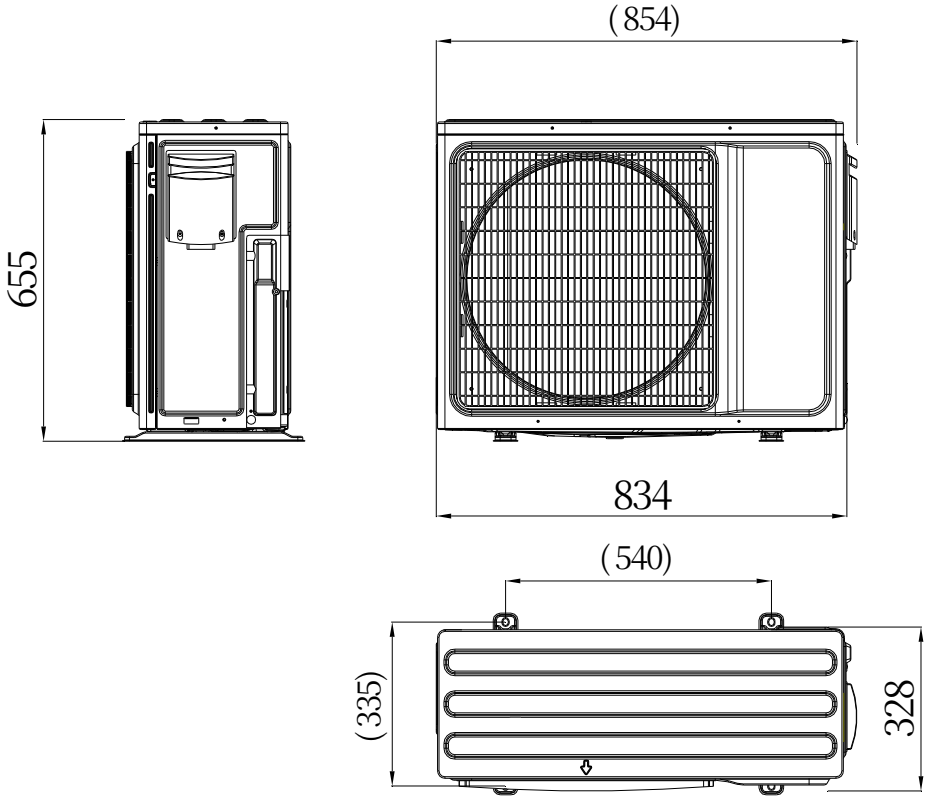
6.1 18K (AM2-H18/4DR3)



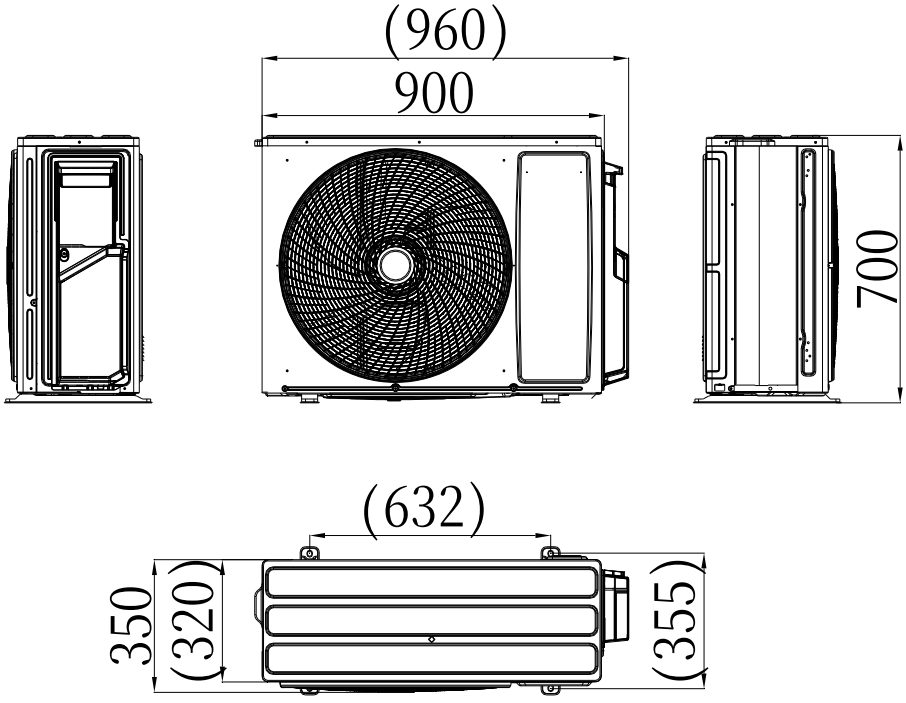
14K(AM2-H14/4DR3C)、18K(AM2-H18/4DR3C)



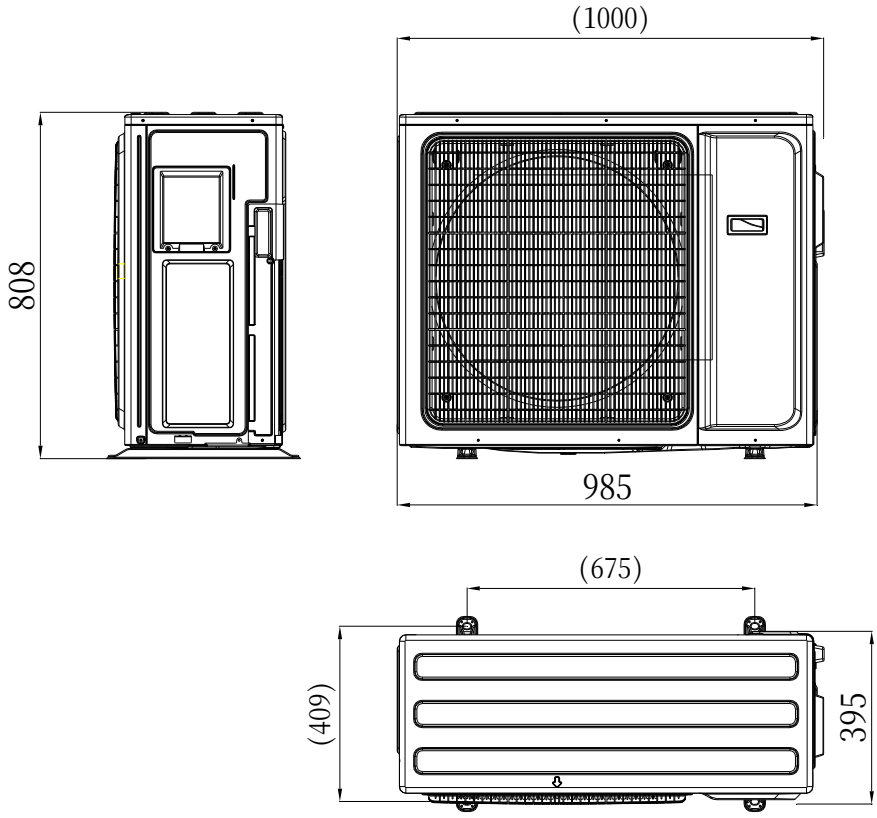
6.2 27K(AM2-H27/4DR3)



21K(AM3-H21/4DR3C)、27K(AM3-H27/4DR3C)



6.3 36K(AM4-H36/4DR3)、42K(AM5-H42/4DR3)



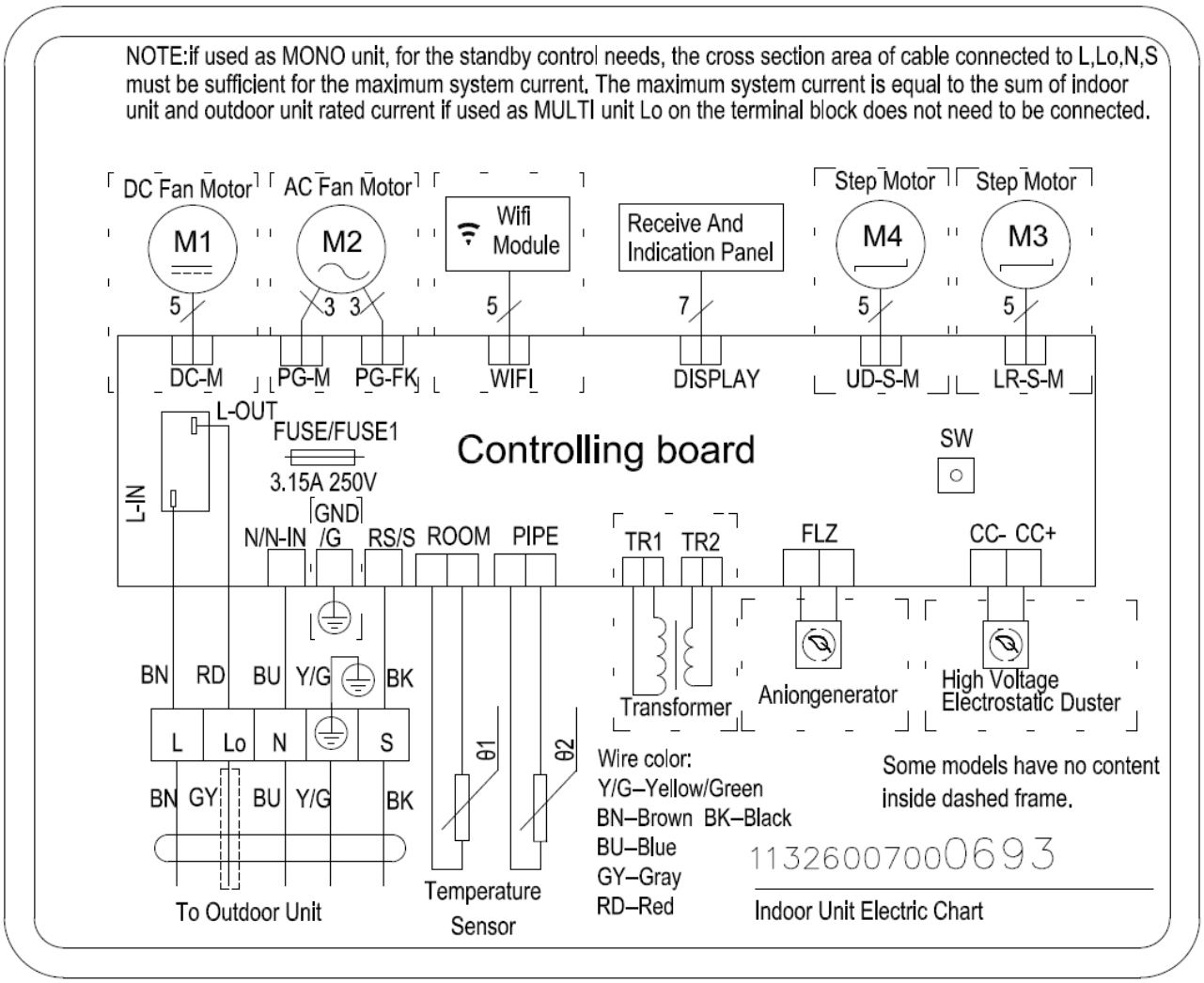
Part5 Electrical Principle Diagram

1. Wall Mounted

1.1 H Type& J Type

H Type: 18K: AMWM-H18/4R3A(H*)

J Type: 18K: AMWM-H18/4R3A(J*)



1.2 J Type& H Type& F Type& Q Type

J Type:07K: AMWM-H07/4R3A(J*); AMWM-H07/4R3C(J*)

09K: AMWM-H09/4R3A(J*); AMWM-H09/4R3C(J*)

12K: AMWM-H12/4R3A(J*); AMWM-H12/4R3C(J*)

18K: AMWM-H18/4R3C(J*); 24K: AMWM-H24/4R3A(J*)

H Type:07K: AMWM-H07/4R3A(H*); AMWM-H07/4R3C(H*)

09K: AMWM-H09/4R3A(H*); AMWM-H09/4R3C(H*)

12K: AMWM-H12/4R3A(H*); AMWM-H12/4R3C(H*)

18K: AMWM-H18/4R3C(H*);24K: AMWM-H24/4R3A(H*)

F Type:07K: AMWM-H07/4R3A(F*); AMWM-H07/4R3C(F*)

09K: AMWM-H09/4R3A(F*); AMWM-H09/4R3B(F*); AMWM-H09/4R3C(F*)

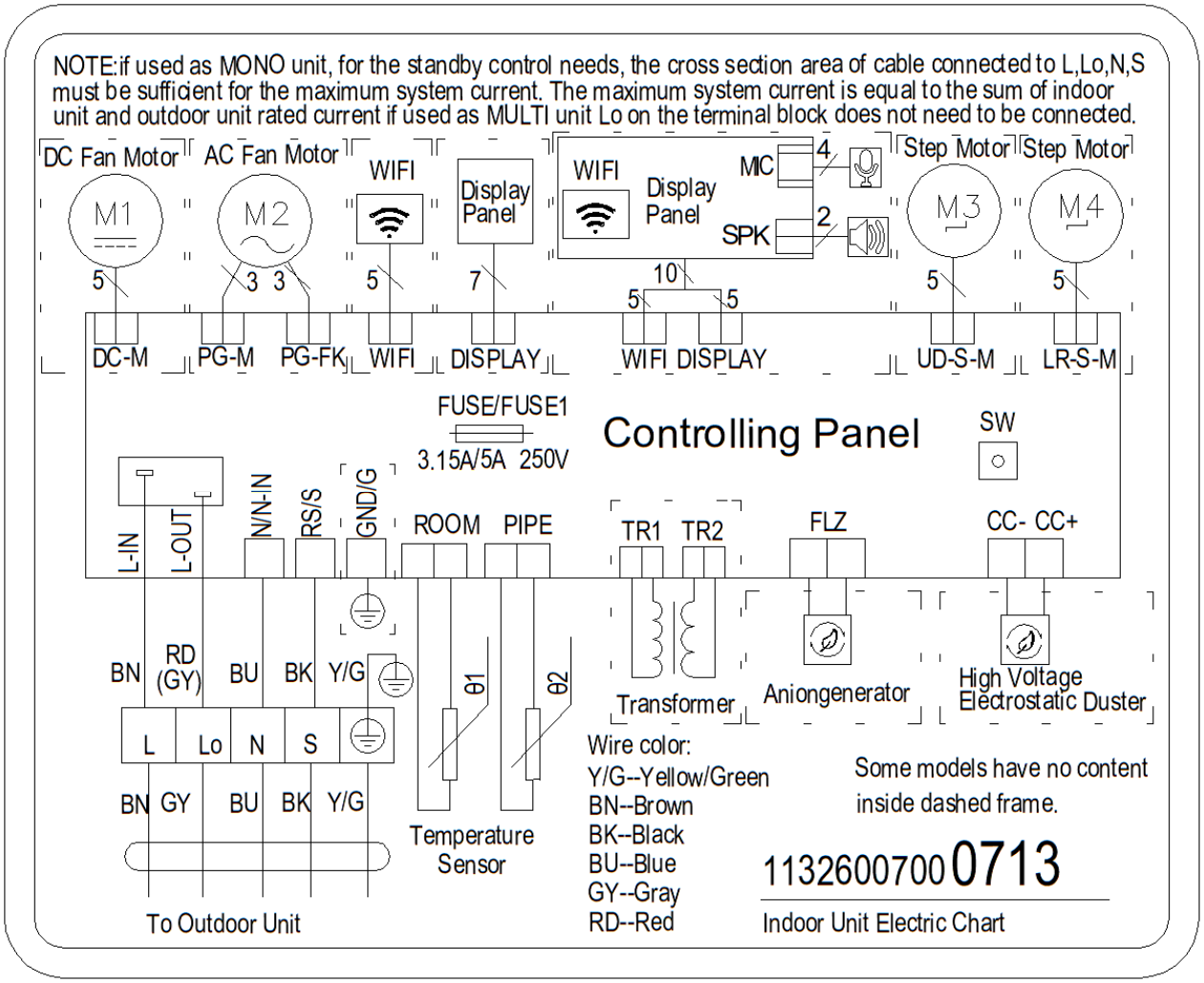
12K: AMWM-H12/4R3A(F*); AMWM-H12/4R3C(F*)

18K: AMWM-H18/4R3A(F*); AMWM-H18/4R3C(F*); 24K: AMWM-H24/4R3A(F*)

Q Type:07K: AMWM-H07/4R3A(Q*); AMWM-H07/4R3B(Q*)

09K: AMWM-H09/4R3A(Q*); AMWM-H09/4R3B(Q*)

12K: AMWM-H12/4R3A(Q*); 18K: AMWM-H18/4R3A(Q*); 24K: AMWM-H24/4R3A(Q*)



