

Home H1

User and Installation Manual

(AC Home UL 50A/40A)

This user and Installation manual describes how to use and install the charging station. You must carefully read the safety information before you start.

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Scope of the manual

The user instructions are intended for users of the charging station.

The installation and configuration instructions in this manual are intended for qualified installers who can assess the work and identify potential danger.

This user and Installation manual describes how to use and install the charging station. You must carefully read the safety information before you start.

Symbols used in this manual

DANGER Indicates imminently hazards or unsafe practices that could result in electric shock, fire, injury, or other serious consequences.

WARNING Indicates potential hazards or unsafe practices that could result in electric shock, fire, injury, or other serious consequences.

CAUTION Indicates practices that could result in minor injuries or equipment damage if not followed properly.

• **CAUTION**

Risk of electric shock. Do not remove cover or attempt to open the enclosure. No user serviceable parts inside. Refer servicing to qualified service personnel.

• **ATTENTION**

Risque de choc électrique. Ne pas retirer le couvercle ni essayer d'ouvrir le boîtier. Aucune pièce interne réparable par l'utilisateur. Confier tout travail d'entretien ou de réparation à un technicien qualifié.

• **WARNING**

Risk of explosion. This equipment has arcing or sparking parts that should not be exposed to flammable vapors. This equipment should be located at least 460 mm (18 inches) above the floor. This device is intended only for charging vehicles not requiring ventilation during charging. To avoid a risk of fire or electric shock, do not use this device with an extension cord.

• **AVERTISSEMENT**

Risque d'explosion. Cet équipement comporte des pièces produisant des arcs ou des étincelles qui ne doivent pas être exposées à des vapeurs inflammables. Cet équipement doit être placé à au moins 460 mm (18 pouces) au-dessus du sol. Cet appareil est destiné uniquement à la recharge de véhicules ne nécessitant pas de ventilation pendant la charge. Pour éviter un risque d'incendie ou de choc électrique, n'utilisez pas cet appareil avec une rallonge.

For use with electric vehicles. Pour utilisation avec des véhicules électriques.

Ventilation Not Required. Ventilation non requise.

FCC regulatory conformance:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

NOTE:

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

NOTE:

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

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

RF Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

IC regulatory conformance

This device complies with CAN ICES-003 (B)/NMB-003(B) .

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme à la norme CAN ICES-003 (B)/NMB-003 (B) .

Cet appareil contient des émetteurs / récepteurs exempt (s) de licence qui sont conformes aux RSS exemptes de licence d'Innovation, Sciences et Développement économique Canada. Son fonctionnement est soumis aux deux conditions suivantes:

(1) Cet appareil ne doit pas provoquer d'interférences.

(2) Cet appareil doit accepter toute interférence, y compris les interférences susceptibles de provoquer un fonctionnement indésirable de l'appareil.

The device is restricted to indoor use when operated in the Canada using frequency 5150MHz-5250MHz to reduce the potential for interference.

Lors de l'utilisation au Canada d'un appareil dont la fréquence est de 5150 MHz à 5250 MHz, l'appareil est limité à un usage intérieur afin de réduire les risques de brouillage.

RF Exposure

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d' exposition aux rayonnements de la IC établies pour un environnement non contrôlé. Cet équipement doit être installé et fonctionner à au moins 20cm de distance d'un radiateur ou de votre corps. Cet émetteur ne doit pas être co-localisé ni fonctionner en conjonction avec une autre antenne ou un autre émetteur.

