

# Owner's Manual

**NOTE:** Read and become familiar with these instructions before beginning installation.

## SAFETY CONSIDERATIONS


Installing, starting up, and servicing air-conditioning equipment can be hazardous due to system pressures, electrical components, and equipment location (roofs, elevated structures, etc.).


Only trained, qualified installers and service mechanics should install, start-up, and service this equipment.

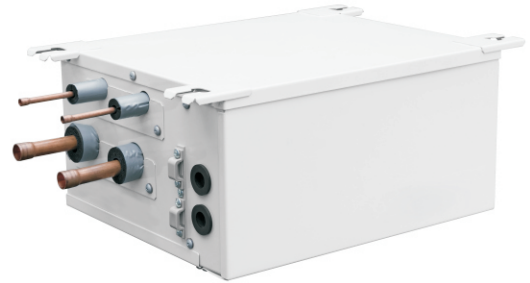
Untrained personnel can perform basic maintenance functions such as cleaning coils. All other operations should be performed by trained service personnel.

When working on the equipment, observe precautions in the literature and on tags, stickers, and labels attached to the equipment.

Follow all safety codes. Wear safety glasses and work gloves. Keep quenching cloth and fire extinguisher nearby when brazing. Use care in handling, rigging, and setting bulky equipment.

Read these instructions thoroughly and follow all warnings or cautions included in literature and attached to the unit. Consult local building codes and National Electrical Code (NEC) for special requirements.  Recognize safety information. This is the

safety-alert symbol . When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury. Understand these signal words: DANGER, WARNING, and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies hazards which **could** result in personal injury or death. CAUTION is used to identify unsafe practices which **may** result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which **will** result in enhanced installation, reliability, or



KSAUI0201AAA



KSAUI0401AAA

## **WARNING**

### **ELECTRICAL SHOCK HAZARD**

Failure to follow this warning could result in personal injury or death.

Before beginning any modification or installation of this kit, be sure the main electrical disconnect is in the OFF position. Ensure power is disconnected to the fan coil unit. On some systems both the fan coil and the outdoor unit may be on the same disconnect. Tag the disconnect switch with a suitable warning label. There may be more than one disconnect.

## **CAUTION**

### **EQUIPMENT DAMAGE HAZARD**

Failure to follow this warning may result in equipment damage.

Do not install wired controller in an area subjected to excessive steam, oil or sulfide gas. Doing so may cause the controller to deform and/or fail.

## Preface

Read the manual carefully before installation and operation.

- 1) To ensure safety when operating this system, strictly follow the instructions in this manual.
- 2) Ensure the manual is kept by the operators or serviceman.
- 3) The refrigerant pipes and accessories must be designed exclusively for R410A.
- 4) The total capacity of the indoor units which operate at the same time cannot exceed the capacity of the outdoor units, otherwise, the cooling (heating) effect of each indoor unit would be lower than the nominal capacity.
- 5) In case of a malfunction, please examine the following items and contact our appointed service centers as soon as possible.
  - ◆ Nameplate (model, cooling capacity, product code, factory date).
  - ◆ Malfunction status (detail description of conditions before and after the malfunction occurs).
- 6) It is a normal for the indoor unit fan to run for 20-70 seconds after the indoor unit receives the “stop” signal to make full use of the waste heat.
- 7) When the indoor unit's work mode is in conflict with the outdoor unit's mode, the conflict appears on the wired controller display in five seconds and then the indoor unit will stop. In this case, synchronize their work modes: the cooling mode is compatible with the dry mode.
- 8) If the supply power fails when the unit is running, the indoor unit sends “start” signal to the outdoor unit three minutes after power recovery.
- 9) The power cable and transmission line must not be twisted together. The cable and the line must be separated with an interval of at least 0.79 in (2 cm); otherwise it may result in a communication problem.
- 10) This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure they do not play with the appliance.
- 11) All graphics and information in this manual are only for reference. Manufacturer reserves the right to make changes in terms of sales or production at any time and without prior notice.







This product must not be disposed with domestic waste. This product has to be disposed at an authorized place for recycling of electrical and electronic appliances.

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# 1 Safety Precautions

	<p>This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.</p>
	<p>This mark indicates procedures which, if improperly performed, might lead to the death or serious injury of the user.</p>
	<p>This mark indicates procedures which, if improperly performed, might possibly result in personal harm to the user, or damage to property.</p>
<p><b>NOTICE</b></p>	<p>NOTICE is used to address practices not related to personal injury.</p>

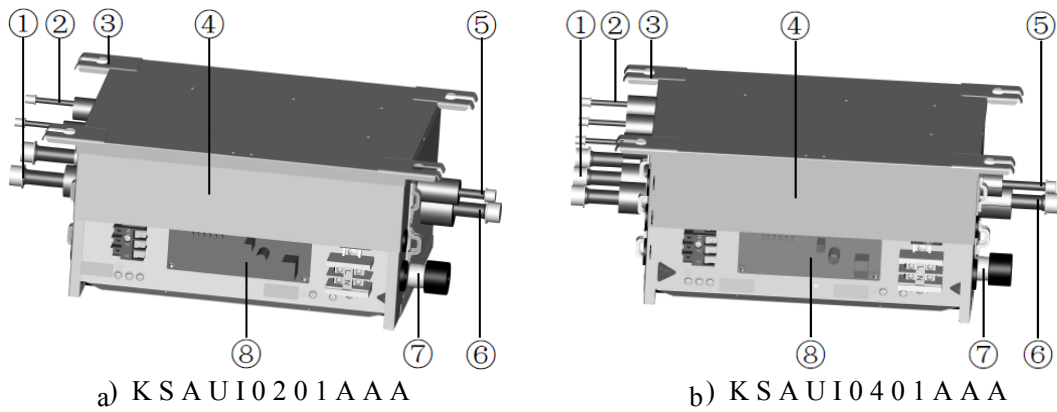
	
<p>1)</p>	<p>Instructions for installation and use of this product are provided by the manufacturer.</p>
<p>2)</p>	<p>Installation must be performed in accordance with the requirements of NEC and CEC by appointed personnel only.</p>
<p>3)</p>	<p>The installation should be left to the appointed service center and according to the instructions given in the manual. Improper installation may cause fall down, water leakage, electric shock or fire etc.</p>
<p>4)</p>	<p>For operating the air conditioner pleasantly, please install it as outlined in this installation manual.</p>
<p>5)</p>	<p>The power supply must adopt the special circuit with air switch protection and assure it has enough capacity</p>
<p>6)</p>	<p>Connect the indoor unit, Branch Box module and outdoor unit with the room air conditioner piping and cord available from our standard parts. This installation manual describes the correct connections using the installation set available from our standard parts.</p>
<p>7)</p>	<p>Before installation, check the parameter of power cord and make sure that it complies with the power supply requirement on the nameplate. Make sure the power supply is safe.</p>
<p>8)</p>	<p>This air conditioner must be properly grounded through the receptacle to avoid electric shock. The ground wire shouldn't be connected with gas pipe, water pipe, lightning arrester or telephone line.</p>
<p>9)</p>	<p>If refrigerant leaks while work is being carried out, ventilate the area. If the refrigerant comes in contact with a flame, it produces toxic gas.</p>
<p>10)</p>	<p>Do not power on until all installation work is complete.</p>
<p>11)</p>	<p>During installation, make sure that the refrigerant pipe is attached firmly before you start up the compressor. Do not operate the compressor under the condition of refrigerant piping not attached properly with valve open. This may cause abnormal pressure in the refrigeration cycle that leads to breakage and even injury.</p>
<p>12)</p>	<p>When installing and relocating the air conditioner, do not mix gases except the specified refrigerant (R410A) to enter the refrigerant cycle. If air or other gas enters the refrigerant cycle, the pressure inside the cycle will rise to an abnormally high value and cause breakage, injury, etc.</p>
<p>13)</p>	<p>This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.</p>
<p>14)</p>	<p>Never cut off or damage power cables and transmission wires. If the power cable or transmission line were damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.</p>
<p>15)</p>	<p>After the power cord is connected, install the cover of electric box to avoid danger.</p>

