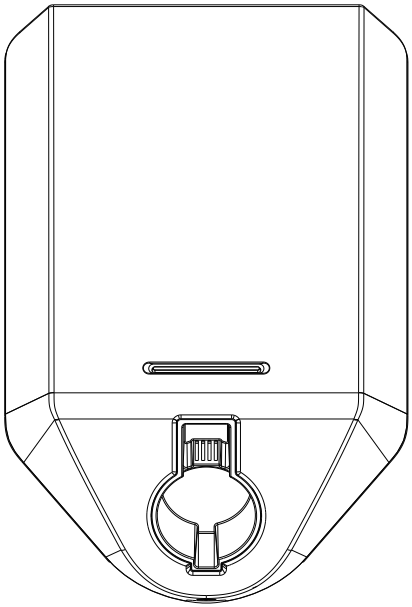

# Home H1
# User and Installation Manual

（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 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 unenvironnement non contrôé. 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.

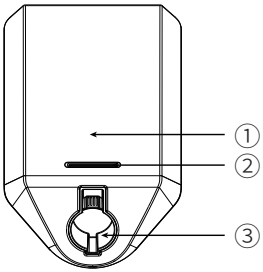
## Safety information

- 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

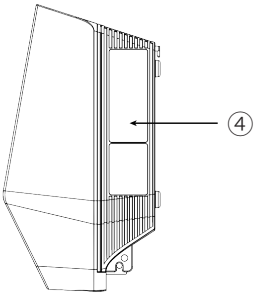
## Overview

### Front View



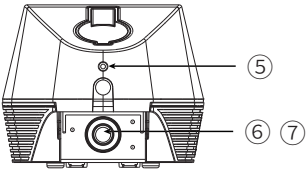

1. RFID sensor position
2. LED light strip
3. Charging Socket

### Right View



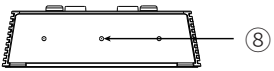

4.Product Label

### Bottom View



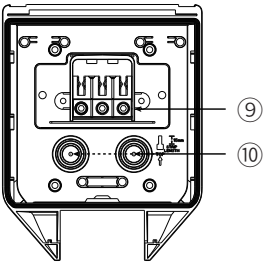

5. Anti theft screw
6. Bottom drill out cable entries for power/data
7. Bottom drill out cable entry for data

### Top View




8. Top drill out cable entry for power only

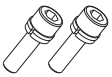
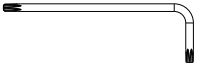
### Inside Backplate



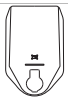
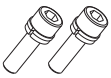

9. Wiring terminals – Live and Neutral
10. Rear drill out cable entry for power/data

## 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)<br>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 (±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 | |

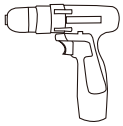
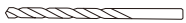
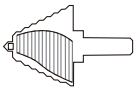
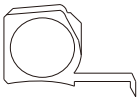
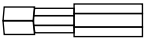
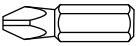
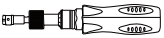
| **Compliance** | | |
|---|---|---|
| UL 2594 | UL 2231-2 | NEC article 625 |
| UL 2231-1 | UL 1998 | CSA C22.2.NO.280 |

| **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 requied | | | | | |
|---|---|---|---|---|---|
| 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.

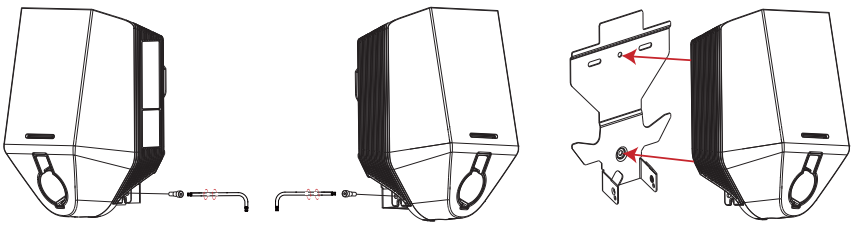
### NEMA Plug-in Installation

**1. Opening**

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

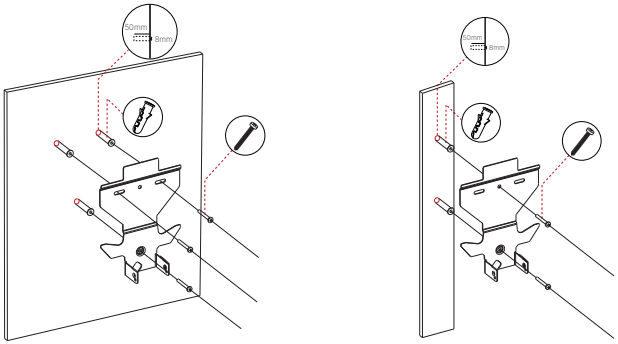
Grasp the bottom of the main unit and push upwards with good force until the Main unit disconnects.