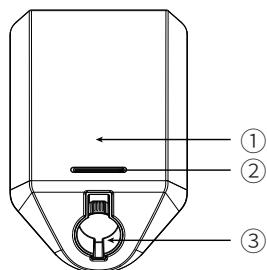
Safety information

- When using electric products, basic precautions should always be followed, including the Following
- The statements made in this manual do not constitute the full safety instructions. These are only supplemental. The Company shall not be held liable for any consequences caused by the violation of these general safety requirements, design, production or safety standards.
- Ensure that the product is installed in environments as specified in this manual. Incorrect installation could potentially damage the charger. Any resulting damage, personal injury or property damage is excluded from the warranty. Turn off power at the circuit breaker before installing or cleaning the Wall Connector
- This device should be supervised when used around children.
- Before installing or cleaning the product, switch off the upstream residual current operated circuit-breakers.
- Do not install or use the product in an environment with strong magnetic fields or near a wireless transmitter.
- Do not install or use the product in or near areas with flammable, explosive, chemical materials, or steam.
- Do not use or replace the product in extreme weather conditions.
- Before charging an electric vehicle with the product, read the instructions of the vehicle carefully.
- Do not remove the safety marks, warning signs, nameplates, or cabling marks from the product.
- Do not spray water or any liquids on the product. Do not submerge the charging connector in water.
- Before charging your electric or hybrid vehicle, turn off the car.
- Do not disassemble, repair, or modify the product by yourself.
- Do not insert your fingers or sharp objects into any components of the product.
- Do not drop, squeeze, or pierce the product to avoid device faults.
- Do not fold or crush any component of the product, or damage it with sharp objects.- Do not use the product if it is defective, cracked, damaged, or malfunctioned.
- A generator cannot serve as the power supply for the product.
- Do not connect the product to devices other than a vehicle.

1. Product introduction

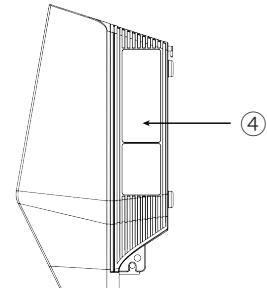
Overview

Front View



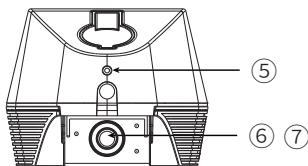
1. RFID sensor position
2. LED light strip
3. Charging Socket

Right View



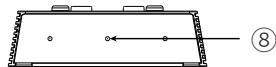
4. Product Label

Bottom View



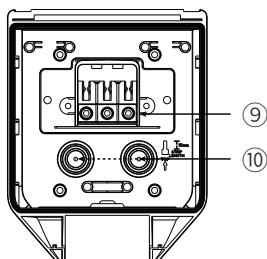
5. Anti theft screw
6. Bottom drill out cable entries for power/data
7. Bottom drill out cable entry for data

Top View



8. Top drill out cable entry for power only

Inside Backplate



9. Wiring terminals – Live and Neutral
10. Rear drill out cable entry for power/data

Packing List

Hardwired version

Charger 1 PC		Screw (ST5.5*25mm) 4 PCS	
Screw (M5*18mm) 2 PCS		screw waterproof rubber 4 PCS	
Strain Relief (38mm) 1 PC		Wall Anchor (8*40mm) 4 PCS	
Power Conduit Plug 1 PC		Power cable rubber(29mm) 2 PCS	
Packing List 1 PC		Amperage Labels 1 PC	
Installation Guide 1 PC		Charge Card 2 PCS	
T15 Torx Screwdriver 1 PC			

NEMA Plug Version

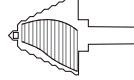
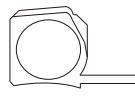
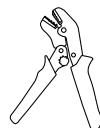
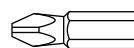
Charger 1 PC		Wall Dock 1 PC	
Screw (ST5.5*25mm) 3 PCS		Screw (M5*18mm) 2 PCS	
Wall Anchor (8*40mm) 3 PCS		Amperage Labels 1 PC	
Packing List 1 PC		Installation Guide 1 PC	
Charge Card 2 PCS		T15 Torx Screwdriver 1 PC	

