



Installation guide

smart 44

(Gen 3)



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Smart 44(Gen 3)



Introducing CITA Smart 44 (Gen 3)

Commercial Charger

The three phase 44KW charger is combination of two 22KW chargers in a floor-standing housing, which provides AC charging to two electric vehicles simultaneously. It's equipped with the function of charging by scanning the RFID card. The RFID card is a key component to start or stop the charging session. The LED indicators on the left and right panels help you understand what is happening with the charger by indicating different colors.

With internet connection via a built-in Gateway, more functions like monitoring, operation management and remote upgrade are available on the backend named Charge Management System. Compatible with all types of cables, the socket locks the charging cable into the charger to ensure a safe charging.

Top Features



Active & Dynamic
Load Balancing



2 kW X 22kW Power Range



7" LCD Touch Screen



OCPP 1.6
JSON Integration



CITA Smart EV App
via WiFi/4G/Ethernet



Compatible with all
Type 2 Charging Cables

Specification Parameter

Configuration

User Interface	LED indicator, LCD Touchscreen,
Housing Material	Galvanized Steel
Installation Way	Floor-stand
RFID Card Quantity	10 cards
Charging Outlet	Two charging socket type 2
Product Dimension	300*300*1250mm (L*W*H)
Net Weight	32.5kg
Gross Weight	32.5kg

Electrical Specifications

AC Nominal Input

Phases/Lines	3 phase + natural+ PE (Optional: 1 phase + natural+ PE)
Voltage	400V±10%
Frequency	50/60Hz

AC Nominal Output

Voltage	400V±10%
Output Power	2x22kW programmable
Output Current	2x32A programmable

Structure Design

Housing Material	Galvanized steel
Display Panel	Temper glass
Installation Method	Floor-stand
Charging Outlet	Type 2 charging socket
Cable Length	No cable
LED Indicator	Green/Yellow/Red colour notification on CITA logo
LCD Screen	Yes
RFID Function	Yes
Solenoid Lock	Yes (Optional)
Energy Meter	MID certified
RCD	Type A+ 6mA DC

Protection

Multiple Protection	Over/Under voltage protection, Overload protection, Short circuit protection, Current leakage protection, Grounding protection, Surge protection, Over/Under temperature protection
MTBF	100,000 hours
Safety Standard	IEC 61851-1:2017, IEC 62196-2:2016
Warranty	3 years

Environmental Index

Operating Temperature	-30°C - +55°C
Working Humidity	5%~95% without condensation
Working Altitude	<2000M
Protection Grade	IP54
Application Site	Indoor/Outdoor
Cooling Method	Natural cooling

Communication

Network Gateway	Ethernet/WIFI/4G communication
Communication Protocol	OCPP1.6 (JSON)

Preface

Thank you for your continued support of our products. Our company focuses on the new energy field of electric vehicle charging, dedicated to providing customers with excellent charging devices equipped with comprehensive solutions. The EV chargers are of advanced functions with steady performance, a wide range of applications and strong practicability, winning a good reputation in the industry.

Before any operation, please read the user manual carefully to understand the correct use of the device. After reading, please retain the user manual for future review.

This device's input and output voltages are dangerously high, which can endanger human life. Please strictly observe all warnings and operating instructions on the device and in the manual. Unauthorised and non-professional service personnel should not remove the cover of this device.

Warning

The input and output voltages of this device are dangerously high, which can endanger human life. Please strictly observe all warnings and operating instructions on the device and in the manual. Unauthorised and non-professional service personnel should not remove the cover of this device.

Safety Instructions

Please read the following safety instructions before handling the products:

Keep explosive and flammable materials, chemicals, vapours, and other hazardous objects away from the charger.

Keep the charging socket clean and dry. If dirty, please wipe with a clean dry cloth. Touching the socket core is strictly forbidden when powered on.

Do not use the charger in case the device has defects, cracks, abrasion, bare leakage and so on. Please contact the working staff in case of the above conditions.

Do not attempt to disassemble, repair or refit the charger. If necessary, please contact the working staff. The improper operation will result in device damage, electric leakage, etc.

In case any abnormal condition happens, please press the emergency stop button immediately, and cut off all input and output power supply.

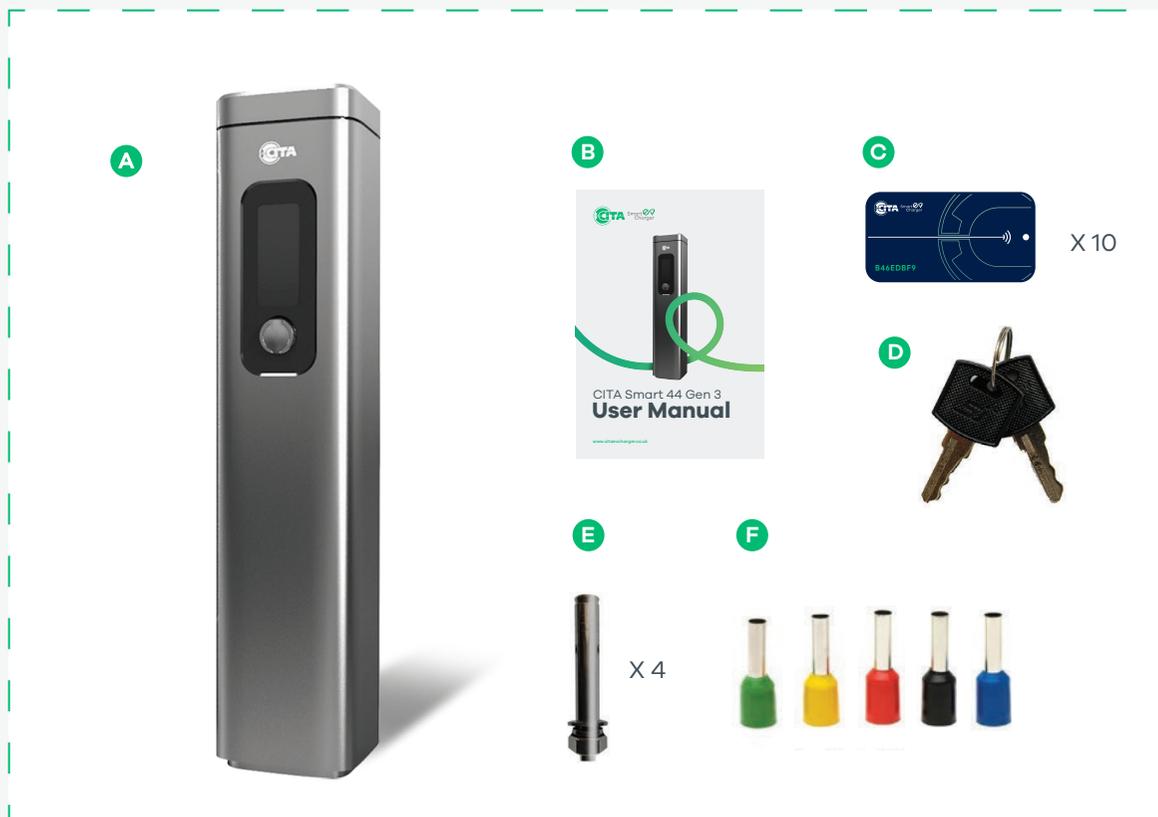
Please charge cautiously in rainy or lightning weather.

