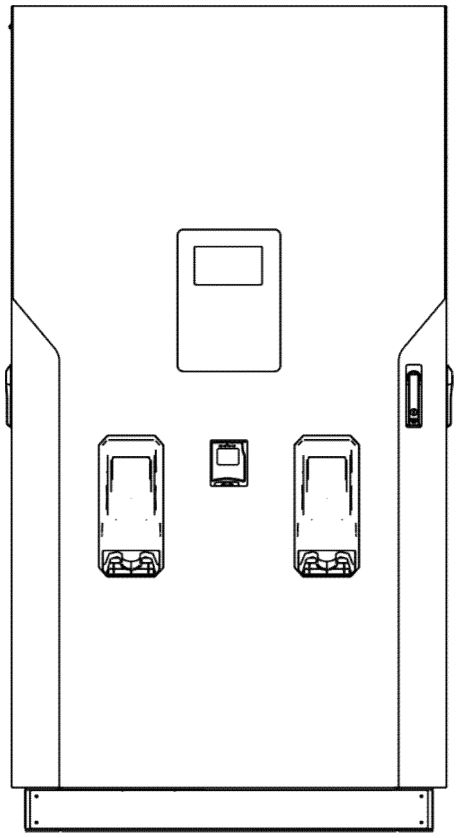
REAL SEE
INTELLIGENCE

DC Charger

Installation and Operation Manual



Version: 1.0

Introduction

The dual-gun DC charger delivers fast and efficient charging for two EVs simultaneously. Its intelligent power distribution, robust safety protection, and Type 3R-rated design make it ideal for commercial and fleet applications requiring reliable and high-performance charging solutions.

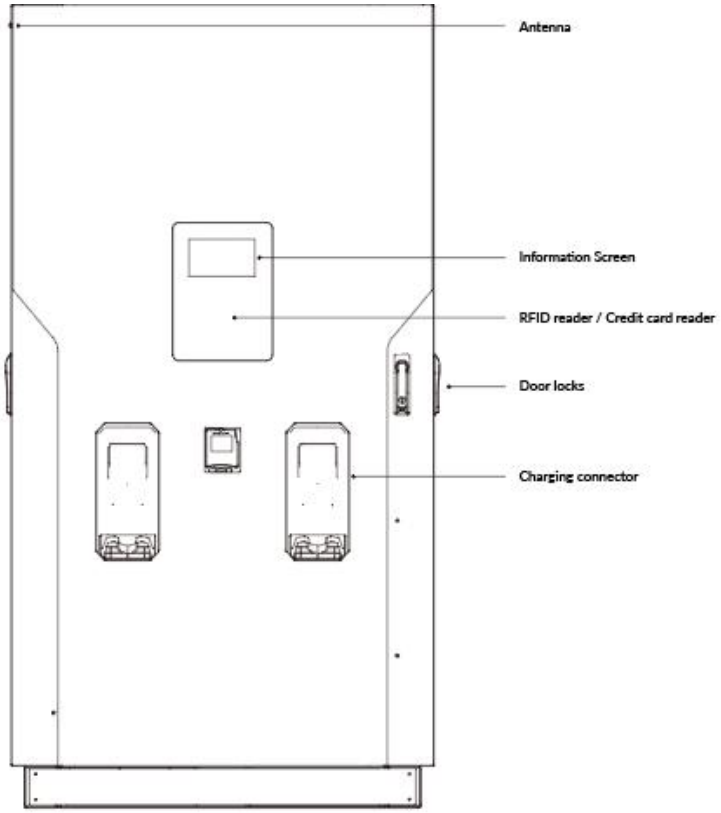
Features

- Wide-Range Fast DC Charging
- Smart Interface and Connectivity Options
- Integrated Payment and User-Friendly Operation
- Durable Modular Architecture for Heavy-Duty Environments
- User-Friendly Cable Management and Comprehensive Protection
- Stable Thermal Architecture for Continuous High-Load Operation

Applications

- Public Parking Lots
- Office EV Parking Areas
- Highway Service Areas
- Fleet Operation Centers
- Large Commercial Charging Stations
- Commercial Fleet Depots
- Logistics and Distribution Hubs
- Industrial Charging Centers

Basic User Interface



Accessory Kit

RFID cards x 2 Keys x 2 User manual x 1 Aluminum base cover x 1 Mounting template x 1

Side wiring cover x 1 Expansion bolts x 4 M12 bolts x 4

Important Safety and Wiring Instructions

1. Safety and Compliance

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

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

This document provides instructions for EV Charger and should not be used for any other product.

