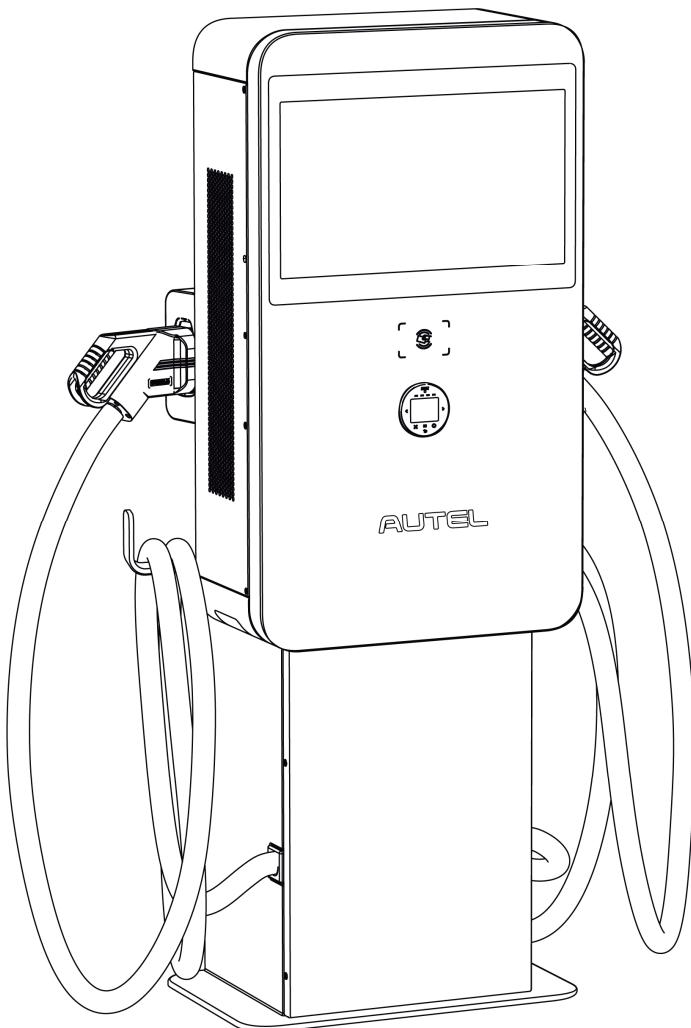


AUTEL®



Installation and Operation Manual

MaxiCharger DC Wall Mount (EU)

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IMPORTANT

Before operating or maintaining this unit, please read this manual carefully, paying extra attention to the safety warnings and precautions.

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1 Using This Manual

This manual provides the procedures for installing and operating of the MaxiCharger DC Wall Mount. Read through this manual and become familiarized with the instructions of the MaxiCharger prior to installation to ensure successful use.

This document is intended for these groups:

- Owner of the MaxiCharger
- Installation Engineer

1.1 Conventions

1.1.1 Bold Text

Bold text is used to highlight selectable items such as buttons and menu options.

1.1.2 Signal Words

- **NOTE:** provides helpful information such as additional explanations, tips, and comments.
- **IMPORTANT:** indicates a situation that, if not avoided, may result in damage to the test equipment or vehicle.
- **DANGER:** indicates an imminently hazardous situation with a high risk level which, if the danger is not avoided, will cause death or serious injury.
- **WARNING:** indicates a potentially hazardous situation with moderate risk level which, if the warning is not obeyed, can cause death or serious injury.
- **CAUTION:** indicates a potentially hazardous situation with a medium risk level which, if the caution is not obeyed, may cause minor or moderate injury or damage to the equipment.

1.1.3 Hyperlinks

Hyperlinks and links that take you to other related articles, procedures, and illustrations are available in electronic documents.

1.1.4 Illustrations

Illustrations used in this manual are only examples; the actual product(s) or screens may vary.

