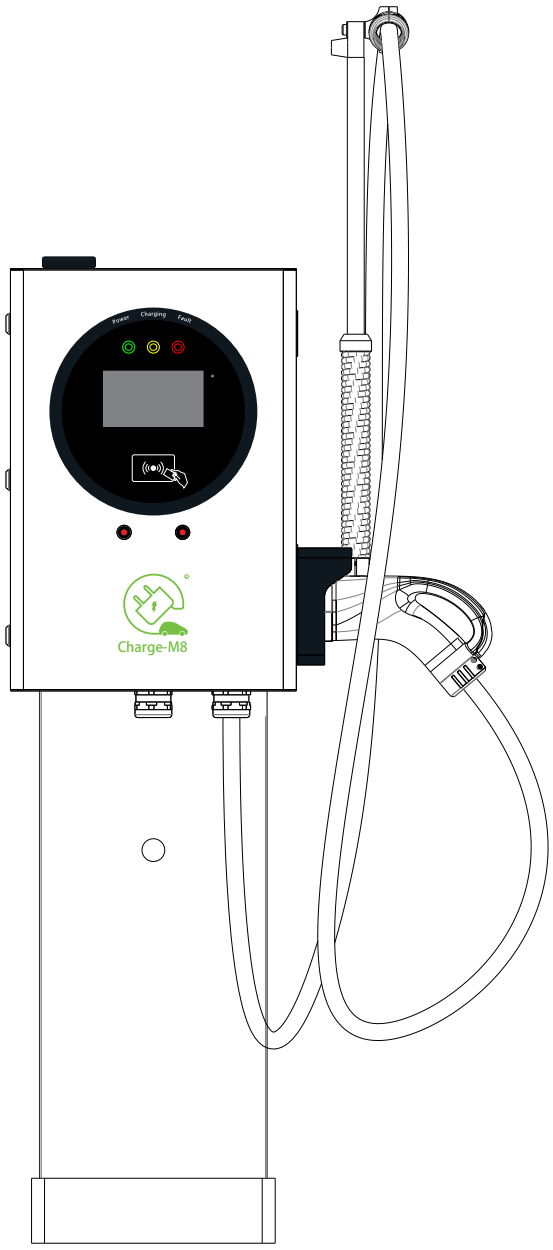
Charge-M8 DC Charger

Omega



Specification and Installation Manual

WARNING: High Voltage Appliance

This Omega unit is a high-voltage DC charging station and must only be installed, commissioned, and serviced by qualified electrical personnel in compliance with applicable electrical regulations. Incorrect installation, commissioning, servicing, or operation by unqualified personnel may result in serious injury, equipment damage, or malfunction, and will invalidate the manufacturer's warranty.

Important Notes

Thank you for purchasing a Charge-M8 DC Electric Vehicle Charging Station.

Please read the installation and operating instructions carefully to ensure correct installation, configuration, and safe operation of the charging equipment.

Omega DC chargers must be installed and operated in accordance with applicable electrical standards and regulations, including but not limited to IEC 61851 series standards, and all relevant local electrical laws, regulations, and safety requirements, and the manufacturer's guidance as specified in this manual.

This charging station is a complex electrical device and is not intended for end-user or unauthorised service or maintenance. The unit must only be opened, serviced, or repaired by qualified and authorised personnel. Any unauthorised opening, modification, or servicing of the unit will invalidate the manufacturer's warranty.

This manual is provided as a reference guide. Every reasonable effort has been made to ensure the accuracy of the information contained herein at the time of publication. However, the actual product shall prevail in the event of any discrepancy. The manufacturer reserves the right to modify product specifications or documentation without prior notice.

Installers must ensure that the operating environment, installation method, power wiring, grounding, and commissioning procedures comply with the requirements described in this manual and relevant local regulations. Only qualified personnel are permitted to install, commission, inspect, or service this charging station.

Once installation is complete, users are advised to retain this manual for future reference and maintenance purposes.

If you have any questions regarding the operation, installation, or maintenance of this DC charging station, please contact the manufacturer or authorised service provider.

Statement of Compliance

The Electric Vehicles (Smart Charge Points) Regulations 2021

Charge-m8 Limited hereby declare under our sole responsibility that the following charge point models below comply with the requirements set out under the Regulations. A technical file is available upon request.

Model	Omega DC Charger 30kW ANDCE 1 - 30 LP
SKU:	450 - 4030
Rating(Input):	Input Voltage: 400 ±10% Vac Input Power: 3P+N+PE (L1, L2, L3, N, PE) Rated Input Current: 46 A
Rating (Output):	Rated Power: 30 kW Output Voltage: 200-1000 Vdc Output Current (Imax): 100 A
Communication:	Charging communication protocol: DIN 70121 / ISO 15118 Background communication protocol: OCPP 1.6
Connection Type:	Charging Connector: CCS2 (DC)

This statement of compliance covers all Charge-m8 Omega Charger units under 50kW and further confirms compliance with Schedule 1 of the Regulations (Security).

Signed on behalf of Charge-M8 Limited:

J Smith

Name: Julian Smith

Position: Managing Director

Date: 8th January 2026

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Charge-M8 reserves the right to modify or update this manual without prior notice as part of our continuous improvement policy and product development process.

E&OE

WARRANTY

Thank you for purchasing a Charge-M8® Omega DC Charger

Warranty Period
Charge-M8 provide a 3-year warranty against manufacturing defects from the date of purchase, conditional upon the installation and annual servicing requirements being compliant with the manufacturer's instructions and all applicable local regulations.

Warranty Conditions
Upon delivery the product packaging should be inspected for transit damage, and opened to check the product and accessories are both complete and in good condition. Claims for transit damage or missing parts will not be considered unless made within 3 working days of delivery, and supporting images/documentation provided.

Warranty Scope
The Charge-M8 Omega DC Charger range includes Bronze on-site parts & labour engineers support (10 day SLA) for the warranty period, which can be upgraded to Silver (5 day SLA) or Gold (48hr SLA) subject to application and payment of the applicable upgrade rate within 28 days of installation. Contact support for further information.

During the warranty period, Charge-M8 may replace or repair components or the whole unit at our discretion, based upon assessment by our appointed engineers. Warranty on replacement parts & components expire in line with the original warranty period.

Technical support can be obtained by contacting the customer team on sales@charge-m8.com or calling +44 333 242 3328

Signed on behalf of Charge-M8 Limited:

J Smith

Name: Julian Smith

Position: Managing Director

Date: 8th January 2026

1. Product Introduction

1.1 Scope of Application

The Omega DC charger provides safe and reliable charging services for electric vehicles equipped with the CCS2 standard interface. The charger communicates with the vehicle battery management system (BMS) in real time during the charging process to ensure smart and safe vehicle charging.

Example installation scenarios include:

- Electric vehicle transport depots (Bus/Truck);
- Hospitality (Hotels and sports clubs);
- Commercial business offices;
- Car dealerships;
- Public EV charging sites.

