

22kW AC MiD WALL BOX

MID - AC022-BB-44



CONTENTS

1. Safety and Warnings	3
2. Introduction	5
2.1 Product Technical Specifications	5
2.2 External Structure	6
2.3 Package Contents	7
3. Operation Instructions	8
3.1 Installation Preparation	8
3.2 Installation Process	8
3.3 Installation Procedure	10
4. Electrical Connection	11
4.1 Visual Overview	11
4.2 Overview of Internal Structure	11
4.3 AC Wiring	12

5. Configuration and Operation	13
5.1 Power-on Safety Checks and Network Configuration	13
6. Network Configuration and Monta App Setup	14
7. Charging Operation and Configuration	23
7.1 Charge using Monta app	23
7.2 Charge using RFID card	23
7.3 Plug and play mode	24
8. Troubleshooting	25
9. Maintenance	26
9.1 Fault Code and Resolution	27
9.2 Security Events	28
9.3 Monta Support	28
9.4 HUMAX EV Customer Support and Complaints	28

SAFETY AND WARNINGS

Save these instructions. Read all instructions before installing or using the charge point.

1. Keep the charge point away from explosive or flammable materials, chemicals, vapours and other hazardous objects.
2. Keep the charge point socket clean and dry. If it gets dirty, wipe it with a clean, dry cloth.
3. Do not touch the socket pin when the unit is powered on.
4. Do not use the charge point if it is showing any visible product damage such as cracks, abrasions, exposed cables, and other visible defects or is reading error state. In the event of such damage, or error, contact a qualified technician immediately.
5. Do not attempt to disassemble, repair, or refit the charge point. If necessary, contact a qualified technician. Improper operation will result in device damage, electric leakage, and other hazards.
6. If any abnormal condition occurs, turn off incoming power supplies immediately.
7. Where possible, please ensure the charge point is protected against lightning and heavy rain.
8. Keep children away from the charge point.
9. Only use the charge point for charging your electric vehicle while the vehicle is parked and stationary.
10. Our packaging materials are environmentally friendly and can be recycled. Please recycle packaging in appropriate containers. Do not dispose of this device with the household waste. It should be taken to a suitable facility for recycling of electrical and electronic devices. For more detailed information about recycling of this device, please contact your local city/town council office or household waste disposal service.
11. Only a qualified electrician is allowed to install this charge point. The installation must comply with local, regional, and national regulations.



WARNING!

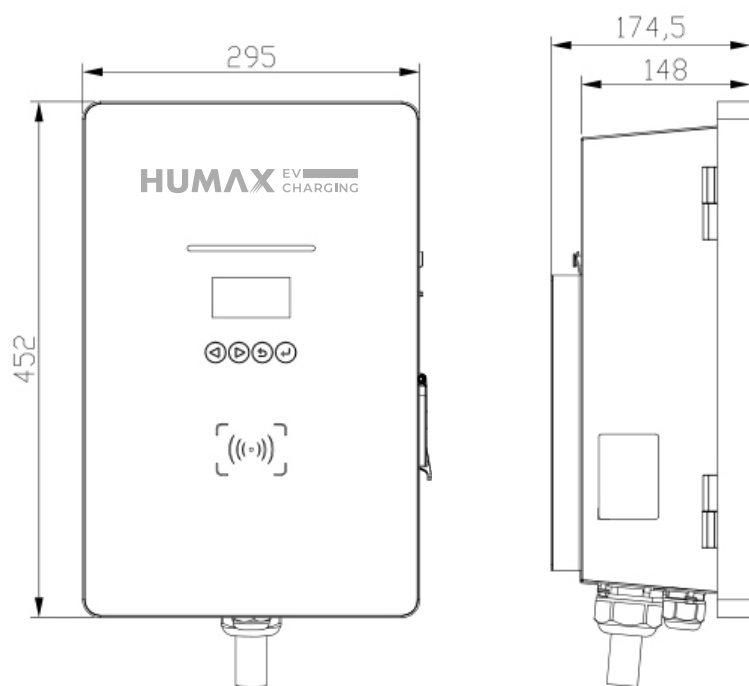
The device may be electrically energized. There is a risk of shock and electrical hazard. Please ensure all warnings on the device and user manual are strictly observed. The cover of the charge point is only to be removed by a qualified electrician.

