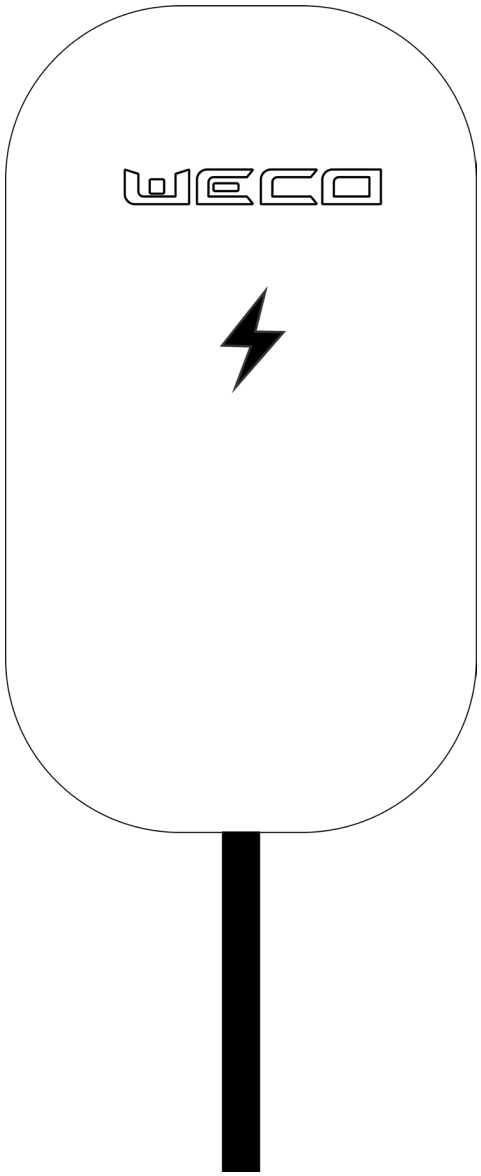


ZEER 7-11-22kW Residential EV Charger

Installation & User Manual

About the Manual

Overview

This document mainly introduces the installation, setup, and instructions for use. Please read this manual carefully before installation and use to understand the safety information and familiarize yourself with the functions and features of the product.

Unauthorized personnel have not the right to change or modify the contents of this manual.

Version Revision History

Modification records accumulate a description of each document update. The latest version of the documentation contains updates for all previous document versions. Once a new document is published, the old document will automatically become invalid. Please go to the official website to obtain the latest version. WECO Company shall not be liable for any losses caused by any wrong operation based on the older documentation or manuals.

Version	Date of issue	Items	Remarks
1.0	01-09-2024	1st release	
1.1	08-10-2024	2nd release	Add installation details, wiring details and specifications for Zeer-11, Zeer-22
1.2	18-10-2024	3nrd release	Update commission part
1.3	28-11-2024	4th release	Add more use details
1.4	04-12-2024	5th release	Add more Setting details

Table of Contents

1 Safety Instruction

General security considerations

The safety warnings listed in the manual represent only those known to WECO and WECO assumes no responsibility for violations of general safe operating requirements or safety standards for the design, production and use of the equipment.

Safety instruction

- Do not use product if product defect, such as cracking, breakage, corrosion, or other damage are observed.
- Do not use product comply with the requirements of the product manuals or safety requirements.
- Installation and modification of equipment by qualified or authorized personnel or installer.
- Follow operating instructions and safety warnings in the product manuals.
- Do not operate in harsh environments beyond what is described in the product manuals.
- Do not operate as the technical specifications against to the product label.
- Do not use products with unauthorized or non-qualified parts and modules used to the system.
- Do not unauthorized disassembly, alteration of the product, or modification of software code.
- Please contact your installer or sale for charging cable extension cable.
- Install the EV charger at the place where out of the reach of children.

Safety in use

- Always checking the charger gun and cable, prevent water, contamination or damage before use.
- Never use the charger when contacts are wet, or dirty.
- Make sure the outlet of the EV is clear and dry, before plugging the charger gun.
- Do not violently unplug the Locked charger gun from the EV while charging.
- Such dangerous can cause electric shock, serious injuries or even death.
- The Charger gun will be unlocked at the end of charging. The duration of charging will vary depending on the vehicle or setting.
- Please take care to unplug the charger, before you gone to driving.
- In case of device smoking, melt or fire, leave far away the device, do not touch any of the cable. When charging, try to disconnect the charging box power support the first time if possible.
- Vehicle Adapters are not allowed to be used.

Disposal instruction

It is important to understand the Directive 2012/19/EC for device disposal. At the end of its useful life, the product will not be disposed of as urban waste. Dispose of it in accordance with the electrical waste disposal law applicable at the place of installation. The end user can ship the product to the distributor or installer for further action.

Safety in installation

Danger!

It is strictly forbidden to operate the charger with electricity during installation.

The process of lifting or placing the charger must be carried out slowly and cannot be placed quickly.

During installation, liquids, debris or conductive particles must be prevented from entering the system, which could lead to internal short circuits or system failure.
Equipment should be strictly prohibited to be installed under air conditioning outlets, ventilation openings, and machine room outlet windows that are prone to water leakage to prevent liquid from entering the equipment.
When installing the wall box, please ensure that the installation surface is sturdy and meets the load-bearing requirements of the equipment.
The lowest point of the vehicle connector when stored shall be located at a height between 0,5 m and 1,5 m above ground level.

Safety in electrical connection

Danger!

Before electrical connection, please make sure that the charger box, cables, CT, and Charger gun are undamaged and in a safe state, otherwise it may cause electric shock or fire.

- All electrical connections must comply with local electrical standards.
- The equipment should be permanently connected to a protective ground. If it is a high contact current device, before connecting to the input power supply, the protective grounding terminal of the device casing must be grounded to prevent the contact current of the device from causing electric shock to the human body.
- During the process of laying the power cables, it is strictly prohibited to wrap or twist it.
- If the length of the power cable is found to be insufficient, it is necessary to replace the power cable and it is strictly prohibited to make joints or solder joints in the power cable.
- Buried cables need to be reliably fixed using cable brackets and cable clamps. The cables in the back filled soil area must be tightly attached to the ground to prevent deformation or damage caused by stress on the cables during back filling.
- Cable trays and wire holes should have no sharp edges, and the position of cable conduits or wire holes should be protected to avoid damage from sharp edges, burrs, etc. Similar cables should be tied together, with a straight and neat appearance and no external skin damage; Different types of cables should be laid separately, and intertwining or cross laying is prohibited.
- The Charger can only be connected to the grid after getting the permission of the local electric department.

Cable requirements for connection:

The use of AC input cables in high-temperature environments may cause aging and damage to the insulation layer, as well as damage to the cables. The distance between the cables and heating devices or heat source areas should be at least 30mm.
When the temperature is too low, severe impact and vibration may cause brittle cracking of the plastic outer skin of the cable. All cables should be laid and installed above zero degree, especially in low temperature environment.
There are different cable specifications for grid connection, battery connection, PV connection. It should be strictly followed. And cord extension sets are not allowed to be used.

2 EV charger Instruction

The EV charger is Versatility， Efficiency， and Accessibility. It is designed to work with your home energy system for your better EV charging experience.

Wallbox Model

This paragraph defines product models: ZEER 7, ZEER 11, ZEER 22

Naming convention ZEER (Refer to Figure-2-1, using ZEER 7 as an example):

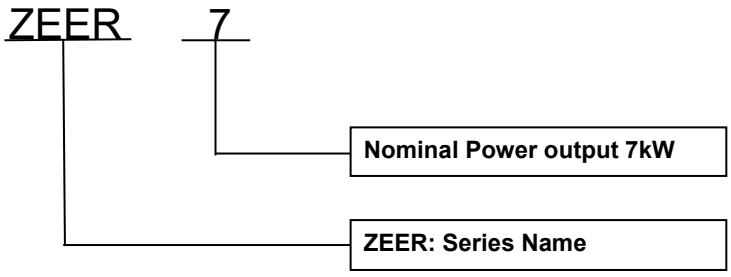


Figure 2-1

Appearance:

