Teison

Teison DC Pro 60-240kW

TS-EDC60AA
TS-EDC90AA
TS-EDC120AA
TS-EDC150AA
TS-EDC180AA
TS-EDC240AA

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Product overview

Overall features

Multiple standard charging port combinations to choose from

CCS2, CHAdeMO, GB/T, and CCS1 can be combined and customized.

Diverse power range

Multiple power options are available, ranging from 60 KW to 240 KW with customizability.

High voltage output

The maximum output voltage can reach 1000V, meeting the needs of the vast majority of electric vehicles on the market.

Intelligent operation

It can not only operate on our platform but also connect with various OCPP platforms.

Backend monitoring

The status of the charging station can be monitored in the background.

Load balancing

More effective connection to the load system.

Parameter Instructions

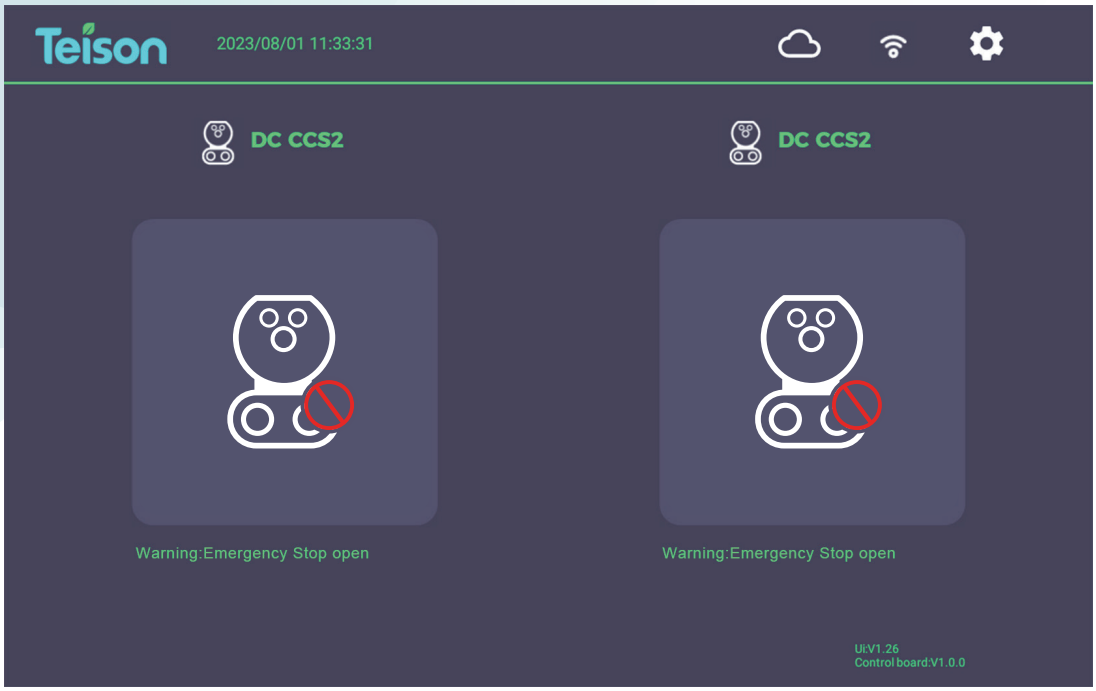
Specification				
Model		TS-EDC60AA TS-EDC60AA/AC43	TS-EDC90AA TS-EDC90AA/AC43	TS-EDC120AA TS-EDC120AA/AC43
Electrical Properties				
AC Input	Input Rating	AC400V(±10%) 3ph		
	AC Input Connection	3P+N+PE		
	Rate Input Current	3Φ92A	3Φ137A	3Φ183A
	Frequency	50/60Hz		
	Power Factor	≥0.99		
	Efficiency	≥95%		
DC Output	Output Voltage Range	200V-1000V		
	Max.Output Current(system)	200A	300A	400A
	Max.Output Current(connector)	150A	200A	200A
	Max.Output Power	DC60kW	DC90kW	DC120kW
	Voltage Accuracy	≤±0.5%		
	Current Accuracy	≤±1%		
User Interface & Control				
Display		10.1" touch screen		
Screen Material		LCD		
Push Buttons		Operation buttons / Emergency buttons		
User Authentication		RFID,OCPP,QR code,Password,Application		
Support Language		English (Other languages available upon request)		
Communication				
External		Ethernet,WIFI		
Internal		CAN,RS485,RS232		
Environmental				
Operating Temperature		-30℃ ~ +50℃		
Humidity		<95% relative humidity, non-condensing		
Altitude		≤2000m(6000 feet)		
Mechanical				
Ingress Protection		IP55		
Enclosure Protection		IK10		
Cooling		Air cooling		
Installation Method		Floor mounted		
Product Size（L*D*H)		670*480*1600mm	800*603*1854mm	800*603*1854mm
Protection				
Protection		Over current, Under voltage, Over voltage, Residual current, Surge protection, Short circuit, Over temperature, Ground fault		
Regulation				
Certificate		CE		
Standard		EN IEC-61851-1:2019; EN61851-23:2014; EN 61851-24:2014; EN IEC 61851-21-2:2021		
Optional Config				
Network Gateway		4G		
Payment Method		POS Machine		

Specification				
Model		TS-EDC150AA TS-EDC150AA/AC43	TS-EDC180AA TS-EDC180AA/AC43	TS-EDC240AA TS-EDC240AA/AC43
Electrical Properties				
AC Input	Input Rating	AC400V(±10%) 3ph		
	AC Input Connection	3P+N+PE		
	Rate Input Current	3Φ228A	3Φ274A	3Φ365A
	Frequency	50/60Hz		
	Power Factor	≥0.99		
	Efficiency	≥95%		
DC Output	Output Voltage Range	200V-1000V		
	Max.Output Current(system)	500A	600A	800A
	Max.Output Current(connector)	200A	200A	250A
	Max.Output Power	DC150kW	DC180kW	DC240kW
	Voltage Accuracy	±0.5%		
	Current Accuracy	±1%		
User Interface & Control				
Display		10.1" touch screen		
Screen Material		LCD		
Push Buttons		Operation buttons / Emergency buttons		
User Authentication		RFID,OCPP,QR code,Password,Application		
Support language		English (Other languages available upon request)		
Communication				
External		Ethernet,WIFI		
Internal		CAN,RS485,RS232		
Environmental				
Operating Temperature		-30℃ ~ +50℃		
Humidity		<95% relative humidity, non-condensing		
Altitude		≤2000m(6000 feet)		
Mechanical				
Ingress protection		IP55		
Enclosure Protection		IK10		
Cooling		Air cooling		
Installation Method		Floor mounted		
Product Size（L*D*H)		800*603*1854mm	800*603*1854mm	800*603*1854mm
Protection				
Protection		Over current, Under voltage, Over voltage, Residual current, Surge protection, Short circuit, Over temperature, Ground fault		
Regulation				
Certificate		CE		
Standard		EN IEC-61851-1:2019; EN61851-23:2014; EN 61851-24:2014; EN IEC 61851-21-2:2021		
Optional Config				
Network Gateway		4G		
Payment Method		POS Machine		

