VERDEXON

BORN FROM EARTH, BUILT FOR TOMORROW

Installation, Operation & Maintenance Guide.

Earth Ultra Series DC Charger

40kW - 240kW

Table of Contents

1. Introduction and General Information

1.1 Disclaimer and Warranty Conditions

The equipment manufacturer shall not be liable for any damages, losses, costs or expenses resulting from improper handling, installation and use of the products described in this document, in particular losses resulting from failure to comply with the instructions of this document and other applicable regulations and standards, (e.g., installation, transportation, occupational health, digital security, and other safety standards).

1.2 Purpose and Scope of This Document

The document applies to these devices (including all variants and options): NEDF series
The purpose of this document is to provide the safety information needed to accomplish the following tasks:

- Transport and store equipment
- Install the equipment
- Operate the equipment
- Perform basic maintenance tasks

NOTE
This manual only covers the charging station itself, and does not include the part of other devices (e.g. external protective devices, electric vehicles, etc.) that are connected to it. Some of the component information provided in this manual was taken from the original supplier documentation. Please consult the supplier's website for complete and updated documentation.

1.3 Language

The original description of this document was written in English (EN-US). All other language versions are translations of the original instructions and the manufacturer is not responsible for errors in the translation. If in doubt, please refer to the original English version.

1.4 How to Use This Document

Make sure you understand the structure and content of this document. Read the safety section and make sure you understand all the instructions. Follow the steps in the program exactly and in the correct order.

1.5 Abbreviation

Abbreviation	Description
EV	Electric Vehicle
EVSE	Electric vehicle Supply Equipment
AC	Alternating Current
DC	Direct Current
CAN	Controller LAN
CCS	Combination Charging System, a standard charging method for electric vehicles
CPU	Central Processing Unit
EMC	Electromagnetic Compatibility
HMI	Human-Machine Interface
HVC	Heavy-Duty Vehicle Charger
MCB	Miniature Circuit Breakers
MID	Measuring Instruments Directive
NFC	Near-field communication
OCPP	Open Charging Pile Protocol
PE	Protective Earth
PPE	Personal Protective Equipment
RCD	Residual current device
RFID	Radio Frequency Identification (RFID) technology
SPD	Surge Protection Devices

1.6 Term

Term	Description
Cabinets	The enclosure of the EVSE, including the internal components
Charging power module	Converts alternating current (AC) to direct current (DC) for use by the charging control unit
Interlocks	Interlocks are the properties of independent current loops that make the state of two mechanisms or functions dependent on each other
Cable margin	Leave some extra cable length from the top of the foundation to ensure that the cable length is long enough to connect to the correct terminals of the EVSE
Grid suppliers	A company responsible for transporting and distributing electricity
Local rules	All rules that apply to the entire life cycle of EVSE, including local national laws and regulations.
Open Charging Pile Protocol	An open standard for communicating with charging stations
Protective equipment	Personal protective equipment to protect individuals from injury or electric shock when performing commissioning, operation, and maintenance activities. Guards include doors, electrical component covers, latches, etc
Site Operator	The entity responsible for the day-to-day control of the Electric Vehicle Supply Equipment (EVSE). The site operator is not necessarily the owner
Qualified installers	An installer is a qualified person who has installed an electric vehicle charging equipment (EVSE) in accordance with applicable local regulations and has a good understanding of the device and its safe installation. Qualified installers follow all local regulations as well as instructions in operating and installation manuals.
Owner	The legal owner of electric vehicle charging equipment (EVSE).
User	People who use electric vehicle charging equipment (EVSE) to charge their electric vehicles

2. Safety Precautions

Before transporting, storing, installing, operating, and maintaining the equipment, please read this manual carefully, strictly follow the instructions provided in the manual and on the equipment labels, and pay attention to relevant safety precautions.
The safety precautions mentioned in this manual are only valid when used in conjunction with the additional safety standard measures applicable to the installation site, and the instructions provided in the manual do not replace:
• Safety devices
• Technical and operational data labels on the product
• The current safety regulations of the country of installation

NOTE
Operators must read and follow the technical information and instructions provided in the manual and any additional documentation.

2.1 User's Responsibilities and Eligibility

Operators responsible for installation, operation, maintenance and service must:
• Comply with applicable local laws and regulations.
• Before starting work, identify any possible hazards and conduct risk assessment and elimination.
• Operate the appliance with the protective device installed and ensure that all protective devices are reinstalled after any installation or maintenance operation.
• Prepare and execute an emergency plan that instructs people on what to do in case of an emergency related to charging equipment or other on-site emergencies.
• Ensure that all employees, owners, and third parties are qualified to perform their jobs in accordance with applicable local laws and/or regulations.
• Ensure that there is enough space around the equipment for safe handling, commissioning, maintenance, and installation activities.

2.2 Environmental conditions

This device has a fast charging function and is suitable for eligible indoor and outdoor environments.

DANGER
The manufacturer is not responsible for any risks and damages associated with any use other than those described in this manual. The device should only be used for its intended purpose as set forth in this manual.

2.2.1 Precautions

• Please do not place the charging pile in a flammable environment or under impermissible environmental conditions.
• The installation and use of equipment need to consider specific conditions such as temperature and humidity, and it is strictly forbidden to place it in a high humidity or high temperature environment, and it is strictly forbidden to smoke and fire (open flames), ensure smooth ventilation, and do not place it in places with corrosive gases or excessive dust.
• Avoid direct sunlight or near heat sinks. For outdoor use, it is recommended to install an awning on top of the charging pile to prevent direct sunlight, which may cause the charging pile to overheat during operation.
• Do not place any heavy objects on the charging pile.
• A short circuit inside the charging station may cause a risk of electric shock or fire, so do not place a container with liquid above the charging station to avoid such hazards.

DANGER
Do not proceed with the installation if the integrity of the charging station is compromised. Do not use the equipment if any operational abnormalities are detected.

2.2.2 Residual Risk

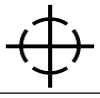
Despite warnings and safety systems, there are still some residual risks that cannot be eliminated. These risks are listed in the table below, with some recommendations to prevent them:

Risk Analysis and Description	Suggest Action
noise pollution	Assess the environment or installation site in strict accordance with the standards of the relevant specifications
The electrical energy stored in the components can produce dangerous discharges	Wait at least 15 minutes after turning off the EVSE and perform the total power-down procedure before performing work on the charger's internal components
EVSE contains components and circuit boards that are sensitive to electrostatic discharge	Take ESD precautions to protect electronic components during the installation and maintenance of the EVSE
Overheating of components can cause burns	Use appropriate personal protective equipment (PPE). Before turning on the EVSE, make sure the parts have cooled
Blocked EVSE cooling system airflow may lead to equipment overheating	Clean cooling vents or radiators to ensure adequate airflow for equipment cooling
The security label cannot be read	Clean the EVSE, labels, and installation environment regularly
The installation is incomplete, and the EVSE or its components are installed temporarily	Prevent unauthorized access to the installation area by setting up obstacles and placing warning signs indicating the status of the EVSE
Insufficient staff training	Require pre-job training and provide enhanced training sessions
Unless expressly stated by the vehicle manufacturer, no extension cords, adapters, Y-cables, or similar devices may be used	Adhere to manufacturer and national guidelines and regulations regarding charging stations
User-owned AC cables may be damaged	Inspect the integrity of the cable and connector before connecting it to the EVSE

2.3 General Signs and Signal Words

In manual and on equipment, hazardous or hazardous areas, components are identified by symbols, icons, or labels to indicate the precautions to be followed during installation, operation, and maintenance of equipment. The safety symbols are shown in the following table:

Symbol	Description
	General Risks With the signal word "Danger": failure to follow instructions could result in injury ordeath. With the signal word "warning": Failure to follow instructions may result in injury. With the signal word "Caution": Failure to follow instructions may result in damage to EVSE or other property.
	Voltage with a risk of electric shock
	High-temperature surfaces may pose a risk of burn injuries
	With the signal word “Note”: Notes provide additional information to make steps easier to perform.
	Information about the condition of the EVSE before starting the program
	Personnel requirements needed to perform a specific procedure.

Symbol	Description
	General safety guidance for the procedure
	Information on spare parts required for the procedure
	Supporting device information required by the program
	Information on supplies (consumables) required for the procedure
	Make sure to disconnect the power supply to the EVSE
	Electrical technical expertise is required according to local regulations
	alternating current
	direct current
	Protective Earth (PE)
	A sign indicating that the manual must be read before installing the EVSE
	Waste of electrical and electronic equipment
	Center of gravity (CoG)

2.4 Personal Protective Equipment

Personal protective equipment (PPE) refers to clothing or equipment designed to protect and reduce an employee's exposure to workplace hazards and injuries.

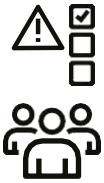
symbol	description
	Protective clothing
	Safety gloves
	Safety shoes
	Eye protection
	Helmet

2.5 Safety Instructions

• Follow the steps indicated in this manual to perform the procedure.
• You may perform any services as a qualified installer or for a user of the device only if you are fully qualified.

DANGER
In the event of any inconsistency or contradiction between any of the requirements or procedures in this manual and local laws and/or regulations, please observe the stricter conditions.

2.5.1 Safety Instructions - Transportation of Equipment



• Wear the correct personal protective equipment.
• Lifting equipment should only be used to lift the equipment as specified in this manual.
• Consider the weight and center of gravity of the charging station.
• Follow the applicable safety instructions for lifting equipment or forklifts.

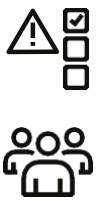
2.5.2 Safety Instructions - Installation of the Equipment

• Wear the correct personal protective equipment.
• Before proceeding with any installation activities, make sure that there is no voltage on the input cable.
• During installation, ensure that untrained personnel maintain a safe distance.
• Use sufficiently sized and insulated wires to handle rated current and voltage needs.
• Ensure that the load capacity of the grid meets the requirements of the equipment.
• Adopt designated safety devices and protective equipment in accordance with local regulations.
• Ensure that the connection to the charging station complies with all applicable local regulations.

Additional instructions during ground operations:

• Ensure that the equipment used in the ground works has been certified.
• Comply with all applicable local regulations.

2.5.3 Safety Instructions - Maintenance of Equipment



• Wear the correct personal protective equipment.
• Make sure that there is no supply voltage on the input cable throughout the cleaning or maintenance process.
• During cleaning or maintenance, ensure that unauthorized personnel keep a safe distance.
• It is strictly forbidden to use products that may corrode equipment parts or generate static electricity.
• If safety or protective devices must be removed for cleaning or maintenance, restore them to their original condition as soon as the work is complete.
• There is high voltage in the power switch cabinet and charging station, and it is strictly forbidden to open the charging pile cabinet at will.

2.5.4 Safety Instructions - Use of EVSE

• It is strictly forbidden to use equipment with faulty or disabled identification.
• Unless expressly stated otherwise, the appliance or parts of the appliance may not be connected to other machines or equipment.
• It is strictly forbidden to arbitrarily modify the operating parameters in order to change their performance or change their isolation.

• Do not use the device if it presents a safety hazard.
• This includes, but is not limited to, the following: severe weather such as thunderstorms; damage to the safety fence; The EV charging cable or connector is damaged; There is a risk of an accident or fire in the vicinity of the charging station; Water got into the device; The device shows signs of impact, lightning strike, or other damage.

2.6 Discard the Equipment or Part of The Equipment

Hazardous substances may be present in equipment and equipment parts, and improper waste disposal can have a negative impact on the environment and human health. Proper disposal of used equipment and parts helps to promote the reuse and recycling of materials and protect the environment.