Charger box

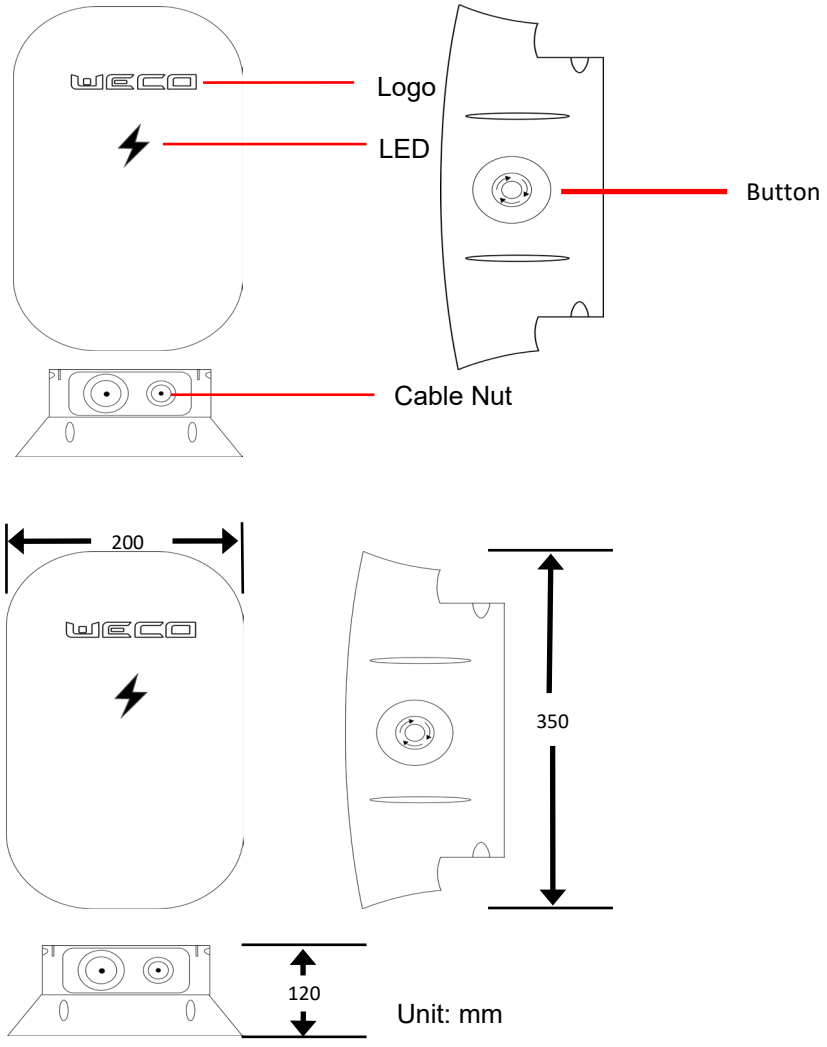


Figure 2-2

EV Charger Connector

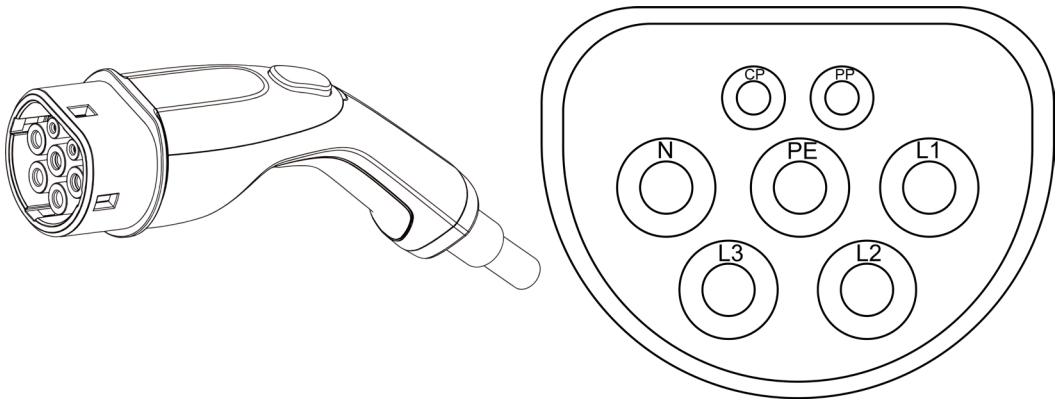


Figure 2-3

Connector PIN	Description
CP	Control Pilot, control charge current with square wave during charging
PP	Proximity Pilot, detect the maximum charging current allowed
N	N Conductor for Single phase or three phase
PE	PE Conductor for protective earthing system
L1	L1 Conductor, Single phase or three phase
L2	L2 Conductor for Three phase
L3	L3 Conductor for Three phase

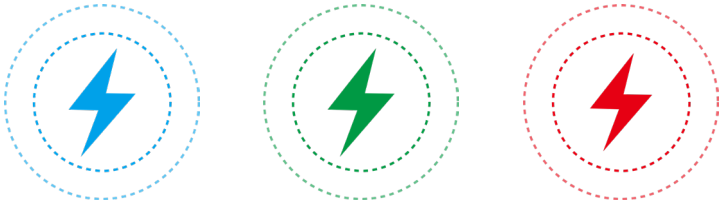
Specifications

Specifications Model	**ZEER 7**	**ZEER 11**	**ZEER 22**
Input Voltage	AC230V+15%/ Single phase	AC400V+15%/ Three phase	AC400V+15%/ Three phase
Input Frequency	50/60Hz		
Maximum output power	7.4kW	11kW	22kW
Output Voltage	AC230V+15%/ Single phase	AC400V+15%/ Three phase	AC400V+15%/ Three phase
Output current	6-32A	6-16A	6-32A
Measurement accuracy	Class 1.0		
Mounting method	Wall/stand		
Number of charge guns	Single Cable		
Charging method	Cable		
Communication methods	WiFi, Bluetooth		
Charging Control	Swipe card / App Start Stop / Plug & charge		

Charging Connector	IEC62196
User Interface	Three color Led Light/ APP
Ac output Type	Type 2
Earth leakage protection parameters	Type A+6mA (30mA AC+6mA DC)
Case Material	ABS+PC material
Shell Size	350mm*200mm*120mm
Protection Class	IP55
Safety Protection	Leakage, Over-voltage, Under-voltage, Overload, Grounding, Over-temperature
Working Temperature	(-30℃~+50℃)
Relative Humidity	5% to 95%
Altitude	≤2000m
Other Protections	Moisture-proof, mildew-proof, salt spray-proof

Charger Status

The LED lighting on the wall box is marked with 3 colors. Different charging states can be fed back through different colors and flashing states, which are as follows.



Light-off--Power off

No electric input, the charger is out of service.

RGB flash--Offline

Charger is waiting for network when it is not connected to the EV (electric vehicle).

Blue Solid--Standby

Ready for use. Waiting for EV connection.

Green Solid--Connected

The charger detects an EV signal. The LED will stay green solid if battery is full, countdown before charging, charging completed, or charging paused.

Green Flash--Charging

In the charging process, the EV is being recharged.

Red Solid--Malfunction

The charger is in fault status. Do not try to charge in this condition. Please contact the product service team for support.

Emergency Button

Note: When the emergency button is pressed, the device stops all charging actions and automatically enters the protection state. However, please do not press the emergency button for convenience to stop charging without emergency.

Press the button

Press the emergency button quickly when one of the following situations occurs.

- Smoke or smell of burning.
- Electric sparks are visible or audible.
- Hearing unusual noises.
- Vibration found.
- Other cases where it is deemed necessary to stop the charging pile immediately.

Release the button

Once the emergency is resolved, the emergency button can be rotated to release the emergency button and complete the reset. In the direction shown below:

3 Pre - installation

Packing list

Before unpacking, please check the outer packaging for visible damage, such as holes, cracks, or other signs of possible damage inside. If there is any abnormal packaging or the wallbox model does not match, do not open it and contact your dealer as soon as possible. After unpacking, please check if there are all products and accessories.

Installation tools and gauges requirement

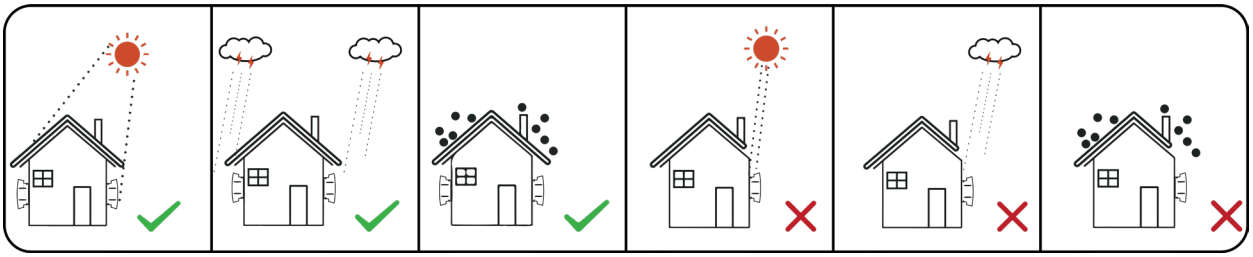
Installation	Hammer drill (drill bit Φ8mm).	Torque socket wrench (sleeve opening: 8mm, for M6 bolts; Torque range: 0N•m~ 15N•m).	Torque wrench (opening size: 13mm; Torque range: 0N•m~1.5N•m).
Personal protective equipment	Safety gloves	Protective goggles	Dust masks

Installation Requirement

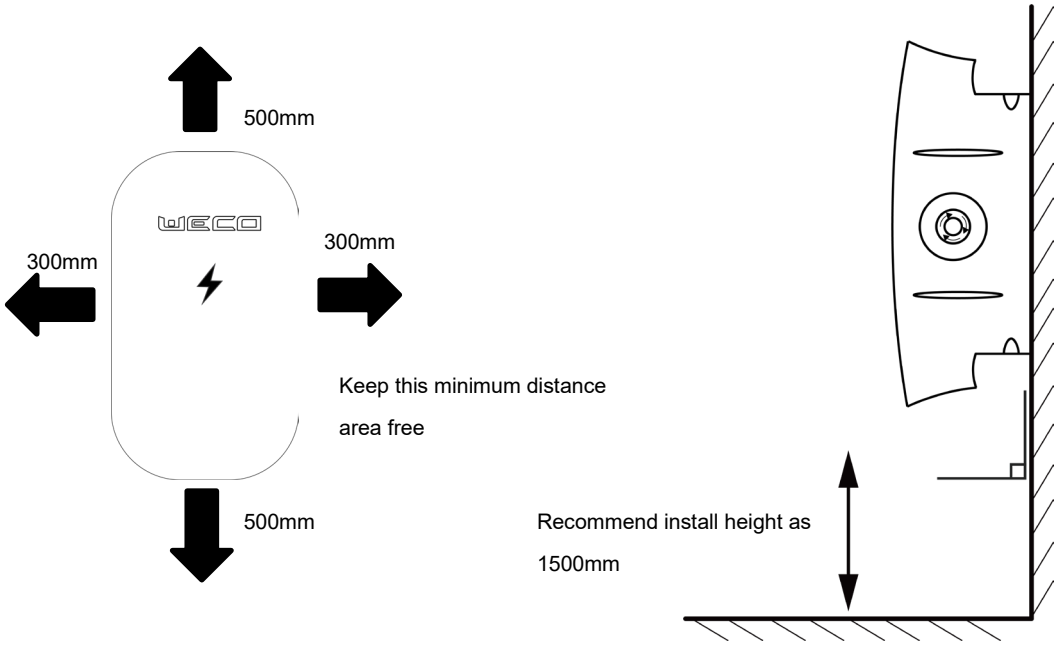
1) Wallbox installation must comply with local fire regulations (consult your company's safety department for details).
2) Do not install the wallbox near flammable materials, liquids or gases; The installation site must be approved by local authorities.
3) Ensure that the installation surface is strong enough to support the wallbox and that the supporting screws can meet the load requirements of the wallbox installation.
4) Wallboxs must be marked and confined to a dedicated area, room or technical compartment, must not be accessible to third parties, and must be illuminated for safe operation.
5) Post signs, in the immediate vicinity, warning and danger for the presence of solar wallboxs connected to batteries and solar panels.

6) Inform the person responsible for managing the electrical system of the presence of the solar wallbox and batteries, update the electrical diagrams of the buildings.

