

Electric Vehicle DC Charger

Installation Instructions EVD100/030(NA)

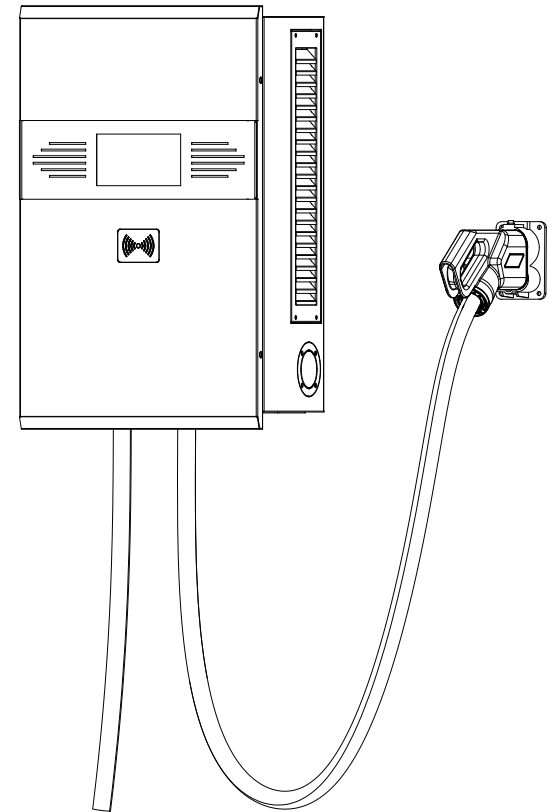


TABLE OF CONTENTS

1. IMPORTANT SAFETY INSTRUCTIONS 2

1.1 Overall Warnings & Cautions
 1.2 Installation Requirements
 1.3 Daily Maintenance

2. PRODUCT INTRODUCTIONS..... 4

2.1 Introductions
 2.2 Dimensions
 2.3 Basic Interface
 2.4 Direction of Cooling Airflow
 2.5 Light Codes
 2.6 Specification
 2.7 Charging Curve

3. INSTALLATION..... 11

3.1 Unpacking
 3.2 Gather Tools
 3.3 Installation Procedure

4. OPERATE YOUR DEVICE..... 16

4.1 Starting Up
 4.2 User Authorization
 4.3 Prepare for Charging
 4.4 In Charging
 4.5 Stop Charging
 4.6 Finish Charging

5. TROUBLESHOOTING AND WARRANTY..... 23

5.1 General Troubleshooting
 5.2 Warranty

! WARNING & CAUTION

1. Important Safety Instructions

1.1 Overall Warnings & Cautions

- ! WARNING:** To avoid fire, injury or death, carefully read and follow the instructions during installation, operation and maintenance.
 - **DO NOT** put fingers into the electric vehicle connector.
 - **DO NOT** use this product if the flexible power cord or EV cable is frayed, insulation-broken, or any other signs of damage.
 - **DO NOT** use this product if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage.
 - **DO NOT** remove cover or attempt to open the enclosure because of risk of electric shock.
- ! WARNING:** This device should be supervised when used around children.
- ! WARNING:** This device must be grounded.
- ! WARNING:** To avoid a risk of fire or electric shock, do not use this device with an extension cord.
- ! WARNING:** The suitability of the use of flexible cord in accordance with CE code, part I, rule 4-012, is to be determined by the local inspection authority.
- ! WARNING:** To reduce the risk of fire, connect only to a circuit provided branch circuit over-current protection in accordance with the CSA C22.1–15 Canadian Electrical Code, Part 1 (Canada) or NOM-001-SEDE Electrical installations (utility) (Mexico) or ANSI / NFPA 70 National Electrical Code (USA).

⚠ WARNING & CAUTION

1.2 Installation Requirements

- ⚠ **WARNING:** Disconnect electrical power prior to installing the charging station.
- ⚠ **WARNING:** Be sure to preview the user manual and ensure local building and electrical codes are reviewed before installing the DC charger.
- ⚠ **WARNING:** The DC charger should be installed by a qualified technician according to the user manual and local safety regulations.
- ⚠ **CAUTION:** Use appropriate protection when connecting to the main power distribution cable.
- ⚠ **CAUTION:** Please keep the charger in a clean area with low humidity.

1.3 Daily Maintenance

- ⚠ **CAUTION:** Avoid moisture or water in the charger. If there is water or moisture ingress in the charger, it is necessary to immediately power off to avoid immediate danger, and notify the professionals to carry out maintenance before next use.
- ⚠ **CAUTION:** Please use the charger properly. Do not hit or press hard on the enclosure. If it is damaged, please contact a professional technician.
- ⚠ **CAUTION:** Avoid placing the charger near hot objects and at high temperature locations and away from dangerous substances such as flammable gases and corrosive materials.
- ⚠ **CAUTION:** Do not put heavy objects on the charger to avoid danger.

2. Product Introductions

2.1 Introductions

2.1.1 function

Charge

- Quickly and accurately respond to the current and voltage requirements of the vehicle-side battery management system (BMS) during normal charging through charge control pilot.

