



USER'S MANUAL



EV CHARGE DC 30K CORE

ZVD-30K-CORE



ZUCCHETTI
Centro Sistemi



GREEN
INNOVATION



Corebox series DC30K-E2C22-75 User Manual



General instructions

This manual contains important safety instructions that must be followed during installation and maintenance of the equipment.

Please keep these instructions!

This manual must be considered an integral part of the equipment, and must be available at all times to everyone who interacts with the equipment. The manual must always accompany the equipment, even when it is transferred to another user or plant.

Copyright statement

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Technical support

ZCS offers a support and technical consultancy service accessible by sending a request directly from the website www.zcsazzurro.com

The following toll-free number is available for the Italian territory: 800 72 74 64.

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Preface

General information

Please read this manual carefully before installation, use or maintenance. This manual contains important safety instructions that must be followed during installation and maintenance of the system.

Scope

This manual describes the assembly, installation, electrical connection, commissioning, maintenance and troubleshooting of the DC-030K-E2C22-75:





Keep this manual so that it is accessible at all times.

Recipients

This manual is intended for qualified technical personnel (installers, technicians, electricians, technical support personnel or anyone who is qualified and certified to work on an electrical system), responsible for installing, starting up and operating the charging station.

Symbols used

This manual provides information for safe operation and uses certain symbols to ensure the safety of personnel and materials, and for efficient use of the equipment during normal operation. It is important to understand this information to avoid accidents and damage to property. Please take note of the following symbols used in this manual.

	Danger: indicates a hazardous situation which, if not resolved or avoided, could result in serious personal injury or death
Danger	
	Warning: indicates a hazardous situation which, if not resolved or avoided, could result in serious personal injury or death
Warning	
	Caution: indicates a hazardous situation which, if not resolved or avoided, could result in minor or moderate personal injury
Caution	
	Attention: indicates a potentially hazardous situation which, if not resolved or avoided, could result in damage to the system or other property
Attention	



Note

Note: provides important tips on the correct and optimal operation of the product

1. Preliminary safety instructions



Note

If you have problems or questions in reading and understanding the following information, please contact Zucchetti Centro Sistemi S.p.A. through the appropriate channels.

1.1. Safety instructions

Highlights the safety instructions to be followed during installation and use of the equipment.

Before installing and using the equipment, make sure you read and understand the instructions in this manual and familiarise yourself with the relative safety symbols shown in this chapter. According to national and local requirements, permission must be obtained from your local provider before connecting to the electrical grid, making sure that the connections are carried out by a qualified electrician. All installation work must be carried out by a qualified and competent electrician.

Contact the nearest authorised service centre for any repairs or maintenance. Contact your distributor for information on the nearest authorised service centre. DO NOT carry out repairs yourself, as this may result in injury or damage.

Qualified personnel

Ensure that the operator has the necessary skills and training to operate the equipment. Personnel responsible for use and maintenance of the equipment must be qualified and capable of performing the activities described, and must also have appropriate knowledge on how to correctly interpret the contents of this manual. For safety reasons, this charging station can only be installed and serviced by a qualified electrician with the necessary training and/or skills and knowledge. Zucchetti Centro Sistemi S.p.A. declines all responsibility for damage to property or personal injury caused by incorrect use of the device.

Do not attempt in any way to repair or replace components of the charging station without the assistance of qualified personnel.

Installation requirements

Install and start the charging station according to the following instructions. Place the charging station on suitable load-bearing supports with sufficient load capacity (such as metal walls or columns) and make sure it is positioned vertically. Choose a suitable location for the installation of the electrical equipment. Make sure there is sufficient space for heat dispersion and to accommodate future maintenance. Maintain adequate ventilation and ensure that there is enough air circulation for cooling. The charging station display must not be exposed directly to sunlight.

Follow the instructions in this manual exactly.

Only perform any services as installation engineer or use the DC charger when you are fully qualified to do so.

Observe the instructions in this manual and any applicable local laws. If the local laws contradict with the instructions in this manual, the local laws will be applied. In the case of any conflict or contradiction between any requirements or procedure contained in this manual and any such local laws and/or rules, obey the local laws and/or rules, requirements, and processes established in this manual, if and to the degree permitted by law.

Be familiar with and follow all applicable laws and regulations.

Before working, identify the dangers and conduct a risk assessment resulting from the working circumstances on the site.

To use the DC charger with the protective devices in place.

Ensuring that all protective devices are properly installed following installation or maintenance work.

To create an emergency plan that informs people on what to do in the case of an DC Charger or other site emergency.

Ensuring that all employees, the owner, and third parties are qualified to conduct the work in accordance with applicable local laws and/or norms.

Ensuring that there is enough room around the DC Charger to safely perform maintenance and installation tasks.

The qualified installation engineer should be completely familiar with the DC Charger and its safe installation.

The installation engineer should be qualified to do the work in accordance with the applicable local regulations.

The qualified installation engineer should follow all local rules as well as the installation methods outlined in this manual.

Ensure that there is no voltage on the AC input side throughout the installation process.

Keep unqualified personnel a safe distance away from the installation.

Use only electrical cables with the proper gauge and insulation to handle the rated current and voltage demand.

Ensure that the grid's load capacity corresponds to the DC Charger.

Ensure that the wiring within the DC Charger is not damaged and cannot become caught when the cabinet is opened or closed.

Make certain that no water can enter the cabinet.

Protect the DC Charger with the safety equipment and procedures specified by local regulations.

If it is necessary to remove safety equipment, replace them as soon as possible once the work is completed.

Wear the appropriate personal protective equipment (PPE).

Do not use the DC Charger and immediately get in contact with the manufacturer if the safety or the safe use of the DC Charger is at risk. This includes, but is not limited to, these conditions: the enclosure has damage, the EV charge cable or connector has damage, lightning struck the DC Charger, there was an accident or a fire at or near the DC Charger, water entered the DC Charger.





Make sure that the DC Charger is connected to a grounded, metal, permanent wiring system, or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment grounding terminal or lead on the product.








Make sure that the connections to the DC Charger comply with all applicable local rules.



Adapters or conversion adapters are not allowed to be used.

Cord extension sets are not allowed to be used.

The charging station display must not be exposed directly to sunlight.

	<p>Do not bring flammable, explosive or combustible materials, chemicals, flammable vapors and other dangerous items near the charger.</p>
<p>Danger</p>	
	<p>Keep the charging connector clean and dry. If it is dirty, wipe with a clean dry cloth. It is strictly forbidden to touch the charging connector core with your hand.</p>
<p>Danger</p>	
	<p>It is strictly forbidden to use the charger when the charging connector or charging cable is defective, cracked, worn, broken, or exposed. Please contact the aftersale service in time.</p>
<p>Danger</p>	
	<p>Please do not attempt to disassemble, repair, or modify the charger. If there is a need for maintenance or modification, please contact the aftersale service. Improper operation may cause equipment damage, water leakage, electric leakage, etc.</p>
<p>Danger</p>	

	<p>For the safety of human and the vehicle, it is strictly forbidden to pull out the charging connector during the charging process.</p> <p>If there is any abnormality during use, press emergency button immediately to cut off all input and output power.</p>		
<p>Danger</p>	<td data-bbox="113 456 360 618">  </td> <td data-bbox="360 456 1477 618"> <p>In case of flooding, do not operate your charger while it or your vehicle is submerged in water.</p> </td>		<p>In case of flooding, do not operate your charger while it or your vehicle is submerged in water.</p>
<p>Danger</p>	<td data-bbox="113 618 360 792">  </td> <td data-bbox="360 618 1477 792"> <p>Children are forbidden to approach or use the charger to avoid any injury.</p> </td>		<p>Children are forbidden to approach or use the charger to avoid any injury.</p>
<p>Danger</p>	<td data-bbox="113 792 360 949">  </td> <td data-bbox="360 792 1477 949"> <p>During the charging process, the vehicle engine shall stay off throughout and is strictly prohibited from starting.</p> </td>		<p>During the charging process, the vehicle engine shall stay off throughout and is strictly prohibited from starting.</p>

	<p>The input and output voltages of this product are dangerous high voltage, which can endanger human life safety. Please strictly observe all warnings and operating instructions on the product and in the manual. Unauthorized and non-professional service personnel should not remove the cover of this product.</p>	
<p>Warning</p>		<p>Warning</p>

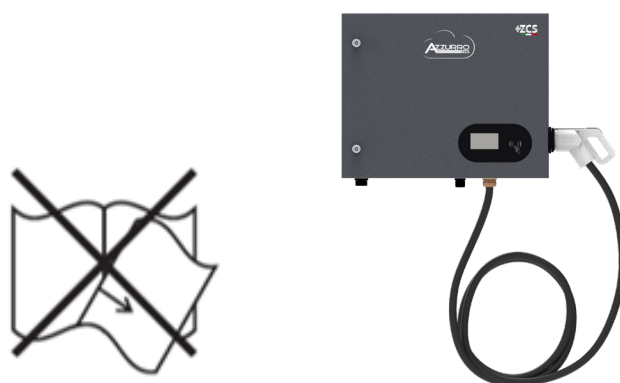






Figure 1 - Do not lose or damage this manual

Transport requirements

If you encounter problems with the packaging that could damage the charging station or if you find any visible damage, immediately notify the transport company. If necessary, request assistance from an installer or from Zucchetti Centro Sistemi S.p.A. Transport of the equipment, especially by road, must be carried out with vehicles suitable to protect the components (in particular, electronic components) against violent knocks, humidity, vibrations, etc.




Electrical connections

Please follow all the electrical regulations on accident prevention.

 Danger	<p>Before connecting the electrical cables, make sure to properly disconnect the voltage on the AC connection cables, and do not connect any charging cables for electric vehicles.</p>
 Warning	<p>All installation operations must be carried out by a professional electrician, who has carefully read this manual and understands its contents!</p>
 Attention	<p>Before connecting the charging station to the grid, make sure that all the necessary permits have been obtained from the local grid operator and that all the electrical connections have been completed by a professional electrician.</p>
 Note	<p>Do not remove the information label or tamper with the charging station. Otherwise, ZCS will not provide any warranty or assistance</p>



Operation

Do not use the product if it has any defects, cracks, scratches or leaks, but contact your dealer or ZCS technical service.

	<p>Contact with the electrical grid or the terminal of the equipment may cause electrocution or fire!</p> <ul style="list-style-type: none"> Do not touch the terminal or the conductor connected to the electrical grid. Follow all the instructions and safety requirements relating to grid connection
Danger	
	<p>If the charging station is not functioning properly:</p> <ul style="list-style-type: none"> Disconnect the input and output power supply
Warning	
	<p>Take special care when charging in thunderstorms or in rain</p>
Attention	

Maintenance and repair

Keep the charging station clean and dry; if you need to clean it, use a clean dry cloth. It is very dangerous to touch the inside of the charging station, therefore it is strictly forbidden to do so while the system is running. NEVER clean the inside of the charging station with a wet or damp cloth.

	<ul style="list-style-type: none"> Before performing any repairs, disconnect the charging station from the power supply (AC side) and from the data connection to the transmission gate. After switching off the DC switch, wait 5 minutes before carrying out any repairs or maintenance on the charging station
Danger	
	<ul style="list-style-type: none"> The charging station should start working again after any faults have been fixed. For repairs, contact your local authorised service centre Do not disassemble the internal components of the charging station without permission; this will void the warranty.
Attention	

1.2. Symbols and icons

Introduces the main safety symbols on the charging station. Some safety symbols are located on the charging station. Read and understand the contents of the symbols before installation:






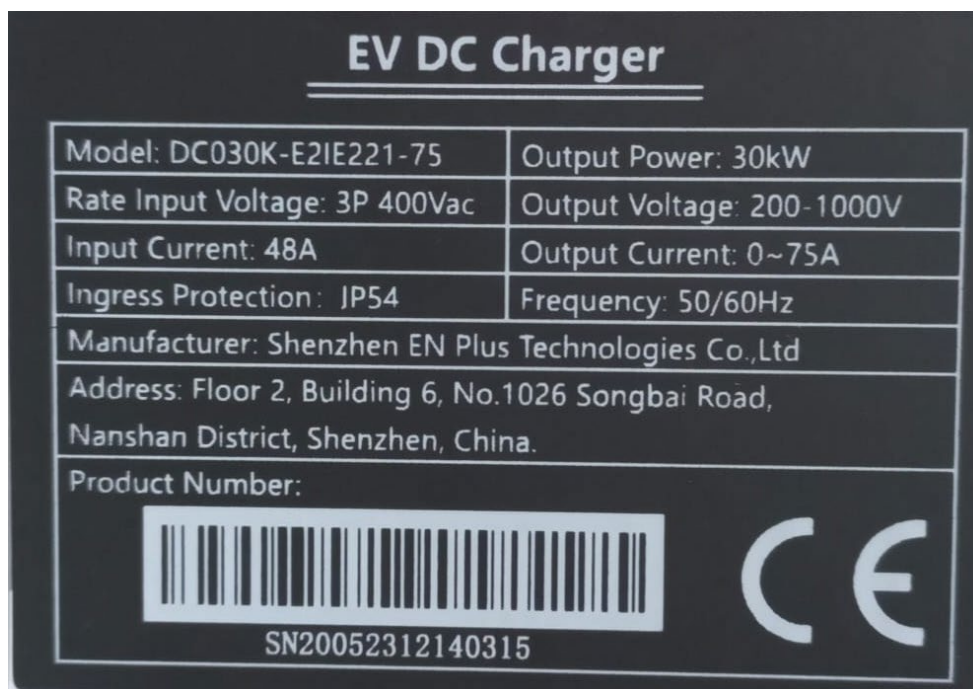
	<p>Be careful of high voltage</p>
	<p>Complies with the European Standards</p>
	<p>Ground connection point</p>
	<p>Read this manual before installing the charging station.</p>
	<p>Degree of protection of the equipment according to the IEC 70- 1 standard (EN 60529 June 1997). IP54 means that it is resistant against water and rust, therefore also suitable for outdoor operation and maintenance.</p>

Table 1 – Symbols present on the charger

1.3. Labels



DO NOT remove the labels. **DO NOT** cover with sheets, supports, cabinets, etc. Always keep them clean and legible.

Figure 2 - Labels present on the charging station

2. Product Overview

2.1. Product Introduction



Figure 3 - Dimension

Connector	CCS2	Outdoor	IP54
Start mode	APP/RFID	Installation	Wall or Pillar (optional)
LED indicator		Touch screen	

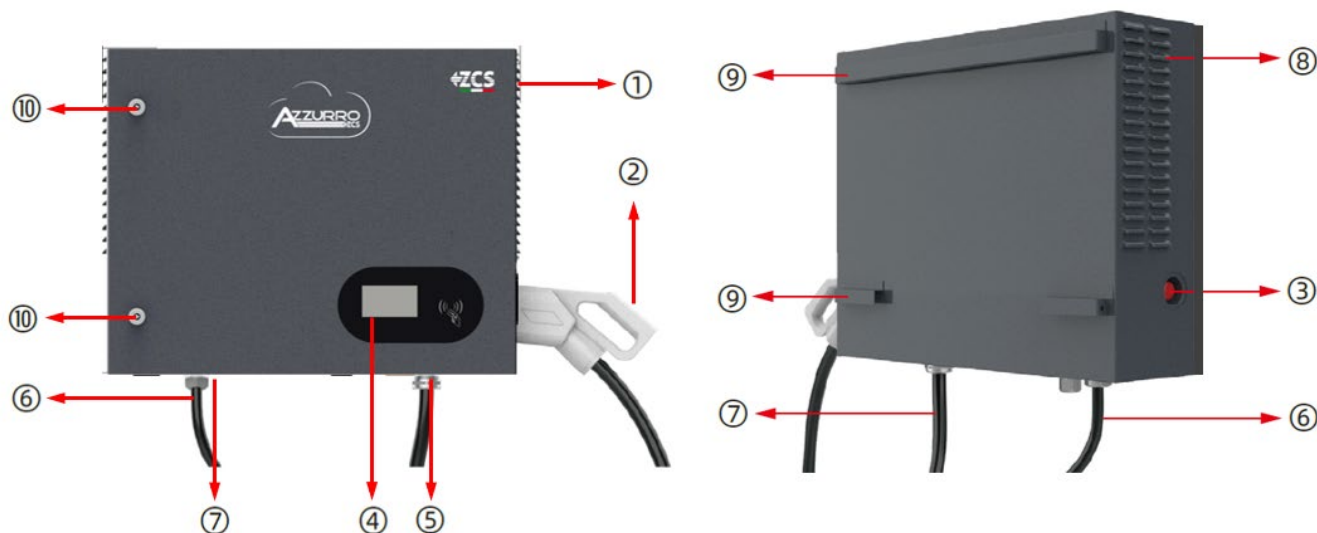
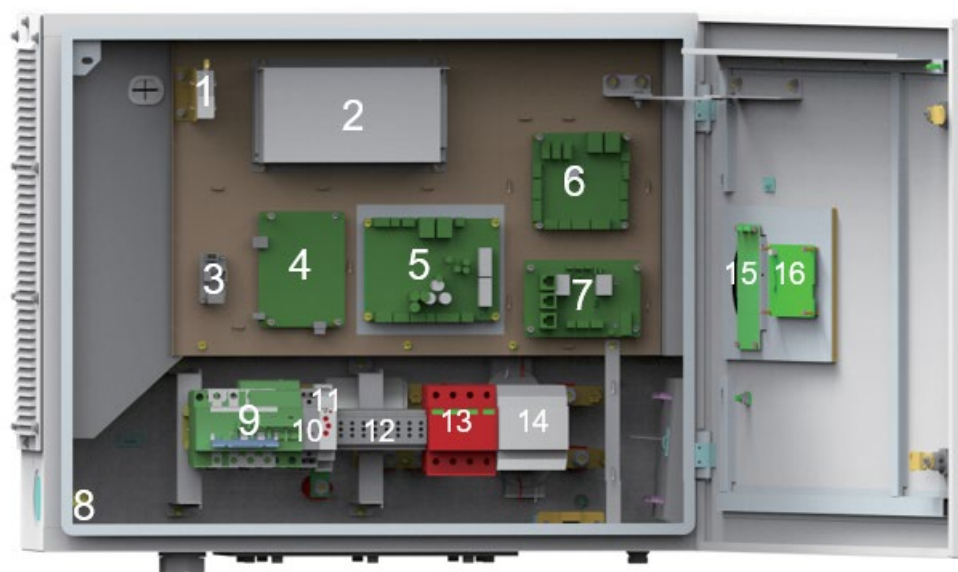


