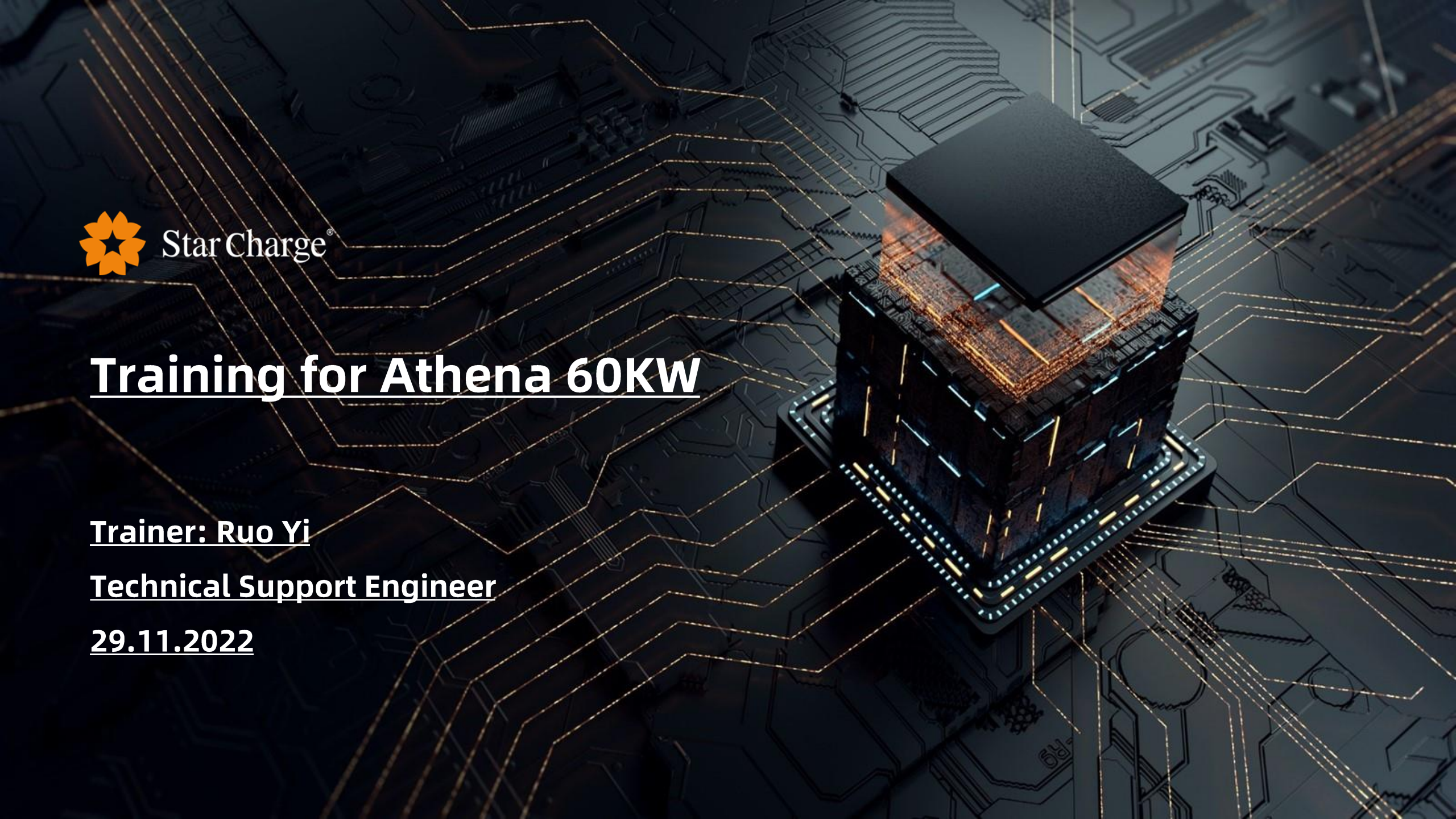


# Training for Athena 60KW

Trainer: Ruo Yi

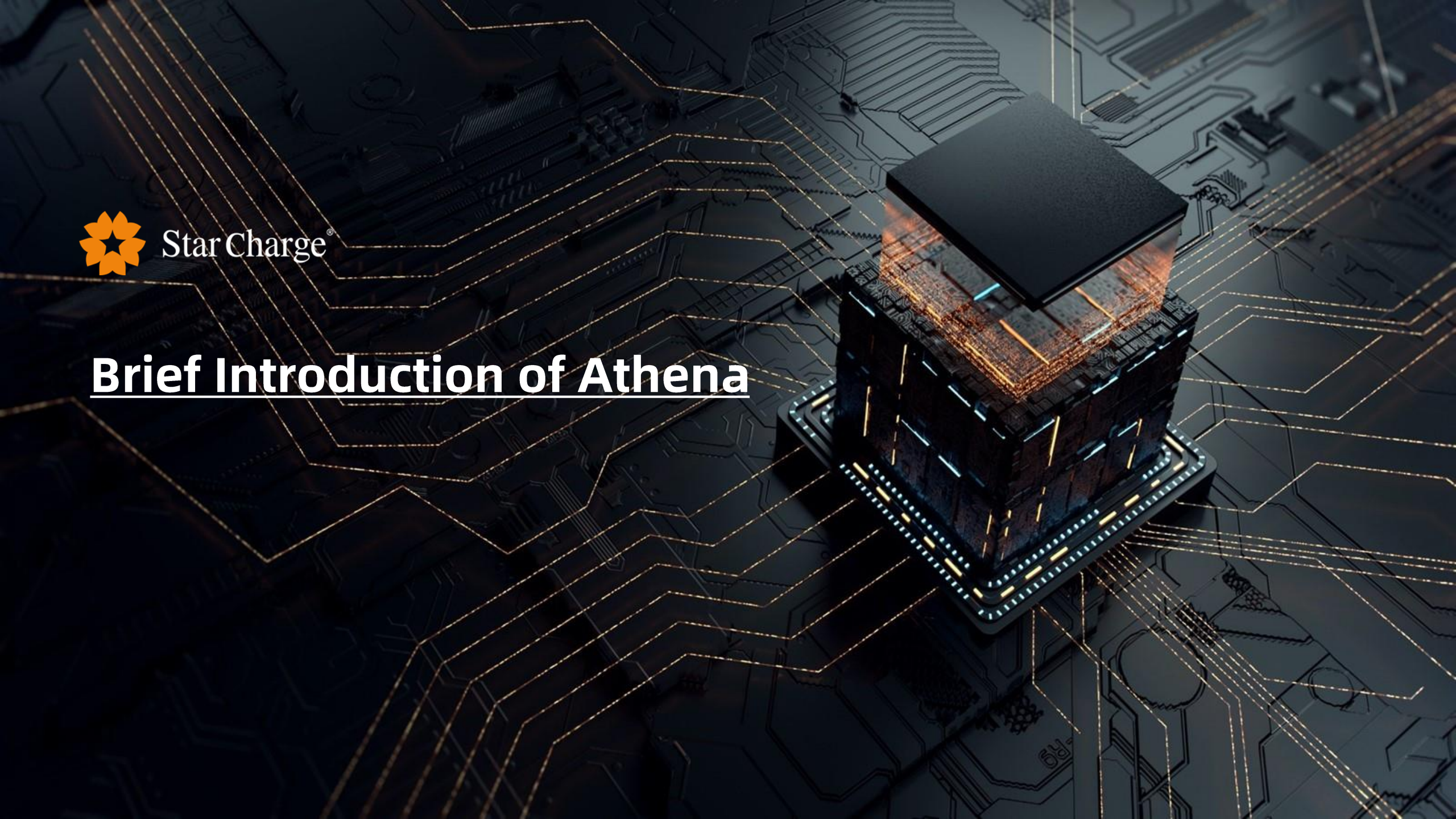
Technical Support Engineer

29.11.2022

# Agenda

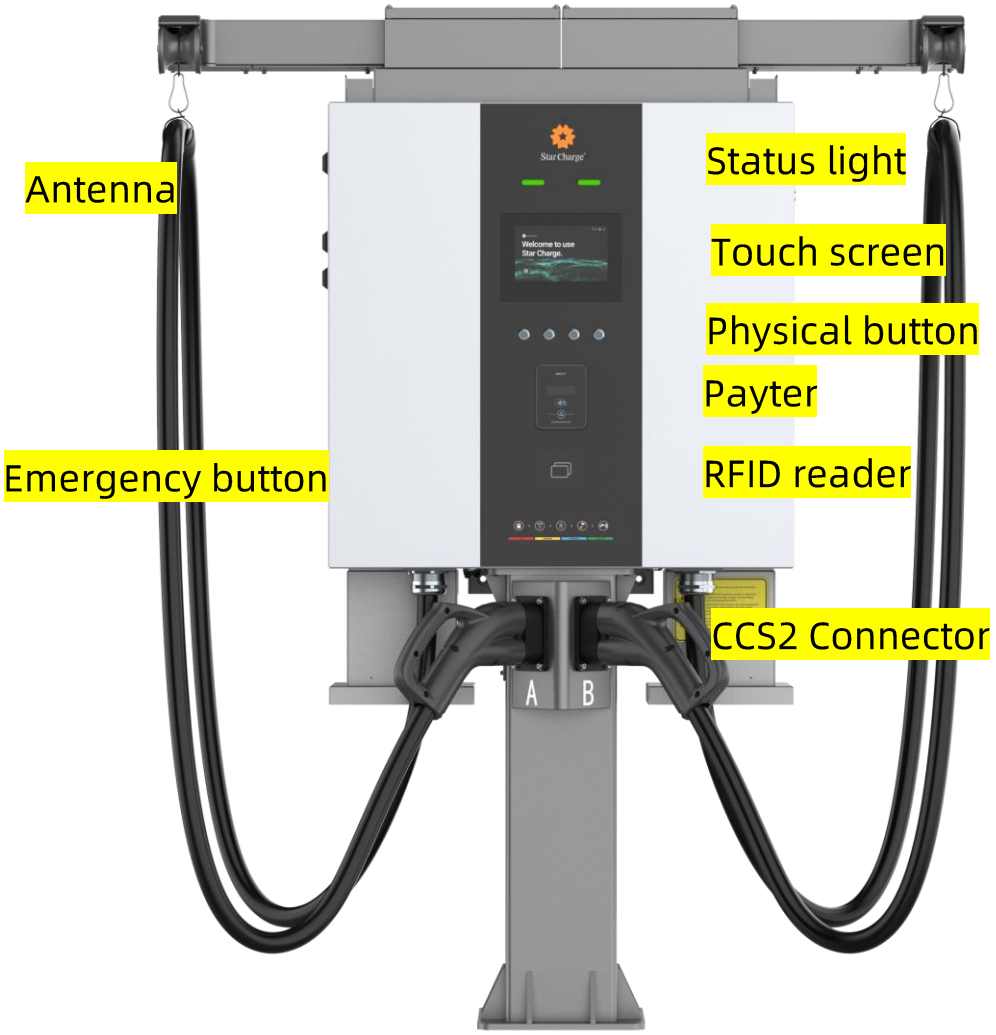
## Athena 60KW

- Brief Introduction
- Installation
- Commissioning
- Error code and log file




# Brief Introduction of Athena

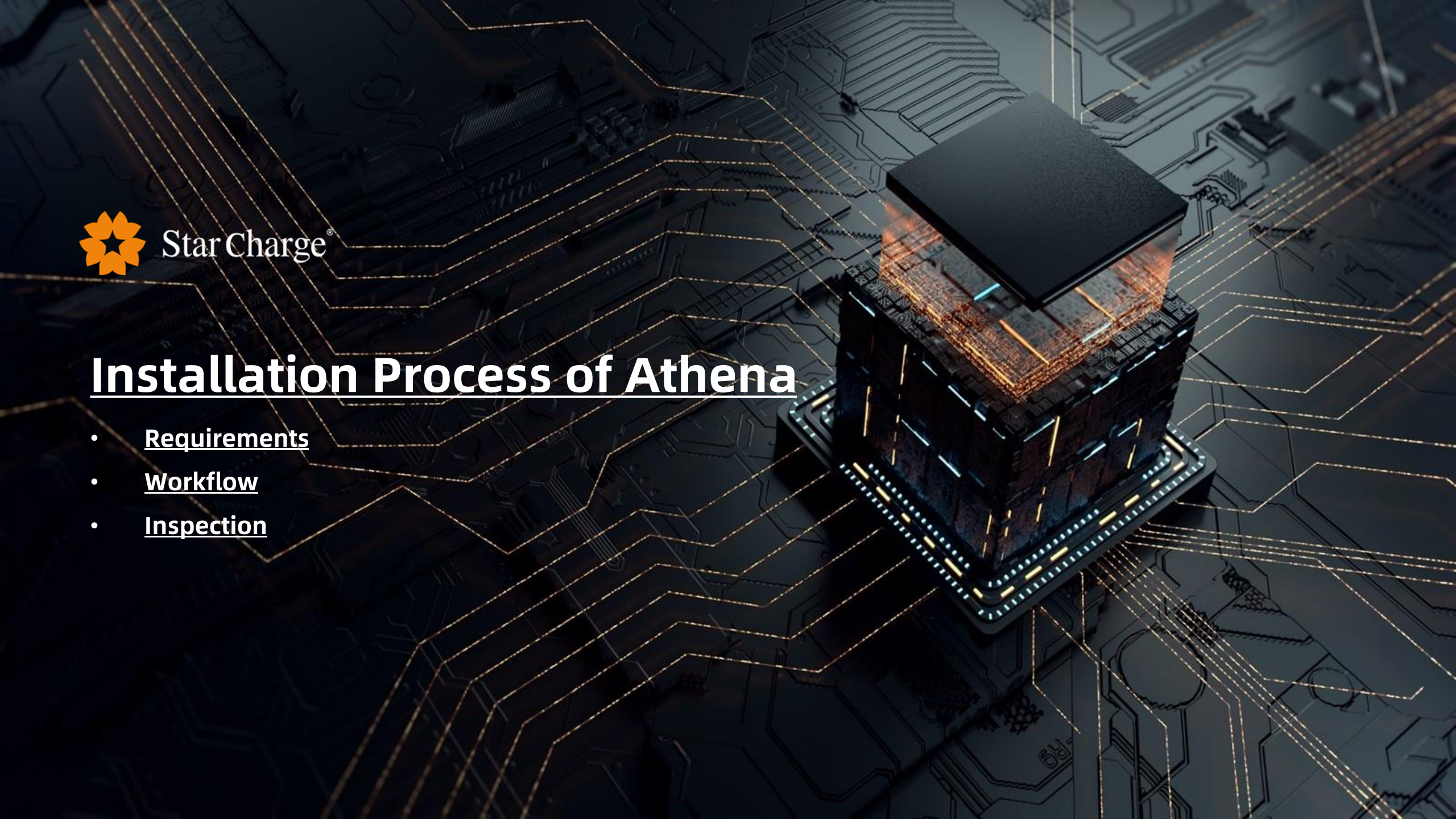
# Introduction of Athena 60KW




- High power factor > 95%
- Dual CCS2 connectors or CCS2 + CHAdeMO
- Simultaneous charging
- Supports TN-S, TN-C, TN-C-S, TT, IT
- Output current 200A (CCS2) ,125A(CHA)
- Wide output voltage 200-1000V

# Specifications Athena

| Athena 60kW | | |
|---|---|---|
| **Power Input** | **Input Rating** | 400Vac±10%, 3-Phase, 50/60 Hz, L1+L2+L3+PE |
| | **Power Factor** | 0.99 at nominal output power |
| | **Current THD** | ≤5% at nominal output power |
| | **Efficiency Rectifier** | ≥95% at nominal output power |
| **Power Output** | **Output Interface** | Configuration1: 2 x CCS2<br>Configuration2: CCS2 + CHAdeMO |
| | **Output Power** | CCS2: 60kW max., CHAdeMO: 60kW max. |
| | **Output Voltage** | CCS2: 150-1000Vdc, CHAdeMO: 150-500Vdc |
| | **Output Current** | CCS2: 200A max. , CHAdeMO: 125A max. |
| **User Interface & Control** | **Display** | 7'' LCD Touch Panel |
| | **Support Language** | Simplified chinese, English, Other languages available upon request |
| | **Push Buttons** | Emergency stop button |
| | **RFID Reader** | ISO/IEC 14443 A/B Mifare RFID reader |
| **Communication** | **Network Interface** | 4G, Wi-Fi, Ethernet |
| | **Protocol** | OCPP1.6J |
| **Environmental** | **Operating Temperature** | -30℃ - 50℃ |
| | **Storage Temperature** | -30℃ - 70℃ |
| | **Humidity** | 5%-95% no condensation |
| | **Altitude** | ≤2000m |
| **Mechanical** | **Ingress Protection** | IP54 |
| | **Enclosure Protection** | IK10 (IK08 for display) |
| | **Cooling** | Forced air |
| | **Charging Cable Length** | CCS2+CCS2 Version: 5m, CCS2+CHAdeMO Version: 4.5m |
| | **Dimension (WxHxD)** | 750*750*310mm (depth without connector holder) |
| | **Weight** | approx. 125kg (excluding power modules) |
| | **Installation** | Column-mounted, Wall-mounted |
| **Regulation** | **Certificate** | CE, TR25,RCM |




# Installation Process of Athena

- Requirements
- Workflow
- Inspection

## 1.Requirements for grid capacity and grounding / insulation resistance

- The power grid is 3-phase system (L1 + L2 + L3 + PE), the phase-to-phase voltage is 400V (± 10%), and the frequency is 50 ~ 60Hz.
- It is recommended that the MCCB should be Ue:400Vac, In: 160A, thermo-magnetic type, Icu ≥Ics ≥40kA, 3P.
- Civil grounding resistance must be ≤ 4Ω .
- Civil insulation resistance must be ≥10MΩ.

## 2.Maintenance distance (mm)

Unit: mm

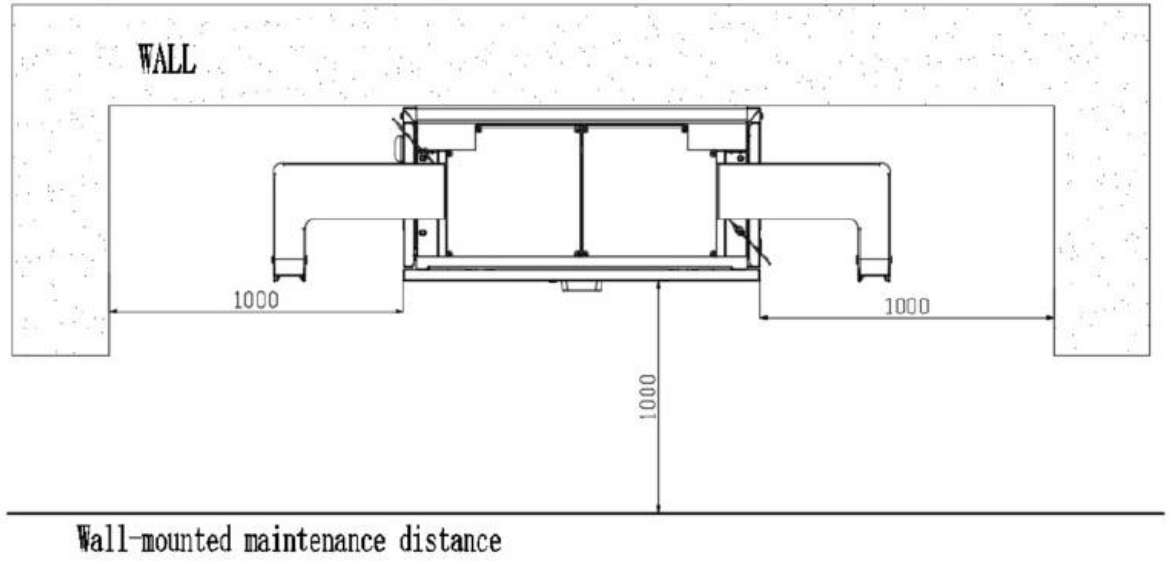



Figure 3 Wall-mounted maintenance distance diagram

Unit: mm

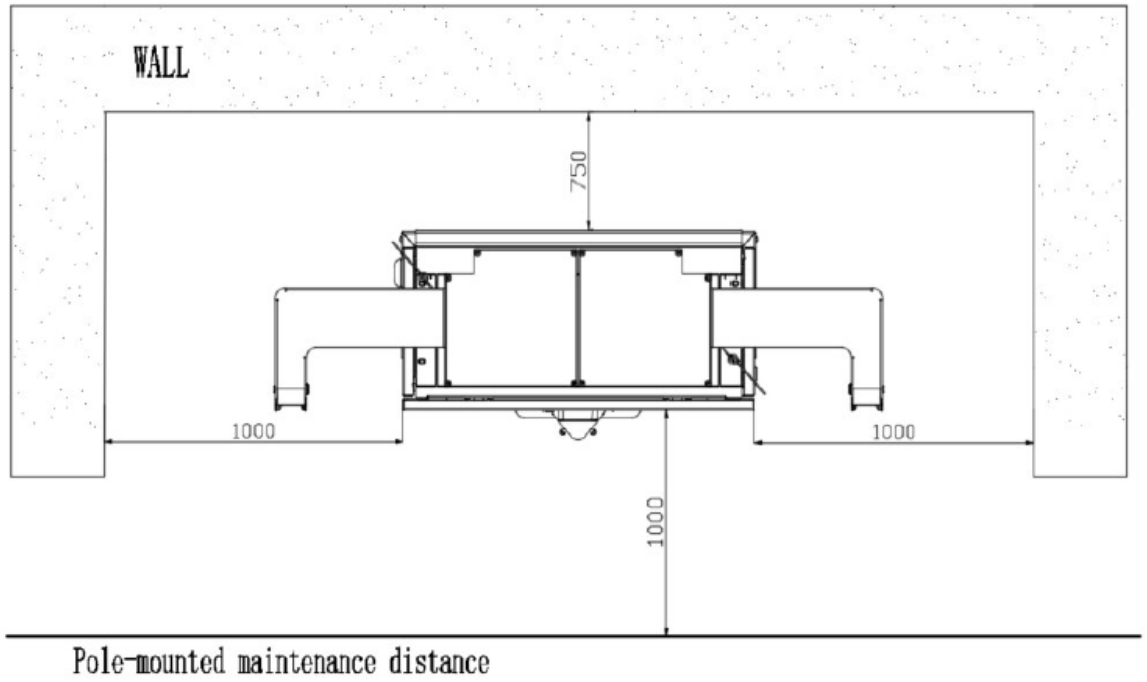



Figure 4 Pole-mounted maintenance distance diagram

## 2.Maintenance distance (mm)

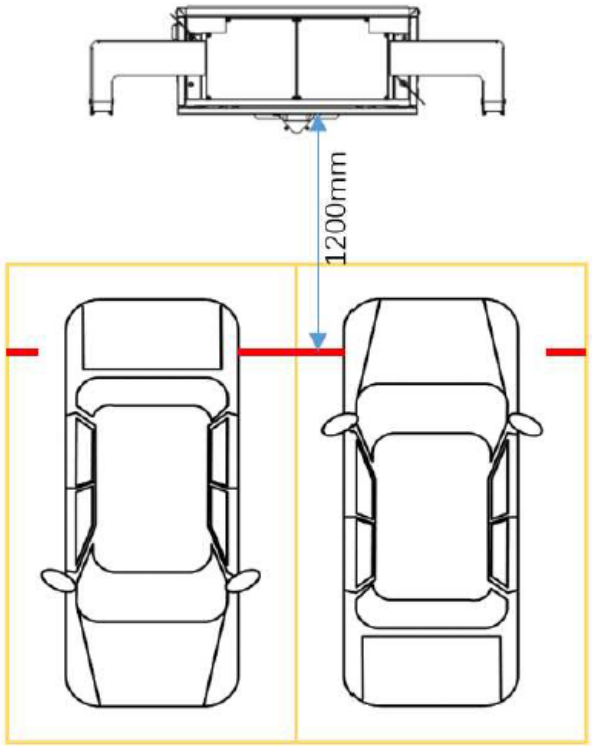



Figure 5 Distance requirements for parking spaces

## 3.Dimension of concrete base

If there is no suitable installation place on site, it is recommended to build a concrete foundation.

The size of the concrete (C20) base is 450mm*500mm*500mm, the underground depth of is 500 mm.

