

DC 30kW Wallbox

User Manual

Revision 0.2



IMPORTANT SAFETY INSTRUCTIONS

This document contains instructions and warnings that must be followed when installing and using the Electric Vehicle Charging Equipment (EVCE). Be sure to review all **WARNINGS** and **CAUTION** markings before proceeding with installation or use of the EVCE to avoid hazards.

Safety Instructions

The below symbols signify a **WARNING** or **CAUTION** and should be acknowledged immediately.



WARNING: RISK OF PERSONAL INJURY



WARNING: RISK OF ELECTRIC SHOCK



WARNING: RISK OF FIRE OR EXPLOSION



CAUTION: RISK OF DAMAGE TO THE EQUIPMENT

- The information provided in this manual in no way exempts the user of responsibility from following all applicable codes or safety standards.
- This document provides instructions for the Electric Vehicle Charging Equipment (EVCE) and should not be used for any other product.

Repair and Maintenance Clause

- Only licensed electricians can repair or maintain this equipment as it is forbidden for general users to repair or maintain it.
- Input power must be turned off before any repair or maintenance is performed.

Federal Communication Commission Interference Statement

This equipment complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This equipment may not cause harmful interference, and (2) this equipment must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not covered in this Guide must be approved in writing by the manufacturer's Regulatory Engineering Department. Changes or modifications made without written approval may void the user's authority to operate this equipment.

Industry Canada statement:

This equipment complies with ISED's license-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this equipment must accept any interference received, including interference that may cause undesired operation.

DFS (Dynamic Frequency Selection) products that operate in the bands 5250- 5350 MHz, 5470- 5600MHz, and 5650-5725MHz.

Le présent appareil est conforme aux CNR d' ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Les produits utilisant la technique d'atténuation DFS (sélection dynamique des réquences) sur les bandes 5250- 5350 MHz, 5470-5600MHz et 5650-5725MHz."

Radiation Exposure Statement:

This equipment complies with FCC / ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with greater than 20cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements FCC / ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à plus de 20 cm entre le radiateur et votre corps.



WARNING: RISK OF PERSONAL INJURY

This equipment is intended only for charging vehicles that do not require ventilation during charging. Please refer to your vehicle's owner's manual to determine ventilation requirements.



WARNING: RISK OF PERSONAL INJURY

Do not use extender cables to increase the length of the charging cable. Maximum length is limited to 25 feet by the National Fire Protection Agency.



WARNING: RISK OF PERSONAL INJURY

Do not drag this equipment by input power cord.



WARNING: RISK OF ELECTRIC SHOCK

Basic precautions should always be taken when using electrical products, including the following:

- Read all the instructions before using this equipment.
- This equipment should be supervised when used around children.
- Do not insert fingers or tools into the EV connector.
- Do not use this equipment if the flexible power cord or EV cable is frayed, has broken insulation, or any other signs of damage.
- Do not use this equipment if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage.



WARNING: RISK OF ELECTRIC SHOCK

Improper connection of the equipment grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded.



WARNING: RISK OF ELECTRIC SHOCK

Do not touch live electrical parts. Incorrect connections may cause electric shock.



WARNING: RISK OF ELECTRIC SHOCK

Do not remove the front cover or attempt to open the enclosure. There are no user serviceable parts inside, if service is required, contact qualified personnel.



WARNING: RISK OF FIRE OR EXPLOSION

To reduce the risk of fire, replace only with same type and rating of fuse.



WARNING: RISK OF FIRE OR EXPLOSION

This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors. It should not locate in a recessed area or below floor level. Automatic reset feature provided.



WARNING: RISK OF FIRE OR EXPLOSION

Do not use this device with an extension cord.



CAUTION: RISK OF DAMAGE TO THE EQUIPMENT

Do not operate this equipment in temperatures outside its operating range of -30°C to +50°C (-22°F to +122°F).



CAUTION: RISK OF DAMAGE TO THE EQUIPMENT

Store this equipment in a clean dry place in temperatures between -40°C and +80°C (-40°F to +176°F).



CAUTION: RISK OF DAMAGE TO THE EQUIPMENT

Do not connect to a circuit operating at more than 300 volts to ground.



CAUTION: RISK OF DAMAGE TO THE EQUIPMENT

To reduce the risk of fire, connect only to a circuit provided with 70 amperes maximum branch circuit overcurrent protection in accordance with the National Electrical Code, ANSI/NFPA 70.

SAVE THESE INSTRUCTIONS

This manual contains important instructions for these models that shall be followed during installation, operation and maintenance of the unit.

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1 Introduction

This user manual applies to “DC 30kW Wall Box for Plug-in Electric Vehicles (PEVs) and Battery Electric Vehicles (BEVs)”.

!!! Any unauthorized modifications will void the manufacturer's warranty!!!

1.1 Product View



Figure 1-1 Front View

Box Contents

Inside the box, you will find the following accessories.

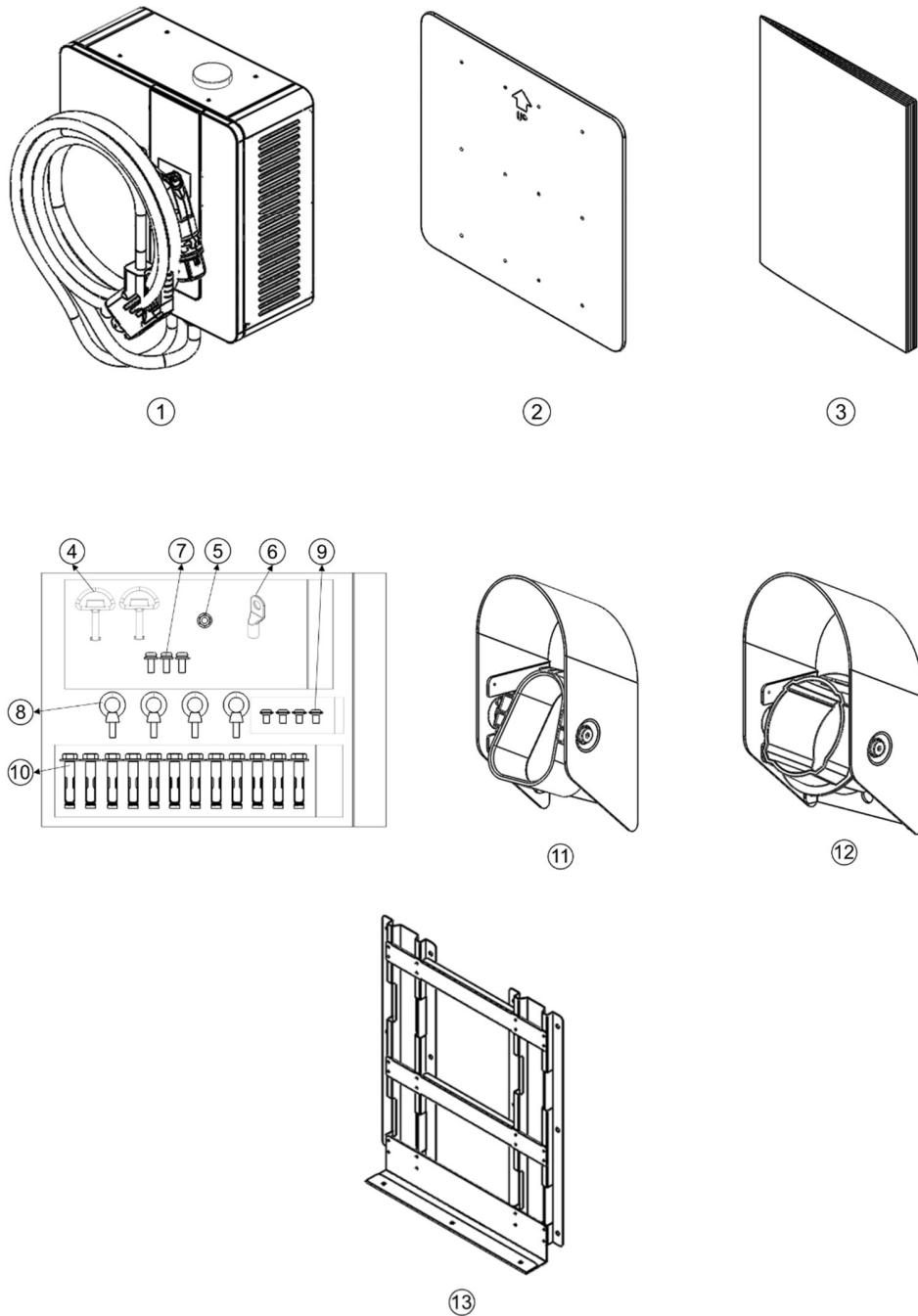


Figure 1-2 Box Contents

Table 1-1 Accessories in the Box

Item	Description	QTY	Remark
1	30KW WALLBOX	1	MAIN PART
2	ALIGNMENT PLATE	1	FOR CONCRETE WALL DRILLING
3	USER MANUAL	1	FOR USER TO READ
4	KEY FOR WALLBOX CHARGER	2	FOR LOCK THE ENCLOSURE
5	M6 NUT	1	TO FASTEN INPUT PE WIRE
6	PE TERMINAL	1	TO CLAMP PE WIRE
7	M6 TORX SCREW	3	FOR FASTEN ENCLOSURE BRACKET
8	M6 EYE BOLT	4	FOR LIFTING HOOK INSTALL
9	M6 TORX WATERPROOF SCREW	4	REPLACE EYE BOLT POSITION
10	M8 EXPANSION BOLT	12	FOR CONCRETE WALL FIXED
11	CCS1 CHARGING SOCKET & HOLSTER	1	PLACE CCS1 CHARGING CONNECTOR
12	CHAdE MO CHARGING SOCKET & HOLSTER	1	PLACE CHAdE MO CHARGING CONNECTOR
13	WALL MOUNT BRACKET	1	FOR MOUNT WALLBOX (WALL SIDE)

Carton Opening Process

1. Remove the carton cover and take out the pad, accessories and upper EPE.

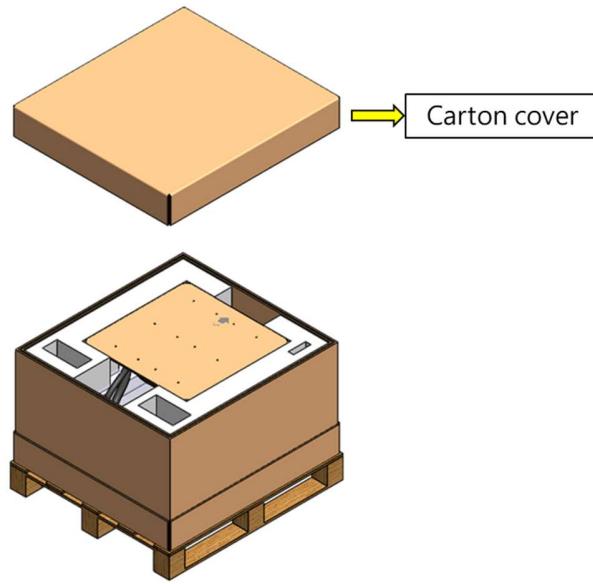


Figure 1-3 Remove the Carton Cover

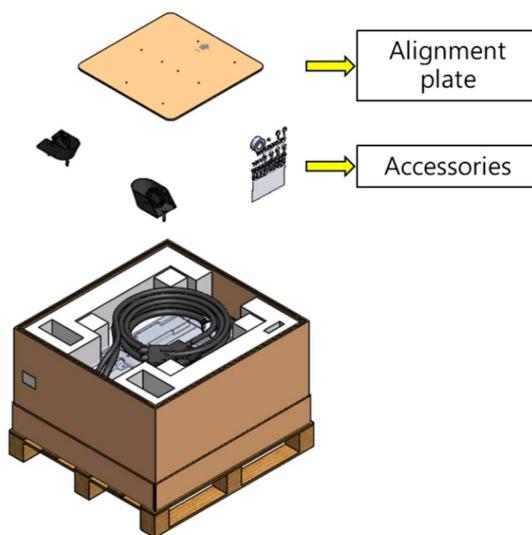


Figure 1-4 Take Out the Pad, Accessories and Upper EPE

2. Remove the carton frame and corners, then move away the charging cable and wall mount bracket.

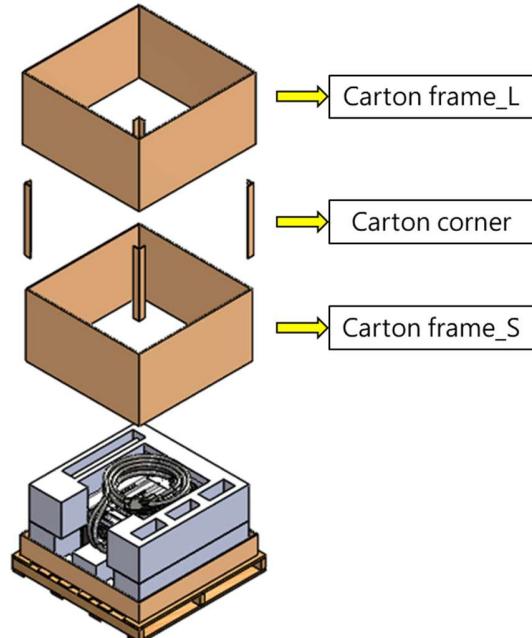


Figure 1-5 Remove the Carton Frame and Corners

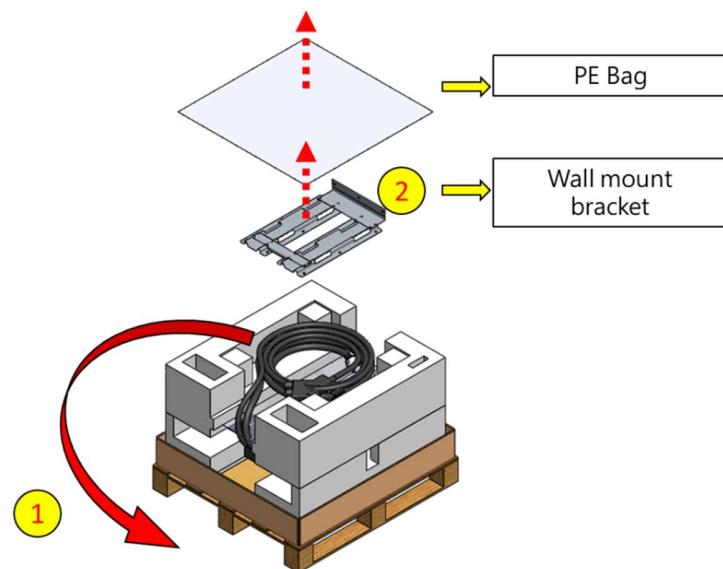


Figure 1-6 Move Away the Charging Cable and Wall Mount Bracket

3. Take out the middle EPE and then lift the wallbox.



Figure 1-7 Take Out the Middle EPE and Then Lift the wallbox

2 Specifications

2.1 Product Specifications

Table 2-1 Product Specifications

Item	DC 30kW Wallbox	
Application	Residential/ Commercial	
Voltage (VAC)	380~480VAC (-15% ~ + 15%), Three -Phase	
Frequency (Hz)	50/60Hz	
Input Current (Rms)	Max. 50 A	
Out maximum power	30kW	
Output Voltage range	150 – 950 VDC	
Output current range	Max. 65 A	
Charging Connector	CHAdeMO and CCS1	
Indications	<ul style="list-style-type: none"> Green Steady: Ready Blue Steady: Charging process and charging stops Blue Flashing: Charging Red Steady: Unrecoverable Fault White Flashing: Booting / Firmware Upgrading / Out of Service <u>Remark</u> <ul style="list-style-type: none"> Flash: On Time 200ms, Off Time 200ms 	
Wi-Fi	802.11 b/g/n/ac	
Ethernet	YES	
Cellular	M2M connection (LTE CAT1)	
RFID	ISO 14443 A/B, ISO 15693, NEMA interoperability protocol	POS: Contactless payment options, Credit Card (EMV CTLS L1)
Display	A sunlight-readable and 5" Color TFT-LCD Module	
Data Protocol	OCPP 1.6J	
Operation Temp.	-30 ~ 50 °C (-22 to 122 °F)	
Storage Temp.	-40 ~ 80 °C (-40 to 176 °F)	
Mounting Type	Wall mount / Pedestal mount (optional)	
Wiring Type	Hard-wired	
Enclosure Level	NEMA 3R	
Impact Resistance	IK10 (POS not included)	
Dimension (H x W x D, mm)	600 x 600 x 260 (POS not included)	
Web Portal Management	Yes	
Certification	UL 2202/2231, FCC Part 15B ClassB	
	FCC Part 15.225, FCC Part 15.247	

3 Installation

3.1 Before Installation

3.1.1 Safety Check

- Check for transport damage.
- Before connecting the product to the power supply, check that the power supply voltage and current rating corresponds with the power supply details shown on the product rating label.