The product can only be installed by a licensed contractor, and/or a licensed electrician in accordance with all applicable state, local and national electrical codes and standards in a location with non restricted access.

Service should be carried out in compliance with safety and hygiene requirements work and ergonomics, taking into account the instructions contained in this documentation.

- Before installing the product, review this manual carefully and consult with a licensed contractor, licensed electrician and trained installation expert to ensure compliance with local building practices, climate conditions, safety standards, and state and local codes.
- DC City Charger meets the requirements specified in the regulations by using dedicated devices and systems.
- Do not install or use DC City Charger if the enclosure is broken, cracked, open or shows any other indications of damage.
- Make sure that the materials used and the installation procedures follow local building codes and safety standards.
- Do not put tools, material or body parts into the electric vehicle connector.
- The information provided in this manual in no way exempts the user of responsibility to follow all applicable codes or safety standards.
- The manufacturer is not responsible for physical injury, damage to property or damage to equipment caused during the installation of this device.
- Emergency stop button is available to stop the EVSE when under emergency situation.
- Keeping DC City Charger in technical condition and ensuring cleanliness use without compromising safety.
- Maximum ambient temperature: DC City Charger operates from -20 °C to +50 °C.
- 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.

GROUNDING INSTRUCTIONS - This unit is must be connected to a grounded, metal, permanent wiring system; or an equipment-grounding conductor with circuit conductors and connected to equipment-grounding terminal or lead on battery charger. Connections to battery charger must comply with all local codes and ordinances.

CAUTION

Risk of electric shock. Do not remove cover or attempt to open the enclosure. No user serviceable parts inside. Refer servicing to qualified service personnel.

Risk of electric shock. Refer to bottom of unit for cautionary markings.

Identify parts not earth grounded are not grounded - they presents risk of electric shock. Test before touching.

Have defective cords or wires replaced immediately by a qualified service person.

CAUTION - Risk of electric shock. Capacitor stores hazardous energy. Do not remove cover until 5 minutes after disconnecting all sources of supply.

WARNING

This devices is intended only for charging vehicles not requiring ventilation during charging.

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

DO NOT INSTALL ON OR OVER COMBUSTIBLE SURFACES.

ATTENTION

Risque de choc électrique. Ne pas retirer le couvercle ni essayer d’ ouvrir le boîtier.

Risque de choc électrique. Consulter au bas de l’unité pour voir les marques de mise en garde.

Aucune pièce interne réparable par l’ utilisateur. Confier tout travail d’ entretien ou de réparation à un technicien qualifié.

Pour réduire le risque d’ incendie, remplacez seulement par le même type et les cotes de fusible.

Attention - risque de choc eléctrique. Le condensateur stocke I’ énergie dangereuse. Ne retirez le couvercle que 5 minutes après avoir débranché toutes les sources d’ alimentation

AVERITSSEMENT

Ce dispositif est destiné au chargement des véhicules ne nécessitant pas de ventilation au cours du chargement.

Identifier les pièces qui ne sont pas mises à la terre ne sont pas mises à la terre - elles présentent un risque de choc élecctrique. Testez avant de toucher.

Faites remplacer immédiatement les cordons ou les fils défectueux par une personne de service qualifiée.

NE PAS INSTALLER SUR OU AU-DESSUS DE SURFACES COMBUSTIBLES.

2. Electrical Service Wiring

WARNING!

Danger of electrical shock or injury. Turn off power at the panel board or load center before working inside the equipment or removing any component. Do not remove circuit protective devices or any other component until the power is turned off.

Grounding Instructions

DC City Charger must be permanently grounded. Always connect the Protective Earth (PE) first, before connecting the phase and neutral wiring to avoid hazardous voltage.

