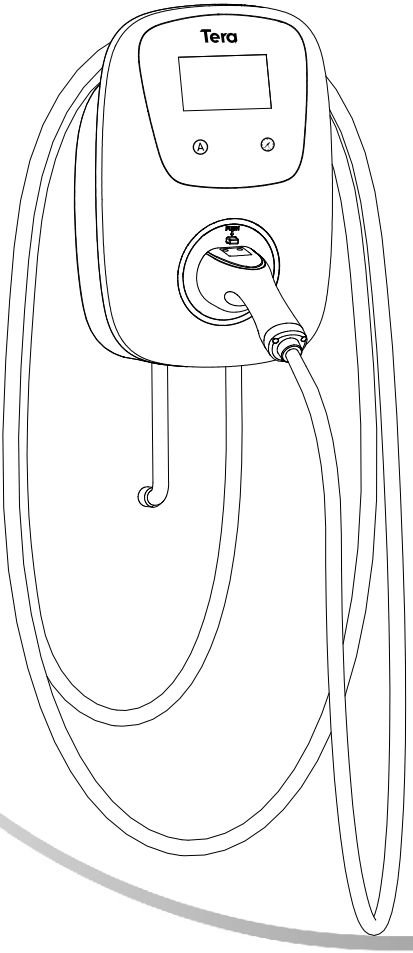
Tera



EV CHARGER USER MANUAL

(E Version : 1.1)

Please do not hesitate to contact us if you have any questions

Important note:

Please include your order number and the product model number in your email.

Official Customer Service:

Website Address: http://www.tera-innovation.com

Email Address:cs@tera-innovation.com

Cell:+1(626)438-1404

Whatsapp: +1(626)438-1404

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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. 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 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 charging pile, 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 pile within the specified working parameters;
f. Only connect electric vehicles. Do not connect other loads (electric tools, etc.). Do not use the charging pile 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 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 pile. 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 pile 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 charging pile.

2. I MPORTANT INFORMATION

2.1 Specified Use

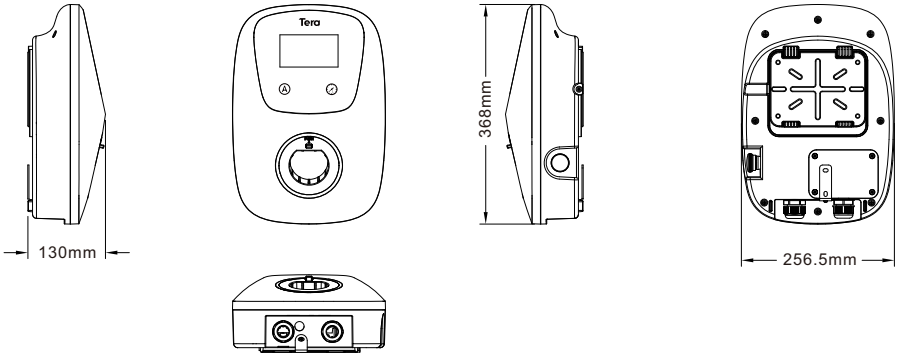
● This type of product is a charging pile that can charge electric vehicles in indoor and outdoor areas (such as electric vehicles).
● When installing and connecting the charging pile, the relevant regulations of the local country or government shall be observed;
● The specified use of the equipment 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 vehicle connector 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, pls feel free to contact us.

