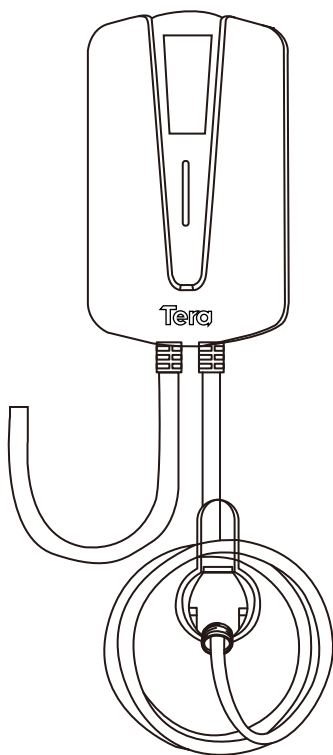


Tera

Model: Q8

Electric Vehicle AC Charging Station



User Manual

Ver. E07

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: <https://www.tera-innovation.com>

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1. Safety rules

- 1.1. Be sure to cut off the power supply during the installation and replacement of the charging station to prevent electric shock.
 - 1.2. The cable of the charging station must be firmly connected and well insulated. Loose connection and damage will cause circuit failure, which may cause casualties or fire in severe cases.
 - 1.3. The installation of charging station and access to the power grid must be operated by professionals.
 - 1.4. The dropped charging station cannot be directly installed even if its appearance is not damaged. It must be inspected by professionals to determine whether it can be installed.
 - 1.5. This charging station is not allowed to be flushed with liquid.
 - 1.6. Any fault that may affect the safety of the charging station must be eliminated by professional maintenance personnel.
 - 1.7. The charging station is installed by professional technicians.
- The company will not bear any responsibility for any loss caused by unauthorized installation and modification.

2. Product introduction

Tera Q8 AC charging station is a charging station developed to meet the charging needs of electric vehicle. It is used together with the electric vehicle on-board charger to provide charging services for electric vehicles. This product is easy to install, occupies a small area, is easy to operate, and has a fashionable appearance. It is suitable for private parking lots, public parking lots, residential parking lots, enterprise dedicated parking lots and other outdoor and indoor parking lots As this product is a high-voltage equipment, please do not disassemble the housing or modify the circuit of the equipment. This charging station is intelligent, with electricity metering, charging and human-computer interaction interface.

2.1. product composition:

The charging station is mainly composed of shell, wall mount, main control board, human-computer interface, display module, fuse, emergency stop switch, charging interface, charging cable, charging cable holder, etc.

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2.2. Product main features:

2.2.1. This charging station has an operation background monitoring system (only for connected devices).

2.2.2. This charging station has a dynamic human-computer interaction function and is equipped with LED status indication, so the charging process is clear at a glance.

2.2.3. The charging station is equipped with an embedded emergency stop mechanical switch, which can greatly increase the safety of equipment control.

2.2.4. The charging station has Ethernet online communication function (optional), and online control and payment functions (optional) can be realized by scanning the QR code through We Chat on Mobile.

2.2.5. The charging station has perfect system protection functions: overvoltage, undervoltage protection, overcurrent protection, short circuit protection, leakage protection, over temperature protection, lightning protection, and safe and reliable product operation.

2.2.6. Data storage and fault identification.

2.2.7. The charging station has accurate power metering and identification functions (optional), which can increase users' confidence.

2.2.8. The whole structure of the charging station is rainproof and dust-proof, with IP55 protection grade, suitable for indoor and outdoor use in a wide and flexible environment.

2.2.9. The charging station is easy to install, operate and maintain.

2.2.10. The charging station is safe against theft.

Issues with missing or damaged items?



