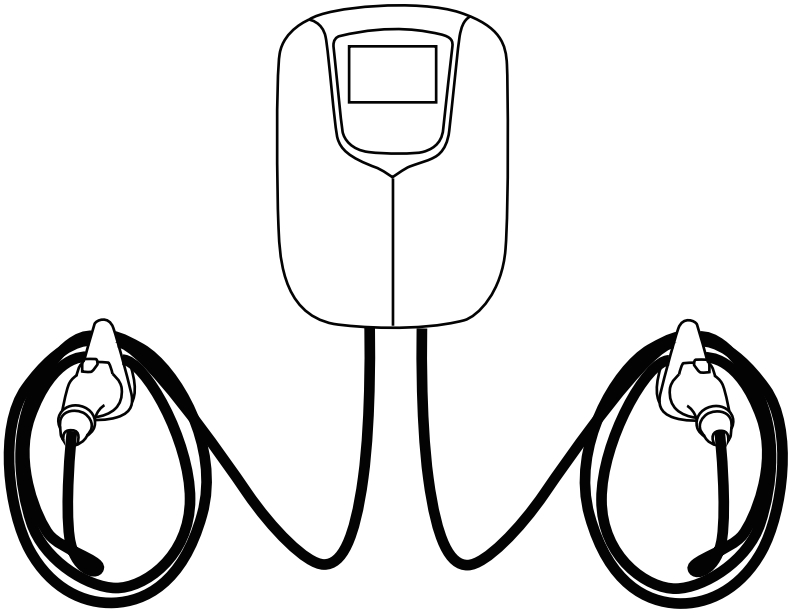
AC EV CHARGER

User's Manual



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IMPORTANT SAFETY INSTRUCTIONS

WARNNING When using electric products, basic precautions should always be followed, including the following.

This manual contains important instructions for Models EU-ACHXXX-48/32/16-XXXX that shall be followed during installation, operation and maintenance of the unit.

A) Read all the instructions before using this product.

B) This device should be supervised when used around children.

C) Do not put fingers into the electric vehicle connector.

D) Do not use this product if the flexible power cord or EV cable is frayed, has broken insulation, or any other signs of damage.

E) Do not use this product if the enclosure or the EV connector is broken, cracked, open or shows any other indication of damage.

F) Before turning on the equipment, please ensure that the equipment is well grounded to avoid personal injury or death caused by electric shock.

a) 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.

G) The charging current must never be set higher than the line fuse itself. If the charger is to be operated with an output of 7 kW and 11 kW, it must be protected with an 50 A over current protection device (such as fuse), and 11kW with a 50A over current protection device (such as fuse). Ensure the current carrying capacity of the AC.

H) Do not disassemble the product without permission, and do not modify or install any parts by yourself under any circumstances

I) When the equipment is installed, please keep away from volatile gas or flammable environment;

J) The electrical installation must comply with all local applicable safety requirements, standards and guidelines.

K) Before powering on the equipment, please ensure that the input voltage and power frequency meet the technical requirements of the equipment

L) During the charging process, the vehicle is prohibited from driving and can only be charged when it is stationary

M) Please turn off the electric car before charging

N) In case of any abnormal situation during use, please immediately press the side emergency stop switch button to cut off the input and output current source

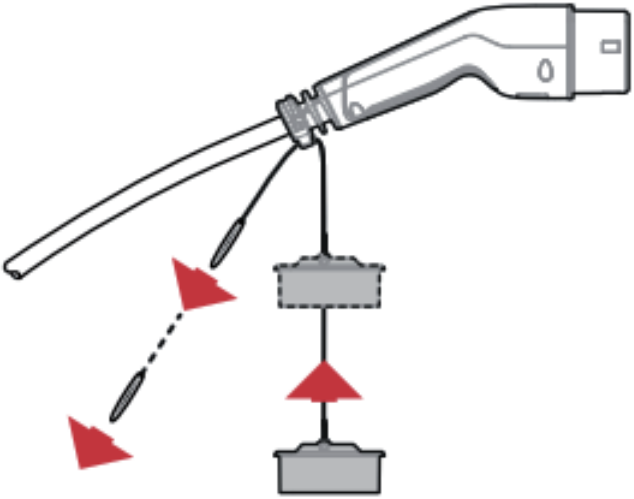
O) Components should not be changed or replaced by the end-user or unqualified personnel.

symbol	meaning
	Risk of danger, warning and caution Safety information important for human safety. Failure to observe the safety information in this manual may result in injury or death.
	"Non-recyclable" mark: located on the product, instruction manual or package, indicating that electrical and electronic equipment and its accessories should be treated separately from ordinary household waste. When scrapped, it should be treated as industrial waste, otherwise it may cause accidents.
	Warning sign: indicates danger. Pay attention to the personal injury that may be caused by operation procedure or incorrect operation. Beware of high voltage and operating current. The EV charger operates at high voltage and current. Work on the EV charger must only be carried out by skilled and authorized electricians.
	Refer to the manual accompanying the EV charger.

SAVE THESE INSTRUCTIONS

Store and Protect:

Coil the cable Roll the cable around the charging unit. Make sure that the plug hangs with the plug cap facing the ground. Attach the clip to the charging cable. Use the plug cap The plug strap can adjust the cap's position. This prevents the cap from collecting water and dirt, and keeps the cap clear of the vehicle.



Maintenance and Care

WARNNING Do not flush water on the charging station. Do not use harsh chemicals when cleaning.

Checking

1.Keep the plug dry and check them regularly for dust, dirt, pebbles, etc..

2.Check the cable regularly for cracks and other damage.

3.Check the charging station regularly for cracks and other damage.

Cleaning

1.Switch off the charging station before cleaning.

2.Use a damp cloth to clean. Do not use water or harsh chemicals.