2 General Introduction

The MaxiCharger DC Wall Mount is designed to charge an electric vehicle (hereinafter called EV). Our chargers provide safe, reliable, fast, and smart charging solutions.

This MaxiCharger is intended for the DC charging of EVs and is intended for both indoor and outdoor use:

- Fleets
- Highway rest stops
- Commercial parking garages
- Other locations

DANGER

- Do not operate the equipment in any ways other than described in this manual or other related documents. Not following the instructions may cause potential personal injury and/or damage to the property.
 - Use the MaxiCharger only as intended.
-

NOTE

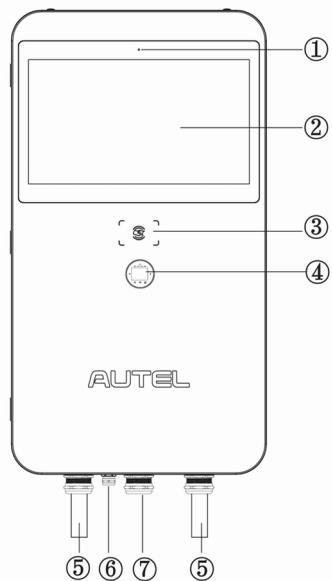
The images and illustrations depicted in this manual may slightly differ from the actual product.

This manual will instruct you how to install and operate the MaxiCharger.

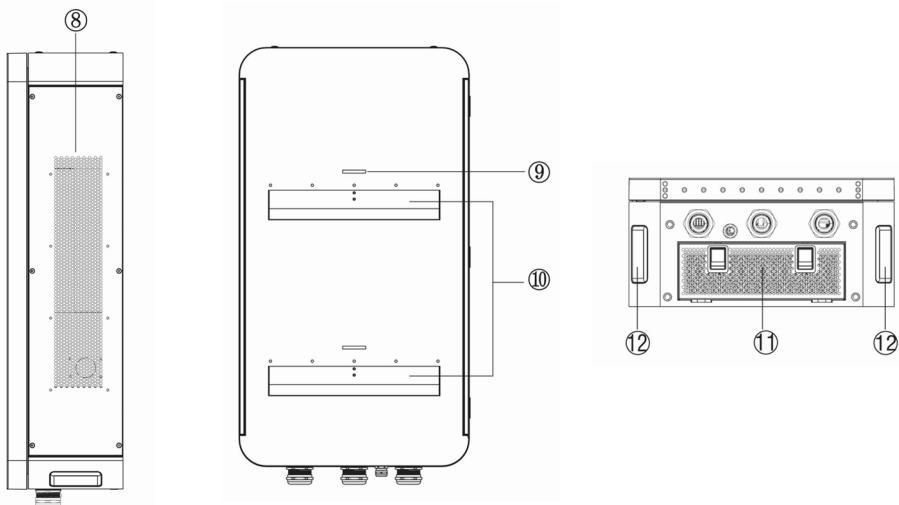
2.1 Safety Warnings

- Disconnect the power supply to the MaxiCharger during the entire installation procedure.
- The load capacity of the grid must meet the requirements of the MaxiCharger.
- Connect the MaxiCharger to a grounded, metal, permanent wiring system. Otherwise, use the equipment-grounding conductor with the circuit conductors and connect it to the equipment grounding terminal or lead on the product.
- Unqualified personnel must keep a safe distance during the entire installation procedure.
- The connections to the MaxiCharger must comply with all applicable local rules.
- Only use electrical wires of sufficient gauge and insulation to handle the rated current and voltage demand.
- Protect the wiring inside the MaxiCharger from damage and do not obstruct the wiring when you perform maintenance on the cabinet.
- Protect the MaxiCharger with safety devices and measures as specified by local rules.
- **If any specifications or regulations mentioned in this manual contradict with your local rules, refer to your local rules.**

