

DC Charging Station

User Manual



Thank you for using this series of DC charger. Before using the product, please read the instructions carefully.

When using the product, please follow the instructions.

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1. Product Overview

High-power power module platform of nuclear safety level is adopted, which has higher safety and reliability.

A new high-efficiency three-phase PFC circuit topology is adopted, and the power factor is greater than 0.99 and the harmonic distortion rate is lower than or equal to 5%. The full-bridge phase-shifting soft-switching technology is adopted in the high-frequency switching power supply module, which has high execution efficiency.

Advanced digital current sharing technology effectively improves current sharing accuracy and anti-interference ability, and pioneers module dormancy technology and rotation technology to ensure efficient operation of the system.

Intelligent charging process control and perfect charging process monitoring and protection, simple operation.

Various charging modes to choose, such as timing charging, quantitative charging, fixed amount charging and automatic charging.

Real-time display of charged quantity, charging time, current electricity price, charging price and operation status.

It can reserve RS-485 networking communication interface and provide GPRS networking mode.

Module Hot Plug-in technology to make maintenance more convenient.

Working environment temperature from -25°C to $+55^{\circ}\text{C}$.

1.1 Safety Instructions

Save these instructions - this document contains instructions and warnings that must be followed when installing and using the Electric Vehicle Supply Equipment . Before installing or using the charging pile, read this entire document as well as WARNING and CAUTION markings in this document.

1.2 Safety Instructions

Symbol	Risk type
	RISK OF PERSONAL INJURY
	RISK OF ELECTRIC SHOCK
	RISK OF FIRE
	RISK OF DAMAGE TO THE EQUIPMENT

- The charger must only be installed by licensed electricians
- Make sure that the materials used and the installation procedures adhere to local building codes and safety standards.
- The information provided in this manual in no way exempts the user of responsibility to follow all applicable codes or safety standards.
- This document provides instructions for the charger and should not be used for any other product. Before installation or use of this product, review this manual carefully and consult with a licensed contractor, licensed electrician, or trained installation expert to make sure of compliance with local building codes and safety standards.

1.3 Repair and Maintenance Clause

- Only licensed electricians can repair or maintain the charger. It is forbidden for general users to repair or maintain it.
- Turn off input power before repair or maintenance of the charger.



WARNING: RISK OF ELECTRIC SHOCK

When using electric products, basic precautions should always be taken. This manual contains important instructions that shall be followed during installation, operation and maintenance of the unit.

- Read all instructions before using this product
- Children should not use the device without adult supervision.
- Do not insert fingers into the EV connector.
- Do not use this product if the flexible power cord or EV cable is frayed, has broken insulation, or displays any other signs of damage.
- Do not use this product if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage.
- To avoid the risk of fire or electric shock, do not use this unit with an extension cord.



WARNING: RISK OF ELECTRIC SHOCK

Improper connection of the equipment grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded.

Do not modify the plug provided with the product. If it will not fit the outlet, have a proper outlet installed by a qualified electrician

**WARNING: RISK OF ELECTRIC SHOCK**

Do not remove the cover or attempt to open the enclosure. There are no user serviceable parts inside. Refer servicing to qualified service personnel.

**● WARNING: RISK OF ELECTRIC SHOCK**

- Do not touch live electrical parts.
- Incorrect connections may cause electric shock.
- Do not disconnect under load.



WARNING: This equipment is intended only for charging vehicles that do not require ventilation during charging. Please refer to your vehicle's owner's manual to determine ventilation requirements.



WARNING: Do not use extended cables to increase the length of the charging cable. Maximum length is limited to 5M



WARNING: Do not drag the charger by its input power cord.



CAUTION: Do not expose to liquid, vapor, or rain.



CAUTION: If this unit is installed outdoors, the outlet must be rated for outdoor installation. The outlet must be installed properly to maintain the proper NEMA rating of the enclosure.

- Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
 - Do not touch the terminals or other current-carrying parts.
-
-

-
- Take care not to drill into any pipes or power lines beneath the surface when preparing the mounting holes. Use a power line / metal detector.
 - Do not trample or drive over the product's cables.
 - Do not put any foreign objects into the enclosure.
 - Do not start the vehicle's engine when the charging connector is still connected.



CAUTION: Do not use this product if there is any damage to the unit. In the event that the unit is not operational, send it back to the manufacturer.

2. Protection Function

Electrical isolation between input and output of charger.

The output device prevents the battery pack from charging the output filter capacitor of the charger, and prevents the instantaneous high current from occurring at the output end of the charger when the battery pack is connected.

The voltage withstanding grade, insulation grade and EMC of the charger meet the standards.

