



# Energy that moves you



## Safety And Protection

- Comply with the latest leakage protection standard
- Multiple protection to ensure the users safety
- IP54 & IK10 (display is IK08)

## Intelligent control

- OCA listed brand, comply with the latest OCPP protocol standard
- Various payment method, such as Credit card / RFID / Apps etc
- Support the most popular communication method, such as Bluetooth / Wifi / Ethernet / 4G

## High Efficiency

- Economic DC Charger, Low Investment and high returning
- Equipped with high performance components, DC Charger power factor up to 98% and 95% charging efficiency



Parameter type	Description	QUANTUM1E		QUANTUM1U
Input	Power Supply	3P+N+PE		
	Rated voltage	400VAC±10%		480VAC±10%
	Frequency	50/60Hz		
	THDi	≤5%		
	Efficiency	≥95%		
	Power Factor	≥0.98		
Output	Connector Type		CCS1/CCS2/GBT	
	Voltage		150-1000VDC	
	Maximum Current	100A		125A
	Power Rating	30kW		40kW(Custom)
	Voltage Accuracy		≤0.5%	
	Current Accuracy		≤±1%	
General	HMI		4.3-Inch Touchscreen	
	Payment Method		RFID Card,APP	
	Cable Length		5m	
	Network Connection		Cellular modem:4G LAN:10/100 Base-T Ethernet	
	Communication Protocol		OCPP 1.6J	
	Operating Noise Level		≤75dB	
	Ingress Rating		IP54	
	IK Rating		IK10	
	Power Meter		Accuracy Class 1.0 energy meter	
	Enclosure		Galvanized steel, surface sprayed with anti-corrosion paint	
	Place of Installation		Indoor / Outdoor	
	Product Dimension(W*D*H)		650*160*550mm	
	Package Dimension(W*D*H)		808*748*438mm	
	Protection		Over Current,Under Voltage, Over Voltage,Short Circuit, Surge Protection,Over Temperature, Ground Protection	
			Residual Current	/
	Certification Standard		EN/IEC 61851-1, EN/IEC 61851-23, EN/IEC61851-24, IEC62196-1,IEC62196-3	
Environmental	Operating temperature		-30°C~+50°C	
	Storage temperature		-40°C~+75°C	
	Maximum Installation Height		≤2000m	
	Operating Humidity		5%~95% RH	

# Safety and Compliance

**Save these instructions. Read the manual before installation or usage of device.**

- 1) Do not put tools, material or other parts into the electric vehicle connector.
- 2) Do not use the DC EV charger if the cabinet, power cord or charging cable are frayed, have broken insulation or show any other signs of damage.
- 3) Do not install or use the DC EV charger if the enclosure is broken, cracked, opened or shows any other indications of damage.
- 4) The DC EV charger should be installed only by a qualified technician.
- 5) Make sure that the materials used and the installation procedures follow local building codes and safety standards.
- 6) The information provided in this manual in no way exempts the user of responsibility to follow all applicable codes or safety standards.
- 7) The manufacturer is not responsible for physical injury, damage to property or damage to equipment caused by the installation of this device.
- 8) This document provides instructions for the DC EV charger and should not be used for any other product. Before installation or use of this product, you should review this manual carefully and consult with a licensed contractor, licensed electrician or trained installation expert to make sure of compliance with local building codes and safety standards.

## Warning



**Hazardous voltage that gives risk of electrocution**



**General risk**



**PE**

**The input and output voltages of this device are high voltage, which threaten human life safety. Please strictly observe all warnings on the device and user manual. Unauthorized and non-professional service personnel are forbidden to remove the cover of this device.**

# 1 Product Introduction

## 1.1 Product Description

The DC EV charger is the top choice for powering battery electric vehicles (BEV) and plug-in electric vehicles (PHEV) today. It is designed for quick charging in both public and private locations, such as retail and commercial parking spaces, fleet charging stations, highway service areas, workplaces, residences, etc.

## 1.2 Product Characteristic



### 4.3 Inch LCD Display

LCD screen can display the real-time charging status, including time, voltage, current, power and temperature.

### Convenient operation

Customers can get the convenience of full start and stop charging control through mobile phone Bluetooth or authorized RFID smart card.

### IP54

Carries an outdoor rating capability of withstanding solid and liquid intrusions in outdoor settings, making the unit more stable and highly reliable.

### High intelligence

Powerful information collection, transmission and communication functions, supporting Bluetooth, Ethernet, 4G and WIFI wireless communication.

