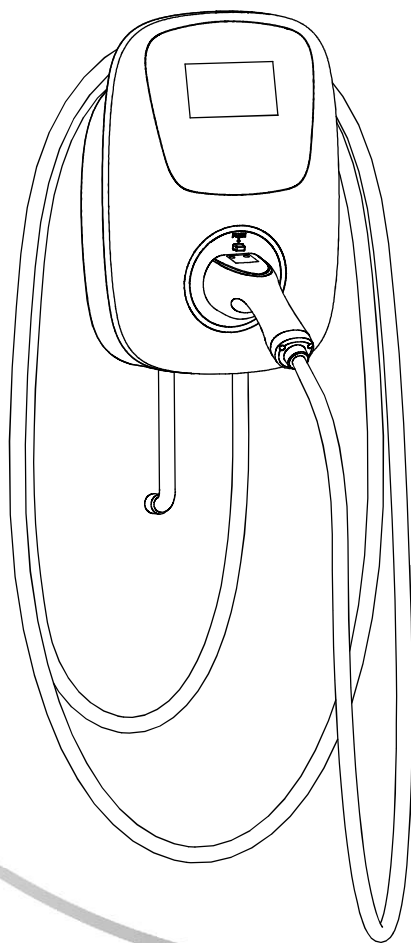




EV CHARGER USER MANUAL

(E Version : 1.0)

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1.SAFETY TIPS



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 AC charger to charge the electric vehicle, please carefully read the instructions of the AC charger. Pay attention to the operation steps, practices or incorrect execution may lead to life danger, injury and equipment damage. The manufacturer refuse to accept any claim arising therefrom. The operation can only be carried out when the contents of the instruction manual of the AC charger are fully understood and the specified conditions are met.
- e. In case of short-circuit, the value of I_2t at the EV socket-outlet of the Mode 3 charging station shall not exceed 75 000 A²s.
- f. Adaptors or conversion adapters are not allowed to be used.
- g. Cord extension sets are not allowed to be used.

1.SAFETY TIPS

Notice

- a. The AC charger 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 AC charger in a cool and ventilated place;
- c. Do not install and use the AC charger near flammable, explosive, combustible and chemical substances or steam;
- d. Before installing or cleaning the AC charger, 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 AC charger within the specified working parameters;
- f. Only connect electric vehicles. Do not connect other loads (electric tools, etc.). Do not use the AC charger 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 AC charger must be checked regularly. If it is found to be defective, cracked, worn, damaged and inoperable, the AC charger shall be stopped immediately and the after-sales service telephone shall be called;
- h. Do not attempt to open, disassemble, modify or transform the AC charger without a professional electrician. The AC charger 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 AC charger to prevent any parts from being damaged;
- j. Please handle with care when transporting the AC charger. Do not subject it to strong external force impact, and do not drag, twist or step on the AC charger and cable to prevent damage to any parts. At any time, please avoid and prevent the AC charger 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 vehicle connector head with wires, tools or other sharp hard objects;
- k. If your EV is covered with a car coat, please remove it before charging the car;
- l. The charger may affect or impair the medical implanted electronic device, such as cardiac defibrillator, pacemaker, etc.
- m. During transportation, there should be no severe vibration, impact, exposure to sunlight, rain, or dumping of the AC charger.

2. IMPORTANT INFORMATION

2.1 Specified Use

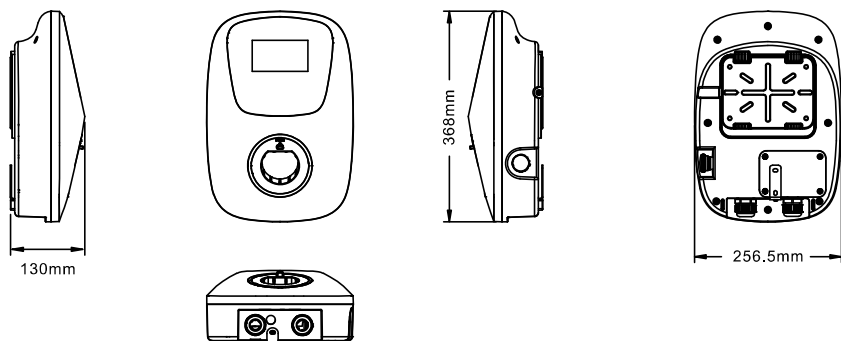
- This type of product is a AC charger that can charge electric vehicles in indoor and outdoor areas (such as electric vehicles).
- When installing and connecting the AC charger, the relevant regulations of the local country or government shall be observed;
- The specified use of the equipment includes 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 AC charger 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 $\leq 35^{\circ}\text{C}$ within 24 hours;
 - ★ Monthly average relative humidity $\leq 90\%$ (25°C), no condensation on the surface;
 - ★ After the installation, the shell of the AC charger 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 AC charger;
 - ★ When the AC charger is not in use, the vehicle connector shall be placed 0.6 m~1.2 m away from the ground;
 - ★ This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.
- 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, please feel free to contact us.