3. Applicable scenes

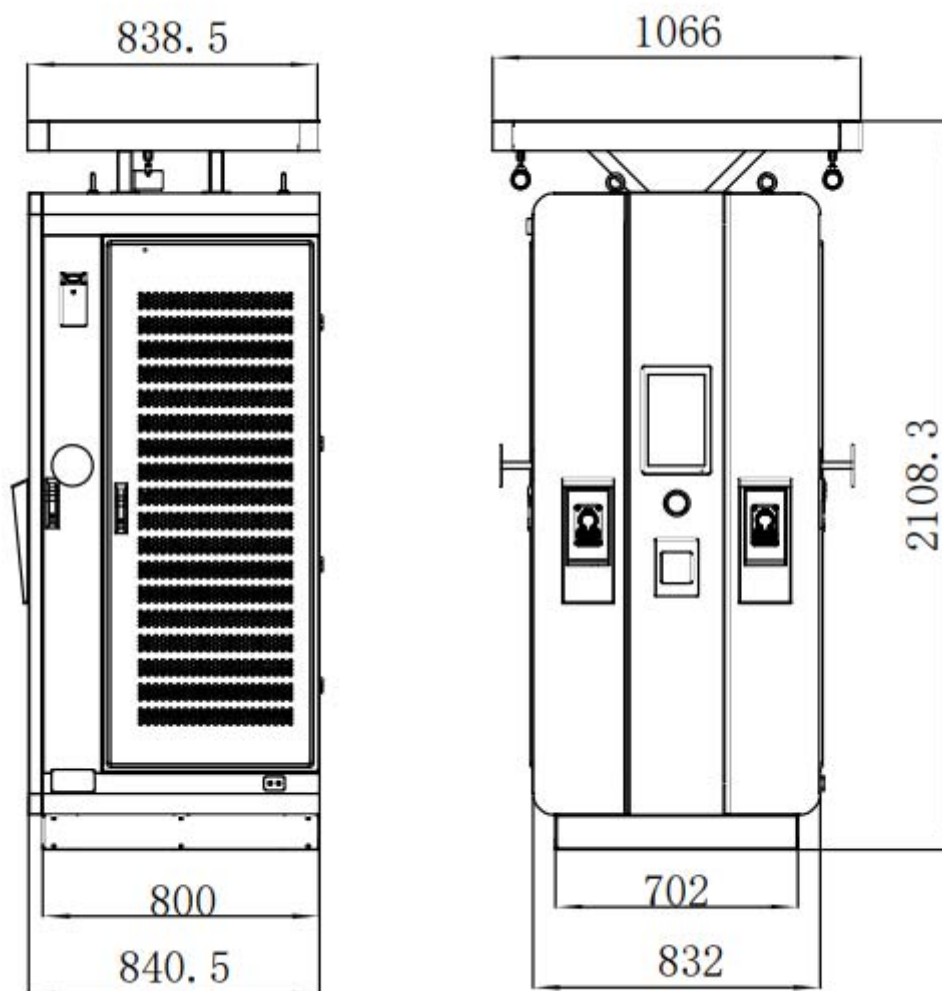
It is suitable for all kinds of parking lots in urban public charging stations (private cars, commuters, buses), urban residential districts, shopping plazas, power business places, etc. of city special charging stations (buses, taxis, public service vehicles, sanitation vehicles, logistics vehicles, etc.) It is especially suitable for fast charging situations such as charging stations on intercity expressways where DC is needed, especially in the case of limited sites.

4. Technical Data

S. NO.	Parameters	Requirements
General Requirements		
1	Charger Capacity	360kW
2	Model No.	ANSI-DCL360B
Input Requirements		
3	AC Supply System	Three-Phase, 5 Wire AC system
4	Nominal Input voltage	AC480V±10%
5	Input frequency	50-60Hz
Environmental Requirements		
6	Ambient Temperature Range	-25 to 55°C
7	Ambient Humidity	5 to 95%
8	Storage temperature	-40 to 70°C
9	Environmental Condition	Outdoor use
Mechanical Requirements		
10	IP Ratings	IP 54
11	Cooling	Air-cooled
Output Requirements		
12	Number of outputs	2
13	Type of each output	DC200-1000V
14	Output Current	Max. 300Amp
15	Output Connector Compatibility	SAE J1772
16	Converter Efficiency	≥95% at nominal output power
17	Power Factor	≥0.99(50% load above)
User Interface & Display Requirements		
18	Emergency stop switch	Support
19	Display	12 Inches Touch Screen with Shell
20	User Authentication	Mobile Application or User Interface / QR Code/RFID Card /Password Login
21	Metering Information	Consumption Units
Communication Requirements		
22	Communication between EVSE and Central Server	Open Charge Point Protocol (OCPP) 1.6 protocol.
23	Metering	Grid responsive metering as per units' consumption of each vehicle
24	Interface between charger and CMS	Ethernet/3G/4G/WIFI
Protection & Safety Requirements		
25	Safety Parameters	Over current, under voltage, Residual current, Surge protection, leakage protection, Short circuit, Over temperature, etc.

5. Shape Dimension and Installation Method

5.1 Shape of Equipment



Unit: mm

Figure 5-1-1

5.2 Installation of Equipment

5.2.1 Before installation, please check whether the packing box contains the following items: (whichever is the packing list)

- 1) 1pcs ground-mounted DC EV Charger
- 2) 2pcs testing cards
- 3) 1pcs Installation Instructions
- 4) 1pcs Qualification Certificate
- 5) 4pcs installation of expansion screws

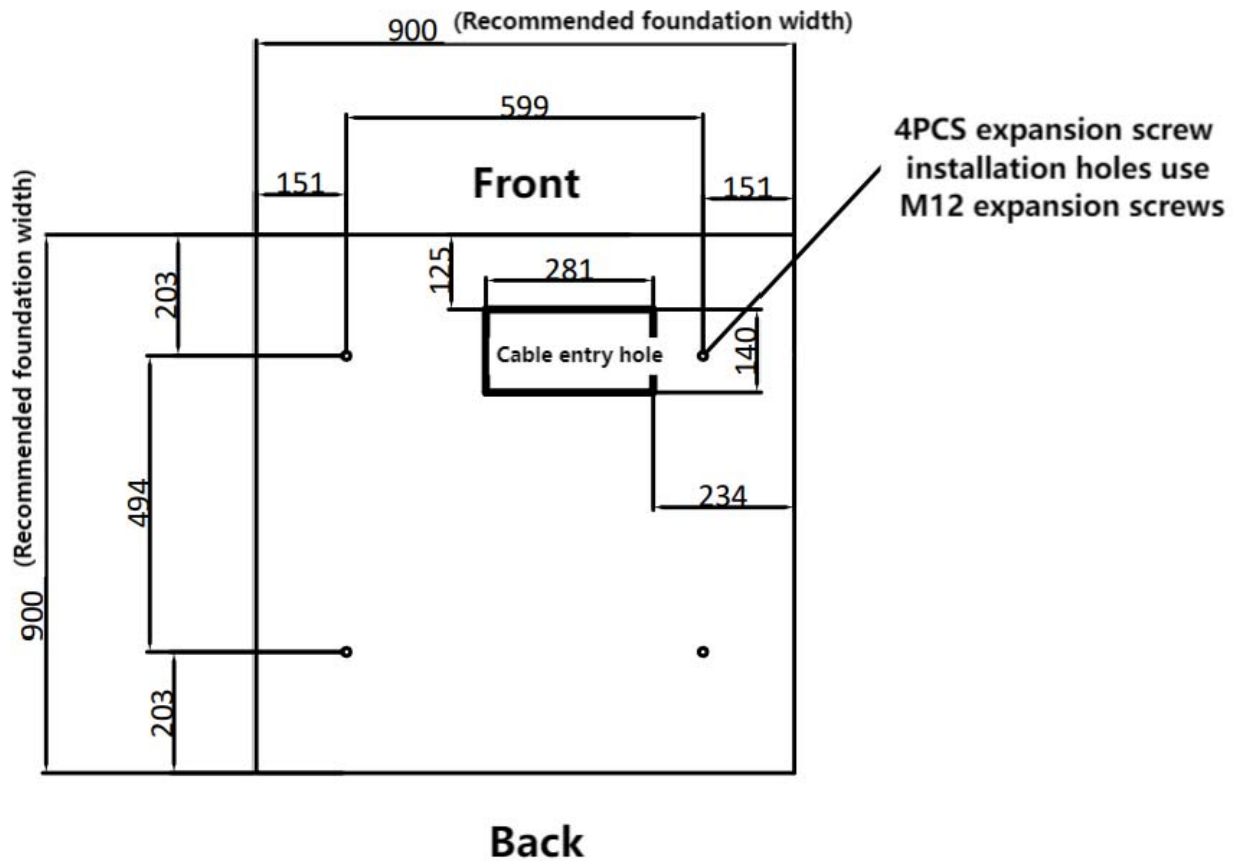
5.2.2 Installation environment requirements

