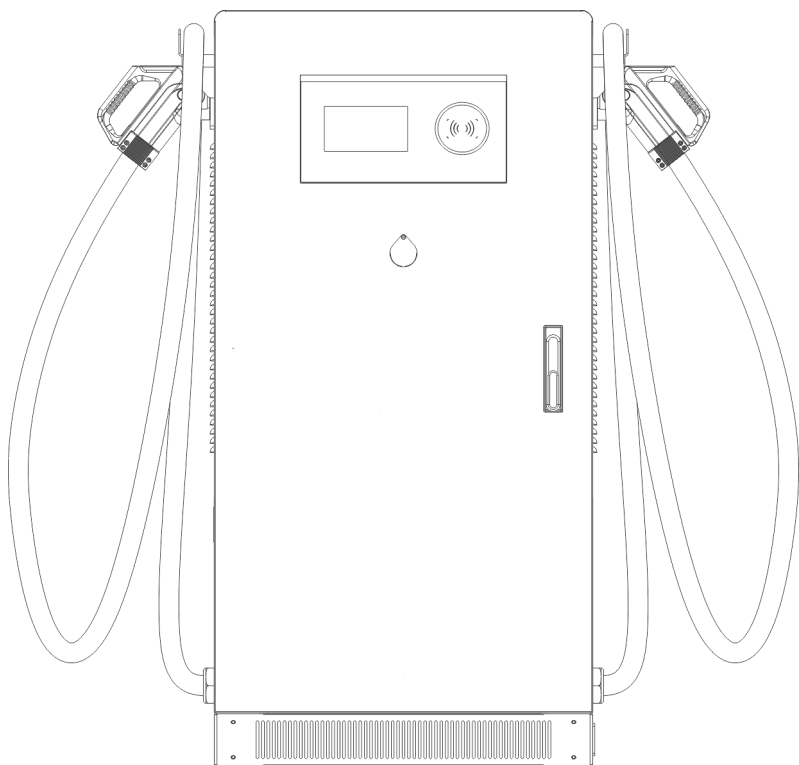




60-120KW DC Fast Charger

Econ DC Series

User Manual & Installation Instructions



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Introductions

The Wall Mount DC Fast Charger is the top choice to power battery electric vehicles (BEV) and plug-in electric vehicles (PHEV). 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, workplace, residence, etc.

The Wall Mount DC Fast Charger has the advantage of easy installation. The wall-mounted design and pluggable power modules realize flexible and cost-effective installation for different types of locations. The DC Wall-Mounted charger also has network communication capability. It is able to connect with remote network systems and provide drivers of electric cars real-time information, such as the location of charging stations, charging progress and billing information. The Wall Mount DC Fast Charger has a clear user interface with function buttons, safety certifications and an excellent waterproof and dust proof design to provide the best choice for outdoor environments.

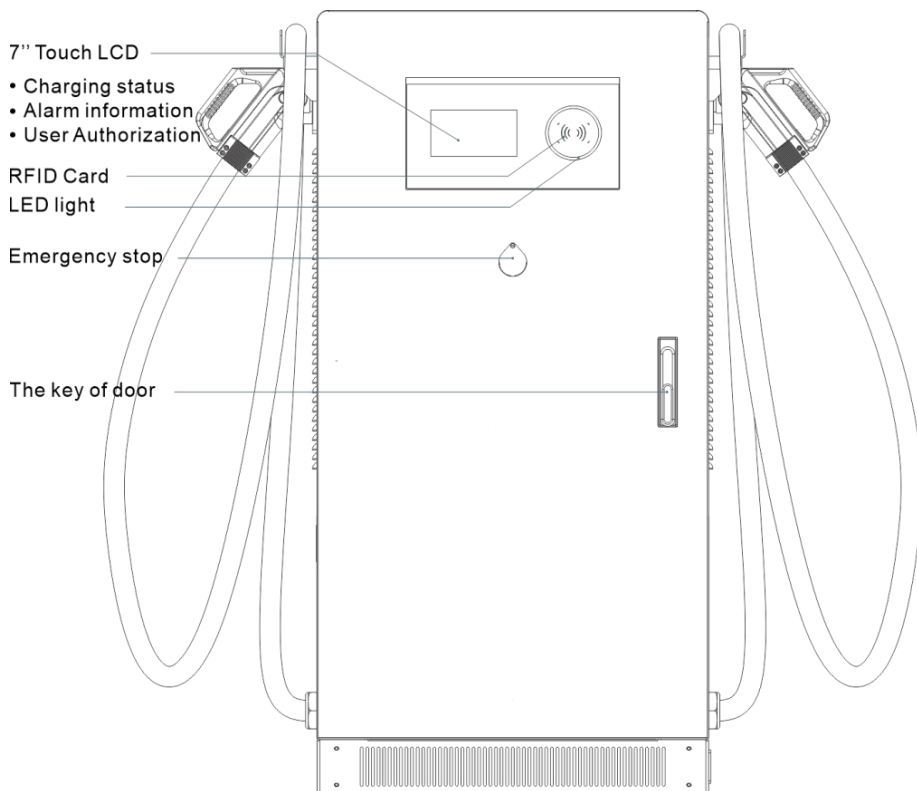
Features

- Wall-Mounted design and pluggable power modules make installation easy and flexible.
- Offers customers the convenience of start/stop charging control from an authorized RFID smart card or mobile APP.
- Built on latest industry standards for DC charging.
- Carries an outdoor rating capable of withstanding solid and liquid intrusions in outdoor settings making the unit more stable and highly reliable.
- Provides a high-contrast, screen interface with multi-function buttons.

Applications

- Public and private parking areas
- Community parking areas
- Parking areas of hotels, supermarkets and shopping malls
- Workplace parking areas
- Charging stations
- Highway rest are

