

Apex SXE DCFC / 240kW

User Manual



Important Safety Instructions

SAVE THESE INSTRUCTIONS

**WARNING:**

This manual contains important instructions for installation and use.

When install and use, always follow basic precautions, including the following.

Safety instructions for operation

- Before using for the first time you must read this document carefully, make sure that the equipment is installed and commissioned according to the instructions in the installation manual.
- For the safety of personnel, the tips, safety, and warning instructions contained in this manual must be strictly followed.
- The Apex SXE is a high power and high voltage electric equipment. Only qualified professionals are allowed to install and maintenance it.
- Do not perform maintenance operations when the device is not powered off. When repairing the device, turn off the upper switch of the charger, hang the maintenance sign, and check for dangerous voltage to ensure that the charger is completely powered off. Test before touching.
- Even if all switches in the charger are disconnected, there is still a dangerous voltage in the copper bar of the device. Capacitor stores hazardous energy. Do not remove cover until 1 minutes after. Please pay attention to safety.
- The device must always be properly grounded. Inadequate or improper grounding can result in electric shock or fire hazards. To minimize the risk of electric shock and fire, do not connect the device to a circuit with more than 150 volts to ground.
- After installation or maintenance, make sure the door is securely locked to prevent rainwater from entering the device.
- Installation conditions should be far away from fire hazards or other dangerous environments.

Consignes de sécurité importantes

SAVE THESE INSTRUCTIONS

**WARNING:**

This manual contains important instructions for installation and use.

When install and use, always follow basic precautions, including the following.

Consignes de sécurité pour le fonctionnement

- Avant la première utilisation, lisez attentivement ce document et assurez-vous que l'équipement est installé et mis en service conformément aux instructions du manuel d'installation.
- Pour garantir la sécurité du personnel, suivez strictement les conseils, consignes de sécurité et avertissements décrits dans ce manuel.
- Le SEC est un équipement électrique à haute puissance et haute tension. Seuls des professionnels qualifiés sont autorisés à procéder à son installation et à son entretien.
- N'effectuez aucune opération de maintenance tant que l'appareil n'est pas hors tension. Avant toute réparation, coupez l'alimentation principale du chargeur, accrochez le panneau de maintenance, et vérifiez l'absence de tension dangereuse pour vous assurer que le chargeur est complètement hors tension. Testez avant de toucher.
- Même si tous les interrupteurs du chargeur sont déconnectés, une tension dangereuse peut subsister dans les barres de cuivre de l'appareil. Les condensateurs peuvent contenir de l'énergie résiduelle dangereuse. Attendez au moins 1 minute avant de retirer le couvercle. Soyez vigilant.
- L'appareil doit être correctement mis à la terre en permanence. Une mise à la terre insuffisante ou incorrecte peut entraîner des risques de choc électrique ou d'incendie. Pour minimiser ces risques, ne connectez pas l'appareil à un circuit dépassant 150 volts par rapport à la terre.
- Après chaque installation ou opération de maintenance, vérifiez que la porte est bien verrouillée pour éviter l'infiltration d'eau de pluie dans l'appareil.
- Les conditions d'installation doivent exclure tout environnement présentant des risques d'incendie ou d'autres dangers.





Reader Object

This document (this guide) is primarily intended for the following engineers:

- Technical Support Engineer
- Maintenance Engineer
- Engineering installation team





Symbol Conventions

The following symbols may appear in this document and their description are as follows.

Symbol	Description
	DANGER Dangerous Voltage Dangerous voltages can cause death or injury
	WARNING Hazard Warning May cause equipment damage and personal injury
	WARNING Heat warning May cause injury when touching specified components.
	ATTENTION Cause of Hazard Failure to comply may result in equipment damage or functional failure

Conventions relatives aux symboles

Les symboles suivants peuvent apparaître dans ce document. Leur signification est décrite ci-dessous :

Symbole	Description
	DANGER Tension dangereuse Les tensions dangereuses peuvent entraîner des blessures graves ou la mort.
	ATTENTION Avertissement de danger Le contact avec certaines pièces spécifiques peut provoquer des brûlures.
	AVERTISSEMENT Risque de chaleur Il peut provoquer des brûlures en touchant les pièces spéciales
	ATTENTION Cause du danger Le non-respect de cette consigne peut entraîner des dommages matériels ou des défaillances fonctionnelles.

Contents

1 Safety Precautions.....	1
1.1 Special symbols for warnings and dangers.....	1
1.2 Disclaimers.....	3
2 Declaration of Conformity.....	4
2.1 FCC.....	4
2.2 ISED.....	8
3 Product Overview.....	11
3.1 Introduction.....	11
3.2 SEC series products model.....	11
3.3 Product types description.....	12
3.4 Product views.....	16
3.5 Product characteristics.....	18
3.6 Parameter table of product specifications.....	19
4 Installation instructions.....	21
4.1 Equipment dimensions.....	21
4.2 Equipment installation requirements.....	22
4.3 Construction of distribution cables.....	24
4.3.1 Layout requirements of distribution cables.....	24
4.3.2 Process requirements of distribution cables.....	25
4.3.3 Internal wiring diagram of equipment.....	28
4.4 Installation steps of charging equipment.....	29
4.4.1 Unpacking the outer package of the cabinet.....	30
4.4.2 Foundation drilling.....	32
4.4.3 Placing charger.....	33
4.4.4 Internal wiring diagram of equipment.....	36
4.5 Inspection after installation.....	37
5 Operation interface.....	39
5.1 Notes before charging.....	39
Remarques avant la charge.....	39

5.2 Charging process.....39

5.2.1 Introduction to screen icons and connector specifications.....40

5.2.2 Charging procedure.....42










6 Simple troubleshooting.....49

7 After-sales service.....50










Appendix.....50

Module Group Number Setting Guide.....50

1.1 Special symbols for warnings and dangers

Symbol	Symbol Word	Descriptions
	Danger	Since some parts of this power system are under high voltage during operation, it is fatal for direct contact or indirect contact with these parts.
	Danger	Construction operation of high voltage lines may cause fire or electric shock. The wiring area and the area where the line passes through for AC cables must comply with local regulations and laws. Only personnel who are qualified to work with high DC and AC voltage are allowed to install and maintain the DC Charger.
	Danger	It is strictly forbidden to carry out installation and maintenance work during thunderstorms.
	Danger	The DC Charger is a high voltage DC power supply, and short circuits may cause damage to the DC Charger and personal safety hazards.
	Warning	Special tools must be used during various operations of high DC and AC voltages.
	Warning	Avoid touching specific parts of the charger (E.g., air outlet) to prevent high temperature scald.
	Attention	Make sure that the cable label is correct before the connection of cables.
	Attention	Signal cables shall be kept away from power cables to avoid interference.
	Attention	The device will release heat during operation. Ensure that the area around the device is well ventilated

Symboles spéciaux pour les avertissements et les dangers

Symbole	Mot symbole	Descriptions
	Danger	Certaines parties de ce système électrique sont sous haute tension pendant son fonctionnement. Tout contact direct ou indirect avec ces parties peut être mortel.
	Danger	Les travaux sur des lignes à haute tension peuvent provoquer un incendie ou une électrocution. La zone de câblage et le passage des câbles CA doivent respecter strictement les réglementations et lois locales. Seul le personnel qualifié pour travailler avec des tensions continues (CC) et alternatives (CA) élevées est autorisé à installer et entretenir le chargeur CC.
	Danger	Il est formellement interdit d'effectuer des travaux d'installation ou de maintenance pendant les orages.
	Danger	Le chargeur CC est une alimentation électrique haute tension. Les courts-circuits peuvent l'endommager gravement et poser des risques importants pour la sécurité personnelle.
	ATTENTION	Des outils spécifiques doivent être utilisés pour toute opération sous haute tension continue ou alternative.
		Évitez tout contact avec des parties spécifiques du chargeur (par exemple, la sortie d'air), afin de prévenir les brûlures dues aux hautes températures.
	Attention	Avant de connecter les câbles, assurez-vous que leurs étiquettes sont correctement identifiées et conformes.
	Attention	Les câbles de signal doivent être éloignés des câbles d'alimentation pour éviter les interférences électromagnétiques.
	Attention	L'appareil dégage de la chaleur pendant son fonctionnement. Veillez à ce que la zone autour de l'appareil soit bien ventilée.

1.2 Disclaimers

ChargeTronix shall not be liable for any consequence caused by any of the following events:

- Warranty expiration of the warranty service;
- Equipment malfunction, component damage, personal injuries, or property damage caused by failure to follow operation instructions
- Installation or use in environments which are not specified in related international standards.
- Incorrect transportation, removal, storage, installation, or use.
- Unauthorized modifications to the product or software code or removal of the product;
- Device damage due to force majeure (such as lightning, earthquakes, fire, and storms);
- Unauthorized modifications to the product nameplate or serial number or product appearance;
- Storage conditions that do not meet the requirements specified in this document, unused products should be stored in packing cases and placed in a dry place, (If the charger is not energized within 6 months of delivery, it must be returned to ChargeTronix for aging test and shipping or additional services to be paid for by customer.);
- Ensure that the area required for heat dissipation remains clear, Otherwise, the equipment may become faulty, and the resulting equipment malfunction, component damage, personal injuries, or property damage are beyond the warranty scope;
- Installation or use by unqualified personnel;
- The content of this document is for reference use only. If there is any inconsistency between the document and the actual product, please refer to the product itself for the most accurate information.

2. Declaration of Conformity

2.1 FCC



Supplier's Declaration of Conformity

To whom it may concern:

ChargeTronix, do hereby attest that we have made measurements or completes other procedures found acceptable to the FCC part 15B, and ensure that the equipment complies with the appropriate technical standards. The Supplier's Declaration of Conformity are only for the product below, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

Responsible party Type	Importer
Responsible party	ChargeTronix
Responsible party Address	3587 Harbor Blvd, Costa Mesa, CA 92626
Responsible party telephone number or Internet contact information	+ 1 (949) 694-1644
Test Report Number	No. 64.793.23.30886.02A
Product Description	APEX SXE DCFC 240kW
Relevant Standard(s)	FCC Part 15 Subpart B(10-1-2021 Edition)

	<p>Attention:</p> <p>NOTE: This equipment is 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.</p>
	<p>Attention:</p> <p>REMARQUE :Cet équipement est conforme aux limites définies pour un appareil numérique de Classe A, conformément à la section 15 des règles de la FCC. Ces limites sont conçues pour offrir une protection raisonnable contre les interférences nuisibles lorsque l'équipement est utilisé dans un environnement commercial. Cet équipement génère, utilise et peut émettre de l'énergie de fréquence radio et, s'il n'est pas installé et utilisé conformément au manuel d'instructions, il peut causer des interférences nuisibles aux communications radio. L'utilisation de cet équipement dans une zone résidentielle est susceptible de provoquer des interférences nuisibles, auquel cas l'utilisateur devra corriger ces interférences à ses propres frais.</p>
<p>Contains FCC ID:</p>	<p>ZUA-AUTO-NACS02 2BFID-13EA2BFID 2BD3RNACSUHF434 2AANY-IR315 V5PIM30 XMR201906EG21G</p>

2.2 ISED

Supplier's Declaration of Conformity



To whom it may concern:

It is hereby to declare that ChargeTronix do hereby attest that we have made measurements or completes other procedures found acceptable to ICES-002, and ensure that the equipment complies with the appropriate technical standards. The Supplier's Declaration of Conformity are only for the product below, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with ICES-002 .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.

Responsible party Type	Importer
Responsible party	ChargeTronix
Responsible party Address	3587 Harbor Blvd, Costa Mesa, CA 92626
Responsible party telephone number or Internet contact information	+ 1 (949) 694-1644
Test Report Number	No. 64.793.23.30886.02A
Product Description	APEX SXE DCFC 240kW
Relevant Standard(s)	ICES-002(CAN ICES-002(A) / NMB-002(A))

	<p>Attention:</p> <p>NOTE: This equipment is comply with the limits for a Class A digital device, pursuant to ICES-002 of the ISED 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.</p>
	<p>Attention:</p> <p>Note : Cet équipement est conforme aux limites définies pour un appareil numérique de Classe A, conformément à la norme ICES-002 des règles ISED. Ces limites sont conçues pour offrir une protection raisonnable contre les interférences nuisibles lorsque l'équipement est utilisé dans un environnement commercial. Cet équipement génère, utilise et peut émettre de l'énergie de fréquence radio et, s'il n'est pas installé et utilisé conformément au manuel d'instructions, il peut causer des interférences nuisibles aux communications radio. L'utilisation de cet équipement dans une zone résidentielle est susceptible de provoquer des interférences nuisibles, auquel cas l'utilisateur devra corriger ces interférences à ses propres frais.</p>
<p>Contains FCC ID:</p>	<p>31215-AUTONACS02 32722-13EA2BFID AN24I3464 1594A-IR315 11689A-IM30 10224A-201906EG21G</p>

NACS EV Charging Connector (A9604977)	
FCC ID: ZUA-AUTO-NACS02	ISED: 31215-AUTONACS02
NACS EV Charging Connector (66c14-yb)	
FCC ID: 2BFID-13EA2BFID	ISED: 32722-13EA2BFID
NACS EV Charging Connector (HVCON1MA380APL0000U1)	
FCC ID: 2BD3RNACSUHF434	ISED: 31765-NACSUHF315
NACS EV Charging Connector (VECGCNA350HV)	
FCC ID: 2BDAP-5220353	ISED: 31498-5220353
Industrial Cellular Router (IR315)	
FCC ID: 2AANY-IR315	ISED: 11594A-IR315
POS Terminal(IM30)	
FCC ID: V5PIM30	ISED: 11689A-IM30
POS Terminal (VPOS Touch)	
FCC ID: 2AK6L-VPOST	ISED: 10840A-VPOST
POS Terminal (APO01.BL.PAY.4E)	
FCC ID: 2AHPPAPX01	ISED: N/A
LTE Module (EG21-G)	
FCC ID: XMR201906EG21G	ISED: 10224A-201906EG21G
LTE Module (SIM7600G)	
FCC ID: 2AJYU-8PYA008	ISED: 23761-8PYA009
LTE Module (SIM7670G)	
FCC ID: 2AJYU-8XS0002	ISED: 23761-8XS0006
Bluetooth/wifi module(ESP32-WROVER-B)	
FCC ID: 2AC7Z-ESP32WROVERB	ISED: 21098-ESPWROVERB
RFID module (LSD1U-4R5C)	
FCC ID: 2BFGT-LSD1U	ISED: N/A



3. Product Overview

3.1 Introduction

APEX SXE series EVSE adopts modular design, and has multiple protections, flexible power distribution and charging control system, which has high efficiency, stable outputs and high reliability.