- 1) This series of DC chargers are for outdoor use, IP54 protection level;
- 2) Ambient temperature from - 25 °C to + 55 °C.

5.2.3 Installation mode

Ground-mounted

5.3 Installation Dimension Diagram



Unit: mm

Figure 5-3-1

Note:

1. The length * width of cement foundation is recommended to be 900 * 900mm (according to the actual situation on site);
2. The height of cement foundation should not be less than 200mm;
3. Cable inlet mode: from the bottom of the charger, it is recommended to reserve cable length ≥ 600 mm;
4. Recommended installation method: Crane transportation and installation;

5.4 Cable access

Connect the three-phase cable embedded in the pile foundation to the input end of the charger, and pay attention to the connection method of five lines and the corresponding color, and connect the ground wire on the cabinet grounding row, as shown in Fig. 5-4-1. Note: The cross-sectional area of DC input phase line and N line and ground line is not less than $3 \times 240\text{mm}^2 + 2 \times 120\text{mm}^2$.

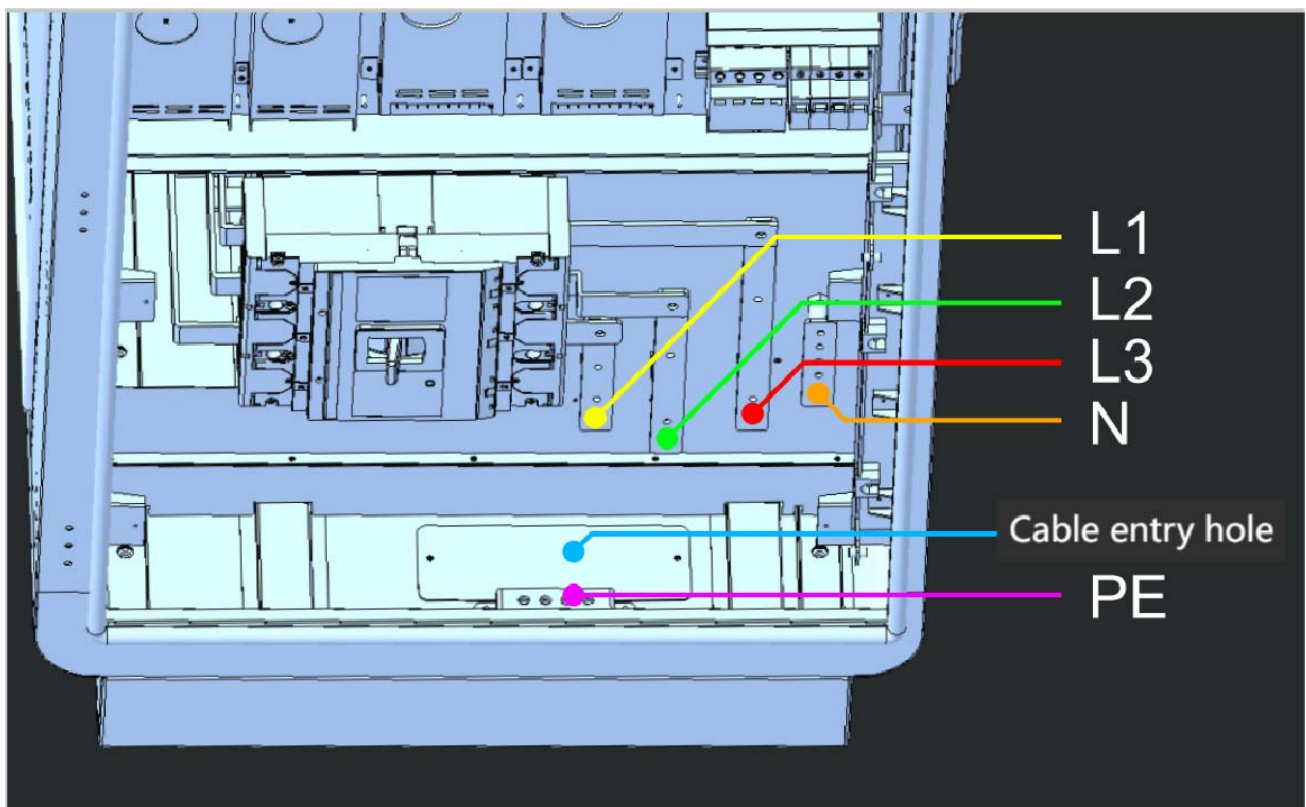


Figure 5-4-1

6. Operational Instructions

6.1 Operation Area

- 1). Press password to charge;
- 2). Card charging;
- 3). QR code charging ;

