

# ChargeX

# USER MANUAL



# OVERVIEW

## ChargeX

ChargeX is an integrated EV charger providing 240kW DC output with two connectors. Power flexible distributed to two connectors controlled by algorithm realizes intelligently EV charging. It supports high resolution large LCD touchscreen with audio function and cable management system which provide better user experience.



ChargeX	
<b>Models</b>	PQ-SEC1000 (80) (120) (160) (200) (240)
<b>Rated Power</b>	DC: 80kW to 240kW
<b>Input Voltage (v)</b>	480AC
<b>Dimensions (mm)</b>	W (800-918) x D 750 x H 2000

STANDARDS & CERTIFICATIONS	
<b>Standards</b>	UL2231, UL2202, ISO 15118, DIN70121
<b>Certifications</b>	cTUVus



## IMPORTANT SAFETY INSTRUCTIONS

### SAVE THESE INSTRUCTIONS

**WARNING:**

This manual contains important instructions for installation and use. When install and use, always follow basic precautions, including the following.

### Safety instructions for operation

- Before using for the first time you must read this document carefully, make sure that the equipment is installed and commissioned according to the instructions in the installation manual.
- For the safety of personnel, the tips, safety, and warning instructions contained in this manual must be strictly followed.
- ChargeX is a high power and high voltage electric equipment. Only qualified professionals are allowed to install and maintenance it.
- Do not perform maintenance operations when the device is not powered off. When repairing the device, turn off the upper switch of the charger, hang the maintenance sign, and check for dangerous voltage to ensure that the charger is completely powered off.
- Even if all switches in the charger are disconnected, there is still a dangerous voltage in the copper bar of the device, Please pay attention to safety.
- The device must be grounded at all times. Poor or ungrounded grounding can lead to electric shock or fire.
- In case of any abnormal condition, press the emergency button immediately, which will cut input and output to ensure safety. It is forbidden to use the emergency button in non-emergency situations.
- After the emergency button is pressed, the operator shall be informed that the charger cannot be started, and only the operation and maintenance personnel or professional operators can restart the charger.
- Properly lock the door after installation or maintenance operations to prevent rainwater from entering the equipment.
- Installation conditions should be far away from fire hazards or other dangerous environment.

## FOREWORD





### Reader Object

This document (this guide) is primarily intended for the following engineers:

- Technical Support Engineer
- Maintenance Engineer
- Engineering installation team

## SYMBOL CONVENTIONS

The following symbols may appear in this document and their description are as follows.

SYMBOL	DESCRIPTION
	<b>DANGER</b> Dangerous Voltage. Dangerous voltages can cause death or injury.
	<b>WARNING</b> Hazard Warning. May cause equipment damage and personal injury.
	<b>WARNING</b> Heat warning. May cause scald when touch the special parts.
	<b>ATTENTION</b> Cause of Hazard. Failure to comply may result in equipment damage or functional failure.

# ChargeX

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## 1-SAFETY PRECAUTIONS

### 1.1 Special symbols for warnings and dangers

SYMBOL	SYMBOL WORD	DESCRIPTION
	<b>DANGER</b>	Since some parts of this power system are under high voltage during operation, it is fatal for direct contact or indirect contact with these parts.
		Construction operation of high voltage lines may cause fire or electric shock. The wiring area and the area where the line passes through for AC cables must comply with local regulations and laws. Only personnel who are qualified to work with high DC and AC voltage are allowed to install and maintain the DC Charger.
		It is strictly forbidden to carry out installation and maintenance work during thunderstorms.
		The DC Charger is a high voltage DC power supply, and short circuits may cause damage to the DC Charger and personal safety hazards.
	<b>WARNING</b>	Special tools must be used during various operations of high DC and AC voltages.
	<b>WARNING</b>	Avoid touching specific parts of the charger (E.g., air outlet) to prevent high temperature scald.
	<b>ATTENTION</b>	Make sure that the cable label is correct before the connection of cables.
		Signal cables shall be kept away from power cables to avoid interference.
		The device will release heat during operation. Ensure that the area around the device is well ventilated.

## IMPORTANT SAFETY INSTRUCTIONS

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### 1.2 Disclaimers

**Power Q shall not be liable for any consequence caused by any of the following events:**

- Warranty expiration of the warranty service;
- Failure to follow the operation instructions and safety precautions in this document, and the resulting equipment malfunction, component damage, personal injuries, or property damage are beyond the warranty scope;
- Installation or use in environments which are not specified in related international standards.
- Incorrect transportation, removal, storage, installation, or use.
- Unauthorized modifications to the product or software code or removal of the product;
- Device damage due to force majeure (such as lightning, earthquakes, fire, and storms);
- Unauthorized modifications to the product nameplate or serial number or product appearance;
- Storage conditions that do not meet the requirements specified in this document, unused products should be stored in packing cases and placed in a dry, (After delivery shall be started and test equipment operation status within 6 months, otherwise it shall be return to Power Q for aging test and payable the shipping cost.);
- Ensure that the area required for heat dissipation, Otherwise, the equipment may become faulty, and the resulting equipment malfunction, component damage, personal injuries, or property damage are beyond the warranty scope;
- Installation or use by unqualified personnel;
- This document content here is for indicative purpose only. If there is any inconsistency between the content and the actual product, it should base on the actual product.

## 2-PRODUCT OVERVIEW

### 2.1 Short description

ChargeX is a high-power DC distributed charger independently developed. It supports new 40kW DC charging module, with a maximum charging power of 480kW. The whole charging system has high efficiency and flexible configuration. By controlling the User Terminal to charge for EV, it can realize not only even load sharing, but also the flexible output distribution of several connectors. In this way, ChargeX can realize the flexible power distribution among the connectors.

ChargeX can provide liquid cooling and air cooling User Terminal, as well as CCS1 charging standard. The charger can meet the charging demand of larger capacity and high endurance from electric vehicle on the market.

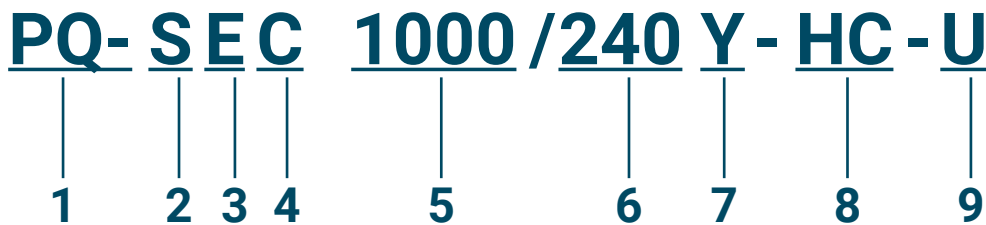
ChargeX adopts modular design, and has multiple protections, flexible power distribution and charging control system, which has high efficiency, stable outputs and high reliability. Therefore, it can charge for the EV with high power via reliable User Terminal.

### 2.2 ChargeX products model



**WARNING:**

This manual contains important instructions for Models that shall be Followed during installation, operation and maintenance of the unit.



NO.	MEANING
1	Power Q Inc.
2	Super
3	Electric Vehicle
4	Charger
5	Rated output Voltage 1000Vdc
6	Rated output power 240kW, here can choose 80/120/160/200/240kW
7	Integrated charger
8	Types of charging connectors to distinguish between different charging standards; C: CCS1 charging connector for 200A H: CCS1 charging connector for 300A
9	System type, used to distinguish application scenarios, here the default is U for UL certified models, 8 this parameter will be replaced later if the model is certified for other regions; U: stands for UL certified model.



## 2.3 Product types description

Spécification	Distribution de puissance		Courant maximal	
	Connecteur A	Connecteur B	Connecteur A	Connecteur B
PQ-SEC1000/80Y-H-U	CCS1: 80kW	/	300A	/
PQ-SEC1000/80Y-HH-U	CCS1: 40kW or 80kW	CCS1: 40kW or 80kW	300A	300A
PQ-SEC1000/80Y-C-U	CCS1: 80kW	/	200A	/
PQ-SEC1000/80Y-CC-U	CCS1: 40kW or 80kW	CCS1: 40kW or 80kW	200A	200A
PQ-SEC1000/120Y-H-U	CCS1: 120kW	/	300A	/
PQ-SEC1000/120Y-HH-U	CCS1: 80kW or 120kW	CCS1: 40kW or 120kW	300A	300A
PQ-SEC1000/120Y-C-U	CCS1: 120kW	/	200A	/
PQ-SEC1000/120Y-CC-U	CCS1: 80kW or 120kW	CCS1: 40kW or 120kW	200A	200A
PQ-SEC1000/160Y-H-U	CCS1: 160kW	/	300A	/
PQ-SEC1000/160Y-HH-U	CCS1: 80kW or 160kW	CCS1: 80kW or 160kW	300A	300A
PQ-SEC1000/160Y-C-U	CCS1: 160kW	/	200A	/
PQ-SEC1000/160Y-CC-U	CCS1: 80kW or 160kW	CCS1: 80kW or 160kW	200A	200A
PQ-SEC1000/200Y-H-U	CCS1: 200kW	/	300A	/
PQ-SEC1000/200Y-HH-U	CCS1:120kW or 200kW	CCS1:80kW or 200kW	300A	300A
PQ-SEC1000/200Y-C-U	CCS1:200kW	/	200A	/
PQ-SEC1000/200Y-CC-U	CCS1: 120kW or 200kW	CCS1: 80kW or 200kW	200A	200A
PQ-SEC1000/240Y-H-U	CCS1: 240kW	/	300A	/
PQ-SEC1000/240Y-HH-U	CCS1: 120kW or 240kW	CCS1: 120kW or 240kW	300A	300A
PQ-SEC1000/240Y-C-U	CCS1: 240kW	/	200A	/
PQ-SEC1000/240Y-CC-U	CCS1: 120kW or 240kW	CCS1: 120kW or 240kW	200A	200A