INTRODUCTION

2.1 Product Technical Specifications

ITEM	PERAMETERS	DESCRIPTION
Input	Power Supply	Three-phase
	Rated Voltage	400V AC
	Rated Current	32A
	Frequency	50Hz
Output	Output Voltage	400V AC
	Maximum Current	32A
	Rated Power	22kW
User Interface	Charging Outlet	Type 2 socket
	Housing Material	Plastic PC 940
	LED Indicator	Green/Yellow/Red
	RFID Reader	Mifare ISO/IEC 14443A
	Start Mode	RFID card/ Mobile App
Communication	Communication	Wi-Fi
	Protocol	OCPP 1.6J
Safety	RCD	RCBO with 30mA Type A RCD + 6mA DC
	Ingress Protection	IP54
	Impact Protection	IK08
	Electrical Protection	Over current protection, Residual current protection, Surge protection, Over/Under voltage protection, Over/Under frequency protection, Over temperature protection, PEN Fault Protection
	Certification	BS EN IEC 61851-1:2019, BS EN IEC 61851-21-2:2021, BS EN IEC 61000-6-1:2019, BS EN IEC 61000-6-3:2021, EN IEC 62311:2020, EN 300328 V 2.2.2:2019, EN 300330 V 2.1.1:2017, EN 301489-1 V 2.2.3:2019, EN 301489-3 V 2.1.1:2019, EN 301489-17 V 3.2.0:2017
	Warranty	3 year
Environment	Installation	Wall-mount
	Work Temperature	-30°~+50°
	Work Humidity	5%~95%
	Work Altitude	<2000m
Package	Product Dimension	452 x 295 x 148mm (L x W x H)
	Package Dimension	560 x 380 x 226mm (L x W x H)
	Net Weight	11kg
	Gross Weight	12kg

2.2 External Structure



2.3 Package Contents









Once opened, confirm the items below are in your packaging in the following way:

Visual Inspection

Visually inspect the charge point's external appearance. If there is any breakage or other damage, please notify the supplier immediately.

Item Inspection




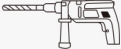


Confirm that all the items listed below are included with your product. If there is a shortage in the quantity of any item, or if any items are missing, please contact the supplier at once.

			
EV Charge Point (x1)	User Manual (x1)	6 Wall Plugs (x6)	M4*32 Screw (x10)
			
M4*12 Screw (x2)	Insulated Terminal (x10)	Charge Point Cover Key (x2)	Wall-mount bracket (x1)

OPERATION INSTRUCTIONS

3.1 Installation Preparation

3.1.1 Tools required

TOOL NAME	PHOTO	FUNCTION
Multimeter		Test electrical connection and electrical parameter
Cross Screwdriver		Screw tightening
Insulated Torque Wrench		Bolt tightening
Electric drill		Drilling of mounting holes
Diagonal Pliers		Cable cutting
Combination Wrench		Bolt tightening

3.1.2 Cables & Materials

NAME	SPECIFICATION	QUANTITY
Power supply cable	Single-phase power supply cable Maximum Cross-Sectional Area: 10mm ²	As required

3.2 Installation Process

3.2.1 Installation Notice

- Electrical devices should only be installed, operated, and maintained by qualified technicians. No responsibility is assumed by the manufacturer for any consequences arising out of the use of this device. A qualified technician is an electrician who has certified skills and knowledge related to the construction, installation, and operation of this type of electrical device and who has received safety training to recognize and avoid the hazards involved.
- All applicable local, regional, and national regulations must be applied when installing, repairing, and maintaining this device.

- The Charge Point is equipped with 30mA type A RCBO and 6mA DC RDC-DD function.
- The Charge Point is equipped with PEN Fault Protection and automatic disconnection system which satisfies the requirements of BS7671:2018 Amendment 2:2022 722.411.4.1 (iii) (the 18th Edition IET Wiring Regulations).
- This means the Charge Point can be installed without the need for an additional earth rod. However, if the customer or local regulations require that an earth rod is installed (for instance as part of a TT earthed system) then this should be connected to the dedicated terminal within the charger.

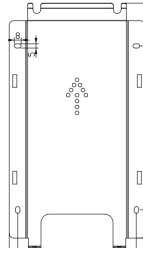
3.2.2 Pre-installation checks

- Ensure that the site of installation is suitable for the Charge Point technical specification and there is no uncontrolled hazard arising from installation of this unit.
- Ensure the charge point's location allows good operational access for normal use, repair, and maintenance.
- The AC input components for the power supply on site are to be correctly fitted with required protection devices prior to installation of the charge point as per local, regional, and national regulations.
- Ensure that the charge point location has a good network connectivity
 - This charge point only supports 2.4GHz network.
 - Wi-Fi signal strength between -50dBm to -60dBm is considered good.
 - A 2.4GHz Wi-Fi extender may be needed if the signal strength is below -60dBm to -80dBm range.
 - The Wi-Fi signal strength can be checked with a smartphone at the point of installation using a suitable Wi-Fi Speed Test mobile application.
- Ethernet: Ensure the ethernet cable length has a maximum distance within 100 meters for good signal strength and speed.

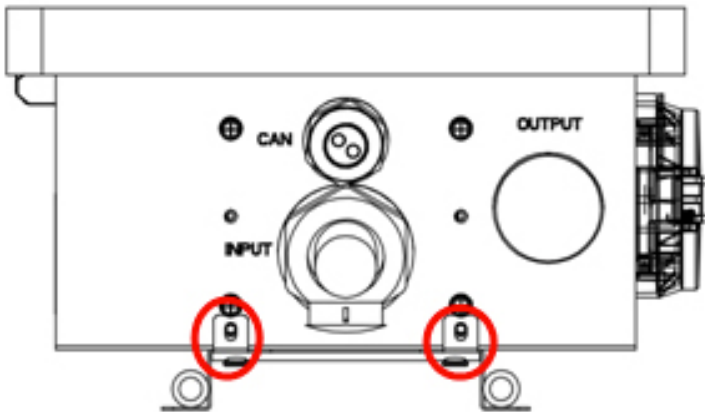
3.3 Installation Procedure

3.3.1. Wall Mount Installation

1. Based on the four holes of the wall-mount bracket, drill 4 x $\Phi 6$ * 35mm holes on the wall, and insert the wall plugs.