2.2 About this Manual

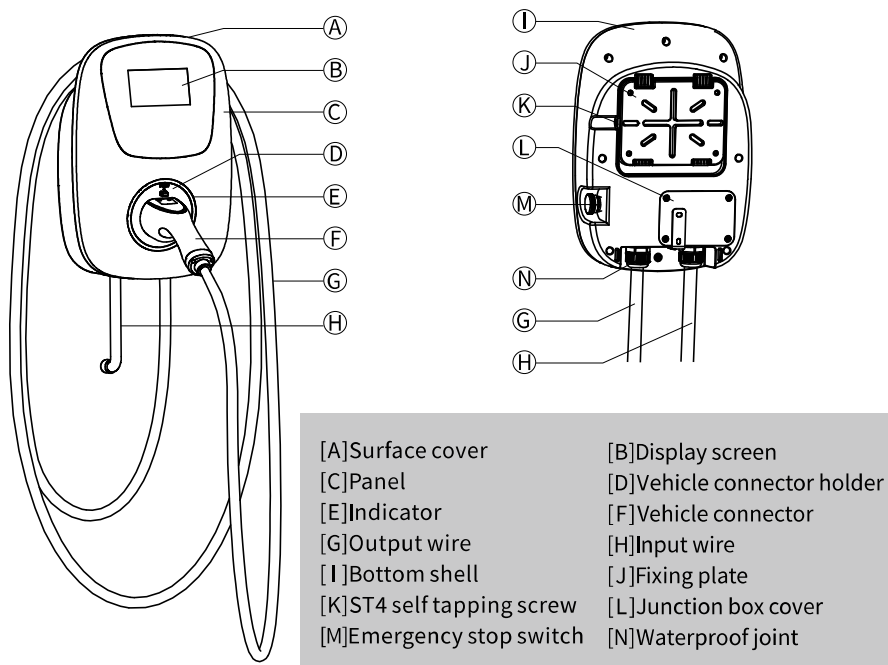
- This manual is applicable to the following groups:
 - ★ The end customer (EV charger user).
 - ★ The technical staff of debugging and service
- The final explanation of this manual belongs to the company.

3. USE OF PRODUCTS

3.1 Product Appearance Size

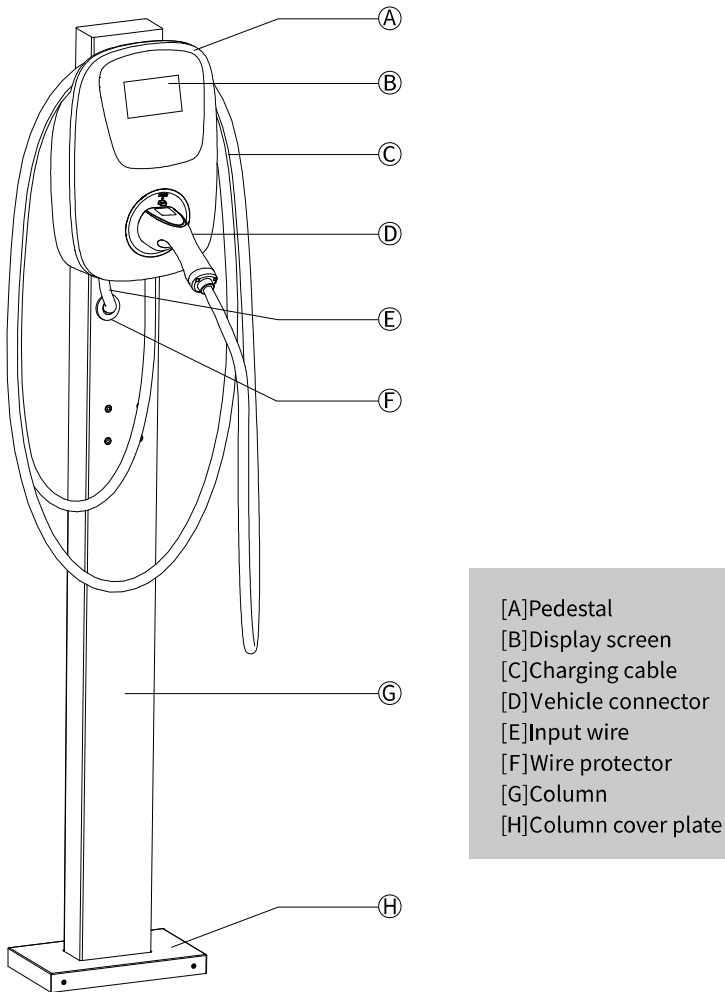


3.2 Product Appearance Introduction



3. USE OF PRODUCTS

3.3 Ground Mounted Appearance Size(Optional)



- 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 vehicle connector head shall be covered or inserted into the vehicle connector holder.

