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# Delta InfraSuite Precision Cooling

RowCool

Air Cooled Type (RWD030R)

User Manual

[www.deltapowersolutions.com](http://www.deltapowersolutions.com)



## **SAVE THIS MANUAL**

This manual contains important instructions and warnings that you should follow during the installation, operation, storage and maintenance of this product. Failure to heed these instructions and warnings will void the warranty.

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# Chapter 1 : Safety Instructions

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## 1.1 General

- Carefully read all chapters of the Manual before any installation, operation, or maintenance. To avoid personal injuries and damaging the equipment, be sure to operate the product in accordance with the instructions in this Manual and the markings on the cabinet.
- When moving the equipment, the unit should only be moved by at least two people so as to guarantee safety.
- In handling or removal of the equipment, pay attention to its height and center of gravity. When using a transportation tool for handling, it must be raised from the bottom to avoid toppling.
- The unit contains moving components. Be careful to keep it away from your arms, legs, hair, clothes or jewelry so as to avoid any danger.
- 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

## 1.2 Installation Warnings

- The unit can be connected with a single or dual power source. Make sure the input power is disconnected before making a connection. If necessary, use a multi-meter to confirm this.
- There shall not be any flammable objects in the installation area, and the equipment must be installed on a stable floor.
- This indoor unit is only intended for indoor use. The indoor environment must be separated from the outside air so as to avoid temperature and humidity interference. Consult the national or local regulations for separating the installation environment.
- All specifications such as connection and length of cables must be in compliance with local or national laws and regulations.
- The refrigerant connection piping between the indoor unit and the outdoor unit should be insulated to prevent personnel from being exposed to high temperatures.

## 1.3 Operation Warnings

- Please read these operating instructions before operation.
- The high voltage and high-pressure in the equipment can cause personal injuries! The components may have hidden dangers and only authorized service personnel can operate the unit. Improper operation may lead to serious injury or death or equipment damage. Be sure to follow all the instructions and warnings contained in the Manual.



**NOTE:**

The motor-compressor was protected by UL Listed, non-renewable cartridge fuses.

## Chapter 2 : Introduction

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The air conditioning system includes an indoor unit (RWD030R) and an outdoor unit (RDA037). After disassembling individual wooden boxes, you will see indoor and outdoor units of the air conditioner and an accessory pack. Please make sure that objects in the accessory pack are correct.

### 2.1 Package List

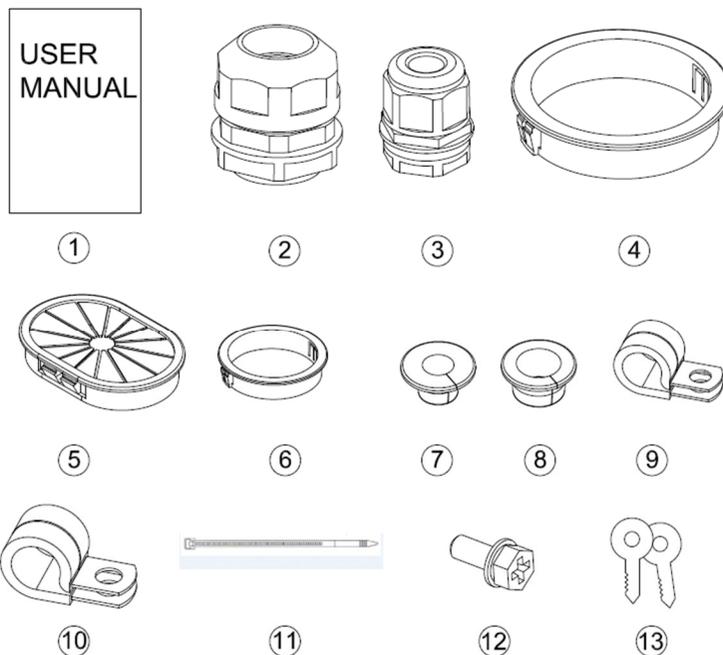
#### After unpacking the wooden box

**Indoor Unit:** It includes the indoor unit and an accessory pack. The accessory bag includes objects shown in *Figure 2-1* and *Table 2-1* below.

**Outdoor Unit:** It includes the outdoor unit and an accessory pack. The accessory bag includes objects shown in *Figure 2-2* and *Table 2-2* below.

If the accessory pack is found to be missing or damaged after unpacking, please notify Delta personnel to have it replaced.

## Indoor Unit Accessory Pack

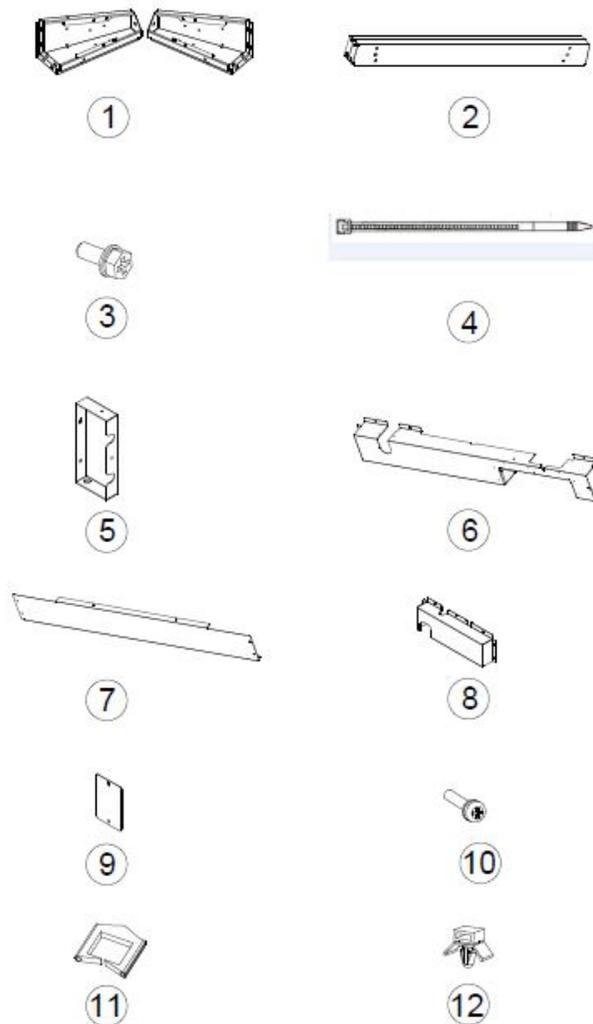


(Figure 2-1: Indoor Unit Accessory Pack)

Table 2-1: Indoor Unit Accessory Pack Contents

No.	Item	Quantity
①	Manual	1
②	Bigger Cable Gland (used for power wiring)	2
③	Smaller Cable Gland (used for signal wiring)	1
④	Snap Bushing (used for bottom power wiring)	1
⑤	Snap Bushing (used for drain pipe)	1
⑥	Snap Bushing (used for leakage & signal wire wiring)	3
⑦	Copper Pipe Sheathing (used for liquid pipe)	2
⑧	Copper Pipe Sheathing (used for discharge pipe)	2
⑨	Copper Pipe Clamp (used fix pipe)	1
⑩	Copper Pipe Clamp (used fix pipe)	1
⑪	Cable Tie (used for cable management)	3
⑫	M6 Screw_16L (used for copper pipe clamp)	2
⑬	Key (used for front door lock & open)	2

## Outdoor Unit Accessory Pack



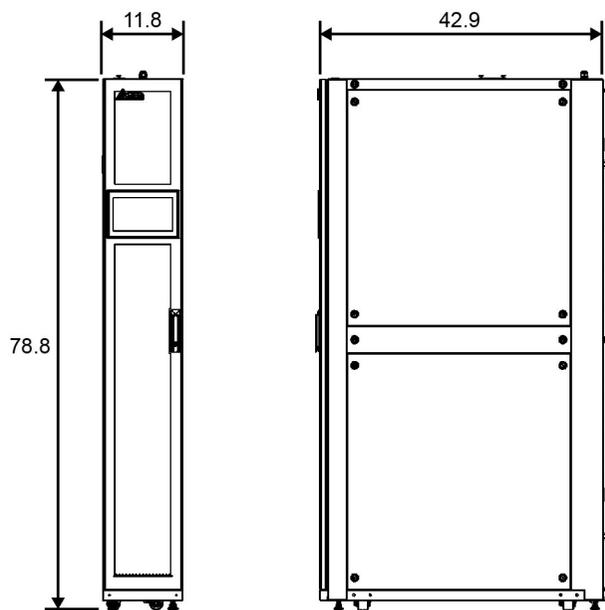
(Figure 2-2: Outdoor Unit Accessory Pack)

**Table 2-2: Outdoor Unit Accessory Pack Contents**

No.	Item	Quantity
①	Stand (used for outdoor unit install)	4
②	Beam Support (used for outdoor unit install)	2
③	Screw M6*16L (used for fix outdoor unit & stand & beam)	32
④	Cable Tie (used for cable management)	6

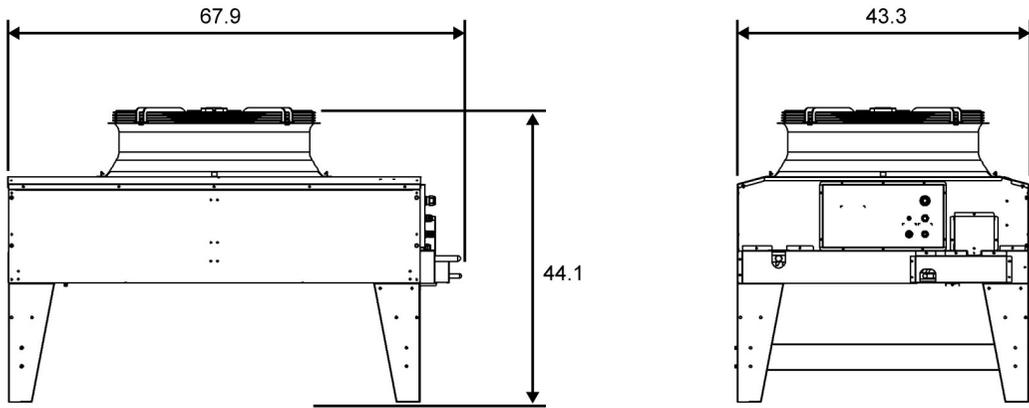
⑤	Cover-2 (used for Pipe protect)	1
⑥	Cover-3 (used for Pipe protect)	1
⑦	Cover-1 (used for Pipe protect)	1
⑧	Cover-5 (used for Pipe protect)	1
⑨	Cover-4 (used for Pipe protect)	1
⑩	Screw M4*10L(used for Cover)	29
⑪	Snap Bushing	1
⑫	Cable Mount	2

## 2.2 Appearance



Unit: inch

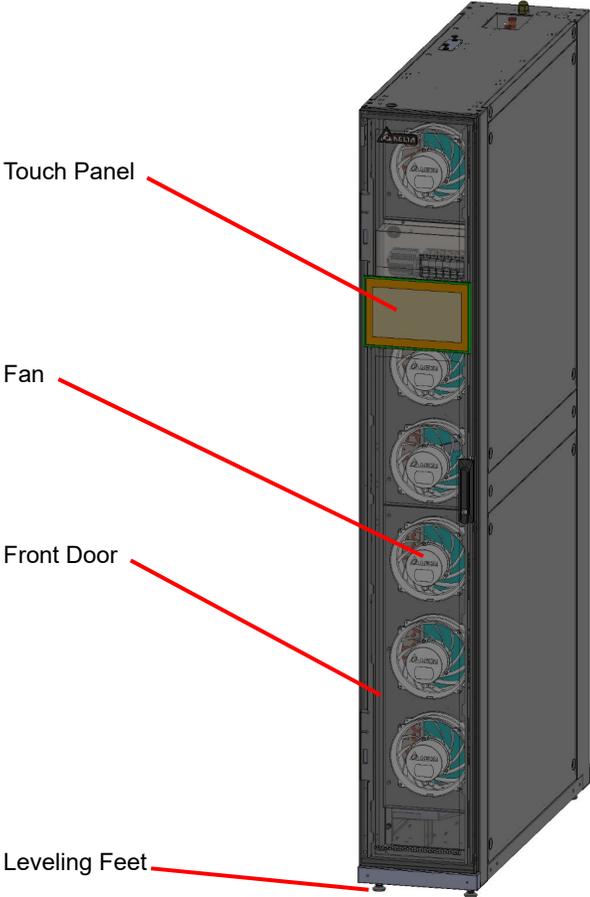
*(Figure 2-3: Indoor Unit Appearance and Dimensions)*



Unit: inch

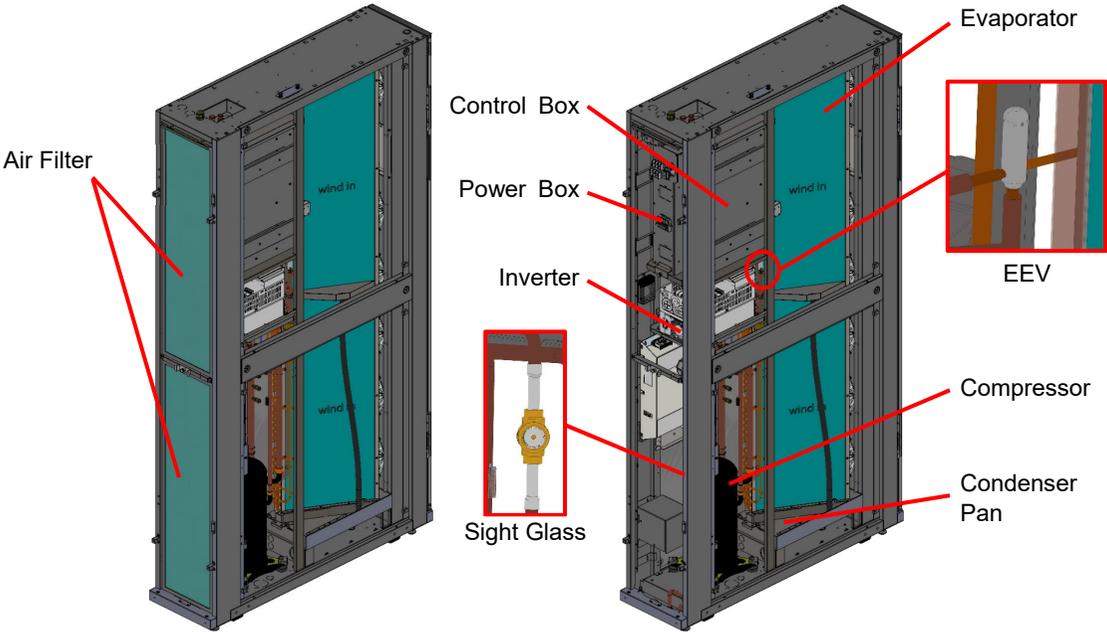
***(Figure 2-4: Outdoor Unit Appearance and Dimensions)***

### 2.3 Components Identification



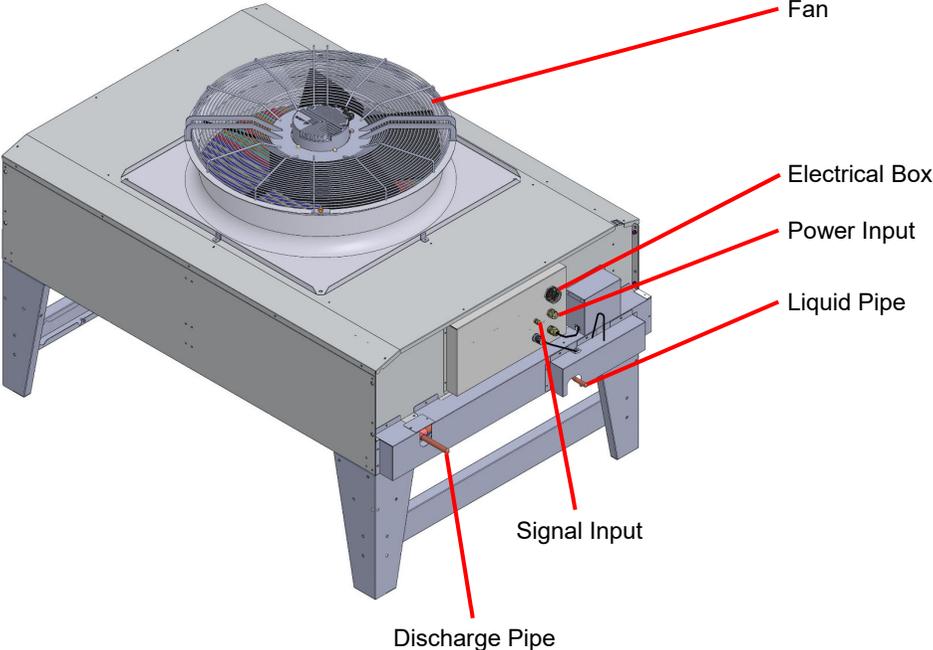
(Figure 2-5: Main External Components)

**Indoor Unit Interior**



***(Figure 2-6: Main Internal Components)***

**Outdoor Unit**



***(Figure 2-7: Outdoor Unit Components)***

## Chapter 3 : Installation

---



### **WARNING:**

Only service personnel can perform the following installation procedures. No installation, piping or handling should be performed without authorization so as to avoid equipment damage and personal injuries.



### **WARNING:**

The high voltage and high-pressure refrigerant in the equipment can be fatal! The inner components can potentially be dangerous, and only qualified service personnel can perform wiring and piping.

For detailed information on installation, refer to the installation manual. The user manual contents are for reference only.

### 3.1 Location and Power Considerations

When planning the installation site for the cooling unit, you must take the following into consideration so as to guarantee the best efficiency.

**Room Preparation:** The installation site must allow the equipment to move in and out, the flooring must have sufficient bearing capacity, and there must be sufficient space for maintenance, operation, and pipe layout and repair. The indoor environment must be isolated from the outside air to avoid temperature and humidity interference. The outside humidity entry must be minimized in accordance with the local or national regulations so as to avoid the increase of operation costs due to temperature differences increasing the heat load temperature.

**Humidity and heat source:** Implement water-proof and heat insulation engineering for the data hall environment so as to isolate the outside humid hot air.



### **NOTE:**

If the humidity of the installation environment exceeds the operation scope, there may be excessive coil condensation, since the standard model of this equipment is unable to humidify or dehumidify. This equipment comprises of a highly sensible heat design. With a low load or poor air-tightness, excessive humidity is likely; use auxiliary dehumidifying equipment in these situations.

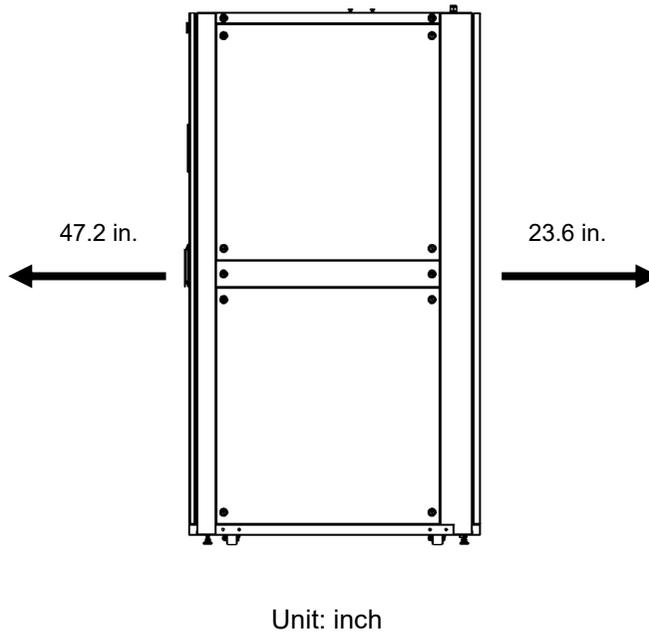
**Noise impact:** At a high load, the operation of this cooling unit may produce loud noises. Therefore, it is not suitable to install the unit close to offices.

**Incoming Power Supply Requirement:** When connecting the power supply, make sure that the power conforms to the rated value, and that the power distribution device is sufficient to satisfy the load requirement. Inspect the rated values of each unit and make sure they have been properly grounded. Do not connect more than one cooling unit to the same branch circuit or power distribution equipment.

### 3.1.1 Clearance Zone

- Indoor unit

A minimum of 900 mm (36") of clear floor space in front of and behind the equipment is recommended for service access. All required normal maintenance is performed from the front and rear of the equipment.