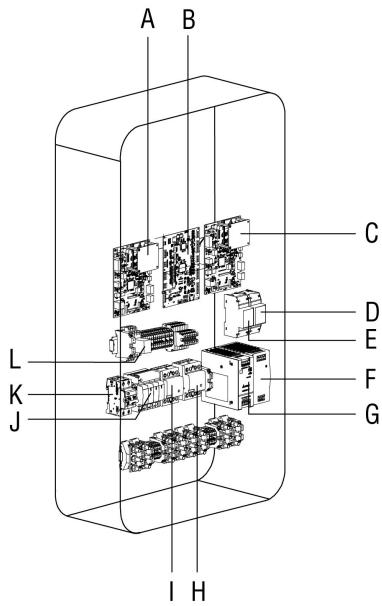
2.2 Product Overview (Outside)



1. Ambient Light Sensor
2. Touchscreen
3. RFID Card Reader
4. POS Payment Device (optional)
5. EV Charging Cable
6. Ethernet Cable Port
7. AC Inlet Hole
8. Vent — each on the right and left side
9. Slot
10. Groove
11. Bezel
12. Lifting Handle



2.3 Product Overview (Inside)



A	Communication Control Unit 1
B	Equipment Control Unit
C	Communication Control Unit 2
D	Energy Meter (PJ1)
E	Energy Meter (PJ2)
F	48 V Auxiliary Power
G	24 V Auxiliary Power
H	AC Contactor (KM2)
I	AC Contactor (KM1)
J	Surge Protection Device
K	Fuse
L	Intermediate Relay

2.4 Technical Specifications

Item	Description
Product Information	
Power Rating	40 kW, max. 47 kW
Charging Type	Mode 4
Max. Output Current for Outlet A/B	<ul style="list-style-type: none">● CCS2: 130 A● CHAdeMO: 125 A
Outlet A+B	<ul style="list-style-type: none">● CCS2 + CHAdeMO (charging for 2 EVs concurrently)● CCS2 + CCS2 (charging for 2 EVs concurrently)
Rated/Max. Input AC Current	75 A/82 A
Input Voltage Range	400 VAC +10% ~ -10% @ 50Hz
Network Type	<ul style="list-style-type: none">● TN-S (Requires external RCD)● TN-C (Requires external RCD)● TN-C-S (Requires external RCD)● TT (Requires external RCD)
AC Input Connection	3P + N + PE
DC Output Voltage	<ul style="list-style-type: none">● CCS2: 150 ~ 950 VDC● CHAdeMO: 150 ~ 500 VDC
Cable Length	4 m/7.5 m

Item	Description
Protection	<ul style="list-style-type: none"> ● Overcurrent ● Overtension ● Undervoltage ● Ground Fault ● Over-temperature ● Short-circuit ● Insulation Monitor ● Surge Protection
Overvoltage Category	AC side (Input) OVC: III
Power Factor (>50% load)	≥ 0.98
Total Harmonic Distortion (>50% load)	$\leq 5\%$
Peak Efficiency	$\geq 96\%$
Standby Power	40 W
Cellular Communication	<ul style="list-style-type: none"> ● GSM ● 4G ● LTE
General Characteristics	
Enclosure Rating	IP54
Operating Altitude	< 2000 m (2000 m ~ 3000 m with power de-rating)
Operating Temperature Range	-30 °C to +55 °C (+45 °C to +55 °C with linear power de-rating)
Storage Temperature Range	-40 °C to +70 °C
Mounting	Floor Mount

Item	Description
Dimensions (W x D x H)	550 x 265 x 1000 mm
User Interface	
Status Indication	LED/APP
User Interface	<ul style="list-style-type: none"> ● Autel Charge APP ● Autel Charge Cloud
Connectivity	<ul style="list-style-type: none"> ● Wi-Fi ● Ethernet ● CAN ● RS485 ● Cellular Network
Communications Protocols	<ul style="list-style-type: none"> ● OCPP 1.6 JSON ● OCPP 2.0.1 (optional)
User Authentication	<ul style="list-style-type: none"> ● QR Code ● RFID ● Plug & Charge ● Credit Card (optional)
Software Update	
Software Update	OTA updates via web portal
Certification and Standards	
Charging System	<ul style="list-style-type: none"> ● IEC 61851-1 ● IEC 61851-23 ● IEC 61851-21-2
Communication to the EV	<ul style="list-style-type: none"> ● ISO 15118 ● DIN 70121 ● CHAdeMO 1.2
EMC Compliance	Class A

