

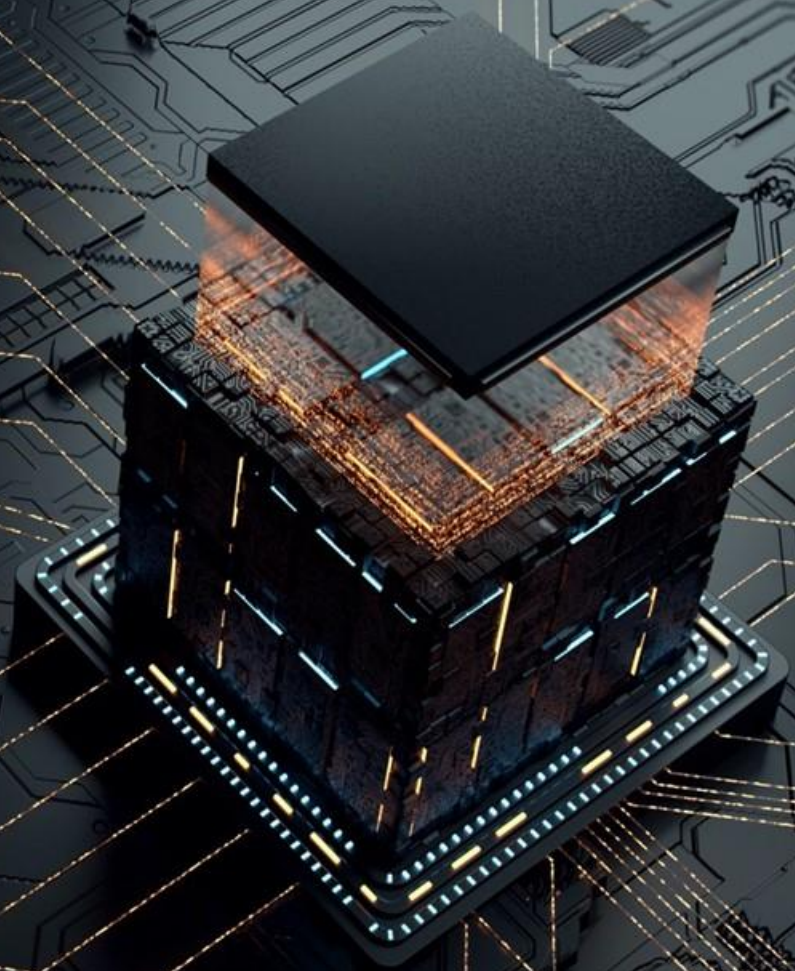


Training for Athena 60KW

Trainer: Ruo Yi

Technical Support Engineer

29.11.2022



Agenda

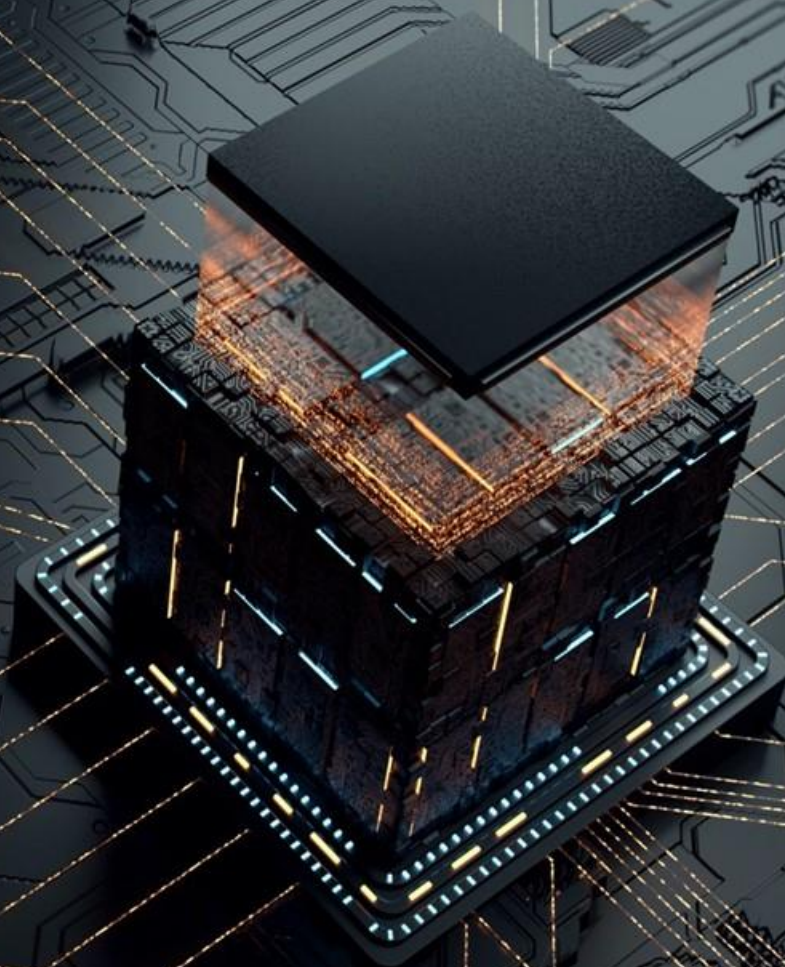
Athena 60KW

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

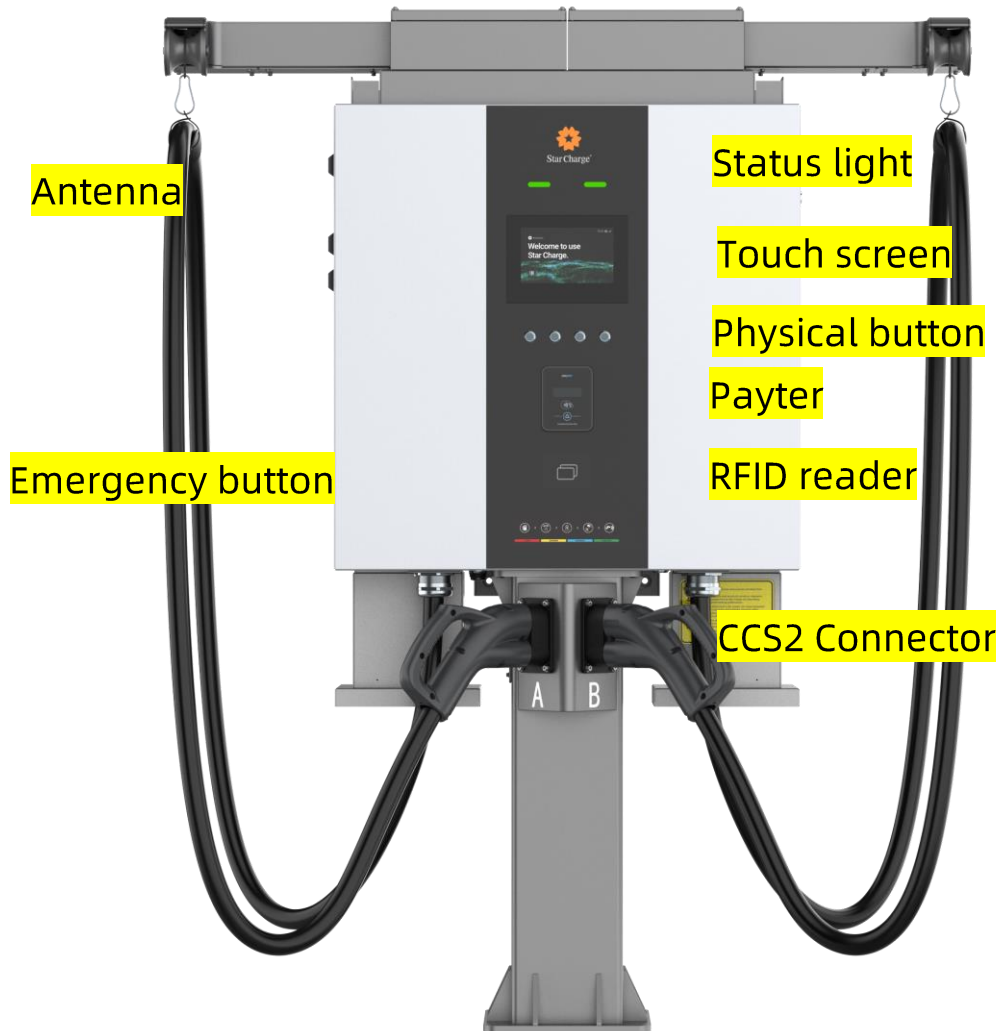




Brief Introduction of Athena



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 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°C - 50°C
	Storage Temperature	-30°C - 70°C
	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



Installation Requirements



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 ($\pm 10\%$), and the frequency is 50 ~ 60Hz.
- It is recommended that the MCCB should be Ue:400Vac, In: 160A, thermo-magnetic type, Icu $\geq$ Ics $\geq$ 40kA, 3P.
- Civil grounding resistance must be $\leq 4\Omega$.
- Civil insulation resistance must be $\geq 10M\Omega$.



Installation Requirements



2.Maintenance distance (mm)

Unit: mm

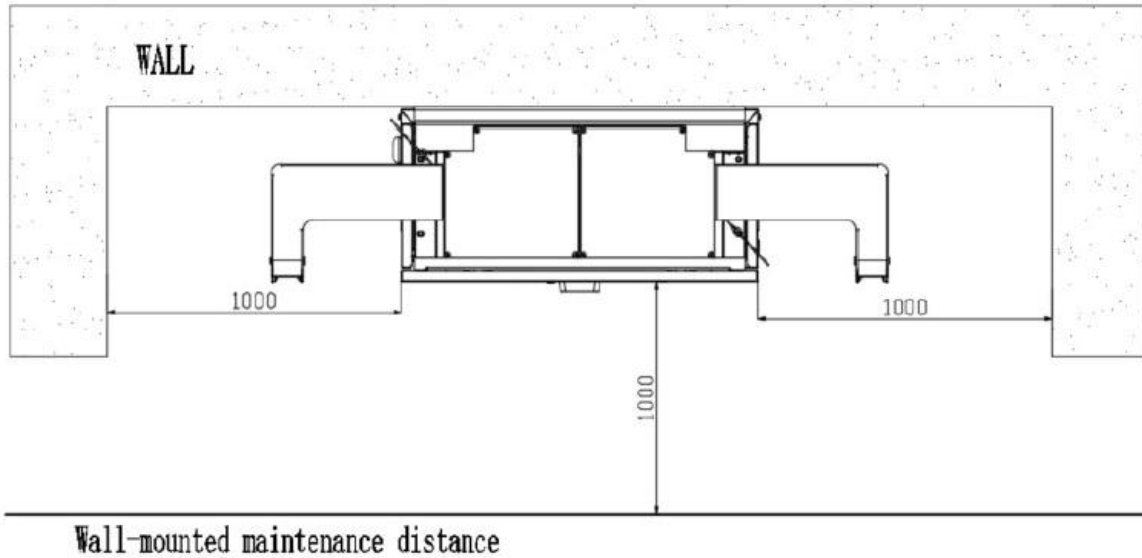


Figure 3 Wall-mounted maintenance distance diagram

Unit: mm

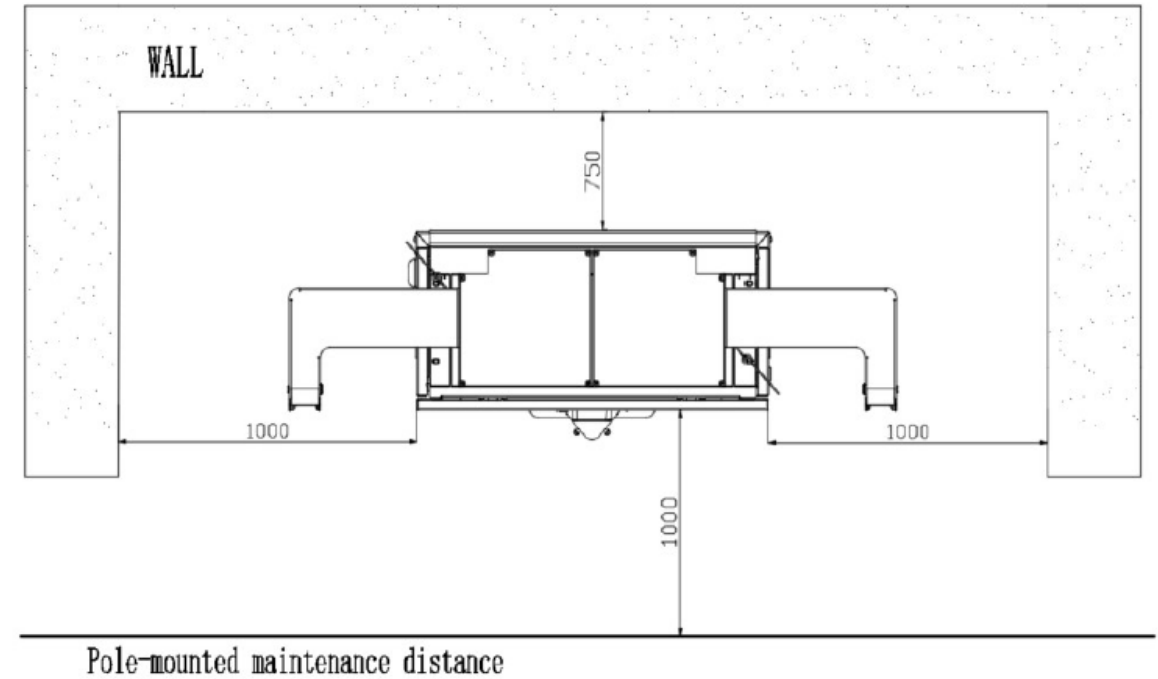


Figure 4 Pole-mounted maintenance distance diagram

Installation Requirements

2. Maintenance distance (mm)

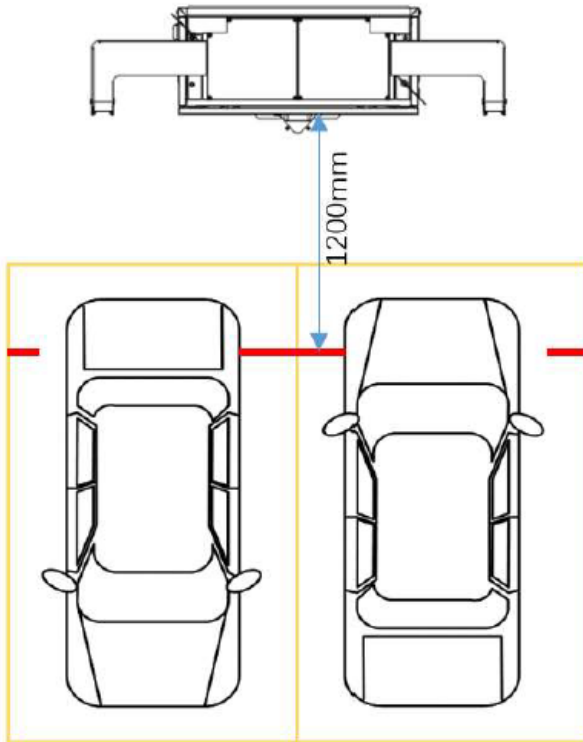


Figure 5 Distance requirements for parking spaces

Installation Requirements



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.