### Easy to install and use

The installation process is simple, payment is convenient and fast, supports mobile application software or IC card swiping. Fully compatible with all EV in the market .

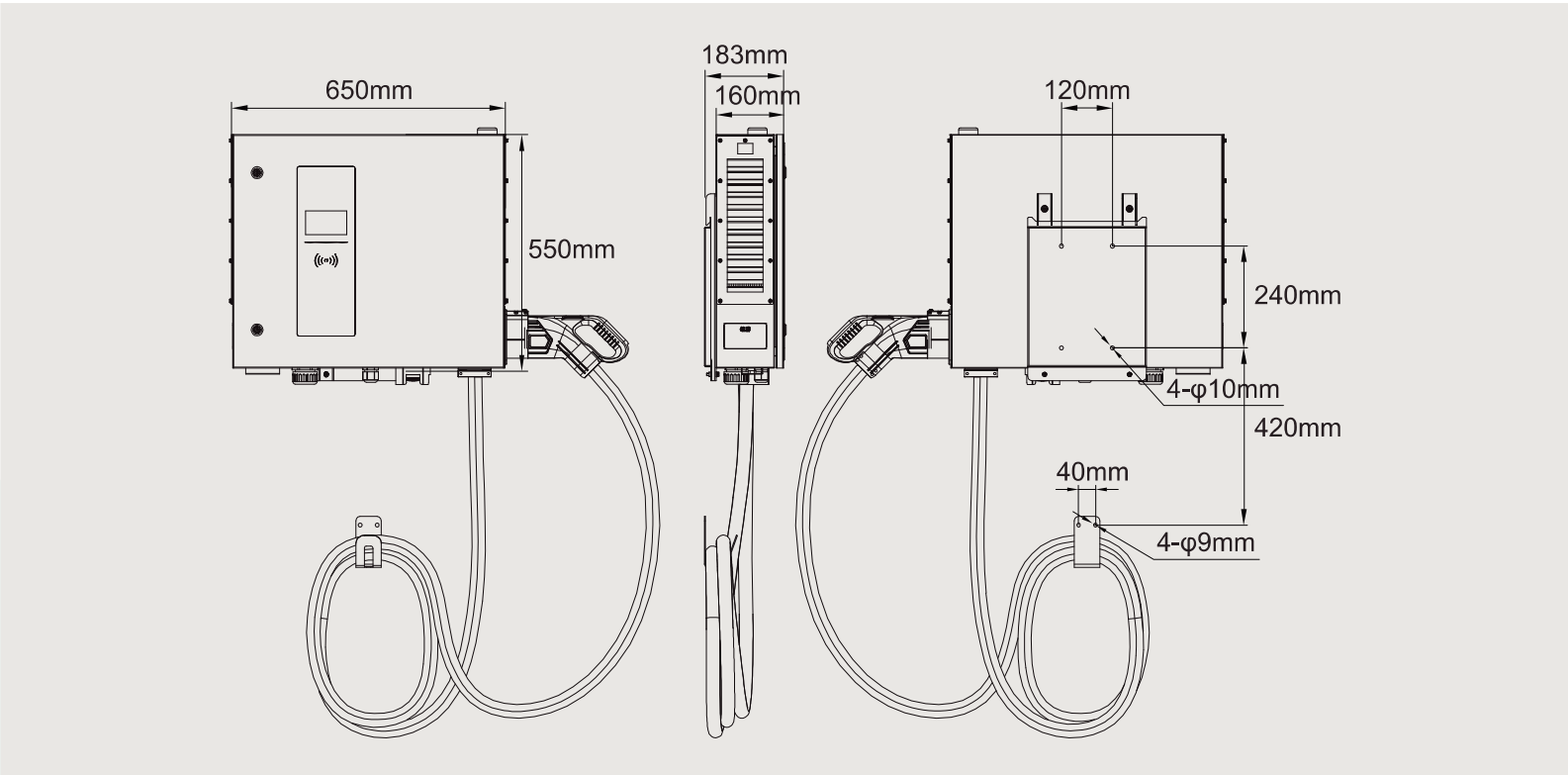


1.3 Product Technical Specifications

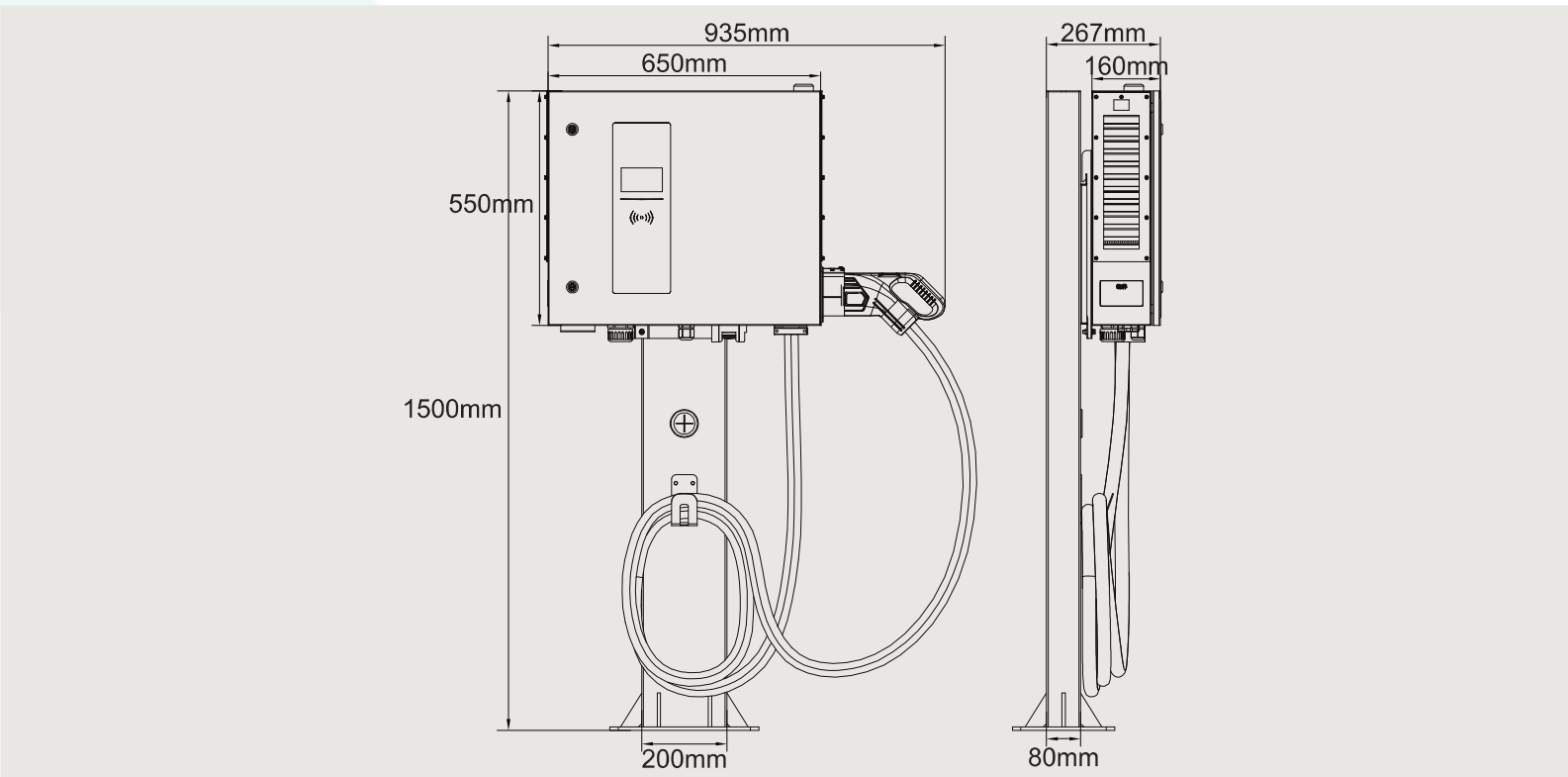
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	Maximum Current	100A	125A	
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General	HMI	4.3-Inch Touchscreen		
	Payment Method	RFID Card,APP		
	Cable Length	5m		
	Network Connection	Cellular modem:4G LAN:10/100 Base-T Ethernet		
	Communication Protocol	OCPP 1.6J		
	Operating Noise Level	≤75dB		
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	Power Meter	Accuracy Class 1.0 energy meter		
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		Residual Current	/	
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Environmental	Operating temperature	-30°C~+50°C		
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	Maximum Installation Height	≤2000m		
	Operating Humidity	5%~95% RH		

1.4 External Structure

Wall Mounting



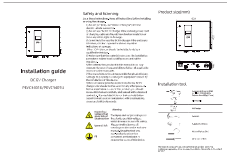


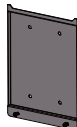

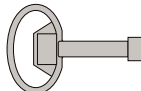





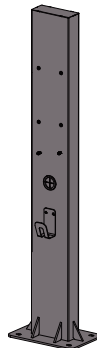
Column Mounting



1.5 Package Contents

Unpack the product. Please check and verify following items after receiving the charger:

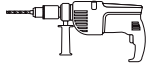





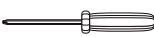
- 1) Visual inspection on charger's external appearance. If there is any breakage or other damage, please notify the seller immediately.
- 2) Check type and quantity of all accessories as follows. If there is a shortage in the quantity of any items or if any items are missing, please contact the seller at once.