• Comply with local laws and regulations when discarding parts, packaging materials, or charging stations.
• Electrical and electronic equipment is disposed of separately in accordance with the regulations for the disposal of waste electrical and electronic equipment.
• At the end of use, please do not mix or dispose of the device with household waste, and should hand over the device to a waste collection point in the local community for recycling.
• For more information, please contact your country's government waste management department.

2.7 Cybersecurity

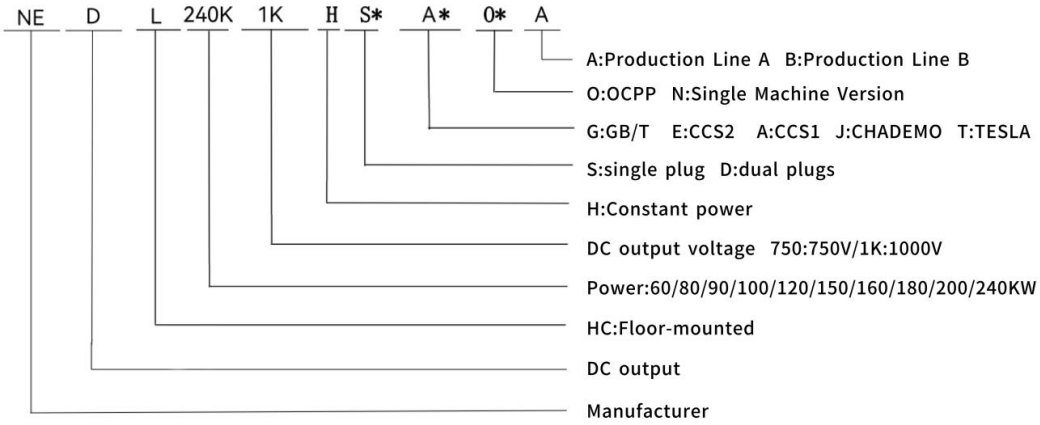
The network communication function of the product is designed to connect and transmit information and data through a network interface. The Owner and the Operator agree to use the Product and its features at their own discretion and risk, and are the decision-makers and sole responsible parties for providing and maintaining a secure connection between the Product and the network. The Owner and the Website Operator shall establish and maintain effective cybersecurity measures (such as, but not limited to, the installation of firewalls, application of authentication measures, data encryption, installation of anti-virus programs, etc.) to protect the Products, networks, systems and interfaces from any security breaches, unauthorized access, interference, incursions, leaks and theft of data and information.
Owners and venue operators who use embedded software do so at their own risk and are responsible for quality, accuracy, and performance. The device manufacturer shall not be liable for damages and/or losses related to such security breaches, any unauthorized access, interference, incursion, leakage, and/or theft of data or information.

3. Product Overview

3.1 Overview

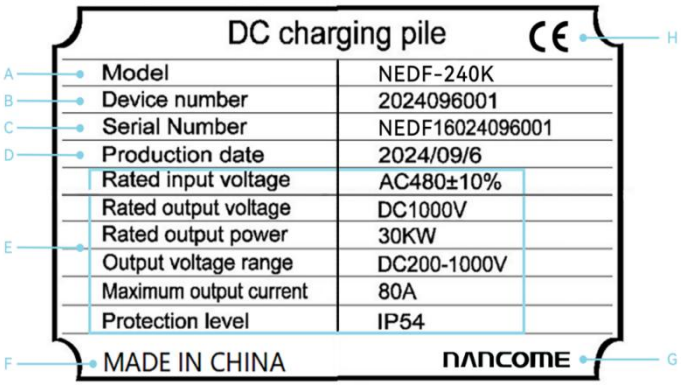
HC fixed ac-dc DC charging pile is a DC charging equipment that specializes in providing fast charging services for electric vehicles, integrating human-computer interaction, charging control, metering and billing, fee payment, remote communication and intelligent safety protection. The product series has a variety of power configurations, charging interfaces have different standard configurations such as GBT/T, CCS2, CCS1, CHAdeMO, single and double guns are optional, and double guns can be freely combined with different standard charging interfaces.

3.1.1 Product Model Description



3.1.2 Model Nameplate - Equipment Identification

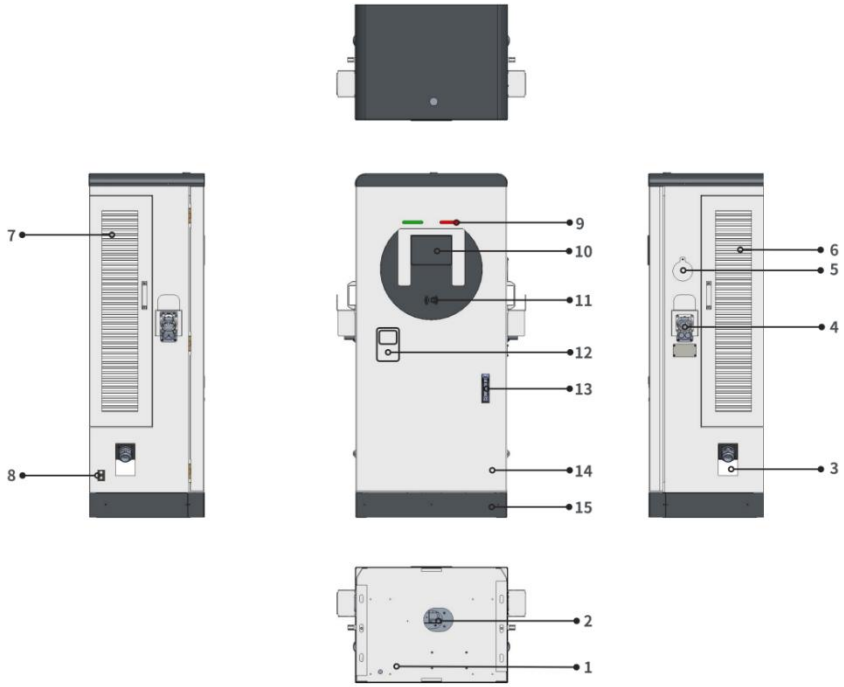
Number	Description
A	The model name of the electric vehicle power supply equipment
B	The internal number of the electric vehicle power supply device
C	The serial number of the electric vehicle power supply equipment
D	The date of manufacture of the electric vehicle power supply equipment
E	The main technical parameters of the power supply equipment of electric vehicles
F	Producer
G	manufacturer
H	CE marking



NOTE
Please find the nameplate on your Electric Vehicle Charging Equipment (EVSE) to view the relevant data.

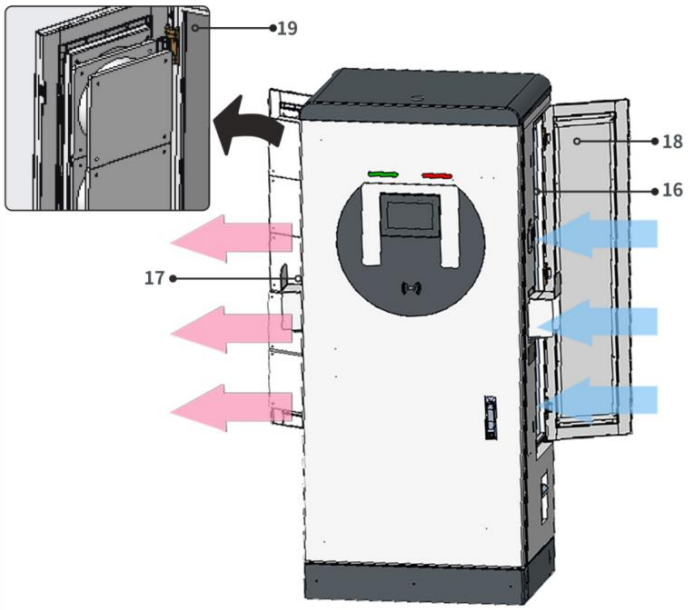
3.2 Product Overview

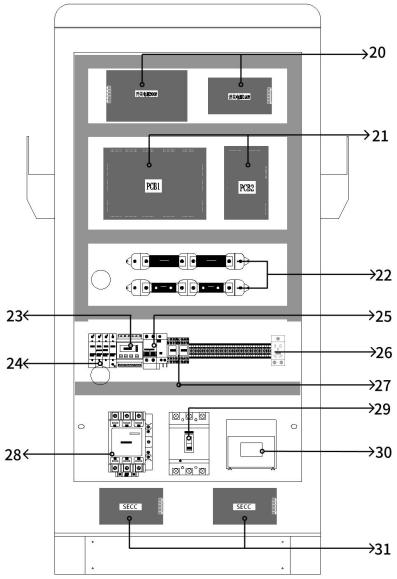
3.2.1 Appearance and Composition



Ref.	Parts	Function
01	Removable base	Cover the lower part of the EVSE
02	AC cable inlet	Grid AC cable entry
03	Connector cable outlet	The cable connection between the charging gun and the pile body
04	Charging cable socket	Standby placement location for the charging gun
05	Panic button	In an emergency, press the emergency stop button quickly to immediately stop the charger operation
06.07	Module compartment door	Enter the EVSE module compartment
08	Grounding Copper Plate	Effectively connect the EVSE equipment to the ground to form an electrical grounding system
09	Indicator light	Different colors and flashing patterns provide users with information about the status of the EVSE device
10	Touchscreen display	Control and monitor charging sessions
11	RFID readers	Read information from RFID cards
12	Payment terminal (if available)	Process payments for charging
13	Front door handle	Manage the EVSE front door
14	front door	Enter the inside of the EVSE
15	Base baffle	Closed base

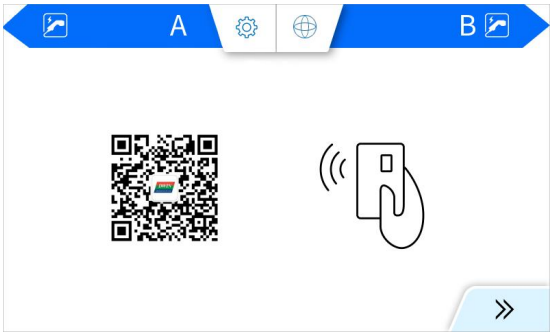
3.2.2 Overview of Air Cooling System and Internal Structure





Ref.	Parts	Function
16	Air intake	Cooling air incomes to cool the EVSE internal module
17	Air outlets	The air flow ensures that the components inside the EVSE do not overheat
18	Air inlet filter cotton	Filter the air entering the EVSE
19	Exhaust fan	Hot air is discharged from the EVSE
20	Switching power supply box	It provides control power for the control system and low-voltage auxiliary power supply to the high-voltage distribution box
21	Core control board	The motherboard of the core control system for the work of the charging pile
22	AC access terminals	AC power access
23	DC meters are used for MRUs	Read the DC current value to be sent to the meter reading unit
24	AC surge protection	Protects the AC input line from overvoltage
25	Auxiliary power circuit	Protect and isolate AC auxiliary lines
26	Alternate AC outlets	AC power backup interface
27	Relays	Control the current interruption between the charging station and the electric vehicle
28	AC contactors	Control the on/off of the AC power supply of the charging circuit,
29	Molded case circuit	Isolate the AC input voltage
30	AC meters	The AC current value is read to be sent to the meter reading unit
31	SECC1 and 2	Communication protocol conversion box

3.3 Touchscreen Display and Main Interface Display



3.4 Charging Indicator

- Red light on: The device is in standby mode.
- Green light on: The corresponding charging terminal is working, please do not unplug.
- Yellow light on: Equipment malfunction, service suspended.