Installation location

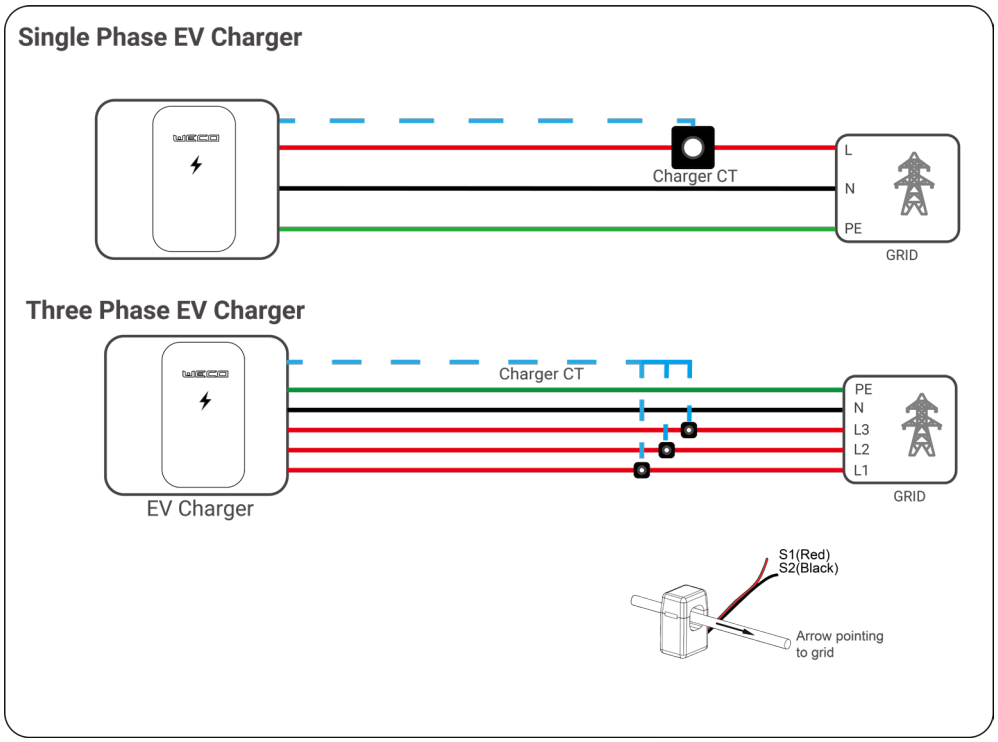


Installation Space and Height

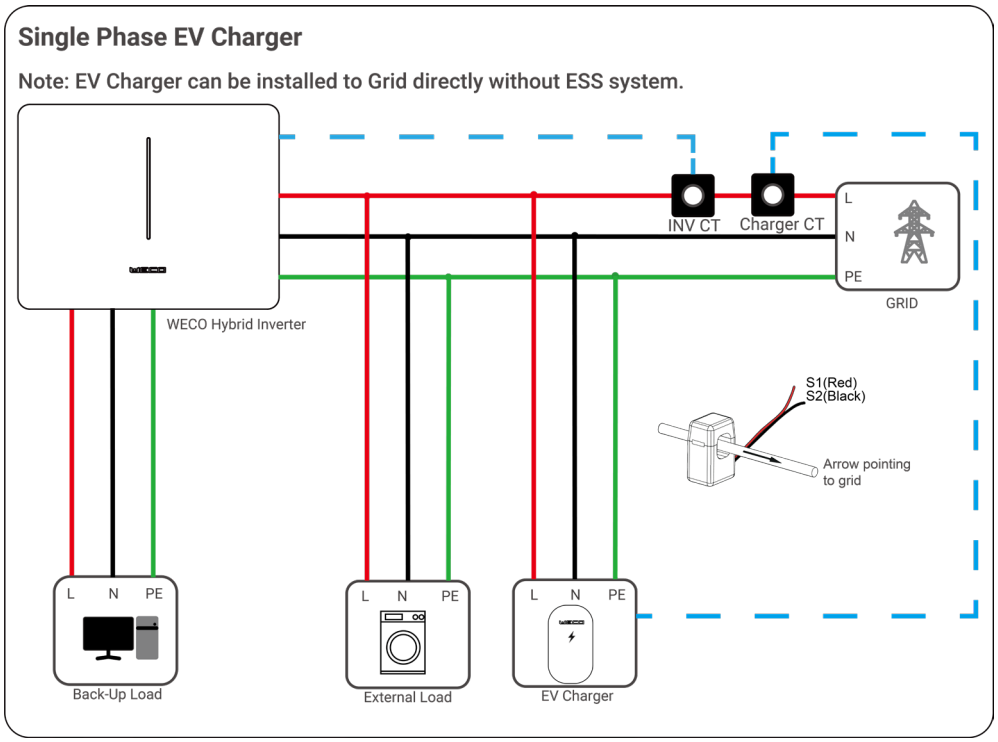


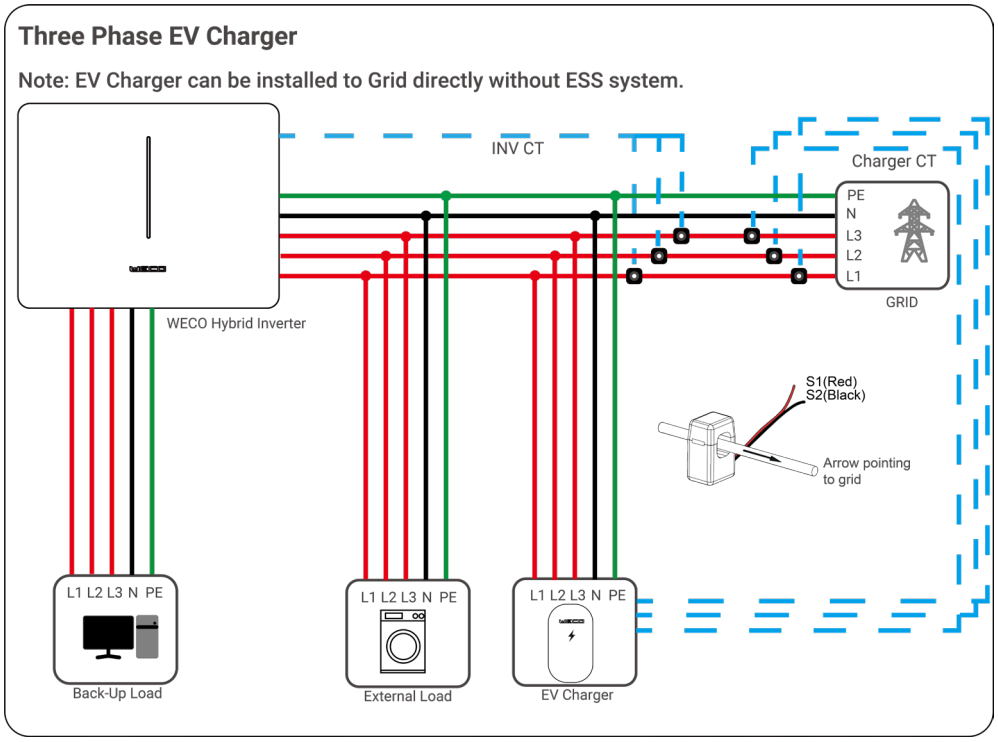
4 Installation Instruction

Use EV charger Only



Use with Energy Storage System+EV charger





Safety matters for wiring:

- Must ensure power-off operation before wiring.
- The installer is well insulated and protected.
- Prohibit wiring during rain and thunderstorms.
- No power on until the wiring window is closed.

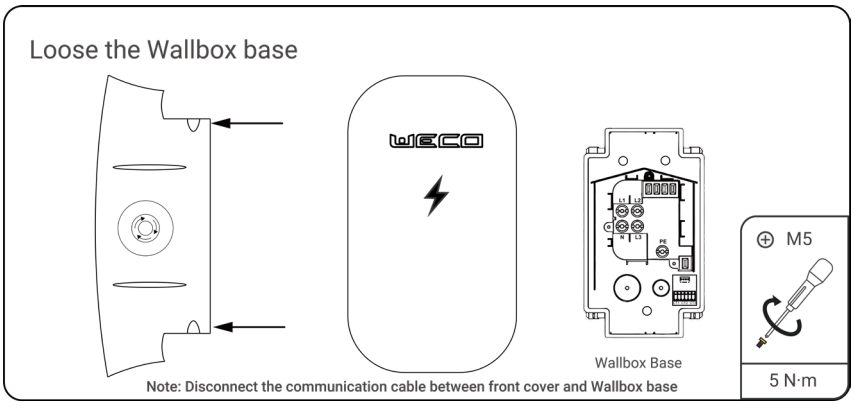
Safety matters for installation:

- Wallbox should be kept away from water, fire and smoke, dangerous gases, etc.
- The wallbox should be installed at a height that is easy to operate, with the horizontal center line of the equipment's human-machine interface area 1.5m from the ground.
- The wallbox shall be installed vertically with an error not more than 5°in either direction off the vertical. Before use, ensure that the wallbox is reliably grounded.

Installation Steps:

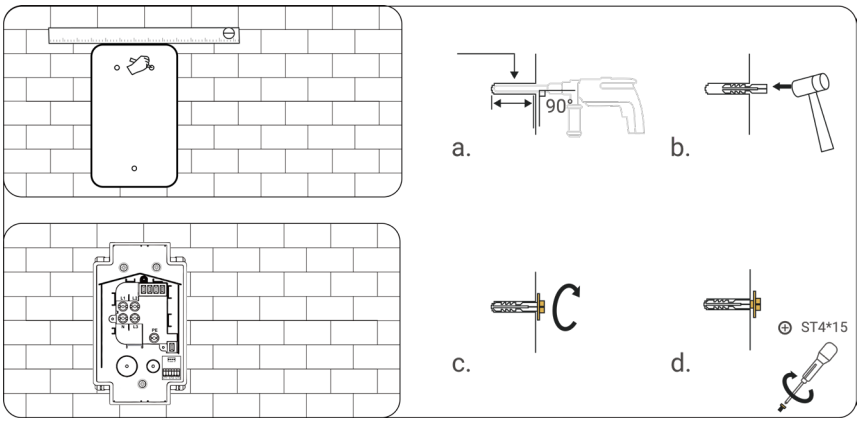
1. Loose wallbox base

Loose wallbox base M5*4 screws from the back of wallbox



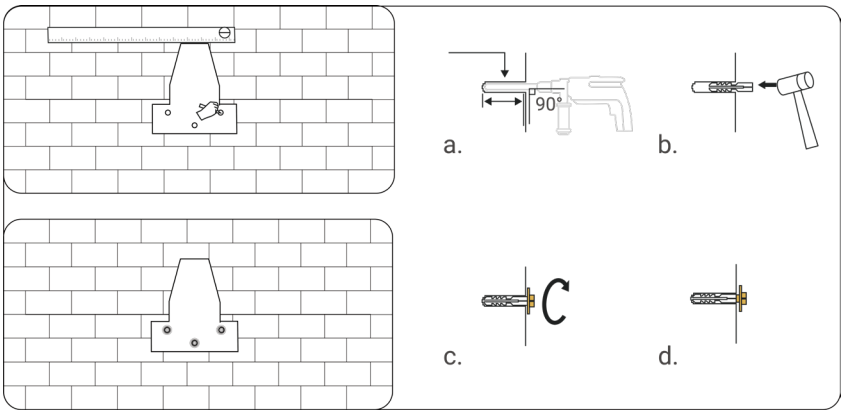
2. Install the wallbox base on a wall

Make the holes and fix the wallbox base on the wall with drill and expansion bolt