Basic User Interface

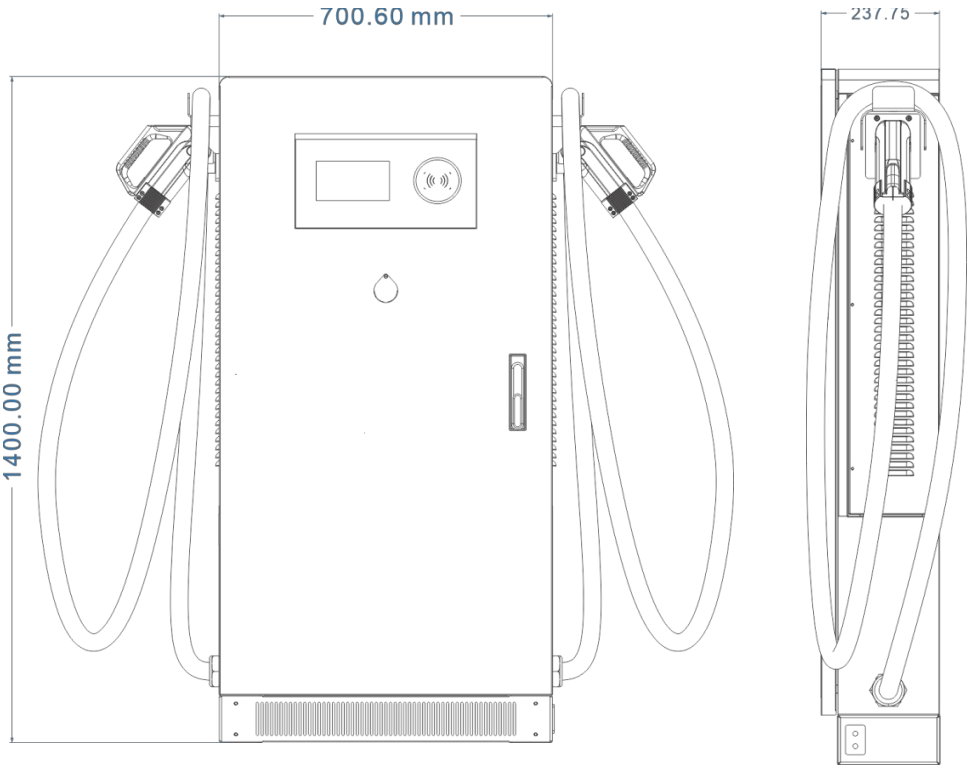


1. Specification

1.1 Product Specification

Model	ZECO60K-D1	ZECOC80K-D2	ZECO120K-D3
Technical features			
Max Power	Up to 60KW	Up to 80KW	Up to 120KW
Input Voltage	400VAC±10%-50/60Hz-3phase(CCS2 and GB/T) 480VAC±10%-50/60Hz-3phase(CCSI+NACS)		
Power factor	≥0.98		
Efficiency	>95%		
Measuring accuracy	Level 0.5		
Output voltage range	CCS2 CCS1 NACS GB/T: 150~1000VDC		
Output current range	0-200A 0-250A(optional)	0-200A 0-250A(optional)	0-250A 0-300A(optional)
Communication	ISO15118 / DIN70121(between charger & vehicle) Ethernet/4G/OCPP 1.6J		
User interface	LCD 7 inch Touch Screen /RFID card and APP		
Versatility	EN/IEC 61851-1: 2019, EN/IEC 61851-23: 2014 ,UL 2202, UL2594		
Security design	Over/under voltage protection, overload protection, current leakage protection, grounding protection, lightening surge protection		
DC Plugs	Cable 5M		
Physical properties			
Warranty	2 years		
Cooling	Air cooled		
IP Level	IP54		
Sound noise	<70DB in all directions		
Operating temperature	-20°C to +50°C		
Humidity	Max.95%(non-regulating)		
Dimensions	700*2370*1400mm		
Package Dimension	1000*400*1450(L*W*H)mm Wooden packing		
Weight	175KG		

1.2 Dimmensions (Unit: mm)



2. Installation Instruction

2.1 Before Installation

- Read all the instructions before using and installing this product.
- Do not use this product if power cable or charging cable have any damage.
- Do not use this product if the enclosure or charging connector are broken or open or if there is damage.
- Do not put any tool, material, finger or other body part into the charging connector or EV connector.



Warning: The product should be installed only by a licensed contractor and/or licensed technician in accordance with all building codes, electrical codes and safety standards.



Warning: The product should be inspected by a qualified installer prior to initial use. Under no circumstances will compliance with the information in this manual relieve user of his/her responsibilities to comply with all applicable codes and safety standards.

- Power feed must be 3 Phase Wye configuration with TN (-S) / IT / TT grounding systems.
- In the installation of TN (-S) system: the neutral (N) and the PE of the power distribution are directly connected to the earth. The PE of the charger equipment is directly connected to the PE of power distribution and separate conductor for PE and neutral (N).
- In the installation of IT system: the neutral of the power distribution system is isolated from the earth. The PE of the charger equipment is isolated to the PE of power distribution to the earth.
- In the installation of TT system: the neutral (N) and the PE of the power distribution are directly connected to the earth. The PE of the charger equipment is isolated to the PE of power distribution to the earth.
- The capacity of power supply should be higher than 33.0kVA in order to function correctly.
- The product should be installed in free air area and keep at least 30cm clearance distance to all air vent of the product.
- Need sufficient space for product installation and maintenance, please keep not less than 60cm clearance distance from all around the product. The product should be installed in free air area and keep at least 30cm clearance distance to all air vent of the product.

2.2 Grounding and Safety Requirement

- The product must be connected to a grounded, metal, permanent wiring system. Connections shall comply with all applicable electrical codes.
- Ensure no power is connected at all times when installing, servicing, or maintaining the charger.
- Use appropriate protection when connecting to main power distribution network.
- Use appropriate tools for each task.



CAUTION: The disconnect switch for each ungrounded conductor of AC input shall be provided by installation contractor or technician.



CAUTION: A cord extension set or second cable assembly shall not be used in addition to the cable assembly for connection of the EV to the ZECONEX.

2.3 Service Wiring

•Ground Connection

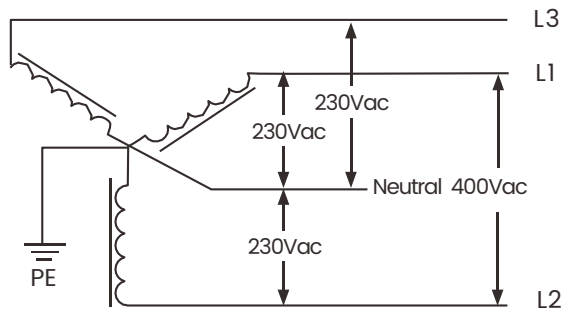
Always connect the Neutral at the service to Earth Ground. If ground is not provided by the electrical service then a grounding stake must be installed nearby. The grounding stake must be connected to the ground bar in the main breaker panel and Neutral connected to Ground at that point.

- 400Vac (Line to Line) Three-Phase



CAUTION!

This is feed from Wye-connection power grid, the Wall Mount DC Fast Charger can connect to L1, L2 or L3, and Neutral. Earth ground must be connected to neutral at only one point, usually at the breaker panel.



400V Three-Phase Wiring Connection



DANGERS

Be Aware of High Voltage!



WARNING!

Earth Connection is Essential!

2.4 Unpack the charger

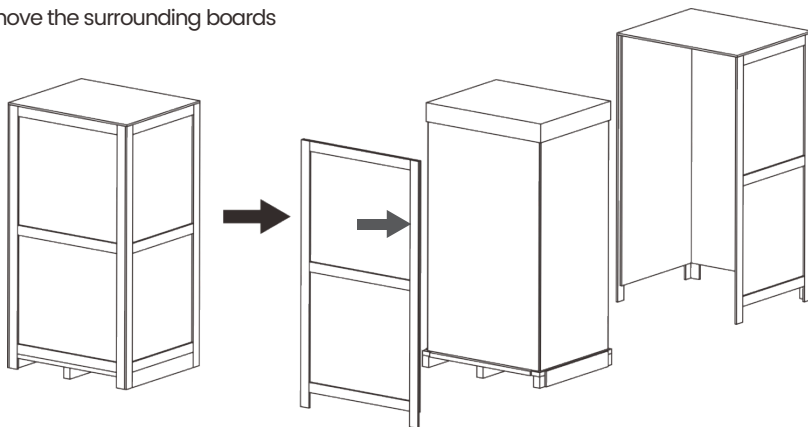


WARNING!

Charger weight might >350Kg!
Be careful during unpack process.

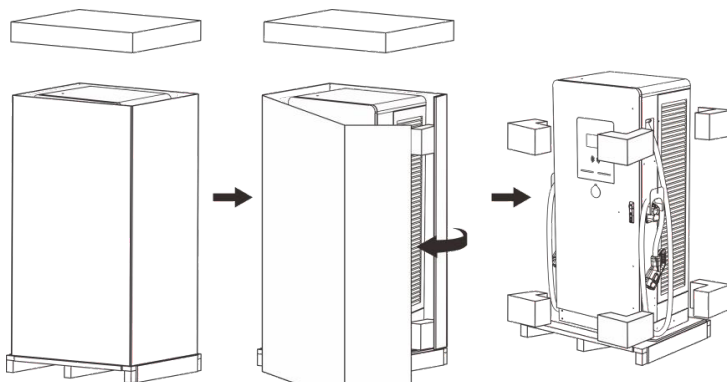
STEP 1.

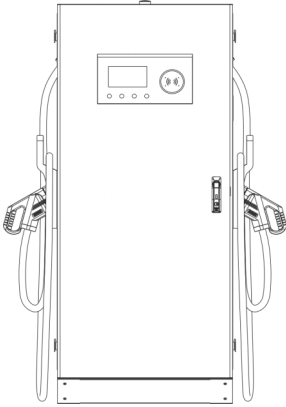


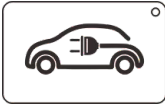


Remove the surrounding boards



STEP 2.

Remove the packaging film and the paper cover. Accessories are packed in a carton.



