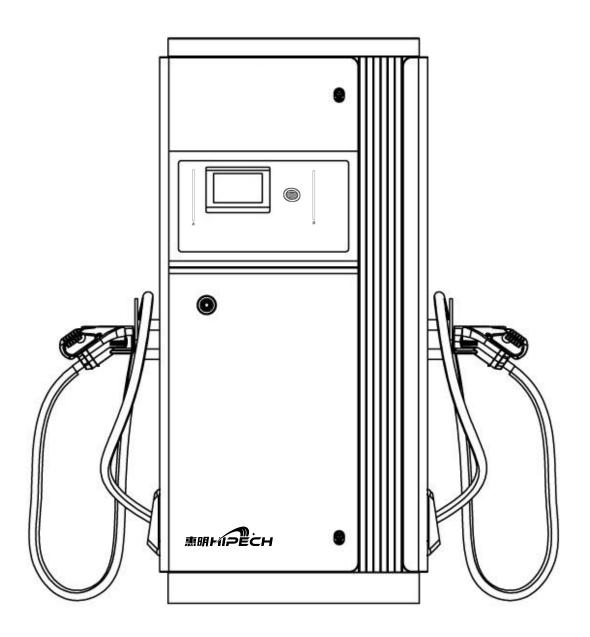
# EV charger Instruction Manual



When there is a discrepancy between the actual product and the instruction manual, the actual product shall prevail.

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# **CATALOGUE**

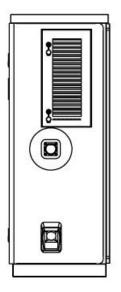
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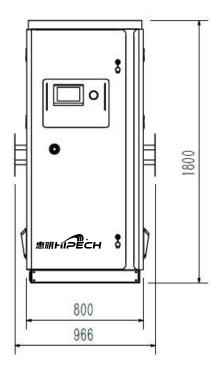
### Safety precautions

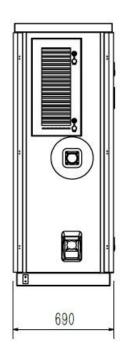
- 1) Do not put flammable, explosive or combustible materials, chemicals, flammable steam and other dangerous goods near the charging pile;
- 2) Children are not allowed to approach or use the charging pile during charging to avoid injury;
- 3) In case of rain and thunder, please charge carefully;
- 4) It is strictly forbidden to use the charging pile when the charging gun or charging cable has defects, cracks, wear, cracks, or the charging cable is exposed. If any, please contact the staff in time;
- 5) Please keep the charging gun head clean and dry. If there is any dirt, please use a clean dry cloth to wipe it. It is strictly forbidden to touch the charging gun core with your hands when it is electrified;
- 6) Do not attempt to disassemble, repair or refit the charging pile. If there is a need for repair or refit, please contact the staff. Improper operation may cause equipment damage, water leakage, electric leakage, etc;
- 7) In case of any abnormality during use, press the emergency stop button immediately to cut off all input and output power;
- 8) During the charging process, the vehicle shall not be driven and can only be charged when it is stationary;
- 9) Please turn off the hybrid electric vehicle before charging.

## **Chapter 1 Basic Introduction**

## 1.1 Appearance







System appearance and size (Note: Actual spray colors may vary.)

## 1.2 Basic parameters

AC input voltage: 260V-530V (L1, L2, L3, N, PE)

➤ Grid frequency: 45 Hz-60Hz

➤ Power factor: ≥0.99

➤ Relative humidity:≤95%

➤ Altitude: ≤2000m

➤ Ambient temperature: -40 °C ~70 °C

> Protection grade: IP54

> Size (H \* W \* D): 1800mm\*966mm\*690mm

Output current and voltage

Power	Combination	Output current Max	Output voltage	
60kW	DC 30kW + DC 30kW	GBT: 250A CCS2:250A		
80kW	DC 40kW + DC 40kW			
120kW	DC 60kW + DC 60kW		DC 200-1000V	
160kW	DC 80kW + DC 80kW			
180kW	DC 90kW + DC 90kW			
240kW	DC 120kW + DC 120kW			