Children should not get close to or use the charger to avoid being hurt.

During charging, the EV is not allowed to drive. Charge only when the EV stops still. For Hybrid cars, charging is allowed only when switching the engine off.

Package Contents

The CITA Smart 44 (Gen 3) box comes with the A. CITA Smart 44 (Gen 3) EV Charger, B. User Manual, C. RFID Cards, D. Lock Keys, E. Screw Sets, F. Wire Crimp Connector (1xBlue 1xRed 1xYellow 1xBlack 1xGreen)



Package Verification

Unpack to check & verify following items after receiving the charger:

Visual inspection on external appearance. In case there is any broken or damage, notify the seller immediately.

Check accessory type & quantity. If there is quantity in short or type in conformity, make the record in time & contact the seller at once

Installing CITA Smart 44 (Gen 3)

Warning Electric Shock

INSTALLATION OF ANY ELECTRICAL DEVICE SHOULD BE CARRIED OUT BY A SUITABLY QUALIFIED AND COMPETENT PERSON.

A qualified person has the skills and knowledge related to the construction, installation, & operation of electrical devices and who has received safety training to recognise and avoid the hazards involved.



Scan the QR Code



Click on the image to watch the video



Things to keep in mind during Installation of CITA Smart 44 (Gen 3)

Before installing the CITA Smart 44 (Gen 3), make sure that the power line you're using is switched off on your service panel.

Make sure that the power line to CITA Smart 44 (Gen 3) is installed on a dedicated circuit breaker (MCB) on your service panel.

The installation must incorporate an adequate residual current device (RCD).

The MCB must be in line with the capacity of the charging cable (22 kW).

In case the amperage rating of the charging cable is different than the amperage rating of the (MCB), the installer/user must change the station settings in the mobile app and/or web platform for station management as provided by the operator or service provider for this product.

THIS IS A GLOBAL PRODUCT, AND LOCAL WIRING REGULATIONS AND SAFETY PRECAUTIONS WITHIN THE COUNTRY OF INSTALLATION SHOULD BE ADHERED TO AT ALL TIMES.

The CITA Smart 44 (Gen 3) requires Wi-Fi/Ethernet/LTE to bring it online. Before installation, it is advised to ensure that you have one of the communications methods.

Tools Needed For The Installation

Included in the box



CITA Smart 44 (Gen 3)



4 x Bolts Set 304



Wire Crimp Connector
1 Blue 1 Red
1 Yellow 1 Black
1 Green

Required Tools



Multimeter



Cross
Screwdriver
PH2x150mm / PH3x250mm



Electric Drill



Diagonal Pliers

Preparing for Installation

Cables & Materials

Power supply cable	≥5*25mm ² three-phase power supply cable	Depend on actual requirement
Network cable	STP, Category 5 Enhanced, 8 cores	Depend on actual requirement
Network cable plug	RJ45	Depend on actual requirement
Insulated tape	0.15mm*18mm, 0~600V, 0°C~80°C	Depend on actual requirement
Cable tie	4*200mm	Depend on actual requirement
Gland Plate & Gland	Plate size as per the cable used	Depend on actual requirement

Installation Process

1) Installation Notice

- a) Electrical product should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by the manufacturer for any consequences arising out of the installation of this product.
- b) A qualified person is one who has skills and knowledge related to the construction, installation & operation of electrical product & who has received safety training to recognize and avoid the hazards involved.
- c) All applicable local, regional, and national regulations must be respected when installing, repairing, & maintaining this product.

2) Layout Cables

Select the standing positions of the charger on the ground. Lay network cables & power supply cables under the ground. Cables come out of the ground from the center of standing position with about 100cm length above the ground.

3) Fix Charger

Locate the footprint of the charger on the ground of standing position. Drill the four screw holes as indicated below on the ground for the fixation of the charger. Place the charger on the standing position & fix the four screws.

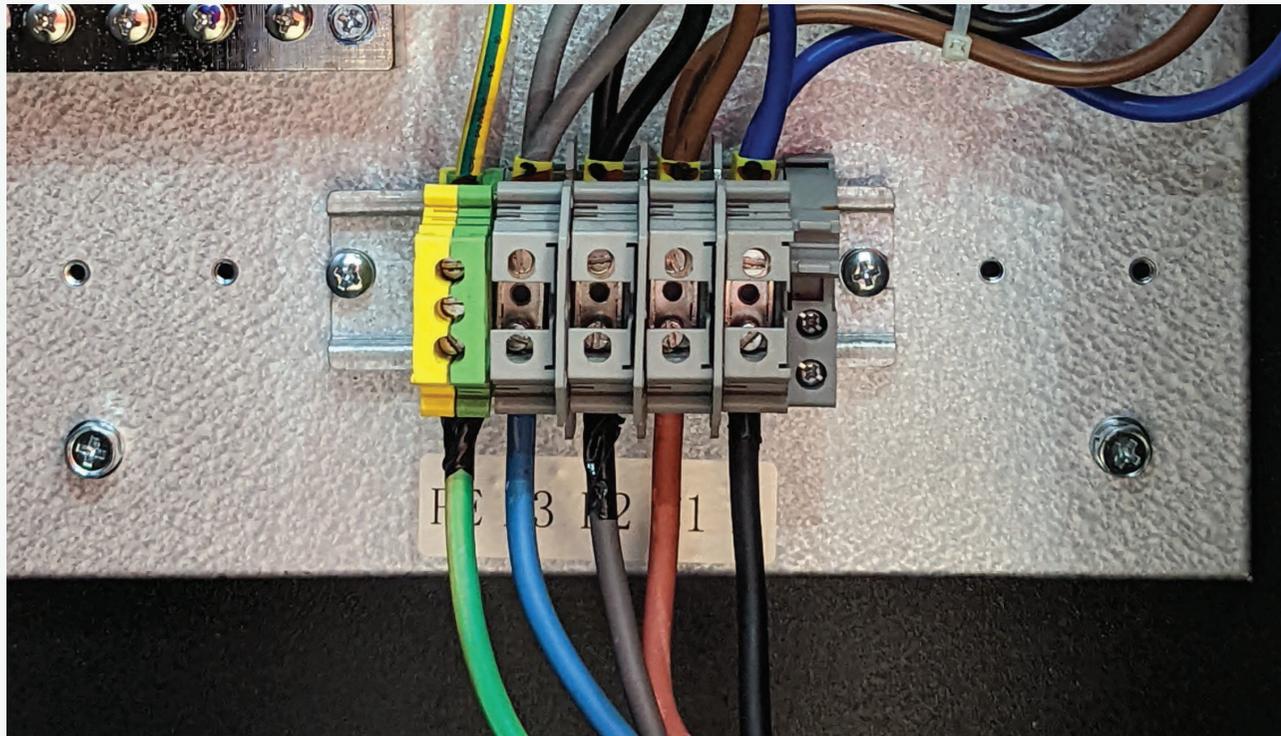
Note:

Make sure that the charger is installed on a concrete base or platform above the ground level.

Commissioning

Connect Power Cables

The power supply cables go through the input cable inlet at the charger's bottom, and connect to the corresponding L1, L2, L3, N and PE terminals inside the charger. Please note that L1, L2, L3, N correspond to R, S, T, N phases



Check before Power-on

Please check the following before any operation

- The charger's location is easy for operation & repairing
- AC input's current leakage protection switch is reasonable.
- Double confirm the charger is installed properly.
- No other stuff or component left on the top of the charger

Powering-on and lock charger

Turn on the breaker switch inside the charger and close the back door of the charger. Use the equipped keys to lock the charger.



- a) Make sure all checking is done according to the above items.
- b) Turn on the current leakage protection switch of AC input.
- c) Power-on the charger and observe the LED indicator, which should be standby status.
- d) Observe the screen display and the symbol on the top right corner. The screen should display as the following picture

LED Status Indicator Meaning

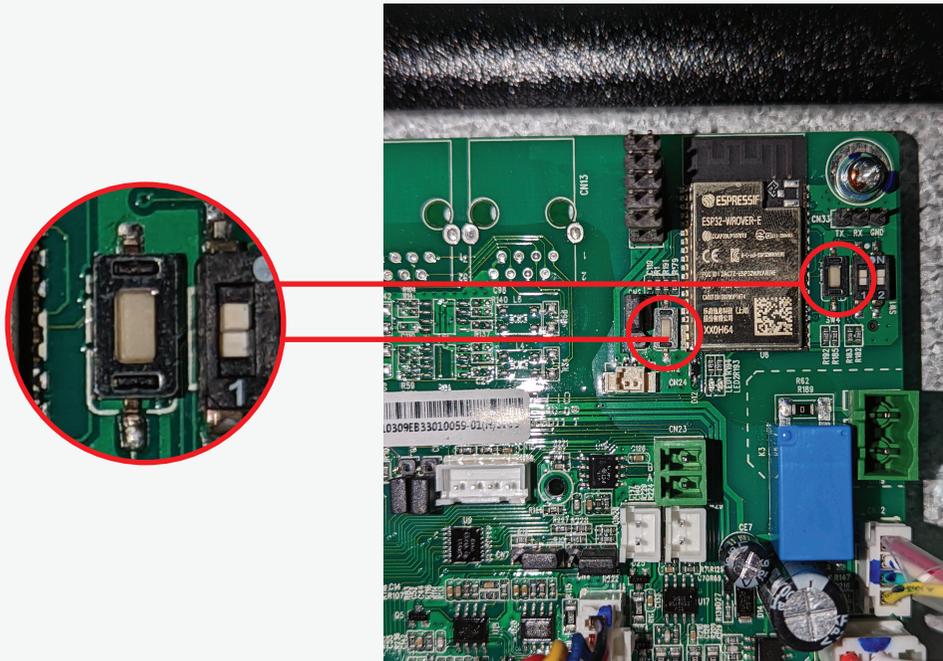
State	Description	LED Status
Standby	Power-on, but no gun plug-in	 Flashing green, 2S on 2S off
Ready to charger	Gun plug-in, but not start charging yet	 Flashing yellow, 2S on 2S off
In charging	Gun plug-in, and start charging by RFID	 Breathing green, on/off gradually
Stop charging	Charging stop, but gun is still plug-in	 Solid green
Fault	Error happens	 Solid red

Wi-Fi Reset on CITA Smart 44 Gen 3

⚠ Warning

This device's input & output voltages are dangerously high, which can endanger human life. Please strictly observe all warnings & operating instructions on the device and in the manual. Unauthorised & non-professional service personnel should not remove the cover of this device