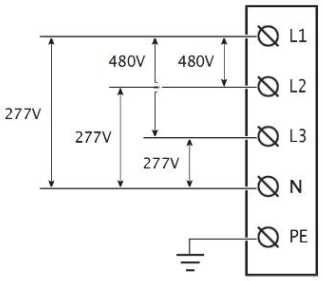
1) An insulated grounding conductor that is identical in size, insulation material, and thickness to the grounded and ungrounded branch-circuit supply conductors except that it is green with or without one or more yellow stripes is to be installed as part of the branch circuit that supplies the unit or system.

2) The grounding conductor described in item 1 is to be grounded to earth at the service equipment or, when supplied by a separately derived system, at the supply transformer.

480V Three-Phase

WARNING!

The following diagram illustrates DC City Charger connection to L1, L2, L3, and neutral in a Wye power grid feed.



Before Installation

- Read all the instructions before using and installing this product.
- 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 on or if there is damage.
- Do not put any tool, material, finger or other body part into the charging connector or EV connector.
- Do not twist, swing, bend, drop or crush the charging cable. Never drive over it with a vehicle.

 **WARNING:**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.

 **WARNING:** 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.

- Power feed must be 3 Phase Wye configuration with TN(-S)/ TT grounding systems.
- In the installation of TN(-S) system: the neutral (N) and the PE of the power distribution are directly connected to the earth. The PE of the charger equipment is directly connected to the PE of power distribution and separate conductor for PE and neutral (N).
- In the installation of TT system: the neutral (N) and the PE of the power distribution are directly connected to the earth. The PE of the charger equipment is isolated to the PE of power distribution to the earth.
- The capacity of power supply should be higher than 196 kVA in order to function correctly.
- The product should be installed in free air area and keep at least 30cm (12 inches) clearance distance to all air vent of the product.
- Recommend to keep not less than 100cm (3 ft. 6 in.) clearance distance from all around the product following NEC table 110.26 condition 2, 151-600V.

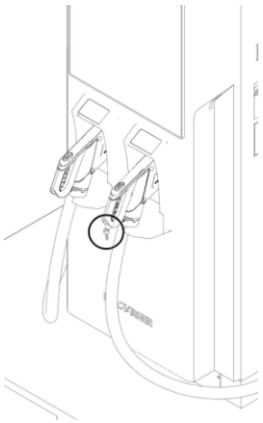
NOTICE

It is recommended to conduct Wi-Fi and 3G/4G signal strength while charger installation. The RSSI (Received Signal Strength Indication) value is considered as good as higher than -65dBm. Poor connection quality might interrupt charging process or data transaction.

Installing the DC Charger

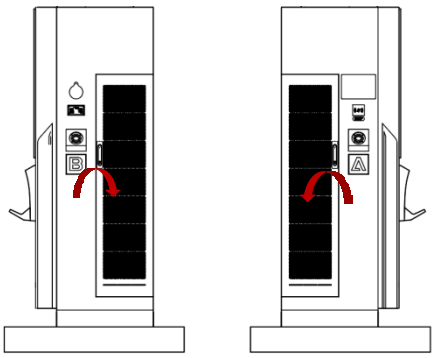
Preparation

1. Take the key from the handle of the charging connector.



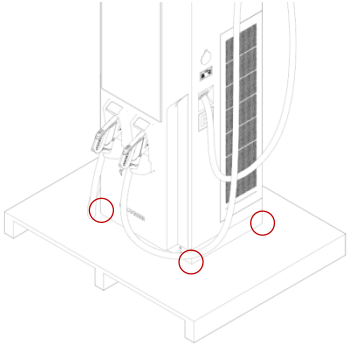
2. Open the left door (clockwise) and right door (anticlockwise).

Press the handle back to the lock slot to make sure that the door lock is closed.



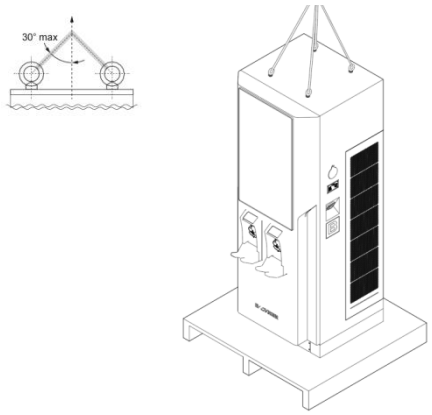
3. Release the 4 screws on the base panel (two sides) with a Torx® Tamper-Resistant T15 & T20 screwdriver. Take out the base panel.