Figure 4 - Detail

1	Air inlet	6	Input cable
2	Charging connector	7	Ethernet inlet
3	Emergency stop button	8	Air outlet
4	Touch screen	9	Hanger
5	Output cable	10	Lock

2.2. Inside view



1	Tamper detection	9	Circuit breaker
2	Switch mode power supply	10	AC contactor
3	Relay switching board	11	Time relay
4	PLC converter	12	Terminal block
5	Charging control board	13	SPD
6	Main control board	14	DC meter
7	Gateway	15	RFID card sensor area
8	Emergency button	16	LCD

3. Installation

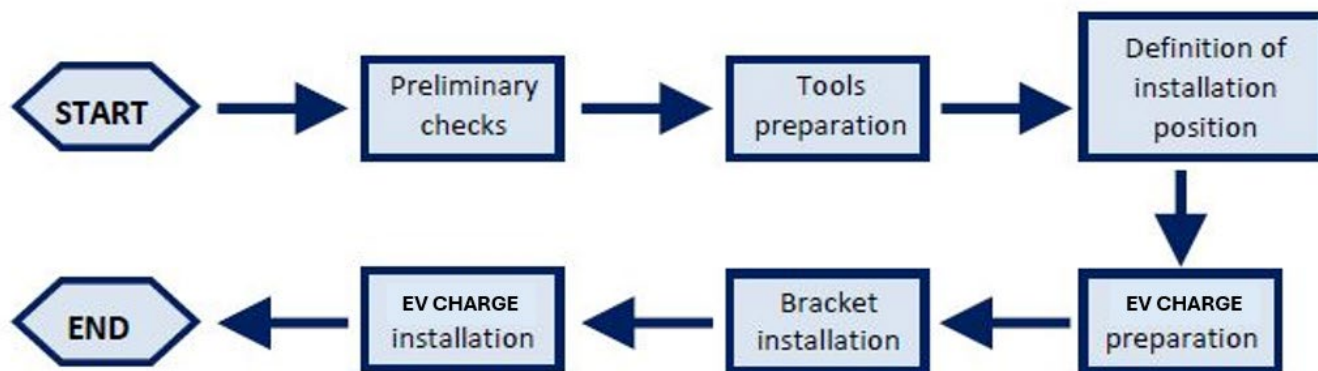




Figure 5 - Installation procedure

	<ul style="list-style-type: none"> • DO NOT install the charging station near flammable materials. • DO NOT install the charging station in an area where flammable or explosive materials are stored.
Danger	
	<ul style="list-style-type: none"> • Take into account the weight of the charging station during transport and installation. • Choose an appropriate mounting position and surface.
Attention	

3.1. Checks before installation



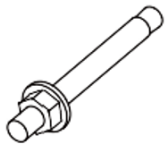
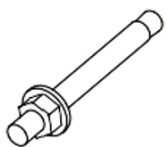
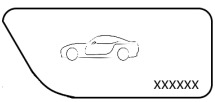
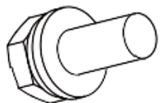

Checking the outer packaging

Packaging materials and components may be damaged during transport. Therefore, it is recommended to check the materials of the outer packaging before installing the charging station. Check the surface of the box for external damage such as holes or tears. If any type of damage is detected, do not open the box containing the charging station and contact the supplier and the courier as soon as possible. It is also recommended that you check the contents of the packaging and make sure that they correspond to what was declared. If not, contact your dealer to have any missing parts sent to you.


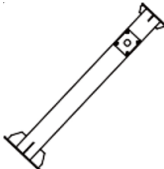






Checking the product

After removing the charging station from its packaging, check that the product is intact and complete. If any damage is found or components are missing, contact the supplier and transport company.

Contents of the packaging

No.	Part	Qty
1	 Fast Charger	1
2	 Mounting bracket	1
3	 M8*60 Anchor bolt	4
4	 M12*100 Anchor bolt	4
5	 RFID activation card	2
6	 M6*16 Screw	2
7	 Expansion pipe Self-tapping screw	4 4



8		Cable holder	1
9		Pillar	1
10		Ferrule	5
11		Power module	1
12		Wire tie	5
13		Internal triangle wrench	1
14		Declaration of Conformity	1
15		User Manual	1



16		Warranty	1
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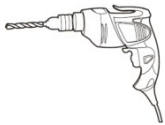





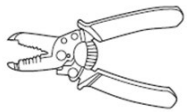
Table 2 - Package contents

	<p>The M12*100 Anchor bolt and the PillarPillar are optional, so please ensure that you have chosen the pillar, otherwise your delivery will not include these two.</p>
Note	



3.1.1. Installation tools

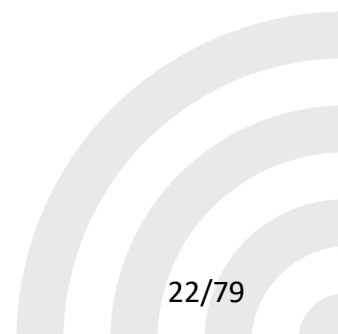
The following tools are required for the installation of the charging station and electrical connections; therefore, they must be prepared before installation.

No.	Tool	Function
1		Cross Screwdriver To screw and unscrew screws for the various connections
2		Flathead screwdriver To screw and unscrew screws for the various connections
3		Drill To drill holes in the wall for fixing $\Phi 10/\Phi 12$
4		Hydraulic clamp:16mm ² To crimp the cables
5		Adjustable spanner
6		Wire Stripper To stripper the wire
7		Cable Cutter To cutter the cable
8		Crystal Crimping pliers To crimp the cables
9		Wire stripping tool To remove the outer sheath of the cables




10		RJ45 connector crimping plier	To crimp the cables
11		Rubber hammer	To insert the expansion plugs into the wall holes
12		Multi-meter	To check the voltage and current values
13		Marker pen	To mark the wall for better fixing precision
14		Measuring tape	To measure distances
15		Level	To make sure the bracket is level
16		ESD gloves	Protective clothing
17		Safety goggles	Protective clothing

Table 3 - Installation tools



3.1.2. Movement of the charger

- 1) Open the packaging and remove the polystyrene protection cover, insert your hands into the slots and take hold of the device;
- 2) Lift the charging station from its packing box and move it to the installation position, then remove the polystyrene protections.

	<ul style="list-style-type: none"> • To prevent damage and personal injury, hold the device securely when moving as it is a heavy piece of equipment • Always position the device horizontally
Attention	

3.2. Prepare cable

Cable type	Operating current	Cross-sectional area
AC Input power cable (three-phase five wire)	48A	Choose a suitable section cable

It is important that all cables used are suitable for outdoor use

NOTE: For safety reasons, make sure to use suitably sized cables, otherwise the current may cause overheating or overloading, which could result in a fire.

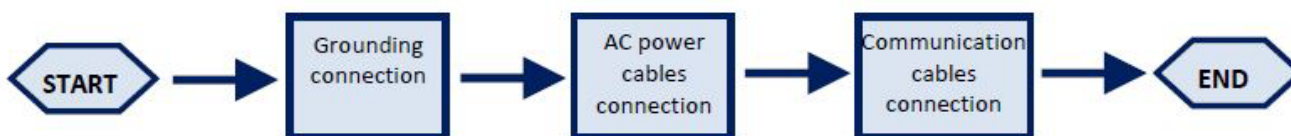
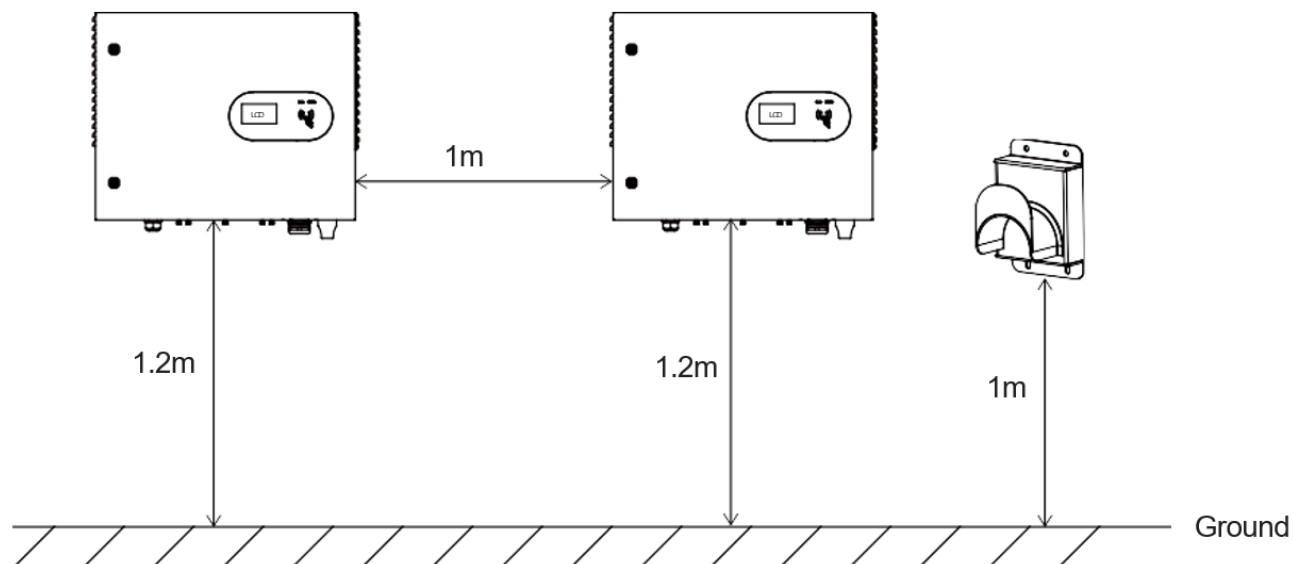


Figure 6 - Logical sequence for connecting cables

3.2.1. Recommended sizes for installation



The charger is recommended to be installed above the ground by 1.2m. The distance between two chargers is at least 1m.

The holder for the charging connector is recommended to be installed above the ground by 1m.

4. Installation



Danger

- Please disconnect the power supply before proceeding with installation work

4.1. Preparation

Step1: Site preparation.

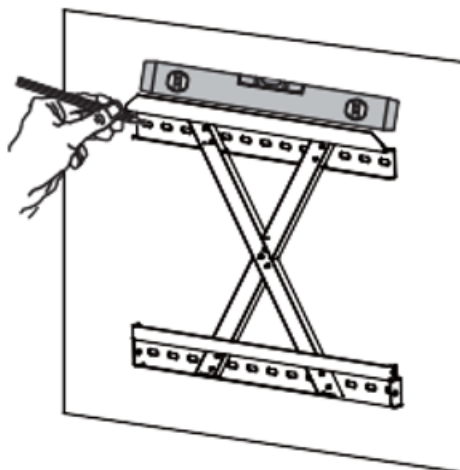
Keep charger adjacent space no less than 1 meter at all directions with no object.

Step2: Prepare the installation foundation properly with concrete construction.

Step3: Ensure the vertical tilt angle no more than 5%.

4.2. Wall-mount installation

Step1: Place the mounting bracket on the wall, keeping it vertical and level, and make four marks depending on the mounting bracket's holes.

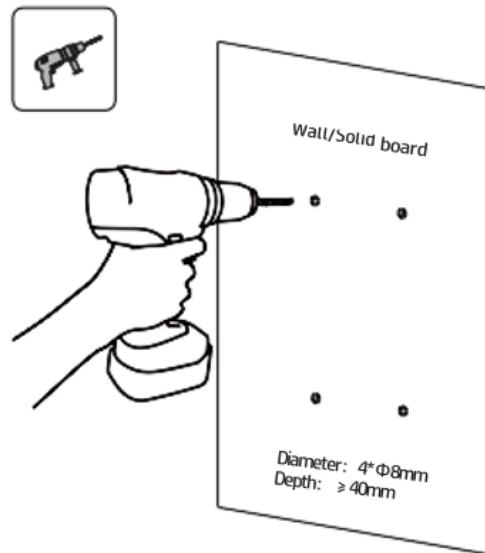




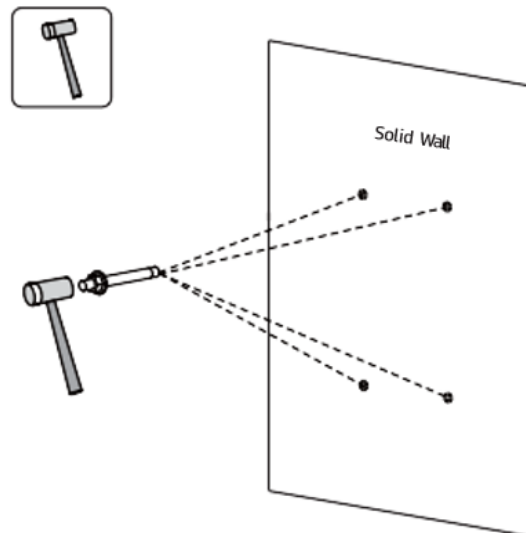
Note

You can make four marks overall based on any one hole in the four corners of the mounting bracket, however it is recommended to keep it symmetrical.

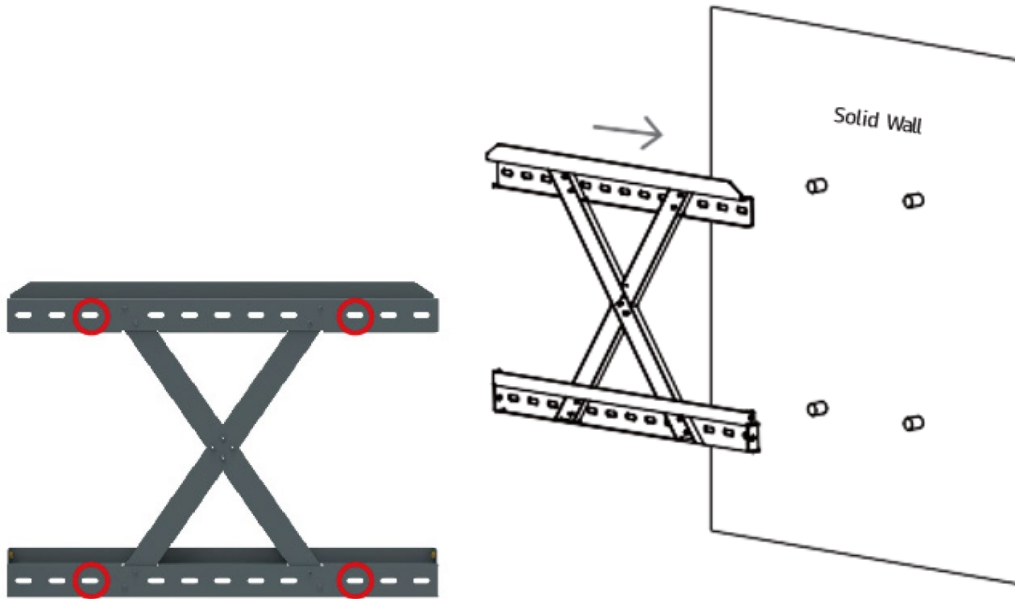
Step2: Use the electric drill to drill four holes on the marks made at the previous step.



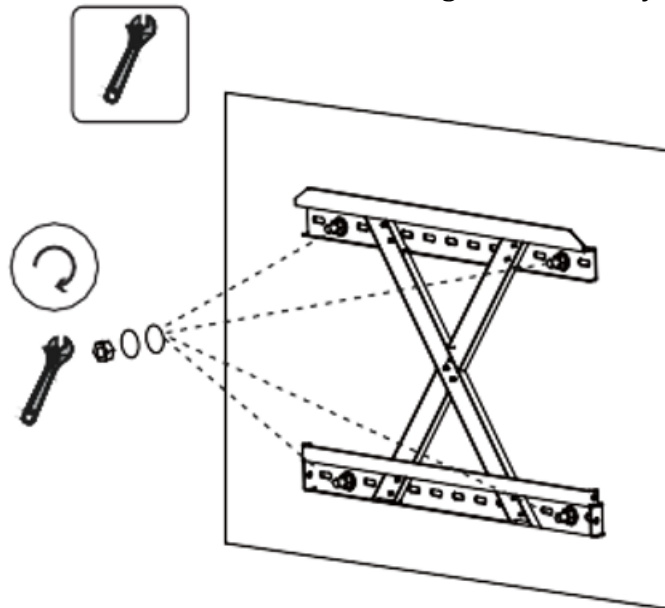
Step3: Use a hammer to hammer the whole anchor bolt into the holes.



