



C7AM User Manual

ENGLISH

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Changelog

Date	Changed by	Version	Changes
2023.01	Johan Gao	1.0	Initial release
2023.04	Johan Gao	2.0	Mechanical change update
2023.06	Johan Gao	2.1	Electrical wiring parameter update
2024.02	Kang Liu	2.2	Update contents (figure, wiring diagram, devices)

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1. Information and Safety

1.1 Preface

This document is valid for C7 Series Products.

This manual describes the features and functions as well as safety information and instructions, scope of delivery, system overview, installation, electrical connection, commissioning, troubleshooting, maintenance and storage, and technical data of the XCHARGE C7 Series facility.

This product is developed to meet the growing high power charging service demand. It incorporates a charging cable and is capable of delivering a maximum output of 400kW/1000V through a single connector.

Due to its high technical modularity and varying customer requirements, there exist different variants with distinctions in terms of maximum output power, installed cables, and connectors. The components depicted in this manual are illustrative examples. The visuals and explanations pertain to a standard device configuration. Your actual device might differ from the description provided in the manual. Please thoroughly review this document before using the device for the first time.

Only the charged energy in kWh may be billed in accordance with calibration law.

1.2 Target Group

This document is intended for:

- Customers who have purchased or are in the process of ordering a C7 model and seek comprehensive information regarding installation and maintenance.
- Contractors responsible for site preparation and/or installation of the C7.
- Qualified electricians or professionals performing installation, commissioning, maintenance, or repairs of the XCHARGE C7 Models.
- XCHARGE employees and after-sales service personnel who have responsibilities concerning the C7 Models.

The instructions in this document may only be performed by qualified persons who must have the following skills:

- Knowledge of, and adherence to the locally applicable connection requirements, standards, and directives
- Knowledge of, and adherence to this document and the associated system documentation, including all safety instructions
- Knowledge of the relevant safety and accident prevention regulations.
- Ability to recognize risks and avoid dangers
- Training in dealing with the hazards associated with the installation and operation of electrical equipment and batteries
- Training in the installation and commissioning of electrical equipment

In case of loss or damage due to improper use or unauthorized modification of the product, XCHARGE shall not be liable for the product, the purchaser or any third party. The same also applies if the maintenance provided by XCHARGE is not strictly observed.

1.3 Important Safety Instructions

DANGER

Indicates a hazardous situation that, if not avoided, will result in death or serious injury.

1. Please use personal protective equipment to avoid such hazards. And emergency personnel should respond appropriately to possible incidents at power generation by standard operating procedures.
2. If the smoke detection alarm or other heat signs are reported, the responder should remain within the safety zone until it is safe to enter the site according to the emergency plan.
3. Please do not operate in cloudy, rainy weather or similar conditions as this may lead to possible electrical issue. Do not install or use the charging station near flammable, explosive materials or steam.
4. All wiring of this product requires qualified electricians to complete, and confirm the wiring harness is in good condition. The shutdown sequence only isolates the battery and associated hazardous voltages. Personnel must be extreme care and wear appropriate PPE at all times. Always consult site-specific schematics and manuals to ensure proper isolation of electrical equipment.
5. Do not attempt to open, disassemble or modify the charging station without qualified personnel.

WARNING

Indicates a hazardous situation that, if not avoided, could result in serious injury.

1. All personnel operating C7 Series Charger should be properly trained and qualified. These operators should have an in-depth knowledge of electrical high-power systems and electric vehicles. Prior to carrying out any work the operator and the responsible technical personnel must carefully read these instructions.
2. The long period of the shutdown of thermal management and communication systems may result in equipment damage and failure to detect and communicate faults.

Caution

Indicates a hazardous situation that, could result in minor or moderate injury.

1. Wear suitable personal protective equipment for all work on the charger.
2. Disconnecting the contactor under load may damage the C7 charger. Please use the emergency stop button only in a situation emergency.
3. Please do not start operation until the system has been fully commissioned and checked by XCHARGE technicians or until all required scheduled maintenance has been carried out. Before installing or cleaning the charging station, disconnect the power supply.
4. Please use the charging station within the parameter range as defined in the specification. Do not use the charging station for non-charging purposes or for vehicles that do not support the on Screen showed charging standards.
5. In the event of any defects such as cracks, wear and tear, malfunctioning parts or other damage, stop using the charging station immediately and call for service.
6. Do not start or drive your electric vehicle if the socket is still connected. The user is liable for damage to the electric vehicle and the charging station caused by the case addressed earlier.
7. Please transport the charger carefully. Avoid strong external shocks. Do not pull, twist or step on the charger to avoid damage to parts. Avoid and prevent damage to the charger by moisture, liquids

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and foreign objects at all times. Do not use if water is present or if you suspect that the charger is damaged or corrosive. Do not touch the charging station, charging cable and charging plug with wires, tools or other sharp objects.

Notice

Indicates a situation that, if not avoided, can result in property damage.

Please ensure that the installation environment meets the environmental requirements of this product. The place of use must not contain explosive hazardous media, and the surrounding area does not contain corrosive and insulation-damaging harmful gases and conductive media.

No strong vibration and shock at the place of use, no strong electromagnetic interference, the external magnetic field induction strength must not exceed 0.5 mT. the vertical inclination of the installation must not exceed 5%.

The charger has been designed and tested by international safety requirements. However, to prevent personal injury and property damage and ensure follow the instructions in the manual, please read this section carefully and observe all safety information at all times. If the product is not installed and used in accordance with the requirements in the product description, all responsibility does not lie with XCHARGE.

1.4 Signs

Table 1 Safety signs

Signs	Description
	Earthing Connect an earth terminal to earth
	General warning sign Identify a hazard that may result in damage to the operator, machinery, other equipment and / or contamination.
	Electrical hazard Warning of electrical voltage

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Crushing of hands

Touching the device can cause hand injuries



No access for persons with active implanted cardiac devices

These following signs are also used on the nameplate of C7:

Table 2 Signs on nameplate

Sign	Description
	Pay attention to documentation Observe all documentation supplied with the product.
	WEEE-Symbol Do not dispose of the product with household waste. Please observe the applicable disposal regulations at the place of installation for electronic waste.
	CE-symbol

1.5 Abbreviations

Table 3 Abbreviations

Abbreviation	Definition
AC	Alternating Current
BMS	Battery Management System (on EV)
BOL	Beginning of Life
BOP	Balance of Plant
COG	Center of Gravity
DMC	Distribution Management Cabinet
DC	Direct Current

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<i>FAT</i>	Factory Acceptance Test
<i>HMI</i>	Human Machine Interface
<i>HVAC</i>	Heating Ventilation Air Conditioning
<i>OCPD</i>	Over-current Protection Device
<i>PPE</i>	Personnel Protective Equipment
<i>SAT</i>	Sight Acceptance Test
<i>SOP</i>	Standard Operating Procedures
<i>SPD</i>	Surge Protection Device
<i>SoC</i>	State of Charge

2. Product Introduction

The C7 DC fast charger is intended to provide fast charging for electrical vehicles. The C7 can be installed either indoors or outdoors. It is imperative that the characteristics of the electrical grid, environmental conditions, and the electric vehicle align with the technical specifications of the Electric Vehicle Supply Equipment (EVSE). It is crucial to exclusively employ the EVSE with the accessories provided by the manufacturer, ensuring strict adherence to local regulations.

2.1 Nameplate

To guarantee the secure installation and proper utilization of the C7 Charger, it is essential to inspect the nameplate. The nameplate is affixed to the lower left corner of the left door of the charger, as illustrated in the product image. The nameplate displays crucial information such as CE certification compliance and input-output parameters, manufacturing date and address, part number, serial number, and safety symbols.

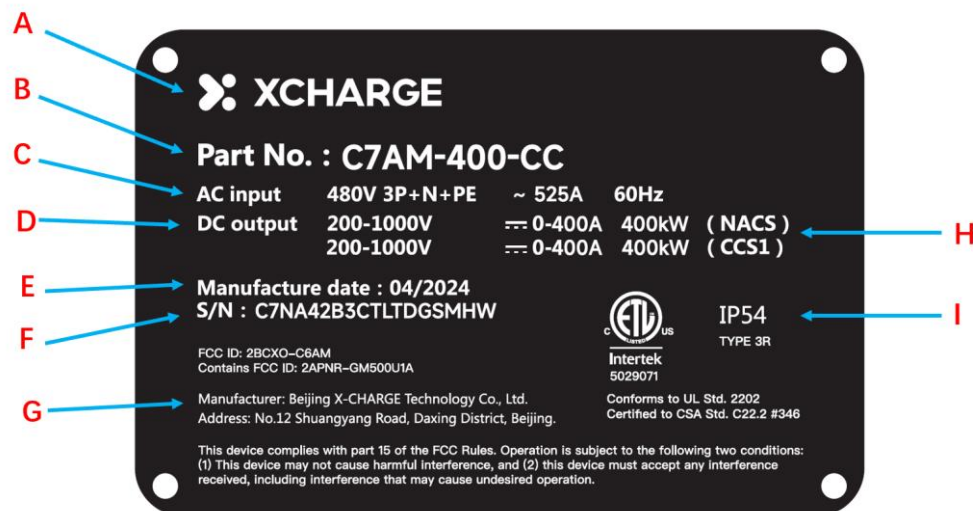


Figure 1 Nameplate of C7AM (for reference only)

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Table 4 Description of nameplate

A	Manufacturer	F	Serial Number
B	Part number	G	Address of the manufacturer
C	Input requirement	H	Additional rating data
D	Output voltage	I	Marks and certification info
E	Manufacture date		

2.2 Structure Overview

2.2.1 External View

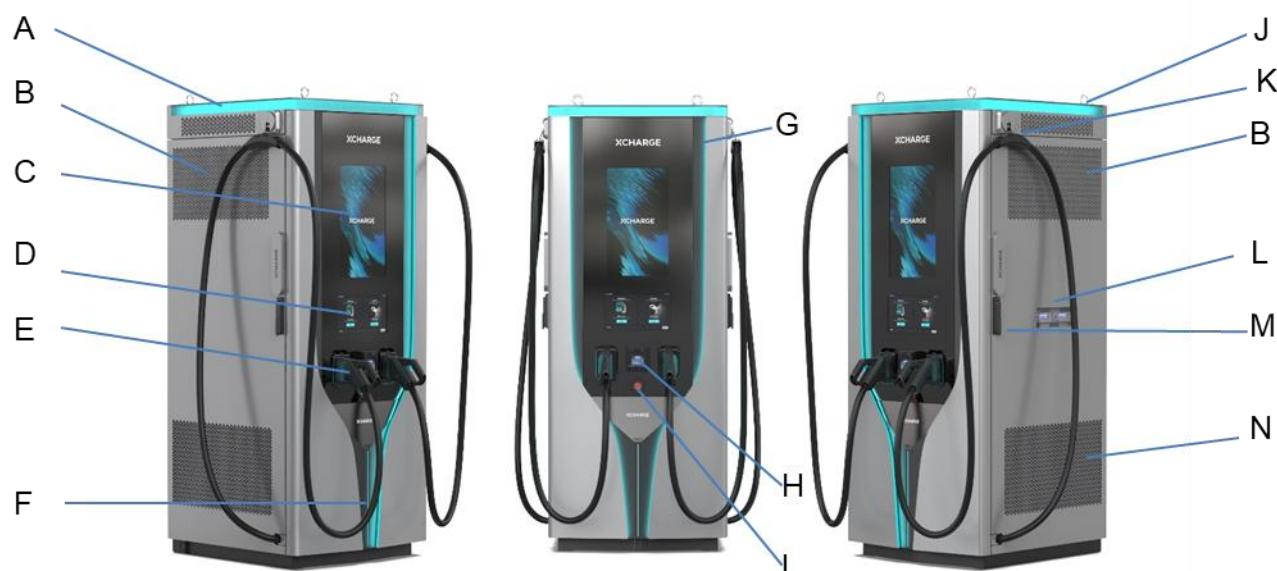


Figure 2 External view of C7

Table 5 Components of C7

A	LED indicator of charger status	H	Payment terminal (Credit/RFID card reader)
B	Air outlet	I	Emergency button
C	Advertisement display (21.5inch FHD non-touch)	J	Eye bolt for lifting
D	HMI display (13.3inch FHD touch)	K	Cable management

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E	Charging connector	L	DC meter display
F	Ambient light (breathing)	M	Cabinet lock
G	Ambient light	N	Air inlet

Table 6 Functions of main components

Part	Function
LED indicator	To show charging station's status and charging progress
Air inlet and outlet	To let cooling air in and out. The airflow makes sure that the parts inside do not become overheated
Advertisement display	To play customized advertisement videos
HMI display (touchscreen)	To control and monitor the charge session
Charging connector	To connect the charging station to a electrical vehicle
Payment terminal	To pay for the charge session
Emergency button	To cut the power of the EVSE off when there is an emergency
DC meter	To measure the power consumption of the charge session

2.2.2 Internal View

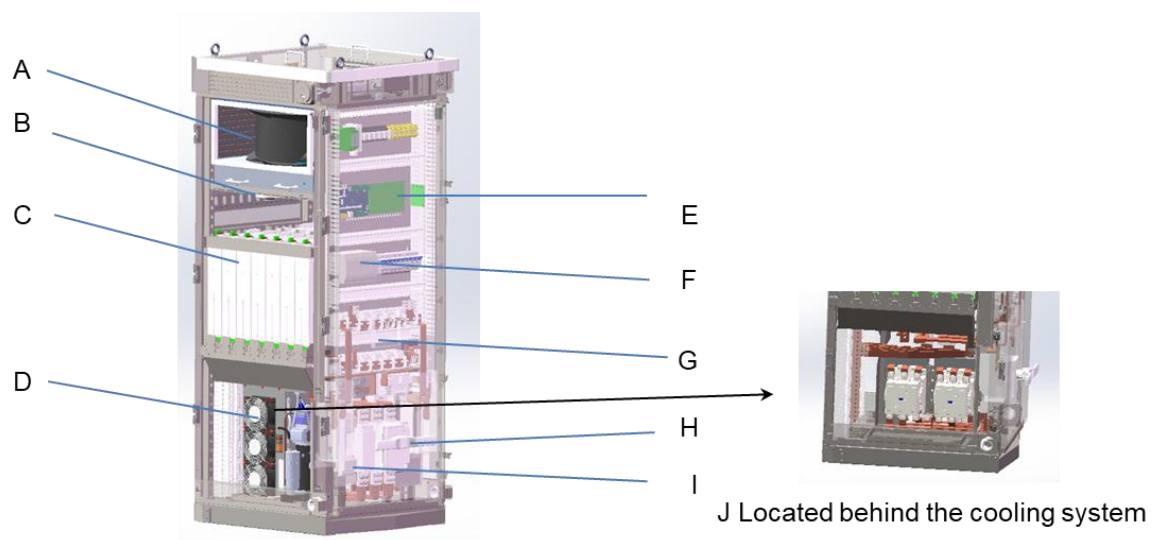


Figure 3 Internal view of C7

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Table 7 Main components inside

