VERDEXON

BORN FROM EARTH, BUILT FOR TOMORROW

Installation, Operation & Maintenance Guide.

Earth Core Series DC Charger

40kW - 240kW

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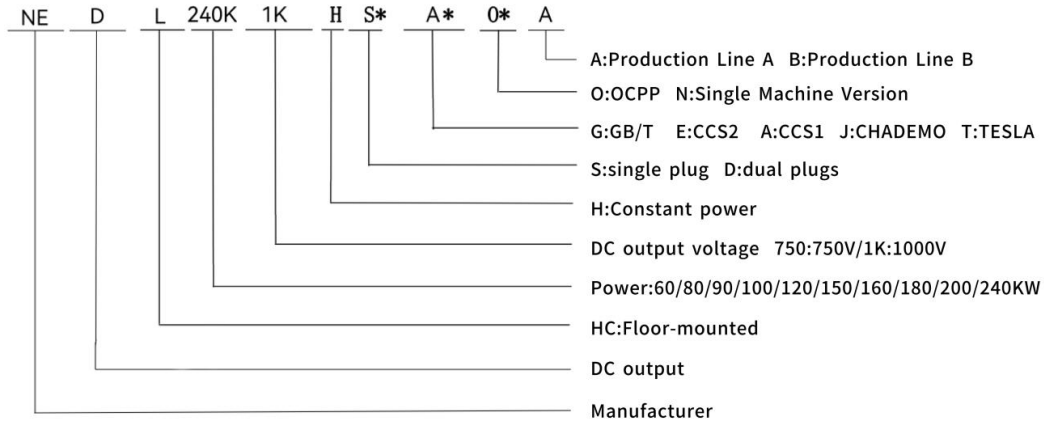
1. Product Overview

1.1 Overview

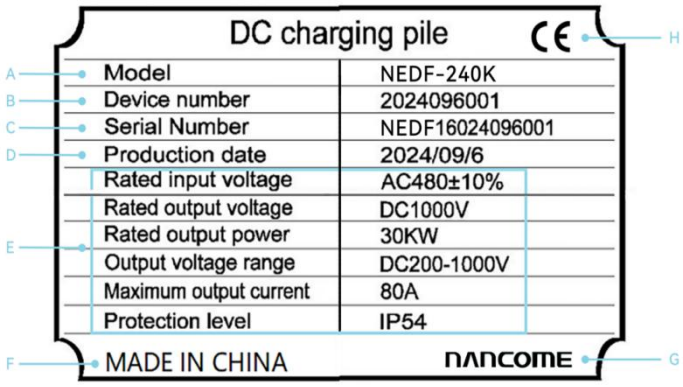
HC fixed ac-dc DC charging pile is a DC charging equipment that specializes in providing fast charging services for electric vehicles, integrating human-computer interaction, charging control, metering and billing, fee payment, remote communication and intelligent safety protection. The product series 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.

1.1.1 Product Model Description



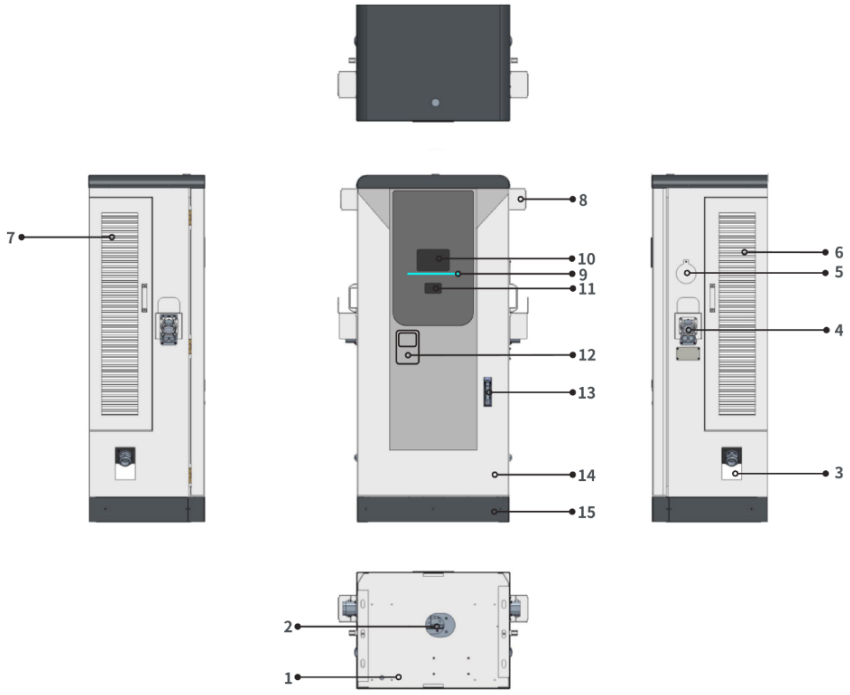
1.1.2 Model Nameplate - Equipment Identification