2.2 About this Manual

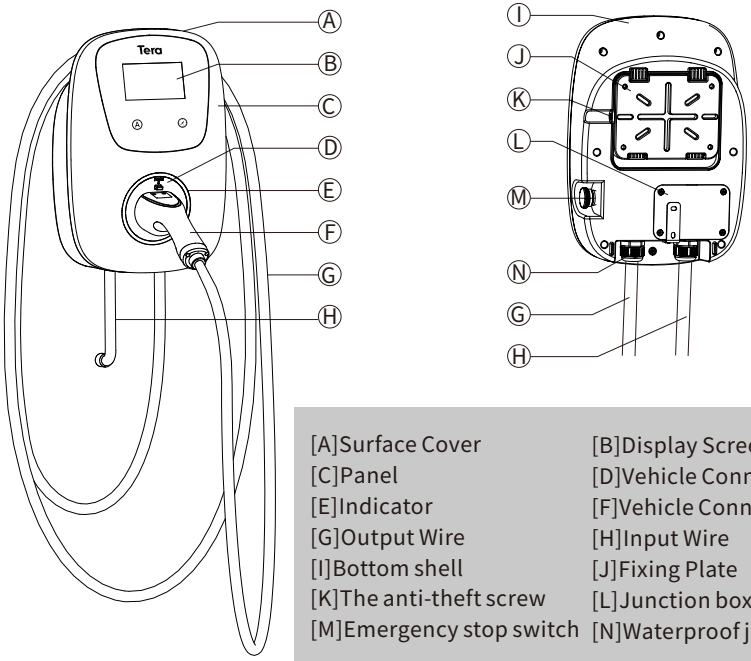
●This manual is applicable to the following groups:
★The end customer (EV charger user).
★The technical staff of debugging and service
●The final explanation of this manual belongs to the company.

3.USE OF PRODUCTS

3.1 Product Appearance Size



3.2 Product Appearance Introduction



[A]Surface Cover	[B]Display Screen
[C]Panel	[D]Vehicle Connector Holder
[E]Indicator	[F]Vehicle Connector
[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.USE OF PRODUCTS

3.3 Product Performance Description

Product Characteristics	
Product Item	W01-AM-BK-32
Output Power	22kW
Operating Current	32A
Operating Voltage	L1/L2/L3/N/PE;400Vac
Product Weight	6.5kg±10 %
Operating Frequency	50Hz±1
Cable Length	7m
Indicator	4-color Indicator
User Interface	4.3inches LCD Display Screen
Installation Method	Wallbox/Ground Mounted
Charging Method	Plug and Charge/APP Charging
Communication Method	Wifi&Bluetooth
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＞110%, relay disconnected, the power supply needed to be cut off and restored
Over Temperature Protection	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 ground wire is not detected or the ground wire is disconnected during charging. The relay is disconnected.
Surge Protection	L-N3kV/LN-G3kV
Leakage Protection	DC6mA+External Type A circuit breaker
Environment Characteristics	
Operating Temperature	-30°C~+50°C
Storage Temperature	-35°C~+80°C
Operating Humidity	5%~95%RH
Operating Altitude	＜2000m
Protection Degree	IP54(Vehicle connector mated with holder). IP65(Vehicle connector mated with cap).

Reliability	
MTBF	100, 000H
Warranty	2 Years
Safety Standard	IEC 61851-1:2017, EN/IEC 61851-1:2019, IEC 62955:2018, IEC 61851-21-2:2021

3.4 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	Gound 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

3.5 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	Certificate of conformity	1	
6	Wall hole formwork	1	
7	User Manual	1	

4. Operation Guide

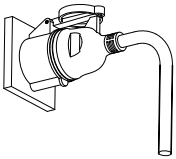
4.1 Operation Steps

❶ Plug the charger into the socket

GROUNDING INSTRUCTIONS

This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment grounding conductor and a grounding plug.

The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

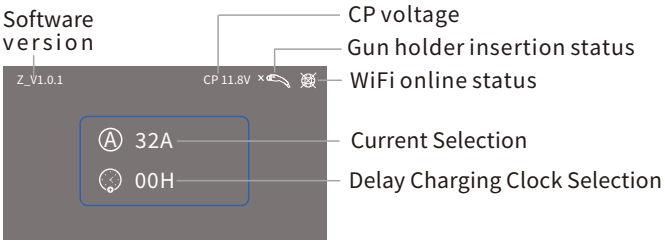


WARNING

Improper connection of the equipmentgrounding conductor is able to 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.

❷ Adjust charging parameter

- Long press the Ⓐ or ⊘ button for 2s to enter the setting interface
- The Ⓐ button can set the 16A-20A-24A-32A power output
- The ⊘ button can be set to delay charging between 1-12H
- After setting, press and hold the Ⓐ or ⊘ button for 2s to confirm the setting and exit.



Tips: 1.All operations must be completed before inserting the gun;
2.All buttons will lock after inserting the gun;
3.No action in 5S, automatic confirmation to exit the current interface.