2. Lock the 4 x M4*32mm self-tapping screws into the wall plugs, fixed the bracket between the screw head to the wall.
3. Hang the charge point to the bracket through the two raised screws
4. Fix the charger to the bracket by mounting two screws to two screw holes at the bottom of the charger and bracket.
5. Connect the input power cables to the terminal (Refer to Section 4.3).

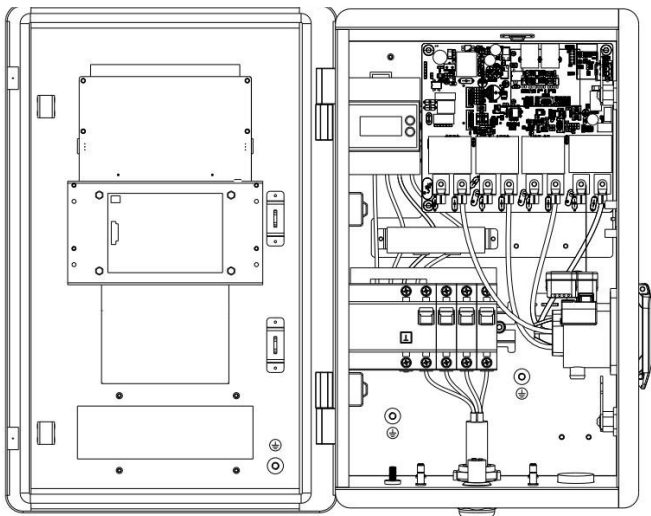


ELECTRICAL CONNECTION

4.1 Visual Overview

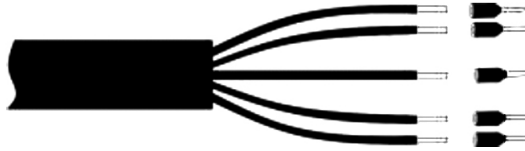


4.2 Overview of Internal Structure



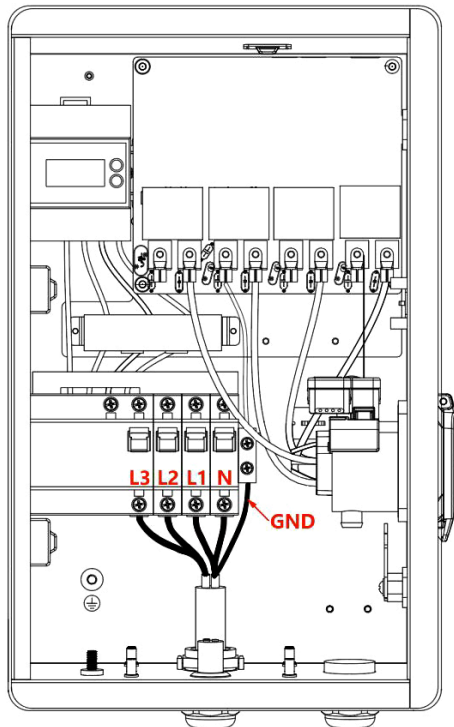
4.3 AC Wiring

1. Remove a length of 40mm of the cable jacket and strip the wire insulation to a length of 8-15mm.
2. Crimp the terminals as shown in the figure below.



Three-phase wiring

3. Distinguish PE, N, L1/L2/L3, then insert the wire into the corresponding terminal. Please ensure that the line and neutral cable are installed properly without overbend. Overbent cable may loosen the connection over time and results in a critical fault.



CONFIGURATION AND OPERATION

5.1 Power-on Safety Checks and Network Configuration

5.1.1 Checks before Power-on

Please check / re-check the following items prior to the initial Power-On :

- The charge point's location allows for good operational access to normal use, repair, and maintenance.
- The AC input components within the installation location power supply is fitted correctly with the required electrical and mechanical protection components prior to installation of the charge point.
- Ensure that there is no visible damage on the electrical cable and the unit.
- Confirm the charge point is installed correctly, as per the instructions in this manual.

5.1.2 Power-on status

When powering on the charge point, the LED indicator should be in standby state.

STATE	DESCRIPTION	LED STATUS
Standby	Power-on, charge gun not plugged into vehicle	Flashing green, 1 second on; 3 seconds off
Ready to charge	Charge gun plugged into vehicle, charging not yet started	Flashing Yellow, 1 second on; 1 second off
Charging in progress	Charge gun plugged into vehicle and charging in progress	Breathing green, 1 second on; 1 second off
Fault has occurred	An error condition has occurred. See Section 6 (Troubleshooting) for details of error conditions	Flashing red or constantly red

NETWORK CONFIGURATION AND MONTA APP SETUP

The following network configuration step applies for Monta ready product with Wi-Fi connection.

