

LEDVANCE PHASE EV

Installation Guide



 1-800-LIGHTBULB (1-800-544-4828)
www.ledvanceUS.com (US & Canada)

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INSTRUCTIONS PERTAINING TO A RISK OF FIRE OR ELECTRIC SHOCK

IMPORTANT SAFETY INSTRUCTIONS

Please Read All Instructions Before Attempting Installation

- ☒ **WARNING: TO AVOID FIRE, SHOCK OR DEATH, TURN OFF POWER** at the circuit breaker or fuse and test that the power is off before wiring! Do not remove circuit protective devices or any other component until power is turned off.
- ☒ **WARNING: TO AVOID FIRE, SHOCK OR DEATH,** carefully read the charging instructions in your vehicle's manual before charging and heed the following warnings:
- ☒ **DO NOT** put your fingers into the vehicle connector.
- ☒ **DO NOT** use this product if the flexible power cord is frayed, has broken insulation or any other signs of damage.
- ☒ **DO NOT** use this product if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage.
- ☒ **WHEN USING THIS DEVICE AROUND CHILDREN,** supervise closely.
- ☒ **TO REDUCE THE RISK OF FIRE, CONNECT ONLY TO A CIRCUIT PROVIDED WITH BELOW AMPERES** maximum branch circuit over-current protection in accordance with the National Electrical Code NFPA 70, and the Canadian Electrical Code, Part I, C22.1.

Models	Circuit Breaker Rating
EVC48ALVL2C1, EVC48ALVL2C1WH, EVC48ALVL2C1GY	60A

- ☒ **WHEN USING THIS DEVICE AROUND CHILDREN,** supervise closely.

SAVE THESE INSTRUCTIONS

1 ABBREVIATIONS

S/N	Abbreviations	Description
1	EV /PHEV	Electrical Vehicle, this can be BEV (battery EV) or PHEV (plug-in hybrid EV)
2	EVSE	Electric Vehicle Supply Equipment
3	kW	Kilo Watt (unit of Power)
4	A	Ampere (unit of Current)
5	V	Volt (unit of Voltage)
6	Hz	Hertz (unit of Frequency)
7	RFID	Radio Frequency Identification

2 SAFETY NOTES

The following warning labels and precautions are used in this manual on and in AC electric vehicle chargers:

WARNING

This product can expose you to chemicals known to the State of California to cause cancer or birth defects or other reproductive harm. For more information, go to www.p65Warnings.ca.gov.

NEED HELP?

1-833-692-6787

WARNING

This device is intended only for charging vehicles not requiring ventilation during charging. This device contains arcing or sparking parts that should not be exposed to flammable vapors. This equipment should be located at least 18 inches above the floor. Do not use this device with an extension cord.

CAUTION

Risk of electric shock. Do not remove cover or attempt to open the enclosure. No serviceable parts inside. Refer servicing to qualified service personnel. Do not use this product if there is any damage to the unit.



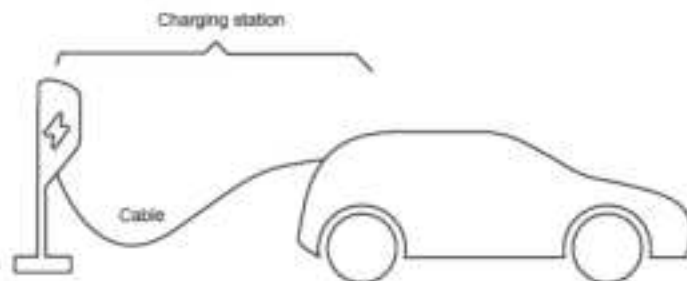
3 STANDARDS COMPLIANCE

3.1 Standard(s) for safety

Conformito UL 2594

3.2 Charging connection method

The charging connection is shown in the figure below:



4 PRODUCT INFORMATION

4.1 General

Welcome to use our AC EVSE

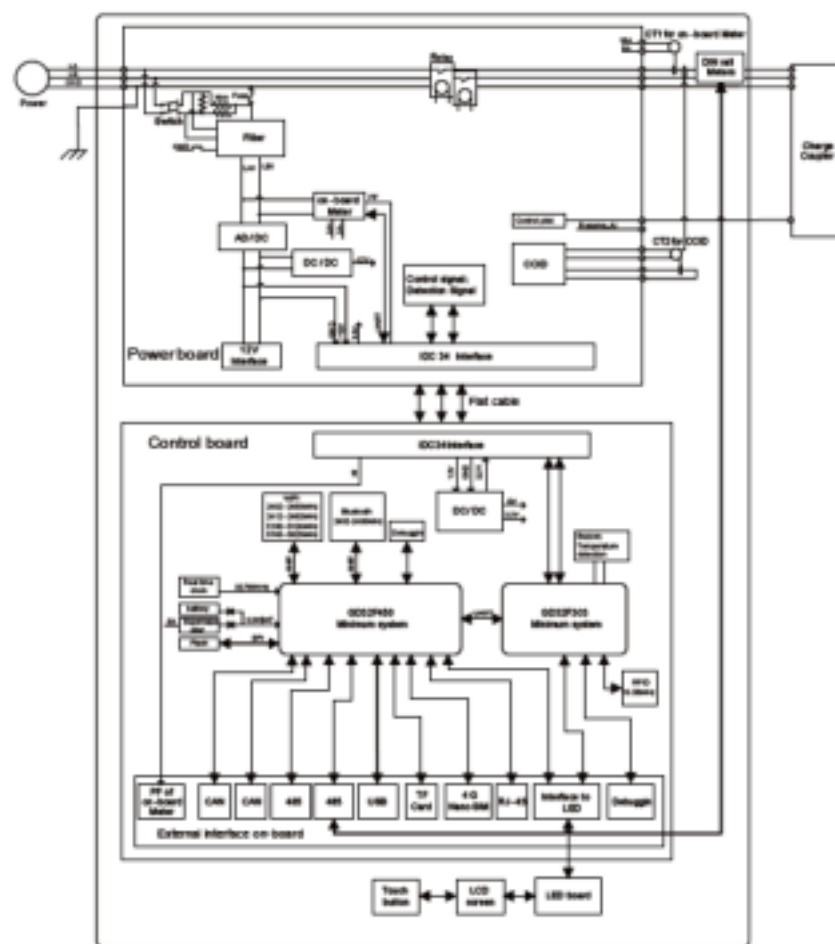
4.1.1 Shape & dimensions

The shape and dimensions of the AC EVSE, as shown below:



4.1.2 Block diagram

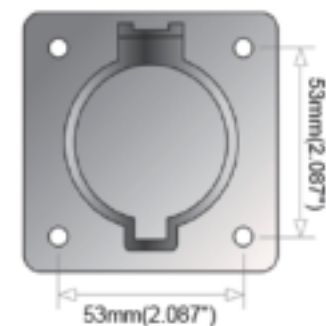
The EVSE block diagram is as follows:



It is widely used in various household electric vehicle charging in North America, as well as various chargers, parking lots, community garages and public electric vehicle charging places.

4.2 Empty socket

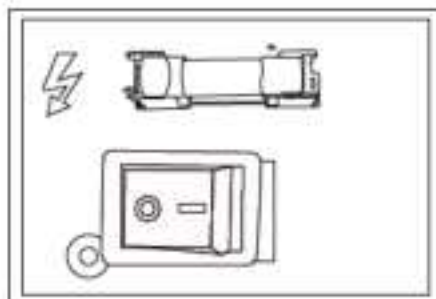
- The AC EVSE is equipped with a US standard automotive end charging connector.
- When the EVSE is in standby mode, protect the car-side charging connector by plugging it into an empty socket.
- Use the mounting screws to secure this empty socket in the appropriate location next to the EVSE.