			
	User Manual (x1)		Expansion bolt (×4) M12*80mm
			
DC Charger	RFID CARD (x2)	Key (x2)	SD card(x1)

2.5 Recommended Tools for Installation and Inspection

2. 5. 1 Recommended Tools for Installation

Type	Description
Philips Screwdriver	No. 2 and 3
Shifting Wrench	8" (24mm)
Ball-Head Hex Key	2.5mm and 5mm
Socket Screwdriver	No. 8 ,10 and 17
Electrical Tape	Black / 15mm Width
AC Input Cable of 60KW	25mm² Cable x 4 (L1,L2,L3,N)+16 mm² PE
AC Input Cable of 80KW	50mm² Cable x 5 (L1,L2,L3,N)+16 mm² PE
AC Input Cable of 120KW	100mm² Cable x 5 (L1,L2,L3,N)+25 mm² PE
Crimping Pliers for Ring Terminal	Applied for 100- 185mm ²
Machine Drill	
Wire Cutters	
Level Ruler	

2. 5. 2 Recommended Tools for Inspection & Commissioning

Type	Description
EV or EV Simulator	Meet CCS2 standard
Multiple Meter	1000V
Current Probe	600Amp
RFID Authorized Card	
RFID No Valid Card	
Door Key	
Needle-Nose Plier	
Laptop or PC & CAT6 cable	For Charger Configuration

2.6 Installation Procedure

STEP 1.

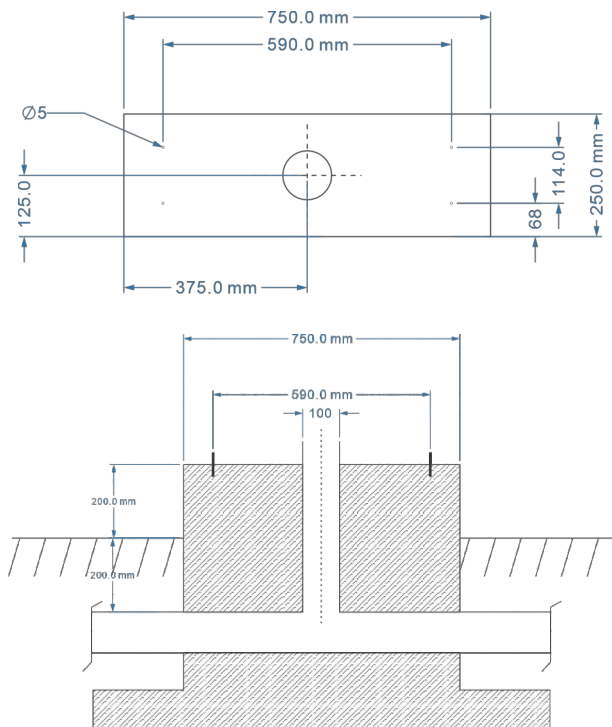
1. Build 1090mm x 750mm x 200mm (42.91" x 29.53" x 7.87") concrete base on the level to stand charger in advance.

2. Implant AC input cable conduit less than $\varnothing 102\text{mm}$ (eg. 4" PVC conduit), and SFTP Ethernet cable conduit less than $\varnothing 34\text{mm}$ (eg. 1 1/4" PVC conduit).

3. And implant 4 pcs of M12 screw stick out the concrete base for 40 mm (1.57") to fix the charger. The positioning of these 4 pcs of M12 screws should be within $\pm 2\text{ mm}$ (0.08") in short axis, $\pm 8\text{ mm}$ (0.32") in long axis according to screw holes of charger.

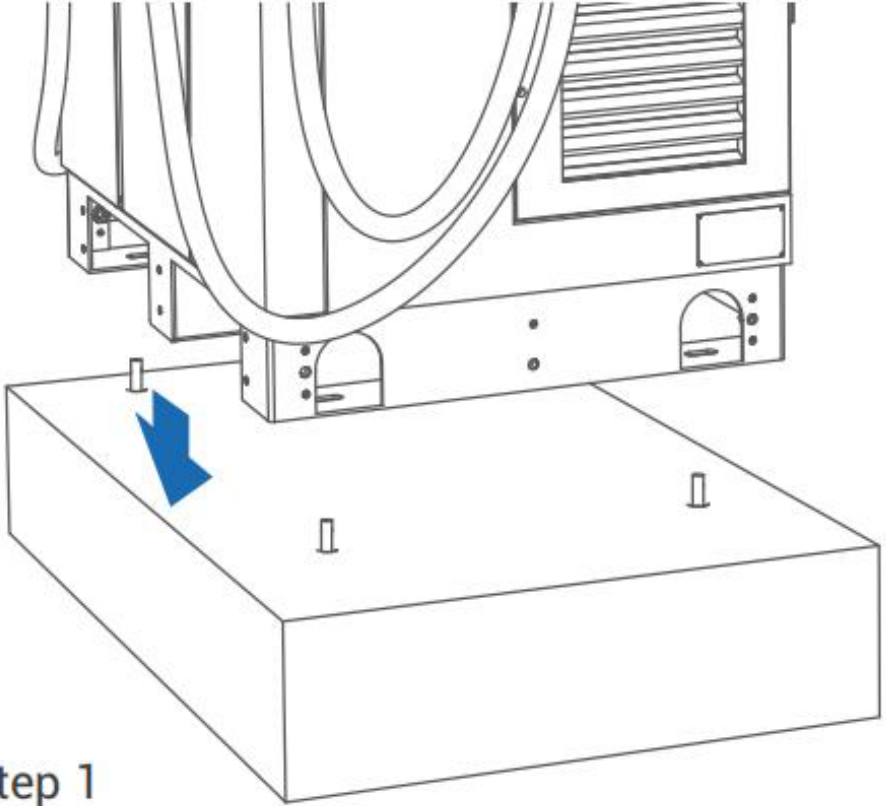
4. To fit this positioning requirement, a steel plate fixture be suggested. Please create the fixture by the following drawing or order this fixture from your vendor.

5. The other way to fix the charger on concrete base is install 2 of L-brackets accessories outside of charger and drill the screw holes ($\varnothing 16\text{ mm}$ (0.63")) on the cement base as drawing below.

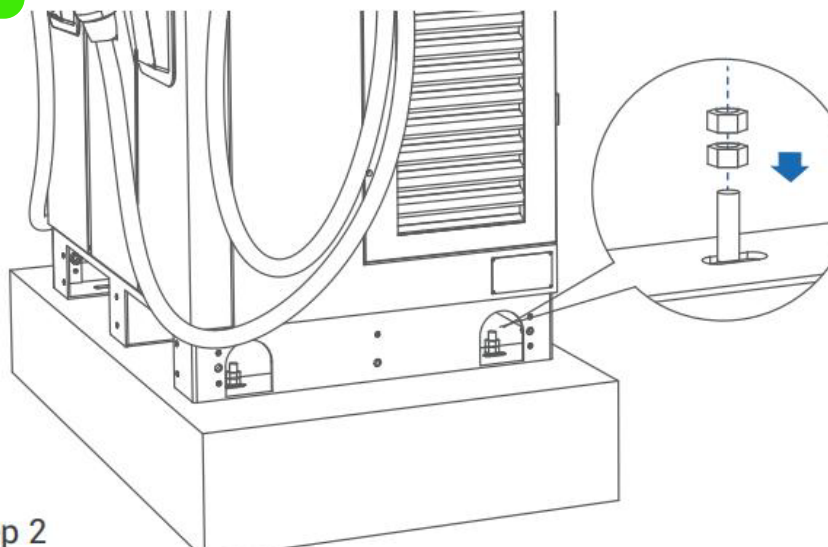


STEP 2.

1. Lift the charger on concrete base, pull the input cable through bottom hole of charger; fasten 8 pcs of M12 screw nuts and 4 pcs M12 washers on 4 pcs of M12 screw of concrete base (2 nuts for each screw) to secure the chargers. Then fix the base cover (in the accessory pack) in charger base.