Step 1: Airplane mode

Please switch your smartphone to airplane mode.



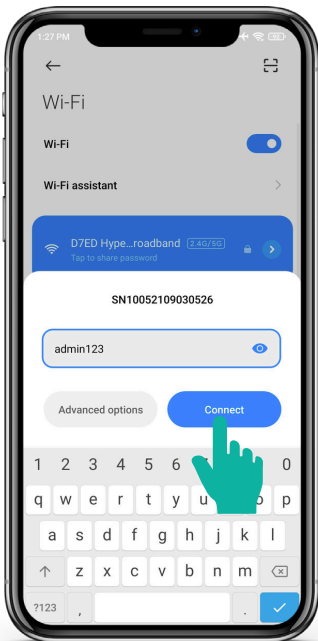
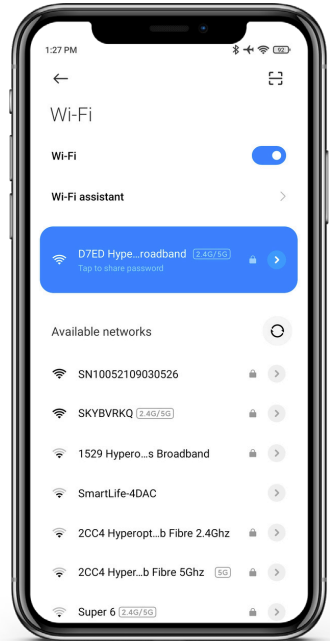
Step 2: Power reboot

- Restart the power of the charge point and ensure the indicator light is flashing green.
- Please note that the network configuration setting is only accessible for 15 minutes after the power reboot.



Step 3: Charge point Wi-Fi

- Turn on your smartphone Wi-Fi.
- After one minute, please find the charge point hotspot that begins with “SN100...”

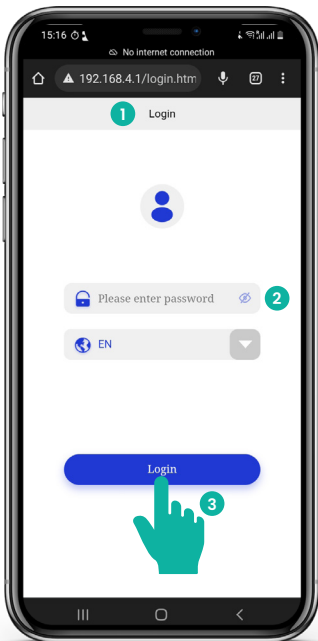
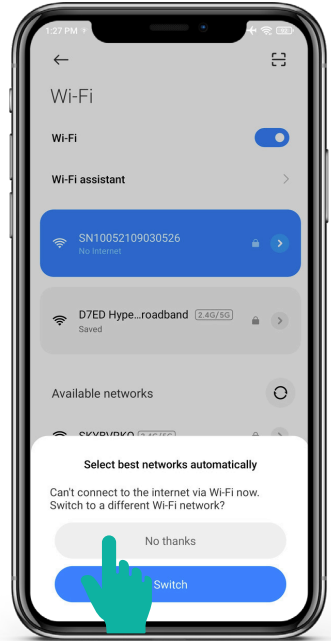


Step 4: Input charge point Wi-Fi password

- Input “admin123” as the password.
- Click ‘Connect’.

Step 5: Automatic network switch

Please reject automatic Wi-Fi network switch when the message appears. The smartphone can communicate with the charge point without internet connection.

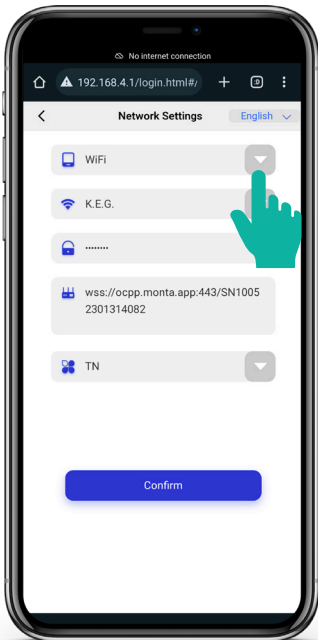
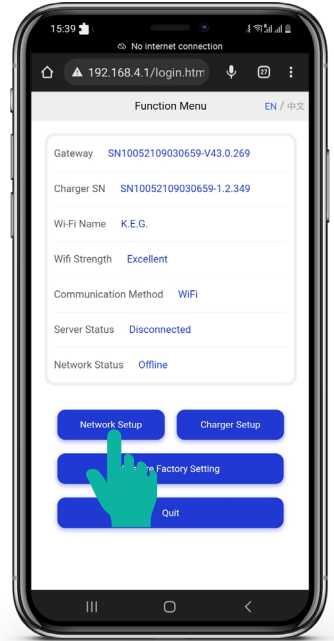


Step 6: Open network configuration page

- Open the web browser on your smartphone which should be connected to charger Wi-Fi.
- Go to 192.168.4.1 to open the network configuration page.
- Input the 4-digit network pin. The network pin can be found on the cover of the charge point. Please take note of the pin and remove the pin sticker from the charge point.
- Tap 'Login'.
- If the webpage is not accessible, please reboot the charge point and start at Step 6 again.