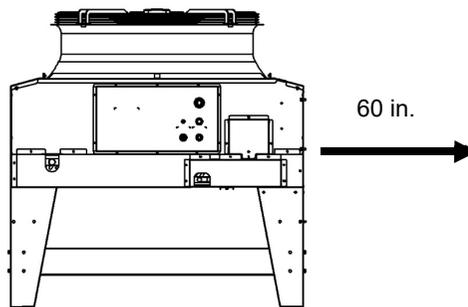


***(Figure 3-1: Indoor Unit Clearance)***

It is recommended to preserve 47.2 inch in the front communication aisle, 23.6 inch in the rear aisle, and at least 60 cm above the cabinet to facilitate wiring and piping.

- **Outdoor unit**

- The outdoor unit will have a large amount of air flow that discharges heat into the atmosphere. Therefore, the outdoor unit should be installed in a clean area free of debris, away from dirt and foreign objects that may block the condenser. In addition, the outdoor unit must not be located near steam, hot air or flue gas outlets. The outdoor unit should be located more than 60 inches away from walls, obstructions, or adjacent equipment, and there should be no obstructions above the equipment.
- Do not install the outdoor unit in an area where the sound level of the normal operation of the equipment may interfere with the work or living environment of others.
- The installation surface must not muddy.



Unit: inch

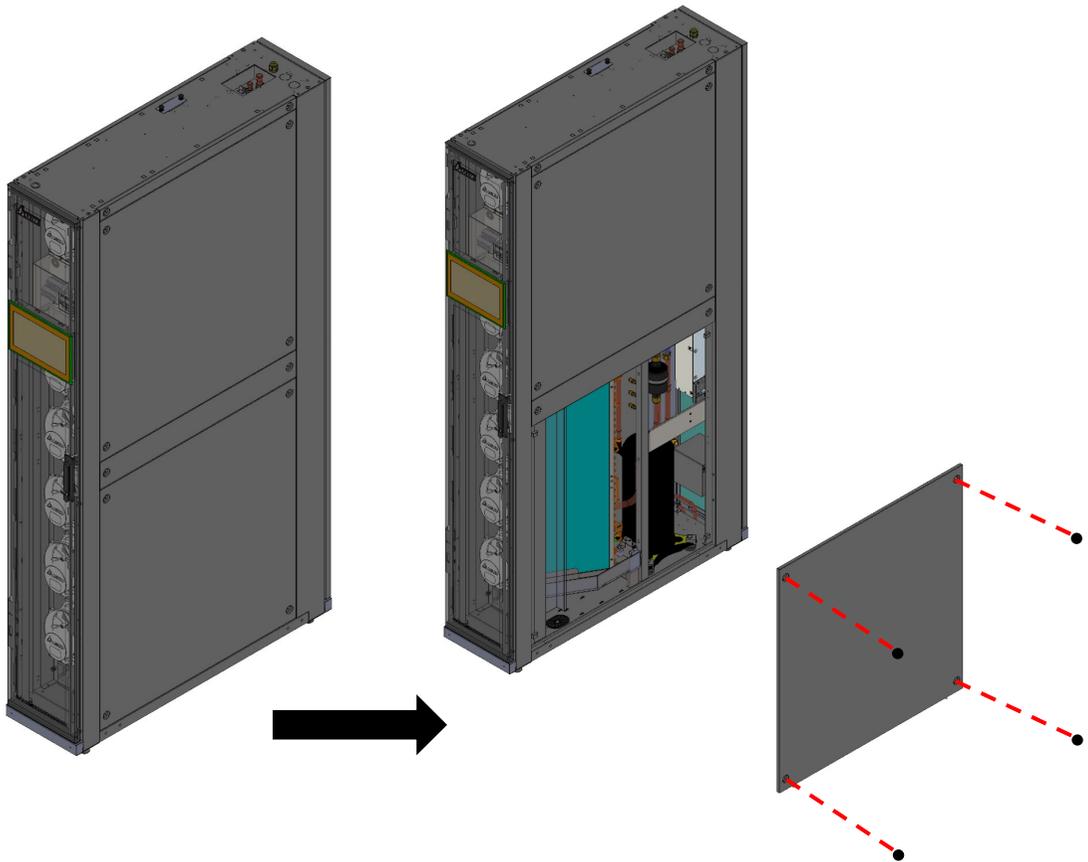
*(Figure 3-2: Outer Unit Horizontal Clearance)*

### **3.1.2 Handling**

Before moving the equipment to the installation site, plan the route according to the following instructions:

1. Make sure the passage, floor, elevator or slope on the handling route can bear the weight of the equipment and handling device, and there is sufficient space to avoid collisions.
2. In the case of a slope on the handling route, its inclination must not be greater than 15 degrees so as to avoid toppling the cabinet.
3. The bottom casters are only suitable for short distance movement. For long distance movement, use a handling device so as to avoid damage to the casters.
4. The casters are only suitable for moving on flat surfaces. Avoid heavy falling off and moving of the unit on uneven ground since they may damage the casters or even result in toppling.
5. When moving the unit, pay attention to its height and center of gravity. A minimum of two people should work together to handle the unit so as to guarantee safety.

### 3.1.3 Remove the Transport Fasteners from the Compressor



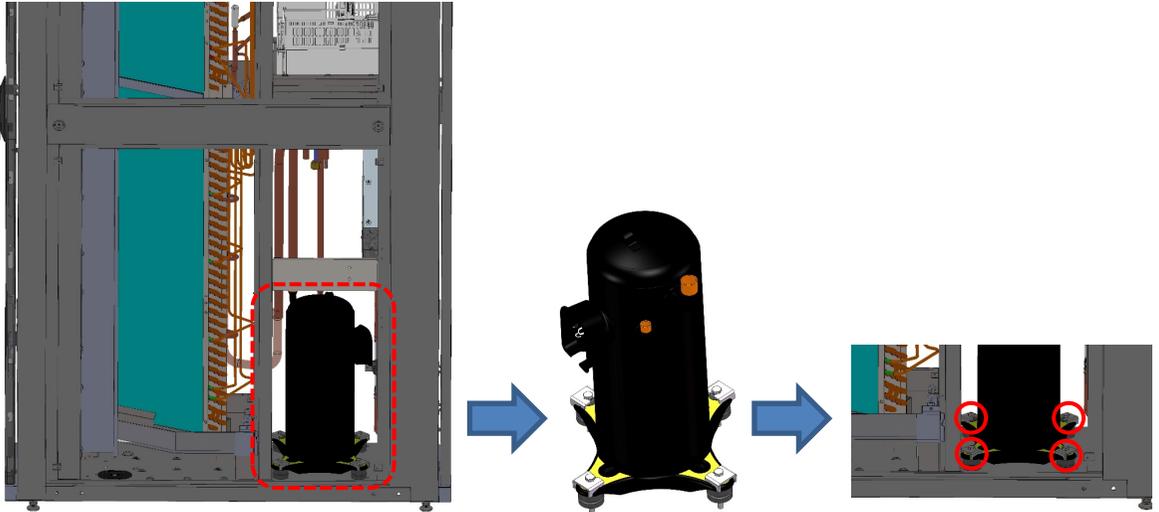
**(Figure 3-3: Removing the Side Panel)**

If the side panel is locked, use a No. 2 Phillips screwdriver to remove the screws first. Hold the side panel with your hand when the screws are being removed in order to prevent the panel from falling. Then, pull outward first, then lift up to remove the side panel.

To place the side panel back in place, align it with the two bottom holes. One person should support the side panel while the other person refastens the fixing screws.

After removing the side panel, please remove the compressor transport fasteners as shown in the figure below (the compressor transport fasteners must be removed before operation, if the transport fasteners are not removed, the compressor will easily generate abnormalities in operation), and tighten the stud at a torque of  $120\pm 5\text{kgf/cm}^2$ .

When moving the unit, the transport fasteners must be reinstalled.



(Figure 3-4: Removing Transport Fasteners from the Compressor)

### 3.1.4 Positioning

After moving the unit into place and once it is parallel with the adjacent cabinet, you must position it so as to ensure its stability. The following two methods can be used, depending on the installation environment:

- **Cabinet fasteners**

If the adjacent cabinets are Delta cabinets (MSR1110 and MSR2110), you may use connecting fasteners to fix the equipment. Each cooling unit is provided with four connecting fasteners (two at the front and two at the rear). You must remove the front and back doors before installing the connecting fastener. Refer to the following procedures:

#### **Step 1**

If the front door is locked, use the attached key to open it.

#### **Step 2**

Remove the unit's earth wire and the control panel's flat cable, raise the front door, and take it out.

### **Step 3**

Use the key to unlock the rear door, remove the earth wire, raise the door, and take it out. The rear door is of the split type and, if necessary, take down both panels.



#### **NOTE:**

Put the front and rear doors that have been removed in a safe place so as to avoid any equipment damage or personal injury due to collisions.

### **Step 4**

Use a screwdriver to loosen the screw under the fastener and lock it on the adjacent cabinet.

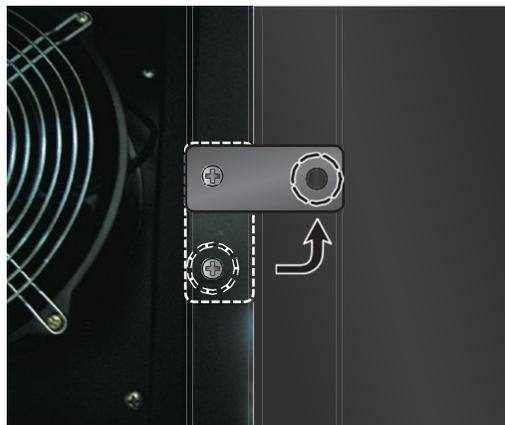
### **Step 5**

Fix the front and rear (8 in total) fasteners with the adjacent cabinet.

### **Step 6**

After fixing the fasteners, re-install the front and rear doors.

(Cabinet Precision Air- conditioning)      (Adjacent Cabinet)

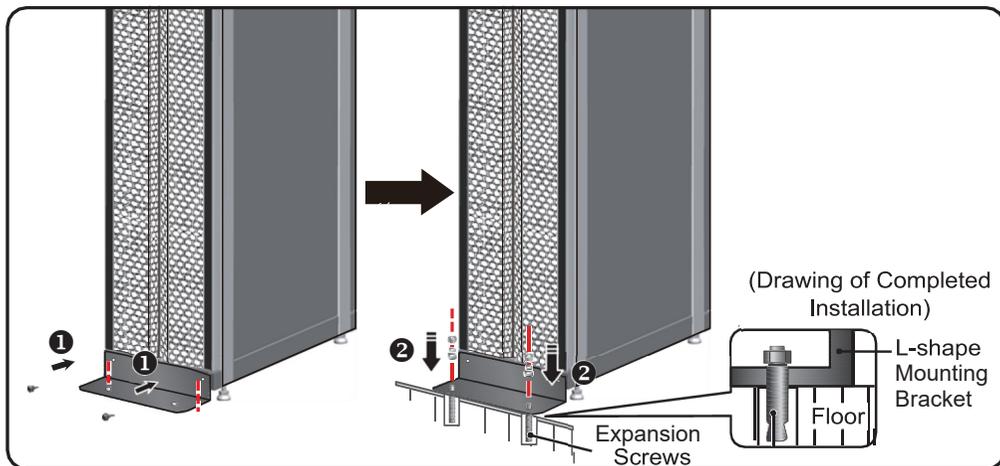


*(Figure 3-5: Join the Cooling Unit and the Adjacent Cabinet Together)*

- **L-shape mounting bracket**

The L-type balance support is originally used to fix the cooling unit on the pallet during transportation and can be used for ground fixing after positioning to provide extra locking force.

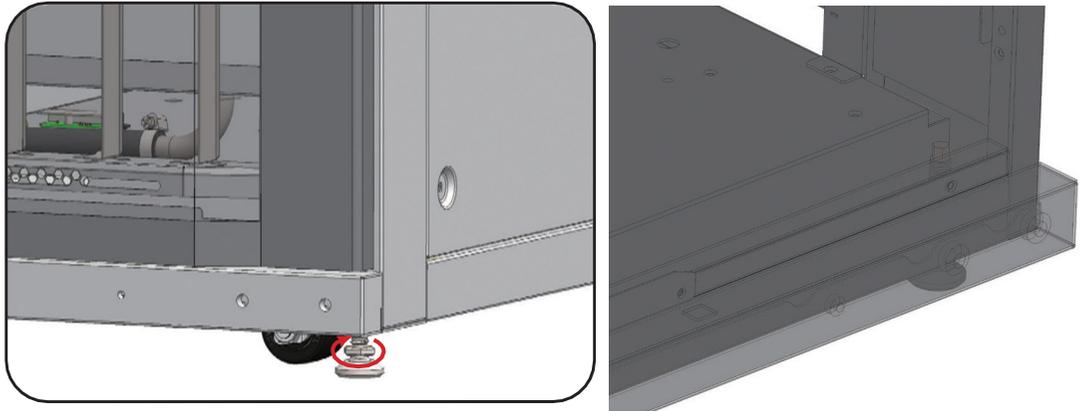
1. Use two M6 screws to fix the L-type balance support under the front door (with the extruding part forward) as shown in the figure.
2. Use expansion screws to fix the extruding end on the floor.



*(Figure 3-6: Installation of L-type Balance Support)*

- **Leveling feet**

After moving the unit into place, use a wrench to rotate clockwise the four levelers beside the casters to put them down and stabilize the unit on the floor. Make sure the unit cannot slide or topple. The leveling feet may be fastened or loosened with a No. 8 hex wrench.



*(Figure 3-7: Levelers)*



**WARNING:**

The levelers are only used for leveling the unit and cannot be used to compensate for the height difference of the floor or the unit may topple.

### 3.1.5 Outdoor Unit Installation

Install the outdoor unit according to the following instructions.

1. Open the wooden box and take out the outdoor unit accessory pack.
2. Combine the No. 1 floor stand X2, No. 2. support X1, and No. 3 M6 screw X8 of the accessory pack into a floor stand set (attached at a torque of 45kgf/cm<sup>2</sup>). There are two sets in total.

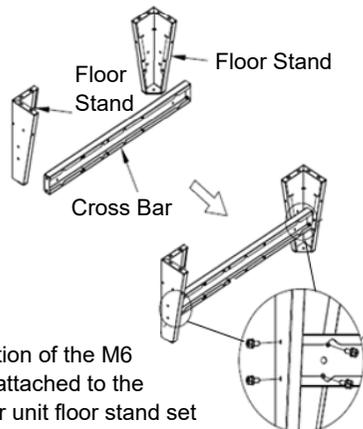
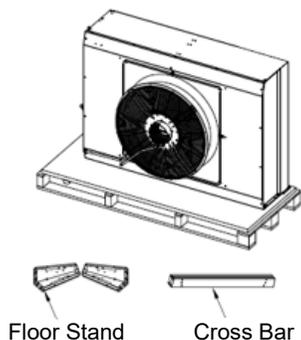


Illustration of the M6 screw attached to the outdoor unit floor stand set

3. Attach the outdoor unit floor stand set to the outdoor unit body with No. 3 M6 screws (torque: 45 kgf) in the accessory pack at four designated places
4. Remove the wood screws and the flat washers of the outdoor unit's main unit and install the outdoor unit upright in the direction of the arrow.

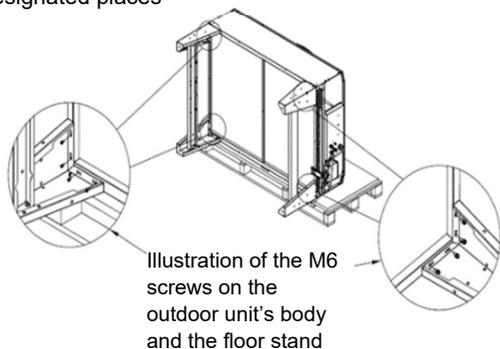
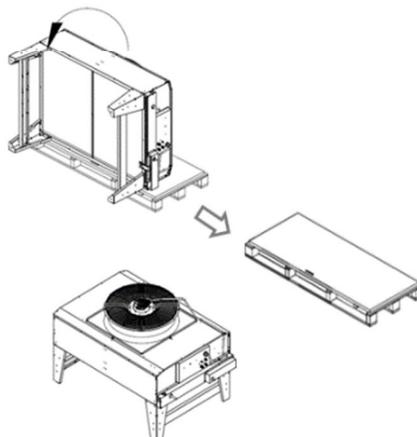
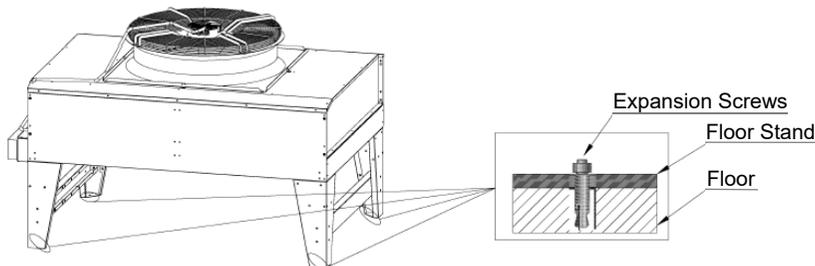


Illustration of the M6 screws on the outdoor unit's body and the floor stand



5. Move to the installation location. Use SUS 5/16" x 1-1/4" expansion screws to fix the floor stand at four designated places. The required environment and the working space must be taken into account when choosing the installation location. If there is a risk of flooding, the unit must be installed on an elevated surface.



(Figure 3-8: Installing the Outdoor Unit Stand)



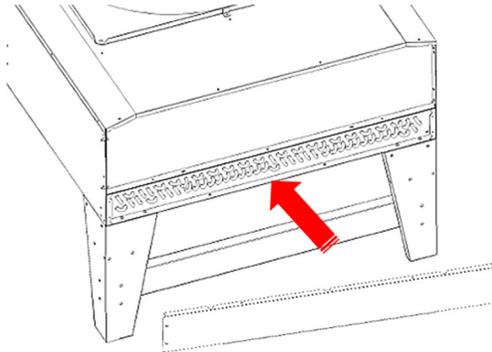
**NOTE:**

If you require a vertical installation, please contact Delta customer service.

### 3.1.6 Outdoor Side Cover Installation

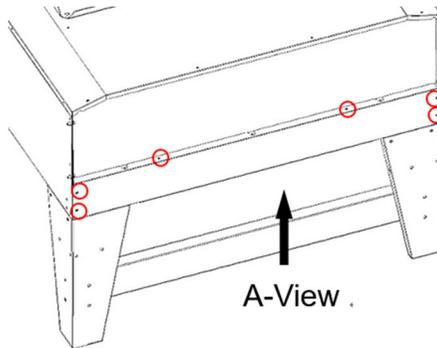
Follow the instructions below to install the side sealing plate of the outdoor unit.

1. Take Cover-1 (see **Figure 3-9**) and install it to protect the coil pipe.



**(Figure 3-9: Install the Cover)**

2. Take 8 pieces of M4\*L10 screws and lock them at designated places indicated by the circles in **Figure 3-9-1** and **Figure 3-9-2**. Lock 6 screws on the side and 2 at the bottom.



**(Figure 3-9-1: Lock the Screws on the Side)**



**A-View·(Bottom)**

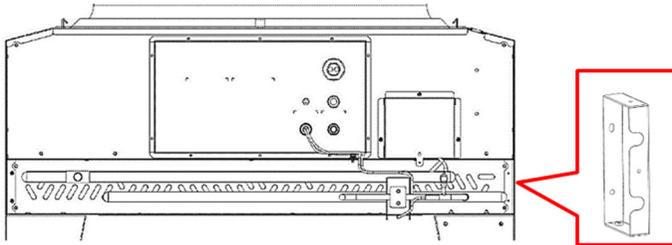
**(Figure 3-9-2: Lock the Screws at the Bottom)**



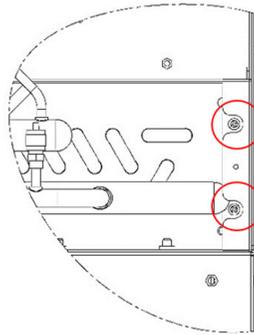
**NOTE:**

The recommended installation torque for M4 screws is  $20 \pm 2 \text{ kgf/cm}^2$ .

3. Take Cover-2 and install it to where **Figure 3-9-3** indicates. Please use 2 pieces of M4\*L10 screws for the installation. Lock the screws at where **Figure 3-9-4** indicates.