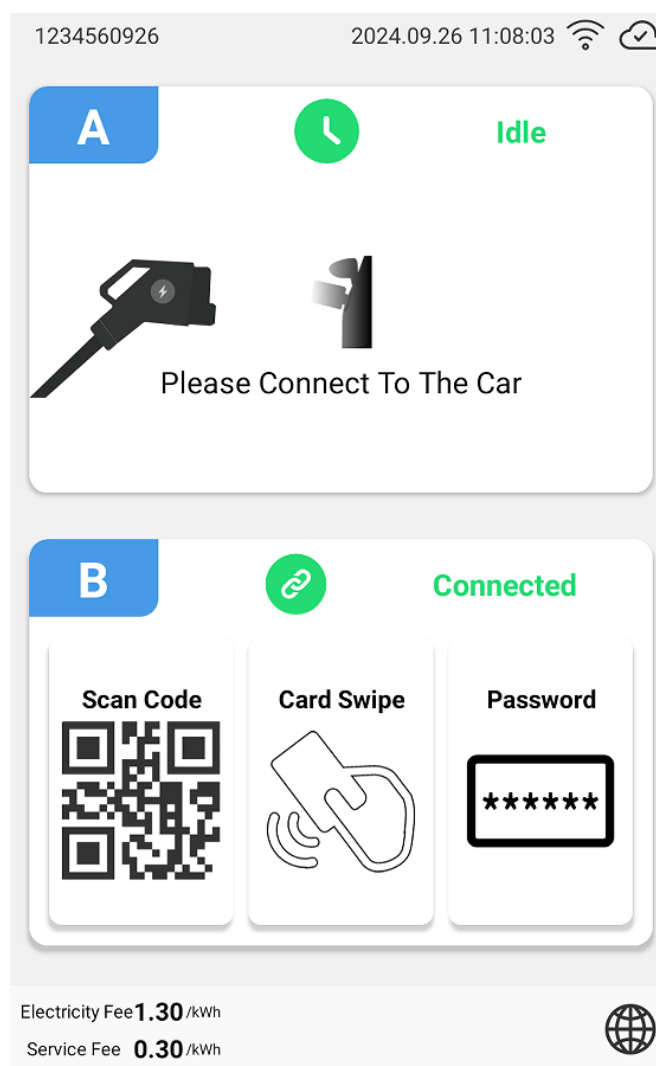


Figure 6-1-1

6.2 Charging operation

- When the screen displays normally, there is no fault information, the charger is in normal standby mode, and the appearance and The surrounding environment is normal, and the charger can be charged.
- When the screen displays a fault message, do not use the product an call the service hotline for help.

6.2.1 Connect and Authorize

- Enter the standby interface.
- Select the corresponding charging gun and connect it to the AC charging port of the electric vehicle. After plugging in the gun, select the charging start method.

