Star Charge

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Basic Training for Saturn

Star Charge Europe GmbH

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Star Charge

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[1] —— 4.3-inch display screen

[2] —— RFID reader

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[5] —— Charging socket

[6] —— Sealed casings at power cable inlets

[7] —— Network cable interface

[8] —— LED status lights

Specification

General Information	
Charging Mode	Mode 3 (IEC 61851-1)
Input/Output Power&Current Rating	2 x 22kW/2 x 32A max.
Input/Output Voltage Rating	400Vac±10%, 2*3 phases, 50/60Hz, L1+L2+L3+N+PE
Grid Type	TN-S, TN-C, TN-C-S, TT
Charging Interface	Configuration 01: 2 x IEC 62196-2 Type 2 tethered plug (Case C) Configuration 02: 2 x IEC 62196-2 Type 2 socket (Case B)
Metering	MID meter, Accuracy: Class 1
Internal RCD	Type B
Protection	Overcurrent, Overvoltage, Undervoltage, Residual current, Short circuit, Over temperature, Ground fault, Integrated surge protection
Mechanical	
IP Rating	IP54@Case B, IP55@Case C
IK Rating	IK10
Cooling	Natural cooling
Charging Cable Length	5m
Dimensions (WxHxD)	395*504*197mm
Weight	Approx. 11kg (Case B) Approx.16kg (Case C)
Installation	Wall mounting, Pole mounting (Pole is optional)
Certification and standards	
Standards and compliance	IEC 61851-1, IEC 61851-21-2, LVD 2014/35/EU, RED 2014/53/EU
Certification	CE

Installation

Requirements & Workflow

Installation - Requirements

1.Requirements for grid capacity

- AC working voltage: AC 400V ± 10%
- AC working frequency: 50Hz/60Hz
- It is recommended that customers install a miniature circuit breaker upstream to Saturn.

  The recommended specifications of the circuit breaker are as follow

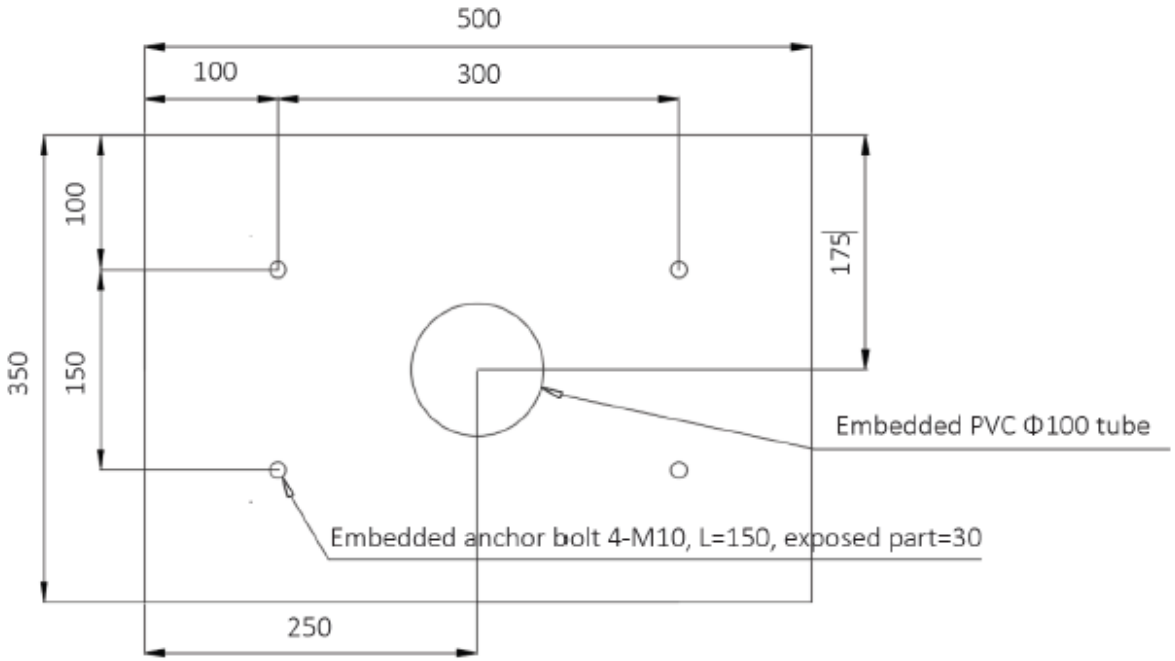
Power	Series	Rated Voltage	Rated Current	Tripping Characteristics	Quantity
22KW	3P+N	400V	40A	B/C	1
22KW + 22KW	3P+N	400V	40A	B/C	2

Installation - Requirements

2. Installation foundation

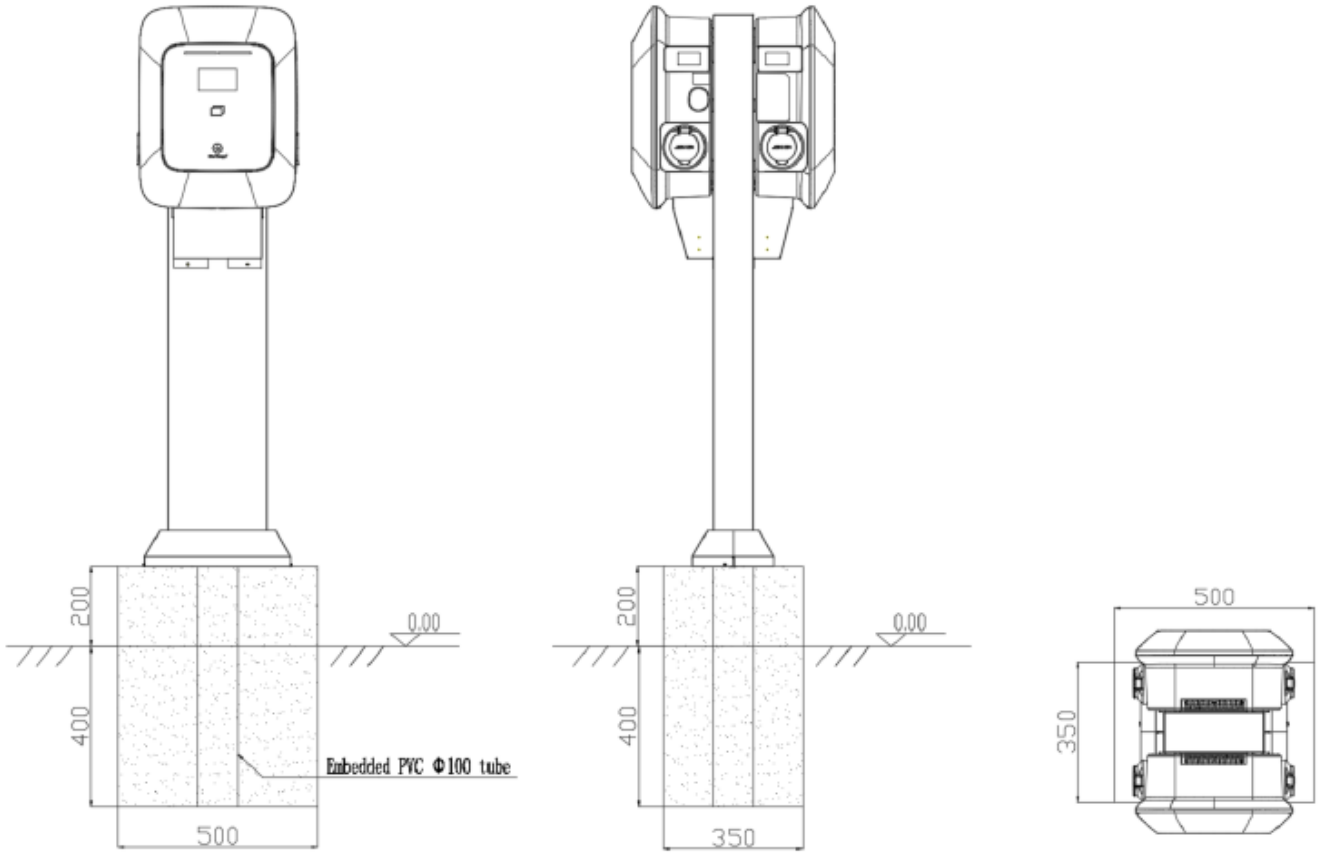
The charger shall be installed on a hard mounting floor (e.g. cement floor), if there is no appropriate mounting floor on site, a concrete foundation is recommended.

- Size 500mm * 350mm * 600mm
- Depth of the foundation 400mm
- Height above the ground 200mm.
- The foundation is filled with C20 concrete



Installation - Requirements

2. Installation foundation



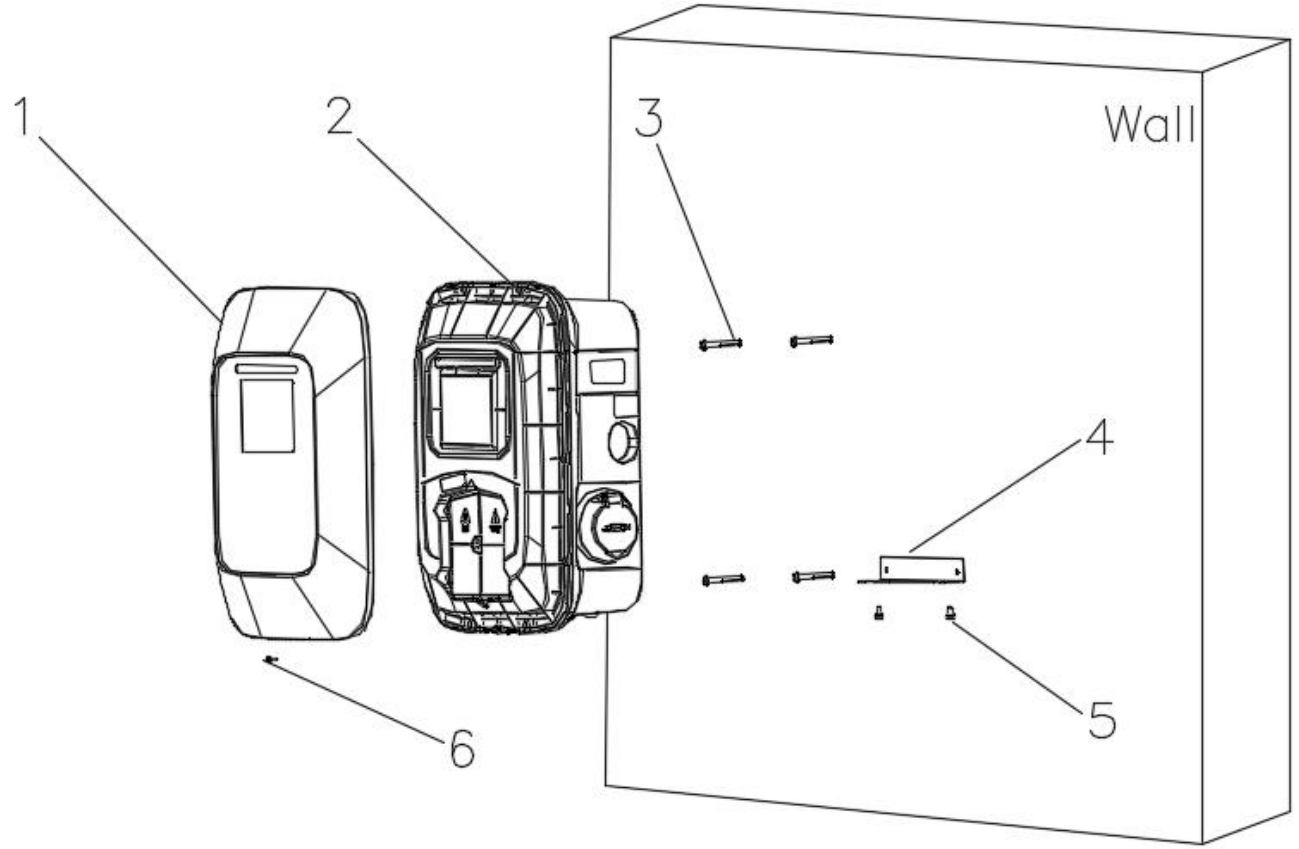
Installation - Requirements

3. Power cable specification

- 5 * 6mm² (L1,L2,L3,N, PE)
- The core material is copper.