4. Release the screws on the cabinet and pallet with a No. 19 socket wrench.



5. Transport the cabinet.

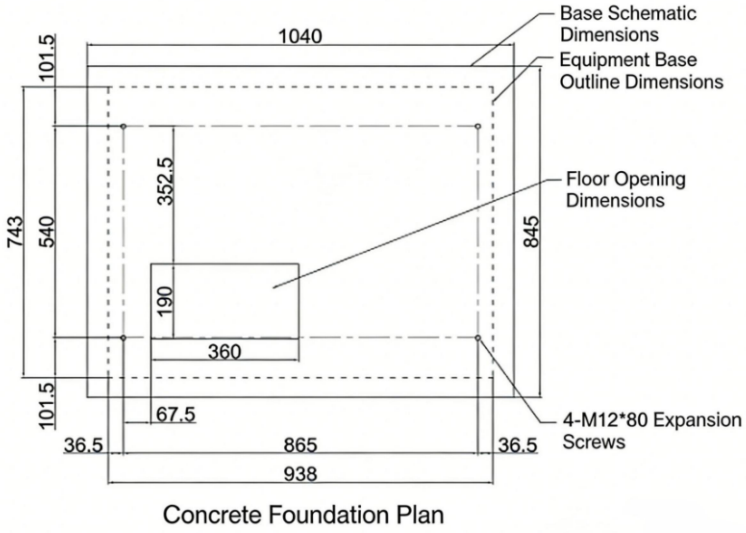
Transporting with the crane: The included angle hanging the cabinet on the top shall be 30° .



6. Replace the eye bolts with M12 bolts x4 with a No. 19 socket wrench after the DC charger has been well-placed.

Ground mounting

The EV Charger shall be installed on the ground. During installation, it must be securely and reliably fixed. It is recommended that the foundation be constructed in accordance with the following foundation drawing:

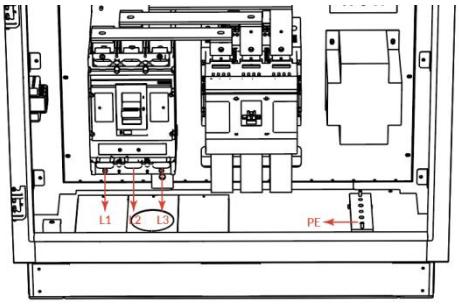


Concrete Foundation Plan

Making the Connection

Power Wiring

- The electrical installation of the DC charger must be carried out under the guidance of professional technical personnel. Open the front door of the charging pile and connect the incoming power cable to the upper terminals of the circuit breaker. Connect the grounding wire to the grounding bolt.
- The charger input uses a three- phase four- wire AC power supply, and the AC incoming current is approximately 235A.
- It is recommended to select copper core cables that meet US standards. Use wire terminals matching the cable cross- section for crimping. The exposed parts of the terminal connections must be insulated with heat- shrinkable sleeves or insulating tape. The wiring is shown in the following diagram:



- The AC incoming cable enters the charger from the bottom and is connected to the AC input terminals and the ground terminal inside the charger. The AC input must be wired in accordance with the incoming line markings. The upstream circuit breaker and distribution cabinet for the charger must be selected and operated by professional electrical personnel.

Power- On Preparation

1. Personnel Requirements

Users must complete operation training before using the charger. During operation, they must wear appropriate work clothes and insulated shoes. Individuals with long hair must wear safety helmets.

2. Pre- Use Inspection

In accordance with electrical operation standards, check the interior of the cabinet for any electrical damage or displacement. Ensure all terminals are securely crimped and free of damage or burning.

Open the front cabinet door, set the circuit breaker to the ON position, and close the control circuit air switch to perform a continuity test and ensure there is no short circuit.

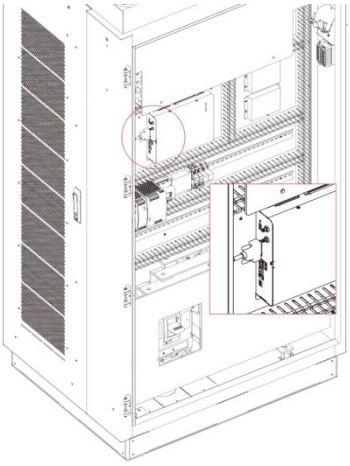
Set the circuit breaker to the OFF position to disconnect it. Turn off the control circuit air switch and connect the AC input power cable.

