

User Manual

22KW EV Charger

Please read the product manual prior to installation to prevent improper operation

Table of Contents

1. Notes on This Manual.....	1
1.1 Scope of Validity.....	1
1.2 Target Group.....	1
1.3 Symbols Used.....	1
2. Safety.....	2
3. Packing List.....	3
4. Introduction.....	4
5. Technical Data.....	5
6. Installation.....	6
6.1 Product Handling.....	6
6.2 Out of the box inspection.....	6
6.3 Install.....	6
7. APP download.....	15
8. Operation.....	16
8.1 Charger Status Indicators.....	16
8.2 Charging mode and Operation.....	17
9. Maintenance.....	19
10. Decommissioning.....	20
10.1 Dismantling the charger.....	20
10.2 Packaging.....	20
10.3 Storage and Transportation.....	20

1. Notes on This Manual

1.1 Scope of Validity

This manual describes the assembly, installation, commissioning, maintenance and troubleshooting of the following model(s) of products:

A022KP1-E2
A022KS1-E2





Note: Please keep this manual where it will be accessible at all times.







1.2 Target Group

This manual is for qualified electricians. The tasks described in this manual only can be performed by qualified electricians.

1.3 Symbols Used

The following types of safety instructions and general information appear in this document as described below:

	Danger! “Danger” indicates a hazardous situation which, if not avoided, will result in death or serious injury.
	Warning! “Warning” indicates a hazardous situation which, if not avoided, could result in death or serious injury.
	Caution! “Caution” indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
	Note! “Note” provides important tips and guidance.

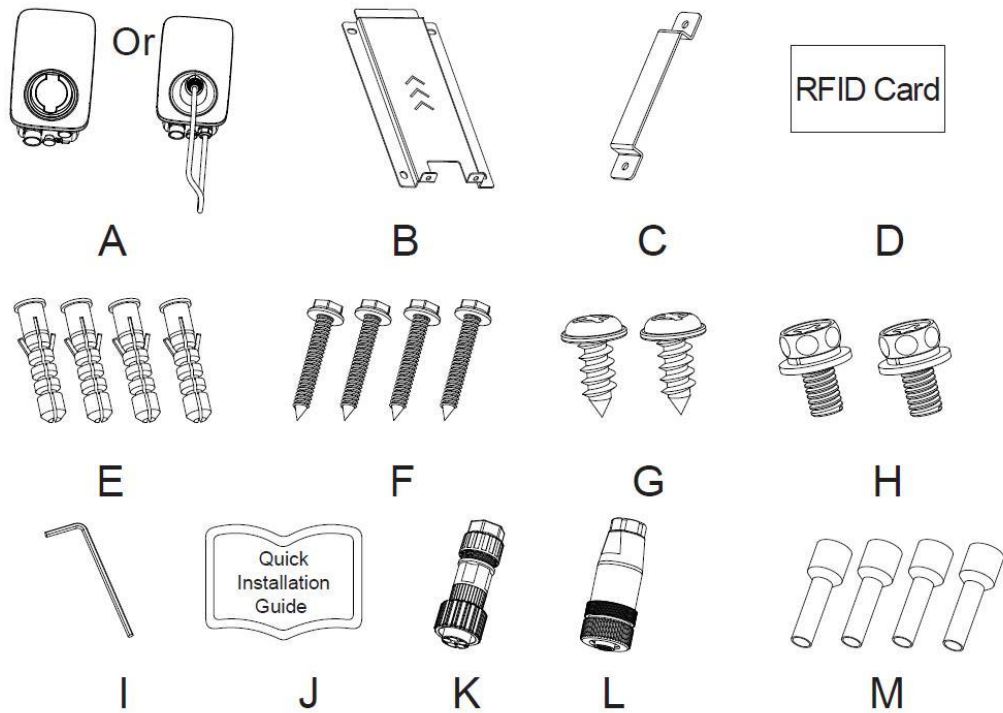
Symbols	Explanation
	Symbol Explanation CE mark. The charger complies with the requirements of the applicable CE guidelines.
	Beware of hot surface. The charger can become hot during operation. Avoid contact during operation.
	Danger of high voltages. Danger to life due to high voltages in the charger!
	Danger. Risk of electric shock!
	Read the manual.
	Product should not be disposed as household waste.