Installation Workflow
Wall Mounted

Installation Workflow – Wall Mounted



1-Front cover;

2-Charging station;

3- M6*60 expansion screw;

4-Mounting bracket;

5-M6*16 hexagon socket screw;

6-M4*8 hexagon socket screw.

Installation Workflow – Wall Mounted

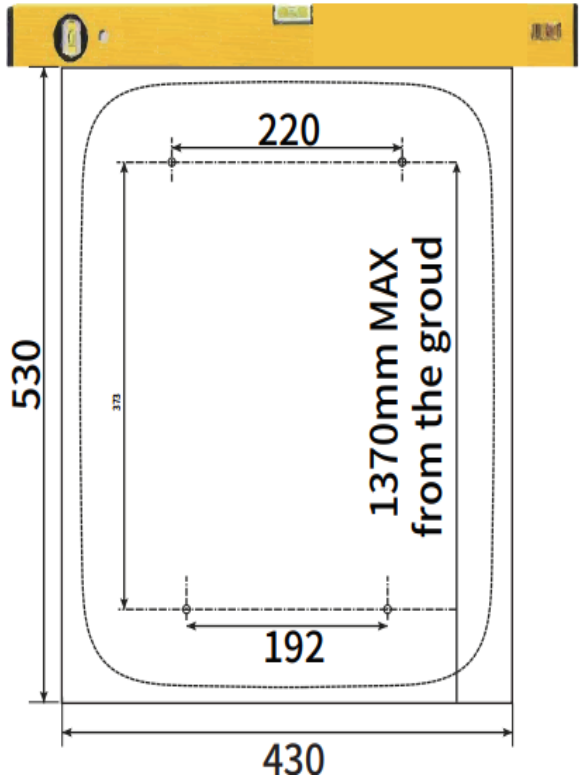
Step 1:

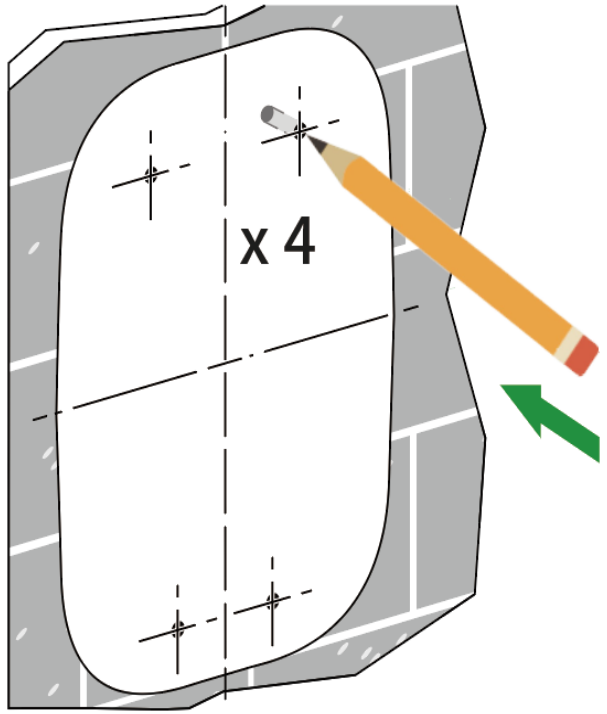
Please confirm the installation location and mark it on the wall. It is suggested that the top height of charging pile should be about 1 - 1.45 meter from the ground

Installation Workflow – Wall Mounted

Step 2:

Place the template at a suitable height, and mark the punching position on the wall with a pencil

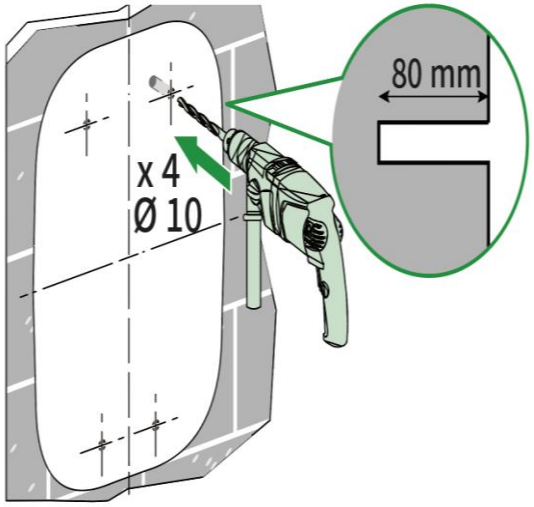


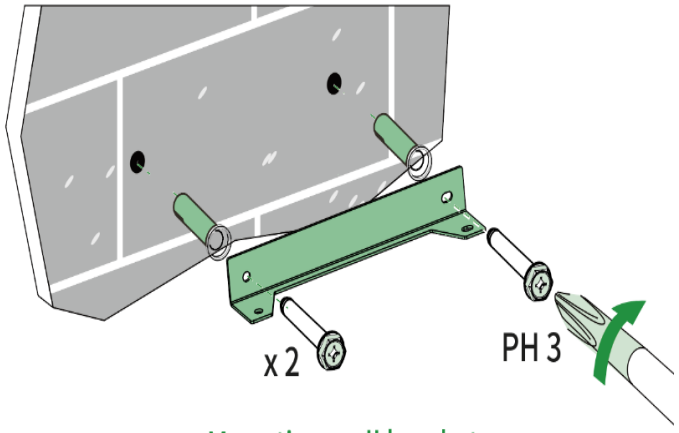


Installation Workflow – Wall Mounted

Step 3:

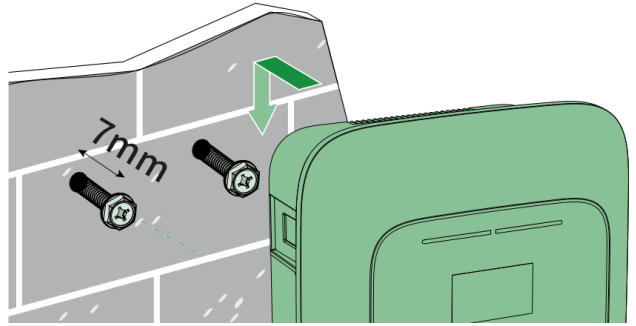
- Use a Φ10 drill bit to drill 4 holes with depth of 80mm.
- Use two M6*60 screws to fasten the wall mount to the holes at the bottom
- Insert two M6*60 screws in the holes at the top. Note that the screw head protruding length is 7mm.





Mounting wall bracket

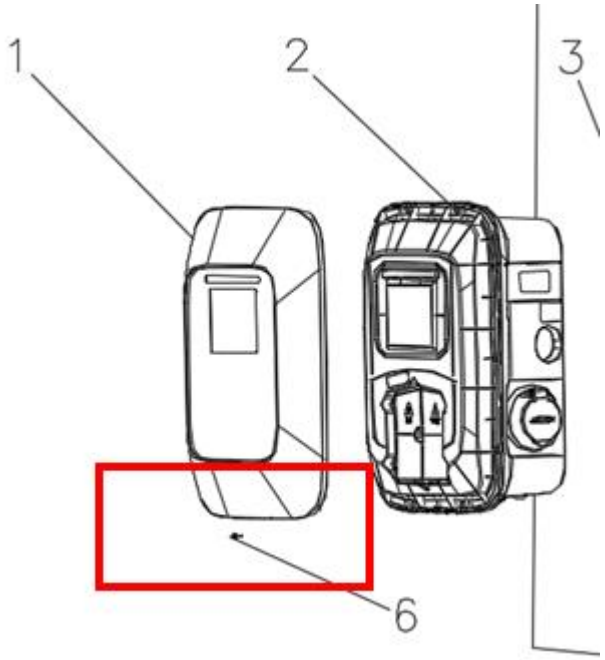
The screw head protruding length is 7mm

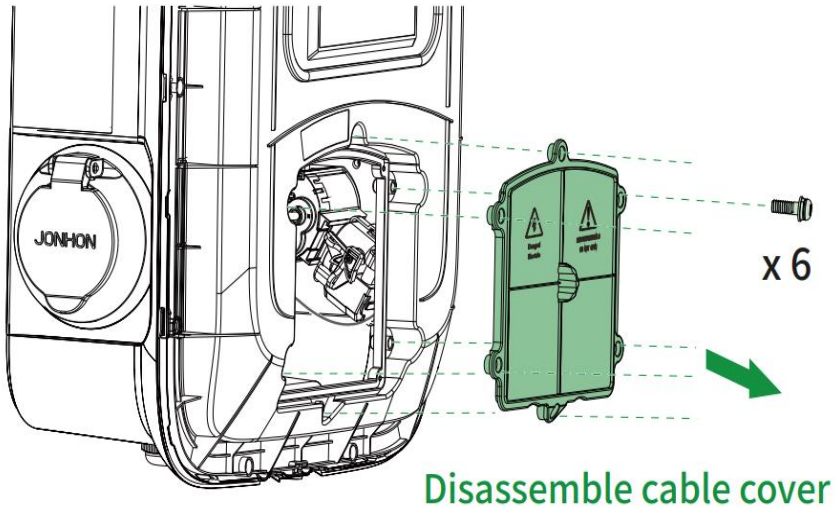


Installation Workflow – Wall Mounted

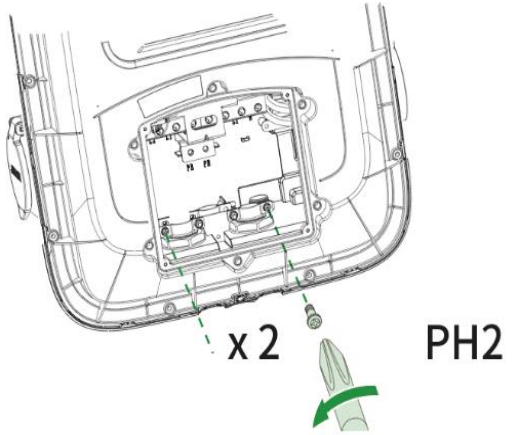
Step 4:

- First move one screw at the bottom of front cover, then remove the front cover with a card and the cable cover
- Loosen the two clamp screws of inlet cable





