

# Airwell

*Just feel well*

## SERVICE MANUAL

**Console Type Indoor Unit (new)**  
**XVVA Range R410a**  
**English Manual**

XVVA-050/035/025N-01M22



### **IMPORTANT NOTE:**

Read this manual carefully before installing or operating your new air conditioning unit. Make sure to save this manual for future reference.

## 1. Console Type Indoor Unit (new)

### 1.1 Features



XVVA-050/035/025N-01M22

#### **Compact unit, space saving**

The console indoor unit is very slim and will be harmonious with room. It can be placed at the corner, and it is very space saving.

#### **Quiet operation**

Thanks to the low noise centrifugal fan, the unit always works quietly, it lets your life more comfortable.

#### **Dual air sending position**

The console indoor unit can send the air from the top and the bottom, which will realize the indoor temperature be adjusted soon.

#### **High efficiency filter**

The console indoor unit adopts high efficiency filter to improve the air quality.

## 1.2 Specification

MODEL		XVVA-025N-01M22	
Power supply		Ph-V-Hz	1,220~230,50/60
Cooling	Capacity	kBtu/h	9.5
	Capacity	kW	2.8
	Power input	W	31
	Current	A	0.30
Heating	Capacity	kBtu/h	10.9
	Capacity	kW	3.2
	Power input	W	31
	Current	A	0.30
	Heating capacity at low temp.	kW	2.1
Operating current		A	0.30
Power consumption		kW	0.031
Indoor motor	Brand		ZWK465A000114 /SIC-41CVJ-F130-20
	Model		Broad-Ocean/Nidec
	Type		DC
	Insulation class		E
	IP class		41
	Power input	W	31
	Power output (up/down)	W	30
	Speed (High/Middle/Low)	rpm	
Indoor fan	Brand		Shunwei
	Type		Centrifugal
	Quantity		1
Indoor coil	a. Number of rows		2
	b. Tube pitch (a)×row pitch(b)	mm	21*13
	c. Fin spacing	mm	1.4
	d. Fin type (code)		
	e. Tube outside dia. and type	mm	
	f. Coil length×height×width	mm	509×378×26
	g. Number of circuits		3

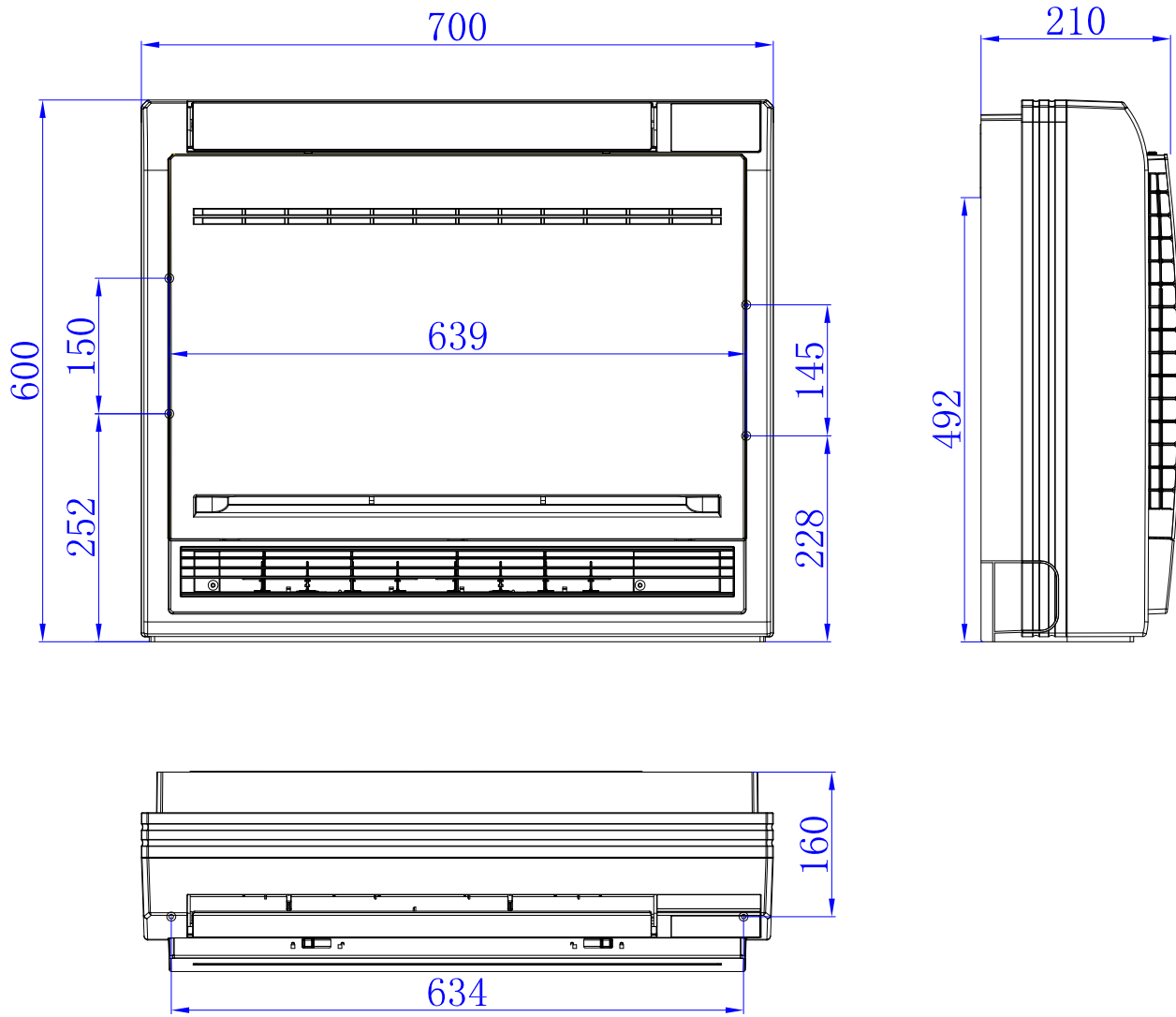
MODEL			XVVA-025N-01M22
Cabinet	Cabinet coating type		Plastic
	Control box IP class		IP20
Construction	Sheet metal thickness		/
	Drain pan material		PS
	Drain pan insulation		22
	Drain pump option		NO
	Branch outlet option		NO
Indoor wall	Material		Plastic
	Thickness	mm	/
	Double or single skin		Single
Air filter	Material		PP
	Mesh		15*13
	Pressure drop	Pa	5
Piping dimension	Liquid pipe	mm	6.35
	Gas pipe	mm	12.7
	Drain hose	mm	16
Fresh air dimension		mm	/
Sound pressure level (H/M/L)		dB(A)	45/42/39/35/32
Sound power level (H/M/L)		dB(A)	58/55/52/48/45
Standard static pressure		Pa	0
Indoor air flow (H/M/L)		m <sup>3</sup> /h	
Dimension (W*H*D)		mm	700/210/600
Packing (W*H*D)		mm	783/303/695
Net weight		kg	15.2
Gross weight		kg	18.7
Nominal condition: indoor temperature (cooling): 27DB (°C)/19WB (°C), indoor temperature (heating): 20DB (°C) Outdoor temperature (cooling): 35DB (°C)/24WB (°C), outdoor temperature (heating): 7DB (°C)/6WB (°C) The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.			



