

# USER MANUAL & INSTALLATION MANUAL

ARTEMIS EN 7KW & 11KW AC CHARGER

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Symbols	Meaning
4	<b>"Warning", which indicates a hazard.</b> Pay attention to personal injuries or death caused by operation steps, practice or incorrect implementation. The operation after the "warning" sign can only be performed when the conditions are fully understood and satisfied.
!	<ul> <li>"Caution", which indicates a hazard.</li> <li>Pay attention to the damaged or destroyed product caused by the operation steps, experiments or incorrect execution.</li> <li>Only after fully understanding and satisfying the indicated conditions, the operation after the "caution" mark can be performed</li> </ul>
<u>!</u>	"Hint", which indicates skill or useful information. Skills and useful information are marked as "Hint". It does not contain information that warns of dangerous or harmful features.
	<ul> <li>"Garbage disposal", which indicates electrical and electronic waste.</li> <li>This symbol is located on the product, in the instruction manual or on the packaging, indicating that the electrical and electronic equipment and its Materials can be reused based on their markings.</li> <li>By reusing old equipment materials and other forms of reuse, you can make a significant contribution to the environment</li> </ul>
	<b>"Grounding", which indicates ground protection</b> The charger has the function of grounding protection. Once the ground fails or there is no grounding, the charger will report the fault and stop charging.
	<b>"User manual", which indicates using instruction</b> Users can scan a QR code using the APP to view the user manual.

## 1. SAFETY INSTRUCTIONS

## **1.1 Safety precautions**



#### Warning: Electric shock hazard

- Before using the equipment, please carefully read the attached documents carefully and familiarize yourself with all safety instructions and regulations;
- This product is designed and tested in accordance with international standards;
- This product can only be limited to its design purpose;
- This product is AC charger that can charge electric powered vehicles (for example, an electric car) in indoor and outdoor areas.
- The installation, maintenance and repair of this product may only be performed by a trained electrician;
- Improper installation or maintenance may be dangerous to users of this product;
- Any installation and maintenance operations must be carried out under the condition of power failure;
- All parts of the product cannot be repaired by the user. Do not attempt to repair the charger yourself;
- Do not install this product in potentially explosive environments, areas with high electromagnetic radiation and areas susceptible to flooding;
- Ensure that this product is used only under proper operating conditions;
- Before storing or transporting this product, make sure that the main power supply has been disconnected;
- Do not use adapters or converting adapters;
- Do not use cable extension kits;
- Make sure the power cord connected to the charger is routed from the dedicated Type A RCBO or MCB+ Type A RCD in the distribution box. The Type A RCBO or MCB+ Type A RCD must match the capacity of the charging cable used.
- Equipment for locations with non-restricted access.

The installer must always ensure that the installation of the charger complies with local regulations.

Star Charge is not responsible for any damage that occurs if this product is shipped in packaging that is different from when the product was originally supplied. Please store this product in a dry environment, the storage temperature must be between -40°C and +85°C.

## 1.2 Disposing

- Please divide different materials into recyclable materials, general waste and special waste before handling;
- Please abide by local laws and regulations and relevant provisions when recycling or handling products, individual components and packages;
- The disposed products with WEEE logos must be delivered to a place in which electrical and electronic devices are separately collected.

## **1.3 Disclaimers**

- This document is provided for reference only and does not constitute a binding offer to Star Charge.
- Star Charge provides the latest document as accurate as possible; and makes no express or implied guarantee for its content and the completeness, accuracy, reliability or applicability of products and services provided therein. Specifications and performance data are subject to change without prior notice.
- Star Charge shall assume no liability for direct or indirect (including loss of profits) losses incurred by any error or omission in this Manual. All obligations of Star Charge are stated in the relevant contract agreements. Star Charge reserves the right to change this document at any time.
- Please contact Star Charge to know the latest information and specifications before ordering.

Star Charge is committed to manufacturing high-quality products. This product has completely passed the CE certification and meets the requirements of RED Directive 2014/53/EU and Low Voltage Directive 2014/35/EU. You can find more details r by consulting your dealer or service provider.



## 2. PRODUCT PARAMETERS

- It is suitable for all vehicles that meet IEC 62196-2 standards
- The output power is adjustable
- · Charging by scanning the charging QR code or swiping the RFID card
- The charger supports the OCPP1.6J communication protocol, that is, the charger can be connected to the data service platform and management platform (cloud platform) of OCPP1.6J
- The charger can be normally used in indoor and outdoor environments with protection levels of IP55 and IK10
- The device has the following protection functions:
- Lightning protection
- Over-load protection
- Residual current protection
- Over-temperature protection
- Grounding protection
- Over-voltage protection
- Under-voltage protection

## 2.1 Technical specifications

#### 2.1.1 Product parameters

Model	AC0070EN02525
	AC0110EN02525
Dimensions (H x L x W)	280 mm×280 mm×148 mm
Weight	About 4.0kg
Installation method	Wall mount/pole mount(Optional)
Certification	The device has passed the CE certification and meets the requirements of RED Directive 2014/53/EU and Low Voltage Directive 2014/35/EU and the following standards:
	IEC 61851-1:2019
	IEC 61851-21-2:2018
	EN 300 328 V2.2.2
	EN 300 330 V2.1.1
	EN 301 908-1 V13.1.1
	EN 301 908-2 V13.1.1
	EN 301 908-13 V13.1.1
	EN 301 511 V12.5.1
	EN 301 489-1 V2.2.3
	EN 301 489-3 V2.1.1
	EN 301 489-17 V3.2.4
	EN 301 489-52 V1.1.0
	EN 50665:2017 & EN 62311:2008/IEC62955-2018

## 2.1.2 Working environment

Operating ambient temperature	-30°C~ +50°C
Relative humidity	5%-95% (No condensation)
Altitude	≤3000m
Electrical safety level	1
Overvoltage Category	OVC III
Protection level	IP55
Anti-collision level	IK10

Attention: If the temperature is out of the maximum allowable value, the charger will automatically activate over-temperature protection (OTP) measures.

#### 2.1.3 Input parameters

Recommended cable for input terminal	Copper wire cable, 7kW with a wire gauge of 6mm <sup>2</sup> and 11kW with a wire gauge of 2.5mm <sup>2</sup>
	It is recommended that adapter terminals are crimped on the power cable conductor
Rated input voltage	230/400Vac (+/- 10%)
Limitation of input power	7kW: Single-phase input: with the maximum value of 32A per phase.
	11kW:Three-phase input: with the maximum value of 16A per phase.
Operating frequency	50/60 Hz
Grounding system	TN system
	TT system
	IT system

Parent device protection	The electrical protection devices and wire gauges used must comply with requirements of local codes and limitations of electrical installations. In particular, the selected protective device must not only meet the requirements of IEC 61851-1 ed 3.0
	The parent RCBO, MCB and RCD must match the capacity of charging cable:
	MCB: curve C, with a margin of about 25% reserved for the rated current value;
	RCD: Type A, with an operating current value of rated residual current of 30mA
	RCBO: It has the same performance as MCB+RCD.
	For high outdoor lightning activity levels, it is recommended to equip each charger with a lightning arrester.