Technical specification		
Electrical		
Charging power	12kW/50A (Hardwired version) 9.6kW/40A (NEMA Plug version)	
Number of phases	Single phase	
Voltage	Single phase: 208/240 V AC	
Grid frequency	60 Hz	
Connector type	SAE J1772/NACS	
Meter	Built-in energy meter ($\pm 1\%$)	
General		
Dimension	283*190*152mm	
Weight	2.8kg	
Operating temperature	-40~50°C	
Storage temperature	-40~85°C	
Operating altitude	4000m	
Connectivity		
WIFI 2.4G&5G , 802.11b/g/n/a/ac/ax		
Bluetooth		
RS485		
RFID/NFC Reader		
OCPP 1.6J and OCPP 2.0.1		
Interaction		
Elecq App		
LED Light strip showing the status of the charger		
Sound effects and voice prompt		
Protection		
Integrated overload protection according to UL 2331-1		
Built-in CCID(20mA AC) for ground fault protection according to UL 2331-2		
Insulation class: I		
Higher surge protection level: supports 10kV/5kA		
Degree of protection: Type 4		
Impact resistance: IK10		
Temperature sensors in all main contacts and critical components		
Relay sticking detection triggers a trip to prevent electric shock accidents		
Compliance		
UL 2594	UL 2231-2	NEC article 625
UL 2231-1	UL 1998	CSA C22.2.NO.280
Compliance	Description	
AU101	Home-UL-9.6kW-J1772-25ft-WiFi-Black	
AU102	Home-UL-9.6kW-NACS-25ft-WiFi-Black	
AU105	Home-UL-12kW-J1772-25ft-WiFi-Black	
AU106	Home-UL-12kW-NACS-25ft-WiFi-Black	
AU107	Home-UL-12kW-J1772-25ft-LTE-Black	
AU108	Home-UL-12kW-NACS-25ft-LTE-Black	

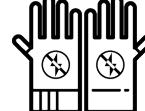
Planning the installation

Location

- Install your charger on a flat and vertical surface capable of supporting its weight (e.g., a finished wall or pedestal).
- Install Elecq Home in a location that allows the charge cable to reach the vehicle charge port without putting strain on the cable.
- Install Elecq Home in a location with ample clearance on all sides to allow the charge cable to loop around the unit and the charge handle to comfortably land in the side dock.

Tools required				
① Power Drill		⑥ Drill Bit		
② Multimeter		⑦ Step bit		
③ Tape Measure		⑧ Hex Dirve Bit		
④ Wire Stripper		⑨ Pozidriv Bit		
⑤ Torque Driver		⑩ Level		

Personal protective equipment

① Safety helmet		③ Protective gloves		
② Insulated shoes				

Note

Elecq Home includes integrated GFCI protection, install a circuit breaker without GFCI function.

Electrical

The Elecq Home allows you to manually set a lower maximum current when installing your charger on a circuit rated lower than the maximum rating for your charger. In the table below, you can choose the right circuit breaker to meet your requirements.

Charging Current(A)	Circuit Breaker Rating (A)	Charging Power(kW)
16	20	3.84
24	30	5.76
32	40	7.68
40	50	9.6
48	60	11.52
50	70	12

Incoming Cable

Configuration Item	Cable model	Comment
16A	3*12AWG	It is recommended to use a power cable with a temperature of 90 ° C. To ensure current carrying capacity, aluminum wires are not recommended.
24A	3*10AWG	
32A	3*8AWG	
40A	3*8AWG	
48A	3*6AWG	
50A	3*6AWG	
Ethernet cable	CAT5	
485 Cable	Range:3*22AWG~3*18AWG	
External DI /CT cable	Range:2*22AWG~2*18AWG	

Note:
If the outer diameter of the cable is too small, the water resistance is affected. If the outer diameter of the cable is too large, the cable cannot be penetrated into the cable inlet hole

2. Installation

• Warning

Turn off the power before you begin the installation. Use extreme caution and follow instructions carefully.

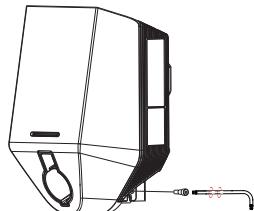
NEMA Plug-in Installation

1. Opening

Loosen the anti-theft screws and remove the front cover.

Grasp the bottom of the main unit and push upwards with good force until the Main unit disconnects.