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



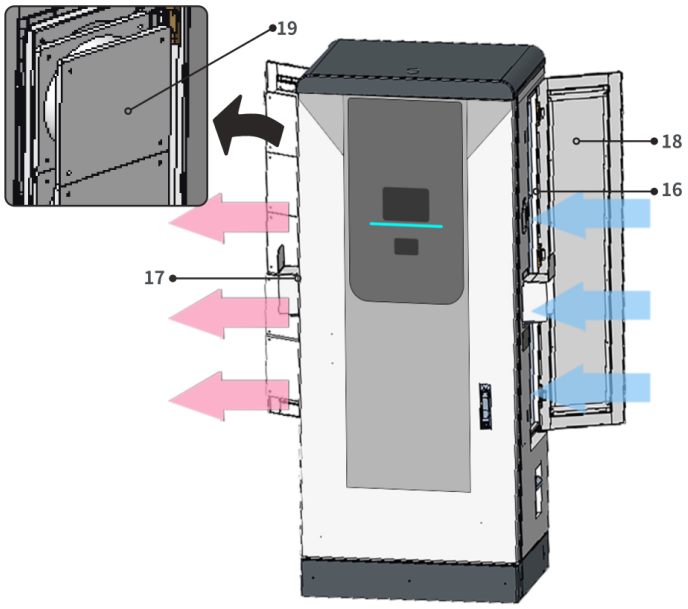
1.2 Product Overview

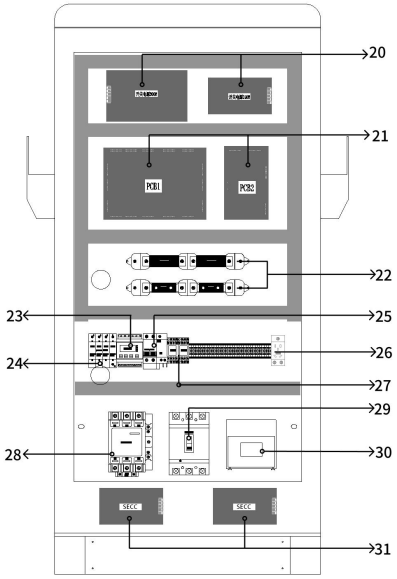
1.2.1 Appearance and Composition



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

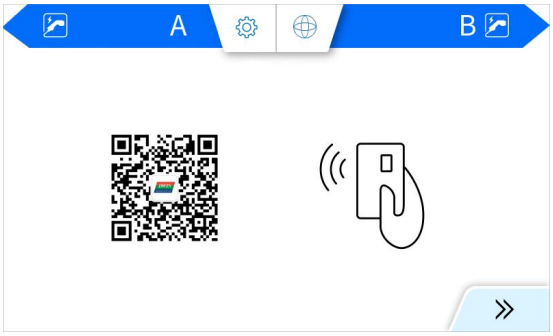
1.2.2 Overview of Air Cooling System and Internal Structure





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

1.3 Touchscreen Display and Main Interface Display



1.4 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.

1.5 Mode of Operation

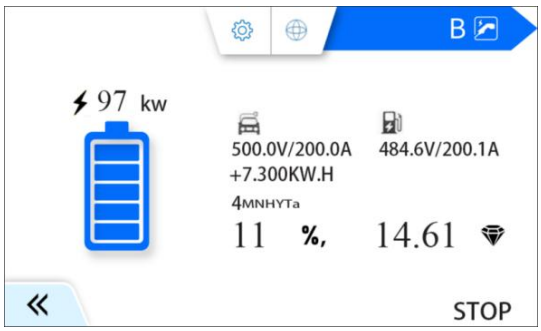
- Support local operation: via touch screen, card reader
- Remote operation: remote control operation through the Internet background

1.6 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.