# ChargeX

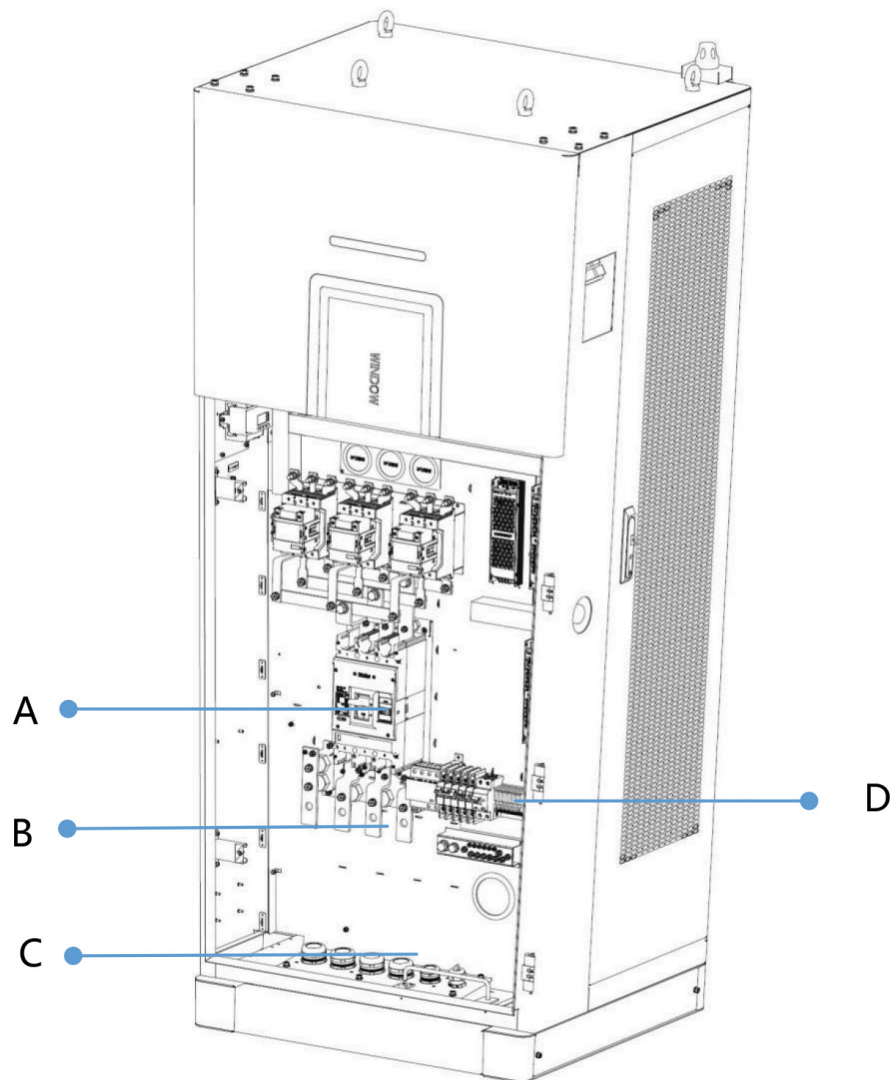
## 2.4 Product views

Outside view of the ChargeX series two-connector type DC integrated charger



- |          |                         |          |                       |
|----------|-------------------------|----------|-----------------------|
| <b>A</b> | Status LED              | <b>E</b> | Charging connector    |
| <b>B</b> | Human machine interface | <b>F</b> | Pay card reader       |
| <b>C</b> | Air outlet              | <b>G</b> | Eye bolts for lifting |
| <b>D</b> | Door handle/lock        |          |                       |

## Internal wiring area view of the ChargeX series two-connector DC integrated charger



- A** Main circuit breaker
- B** AC inlet copper row

- C** Inlet hole
- D** AC connector circuit breaker

## 2.5 Product characteristics

- ▶ A variety of power configurations from 40kW to 80kW can meet the customized requirements of customers. And more flexible power distribution, the model with dual DC connectors can automatically switch the power according to the vehicle demand, which can meet the rapid charging of two vehicles at the same time.
- ▶ The charging system is built in the form of DC and AC to meet the charging demand of fast charging and slow charging, thus multiple charging points can be provided to support charging at the same time. Among them, the AC connector power and DC connector power are output separately, which do not affect each other and improve the charging experience.
- ▶ The constant current and constant power charging methods have the advantages of high charging efficiency, simple operation and reliable performance.
- ▶ Ultra wide output voltage range, with the highest output voltage can reach DC1000V. It can not only meet the low-voltage charging of small cars, but also meet the charging requirements of buses and high-voltage vehicles.
- ▶ With overload, short circuit, leakage, lightning protection, overcharge, over voltage, under voltage, reverse connection, over temperature and other multiple protection functions.
- ▶ Multiple supporting functions integrated: standard connector homing detection function; and supports optional functions such as flooding detection, smoke detection, tilt detection, etc. provides protection for the installation and use of charger; also supports optional heaters to support the use of charger installed in cold areas.
- ▶ The intelligent standby mode can effectively reduce the operation cost of customers in the whole project life cycle, and improve the return rate of station charging.
- ▶ The cabinet shell is made of stainless steel with protection grade of IP55, which can be applied to various outdoor environments. At the same time, the overall new design of the cabinet is smaller and more compact, which can save floor space, thus more suitable for the arrangement of charger in operating stations.

## 2.6 Parameter table of product specifications

Specification		
Category	Item	Parameter
Input Characteristic	Input	3P+N+PE
	Input Voltage	AC 480V
	Frequency	60Hz
	Power Factor	0.99
	THDi	≤5%
Output Characteristic	Output Voltage	CCS1 : 200-1000 Vdc
	Rated Power	240kW (DC connector output is compatible up to 40kW)
	Max Current	CCS1 : 300A
	Efficiency	96% @ peak efficiency
	Connector Type	UL 2251
Standards	System Standards	UL 2231-2 UL 2202
Others	Energy Meter	High precision meter
	Number of Connectors	1(CCS1) or 2(CCS1+CCS1)
	Network Interface	4G/LAN
	Size	W31-1/2 * D29-17/32 * H78-47/64 inches (W800 * D750 * H2000 mm)
	NEMA Grade	IP55 / 3R / Rainproof
	Weight	≤1084.66 lbs (492 kg)
	Cable Length	Maximum overall length 295-9/32 inches (7.5m) (In Canada, the maximum overall length is 196-27/32 inches (5 m))
	Communication Protocol	OCPP1.6/2.0(Upgrade)
	Display Screen	15 inches
	Method of Payment	QR Code / RFID / Mobile phone (Optional)
Language	English	
Environmental Conditions	Cooling Method	Forced air cooling
	Full Power Operating Temperature	-13 °F to 122 °F (-25 °C to 50 °C)
	Humidity	5%~95%
	Altitude	≤6561.67 ft (2000 m)

# ChargeX

Specification		
Category	Item	Parameter
Protection		DC Over current protection Surge Protection Device Emergency Stop Protection Overload protection Short circuit protection Electric leakage protection Overcharge protection Over voltage protection Under voltage protection Reverse connect protection Over temperature protection
Function Options		Flood detection, smoke detection, tilt detection, heating, Connector Homing Check