CAUTION: Disconnect the power supply before installing or repairing the charge point. Failure to do so may result in physical injury or damage to the power supply system and the charge point.



DANGER: RISK OF SUFFOCATION

Keep any packing materials away from children – these materials are a potential source of danger, e.g. suffocation.



CAUTION: Cord extension cannot be used in any case.

The charge point must be installed only by a licensed electrician in accordance with the provisions of the local electrical industry construction and should comply with national electrical codes and standards.

Before installing the charge point, make sure you have read all these instructions in this manual and fully understand its contents.

Appropriate protection is required when connecting to a main switchboard. The tools and parts required for installation are outlined in the section “Tools & parts required for installation”.

3.1.2 Grounding Instructions

The charge point must have implemented equipment grounding through a permanent wiring system or an equipment grounding conductor. Use a wire with a dedicated grounding wire and a ring terminal and connected to the equipment ground terminal block for grounding.

3.2 Tools & Parts Required for Installation

Tool	QTY	Model	Size	Supplier	Remark
Ratchet Wrench	1	All		Commercially Available	
Hexagon Socket	1	All	13mm	Commercially Available	Tighten M8 Expansion Screw
	1	All	10mm	Commercially Available	Tighten M6 Nut.
Hex Bit Socket	1	All	5mm	Commercially Available	Tighten Terminal Block
Torx Screwdriver	1	All	T30	Commercially Available	Tighten M6 Torx Screw
Power Wire	1	All	4 AWG	Commercially Available	Power in
PE Wire	1	All	8 AWG	Commercially Available	
Ethernet Wire	1	All	RJ-45	Commercially Available	
Crimping Tool	1	All	KST LY-2045D	Commercially Available	For PE Terminal (Or equal spec.)
Heat Shrink Tube	1	All	For PE Wire	Commercially Available	
Conduit and Bushing	1	All	1-1/2"	Commercially Available	For Power Wire
Flathead Screwdriver	1	All		Commercially Available	For Ethernet Bushing (Option)

Table 3-1 Tools & Parts Required for Installation

3.3 Wallbox Installation

1. Determine the installation position of the wallbox.

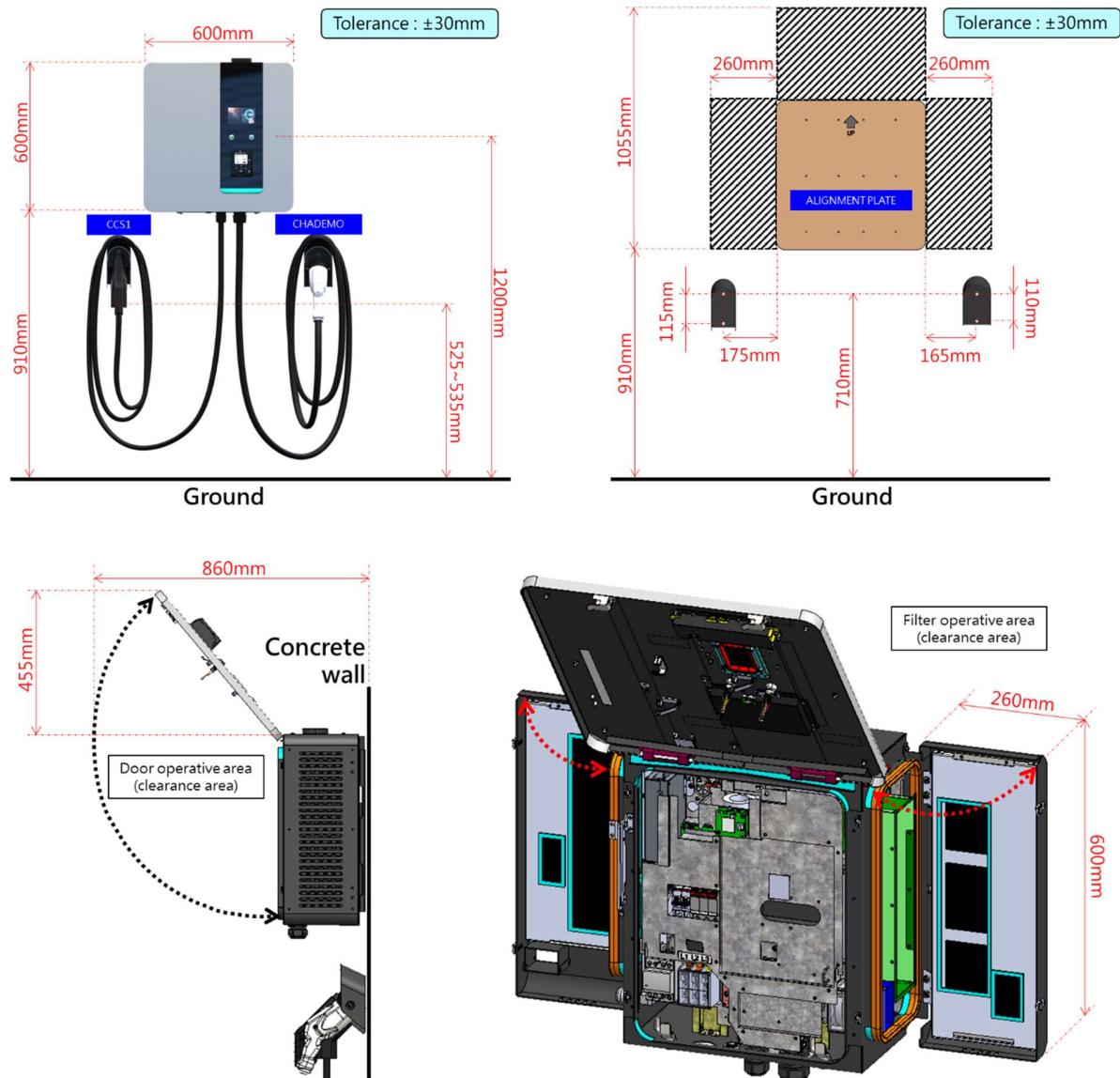


Figure 3-1 Wallbox Installation Position

2. Fasten the wall mount bracket on cement wall.

- * Place the alignment plate on the cement wall and mark the position of the holes.
- * Drill the holes (Diameter 10mm and depth min. 60mm) and tap the sleeve type expansion M8 screws*8 into the wall and place the washer flat on the wall.
- * Unscrew the screws and install the wall mount bracket*1.

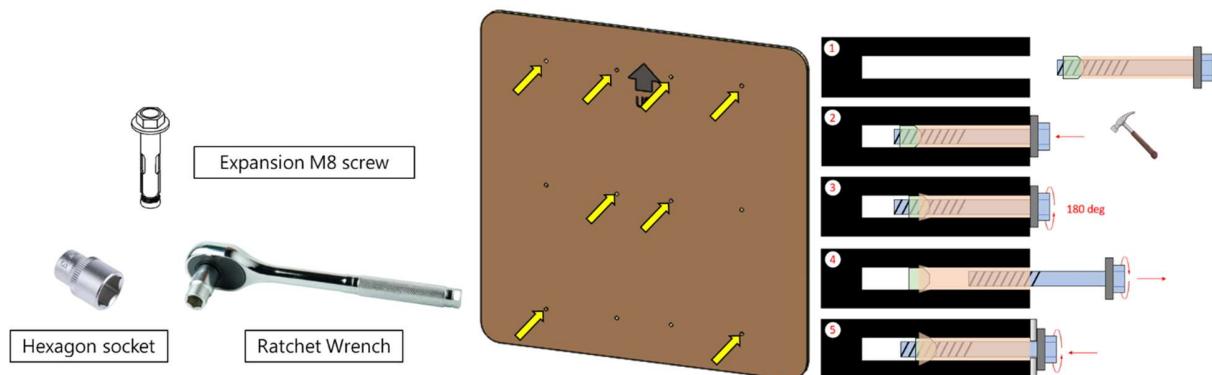


Figure 3-2 Alignment Plate and Wall Bracket

*Locking tool: 13mm hexagon socket

*Locking torque: 50kgf.cm

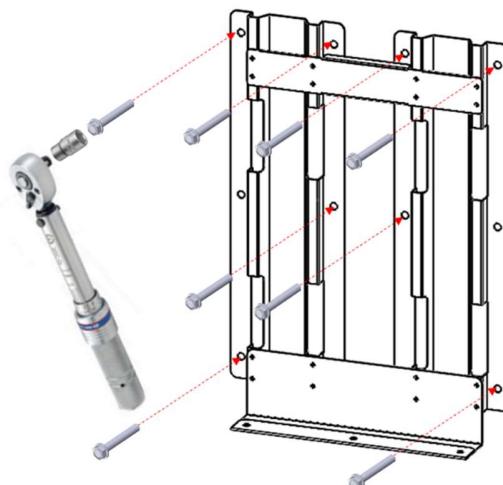


Figure 3-3 Locking the Wall Mount Bracket

Hook the device or hand-carry up and hang it on the wall mount bracket.

*Screwdriver bit: T30 (with PIN)

*Locking torque: 30kgf.cm

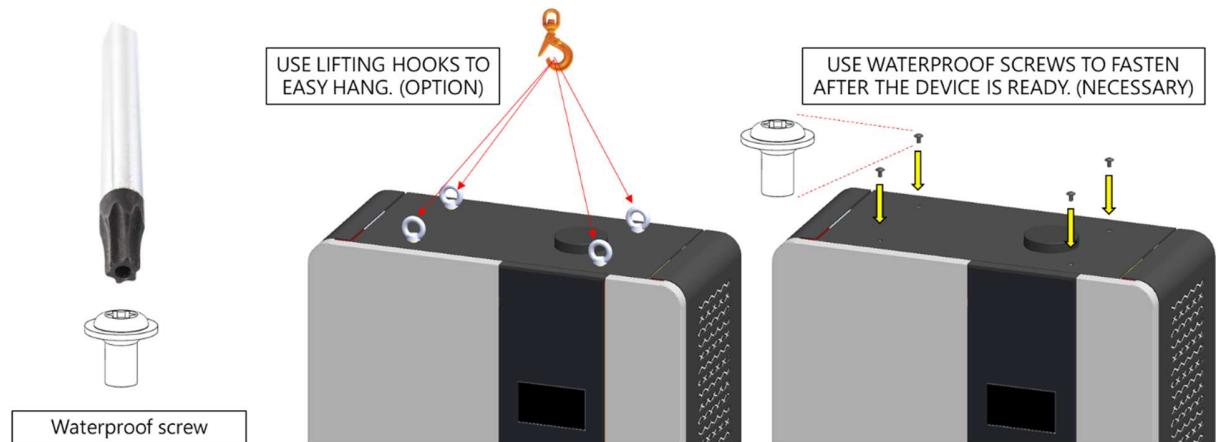


Figure 3-4 Fasten the Waterproof Screws on the Enclosure (After Using the Hook or Not)

Mount the device onto the wall mount bracket and lock the enclosure bracket with M6 screw*3.

*Screwdriver bit: T30 (with PIN)

*Locking torque: 40kgf.cm

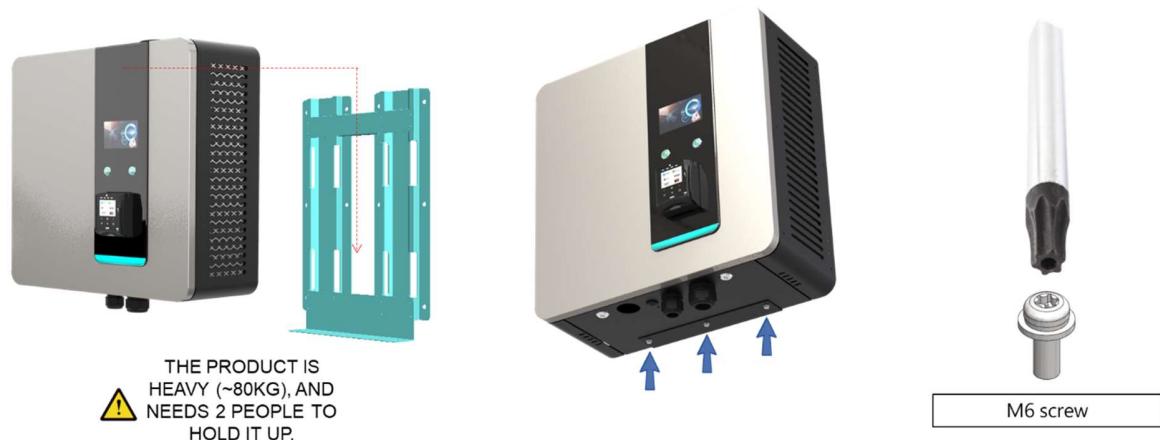


Figure 3-5 Put the Device onto the Wall Mount Bracket and Fasten the Waterproof Screws

3.4 Input Power Cord Installation



Please check with the local jurisdiction to ensure compliance with electrical requirements, and confirm that use UL489 certificated type B or C, rating current over than 70A for upstream circuit breaker while install.

1. **Choose the appropriate conduit in accordance with all applicable state, local and national electrical codes and standards.**

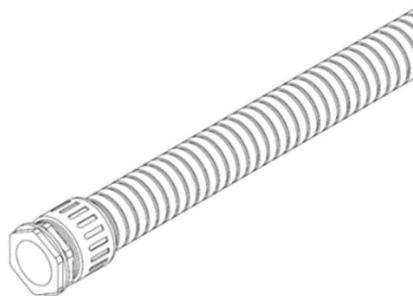


Figure 3-6 Conduit

2. **Clamp the copper terminal to connect the copper wire. The clamp point is covered by a heat shrink tube for protection.**

Note: Refer to the following wire specification. Use conductor type other than RHH, RHW and RHW-2 with outer covering.

Model	Terminal	Conductor	Rating
Charger-30kW	L1, L2, L3	4 AWG	90C copper wire
	G	8 AWG	



Figure 3-7 Copper Terminal, Heat Shrink Tube and Copper Wire

3. Electrical wiring to the input terminal.

3-1. Open the front door (90 degrees counterclockwise), fix the strut.