General parts				
				
Installation guide (x1)		RFID card (x2)	Certificate (x1)	
				
Bracket (x1)		Combination screw M6×25 (x2)	Key (x2)	Ring terminal SC16-6(x5)
Wall Mounting		Column Mounting		
				
Hook (x1)	Expansion bolt M8×70 (x6)	Combination screw M8×20 (x4)	Expansion bolt M12×100 (x4)	Column (x1)

2 Installation Instruction

2.1 Installation Preparation

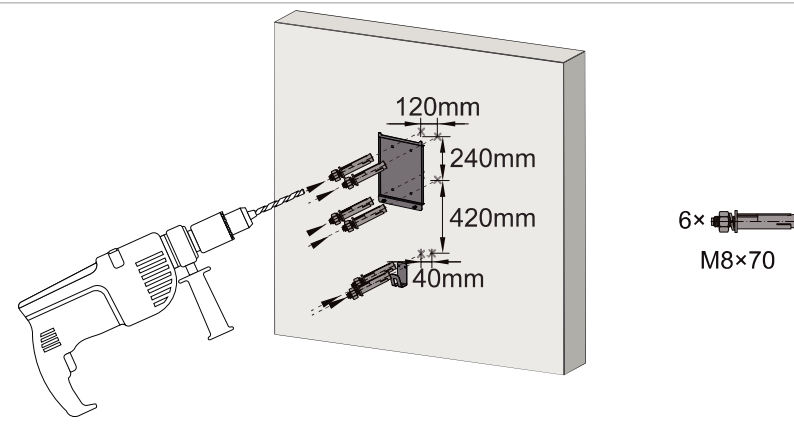
Please prepare the following tools before installation:

	Hammer drill and drill bit (Wall Mountingφ8mm/ Column Mountingφ16mm)
	Electric drill
	Multimeter
	Hammer
	Adjustable wrench
	Measuring tape(5m)
	Cross screwdriver

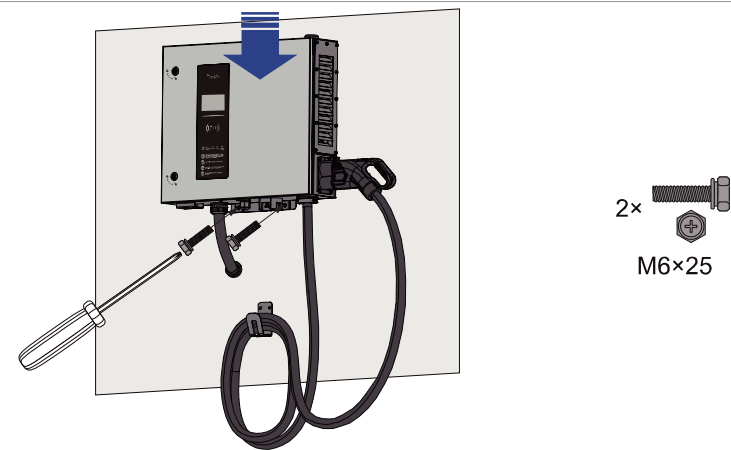
⚠ Installation Notice

- Electrical devices should only be installed, operated, and maintained by qualified technician. No responsibility is assumed by the manufacturer for any consequences arising out of the use of this device.
- When installing wires, do not turn on the power supply.
- The length of the power cable and communication cable should be properly reserved to facilitate installation and connection.
- Pay attention to protect the charger enclosure during installation to prevent bumping, scratching the surface, etc.
- The charger must be installed vertically, and the deviation of any direction from the vertical position should not exceed 5°.
- The cross sectional area of the L1/L2/L3/N copper wires should not be less than **16mm<sup>2</sup>**.
- The cross sectional area of the power grid's protective earthing (PE) conductor shall have a cross-sectional area not less than **16mm<sup>2</sup>** in copper.