Item	Description
Certification	<ul style="list-style-type: none">● CE● UKCA
Design Life	10 year
Warranty	Base warranty 24 months after site acceptance test or 30 months after factory delivery. Warranty extensions available.

3 Preparation

3.1 Before You Begin

- Read through this manual prior to installation to familiarize yourself with the installation steps.
- Ensure the appropriate wiring, circuit protection, and metering are in place at the installation site, according to the specifications, wiring diagrams, and grounding requirements.
- Ensure the MaxiCharger is connected to a grounded, metal, permanent wiring system. Otherwise, an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment grounding terminal or lead on the product.
- Ensure the installation site has a load capacity sufficient to support the MaxiCharger.
- If you choose to use a cellular network to communicate with the MaxiCharger, the cellular coverage at the installation site should be consistently strong. Use a cellular signal detection device to ensure the signal is above -90 dBm. If the signal is below -90 dBm, install repeaters to boost the strength of the cellular signal. Repeaters are often required when installing the MaxiCharger in underground environments such as in an underground garage or enclosed parking space.
- There is enough space available around the installation site to use a lifting equipment, to unpack, and to allow people to work freely.
- Ensure the charging connector of the MaxiCharger can sufficiently reach the vehicle's charging port with the chosen cable length. The standard charging cable length is 4 m, and a 7.5-meter cable is also available.

3.2 Installation Tools

- Flathead Screwdriver
 - Hoisting Equipment
 - Socket Wrench (10 mm/13 mm/19 mm)
 - Drill (16 mm)
 - Cleaning Tool
 - Wire Stripper
 - Cable Lug
 - Voltage Tester
 - Digital Multimeter
-

 **NOTE**

The tools mentioned above are not provided. Be sure to have all the tools prepared prior to the installation.

4 Installation

The MaxiCharger DC Wall Mount has four variations available. The installation work shall be carried out after a suitable location is chosen.

- MaxiCharger and Pedestal
- MaxiCharger mounted on Pedestal
- MaxiCharger and Trolley
- MaxiCharger mounted on Trolley

NOTE

- The MaxiCharger and Pedestal means MaxiCharger and Pedestal will be shipped in separate boxes.
- The MaxiCharger mounted on Pedestal means the MaxiCharger has been installed on a pedestal before shipment.
- The MaxiCharger and Trolley means MaxiCharger and Trolley will be shipped in separate boxes.
- MaxiCharger mounted on Trolley means the MaxiCharger has been installed on a trolley before shipment.

CAUTION

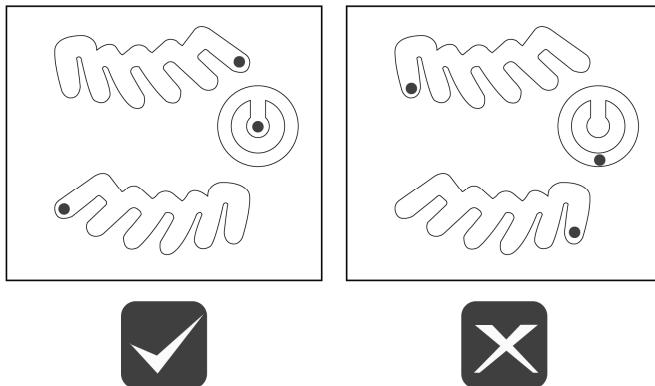
- Cut off the power supply before opening the MaxiCharger.
- Do not touch the inside components of the MaxiCharger while it is powered on.
- Ensure no voltage is applied while checking the MaxiCharger.
- Operate the MaxiCharger only when its door is closed and locked.

