

EV CHARGER USER MANUAL

（E Version : 1.0）

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Warning

a. Please confirm the power level you are ready to connect before installation;
b. The whole installation process needs professional personnel with electrician qualification to operate;
c. Please do not operate under any circumstances that may cause electric leakage;
d. When using the charging pile to charge the electric vehicle, please carefully read the instructions of the charging pile. Pay attention to the operation steps, practices or incorrect execution may lead to life danger, injury and equipment damage. Refuse to accept any claim arising therefrom. The operation can only be carried out when the contents of the instruction manual of the charging pile are fully understood and the specified conditions are met.

Notice

a. The charging pile must be grounded through the grounding conductor of the permanent wiring system or equipment;
b. Please avoid installing in the direct sunlight or exposure environment, and try to use the charging pile in a cool and ventilated place;
c. Do not install and use the charging pile near flammable, explosive, combustible and chemical substances or steam;
d. Before installing or cleaning the Charge Point, the power supply must be cut off to ensure that there is no power input. Do not touch the heat source, dirt or water source on the contact surface;
e. Please use the charging post within the specified working parameters;
f. Only connect electric vehicles. Do not connect other loads (electric tools, etc.). Do not use the charging post for other purposes than charging or other vehicles that do not support the AC charging standard of the country where the product is located;
g. The charging pile must be checked regularly. If it is found to be defective, cracked, worn, damaged or otherwise damaged and inoperable, the charging pile shall be stopped immediately and the after-sales service telephone shall be called;
h. Do not attempt to open, disassemble, modify or transform the charging pile without a professional electrician. The charging pile is not a device that can be maintained by users. Do not remove safety symbols, warning prompts, nameplates, signs or pipeline marks;
i. If you or your car are exposed to rainstorm, lightning, heavy snow or other severe weather conditions, do not use the charging pile to prevent any parts from being damaged;
j. Please handle with care when transporting the charging post. Do not subject it to strong external force impact, and do not drag, twist or step on the charging pile and cable to prevent damage to any parts. At any time, please avoid and prevent the charging post from being damaged by moisture, liquid and other foreign matters. If there is water, damage or corrosion, please do not use it. Do not touch or charge the cable and charging gun head with wires, tools or other sharp hard objects;
k.If your vehicle is covered with car cover and car clothes, please take them off before using the charger for charging;
l. The use of the charging post may affect or damage the work of any medical or implanted electronic equipment, such as cardiac defibrillator, pacemaker, etc.

2. I MPORTANT INFORMATION

2.1 Specified use

● This type of product is a charging pile that can charge electric vehicles in indoor and outdoor areas (such as electric vehicles).

● When installing and connecting the charging pile, the relevant regulations of the local country or government shall be observed;

● The specified use of the equipment includes complying with the environmental conditions established for the equipment under any circumstances;

★ During the storage or use of the equipment, it is necessary to store the charging pile and its supporting components in a dry and ventilated indoor place with a temperature of - 30 °C~+50 °C and a daily average temperature of ⩽ 35 °C within 24 hours;

★ Monthly average relative humidity ⩽ 90% (25 °C), no condensation on the surface;

★ After the installation, the shell of the charging pile shall be kept sealed to avoid soaking in rain;

★ The use site shall be free of explosive media, the surrounding media shall not contain harmful gases and conductive media that corrode metals and damage insulation, and shall not be filled with steam or serious mold;

★ The place of use should avoid direct sunlight. When installing outdoors, it is recommended to install sunshade facilities for the charging pile;

★ When the charging pile is not in use, the charging gun shall be placed 0.5 m~1.5 m away from the ground;

● Equipment shall be developed, produced, inspected and filed according to relevant safety standards. Therefore, if the instructions and safety technical tips for the specified use are followed, the product will not cause property loss or endanger the health of personnel under normal conditions;

● The instructions contained in this manual must be strictly followed, otherwise potential safety hazards may occur or the safety devices may fail. Although this manual describes the relevant safety tips, it is still necessary to pay attention to the safety regulations and accident prevention regulations in accordance with the corresponding application;

● Due to technical or legal restrictions, it is impossible to supply all models/options to the region;

● If users have special requirements, they can negotiate with us.

2.2 About this Manual

●This manual is applicable to the following groups:

★The end customer (charge pile user).