## 3-INSTALLATION INSTRUCTIONS

### 3.1 Equipment dimensions

1. The shape and dimension of the charger are shown in Figure 3.1-A.

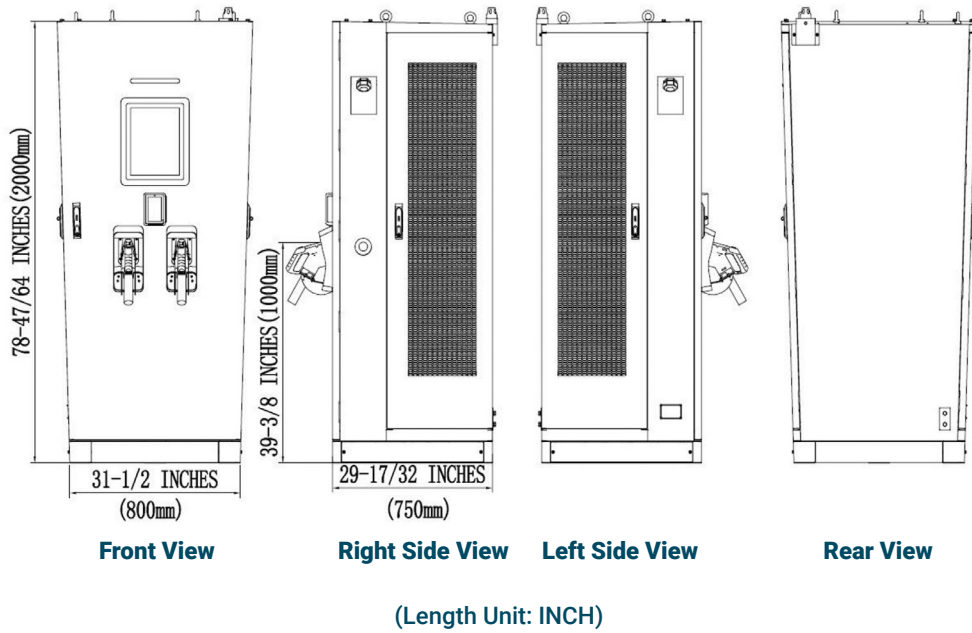


Figure 3.1-A Outline and dimension of charger

2. The hole size of charger base is shown in Figure 3.1-B.

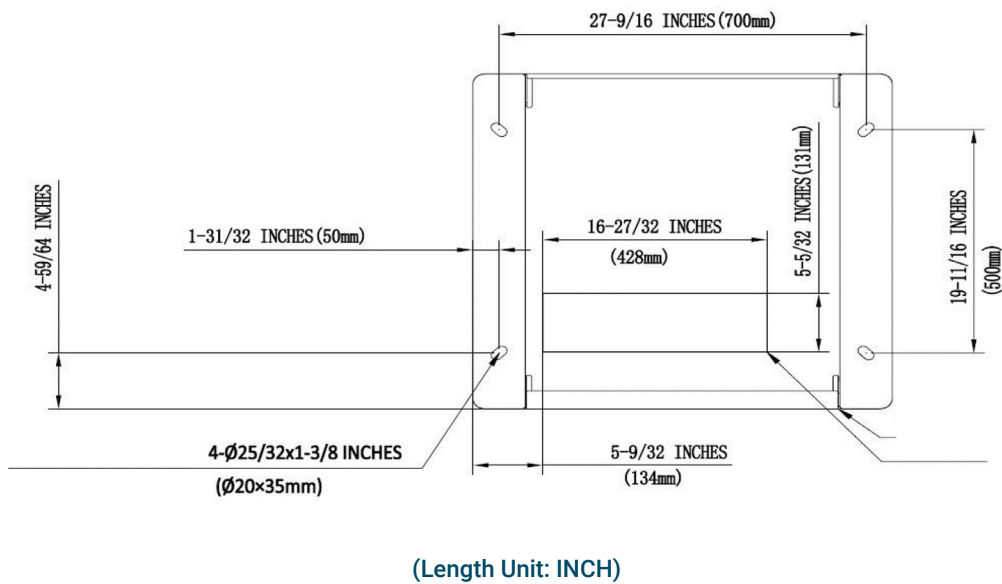


Figure 3.1-B Hole size of charger base

## 3.2 Equipment installation requirements



**WARNING:**

Ensure that you comply with the following installation requirements. Otherwise, the normal operation and ventilation of the cabinet may be affected!

1. The charger is opened in front, left and right, and the connectors are used from both sides. Space should be reserved around. See Figure 3.2-A for the reserved size;
2. Installation on the foundation of channel steel or concrete;
3. The cable shall be embedded in advance, the reserved length of Ethernet cable should not be less than 118-7/64 inches(3000 mm); the length of power cable reserved shall be 23-5/8 inches  $\pm$  25/32 inch(600 mm  $\pm$  20 mm), and the protruding of the base through which 5 wires pass shall be less than 1-3/16 inches(30 mm), as shown in Figure 3.2-B;
4. The height of the installation foundation is recommended to be 7-7/8 inches  $\pm$  25/32 inch(200 mm  $\pm$  20 mm), and the vertical inclination of the installation shall not exceed 5 °. See Figure 3.2-B for details;
5. Install 4 stainless steel M15/32\*3-5/32 inches(M12\*80mm) expansion bolts between the base and the cabinet. Note that the bolts need to be equipped with M15/32 inch(M12) stainless steel flat gasket.

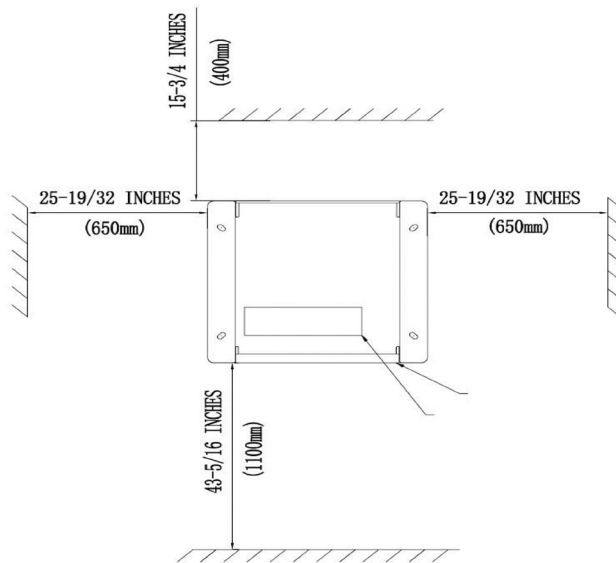


Figure 3.2-A Requirements for charger placement



**ATTENTION:**

The reserved cable length cannot be lower than the value shown in the picture; otherwise, the installation may fail!



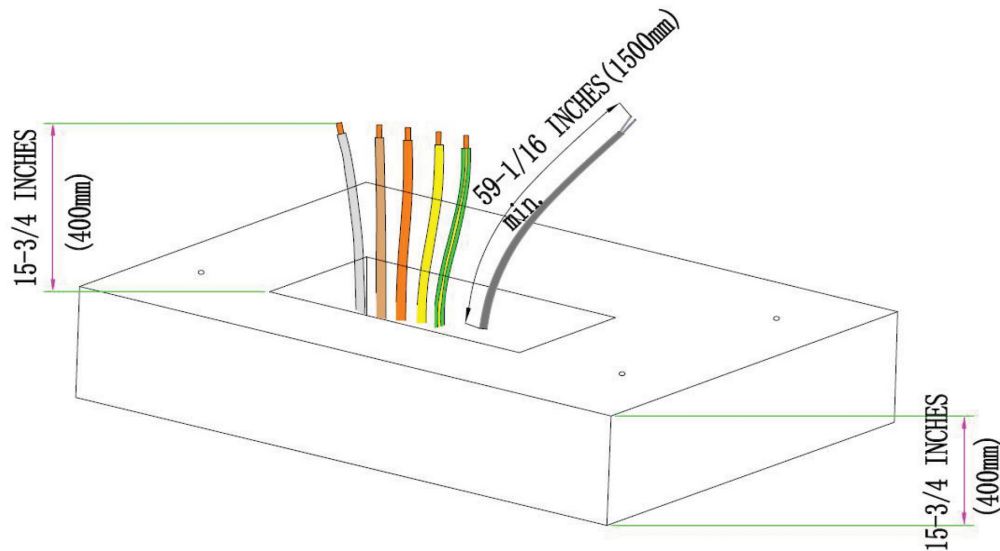


Figure 3.2-B Base and cable reservation requirements

### 3.3 Construction of distribution cables

#### 3.3.1 Layout requirements of distribution cables

1. The input cable of the system is introduced from the inlet hole at the bottom of the charger, and the cable shall be laid through the cable trench.
2. The AC cable adopts copper core wire, and the cross-sectional area of the cable shall adapt to the load.
3. The colors of AC input cable are brown (L1), orange (L2), yellow (L3), gray (N) and yellow&green (PE). If the input cable has only one color, it is necessary to put cable number identification (or sleeve with mark) on it.
4. The outdoor power cable shall be laid according to the power specification. The power cable and the signal cable must be separated, and the signal cable should be put through the tube separately to avoid the pressure loss and interference of the communication signal.
5. The cable shall not be laid in the area easily damaged by mechanical damage, corrosive medium emission, humidity, strong magnetic field and strong electrostatic field interference. If necessary, please take corresponding protection or shielding measures.
6. The AC input cable starts from the user's distribution switch and connects to the copper bar of the charger's inlet cable switch. Protection devices shall be provided at the user's power distribution.

### 3.3.2 Process requirements of distribution cables

1. Cable laying shall be free from external force, distortion and damage of insulation layer.
2. It is strictly forbidden to twist, flatten, break the protective layer and wear the protective layer seriously.
3. The protective pipe shall be cleaned before the cable passes through the pipe, and the wire shall not be damaged.
4. The cable arrangement shall be tidy. The binding should be neat and should not be crossed.
5. Sufficient allowance (no less than 23-5/8 inches(600 mm)) shall be reserved for each wire of the cable, and the bending degree shall be consistent.
6. Crimp the terminal of the cable head, and there should be no gap on the penetration surface of the terminal after crimping.
7. When pressing the lug of inlet cable, the heat shrinkable tube should be set between the cable and the lug, and the inside and outside of the tube should be smooth without damage and crack. Before setting the heat shrinkable tube, the sundries on the cable shall be removed, and there shall be no burr and iron filings on the surface to prevent damage to the tube. The color of the tube shall be in accordance with the phase sequence. When the tube is heat shrinkable, the flame should be avoided to spray on the inside of the cabinet to prevent burning the internal components and cables of the cabinet. The appearance of heat shrinkable casing should be flat, smooth, uniform shrinkage, no dust and crack.
8. Attention should be paid to the wiring sequence when pressing RJ45 connector for Ethernet cable. Check whether the pressing is qualified after pressing.