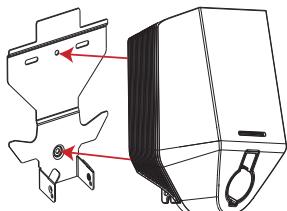
Step 1



Step 2



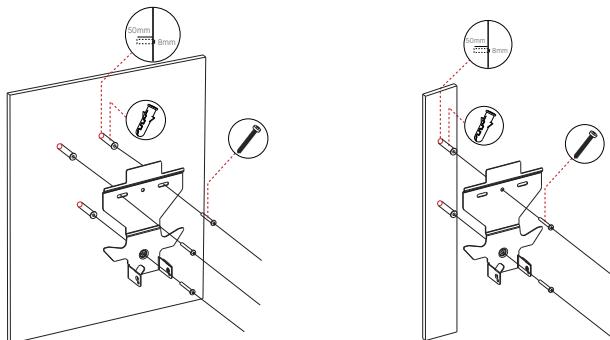
Step 3



2. Wall dock mounting

Find the wall stud nearest to the NEMA outlet using a wall stud finder. Draw a vertical line and screw hole mark with the wall stud. Or find a flat and solid wall.

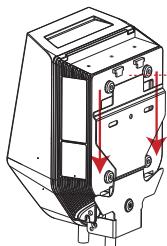
Attach the wall dock to the mounting location by screwing two ST5.5 x 25 screws into the lower mounting holes. Tighten the screws using the screwdriver type PH2.



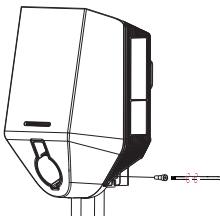
3. Attaching the charger

Attach the charger to the wall dock, slide the charger downwards, Screw two M5 x 10 screws into the hole at the bottom of the charger and tighten the screw to secure the charger.

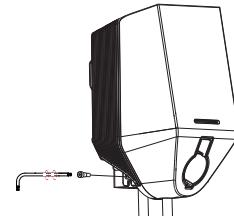
Step 1



Step 2



Step 3



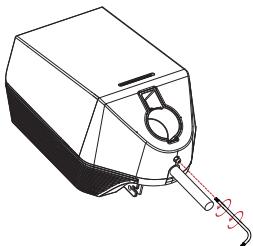
Hardwired Installation

1. Opening

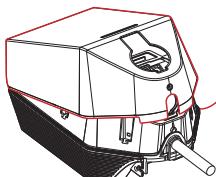
Loosen the anti-theft screws and remove the front cover.

Grasp the bottom of the main unit and push upwards with good force until the Main unit disconnects.