The APEX SXE is an integrated DC EVSE featuring high efficiency and flexible configuration solution. It supports CCS1 & NACS dual connectors to charge at the same time. Used in centralized fast charging station, the product adopts 40kW charging power module, satisfying the capacity demand as well as flexibility demand on the market.

3.2 APEX SXE series products model

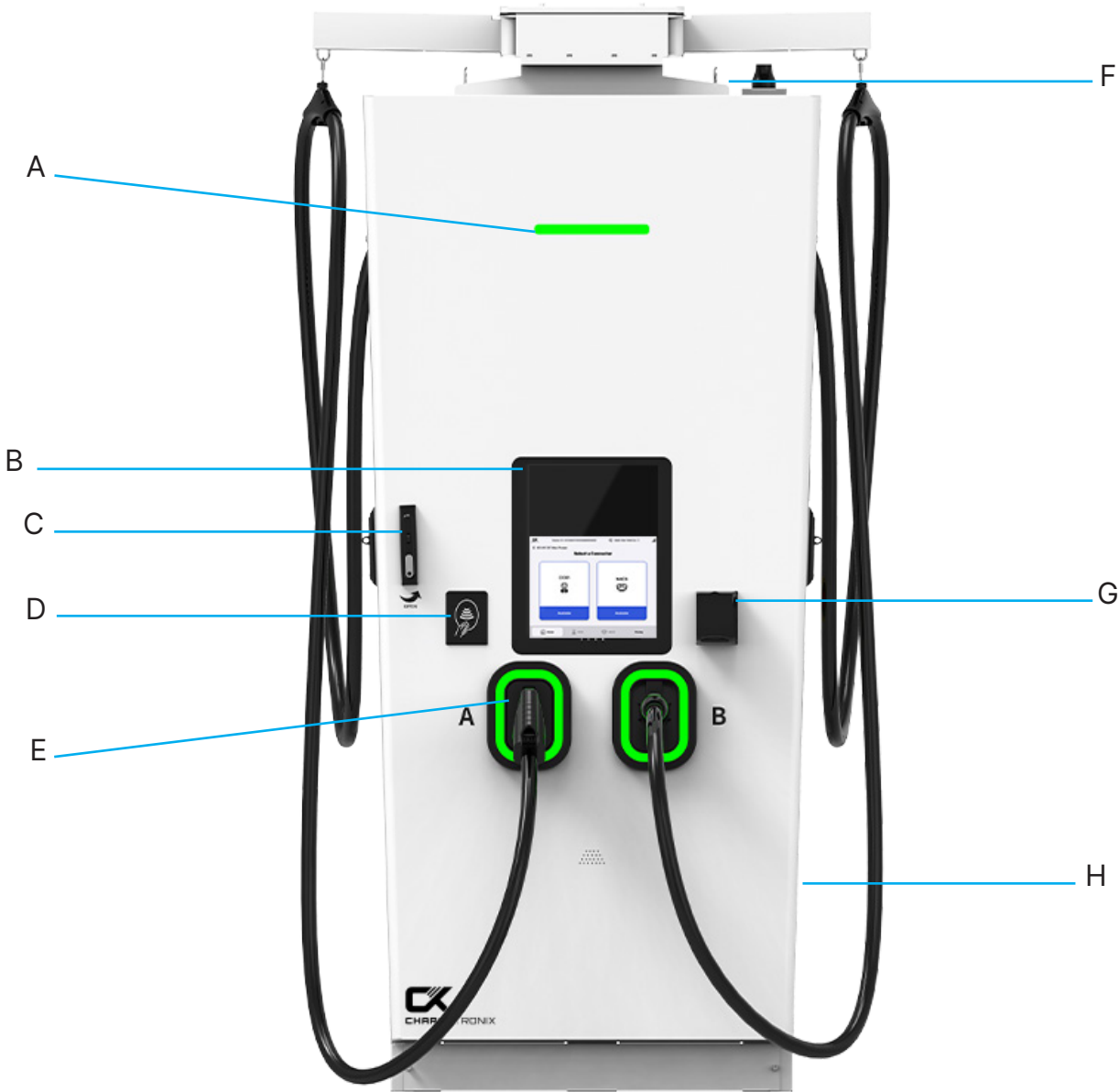
	<p>WARNING</p> <p>Since some parts of this power system are under high voltage during operation, it is fatal for direct contact or indirect contact with these parts.</p>
	<p>Avertissement</p> <p>Since some parts of this power system are under high voltage during operation, it is fatal for direct contact or indirect contact with these parts.</p>

3.3 Product types description

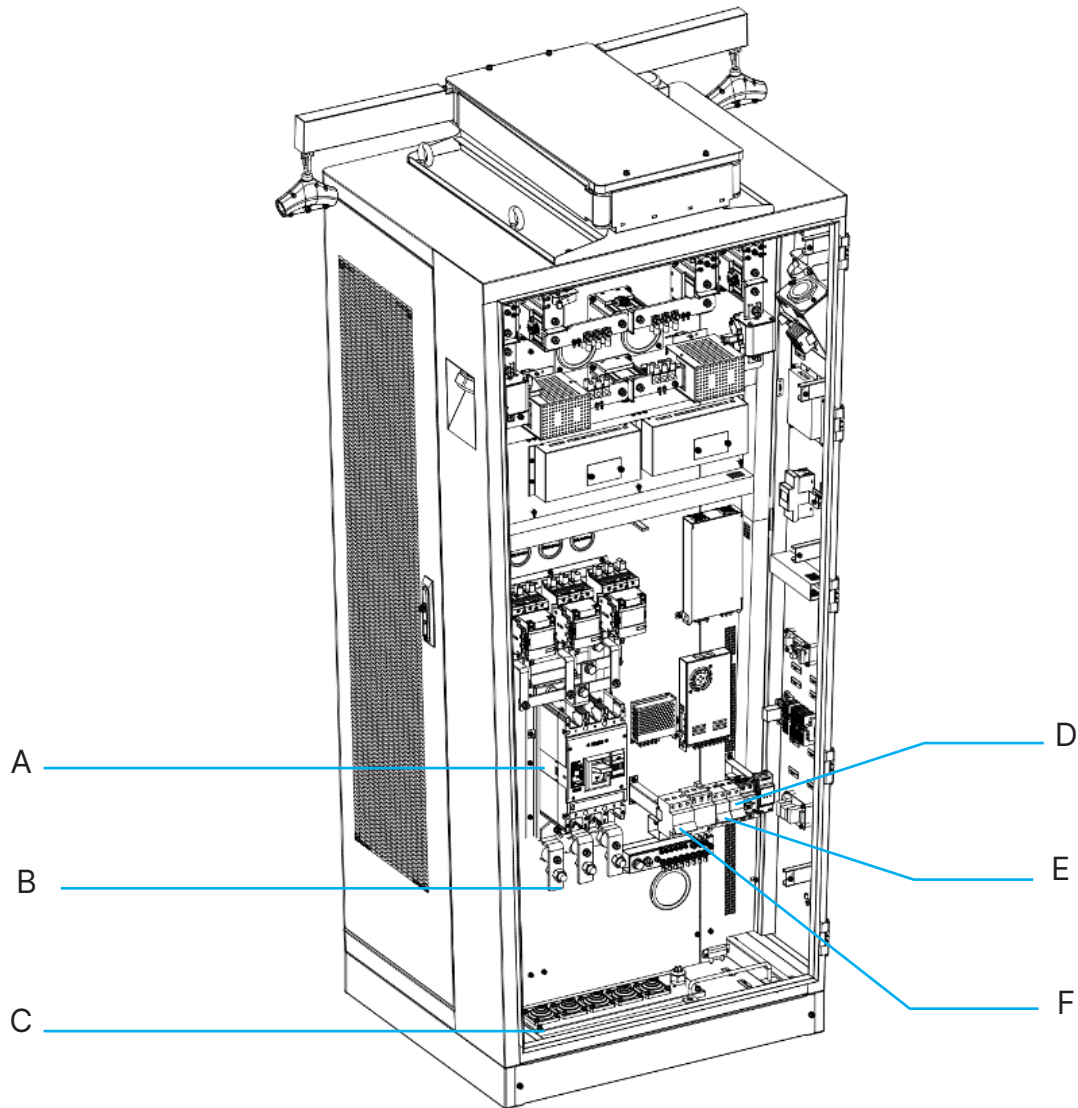
Specification	Power distribution		Maximum current	
	Connector A	Connector B	Connector A	Connector B
CTX-AiO-240-5-300	CCS1:240kW	/	300A	/
CTX-AiO-240-2-300	CCS1:120kW or 240kW	CCS1:120kW or 240kW	300A	300A
CTX-AiO-240-6-300	NACS: 240kW	/	300A	/
CTX-AiO-240-3-300	CCS1:120kW or 240kW	NACS:120kW or 240kW	300A	300A
CTX-AiO-240-4-300	NACS:120kW or 240kW	NACS:120kW or 240kW	300A	300A

3.4 Product views

Outside view of the APEX SXE series dual connectors type DC EVSE



A. Status LED	E. Charging connector
B. Display screen	F. Lifting lugs
C. Door handle/lock	G. Credit Card reader
D. RFID card reader	H. Air inlet



This image is for reference only.

Internal wiring area view of the APEX SXE series dual connectors DC EVSE

A. Main Circuit Breaker	D. Secondary side AC Circuit Breaker
B. AC input copper busbar	E. Transformer upstream breaker
C. Inlet hole	F. SPD upstream breaker



Note: Do not operate under live conditions! Before operating, make sure to disconnect the upstream switch, main circuit breaker A, transformer upstream breaker E, SPD upstream breaker F, and secondary AC circuit breaker D of the DC charger. If the upstream switch is not disconnected, the circuit between AC input copper busbar B and SPD upstream breaker F, and transformer upstream breaker E will be energized even if the main circuit breaker A, transformer upstream breaker E, SPD upstream breaker and secondary AC circuit breaker F are turned off, posing a risk of electric shock. Any damage or hurt caused by unauthorized operation will not be borne by the manufacturer.

3.5 Product characteristics

- A variety of power configurations are available, via software settings, to meet customer demands. Our dual DC connector model can distribute power based on vehicle demand, meeting requirements for charging two vehicles at the same time.
- The constant current and constant power charging methods have the advantages of high charging efficiency, simple operation and reliable performance.
- Ultra wide output voltage range, with the highest output voltage can reach DC1000V. It can not only meet the low-voltage requirements of some vehicles, but also meet the charging requirements of buses and high-voltage vehicles.
- With overload, short circuit, leakage, lightning protection, overcharge, over voltage, under voltage, reverse connection, over temperature and other protection functions.
- Multiple supporting functions integrated: standard connector homing detection function; and supports optional functions such as flooding detection, etc. provides protection for the installation and use of charger.
- The intelligent standby mode can effectively reduce the operation cost of customers in the whole project life cycle, and improve the economics of station charging.
- The cabinet shell is made of hot dip galvanized sheets with protection grade of NEMA 3R, which can be applied to various outdoor environments. At the same time, the overall new design of the cabinet is smaller and more compact, which can save real estate.