★The technical staff of debugging and service

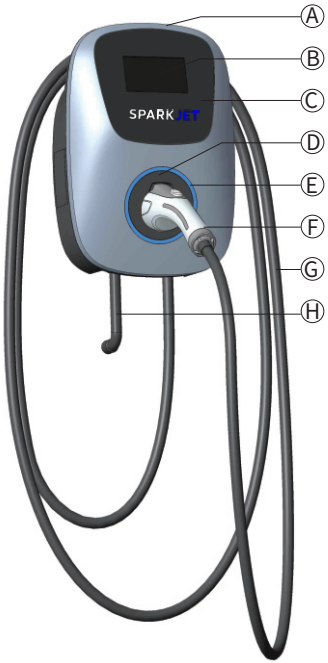
●The final explanation of this manual belongs to the company.

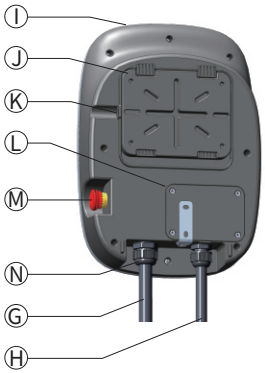
3.USE OF PRODUCTS

3.1 Product Appearance Size



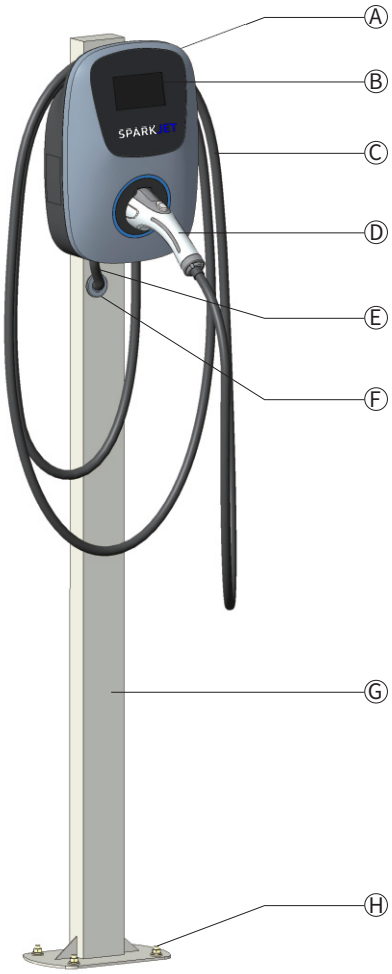
3.2 Product Appearance Introduction





[A]Cover	[B]Display Screen
[C]Lens	[D]Gun Holder
[E]Indicator Light	[F]Charging Gun
[G]Output Wire	[H]Input Wire
[I]Bottom shell	[J]Fixing Plate
[K]The anti-theft screw	[L]Junction box cover
[M]Emergency stop switch	[N]Waterproof joint

3.3 Floor Mounted Appearance Size



[A]Pedestal
[B]Display Screen
[C]Charging Cable
[D]Charging Gun
[E]Input Wire
[F]Wire protector
[G]Column
[H]Expandable Rubber Stopper

● The appearance shall be subject to the real object.
● When the charging operation is not performed, the charging cable shall be rolled up and put back into the cable slot.
● When the charging operation is not performed, the charging gun head shall be covered or inserted into the gun holder.

3.4 Product Performance Description

	Item	ZB04-E007KSeries	ZB04-E011KSeries	ZB04-E011KSeries
Product Characteristics	Power	7kW	11kW	22kW
	Operating Current	32A	16A	32A
	Operating Voltage	230Vac	400Vac	
	Weight	＜4.7kg	＜5.1kg	
	Operating Frequency	50Hz		
	Cable Length	3.5m/5m/7.5m		
	Indicator Light	3-color Indicator Light		
	User Interface	4.3inches LCD Display Screen		
	Installation Method	Wallbox/Floor Mounted		
	Charging Method	Plug and Charge/RFID Card Charging/APP Charging		
	Communi-cationMethod	RFID/Wifi&Bluetooth/4G/Ethernet(Optional)		
	Appearance Size	368mm*256.5mm*130mm		
Protection Characteristics	OVP	Input Voltage ＞120%, relay is off		
	UVP	Input Voltage＜80%, relay is off		
	OLP	Output Current＞110%, relay disconnected, the power supply needed to be cut off and restored		
	OTP	When the temperature of the main board reached 85 °C , the power was reduced to 50%, and it was turned off after 90°C		
	Emergency Stop Protection	If the charging pile fails but does not stop automatically, the operator can press the emergency stop button to stop the charging pile (the whole machine needs to be equipped with an emergency stop button)		
	Ground Protection	The earth wire or the charging earth wire was not broken, and the relay was broken		
	Surge Protection	L-N1kV/LN-G2kV		
	Leakage Protection	AC30mA+DC6mA		
Environment Characteristics	Operating Temperature	-30°C~+50°C		
	Operating Humidity	5%~95%RH		
	Operating Altitude	＜2000m		
	Protection Degree	IP54		
Reliability	MTBF	100,000H		
	Warranty	2 Years		
	Safety Standard	IEC/EN 6,185 1- 1,IEC/EN 6,185 1-22		