1.7 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.



1.8 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.

1.8.1 RFID - Authorized Charge

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

1.8.2 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.

1.8.3 Cloud Payments

Merchants can implement cloud payments based on OCPP.

1.9 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.

1.10 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.

1.11 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.

1.12 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.

1.13 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.

2. Technical parameters

2.1 Detailed technical data

2.1.1 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

2.1.2 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

2.1.3 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

2.1.4 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

2.1.5 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

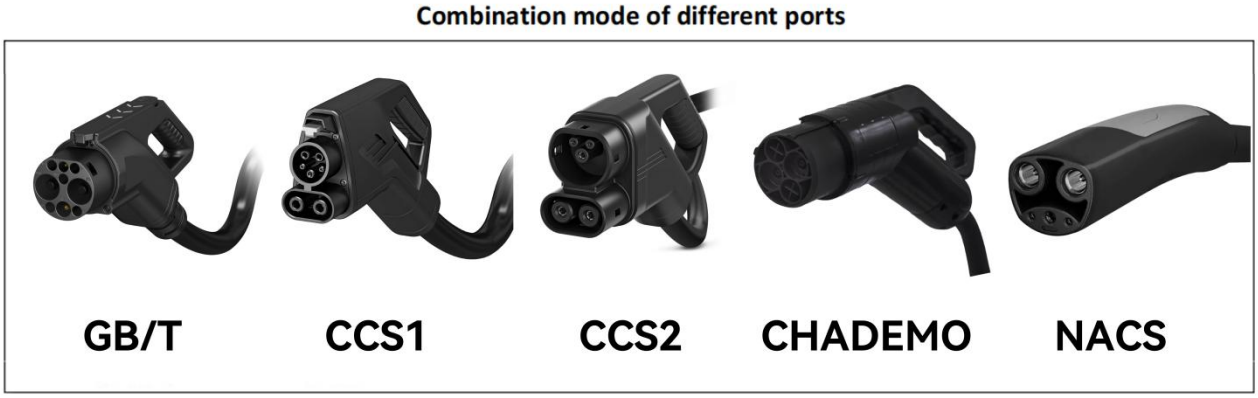
2.1.6 Specifications NEDF180KW detailed technical parameters