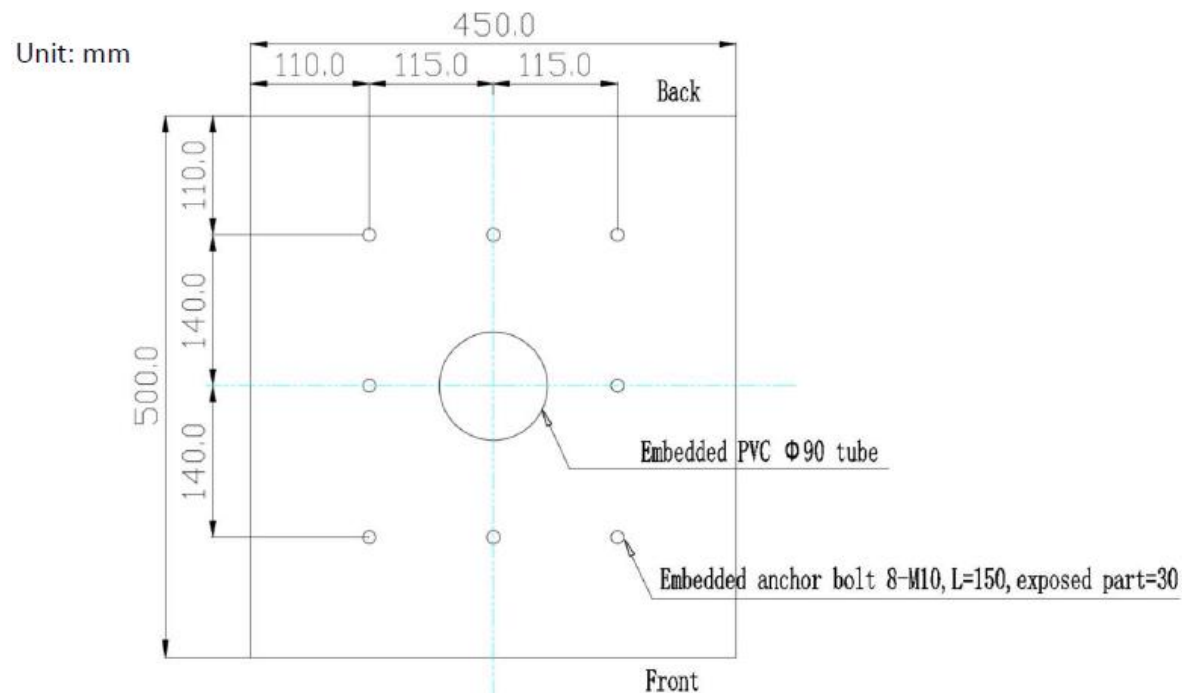
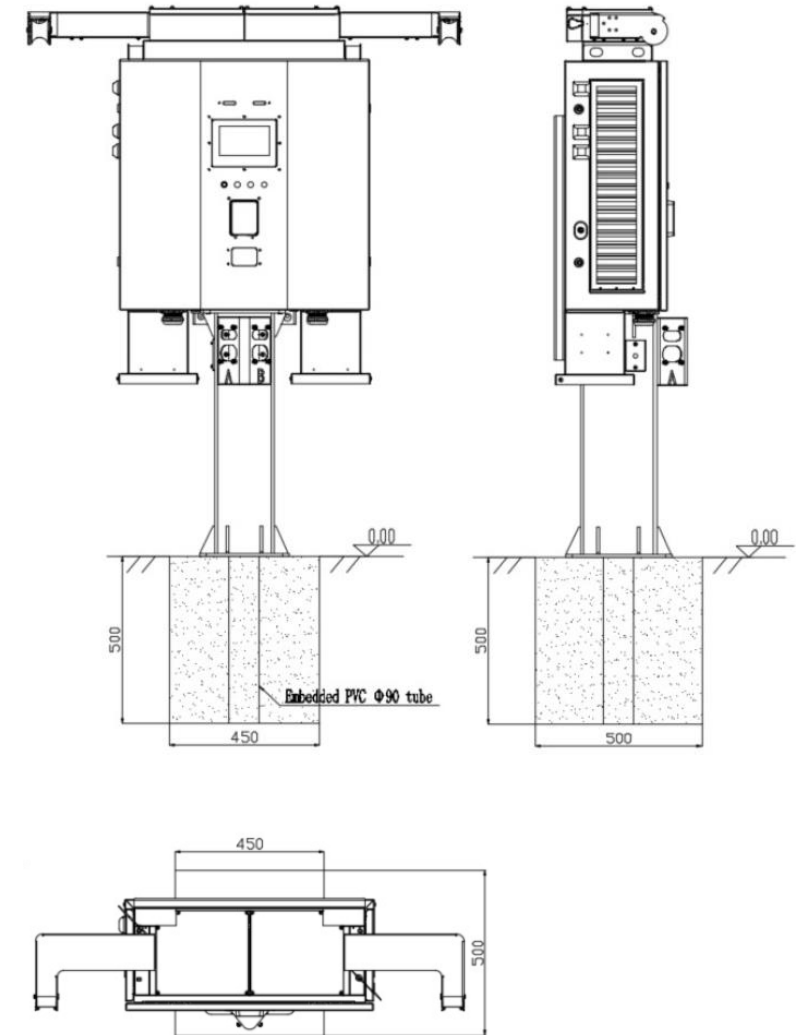


Figure 1 Top-view drawing of concrete foundation



Installation Requirements



4. Power cable specification

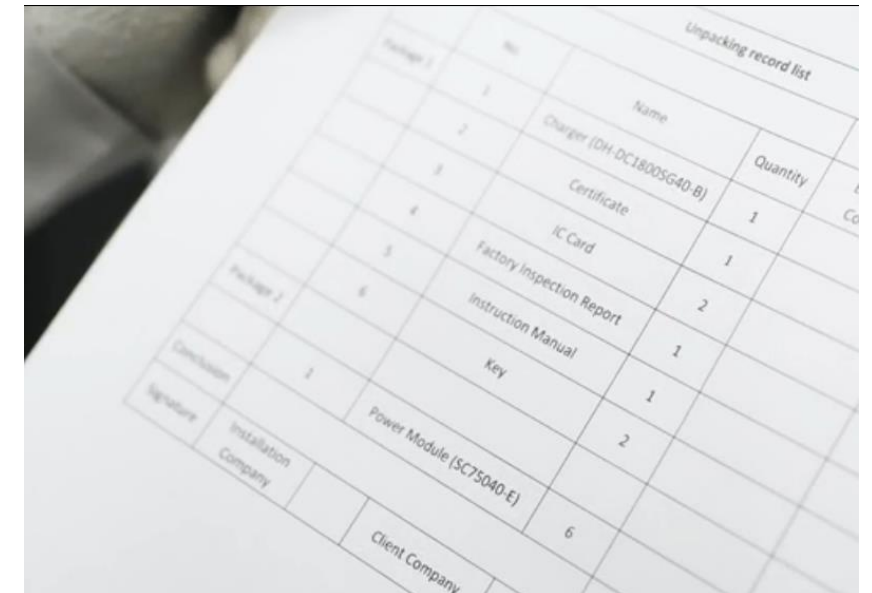
Recommendation:

- Cross sectional area: $3 * 50\text{mm}^2 + 1 * 25\text{mm}^2$
- 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)



Unpacking record list

Package J	No.	Name	Quantity
	1	Charger (DH-DC1800SG40-B)	1
	2	Certificate	1
	3	IC Card	1
	4	Factory Inspection Report	2
	5	Instruction Manual	1
	6	Key	1
		Power Module (SC75040-E)	2
			6

Conclusion: _____

Signature: _____

Installation Company: _____

Client Company: _____

1. Unpacking inspection

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

2. Check list before installation (Appendix 2 of installation manual)

Sub-project	Acceptance items
Installation plan	The installation location complies with the construction plan design drawings
Distribution box 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 $\varnothing 12$ to make holes. The drilling depth is about 70mm.
- 3) Install the mounting bracket using M8 $\times$ 50 expansion screws.

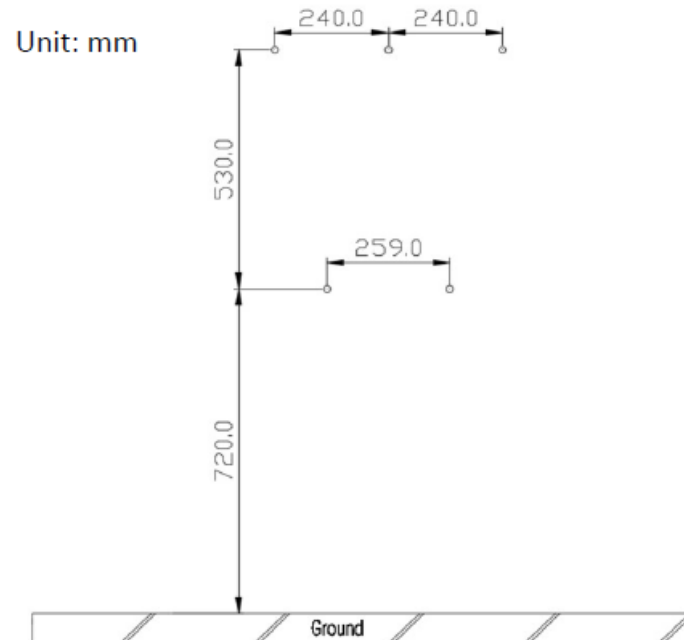


Figure 8 Marking the installation hole position

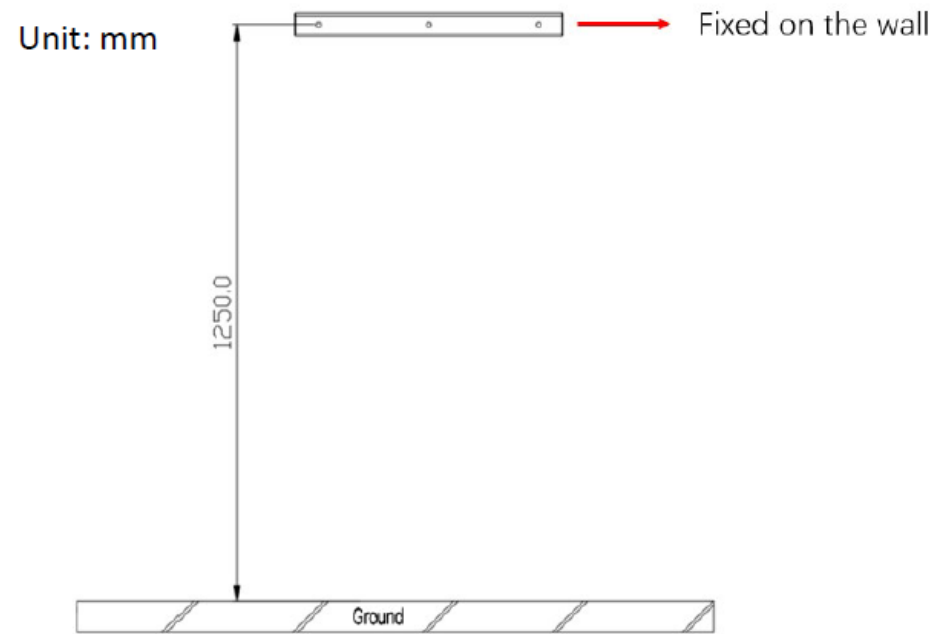
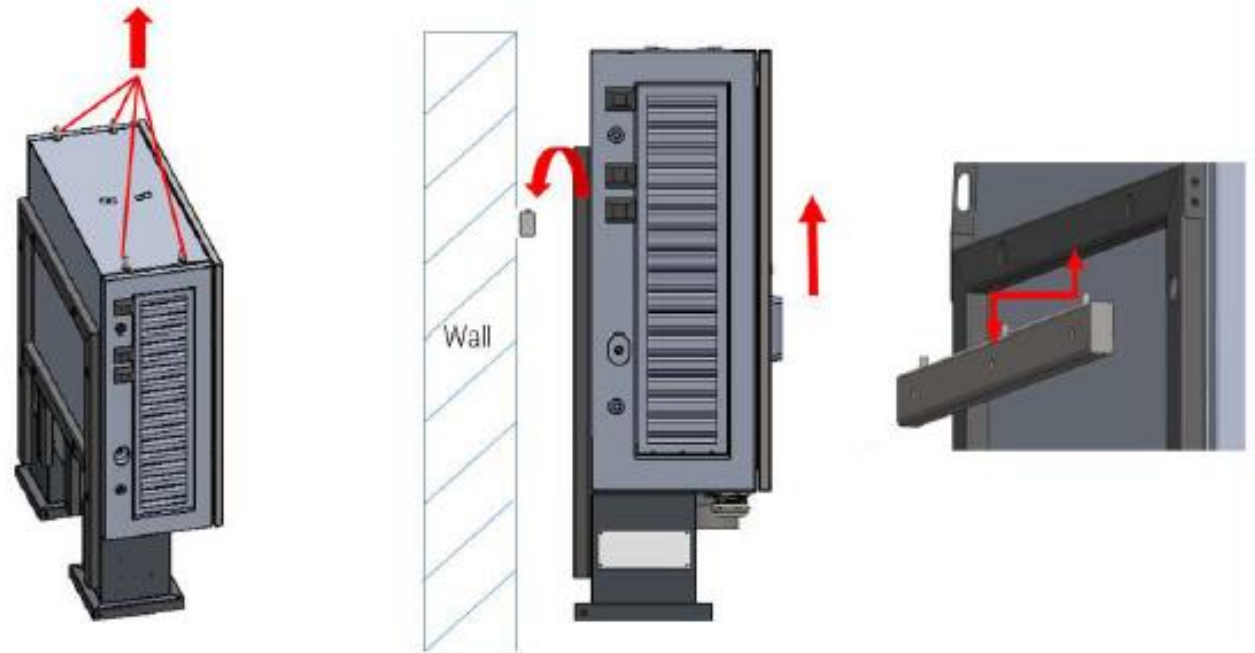


Figure 9 Installation of mounting bracket

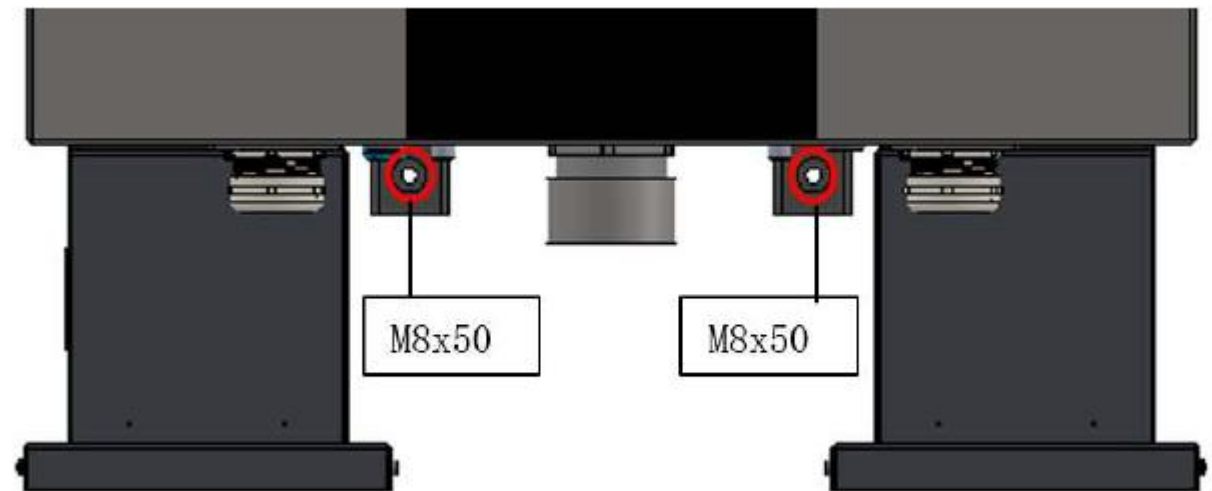
4. Fix the charger on the wall

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.