### 3.3.3 Cable specifications for AC input (Recommended)

Capacity (kW)	Cable specification (Use copper conductors only)	Capacity of superior distribution switch	Screw specification (diameter: mm)	Specification
<b>160 kW</b>	L1/L2/L3/ N: 350 kcmil(185 mm <sup>2</sup> ) PE: 3/0 AWG(95 mm <sup>2</sup> )	320A	L1/L2/L3/ N: M16{763.14~1075.33in-lbs (880~1240kgf.cm)} PE: M12{376.36~438.80in-lbs (434~506kgf.cm)}	L1/L2/L3/ N: DT185-16 PE:DT95-12
<b>200 kW</b>	L1/L2/L3/ N: 500 kcmil(240 mm <sup>2</sup> ) PE: 3/0 AWG(95 mm <sup>2</sup> )	400A	L1/L2/L3/ N: M16{763.14~1075.33in-lbs (880~1240kgf.cm)} PE: M12{376.36~438.80in-lbs (434~506kgf.cm)}	L1/L2/L3/N: DT185-16 PE:DT95-12
<b>240 kW</b>	L1/L2/L3/ N: 500 kcmil(240 mm <sup>2</sup> ) PE: 250 kcmil(120 mm <sup>2</sup> )	500A	L1/L2/L3/ N: M16{763.14~1075.33in-lbs (880~1240kgf.cm)} PE: M12{376.36~438.80in-lbs (434~506kgf.cm)}	L1/L2/L3/N: DT240-16 PE:DT120-12

### 3.3.4 Internal wiring diagram of equipment

The internal AC input cables are N, L1, L2, L3 and PE from left to right. The cabinet grounding is divided into two parts, one is the grounding bar inside the cabinet, and the other is the grounding of cabinet shell, as shown in Figure 3.4-A.

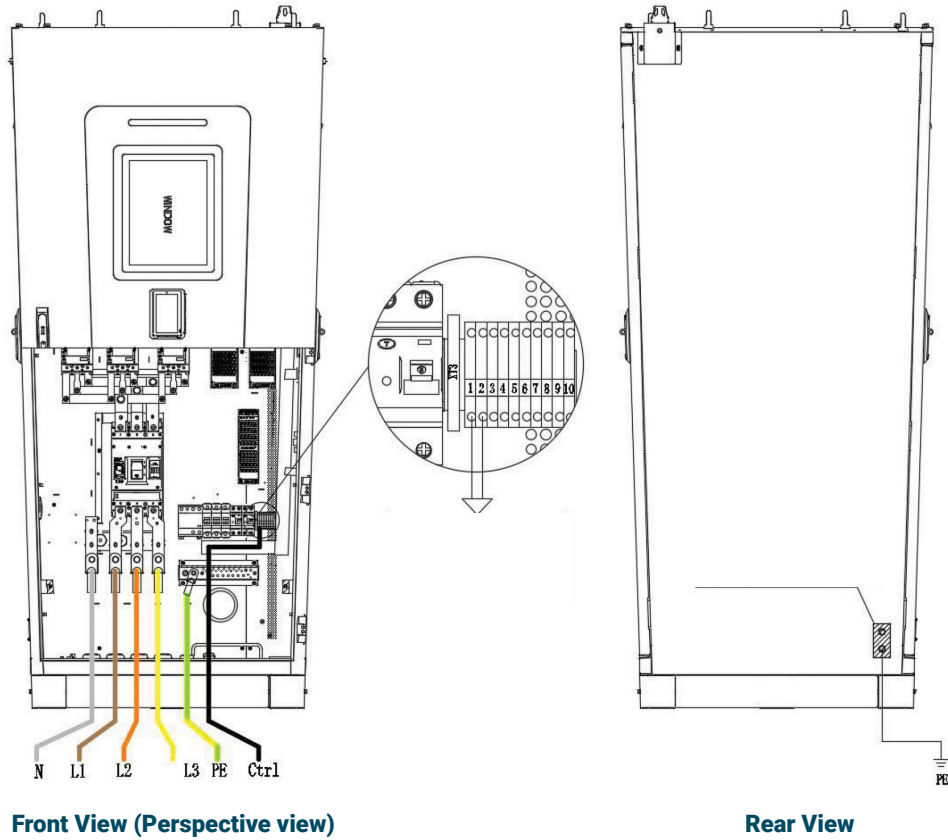



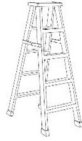



Figure 3.4-A Internal wiring diagram of charger






## 3.4 Installation steps of charging equipment



**ATTENTION:**

The following tools should be included as far as possible, but are not limited to those listed in the following table.

S/N	Tools	Num	Drawing
1	Claw hammer	1	
2	Herringbone ladder	1	
3	Insulating gloves	1	
4	Insulation shoes	-	
5	Adjustable wrench	1	

S/N	Tools	Num	Drawing
6	Art knife	1	
7	Cross screwdriver	1	
8	Electric drill Equipped with $\varphi$ 16mm drill bit	1	
9	Cable clipper	1	
10	Hydraulic clamp	1	

### 3.4.1 Unpacking the outer package of the cabinet

**WARNING:**

Proper movement and installation are necessary to ensure the proper operation of the equipment, and it is necessary to follow the operation instructions in the manual!

Tools required: herringbone ladder, claw hammer, art knife, protective gloves

1. With the help of the herringbone ladder, straighten the metal card on the top of the packing material with a claw hammer, and remove the upper cover plate. As shown in Figure 3.4.1-A.

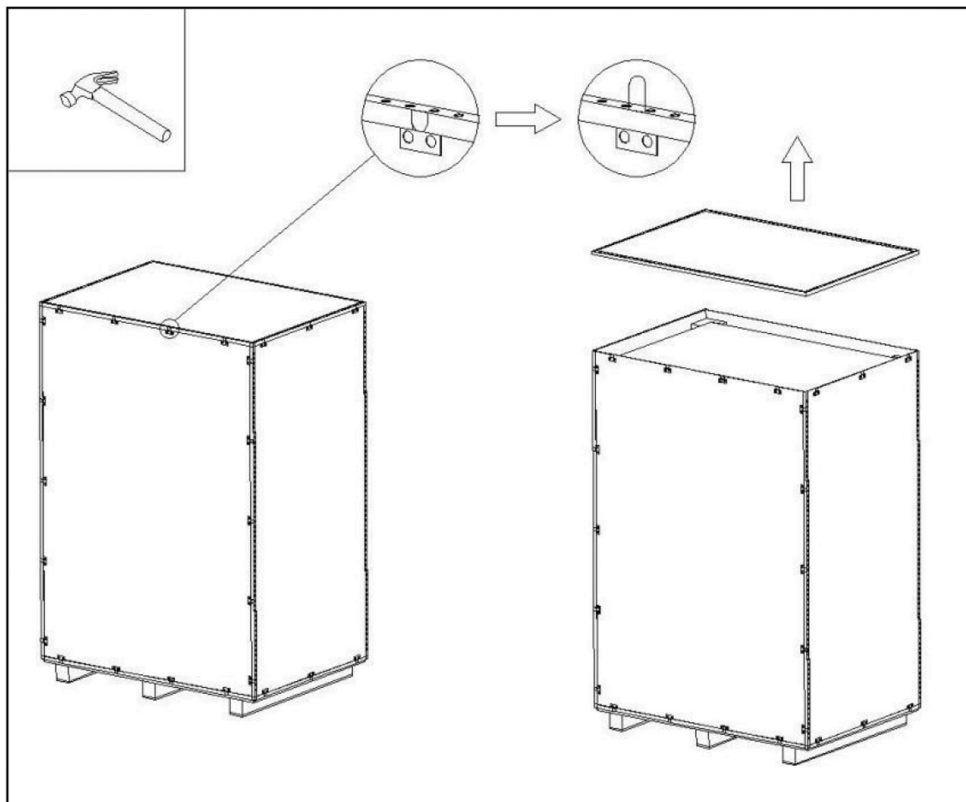


Figure 3.4.1-A

2. Straighten all metal cards with a claw hammer, remove the surrounding wood boards, cut the PE bags wrapped around the cabinet with the art knife, and remove the PE bags and foam. As shown in Figure 3.4.1-B.