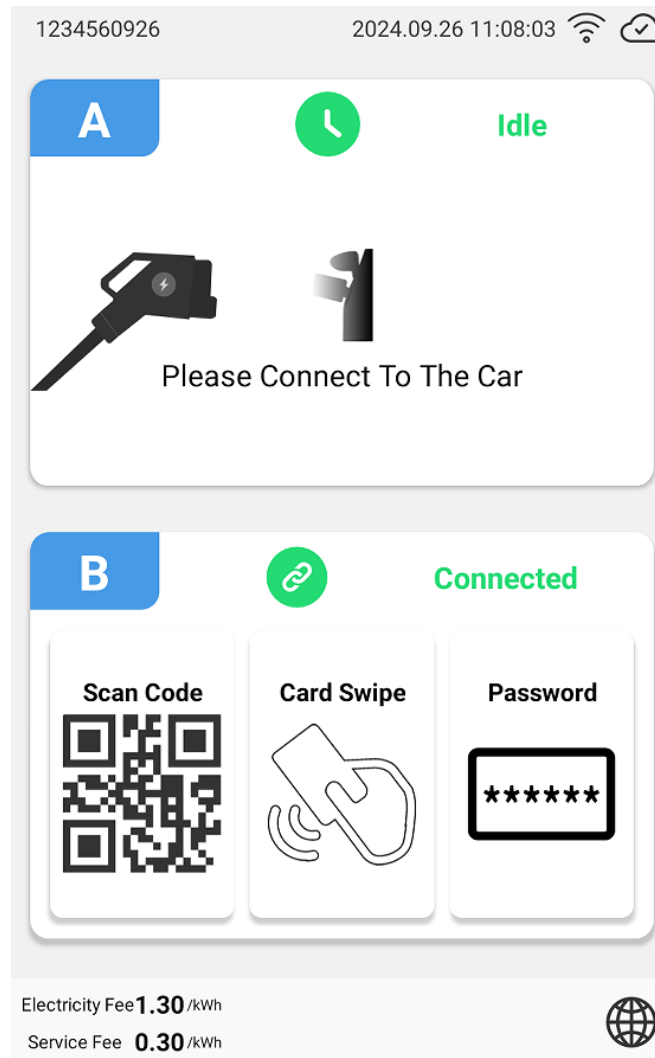


Figure 6-2-1

6.2.2 Start charging

- Enter password to charge

1234560926

2024.09.26 11:08:13



Please Enter Charge Password

Please Enter The Password

1	2	3
4	5	6
7	8	9
Clear	0	Delete
Return	.	Confirm

Electricity Fee**1.30**/kWh

Service Fee **0.30**/kWh



Figure 6-2-2

- Swipe card to charge

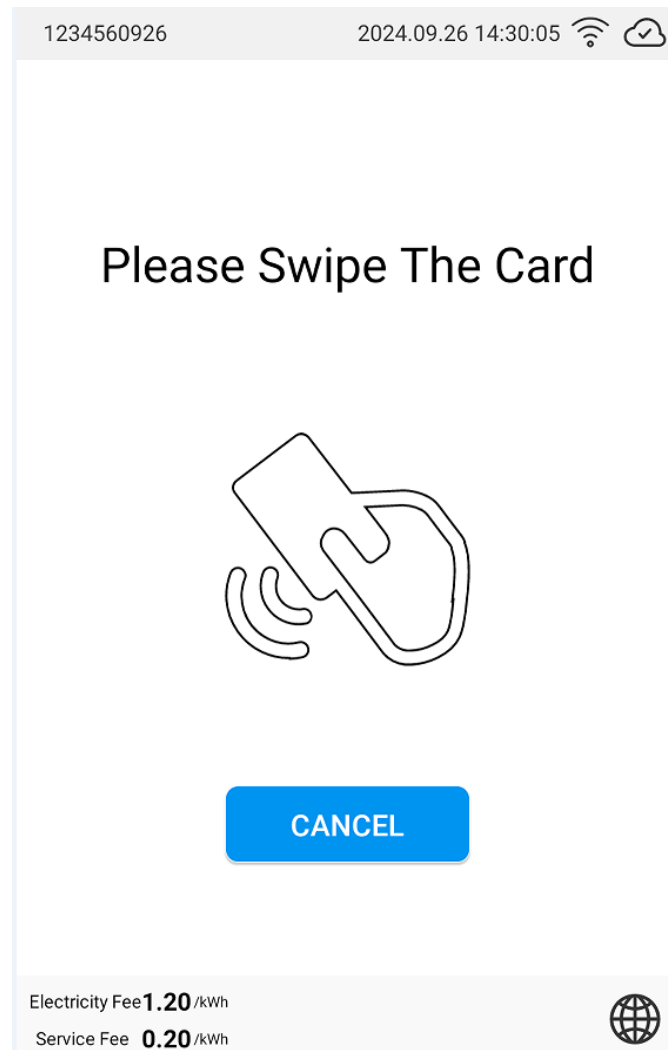


Figure 6-2-3

- Swipe card to charge Select one of the charging modes [Charge by amount, charge by power, Charge by time], enter the corresponding mode and enter the number, click OK, and follow the prompts to swipe the card again to start charging.

1234560926

2024.09.26 14:32:19



Current User Card Number

2202403230000007

Current User Balance

999256.50

AUTOMATICALLY FILL UP

CHARGE BY AMOUNT

CHARGE BY POWER

CHARGE BY TIME

CANCEL

Electricity Fee **1.20** /kWh

Service Fee **0.20** /kWh



Figure 6-2-4

6.2.3 Starting charge

- The system prepares for charging, connects to the BMS to establish communication, and performs safety testing;

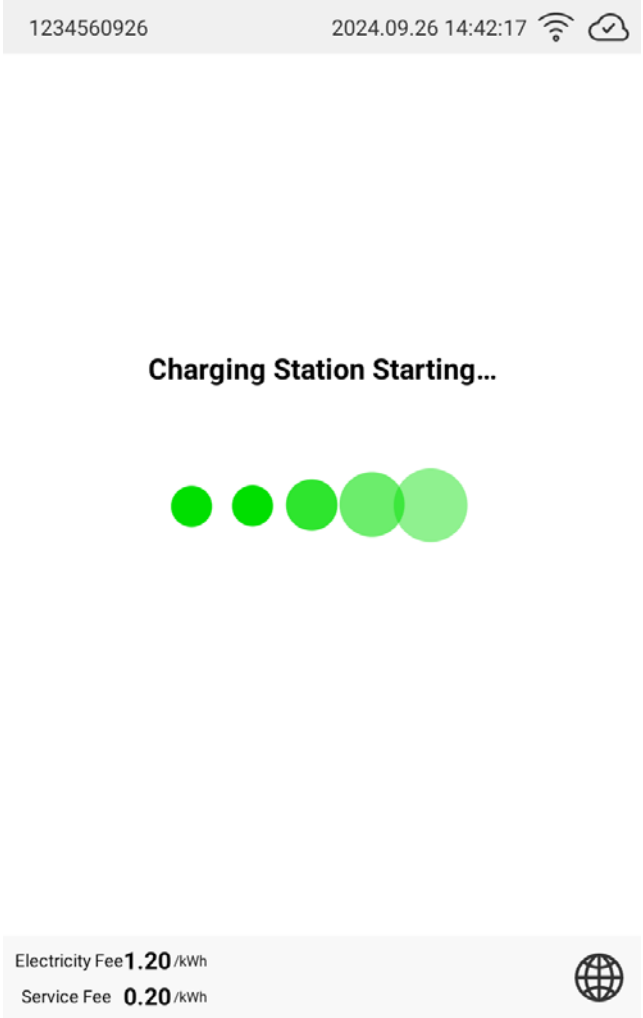


Figure 6-2-5

6.2.4 Charging

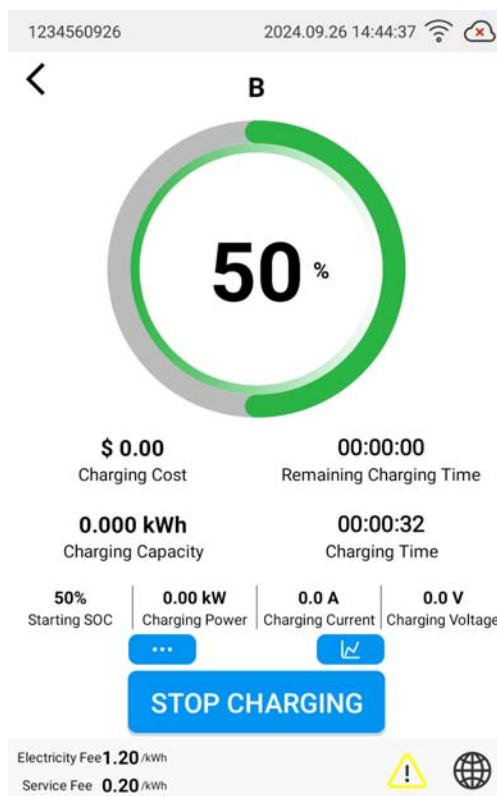


Figure 6-2-6



Note

There is high voltage current during charging, please do not pull the gun directly, otherwise there is a risk of damage to the charger or serious casualties. The shutdown needs to be operated on the screen or APP.

The charger will heat up during charging, please do not cover the vents of the charger.

Do not clean the vehicle or work in the vehicle during charging.

Do not do any cleaning work on the charger during charging.

6.2.5 Stop charging

- Place the charging IC card close to the IC card sensing area of the charger, jump to the charging end page, and swipe the card again to settle the bill according to the prompts.