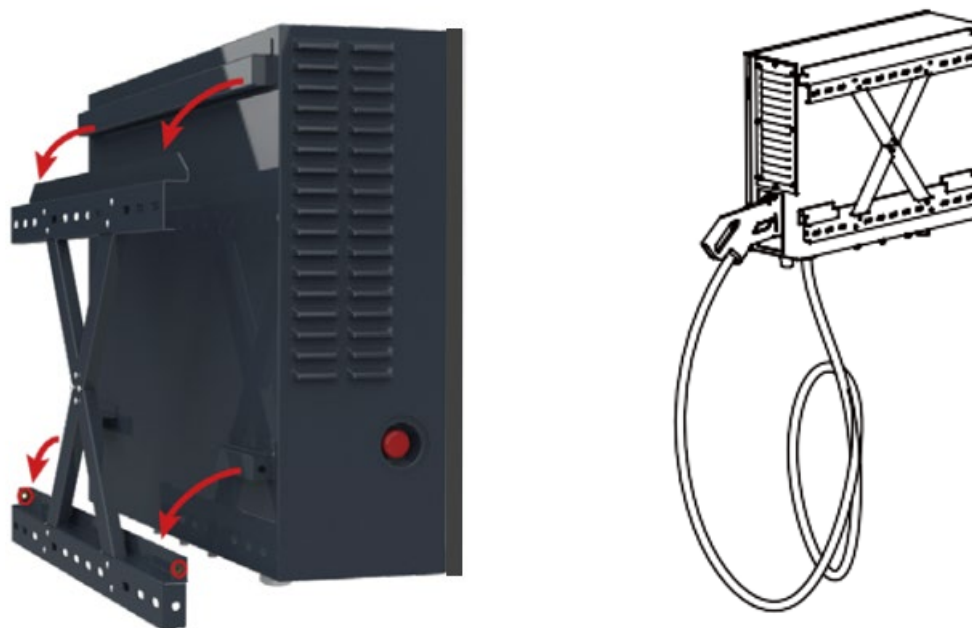
Step4: Install wall-mounted plate. Hang the mounting bracket by inserting the exposed screw through the hole on the mounting bracket.



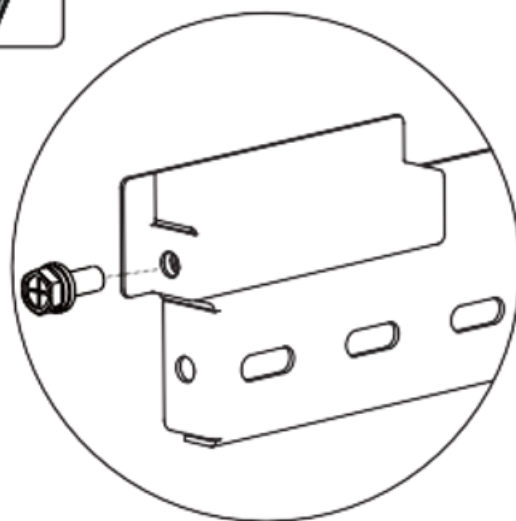
Step5: Put the nuts onto the screws to secure the mounting bracket firmly.



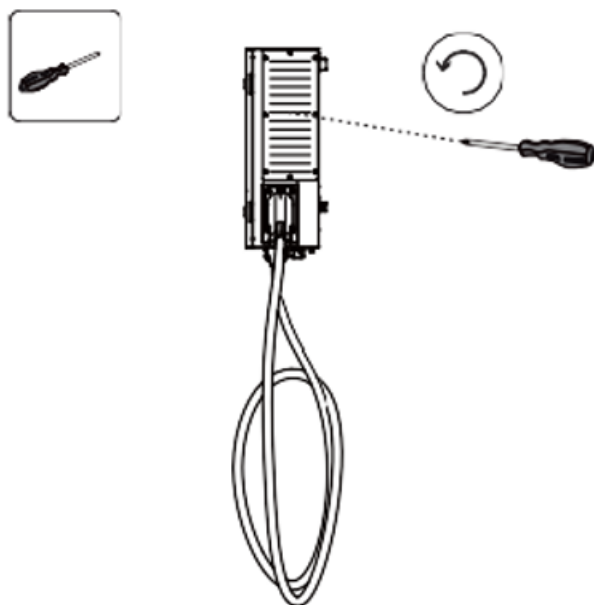
Step6: Hang on the charger, and fasten the fixture bolt at both sides.



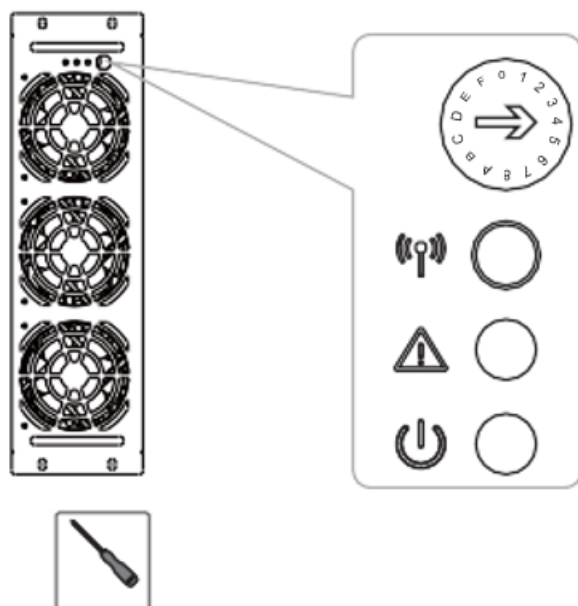
Step7: To hang the charger, insert the edges of two parallel iron rods of the mounting bracket into the hooks on the back of the charger to get stuck, and fasten the charger with two screws.



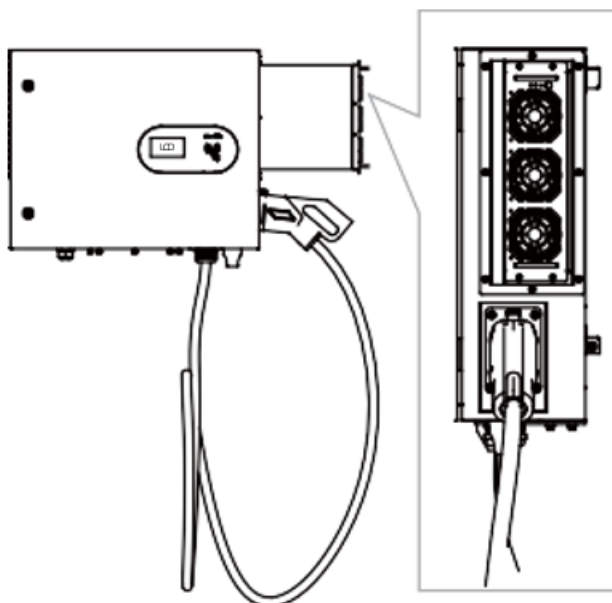
Step8: Loosen the 8 screws on the cover of the power module.



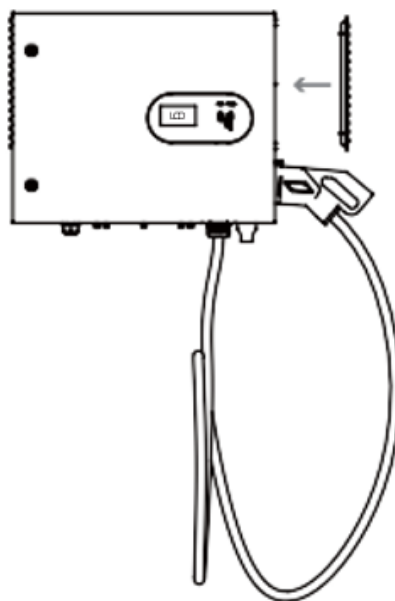
Step9: Use a flat-head screwdriver to turn the "arrow" knob so that the arrow points to the number 0.



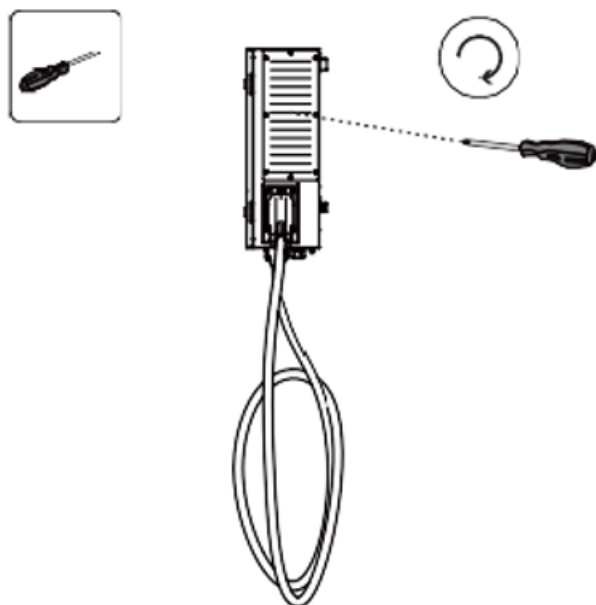
Step10: Gently place the power module into the cabinet.



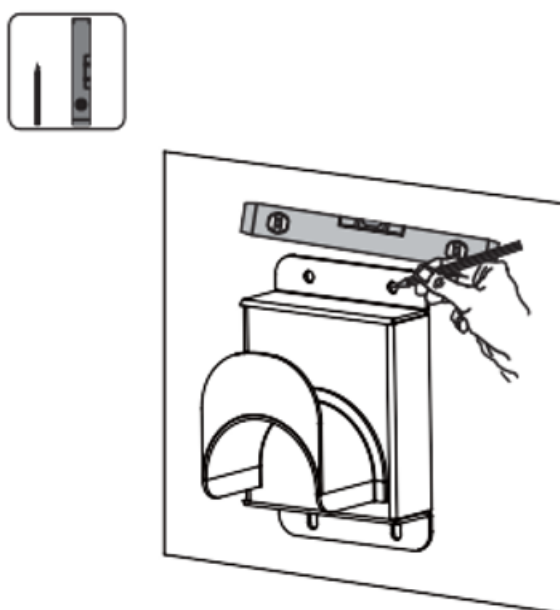
Step11: Close the cover.



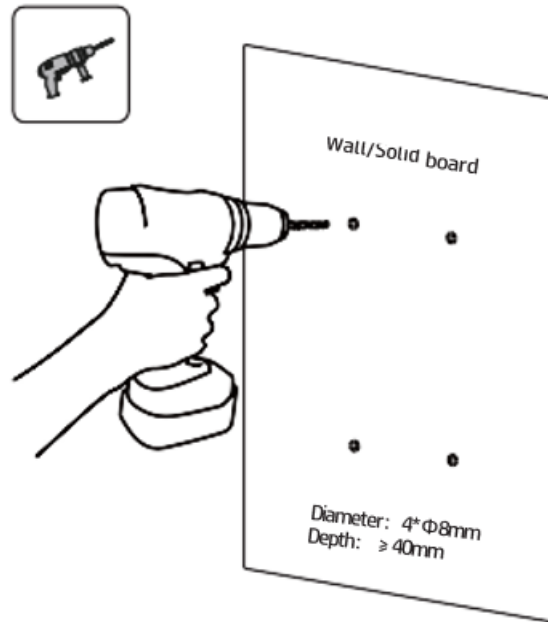
Step12: Put the 8 screws through the holes in the cover and tighten the screws.



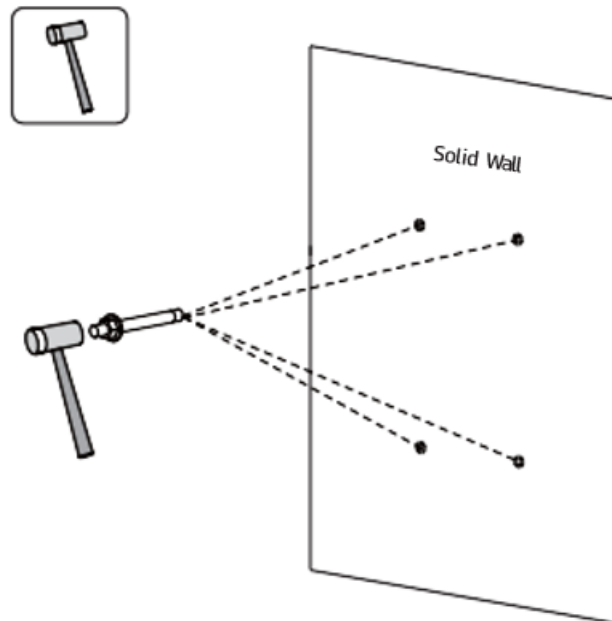
Step13: Place the cable holder on to the wall, keeping it vertical and level, and make four markings depending on the cable holder's holes.



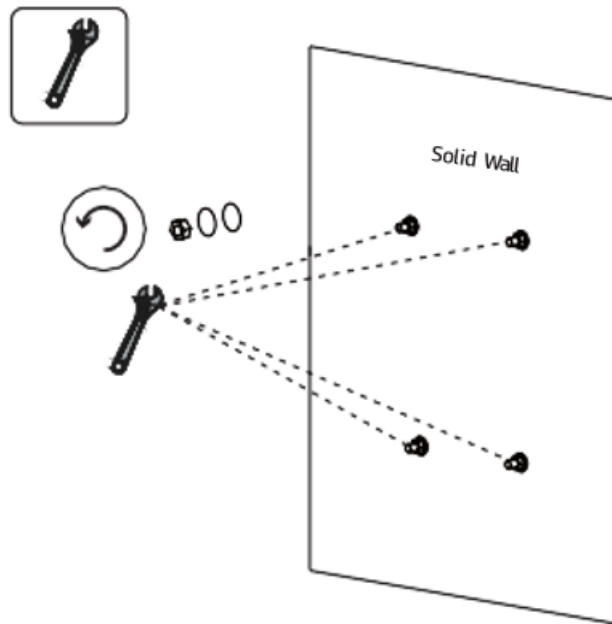
Step14: Drill four holes with an electric drill on the markings made at previous step.



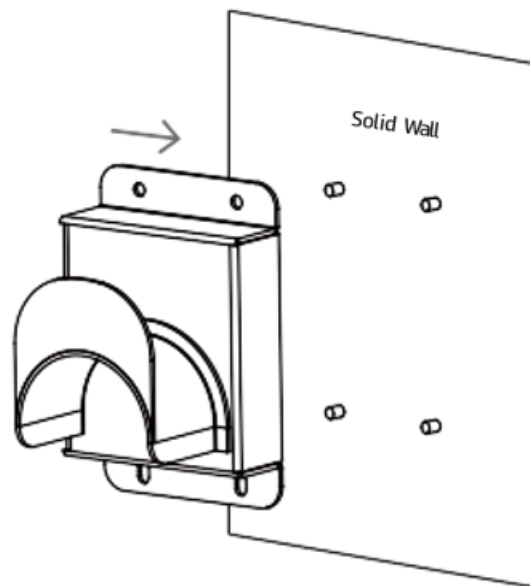
Step15: Hammer the whole anchor bolt into the holes with a hammer.



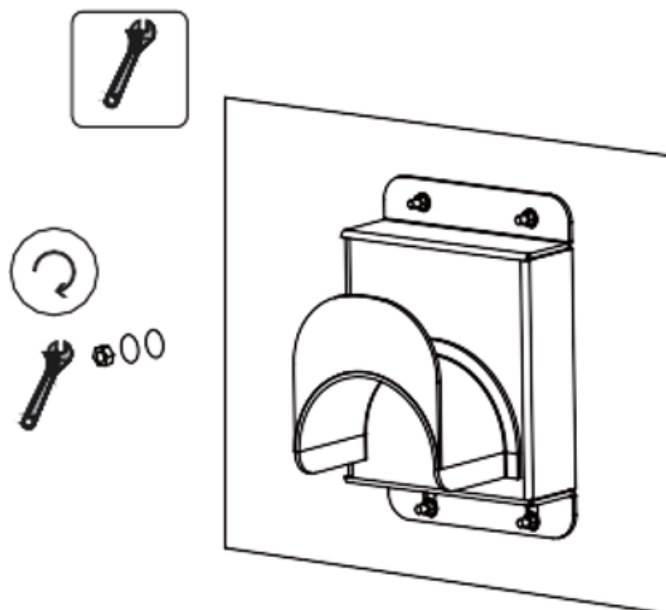
Step16: Unscrew the nuts counterclockwise with an adjustable wrench.



Step17: Hang the cable holder by inserting the exposed screws through the holes on the cable holder.



Step18: Thread the nuts onto the screw to secure the cable holder firmly.