3.USE OF PRODUCTS

3.5 LED Indicator Instruction

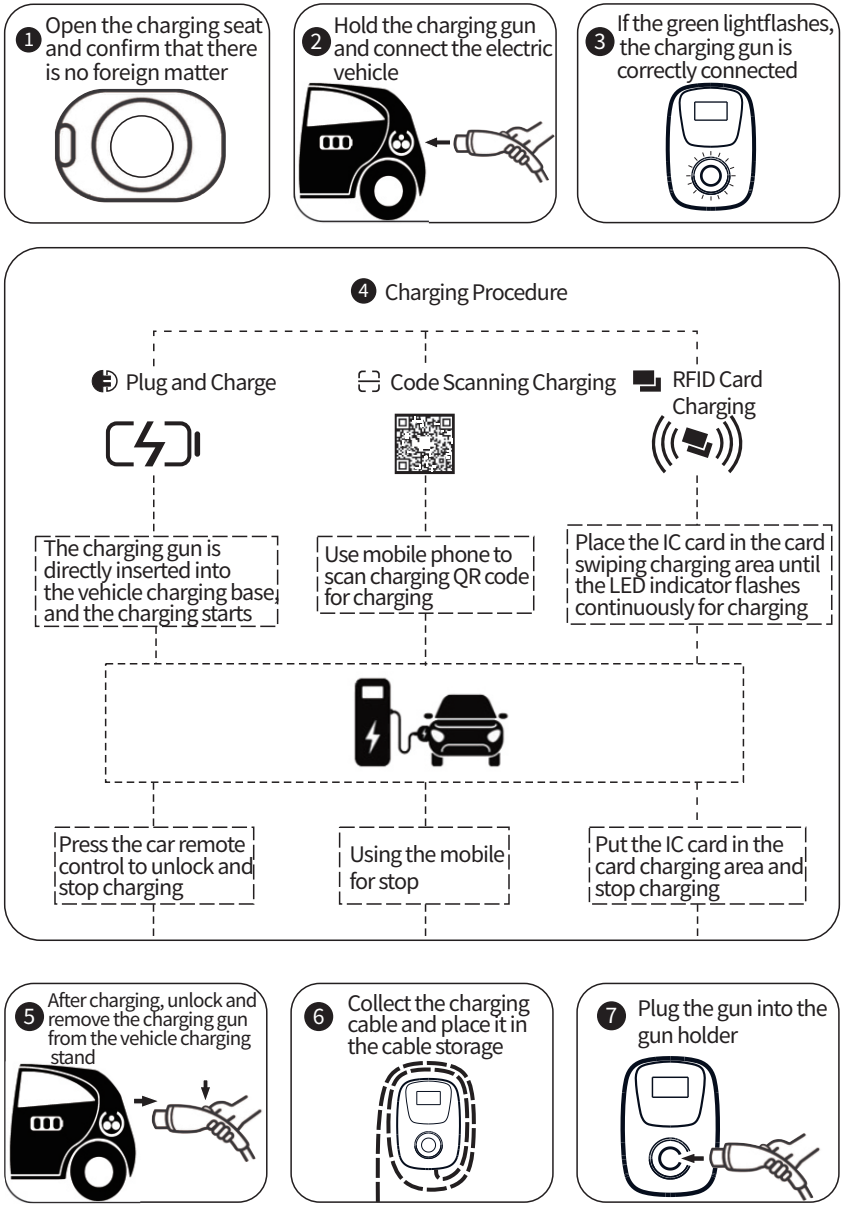
No.	Charger Status	Indicator Color	Indicator Status
1	Standby	Blue	Always on
2	Insert the Plug	Green	Always on
3	Charging	Green	Flashes once every 1S
4	C P Abnormal	Red	Always on
5	Over voltage/Under voltage	Red	Flashes once every 1S
6	Un Earthed	Red	Flashes once every 2S
7	Emergency Stop	Red	Flashes once every 4S
8	Over-current Protection	Red	Flash 3S,Off 3S
9	Leakage ProtectionPurple	Purple	Flashes once every 1S
10	Over-temperature Protection	Purple	Flashes once every 2S
11	Adhesion protection	Purple	Flashes once every 4S