A	Cooling fan	F	Low-voltage power supply
B	Tilt sensor	G	DC contactor
C	Power module	H	Main breaker
D	Cooling unit	I	Surge protector
E	Controller	J	AC contactor

Table 8 Functions of components inside the charger

Part	Function
Cooling fan	To circulate air through the charging station
Tilt sensor	To detect inclination, the alarm is triggered to stop charging session when tilt occurs
Power module	To convert the AC voltage to an electrically isolated DC voltage
Cooling system	Cooling unit for cooled charging cable (optional, only with cooled charging cable)
Controller	The control unit of the charger, incl. RK3568 board with Android (HMI/Network/OCPP communication) & DCB board (SECC Supply Equipment communication controller)
Low-voltage power supply	To supply electricity for low voltage devices (touchscreen, cooling system etc.)
DC contactor	To connect or disconnect the power modules for charging capacity allocation
Main breaker	To power on/off the whole charging station
Surge protector	Overvoltage & lightning protection
AC contactor	AC power supply switch to power modules controlled by DCB board

2.2.3 Dimension

- Main size

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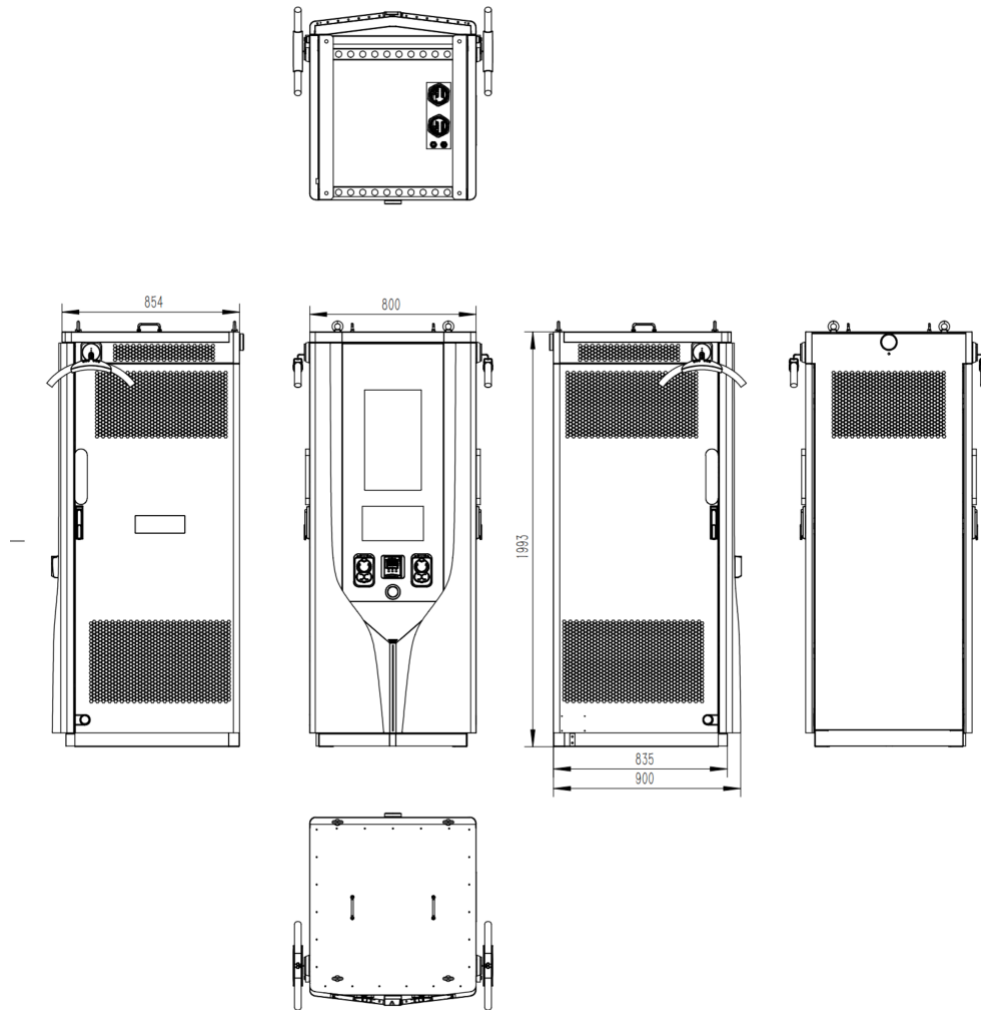


Figure 4 Dimension of C7

- Barrier free design

The C7 charger is designed to be disabled-friendly. The connector and HMI design comply with accessible regulation strictly (within 85cm-105 cm according to **DIN 18040-3**). The Barrier free design and cable hanger extend the user group of charging service.

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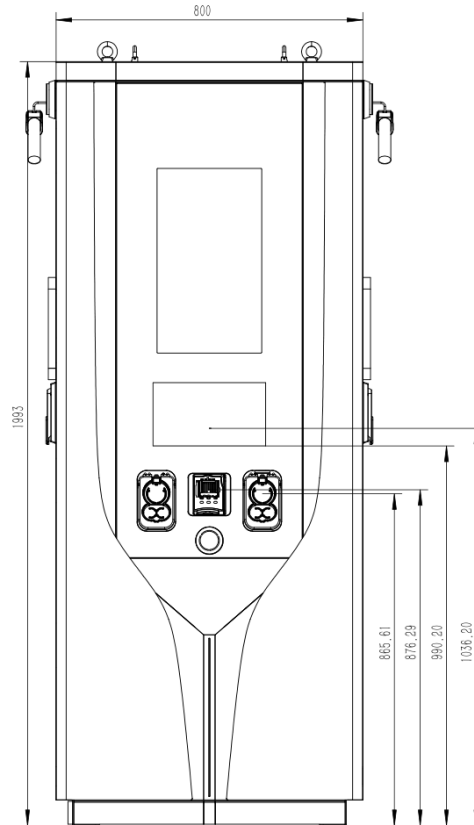


Figure 5 Barrier free design

- Access to parts (door opening)

By opening the display, right and left door, the cabinet of EVSE can be accessed by authorized personnel. Please keep the keys properly, only well-trained and authorized personnel are permitted to operate on the devices inside. When opening the door, pull the handle firmly and completely, to prevent the cylinder touching the door. The lock cylinder can be replaced if necessary.

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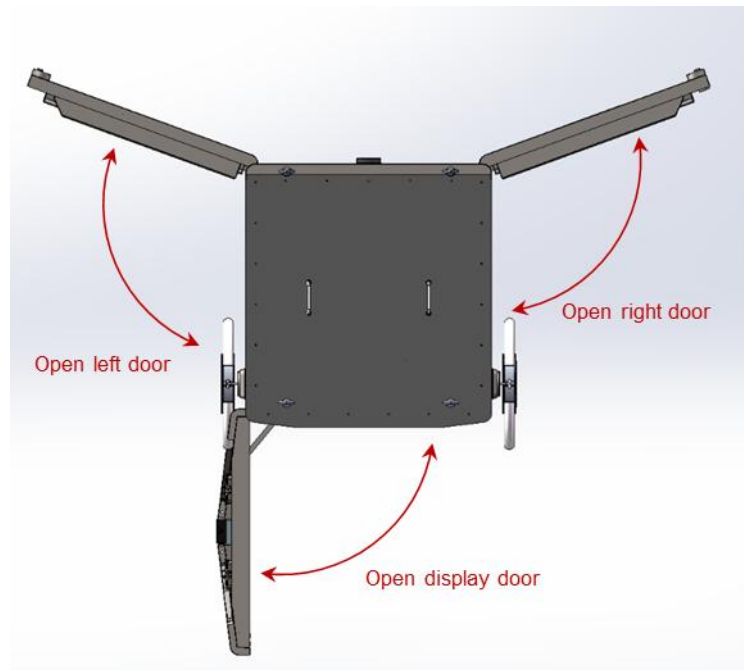


Figure 6 Access to charger

- Direction of airflow

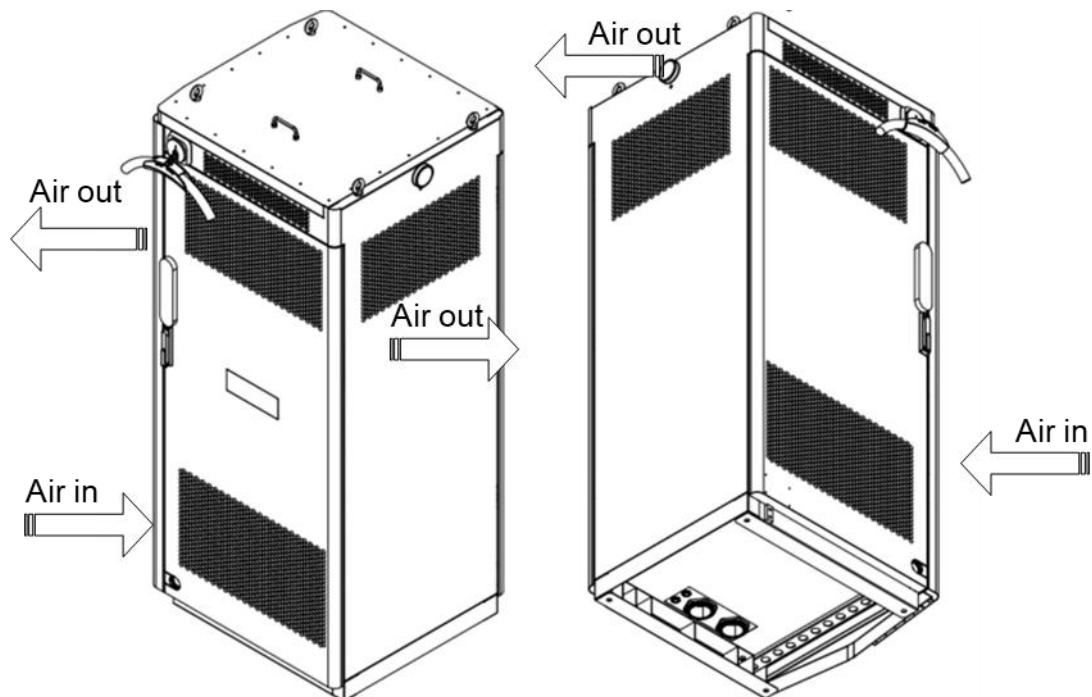


Figure 7 Airflow direction

2.3 Display

2.3.1 Screen Layout

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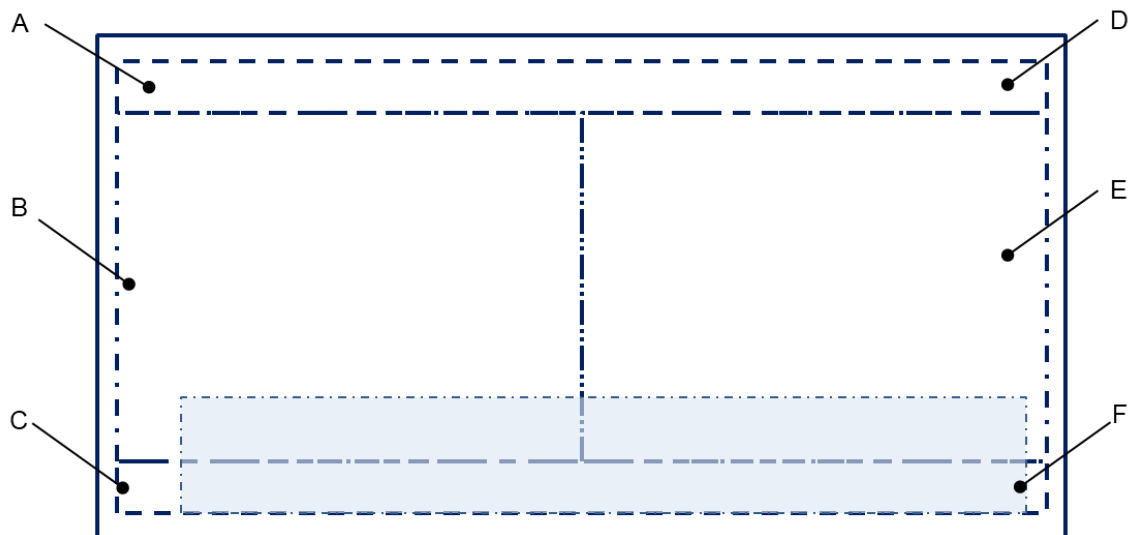


Figure 8 Screen lay-out

Table 9 Description of screen lay-out

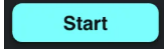
A	Company logo	D	Connection
B	Main display area for left connector	E	Main display area for right connector
C	Time	F	Touch screen control bar

2.3.2 General Description of Buttons on Display

Table 10 Button description

Button	Name	Description
	Price	To know the pricing rate of the charging service
	Language	To change language setting on the touchscreen
	Help	To show help information on the current status of the EVSE
	Configuration	To check and set the configuration of the EVSE (basic info, signage, charging setting)
	Home	Click to back to homepage
	More	To show more information of the EVSE

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	Start	To start the chosen connector for charging
	Stop	To stop current charging session

2.3.3 Indicator Lights

Charger status LED indicator (on the top of C7 charger)

Table 11 LED indicators

LED color	LED outline	LED display	Status
Hollow		Switch off	Inactive
Green		Static	Available
Blue		Flow to right	Charging
Red		Static	Warning/Fault message (Not allow to use)

2.4 Meter

On the right door the user can easily find two DC meter displays. By integrating the certified LEM DC meter, the reliable billing data is ensured. C7 is equipped with two DC meter (DCBM).

The DCBM is split into two elements linked via a cable: the sensor unit and the meter unit. The sensor unit has four terminals: two terminals to measure current flow and two terminals to measure the DC link voltage.