Disassemble cable cover

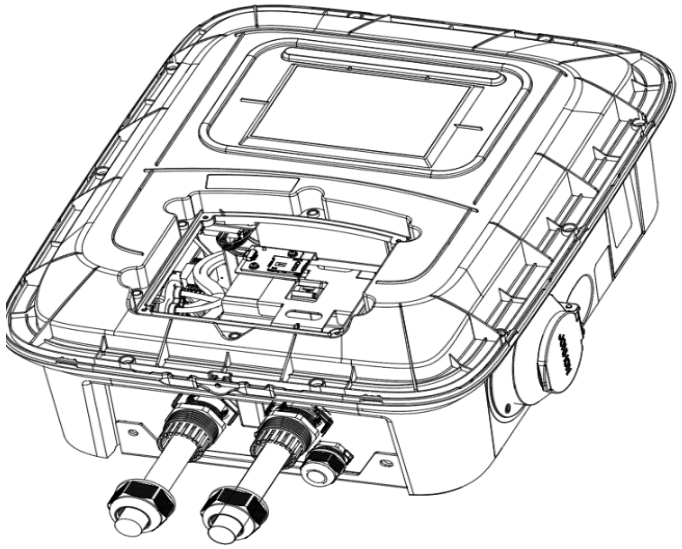


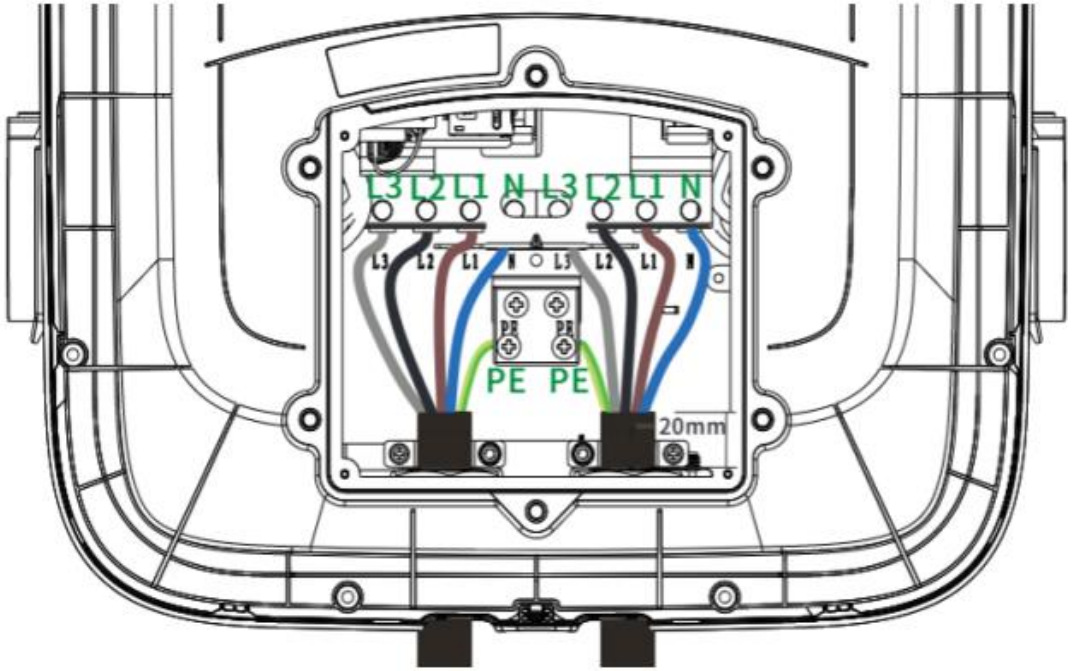
Loosen clamp screws of power cable

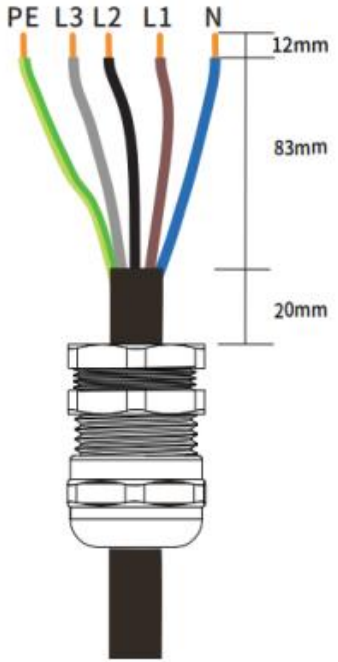
Installation Workflow – Wall Mounted

Step 5:

- Thread two input cable through the two waterproof glands
- Connect power line according to the marker. Screw torque is 1.4-1.6Nm



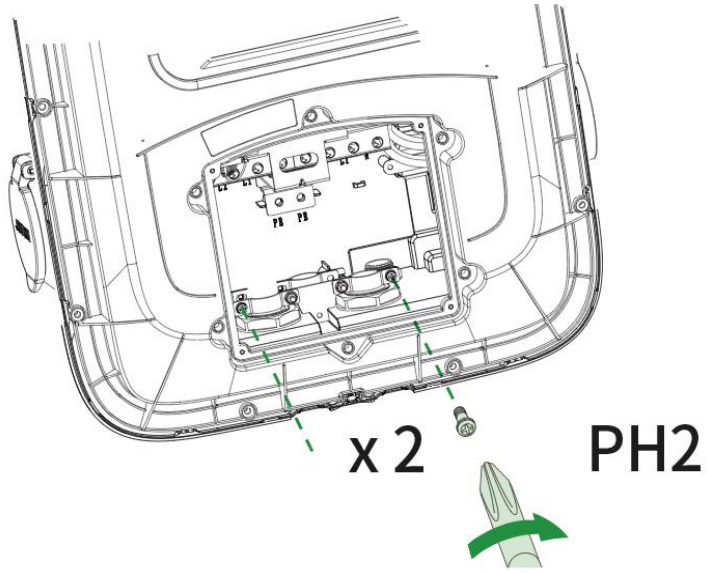


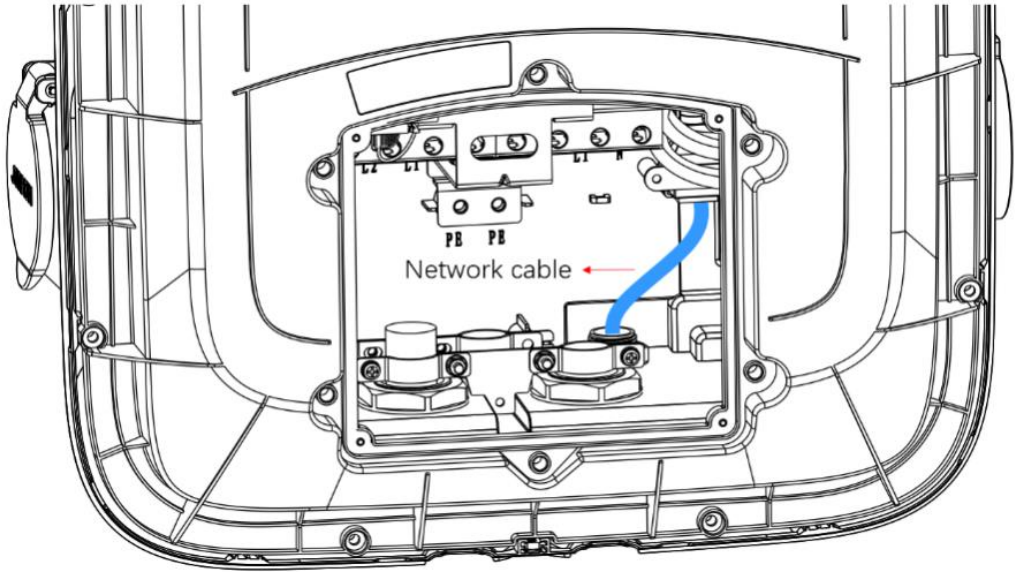


Installation Workflow – Wall Mounted

Step 6:

- Fasten the clamp screws and lock the inlet cable. Screw torque is 1.4-1.6Nm
- Optional: If Ethernet cable is required, you can thread the Ethernet cable through the small gland and connect it to the internal network cable interface.

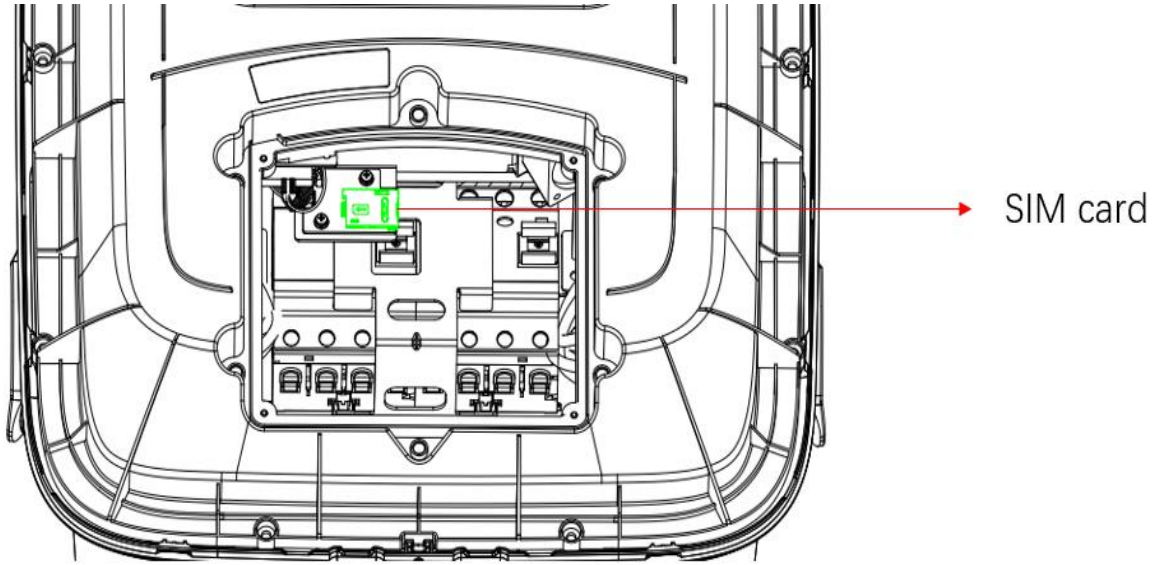




Installation Workflow – Wall Mounted

Step 6:

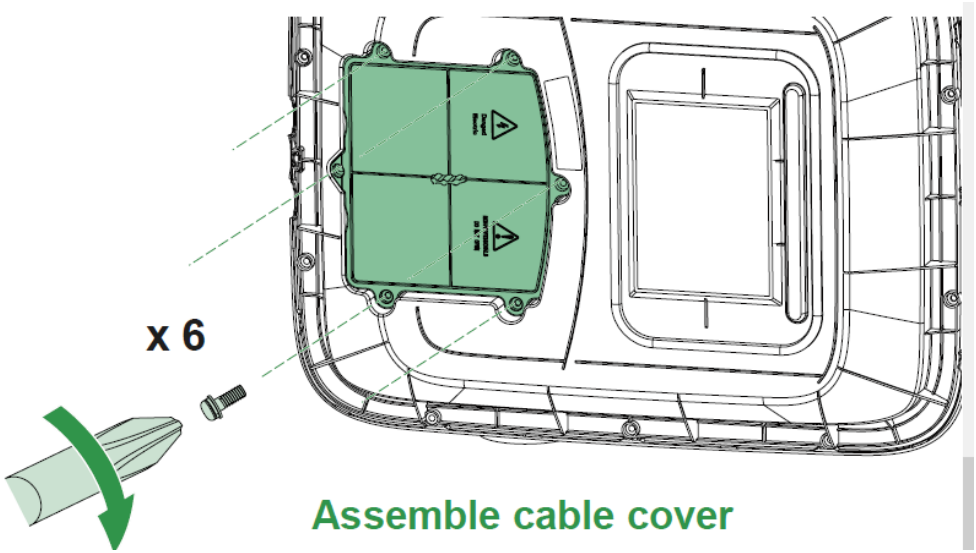
- Optional: If SIM card is required, Insert the SIM card into the SIM card slot.