2. Safety

EV chargers are designed and tested in accordance with international safety requirements. However, certain safety precautions must be taken when installing and operating this. The installer must read and follow all instructions, cautions and warnings in this installation manual.

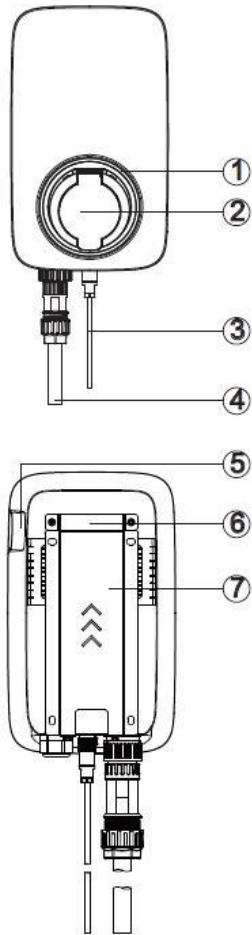
- All operations including transport, installation, start-up and maintenance, must be carried out by qualified, trained personnel.
- The electrical installation & maintenance of the charger shall be conducted by a licensed electrician and shall comply with local wiring rules and regulations.
- Before installation, check the unit to ensure it is free of any transport or handling. Unauthorized removal of necessary protections, improper use, incorrect installation and operation may lead to serious safety and shock hazards or equipment damage.
- Do not install the equipment in adverse environmental conditions such as in close proximity to flammable or explosive substances; in a corrosive or desert environment; where there is exposure to extreme high or low temperatures; or where humidity is high.
- Do not use the equipment when the safety devices do not work or are disabled.
- Use personal protective equipment, including gloves and eye protection during the installation.
- Inform the manufacturer about non-standard installation conditions.
- Do not use the equipment if any operating anomalies are found. Avoid temporary repairs.
- All repairs should be carried out using only approved spare parts, which must be installed in accordance with their intended use and by a licensed contractor or authorized FoxESS service partner.
- Liabilities arising from commercial components are delegated to their respective manufacturers.

3. Packing List



S/N	Name	Quantity
A	EV Charger (EV Plug or Plug Holder)	1
B	Mounting Backplate	1
C	Mounting Bucket	1
D	RFID Card	2
E	Φ8*40mm Expansion Pipe	4
F	ST6*40 Expansion Screw	4
G	ST4.2*9.5mm Self-tapping Screw	2
H	M4*10mm Screw Assembly	2
I	2mm Socket Head Wrench	1
J	Quick Installation Guide	1
K	AC Connector	1
L	DC Connector	1
M	E0508 Tubular Terminal	4

4. Introduction



- ① Meaning of lights
 - Green breathing light -standby status
 - Blue Steady -EV Plug inserted status
 - Blue breathing light-charging start status/pause
 - Blue running light -charging status
 - Green Steady-charging end status
 - Red Steady-Charger fault, shutdown protection
 - Yellow Steady -locked status
- ② Plug holder
- ③ RS485 Communication wire
- ④ Incoming cable
- ⑤ Stop button
- ⑥ Mounting Bracket
- ⑦ Mounting Backplate

5. Technical Data

Model	A022K
General	
Name	AC Charger
Input	
Input line	3P+N+PE
Rated voltage	400Vac, ±20%
Rated current	32A
Rated frequency	50/60Hz
Output	
Output voltage	400Vac, ±20%
Maximum output current	32A
Rated power	22kW
Interaction method	
Charging connection method	With cable/socket
Card reader	Mifare ISO/IEC 14443 A
Start-up mode	Plug and Charge/RFID Card/APP
Communication method	
Bluetooth	Yes, 3db, -40-85°C
WiFi	Yes, 2412-2484MHz,802.11b/g/n: 20db
4G	Yes
Using environment	
Installation method	Wall mounting/column mounting
Working temperature	-30°C~50°C
Working humidity	5%-95% no condensation
Altitude	≤2000m
Size and weight	
Size	320*190*144.5 mm(socket),320*190*130 mm(plug)
Weight	3.0kg(socket),5.6kg(plug)
Safety	
Waterproof rating	IP55
Anti-collision grade	IK08
Type A RCD	6mA DC / 30mA AC
Protection function	Over-current protection, grounding protection, lightning protection, over-voltage protection, under-frequency protection, over-under-temperature protection
Certification	CE/UKCA
Certification standard	EN/IEC 61851-1: 2019, EN/IEC 61851-21-2: 2018

6. Installation

6.1 Product Handling

To ensure safety, the following points should be paid attention to:

- All accessories are placed separately during transport or handling.
- Avoid violent shock and impact, and take it lightly.
- Avoid inversion.