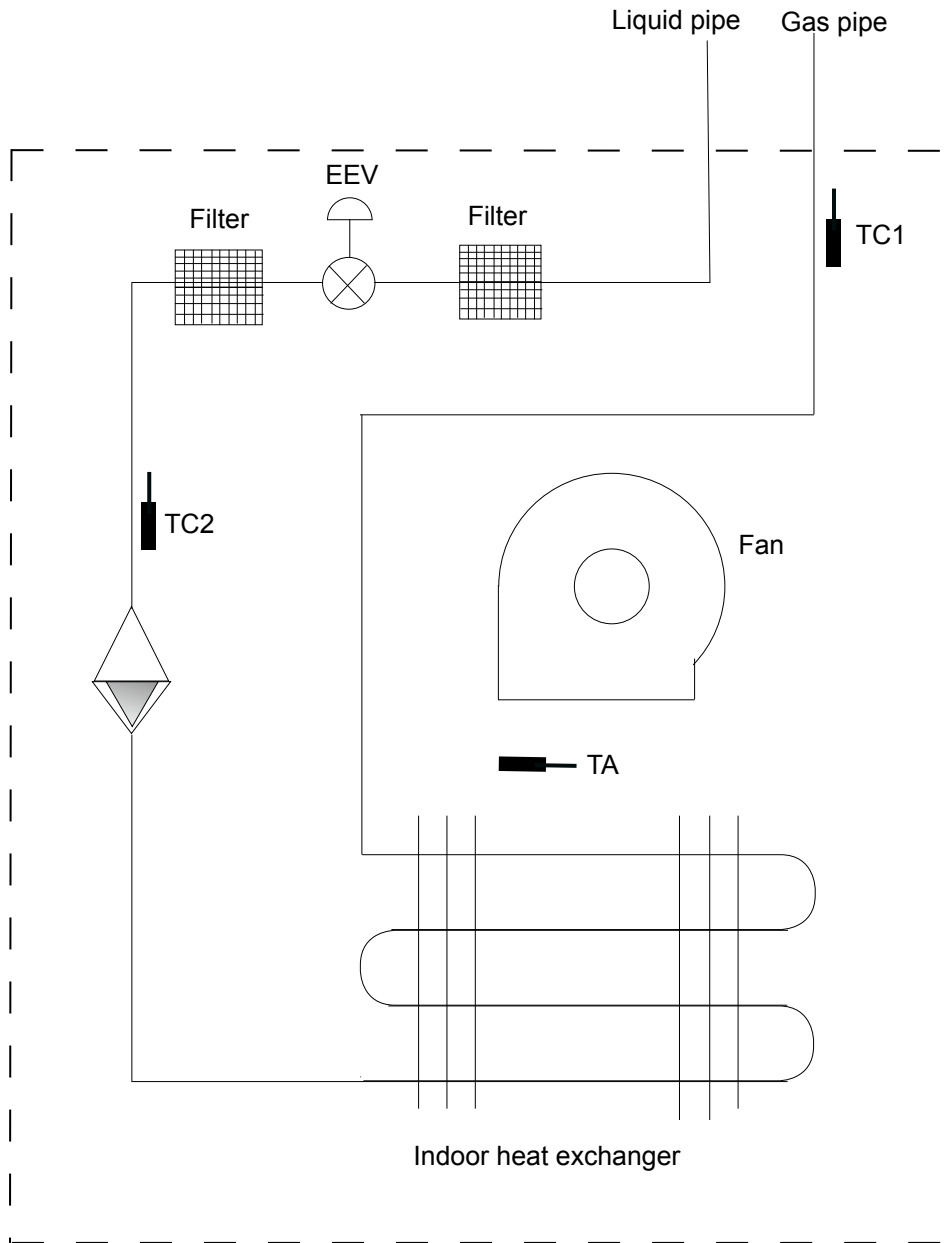
MODEL			XVVA-035N-01M22	XVVA-050N-01M22
Power supply		Ph-V-Hz	1,220~230,50/60	1,220~230,50/60
Cooling	Capacity	kBtu/h	12.3	17
	Capacity	kW	3.6	5
	Power input	W	34	36
	Current	A	0.32	0.34
Heating	Capacity	kBtu/h	13.6	18.5
	Capacity	kW	4	5.5
	Power input	W	34	36
	Current	A	0.32	0.34
	Heating capacity at low temp.	kW	2.6	3.6
Operating current		A	0.32	0.34
Power consumption		kW	0.034	0.036
Indoor motor	Brand		ZWK465A000114 /SIC-41CVJ-F130-20	ZWK465A000114 /SIC-41CVJ-F130-20
	Model		Broad-Ocean/Nidec	Broad-Ocean/Nidec
	Type		DC	DC
	Insulation class		E	E
	IP class		41	41
	Power input	W	34	36
	Power output (up/down)	W	30	30
	Speed (High/Middle/Low)	rpm	750/650/550 /450/350	800/700/600 /500/350
Indoor fan	Brand		Shunwei	Shunwei
	Type		Centrifugal	Centrifugal
	Quantity		1	1
Indoor coil	a. Number of rows		2	2
	b. Tube pitch (a)×row pitch(b)	mm	21*13	21*13
	c. Fin spacing	mm	1.4	1.4
	d. Fin type (code)		Hydrophilic aluminum	
	e. Tube outside dia. and type	mm	Φ7 Inner groove tube	
	f. Coil length×height×width	mm	509×378×26	509×378×26
	g. Number of circuits		3	3

MODEL			XVVA-035N-01M22	XVVA-050N-01M22
Cabinet	Cabinet coating type		Plastic	Plastic
	Control box IP class		IP20	IP20
Construction	Sheet metal thickness		/	/
	Drain pan material		PS	PS
	Drain pan insulation		22	22
	Drain pump option		NO	NO
	Branch outlet option		NO	NO
Indoor wall	Material		Plastic	Plastic
	Thickness	mm	/	/
	Double or single skin		Single	Single
Air filter	Material		PP	PP
	Mesh		15*13	15*13
	Pressure drop	Pa	5	5
Piping dimension	Liquid pipe	mm	6.35	6.35
	Gas pipe	mm	12.7	12.7
	Drain hose	mm	16	16
Fresh air dimension	mm	/	/	
Sound pressure level (H/M/L)	dB(A)	47/44/41/38/34	48/45/42/39/35	
Sound power level (H/M/L)	dB(A)	60/57/54/51/47	61/58/55/52/48	
Standard static pressure	Pa	0	0	
Indoor air flow (H/M/L)	m <sup>3</sup> /h	580/500/420 /350/270	620/540/460 /390/270	
Dimension (W*H*D)	mm	700/210/600	700/210/600	
Packing (W*H*D)	mm	783/303/695	783/303/695	
Net weight	kg	15.2	15.2	
Gross weight	kg	18.7	18.7	
Nominal condition: indoor temperature (cooling): 27DB (°C)/19WB (°C), indoor temperature (heating): 20DB (°C) Outdoor temperature (cooling): 35DB (°C)/24WB (°C), outdoor temperature (heating): 7DB (°C)/6WB (°C) The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.				

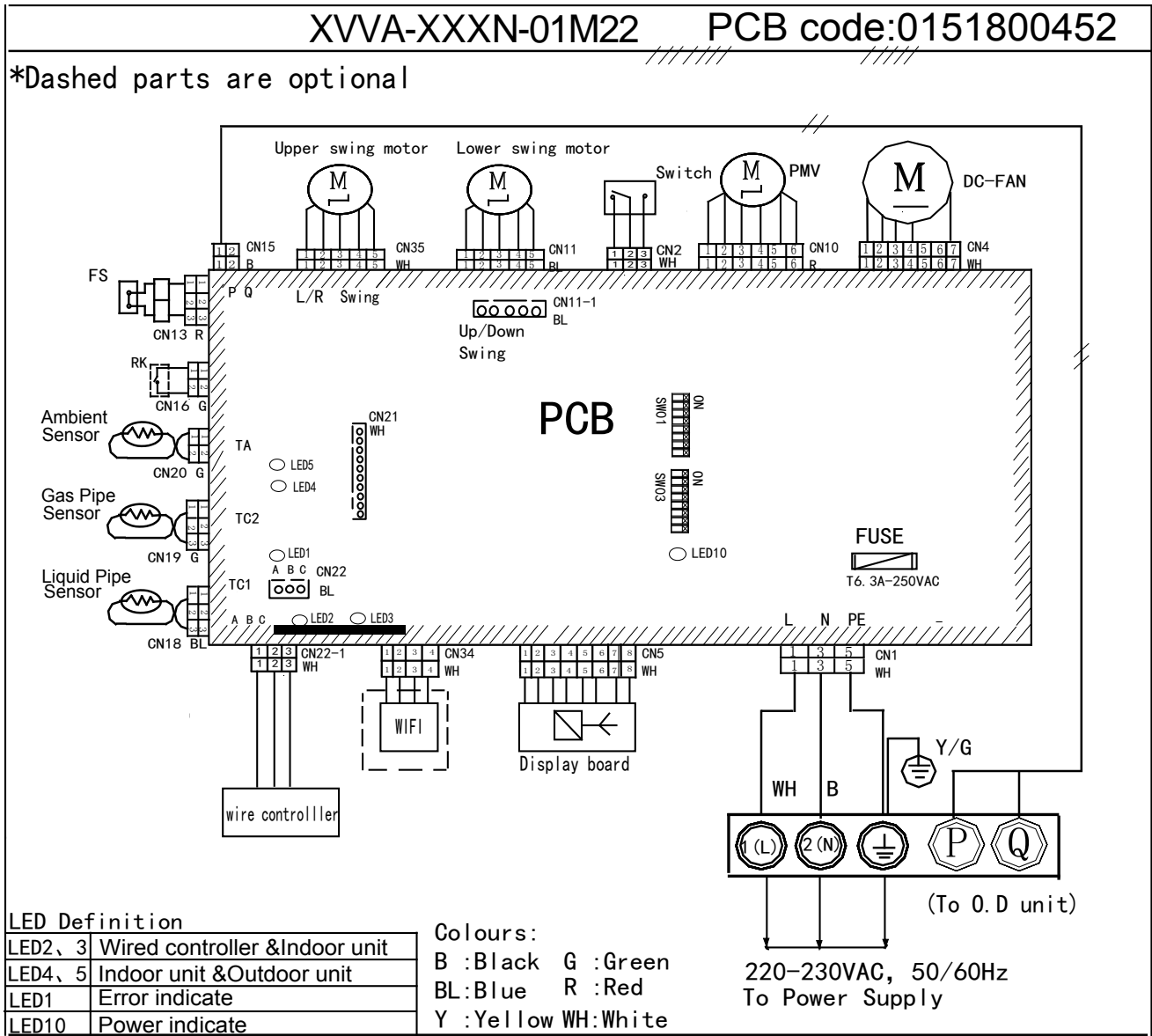
## 1.3 Dimension



1.4 Piping diagram



## 1.5 Wiring diagram



## 1.6 Electric characteristics

Units					Power supply		Indoor fan motor		Power input (w)	
Model	Phase	FQY	Voltage	Volt range	MCA	MFA	Output (W)	FLA	Cooling	Heating
XVVA-025N-01M22	1	50/60	220	198~242	0.38	1.20	30	0.30	31	31
XVVA-035N-01M22	1	50/60	220	198~242	0.39	1.24	30	0.31	34	34
XVVA-050N-01M22	1	50/60	220	198~242	0.43	1.36	30	0.34	36	36

### Symbols:

MCA: Min. circuit amps (A)

MFA: Max. fuse amps of circuit breaker

Output: Fan motor rated output (w)

FLA: Full load amps (A)

### Note:

1. *Voltage range*

*The units are applicable for the electrical systems where voltage supplied to unit is in the range.*