## 2.1.4 Output parameters of chargers/connection method to electric vehicles

Connection method to vehicles	Type 2 connector, which meets the standard IEC62196-2
Output voltage	230/400Vac (+/- 10%)
Maximum charging current	7kW: single-phase output: with the maximum value of 32A per phase. 11kW: three-phase output: with the maximum value of 16A per phase.
Maximum output power	7/11kW
Stand-by power consumption	AC0070EN025XX/AC0110EN025XX: Less than 3.6W AC0070EN026XX/AC0110EN026XX: Less than 2.6W

#### 2.1.5 Protection functions and safety integrated components

Residual current protection	DC leakage current detection: 6mA (has complied with IEC62955:2018 certification).	
Power switch relay	Integrated in the hardware circuit, linked on and off.	
Over-current protection	The current reaches 110%-125% of the rated current, and the circuit is disconnected for 5s.	
	Disconnect the circuit as soon as the current is greater than 125% of the rated current.	
Over/Under-voltage protection	Over-voltage protection: 275Vac	
	Under-voltage protection: 150Vac	

Attention: Install it in accordance with the standards and regulations of the region where the equipment is located. These tables are made based on the actual operation of the charging site, provided all prerequisites are met.

#### 2.1.6 Charging and access

Card reader	ISO/IEC 14443A&MIFARE Classic	
	ISO/IEC 14443B, ISO/IEC 18003-3	
	ISO/IEC 18092, ISO/IEC 15693	
Network communication	Cellular Network/ Ethernet/ Wi-Fi/ Bluetooth5.0	
Communication protocol	OCPP 1.6(JSON)	

## 2.1.7 Network communications

## 4G module

ME3630	A1C
--------	-----

E-GSM900	880~915	925~960
DCS 1800	1710~1785	1805~1880
WCDMA Band I	1920~1980	2110~2170
WCDMA Band VIII	880~915	925~960
LTE B1	1920~1980	2110~2170
LTE B3	1710~1785	1805~1880
LTE B7	2500~2570	2620~2690
LTE B8	880~915	925~960
LTE B28	703~749	758~803
LTE B40	2300~2400	2300~2400

## RFID:13.56Hz

EIRP	ME3630 A1C	
	GPRS 900	33.32
	DCS 1800	29.54
	WCDMA Band I	21.56
	WCDMA Band	22.61
	LTE B1	23.00
	LTE B3	21.80
	LTE B7	23.60
	LTE B8	23.90
	LTE B28	23.90
	LTE B40	23.00

## RFID: far less than 20mW

## Wi-Fi module

Standard	2.4G: IEEE802.11 b/g/n radio
	5G: IEEE802.11 a/n/ac radio
Frequency	WLAN: 2.4G: 2412~2484MHz 5G: 5470~5725MHz,5725~5850 MHz,
Transmit power	18dBm (Maximum)
	12dBm (Minimum)
Profiles	WIFI-AP (access point), WIFI-Station

#### Notice: The following frequencies have usage restrictions

5470~5725MHz: Indoor and outdoor installations are not allowed on road vehicles, trains and aircraft as well as unmanned aerial systems

#### Bluetooth module

Standard	Bluetooth 5.0
Frequency range	2402~2480MHz
Output power	+10dBm

#### 2.1.8 Output power adjustment

Support output power adjustable (Maximum output current set by rotary switch, single-phase 6A-32A,three-phase 6-16A).

	ROTA	ROTARY SWITCH								
POWER RATE	0	1	2	3	4	5	6	7	8	9
7kW	32	6	8	10	13	16	20	25	32	32
11kW	16	6	8	10	13	16	16	16	16	16

## 2.2 Introduction of appearance

#### 2.2.1 Wall-mounted





- a. Cable winding trough
- b. Emergency stop: press the button to stop the device when the device is working abnormally
- c. RFID card swiping area
- d. LED status indicator
- e. Charging connector unlocking button
- f. Position of charging connector
- g. Scan charging QR code

When charger is not used, the charging cable should be rolled up and put back into the cable winding through in position [A] as indicated in figure 2, and the charging connector should be inserted into the designated position [F] for safe storage.

#### 2.2.2 Pole-mounted



Figure 3: Artemis - pole-mounted

- a. Cable winding trough
- b. Emergency stop: press the button to stop the device when the device is working abnormally
- c. RFID card swiping area
- d. LED status indicator
- e. Charging connector unlocking button
- f. Position of charging connector
- g. Scan charging QR code
- h. Mounting Pole

When charger is not used, the charging cable should be rolled up and put back into the cable winding through in position [A] as indicated in figure 3, and the charging connector should be inserted into the designated position [F] for safe storage.



According to the provisions of EN 17186:2019, this label has been added to the charging connector head for easy identification by consumers.

## 2.5 LED status indicators

Artemis chargers are equipped with different LED colors to represent various working states.

Lighting effect		Meaning	Subsequent operation			
	Green color is flashing (cycle by 4 seconds)	The charger is in standby state without failure	Correctly connect the charging connector to the vehicle end (swap RFID to charge)			
_			Correctly connect the charging connector to the vehicle end and Start charging (plug and play )			
	Blue color is always on	The charging cable is connected	Start charging by swiping the RFID card			
	The blue color is flashing quickly (cycle by 0.125 seconds)	RFID card reading	Wait for authentication to complete			
-	The blue color is breathing	Charging in progress	The vehicle is being charged			
	The blue color is flashing slowly (cycle by 0.5 seconds)	The vehicle suspends/the terminal suspends (Suspend EV and suspend EVSE)	Check the vehicle screen for failure: If any failure is found, replace the charger to charge; if the failure is still displayed, please consult the vehicle dealer If not, the grid side has limited			
	Red color is	CP fault/Electric	charging			
	always on	meter failure				
_	The red color is cycle flashing (1 times)	The emergency stop is pressed	Remove the faults according to the troubleshooting measures in			
	The red color is flashing (2 times)	Ground fault	if the problem cannot be removed, please contact your dealer or service provider			
	The red color is flashing (3 times)	Under-voltage				

	The red color is flashing (4 times)	Over-voltage			
_	The red color is flashing (5 times)	Adhesion of relay			
	The red color is flashing (6 times)	Over- temperature	Remove the faults according to the troubleshooting measures in the "Troubleshooting" section;		
	The red color is flashing (7 times)	Leakage fault	if the problem cannot be removed, please contact your dealer or service provider		
	The red color is flashing (10 times)	Over-current			
	The red color is flashing continuously	No configuration ID			
-	White color is normally on	Start up	Wait for the charger standby		
	Yellow color is always on	The OCPP is not started and the connector is not inserted	Wait for the OCDD standby		
	The yellow color is flashing	The OCPP is not started and the connector is inserted	wait for the OCPP standby		

## 3. INSTALLATION INSTRUCTIONS

## 3.1 Safety

#### 3.1.1 General rules of safety

- Please follow the instructions in this chapter, and familiarize yourself with all safety instructions and regulations.
- The installer must always ensure that the installation of the charger complies with local regulations.



Warning: Prevent incorrect operation steps, practices or execution that may cause personal injury or death.

#### 3.1.2 Electrical safety

- The installation, maintenance and repair of this product may only be performed by a trained electrician;
- · Improper installation or maintenance may be dangerous to users of this product;
- Any installation and maintenance operations must be carried out under the condition of power failure;
- All parts of the product cannot be repaired by the user. Do not attempt to repair the charger yourself;
- Do not install this product in potentially explosive environments, areas with high electromagnetic radiation and areas susceptible to flooding;
- Before installing this product, make sure that the main power supply has been disconnected;
- Do not use adapters or converting adapters;
- Do not use cable extension kits;
- Make sure that the power cable connected to the charger is le d out from the special Type A RCBO or MCB+ Type A RCD in the distribution box. The Type A RCBO or MCB+ Type A RCD must match the capacity of the charging cable used.
- Where underground cable is to be installed for reticulation of electricity supply from | the main intake switchboard to individual chargers in public area, care shall be taken to prevent possible damage to existing underground cables or services.
- The electricity transmission licensee shall be consulted prior to the commencement of any earthworks (for the purpose of installing structure, cables, earthing system, etc.) to prevent damage to any underground electricity cables under the management of the electricity transmission licensee.