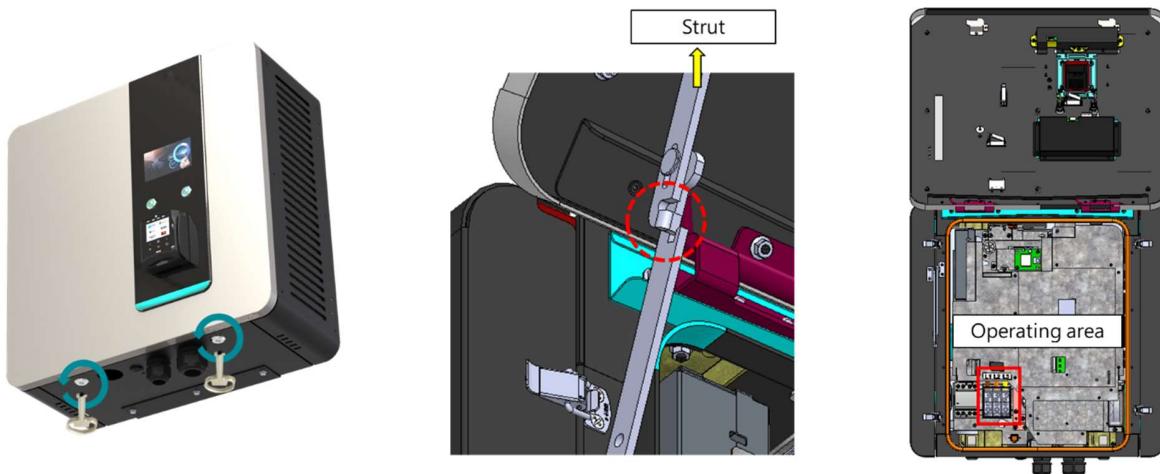


Figure 3-8 Opening the Door of Enclosure

3-2. Remove the input terminal cover and secure the wires (through conduit) in the terminal block.

*Locking tool: 5mm hexagon socket

*Locking torque: 125kgf.cm

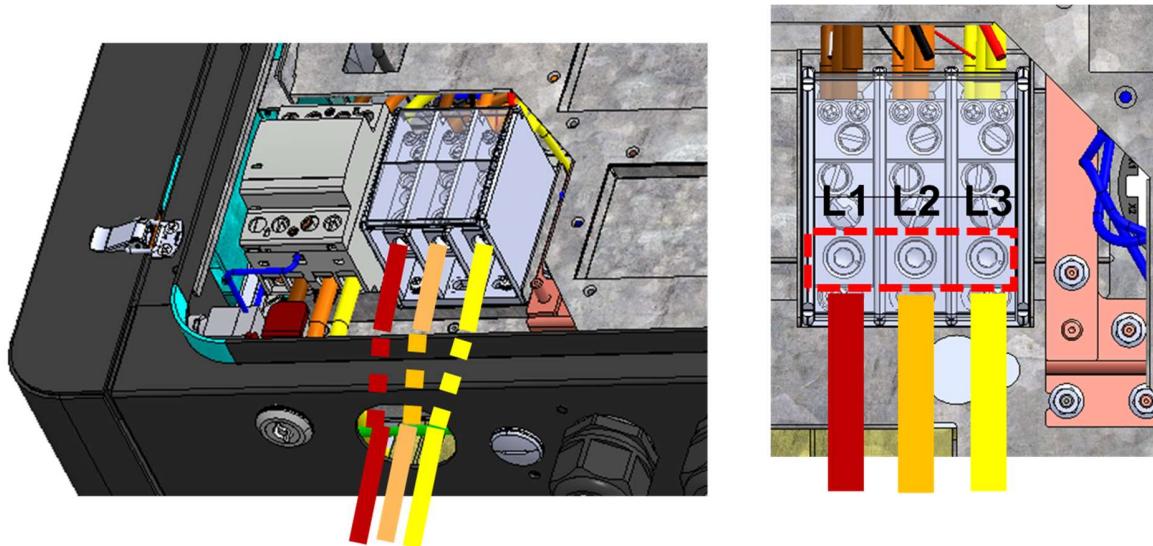


Figure 3-9 Setting the Input Wire

3-3. Use the following torque to connect the wire terminal to the terminal block.

Tool	Torque	
5mm hexagon socket	125 kgf.cm	110 lb-in



CAUTION: If this unit is installed outdoors, the outlet must be rated for outdoor installation. The outlet must be installed properly to maintain the proper NEMA rating of the enclosure.

3-4. Lock the conduit on the enclosure. Please refer to the recommended torque.

3-5. Insert the sim card and confirm that the breaker switch is turned on, then close and lock the door (90 degrees clockwise).

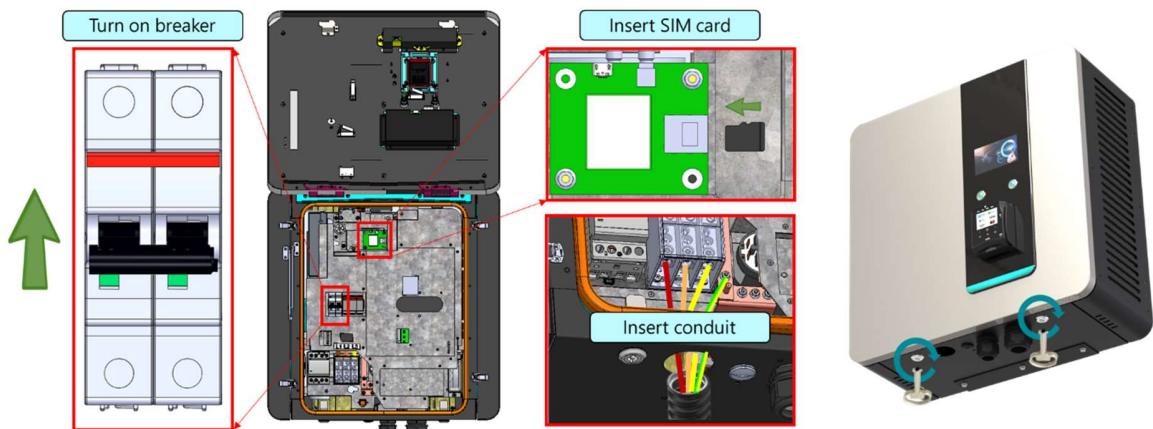


Figure 3-10 Reassemble the door of wallbox

3.5 Holster Installation

1. Determine the installation position of the holster.

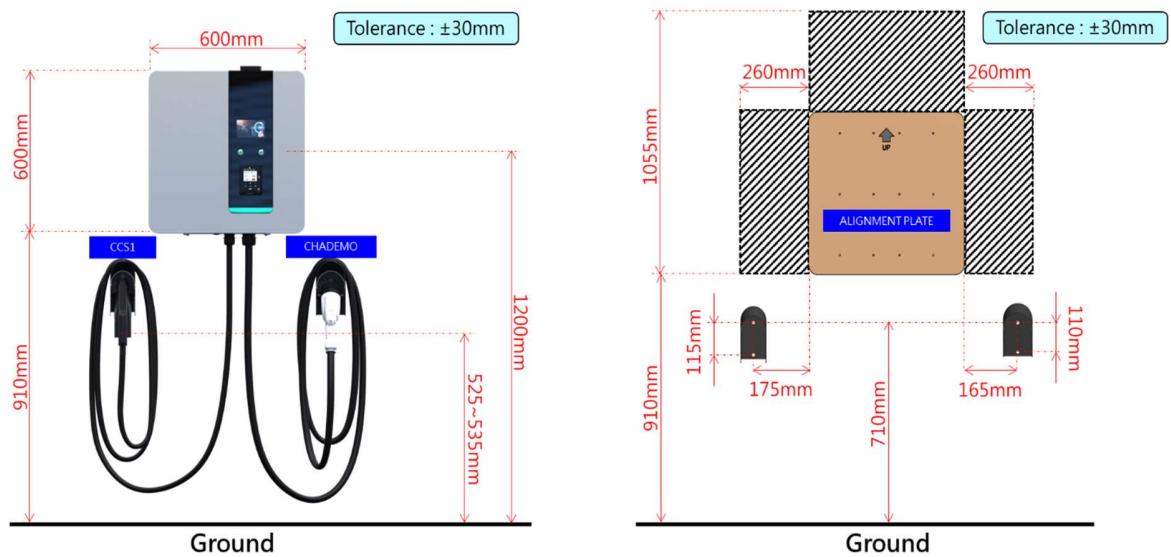


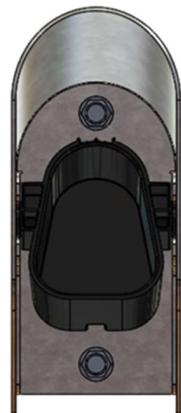
Figure 3-11 Holster Installation Position

2. Drill holes on wall.

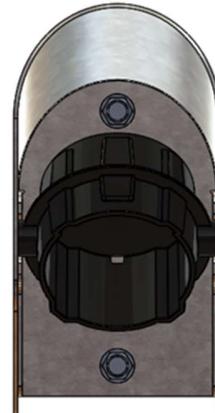


Figure 3-12 Hole Pitch of Holster

3. Fasten the holster on cement wall. (Refer to the steps of fig. 3-2)



CCS1



CHAdeMO



Figure 3-13 Secure the Holster

4. Place the EV charging plug onto the holster.

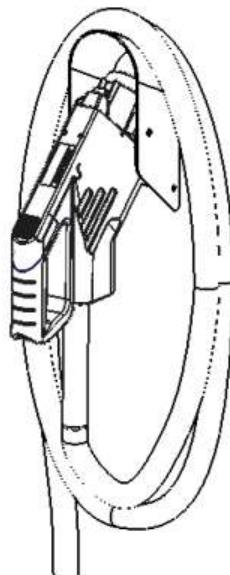


Figure 3-14 Placing the EV Charging Plug

4 Getting Started

4.1 Access Charger via Browser

4.1.1 Setting Up the Local Network

The default factory setting of networks is Wi-Fi AP mode. You can get the SSID number from the label on the side of the charge point. Please refer to the Figure 4-1. The SSID name is DC30KW+SN. Then you can connect a computer/smart phone/iPad to the charge point using Wi-Fi. The default password is "SN+@DC30KW"

Ex. SN: M2-A303-VA21-1-2326-00001,

SSID name: DC30KWM2-A303-VA21-1-2326-00001.

Password: M2-A303-VA21-1-2326-00001@ DC30KW.

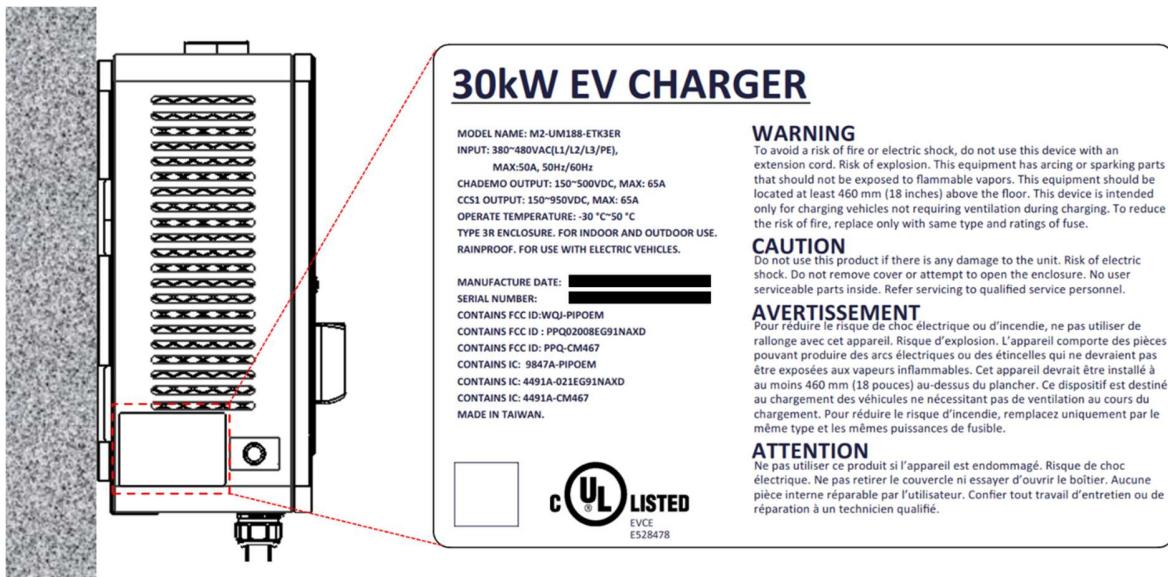


Figure 4-1 Serial Number on the Main Label

4.1.2 Log In

Open a web browser (Internet Explorer for example) and enter the IP address(169.254.64.255) in the address field of the browser and press enter, you should see the login screen:

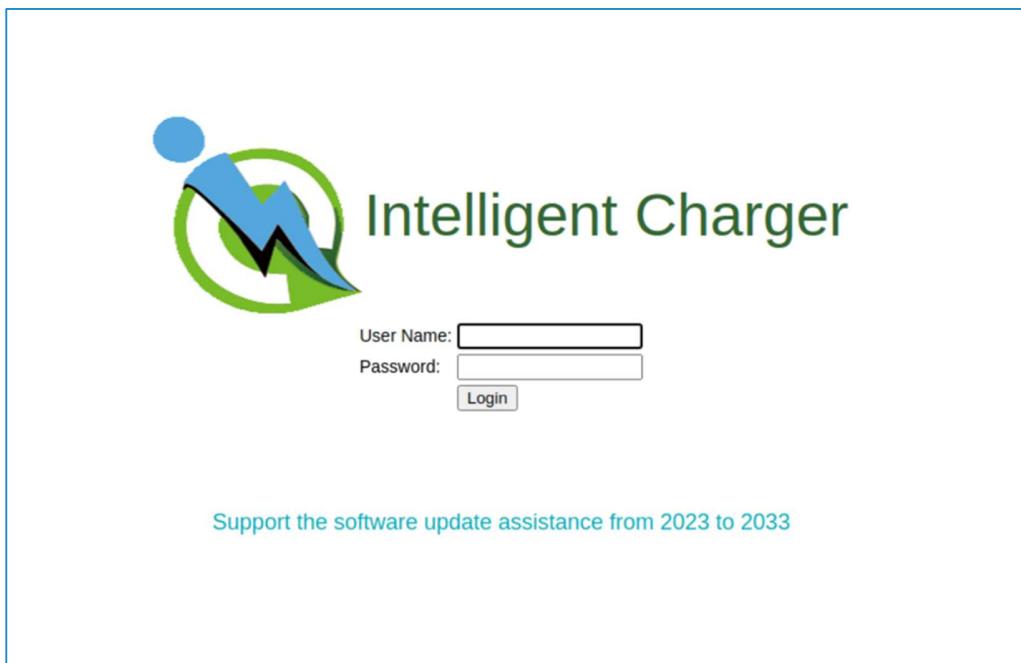


Figure 4-2 Home Page of the Web Portal

To be able to configure the charge point you should enter “**guest**” in the user name box. The default password is “**guest**”.

4.2 Web-Page Overview

4.2.1 Menu Overview

To navigate via the web browser, use the menu items available: Home, Configuration, Report Maintenance.