6.2 Out of the box inspection

- Open the charging pile packaging, please check the random attachment according to the attachment list.
- Check the charging pile for damage in transport. If damage or missing parts are found, do not boot up and inform the carrier and dealer. Determine if this machine is the model that you want to purchase.

Note: Please keep the packing boxes and packaging materials for future handling.

6.3 Install

• Pre-installation preparation

The following tools are required for the installation:

Cross screwdriver, special plum screwdriver, stripping pliers, pressing pliers.

• Installation precautions

Please strictly follow the wiring requirements and correct access.

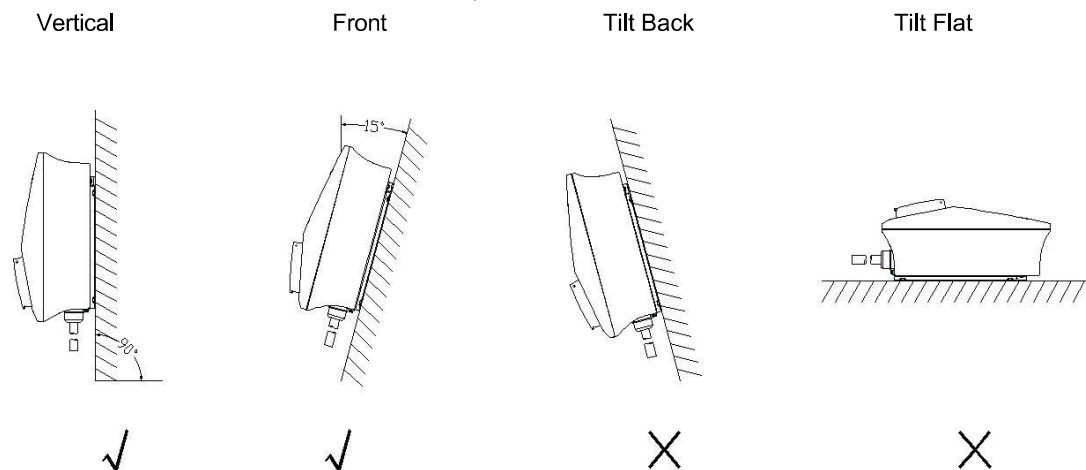
Please confirm that all fasteners are locked to secure the charging pile.

• Installation placement environment and location

- The area where the charger must be placed must be well ventilated, far away from water, combustible gas and corrosive agent.
- Ensure that the ground or installation platform can withstand the weight of the charger.
- If the charger is disassembled and used at low temperature, there may be water droplets condensation phenomenon, be sure to wait for the charger inside and outside completely dry. After dryness can be installed and use, otherwise there is a danger of electric shock.
- Please place the charger near the mains input to disconnect the mains input switch and cut off the power supply in an emergency.

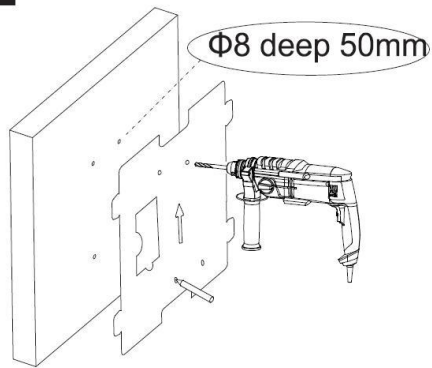
Note: The actual installation needs to comply with local installation requirements and local safety regulations.

Ensure that the wall or column is vertical or positive 15 ° before installation.



