

AC Home User and Installation Manual

(AC Home EU 7kW / AC Home EU 22kW)

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

Contents

1. Safety information

2. Product introduction

a. Overview

b. Packing List

c. Technical specification

d. Planning the installation

3. Installation

a. Opening

b. Prepare Backplate for Wiring

c. Backplate mounting

d. Wiring

e. Attaching

f. Front cover Closing

4. Operation

1. Charger power on

2. Start charging

3. Stop charging

5. Configuration

6. User interface

LED Description

7. Troubleshooting


8. Declaration of Conformity


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.

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.

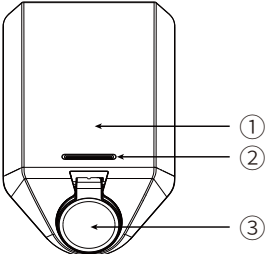
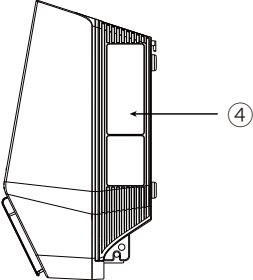
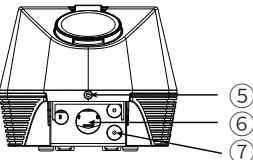
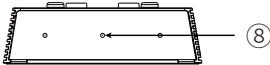
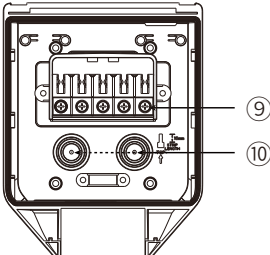
1. Safety information















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.
- This device should be supervised when used around children.
- Before installing or cleaning the product, switch off the upstream residual current operated circuit-breakers with integral overcurrent protection (RCBO) of it.
- 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.
- **If any specifications or regulations mentioned in this manual contradict with your local rules, refer to your local rules.**

2. Product introduction

a. 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 power cable inlet hole 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

b. Packing List			
Charger 1 PC			Screw (ST5.5*40mm) 4 PCS 
Screw (M5*18mm) 2 PCS			Wall Anchor (8*40mm) 4 PCS 
Strain Relief (38mm) 1 PC			screw waterproof rubber 4 PCS 
Power cable rubber(25mm) 2 PCS			Power Conduit Plug 1 PC 
Ethernet cable rubber (14.8mm) 1 PC			Sealing plug (16mm) 2 PCS 
Installation Guide 1 PC			Packing List 1 PC 
Charge Card 2 PCS			T15 Torx Screwdriver 1 PC 

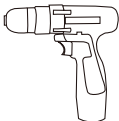


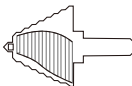



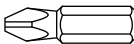




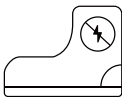
c. Technical specification	
Electrical	
Charging power	Single phase up to 7.4kW/32A Three phase up to 22kW/32A
Number of phases	1 or 3
Voltage	Single phase:230V±10% Three phase:400V±10%;
Grid frequency	50 Hz
Connector type	IEC 62196 type 2 socket
Power grid	TN, IT, TT
Meter	Built-in energy meter (±1 %)
General	
Dimension	283*190*152mm
Weight	2.8kg
Operating temperature	-40~55°C
Storage temperature	-40~85°C
Operating altitude	2000m
Connectivity	
WIFI 2.4G, 802.11b/g/n/ax	
Bluetooth	
100Mbps Ethernet	
4G with built-in eSIM or standard SIM card (optional)	
RS485	
RFID/NFC Reader	
OCPP 1.6J and OCPP 2.0.1	
Max transmitted power	
WiFi (802.11b/g/n/ax)	14.54dBm/28.44mW @b_mode/1Mbps
Wi-sun	4.26dBm/2.67mW @ 868MHz
LTE Band 1	23.87dBm/243.78mW
LTE Band 3	23.61dBm/229.61mW
LTE Band 7	23.23dBm/210.38mW
LTE Band 8	24.08dBm/255.86mW
LTE Band 20	24.15dBm/260.02mW
LTE Band 28	24.55dBm/285.10mW
LTE Band 38	22.13dBm/163.31mW
LTE Band 40	23.00dBm/199.53mW
Bluetooth(BLE)	8.15dBm/6.53mW