3.6 Equipment Parts List

No.	Equipment Parts	Quantity	Remark
1	AC Charger	1	
2	Retainer Plate	1	
3	Screw	8	
4	Expandable Rubber Stopper	6	
5	Column	1	Optional
6	Wall hole formwork	1	
7	Certification	1	
8	User Manual	1	

4. Operation Guide

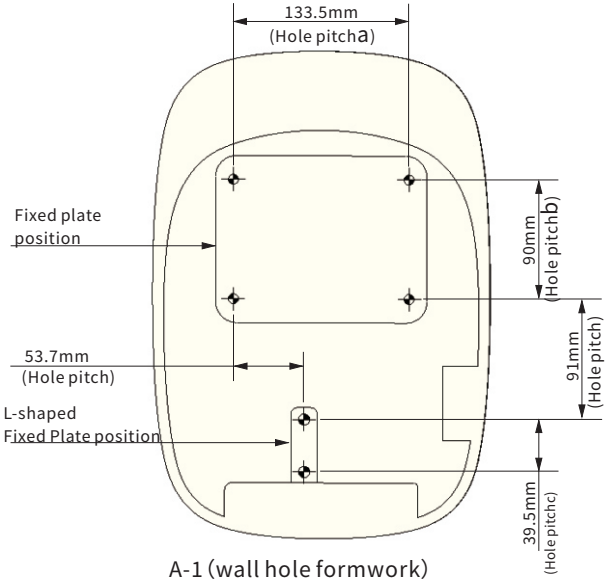
4.1 Operation Steps



5. Installation Method

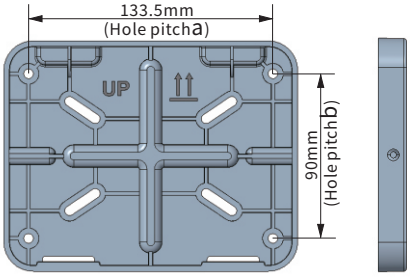
5.1 Wallbox Installation Method

5.1.1 The distance between the center of the wall drilling is shown in the figure, and the wall hole template is placed at a suitable height (the top surface of the wall hole template is at least 1.3 meters above the ground). The wall hole template shall be close to the wall, and ϕ7 holes shall be drilled on the wall according to the ⌖6 positions marked on the wall hole template with an impact drill. As shown in Figure A - 1 (wall hole formwork)

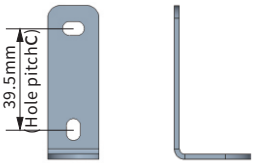


A-1 (wall hole formwork)

5.1.2 After the wall hole corresponding to the wall is drilled, remove the wall hole formwork, and insert the corresponding holes of the fixing plate (Figure A-2) and L-shaped fixing strip (Figure A-3) into the expansion rubber plug and lock them with screws for fastening. Note that the concave surface of the fixed plate faces the installer, and the "UP" double arrow symbol in the concave surface of the fixed plate should be placed upward (as shown in Figure A-2)