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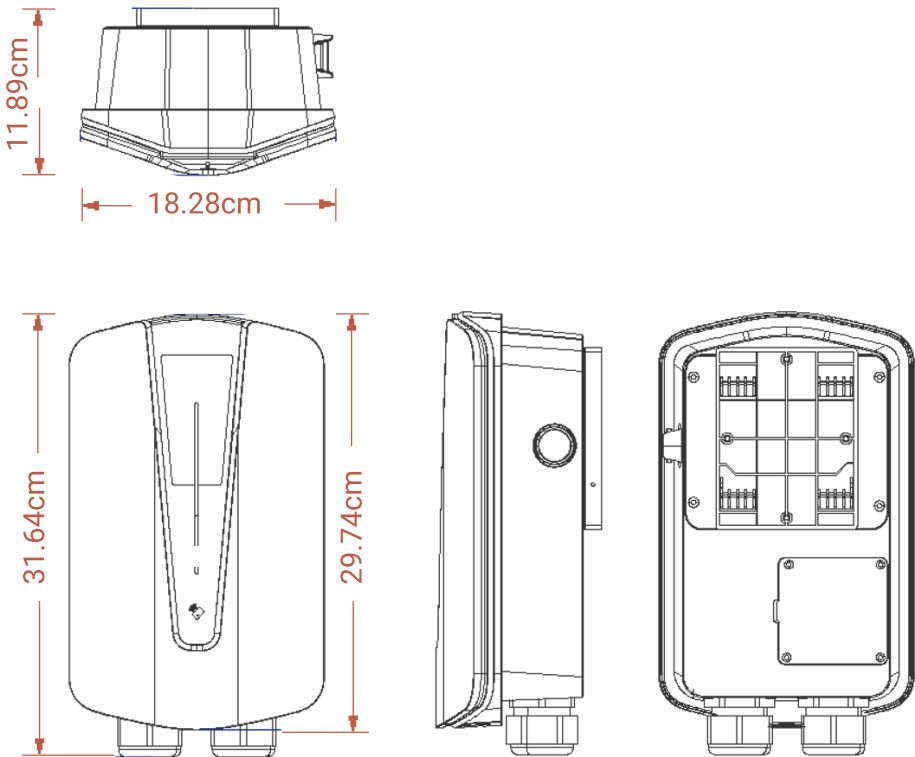


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3. Appearance description

3.1. Product appearance dimension:

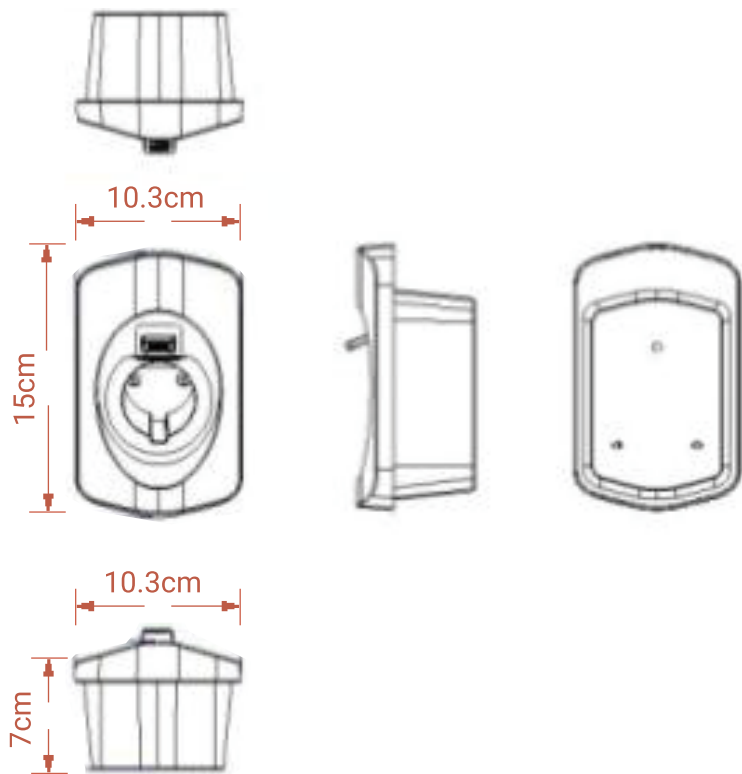
3.1.1. Charging station



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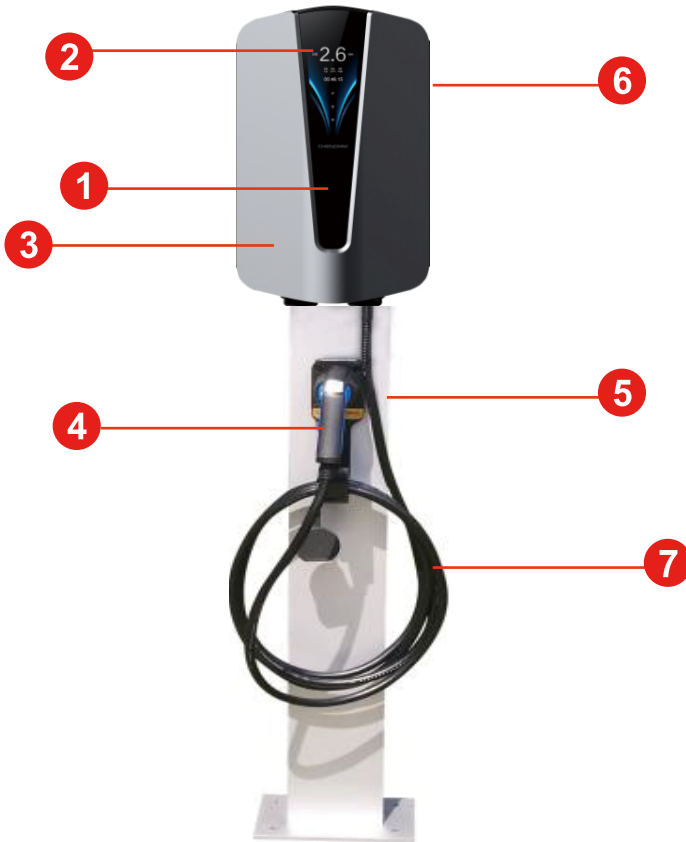
3.1.2. Charger Cable Holder