IEC 61851-1

UKCA

CE

MACHINE AND PRODUCT TEST

ISO9001

ENERGY STAR

ETL

FCC

ECM

① PRODUCT PARAMETERS

•CHARGING PILE

4.3-inch LCD screen
High compatibility
Waterproof grade:IP54
Small size, Easy to transport
Multiple security protection
Certified by authorities
Real-time monitor on temperature

Transport Package

Package Size（W/H/D）	500/350/300mm
GW./NW.	10/9KG
Packing Quantity	1in 1 carton

• EV CONNECTOR

Built in temperature monitoring
Good conductivity
PVC CABLE
Durable and anticorrosion
Easy to bend, Long service life
High resistance to cold/ high temperature

•CORE ADVANTAGE

RCD: Type A+6mA DC
Directional current regulation
Repair the disorder of capacitor units
Full-link temperature monitoring system
Strong Expansibility

			
	User Manual (x1)	φ6 Expansion Pipe (x6)	M4*40 Screw (x6)
			
Wallbox(x1)	The holder (x1)	RFID CARD (x2)	SD card(x1)

Cables & Material

Name	Specification	Quantity
Power supply cable	Single-phase or three-phase power supply cable	Depend on actual requirement

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 item or if any items are missing, please contact the seller at once.

② PRODUCT CHARACTERISTIC

RFID reader, 4.3-inch LCD/touch screen, 4G / WiFi / Ethernet Communication module, level1.0 embedded metering / level1.0 energy meterare modular design, convenient for users to flexibly select.

Built-in type A leakage +DC 6ma protection, which can reliably protect AC leakage and DC leakage; Built-in PE grounding detection, real-time. Test the reliability of PE wiring, protect the safety of equipment electricity; Built-in temperature sensor, controller through downflow or disconnect Charging guarantees spontaneous combustion and other accidents caused by over temperature during the charging process.

The shell is injection molded with ABS+PC mixed material with good weather resistance and excellent flame retardant performance.
The shape fully reflects the minimalist design idea, makes full use of organic surface elements, and has a strong overall sense, which is safe and reliable for industrial products and reflects a strong sense of science and technology.

Model H EV Charger Data Sheet			
WALL-MOUNT EV CHARGER		**EUROPEAN STANDARD**	
PARAMETER	Product Name	11kW AC EV Charger	22kW AC EV Charger
	Item No.	EE-ACH101-22-7H2	EE-ACH101-44-7H2
INPUT	Power Input Cable	L1,L2,L3,N,PE	L1,L2,L3,N,PE
	Voltage Range	400VAC±20%	400VAC±20%
	Rated Current	16A*2	32A*2
OUTPUT	Rated Voltage	380V	380V
	Rated Current	16A*2	32A*2
	Rated Power	11kW*2	22kW*2
FUNCTION	Plug Type	Type 2*2	
	Cable Length	5M	
	Housing Material	Plastic PC+Temper glass front panel	
	LED Indicator Lamp	Support	
	Screen	4.3" LCD Screen	
	Charging Way	AC EV Charging	
	Emergency Button	Optional	
COMMUNICATION	WiFi	Support	
	Ethernet	Support	
	RFID	Support	
	4G	Optional	
	RS485	Optional	
	OCPP 1.6J	Support	
	TLS 1.3	Optional	
SAFETY	Electricity Metering	Support, but not as basis for billing	
	RCD	Type B (Type A +6mA DC)	
	IP Rate	IP54, IK08	
	Safety Protection	Emergency Stop/ Over Voltage Protection/ Under Voltage Protection/Over Current Protection/ Leakage Current Protection/ Ground Protection/Over Temperature Protection/ Short-circuit Protection/ Lightning Protection	
	Built-in PEN Protection	/	
	Safety Standard	EN/IEC 61851-1, EN/IEC 61851-21-2, EN62196	
	Certification	CE / EN/IEC 61851-1:2017, EN/IEC 61851-21-2:2018	
	Warranty	Two Years	
INSTALLATION	Installing Type	Wall Mount/ Pillar Style	
	Working Temperature	-20℃-50℃	
	Working Humidity	5%~95%	
	Dimension	402*290*135mm (L*W*H)mm	
	Net Weight	8.5kg	9.2kg
	Gross Weight	9.5kg	10kg
CHARGER GUN	Connection Type	Case C/ Mode 3	

③ INSTALLATION INSTRUCTIONS

1. Installation Notice

• Electrical devices should only be installed, operated, and maintained by qualified personnel. No responsibility is assumed by the manufacturer for any consequences arising out of the use of this device. A qualified person is one who has certified skills and knowledge related to the construction, installation and operation of this type of electrical.

device and who has received safety training to recognize and avoid the hazards involved.

• All applicable local, regional, and national regulations must be applied when installing, repairing and maintaining this device.

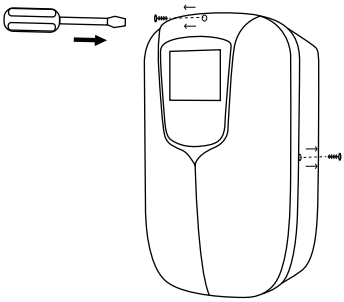
• RCD of the charger is intergrated 6mA DC, please install a Type A breaker outside.

2. Checks before starting the Installation Process

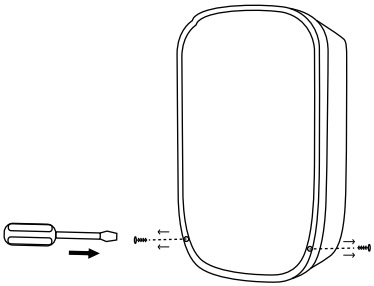
• Ensure the charger's location allows good operational access for normal use and repair & maintenance.

• The AC input components within the premise's power supply are correctly fitted with required protection items prior to installation of the charger.