Metering

- Dc meter metering function, Accuracy 1%

Communication

- Support Ethernet access, LTE, and wireless communication networking and other access methods.

Protection

- OVP, UVP, OLP, Short Circuit Protection, Ground Fault Protection, OTP, Insulation Fault Protection, RVP, SPD, Emergency Stop, RCD

Payment

- The charger provides charging time and power information to the operation background, and support various payment methods such as card and code.

Self-inspection and self-repair

- The charger performs regular system self-inspection every day. When power-on operation, the charger first conducts a self-inspection to check the working environment of the equipment, power supply, data storage space, etc.
- Fault information is recorded and uploaded to the higher-level monitoring management system.
- Automatic monitoring of the working condition of key components, including but not limited to self-test of charging gun connectivity, contactor adhesion, power unit status, etc.

Remote IOT function

- The charger has the function of IOT with the equipment cloud platform to monitor numerous parameters in real time. It can provide perfect remote diagnosis, remote service and remote upgrade service, which can timely find and locate the actual problems in the actual operation process, solve the problems of end users and realize unattended operation.
- Diagnosis includes: whether the charging pile cabinet door is opened, whether the emergency stop button is pressed, whether the leakage protector is disconnected, whether the vehicle is connected, whether the gun head is locked, whether the gun head temperature is too high, whether the insulation detection is normal, whether the vehicle communication protocol is correct, and the errors reported by the vehicle.

2.1.2 Features

Safe

- It is equipped with pre-charge protection, main circuit safety detection, remote diagnosis management and other safety mechanisms.
- It has SPD, over-voltage, over-current, short-circuit, connection failure, emergency stop and other basic protection measures.
- Perfect charging protection function and mechanism effectively protect personnel safety, prevent vehicle overcharging and ensure operational safety.

Smart

- Intelligent IOT connection between terminal charging pile and cloud platform enables it to realize real-time sensing of more than 100 underlying operating parameters.
- Remote diagnosis, remote reset, and remote upgrade. It can diagnose and repair faults online to realize unattended.
- 200-1000V of wide range to charge various EVs.

Convenient

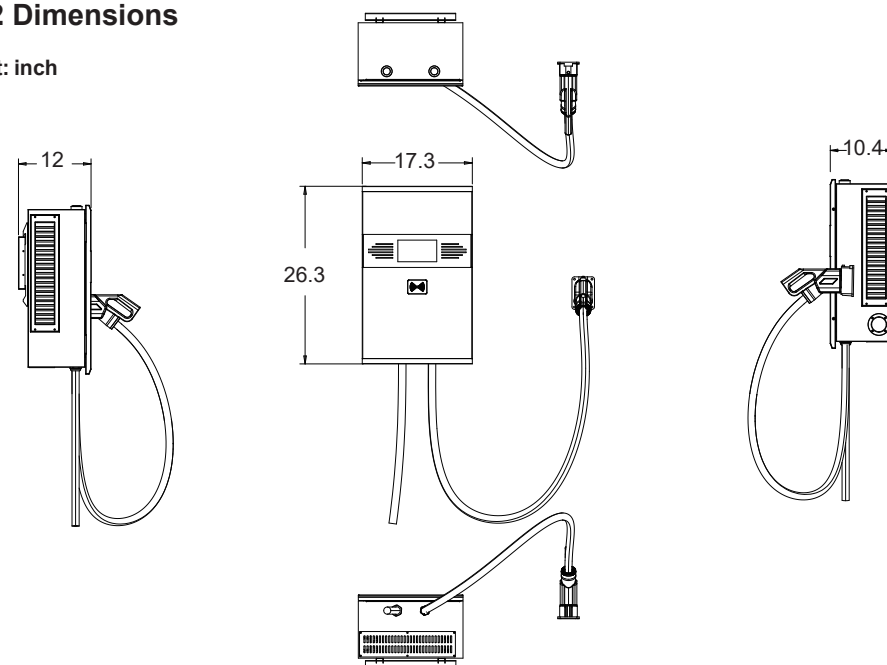
- Wireless or wired communication mode, flexible networking
- 7 "touch screen LCD display, friendly interactive interface
- DIN70121 Plug and charge function
- Pull-out power module, easy to maintain