3. USE OF PRODUCTS

3.4 Product Performance Description

Product Characteristics					
Product Item	ZB04-E007K Series	ZB04-E011K Series	ZB04-E022K Series		
Output Power	7kW	11kW	22kW		
Operating Current	32A	16A	32A		
Product Weight	<6kg	<6kg	<7.3kg		
Operating Voltage	L/N/PE; 230Vac(±10%)	L1/L2/L3/N/PE; 400Vac(±10%)			
Operating Frequency	50Hz±1Hz				
Cable Length	3.5m/5m/6m/6.5m/7m/7.5m (Optional)				
Indicator	3-color LED				
User Interface	4.3inches LCD Display Screen				
Installation Method	Wallbox/Ground Mounted (Optional)				
Charging Method	Plug and Charge/RFID Card Charging/APP Charging (Optional)				
Communication Method	Wifi&Bluetooth(Optional)				
Appearance Size	368mm*256.5mm*130mm				
Protection Characteristics					
Over Voltage Protection	Input Voltage> 120 %, relay is off				
Under Voltage Protection	Input Voltage< 80 %, relay is off				
Over Load Protection	Output Current> Preset Current, relay disconnected, the power supply needed to be cut off and restored				
Over Temperature Protection	The motherboard relay temperature reaches 90°C and the current is reduced. If it exceeds 95°C, it will shut down				
Emergency Stop Protection	If the AC charger fails but does not stop automatically, the operator can press the emergency stop button to stop the AC charger (the whole machine needs to be equipped with an emergency stop button)				
Ground Protection	The ground wire is not detected or the ground wire is disconnected during charging. The relay is disconnected.				
Surge Protection	L-N2kV/LN-G4kV				
Leakage Protection ^①	Type A RCBO AC 30mA+IΔdc 6mA				
Environment Characteristics					
Operating Temperature	-30°C~+50°C(-22°F~+122°F)				
Storage Temperature	-35°C~+80°C(-31°F~+176°F)				
Operating Humidity	5%~95%RH				
Operating Altitude	<2000m				
Protection Degree	IP54(Vehicle connector mated with holder). IP65(Vehicle connector mated with cap).				

3. USE OF PRODUCTS

Reliability	
MTBF	100,000H
Warranty	2 Years
Safety Standard	EN/IEC 61851-1:2019, EN/IEC 62955:2018, EN/IEC 61851-21-2:2021

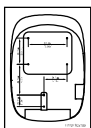
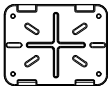
① The Type A leakage protection function shall be implemented in conjunction with a circuit breaker.

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	Breathing light
4	CP Abnormal	Red	Always on
5	Over voltage/Under voltage	Red	Flashes once every 1S
6	Ground Fault	Red	Flashes once every 2S
7	Emergency Stop	Red	Flashes once every 4S
8	Over-current Protection	Red	Flash 3S,Off 3S
9	Leakage Protection	Purple	Flashes once every 1S
10	Over-temperature Protection	Purple	Flashes once every 2S
11	Adhesion Protection	Purple	Flashes once every 4S