Interaction		
Elecq App		
LED Light strip showing the status of the charger		
Sound effects and voice prompt		
Protection		
Integrated overload protection according to EN IEC 61851-1:2019		
Built-in RCD for ground fault protection (30 mA AC/ 6 mA DC) according to IEC 62955		
Insulation class: I		
Overvoltage category III		
Higher surge protection level: supports 10kV/5kA		
Degree of protection: IP65		
Impact resistance: IK10		
Angled and self-draining socket		
Temperature sensors in all main contacts and critical components		
Relay sticking detection triggers a trip to prevent electric shock accidents.		
Compliance		
IEC/EN 61851-1	IEC 62196	EN 300 328
IEC/EN 61851-21-2	EN 301 908-1	EN 300 330
IEC/EN 62955	EN 301 908-13	BS 7671

d. 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 your charger in a location that allows the charge cable to reach the vehicle charge port without putting strain on the cable.
- Install your charger 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 Drive Bit	
④	Wire Stripper		⑨	Pozidriv Bit	
⑤	Torque Driver		⑩	Level	
Personal protective equipment					
①	Safety helmet		③	Protective gloves	
②	Insulated shoes				

Electrical

The charger automatically adapts to the power grid, the electric car and the capacity of the electrical installation. In the table you can see what charging effect you can expect from your installation and situation.

Ampere(A)	1 Phase(kW)	3 Phase(kW)
6	1.4	4.1
10	2.3	6.9
16	3.7	11
20	4.6	13.8
25	5.8	17.3
32	7.4	22

Incoming Cable

Configuration Item	Cable model	Comment
Single-phase power cable	3*6mm²	It is recommended to use a power cable with a temperature of 90 ° C. To ensure current carrying capacity, aluminum wires are not recommended.
Three-phase power cable	5*6mm²	
Ethernet cable	CAT5	
485 Cable	Range:3*0.3mm²~3*1mm²	
External DI /CT cable	Range:2*0.3mm²~2*1mm²	
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		

External Protection Device

Recommend RCBO Configuration	
RCBO Rated Current	40A
Residual current action type	A
Tripping characteristics	C
Breaking Capacity	6kA
Number of Poles	1 Phase 1P+N, 3 Phase 3P+N
Note: The RCBO needs to be tested at least every month.	

3. Installation

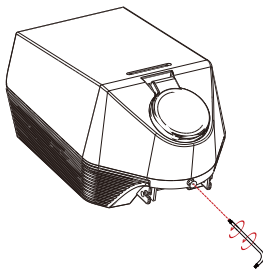
Warning

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

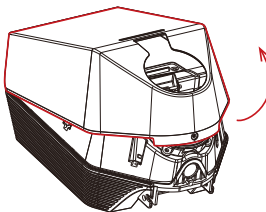
a. Opening

Loosen the anti-theft screws and remove the front cover.
Grasp the bottom of the Charge Core and push upwards with good force until the Charge Core disconnects.

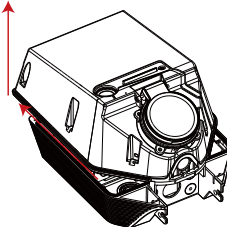
Step 1



Step 2



Step 3

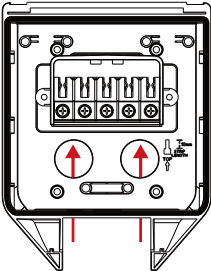
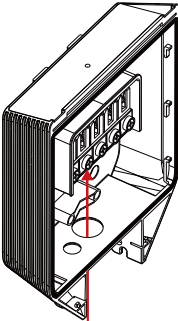
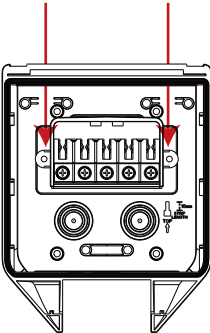