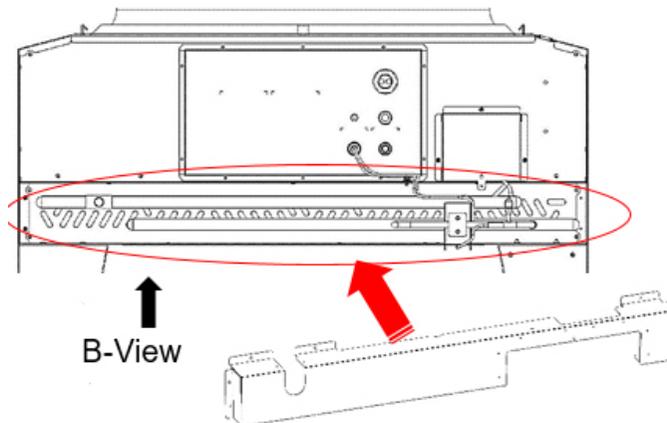


**(Figure 3-9-3: Install the Cover)**

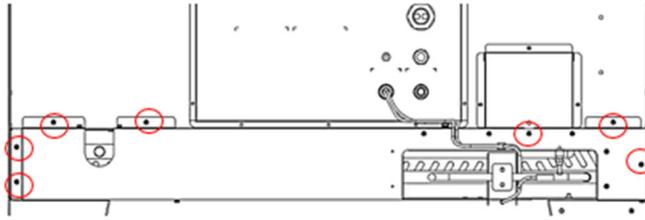


**(Figure 3-9-4: Lock the Screws)**

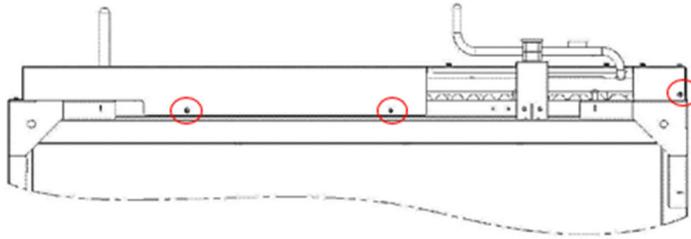
4. Take Cover-3 and install it at the circled place in **Figure 3-9-5**. Please use 10 pieces of M4\*L10 screws for the installation. Lock the screws at where **Figure 3-9-5 ~ Figure 3-9-7** indicate.



**(Figure 3-9-5: Install the Cover)**

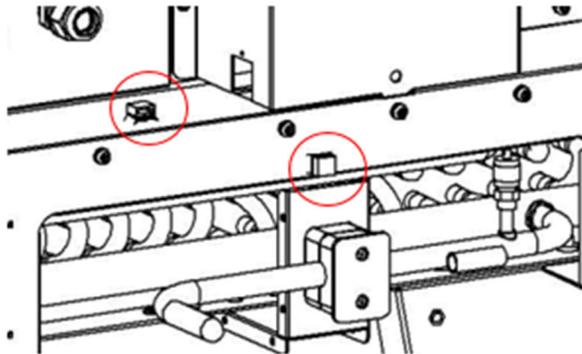


**(Figure 3-9-6: Lock the Screws)**



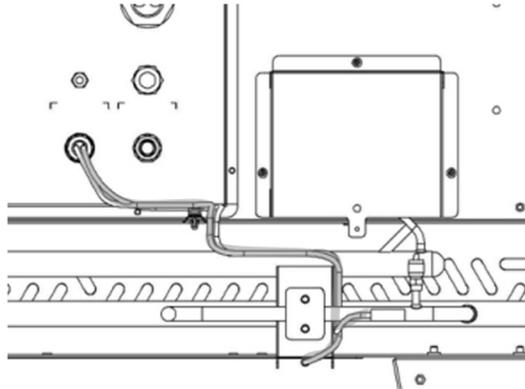
**(Figure 3-9-7: Lock Three Screws at the Bottom)**

5. Take 2 cable mounts and install them on where **Figure** indicates.



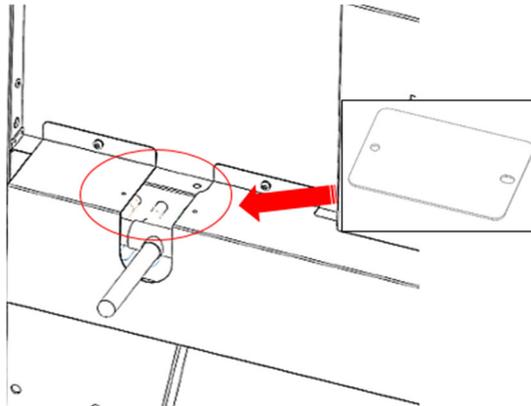
**(Figure 3-9-: Install the Cable Mount)**

6. Take 4 pieces of cable ties to fix the NTC cables as shown in **Figure 3-9-9**.

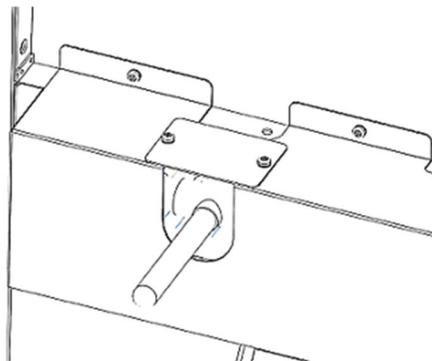


**(Figure 3-9-9: Install the Cable Ties)**

7. Take Cover-4 and install it at the circled place in **Figure 3-9-10**. Please use 2 pieces of M4\*L10 screws and lock them at where **Figure 3-9-11** indicates.



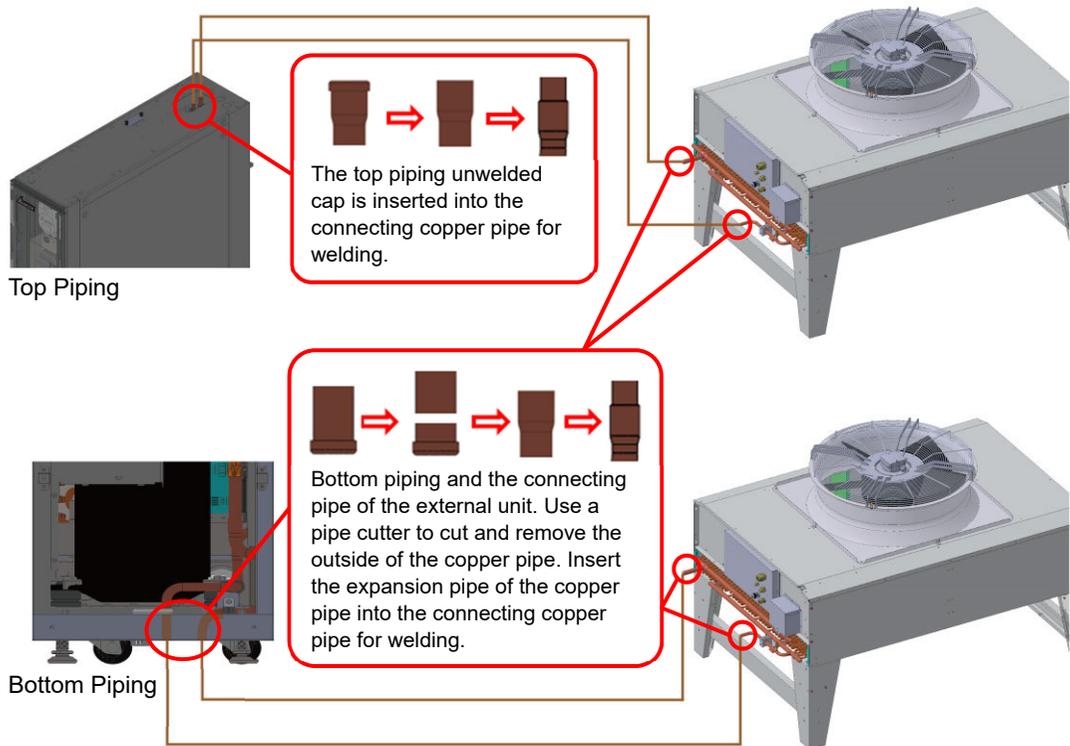
**(Figure 3-9-10: Install the Cover)**



**(Figure 3-9-11: Lock the Screws)**

## 3.2 Installation of Pipeline

### 3.2.1 Refrigerant Piping



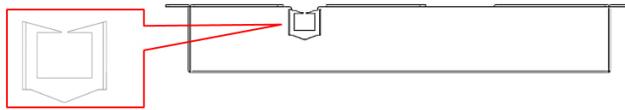
**(Figure 3-10: Refrigerant Piping Installation between Indoor and Outdoor Units)**

The shutoff valve and schrader valve (hand valve) are added, respectively, to the joints between the refrigerant discharge pipe and liquid pipe and the outdoor unit (optional or to be purchased separately and installed). First, when the indoor and outdoor units' discharge and liquid pipes are connected, apply anaerobic high-temp welding and complete it within 30 minutes. For piping, it is advised that the outdoor unit should not be lower than the indoor unit. The piping length may not exceed 197 ft; the vertical climbing height may not exceed 49 ft upwards and 16 ft downwards. Every 16 ft. configure one oil trap gas pipe. There should be a slope 0.2 inch in height every meter of horizontal refrigerant flow direction.

When the horizontal piping length exceeds 66 ft. one reversed U-shaped loop must be added every 33 ft. to prevent refrigeration oil backflow.

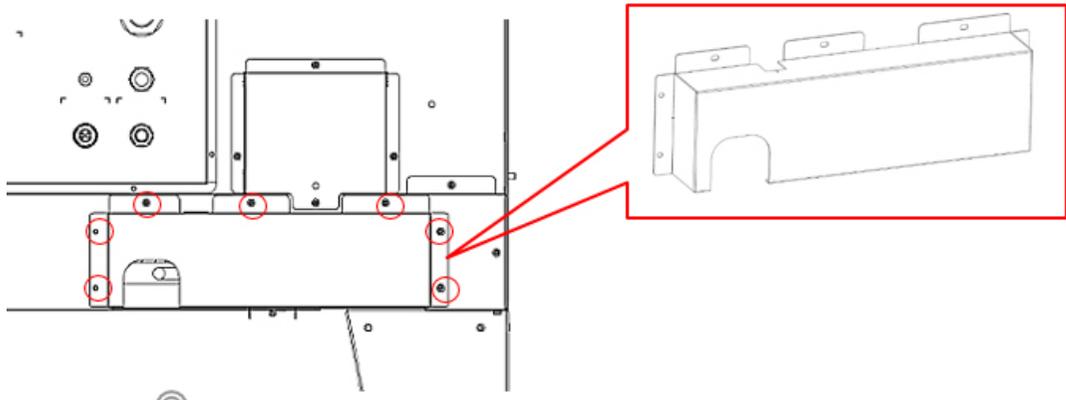
### 3.2.1.1 Installation of the Protection Cover for Piping

1. Take a snap bushing and install it on Cover-5 as shown in **Figure 3-11**.



**(Figure 3-11: Install the Snap Bushing)**

2. Take Cover-5 and install it at where **Figure 3-11-1** indicates. Please use 7 pieces M4\*L10 screws for the installation.



**(Figure 3-11-1: Install the Protection Cover)**



#### **NOTE:**

Support the top pipeline. The configuration of the pipe, valves, and filters must be identical to that of the bottom pipeline.

### 3.2.2 Condenser Drain Connection

Gravity drainage (drainage from bottom only):

The gravity water pipe has been connected to the lower part of the cabinet at one end with an additional 3.94 ft. of length remaining. The drain pipe must be insulated and pass the other end through the reserved hole at the bottom to drain the condensed water. The condensed water is drained by making use of the height difference of the unit. Make sure the horizontal slope between the two ends of the pipe is at least 5 degrees.



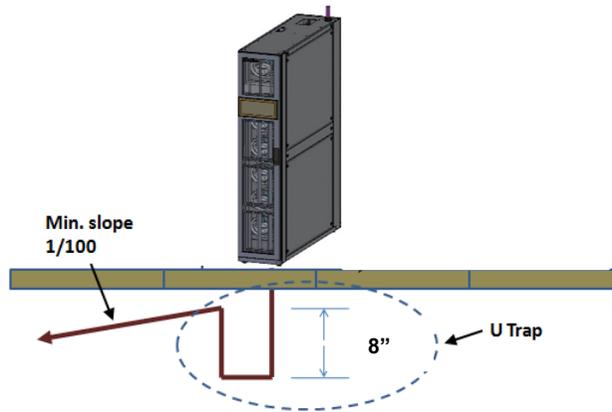
*(Figure 3-12: Drain Pipe)*

Gravity drainage is completely driven by the drain pipe height and slope. Therefore, please follow and maintain the following principles.

- (1) Please maintain a direct descend of the drainage pipes to the raised floor, else condensed water will gather on the pipelines.
- (2) The water drainage slope of the drain pipes beneath the raised floor must be greater than 1/100 to ensure normal flow rate of the condensed water.
- (3) To prevent air or condensed water in drain pipes from returning to inside the equipment during indoor fan operation, the U-trap must have a minimum depth of 8 inches. Therefore, please first check the space of the raised floor.

- (4) If the U-trap cannot be installed correctly, please install a check valve on the drain pipes to prevent air or condensed water in drain pipes from returning to the equipment.
- (5) Do not install two U-traps because this will cause gas blockage.

☺ Good, drain hose has a U trap underneath raised floor!

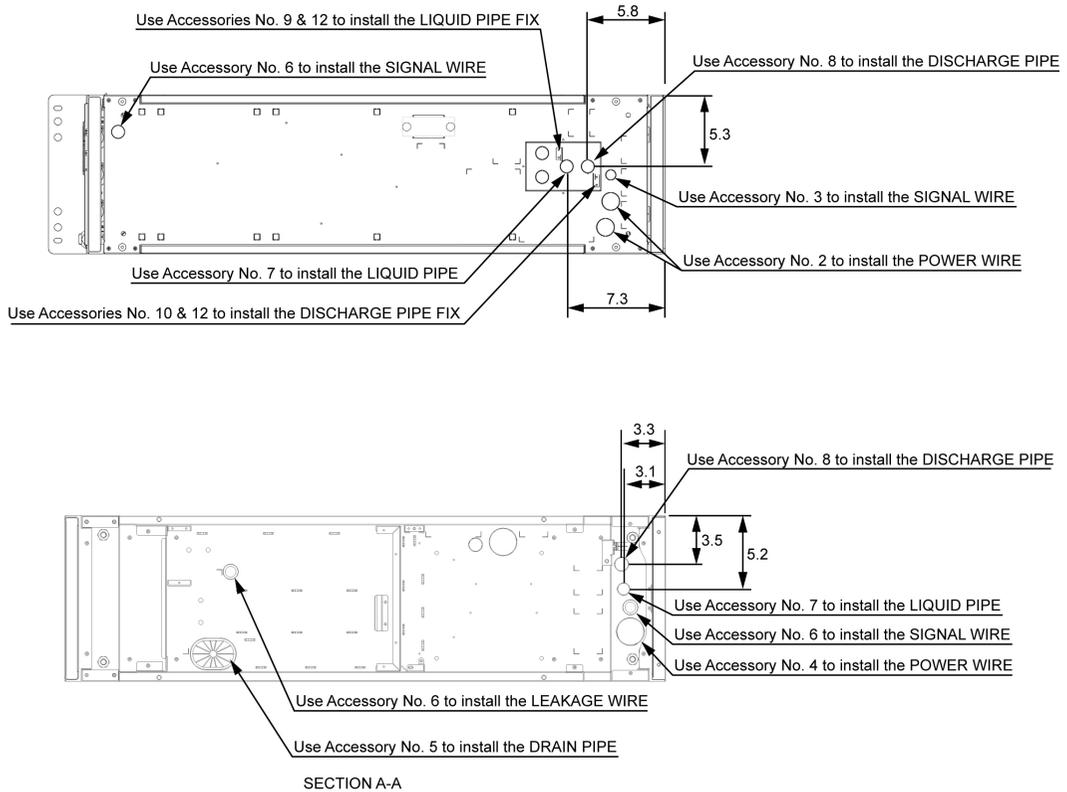


(Figure 3-13: Drain Trap)

### 3.2.3 Opening Hole and Related Locations

Drill holes on the raised floor or ceiling according to the piping mode (top or bottom) as shown in the following figures for pipe passing.

The top and the bottom pipelines must be enclosed when the unit is ready to be shipped. After the external pipeline is installed and put on the copper sheath found in the accessory pack, in order to avoid the copper pipe damage.



(Figure 3-14: Top and Bottom Piping Positions and Dimensions)

For refrigerant piping, it is required to remove the copper pipe cap. After the copper pipes are inserted correctly, weld in place.

## 3.3 Connection of Cables

### 3.3.1 Connecting the Power Cable (Use Accessory Pack Item: 3 Cable Gland)

- Prior to connection, you must make sure that the external power source is disconnected.
- Prior to connection, it is required to remove the cap from the power terminal of the indoor unit and make sure that the cable is fastened before the cap is put back on.
- The power cable may be inserted from the top or from below.



#### **WARNING:**

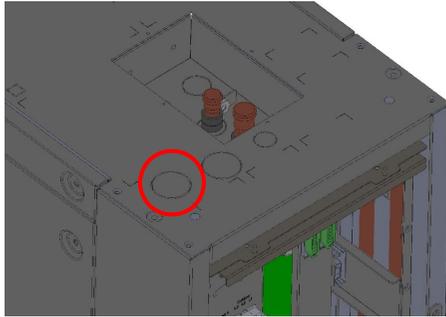
1. The input power must conform to the rated value on the equipment nameplate.
2. In locking the screws for wiring at the power terminal block, use the recommended installation torque (24kgf/cm<sup>2</sup>).
3. When installing the input power source, install the grounding line and confirm that it is effectively connected first.
4. Follow the electricity system and local laws and regulations in the relevant regions/countries, and select appropriate cable size(s).
5. Add a circuit breaker to the front of the equipment, in accordance with the maximum power consumption indicated on the nameplate of the equipment (recommended specifications: Branch Circuit Type Breaker, voltage tolerance level of 300VAC/60A/3ports). In case of an overload or short circuit, this helps protect other equipment of the loop.
6. If there is no wire passing through the communication wire duct at the top of the cabinet, cover the duct with the cover plate provided in the accessory package so as to avoid dust accumulation.

**Cable size:** For a standard unit (cooling-only), use 6AWG (13mm<sup>2</sup>) or larger cables.

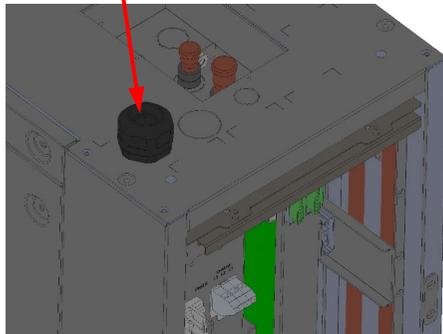
## **Connecting indoor unit power wire (single power supply)**

### **Step 1**

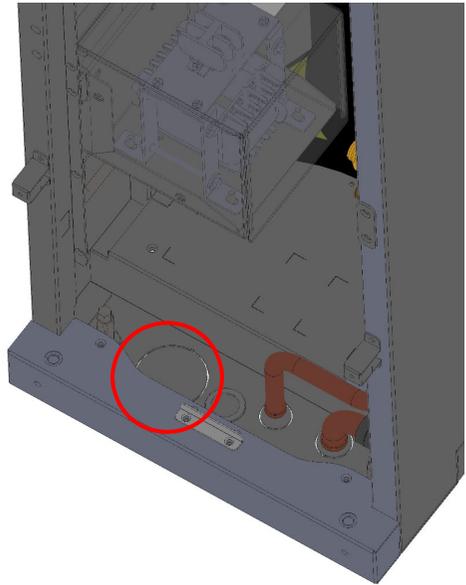
At the rear of the top/bottom of the indoor unit cabinet, use needle-nose pliers to remove the knocking-piece at the top/bottom of the cabinet; remove the cable gland from the accessory package and remove its nut. Rotate and tighten the cable gland on the knocking-piece, and pass the power wires through it.



Cable Gland



Top of the Cabinet



Bottom of the Cabinet

***(Figure 3-15: In-coming Power Cable Path (Single Power Supply))***

### **Step 2**

Pass the external wire through the cable connector to the indoor unit's Feed A terminal L1/L2/L3 and fasten it. (Beware of the fact that, when using a single power supply, the power cable must be connected to the main circuit power source Feed A.)