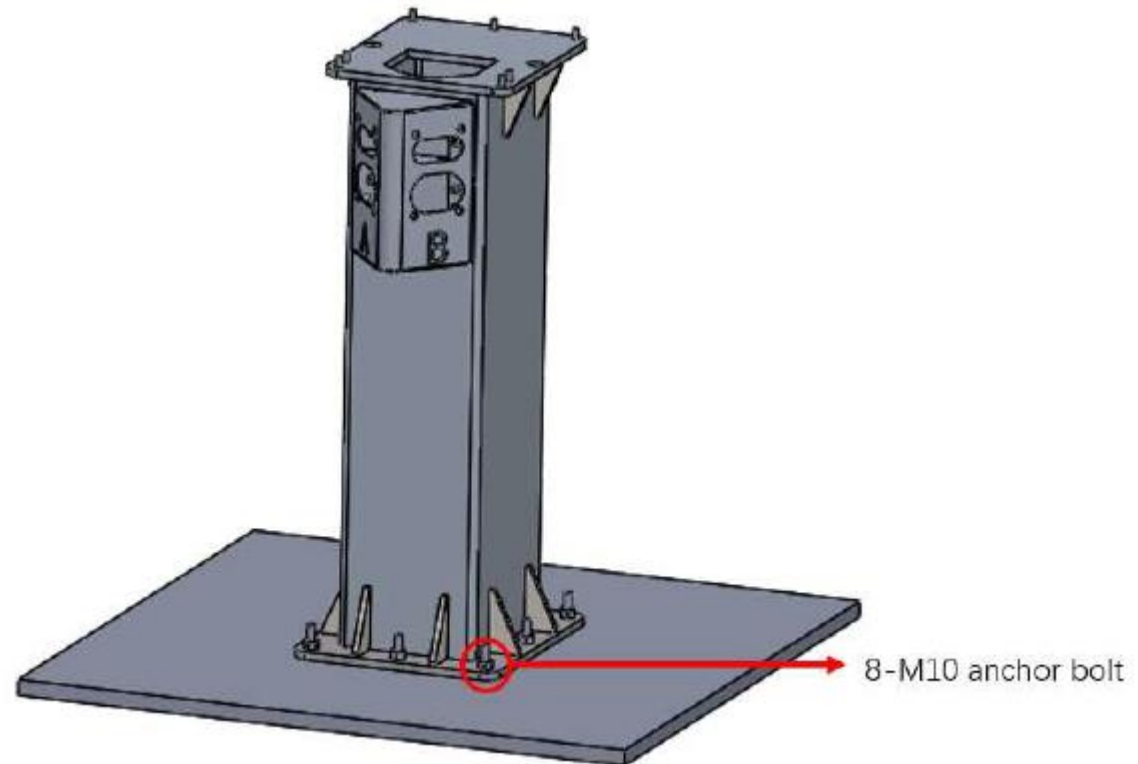
4. Fix the charger on the wall

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



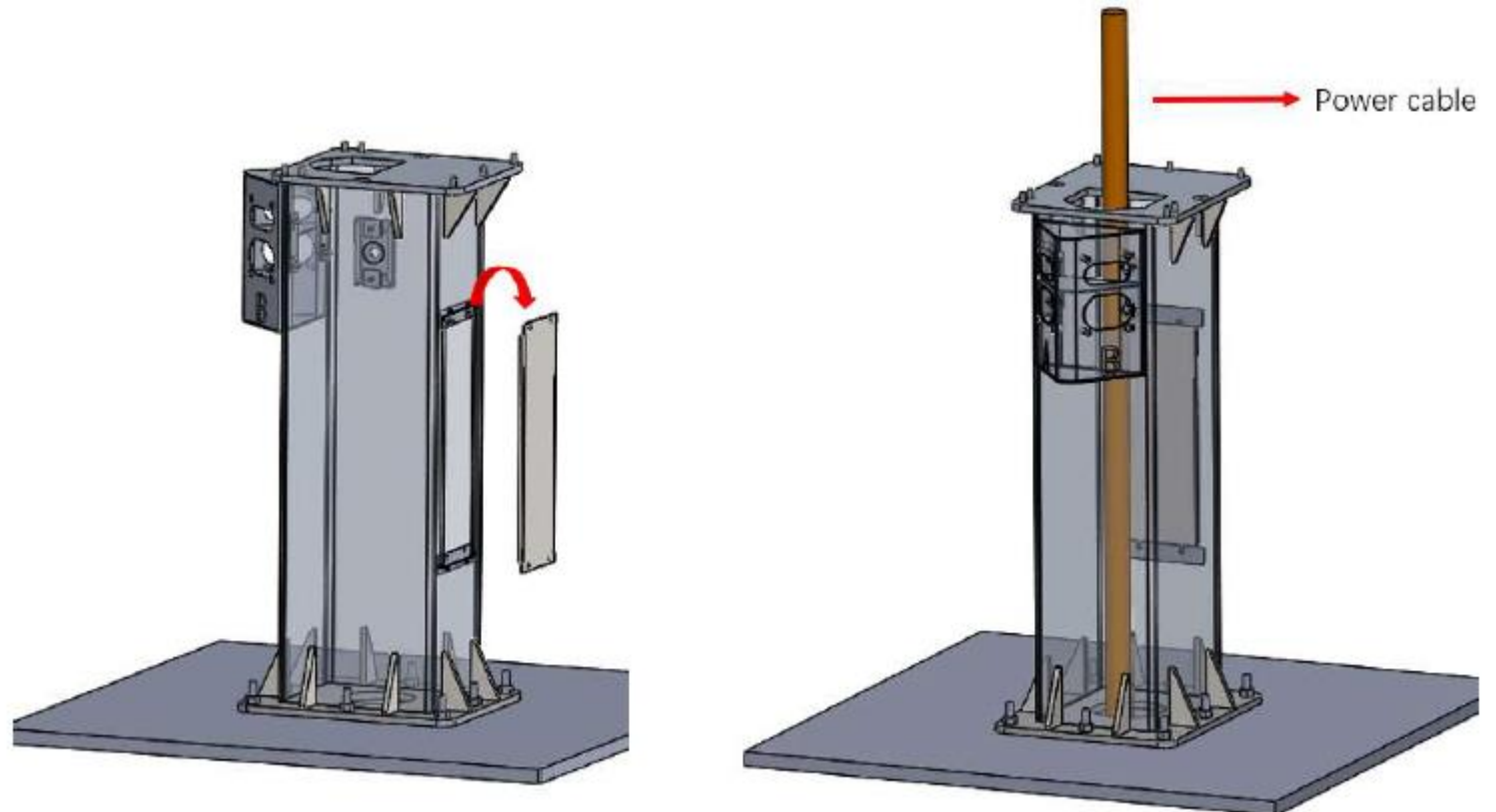
3. Install the pole on the foundation

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



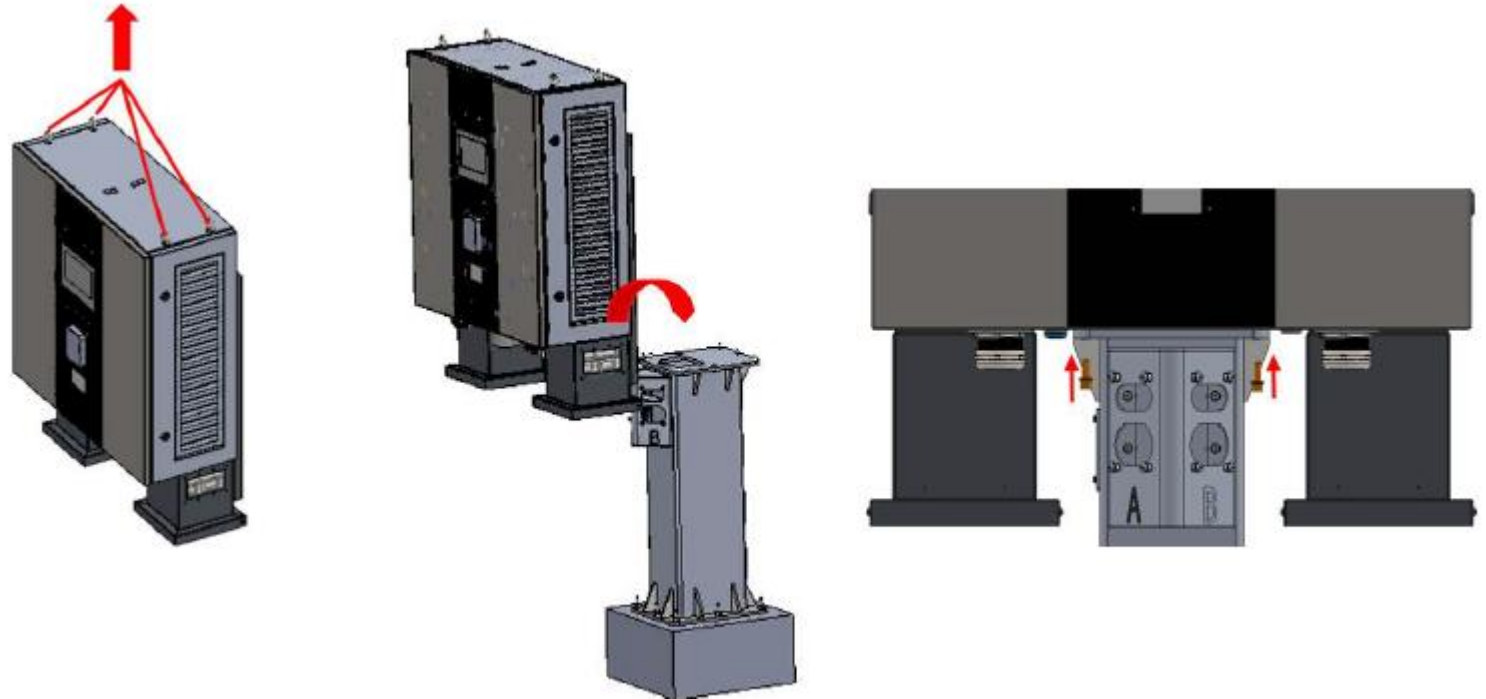
3. Install the pole on the foundation

- 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



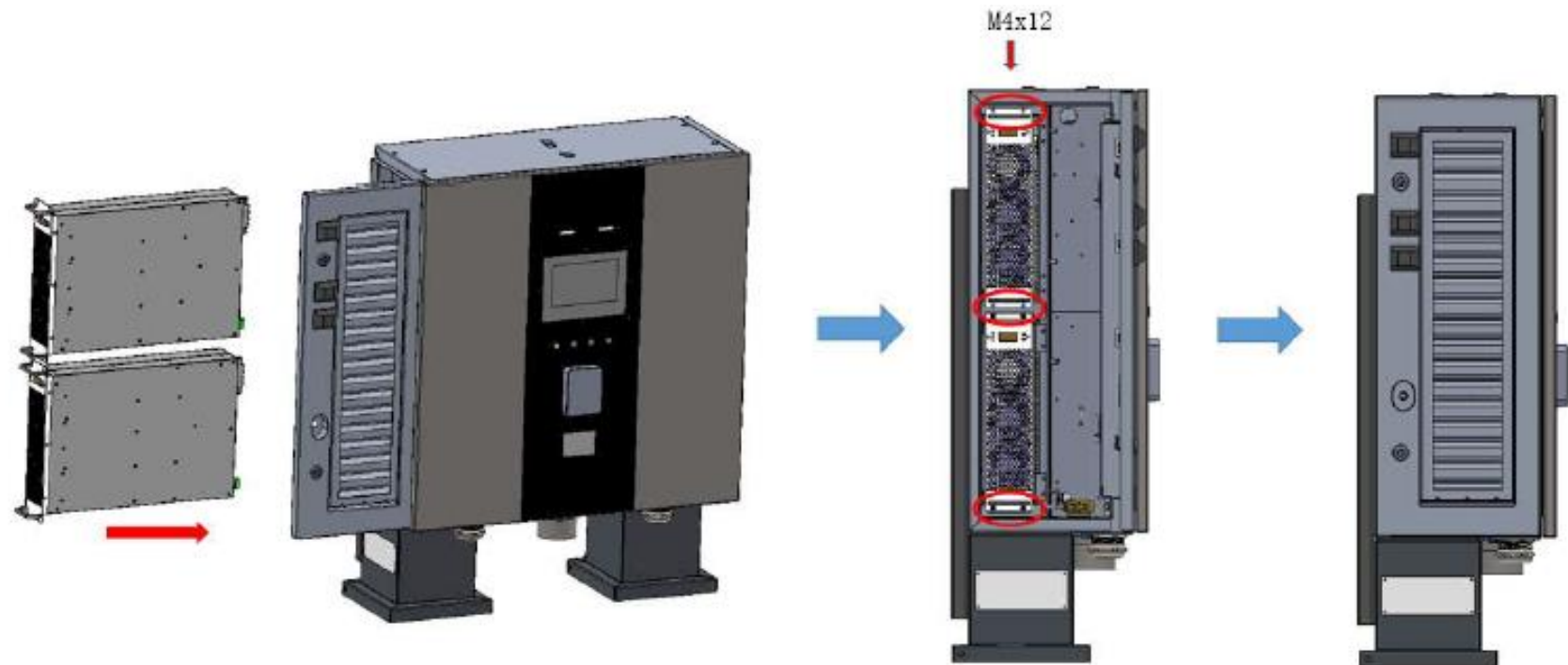
4. Fix the charger on the wall

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,



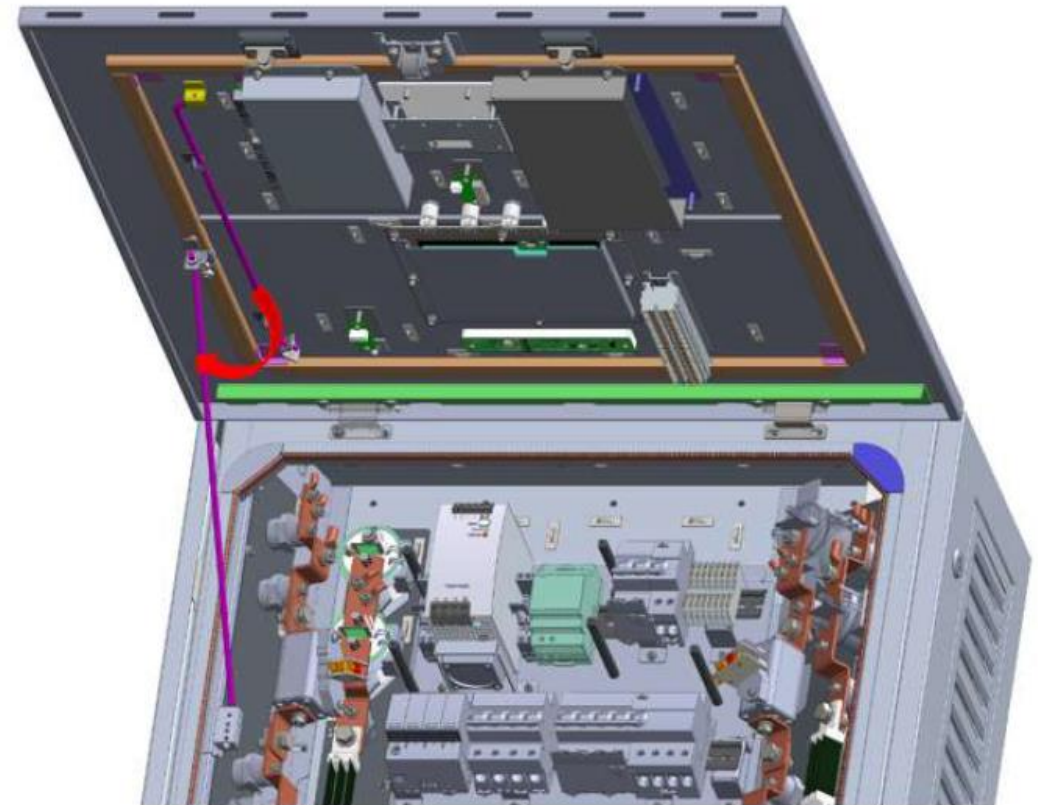
5. Insert power module

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,



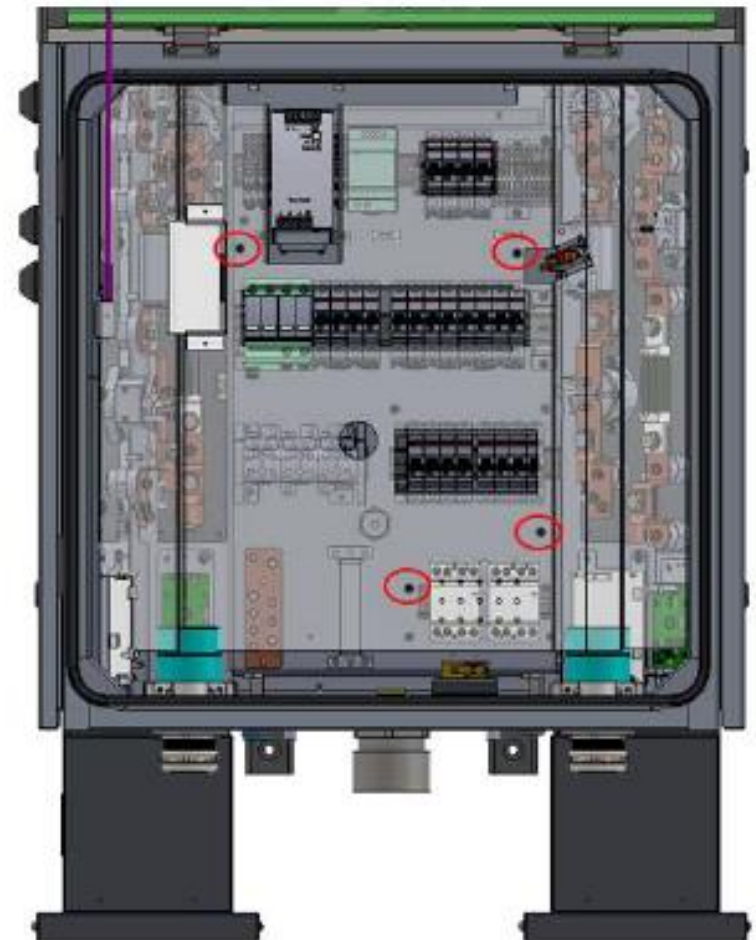
6. Connect input power cable

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



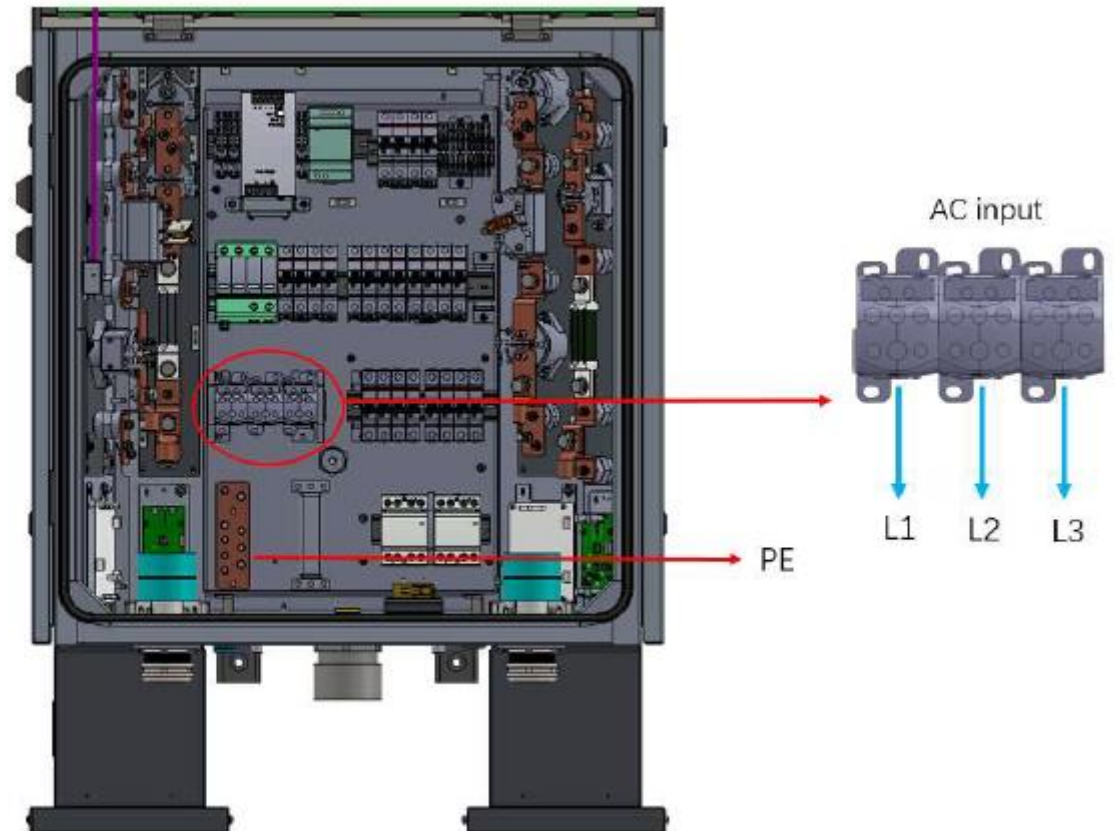