2.1.3 Applications

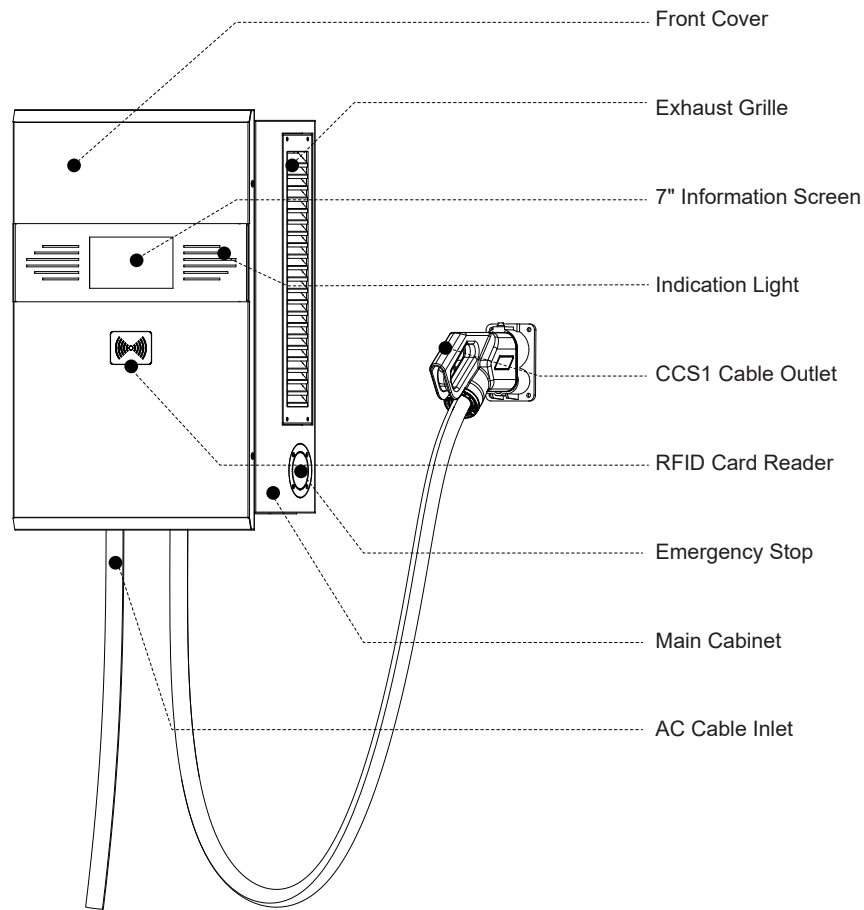
- Public and private parking areas
- Community parking areas
- Parking areas of hotels, supermarkets and shopping malls
- Workplace parking areas
- Charging stations
- Highway rest areas

2.2 Dimensions

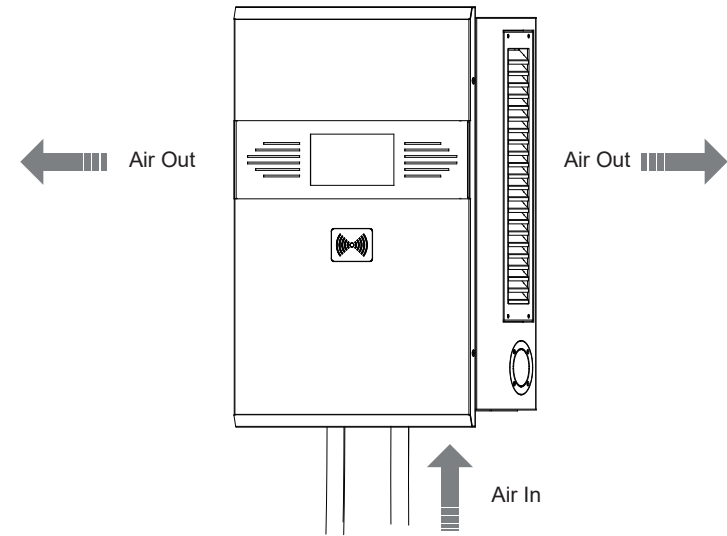
unit: inch



2.3 Basic Interface



2.4 Direction of Cooling Airflow



2.5 Light Codes

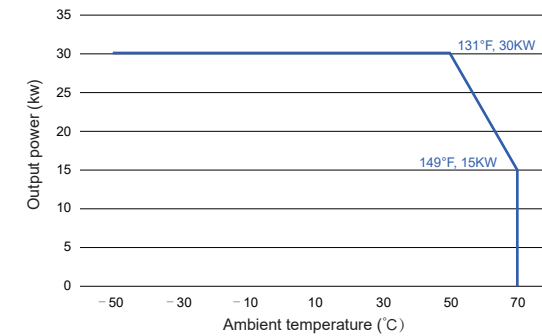
Status	LED
Stand by	Solid Green
Charging	Green Blinking
Finished charging	Solid Green
Fault	Solid Red