3. USE OF PRODUCTS

3.6 Equipment Parts List

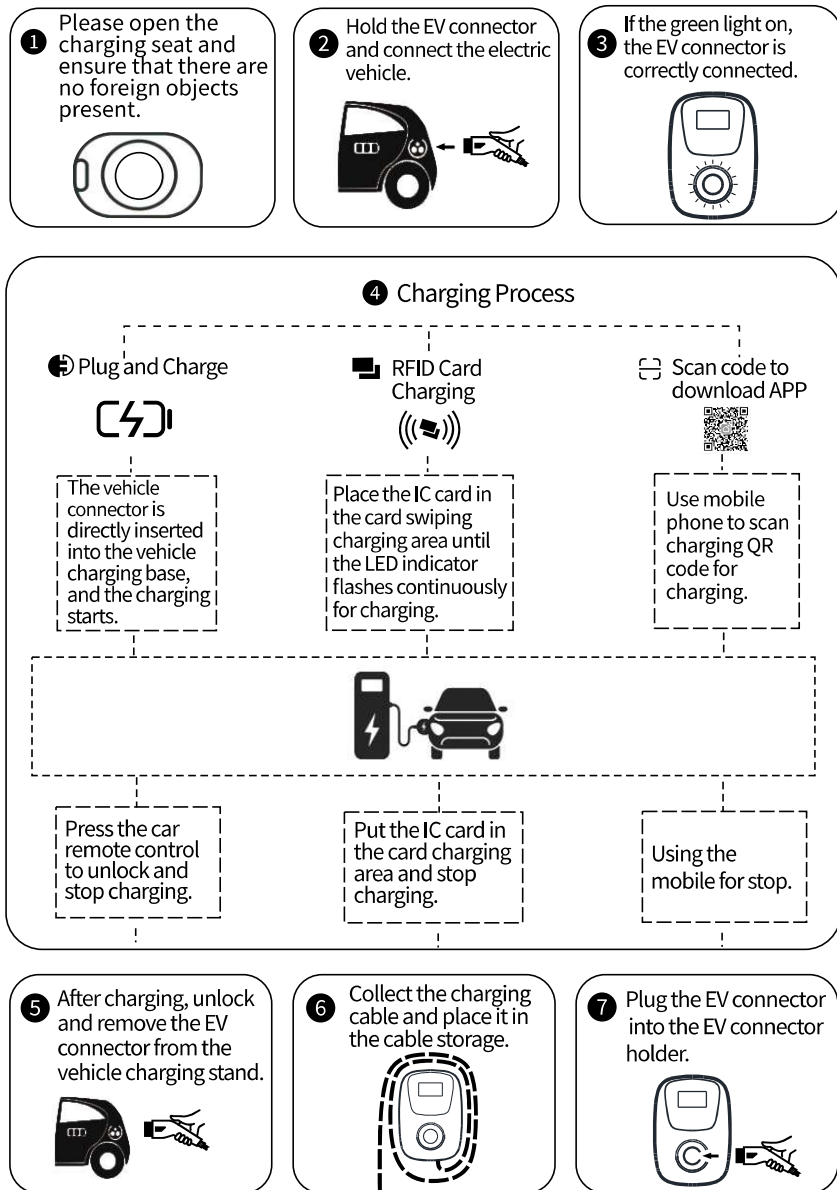
			
AC Charger 1PC	Wall Hole Formwork 1PC	Fixing Plate 1PC	User Manual 1PC
			
Certificate 1PC	Expandable Rubber Stopper 6PCS	L-shaped Fixed Bracket 1PC	Screw 8PCS
			
IC Card 2PCS			

3.7 Residual Currents Function & Wireless Tech Description

- Before leaving the factory, RDC-DD will trigger an residual currents testing action for residual currents function inspection by pressing the onboard residual currents test button Sw200.
- Every time when the product is powered on, RDC-DD undergoes an residual currents self inspection.
- EV charger undergoes an residual currents self inspection after each charge is completed and the vehicle is unplugged.
- WIFI: Max Output Power from 18.1dBm; Antenna Gain from 2.5dBi; Operate Frequency from 2412-2472MHz.
- BLE: Max Output Power from 6.8dBm; Antenna Gain from 2.5dBi; Operate Frequency from 2402-2480MHz.
- RFID: Frequency 13.56MHz ;Rated Output Power17.50 dBμA/m @ 3m.

4. OPERATION GUIDE

4.1 Operating Steps



4. OPERATION GUIDE

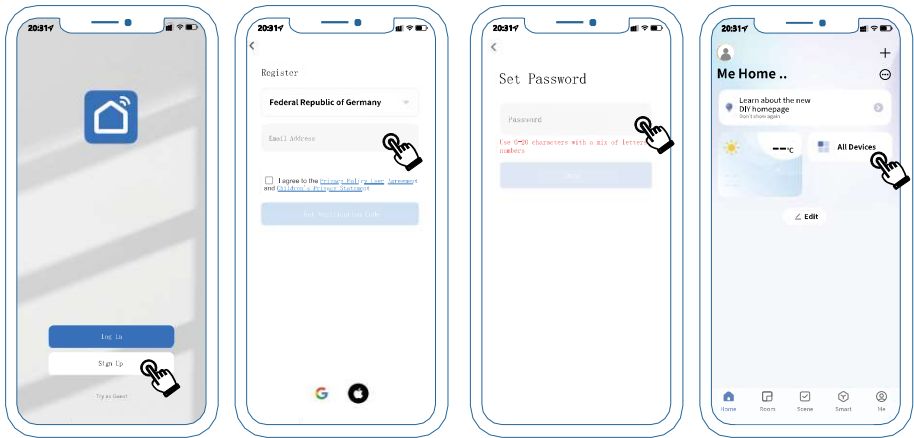
4.2 APP Usage Guide

• APP Download

Scan the QR code to download the “Smart Life” APP: iOS users can search and download it on the Apple Store, and Android users can do so on the Google Play Store.



• Registration and Login



Step 1

Step 2

Step 3

Step 4

Step 1: Open the APP and click "Register".

Step 2: Register with your email, Google account, or Apple account.

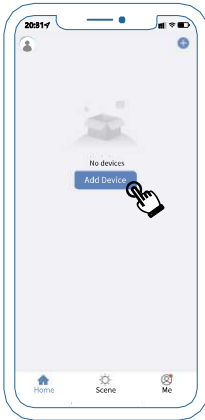
Step 3: Set your login password and enter the APP once completed.

Step 4: Click "All Devices" on the APP's home page to start binding the EV charger.

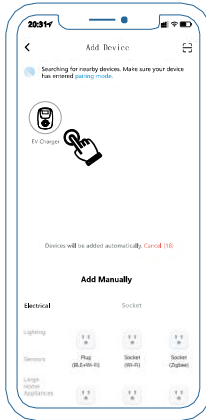
⚠ Attention: Please turn on Wi-Fi and Bluetooth before binding the device.