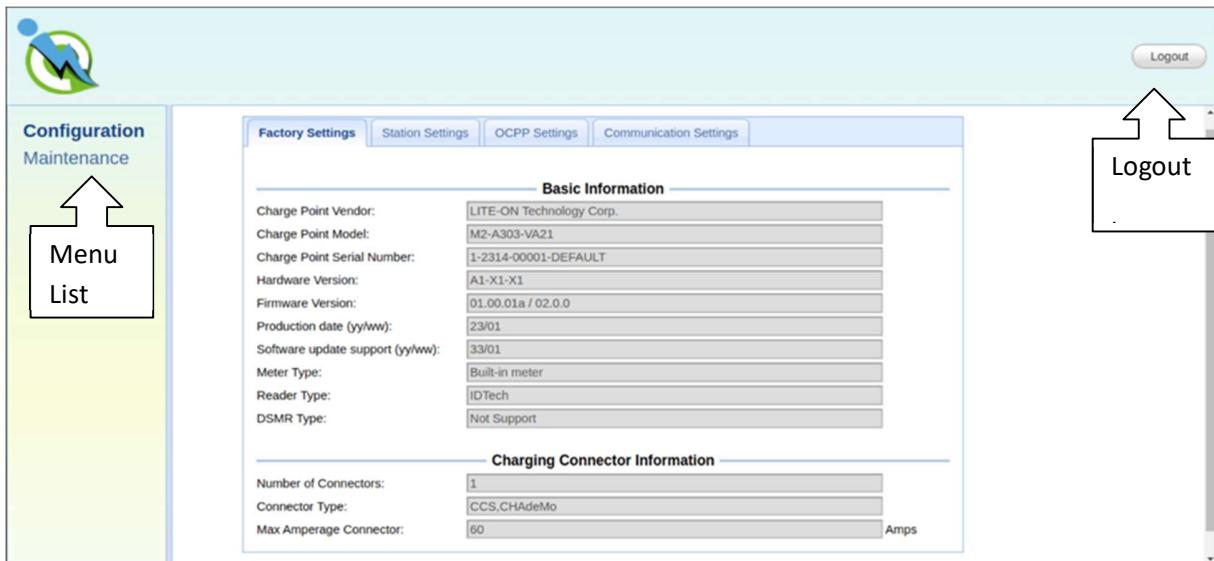


Figure 4-3 Overview of the Web Portal

4.2.2 Configuration Menu

When you choose the **Configuration** menu, a sub menu will appear:

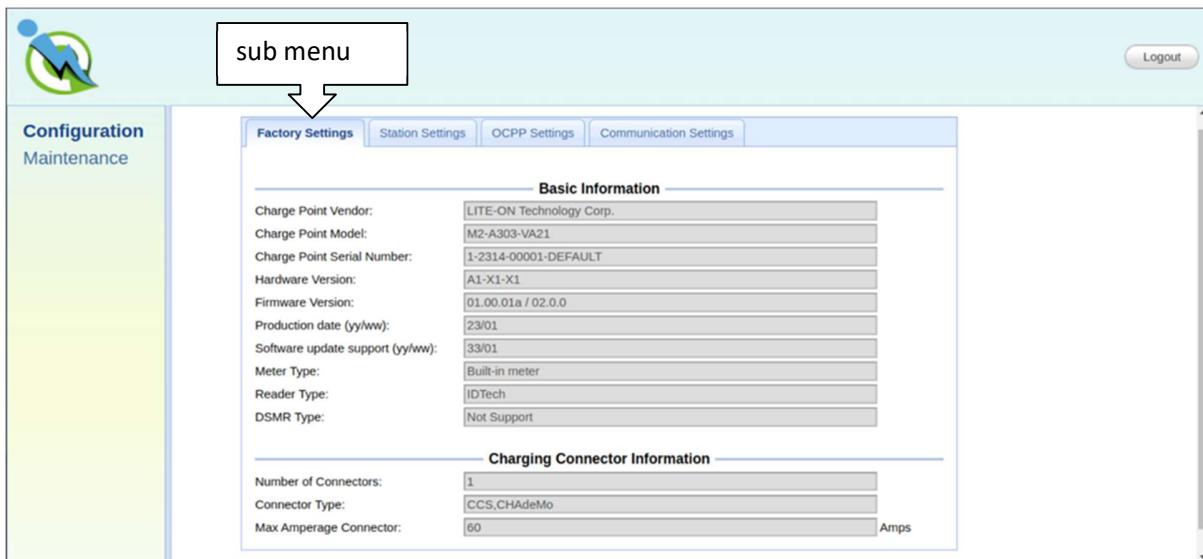
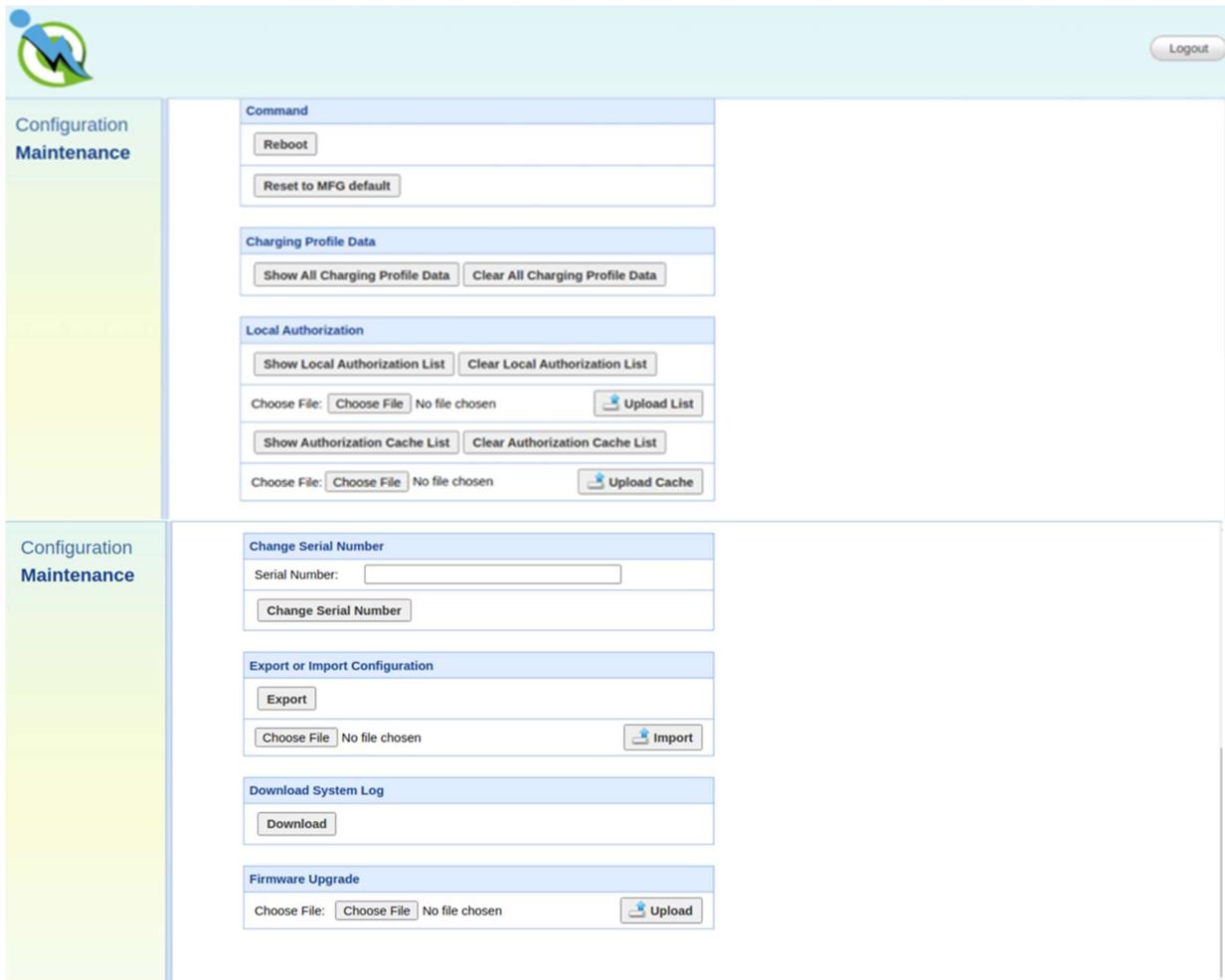


Figure 4-4 Configuration Page

- The “**Factory Settings**” tab is used to display the information of the charge point.
- The “**Station Settings**” tab is used to set up the configuration regarding to the charge point itself.
- The “**OCPP Settings**” tab is used to set up the custom properties for uses in OCPP 1.6J services.
- The “**Communication Setting**” tab is used to set up the network connection.

4.2.3 Maintenance Menu

The **Maintenance** menu includes some maintenance functions:



The screenshot shows the Maintenance Page with two columns of functions:

- Left Column (Configuration Maintenance):**
 - Command:** Reboot, Reset to MFG default
 - Charging Profile Data:** Show All Charging Profile Data, Clear All Charging Profile Data
 - Local Authorization:** Show Local Authorization List, Clear Local Authorization List, Choose File (Choose File, No file chosen), Upload List
 - Authorization Cache:** Show Authorization Cache List, Clear Authorization Cache List, Choose File (Choose File, No file chosen), Upload Cache
- Right Column (Configuration Maintenance):**
 - Change Serial Number:** Serial Number: Change Serial Number
 - Export or Import Configuration:** Export, Choose File (No file chosen), Import
 - Download System Log:** Download
 - Firmware Upgrade:** Choose File (Choose File, No file chosen), Upload

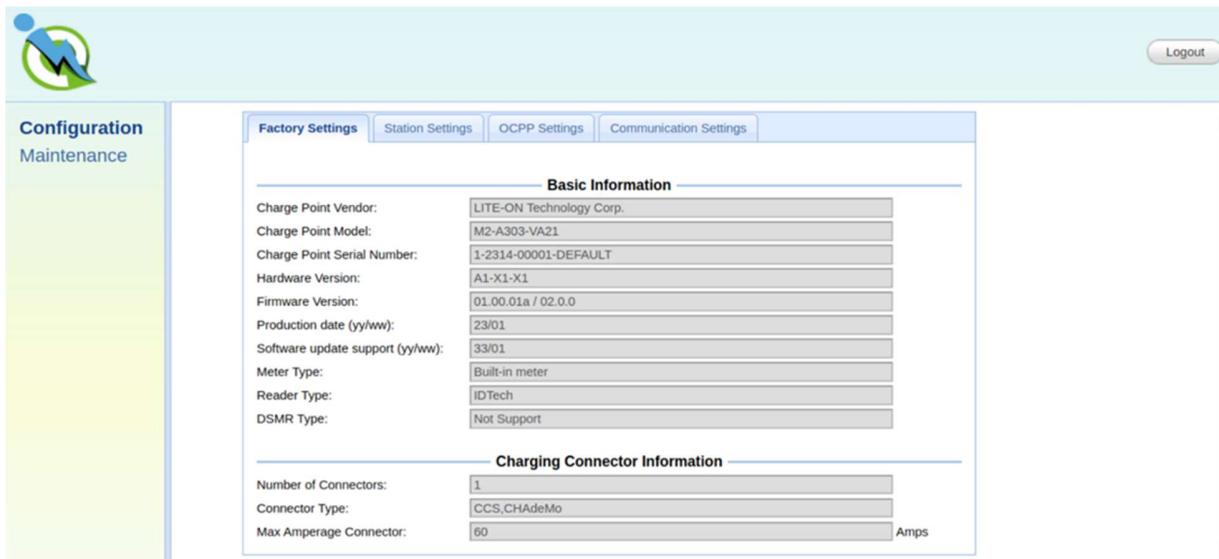
Figure 4-5 Maintenance Page

The related details of these functions are shown in chapter 4.4.

4.3 Configuration

4.3.1 Factory Settings

Clicking on the “Configuration” and then “Factory Settings” link will bring up the following screen:



The screenshot shows a web-based configuration interface for a charge point. The left sidebar has a logo and navigation links for 'Configuration' and 'Maintenance'. The main content area has tabs for 'Factory Settings', 'Station Settings', 'OCPP Settings', and 'Communication Settings'. The 'Factory Settings' tab is active. It contains two sections: 'Basic Information' and 'Charging Connector Information'. The 'Basic Information' section lists various parameters with their values. The 'Charging Connector Information' section lists the number of connectors, connector type, and maximum amperage.

Basic Information	
Charge Point Vendor:	LITE-ON Technology Corp.
Charge Point Model:	M2-A303-VA21
Charge Point Serial Number:	1-2314-00001-DEFAULT
Hardware Version:	A1-X1-X1
Firmware Version:	01.00.01a / 02.0.0
Production date (yy/ww):	23/01
Software update support (yy/ww):	33/01
Meter Type:	Built-in meter
Reader Type:	IDTech
DSMR Type:	Not Support

Charging Connector Information	
Number of Connectors:	1
Connector Type:	CCS,CHAdeMo
Max Amperage Connector:	60

Figure 4-6 Factory Settings

Basic Information

- **Charge Point Vendor** – The vendor’s name of the charge point.
- **Charge Point Model** – The model’s name of the charge point.
- **Charge Point Serial Number** – The unique serial number of the charge point.
- **Hardware Version** – The Hardware version of the charge point.
- **Firmware Version** – The software version of the charge point.
- **Production date** – The date when the product was manufactured.
- **Software update support** – The deadline date for support the software update assistance.
- **Meter Type** – The meter type of the charge point.
- **Reader Type** – The reader type of the charge point.
- **DSMR Type** – The DSMR type of the charge point.

Charging Connector Information

- **Number of Connectors** – Number of connectors of the charge point.
- **Connector Type** – Indicates type CCS or type CHAdeMO cable installed in the charge point.
- **Max Amperage Connector** – The maximum charging current of the connector capability.

4.3.2 Station Settings

Clicking on the “Station Setting” and then will bring up the following screen.

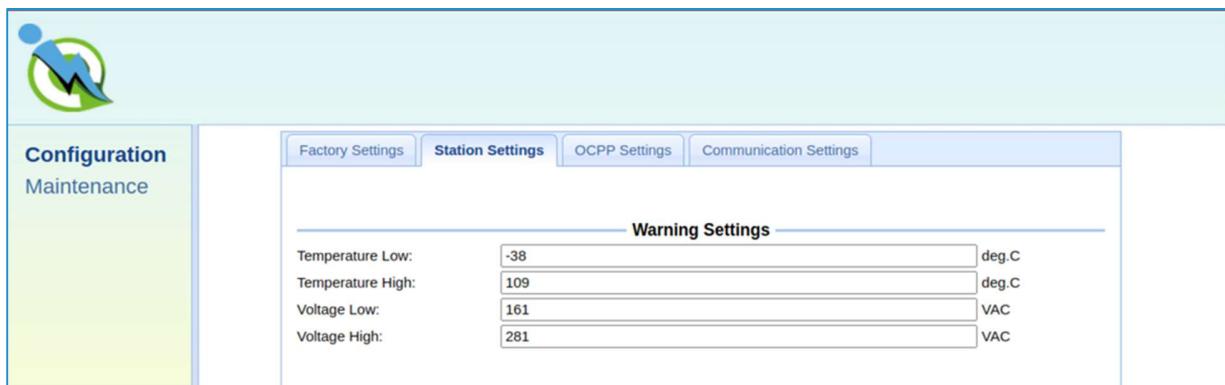


Figure 4-7 Warning Settings

Warning Settings

- **Temperature Low** – System issues a warning when the charge point temperature is lower than the user setting value.
- **Temperature High** – System issues a warning when the charge point temperature is higher than the user setting value.
- **Voltage Low** – System issues a warning when the charge point voltage is lower than the user setting value.
- **Voltage High** – System issues a warning when the charge point voltage is higher than the user setting value.