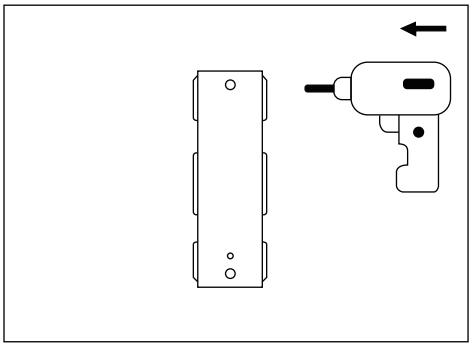
3. Installation Procedure



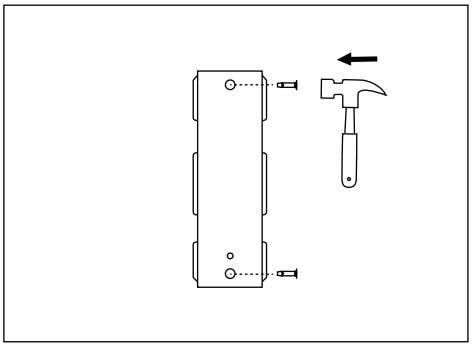
1. Loosen the screws on the cover and open it.



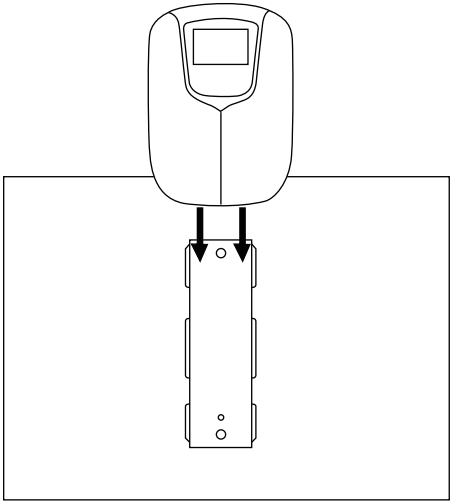
2. Loosen the screw of the bracket



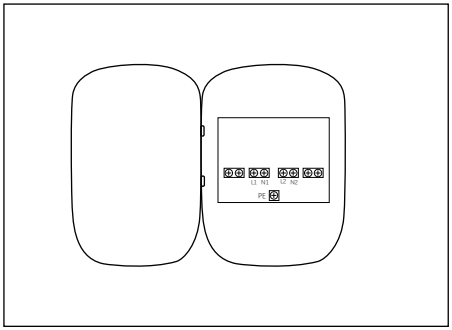
3. Please use a percussion drill to drill holes according to the cardboard positioning.



4. Install expansion bolts(3*M6*60MM)



5. Hang the charger on the bracket



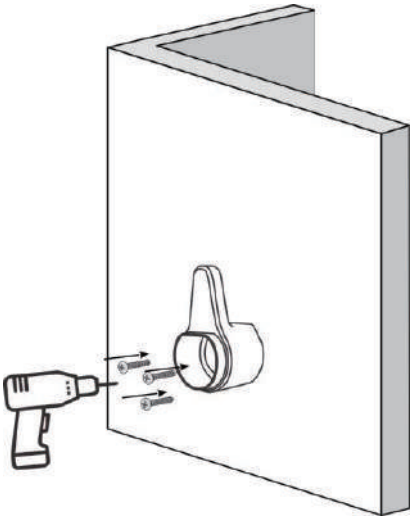
6. Preparing for installationConnet the wires(L1, L2 and PE) per labels

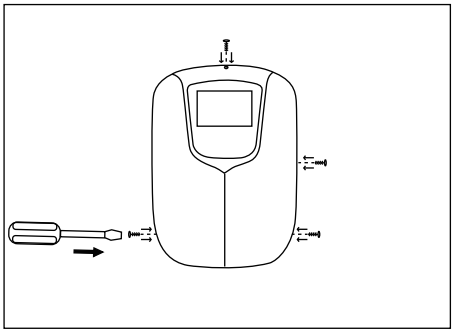
7. Open the cover with the key,fix the charging station with self=tapping screws(3*M5*50mm)

8. Use a cable with a size of 3*6mm²(7KW) to connect to the input terminal of the charging station, from left to right,R S T N and GND wire, and then tighten the screw with a screwdriver.

9. Use a cable with a size of 5*4mm²(11KW)or 5*6mm²(22KW) to connect to the input terminal of the charging station, from left to right,R S T N and GND wire, and then tighten the screw with a screwdriver.

10. Fix the hook on the wall with screws (3*M5*50mm)





11. Close the cover and tighten the screws

1. Power on

After the charging station has been installed and installation has been confirmed,
the charging station switches to standby state, The display is shown in fig. 4-1. Human-Machine Interface Overview
As shown in Fig. 4-1, the EMN series product is configured with multiple human- machine interfaces

2. RGB LED indicators

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

3. LCD indicators

The charger config a 4.3 inch Touch LCD screen, which is mainly used to display various status information of the charging station, shown as Fig.

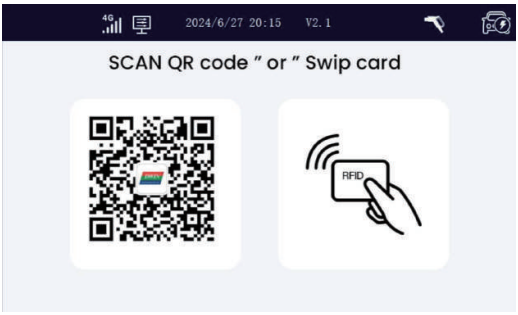
- **Icons or instructions in each display area**

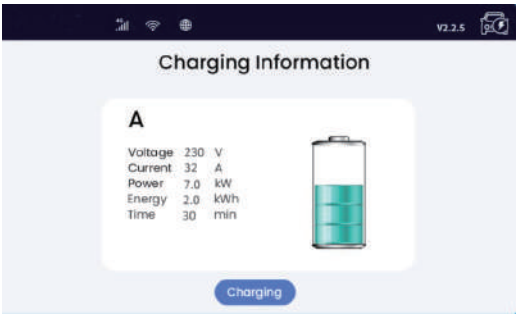
4. Display of icons and instructions

There are three areas to display icons or instructions, with the specific meanings as follows:

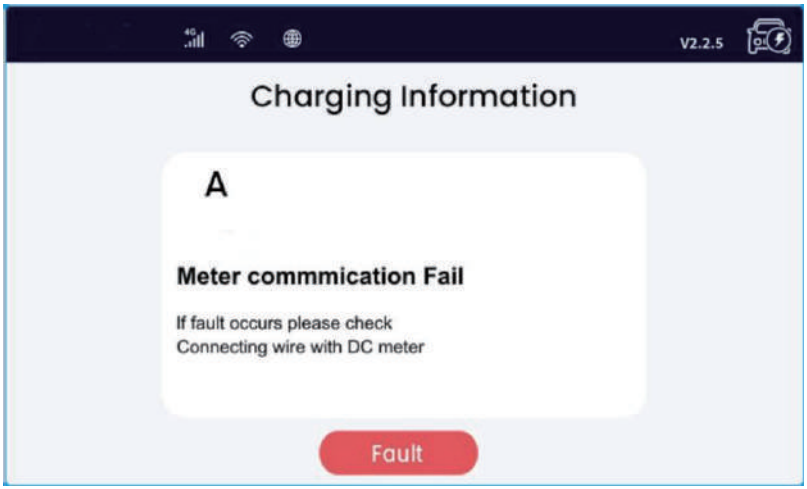
Area ①		
No.	Icon	Description
1	4G	Connected a network through 4G cellular
2		Connected a network through WIFI
3		Connected a network through Ethernet
4	2024/6/27 20:21	Time show
5	V2.1	Software version
6		Plug in or out
Area ②		
7	QR code	Serial number of EVSE
8	Rfid	Swipe Rfid

5. The LCD screen displays 3 types picture in normal state.



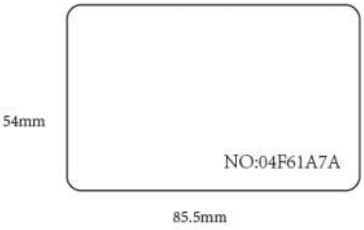


6. If the charging process fails or the equipment fails



7. RFID reader

In general, the charging station is equipped with RFID card reader as standard, and the charging process can be started and stopped by using the RFID card configured with the host. The special customized card swiping function is not separately described here.



8. Emergency stop button

The button can stop or start charging after the device is configured to allow the button to start, The user can configure whether the function is enabled. When the charging station is in standby state, please plug the charging connector into the empty socket in order to protect the charging connector.

9. Configure parameters on the screen

- **Load balancing Settings**

(1) The load balancing function requires three steps:

① Set the load balancing metering mode;

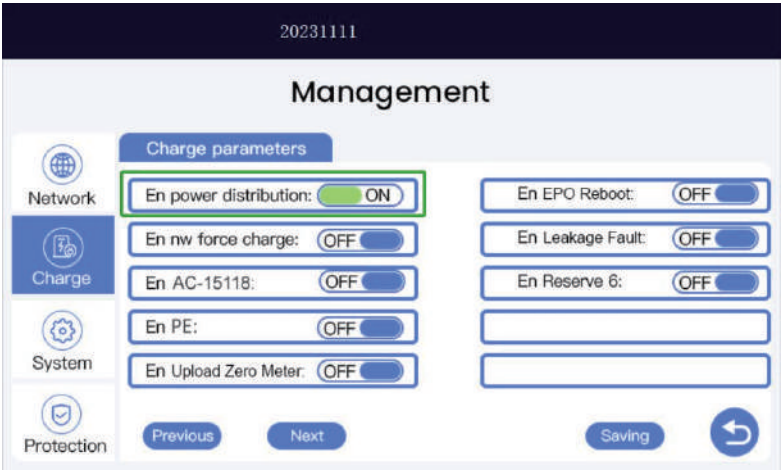
② Turn on the load balancing switch;

③ Connect the load balancing accessories to the household load box&Verify that the load balancing function works properly

(2) Select load balancing function has two modes:

① ct sampling calculation : select No meter

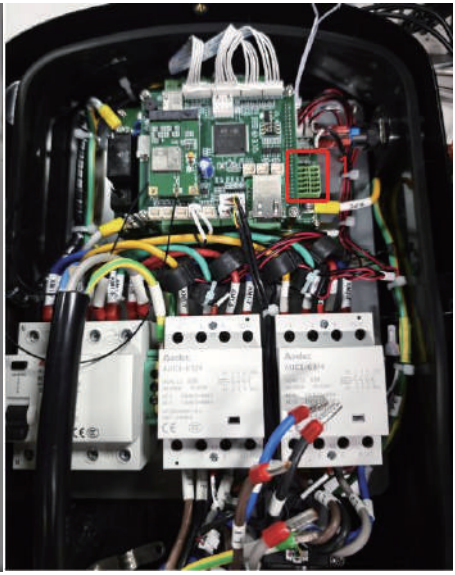
② Using an external meter calculation: Select the corresponding meter model



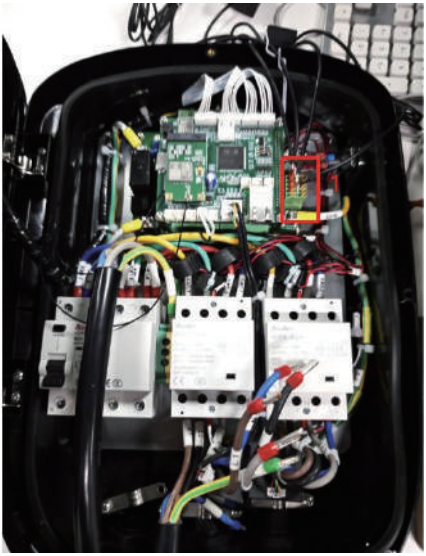
(3) Verify that the load balancing function

Connect the load balancing accessories to the household load box, The pagefor monitoring load balancing is displayed.