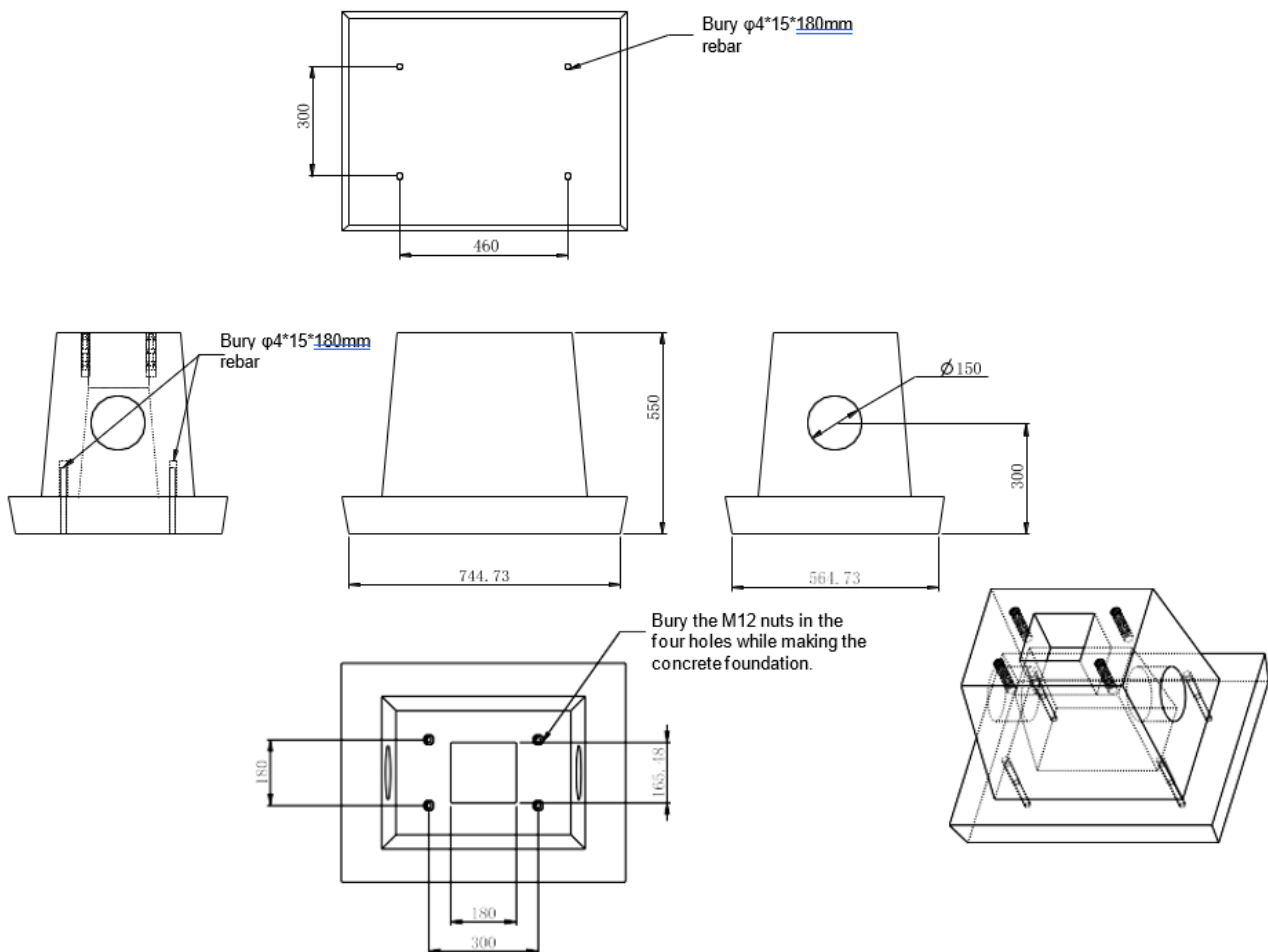
4.3. Pillar-mounted (optional)

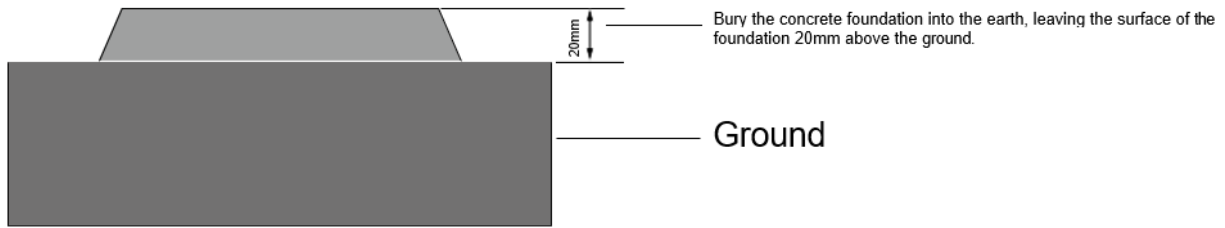
The mounting of the fast Charger must be performed on a solid ground, this can be a concrete foundation or a concrete floor. When dimensioning the foundation, it is recommended to perform a static load capacity analysis according to relevant norms.

Prepare the concrete foundation.

As shown below, please follow the instructions below to make the concrete foundation. The concrete foundation should be above the ground 20mm.

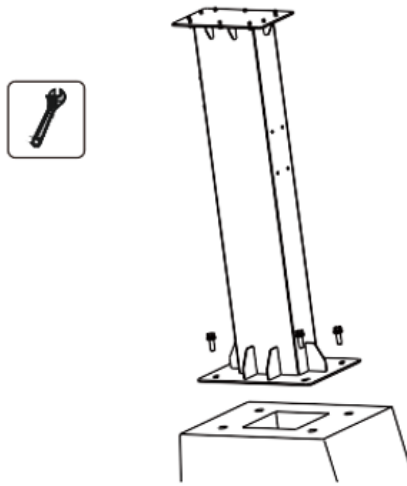
The holes on the concrete foundation should be: 14mm (diameter), 90mm (depth).



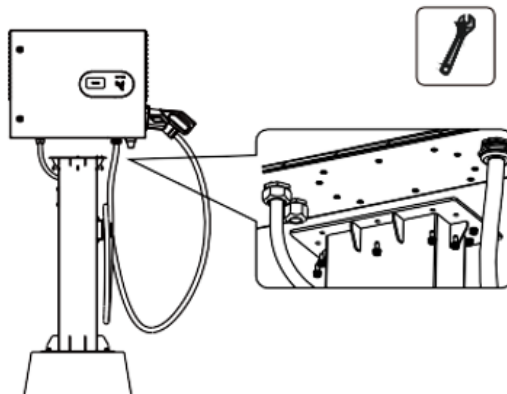


4.3.1. Install the pillar and the charger

Step1: Align the holes in the pillar with the nuts in the concrete foundation, then tighten the screws.

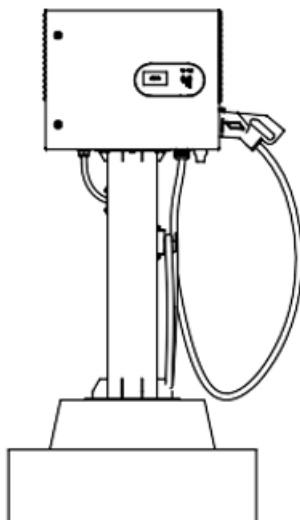


Step2: Place the charger on the pedestal's bracket, as shown, and match the ten holes in the pedestal with the ten holes on the bottom of the charger.



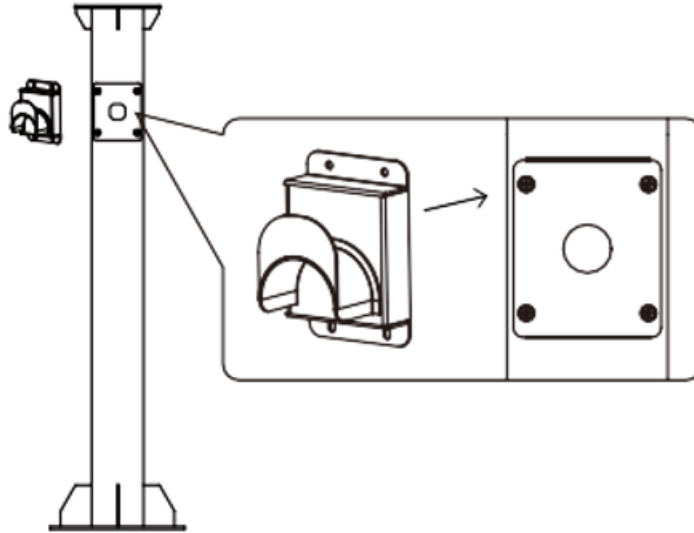


Step3: Put the screws through the holes and tighten them to secure the charger onto the pillar firmly.

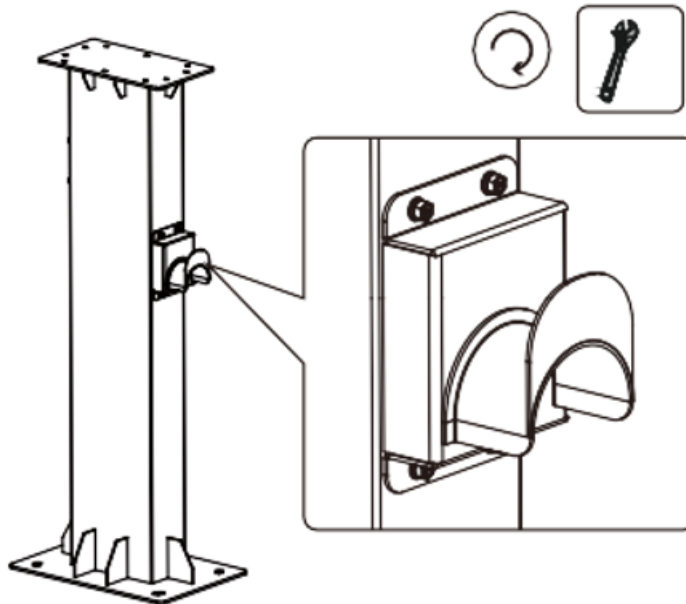


4.3.2. Install the cable holder

Step1: Loosen the four screws on the right side of the pillar, and align the holes of the socket holder with the installation holes for socket holster on the pillar.

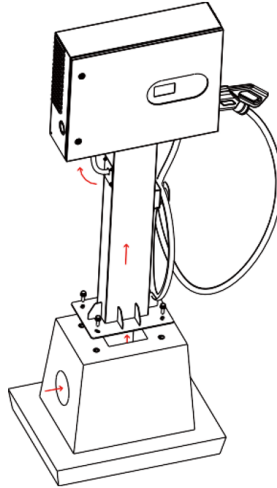


Step2: Tighten the screw clockwise to secure the socket holster firmly.



4.3.3. The path of the cable

Step1: The cable will be buried in the ground, then pass through the hole on the left side of the concrete foundation and exit through the hole on the top side of the foundation to pass through the pillar and exit through the hole on the left side of the pillar.



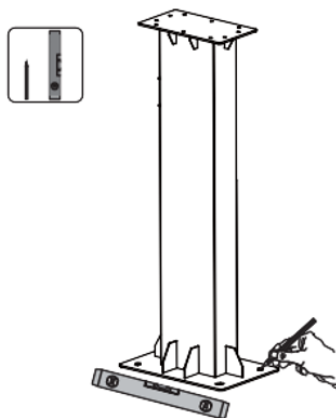
4.3.4. Pillar-mounted (without concrete foundation)



Attention

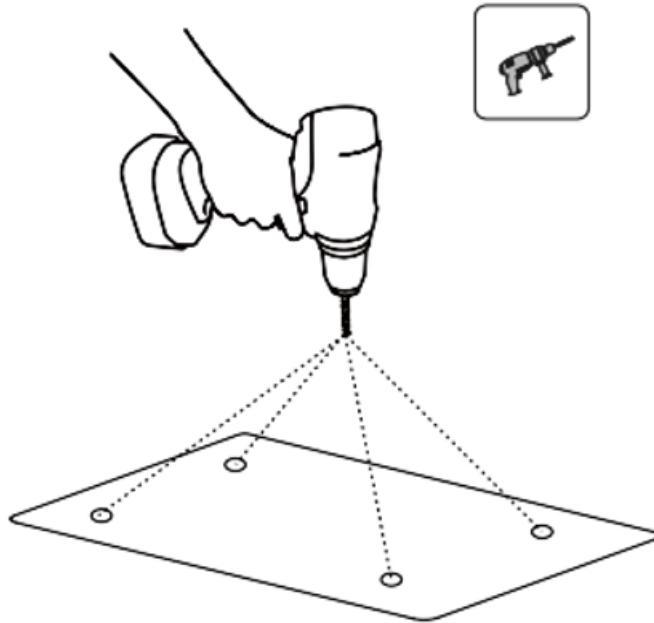
- When you choose pillar-mount, but without concrete foundation, please make sure that the concrete ground should be flat and with a thickness of 200mm.

Step1: Place the pillar on the concrete foundation, and make four markings depending on the pillar's holes.

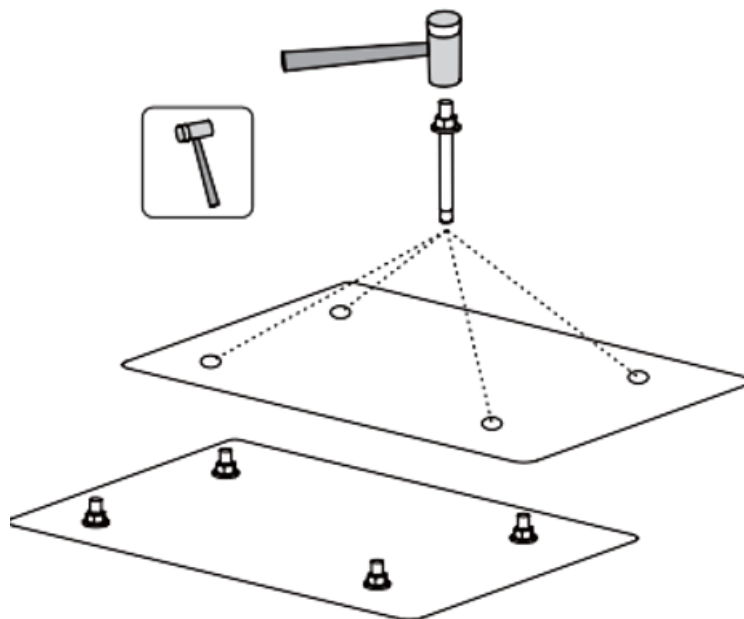




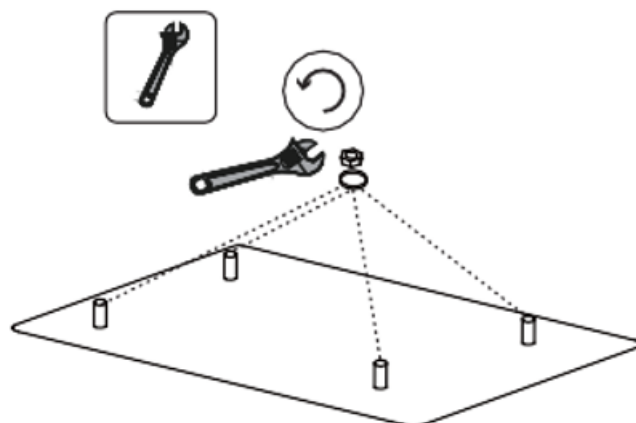
Step2: Use the electric drill to drill four holes on the marks made at the previous step.



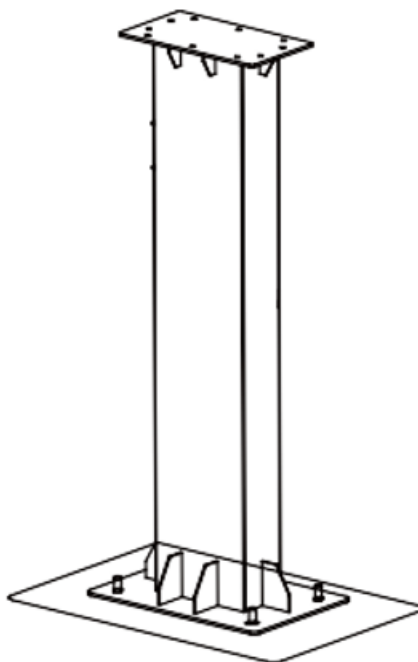
Step3: Hammer the whole anchor bolt into the holes with a hammer.



Step4: Loosen the nuts counterclockwise with an adjustable wrench.

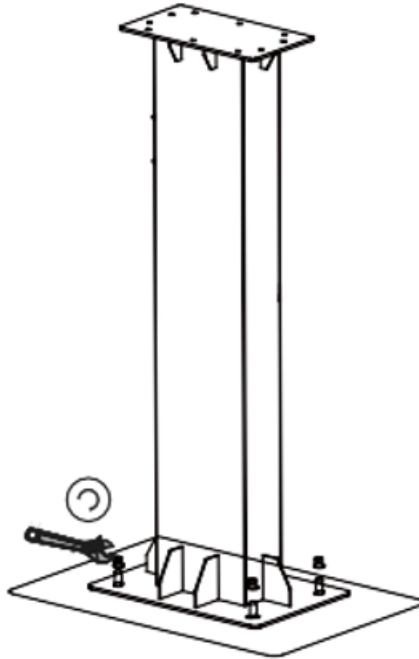


Step5: Put the four protruding screws through the pillar's four holes.