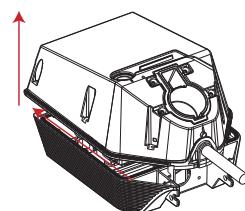
Step 1



Step 2



Step 3



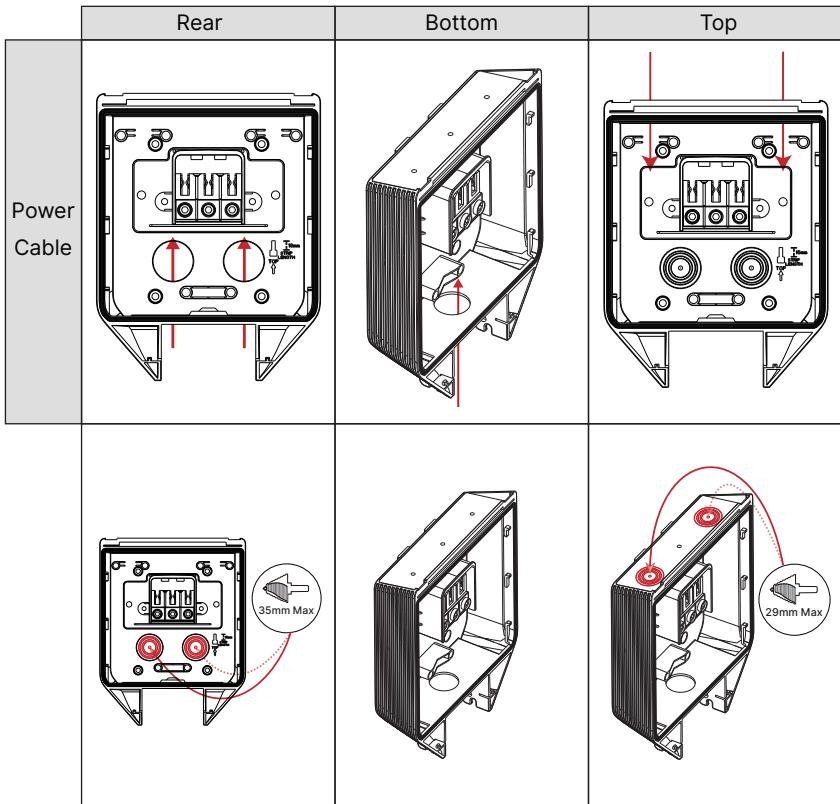
2. Prepare Backplate for Wiring

The backplate comes with a default bottom entry hole. If you need to choose top entry or rear entry, a power drill and step bit is needed.

Bottom entry hole size: **29mm**.

For top entry: Drill with **29 mm** step bit to prepare backplate for fittings.

For rear entry: Drill with **29 mm** or **35mm** step bit to prepare backplate for fittings.



3. Backplate mounting

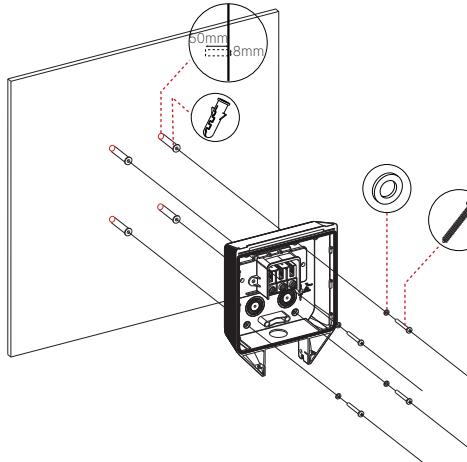
Fix the backplate to a solid, non-perforated wall or structure with sufficient load-bearing capacity using the 4 wall screws provided in the mounting kit. Use suitable wall plugs for mounting and observe the local regulations for recommended installation height.

Cautions

The installation wall must cover the entire back of the product. The area should not be exposed to direct rain, direct sunlight or explosive gases. A physical barrier is recommended to protect the charger.

NOTE

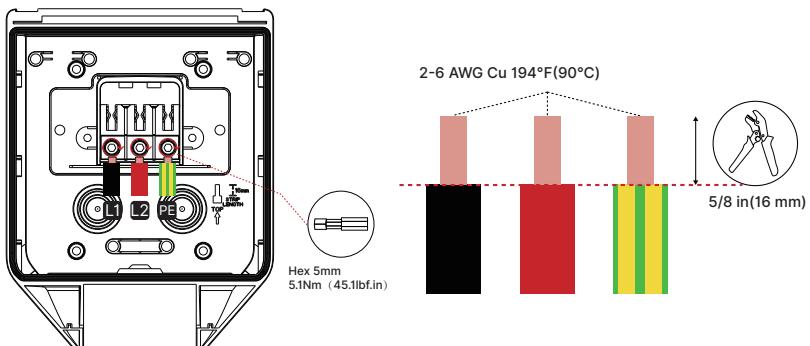
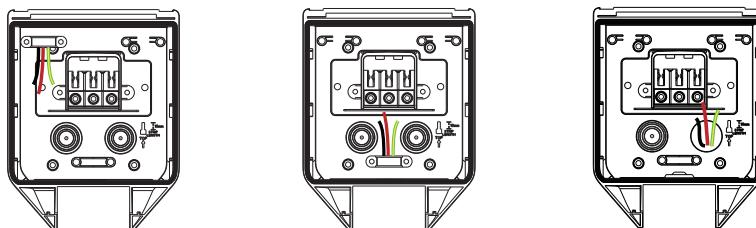
If you are going to install multiple backplates, now would be a good time to mount them as well.



4. Wiring

Power cable wiring

- Shorten the sealing plug to fit the cable. The hole should be slightly smaller to ensure a good seal.
- Route wiring into selected entry point and through the service loop channel
- Strip each wire, exposing 16mm of copper on each. If the cable has flexible conductors, then you must use ferrules on stranded wires to make the connection. Use correct tools to press them.
- Tighten the screw terminal with a torque of 5.1Nm(45.1lbf.in).