5. OPERATION

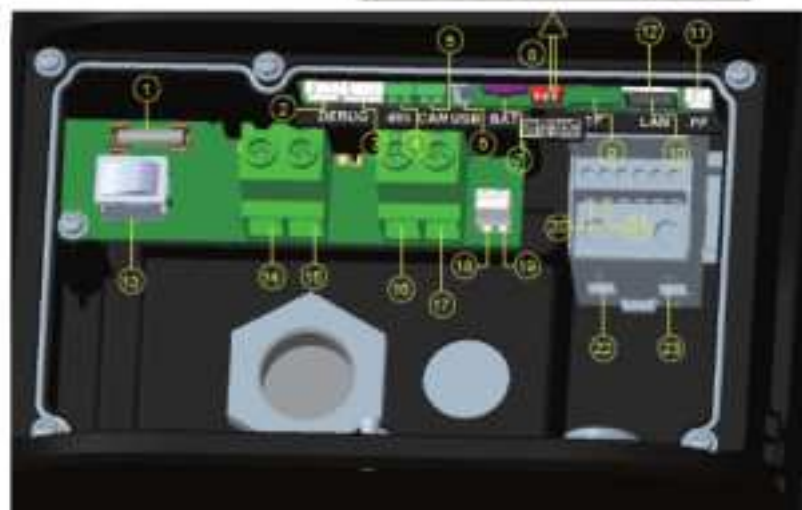
5.1. Power on

1. Check whether the main board power supply switch is disconnected, and the fuse exists and has been installed. - Shown as follows:



2. Power supply to this product closed and turn on the main board power switch; observe whether the product's power-on interface is normal.

5.2. About interfaces



NO	Name	functions	Specification
1	Fuse	Safety Protection	5*20, 250V/AC, 10A
2	Debug serial port	Not open	
3	Download interface	Not open	
4	485 interface	Undeveloped	
5	CAN interface	Undeveloped	
6	USB interface	Undeveloped	
7	Coin cell battery	Clock power supply storage	CR1220
8	Dip switch Control	See picture 1 for setting method ,rated current setting	See picture 1 for setting method ,rated current setting
9	TF card holder	undeveloped	Micro SD
10	Ethernet interface(RJ45)	Internet connection	100Mbps
11	PF pulse interface	Meter calibration	Optocoupler output, external pull-up resistor
12	SIM card interface	Internet connection	4G Nano SIM
13	Power switch	Power control	
14	Input L1	Power input	AC 208/240V 50/60Hz
15	Input L2	Power input	AC 208/240V 50/60Hz
16	Input GND	Power input	
17	Cable GND	Power output	
18	Reserved interface		
19	CP interface	Charging control guide	
20	RS485 interface A	Meter communication	
21	RS485 interface B	Meter communication	
22	Cable L2	Power output	Depending on input
23	Cable L1	Power output	Depending on input

6.2 Config WiFi network(currently no APP)

Internet configuration via WiFi and OCPP Authpass.

The parameters for configuring the charger with a laptop are described below as an example. (The method of setting parameters with a cell phone is similar and will not be repeated).

Step 1: Connect to a WiFi hotspot.

Keep your laptop in a state where it can connect to Wi-Fi hotspots. Power on the charger. Locate a hotspot with the name "Longhorn" and connect to it without a password. (If you do not find a hotspot with the name "Longhorn", restart the power to the charger).

Step 2: Login to Settings.

Open a web browser on your laptop, preferably using Google Chrome or Microsoft Edge, and fill in the IP address "192.168.4.1" in the address bar of the browser. Press enter and go to the EVSE CONFIGURATION LOGIN web page. (Note: Microsoft Internet Explorer cannot be accessed).



Step 3: Configure your electric vehicle charger

Fill in the default password "12345678" to enter this page. The first time you login to this page, please change to a new login password.

EVSE CONFIGURATION

Advanced Options	User Options
Serial Number: 9885233079195	WiFi SSID:
OCPP Version: OCPP1.6J	WiFi Password:
OCPP Server: www.fortelsystem.com/ocpp1.6j/ocpp1.6j	Plug and Play: Disable
OCPP AuthPass: 0	Share Current: 0
Connect Alternative Server: YES	Modbus Address: 0
New password: Enter a new password of 1 to 8 characters	
Enter password again	
Network Setting	Advanced Options
DHCP: On	Serial Number: 9885233079195
Static IP: 192.168.4.100	OCPP Version: OCPP1.6J
Static Gateway: 192.168.4.1	OCPP Server: www.fortelsystem.com/ocpp1.6j/ocpp1.6j
Static Mask: 255.255.255.0	OCPP AuthPass: 0
4G APN:	Connect Alternative Server: YES
4G USER:	New password: Enter a new password of 1 to 8 characters
4G Password:	Enter password again
	Network Setting
	DHCP: On
	Static IP: 192.168.4.100
	Static Gateway: 192.168.4.1
	Static Mask: 255.255.255.0

Fill in the name of the hotspot and the password of your WiFi router on the webpage, click the "SAVE" button to save the settings, and click the "RESTART" button to restart the charging station to make the settings take effect. Once it takes effect, the charging station can access the Internet through your WiFi router.