2. *Maximum allowable voltage unbalance between phases is 2%.*

3.  $MCA=1.25*FLA$   $MFA\leq 4*FLA$

4. *Power supply uses the circuit breaker.*

## 1.7 Air velocity and temperature distribution

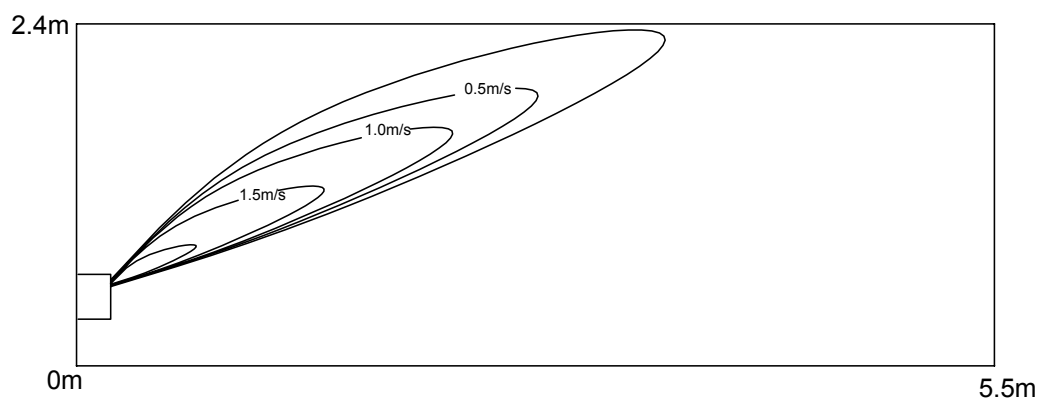
A) On the floor

a. Cooling / Air velocity distribution

Cooling

Blow angle: 25

Air velocity distribution

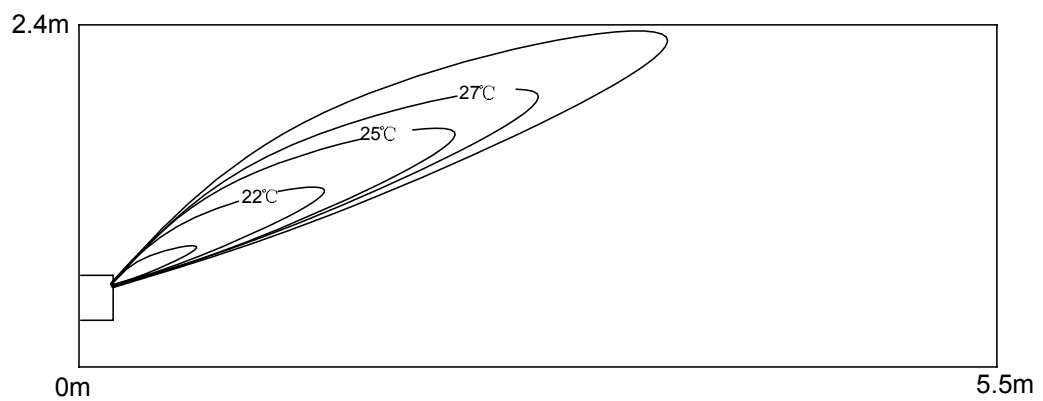


b. Cooling / Temperature distribution

Cooling

Blow angle: 25

Temperature distribution

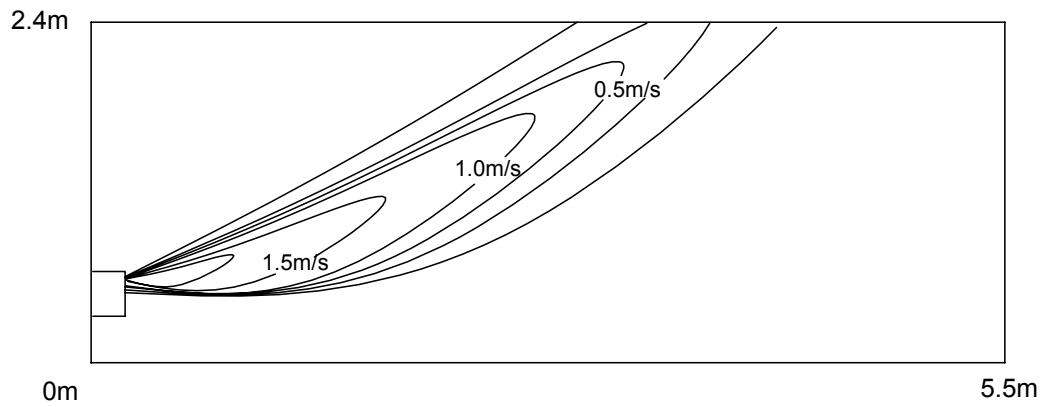


c. Heating / Air velocity distribution

Heating

Blow angle: 5

Air velocity distribution

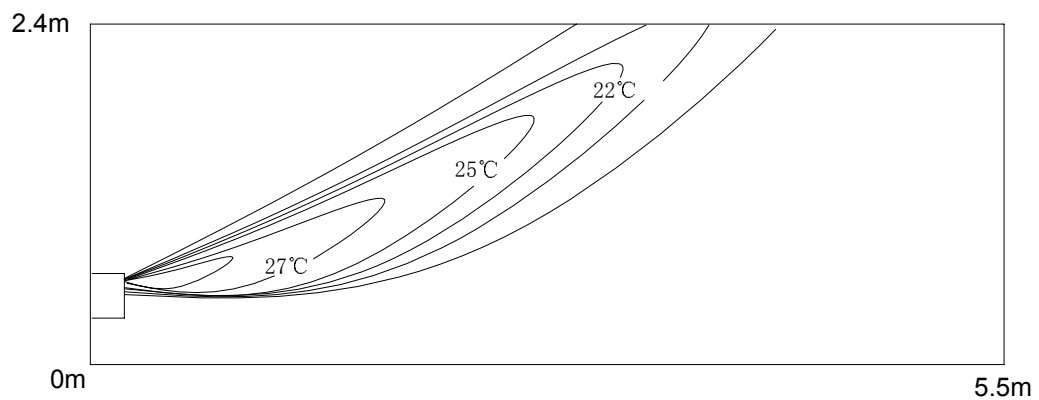


d. Heating / Temperature distribution

Heating

Blow angle: 5

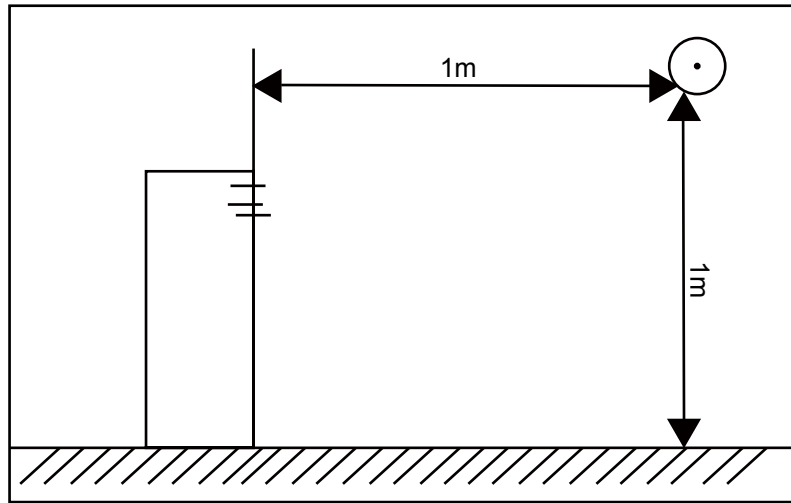
Temperature distribution





## 1.8 Sound pressure level

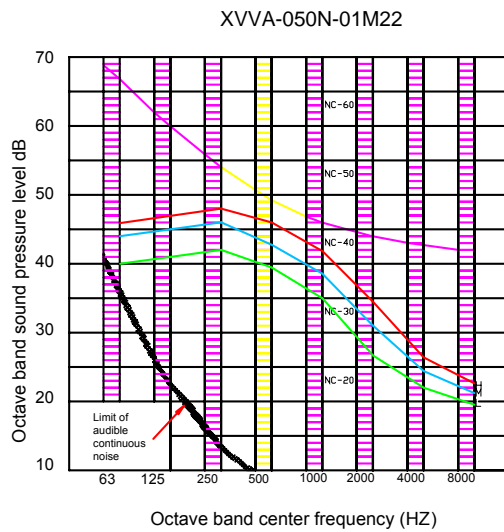
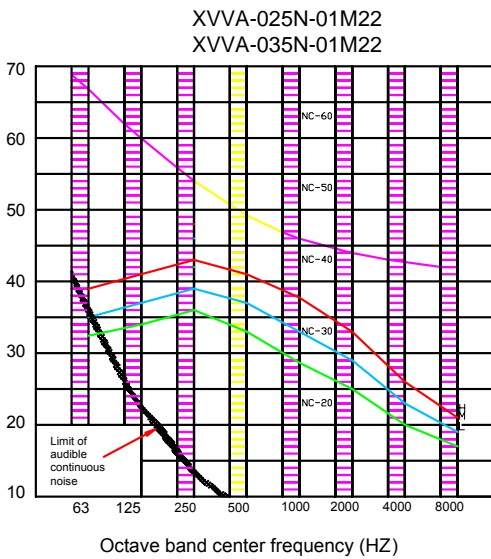
(1) Testing illustrate:



(2) Testing condition:

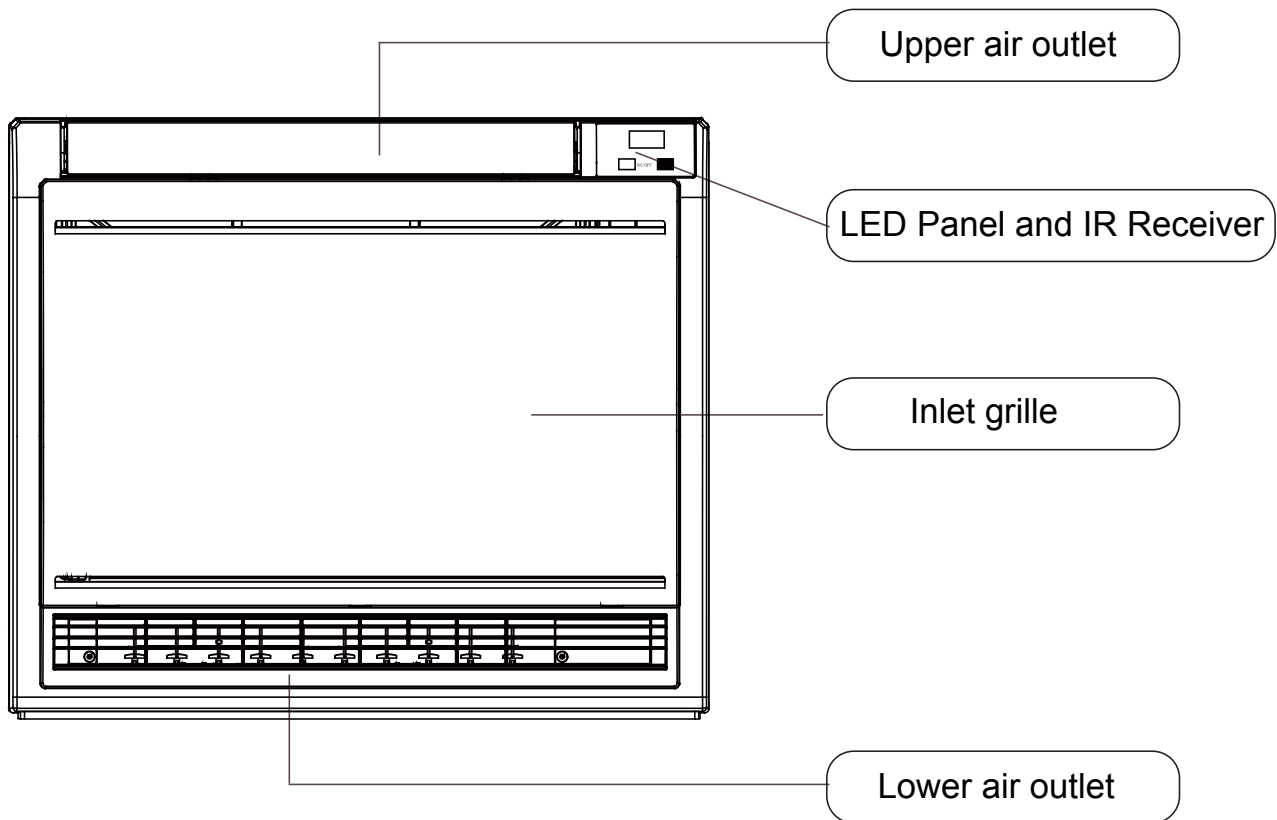
- a. Unit running in the nominal condition.
- b. Test in the semi-anechoic chamber.
- c. Noise level varies from the actual factors such as room structure, etc.

(3) Octave band level:

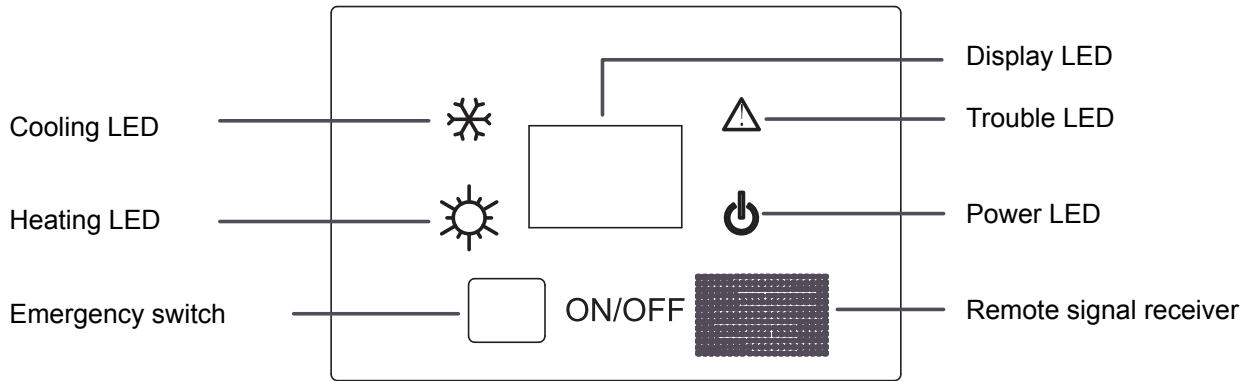


## 1.9 Installation

### 1.9.1 Parts

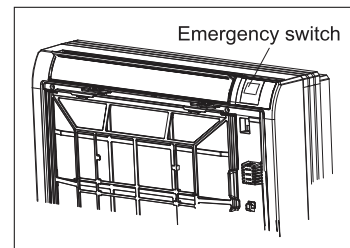


## 1.9.2 Operation hints



### Emergency operation of indoor unit

- When the remote controller is lost or damaged, the emergency switch can be operated under the panel. (as shown in the figure).
- In the OFF state, pressing the emergency switch can turn on automatic operation. Air conditioning automatically selects operation mode according to indoor temperature (cooling or heating).
- However, temperature setting and wind speed can not be changed. In the ON state, press this button to stop the air conditioner.

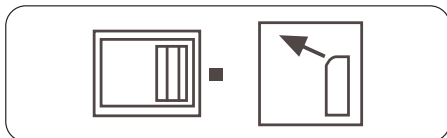


### Indoor air supply control

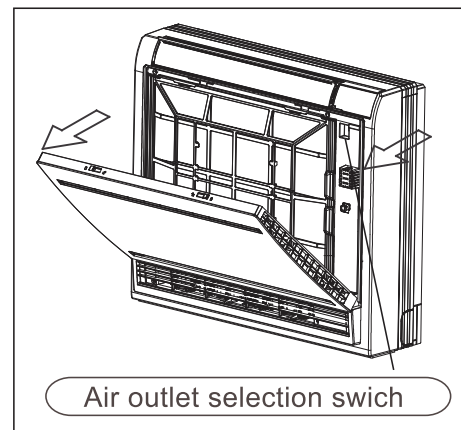
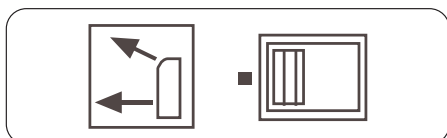
#### ⚠ CAUTION

- Before opening the front grille, be sure to stop the operation and turn the breaker OFF.
- Do not touch the metal parts on the inside of the indoor unit, as it may result in injury.

- Regardless of the operating mode or situation, air blows from the upper air outlet.
- Use this switch when you do not want air coming out of lower air outlet. (While sleeping etc..)



- Air conditioner automatically decides the appropriate blowing pattern depending on the operating mode and situation.
- During Cool/Dry and Fan mode, so that cold air does not come into direct contact with people, air is blown upper air outlet.



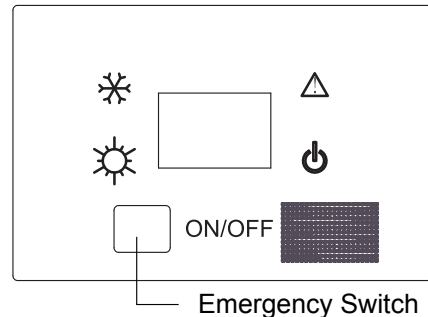
## EMERGENCY OPERATION AND TEST OPERATION

### EMERGENCY OPERATION

Carry out this operation only when the remote controller is defective or lost.

#### Unit start

When the emergency operation switch is pressed, a sound you can hear, which means the start of this operation.



Follow the requirements below.

Room temperature	Designated temperature	Timer mode	Air flow speed	Operation mode	Anion
>23°C	26°C	None	AUTO	COOL	None
≤23°C	23°C	None	AUTO	HEAT	None

#### Unit stop (to cancel emergency operation)

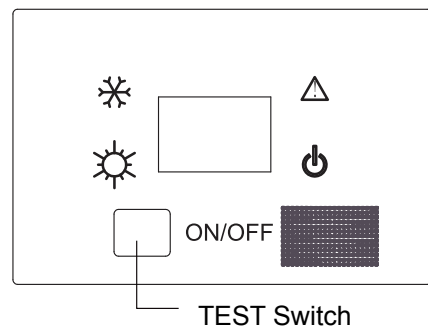
Press the emergency switch and hear a sound, the unit stops.

### TEST OPERATION

Use this switch in the test operation when the room temperature is less than 16 °C, do not use it in the normal operation.

#### Unit start

Continue to press the test operation switch for more than 5 seconds. After you hear the "BI" sound twice, release your finger from the switch, the test operation starts and the air conditioner starts with the air flow speed setting "HI".



#### Unit stop (to cancel test operation)

Push the test run switch or operate with remote controller to cancel the test run.

If you use the remote controller to cancel the test run, the conditioner will then run as per the working mode displayed on the remote controller.

#### Power failure resume (please set and apply as necessary)

With setting of power failure resume, if sudden power failure occurs, the unit will resume original operation when power is supplied again.

#### Setting method:

with ON of remote controller (except TIMER and FAN), repeatedly press SLEEP button 10 times in 5 seconds, after 4 Beep from the buzzer, the unit comes into power failure resume mode.

#### To cancel:

press SLEEP button continuously 10 times in 5 seconds, the buzzer sounds Beep twice and power failure resume function is canceled.

#### Note:

When sudden power failure happens during unit operation in power failure resume mode, if the air conditioner is not desired for use in a long period, please shut off the power supply in case that the unit automatically resume operation when power is re-supplied, or press ON/OFF to turn off the unit when power resumes.

## Special function

### A. Emergency switch:

- a) Press the emergency switch in stop condition, indoor unit operate with AUTO, AUTO SPEED, 24 Setting modes, pressure the emergency switch in start condition, indoor unit will stop operation.
- b) Malfunction history list checking: In cooling or heating mode, using the remote controller set automatic wind speed, press Press SWING button 6 times can query the recent history of fault, the times the buzzer rang or timing lights flashing times stands for a recent fault code .

### B. Temp. consumption:

The heating mode, the temp. compensation range is  $-14 \sim 0^{\circ}\text{C}$ .