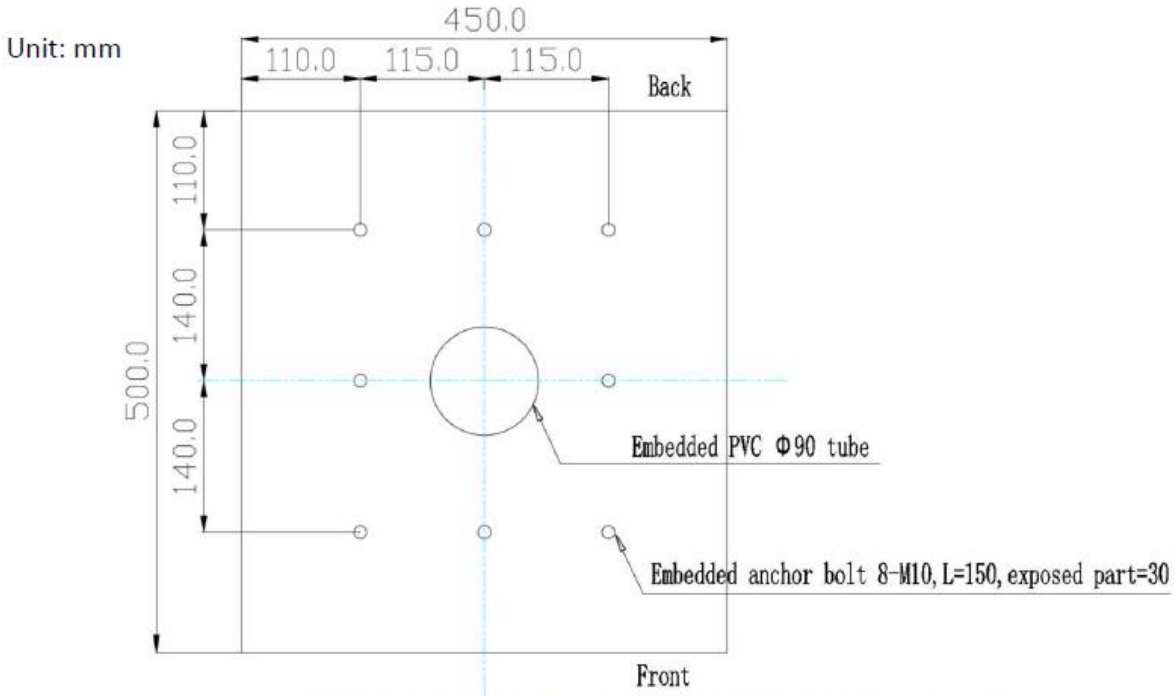
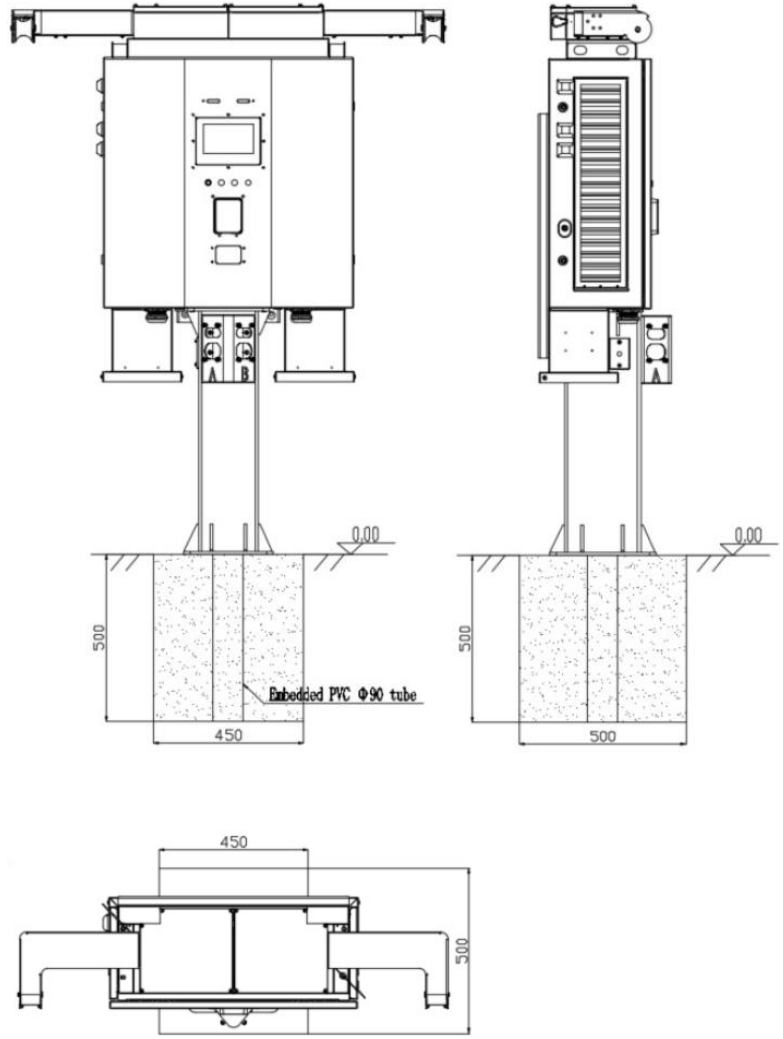



Figure 1 Top-view drawing of concrete foundation



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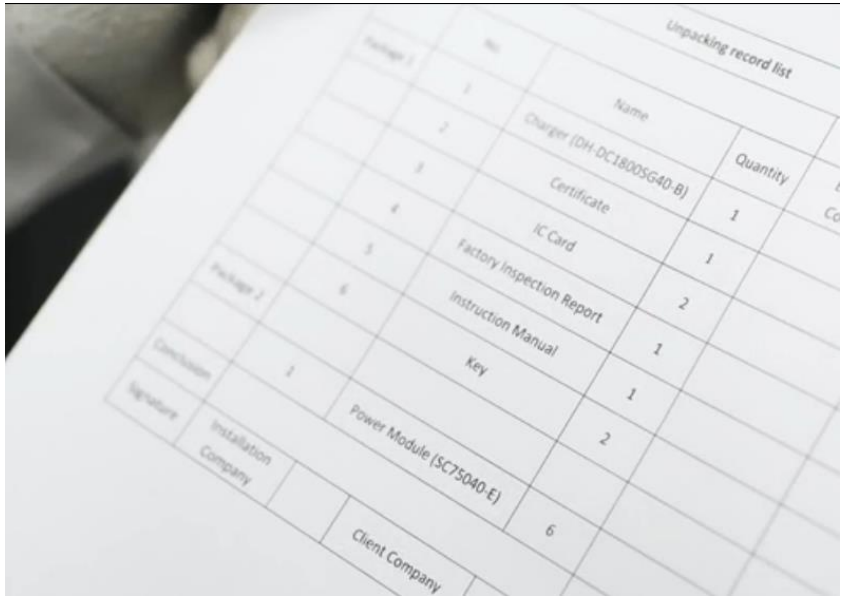
## 4.Power cable specification

Recommendation:

- Cross sectional area: 3 * 50mm² + 1 * 25mm²
- Core material: copper

## 1. Unpacking inspection

- The installer open crate in the presence of customer
- After unpacking inspection, invite customer's representative to confirm and sign on the unpacking record sheet.
- In case of any problem found during the unpacking inspection, besides making record, notify the supplier.
- Fill out the unpacking record sheet.  (Appendix 1 of installation manual)



## 1. Unpacking inspection

| Name | Package | Configuration | Package Size(mm) | Weight (kg) | Attachment paper | Parts List |
|---|---|---|---|---|---|---|
| DC charger | Wooden box | Standard | 1250 W<br>1110 D<br>765 H | 193 kg | 1*Certificate of conformity<br>1*Factory inspection report<br>1*User manual | 1*Mounting bracket<br>2*Door brace<br>8*Key<br>2*Connector holder<br>8* Screw M4<br>5* Expansion bolt M8<br>8* Expansion bolt M6 |
| Power module | | Standard | | | | |
| CMS assembly | Wooden box | Optional | 800 W<br>600 D<br>510 H | 60 | | 1* Adapter plate<br>2*Main part<br>4*Screw M8<br>8*Screw M6 |
| Pole | Wooden box | Optional | 550*472*915 | 45 | | 7* Screw M8<br>8* Expansion bolt M10 |

## 2. Check list before installation (Appendix 2 of installation manaul)

| Sub-project | Acceptance items |
|---|---|
| Installation plan | The installation location complies with the construction plan design drawings |
| Distribution box<br>MCCB | The distribution box meets requirements of section 2.8 in the installation manual |
| Input cable | Input power cable meets requirements of section 2.5 in the installation manual |
| | Network cable cat6a (if Ethernet communication is required) |
| Concrete foundation | Dimensions meet requirements |
| | Foundation bolts meet the requirements of section 2.6 in the installation manual |
| Maintenance distance | The maintenance distance meets the equipment spacing requirements in section 2.7 |

## 3.Determine installation position on the wall

1) Mark drill position on the wall.
2) Use drill bit of Ø 12 to make holes. The drilling depth is about 70mm.
3) Install the mounting bracket using M8 × 50 expansion screws.

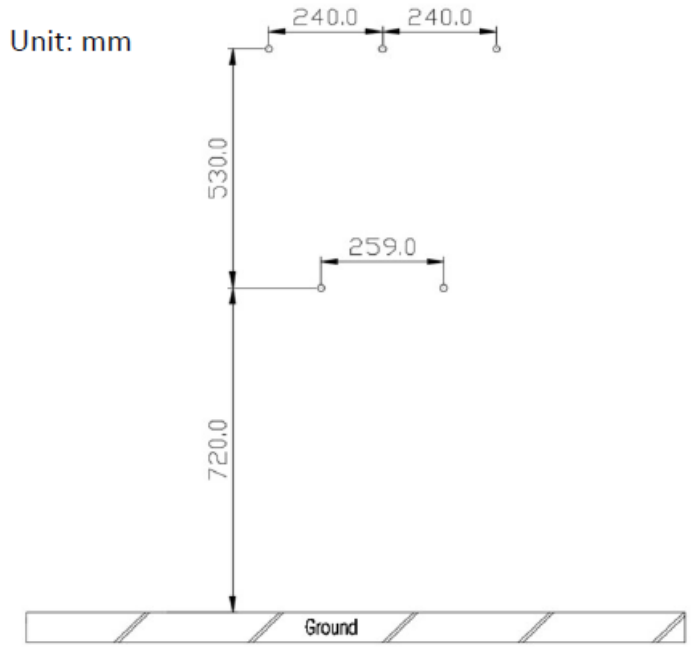



Figure 8 Marking the installation hole position

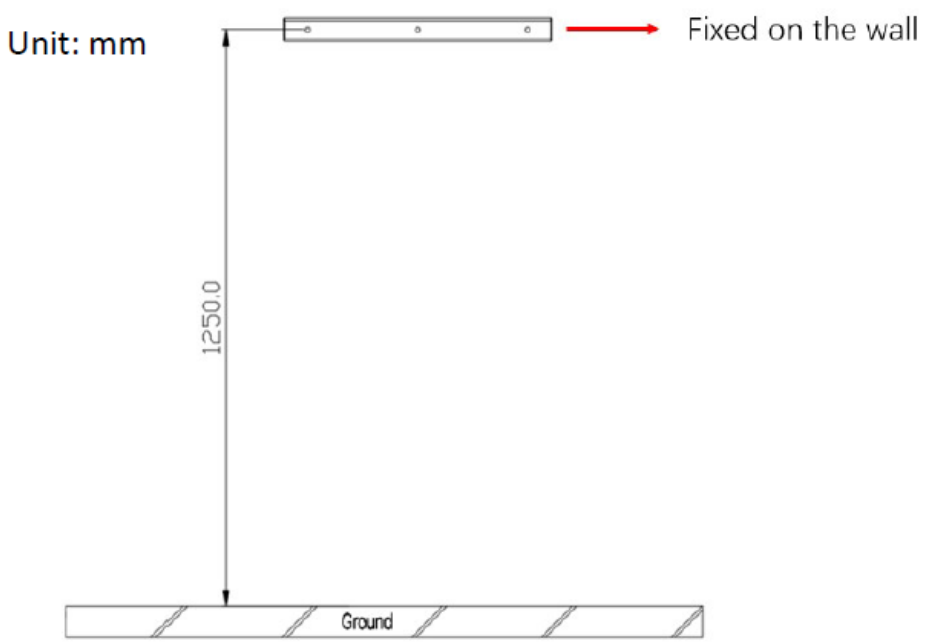
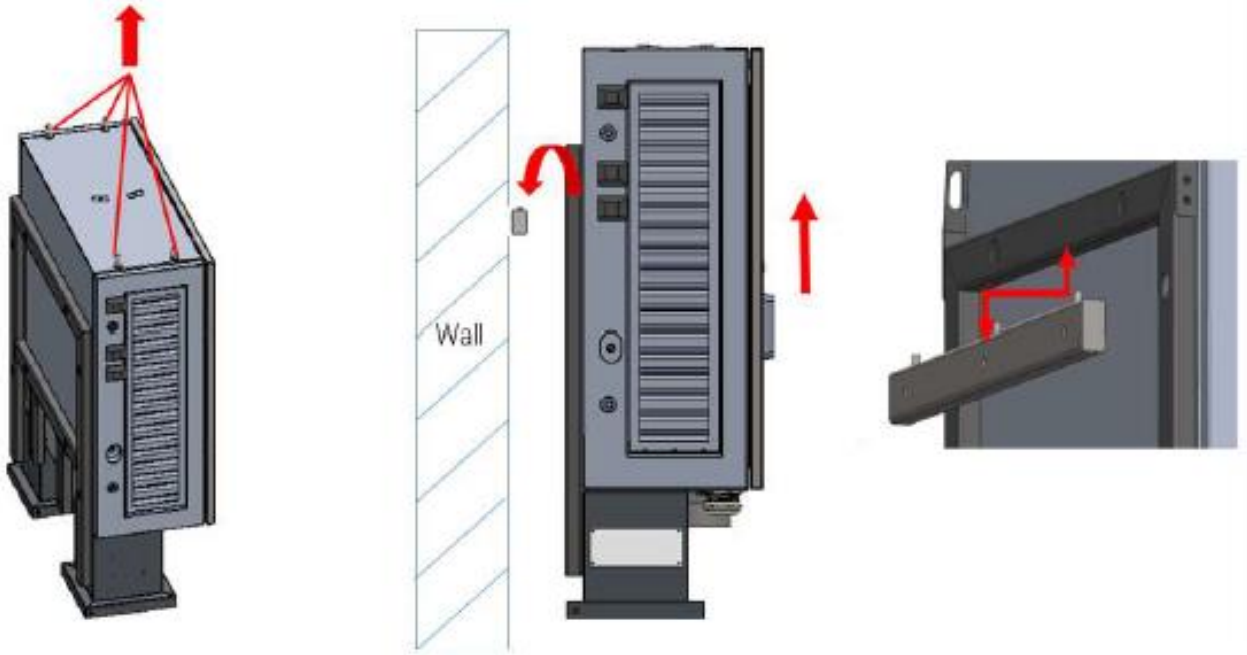



Figure 9 Installation of mounting bracket

## 4.Fix the charger on the wall

Lift the charger main body to its back slightly higher than the mounting bracket with a crane, and move it close to the wall until the mounting bracket contacts the back of the charger cabinet. Insert the three small protrusions on the upper side of the mounting bracket into the hole in charger cabinet.



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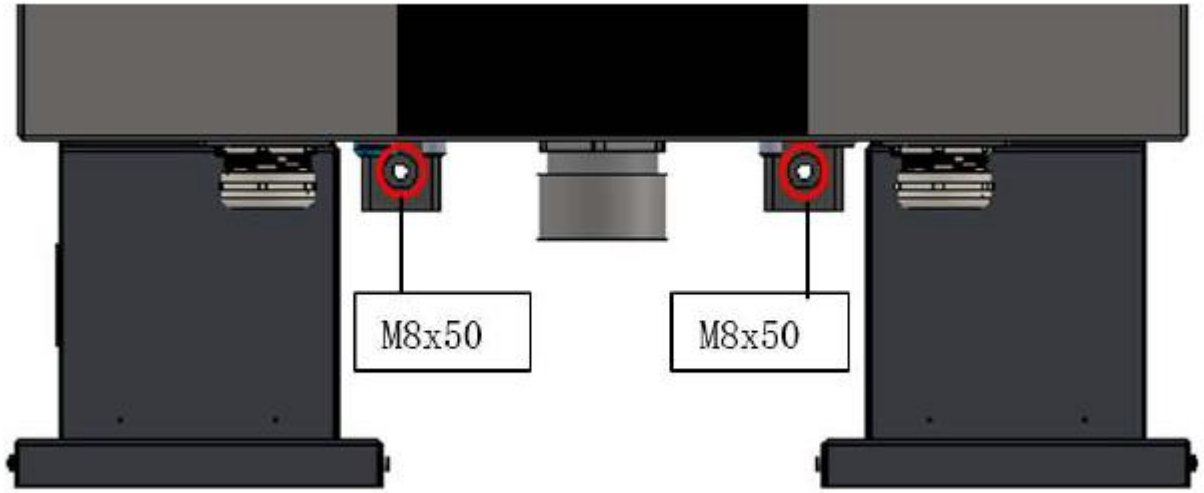
## 4.Fix the charger on the wall

Fix the lower part of the charger cabinet with M8 × 50 screws in the two mounting holes.



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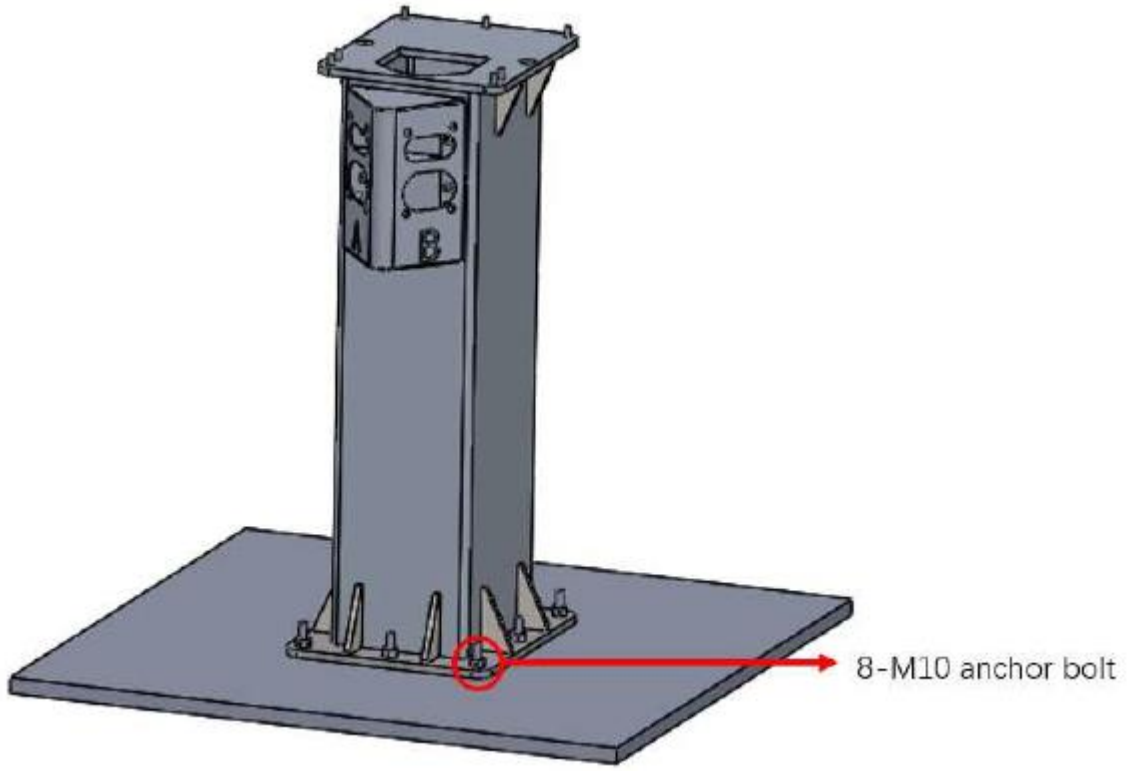
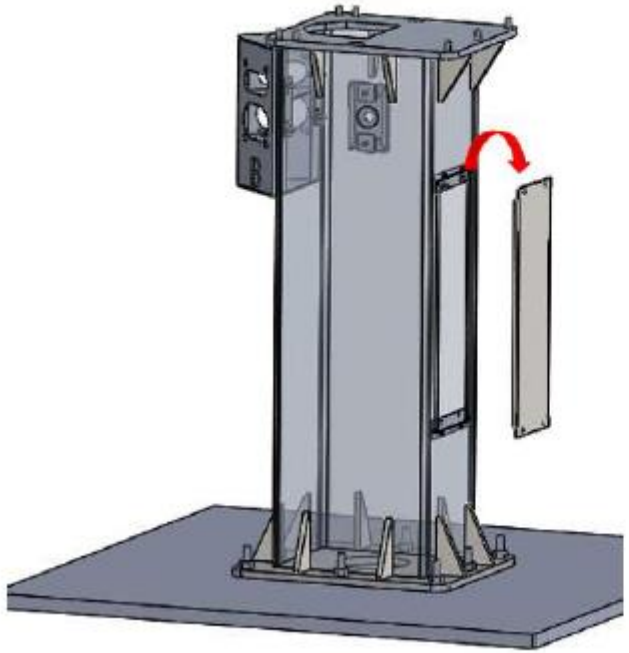
## 3.Install the pole on the foundation

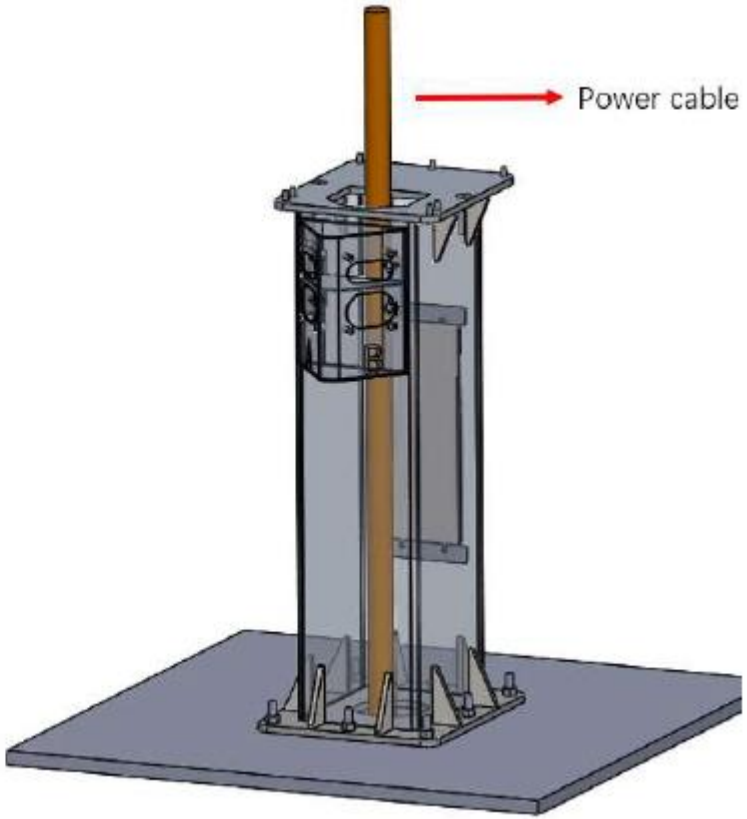
1) Fix the pole on the foundation with embedded anchor bolts of M10.