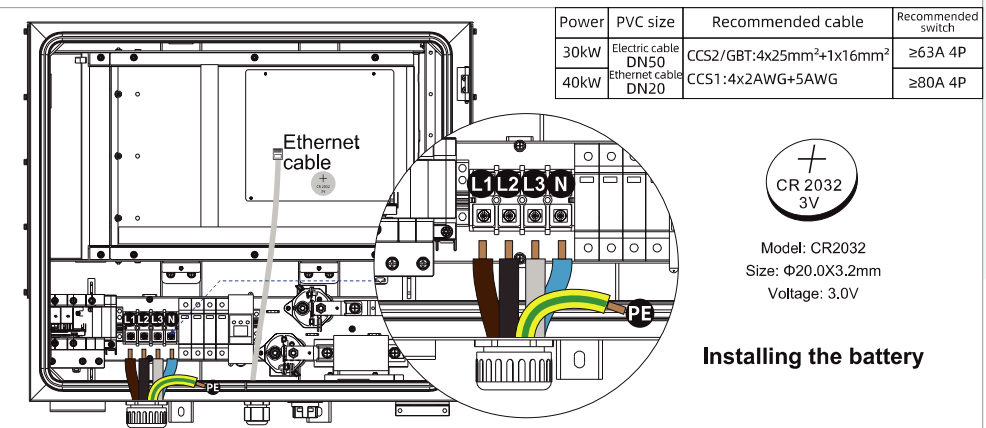
## 2.2 Wall Mounting Process



1) Use the bracket and hook to mark drill holes, Mount bracket and hook onto the wall. Use the expansion bolts in the accessory kit or choose proper mounting screws for different types of wall. A drilling machine might be needed for certain conditions.

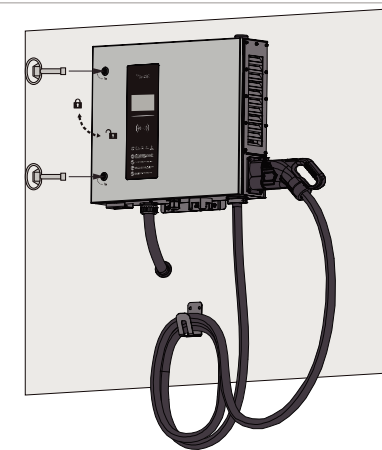


2) Place charger onto bracket. Align the back chassis of the charger with the corresponding slot on the bracket. Slowly slide down the charger until it sits firmly on the bracket. Fasten two screws from the bottom.

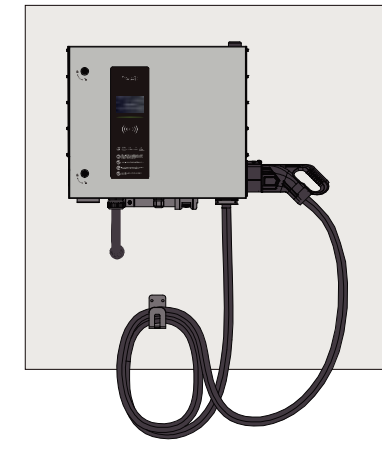


3) Pass the power cable through the bigger cable gland, crimp power terminal from the end of the power cable to be connected to the internal circuit breaker. Connect the ground wire(PE), neutral wire(N) and each phase(L) to the AC input configuration board. Connect the Ethernet cable to the motherboard via a PG connector.

## 2.2 Wall Mounting Process



4) Lock the charger cover with the key.



5) Complete installation and start to test and charge.

## 2.3 Column Mounting Process

Power	PVC size	
30kW/40kW	Electric cable	DN50
	Ethernet cable	DN20

1) Make concrete platform, mark the holes position of installation column and drill holes.

2) Install expansion bolts in the base mounting holes. Fix the column on the concrete platform with expansion bolts(x4).

3) Install the bracket on the column.

4) Place charger onto bracket.Align the back chassis of the charger with the corresponding slot on the bracket. Slowly slide down the charger until it sits firmly on the bracket. Fasten two screws from the bottom.

## 2.3 Column Mounting Process

Power	PVC size	Recommended cable	Recommended switch
30kW	Electric cable DN50	CCS2/GBT:4x25mm <sup>2</sup> +1x16mm <sup>2</sup>	≥63A 4P
40kW	Ethernet cable DN20	CCS1:4x2AWG+5AWG	≥80A 4P

5) Pass the power cable through the bigger cable gland, crimp power terminal from the end of the power cable to be connected to the internal circuit breaker. Connect the ground wire(PE), neutral wire(N) and each phase(L) to the AC input configuration board, Connect the Ethernet cable to the motherboard via a PG connector.

6) Lock the charger cover with the key.

7) Complete installation and start to test and charge.