#### 3.1.3 Requirements for installation personnel

Only authorized technicians can install and maintain the product, and also they should possess the following qualifications:

- Understand and follow the safety instructions and sections related to product installation in this Manual;
- Understand and abide by governing local, national and international laws and regulations;
- Be able to identify the possible hazards of the product and to take necessary measures to protect personal and property safety.
- EVCS's owner or operator who has been trained, certified and has sufficient knowledge of TR 25 and relevant standards and requirements for the safe operation of the EVCS

#### 3.1.4 Safety protection measures

- Protective measures (PPE): Please wear personal protective equipment (PPE) when conducting installation work.
- Please wear insulating gloves when installing wires and electrical components to avoid damage arising from electrostatic discharge;
- Please wear the anti-static safety shoes of Level S3;
- Please wear goggles while drilling a hole to prevent dust or other particles from getting into eyes;
- Please wear safety earmuffs while drilling a hole to protect ears from noise.

## 3.2 Preparation for installation

#### 3.2.1 Installation tools

No.	Category	Name	Use	Picture
1	Cable processing	Electrician's knife	Stripping of insulating layers	area a
2	Cable processing	Stripping pliers	Stripping of insulating layers	
3	Cable processing	Crimping pliers	Terminal crimping	
4	Network cable processing	Network cable pliers	Pressing of network cable joints	
5	Installation tools	Percussion bit	Drilling	·····•

6	Installation tools	Open-end wrench (full set)	Installation and removal of nuts	
7	Installation tools	Cross screwdriver (PH2,PH3)	Installation and removal of screws	
8	Installation tools	Slotted screwdriver (SL2)	Installation and removal of screws	·
9	Installation tools	Inner hexagon socket screwdriver (full set)	Installation and removal of screws	
10	Installation tools	Electric torque screwdriver (with full set of cross screw bit, hexagon screw bit and slotted screw bit)	Installation and removal of screws	
11	Installation tools	Manual torque screwdriver (with full set of cross screw bit, hexagon screw bit and slotted screw bit)	Installation and removal of screws	
12	Installation tools	Torque monkey wrench	Installation and removal of nuts	3-0
13	Installation tools	Hammer	Knock	
14	Measuring devices	Level	Levelness measurement	and
15	Measuring devices	Tape measure	Distance measurement	
16	Marking tools	Pencil	Marking	

#### 3.2.2 Installation environment

The environmental conditions listed in the following table should be met while selecting a installation site for the product.

Environmental condition	Suggested range
Ambient temperature	-30°C ~+50°C
Altitude	≤3000m
Moisture	5%~95%RH, no condensation inside the product;
Degree of dust	≤1mg/m³
Corrosive substances	No pollutants, such as salt, acid, smoke, etc.
Vibration	≤1.5mm/s
Insects, pests, vermins, termites	None
Mould	None
Damp	Rain prevention
Fire resistance	No flammable substances on the top and bottom of cabinet

#### 3.2.3 Power supply requirements

#### 3.2.3.1 Power supply requirements of product

Rated input voltage: 230/400Vac (+/-10%);

- Operating frequency of the system: 50/60Hz;
- Limitation of input power: 7 kW: Single-phase input; maximum: 32A per phase; 11kW: Three-phase input; maximum: 16A per phase;
- The power inlet cable is recommended for input terminal:

7 kW: copper core cables with a wire gauge of 3\*6mm2 can be selected

11kW: copper core cables with a wire gauge of 5\*2.5mm2 can be selected.

A flexible wire shall be used for wall mount type, and the flexible wire should be crimped to the terminal.

• Recommended supply Type A RCBO or MCB+ Type A RCD for charger:

7kW: Ue=230V, In=40A, 2P.

11kW: Ue=400V, In=20A, 4P.

## 3.2.3.2 Grounding system

- TN system
- TT system
- IT system
- 3.2.3.3 Electrical system diagram

Diagram of electrical system of product (7kW):



Figure 6: 7kW electrical system

Diagram of electrical system of product (11kW):



Figure 7: 11kW electrical system 22 | User Manual & Installation Manual

## 3.2.3.4 List of cables

## List of cables for wall mount:

Cable Name	Model	Remarks
Inlet power cable	7kW: 3 x 6mm <sup>2</sup> copper core cable (outer diameter of 13-18mm) 11kW: 5 x 2.5mm <sup>2</sup> copper core cable (outer diameter of 13-18mm)	It is recommended to use a flexible cables, If the incoming line is 6mm <sup>2</sup> Flexible wire, KST E6012 pin type terminal or equivalent terminal is recommended; If the incoming line is 10mm <sup>2</sup> Flexible wire, KST E10-12 pin type terminal or equivalent terminal is recommended
Network cable	CAT5	Use only when Ethernet communication is required

## 3.3 Installation steps

## 3.3.1 Unpacking and unpacking inspection

## 3.3.1.1 Product packing list

No.	Equipment	Quantity	Content
1	Charger	1	Positioning cardboard x 1 Key x 1
	Mounting	1	M6 x 50 self-tapping screw x 5 (1 for standby) No 8 x 40 plastic expansion solenoid x 5 (1 for standby)
	RFID card (Only for RFID version)	2	
	Accompanying documents	1	Factory report x 1 Certificate x 1
2	Pole (optional)	1	Pedestal*1 M6*16 Cross screw*7(1 for standby) M4*12Torx screw*3 (1 for standby) M3*10Torx screw*3 (1 for standby) M10*120Expansion screw*4 Mounting Accessory 1*1 Mounting Accessory 2*1 Cable cover*1 Trim cover*2

#### 3.3.1.2 Unpacking inspection

- 1. Check the packing list number and equipment quantity.
- 2. Check the information on the nameplate of equipment.
- 3. Check whether the accompanying documents are complete.
- 4. Check whether accessories are complete.
- 5. Check whether the equipment has good appearance and whether it is deformed, bumped or stained.

#### 3.3.2 Installation

#### 3.3.2.1 Wall-mounted charger

The general assembly drawing is shown in Fig. 8.



Fig. 8 General assembly drawing of wall-mounted charger

## Installation

1. Please confirm and mark the installation position of the charging pole. The central position of the charging pole should be at least 0.8 m above the ground, as shown in Fig. 9.



Fig. 9 Wall mounting height

2. Use a No8 drill bit for the wall hole 40mm deep, into 4 No8 x 60 expansion tubes, first put the top two expansion tubes into self-tapping screws (note: the top two self-tapping screws flange end distance is reserved about 6mm distance from the wall, can be used to open the key auxiliary calibration distance). as shown in Fig. 10 and Fig. 11.



Figure 10: Mark mounting hole



Figure 11: installing expansion screws

3. Use the key to open the decorative cover of the pole, hang the pole on the top two extended screws, and insert the two self-tapping screws at the bottom through the front screw mounting hole of the pole to clamp the pole, as shown in Fig. 12.



Figure 12: Installing the wall box

4. If cable has flexible conductors, it is recommended to use ferrules on stranded wires. Use correct tools to press them. Connection mode of 7kW and 11kW is as shown in Fig. 13.