IMPORTANT

Always check local codes to ensure compliance. The guidelines described here are the minimum requirements. Ensure that the installation complies with all applicable codes.

4.1 Unpacking

1. Check the tilt and inversion indicators and shock watch.
 - Observe the sensors attached to the wooden box for the degree of the tilt and complete overturn. If the sensors demonstrate severe tilt (over 30°) or total overturn as shown, refuse the delivery.



- If the shock watch appears red, contact Autel customer service and the delivery personnel, and then inspect the product for any damage. Do not accept the delivery until the inspection is complete and no damage is found.
2. Remove the packaging material using appropriate tools.
 3. Inspect whether the MaxiCharger and the parts for installation are damaged. If any damage is found or the parts are not consistent with the order, contact your local dealer.
 4. Make sure that all parts are delivered according to the order.

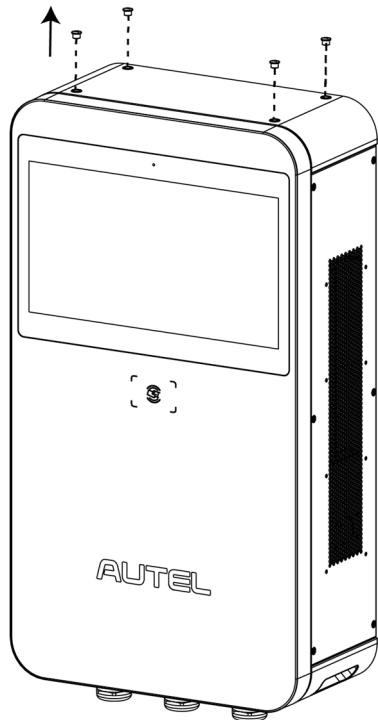
4.2 Moving the MaxiCharger

NOTE

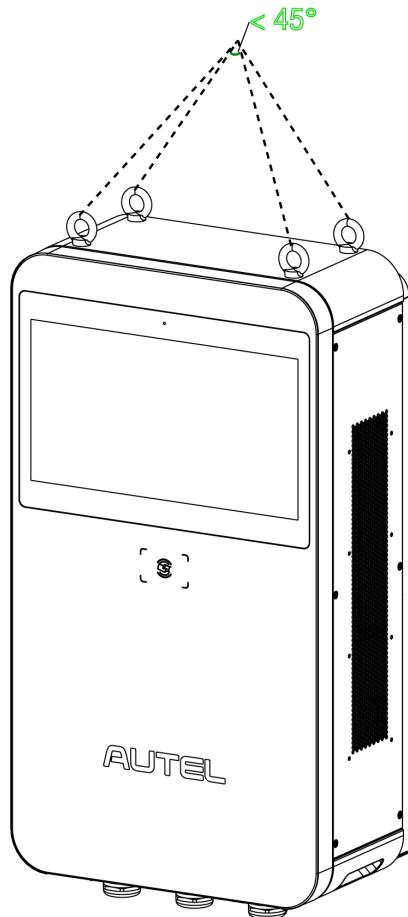
The MaxiCharger mounted on trolley can skip this Chapter **4.2**.

It is recommended to move the MaxiCharger to the installation site using an appropriate hoisting equipment (crane, straps, and so on).

1. Remove the four screws on the top of the charger using a flathead screwdriver. Set them aside.



2. Install and tighten the four M12 lifting eye bolts into the four holes.
3. Connect the cables of the hoisting equipment to the eye bolts' lifting loops. Do not tilt over 45° when hoisting the MaxiCharger.
4. Move the MaxiCharger to the installation site.