3.6 Parameter table of product specifications

Category	Item	Parameter
Input Characteristic	Input AC Current (FLA)	300A
	Input Power	258kW
	Inlet method	3P+PE
	Input Voltage	480Vac±10%
	Frequency	60Hz
	Power Factor	0.99
	THDi	≤5%
Output Characteristic	Output Voltage	CCS1/NACS : 300-1000 Vdc
	Rated power	240kW
	Max Current	CCS1/NACS : 350A
	Efficiency	96%
Others	Energy meter precision	±1%
	Number of connectors	1(CCS1) /1(NACS)/2(CCS1+CCS1)/ 2(NACS+NACS)/2(CCS1+NACS)/
	Network Interface	Wi-Fi retrofit option available/Ethernet/GSM,4G(Support for U.S. Carriers)
	Size	W(31.5(Base)-36.1(Top)) * D29.5 * H78.7 inches (W(800(Base)-918(Top)) * D750 * H2000 mm)
	Protection degree	NEMA 3R / IK10
	Weight	≤1058lbs(480 kg)
	Cable length	Exposed 16.5ft (5m)
	Communication protocol	OCPP1.6J/2.0.1(Upgrade)
	Display Screen	15 inches
	Method of payment	QR Code/RFID/Credit Card
	Language	English

Standards	System Standards	UL 2231-2 UL 2202 CSA C22.2#281.2 CSA C22.2#107.1
Environmental	Cooling method	Forced air cooling
Category Conditions	Item	Parameter
	Full power operating temperature	-22 ~ 122 °F (-30 ~ 50 °C)
	Storage temperature range	-22°F-158°F(-30 °C to +70 °C)
	Humidity	5%~95%
	Altitude	≤6561.67 ft (2000 m)
Protection and Operational Functions		<p>Undervoltage protection</p> <p>Overvoltage protection</p> <p>DC Overcurrent protection</p> <p>Over temperature protection</p> <p>Surge Protection Device</p> <p>Emergency Stop Protection</p> <p>Tilt detection</p> <p>Flood detection</p> <p>Smoke detection</p> <p>Heater</p> <p>Cable management</p>

4. Installations instructions

4.1 Equipment dimensions

1. The shape and dimension of the charger are shown in Figure 4.1-A.

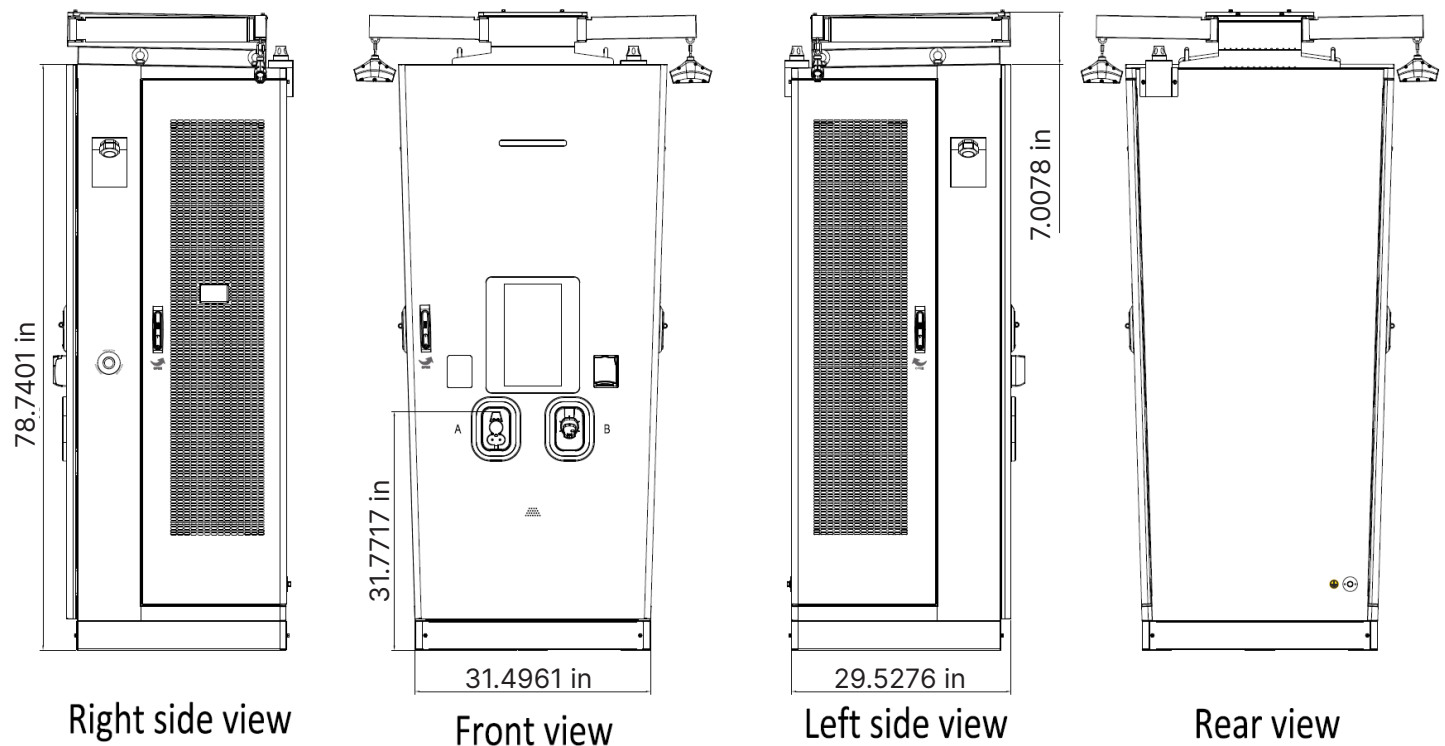


Figure 4.1-A Outline and dimension of charger

2. The hole size of charger base is shown in Figure 4.1-B.

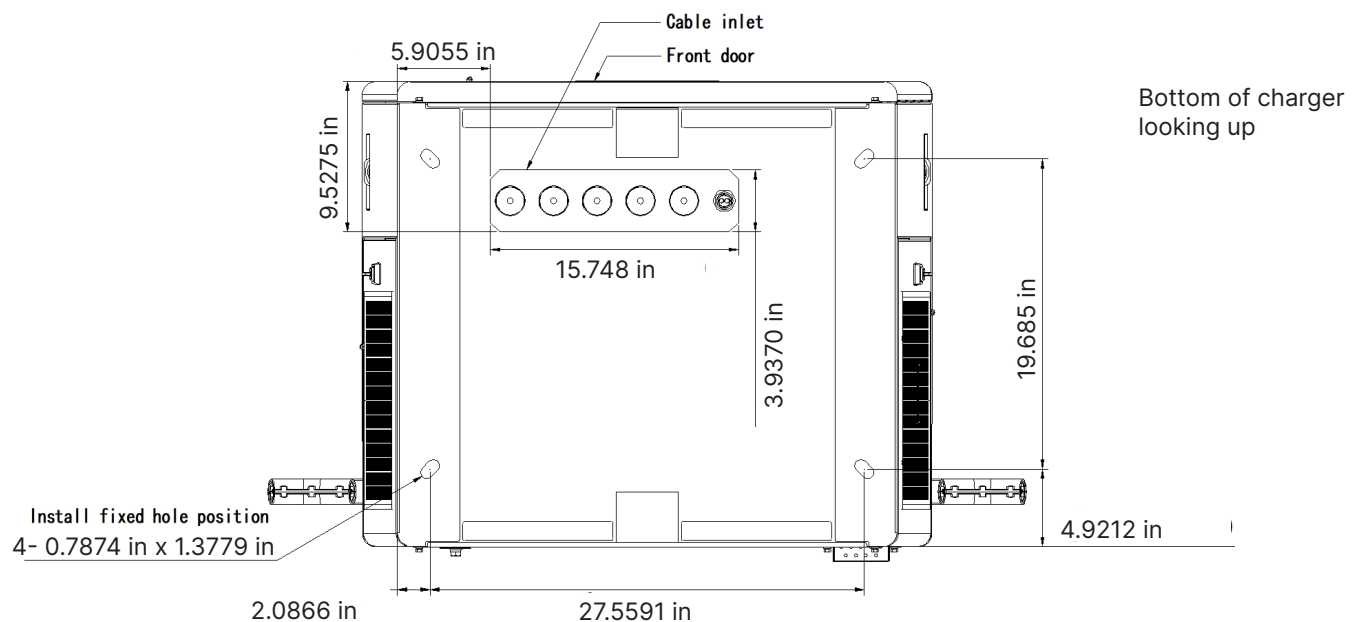




Figure 4.1-B Holes size of charger base

4.2 Equipment installation requirements

	<p>WARNING Ensure that you comply with the following installation requirements. Otherwise, the normal operation and ventilation of the cabinet may be affected!</p>
	<p>Avertissement Assurez-vous de respecter les exigences d'installation suivantes, faute de quoi le bon fonctionnement et la ventilation du coffret pourraient être affectés.</p>

1. The charger is opened in front, left and right, and the connectors are used from both sides. Space should be reserved around. See Figure 4.2-A for the reserved size;
2. Charger must be installed on a foundation made of channel steel or concrete;
3. The cable shall be embedded in advance, the reserved length of Ethernet(if required) cable should not be less than 118-7/64 inches(3000 mm); the length of power cable reserved shall be 23.62 inches \pm 25/32 inch(600 mm \pm 20 mm), and the protruding of the base through which 5 wires pass shall be less than 1-3/16 inches(30 mm), as shown in Figure 4.2-B;
4. The height of the installation foundation is recommended to be 6 inches, and the vertical inclination of the installation shall not exceed 5 °. See Figure 4.2-B for details;
5. Install 4 stainless steel M15/32*3-5/32 inches(M12*80mm) expansion bolts between the base and the cabinet or equivalent as directed by engineer. Note that the bolts need to be equipped with M15/32 inch(M12) stainless steel flat washer.
6. These requirements do not cover DC charging equipment for EV intended to be used in hazardous locations, such as near fuel dispensing stations.

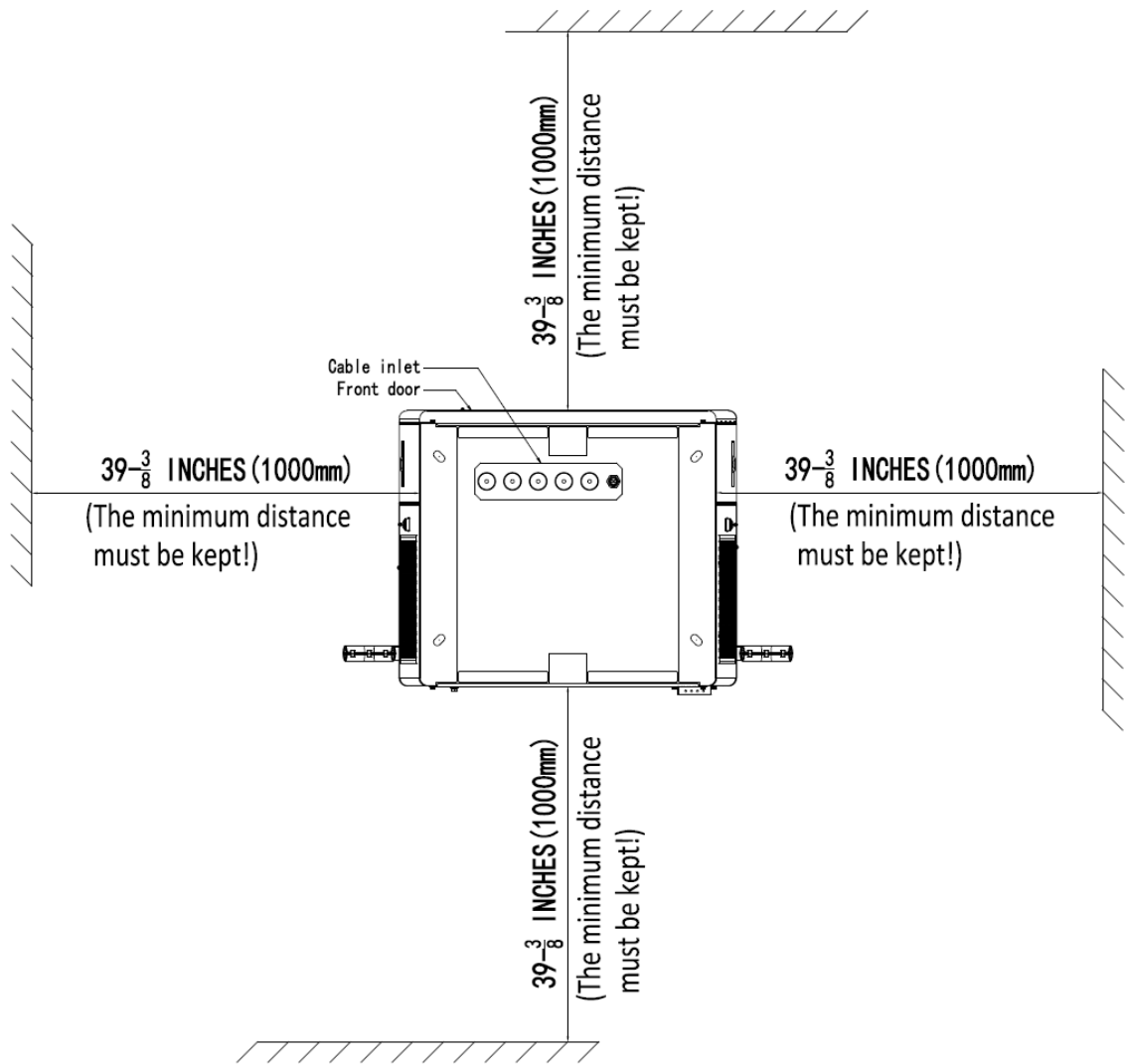


Figure 4.2-A Requirements for charger placement

	<p>Attention</p> <p>The reserved cable length cannot be lower than the value shown in the picture; otherwise, the installation may fail!</p> <p>These requirements do not cover DC charging equipment for EV intended to be used in hazardous locations, such as near fuel depot.</p>
	<p>Attention</p> <p>La longueur de câble réservée ne doit en aucun cas être inférieure à la valeur indiquée sur l'image, sous peine de compromettre le bon déroulement de l'installation !</p> <p>Ces exigences ne s'appliquent pas aux équipements de recharge en courant continu pour véhicules électriques destinés à être utilisés dans des zones dangereuses, telles que les environs d'un dépôt de carburant.</p>

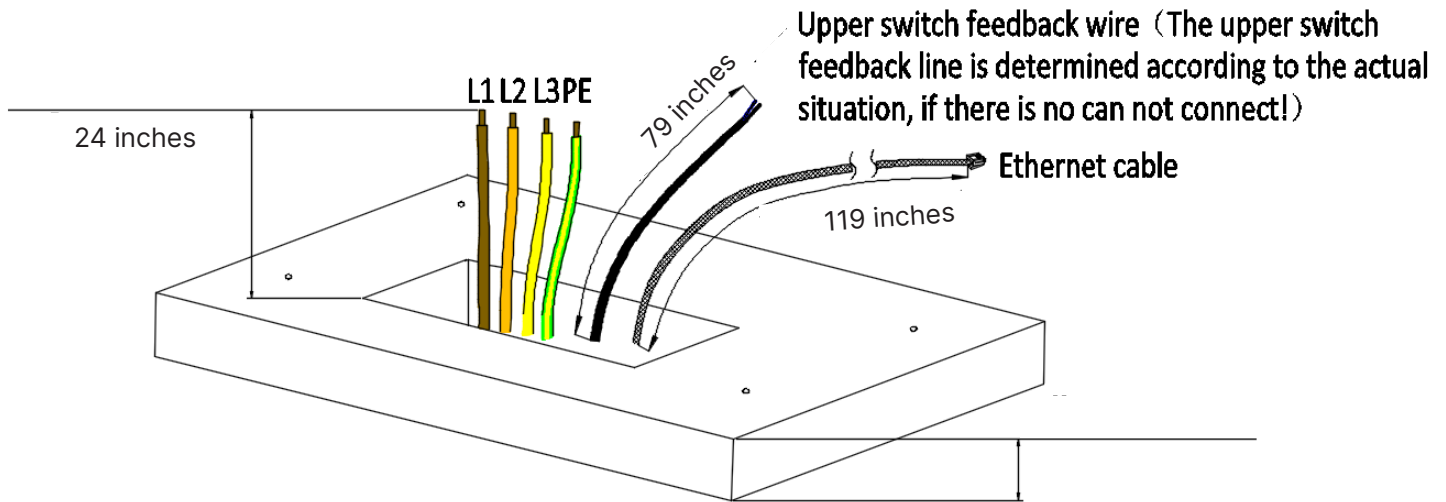


Figure 4.2-B Base and cable reservation requirements

NOTE: The SEC 160kW Series DC EVSE can be operated at a height of 41-11/32 inch (105cm).