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3.2. Product introduction:



3.2.1. LED indicator: different colors indicate different states.

3.2.2. Display screen: 4.3 inch LCD screen, displaying charging information.

3.2.3. Shell: PC/ABS material.

3.2.4. Charging connector: IEC 62196-2, Type2. Connected with 7m long charging Cable.

3.2.5. Charging connector holder: fixed gun base of charging gun.

3.2.6. Emergency stop switch: in case of emergency, press the emergency stop switch to cut off the output.

3.2.7. Cable: 7m charging cable.

4. Main technical parameters

Table 1 Technical parameters of AC charging station

Power Supply Type	Three-phase
Maximum output power	11KW
Input voltage	AC 400V
Input voltage frequency	50Hz/60Hz
Output voltage	AC 400V
Output current	16A
Efficiency	≥98
Insulation resistance	≥10MΩ
Power consumption of control module	≤7W
RCD	AC30mA
Operating ambient temperature	-30℃～+50℃
Storage ambient temperature	-40℃～+80℃
Ambient humidity	5% ~95% No frost, no condensation
Altitude	Not more than 2000 meters
Status indication	LED indicator
Screen	4.3 inch LCD color screen
Startup mode	Plug and Play
Communication mode	Ethernet, Bluetooth
Charging interface	IEC 62196-2

Degree of protection	IP55、IK10
Safety protection	Overvoltage protection, undervoltage protection, grounding protection, lightning protection, leakage protection, flame retardant protection, overcurrent protection, intelligent temperature control protection, relay adhesion protection, input shutdown protection, vehicle specification level protection vehicle and protection personnel
Electric energy meter (provided for networking equipment)	≥1.0 level
Cable length	7m
Weight	4.8KG+/-0.25KG

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5. Install

5.1. Please check whether the packing box contains the following items before installation

- 5.1.1. 1* AC charging station (including cable)
- 5.1.2. 2* User manual for AC charging station - German Version and English Version
- 5.1.3. Wall mounted: 7 M6 * 30mm rubber plugs
- 5.1.4. Four M3.0 * 35mm flat head screws and three M3.0 * 25mm round head screws with washers
- 5.1.5. 1* Charging Cable Holder
- 5.1.6. 1* Install hanging board

5.2. Installation environment requirements

5.2.1. The charging station is an indoor and outdoor general charging station, which meets the IP55 protection level and can be installed in open spaces.

5.2.2. Please ensure that the ambient temperature is within the range of - 30 ℃ ~ +50 ℃.

5.2.3. The altitude of the installation site shall not be higher than 2000 meters.

5.2.4. There should be no violent vibration, inflammables and explosives near the installation site.

5.2.5. The installation site should not be located in low-lying areas or areas prone to water accumulation.

5.2.6. When the station is installed, it should be ensured that the station body is vertical, and the installation height is from the center point of the connector base to the horizontal ground range: 1200~1300mm.

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5.3. Wiring mode

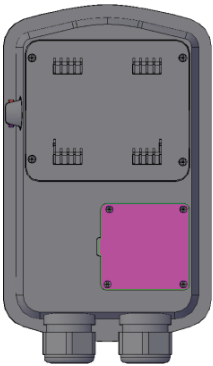
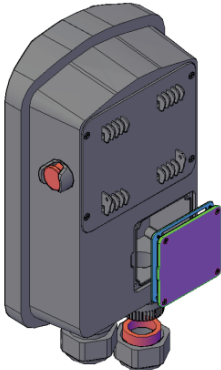
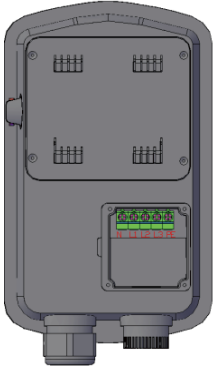
5.3.1. The charging station shall be provided with an independent power circuit, which cannot be shared with other electrical equipment;