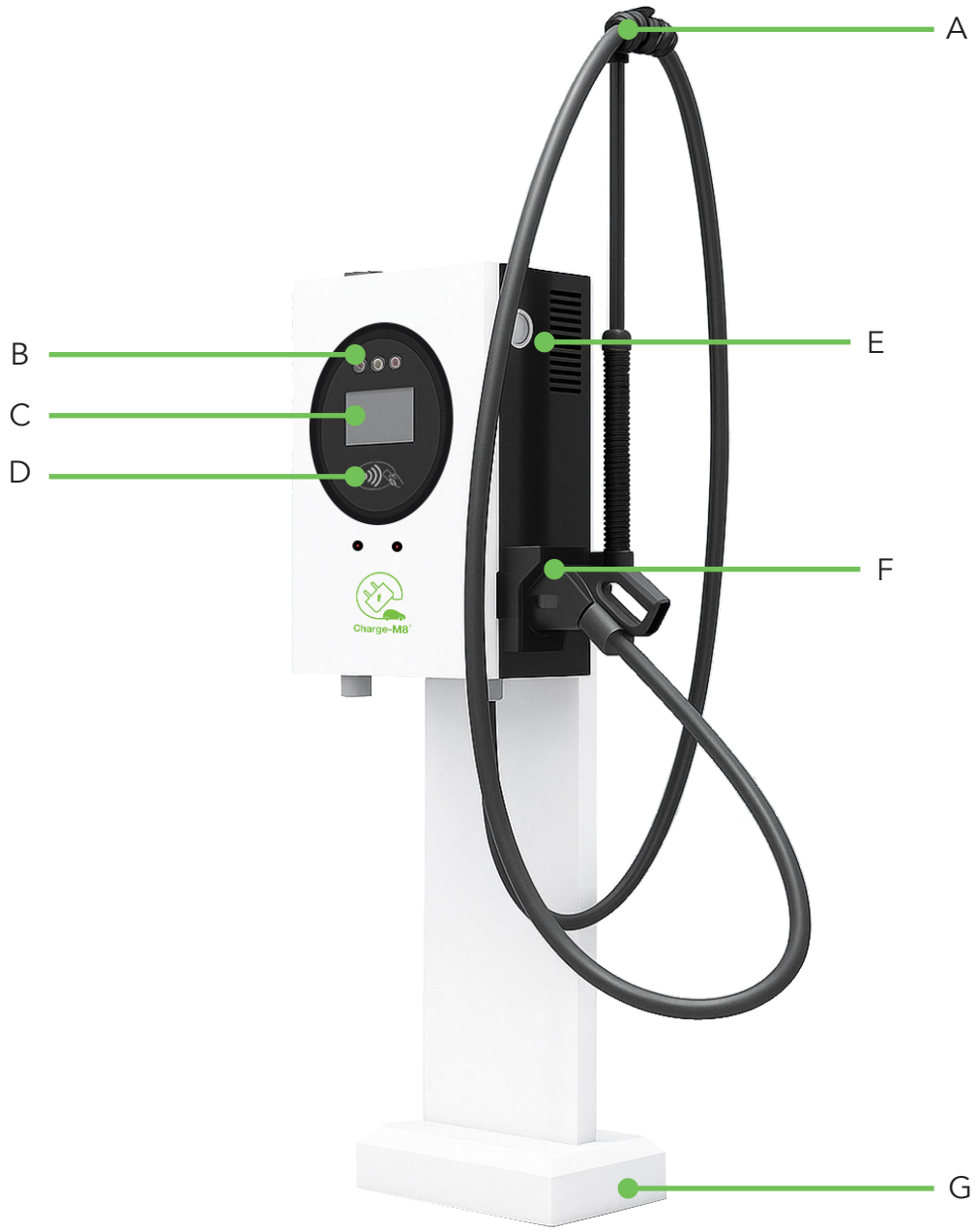
1.2 Product Features

Omega chargers incorporate advanced soft-switching technology, delivering high conversion efficiency and stable performance, whilst their modular design allows for convenient operation and maintenance.

The Omega core features include a signal indicator LED, touch screen user interface, RFID module (swipe card), metering module (electricity meter), OCPP control unit, power conversion module, charging controller, charging connector, emergency stop button, and multiple protection modules:

- Signal indicator LED: displays the current operating status of the charger.
- User interface: supports touchscreen operation and displays real-time charging and battery information.
- RFID reader: identifies and verifies user information to start or stop charging.
- Metering module: records the quantity of electricity delivered to the vehicle.
- OCPP control unit: handles background interaction, storage and reporting of charging and fault information, and statistical reporting.
- Power conversion module: converts AC energy into DC energy to supply power to electric vehicles.
- Charging controller: schedules power output based on BMS requirements and manages system charging information collection, processing, and control.
- Charging connector: CCS2 charging interface.
- Emergency stop button: cuts off input and output power in emergencies to stop charging.
- Protection module: includes over-voltage/under-voltage, overload, short-circuit, over-temperature, anti-reverse, surge, grounding, emergency stop, insulation and other protection functions.

1.3 Operation



A. Cable manager
B. LED Status Indicator
C. User Interface - 7-inch touch screen
D. RFID Card reader
E. Emergency stop button for cutting off the power supply in an emergency
F. Charging Connector
G. Floor mounting pedestal (Optional)

2. Product Performance

2.1 Specification Model Description

ANDCE 1 - 30 LP

1 2 3 4

Model No	Model No description
1	Export DC charger
2	CCS2 connector
3	Rated Power (kW)
4	Product Code

2.2 Environmental parameters

1	Protection level	IP 55
2	Operating temperature	-30°C ~ +55°C
3	Storage temperature	-40°C ~ +70°C
4	Relative humidity	5%~95%, No condensation
5	Altitude	≤2000 m
6	Running noise	≤65 dB
7	Cooling method	Forced air cooling
8	Working environment	Indoor or outdoor
9	Operating environment	No conductive dust, no corrosive gas, no explosive gas, no strong vibration
10	Installation method	Vertical floor or wall installation, inclination angle not more than 5°

2.3 Omega 30 kW DC charger - technical parameters		
1	Product Name	Omega DC Charger 30kW
2	Input Power	3P+N+PE (L1, L2, L3, N, PE)
3	Input Voltage	400 ±10% Vac
4	Power rating	30 kW
5	Output Voltage	200~1000 Vdc
6	Output current Imax	100 A
7	Rated input current	46 A
8	Recommended input cable size (mm^2)	3x16 +2x10
9	Power factor	≥0.99
10	Peak efficiency	≥96%
11	HMI	7 inch LCD touch screen
12	Signal indicator	Green (standby), Yellow (charging), Red (fault)
13	Charging Connector	<IEC 62196-32022>, CCS 2 (DC)
14	Charging cable length	Default 5 metres (optional)
15	Electromagnetic Compatibility	IEC 61851-21-2
16	Safety	EN 61851-23 , EN 61851-1 ,IEC 61851-1
17	Charging communication protocol	DIN70121/ISO15118
18	Background communication protocol	OCPP1.6
19	RFID module	ISO 14443, Type A, Mifarel
20	Dimension	Charging station (Including the installation of pillars) 440(W) × 250 (D) ×650 (H) mm
21	Optional item	Cable Manager, Pedestal Stand