**Step 1** **Step 2** **Step 3**



**2. Wall dock mounting**

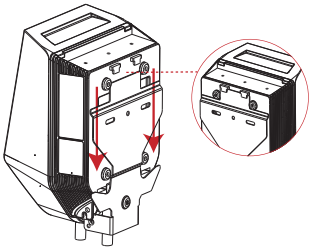
Find the wall stud nearest to the NEMA outlet using a wall stud finder. Draw a vertical line and screw hole mark with the wall stud. Or find a flat and solid wall. Attach the wall dock to the mounting location by screwing two ST5.5 x 25 screws into the lower mounting holes. Tighten the screws using the screwdriver type PH2.



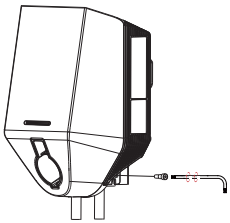
### 3. Attaching the charger

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.

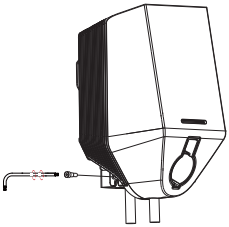
Step 1



Step 2



Step 3



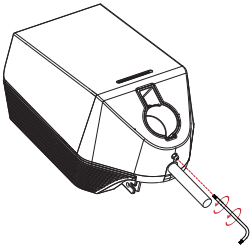
## Hardwired Installation

### 1. Opening

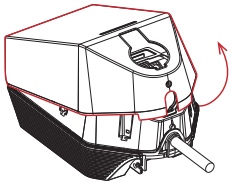
Loosen the anti-theft screws and remove the front cover.

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

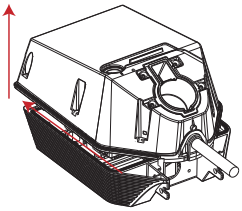
Step 1



Step 2



Step 3



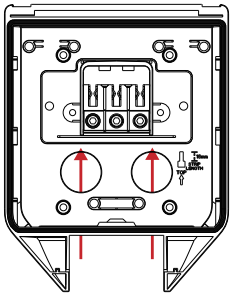
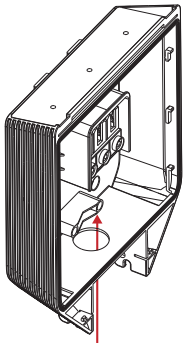
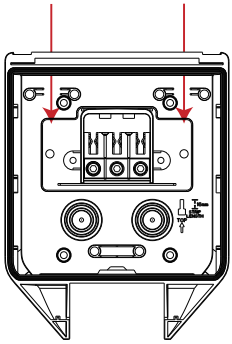
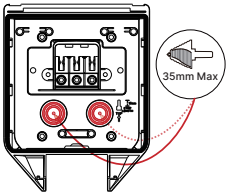
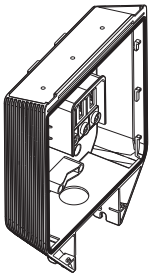
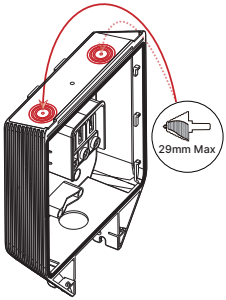
### 2. Prepare Backplate for Wiring

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.

| | Rear | Bottom | Top |
|---|---|---|---|
| Power Cable |  |  |  |
| |  |  |  |

## 3. Backplate mounting

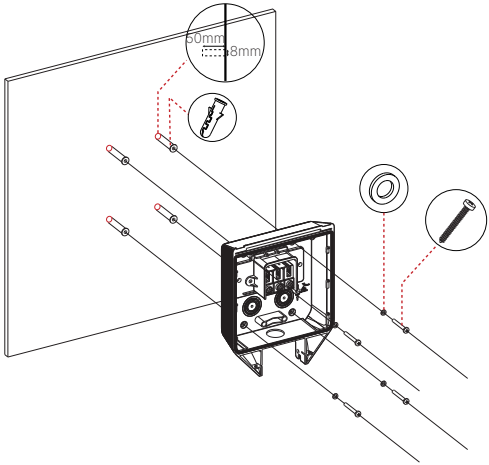
Fix the backplate to a solid, non-perforated wall or structure with sufficient load-bearing capacity using the 4 wall screws provided in the mounting kit. Use suitable wall plugs for mounting and observe the local regulations for recommended installation height.