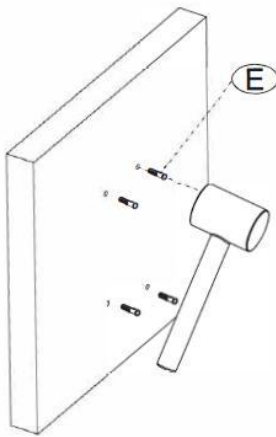
- **Wall-mounted installation method:**

Step 1



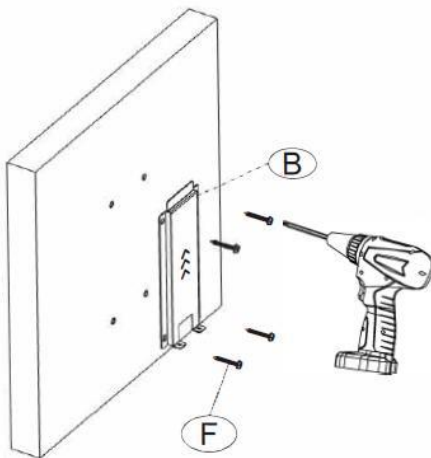
1. Mark 4 holes according to the installation positioning card on the wall.
2. Use an 8mm drill bit to drill holes (with a hole depth of over 50mm).
3. Clean the hole position.

Step 2



Insert the expansion pipe (E) into the hole and fix it tightly with a rubber hammer.

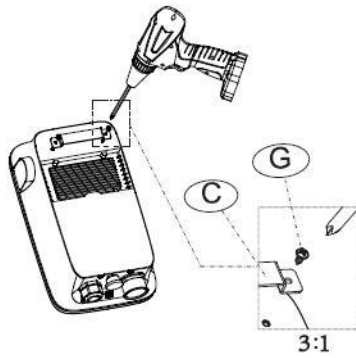
Step 3



Fix the Mounting backplate (B) to the wall with screws (F).

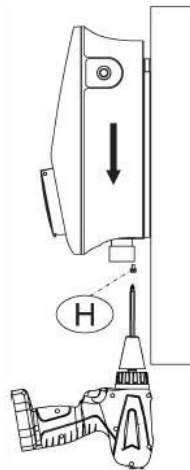
Step 4

Fix the Mounting bracket (C) onto the EV Charger with screws (G).



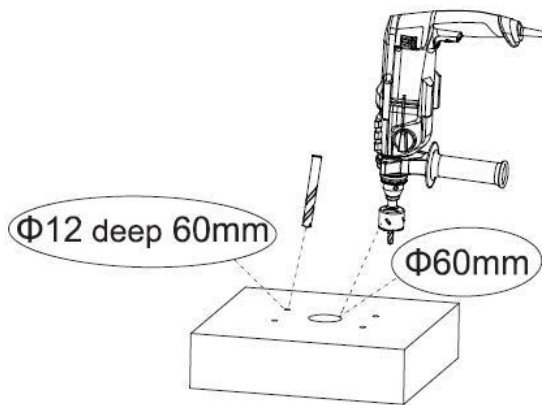
Step 5

1. Hang the EV Charger into the Mounting backplate.
2. Tighten the screws (H) to complete the installation.



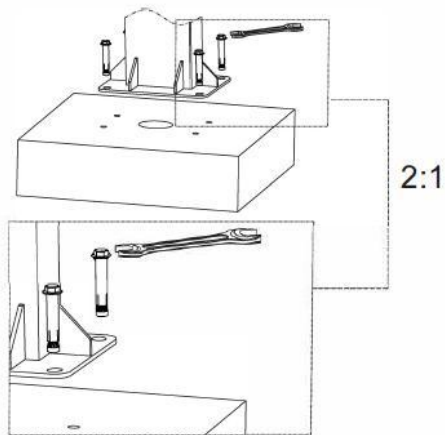
• Floor type / Vertical installation method:

Step 1



1. Use a 12mm drill bit to drill four 60mm deep holes with a spacing of 170*120mm.
2. Drill one $\varnothing 60$ mm outlet hole in the center.
3. Clean the hole position.

Step 2



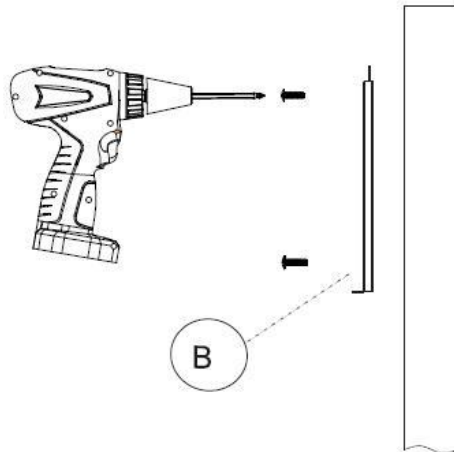
Install the foot screw and fix with a wrench.