4.3 Installing MaxiCharger and Pedestal

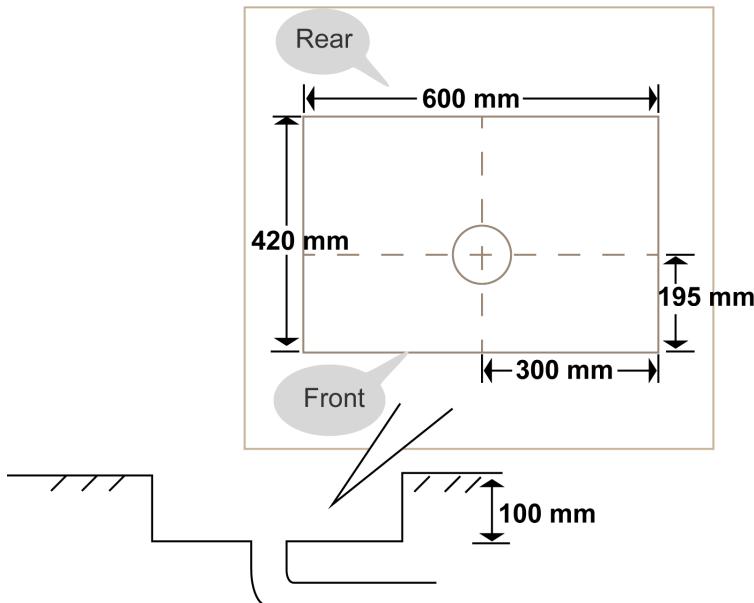
Location Requirements

The pedestal can be installed on an existing concrete. To safely mount the equipment, the concrete should be at least **80 mm** thick and its surface should be perfectly flat and level.

If a new foundation is required, prepare one according to the recommended dimensions (420 mm x 600 mm x 100 mm) (W x D x H).

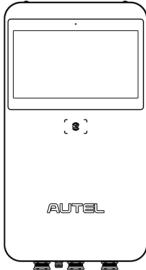
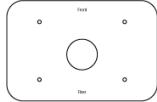
NOTE

The foundation is recommended to be flush with the ground surface.



Checking the Package

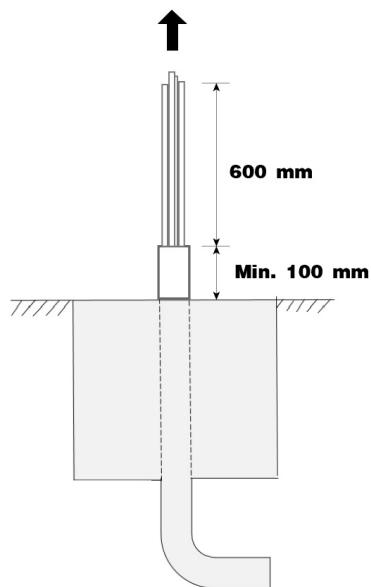
Ensure the following items can be found in the package.

MaxiCharger		Lifting Eye Bolt (M12) (4 PCS)	
Torx Screwdriver (T25)		Hex Key (6 mm)	
Screw (M5 x 20) (For spare use) (4 PCS)		Drilling Template	
Pedestal		Expansion Bolt (M12 x 80) (4 PCS)	
Screw (M12 x 30) (2 PCS for spare) (4 PCS)			

Getting Started

Step 1: Preparing the conduit

1. Trench and excavate a cable tunnel to accommodate the conduit.
2. The conduit stub-up should be minimum 100 mm.
3. Pull the conduit and wire up through the exit opening, leaving 600 mm flexible length for the remaining installation activities.