Set the temp. consumption in Heating mode with remote controller, heating mode ,set  $30^{\circ}\text{C}$  as the reference point, press the sleep button 7 times, the buzzer ring 2 times, the unit enter temp. consumption condition. Temp. consumption data=current temp.- $30^{\circ}\text{C}$

In the cooling mode, the temp. compensation range is  $-7 \sim 7^{\circ}\text{C}$  .

Set the temp. consumption in Cooling mode with remote controller, cooling mode ,set  $23^{\circ}\text{C}$  as the reference point, press the sleep button 7 times in 5 seconds , the buzzer ring 2 times, the unit enter temp. consumption condition. Temp. consumption data=current temp.- $23^{\circ}\text{C}$

### C. Compulsive Defrost:

In heating mode, setting high speed ,set temp. is  $30^{\circ}\text{C}$  , press sleep button for 6 times, buzzer short ring 3 times, unit enter manual defrost mode..

### D. Auto start function:

In on condition ,press the sleep button 10 times within 5 seconds, buzzer short ring 4 times stands for enter auto restart function; press the sleep button 10 times within 5 seconds, buzzer short ring 2 times stands for exit auto restart function .

The memory information: on/off condition, mode, fan speed, setting temp., swing position.

### E. Room card Function:

Room card function can realize by remote controller.

Press the light button 12 times with remote controller,if the buzzer rings 4 times that the room card is valid, if the buzzer rings 2 times that the room card is invalid.

### Note:

If the wired controller is selected, then the implementation of special functions of A, B, C and D can refer to the wired controller manual. E function shall be set up by the installation personnel during debugging and installation.

### 1.9.3 Installation Procedures

#### CAUTIONS:

To ensure proper installation, read "Cautions" carefully before working. After installation, start the unit correctly and show customers how to operate and maintain the unit.

#### Meanings of Warning and Cautions:

**⚠ WARNING:** Serious injury or even death might happen, if it is not observed.

**⚠ CAUTION:** Injury to people or damages to machine might happen, if it is not observed.

#### **⚠ WARNING:**

- Installation shall be done by professional people, don't install unit by yourself. Incorrect installation will cause water leakage, electric shock or fire.
- Install unit as per the Manual. Incorrect installation will cause water leakage, electric shock or fire accident.
- Be sure to use specified accessories and parts. Otherwise, water leakage, electric shock, fire accident or unit falling down may happen.
- Unit should be placed on a place strong enough to hold the unit. Or, unit will fall down causing injuries.
- When install the unit, take in consideration of storms, typhoon, earthquake. Incorrect installation may cause unit to fall down.
- All electric work shall be done by experienced people as per local code, regulations and this Manual.
- Use exclusive wire for the unit. Incorrect installation or undersized electric wire may cause electric shock or fire accident.
- All the wires and circuit shall be safe. Use exclusive wire firmly fixed. Be sure that external force will not affect terminal block and electric wire. Poor contact and installation may cause fire accident.
- Arrange wire correctly when connecting indoor and outdoor power supply. Fix terminal cover firmly to avoid
- In case refrigerant leakage occurred during unit installation, keep a good ventilation in the room.
- Poisonous gas will occur when meet with fire.
- Check the unit upon installation. Be sure there is no leakage. Refrigerant will induce poisonous gas when meet heat source as heater, oven, etc.
- Cut power supply before touching terminal block.

## **⚠ CAUTION:**

- Unit shall be grounded. But grounding shall not be connected to gas pipe water pipe, telephone line. Poor grounding will cause electric shock.
- Be sure to install a leakage breaker to avoid electric shock.
- Arrange water drainage according to this Manual. Cover pipe with insulation materials in case dew may occur. Unproper installation of water drainage will cause water leakage and wet your furniture.
- To maintain good picture or reduce noise, keep at least 1 m from T.V. radio, when install indoor and outdoor unit, connecting wire and power line. (If the radio wave is relatively strong, 1 m is not enough to reduce noise).
- Don't install unit in following places:
  - (a) Oil mist or oil gas exists, such as kitchen, or, plastic parts may get aged, or water leakage.
  - (b) Where there is corrosive gas. Copper tube and welded part may be damaged due to corrosion, causing leakage.
  - (c) Where there is strong radiation. This will affect unit's control system, causing malfunction of the unit
  - (d) Where flammable gas, dirt, and volatile matter (thinner, gasoline) exist, These matter might cause fire accident.
- Refer to paper pattern when installing unit.



## **Cautions for the installation personnel**

Don't fail to show customers how to operate unit.

## **BEFORE INSTALLATION** <Don't discard any accessories until comp>

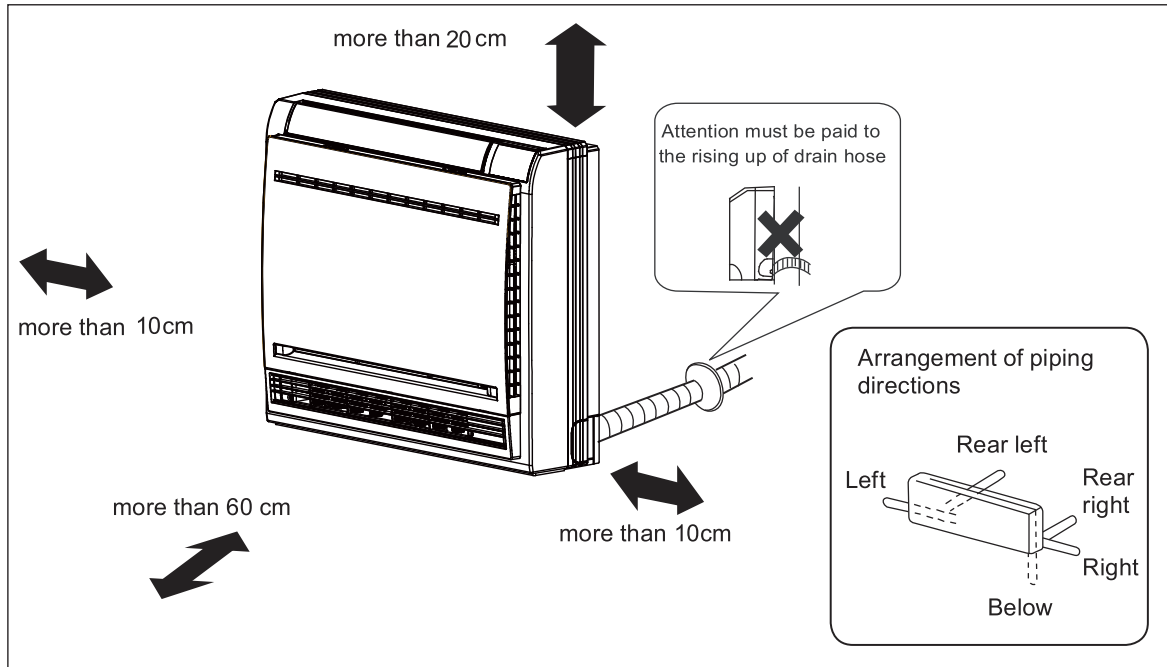
- Determine the way to carry unit to installation place.
- Don't remove packing until unit reaches installation place.
- If unpacking is unavoidable, protect unit properly.

## **SELECTION OF INSTALLATION PLACE**

**Installation place shall meet the following and agreed by customers:**

- Place where proper air flow can be ensured.
- No block to air flow. Water drainage is smooth.
- Place strong enough to support unit weight. Place where inclination is not evident on ceiling.
- Enough space for maintenance.
- Indoor and outdoor unit piping length is within limit. (Refer to Installation Manual for outdoor unit.)
- Indoor and outdoor unit, power cable, inter unit cable are at least 1 m away from T.V. radio. This is helpful to avoid picture disturbance and noise. (Even if 1 m is kept, noise can still appear if radio wave is strong)

## DRAWING FOR THE INSTALLATION OF INDOOR UNITS

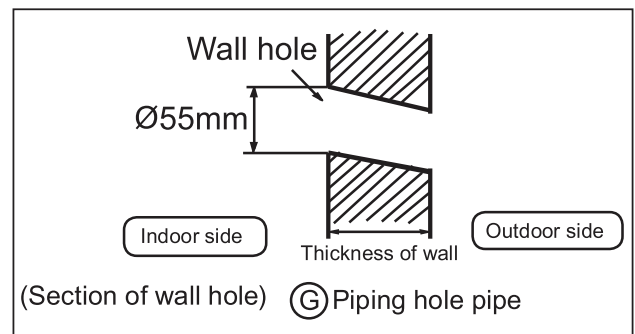


### Indoor Unit Installation

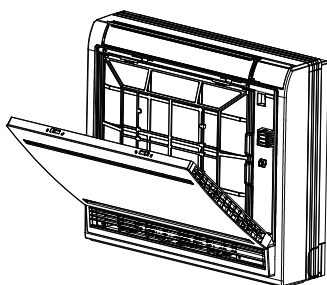
#### (1) Making a Hole on the Wall and Fitting the Piping Hole Cover

- Make a hole of 55mm in diameter, slightly descending to outside the wall.
- Install piping hole cover and seal it off with putty after installation.

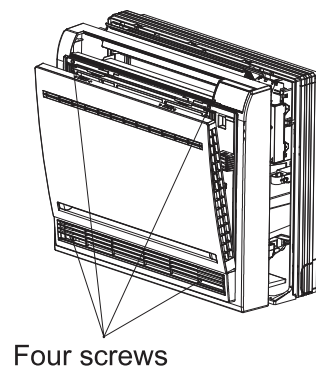
#### (2) Installation of the Indoor Unit Removal of Front Grille



- Hole the front panel by the tabs on the both sides and lift it until it stops with a click.



- Loosen the marked four screws and open the grille.