Operating Instructions

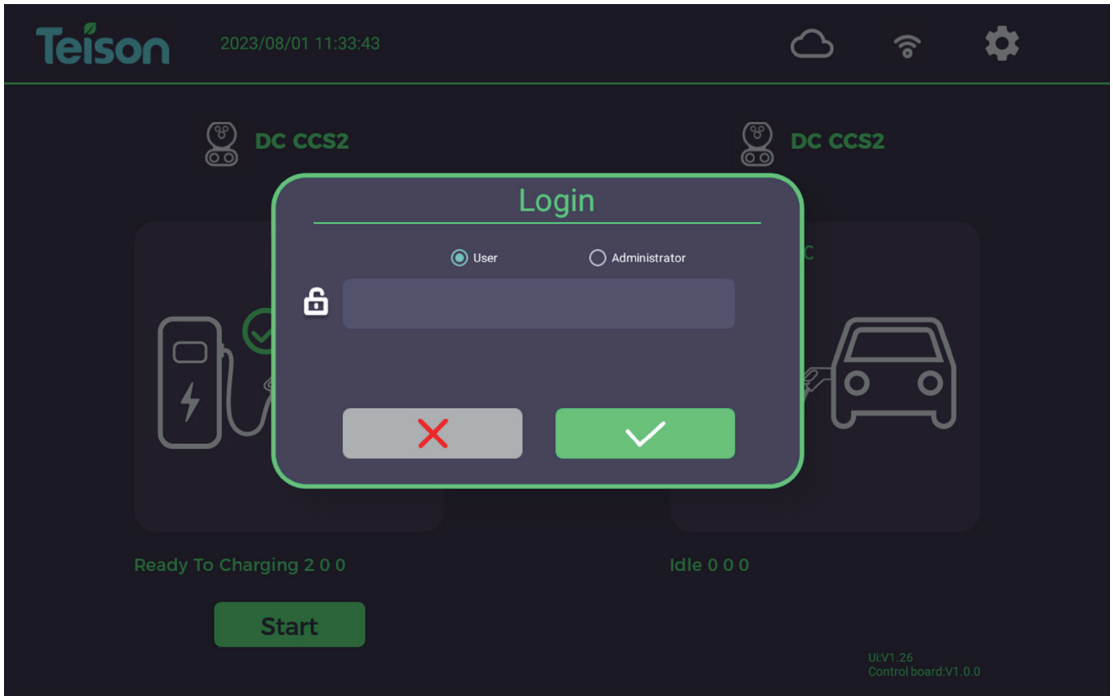
Instruction

1. After powering on, please check if the communication is normal and whether pressing the emergency stop button displays as follows. If the emergency stop status is not shown, it indicates a communication abnormality between the screen and the main control board. Please contact technical support for assistance.



2. By default, the charging mode is set to RFID mode, as shown in the following figure. Click the "Start Charging" button to display the card swiping interface, which can only be activated by swiping the card. (Before starting card swiping, the charging station needs to be connected to the Teison platform.)

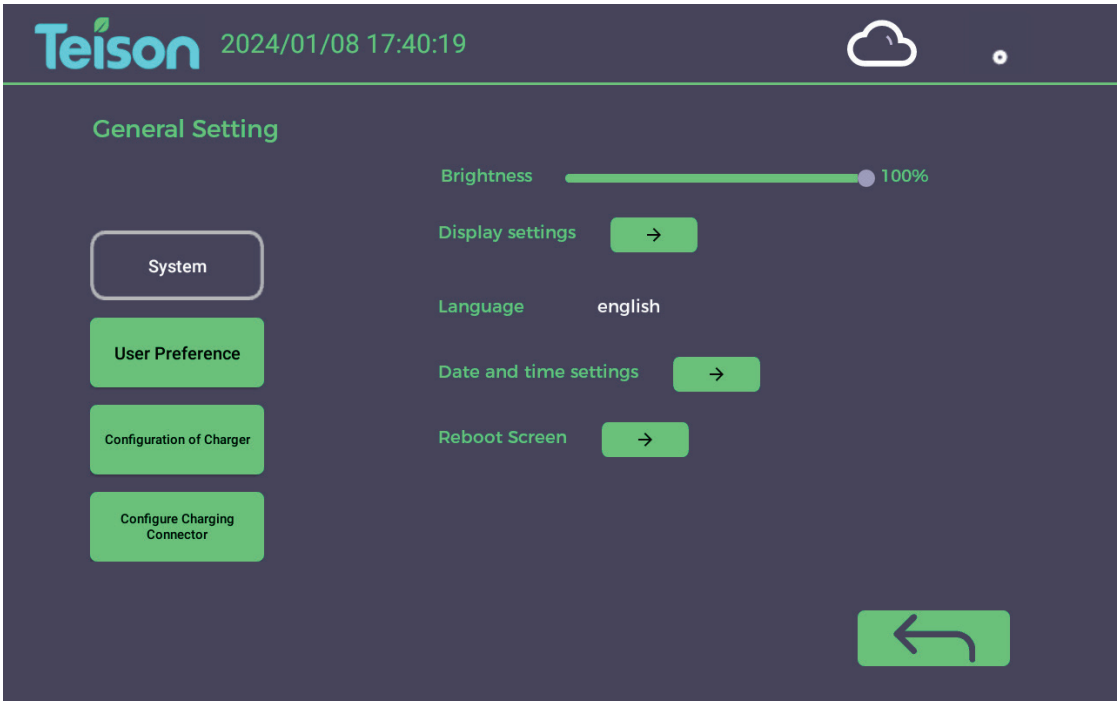
3. To change the charging mode, you need to access the settings interface. The user password for the settings interface is initially set to 'No Password'.



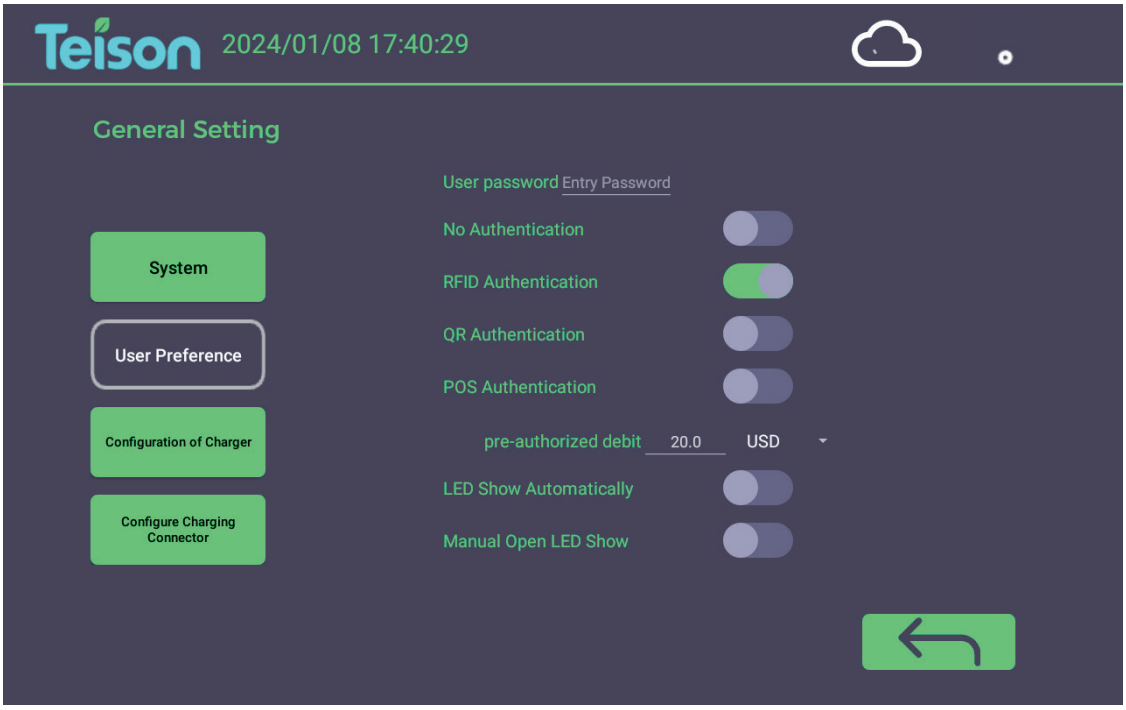
4. The settings accessible to the user include General Settings, Network Settings, OCPP Settings, Device Information, and Records.

5. General Settings are divided into System Settings, User Preferences, Charging Station Configuration, and Charging connector Configuration.