Figure 13: Wire stripping

Different wiring modes of 11kW inlet lines are shown in the following Fig. 16 to Fig. 17

TN 1-phase (230V)



Figure 14: TN 1-phase

IT/TT 1-phase (230V)



Figure 15: IT/TT 1-phase

Different wiring modes of 11kW inlet lines are shown in the following Fig. 16 to Fig. 17



Figure 16: TN/TT 3-phase

IT/TT 1-phase (230V)



Figure 17: IT/TT 3-phase



Before attaching the charger, pull each wire to double check that they are connected properly.



It is recommended to follow the existing color codes used in the installation. Depending on national standards, the colors of the cables can vary from the illustrations. The illustrations in this manual follow the IEC 60446 standard.



Before turning on the power, make sure the wires are properly connected and tightened. Test this by pulling on each wire.

**Notice:** when the incoming cable is affected by the surge or wrong wiring sequence, the device will out of power for protection. Searching the support from the professional for the wiring sequence checking or other abnormal interference. Power on after the above checking is finished.

5. Insert the network cable into the Ethernet cable port and install the SIM card, as shown in Fig. 18 and Fig. 19.



Figure 18: 7kW Ethernet cable



Figure 19: 11kW Ethernet cable

Note: You can adjust the power of the charger by adjusting the rotary switch, as shown in the table below.

	Rotary	Rotary Switch								
Power rate	0	1	2	3	4	5	6	7	8	9
7kW	32	6	8	10	13	16	20	25	32	32
11kW	16	6	8	10	13	16	16	16	16	16

Check that the sealing rubber strip of the wiring bin is properly installed, reinstall the charging connector holder, tighten the screws, cover the decorative cover, and insert the charging connector into the connector holder, as shown in Fig. 20.



Figure 20: Finishing the installation

## 3.3.2.3 Installation guide for Pole

The general assembly drawing is shown in Fig. 21.



Figure 21: Pole-mounted assembly drawing

Tool list: Percussion drill, Cross Screwdriver, Tool hammer, Adjustable wrench, A set of Torx screwdriver with pillar core.

## Step 1: Install the Charging cable

Before installing the pole, remove the trim cover and cable cover, and place the pole flat on the ground, put the Charging cable through the cable inlet hole and the cable outlet hole, as shown in Fig. 22.



Figure 22: Pole threading

## Step 2: Install the pole

Fix the pole to the ground using M10 x 120 expansion screws, and tighten the grounding nut M6, as shown in Fig. 23.



Figure 23: Install the pole

#### Step 3:Install the charger

Remove the decorative cover of the charger with the key, hang the charger on the screws above the pole, and then drive two screws from the front to fix the charger, as shown in Fig. 24.



Figure 24: Install the charger

#### Step 4: Wire

Remove the screws of the charging connector holder and dismantle the charging connector holder, then wire in the wiring window, as shown in Fig. 25.



Figure 25: Wiring

## Step 5: Complete the installation

Replace the charging connector holder and decorative cover, then insert the charging connector into the holder. Finally, replace the cable cover and trim cover, check after installation, as shown in Fig. 26.



Figure 26: Complete the installation

## 3.4 Inspection after installation

#### 3.4.1 Sitting clearance after mounting

- 1. Handle all shipping and packaging materials in accordance with local laws and regulations;
- 2. Remove the rubbish and debris around the charger. Do not leave tools on site or in the charger;
- 3. Clean the charger with an anti-static cloth and remove the dust on the surface.

#### 3.4.2 Inspection

- 1. Check whether the base is secure and sealed.
- 2. Check whether the parts inside the device are fixed reliably.
- 3. Use a multimeter to check whether the electrical connection and wiring are correct, complete and secure.
- 4. Check whether the protection level of device meets the requirements, especially the cable inlet at the bottom of charger.
- 5. Check the appearance, marking, completeness and cleanliness.

## 4. COMMISSIONING INSTRUCTIONS

## 4.1 Checks before switching on

- Measure the insulation resistance (IR), this needs to be >1M $\Omega$ .
- Check if all screws and connections are securely fastened.
- Check if all phase wires are properly connected.
- Check if the data cables are properly wired.
- Measure if the voltage on the applied RCBO or MCB+ Type A RCD is within 10% of 230V between the phase(s) and neutral, before turning on the protection device of the charger.

#### 4.2 Switching on the charger

• Switching on the power to the circuit on which the charger is installed, the charger starts up and the LED will light green (flash with cycle time 4s).

#### 4.3 Network connection method

There are three network connection methods for charger (Data traffic, Wi-Fi and Ethernet), and you can choose any one.

**Note:** If Ethernet communication is required, it is necessary to connect the network cable. If the network cable is not connected during installation, it is recommended to configure the charger by APP configuration method.

#### 4.4 Configuration of charger

#### 4.4.1 APP configuration

Need to download the IOS version APP in the Apple App Store, and download the Android version APP in the Google Play. The icon of the APP is shown in the figure below.



#### 4.4.1.1 APP account login

Go to the home page of the APP, click the "Mine" button in the bottom navigation menu, or click the "Bind" button to open the login page. Log in or register as a new user.

	Frank a	·····································	79122	75%
	English -	<	Password Setting	
<b>\$</b>				
Sign in		958069247@qq.com		
		112543	reser	d after 26s
Email		New passo		
Paisword	~	Repeat password		
	Login	_		_
Register	Forget Password?			
		Password a least a cap	t least 8 characters, including Ital letter), a number(0-8) and symbol	a latter (at La specific
Have read and egree to Star Darge Terms and Conditions and Star Charge User Prince Peter.		Have read and agree with "Bar Charge Terms and Conditions" and "Bar Charge Lever Privacy Parky"		

## 4.4.1.2 Modifying the PIN code

"My Equipment" page, click "More", could change the PIN code of the charger. After changing the PIN code, if you remove the Binding, re-bind the charger needs to use the new PIN code.



Note: Please change the pin code after the first use, otherwise there will be a risk of user information disclosure.
#### 4.4.1.3 Reboot

Click the "Reboot" button, could reboot the charger. If reboot during charging process, the charging order will be stopped. (After you configure and save the parameter, then reboot charger, the parameter will not return back to default.)



## 4.4.1.4 Configuration information

Click "Configuration Delivery" to configure

743-51 0.0K/s \$ @ @ Cale Cal	<b>₽</b> 2%
< My Equipment	
Basic Information	elivery
СРЮ	
OCPP Configuration	
4G Configuration	
Get Version	
Charging Status	
Ethernet Configuration	
Wifi Configuration	
DHCPD Configuration	
DNS Configuration	
Network Priority Selection	
View	
192 (1)	

#### 4.4.1.5 CPID

- 1. Fill in the CPID in "CPID"
- 2. Fill in the group number in "GroupNumber"
- 3. Fill in the evse id in "Evseld"
- 4. Click "Configuration Delivery" to confirm

	CPID		
PID		schneider_zh	
GroupNumber		0 (0-10 Cligits)	
vseld		(0-5 Olghs)	
Cont	icuration De	in and	

#### 4.4.1.6 OCPP configuration

- 1. Fill in the IP address or platform domain name in "IP or Domain Name"
- 2. "SSL\_Enable" is "Enable" for TLS access of platform, and it is "Disable" for non-TLS access
- 3. Fill in the platform port number in "Port"
- 4. Fill in the path after the IP address in "Path"
- 5. Only fill in "Authorization key" platform if basic authentication is being used by the platform (keep clear if not)
- 6. Click "Configuration Delivery" to confirm