16) When installing or relocating the unit, please contact the appointed service center for the repair or relocation. Meanwhile the specialized parts and accessories must be used. Otherwise, it may result in water leakage, electric shock or fire hazard.
17) Diameter of power cord must be large enough. Damaged power cord or connecting wire must be replaced by specialized electric cable.
18) The power wire and transmission line must be more than one meter away from televisions or radios which can emit electromagnetic waves to prevent image interference or noise. Otherwise, the unit maybe not work
19) Nitrogen must be charged according to technical requirements.
20) For units with wired controllers, do not connect power supply until the wired controller is well installed. Otherwise, the wired controller cannot be used.
21) When installation is finished, please check and make sure the drain pipe, pipeline and electric wire are all well connected so as to avoid water leakage, refrigerant leakage, electric shock and fire hazard.
22) Never extend fingers or objects into air outlet or return air grille.
23) Please keep the room well-ventilated and it could avoid oxygen deficit.
24) Never start or stop the air conditioner by inserting or removing the power cord.
25) Before startup of the compressor, please turn on the main power switch of the unit for more than 8 hours and it makes sure that the heater belt of the compressor has been energized for at least eight hours! Once the compressor is started, it must be guaranteed that it works continuously for at least 30 minutes, otherwise it would be damaged!
26) Never operate the unit with wet hands. Otherwise, it may cause electric shock.
27) Before cleaning and repairing, it is necessary to stop working and turn off the power supply. Otherwise, it may cause electric shock or damage.
28) Do not spray water on the air conditioner or it will cause malfunction or electric shock.
29) The air conditioner is not support to install in the circumstances as the following that where there is full of mist of oil, damp or corrosive gas, flammable gases, the acidic or alkaline vapor and the ocean.
30) Volatile liquid like thinner or gasoline will damage the appearance of air conditioner. (Please use soft dry cloth and wet cloth with mild detergent to clean unit's appearance.)
31) Never standing or place objects on outdoor unit. Person or objects falling from the unit may cause injury.
32) If abnormal condition occurs (e.g. unpleasant smell), please turn off the unit at once and disconnect power supply. Then contact appointed service center. If the air conditioner continues to operate despite of abnormal condition, it may be damaged and cause electric shock or fire hazard.
33) The drain pipe should be installed as instructed in the manual to guarantee the proper drainage; meanwhile it should be insulated to prevent condensing; otherwise the improper installation would cause water leakage and then wet the household wares in the room.
34) Don't attempt to repair the air conditioner by yourself. The improper repair will lead to electric shock or fire, please contact the appointed service center and ask professional technicians to repair it.
35) Please take notice of the installation foundation of the unit after long use, if it is damaged, it may lead to the fall of the unit and cause the injury.
36) Be sure to shut off the power supply when you do not use the air conditioner for a long time. Otherwise, the dusts may accumulate in it, which may cause overheating or fire hazards.

## 2 Product Introduction

The Branch Box module is the latest branch device, which adopts the intelligent control technology. Responds to the changes in the load of the indoor units, and it can coordinate the flow rate of the refrigerant well. The unit is compact which allows the unit to be installed in a variety of locations, such as the ceiling , corridor, balcony or storeroom .

### 2.1 Names of Main Parts



NO.	①	②	③	④
Name	Gas piping of indoor unit side	Liquid piping of indoor unit side	Hanger metal	Electrical equipment plate
NO.	⑤	⑥	⑦	⑧
Name	Liquid piping of outdoor unit side	Gas piping of outdoor unit side	Drain hole	Printed circuit board

Fig. 1

## 2.2 Combinations for Outdoor and Indoor Units

Table 1

Sorts		FXA2B-D	FXA3B-D
No. of connectable indoor units	Min	1	1
	Max	2	3

## 2.3 Parts and Components of Unit

One outdoor unit is able to power up to three Branch Box modules and nine indoor units which include cassette type, duct type, wall-mounted type, floor ceiling type and console type. The outdoor unit will run as long as any one indoor unit receives the running command, and all indoor units stop once the outdoor unit is turned off.

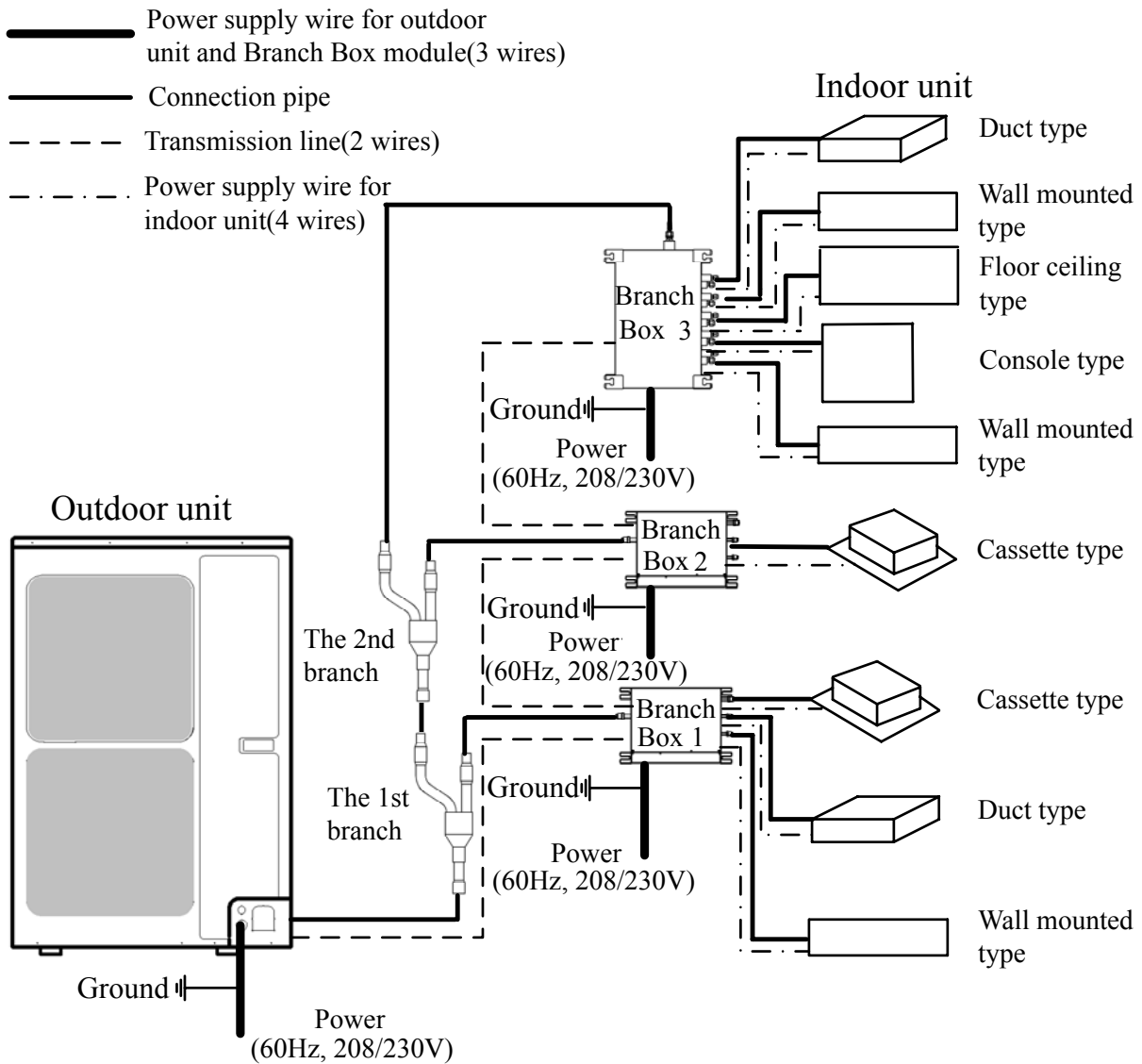


Fig. 2

## 2.4 Working Temperature Range

Table 2

Sorts	Outside temperature: DB(°F / °C)
Maximum	122°F (50 °C)
Minimum	-5°F (15 °C)

### 3 Selection of Installation Location and Precautions

<b>⚠ WARNING</b>	
1)	The installation of the air conditioner must be in accordance with the national and local laws and regulations.
2)	The quality of the installation will affect the capability of the air conditioner to function as designed. The installation should be left to the appointed service center. Please contact your dealer after purchasing this machine. Professional installation workers will provide installation and test services according to the installation manual.
3)	The air conditioner should not be installed in a place where small animals exist. Small animals may cause malfunctions, smoke or fire. Please keep the area around the unit clean.