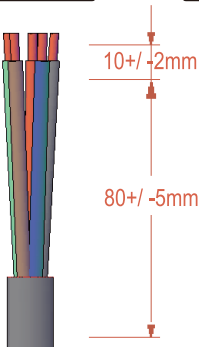
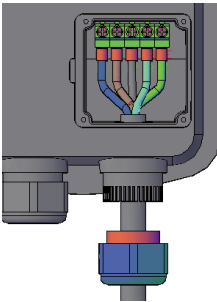
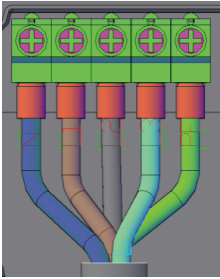
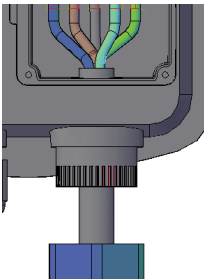
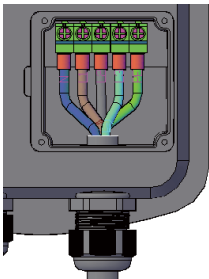
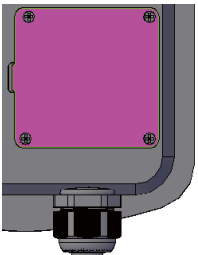
5.3.2. The device is equipped with an input cable interface when it leaves the factory. When wiring, first use a Phillips screwdriver to open the rear wiring cover on the back of the charging station, and connect the three cables (live wire L, neutral wire N, and ground wire PE) to the terminal according to the wiring mark to complete the wiring.

If you need to extend the length of the input cable, be sure to extend it according to the correct cable connection.

(Due to the large current of the equipment, the extension should ensure the reliable connection of the connection);

5.3.3. To prevent the risk of electric shock, the equipment should ensure that the input ground wire is firmly grounded.

		
1. Loosen four screws of the input cable cover on the back of the charging station.	2. Remove the input line cover and waterproof rubber ring respectively, unscrew the gland on the input line side, and remove the rubber ring.	3. Remove the input wire cover and the gland and tighten the nut.

		
<p>4. Use 5-core 6mm² multi-strand copper flexible cable (single-phase charging station uses 3-core 6mm²), and the stripping method is shown in the figure above.</p>	<p>5. The input cable shall be threaded into the gland to tighten the nut and rubber ring. Then it passes through the inner hole of the gland head and enters the interior of the charging station.</p>	<p>6. The wiring sequence is N, L1, L2, L3 and PE from left to right. The terminal block shall be tightened without looseness.</p>
		
<p>7. Install the rubber ring along the cable to the end of the gland.</p>	<p>8. The cable shall be squeezed to the interior of the charging station to prevent the internal cable from stretching. Tighten the screws again for fixation.</p>	<p>9. Place the waterproof rubber ring in turn (pay attention to the left side of the wide edge), and fix the input line cover with screws.</p>

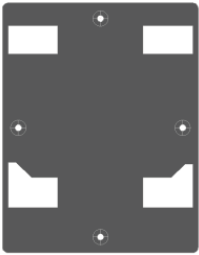
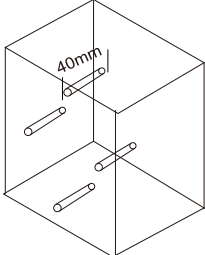
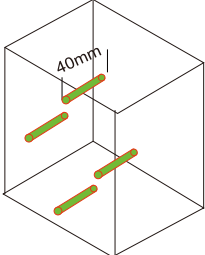
5.4 Installation method

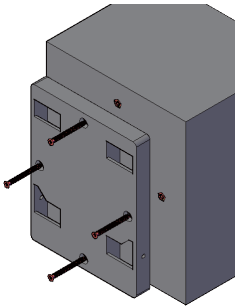
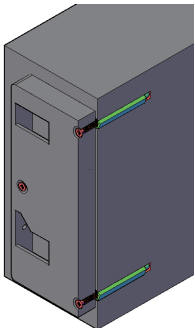
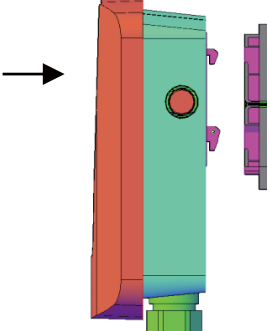
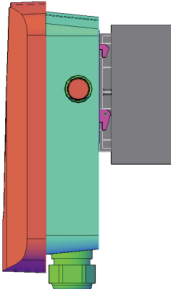
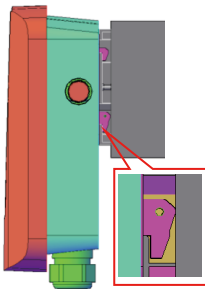
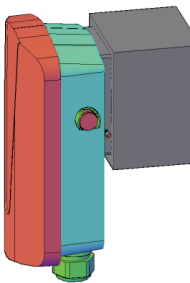
For the sake of safety, only professionally trained personnel can install the charging station. Please do not install it yourself.