Step 7: Network setup

After logging in to the function menu, click 'Network setup'.



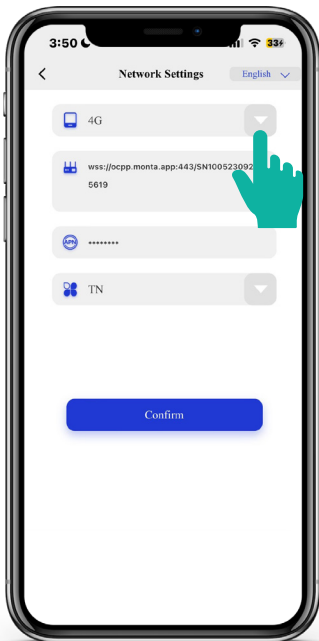
Step 8: Select preferred networking mode - WiFi or Ethernet/4G

a. Wi-Fi

- Tap on the Networking mode drop-down menu and select 'Wi-Fi'.
- Tap 'Confirm'.
- Go to Step 10.

b. Ethernet version

- Tap on the Networking mode drop-down menu and select 'Ethernet'.
- Tap 'Confirm'.
- Go to Step 10.

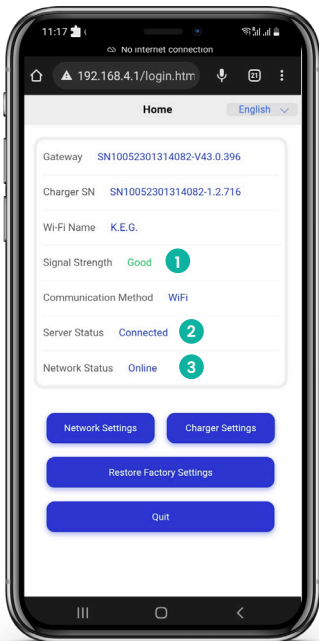
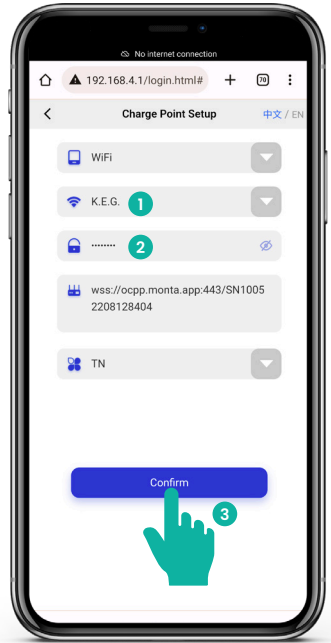


c. 4G version

- Tap on the Networking mode drop-down menu and select '4G'.
- Tap 'Confirm'.
- Input the SIM APN.
- Go to Step 10.

Step 9: Input Wi-Fi details

- Tap on the Wi-Fi drop-down menu to select the 2.4 GHz Wi-Fi network.
- Input the Wi-Fi password.
- Click 'Confirm'.
- Confirmation message appears and the charge point restarts its network.



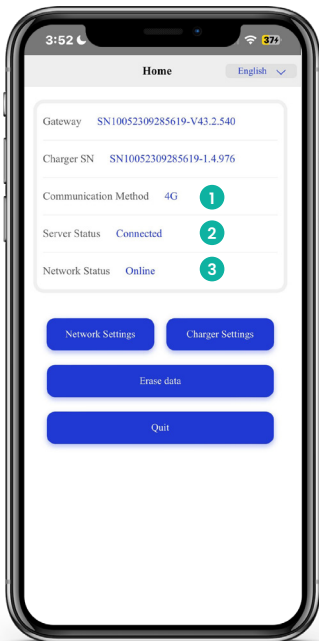
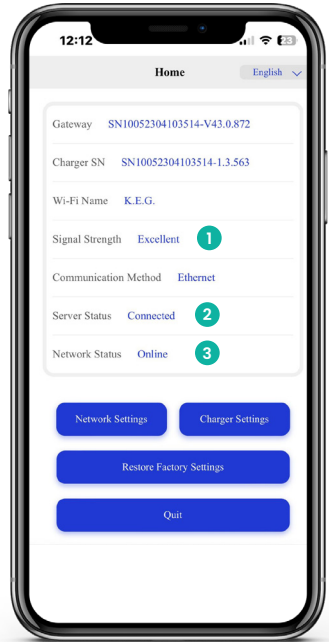
Step 10: Verifying network connectivity

a. Wi-Fi

- To verify the network, -
- Verify that the Wi-Fi strength is either 'Good' or 'Excellent'.
- If the Wi-Fi strength is 'Poor', please change to another network or use a Wi-Fi extender.
- Verify that the 'Server Status' is connected.
- Verify that the 'Network Status' is online.
- If facing difficulties connecting to WiFi, switch to 4G mode. Refer to section 11.4 for 4G configuration.

b. Ethernet version

- Verify that the Ethernet strength is either 'Good 'or 'Excellent'.
- If the Ethernet strength is 'Poor', please check the network speed and connection
- Verify that the 'Server Status' is connected.
- Verify that the 'Network Status' is online.



c. 4G version

- Verify that the 'Server Status' is connected.
- Verify that the 'Network Status' is online.