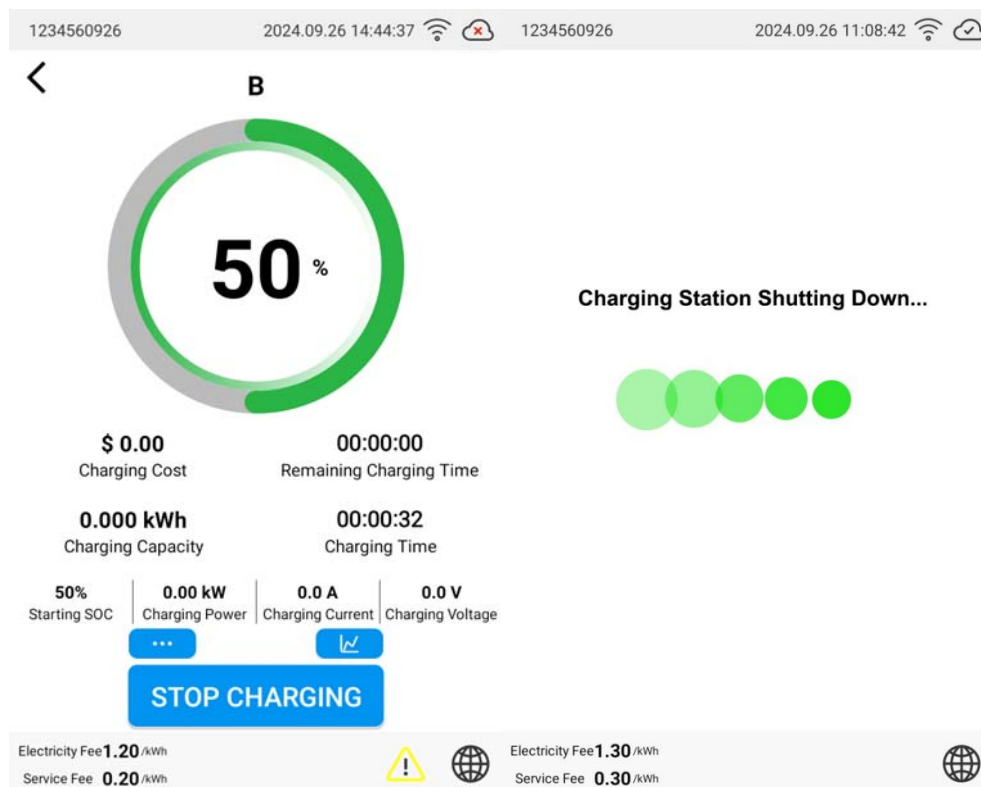


Figure 6-2-7

6.2.6 Charging complete

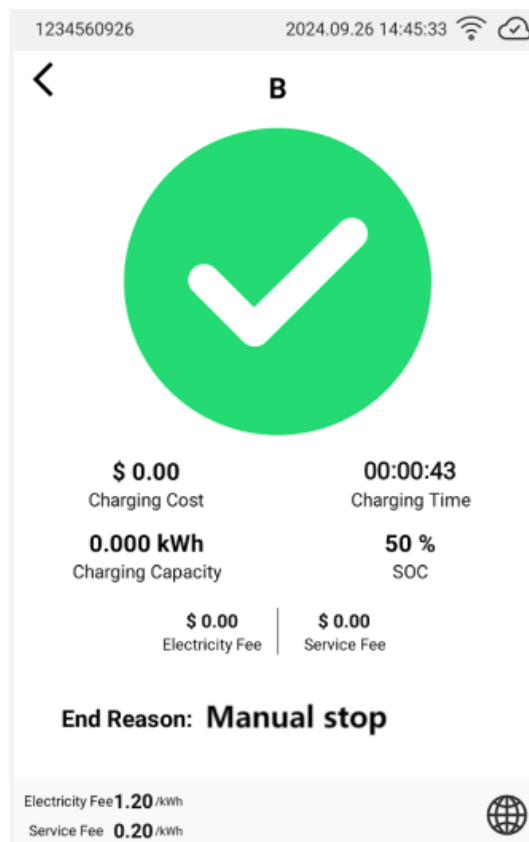


Figure 6-2-8



Note

There is high voltage current during charging, please do not pull the gun directly, otherwise there is a risk of damage to the charger or serious casualties. The shutdown needs to be operated on the screen or APP.

The charger will heat up during charging, please do not cover the vents of the charger.

Do not clean the vehicle or work in the vehicle during charging.

Do not do any cleaning work on the charger during charging.

6.3 System setup

- Network settings: Set IP address and port;
- Rate settings: set price at different time;
- Module settings: Display charging module information in Charger;
- Electric Energy Meter settings: set the parameters of electric energy meter;
- RFID card settings: Password and RFID card settings;
- Charging record: Query the charging history Record of charger;
- Event record: Record all events;
- Password settings: set changing system password.