# 3 Configuration and Operation

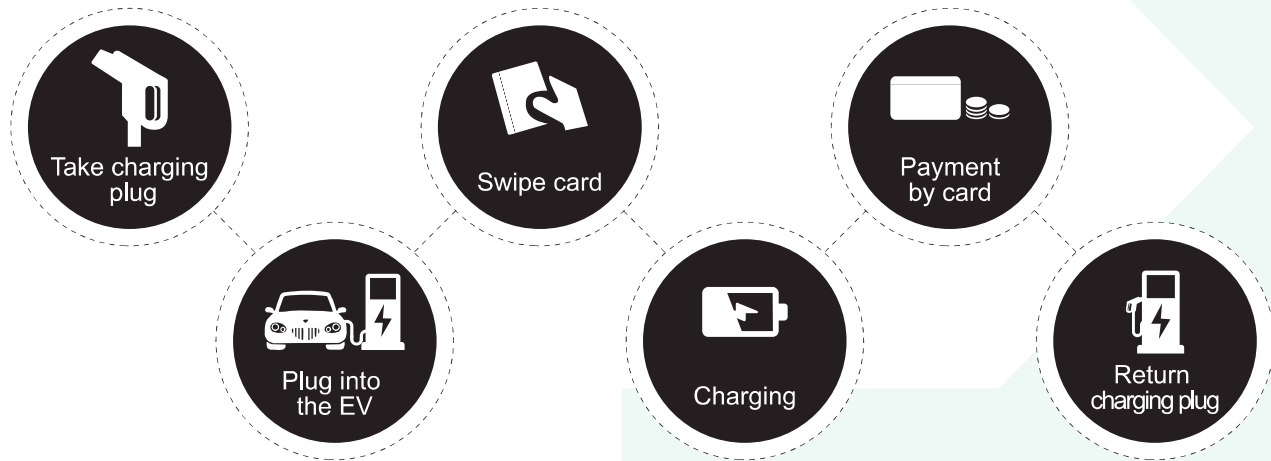
## 3.1 Power-on Checking

Please check / re-check the following items prior to initial Power-on:

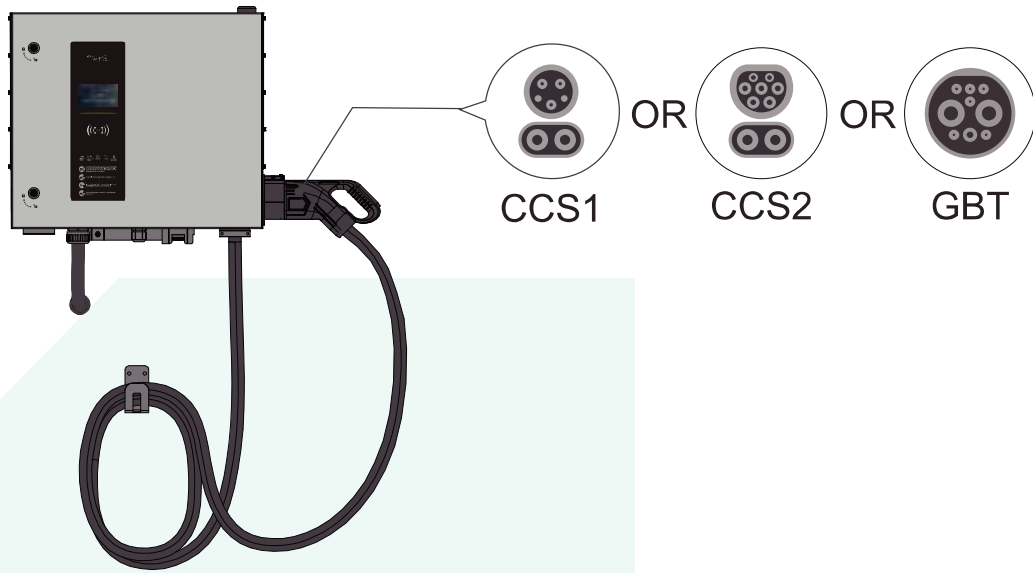
- 1) The location of the charger should be convenient for operation and maintenance.
- 2) Before installation of the charger, ensure that the AC input component in the power supply is properly installed with the required protection.
- 3) Double confirm the charger is installed properly.
- 4) No components or other items have been left inside of the charger.