Step 3



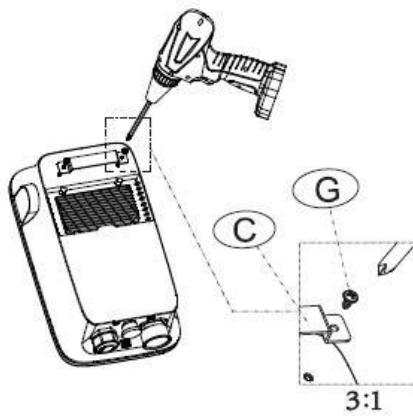
Router the input wire into the column hole through the ottom of the column.

Step 4



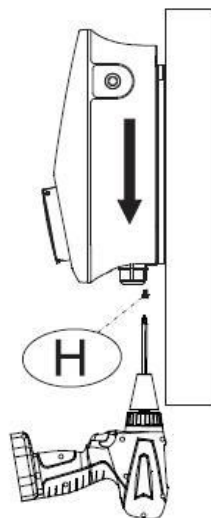
Fix the Mounting backplate (8) to the column with screws.

Step 5



Fix the bracket (C) onto the EV Charger with screws (G).

Step 6

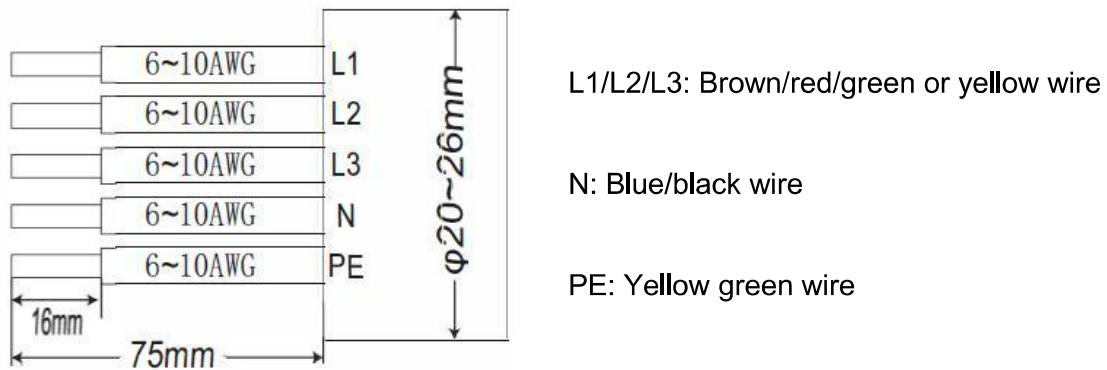


1. Hang the EV Charger into the Mounting backplate.
2. Tighten the screws (H) to complete the installation.

- **Electrical Connection**

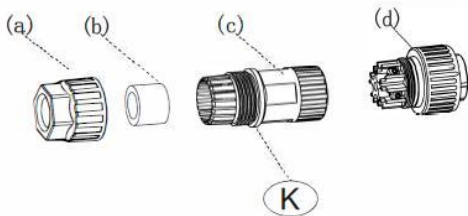
A leakage protection switch needs to be installed. The leakage protection switch should use Type A, not less than 32A, and the input wire should be led out from the leakage protection switch. It is recommended to use 6~10AWG (wire diameter 6~16mm²) cable.

Trim all cables to 75mm (as shown in the figure) and peel off the insulation sheath to expose the conductor by about 16mm.



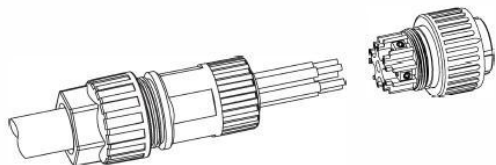
Note: Please refer to the local cable model and color during actual installation

Step 1



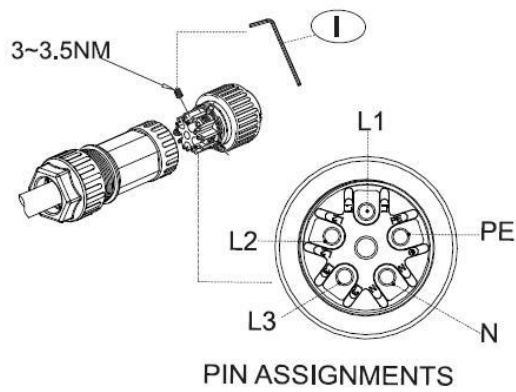
Divide the AC connector (K) into four parts: nut(a), sealing ring (b), sleeve (c), and plug (d).