**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**

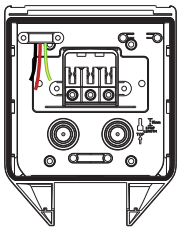
**If you are going to install multiple backplates, now would be a good time to mount them as well.**

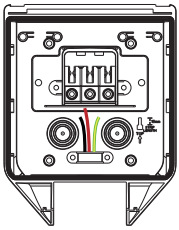


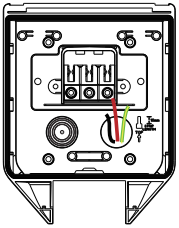

## 4. Wiring

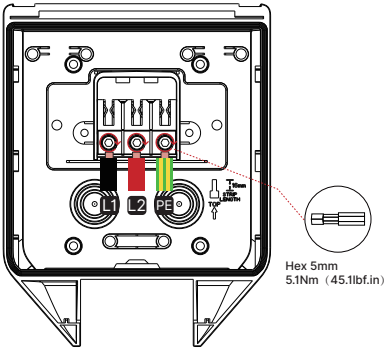
**Power cable wiring**

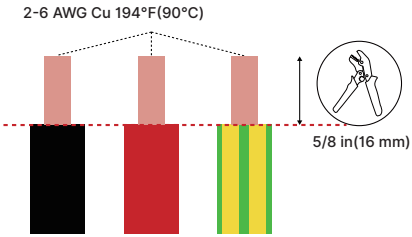
- Shorten the sealing plug to fit the cable. The hole should be slightly smaller to ensure a good seal.
- Route wiring into selected entry point and through the service loop channel
- Strip each wire, exposing 16mm of copper on each. If the cable has flexible conductors, then you must use ferrules on 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).









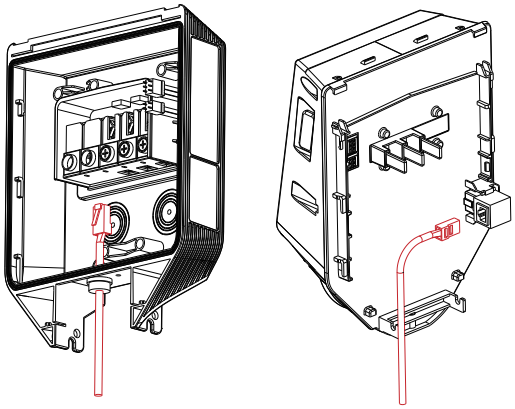
**Ethernet cable wiring（Optional）**

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.

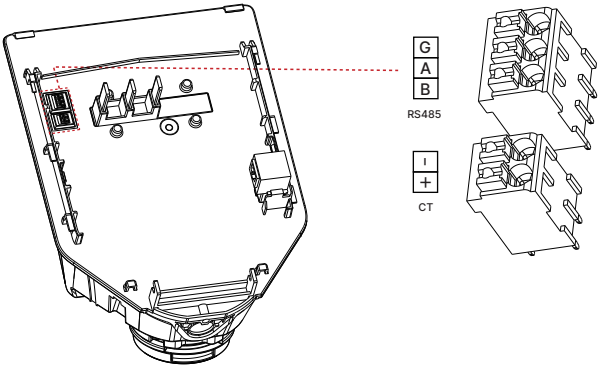
Step 2

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.

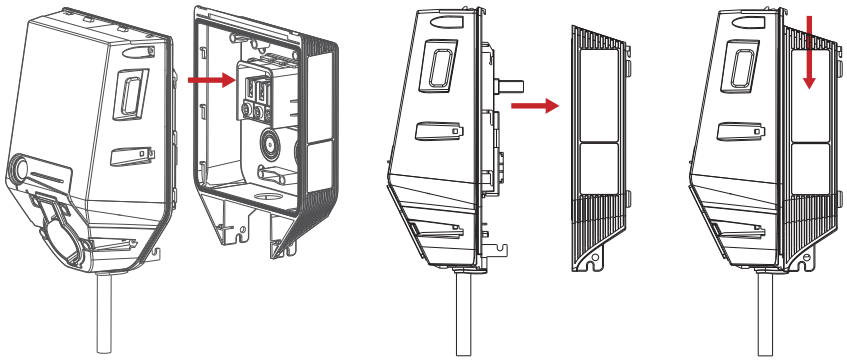


## 5. Attaching

- **Warning**

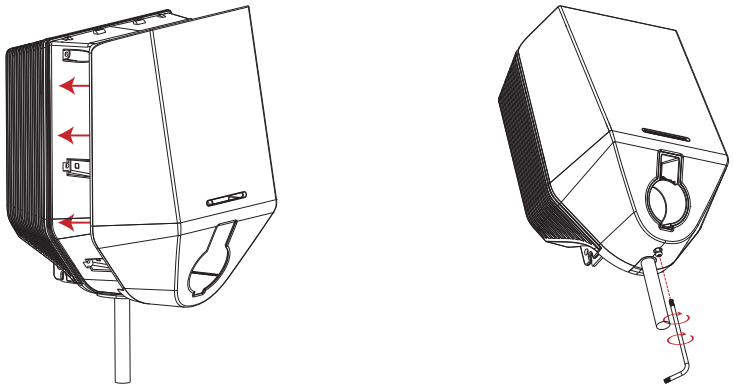
  Insulation testing should be performed before a Main unit installed in the backplate. Testing the circuit insulation with the Main unit installed in the backplate may damage the electronics or impact the reading negatively.