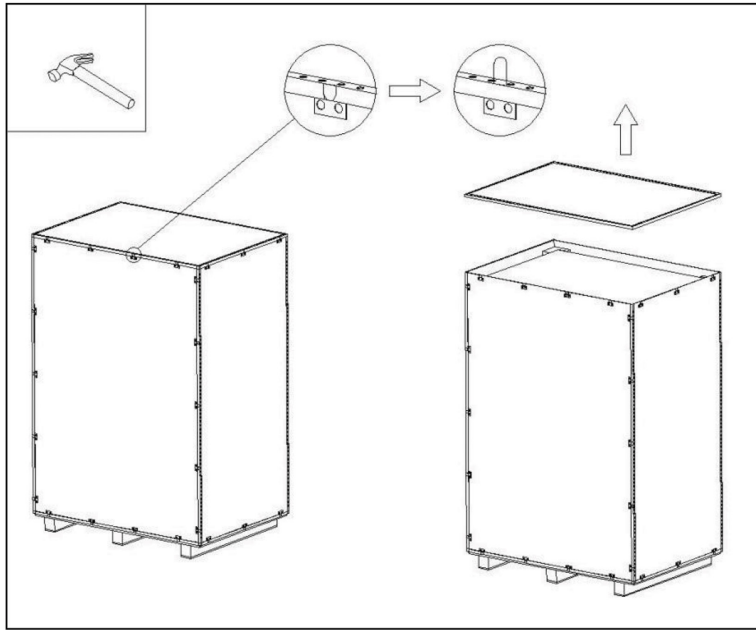


Figure 3.4.1-B

3. Remove the left and right sealing plates first, and then use a wrench to remove the four M15/32 inch(M12 mm) bolts around the base, as shown in Figure 3.4.1-C.

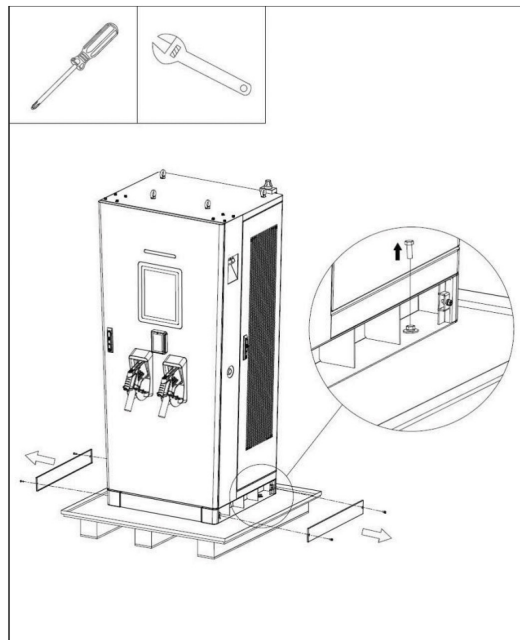


Figure 3.4.1-C

### 3.4.2 Foundation drilling

Tools required: electric drill,  $\varnothing$  5/8 inch(  $\varnothing$  16 mm) drill bit, protective gloves

1. The hole size is shown in Figure 3.4.2-A.

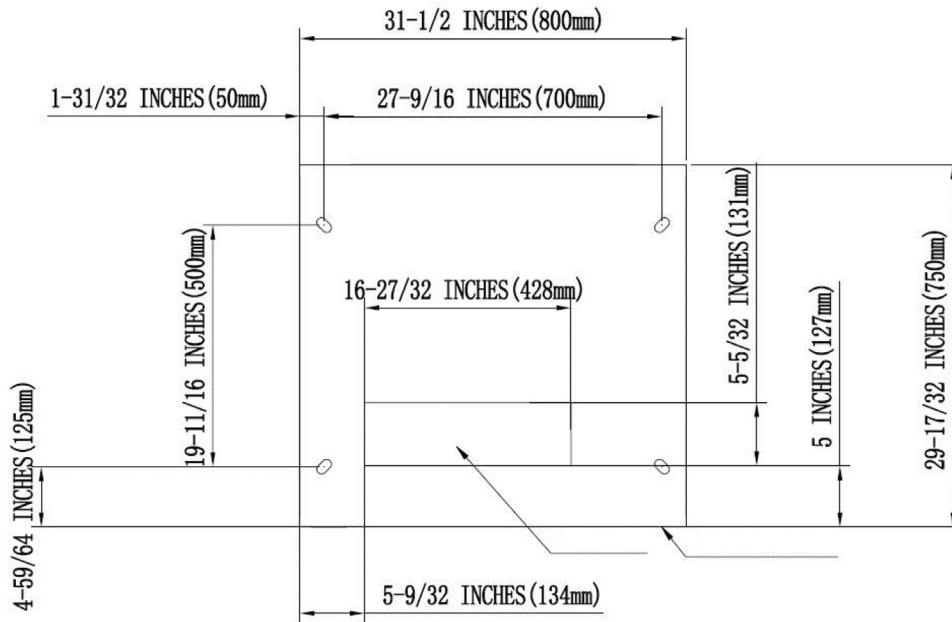


Figure 3.4.2-A

2. Drill four mounting holes with a diameter of  $\varnothing$  5/8 inch(16 mm) and a depth of 3-5/32~3-11/32 inches(80-85 mm) on the cement mounting base.

3. Knock four M15/32 \* 3-5/32 inches(M12 \* 80) expansion bolts into the holes with a claw hammer, and then screw out the screw part, so that the expansion bolt casing is embedded in the base mounting hole. As shown in Figure 3.4.2-B.

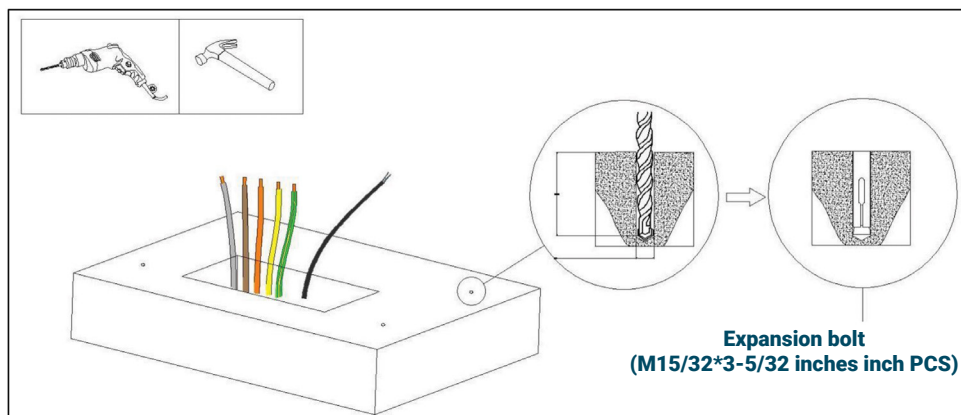


Figure 3.4.2-B



## 3.4.3 Placing charger

1. Use forklift to transport the cabinet to the installation base, and use the crane to lift the cabinet. It is shown in Figure 3.4.3-A.



**WARNING:**

Select a forklift or crane whose load matches the weight of the cabinet!

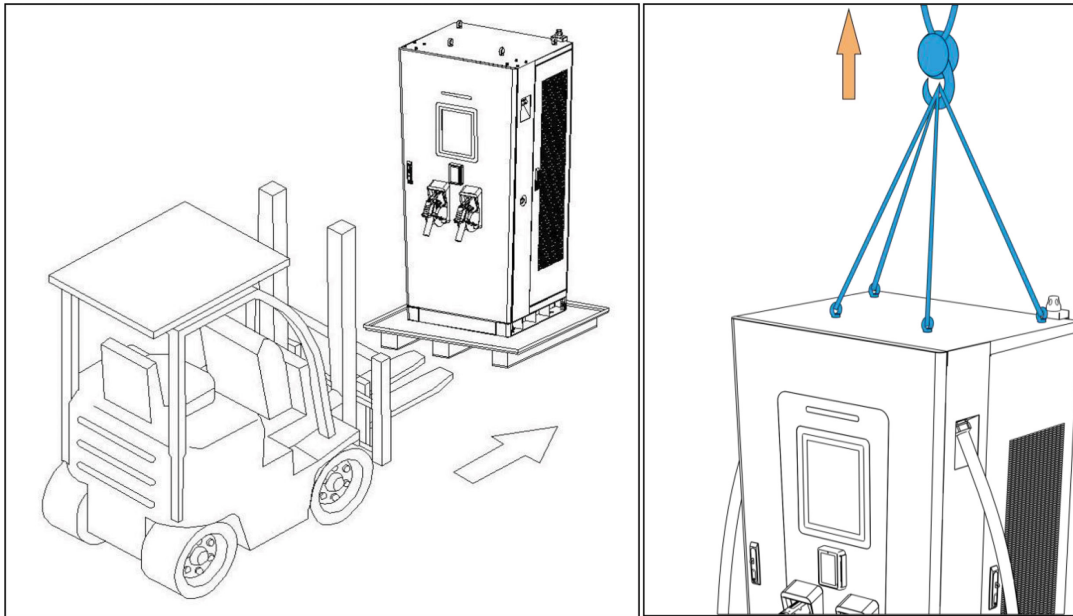


Figure 3.4.3-A

2. Suspend the cabinet above the cement base, open the front door of the cabinet, and extend the embedded cable from the bottom of the cabinet through the inlet hole (the rubber film of the inlet hole needs to be punctured). At this time, slowly lower the cabinet and pull the remaining cables out from the front door until the cabinet is completely placed on the base. As shown in Figure 3.4.3-B.