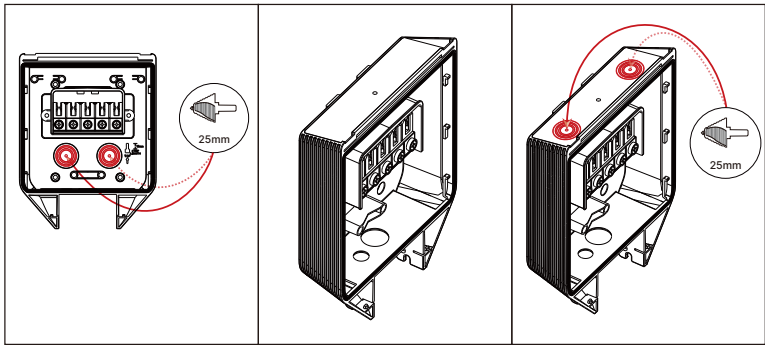
b. Prepare Backplate for Wiring

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: 25mm

For top and rear entry: Drill with 25 mm step bit to prepare backplate for power cable, 16 mm for data cable.

	Rear	Bottom	Top
Power Cable			



c. Backplate mounting

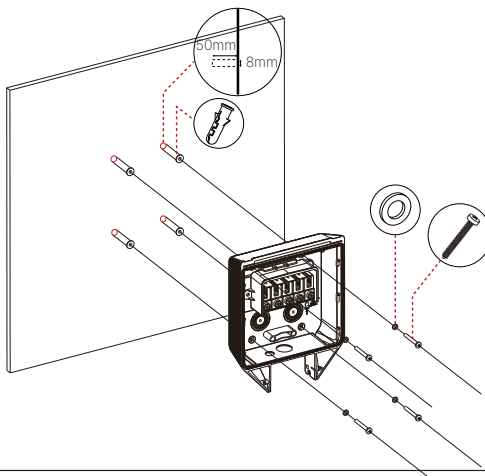
Fix the backplate to a solid, non-perforated wall or structure with sufficient load-bearing capacity using the 4 wall screws provided in the mounting kit. Use suitable wall plugs for mounting and observe the local regulations for recommended installation height.

⚠ 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

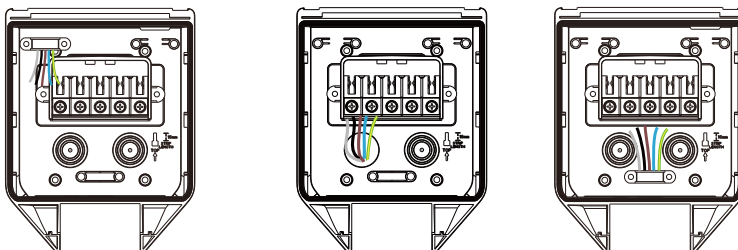
If you are going to install multiple backplates, now would be a good time to mount them as well.



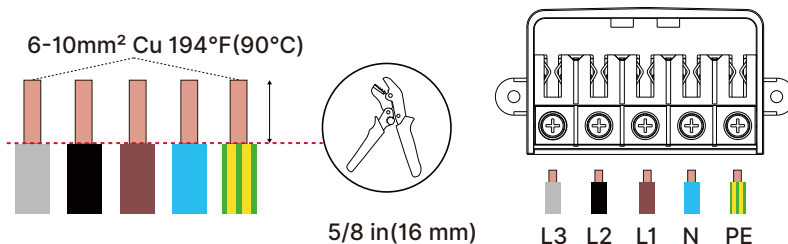
d. Wiring

Power cable wiring

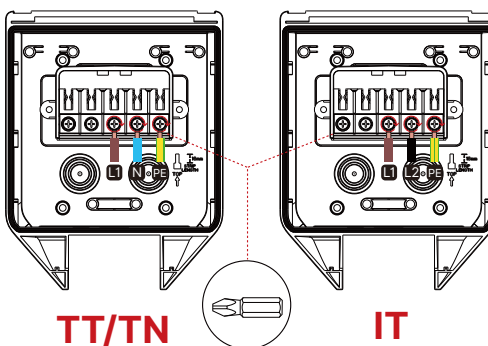
- Shorten the sealing plug to fit the cable. The hole should be slightly smaller to ensure a good seal.
- Route wiring into selected entry point and through the service loop channel.



- Strip each wire, exposing 16 mm 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 3 Nm.