1. Open the CITA Smart 44 Gen 3 black cover and unscrew the transparent body cover.



2. Please press hold each highlighted white buttons for 5-10 secs as soon as you turn on the charger.

3. This will reset the Wi-Fi and Bluetooth configuration on the EV Charger and be ready for new network pairing.

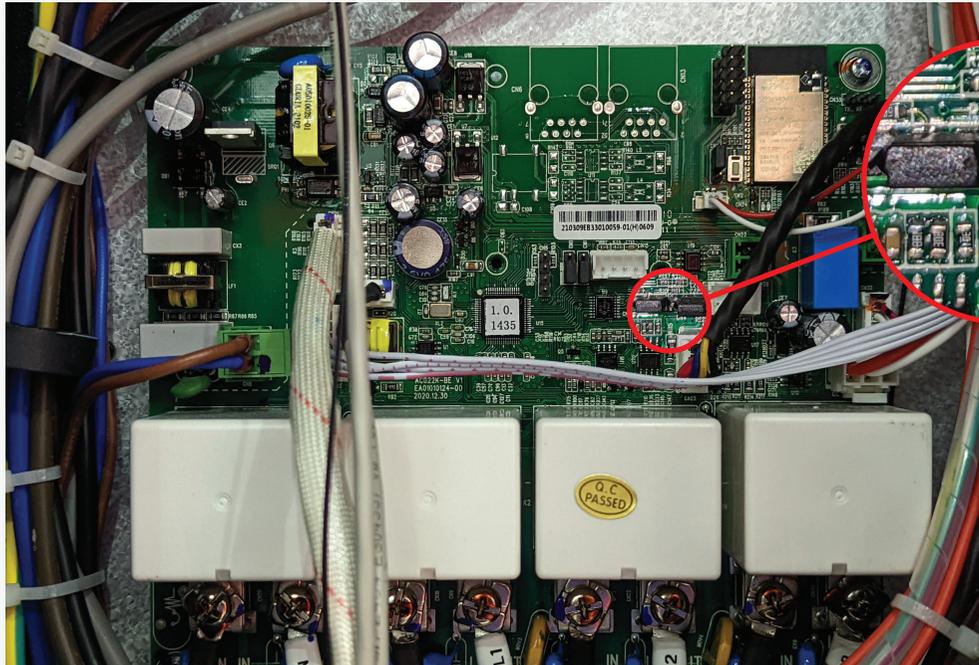
Meaning of the LED notification

 **Solid Red:** Ready to Pair

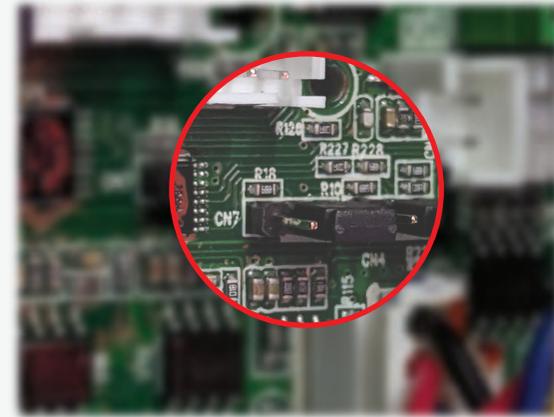
 **Blinking Red:** Has Wi-Fi details and waiting to pair to a network

  **Solid Red Left, Blinking Green Right:** Connected to the Wi-Fi network and communicating to the backend.

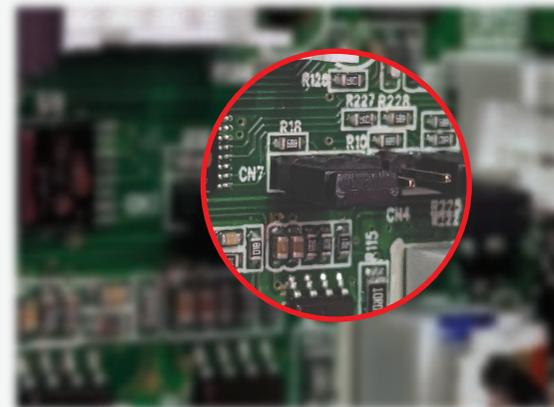
Switching between **Online & Plug-n-Play Mode**



Look for Jumper Name CN7 to change between Online & Plug & Play mode operation.



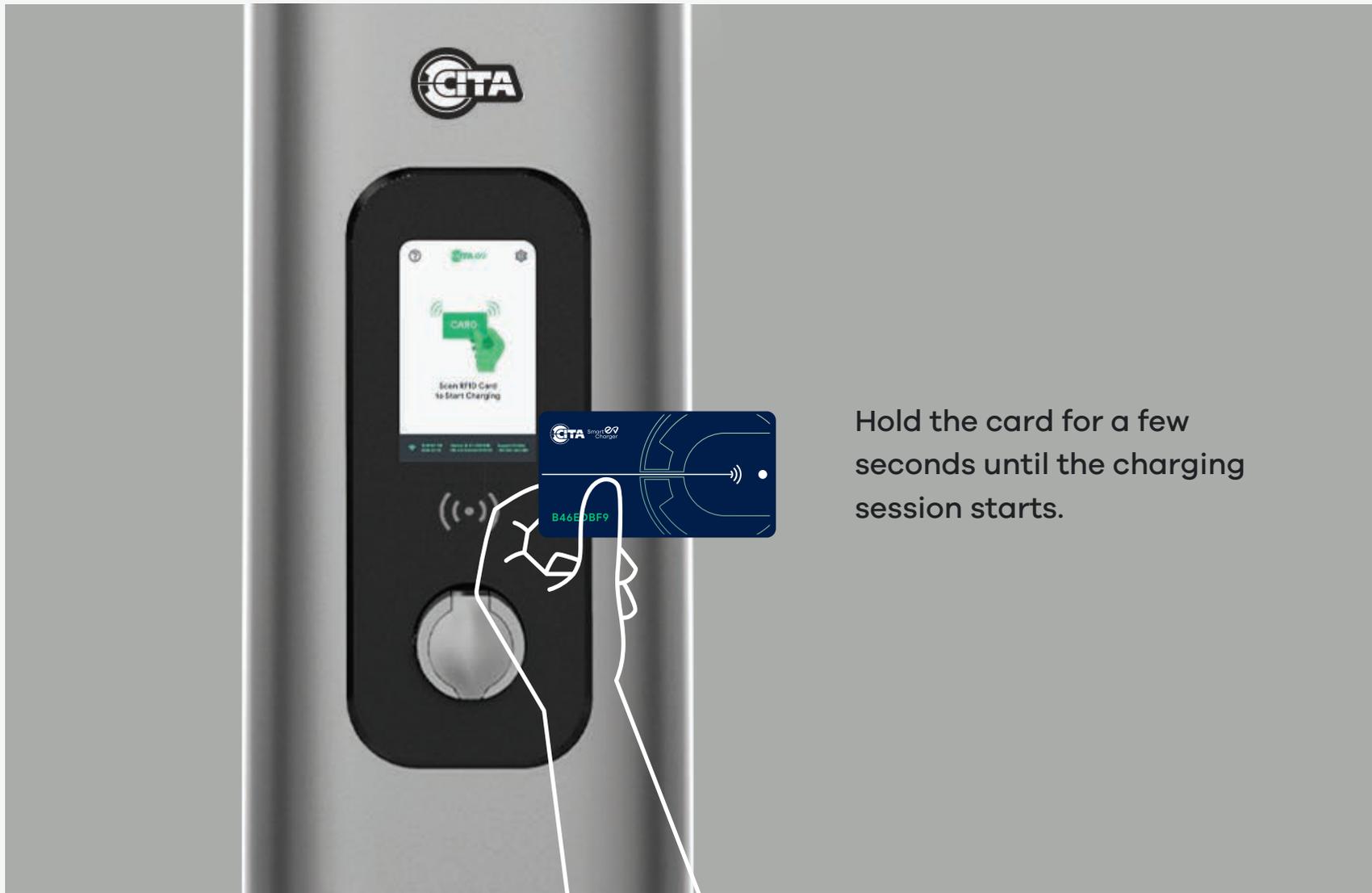
Jumper in 2-3: Online Mode (Default)



Jumper in 1-2: Plug & Play Mode

RFID Operation

- a. After the charger is connected to the EV, a yellow light will switch on indicating that it is ready for charging.
- b. Scan the RFID card once on the identification area of the front panel after which the charging starts. When the charging starts, the gun will be locked into the charger socket. The charger LED will change to a slow green pulse to indicate charging.
- c. Charging will automatically stop when the EV is fully charged, and the charger LED indicator will be solid green.
- d. Please end the charging session by scanning the RFID card for a second time. If you do not scan the RFID card again, the charger will not unlock the gun on the charger side, and the user cannot unplug the charging gun.
- e. When an EV is being charged, the user can stop charging by scanning the RFID card for a second time. The charging session will end, and the gun on the charger side will be unlocked.
- f. Another solution to stop charging is to end the charging session from the EV side. After the gun on the EV side is unlocked and plugged out, the charging session will end, and the gun on the charger side will be unlocked automatically.