4.3 Construction of distribution cables

4.3.1 Layout requirements of distribution cables

1. The input cable of the system is introduced from the inlet hole at the bottom of the charger, and the cable shall be laid through the cable trench.
2. The AC cable adopts copper core wire, and the cross-sectional area of the cable shall be adequate to the equipment load.
3. The outdoor power cable shall be laid according to the power specification. The power cable and the signal cable must be separated, and the signal cable should be put through the tube separately to avoid the signal loss and interference of the communication signal.
4. The cable shall not be laid in the area not easily damaged by mechanical damage, corrosive medium emission, humidity, strong magnetic field and strong electrostatic field interference. If necessary, please take corresponding protection or shielding measures.
5. The AC input cable starts from the user's distribution switch and connects to the copper bar of the charger's inlet cable switch. Over-current Protection devices shall be provided at the user's power distribution.

4.3.2 Process requirements of distribution cables

1. Cable laying shall be free from external force, distortion and damage of insulation layer.
2. It is strictly forbidden to twist, flatten, break the protective layer and wear the protective layer seriously.
3. The protective pipe shall be cleaned before the cable passes through the pipe, and the wire shall not be damaged.
4. The cable arrangement shall be tidy. The binding should be neat and should not be crossed.
5. Sufficient allowance (no less than 23-5/8 inches(600 mm)) shall be reserved for each wire of the cable, and the bending degree shall be consistent.
6. Crimp the terminal of the cable head, and there should be no gap on the penetration surface of the terminal after crimping.
7. When pressing the lug of inlet cable, the heat shrinkable tube should be set between the cable and the lug, and the inside and outside of the tube should be smooth without damage and cracks. Before setting the heat shrinkable tube, the accessories on the cable shall be removed, and there shall be no burr and iron filings on the surface to prevent damage to the tube. The color of the tube shall be in accordance with the phase sequence. When the tube is heat shrinkable, avoid flame contacting the inside of the cabinet to prevent burning the internal components and cables of the cabinet. The appearance of heat shrinkable casing should be flat, smooth, uniform shrinkage, no dust or cracks.
8. Attention should be paid to the wiring sequence when pressing RJ45 connector for Ethernet cable(If ethernet connection is to be utilized). Check whether the cable is secured after connecting.

4.3.3 Internal wiring diagram of equipment

The internal AC input cables are L1, L2, L3 and PE from left to right. The cabinet grounding is divided into two parts, one is the grounding bar inside the cabinet, and the other is the grounding of cabinet shell, as shown in Figure 4.3-A.

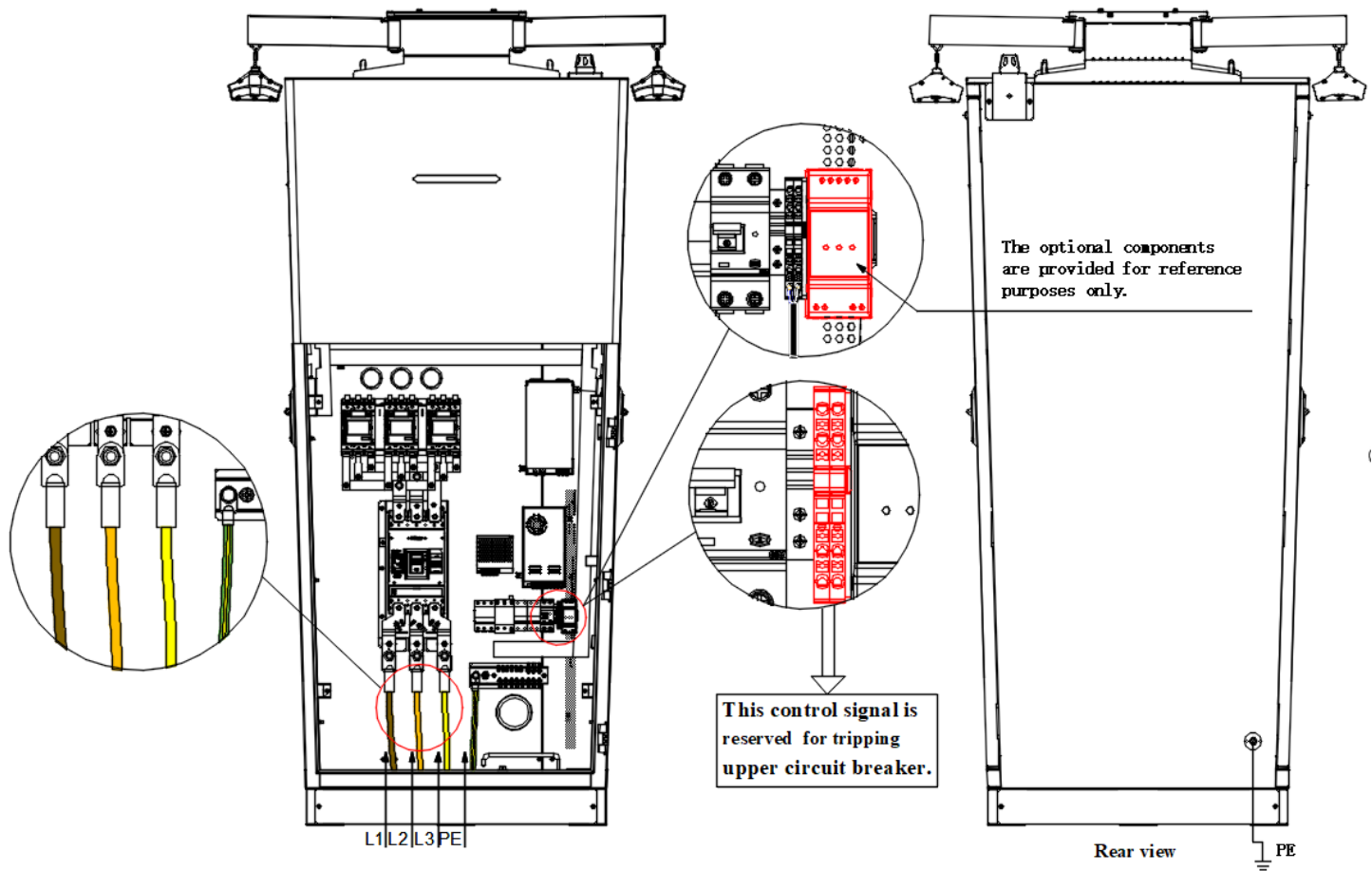


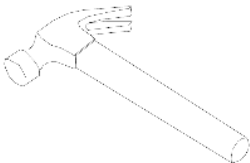
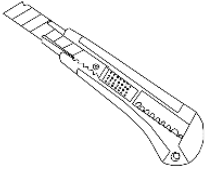
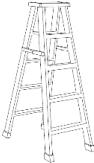

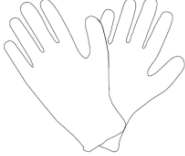
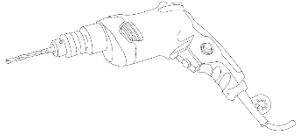
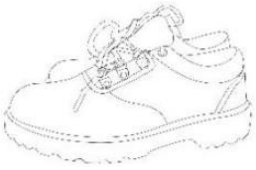
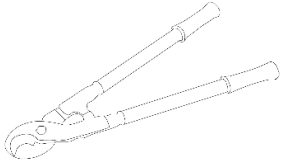
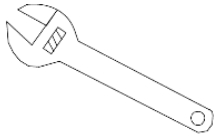
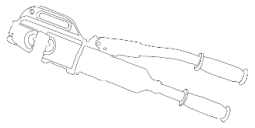
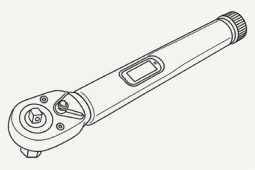




Figure 4.3-A Internal wiring diagram of charger

4.4 Installation steps of charging equipment

	Attention The following tools should be included as far as possible, but are not limited to those listed in the following table.
	Attention Les outils suivants doivent être inclus dans la mesure du possible, sans se limiter à ceux figurant dans le tableau ci-dessous.

S/N	Tools	Num	Drawing	S/N	Tools	Num	Drawing
1	Claw hammer	1		6	Art knife	1	
2	Herringbone ladder	1		7	Cross screwdriver	1	
3	Insulating gloves	1		8	Electric drill Equipped with φ 16mm drill bit	1	
4	Insulated shoes	1		9	Cable clipper	1	
5	Adjustable wrench	1		10	Hydraulic clamp	1	
				11	Torque Wrench	1	

4.4.1 Unpacking the outer package of the cabinet

	Attention Proper movement and installation are necessary to ensure the proper operation of the equipment, and it is necessary to follow the operation instructions in the manual!
	Attention Un déplacement et une installation corrects sont nécessaires pour garantir le bon fonctionnement de l'équipement, et il est impératif de suivre les instructions d'utilisation fournies dans le manuel.

Tools required: herringbone ladder, claw hammer, art knife, protective gloves

1. With the help of the herringbone ladder, straighten the metal card on the top of the packing material with a claw hammer, and remove the upper cover plate. As shown in Figure 4.4.1-A.

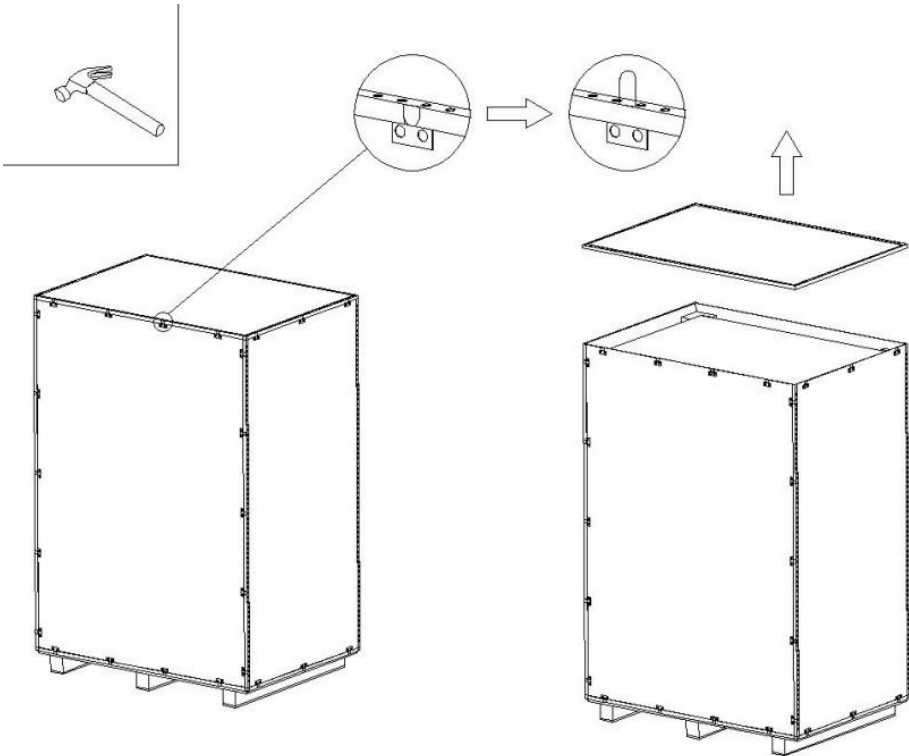


Figure 4.4.1-A

2. Straighten all metal cards with a claw hammer, remove the surrounding wood boards, cut the PE bags wrapped around the cabinet with the art knife, and remove the PE bags and foam. As shown in Figure 4.4.1-B.