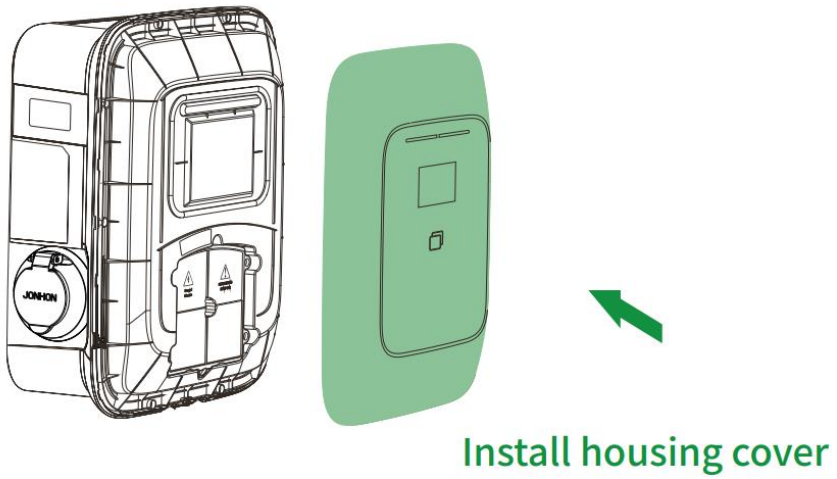


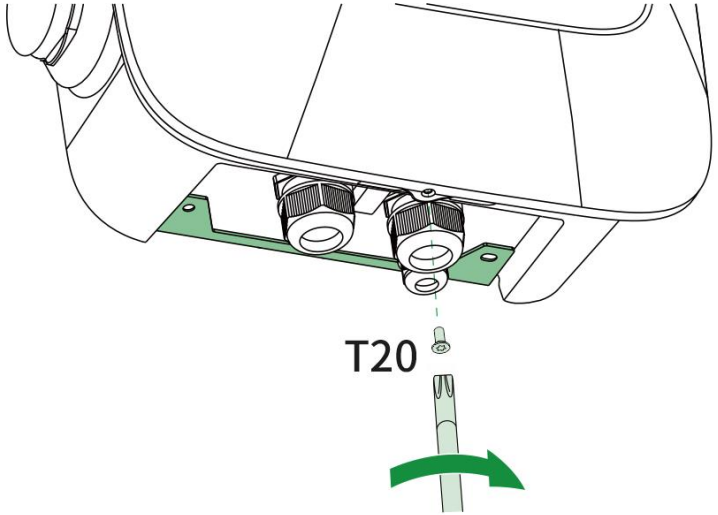
Installation Workflow – Wall Mounted

Step 7:

- Install the cable cover back to the charger
- Install the front cover



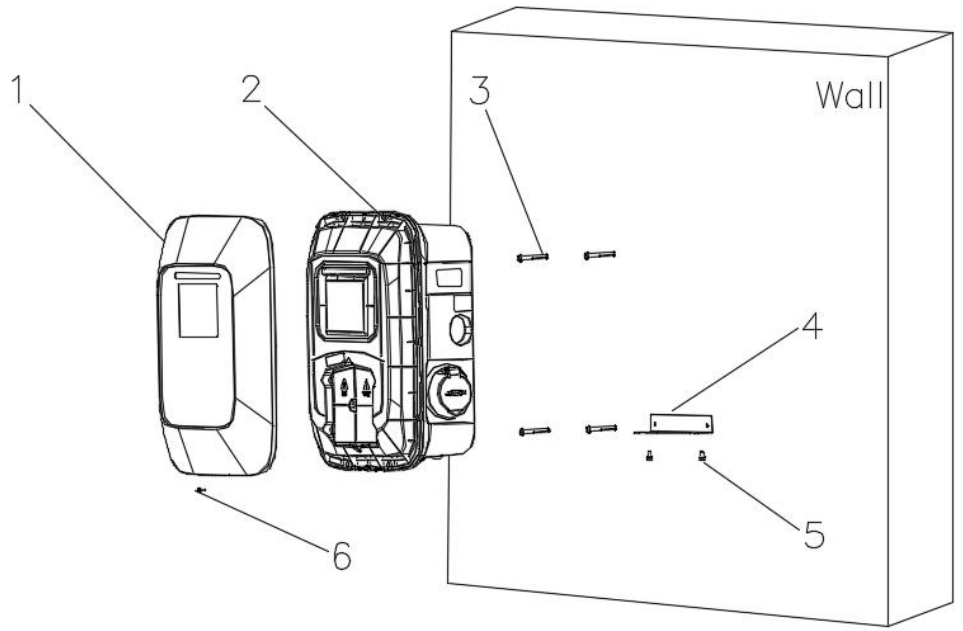




Installation Workflow – Wall Mounted

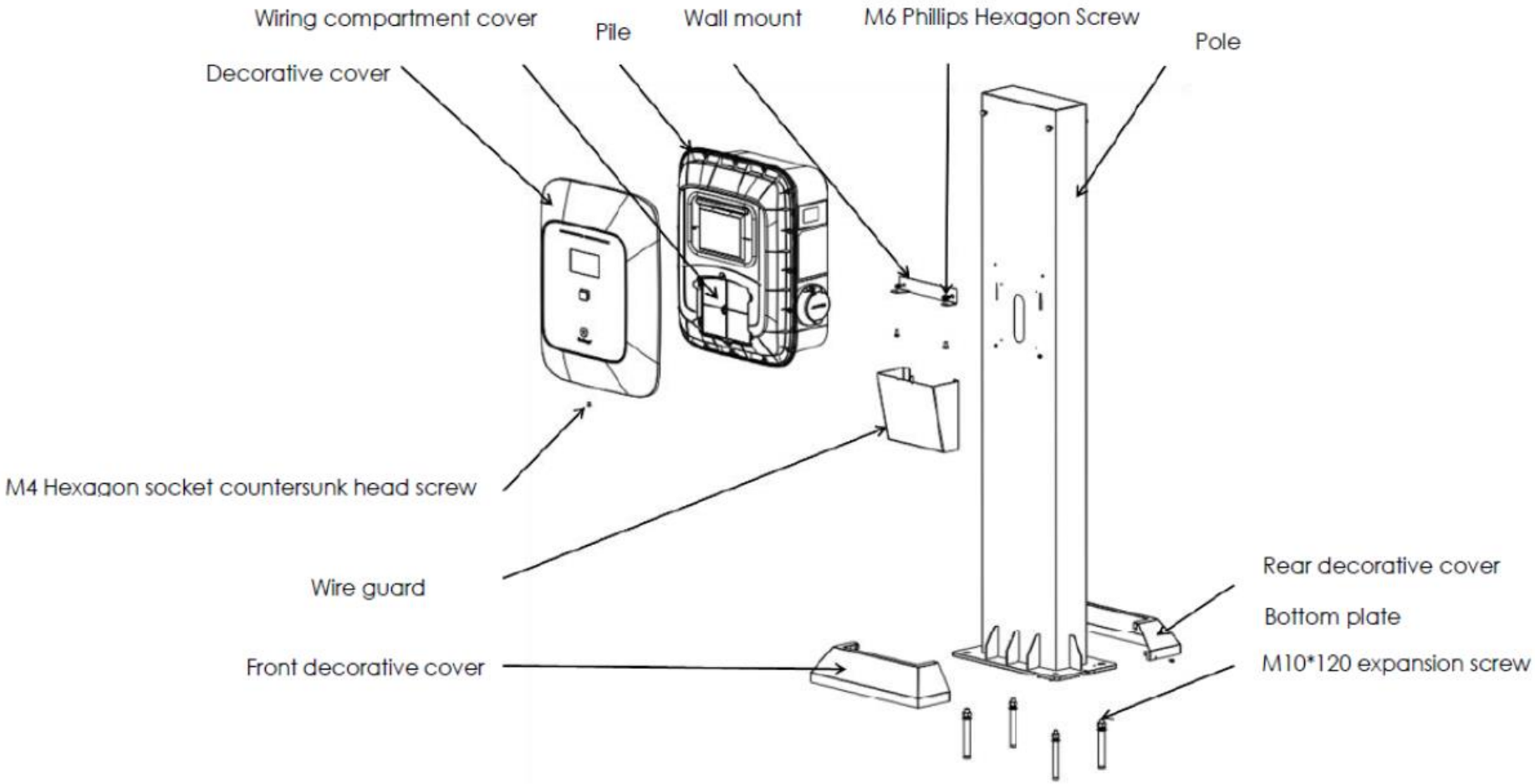
Step 8:

- Hang the on the wall
- Fix the charger to the wall by using two M6*16 screws



Installation Workflow Column Mounted

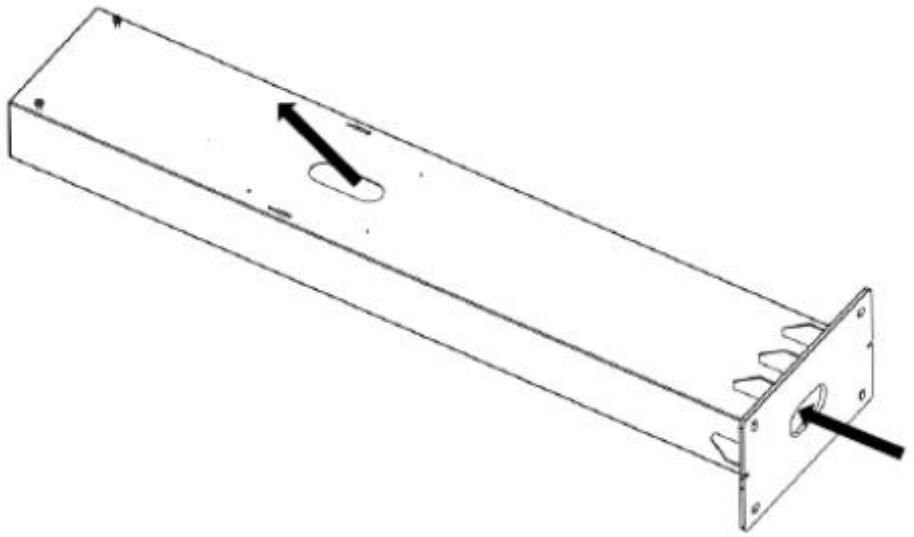
Installation Workflow – Column Mounted



Installation Workflow – Column Mounted

Step 1:

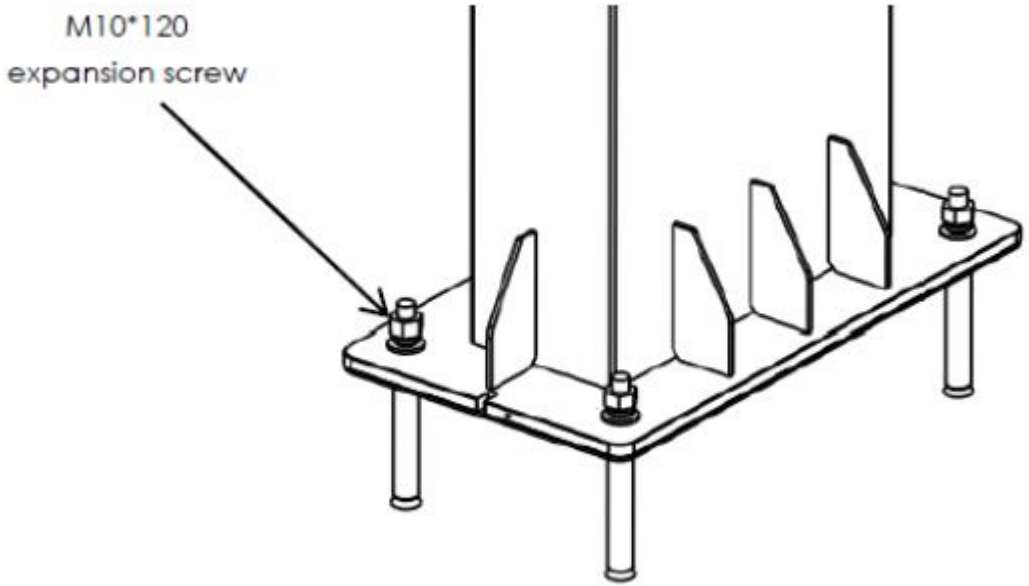
- Lay the column flat on the ground and pass the incoming line out from the front.