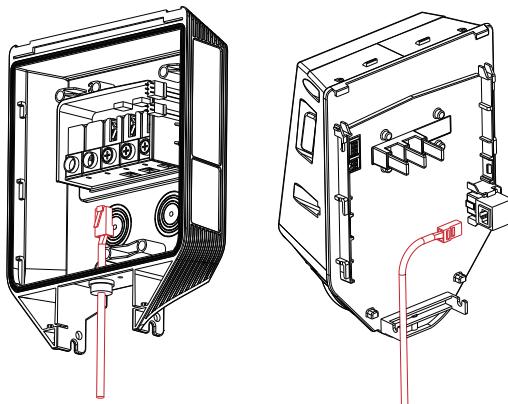
Ethernet cable wiring (Optional)

Step 1

- Bottom entry: Cut open the cable sealing ring from the side and place it around the network cable. Then, pass the network cable through the bottom entry port.
- Rear entry: Pierce the rubber grommet and put the Ethernet cable through it. Make a RJ45 plug and connect it with the Ethernet cable.

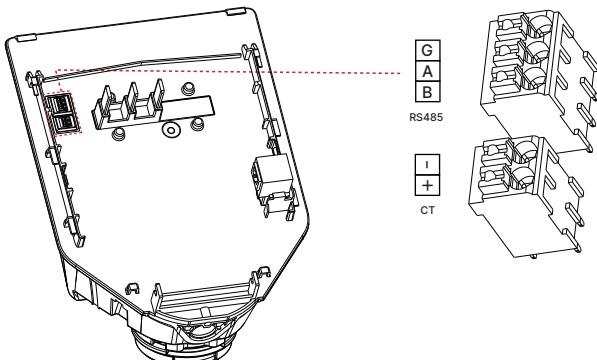
Step 2

Plug the cable into the RJ45 port on the main unit as shown.



RS485 and CT cable wiring (Optional)

RS485 and CT communication cable, e.g. from an energy meter, is terminated on the rear of the Main unit.

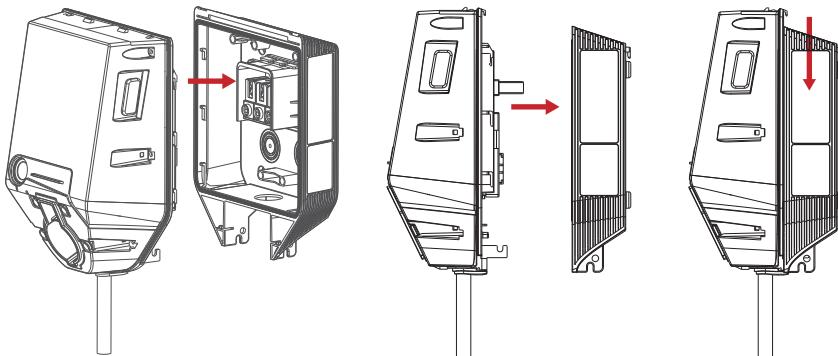


5. Attaching

• Warning

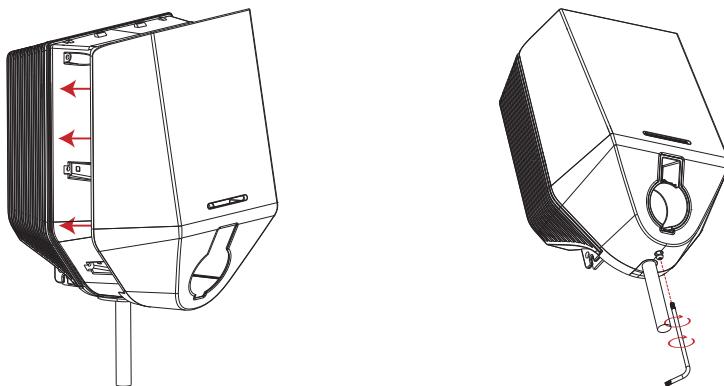
Insulation testing should be performed before a Main unit installed in the backplate. Testing the circuit insulation with the Main unit installed in the backplate may damage the electronics or impact the reading negatively.