## 3.Install the pole on the foundation

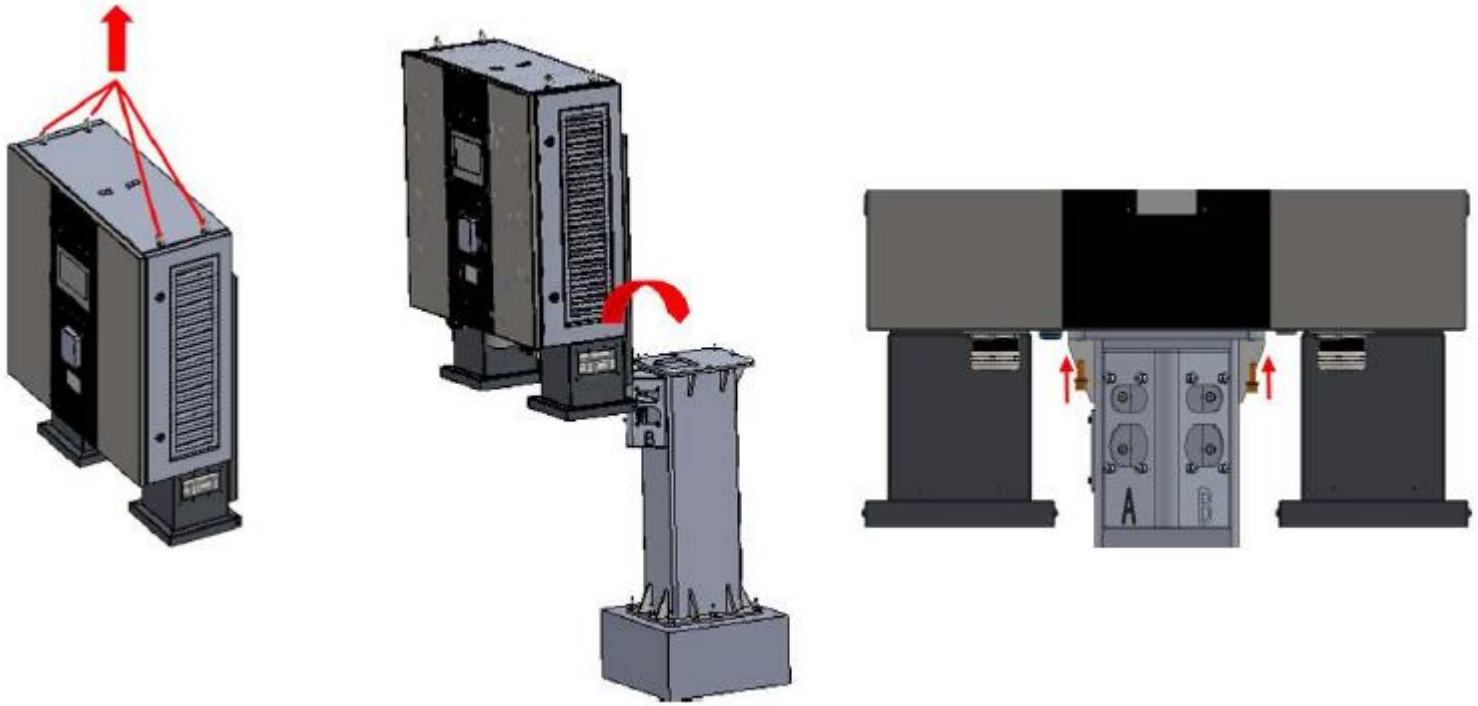
2) Remove the plate at the back side of the pole, insert the power cable from the foundation into the pole, then thread the cable through the hole at the upper part of the pole





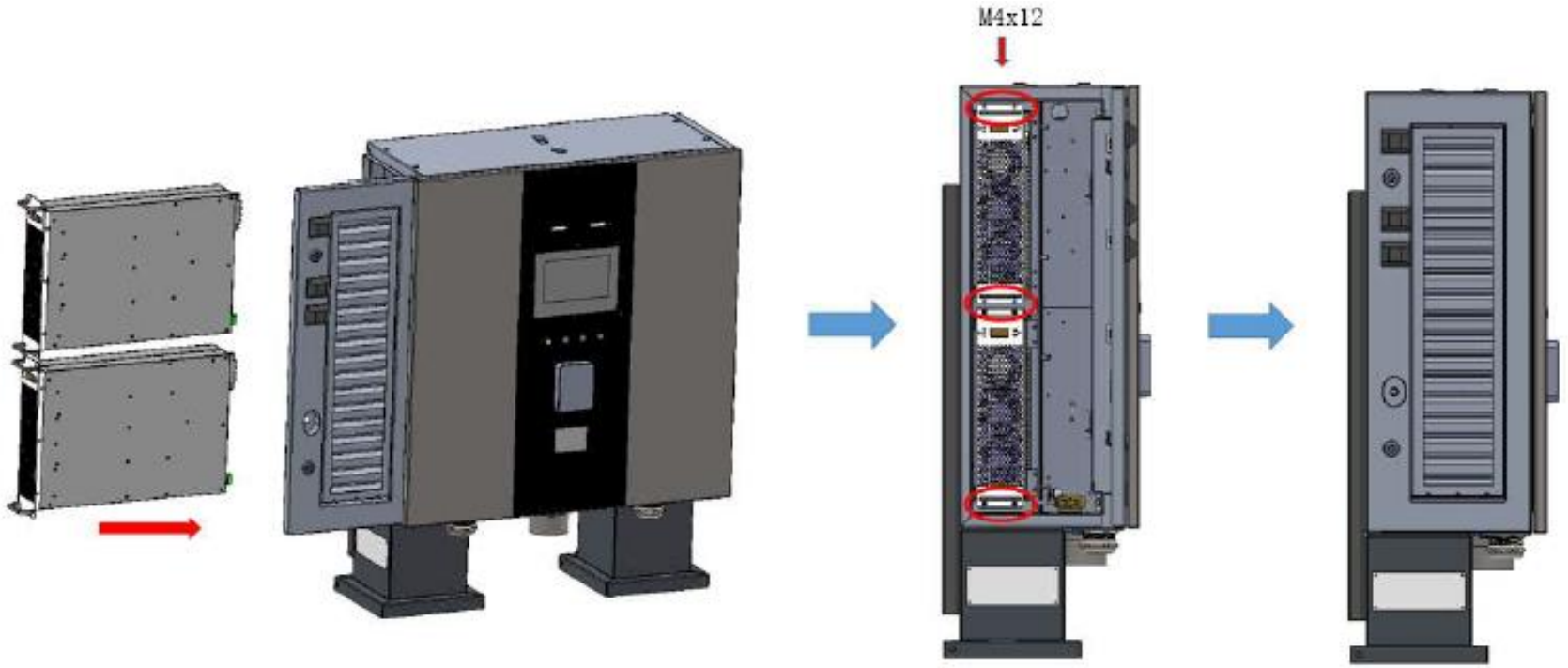
## 4.Fix the charger on the wall

Move the charger cabinet to the pole position by crane, align the screw holes, and fix the charger cabinet on the pole with 7 screws of M8 × 30,



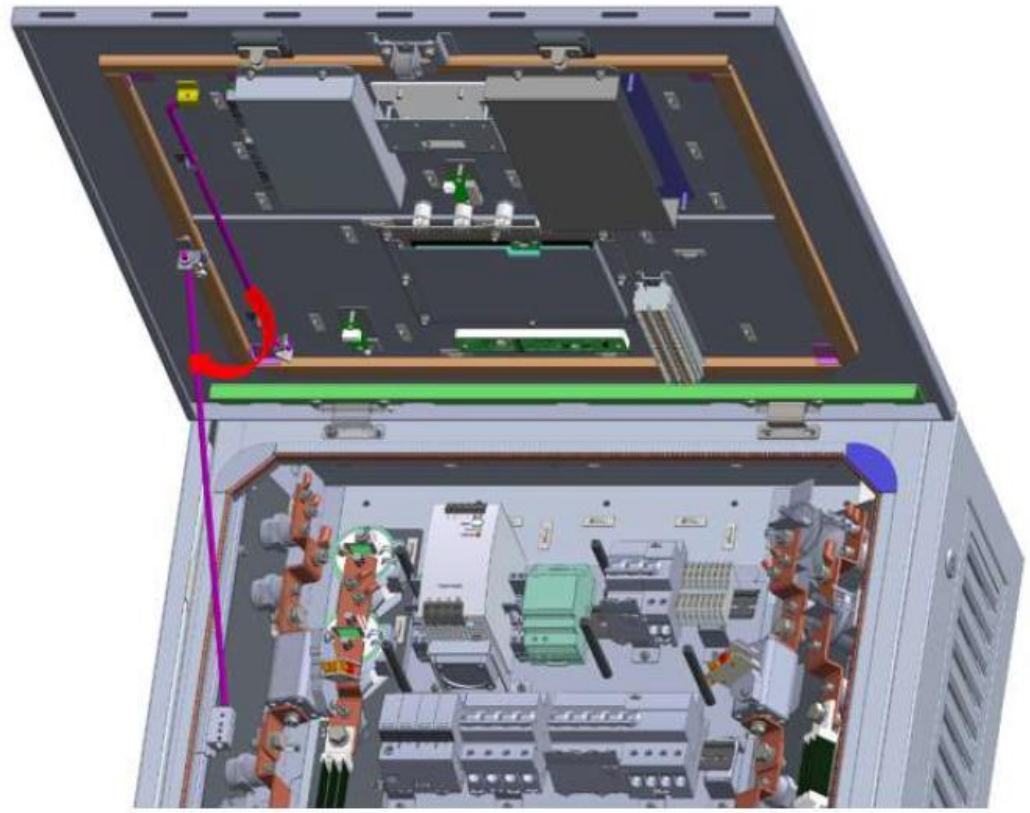
## 5.Insert power module

Open the left door, put the charging modules into the charger cabinet, tighten the four screws (M4 × 12) for each power module. Then close the left door,



## 6.Connect input power cable

1) Open the front door from the bottom, remove the brace and prop up the front door



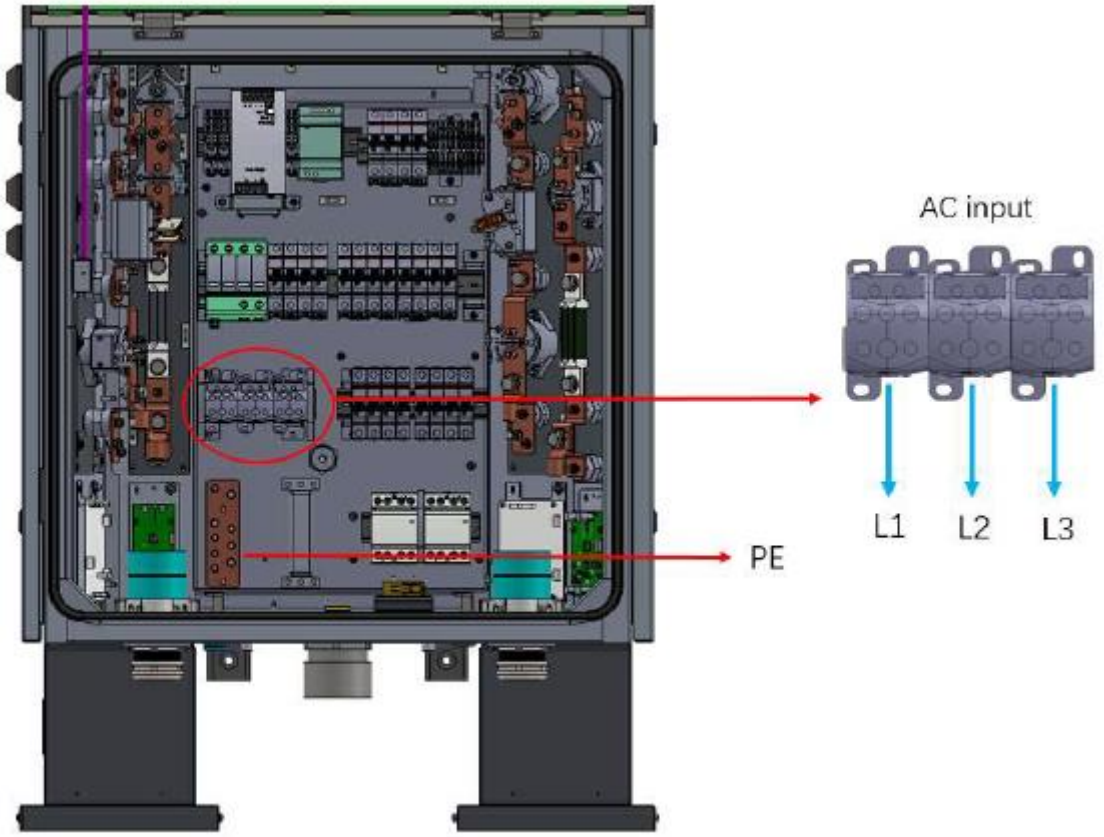
## 6.Connect input power cable

2) Unscrew the screws of the transparent protective cover and remove the transparent protective cover

## 6.Connect input power cable

3) Wiring: Thread the power cable through cable gland on the bottom into the charger cabinet.

Connect the L1 \ L2 \ L3 three-phase to the corresponding incoming terminals, and the PE wire to the PE copper bar.



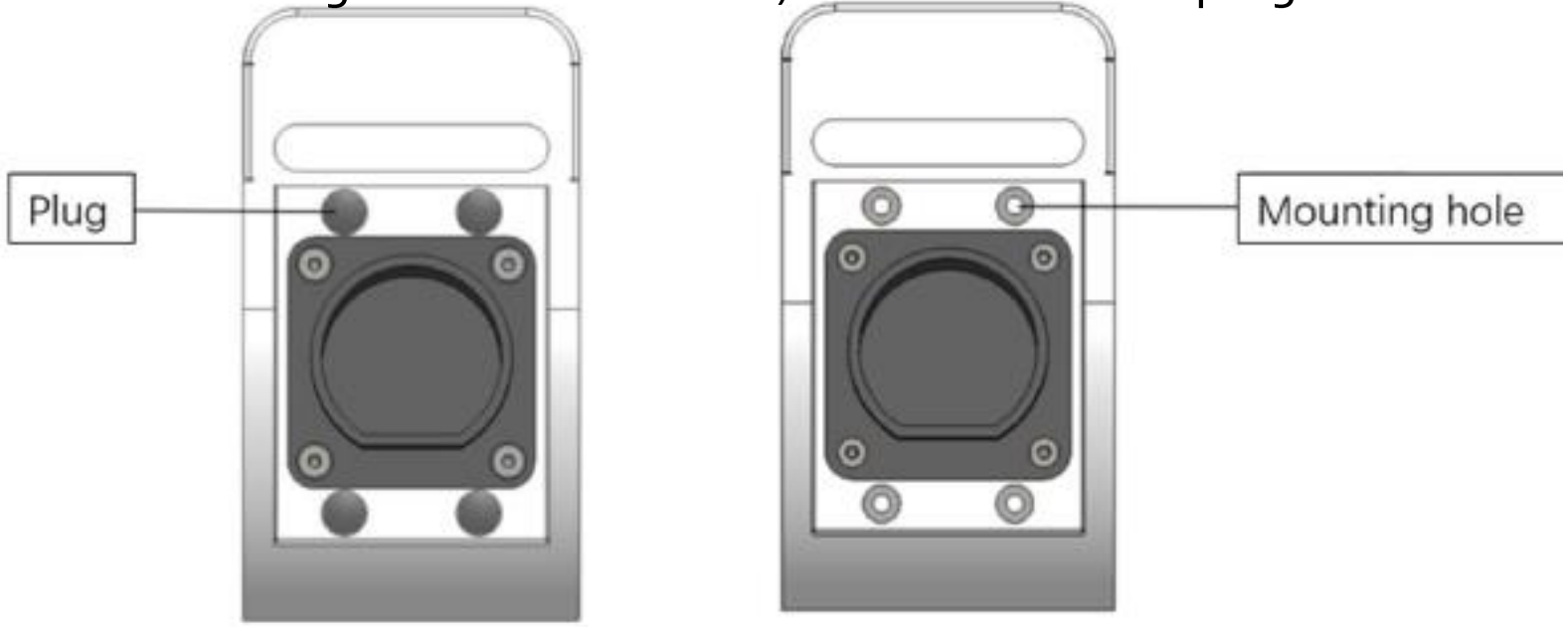
## 7.Install connector holder – Wall mounting

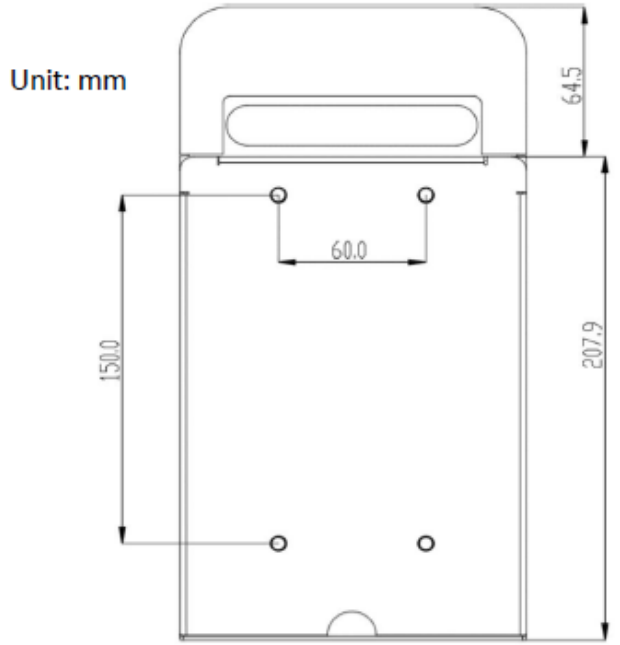
Remove four black plugs on the connector holder, select a suitable position on the wall.

It is recommended that the lower edge is 950mm away from the ground.

Use a drill bit of Ø 10 to drill holes with a depth of about 70mm. Tap M6 × 50 expansion screws into the hole and fix the connector holder.

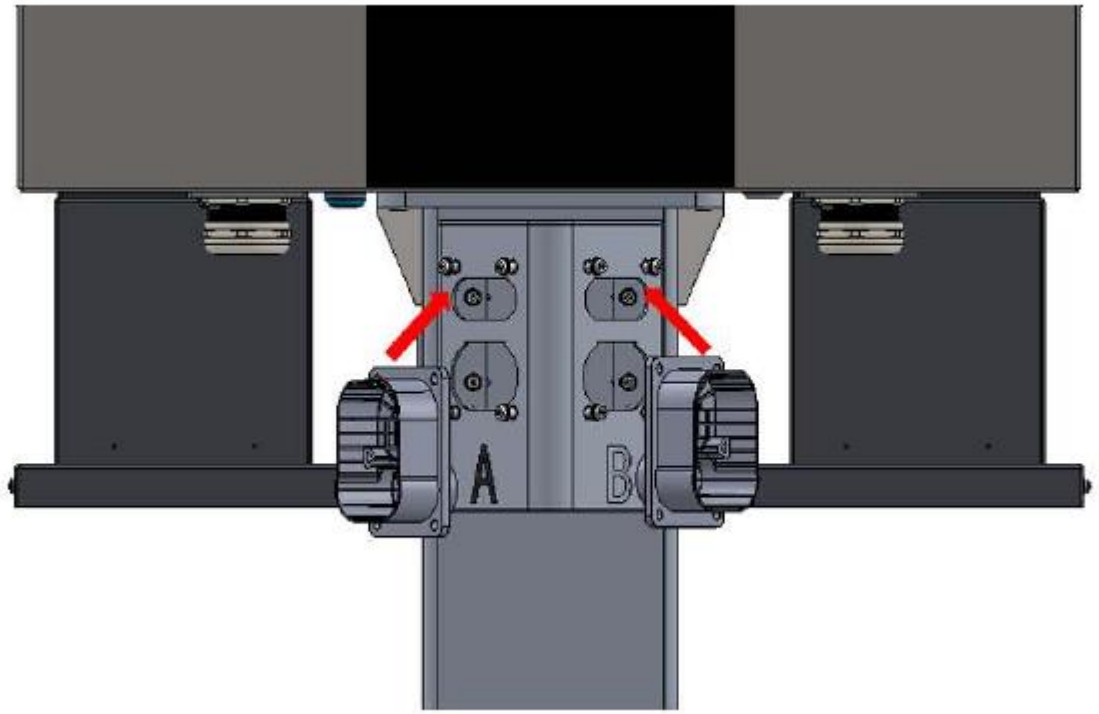
After installing connector holders, restore the black plugs.



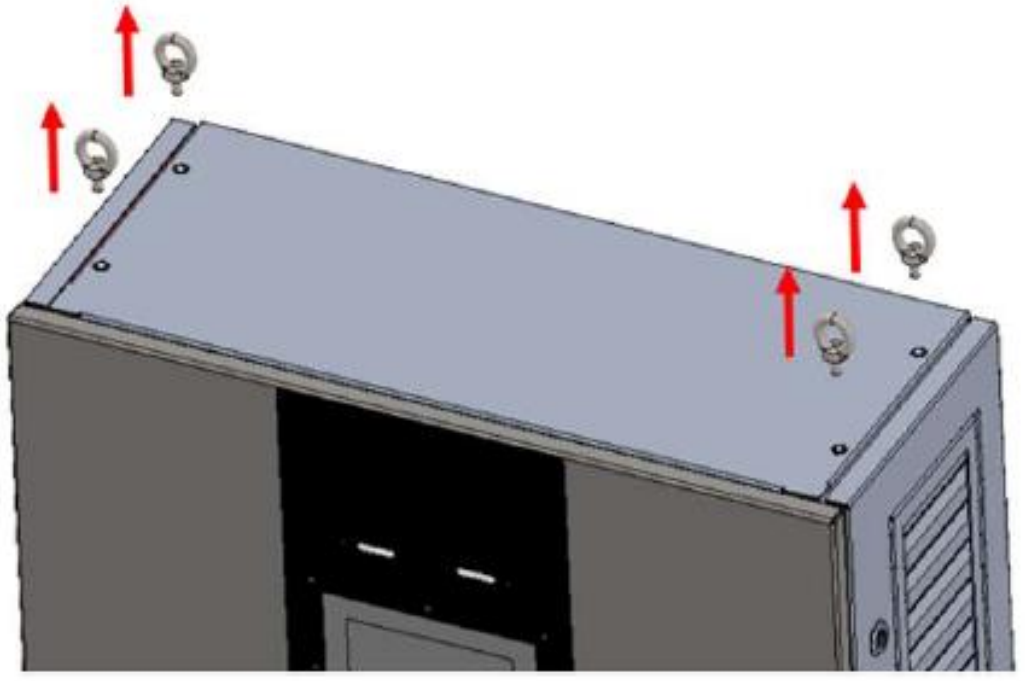
## 7.Install connector holder – Wall mounting

Fix the connector holder with 4 M6× 16 bolts screws on the pole



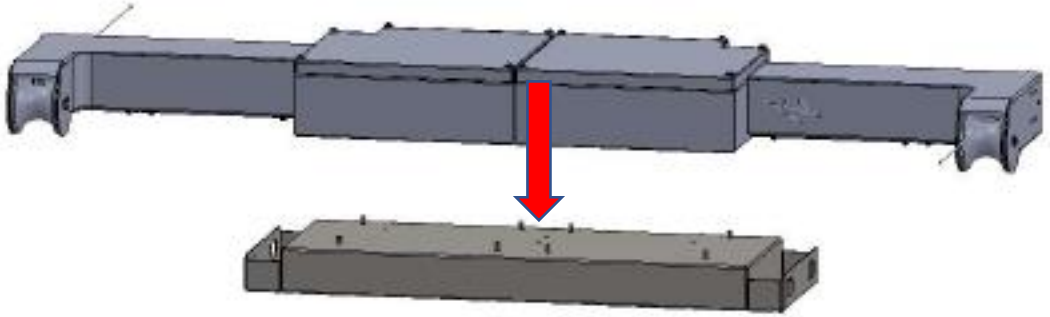
## 8.Install cable management system

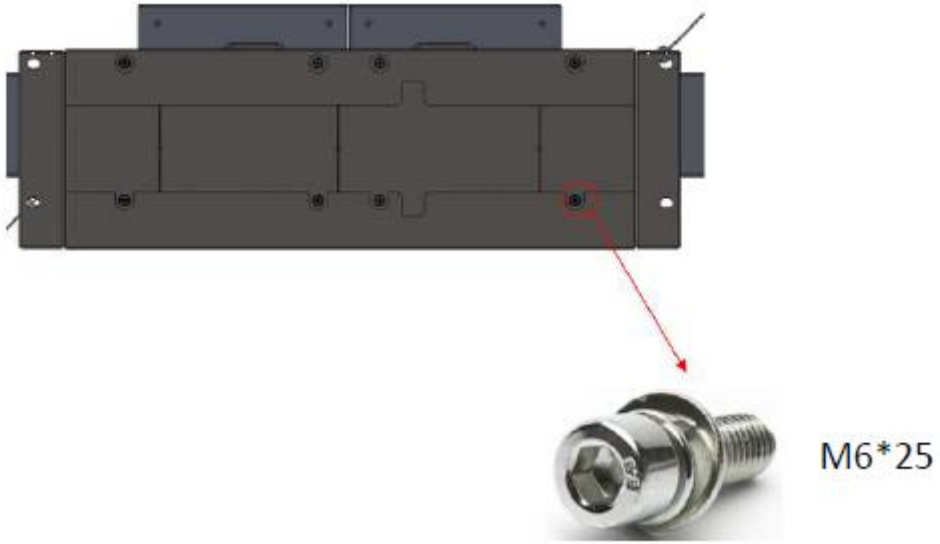
1) Remove the hoisting rings on the top of the charger cabinet.