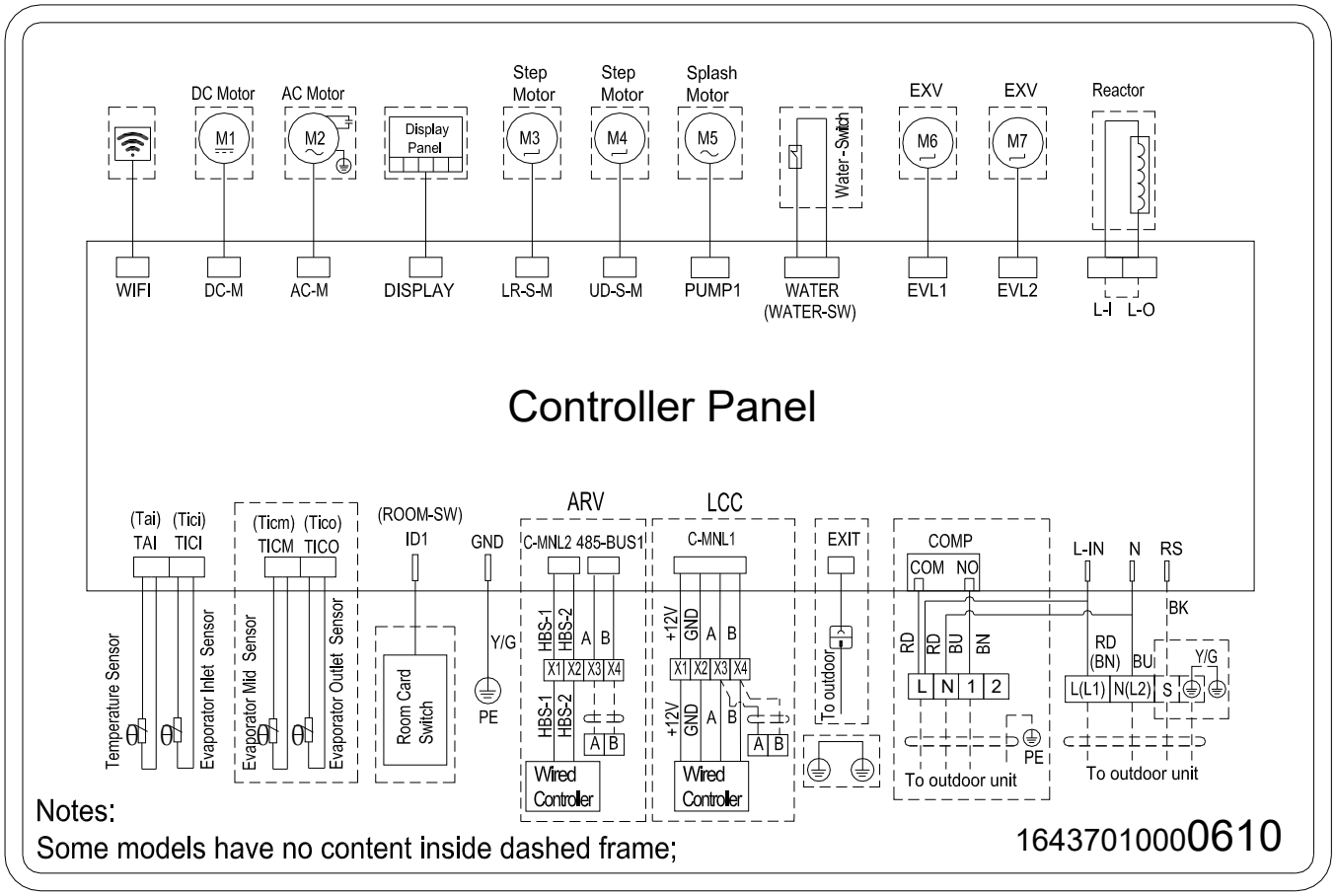
2. Cassette

2.1 Compact cassette（Y type）

09K: AMCA-H09/4R3YAA 12K: AMCA-H12/4R3YAA

18K: AMCA-H18/4R3YAA、AMCA-H18/4R3YA

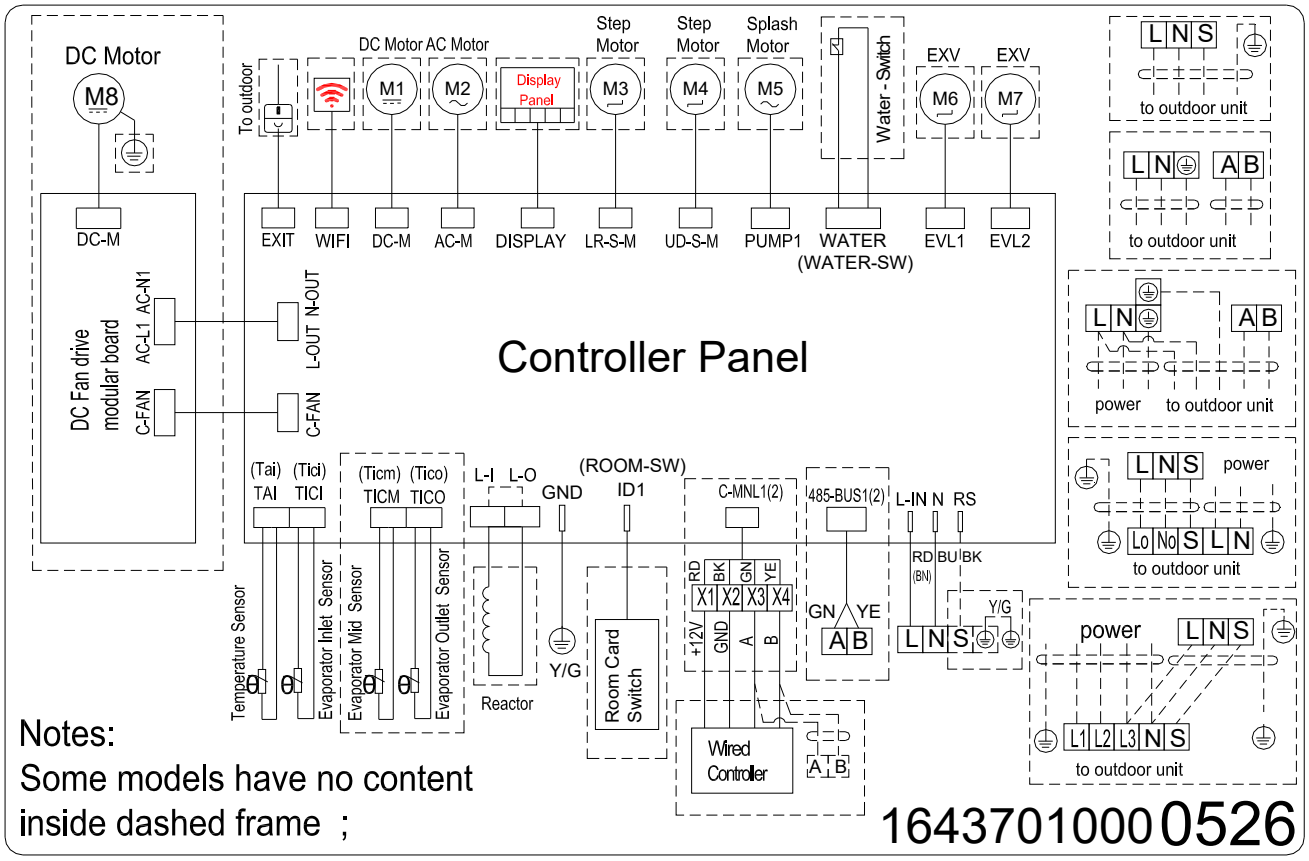
24K：AMCA-H24/4R3B



3. Ceiling Floor (F Type)

09k：AMCF-H09/4R3F、12k: AMCF-H12/4R3F

18k: AMCF-H18/4R3F



4. Duct

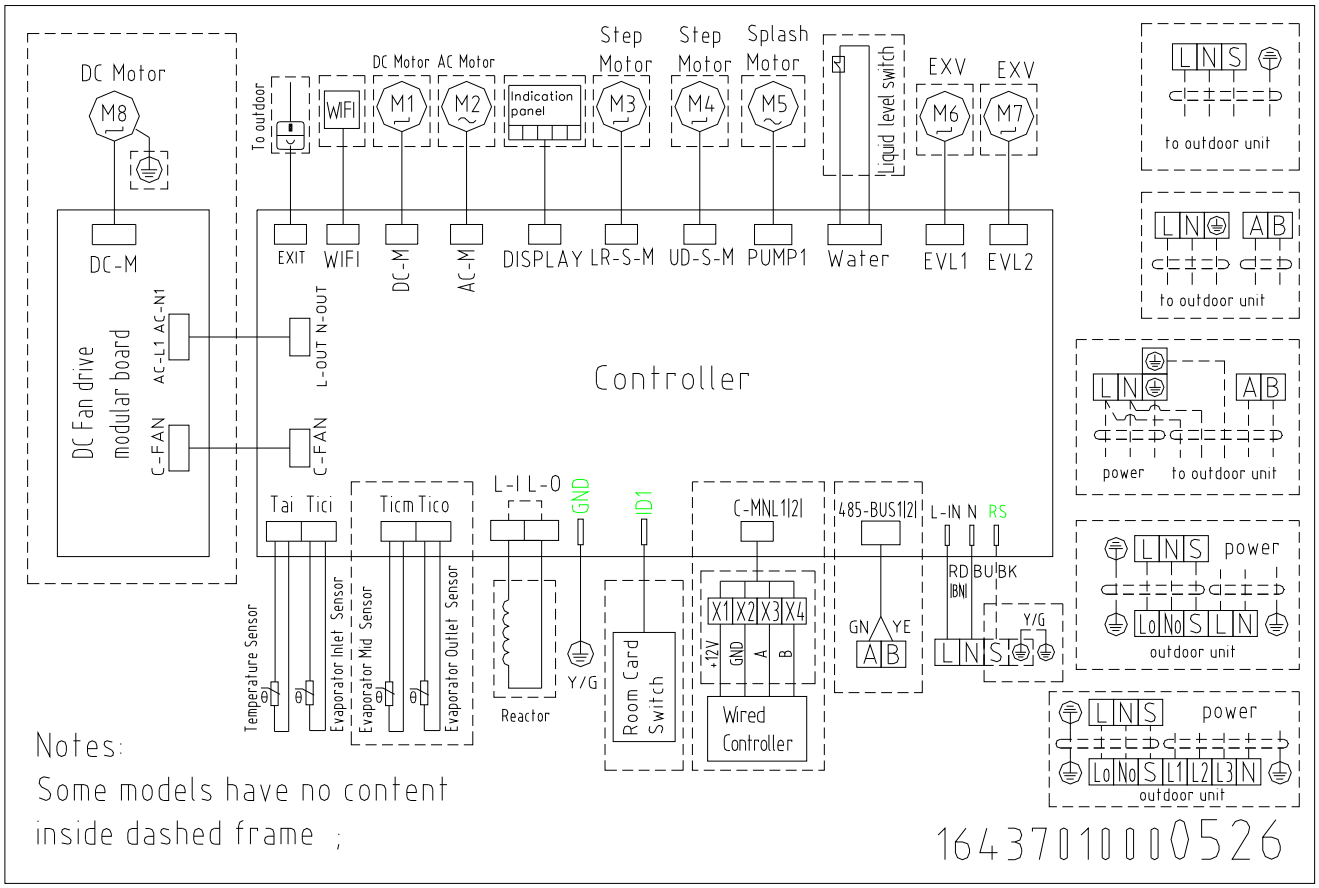
4.1 Compact cassette（Y type）

07K: AMSD-H07/4R3AA

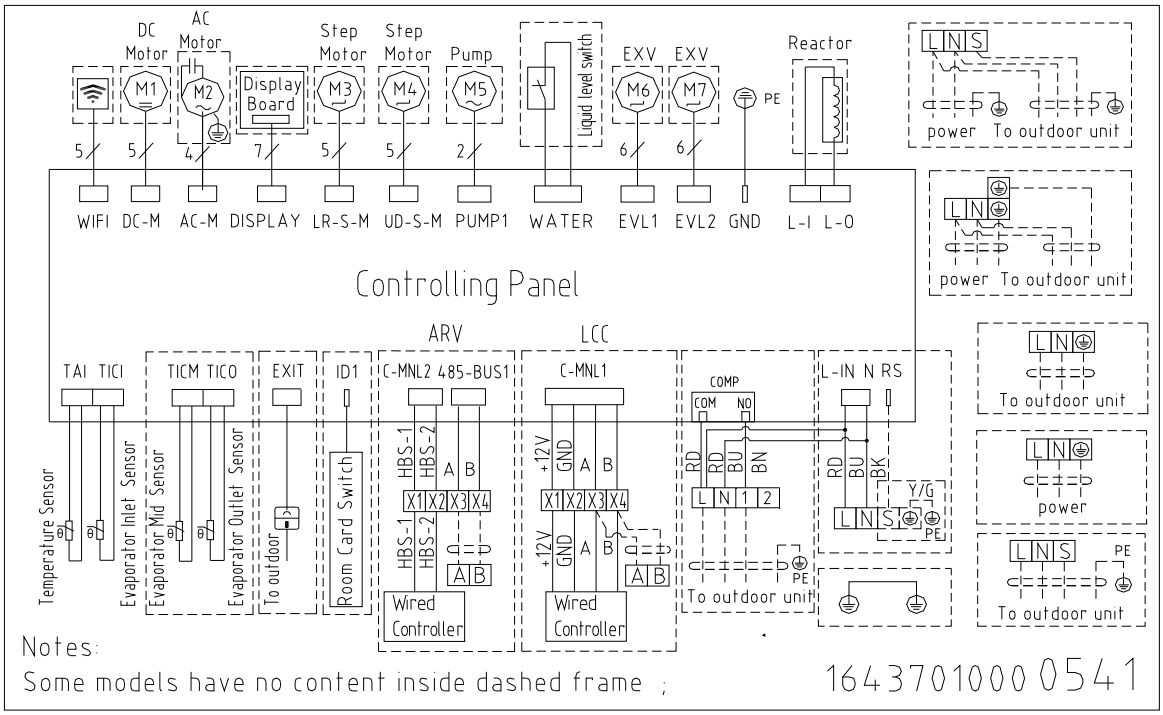
09K: AMSD-H09/4R3AA

12K: AMSD-H12/4R3AA

18K: AMSD-H18/4R3AA



24K：AMSD-H24/4R3AA

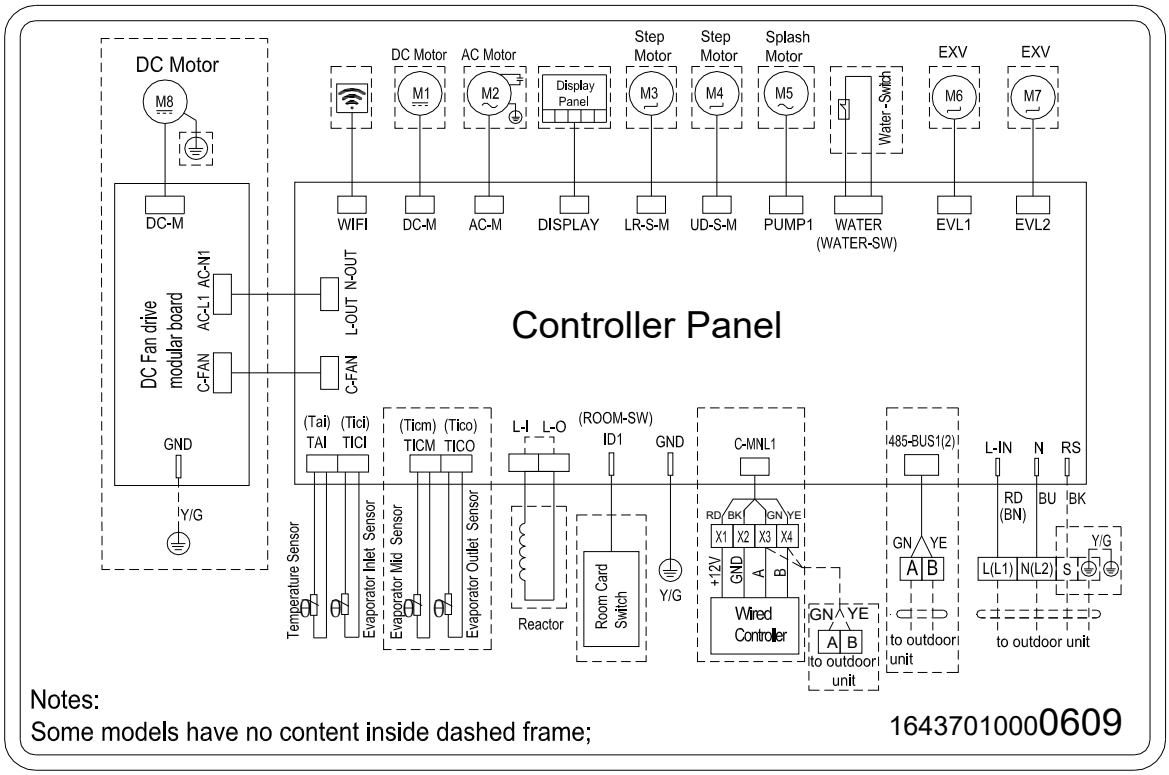


4.2 Compact cassette（M type）

12K: AUMD-H12/NDR3HM2B

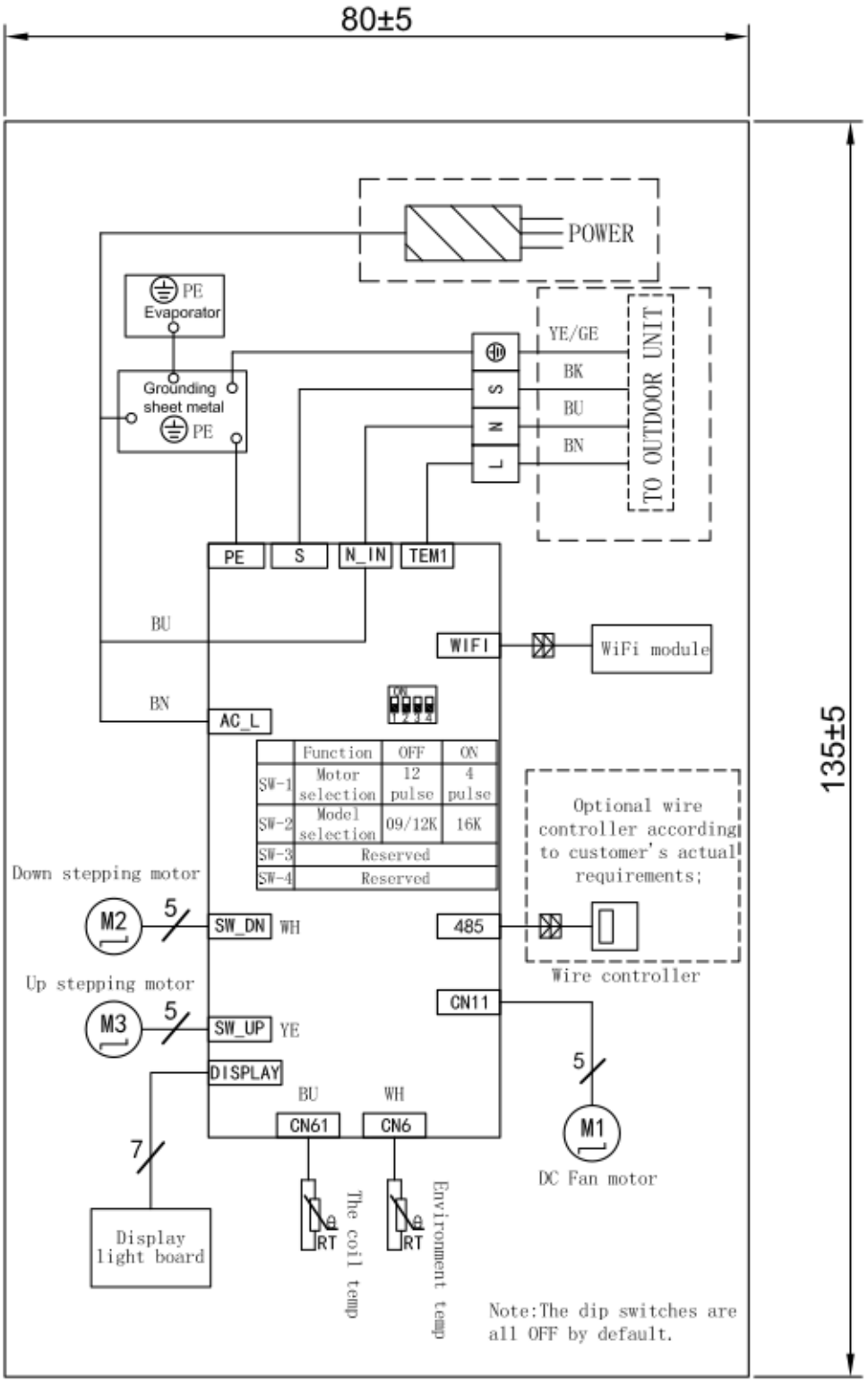
18K: AUMD-H18/NDR3HM2B

24K: AUMD-H24/NDR3HM2B



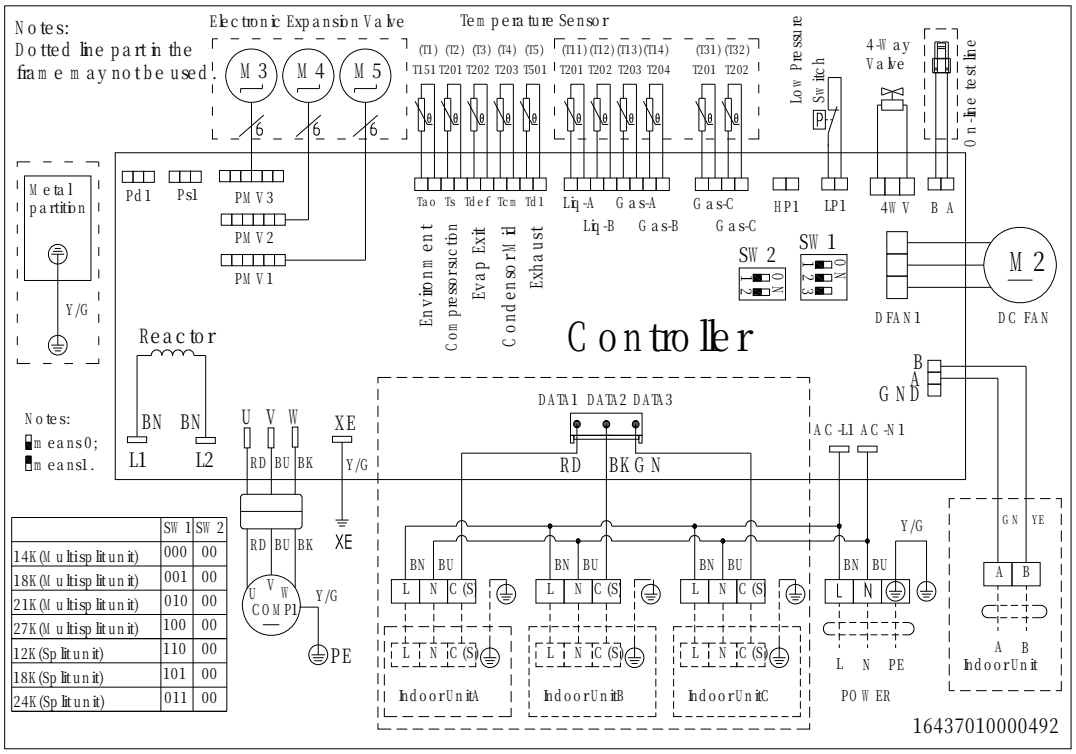
5. Console

AMCO-H09/4R3B、AMCO-H12/4R3B、AMCO-H16/4R3B



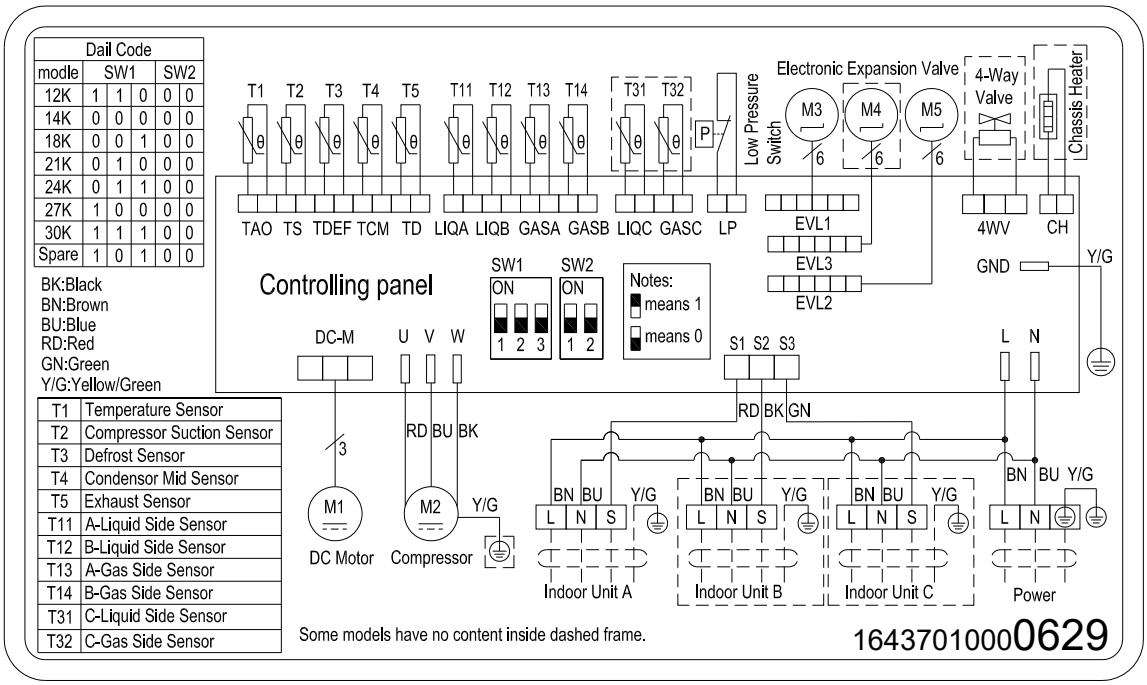
6. Outdoor Unit

18K(AM2-H18/4DR3)、27K(AM2-H27/4DR3)

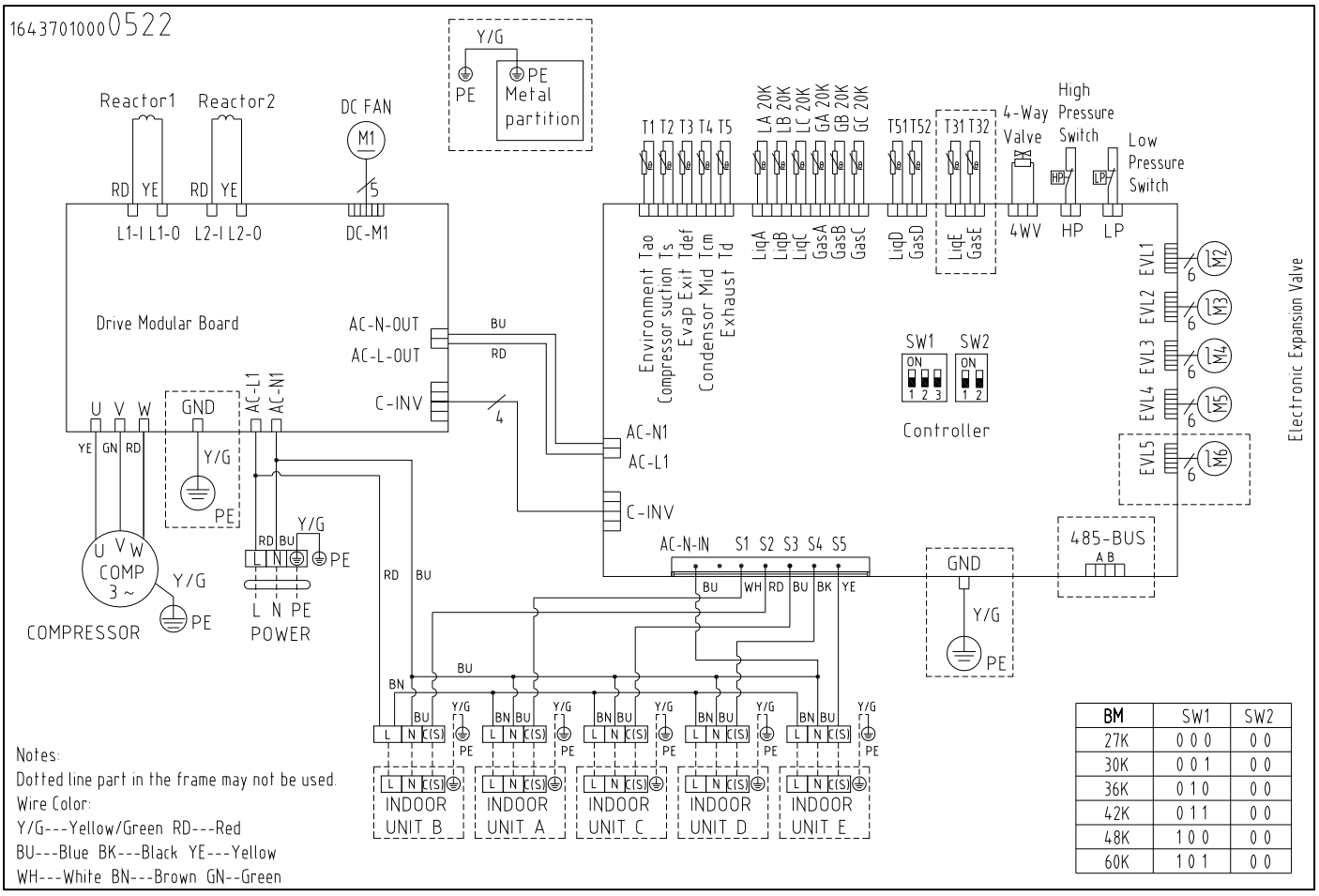


	SW1	SW2
14K(Multisplit unit)	000	00
18K(Multisplit unit)	001	00
21K(Multisplit unit)	010	00
27K(Multisplit unit)	100	00
12K(Split unit)	110	00
18K(Split unit)	101	00
24K(Split unit)	011	00

14K(AM2-H14/4DR3C)、18K(AM2-H18/4DR3C)、21K(AM3-H21/4DR3C)、27K(AM3-H27/4DR3C)



36K： AM4-H36/4DR3 42K： AM5-H42/4DR3



Notes:
Dotted line part in the frame may not be used.
Wire Color:
Y/G---Yellow/Green RD---Red
BU---Blue BK---Black YE---Yellow
WH---White BN---Brown GN--Green

BM	SW1	SW2
27K	0 0 0	0 0
30K	0 0 1	0 0
36K	0 1 0	0 0
42K	0 1 1	0 0
48K	1 0 0	0 0
60K	1 0 1	0 0

Part6 Capacity Amendment

1. Operation range

Cooling capacity (KBtu/h)		14K	18K	21K	27K	36K	42K
Power supply		220-240V~/50Hz					
Voltage		187~253V					
Ambient temperature	Cooling	-10~52℃					
	Heating	-15~24℃					

2. Capacity amendment of different ambient temperature

2.1 Amendment coefficient of Cooling capacity under different indoor/outdoor DB/WB temperature K1

IDU temp.℃		Outdoor air inlet DB temperature℃											
DB	WB	-15	-10	0	10	16	25	30	35	40	43	48	52
23	16	1.26	1.19	1.12	1.08	1.05	1	0.95	0.90	0.87	0.85	0.82	0.77
25	18	1.28	1.26	1.19	1.12	1.08	1.05	1	0.95	0.90	0.87	0.85	0.82
27	19	1.30	1.28	1.26	1.19	1.12	1.08	1.05	1	0.95	0.90	0.87	0.85
28	20	1.33	1.30	1.28	1.26	1.19	1.12	1.08	1.05	1	0.95	0.90	0.87
30	22	1.5	1.33	1.30	1.28	1.26	1.19	1.12	1.08	1.05	1	0.95	0.90
32	24	1.7	1.5	1.33	1.30	1.28	1.26	1.19	1.12	1.08	1.05	1	0.95

Actual cooling capacity calculation:

Actual cooling capacity=amendment coefficient of cooling capacity × nominal cooling capacity

——Amendment coefficient of cooling capacity could be found from table above.

Amendment coefficient of Heating capacity under different indoor/outdoor DB/WB temperature K2

IDU temp.℃	Outdoor air inlet DB temperature℃								
DB	-15	-10	-5	0	7	10	15	20	24
16	0.93	0.97	1	1.06	1.08	1.1	1.14	1.2	1.25
18	0.87	0.93	0.97	1	1.06	1.08	1.1	1.14	1.2
20	0.8	0.87	0.93	0.97	1	1.06	1.08	1.1	1.14
22	0.71	0.8	0.87	0.93	0.97	1	1.06	1.08	1.1
24	0.62	0.71	0.8	0.87	0.93	0.97	1	1.06	1.08

Actual heating capacity calculation:

Actual heating capacity=amendment coefficient of heating capacity × nominal heating capacity

——amendment coefficient of heating capacity could be found from table above.

3. Long piping length

Cooling capacity (KBtu/h)		14K	18K	21K	27K	36K	42K
Connection Pipe(mm)	Liquid pipe	Φ6.35*2		Φ6.35*3		Φ6.35*4	Φ6.35*5
	Gas pipe	Φ9.52*2		Φ9.52*3		Φ9.52*4	Φ9.52*5
Max. length for all rooms (m)		40		60		80	
Max. length for one IU (m)		25		30		35	
Max. height difference between IU and OU (m)		15					
Max. height difference between IUs (m)		10					

Caution:

1. The standard Pipe length is 5m, if the pipe length is less than this then no additional charging is necessary. If the pipe length is more than this then you should charge more refrigerant into the system according to the above Charging Data

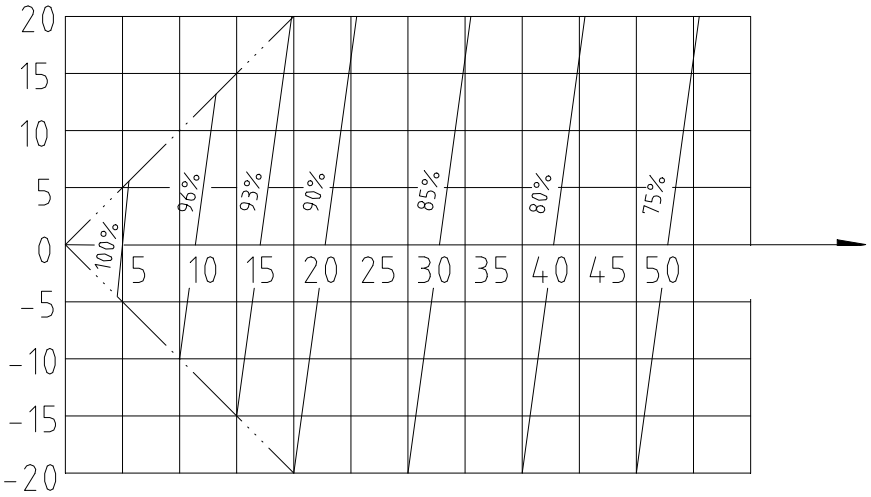
2. The thickness of the pipe is 0.6-1.0, bearing pressure is 4.2MPa;

3. If the connection pipe is too long, the cooling capacity and stability would be decreased. And the more bend quantity, the resistance in the piping system would be bigger, then the cooling and heating capacity would be decreased even lead to compressor broken. We suggest you to use the shortest connection pipe according to the pipe length parameter in this manual. If the height difference between outdoor and indoor unit is more than 5m, an oil trap should be installed in the gas pipe for every 10 meters.

4. Capacity amendment of different piping length

Amendment coefficients of heating and cooling capacity under different height drop K3

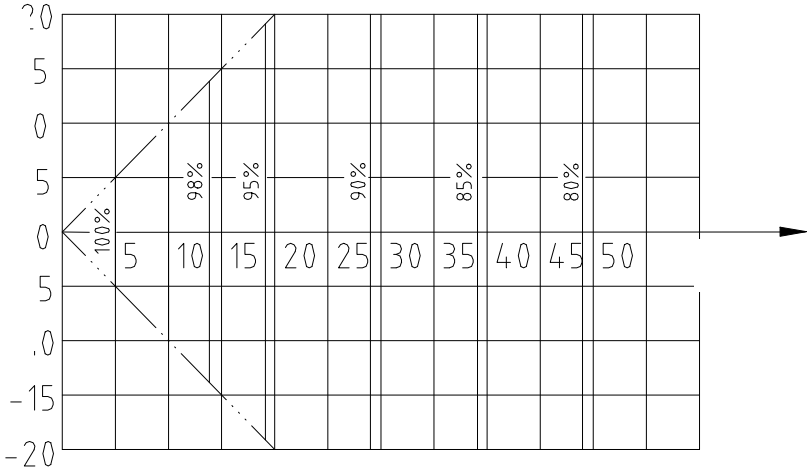
Different Cooling Capacity modified coefficients at different height:



Note:

H = Height of Outdoor Unit — Height of Indoor Unit

Different Heating Capacity modified coefficients at different height:



Note:

H = Height of Outdoor Unit — Height of Indoor Unit

4.2 Correction capability

Cooling capacity = Rated cooling capacity xK1xK3

Heating capacity = Rated heating capacity xK2xK3

5. Equivalent Pipe length conversion

Equivalent pipe length means converting pipe elbow to straight pipe length after considerate the pressure loss.

Bend and Oil Loop Conversion tablet

Type / Pipe Dia.(mm)	Bend（m）	Oil Loop(m)
6.35	0.10	0.7
9.52	0.18	1.3
12.70	0.20	1.5
15.88	0.25	2.0
19.05	0.35	2.4
22.02	0.40	3.0

Equivalent Pipe length L＝Actual Pipe length L+ Bend Qty× Equivalent pipe bend length+ Oil Loop Qty × Equivalent Oil Loop length

Note:

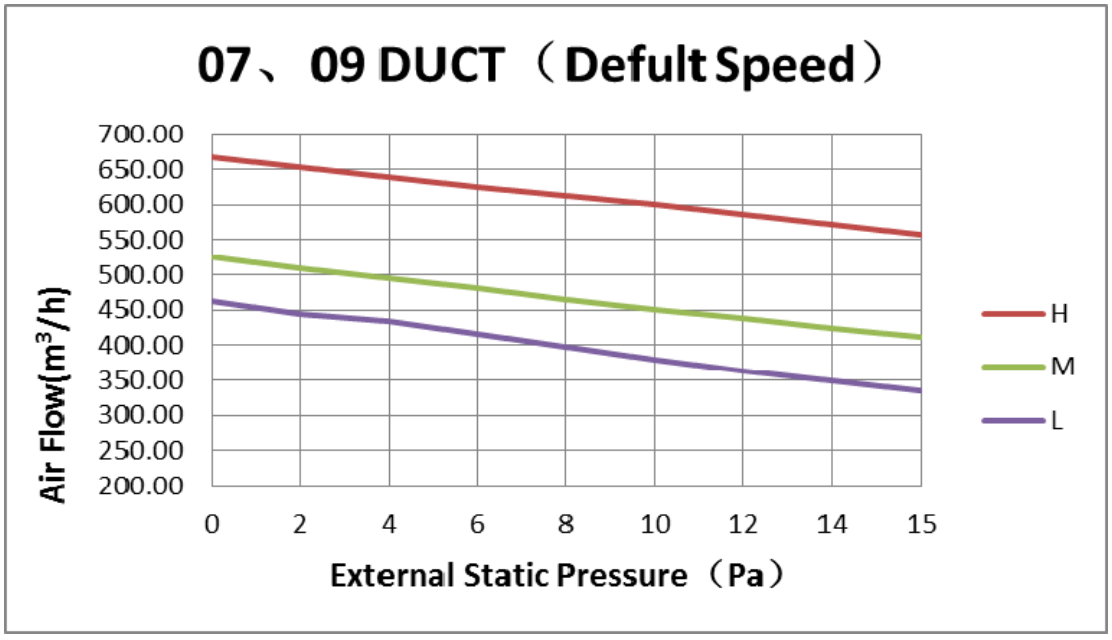
If there is relatively level difference of indoor and outdoor unit, S-shaped oil trap must be installed every 8~10m for vertical pipe.