#### 3.1 Selection of Installation Location

<b>⚠ WARNING</b>	
1)	The Branch Box module must be installed on a firm and solid support which can withstand the weight of the module and the mounting surface must be a horizontal plane. The Branch Box module can be installed on the ceiling, or in a, corridor, balcony, storeroom.
2)	The location must be out of children's reach. Keep the unit away from children.
3)	The Branch Box module is for indoor use. If installing the unit outdoors, the location must be away from wind and rain. Otherwise, it maybe cause water leakage, electric shocks or fire.
4)	Ensure there is enough space for the installation and maintenance.
5)	Avoid direct sunlight or other heat sources.
6)	Do not install in a location that is hot or humid for long periods of time.
7)	Avoid installing the Branch box module in the bedroom or study, or any place that needs to be quiet.
8)	The Branch box module cannot be installed in the place near inflammable and explosive materials, severe dust, smoke, or air pollution like that found in a kitchen or similar space.
9)	Ensure there is enough space to install drainage pipe, so the condensed water can be discharged.
10)	Avoid installing the BU module in the following places to reduce the chance of air conditioner malfunctions: malfunctions: areas with an abundance of machine oil, saline-sodic soil (near coastal areas), sulphide fog, high frequency facilities or special conditions. If it is unavoidable, please contact the appointed service center.

<b><i>NOTICE</i></b>	
1)	Make sure that the unit will not cause any operating vibration or noise after installation.
2)	The Branch box module shall be installed close to the indoor unit, to minimize the length and bends of cooling pipe.



### 3.2 Outline Dimension and Servicing Space of FXA2B-D

#### 1) Outline dimension

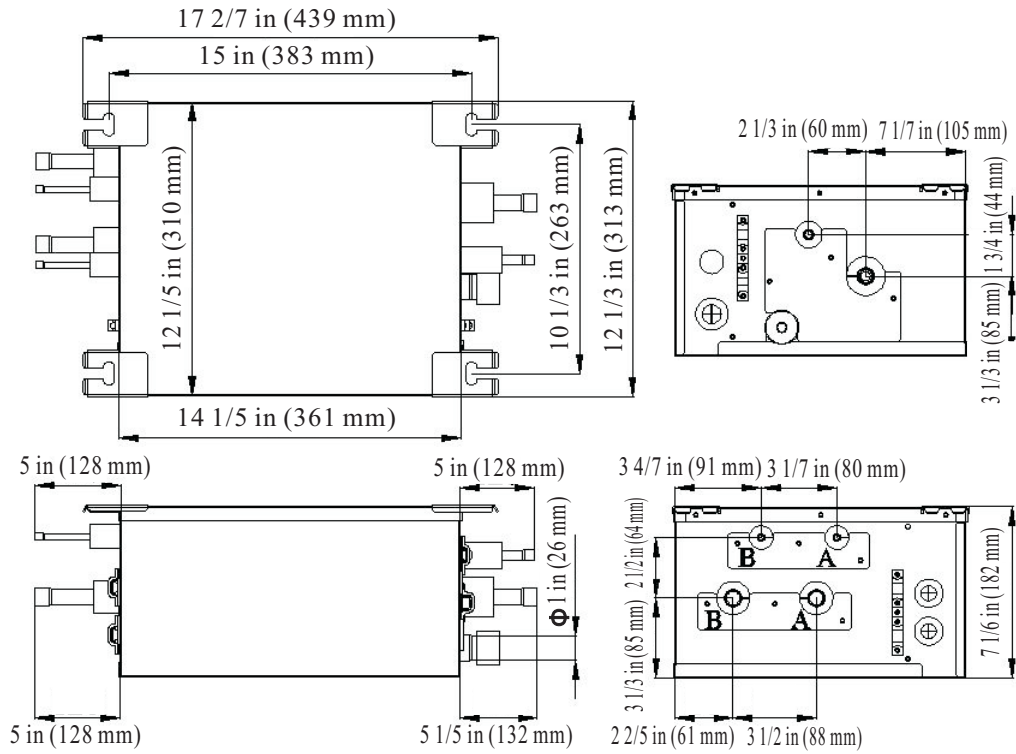


Fig. 7 (inches)

Table 5

Sorts	Indoor unit side (inch/mm)		Outdoor unit side (inch/mm)
	Port A	Port B	
Liquid pipe	Φ1/4(6.5)	Φ1/4(6.5)	Φ3/8(9.7)
Gas pipe	Φ5/8(16.3)	Φ5/8(16.3)	Φ5/8(16.3)

#### 2) Installation and service space

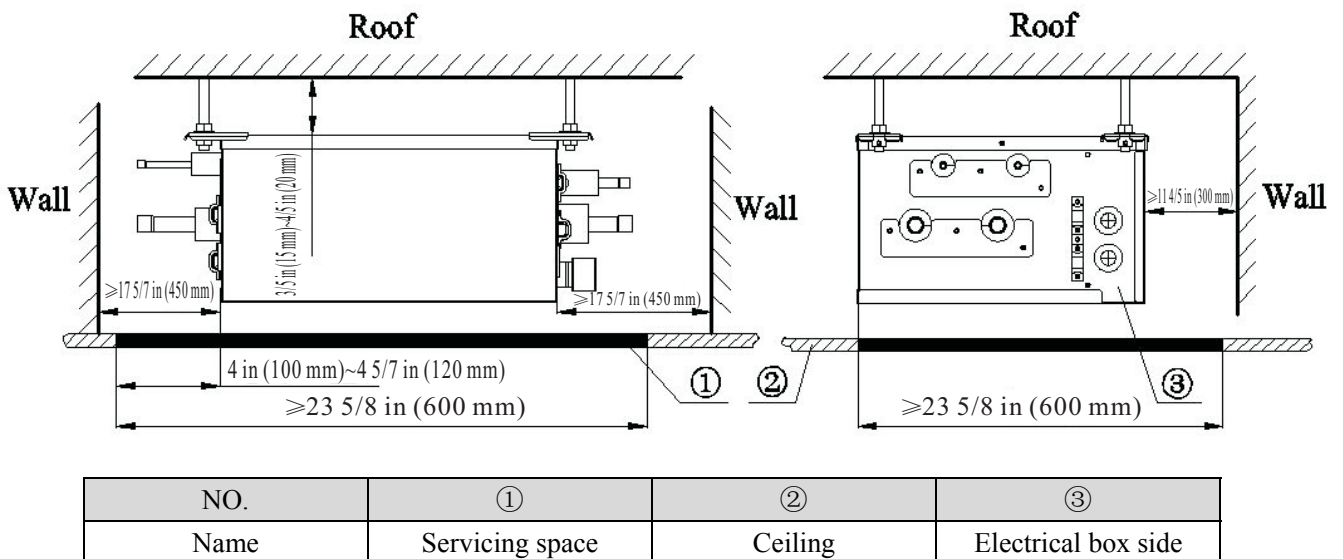


Fig. 8 (inches)