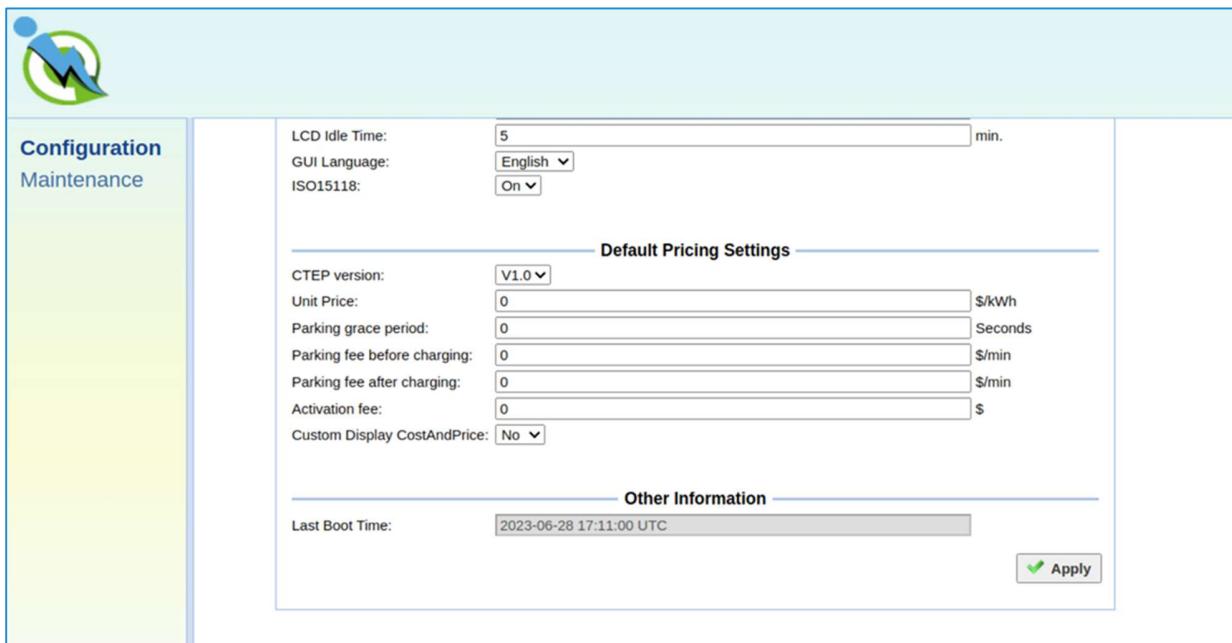
General Settings	
Output Power Type:	DC
Power Phase Connected:	1
Max Amperage HW Setting:	60 Amps
Max Amperage FW Setting:	60 Amps
PWM Amperage:	0.0 Amps
Real Amperage:	0.0 Amps
Cold Load Pickup Max Delay:	720 Seconds
Plug and Charge ID:	
Reservation Supported:	Yes
Resume Charge After Reboot:	Off
Time Zone:	(UTC-07:00) Arizona
RFID Reader:	On
Ventilation Required:	Yes
Skip HeartBeat Message:	Yes
GUI Language:	English

Figure 4-8 General Settings

General Settings

- **Output Power Type** – Type of charge point output. This type is always “DC”.
- **Power Phase Connected** – Input power phase connected to the charge point to indicate single phase or three phases. This value is always “1”.
- **Max Amperage HW Setting** – The DIP switches (Hardware) settings to indicate the maximum charging current.
- **Max Amperage FW Setting** – The software settings to indicate the maximum charging current.
- **PWM Amperage** – The PWM setting for charging current when the charge point is online. This signal is to tell EV how much current is allowed to be used.
- **Real Amperage** – The real-time charging current detected by the charge point.
- **Cold Load Pickup Max Delay** – Default cold load pickup delay is 120s ~ 720s. The max value could be changeable by this property.
- **Plug and Charge ID** – If the value is present, the charge point needs to support plug and charge scenario by using the specific identifier. If absent, authorization for each session is required. This ID must be 8 or more characters.
- **Reservation Supported** – If true, the charge point will support reservation related messages from Central System.
- **Resume Charge After Reboot** – Indicate if the charge point resumes charging after power recycle. If true, the charge point will resume charging according to UL regulations. If false, the charge point will not resume charging.

- **Time Zone** – User can according to the time zone to adjust the UTC (Coordinated Universal Time).
- **RFID Reader** – Indicate if RFID reader is available.
- **Ventilation Required** – Indicate if ventilation equipment is required. If set this option to yes, a ventilation fault will occur when the EV report for need ventilation equipment.
- **Skip HeartBeat Message** – When set to true, the Charge Point should skip sending a “Heartbeat.req” PDU when another PDU has been sent to the Central System within the configured heartbeat interval. The default value is Yes.
- **GUI Language** – The language displayed on the GUI.



The screenshot shows the 'Configuration Maintenance' screen with a sidebar on the left. The main area is titled 'Default Pricing Settings'. It contains several input fields and dropdown menus for setting CTEP version, unit price, parking grace period, parking fees, activation fees, and a custom display setting. At the bottom, there is an 'Apply' button and a timestamp for the last boot.

Default Pricing Settings	
CTEP version:	V1.0
Unit Price:	0 \$/kWh
Parking grace period:	0 Seconds
Parking fee before charging:	0 \$/min
Parking fee after charging:	0 \$/min
Activation fee:	0 \$
Custom Display CostAndPrice:	No
Other Information	
Last Boot Time:	2023-06-28 17:11:00 UTC
<input checked="" type="button"/> Apply	

Figure 4-9 Default Pricing Settings

Default Pricing Settings

- **CTEP version** – User can choose the version of CTEP which change the Parking fee calculation unit.
- **Unit Price** – Set charging cost (kWh).
- **Parking grace period** – The fee when vehicles are fully charged and have not been removed.
- **Parking fee before charging** – The parking fee is calculated when the EV is suspended.
- **Parking fee after charging** – The parking fee is calculated when after charging.
- **Activation fee** – The basic fee.
- **Custom Display CostAndPrice** – Display the detail calculated of Cost and Price info or not.

Other Information

- **Last Boot Time** – Display the last boot time.

4.3.3 OCPP Settings

Clicking on the “**OCPP Settings**” link will bring up the following screen.

Service Settings	
Charge Point ID:	L3-0630-LTE-2046-ENG001
Protocol Name:	OCPP1.6J
Central System URL*:	ws://centralsystem.serverurl.com/ocpp
Basic Auth ID*:	
Basic Auth Password*:	
FTP Server Username:	
FTP Server Password:	
AWS Access Key:	
AWS Secret Key:	
Message Transport Layer:	WS
Boot Notification Interval:	900
Boot Notification Retries:	-1
PDU Timeout:	30
Download Firmware Interval:	300
Download Firmware Retries:	3
Upload Diagnostic Interval:	300
Upload Diagnostic Retries:	3

Figure 4-10 Service Settings

Remote Service Settings

- **Remote Service Type** – The remote-control mode accepted by charger which is controlled by OCPP 1.6 protocol.

Service Settings

- **Charge Point ID** – User can define the ID of Charge Point.
- **Protocol Name** – The name and version of OCPP is running in the charge point.
- **Central System URL** – The URL of the OCPP v1.6 Central System service.
- **Basic Auth ID** – The ID for basic authentication in charger webpage connections.
- **Basic Auth Password** – The password for basic authentication in charger webpage connections.

- **FTP Server Username** – The username of the FTP (File Transfer Protocol) server for OCPP.
- **FTP Server Password** – The password of the FTP server for OCPP.
- **AWS Access Key** – To verify who you are and whether you have permission to access the AWS(Amazon Web Services) resources. It is the public key
- **AWS Secret Key** – The private key used to authenticate the AWS account.
- **Message Transport Layer** –Select the transport layer of the OCPP service that will be used. The available option is **WS** and **WSS**.
 - WS: Connection from charge point to OCPP Server uses WebSocket protocol.
 - WSS: Connection from charge point to OCPP Server uses Secure WebSocket protocol.
- **Boot Notification Interval** – Interval of re-sending BootNotification.req to Central System.
- **Boot Notification Retries** – Number of times to retry sending BootNotification.req. (“-1” means unlimited; “0” means don’t retry)
- **PDU Timeout** – Interval until the charge point stop waiting for a PDU (Protocol Data Unit) response.
- **Download Firmware Interval** – Interval of downloading firmware from Central System.
- **Download Firmware Retries** – Number of times to retry downloading firmware.
- **Upload Diagnostic Interval** – Interval of uploading diagnostic file to Central System.
- **Upload Diagnostic Retries** – Number of times to retry uploading diagnostic file.

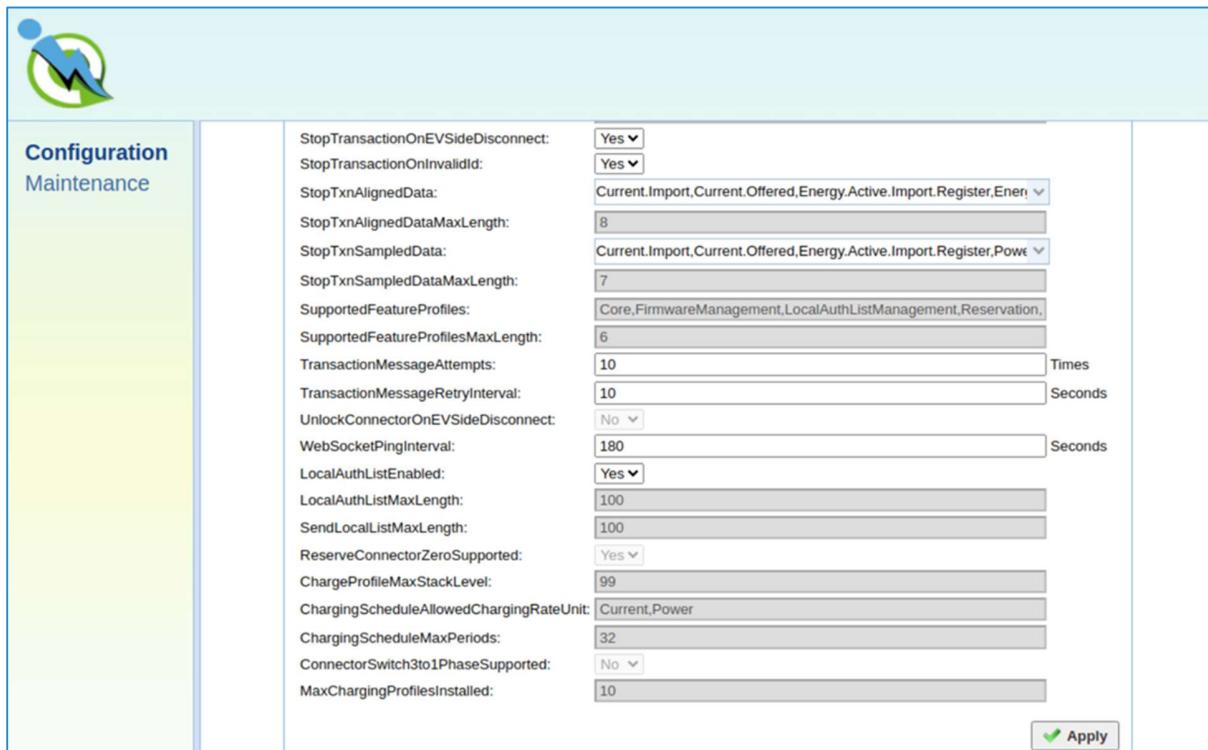
OCPP1.6 Settings	
AllowOfflineTxForUnknownId:	Yes
AuthorizationCacheEnabled:	Yes
AuthorizeRemoteTxRequests:	No
BlinkRepeat:	30
ClockAlignedDataInterval:	0
ConnectionTimeOut:	120
GetConfigurationMaxKeys:	256
HeartBeatInterval:	43200
LightIntensity:	100
LocalAuthorizeOffline:	Yes
LocalPreAuthorize:	Yes
MaxEnergyOnInvalidId:	7680
MeterValuesAlignedData:	Current.Import,Current.Offered.Energy.Active.Import.Register,Ener
MeterValuesAlignedDataMaxLength:	8
MeterValuesSampledData:	Current.Import,Current.Offered.Energy.Active.Import.Register,Pow
MeterValuesSampledDataMaxLength:	7
MeterValueSampleInterval:	900
MinimumStatusDuration:	0
NumberOfConnectors:	1
ResetRetries:	0
ConnectorPhaseRotation:	NotApplicable
ConnectorPhaseRotationMaxLength:	1

Figure 4-11 OCPP 1.6 Settings

OCPP 1.6 Settings

- **AllowOfflineTxForUnknownId** – If set to yes, an unknown ID (not in Authorization and Cache List) will be accepted and start the charging session when charge point is not connected to central system.
- **AuthorizationCacheEnabled** – If set to yes, the Authorization Cache is enabled.
- **AuthorizeRemoteTxRequests** – Start RemoteStartTransaction.req message should be authorized beforehand, like a local action to start a transaction.
- **BlinkRepeat** – Number of times to blink the charge point lighting when signaling.
- **ClockAlignedDataInterval** – Size (in seconds) of the clock-aligned data interval. This is the size (in seconds) of the set of evenly spaced aggregation intervals per day, starting at 00:00:00 (midnight).
- **ConnectionTimeOut** – Interval (from successful authorization) until incipient Transaction is automatically canceled, due to failure of EV driver to (correctly) insert the charging cable connector(s) into the appropriate socket(s).
- **GetConfigurationMaxKeys** – Maximum number of requested configuration keys in a GetConfiguration.req PDU.
- **HeartBeatInterval** – Defines the heartbeat interval.
- **LightIntensity** – Percentage of maximum intensity at which to illuminate the charge point lighting.
- **LocalAuthorizeOffline** – Whether the charge point, when offline, will start a transaction for locally-authorized identifiers.
- **LocalPreAuthorize** – Whether the charge point, when online, will start a transaction for locally authorized identifiers without waiting for or requesting an Authorize.conf from Central System.
- **MaxEnergyOnInvalidId** – Maximum energy in Watt-hour (Wh) delivered when an identifier is invalidated by Central System after start of a transaction.
- **MeterValuesAlignedData** – Clock-aligned measurand(s) to be included in a MeterValues.req PDU, every “Clock Aligned Data Interval” seconds. Supported value are Current.Import, Energy.Active.Import.Register, and Temperature, Voltage or any combination of these 4 value.
- **MeterValuesAlignedDataMaxLength** – Maximum number of items in a “MeterValuesAlignedData” configuration key.
- **MeterValuesSampledData** – Sampled measurands to be included in a MeterValues.req PDU, every MeterValueSampleInterval seconds. Supported value are Current.Import, Energy.Active.Import.Register, and Temperature, Voltage or any combination of these 4 value.
- **MeterValuesSampledDataMaxLength** – Maximum number of items in a MeterValuesSampledData configuration key.
- **MeterValueSampleInterval** – Interval between sampling of metering (or other) data, intended to be transmitted by "MeterValues" PDUs.

- **MinimumStatusDuration** – The minimum duration that a charge points or connector status is stable before a StatusNotification.req PDU is sent to Central System.
- **NumberOfConnectors** – The number of physical charging connectors of this charge point.
- **ResetRetries** – Number of times to retry an unsuccessful reset of the charge point.
- **ConnectorPhaseRotation** – The phase rotation per connector in respect to the connector's energy meter.
- **ConnectorPhaseRotationMaxLength** – Maximum number of items in a "ConnectorPhaseRotation" configuration key.