Part7 Static pressure curve

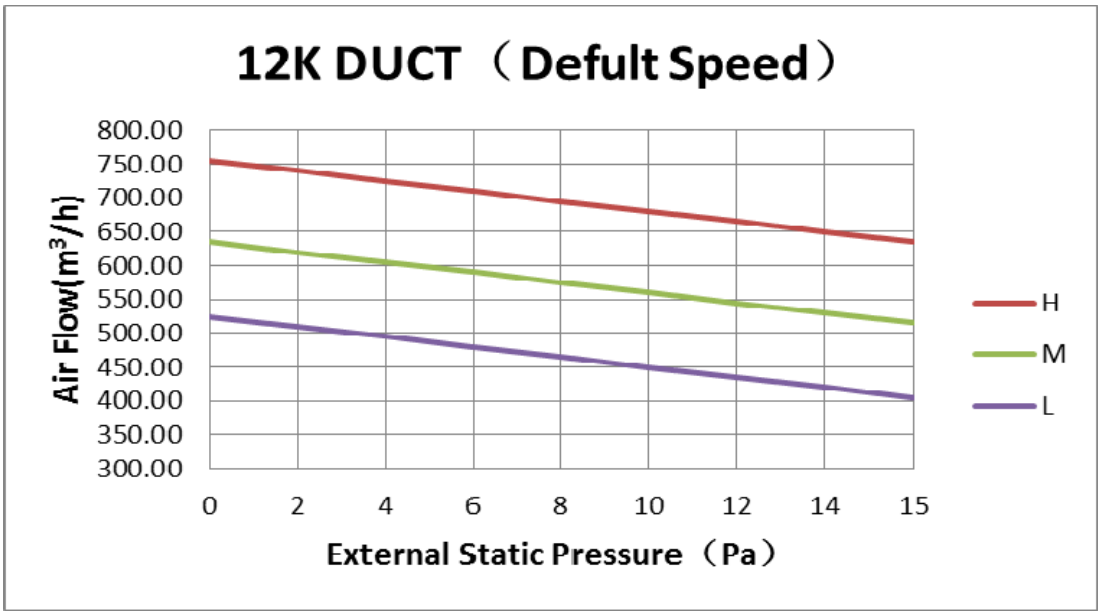
7.1 Default & optional ESP

Models	Default ESP		Optional ESP	
	Value	Remark	Value	Remark
AMSD-H07/4R3AA	10Pa	Parameter0602	30Pa	Parameter0606
AMSD-H09/4R3AA	10Pa	Parameter0603	30Pa	Parameter0607
AMSD-H12/4R3AA	10Pa	Parameter0604	30Pa	Parameter0608
AMSD-H18/4R3AA	10Pa	Parameter0605	30Pa	Parameter0609
AMSD-H24/4R3AA	10Pa	Parameter0610	30Pa	Parameter0611

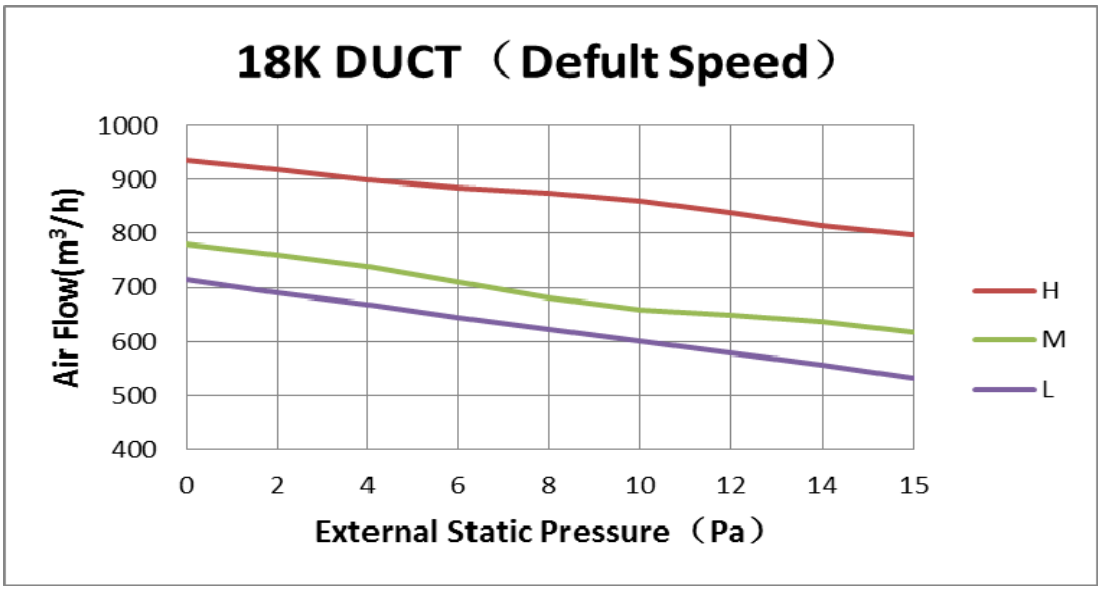
7.2. 07K,09K(Y-TYPE)



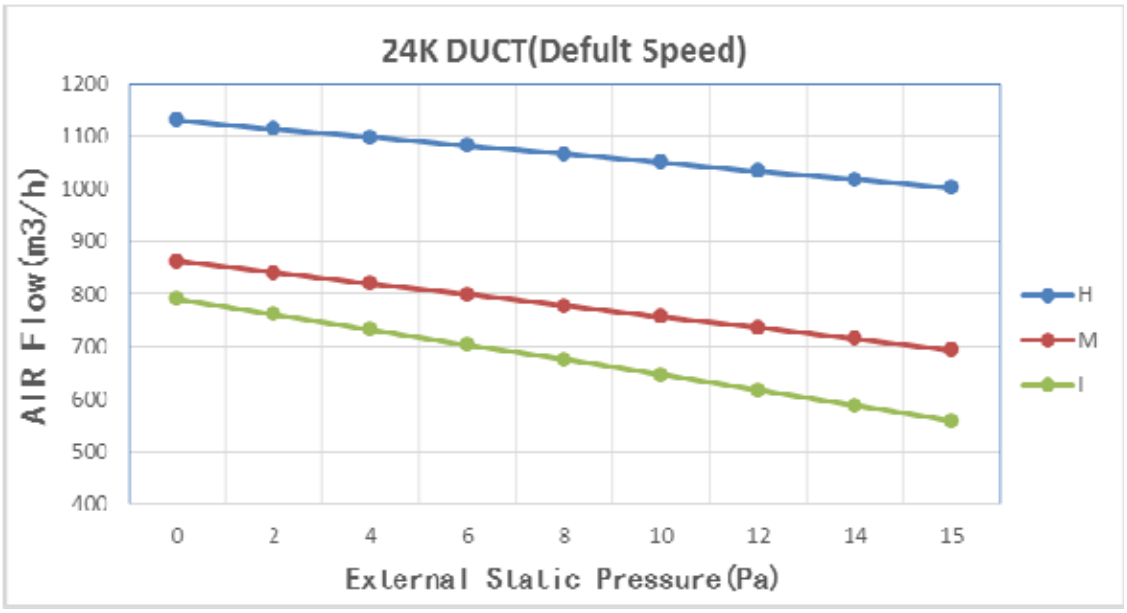
7.3 12K(Y-TYPE)



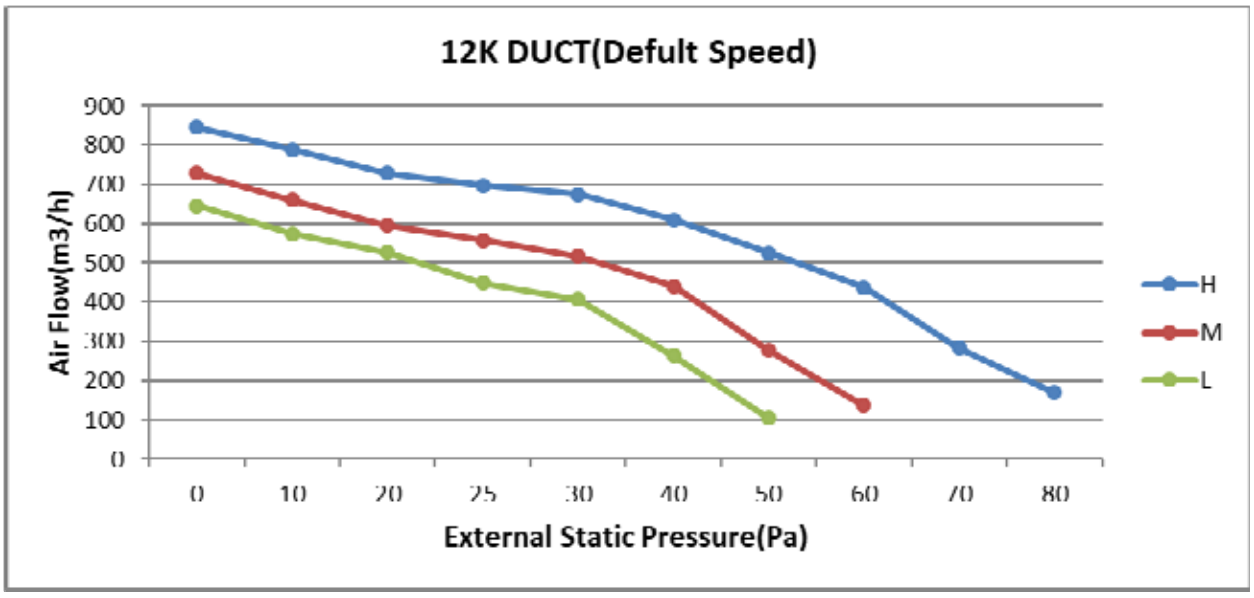
7.4 18K(Y-TYPE)



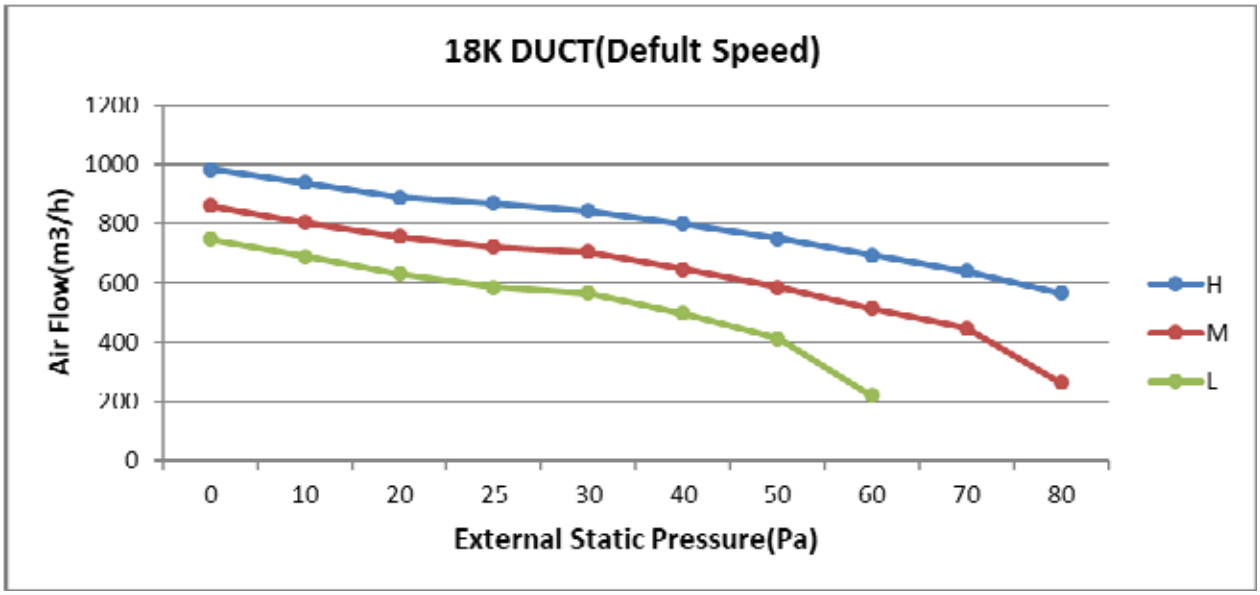
7.5 24K(Y-TYPE)



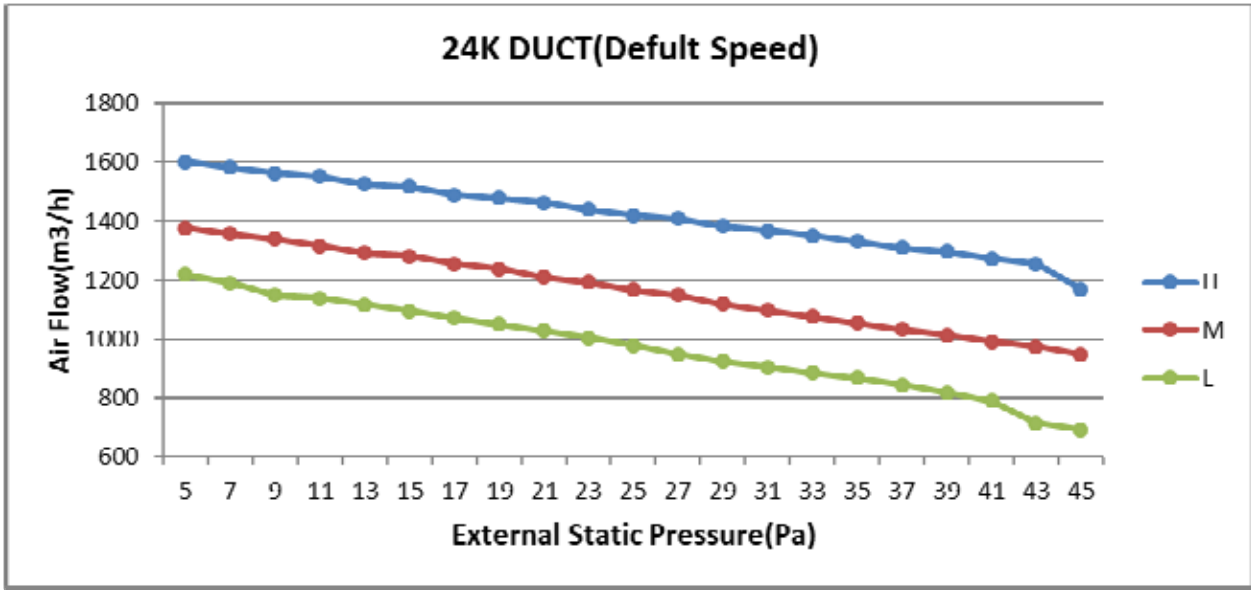
7.6 12K(M-TYPE)



7.7 18K(M-TYPE)

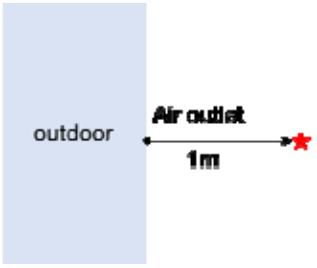


7.8 24K(M-TYPE)



Part8 Sound level

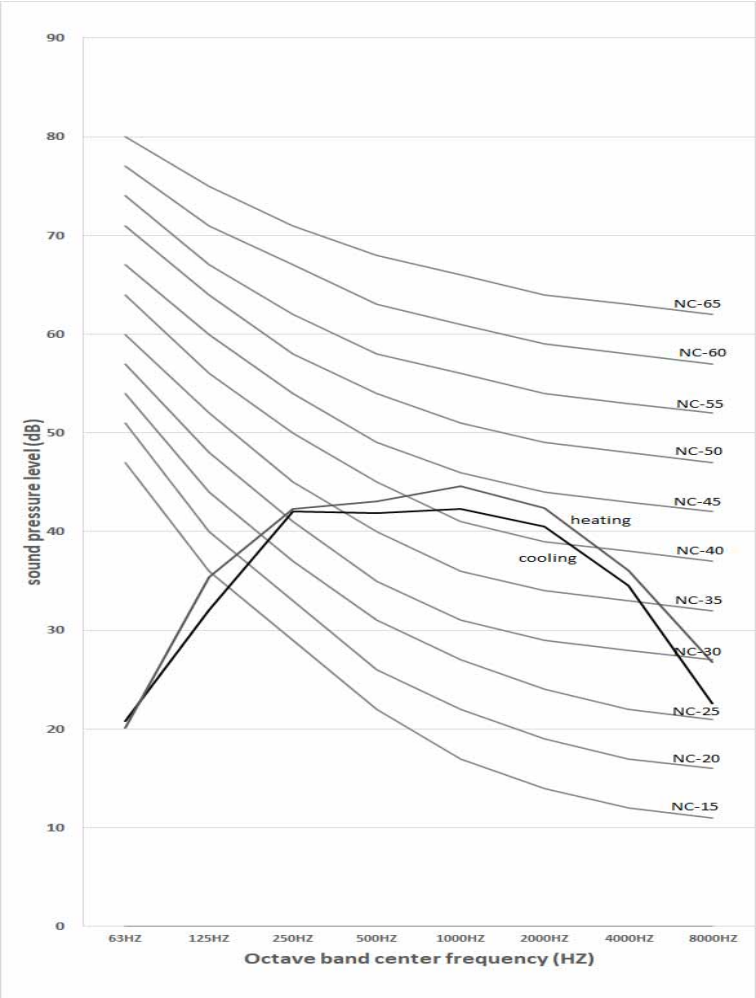
1、Outdoor unit



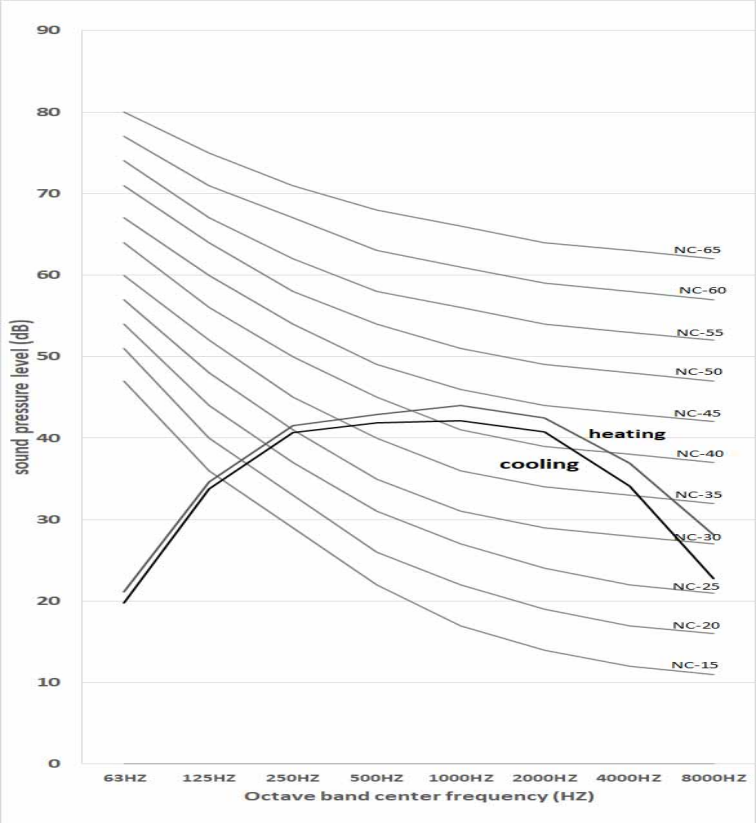
Test site：1m directly in front of the center of the air outlet

Model	Sound pressure（dB（A））	Model	Sound pressure（dB（A））
AM2-H14/4DR3C	53	AM3-H27/4DR3	58
AM2-H18/4DR3	55	AM3-H27/4DR3C	56
AM2-H18/4DR3C	54	AM4-H36/4DR3	61
AM3-H21/4DR3C	56	AM5-H42/4DR3	61

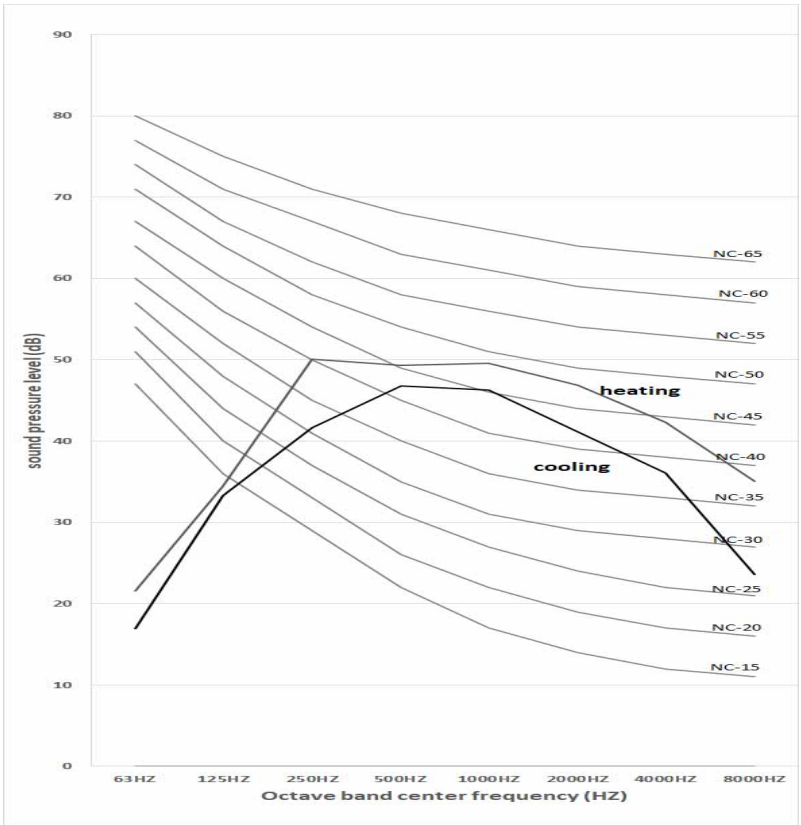
1.1 14K (AM2-H14/4DR3C) NC curve



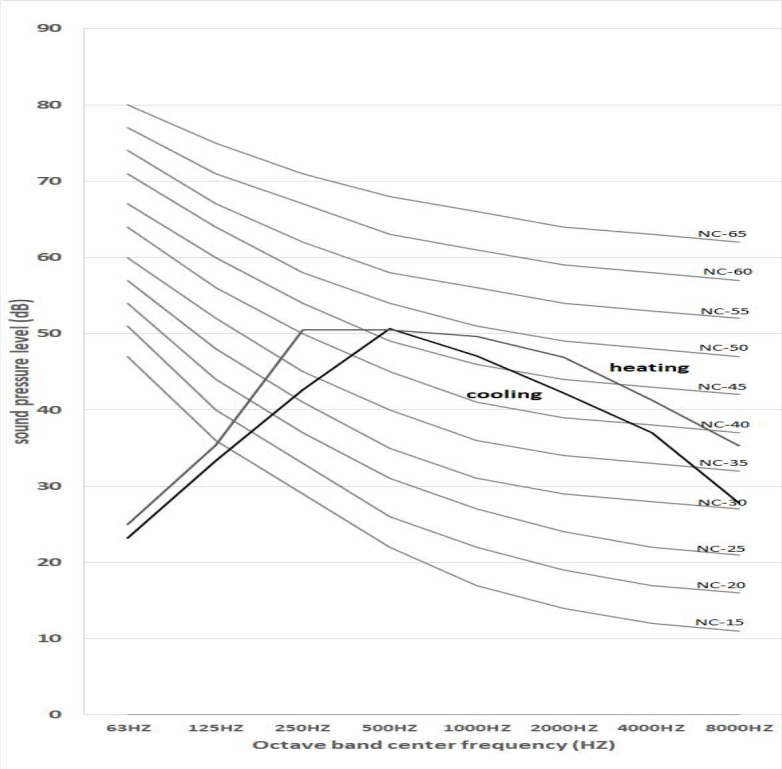
1.2 18K (AM2-H18/4DR3C) NC curve



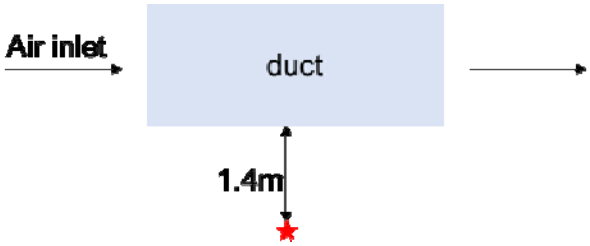
1.3 21K (AM3-H21/4DR3C) NC curve



1.4 27K (AM3-H27/4DR3C) NC curve



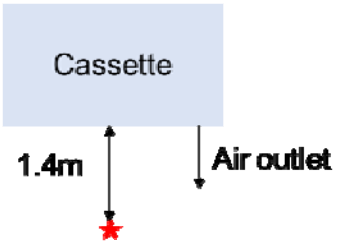
2、Duct



Test site：1.4m directly below the center of the duct

Model	Sound power（dB（A））	Model	Sound power（dB（A））
AMSD-H07/4R3AA	53	AMSD-H18/4R3AA	54
AMSD-H09/4R3AA	53	AMSD-H24/4R3AA	55
AMSD-H12/4R3AA	53	AUMD-H12/NDR3HM2B	49
AUMD-H18/NDR3HM2B	56	AUMD-H24/NDR3HM2B	55

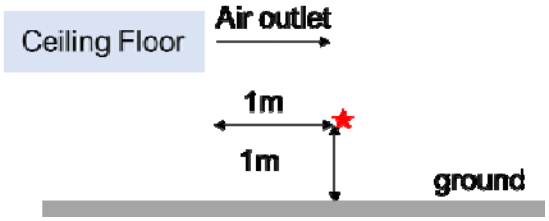
3、Cassette



Test site：1.4m directly below the center of the duct

Model	Sound power（dB（A））	Model	Sound power（dB（A））
AMCA-H09/4R3YAA	52	AMCA-H24/4R3B	57
AMCA-H12/4R3YAA	52		
AMCA-H18/4R3YAA	56		
AMCA-H18/4R3YA	56		

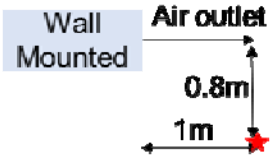
4、Ceiling Floor



Test site：1m directly in front of the air outlet and 1m above the ground

Model	Sound power（dB（A））	Model	Sound power（dB（A））
AMCF-H09/4R3A	55	AMCF-H09/4R3F	55
AMCF-H12/4R3A	55	AMCF-H12/4R3F	55
AMCF-H18/4R3A	59	AMCF-H18/4R3F	58

5、Wall Mounted

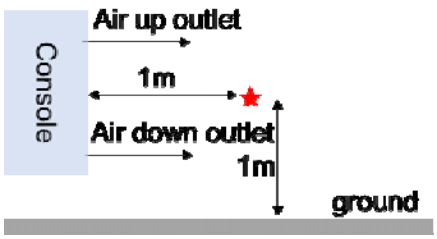


Test site：1m directly in front of the air outlet and 0.8m below the air outlet

Model	Sound power（dB（A））	Model	Sound power（dB（A））
F series			
AMWM-H07/4R3A(F*)	51	AMWM-H07/4R3C(F*)	54
AMWM-H09/4R3A(F*)	54	AMWM-H09/4R3C(F*)	54
AMWM-H09/4R3B(F*)	53	AMWM-H12/4R3C(F*)	54
AMWM-H12/4R3A(F*)	52	AMWM-H18/4R3C(F*)	57
AMWM-H18/4R3A(F*)	57	/	/
AMWM-H24/4R3A(F*)	60	/	/