Installation Workflow – Column Mounted

Step 2:

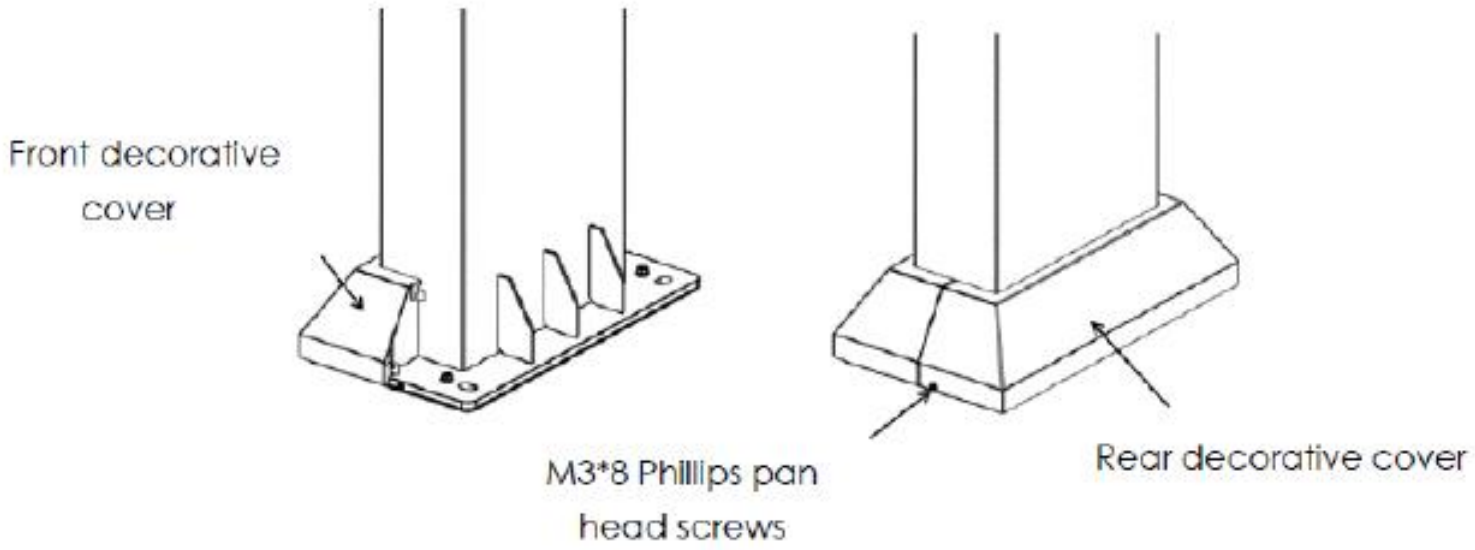
- Erect the column and fix it to the foundation with 4 M4*120.



Installation Workflow – Column Mounted

Step 3:

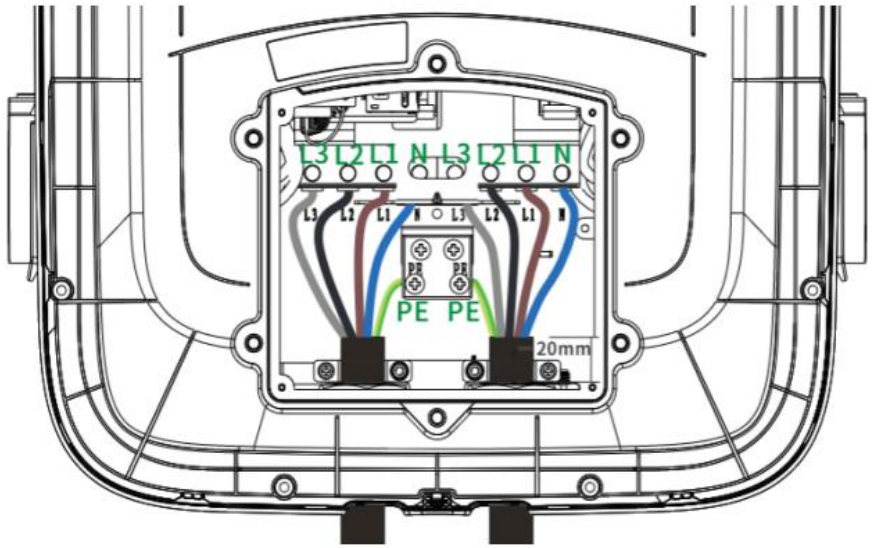
- Add the decorative cover to the pedestal ..

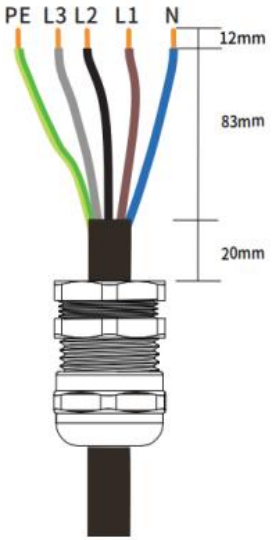


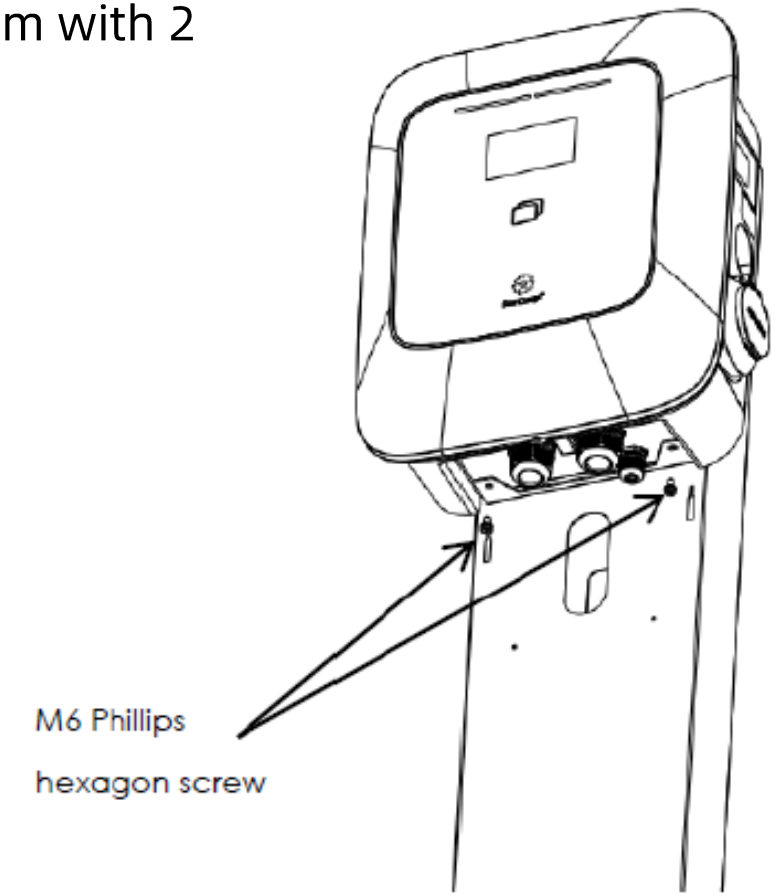
Installation Workflow – Column Mounted

Step 4:

- Hang the charger body to the column and fix it at the bottom with 2 M6 screws.
- After that, connect the power cables to charger .







Commissioning

Tools & Workflow

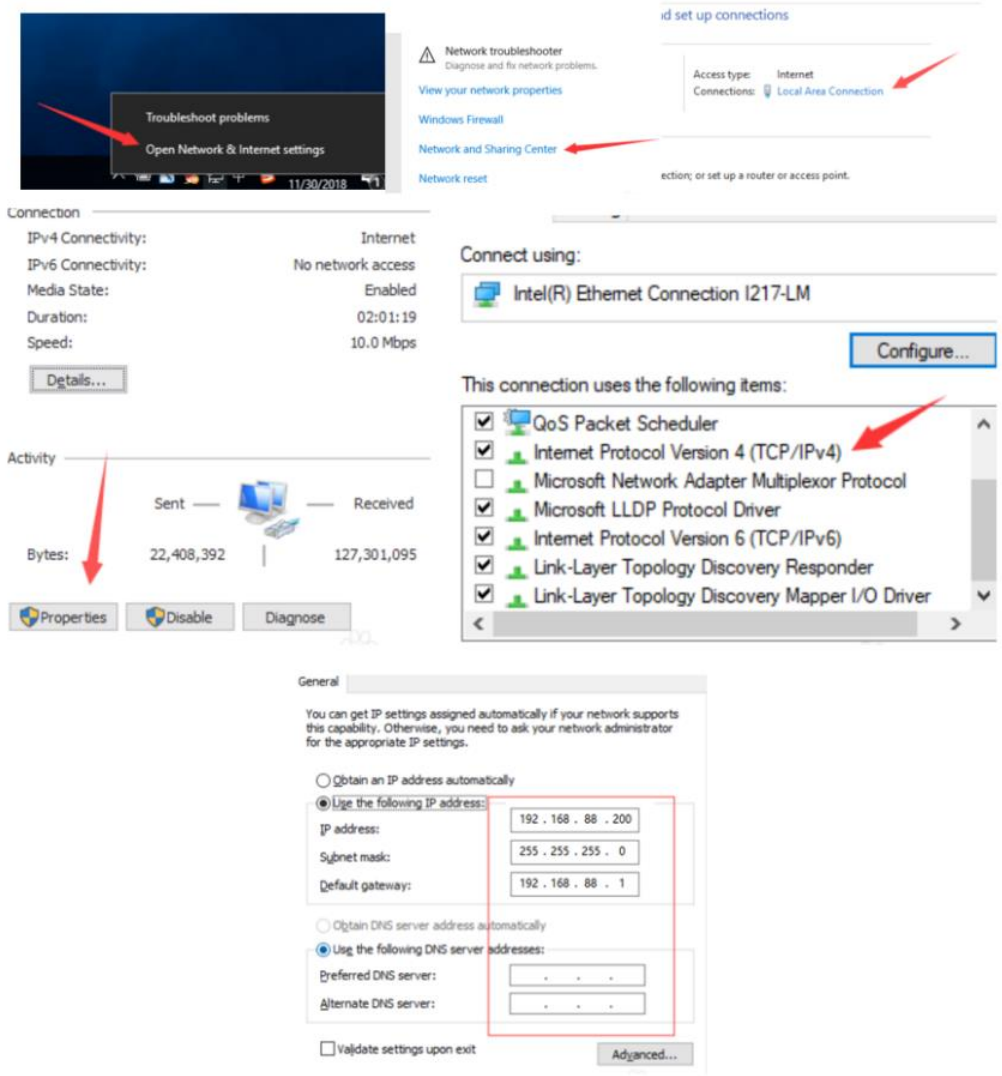
Commissioning - Tools

Item	Tools	Usage	Example
1	Laptop	Configure the settings, read the log, Troubleshooting	
2	Ethernet cable	Connect laptop to charger	
3	Screwdriver set	Assemble and disassemble the screws	

Commissioning - Workflow

1. Connect laptop to charger

- Connect your laptop with the charger via Ethernet cable.
- To access the charger system, you need to set the IP address of your laptop to 192.168.88.200 and subnet mask to 255.255.255.0



Commissioning - Workflow

2. Log into charger web panel

- Open an internet browser (Google chrome)
- Enter in website address 192.168.88.206
- Log in:

  Normal account:

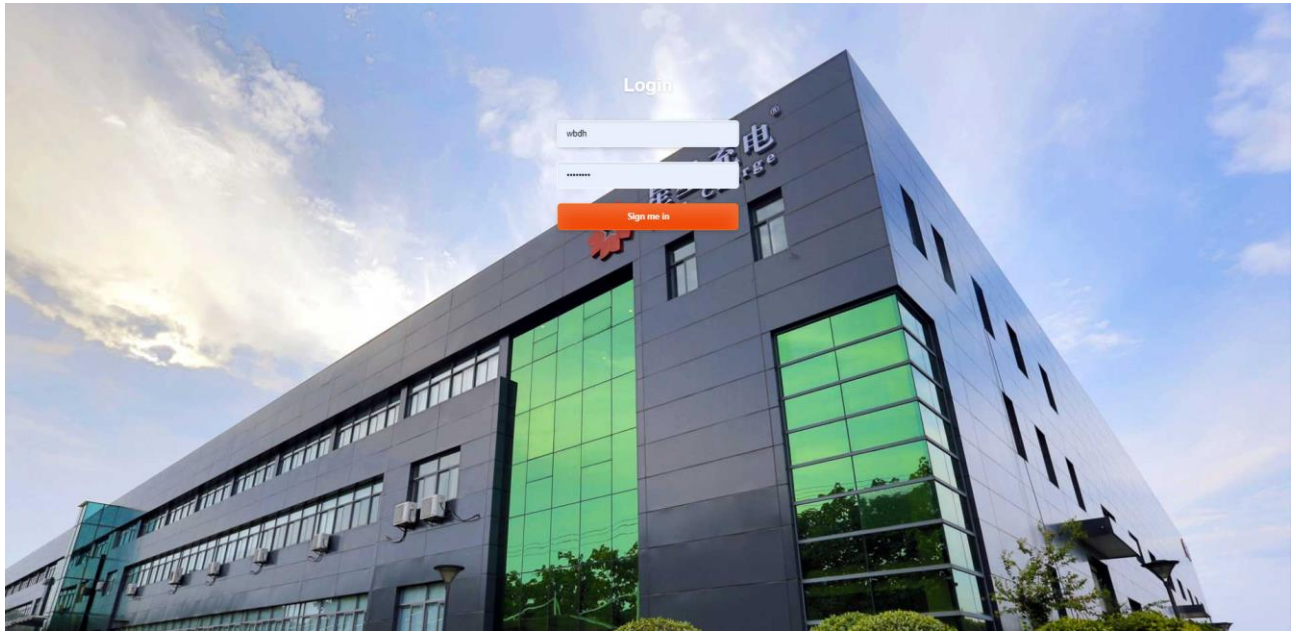
  Username : xxcd

  Password : 28912891

  Advanced account:

  Username : wbdh

  Password : 26835941

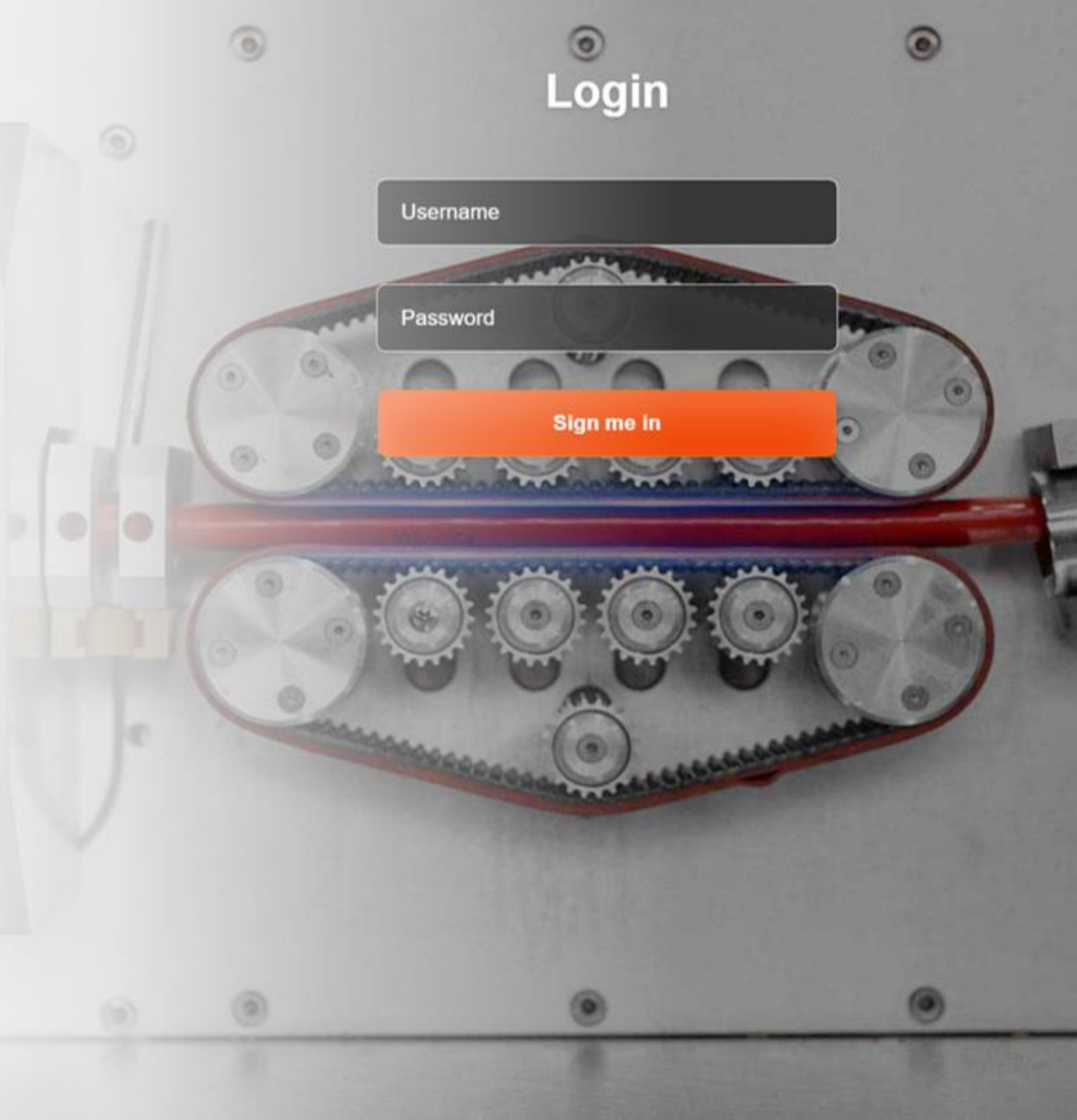


Commissioning - Workflow

3. Parameter configuration

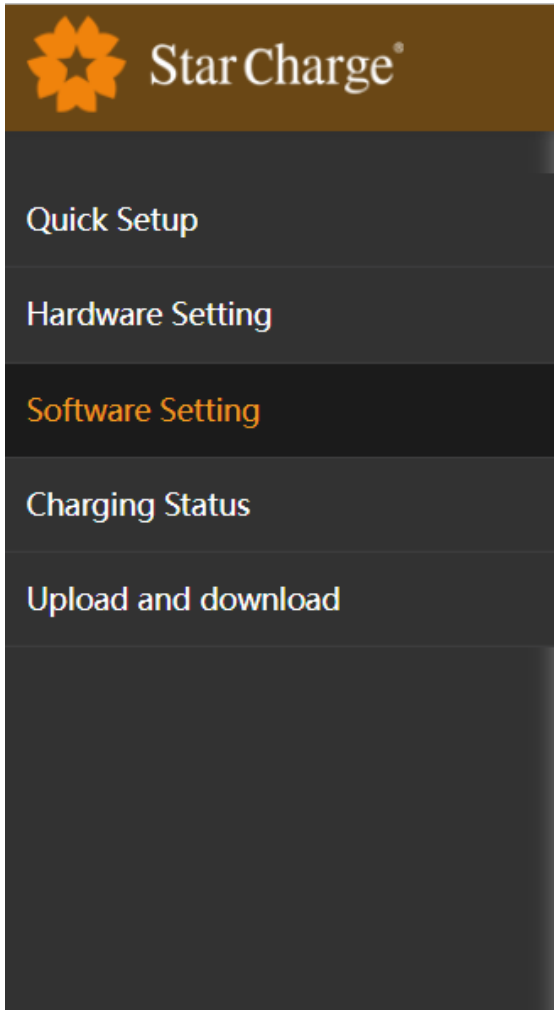
Software settings needs to be configured:

- Internet communication (4G, Ethernet, WIFI)
- OCPP backend
- Charger authentication method
- Output power configuration



Commissioning - Workflow

3. Parameter configuration



Collection of the most used settings

Charger connector settings for connector type, output power limit, etc.

Settings for 4G, Ethernet, WIFI, OCPP and authentication methods

Check the internet and backend connection status

Firmware update and log download

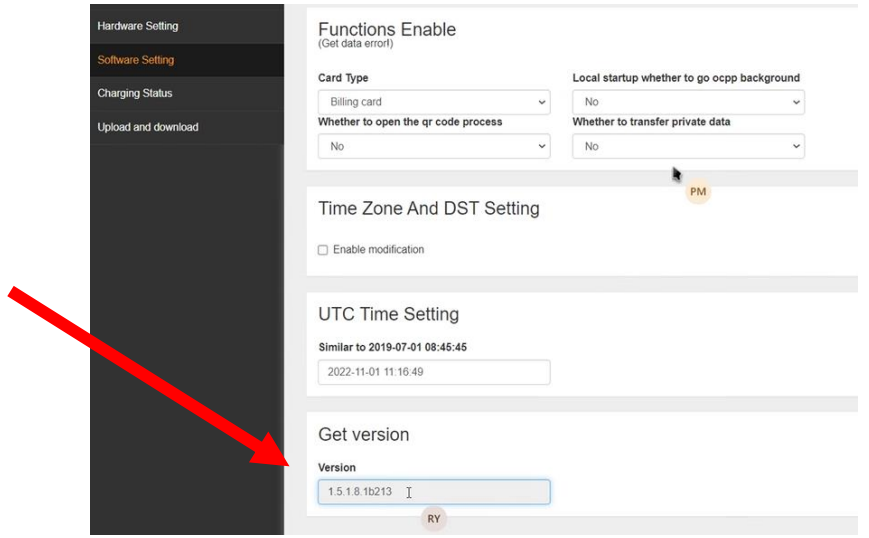
3. Parameter configuration

Firmware update

In the first commissioning of a new charger, the firmware of the charger is usually relative old and needs to be updated to newest version to optimize the charger performance.

To check the firmware version, go to “Software setting“ and find “version” data.

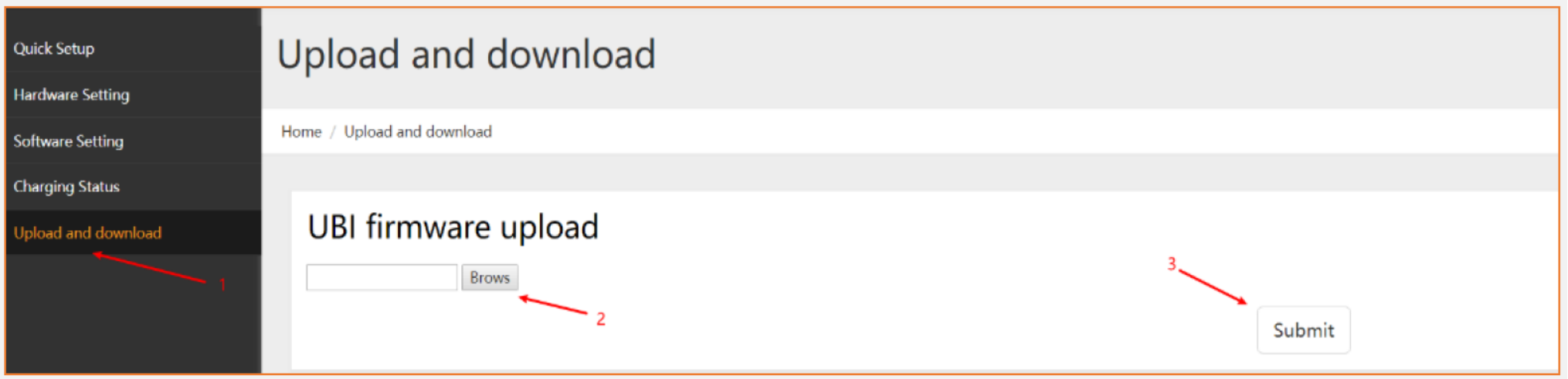
Star Charge engineer will provide you the newest firmware version and guide you do the update.