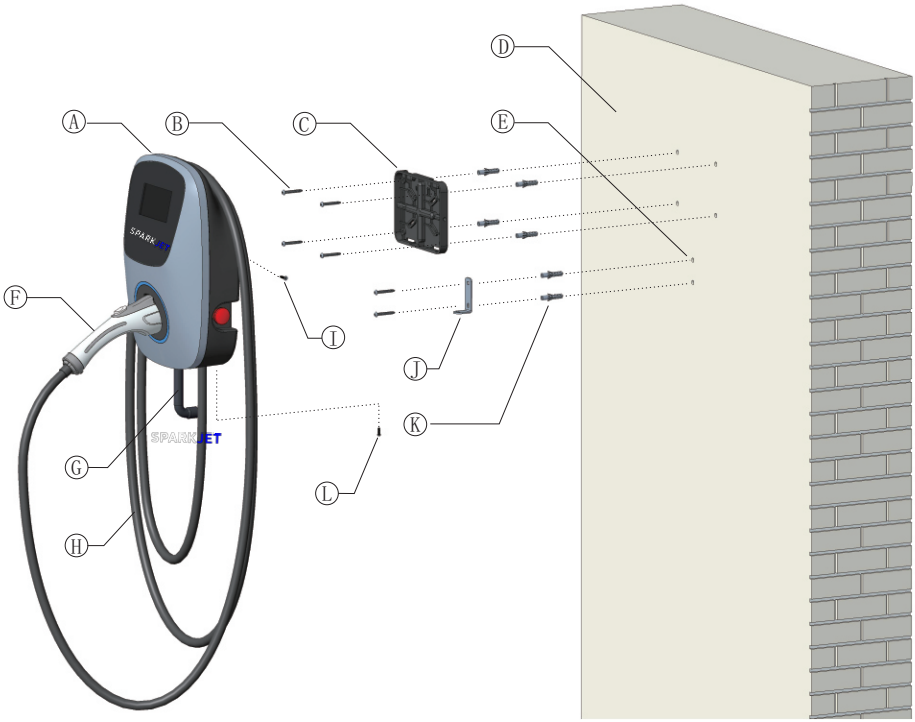


A-2 (fixing plate)



A-3 (L-shaped fixing strip)

5.1.3 After locking the fixed plate and L-shaped fixing strip with self tapping screws, hang the charger connected with the line onto the fixed plate and L-shaped fixing strip, lock the charger and the fixing strip from the side of the charger with flat head anti-theft screw ϕ 4, and finally lock the charging pile and L-shaped fixing strip from the bottom of the charging pile with pan head anti-theft screw ϕ 4. As shown in Figure A-4 (wall mounted general assembly drawing)



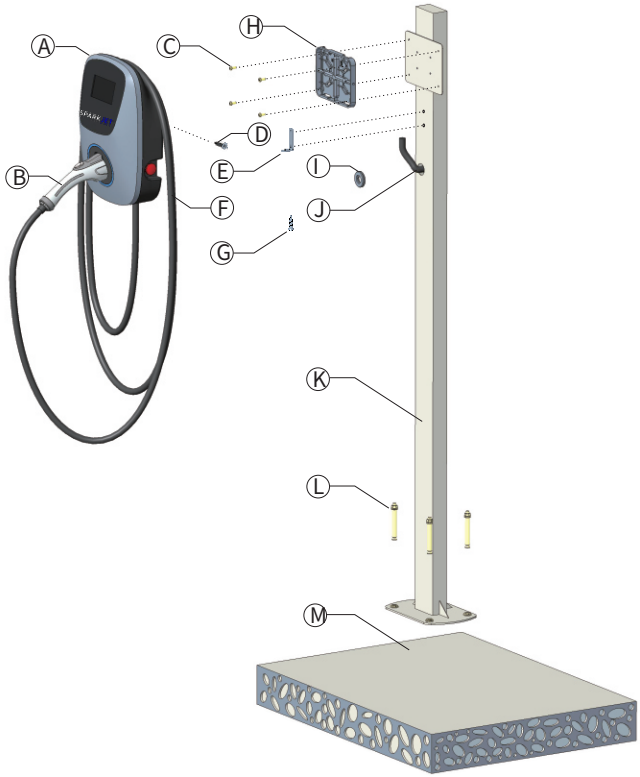
A-4 (wall mounted general assembly drawing)

[A]Charger	[B]Self-tapping screwφ5	[C]Fixing Cover
[D]Wall	[E]Wall Hole	[F]Charging Gun
[G]Input Wire	[H]Output Wire	[I]Flat head anti-theft screwϕ4
[J]L-shaped fixing strip		[K]Expandable Rubber Stopper ϕ8
[L]Pan head anti-theft screw φ4		