After applying AC input power, first confirm that the emergency stop button is in the released position. Then turn on the circuit breaker and air switch, and use a multimeter to verify that power has been applied.

Before charging, inspect the charging gun, the insulators of the charging socket, the pins, and the jacks for any foreign objects. If any foreign objects are found, please clean them.

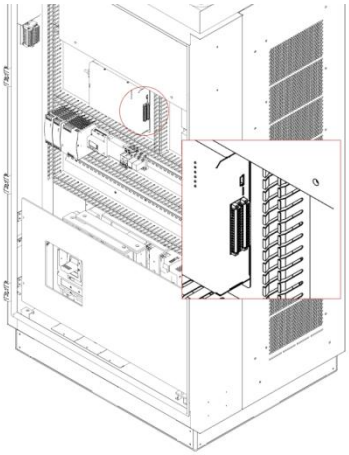
Ethernet Connection

1. It is recommended to connect Ethernet cables through the underside access ports. It is necessary to open the front cover and the left door.
2. Make sure that the cable passes through the grommet and reaches the Ethernet terminal on the upper controller, as shown in the following figure.
3. Connect the Ethernet cable to the Ethernet terminal.
4. Fasten the cable on the brackets with cable ties.



Cellular Connection

1. Open the door.
2. Insert mirco SIM card onto the micro SIM interface on the upper controller.

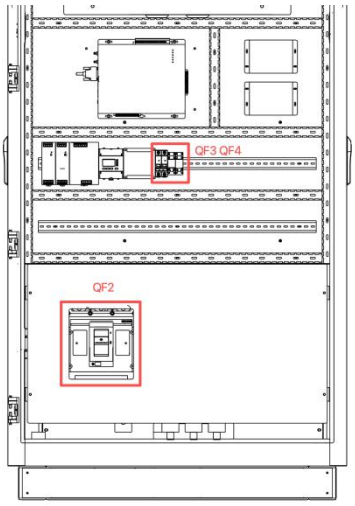


Note:

Insert a valid SIM card as detailed above to start cellular connection. Consult with local operator to activate data service on the SIM card beforehand. Disable PIN check on the SIM card before inserting the card into the modem. Request APN information from the operator and make sure APN is configured correctly via the configuration tool.

Switch on DC Charger

1. Open the door of City Charger, AC input breaker QF2, QF3, QF4 are marked on the side panel. Follow the steps to turn on City Charger: QF3 — QF4 — QF2.



2. Switch the power on to initialize DC Charger.
3. DC Charger is ready to charge.
4. To switch off City Charger, open the left door of City Charger, AC input breaker QF2, QF3, QF4 are marked on the side panel. Follow the steps to turn on City Charger: QF2 — QF4 — QF3.

WARNING!

Under emergency situation, press Emergency button to stop power output.

Operation

1. Choose a compatible charging connector.
2. Connect the charging connector to the EV.
3. Swipe the authorized RFID card to start charging.

4. Once charging session starts, status information is displayed on the screen.

5. To stop charging session, press Stop on the screen and swipe the authorized RFID card.

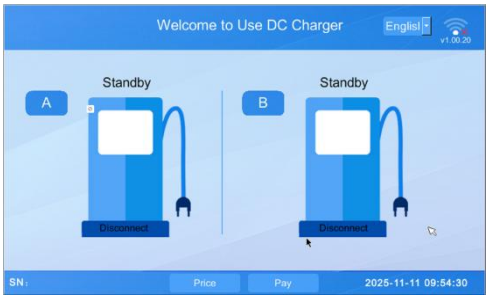
6. Return the charging connector to the holder.

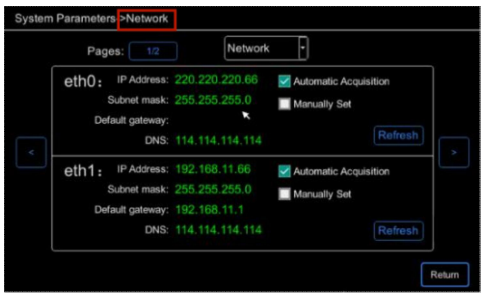
System Configuration

To enter the system interface for debugging

Tap the top-left and top-right corners of the screen repeatedly in the sequence left → right → left → right, as indicated by the red boxes in the diagram below. Continue until the login dialog appears.