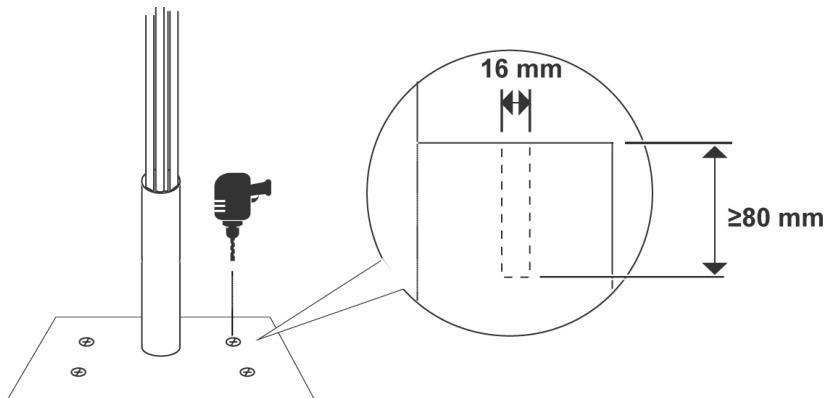
Step 2: Drilling holes

1. Place the drilling template on the concrete surface, aligning its central hole with the exit opening.

NOTE

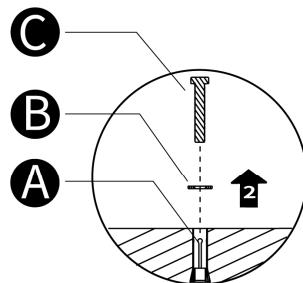
The "Front" side of the drilling template must face forward.

2. Mark four holes on the concrete surface using a marker. Remove the drilling template.
3. Drill four holes at the marked positions measuring 16 mm in diameter and minimum 80 mm in depth.
4. Clean the ashes.