### **Step 3**

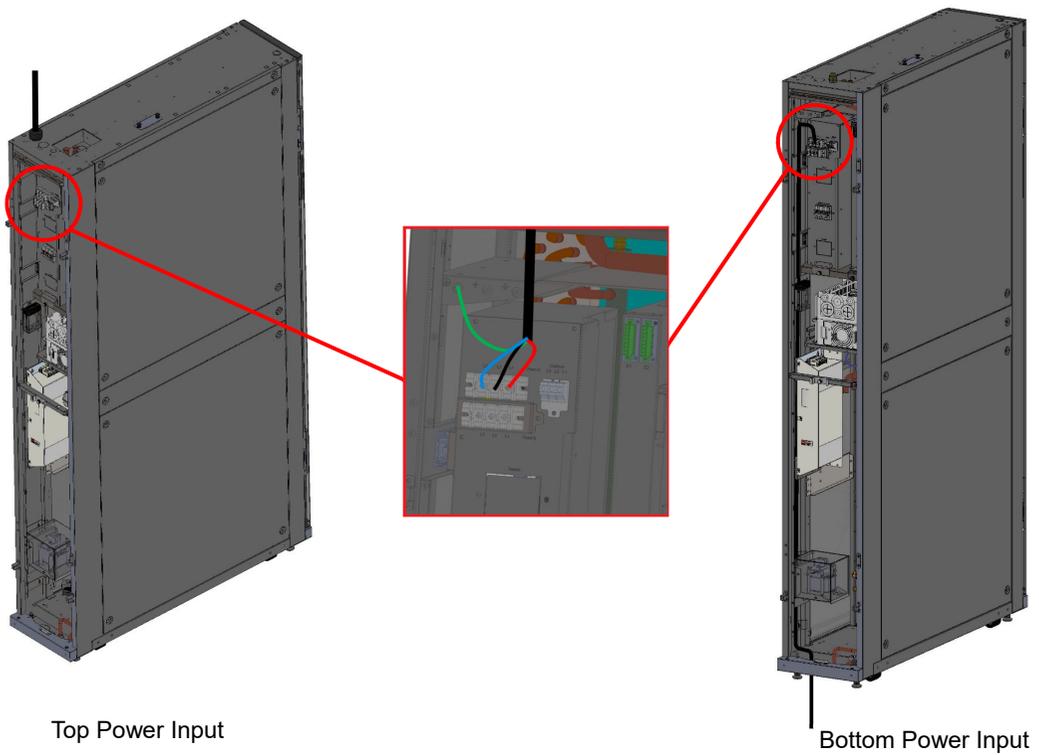
Connect the PE line (Protective Earthling line) to the cabinet ground stud, as shown. It should be securely locked to prevent injuries from abnormal current.

**Step 4**

For the routing wire, use the cable tie to fasten it onto the cabinet's supporting column.

**Step 5**

Fasten the cable gland.

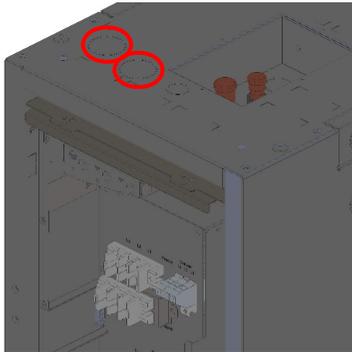


***(Figure 3-16: Signal Power Supply Wiring)***

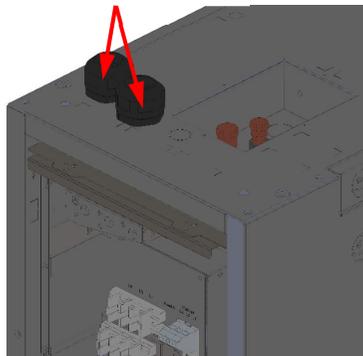
## Connecting the indoor unit's power cable (dual power supply)

### Step 1

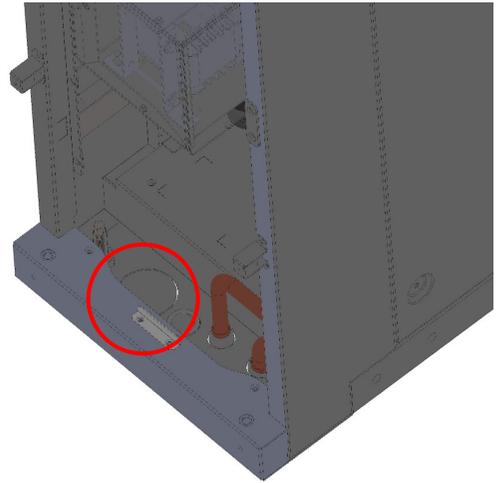
At the rear of the top/bottom of the indoor unit cabinet, use needle-nose pliers to remove the knocking-piece at the top/bottom of the cabinet; remove the cable gland from the accessory package and remove its nut. Rotate and tighten the cable gland on the knocking-piece, and pass the power wires through it.



Cable Gland



Top of the Cabinet



Bottom of the Cabinet

*(Figure 3-17: In-coming Power Cable Path (Dual Power Supply))*

### Step 2

Pass the external wire through the cable connector to the indoor unit's Feed A and Feed B terminal L1/L2/L3 and fasten it. (Beware of the fact that, when using a dual power supply, you must first connect the main power source Feed A and then the backup power source Feed B.)

### Step 3

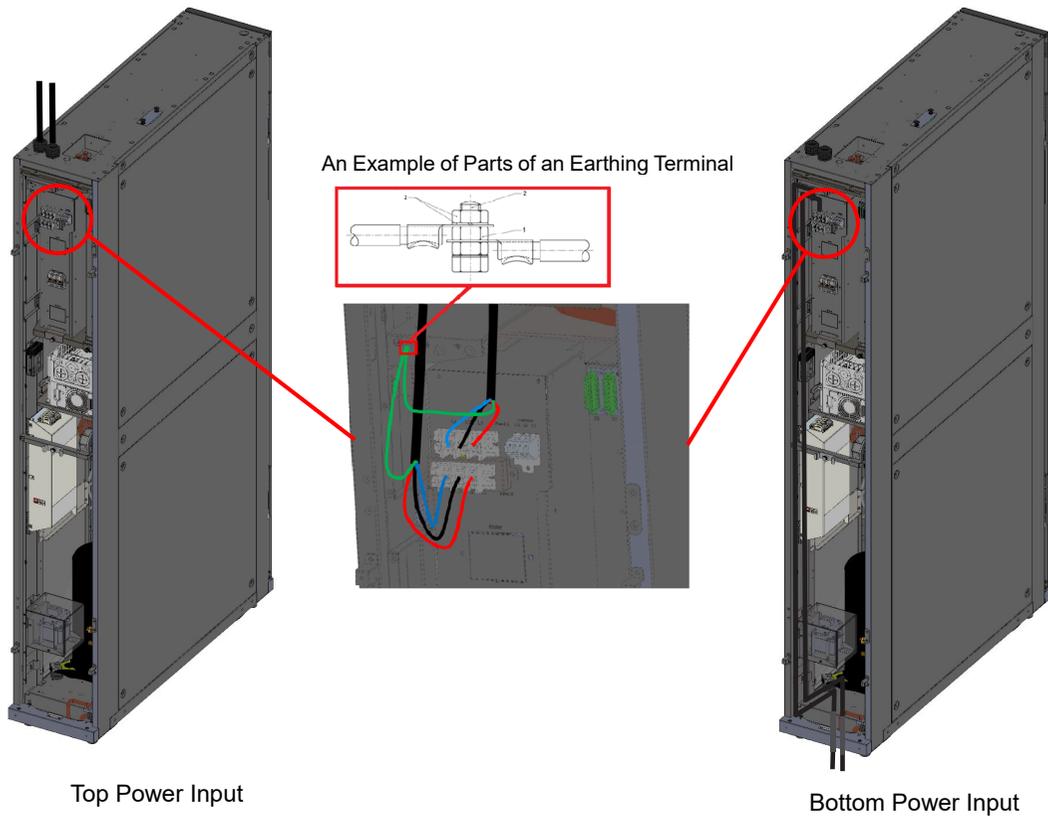
Connect the PE line to the cabinet ground stud.

**Step 4**

For the routing wire, use the cable tie to fasten it onto the cabinet's supporting column.

**Step 5**

Fasten the cable gland.



***(Figure 3-18: Dual Power Supply Wiring)***

**Connecting the outdoor unit's power wire (Use accessory pack item: 4 cable glands)**

**Cable size:**

1. When using indoor unit power supply: Use cabling 16 AWG (1.3 mm<sup>2</sup>) or greater for power wires and control lines.
2. When using independent power supply: Use cabling 14 AWG (2 mm<sup>2</sup>) or greater for power wires and control lines.

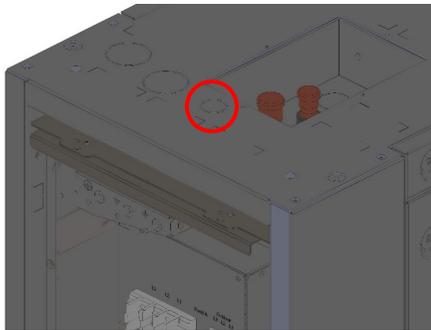


**NOTE:**

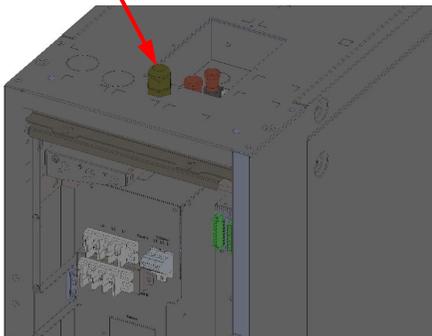
When installing the cabling lock to the Manual Motor Starter (MMS), pay attention to the torque; the torque range is 0.8 to 1.2Nm.

**Step 1**

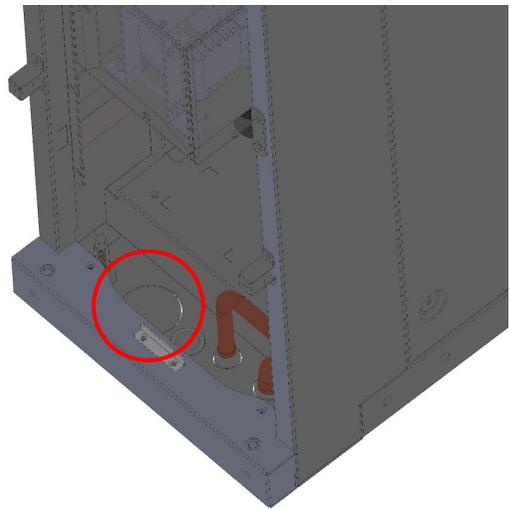
At the rear of the top/bottom of the indoor unit cabinet, use needle-nose pliers to remove the knocking-piece at the top/bottom of the cabinet; remove the cable gland from the accessory package and remove its nut. Rotate and tighten the cable gland on the knocking-piece, and pass the power wires through it.



Cable Gland



Top of the Cabinet



Bottom of the Cabinet

*(Figure 3-19: Power Wire Outlet)*

### **Step 2**

Pass the external wire and the signal cable through the cable connector to the indoor unit's outdoor terminal L1/L2/L3 and fasten it.

### **Step 3**

Connect the PE line to the cabinet ground stud.

### **Step 4**

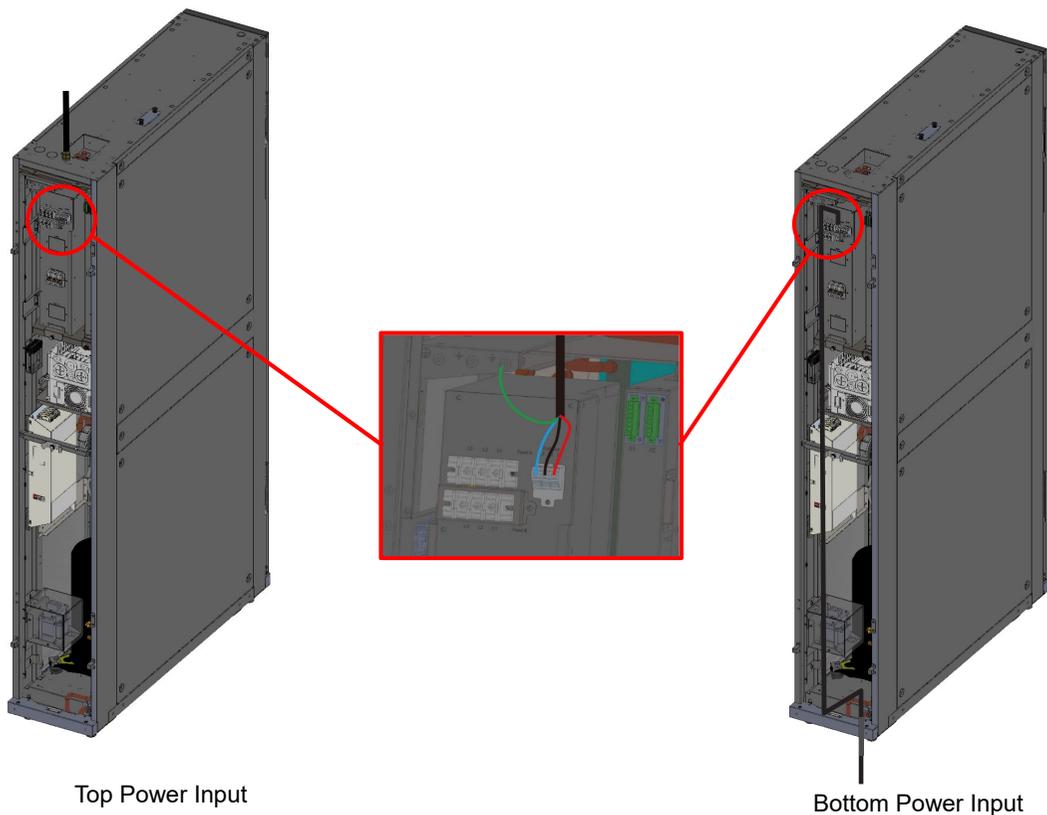
For the routing wire, use the cable tie to fasten it onto the cabinet's supporting column.

### **Step 5**

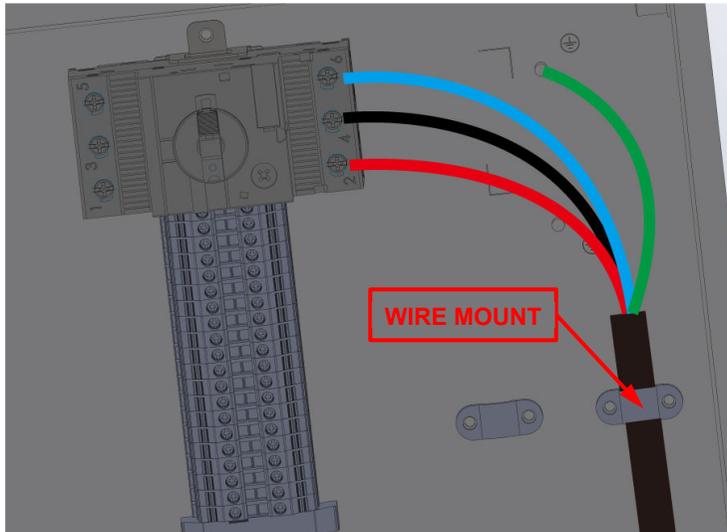
To install the outdoor power wire, one must use the wire mount fix cable as shown in **Figure 3-21**.

### **Step 6**

Fasten the cable gland.



**(Figure 3-20: Connecting the Outdoor Unit's Power Wire)**



(Figure 3-21: Outdoor Power Cable)

### 3.3.2 Connecting the Signal Cables

#### Step 1

At the rear of the indoor unit's cabinet top, lift the signal cover; or at the bottom rear, use needle-nose pliers to remove the knocking-piece. Remove the cable gland from the accessory pack and remove its nut. Rotate and tighten the cable gland on the knocking-piece, and pass the signal cable through the signal cable hole at the top or bottom of the cabinet.

#### Step 2

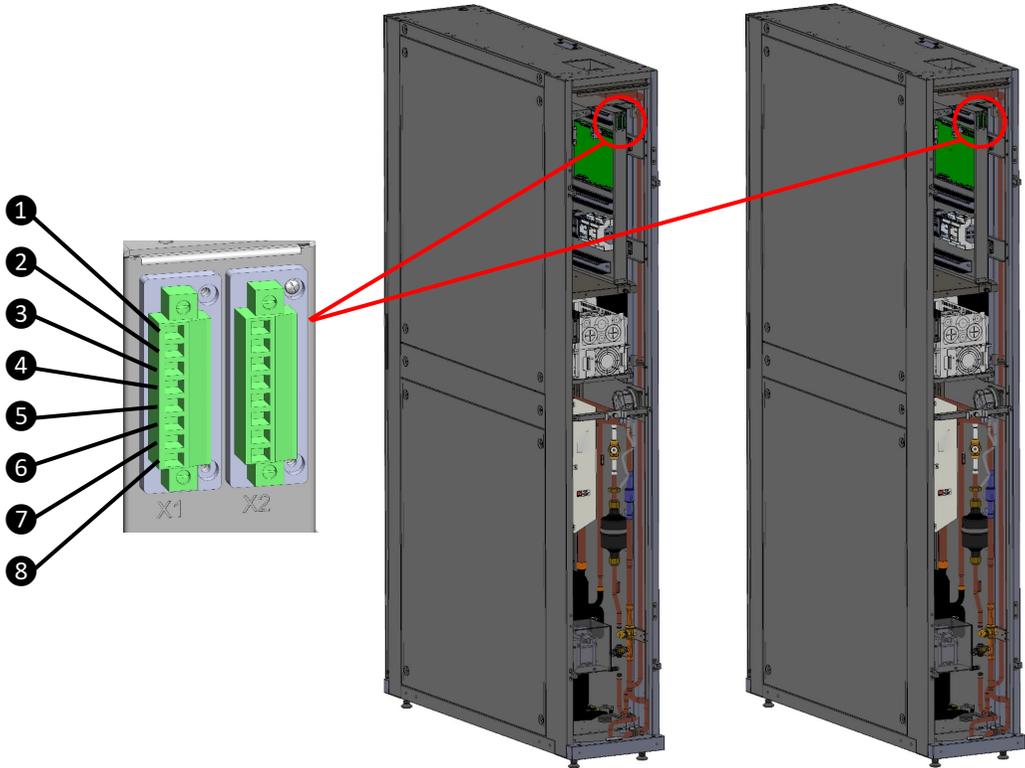
Pass the signal cable through the cover or the cable gland, and connect the cable to the indoor unit's X1/X2 ports. (Remove the head of the terminal to be connected. Once the wire is connected to the head, plug both together to the terminal.)

#### Step 3

For the routing cable, use the cable tie to fasten it onto the cabinet's supporting column.

#### Step 4

Use a lower access approach to fasten the cable gland.