## 3.2 Start and stop charging by your charge card

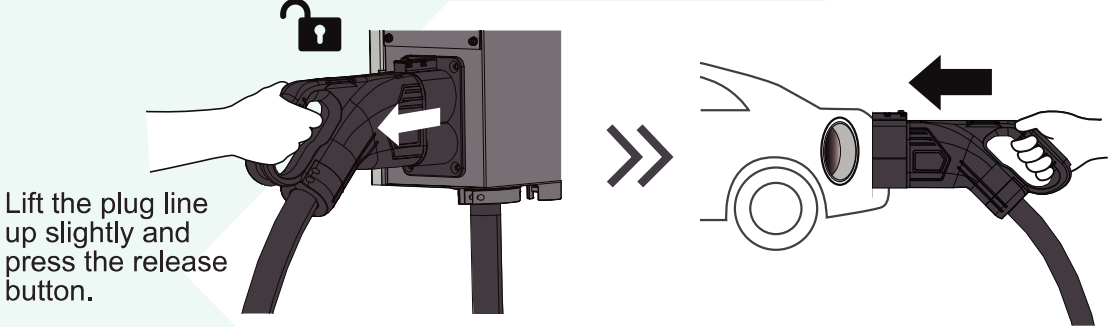
Operation



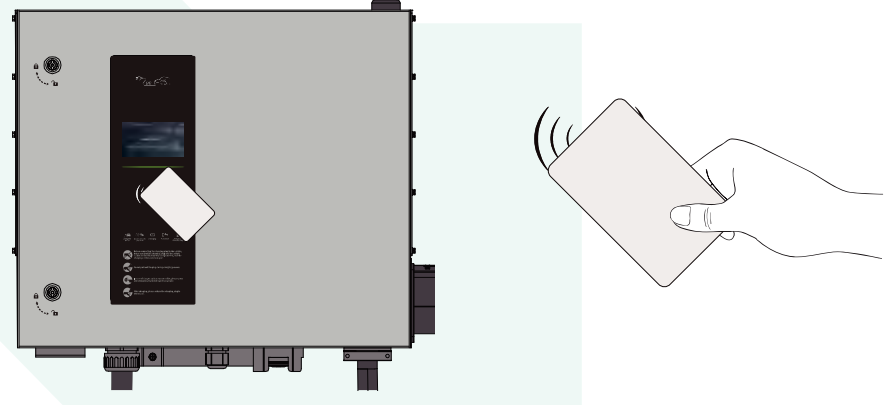
1) Choose a compatible plug (CCS).



2) Connect the plug to the EV.

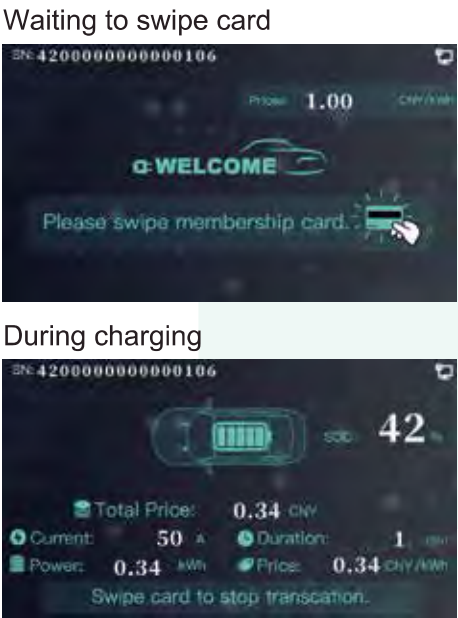


3) Swipe the authorized RFID card to start charging. The authorized RFID can be use directly without any activation or setting.

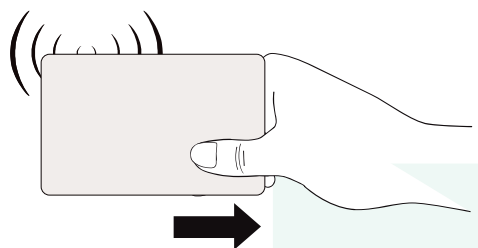




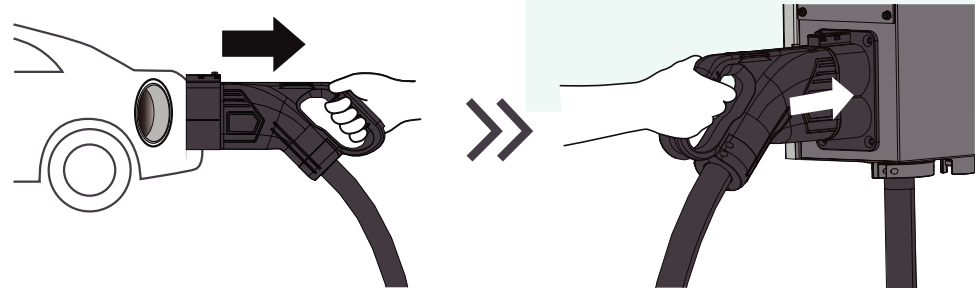
4) Once charging commences, status information is displayed on the screen. The following illustrations demonstrate the start to near complete charging procedure.