6. Connect input power cable

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.



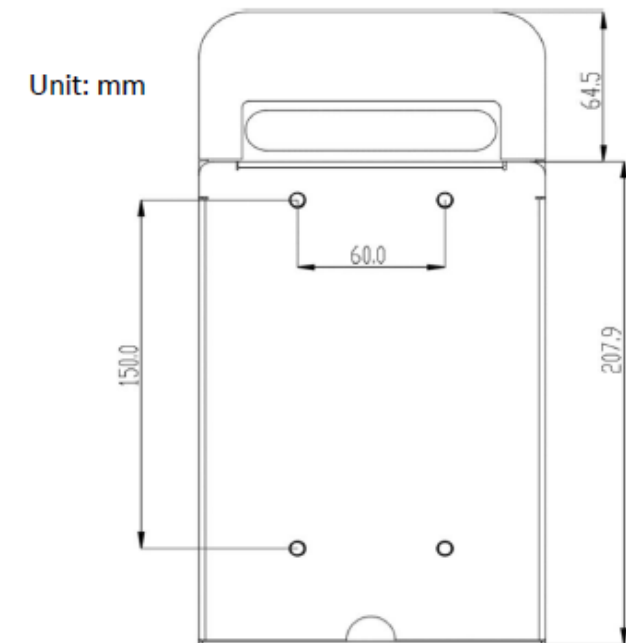
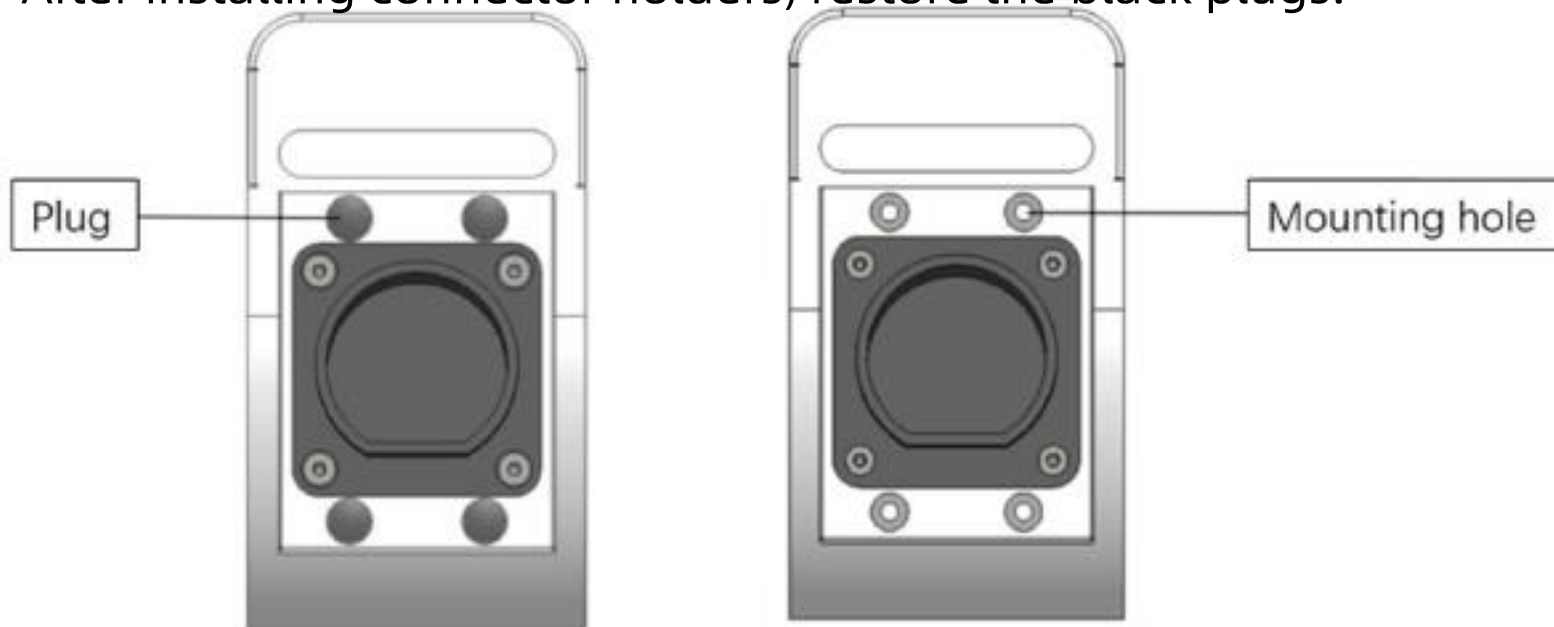
7. Install connector holder - **Wall mounting**

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 $\varnothing 10$ to drill holes with a depth of about 70mm. Tap M6 $\times$ 50 expansion screws into the hole and fix the connector holder.

After installing connector holders, restore the black plugs.

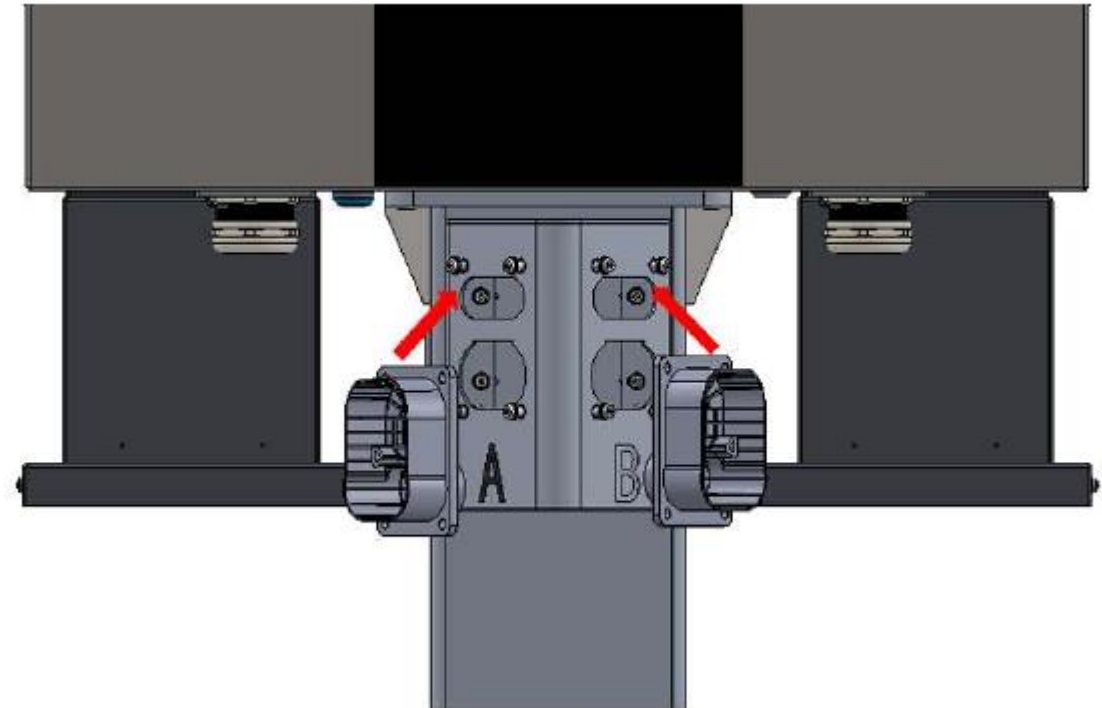


Installation Process



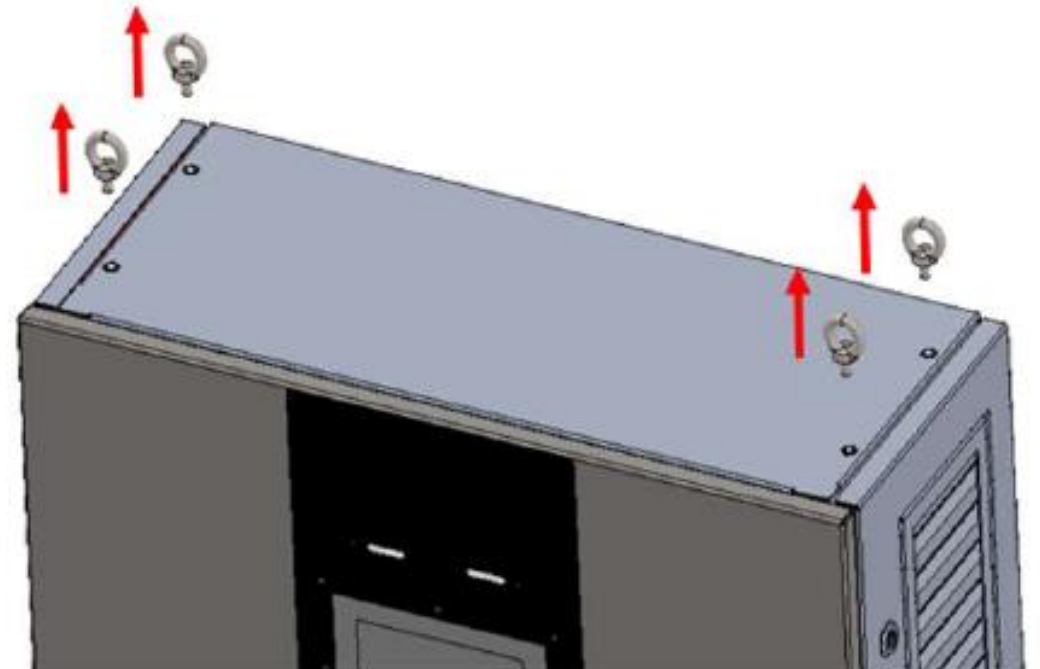
7. Install connector holder - **Wall mounting**

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



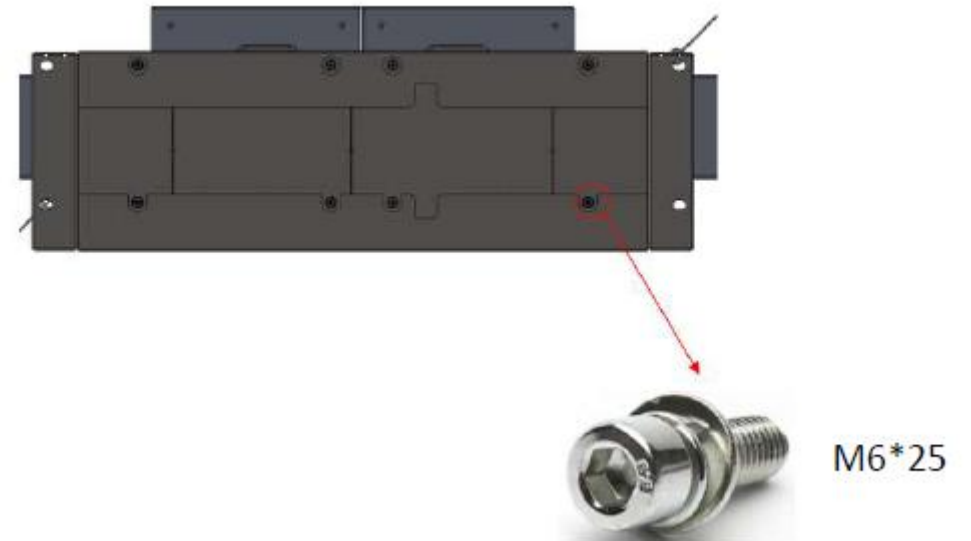
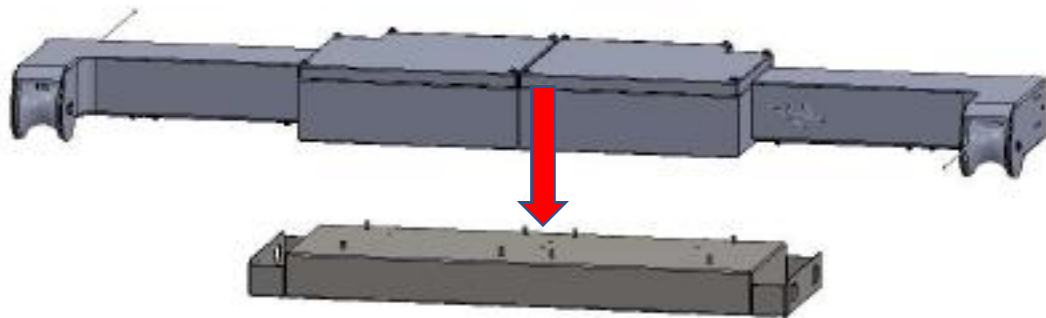
8. Install cable management system