3.5 Mode of Operation

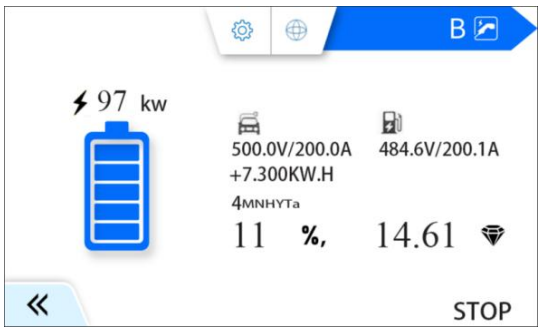
- Support local operation: via touch screen, card reader
- Remote operation: remote control operation through the Internet background

3.6 Charging Mode

This device can support local charging mode, offline charging mode, and remote operation mode:
Local Charging Mode: Tap the button on the screen to initiate charging.
Offline charging mode: After it is enabled, the offline OCPP function will not be run when it is not connected to the Internet (if it is connected to the Internet, the OCPP function will continue to be used), and the card can be swiped offline to start charging.
Remote operation mode: It can be operated through the OCPP back-end management software.

3.7 Billing Features

The energy charged by an electric vehicle is metered, and a precision energy meter is configured to measure the total energy consumption of the charging pile and the electric vehicle.
The metering information is displayed through the display on the front panel, and can be selected and queried by tapping the touch screen button for gun A and gun B.



3.8 Charging Features

The device can be used with or without authorization, which can be based on radio frequency identification (RFID), personal identification numbers, or mobile authentication methods. Authorization can be a standard solution provided by the manufacturer or an external company that provides an authorized solution through the OCPP.

3.8.1 RFID - Authorized Charge

The device can be authorized to be used and charged based on radio frequency identification (RFID).

NOTE
RFID authorization should be enabled by the charging pile operator's (CPO) OCPP server backend

3.8.2 POS Payments

Devices can optionally be equipped with POS payment terminals, enabling charging point operators to offer secure payment methods and enhance the customer experience.

3.8.3 Cloud Payments

Merchants can implement cloud payments based on OCPP.

3.9 Communication Function, OCPP Support

Support Ethernet, 4G wireless, WIFI and other network methods for communication. With support for the Open Charging Point Protocol (OCPP), merchants can integrate with their existing management systems.

3.10 Storage Recording Function

The charging equipment has the function of recording event information data, and the storage capacity is 1000 records. When the number of records exceeds 1000, the previous records will be automatically overwritten one by one. The above records can be selected to enter the query through the main menu of the touch screen.

3.11 Self-test and Self-recovery Functions

The equipment has self-test and fault alarm functions. After troubleshooting, the function can be automatically restored, but charging will not be automatically restored. The non-volatile memory charger is equipped with a power-off recording function for field data, which can prevent the loss of charging data in the event of an unexpected power failure.

3.12 Security Protection Features

It is equipped with functions such as emergency stop, reverse connection, anti-misoperation, over-voltage, under-voltage, abnormal charging, over-current, short circuit, leakage, over-temperature protection, lightning protection and other safety protection functions.

3.13 Power Allocation Strategy

Before the manufacturer can begin the commissioning procedure, you must select a power allocation strategy. The configuration of the device allows for the use of the following two power allocation strategies:

Parallel Mode:

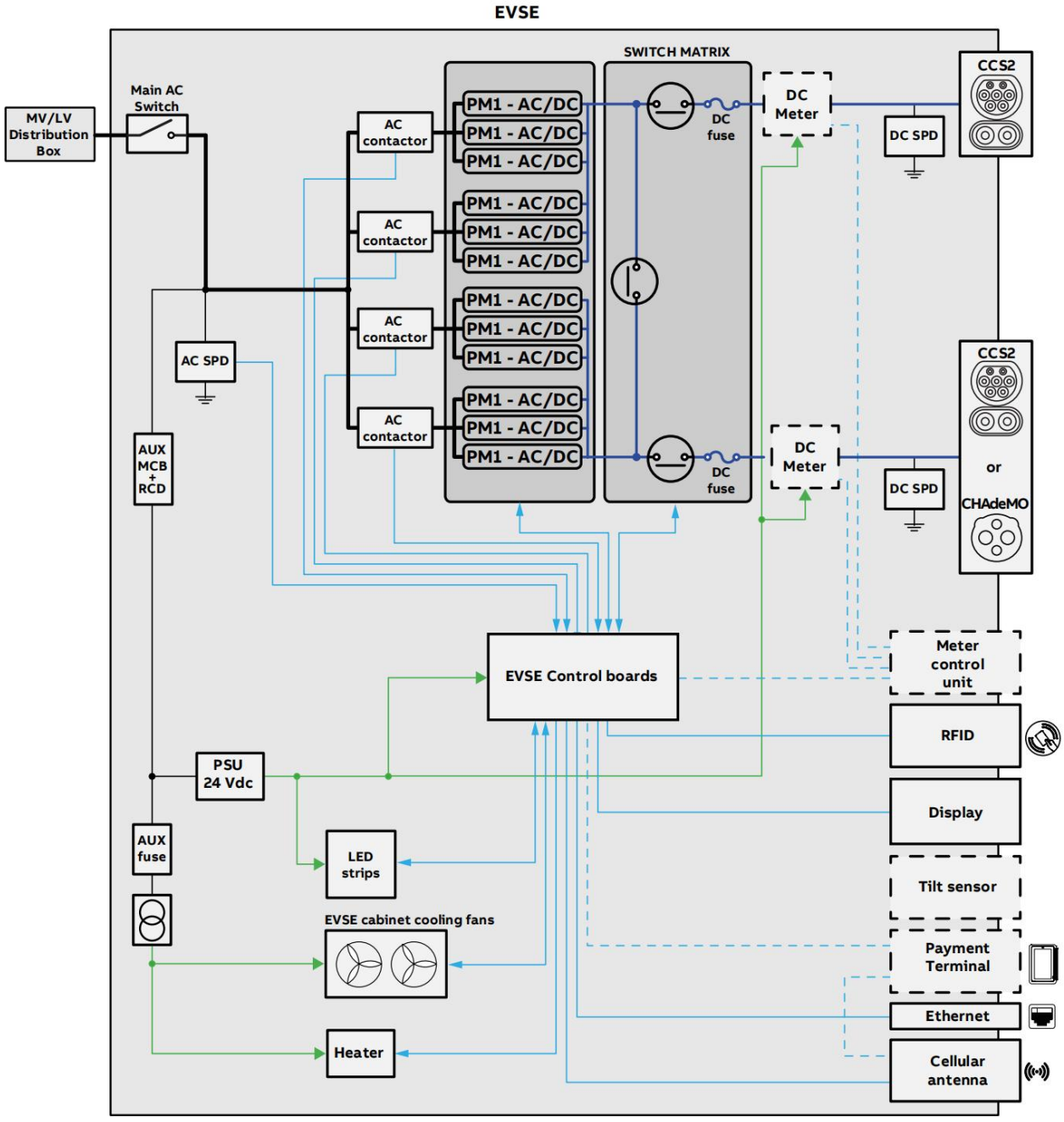
When the device charges an electric car, each car can get ≤50% of the power until it is fully charged.

Dynamic Power Allocation Mode:

When a device charges only one EV, the EV gets ≤100% of the power.

When one car charges two electric vehicles at the same time, each car gets ≤50% of the power; When one of the electric cars is disconnected, the other vehicle can get ≤100% of the power.

3.14 Operation Mechanism



4. Technical parameters

4.1 Detailed technical data

4.1.1 Specifications NEDF40KW detailed technical parameters

Item		Model Number：NEDF40K750/NEDF40K1K
AC Input Characteristics	Voltage Range	AC380V±20%
	Input Connection	3P+N+PE
	Operating Frequency	45-65HZ
	Power Factor	≥99%，@ normal output power
	Input Current	0-100A
Output Characteristics	Output Power	≤40KW
	Auxiliary Power Supply	GB/T Standard: Compatible with 12V European/American/Japanese Standards: 12V
	Voltage Range	DC200-750V/DC200-1000V
	Output Current	0-100A
	Number of Charging Connectors	2
	Rated Power Distribution	Single-gun operation: 40kW / Dual-gun operation: 20kW each
	Charging Cable Length	Standard Configuration: 5-meter cable (optional upgrade available)
	Cable Type	Air cooling
Environmental Conditions	Temperature Range	Operating Temperature: -20~50℃; 25℃ (typical); Storage Temperature: -40~85℃; 25℃ (typical); Intelligent power derating when shell temperature exceeds 70℃
	Humidity Range	5~90RH%；Non-condensing
	Altitude	≤2000M
	Operating Environment	Indoor/Outdoor
	Protection Level (IP Rating)	IP54
Dimensions and Weight	Machine Dimensions	700 x 435 x 1500 mm (excluding gun holder and protruding components like charging guns)
	Enclosure Material	2.0 mm galvanized steel plate
	Net Weight	About 170KG
	Packaging Dimensions	1020 x 620 x 1730mm
	Gross Weight	About 205KG
Display	Size	7-inch color touch screen
	Language	Chinese, English, Russian (other languages customizable)
Charging Standards	GB/T Standard (G)	GB/T 18487 、GB/T 20234 、GB/T 27930
	European Standard (E)/American Standard (A)	EN61851 、EN62196 、ISO15118 、DIN70121
	Japanese Standard (J)	CHAdeMO
Protection Features		Emergency stop/Input over/under-voltage protection/Output over-voltage protection/ Over-temperature protection/Overcurrent protection/Short-circuit protection/Leakage protection/ Integrated surge protection/Battery reverse polarity protection/Insulation monitoring protection
Charging Method		Button start/Access control card swipe/OCPP remote start
Charging Mode		Local mode/Offline mode/OCPP network mode
Payment Method		RFID/POS machine/Cloud-based payment
Networking Method		WIFI/Ethernet/4G
Installation Method		Floor-mounted

4.1.2 Specifications NEDF60KW detailed technical parameters

Item		Model Number：NEDF60K1K
AC Input Characteristics	.	AC380V±20%
	Input Connection	3P+N+PE
	Operating Frequency	45-65HZ
	Power Factor	≥99%，@ normal output power
	Input Current	0-116A
Output Characteristics	Output Power	≤60KW
	Auxiliary Power Supply	GB/T Standard: Compatible with 12V European/American/Japanese Standards: 12V
	Voltage Range	DC200-1000V
	Output Current	0-150A
	Number of Charging Connectors	2
	Rated Power Distribution	Single-gun operation: 60kW / Dual-gun operation: 30kW each
	Charging Cable Length	Standard Configuration: 5-meter cable (optional upgrade available)
	Cable Type	Air cooling
Environmental Conditions	Temperature Range	Operating Temperature: -20~50℃; 25℃ (typical); Storage Temperature: -40~85℃; 25℃ (typical); Intelligent power derating when shell temperature exceeds 70℃
	Humidity Range	5~90RH%；Non-condensing
	Altitude	≤2000M
	Operating Environment	Indoor/Outdoor
	Protection Level (IP Rating)	IP54
Dimensions and Weight	Machine Dimensions	700 x 435 x 1500 mm (excluding gun holder and protruding components like charging guns)
	Enclosure Material	2.0 mm galvanized steel plate
	Net Weight	About 190KG
	Packaging Dimensions	1020 x 620 x 1730mm
	Gross Weight	About 225KG
Display	Size	7-inch color touch screen
	Language	Chinese, English, Russian (other languages customizable)
Charging Standards	GB/T Standard (G)	GB/T 18487 、GB/T 20234 、GB/T 27930
	European Standard (E)/American Standard (A)	EN61851 、EN62196 、ISO15118 、DIN70121
	Japanese Standard (J)	CHAdeMO
Protection Features		Emergency stop/Input over/under-voltage protection/Output over-voltage protection/ Over-temperature protection/Overcurrent protection/Short-circuit protection/Leakage protection/ Integrated surge protection/Battery reverse polarity protection/Insulation monitoring protection
Charging Method		Button start/Access control card swipe/OCPP remote start
Charging Mode		Local mode/Offline mode/OCPP network mode
Payment Method		RFID/POS machine/Cloud-based payment
Networking Method		WIFI/Ethernet/4G
Installation Method		Floor-mounted