Q series			
AMWM-H07/4R3A(Q*)	54	AMWM-H07/4R3B(Q*)	53
AMWM-H09/4R3A(Q*)	54	AMWM-H09/4R3B(Q*)	53
AMWM-H12/4R3A(Q*)	**54**	/	/
AMWM-H18/4R3A(Q*)	**58**	/	/
AMWM-H24/4R3A(Q*)	**63**	/	/
H series			
AMWM-H07/4R3A(H*)	57	AMWM-H07/4R3C(H*)	**55**
AMWM-H09/4R3A(H*)	57	AMWM-H09/4R3C(H*)	**55**
AMWM-H12/4R3A(H*)	57	AMWM-H12/4R3C(H*)	**55**
AMWM-H18/4R3A(H*)	57	AMWM-H18/4R3C(H*)	**58**
AMWM-H24/4R3A(H*)	**62**	/	/
J series			
AMWM-H07/4R3A(J*)	51	AMWM-H07/4R3C(J*)	**54**
AMWM-H09/4R3A(J*)	54	AMWM-H09/4R3C(J*)	**54**
AMWM-H12/4R3A(J*)	52	AMWM-H12/4R3C(J*)	**54**
AMWM-H18/4R3A(J*)	55	AMWM-H18/4R3C(J*)	**58**
AMWM-H24/4R3A(J*)	59	/	/

6、Console



Test site：1m directly in front of the center of the up and down air outlets

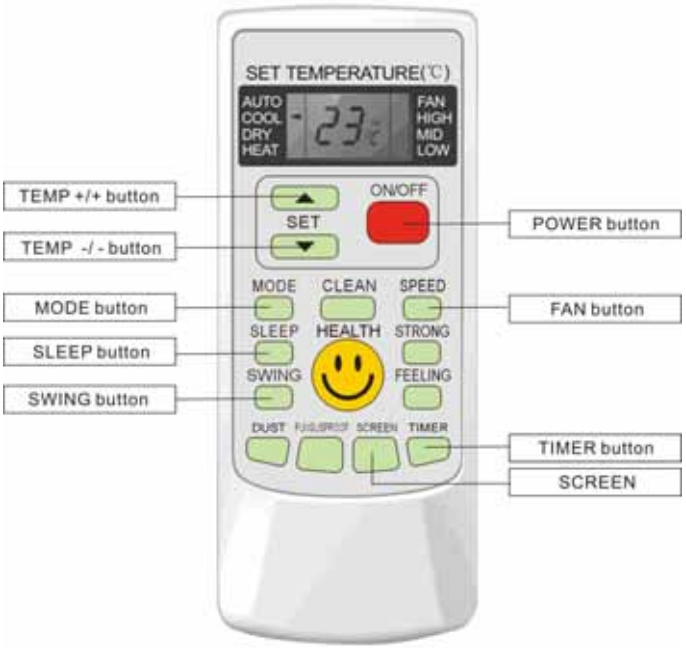
Model	Sound power（dB（A））	Model	Sound power（dB（A））
AMCO-H09/4R3B	52	AMCO-H12/4R3B	52
AMCO-H16/4R3B	54		

Part9 Controller

1. Controller

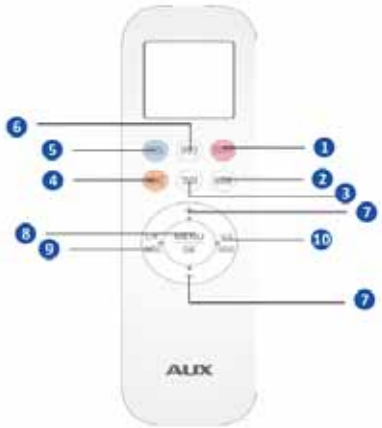
IDU type	Controller	
	Standard	Optional
Wall Mounted		   
	YK-H(**AUX**)	YK-H YK-L YK-P YK-K
Cassette		      
	YK-H(**AUX**)	YK-H YK-L YK-P YK-K XK-04 XK-05 XK-06
Ceiling & Floor		      
	YK-H(**AUX**)	YK-H YK-L YK-P YK-K XK-04 XK-05 XK-06
Console		   
	YK-L(**AUX**)	YK-T YK-K XK-05 XK-06
Duct		      
	XK05-DY	YK-K YK-H YK-L YK-P XK-04 XK-06

1.1 H series



1.2 T series

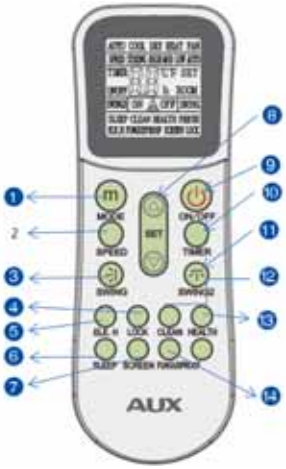
YK-T



1. ON/OFF
2. Mode Setting AUTO/ COOL/ DRY/ HEAT/ FAN
3. Time On/Off
4. Heating Mode
5. Cooling Mode
6. Fan Speed Setting Low/Mid/High/Turbo/Auto
7. Temperature-Setting /Timer Range Setting
8. MENU & OK Button
9. L/R SWING Button
10. U/D SWING Button

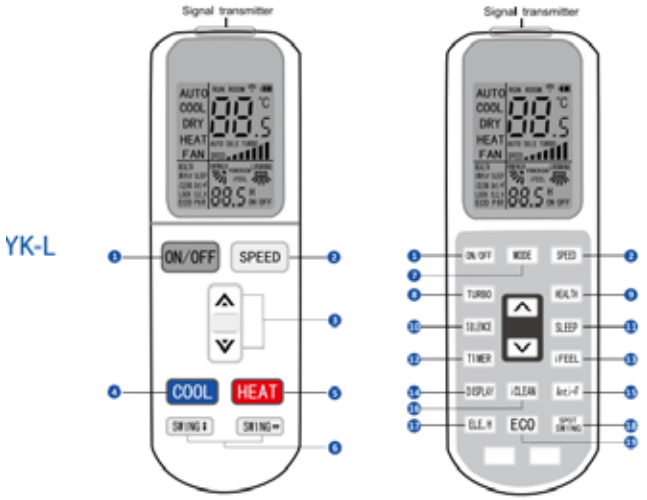
1.3 K series

YK-K



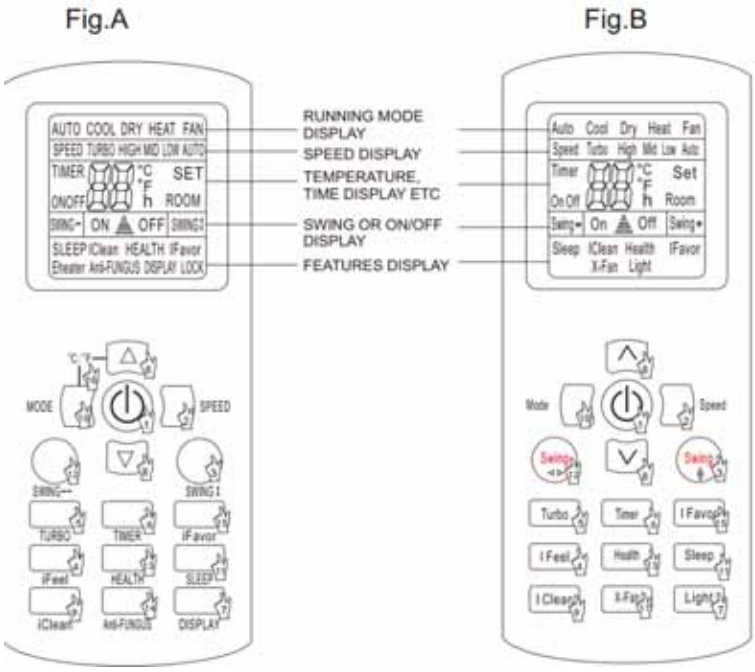
1. Mode Setting AUTO/COOL/DRY/HEAT/FAN
2. Fan Speed Setting HIGH/MED/LOW/AUTO
3. Vertical Swing
4. Lock
5. Electrical Heating
6. Sleep Function
7. LED Display On/Off
8. Temperature-Setting /Timer Range Setting
9. ON/OFF
10. Timer On/Off
11. Horizontal Swing
12. Clean Function
13. Health
14. Fungusproof Function

1.4 L series



1. ON/OFF
2. Fan Speed Setting
3. Temperature-Setting
4. Cooling Mode
5. Heating Mode
6. Vertical Swing/Horizontal Swing
7. Mode Setting
8. Turbo Wind
9. Health Function
10. Silence Function
11. Sleep Function
12. Timer On/Off
13. I Feel Function
14. LED Display On/Off
15. Anti-fungus Function
16. Clean Function
17. Auxiliary Electric
18. Spot Swing
19. Economic Function

1.5 P series

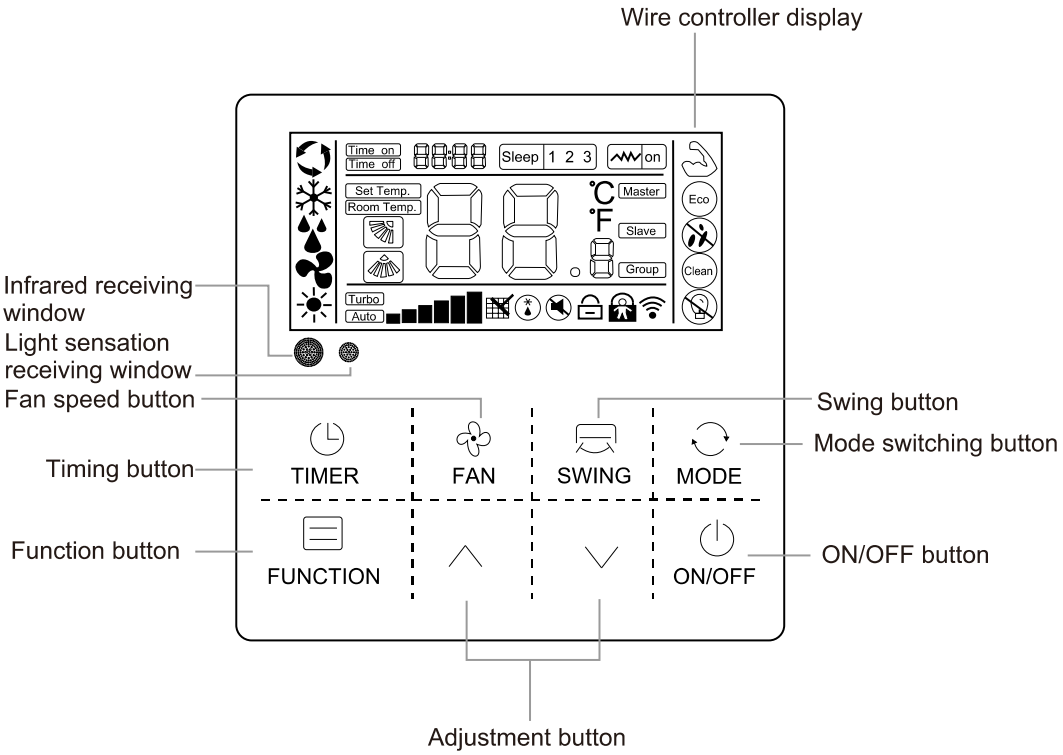


Note :for more information，please refer to the REMOTE CONTROLLER INSTRUCTIONS

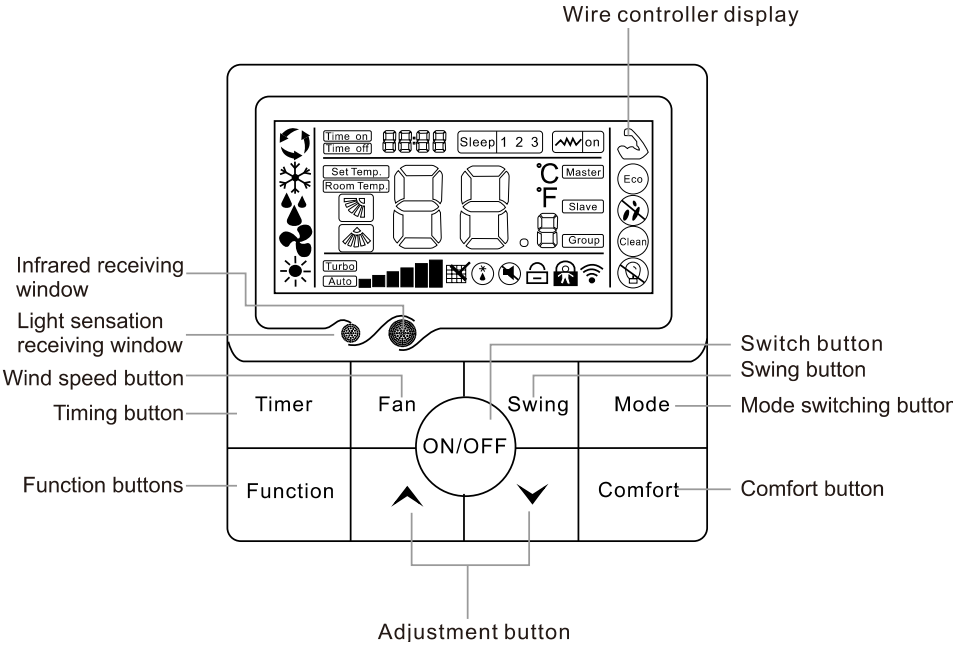
1.6 Wired Controller XK-05/XK-04、XK-06

XK-05	Features
	**Technical indicator** 1. Power source: voltage DC 12V; 2. Work temperature range of PCB:(-10~+70)℃; 3. Work humidity range of PCB: RH20%~RH90%; 4. Button: Touch button 5. Dimensions(W*H*D):120*120*20mm
	Main functions 1. 8-keytouch button input 2. Buzzer prompt tone function 3. LCD+ white backlight 4. Display the failure of main controller 5. Ambient temperature detection sensor 6. Receive the signal of wireless remote controller
XK-04	**Features**
	**Technical indicator** 1. Power source: voltage DC 12V; 2. Work temperature range of PCB:(0~50)℃; 3. Work humidity range of PCB: RH20%~RH90%; 4. Button: Touch button 5. Dimensions(W*H*D):86*86*10.8mm
	Main functions 1. 9-keytouch button input 2. Buzzer prompt tone function 3.Comfort one-button setting 4. LCD+ white backlight 5. Display the failure of main controller 6. Ambient temperature detection sensor 7.Connect to indoor unit via 3-core shielded cable 8. Receive the signal of wireless remote control
XK-06	**Features**
	**Technical indicators** • Power voltage range: DC 12V; • Max communication line length:1000m; • Mounting hole spacing:58~62mm; • Working ambient humidity:0℃~50℃; • Button: Touch button; • Dimensions(W*H*D):120*120*20mm; • Humidity:RH20%~RH90%; • Temperature setting:16℃~32℃ 60℉~90℉
	Main functions • 8-key touch button input; • Display the failure of main controller • LCD+ white backlight;

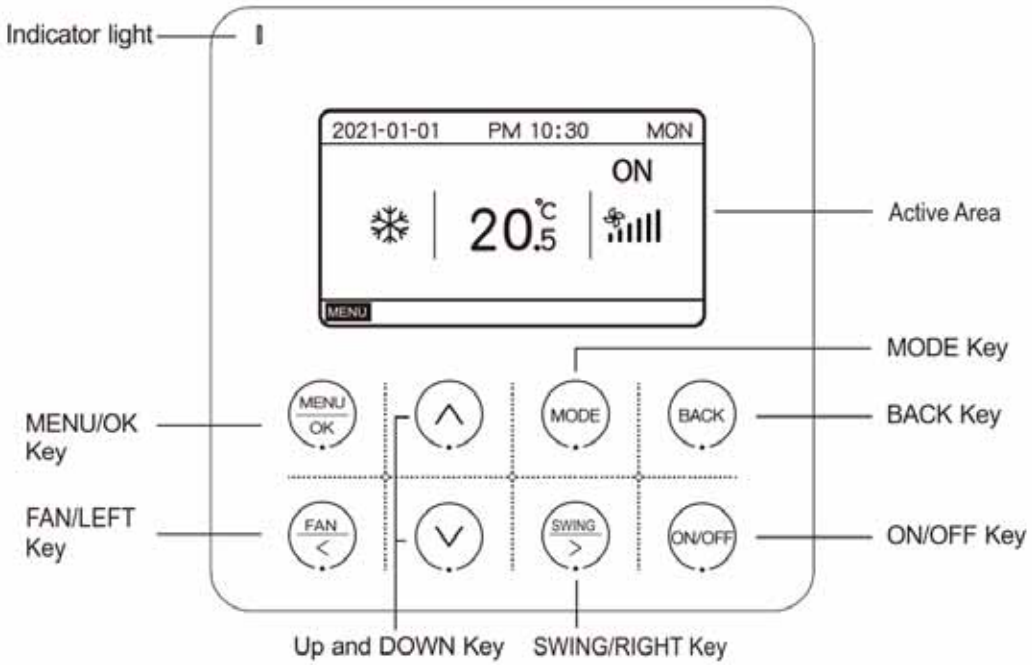
XK-05


Wire controller display
Time on
Time off
Sleep 1 2 3
on
Set Temp.
Room Temp.
Master
Slave
Group
Eco
Clean
Turbo
Auto
Infrared receiving window
Light sensation receiving window
Fan speed button
Timing button
Function button
Swing button
Mode switching button
ON/OFF button
TIMER
FAN
SWING
MODE
FUNCTION
ON/OFF
Adjustment button

XK-04


Wire controller display
Time on
Time off
Sleep 1 2 3
on
Set Temp.
Room Temp.
Master
Slave
Group
Eco
Clean
Turbo
Auto
Infrared receiving window
Light sensation receiving window
Wind speed button
Timing button
Function buttons
Switch button
Swing button
Mode switching buttor
Comfort button
Timer
Fan
Swing
Mode
ON/OFF
Function
Comfort
Adjustment button

XK-06：



2. Parameters Setting

Indoor unit's parameters can be set by remote controller (YK-L) and wired remote controller—For after-sales (In indoor side After a new PCB was replaced, indoor parameters set is necessary).

2.1 Parameter Setting table

	【04】	【05】	【15】
	Model of IDU	**Capacity of IDU**	**Selection of room sensor**
DUCT			
AMSD-H07/4R3A	02	08	01
AMSD-H09/4R3A	02	09	01
AMSD-H12/4R3A	02	12	01
AMSD-H18/4R3A	02	18	01
AMSD-H07/4R3AA	44	08	02
AMSD-H09/4R3AA	44	10	02
AMSD-H12/4R3AA	44	12	02
AMSD-H18/4R3AA	44	18	02
AMSD-H24/4R3AA	44	24	02
Ceiling & Floor			
AMCF-H09/4R3F	46	10	02
AMCF-H12/4R3F	46	12	02
AMCF-H18/4R3F	46	18	02

Note:

【04】：Model of IDU

【05】：Capacity of IDU,

【15】:Selection of air return temperature sensor; 00 – sensor in indoor unit , 01—Sensor in wired cont**roller**

2.2 Parameter Setting by YK-L

Enter the setting interface

① Make sure the remote controller is **off**

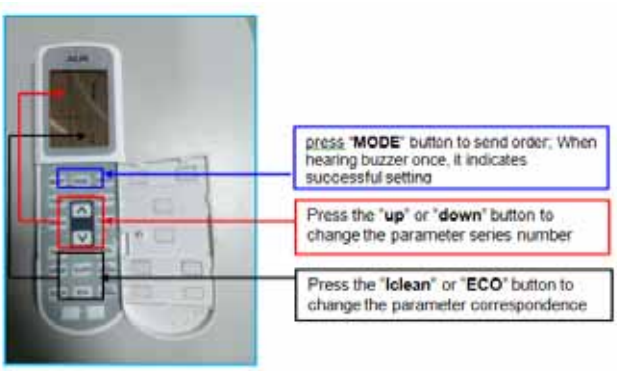
② Press the **two white button** at the down side simultaneously **more than 10s** to enter the address setting mode.

Parameter Setting

③ Press the **[∧]** or **[∨]** button to change the parameter series number

④ Press the **[I Clean]** or **[ECO]** button to change the parameter correspondence

⑤ Press the **[MODE]** button to send order (Sent signal to display panels or receivers), Then can hearing buzzer once



For example:

If you changed a new PCB to 18K cassette indoor unit , then you should set the type of the unit , check the above【**Parameter Setting Items table**】--- Mode of IDU is 【04】, 18K cassette parameter is 【37】

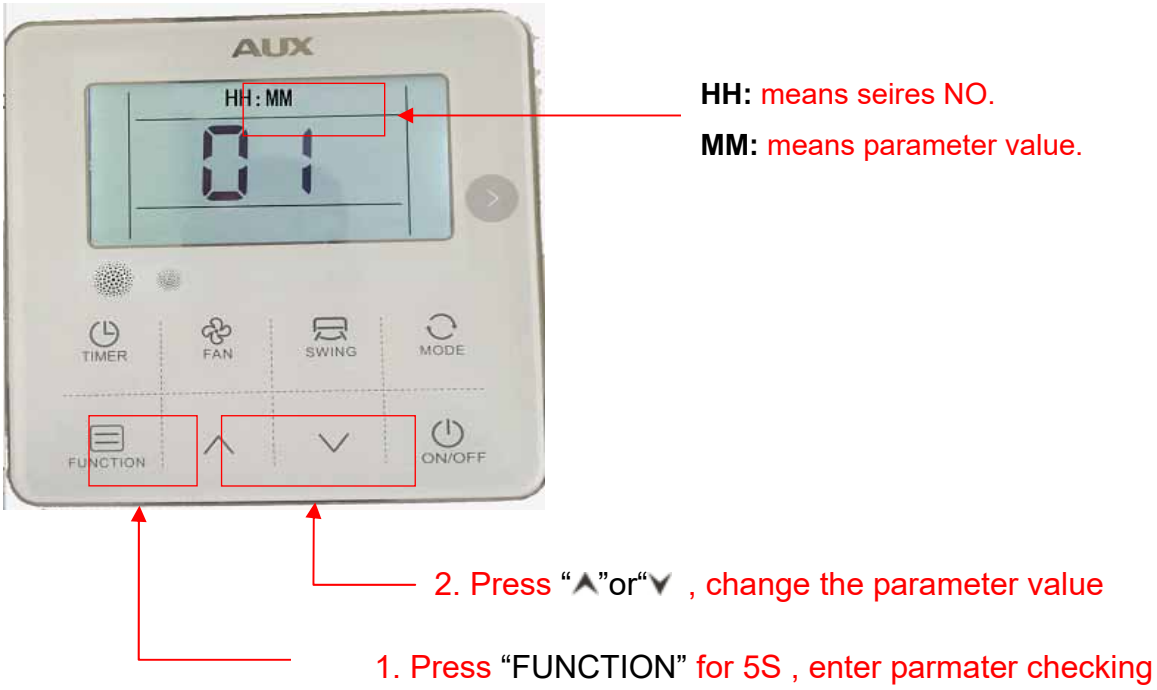
2.3 Parameter Setting by XK-04/ XK-05

Parameter checking

Press the "FUNCTION" or "FUNCTION+MODE" button for 5 seconds, enter the parameter checking interface

the wired controller's address will be displayed in the temperature zone of LED screen (press "FUNCTON" button, the wired controller's address will flash, the wired controller 's address can be changed through press the "∧"or"∨", then press "FUNCTION" button to confirm);

In the timing setting zone: **HH** means series NO. **MM** means parameter value. After Entering IDU parameter checking, via pressing the "∧"or"∨"button , you can check the parameter value of series NO.【04】【05】【1】.



Note :

1、produced before 2021.1.1 , Long Press 【FUNCTION】 key for 5s

2、produced after 2021.1.1 , press the 【FUNCTION】 + 【MODE】 at the same time for 5s

Parameter setting

Only in parameter checking model, press the “FUNCTION” button for 5 seconds,

Enter parameter setting model.

The corresponding parameter value ”MM” begin to flash, changing it through pressing

The “∧”or“∨”burton, after finished, press the “FUNCTION” button to confirm. When finishing parameter setting, it will automatically go back to parameter checking model.