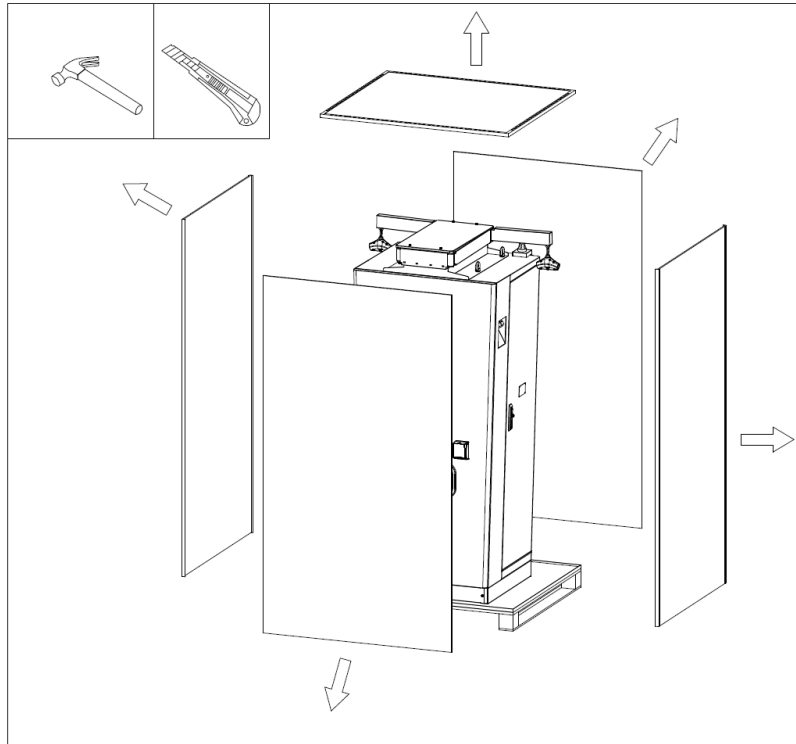


Figure 4.4.1-b

3. Remove the left and right sealing plates first, and then use a wrench to remove the four M15/32 inch(M12 mm) bolts around the base, as shown in Figure 4.4.1-C.

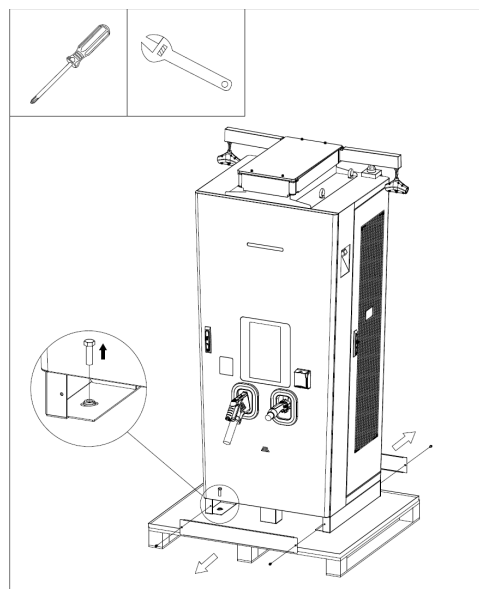


Figure4.4.1-C

4.4.2 Foundation drilling

Tools required: electric drill, ϕ 5/8 inch(ϕ 16 mm) drill bit, protective gloves

1. The hole size is shown in Figure 4.4.2-A.

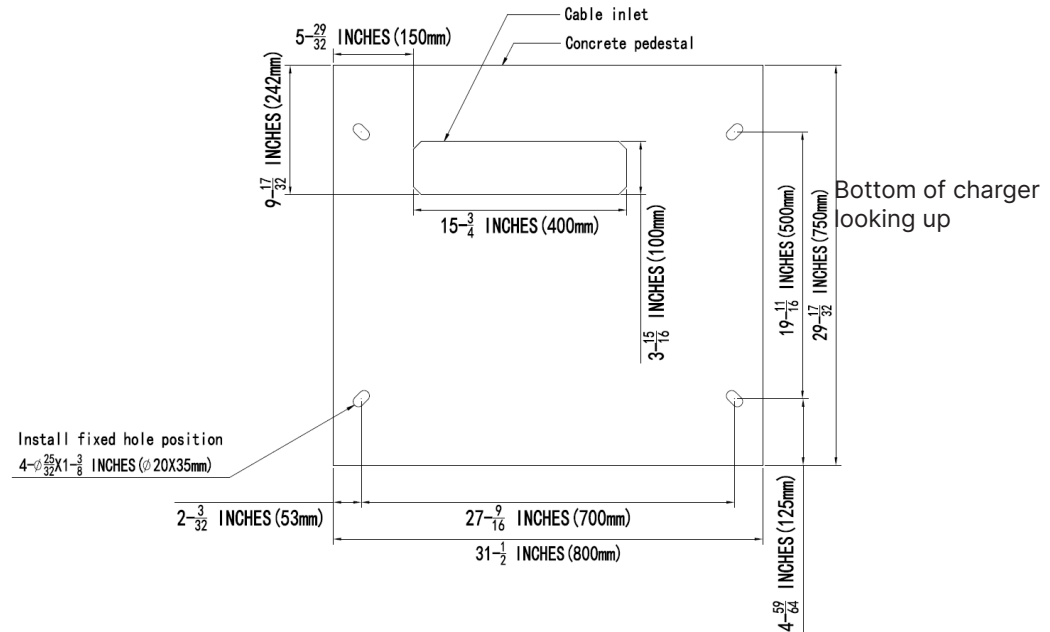


Figure 4.4.2-A

2. Drill four mounting holes with a diameter of ϕ 5/8 inch(16 mm) and a depth of 3-5/32~3-11/32 inches(80-85 mm) on the cement mounting base.

3. Knock four M15/32 * 3-5/32 inches(M12 * 80) expansion bolts into the holes with a claw hammer, and then screw out the screw part, so that the expansion bolt casing is embedded in the base mounting hole. As shown in Figure 4.4.2-B.

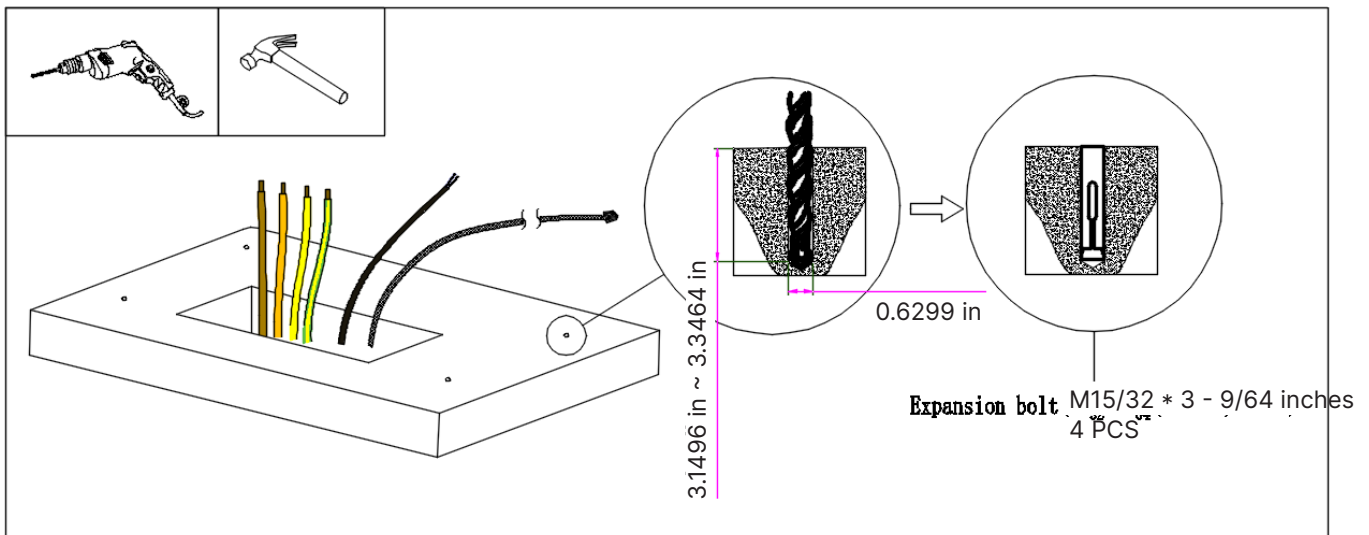




Figure 4.4.2-B

4.4.3 Placing charger

Use forklift to transport the cabinet to the installation base, and use the crane to lift the cabinet. It is shown in Figure 3.4.3-A.

	WARNING Select a forklift or crane whose load matches the weight of the cabinet!
	AVERTISSEMENT Choisissez un chariot élévateur ou une grue dont la capacité de charge correspond au poids de l'armoire.

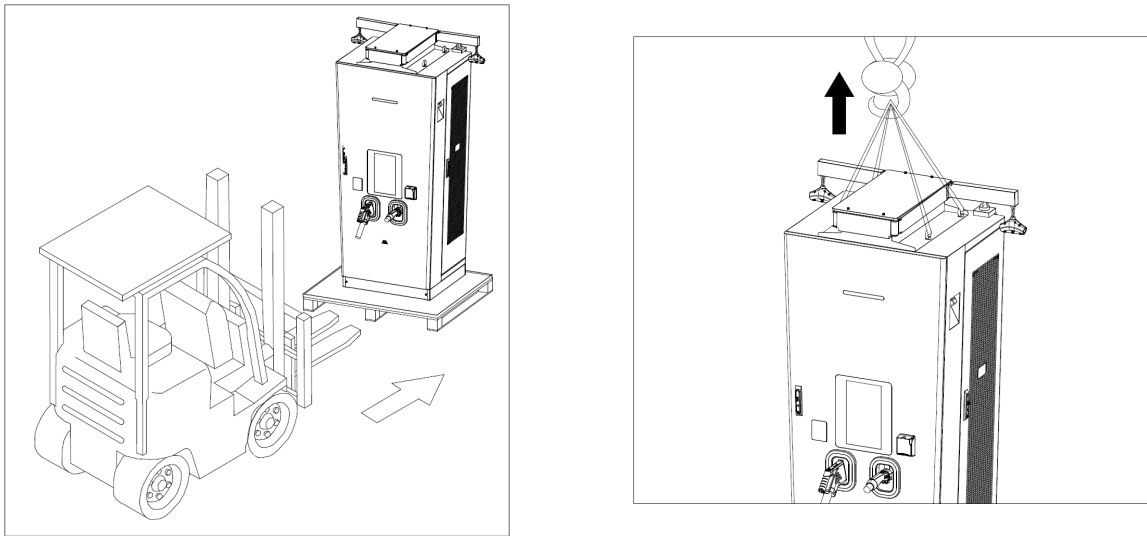


Figure 4.4.3-A

2. Suspend the cabinet above the cement base, open the right door of the cabinet, and extend the embedded cable from the bottom of the cabinet through the inlet hole (the rubber film of the inlet hole needs to be punctured). At this time, slowly lower the cabinet and pull the remaining cables out from the right door until the cabinet is completely placed on the base. As shown in Figure 4.4.3-B.

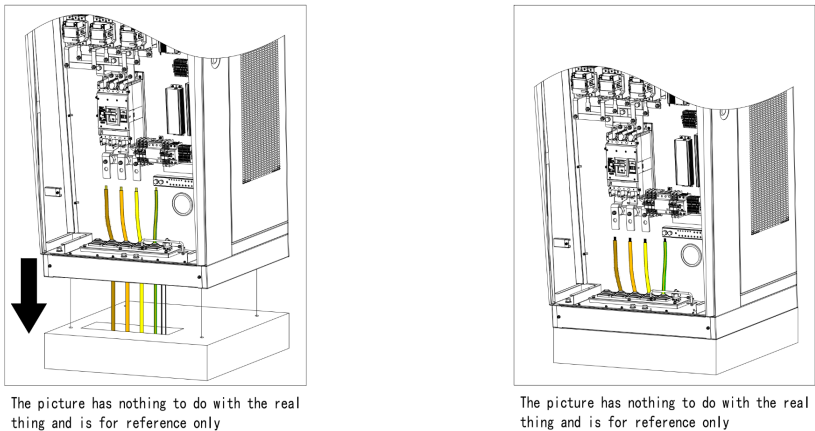




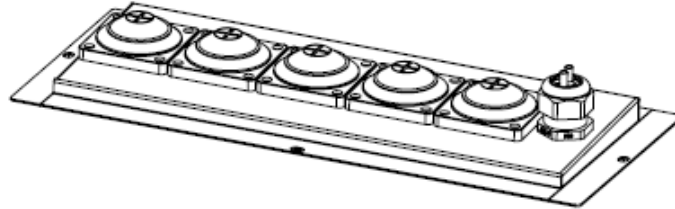
Figure 4.4.3-B

33

Note:



- ① It is necessary to match the mounting hole of the cabinet base with the hole on the cement base;
- ② The inlet cable sealing plate of the cabinet can be removed, but the protection coil shall be avoided from damage during the removal process. The inlet cable sealing plate is shown in Figure 4.4.3-C- (1).
- ③ During operation, please pay attention not to damage the cable and charging connector wire. As shown in Figure 4.4.3-C-(2)

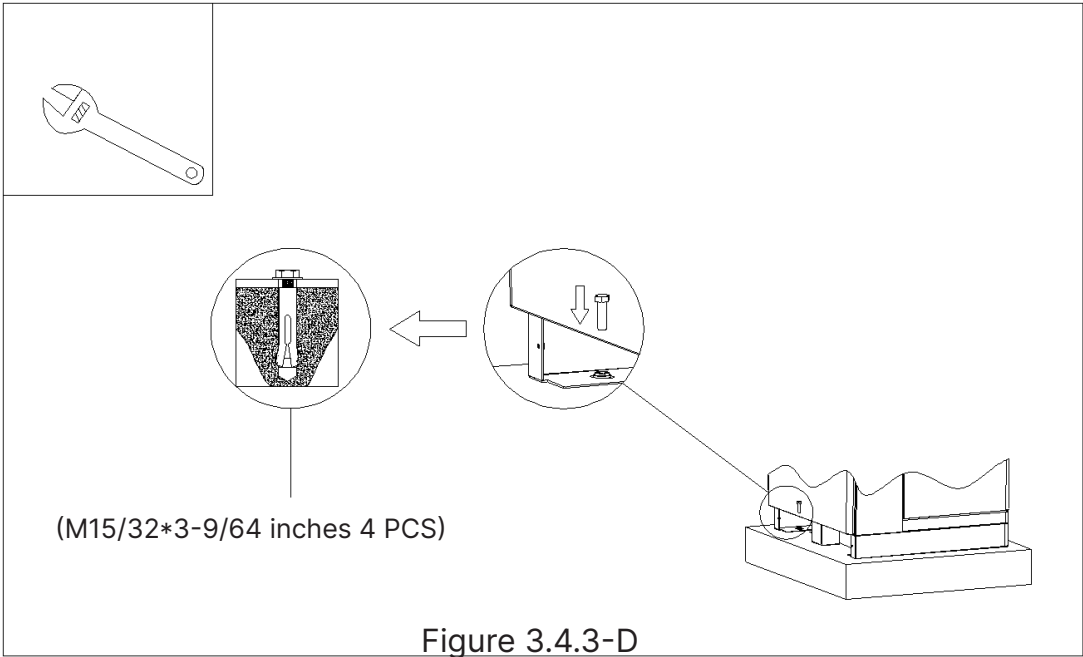
	<p>WARNING Select a forklift or crane whose load matches the weight of the cabinet!</p>
	<p>AVERTISSEMENT Choisissez un chariot élévateur ou une grue dont la capacité de charge correspond au poids de l'armoire.</p>



- (1) The inlet cable sealing plate is removable
- (2) Do not press on the charging connector cable

3. Install M15/32 * 3-5/32 inches(M12 * 80) (4 pcs)expansion bolts on the drilled installation holes around the base, and tighten the bolts to ensure the cabinet is fixed reliably, as shown in Figure 3.4.3-D

	Attention The torque of these bolts is 376.36 ~ 438.80 in-lbs(434~506 kgf.cm).
	Attention Le couple de serrage de ces boulons est compris entre 376,36 et 438,80 in-lbs (434 à 506 kgf.cm).