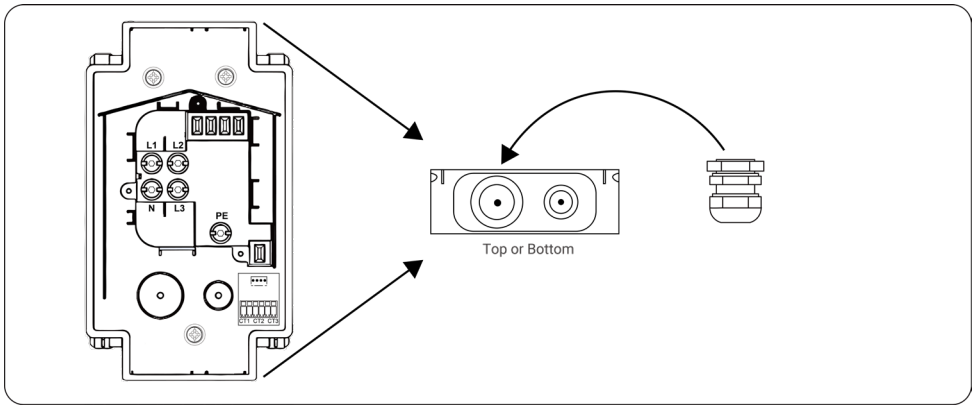
3. Install the holder bracket on the wall.

Make the holes and fix the charger holder on the wall with drill and expansion bolt

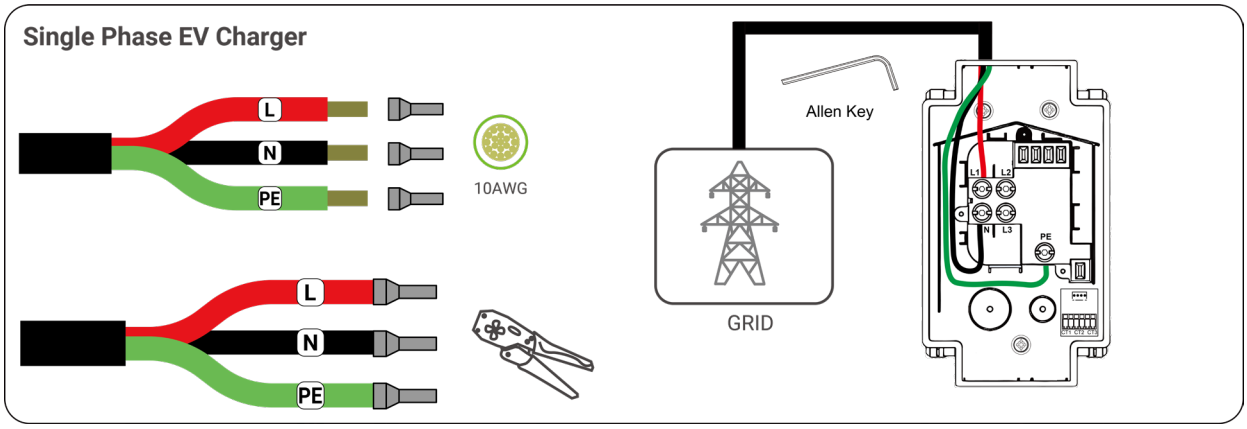


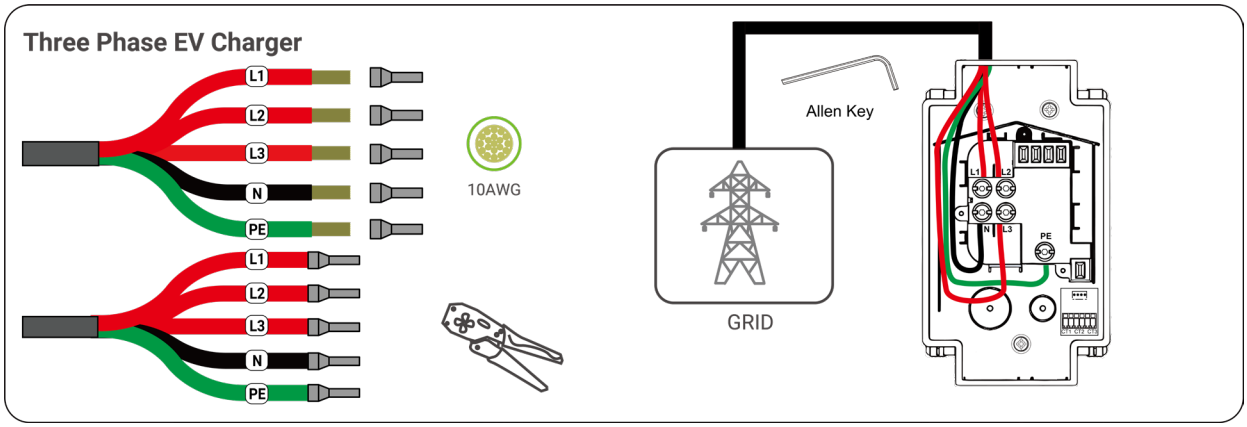
4. Install waterproof cable gland

Install the cable gland from the top or bottom

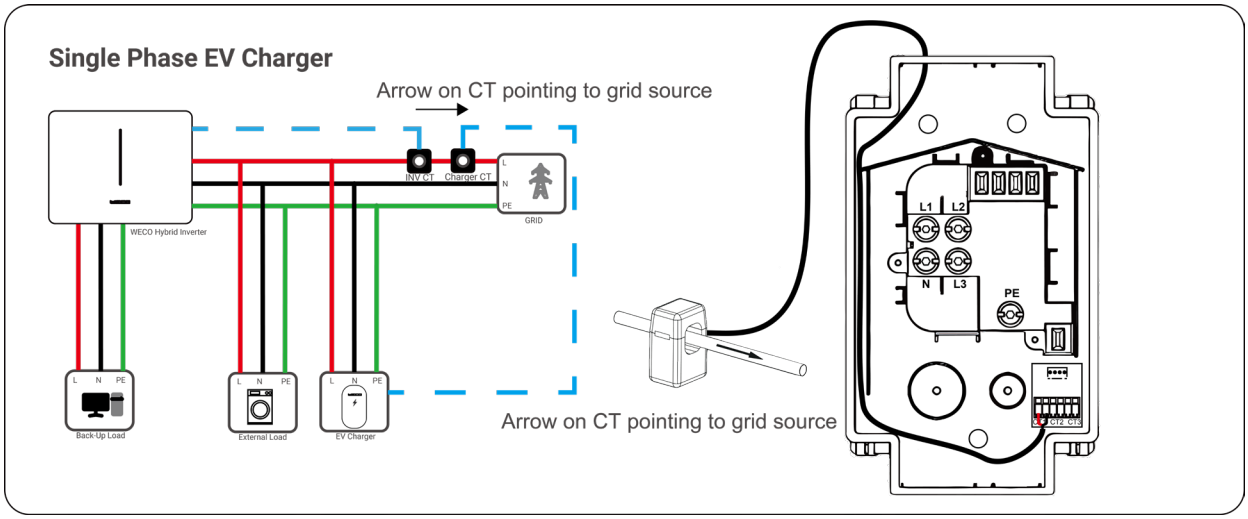


5. Connect the wallbox base to the Grid Power.



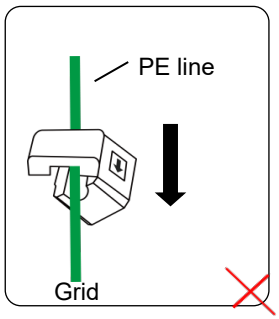


6. Install the CT on L line and connect the CT to the the wallbox base.

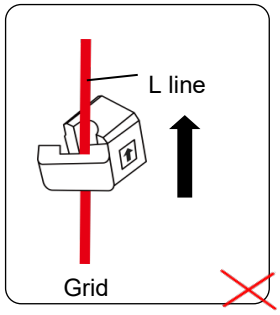


Fault CT connection cases

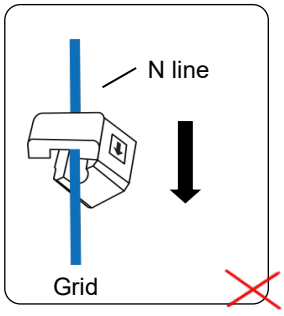
Case1: Connected to wrong Line



Case2: Wrong Orientation



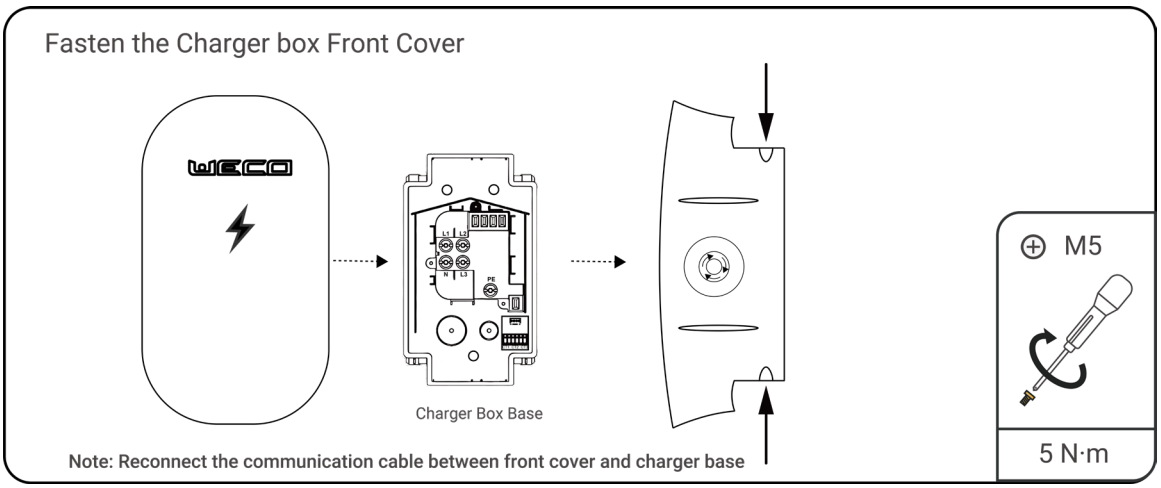
Case3: Connected to wrong Line



Note!