NO.	①	②	③
Name	Servicing space	Ceiling	Electrical box side

### 3.3 Outline Dimension and Servicing Space of KSAUI0401AAA

#### 1) Outline dimension

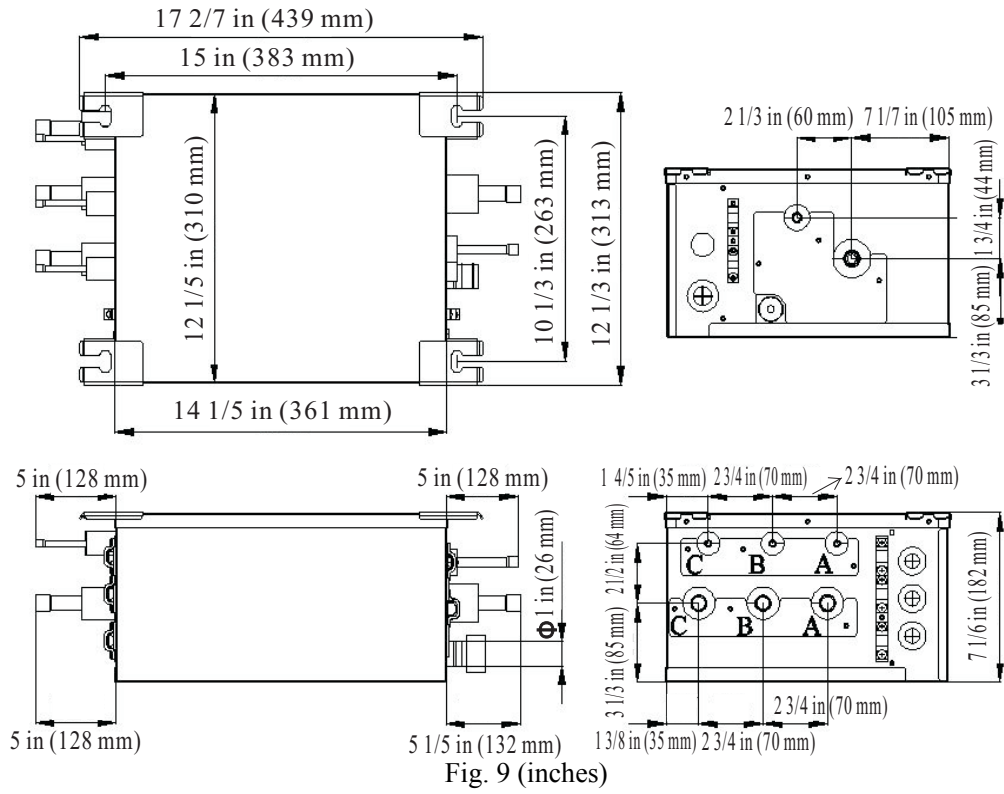
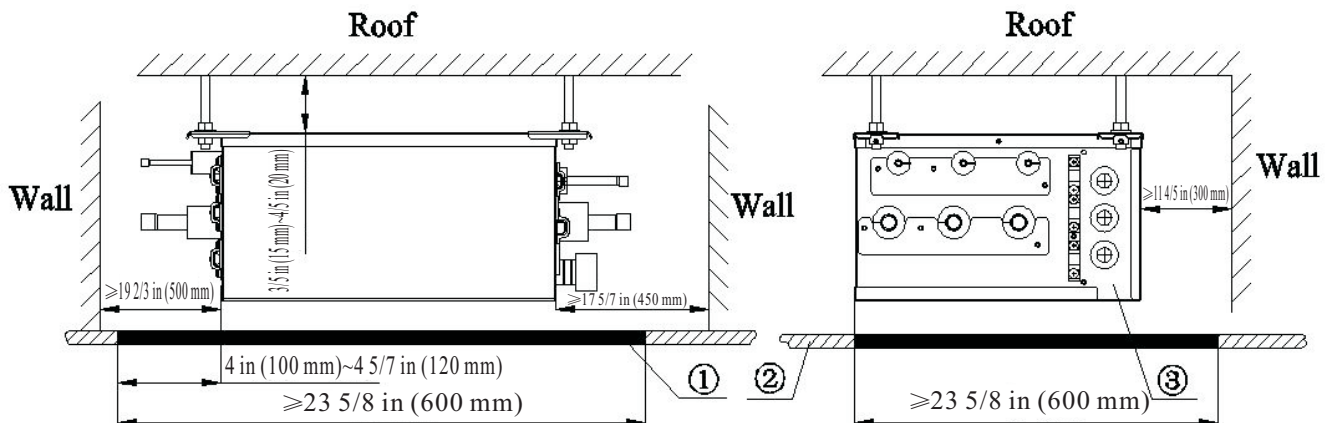


Table 6

Sorts	Indoor unit side (inch/mm)			Outdoor unit side (inch/mm)
	Port A	Port B	Port C	
Liquid pipe	Φ1/4(6.5)	Φ1/4(6.5)	Φ1/4(6.5)	Φ3/8(9.7)
Gas liquid	Φ5/8(16.3)	Φ5/8(16.3)	Φ5/8(16.3)	Φ5/8(16.3)

#### 2) Installation and service space



NO.	①	②	③
Name	Servicing space	Ceiling	Electrical box side

Fig. 10 (inches)

## 4 Installation Instruction

- 1) Check the installation location and ensure it is sturdy and level. There should be enough space to install drainage pipe, so the condensed water can discharge.
- 2) Reference the size of hanger metal and drill 4 holes in the installation location.
- 3) Hang the hanger bolts.

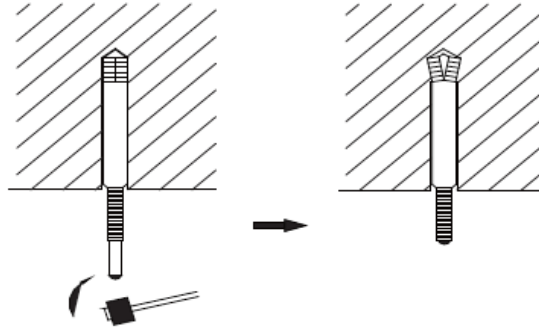


Fig. 13

- 4) Secure the modules tightly with the hanger bolts. You can get the M 2/5 or M 1/3 hanger bolts, nuts and washers from the market.

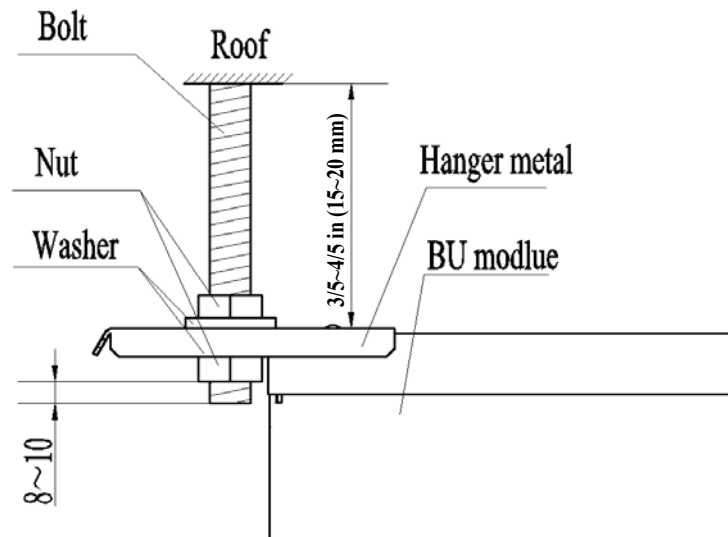


Fig. 14 (inches)

- 5) Adjust the nuts position, so the Branch Box module is level in the front/back and left/right.