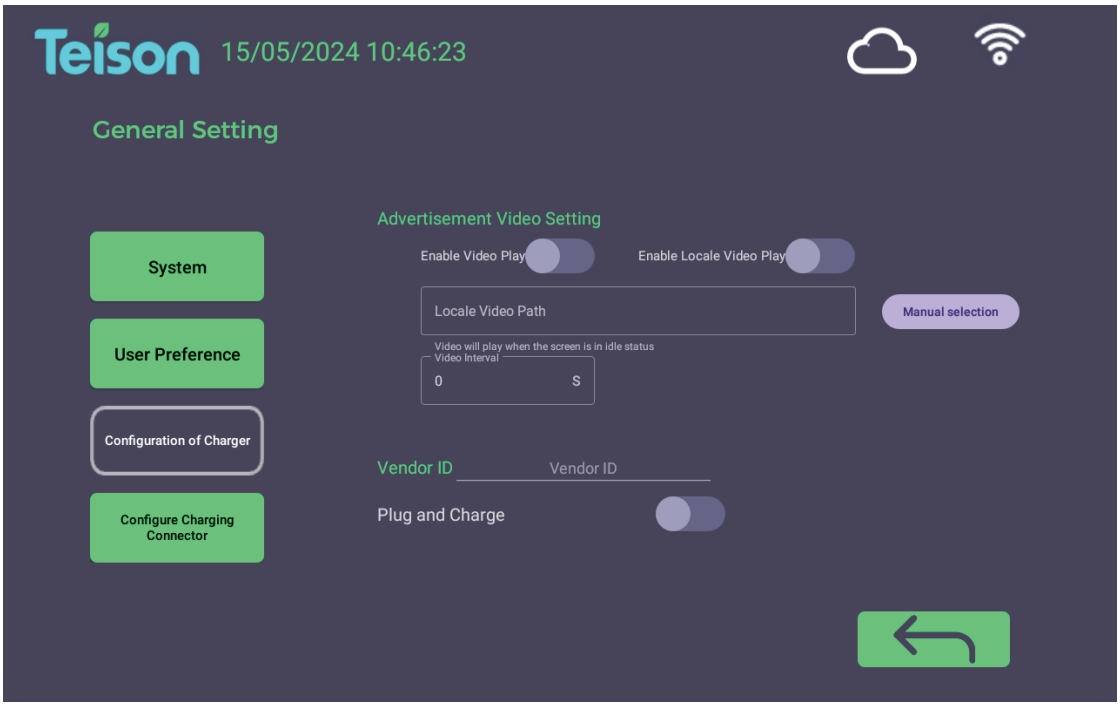
- System settings include brightness adjustment, full screen display, language configuration, time zone setting, and screen restart. As shown in the following figure.



- User preferences include password settings and four charging modes (with POS machines being a non-standard option). After enabling anonymous charging, other charging modes will not be available. Models that support POS machines will have POS machine authentication options. When using a POS machine, it is necessary to authorize a debit of a specified amount in advance. The LED strip setting function is only available on models with customized strip functions. This option is not displayed on regular models.



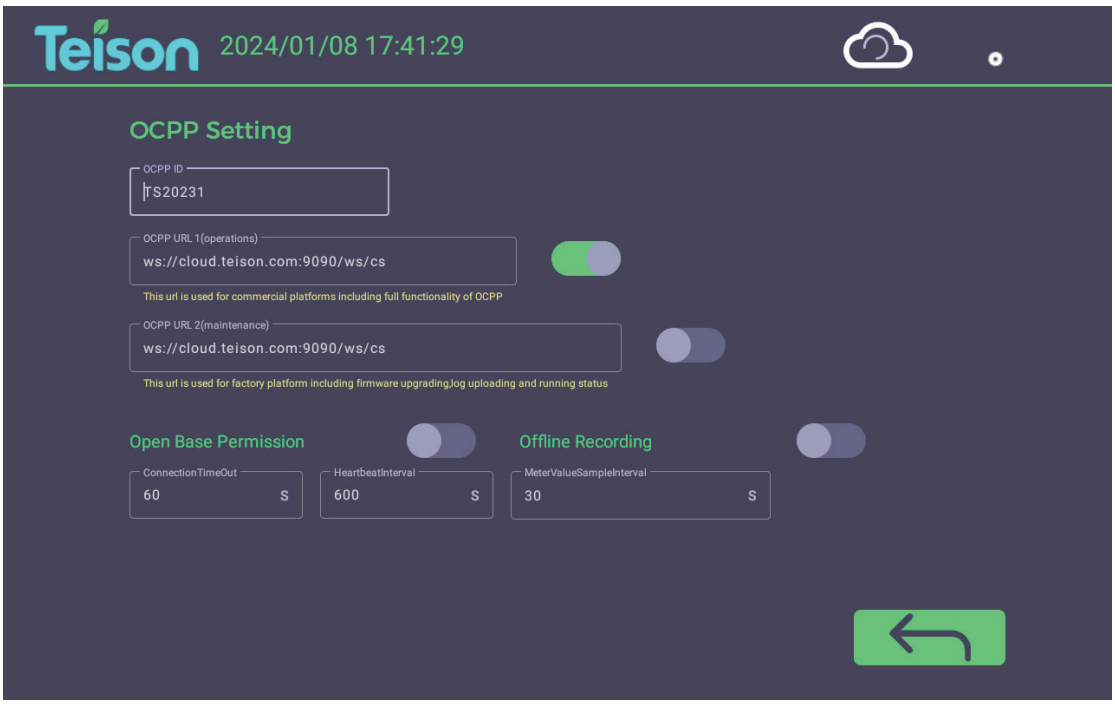
- The charging station configuration includes "advertising playback" and "plug and charge" functions (plug and charge function is a customized function).



- A. The "advertisement playback" function requires:
  （1）. Activate the local playback button
  （2）. Import the video that needs to be played
  （3）. Set the playback path
  （4）. Set the idle time to start playing
  B. Plug and play is a custom feature that regular products do not support. (Need to upgrade the main control board program implementation)

- Charging connector Configuration allows you to set the maximum power, maximum voltage, minimum voltage, QR code, whether to enable Base64 encoding for QR code, and the billing price per kWh.

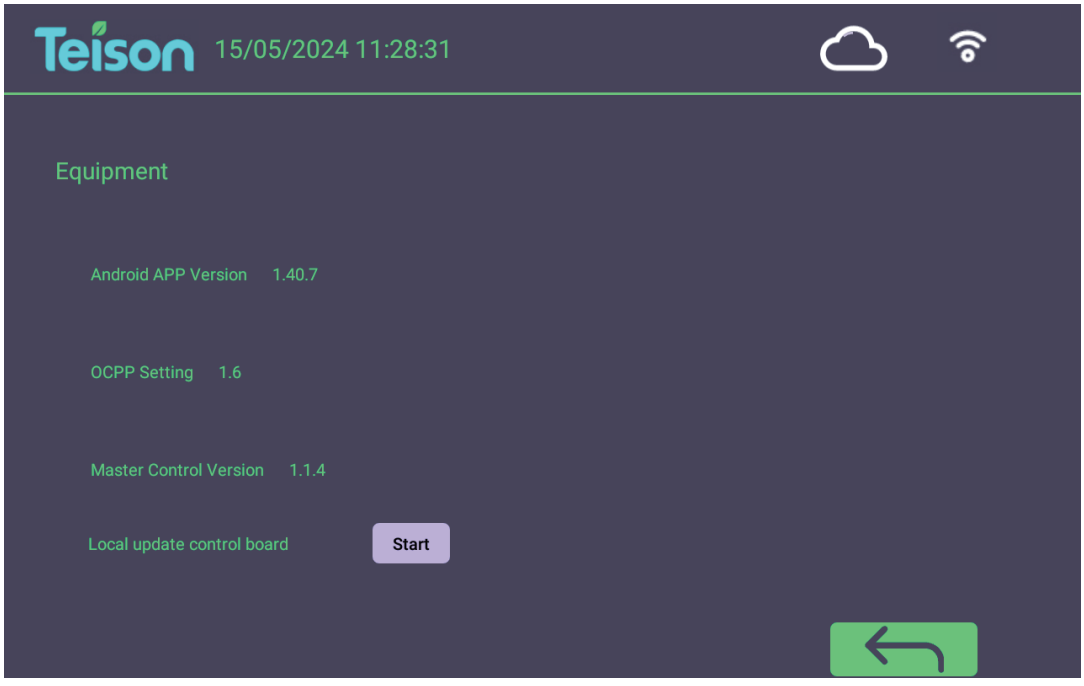
6. OCPP settings include: charging station ID number, UL1 OCPP platform connection address, UL2 OCPP platform connection address, basic identity verification, and offline recording function.