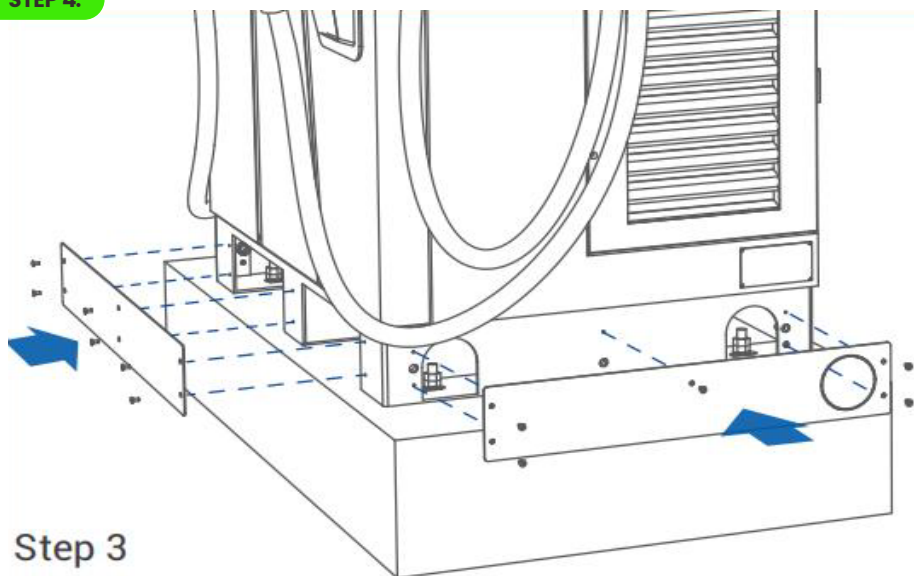


STEP 3.



Step 2

STEP 4.

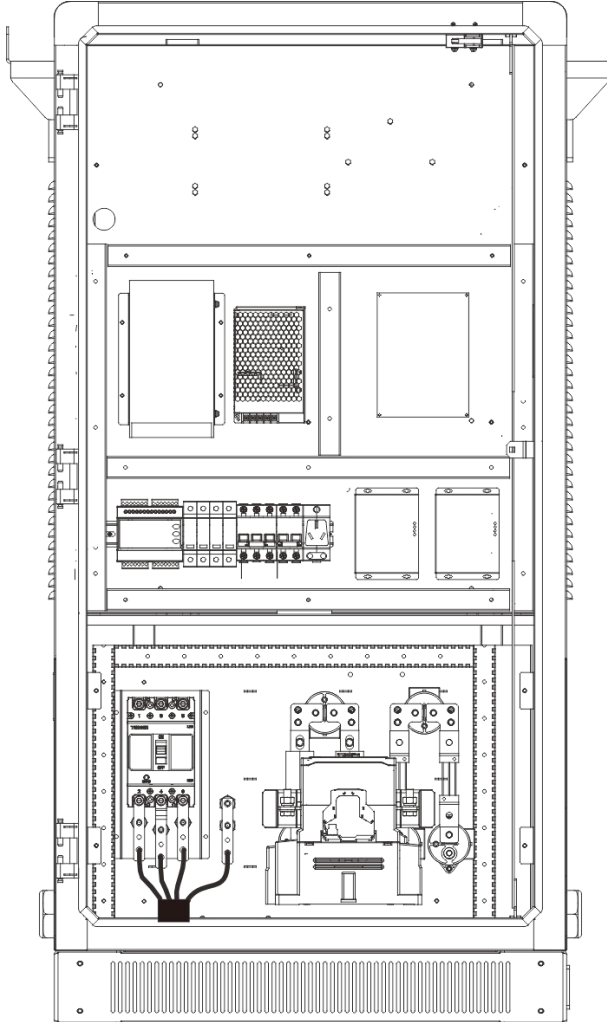


Step 3

Installing the AC Input Connect

STEP 5.

Connect L1, L2, L3 and N of AC power to 4P terminal. Fasten each wire with proper screw and torque number- 120Kgf.cm/5-15 secs. Connect the PE wire (green with yellow) to Grounding position of Charger and torque number- 220Kgf.cm. Keep proper length of each wires then fasten cable grand.



2. 7 Installation Inspection & Commissioning

2. 7. 1 Environmental Check

Item	Status	Remark
Ambient Temperature		
Ambient Humidity		
Sunshade		Recommended but not required.
Rain Canopy		Recommended but not required.
Air Circulation / Drafty		
Dust Level		
Anti-Vandalism Measures		

2. 7. 2 External Infrastructure Readiness & Check

Item	Status	Remark
Input Wirings & Terminals		Type/ Length/ Cross Section
Key & Lock of Cabinet Door		
Fixing Screws		Type / No
No Fuse Breaker (NFB)		Notice: Current rating of NFB shall be higher than 63 Amp
Residual Current Device (RCD)		Notice: Maximum RCD residual current shall not excess 30mA
Input Electricity Capacity		
Input Electricity Configuration		Wye
Grounding Resistance		< 50Ω
Grounding System		
Input Voltage & Frequency		
Network Connection & Quality		LAN/ Wi-Fi/4G

2. 7. 3 Check – Static (Non-Powered)

Item	Status	Remark
Outlook		
Labeling & Warning Signs		
Package (Accessory) List		
Robustness of Input Wirings		

2. 7. 4 Check – Power On

Item	Status	Remark
Screen On		
Acoustic Noise		
Screen Display & Function		
Time Display Correctly		
Network Connection Quality		
Cooling Fans Operation & Noise		
Led Status Indication		
Seconpower EV Setting		
Function of Engineer Mode		
Version of H.W. & F.W.		
Remote Control & Monitoring		
Backend Server Connection		

2. 7. 5 Check – Charging

Item	Status	Remark
User Authorization –RFID		
User Authorization –QR Code		
User Authorization –Others.		
Waiting Time of Connection Check		
Reading of Each Display Item		
Full Charge Test		
Function of Electronic Lock		
Reading of Engineer Mode		
Airflow & Noise of Cooling Fan		
Charging Record (log) Upload		
Remote Control & Monitoring		