# 4.4.1.7 4G configuration

- 1. Click "Enable modification"
- 2. Depending on use case, set APN, User, Psw, Pin
- 3. The setting of APN depends on the SIM card of the user. The user, password and pin options are usually blank
- 4. Click "Configuration Delivery" to confirm

Enable Modification	
APN .	Please Enter
lser	Please Enter
Psw	Please Enter
Nin	Please Enter

## 4.4.1.8 Get version

View the version in this interface



# 4.4.1.9 Charging status

View the charging status in this interface

Charging Stat	US
etwork State	
nk Status	Running
trength of 4G(CSQ)	22
etwork Card	EthO
tate of OCPP	
ackground Connection	Connected
Only READ, cannot edit	

#### 4.4.1.10 Ethernet configuration

- 1. Find "Ethernet configuration"
- 2. Click "Enable modification"
- 3. Click "Dhcpc enable" to automatically obtain the IP address; if it is necessary to fix the IP, do not click "Dhcpc enable" to enter the IP address
- 4. Click "Configuration Delivery" to confirm

letwork State	
ink Status	Running
trength of 4G(CSQ)	22
letwork Card	EthO
tate of OCPP	
ackground Connection	Connected

# 4.4.1.11 DHCPD configuration

- 1. Click "Dhcpd Enable"
- 2. Fill in the start address in "Start Address"
- 3. Fill in the terminate address in "Terminate Address"
- 4. Fill in the net mask in "Netmask"
- 5. Fill in the gateway in "Gateway"
- 6. Fill in the DNS1 in "DNS1"
- 7. Fill in the DNS2 in "DNS2"
- 8. Click "Configuration Delivery" to confirm

Dhond Erubia	
ert Address	192.168.1.200
nninate Address	192.168.1.250
tmask	255.255.255.0
teway	192.168.1.136
151	6.8.8.8
152	114.114.114.114
Configuration	Delivery

# 4.4.1.12 DNS configuration

- 1. Click "Enable Modification"
- 2. Fill in the DNS1 in "DNS1"
- 3. Fill in the DNS2 in "DNS2"
- 4. Click "Configuration Delivery" to confirm

DNS Configurat	ion
Enable Modification	
DNS1	0.0.0.0
DNS2	0.0.0.0
	very
	20

#### 4.4.1.13 Network priority configuration

- 1. Click "Enable modification"
- 2. Set the priority, Ethernet>4G>Wi-Fi by default
- 3. Click "Configuration Delivery" to confirm



#### 4.4.1.14 Function configuration

- 1. Start stop card": This is the local start and stop card that allows the charger to be used without being connected to the platform
- 2. "Billing card": This is the authentication card that the charger needs to be connected to the platform, and the UID of RFID card needs to be entered into the platform before swiping card for use
- 3. "Local pnc": Plug and Play
- 4. Click "Configuration Delivery" to confirm



#### 4.4.1.15 Time zone configuration

- 1. Click "Enable modification"
- 2. Select your Time Zone
- 3. Click "Configuration Delivery" to confirm



# 4.4.1.16 Charging parameter configuration

- 1. Edit "Current01(A)"
- 2. Click "Configuration Delivery" to confirm

269
165
32
85
nput only 0 6-32]

### 4.4.2 Web configuration of connecting network cable

#### 4.4.2.1 Login into web configuration

Via Ethernet cable (A laptop with a network port and an Ethernet cable needed)

- a. First, please refer to the product instructions to correctly connect the power supply.
- b. Once you've connected the cable, click the Network icon in the bottom right corner of your Windows desktop, and then click "Network".
- c. Then click "Network".
- d. Click "edit".
- e. Change the IP Settings to manual.
- f. Set the IP address to 192.168.88.6, Subnet Prefix Length to 24, gateway to 192.168.88.206 as following screenshot shows. The default subnet mask is 255.255.255.0 not need to set it, then save.
- g. Using Chrome browser and visit http://192.168.88.206.
- h. After launching, put in user name "xxcd" and password "28912891".
- i. If you cannot access the web page, it must be the IP address in the previous step is not set correctly or the network cable is not plugged in properly. Please check it.

臣	网络 No Internet 1	Settings	
L	· · · · · · · · · · · · · · · · · · ·	ŵ Home	Ethernet
°.	WBwifi-4F Connected, secured	Find a setting	日 网络
	Properties	Network & Internet	No Internet
	Disconnect		<b></b>
°	Aurora	😕 Status	Related settings
°/	Artemis_Server	₫ Wi-Fi	Change adapter options
9/2	Aurora Nat	😰 Ethernet	Change advanced sharing options
11%	Nurtha_Net		Network and Sharing Center
%	HONOR_9X	🛫 Dial-up	Windows Firewall
		ogo VPN	
Net	vork & Internet settings	A submert	Get help
Chan	ge settings, such as making a connection metered.	*9* Airplane mode	Give feedback
M. C.	r∯s 0µ0 Mobile	<sup>စု</sup> ဖို <sup>စွဲ</sup> Mobile hotspot	
WI-FI	Alipane mode hotopot ^ 90 派 대 英 圖 840 厚	Proxy	

#### ☆ 网络

Network profile

#### Public

Your PC is hidden from other devices on the network and can't be used for printer and file sharing.

#### O Private

For a network you trust, such as at home or work. Your PC is discoverable and can be used for printer and file sharing if you set it up. Configure firewall and security settings

#### Metered connection

If you have a limited data plan and want more control over data usage, make this connection a material network, Some apps might work differently to reduce data usage when you're connected to this network.

# Set as metered connection

• 0e

If you set a data limit, Windows will set the metered connection setting for you to help you stay under your limit.

Set a data limit to help control data usage on this network

#### IP settings

IP assignment:	Manual
IPv4 address:	192.168.88.6
IPv4 subnet prefix length:	2.4
IPel gateway:	192.168.88.206
Edit 3	

#### 4.4.2.1 (1)

Manual 4	
Pv4	
Cm On	
P address	
192.168.88.6	
Subnet prefix length	
24	
Cateway	5
192,168.88.206	
Preferred DNS	
Alternate DNS	
Pv6	



4.4.2.1 (2)

#### Use WiFi AP (need a cell phone or laptop. Take cell phones for example)

- a. The Aurora AC wallbox support WiFi. The default work mode of the Aurora AC wallbox is AP. After the wallbox is powered on for 1 minute, connect the hot spot with your mobile phone. The hotspot SSID is Aurora and the password is Wb123456789.
- b. Visit http://192.168.1.136 via your phone's browser.
- c. Then fill in user name "xxcd" and password "28912891" and click "Sign me in".
- d. Now we have successfully entered the configuration page.
- Note: It should be noted that some mobile phones will give priority to using mobile data to connect to the Internet when WiFi is unable to connect to the Internet, so that they can't access the web page, so they can access it normally by turning off mobile data.





4.4.2.1(4)

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		Language - User S	
9	Login	Quick Set	up
	3.0012000	Home / Quick Setup	
	IN NAME OF TAXABLE PARTY.	ChargePoint Id	
	Sur na h	122233	
	Contraction of the	Submit	Refresh
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		36 153 57 202	
		SSL Enable	
		disable	
		Port	
		3400	
		Path	
		/steve/websor	ket/CentralSystemE
	entrep 🛛 🗧 🗮	0 G [•	scarba 🖞 🚊
4.4.2.1(5)		4.4.2.1(6)	)

#### 4.4.2.2 Connect to the network

- a. As shown in the screenshot below, you can change the priority of the networking mode, and the system will connect according to this priority. Do not check this setting if the device uses only one of these methods for networking.
- b. Before you set the networking mode, you need to know which networking mode you want to use first, and then follow the method in the screenshot to set your preferred networking priority. If you want to give priority to WiFi, and you have a SIM card plugged in, if the SIM card has a higher priority, you can't give priority to WiFi.
- c. It should be noted that every time the network connection mode is changed or the network configuration is changed, the charging point system will be restarted and the network connection will be disconnected.