3. Installation and Commissioning

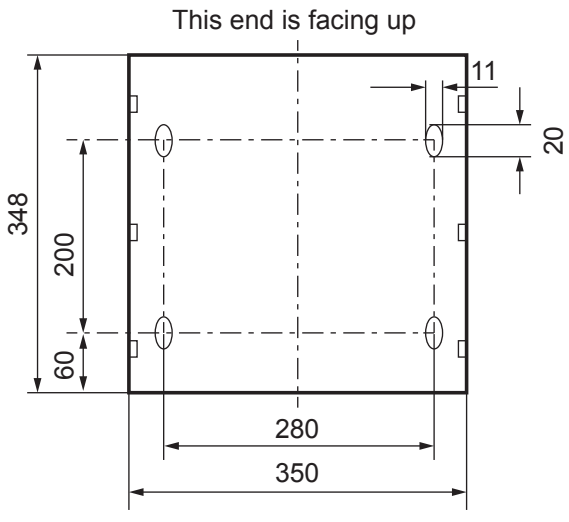
3.1 Unpacking and Inspection

- Each Omega charger is inspected and tested prior to shipping;
- When unpacking, refer to the packing list to check that all parts are included;
- If there are any damaged or missing parts during shipping, please contact our customer service promptly (within 3 days of receipt);

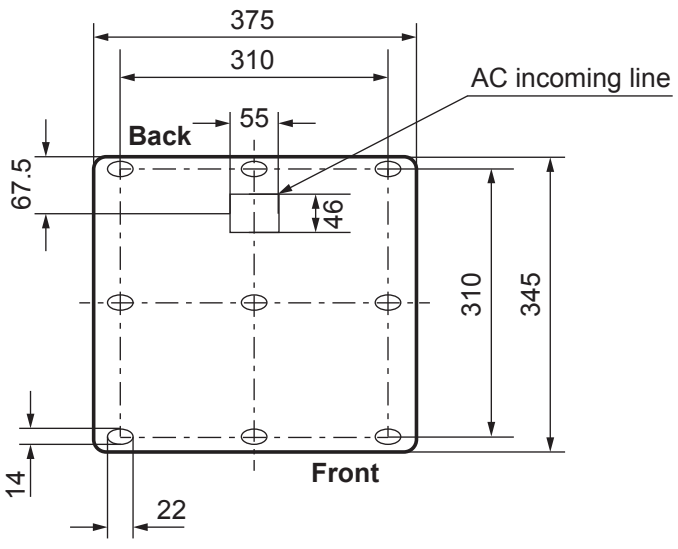
3.2 Charger Installation

- Remove the outer box and move the charger to the installation position;
- If wall mounting ensure the fixing location is suitable and observes local regulatory/insurance guidance, particularly with regard to ventilation and electrical/fire prevention safety;
- If floor mounting with the optional pedestal stand, ensure the foundation is suitable and observes local regulatory/insurance guidance, particularly with regard to ventilation and electrical/fire prevention safety and impact protection, and check the ground fixings and mains connection cables on the foundation match the relevant apertures on the fixing plate (a Charge-M8 600x600mm EV Kube Foundation is recommended for pedestal mounted installations)
- Before confirming the installation position, please ensure that all access doors and panels can be opened properly for maintenance;
- Please note that the length of the power supply cable needs to be long enough to enter the pedestal and reach through the column into the charger body. The length of the supply cable shall be at least 1.5m for pedestal installation. For wall-mounted installation, the cable length should be determined according to the actual fixed height of the charger.
- When the charger is placed in position, the angle of its vertical line should not be more than ±5°;