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

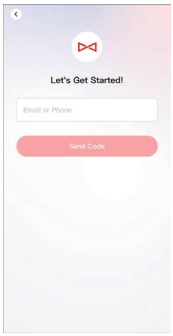
1. Hang the front cover at the top of the backplate and let it fall into place.
2. Press the bottom of the front cover until you hear a click.
3. Screw in the locking screw at the bottom of the charger to secure the front cover.
4. If needed, it is possible to lock the Main unit with a padlock.

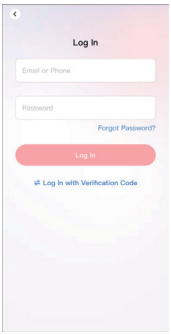


## 3. Configuration

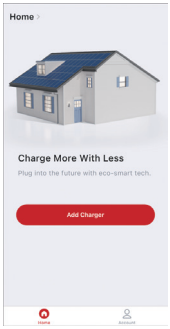
**Basic process for first-time use of Elecq app**

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



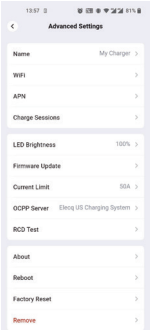



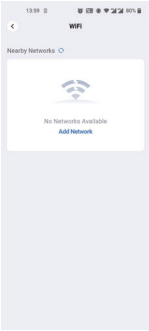

b. Add your charger

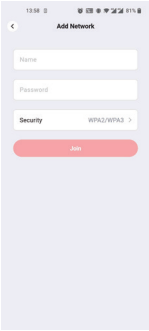



c. Add your charger by Bluetooth scanning, scanning QR codes, or entering PIN codes.

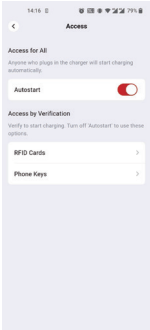
d. Set up the WiFi network for your charger.

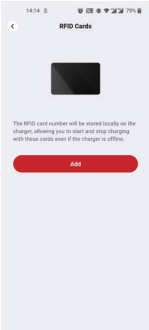


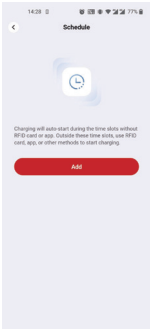



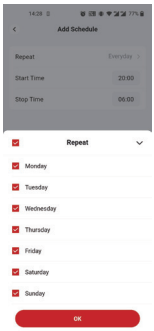

e. Advanced settings for the chargers, including setting the startup mode, configuring charging RFID cards, and setting up mobile phone keys.



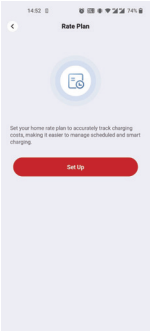



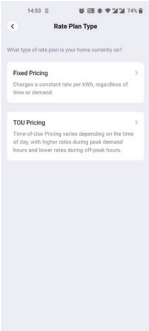

f. Set charging schedule. It supports setting up automatic charging schedules based on your personal habits, allowing you to configure different charging schedulesfor weekdays and weekends.

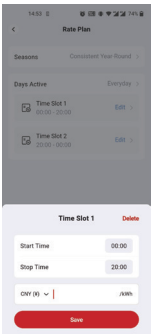


g. Set rate Plan. Set your home rate plan to accurately track charging costs, making it easier to manage scheduled and smart charging.

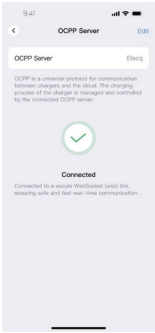



h. OCPP Server configuration

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 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,<br>The earthing system is incorrectly set;<br>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<br>DC leakage fault<br><br>The charging power loop insulation is faulty;<br>There was an electric shock;<br>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<br>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<br>The electronic lock of the charger connector fails to lock or unlock | Check that the charging plug is properly plugged in.<br>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,<br>High temperature detected; | Contact the installer to check whether the wiring of the power terminal is loose;<br>Ensure the ambient temperature around the charger is in the allowed range. |
| | Over Current fault<br>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<br>Input overvoltage occurs | Check whether the input voltage is within the normal range. |
| | Under voltage warning<br>Input undervoltage occurs | Check whether the input voltage is within the normal range. |
| | Over current warning<br>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.