Step 2



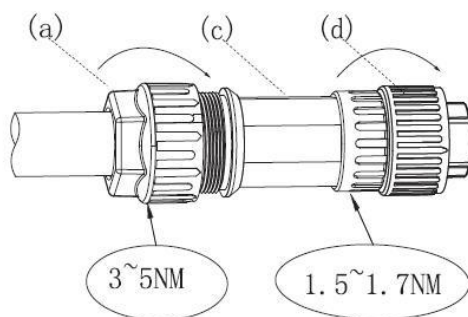
Thread the cable through the nut (a), sealing ring (b), and sleeve (c) in sequence, and screw the nut onto the sleeve (do not tighten it yet).

Step 3



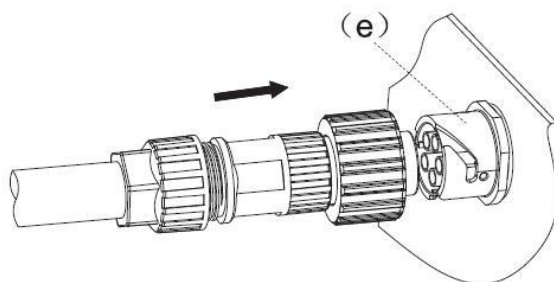
Install the cable into the plug (D) of the AC connector as shown in the figure below, and tighten the screw with a 2mm Allen wrench (I).

Step 4



First, tighten the nut (a) and sleeve (c) with 3-5 NM torque, and then tighten the sleeve(c) and plug (d) with 1.5-1.7 NM torque to complete the internal wiring of the AC connector.

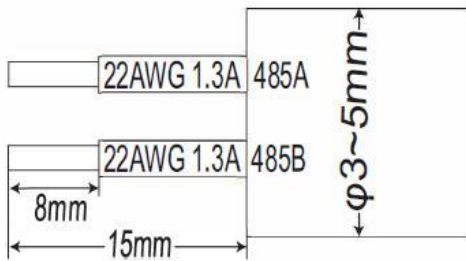
Step 5



Insert the plug (d) of the AC connector into the socket (e) of the junction box, and tighten the plug (d) to complete the installation.

- **Communication wiring**

Trim all cables (wire diameter 0.3mm²) to 15mm (as shown in the figure), peel off the insulation sheath to expose the conductor by about 8mm.

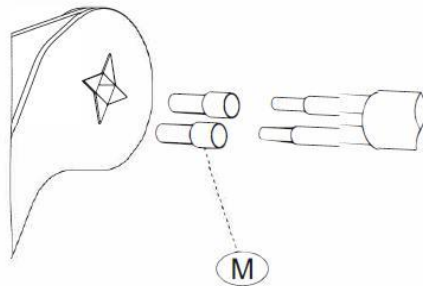


485A: Brown/red/green or yellow wire

485B: Blue/black wire

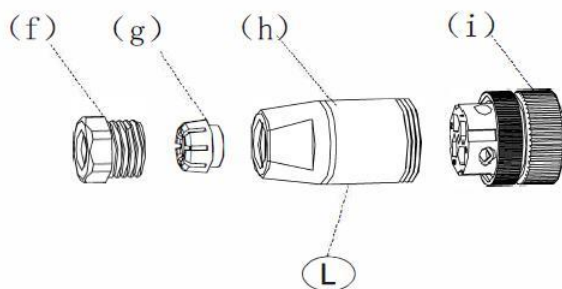
Note: Please refer to the local cable model and color during actual installation

Step 1



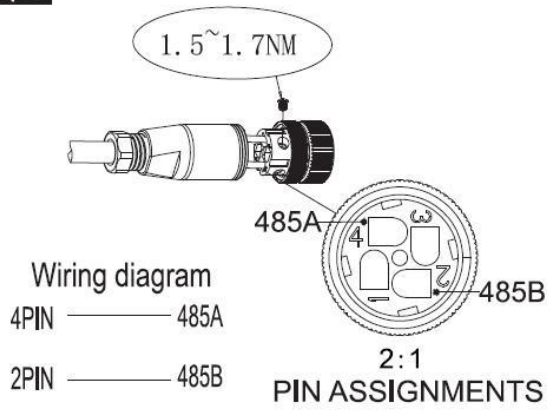
Use crimping pliers to crimp the tubular terminal (M) and cable.