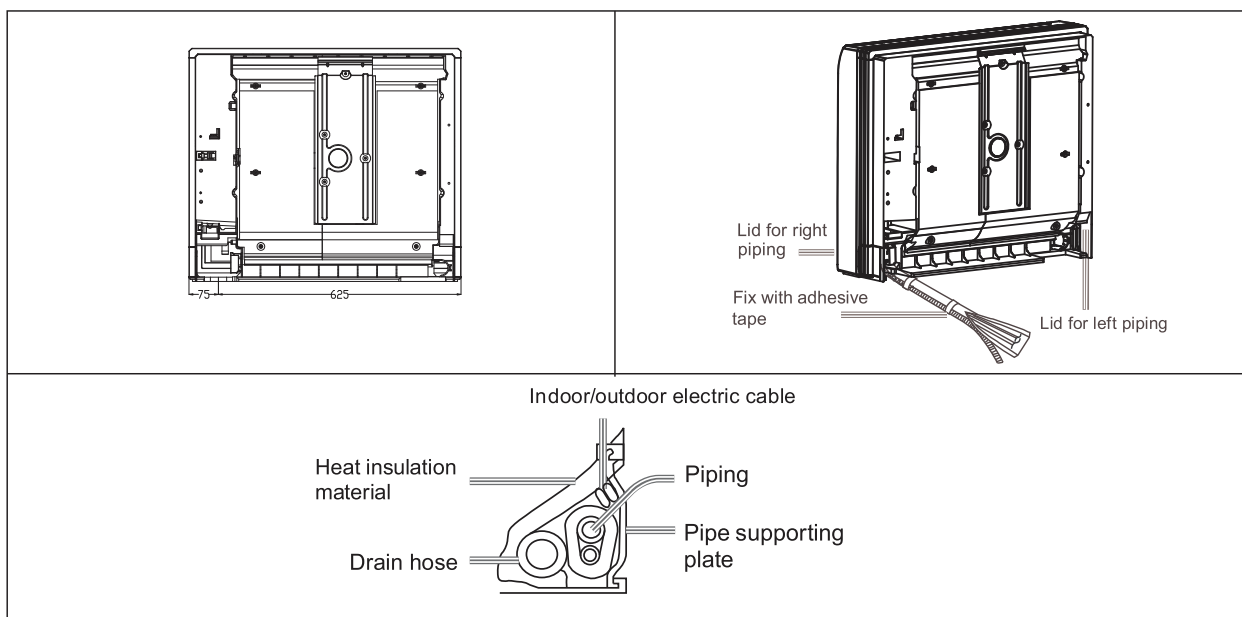




## Drawing of pipe

### [Rear piping]

- Draw pipes and the drain hose, then fasten them with the adhesive tape. [Left-Left-rear piping]
  - In case of left side piping, cut away, with a nipper, the lid for left piping.
  - In case of left-rear piping, bend the pipes according to the piping direction to the mark of hole for left-rear piping which is marked on heat insulation materials.
1. Insert the drain hose into the dent of heat insulation materials of indoor unit.
  2. Insert the indoor/outdoor electric cable from backside of indoor unit, and pull it out on the front side, then connect them.
  3. Coat the flaring seal face with refrigerant oil and connect pipes.
- Cover the connection part with heat insulation materials closely, and make sure fixing with adhesive tape.



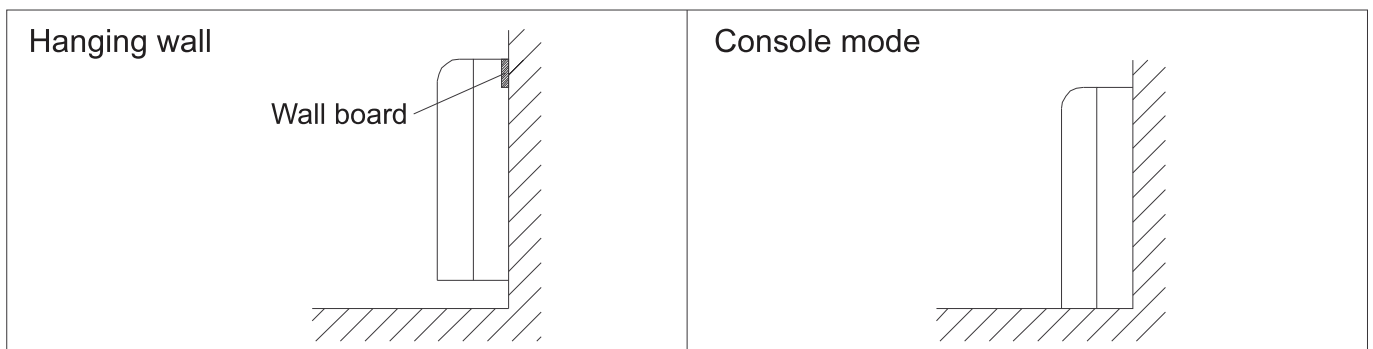
- Indoor/outdoor electric cable and drain hose must be bound with refrigerant piping by protecting tape.

### [Other direction piping]

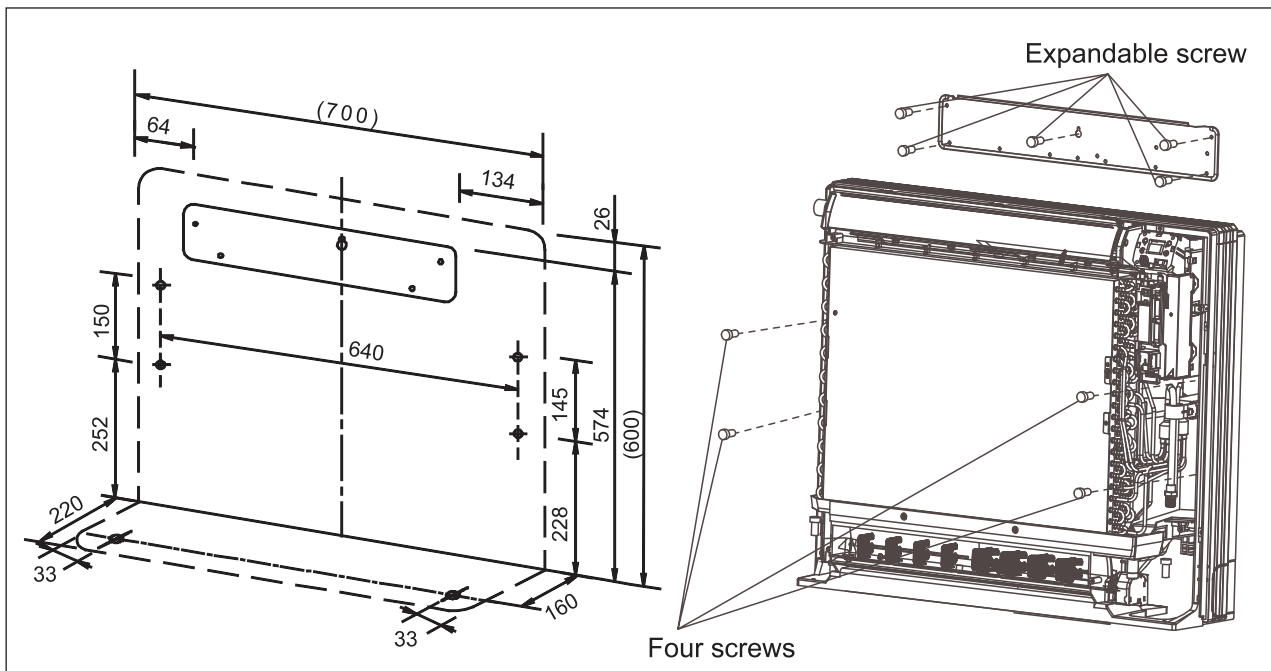
- Cut away, with a nipper, the lid for piping according to the piping direction and then bend the pipe according to the position of wall hole. When bending, be careful not to crash pipes.
- Connect beforehand the indoor/outdoor electric cable, and then pull out the connected to the heat insulation of connecting part specially.

## Fixing the indoor unit body

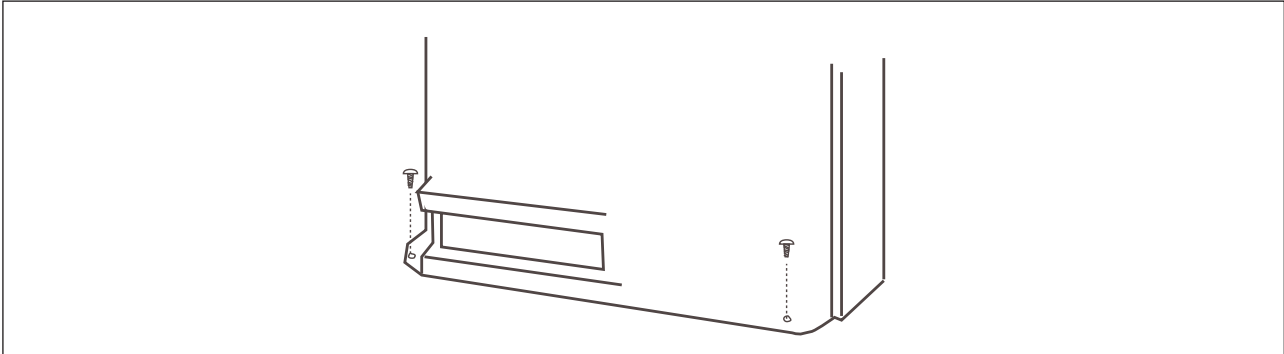
Indoor installation can be done in any of the following two ways:



- Fix the wall board, then use four screws to fix the unit on the wall. As the figure shown.



- Remove the front panel, then use two fastening screws to fix the unit on the floor. As the figure shown.