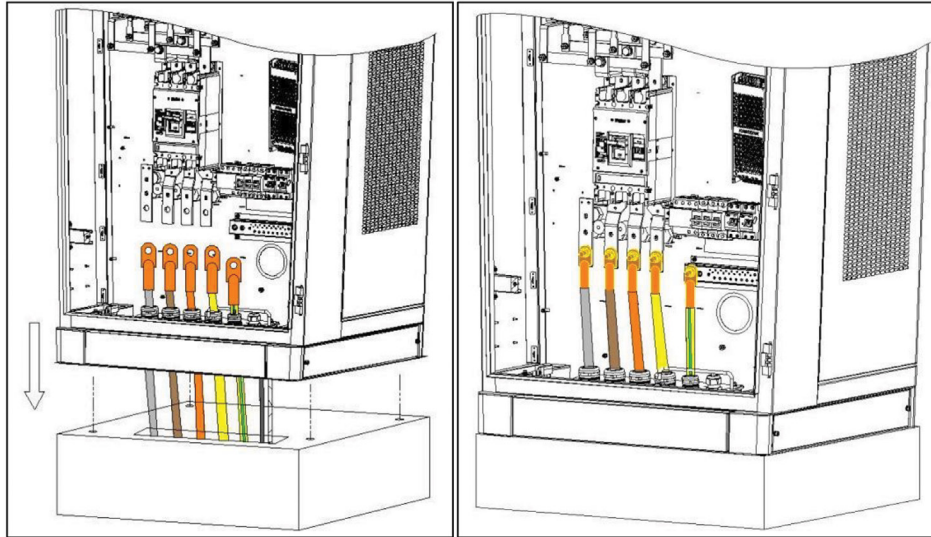


Figure 3.4.3-B

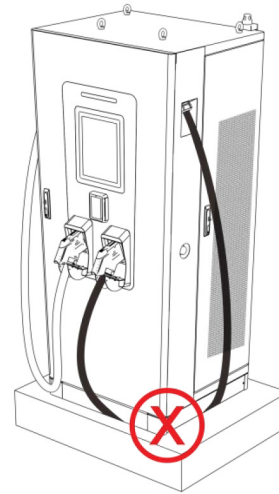
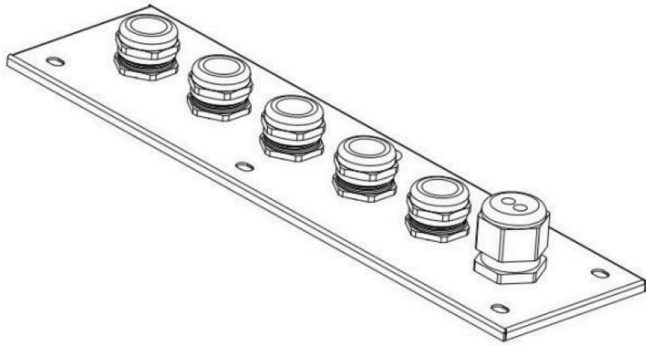
Note:

1. It is necessary to match the mounting hole of the cabinet base with the hole on the cement base;
2. The inlet cable sealing plate of the cabinet can be removed, but the protection coil shall be avoided from damage during the removal process. The inlet cable sealing plate is shown in Figure 3.4.3-C- (1).
3. During operation, please pay attention not to damage the cable and charging connector wire. As shown in Figure 3.4.3-C-(2).



**WARNING:**

Avoid damaging the charging connector during installation!



(1) The inlet cable sealing plate is removable

(2) Do not press the charging connector cable

Figure 3.4.3-C

3. Install M15/32 \* 3-5/32 inches(M12 \* 80) (4 pcs)expansion bolts on the drilled installation holes around the base, and tighten the bolts to ensure the cabinet is fixed reliably, as shown in Figure 3.4.3-D.



**ATTENTION:**

The torque of these bolts is 376.36 ~ 438.80 in-lbs (434~506 kgf.cm).

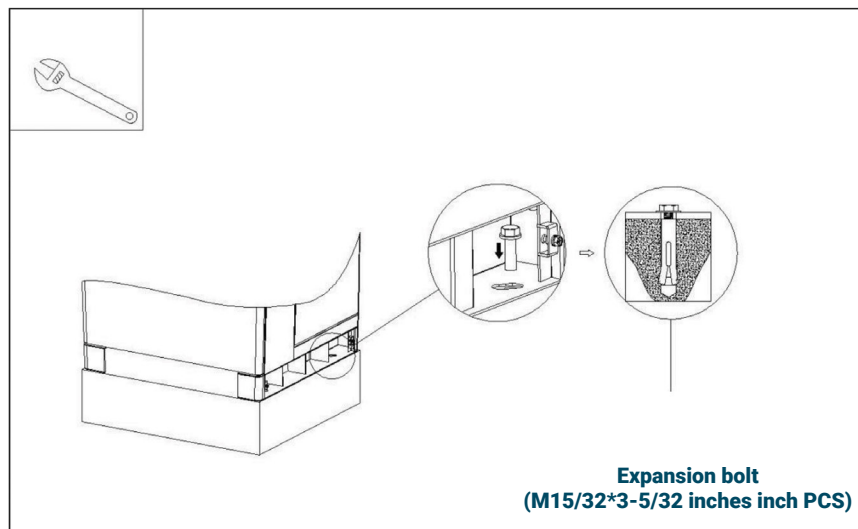


Figure 3.4.3-D

4. Install the left and right sealing plates as shown in Figure 3.4.3-E.

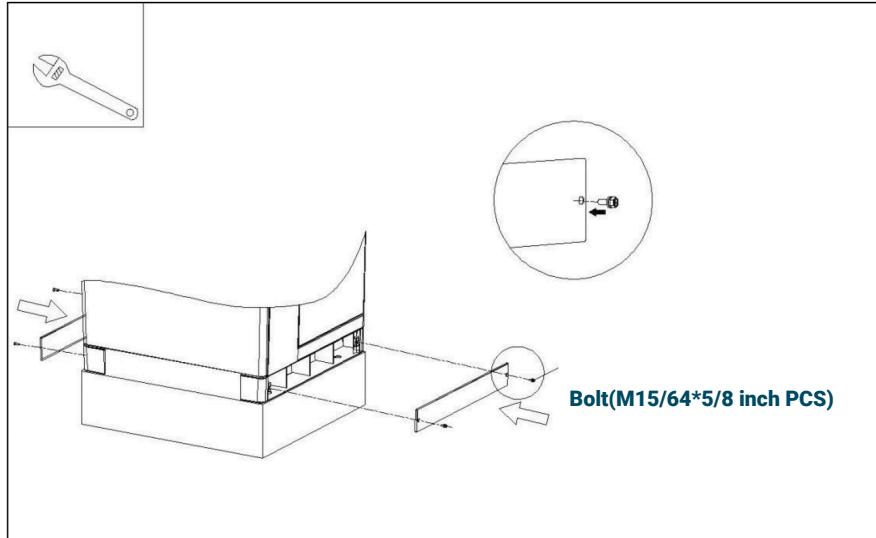


Figure3.4.3-E

### 3.4.4 Internal wiring diagram of equipment

1. Use the cable clipper to cut the cable to the appropriate wiring length, press the lug with hydraulic clamp and put on the heat shrinkable tube.
2. Fix the cable lug on the copper bar with the screw of M(25/64)/M(5/16) inch(M10/M8), the torque is 221-265.2 in-lbs(25-30N·m), and the force is calibrated, as shown in Figure 3.4.4.

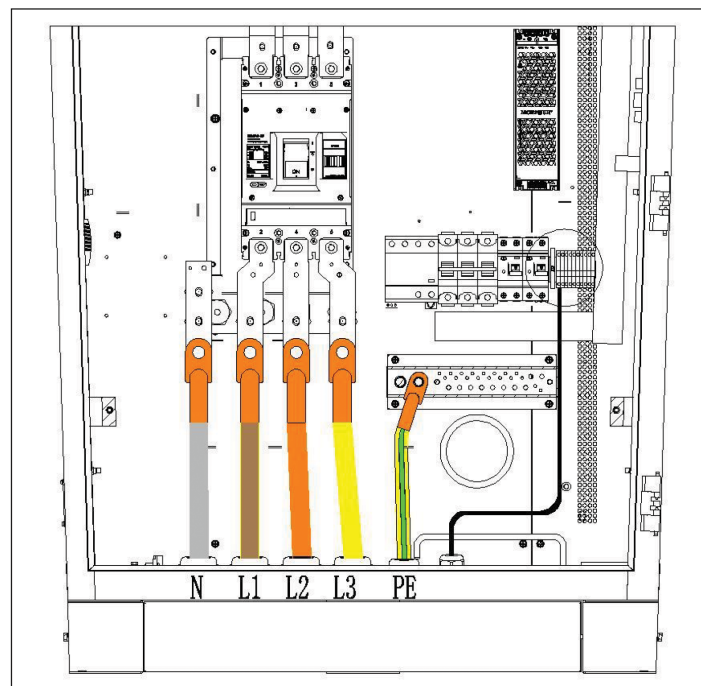


Figure 3.4.4

### 3.5 Inspection after installation

#### 1. Tightness

According to the requirements of design and protection level, the junction between the inlet sealing plate and the inlet cable at the bottom of the cabinet must be sealed with fireproof mud to prevent insects or dirt from entering the cabinet.

#### 2. Stability

After the pile is installed, shake the cabinet from different directions, and there should be no obvious loosening and shaking.

#### 3. Clean up

- ▶ Dispose of all transportation and packaging materials in accordance with local regulations.
- ▶ Clean up the sundries inside and around the cabinet, such as small section of cable, binding tape, screw / nut, desiccant, etc. Do not leave installation tools on site or in the cabinet (record the type and quantity of tools to prevent omission).
- ▶ Wipe the insulation with anti-static cloth. Do not use any corrosive solvent.