4. Install the left and right sealing plates as shown in Figure 3.4.3-E.

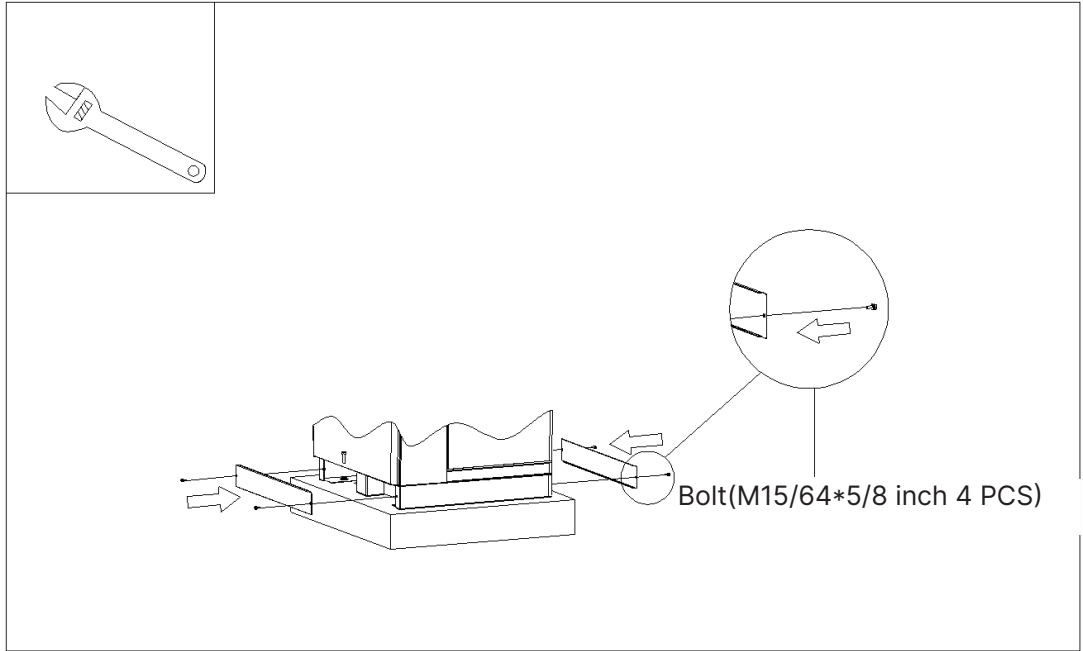


Figure3.4.3-E

4.4.4 Internal wiring diagram of equipment

1. Use the cable clipper to cut the cable to the appropriate wiring length, press the lug with hydraulic clamp and put on the heat shrinkable tube.
2. Fix the cable lug on the copper bar with the screw of M(25/64)/M(5/16) inch(M10/M8), the torque is 221-265.2 in·lbs(25-30N·m), and the force is calibrated, as shown in Figure 4.4.4.

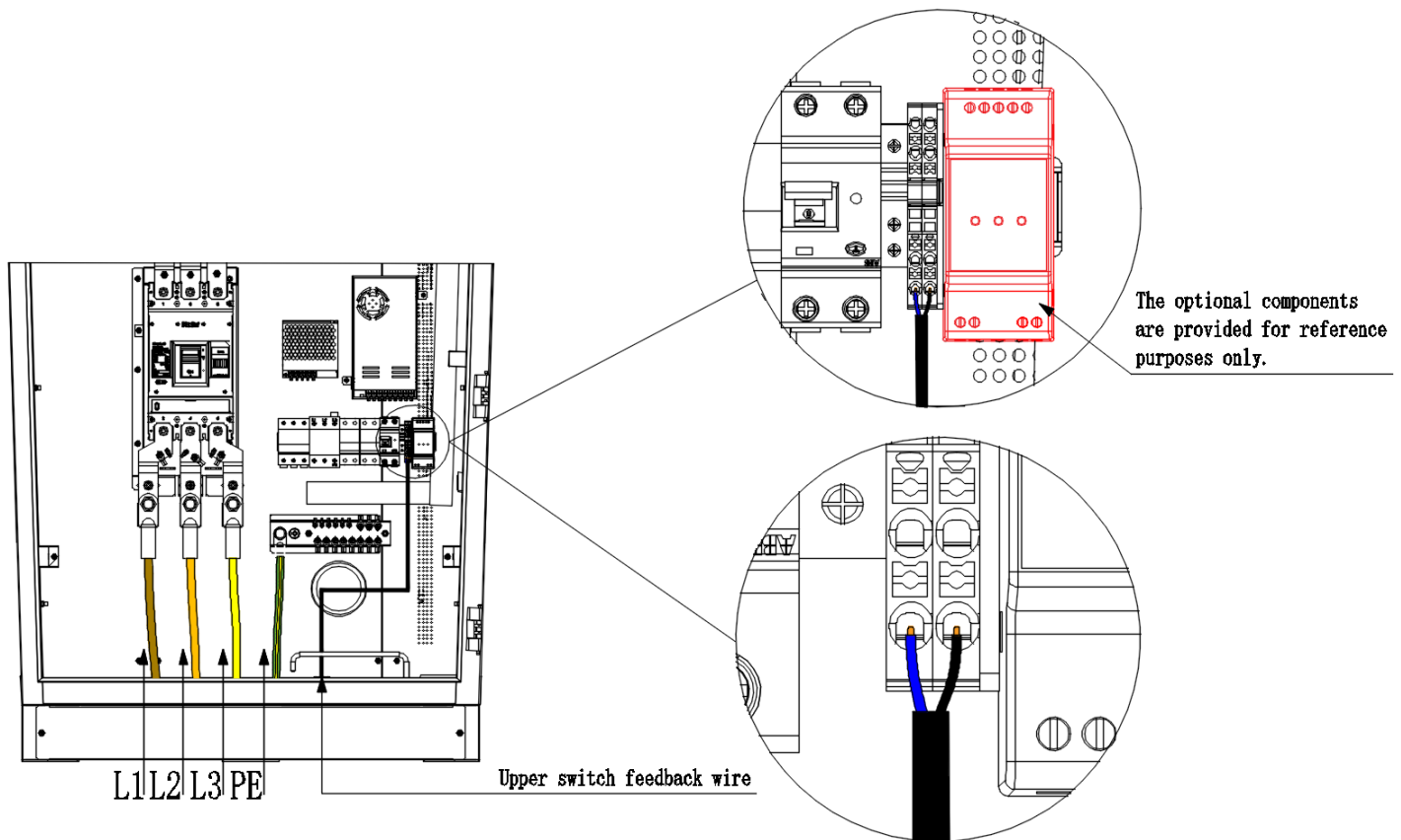


Figure 4.4.4

4.5 Inspection after installation

1. Tightness

According to the requirements of design and protection level, the junction between the inlet sealing plate and the inlet cable at the bottom of the cabinet must be sealed with fireproof mud to prevent insects or dirt from entering the cabinet.

2. Stability

After the pile is installed, shake the cabinet from different directions, and there should be no obvious loosening and shaking.

3. Clean up

- Dispose of all transportation and packaging materials in accordance with local regulations.
- Clean up the contamination or loss materials inside and around the cabinet, such as small section of cable, binding tape, screw / nut, desiccant, etc. Do not leave installation tools on site or in the cabinet (record the type and quantity of tools to prevent omission).
- Wipe the insulation with anti-static cloth. Do not use any corrosive solvent.

4. Inspection

- Check whether the base is fixed and sealed.
- Check whether the internal components of the equipment are tight and reliable.
- Check whether the electrical connection and wiring are correct and complete, whether the connection is reliable, and whether the grounding is reliable.
- Check whether the cable terminal is loose, and torque the screw fixing the terminal.
- Check whether the cable is broken, damaged and scratched.
- Check whether the protection level of the equipment meets the requirements, especially the cable entrance at the bottom of the pile.
- Check appearance, marking, integrity, cleanliness.
- Check the installation of the equipment according to the foundation installation drawing.





4.6 Special instructions

Need to place the charging connector on the storage device after charging is complete.
As shown below.







5 Operation interface

5.1 Notes before charging

	Before charging, make sure that the charger system is in a normal state.
	Before charging, make sure that the charging cable is not damaged, and the charging connector is free of water. If the charging connector gets water, do not charge directly.
	Before charging, the user should fully read the User Manual and be familiar with the safety operation instructions to prevent dangerous operations.
	Before charging, the user should be familiar with the charging operation steps to prevent improper operation.

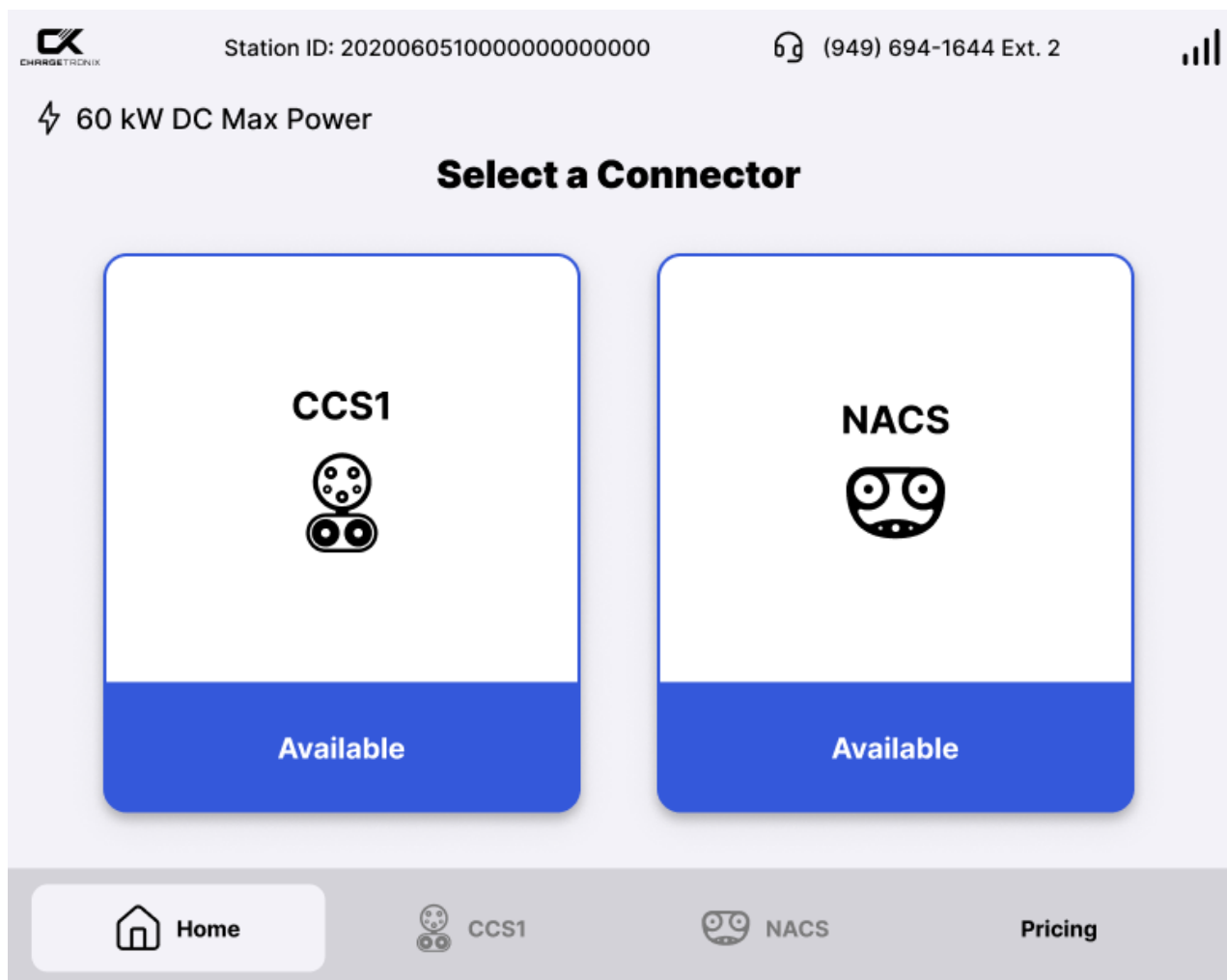
Remarques avant la charge

	Avant de procéder au chargement, assurez-vous que le système de chargement est en état normal.
	Avant de charger, vérifiez que le câble de chargement n'est pas endommagé et que le connecteur de chargement est exempt d'eau. Si le connecteur est mouillé, ne lancez pas la charge.
	Avant de commencer la charge, l'utilisateur doit lire attentivement le manuel d'utilisation et se familiariser avec les consignes de sécurité pour éviter toute opération dangereuse.
	Avant de charger, l'utilisateur doit se familiariser avec les étapes de l'opération de chargement afin d'éviter toute mauvaise manipulation.