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



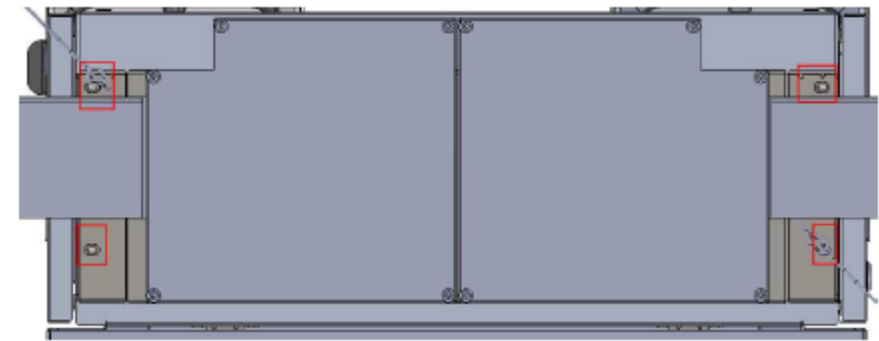
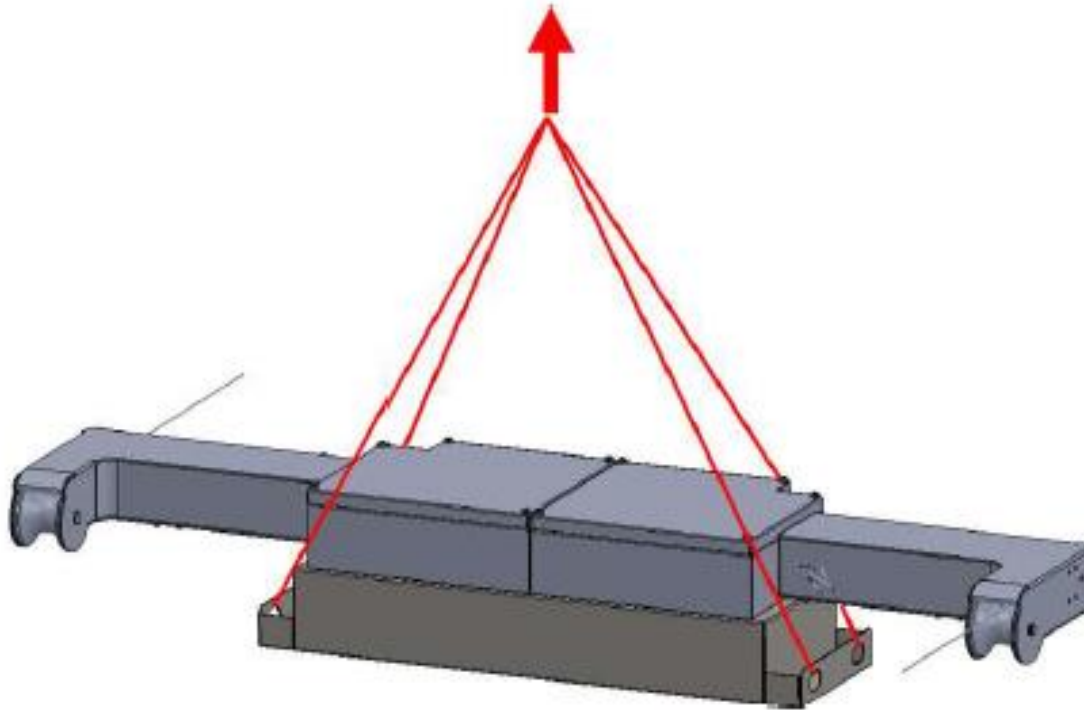
8. Install cable management system (CMS)

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

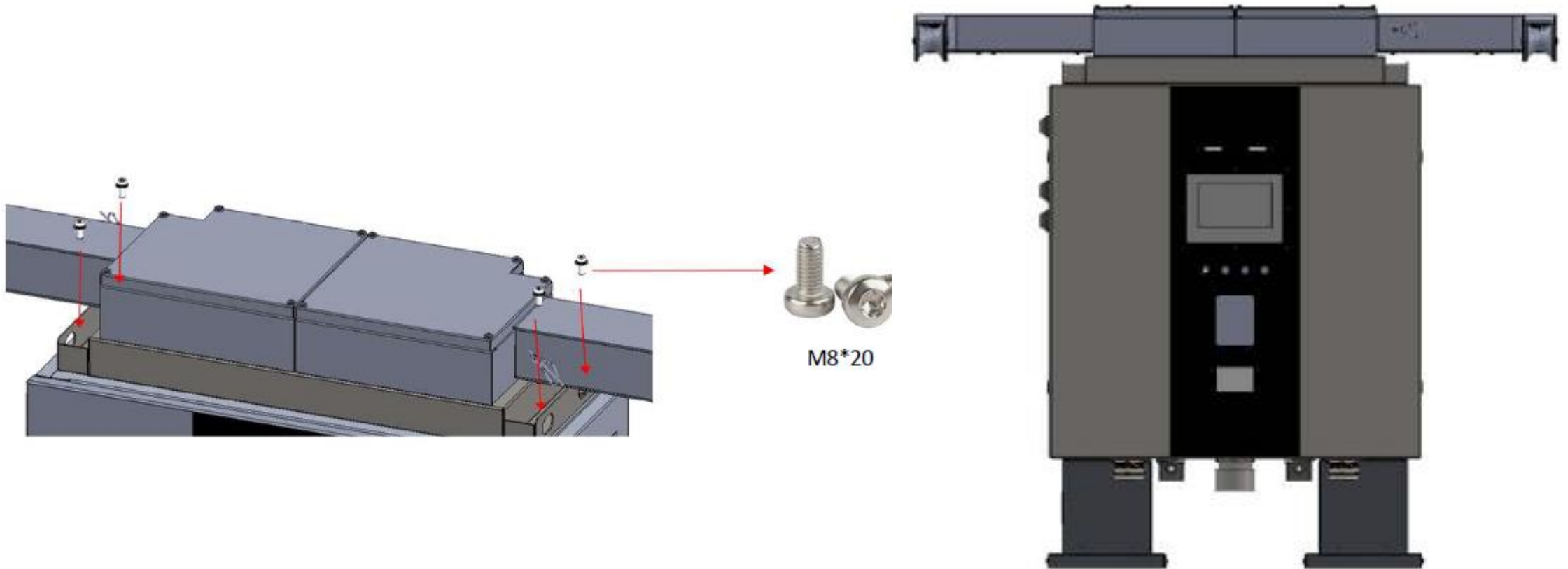
3) Hoist the CMS, move it onto the top of the charger cabinet and align the mounting holes on the charger cabinet.



Installation Process

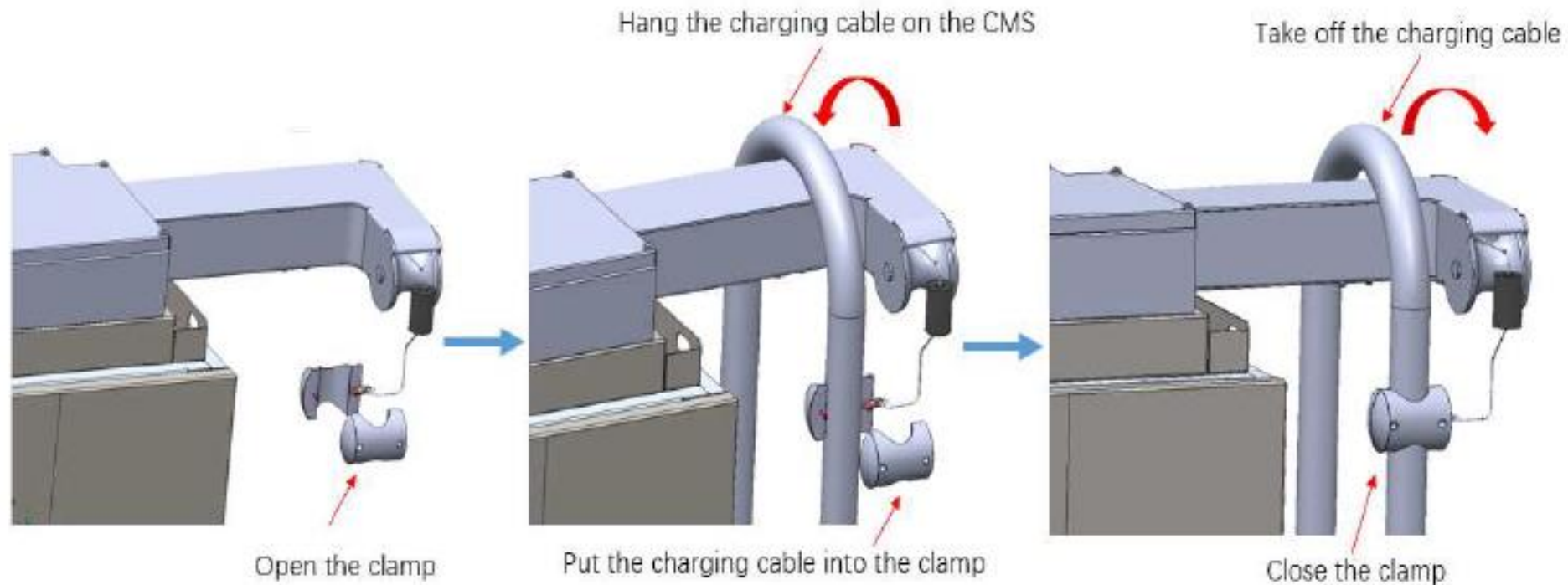
8. Install cable management system

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



Installation Process



Final effect



Inspection after installation



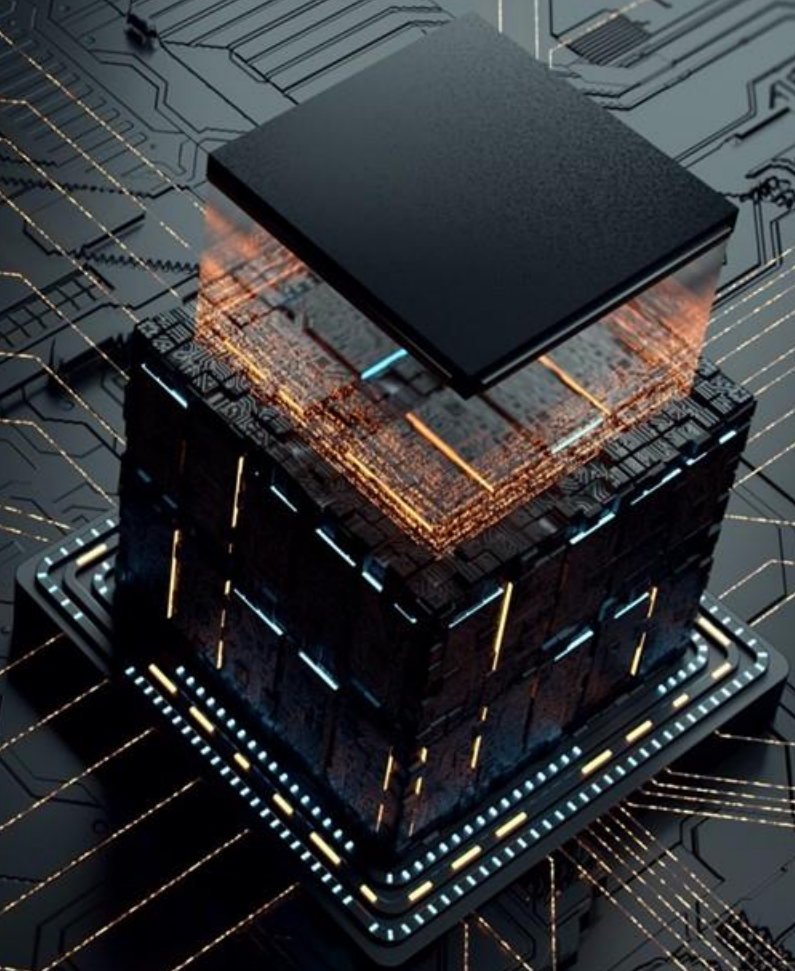
- (1) Short circuit: check the power supply cable , there should no short circuit between the three-phase wire, neutral wire and ground wire.
- (2) Power supply voltage : Check the power supply voltage in distribution cabinet, ensure there are no lack-phase, over voltage, under voltage, phase sequence abnormality.
- (3) Line voltage of charger inlet terminal should be 400V ($\pm 10\%$).