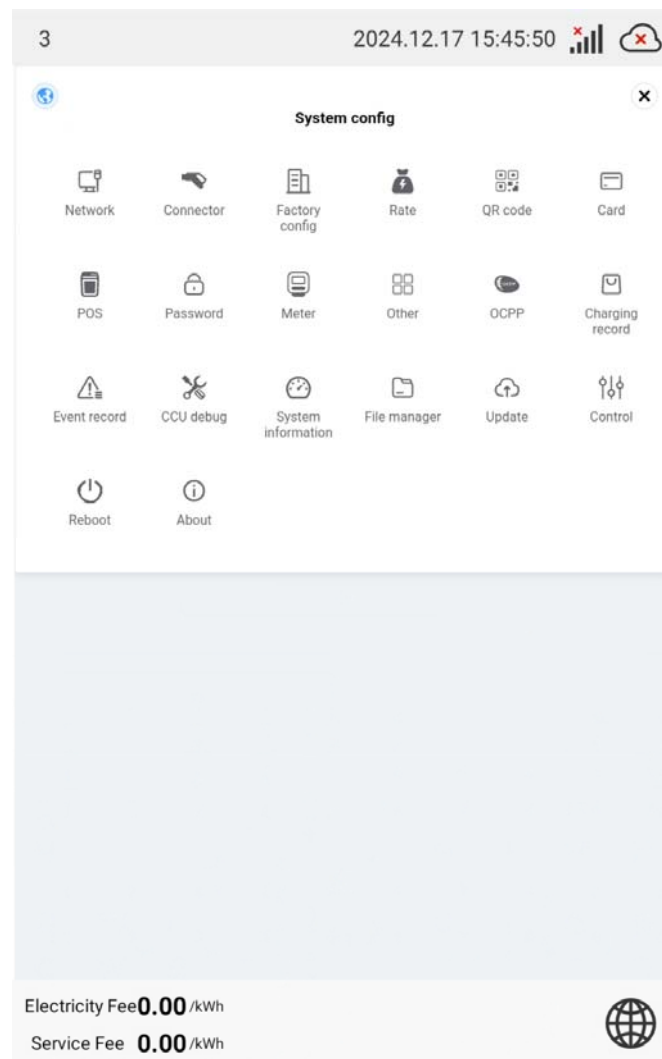


Figure 6-3-1

- 1) Network settings: Set IP address and port, as shown in Figure 6-3-2.

1234560926

2024.09.26 14:49:46



<

Network

>

Server

Charger ID

1234560926

Address

120.24.227.36

Port

59003

eth0

DHCP

☒

sharing

none

>

eth1

DHCP

☒

sharing

none

>

Electricity Fee **1.20** /kWh

Service Fee **0.20** /kWh



Figure 6-3-2

- 2) Rate settings: set price at different time. As shown in Figure 6-3-3.

1234560926

2024.09.26 14:51:00



<

Rate

>

+

No.	Start time	End time	Electricity charge	Service charge	Operate
1	0:0	7:0	1.60	0.60	
2	7:0	9:0	1.50	0.50	
3	9:0	11:0	1.40	0.40	
4	11:0	13:0	1.30	0.30	
5	13:0	19:0	1.20	0.20	
6	19:0	22:0	1.40	0.40	
7	22:0	24:0	1.50	0.50	

Power loss rate 1.000

Electricity Fee **1.20** /kWh

Service Fee **0.20** /kWh



Figure 6-3-3

3) Module settings: Display charging module information in Charger. As shown in Figure 6-3-4.

1234560926
2024.09.26 14:50:48

Factory config

Module

Vender
20

Max. Voltage
999.0 V

Power
20.0 kW

Min. Voltage
200.0 V

Max. Current
66.0 A

Noise level
NONE

Device

Power dispatch
1

Charger over temperature
85 °C

Liquid cooling model
ETY

Power
120.0 kW

LED type
Three color

Fault detect

Lightning detect
AC contactor
Water detect
PE detect

Door detect
Lean detect
Breaker detect

Emergency stop
Smog detect
Fire detect

LED config

Charging
Always on

Idle
Always on

Fault
Always on

Plug in
Always on

Color

Color

Color

Fan config

Speed control

PWM frequency
1 kHz

Fault detect
H

Electricity Fee 1.20 /kWh

Service Fee 0.20 /kWh

Figure 6-3-4

- 4) Electric Energy Meter settings: set the parameters of electric energy meter. As shown in Figure 6-3-5.

1234560926

2024.09.26 14:51:53



<

Meter

>

Baudrate

9600

▼

Parity

EVEN

▼

Output meter

Meter address1

231017350134

Meter address2

230909910003

Input meter

Meter address

0

Electricity Fee

1.20

/kWh

Service Fee

0.20

/kWh



Figure 6-3-5

- 5) RFID card settings: Password and RFID card settings. As shown in Figure 6-3-6.

1234560926

2024.09.26 14:51:21



<

Card

>

Charge card

Card type

HJL1

▼

Card secret key

666666

Enable admin card

☐

Electricity Fee **1.20**/kWh

Service Fee **0.20**/kWh



Figure 6-3-6

6) Charging record: Query the charging history Record of charger. As shown in Figure 6-3-7