3.3 Installation Fixing Template

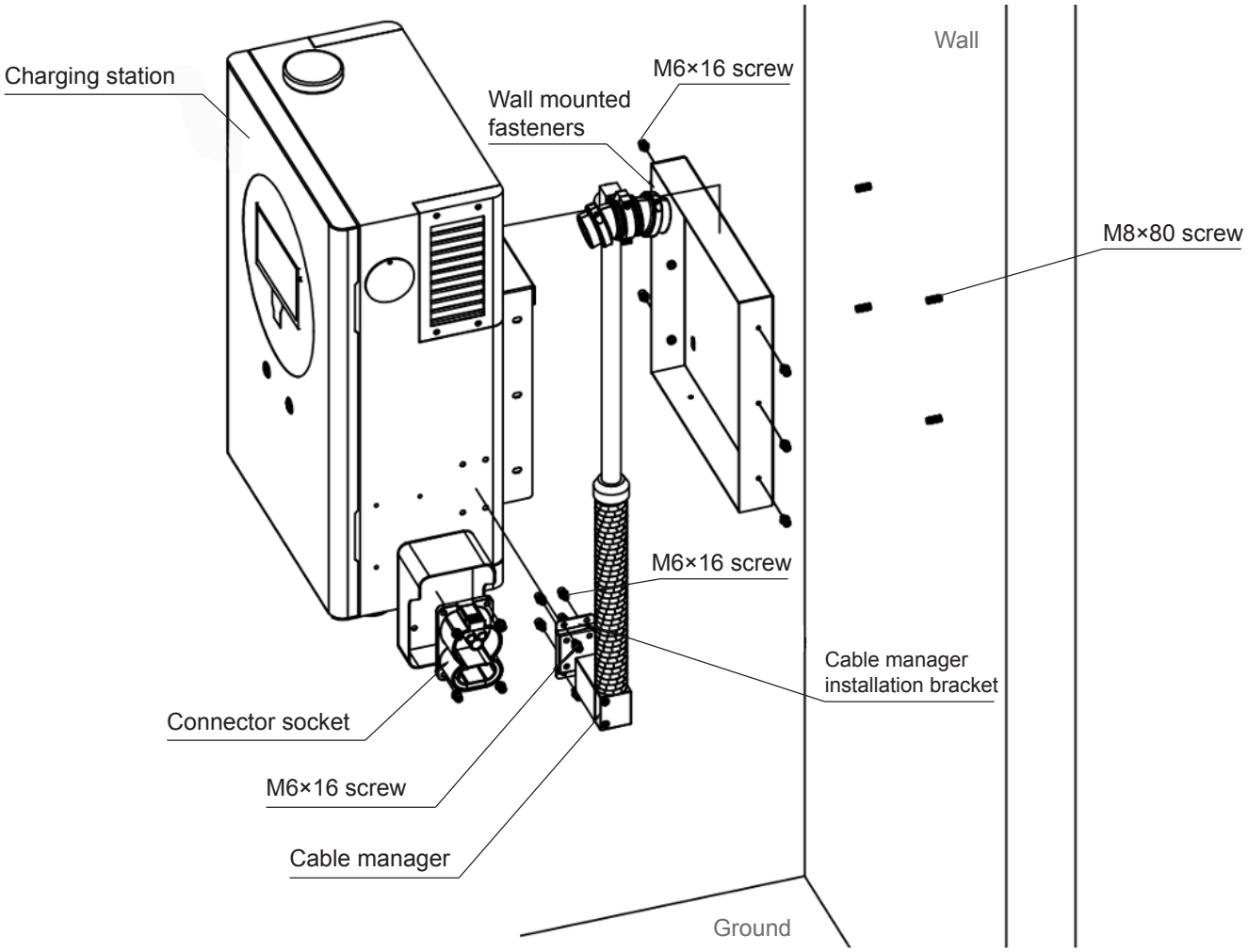


(1)
Installation Drawing of Wall Hanging Plate



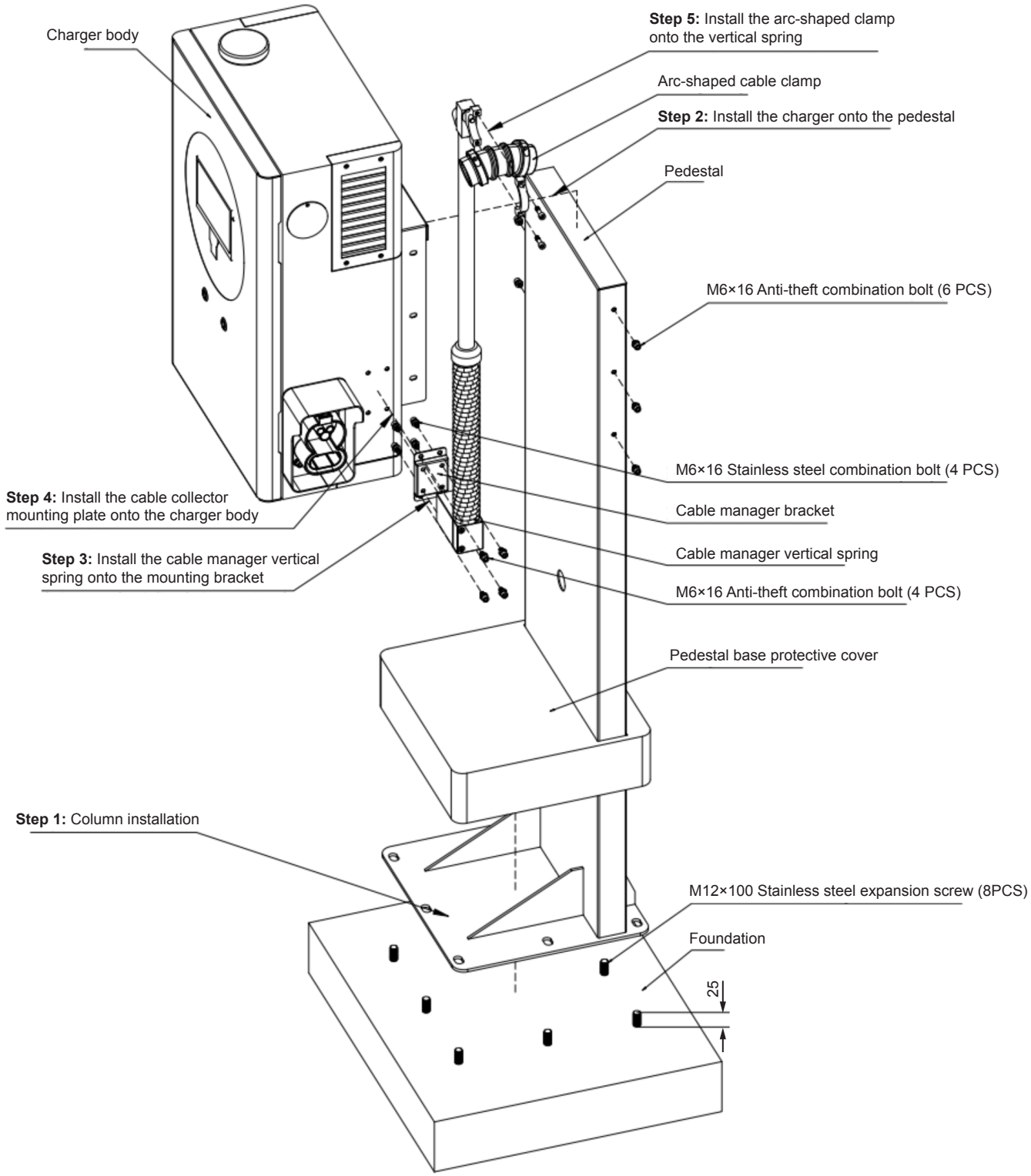
(2)
Installation Drawing of Pedestal Stand

3.3.1 Wall Mounting



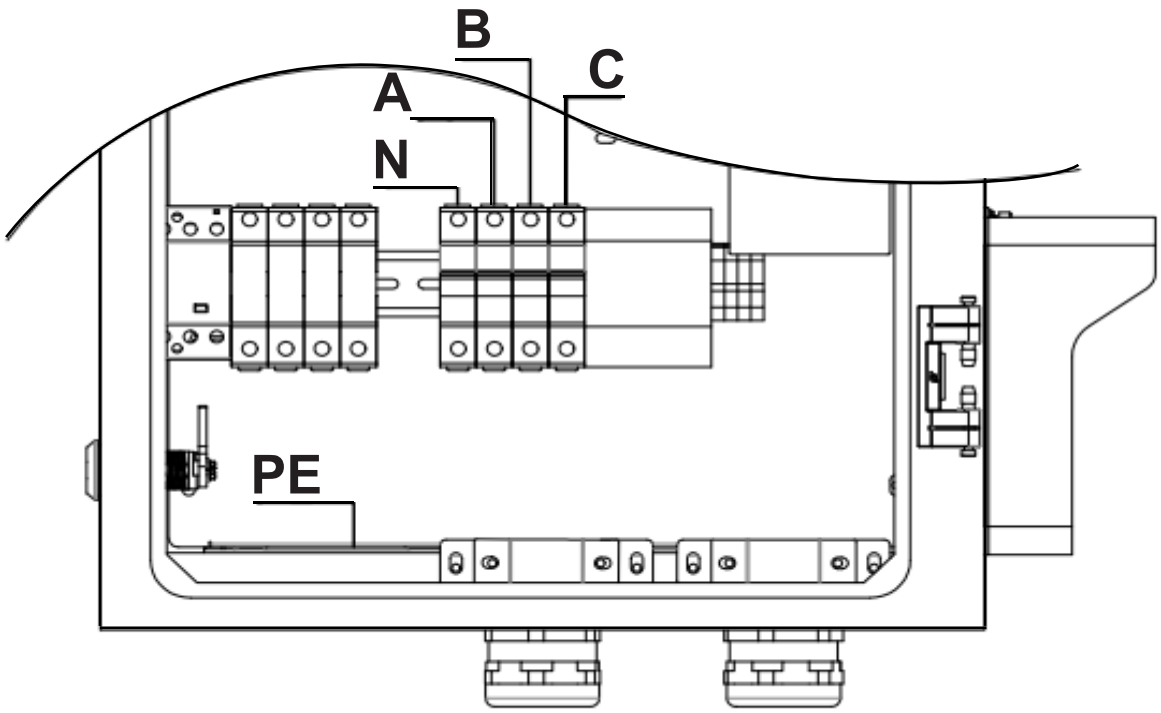
- There are 4 fixing holes for securing the wall mounting the bracket, fix the mounting bracket to the wall with M8 expansion screws, or other suitable fixings as required by site assessment;
- After fixing the installation bracket, hang the charging station on the bracket using suitable lifting/ handling equipment and tighten the six M6 × 16 screw fixings on the side of the bracket.
- Fix the cable management spring on to its bracket, then fix the bracket on the charging station, and finally fix the cable on to the spring cable puller;