2. Press “∧”or“∨ , change the parameter

1. Only in checking model, Press **“FUNCTION”** for 5S enter parameter checking model

For example:

If you want to change the PCB from cassette type to mid duct type for 42k unit , you should set the type of the unit , check the above【**Parameter Setting Items table**】--- Mode of IDU is 【04】, 42K cassette parameter is 【11】, 42K mid duct parameter is 【39】

【0411】change to 【0439】（step1）

③ Press **"FUNCTION"** for 5S again, enter parmater setting

② Press the"⋀"or"⋁"button to get "**04 11**"

① Press **"FUNCTION"** for 5S,enter parameter check model;

【0411】change to 【0439】(step2)

④ Press the"⋀"or"⋁"button to get "**04 39**"

⑤ After finishing setting , press **"FUNCTION"** to confirm

3. Room Card Function

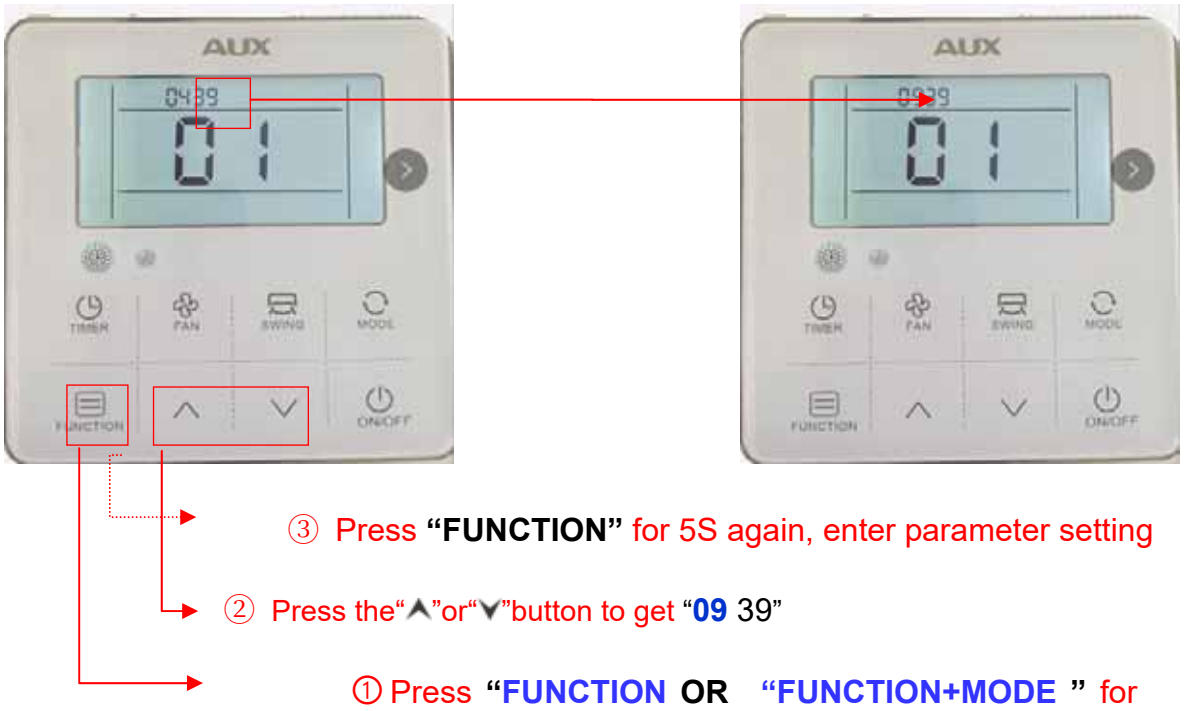
3.1 Function setting

Parameter setting	Model	Contact State	Operation model specification
0900	No (default)		Stand
0901	Room Card (optional)		The IDU Will be into standby mode, can be controlled by controller
			The IDU Will be into standby mode, can't be controlled by controller

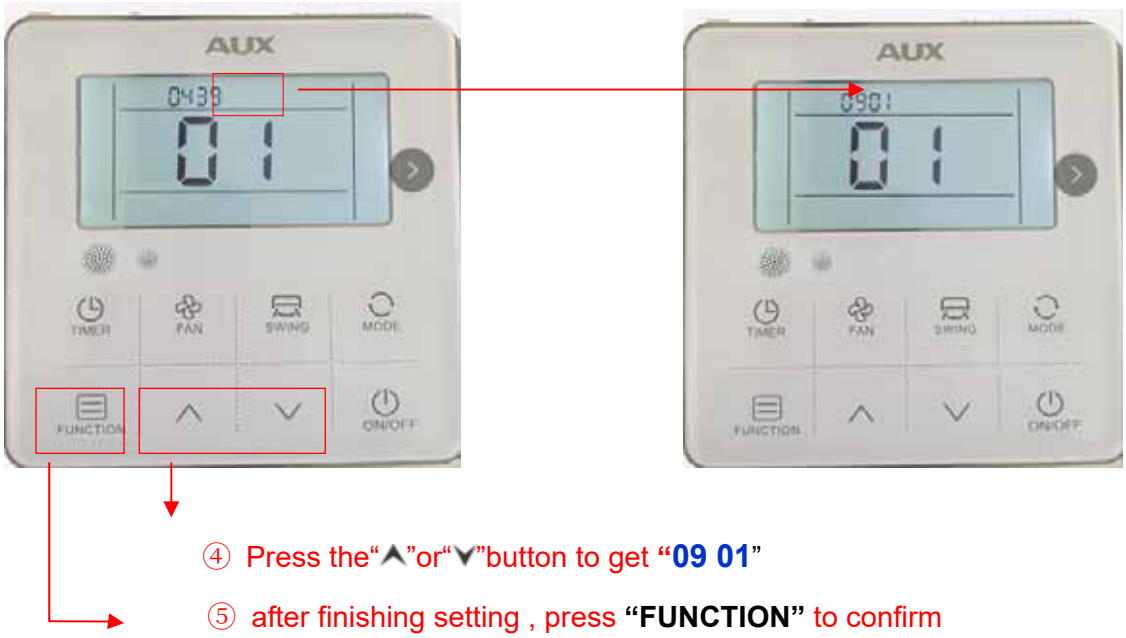
※ How to set the room card function (Set method same as the above【Part 9 →2.2Parameter Setting by YK-L **or** 2.3 Parameter Setting by XK-04/XK-05 】

For example (XK-05)

Step 1



Step 2



④ Press the“⮝”or“⮟”button to get **“09 01”**

⑤ after finishing setting , press **“FUNCTION”** to confirm

Note ：

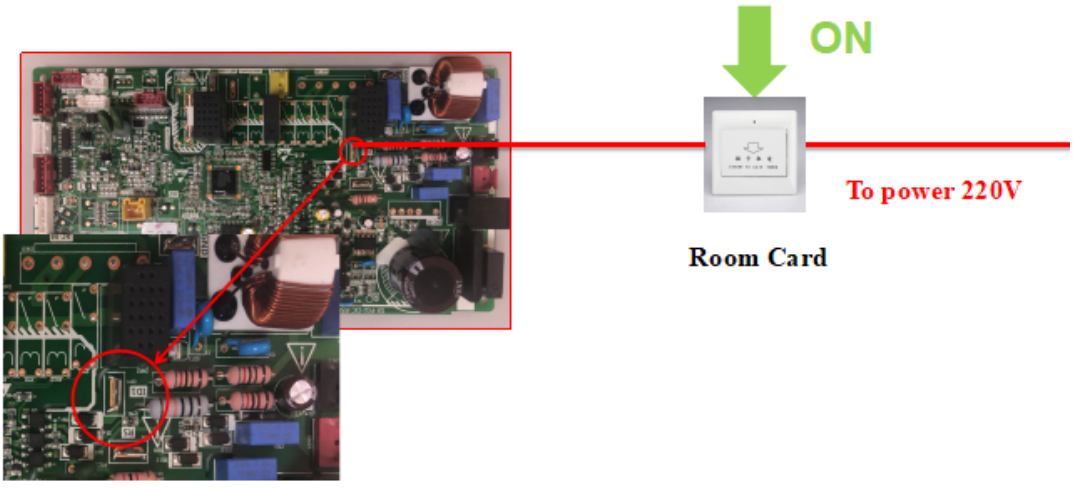
1、produced before 2021.1.1，Long Press 【FUNCTION】 key for 5s

2、produced after 2021.1.1，press the 【FUNCTION】 + 【MODE】 at the same time for 5s

3.2 Wiring diagram

When the room card is inserted, the air conditioning can be controlled， when you leave the room, the AC will standby, can ’t be controlled .

【DUCT TYPE】and【Ceiling & Floor】



4. WIFI Module

4.1 WIFI Module Configuration

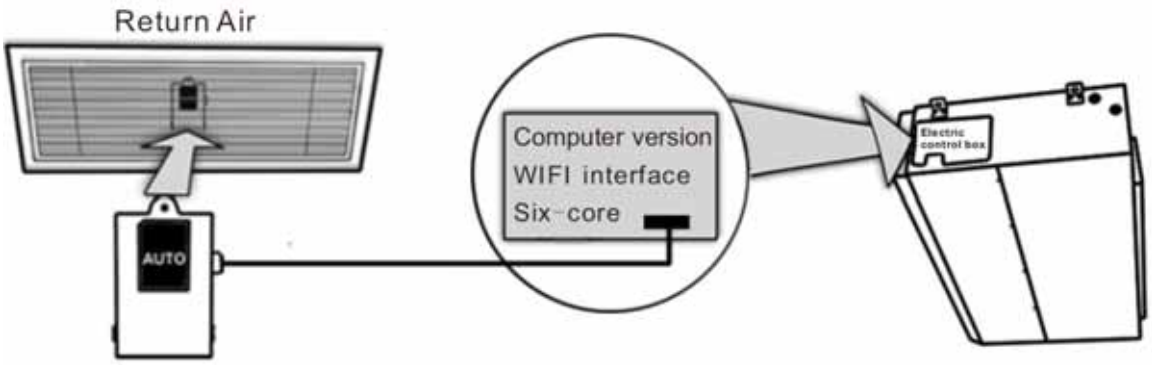
IDU Series	Models	Capacity	WIFI
Cassette	AMCA-H24/4R3B	24K	√
	AMCA-H*/4R3YAA	9、12、18k	√
Ceiling floor	AMCF-H*/4R3DF	9,12,18K	√
Low ESP duct	AMSD-H*/4R3A	7,9,12,18K	√
	AMSD-H*/4R3AA	7,9,12,18,24K	√
Mid ESP duct	AUMD-H*/NDR3HM2B	12,18,24K	√
Console	AMCO-H*/4R3B	9,12,16K	√
Wall mounted	AMWM-H*/4R3A(H*)	7,9,12,18,24K	√
	AMWM-H*/4R3C(H*)	**7,9,12,18K**	√
	AMWM-H*/4R3A(J*)	7,9,12,18,24K	√
	AMWM-H*/4R3C(J*)	**7,9,12,18K**	√
	AMWM-H*/4R3A(F*)	7,9,12,18,24K	√
	AMWM-H09/4R3B(F*)	9K	√
	AMWM-H*/4R3C(F*)	**7,9,12,18K**	√
	AMWM-H*/4R3A(Q*)	7,9,12,18,24K	√
	AMWM-H*/4R3B(Q*)	7,9K	√

① **APP Download**

Mobile terminal scans the following dimensional code to download APP, or search “AC Freedom” in APPSTORE and Google store

② **Light Commercial WIFI Module Installation**

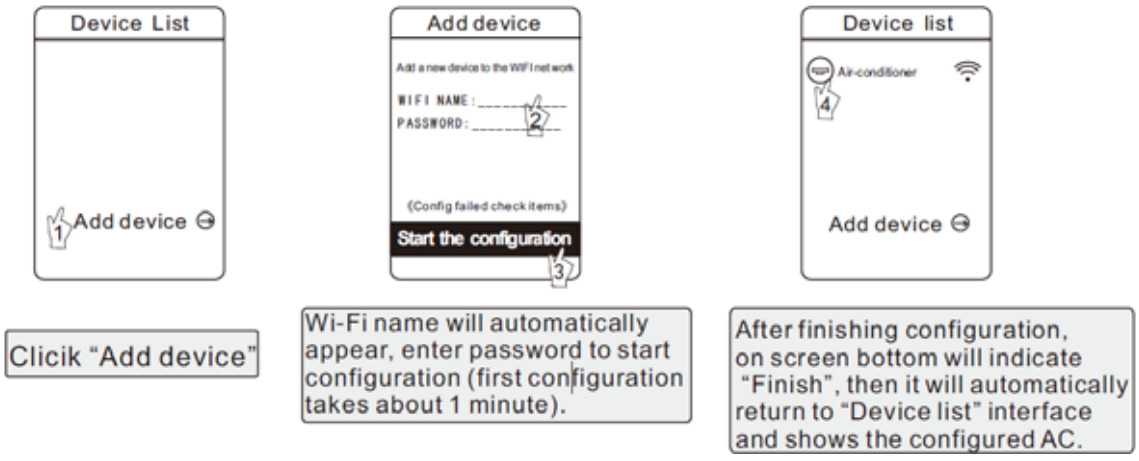
Connect the WIFI module communication wire to WIFI interfaces of main PCB, as shown below:



The WIFI module should be placed in the return air or some other place in WIFI area. (Customers buy the wireless router)

③ **APP Configuration**

- Press "healthy" button 8 times consecutive, and buzzer even ring two sound then into the configuration
- Connect mobile terminals to WIFI, open APP “AC Freedom”, and then operate following the steps below:

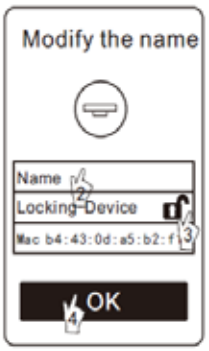


Note: If the configuration fails or you change the password of wireless router, you need to reset the WIFI module to reconnect: Turn on the power of the module, then repeat the steps above for

APP configuration.

4.2 AC management

① **Modify AC name and locking function**



Note:
If you had locked AC equipment, you need to unlock before connecting other mobile terminal. If the mobile terminal locked AC was accidentally lost, you need to reset WIFI module first, and then use the new mobile terminal to connect (Reset step is same with 1.3 APP configuration).

② **For other instructions, please refer to "HELP" in APP.**

③ **Remote-control device**

Connect the wireless router to internet, then open the GPRS. It means the remote-control device, voice control function only effective after connected to the Internet

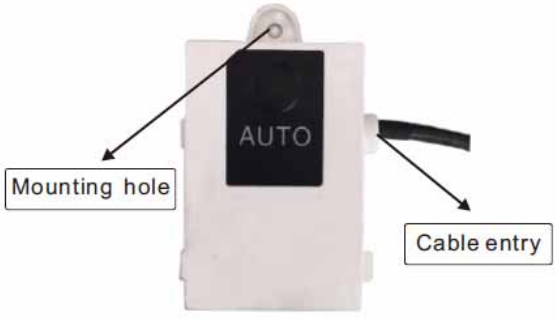
4.3 Trouble Shooting

If unable to properly configured or connect the WIFI box:

- Make sure the WIFI box for wiring is properly connected.
- Long press WIFI box 8 seconds to reconfigure the positive button. If the problem can't be solved, please contact after sales person.

4.4 Technical Parameters

- Working temperature：0~50℃；
- Working environment humidity：20~90%RH；
- Dimensions：78 X 52 X 15.5
- Configuration cable wire length：1500mm



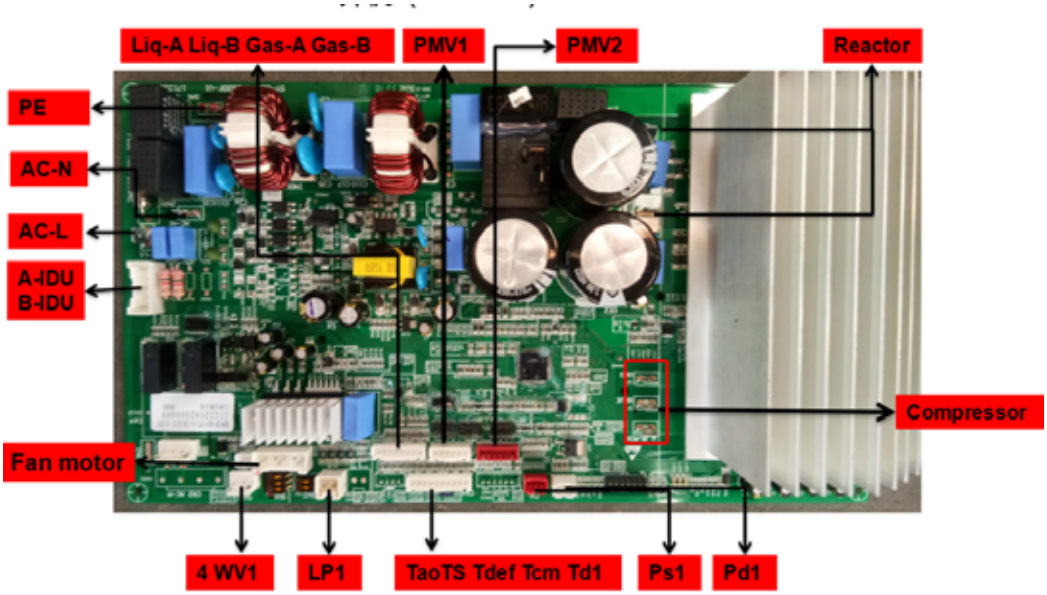
Part10 PCB Instruction

1. Outdoor Unit PCB

1.1 18K (AM2-H18/4DR3)

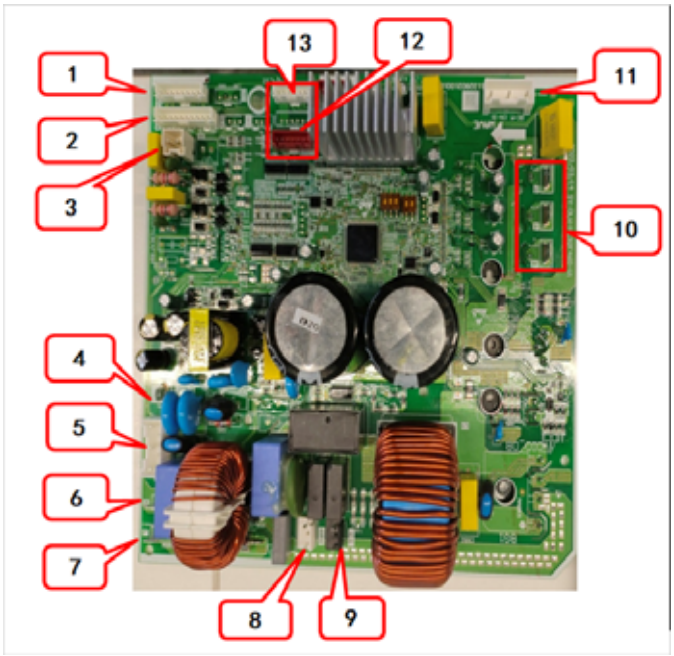
Main PCB and Driver modular

11222542000099 CJ 控制板 DLW-BP-DC4-1T2-14/18K(R32)-E1(SY)



1.2 14K（AM2-H14/4DR3C）,18K (AM2-H18/4DR3C)

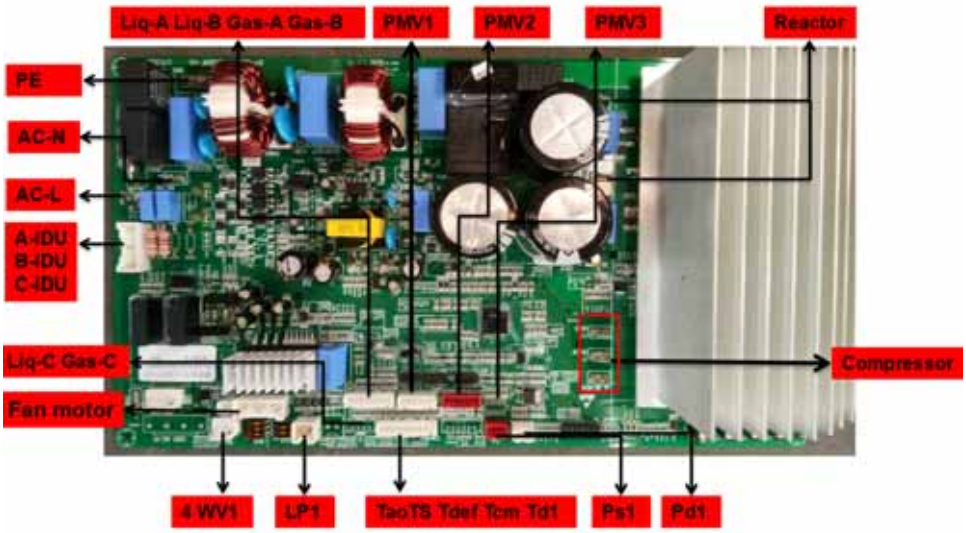
Main PCB and Driver modular: 11222542000153 CJ 控制板 DLW-BP-DC4-1T2-18K(R32)竖-E1(SY)



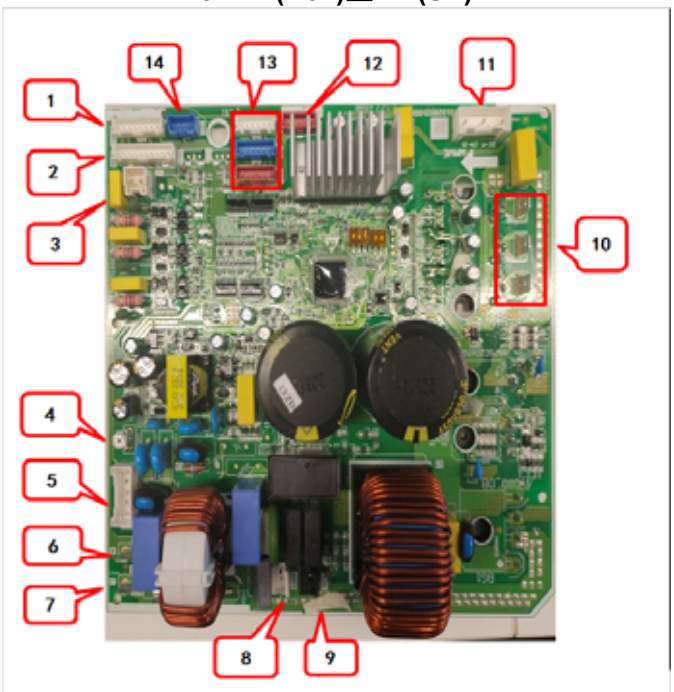
No	Remark	No	Remark
1	Temperature sensor (A/B)	8	Four-way valve (white)
2	Temperature Sensor	9	Electric heating (black)
3	Pressure Switch	10	Compressor cable (U/V/W) (red/l blue, black)
4	Main Controller Ground wire (Yellow/Green)	11	fan
5	Signal line (white)	12	Monitoring
6	Power Neutral Line (Blue)	13	Electronic expansion valve (A/B)
7	Power live wire (brown)		

1.3 27K（AM2-H27/4DR3）

Main PCB and Driver modular:11222542000100 CJ 控制板 DLW-BP-DC4-1T3-21/27K(R32)-E1(SY)



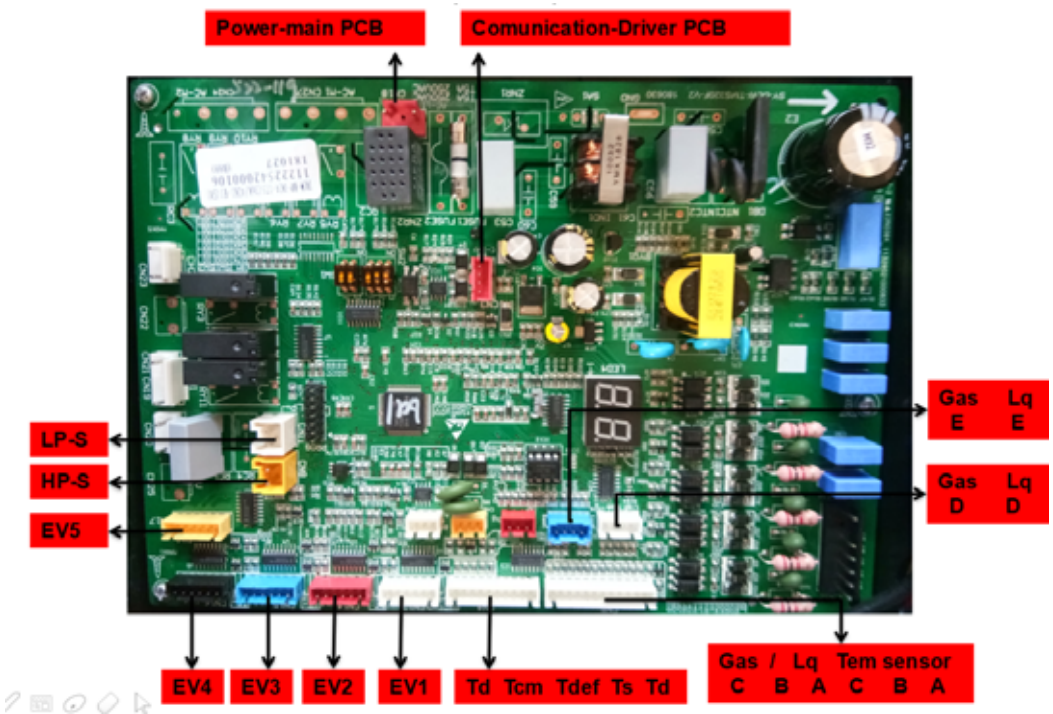
21K（AM3-H21/4DR3C）,27K (AM3-H27/4DR3C):
11222542000152 CJ 控制板 DLW-BP-DC4-1T3-27K(R32)竖-E1(SY)



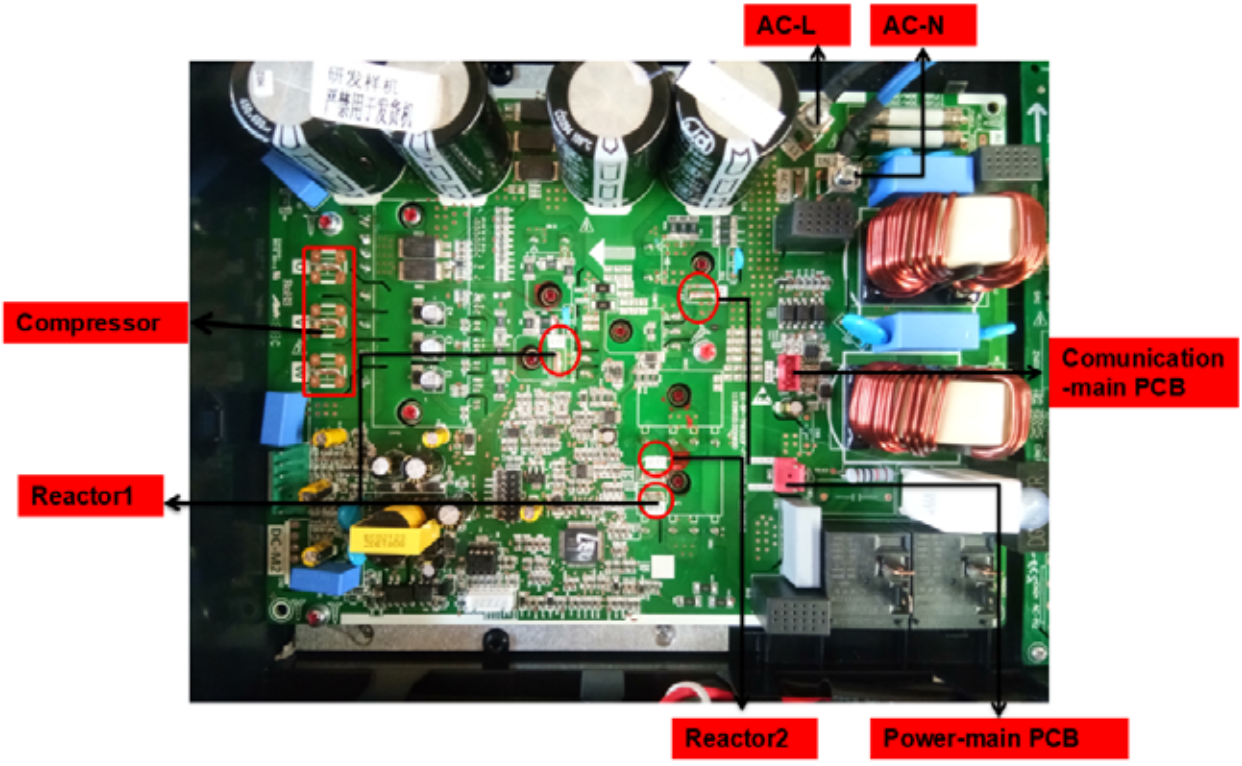
No	Remark	No	Remark
1	Temperature sensor (A/B)	8	Four-way valve (white)
2	Temperature Sensor	9	Electric heating (black)
3	Pressure Switch	10	Compressor cable (U/V/W) (red/l blue, black)
4	Main Controller Ground wire (Yellow/Green)	11	fan
5	Signal line (white)	12	Monitoring
6	Power Neutral Line (Blue)	13	Electronic expansion valve (A/C/B)
7	Power live wire (brown)	14	Temperature Sensor

1.4 36K (AM4-H36/4DR3),42K(AM5-H42/4DR3)

Main PCB：11222542000133 CJ 控制板 DLW-BP-DC4-1T5(36K/42K)-E2(SY)



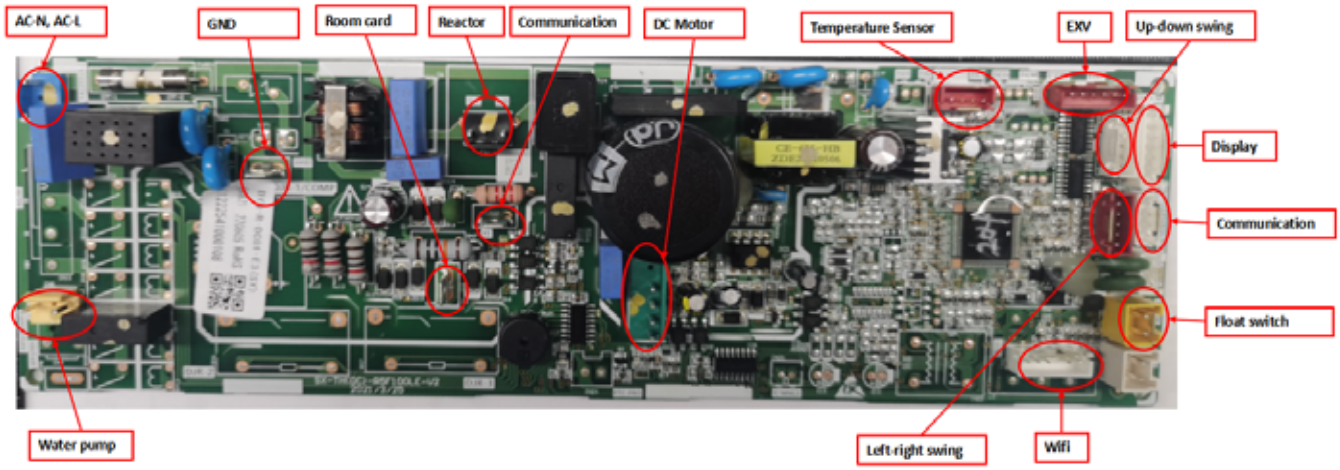
Drive Modular Board: 11222543000033 CJ 模块板 QD-12241F(KTF310D43UMT)-1(SY)