4.1.3 Specifications NEDF80KW detailed technical parameters

Item		Model Number：NEDF80K1K
AC Input Characteristics	Voltage Range	AC380V±20%
	Input Connection	3P+N+PE
	Operating Frequency	45-65HZ
	Power Factor	≥99%，@ normal output power
	Input Current	0-152A
Output Characteristics	Output Power	≤80KW
	Auxiliary Power Supply	GB/T Standard: Compatible with 12V European/American/Japanese Standards: 12V
	Voltage Range	DC200-1000V
	Output Current	0-200A
	Number of Charging Connectors	2
	Rated Power Distribution	Single-gun operation: 80kW / Dual-gun operation: 40kW each
	Charging Cable Length	Standard Configuration: 5-meter cable (optional upgrade available)
	Cable Type	Air cooling
Environmental Conditions	Temperature Range	Operating Temperature: -20~50℃; 25℃ (typical); Storage Temperature: -40~85℃; 25℃ (typical); Intelligent power derating when shell temperature exceeds 70℃
	Humidity Range	5~90RH%；Non-condensing
	Altitude	≤2000M
	Operating Environment	Indoor/Outdoor
	Protection Level (IP Rating)	IP54
Dimensions and Weight	Machine Dimensions	700 x 435 x 1500 mm (excluding gun holder and protruding components like charging guns)
	Enclosure Material	2.0 mm galvanized steel plate
	Net Weight	About 200KG
	Packaging Dimensions	1020 x 620 x 1730mm
	Gross Weight	About 235KG
Display	Size	7-inch color touch screen
	Language	Chinese, English, Russian (other languages customizable)
Charging Standards	GB/T Standard (G)	GB/T 18487 、GB/T 20234 、GB/T 27930
	European Standard (E)/American Standard (A)	EN61851 、EN62196 、ISO15118 、DIN70121
	Japanese Standard (J)	CHAdeMO
Protection Features		Emergency stop/Input over/under-voltage protection/Output over-voltage protection/ Over-temperature protection/Overcurrent protection/Short-circuit protection/Leakage protection/ Integrated surge protection/Battery reverse polarity protection/Insulation monitoring protection
Charging Method		Button start/Access control card swipe/OCPP remote start
Charging Mode		Local mode/Offline mode/OCPP network mode
Payment Method		RFID/POS machine/Cloud-based payment
Networking Method		WIFI/Ethernet/4G
Installation Method		Floor-mounted

4.1.4 Specifications NEDF120KW detailed technical parameters

Item		Model Number：NEDF120K1K
AC Input Characteristics	Voltage Range	AC380V±20%
	Input Connection	3P+N+PE
	Operating Frequency	45-65HZ
	Power Factor	≥99%，@ normal output power
	Input Current	0-232A
Output Characteristics	Output Power	≤120KW
	Auxiliary Power Supply	GB/T Standard: Compatible with 12V European/American/Japanese Standards: 12V
	Voltage Range	DC200-1000V
	Output Current	0-250A
	Number of Charging Connectors	2
	Rated Power Distribution	Single-gun operation: 120kW / Dual-gun operation: 60kW each
	Charging Cable Length	Standard Configuration: 5-meter cable (optional upgrade available)
	Cable Type	Air cooling
Environmental Conditions	Temperature Range	Operating Temperature: -20~50℃; 25℃ (typical); Storage Temperature: -40~85℃; 25℃ (typical); Intelligent power derating when shell temperature exceeds 70℃
	Humidity Range	5~90RH%；Non-condensing
	Altitude	≤2000M
	Operating Environment	Indoor/Outdoor
	Protection Level (IP Rating)	IP54
Dimensions and Weight	Machine Dimensions	700x600x 1500mm (excluding gun holder and protruding components like charging guns)
	Enclosure Material	2.0 mm galvanized steel plate
	Net Weight	About 280KG
	Packaging Dimensions	1020 x 780 x 1730mm
	Gross Weight	About 320KG
Display	Size	7-inch color touch screen
	Language	Chinese, English, Russian (other languages customizable)
Charging Standards	GB/T Standard (G)	GB/T 18487 、GB/T 20234 、GB/T 27930
	European Standard (E)/American Standard (A)	EN61851 、EN62196 、ISO15118 、DIN70121
	Japanese Standard (J)	CHAdeMO
Protection Features		Emergency stop/Input over/under-voltage protection/Output over-voltage protection/ Over-temperature protection/Overcurrent protection/Short-circuit protection/Leakage protection/ Integrated surge protection/Battery reverse polarity protection/Insulation monitoring protection
Charging Method		Button start/Access control card swipe/OCPP remote start
Charging Mode		Local mode/Offline mode/OCPP network mode
Payment Method		RFID/POS machine/Cloud-based payment
Networking Method		WIFI/Ethernet/4G
Installation Method		Floor-mounted

4.1.5 Specifications NEDF160KW detailed technical parameters

Item		Model Number：NEDF160K1K
AC Input Characteristics	Voltage Range	AC380V±20%
	Input Connection	3P+N+PE
	Operating Frequency	45-65HZ
	Power Factor	≥99%，@ normal output power
	Input Current	0-304A
Output Characteristics	Output Power	≤160KW
	Auxiliary Power Supply	GB/T Standard: Compatible with 12V European/American/Japanese Standards: 12V
	Voltage Range	DC200-1000V
	Output Current	0-300A
	Number of Charging Connectors	2
	Rated Power Distribution	Single-gun operation: 160kW / Dual-gun operation: 80kW each
	Charging Cable Length	Standard Configuration: 5-meter cable (optional upgrade available)
	Cable Type	Air cooling
Environmental Conditions	Temperature Range	Operating Temperature: -20~50℃; 25℃ (typical); Storage Temperature: -40~85℃; 25℃ (typical); Intelligent power derating when shell temperature exceeds 70℃
	Humidity Range	5~90RH%；Non-condensing
	Altitude	≤2000M
	Operating Environment	Indoor/Outdoor
	Protection Level (IP Rating)	IP54
Dimensions and Weight	Machine Dimensions	700 x 600 x 1500 mm (excluding gun holder and protruding components like charging guns)
	Enclosure Material	2.0 mm galvanized steel plate
	Net Weight	About 290KG
	Packaging Dimensions	1020 x 780 x 1730mm
	Gross Weight	About 330KG
Display	Size	7-inch color touch screen
	Language	Chinese, English, Russian (other languages customizable)
Charging Standards	GB/T Standard (G)	GB/T 18487 、GB/T 20234 、GB/T 27930
	European Standard (E)/American Standard (A)	EN61851 、EN62196 、ISO15118 、DIN70121
	Japanese Standard (J)	CHAdeMO
Protection Features		Emergency stop/Input over/under-voltage protection/Output over-voltage protection/ Over-temperature protection/Overcurrent protection/Short-circuit protection/Leakage protection/ Integrated surge protection/Battery reverse polarity protection/Insulation monitoring protection
Charging Method		Button start/Access control card swipe/OCPP remote start
Charging Mode		Local mode/Offline mode/OCPP network mode
Payment Method		RFID/POS machine/Cloud-based payment
Networking Method		WIFI/Ethernet/4G
Installation Method		Floor-mounted

4.1.6 Specifications NEDF180KW detailed technical parameters

Item		Model Number：NEDF180K1K
AC Input Characteristics	Voltage Range	AC380V±20%
	Input Connection	3P+N+PE
	Operating Frequency	45-65HZ
	Power Factor	≥99%，@ normal output power
	Input Current	0-348A
Output Characteristics	Output Power	≤180KW
	Auxiliary Power Supply	GB/T Standard: Compatible with 12V European/American/Japanese Standards: 12V
	Voltage Range	DC200-1000V
	Output Current	0-300A
	Number of Charging Connectors	2
	Rated Power Distribution	Single-gun operation:180kW / Dual-gun operation: 90kW each
	Charging Cable Length	Standard Configuration: 5-meter cable (optional upgrade available)
	Cable Type	Air cooling
Environmental Conditions	Temperature Range	Operating Temperature: -20~50℃; 25℃ (typical); Storage Temperature: -40~85℃; 25℃ (typical); Intelligent power derating when shell temperature exceeds 70℃
	Humidity Range	5~90RH%；Non-condensing
	Altitude	≤2000M
	Operating Environment	Indoor/Outdoor
	Protection Level (IP Rating)	IP54
Dimensions and Weight	Machine Dimensions	700x600x 1800mm (excluding gun holder and protruding components like charging guns)
	Enclosure Material	2.0 mm galvanized steel plate
	Net Weight	About 360KG
	Packaging Dimensions	1020 x 780 x 2030mm
	Gross Weight	About 400KG
Display	Size	7-inch color touch screen
	Language	Chinese, English, Russian (other languages customizable)
Charging Standards	GB/T Standard (G)	GB/T 18487 、GB/T 20234 、GB/T 27930
	European Standard (E)/American Standard (A)	EN61851 、EN62196 、ISO15118 、DIN70121
	Japanese Standard (J)	CHAdeMO
Protection Features		Emergency stop/Input over/under-voltage protection/Output over-voltage protection/ Over-temperature protection/Overcurrent protection/Short-circuit protection/Leakage protection/ Integrated surge protection/Battery reverse polarity protection/Insulation monitoring protection
Charging Method		Button start/Access control card swipe/OCPP remote start
Charging Mode		Local mode/Offline mode/OCPP network mode
Payment Method		RFID/POS machine/Cloud-based payment
Networking Method		WIFI/Ethernet/4G
Installation Method		Floor-mounted

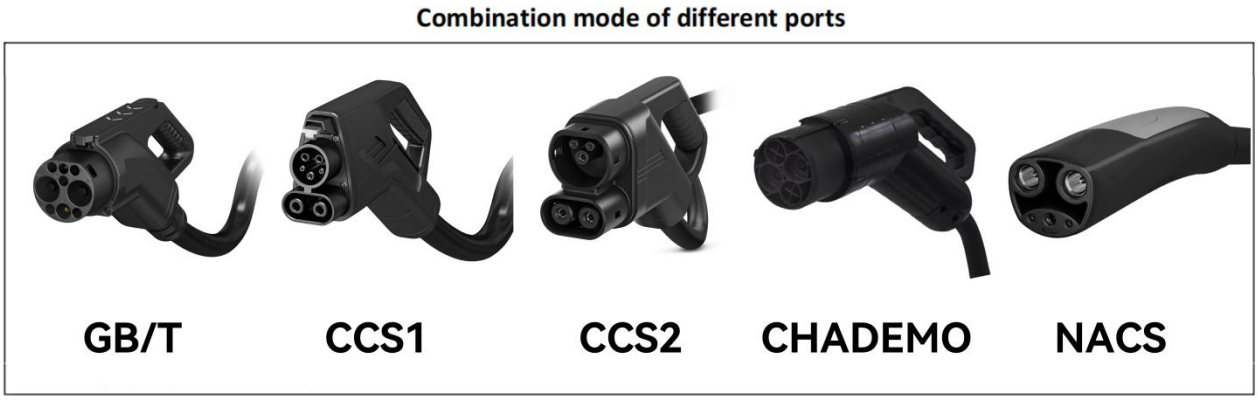
4.1.7 Specifications NEDF240KW detailed technical parameters