5.2 Charging process







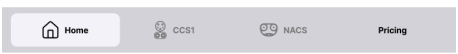
Note: The top half of the screen is used for advertisements, and the bottom half of the screen contains the interactive user interface.

5.2.1 Introduction to screen icons and connector specifications



(Home screen)

1. The meanings of the screen icons are shown in the table below:

Icon	Name	hidden meaning
	Backend Menu Button	Logo of company can vary(This is set during configuration), and button for Backend access
Station ID:	Station ID	Station ID
	customer service hotline	Customer and maintenance calls
	network state	<ul style="list-style-type: none"> : Network and platform are connected : Network is connected, not connected to the platform : Network and platform are not connected Button for quick view popup of Charger Unit Status
 60 kW DC Max Power	Charger Power Level	This displays the Max Power output of the Unit
	Connector Type	American Standard Charge Connector (CCS1)
	Connector Type	Tesla Interface Charge Connector (NACS)
<div>Available</div> <div>Unavailable</div> <div>Charging</div> <div>Fault: xxxx</div>	Indicator status	Connector Available: blue always on Connector Unavailable: gray always on Charging: green always on Fault: red always on
	Bottom Nav Menu	Navigate to Home, Connector States, and Pricing

The picture is for reference only, the charging connector of the whole series of products has two specifications to choose from: CCS1, NACS. Please select the corresponding specification according to the type of socket of the car and the connector that the charger is actually equipped with, and the combination of the charging connector is shown in the table below:

Connector Type	CCS1	NACS
CCS1	CCS1+CCS1	CCS1+NACS
NACS	CCS1+NACS	NACS+NACS

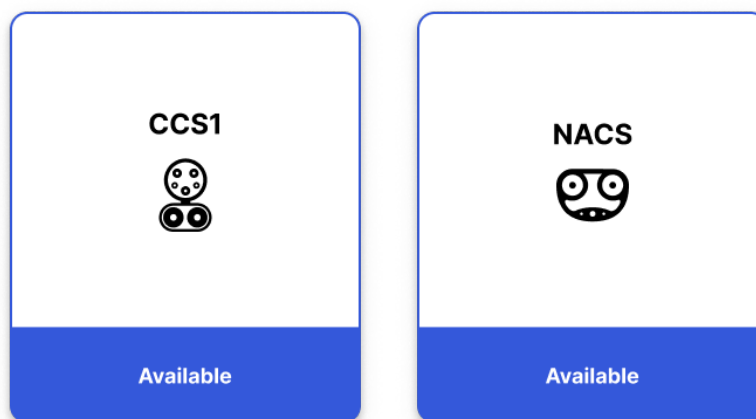
Note: There are single-connector “CCS1” and single-connector “NACS” models, which are not included in the table!

2. Click on the lower right corner of the screen “Language” to switch the interface language, currently supports English. Note: the latter steps no longer show the full screen, only show the operation part!

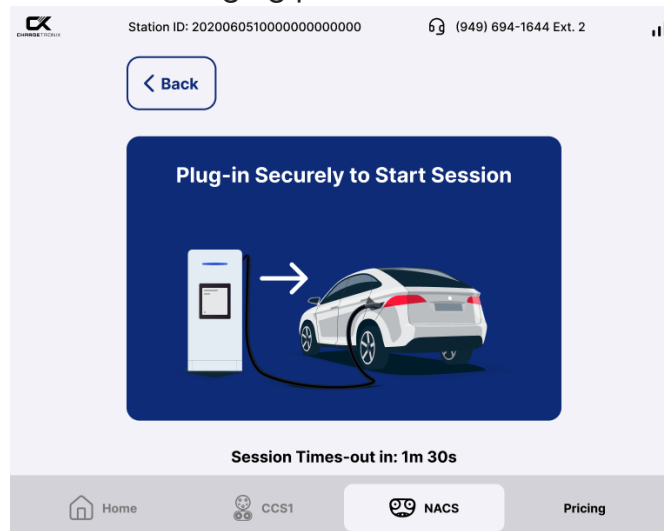
5.2.1 Introduction to screen icons and connector specifications

1. Select the connector as shown below and click on the “CCS1” or “NACS” icon on the screen. Or do not select the connector type directly corresponds to the vehicle socket insert the correct connector, the system will automatically recognize the connector type, then directly jump to step 3. after completing the connection with the vehicle, the status indicator light from green to blue. This screen is also known as the Home screen.

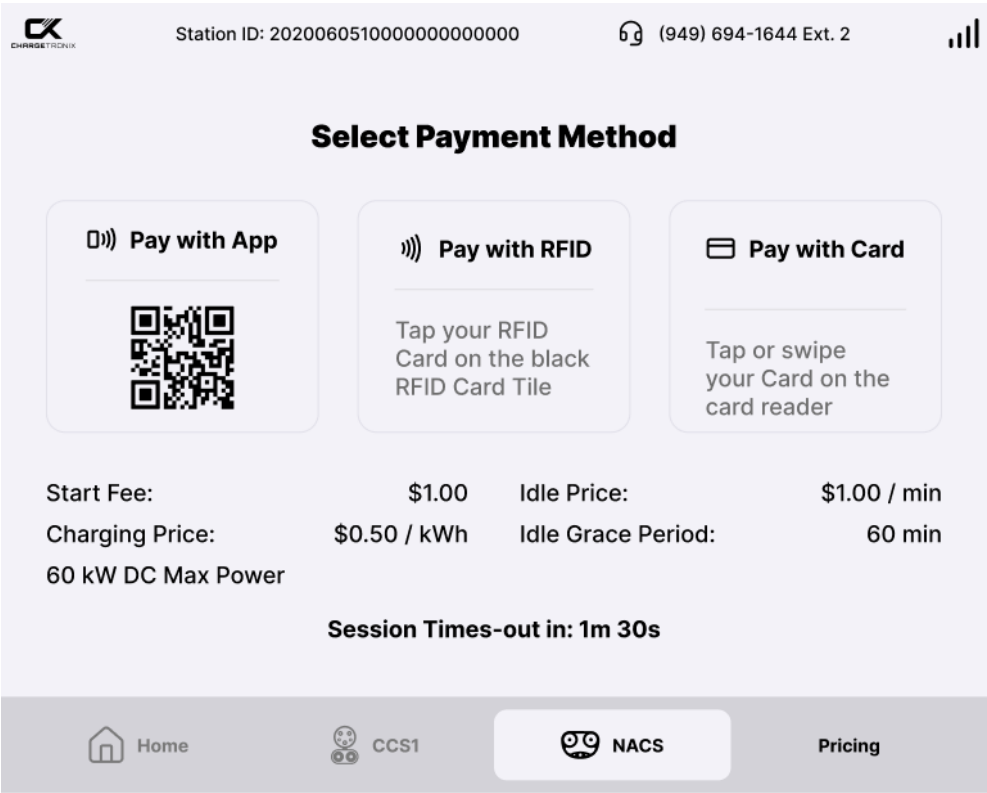
Select a Connector



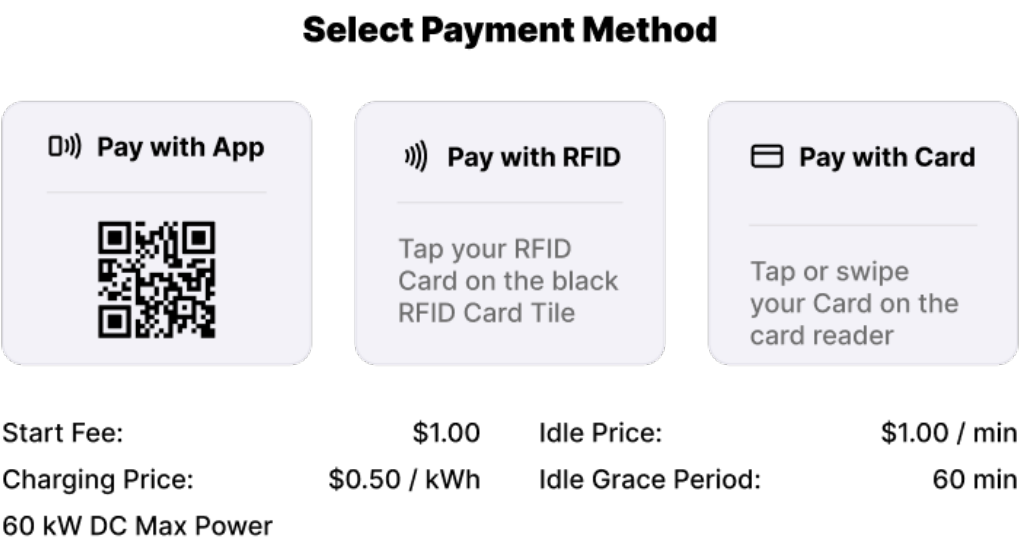
2. Click on the icon will enter the interface shown below, the corresponding connector will be plugged into the car relative to the charging port.



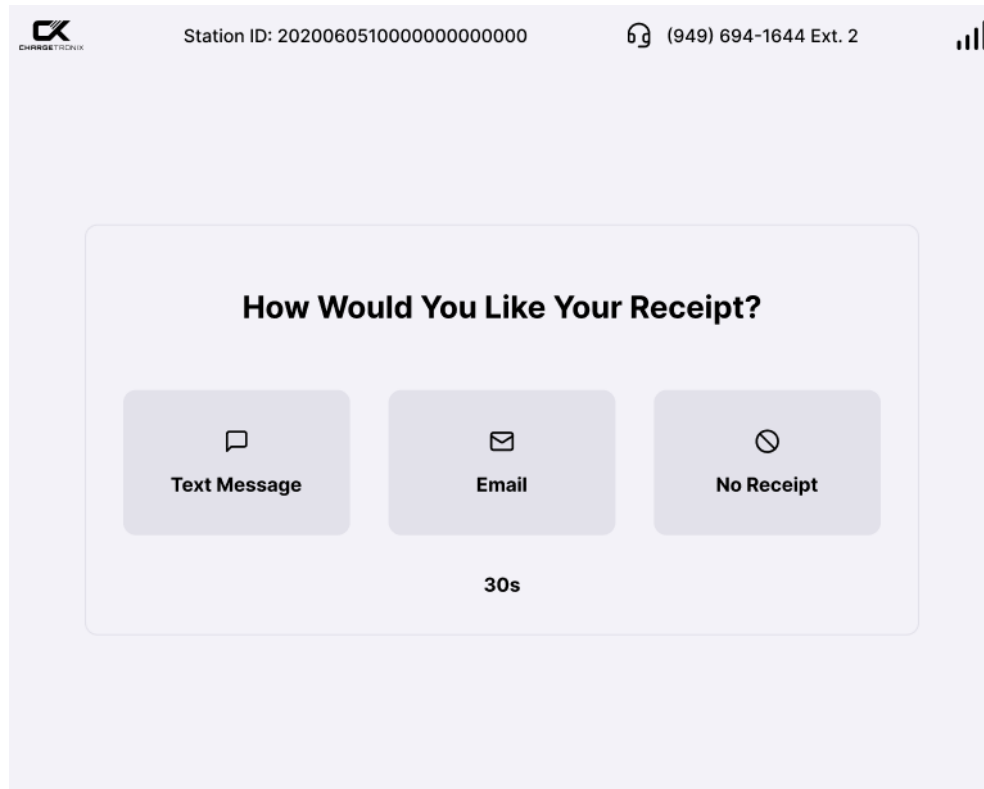
3. After successful connection, you will be asked to select a Payment Method. The user can Pay with App, Pay with RFID, or Pay with Card. Pricing fees will be displayed below and the session has a 90 second time-out window before the user would have to unplug and start again.



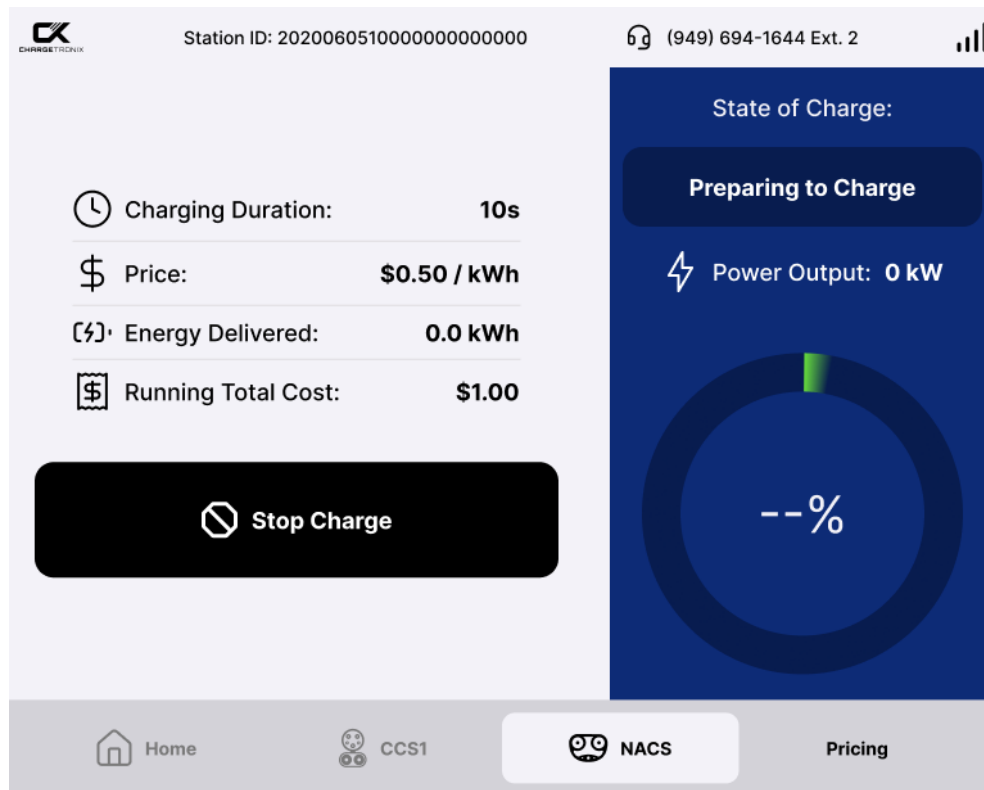
4. While in the Payment Method screen, the charger unit is waiting for authorization via App (if connected), RFID and Credit Card are active during this time.