(Figure 3-22: Connecting the Signal Cables)

Table 3-1: X1 & 2 Contact Description

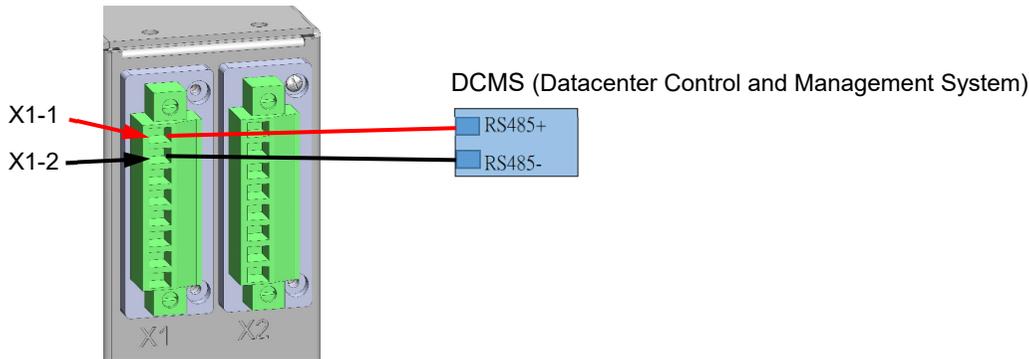
Name	No.	Function	Description
X1	1	Communication with external unit	RS485+
	2		RS485-
	3	Group communication	CAN+
	4		CAN-
	5	Communication with outdoor unit	RS485+
	6		RS485-
	7	Total alarm	Output dry contact+
	8		Output dry contact-

Name	No.	Function	Description
X2	①	Sensor power	12VDC
	②		GND
	③	Fire, smoke warning	Input dry contact +
	④		Input dry contact -
	⑤	Remote startup/shutdown	Input dry contact +
	⑥		Input dry contact -
	⑦	N/A	N/A
	⑧	N/A	N/A

**Table 3-2: X1 & 2 Function Description**

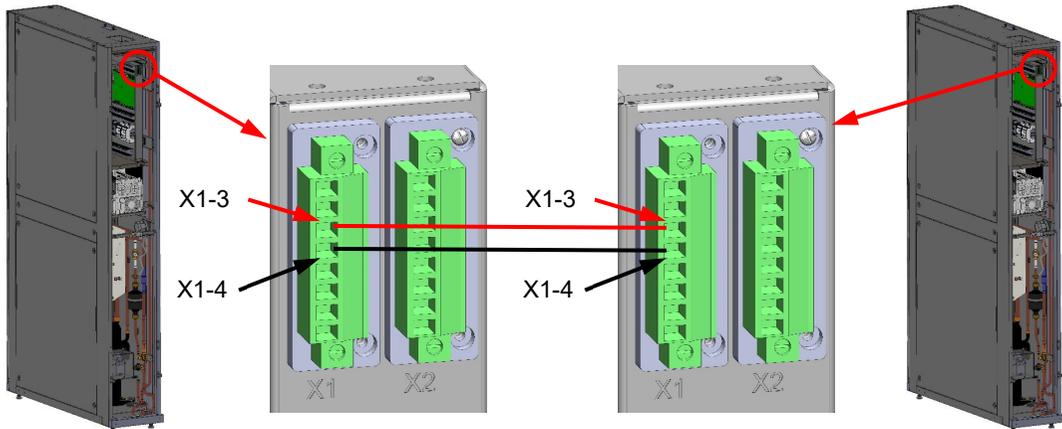
Item	Description
<b>RS485</b>	The RS485 port allows you to use the Modbus protocol to connect a workstation, the outdoor unit, or power distribution device for remote use.
<b>CAN-Link</b>	For group control
<b>Output dry contacts</b>	Can connect dry contact output devices and trigger the contacts at specific events. <b>X1 Terminal Pin 7-8 (NO):</b> Normally open. Connect the dry contact device to this port; the device will be triggered when an alarm event occurs (closing the circuit).
<b>Input dry contacts</b>	<b>X2 Terminal Pin 3-4 (NO):</b> Normally open. For connecting the fire alarm or smoke detector. When an event occurs, the dry contact device is triggered to form a short circuit. The system will record it in the Historical Event log and shut down the cooling unit. <b>X2 Terminal Pin 5-6 (NO):</b> Normally open. For connecting remote switch device. When an event occurs, the dry contact device is triggered to form a short circuit. The system will record it in the Historical Event log and will stop the machine.

Communication with external unit wiring: (X1 Terminal Pin 1 & 2)



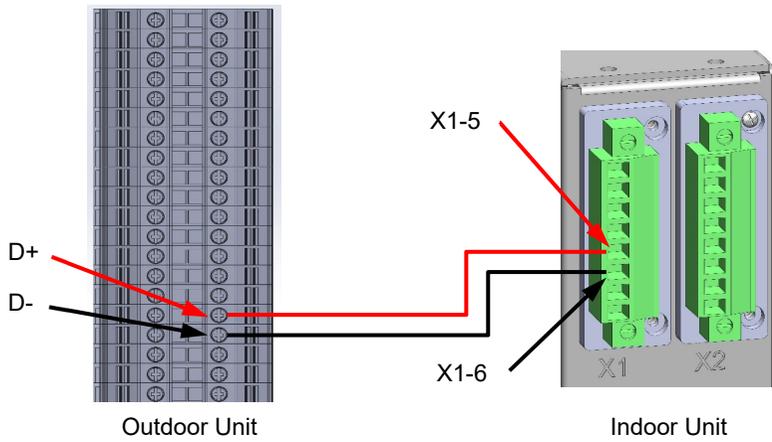
(Figure 3-23: Connect RS485)

Group communication wiring: (X1 Terminal Pin 3 & 4)



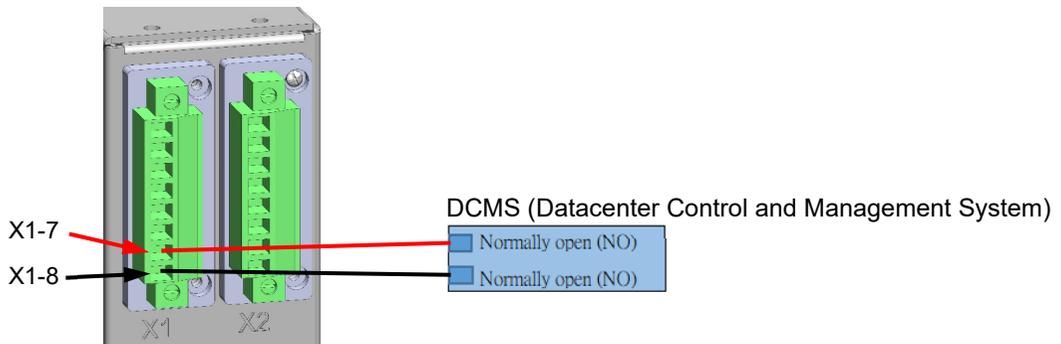
(Figure 3-24: Connect the Group Communication Line)

Communication with outdoor unit: (X1 Terminal Pin 5 & 6)



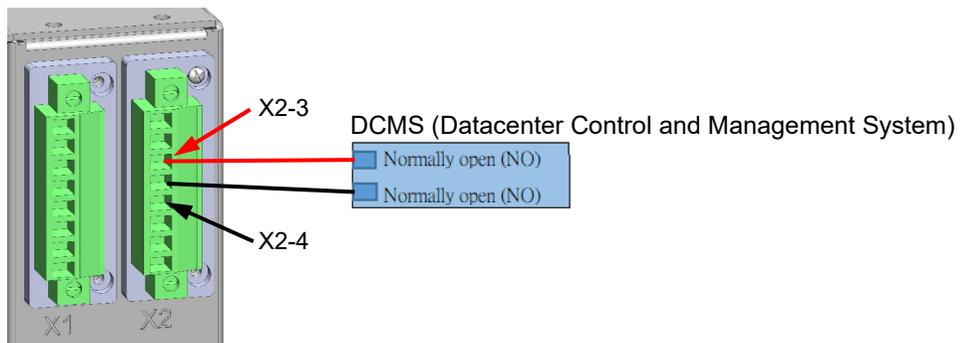
**(Figure 3-25: Communication Connection with the Outdoor Unit)**

Total alarm wiring: (X1 Terminal Pin 7 & 8)



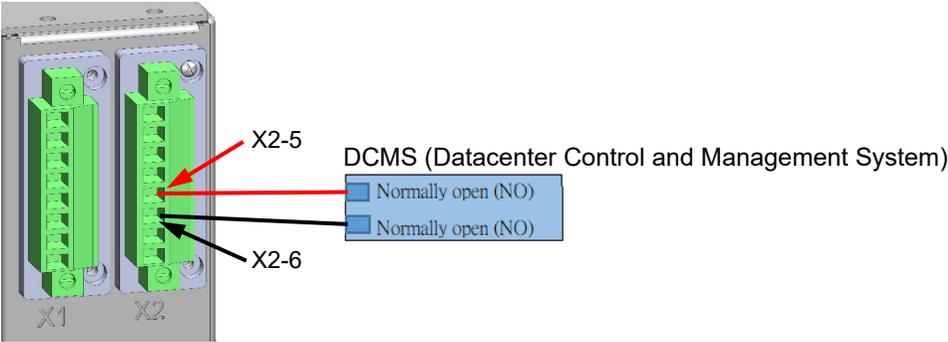
**(Figure 3-26: Connect the Alarm Output)**

Fire, smoke warning wiring: (X2 Terminal Pin 3 & 4)



**(Figure 3-27: Connect the Fire and Smoke Alarm Input)**

Remote startup/shutdown wiring: (X2 Terminal Pin 5 & 6)



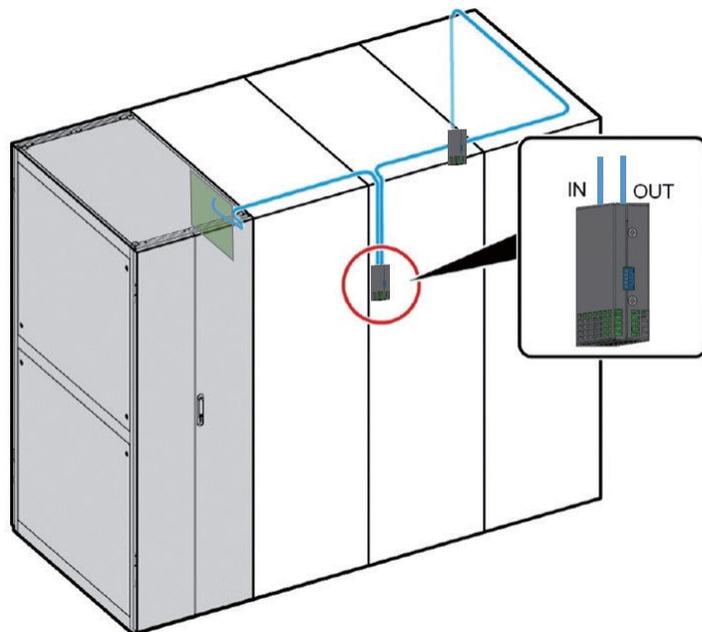
(Figure 3-28: Connect the Remote Switch Function)

### 3.3.3 Connecting the External Temperature and Humidity Sensor

- These sensors are used to detect the temperature and humidity of the hot/cold air corridors. Installation location is based on on-site conditions. It is suggested that sensors be placed in the hot air corridor where the heat source is accumulated, or in a cold air corridor where more cold air is needed.
- Placement at another air-conditioning outlet is prohibited. The location cannot be too far away from the air conditioning unit. This is to prevent inaccurate test results.

#### **Step 1**

Connect the external temperature and humidity sensor and the remote temperature and humidity sensor in series, as shown in **Figure 3-29**.



(Figure 3-29: External Wiring)

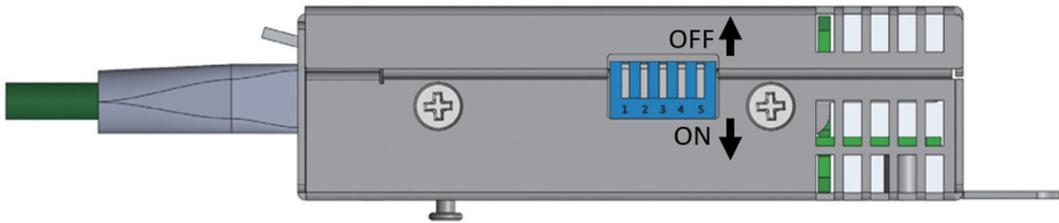


#### **NOTE:**

- When the remote temperature and humidity sensor port on the main control board is connected to the external sensor, the cable must be connected to the "IN" port of the sensor, and the "OUT" port of the sensor to the "IN" port of the next sensor, sequentially in series.
- Each air conditioner can support up to 10 external temperature and humidity sensors.

**Step 2**

Set up the dip switch for the temperature and humidity sensor. The sensor appears as in **Figure 3-30**. For the specific setup method, refer to **Table 3-3** below.



(Figure 3-30: Dip Switch Appearance)

**Table 3-3: Instructions for Operating the Temperature and Humidity Sensor Dip Switch**

Detection Location	Addressing	Dip Switch Serial Number				
		1	2	3	4	5
Air return	0	OFF	OFF	OFF	OFF	OFF
Air supply	1	ON	OFF	OFF	OFF	ON
Remote side	0	OFF	OFF	OFF	OFF	OFF
	1	ON	OFF	OFF	OFF	OFF
	2	OFF	ON	OFF	OFF	OFF
	3	ON	ON	OFF	OFF	OFF
	4	OFF	OFF	ON	OFF	OFF
	5	ON	OFF	ON	OFF	OFF
	6	OFF	ON	ON	OFF	OFF
	7	ON	ON	ON	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	



**NOTE:**

- The default setting for the temperature and humidity sensor is 0.
- "5" on the dip switch is the RS485 terminal resistance.
- Addressing 0-4 is Cold Aisle1-5; 5-9 is Hot Aisle1-5.

### 3.4 System Management

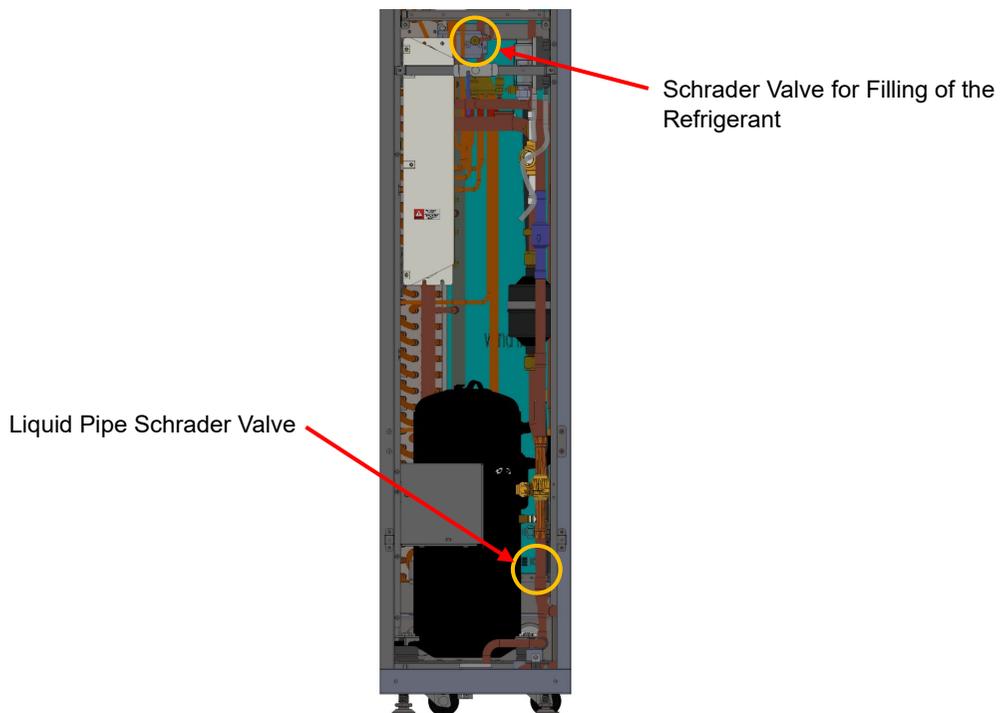
For detailed information of system management, refer to the Installation Manual. The Manual contents are for reference only.

#### 3.4.1 Charging Refrigeration Oil

While the compressor is operating, the lubricant inside it will more or less be brought outside the compressor by the high pressure and high-speed refrigerant gas. Therefore, it is necessary to add refrigeration oil to the refrigerant system. Different piping lengths will require adding different amounts of refrigeration oil. If the length of the piping is more than 50m (164 ft), one must add refrigerant oil (FV50S) from the schrader valve in front of the oil separator inlet. Charge 7c.c. refrigerant oil per lb of charged refrigerant.

#### 3.4.2 Pressure Leak Test

After the indoor and outdoor units are connected, introduce nitrogen gas (3.0 MPa) through the shutoff valve behind the electronic expansion valve and the liquid pipe schrader valve. Pressure must be retained for 24 hours without leakage.



(Figure 3-31: Schrader Valve Location)

### 3.4.3 Vacuum Pumping

After doing a pressure leak test to confirm that there is no leakage, use the schrader valve behind the electronic expansion valve and that of the liquid pipe to perform the vacuum pumping process.

During the vacuum pumping process, the electronic vacuum gauge must be used to detect the current vacuum value.

Stop vacuum pumping once the vacuum status reaches 200 Pa. The duration of the vacuum pumping takes no less than 2 hours.

If the vacuum status is higher than 200 Pa, on the other hand, inject dry nitrogen gas until the pressure normalizes and vacuum pumping continues. Repeat these steps till the vacuum status is below 200 Pa.

After sitting for four hours, if the vacuum status is below 266 Pa, then the vacuum pumping process is defined as complete.

**Table 3-4: Vacuum and Charging Refrigerant Tools**

Item	Tool
1	Manifold with gauges (R410A)
2	Vacuum gauges
3	Vacuum pump
4	Refrigerant R410A



**NOTE:**

The vacuuming and filling of refrigerant must be carried out by Delta authorized personnel.

## Chapter 4 : Initial Startup

### 4.1 Pre-start Inspection



**WARNING:**

Only qualified service personnel can carry out the installation procedures in this chapter.



**WARNING:**

The high voltage and refrigerant in the equipment can cause personal injuries! Make sure the input power has been disconnected before the following actions.



**WARNING:**

A startup without correctly completing **4.1 Pre-start Inspection** may lead to serious personal injuries or equipment damage!

Complete all the following inspections before implementing the initial startup procedures.

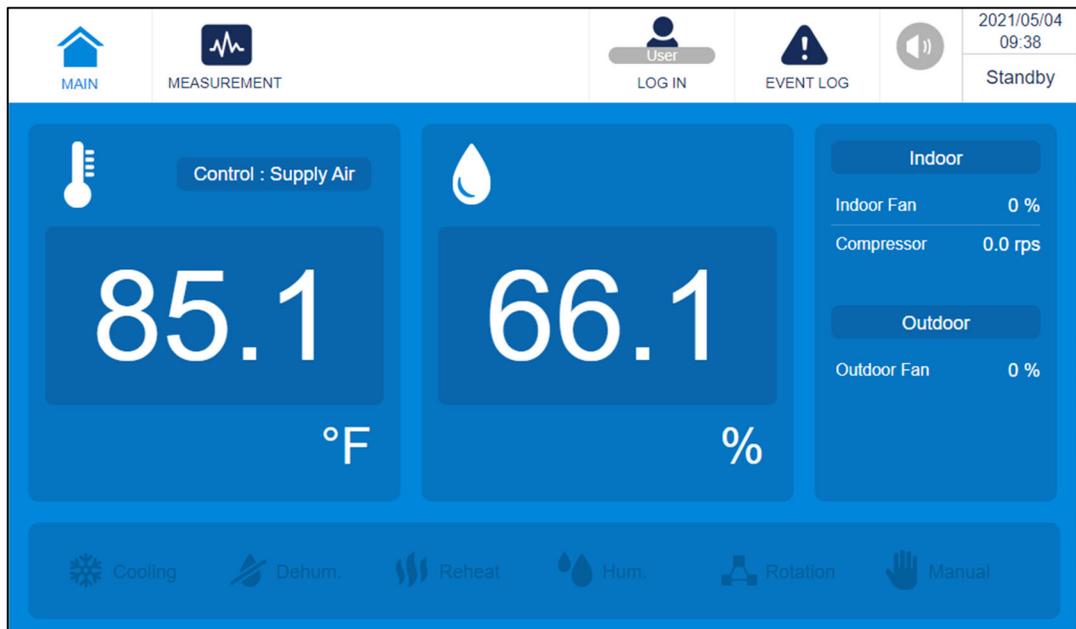
#### Inspection List

General items	
<input type="checkbox"/>	The unit has no external damage.
<input type="checkbox"/>	The unit is stably fixed and close to the adjacent cabinet.
<input type="checkbox"/>	All the installation procedures have been performed in accordance with the instructions in <b>Chapter 3: Installation</b> .
<input type="checkbox"/>	The pipes inside and outside of the cabinet have been correctly connected, and the thermal insulating layer of the pipes is free of damage and leakage.
<input type="checkbox"/>	The front and back doors have been reinstalled and the flat cable of the control panel has been connected.
Environment	
<input type="checkbox"/>	The inner environment is an enclosed space and is isolated from interference from outside temperature and humidity.
<input type="checkbox"/>	The clearance zone surrounding the cabinet conforms to the regulations (please refer to <b>3.2 Clearance Zone</b> ).

Electronic connection	
<input type="checkbox"/>	The rated value of the input power conforms to that marked on the nameplate.
<input type="checkbox"/>	The equipment has been properly grounded.
<input type="checkbox"/>	All electronic connections are tight and stable.
<input type="checkbox"/>	The remote temperature (humidity) sensors have been correctly connected and located properly.
Mechanical connection	
<input type="checkbox"/>	The discharge pipe and the liquid pipe are free of rupture or damage.
<input type="checkbox"/>	The condensed water drain pipe has been correctly connected and insulated, and led to the draining site.
<input type="checkbox"/>	The schrader valve and the shutoff valve are free of rupture or damage.
<input type="checkbox"/>	The shutoff valves connecting the indoor and the outdoor units are all open.

## 4.2 Power On

Power on the cooling unit and it will automatically enter standby mode. For the sake of safety, the fans will not automatically rotate. After the system is connected to the power feed, screens to be read appear on the touch screen monitor; the status page automatically displays.