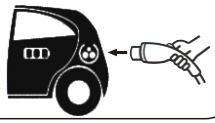
4. Operation Guide

4.1 Operation Steps

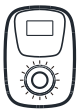
3 Please open the charging seat and ensure that there are no foreign objects present.



4 Hold the charging gun and connect the electric vehicle.



5 If the green light flashes, the charging gun is correctly connected



6 Charging Procedure

Plug and Charge

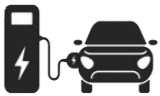
The charging gun is directly inserted into the vehicle charging base, and the charging starts.

Scheduled Charge

Long press the ⏲ for 2s to enter the interface, short press Ⓐ or ⏲ to adjust the current or timer.When time up, start to charge.

Scan code to download APP

Use mobile phone to scan charging QR code for charging.

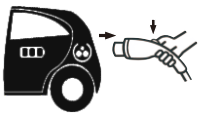


Press the car remote control to unlock and stop charging

Press the car remote control to unlock and stop charging

Using the mobile for stop

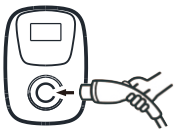
7 After charging, unlock and remove the charging gun from the vehicle charging stand



8 Collect the charging cable and place it in the cable storage



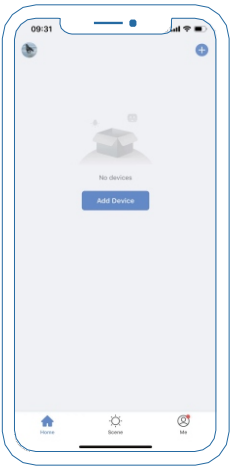
9 Plug the gun into the gun holder



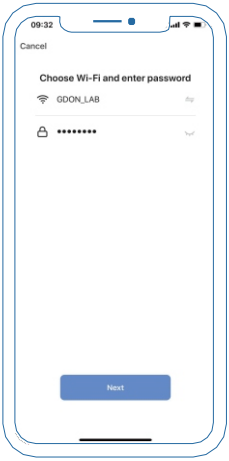
4.2 Steps For Adding APP Device

Download method

For IOS: Search Smart Life in the Apple Store to download and install it.
For Android: Search Smart Life in the Google Store to download and install it.



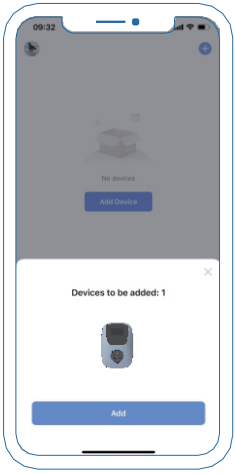
Step 1:
Add Device
Click “Add Device”.



Step 2:
Connect the WIFI
When adding a device for the fist time, conect the device and mobile phone under the same WIFI.



Step 3:
Loading
Wait until the device is loaded.

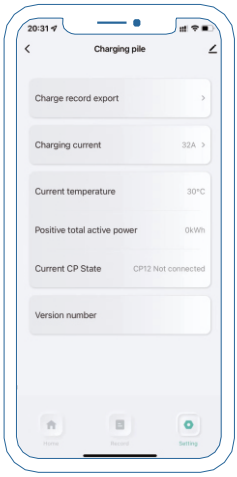


Step 4:
Loading completed
After loading, click “Add to enter the charging interface”.

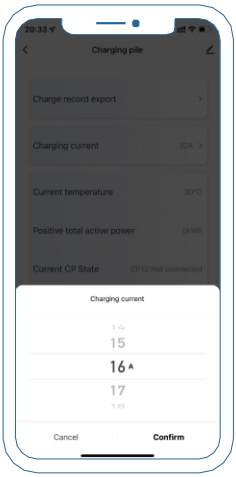
Tips:

Only when the device is added for the first time, the device and mobile phone need to be connected under the same WIFI. After the device is loaded, you only need to turn on Bluetooth to connect the device again.

4.2.1 APP Current Switch Step

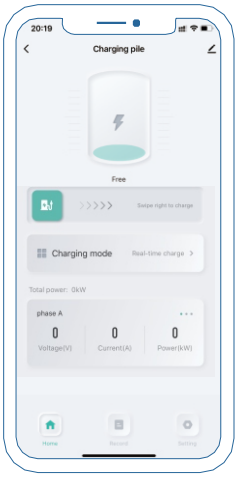


Step 1:
Setting
Click on the "Settings" TAB.