3. Parameter configuration

Firmware update

- Go to “Upload and download”
- Click “Brows” under “UBI firmware upload”
- Assign the firmware file “firmware.zip”
- Click “Submit”. A message “success” will pop up after the firmware is uploaded to charger. After that the charger will begin the upgrading process, it will take 5 minutes.

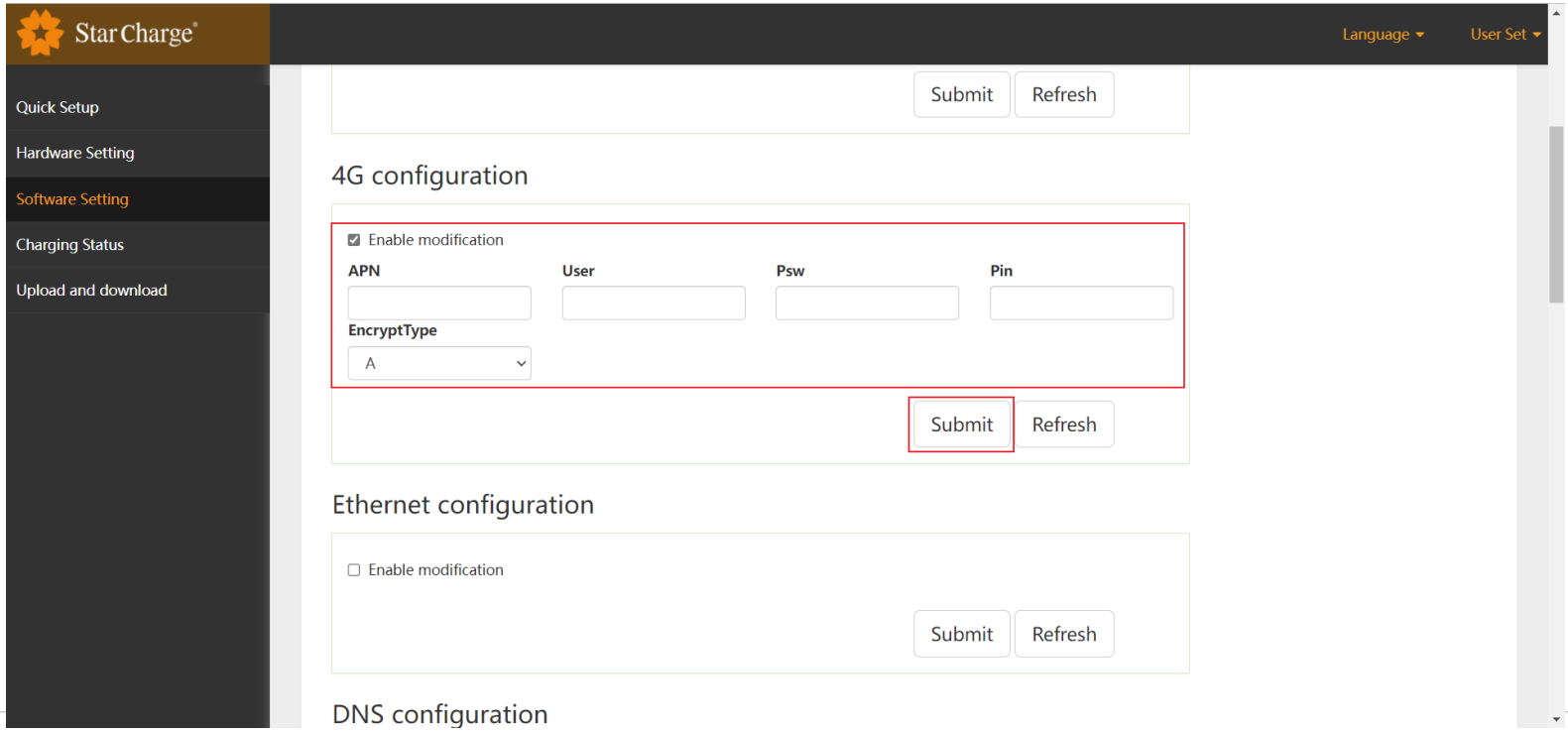


Commissioning - Workflow

3. Parameter configuration

Internet communication (4G, Ethernet, Wifi)

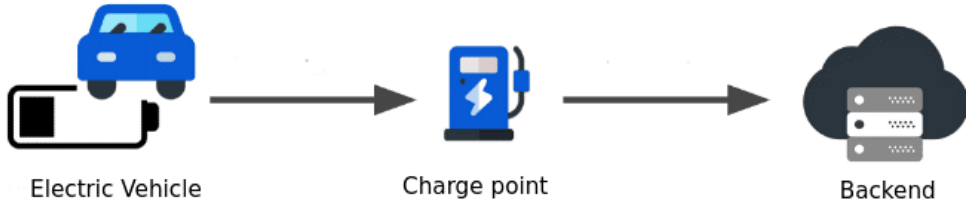
1. Click “Enable modification”
2. Enter data for APN, User, Psw and Pin
3. Click “Submit”

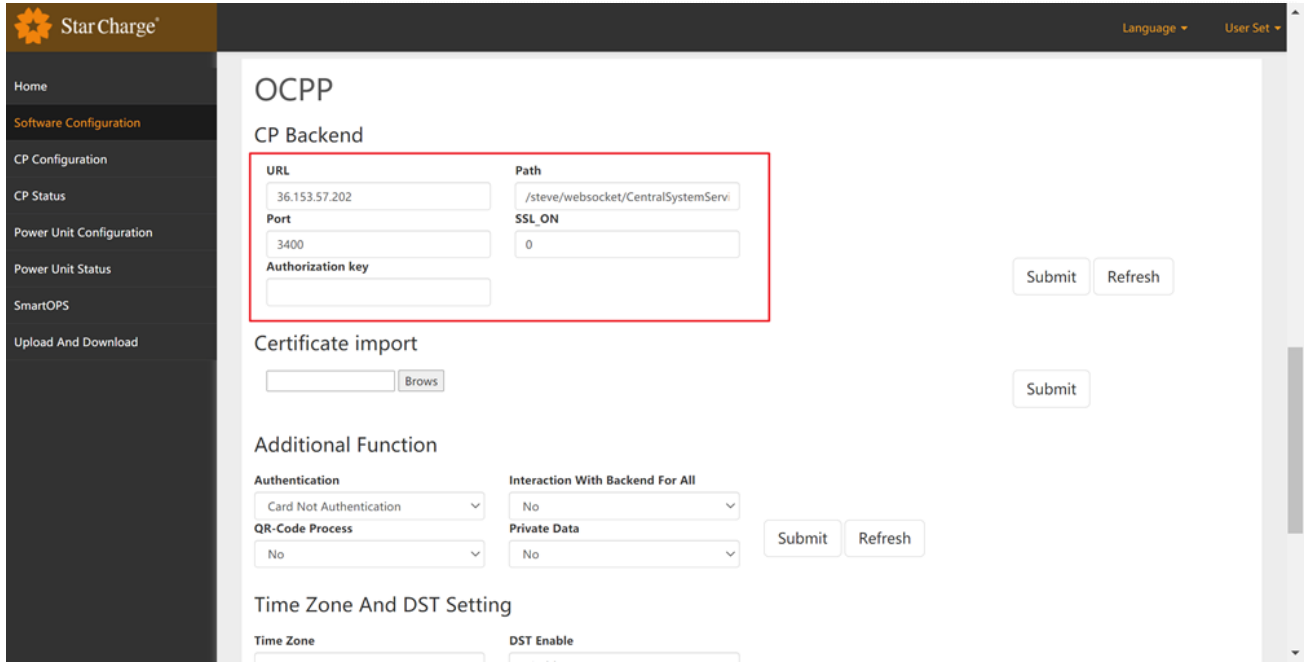


3. Parameter configuration

OCPP backend

Set CP backend: Enter data for URL, Path, Port and SSL_ON according to OCPP backend address

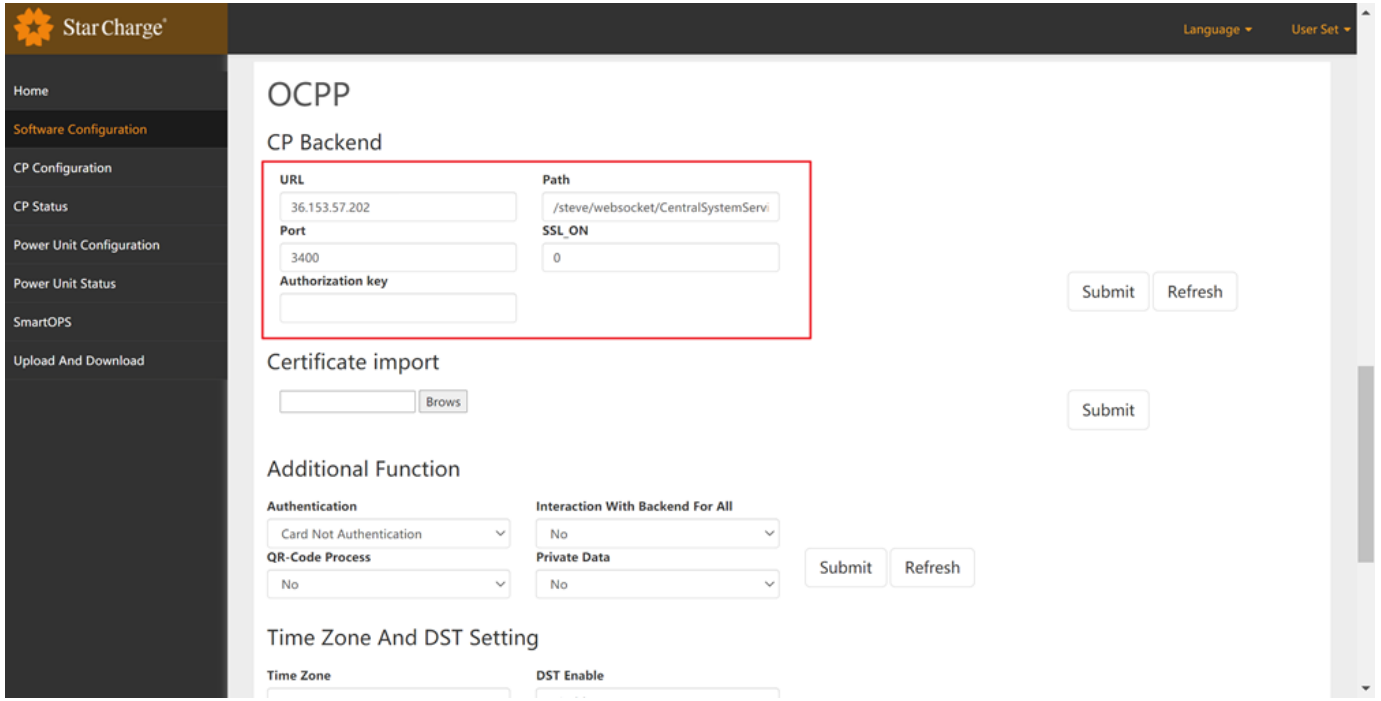




3. Parameter configuration

OCPP backend

Take http://36.153.57.202:3400/steve/websocket/CentralSystemService as an example. The information need to be filled in is shown as below:



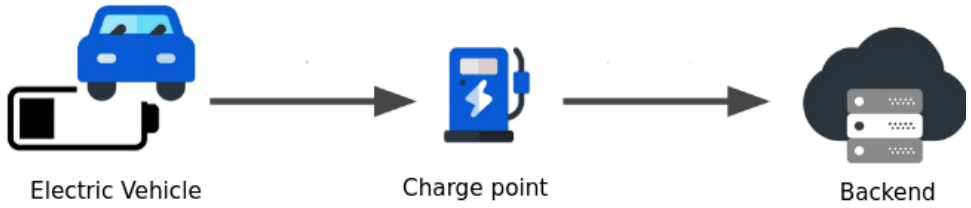
Commissioning - Workflow

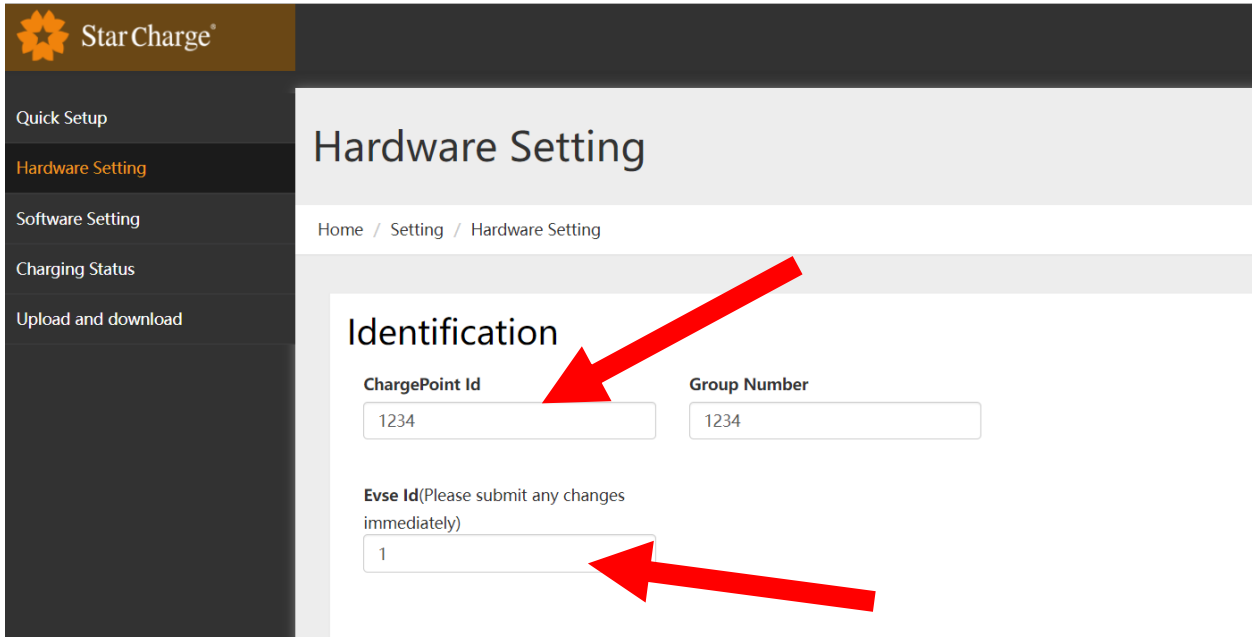
3. Parameter configuration

OCPP backend

Set CP Identity: Enter the charger ID number which is registered in the OCPP backend.

EVSE ID: Please ensure the parameter is “1-1”



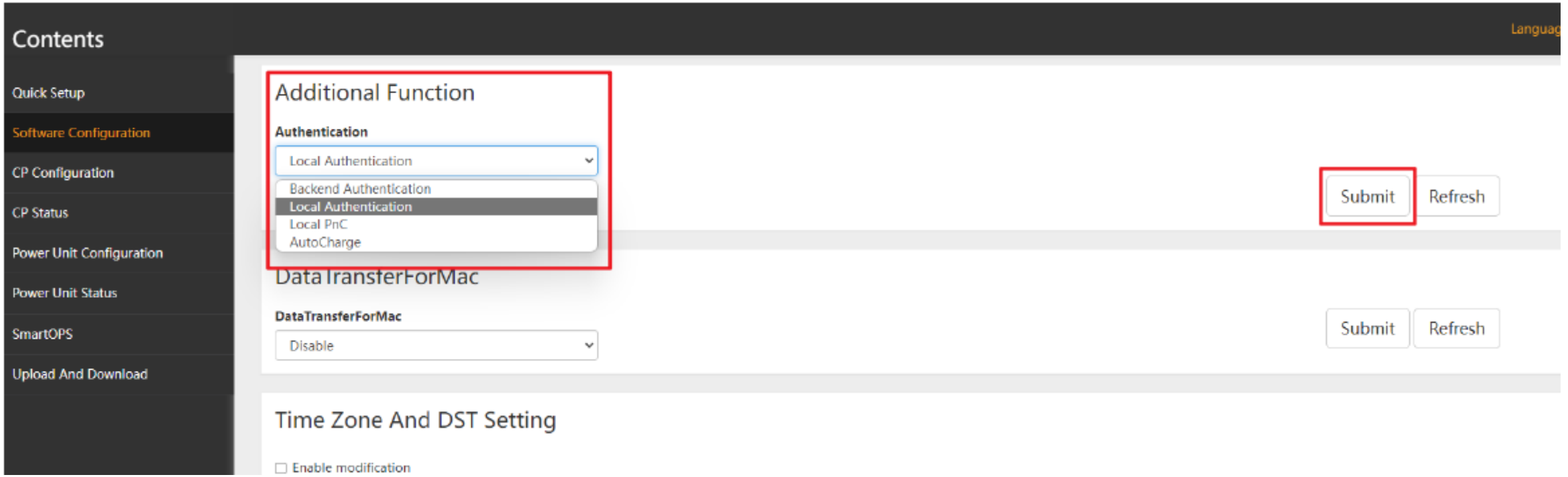


Commissioning - Workflow

3. Parameter configuration

Charger authentication method

Following authentication method can be selected:



3.Parameter configuration

Charger authentication method

Authentication method	Principle
Card Authentication	Use authenticated IC card to start charging session card. The IC card must be whitelisted in backend platform and EVSE must always connect to the backend
Card Not Authentication	Use the IC cards from charger accessories to start charging session. No authentication.
Local PnC	Once plug in the charger connector, the charging session automatically begins without any authentication.
AutoCharge	Similar to PnC mode, but with MAC code authentication. The MAC Code of the EV must be registered in backend.

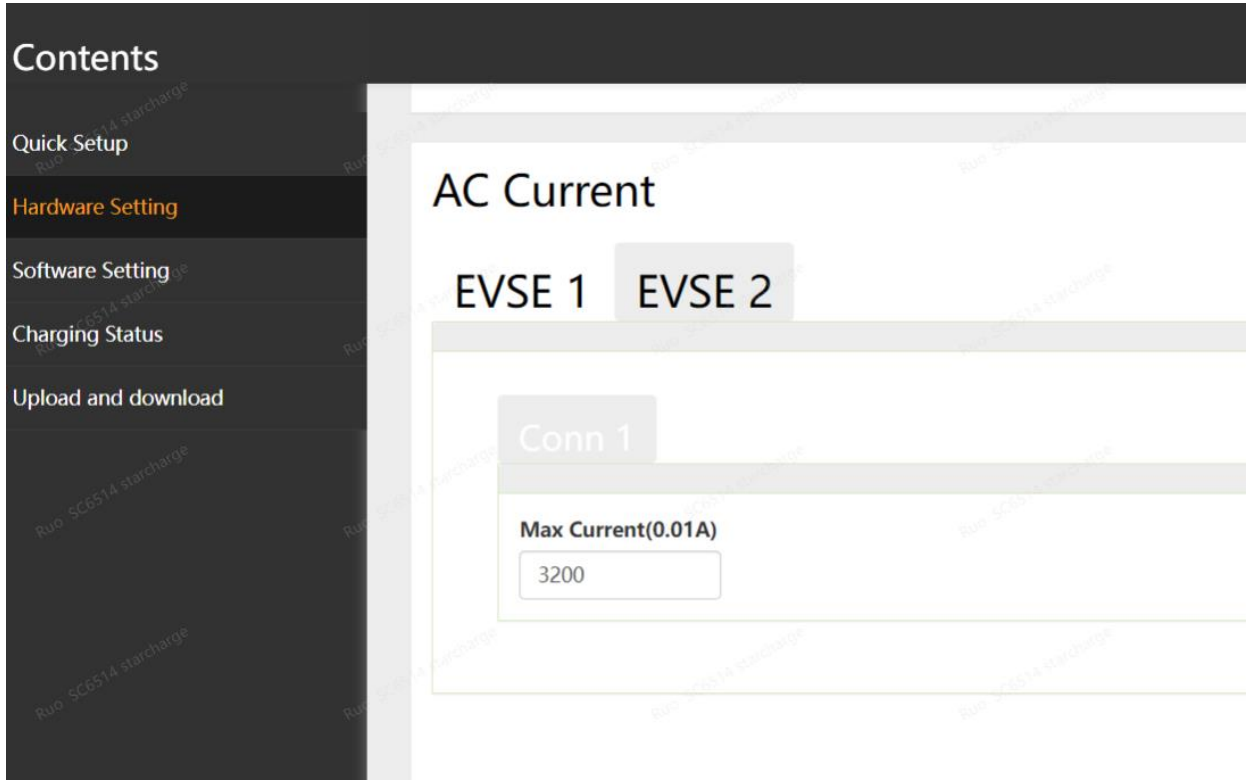
3. Parameter configuration

Connector and Output power configuration

According to the use scenarios and grid capacity, output power of AC connector can be individually configured .

For example:

- 3200 (default) is for 22kW power
- 1600 is for 11 power



Commissioning - Workflow

4. Charging test

Starting the session

Ending the session

4. Charging test

LED status indicator

Standby mode for Charging

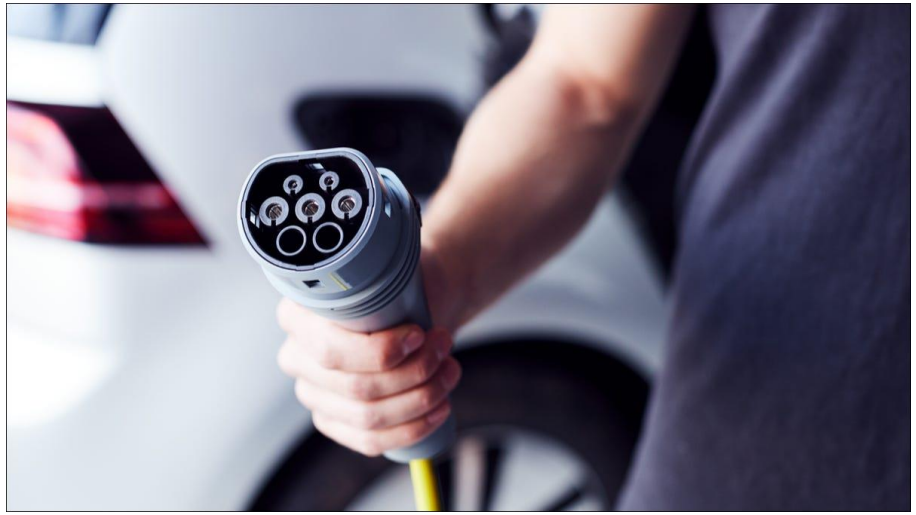
1. Constant - Cable connected
2. Flashes Quickly - Reading the RFID card
3. Breathing slowly - Charging in session

Error

Commissioning - Workflow

5. Customer Training and finishing commissioning report

- After the commissioning work for the EVSE, engineer should give a basic training related to the main characteristics of the EVSE to guide the customer how to use EVSE. The training content should cover safety knowledge, basic charging procedure etc.
- Last and not least, the commissioning report needs to be finished after whole work.



Thank You.

Connect the World. Connect the People.

Star Charge

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