2. Indoor Unit PCB

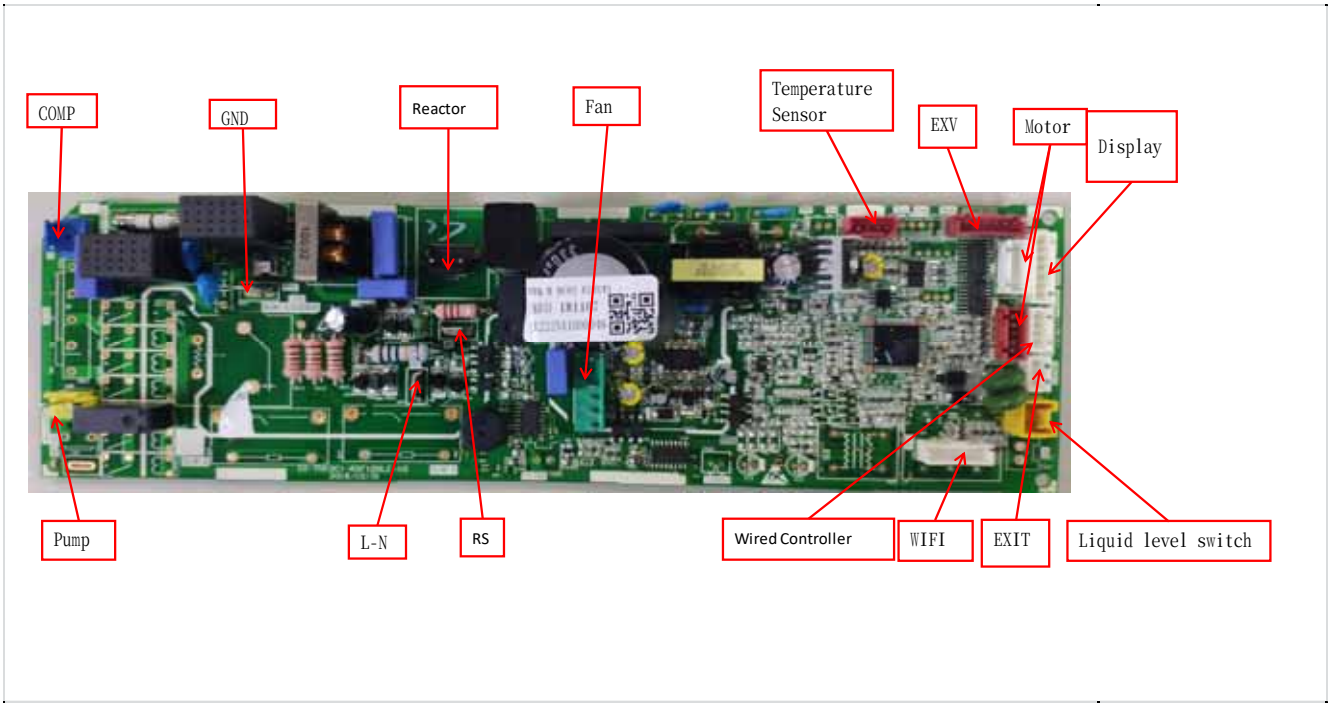
2.1 09、12、18K(Compact Cassette Y type)

11222541000108 CJ 控制板 DYQ-R-DC01-E3(SY)



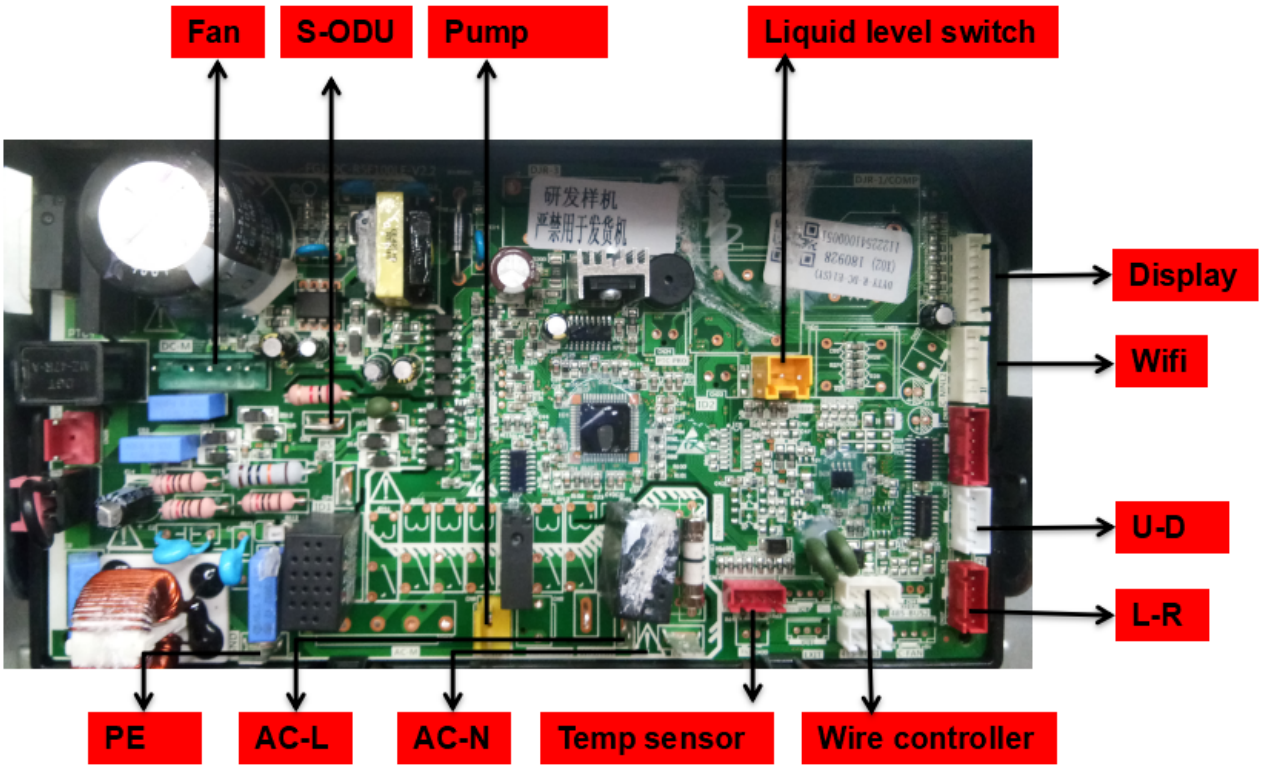
2.2 24K(Round-flow Cassette Y type)

11222541000068 C106247421 CJ 控制板 DYQ-R-DC01-E1(SY)



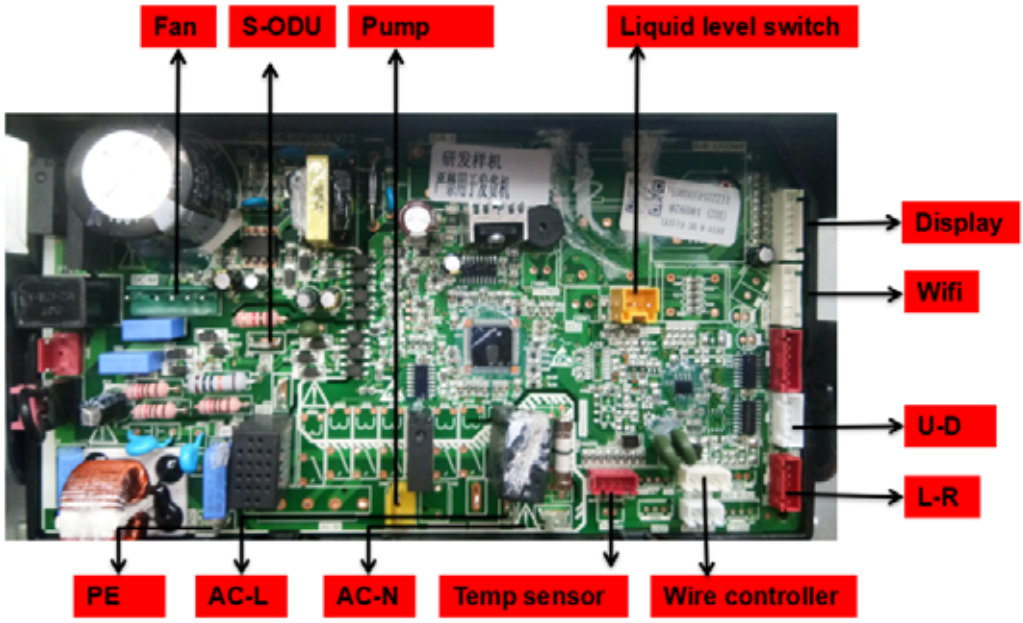
2.4 09K,12K,18K(Ceilling&Floor) （F Type）

11222541000099 CJ 控制板 DYTY-R-DC02(470μF)-E2(SY)



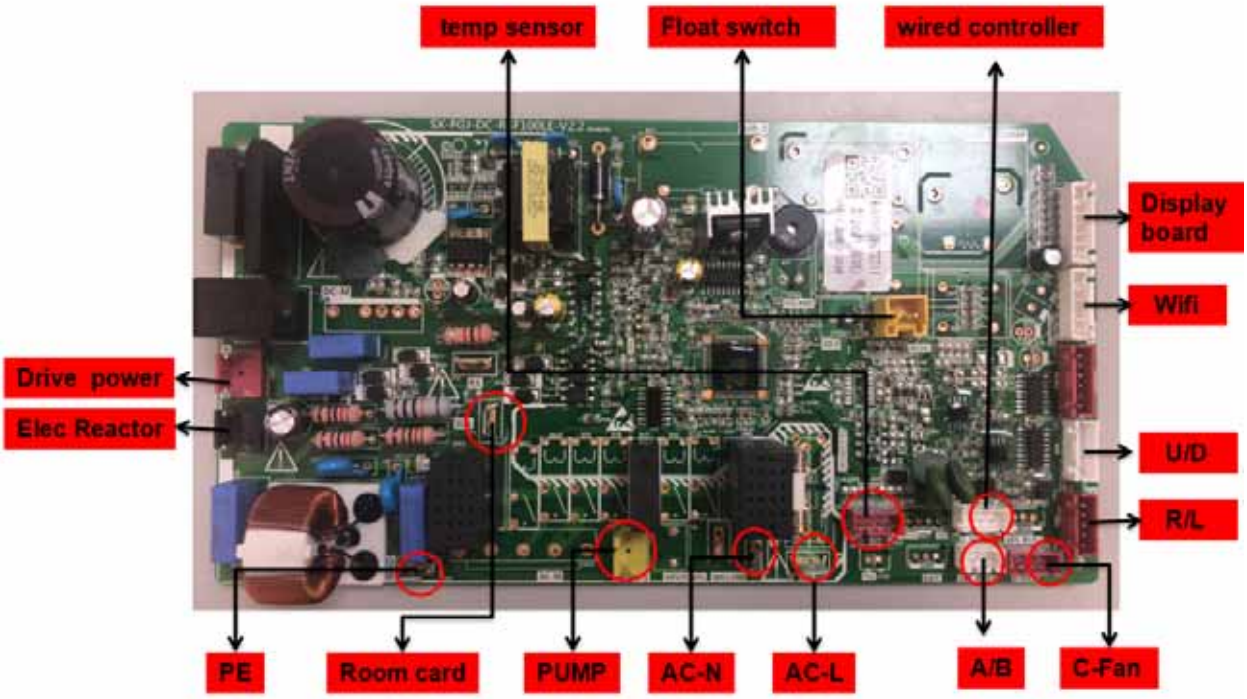
2.5 07k,09K,12K,18,24K(Y-Duct)

11222541000051 CJ 控制板 DYTY-R-DC-E1(SY)

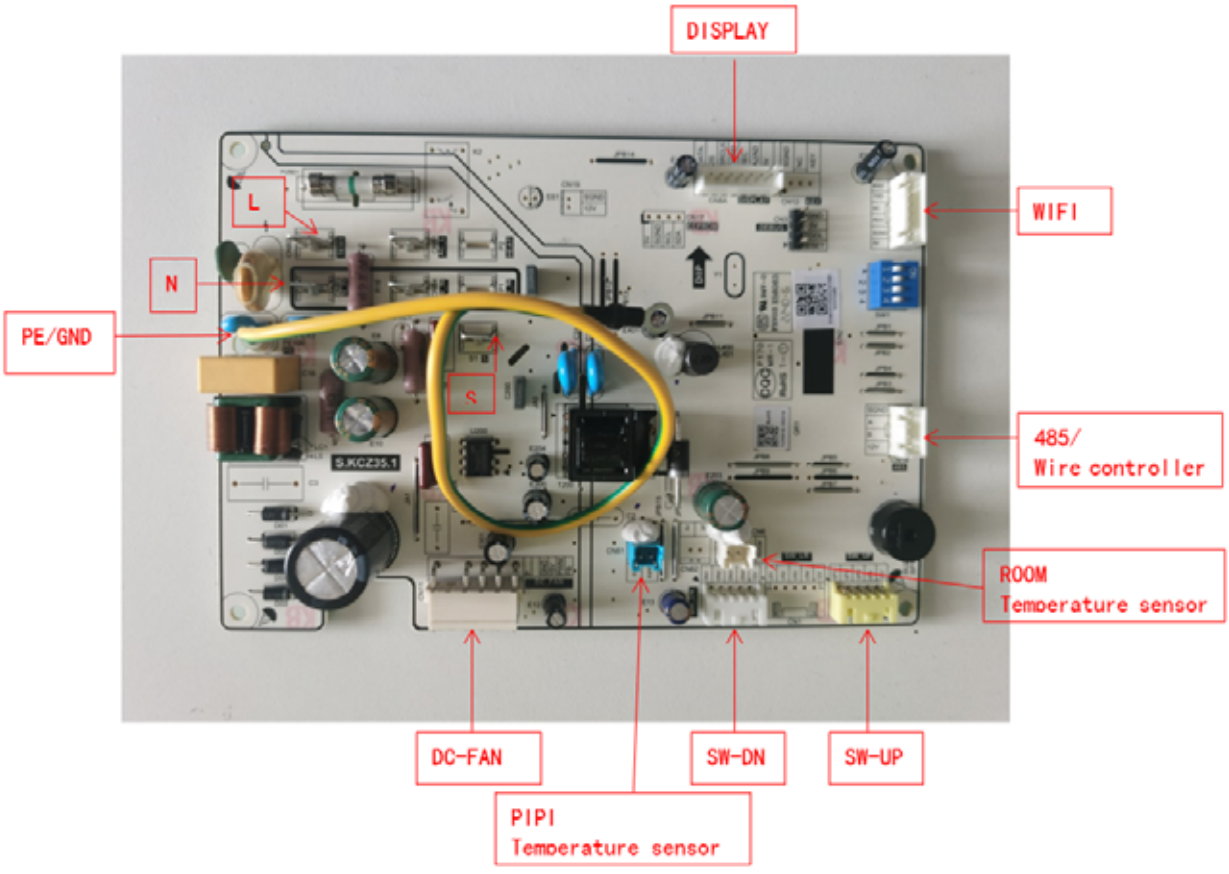


2.6 12K,18,24K(M-Duct)

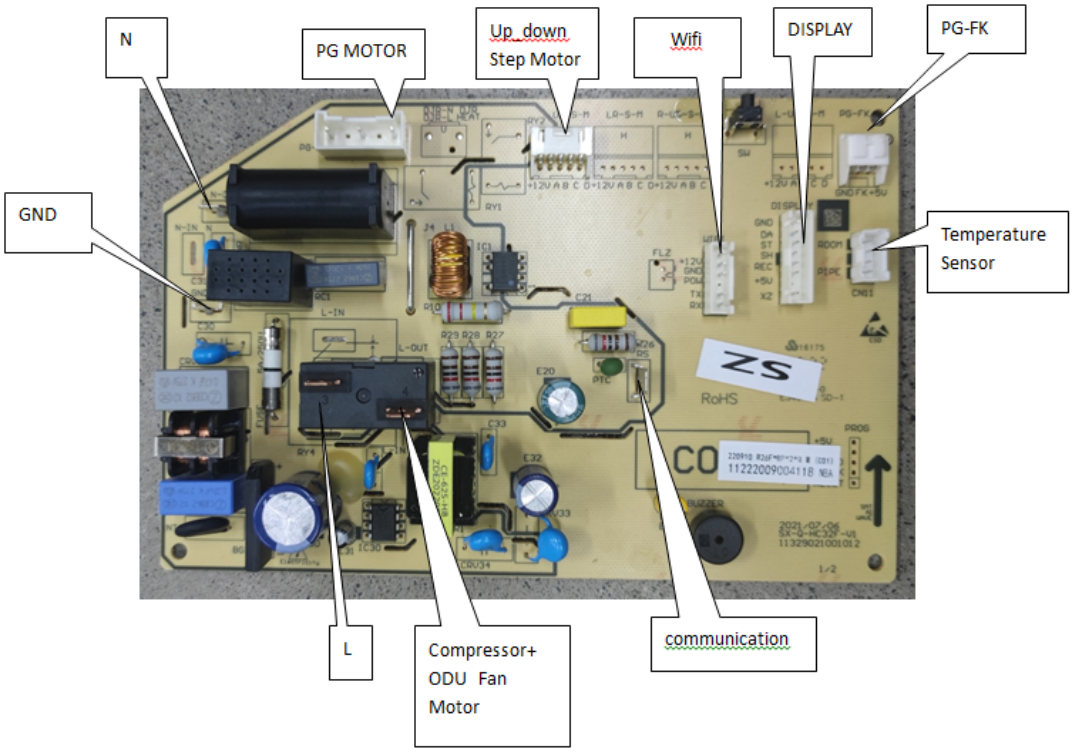
11222541000114 CJ 控制板 DYTY-R-DC02-E3(SY)



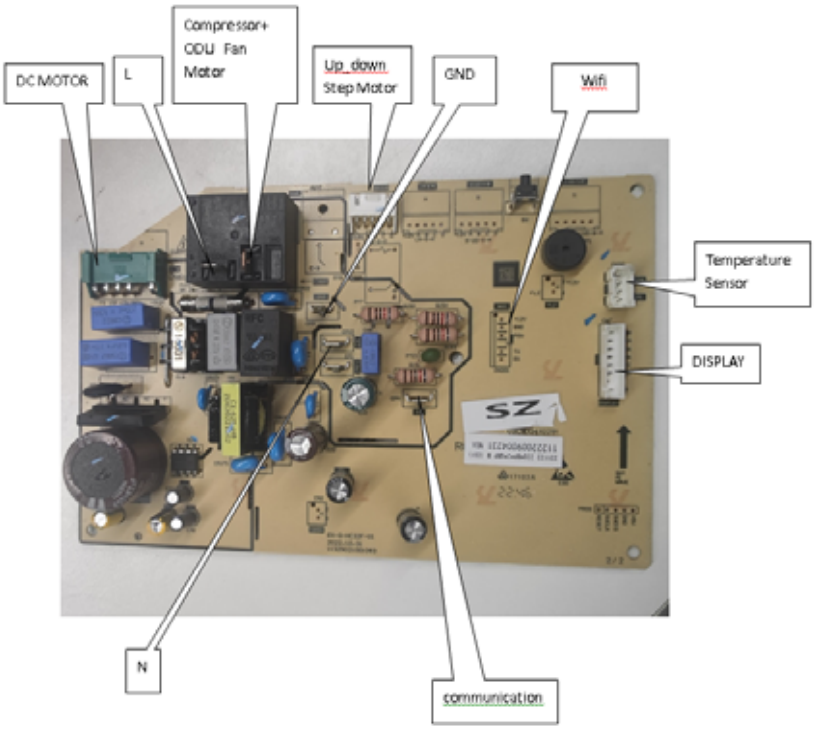
2.7 09K,12K,16K(Console)



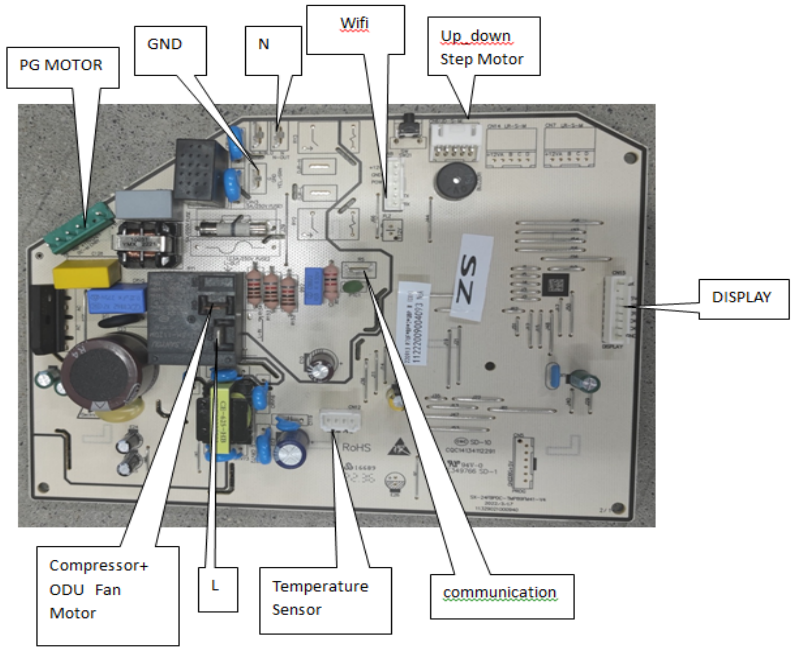
2.8 AMWM-H07/4R3A(Q*)、AMWM-H09/4R3A(Q*)、AMWM-H12/4R3A(Q*)



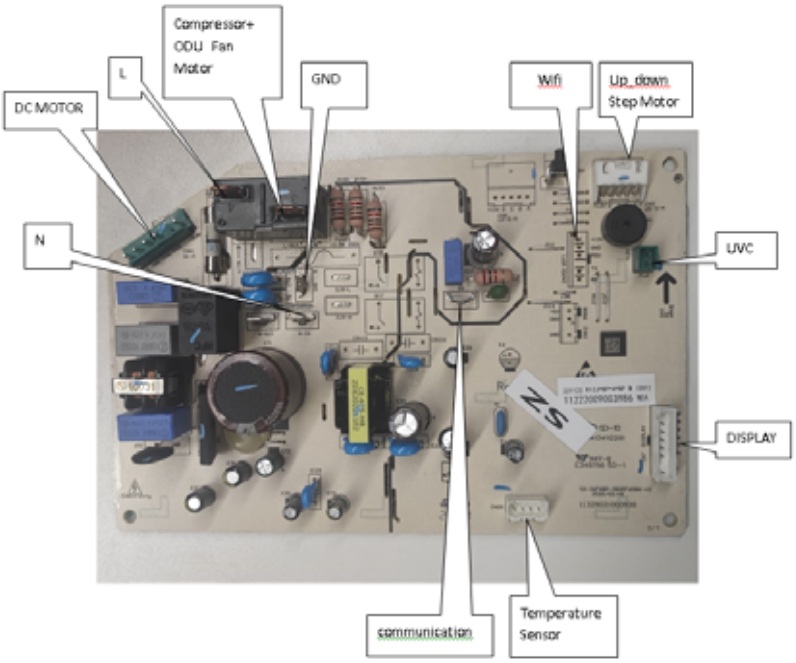
AMWM-H07/4R3B(Q*)、AMWM-H09/4R3B(Q*)



AMWM-H18/4R3A(Q*)、 AMWM-H24/4R3A(Q*)



2.9 AMWM-H09/4R3B(F*)

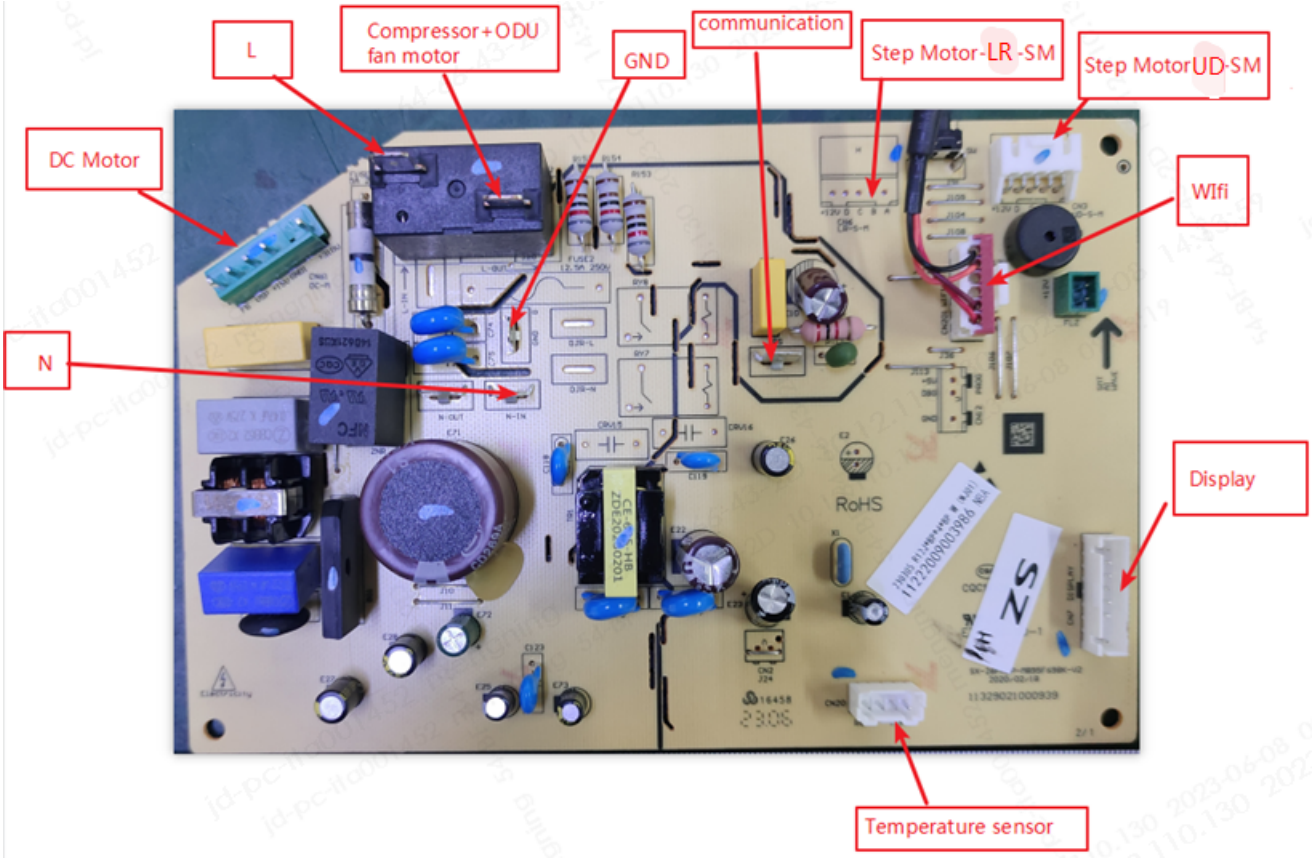


2.10

AMWM-H07/4R3C(J*);AMWM-H09/4R3C(J*);AMWM-H12/4R3C(J*);AMWM-H18/4R3C(J*)

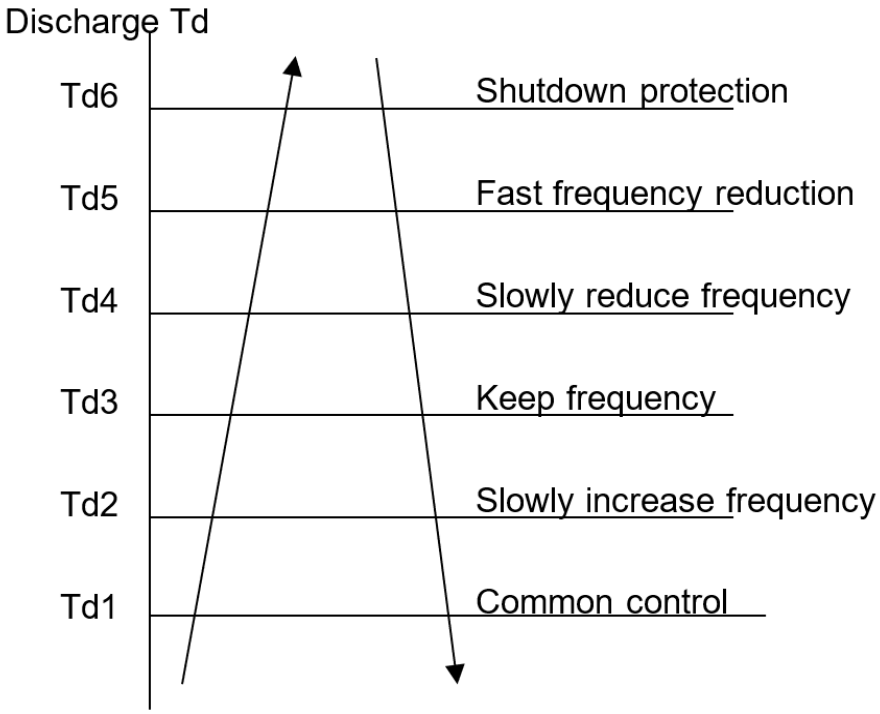
AMWM-H07/4R3C(F*);AMWM-H09/4R3C(F*);AMWM-H12/4R3C(F*);AMWM-H18/4R3C(F*)