## 5 Installation of Refrigerant Pipes

### 5.1 Allowable Length and Drop Height of Connecting Pipe

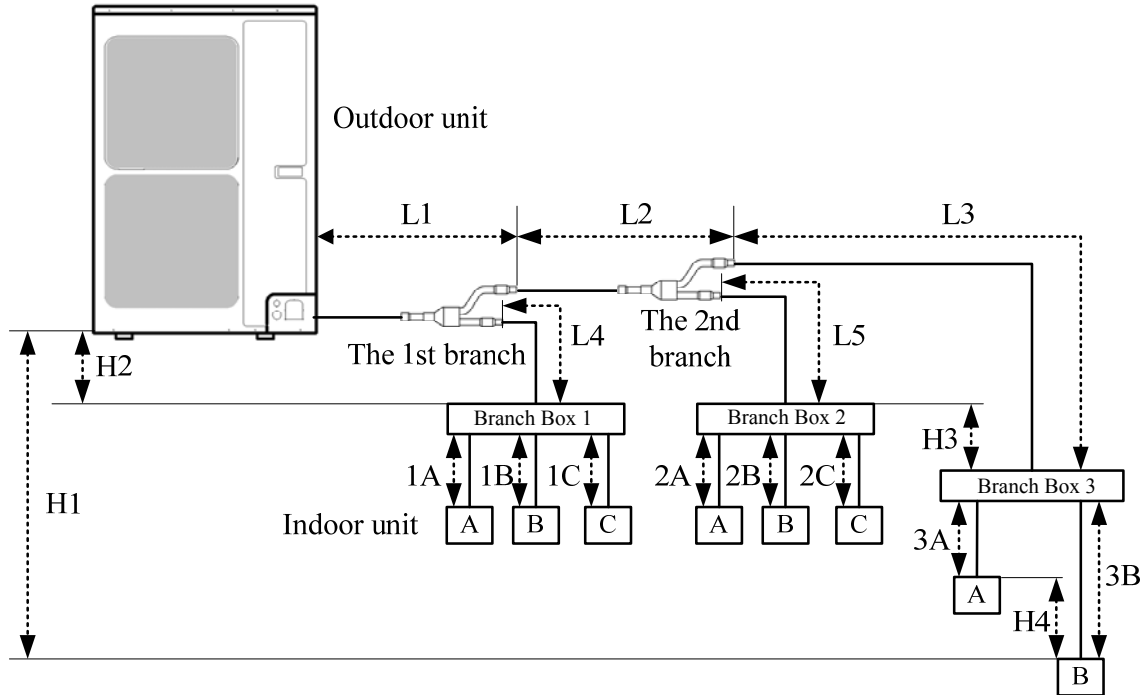


Fig. 15 (8 indoor units)

Table 8

The sorts		The pipes	Length(feet/m)
Maximum allowable length	Total length between outdoor unit and Branch Box modules	$L1+L2+L3+L4+L5$	$\leq 181(55)$
	Total length between indoor units and Branch Box	38GJQK48---3	$\leq 263(80)$
		38GJQL56---3	$\leq 295(90)$
	Between indoor unit and Branch Box module	$1A;1B;1C;2A;2B;2C;3A;3B$	$\leq 49(15)$
	Between indoor unit and the 1st branch	$L4+1B;L2+L5+2A;L2+L3+3B$	$\leq 131(40)$
Maximum allowable length	Between outdoor and indoor units	$H1$	$\leq 99(30)$
	Between outdoor units and Branch Box modules	$H2$	$\leq 99(30)$
	Between Branch Box and Branch Box modules	$H3$	$\leq 49(15)$
	Between indoor and indoor units	$H4$	$\leq 49(15)$
Minimum allowable length	Between outdoor and the 1st branch	$L1$	$\geq 16(5)$
	Between Branch Box and the branch	$L3;L4;L5$	as possible as short

**NOTICE!** Branch Box module should be placed level between the outdoor unit and the indoor unit.

**5.2 Installation of Piping Adapter (KSAUI0201AAA and KSAUI0401AAA)**

If the piping connection size of the Branch Box module does not match with the outdoor and indoor units, use it with the piping connection size of the outdoor and indoor units. Braze the optional piping adapters to the Branch Box module, so that the piping connection size of the Branch Box module can match with that of the outdoor and indoor units.

- 1) Piping adapter(Standard accessories)

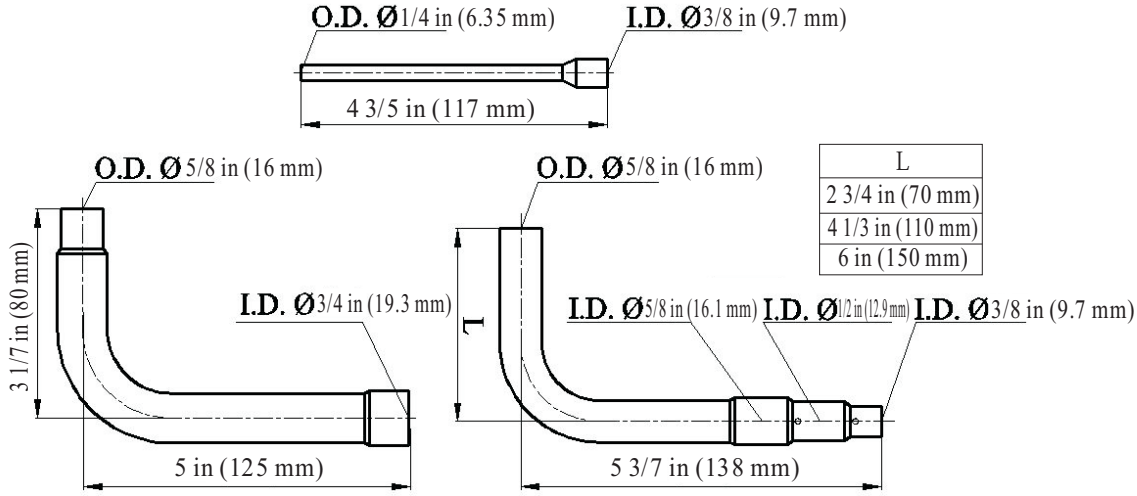


Fig. 18

2) Brazing the piping adapter

- ① If the connection size of the pipe adapter selected is different from the piping connection size of the Branch Box module, cut the tube of the piping adapter from the middle with a tube cutter and remove the burrs.
- ② To avoid heat damage to the internal structure of the Branch Box module, wrap the pipes to be brazed with wet cloths.
- ③ After brazing, use wet cloths to cool off the pipes for effective brazing.

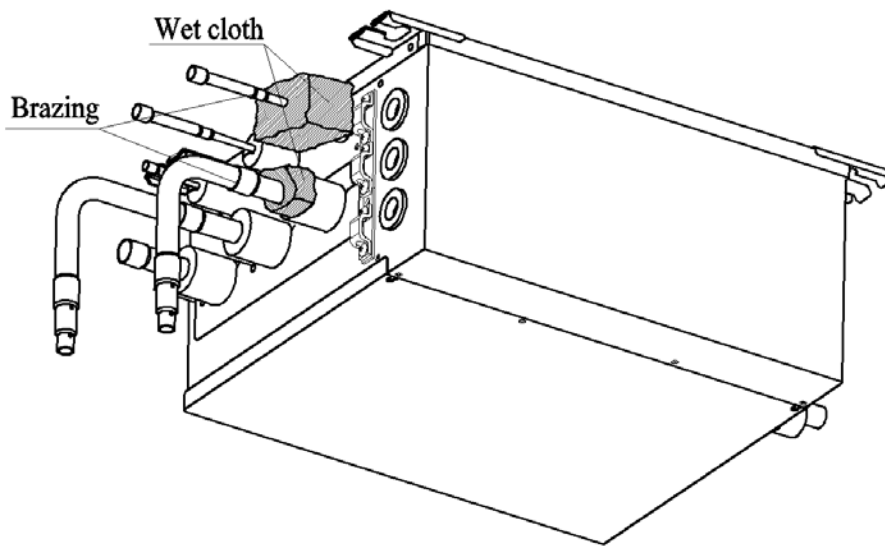


Fig. 19

3) Sealing the unconnected port

If the port of the Branch Box module indoor side does not connect to one indoor unit, the port must be sealed to prevent refrigerant leaks.

- ① Select the appropriate piping adapter.
- ② Pinch the end of the chosen piping.
- ③ To avoid heat damage to the internal structure of the Branch Box module, wrap the pipes to be brazed with wet cloths.