1. Position the Main unit to fit into the slots on the backplate located in the center of the installation.
2. When the Main unit is in the track, press it forcefully down until you hear a "CLICK".



6. Closing

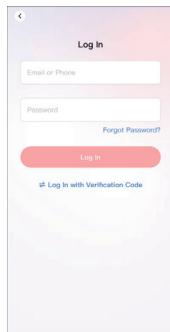
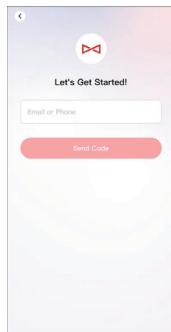
1. Hang the front cover at the top of the backplate and let it fall into place.
2. Press the bottom of the front cover until you hear a click.
3. Screw in the locking screw at the bottom of the charger to secure the front cover.
4. If needed, it is possible to lock the Main unit with a padlock.



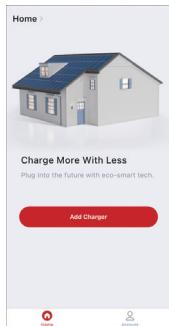
3. Configuration

Basic process for first-time use of Elecq app

a. Register and log in to the APP with your mobile number or email.



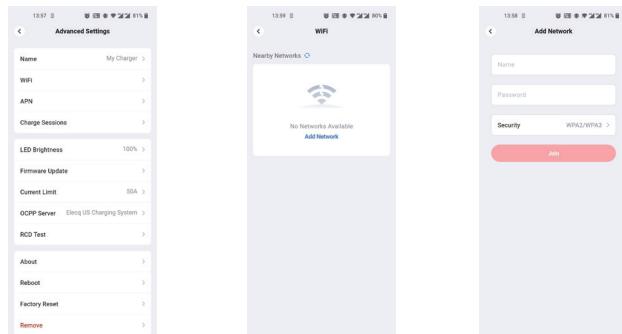
b. Add your charger



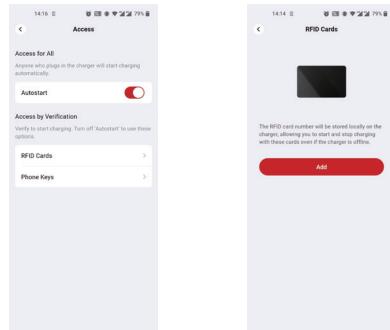
c. Add your charger by Bluetooth scanning, scanning QR codes, or entering PIN codes.



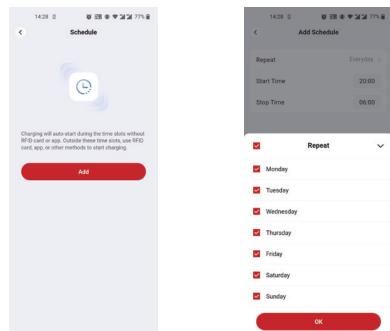
d. Set up the WiFi network for your charger.



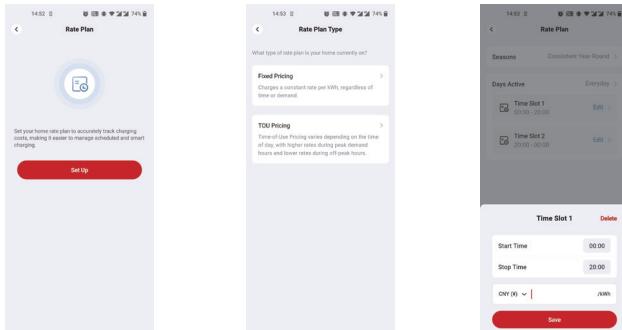
e. Advanced settings for the chargers, including setting the startup mode, configuring charging RFID cards, and setting up mobile phone keys.



f. Set charging schedule. It supports setting up automatic charging schedules based on your personal habits, allowing you to configure different charging schedules for weekdays and weekends.

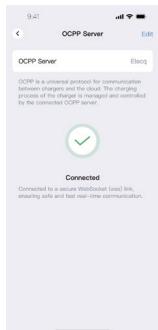


g. Set rate Plan. Set your home rate plan to accurately track charging costs, making it easier to manage scheduled and smart charging.



h. OCPP Server configuration

When you complete the configuration and the following interface appears, it means that you have completed the security settings of the charging station.