4. OPERATION GUIDE

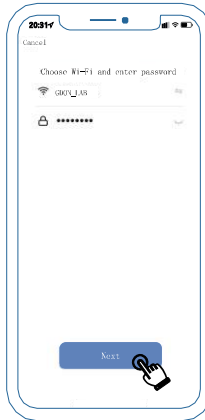
- Bind the AC charger



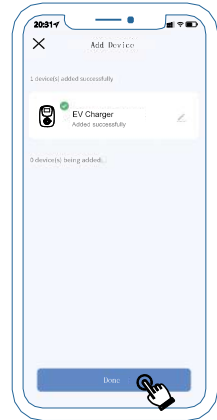
Step 1



Step 2



Step 3



Step 4

Step 1: Click “Add Device” or the “+” icon in the upper right corner to add a device.

Step 2: After completing product search, click the corresponding icon to bind it.

Step 3: Follow prompts to enter WiFi password and connect the product and phone to the same network.

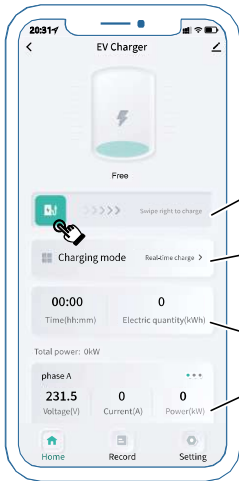
Step 4: Once connected, click “Done” to enter the “Charging” page.

ⓘ Tip:

- How to handle the failure to bind the AC charger?
 1. Check Bluetooth and network stability.
 2. Ensure Wi-Fi is 2.4 GHz with a strong signal and keep your phone close to the charger during search.
 3. Confirm the EV charger is powered on and working. If search fails, unplug it, long-press the current and time settings buttons(Or press the emergency stop knob switch three times consecutively.) until the white light flashes three times to reset the network.
 4. Restart the APP, reconnect to the network, and retry binding.

4. OPERATION GUIDE

- Click the "🏠" Home icon to enter the charging interface. For specific operations, refer to Fig.1.



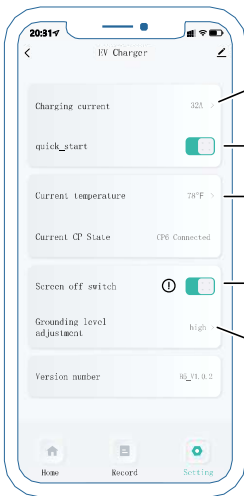
Swipe the "🔌" icon to the right to start the AC charger for charging.

Select real-time charging, timed charging, or delayed charging as needed to leverage off-peak electricity prices and save costs.

During the charging process, you can view information including charging duration, mode, and power status.

Fig.1

- Click the "⚙️" Setting icon to enter the settings interface. Specific operations are shown in Fig.2.



The suitable current can be adjusted according to vehicles with different power ratings.

After turning on this switch, charging can be initiated without the need for manual operation on the APP.

You can switch the temperature unit according to your personal habits.

Turn it on according to your personal needs. Click "ⓘ" to view the function introduction.

The grounding threshold can be adjusted according to the grounding environmental conditions. The worse the environment, the lower the threshold.

Fig.2

4. OPERATION GUIDE

- Click on the "📄" record icon, and then you can enter the charging record interface. For specific operations, please refer to Fig.3.

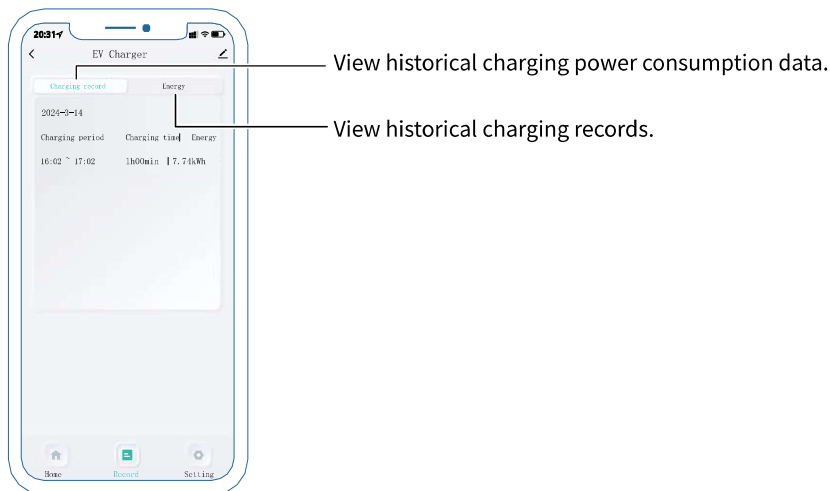


Fig.3

- Click on the "✎" upper-right icon on the EV charger home page to enter the device details page, as shown in Fig.4.