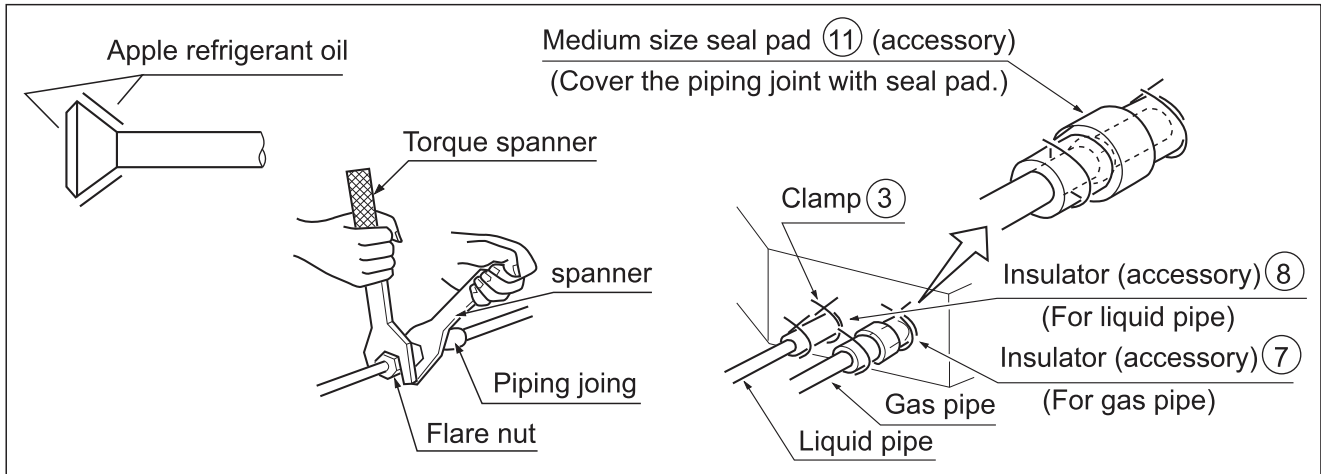


- Once refrigerant piping and drain piping connections are complete, fill the gap of the through hole with putty. Attach the front panel and front grille in their original positions once all connections are complete.

## REFRIGERANT PIPING

(As for outdoor piping, please refer to installation Manual of outdoor unit.)

- Outdoor is precharged with refrigerant.
- Be sure to see the Fig.1, when connecting and removing piping from unit.
- For the size of the flare nut, please refer to Table 1.
- Apply refrigerant oil at both inside and outside of flare nut. Tighten it band tight 3-4 turns then tighten it.
- Use torque specified in Table 1. (Too much force may damage flare nut, causing gas leakage).
- Check piping joints for gas leakage. Insulate piping as shown in Fig. below.
- Cover joint of gas piping and insulator 7 with seal.



Pipe size

Model	Gas pipe	Liquid pipe
XVVA-050/035/025N-01M22	ø6.35mm	ø12.7mm

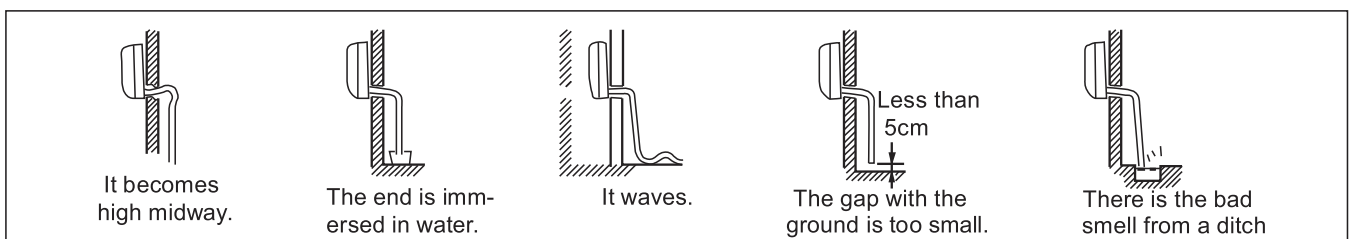
Table 1

Pipe size	Tighten torque	A(mm)	Flare shape
ø6.35	1420~1720N.cm (144~176kgf.cm)	8.3~8.7	
ø9.52	3270~3990N.cm (333~407kgf.cm)	12.0~12.4	
ø12.7	4950~6030N.cm (490~500kgf.cm)	12.4~16.6	
ø15.88	6180~7540N.cm (630~770kgf.cm)	18.6~19.0	
ø19.05	9720~11860 N.cm (990~1210 kgf.cm)	22.9~23.3	

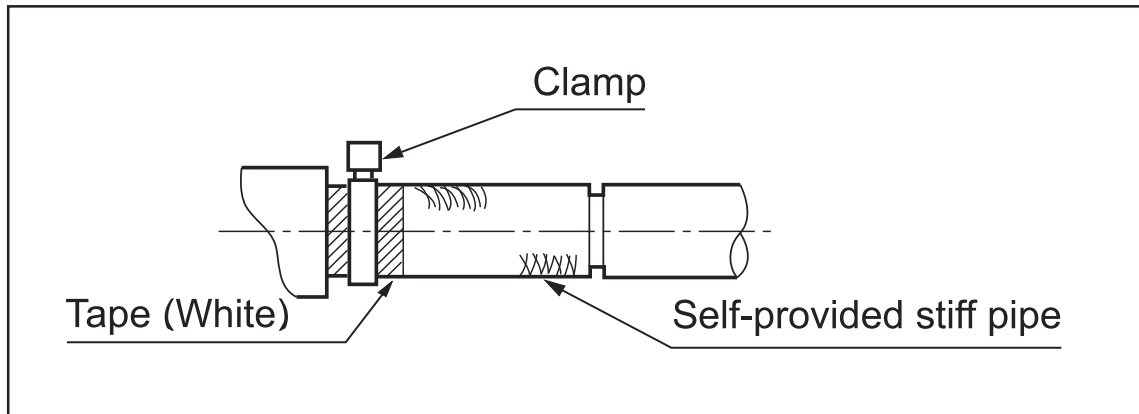
## INSTALLATION OF WATER DRAINAGE PIPE

(1) Install water drainage pipe

- Pipe dia, shall be equal or larger than that of unit piping.(pipe of polyethylene; size: 20mm; O.D:26mm)
- Drain pipe should be short, with a downward slope at least 1/100 to prevent air bag from happening.
- If downward slope can't be made, take other measures to lift it up.
- Please install the drain hose so as to be downward slope without fall.
- Please don't do the drainage as shown below.
- Please pour water in the drain pan of the indoor unit, and confirm that drainage is carried out surely to outdoor.
- In case that the attached drain hose is in a room, please apply heat insulation to it without fall.






- Use the self-provided stiff pipe and clamp with unit. Insert water pipe into water plug until it reaches the white tape.
- Insulate drain hose in the room.







## 1.9.4 Electrical Wiring

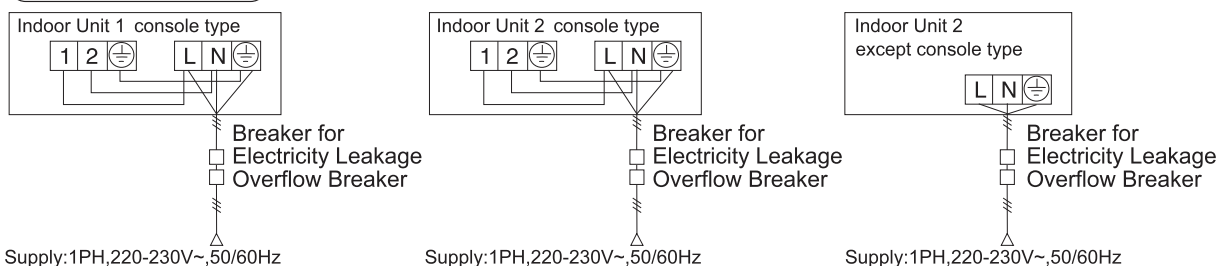
### ⚠ Warning

- Electrical construction should be made with specific mains circuit by the qualified personnel according to the installation instruction. Electric shock and fire may be caused if the capacity of power supply is not sufficient. 
- During arranging the wiring layout, specified cables should be used as the mains line, which accords with the local regulations on wiring. Connecting and fastening should be performed reliably to avoid the external force of cables from transmitting to the terminals. Improper connection or fastness may lead to burning or fire accidents. 
- There must be the ground connection according to the criterion. Unreliable grounding may cause electrical shocks. Do not connect the grounding line to the gas pipe, water pipe, lightning rod and telephone line. 