5. Installation Method

5.1 Floor Mounted Installation Method

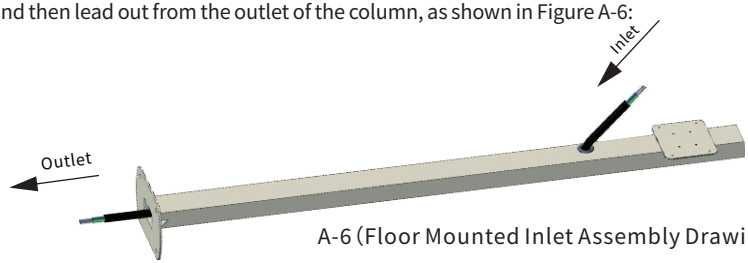
5.2.1. Floor Mounted general assembly drawing



A-5 (Floor Mounted General Assembly Drawing)

[A]Charger
[B]Charging Gun
[C]Cross pan head screwM5*18mm
[D]Flat head anti-theft screwϕ4
[E]L-shaped fixing strip
[F]Output Wire
[G]Pan head anti-theft screwϕ4
[H]Fixing plate
[I] Wire protector
[J]Input Wire
[K]Column
[L]Expansion boltM8*100mm
[M]Cement foundation

5.2.2 Lay the column flat on the ground, pass the cable through the guard coil of the column such as the inlet, and then lead out from the outlet of the column, as shown in Figure A-6:



A-6 (Floor Mounted Inlet Assembly Drawing)

5.2.3 The power supply in the cement foundation has been embedded in the cable at one end of the outlet, and the column is erected at a suitable position on the cement foundation. Mark the cement foundation through the four bolt holes in the column flange plate, drill holes with a diameter of 12 mm with a hole depth of 120 mm with an impact drill, and then drive four M8 expansion bolts into the holes with a diameter of 12 mm respectively to erect the column and the foundation. The M8 expansion bolts pass through the column flange plate holes, Screw in M8 nuts to fasten the column;

5.2.4 Lock the fixed plate into the column tray with four cross pan head screws M5;

5.2.5 Connect the cable at the column inlet to the junction box of the charging pile (see A-5 Wiring Diagram)

5.2.6 Hang the charging pile directly onto the fixed plate, and lock the charging pile and the fixed plate from the side of the charging pile with the flat head screw ϕ4.

5.3 Installation Environment Requirements

5.3.1 The installation position of the charging pile shall not be close to dangerous locations or areas such as water, oil and gas pipelines.

5.3.2 The installation position shall be convenient for charging, the wiring length shall be shortened to reduce the energy consumption of cable resistance when laying lines.

5.3.3 The wall hanging parts and fixed walls shall be fixed with screws. The installation wall shall be able to bear the gravity of the charging pile and its accessories, and shall not tilt after installation. The wall should not be too close to the internal line.

5.3.4 The protection degree for indoor installation shall be at least IP 32, and that for outdoor installation shall be at least IP 54. It is recommended that the charging pile be installed in an environment with sunshade or umbrella; The lighting and passage at the installation site of the charging pile must be safe and smooth.

5.3.5 A certain operating space shall be reserved for the installation of charging pile to facilitate the overhaul and maintenance of engineering personnel.

5.3.6 It is recommended that the customer install a circuit breaker at the front end of the charging pile. The mini circuit breaker should meet local regulations.

5.4 Power Supply Requirements

The power supply mode of the portable AC charging pile is AC single-phase power supply, and the input electrical requirements are:

5.4.1 AC Operating Voltage: Refer to page 6;

5.4.2 AC Operating Frequency: Refer to page 6;

5.4.3 The capacity of the power supply system shall be greater than the maximum operating power of the product.

6. Troubleshooting

Troubleshooting Table

Fault	Reasons&Solutions
Power LED is not lit	● No power supply ☆ Damaged, please contact your service partner
Unable to start charging	● The charging gun is not inserted correctly ☆ Re plug the charging gun and confirm the connection is OK ● The charging gun may be dirty or damaged in the locked area ☆ Clean or replace the charging gun
Power is not fully charged or charging time is increased	● Current drop due to high temperature of vehicle or charging pile ☆ Visually check whether the plug device is dirty,worn or damaged ☆ If necessary, please contact your service partner ● Lack of power release due to external devices (power supply equipment, etc)
The fault status LED lights up red	● Fault ☆ First check the possible fault causes (*) ☆ Cut off the power voltage of the charging pile, pull out the charging gun, and connect the power voltage again ● Damage ☆ please contact your service partner

(*) Possible fault causes (fault status LED lights up):
In principle, the fault must be cleared by pulling out the charging gun. The following reasons may lead to failure: Un earthed, electric leakage, pile ID not set. Please contact your service partner to maintain the equipment.