## 8.Install cable management system (CMS)

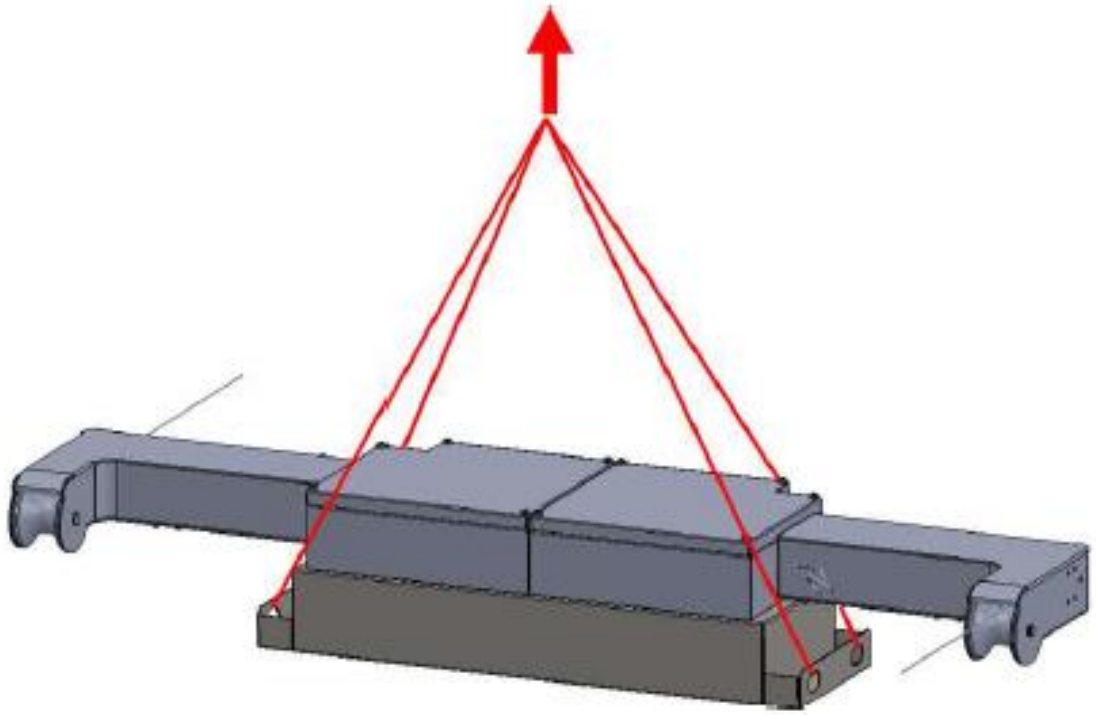
2) Assemble the CMS with the adapter plate, fasten the CMS with the screws on the back of the adapter Plate.

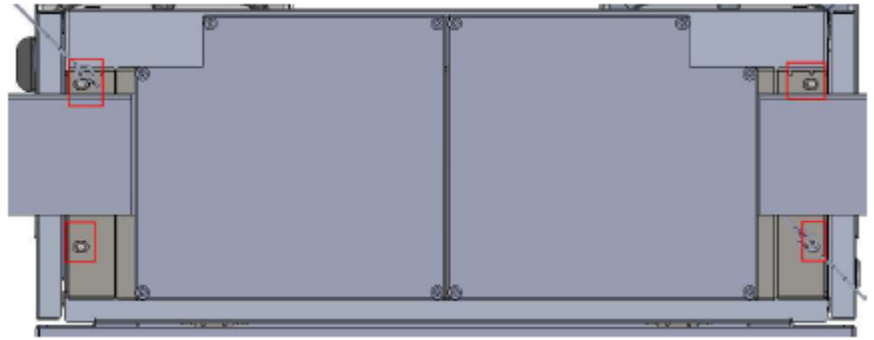




## 8.Install cable management system

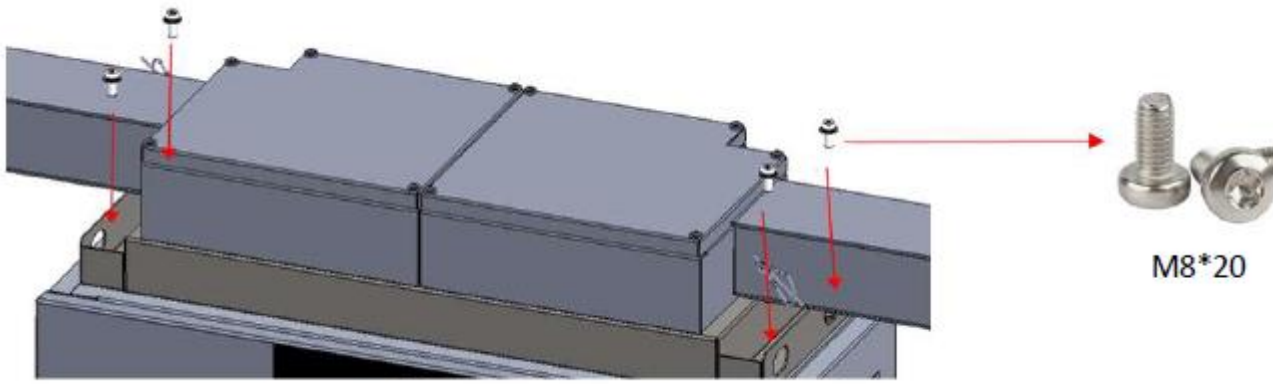
3) Hoist the CMS, move it onto the top of the charger cabinet and align the mounting holes on the charger cabinet.

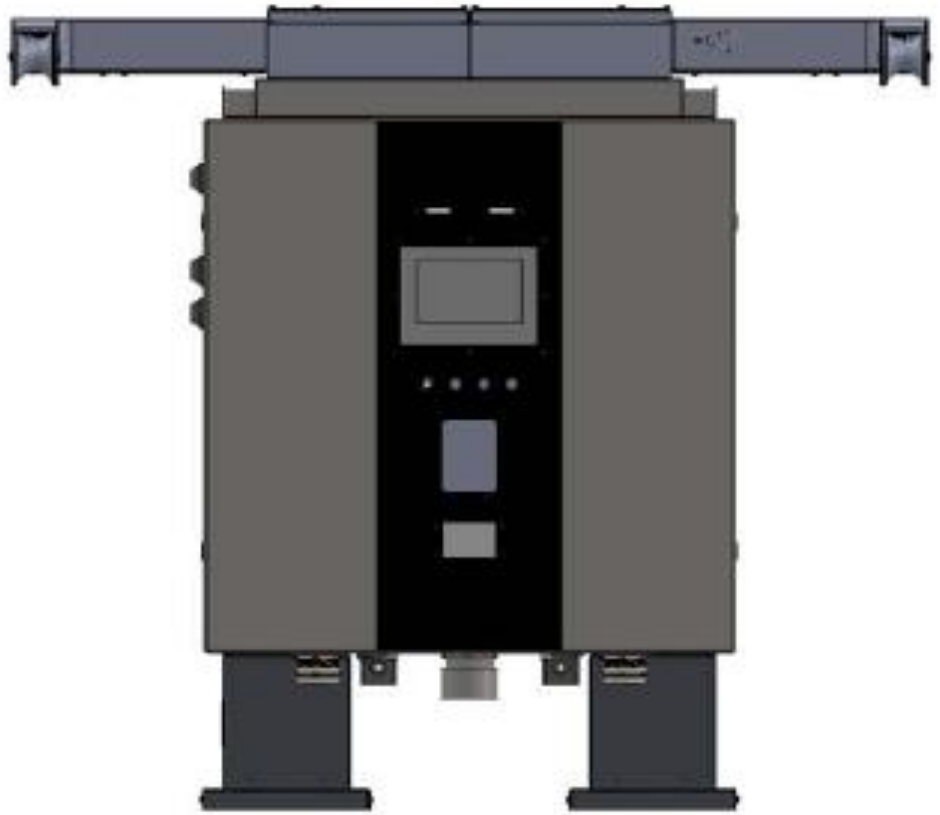




## 8.Install cable management system

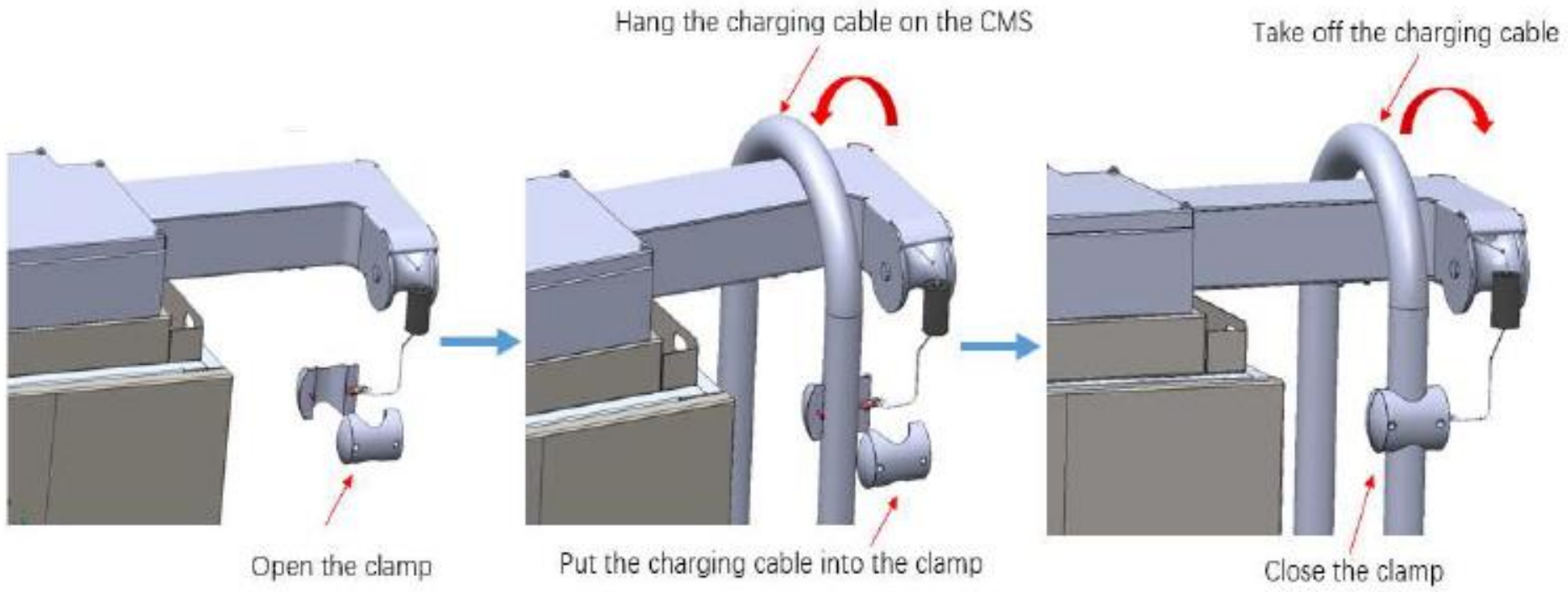
4) Fix the adapter plate and the charger main body with screws.



## 9. Fix cable to the clamp

First open the clamp, then hang the charging cable on the CMS and put it in the clamp, finally close the clamp, shown in Figure 26. The fixed point of charging cable is 2.5m from the outlet gland



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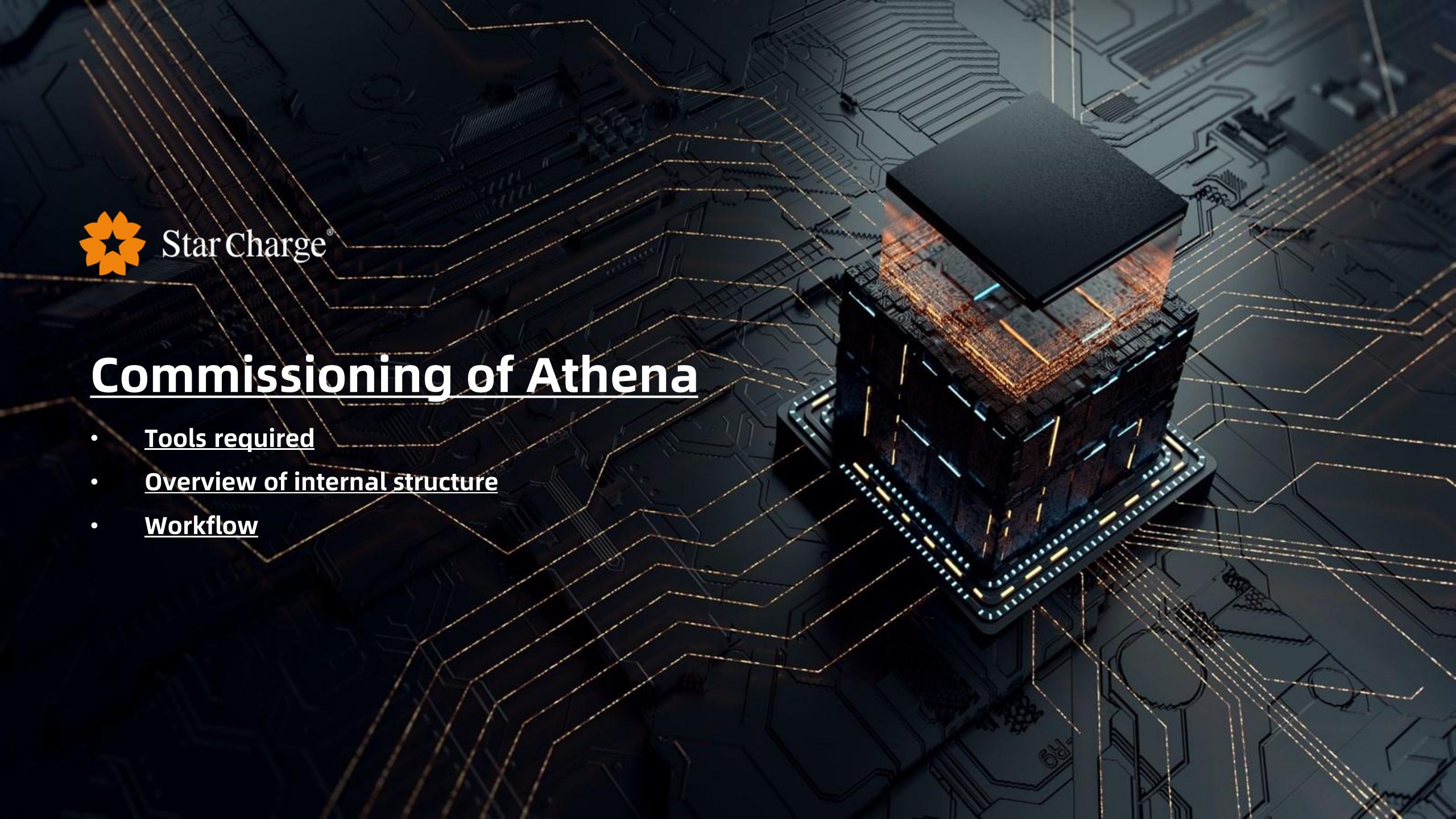
## Final effect

# Inspection after installation

(1) Short circuit: check the power supply cable , there should no short circuit between the three-phase wire, neutral wire and ground wire.

(2) Power supply voltage : Check the power supply voltage in distribution cabinet, ensure there are no lack-phase, over voltage, under voltage, phase sequence abnormality.

(3) Line voltage of charger inlet terminal should be 400V (±10%).




# Commissioning of Athena

- Tools required
- Overview of internal structure
- Workflow

# Commissioning Tools

| Item | Tools | Usage | Example |
|---|---|---|---|
| 1 | Laptop | Configure the settings, read the log, Troubleshooting |  |
| 2 | Ethernet cable | Connect laptop to charger |  |
| 3 | J – LINK tool | Firmware update |  |
| 4 | TF Card and reader | Firmware update |  |
| 5 | Screwdriver set | Assemble and disassemble the screws |  |

# Commissioning Tools

| Item | Tools | Usage | Example |
|---|---|---|---|
| 6 | Wrench set | Standby |  |
| 7 | Electrical multimeter | Electric measurement |  |
| 8 | Megohmmeter | Test the insulation |  |
| 9 | Safety Sign | Warn potential danger on site |  |
| 10 | Electrician protective gloves | Safety protection |  |
| 11 | Electrician protective Shoes | |  |

# Overview of internal structure

① DC Relay

② Fuse Protector

③ Switching Power Supply

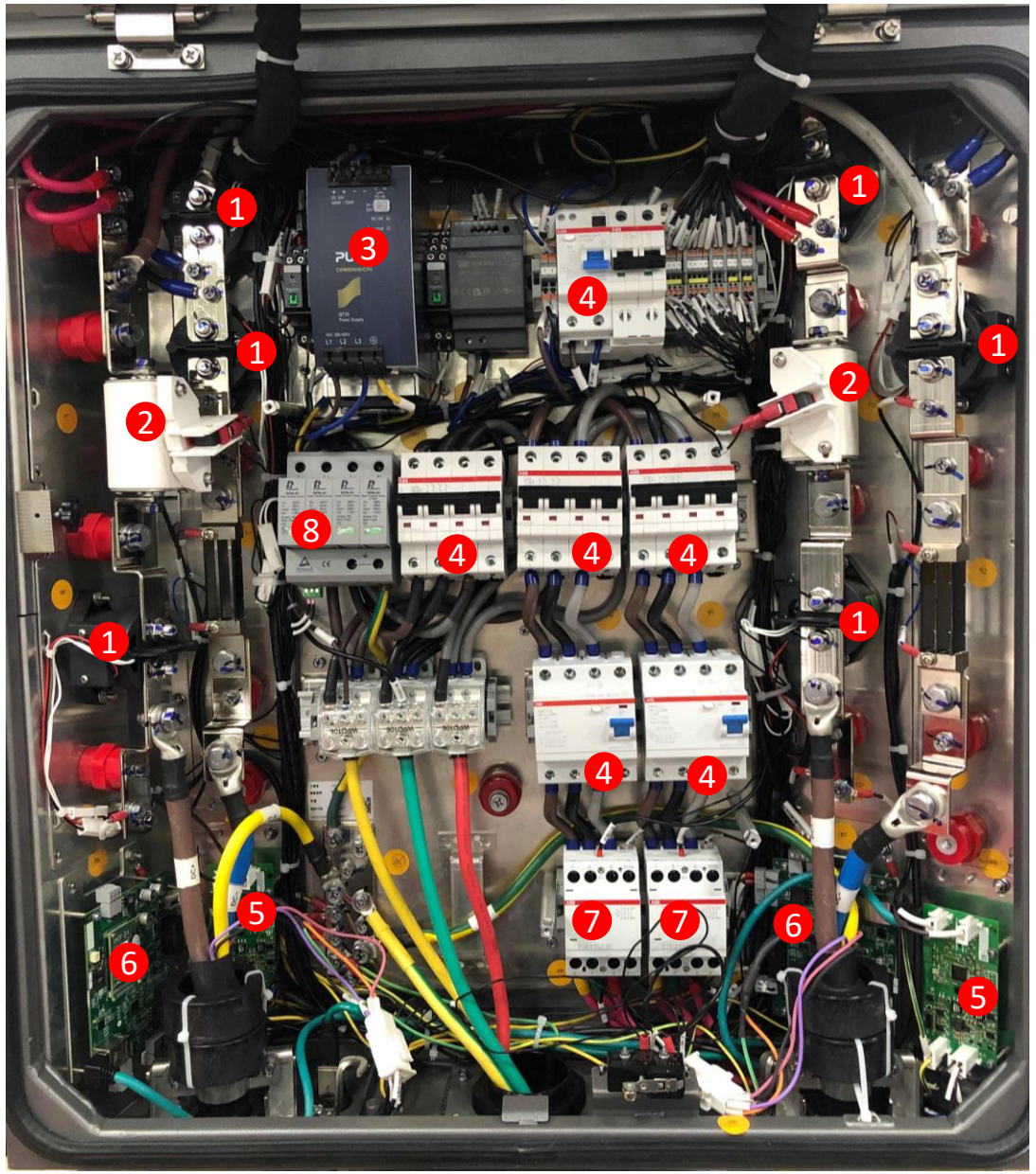
④ Residual Current Operated Miniature Circuit Breaker

⑤ Insulation Testing Board

⑥ SECC Board

⑦ AC Contactor

⑧ Surge Protection Device



# Overview of internal structure

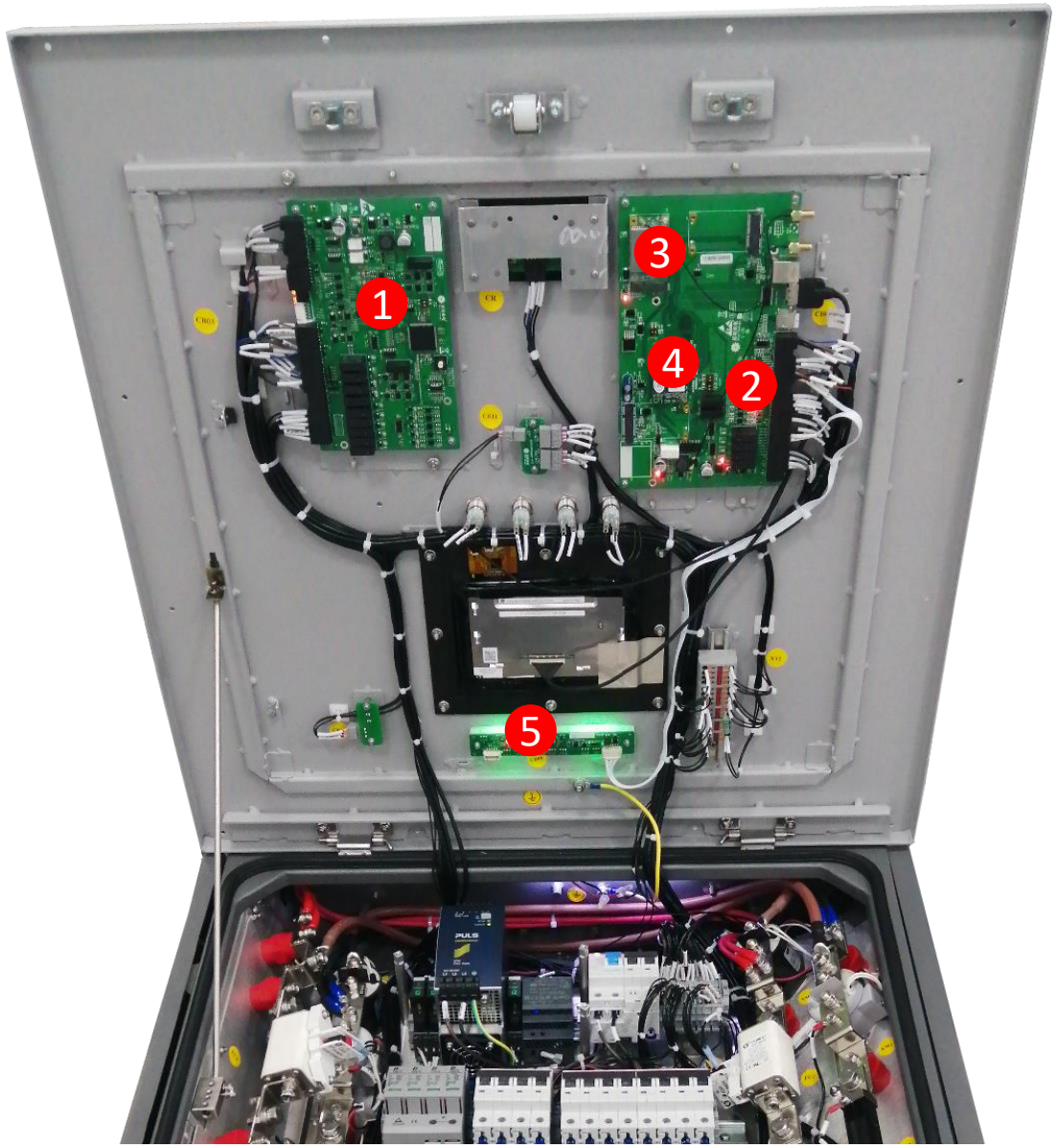
① M4 Control Board

② A7 Main Board

③ 4G Communication Board

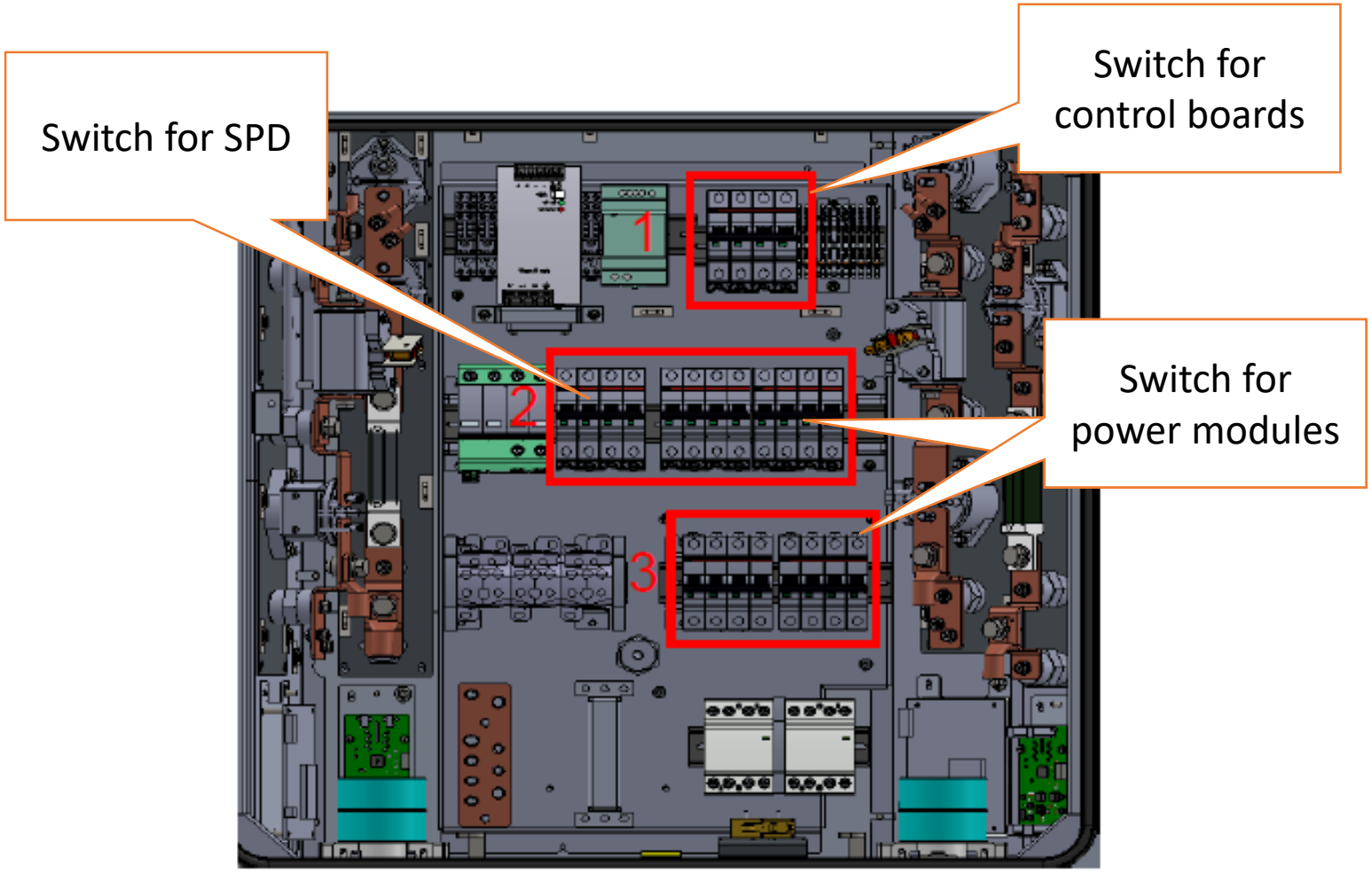
④ A7 Core Board

⑤ LED Indicator board



## Overview of internal structure

The function of switches inside charger cabinet.