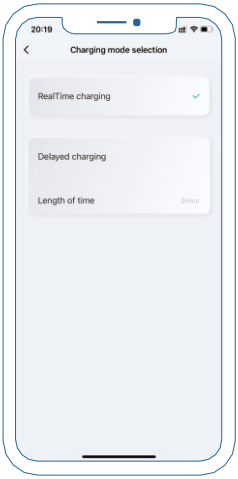


Step 2:
Charging Current
Click on Charging current to switch from 16-32A.

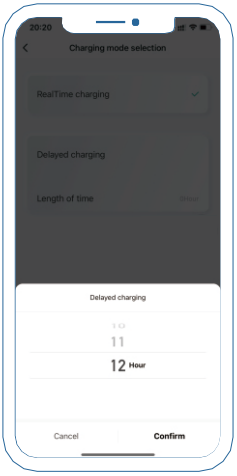
4.2.2 Steps for APP Appointment Time



Step 1:
Click charging mode.

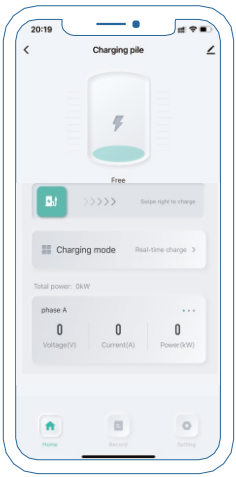


Step 2:
Click delay charging.



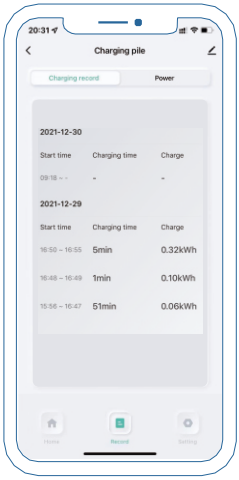
Step 3:
Select delay charging time 1-12h and confirm.

4.2.3 Charging Instructions on APP



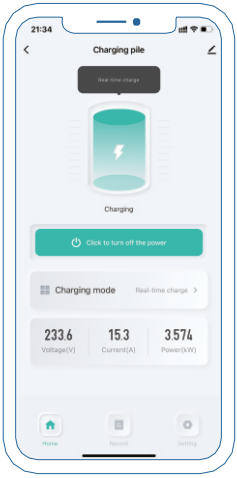
Instructions 1: Swipe Right to Charge

Insert the charging plug into the charging port, “Swipe Right to Charge”.



Instructions 2: Charging Record

Users’ charging history can be viewed in the APP.



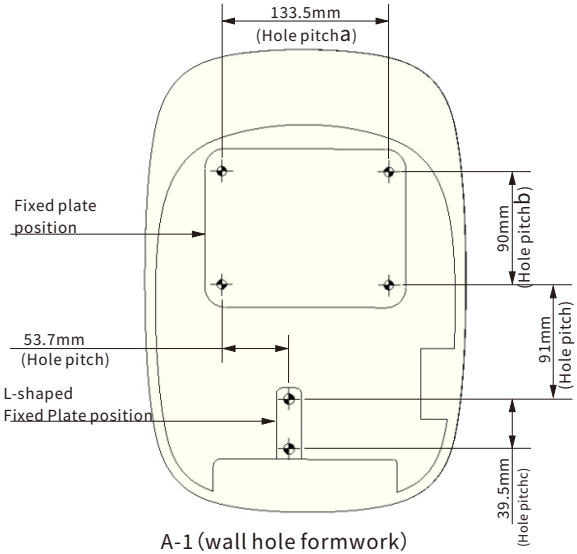
Instructions 3: Charging Completed

After charging, click to turn off the power.