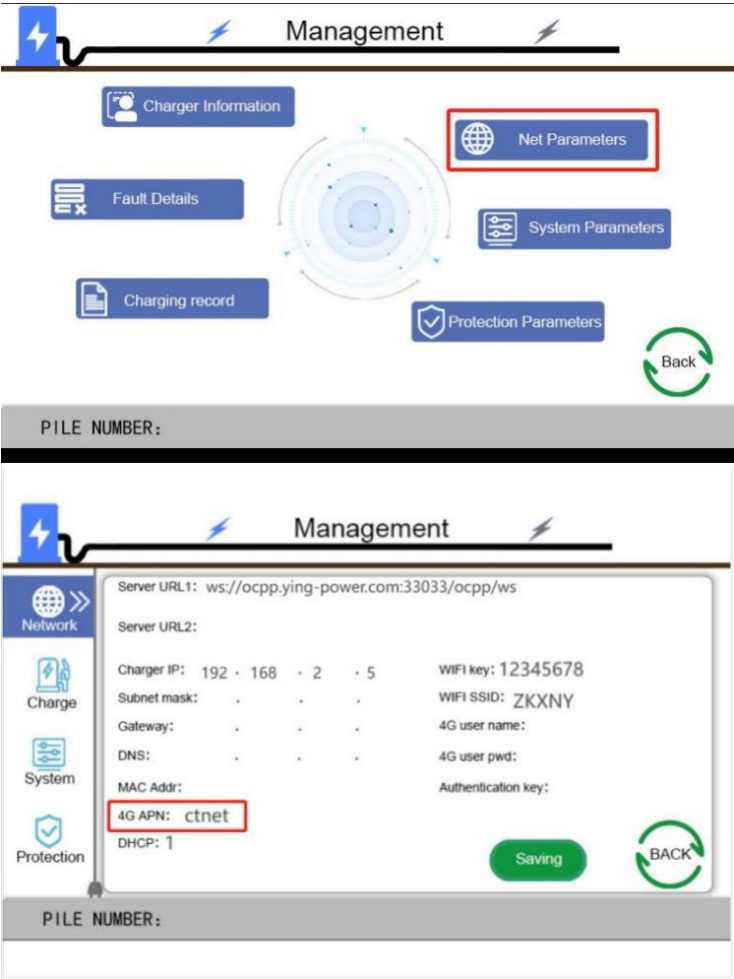
2. 7. 6 Check –System Power Button

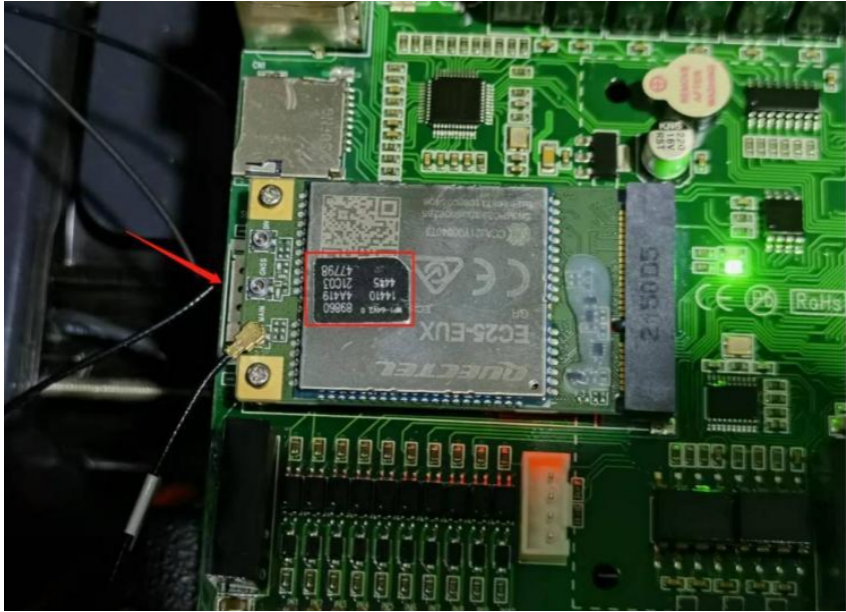
Item	Status	Remark
Emergency Stop Button		

3. Network Setting

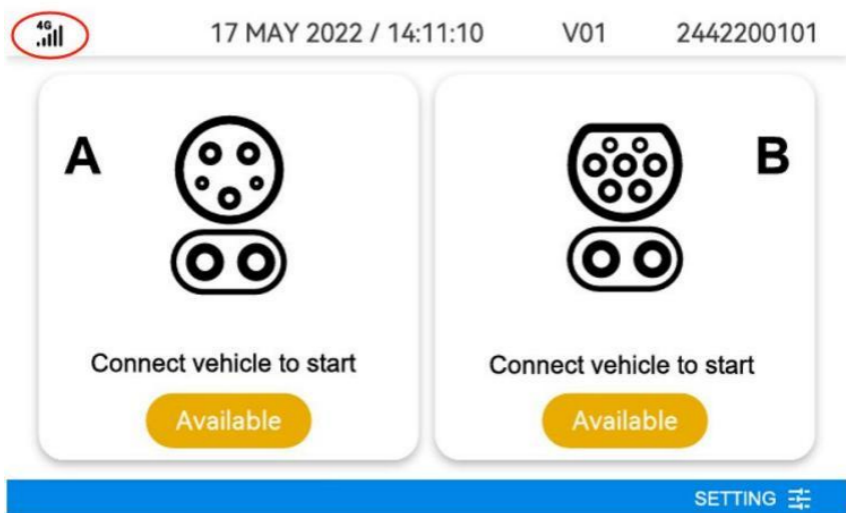
3.1 4G Network Setting

On the Network Parameters page, set URL and the 4G card APN and save the settings (If the 4G card you purchased has an APN username and password, please enter the corresponding username and password) . Then, power off the device, insert the 4G card into the motherboard slot, and replace the 4G module. And power on device.





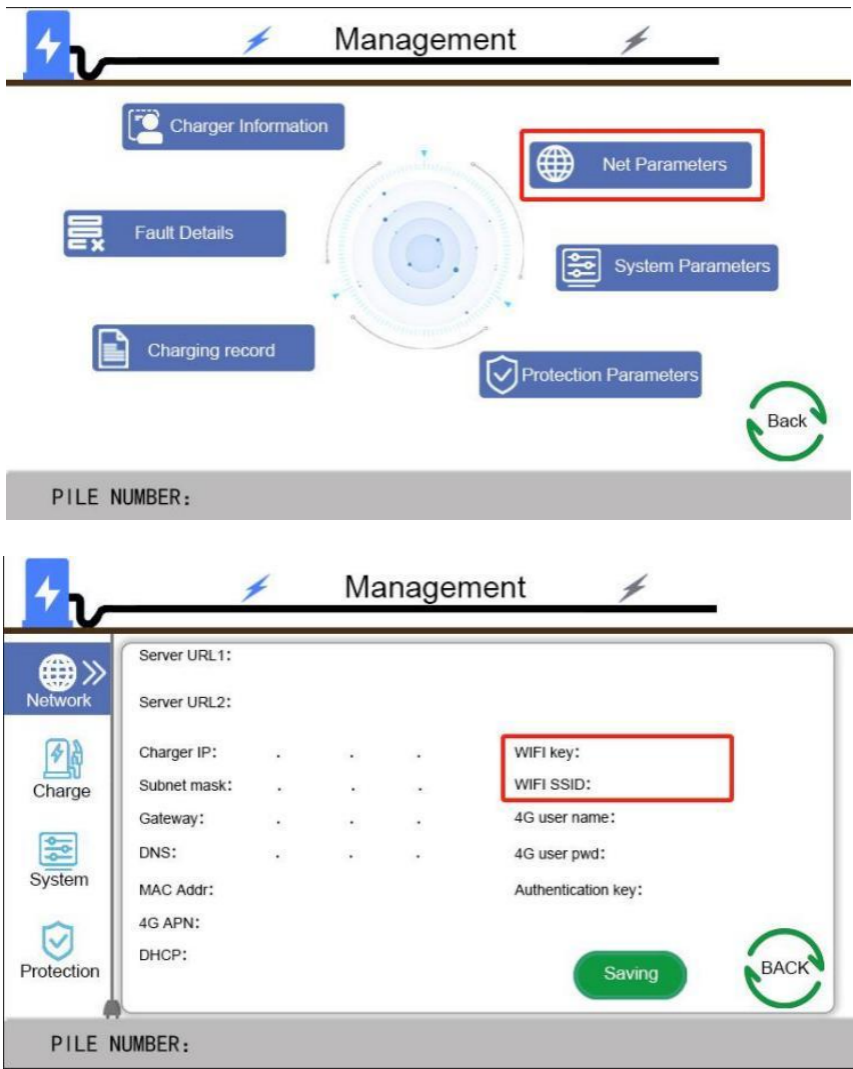
Replace 4G module

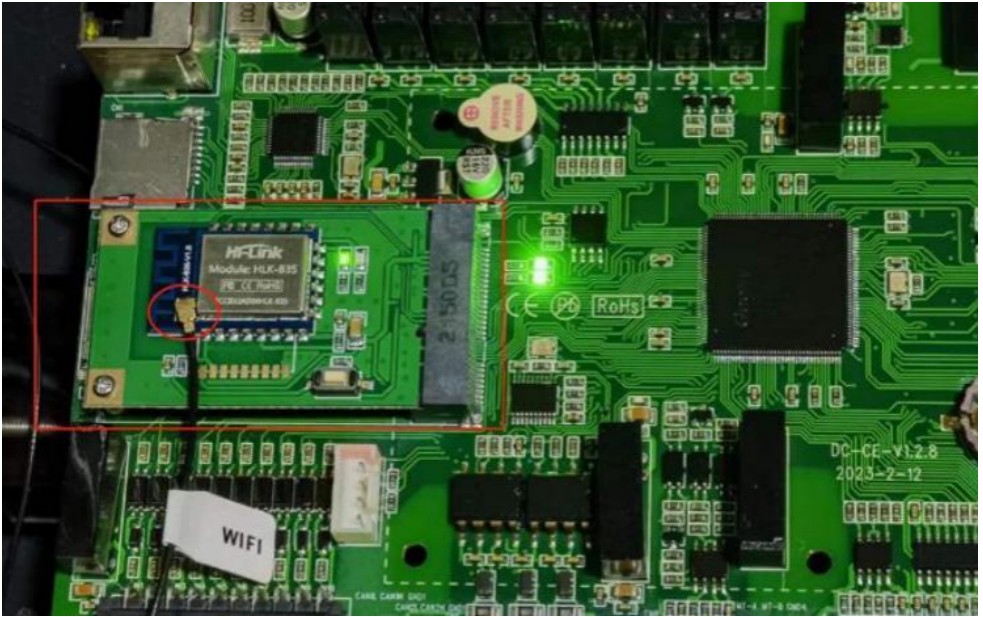


If the network is working, the 4G signal icon will be displayed


3.2 Wi-Fi Network Setting

On the charging station display screen, start searching for the Settings – Network Parameters page on the homepage, set URL and the WiFi SSID and WiFi KEY, then replace the WiFi module internally and restart the charging station:

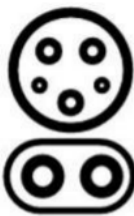




Replace WiFi module

 17 MAY 2022 / 14:11:10 V01 2442200101


A



Connect vehicle to start


Available

B



Connect vehicle to start

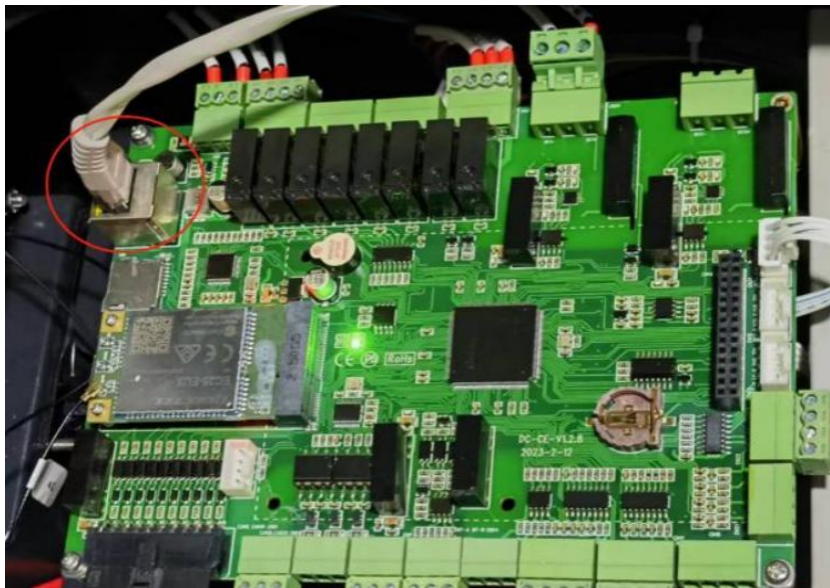
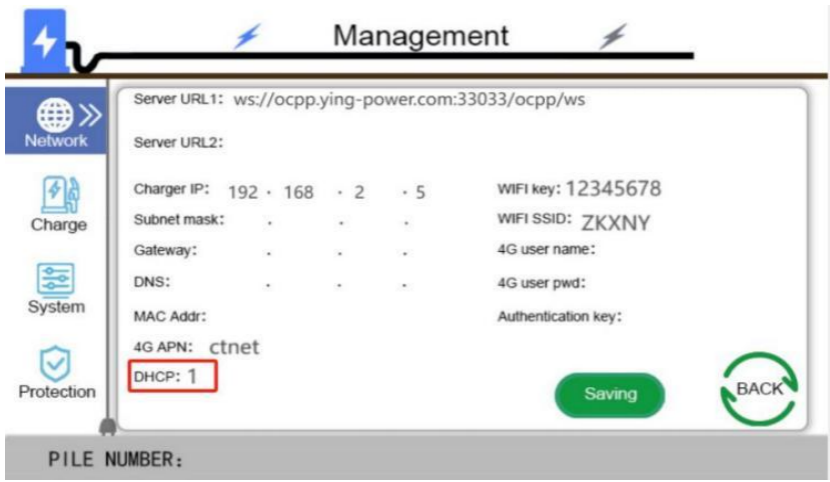
Available

SETTING 

If the network is working, the WIFI signal icon will be displayed

3.3 Ethernet DHCP Network Setting

On the Network Parameters page, setURL and the DHCP type to 1. Connect a network cable from the router to the RJ45 port on the motherboard, then restart the charging station.



Connect the router via Ethernet cable



17 MAY 2022 / 14:11:10

V01

2442200101

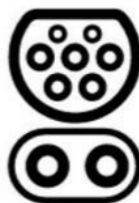
A



Connect vehicle to start

Available

B



Connect vehicle to start

Available

SETTING

If the network is working, the Wlan signal icon will be displayed

4. Operation Process

4.1 RGB LED indicators

Charger status	LED performance
Standby	green blink
plug in	yellow
swipe/punch a card	yellow
charging	Light green breath
Fault status	Red flashing

4.2 LCD indicators

the EMN series config a 7-inch LCD screen, which is mainly used to display various status information of the charging station.

• Icons or instructions in each display area

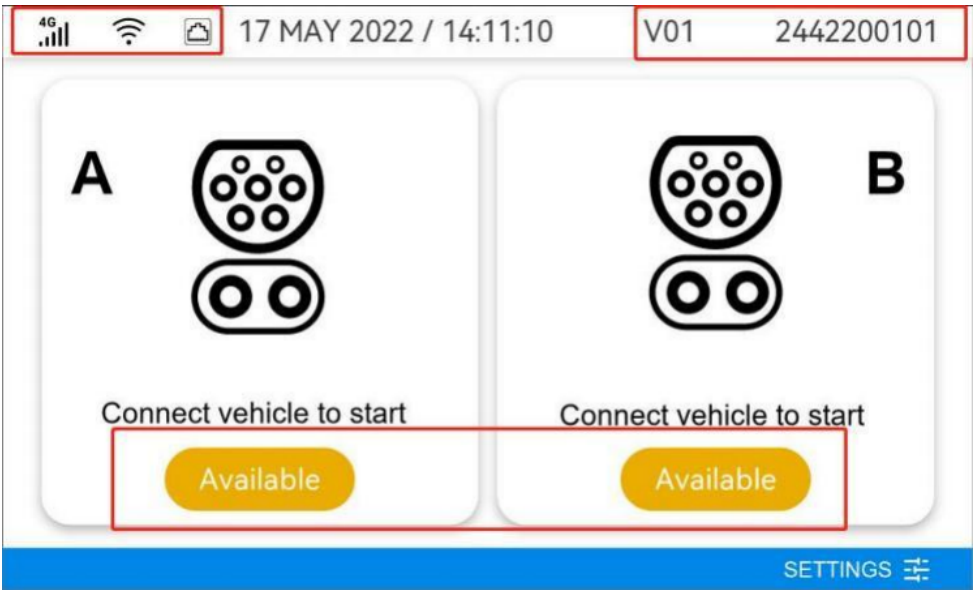





Fig. 1-2 Display of icons and instructions

In Fig. 1-2, there are three areas to display icons or instructions, with the specific meanings as follows:

No.	Icon	Description
Area①		
1		Connected a network through 4G cellular
2		Connected a network through WIFI
3		Connected a network through Ethernet
Area②		
4	Version	Software version
5	SN	Serial number of
Area③		
5	status	status information
Area④		
6	Settings	Set charging station parameters

• As shown in Fig. 1-3, 1-4, 1-5, 1-6, the LCD screen displays 4 types picture in normal state.