2.6 Specification

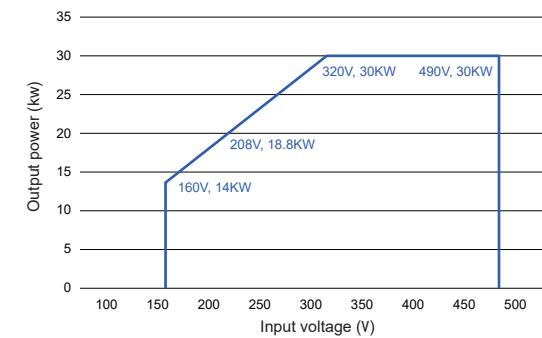
AC Input	Number of phase / wire	3ph / L1, L2, L3, N, PE
	Voltage Rating	480 Vac (+10%, -15%)
	Max. Input Amperage	40A
	Frequency	50~60Hz
	Power factor	PF≥0.98@Rated load
	Efficiency	>96%
DC Output	Maximum Power	30KW
	Voltage Operating Range	200-1000V
	Maximum Current	80A
	Connector and Cable	CCS1 with 18ft cable
Function		
EV Communication	DIN 70121	
User Authentication	Plug & Play / RFID / QR Code	
Display	7 inch touch screen	
Network	Ethernet, LTE, Wi-Fi	
Connectivity	OCPP 1.6 J	
Protection & Standard		
Certificate	ETL, FCC	
Safety Compliance	UL2202, UL2231-1, UL2231-2	
Multiple Protection	OVP, UVP, OPP, OTP, SPD, RCD, IMD, OCP	
Warranty	2 years	
Environmental		
Storage Temperature	-40°F to 158°F	
Operating Temperature	-22°F to 122°F	
Anti-vandalism	IK10(not include LCD & RFID cover)	
Ingression	NEMA 3R	
Relative Humidity	Up to 95% non-condensing	
Cooling	Forced Air	
Operating Noise Level	≤65dB	
Altitude	≤6561ft	

2.7 Charging Curve

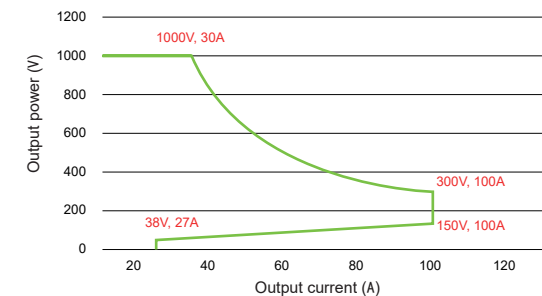
2.7.1 Ambient temperature power limit curve



2.7.2 Input voltage power limit curve

















2.7.3 Output external characteristics






3. Installation

3.1 Unpacking


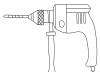


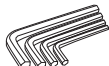


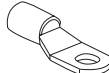



Check the box to ensure you have this installation guide and these parts:

No.	Type	Quantity	Diagram
1	Charger	1	
2	Wall-Mounted Bracket	1	
3	Expansion Bolt (M7)	8	
4	Bolt (M5x45)	4	
5	M5 Washer	4	
6	M5 Spring Washer	4	
7	Bracket	2	
8	Bolt (M8x16)	6	
9	M8 Washer	6	
10	M8 Spring Washer	6	
11	Wall-Mounted Bracket	1	
12	Gun Holder	1	
13	Bolt (M6x20)	4	
14	M6 Washer	4	

15	M6 Spring Washer	4	
16	M6 Nut	4	
17	RFID Card	3	

3.2 Gather Tools

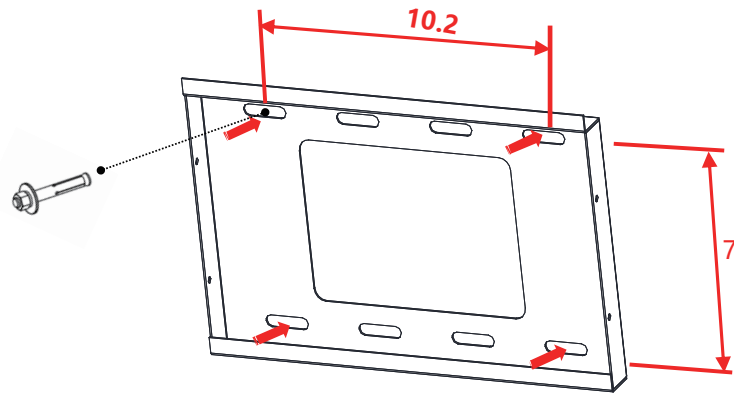
Recommended Tools for Installation

No.	Type	Quantity	Diagram
1	Pencil or Marker		
2	Machine Drill		
3	Hammer		
4	Shifting Wrench	8" (24mm)	
5	Ball-Head Hex Key	2.5mm and 5mm	
6	Wire Stripper		
7	Voltmeter or Digital Multi-meter		
8	Terminal		
9	Crimping Pliers for Ring Terminal		
10	Electrical Tape	Black / 15mm Width	
11	Level Ruler		

3.3 Installation Procedure

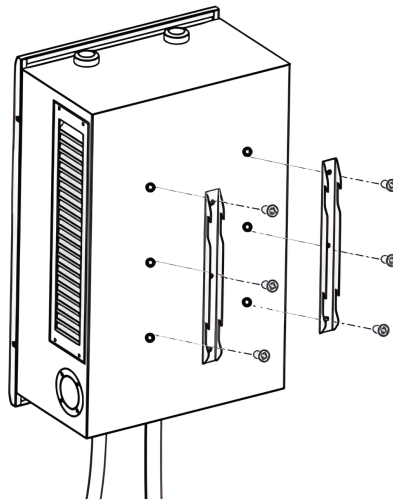
STEP 1

Attach 4 pcs M7 expansion Bolts to the wall-mounted bracket. (Unit: inch)