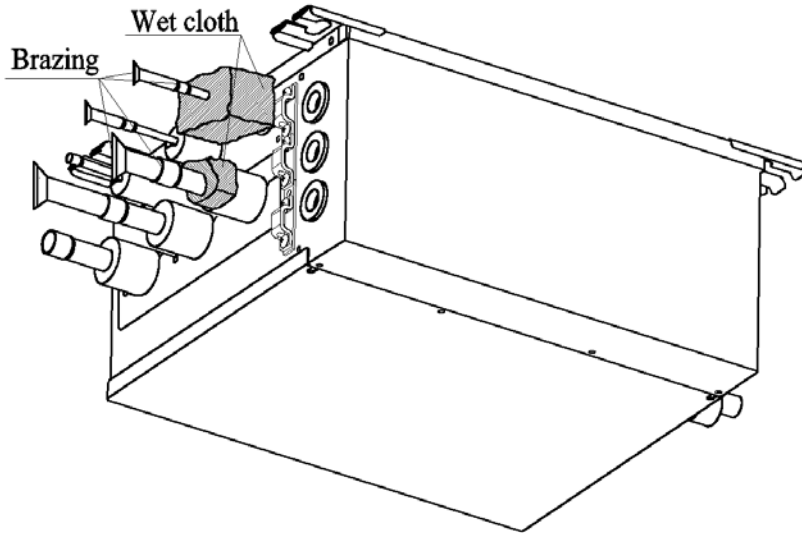


Fig. 20

- ④ After brazing, use wet cloths to cool off the pipes for effective brazing.

### 5.3 Precaution for Connection

#### ⚠ CAUTION

- 1) Adhere to the following principles during pipe connection: the outdoor unit shall be installed close to the indoor unit, to minimize the length and bends of connection pipes; the height gap of the outdoor unit and indoor units should be as small as possible; the radius of the curvature should be as large as possible.
- 2) The brazing operation must be performed strictly in accordance with the process requirements. A rosin joint or pin hole is not allowed.
- 3) During the installation, do not damage the pipeline. The pipeline's radius for bending must be more than 8 inch (200mm). The pipes cannot be bent repeatedly or straightened, otherwise they will harden and crack. Do not bend or straighten the pipes more than 3 times at the same position.

#### 1) The process of flaring

- ① Use the tube cutter to cut the connecting pipe in the appropriate place and remove the burrs.
- ② Install the nut before the flaring operation.
- ③ Check the flared portion, whether it is fractured or not.

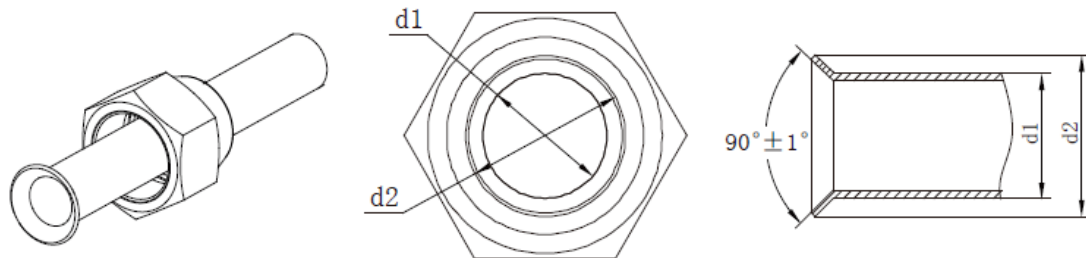


Fig. 21

#### 2) Precaution for elbow operation

- ① The elbow operation could be done by hands. Be careful to not damage the pipe.

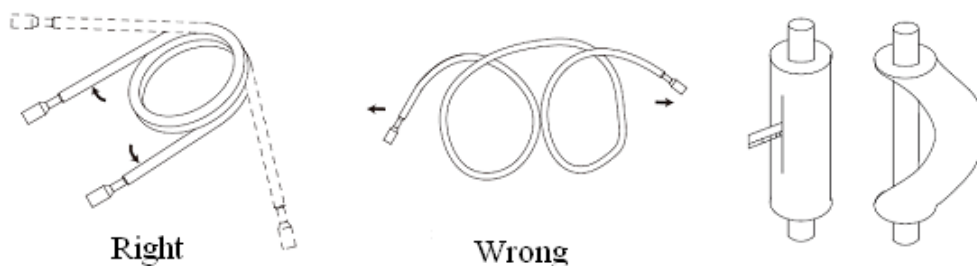


Fig. 22

- ② If the thermal insulation of the refrigerant pipe is not removed, do not bend the pipe, otherwise it may cause the pipe to crack. It's better to make an incision with a knife in the thermal insulation and remove it. After the elbow operation is finished, recover the thermal insulation with a binding band.
- 3) The process of installing refrigerant pipes
  - ① Remove the screw caps from the pipes.
  - ② Align the flared end of the copper tube with the center of the pipe joint. Tighten the nuts by hand. (If the flared end of the copper tube and the center of pipe joint are not coaxial, it is hard to tighten the nuts by hands. Do not tighten it with spanners, because the screw thread may be broken with force).
  - ③ Tighten the flaring nuts with a torque wrench until you hear a “click”. (The spanner and torque wrench should be perpendicular to the refrigerant pipeline).
  - ④ Refer to the following table for the torque required to tighten the nuts.

Table 10

Pipe diameter (inch/mm)	Thickness of copper tube (inch/mm)	Tightening torque (ft/metric)
Φ1/4(6.35)	≥1/32(0.8)	11~22(15~30)
Φ3/8(9.52)	≥1/32(0.8)	26~29(35~40)
Φ1/2(12.7)	≥1/32(0.8)	33~37(45~50)
Φ5/8(15.9)	≥1/25(1.0)	44~48(60~65)
Φ3/4(19.05)	≥1/25(1.0)	52~55(70~75)

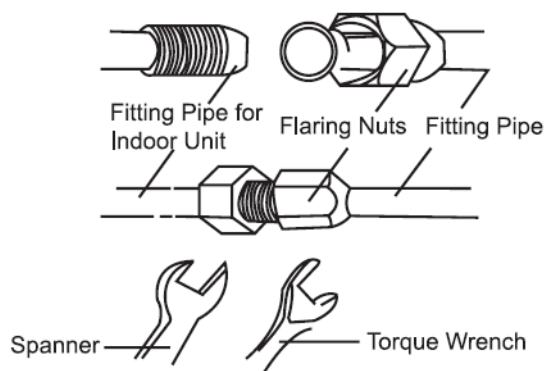


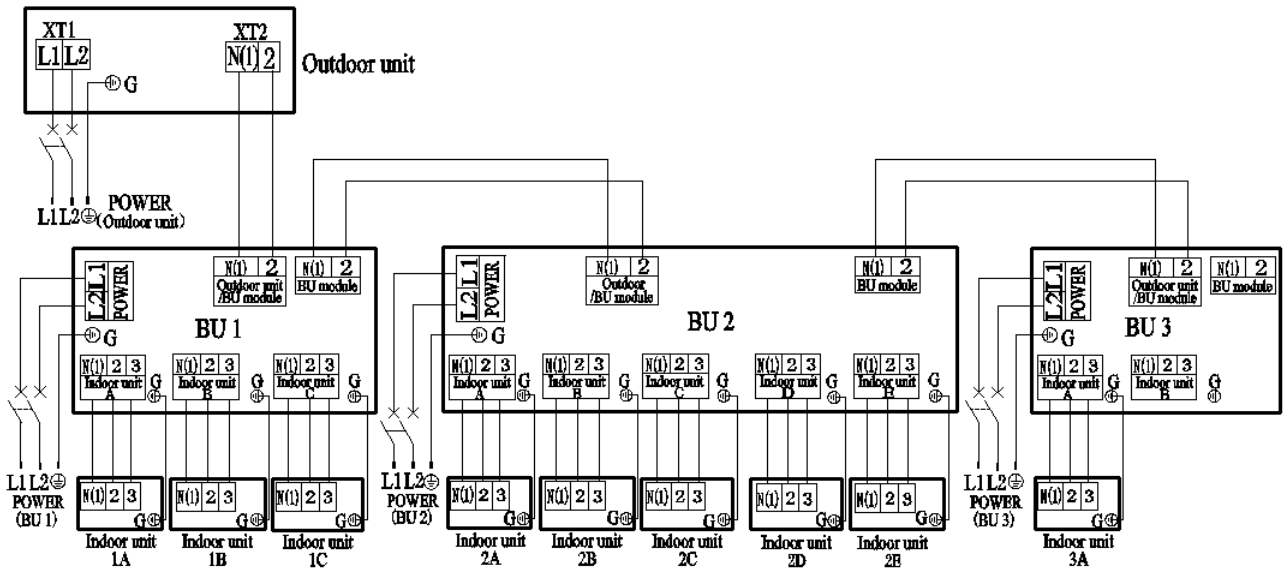
Fig. 23

<b>⚠ CAUTION</b>	
1)	During the connection of the indoor unit and the Branch Box module to the refrigerant pipe, never pull any indoor unit or Branch Box module joints by force, otherwise the capillary pipe or other pipe may crack which would result in leakage.
2)	The refrigerant pipe should be supported by brackets. Do not allow the unit to bear the weight of the refrigerant pipe.
3)	Each pipe should be labeled to identify which system it belongs to avoid mistaken piping.