6.3 Operation guide

Method 1: Swipe card charging

- ① Plugging the charging connector into the AC charging socket of the electric vehicle (User can swipe the card first and then insert the gun)



- ② After swiping the card in the card swipe area, the user hears A "tick" sound, the card is swiped successfully(RFID card to start and stop charging)



- ③ When the vehicle is ready, start charging



- ④ Settlement on mobile phone when charging is complete Payment (no billing for domestic piles)



- ⑤ When finished charging, unplug the charging plug and insert it into an empty socket(Possibility of unusual draws during charging)



Mode 2: Charging by appointment (operational installation)

- ① Book a charging station via mobile phone



- ② After the reservation user has swiped the code or swiped the card at the swipe area, he/she will hear a "drop", so unlock the card.



- ③ Plugging the charging connector into the AC charging socket of the electric vehicle (User can swipe the card first and then insert the gun)



- ④ After swiping the card in the card swipe area, the user hears A "tick" sound, the card is swiped successfully(RFID card to start and stop charging)



- ⑤ When the vehicle is ready, start charging



- ⑥ Settlement on your mobile phone when charging is complete Payment

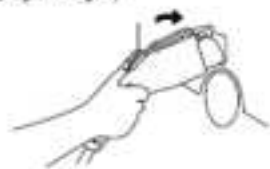


- ⑦ When finished charging, unplug the charging plug and insert it into an empty socket(Possibility of unusual draws during charging)



Mode 2: Charging by appointment (home installation)

- ① Plugging the charging connector into the AC charging socket of the electric vehicle (Users can make a reservation or swipe a card and plug in the gun)
- ② Book a charging station via mobile phone



- ③ After swiping the card in the card swipe area, the user hears A "tick" sound, the card is swiped successfully(RFID card to start and stop charging)
- ④ When the vehicle is ready, start charging



- ⑤ When finished charging, unplug the charging plug and insert it into an empty socket(Possibility of unusual draws during charging)



Mode 3: Plug and Play

- ① Plugging the charging connector into the AC charging socket of the electric vehicle
- ② When the vehicle is ready, start charging



- ③ Settlement on mobile phone when charging is complete Payment (no billing for domestic piles)
- ④ When finished charging, unplug the charging plug and insert it into an empty socket(Possibility of unusual draws during charging)



Method 4: Scan and Charge

- ① Plugging the charging connector into the AC charging socket of the electric vehicle



- ② Users scan the code via mobile phone



- ③ User determined charging



- ④ When the vehicle is ready, start charging



- ⑤ Settlement on mobile phone when charging is complete Payment (no billing for domestic piles)



- ⑥ When finished charging, unplug the charging plug and insert it into an empty socket (Possibility of unusual draws during charging)



Mode 5: Remote start/stop

- ① Plugging the charging connector into the AC charging socket of the electric vehicle



- ② Charging is initiated remotely by the user via mobile phone



- ③ User determined charging



- ④ When the vehicle is ready, start charging



- ⑤ Settlement on mobile phone when charging is complete Payment (no billing for domestic piles)



- ⑥ When finished charging, unplug the charging plug and insert it into an empty socket (Possibility of unusual draws during charging)



6.4 FAULT HANDLING

The charger is automatically protected when a fault occurs. Fault information and handling are as follows:

Fault code	Handling method
Code 11: CP failure	Check that the adapter is properly connected to the electric vehicle, pull and plug the adapter and try charging again
Code 13: Under voltage fault	Check that the input cable is reliably connected, that the parent grid is properly connected, and that the grid voltage is abnormal.
Code 14: Over voltage fault	Check whether the input cable is connected correctly; Whether the grid voltage is abnormal.
Code 15: Over temperature fault	Check whether the charging station is covered or installed in a high temperature environment.
Code 16: Meter failure	It is recommended to reboot on the power, there is a fault if you need to return to the factory.
Code 17: Leakage fault	Check whether the charging adapter and its cable are damaged or wet. Recover after pulling out the adapter.
Code 18: Short circuit fault	Check whether the charging adapter and its cables are damaged or wet.
Code 19: Over current fault	Check whether the charging adapter is correctly connected to the car, and check whether the on-board charger is normal
Code 23: Relay sticking fault	The equipment is damaged and needs to be returned to the factory for repair.
Code 24: Leakagecurrent device failure	Users need to re-plug the gun or contact the after-sales service.
Code 25: Ground fault	The charging pile is not grounded, so the circuit needs to be tested