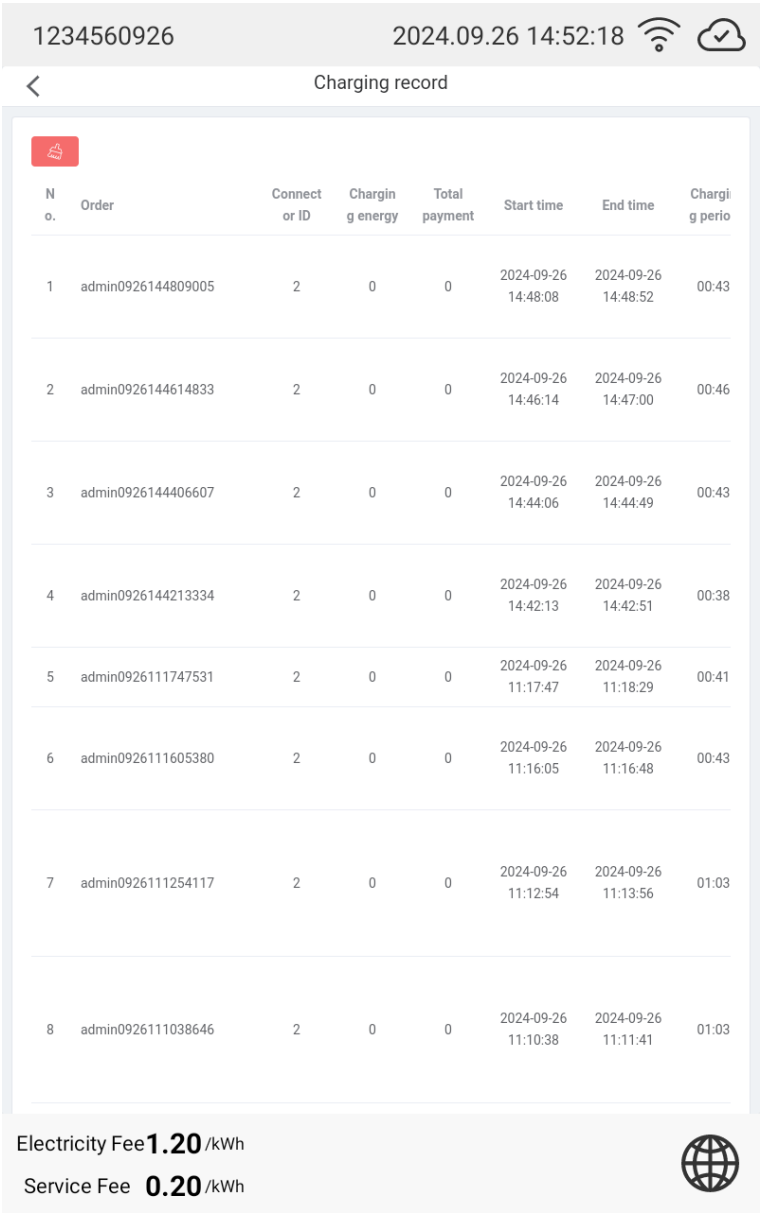


Figure 6-3-7

7) Event record: Record all events. As shown in Figure 6-3-8.

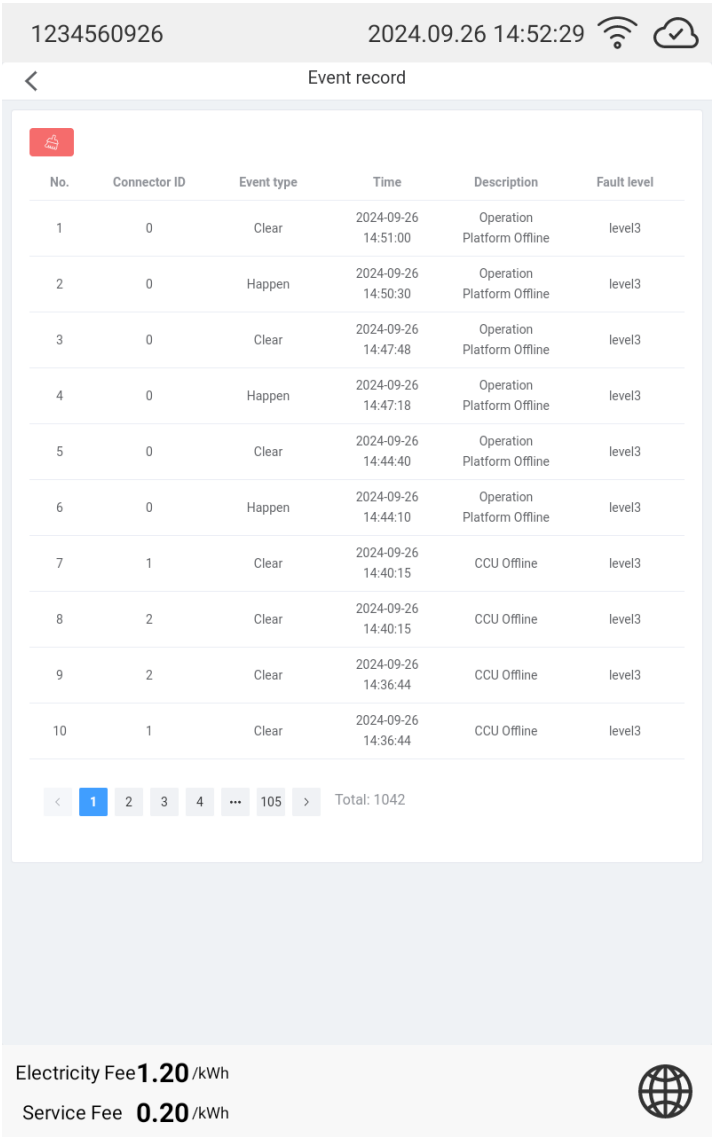


Figure 6-3-8

- 8) Password settings: set changing system password. As shown in Figure 6-3-9.

1234560926

2024.09.26 14:51:42



<

Password

Password type

Admin

▼

New password

Confirm password

Modify password

Electricity Fee **1.20** /kWh

Service Fee **0.20** /kWh



Figure 6-3-9

7. Storage and Transportation

7.1 Storage and Transportation of Equipment

In the course of transportation, the charger should be packed firmly and intact in a solid wooden packing box, and the direction of loading and unloading should be marked. The charger should not be stored and transported upside down. In the course of transportation, corresponding tightening measures should be taken to avoid strong vibration and bump damage to the outer packaging of equipment. After arrival of the goods, user should check whether there is any damage. If there is any transport damage, user should consult with the transport party or our company to solve it. Check whether the contents in the box are in conformity with the packing list immediately after opening the box.

The packaged equipment should be stored in the room where the relative humidity is less than 80% and the ambient air temperature is -25°C to $+55^{\circ}\text{C}$. Storage places should be dry, clean and airy, and can prevent the invasion of harmful gases. It is strictly forbidden to store corrosive articles in the same place.

Note: It is strictly forbidden for non-professionals to disassemble equipment components.

8. Maintenance of Charger

8.1 Maintenance

- Charger body is easy to be fixed with anchor bolts to prevent it from inclining and dithering due to external and human factors.
- Shading and rainproof measures should be taken for chargers. It is suggested to install shelters outdoors.
- Check regularly whether all bolts in chargers are tightened, whether the connecting wires are loosened or not, or the connection is not firm, etc.
- Check for short circuit.
- Check whether the emergency stop button is available.
- Attention should be paid to lightning protection to ensure effective shielding and reliable grounding of chargers.
- When in use, the output voltage and current of the charger should be controlled within the nominal range to ensure that the charger works in the state of maximum efficiency.
- When the charger stops using, the charging output should be stopped first, then the cable should be wrapped and put back in place.

Note: During the transportation, the chargers should be packed firmly and the direction of loading and unloading should be marked. It is forbidden to store and transport chargers upside down. Corresponding tightening measures should be taken to avoid strong vibration and turbulence damage to the outer packaging of equipment.

9. Instructions for Ordering

9.1 Notices for Order

- **Users are requested to specify model specifications, quantities and delivery dates.**
- **Our company will provide users with equipment in standard size .**
- **Users may negotiate with us if they have other requirements.**
- **We reserve the right of final interpretation for this product.**

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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