A.Cloud platform connection supports dual platform simultaneous connection. UL1 has functions such as remote control of charging stations, access to charging logs, charging data, charging status, and remote firmware upgrades; UL2 only supports remote firmware upgrade, access to charging logs, and access to charging status. (UL2 connection platform function, UL1 platform must be turned on to work)

B.After completing the settings, click the OCPP Start Button. Return to the main interface to check whether there is a cloud icon displayed.If UL1 and UL2 are successfully connected, two clouds will appear

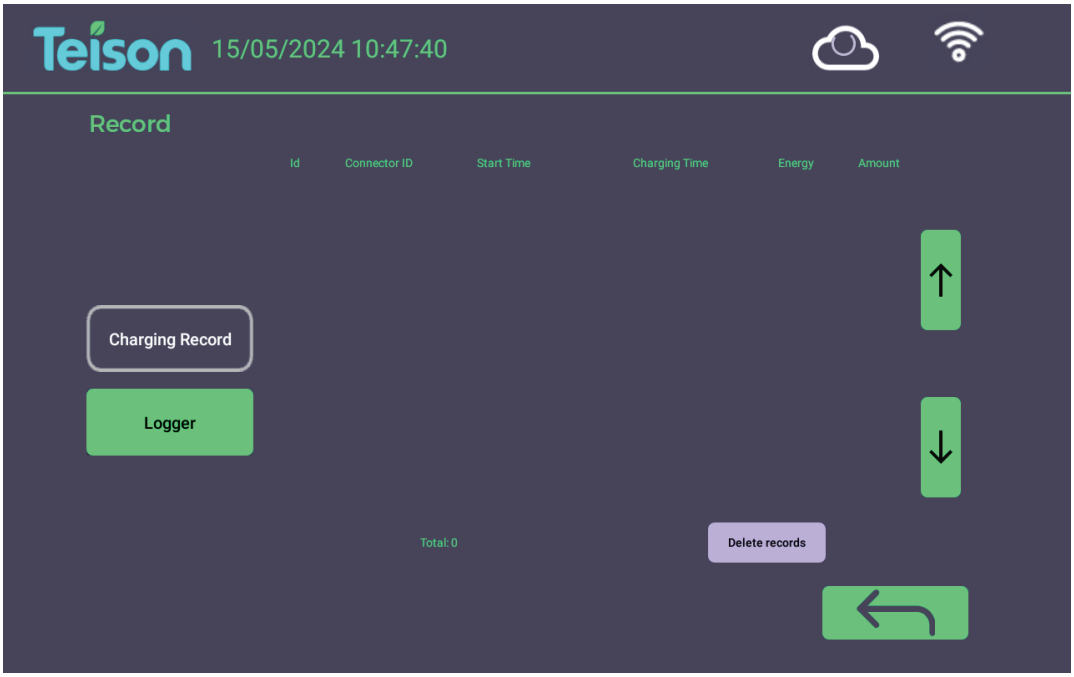
7. Device information: Display Android UI firmware version, OCPP protocol version, main control board version, and local firmware upgrade.

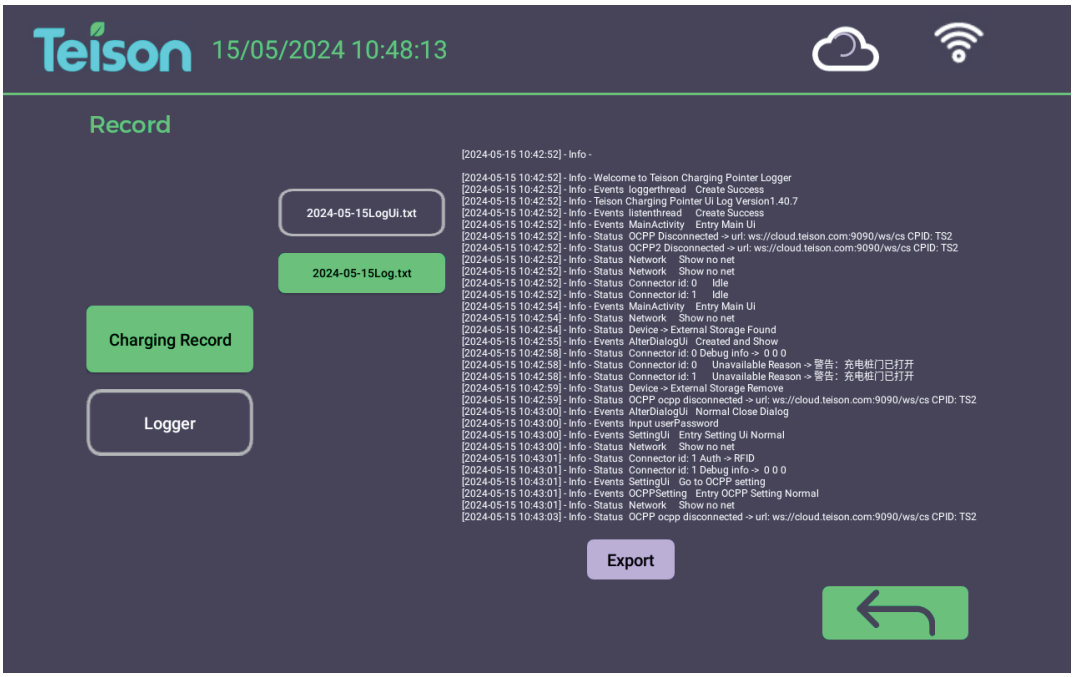


8. Charging records: The device stores charging records and logs

A. Support querying the charging date, charging time, charging power, and charging amount for each order.

B. Support querying charging logs for charging stations and exporting them locally using a USB drive.



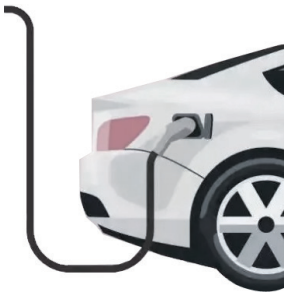


Charging Mode and Method

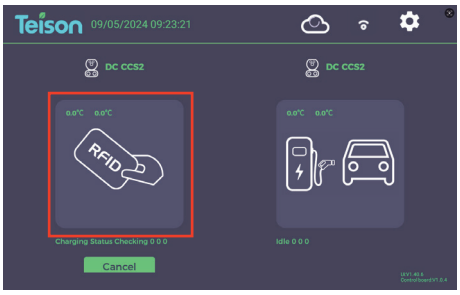
RFID prepaid charging mode

1. Confirm that the device is in normal standby mode as shown below.

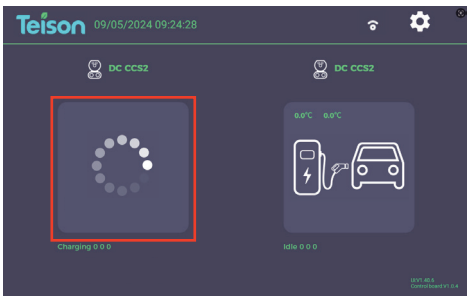
2. Insert the charging gun into the vehicle.



3. Click the start button on the display screen, and the screen will show a swipe signal. Once this interface appears, place the card at the card reader.



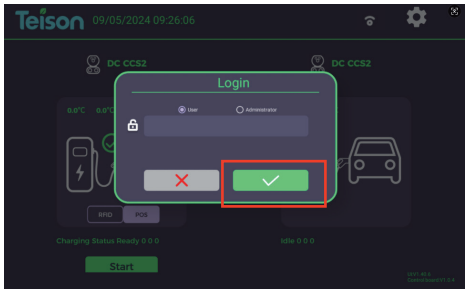
4. The display screen shows the connection status, waiting for the device to connect successfully before starting charging.