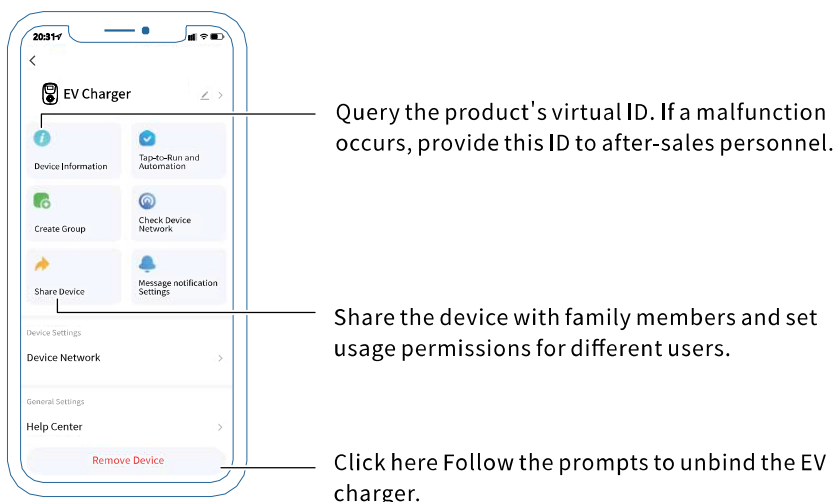
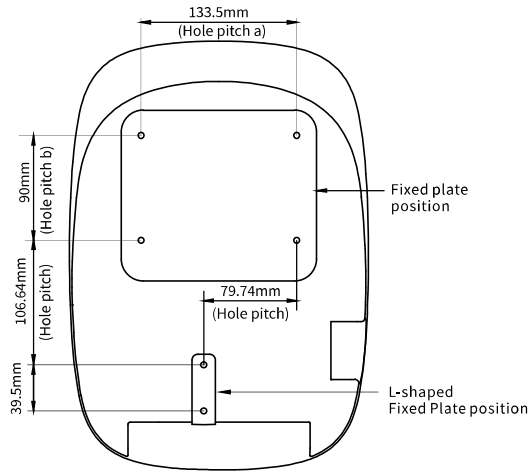


Fig.4

5. INSTALLATION METHOD

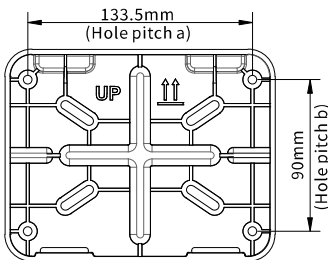
5.1 Wallbox Installation Method

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 $\phi 7$ holes shall be drilled on the wall according to the $\phi 6$ 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)



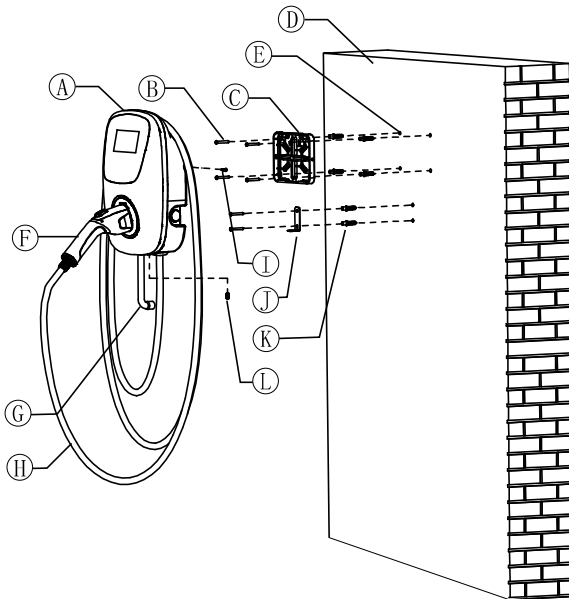
A-2 (fixing plate)



A-3 (L-shaped fixing strip)

5. INSTALLATION METHOD

5.1.3 After securing the fixed plate and L-shaped fixed bar with self-tapping screws, hang the wired charging hub onto the fixed plate and L-shaped fixed bar. Use flat-head screws $\phi 4$ to lock the charging hub to the fixed plate from the side. Lastly, use pan head screws $\phi 4$ from the bottom of the charging hub to secure it to the L-shaped fixed bar. Please refer to Figure A-4 (Wall-Mounted Assembly Diagram) for detailed instructions.