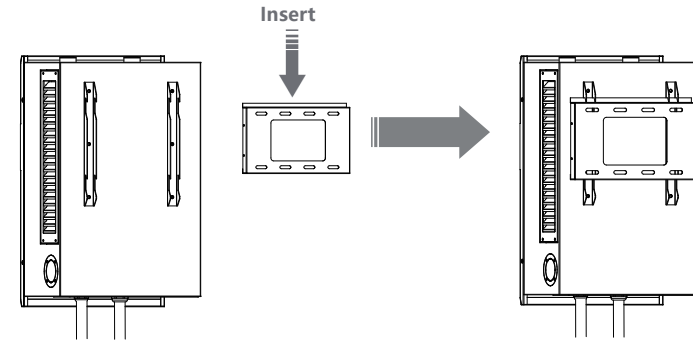
STEP 2

Fix the bracket on the charger with 6 pcs M8*16 Bolts.



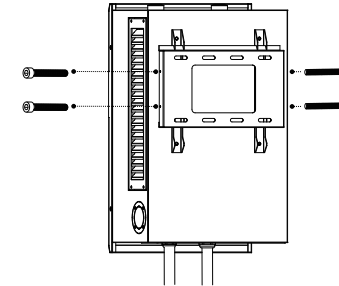
STEP 3

Install the two brackets on the rear side of the charger into the grooves on the wall-mounted bracket.



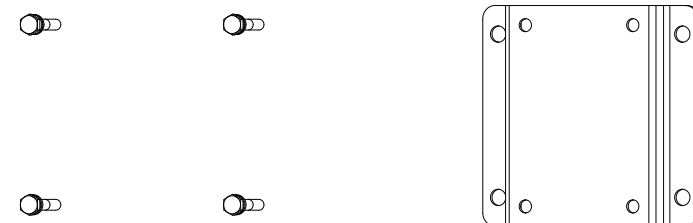
STEP 4

Fix the charger with 4 pcs M5x45 Bolts through the side of the wall-mounted bracket.



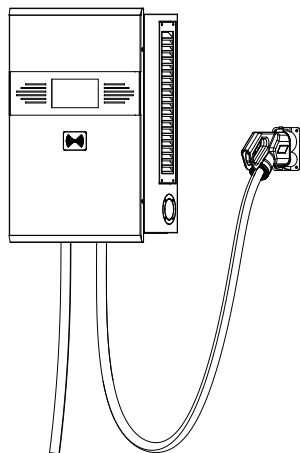
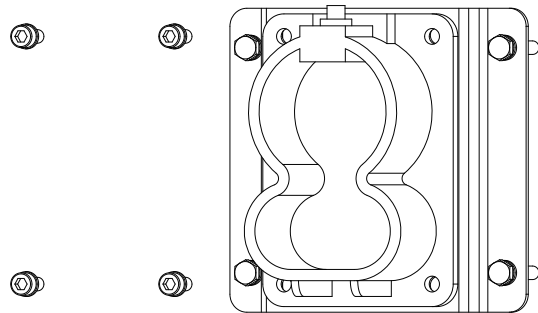
STEP 5

Attach 4 pcs M7 expansion Bolts to the wall-mounted bracket.



STEP 6

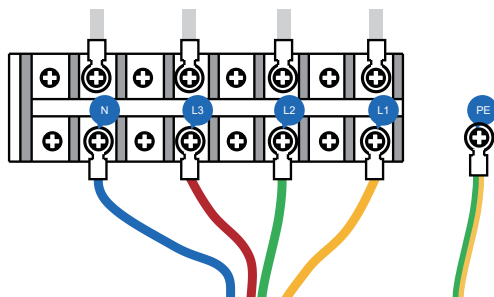
Fix the Gun Holder on the wall-mounted bracket with 4 pcs M6x20 Bolts.



STEP 7

Installing Cables

1. Fasten PE wires onto the connectors on the cabinet.
2. Fasten L1, L2, L3 and N wires onto the connectors on the AC copper busbar.