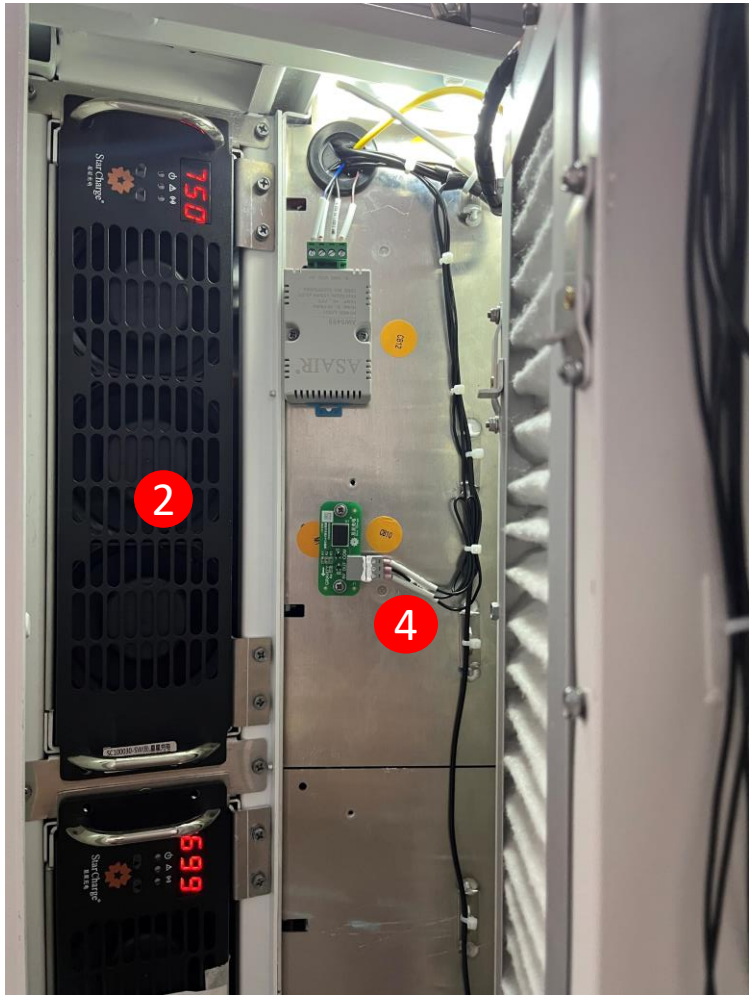
# Overview of internal structure

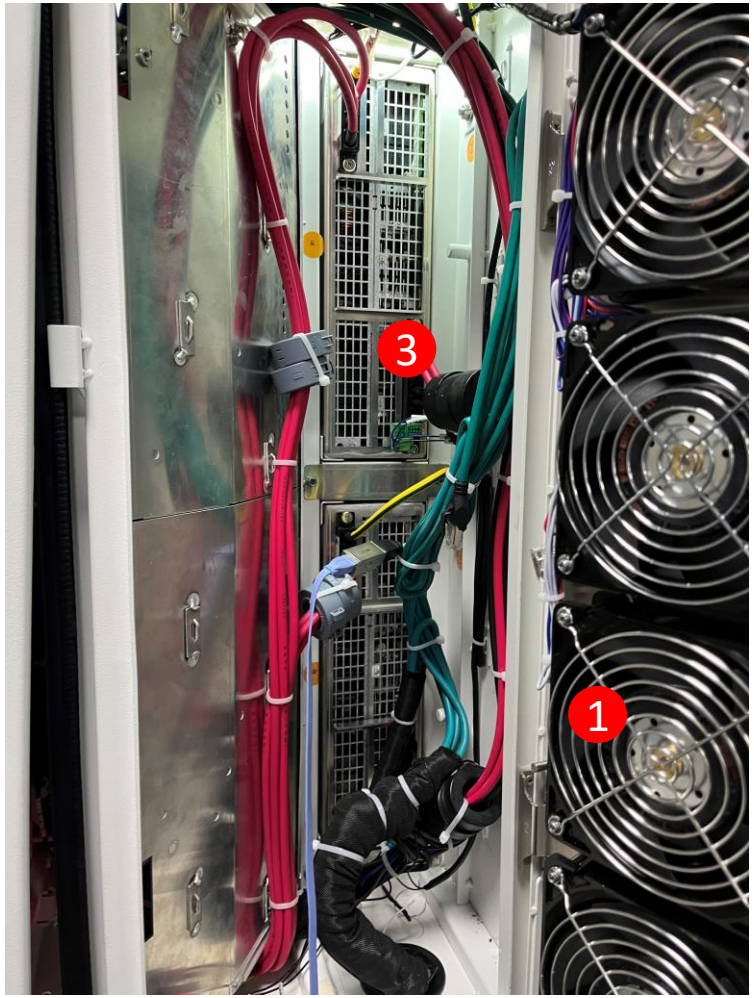
① Fan

② Power Modules

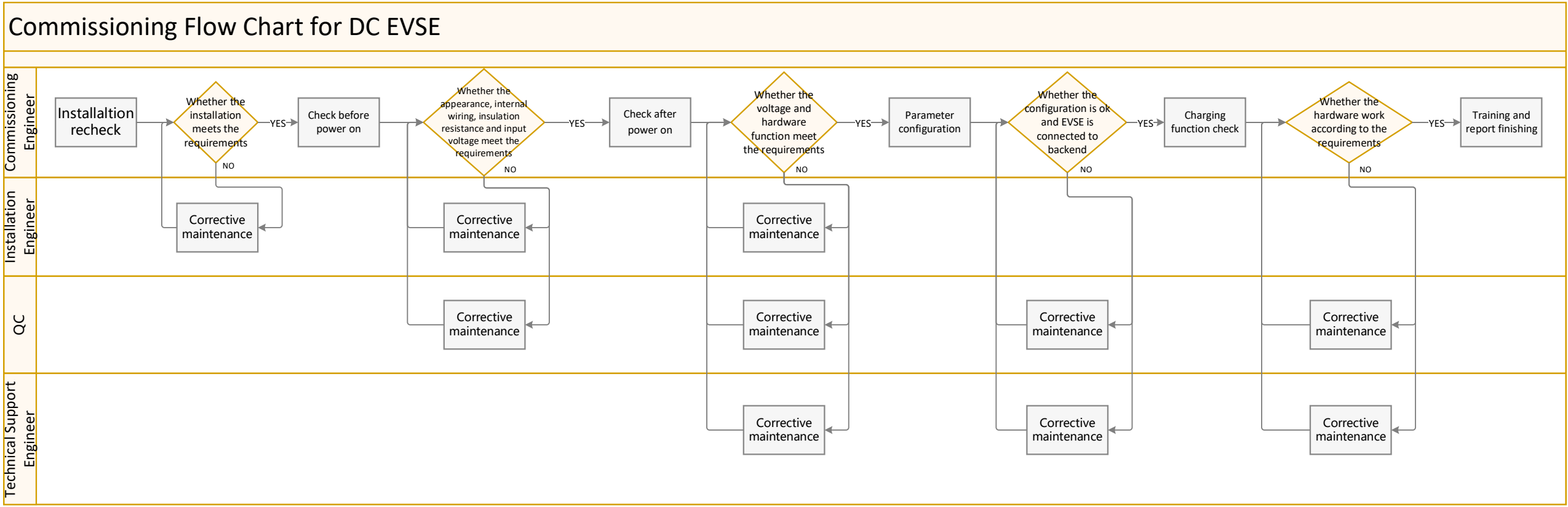
③ Power module socket

④ Tilt switch



# Commissioning Flowchart

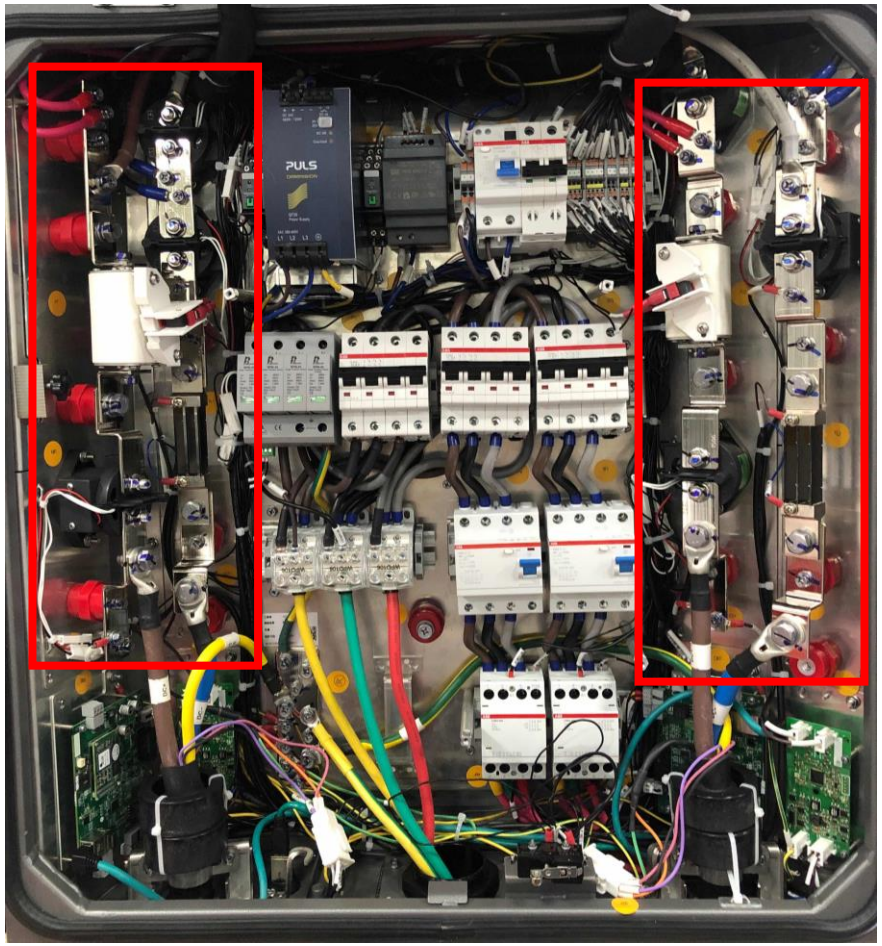


## Commissioning workflow
## 1. Installation Recheck

- Foundation should be fixed and sealed well.
- All inlet cables should meet the requirement of EVSE. The cables are intact. All connections are solid.
- Insulation resistance: The insulation resistance of power supply cable must comply with local regulation
- The surface of cabinet is intact. The charging cable is not broken or damaged. All doors of cabinet can be opened, closed and locked.
- Nameplate and other signs are printed correct and complete.

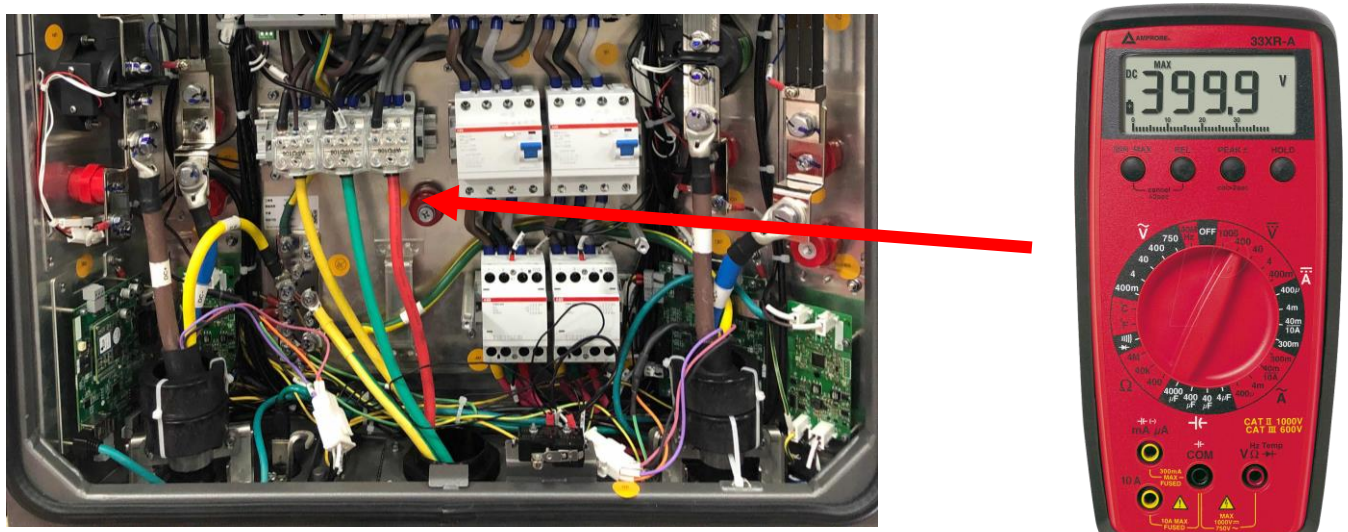
## Commissioning workflow
## 2. Check before power on charger

- Fasten screw: Check and ensure screws or nuts on each cable connection inside charger are fastened.



## Commissioning workflow
## 2. Check before power on charger

- Input Voltage：check whether the input voltage is correct. There should be no fault such as phase loss, overvoltage, undervoltage and wrong phase sequence.



## Commissioning workflow
## 3. Check after power on charger

1. Touch screen: Check whether the touch screen displays normal. The display image should be clear.

2. LED indicator light: Check whether the LED indicator light on the charger. The LED light should be green.

3. Switching power supply: It provides 12V DC power to control boards. Use electrical multimeter to check the 12V DC voltage.


# Commissioning workflow
# 4. Parameter configuration

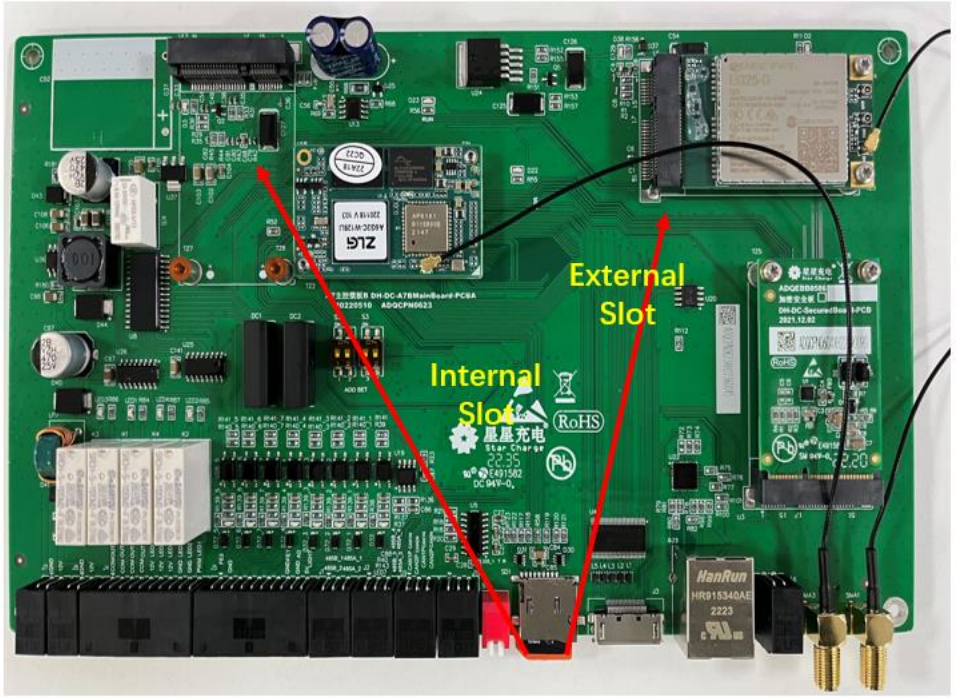
**Software settings needs to be configured:**

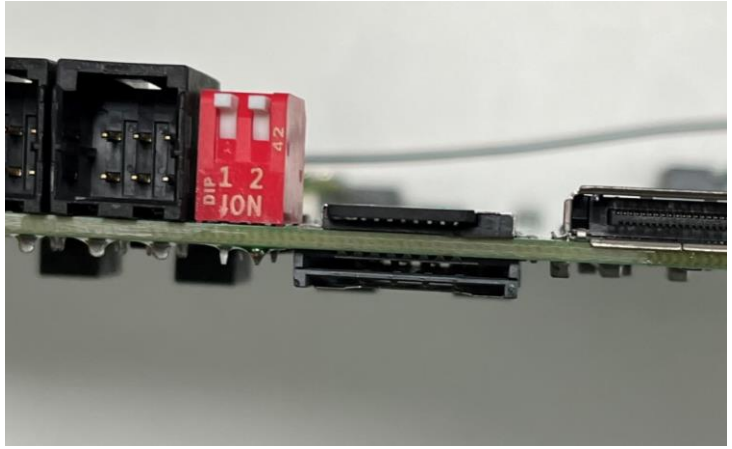
- Internet communication (4G, Ethernet, Wifi)
- OCPP backend
- Charger authentication method
- Output power configuration
- Power module configuration

## Commissioning workflow
## 4. Parameter configuration

Preparation:

If SIM card is needed for internet communication, insert the SIM into the slot in A7 mainboard

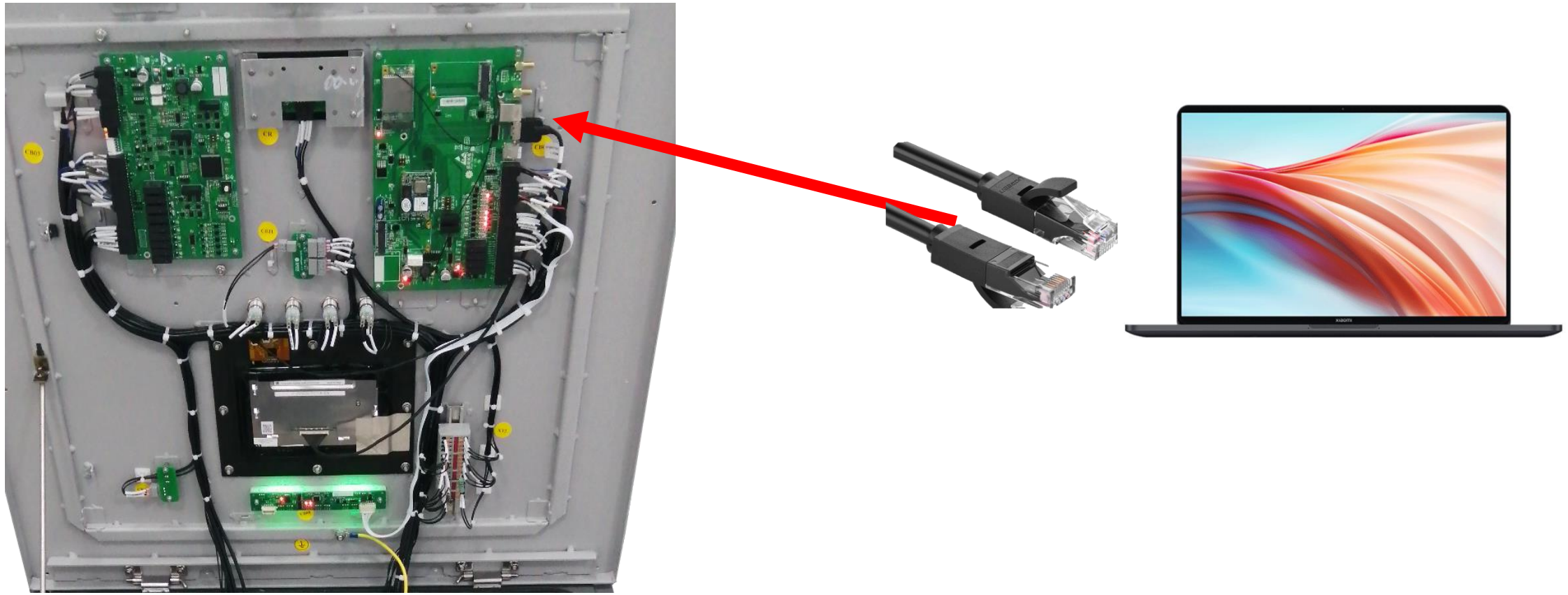


**Commissioning workflow**
**4. Parameter configuration**

Preparation:

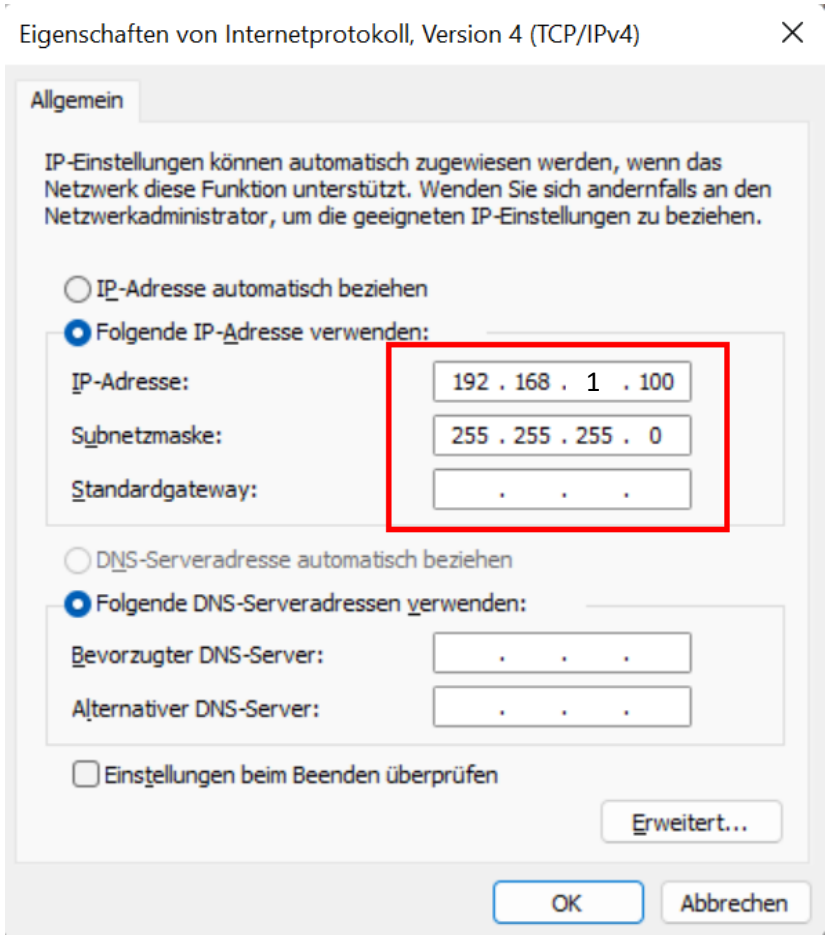
To configure the software settings, connect laptop to router via Ethernet cable