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	

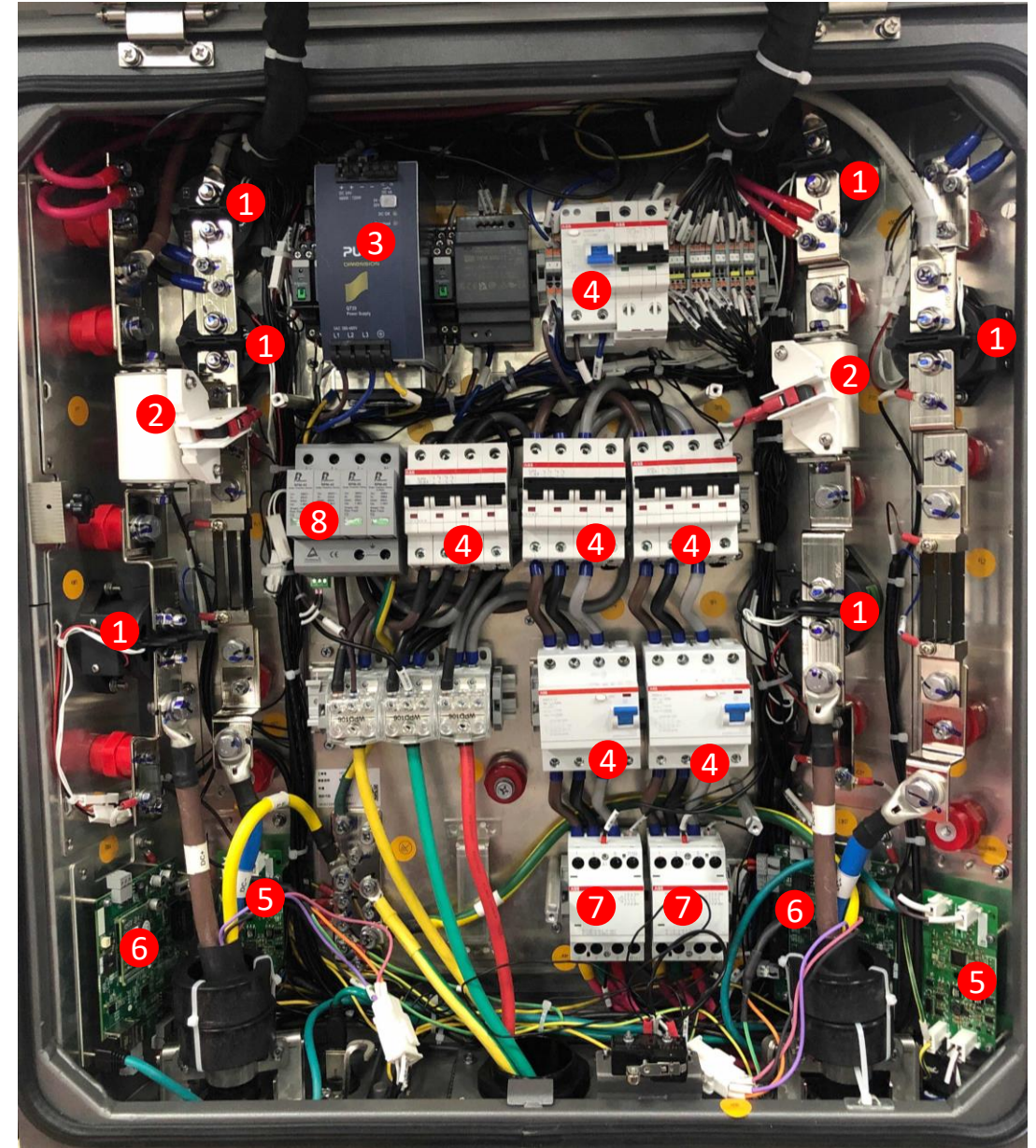
Commissioning Tools



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		

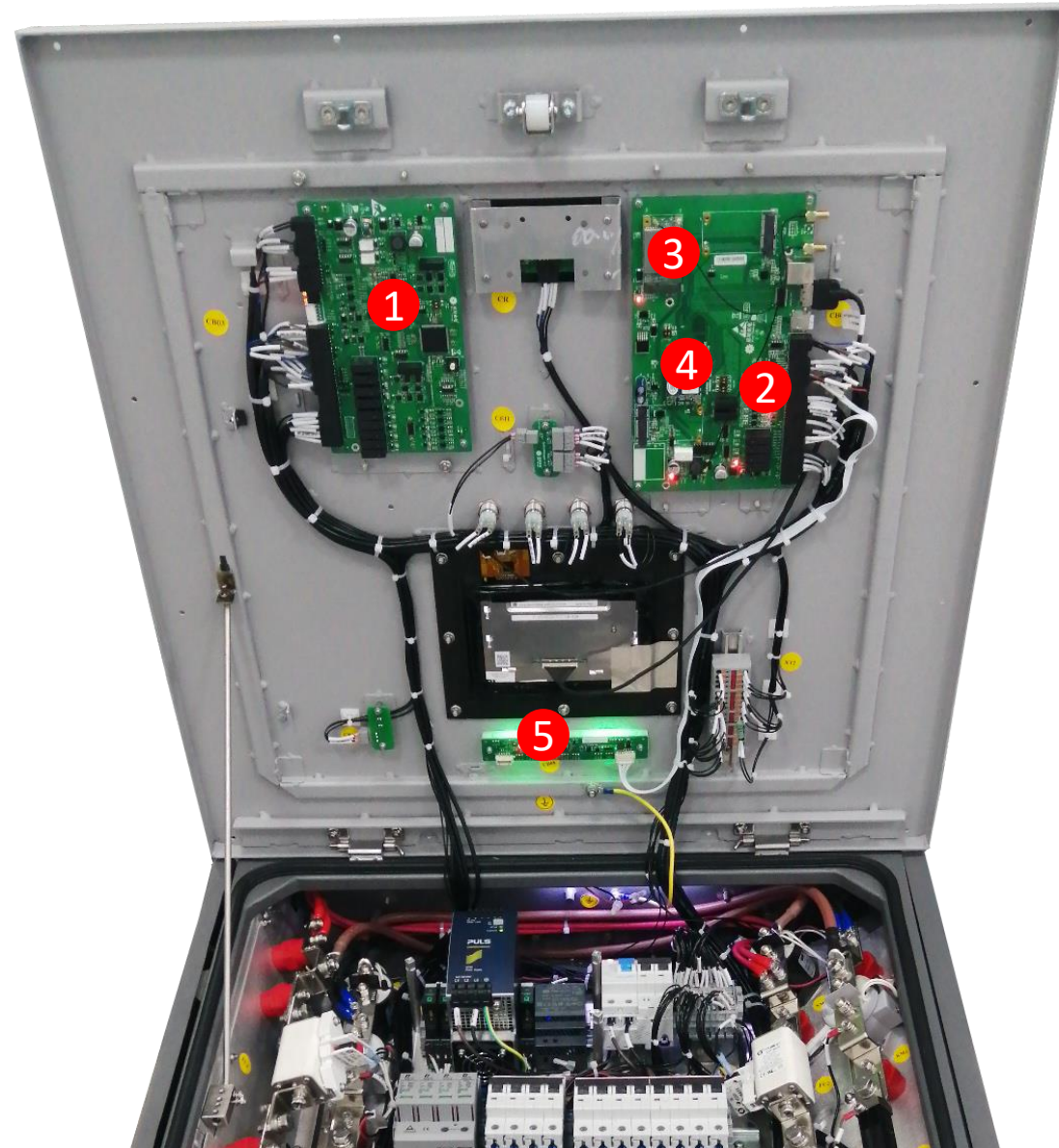
Overview of internal structure

- 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



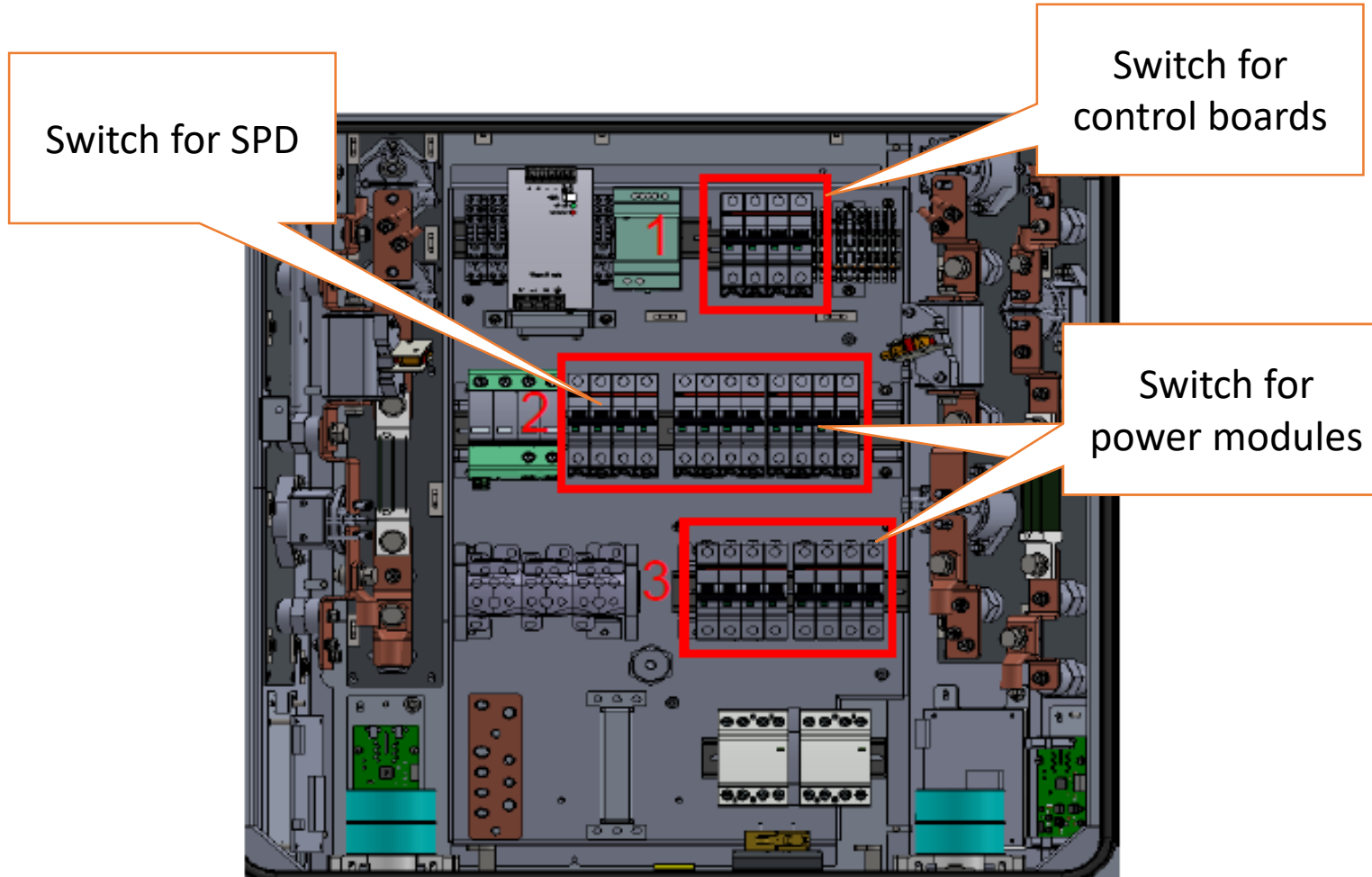
Overview of internal structure

- ① M4 Control Board
- ② A7 Main Board
- ③ 4G Communication Board
- ④ A7 Core Board
- ⑤ LED Indicator board



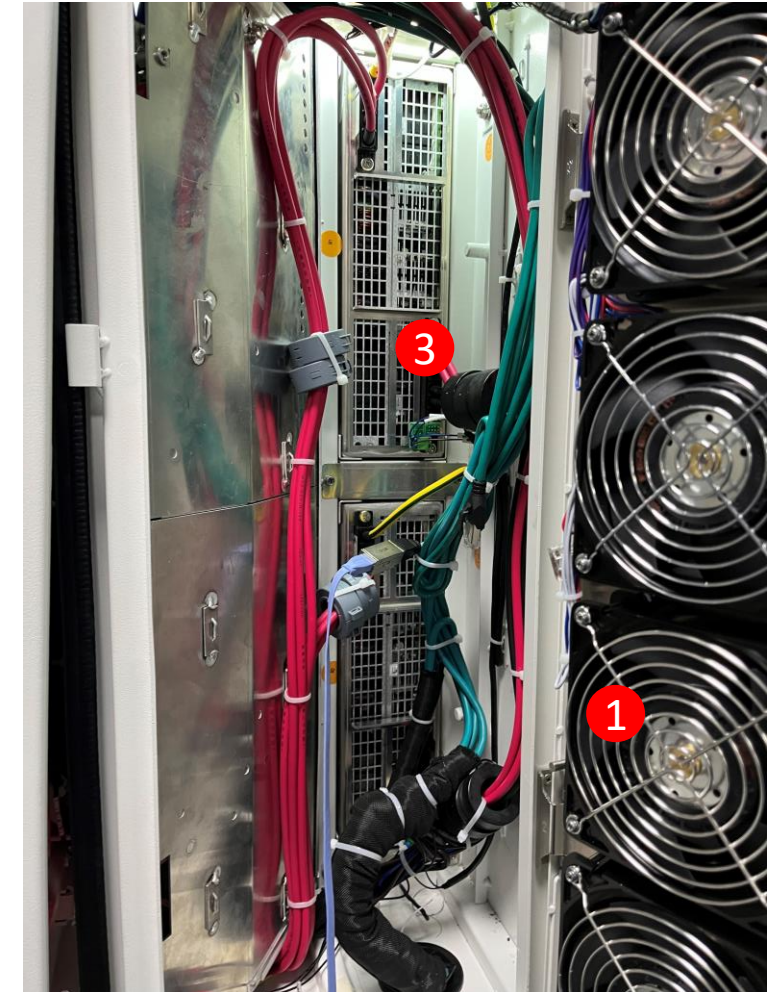
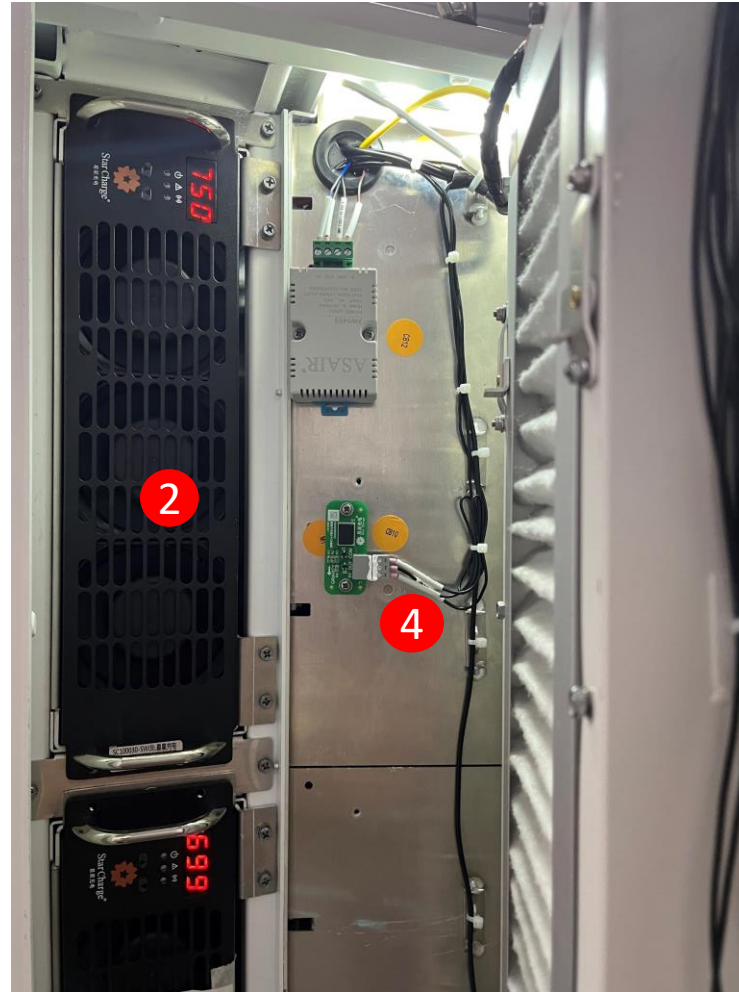
Overview of internal structure

The function of switches inside charger cabinet.