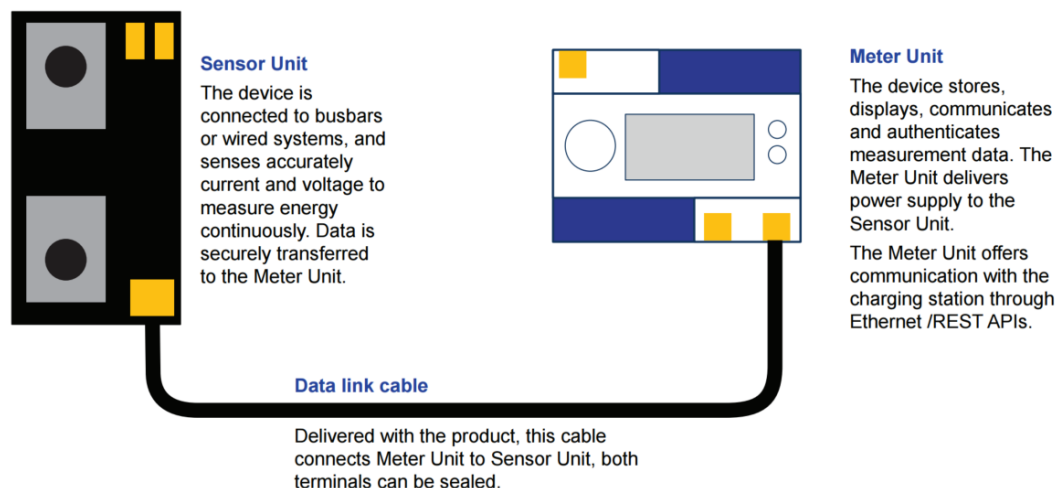


Figure 9 LEM meter

2.5 Variants

2.5.1 Charging Capability

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Table 12 Maximum charging output

Type	Max. charging output	Power module
C7AM/400	400 kW	10*40kW
C7AM/360	360 kW	9*40kW
C7AM/320	320 kW	8*40kW
C7AM/280	280 kW	7*40kW
C7AM/240	240 kW	6*40kW

2.5.2 Charging Connector & Charging Cable

- Charging connector

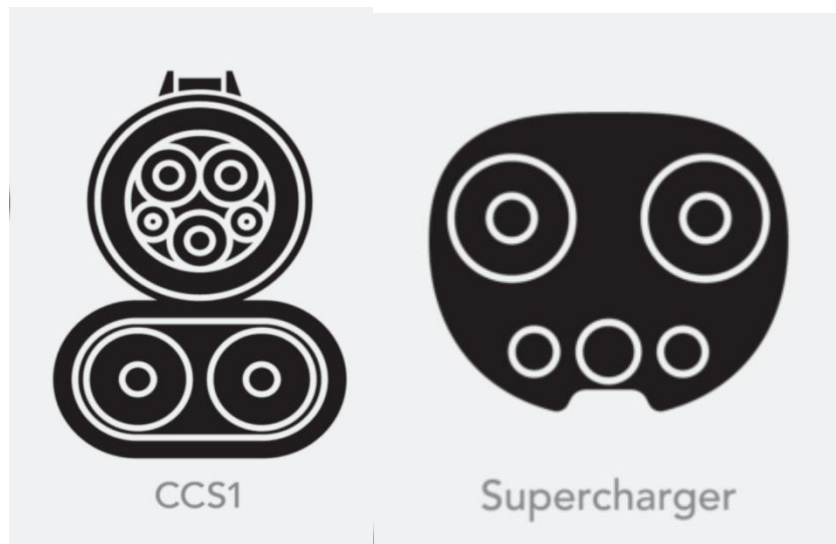


Figure 10 Charging connector variants

- Charging cable

Table 13 Charging cables

Type	Amphenol C-HVCOAEM400AML5000	Sinbon A9604908
Rated current	400A	400A
Length options	5/7 m	5/7 m

2.5.3 Authorization to Charge

It is possible to use the EVSE with or without authorization. If the charger is intended for internal use (such as industrial park etc.), without authorization mode can be set. Charging session can also be initiated via RFID, QR code, credit card, auto charge or ISO15118 “plug and charge”.

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2.5.4 Integrated Payment Terminal

Multiple payment terminals can be integrated such as Payter Apollo, PAX IM15 POS terminal. UPT payment offers customization options, please reach out to Xcharge for technical feasibility check. Xcharge ensures further configuration and seamless connection.



Figure 11 POS Terminal

2.5.5 Power Module

The power module converts the AC voltage to an electrically isolated DC voltage. It is the utmost important electronic component inside the charging station. C7 is equipped with 40 kW power module.



Figure 12 Power module



2.5.6 FCC Information

To whom it may concern,

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

For class A digital device:

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

MODIFICATION: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the device.

This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.

FCC ID:2BCXO-C7AM

To satisfy FCC exterior labeling requirements, the following text must be placed on the exterior of the end product Contains router FCC ID: 2AANYIR6X5-S, POS unit FCC ID: 2AHPPAPX01.

Wireless module operating parameters

Router		
FCC ID: 2AANYIR6X5-S		
POS unit		
FCC ID: 2AHPPAPX01		
RFID module		
No	Project Content	Specifications
1	Operating Frequency	13.56MHz
2	Maximum transmission power	7.67 dbuV/m @ 3m
3	Antenna	0 dbi

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4	Working limit	-40 °C to +65 °C
5	Operating voltage	3.0V to 3.6V
6	Support card	ISO14443TypeA; M1; MIFARE50, S70
7	Standards	ISO/IEC14443TypeA
8	Comm rate	106kbit/s212kbit/s424bit/s
9	Modulation	ASK
10	Antenna	PCB Integrated

2.6 Technical Specifications

2.6.1 General Specification

Table 14 General specification

General features	Authorization	RFID/QR code/Credit card/ISO15118 'Plug & Charge'
	Dimensions	800x900x1992mm
	Weight	Approx. 680kg
	Housing material	Industrial alloy with weatherproof coating
	Installation	On ground, Indoor/ Outdoor
	HMI & Plug operation height	85-105cm
	Operation temperature	-35 °C — 50 °C
	Noise	< 70dB at distance of 1m (Steerable via preset silence mode sent by back-end)
	Humidity	≤ 95% No condensing
	Altitude	≤ 2000m
Safety Security	Compliance	IEC 61851-1:2011, IEC 61851-23:2014, IEC 61851-24:2014, IEC 62196-3:2014, DIN 18040-3, ISO 15118, DIN 70121-2014
	Safety protection	Over/under voltage, short circuit, reverse connection,

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		grounding, door switch, smoke/water ingress, tilting.
	Ingress protection	IP54
	Impact resistance	IK10
	Cyber security	TLS 1.3

2.6.2 Electrical Specification

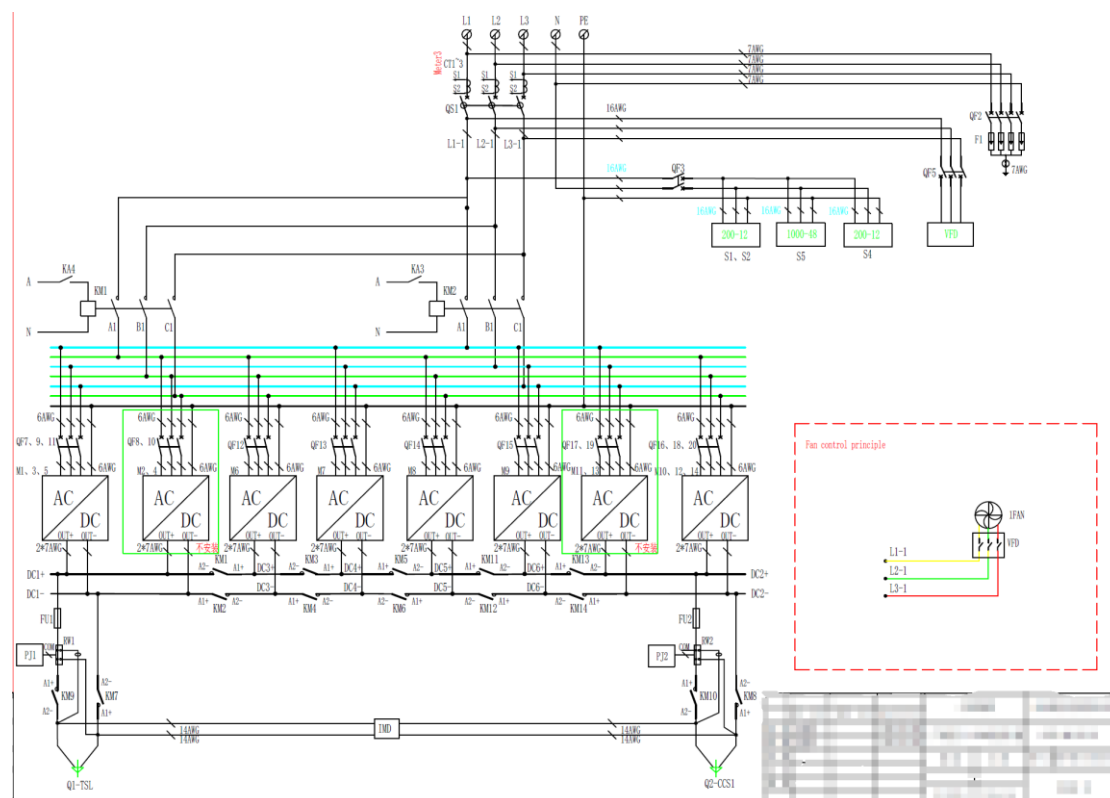
Table 15 Electrical specification

Electrical features	RFID/NFC	ISO/IEC 14443A/B, 14443-4A/B, M1(S50/70) card	
	Network adapter	Cellular(3G/4G/LTE), Ethernet RJ-45	
	HMI	13.3 inches 1920x1080 LCD Touch Screen	
	Advertisement	21.5 inches 1920x1080 LCD Screen	
	OS Kernel	Android 11	
	OCPP protocol	OCPP 1.6J/ OCPP2.0.1	
	THD	< 5% (steerable via central control on site)	
	Power efficiency	≤ 96%	
	Metering	AC Meter/DC Meter	
Input/ Output	Input voltage	3P+N 480V ±15%	
	Frequency	60Hz	
	Connectors	CCS1	NACS
	Max. output power	400kW	400kW
	Max. output current Peak value	400A	400A
	Max. output current Continuously	400A	400A
	Output voltage range	200-1000V	200-1000V
	Cable length	5m/7m	
	Cable cooling	Air cooling	

2.6.3 Electrical Diagram

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Figure 13 Electrical diagram



Notes:

The diagram complies with the Standard EN 61851-23. For different C7 model, cable size is variable.

2.7 Compliance

Table 16 Compliance

Safety and Low voltage electrical	IEC 61851-1:2017 EN 61851-1: 2019 EN 61851-23: 2014 EN 61851-24: 2014 UL 2202:2022 Ed.3 CSA C22.2#346:2022 Ed.1
EMC	IEC 61000-6-2:2016 IEC 61000-6-4:2018 UL 2231
RED	EN 301908-1 EN 300330 EN IEC 62311:2020

3. Packaging, Transport and Storage

3.1 Packaging

The C7 charger is delivered in a specialized wood package (100% recyclable wood). Shrink wrap and packaging foam is used for padding and protection.

The following figure and table show the packaging size and material.

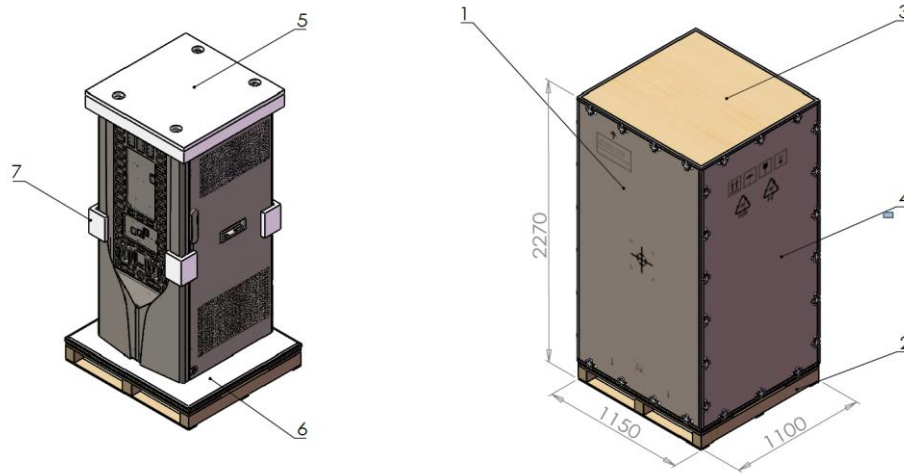


Figure 14 Packaging

Table 17 Packaging size

No.	Part	Dimension (mm)	Qty.
1	Plywood for sides 1	1145x2100	2
2	Palette	1150x1100	1
3	Plywood for top	1150x1100	1
4	Plywood for sides 2	1080x2100	2
5	EPE for top	920x940x130	1
6	EPE for bottom	1150x1010	3
7	EPE for edge protection	200x150	4

Table 18 Packaging material

Material	Sizing	Comments
Shrink wrap	1 pack	Prevent scratch
Foam plastic protection	2m x 2m	Prevent shaking & collision damage
Tilt indicator	2 set	Guarantee upright status

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Wooden box	1150mm x 1100mm x 2270mm (With cable management system)	
Nail gun	1 set	

3.2 Transport

The product is delivered to a warehouse by a logistics company and handed over to the customer. Normally, XCHARGE is not responsible for transporting the charger to the final installation site. The movement of charger to its final location is charger owner's responsibility.

 Caution
Only transport and store the charging station in its original packaging. No liability can be accepted for damage incurred when the product is transported in non-standard packaging. In its wooden packaging, the charger must be transported vertically! Damaged product: After any transportation, make a detailed visual inspection of the charger. Reject the product if there is any visible damage. Make all damage claims to the transport operator immediately and also immediately inform the sender regarding transport insurance. Failure to follow these instructions can result in death, serious injury or equipment damage.

Visual inspection

Check if:

- The exterior packaging has been damaged.
- The exterior panels of the charger are damaged (shock, scratch, ...).
- The tilt indicator turns red.

It is necessary to ensure vertical transportation. A tilt indicator is fixed on the wooden package. If the indicator turns red, it can be considered that during transportation severe impact and tilt occurs.

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Figure 15 Tilting detector on the package

3.2.1 Packed Product Handling with a Forklift

Take the mass and dimension of charger into account while choosing suitable forklift. C7 weighs around 800kg and requires a motorized forklift with a rated lifting weight of $\geq 2T$. After confirming the safety within the forklift operation radius, start the forklift operation. Insert the forklift from the bottom facing the HMI & Advertisement Display side and move the charger to the desired installation location. Please move the charger with the utmost caution!

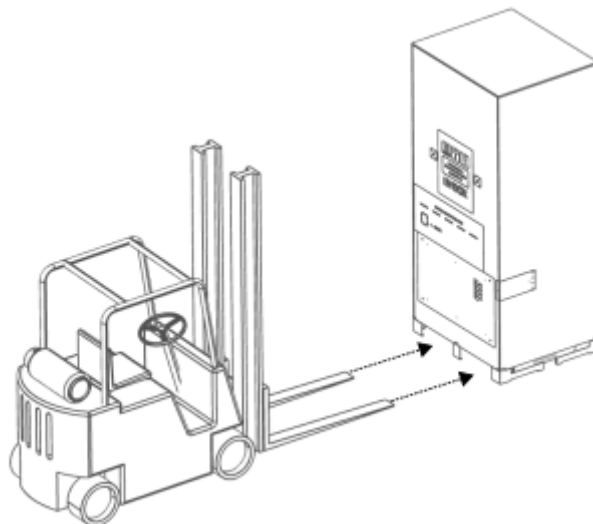


Figure 16 Forklift transportation



Caution

Risk of pinching or crushing, the charger is heavy!