A-4 (wall mounted general assembly drawing)

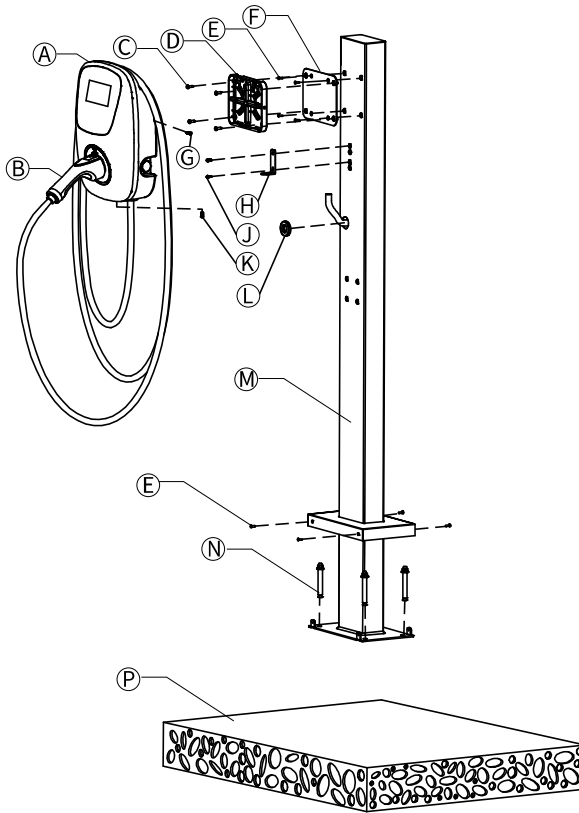
[A]Charging Hub	[B]Pan Head Self-Tapping Screw $\phi 5$	[C]Fixed Plate
[D]Solid Wall	[E] Wall Hole	[F]EV connector
[G]Input Line	[H]Output Line	[I]Flat-Head screw $\phi 4$
[J]L-Shaped Fixed Bar		[K]Expansion Plug $\phi 8$
[L]Pan Head Screw $\phi 4$		

5.1.4 This device shall be mounted at a sufficient height from grade such that the height of the storage means for the coupling device is located between 0.6m and 1.2m from grade.

5. INSTALLATION METHOD

5.2 Ground Mounted Installation Method(Optional)

5.2.1. Ground Mounted general assembly drawing

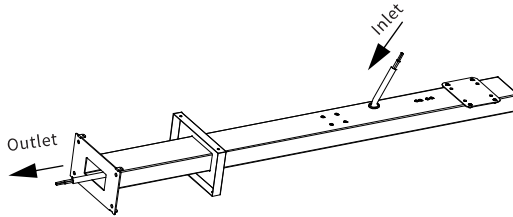


A-5 (Ground Mounted General Assembly Drawing)

[A]Charger	[B] Vehicle Connector
[C]Cross pan head screw M5	[D]Fixing Cover
[E]Cross flat head screw M4	[F]Column back panel
[G]ST4 self tapping screw	[H]L-shaped fixing strip
[J]ST4 pan head self tapping screw	[K]ST4 countersunk head self tapping screw
[L]Wire protector	[M]Column
[N]Expansion bolt M8	[P]Cement foundation

5. INSTALLATION METHOD

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 (Ground 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 Hang the AC charger directly onto the fixed plate, and lock the AC charger and the fixed plate from the side of the AC charger with the flat head screw $\phi 4$.

5.3 Installation Environment Requirements

5.3.1 The installation position of the AC charger 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 AC charger and its accessories, and shall not tilt after installation. The wall should not be too close to the internal line.

5.3.4 It is recommended that the AC charger be installed in an environment with sunshade or umbrella; The lighting and passage at the installation site of the AC charger must be safe and smooth.

5.3.5 A certain operating space shall be reserved for the installation of AC charger 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 AC charger. The mini circuit breaker should meet local regulations.

5.3.7 For power safety, add circuit breaker at the product input.

5. INSTALLATION METHOD

No.	Power	Current	Circuit breaker (recommended)
1	7kW	32A(Max)	1P+N(NXBLE-63)/40A
2	11kW	16A(Max)	3P+N(NXBLE-32)/20A
3	22kW	32A(Max)	3P+N(NXBLE-63)/40A

5.4 Power Supply Requirements

The power supply mode of the wallbox mounted AC charging station is AC single-phase(three-phase) power supply, and the input electrical requirements are:

5.4.1 AC Operating Voltage: Refer to page 7;

5.4.2 AC Operating Frequency: Refer to page 7;

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

6. TROUBLESHOOTING

6.1 Troubleshooting Table

Failure	Causes and Solutions
Unable to turn on	● Check the power supply and cables to make sure they are not damaged in any way and properly connected and that the power supply is working properly. ● If you cannot resolve the problem, please contact a service partner.
Unable to start charging	● Check the vehicle connector to make sure there is no foreign matter inside the EV connector, the cable is not damaged, and the vehicle connector and socket are in good contact. ● Check the unlock button to make sure it is locked and that the vehicle is set up properly.
Incomplete charge or overtime charge	● High temperatures can cause current derating or interrupt charging. ● Overvoltage or undervoltage may cause interruption of charging. ● Poor grounding leads to incomplete product protection charging.
The screen displays "CP Fault"	● Please restart the device to charge. ● If you cannot solve the problem, please contact the service partner.
The phone cannot find the device	● The frequency band of the phone and the device do not match (must be connected via the same 2.4 GHz WIFI). ● If the device is already tied to another phone. New phones cannot be added. If necessary. Restore factory settings: Repeat the emergency stop button off/on 3 times within 12 seconds.
The screen displays "Overvoltage fault"	● Indicates that the charger input voltage is higher than the limit value 276Vac(max). ● Contact an electrician to confirm whether the supply voltage is normal. ● If you cannot solve the problem, please contact the service partner.