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

2.1.7 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

2.2 Charging interface standards and combinations



3. Instructions

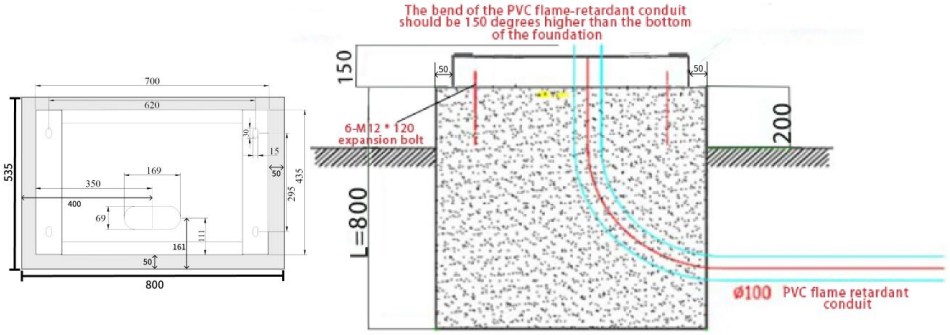
3.1 Prepare for Installation

3.1.1 Foundation Construction

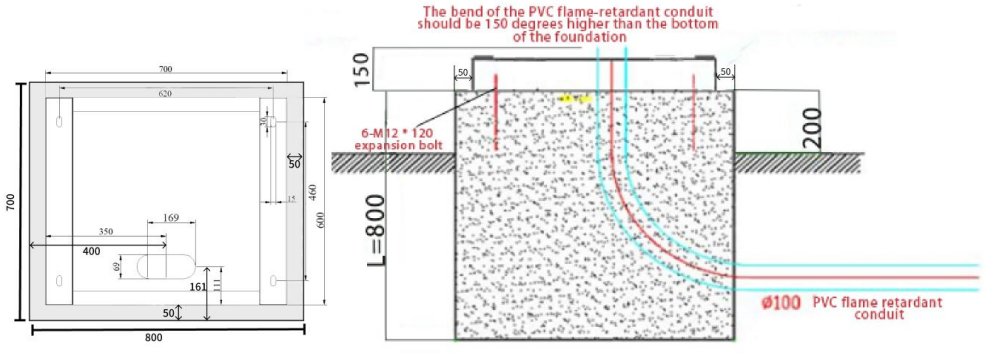
The equipment must be installed on the cement base suitable for supporting the weight of the equipment, and the cement base needs to reserve a suitable space during the construction, and after the charging pile is installed, there is no obstacle on the front, 100mm away from the obstacle behind the back, 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:



3.1.2 Prepare The Cables

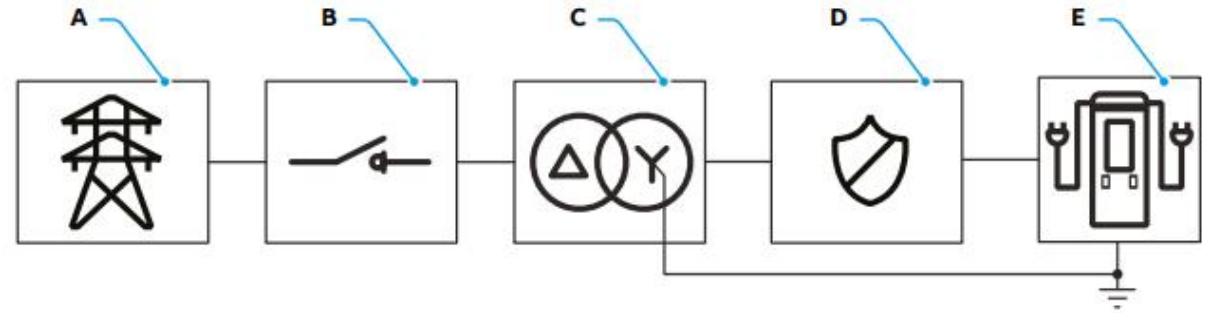
The selection of cables should comply with the relevant specifications of the electrical industry. Please refer to the following table to determine the cable, the cable selection in the table is for reference only, please refer to the judgment of the professional construction qualification unit:

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			

3.2 Install The Connection

3.2.1 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

3.2.2 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.

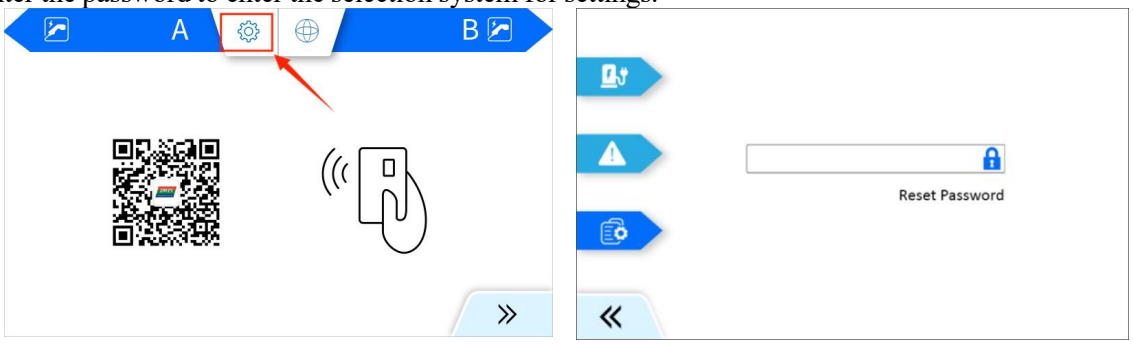
3.2.3 Internet Connection

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

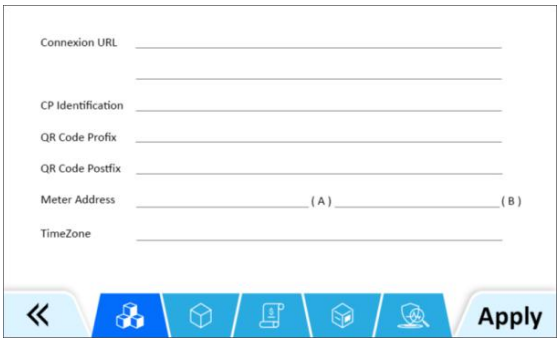
4G connection: You need to purchase an industrial router that meets the local telecom communication standards and a SIM provided by the local telecom operator, and insert the SIM into the router card slot; Connect the router to the device via the Ethernet port.