Make sure that the forklift can lift the charger safely. Observe the safety instruction that apply to

XCHARGE

the forklift. Top heavy load may fall resulting in death, severe injury or damage the charger.

Do not drop the charger.

Do not tilt the charger more than allowed.

3.2.2 Hoist the Charger

To put the charger into designated installation site, the charger needs to be lifted by hoisting equipment. This can be achieved through four eyebolts included in delivery, which can be screwed into the tapped holes on the top. The center of gravity of the charger is high, take care when handling.

Then install the swivel eyebolts with lifting loops (A) and then connect the cables (B) of hoisting equipment to the eye bolts. Then move the charger to the correct location.

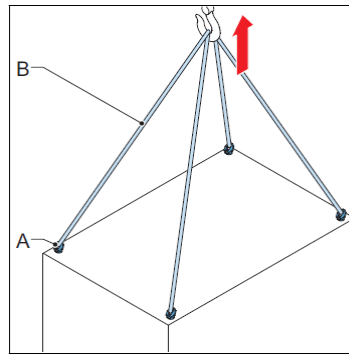


Figure 17 Lifting loops connection

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Caution

Risk of pinching or crushing, the charger is heavy!

Make sure that the hoisting equipment can lift the charger safely. Observe the safety instructions that apply to the hoisting equipment. Top heavy load may fall resulting in death, severe injury or damage the charger.

Do not drop the charger.

Do not tilt the charger more than allowed.

3.3 Storage

If the charger is arranged to be stored before installation, obey the ambient conditions for storage.

Caution

The product must be stored in its original packaging at a relative ambient humidity of 0-95% (no condensing). Condensation inside the cabinet damages the charger.

Store the charging station away from exposure to the sun and in the temperature range stated in the specifications (-35°C to +50°C).

Disconnect input power before removing the charging station for storage or relocation.

Failure to follow these instructions will result in waiver of warranty and product damage.

4. Installation

Before installation:

- Read all the instructions before using and installing this product
- The entire installation process requires a professional electrician to operate
- Please do not operate in rain or other possible conditions might cause leakage
- The DC charger must be grounded through the permanent wiring system or the ground wire of the equipment
- Please do not place the charger near flammable, explosive, rough, combustible, chemical and steamy materials
- If any defect is found, or there is cracking, wear, breakage or other damage, inoperable, any potential risk, immediately stop using the charger and contact after-sales
- Do not use this product if power cable or charging cable have any damage
- Do not use this product if the enclosure or charging connector are broken or open or if there is damage.
- Do not put any tool, material, finger or other body part into the charging connector or EV connector.

Caution

XCHARGE

The product should be installed only by a licensed contractor and/or licensed technician in accordance with all building codes, electrical codes and safety standards.

The product should be inspected by a qualified installer prior to initial use. Under no circumstances will compliance with the information in this manual relieve user of his /her responsibilities to comply with all applicable codes and safety standards.

DANGER

Danger to life due to improper installation!

Ensure no power is connected at all times when installing, servicing, or maintaining the charger.

Failure to observe the ambient conditions can lead to dangerous situations when dealing with electricity.

Do not install and use the charger near flammable, explosive, rough or combustible materials or chemicals or steam.

4.1 General Installation Procedure

Preliminary requirements

- All required permits to agree with the local rules, are granted.
- The AC input cable is available.
- There is no voltage on the AC input cable during the complete installation procedure.
- Required tools for installation:

Table 19 Required tools for installation

No.	Name	Pieces	Usage
1	Forklift trucks	1	≥2T, for product unloading and deployment
2	Cranes (optional)	1	≥2T, for unloading and deployment
3	Bolts	4	4pcs M12*80 for connection of base and charger
4	Electric screwdrivers	1	Fastening of base screws
5	Insulated torque spanners	1	Check and mark torque values
6	Herringbone ladders	1	Remove ropes for lifting
7	Insulated gloves	1	For safety during installation
8	Safety helmet	1	Protection against falling objects and other dangerous impacts
9	Leveling ruler	1	Check levelness

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Procedure:

1. Prepare the site.
2. Unpack the EVSE.
3. Move the cabinet above the correct location.
4. Do the mechanical installation.
5. Do the electrical installation.
6. Prepare for commissioning.

4.2 Site Preparation

4.2.1 Prepare the Site

- Make sure that the space and the airflow around the cabinet is sufficient. Foot print of C7 charger is 800x792mm. The space requirement of C7 is calculated at front at least 1.0m and side at least 0.8m to open the front/side door to allow technical operation.
- Design the site so that the charge cables can get to the inlet for the charge connectors on the EVs. For each, standard cable length of C7 is 5.5m (customized range of 3m to 10m).
- Prepare the cables:
 - i. AC input cables
 - ii. PE wire
 - iii. Ethernet cable, if no wireless 2G/3G/4G signal is available.
- Power supply requirements:

Table 20 Power supply requirements

Power	Nominal Voltage	Frequency	Nominal Current	Cable dimension	Diameter
400kW	480V P+N+PE	60Hz	570A	2x (3x120mm ² +2x70mm ²)	42-52mm

4.2.2 Prepare the Foundation

The C7 charger should be built on a concrete foundation. The flat surface of foundation should not be smaller than the dimension of 800 mm*792 mm. For the entrance of the cable, a hole should be provided in the foundation corresponding to the type of power cable, which was dimensioned in Figure below as an example. If you do not use a prefabricated foundation, please notice the hardening times of the applied concrete before installation.

The height of the foundation is determined by the terrain of the site. Depending on rainfall and drainage, a height below 30 cm above the ground is recommended by Xcharge. For frost-proof the foundation has to be about 80 cm deep under the ground.

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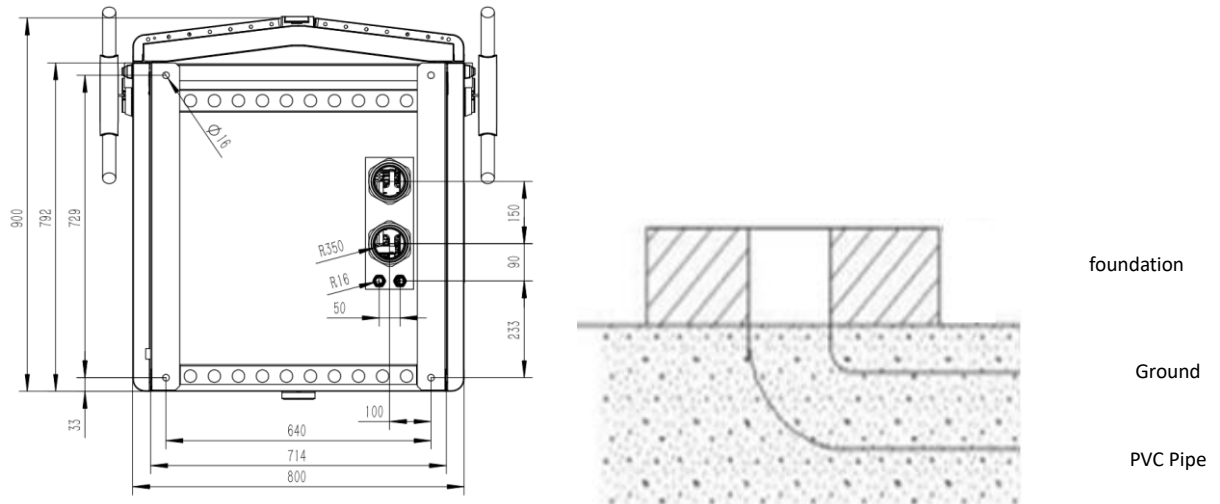


Figure 18 Concrete foundation

4.3 Unpacking

Caution

Check whether the outer package is complete, there is no breakage, crack, scratch, etc.

Do not push the outer package or equipment by external force to prevent the risk of tipping.



After moving the charger with a forklift close to the final installation site, the packaging can be removed.

Steps:

1. Remove the screws that hold the installation template and cable bracket on the packaging.
2. Remove the screws that hold the left and right sides, the front and back sides.
3. Remove the left and right, front and back covers
4. Remove the roof cover and edge protection
5. Remove the foam protection and inner shrink wrap
6. Use screwdriver to remove the bolts on the bottom pallet

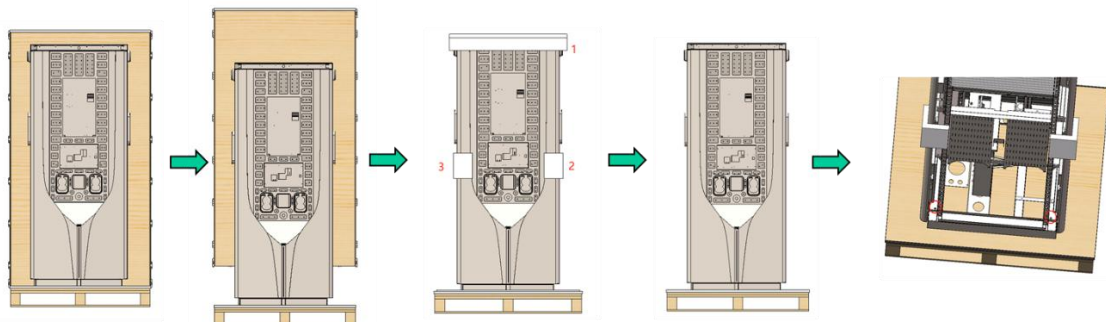


Figure 19 Unpack procedure

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WARNING

Risk of suffocation!

Children are not allowed to play with plastic wrap and shrink wrap.

The packaging includes the following components:

- Charger
- User manual
- Door key
- Power module maintenance cable
- 2x NFC cards (option)

4.4 Mechanical Installation

Procedure:

1. Open the cable inlet and remove the cable gland.
2. Guide the cables through the openings in the cable guide plate.
3. Install these parts:
 - i. Cabinet on the foundation
 - ii. Side panels

CAUTION

- Collisions and bumps can damage the charging station.
- Move the charging station with the utmost caution.
- Please use a soft pad to set down the charging station.
- Always transport the charger in an upright position.
- Do not manipulate the charger when it is connected to the power supply.

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- Do not place your hand underneath the charger or inside the feet through the side openings.
- The charger must be protected against overturning. This protection must be maintained until final mounting.

After unpack, the operator needs to choose a safe hoisting device to lift up the charger and deliver it to final installation position. Before lifting, the side panels and protective cover as below picture shown need to be disassembled.

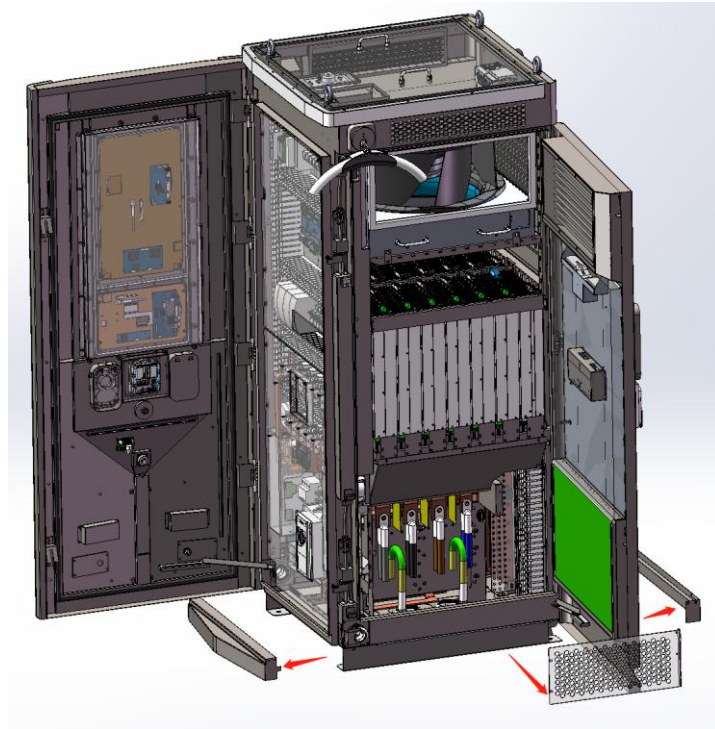


Figure 20 Disassemble side panel and protective cover

After threading all the cables through the inlets, the charger must be fixed to the concrete foundation. 4 fixing screws (M12 x 80 mm) and washers (M12 x 20mm) are used to mount the charger. The mains power-supply cables for connecting the charger to the grid are routed through the foundation and the cable entry plate. Thus, the base fixes the connection of the mains supply with the charger, using cable glands.

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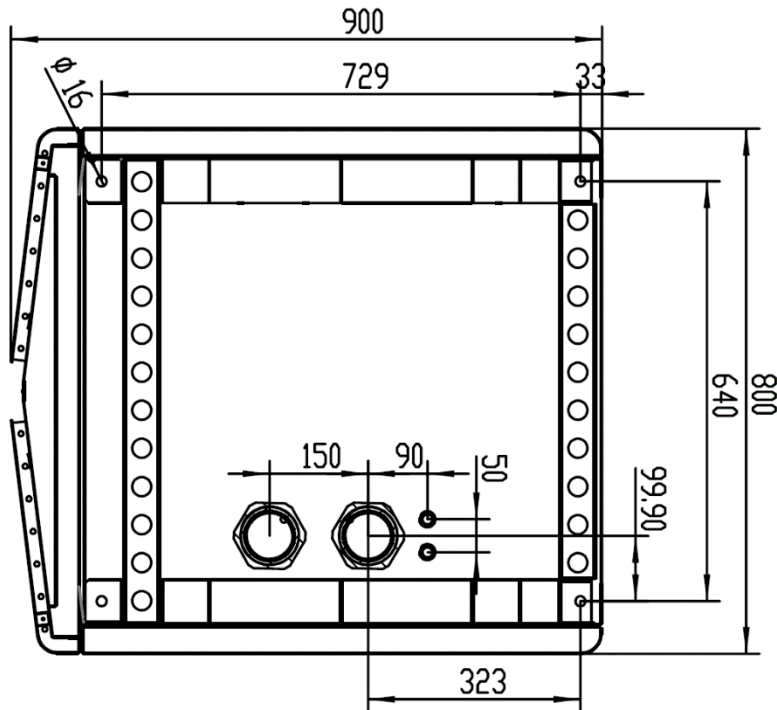


Figure 21 Concrete drawing



Caution

The screws must be tightened with a torque of 60Nm.