CT installation directions should strictly follow the instruction in the user manual, otherwise, the charger may not be working normally. The connection of CTs needs to be reliable, otherwise, the CT measurement accuracy may be affected.

7. Install the wallbox cover.



5 Commission

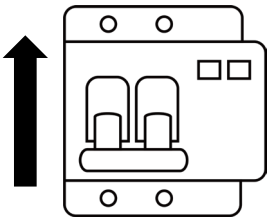
System power up

Prerequisites

Before closing the AC switch of EV Charger, it is necessary to measure whether the AC voltage on the grid side of the AC switch is within the range allowed by the EV Charger.

Procedure

Step 1: Close only the AC switch between the EV Charger and the grid.



Commission on APP

Procedure:

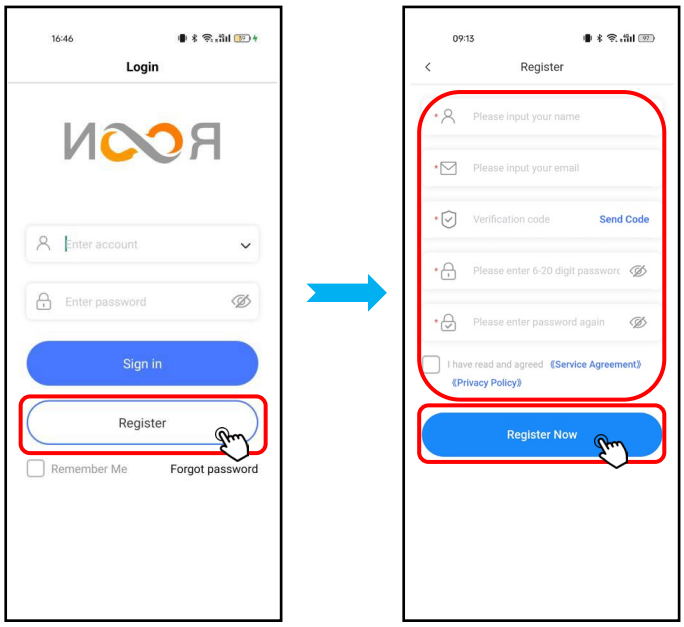
Step 1: Download and install the app

Search for "Noor" in the Google Play or App Store application market.

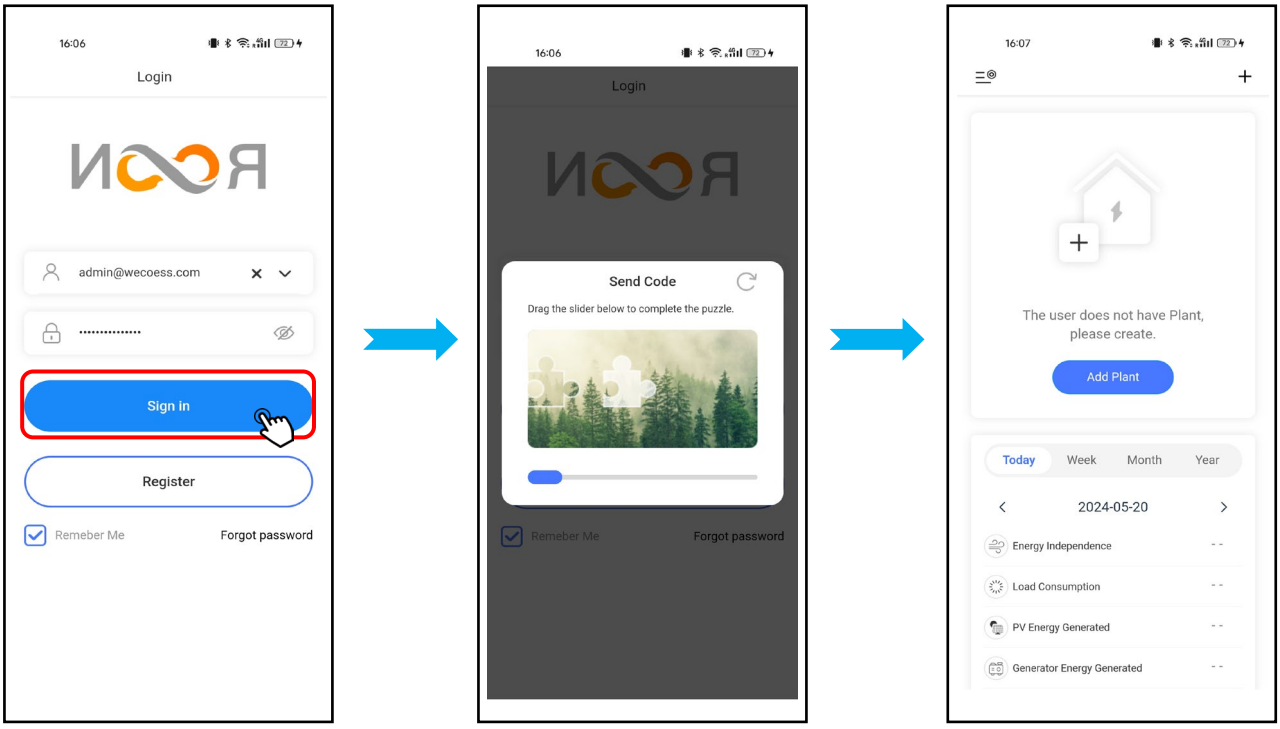
Step2: Register Noor APP account and Sign in Noor APP

a. Click “Register”.

b. Fill in the account info step by step and Click “Register Now!”.



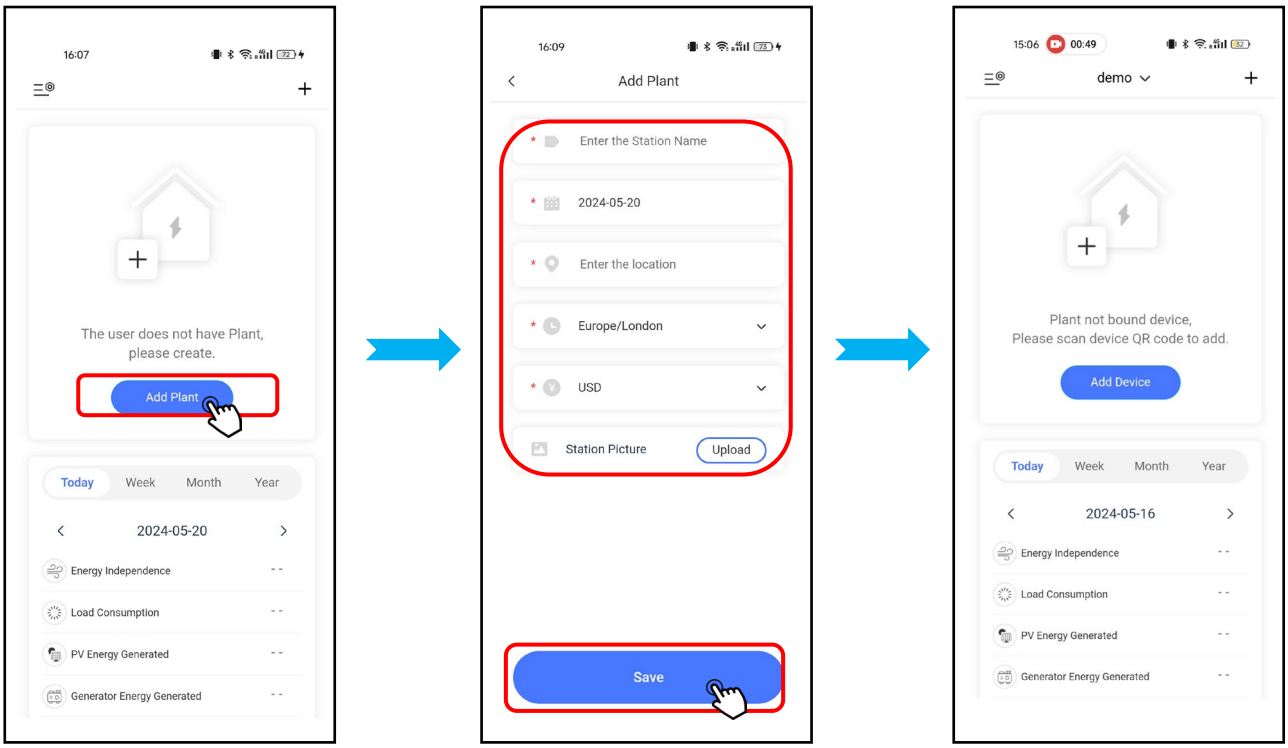
c. Fill in the account and password and Click “Sign In”.



Step 3: Add Plant on Noor APP

a. Click “Add Plant”.

b. Fill in the Plant info and Click “Save”.