According to the position of the mounting hole on the wall frame, mark the hole position on the wall and then use the impact drill to drill holes ($\Phi 6 * 40$) Then put in the plastic rubber plug, hammer the pointed end into the hole to make its surface flush with the wall, the plane of pendant B is outward, and the special-shaped hole is fixed downward with KA3.0 * 35mm screws. Insert the hanger A vertically into the hanger B hole and press it down to fully install it onto the hanger B.

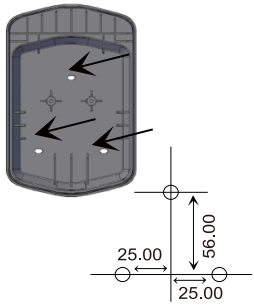
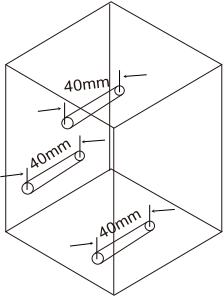
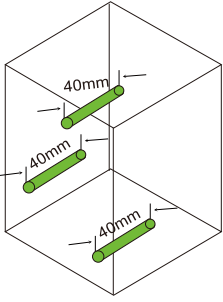
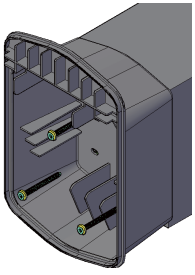
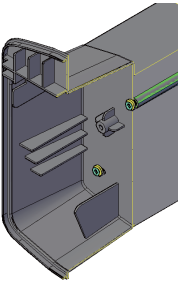
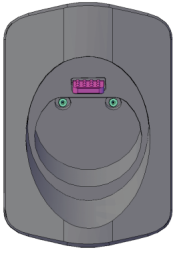
During wall mounted installation, the hanger has anti-theft screw holes. After installation, please tighten the anti-theft screws KA3.0 * 10mm hexagon socket self tapping screws to fix the equipment hanger.

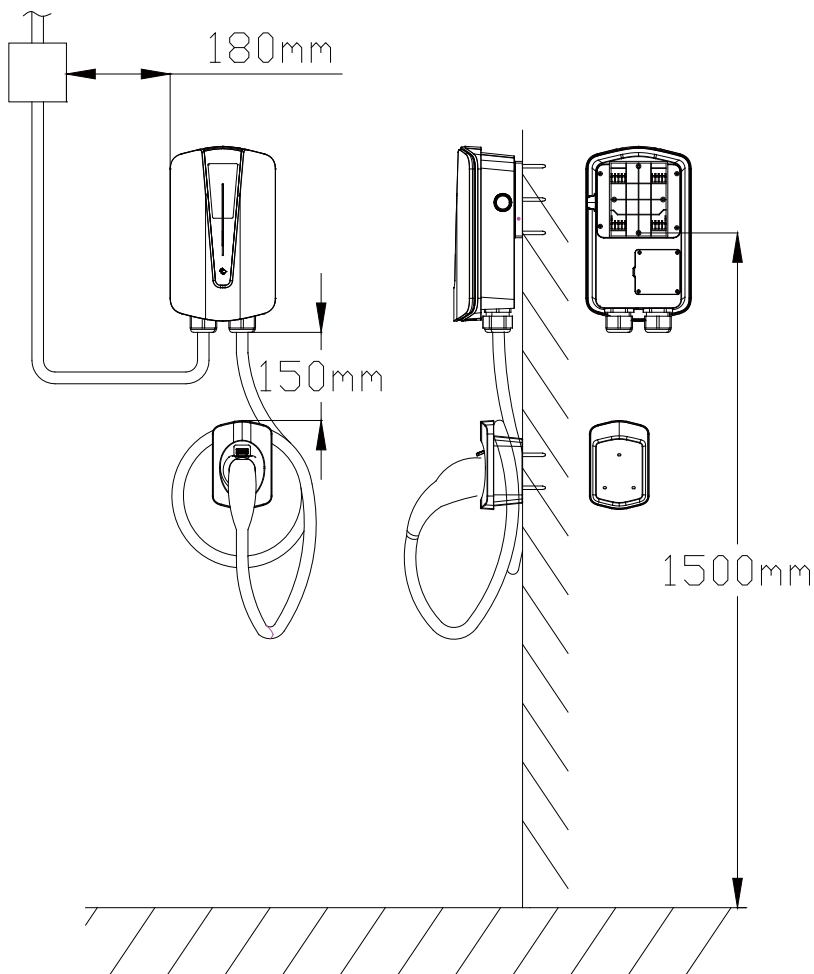
5.4.1. Charging station installation:

		
1. The charging station pendant B shall be pasted flat on the wall at an appropriate position, and the screw hole position shall be marked (or marked in mm according to the above figure).	2. use Φ The 6mm drill bit is used to drill holes at the marked position, with the depth>40mm.	3. Insert the rubber plug vertically, and the surface of the rubber plug is flush with the wall.

		
<p>4. The special-shaped hole of charging station pendant B faces down ward, the plane faces out ward to align the wall rubber plug, and screw in the fixing screw vertically to the end.</p>	<p>5. The screws are locked to the bottom (sectional view). Hanger B shall be free from looseness, deformation, etc.</p>	<p>6. The charging station pendant A corresponds to the hole position of pendant B, press it vertically to the bottom, pull the charging station downward, and lock two anti-theft screws to the bottom.</p>
		
<p>7. Press it horizontally to the bottom.</p>	<p>8. Press the Charge Point vertically down ward.</p>	<p>9. Lock the anti-theft screws in the holes on both sides of pendant B.</p>

5.4.2. Charger Cable Holder Installation

		
<p>1. The bottom shell of the gun base shall be flatly pasted on the appropriate position on the wall, and the screw hole position shall be marked (or marked in mm according to the data in the figure above).</p>	<p>2. use Φ The 6mm drill bit is used to drill holes at the marked position, with the depth>40mm.</p>	<p>3. Insert the rubber plug vertically, and the surface of the rubber plug is flush with the wall.</p>
		
<p>4. Screw in the gasket, align the gun seat hole with the wall rubber plug, and screw in the screw vertically to the end.</p>	<p>5. Screw into the bottom section. The bottom shell of gun base shall be free of looseness and deformation.</p>	<p>6. The base face shell is aligned with the bottom shell and clamped to the bottom, and two screws are locked to the bottom.</p>



Construction requirements for wall installation:

1. The center of the charging station is about 1.5m above the ground;
2. Mark the hole position of the hanging plate on the wall;
3. use $\Phi 6$ The drill bit shall open a 45mm deep hole, insert a M6 * 40mm rubber plug (the surface shall be flush with the wall), and the pendant plate shall be fixed with KA3.0 * 35mm screws;