## 6 Electrical Wiring Work

### 6.1 Wiring Connection



**NOTICE!** The “L1”, “3” terminals are connected to the live wire, the “L2”, “N(1)” terminals are connected to the neutral wire and the “2” terminal is connected to the transmission line.

Fig. 24

### 6.2 Requirements of Power Circuit and Cable

Table 11


Phase and frequency		1Ph,60Hz
Voltage		208/230V
Recommended cable of outdoor unit (Pieces × Sectional area)	38GJQK48---3	3×1/4 in <sup>2</sup>
	38GJQL56---3	
Recommended cable of Branch Box module (Pieces × Sectional area)		3×0.03 in <sup>2</sup>
Transmission line (Pieces × Sectional area)		2×0.06 in <sup>2</sup>
Recommended cable of indoor unit (Pieces × Sectional area)		4×0.03 in <sup>2</sup>
Capacity of the air switch	38GJQK48---3	40A
	38GJQL56---3	40A
	Branch Box module	10A

#### **NOTICE**

- 1) The total length of the transmission line between the outdoor unit and the furthest Branch Box module 180 feet (55m). Otherwise, the system cannot work properly.
- 2) The specifications of the power cable and transmission line listed in the table above are determined based on the maximum power (maximum amps) of the unit.
- 3) The specifications of the power cable listed in the table above are applied to the conduit-guarded

<p>multi-wire copper cable (for example, YJV copper cable, consisting of PE insulated wires and a PVC cable jacket) used at 104°F (40°C) and resistible to 194°F (90°C), and shall consist of ordinary polychloroprene sheathed cords. If the working condition changes, they should be modified according to the related national standard.</p>
<p>4) The specifications of the air switch listed in the table above are applied to the breaker with the working temperature at 104°F (40°C). If the working condition changes, they should be modified according to the related national standard.</p>
<p>5) The length of the recommended power cable should be less than 49 feet (15 meters); otherwise, the diameter of the power cable is insufficient.</p>
<p>6) The mentioned power cable and transmission line length is just a reference value. It may be different depending on the condition of installation, humidity or materials.</p>
<p>7) An all-pole disconnection switch with a contact separation of at least 1/8 inch (3mm) in all poles should be connected in fixed wiring.</p>

### 6.3 Ground Requirements

<p><b>⚠ WARNING</b></p>
<p>1) The air conditioner is classified as a Class I appliance, so the grounding must be reliable.</p>
<p>2) The ground wire must be fixed on the screw hole with the sign as the right figure. </p>
<p>3) The yellow-green wire of the air conditioner is the ground wire and must be secured with a tapping screw. The wire cannot be used for another purpose or cut off, otherwise, it may cause an electric shock.</p>
<p>4) A reliable ground terminal should be provided. The ground wire cannot be connected to any of the following items: a. water pipe; b. coal gas pipe; c. sewage pipe; d. lightning rod e. telephone line f. other unreliable places considered by a professional.</p>

### 6.4 Precautions on the Electrical Wiring Work

<p><b>⚠ WARNING</b></p>
<p>1) The electrical installation should be carried out by the professional as instructed by the local laws, regulations and this manual.</p>
<p>2) The ground connection should be reliable and the ground wire should be connected to the dedicated device by a professional.</p>
<p>3) Before starting work, the unit's power must be turned off.</p>
<p>4) The air switch coupled with the leakage current protection switch must be equipped in the circuits, with enough capacity and of both magnetic and thermal tripping functions in case of a short circuit or overload.</p>
<p>5) The electrical work should use a cable length long enough to cover the entire distance without a connection. If it is unavoidable, make sure the connection is reliable. External forces should not act on the wires and the joint is not bare, otherwise it will cause electrical shock or fire.</p>
<p>6) Use a power cable with the rated voltage and exclusive circuit for the air conditioner.</p>
<p>7) Do not pull the power cable by force after the unit is installed.</p>
<p>8) The diameter of the power cable should be large enough and once it is damaged, it must be replaced by a dedicated one.</p>
<p>9) The multi-wire copper cable should be used for the power cable and the transmission line.</p>

### 6.5 Precaution of Laying Wires

- 1) Use a wire stripper to strip off a length of the insulation layer at the end of the wires.
- 2) Loosen the screws on the terminal block of the air conditioner.
- 3) Press the ends of the cable tightly onto the round terminals corresponding to the size of the screws.
- 4) Pass the screw through the round terminals and secure it to the terminal block.

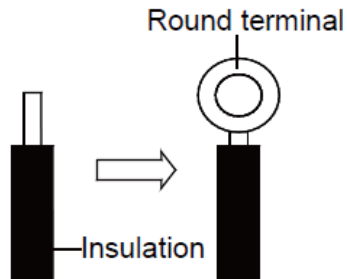
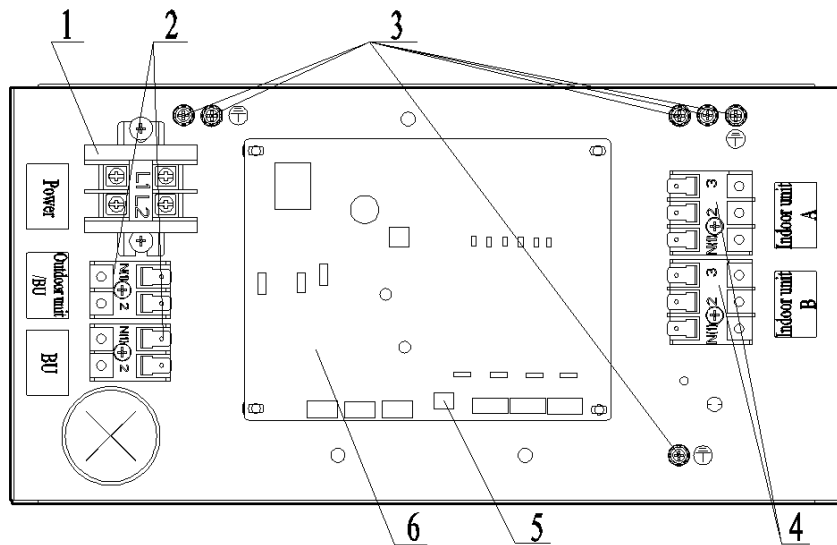