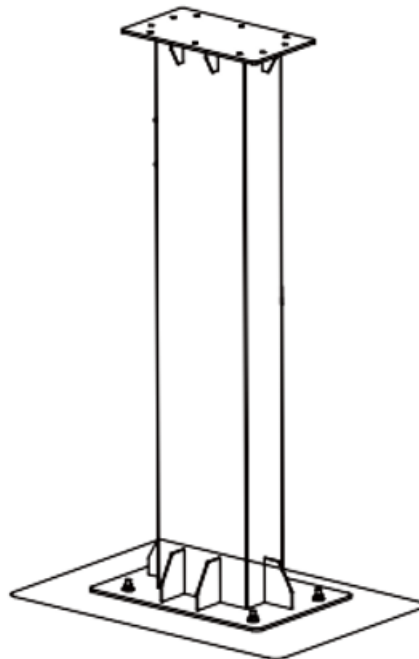




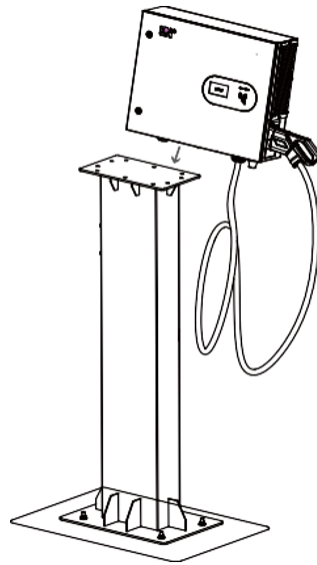
Step6: Put the nut onto the screw to secure the pillar firmly.



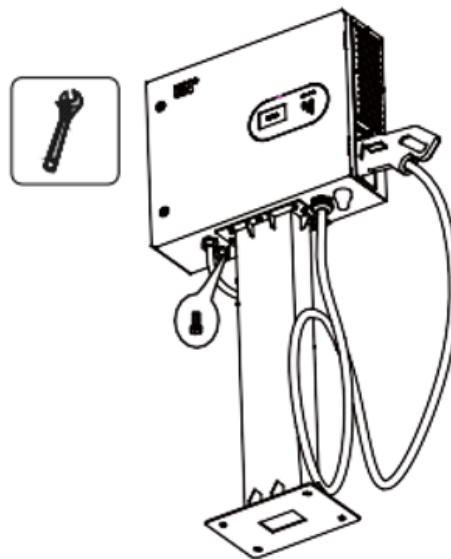
Step7: The pillar installation completed.



Step8: Align the ten holes of the pillar with the ten holes on the bottom of the Charger.



Step9: Tighten the ten screws to secure the Charger onto the pillar firmly.

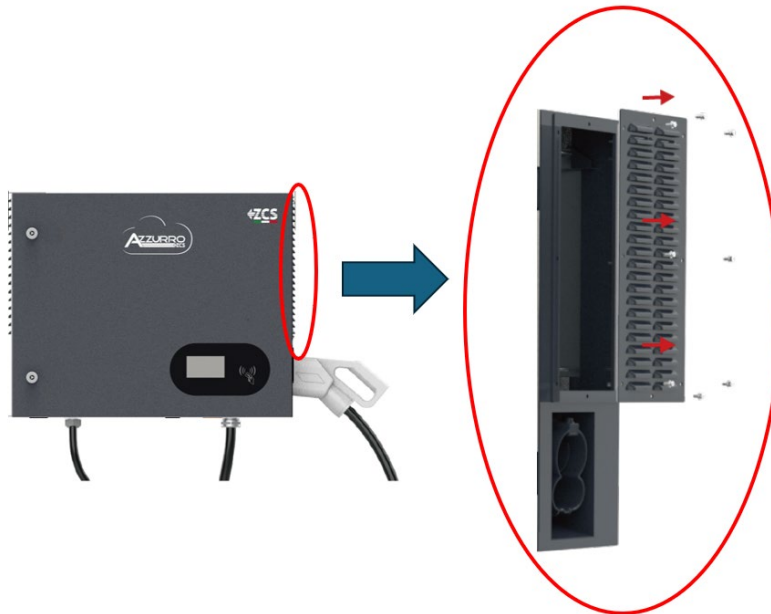


Attention

- For holder installation, please refer to the section "Install the holder" in the wall-mounted installation.

4.4. Module installation

Step1: Take off the side panel (keep screws properly)



Step2: Insert the module and fasten screws 4pcs M4 x 12mm.



Step3: Put back the side panel.

Caution: LED indicator shall be kept on the upside.



4.5. Wiring

4.5.1. Connect power cable

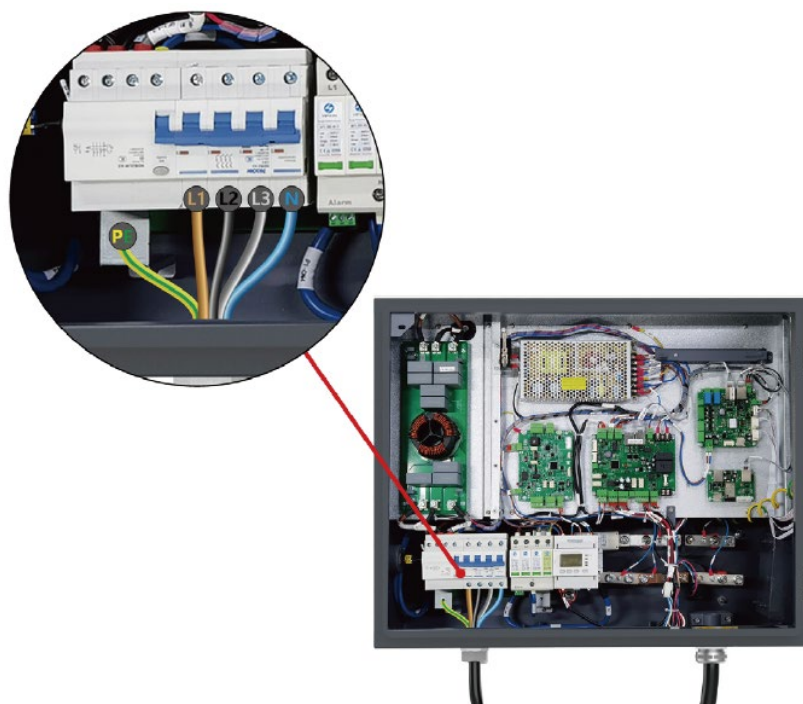
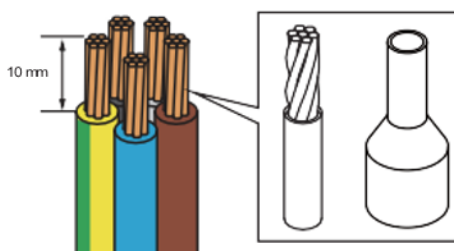


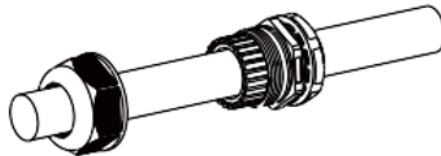
Figure 7 - Hardwire

Step1: Stripe 90 mm of the cable sheath. Stripe 10 mm of the wire sheath. Strain the exposed copper wires and insert them into the ferrules. Crimp the terminals with the crimping piler.

Note: the recommended wire diameter is 16mm²



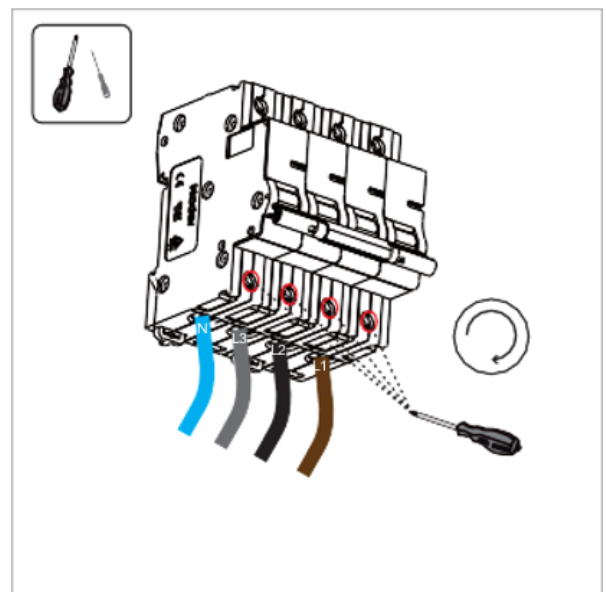
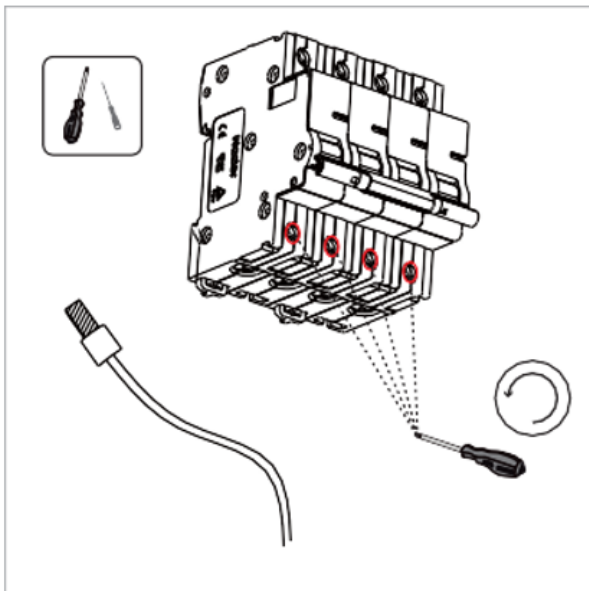
Step2: Use the wrench to loosen the cable gland on the bottom of the cabinet, and put the cable through the cable gland.



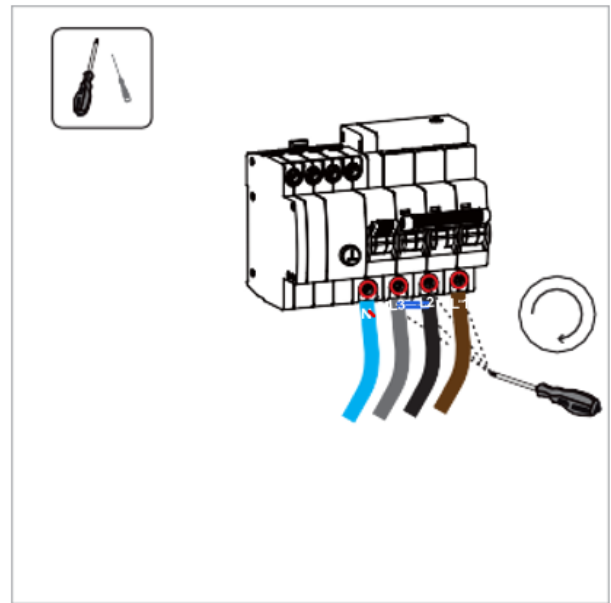
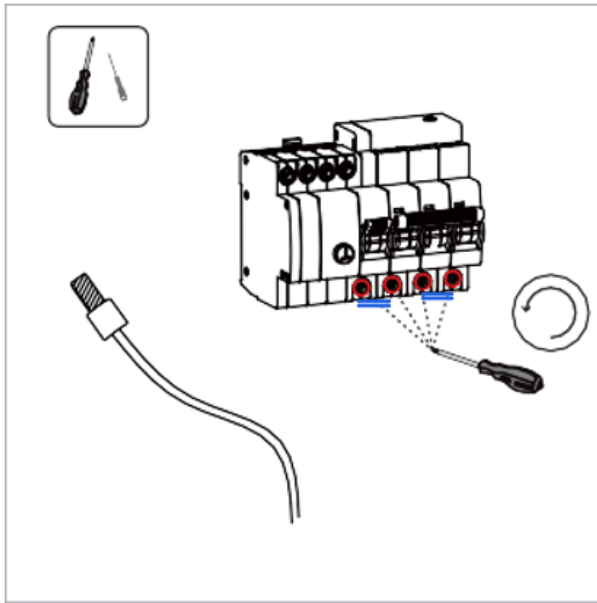
Attention

- Please keep in mind that the circuit breaker is **OPTIONAL**; the diagrams below show these two wiring options.
- Loosen the screws on the terminal block as directed, then insert the ferrule-cripped wires into the ports and tighten the screws.

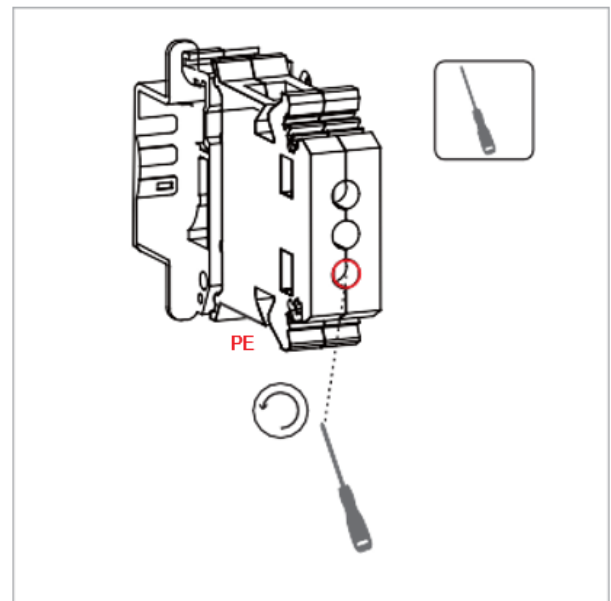
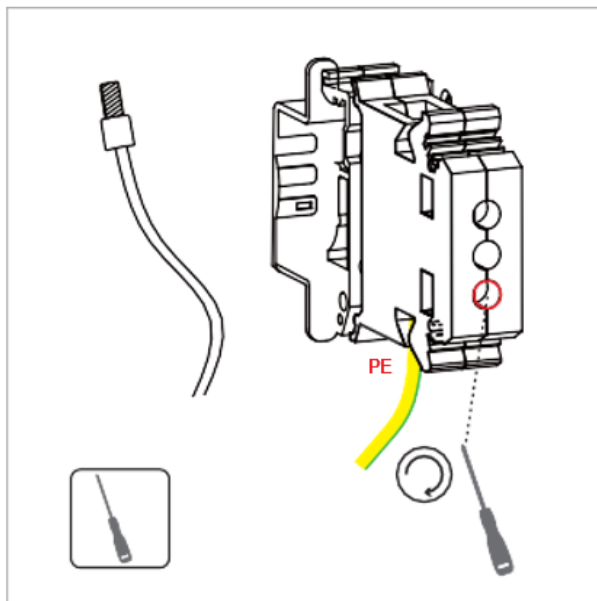
Step3: With circuit breaker



Step4: Without circuit breaker

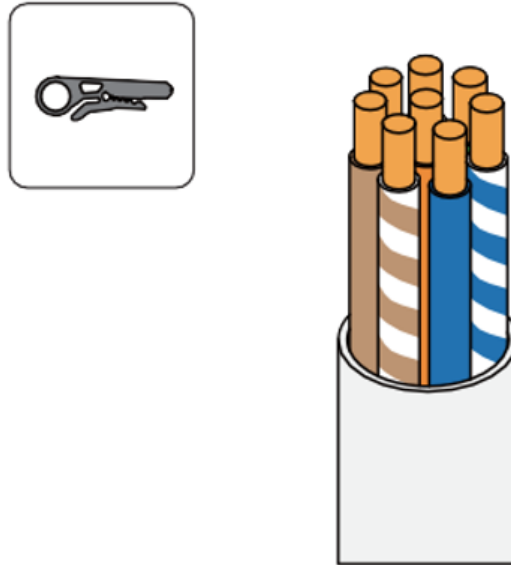


Step5: Connect PE wire. Loosen the screws with a flathead screwdriver. Insert the ferrule-cripped PE wire into the port, and tighten the screws.

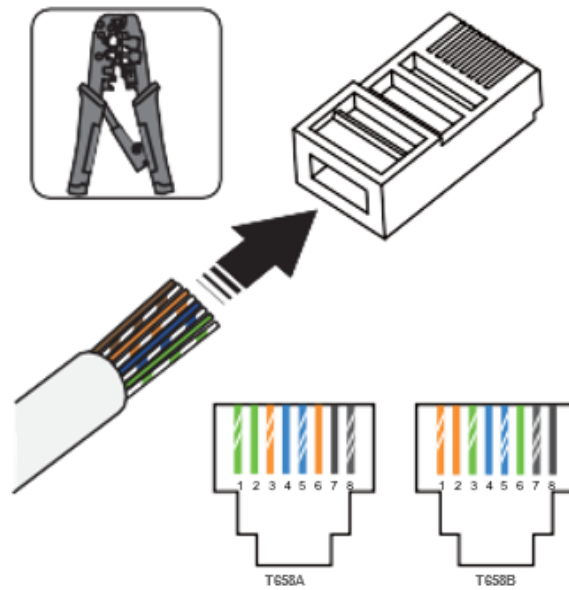


4.5.2. Ethernet cable & RS485 cable & SIM card

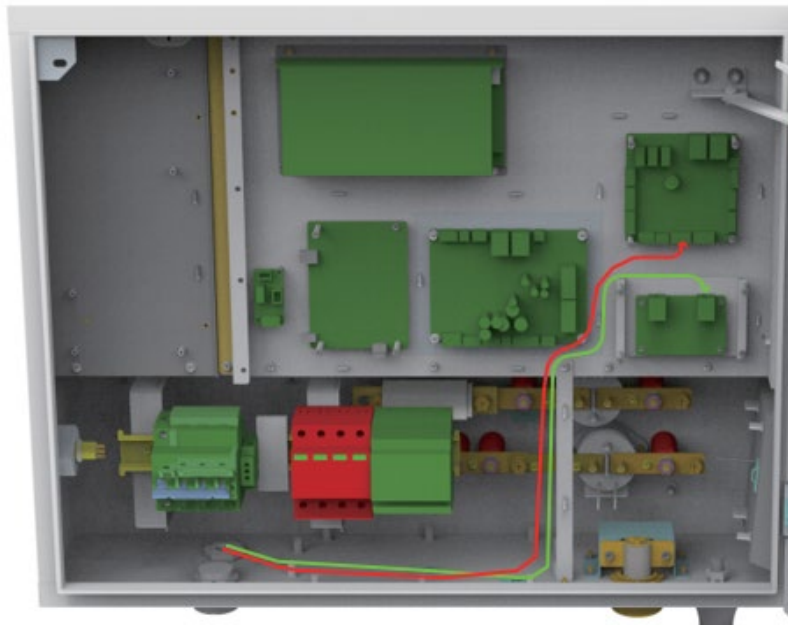
Step1: Strip the cable and wire sheath with the wire stripper.