AMWM-H07/4R3C(H*);AMWM-H09/4R3C(H*);AMWM-H12/4R3C(H*);AMWM-H18/4R3C(H*)

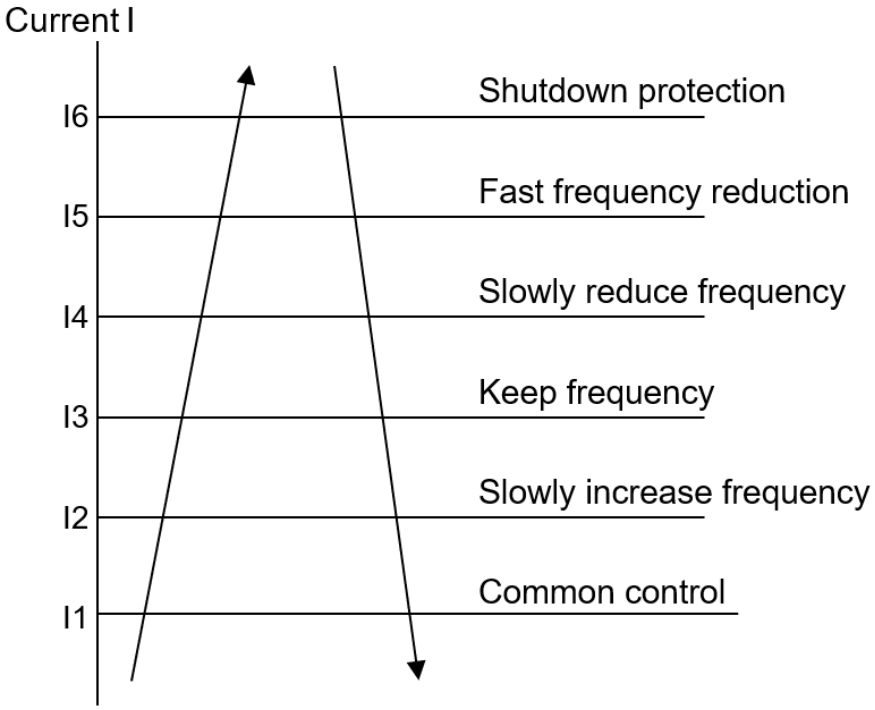


Part11 Protection

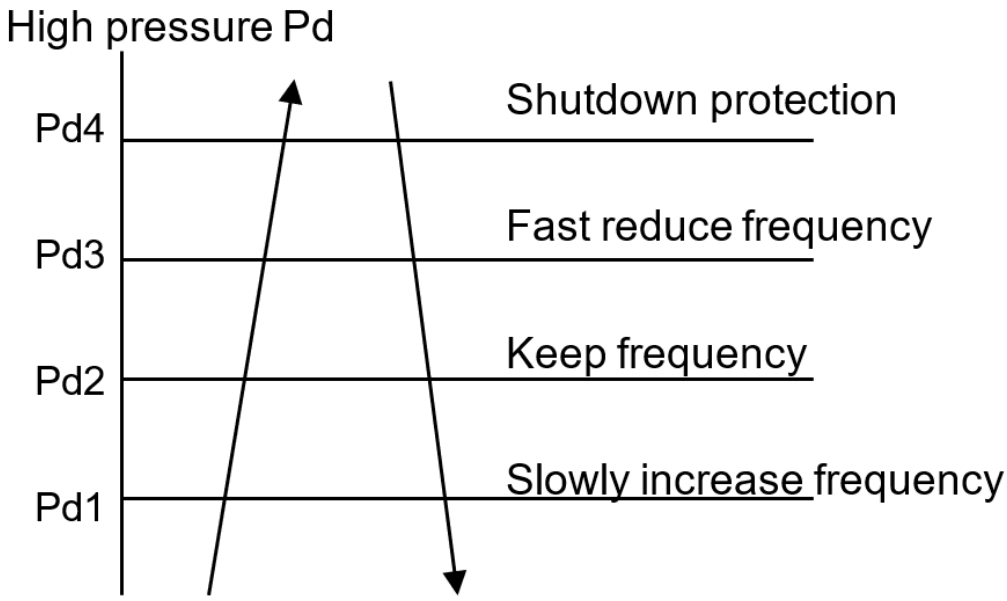
1、High Temperature Protection



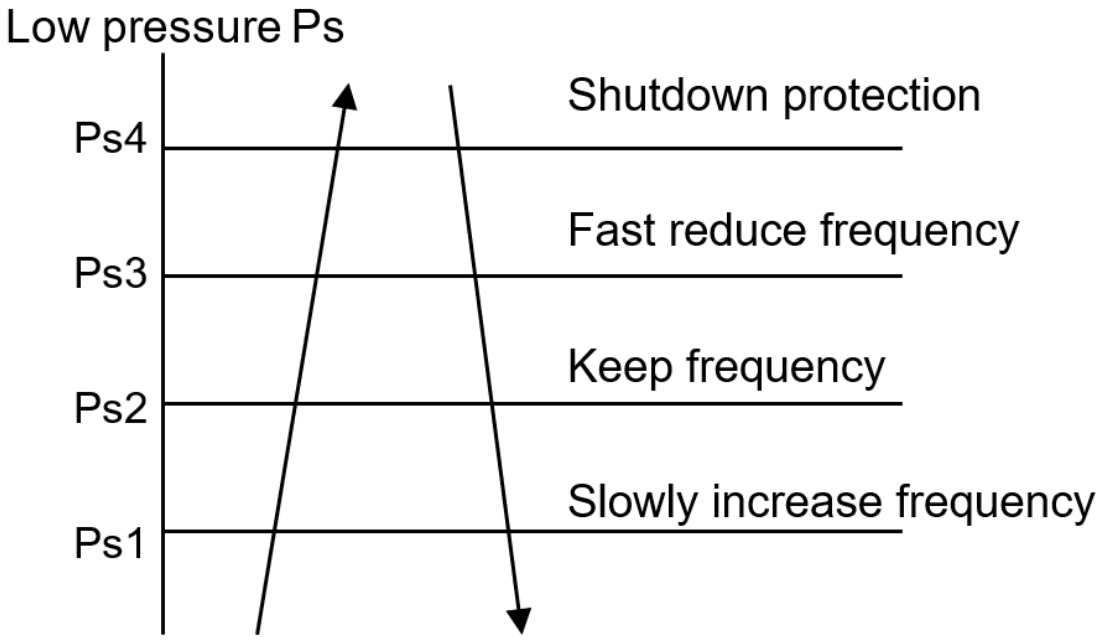
2、Over Current Protection



3、High Pressure Protection



4、Low Pressure Protection



Part12 Electric Characteristic

1、Electric Characteristic

model	power supply		voltage range		running current			ODU fan motor input （kW）
	Hz	voltage	Min	Max	cooling	heating	Max current	
AM2-H14/4DR3-U	50	220-240	187	253	5.39	5	12	60
AM2-H18/4DR3A	50	220-240	187	253	7.6	6.7	11	60
AM2-H18/4DR3C-U	50	220-240	187	253	7.13	6.43	13	60
AM3-H21/4DR3C-U	50	220-240	187	253	8.35	7.74	14	85
AM3-H27/4DR3A	50	220-240	187	253	10.7	9.6	16	85
AM3-H27/4DR3C-U	50	220-240	187	253	10.61	9.61	16.5	85
AM4-H36/4DR3A	50	220-240	187	253	17.5	13.96	23.5	150
AM5-H42/4DR3A	50	220-240	187	253	19.72	16.62	24.5	150

Part13 Trouble Shooting

CA/ CF/ Duct /Co: Ceiling floor /Cassette/Duct/Console unit; WM: wall mounted unit

1. Fault code list

1.1 Temp. sensor fault (CA/ CF/ Duct / Co NO.9; WM NO.8)

Code display in IDU		Fault code description	Possible reason
CA/CF/Duct/Co	WM		
A1	**E1**	Fault with the room temperature sensor on the N # indoor unit	Damage of the room temperature sensor on the indoor unit Poor contact of the room temperature sensor on the indoor unit Damage of wiring of the room temperature sensor on the indoor unit Damage of the main PCB on the indoor unit
A2	**E3**	Fault with the temperature Sensor in the Middle of N # indoor evaporator	Damage of the temperature sensor on the indoor unit Poor contact of the temperature sensor on the indoor unit Damage of wiring of the temperature sensor on the indoor unit Damage of the main PCB on the indoor unit
A3	**H3**	Fault with the liquid pipe temperature sensor on the N# indoor unit	Damage of the liquid pipe temperature sensor on the indoor unit Poor contact of the liquid pipe temperature sensor on the indoor unit Damage of wiring of the liquid pipe temperature sensor on the indoor unit Damage of the main PCB on the indoor unit
A4	**H4**	Fault with the gas pipe temperature sensor on the N# indoor unit	Damage of the gas pipe temperature sensor on the indoor unit Poor contact of the gas pipe temperature sensor on the indoor unit Damage of wiring of the gas pipe temperature sensor on the indoor unit Damage of the main PCB on the indoor unit

Code display in IDU		Fault code description	Possible reason
CA/CF/Duct/Co	WM		
C1	F6	Fault with the environmental temperature sensor on the outdoor unit	Damage of the Environmental temperature sensor on the outdoor unit Poor contact of the Environmental temperature sensor on the outdoor unit Damage of wiring of the Environmental temperature sensor on the outdoor unit Damage of the main PCB on the outdoor unit
C3	F4	Fault with the discharge temperature sensor	Damage of the discharge temperature sensor on the outdoor unit Poor contact of the discharge temperature sensor on the outdoor unit Damage of wiring of the discharge temperature sensor on the outdoor unit Damage of the main PCB on the outdoor unit
C6	FA	Fault with the suction temperature sensor	Damage of the suction temperature sensor on the outdoor unit Poor contact of the suction temperature sensor on the outdoor unit Damage of wiring of the suction temperature sensor on the outdoor unit Damage of the main PCB on the outdoor unit
C8	E2	Fault with the Temperature Sensor in the middle of Outdoor condenser	Damage of the temperature sensor on the outdoor unit Poor contact of the temperature sensor on the outdoor unit Damage of wiring of the temperature sensor on the outdoor unit Damage of the main PCB on the outdoor unit
C2		Fault with the Defrosting Temperature Sensor on Outdoor	

1.2 Communication fault (CA/ CF/ Duct / Co NO.3; WM NO.5)

Code display in IDU		Fault code description	Possible reason
CA/CF/Duct/Co	WM		
A9	5E/E5	Communication error between the outdoor unit and the N # indoor unit	Damage of the main PCB on the indoor unit Damage of the main PCB on the outdoor unit poor wiring
AA	E8/H2	Communication error between the wired controller and main PCB of the N# indoor unit	poor wiring Damage of the wired controller Damage of the main PCB on the indoor unit
D3(J3)	F8	Communication error between the driver PCB and main PCB of the outdoor unit	Damage of the driver PCB on the outdoor unit Damage of the main PCB on the outdoor unit poor wiring

1.3 IDU fault (CA/ CF/ Duct / Co NO.3; WM NO.3)

Code display in IDU		Fault code description	Possible reason
CA/CF/ Duct/Co	WM		
A5	H1	Fault with the drainage on N# Indoor unit	Float switch disconnected or poor wiring Error setting of model parameters Drain plug Damage of the pump
A6	E4	Fault with the Fan motor of N # indoor unit	Low voltage poor wiring Damage of the main PCB on the indoor unit Damage of the motor
AD	P7	Indoor anti-freezing protection	Dirty Blockage of evaporator Indoor fan abnormal

1.4 Refrigerant circuit fault (CA/ CF/ Duct / Co NO.6; WM NO.6)

Code display in IDU		Fault code description	Possible reason
CA/CF/Duct/Co	WM		
E3	P5	High discharge temperature Protection	Lack of the refrigerant Stop valve unopened Damage of the main PCB on the outdoor unit
E8	P4/P6	Cooling: high temperature Protection of outdoor unit Heating: high temperature Protection of indoor unit	Cooling: Poor condenser heat exchange Heating: Poor evaporator heat exchange
F6/H4	H7	Low pressure protection	Lack of the refrigerant Heat exchanger viscera
FH	H5	Lower discharge temperature protection	temperature sensor shedding Damage of the main PCB on the outdoor unit
(B5)H5	P3	Lack of refrigerant	Lack of the refrigerant Stop valve unopened

1.5 ODU components fault (CA/ CF/ Duct / Co NO.7; WM NO.12)

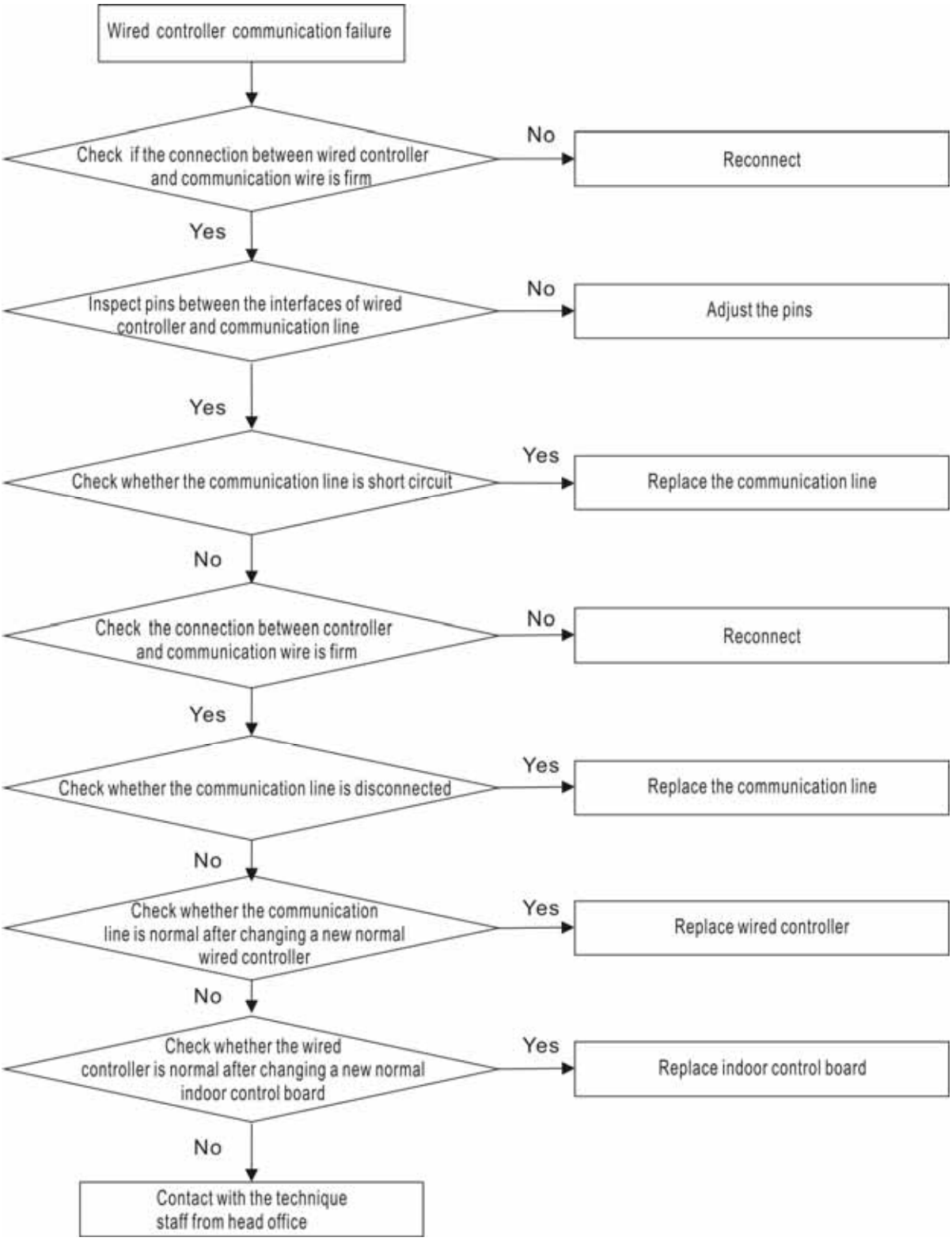
Code display in IDU		Fault code description	Possible reason
CA/CF/Duct/Co	WM		
(B1)H1	P2	High pressure Switch Protection	System dirty blocking Damage of High Voltage Pressure Switch
H4	H6	Low pressure switch protection	Lack of the refrigerant Stop valve unopened damage of low press switch
E1	H8	Fault of four-way valve	Damage of four-way valve Damage to coil of four-way valve
34	F3/LA/L2 /L3	Compressor failed to start	Compressor power line not connected Compressor sequence connection error Damage of compressor
3E			
3B(3H)	F0/LD/LE/LF	Fault with the Fan motor of outdoor unit	Damage of motor
3C	LF	Outdoor DC Fan Out-of-step Protection & over current protection	DC motor failure High Speed of DC Fan System dirty blocking

1.6 ODU electeic control fault (CA/ CF/ Duct / Co NO.10; WM NO.20)

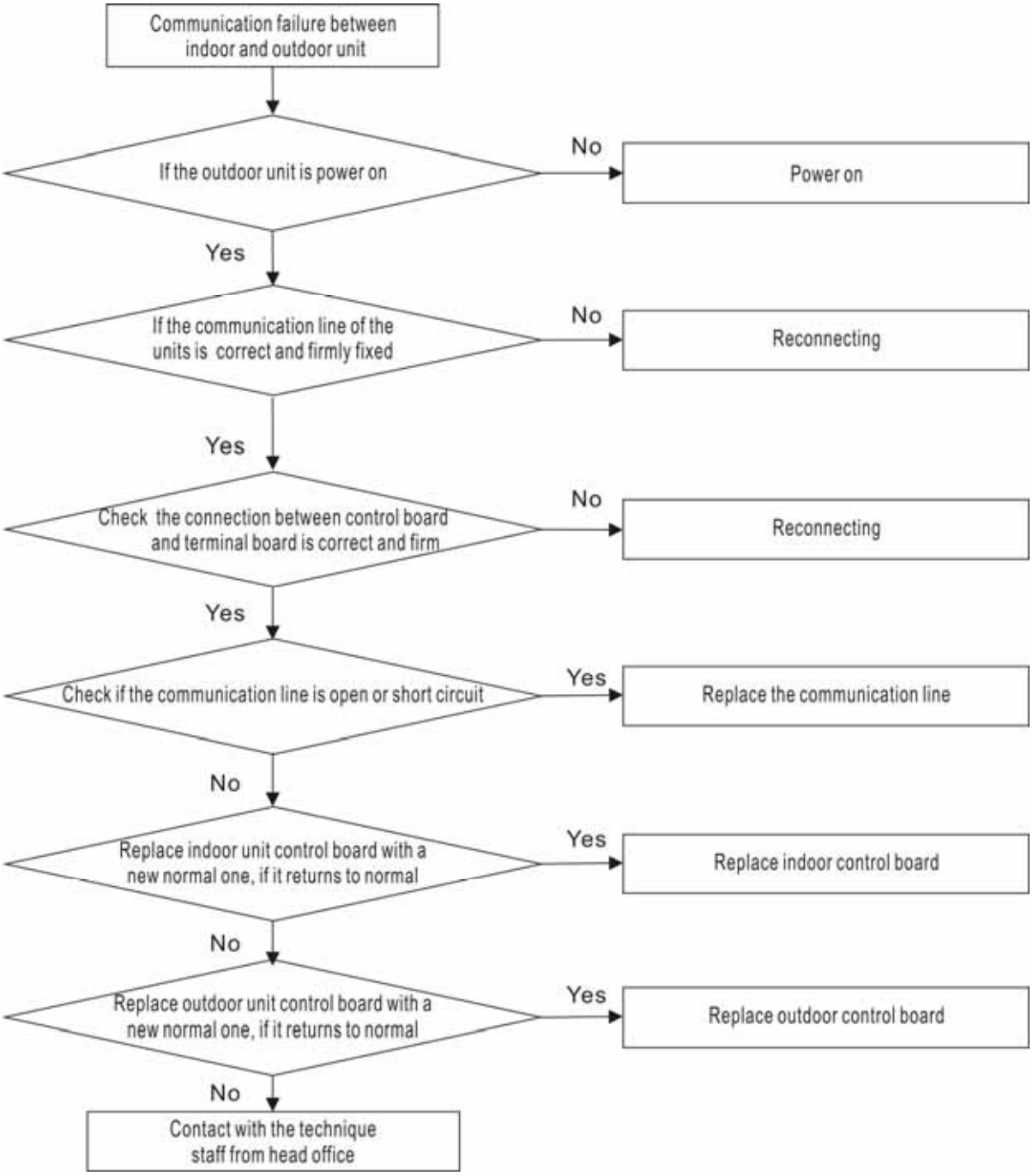
Code display in IDU		Fault code description	Possible reason
CA/CF/Duct/Co	WM		
31	F1/L1/L4 /L7/L8	IPM Module failure protection	compressor damage compressor IPM Module damage system blockage
32	F9	Compressor drive hardware protection & Fault with the outdoor unit EEPROM	chip damage
D7(J7)			
35	P8/J8	Over-current Protection of the compressor drive modular	Excessive running current of the unit Voltage drops abruptly during operation
36	F7/L0	Over-voltage Protection of the compressor drive modular	Excessive input voltage Lower input voltage
37	HE/HF	Abnormal temperature sensor in IPM/PFC module	Driver board IPM/PFC module device is broken
39	L9	Temperature of compressor drive modular too high protection	Compressor IPM Module sensor damage Poor contact between compressor IPM module and radiator
3J	LD	AD Abnormal Protection for Outdoor DC Fan Current Detection	Abnormal component of the fan driver modular
3F	F2/L5/ L6/LC	Compressor drive PFC protection	Damage of the PFC circuit components Reactor damage
41	LH	IPM Protection of Outdoor DC Fan drive modular	The IPM Device of DC Motor is Bad

2. Failure analysis

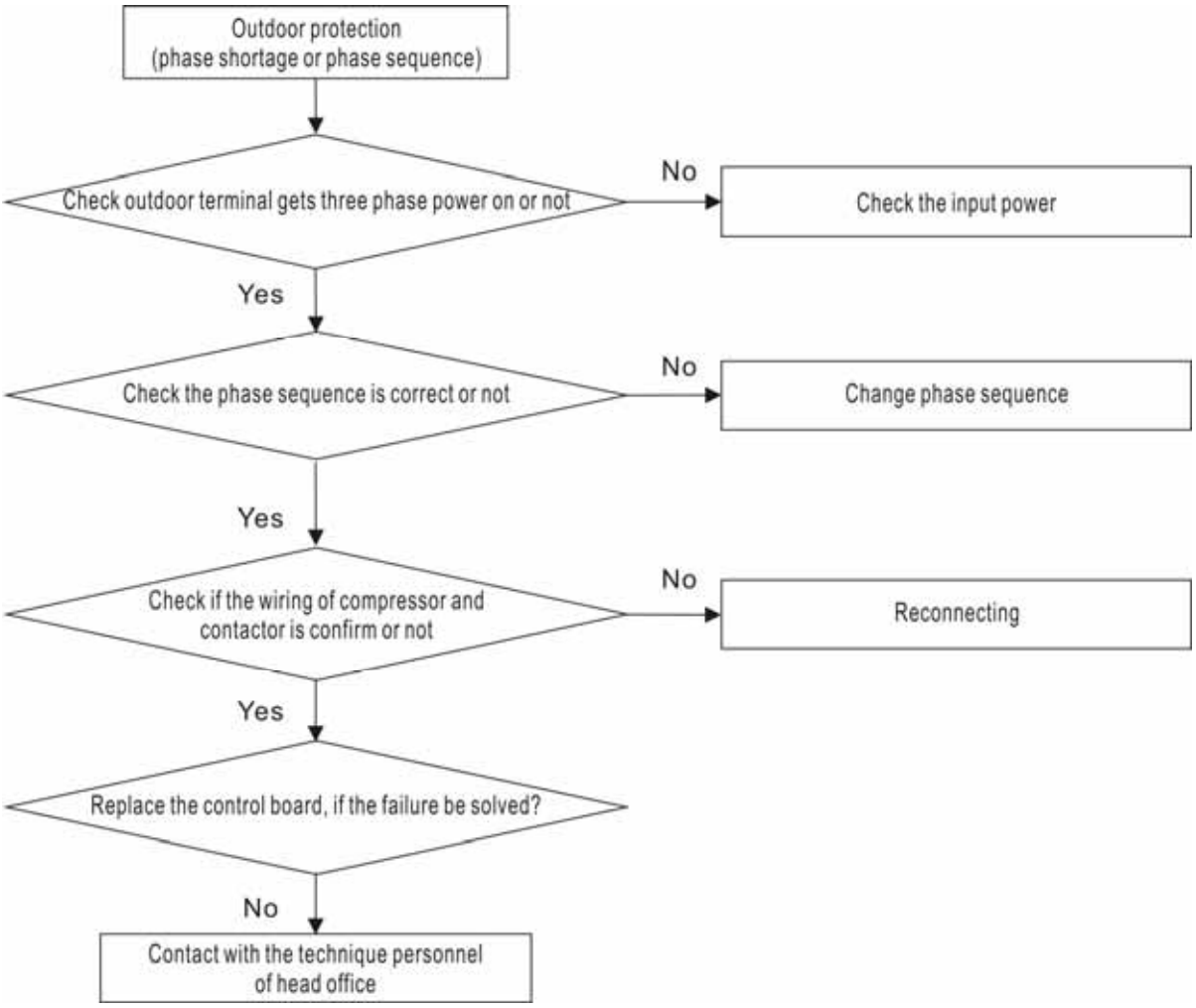
2.1【H2】Wired controller communication failure



2.2【E5】Communication failure between indoor and outdoor unit

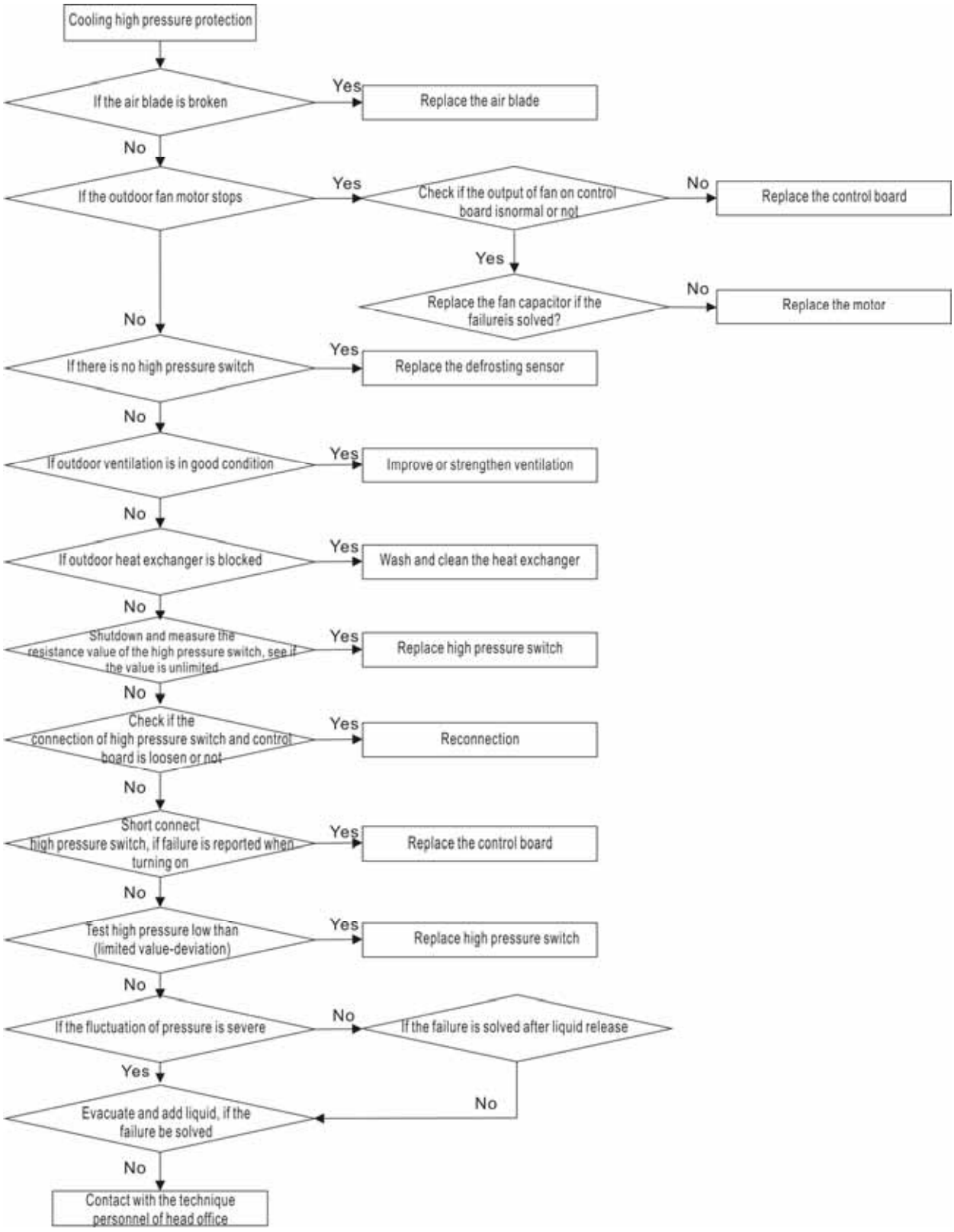


Outdoor protection (phase sequence)