(Figure 4-1: Main Page)

For how to interpret the values shown on the main page and how to operate the main page, refer to **Chapter 5. Operation**.

### 4.3 Charging Refrigerant

Before powering on, the system needs to be filled with refrigerant since if the compressor runs in vacuum, it will be damaged. The process is as follows:

1. As shown in **Figure 3-29**, both the vacuuming and refrigerant filling processes use a refrigerant gauge to connect these two points.
2. Once the vacuuming process is completed, remove the vacuum pump and connect the R410A refrigerant filling pipe when the compressor is not operating. Fill the liquid pipe schrader valve with refrigerant till the refrigerant cannot flow in (refrigerant in the system should still be insufficient at this point).
3. Turn off the circuit between the high-pressure side and the refrigerant tank, and turn on the compressor to fill the system with sufficient refrigerant through the schrader valve behind the electronic expansion valve.
4. Press **POWER ON** on the start page of the **TOUCH PANEL**. Once the compressor is running, turn on the low-pressure side circuit to allow refrigerant to flow in, and turn off the circuit when the compressor stops. Because there is no heat load during the initial operation, the compressor may need to start and stop several times to fill the refrigerant. The lack of bubble formation on the sight glass means that the amount of system refrigerant is sufficient.
5. The amount of refrigerant needed to fill the entire system will vary due to different pipe lengths, as explained below.

Total charge: Basic charge + Additional charge

Basic charge: 26.5lb

Additional charge: If the length of the piping more than 33 ft, add 0.13 lb for each foot.

Example: Length of the piping 82 ft, total charge is 32.87 lb.

$$26.5 \text{ lb} + (82 \text{ ft} - 33 \text{ ft}) \times 0.13 \text{ lb/ft} = 32.87 \text{ lb}$$

**Table 4-1: Vacuum and Charging Tools**

Item	Tool
1	Manifold with gauges (R410A)
2	Vacuum gauges
3	Vacuum pump
4	Refrigerant R410A



**NOTE:**

The vacuuming and filling of refrigerant must be carried out by personnel authorized by Delta.

## Chapter 5 : Operation

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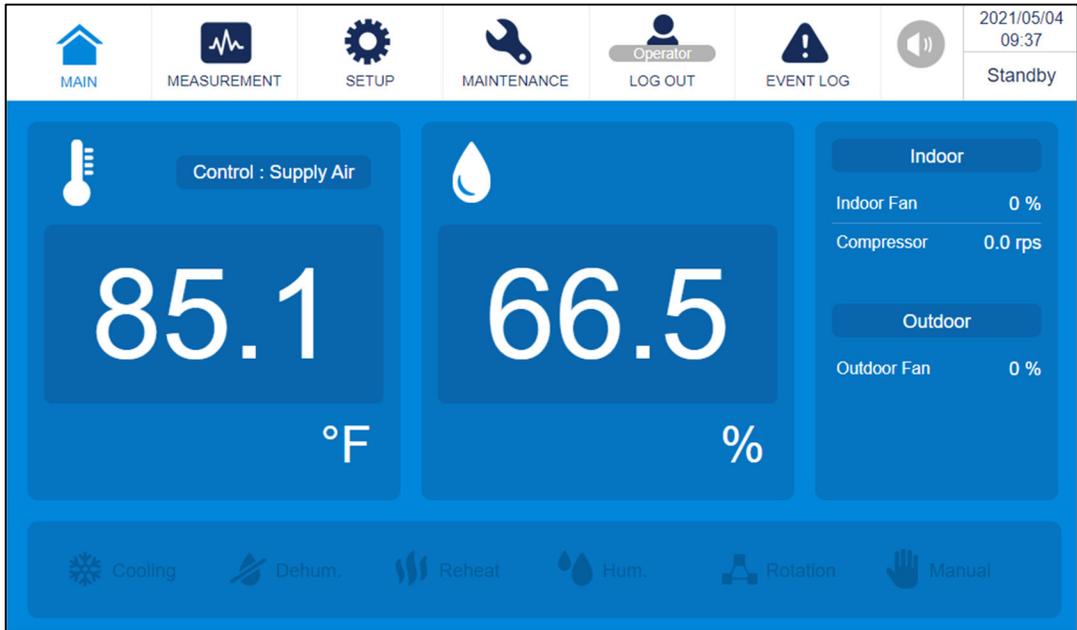
### 5.1 Main Page

Once the system is connected to the power feed, the screens to be read appear one after another on the touch screen monitor.

**Loading screen:**



Once the screens to be read appear, the main page will automatically come up.



Operation may only begin after login.

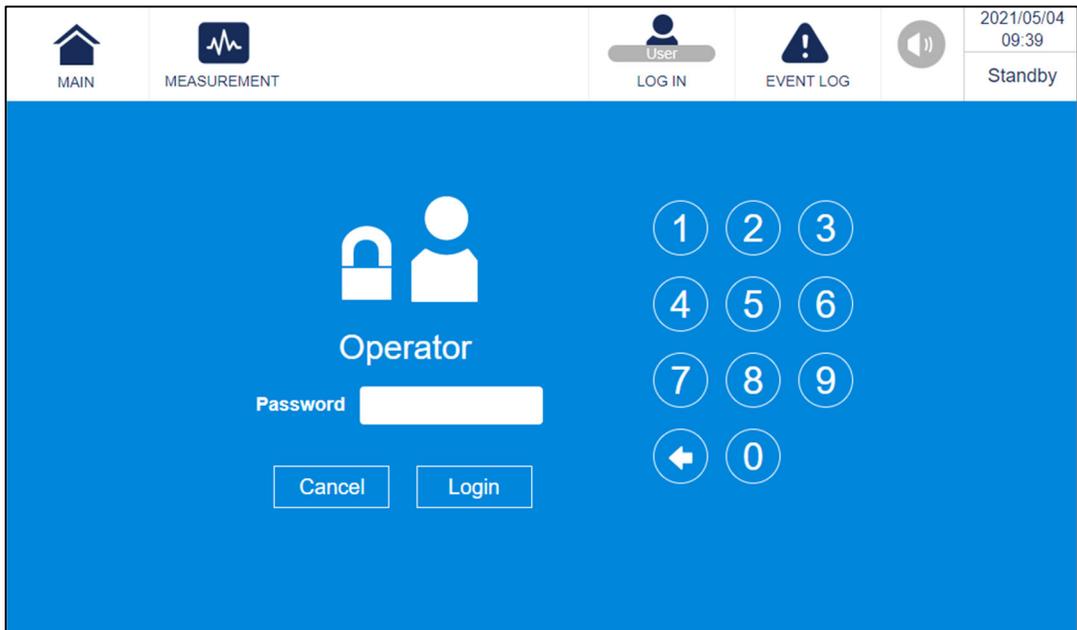
## 5.2 Account Authority and Login

Click on the “Log In” icon on the upper right corner of the status page to access the login page.

There are three operator types:

Operator Type	Functions
User	Measurement (partial functions)
Operator	Measurement, Setup (partial functions); PW: 2222
Administrator	Measurement, Setup, Maintenance

Select your operator type and enter the password, then click “Login.” Then, the status page will show up again.



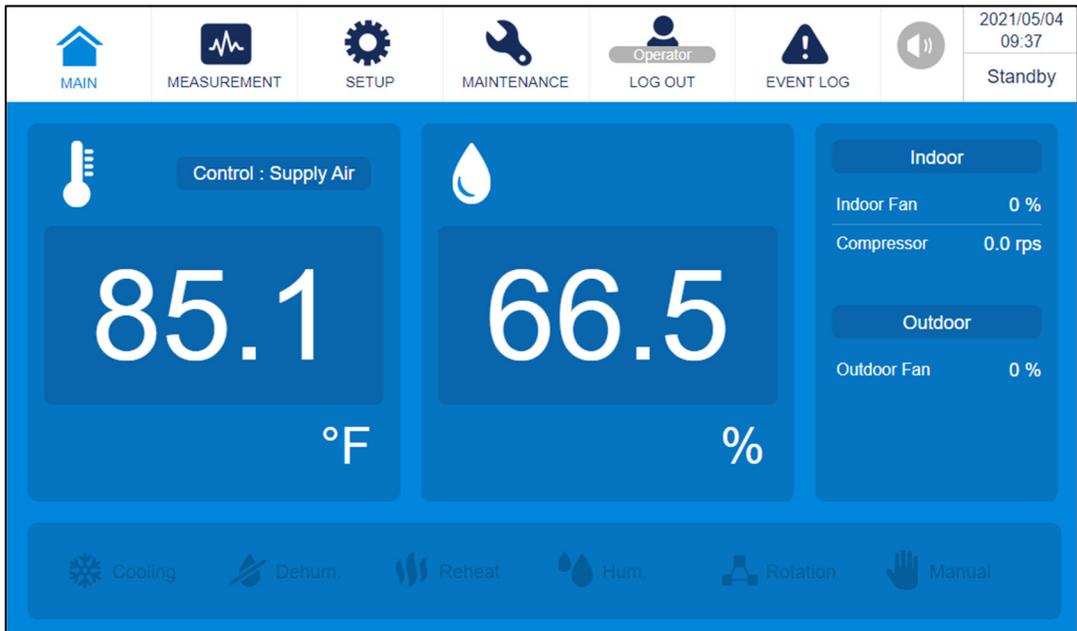
If no operation is performed for a long time after login, the login status will become invalid after the system becomes idle. If you want to re-enter the above menu, you must re-enter the password.



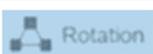
**NOTE:**

To avoid unauthorized change of and access to important settings, do not disclose the administrator password. To get the administrator's password, contact Delta's service personnel.

### 5.3 How to Operate the Main Page



No	Item	Description
	Main	Click here for start-up/shutdown operations and for displaying the Main Page.
	Measurement	Click here to inquire about the system status. Sub-menu: System Status, Data History
	Setup and Control	Click here for Control Type, Controller Setting, Alarm Setting, Exceed Alarm Setting, Group Control Setting, and other functions. Sub-menu: Set Point Setting, Control Type, Controller Setting, Alarm Setting, Exceed Alarm Setting, Group Control Setting, General Setting, IP Setting
	Maintenance	Click here for Warning, Historical Event, Run Hours, Version, Manual Mode, Advanced Settings and other functions. Sub-menu: Warning, Historical Event, Run Hours, Version, Manual Mode, Advanced Setting, Calibration, Deploy, SNMP Setting, Clear Log.
	Operator Login	Click here for operator login.

No	Item	Description
 EVENT LOG	Current Warnings	Shows the number of warnings that are currently active. If there are no warnings, on the other hand, this is the Historical Event Log.
	Buzzer	Shows whether the buzzer is currently operating or if it is muted. Click here to turn on or to mute the buzzer.
	Time & Status	Shows the current date/time and unit status (standby/on/shutdown)
	Air Temperature and Humidity	Shows the current air temperature and humidity (select depending on control status).
	Component Operational Status	Shows the operational status of the indoor and outdoor units' components. The indoor fan operation values are average values. When running in dehumidification mode, the actual individual fan speed will be different.
	Cooling Icon	System provides the cooling mode.
	Dehum Icon	System provides the dehumidifying mode.
	Reheat Icon	System provides the heating mode.
	Hum Icon	System provides the humidifying function.
	Rotation Icon	System provides the group function.

## 5.4 Startup

### 5.4.1 Operating Settings

**Path: Main Page → Setup → Set Point Setting**

Follow this path to set up: Type of temperature and humidity control (Supply Air/Return Air/Cold Aisle/Hot Aisle); temperature control area; humidity control area uses reasonable settings.

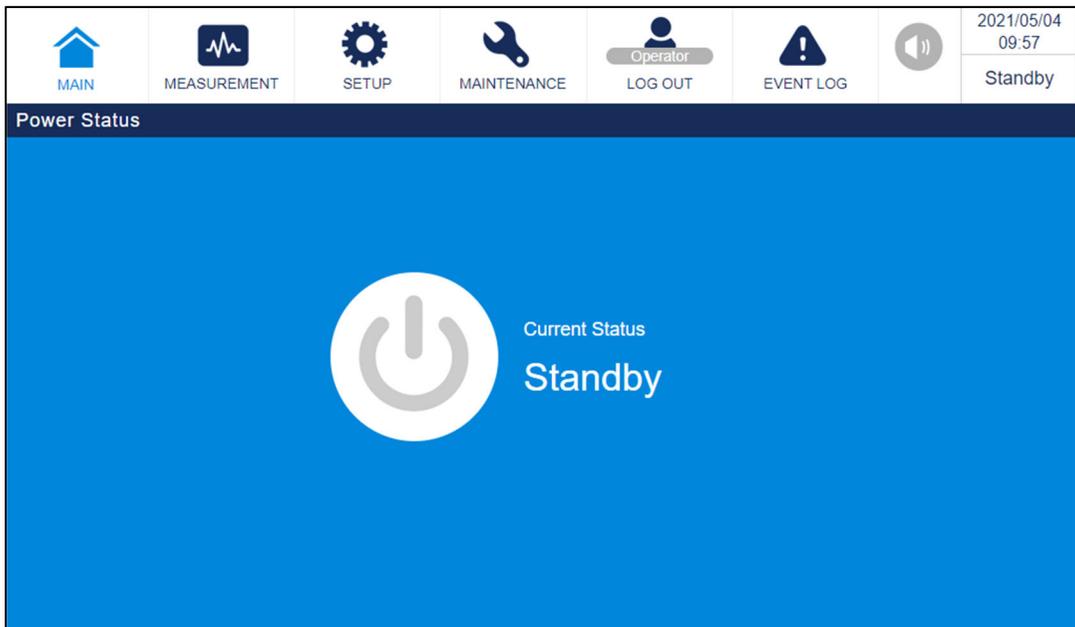
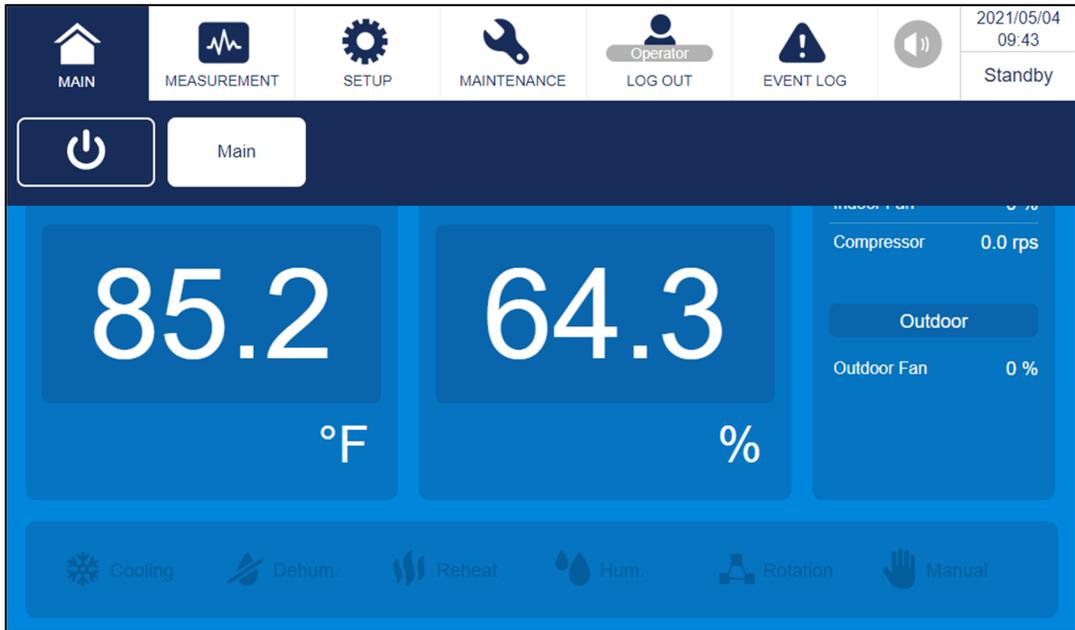
The screenshot shows the main dashboard of the HVAC control system. The top navigation bar includes icons for MAIN, MEASUREMENT, SETUP (highlighted), MAINTENANCE, Operator LOG OUT, EVENT LOG, and a speaker icon. The date and time are 2021/05/04 09:40, and the system is in Standby mode. Below the navigation bar are buttons for Set Point Setting, Controller Setting, Group Control Setting, Alarm Setting, Exceed Alarm Setting, General Setting, and IP Setting. The main display area features two large digital readouts: 85.1 °F and 65.0 %. To the right, there are smaller readouts for Compressor (0.0 rps) and Outdoor Fan (0 %). At the bottom, there are icons for Cooling, Dehum., Reheat, Hum., Rotation, and Manual.

The screenshot shows the 'Set Point Setting' configuration screen. The top navigation bar is similar to the main dashboard, but the 'SETUP' icon is highlighted. The date and time are 2021/06/08 10:26, and the system is 'On'. The screen title is 'Set Point Setting'. The configuration options are as follows:

Control Type	Supply Air
Temperature Setpoint	75.0
Humidity Setpoint	50.0
Temperature Control Band ( °F )	1.8
Humidity Control Band ( % )	10.0

## 5.4.2 Startup

Path: Main Page → Main → Power Icon

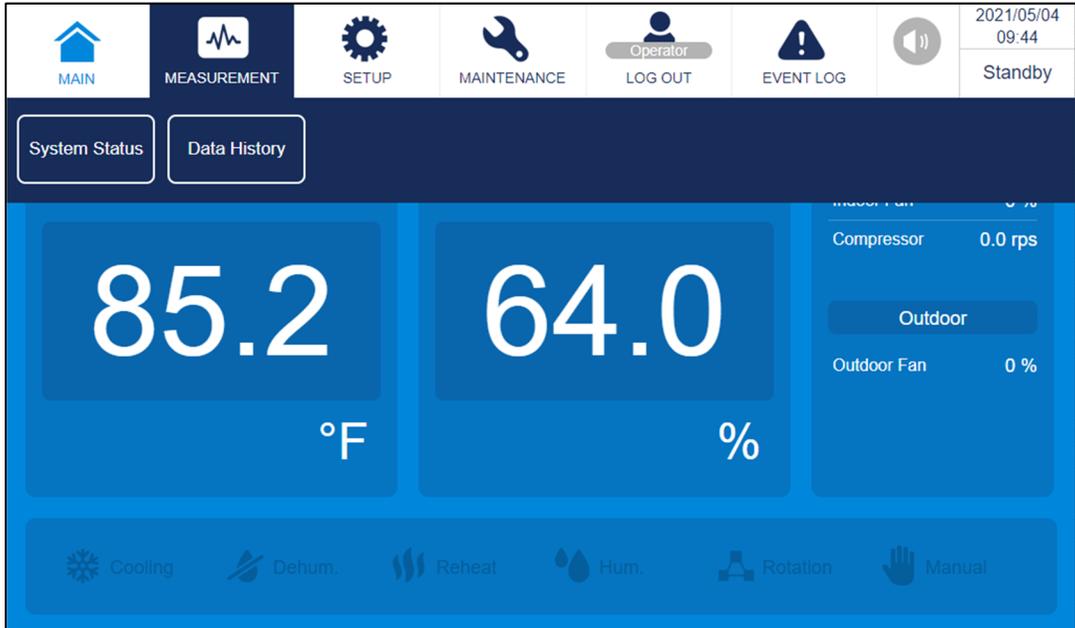


While in standby, once it is connected to the power feed for the first time, the compressor heater crank case will begin to warm up (for 12 hours). Do not start up or run the machine before the warm-up is finished.