7 INSTALLATION

7.1 Nameplate

On the EVSE case, there is a nameplate identifying the charger model and specifications, which reads as follows:



7.2 Unpacking

7.2.1 Packing list

Package	Quantity
Empty seat, American Standard, PA66+30% GF black standard 72mm(2.835")*72mm(2.835")*42mm(1.654"), installation hole distance 53mm(2.086")	1PCS
Empty seat soft rubber pad, 71mm(2.795")*71mm(2.795")*2.0mm(0.079"), silicone, black	1PCS
Hook, 120mm(4.724")*100mm(3.937")*2.5mm(0.098"), SPGC, powder coated, metallic silver, NC4802S, Han Ingot	1PCS
Self-tapping screws, plum with column, countersunk head self-tapping KA5mm(0.197")*40mm(1.575"), SUS304, black nickel plated, tamper-proof	8PCS
Rubber plug expansion tube, D6mm(0.236")*40mm(0.372"), nylon, yellow, small yellow fish, standard parts	8PCS
Expansion screw, external hexagon, expansion screw M6mm(0.236")*50mm(1.969"), stainless steel, expansion parts are 3 pieces of carbon steel with color zinc plating	3PCS
Electric drill head: plum head with medium hole T20-L25mm(0.984"), S2 alloy steel, nickel plated, silver hexagonal D6.3(0.248")	1PCS
3-hole watertight connector assembly, M32-H3-10, PA66, black, UL with nut + watertight rubber ring BN-M32-25Weyu	1PCS
3-hole waterproof connector assembly, M25-H3-08, PA66, black, UL with nut + waterproof rubber ring BN-M25 18Weyu	1PCS
Plastic bag, self-sealing, PE, transparent, 250mm(9.843")*200mm(7.874"), short side opening	2PCS

7.2.2 Inspection & confirm

When unpacking, please carefully confirm the following points:

Whether the accessories are missing according to the packing list.

Whether there is any damage during transportation.

Whether the model and specification of the machine's nameplate are consistent with the order requirements.



▷ If any damage or missing parts are found, please do not start the machine, and contact the supplier as soon as possible.



▷ Please keep the packing box and packing materials 1 month for future handling..
The paper packaging is recyclable.

7.3 Prepare

In order to ensure long-term stable operation of the product, it is recommended to avoid the following installation problems:



- ▷ This product is electrical equipment. It should be handled with care to avoid violent vibration and impact.
- ▷ The EVSE must not be transported by dragging the charging connector and charging cable.
- ▷ The EVSE must not be used in extreme weather, especially when the ambient temperature is too low or too high, which may affect the use of the EVSE.