ыр					
Setting	New version of	notwork	Sattings		
Setting 1	New Version on	ietwork	settings		
katus	Network priority se	election			
katus d download	Network priority se	election			
Status Id download	Enable workmode Priority No.1	election 2	Priority No.2	Priority No.3	

4.4.2.2(1)

#### Use SIM card

- a. Insert the SIM card before powering on the device. After entering the web page and setting your networking priorities, check the 4G signal and connection status according to "Status Check".
- b. In some countries or regions, when the 4G card is used for network connection, APN must be set. The APN can be obtained from the local network carrier. The following figure shows how to set APN.
  - i. Click "Software Setting".
  - ii. Choose "Enable modification" in "4G configuration".
  - iii. Fill in corresponding ANP data.
  - iv. Click "Submit".
- c. If no signal is displayed on the 4G card, check whether the 4G card is properly inserted or available. Then restart the device and repeat the preceding procedure.



4.4.2.2(2)

#### Use WiFi STA

- a. WiFi connection has two connection modes, one is the above factory default AP mode and the other is STA mode. In AP mode, charging points are configured with WiFi hotspots connected by other devices, but the charging points cannot be connected to the Internet in this way. In STA mode, charging points are connected to networked hotspots such as routers, which can access the Internet and communicate with OCPP back-end platforms.
- b. Once you've set your networking priorities correctly, make sure the AP band of WiFi you want to connect to is 2.4G band, if not change to it. Then choose one of open, wpa, wpa2 or wep encryption methods.
- c. Click on "Software Setting".
- d. Check "WiFi enable".
- e. Set "Mode selecting" to STA.
- f. Fill in the correct SSID, key and the same encryption method as your WiFi connection.
- g. Click "Submit".
- h. Then refresh the web page to see "Charging status" according to "Status Check".



4.4.2.2(3)

4.4.2.2(4)

#### Use Ethernet cable

- a. After you have successfully set the priority of networking mode, connect the router and charging point with a network cable and check the network connection status according to the "status check".
- b. If the network connection fails, refresh the web page or check the network cable connection and restart the charging point.

#### Change the default WiFi AP mode Settings

- a. If you want to change the default WiFi Settings (which are generally not recommended), you can do this.
- b. Click "Software Setting".
- c. Select "wifi enable".
- d. Select AP mode and fill in the information you want to change, such as hotspot name, password, encryption level, etc. Note that the channel cannot be 0.
- e. Disable DHCPC, fill in the information shown, and click "Submit" next to "gateway".
- f. Enable DHCPD, fill in the DHCPD configuration information as shown in the figure, and click "Submit" next to "DNS2" to complete the AP configuration.
- g. It is once again reminded that after the WiFi AP configuration is modified, the hotspot information of charging point will be changed. If the Settings are incorrect or the configuration is forgotten, WiFi will not be connected to the configuration page. If you can access the configuration page only through WiFi, exercise caution.

				Submit	Refresh	
v						
• 1	Wifi configuration					
	- 101 august 2					
-	Made selection					
	10 v					
	5510	Pre 3	Channel		Encryption	
	Aarora	Wb123456789	1	÷	Sager	*
	C thep: whatte				1	
	le .	netmask A	gateway			
	192,168,1.136	255,255,255,0	192,168.5,136			
				[ ( )		
				Submit	Refresh	
				F		
	DHCPD configuration			<u> </u>		
	6					
	Chipd Balle					
	Start address	Terminate address	Netmask		Gateway	
	Start address 192.146.1.200	Terminate address 192.168.1.250	Netmaak 255.255.255.0		Gateway 192.160.1.136	
	Start address 192.168.1200 DNS1	Terminate address 192.168.1250 DNS2	Netmaak 255.255.255.0 7		Gateway 192.166.1.136	
	Start address     Start address     193,168.1,200     ONS1     8.6.6.3	Terminate address 192,100,1,250 DNSJ 114,114,114,114	7		Gateway 192.168.1.136	
	Churged Photoe     East address     Inst. stat. 200     DNS5     E.6.6.8	Terminate Jodiness 192.168.1250 DNSJ 114.114.114.114	7	(chuit	Gateway 192.168.1.136	
	Carlos moles     Sartadores     ISA. 166.1,200     De65     E.6.6	Terminate Jodiness 192.168.1250 DNS2 114.114.114.114	Netmaak 255.255.255.0 7	Submit	Refresh	

4.4.2.2(5)

#### 4.4.2.3 OCPP connection setting

- a. OCPP is a communication protocol between charge points and back-end platforms. Charge points and platforms of different manufacturers that conform to this protocol can communicate with each other.
- b. The platform can connect multiple charging points to manage charging points, including information viewing, remote upgrade, user authentication, remote control and so on.
- c. If you want to connect to the OCPP platform, your charge point must be able to connect to the network, please refer to title 2, and then refer to the following method to set up the OCPP.

#### Use http/ws

- a. Click "Software Setting".
- b. Fill corresponding OCPP address in "Setting". If website of OCPP back-end platform is no write port, the default HTTP/WS port is 80, and the default HTTPS/WSS port is 43. For example:

http://www.osb-prefytuyu.com:80/miugigyu-ws/ocpp16

URL: osb-prefytuyu.com

Path: /miugigyu-ws/ocpp16

Port: 80

http://36.153.57.202:3400/steve/manager/signin

URL: 36.153.57.202

Path: /steve/manager/signin

Port: 3400

- c. "SSL\_ON" set to 0.
- d. Click "Submit", then check the connection status of OCPP back-end platform by referring to "Status Check". If online is displayed, the connection is successful.

Suick Settup	OCPP Part			
factware Setting	Setting			
offware Setting	URL	Puth		
hanging Status	C			1
rical and download	Port	SSLOW	3	
	Authorization key	2	Submit	Refresh



#### Use https/wss

- a. Click "Software Setting".
- b. Click button "Brows" below "Certificate Import", then choose the CA certificate file.
- c. Click "Submit" next to "Certificate Import".
- d. Fill corresponding OCPP address in "Setting", For example:

https://blog.csdn.net/luo\_boke/article/details/114220450

URL: blog.csdn.net

Path: /luo\_boke/article/details/114220450

Port: 43

- e. "SSL\_ON" set to "1".
- f. Click "Submit".

landware Setting	Setting			
chaara Satting 1	URL	Page 1		
weging Status	- C			
wood and download	Put	SSL, ON	5	
	Authorization key		Submit	Refresh
		4		
	Certificate Import		3	
	<b>E</b>			



## Charge point authentication

- a. For "HTTP Basic authentication, the username is equal to the charge point identity.
- b. Fill in password in "Authentication Key".
- c. Click "Submit".

Guick Setup	Home / Setting / Hardware Setting			
Harbarn Setting 1 Software Setting Charging Status	Identification	Group Number		
Upload and download	Even MCPress submit any changes immediately)	3	3 Sub	mit Refresh

4.4.2.4(1)

#### 4.4.2.5 Status Check

- a. Choose "Charging Status"
- b. arrows 1 refers to whether the network connection is normal.
- c. arrows 2 refers to the current 4G signal status (0-31).
- d. arrows 3 refers to what kind of network is currently used (4G, WiFi, Ethernet).
- e. arrows 4 refers to whether connect to OCPP backend currently.