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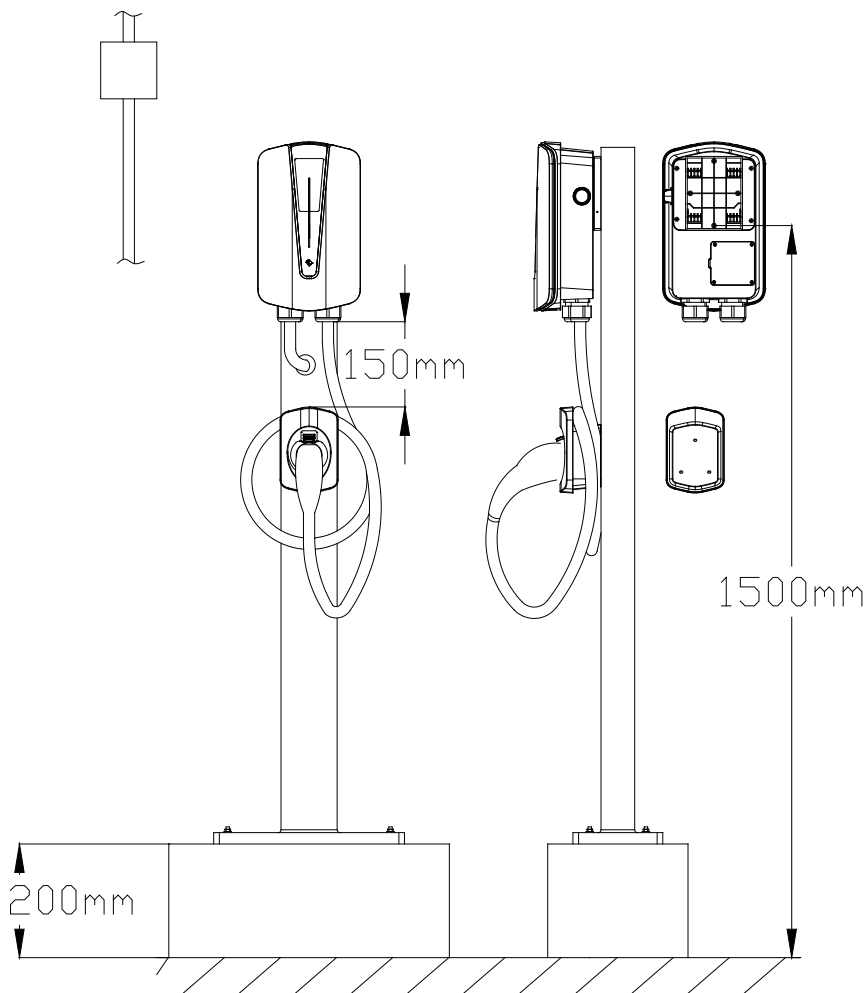
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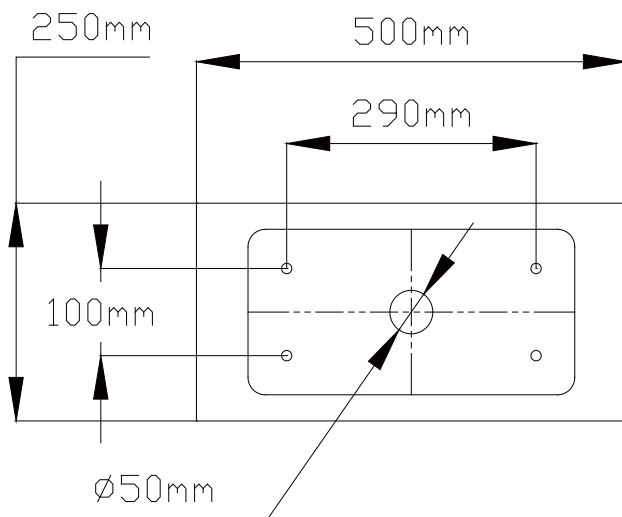
4. use $\Phi 6$ The drill bit shall open a 45mm deep hole, insert an M6 * 40mm rubber plug (the surface shall be flush with the wall), and the gun base bottom shell shall be fixed with PA3.0 * 25mm round head pad screws.

The middle frame of the gun base is vertically installed into the bottom shell of the gun base and fixed with two PA3.0 * 10mm;

5. Open the power connection cover of the charging station, connect the PE, N, L power lines, fix the power connection cover, hang it on the pendant B, and tighten the anti-theft screw;

6. The cable is coiled clockwise on the base, and the charging Connector is inserted into the base.





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5.5 Description of light strip control logic

Column	Status	Charge station status	LED status	Remarks
1	Normal	Standby	The blue light is always on	Remarks
2		Ready to Charge	The green light is always on	Remarks
3		Charging	Green light flashes (500ms on, 500ms off)	Charger started charging
4		Charging completed	The green light is always on	The vehicle is fully charged or stops charging when the charging completion condition is reached, and the charger is not unplugged
5	Fault	Emergency stop fault	The red light is always on	In case of fault, the red light flashes for 200ms on and 200ms off
6		Ungrounded fault	The red light flashes twice every 5s	
7		CP error fault	The red light flashes 3 times every 5s	

Column	Status	Charge station status	LED status	Remarks
8	Fault	Overcurrent fault	The red light flashes 4 times every 5s	In case of fault, the red light flashes for 200ms on and 200ms off
9		Overvoltage fault	The red light flashes 5 times every 5s	
10		Undervoltage fault	The red light flashes 6 times every 5s	In case of fault, the red light flashes for 200ms on and 200ms off
11		Breaker adhesion fault	The red light flashes 7 times every 5s	
12		Leakage fault	The red light flashes 8 times every 5s	
13		Overtemperature fault	The red light flashes 9 times every 5s	
14		Meter fault	The red light flashes 10 times every 5s	
15		Other faults	The red light is on for 1000ms and off for 1000ms	

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6. Appendix

6.1. Precautions

6.1.1. The power supply used must be consistent with the requirements of this equipment, and the three core power cord must be reliably grounded.

6.1.2. Please strictly follow the design parameters and use conditions during use, and do not exceed the threshold value in this user manual, otherwise the equipment may be damaged.