Step2: Insert the wires into the RJ45 connector, and crimp the wires with the crimping plier.

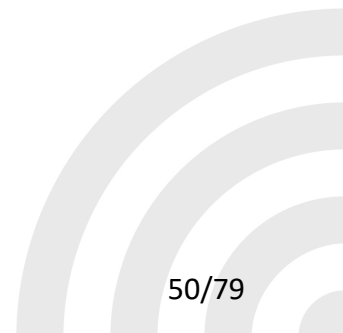
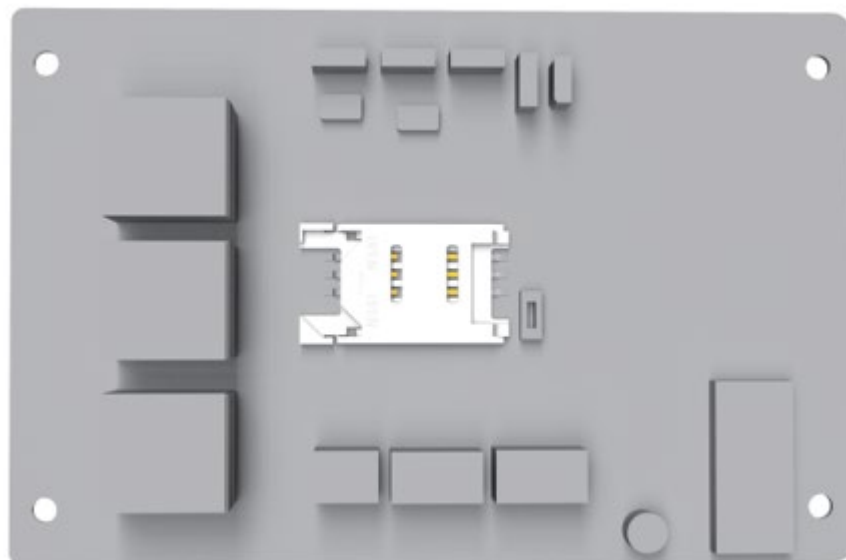


Step3: Connect the RS485 cable and Ethernet cable as shown, put their connections into the ports indicated by the arrows, and secure the cables with a tie where there is a tie hole.



— RS485 cable
— Ethernet cable

Step4: If you choose the 4G version, find the PCB located in the same location as the Ethernet PCB, then gently slide the cover and flip it open, then insert the SIM card.



4.6. External protection devices

The charging station is equipped with a Residual Current Device (RCD) to detect any current faults. It is also equipped with a detection system for DC components above 6mA.

It is recommended to install a magnetothermal device with a suitable capacity on the AC connection cables for installation, uninstallation, maintenance and disconnections caused by other reasons.

5. Disposal

The packaging materials are environmentally friendly and can be recycled.

Do not dispose this product with the household waste. It shall be handed over to the applicable collection point for the recycling of electrical and electronic product. For more detailed information, please contact your local city office, household waste disposal service or the local supplier of the product.

6. Commissioning

6.1. Configure the network for the charger

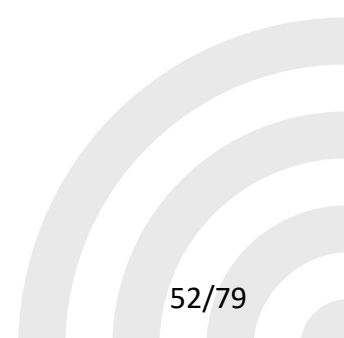
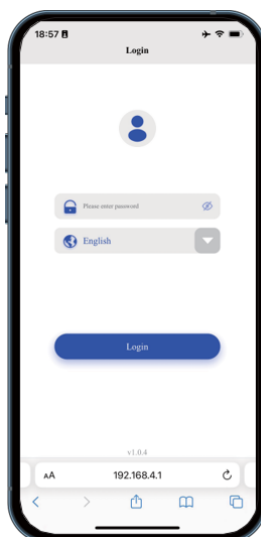
If you select Wi-Fi or 4G for communication, you need to use AP mode to configure the network for the charger.

 Attention	AP mode, which is similar to a local area network, operates the internet locally between your phone and the charger.
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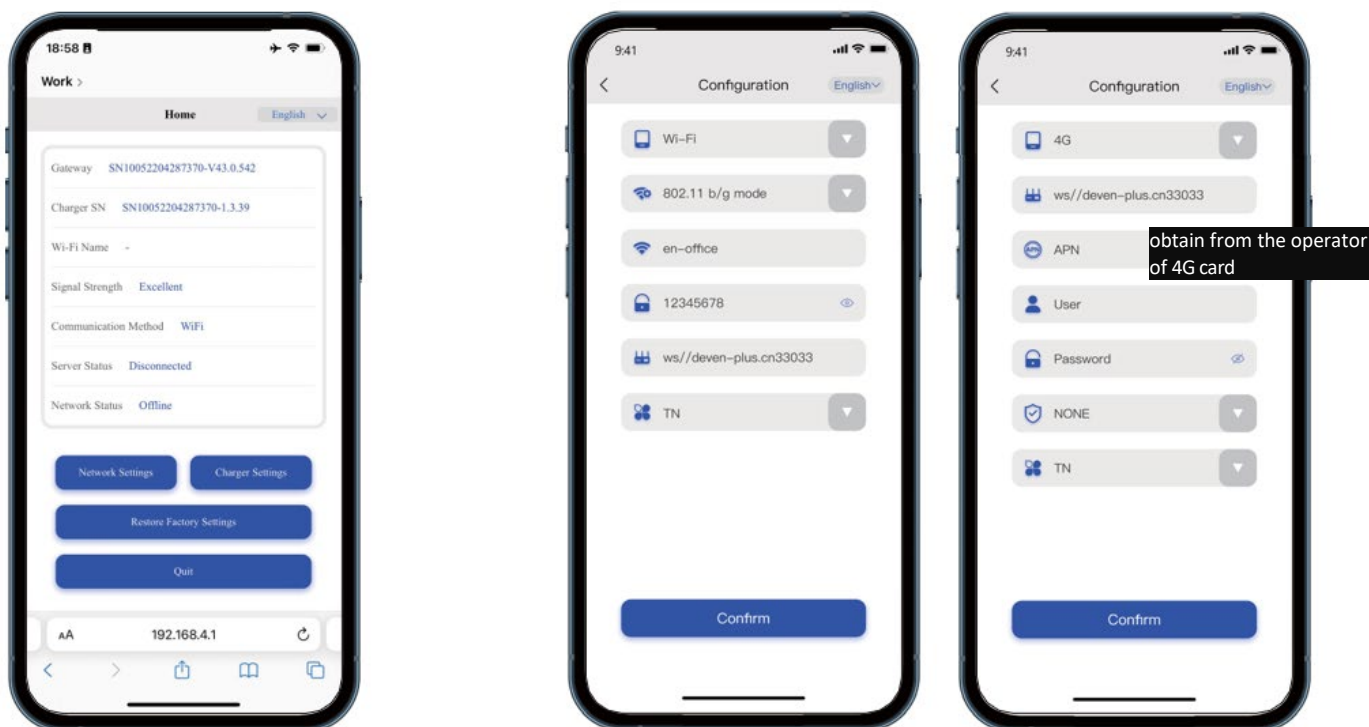
- 1) Set your phone to airplane mode and make sure the WLAN is turned on.
- 2) Restart the charger's power supply to activate the hotspot.
- 3) Locate the charger's wifi hotspot (wifi name: the serial number of the charger) in your phone's Wi-Fi list.
- 4) Enter the password to connect the charger to your phone (a dedicated password is 8-digit depending on the SN of the charger, which is case sensitive and can be found on the breaker).

 Attention	The hotspot of the charger remains available for 15 minutes after the charger is restarted.
--	--

Step1: Login. To access the LOGIN page of AP mode, enter the IP address 192.168.4.1 in a browser, followed by the 4-digit network password (PIN number, which can be found on the breaker).




Step2: Configure Wi-Fi or 4G . After logging in, and you will be prompted with the following interfaces:



	<p>The address of Evcharge Cloud platform: wss://ocpp16.evcharge.com:33033</p>
Attention	

Step3: Click Network Settings and you will see interface as shown on the right side above, then enter the information to configure the network.

	<p>Your charge point will automatically restart once the network configuration is complete, ending communication between your phone and the charge point, at this point, your phone may automatically join to other Wi-Fi hotspots, preventing you from accessing the network configuration interface. As a result, before accessing the network configuration interface, please ensure that your phone is connected to the charger's Wi-Fi hotspot.</p>
Attention	


6.2. Connect charger to Evcharge portal

Once the network setting is complete and the charger is online, it is able to connect to Evcharge platform, where you can configure your charger and charge station.

When you purchase our charger, after your request, you will be given an account. With this account, you will be able to log in to our platform (Evcharge cloud) and configure the charger's details.

The configuration is completed in three steps:

1. Create a Stripe or PayPal account.
2. Create a charge station
3. Add your charge point to the charge station.

 Attention	<p>If you opt to pay with a card, you can skip the first step, and no need to proceeding the next App configuration. However, If you choose App to start the charging session, you have chosen the online payment</p>
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For the use of the monitoring portal, please refer to the dedicated documentation on the website <http://www.zcsazzurro.com/>.

In the section on charging stations see the document "User Manual Evcharge Portal"

7. Operations

After the charger is installed, please follow the steps below to test whether the charger can charge the car

7.1. Indicator description

Indicator	Description
Yellow indicator keeps on	The charging connector has been plugged in
Green indicator keeps on	Idle
Red indicator keeps on	Faults
Yellow indicator flashes	Alarm (charging connector has been plugged in)
Green indicator flashes	Alarm (idle)

7.2. LCD information

- Standby/Home page upon power on.

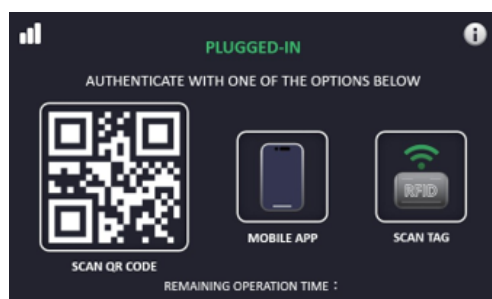


- Plug the connector into the charging socket of the EV, and choose the start modes.

With Evcharge App: use the app to scan the QR code to start charging session.

Without Evcharge App: just use your phone to scan the QR code to start charging session.



Use a RFID card to start the charging session.



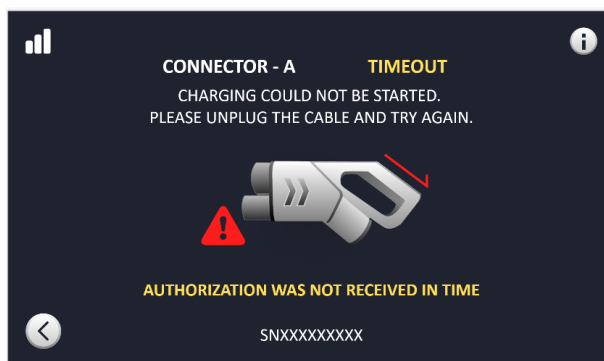
[Evcharge App Download](#)

For the use of the monitoring portal, please refer to the dedicated documentation on the website <http://www.zcsazzurro.com/>.

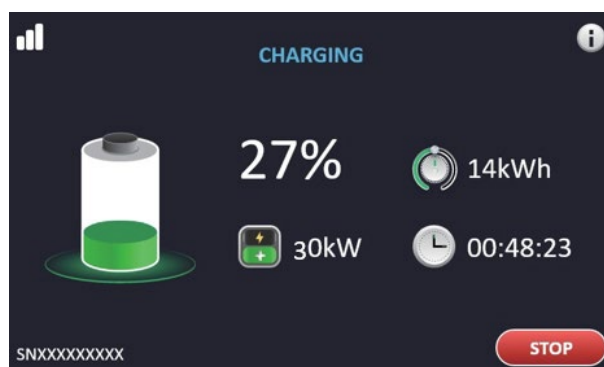
In the section on charging stations see the document "User Manual Evcharge Portal"

	<p>If App is chosen, then the user manual of App as shown.</p>
<p>Note</p>	
	<p>The user needs</p>
<p>Note</p>	

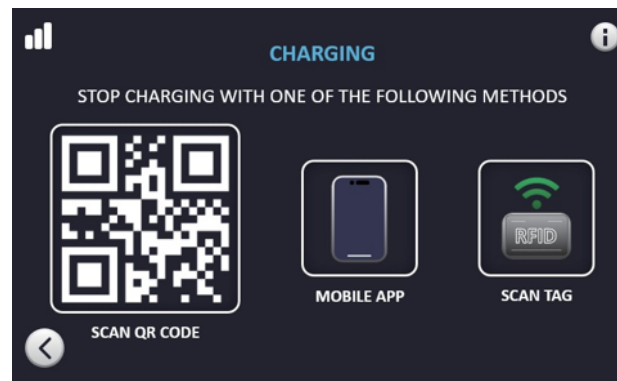
Select the start mode within the remaining operation time or the operation timeout, and the user needs remove the connector before plugging it back in.



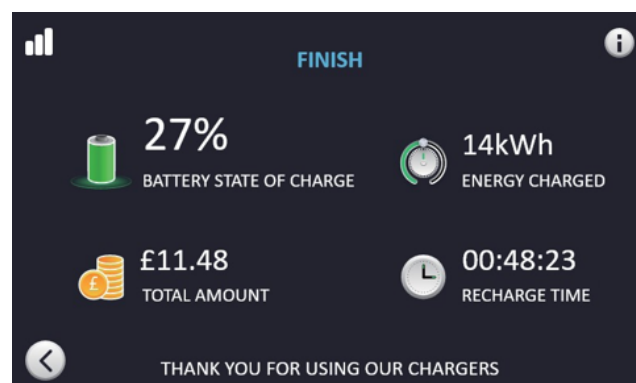
During charging session, and the charging details displayed.



Make payment after the charging finished. The user can terminate the charging session by scanning the QR code or by the RFID card then make payment by App.




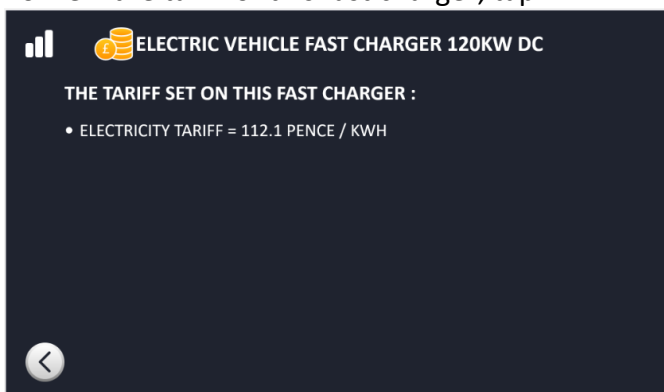
The payment details as shown.




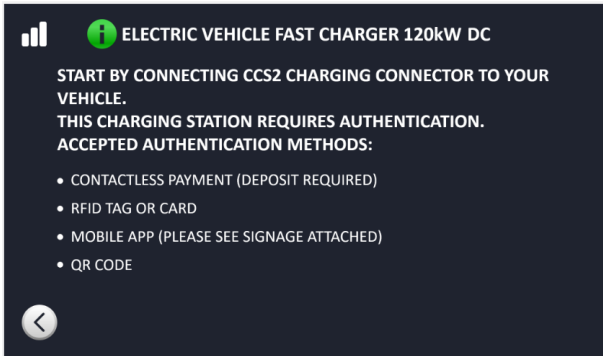
7.3. Settings


You can do tasks in these pages, as shown.

To view the tariff of this fast charger, tap  on the standby page.



To view the basic information of the fast charger, tap  on the standby page.

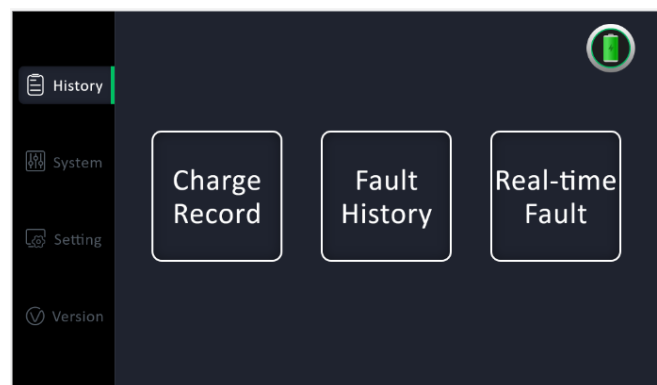
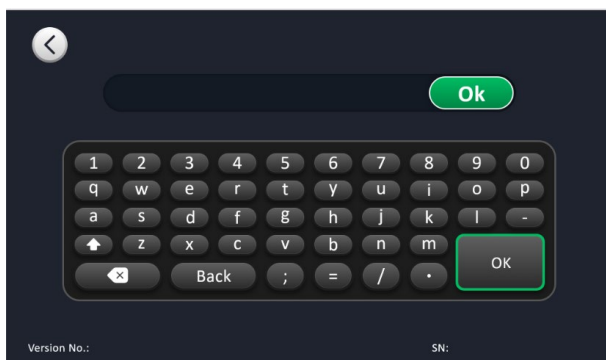


To enter the setting page, you need to tap  on the standby page then enter the password: 123456.