Quick Setup Hardware Setting	Charging S	tatus				
Software Setting	Home / Disgnosis / Char	rging Status				
Changing Status						
Upload and download	Network sta	te				
	Link status	inim .	Strength of 45(CSQ)	Network card	45 retwork	
		2	3		4	
	State of OCF	pp				_
	Background connection	Online 5				



#### 4.4.2.6 Firmware upload

- a. Click "Upload and download"
- b. Click button "Brows" below "UBI firmware upload", then choose the corresponding firmware named "firmware.zip"
- c. Click "Submit". The "success" pop up after several seconds, which means the firmware successfully uploaded and the firmware is upgrading now.
- d. It will last about 5-10 minutes for upgrading. During the update process, the charging point will restart and the network connection will be disconnected. You can try to refresh the page of the web configuration and check the version information using the following method after you enter the web page. If the version number changes, the firmware upgrade is complete.



4.4.2.6(1)

#### 4.4.2.7 RFID

- a. Click "Software Setting".
- b. Select the "card type". There are three options: Billing card, Stat Stop card and Local PnC("Plug and Charge" which means charging when connected with EVSE).
- c. Select whether to go through the OCPP background during local startup.
- d. Click Submit.

	5400	0		
lakk Setup	Authorization key			Submit Refresh
erdware Setting				
Rear Setting	Certificate Import			
Surging Status	Bross			Submit.
pload and download				porting
	Functions Enable			
	Functions Enable	Local startup whether to go ecop backgrow	ord	
	Functions Enable Carel Type Billing cell	v Local starting whether to go orga backgrou No. 3	vid v	4
	Functions Enable Cord type Cord type Enable Ministry out Whether to open the op code process	v Local daring whether to go eopy backgrow No. 3 Whether to bandler private data	vid	4 Submit Batesh

4.4.2.7(1)

#### 4.4.2.8 Get version.

- a. Click "Software Setting".
- b. Click "Refresh" in "Get version".
- c. The version shows in Display Frame.

Software Setting	Certificate Import					
Charging Status	Brown				Submit	
Upload and download						
	Functions Enable					
	Card Type		Local startup whether to go ecop background			
	Billing card		No	*		
	Whather is open the or code process		Whether to transfer private data		Submit	Refresh
	No	*	No	*		
	D Endle medification					
	UTC Time Setting					
	Similar to 2010-07-01 12-45-45					
	2021-10-25 08:50:55				Submit	Refresh
	Get version				2	
	Version				Referet	
	1.0.04.5e106				netten	

4.4.2.8(1)

#### 4.4.2.9 Download Log File

- a. Choose "Upload and download"
- b. Set the date of the log which you need to download in "Log Download"
- c. Click "Download"



4.4.2.9(1)

# 4.4.2.10 Time Zone, UTC Time, DST setting

en Senip										
deare Setting	Functions Enabl	e								
tware Setting	Card Type			Local startup who	ther to po scop background					
ping Status	Billing card		w	No		*				
al and direction	Whether to open the gr o	ode process		Whether to transf	ter private data	-			Submit	Refres
				140						
	Time Texa And	DETEN	lan.							
	Time Zone And	UST Set	ting							
	C Lrubie modification									
	Time Zone			DST Enable						
	U70		w	Disable		w				
	Beginning month		Beginning week		Beginning day		Beginning hour			
		*		*	Sunday	*		-		
	Ending month		Ending week		Ending day		Ending hour		Submit	Refrest
		÷		÷	Sunday	*		-		
	UTC Time Settin	9								
	Similar to 2019-07-01 12	45.45							Schundt	Refeed
	2021-10-25 09:12:25									

4.4.2.10(1)

#### **Time Zone setting**

- a. Click "Software Setting"
- b. Select the corresponding time zone in drop-down box named "Time Zone"
- c. If no need for Summer time setting, just need to set "DST Enable" as Disable
- d. Click "submit".

#### Summer time setting

- a. After setting the time zone, set "DST enable" to enable
- b. Set the start time and end time of daylight saving time.
- c. Click "submit".
- d. 10.3 UTC time setting
- e. This setting is used for backend timing when OCPP backend is not connected. At this time, when using manual calibration, enter the time in the format prompted.
- f. Click "submit"

#### 4.4.2.11 Change language

You can switch between English and Chinese in the upper right corner of the web page.



4.4.2.11(1)

#### 4.4.2.12 User Set

Click "User Set" in the upper right corner of the web page to enter the user information setting interface or log out.

After the user Settings page is displayed, you can change the user name and password (not recommend to change the user name and password). After entering the information, click Submit to complete the modification

	Ⅲ 阅读清单	User Set	
Language 🕶	User Set 👻	Home / Setting / User Set	
	4	Change username	Change password
ØUser Set		Please input new username	Please input new password
		New Name 3	New Password Please input new password again
Geogout		Submit Refresh	New Password
		4	Submit Refresh
		www.starcharge.com	6
4.4.2.12(1)	_	4.4.2.12(2)	

# 5. OPERATION INSTRUCTIONS

# **5.1 Activation**

# RFID card

• Please find the RFID card in the package of charger.

## Special charging App

- Please download the special charging App from the location provided by your dealer or service provider.
- Please register (detail on chapter 4) and log into your account in the special charging App. For detailed information, please contact your dealer or service provider.

## 5.2 Charging

#### Preconditions

- The charging connector is not plugged into the vehicle
- The charger is ready (the LED indicator turns green and is flashing with cycle time 4s)

#### 5.2.1 Authentication by swiping the RFID card

#### Start charging

- Connect the charging connector to the vehicle terminal correctly and confirm the connection. If the blue LED lamp is on, it indicates that the charger has been connected and everything is ready;
- Place the RFID card on the RFID reader until the blue LED lamp flashes continuously at flashing frequency of 4 times per second. If card swiping fails due to network connection, please swipe the card again;
- When the blue LED lamp is breathing (gradually on and off), it indicates that the charging process has started.

## End charging

N.B. Do not pull a mechanically locked connector out of the socket plugged into the vehicle with any force.

- Place the RFID card on the RFID reader until the LED lamp flashes continuously at flashing frequency of 4 times per second (if the electric vehicle has been fully charged, the charger will automatically stop, no need to swipe the card);
- Press the Unlock button and unplug the charging connector;
- Put away the charging cable, wrap it in the cable winding slot, and place the connector head properly (insert into the charging connector socket).

#### The operation flow is shown on the next page:

# 5.2.1 Authentication by swiping the RFID card

# Start charging

- Connect the charging connector to the vehicle terminal correctly and confirm the connection. If the blue LED lamp is on, it indicates that the charger has been connected and everything is ready;
- Place the RFID card on the RFID reader until the blue LED lamp flashes continuously at flashing frequency of 4 times per second. If card swiping fails due to network connection, please swipe the card again;
- When the blue LED lamp is breathing (gradually on and off), it indicates that the charging process has started.

# End charging

N.B. Do not pull a mechanically locked connector out of the socket plugged into the vehicle with any force.

- Place the RFID card on the RFID reader until the LED lamp flashes continuously at flashing frequency of 4 times per second (if the electric vehicle has been fully charged, the charger will automatically stop, no need to swipe the card);
- Press the Unlock button and unplug the charging connector;
- Put away the charging cable, wrap it in the cable winding slot, and place the connector head properly (insert into the charging connector socket).