After fixing the charger on basement, the side panels which has been removed previously can now be assembled back on charger.

4.5 Cable Connection



WARNING

- All cable connection of this product requires a qualified electrician to complete. When connecting or installing the copper row, you must wear insulated gloves to prevent electric shock and confirm that the wiring harness is intact.
- The contact with high power parts can result in electric shock, burns or death. Before operating, please put on the required protection device such as protective clothing and gloves.
- Make sure that the power supply is disconnected while operating

The dimensioning of the cables and the protection devices outside the charger has to be prepared according to the local regulations and in order to respect the technical specification of the charger.

The cable entrance on the right bottom of charger is divided into four inlets, of which the bigger ones are for the power cable, the smaller inlets are for the LAN cable and signal cable. In order to prevent animals from entering the charging station to cause unnecessary damage, when the LAN/signal cable

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are not used, the cable gland should be closed and sealed.

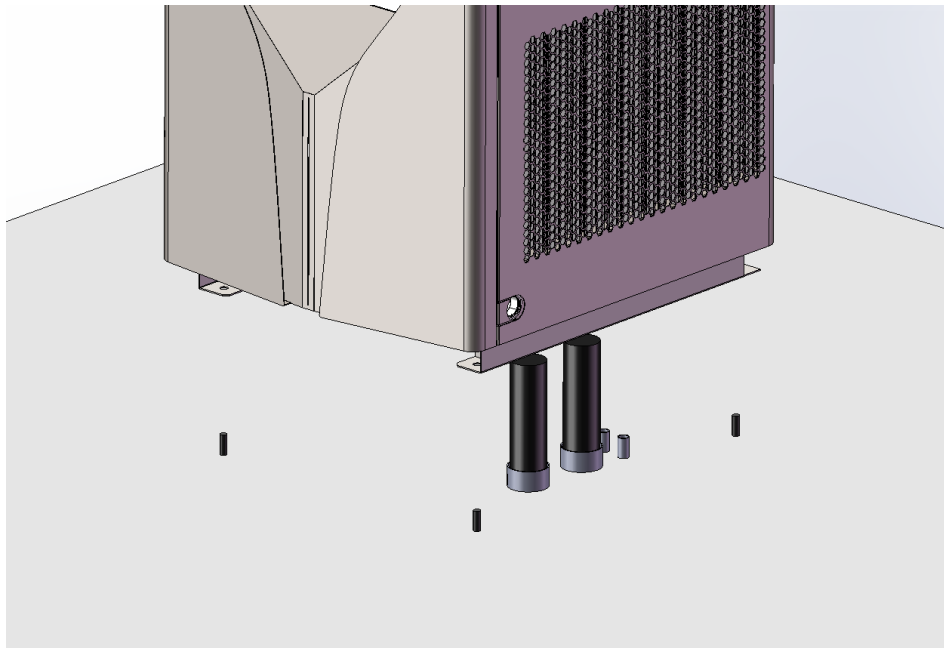


Figure 22 Input cable gland

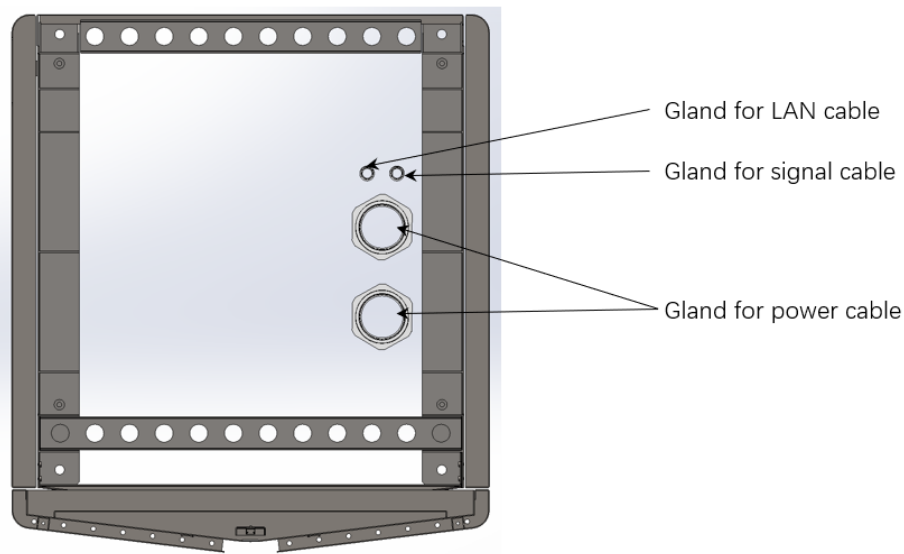


Figure 23 Gland description

Please connect the 3 phase cables L1, L2, L3 and conductor N as well as the PE protective conductor to the busbar as below pictures shown. Tighten all terminal screws to complete the installation of the power cables. The screw size and torque requirements are shown below.

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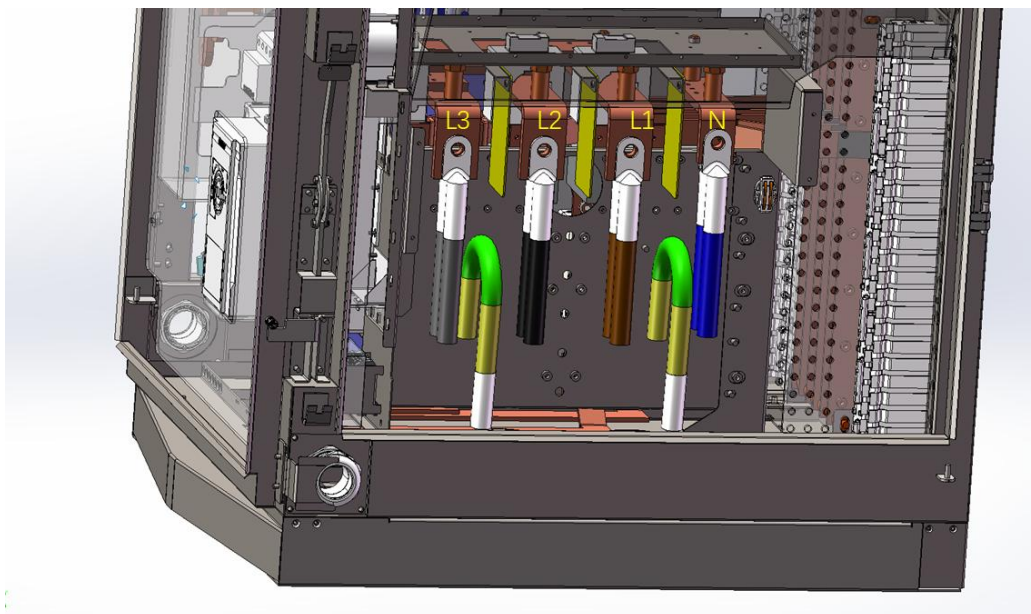


Figure 24 Phase of input cables

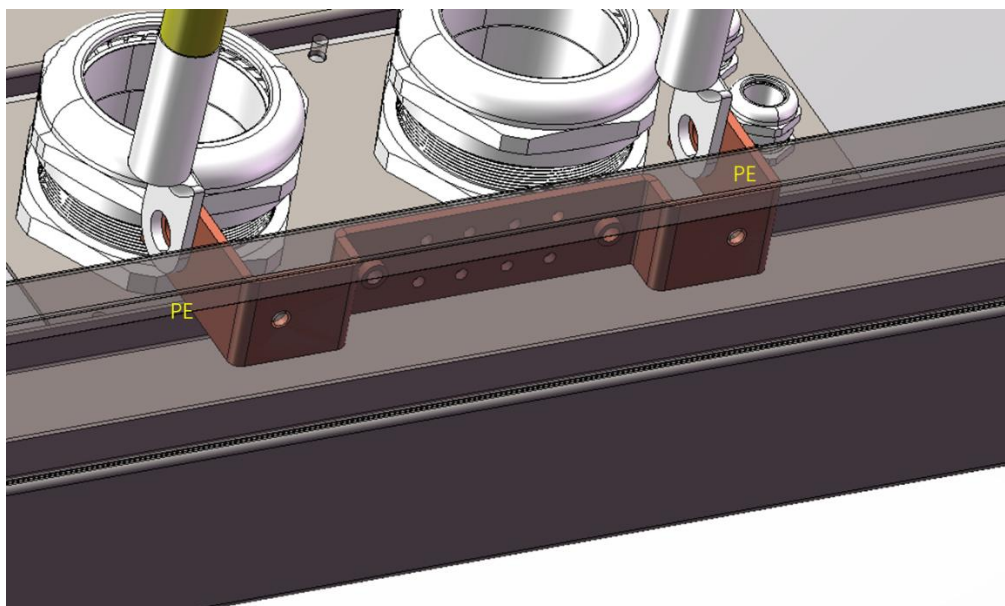


Figure 25 PE busbar

Table 21 Screws for fixation

Type	Size of screws	Torque	tools
C7-400kW	L1/L2/L3/N M10x20mm	M10: 25-30N.m	17mm socket for M10
	PE M8x16mm	M8: 15-20N.m	13mm socket for M8

WARNING

- Be aware of high voltage!
- Earth connection is essential!

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If you use an Ethernet cable for internet connection, make sure that the internet connection is available for an approved service engineer and the network operating center of the manufacturer. Connect the Ethernet cable to the Ethernet RJ45 socket fixed on the left side of AC cables. If wireless connection is planned, please insert SIM card on the router.

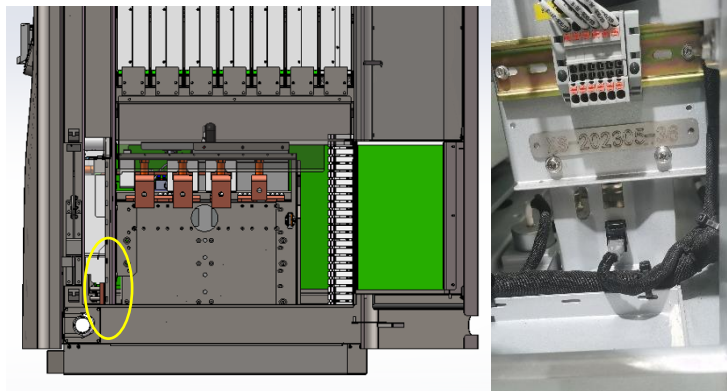


Figure 26 Ethernet cable



WARNING

Danger of life through wrong installation!

Extension cables are not permitted according to IEC 61851-1. If an extension cable or a second cable set is used, there is a risk of electric shock or cable fire

5. Commissioning

5.1 Checklist Before Commissioning:

1. Tell the owner that the charger is ready for commissioning.
2. Make sure that the site agrees with these requirements:
 - a) The charger is installed.
 - b) AC input power is available from the grid provider.
 - c) Internet access is available, through 2G/3G/4G or through a wired Ethernet connection.
 - d) An EV must be available with a compatible connection. If the EVSE has more than one connection type, an EV of each type must be available.
 - e) The site operator or owner is available to receive instructions from the service engineer of the manufacturer.
3. Make sure that these data are available:
 - i. Contact data of the contact person on site
 - ii. Address of the charger
 - iii. Site name
 - iv. Exact location of the charger: longitude and latitude. If there are more chargers on one location, make sure that the coordinates are slightly different (at least 0.0001 degree) so that the chargers are not at the same location on the map.
 - v. Specification of the external fuse at the power distribution board
 - vi. Date that the installation is done

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- vii. Special remarks, for example to decline the authorization for the service engineer of the manufacturer to take photos
- viii. Photo of the surroundings of the charger

Then check the connection carefully.

Final check: Please ensure all measured values are within specified range before proceeding to commissioning and operation. Ensure values measured are written down on the installation acceptance document.

Table 22 Measurement points before commissioning

Measurement points on hot/live side	Unit	Nominal value	Specified range
L1 to N	Voltage	277 V	± 10%
L2 to N	Voltage	277 V	± 10%
L3 to N	Voltage	277 V	± 10%
L1 to L2	Voltage	480 V	± 10%
L1 to L3	Voltage	480 V	± 10%
L2 to L3	Voltage	480 V	± 10%
N to PE (on connection terminal)	Voltage	0 V	
PE to N (on connection terminal)	Resistance	<1000mΩ in TN-S system	variable according local law/standards and different earthing system



DANGER

Mortal danger due to electrocution!

The contact with high power parts can result in electric shock, burns or death.

After confirmation, charging station is able to be powered up by turning on the main switch, please follow the procedure below to complete the commissioning.

The main switch locates on the bottom area behind the display door.

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Figure 27 Main switch location

- "Turn on the main switch. The C7 charger then powers up automatically, loads the operating system, and runs within 1 minutes."
- Check that the start page is displayed.
- Make sure the 3G / 4G / LAN icon appears on the home screen.
- Backend connection icon is shown stable (if configured).

5.2 Configure the C7 Into Service

After system powering on, please check the HMI display to confirm no any warning/Fault messages and ready to serve.

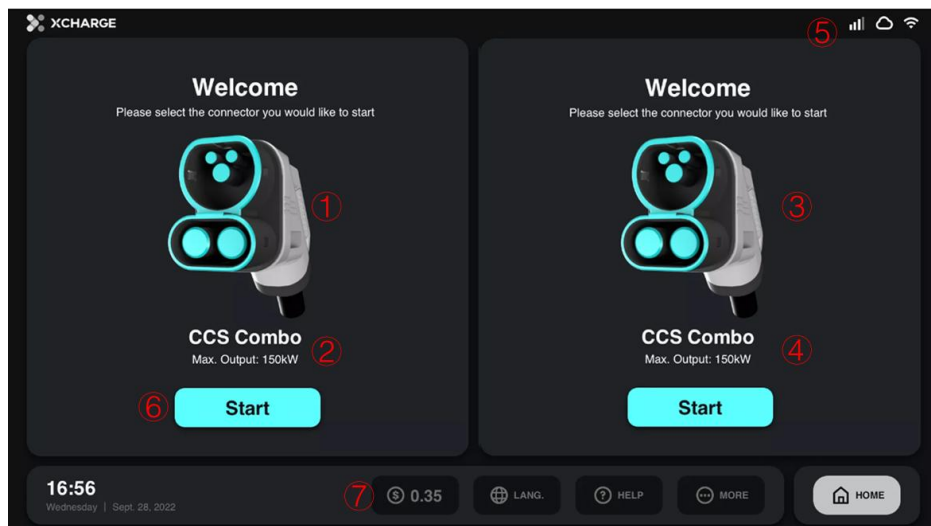


Figure 28 Start page (for reference only)

Table 23 Icon's description

NO.	Item	NO.	Item
-----	------	-----	------

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①	Icon of connector 1(left)	⑤	Status bar (internet/backend connection)
②	Available output power	⑥	Start charging button
③	Icon of connector 2(right)	⑦	Charging service rate Configuration menu
④	Available output power		

Please follow the procedure below to configure C7 before coming into service.