5. User interface

LED Description		
NO.	Charge status	light mode
1.	Booting up	Solid white for a few seconds and then solid cyan
2.	Standby, waiting to plug in	Solid cyan
3.	Plugged in, ready to start Charging	Solid green
4.	Authentication Approved	Breathing green
5.	Charging in Progress	Blue streaming from Left to Right
6.	Discharging in Progress	Blue streaming from Right to Left
7.	Charging finished (normal)	Solid green
8.	Charging pause (normal)	Blinking blue
9.	Charging pause (Alert)	Blinking yellow
10.	Alert Triggered (Overtemperature or Other Recoverable Alarm)	Blinking yellow
11.	Critical Alarm, Charger Unable to Operate Normally	Blinking red
12.	Charger Unavailable	Solid yellow
13.	Charger is upgrading	Yellow streaming from Left to Right
14.	Pre-ordered	Breathing slowly blue

6. Troubleshooting

Symptom	Possible Cause	Solution
The indicator is off.	The power input cable is incorrectly connected	Connect cables according to the cable connection label
	The upstream circuit breaker Tripped	Turn the circuit breaker on
	the power supply is abnormal	Contact an electrician to check the upstream input power cable.
The indicator is flashing red	The charger has detected some kind of malfunction	Connect to the APP to view the fault code
	Grounding fault, The earthing system is incorrectly set; The PE cable is not properly connected to the PE terminal of the charger	Contact the installer to check the earthing system set and PE cable wiring.
	AC leakage fault DC leakage fault The charging power loop insulation is faulty; There was an electric shock; The leakage current of the car is too large	Restart the charger. If the fault persists, contact an electrician to check the wiring. Charge another vehicle that charges normally at other stations. If it charges successfully, contact the after-sales technical support for the vehicle that couldn't charge properly to check the vehicle. If it still doesn't charge, contact the charger's technical support
	LN connect reverse fault	Contact an electrician to change the wiring
	Phase loss fault A phase fails in the three-phase input.	Contact an electrician to Check whether the three-phase input voltage is within the normal range
	Electronic lock fault The electronic lock of the charger connector fails to lock or unlock	Check that the charging plug is properly plugged in. If the charging plug is locked and cannot be pulled out, restart the charging pile. If it still cannot be unlocked, contact after-sales maintenance personnel
	Over temperature fault, High temperature detected;	Contact the installer to check whether the wiring of the power terminal is loose; Ensure the ambient temperature around the charger is in the allowed range.
	Over Current fault The overcurrent alarm occurred three times consecutively.	Increase the overcurrent protection threshold of the charger, provided the load on the line allows

The indicator is flashing yellow	The charger has detected some kind of alarm	Connect to the APP to view the alarm code
	Over voltage warning Input overvoltage occurs	Check whether the input voltage is within the normal range.
	Under voltage warning Input undervoltage occurs	Check whether the input voltage is within the normal range.
	Over current warning Vehicle overcurrent detected	Reduce the vehicle's charge current setting
Charging cannot be started	The charging card is not authorized	Bind the charging card to the charger
	The charging plug is not firmly inserted	Plug in tightly and the indicator turns green
	Some vehicles need to be turned off to charge	Turn off the vehicle
	The vehicle is set for scheduled charging, and the scheduled time has not yet arrived	If you need to start charging immediately, cancel the vehicle's scheduled charging setting.
The app fails to connect to the charger through WiFi	The wifi switch of the mobile phone is not turned on	Turned on the wifi switch
	Too far away from the charger, the wifi signal is weak	Get closer to the charger
The app fails to connect to the charger through BLE	The BLE switch of the mobile phone is not turned on	Turned on the wifi switch
	Too far away from the charger, the BLE signal is weak	Get closer to the charger

6. Software update policy

During the product life cycle, we will keep the product software continuously updated, and you can upgrade your device software by connecting to the Internet. After the product stops selling, we will maintain the software update service for more than 2 years, and before stopping the software service , we will issue an announcement on the website 6 months in advance.