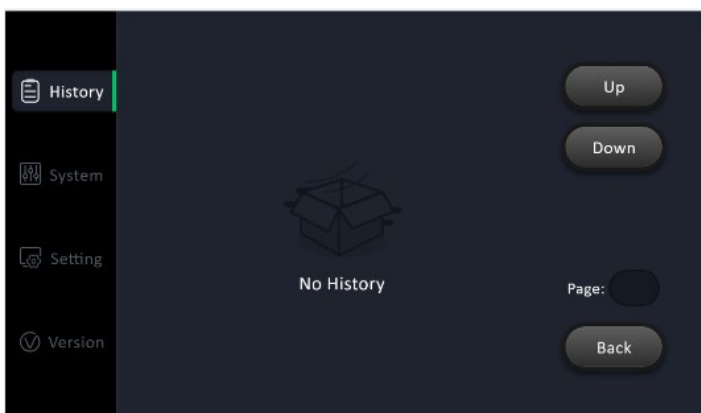


Only for technician! ZCS won't provide any support in case of damage related to bad configuration.

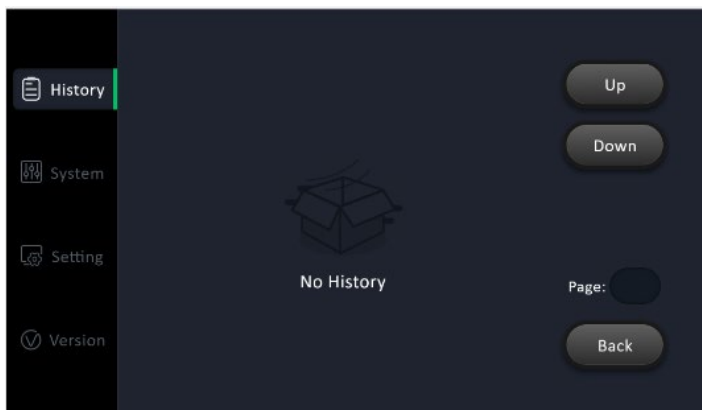
Note




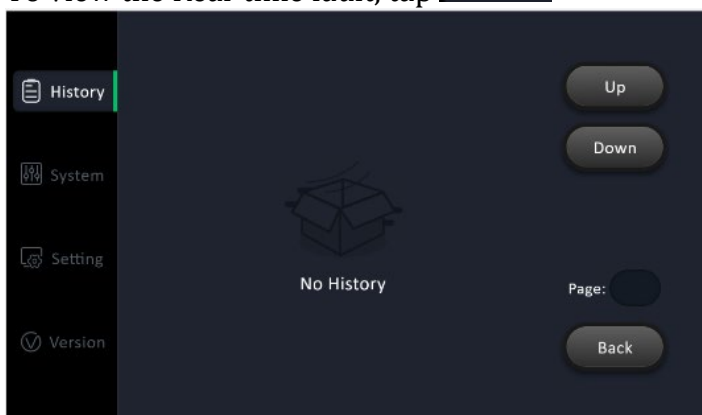
To view the charge record, tap  > 



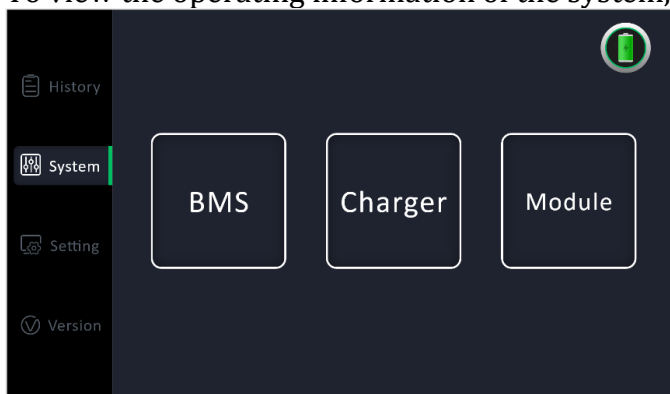
To view the Fault history, tap  History > 



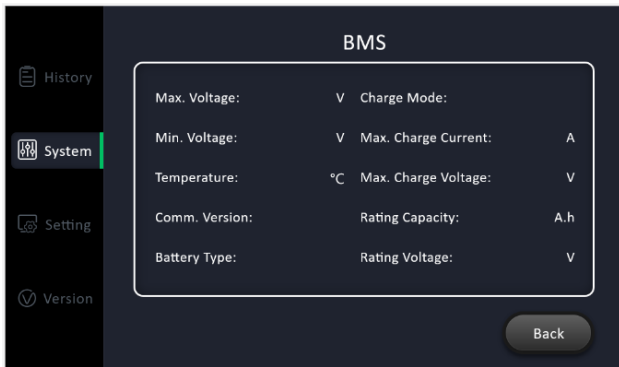
To view the Real-time fault, tap  History >



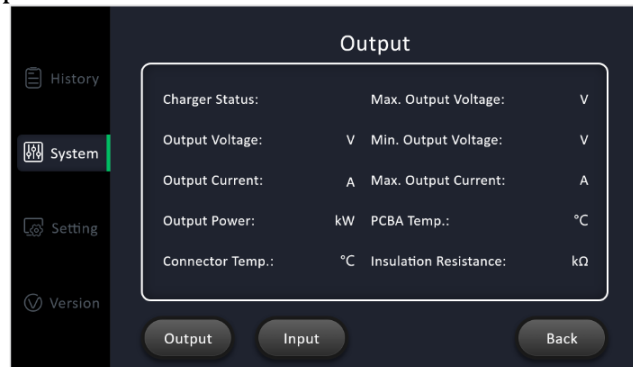
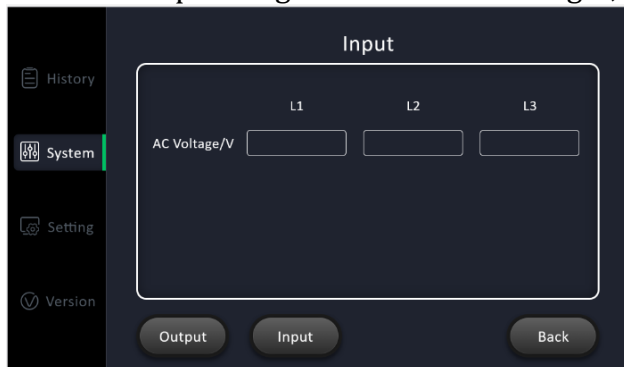
To view the operating information of the system, tap  System



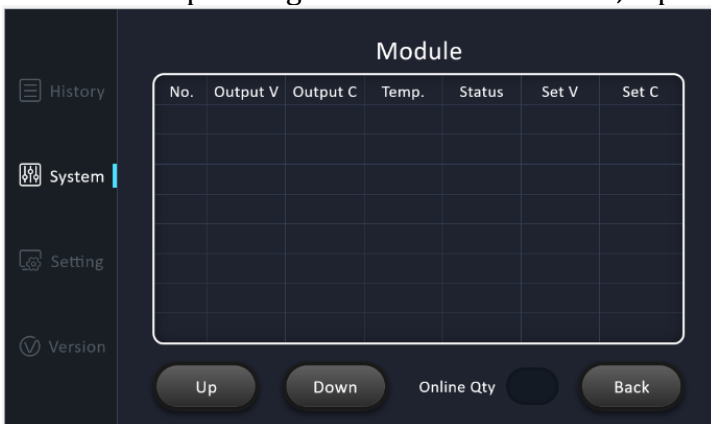
To view the operating information of BMS (battery management system), tap




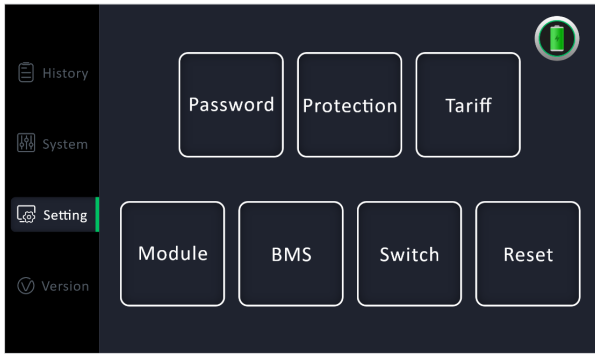
To view the operating information of Charger, tap 



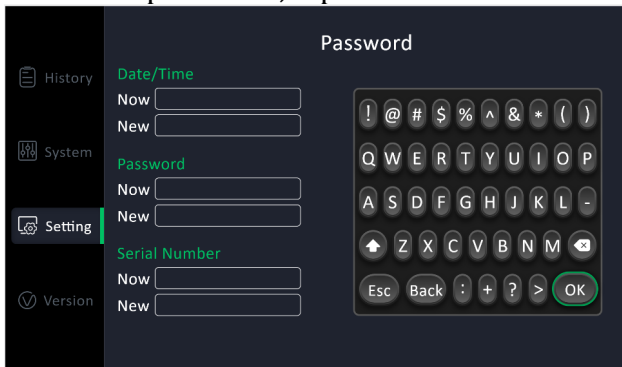
To view the operating information of module, tap 



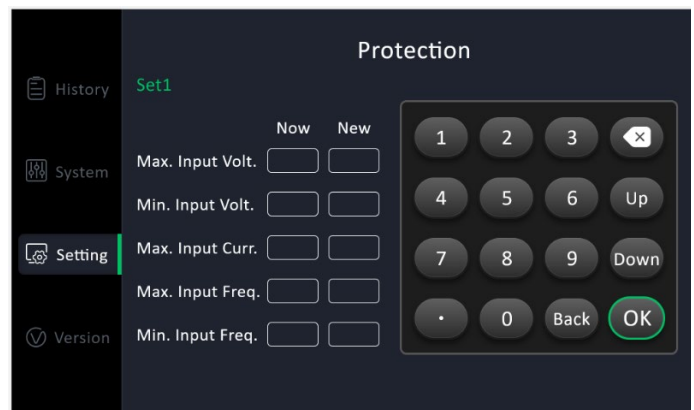
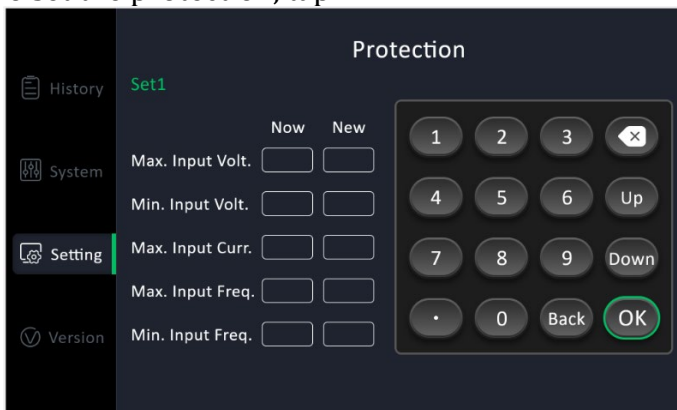
To set the basic information of this fast charger, tap 



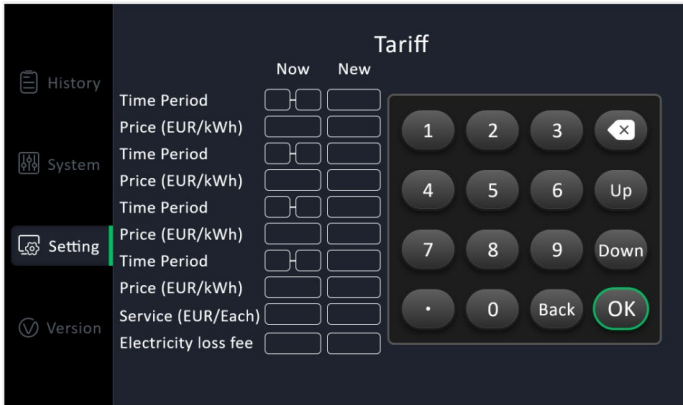
To set the password, tap **Password**



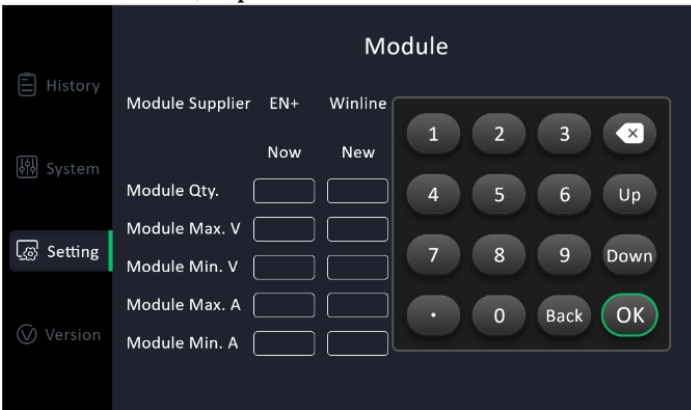
To set the protection, tap **Protection**



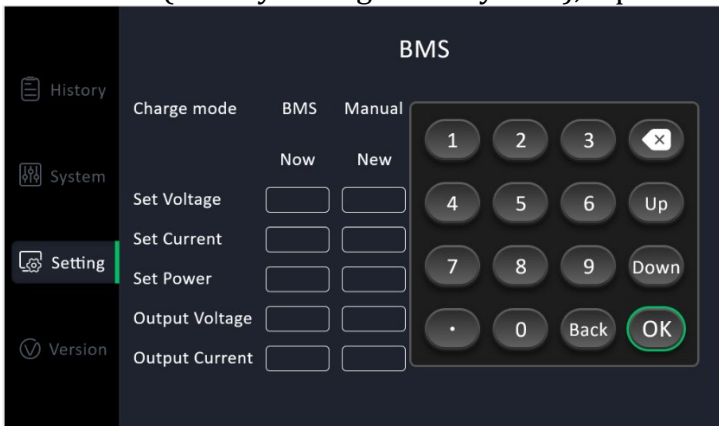
To set the tariff, tap **Tariff**



To set module, tap **Module**

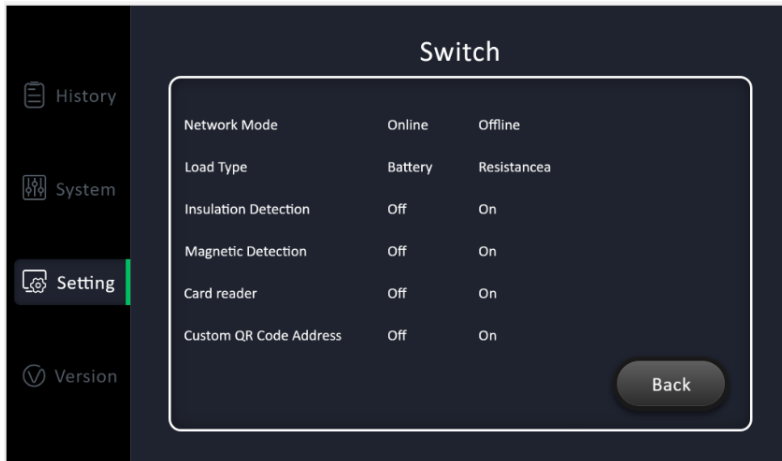


To set BMS (battery management system), tap **BMS**

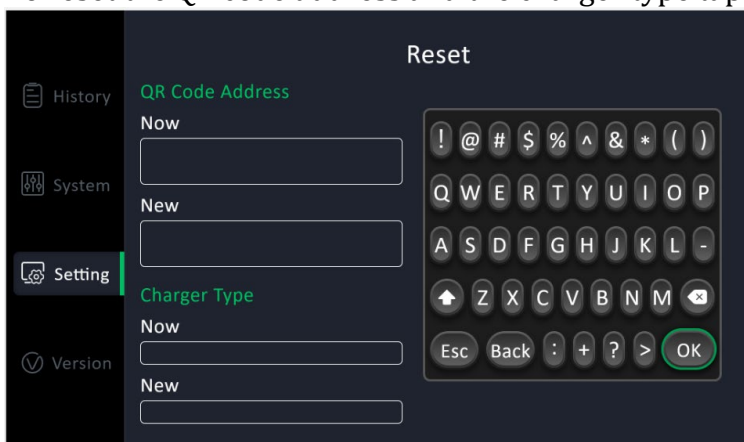


To set module, tap **Switch**

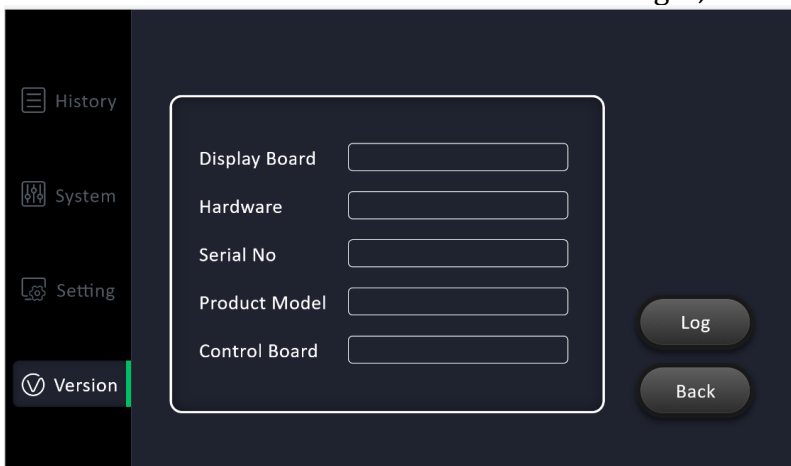




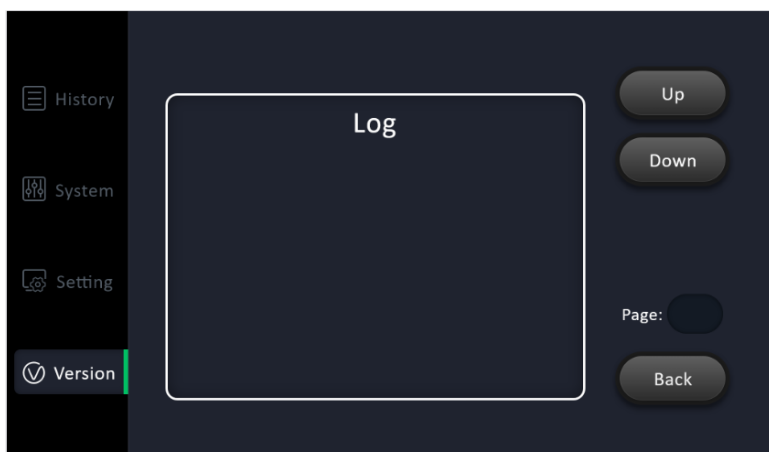
To reset the QR code address and the charger type tap **Reset**



To view the version information of the fast charger, including software, serial number, etc. Tap **Version**



To view the log of the version, tap **Log**



7.4. Checks before initial startup

The operation of this DC charger must be performed in accordance with the test instructions outlined below. All of the instructions given below are required and must be followed by the operator of the DC charger.