1. Set language from icon on the right bottom side of Charger display.
2. Check charger status from system info (CONFIG) tag.
3. Check the pricing policy of charging service.
4. Check the advertisement Display setting (content, auto-update, etc.)
5. Functional check with an EV.

5.3 Operation

5.3.1 Start Charging Session

- Press “Start” to start charging session

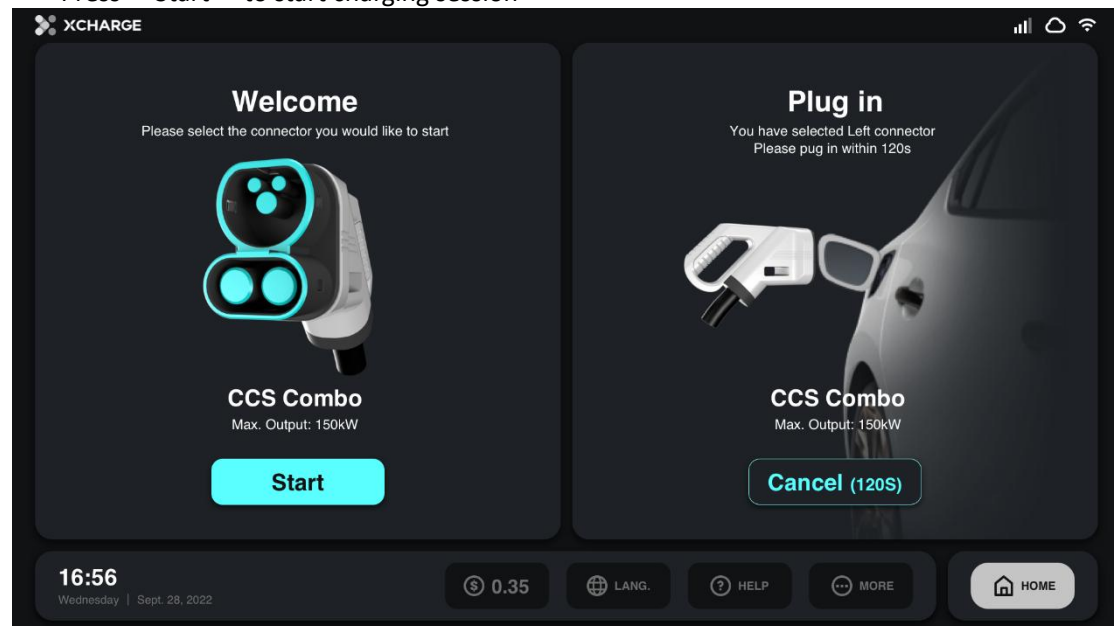


Figure 29 Start charging session

- Authentication

Please select authorization method: credit card or RFID.

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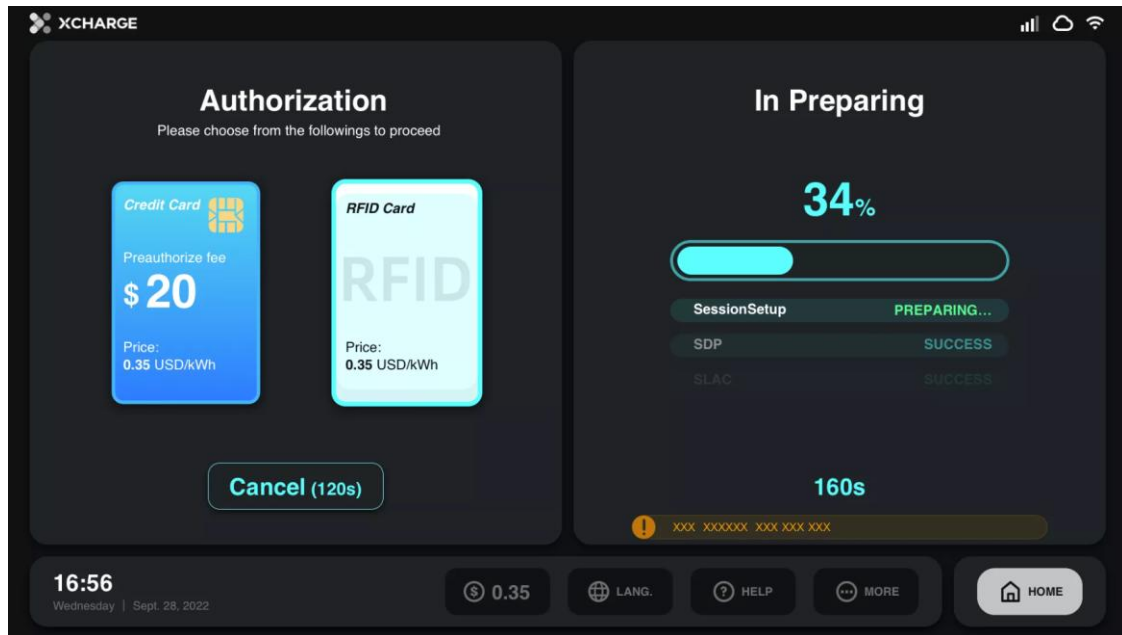


Figure 30 Choose authorization method

Authorize yourself with your credit card

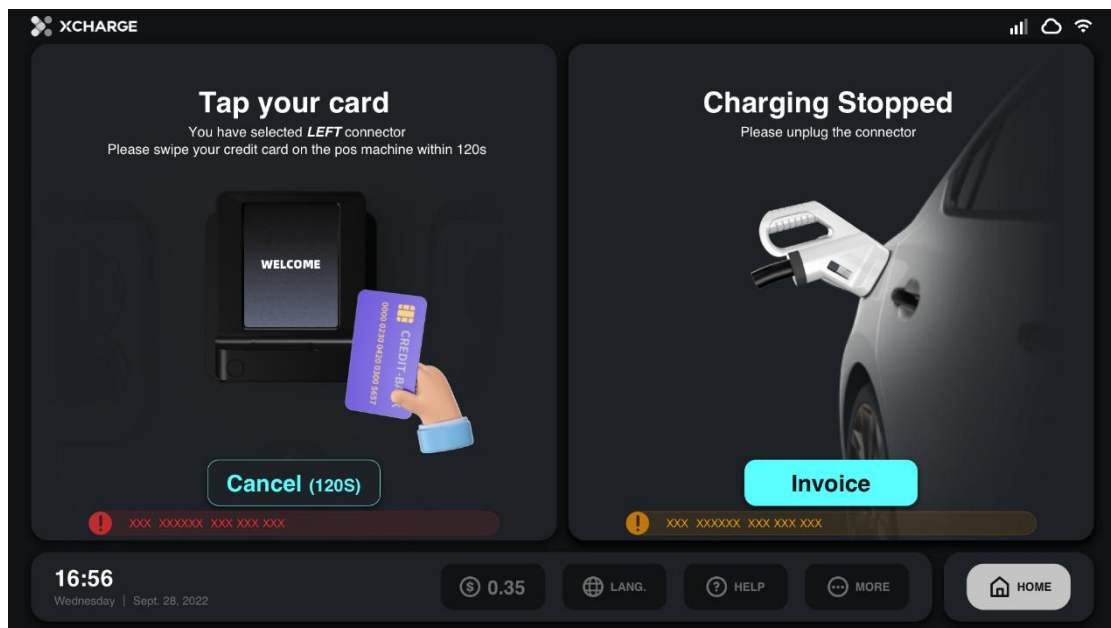


Figure 31 Tap card to authorize

Authorization

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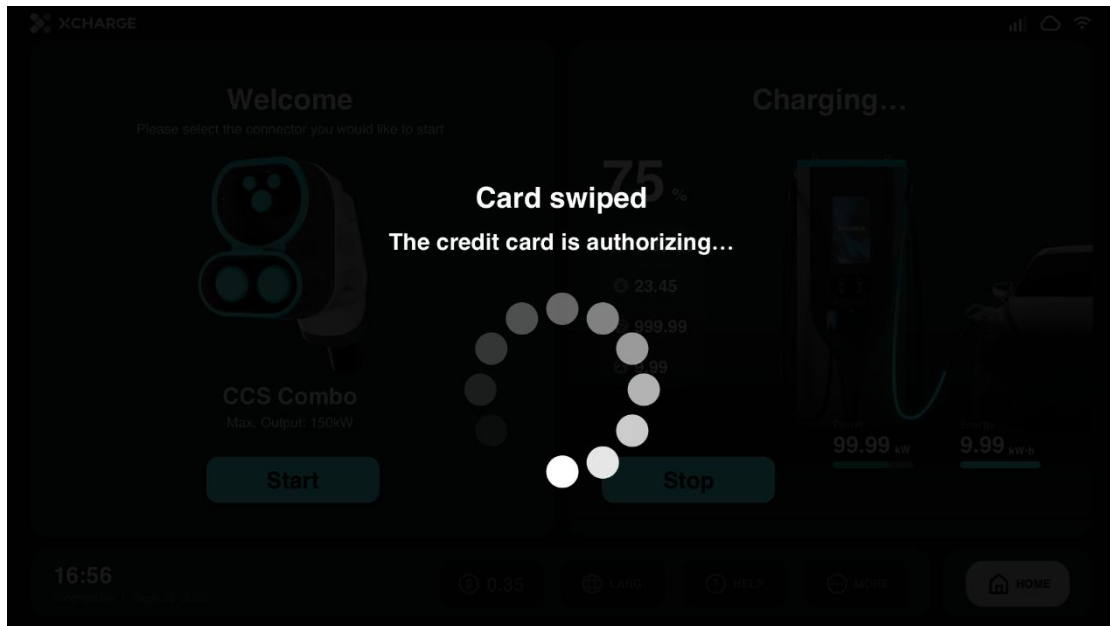


Figure 32 Card checking

Authorization succeeds

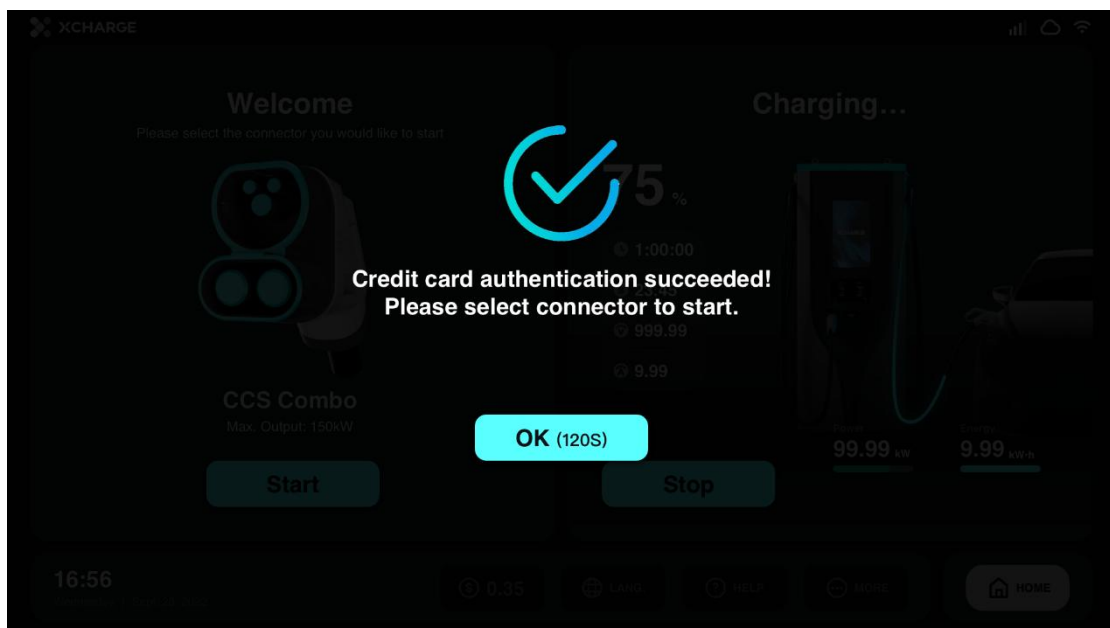


Figure 33 Authorization succeeds

5.3.2 During the Charging Process

- After plugged in connector, the charging session starts

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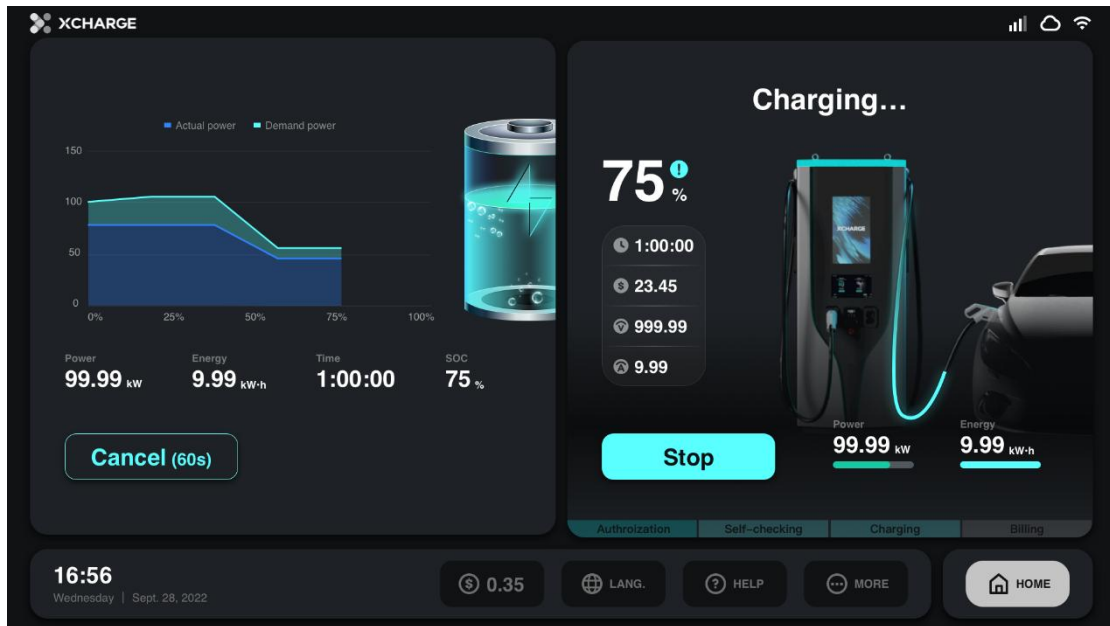