① Prepare a load balancing CT accessory or an electric meter

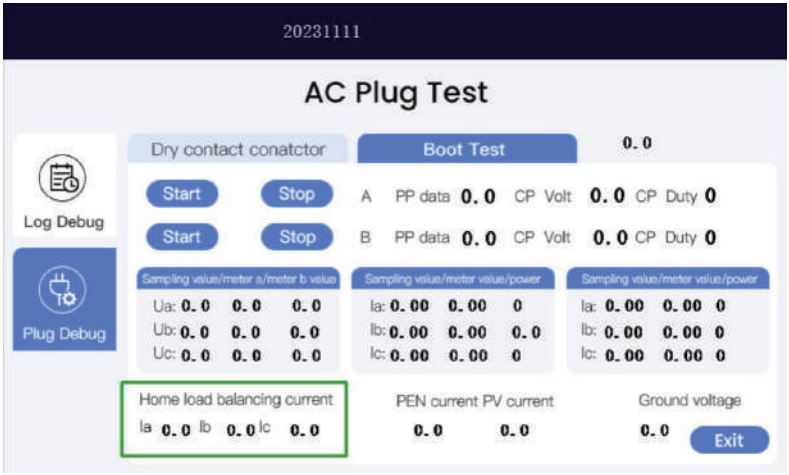


② Connect the load balancing terminal to the corresponding position on the mainboard

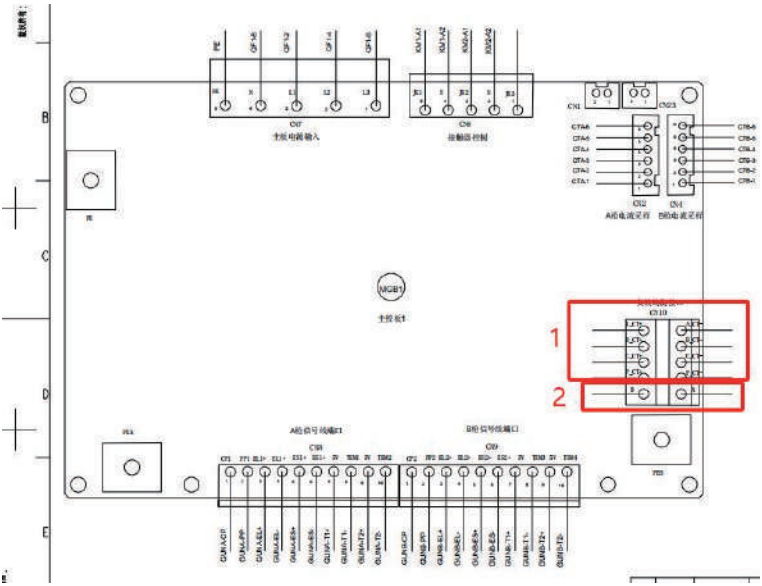


③ Fasten the CT ring to the total load line of the household side, and install one for each phase

④ The ac debug screen is displayed. If there is current, the cable is connected properly



*Supplement: If you use the meter as a load balancing function, you ne ed to connect the meter to the household load measurement grid, and the 485 terminal of the meter is connected to the corresponding 2 positions on the motherboard.



- **Set network（4G,WIFI,LAN） parameters**

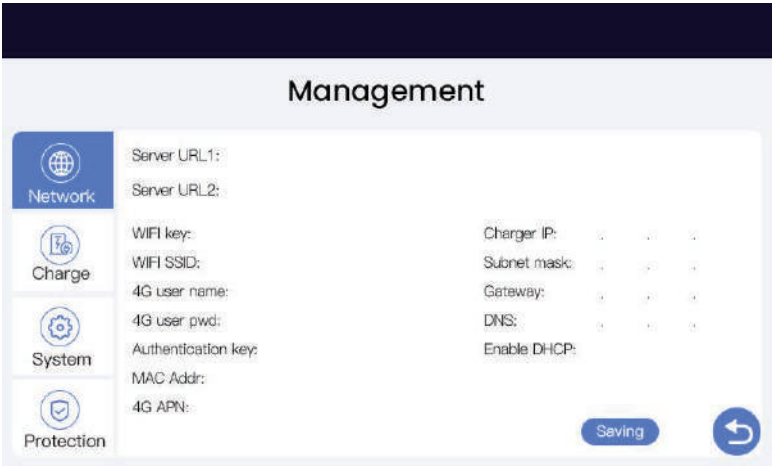
① Set severURL1 as the platform address.

② Set ChargeID to the peg number on the System interface.

③ WIFI connection: Install the WIFI module on the WIFI cable, then enter the WIFI account in WIFISSID, and enter the WIFI password in WIFIKEY.

④ 4G connection: Install the 4G module and insert the SIM card, and install the antenna.

⑤ LAN connection: Insert a network cable and set EnableDHCP to 1.



10. Set parameters on the web page

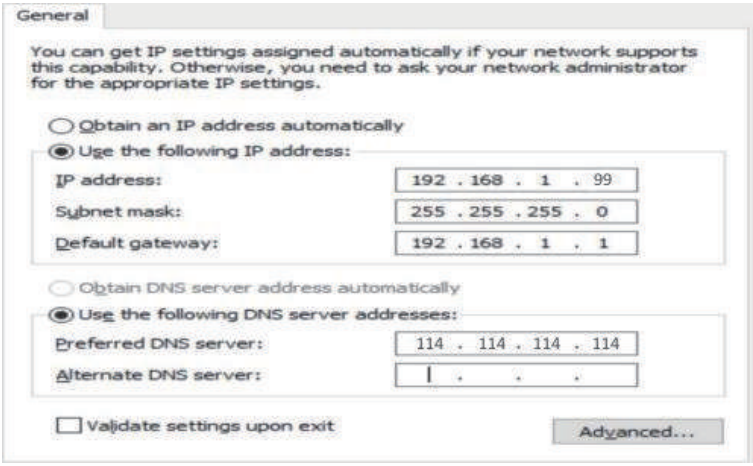
(1) Configure parameters(Direct network connection)

Taking the configuration of charging station parameters by laptop as an example, it is introduced as follows (the method of setting parameters by mobile phone is similar and will not be repeated):

Step 1: Connect to EVSE with RJ45 line

Step 2: Keep your laptop in a state where it LAN use static IP 192.168.1.99, default gateway 192.168.1.1, network mask 255.255.255.0. Connect to the EVSE with RJ45 line

Step 3: By this setting the EVSE use a static IP 192.168.1.99. Now you can use:http://192.168.1.99 to login to the manage web