### ⚠ Attention

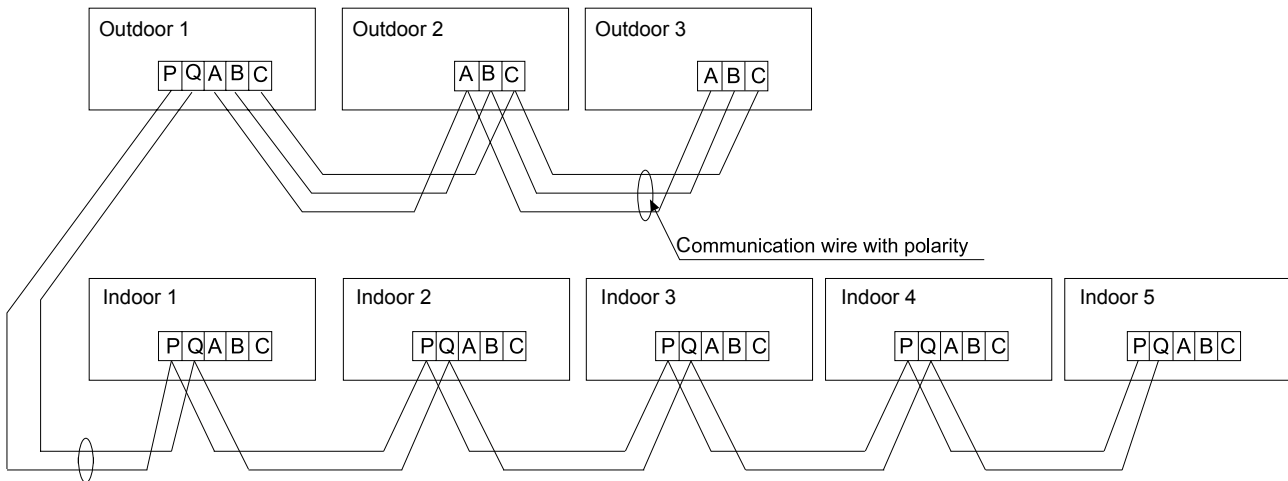
- Only copper wire can be used. Breaker for electric leakage should be provided, or electric shock may occur.
- The wiring of the mains line is of Y type. The power plug L should be connected to the live wire and plug N connected to null wire while  should be connected to the ground wire. For the type with auxiliary electrically heating function, the live wire  and the null wire should not be misconnected, or the surface of electrical heating body will be electrified. If the power line is damaged, replace it by the professional personnel of the manufacturer or service center.
- The power line of indoor units should be arranged according to the installation instruction of indoor units.
- The electrical wiring should be out of contact with the high-temperature sections of tubing as to avoid melting the insulating layer of cables, which may cause accidents.
- After connected to the terminal tier, the tubing should be curved into be a U-type elbow and fastened with the pressing clip.
- Controller wiring and refrigerant tubing can be arranged and fixed together. 
- The machine can't be powered on before electrical operation. Maintenance should be done while  power is shut down.
- Seal the thread hole with heat insulating materials to avoid condensation.
- Signal line and power line are separately independent, which can't share one line. [Note: the power line, signal line are provided by users. Parameters for power lines are shown as below:  $3 \times (1.0-1.5) \text{ mm}^2$ ; parameters for signal line:  $2 \times (0.75-1.25) \text{ mm}^2$  (shielded line)]
- 5 butt lines (1.5mm) are equipped in the machine before delivery, which are used in connection between the valve box and the electrical system of the machine. The detailed connection is displayed in the circuit diagram.

Supply Wiring Drawing



- Indoor units and outdoor units should be connected to the power source separately. Indoor units must share one single electrical source, but its capacity and specifications should be calculated. Indoor & outdoor units should be equipped with the power leakage breaker and the overflow breaker.

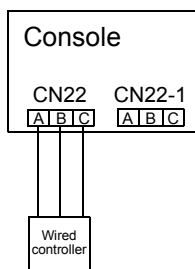
### Signal Wiring Drawing



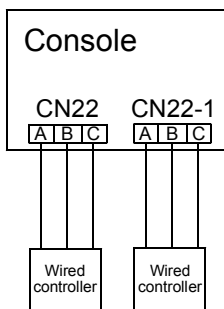
Outdoor units are of parallel connection via three lines with polarity. The master unit, central control and all indoor units are of parallel connection via two lines without polarity. The signal line between wired controller and indoor units are polarity

There are three connecting ways between wired controller and indoor units:

A. One wired controller controls one indoor unit, the wired controller connects with the ABC terminal of indoor unit.



B. Two wired controllers control one indoor unit. Either of the wired controls can be set to be the master wired controller while the other is set to be the slave wired controller.

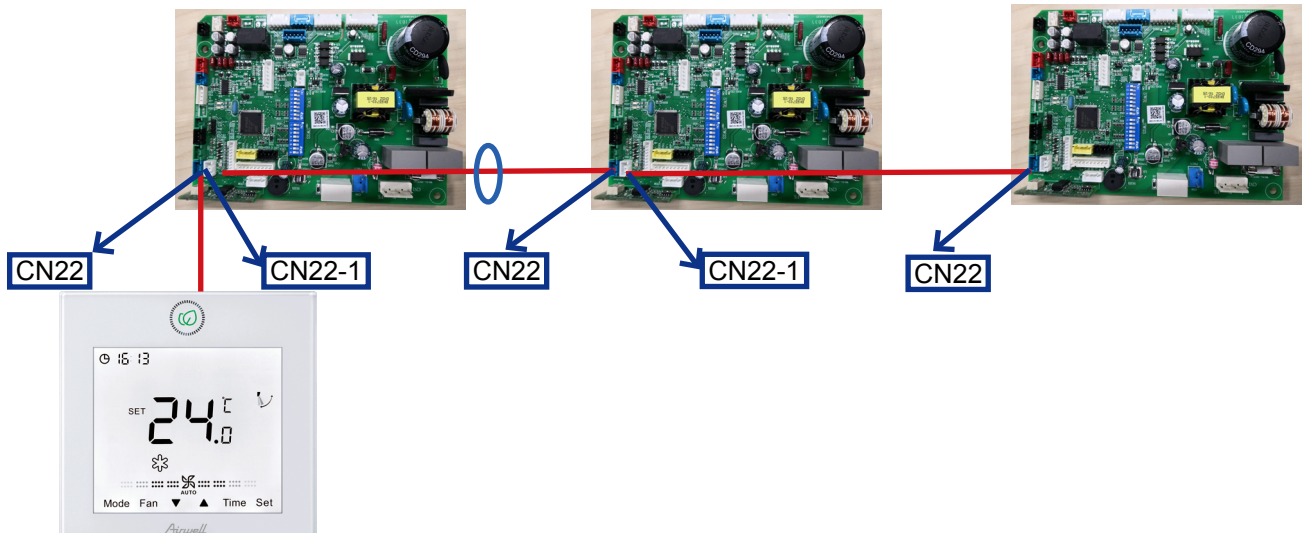


Master and slave controller setting method for RWV05, other controllers' setting method please refer to the controller manual

No.	Type	State of switch	Function description
SW1-1	Select the master or the slave controller	ON	Slave controller
		OFF	Master controller

## C. One wired controller controls multiple units

0151800452 PCB



### Note:

1. Plug the wired controller terminal to the CN22 terminal of master unit which wired address is 0.
2. The CN22-1 terminal of the previous unit is connected to the CN22 terminal of the next unit
3. Wired address setting

0151800452

SW01_1 SW01_2 SW01_3 SW01_4	Wired control address	[1]	[2]	[3]	[4]	Wired control address
		OFF	OFF	OFF	OFF	OFF
		OFF	OFF	OFF	<u>ON</u>	Slave unit 1 in group control
		OFF	OFF	<u>ON</u>	OFF	Slave unit 2 in group control
		OFF	OFF	<u>ON</u>	<u>ON</u>	Slave unit 3 in group control
		...	...	...	...	.....
		<u>ON</u>	<u>ON</u>	<u>ON</u>	<u>ON</u>	Slave unit 15 in group control

4. One controller can Max. control 16 indoor units.
5. Hand-in-hand connection method
6. The signal line is polarity
7. The signal line diameter and length

Length of signal line (m)	Wiring dimensions
≤ 250	0.75mm <sup>2</sup> ×3 core shielded line

- ※ The shielding lay of the signal line must be grounded at one end.
- ※ The total length of the signal line shall not be more than 250m.

Indoor power supply wiring & signal wiring between indoor and outdoor & signal wiring between indoor.

Items Total current of indoor units (A)	Cross section (mm <sup>2</sup> )	Length (m)	Rated current of overflow breaker (A)	Rated current of residual circuit breaker (A) Ground fault Interrupter (mA) Response time (S)	Cross sectional area of signal Line	
					Outdoor -indoor (mm <sup>2</sup> )	Indoor -indoor (mm <sup>2</sup> )
<7	2.5	20	10	10 A, 30 mA, 0.1S or below	2 cores×(0.75-2.0) mm <sup>2</sup> shielded line	
≥7 and <11	4	20	16	16 A, 30 mA, 0.1S or below		
≥11 and <16	6	25	20	20 A, 30 mA, 0.1S or below		
≥16 and <22	8	30	32	32 A, 30 mA, 0.1S or below		
≥22 and <27	10	40	32	32 A, 30 mA, 0.1S or below		

- ※ The electrical power line and signal lines must be fastened tightly.
- ※ Every indoor unit must have the ground connection.
- ※ The power line should be enlarged if it exceeds the permissible length.
- ※ Shielded lays of all the indoor and outdoor units should be connected together, with the shielded lay at the side of signal lines of outdoor units grounded at one point.
- ※ It is not permissible if the whole length of signal line exceeds 1000m.

## Test Run & Fault Code

### Before Test Run

- Before switching it on, test the supply terminal tier (L, N terminals) and grounding points with 500V megaohm meter and check if the resistance is above 1MΩ. It can't be operated if it is below 1MΩ.
- Connect it to the power supply of outdoor units to energize the heating belt of the compressor. To protect the compressor at startup, power it on 12 hours prior to the operation.

### Check if the arrangements of the drainpipe and connection line are correct.

The drainpipe shall be placed at the lower part while the connection line placed at the upper part. Heat preservation measures should be taken such as winding the drainpipe esp. in the indoor units with heating insulating materials. The drain pipe should be made a slope type to avoid protruding at the upper part and concaving at the lower part on the way.

### Checkup of Installation

- check if the mains voltage is matching
- check if there is air leakage at the piping joints
- check if the connections of mains power and indoor & outdoor units are correct
- check if the serial numbers of terminals are matching
- check if the installation place meets the requirement
- check if there is too much noise
- check if the connecting line is fastened
- check if the connectors for tubing are heat insulated
- check if the water is drained to the outside
- check if the indoor units are positioned

### Ways of Test Run

Do ask the installation personnel to make a test run. Take the testing procedures according to the manual and check if the temperature regulator works properly.

When the machine fails to start due to the room temperature, the following procedures can be taken to do the compulsive running. The function is not provided for the type with remote control.

- Set the wired controller to refrigerating/heating mode, press "ON/OFF" button for 5 seconds to enter into the compulsive refrigerating/heating mode. Re-press "ON/OFF" button to quit the compulsive running and stop the operation of the air conditioner.



# Airwell

*Just feel well*

**WARNING :**

The design and specifications are subject to change without prior notice for product improvement. Consult with the sales agency or manufacturer for details.

**ATTENTION :**

Le design et les données techniques sont donnés à titre indicatif et peuvent être modifiés sans préavis.



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