#### 4. Inspection

- ▶ Check whether the base is fixed and sealed.
- ▶ Check whether the internal components of the equipment are tight and reliable.
- ▶ Check whether the electrical connection and wiring are correct and complete, whether the connection is reliable, and whether the grounding is reliable.
- ▶ Check whether the cable terminal is loose, and calibrate the screw fixing the terminal.
- ▶ Check whether the cable is broken, damaged and scratched.
- ▶ Check whether the protection level of the equipment meets the requirements, especially the cable entrance at the bottom of the pile.
- ▶ Check appearance, marking, integrity, cleanliness.
- ▶ Check the installation of the equipment according to the foundation installation drawing.

## 3.6 Special instructions

Need to place the charging connector on the storage device after charging is complete.  
As shown in Figure 3.6.

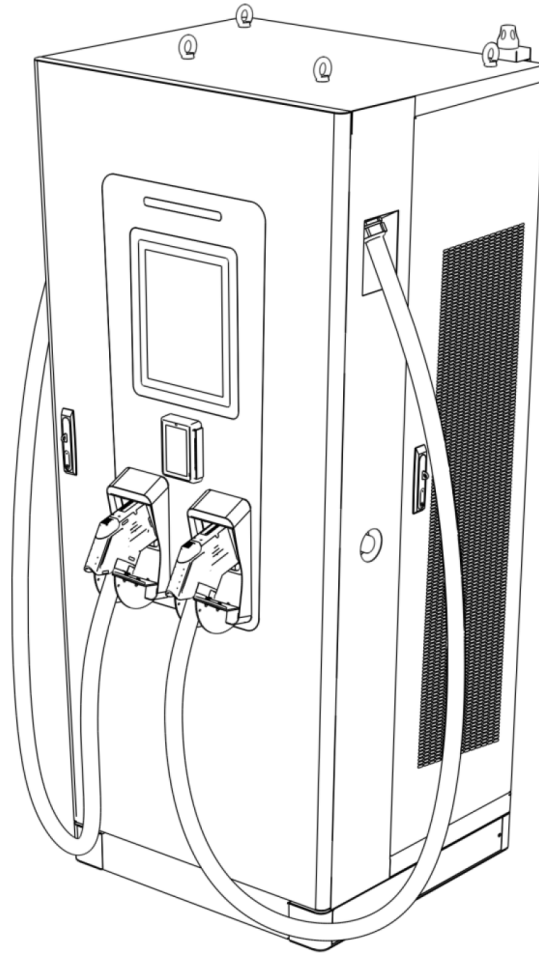






Figure 3.6

## 4-OPERATION INTERFACE

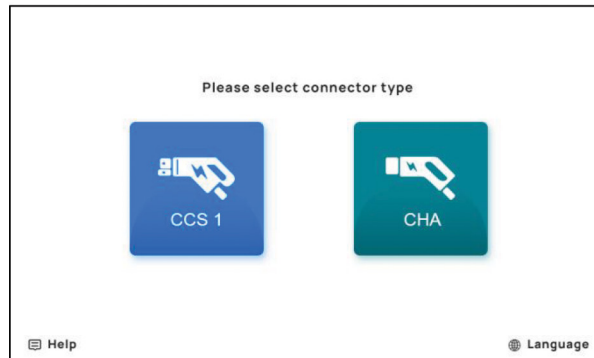
### 4.1 Notes before charging

SYMBOL	DESCRIPTION
	Before charging, make sure that the charger system is in a normal state.
	Before charging, make sure that the charging cable is not damaged, and the charging connector is free of water. If the charging connector gets water, do not charge directly.
	Before charging, the user should fully read the User Manual and be familiar with the safety operation instructions to prevent dangerous operations.
	Before charging, the user should be familiar with the charging operation steps to prevent improper operation.

## 4.2 Charging process

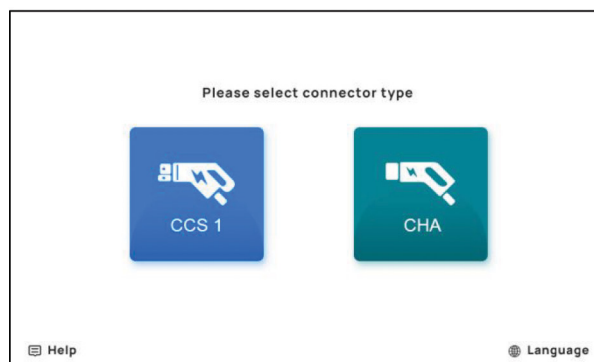
**Note:** when the charger is in standby mode, the screen is in the energy-saving mode. Before operation, touch the screen with your finger to light up the screen! The screen has been split, which can be used for advertising below the operation interface.

### 4.2.1 Standby interface



Tip: 1. Select CCS1 connector or CHA connector according to the socket type of the car. The following is the process of selecting CCS1, and the CHA steps are consistent with CCS1.  
2. Click "language" in any interface to switch the language mode of the UI. At present, Chinese, English and Korean are supported.

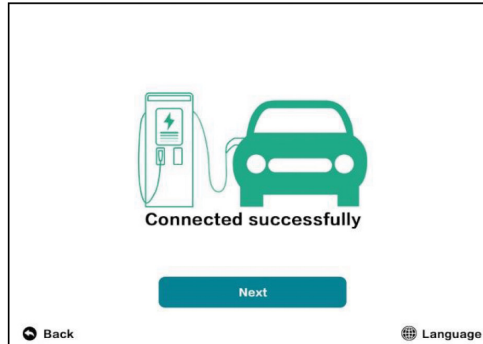
### 4.2.2 Waiting for connector insertion interface



Tip: connecting the connector to the car will jump to the connector insertion interface.

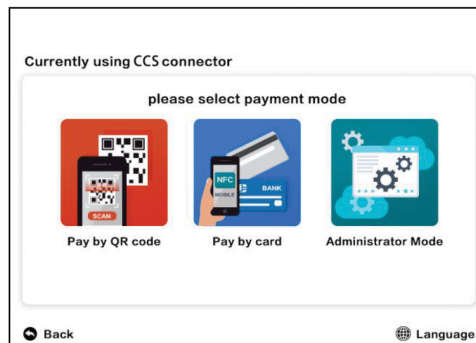


## 4.2.3 Connecting interface



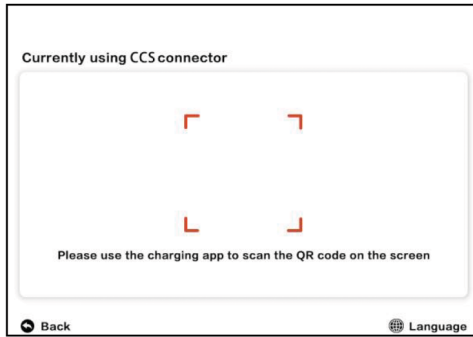
Prompt: click next to enter the interface of charging mode selection.

## 4.2.4 Select charging mode interface

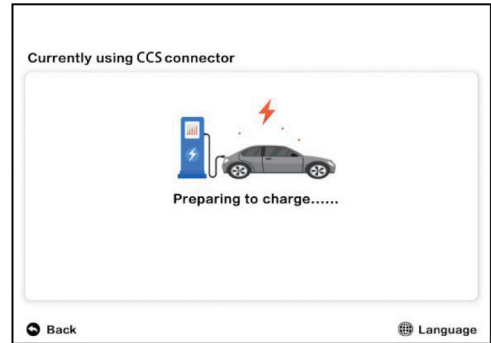


Notice: click the payment method you want to enter the next charging operation.

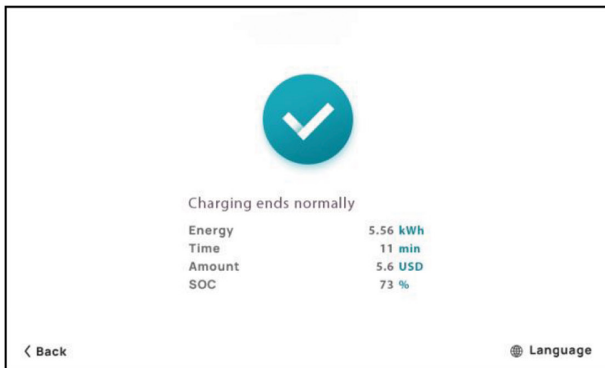
## 4.2.5 Code scanning charging interface process



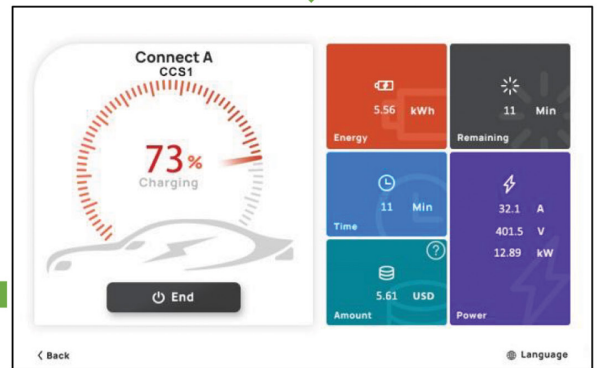
Scan the QR to enter the start charging interface .