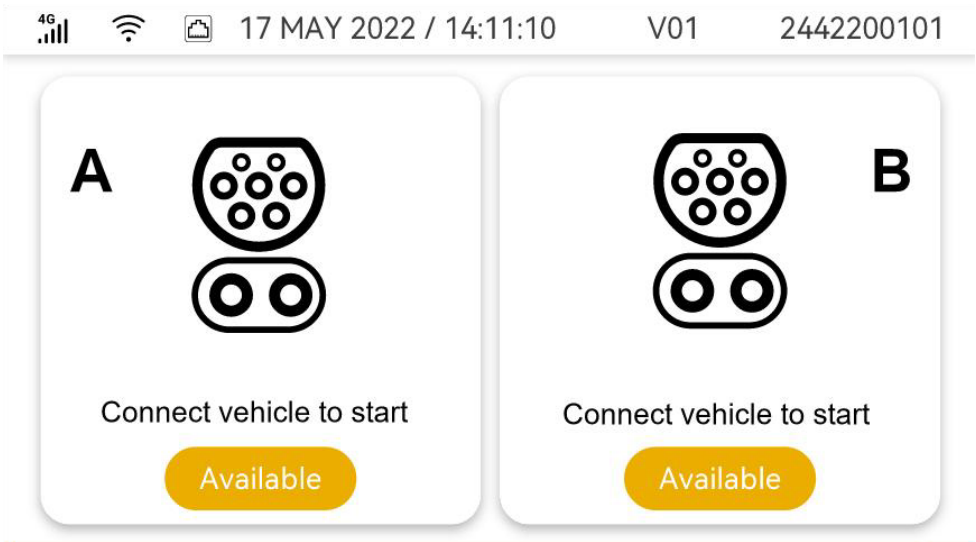


Fig. 6-3 Display of Preparing

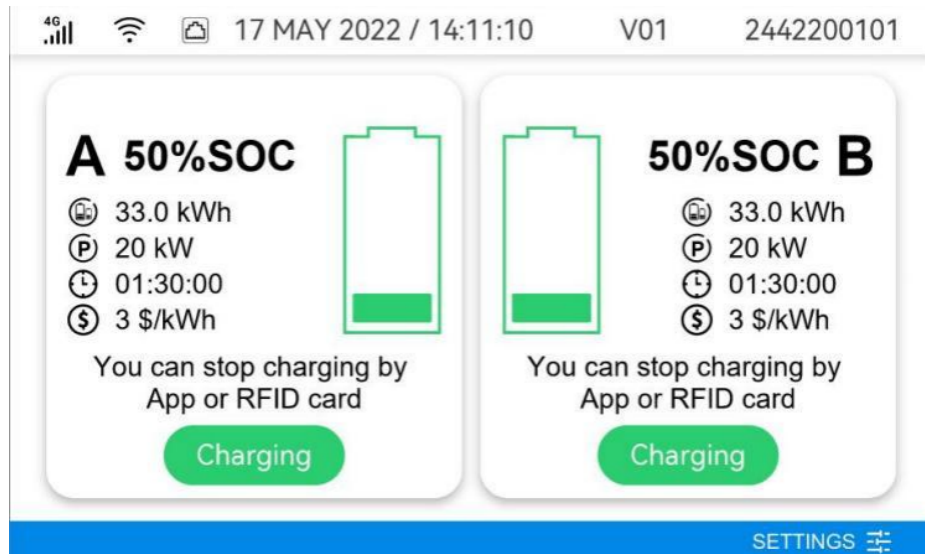


Fig. 6-4 Display of Charging

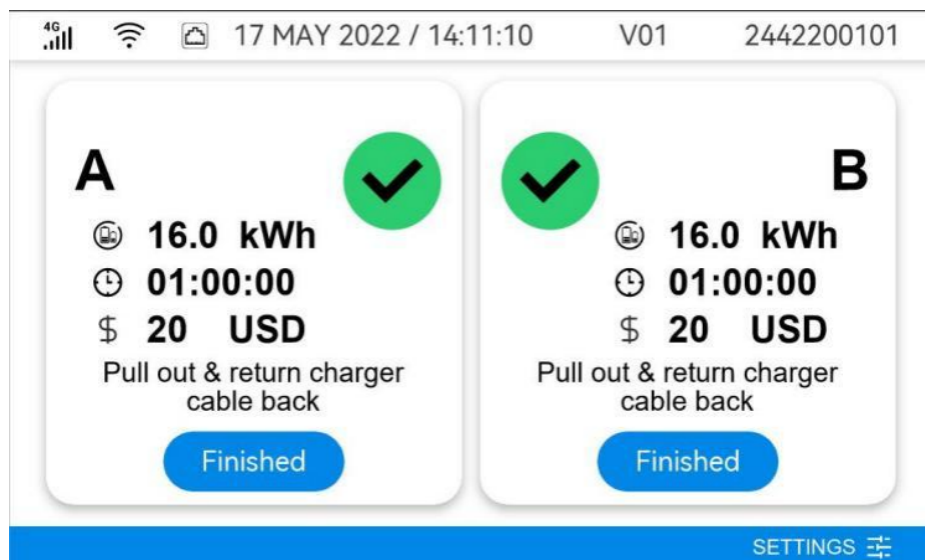


Fig. 6-5 Display of Finished

- Click the settings icon three times to enter the settings interface, the picture displayed on the LCD screen is shown in Fig. 6-6.
- Enter password: 1234

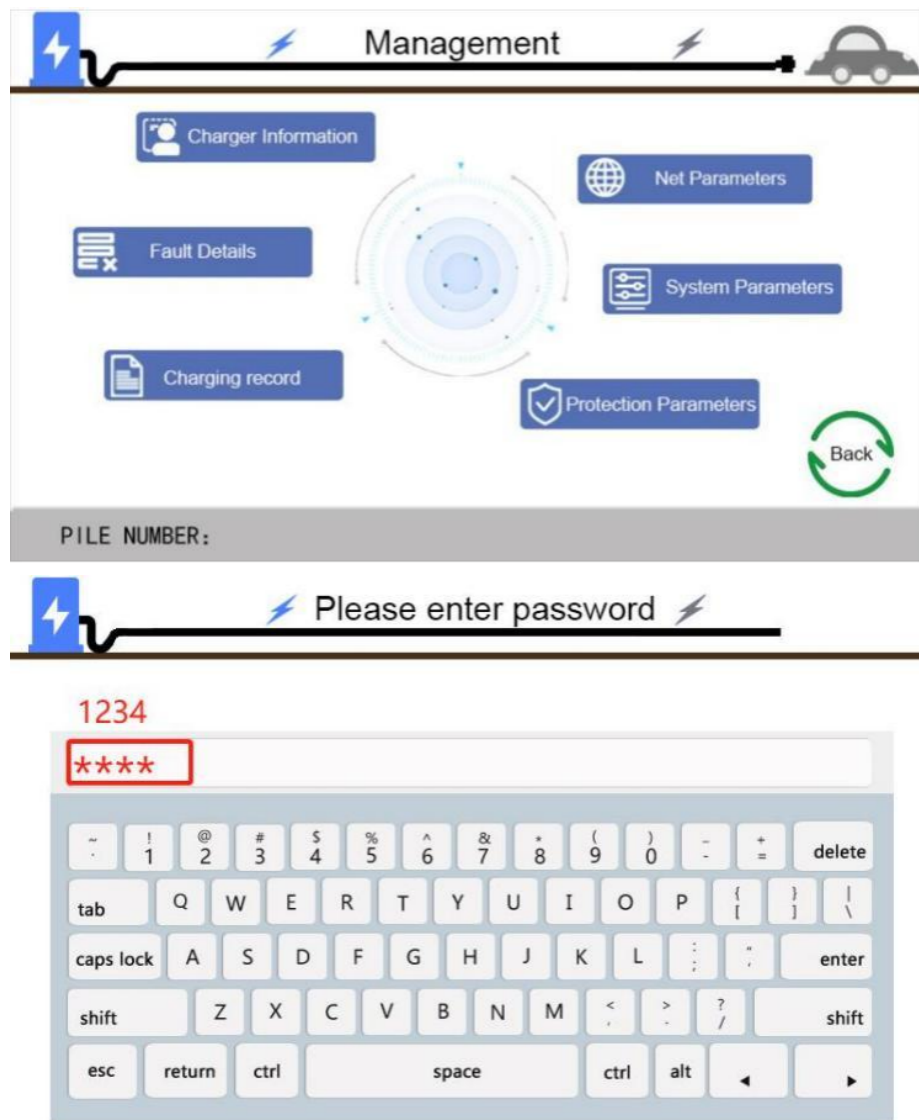


Fig. 6-6 Display of Management

- If the charging process fails or the equipment fails, the picture displayed on the LCD screen is shown in Fig. 6-7.