Hold the card for a few seconds until the charging session starts.

4G Router Configuration Guide

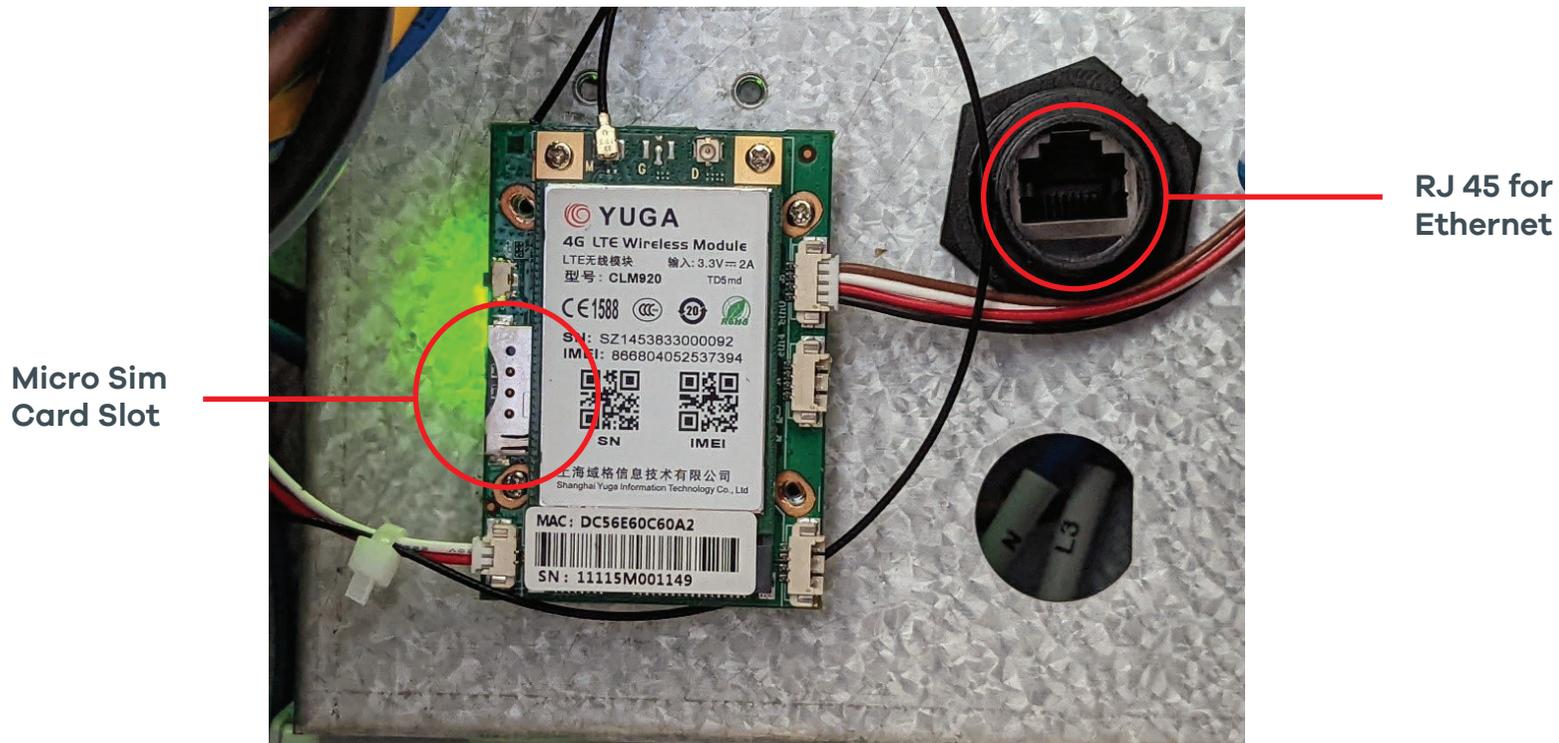
Foreword: 4G router is an optional internet access device installed in the charger, which can provide a 4G internet access point for the charger. If there is not a local Wi-Fi access point at installation site, 4G router can be your choice.

Usually the charger isn't connected to the 4G router when factory out. Please follow the steps to connect charger to the 4G router.

1. Insert SIM or Ethernet:

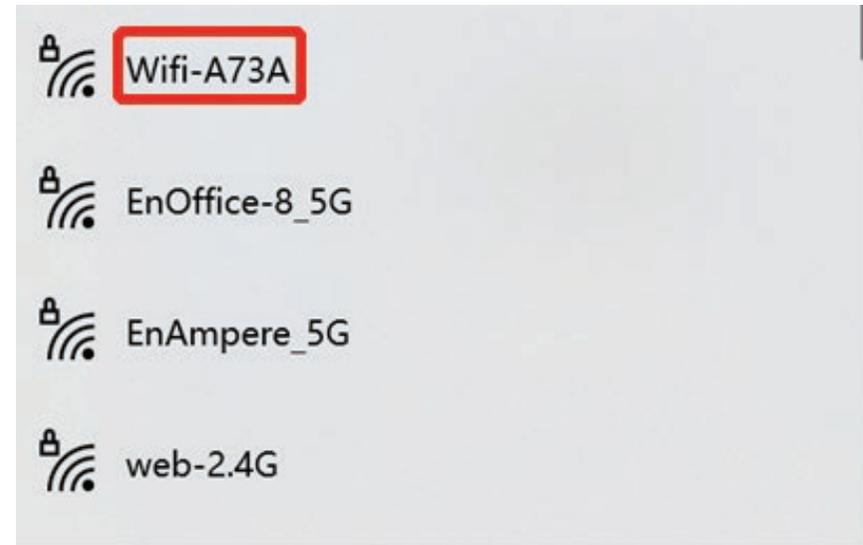
Insert a 4G SIM Card into the SIM card port at the edge of the 4G router. Or insert the ethernet cable with RJ45 connector.