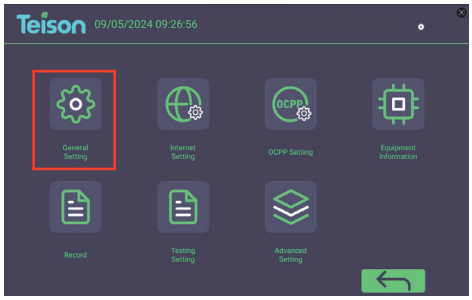
Unverified startup charging

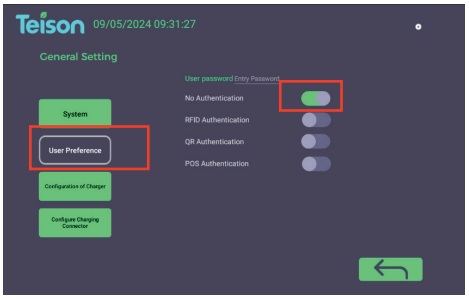
1. Ensure that the device has enabled the unauthenticated mode. Setting steps:

① Click the setting button in the upper right corner to enter the setting interface in user mode;

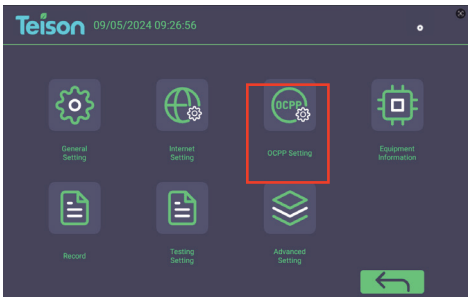


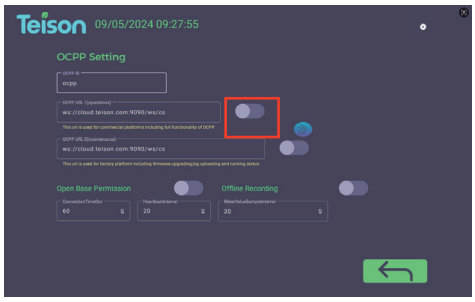
② Click on General Setting; ③ Click on User Preference and then select No Authentication.



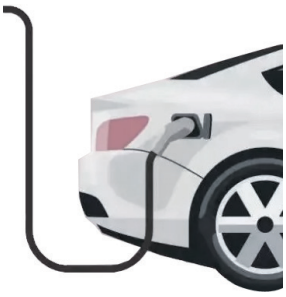


2. Return to the settings interface, click on OCPP Setting, and close the OCPP URL button.





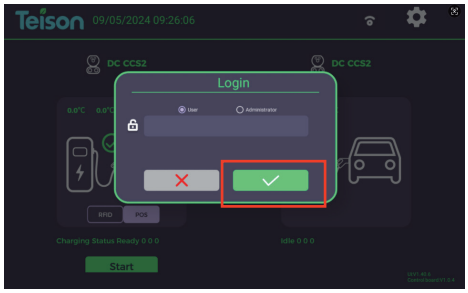
3. After completing the settings, return to the main interface.
4. Insert the charging gun into the vehicle.



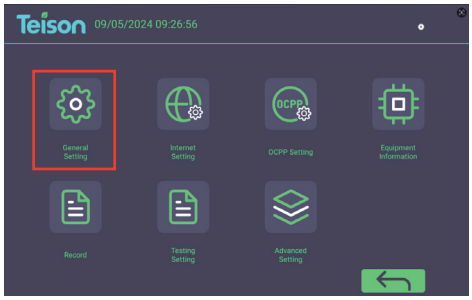
5. Click the start button on the display screen and wait for the device to connect to the vehicle. Once the connection is successful, charging can begin

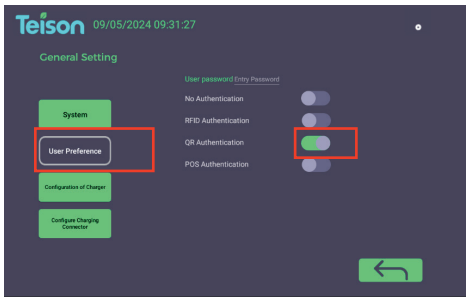
Scan the code on the app to start charging

1. Ensure that the device has enabled the unauthenticated mode. Setting steps:
① Click the setting button in the upper right corner to enter the setting interface in user mode;

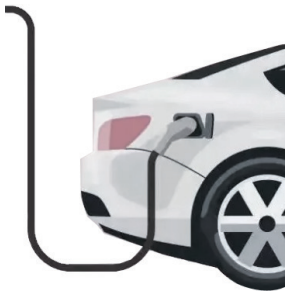


② Click on General Setting; ③ Click on User Preference and then select QR Authentication.



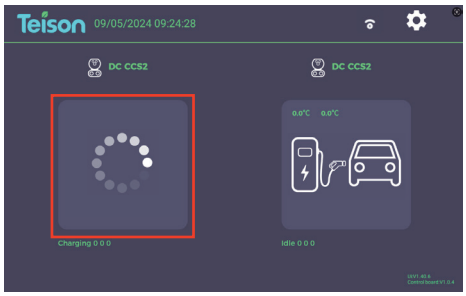


2. After completing the settings, return to the main interface.
3. Insert the charging gun into the vehicle.



4. Click the start button on the display screen.
5. Open the My Teison app and enable the scanning function

6. After scanning the code successfully, wait for the device to connect.
Once the connection is successful, you can start charging



Installation instructions

1. Scope

This manual is specifically for Teison DC model products. Before using the product, please read this manual carefully and ensure that the installation and operation are carried out according to the instructions. Please keep the installation instructions in a safe place for maintenance or reference during operation.

2. Installation preparation

2.1. Installation environment

- This charging station is an outdoor electric vehicle charging station that meets the IP55 protection level and is suitable for installation in dry and less dusty environments.
- The foundation must ensure the stability and safety of the charging station installation position.
- Please ensure that the operating temperature is within the range of -30℃ to +50℃ to ensure that the charging station operates in an optimal state.
- When the charging station is installed in an open-air environment, in order to better improve user experience and satisfaction, it is recommended to arrange a rain-shielding roof above the device to prevent rain from directly falling on the device and facilitate user operation.
- The charging station installation environment should be well-ventilated and away from water sources, heat sources, and flammable and explosive materials. Avoid installing the charging station in an environment with direct sunlight, dust, volatile gas, corrosive substances and excessive salt content.

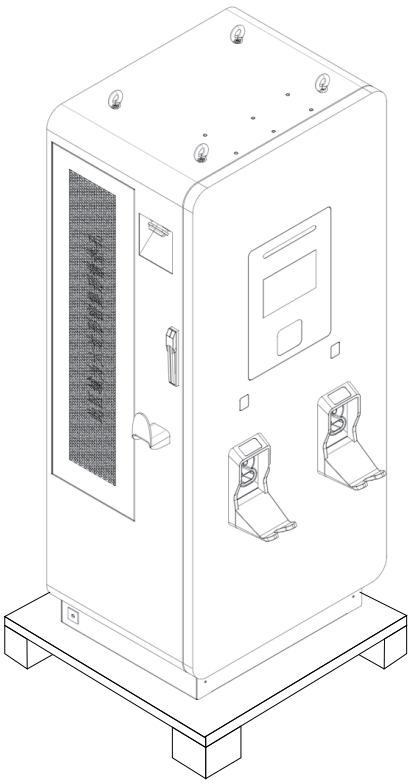
2.2. Installation spacing

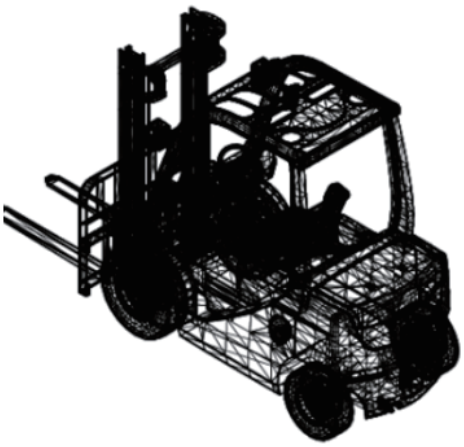
- The foundation must have a certain bearing capacity to support the weight of the charging station and sufficient space to place the charging station.
  Please place the charging station in a reasonable position on the foundation according to the size of the charging station.

- If the site conditions permit, it is recommended to leave more space between the machine and the surrounding device or walls for heat dissipation and maintenance to ensure the stable and efficient operation of the charging station.

3. Handling method

- The charging station can be handled with a forklift. When forking the machine, the center of gravity of the machine should be at the center of the two forks, and the handling process should be kept slow and steady.
- When forking the machine, the center of gravity of the machine should be at the center of the two forks, and the handling process should be kept slow and steady.
- When lifting the equipment with a forklift, please ensure the stability of the fork and keep the left and right balance.
- During the moving process, Please keep the charging station vertical and should not be put down or lifted suddenly.