3.3.2 Pedestal Mounting



- Description:
- Step 1, fix the pedestal base on a suitable solid foundation with 8x 100mm M12 expansion bolts, and then slide over the column protection cover;
- Step 2, fix the charger on the pillar and fix the side of the back plate with 6 anti-theft screws;
- Step 3, fix the cable management spring on to its bracket, then fix the bracket on the charging station, and finally fix the cable on to the spring cable puller.

3.4 Power Supply Wiring



Description:

- Connect the supply cable according to the chargers three-phase five-wire connections as shown in the above diagram (A, B, C, N, PE), the supply cable conductors should be terminated with the appropriately sized ferrule/crimping lug and tightened to 25nm using a torque driver/spanner/wrench.
- For the recommended supply cable parameters, please refer to subsection “2.3 Technical Parameters-8”.

3.5 Power Up

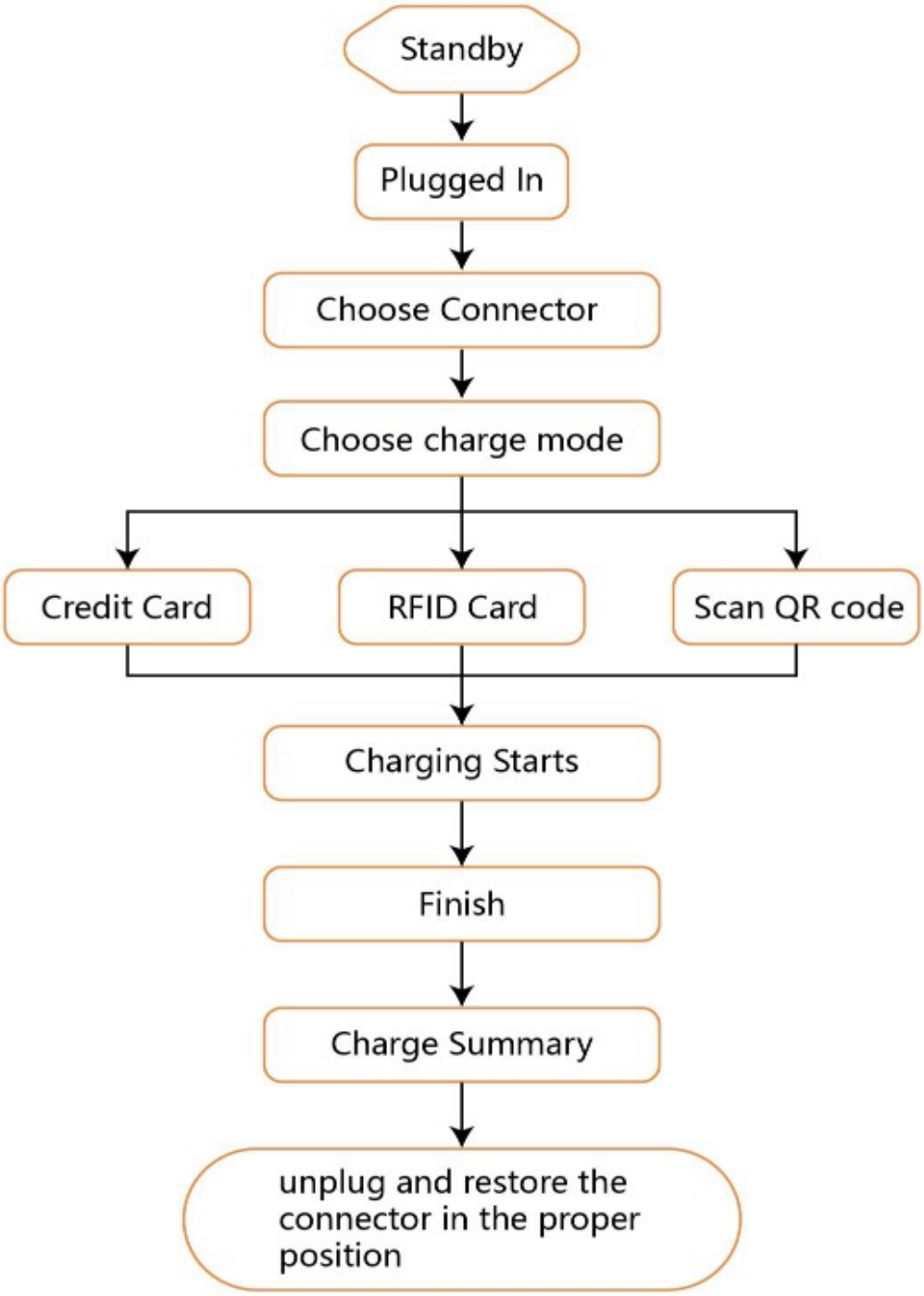
Double check all cable connections from the supply distribution board to the charger before energising the unit for the first time.