#### 1.3 Normal service conditions

- > The altitude shall not exceed 2000m.
- The ambient air temperature during equipment operation shall not be higher than 70  $^{\circ}$ C and not lower than 40  $^{\circ}$ C.
- Daily average relative humidity is not more than 95%, and monthly average relative humidity is not more than 90%.
- The installation and use site shall be free of strong vibration, impact and strong electromagnetic interference, and the induction intensity of external magnetic field shall not exceed 0.5mT.
- > The vertical inclination of installation shall not exceed 5%.
- The place of use shall be free of explosive hazardous media, and the surrounding media shall be free of harmful gases and conductive media that corrode metals.
- Three phase five wire system shall be adopted for AC input, and the voltage asymmetry shall not exceed 5%.
- AC input voltage shall be sine wave with non sine content not exceeding 5%.
- The equipment can be installed indoors and outdoors, and pay attention to the ambient temperature of equipment operation. If it is built outdoors, it is recommended to build a rain cover for the charger.

## **Chapter 2 Installation and Opening Method**

## 2.1 Installation method of charger

## 2.1.1 Unpacking inspection

- After receiving the goods, open the box to check whether the cabinet is damaged or not, and whether the module package is damaged or not. If it is damaged or damaged, immediately contact the logistics company and our company.
- Check whether the packing list corresponds to the actual goods. If there is any difference, please contact our company for verification.

## Installation preparation

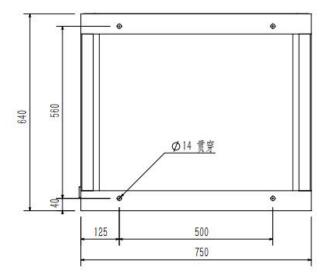
#### Cable preparation

> Recommended cable specifications for power supply are as follows:

The power of the charger	Recommended incoming cable model	Note
60kW	3*50mm²+2*25mm²	L1, L2, L3, N, PE
80kW	3*70mm²+2*35mm²	L1, L2, L3, N, PE
120kW	3*95mm²+2*35mm²	L1, L2, L3, N, PE
160kW	3*120mm²+2*50mm²	L1, L2, L3, N, PE
180kW	3*150mm²+2*70mm²	L1, L2, L3, N, PE
240kW	3*185mm²+2*95mm²	L1, L2, L3, N, PE

#### 2.1.2 Cabinet installation

The dimensions of cabinet mounting holes are shown in Figure



Base hole drawing

The customer needs to reserve the installation holes according to this size on the installation platform in advance, align the holes according to this size after the arrival of the equipment, and then fix them with 4 M12 expansion bolts.

## 2.2 Charging machine opening method

#### 2.2.1 System wiring

- The system wiring is three-phase five wire system. Connect the input line to the input terminal and the ground bar according to the system wiring diagram. During wiring, ensure that the circuit breaker at the power supply end and all circuit breakers in the cabinet are in the disconnected position.
- Check the upper left corner of the display, no fault codes are displayed. If a fault code is displayed, please contact the manufacturer immediately.

#### 2.2.2 Power on operation

- Check whether the internal fasteners are loose and whether the electrical components are intact.
- > Whether the system is well grounded, and all switches are in the off position.
- > Use a multimeter to measure whether the input power is 260V-530V.
- Close AC circuit breaker, air switch.

- The inspection indicator light should only have a blue light on.
- There is no fault code in the upper left corner of the display.

# 2.3 HMI configuration mode of charger

The charger is already configured at the factory and can be used without special configuration

## **Chapter 3** Instructions

## 3.1 EV charger Indicator status

The 3 colors of indicators represent the different states of the charging pile.