4. Operate Your Device

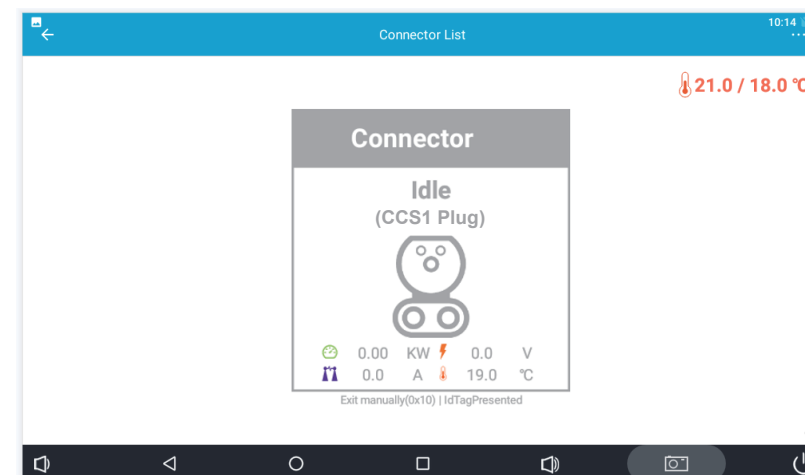
4.1 starting up

STEP 1

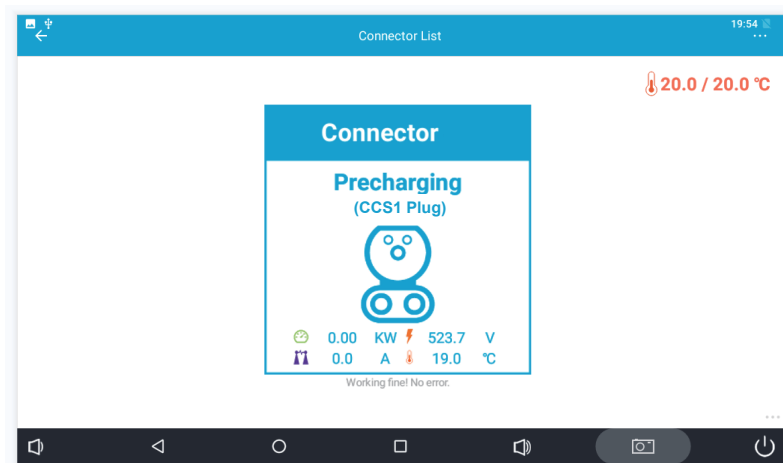
System Initialization.



Waiting For Plug in Connector.



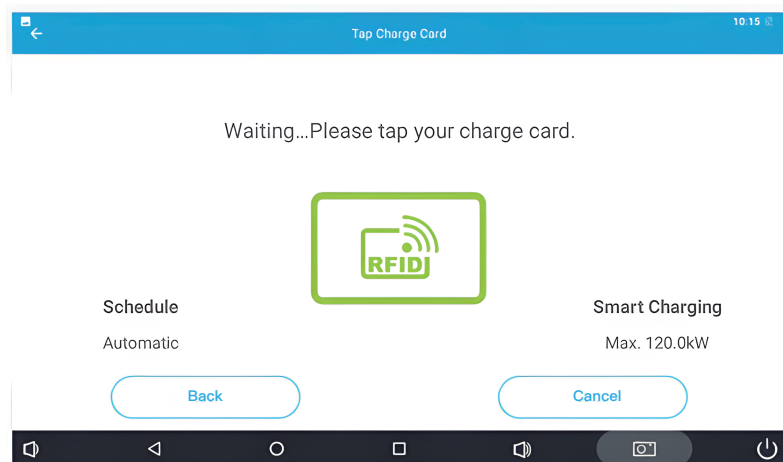
Plug in DC Charging Connector.



4.2 User Authorization

STEP 2

Model1: Use RFID Card.



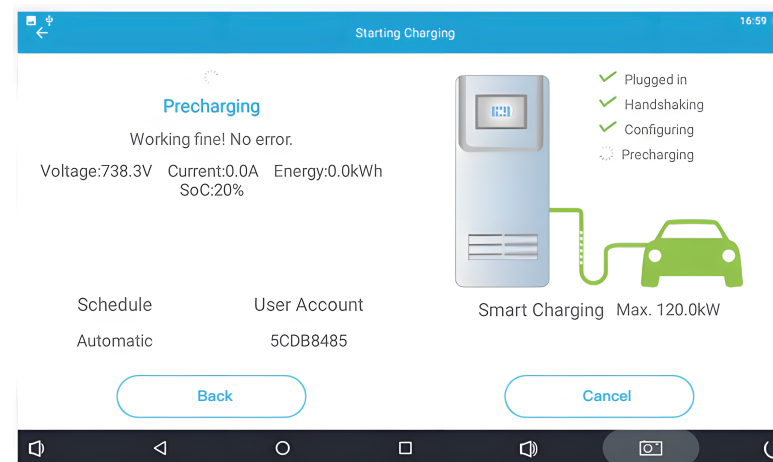
Model2: Scan QR code.



4.3 Prepare for Charging

STEP 3

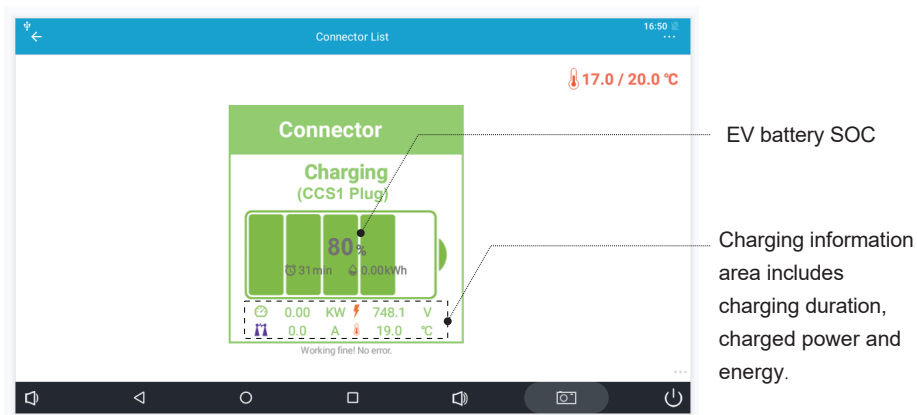
After authorization and plug-in process, the charger will start communicating with the vehicle.