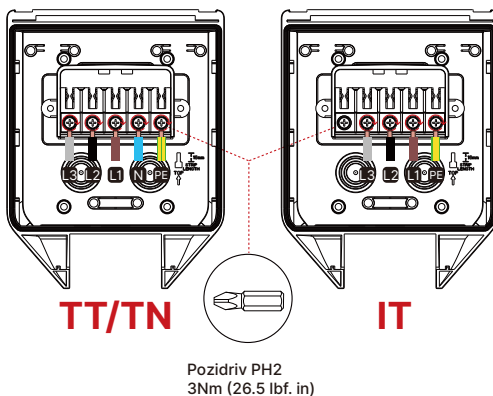


1-phase Wiring



Pozidriv PH2
3Nm (26.5 lbf. in)

3-phase Wiring



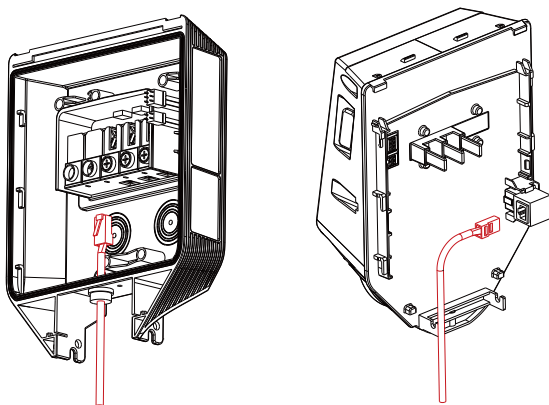
Ethernet cable wiring (Optional)

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.

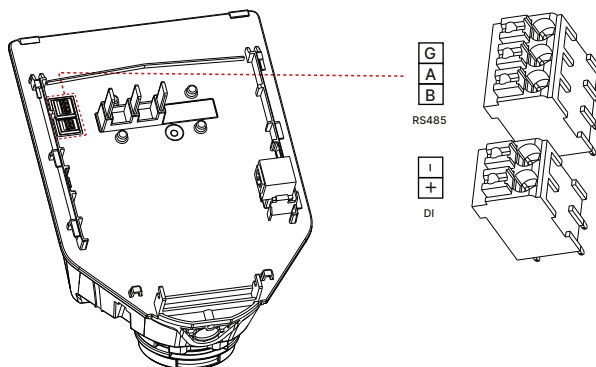
Step 2

- Plug the cable into the RJ45 port on the Charge Core as shown.



Ethernet cable wiring (Optional)

RS485 and DI communication cable is terminated on the rear of the main unit.

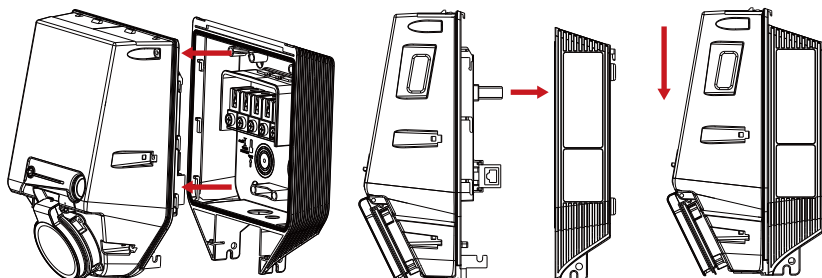


e. Attaching

Warning

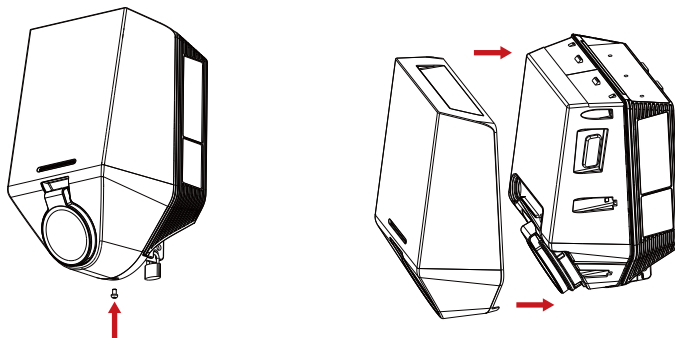
Insulation testing should be performed before a Charge Core installed in the backplate. Testing the circuit insulation with the Charge Core installed in the backplate may damage the electronics or impact the reading negatively.