6. TROUBLESHOOTING

6.1 Troubleshooting Table

Failure	Causes and Solutions
The screen displays "Low voltage fault"	● Indicates that the charger input voltage is below the limit 184Vac(min). ● Contact an electrician to confirm that the supply voltage is normal. ● Please check whether the power supply load capacity is sufficient. ● If you cannot solve the problem, please contact the service partner.
The screen displays "Ground fault"	● Check whether the ground status of the power supply socket is valid.
The screen displays "Overcurrent fault"	● Please make sure that the vehicle charging current is within the rated range. ● If you cannot solve the problem, please contact the service partner.
The screen displays "Over Temperature fault"	● Stop charging and leave it for 30 minutes before starting charging again. ● If you cannot solve the problem, please contact the service partner.
Show "not plugged in" not charging?	● Avoid fast and frequent plugging and unplugging. ● Maybe it's the vehicle's problem, please contact the official after-sales.

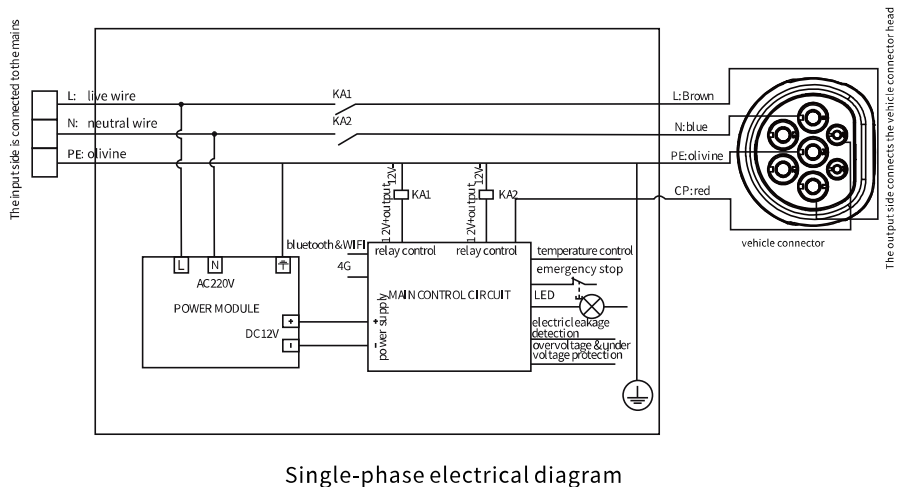
(*) Possible fault causes (fault status LED lights up):

In principle, the fault must be cleared by pulling out the vehicle connector. The following reasons may lead to failure: Ground fault, electric leakage, charger pile ID not set. Please contact your service partner to maintain the equipment.

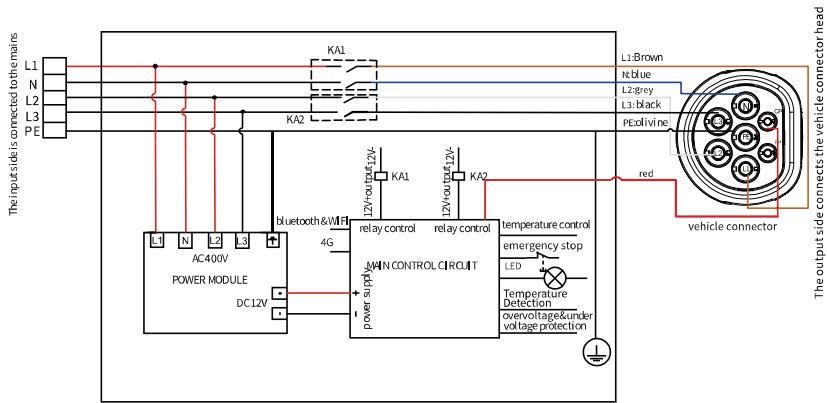
7. MAINTENANCE

7.1 Maintenance

- The whole maintenance process needs professional personnel with qualification to operate;
- 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 AC charger, and it is recommended to install a canopy outdoors;
- Regularly check whether the bolts of the AC charger 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 AC charger;
- When using, try to control the output voltage and current of the AC charger within the nominal range, so as to ensure that the AC charger can work with the maximum efficiency;
- When the AC charger 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 AC charger shall be put back to its original position after the temperature of the AC charger drops to normal temperature;
- The electrical schematic diagram of the AC charger is shown in the figure below.



7. MAINTENANCE



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 AC charger is intact;
- The warranty period of your AC charger 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.