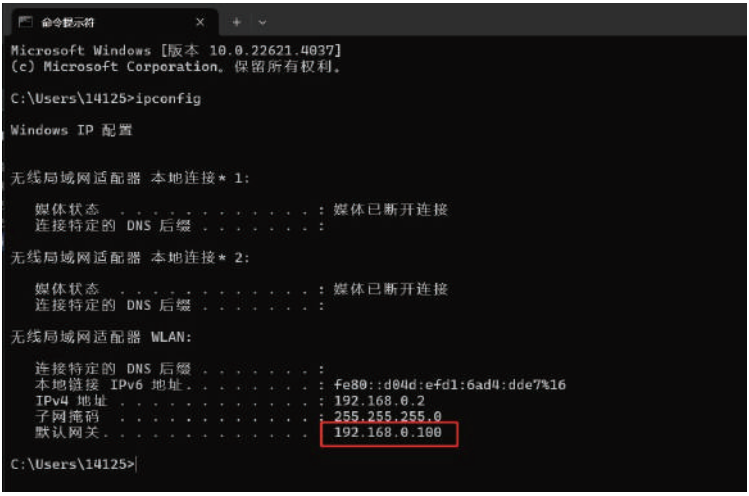
How to configure onboard WI-FI hotspots

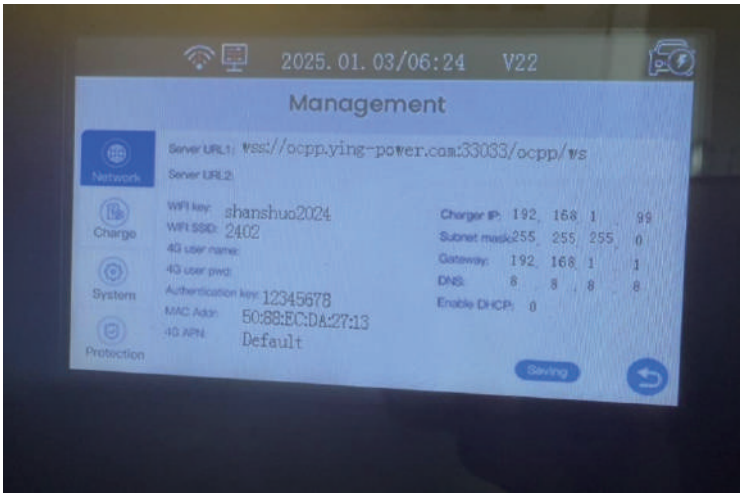
① It is required that after 8 seconds of continuous pressing the emergency stop button 5, the buzzer will ring 1, and it will enter the wifi configuration mode.

② When the lamp turns yellow, it means that it has entered the wifi configuration mode.

③ Charging pile will generate a wifi hotspot, hotspot name: charging pile serial number, default password: 12345678 Use your phone or computer to connect to this hotspot, as shown in the picture.

④ After the connection is successful, open the browser and enter: 192.168.1.99:8080, this address is the default address, if the user has changed the IP address, please view the screen to modify or use the DOS command to view the address (valid when connecting to the hotspot), the input information becomes: 192.168.0.100:8080, as shown in the figure:

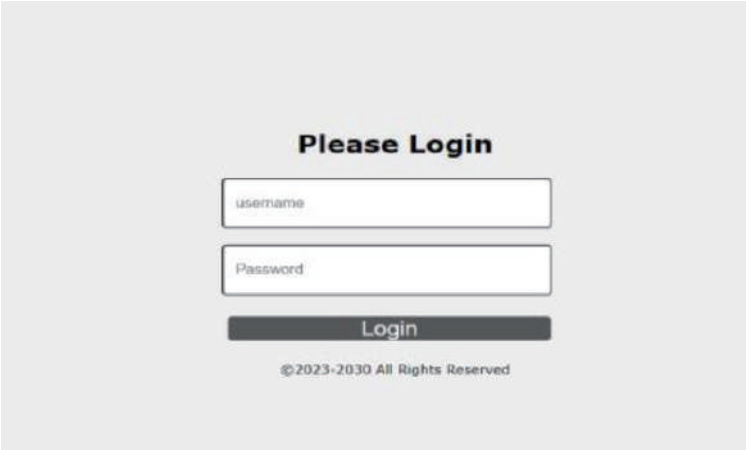


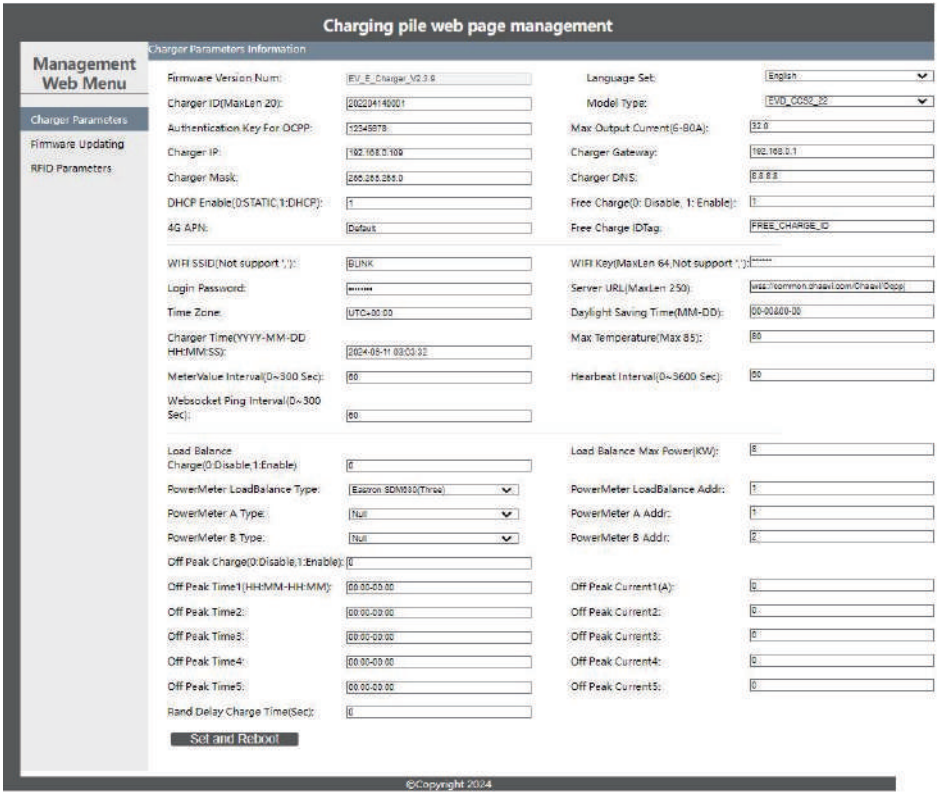


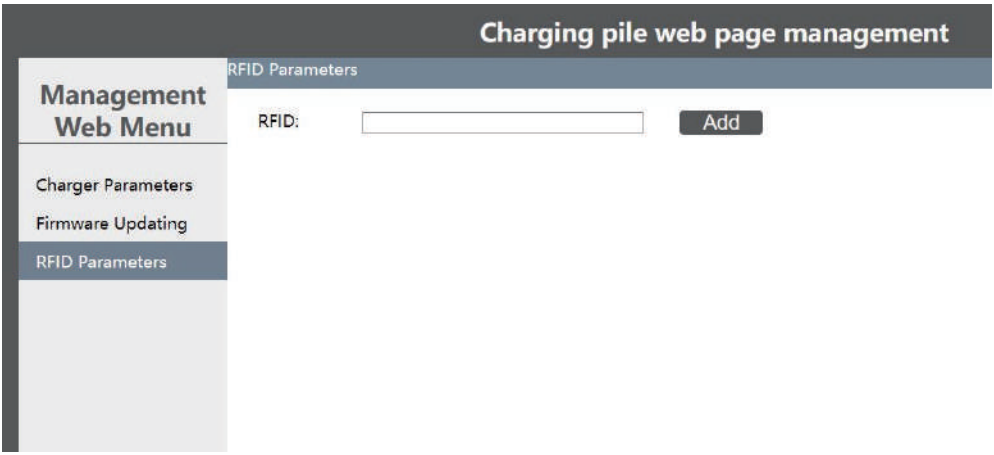
Enter the charger IP address in the image above in the viewer, followed by :8080

(3) Login to the web interface

The account is admin and password is 123456789







① Select Wi-Fi Module

Select Wi-Fi modes and fill in SSID and Password according to your application, if not required, just keep default.

② Version number, charging station number Server address can be changed&set;

③ Set the number and type of charging stations, Module type and number. temperature. Meter etc can be changed also;

④ Firmware Updating: Select an upgrade file to perform the upgrade

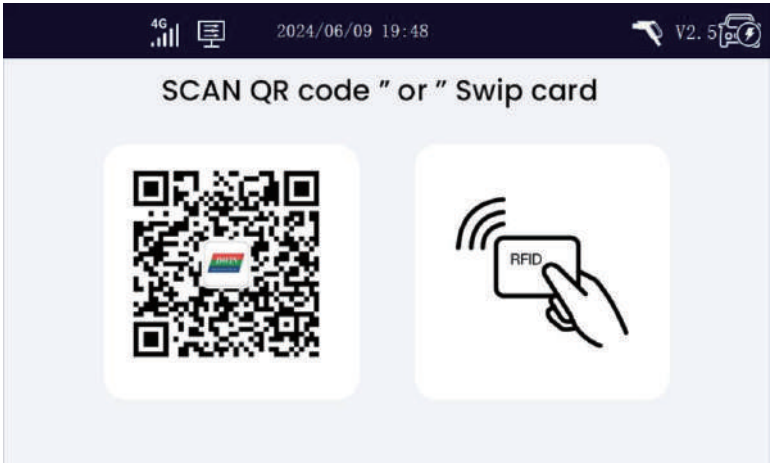
⑤ RFID Parameters Select the RFID file to import the binding card function

11. Start Charging

Note: The vehicle to be charged must be parked, switched off and the parking brake engaged.

① Park your EV into place, turn off, and put the EV under braking.
② For tethered (cable) version: Remove the Type 2 cable from the plug holder of the EVSE on the right side by pushing the button on the holder. For untethered (socket) version: Plug in the Type 2 plug of the charging cable into the EVSE socket on the right side.
③ As shown in Fig. 6-13, plug the charging connector into the AC charging socket of the EV, and the LED of the charging station lights yellow.
④ For the mode of “Plug and play” charging station, the charging process will start automatically after plug in.

⑤ For the mode of “swipe card” or “scan QR code” charging station, follow the instructions on the LCD screen after charging connector plug in, you can start charging process by swipe RFID card or scan QR code.