5. Installation Method

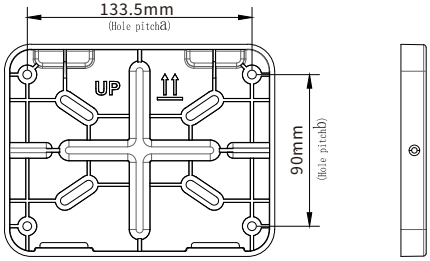
5.1 Wallbox Installation Method

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)

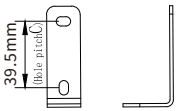


A-1 (wall hole formwork)

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)

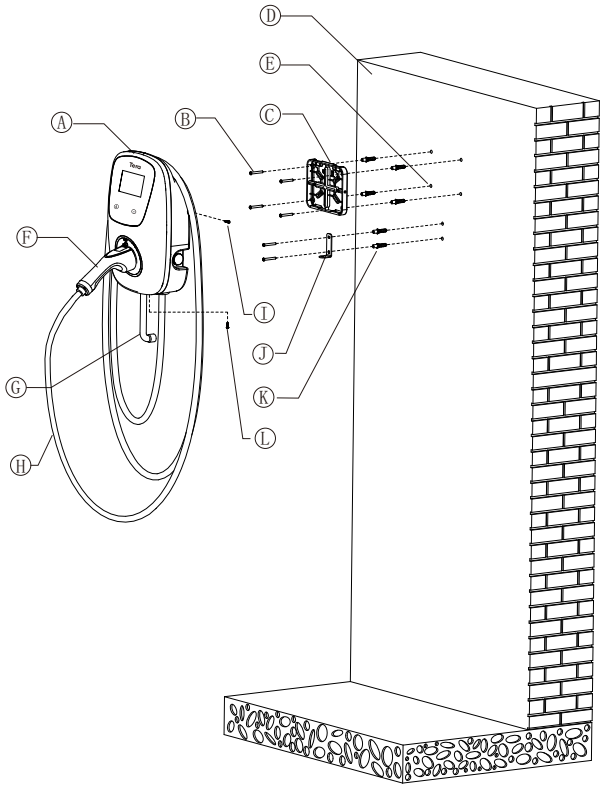


A-2 (fixing plate)



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]Vehicle Connector
[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

5.2 Installation Environment Requirements

5.2.1 The installation position of the charging pile shall not be close to dangerous locations or areas such as water, oil and gas pipelines.
5.2.2 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.
5.2.3 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.
5.2.4 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.
5.2.5 A certain operating space shall be reserved for the installation of charging pile to facilitate the overhaul and maintenance of engineering personnel.
5.2.6 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.
5.2.7 For power safety, add circuit breaker at the product input.

No.	Power	Current	Circuit breaker (recommended)
1	22kW	32A(Max)	3P+N(NXBLE-63)

5.3 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:
5.3.1 AC Operating Voltage: Refer to page 5;
5.3.2 AC Operating Frequency: Refer to page 5;
5.3.3 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 vehicle 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 288Vac(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 192Vac(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.

Need Support?
Issue with missing or damaged items?

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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 charging pile, and it is recommended to install a canopy outdoors;

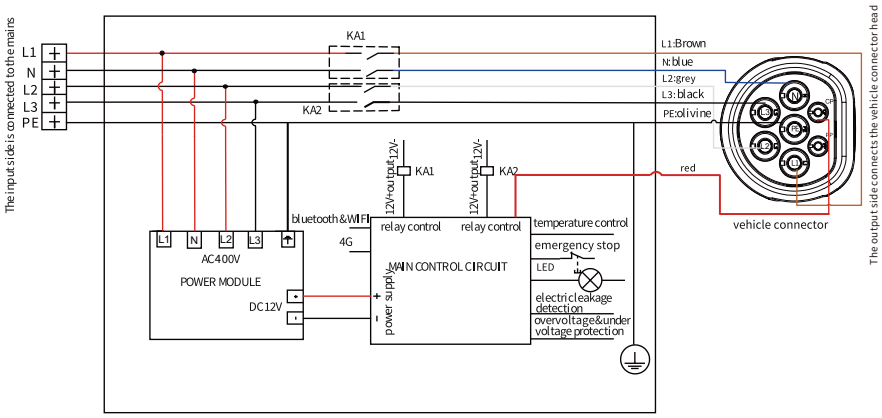
● Regularly check whether the bolts of the charging pile are fastened, whether the connecting wire is loose, and whether the connection is not firm, and check whether there is short circuit;

● 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.



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.

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