Item		Model Number：NEDF240K1K
AC Input Characteristics	Voltage Range	AC380V±20%
	Input Connection	3P+N+PE
	Operating Frequency	45-65HZ
	Power Factor	≥99%，@ normal output power
	Input Current	0-456A
Output Characteristics	Output Power	≤240KW
	Auxiliary Power Supply	GB/T Standard: Compatible with 12V European/American/Japanese Standards: 12V
	Voltage Range	DC200-1000V
	Output Current	0-300A
	Number of Charging Connectors	2
	Rated Power Distribution	Single-gun operation: 240kW / Dual-gun operation: 120kW each
	Charging Cable Length	Standard Configuration: 5-meter cable (optional upgrade available)
	Cable Type	Air cooling
Environmental Conditions	Temperature Range	Operating Temperature: -20~50℃; 25℃ (typical); Storage Temperature: -40~85℃; 25℃ (typical); Intelligent power derating when shell temperature exceeds 70℃
	Humidity Range	5~90RH%；Non-condensing
	Altitude	≤2000M
	Operating Environment	Indoor/Outdoor
	Protection Level (IP Rating)	IP54
Dimensions and Weight	Machine Dimensions	700x600x 1800mm (excluding gun holder and protruding components like charging guns)
	Enclosure Material	2.0 mm galvanized steel plate
	Net Weight	About 380KG
	Packaging Dimensions	1020 x 780 x 2030mm
	Gross Weight	About 420KG
Display	Size	7-inch color touch screen
	Language	Chinese, English, Russian (other languages customizable)
Charging Standards	GB/T Standard (G)	GB/T 18487 、GB/T 20234 、GB/T 27930
	European Standard (E)/American Standard (A)	EN61851 、EN62196 、ISO15118 、DIN70121
	Japanese Standard (J)	CHAdeMO
Protection Features		Emergency stop/Input over/under-voltage protection/Output over-voltage protection/ Over-temperature protection/Overcurrent protection/Short-circuit protection/Leakage protection/ Integrated surge protection/Battery reverse polarity protection/Insulation monitoring protection
Charging Method		Button start/Access control card swipe/OCPP remote start
Charging Mode		Local mode/Offline mode/OCPP network mode
Payment Method		RFID/POS machine/Cloud-based payment
Networking Method		WIFI/Ethernet/4G
Installation Method		Floor-mounted

4.1.8 Specifications NEDF360KW detailed technical parameters

Item		Model Number：NEDF360K1K
AC Input Characteristics	Voltage Range	AC380V±20%
	Input Connection	3P+N+PE
	Operating Frequency	45-65HZ
	Power Factor	≥99%，@ normal output power
	Input Current	0-696A
Output Characteristics	Output Power	≤360KW
	Auxiliary Power Supply	GB/T Standard: Compatible with 12V European/American/Japanese Standards: 12V
	Voltage Range	DC200-1000V
	Output Current	0-300A
	Number of Charging Connectors	2
	Rated Power Distribution	In theory: Single-gun operation: 360kW / Dual-gun operation: 180kW each **It needs to be matched according to the specific requirements on the vehicle side.**
	Charging Cable Length	Standard Configuration: 5-meter cable (optional upgrade available)
	Cable Type	Air cooling
Environmental Conditions	Temperature Range	Operating Temperature: -20~50℃; 25℃ (typical); Storage Temperature: -40~85℃; 25℃ (typical); Intelligent power derating when shell temperature exceeds 70℃
	Humidity Range	5~90RH%；Non-condensing
	Altitude	≤2000M
	Operating Environment	Indoor/Outdoor
	Protection Level (IP Rating)	IP54
Dimensions and Weight	Machine Dimensions	700x600x 1800mm (excluding gun holder and protruding components like charging guns)
	Enclosure Material	2.0 mm galvanized steel plate
	Net Weight	About 380KG
	Packaging Dimensions	1020 x 780 x 2030mm
	Gross Weight	About 480KG
Display	Size	7-inch color touch screen
	Language	Chinese, English, Russian (other languages customizable)
Charging Standards	GB/T Standard (G)	GB/T 18487 、GB/T 20234 、GB/T 27930
	European Standard (E)/American Standard (A)	EN61851 、EN62196 、ISO15118 、DIN70121
	Japanese Standard (J)	CHAdeMO
Protection Features		Emergency stop/Input over/under-voltage protection/Output over-voltage protection/Over-temperature protection/Overcurrent protection/Short-circuitprotection/Leakage protection/Integrated surge protection/Battery reverse polarity protection/Insulation monitoring protection
Charging Method		Button start/Access control card swipe/OCPP remote start
Charging Mode		Local mode/Offline mode/OCPP network mode
Payment Method		RFID/POS machine/Cloud-based payment
Networking Method		WIFI/Ethernet/4G
Installation Method		Floor-mounted

4.2 Charging interface standards and combinations



5. Instructions

5.1 Storage and Transportation

5.1.1 Storage

Please store the charging pile equipment in accordance with the relevant specifications of this manual. Do not expose the charging pile equipment to places with adverse weather conditions (such as rain, snow or high humidity environments) and avoid storing in environments containing alkaline or other corrosive or explosive gases.

5.1.2 Transport and handling

The equipment must be packaged in complete condition before leaving the factory, and must be operated in accordance with the requirements of the specification during transportation, loading and unloading, so as to avoid strong shock and vibration to prevent damage to the outer packaging of the product. It is the sole responsibility of the transporter to deliver the charging station equipment to the vicinity of the site and move the equipment to its final location.

NOTE
The manufacturer shall not be liable for any damage caused by improper storage, handling and transportation of the equipment, in particular as a result of failure to comply with these instructions and other applicable regulations and standards, such as transport, occupational health and other safety standards.

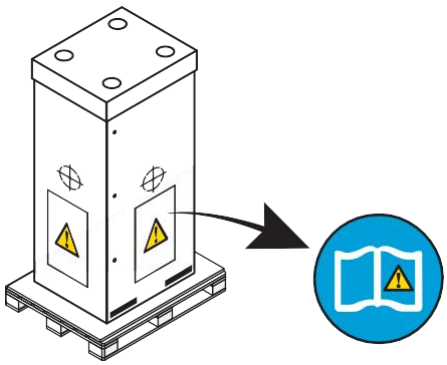
DANGER
Handling personnel must wear all appropriate and applicable personal protective equipment (PPE) and comply with all applicable health and safety measures applicable to the work area.

5.1.3 Packing Specification Inspection

• Check and follow the instructions of the symbol on the package:

Symbol	Description
	Handle with care
	fragile
	Keep dry
	barycenter
	This is the upward side
	Do not stack
	Do not pour

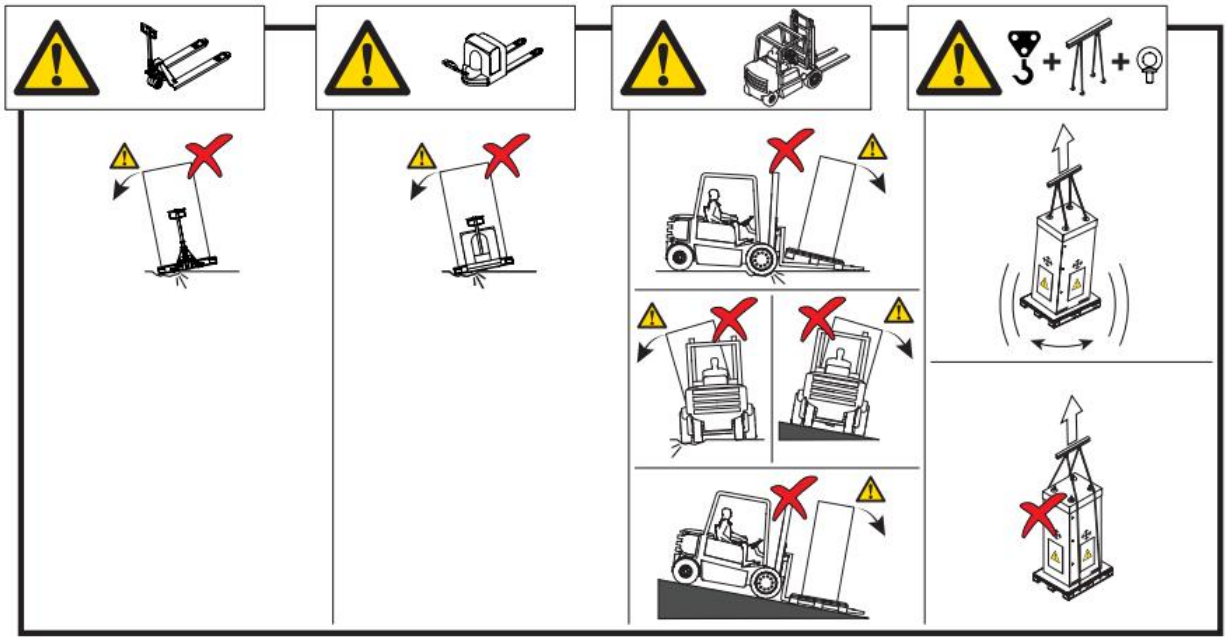
• Read and follow the handling and safety instructions marked on the package.



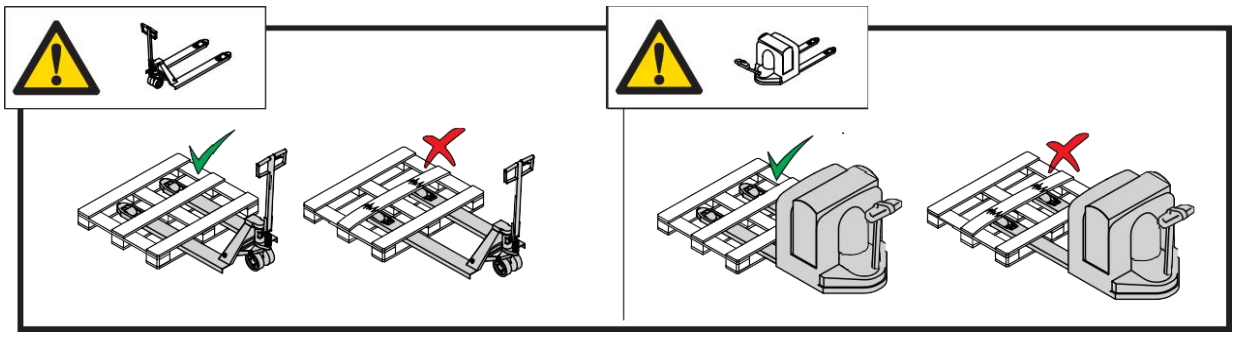
• Inspect the outer packaging of the product for damage or scratches.
After receiving the goods, if you find that the outer packaging of the equipment is damaged or crushed, please do the following:
• Inspect the equipment, unpacking it if necessary to check the extent of damage to the equipment, and take photos as evidence.
• Record the damage on the shipping documents (e.g. CMR/bill of lading or AWB/air waybill) before receiving the goods.
• Accept the equipment with the reservation and return the shipping documents with the reservation of the damage indication to the carrier.