Monta app Set-up

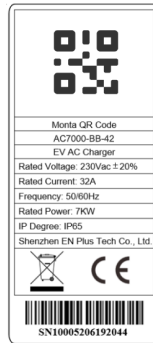
Step 1: Download the Monta app

Scan the QR code below and follow the link or search for 'Monta EV Charging' on AppStore or Google Play.



Step 2: Scan the QR on your charge point

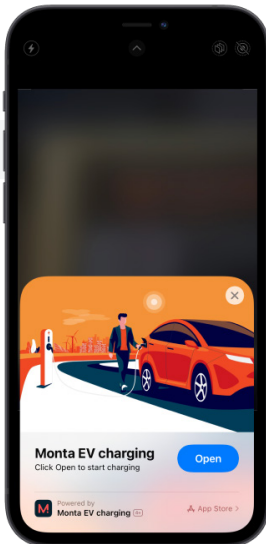
After downloading the app, scan the Monta QR code on the side of your charger using your QR scanner or Google Play.



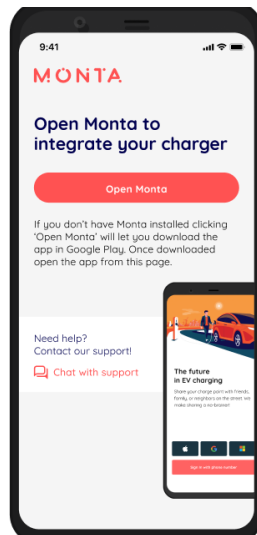
Step 3: Open the Monta app

Follow the link to open the app.

Android

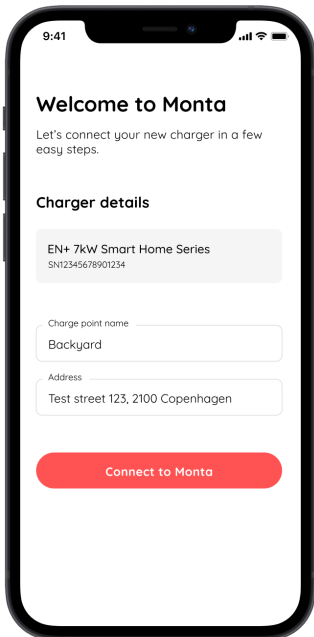
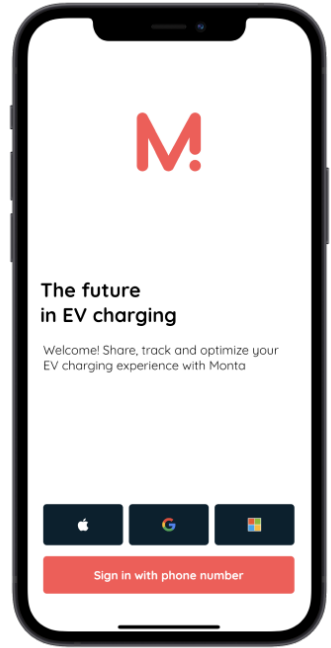


iOS



Step 4: Create your Monta account

Create your account using your phone number or social logins (Apple/Google/Microsoft).



Step 5: Final steps

Follow the last few steps on the Monta app to complete the integration with Monta.

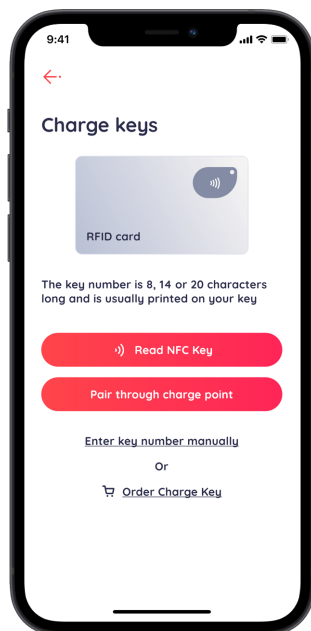
CHARGING OPERATION AND CONFIGURATION

7.1 Charge using Monta app

1. Plug the charging gun into the EV charge point.
2. Once plugged in, please ensure that the charging gun is connected correctly and tightly.
3. When the connection is correctly set up, the charge point's LED indicator will flash yellow, which shows that the charge point is ready for charging.
4. Start the charging session through the Monta app
5. When the charging session has started, the LED indicator will show a pulsing green pattern.