Select Admin Mode. The default password is the current day of the month followed by 1234. For example, if today is the 25th, the password would be 251234.





System Code

Error Code	Fault Cause	Error Code	Fault Cause
0	No Error	30	Charging Module Over-Temperature Fault
1	E-Stop Button Pressed	31	Charging Module Communication Alarm
3	AC Circuit Breaker Fault	32	Charging Module Fan Alarm
4	DC Bus Output Contactor Fault	33	Access Control Fault
5	DC Bus Output Fuse Fault	34	DC Output Contactor Adhesion Fault
6	Charging Port Electronic Lock Fault	35	Insulation Monitoring Alarm
7	Charger Fan Fault	36	Discharge Circuit Fault
8	Surge Protector Fault	37	Charging Pile Over-Temperature Alarm
9	Insulation Detection Fault	38	Charging Gun Over-Temperature Alarm
11	Vehicle Control Pilot Fault During Charging	39	AC Input Contactor Refusal/Maloperation Fault
12	Charging Pile Over-Temperature Fault	40	AC Contactor Adhesion Fault
13	Charging Port Over-Temperature Fault	41	Auxiliary Power Supply Fault
14	Charging Gun Not Returned Alarm	42	Parallel Contactor Refusal/Maloperation Fault
15	BMS Communication Fault	43	Parallel Contactor Adhesion Fault
16	AC Input Over-Voltage Fault	44	Charging Module Communication Fault
17	AC Input Under-Voltage Fault	103	Energy Meter Communication Lost
18	DC Bus Output Over-Voltage Fault	104	IC Card Reader Communication Lost
19	DC Bus Output Under-Voltage Fault	105	Communication Fault with Upper Computer
20	DC Bus Output Over-Current Fault	225	BMS Abnormal Charging Termination
21	Charging Module Fault	226	Charging Pile Detects Other BMS Abnormal Termination
22	Charging Module AC Input Fault	1009	Network Disconnection Shutdown
23	Charging Module Input Over-Voltage Fault	1110	Card Swipe Shutdown
24	Charging Module Input Under-Voltage Fault	1018	Account/Password Shutdown
25	Charging Module Input Phase Loss Fault	1019	Reached Charge Limit Shutdown
26	Charging Module Output Short-Circuit Fault	1020	Reached Amount Limit Shutdown
27	Charging Module Output Over-Current Fault	1021	Reached Time Limit Shutdown
28	Charging Module Output Over-Voltage Fault	1022	Insufficient Account Balance
29	Charging Module Output Under-Voltage Fault	1023	Stopped at Server-Preset SOC

Maintenance

Annual Requirements

1. Replace the ventilation filter.
2. Conduct a visual inspection of the charging cable and ensure that the cable does not show any visual damage or deformation.
3. Conduct a visual inspection of the charging connector and ensure that the connector does not show any visual damage, arcing or rust.

WARNING!

To avoid danger of electrical shock or injury, turn off power at the panel board or load center before working on the equipment or removing any component. Do not remove circuit protective devices or any other component until the power is turned off.

Disconnect electrical power to DC City Charger before any maintenance work to ensure that 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.

Note:

Even when the key switch is turned off, the circuit before the main terminal is still hazardous. Please only operate visual inspection at this moment.

Maintenance of the DC City Charger shall be conducted only by a qualified technician.

After opening the front door, turn off the main breaker and auxiliary breaker before any maintenance work.