7. Maintenance

7.1 Maintenance

● The following routine maintenance items are only for reference, please refer to relevant standards and operation instructions for operation;

● Sunshade and rainproof measures shall be taken for the charging pile, and it is recommended to install a canopy outdoors;

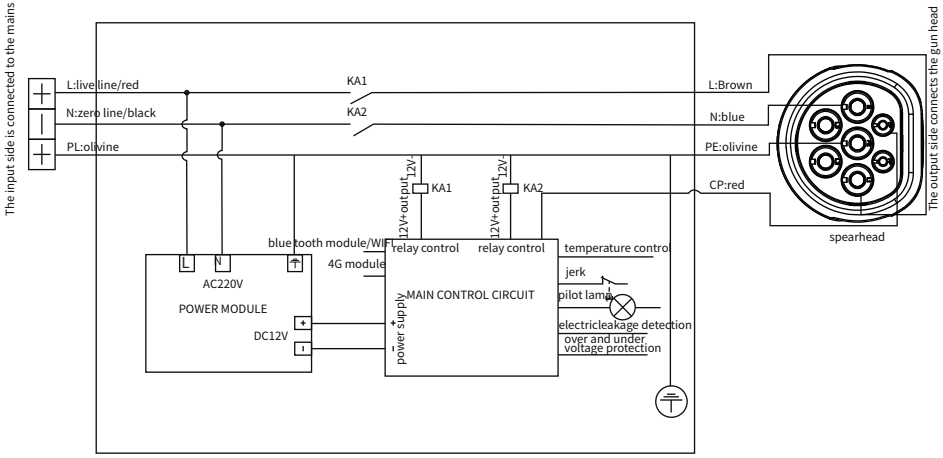
● Regularly check whether the bolts of the charging pile are fastened, whether the connecting wire is loose, and whether the connection is not firm, and check whether there is short circuit;

● Pay attention to lightning protection and ensure effective shielding and reliable grounding of the charging pile;

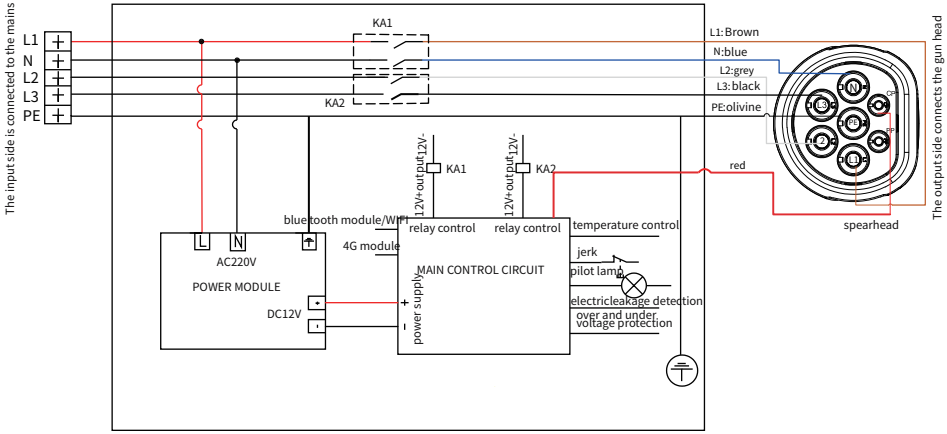
● When using, try to control the output voltage and current of the charging pile within the nominal range, so as to ensure that the charging pile can work with the maximum efficiency;

● When the charging pile is out of service, the charging output shall be stopped first, then the power plug shall be pulled out and the power shall be cut off, then the cable shall be wound, and the charging pile shall be put back to its original position after the temperature of the charging pile drops to normal temperature;

● The electrical schematic diagram of the charging pile is shown in the figure below.



Single-phase electrical diagram



Three-phase electrical diagram

7.2 Important matters

● To ensure that you can enjoy the warranty service, please ensure that the tear-proof label on your charging pile is intact;

● The warranty period of your charging pile shall be subject to the transportation and delivery period. If it cannot be provided, it shall be subject to the ex factory date of the equipment;

● Please show the original of the unit and invoice during warranty.