# Start charging

## 5.2.2 Authentication by scannming QR code

#### Start charging

- Connect the charging connector to the vehicle terminal correctly and confirm the connection. If the blue LED lamp is normally on, it indicates that the charger has been connected and everything is ready;
- Open the special charging App, scan the charging QR code and tap Start Charging;
- When the blue LED lamp is breathing (gradually on and off), it indicates that the charging process has started.

## End charging

N.B. Do not pull a mechanically locked connector out of the socket plugged into the vehicle with any force.

- Open the special charging App and tap Stop Charging (if the electric vehicle has been fully charged, the charger will stop automatically, with no need to open the App);
- Press the Unlock button and unplug the charging connector;
- Put away the charging cable, wrap it in the cable winding slot, and place the connector head properly (insert into the charging connector socket).

Start charging



# End charging



#### 5.2.3 Free charge

### Start charging

- Connect the charging connector to the vehicle terminal. If the blue LED lamp is normally on, it indicates that the charger has been connected and everything is ready;
- When the blue LED lamp is breathing (gradually on and off), it indicates that the charging process has started.

# End charging

- Unplug the charging connector;
- Put away the charging cable and place the connector head properly (insert into the charging connector socket).

Start charging



End charging



# 6. TROUBLESHOOTING

The failures that may happen to the charger and the methods to solve the problems are listed in the table below. If the problems still exist and cannot be solved, please contact our service department.

Failure	Suggested range
The power LED is	No power supply
not on	<ul> <li>Check if the parent MCB+ Type A RCD or Type A RCBO have been turned off</li> </ul>
	<ul> <li>Make sure that the input power cable is intact and has been properly and securely connected to the charger</li> </ul>
	<ul> <li>Check whether the power voltage on the grid side is within the operating range (230/400±10%Vac) of charger with a voltage tester</li> </ul>
	<ul> <li>Turn off the charger by shutting off the parent circuit breaker and restart the charger in about 20s.</li> </ul>
	<ul> <li>When the incoming cable is affected by the surge or wrong wiring sequence, the device will out of power for protection. Searching the support from the professional for the wiring sequence checking or other abnormal interference. Power on after above checking finished.</li> </ul>
	<ul> <li>If the problem still exists, please contact your dealer or service provider</li> </ul>
Failure to start	The connector is not inserted correctly
charging process	<ul> <li>Plug and unplug the charging connector again and confirm that the connector connection has succeeded</li> </ul>
	Failure to execute charging process correctly
	- Please follow the instructions in "5.2 Charging"
	The connector may be stained or damaged in the locking area
	<ul> <li>Clean or replace the connector</li> </ul>

Failure	Suggested range
Failure to start	The charger is still in starting process
charging flow by scanning QR code	- Wait for about 2-5 minutes until the charger starts
	<ul> <li>There is a problem or bug in the special charging APP</li> </ul>
	- Restart the special charging App. Force the App to stop running and ensure that the App is not running in the background
	<ul> <li>If the problem still exists, delete the special charging App from the mobile device and reinstall the App</li> </ul>
	<ul> <li>If the problem still exists, restart the device using the special charging App</li> </ul>
	• 4G or Wi-Fi connection failure
	- Re-connect the 4G or Wi-Fi on in place with a better signal
	If the problem still exists, please contact your dealer or service provider
Failure to start	The charger is still in starting process
charging flow by swiping the RFID	- Wait for about 2-5 minutes until the charger starts
card	The RFID card account is not activated
	<ul> <li>Please contact your dealer or service provider to activate the RFID card account</li> </ul>
The vehicle is not fully charged or	The current decreases due to high temperature of vehicle or charger
the charging time increases	<ul> <li>Visually check whether the connectors are stained, worn or damaged</li> </ul>
	- When necessary, please contact your dealer or service provider
	<ul> <li>Power is limited due to external control devices (power supply device, PV device)</li> </ul>

Failure	Suggested range
The failure status LED becomes red	• Failure
	<ul> <li>Turn off the charger by shutting off the parent circuit breaker and restart the charger in about 20s. It takes about 2-5 minutes to restart the charger</li> </ul>
	- If the problem still exists, find possible causes
	<ul> <li>Check whether under-voltage (≤150Vac) or over-voltage</li> <li>(≥275Vac) happens to the power voltage on the grid side with a voltage tester</li> </ul>
	<ul> <li>Check whether the grounding of device is loose, damaged or removed. Measure whether the grounding resistance of charger exceeds the standard (the grounding resistance is generally within 1000hms) with a tester (e.g. multimeter)</li> </ul>
	<ul> <li>If the problem still exists, please contact your dealer or service provider to conduct troubleshooting</li> </ul>
	• Damage
	- Please contact your dealer or service provider

# 7. ROUTINE MAINTENANCE

# 7.1 Cleaning and washing

It is recommended that the housing of charger is regularly cleaned with a wet cloth. In addition, there should be no plants growing on or around the charger.

- Do not clean the product with a high-pressure water pipe;
- Do not clean the product with corrosive cleansers;
- Do not clean the inside of the product.

#### 7.2 Regular maintenance

The recommended maintenance cycle is shown in the table below.

If it is necessary to change the maintenance cycle according to the standards and regulations of the country where the charging device is installed and used, please comply with the local relevant laws and regulations.

Maintenance items	Maintenance cycle	Handling method
Cable	Yearly	Check whether the cable is tightly connected with the switch, whether the cable is hot or damaged, whether the insulation resistance of cable meets the provisions, whether the sealing measures of cable for entering the cabinet are intact, and whether holes are blocked tightly.
Indicator lamp	Yearly	Check whether the indicator lamp works normally and whether it is faulty

# 8. CONTACT INFORMATION

Company address: No.39, Longhui Road, Wujin High-tech zone, Changzhou, Jiangsu, China.

Website: www.starcharge.com

Company E-mail: starcharge@wanbangauto.com

# 9. WARRANTY CARD

# 9.1 Warranty Terms and Conditions

#### **Basic information**

- 1. Welcome to buy products for Wanbang Digital Energy Co., LTD
- 2. If there are any requirements for the products purchased or used that exceed the standard warranty, please sign in www.starcharge.com to learn about various warranty upgrades and extended warranty services.

#### Product warranty policy

- If the user has a performance failure within 7 days of the purchase, they can choose to exchange the goods or apply for free maintenance. If the user applies for replacement, they need to provide the purchase invoice, warranty card, original packaging box and any other accessories.
- 2. When the user applies for free maintenance service during the warranty period, they need to provide a valid purchase invoice and warranty card. The start date of the warranty period is the purchase date indicated in the invoice. The warranty period of the product is subjected to the date of delivery date of the product recorded if the user cannot provide a valid purchase invoice or the warranty card, or if the information listed in the above warranty certificate does not conform to the product, or it is altered or unidentifiable. If a valid product release date is not available, a free warranty will not be possible.
- 3. The machine repaired by the company will continue to enjoy the warranty service during the original warranty period.
- 4. The faulty parts or faulty machines that have been replaced after the repair are owned by Wanbang.
- 5. The user must properly keep the warranty card; the company does not reissue a new one.

#### Product warranty does not include the following conditions

- 1. Any damage caused by man-made or transport damage.
- 2. Products that have been disassembled and repaired by users and non-authorized service organizations.
- 3. Products that have been damaged due to unpacking and improper use.
- 4. Failure or damage caused by use in a work environment not allowed by the product, including exceeding the product's workload.
- 5. Failure and damage caused by improper storage by the user.

# 9.2 Information Registration

Product name	
Product model	
Warranty period	
User name	
Contact Phone	
Contact address	
Dealer stamp	