3.3 System Settings

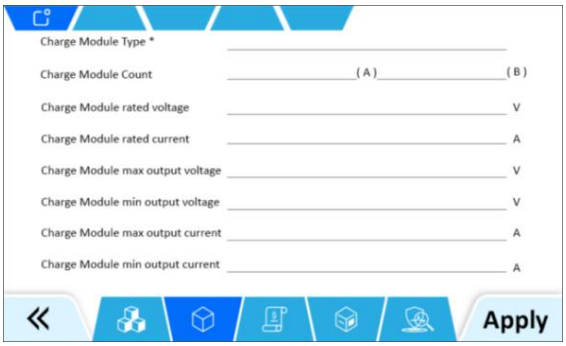
On the main page, click the system management icon at the top of the screen, then click the system settings icon, enter the password to enter the selection system for settings.



Basic System Parameter Configuration

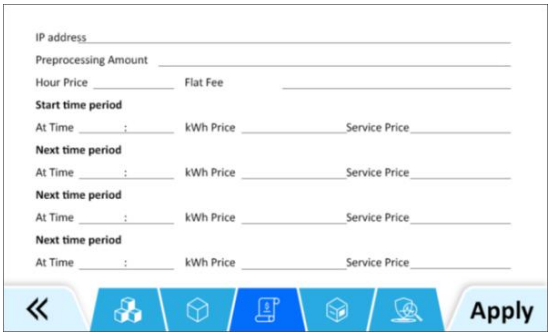


Module Parameter Configuration

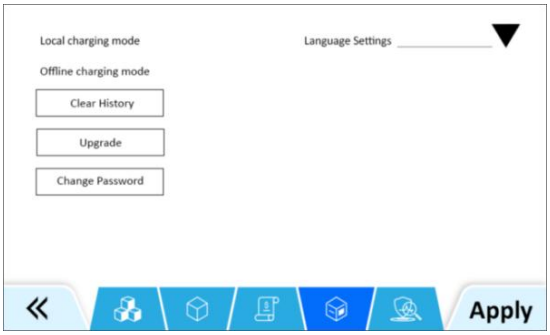


Security Protection Settings

Billing Configuration Page



Other System Configurations



3.4 Pre-production Testing

3.4.1 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.

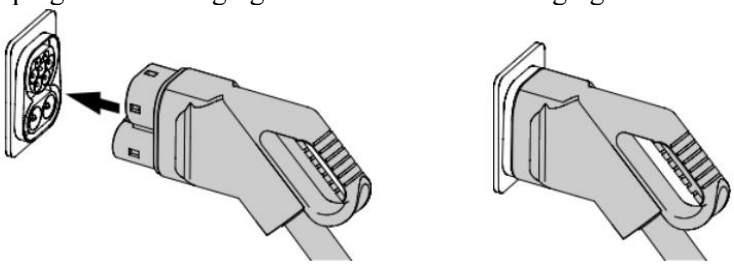
3.4.2 Conduct Emergency Shutdown Tests.

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

3.5 Operation and proper use

3.5.1 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.

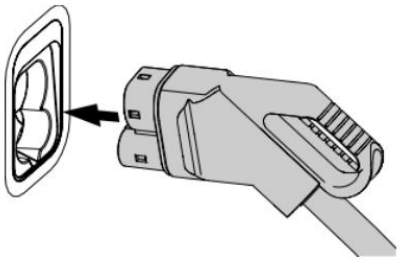


Danger: Dangerous voltage
During the charging phase, the charging connector will be locked in place to prevent unplugging.

• 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.

3.5.2 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.

4. Maintenance and Troubleshooting

4.1 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

4.2 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

4.3 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.

5. Appendix

5.1 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.

5.2 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.