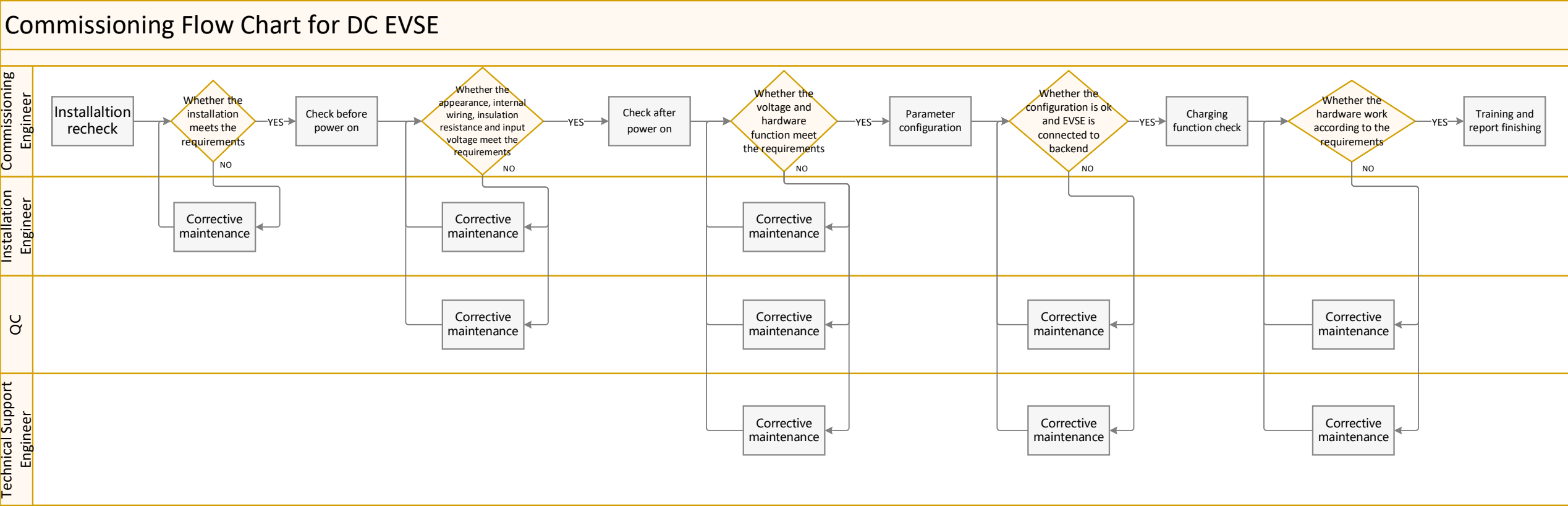


Overview of internal structure

- ① Fan
- ② Power Modules
- ③ Power module socket
- ④ Tilt switch



Commissioning Flowchart



Commissioning workflow

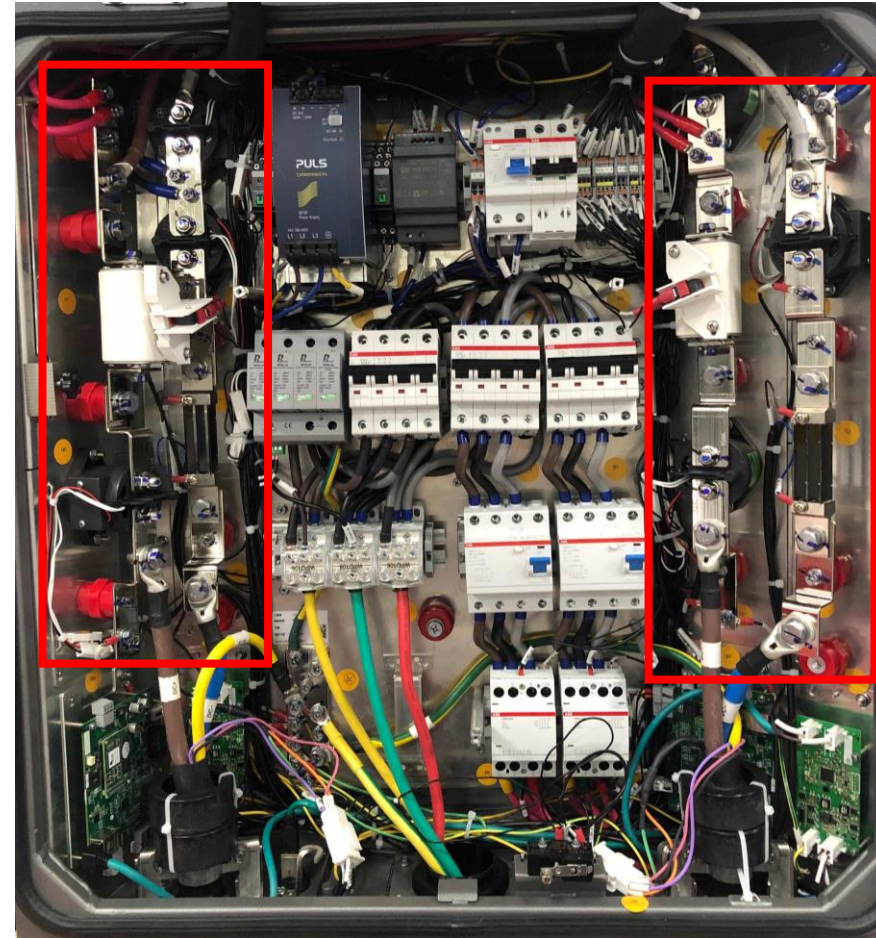
1. Installation Recheck

- 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

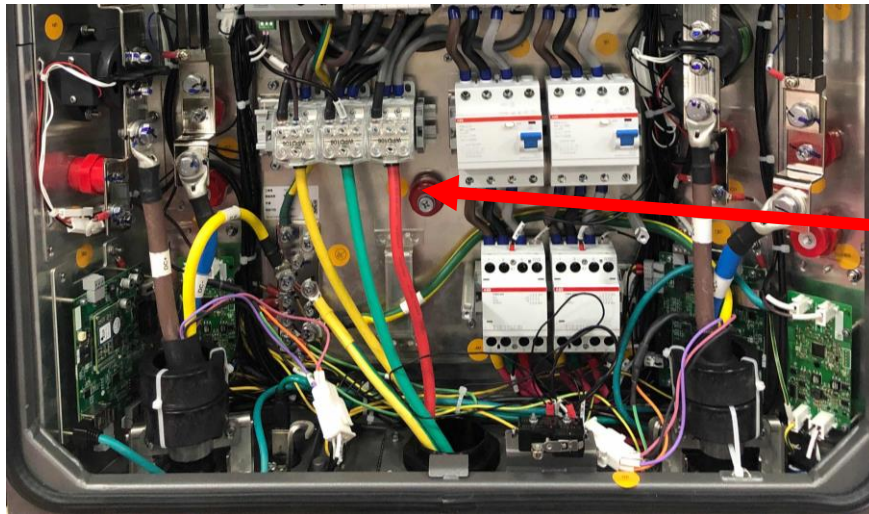
- Fasten screw: Check and ensure screws or nuts on each cable connection inside charger are fastened.



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

Login

Username

Password

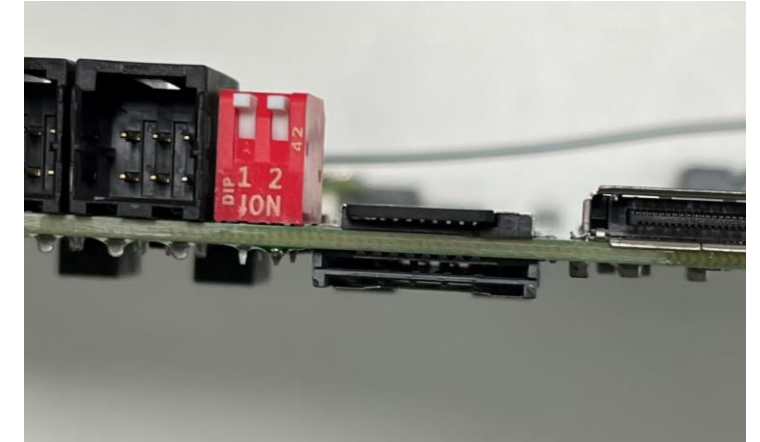
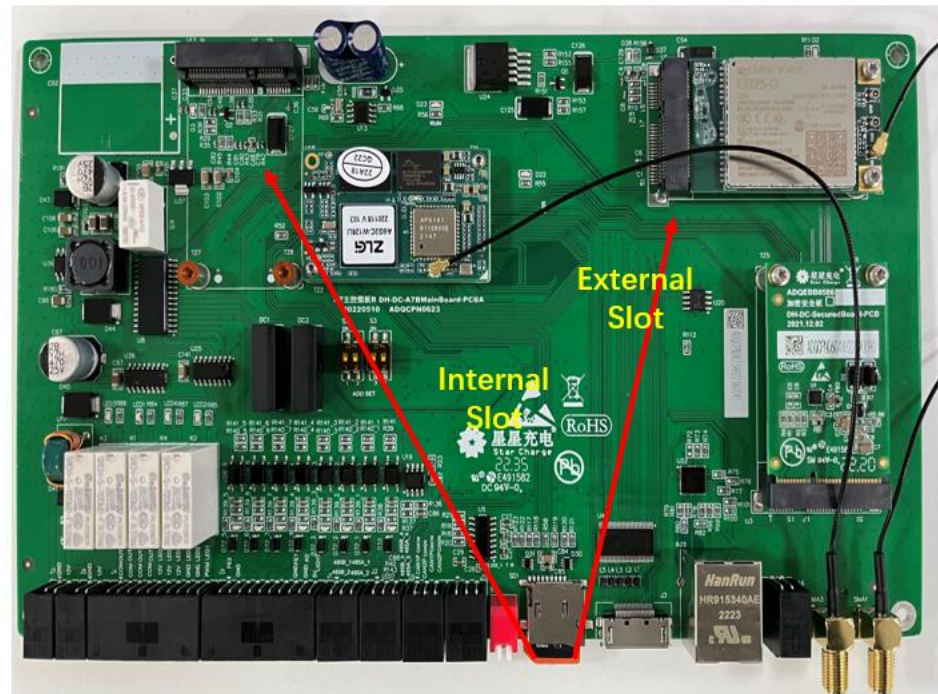
Sign me in

Commissioning workflow

4. Parameter configuration

Preparation:

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



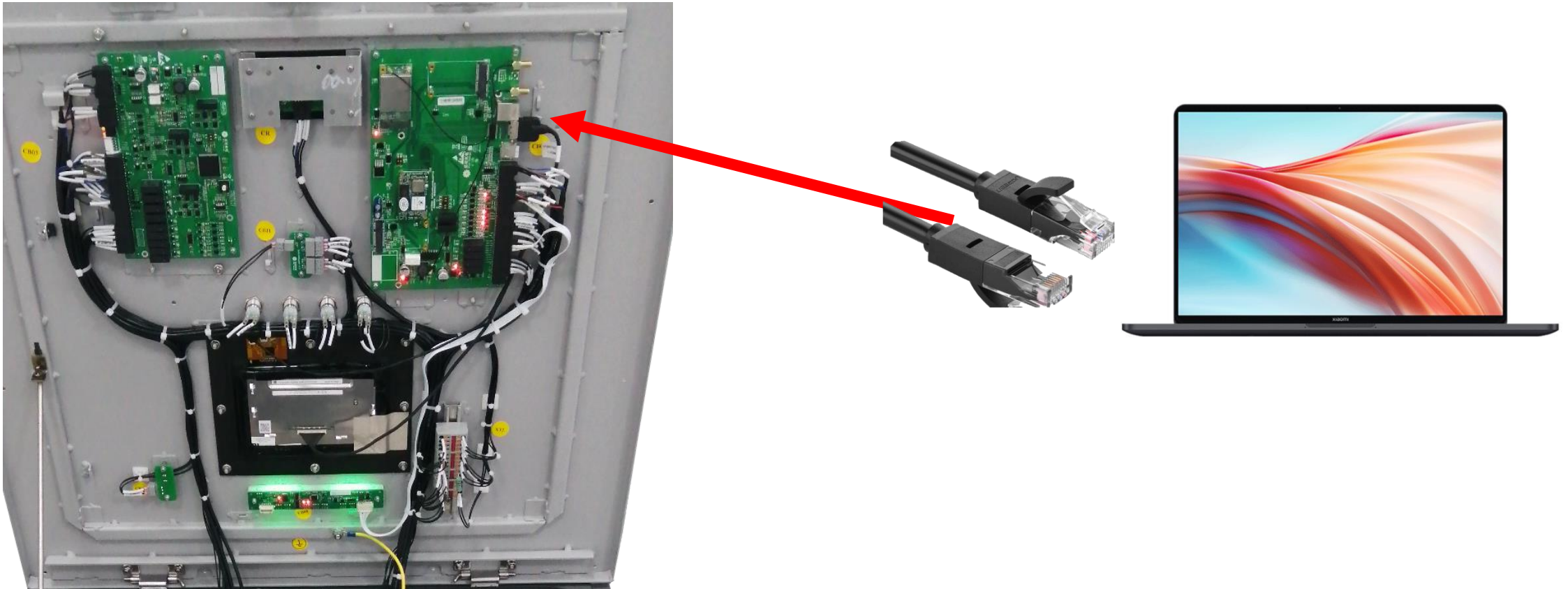
Commissioning workflow

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)



Eigenschaften von Internetprotokoll, Version 4 (TCP/IPv4) X

Allgemein

IP-Einstellungen können automatisch zugewiesen werden, wenn das Netzwerk diese Funktion unterstützt. Wenden Sie sich andernfalls an den Netzwerkadministrator, um die geeigneten IP-Einstellungen zu beziehen.

☐ IP-Adresse automatisch beziehen

☒ Folgende IP-Adresse verwenden:

IP-Adresse: 192 . 168 . 1 . 100

Subnetzmaske: 255 . 255 . 255 . 0

Standardgateway: . . .

☐ DNS-Serveradresse automatisch beziehen

☒ Folgende DNS-Serveradressen verwenden:

Bevorzugter DNS-Server: . . .

Alternativer DNS-Server: . . .

☐ Einstellungen beim Beenden überprüfen

Erweitert...

OK Abbrechen

Commissioning workflow

4. Parameter configuration



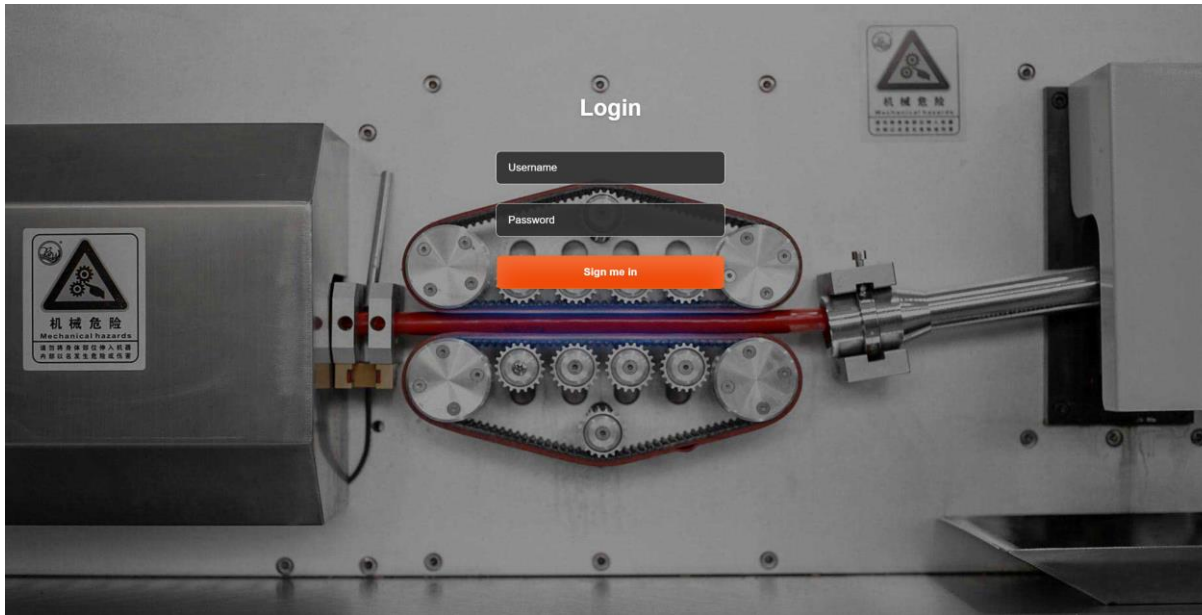
Log in:

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

Contents	
Quick Setup	→
Software Configuration	→
CP Configuration	→
CP Status	→
Power Unit Configuration	→
Power Unit Status	→
SmartOPS	→
Upload And Download	→

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 status

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.

A screenshot of the Star Charge web interface showing the 'Software Setting' menu. The left sidebar has four items: 'Hardware Setting', 'Software Setting' (highlighted in orange), 'Charging Status', and 'Upload and download'. The main content area has several sections: 'Functions Enable' with four dropdown menus (Card Type: Billing card, Local startup whether to go ocpp background: No, Whether to open the qr code process: No, Whether to transfer private data: No); 'Time Zone And DST Setting' with an unchecked 'Enable modification' checkbox; 'UTC Time Setting' with a timestamp '2022-11-01 11:16:49'; and 'Get version' which contains a 'Version' label and a text input field displaying '1.5.1.8.1b213'. A red arrow points from the bottom left towards the 'Version' text and its input field. There are also small circular icons labeled 'PM' and 'RY' near the bottom right of the settings area.