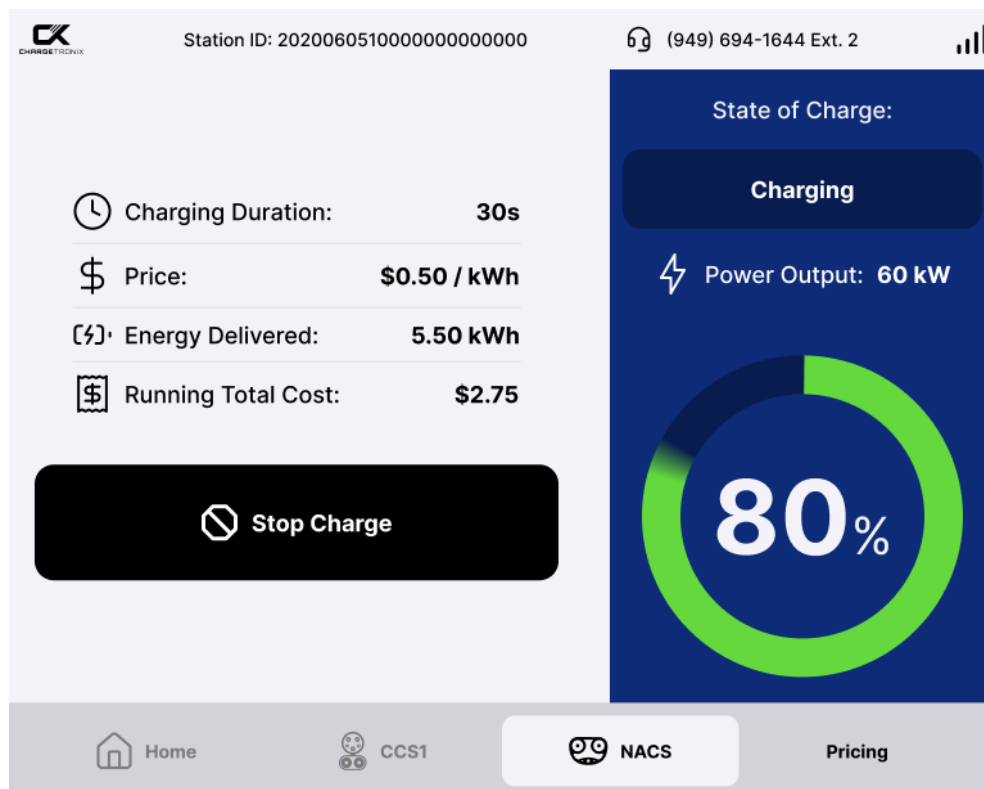
5. After successful payment authorization, the user is presented with a screen asking if they would like a Receipt at the end of the session. The options for receipt are (Dependent on CPMS implementation) Text Message, Email, or No Receipt. If a user selects Text Message or Email, a keyboard will popup at the bottom of the screen, once a user enters their information, the screen will progress to the Charging Status screen or Charging Preparing screen. This screen will time-out after 30 seconds if no option is chosen, and will progress to the Charging Status screen or Charging Preparing screen.



5. Once the charger has an authorized payment, the charger begins the preparing stage.

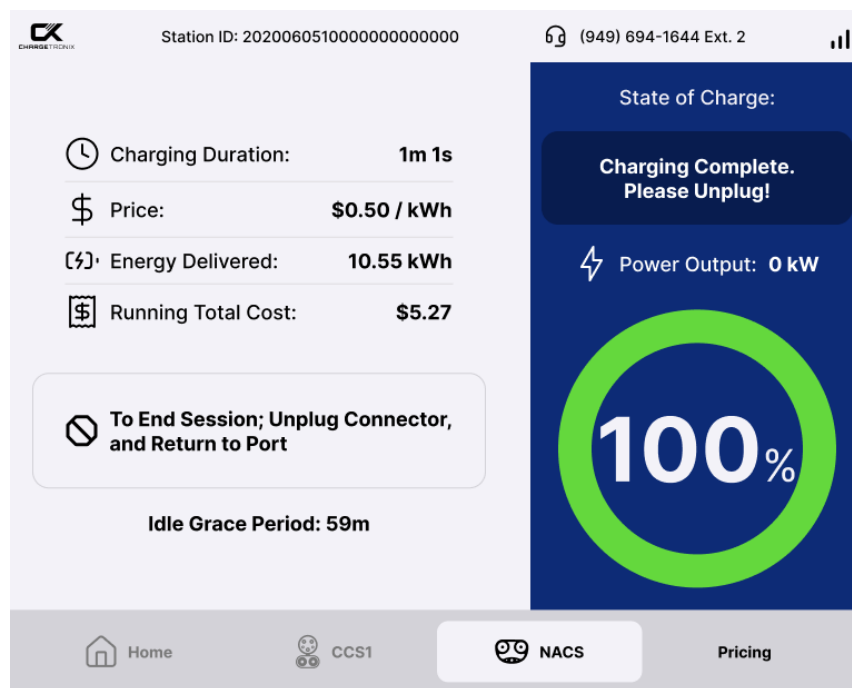


6. Once Preparing to charge is complete, the user can see the charging progress, charging time, charging power and other parameters. This screen will time-out to the Home screen in 30 seconds.

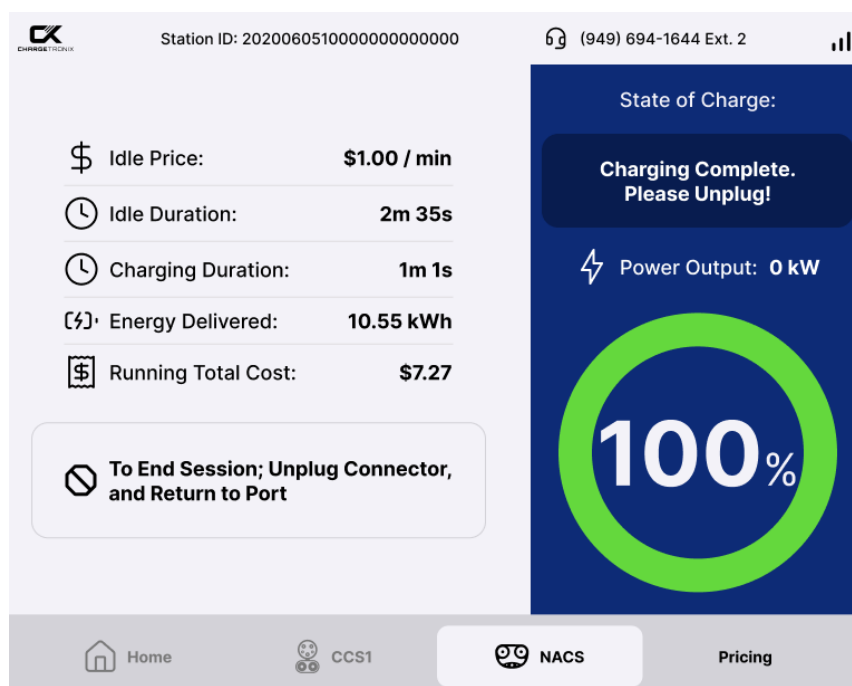


There are 3 ways a charging session can end. 1. A user selects Stop Charge, which stops the power output of the charger. 2. The user's vehicle is %100 full. 3. A user disconnects vehicle from charger.

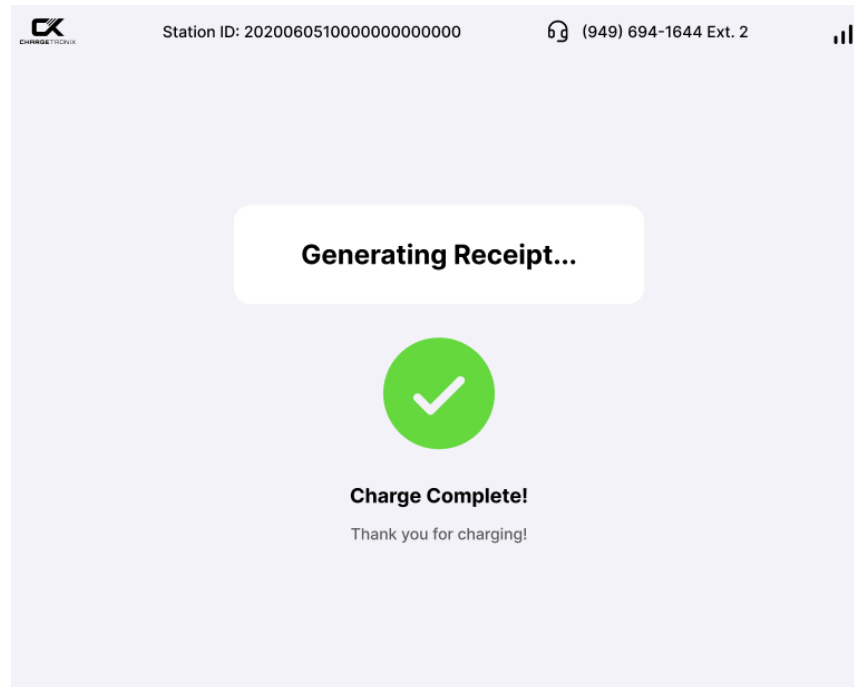
7. Once charging is complete and the user's vehicle is still connected to the charger, they may be given an Idle Grace Period before the user is charged an Idle fee. Note: Fees and pricing can vary by CPMS




8. When the user is in the Idle state, the user has to disconnect vehicle from the charger to end the transaction.





9. Once the user disconnects their vehicle from the charger while in a transaction, the screen will progress to generating a receipt for the user.



10. Once the transaction has been completed, and receipt has been generated. The user will receive their receipt if they selected the option via Text Message or Email and the screen will also display the receipt to the user on the Receipt screen. Depending on CPMS implementaion, this screen may also display a QR code below the Total Session Cost with a link to the receipt. This screen will time-out after 30 seconds going back to the Home screen.


Station ID: 2020060510000000000000


(949) 694-1644 Ext. 2


Receipt

Thank you for charging!

123 Street Street, City, State, 00000

EVSE Station ID: 2020060510

Session Details

Session ID: 1001011562

Session Start Time: 9:50 AM UTC
11/28/2023

Session Duration: Xm Ys
11/28/2023


Max charging speed: 21.00 kW DC


Connector Used: Port B NACS 60kW

Termination Reason: -----

Cost Summary

Charging Price	\$0.50 / kW
Total energy delivered	10.55 kWh
Start Fee	\$1.00
Charging Cost	\$6.27
Sales tax	\$0.00
Idle Time	2 minutes
Idle Price	\$1.00 / min
Idle Cost	\$2.00
Total Session Cost	\$8.27




Home
Screen

6 Simple troubleshooting

Analysis and treatment of common faults

Refer to the maintenance manual for detailed treatment

Error code	Name of alarm or fault	Processing method
7	Lightning protection failure	<ul style="list-style-type: none"> Check the status of surge protector. If the visual window of lightning protection is red, it means it is damaged, please replace it.
1	Emergency stop fault	<ul style="list-style-type: none"> Please check whether the emergency stop button is pressed and not pulled out. If the fault has been solved, please pull out the emergency stop button.
11	Over temperature protection of air outlet	<ul style="list-style-type: none"> Please check whether the air duct of the system is blocked and whether there is too much dust on the dust screen. Please check whether the air outlet fan of charger works normally. If the fan fails, please replace the fan.
32	Access protection	<ul style="list-style-type: none"> Please check whether the cabinet door is completely closed; Confirm that the door is closed, but the alarm still appears. Please check the status of the door switch. If it is damaged, please replace it.
20	Charging module failure	<ul style="list-style-type: none"> Check the module fault code, confirm the fault type and find the fault cause. Pull out the fault module and replace the spare module.
3	RCD action	<ul style="list-style-type: none"> It is necessary to check whether there is insulation fault in the circuit at the back end of RCD; Check whether the casing is reliably grounded.



Notice: in order to prevent personal electric shock accident, all switches of the equipment and front-end power distribution switch of the equipment shall be disconnected during fault detection and treatment, and protective measures shall be taken.



Avertissement : Afin de prévenir tout risque d'électrocution, tous les interrupteurs de l'équipement, ainsi que l'interrupteur de distribution électrique à l'avant de l'équipement, doivent être déconnectés lors de la détection et du traitement des pannes, et des mesures de protection appropriées doivent être prises.

7 After-sales service

If you have any questions or problems, please contact the equipment supplier.

Before contacting the equipment supplier:

- Please check the troubleshooting measures in the chapter “5. Simple troubleshooting”.
- Please record the model and serial number of the equipment (name plate of the equipment) and the failure time.

Contact by Phone: +1 (949) 694-1644 Ext. 2

Contact by Email: Support@chargeptronix.com

Appendix

Module Group Number Setting Guide

240 kW Right Side View

M6(G0 A6)	M5 (G0 A5)
M4 (G0 A4)	M3 (G0 A3)
M2 (G0 A2)	M1 (G0 A1)