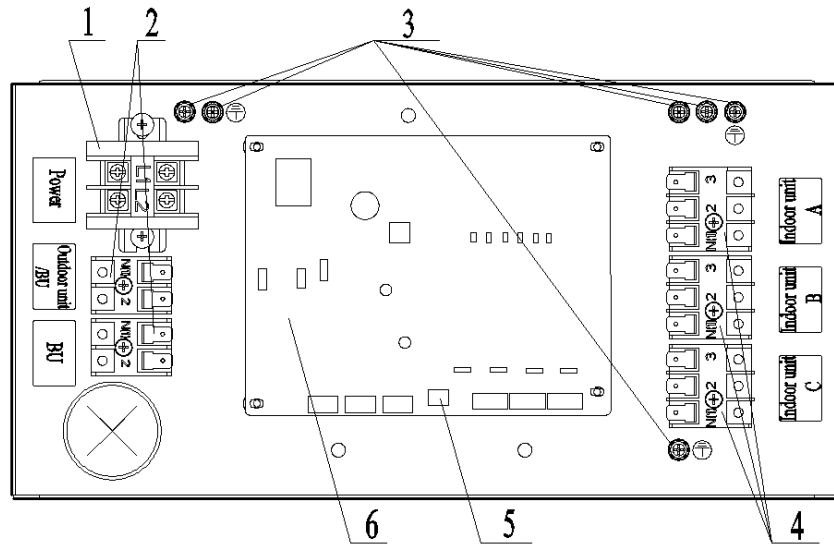
Fig. 25

### 6.6 Procedures for Electrical Wiring Work

- 1) Unscrew the electrical equipment plate.
- 2) Review the structure behind the electrical equipment plate.



a) FXA2B-D



b) FXA3B-D

NO.	1	2	3
Name	Terminal block for Branch Box module power supply	Terminal block for transmission line	Ground screw
NO.	4	5	6
Name	Terminal block for indoor unit power supply	DIP switch	Printed circuit board

Fig. 26

- 3) Put the power cable and transmission line through the rubber ring. To protect the power cable and the transmission line from damaging the hole, the rubber ring cannot fall otherwise, it may cause electrical shock or fire.
- 4) Connect the power cable of the Branch Box module to the L1, L2 terminals with the Power sign and the ground screw.
- 5) Connect the transmission line of the Branch Box module to the N(1) and the 2 terminals with the sign of Outdoor unit/Branch Box module.
- 6) If the transmission line needs to be connected to the other Branch Box module, connect the extra line to the N(1), 2 terminals with the sign of the Branch Box module.
- 7) Connect the power cable of the indoor unit to the N(1), 2 and 3 terminals with the sign of Indoor unit A (B, C, D and E) as well as the ground screw.
- 8) Secure the power cable and the transmission line firmly with the cable fixing clip.
- 9) Screw the electrical equipment plate.

**⚠ CAUTION**

- 1) The transmission line and the power cable must be separated with an interval of at least 3/4 inch (2cm); otherwise it may result in a communication problem.
- 2) Confirm that each cable connected to the terminal screw is correct and secure after finishing the electric work.
- 3) Fix each ground wire separately with a ground screw.
- 4) When connecting indoor units, make sure to connect the refrigerant pipes and power cables to the same connection ports marked with matching signs (A, B, C, D and E).
- 5) If the connecting wire is connected to the terminal incorrectly, the unit will not work as designed.
- 6) The refrigerant pipe should be supported by brackets. Do not the unit to bear the weight of the refrigerant pipe.
- 7) Each pipe should be labeled to indicate which system it belongs to avoid mistaken inaccurate piping.

**6.7 Instructions for DIP Switch**

- ◆ A two digit DIP is adopted to assign the address when using multi-Branch Box modules and the address cannot be repeated in the same unit.
  - ◆ One outdoor unit can connect to no more than 3 Branch Box modules.
  - ◆ The “ON” side indicator means "ON" and the opposite side represents "OFF".
- NOTICE!:** The black part is lever.

Table 12

Number	DIP Code		Icon	Address
	DIP 1	DIP 2		
1	OFF	OFF	<p style="text-align: center;">ON 1 2</p>	Branch Box 1
2	OFF	ON	<p style="text-align: center;">ON 1 2</p>	Branch Box 2
3	ON	OFF	<p style="text-align: center;">ON 1 2</p>	Branch Box 3

## 7 Design of Drainage Pipeline

### 7.1 Installation of the Drain Hose

- 1) Remove the rubber stopper of the drain hole.
- 2) Connect the drain hose to the drain hole of the Branch Box module.
- 3) The drain hose should be kept at a 5-10 degree gradient to facilitate discharge of the condensing water. Take care not to exert too much force on the hose.
- 4) Thermal insulation materials should be placed at the joints of the drain hose to prevent dew condensation. Secure the drain hose firmly with a binding band.

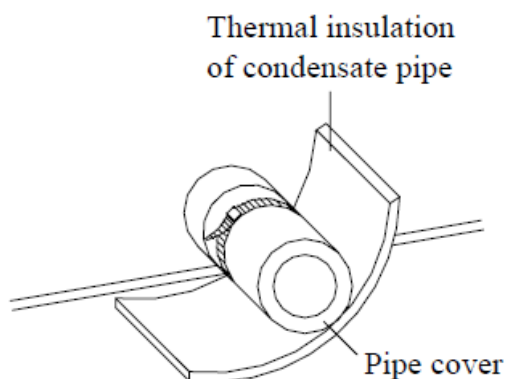


Fig. 27

- 5) Insert the end of the drain hose into the hole of drainage pipeline.

### 7.2 Design of the Drainage Pipeline

- 1) The drainage pipeline should be kept at a gradient of  $(1/50—1/100)$  to avoid bulges of the pipes where there might be water bends.
- 2) The drainage pipeline has the form of the hard PVC pipes for common purposes and can be purchased locally. The diameter of the PVC pipes is no less than 1-1/4 inch (31mm). The pipeline should be fixed as close to the Branch Box module as possible.
- 3) Insert the drain hose into the drain hole of the drainage pipeline. Use a binding band to secure it tightly. Do not use adhesive glue to join the drain hose to the drainage hole.
- 4) When the drainage pipeline is laid for a couple of units, the position of the shared pipeline should be approximately 3.94 inch (100mm) lower than the drainage hole of each module. In this case, specialpurpose pipes, with thicker walls, will be used.

**NOTICE!** At intervals of about 3-1/4 feet (1 meter), secure the drain pipes to the wall with brackets, and not floating in the air.

## 8 Test Operation

After all the installation has been completed, perform the operation test detailed in the outdoor unit owner's manual.

## 9 Troubleshooting

<b>⚠ WARNING</b>	
1)	In the event of abnormal conditions (for example, foul smell), shut off the power supply immediately and then contact the appointed service center. Operating the unit under abnormal conditions could damage the air conditioner and also cause electric shock or fire hazard .
2)	Air conditioning repair shall be done only by professionally skilled personnel at the appointed service center, as incorrect repair would cause electric shock or fire hazard.

Table 13

Errors	Indicating LED flashing times			Indoor unit error code	Outdoor unit error code
	Yellow LED	Green LED	Red LED		
Branch Box 1 is connected	Flash 1 time				
Branch Box 2 is connected	Flash 2 times				
Branch Box3 is connected	Flash 3 times				
Indoor unit A is connected		Flash 1 time			
Indoor unit B is connected		Flash 2 times			
Indoor unit C is connected		Flash 3 times			
Indoor unit D is connected		Flash 4 times			
Indoor unit E is connected		Flash 5 times			
Indoor unit A gas tube temperature sensor error			Flash 1 time	b7	b7 indoor unit address
Indoor unit A liquid tube temperature sensor error			Flash 2 times	b5	b5 indoor unit address
Indoor unit B gas tube temperature sensor error			Flash 3 times	b7	b7 indoor unit address
Indoor unit B liquid tube temperature sensor error			Flash 4 times	b5	b5 indoor unit address
Indoor unit C gas tube temperature sensor error			Flash 5 times	b7	b7 indoor unit address
Indoor unit C liquid tube temperature sensor error			Flash 6 times	b5	b5 indoor unit address
Indoor unit D gas tube temperature sensor error			Flash 7 time	b7	b7 indoor unit address
Indoor unit D liquid tube temperature sensor error			Flash 8 times	b5	b5 indoor unit address
Indoor unit E gas tube temperature sensor error			Flash 9 time	b7	b7 indoor unit address
Indoor unit E liquid tube temperature sensor error			Flash 10 times	b5	b5 indoor unit address

## 10 After-Sales Service

If there is any quality or other issue, please contact the after-sales service center.



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