4.4 In Charging

STEP 4

- After successful communication with the car, enter the formal charging state.
- Charging respond to the needs of BMS in real time.
- The screen shows the charging progress.



 It is very dangerous to remove the gun during the charging process, must prohibit!

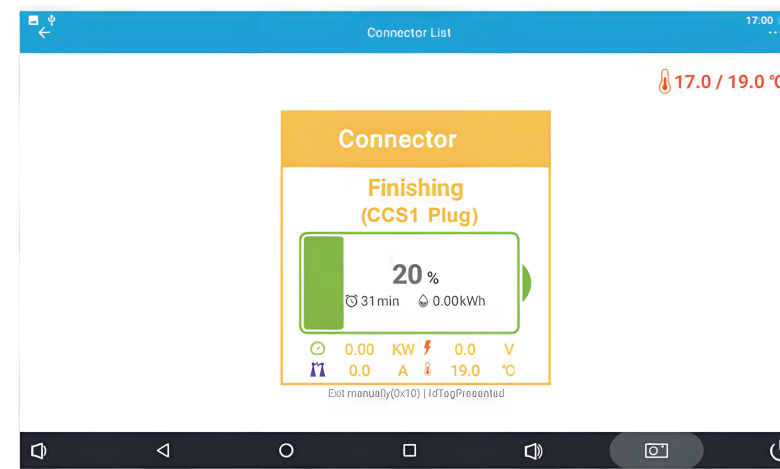
 There is a risk of arc burn when forced to draw a gun.

4.5 Stop Charging

STEP 5

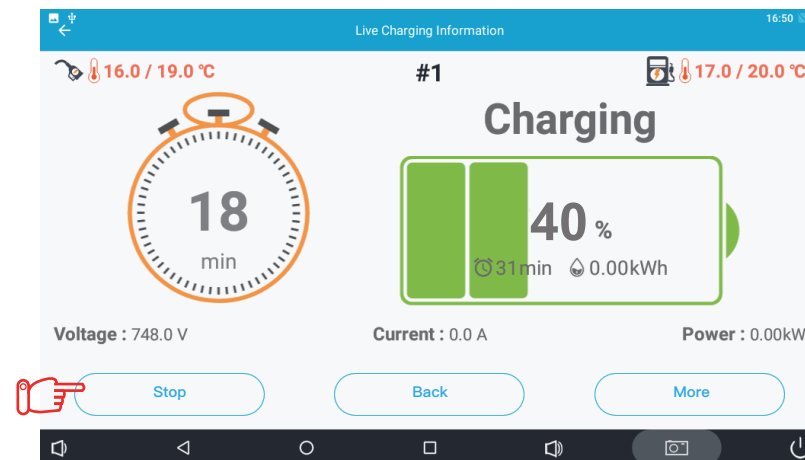
state 1:

When the battery has been fully charged or reaches the limit of the setting it will stop charging automatically and go to the next process.

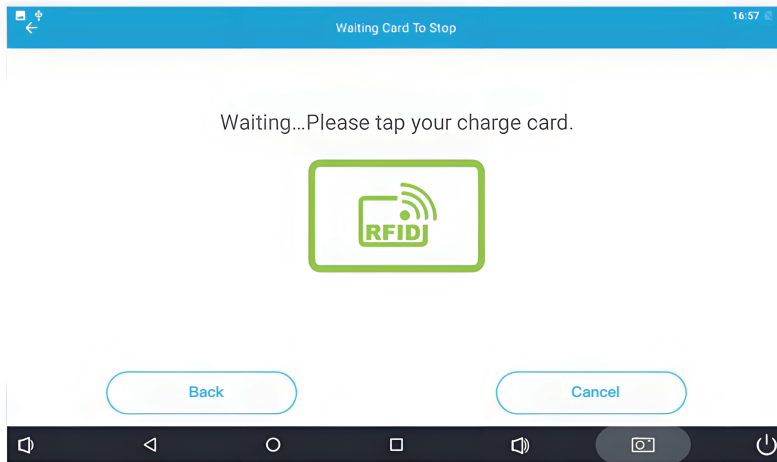


state 2:

Tap the Stop button on the screen.