5) Swipe the authorized RFID card to stop.




6) Return the plug to the holder.



### 3.3 Start and stop charging by APP(Bluetooth)

Please Download APP and read "Bluetooth APP Operation Instructions" for more information.

#### Step 1 Download APP



Apple APP



SINO ENERGY




Android APP




SINO

1. Download the APP either by scanning the QR code or from the Apple / Android APP Store.

#### Step 2 Version select




2.1 Version Select:home charger select Home version and non household charger select Pro version.



2.2 Version Select confirm.

#### Step 3 Bluetooth connect



3.1 Turn on the phone's bluetooth. You can click Scand code icon(scand charger QR code) to connect charger or click Add new device icon to enter the search page. If you have used it before, you can click the head directly to select the device to connect.




3.2 After entering the search page, find the available Bluetooth devices, and then click connect icon.



## 4 Indication and Fault

### 4.1 Indicator Status

	LED Light Status	Description of Charging status
	Green	Standby state
	Blue Blinking	Ready state
	Blue	Charging state
	Red	Error state

### Step 4 Verify a user login



4.1 Please enter the correct password to login in. The initial password is 4567. Change the password after successful login. You should remember the password because it is very important for you next time log in charger and APP. Modify path: Modification-->Devicie parameters-->Change Password



4.2 If the connection and password is correct, it will login in the home page.

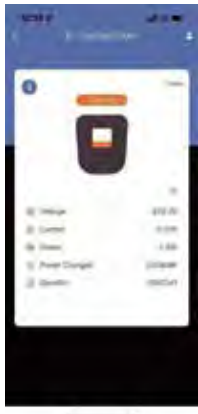
### Step 5 Start charging



5.1 Connect your EV car with the charger gun.



5.2 Click the start charging icon and start charging.



5.3 Click on the startup information icon to display charging information in real-time.

### Step 6 Stop charging



6.1 Click the stop charging icon will stop charging, then unplug the gun to complete the charging.

### Fault status



The fault code table is detailed in 4.2

## 4.2 Fault Code and Resolution

LCD display		
Fault Code	Fault Status	Troubleshooting suggestion
01	RTC fault	Please contact after-sales service.
11	Electric meter fault	The communication failure of the electric meter may be caused by the disorder of the address of the electric meter or the abnormal communication line.
02	Card reader fault	Check whether the connecting cable of the card reader is loose.
03	Lightning Err	Please check whether the SPD is normal, if damaged, please replace it in time.
04	EPO fault	Reset emergency stop button.
05	Over voltage alarm	Check whether the input voltage of the equipment is too high.
06	Under voltage alarm	Check whether the input voltage of the equipment is too low.
07	FRAM fault	Please contact after-sales service.
08	Flash fault	Please contact after-sales service.
10	Lean alarm	Check whether the charge point is tilted.
15	Guard fault	Check whether the door of charge point is open.
14	Module comm fault	Please check whether the module communication is interrupted and whether the module itself is normal.
13	Over temperature alarm	Stop using for a period of time and wait for the equipment to return to the normal temperature range and restart.

Notes: In light of product hardware upgrades, certain models have undergone partial functionality removal.

Bluetooth APP display		
Fault Code	Fault Status	Troubleshooting suggestion
0x0001	RTC fault	Please contact after-sales service.
0x0002	Electric meter fault	The communication failure of the electric meter may be caused by the disorder of the address of the electric meter or the abnormal communication line.
0x0004	Card reader fault	Check whether the connecting cable of the card reader is loose.
0x0008	Lightning Err	Please check whether the SPD is normal, if damaged, please replace it in time.
0x0010	EPO fault	Reset emergency stop button.
0x0020	Over voltage alarm	Check whether the input voltage of the equipment is too high.
0x0040	Under voltage alarm	Check whether the input voltage of the equipment is too low.
0x0080	FRAM fault	Please contact after-sales service.
0x0200	Flash fault	Please contact after-sales service.
0x0400	Lean alarm	Check whether the charge point is tilted.
0x0800	AC switch fault	Please contact after-sales service.
0x2000	Guard fault	Check whether the door of charge point is open.
0x4000	Module comm fault	Please check whether the module communication is interrupted and whether the module itself is normal.
0x8000	AC power down	Check whether the input voltage of AC side is normal.

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