5.1.4 Equipment Loading and Unloading Specifications

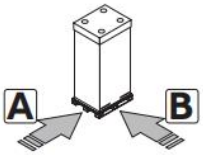
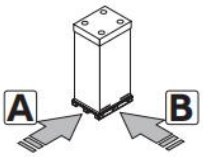
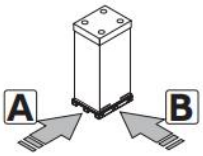
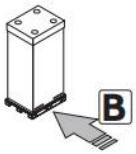
• Before handling the goods, ensure that the workplace conditions are suitable for safe operation.



• The pallet must be intact to ensure the safety of the product during transportation and handling.

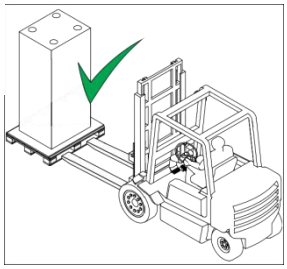


• Check the weight on the shipping documents.
• Check the center of gravity position before lifting the device to avoid tipping over.
• Check that the equipment used to move or lift the charging station is suitable.

Equipment	Movement	Lifting
• Pallet Jack 	 Only short move	
• Pallet Stacker 	 Only short move	
• Forklift Truck • Wheel loader pallet fork 		
• Hoist / Crane 		

5.1.5 Short-distance Movement of The Equipment

• Move the forks of the forklift into the gap on the side of the cabinet.
• Move the cabinet to the correct position.



5.2 Unpack and Check

5.2.1 Check content

• Check whether all product accessories are complete, and the packing list is as follows:

S/N	Name	Quantity	Remark
1	DC charging pile	1	The contents of this packing list refer to the equipment and materials included in the box
2	Factory Report (Certificate of Conformity)	1	
3	Instructions	1	
4	RFID card	2	
5	Key	1	

• Inspect the appearance of the product for abnormalities such as scratches, rust, cracks, or deformation.
• Check that the display and charging connector are in good condition, and that the charging connector cable is not damaged or scratched.
• Open the front door and check if the electrical parts are damaged and if the cable connections are loose or detached.
• Open the left and right side doors and check whether the charging module in the module compartment has fallen off or been damaged.

5.2.2 Execution after inspection

If the inspection finds that the device is damaged or the accessories don't match the list, do the following:
• Notify the transporter immediately and contact the local dealer or manufacturer's service department.
• Take photos as evidence of damage.

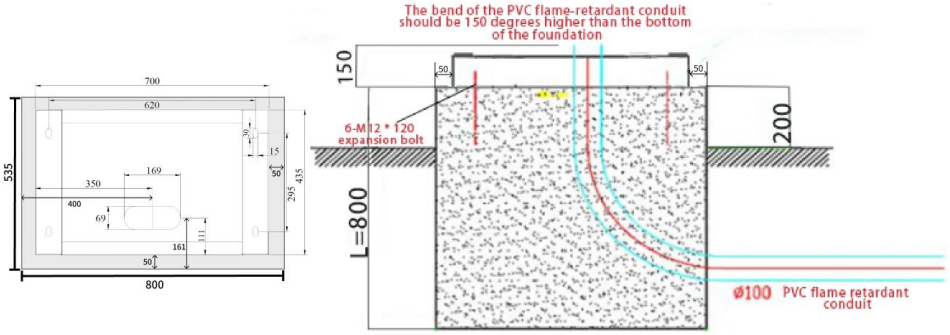
5.3 Prepare for Installation

5.3.1 Precautions

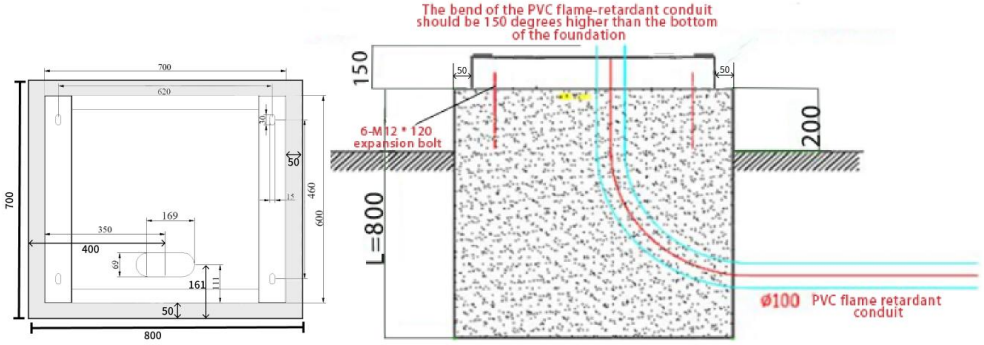
There is high voltage and high current inside the charging equipment, in order to ensure personal safety, the relevant regulations should be complied with when installing:
• Only those who have been trained in charging equipment and have sufficient knowledge of DC chargers should install this equipment.
• Safety precautions and local safety regulations should always be observed during installation.
• Ensure that the operating area is not open to unauthorized persons and that those involved in handling the EV charger are fully aware of the safety measures to be taken when handling the EV charger and keep a sufficient distance away from the moving EV charger.
• If operating inside the charger, make sure that the device is not charged.

5.3.2 Foundation Construction

The equipment must be installed on the cement base suitable for supporting the weight of the equipment, and the cement base needs to reserve a suitable space during the construction, and after the charging pile is installed, there is no obstacle on the front, 100mm away from the obstacle behind the back, and 1000mm away from the obstacle on the left and right sides.
The thickness of the cement base shall not be less than 800mm, the size of the platform shall be greater than the length and width of the charging equipment by more than 50mm, and the base shall be 200mm higher than the floor.
Schematic diagram of the construction size of 40-80KW cement base:



Schematic diagram of the construction size of 120-240KW cement base:



5.3.3 Prepare The Cables

The selection of cables should comply with the relevant specifications of the electrical industry. Please refer to the following table to determine the cable, the cable selection in the table is for reference only, please refer to the judgment of the professional construction qualification unit:

Cable Specification Requirements			
Product power	**Input cable**		
	The name of the cable	**location**	**Cable specifications**
40kw	AC three-phase A	MCCB L1	≥16mm²
	AC three-phase B	MCCB L2	≥16mm²
	AC three-phase C	MCCB L3	≥16mm²
	AC input N	MCCB N	≥10mm²
	AC PE wire	PE busbar	≥10mm²
60kw	AC three-phase A	MCCB L1	≥25mm²
	AC three-phase B	MCCB L2	≥25mm²
	AC three-phase C	MCCB L3	≥25mm²
	AC input N	MCCB N	≥16mm²
	AC PE wire	PE busbar	≥10mm²
80kw	AC three-phase A	MCCB L1	≥35mm²
	AC three-phase B	MCCB L2	≥35mm²
	AC three-phase C	MCCB L3	≥35mm²
	AC input N	MCCB N	≥16mm²
	AC PE wire	PE busbar	≥16mm²
120kw	AC three-phase A	MCCB L1	≥70mm²
	AC three-phase B	MCCB L2	≥70mm²
	AC three-phase C	MCCB L3	≥70mm²
	AC input N	MCCB N	≥35mm²
	AC PE wire	PE busbar	≥25mm²
160kw	AC three-phase A	MCCB L1	≥95mm²
	AC three-phase B	MCCB L2	≥95mm²
	AC three-phase C	MCCB L3	≥95mm²
	AC input N	MCCB N	≥50mm²
	AC PE wire	PE busbar	≥35mm²
180kw	AC three-phase A	MCCB L1	≥120mm²
	AC three-phase B	MCCB L2	≥120mm²
	AC three-phase C	MCCB L3	≥120mm²
	AC input N	MCCB N	≥50mm²
	AC PE wire	PE busbar	≥35mm²
240kw	AC three-phase A	MCCB L1	≥150mm²
	AC three-phase B	MCCB L2	≥150mm²
	AC three-phase C	MCCB L3	≥150mm²
	AC input N	MCCB N	≥70mm²
	AC PE wire	PE busbar	≥35mm²
The cable selection in the table is for reference only, and should be judged by the contractor with power construction qualifications according to the actual situation, the length of the wire, the environment and other factors			

NOTE
It is recommended to use YJV type cable for incoming cable, and the cable should reach at least 70°C temperature resistance level

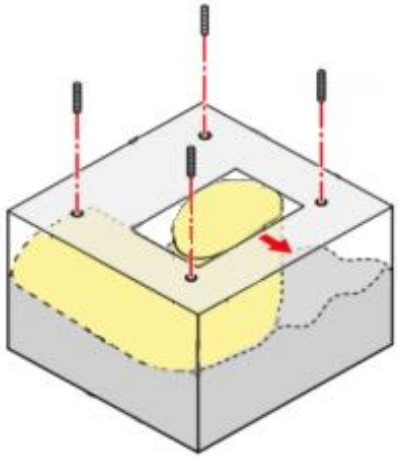
5.3.4 Preparation Tools

The tools needed to install the charger are shown in the following table, and the tools should be insulated and anti-static before use.

The Name of The Tool	
Adjustable wrench	sleeve
Steel tape measure	Screwdriver (Phillips), (slotted)
Electrician's knives	Spring pads, flat pads
Cable cutters	Hydraulic crimping pliers
Power socket row	Digital multimeter
Percussion drills	Four M12 * 120 expansion screws

5.4 Install The Connection

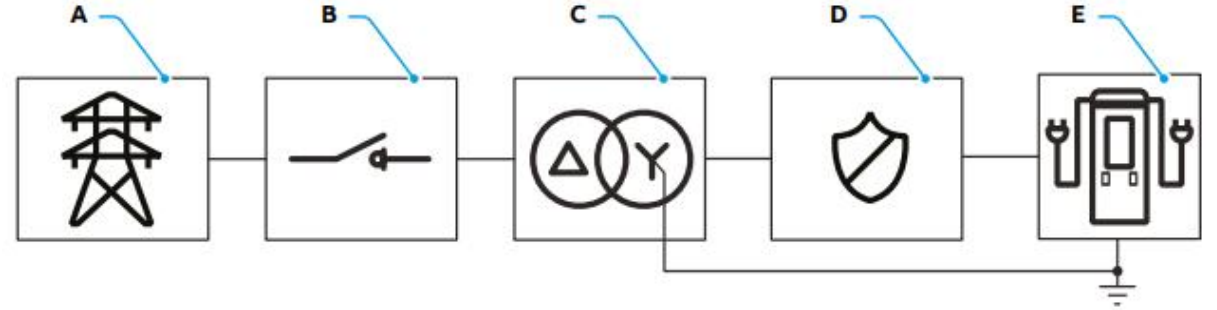
5.4.1 Cabinet Installation



• Open the necessary cable glands for the cable through the cable duct inlet: AC input cables L1, L2, L3 and neutral, protective ground (PE) cables with 700 mm of slack per cable and 2000 mm of slack for Ethernet or signal cables.
• Open the wooden box: remove the top cover and the surrounding sealing plate, pick up the base, unscrew 4 screws, and remove the base cover;
• Use a forklift/crane to move the charger to the cement base, and adjust the position so that the fixing hole of the charger is aligned with the embedded stud of the cement base.
• Fine-tune the charging pile so that it stands upright in the middle of the cement base.
• Pass the cable through the cable inlet at the bottom of the device, and block the incoming wire with rat mud to ensure tightness.
• Install bolts, fix the device.