Setting	Value
StopTransactionOnEVSideDisconnect:	Yes
StopTransactionOnInvalidId:	Yes
StopTxnAlignedData:	Current.Import,Current.Offered,Energy.Active.Import.Register,Energy.Active.Export.Register
StopTxnAlignedDataMaxLength:	8
StopTxnSampledData:	Current.Import,Current.Offered,Energy.Active.Import.Register,Power
StopTxnSampledDataMaxLength:	7
SupportedFeatureProfiles:	Core,FirmwareManagement,LocalAuthListManagement,Reservation,
SupportedFeatureProfilesMaxLength:	6
TransactionMessageAttempts:	10
TransactionMessageRetryInterval:	10
UnlockConnectorOnEVSideDisconnect:	No
WebSocketPingInterval:	180
LocalAuthListEnabled:	Yes
LocalAuthListMaxLength:	100
SendLocalListMaxLength:	100
ReserveConnectorZeroSupported:	Yes
ChargeProfileMaxStackLevel:	99
ChargingScheduleAllowedChargingRateUnit:	Current,Power
ChargingScheduleMaxPeriods:	32
ConnectorSwitch3to1PhaseSupported:	No
MaxChargingProfilesInstalled:	10

Figure 4-12 Other OCPP Settings

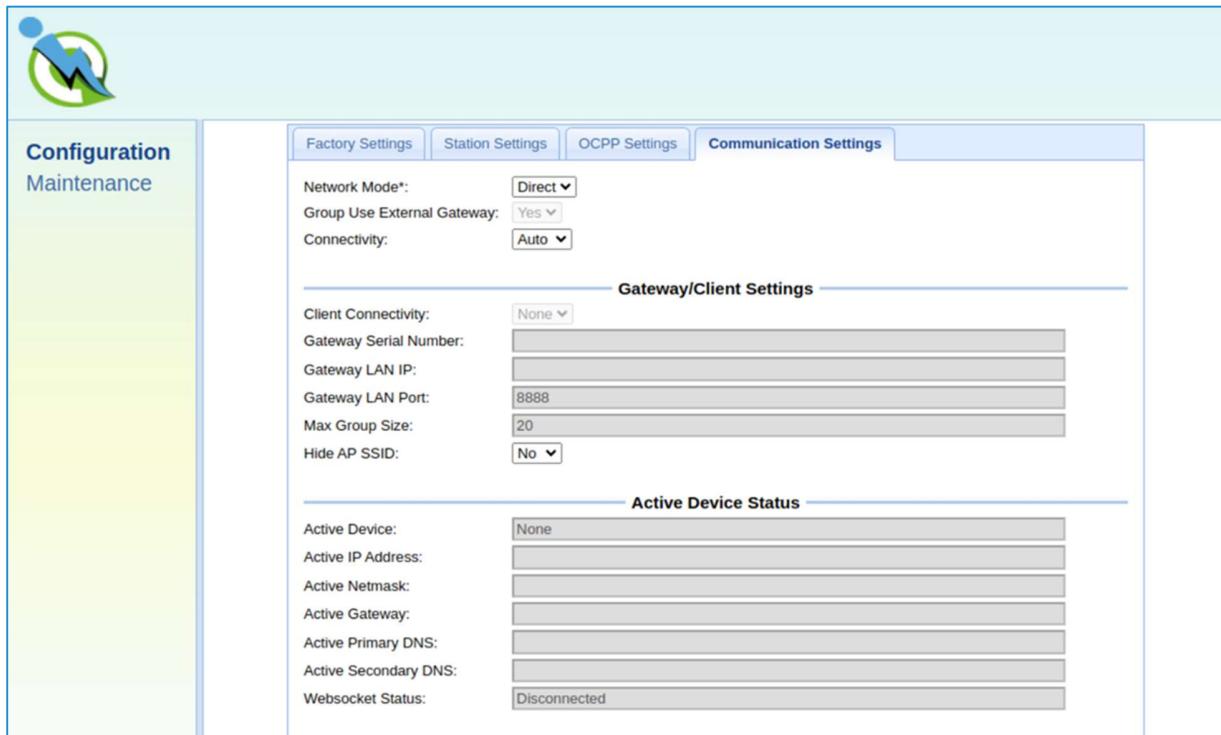
- **StopTransactionOnEVSideDisconnect** – If set to yes, the charge point shall administratively stop the transaction when the cable is unplugged from the EV.
- **StopTransactionOnInvalidId** – Whether the charge point will stop an ongoing transaction when it receives a non-accepted authorization status in a StartTransaction.conf for this transaction.
- **StopTxnAlignedData** – Clock-aligned periodic measurand(s) to be included in the TransactionData element of StopTransaction.req MeterValues.req PDU for every "ClockAlignedDataInterval" of the charging session. Supported value are Energy.Active.Import.Register , Current.Import , Voltage, Temperature ,

Energy.Active.Import.Register , Current.Offered , Power.Offered and Power.Active.Import or any combination of these 8 value.

- **StopTxnAlignedDataMaxLength** – Maximum number of items in a “StopTxnAlignedData” configuration key.
- **StopTxnSampledData** – Sampled measurands to be included in the TransactionData element of StopTransaction.req PDU, every MeterValueSampleInterval seconds from the start of the charging session. Supported value are Energy.Active.Import.Register , Current.Import , Voltage, Temperature , Energy.Active.Import.Register , Current.Offered , Power.Offered and Power.Active.Import or any combination of these 8 value.
- **StopTxnSampledDataMaxLength** – Maximum number of items in a “StopTxnSampledData” configuration key.
- **SupportedFeatureProfiles** – A list of supported Feature Profiles. Possible profile identifiers: Core, Firmware Management, Local Auth List Management, Reservation, Smart Charging and Remote Trigger.
- **SupportedFeatureProfilesMaxLength** – Maximum number of items in a SupportedFeatureProfiles configuration key.
- **TransactionMessageAttempts** – How often the charge point should try to submit a transaction-related message when Central System fails to process it.
- **TransactionMessageRetryInterval** – How long the charge point should wait before resubmitting a transaction-related message that Central System failed to process.
- **UnlockConnectorOnEVSideDisconnect** – If set to yes, the charge point shall unlock the cable on charge point side when the cable is unplugged at the EV.
- **WebSocketPingInterval** – Define the ping pong interval for WebSocket protocol.
- **LocalAuthListEnabled** – Whether the Local Authorization List is enabled.
- **LocalAuthListMaxLength** – Maximum number of identifications that can be stored in the Local Authorization List.
- **SendLocalListMaxLength** – Maximum number of identifications that can be send in a single SendLocalList.req.
- **ReserveConnectorZeroSupported** – If this configuration key is present and set to true: The charge point support reservations on connector 0.
- **ChargeProfileMaxStackLevel** – Max Stack Level of a Charging Profile. The number defined also indicates the max allowed number of installed charging schedules per Charging Profile purposes.
- **ChargingScheduleAllowedChargingRateUnit** – A list of supported quantities for use in a Charging Schedule.
- **ChargingScheduleMaxPeriods** – Maximum number of periods that may be defined per Charging Schedule.
- **ConnectorSwitch3to1PhaseSupported** – If defined and true, this charge point supports switching from 3 to 1 phase during a charging session. This field is ready only.
- **MaxChargingProfilesInstalled** – Maximum number of charging profiles installed at a time.

4.3.4 Communication Settings

Clicking on the “Communication Settings” link will bring up the following screen.



The screenshot shows the 'Communication Settings' page within a configuration interface. The left sidebar has 'Configuration' and 'Maintenance' sections. The main area has tabs for 'Factory Settings', 'Station Settings', 'OCPP Settings', and 'Communication Settings' (which is selected). The 'Communication Settings' section contains the following fields:

- Network Mode*: Direct (dropdown)
- Group Use External Gateway: Yes (dropdown)
- Connectivity: Auto (dropdown)

Below these are sections for 'Gateway/Client Settings' and 'Active Device Status'.

Gateway/Client Settings

- Client Connectivity: None (dropdown)
- Gateway Serial Number: (text input)
- Gateway LAN IP: (text input)
- Gateway LAN Port: 8888 (text input)
- Max Group Size: 20 (text input)
- Hide AP SSID: No (dropdown)

Active Device Status

- Active Device: None (dropdown)
- Active IP Address: (text input)
- Active Netmask: (text input)
- Active Gateway: (text input)
- Active Primary DNS: (text input)
- Active Secondary DNS: (text input)
- WebSocket Status: Disconnected (text input)

Figure 4-13 Communication Settings

General Settings

- **Network Mode** – Specifies to enable the Local Proxy function. (Direct: Use charge point as a single standalone device)
- **Group Use External Gateway** – Gateway/Client mode use external gateway as a local network group or not.
- **Connectivity** – Specifies whether the charge point should always be connected to Internet using **None**, **Auto**, **Wi-Fi**, or **Cellular**. The default value is Auto.

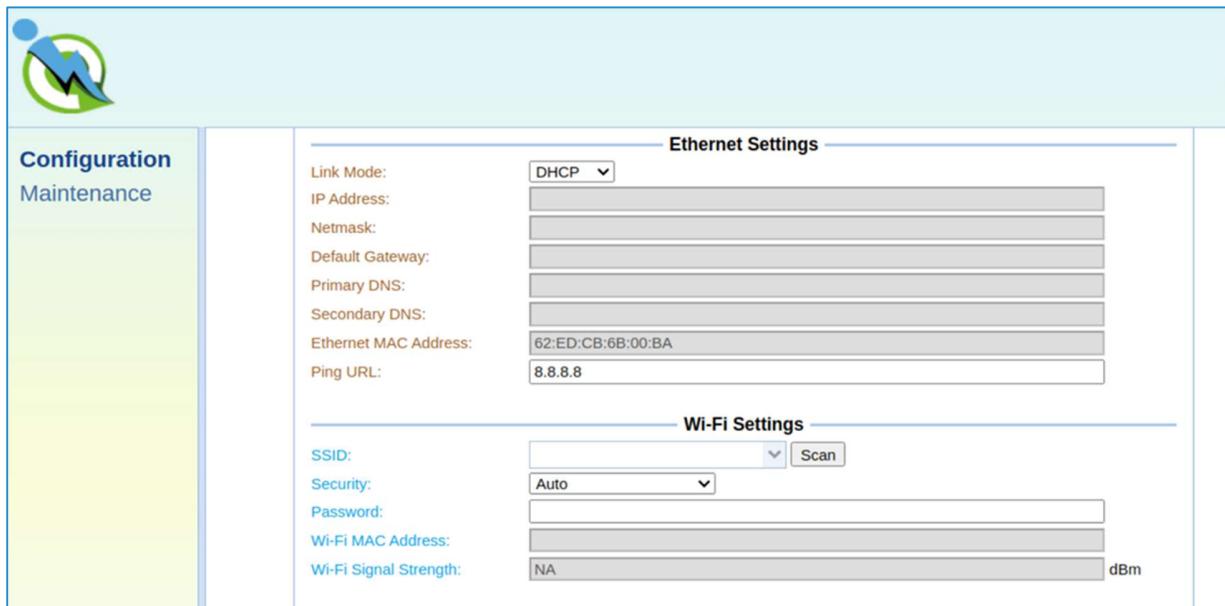
Gateway/Client Settings

- **Client Connectivity** – Specifies whether the Gateway Device should always be connected to Client Device using Ethernet or Wi-Fi.
- **Gateway Serial Number** – The serial number of the charge point which acts as a Gateway.
- **Gateway LAN IP** – The IP of master in LAN.

- **Gateway LAN Port** – The listen port for OCPP client server. This value cannot be modified by users.
- **Max Group Size** – The maximum number of charge points allowed in a group/LAN is 20.
- **Hide AP SSID** – Options for hiding SSID of this charge point or not.

Active Device Status

- **Active Device** – Current active network device. Possible values are None, Ethernet, Wi-Fi or Cellular.
- **Active IP Address** – Current active IP address. There will be value here only if connected to a network.
- **Active Netmask** – Current active netmask address. There will be value here only if connected to a network.
- **Active Gateway** – Current active gateway IP address. There will be value here only if connected to a network and network provide this data.
- **Active Primary DNS** – Current active primary DNS IP address. There will be value here only if connected to a network and network provide this data.
- **Active Secondary DNS** – Current active secondary DNS IP address. There will be value here only if connected to a network and network provide this data.
- **WebSocket Status** – To show the Status of current Websocket.



Configuration		Maintenance																												
<div style="border: 1px solid #ccc; padding: 10px;"> <div style="border-bottom: 1px solid #ccc; padding-bottom: 5px; margin-bottom: 5px;"> Ethernet Settings </div> <table> <tr> <td>Link Mode:</td> <td><input type="button" value="DHCP"/></td> </tr> <tr> <td>IP Address:</td> <td><input type="text"/></td> </tr> <tr> <td>Netmask:</td> <td><input type="text"/></td> </tr> <tr> <td>Default Gateway:</td> <td><input type="text"/></td> </tr> <tr> <td>Primary DNS:</td> <td><input type="text"/></td> </tr> <tr> <td>Secondary DNS:</td> <td><input type="text"/></td> </tr> <tr> <td>Ethernet MAC Address:</td> <td><input type="text" value="62:ED:CB:6B:00:BA"/></td> </tr> <tr> <td>Ping URL:</td> <td><input type="text" value="8.8.8.8"/></td> </tr> </table> <div style="border-bottom: 1px solid #ccc; padding-bottom: 5px; margin-bottom: 5px;"> Wi-Fi Settings </div> <table> <tr> <td>SSID:</td> <td><input type="text"/></td> <td><input type="button" value="Scan"/></td> </tr> <tr> <td>Security:</td> <td><input type="button" value="Auto"/></td> </tr> <tr> <td>Password:</td> <td><input type="text"/></td> </tr> <tr> <td>Wi-Fi MAC Address:</td> <td><input type="text"/></td> </tr> <tr> <td>Wi-Fi Signal Strength:</td> <td><input type="text" value="NA"/> dBm</td> </tr> </table> </div>				Link Mode:	<input type="button" value="DHCP"/>	IP Address:	<input type="text"/>	Netmask:	<input type="text"/>	Default Gateway:	<input type="text"/>	Primary DNS:	<input type="text"/>	Secondary DNS:	<input type="text"/>	Ethernet MAC Address:	<input type="text" value="62:ED:CB:6B:00:BA"/>	Ping URL:	<input type="text" value="8.8.8.8"/>	SSID:	<input type="text"/>	<input type="button" value="Scan"/>	Security:	<input type="button" value="Auto"/>	Password:	<input type="text"/>	Wi-Fi MAC Address:	<input type="text"/>	Wi-Fi Signal Strength:	<input type="text" value="NA"/> dBm
Link Mode:	<input type="button" value="DHCP"/>																													
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Netmask:	<input type="text"/>																													
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Primary DNS:	<input type="text"/>																													
Secondary DNS:	<input type="text"/>																													
Ethernet MAC Address:	<input type="text" value="62:ED:CB:6B:00:BA"/>																													
Ping URL:	<input type="text" value="8.8.8.8"/>																													
SSID:	<input type="text"/>	<input type="button" value="Scan"/>																												
Security:	<input type="button" value="Auto"/>																													
Password:	<input type="text"/>																													
Wi-Fi MAC Address:	<input type="text"/>																													
Wi-Fi Signal Strength:	<input type="text" value="NA"/> dBm																													

Figure 4-14 Ethernet / Wi-Fi Settings

Ethernet Settings

- **Link Mode** – Configure the Ethernet port to use “DHCP” or “Static IP” method. If you select Static IP from the drop-down menu, you need to enter values for IP Address, Netmask, and Default Gateway fields.
- **IP Address** – The IP address of the charge point.
- **Netmask** – The subnet mask.
- **Default Gateway** – The default gateway.
- **Primary DNS** – The primary Domain Name Server (optional).
- **Secondary DNS** – The secondary Domain Name Server (optional).
- **Ethernet MAC Address** – The Physical Address value for your Ethernet card.
- **Ping URL** – Test whether there is a successful connection with the Internet

Wi-Fi Settings

- **SSID** – Setting the Network Name of charge point in AP (Access Point) mode. Press Scan button to scan and receive current detectable Wi-Fi signal.
- **Security** – The encryption of Wi-Fi Access Point. Options are None, WEP, WPA-PSK, WPA2-PSK, WPA-PSK+WPA2-PSK and Auto.
- **Password** – Setting the password to when access to the AP of charge point.
- **Wi-Fi MAC Address** – Display Wi-Fi device hardware MAC address.

Wi-Fi Signal Strength – Display the wireless signal strength of Wi-Fi in dBm.