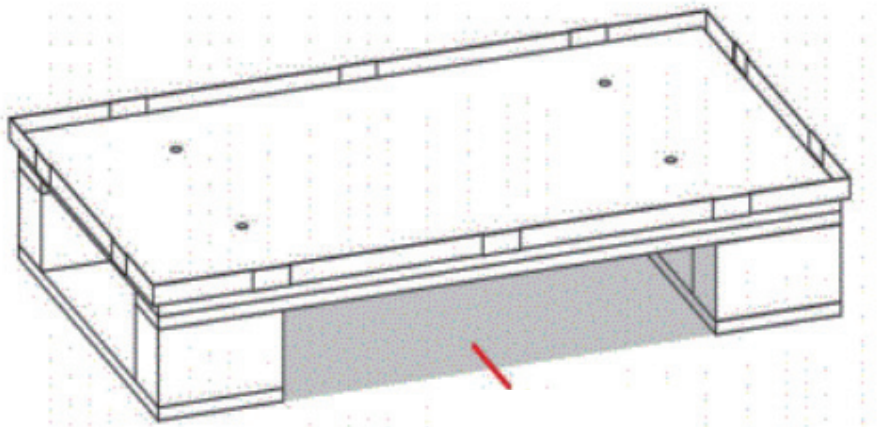




4. Unboxing

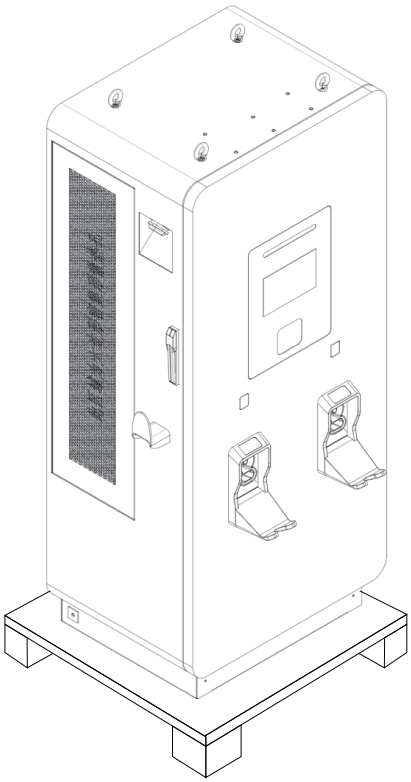
Step 1: Check if the appearance of the device packaging is intact and if there is any transportation damage. If there is any damage, please notify the carrier immediately.

Step 2: Transport the device to the designated location. To prevent the device from tipping over during transportation, when using an electric forklift or a manual forklift for transportation, insert it from the front of the wooden pallet, as shown in the figure below.



Forklift wall insertion position

Step 3: Remove the outer packaging, take out the foam pad and plastic bag, and extract the optional accessories and accompanying materials.



Step 4: Check equipment integrity.

- Inspect the appearance of the machine and check for any transport damage. If any damage is found, please notify the carrier immediately.
- Check the model and completeness of the random accessories against the packing list. If any accessory is found to be missing or the model is incorrect, please make a record on-site in a timely manner and contact the company or local office immediately.

Step 5: After confirming that the equipment is intact, remove the anti-collision plastic protective film on the equipment.

5. Installation steps

In order to facilitate the installation and maintenance of the cables. the cementbase needs to reserve corresponding grooves, as shown in the figure below

Step 1: Select the planned installation site according to the DC chargers size andnstallation distance required between chargers

Step 2: According to the installation hole size, use a percussion drill to drill 4 holeswith a diameter of 16mm and a depth of 70mm on the cement base, as shown below(Size of cement base 1000mm*1000mm*200mm)