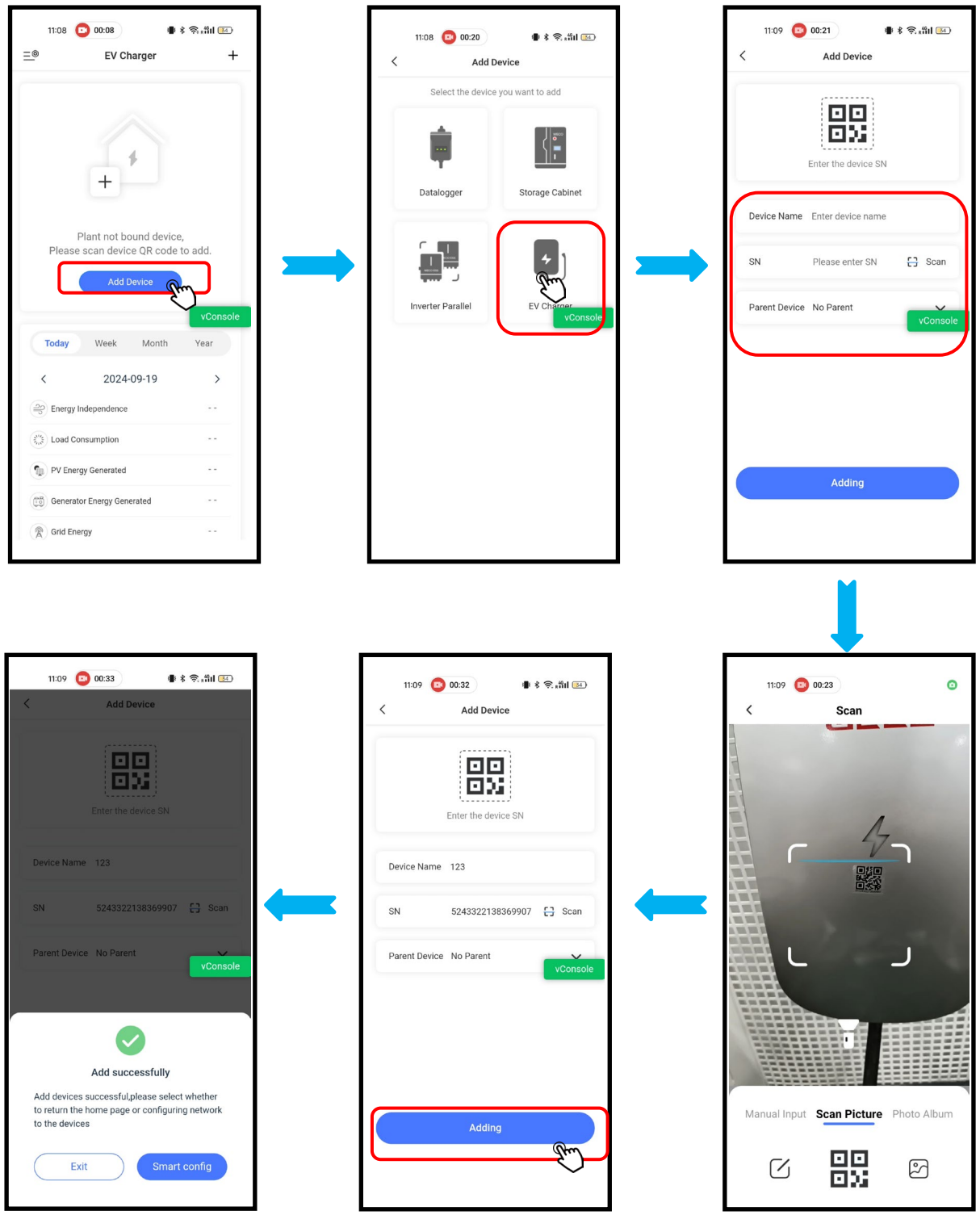


Step 4: Add Device on the Plant and config the WIFI module

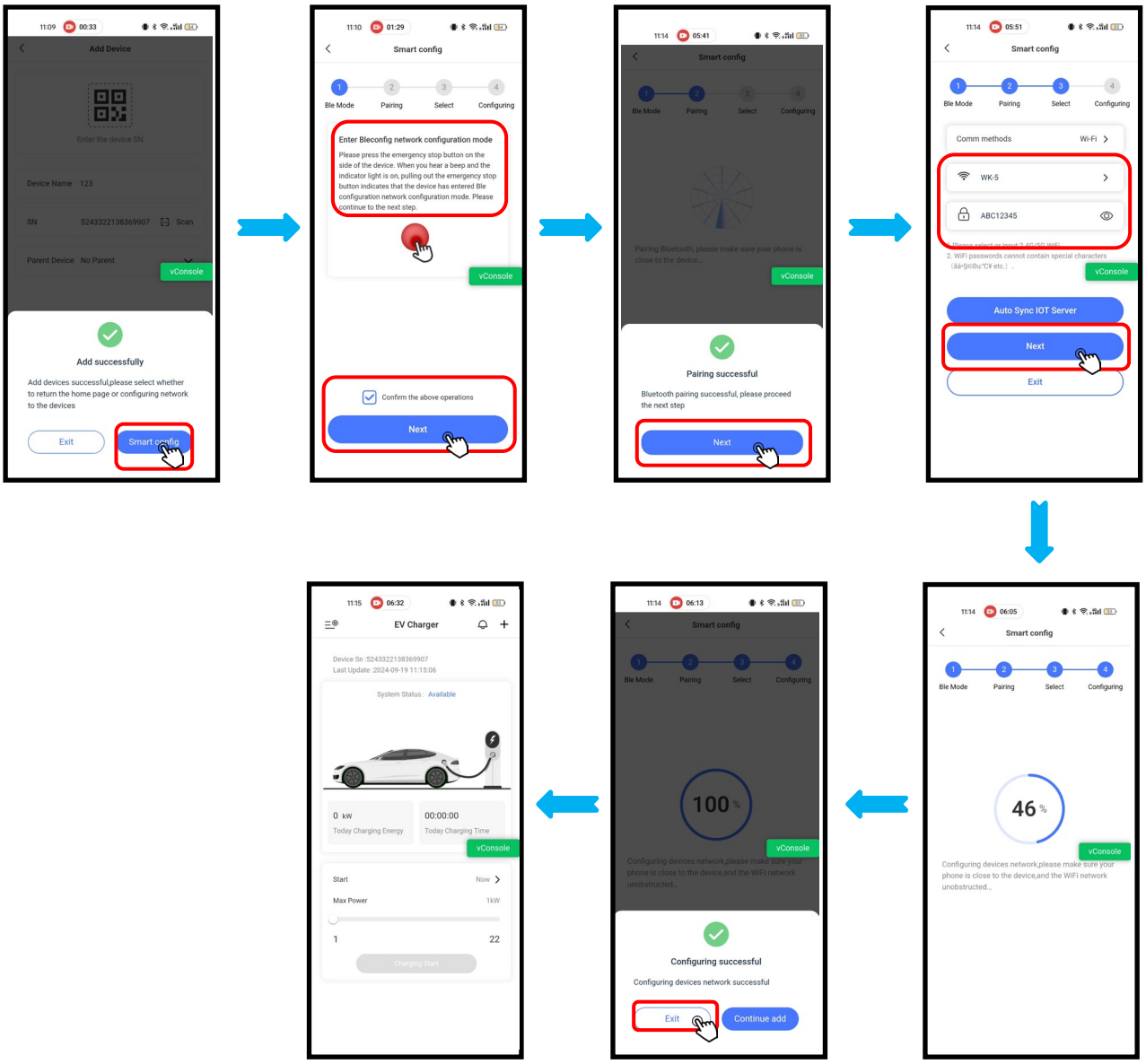
a. Click “Add Device”.

b. Click the “EV Charger”.

c. Scan the QR code of WIFI module or manual input WIFI module SN number and Click “Adding” to finish add device.



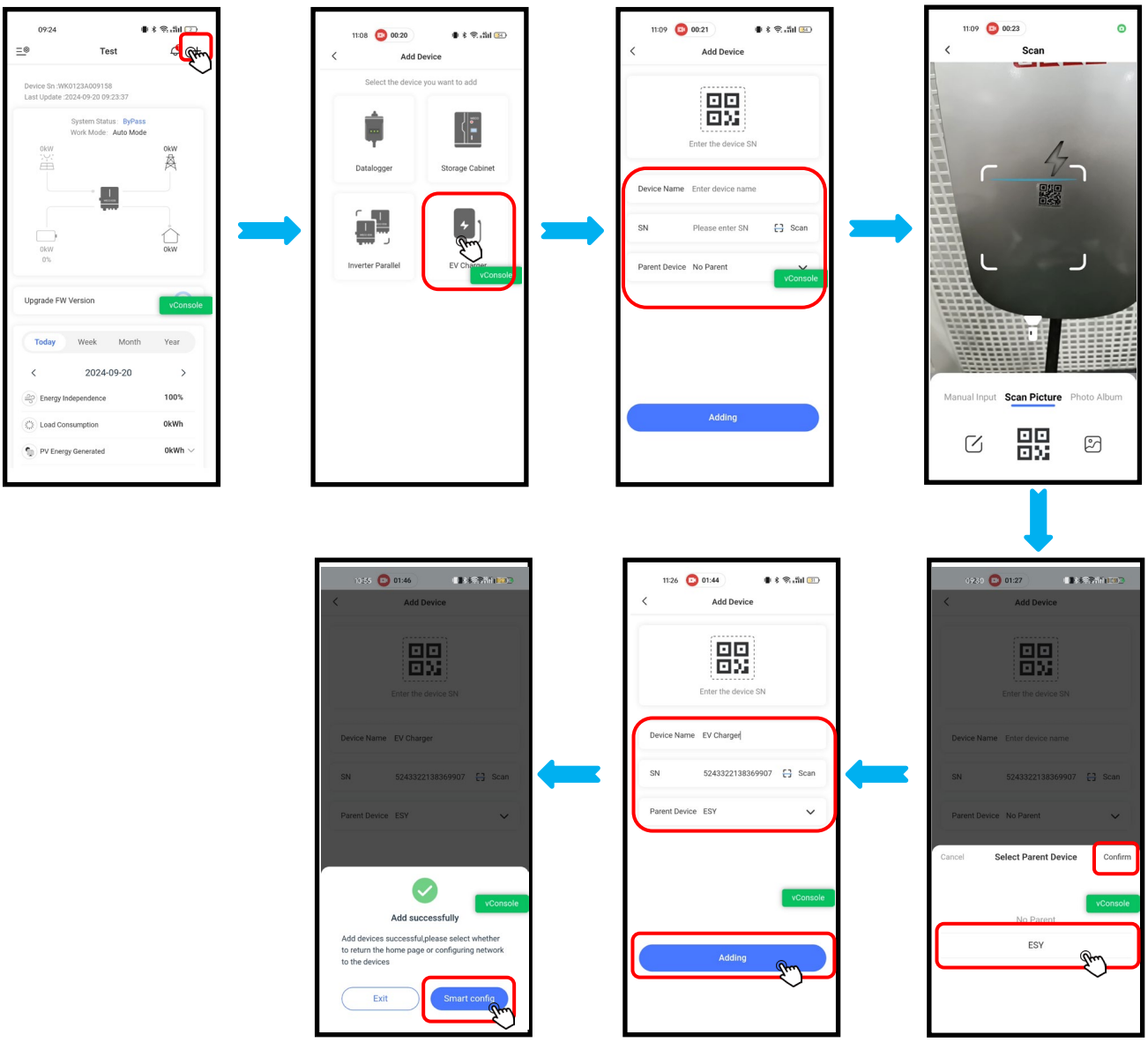
d. Click “Smart config” to config the WIFI module to homeowner Router step by step.



Note：Press the emergency stop button on the side of the device. When you hear a beep and the indicator light is flashing, pulling out the emergency stop button indicates that the device has entered Ble configuration network configuration mode.