6.1.3. Please do not change the specification of electrical components, and do not change the internal circuit or graft other circuits.

6.1.4. After the charging station is installed, if the charging station cannot be started normally after the equipment is powered on, please check whether the power wiring is correct.

6.1.5. The equipment has limited dust-proof and water-proof capacity. Pay attention to anti-static, moisture-proof and water-proof during use. If the equipment has entered water, power off immediately and stop using.

6.1.6. The device has limited anti-theft function. Please install it in a safe and reliable environment.

6.1.7. Please do not plug or unplug the charging gun during charging to avoid irreversible damage to the charging station and the car.

6.2. Other problems and explanations

6.2.1. Line problems

The minimum incoming cable of each charging station is 3 * 6 square meters, and the length shall not exceed 40 meters. If the length exceeds 40 meters, please select 3 * 10 square meters.

The 32A equipment uses the C60 air switch, and the 16A equipment uses the C40 air switch.

6.2.2. About the condition of starting charging without current

There is a battery icon on the upper right of the display interface. If it is gray, it indicates that the S2 switch of the vehicle is not closed. The charging station waits for the S2 switch of the vehicle to close. If it does not close for a long time, please try to power on the vehicle without ignition.

6.2.3. Overvoltage and undervoltage

The lower right corner of the equipment shows overvoltage or undervoltage. Please check the circuit. The voltage may be too high or too low. Use a multimeter to measure the voltage at the incoming line of the equipment, and then measure the voltage at the incoming line of the distribution box.

6.2.4. Leakage alarm

If leakage is displayed on the device screen, it may be the vehicle leakage or the screws at the equipment incoming line are not tightened. First check whether the equipment incoming line is firmly connected. If not, please change a vehicle to charge and try.

6.2.5. In case of any abnormality during use, please refer to "Troubleshooting of General Faults".

If you still cannot troubleshoot a certain fault, please cut off the power supply of the charging station and contact our customer service center.

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6.3. Troubleshooting of general faults

Fault phenomenon	Possible causes	Processing method
Charge station LED or display screen does not light up	The power supply is not well connected	Check whether the incoming power line is energized and whether the power switch is closed
	Circuit breaker trip	The charging station has the leakage tripping function, which requires opening the side switch cover and closing the circuit breaker switch
	Equipment damage	Please contact the customer service center for maintenance
Unable to start charging	The charging gun is not fully connected meet	Check whether the charger is firmly connected to the vehicle socket and ensure that the charger is plugged into the bottom of the socket
Charging current is less than rated value	Equipment failure or vehicle approaching full load	When the vehicle battery is nearly fully charged, the charging current will drop, which is a normal condition. If not, please contact the customer service center for maintenance

Fault phenomenon	Possible causes	Processing method
Equipment on failure lamp	Fault lamp flashes	Contact the customer service center for maintenance
	The fault lamp is always on	Contact the customer service center for maintenance

(In case of any change in product dimensions and parameters, the latest information of our company shall prevail without further notice)

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6.4. Warranty Regulations

6.4.1. The warranty period of this product is 15 months.

At that time, please provide the purchase certificate as the product warranty certificate.

6.4.2. During the warranty period, the faults not caused by human activities under the condition of normal use according to the instructions shall be repaired.

6.4.3. Except for the following problems, charging equipment can enjoy the above related warranty terms:

- ① The warranty certificate cannot be provided, or the contents on the warranty certificate are inconsistent with the physical identification of the repaired goods or altered;
- ② Failure to provide valid invoices;
- ③ The warranty period specified by the manufacturer is exceeded;
- ④ Damage caused by failure to use, maintain and store the product in accordance with the requirements of the user manual;
- ⑤ Damage or failure caused by foreign matters entering;
- ⑥ Damage caused by dismantling by a person who is not responsible for three guarantee repair;
- ⑦ Damage caused by force majeure (such as lightning, high voltage, earthquake, fire, flood and other natural disasters);
- ⑧ Failure and damage caused by other unavoidable external factors;
- ⑨ Damage caused by water entering the equipment or other solutions due to improper use;
- ⑩ Damage caused by using power supply and voltage other than those specified.

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6.4.4. For products beyond the warranty period or not within the scope of the warranty, we provide paid maintenance services.

6.4.5. The above warranty is only made, and no other express or implied warranty is made (including the implied warranty of marketability, rationality and adaptability of a particular application, etc.).

The Company will not be responsible for any special occasional or indirect damages, no matter in the contract, civil negligence or other aspects.

For returns, skip Amazon - call us!

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