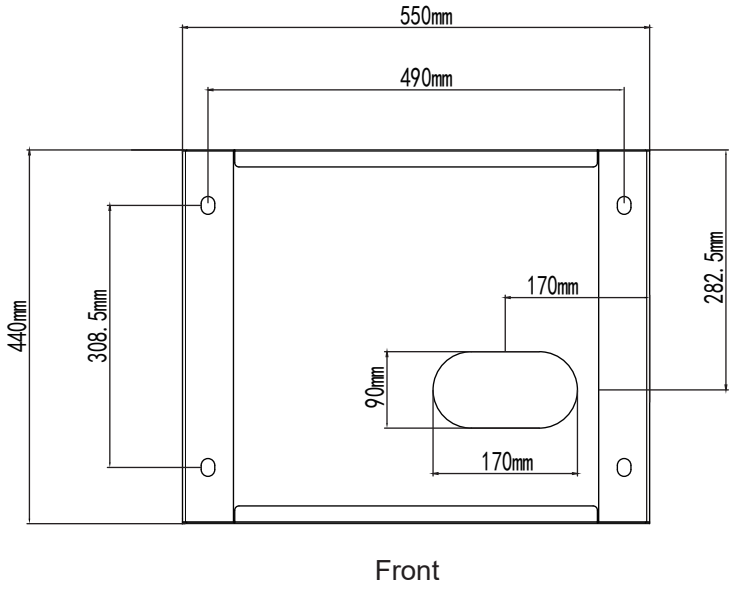


Figure 1： 60kw Installation dimension

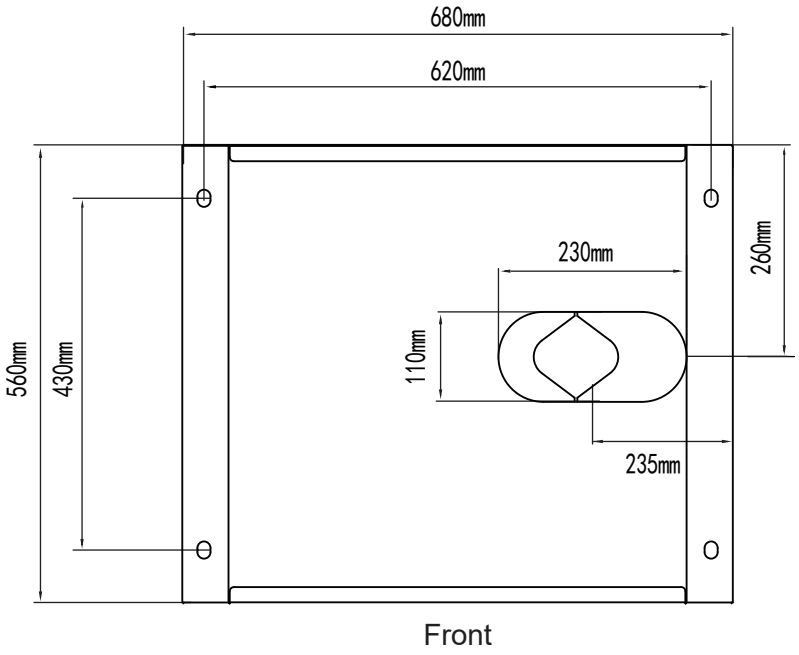


Figure 2：90-240kw Installation dimension

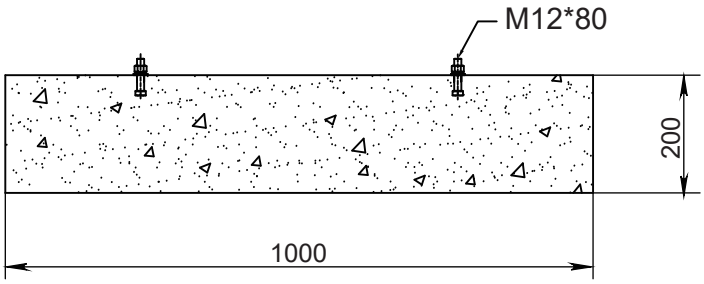
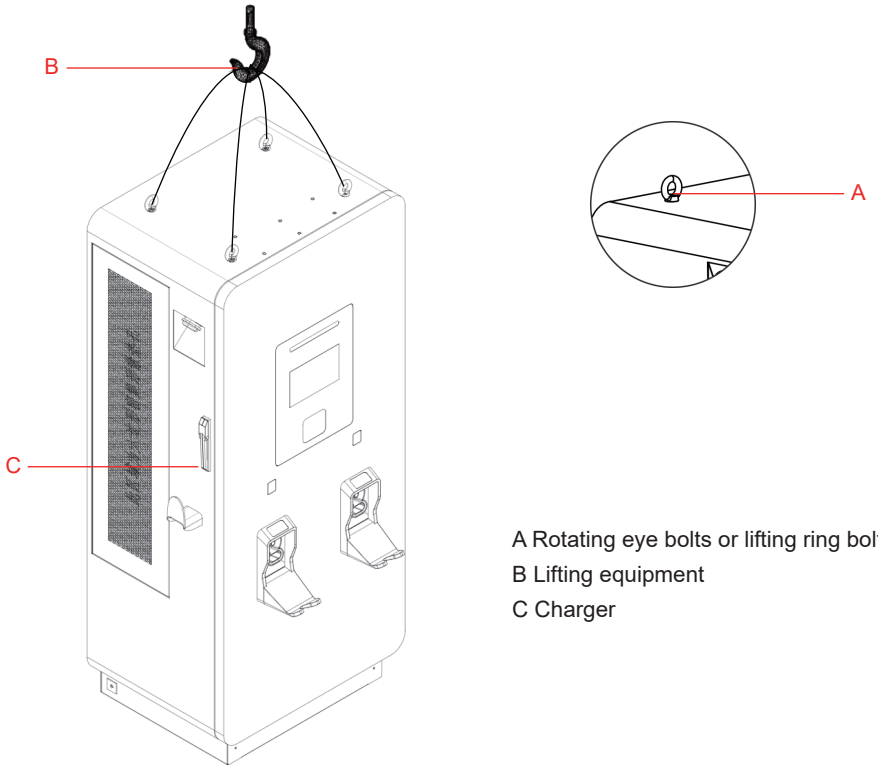


Figure 3：Size of cement base

Step 3: Drive 4PCS M12*80 expansion bolts into the cement base.

Step 4: Use a forklift to move the DC charger from the wooden bracket to the ground, align the mounting holes of the DC charger with the expansion bolts on base, put on 0-12 flat pads and spring pads, then lock. (In order to prevent the charger from falling over, the forklift arm must be inserted from the front or back of the charger when move it to the cement base . During the movement, the tilt angle should not be too large to avoid the slipping. Do not put down or lift suddenly).

Step 5: Hoisting, use hole bolts or eye bolts to tighten and fix the bolt holes at the four corners on the top of charger; the lifting rings are firmly connected with the lifting equipment, and a balanced connection is required; carefully lift the charger to the installation position;



A Rotating eye bolts or lifting ring bolts
B Lifting equipment
C Charger

Step 6: Connect the corresponding incoming cables to complete the installation.

6. Electrical Connection

6.1 Selection of Incoming Line

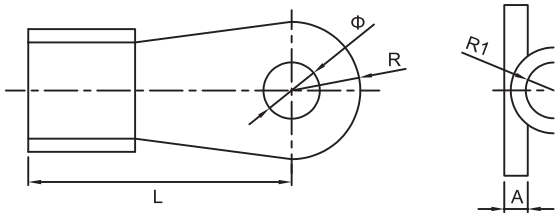
Common selection of incoming line:

Power of charger (NO AC)	Cross section area	Power of charger (AC 22kW)	Cross section area
60KW	wdz-yjv22-0.6/1kv-3×35mm² + 2×25mm²	60KW	wdz-yjv22-0.6/1kv-3×35mm² + 2×25mm²
90KW	wdz-yjv22-0.6/1kv-3×50mm² + 2×35mm²	90KW	wdz-yjv22-0.6/1kv-3×70mm² + 2×50mm²
120KW	wdz-yjv22-0.6/1kv-3×70mm² + 2×50mm²	120KW	wdz-yjv22-0.6/1kv-3×95mm² + 2×70mm²
150/160KW	wdz-yjv22-0.6/1kv-3×95mm² + 2×70mm²	150/160KW	wdz-yjv22-0.6/1kv-3×120mm² + 2×90mm²
180KW	wdz-yjv22-0.6/1kv-3×120mm²+2×90mm²	180KW	wdz-yjv22-0.6/1kv-3×150mm²+2×120mm²
200KW	wdz-yjv22-0.6/1kv-3×150mm²+2×120mm²	200KW	wdz-yjv22-0.6/1kv-3×185mm²+2×150mm²
240KW	wdz-yjv22-0.6/1kv-3×185mm²+2×150mm²	240KW	wdz-yjv22-0.6/1kv-3×240mm²+2×185mm²

6.2. Connector Selection

There are two modes of copper terminal connectors, OT and DT.

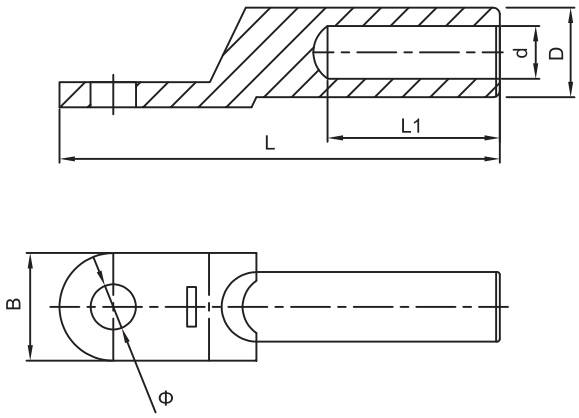
- If it is a flexible cable, it is recommended to use the OT series of wire noses, also known as open wire noses. We recommend using the OT-200A for our electric vehicle charging station. The following figure shows more OT types.



Catalog No.	Dimensiongs(mm)					
	Φ	H	L	R	R1	A
OT-10A	5.2	6	14.5	4.6	2	0.8
OT-20A	6.2	7	17	5.5	2.5	1
OT-30A	6.2	8.2	19	5.8	3.2	1.2
OT-40A	6.2	9	19.5	6.2	3.5	1.2
OT-50A	6.2	9	23	6.5	3.5	1.2
OT-60A	8.2	10	24	7	4	1.4
OT-80A	8.2	11	25	8	4.5	1.5
OT-100A	8.2	12	29	8.5	5	1.5
OT-150A	10.2	12	31	9	5.5	1.6
OT-200A	10.2	14	33	10	6	1.7
OT-250A	10.2	15.5	36	10.5	6.5	2
OT-300A	12.2	16	40	11.5	7	2
OT-400A	14.2	18	43	13	8	2.2
OT-500A	14.2	20	46	14.5	8.5	2.4
OT-600A	16.2	22	50.5	16	10.5	2.8
OT-800A	18.2	26	61	17.5	12.5	3.2
OT-1000A	18.2	33	66	20.5	15.5	3.8

Figure 1-1 OT copper terminal connector

- If it is a hard cable, the cable connector used is the DT model, which is a tubular cable connector. This model is marked by the square of the wire, and the size of the wire nose is selected according to the cross-sectional area of the wire. For example, the wire nose model of a 70mm² cable should be DT-70. The following figure shows more DT types.

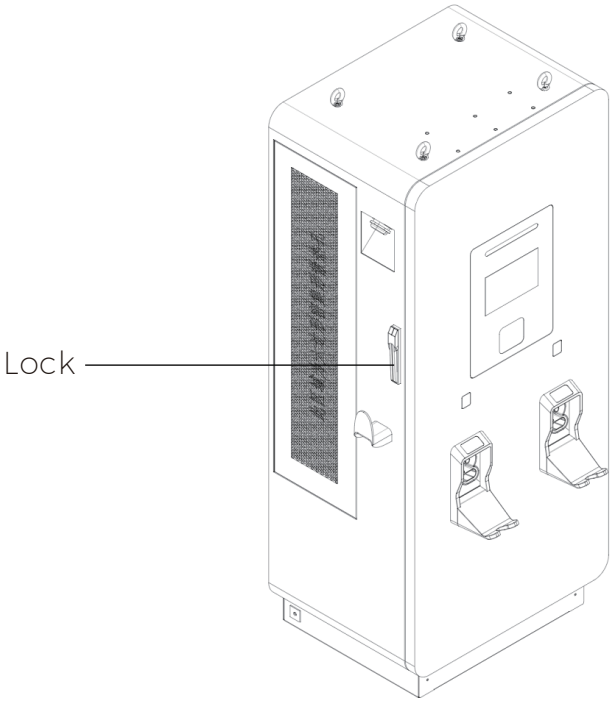


Catalog No.	Dimensiongs(mm)					
	Φ	D	d	L	L1	B
DT-10	8.5	9	5.3	62	28	16
DT-16	8.5	10	6.5	68	30	16
DT-25	8.5	11	7	70	33	18
DT-35	10.5	12	8.58	80	36	20.5
DT-50	10.5	14	9.5	85	38	23
DT-70	12.5	16	11.5	95	43	26
DT-95	12.5	18	13.5	104	46	28
DT-120	14.5	20	15	112	49	30
DT-150	14.5	22	16.5	120	51	34
DT-185	16.5	25	18.5	125	55	37
DT-240	16.5	27	21	136	60	40