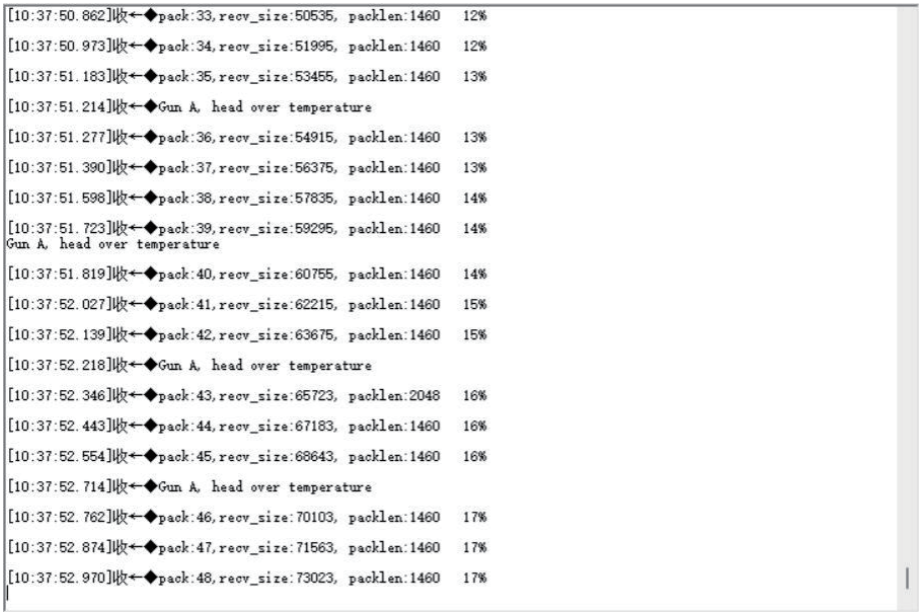
12. Normally stop charging

① The charging station will automatically stop when the electric vehicle is fully charged.
② For the mode of “plug-and-charge” charging station, you can manually stop charging as follow: press the unlock button of the remote key of the EV, the vehicle will stop charging (requires the support of the EV); if the charging does not stop, you may try to unplug the charging connector directly. When “Charging” indicator turns off, the charging process is end. For the mode of “swipe card” charging station, swipe your RFID card again, when “Charging” indicator turns off, the charging process is end.
③ For the mode of “Scan QR code” charging station, click the stop button on your APP, the charging will stop.
④ When the charging is end, please unplug the charging connector and plug back to the empty socket of charging station.

⑤ FIRMWARE UPDATE

1. Web update

Select the rbl file that you want to upgrade and click submit



Upgrade process

Upgrade successfully

You can see that the version number has changed

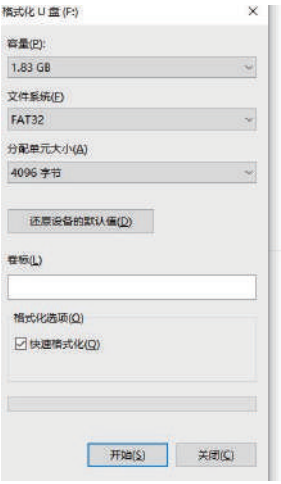
2. SD Card update

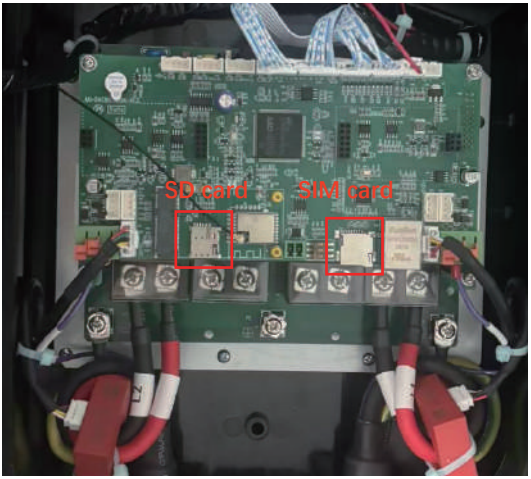
SD card less than 8G, and formatted as Fat32 system

① Insert ac_firmare.rbl into the SD card and insert it into the mainboard

② When the device is powered off and restarted, the motherboard will automatically update. During the update process, the buzzer will keep ringing and the running light will blink quickly.

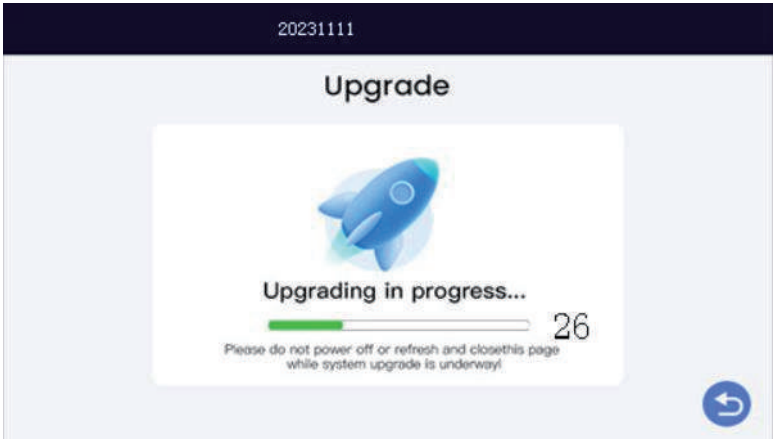
After the update, check the version number to determine





3. Remote update（OTA）

The upgrade file is uploaded to the server, and the server sends the upgrade command



1. Troubleshooting

The charging station is automatically protected in the event of the fault. The fault information and handling methods are as follows.

Fault information	LCD Show	Handling method
LCD is off	· None	· Check whether the power supply and distribution are normal · Check whether the branch breaker is tripped, and close the breaker after troubleshooting; · Check whether the connection is correct, if the cable comes off, should be properly connected to tighten the cable.
CP failure	· EV Communication Error	· Check that the adapter is properly connected to the electric vehicle, pull and plug the adapter and try charging again
Emergency stop	· E-stop	· Check if QTEVSE is working properly and release emergency stop button by turning it around.

Under voltage fault	· Under Voltage	· Check that the input cable is reliably connected, that the parent grid is properly connected, and that the grid voltage is abnormal.
Over voltage fault	· Over Voltage	· Check whether the input cable is connected correctly; Whether the grid voltage is abnormal.
Over temperature fault	· High Temperature	· Check whether the charging station is covered or installed in a high temperature environment.
Meter failure	· Power Meter Failure	· Power off and restart the device
Leakage fault	· Over DC 6MA	· Check whether the charging adapter and its cable are damaged or wet. Recover after pulling out the adapter
Over current fault	· Over Current Failure	· Check whether the charging adapter is correctly connected to the car, and check whether the on-board charger is normal
No diode at vehicle end	· EV Communication Error	· This car is not up to standard and cannot be recharged
Relay sticking fault	· Power Switch Failure	· The device is damaged and needs to be returned to the factory for repair
Ground fault	· Ground Failure	· The charging pile is not grounded, so the circuit needs to be tested

2. Maintenance

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

① The equipment is maintained by professionals.

② Check whether the equipment is well grounded and safe.

③ Check whether there are potential safety hazards around the charging station, such as whether there are high temperature, corrosion or inflammable and explosive articles close to the charging station.

④Check 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.