After transport and installation, check the following points:

Checks	Execution
Mechanical visual inspection	Mechanically perfect condition of all installed devices.
Screw connections, tight fit	Random or complete testing of tightening torques at terminals and mechanical screw connections.
Earthing system	Check if the earthing considers the site-specific conditions as well as the valid standards.
Lightning protections for supply lines	Check if supply line has a lightning protection device in accordance with IEC 61851-1 as well as country-specific norms.
Check the on and off at the AC input side	Use the multimeter to check the voltage and current at the AC input side.
Operating conditions	Consideration of the operating conditions at the installation site (e.g. mechanical, chemical, corrosive stress) according to IEC 61851-1 as well as deviating country-specific standards.
	Checking whether a residual current circuit breaker outside the charger is required/has

Residual current protection device (if have)	been mounted, in accordance with the site-specific conditions and the valid standards.
Check the charging cable, charging connector, and the outside surface of the cabinet.	Check the charging cable, charging connector and outside surface of the cabinet for damage and scratches, etc.
Check inside the cabinet	Make sure there are no debris, spare parts, etc. inside the chassis.

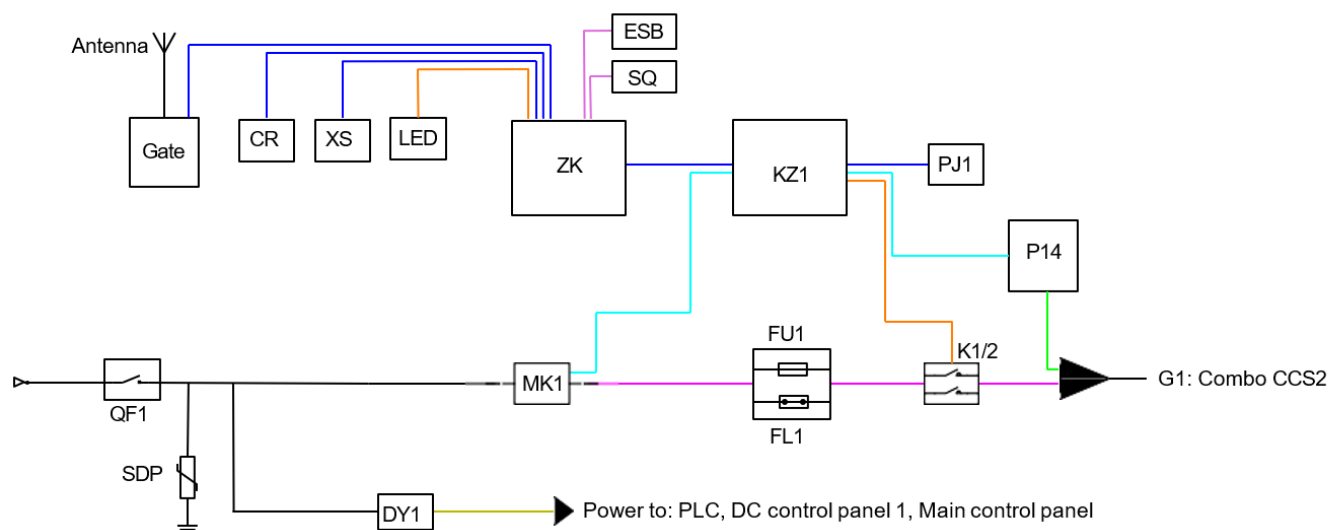
7.5. Checks before switching on for the first time

Checks	Result	
	Ok	Deficient
External visual inspection of the charger (damage, defects)		
Checking the stability		
Inspection of the cable connections		
Inspection of the fuses		
Visual inspection of the screw connections?		
Is the inside of the charger clean and free from traces of condensation?		
Checking the air and creepage distances		
Checking the filter mats		
Mains voltages correct?		
Functional inspection of the electrical protective devices		
Earthing system complete? Potential equalisation connections continuous?		





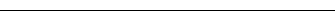
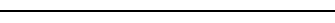
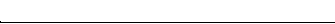


7.6. Checks when switching on for the first time

Checks	Result	
	Ok	Deficient
Check fan noise (if applicable)		
Functional check of the RFID reader		
Checking the function of the screen		
Functional testing of the emergency stop button		
Check the module indicator (green)		
Check the charging connector (dry)		

8. Appendix-Working principle diagram



QF1	Circuit breaker	ZK	Main control panel
SPD	Lightning arrester	KZ1	DC control panel
DY1	Auxiliary switching power supply	P14	PLC
MK1	Power module	G1	Charge cable
K1/K2	DC contactor	XS	Display screen
FU1	Fuse	CR	Card reader
FL1	Shunt	ESB	Emergency stop
PJ1	DC watt-hour meter	SQ	Entrance control
LED	LED light board		

COLOR	DESCRIPTION
	AC power line
	DC power line (high voltage)
	CAN communication line
	485,232, 4222 serial interface communication
	Control line
	PWM line
	Feedback
	PLC communication line
	DC power line (undervoltage)

9. LED Indicator

There are 2 LED indicators next to charger interface.

State	Description	LED Status
Standby	Power-on, and no connector plug-in	Green light normally on
Ready to charge	Connector plug-in, and charging not started yet	Yellow light flashing at the interval of 1S
In charging	Charging started	Green light flashing at the interval of 1S
Stop charging	Charging stop with connector plugged in	Yellow light normally on
Fault	Error happens	Red light normally on



10. Technical datasheet

Scheda dati		DC030K-E2C22-75
Ingresso	Alimentazione	3P+N+PE
	Tensione nominale	400V AC
	Corrente nominale	48A
	Frequenza	50/60Hz
Uscita	Tensione in uscita	200V-1000V DC
	Corrente Massima	75A
	Potenza nominale	30kW
Interfaccia utente	Connettore di carica	CCS2
	Lunghezza cavo	5m
	Custodia	Acciaio galvanizzato
	Indicatore LED	Verde/Rosso/Giallo
	Display LCD	Touch screen a colori 4.3"
	Lettore RFID	MifareISO/IEC14443 A
Comunicazione	Modalità di avvio	RFID card/App/Plug&Play
	WiFi	Sì
	Ethernet	Sì
	4G	Opzionale
	Bluetooth	No
	OCPP	OCPP 1.6 Json (OCPP 2.0 aggiornabile)
Sicurezza	Contatore	Sì
	Arresto di emergenza	Sì
	Protezione in ingresso	IP54
	Protezione dagli impatti	IK07
	Protezione elettrica	Protezione da sovracorrente, Protezione da corrente residua, Protezione da sovratensione Protezione da sovra/sotto-tensione, Protezione da sovra/sotto-frequenza. Protezione da sovratemperatura
	Standard di certificazione	EN IEC61851-1:2019, IEC 01851-1:2017, EN 61851-23:2014, EN 61851-24:2014
Ambiente	Certificazione	Efficienza: 94%
	Garanzia	2 anni
	Installazione	Montaggio a parete/su palo (opzionale)
	Metodo di raffreddamento	Raffreddamento a ventola
	Rumore	60dB
	Umidità di lavoro	-30°C~+50°C, 5%-95%
Imballo	Altitudine di lavoro	<2000m
	Dimensioni prodotto	707*560*217mm(W*D*H)
	Dimensioni confezione	847*762*420mm(W*D*H)
	Peso netto	35,3 kg
	Peso lordo	40 kg
Confezioni esterna	Cartone	



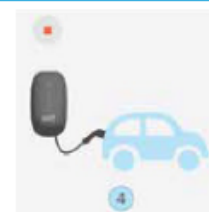
1
Scarica l'App
e registrati.



2
Passa la carta RFID
per avviare la ricarica.



3
Il veicolo elettrico
sta caricando.



4
Passa nuovamente la carta RFID
per interrompere la ricarica.

11. Troubleshooting and maintenance

11.1. Troubleshooting

This section contains information and procedures on how to troubleshoot any faults and errors that may occur during operation of the charging station.

If you have any problems please follow these steps:

- 1) Check the warning messages and error codes on the information panel of the device. Record them before carrying out any further operation.
- 2) If the charging station does not display any errors, perform the following checks:
 - Is the device located in a clean, dry and properly ventilated place?
 - Are the cables correctly sized and as short as possible?
 - Are the connections in good condition?
 - Are the configuration settings correct for the type of installation?

Information on the event list:

Code	Possible causes	Solutions
E000	Over temperature The control board is overheated	Check to remove possible heat source in the surrounding of the charger. Make sure the environmental temperature is below 60°C.
E002	Input over voltage	<ol style="list-style-type: none"> 1. Check the input voltage. 2. If the voltage is over 480Vac for a short time, wait till the power grid recovers to normal voltage range.
E002	Input lower voltage	<ol style="list-style-type: none"> 1. Check the input voltage from the backend. 2. If the voltage is under 320Vac for a short time, wait till the power grid recovers to normal voltage range.
E004	The output current exceeds 35,2A	
E005	Input over frequency	<ol style="list-style-type: none"> 1. Check the input voltage frequency from the backend.

		2. If the frequency exceeds 63Hz for a short time, wait till power grid recover to normal voltage range.
E005	Input lower frequency	1. Check the input voltage frequency from the backend.
		2. If the frequency is lower than 47Hz for short time, wait till power grid recover to normal voltage range.
E007	The DC leakage current A is abnormal	
E008	Emergency stop	Check whether the emergency stop has been pressed, then correct the error and recover the emergency stop button.
E010	RCD value is abnormal	
E011	The terminal at the input side is overtemperature	
E014	Relay adhesion	
E015	Grounding fault	Check whether the grounding connection cables are connected correctly.
E016	The L1 line and N line at the input side are connected reversely	
E017	AC RCD circuit error	
E022	Meter communication failure	
E023	AC CP voltage error	

E024	Output over-voltage The set demand voltage exceeds the maximum output voltage of the charger	1. Check whether the output voltage is within parameters setting range. If not, please check whether the output voltage/current is too high, or the parameters setting is reasonable.
E025	The set demand current exceeds the maximum output current of the charger	
E027	The DC connector K1/K2 error	
E031	DC leakage current C is abnormal	
E032	The voltage during the insulation testing phase did not meet the requirements.	
E033	It is detected that vehicle contactor K5K6 is closed before insulation	
E038	The charging connector is overtemperature	


E039	DC connector (on the display board) failure	
E040	The battery voltage is incorrect	
E041	The module address error	
E043	Module output is short-circuit	
E044	The module is not enabled,unavailable	
E048	The main control board is overtemperature	
E053	The output voltage exceeds the maximum allowable voltage by 110% for 200ms.	

E054	Door access control failure	
E055	Card reader communication error	
E056	Screen communication error	
E057	Communication failure between main control board and the control board	
E059	The insulation resistance is too small and charging is not allowed	
E061	Excessive deviation of demand voltage from charging connector voltage (output > demand)	
E032	The voltage during the insulation testing phase did not meet the requirements.	

E062	Charging cable connection abnormal	1. Check if charging cable connection is correct and firm.
E063	The output wires are connected reversely	

Note: If the above problems cannot be resolved, contact your dealer.

11.2. Maintenance

	<p>Please note that the maintenance should be done by the qualified person. For maintenance of non-electrical parts, please disconnect the power supply first</p>
Attention	

For the safe operation of the fast charger, regular maintenance or control of the safety equipment is required. All the points listed below are considered mandatory and must be carried out by the operator at the intervals described.

The following table gives an overview of the required maintenance work. Depending on the individual operating conditions of the fast charger, further maintenance work may still be necessary so the list below cannot be considered complete.

Maintenance work	Execution	Interval
Charging cable	Replacement of the complete charging cable	Daily
Residual current devices	Function test of residual current circuit breaker, Open the service door and press the indicated button of the circuit breaker at the bottom of the fast charger.	Once a month
Main switch, voltage release switch	Verify the correct function	Half a year
Verification of protective measures	With the charger switched off, check the resistance between the ground of the supply and all externally accessible, non-insulated cabinet parts (housing, add-on parts, screws)	Quarterly



Check for cleanliness and condensation	<p>Check if the interior of the control cabinet is clean and without any traces of condensation.</p> <p>Check the water run-off on cable plug holder and charging connector.</p> <p>Check the seal for damage and correct positioning.</p>	Daily
Screw and lock	<p>Random or complete testing of tightening torques at terminals and mechanical screw connections. Check whether the lock is locked or damaged, and whether the fixing screws are loose.</p>	Daily
Overtoltage protection	<p>Check the surge arrester for full function</p>	Half a year
Ventilation filters	<p>Replacement of filters (Depending on the working environment)</p>	Depending on the working environment.
Charging cable	<p>Check if the charging cable is in perfect condition. Make sure that all cable parts (cable, connector, pins, cable sleeve, locking mechanism) are free from dirt, crushing, cracks, wear, burns or other damages. Also check that the insulation is intact and that all screws are tight.</p>	Daily
Cheaning the charger	<p>Regularly clean the external surface of the charger.</p>	<p>Depending on the working environment ,external cleaning and inspection may be required more regularly than other maintenance task.</p>



<p>Function test of the emergency stop</p>	<p>Press the emergency stop button, and the code "E008" displayed on the screen.</p>	<p>Once a month</p>
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12. Dismantling and disposal

The packaging materials are compatible with the environment and can be recycled. Therefore, they can be disposed of in special recycling containers in accordance with the local waste disposal regulations. However, the charger cannot be disposed of as household waste, but must be treated as special waste. It must be disposed of at facilities authorised to dispose of electrical and electronic goods. For more detailed information on the disposal and recycling of this product, please contact the local competent office, waste disposal service or the retailer where you purchased the charger.

1) Uninstalling

- Disconnect the charging station from the AC network
- Remove the AC terminals
- Remove any communication connections
- Unscrew the fixing screws and remove from the metal part or support

2) Packaging

If possible, pack the charging station in its original packaging.

3) Storage

Store the charging station in a dry place where the ambient temperature is between -25°C and +60°C.

4) Disposal

At the end of its life, dispose of the charging station and packaging materials in places that can manage and recycle electrical equipment safely.



Where present, the crossed-out bin symbol indicates that the product, at the end of its life, must not be disposed of with domestic waste.

This product must be delivered to your community waste collection point local for its recycling.

For more information, refer to the body responsible for waste disposal in your country. Inappropriate waste disposal can have negative effects on the environment and human health due to potentially dangerous substances.

By cooperating in the proper disposal of this product, you are contributing to the reuse, recycling and recovery of this product, as well as to the protection of our environment.

13. Warranty

Zucchetti Centro Sistemi SpA provides a warranty of 2 years from the date of installation of the charging station, subject to registration on the website

<https://www.zcsazzurro.com/it/estensione-garanzia>. During the warranty period, Zucchetti Centro Sistemi S.p.A. guarantees the normal operation of the charging station.

If the device is defective or faulty during the warranty period, contact your installer or supplier. If the fault falls within the responsibility of the manufacturer, Zucchetti Centro Sistemi S.p.A. will provide service and maintenance free of charge.

Warranty exclusions:

- Use of the charging station for any other use other than the intended one.
- Defective or faulty design or installation of the system.
- Improper use of the device.
- Incorrect configuration of the outer protections.
- Unauthorised modifications to the device.
- Damage caused by external factors or force majeure (e.g. lightning, power surges, bad weather, fire, earthquakes, tsunamis, etc.)



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