Configuration		Maintenance																															
		Cellular Settings <table border="1"> <tr> <td>Cellular Mode:</td> <td>UMTS/LTE</td> </tr> <tr> <td>MNC:</td> <td>0</td> </tr> <tr> <td>ICCID:</td> <td>0</td> </tr> <tr> <td>IMSI:</td> <td>0</td> </tr> <tr> <td>IMEI:</td> <td>0</td> </tr> <tr> <td>MEID:</td> <td>0</td> </tr> <tr> <td>UMTS APN:</td> <td></td> </tr> <tr> <td>UMTS APN User:</td> <td></td> </tr> <tr> <td>UMTS APN Password:</td> <td></td> </tr> <tr> <td>UMTS Dial Number:</td> <td>*99#</td> </tr> <tr> <td>UMTS PIN Code:</td> <td></td> </tr> <tr> <td>LTE Operation Mode:</td> <td>Auto</td> </tr> <tr> <td>CDMA Carrier:</td> <td></td> </tr> <tr> <td>CDMA Dial Number:</td> <td>#777</td> </tr> <tr> <td>Cellular Signal Strength:</td> <td>NA</td> </tr> </table>		Cellular Mode:	UMTS/LTE	MNC:	0	ICCID:	0	IMSI:	0	IMEI:	0	MEID:	0	UMTS APN:		UMTS APN User:		UMTS APN Password:		UMTS Dial Number:	*99#	UMTS PIN Code:		LTE Operation Mode:	Auto	CDMA Carrier:		CDMA Dial Number:	#777	Cellular Signal Strength:	NA
Cellular Mode:	UMTS/LTE																																
MNC:	0																																
ICCID:	0																																
IMSI:	0																																
IMEI:	0																																
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CDMA Dial Number:	#777																																
Cellular Signal Strength:	NA																																
		<input checked="" type="button" value="Apply"/>																															

Figure 4-15 Cellular Settings

Cellular Settings

- **Cellular Mode** –
- **MNC** – The Mobile Network Code of cellular service provider. There will be no data here if no cellular signal.
- **ICCID** – The ICCID of the modem's SIM card. There will be no data here if no SIM card inserted.
- **IMSI** – The IMSI of the modem's SIM card. There will be no data here if no SIM card inserted.
- **IMEI** – The IMEI (International Mobile Equipment Identity) of the modem.
- **MEID** – The MEID (Mobile Equipment Identifier) of the modem.
- **UMTS APN** – This is the gateway for all cellular traffic. Contact your cellular operator for information about this.
- **UMTS APN User** – This is the user name your ISP (Internet Service Provider) has assigned to you.
- **UMTS APN Password** – Password to log into the ISP network.
- **UMTS Dial Number** – Phone number to dial for network.
- **UMTS PIN Code** – PIN code for the modem's SIM card. It's a 4 digit number.
- **LTE Operation Mode** – The operation mode of LTE. Options are Auto, Cat NB1 and Cat M1.
- **CDMA Carrier** – Show the provide carrier of CDMA (Code Division Multiple Access).
- **CDMA Dial Number** – Phone number to dial for network.

Cellular Signal Strength – The strength of cellular signal in dBm.

4.4 Maintenance

Clicking on the “Maintenance” and link will bring up the following screen:

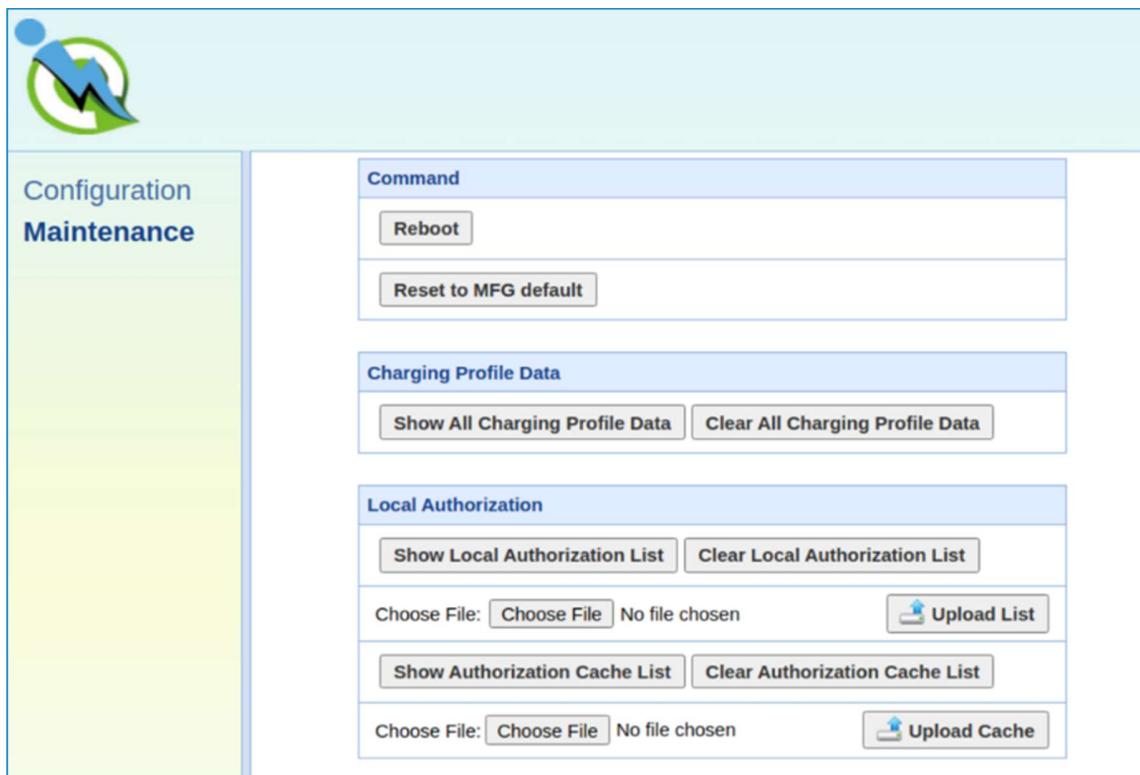


Figure 4-16 Maintenance Page

4.4.1 System

Command

- **Reboot** –The button to restart the charge point.
- **Reset to MFG default** – The button reset to the factory default settings.

Charging Profile Data

- **Show All Charging Profile Data** –To show the list of Charging Profiles. There will be a display window. The data display here is a RAW data, usually for diagnostic use.
- **Clear All Charging Profile Data** – To clear all Charging Profile data.

Local Authorization

(1)

- **Show Local Authorization List** – To show the list of Local Authorization. Each line of the list shown below indicates a RFID card info.
- **Clear Local Authorization List** – To clear the list of Local Authorization.
- **Upload List** – Upload a file which including card info to Local Authorization List.

(2)

- **Show Authorization Cache List** – To show the list of Authorization Cache. Each line of the list shown below indicates a cached RFID card info.
- **Clear Authorization Cache List** – To clear the list of Authorization Cache.
- **Upload Cache** – Upload a csv file which including cached card info to Authorization Cache List.

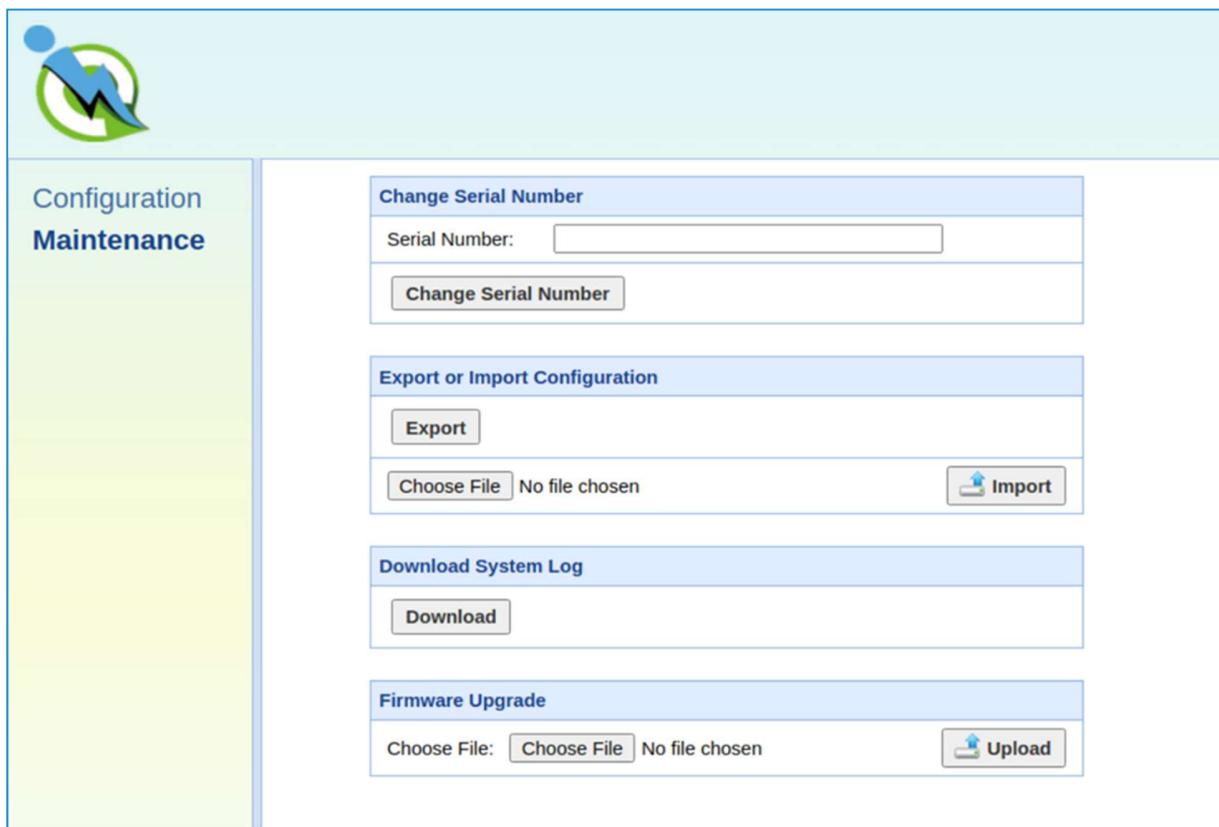


Figure 4-17 Change Serial Number

Change Serial Number

After user modifies the Charge Point Serial Number and click the button to restart the charge point. Change will succeed. (Refer to the following image)

1. Original:

Charge Point Serial Number:	1-2314-00001-DEFAULT
-----------------------------	----------------------

2. Modify:

Change Serial Number

Serial Number:	Test123S
----------------	----------

Change Serial Number

Message

Are you sure to change serial number? It will take reboot action.

Yes **No**

3. Change succeed:

Charge Point Serial Number:	Test123S
-----------------------------	----------

Export or Import Configuration

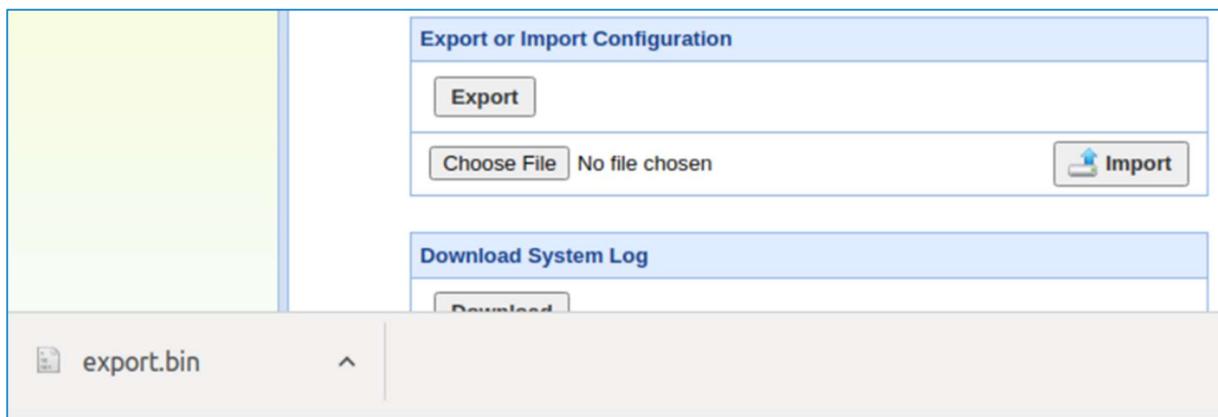


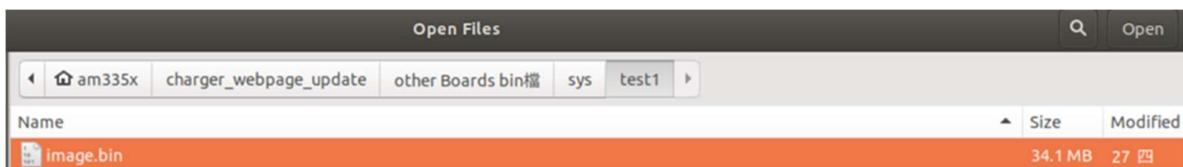
Figure 4-18 Export or Import Configuration

- **Export** – To export the .bin file which includes the charge point current setting.
- **Import** – Upload a bin file which including the charge point user setting info.
- **Download System Log**
- **Download** – User can download the System Log of charge point.

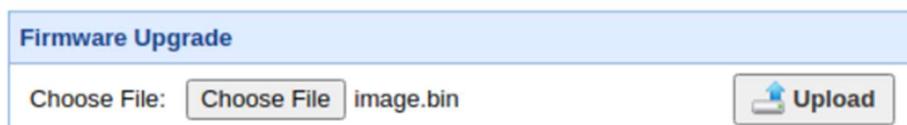
Firmware Upgrade

- **Upload**

(1) To click the “Choose File” Button and under the local path to open the correspond Firmware file(.bin)



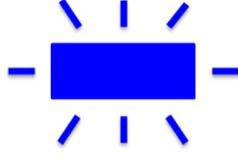
(2) To click the Upload button.



5 Operations

5.1 Charging Status Indicators

Table 5-1 Charging Status Indicators

LED Indicator	Description	Definition
	Not illuminated	Power Off
	Green Steady	Ready / Standby
	Blue Flashing	Charging
	Blue Steady	Authorized, wait for EV to Connect, Charging process / Charging stops
	Red Steady	Unrecoverable Fault
	White Flashing	Booting / Firmware Upgrading / Out of Service

5.2 Authorization

Before the owner of an electric vehicle can start or stop charging, the Charge Point must be authorized to continue with the operation.

5.2.1 Online Authorization

Description:

- The EVCE SHALL will only supply energy after authorization.

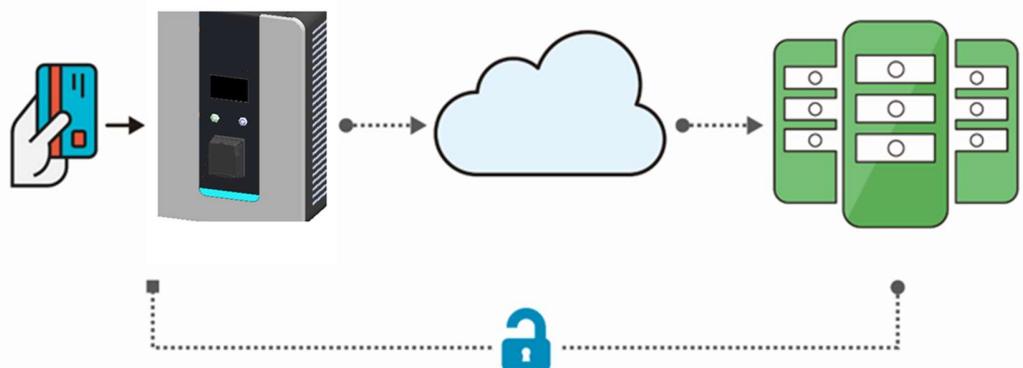


Figure 5-1 On-line Authorization

5.2.2 Local Authorization

Description:

- Synchronized with the Central System when EVCE is Online.
- To improve the experience for users, the EVCE MAY support local authorization when EVCE is *offline*.