Step 2



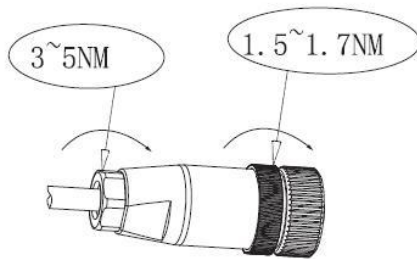
Divide the DC connector into four parts: nut (f), sealing ring (g), sleeve (h), and plug (i).

Step 3



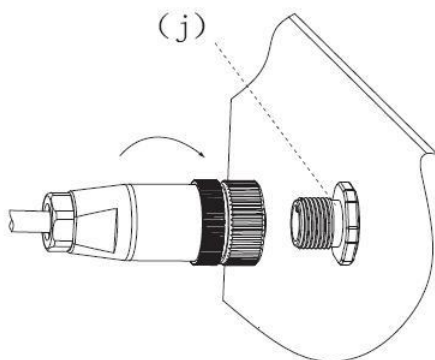
Thread the cable through the nut (f), sealing ring (U), and sleeve (h) in sequence. Thread the nut onto the sleeve (do not tighten it yet), then insert the cable tubular terminal (M) into the plug (i) of DC connector, and tighten the screw.

Step 4



First tighten the nut (f) and sleeve (g) with 3-5 NM torque, and then tighten the sleeve (h) and plug (i) with 1.5-1.7 NM torque.

Step 5



Insert the plug (f) of the DC connector into the socket (U) of the junction box, and tighten the plug (i) to complete the installation.

7.APP download

Users can scan the QR code (Android and IOS) in the quick installation manual, or go to the App Store and Google Play to search for .

8.Operation

8.1. Charger Status Indicators

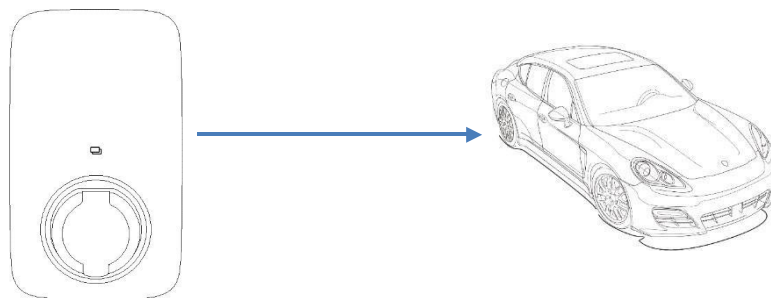
LED Indicator description	Definition
Green Flashing	Device available
Blue Steady	EV connected, User not authorized
Blue Flashing	Authorized, Wait for charging
Blue marquee light	Charging
Blue Flashing	Charging suspension
Green Steady	Charging Finish, Wait for unplug
Yellow Steady	Charging Locking
Red Steady	Device Fault

8.2. Charging mode and Operation

Users can set three charging modes through the charging mode setting interface of the APP: controlled, locked, plug and charge.

A. Plug and charge mode

Charging will start automatically after EV plugged in. If you want to stop the charging, just press the stop button on the side of the charger.