## 5.5 Inquiry of System Status

### 5.5.1 System Status

Path: Main Page → Measurement → System Status



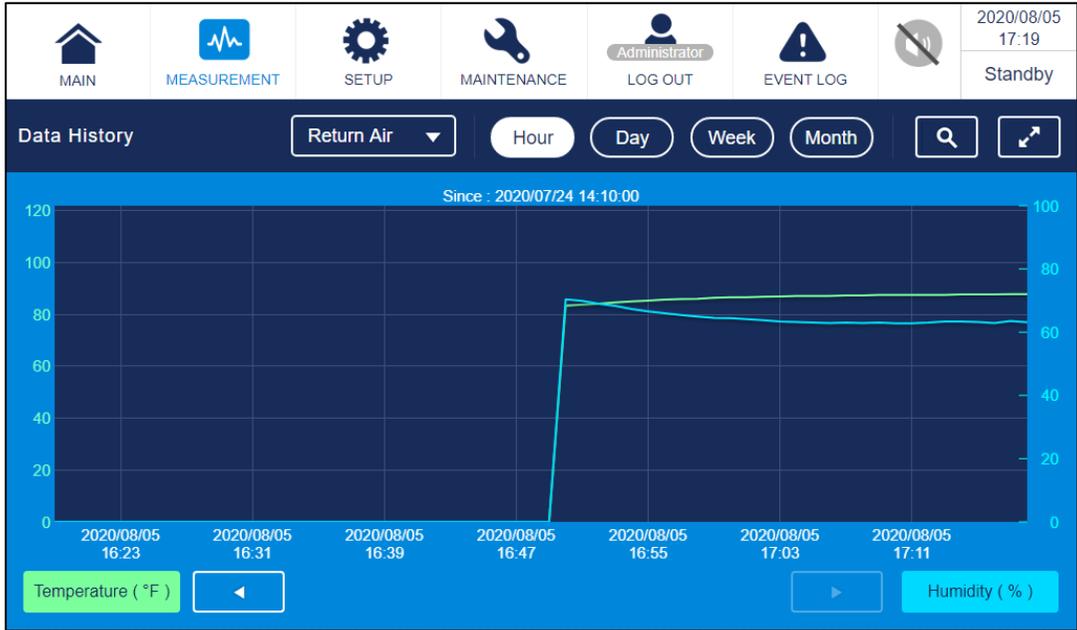
The screenshot shows the 'System Status' table. The table is organized into three columns: Air side, Refrigerant Side, and System. Each column has a header with a page indicator (1/2, 1/1, 1/2) and a scroll arrow. The data is as follows:

Air side	Refrigerant Side	System
Return Air Temp1 ( °F )	Discharge Temp ( °F )	Compressor ( rps )
85.2	71.6	0
Return Air Humi ( % )	Liquid Temp ( °F )	Outdoor Fan ( % )
67.9	77.7	0
Return Air Temp2 ( °F )	Suction Temp ( °F )	EEV OD ( % )
84.3	78.8	0
Supply Air Temp1 ( °F )	Discharge Pressure ( kPa )	Indoor Fan ( % )
85.2	1672	0
Supply Air Temp2 ( °F )	Suction Pressure ( kPa )	Reheater ( % )
85.8	1066	0
Supply Air Temp3 ( °F )	Superheat ( K )	Humidifier ( % )
86.5	13.7	0
Supply Air Humi ( % )		Liquid pipe solenoid valve
63.9		0
Cold Aisle 1 Temp ( °F )		Input R Voltage ( V )
83.1		0

Inquiry items available depend on logged-in operator type.

## 5.5.2 Data History

Path: Main Page → Measurement → Data History



### 5.5.3 Warning

Path: Main Page → Maintenance → Warning

No.	Time	Level	Log
0001	2021/05/04 09:48:32	Severity	Suction Temp Abnormal

## 5.5.4 Historical Event

Path: Main Page → Maintenance → Historical Event

The screenshot shows the Maintenance page with a top navigation bar containing icons for MAIN, MEASUREMENT, SETUP, MAINTENANCE (selected), LOG OUT, EVENT LOG, and a speaker icon. The date and time are 2021/05/04 09:50, and the system status is Standby. Below the navigation bar are buttons for Warning, Historical Event (selected), Run Hours, and Version & S/N. The main area features two large gauges: 85.4 °F and 62.9 %. To the right, there are smaller gauges for Compressor (0.0 rps) and Outdoor Fan (0 %). At the bottom, there are icons for Cooling, Dehum., Reheat, Hum., Rotation, and Manual.

The screenshot shows the Historical Event page with a top navigation bar similar to the previous page. The date and time are 2021/05/04 09:55, and the system status is Standby. The page title is "Historical Event". Below the title is a table with columns for No., Time, Level, and Log. The table contains 8 rows of event data. On the right side, there are navigation arrows and a page number "18".

No.	Time	Level	Log
0137	2021/04/22 11:16:34	Severity	Return Air Sensor T/RH Abnormal
0138	2021/04/22 11:16:34	Warning	Filter abnormal
0139	2021/04/22 11:11:42	Information	Left Manual Mode
0140	2021/04/22 10:53:48	Information	Supply Air T Low Recover
0141	2021/04/22 10:47:37	Information	Enter Manual Mode
0142	2021/04/22 10:46:47	Information	System Standby
0143	2021/04/22 09:49:47	Warning	Supply Air T Low
0144	2021/04/22 09:46:02	Information	System On

No.	Time	Level	Log	Download
0001	2021/01/15 09:44:51	Information	Air Door Abnormal	
0002	2021/01/15 09:44:51	Warning	Humidifier Warning	
0003	2021/01/15 09:44:51	Information	Valve Direction Set to Positive	
0004	2021/01/15 09:44:51	Warning	Water In T Low	
0005	2021/01/15 09:44:51	Information	Ball Valve Error Recover	
0006	2021/01/15 09:44:51	Severity	Fan CH7 Abnormal	
0007	2021/01/15 09:44:51	Severity	Fan CH6 Abnormal	
0008	2021/01/15 09:44:51	Severity	Fan CH5 Abnormal	

Event record: Click “Download” to download the event record to a portable flash drive.

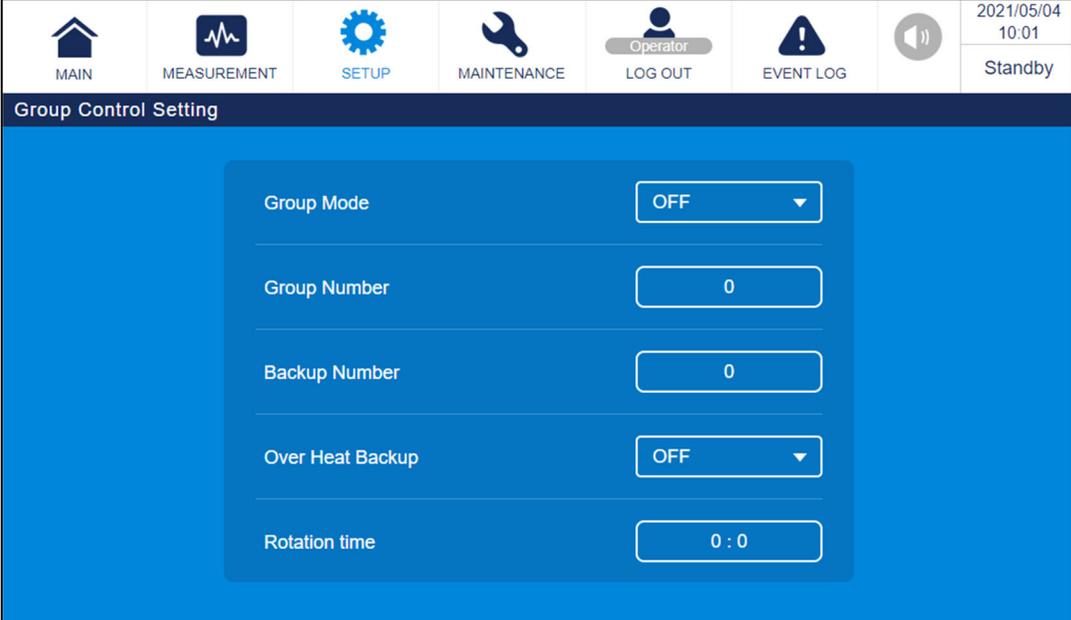
### 5.5.5 Run Hours

Path: Main Page → Maintenance → Run Hours

MAIN	MEASUREMENT	SETUP	MAINTENANCE	Operator LOG OUT	EVENT LOG	2021/05/04 09:56 Standby
<b>Run Hours</b>						
System ( hr )	62	Indoor Fan 2 ( hr )	62			
Compressor ( hr )	40	Indoor Fan 3 ( hr )	62			
Outdoor Fan ( hr )	34	Indoor Fan 4 ( hr )	62			
EEV ( hr )	42	Indoor Fan 5 ( hr )	62			
Indoor Fan 1 ( hr )	62	Indoor Fan 6 ( hr )	62			

## 5.5.6 Group Setting

Path: Main Page → Setup → Group Control Setting



Icon	Label
	MAIN
	MEASUREMENT
	SETUP
	MAINTENANCE
	Operator
	LOG OUT
	EVENT LOG
2021/05/04 10:01	
Standby	

Setting	Value
Group Mode	OFF
Group Number	0
Backup Number	0
Over Heat Backup	OFF
Rotation time	0 : 0

1. Group Mode OFF→ON (Enable group function)
2. Select how many cooling units in a group, and how many cooling units for backup (less than group number).
3. The time interval (h:m) for cooling units to shaft between operation modes (on or standby).
4. “Over Heat Backup” means that when the cooling unit return air temperature is higher than the alarm value, the backup unit will automatically turn on.

## 5.6 Summary of Parameters Settings

Parameter	Setting Range	Description	Default Setting	Note
<b>5.6.1 Setup--&gt;Set Point Setting</b>				
Control Type	Return Air	Choose a control type that suits the needs of the computer room.	Supply Air	It is recommended to use supply air temperature control for row cool.
	Supply Air			
	Cold Aisle			
	Hot Aisle			
Temperature Setpoint	82.4-104°F (Return Air/Hot Aisle)	The air temperature control target	75°F	
	62.6-82.4°F (Supply Air/Cold Aisle)			
Humidity Setpoint	15-80%	The air relative humidity control target	50%	
Temperature Control Band	0.0-3.6°F	The air temperature control band	1.8°F	
Humidity Control Band	0-20%	The air relative humidity control band	20%	
<b>5.6.2 Setup--&gt;Controller Setting</b>				
Auto Recover	On/Off	After Power Recover On→Keep previous setting Off→Standby	On	
Delay Time	1-30 sec	After Power Recover There is a delay time when a unit starts to operate	5 sec	

Parameter	Setting Range	Description	Default Setting	Note
Leak Shutdown	On/Off	The water leakage alarm may shut down the unit	Off	
Compressor Preheating	On/Off	The first time a unit starts operating, the compressor needs preheating	On	
Heater Enable	On/Off	Enable the heater function if a unit includes a heater	Off	
Humidifier Enable	On/Off	Enable the humidifier function if a unit includes a heater	Off	
<b>5.6.3 Setup--&gt;Group Control Setting</b>				
Group Mode	On/Off	Enable Group Control Function	Off	
Group Number	0-99	Amount of cooling units in a group	0	
Backup Number	0-99	Amount of cooling units that start if one unit shuts down	0	
Over Heat Backup	On/Off	When the return air is at a high temp, the standby cooling unit will start	Off	

Parameter	Setting Range	Description	Default Setting	Note
Rotation Time	0-999h:0-60m	Setting group unit operating rotation time	0h:0m	When using the Group Function, it is recommended to set to 24h:00m.
<b>5.6.4 Setup--&gt;Alarm Setting--&gt;Sensor</b>				
Supply Air Sensor 1-2 Abnormality	On/Off	When the sensor signal is lost, the alarm will go off	On	
Return Air Sensor 1-2 Abnormality	On/Off	When the sensor signal is lost, the alarm will go off	On	
Discharge Temp Abnormality	On/Off	When the sensor signal is lost, the alarm will go off	On	
Liquid Temp Abnormality	On/Off	When the sensor signal is lost, the alarm will go off	On	
Suction Temp Abnormality	On/Off	When the sensor signal is lost, the alarm will go off	On	
Ambient Temp Abnormality	On/Off	When the sensor signal is lost, the alarm will go off	On	
Discharge P Sensor Abnormality	On/Off	When the sensor signal is lost, the alarm will go off	On	
Suction P Sensor Abnormality	On/Off	When the sensor signal is lost, the alarm will go off	On	
<b>5.6.5 Setup--&gt;Alarm Setting--&gt;Cooling System</b>				
Fan 1-6CH Abnormality	On/Off	When there is a fan abnormality, the alarm will go off	On	

Parameter	Setting Range	Description	Default Setting	Note
Compressor 1 Abnormality (Inverter)	On/Off	When there is a compressor abnormality, the alarm will go off	On	
Outdoor Fan Abnormality	On/Off	When there is an outdoor fan abnormality, the alarm will go off	On	
EEV Abnormal	On/Off	When there is an EEV abnormality, the alarm will go off	On	
<b>5.6.6 Setup--&gt;Alarm Setting--&gt;Other</b>				
Filter Abnormality	On/Off	When the filter is clogged, the alarm will go off	On	
Leak Active	On/Off	When a water leakage has been detected, it will be shown	Off	
Leak Detector	Close/Low/Medium/ High	Sensitivity of the leakage detector	Close	
Input Voltage Abnormality	On/Off	When the input voltage is over $\pm 10\%$ , the alarm will go off	On	
Input Frequency Abnormality	On/Off	When the input frequency is over $\pm 3\text{Hz}$ , the alarm will go off	On	

Parameter	Setting Range	Description	Default Setting	Note
<b>5.6.7 Setup--&gt;Exceed Alarm Setting--&gt;Air Side</b>				
Supply Air Temp High	On/Off	Setting supply air temperature high alarm value	Off	
	68-122°F			
Supply Air Temp Low	On/Off	Setting supply air temperature low alarm value	Off	
	41-59°F			
Return Air Temp High	On/Off	Setting return air temperature high alarm value	On	
	95-131°F		113°F	
Return Air Temp Low	On/Off	Setting return air temperature low alarm value	Off	
	41-59°F			
Supply Air RH High	On/Off	Setting supply air relative humidity high alarm value	Off	
	65-95%			
Supply Air RH Low	On/Off	Setting supply air relative humidity low alarm value	Off	
	5-35%			
Return Air RH High	On/Off	Setting return air relative humidity high alarm value	Off	
	65-95%			
Return Air RH Low	On/Off	Setting return air relative humidity low alarm value	Off	
	5-35%			
Cold Aisle Air Temp High	On/Off	Setting cold aisle air high temperature alarm value	Off	Optional sensor
	68-122°F			
Cold Aisle Air Temp Low	On/Off	Setting cold aisle air temperature low alarm value	Off	Optional sensor
	41-59°F			

Parameter	Setting Range	Description	Default Setting	Note
<b>5.6.8 Setup--&gt;Exceed Alarm Setting--&gt;Refrigerant Side</b>				
Discharge Pressure Over High	On/Off	Display or not	On	If it needs to be changed, please contact Delta.
Suction Pressure Over Low	On/Off	Display or not	On	
Discharge Temp Over High	On/Off	Display or not	On	
Suction Temp Over Low	On/Off	Display or not	On	
<b>5.6.9 Setup--&gt;General Settings</b>				
Date Format	ymd/dmy/mdy	Setting Date display format	ymd	
Date Settings	yyyy/mm/dd	Setting Date	yyyy/mm/dd	
Time Settings	00:00:00-23:59:59	Setting Time	XX:XX:XX	
Time Zone Settings	UTC-12:00-+13:00	Setting Time Zone	UTC+8:00	
ID	1-254	Setting ID in Group	1	
Unit	°C/°F	Setting Temperature Unit	°F	
Language	EN/SC/TC	Setting Language	EN	
Baudrate	9600/19200	Setting Modbus Baudrate	9600	

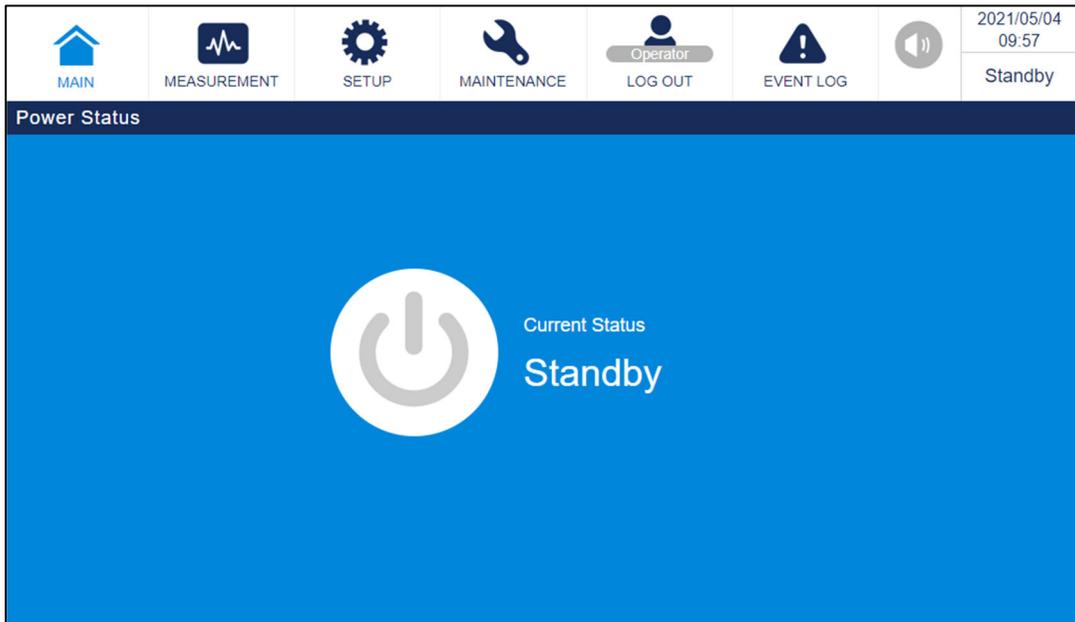
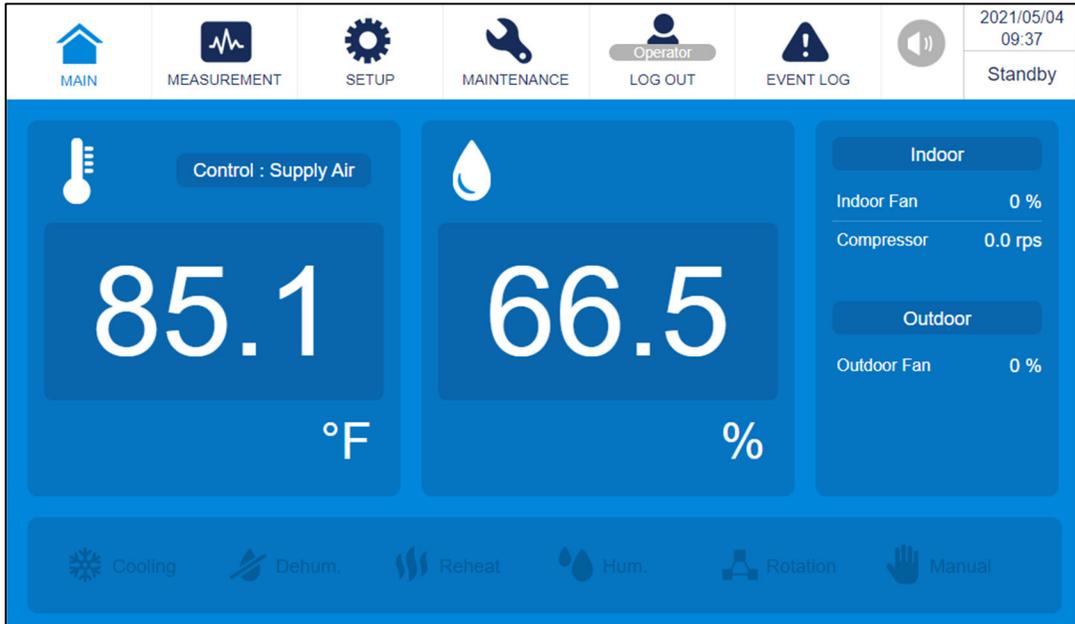
Parameter	Setting Range	Description	Default Setting	Note
LCD Energy Saving Time	1-480min	The LCD will shut down after this amount of time has passed without being used	1 min	
LCD Lightness	20-100	Screen lightness	80	
Buzzer	on/off	When an alarm goes off, the buzzer will be on/off	On	
Operator Code	0000-9999	Setting Operator's Password	2222	

## 5.7 Shutdown

Path: Main Page → Main Screen → Power Icon

When clicked again during operation, the unit will begin the shut-down procedure.

When the shutdown procedure is performed, the indoor fan will continue to operate and will be turned off after a delay of several tens of seconds.



## Chapter 6 : Troubleshooting



**WARNING:**

The following troubleshooting actions can only be carried out by qualified service personnel. Unauthorized actions may lead to major danger or equipment damage.