3.6 Installation inspection checklist

- Confirm the operating environment of the charger meets the technical requirements;
- Check that the charger is fixed securely, it should not feel noticeably loose or wobbly when pressure is applied from different orientations;
- Check that the IP/electrical safety protection class of the installation meets the charger technical requirements, in particular that the cable entrances at the bottom of the equipment are sealed, and the supply cable is protected with a correctly rated Type A RCBO.
- After the charger firmware has booted for the first time, check the LCD touch screen, card reader and meter operation before configuring specific site/network/OCPP/server settings;
- In case of an emergency, press the emergency stop button immediately;
- Only qualified personnel may service the charger;

4. Operating Instructions

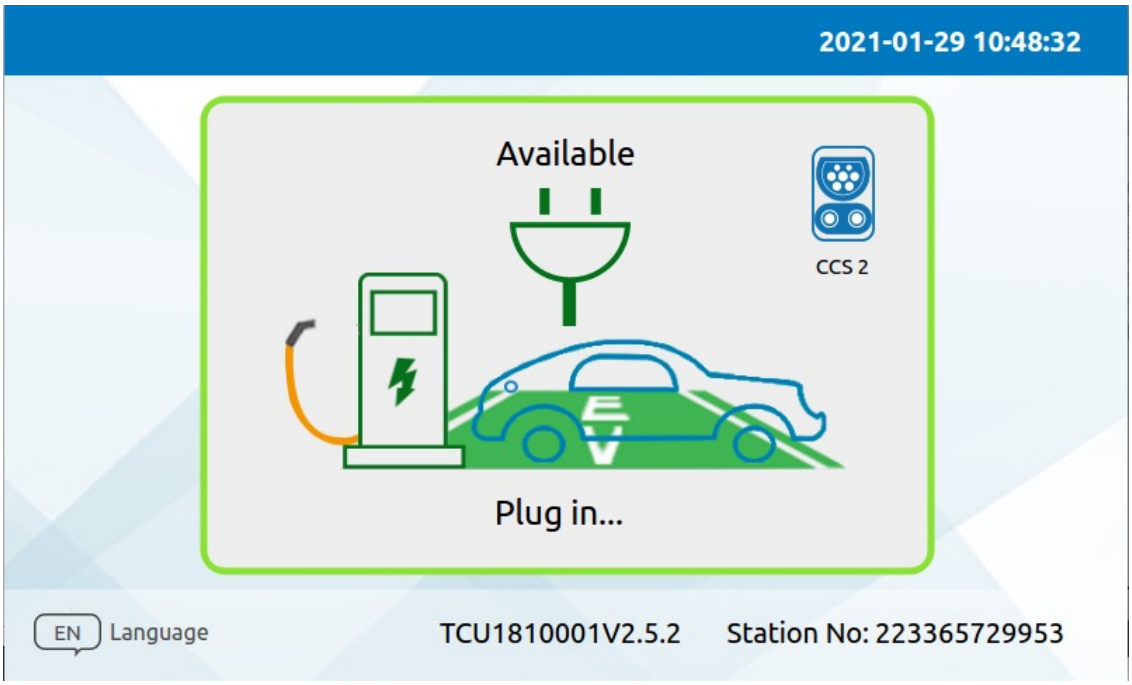
4.1 Operational Processes



4.2 Operation Steps

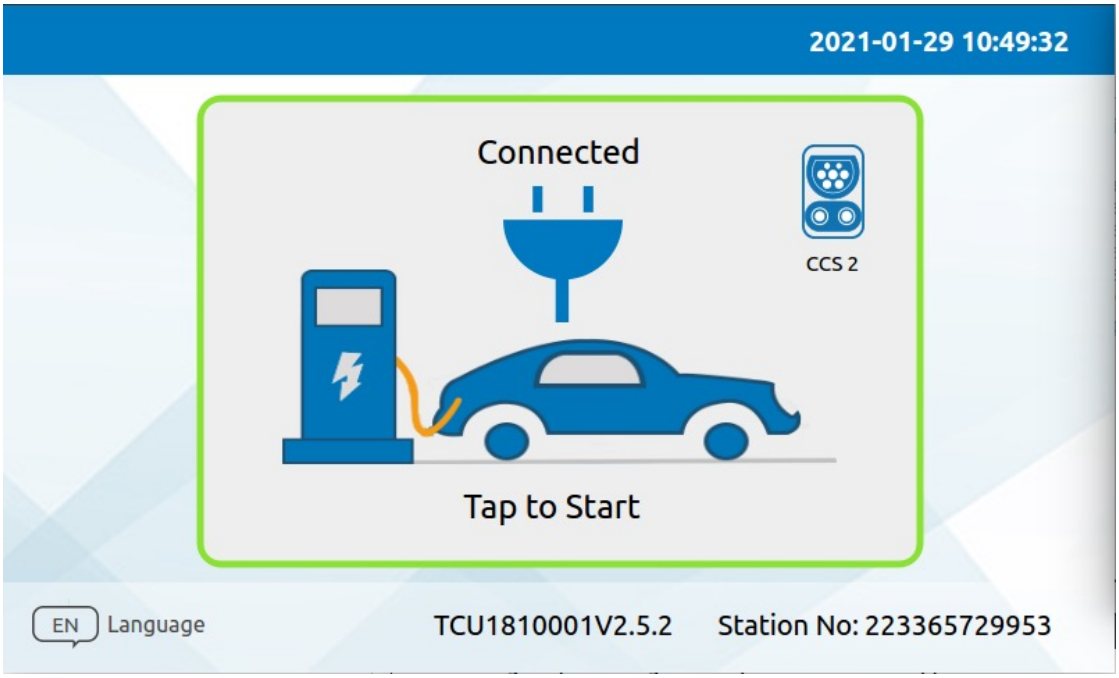
(1) Standby Interface

Indicates that the charger is idle when displaying “Available”.



(2) Connect the Charging Plug

Remove the charging plug from its bracket and connect it to the charging socket of the vehicle. If the charging plug is fully connected to the vehicle socket, the interface displays “Connected”.



Tap the plug on the screen below “Connected” to jump to the start mode selection interface.

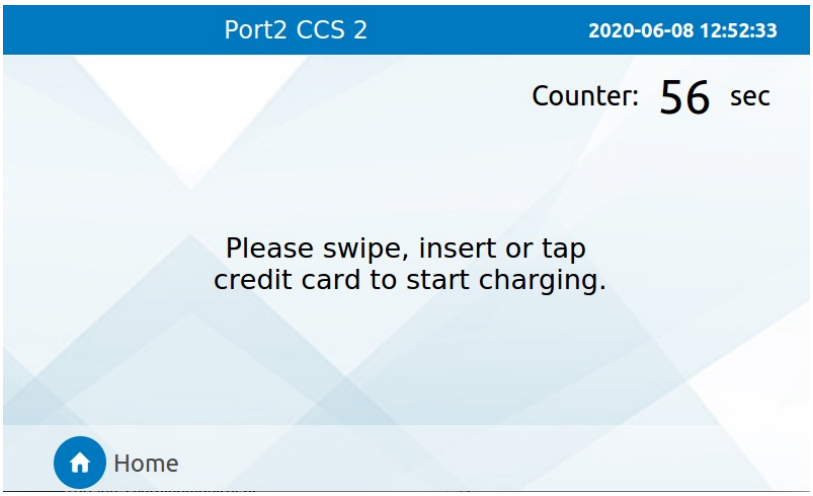
(3) Charge Session Start Method Selection

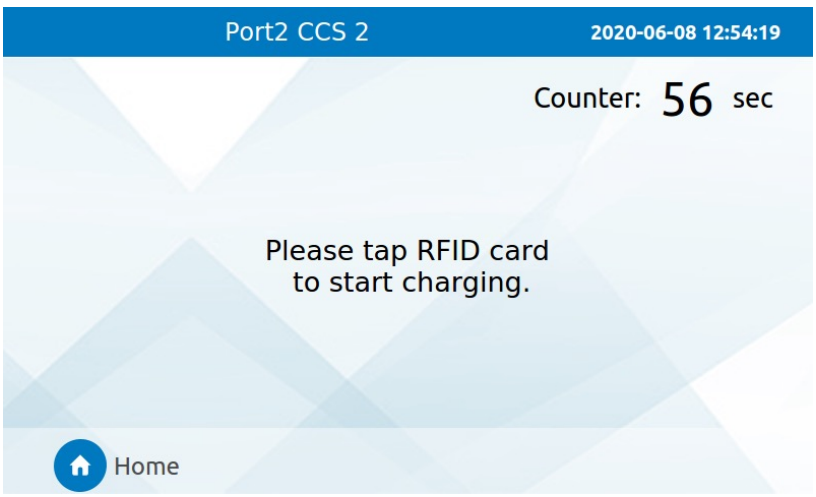
You can now select credit card*, RFID card, use an OCPP APP or scan the QR code to start a charging session.