Note: Please make sure your SIM card is valid and internet service active before installation



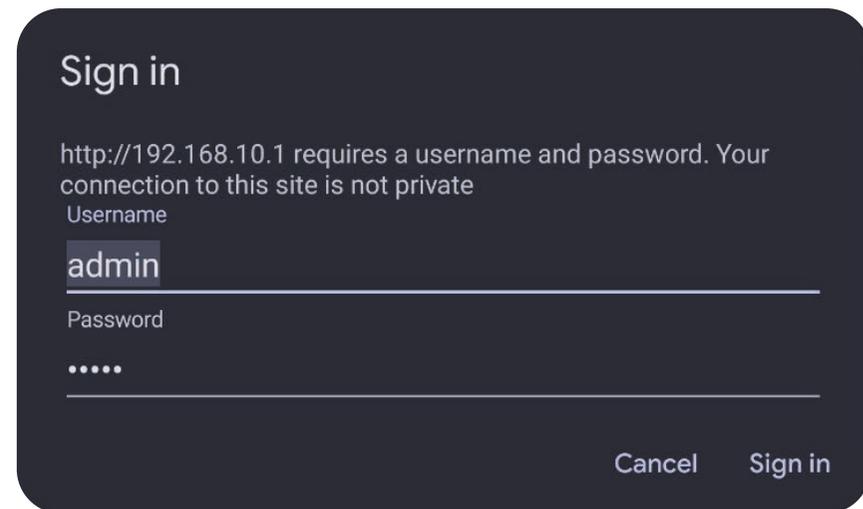
2. Connect to the Router:

Connect your smartphone or computer to the Wi-Fi of the 4G router
Wi-Fi Name(SSID): WiFi-****, (**** is the last 4 digitals of the router MAC)
Password: 12345678



3. Log in to the Router Settings:

Log in to the setting page of the 4G router and input 192.168.10.1 (IP of the 4G router) in your web browser.
Username: admin
Password: admin



4. Router Configuration:

Click "Mode" in the top navigation bar, choose the following

SIM Card Operation: Choose "3G/4G Wireless Routing Mode" and apply. (or)

Ethernet Cable Operation: Choose "Standard Wireless Router Mode" and apply.

After "apply" the 4G router will reboot and switch to 4G mode

5. OCPP Backend Configuration:

If you find your mobile or computer is connected to the internet via the Wi-Fi of the 4G router means the 4G router is online now. Use the 4G router's Wi-Fi as the source of internet and connect the chargers individually using the EVSE Mesh app by following the instructions from the User manual or OCPP integration guide provided by CITA EV.

If you have any questions during this process please reach out to CITA EV Support team at **+44 800 368 6362** or email at **supportuk@citaevcharger.co.uk**

The screenshot displays the web interface for an M2M 4G Industrial Router. The top navigation bar includes 'Status', 'Mode', 'WAN', 'VPN', 'LAN', 'Wireless24', 'Security', 'Server', 'Routing', 'Admin', and 'Logout'. The 'Mode' page is titled 'Device Work Mode' and offers four options:

- 3G/4G Wireless Router Mode**: Wireless and ethernet port connect to local network, The 3G/4G USB modem connect to internet. Diagram shows User PC, 3G USB Modem, Mobile ISP, and Internet.
- Standard Wireless Router Mode**: Wireless connect to local network, The ethernet connect to internet. Diagram shows User PC, xDSL Modem, and Internet.
- Standard Wireless AP and APClient Bridge Mode**: Wireless work for access point, APClient connect remote AP, Ethernet connect to local network. Diagram shows User PC, Router/Switch, xDSL Modem, and Internet.
- Wireless AP Client Mode**: Ethernet Wireless connect PC or local network, Another Wireless Interface work for a WAN port connect to other wireless AP or router. Diagram shows User PC, Wi AP / Router, and Internet.

Buttons for 'APPLY' and 'CANCEL' are located at the bottom right. A 'Help' sidebar on the right explains that 'Smart Mode' is the default, which automatically detects WAN mode with a priority of 3G/4G -> DHCP -> PPPoE -> AP-Client. A footer at the bottom states 'Copyright 2020-2030. All right reserved'.

WiFi & OCPP server configuration

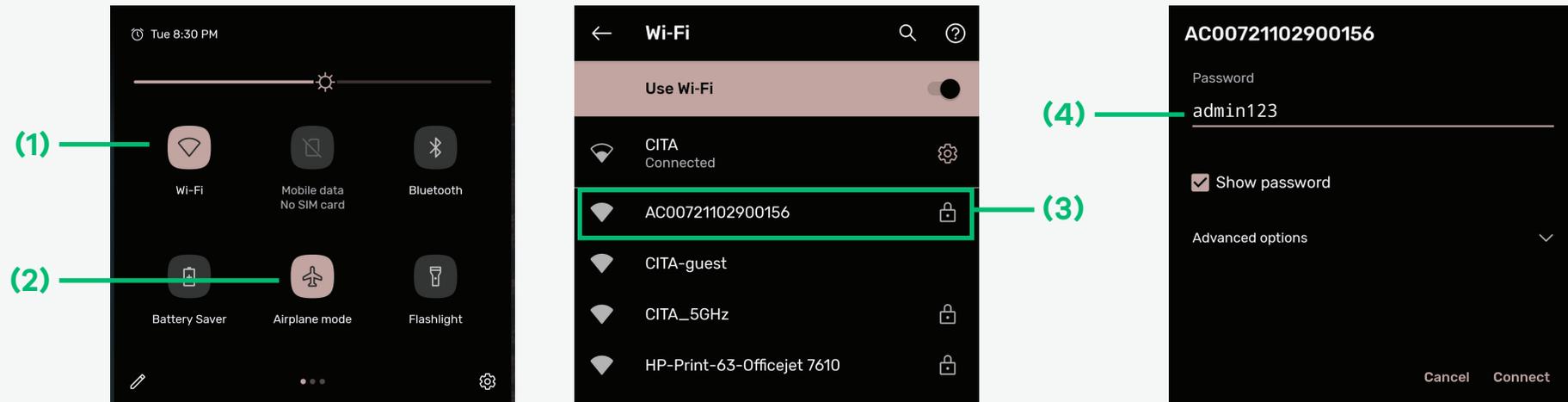
AP Mode function lets you to directly connect to the configuration page of the charger to setup the WiFi network SSID and Password & also set the OCPP server that the charger needs to connect to.