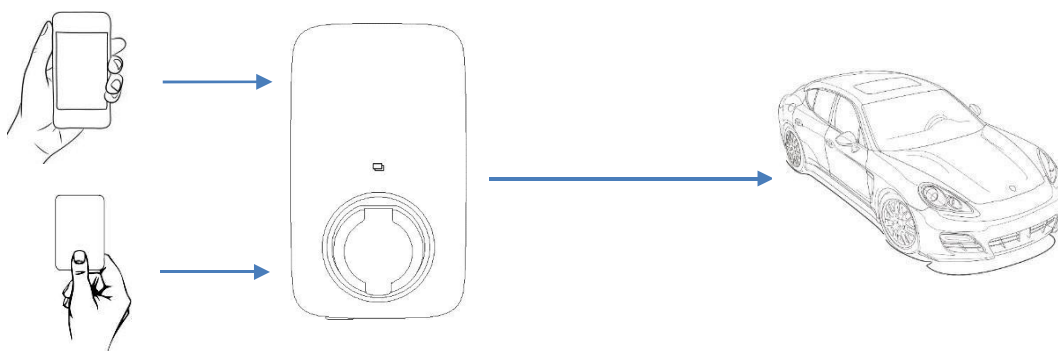


- **Start Charging:**
 1. Set the charger to the Plug and Charge mode
 2. Insert the charging plug into the EV
 3. Charging session started
- **Stop Charging:**

Press the stop button on the side of the charger

B. The controlled mode

Initiate or cease charging by using APP or by swiping RFID card on this mode. You can also use APP for Reservations.



The controlled mode with RFID card

- **Start Charging:**
 1. Set the charger to the Controlled mode
 2. Insert the charging plug into the EV
 3. Swipe card
 4. Waiting for authorizing

5. Charging session started

- **Stop Charging:**

1. Swipe card
2. Charging session end

The controlled mode with APP

- **Start Charging:**

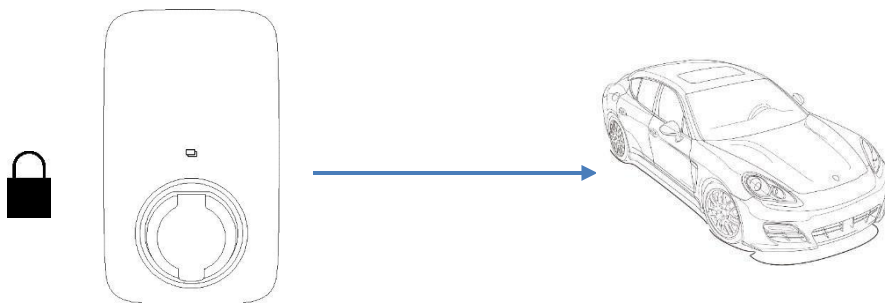
1. Set the charger to the Controlled mode
2. Insert the charging plug into the EV
3. Click to Start the Charge on the APP
4. Waiting for authorizing
5. Charging session started

- **Stop Charging:**

1. Click to Stop the Charge on the APP
2. Charging session end

C. The locked mode

On this mode, the charger is locked and cannot be used.



9.Maintenance

Troubleshoot by Alarm information on APP or LCD display

If fault occurs, users can check the fault information on the APP or by blinks of the LED indicator light.

No.	Fault code on app	Solution
1	Electronic lock fault	Set the electronic lock status to the correct position. Or seek help from us.
2	Emergency stop fault	Reset the emergency stop button. Or seek help from us.
3	Abnormal CP voltage	seek help from us.
4	Abnormal AC output contactor	seek help from us.
5	Over current	Reduce output current. Or seek help from us.
6	Over voltage	Wait for the grid voltage to return to normal. Or seek help from us.
7	Undervoltage	Wait for the grid voltage to return to normal. Or seek help from us.
8	Electric leakage	seek help from us.
9	Reverse connection of lin N	Correctly connect P and N lines. Or seek help from us.
10	Abnormal frequency	Wait for the grid frequency to return to normal. Or seek help from us.
11	Over temperature of charging interface	Wait for the temperature of charging interface to return to normal. Or seek help from us.

10.Decommissioning

10.1 Dismantling the charger

- Disconnect the charger from AC Input and AC output.
- Disconnect communication and optional connection wirings. Remove the charger from the bracket.
- Remove the bracket if necessary.

10.2 Packaging

If possible, please pack the charger with the original packaging. If it is no longer available, you can also use an equivalent box that meets the following requirements.

- Suitable for loads more than 30 kg
- Contains a handle
- Can be fully closed

10.3 Storage and Transportation

Store the charger in dry place where ambient temperatures are always between -40°C - $+70^{\circ}\text{C}$. Take care of the charger during the storage and transportation; keep less than 4 cartons in one stack. When the charger or other related components need to be disposed of, please ensure it is carried out according to local waste handling regulations. Please be sure to deliver any charger that needs to be disposed from sites that are appropriate for the disposal in accordance with local regulations.