**If credit card reader is installed - not supplied*

(4) Start Charging

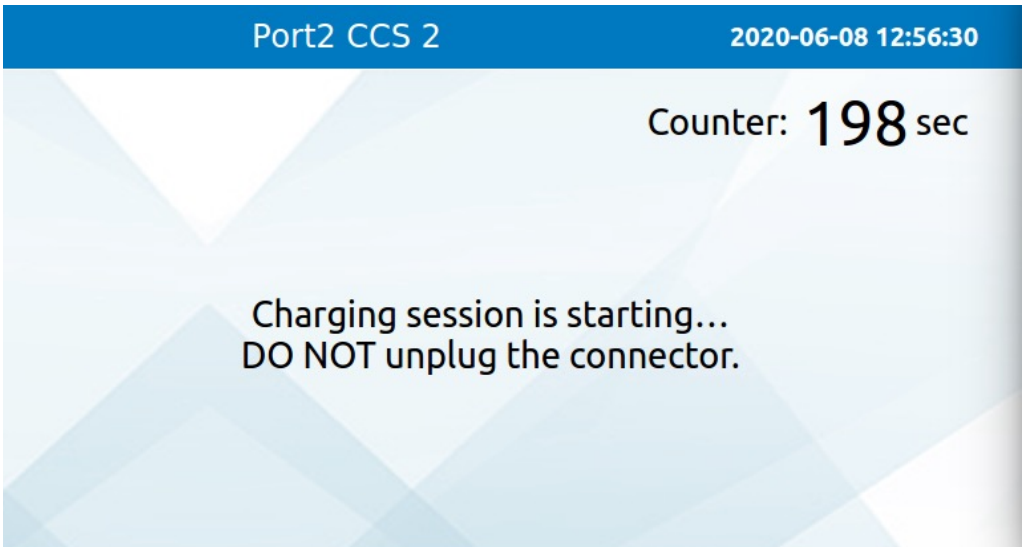
After selecting the payment/authorisation method, the countdown interface is shown giving 60 seconds to complete the authorisation.





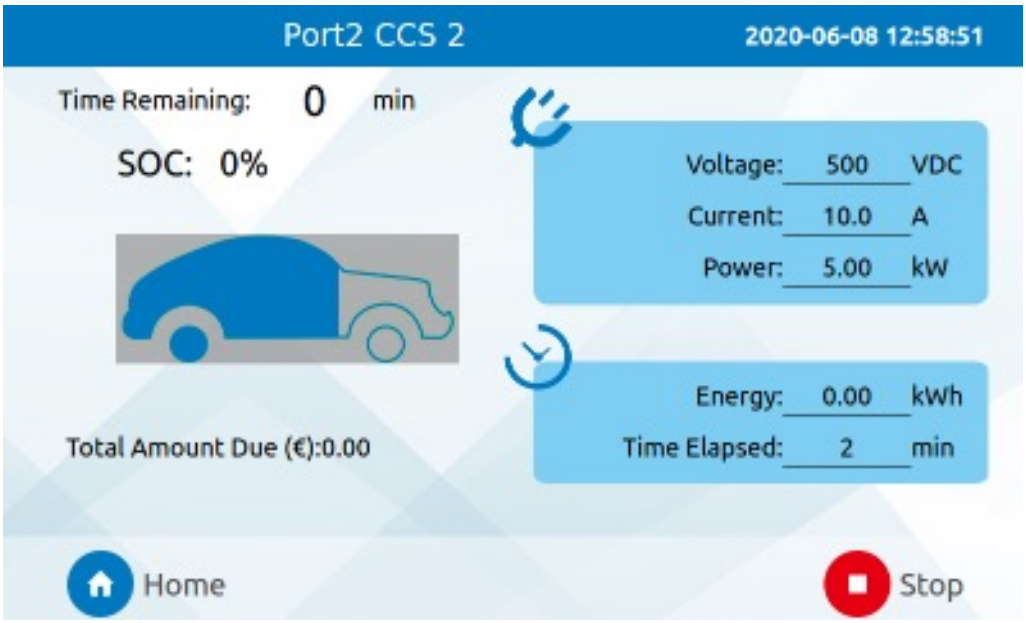
(5) Charging Starts

After swiping the card or scanning the code, enter the charge start countdown interface.