7.2 Charge using RFID card

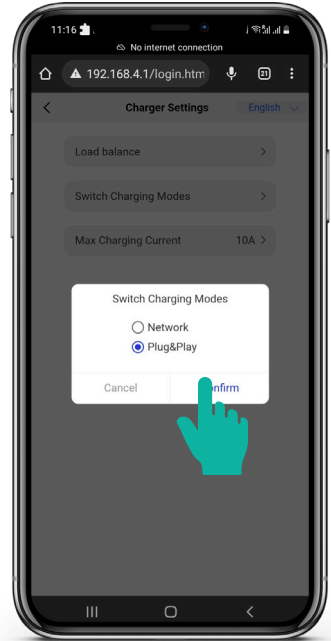
1. Register the 8-digit alphanumeric code on the RFID card to the Monta Charge key setting.
2. Once registered as Monta Charge Key, the RFID card can be used to authorize a charging session even when the device is offline.
3. Plug the charging gun into the EV charge point.
4. Once plugged in, please ensure that the charging gun is connected correctly and tightly.
5. When the connection is correctly set up, the charge point's LED indicator will flash yellow which shows that the charge point is ready for charging.
6. Hold the RFID card to the front of the charge point for 3 to 5 seconds.
7. When the charging session has started, the LED indicator will show a pulsing green pattern.



7.3 Plug and play mode

This mode enables the user to charge the car offline. To enable this feature, follow the steps below.

1. Select Plug and Play from the Switch charging modes.
2. Plug the gun into the car socket and lock the car.
3. The car will start charging.
4. To stop the charge, unlock the car or stop the charging from the car's screen.
5. Unplug the charger plug when the car is no longer charging.



TROUBLESHOOTING

STATE	DESCRIPTION	LED STATUS
In standby	Normal	Flashing green, 1 seconds on, 3 seconds off
Charging status	Normal	Breathing green, 1 seconds on, 1 seconds off
Plugged gun state	Normal	Flashing yellow, 1 seconds on, 1 seconds off
Software upgrade	Normal	Fast flashing green light
Ground warning	Normal	Fast flashing yellow light
Relay fault	Fault	Red on 3s, yellow on 1s, red flash 1 time, yellow on 1s, red flash 1 time, yellow on 1s, Cycle
Reversed input polarity	Fault	Red on 3s, yellow on 1s, red flash 2 times, yellow on 1s, red flash 1 time, yellow on 1s, Cycle
Control pilot fault	Fault	Red on 3s, yellow on 1s, red flash 3 times, yellow on 1s, red flash 1 time, yellow on 1s, Cycle
Leakage current	Fault	Red on 3s, yellow on 1s, red flash 4 times, yellow on 1s, red flash 1 time, yellow on 1s, Cycle
Input terminal overtemperature	Fault	Red on 3s, yellow on 1s, red flash 1 time, yellow on 1s, red flash 2 times, yellow on 1s, Cycle
Relay overtemperature	Fault	Red on 3s, yellow on 1s, red flash 2 times, yellow on 1s, red flash 2 times, yellow on 1s, Cycle
Undervoltage fault	Fault	Red on 3s, yellow on 1s, red flash 3 times, yellow on 1s, red flash 2 times, yellow on 1s, Cycle
Overvoltage fault	Fault	Red on 3s, yellow on 1s, red flash 4 times, yellow on 1s, red flash 2 times, yellow on 1s, Cycle
Overload fault	Fault	Red on 3s, yellow on 1s, red flash 1 time, yellow on 1s, red flash 3 times, yellow on 1s, Cycle
Overfrequency fault	Fault	Red on 3s, yellow on 1s, red flash 2 times, yellow on 1s, red flash 3 times, yellow on 1s, Cycle
Underfrequency fault	Fault	Red on 3s, yellow on 1s, red flash 3 times, yellow on 1s, red flash 3 times, yellow on 1s, Cycle
Faulty Leakage Current Monitoring System	Fault	Red on 3s, yellow on 1s, red flash 4 times, yellow on 1s, red flash 3 times, yellow on 1s, Cycle
Incorrect load balance activation/connection	Fault	Red on 3s, yellow on 1s, red flash 4 times, yellow on 1s, red flash 4 times, yellow on 1s, Cycle
Incorrect load balance setting	Fault	Red on 3s, yellow on 1s, red flash 5 times, yellow on 1s, red flash 1 times, yellow on 1s, a Cycle
Lock Error	Fault	Constant red

MAINTENANCE

NO.	ITEM	OPERATING PROCESS
1	Charger components	Use a dry non-static cloth to clean the charger surface. If there is any damage on the vehicle connector, charging cable, or vehicle connector holder, please contact customer service immediately.
2	Charger casing	Do not hit or press hard on the case. If the case is damaged, please contact customer service.
3	Moisture and water notice	If you notice any water or moisture inside the charging station, it is important to immediately turn off the electricity supply to prevent any potential danger. Before using the station again, kindly inform your contact a qualified electrician.
4	Flammable substance	It is important to ensure that the charging station is kept away from hazardous materials, such as flammable gases and corrosive substances.