5.4.2 Electrical Connections

Schematic diagram of AC input and safety protection device:



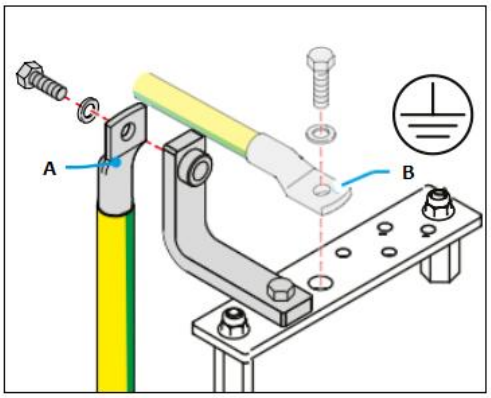
Parameter	Description
A	Medium-voltage power grids
B	Medium voltage circuit breakers
C	Medium/low voltage transformers
D	Low voltage protection device: overcurrent protection, residual current protection (RCD), surge protection device (SPD).
E	EVSE

5.4.3 Connecting Ground and Input Cables

• Open the cabinet door; Thread the grounding cable through the wire jacket on the cabinet baseplate, and reliably connect one end of the grounding cable to the grounding copper bar.

• Connect the input cables and put all switches in the disconnected position before electrically connecting. The installation of the input cable can only be carried out by qualified personnel. Note: It is strictly forbidden to reverse the input (N) and (PE), otherwise the charging equipment will be damaged.

PE wiring diagram:



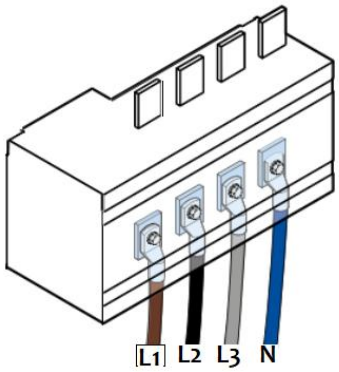
• The equipment is reserved for two grounding protection (PE) copper bars, which are located on the lower bezel inside the chassis and the lower right position on the outside of the chassis.

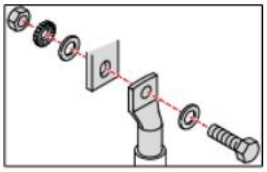
• Cut the cable to the correct length and install the cable terminals.

• Install the primary protective grounding (PE) cable (A) to the PE busbar (identified by the PE symbol).

• Install a second protective grounding (PE) cable (B) to the PE busbar (identified by the PE symbol) if required or required by local regulations.

Schematic diagram of the wiring position of the live wire and the neutral wire





• Connect the AC cable to the main switch terminal and secure it in the order of the components shown in the diagram.

Please note that the three live wires are not in phase order, but the neutral wire and the ground wire must not be reversed, otherwise there will be a risk of burning out the equipment!!

NOTE
Use the bolts provided to install the main AC protective barrier in the AC access area.

5.4.4 Internet Connection

Ethernet connection: Internet connection to the field via an Ethernet port.

4G connection: You need to purchase an industrial router that meets the local telecom communication standards and a SIM provided by the local telecom operator, and insert the SIM into the router card slot; Connect the router to the device via the Ethernet port.

5.5 Check and Finish After Installation

After the charger is installed, it needs to be inspected as follows.

5.5.1 Visual inspection and finishing

• Check that the cabinet installation is horizontal, vertical and stable;
• Check whether all bolts are tightened (especially pay attention to the electrical connection part), whether the flat pad and elastic pad are complete, whether they are reversed, etc.;
• Check whether there are unwanted materials in the equipment and remove all excess materials;
• Check whether the cabinet is damaged or painted. If there is paint loss, the paint part needs to be repaired immediately with anti-rust paint to prevent corrosion;
• cleaning the cabinet;
• Check whether the cabinet door opens and closes flexibly, and whether the door lock is normal;
• Check whether the charging gun head can be easily plugged and unplugged;
• Check whether the air inlet filters on both sides of the cabinet are normal

5.5.2 Electrical inspection and finishing

• Check whether all the empty openings and cable models of the charger are correct;
• Check that all cable connections are strong and reliable;
• Check the AC introduction and power distribution: check whether the color of the AC wire is standardized, whether the original wiring of the equipment is fastened, and whether the safety signs of the AC power distribution part are complete;
• Check whether the lightning protector is closed reliably when the air is opened, and whether the rest of the switches are placed in the off-off position.
• Check whether the wiring is neat and whether the cable binding meets the process specifications.

5.6 Preparation Before Production

Confirm that the equipment is properly installed so that it can be scheduled for commissioning and that the site meets the following requirements:
• The premises of the operation meet the requirements of safety regulations
• The device is properly installed
• AC input power from the grid supplier is available
• During the start-up process, a qualified installer must be present to assist and power the EV charging station on the switchboard.
• Internet access is available via cellular (default) or wired Ethernet connection.

5.7 System Settings

Description of the buttons:

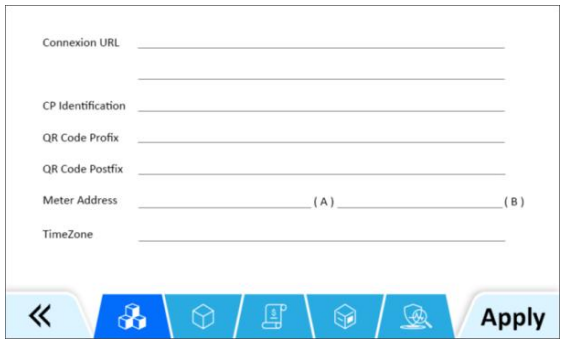
Button	Name	Description
	System Management	To enter the main menu interface
	A gun	To view the charging data for Gun A
	B gun	To view the charging data for Gun B
	Communication status	To read communication status
	charging records	To read the charge record
	Alarm record	To read the alarm record
	System Settings	To enter and perform system management
	System Configuration	System Basic Data Configuration
	Moduls status	To check moduls status
	Billing Settings	To check and Set Billing Standards
	Other Configurations	To check and set Charging Mode, System Language, and Other Settings
	Electrical Connection Status	To enter and check Electrical Connection Status

5.7.1 Go to System Settings

On the main page, click the system management icon at the top of the screen, then click the system settings icon, enter the password to enter the selection system for settings.

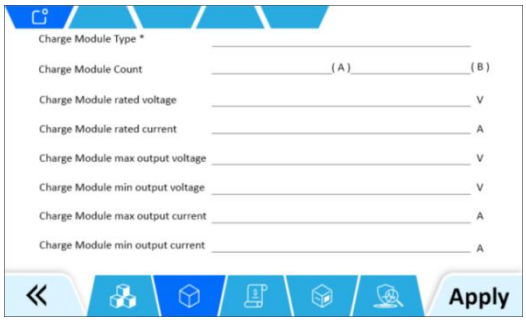
5.7.2 Basic System Parameter Configuration

After entering the configuration interface, the first step is the system configuration: URL address, charging station number, QR code, meter address and time zone, etc. After the settings are completed, click the "Apply" button, and after saving successfully, you need to restart the controller.



5.7.3 Module Parameter Configuration

• Module Protocol and Number: Select the corresponding module protocol and number of groups.
• Rated voltage and current of the module: The rated voltage is the maximum voltage of the module; Rated current = Module rated power / Module rated voltage.
• Module Maximum and Minimum Output Voltage, Maximum and Minimum Output Current: Enter the maximum and minimum output voltage and the maximum and minimum output current values of the module.
• Once the settings are complete, click the "Save" button and you're done.



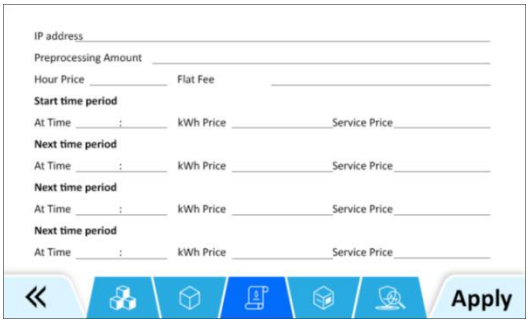
Note: The modification parameters of the module configuration must be integers.

5.7.4 Security Protection Settings

• Feedback negation setting: when the component has a feedback line, it should be opened, and when there is no feedback line, it will be closed.
• Insulation module selection: choose according to the actual situation.
• SECC module selection: select according to the actual situation.
• Protection settings: set according to the actual situation.

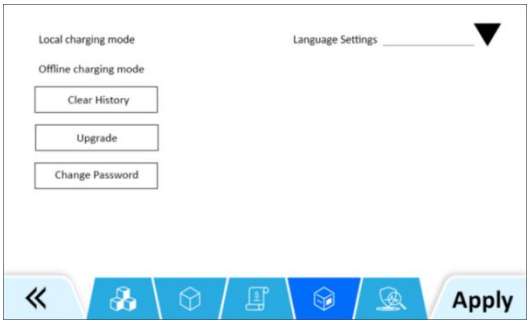
5.7.5 Billing Configuration Page

• IP address: Must be set to a static address.
• Preprocessing Amount： The amount to be prepaid for each charging session, cannot be zero.
• Hour Price: The price per hour.
• Flat Fee: It will only be charged when the charging time is over 3 minutes and the charging power exceeds 0.
• Start time period: The charging standard for each time period, the price and service fee are self-determined, and the first start time must be from 0:00.



5.7.6 Other System Configurations

• Language Selection: Select to switch the system display language as needed.
• Charging mode: Local charging mode: Turn on and you can tap the button on the screen to start charging: Offline charging mode: After it is turned on, the offline OCPP function will not be run when it is not connected to the Internet (if it is connected to the Internet, the OCPP function will continue to be used), and it can be started by swiping the card offline.
• Clear History: Empty the charge and fault records.
• System upgrade: You can upgrade the TCU program, the way is: plug the U disk into the TCU, then click the upgrade button and wait, after success, the word success will be displayed on the right side of the button.
• Change Password: You can change the administrator password.



5.8 Pre-production Testing

5.8.1 Power-on Test

An electric vehicle with a compatible connection entrance must be provided to test the functionality of the charging station. If the charging station has more than one charging connector type, an electric vehicle with each type of charging socket must be available.

5.8.2 Conduct Emergency Shutdown Tests.

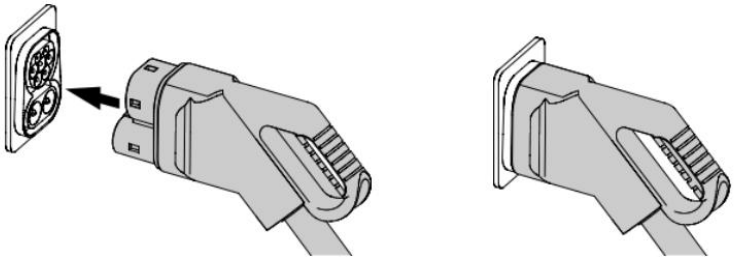
The emergency shutdown test is a necessary test before going into production.

Danger: Dangerous Voltage
No one other than qualified professionals is authorized to configure or debug the equipment.

5.9 Operation and proper use

5.9.1 Start a charging session

• Park your EV where the charging station has access to the connector.
• Turn off the electric car.
• Unplug the EV charging connector from the charging station and plug it into the EV charging socket.

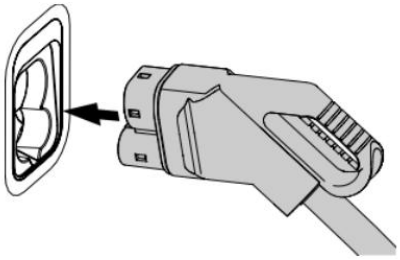


Danger: Dangerous Voltage
During the charging phase, the charging connector will be locked in place to prevent unplugging.