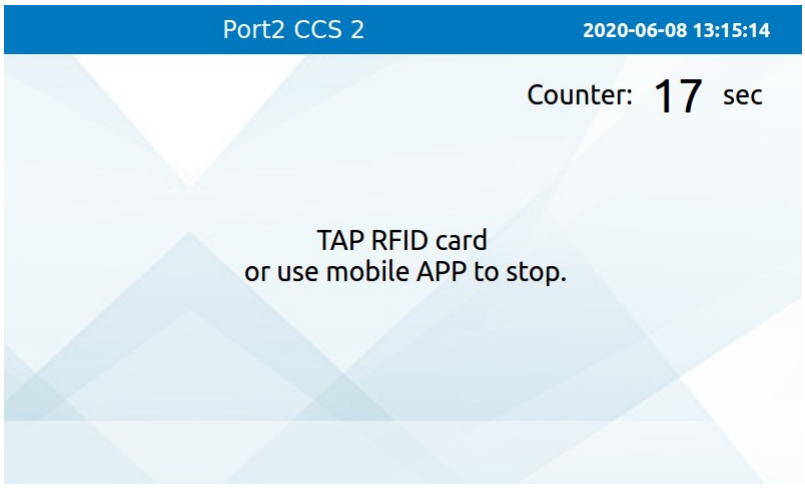
(6) Charging

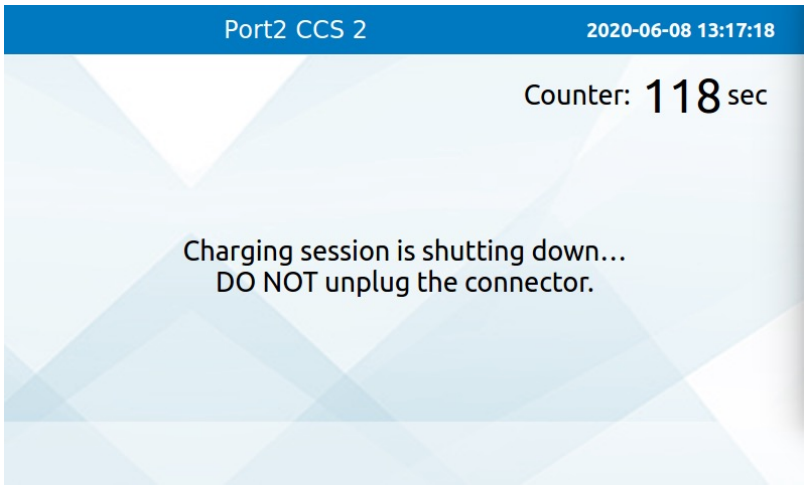
- After the charging session is started, the charging detail screen is displayed.
- The interface displays current charging information such as charging voltage, charging current, charging power, charging energy, charging time, charging cost, battery SOC, remaining charging time, etc.



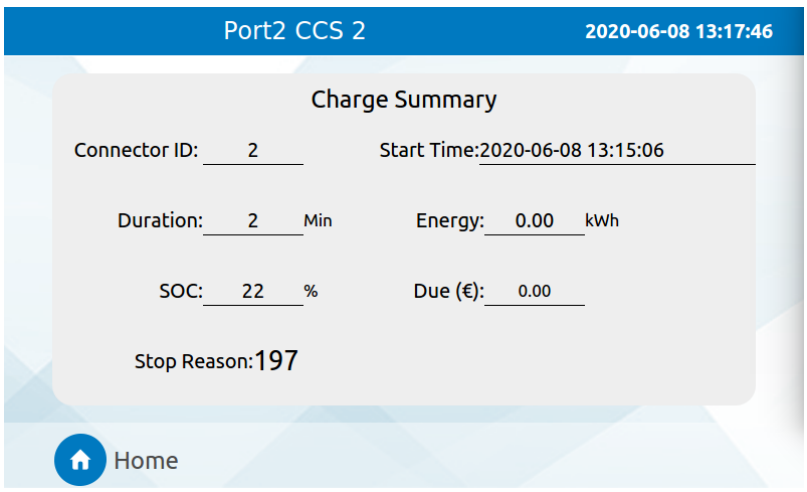
(7) End a Charging Session

- If you want to end charging during the charging process, you can click the red stop button in the lower right corner of the interface to enter the stop charging countdown interface.
- Swipe the RFID Card or APP used to start the session, charging session ends.





After the charging session is completed, the settlement interface displays the relevant information of the charging session, after confirming that the information is correct, please pull out the connector and plug it back into the holster on the charger.



5. Product Maintenance

5.1 Routine Maintenance

To ensure the charger's seamless, long-term operation, regular inspections of the equipment are essential, with the following routine maintenance measures highly recommended:

NO.	Inspection Tasks	Inspection Interval	Inspection Guidance
1	Check the intake and exhaust filters are adequately ventilated and free from blockages.	3 months	1. Verify the flow of air in and out of the intakes and outlets is not obstructed; 2. Examine the filters for the accumulation of dust; should there be any blockage due to grime, proceed with removal for cleaning or replacement if necessary.
2	The charging connector plug and its cable remain in a serviceable condition.	3 months	1. Inspect the charging connector plug for any signs of damage, particularly cracks in the housing; 2. Examine the cable for any damage to the insulation and exposed conductors;
3	Confirm the operational status of the forced air cooling fan.	3 months	During a routine charging session, observe and verify the operation of the forced air heat dissipation fan.
4	Confirm the overall satisfactory performance of the charger.	3 months	1. Observe a charging session and check the display and log files for errors/warnings. 2. Check the charging modules are functioning optimally, with output within the expected range.
5	User touchscreen interface.	3 months	During a routine charging session, verify the satisfactory operation of the touchscreen user interface.
6	Confirm the stability of the earthing components associated with the charging station.	3 months	Check the integrity of each earth grounding connection, identifying potential looseness, insufficient security, or any other complications. Re-torque connections as necessary to 25nm.
7	Emergency stop	3 months	1. Ascertain if the charging procedure ceases instantaneously upon activation of the emergency stop button during the system's regular operations. 2. Following the engagement of the emergency halt, examine whether the visual presentation interface signals any malfunctions of the emergency cessation mechanism.

5.2 Troubleshooting

NO.	Fault Name	Screening Methods
1	Emergency stop	Check that the emergency stop button has been depressed, to reset rotate clockwise until it springs back to the normal position.
2	AC Circuit Breaker Failure	Verify that the circuit breaker on the AC supply cable has not tripped, if not check the internal breaker's handle position and move it to the lowest down position and up again to reset. Recheck operation and functionality.
3	DC Fuse Failure	Inspect the Direct Current fuse for internal resistance, substitute with a new unit in the event of it being blown.
4	Charging interface electronic lock failure	1. In the event of a charging session start error, ensure that the connector plug is fully engaged. Re-insert the charging plug firmly until it is fully secured and retry; 2. To resolve a charging termination error, the gravitationally induced locking between the charging gun and the socket groove may need addressing. Grasp the charging plug and delicately raise it upwards until the lock engages.
5	SPD failure	1. In the event of suspected SPD module failure, verify its condition and check installation connections; 2. Observe the colour indicator of the SPD module. Green = Normal, Red = Failure. If the displayed colour is RED, replace the SPD unit.
6	Insulation monitoring faults	1. Check the charging module's output voltage during insulation testing to confirm its normal; 2. Confirm the impedance values, separately, of the positive and negative poles in relation to ground to guarantee their standard state.
7	Reverse battery connection	1. Ensure the orientation of the battery voltage sampling cable at the stake terminus is not inverse; 2. Validate that the power cord for the vehicle-end socket is accurately directed.
8	Charging port over-temperature fault	Disconnect the charging apparatus, wait several minutes, then re-establish the connection and start a test charging session and re-test.
9	BMS communication failure	1. Check for possible loose connections in the CAN wiring linked to the BMS communication board; 2. Confirm that the CAN circuits for BMS communication is arranged in the correct orientation and has not been reversed.

NO.	Fault Name	Screening Methods
10	Charging Module Failure	1. Examine the integrity of the CAN cabling associated with charging module connections, ensuring its solidity; 2. Check the illumination status of the LED malfunction indicator of the charging module and contact support.
11	Output contactor sticking	Upon cessation of charging and severance of power supply, examine the auxiliary contact of the output relay for any indication of being in an open state.
12	Energy Meter Communication Failure	1. Ensure that the Modbus address setting of the energy meter has not been changed inadvertently; 2. Verify the integrity and functionality of the RS485 communication cable associated with the power meter.

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