Alarm Name	Alarm Severity	Possible Cause	Corrective Action
Cold Aisle Humidity High	1	<ol style="list-style-type: none"> <li>1. The ambient humidity is too high</li> <li>2. The configured value of the alarm is incorrect</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the environmental humidity or add a dehumidifier</li> <li>2. The configured value of the alarm is incorrect</li> </ol>
Cold Aisle Temp High	1	<ol style="list-style-type: none"> <li>1. The heat load exceeds the cooling performance</li> <li>2. The configured value of the alarm is incorrect</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce the heat load or increase cooling devices</li> <li>2. Check the configured value of the alarm</li> </ol>
Compressor 1 Abnormality	2	<ol style="list-style-type: none"> <li>1. Refrigerant system abnormality</li> <li>2. VFD abnormality</li> <li>3. The compressor is not turned on</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the refrigerant system</li> <li>2. Check the VFD</li> <li>3. Turn on the compressor</li> </ol>
Discharge P Sensor 1 Error	2	<ol style="list-style-type: none"> <li>1. Indoor and outdoor communication lines are disconnected</li> <li>2. Outdoor unit power supply abnormality</li> <li>3. Wiring is loose</li> <li>4. Sensor unit abnormality</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the connection of indoor and outdoor communication lines</li> <li>2. Check the power supply</li> <li>3. Check the sensor connections</li> <li>4. Check sensor unit and replace if necessary</li> </ol>
Discharge Pressure Over High	1	<ol style="list-style-type: none"> <li>1. Poor refrigerant system processing</li> <li>2. Outdoor fan abnormality</li> <li>3. Outdoor fan abnormality</li> <li>4. The condenser is dirty</li> <li>5. The temperature of the outdoor unit environment is too high</li> </ol>	<ol style="list-style-type: none"> <li>1. Refrigerant system processing</li> <li>2. Check the fan wiring or replace the fan</li> <li>3. Check the fan</li> <li>4. Clean the condenser</li> <li>5. Check the surrounding environment</li> </ol>

Alarm Name	Alarm Severity	Possible Cause	Corrective Action
Discharge Temp Over High	1	<ol style="list-style-type: none"> <li>Poor refrigerant system processing</li> <li>Outdoor fan abnormality</li> <li>Outdoor VFD abnormality</li> <li>The condenser is dirty</li> <li>The temperature of the outdoor unit environment is too high</li> </ol>	<ol style="list-style-type: none"> <li>Refrigerant system processing</li> <li>Check the fan wiring or replace the fan</li> <li>Check the VFD</li> <li>Clean the condenser</li> <li>Check the surrounding environment</li> </ol>
EEV Control Abnormality	2	<ol style="list-style-type: none"> <li>Suction pressure sensor abnormality</li> <li>Suction temperature sensor abnormality</li> <li>Expansion valve coil wiring is loose</li> <li>Configuration abnormality</li> </ol>	<ol style="list-style-type: none"> <li>Check the sensor connections</li> <li>Check the sensor connections</li> <li>Check the coil wiring</li> <li>Contact the service personnel</li> </ol>
Fan CH1 Abnormality	2	<ol style="list-style-type: none"> <li>Fan wiring is loose</li> <li>The blade is stuck due to foreign matter</li> <li>Fan unit abnormality</li> <li>The fan has no power input</li> </ol>	<ol style="list-style-type: none"> <li>Check the fan wiring</li> <li>Remove foreign objects and confirm that the blades are not damaged</li> <li>Replace the fan</li> <li>Check whether the fan circuit breaker is off</li> </ol>
Fan CH2 Abnormality	2	<ol style="list-style-type: none"> <li>Fan wiring is loose</li> <li>The blade is stuck due to foreign matter</li> <li>Fan unit abnormality</li> <li>The fan has no power input</li> </ol>	<ol style="list-style-type: none"> <li>Check the fan wiring</li> <li>Remove foreign objects and confirm that the blades are not damaged</li> <li>Replace the fan</li> <li>Check whether the fan circuit breaker is off</li> </ol>
Fan CH3 Abnormality	2	<ol style="list-style-type: none"> <li>Fan wiring is loose</li> <li>The blade is stuck due to foreign matter</li> <li>Fan unit abnormality</li> <li>The fan has no power input</li> </ol>	<ol style="list-style-type: none"> <li>Check the fan wiring</li> <li>Remove foreign objects and confirm that the blades are not damaged</li> <li>Replace the fan</li> <li>Check whether the fan circuit breaker is off</li> </ol>

<b>Alarm Name</b>	<b>Alarm Severity</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
Fan CH4 Abnormality	2	<ol style="list-style-type: none"> <li>1. Fan wiring is loose</li> <li>2. The blade is stuck due to foreign matter</li> <li>3. Fan unit abnormality</li> <li>4. The fan has no power input</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the fan wiring</li> <li>2. Remove foreign objects and confirm that the blades are not damaged</li> <li>3. Replace the fan</li> <li>4. Check whether the fan circuit breaker is off</li> </ol>
Fan CH5 Abnormality	2	<ol style="list-style-type: none"> <li>1. Fan wiring is loose</li> <li>2. The blade is stuck due to foreign matter</li> <li>3. Fan unit abnormality</li> <li>4. The fan has no power input</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the fan wiring</li> <li>2. Remove foreign objects and confirm that the blades are not damaged</li> <li>3. Replace the fan</li> <li>4. Check whether the fan circuit breaker is off</li> </ol>
Fan CH6 Abnormality	2	<ol style="list-style-type: none"> <li>1. Fan wiring is loose</li> <li>2. The blade is stuck due to foreign matter</li> <li>3. Fan unit abnormality</li> <li>4. The fan has no power input</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the fan wiring</li> <li>2. Remove foreign objects and confirm that the blades are not damaged</li> <li>3. Replace the fan</li> <li>4. Check whether the fan circuit breaker is off</li> </ol>
Filter Abnormality	1	<ol style="list-style-type: none"> <li>1. Dirty air filter</li> <li>2. The detector tube is deformed or incorrectly positioned</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the air filter</li> <li>2. Check whether the air filter detector tube is intact and in the correct position</li> </ol>
Fire Active	2	<ol style="list-style-type: none"> <li>1. Fire and smoke input contact trigger</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the surrounding environment and troubleshoot</li> </ol>
Group Comm Abnormality	1	<ol style="list-style-type: none"> <li>1. The connections are wrong</li> <li>2. Duplicate unit ID setting</li> <li>3. Terminal resistance setting error</li> </ol>	<ol style="list-style-type: none"> <li>1. Check communication wiring between groups</li> <li>2. Check ID settings of each device in the group</li> <li>3. Check the terminal resistance setting</li> </ol>

Alarm Name	Alarm Severity	Possible Cause	Corrective Action
High Pressure SW Protect	2	<ol style="list-style-type: none"> <li>1. The temperature of the outdoor unit environment is too high</li> <li>2. Outdoor fan abnormality</li> <li>3. Poor refrigerant system processing</li> <li>4. The condenser is dirty</li> <li>5. Too much refrigerant</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the surrounding environment</li> <li>2. Check the fan wiring or replace the fan</li> <li>3. Refrigerant system processing</li> <li>4. Clean the condenser</li> <li>5. The refrigerant system processes and fills the appropriate amount of refrigerant</li> </ol>
Hot Aisle Humidity High	1	<ol style="list-style-type: none"> <li>1. The ambient humidity is too high</li> <li>2. The configured value of the alarm is incorrect</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the environmental humidity or add a dehumidifier</li> <li>2. The configured value of the alarm is incorrect</li> </ol>
Hot Aisle Temp High	1	<ol style="list-style-type: none"> <li>1. The heat load exceeds the cooling performance</li> <li>2. The configured value of the alarm is incorrect</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce the heat load or increase cooling devices</li> <li>2. Check the configured value of the alarm</li> </ol>
Input Frequency Abnormality	2	<ol style="list-style-type: none"> <li>1. Input power frequency abnormality</li> </ol>	<ol style="list-style-type: none"> <li>1. Check whether input power is within the specification range</li> </ol>
Input Voltage Abnormality	2	<ol style="list-style-type: none"> <li>1. Input power supply voltage abnormality</li> <li>2. Input power connection error</li> </ol>	<ol style="list-style-type: none"> <li>1. Check whether the input power meets the value indicated on the equipment nameplate</li> <li>2. Check the input power connection</li> </ol>
Inverter Comm Abnormality	2	<ol style="list-style-type: none"> <li>1. VFD communication abnormality</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the VFD communication line</li> <li>2. Contact the service personnel</li> </ol>
Inverter Other Abnormality	2	<ol style="list-style-type: none"> <li>1. VFD circuit abnormality</li> </ol>	<ol style="list-style-type: none"> <li>1. Contact the service personnel</li> </ol>
Inverter Over Load	2	<ol style="list-style-type: none"> <li>1. VFD overcurrent</li> </ol>	<ol style="list-style-type: none"> <li>1. Contact the service personnel</li> </ol>

<b>Alarm Name</b>	<b>Alarm Severity</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
Inverter Over Temp	2	1. Poor VFD heat dissipation	1. Check the surrounding heat dissipation environment 2. Contact the service personnel
Inverter Voltage Abnormality	2	1. VFD voltage abnormality	1. Check the VFD input power 2. Contact the service personnel
Leak Active	2	1. The condensate is overflowing 2. The cabinet is not placed horizontally 3. Deterioration or damage of the lagged pipe	1. Check whether the drainage is blocked 2. Adjust the cabinet level 3. Replace or reinforce thermal protection materials
Low Pressure SW Protect	2	1. Insufficient refrigerant 2. Indoor fan abnormality 3. Indoor side load is too low 4. The temperature of the outdoor unit environment is too low 5. Dirty air filter 6. Clogged filter drier 7. The electronic expansion valve is blocked	1. Replenish the amount of refrigerant after maintenance of leakage point 2. Check the fan wiring or replace the fan 3. Increase heat load 4. Check the surrounding environment 5. Replace the air filter 6. Replace the filter drier 7. Replace the electronic expansion valve
Need Maintenance	1	1. Over maintenance time	1. Carry out maintenance
Outdoor Fan Abnormality	2	1. The fan motor temperature is too high 2. Unit abnormality	1. Check the surrounding heat dissipation environment 2. Check the fan

<b>Alarm Name</b>	<b>Alarm Severity</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
Outdoor Unit Comm Abnormality	2	<ol style="list-style-type: none"> <li>1. Indoor and outdoor communication lines are disconnected</li> <li>2. Outdoor unit power supply abnormality</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the connection of indoor and outdoor communication lines</li> <li>2. Check the input power of the outdoor unit</li> </ol>
Return Air RH High	1	<ol style="list-style-type: none"> <li>1. The ambient humidity is too high</li> <li>2. The configured value of the alarm is incorrect</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the environmental humidity or add a dehumidifier</li> <li>2. The configured value of the alarm is incorrect</li> </ol>
Return Air RH Low	1	<ol style="list-style-type: none"> <li>1. The environmental humidity is too high</li> <li>2. The configured value of the alarm is incorrect</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the environmental humidity or add a humidifier</li> <li>2. The configured value of the alarm is incorrect</li> </ol>
Return Air T High	1	<ol style="list-style-type: none"> <li>1. The heat load exceeds the cooling performance</li> <li>2. The configured value of the alarm is incorrect</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce the heat load or increase cooling devices</li> <li>2. Check the configured value of the alarm</li> </ol>
Return Air T Low	1	<ol style="list-style-type: none"> <li>1. Heat load is lower than cooling capacity</li> <li>2. The configured value of the alarm is incorrect</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase the heat load or turn off part of the cooling device</li> <li>2. Check the configured value of the alarm</li> </ol>
Return Sensor 1 Abnormality	2	<ol style="list-style-type: none"> <li>1. Wiring is loose</li> <li>2. Sensor unit abnormality</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the sensor connections</li> <li>2. Check sensor unit and replace if necessary</li> </ol>
Smoke	2	<ol style="list-style-type: none"> <li>1. Fire and smoke input contact trigger</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the surrounding environment and troubleshoot</li> </ol>
Suction P Sensor 1 Error	2	<ol style="list-style-type: none"> <li>1. Wiring is loose</li> <li>2. Sensor unit abnormality</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the sensor connections</li> <li>2. Check sensor unit and replace if necessary</li> </ol>

<b>Alarm Name</b>	<b>Alarm Severity</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
Suction Pressure Over Low	1	<ol style="list-style-type: none"> <li>1. Insufficient refrigerant</li> <li>2. Indoor fan abnormality</li> <li>3. Indoor side load is too low</li> <li>4. The temperature of the outdoor unit environment is too low</li> <li>5. Dirty air filter</li> <li>6. Clogged filter drier</li> <li>7. The electronic expansion valve is blocked</li> </ol>	<ol style="list-style-type: none"> <li>1. Replenish the amount of refrigerant after maintenance of leakage point</li> <li>2. Check the fan wiring or replace the fan</li> <li>3. Increase the heat load or turn off part of the cooling device</li> <li>4. Check the surrounding environment</li> <li>5. Replace the air filter</li> <li>6. Replace the filter drier</li> <li>7. Replace the electronic expansion valve</li> </ol>
Supply Air RH High	1	<ol style="list-style-type: none"> <li>1. The ambient humidity is too high</li> <li>2. The configured value of the alarm is incorrect</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the environmental humidity or add a dehumidifier</li> <li>2. The configured value of the alarm is incorrect</li> </ol>
Supply Air RH Low	1	<ol style="list-style-type: none"> <li>1. The environmental humidity is too high</li> <li>2. The configured value of the alarm is incorrect</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the environmental humidity or add a humidifier</li> <li>2. The configured value of the alarm is incorrect</li> </ol>
Supply Air T High	1	<ol style="list-style-type: none"> <li>1. The heat load exceeds the cooling performance</li> <li>2. The configured value of the alarm is incorrect</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce the heat load or increase cooling devices</li> <li>2. Check the configured value of the alarm</li> </ol>
Supply Air T Low	1	<ol style="list-style-type: none"> <li>1. Heat load is lower than cooling capacity</li> <li>2. The configured value of the alarm is incorrect</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase the heat load or turn off part of the cooling device</li> <li>2. Check the configured value of the alarm</li> </ol>

Item	Sign of Failure	Possible Cause	Troubleshooting Instructions
1	The air conditioner does not start	<ol style="list-style-type: none"> <li>1. Input power is disconnected</li> <li>2. The air conditioner is not turned on</li> <li>3. Set to remote shutdown</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the input power and circuit breaker</li> <li>2. Turn on the air conditioner</li> <li>3. Check the remote switch connection and configured value</li> </ol>
2	There is excessive humidity or condensation in the computer room	<ol style="list-style-type: none"> <li>1. The ambient humidity is too high</li> <li>2. The heat load is too small</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the air-tightness of the computer room environment such as doors and windows</li> <li>2. Shut down exterior air fan system equipment</li> <li>3. Increase dehumidification equipment</li> </ol>
3	Abnormal noise or vibration during operation	<ol style="list-style-type: none"> <li>1. The fixed pipeline is loose</li> <li>2. The compressor transport fasteners were not removed</li> </ol>	<ol style="list-style-type: none"> <li>1. Fixed pipeline structure</li> <li>2. Remove the compressor transport fasteners</li> </ol>
4	The compressor won't start	<ol style="list-style-type: none"> <li>1. The compressor is currently on preheating status</li> <li>2. The air conditioner is not turned on</li> <li>3. No need to turn on the compressor</li> <li>4. Tripping of high/low pressure switch</li> <li>5. Compressor or indoor unit VFD abnormality</li> <li>6. The compressor has no power input</li> </ol>	<ol style="list-style-type: none"> <li>1. Wait for the preheating time to end during the initial boot</li> <li>2. Turn on the air conditioner</li> <li>3. Check the system status to confirm the power requirements</li> <li>4. Check the high/low pressure switch</li> <li>5. Check compressor and indoor unit VFD</li> <li>6. Check whether there is a blown fuse</li> </ol>
5	The indoor fan is not running	<ol style="list-style-type: none"> <li>1. The air conditioner is not turned on</li> <li>2. The fan circuit breaker is not turned on</li> <li>3. Fan or wire connection abnormality</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn on the air conditioner</li> <li>2. Turn on the fan circuit breaker</li> <li>3. Check the fan and wire connection</li> </ol>

Item	Sign of Failure	Possible Cause	Troubleshooting Instructions
6	The outdoor fan is not running	<ol style="list-style-type: none"> <li>1. The air conditioner is not turned on</li> <li>2. The outdoor unit panel circuit breaker is not turned on</li> <li>3. No need to turn on the outdoor fan</li> <li>4. Fan or outdoor unit abnormality</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn on the air conditioner</li> <li>2. Turn on the outdoor unit panel circuit breaker</li> <li>3. Check the system status to confirm the power requirements</li> <li>4. Check the fan and outdoor unit</li> </ol>
7	Poor cooling effect	<ol style="list-style-type: none"> <li>1. Insufficient refrigerant filled</li> <li>2. Clogged filter drier</li> <li>3. Insufficient air volume going through the condenser of the outdoor unit</li> <li>4. The air filter of the indoor unit is dirty</li> </ol>	<ol style="list-style-type: none"> <li>1. Replenish the amount of refrigerant filled after maintenance of leakage point</li> <li>2. Replace the filter drier</li> <li>3. Remove impurities or foreign matter at the air inlet end of the outdoor unit condenser</li> <li>4. Replace the air filter</li> </ol>
8	Water is overflowing from the air conditioner	<ol style="list-style-type: none"> <li>1. The drain pipelines are loose</li> <li>2. The drain pipelines are blocked</li> </ol>	<ol style="list-style-type: none"> <li>1. Make sure that the drain pipelines are firmly connected</li> <li>2. Make sure that the drain pipelines are unobstructed</li> </ol>
9	The air conditioner cannot communicate via RS485	<ol style="list-style-type: none"> <li>1. The connections are wrong</li> <li>2. The communication line is not grounded</li> <li>3. An anti-interference communication line was not used</li> </ol>	<ol style="list-style-type: none"> <li>1. Check whether the connections are correct</li> <li>2. Connect the ground wire</li> <li>3. Use an anti-interference communication line</li> </ol>

If an abnormality persists after troubleshooting, contact service personnel.

If an alarm or warning needs to be restarted, please contact service personnel.

## Appendix 1 : Technical Specifications

Model	RWD030-B8
Maximum cooling capacity	30kW
Input voltage	3- 200-208 VAC +G 50/60 Hz
Maximum current	41A
Air volume	2945CFM
Type refrigerant	R410A
Filter	Merv.1
Refrigerant pipe	Refrigerant discharge pipe 5/8"
	Refrigerant liquid 1/2"
Size (Width x Height x Depth)	11.8 x 78.7 x 42.9"
Weight	476 lb
Operating temperature/RH	64.4-113°F/20-90% (non-condensing)

Measurement criteria for the maximum refrigerating capacity: Air return DBT 105°F and WBT 71°F for the indoor unit; air return DBT 95°F for the outdoor unit.

Model	RDA037-B8
Input voltage	3- 200-208VAC +G 50/60Hz
Maximum current	3A
Air volume	7060CFM
Dimensions (Width x Height x Depth)	67.9x44.1x43.3"
Weight	231lb

## Appendix 2 : Warranty

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The Seller warrants this product, if used in accordance with all applicable instructions, to be free from original defects in material and workmanship within the warranty period. If the product has any failure problem within the warranty period, the Seller will repair or replace the product at its sole discretion according to the failure situation. This warranty does not apply to normal wear or damage resulting from improper installation, operation, usage, maintenance or irresistible force (i.e., war, fire, natural disaster, etc.). This warranty also expressly excludes all incidental and consequential damages.

Maintenance service for a fee is provided for any damage out of the warranty period. If any maintenance is required, directly contact the supplier or the Seller.

Warranty not included consumables: fiber filter/wet film/electrode humidifier cylinder.



### **WARNING:**

The individual user must take care to determine prior to use whether the environment and the load characteristics are suitable, adequate or safe for the installation and the usage of this product. The User Manual must be carefully followed. The Seller makes no representation or warranty as to the suitability of this product for any specific application.

No.: 501329590000

Version: V 0.0

Release Date: 2021\_09\_014

## Appendix 3 : Maintenance

### Quarterly Maintenance

**Date:**

**Model:**

**By:**

<b>Clean</b>	
Clean the following components and use an air gun if necessary.	
Filters (replace them if necessary)	<input type="checkbox"/> Completed <input type="checkbox"/> Replaced
Front and rear doors	<input type="checkbox"/> Completed
Condensed water pan	<input type="checkbox"/> Completed
Condensed water pipe	<input type="checkbox"/> Completed
<b>⚠ Be sure to disconnect and lock the input power before cleaning the following components.</b>	
Evaporator	<input type="checkbox"/> Completed
Fans	<input type="checkbox"/> Completed
Outdoor unit	<input type="checkbox"/> Completed
<b>General inspections</b>	
Does the system function normally? There is no high/low voltage alarm.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Does the alarm system operate normally?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Does the unit operate normally in all modes?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Notes:</b>	
Signature: _____	

**Copy this page for use during the inspection/maintenance procedures.**







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