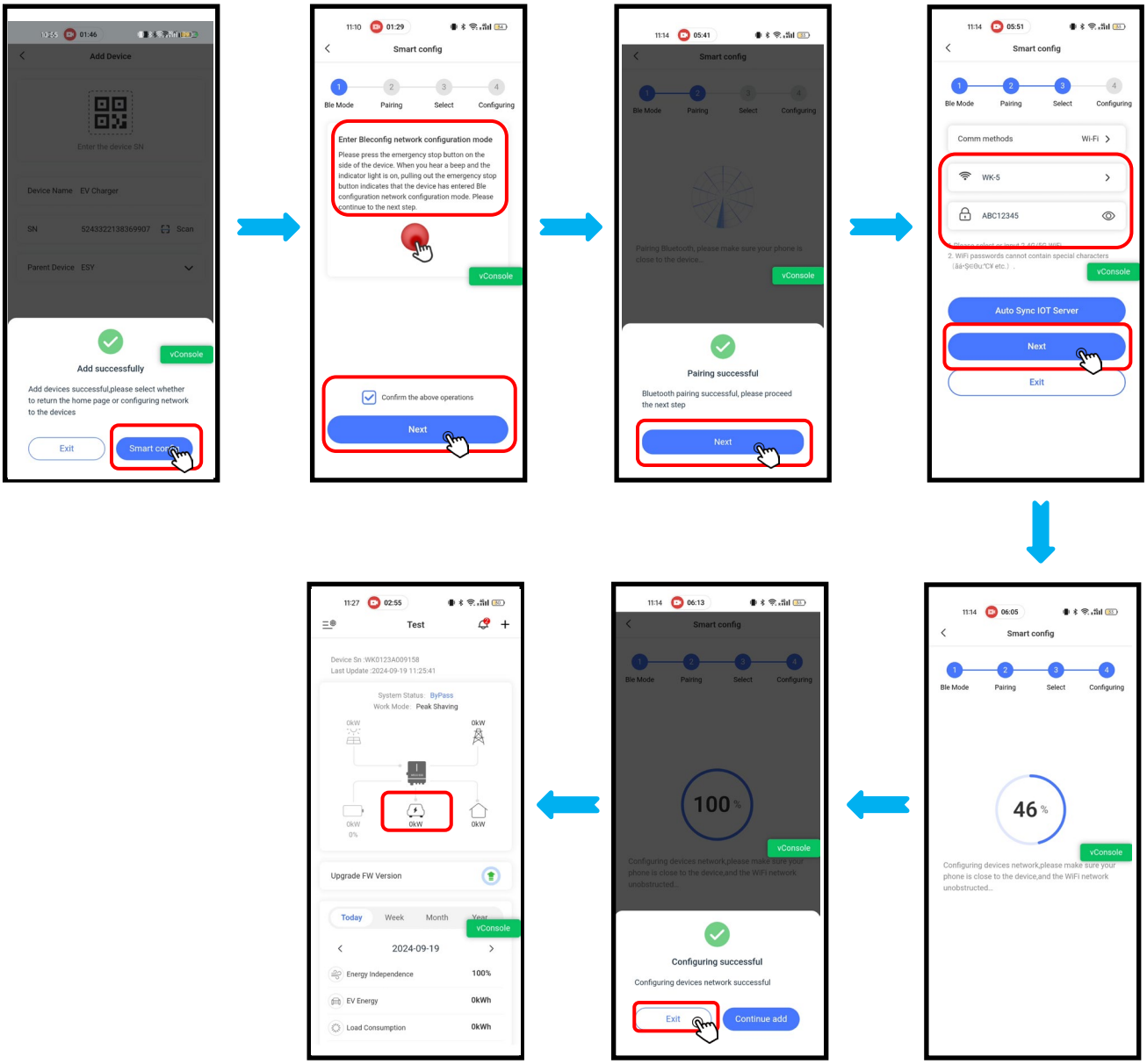
Optional for EV Charger parent with WECO residential energy system

a. Click “+”.
b. Click the “EV Charger”.
c. Scan the QR code of WIFI module or manual input WIFI module SN number and Click “Adding” to finish add device.



Note：Select the parent device on the list for WECO residential energy system in order to combine the WECO ESS and WECO EV charger.

d. Click “Smart config” to config the WIFI module to homeowner Router step by step.



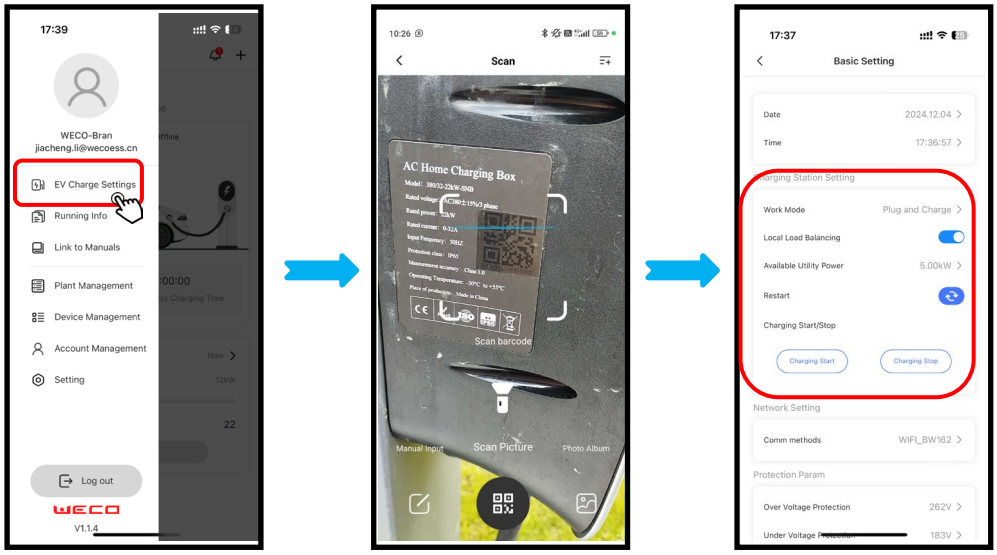
Note：Press the emergency stop button on the side of the device. When you hear a beep and the indicator light is flashing, pulling out the emergency stop button indicates that the device has entered Ble configuration network configuration mode.

Step 5: Modify the EV Charger setting

a.Click the icon and “EV Charger Setting” .

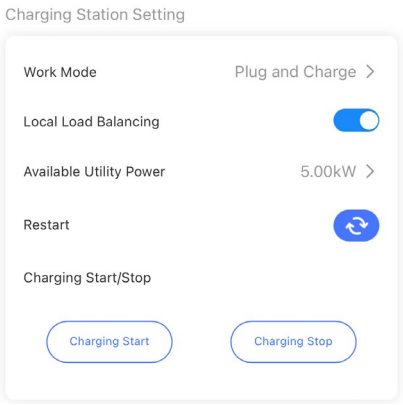
b.Press the EV Charger emergency button.

c.Scan the QR code of WIFI module or manual input WIFI module SN number to enter setting page.



Note: Access the EV settings by scanning the QR code of the EV charger. After finishing the setting, release the emergency button again

Charging Station Setting description



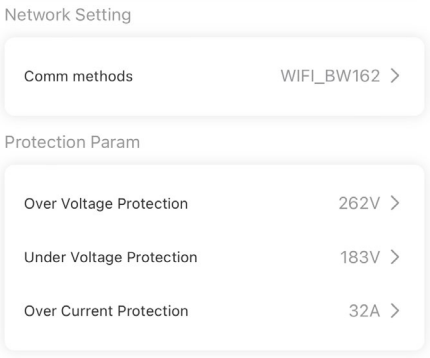
Work Mode: Normal: The EV charger is started manually from the inverter settings

Work mode: Plug & Play: The EV charger starts automatically as soon as you connect it to the car

Local Load Balancing: The EV charger charges in accordance with the maximum available utility power and the active load. Example: Available utility power: 7kW Active inverter load:3kW -> The EV charger will charge with maximum 4kW

Available Utility power: Maximum power that can be taken from the grid.

Charging start/stop: It can be manually started or stopped in advance by swiping card or remote setting, or automatically stopped after being fully charged. Pluck the EV charging connector and put the cable away and put it on the hook.



Network Setting

Comm methods：WIFI_BW162: wireless communication connection;

Comm methods： Ethernet: communicate by network cable;

Protection Param

Over Voltage Protection: When the voltage exceeds a predetermined maximum value, charging stops.

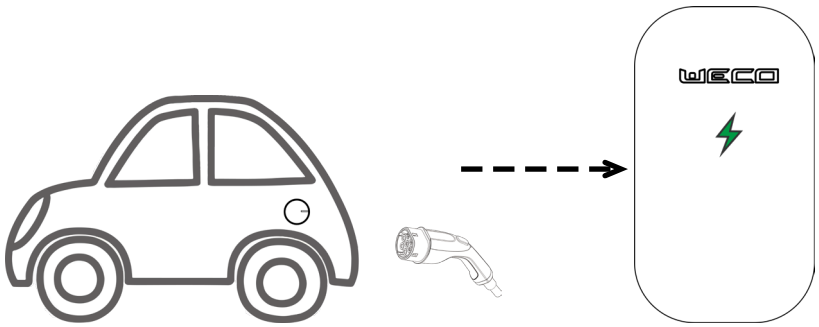
Under Voltage Protection: When the voltage falls below a predetermined minimum value, charging stops.

Over Current Protection: When the current exceeds a predetermined maximum value, charging stops.

Start / Stop charging

1. Park the vehicle in a location where the EV charging connector can easily reach the charging socket.
2. Make sure that the LED indicator of the wallbox is in the standby state of blue light.