Charging interface



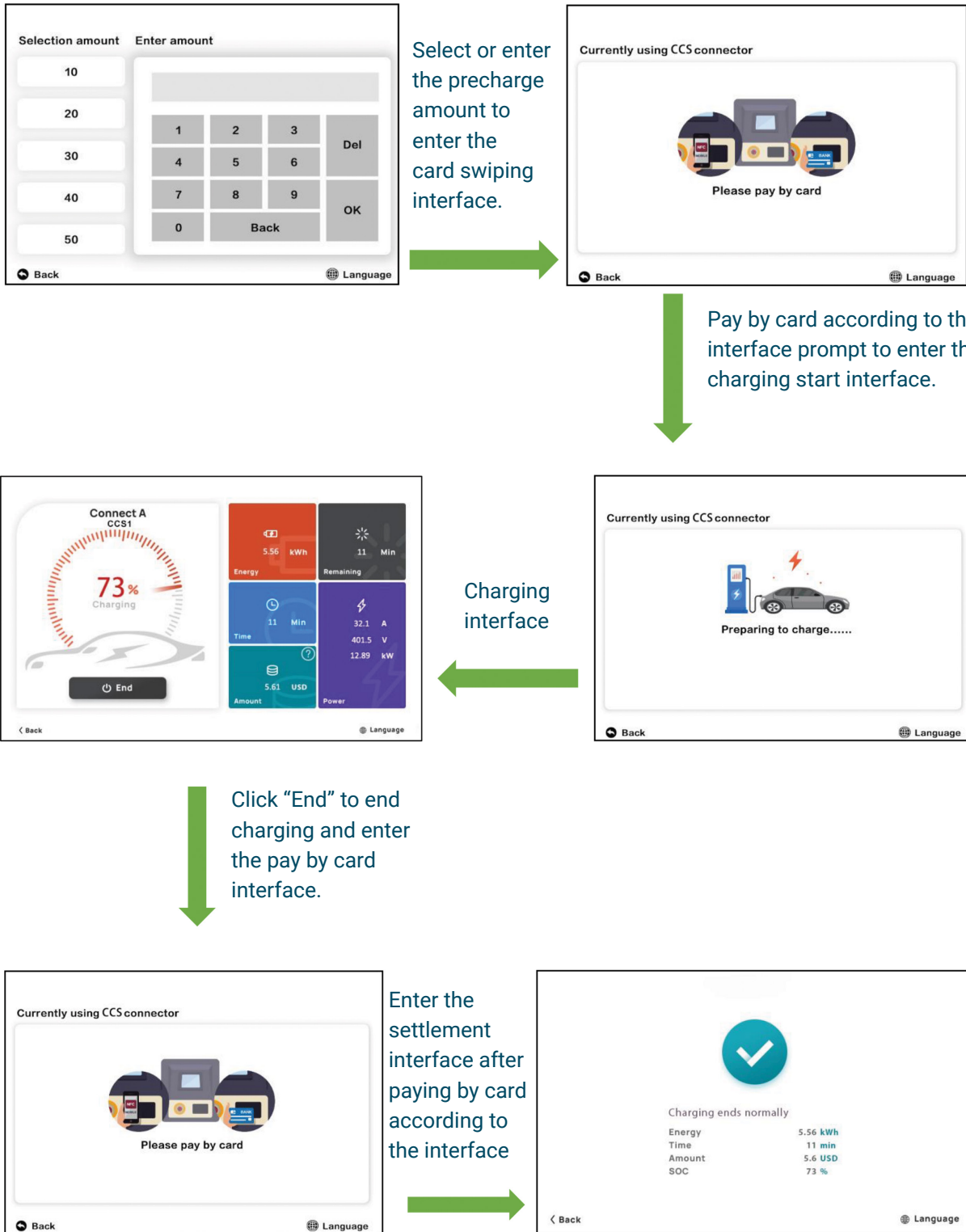
Click "End" to end charging and enter the settlement interface .



Tip: after charging, click back. If the other charging connector is in charging state, it will jump to the charging interface of the other charging connector, otherwise it will jump to the main.

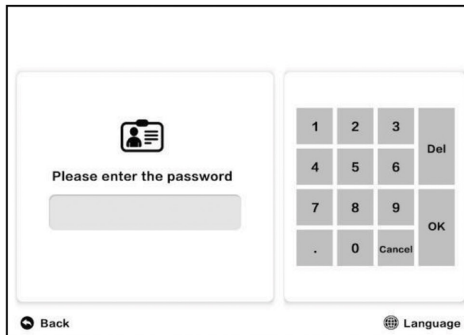
# ChargeX

## 4.2.6 Interface process of pay by card charging

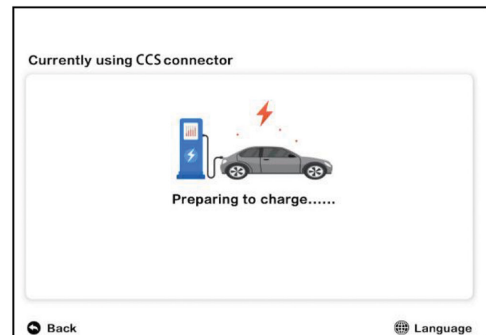


# ChargeX

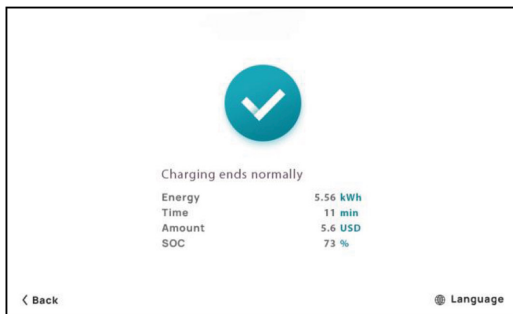
## 4.1.7 Password charging interface process



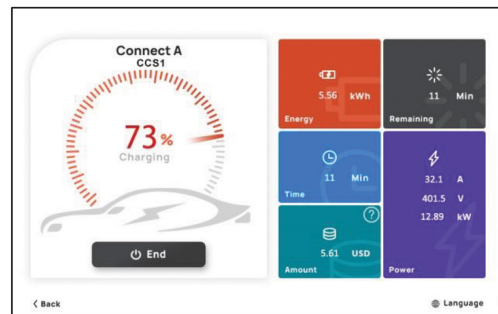
Enter the password to enter the start charging interface.



Charging interface



Click "End" to end charging and enter the pay interface.



Tip: click the input box to pop up a small keyboard. Enter the complete password through the keyboard and click OK to verify the password. After passing the verification, it will jump to the password start charging interface (password setting: administrator > Settings > MCU > function > offline charging password).

## 5-SIMPLE TROUBLESHOOTING

### Analysis and treatment of common faults

Refer to the maintenance manual for detailed treatment

Error code	Name of alarm or fault	Processing method
7	Lightning protection failure	<ul style="list-style-type: none"> <li>• Check the status of lightning arrested. If the visual window of lightning protection is red, it means it is damaged, please replace it.</li> </ul>
1	Emergency stop fault	<ul style="list-style-type: none"> <li>• Please check whether the emergency stop button is pressed and not pulled out. If the fault has been solved, please pull up the emergency stop button.</li> </ul>
11	Over temperature protection of air outlet	<ul style="list-style-type: none"> <li>• Please check whether the air duct of the system is blocked and whether there is too much dust on the dust screen.</li> <li>• Please check whether the air outlet fan of charger works normally. If the fan fails, please replace the fan.</li> </ul>
32	Access protection	<ul style="list-style-type: none"> <li>• Please check whether the cabinet door is completely closed;</li> <li>• Confirm that the door is closed, but the alarm still appears. Please check the status of the micro switch. If it is damaged, please replace it.</li> </ul>
20	Charging module failure	<ul style="list-style-type: none"> <li>• Check the module fault code, confirm the fault type and find the fault cause.</li> <li>• Pull out the fault module and replace the spare module.</li> </ul>
3	RCD action	<ul style="list-style-type: none"> <li>• It is necessary to check whether there is insulation fault in the circuit at the back end of RCD;</li> <li>• Check whether the casing is reliably grounded.</li> </ul>



#### **NOTICE:**

in order to prevent personal electric shock accident, all switches of the equipment and front-end power distribution switch of the equipment shall be disconnected during fault detection and treatment, and protective measures shall be taken.

## 6-AFTER-SALES SERVICE

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**If you have any questions or problems, please contact Power Q**

Before contacting the equipment supplier:

- **Please check the troubleshooting measures in the chapter “5. Simple troubleshooting”.**
- **Please record the model and serial number of the equipment (name plate of the equipment) and the failure time.**

## Appendix A---Module Group Number Setting Guide

240 kW Front View	
M6(G0 A6)	M5 (G0 A5)
M4 (G0 A4)	M3 (G0 A3)
M2 (G0 A2)	M1 (G0 A1)

200 kW Front View	
M6(G0 A6)	M5 (G0 A5)
M4 (G0 A4)	M3 (G0 A3)
M2 (G0 A2)	M1 (G0 A1)

160 kW Front View	
M6(G0 A6)	M5 (G0 A5)
M4 (G0 A4)	M3 (G0 A3)
M2 (G0 A2)	M1 (G0 A1)