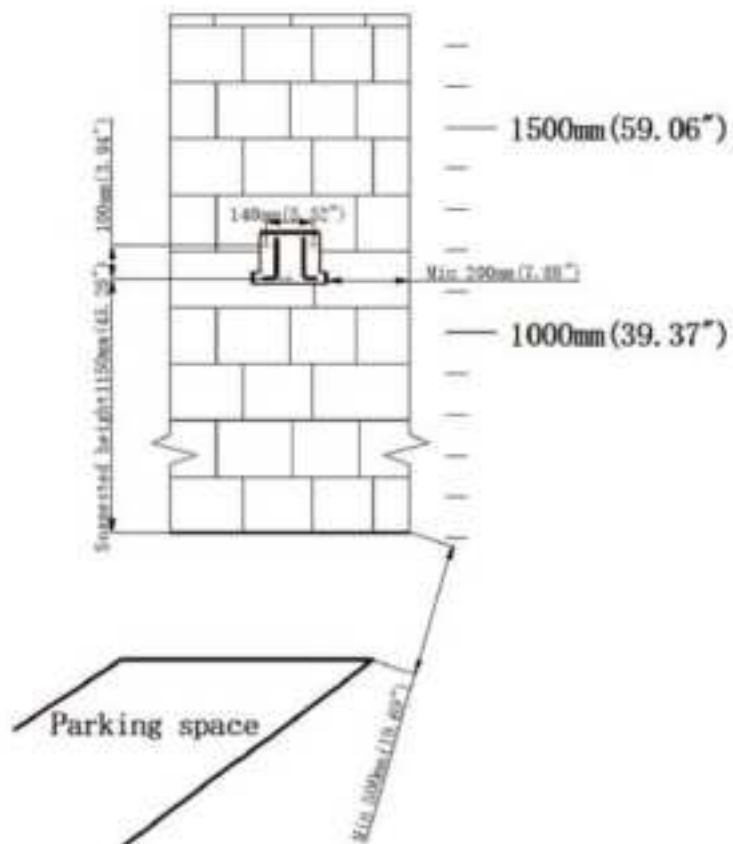
It is recommended to install the EVSE in a ventilated y cool place, avoiding direct sunlight and rain. To ensure good ventilation, you should install the EVSE vertically and leave enough space. Installation tools
Before installing the AC EVSE, you should prepare at least the following tools:

No.	Tools' Name	Main Uses
1	Multimeter	Check the electrical connection and measure the voltage
2	Electric Impact drill	Drill fixing holes in the wall
3	Wrench	Fastening bolt
4	Diagonal plier	Cut the cable
5	Wire stripper	Peeling cables
6	Crimping plier	Pressed cable terminal
7	Cross screwdriver	Fastening screw
8	Plummer medium bore alloy steel electric drill	For use with electric batches

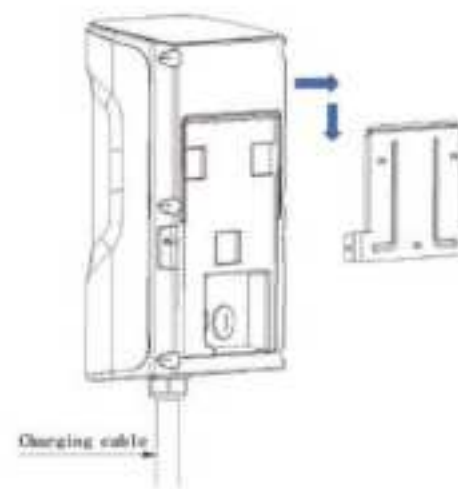
7.4 Installation steps

7.4.1 Mount the EVSE on the wall as follows:

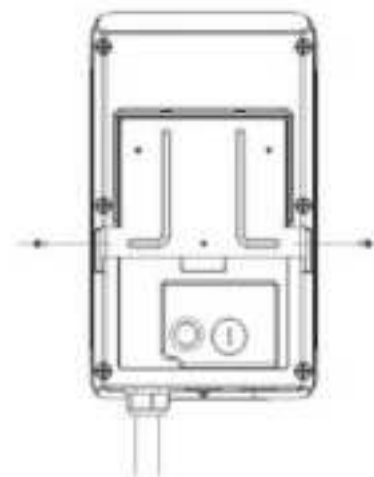
Step 1: Install the back plate using 3CPS of M6mm(0.236")x50mm(1.969") expansion screws fixed on the wall in the position shown below:



Step 2: Hang the charger on the mounting back plate as shown below:



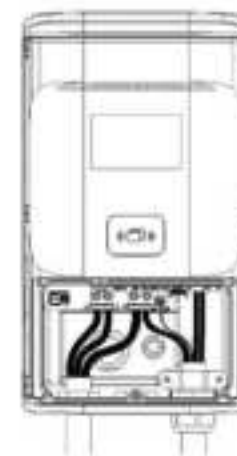
Step 3: Fix the mounting screws on both sides as shown below:



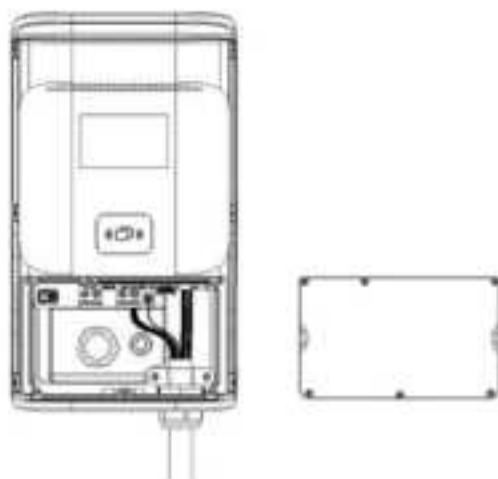
Step 4: Remove the decorative cover, as shown below:



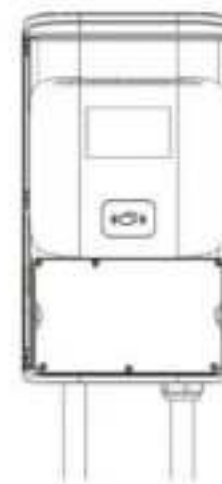
Step 5: Access the AC input power line as shown below:



Step 5: Remove the wiring cover as shown below:



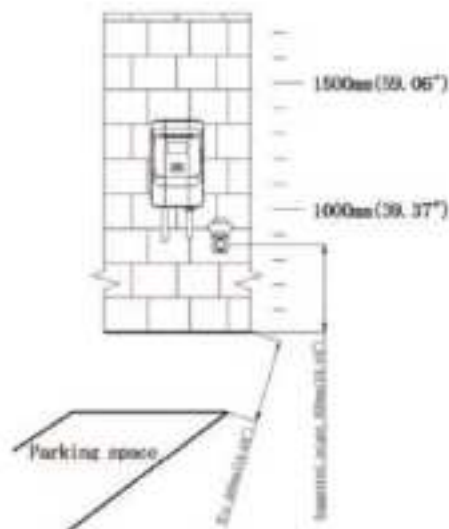
Step 7: Reinstall the wiring cover as shown below:



Step 5: Reinstall the decorative surface cover, as shown below:



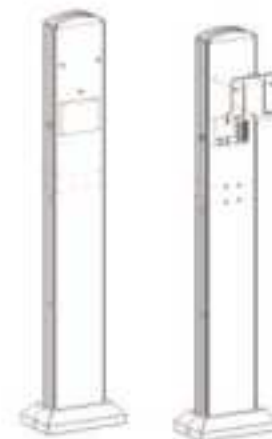
Step 9: Use 8PCS of M5mm(0.197")X40mm(1.575") expansion screws to install the socket and cable hanger on the wall, the location is recommended as shown below:



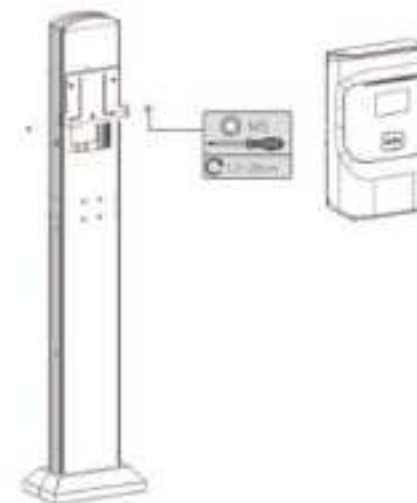
7.4.2 Pedestal installation:

Pedestal installation:

Step 1: Fix the installation plate on the pedestal, as shown in the figure below:



Step 2: Hang the whole charger on the installation plate, as shown in the figure below:



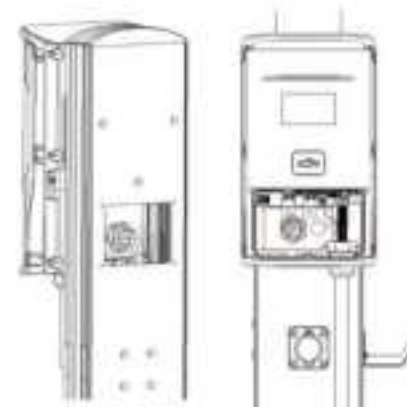
Step 3: Get rid of the front cove and wiring plate, as shown in the figure below:



Step 4: Install the water-proof, as the below picture shown:

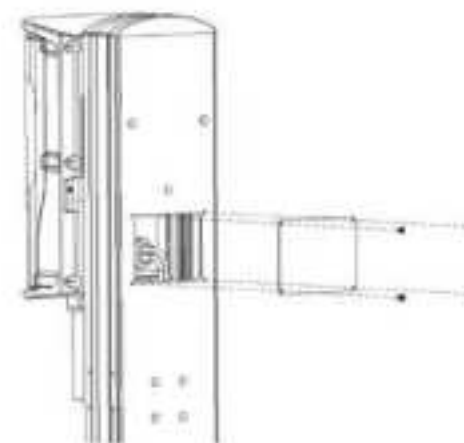


Step 5: Fix
picture 51



g terminal, as the below:

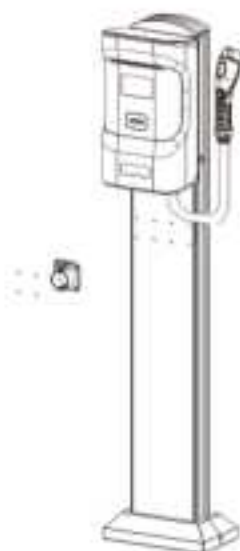
Step 6: Fix the pedestal wiring plate, as the below picture shown:



Step 7: Assembly the wiring cover and plate cover and assembly in the whole machine, as the below picture shown:



Step 8: Install the charger holder, as the below picture shown:

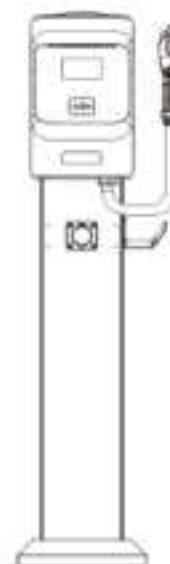


- 29 -

Step 9: Install the hook, as the below picture shown:



Step 10: Complete installation.



- 30 -

7.5 GROUNDING INSTRUCTIONS

GROUNDING INSTRUCTIONS

This product must be connected to a grounded, metal, permanent wiring system, or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment grounding terminal or lead on the product.



7.6 Maintenance

To ensure the long-term stable operation of the equipment, please maintain the equipment regularly (usually every month) according to the operating environment.

- The equipment is maintained by professionals.
- Check whether the equipment is well grounded and safe.
- Check whether there are potential safety hazards around the charging pile, such as whether there are high temperature, corrosion or inflammable and explosive articles close to the charger.
- Check whether the join point of the input terminal is in good contact and whether there is any abnormality. Check whether other terminal points are loose.

Wire diameter	L1 L2 PE CP L2 L1
Crimp terminal specifications	E10-12 E0500
Installation Tool Specifications	One diameter No. 3 screwdriver Cross screwdriver
Wiring tightening torque	3~6N·m

WARRANTY AGREEMENT

1. The scope of warranty refers to the product itself.
2. The warranty period is 12 months. During the warranty period, the company will repair the product free of charge in case of failure or damage (determined by the company's technical personnel) under normal use.
3. The starting time of warranty period is the date of product manufacture.
4. Even in the warranty period, a certain maintenance fee will be charged in case of the following situations.
 - ① Equipment failure caused by not following the user's manual.
 - ② Equipment damage caused by fire, flood, abnormal voltage, etc.
 - ③ Equipment damage caused by using the product for abnormal functions.
 - ④ Equipment damage caused by foreign matter entering.
 - ⑤ Equipment damage caused by other human external factors.
5. The service fee shall be calculated according to the actual cost. If there is another contract, the contract shall prevail.
6. Please be sure to keep this card and show it to the maintenance personnel during the warranty period.
7. If you have any questions, please contact the agent or our company directly.

After sales service center



For Both FCC & IC application:

This device complies with Part 15 of the FCC Rules / Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

MPE Requirements

To satisfy FCC / IC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance is not recommended.

Les antennes installées doivent être situées de façon à ce que la population ne puisse y être exposée à une distance de moins de 20 cm. Installer les antennes de façon à ce que le personnel ne puisse approcher à 20 cm ou moins de la position centrale de l'antenne. La FCC des états-unis stipule que cet appareil doit être en tout temps éloigné d'au moins 20 cm des personnes pendant son fonctionnement.