1. Network Connection

Please follow the steps below to complete the network connection.

Step 1: Wi-Fi Connection

- (1) Switch your phone to airplane mode
- (2) Make sure Wi-Fi is enabled
- (3) Select charger point WiFi name.
The name of the WiFi SSID begins with "AC022.....", it is the same as the charger's serial number.
- (4) Enter WiFi Default password to connect: admin123



Step 2: Login

- (5) Open a web browser
- (6) Enter the IP Address in the address bar as: 192.168.4.1
- (7) Enter 4-digit network password (PIN Number)

The network pin can be found on the cover of the charge point. Please keep the PIN sticker on a safe place to access it later.

(5)

(6)

(7)

Note: Please make sure the WiFi SSID which you connected is correct if you can not enter the login interface via the default IP address.

Step 3: Wi-Fi Setup

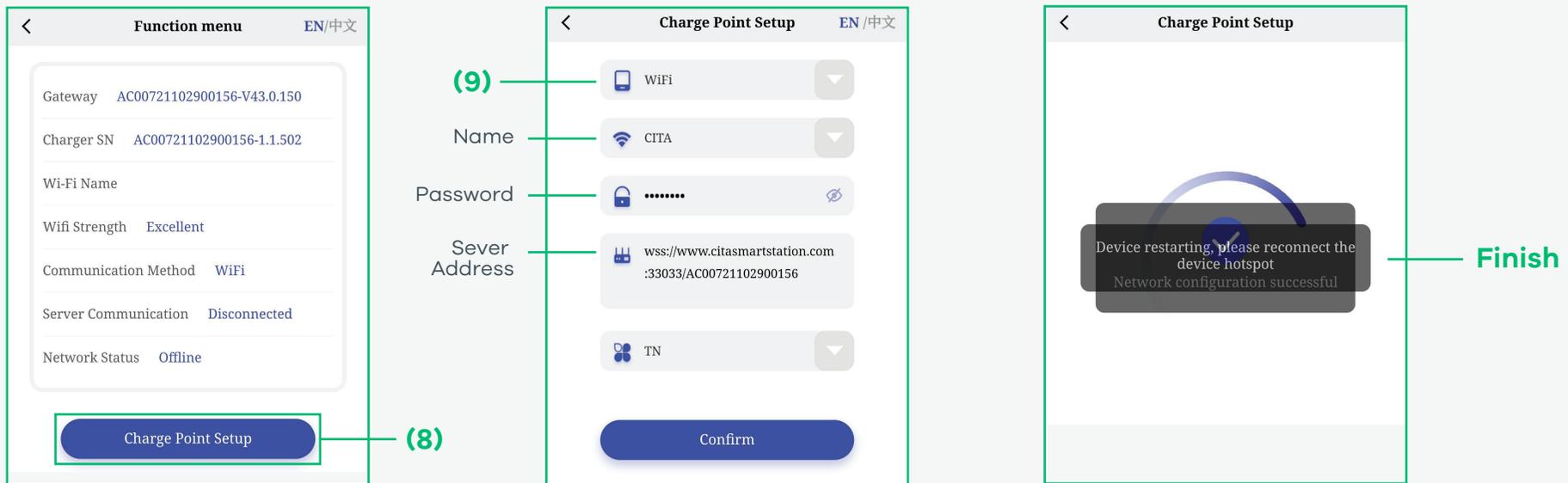
(8) Select "Charger Point Setup"

(9) Wi-Fi Setup

You can select the Wi-Fi SSID name that you want to connect.

Select "Other" and enter Wi-Fi SSID and Password manually if the Wi-Fi network is not showing in the list.

(Make sure to enter the Wi-Fi SSID carefully while entering it manually)



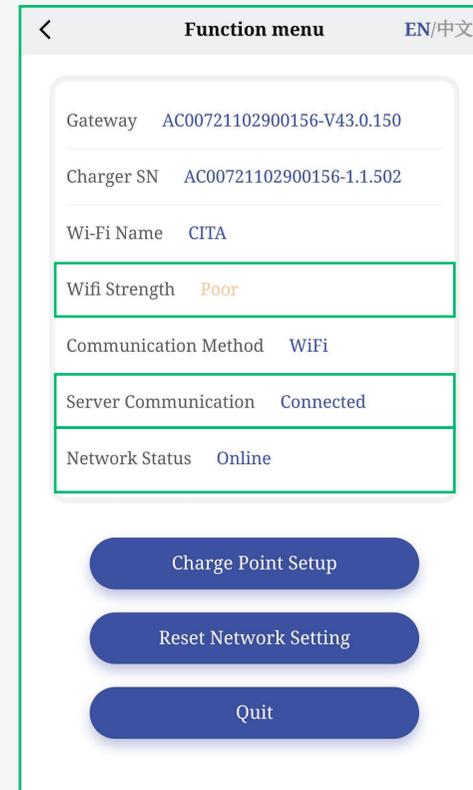
Note: After WiFi setup, you need repeat step (3) to login again.

(10) Verifying Network Connectivity

After re-login, please make sure the Wi-Fi strength is Excellent, Server communication is **“Connected”**, and the network status is Online.

If the Wi-Fi strength is poor, please try to change the Wi-Fi network or arrange a range extender to enhance the network strength.