Commissioning workflow

4. Parameter configuration



Firmware update:

Depends on the original firmware version in the charger, some control boards need 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

Login

Username

Password

Sign me in

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”

Contents

Quick Setup

Software Configuration

CP Configuration

CP Status

Power Unit Configuration

Power Unit Status

SmartOPS

Upload And Download

4G configuration

☒ Enable modification

APN

User

Psw

Pin

Submit

Refresh

Ethernet configuration

☐ Enable modification

Submit

Refresh

Commissioning workflow

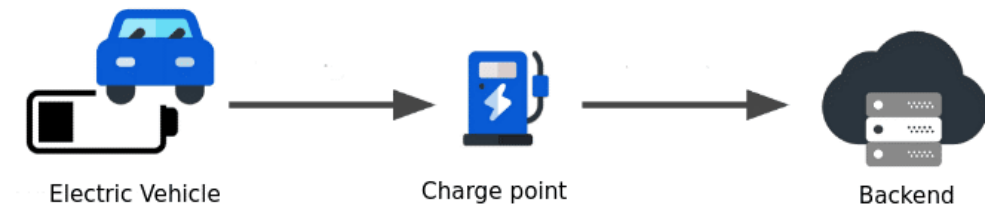
4. Parameter configuration



OCPP backend and remote maintenance platform

For OCPP backend

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



Contents

Quick Setup

Software Configuration

CP Configuration

CP Status

Power Unit Configuration

Power Unit Status

SmartOPS

Upload And Download

CP Configuration

Home / Configuration / CP Configuration

Identification

CP Identity

12345678

Group Number

1234

EVSE ID

1-1

#1 Gun Address

1

#2 Gun Address

2

#1 Gun QRcode

1234567801

#2 Gun QRcode

1234567802

Submit

Refresh

Commissioning workflow

4. Parameter configuration



Charger authentication method

Following authentication method can be selected:

Contents

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CP Status

Power Unit Configuration

Power Unit Status

SmartOPS

Upload And Download

CP Backend

URL

36.153.57.202

Port

3400

Authorization key

Path

/steve/websocket/CentralSystemService

SSL_ON

0

Certificate import

Brows

Additional Function

Authentication

Card Not Authentication

Card Authentication

Card Not Authentication

Local PNC

Mac Start

Interaction With Backend For All

No

Private Data

No

Submit

Refresh

Time Zone And DST Setting

Enable modification

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

A screenshot of the Star Charge web interface for configuring an EVSE. On the left is a dark sidebar with a "Contents" menu listing: Quick Setup, Software Configuration, CP Configuration (highlighted in orange), CP Status, Power Unit Configuration, Power Unit Status, SmartOPS, and Upload And Download. The main area is titled "Gun" and "EVSE 1". Below this are tabs for "Conn 1" and "Conn 2", with "Conn 2" selected. The configuration fields are organized into two columns. The left column includes: "Gun Type" (dropdown menu showing "CCS2"), "Maximum Voltage(V)" (input field with "1000"), "Minimum Voltage(V)" (input field with "150"), "Maximum Current(A)" (input field with "300"), "Maximum Power(kW)" (input field with "180"), and "Maximum Temperature(°C)" (input field with "90"). The right column includes: "Meter" (dropdown menu showing "Type B"), "Insulation Board" (dropdown menu showing "Enable"), "PLC Board" (dropdown menu showing "Type A"), and "Pre-Precharge" (dropdown menu showing "Unknown"). A red rectangular box highlights the "Maximum Voltage(V)", "Minimum Voltage(V)", "Maximum Current(A)", and "Maximum Power(kW)" fields and their corresponding input values.

Commissioning workflow

4. Parameter configuration



Power module configuration

Contents

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Language

Us

Power Unit Configuration

Home / Configuration / Power Unit Configuration

Common

☒ 180_relay

☐ 180_pdu

☐ 360_pdu

Module Layout

Gun Amount

Power Unit Amount

Maximum Power(kW)

Hand In Hand

2

1

60

PDU Type

PDU Amount

PDU Relay Amount

SCII

1

2

Fan Type

Power Unit ID

PWM

undefined

Submit

Refresh

Commissioning workflow

4. Parameter configuration



Power module configuration

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Power Unit Configuration

Power Unit Status

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SCII

1

2

Fan Type

PWM

Power Unit ID

undefined

Power Module

Under-voltage Protection(V)

173

Over-voltage Protection(V)

260

Module Amount

2

Module Type

StarCharge 30KW 1

Module SN	Group Number
1	1
2	2

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.

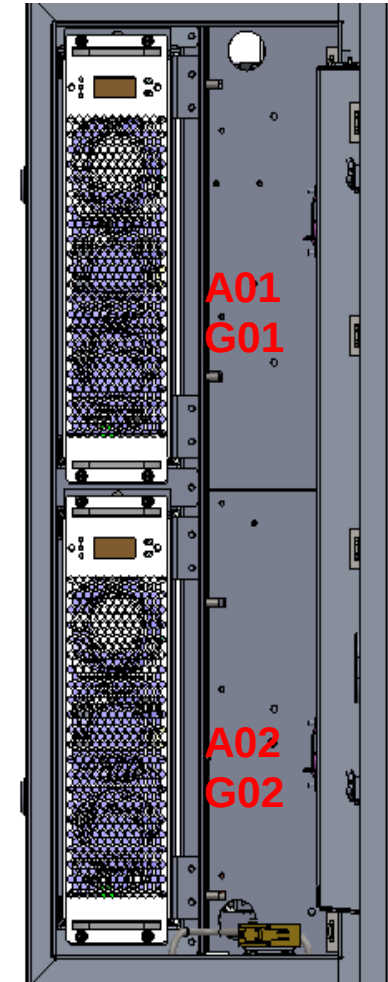
Set the power module sequence as the picture shown :

From top to bottom: A1 to A2.

Top



Bottom



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.

Star Charge

Home

Software Configuration

CP Configuration

CP Status

Power Unit Configuration

Power Unit Status

SmartOPS

Upload And Download

Language ▼User Set ▼

Protection(V)

260

Module Amount

6

Module Type

StarCharge 30KW ▼

2

3

4

5

6

2

3

4

5

6

Submit

Refresh

Sensor

Temperature Sensor

Disable ▼

Temperature Threshold(°C)

Water Level Sensor

Disable ▼

Door Sensor

Disable ▼

Submit

Refresh

www.starcharge.com

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

Star Charge

Home

Software Configuration

CP Configuration

CP Status

Power Unit Configuration

Power Unit Status

SmartOPS

Upload And Download

Language User Set

Door sensor		/
Surging Sensor		/
CB Sensor		/

Debug

Type	Parameters	Control
Fan Relay	\	Open Close
Fan Speed	Example : 0-100	Submit
AC Relay	\	Open Close
PDU Relay	Pdu Id Relay Id	Open Close
Power Check	Gun Id Request Voltage(V) Request Current(A)	Start Stop

www.starcharge.com

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

Star Charge

Home

Software Configuration

CP Configuration

CP Status

Power Unit Configuration

Power Unit Status

SmartOPS

Upload And Download

Door Sensor		/
Surging Sensor		/
CB Sensor		/

Debug

Type	Parameters	Control
Fan Relay	\	Open Close
Fan Speed	Example : 0-100	Submit
AC Relay	\	Open Close
PDU Relay	Pdu Id Relay Id	Open Close
Power Check	Gun Id Request Voltage(V) Request Current(A)	Start Stop

Star Charge

Language

Home

Software Configuration

CP Configuration

CP Status

Power Unit Configuration

Power Unit Status

SmartOPS

Upload And Download

Protection(V)
260

Module Amount
6

Module Type
StarCharge 30KW

2	2
3	3
4	4
5	5
6	6

Submit Refresh

Sensor

Temperature Sensor
Disable

Water Level Sensor
Disable

Temperature Threshold(°C)

Door Sensor
Enable

Submit Refresh

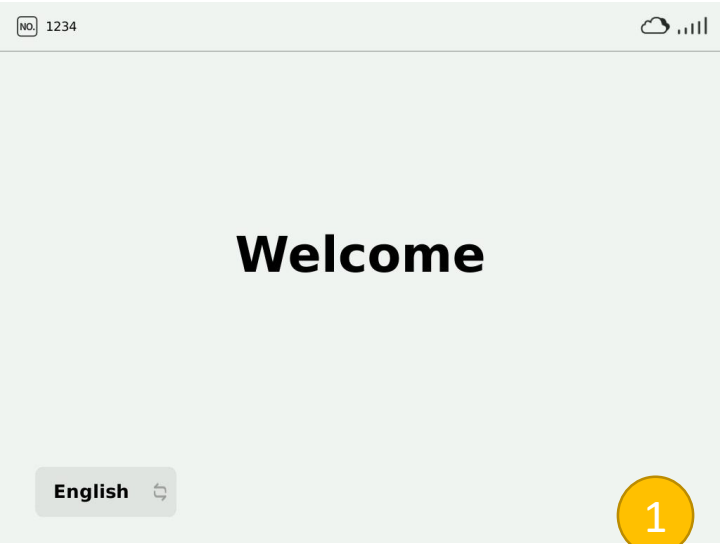
www.starcharge.com

Commissioning workflow

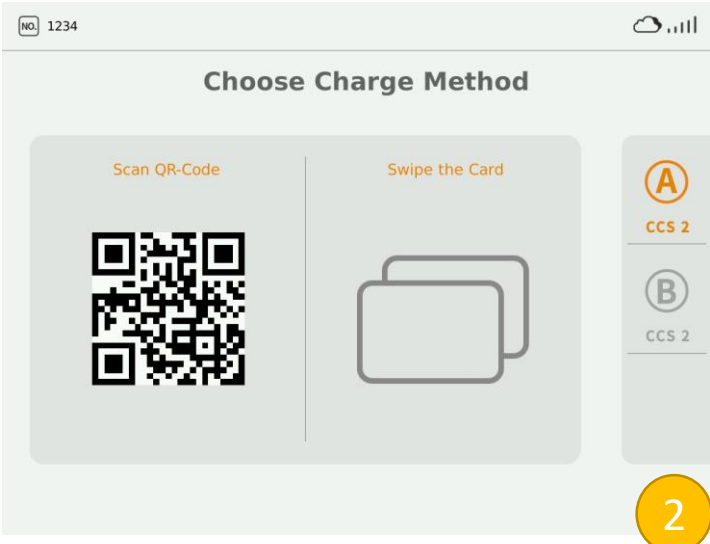
5. Charging test



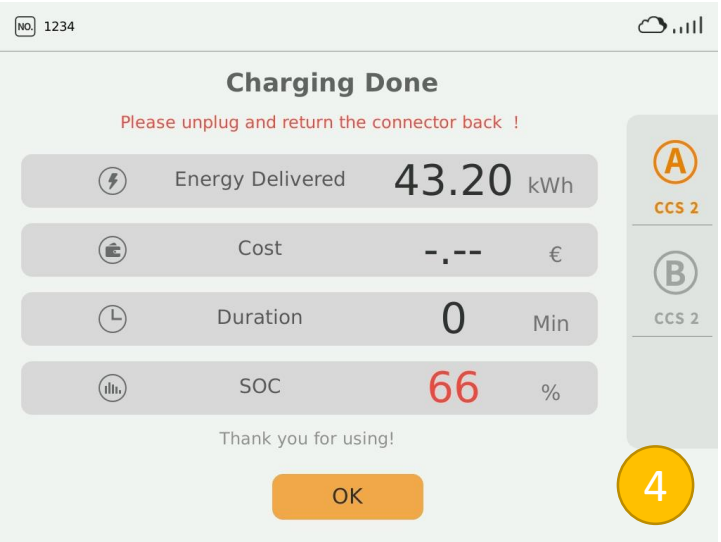
Plug in the charger connector to an EV and then swip IC card or use App to start charging session



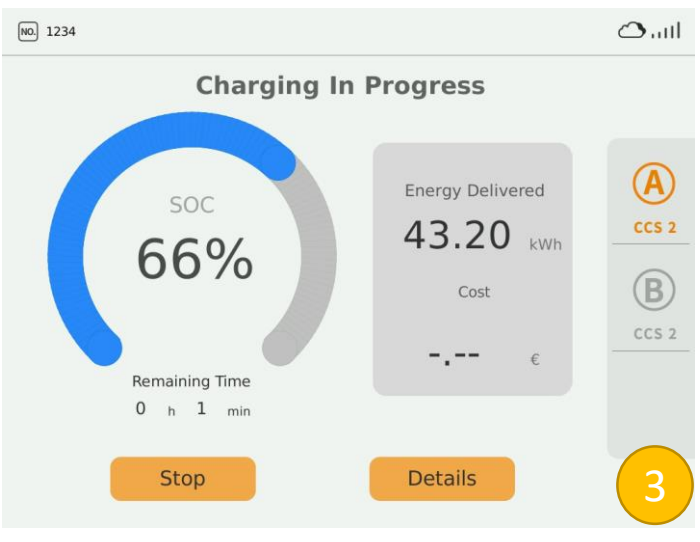
Plug charger gun into EV



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

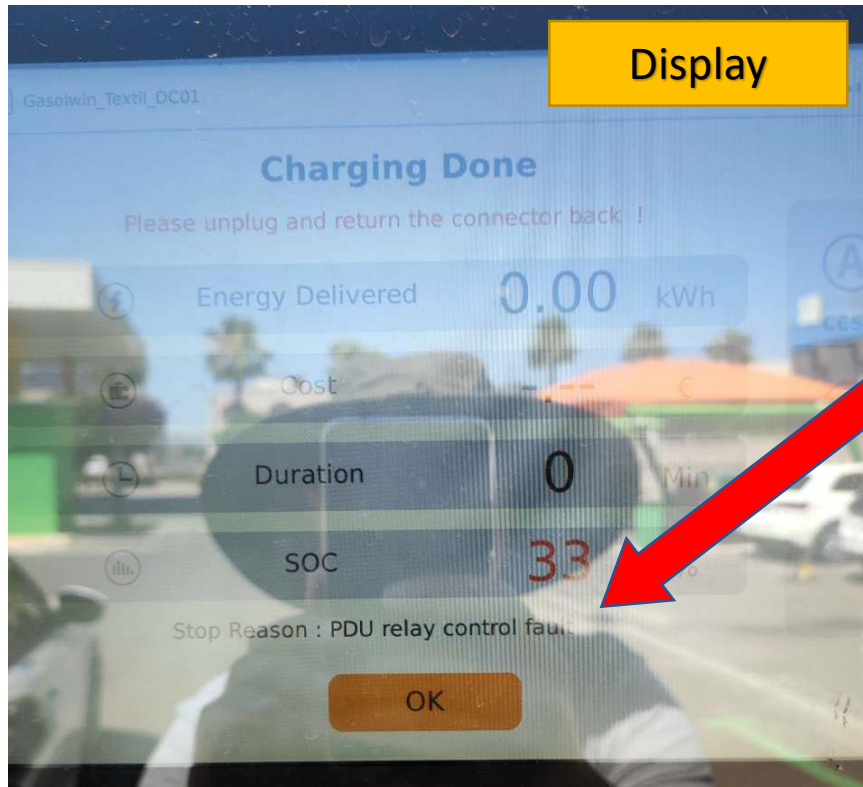
29.11.2022

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	☺ 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 display
- Backend platform notification
- Charger log file

[illegible]

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 board is normal	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 connected	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 cabinet	N/A
InternalError	0x200103	2097411	Abnormal power control fan communication	NO	YES	The output power of the charger will decrease	N/A

The background is a dark, high-tech circuit board. It features a complex network of glowing orange lines that represent electrical traces or data paths. These lines radiate from a central point and branch out across the frame. In the center-right of the image, there is a 3D-rendered cube. The top face of the cube is a solid black square. The sides of the cube are transparent, revealing a dense, glowing orange internal structure that resembles a microchip or a complex circuit. The base of the cube is a dark, rectangular platform with a grid of small, glowing blue and white lights along its edges. The overall aesthetic is sleek, modern, and futuristic, emphasizing advanced technology and connectivity.

Mobile Power Grid Ecosystem Future has Come

Star Charge, Faster and Smarter!
Europe office: Rugbyring 12, 65428 Russelsheim, Germany
Headquarter: No.39 Longhui Road, Wujin, Changzhou, Jiangsu, China
WWW.STARCHARGE.COM