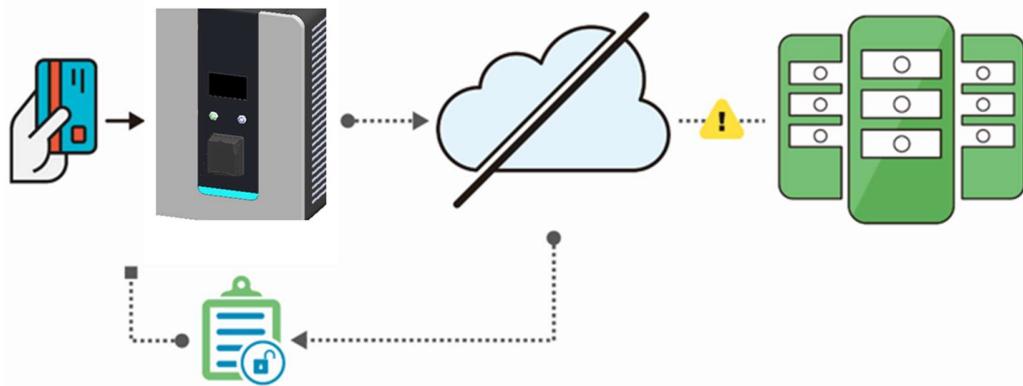


Figure 5-2 Local Authorization

5.3 Charging an Electric Vehicle (EV)

1. Insert the charging plug into the EV
2. Charging session starts

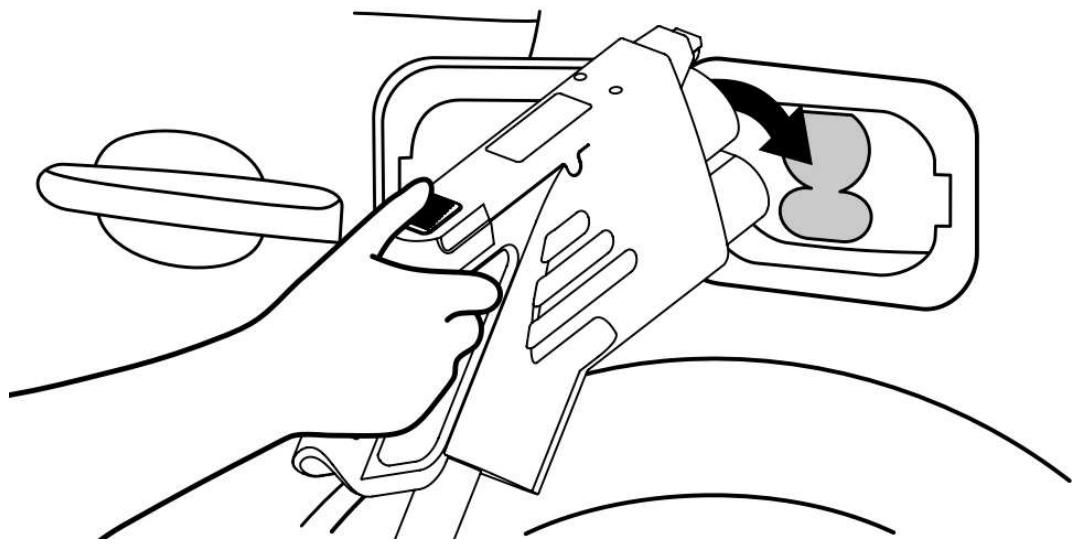


Figure 5-3 Connect the Charging Plug to the EV

5.3.1 RFID Card

1. Insert the charging plug into the EV
2. Swipe RFID card
3. Allow for authorization to complete
4. Charging session starts

5.4 Stop Charging

1. Swipe card
2. Session ends (please return the connector to the holster)

5.4.1 Interrupt Charging

Please refer to STOP CHARGING section for more information.

When a charging session is interrupted due to a temporary error condition, the charge point will automatically restart charging when the cause of the temporary error condition returns to normal. Status indicator lights remain flashing RED until the error condition is resolved.

- Temporary error conditions include: Over Current, Over Voltage, Under Voltage, and Over Temperature.
- For Over Current (OC) conditions: The charging session will be stopped while OC occurs. After the charge point recovers from OC for 30 seconds, it will automatically restart charging up to 3 times.
- When charging session stopped due to CCID trip, the charge point will attempt to restart after 15 minutes up to 3 times.

When power resumes after an outage, the charge point restarts automatically with a delay ranging from 120 to 720 seconds. The delay is designed to avoid impacting the utility grid when multiple charge points are in the same area attempting to resume charging simultaneously.

5.5 General Care

The exterior of the charge point is designed to be waterproof and dust proof. To ensure proper maintenance of the charge point, follow these guidelines:

- Despite the water resistance of the enclosure, it is preferred to not direct streams of water at the unit. When cleaning the charge point, use a soft, damp cloth.
- Make sure the charging plug is placed back into the holster after charging to avoid damage.
- Ensure the power cable is stored on the charge point after use to avoid damage.
- If the power cable or the charging plug is damaged, please contact Customer Support.

5.6 Cable Management

Please keep the minimum bending radius at least 6 times the cable's O.D. (outer diameter), about 180mm.

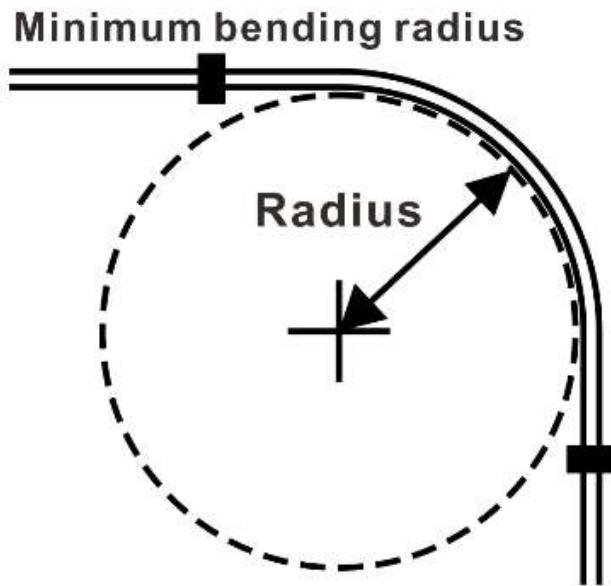


Figure 5-4 Cable's Minimum Bending Radius

5.7 Customer Support

- Please contact your reseller directly for technical support. The filter specifications are as follows (please follow the appendix instructions to replace the filter)

Filter Location	Dimension(mm)
Right side Foam with frame	6.85" x 20.63" x 0.50" (174mm x 524mm x 12.7mm)
Left side Foam with frame	6.85" x 17.30" x 0.50" (174mm x 439.4mm x 12.7mm)
Right side Net with frame	6.85" x 20.63" x 0.13" (174mm x 524mm x 3.55mm)
Left side Net with frame	6.85" x 17.30" x 0.13" (174mm x 439.4mm x 3.55mm)

Spare Parts (please follow the appendix instructions to replace the parts)

Item
Surge Protection Device
DC Output Fuse
5" LCM module
Emergency button
Gun select button (Blue)
Gun select button (Green)
POS module
RFID module
Aux power

- **Trouble Shooting and Error Codes**

When faults occur with the DC charger, please contact customer service.

Error Code table and fault handling:

Code	Fault name
10000	Output1 Relay + driver fault
10001	Output1 Relay + welding
10002	Output1 Relay - driver fault
10003	Output1 Relay - welding
10004	Output2 Relay + driver fault
10005	Output2 Relay + welding
10006	Output2 Relay - driver fault
10007	Output2 Relay - welding

10008	CHAdeMo GFD self-test fail
10011	CCS GFD self-test fail
10016	AC input contactor 1 driver fault
10017	AC input contactor 1 welding
10018	AC input contactor 2 driver fault
10019	AC input contactor 2 welding
10020	Door Open
10021	Fan fail
10022	CHAdeMO output fuse fail
10023	CCS output fuse fail
10024	Safety board module broken
10025	CCS module broken
10026	CHAdeMO module broken
10027	Power Module fail
10028	WiFi module broken
10029	4G module broken
10030	RFID module/POS broken
10031	Power Module fault
20000	System L1 input OVP
20001	System L2 input OVP
20002	System L3 input OVP
20003	System L1 input UVP
20004	System L2 input UVP
20005	System L3 input UVP
20006	System L1 input drop
20007	System L2 input drop
20008	System L3 input drop
20009	System AC input unbalance
20010	System CHAdeMO output OVP

20011	System CHAdeMO output OCP
20012	System CCS output OVP
20013	System CCS output OCP
20016	System ambient/inlet OTP
20017	CHAdeMO connector OTP
20018	CCS connector OTP
20020	CHAdeMO GFD trip
20021	CCS GFD trip
20023	SPD trip
20024	Emergency button
20027	Power module alarm

6 Appendix

6.1 Air Filter Cleaning Process

Filters containing polyurethane foam media should be cleaned (or replaced) every three to six months for most applications. Certain environments may require more frequent cleaning or replacement cycles.

- Remove the air filter parts. (Please refer to the right side as an example)
 1. Open the charger door and release the draw latch on the right side.
 2. Rotate the filter frame and pull up the backplate on the filter module.
 3. Take out the filter module and separate its net and foam components.

※ Please be careful of the fixed component on the metal frame. If it falls off, please reattach it.

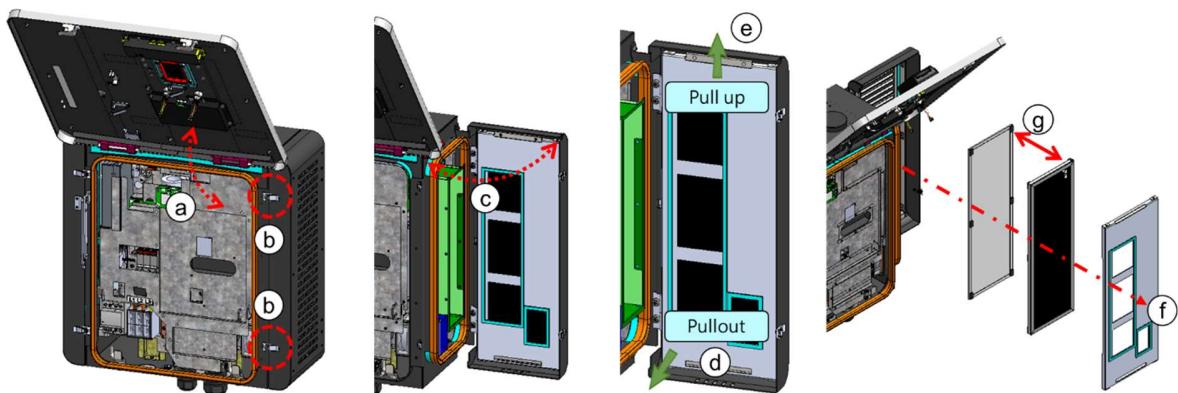


Figure 6-1 Process of Detaching the Filter

- Clean net and foam parts with suitable tools.
 1. Vacuum clean.
 2. Blow with compressed air.
 3. Cold water rinse.
 4. Immersion in warm, soapy water.

※ Surroundings that adversely affect the media are high heat, humidity at high temperatures and ultraviolet light.

※ Media may degrade when exposed to solvents and sulfates, such as, cleaning agents and exhaust.

※ If a degreaser is required, use only a mild detergent, such as, dishwashing liquid.

※ Do not use hard brush or sharp object to clean filter parts.

※ If filters are cleaned with water, the filters should be completely dry before reinstalling.

※ When reinstalling the filters, it is important to pay attention to the sequence, with the net frame being the outer layer and closer to the external environment.

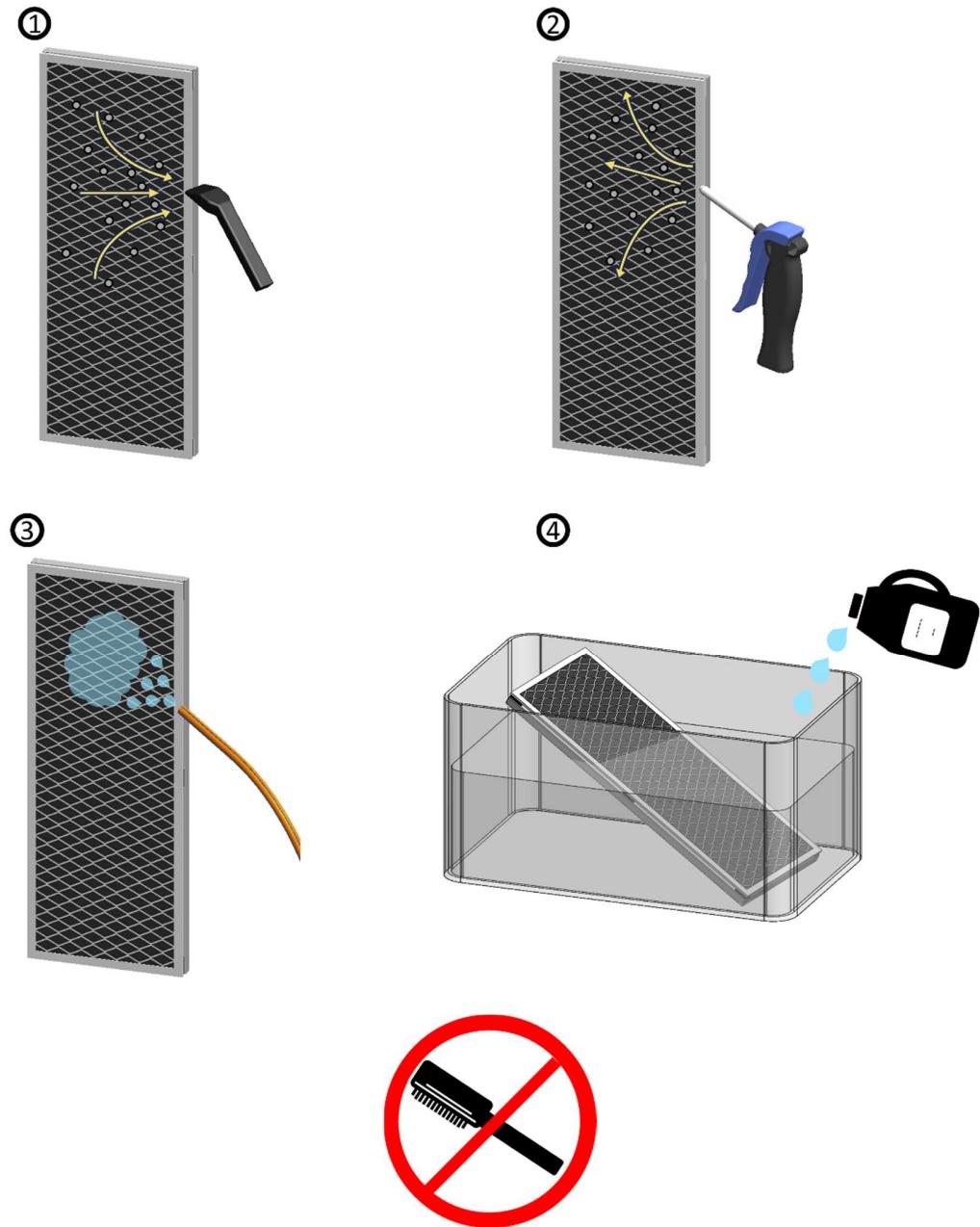


Figure 6-2 Process of Cleaning the Filter