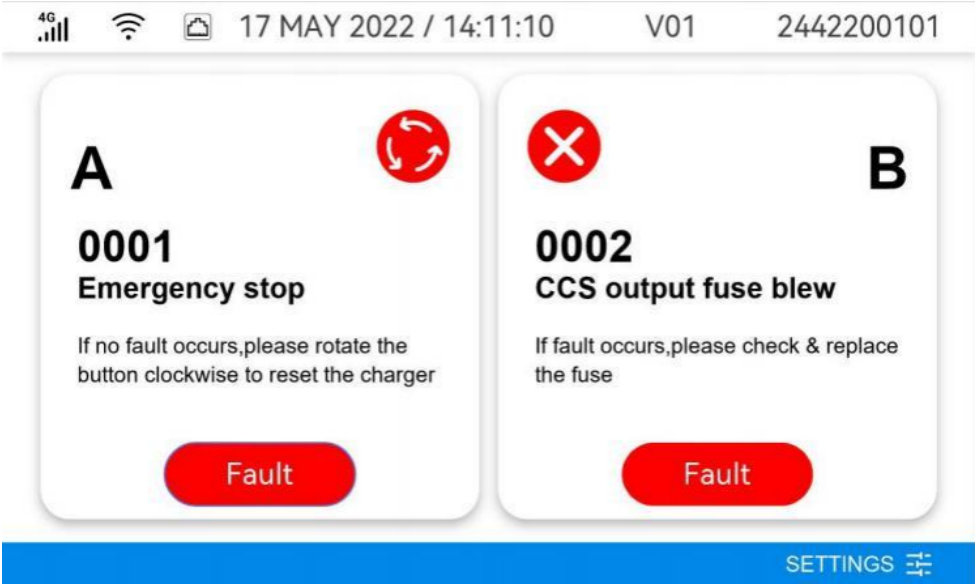


Fig. 6-7Display of fault state

4.3 Troubleshooting

- Please follow the instruction in the table when errors occur during the charging process.
- Or please contact the DC Quick Charger provider for further instructions.
- If an emergency occurs push the Emergency Stop Button to stop charging immediately.

4.4 Status Codes

For latest status code, please visit our website.

Status Code	Description	Solution
0001	Emergency stop	If no fault occurs, please rotate the button clockwise to reset the charger.
0002	CCS output fuse blew	If fault occurs, please check & replace the fuse.
0003	AC input contactor 1 welding	If fault occurs, please check & replace the contactor.
0004	CCS output relay welding	If fault occurs, please check & replace the Relay.
0005	CCS connector temperature sensor broken	If fault occurs, please check & replace the sensor.
0006	Relay control module /smart box broken	If fault occurs, please check & replace the Relay control module.
0007	CCS Power module fault	If fault occurs, please replace the CCS Power module.
0008	Maximum Output Current setup error	If fault occurs, please reset the correct value.
0009	Maximum Output Voltage setup error	If fault occurs, please reset the correct value.
0010	BLE module broken	If fault occurs, please replace the BLE module.
0011	4G module broken	If fault occurs, please replace the 4G module.
0012	Ethernet BLE module broken	If fault occurs, please replace the Ethernet BLE.
0013	wifi module broken	If fault occurs, please replace the wifi module.
0014	CCS connector OTP	If fault occurs, please check & reset the OTP value.
0015	SPD trip	If fault occurs, please replace the SPD Module.
0016	CCS ground fault detection timeout (GFD)	If fault occurs, please check the Ground line.
0017	RFID module communication fail	If fault occurs, please check Communication line with RFID.
0018	Power module communication fail	If fault occurs, please check can line with power module.
0019	Door open	If fault occurs, please closed the door & recharge with vehicle.
0020	System fan decay	If fault occurs, please replace the fan.
0021	AC Ground Fault	If fault occurs, please check the Ground line.
0022	CCS EV communication Fail	If fault occurs, please check Connecting wire with vehicle.

5. Maintenance

5.1 General Maintenance

- The DC Fast Charger is cooled by forced air. Please keep charger in a ventilated location and do not block the air vents of the DC Fast Charger .
- Please clean or replace the air filters regularly to ensure the DC Fast Charger works properly.
- Clean the DC fast Charger at least three times a year, keep the exterior clean at all times.
- Clean the outside of the cabinet with damp cloth or wet cotton towel, only use low-pressure tap water and cleaning agents with PH level between 6 to 8.
- Do not apply high-pressure water jets.
- Do not use cleaning agents with abrasive components and do not use abrasive tools. Improper cleaning agents might spoiled coating, painting, surface, bright- ness and durability of all exterior parts.
- If there is water intruding into the DC Fast Charger then please cut off the power source immediately and contact the DC Fast Charger provider for repair.
- Please make sure the charging connector is returned to the holder of the charging connector after charging to prevent damage.
- If there is damage to the charging connector, charging cable or holder of the charging connector then please contact the DC Fast Charger provider.
- When using the DC Fast Charger please handle properly. Do not strike or scrape the cabinet or touchscreen.
- If the enclosure or touch screen is broken, cracked, open or shows any other indi- cation of damage then please contact the Standalone DC Fast Charger provider.



WARNING: Danger of electrical shock or injury. Turn OFF power at the panelboard or load center before working on the equipment or removing any component. Do not remove circuit protective devices or any other component until the power is turned OFF.

- Disconnect electrical power to the DC Fast Charger before any maintenance work to ensure it is separated from the supply of AC mains. Failure to do so maycause physical injury or damage to the electrical system and charging unit.

Note:

- Before switching off main breaker to begin maintenance, please record the status code number on the LCD monitor.
- After switching off the key switch the circuit before the main terminal is still hazardous. Only visual inspection can be operated.
- Maintenance of the DC Fast Charger shall be conducted only by a qualified technician.
- After opening the front door of the DC Fast Charger, turn off the main breaker and auxiliary breaker before any maintenance work.
- Replace the ventilation filter every six to twelve months.

Limited Product Warranty

The warranty period for this charger is two years.

Any spare parts provided by QUANTEX Technology and used as replacements for repair are covered by a five-year guarantee.

Replacement and repair parts manufactured by alternative manufacturers to those on the maintenance parts are only allowed if authorized by QUANTEX.

Warranty Exclusions:

- Damage or rendered non-functional as a result of power surges, lighting, earthquake, fire
- flood, pest damage, abuse, accident, misuse, negligence or failure to maintain the product or other event beyond QUANTEX's reasonable control or not arising from normal operating condition.
- Cosmetic or superficial defect, dents, marks or scratches after use.
- Components which are separate from the product, ancillary equipment and consumables, such as door key, RFID card, air filter, fuse, cable, wires and connectors.
- Damage as a result of modifications, alterations or disassembling which were not pre-authorized in writing by QUANTEX.
- Damage due to the failure to observe the applicable safety regulations governing the proper use of the product.
- Installed or operated not in strict conformance with the documentation, including without limitation, not ensuring sufficient ventilation for the product as described in QUANTEX installation instruction.

If a defect in the product arises and valid claim is received within the warranty period, your sole and exclusive remedy will be for QUANTEX, at its sole discretion and to extent permitted by law, to

1. Repair the defect in the product at no charge, using new or refurbished parts.
2. Exchange the product with new or refurbished product that is functionally equivalent to the original product.

Any remedy hardware product will be warranted for the remainder of the original warranty period or 90 days from delivery to the customer, whichever is longer.

In order to receive the remedy set for above, you must contact QUANTEX charge during the warranty period and provide the model number, series number, proof of purchase, and date of purchase

Appendix – Package list

Item	Description	Quantity	Remark
1	QTEV	1	
2	User Manual	1	
3	SD card	1	
4	RFID Card	2	
5	Key of Cabinet	2	
6	12/80” Expansion Screw	4	
6	test tools	1	