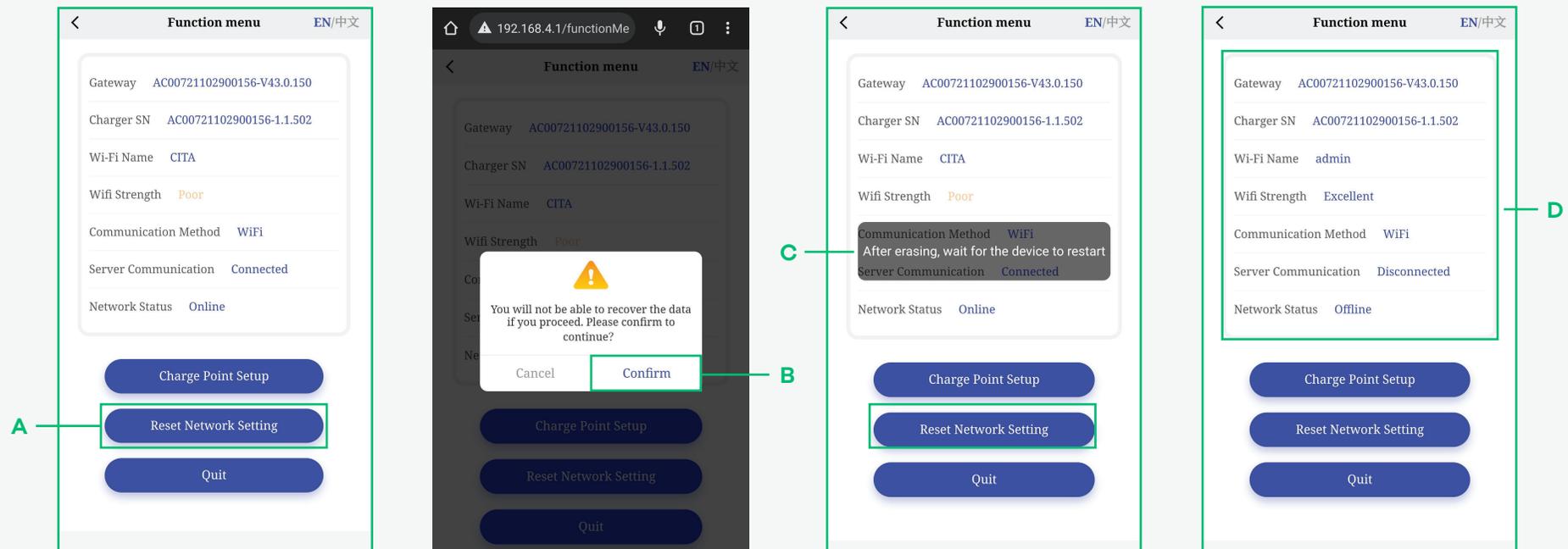
If the server communication is **“Disconnected”** or the network status shows Offline, please try to reset network setting, and then repeat **Step 2 and Step 3**.



2. Reset Network Setting

If you wish to reset all the settings that you have performed, follow the below steps. Please proceed with caution as the information will be removed.

Please **click A** to reset network settings, and **click B** to confirm.



After you reset the network setting, the network configuration information is the same as **D** shows.

Warranty

1.1 CITA Smart EV Charger warrants to Customer on delivery and for a period of three (3) years after that that the Products are free from material defects in material and workmanship and conform in all material aspects with the specifications as explicitly listed in the Documentation, except for charging cables, their connectors and software, for which the warranty is limited to three (3) months from delivery.

1.2 Subject to clause 1.3, CITA Smart EV Charger shall, at its option, repair or replace defective Products, or refund the price of faulty Products if:

(a) Customer gives notice in writing during the warranty period within fourteen (14) days after the Customer has discovered or should reasonably have discovered that some or all of the Products do not comply with the warranty as set out in clause 1.1;

(b) Customer returns such Products to CITA Smart EV Charger (at the location specified by CITA Smart EV Charger) at Customer's cost and following the RMA (return merchandise authorisation) instructions from CITA Smart EV Charger if the nature of the Product allows such return; and (c) CITA Smart EV Charger is given a reasonable opportunity of examining such Products and provided by Customer with all information it may reasonably require to proceed to such examination. Concerning repair, CITA Smart EV Charger is entitled to apply problem avoiding restrictions and/or Workarounds.

1.3 CITA Smart EV Charger shall not be liable for the Products' failure to comply with the warranty in clause 1.1 if:

(a) Customer makes any further use of such Products after giving a notice in accordance with or failed to provide notification within fourteen (14) days as set out in clause 1.2; (b) The Error arises because Customer failed to follow CITA Smart EV Charger's oral or written instructions as to the storage, installation, commissioning, use or maintenance of the Products or (if there are none) good trade practice (such as but not limited to use of the Products with parts, accessories or software not provided or approved by CITA Smart EV Charger);

(c) The Error arises as a result of CITA Smart EV Charger following any customisation or Product specification supplied by Customer; (d) Repairs or other interventions on the Products are performed by persons not trained for this purpose, against CITA Smart EV Charger's oral or written instructions, or with parts not supplied or approved by CITA Smart EV Charger; or (e) The Error arises as a result of fair wear and tear, willful damage or negligence by Customer and/or a third party, or abnormal working conditions (such as but not limited to damages resulting from vandalism, animals, high-pressure cleaners, or Error in connected vehicles).

1.4 In all cases, the following are excluded from the coverage of the warranty:

(a) Travel costs and labour costs of repair, including time spent on preliminary work or on disassembly and reassembly, if the repair of the Products is to take place at the installation site due to the nature of the Products; (b) Cleaning, routine maintenance and preventative maintenance operations of the Products as defined in the Documentation, as well as the supply of products necessary for these operations; (c) Restarting operations after the Product has been secured, for example by circuit breakers, ground fault circuit interrupters (GFCIs), fuses or emergency stops; and (d) In general, all operations on-site, especially if no parts need to be replaced.

1.5 The Agreement shall apply to any repaired or replacement Products supplied by CITA Smart EV Charger. This warranty statement is subject to change.

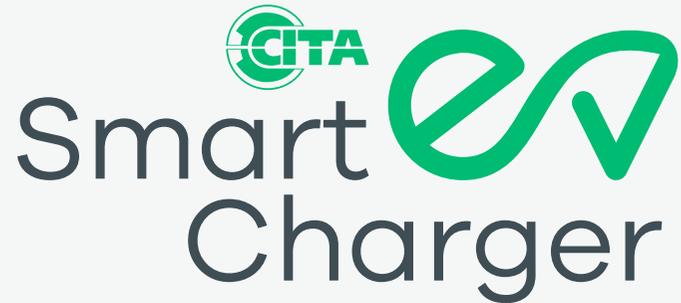
Please refer to <https://citaevcharger.co.uk/terms-and-conditions> for the latest version.

Declaration of conformity

CITA Smart Solutions Limited,
52 Deerdykes View, Westfield Park, Cumbernauld, Glasgow, G68 9HN, United Kingdom

Declares under its' sole responsibility that the following Product:
CITA Smart 44 - 2x22kW, 32A, Single Phase Installation Charger

Provided that they are installed, maintained and used in the applications for which they were designed, in accordance with professional practices, relevant installation standards and manufacturer's instructions for use and installation, are OLEV EVHS & WCS certified (approval pending), CE certified and comply with the essential requirements of EMC Directive 2014/30/EU, Low Voltage Directive 2014/35/EU and RED Directive 2014/53/EU in accordance with the following standards: IEC 61851-1, IEC 61851-22, IEC 62196-2



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Disclaimer: Information has been carefully checked and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Due to continual product development, change in specifications, colours and details of our products and those mentioned in this manual are subject to change without prior notice. For any further inquiries, please contact our nearest sales office via e-mail to info@citaevcharger.co.uk or through the phone.

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