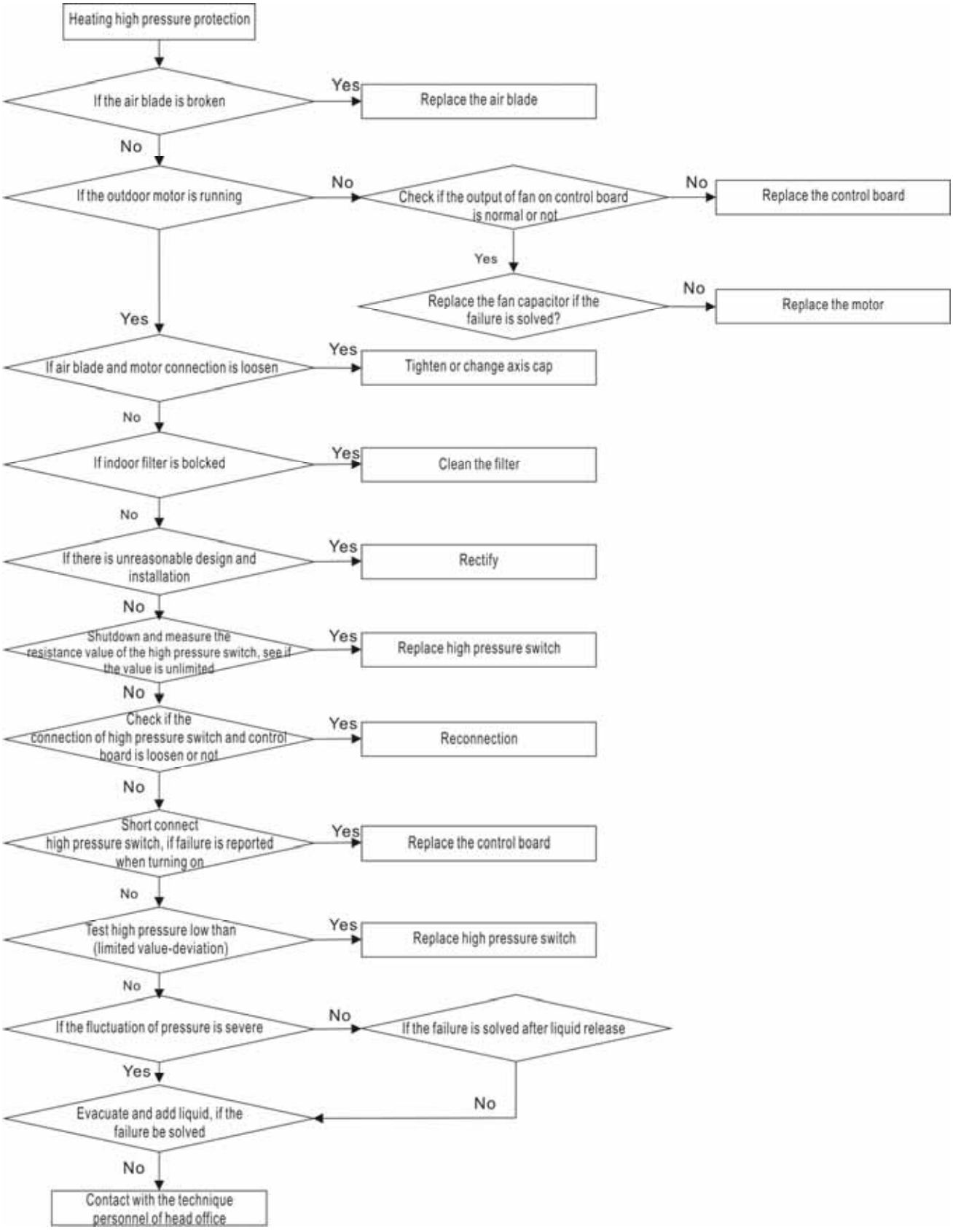


2.3【P2】high pressure protection

Cooling high pressure protection

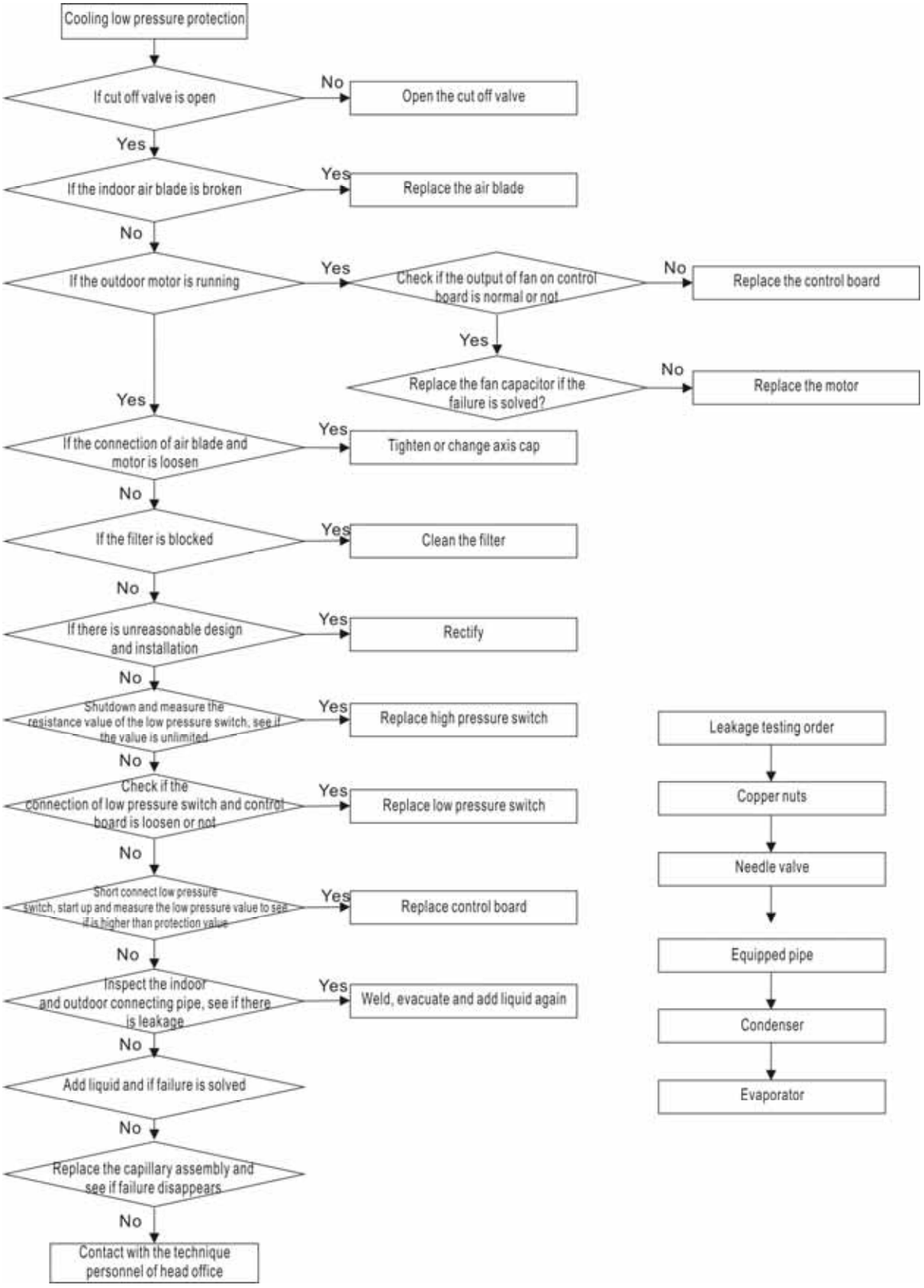


Heating high pressure protection



2.4【H6】low pressure protection

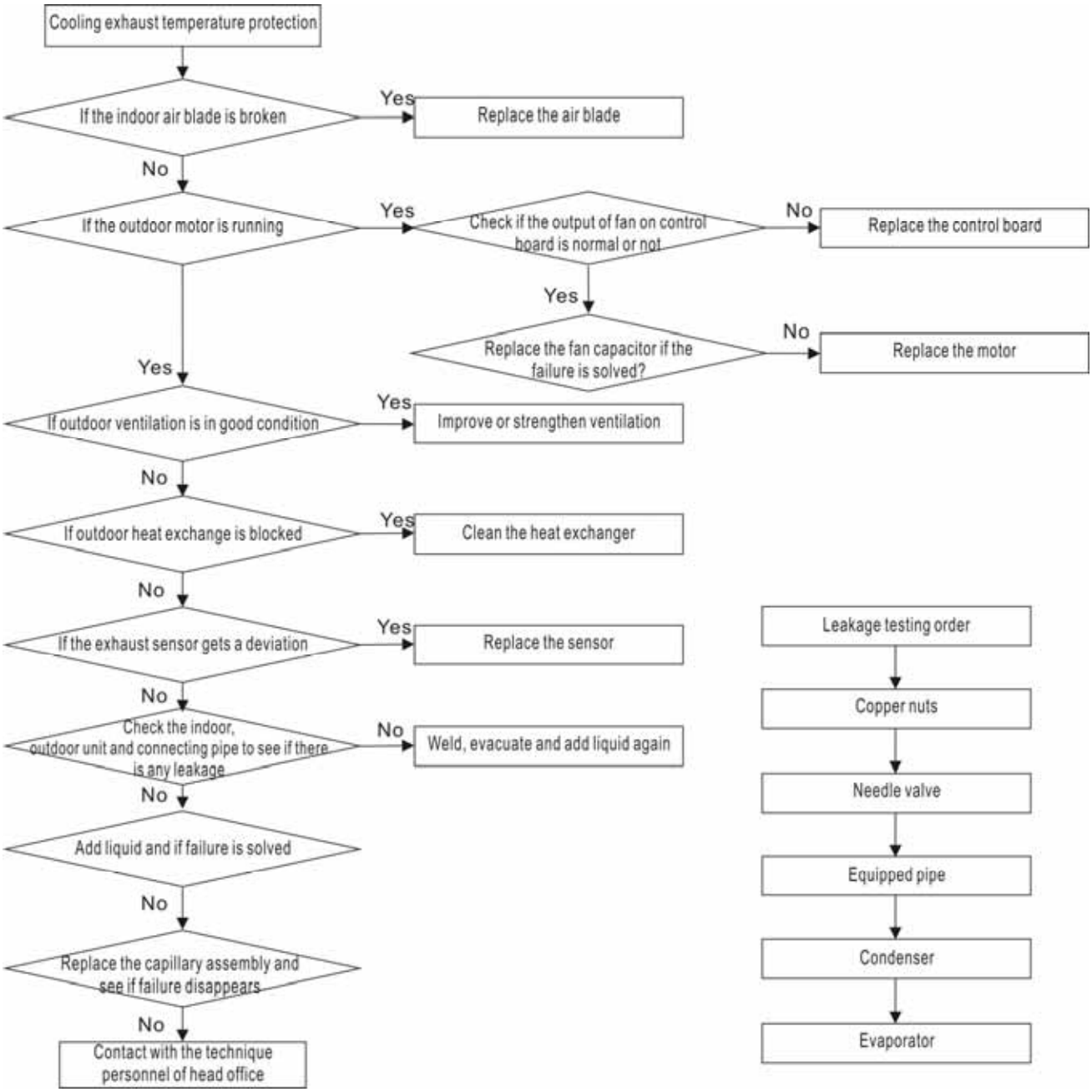
Cooling low pressure protection



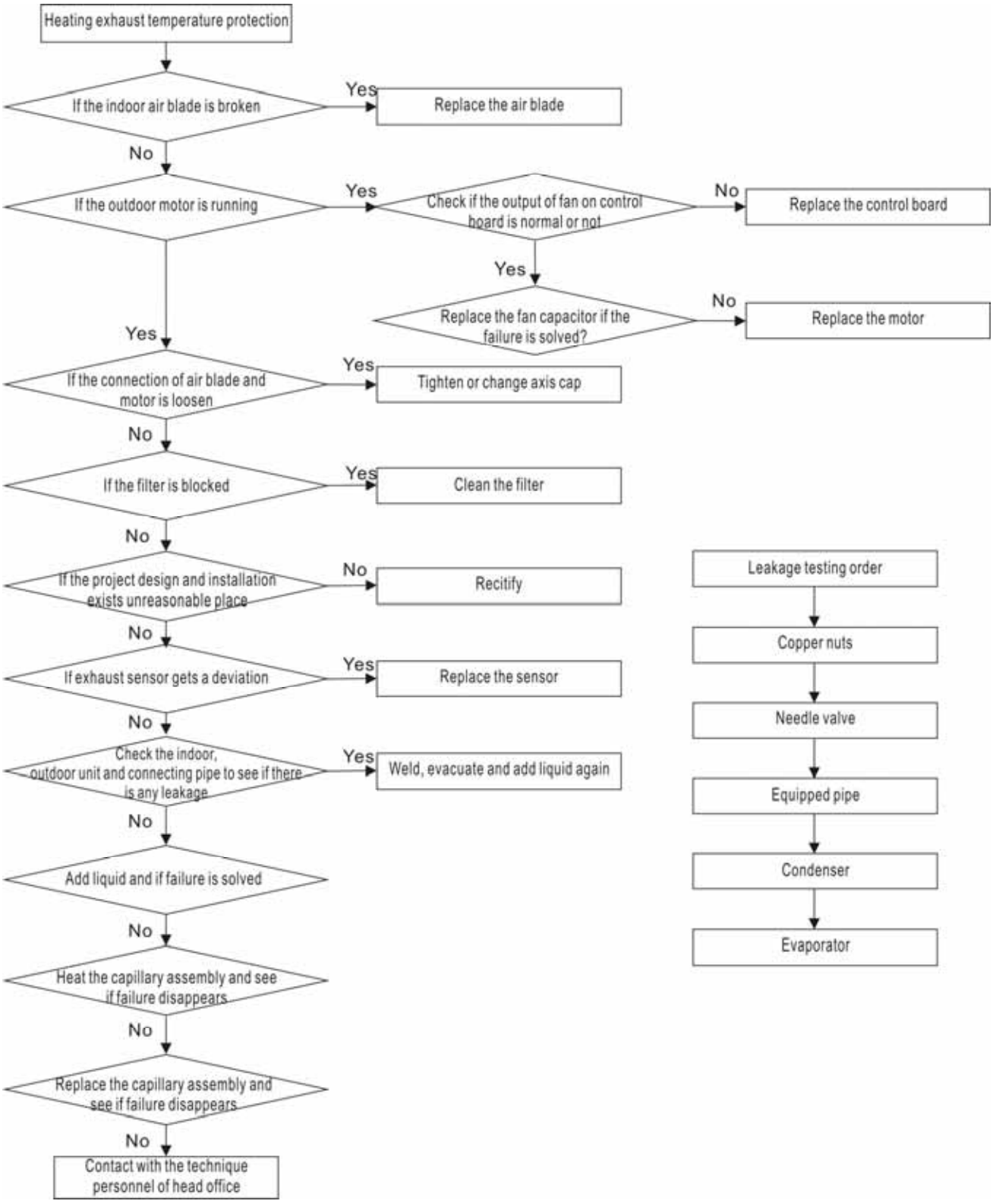
Heating low pressure protection

2.5【P5】High exhaust temperature protection

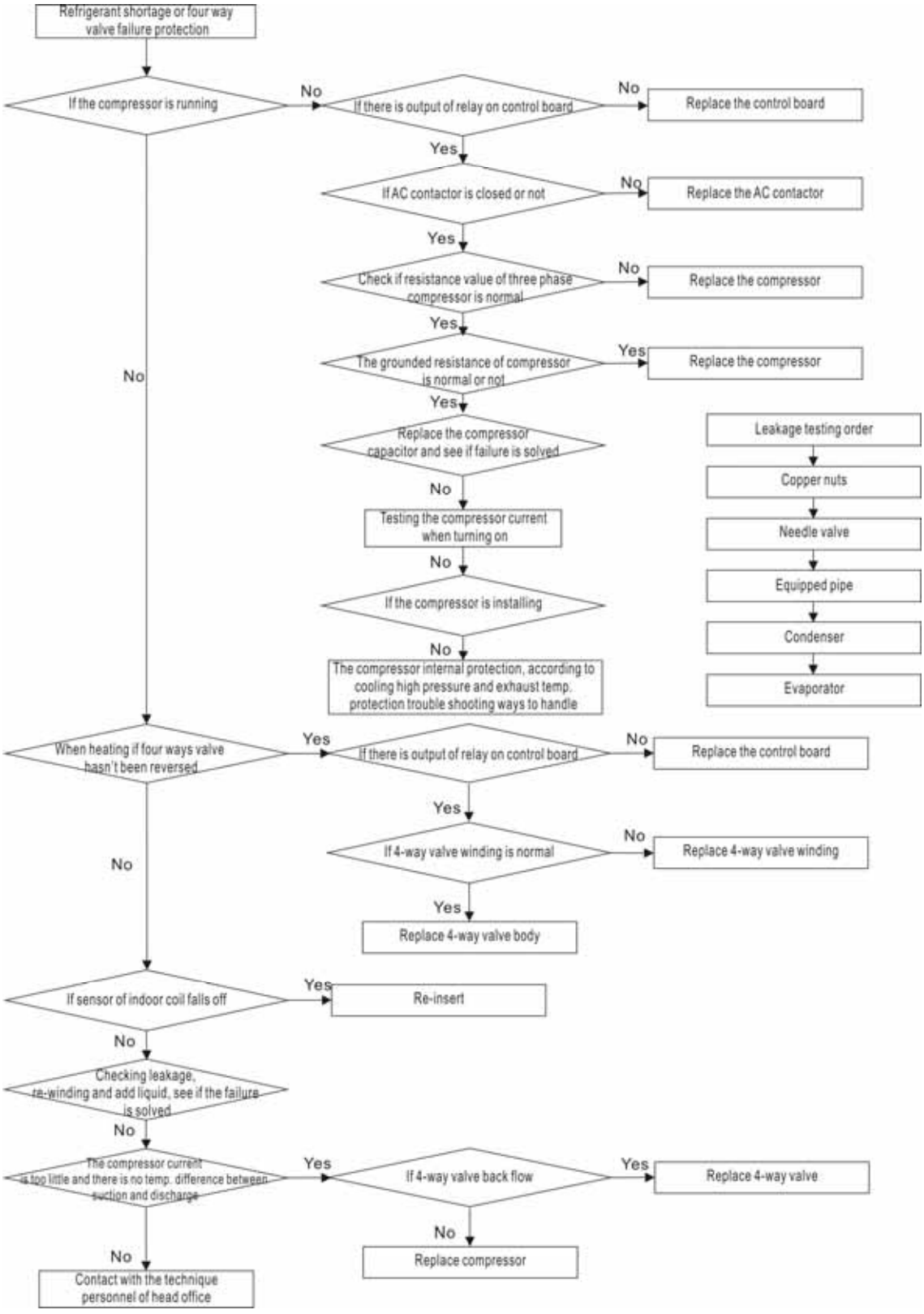
Cooling exhaust temperature protection



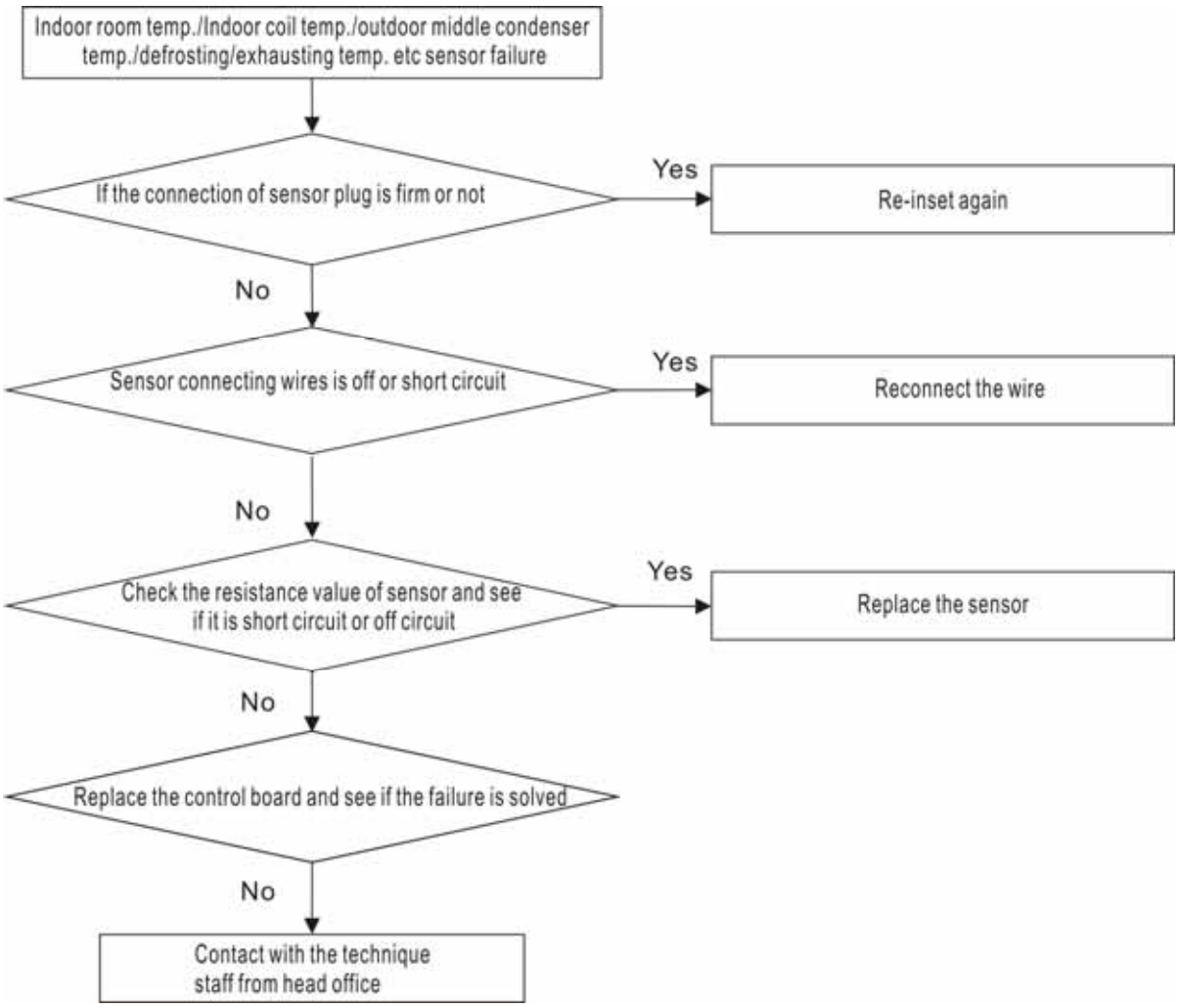
Heating exhaust temperature protection



2.6【H8】four way valve failure protection



2.7 Sensor failure protection



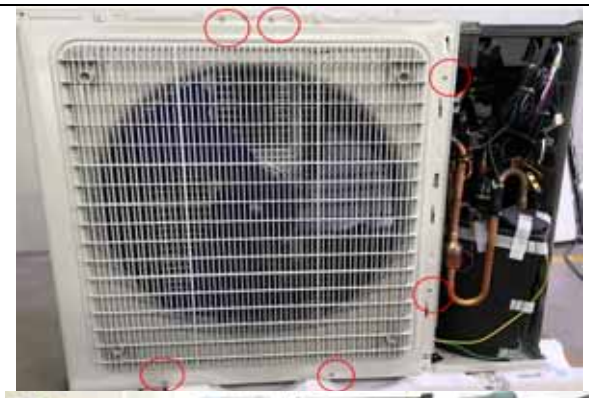
Part14 Installation Information

1. Installation Guide（See the installation instruction manual for details）

2.Disassemble

Outdoor unit：example: AM4-H36/4DR3

NO	Procedure	Remark
1	Remove 8 screws from the cabinet (Use screw driver)	
2	remove 2 screws from the frontal cabinet to pull down the right small one (Use screw driver)	

3	remove 6 screws from the frontal cabinet to pull down the left bigger cabinet	 
NO	**Procedure**	**Remark**
4	remove 3 screws from left cabinet(Use screw driver)	
5	remove 2 screws from the small electrical cover	
6	remove 9 screws from right cabinet to make compressor exposed, 6 screws have been remarked, and 3 ones else are at the edge of condenser	

7	remove 3 screws from electronic box cover and the electronic cord will be exposed.	  
NO	**Procedure**	**Remark**
8	remove the insulation cotton from the periphery of compressor	

Update record

Time	Version	Name	Content
/	1	Five	1. Delete the detaile parameter table, according to the EXCEL shows 2. Delete the installation part, subject to the R&D manual 3. Add 24K Cassette & Duct data, 3D explosion diagram, static pressure curve, electrical schematic diagram and dimension diagram
/	2	Five	1. Update the Error code table, show the IDU error code separately
20200413	3	Five	1. Fault table, commercial internal machine F6 → F6 (H4) 2. Fault table, external F0/LE → F1/LD/LE/LF 3. Fault table, external electric control P8 → P8/J8 4. Fault table, external electric control F7/L0 → F7/L0/F1 5. Fault table, newly added fault code 37
20200416	4	Five	1. Error table, delete the number of error tables
20200909	5	Liu Zhuo	1. Add data, 3D explosion diagram, electrical schematic diagram and dimension diagram of H wall hanging and F seat hanging; Low static pressure Y type static pressure curve.
20210127	6	Five	Update 36,42K ODU explosion diagram
20210823	7	Summer	Add 18k information of Free Match
20210826	8	LiuSailan	Add Free Match one drive two18K ODU (NEW) information
20211013	9	LiuSailan	J Wall Mounted upgrade, information update
20211116	10	LiuSailan	1. F&H Wall mounted upgrade and information update; 2. The C type Celling and floor has been frozen, and the information has been deleted
20220801	11	Summer	Add new ODUs 14K/18K/21K/27K
20221027	12	Bin	Update Console 9K/12K/16K
20221202	13	Bin	Add 9, 12 and 18K information of Y type cassette , delete relevant information of L wall mounted
20220203	14	Harry.Tong	1.Add Q type Wall Mounted 2.Add new F type wall mounted 3.Delete AM2-H14/4DR3、AM2-H18/4DR3S、AM3-H21/4DR3 4.Add the parameter of static setting
20230515	15	Choy	1.Add 12/18/24k M-TYPE duct
20230710	16	Steven	1. Add Wall Mounted that are compatible with home use. (F/J/H:07/09/12/18k) 2. Update the Dimension and Electrical Principle Diagram of the Wall Mounted. 3. Add the PCB Instruction of the Wall Mounted. 4. Delete the Cassette E series product.