No	Indicator definition	Colour	Function
1	Standby made Dive		Normally off: charging is completed or the gun is not
Standby	Standby mode	Blue	inserted, in standby mode
			Always on: charging gun is connected and ready for
2	CHARGE	Green	charging
			Flashing: charging state
3	FAULT	Red	Always on: equipment alarm or fault status

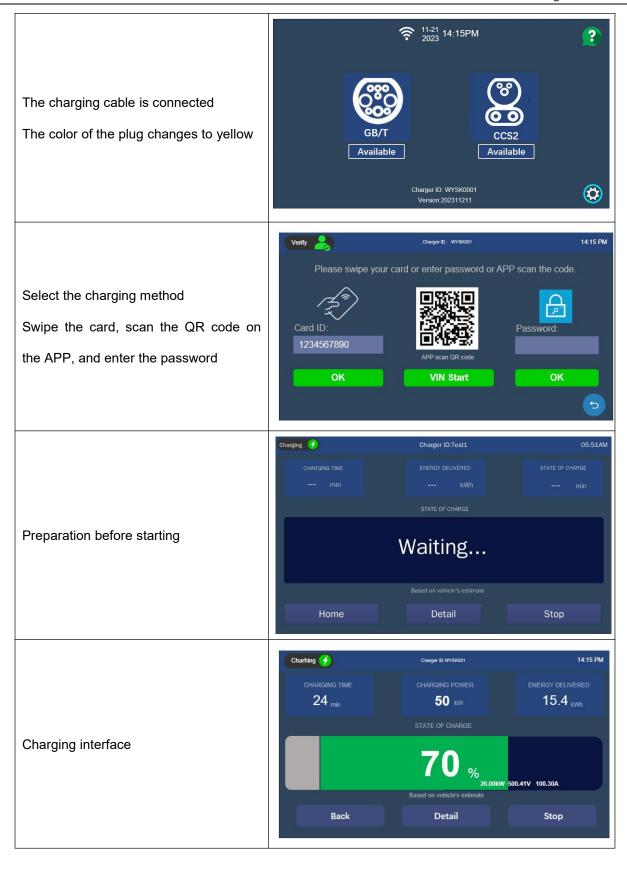
## 3.2 Charging steps

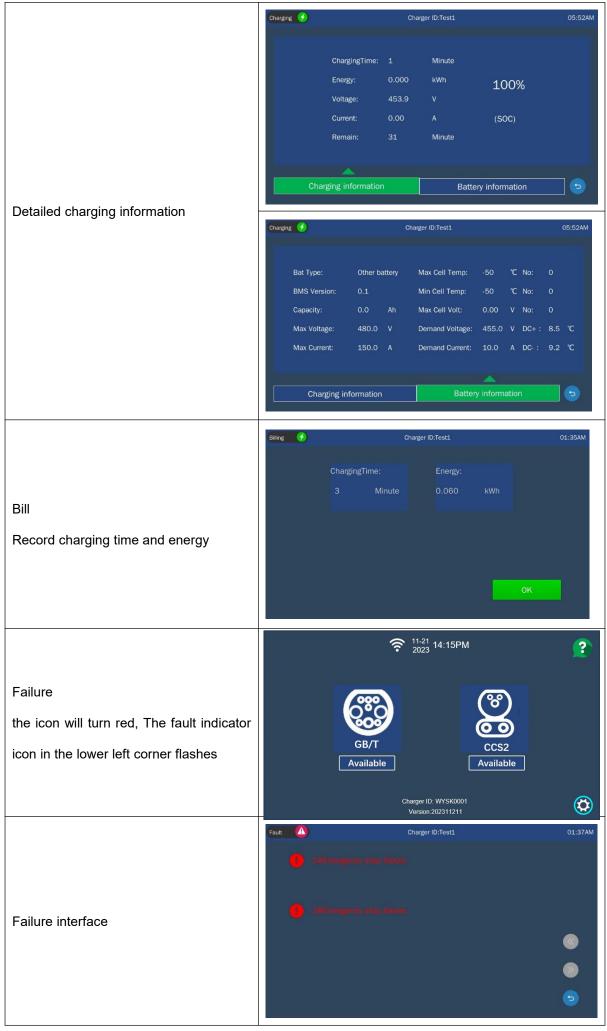
Charging pile idle interface

Network status, time, charger ID,

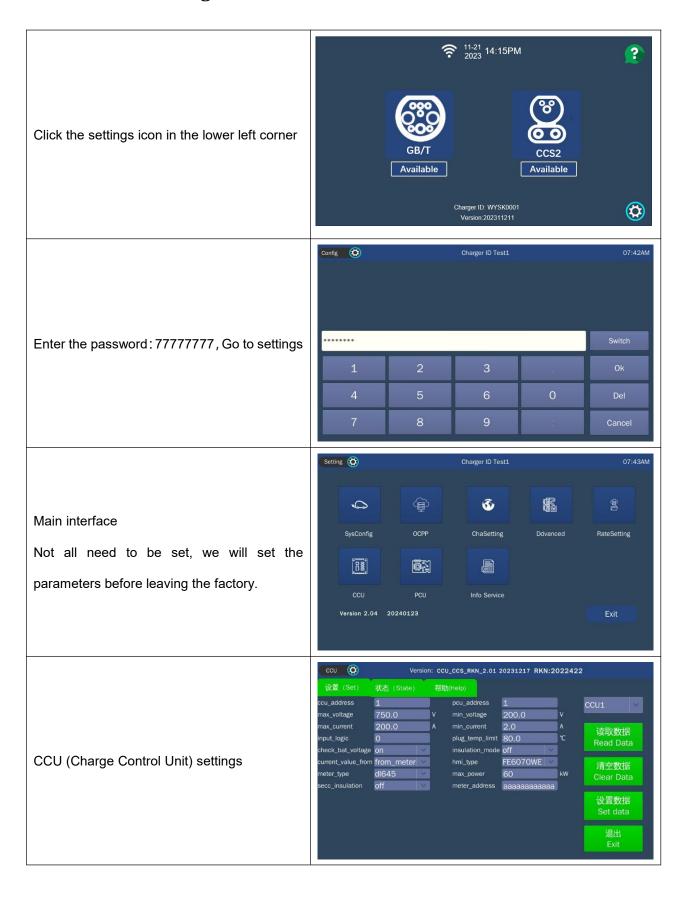
program version number







## 3.3 Parameter settings







# 3.4 Fault list

NUM	Definition description
1	Emergency stop is pressed!
2	RFID communication fault!
3	Over temperature fault!
4	Lightning protection fault!
5	Power module communication fault!
6	Meter communication fault!
7	DC output overvoltage fault!
8	DC output overcurrent fault!
9	Waiting for BMS communication timeout!
10	Insulation detection timeout!
11	Insulation detection fault!
12	Battery voltage reverse fault!
13	DC+ Contactor sticking fault!
14	DC- Contactor sticking fault!
15	Plug line disconnection fault!
16	Plug head connection over temperature fault!
17	AC Contactor sticking fault!
18	AC Input Overvoltage!
19	AC Input Undervoltage!
20	BMS communication fault!

## **Chapter 4 Daily Maintenance Methods of Charger**

- > The charging gun shall be put back after use and inserted into the gun seat in front of the cabinet to prevent rainwater from entering.
- > Chargers without background management system need regular on-site maintenance.
- ➤ The dust-proof cotton shall be disassembled and cleaned after 6 months of system operation, and shall be installed and used after being dried. If the dust-proof cotton is not cleaned for a long time, it will cause difficulty in air inlet, increase the module load, and easily cause module damage.

Maintenance object	job content(Every 3 months)	job content(Once a year)
Cleaning of cabinet		
(External and internal	Check for dust and dirt	1
base plates)		
Terminal blocks	Check for dust and dirt	Check dust and dirt; Insulation
Terminal blocks		and fastening
Wiring apple	Wiring cable Check for dust and dirt	Check dust and dirt; Insulation
wiring cable		and fastening
	Check the dust accumulation and	
Air outlet filter screen	replace the filter screen according to the	1
	operating conditions of the equipment	
Component fastening	1	Check for looseness
		Charging control functions
Equipment function		include man-machine interface,
inspection	1	electrical control, safety
		protection, etc