1. Position the Charge Core to fit into the slots on the backplate located in the center of the installation.
2. When the Charge Core is in the track, press it forcefully down until the edges of main unit and backplate are flush.



f. Front cover Closing

1. Hang the front cover at the top of the backplate and let it fall into place.
2. Screw in the locking screw at the bottom of the charger to secure the front cover.
3. If needed, it is possible to lock the Charge Core with a padlock.



4. Operation

1. Charger power on

Close the breaker that supplies the power to the charger, and wait for the power supply to come on. There will be a series of self-check starts, making sure that the charger works correctly and safely. Check the status of the indicator light to determine whether the charging station is working properly.

2. Start charging

Caution

The cable between the charge point and the EV should not be extended

Caution

During the charging session, do not disconnect the charge connector. There is a risk of damage to the socket of the charger or the connector of your EV.

- a. Insert the Type2 charging cable into the charger socket outlet and charge port on your EV.
- b. Choose one of the following ways to start a charging session:
 - Tap your RFID card on the RFID card reader.
 - Use the Elecq app by tapping Start on the Charge screen.
 - If you have set a charging schedule in the app, the charger will initiate a charging session automatically as scheduled.
 - If the AutoStart or Plug-and-charge function is enabled, the charger will automatically start charging once the charging handle is properly connected.

Note

Observe the indicator light and confirm that the indicator light shows the charging status to confirm that the charging session is proceeding normally.

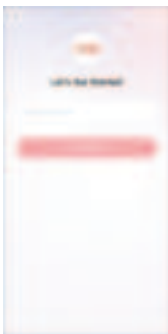
3. Stop charging

- a. To stop charging, you can choose either of the following two ways:
 - Wait for the charging session to end and no further actions are required in the case of scheduled charging or plug-and-charge.
 - End the charging session via the Elecq Charge app or by tapping your RFID card on the RFID card reader again.
- b. Remove the charging cable from the charger socket outlet and the EV charge port.

5. Configuration

Basic process for first-time use of Driver app

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



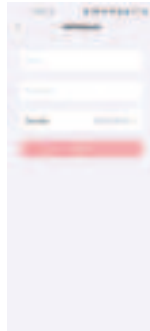
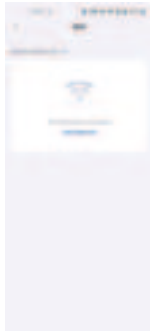
b. Add your charger



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



d. Set up the WiFi network for your charger



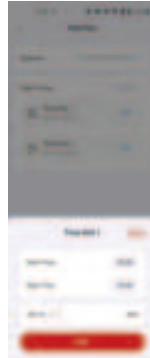
e. Advanced settings for the chargers, including setting the startup mode, configuring charging RFID cards, and setting up mobile phone keys.



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

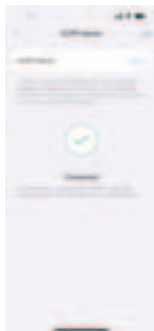


g. Set rate Plan. Set your home rate plan to accurately track charging costs, making it easier to manage scheduled and smart charging



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



6. 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

7. 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, 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

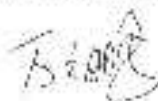
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	IEC 62321-4:2015-AMD1:2017
	IEC 62321-5:2013
	IEC 62321-6:2015
	IEC 62321-7:1 2015
	IEC 62321-7:2 2017
	IEC 62321-8:2017

Object of the declaration:

Signed for and on behalf of Shenzhen FLECO Technology Co., Ltd.

Place and date of issue: Shenzhen 2019.4.15

Signature:



Name, function: Wen Y. nong CEO

Product Type:

Type	Description
#F100	Home BL 7.4kW Suction Wires Black
#F103	Home BL 7.4kW Suction Wires Black
#E104	Home BL 22kW Suction Wires Black
#E105	Home BL 22kW Suction Wires Black
#E101	Home BL 22kW Suction Wires Black
#E102	Home BL 7.4kW Suction Wires Black
#E107	Home BL 7.4kW Suction Wires Black
#E108	Home BL 22kW Suction Wires Black
#E109	Home BL 22kW Suction Wires Black
#E110	Home BL 7.4kW Suction Wires Black
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