3. Plug the charger gun into the EV socket. The LED lights turn on green when the EV charging connector is connected.

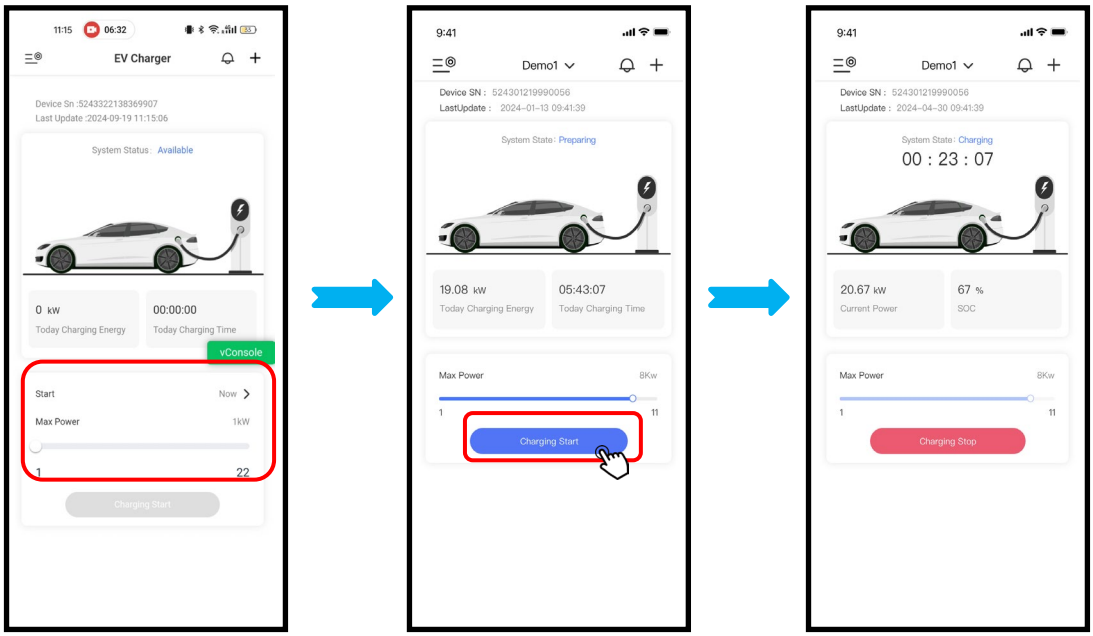


4. Start by swiping the card or remotely through APP.

Use Charger as single device

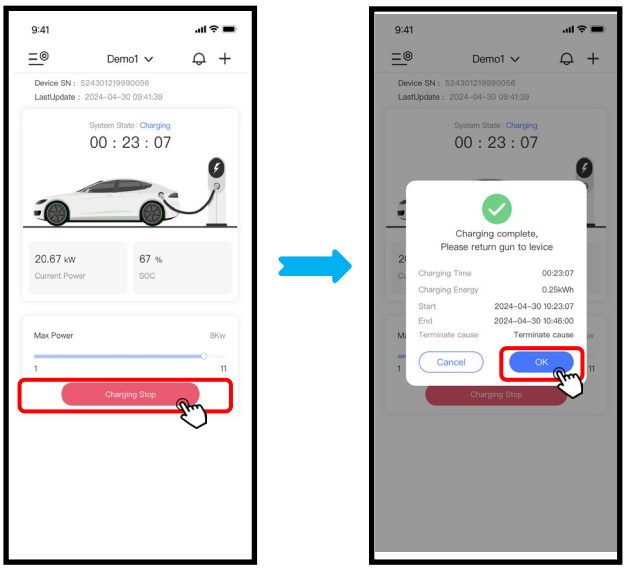
Start the charger

Select the starting time and the charging power and click “Charging start”. When start charging, the charger LED will turn to green flashing.



Stop the charger

Click the “Charging stop” and Click OK to stop the Charger.

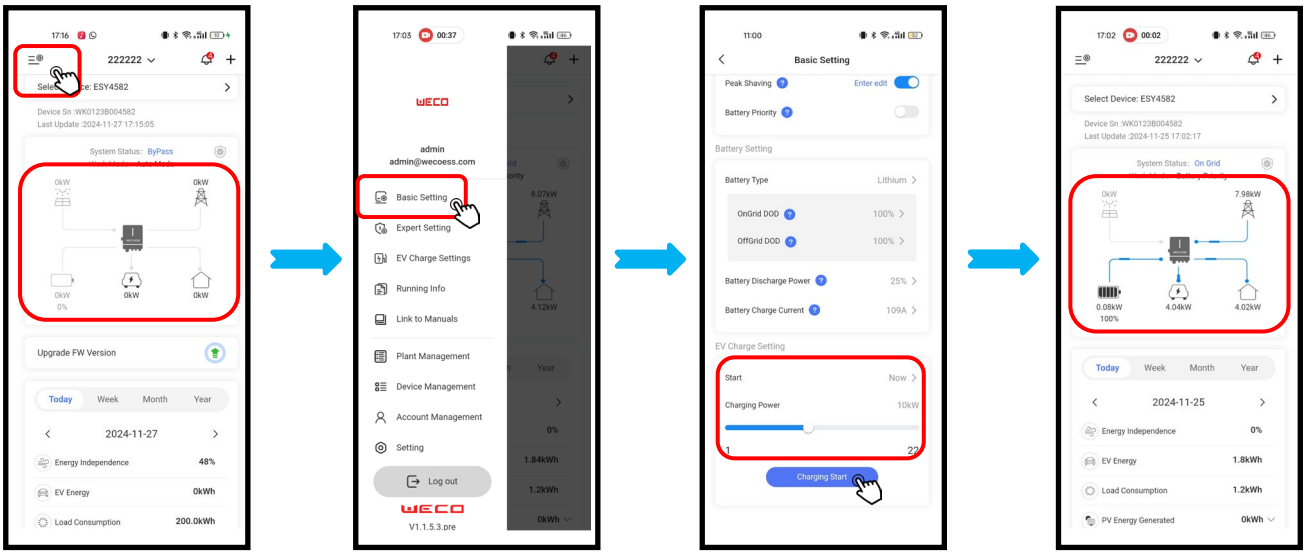


Use Charger with WECO Energy system

Start the charger

Click the icon and “Basic Setting” to enter the inverter basic setting page.

Select the starting time and the charging power and click “Charging start”. When start charging, the charger LED will turn to green flashing.

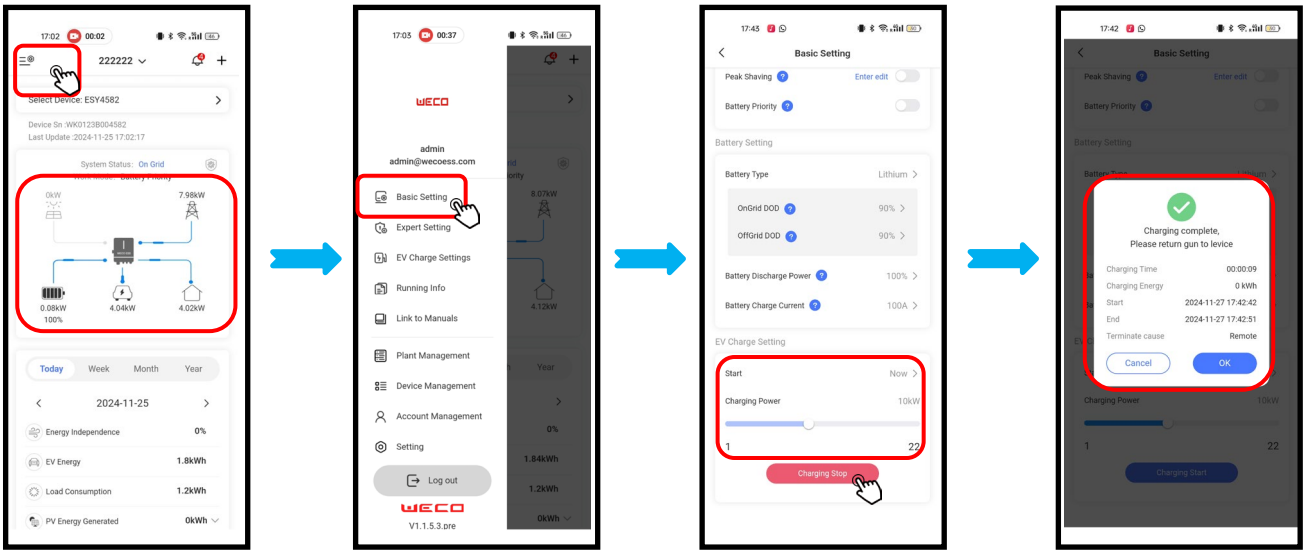


Note: For households with grid power limitations, set the EV Charger charging power; accordingly, if it is a system parent with WECO inverter and EV charger, set the Local Load Balancing enable and Available Utility power.

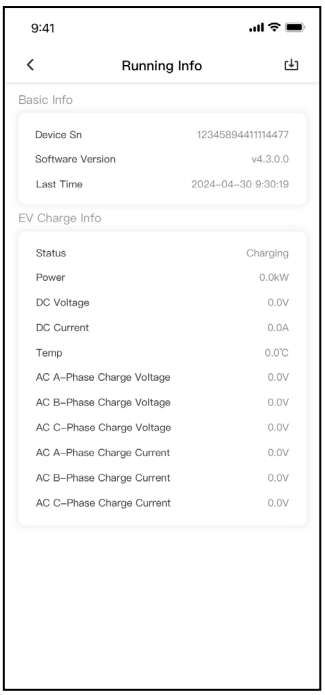
Stop the charger

Click the icon and “Basic Setting” to enter the inverter basic setting page.

Click the “Charging stop”



Charger information



6 Troubleshooting

Please contact the WECO service team for more support.

Case	Solution guidance
No turn-on after power linked	1. Check the E-stop button. Make sure it is not pressed down. 2. Check that the cables are properly connected.
Unable to connect to WIFI	1. Check if the WiFi password is correct. 2. Check if your home WiFi router is set to protection mode (forbidden for all new access).
Can't charge after swiping card	1. Please observe whether the charging pile is connected to the network. 2. Please observe the screen to see if “Non-Authorized Card” is displayed, if so, please go to the user settings screen to add the card. 3. If it is a long wait, it is usually due to the aging of the chip or antenna of the card, please replace the card with a new one.
Charger Gun be locked after charging	Please operate the vehicle manually to release the solenoid lock.
Failed to input the series number	Please contact the WECO service team for support.
Failed to “Start” charging on the App	1. Please ensure that the charging pile is connected to the network. 2. If you wait long and still no response, you can restart the charging pile.
Charger does not end charging even after click to end charging on-line	1. Please ensure that charger is connected to the network. 2. If there is still no response after a long wait, you can simply disconnect the charge cable or disconnect it after the vehicle is operated to release the electromagnetic lock.
Charger suddenly fails to connect to the network during charging	1. If charging is continuing, you can ignore it. 2. If charging stops, disconnect the charging cable and end this charge process.
Network failures during charging	1. Check if the WiFi password is correct. 2. Check if your home WiFi router is set to protection mode (forbidden for all new access).
Can't charge after swiping card	Charging will stop automatically, please unplug the charging plug directly or after the vehicle is operated to release the electromagnetic lock.
Forgot your username and password	Please reset the password on the log in page.
How to restart a charging pile	1. Power off/on and restart. 2. Press and release the emergency button.X

Appendix A abbreviations

C	
CP	Control Pilot
CT	Current Transformer
P	
PE	Protective Earth
PP	Proximity Pilot
E	
EV	Electric vehicle
L	
LED	Light Emitting Diode