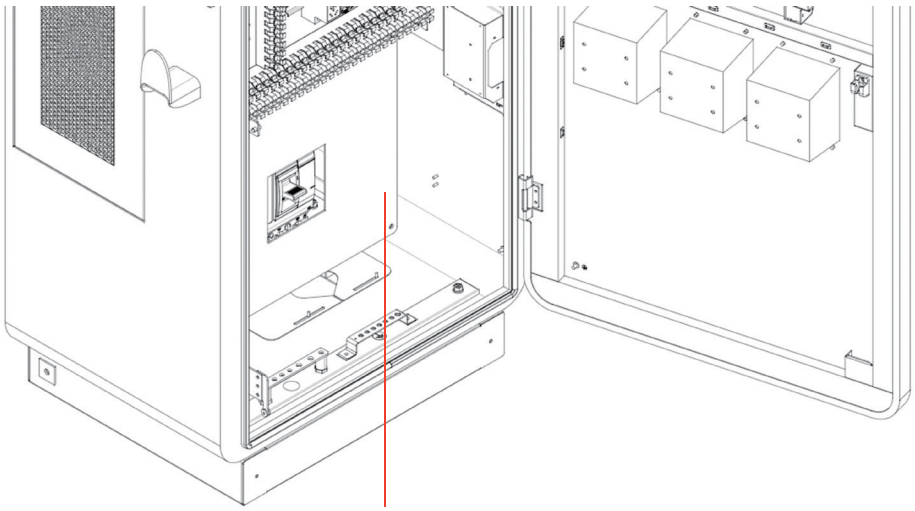
Figure 1-2 DT copper terminal connector

6.3. Wiring Steps

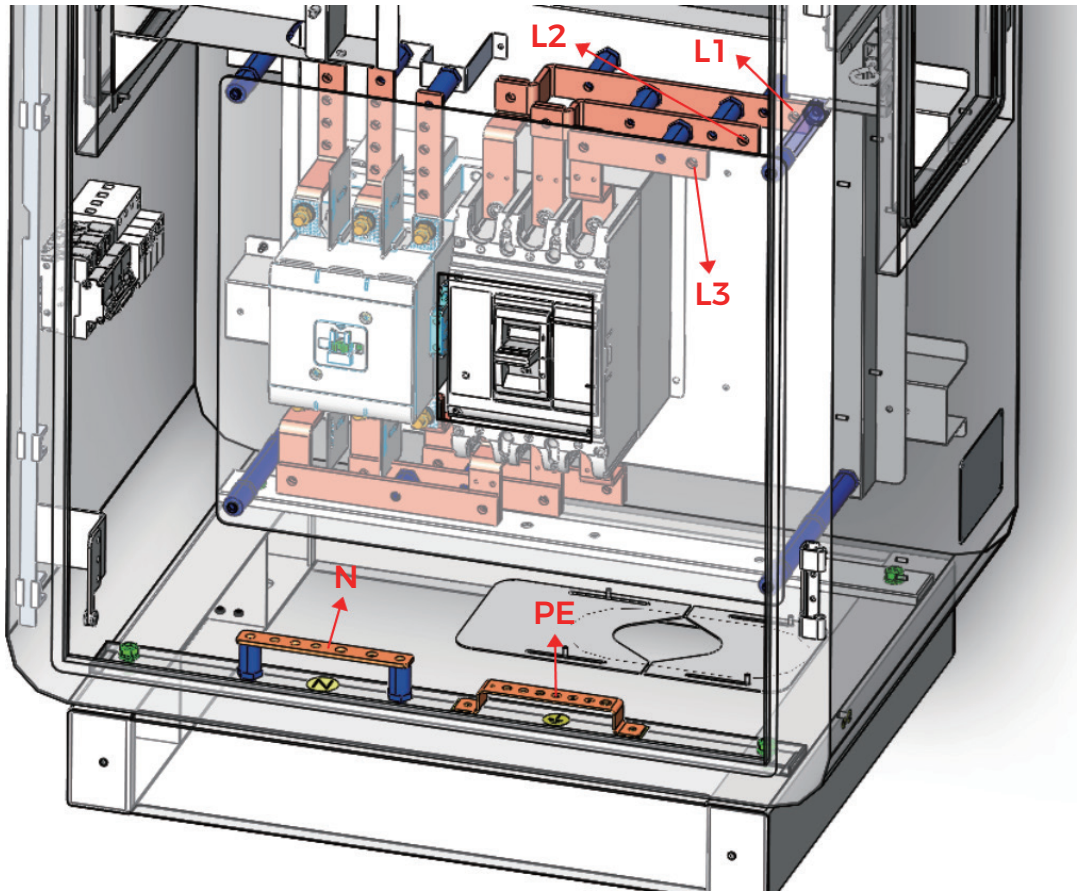
Step 1: Use the key to unlock the charging station door lock, the lock position is shown in the following figure.



Step 2: Open the charging station door panel and thread the mains input cable out of the trench, and connect them respectively to the L1/L2/L3/N phase below the AC circuit breaker. The wiring diagram is shown in the following figure.



Remove the acrylic protective plate before wiring



Step 4: Pull the ground wire out of the incoming cable trench and connect it to the grounding copper busbar. The position of the grounding copperbusbar is shown in the following figure. Make sure that the ground wire is connected to the ground wire in the area, and ensure good grounding, and ensure that all ground wires and grounding devices are reliably grounded to avoid electrification of the cabinet shell.

Step 5: After the wiring is completed and all the connections are confirmed to be correct, seal the cable gap with fire-proof mud.

Step 6: After the installation of the charging station is completed, the protective film of the touch screen can be torn off if necessary.

Teison Profile

Teison Energy Technology Co., Ltd. is a high-tech enterprise specializing in new energy products. With an industry-leading research and development team and advanced automotive charging technology, we provide solutions for energy management, load balancing, commercial operations, data transmission, remote upgrades, and maintenance management in various application scenarios. Our aim is to offer users intelligent and integrated solutions.

Teison products comply with international standards and include portable charging series, home smart charging series, and high-power fast-charging and ultra-fast DC charging series for commercial operations. They are certified with OCPP 1.6J certification by the OCA Alliance, and have obtained CE, CB, WEEE, UKCA, TR25, and AZE certifications from TUV Rheinland in Germany, as well as the State Grid 16949 certification.

As a smart charging expert, Teison products are sold globally and has established distribution points in over 50 countries.Teison prioritizes safety and ensures product quality as a crucial guarantee for safety. We strive to create aesthetically pleasing, high-quality, and safety-friendly charging solutions for users. Let us together enjoy the wonderful life created by Teison technology.

Factory history

2018

Teison brand established，committed to creating the most reliable charging solution for global customers.

2019

1. Built R&D team
2. Developed LVD+EMC TUV-certified OCPP full-featured charging station

2020

1. Established a new 4000m² production facility
2. Developed full-featured OCPP for AC series
3. Awarded national-level high-tech enterprise

2021

1. Developed 20-40kW OCPP DC charging station
2. Developed 60kW-480kW integrated DC charging station
3. Achieved top new energy export status in Yangzhou

2022

1. Expanded production facility to 8800m²
2. Developed a flexible separate power module and dispenser solution, along with high-power liquid-cooled charging stations
3. Ranked among the top 10 most popular Chinese charging station brands globally

2023

1. Continuous upgrading of DC charging station (POS, advertising display, cable management).
2. Attainment of OCPP OCA certification.
3. Full-scale entry into the Southeast Asian and South American markets.
4. Commencement of overseas subsidiary establishment.