Figure 34 Charging overview

5.3.3 Terminate Charging Session

- Charging stop

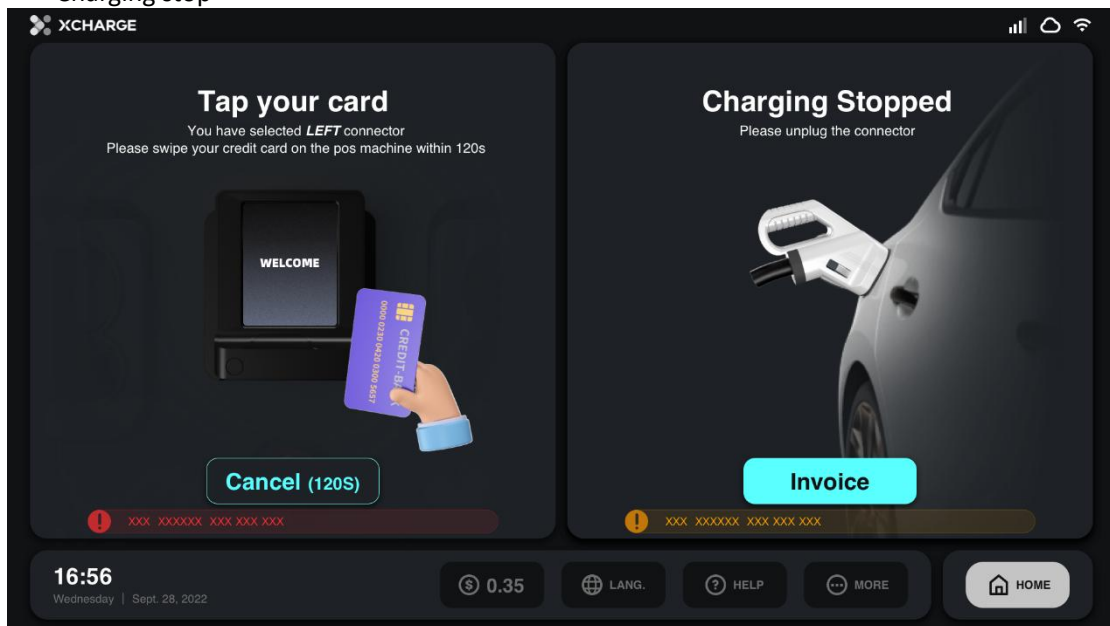


Figure 35 Charging stop

Once you have pressed the button, you need to unplug the charging cable from your car. Please reconnect it properly to the cable plug holder of the charging station.

- Billing details

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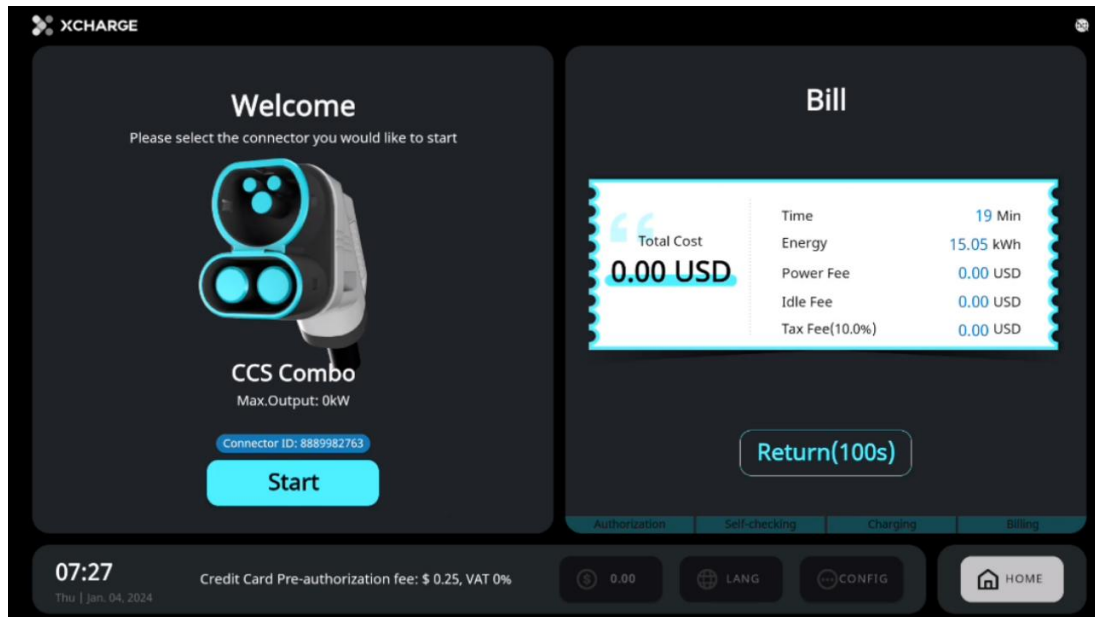


Figure 36 Billing information (for reference only)

5.3.4 Error Messages

Error messages will be displayed on the screen in the event of any abnormalities. For warnings (indicated in yellow), charging sessions can still proceed. In the case where one connector is reported as defective, the other charging connector will remain functional. Only when the entire charger is marked as abnormal (red warning), both connectors will be disabled. Here are some examples of typical error messages:

- Self-check failed

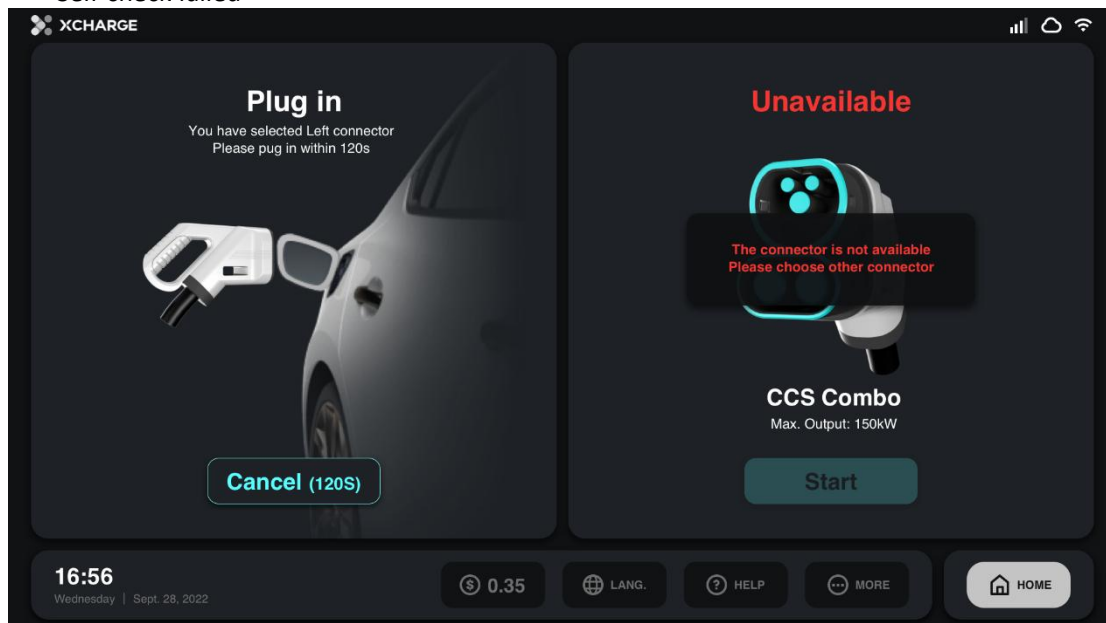


Figure 37 Self-check failed

If this error message appears, please change another connector.

- charger not available

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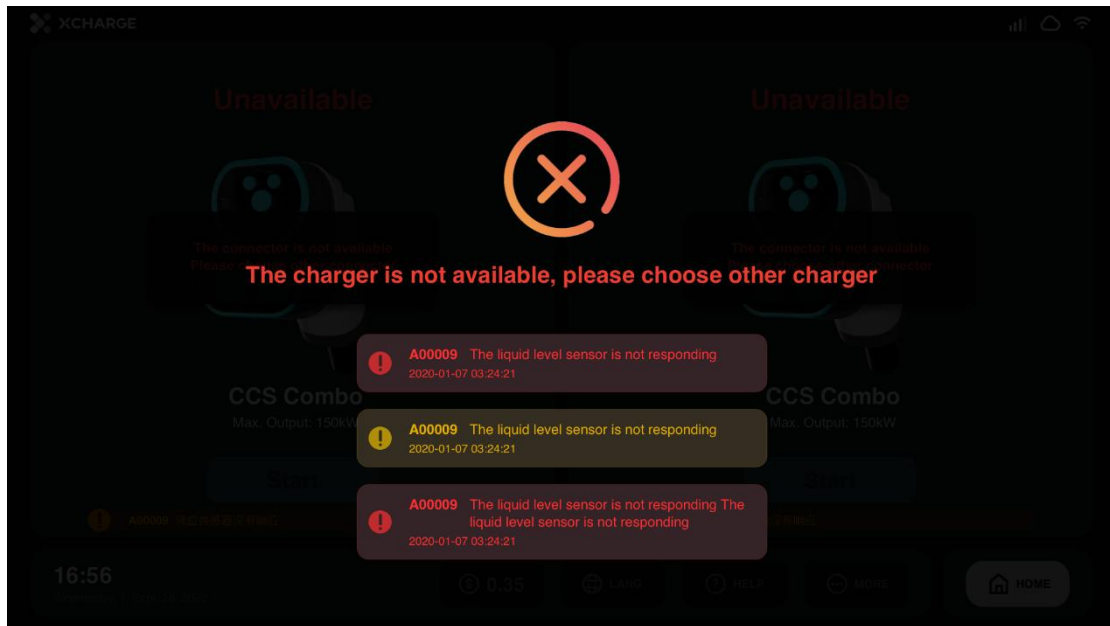


Figure 38 charger not available

If this error message appears, please try again or change the card or charger.

- credit card authentication failed

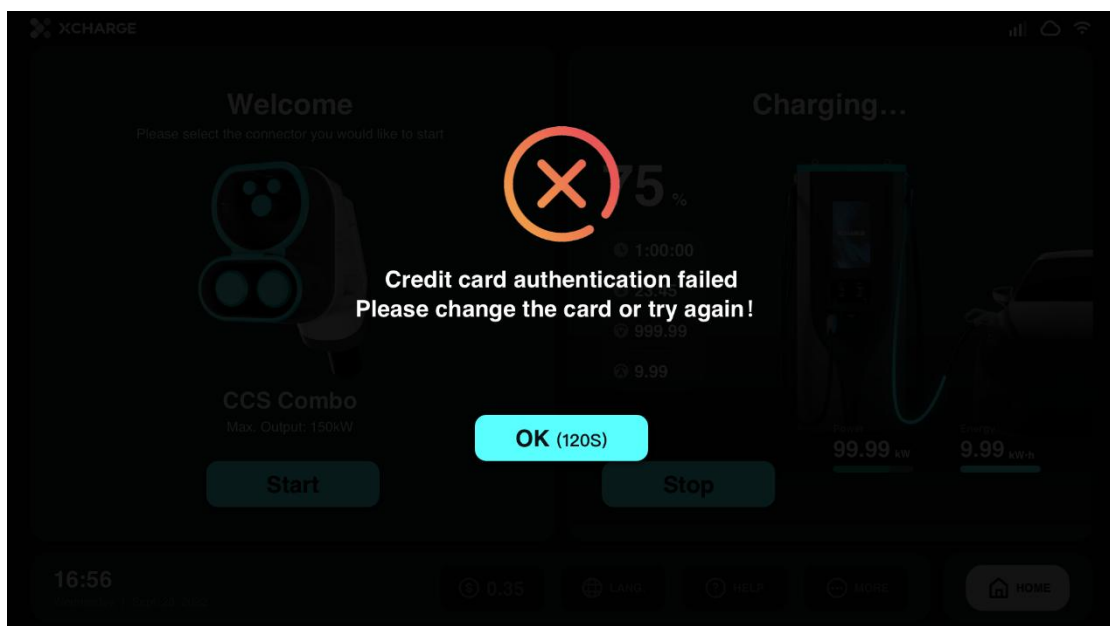


Figure 39 Authentication failed

6. Maintenance

6.1 Responsibility for Maintenance

The Xcharge charging system needs preventive maintenance over its lifetime.

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Xcharge's network connection monitors system health and alerts you when corrective maintenance might be required.

6.1.1 Site Manager's Responsibilities

The site or facility manager where the Xcharge charging station is installed has a few minimal duties for general site maintenance:

Table 24 Facility manager's duty list

☐	Ensure the station is free of debris and nothing is blocking the front and rear vents.
☐	Clear away snow and other substances to maintain the clearances specified in the <i>Site Design Guide</i> .
☐	Check each station monthly for vandalism or damage. If the station is marked, contact Xcharge for replacement signs. If the station appears damaged, contact Xcharge for a service visit.
☐	Check each charging cable monthly for any signs of wear or damage. If a cable appears damaged, contact Xcharge for a service visit.

CAUTION: Do not pressure wash the charging station. Pressurized water can damage the system. To clean the charging station, use a damp cloth.

6.1.2 General Maintenance

- The DC Fast Charger is cooled by forced air. Please keep charger in a ventilated location and do not block the air vents of the DC Fast Charger.
- Please clean or replace the air filters regularly to ensure the DC Fast Charger works properly.
- Please keep the exterior of DC Fast Charger clean at all times and do not spray water directly at the DC Fast Charger.
- If there is water intruding into the DC Fast Charger then please cut off the power source immediately and contact the DC Fast Charger provider for repair.
- Please make sure the charging connector is returned to the holder of the charging connector after charging to prevent damage.
- If there is damage to the charging connector, charging cable or holder of the charging connector then please contact the DC Fast Charger provider.
- When using the DC Fast Charger please handle properly. Do not strike or scrape the cabinet or touch screen.
- If the enclosure or touch screen is broken, cracked, open or shows any other information.
- cation of damage then please contact the DC Fast Charger provider.

6.1.3 Preventative Maintenance

DANGER: RISK OF SHOCK

- Before any procedure, the technician must disconnect the power.
- Follow local code to de-energize the applicable circuit and lock out/tag out the disconnect before proceeding. Use a multimeter to test that power is off.
- Then wait the required time for energy to dissipate (see label on unit) before service. Do not remove signs or panels yet.
- Keep power off until all cover panels are correctly reinstalled and the work is complete.

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY, LOSS OF LIFE, OR PROPERTY DAMAGE.

6.2 Safety Notes

Please always wear appropriate personal protective equipment when performing any operations,

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repairs, maintenance and other activities to C7 charger. The following personal protective equipment is considered a minimum requirement.

- Safety boots with non-perforated soles and steel toes
- Tight fitting flame-retardant coveralls
- Appropriate flame-retardant work pants
- Individually fitted hearing protection
- Safety gloves
- Any other prescribed protective equipment must also be used.

The operator must be a qualified electrician and competent to work on the system. The capability must be evaluated and approved by XCHARGE.