• The touch screen displays a message authorizing the charging session, please follow the displayed instructions to swipe to initiate.
• The device charges the electric car and displays the charging status on the display.

5.9.2 Stop The Charging Session

• On the touch screen, press the stop button or swipe the card to stop and complete the payment as required.
• Remove the connector from the vehicle and place it back in the connector bracket on the charging station.



NOTE
When the battery is fully charged, charging stops automatically.

5.9.3 Emergency Stop of The Charging Session

The manufacturer has installed an emergency stop button on the right side of the charging station, if there is an emergency, please do the following:

• Press the emergency stop button. The device stops running and the display will turn red.

• Contact the website operator.

If the emergency stop button is accidentally pressed:

• Confirm that the situation is safe.

• Pull the emergency stop button out by twisting the button. The device reactivates and returns to normal operation after a few seconds.

5.10 Precautions for Use

• It is strictly forbidden to directly plug and unplug the charging gun head during charging.

• Never use brute force to pull a locked gun out of the socket to avoid electrical conductors such as metal foreign objects from entering the device.

• Do not open the charging cabinet door while it is in operation to avoid danger.

• It is forbidden to pull or twist the charging cable too hard.

• When plugging in or Pulling out the charging cable, pay attention to the strength and avoid using excessive force.

• In non-emergency situations, please do not press the panic button at will.

• In the event of abnormal noise, vibration, sparks, smoke or other serious conditions during operation, the emergency button should be pressed immediately.

• When charging is complete, remember to put the charging cable back in place.

• If any of the following emergencies occur during use, immediately cut off the power supply and notify a professional for repair or contact the dealer's service station:

*There is an abnormal noise inside the charging pile

*Odors or smoke emit from inside the charging pile

*The charging pile display is not displayed or does not respond

*The charging pile has an irreversible fault alarm

6. Maintenance and Troubleshooting

6.1 Maintenance

During the use of the equipment, regular maintenance should be carried out on the equipment to increase the life and reduce the possible downtime.

6.1.1 Inspection Methods

In daily equipment inspection, the general method is to use the direct sensory diagnosis method for fault diagnosis, which can be summarized as: ask, observe, listen, smell, touch, test.

• Observe: Observation, e.g. observing the color of the charging pile indicator light, the display on the human-machine interface.

• Listen: Listen to the sound and judge whether the charging pile is working properly according to the sound of the internal contactor when the charging pile is running.

• Smell: The diagnosis is based on the smell emitted by the charging station.

• Touching: Feel the surface of the charging pile with your hands for overheating, and check whether there is condensation inside.

• Test: Experimental verification, such as pressing the leakage test button of the internal circuit breaker on the charging pile to see if the circuit breaker can be automatically disconnected.

6.1.2 Routine Maintenance Tables

Contents	Check the method	Maintenance intervals
System operating status and environment	• 1. Listen to whether there is any abnormal sound during the operation of the charging pile; • 2. Check whether the heating of the charging pile shell is normal; • 3. Observe whether the inlet and outlet air is normal; • 4. Check the humidity and dust of the surrounding environment of the charging pile. • Note! The ventilation of the air intake must be checked. If the module is not cooled effectively, it will fail due to overheating.	1 time every 6 months
External inspection and cleaning	1. Observe whether the shell structure of the charging pile, the charging gun, and the connecting cable are damaged or deformed; 2. Clean the equipment shell and vent; 3. Check whether the touch screen data display is normal; 4. Check the status of the LED strip light; 5. Radio Frequency Identification Technology, Payment Terminals (if any).	1time every 3 months
Internal inspections clean	1. Check the cleanliness of circuit boards and components; 2. Check the internal charging module and if necessary, remove the module for cleaning; 3. Check whether there is any damage to the fan blades, etc., and maintain and replace them in time; 4. Check whether the internal instrument display is normal; 5. Do routine inspection of the corrosion of all metal components.	1time every 6 months
Circuit connection safety check	1. Check whether the power cable and control cable are in good condition, especially whether the skin in contact with the metal surface is damaged; 2. Check whether the switch, contactor, circuit breaker and fan are normal; 3. Check whether the insulation and wrapping of the power cable terminal are intact, whether the insulation of the parts and cables is discolored or mechanically damaged, and whether the contact force of the fuse is normal.	Half a year after the first commissioning, and then every six months to1year
security and other system functions	1. Check the emergency stop button and whether the stop button function is normal; 2. Simulate operation tests such as start-up charging, shutdown, and card swiping, and observe whether the functions of each system such as power allocation, safety control function, and billing are normal.	1time every 6 months

6.1.3 Security Configuration Check

NOTE
The routine maintenance schedule for the device may vary depending on environmental conditions and the number of charges.

Dangerous Voltages
Operations inside the device should only be performed by authorized or trained personnel. In order to carry out maintenance activities on the equipment, the equipment must be completely de-energized.

6.2 Trouble Shooting

If you're having trouble with your device, the following troubleshooting methods can help fix the problem:

Issue	Possible causes	Solution
the display screen turns black and when pressed the button the display screen can't light up	The main AC voltage is missing	Check if the main AC voltage exists
	The upstream AC protection trips	Check and reactivate upstream alternating current (AC) protection
	EVSE internal issues	Contact the dealer's service station
The display displays this message:The connector could not be locked	The EV charging cable is not properly connected to the EV	Remove the charging connector and reconnect it to properly connect the EV charging cable to the EV
	You are not authorized to charge	Make sure you are authorized to charge your electric vehicle
The display displays this message:Cannot be unlocked	There is a dangerous voltage on the EV charging cable	Wait for 5 minutes and try to remove the charging connector again.If there is a dangerous voltage, press the stop button.
The display displays this message:Insulation detection error	There are insulation issues on electric vehicles or EVSE	Try restarting the charge, and if the problem is from EVSE, contact the service station that contacted the dealer for support
The display displays this message:The vehicle behaves abnormally	There is a communication problem between electric vehicles and EVSE	Contact the dealer's service station for support
The display displays this message: Equipment failure	The owner disabled EVSE	Check whether EVSE is forbidden on-site or through the OCPP backend, and star it if needed
	EVSE internal issues	Contact the dealer's service station

6.3 Device Failure Codes

If you're having trouble with your device, you can check the following fault codes to help resolve the issue:

Code	Description	Code	Description
1001	Remote	2008	Main-Negative relay breakdown
1002	Card Swipe	200A	Insulation process breakdown
1003	Screen	200B	Parallel-Positive relay breakdown
1004	Reboot	200C	Parallel-Negative relay breakdown
1010	Connection timeout	200E	Battery current is too high
1011	Start timeout	2010	Output Reverse Connection
1020	Power input abnormality triggered stop	2011	Current data anomaly
2000	The charging station halts charging	2012	Communication failure of insulation module
2001	E-Stop	2013	Communication failure of charger module
2002	Door is opened	2014	Release process breakdown
2003	insulation module breakdown	2016	Allowable voltage < Minimum output voltage
2004	Communication failure of meter	2017	Outside voltage of the contactor < 10V
2005	Main-Positive relay breakdown	201B	External voltage does not match battery voltage
2006	Communication failure of BMS	2019	External voltage < Minimum output voltage
2007	Charger module breakdown	201A	External voltage >Maximum output voltage

Code	Description	Code	Description
201D	AC-Contactor breakdown	4001	BST Vehicle reaches the sOC target value
201E	Charging connector overtemperature	4002	BST Vehicle reaches the total voltage
201F	Charging voltage > Maximum allowable voitage	4003	BST Vehicle reaches the unit voltage
2020	Over SOC protection value	5000	BMS abnormally terminates charging
3000	The charging station terminates charging	5001	BST Insulation breakdown
3009	Receiving BCP timeout	5002	BST output connector overtemperature
300A	Receiving BRO packet (0x00) timeout	5003	BMS components, output connectors overtemperature
300B	Receiving BRO packets (0xAA) timeout	5004	BST charging connector breakdown
300B	Receiving BCL timeout	5005	BST battery overtemperture
300D	Receiving Bcs timeout	5006	BST high voltage relay breakdown
300C	Receiving BSM timeout	5007	BST monitoring point 2 voltage detection breakdown
3010	Receiving BST timeout	5008	BST other breakdown
300E	Receiving BSD timeout	5009	BST overcurrent
300F	Normal stop by BMS	500A	BST abnormal voltage
4000	BMS normally terminates charging		
Code	**Description**	**Code**	**Description**
F001	Emergency stop activated		
F002	The door is unlocked		
F003	AC contactor failure		
F004	Parallel contactor failure		
F007	Charging station fan malfunction		
F00D	Over-temperature of the charging gun		
F00F	Communication failure of BMS		
F015	All charging modules have failed		
F01F	Communication failure of charging module		
F022	Communication failure of meter		
F023	Communication failure of insulation module		
F024	Discharge malfunction		
F027	Electronic lock malfunction		
F02D	Inconsistent number of charging modules		

6.4 Complete Power off for The Equipment

• Before implementation, it is necessary to confirm whether the weather conditions and the place are available.
• Electrical blackout operations of equipment must be carried out by professionals, wearing mandatory personal protective equipment and using safety equipment, tools and equipment.
• The operator must follow the procedures required by this manual or other relevant mandatory specifications: turn off the external AC main circuit breaker and perform the locking mark operation; Turn on the device and turn off the main AC circuit breaker inside the device.

Dangerous Voltages
No operation can be performed on the charger until at least 15 minutes have been turned off.

Once the mission is complete, restore the previously removed protective barriers and warning signs to their original state.

Note
If you can't find a solution to your problem, contact your local dealer or contact your device manufacturer's customer service via email.
Email: Service@cn-newcom.com

7. Appendix

7.1 Quality Assurance

Please keep the invoice, warranty card and other information of the purchased equipment, which are valid proof of equipment warranty.

During the warranty period, if the equipment has non-human failure, the manufacturer, dealer or designated after-sales service provider will provide free accessories and remotely guide the maintenance service or replace the new equipment. Reasonable time should be reserved for maintenance services according to the distance and equipment damage. If the equipment is replaced with a new one, the unqualified equipment after replacement shall be disposed of by the manufacturer or distributor.

If the equipment fails or is damaged due to the following circumstances, the manufacturer has the right not to carry out quality assurance, and the manufacturer can provide paid maintenance services if the customer has maintenance needs:

- The whole machine and parts have exceeded the free warranty period.
- A valid warranty certificate cannot be provided.
- Failure to transport, store, install, use, and maintain in accordance with the specifications and standards required by this manual.
- Failure to operate and use in accordance with the safety specifications and standards applicable to the installation site.
- Storage and operation in an environment beyond the scope permitted by the provisions of this manual.
- Repairing, altering, or disassembling the device without the manufacturer's authorization.
- Damage caused by abnormal natural environment.

7.2 Precautions

- The manufacturer shall not be liable for any damages caused by the configuration software product supplied with the product.
- It is forbidden to use part or all of the data of the firmware or software developed by the manufacturer for commercial purposes in any way.
- It is forbidden to decompile, decrypt or otherwise destroy the original program design of the software developed by the manufacturer.
- Any modification, manipulation or alteration of the hardware or software without the express consent of the manufacturer will result in the immediate cancellation of the warranty.
- Failure to strictly follow the instructions set forth in this manual will result in the immediate cancellation of any warranty policies applicable to this charging station.