## Commissioning workflow
## 4. Parameter configuration

Preparation:

In laptop, set laptop IP address as shown below (e.g. 192.168.1.xxx, xxx can be any number except 136)



## Commissioning workflow
## 4. Parameter configuration

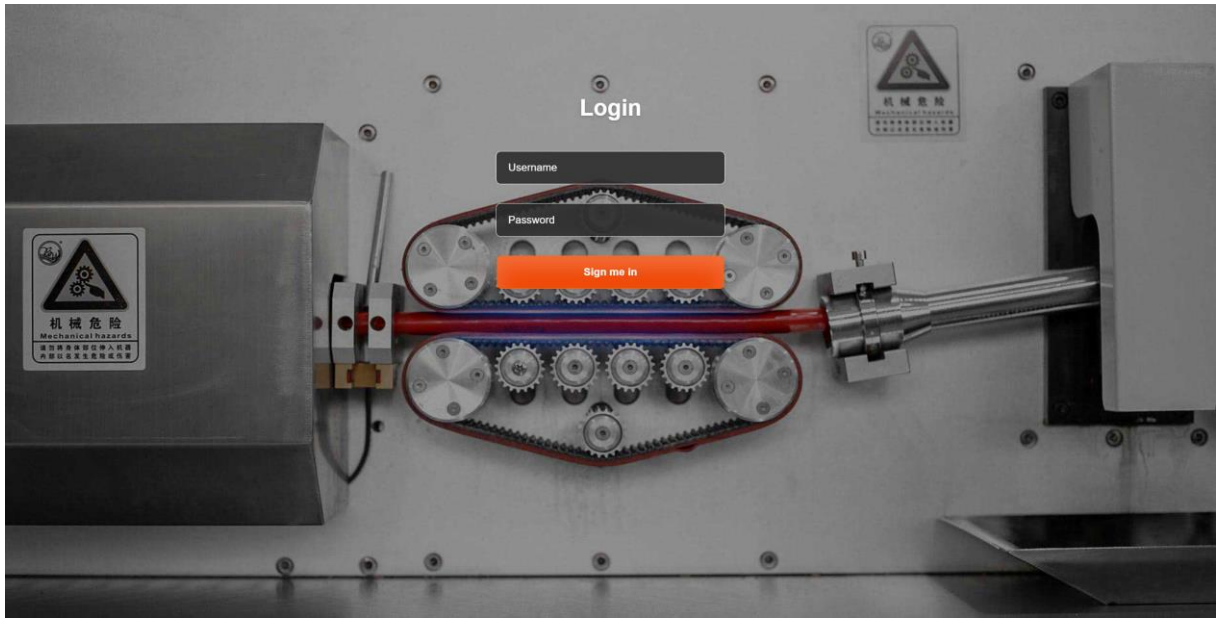
Log in:

Open a browser (e.g. chrome, edge) and enter IP address of charger 192.168.88.206

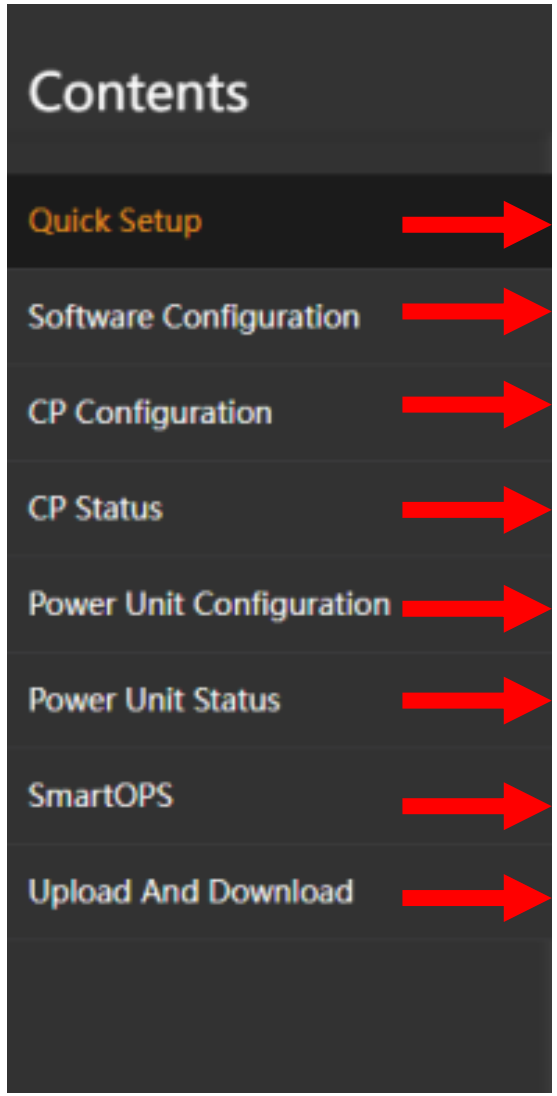
Username wbdh

Password 26835941

The username and password may change in new firmware version. If you have issue during log in, please contact StarCharge service tam



## Commissioning workflow
## 4. Parameter configuration




Collection of the most used settings

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

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

Check the internet and backend connection stauts

Settings for power unit assignment

Check the status of power unit status

This function is still under development...

Firmware update and log download

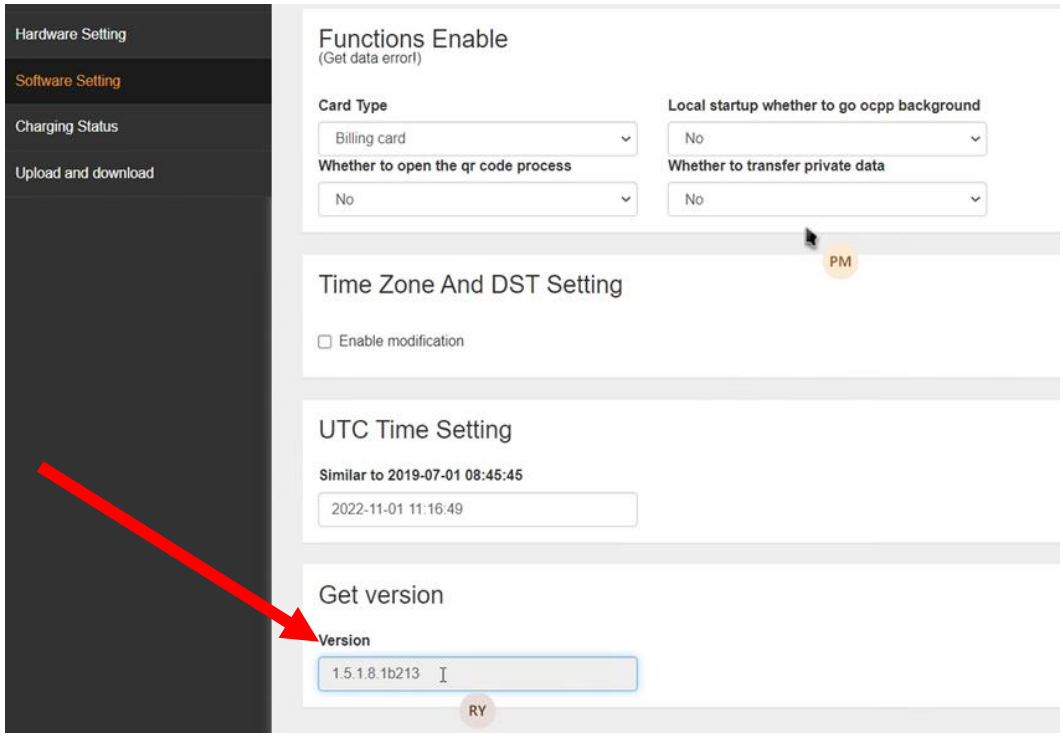
## Commissioning workflow
## 4. Parameter configuration

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.

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



## Commissioning workflow
## 4. Parameter configuration

Star Charge®

### Firmware update:

Depends on the original firmware version in the charger, some control boards needs to be updated during the commissioning, such as:

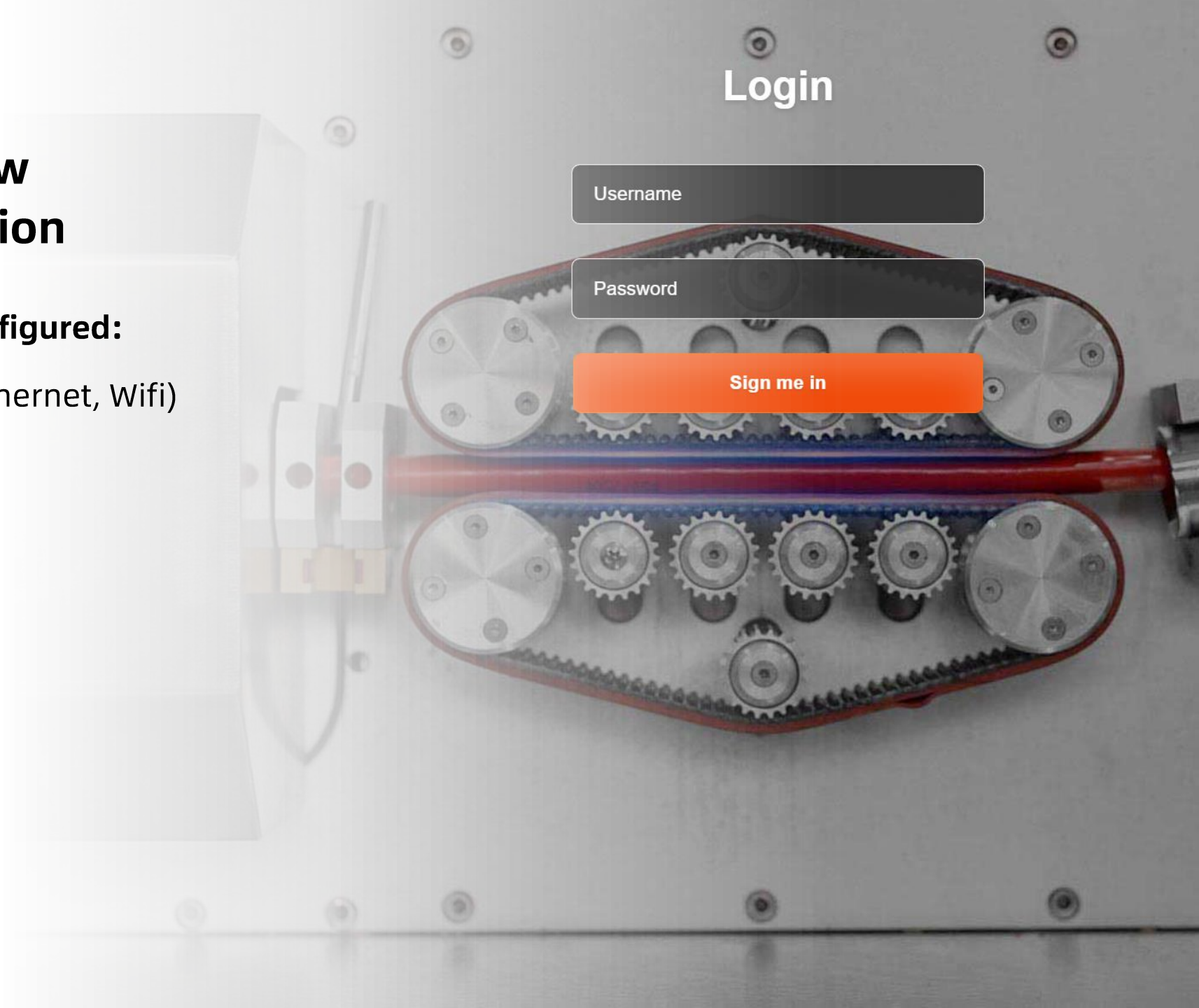
- A7 control board
- M4 control board
- SECC board

For detailed workflow of firmware update, please refer to commissioning manual.

# Commissioning workflow
# 4. Parameter configuration

**Software settings needs to be configured:**

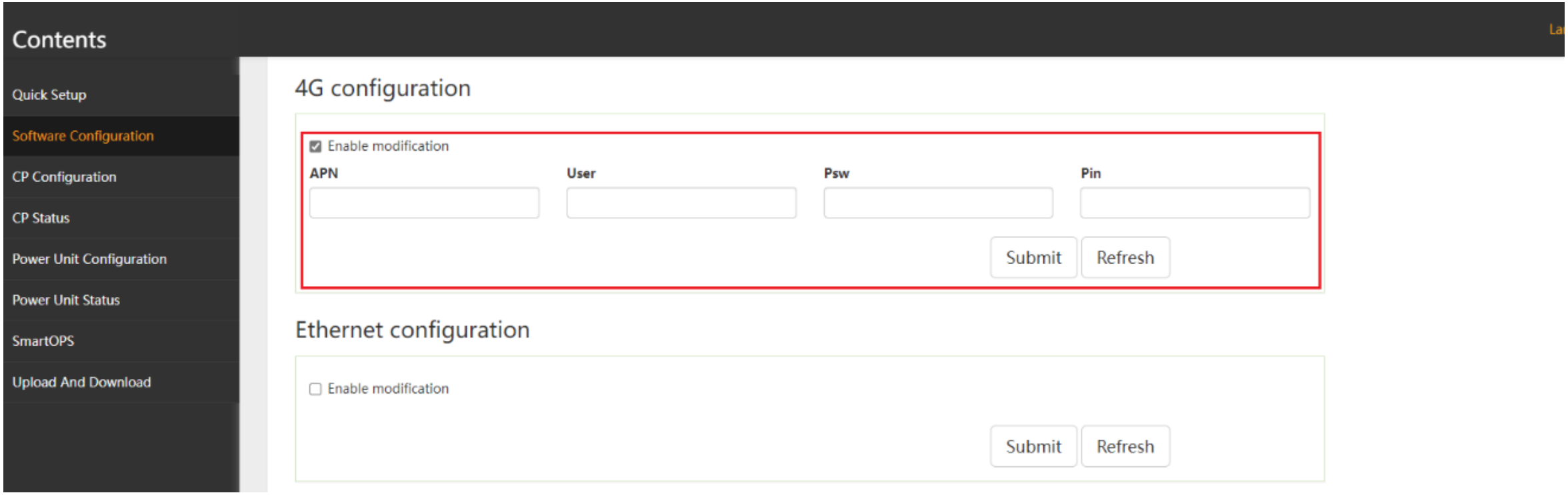
- Internet communication (4G, Ethernet, Wifi)
- OCPP backend
- Charger authentication method
- Output power configuration
- Power module configuration



# Commissioning workflow
# 4. Parameter configuration

## Internet communication (4G, Ethernet, Wifi)

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

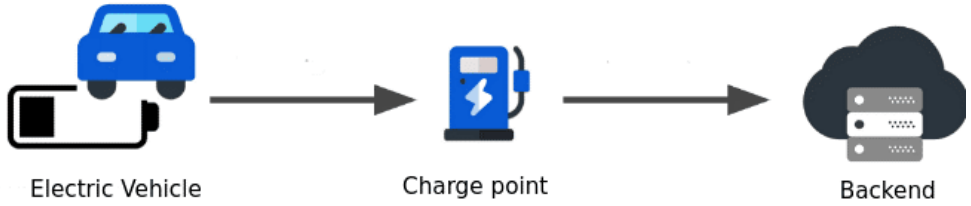


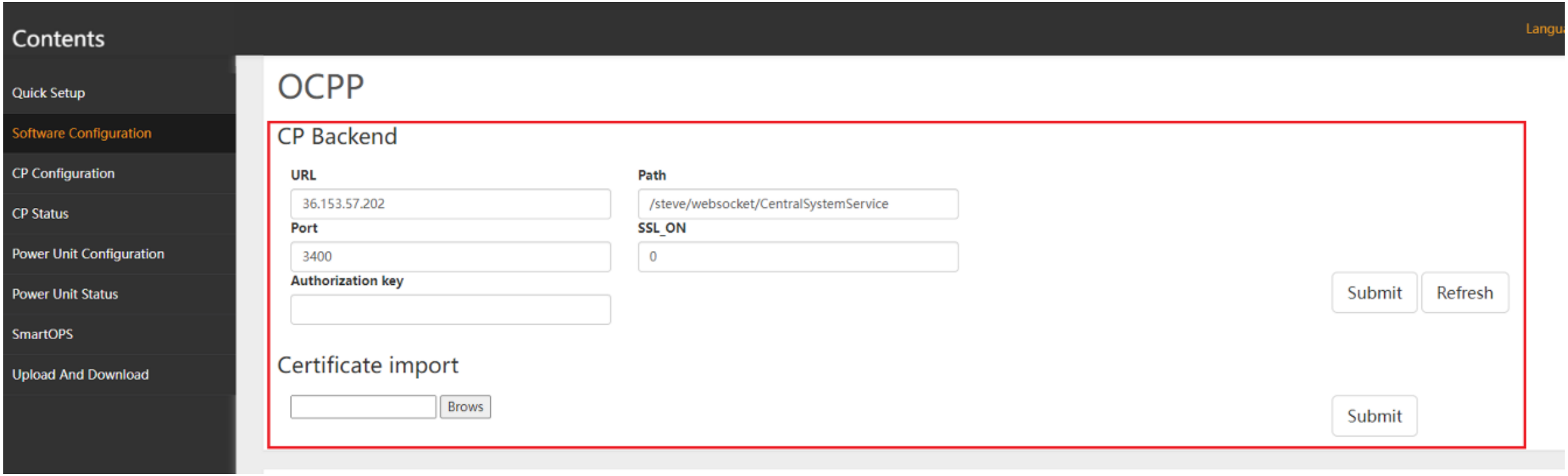
# Commissioning workflow
# 4. Parameter configuration

## OCPP backend and remote maintenance platform

For OCPP backend

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



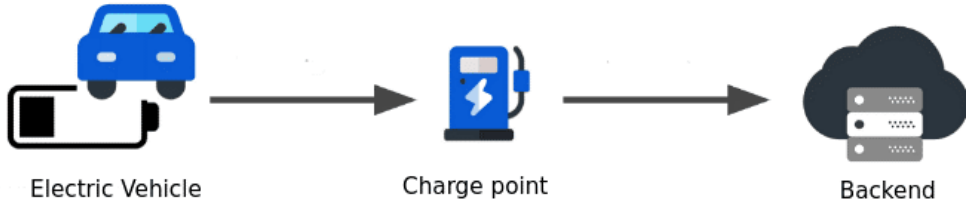



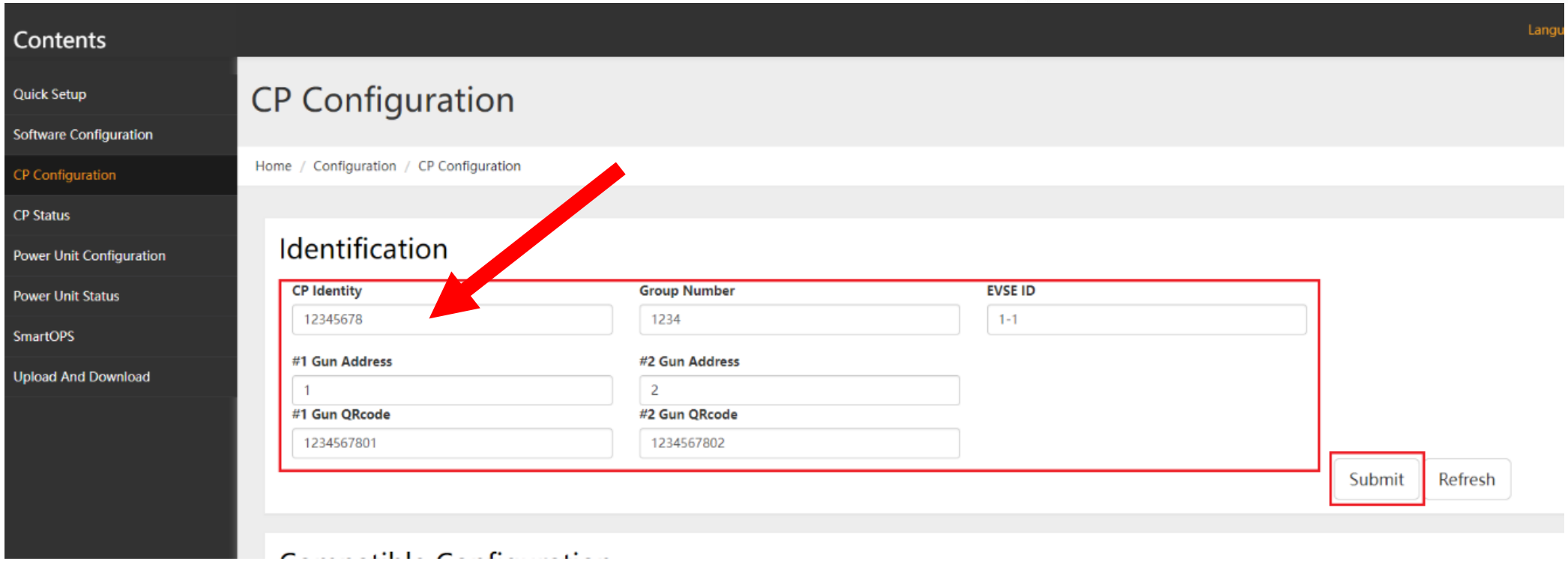
# Commissioning workflow
# 4. Parameter configuration

## OCPP backend and remote maintenance platform

For OCPP backend

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

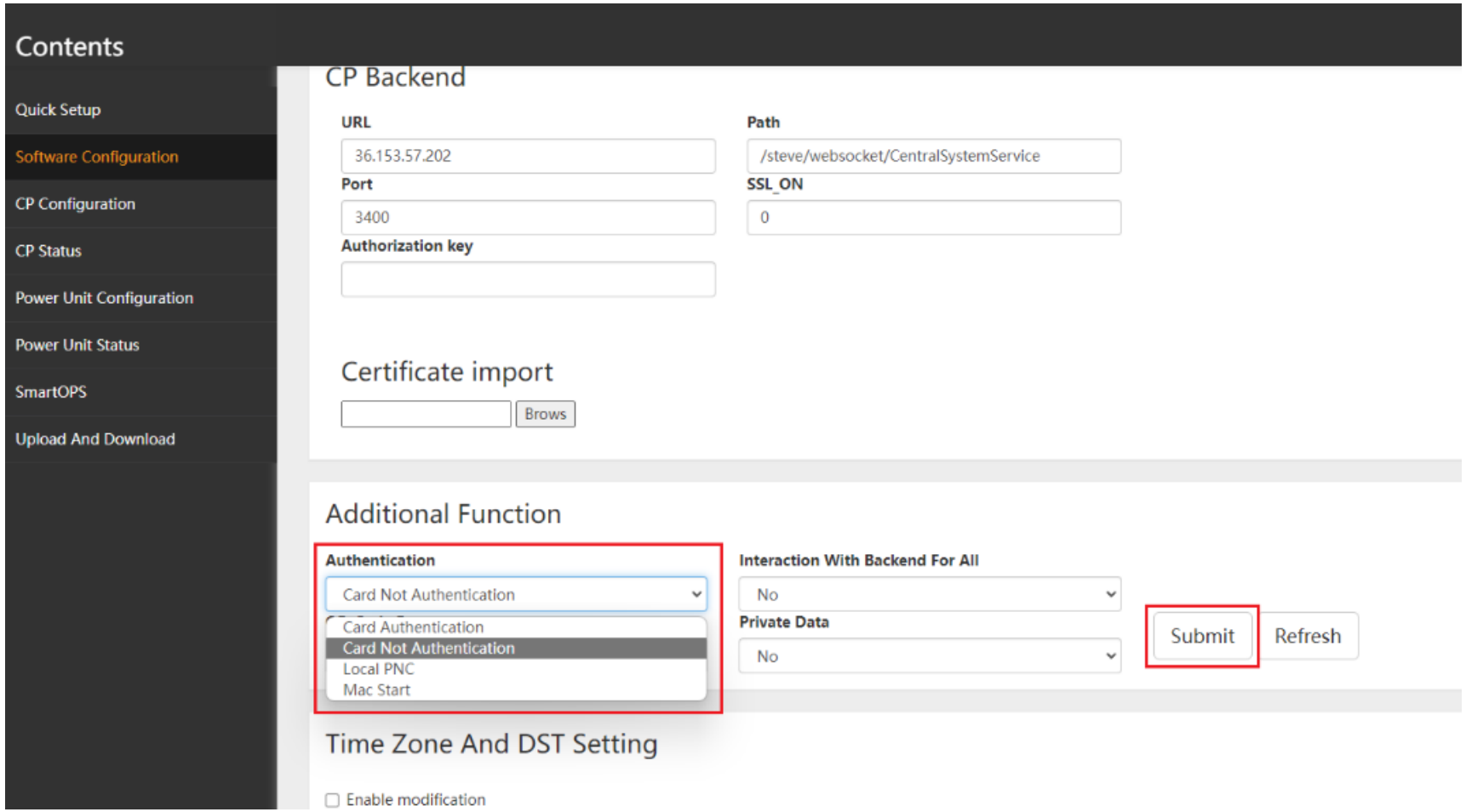


# Commissioning workflow
# 4. Parameter configuration

## Charger authentication method

Following authentication method can be selected:



## Commissioning workflow
## 4. Parameter configuration

### Charger authentication method

Following authentication method can be selected:

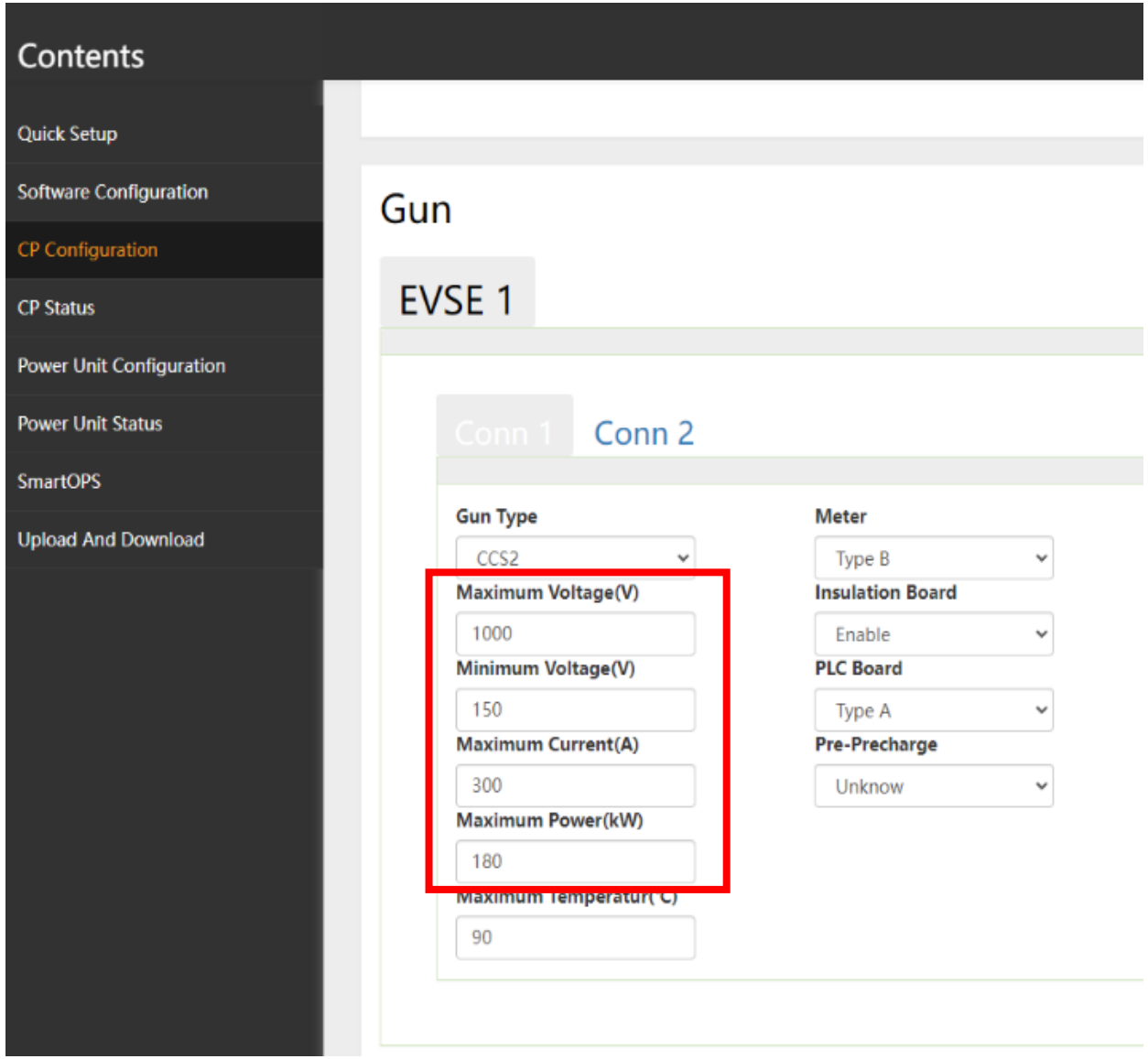
| Authentication method | Principle |
|---|---|
| Card Authentication | Use authenticated IC card to start charging session card. The IC card must be whitelisted in backend platform and EVSE must always connect to the backend |
| Card Not Authentication | Use the IC cards from charger accessories to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

## Commissioning workflow
## 4. Parameter configuration

### Output power configuration

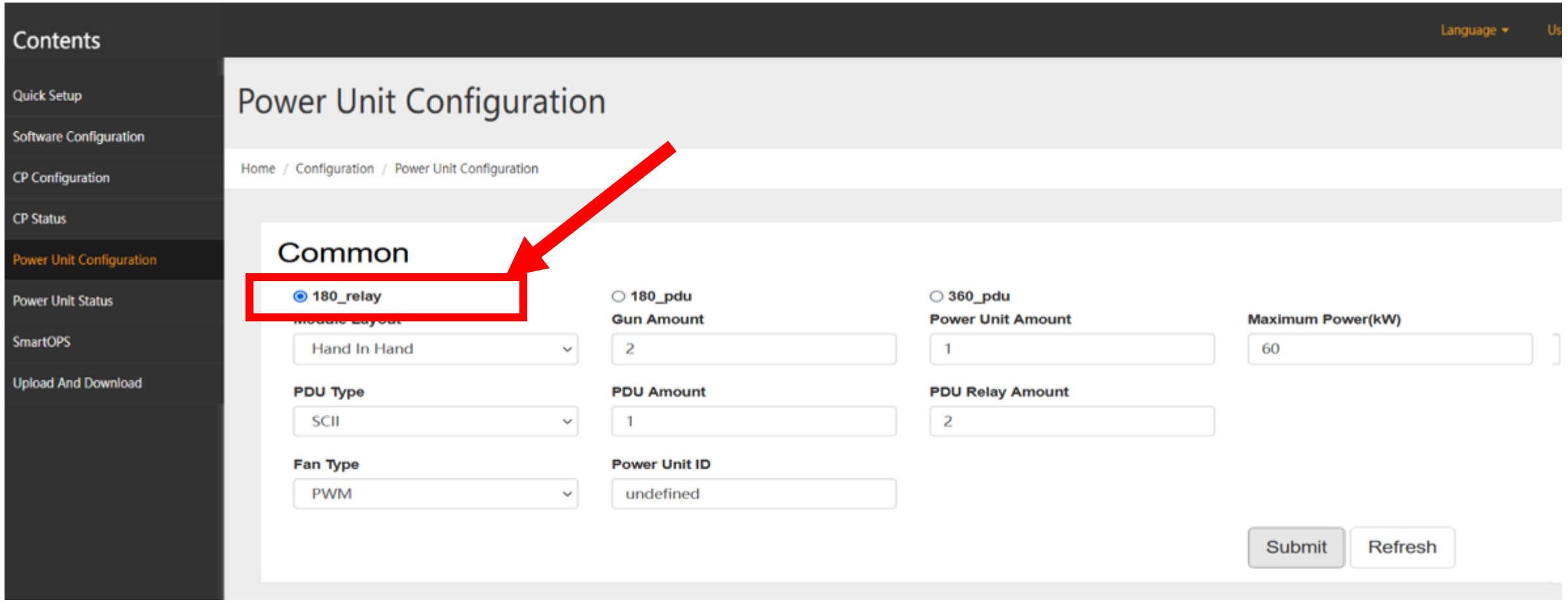
According to the use scenarios and grid capacity, the output power of each charger connector can be individually configured .

- Maximum Voltage
- Minimum voltage
- Maximum current
- Maximum power



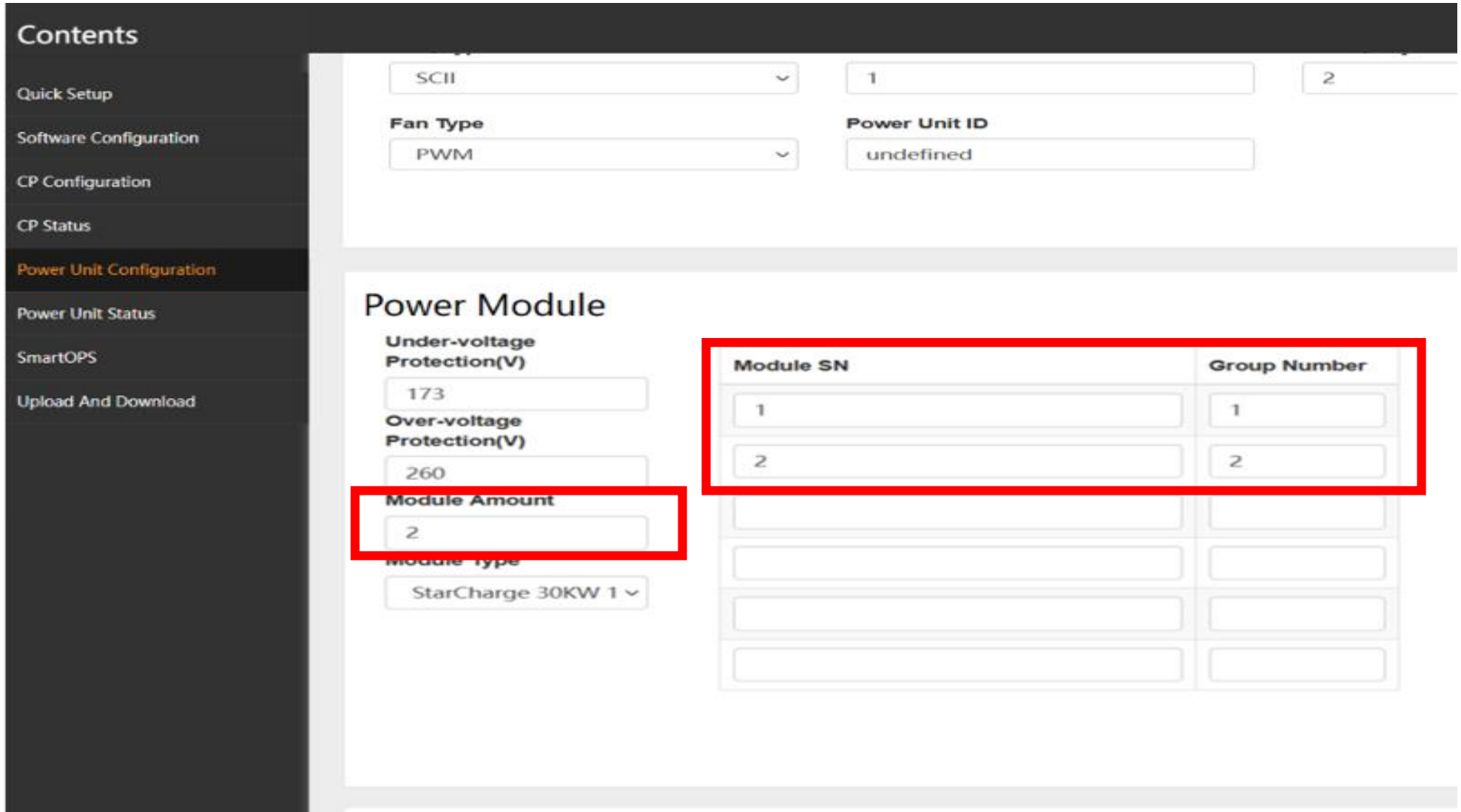
# Commissioning workflow
# 4. Parameter configuration

## Power module configuration



# Commissioning workflow
# 4. Parameter configuration

## Power module configuration



## Commissioning workflow
## 4. Parameter configuration

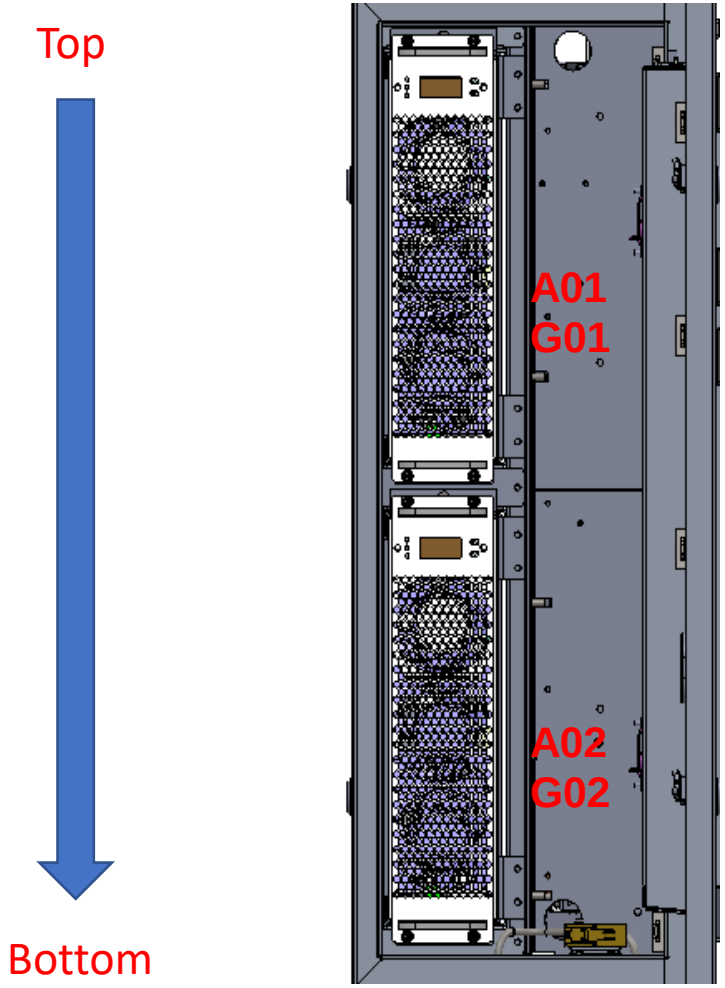
### Power module configuration

All power modules from factory have the same default sequence number A1.

After inserting them into charger body, during the first commissioning, technician needs to manually set different sequence number for each power module.

Set the power module sequence as the picture shown :

From top to bottom: A1 to A2.

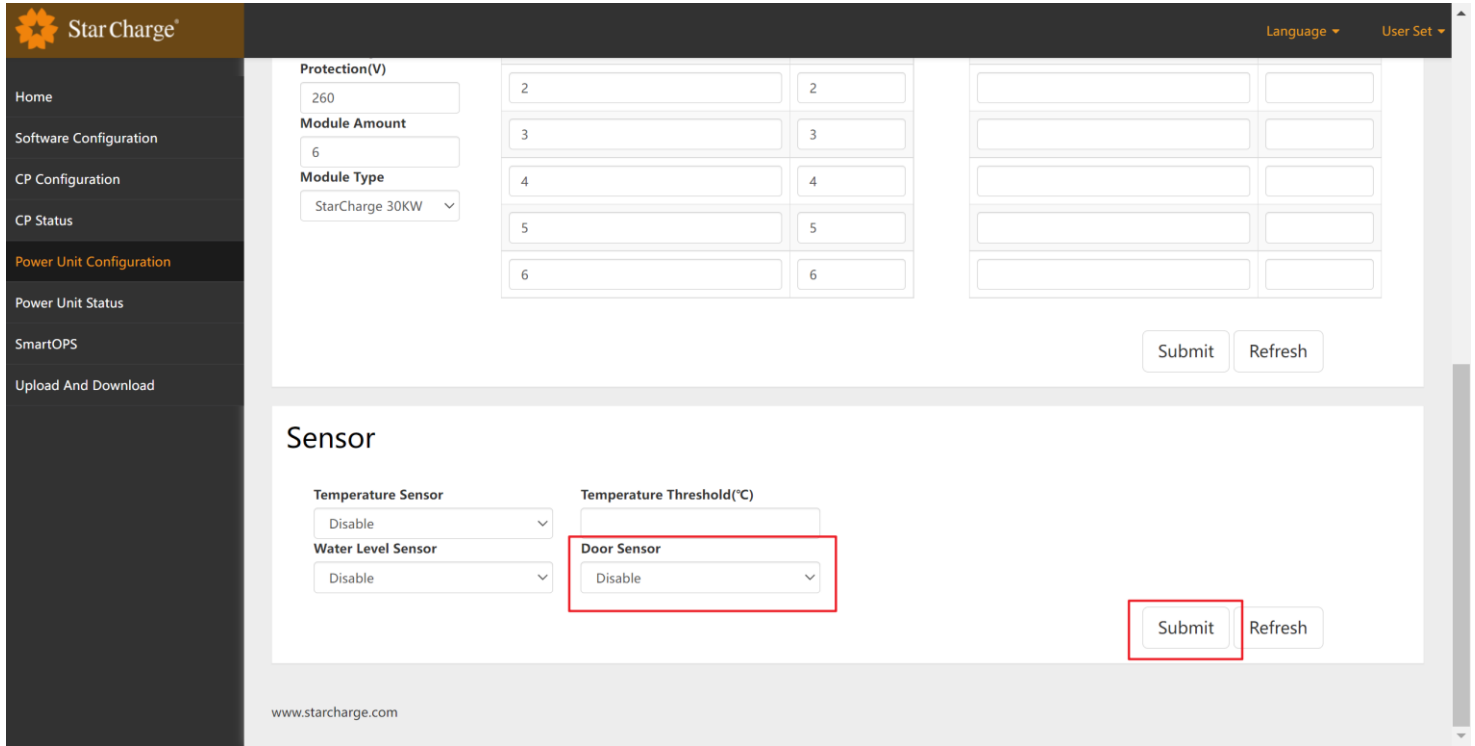


# Commissioning workflow
# 4. Parameter configuration

## Power module configuration

Workflow:

Step 1: disable door sensor. If the door sensor is active, the input power of power module will be automatically cut off, when the door is opened.

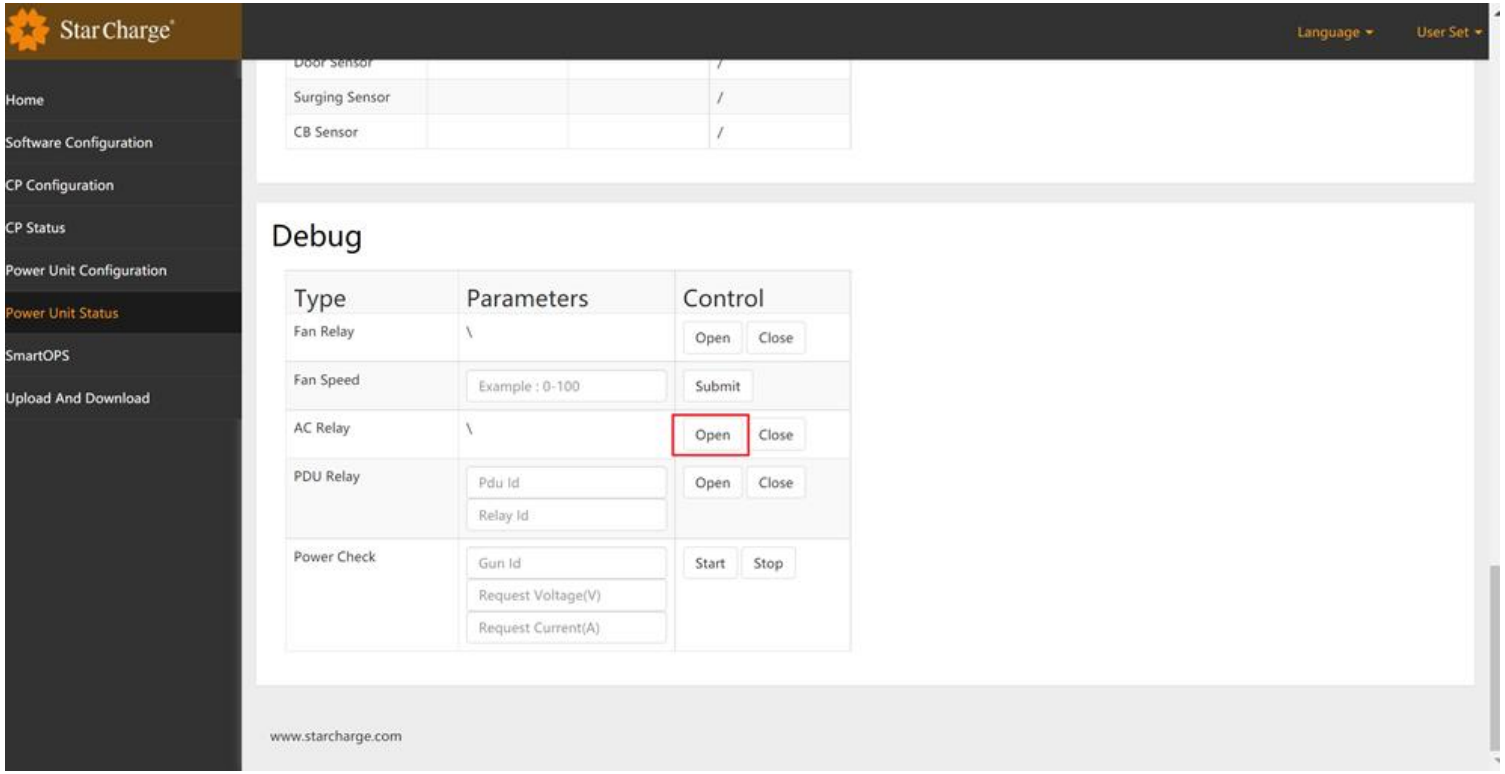


# Commissioning workflow
# 4. Parameter configuration

## Power module configuration

Workflow:

Step 2: Open the AC relay to manually turn on the supply power for power module



## Commissioning workflow
## 4. Parameter configuration

### Power module configuration

Workflow:

Step 3: click the button on power module to set the sequence number

1. Press ▲ or ▼, change the interface;
2. Press and hold ▼ for about the 3s, the value will be flashing;
3. Press ▲ or ▼ to change the value;
4. Press and hold ▼ for about 3s to save the value.