User also can tap the RFID or mobile app to stop charging.



state 4:

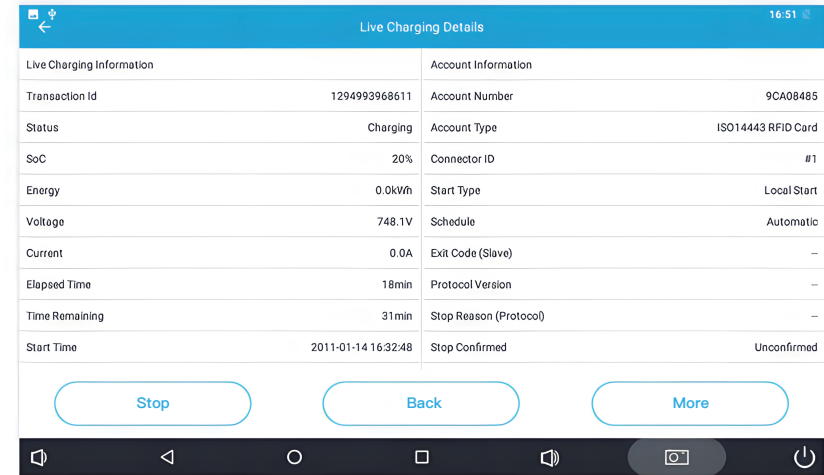
If an emergency occurs push the Emergency Stop Button to stop charging immediately.



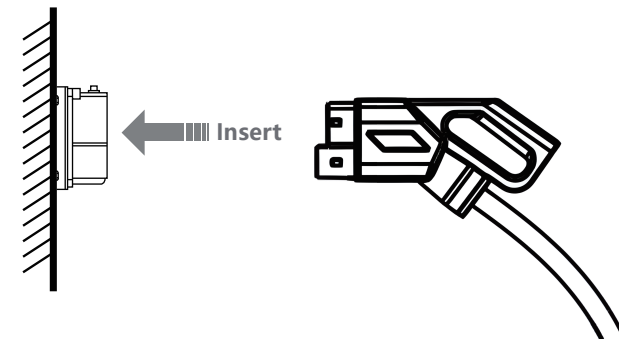
4.6 Finish Charging

STEP 6

When charging is finished, your order details will appear.



Unplug the charging connector from charging inlet of the EV and return the charging connector to charging cable holder.



5. Troubleshooting and Warranty

5.1 General Troubleshooting

NO.	Fault phenomenon	Solution
1	No display	<ul style="list-style-type: none"> ● Open the rear door to check the power supply wiring and contact. ● Open the front door to check the touch screen 2-pole power connector contact. ● Open the rear door and check the 10A fuse at the bottom of the cabinet by multimeter.
2	Unable to charge	<ul style="list-style-type: none"> ● Check the emergency stop button. If it is pressed, release it in the direction of the arrow. ● Check the charging connector is in a good contact to EV. ● Open the front door and observe whether the POWER indicator of the power module is always light. ● Open the rear door and check whether the input power of the power module is in a good contact. ● Check the corresponding circuit breaker of power module at the bottom of the cabinet tripping or not.
3	No output under charging process	<ul style="list-style-type: none"> ● Open the rear door and check the corresponding DC contactor failure of the charging connector by multimeter. ● Open the rear door and check the corresponding fuse of the charging connector by multimeter.
4	Insulation error	Check whether the insulation of the DC bus is in a normal status.
5	Electricity meter communication failure	Open the rear door and check whether the RS485 connector of the meter is in good contact.
6	Upriver power supply tripping frequently	<ul style="list-style-type: none"> ● Check whether the upriver circuit breaker is in a good condition. ● Replace the upriver circuit breaker to a larger rated current if the rated current is too small.
<p>Warning: Withdraw the charging connector before electrical maintenance work! Be sure to cut off the circuit breaker of the charger cabinet and the upriver circuit breaker before electrical maintenance work!</p>		

5.2 Warranty

- The warranty period for this charger is two years.
- During the warranty period for any malfunction under normal use according to the User Manual (to be determined by certified maintenance technicians of sellers), the product shall be repaired free of charge. Except for the following situations, the charger shall be subject to the above warranty terms:
 1. The warranty certificate cannot be provided or the contents of the warranty certificate are modified or inconsistent with the label indication of the repaired product.
 2. Those who are unable to provide valid proof of purchase.
 3. Those who exceed the manufacturer's specified warranty period.
 4. Those who damage the product due to not following the product service instruction for use, maintenance and storage.
 5. Damage or malfunction caused by external object entering.
 6. Unauthorized repair, disassembly or modification.
 7. Damage caused by force (such as lightning, excessive voltage, earthquake, fire, flood, etc.).
 8. Malfunction and damage caused by other unavoidable external factors. Malfunction and damage caused by improper use of equipment, such as water or other solutions entering into the equipment.
 9. Malfunction and damage caused by the grid power supply and voltage which is not specified for use with the charger equipment.

The above guarantees shall be made solely, and no other express or implied warranties shall be made (including the implied warranties of merchant ability, particular and applicable reason- ableness and adaptability, etc.) whether in the contract, civil negligence, or other aspects, the Company shall not be responsible for any special, incidental or consequential damages.