9.1 Fault Code and Resolution

PROBLEMS	POSSIBLE CAUSES	SOLUTIONS	AUTOMATED RECOVERY
Overvoltage	AC input voltage is too high	<ol style="list-style-type: none"> 1. Check the charge point input voltage. 2. If the voltage is over 276Vac for a short time, please wait until the power grid recovers to the normal voltage range. 	The charge point immediately recovers once the input voltage is within range.
Undervoltage	AC input voltage is too low	<ol style="list-style-type: none"> 1. Check the charge point input voltage. 2. If the voltage is under 184Vac for a short time, please wait until the power grid recovers to the normal voltage range. 	The charge point immediately recovers once the input voltage is within range.
Overload/Overcurrent	AC output current is too high	<ol style="list-style-type: none"> 1. Shut off the breaker switch in the distribution/consumer unit immediately if it hasn't already. 2. Check whether there is low resistance path on the output cable and charging gun. 	The charge point recovers to normal state once the charging gun is plugged out from the car.
Overfrequency	AC input frequency is too high	<ol style="list-style-type: none"> 1. Check the input voltage frequency from the backend. 2. If the frequency exceeds 63Hz for a short time, until the power grid recover to normal voltage range. 	The charge point immediately recovers once the electrical frequency is within range.
Underfrequency	AC input frequency is too low	<ol style="list-style-type: none"> 1. Check the input voltage frequency from the backend. 2. If the frequency is lower than 47Hz for short time, wait until the power grid recover to normal voltage range. 	The charge point immediately recovers once the electrical frequency is within range.
Input terminal overtemperature	Temperature inside the charge point is too high	<ol style="list-style-type: none"> 1. Check the surrounding conditions of charge points installed whether there is heat source nearby. Make sure surrounding temperature is under 60°C. 2. Please ensure the electrical cable and terminal integrity before powering the charge point. 	The charge point recovers when the temperature is back to normal.
Leakage current	Leakage current to earth is too high	<ol style="list-style-type: none"> 1. Shut off the breaker switch in the distribution/consumer unit immediately. 	The charge point recovers to normal state once the charging gun is plugged out from the car
Reversed input polarity	Reversed connection of L/N input cable	<ol style="list-style-type: none"> 1. Shut off the breaker switch in the distribution/consumer unit immediately. 2. Check if AC input/output cables are connected in the correct polarity and rectify accordingly. 	The charge point immediately recovers once the input terminal is connected in the correct polarity.
Faulty Leakage Current Monitoring System	Connection issue on the leakage detection current transformer	<ol style="list-style-type: none"> 3. Please check the port connection of the current transformer clamped to the outgoing line and neutral cable. 	The charge point recovers when the connection of leakage detection current transformer is resolved.
Ground Warning	Loose connection on incoming CPC cable or unstable incoming voltage	<ol style="list-style-type: none"> 1. Please tighten the incoming CPC/grounding cable inside the charge point. 2. If tightening does not resolve the issue, please wait until the incoming voltage stabilize. 	The charge point immediately recovers once grounding cable is tightened and the voltage is stable.

Note: If the problem persists, please contact uk.support@humaxcharging.com

9.2 Security Events

NOTIFICATION	FUNCTION
FirmwareUpdated	The Charge Point firmware is updated
StartupOfTheDevice	The Charge Point has booted
ResetOrReboot	The Charge Point was rebooted or reset
SecurityLogWasCleared	The security log was cleared
MemoryExhaustion	The Flash or RAM memory of the Charge Point is getting full
TamperDetectionActivated	The physical tamper detection sensor was triggered

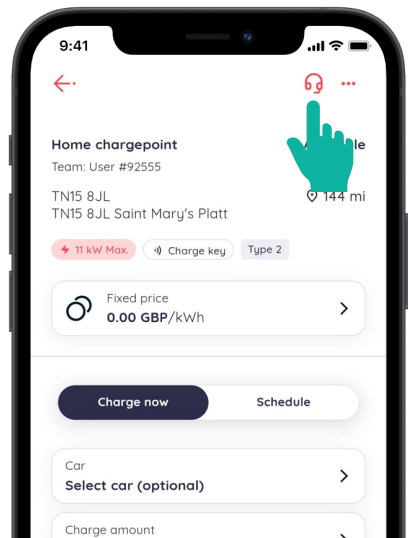
9.3 Monta Support

Visit <https://monta.com/uk/support/> to learn how to use Monta, fix a problem, and get answers to your questions.

Find the chat with support/call support in my profile for queries and if you face any difficulties working with the app.

To contact Monta support:

- Open Monta App
- Open the charge point
- Open the icon in the image below



9.4 HUMAX EV Customer Support and Complaints

Need some assistance? For additional support, contact with our Customer Service Team.

Telephone: 0344 318 8800

Operating Hours: Mon - Fri, 09:00AM - 5:30PM

Email Support: uk.support@humaxcharging.com



Contact us

uk.support@humaxcharging.com / humaxcharging.com/uk

Dec 2024