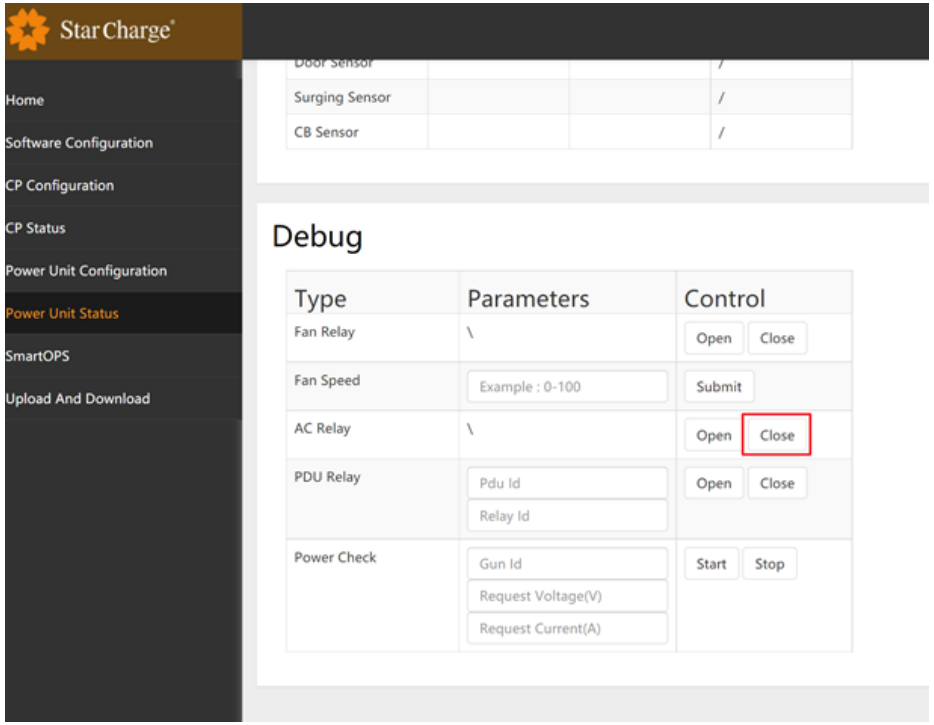
# Commissioning workflow
# 4. Parameter configuration

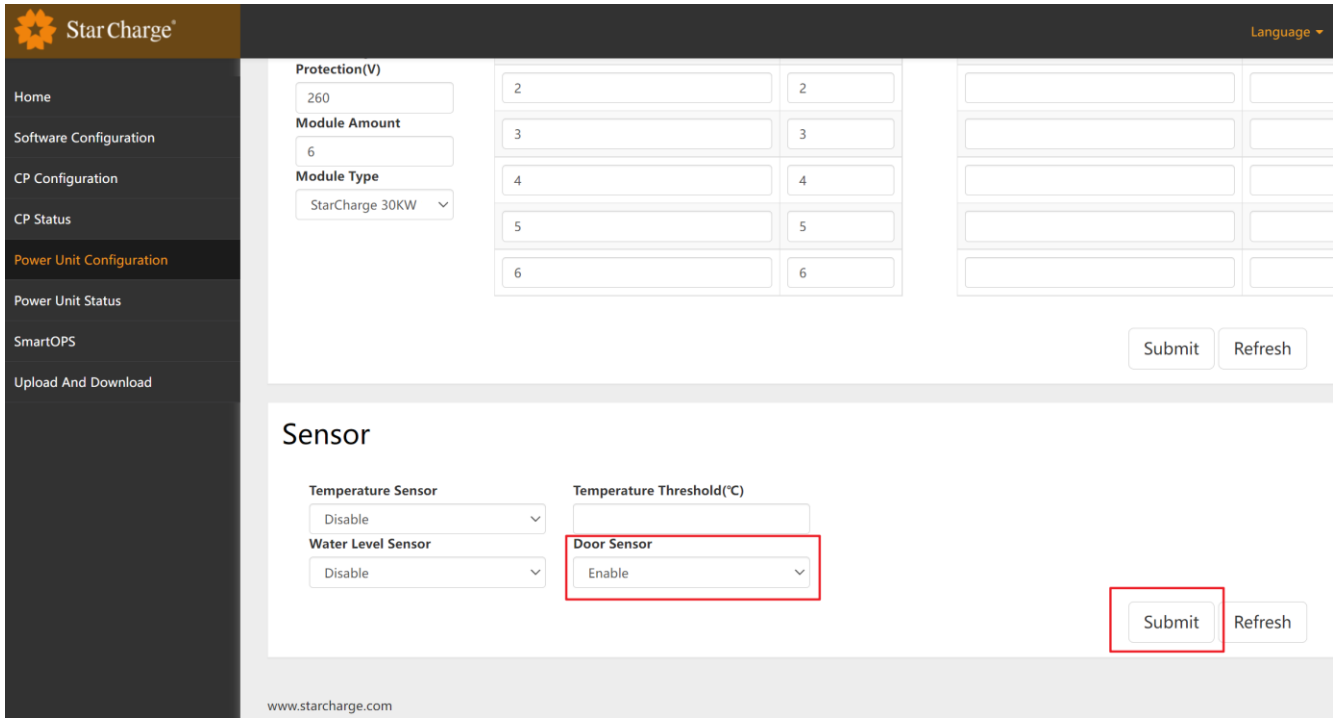
## Power module configuration

Workflow:

Step 4: close AC relay.

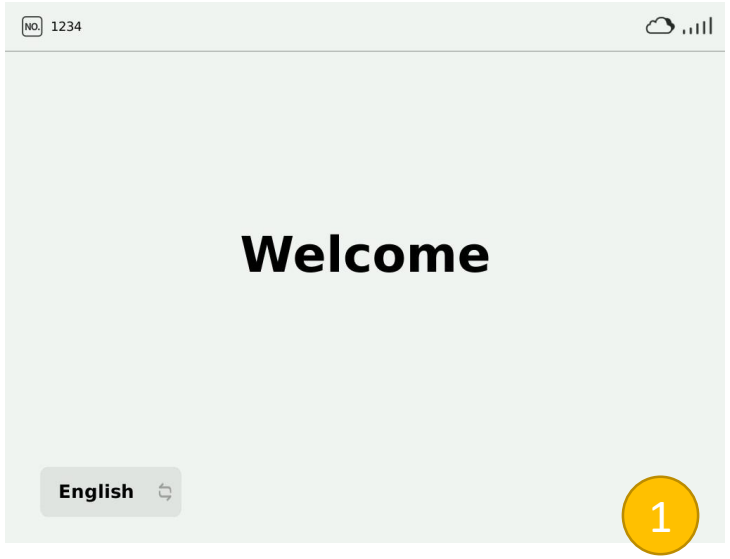
Step 5: enable the door sesnor



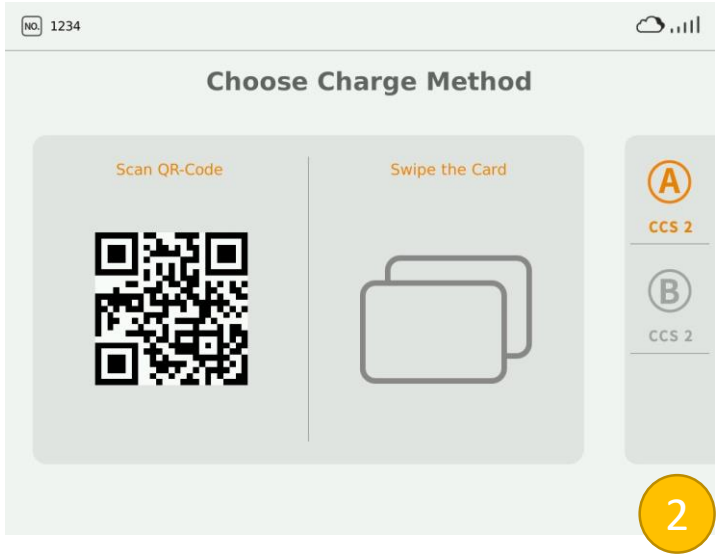



# Commissioning workflow
# 5. Charging test

Plug in the charger connector to an EV and then swip IC card or use App to start charging session

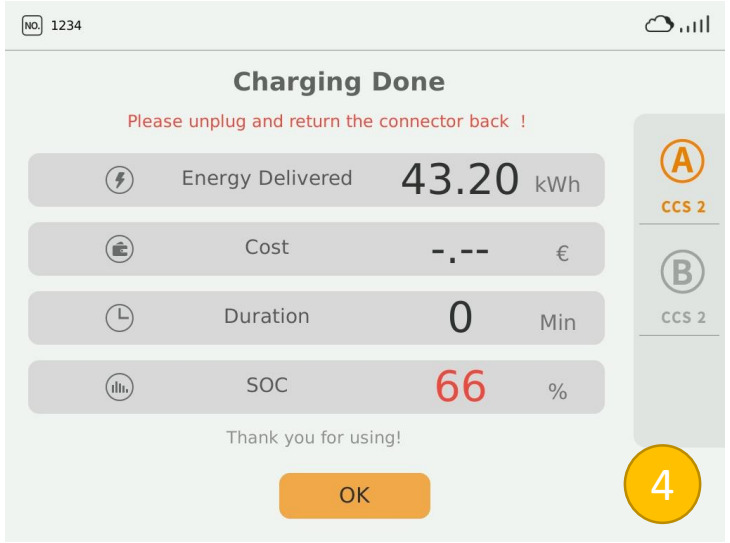



Plug charger gun into EV




Swipe RFID card or use App to start


Swipe RFID card or use App to stop



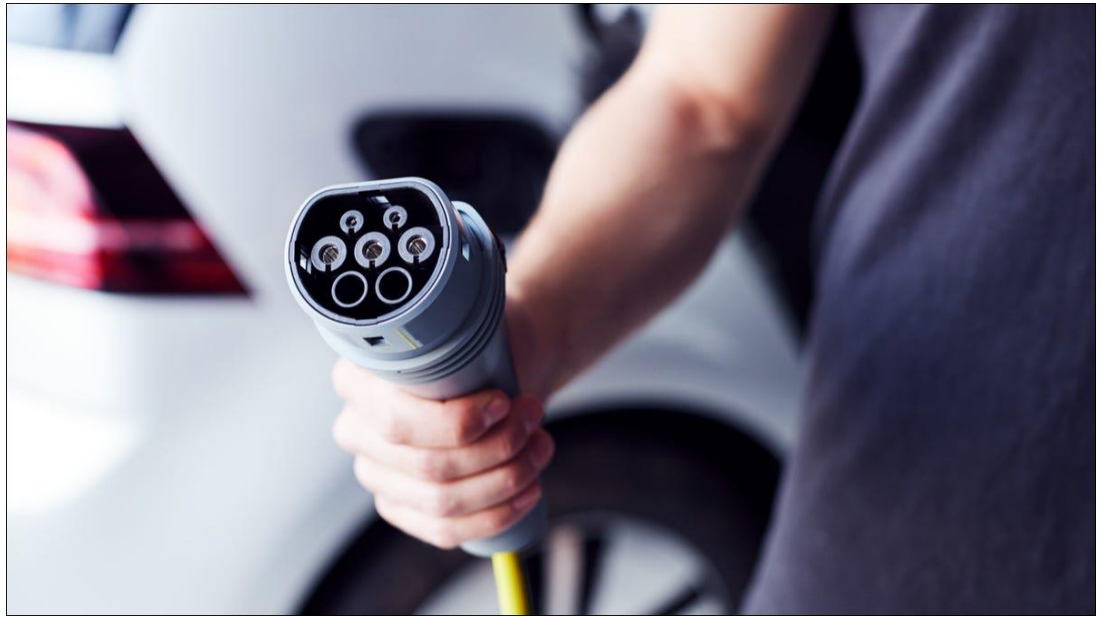
## Commissioning workflow
## 5. Charging test

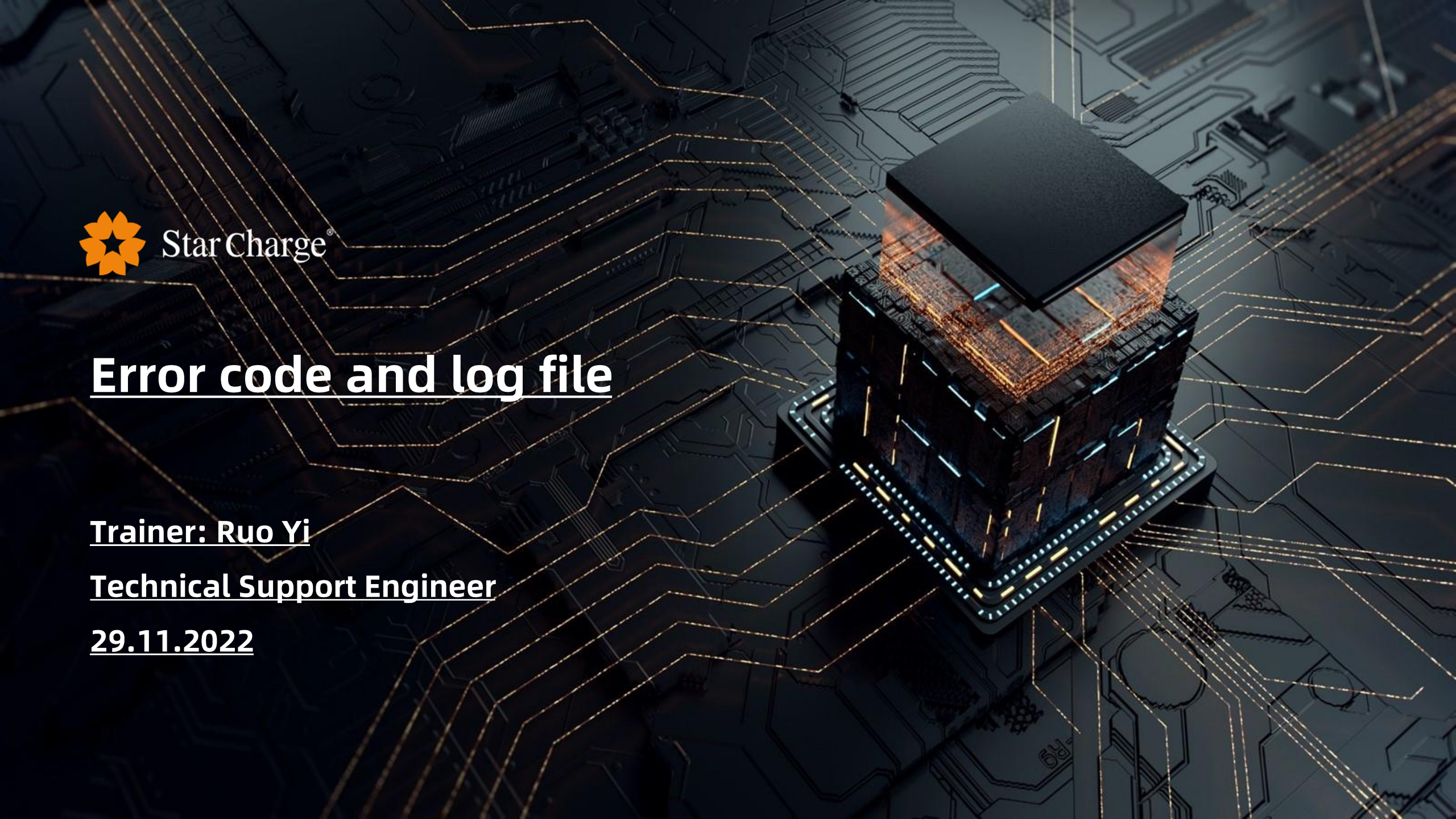
**During the charging session, check / test following items**

1. Door sensor: Open the door of EVSE when charging, the EVSE should stop charging.
2. Emergency stop: Press the emergency stop button on the EVSE when charging, the EVSE should stop charging.
3. Fan: Check the wind speed and direction of fan of inside.
4. Meter: Check whether the meter measures accurately during charging.
5. Charging cable: There’s no burrs, no sharp edges, no overheating, no loosen insulation cap of the charger cable. It’s neither too tight nor too loose when inserting and pulling out the charging cable.

## Commissioning workflow
## 6. 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. (Template refers to appendix 2 of commissioning manual)





# Error code and log file

Trainer: Ruo Yi

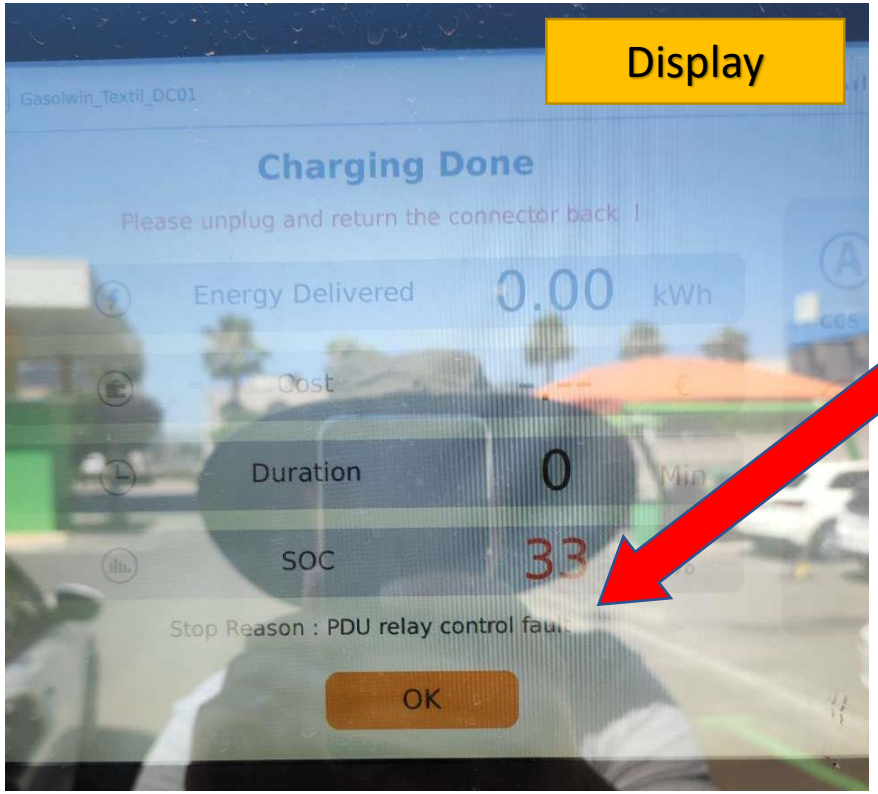
Technical Support Engineer

29.11.2022

# Charger error codes

Once issue happens to charger, the error description / error code will be display in three ways:

- Charger display
- Backend platform notification
- Charger log file



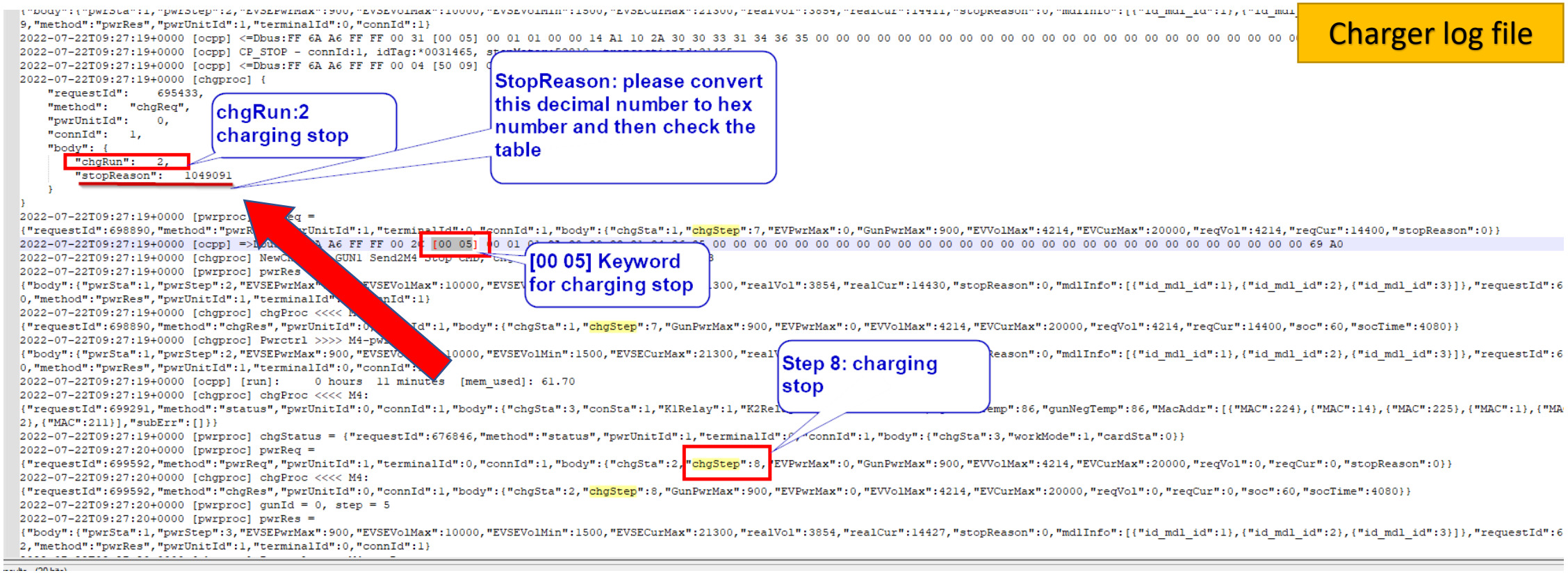

Backend

| | | | | | | |
|---|---|---|---|---|---|---|
| 03/10/2022 12:12:41 | [redacted] | Connector | Status Notification | Faulted | Ground Failure (0x100206) | 5151286 |
| 03/10/2022 11:59:07 | | Connector | Status Notification | Faulted | Ground Failure (0x100206) | 5151228 |
| 02/10/2022 16:31:44 | | Connector | Status Notification | Faulted → Available | (0x100210) | 5146491 |
| 02/10/2022 16:31:44 | | Connector | Status Notification | Faulted → Available | (0x100210) | 5146492 |
| 02/10/2022 16:31:44 | | Connector | Status Notification | Faulted → Available | (0x100212) | 5146493 |
| 02/10/2022 16:31:44 | | Connector | Status Notification | Faulted → Available | (0x100212) | 5146494 |
| 02/10/2022 16:22:33 | | Connector | Status Notification | Faulted | Ground Failure (0x100206) | 5146439 |
| 02/10/2022 16:20:56 | | Connector | Status Notification | Faulted | Ground Failure (0x100206) | 5146432 |
| 02/10/2022 16:19:24 | | Connector | Status Notification | Faulted | Ground Failure (0x100206) | 5146421 |
| 01/10/2022 22:06:18 | | Connector | Status Notification | Faulted | Ground Failure (0x100206) | 5141941 |

# Charger error codes

Once issue happens to charger, the error description / error code will be display in three ways:

- Charger display
- Backend platform notification
- Charger log file



# Error code list of Titan

In the list you can find the description of each error code and the suggested measures for troubleshooting. Combined with maintenance manual, most general issues can be solved by 1st level supporter.

| OCPP error code in StatusNotification | DTC(HEX) | DTC(DEC) | Description | Status Faulted (YES/NO) | Charging Possible (YES/NO) | Customer Information Portal (TEXT) | Resolvable Reset (SOFT-HARD-N/A) |
|---|---|---|---|---|---|---|---|
| ConnectorLockFailure | 0x100205 | 1049093 | Gun lock control failure | YES | NO | try again, If not success, contact the service number | SOFT |
| EVCommunicationError | 0x100204 | 1049092 | BMS communication timeout | YES | NO | try again, If not success, contact the service number | N/A |
| GroundFailure | 0x100206 | 1049094 | Ground Fault | YES | NO | Check whether the ground wire is well connected | N/A |
| HighTemperature | 0x100101 | 1048833 | Overtemperature fault inside the terminal | NO | YES | The output power of the charger will decrease | SOFT |
| InternalError | 0x200101 | 2097409 | Module DC is over temperature | NO | YES | The output power of the charger will decrease | SOFT |
| InternalError | 0x200001 | 2097153 | Power module communication failure | NO | YES | Check whether the power module is installed in place or damaged | N/A |
| InternalError | 0x200002 | 2097154 | Power module alarm and failure | NO | YES | Check whether the power module is installed in place or damaged | N/A |
| InternalError | 0x100202 | 1049090 | Terminal emergency stop failure | YES | NO | Reset terminal emergency stop button | N/A |
| InternalError | 0x100201 | 1049089 | End of product trial period | YES | NO | Contact sales to activate | N/A |
| InternalError | 0x100208 | 1049096 | Output relay control failure | YES | NO | Check whether the connection of the relay control line is normal | N/A |
| InternalError | 0x100209 | 1049097 | Discharge resistance failure | YES | NO | Check whether the power module is faulty | N/A |
| InternalError | 0x100207 | 1049095 | Insulation monitoring board failure (communication, hardware) | YES | NO | Check whether the communication line of the insulation monitoring boa | N/A |
| InternalError | 0x100203 | 1049091 | Auxiliary power control failure | YES | NO | Check auxiliary power wiring | N/A |
| InternalError | 0x300101 | 3145985 | Liquid cooling equipment failure (mechanical, over-temperature) | NO | YES | The output power of the charger will decrease | SOFT |
| InternalError | 0x200003 | 2097155 | PDU relay control failure | NO | YES | contact the service number | N/A |
| InternalError | 0x200004 | 2097156 | PDU communication failure | NO | YES | Check whether the PDU communication cable is connected normally | N/A |
| InternalError | 0x200009 | 2097161 | Front-end AC meter failure (communication, data abnormality) | NO | YES | Check whether the front-end AC meter communication cable is properly c | N/A |
| InternalError | 0x200102 | 2097410 | PDU over temperature fault | NO | YES | The output power of the charger will decrease | SOFT |
| InternalError | 0x200201 | 2097665 | Abnormal power control output | YES | NO | Check whether the power control board is faulty | N/A |
| InternalError | 0x100212 | 1049106 | Abnormal communication with the rectifier cabinet | YES | NO | Check the communication line between the terminal and the rectifier cat | N/A |
| InternalError | 0x200103 | 2097411 | Abnormal power control fan communication | NO | YES | The output power of the charger will decrease | N/A |

# Mobile Power Grid Ecosystem

# Future has Come

Star Charge, Faster and Smarter!
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