- Operators must be authorized and trained in electrical operating skills. Otherwise, the operator must not operate the system to avoid improper operation of the equipment and cause serious injury.
- The operator should be fully familiar with the structure and operating principles of the entire storage system.
- The operator should be fully familiar with this manual.
- The operator should be fully familiar with the relevant standards of the country where the project is located.
- Personnel entrusted to perform the work are able to assess their assigned tasks and identify possible risks.
- Only authorized and trained electricians should perform maintenance work and change the settings and connections of the equipment



Mortal danger due to electrocution!

The contact with high power parts can result in electric shock, burns or death. Before working, please put on the required protection device such as protective clothing and gloves:

Danger of electrical shock or injury. Turn OFF power at the panel board or load centre before working on the equipment or removing any component. Do not remove circuit protective devices or another component until the power is turned OFF.

Disconnect electrical power to the DC Fast Charger before any maintenance work to ensure it is separated from the supply of AC mains. Failure to do so may cause physical injury or damage to the electrical system and charging unit.

Before opening cabinet door, make sure at least 3 minutes after power supply cutting off to prevent possible injury from ventilation fan.

6.3 General Requirements

6.3.1 Cleaning Notice

We suggest that C7 needs to be cleaned **four times every year** (adjusted according to the actual situation) and function test to check the coolant and other consumable part every year.

- Remove rough dirt by spraying with low-pressure tap water instead of high-pressure jet;
- Apply a nAMtral or weak alkaline cleaning solution and let it soak;
- Only use cleaning agents with a PH value between 6 and 8;
- Do not use cleaning agents with abrasive components;
- Do not use abrasive tools;
- Remove dirt by hand with a non-woven nylon hand pad;
- Do a regular check on the coating for damage;
- Call the customer service if any damage on coating occurs.
- Yearly replacement of coolant is recommended.



WARNING

Please shut down the input power before cleaning the charging station.

When opening the front and rear doors, please pay attention to prevent dust from entering the cabinet and clean if necessary.

6.3.2 Other Notes

- Make sure to plug the charging connector back into the right plug holder after charging. Please contact XCHARGE product service for replacement or maintenance if there is any damage being reported.
- After completing the maintenance work, make sure to close all doors properly again.
- After switching off the key switch the circuit before the main terminal is still hazardous. Only visual inspection can be operated.
- Maintenance of the DC Fast Charger shall be conducted only by a qualified technician.
- After opening the front door of the DC Fast Charger, turn off the main breaker and auxiliary breaker before any maintenance work.
- Replace the ventilation filter every six to twelve months.
- Please confirm the main power junctions are tightened every month, and rotate cables testing when the power off. if any main power screw is loose will be resulted in damage on charger or smoke on the connections. Please confirm screw torque

6.4 Maintenance Schedule

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Table 25 Maintenance schedule

Task	Frequency	Procedure
C7 cleaning	3 months	Refer to section 6.3.1
Charge coating Check	3 months	Refer to section 6.5.1
Cabinet Inspection	6 months	Refer to section 6.5.2
Connection Inspection	3 months	Refer to section 6.5.3
Power Module Maintenance	6 months	Refer to section 6.5.4
Cooling system Maintenance	1 year	Refer to section 6.5.5
Anti-dust net replacement	3 months	Refer to section 6.5.6

6.5 Maintenance Procedure

6.5.1 Charger Coating Check

The C7 Charger is powder coated. This coating must be kept in good condition; Do a regular check on the coating for damage. Call the customer service if any damage on coating occurs.

6.5.2 Cabinet Inspection

Check the cabinet door lock

Table 26 Cabinet door lock check

☐	Switch off the power supply and make sure it is operated under power-off conditions.
☐	Check whether the door lock of charger can be opened and closed smoothly (check both sides)
☐	Check whether the cabinet door opens and closes smoothly (check both sides).
☐	Check whether the cabinet door is deformed.

Cabinet check

Table 27 Cabinet check

☐	Switch off the power supply and make sure it is operated under power-off conditions.
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☐	Check whether the cabinet appearance is damaged.
☐	Check whether the cabinet is rusted.
☐	Open the cabinet door and check whether the cabinet is damaged inside.
☐	Open the cabinet door and check whether there is water, dust and debris in the bottom of the cabinet.
☐	Check whether there are foreign objects in metal base.
☐	Checking that the enclosure door seals are not peeling or deteriorating.

6.5.3 Connection Inspection

Input/Output Cable Connection

Table 28 Cable connection check

☐	Switch off the power supply and make sure it is operated under power-off conditions.
☐	Check whether the grounding cables are loose or damaged
☐	Check whether the input/output copper busbar is rusted or oxidized.
☐	Check whether the input cables are damaged.
☐	Checking whether the communication wiring (RJ-45) is firmly connected.

6.5.4 Power Module Maintenance

Table 29 Power module check

☐	Switch off the power supply and make sure it is operated under power-off conditions.
☐	Check the power module for obvious leakage and judge by the smell. (Strong chemical odor)

6.5.5 Cooling System Maintenance

Table 30 Cooling system check

☐	Switch off the power supply and make sure it is operated under power-off conditions.
☐	Checking whether the cooling unit and cooling pipes are connected tightly, whether there is any coolant leakage or seepage.
☐	Checking whether the coolant level is still higher than warning level.

6.5.6 Anti-dust Net Replacement

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- In order to change the anti-dust net in 10min, quick change method is applied. After opening the front door and lifting the lock bar, the cover will open, then wash, air-dry the net, install the anti-dust net and locks back.



Caution!

Anti-dust net is located at charging station air-inlet part, and please check the net every 3 months and conduct scheduled cleaning. If not, dust blockage may happen, causing internal components overheated

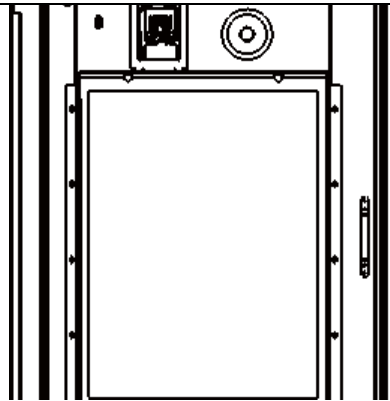


Figure 40 Lock bar of the anti-dust net

7. Fault Diagnosis

C7 is equipped with an automatic diagnosis function, and errors will be directly displayed on the screen and reported to the backend. When the charger is online, users should contact customer service first, and the call center will arrange for an online technician to perform remote self-checks. If the charger does not have internet access, please contact customer service, and on-site repair and maintenance services will be promptly assigned.

The errors are classified into three clusters: A, B and C. In the case of A cluster errors, the charger or connector will be deactivated. For B cluster errors, ongoing charging sessions will be halted temporarily, and a restart will restore functionality. Status report errors will only be logged, without affecting the current charging session or any other operations.

Table 31 Error cluster

Error cluster	Category	Error level	Severity	Remark
A****	EVSE error	E1	Charger error	Charger unfunctional
B****	EV error	E2	Charging service abnormal	Charging terminated, charger is able to work
C****	Others	E3	Status report	Record only, no impact to operation

Here is the part of the error list. For each of these issues, there is an additional trouble-shooting manual available for reference.

Table 32 Error code list

Error code	Description	Level	Responsibility
A0101	Communication failure between host A55 and DCB.	E1	EVSE
A0103	DC meter 485 detection failure.	E1	EVSE
A0104	Power module communication failure	E2	EVSE
A0105	Insulation communication module alarm	E2	EVSE
A0106	Timeout for DCB message report	E2	EVSE
A0107	AC meter communication failure	E3	EVSE
A0108	Communication failure with NFC.	E3	EVSE
A0109	Communication failure with LED board.	E3	EVSE

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A010A	Bluetooth board communication failure.	E3	EVSE
A010B	Fan failure	E3	EVSE
A010C	DCB receives TCU abnormality	E2	EVSE
A010D	Other faults (try not to use)	E2	EVSE
A010E	Timeout waiting for TCU VIN verification result	E2	EVSE
A010F	Vehicle authentication not pass (VIN verification)	E2	EVSE
A010G	Fan speed control board communication failure	E3	EVSE
A0201	Insulation Warning	E3	EVSE
A0202	Insulation Fault	E2	EVSE
A0301	Power module alarm.	E2	EVSE
A0302	Power module address conflict	E2	EVSE
A0303	Power module failure M	E3	EVSE
A0304	Power module status change (x available)	E3	EVSE
A0305	Power module input out of phase	E3	EVSE
A0306	Power module fan fault.	E3	EVSE
A0307	Power module overtemperature fault.	E3	EVSE
A0308	Power module AC input fault.	E3	EVSE
A0309	Power module output short-circuit fault.	E3	EVSE
A030A	Power module output overcurrent fault.	E3	EVSE
A030B	Power module output overvoltage fault.	E3	EVSE
A030C	Power module output undervoltage fault.	E3	EVSE
A030D	Power module input overvoltage fault.	E3	EVSE
A030E	Power module input undervoltage fault.	E3	EVSE
A030F	Power module drain fault.	E3	EVSE
A0310	Power module current limit.	E3	EVSE
A0311	Power module shutdown.	E3	EVSE
A0312	No power module available.	E3	EVSE
A0401	Door Alarm Failure	E1	EVSE
A0403	Emergency stop button is pressed.	E1	EVSE

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A0404	SPD alarm	E1	EVSE
A0405	DC lightning alarm	E1	EVSE
A0406	Connector Contactor fault	E2	EVSE
A0407	Smoke sensor failure.	E1	EVSE
A0408	Inside temperature alarm	E1	EVSE
A0409	Inside humidity alarm.	E1	EVSE
A040A	Tilt angle alarm	E1	EVSE
A0418	Powerbox Fault	E2	EVSE
A0419	Tilt Sensor fault	E1	EVSE
A0501	Connector Temperature alarm	E2	EVSE
A0504	Connector is abnormal (CC abnormal)	E2	EVSE
A0601	BMS demand voltage is too low or too high	E2	EV
A0602	BMS demand voltage is too high.	E2	EV
A0603	BMS demand voltage is too low.	E2	EV
A0701	A-phase voltage is too high.	E1	EVSE
A0702	A-phase voltage is too low.	E1	EVSE
A0703	B-phase voltage is too high.	E1	EVSE
A0704	B-phase voltage is too low.	E1	EVSE
A0705	C-phase voltage is too high.	E1	EVSE
A0706	C-phase voltage is too low.	E1	EVSE
A0707	Ground cable alarm.	E1	EVSE
A0708	N cable not connected.	E1	EVSE
A0709	AC input circuit breaker fault.	E1	EVSE
A070A	AC input contactor rejection fault.	E1	EVSE
A070B	AC input contactor sticking fault.	E1	EVSE
A070C	System power down fault. 220V no input.	E1	EVSE
A070D	AC meter reading abnormal.	E3	EVSE
A070E	AC input out of phase.	E1	EVSE
A0801	overvoltage.	E2	EVSE

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A0802	undervoltage.	E2	EVSE
A0803	short circuit.	E2	EVSE
A0804	overload.	E2	EVSE
A0805	Battery reverse connection.	E2	EV
A0806	DC detection failure.	E2	EVSE
A0807	Drain detection failure.	E2	EVSE
A0808	Parallel contactor miss failure.	E2	EVSE
A0809	Parallel contactor sticking fault.	E2	EVSE
A080A	DC bus output fuse failure.	E1	EVSE
A080B	Powerbox pre-charge failure fault	E2	EVSE
A080C	Powerbox response failure.	E2	EVSE
A080D	Battery undervoltage	E3	EV
A080E	Battery over-voltage	E3	EV
A080F	DC meter reading is abnormal.	E2	EVSE
A0810	Connector contactor miss failure.	E2	EVSE
A0811	Connector contactor sticking failure.	E2	EVSE
A0812	Pre-charge timeout.	E2	EVSE
A0901	Auxiliary power supply is not powered on.	E2	EVSE
A0A01	CRM timeout.	E2	EVSE
A0A02	CRM00 timeout.	E2	EVSE
A0A03	CRMaa timeout.	E2	EVSE
A0A04	CRO timeout.	E2	EVSE
A0A05	CTS timeout.	E2	EVSE
A0A06	CML timeout.	E2	EVSE
A0A07	CCS timeout.	E2	EVSE
A0A08	CST timeout.	E2	EVSE
A0A09	CSD timeout.	E2	EVSE
A0A0A	Other timeout faults	E2	EVSE
B0501	Connector being pulled out during charging	E2	EV

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B0502	Waiting for charging timeout	E2	EV
B0503	SessionStop from Car	E2	EV
B0504	Insulation failure Stop	E2	EV
B0505	Demand over Max. allowable voltage of car	E2	EV
B0506	Demand over Max. allowable Current of car	E2	EV
B0507	DC output overvoltage	E2	EV
B0508	DC output overcurrent	E2	EV
B0509	CP voltage abnormal	E2	EV
B050A	Battery reverse connection	E2	EV
B050B	Output overvoltage before charging	E2	EV
B050C	Output overvoltage after insulation detection	E2	EV
B050D	Output undervoltage	E2	EV
B050E	Waiting to allow charging timeout	E2	EV
B050F	CCS1 Connector	E2	EV
B0510	Doesn't match	E2	EV

8. Warranty

The warranty period of this charger is according to purchasing contract, two years typically.

Replacement and repair parts manufactured by alternative manufacturers to those on the maintenance parts are only allowed if authorized by Xcharge.

Warranty Exclusions:

- Damage or rendered non-functional as a result of power surges, lighting, earthquake, fire, flood, pest damage, abuse, accident, misuse, negligence or failure to maintain the product or other event beyond Xcharge's reasonable control or not arising from normal operating condition.
- Cosmetic or superficial defect, dents, marks or scratches after use.
- Components which are separate from the product, ancillary equipment and consumables, such as door key, RFID card, air filter, fuse, cable, wires and connectors.
- Damage as a result of modifications, alterations or disassembling which were not preauthorized in writing by Xcharge.
- Damage due to the failure to observe the applicable safety regulations governing the proper use of the product.
- Installed or operated not in strict conformance with the documentation, including without limitation, not ensuring sufficient ventilation for the product as described in Xcharge installation instruction.

If a defect in the product arises and valid claim is received within the warranty period, your sole and exclusive remedy will be for Xcharge, at its sole discretion and to extent permitted by law, to

1. Repair the defect in the product at no charge, using new or refurbished parts.
2. Exchange the product with new or refurbished product that is functionally equivalent to the original product.

Any remedy hardware product will be warranted for the remainder of the original warranty period or 90 days from delivery to the customer, whichever is longer.

In order to receive the remedy set for above, you must contact Xcharge during the warranty period and provide the model number, series number, proof of purchase, and date of purchase.



9. Contact Information

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