Specifications

Model Number	CNAC-60kW/2 Series	CNAC-120kW/2 Series	CNAC-180kW/2 Series
Product Type	DC Fast Charging Station		
Output Voltage	200-1000V DC		
Input Voltage	480V AC, 50/60 Hz		
Max Input	78A	156A	233A
Output Current	5-200A	5-400A	5-500A
Maximum Power Output	60kW	120kW	180kW
Input Wire	TN-S, L1+L2+L3+N+PE		
Charging Connector Type	CCS1		
Cable Length	Cable Management, 2×18FT/5.5m Standard (2×25FT/7.5m Optional)		
Charging Modes	Mode 4		
Charging Protocols	OCPP 1.6, ISO 15118		
Dimensions (H × W × D)	2103mm*1036.4mm*1244.2mm		
Weight	200kg	280kg	360kg
Operating Temperature	-20°C to 50°C(-4°F to 122°F)		
Operating Humidity	<95% Non-condensing		
Altitude	Up to 2000m		
Enclosure Rating	NEMA Type 3R		
Protection Function	Under current Protection, Over current Protection, Under voltage Protection, Over voltage Protection, Short Circuit Protection, Residual Current Device, Over Temperature Protection, Surge Protection, Ground Fault Protection, Control Pilot Fault Protection, Leakage Protection		
Emergency Stop	E-stop Button		
Communication Interface	7-inch Touchable Screen(10inch Optional), Ethernet, Bluetooth/Wi-Fi, OCPP 1.6J platform, 4G(Optional)35-inch LCD Advertising Screen, Wi-Fi, LAN Ethernet, 4G		
Control Method	RFID card(offline and online), Nayax POS, Plug n Play, VIN code, QR code, Credit Card		
Mounting Type	Floor Standing Installation		
Compliance Standards	CSA, FCC, Energy Star, NTEP compliance, ISO15118 compliance		
Standards	NEC625, UL817, UL991, UL2231, UL2251, UL2202, OCPP1.6J Compliance		
Warranty Period	3 years		
Indicator Light	Standby: Green on; Charging: Green flashes; Fault: Red on		
Lighting	Atmospheric Neon LED Light		
Heat Dissipation Method	Air Cooling		
Recommended Air-break	100A	200A	300A
Recommended Input Cable Type	2 AWG, 90℃, copper	4/0 AWG, 90℃, copper	400Kcmil, 90℃, copper

Model Number	CNAC-240kW/2 Series	CNAC-300kW/2 Series	CNAC-360kW/2 Series
Product Type	DC Fast Charging Station		
Output Voltage	200-1000V DC		
Input Voltage	480V AC, 50/60 Hz		
Max Input	311A	385A	466A
Output Current	5-700A	5-700A	5-700A
Maximum Power Output	240kW	300kW	360kW
Input Wire	TN-S, L1+L2+L3+N+PE		
Charging Connector Type	CCS1		
Cable Length	Cable Management, 2×18FT/5.5m Standard (2×25FT/7.5m Optional)		
Charging Modes	Mode 4		
Charging Protocols	OCPP 1.6, ISO 15118		
Dimensions (H × W × D)	2103mm*1036.4mm*1244.2mm		
Weight	440kg	520kg	600kg
Operating Temperature	-20°C to 50°C(-4°F to 122°F)		
Operating Humidity	<95% Non-condensing		
Altitude	Up to 2000m		
Enclosure Rating	NEMA Type 3R		
Protection Function	Under current Protection, Over current Protection, Under voltage Protection, Over voltage Protection, Short Circuit Protection, Residual Current Device, Over Temperature Protection, Surge Protection, Ground Fault Protection, Control Pilot Fault Protection, Leakage Protection		
Emergency Stop	E-stop Button		
Communication Interface	7-inch Touchable Screen(10inch Optional), Ethernet, Bluetooth/Wi-Fi, OCPP 1.6J platform, 4G(Optional)35-inch LCD Advertising Screen, Wi-Fi, LAN Ethernet, 4G		
Control Method	RFID card(offline and online), Nayax POS, Plug n Play, VIN code, QR code, Credit Card		
Mounting Type	Floor Standing Installation		
Compliance Standards	CSA, FCC, Energy Star, NTEP compliance, ISO15118 compliance		
Standards	NEC625, UL817, UL991, UL2231, UL2251, UL2202, OCPP1.6J Compliance		
Warranty Period	3 years		
Indicator Light	Standby: Green on; Charging: Green flashes; Fault: Red on		
Lighting	Atmospheric Neon LED Light		
Heat Dissipation Method	Air Cooling		
Recommended Air-break	400A	500A	600A
Recommended Input Cable Type	2*250Kcmil, 90℃, copper	2*300Kcmil, 90℃, copper	2*400Kcmil, 90℃, copper

FCC Caution.
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.
Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.