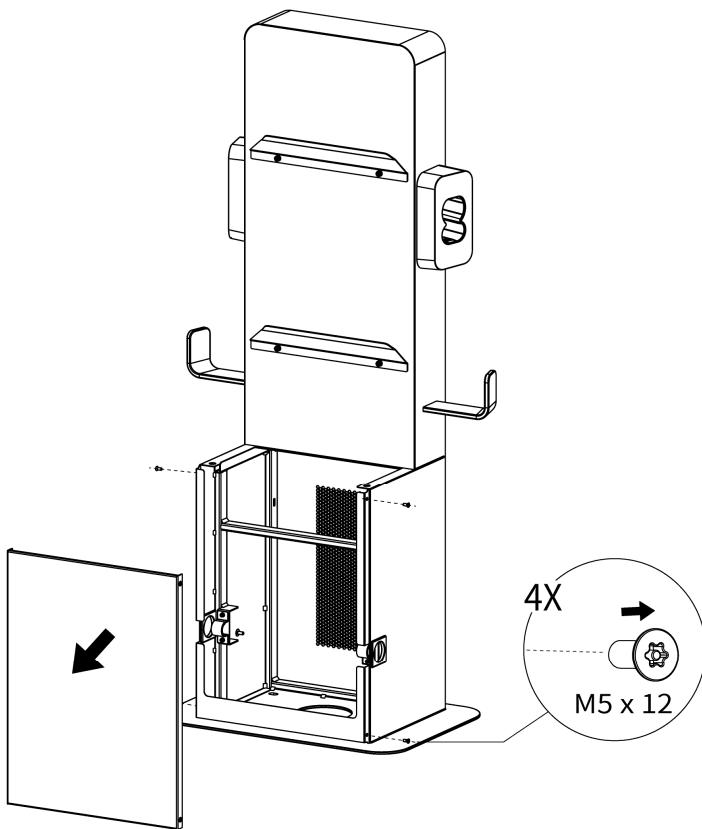


Step 3: Mounting a pedestal

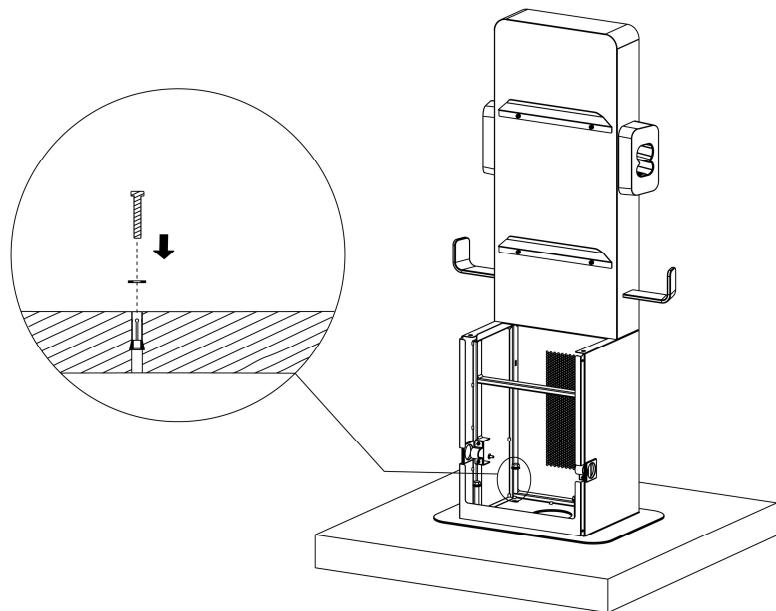
1. Screw the four M12 x 80 expansion bolts into the drilled holes. Remove the threaded bolts (**C**) and flat washers (**B**) when the expansion sleeves (**A**) are stuck. Set them aside.



2. Loosen the four M5 x 12 screws using the T25 Torx screwdriver to remove the front cover from the pedestal. Set them aside.

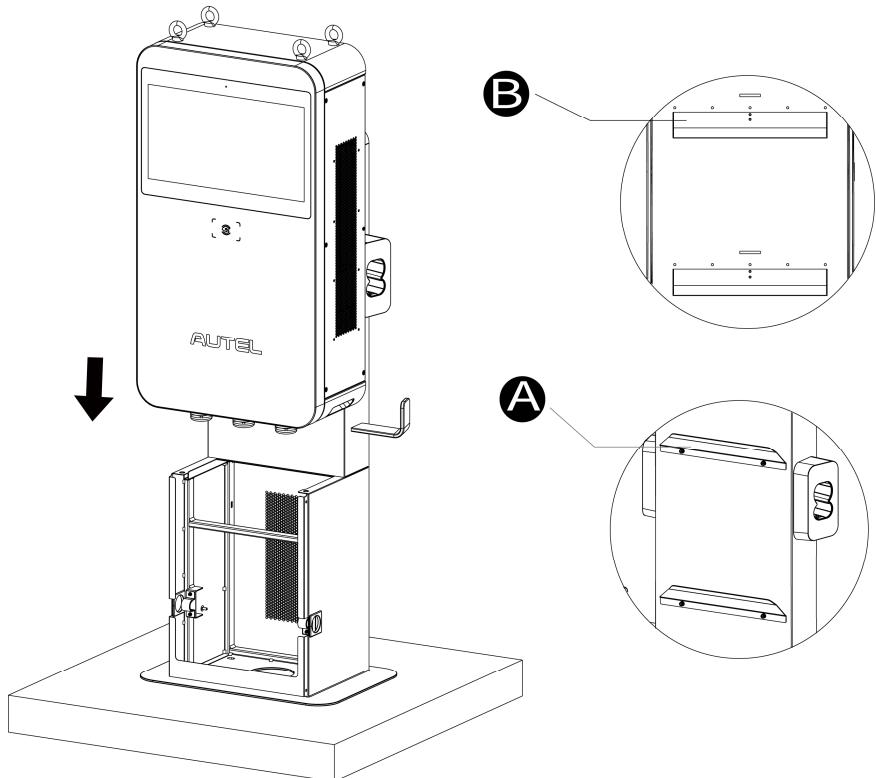


3. Place the pedestal onto the mounting location, aligning the central hole with the exit opening.
4. Reinsert the flat washers and threaded bolts in order and tighten them using a 19 mm socket wrench to 45–55 N·m.

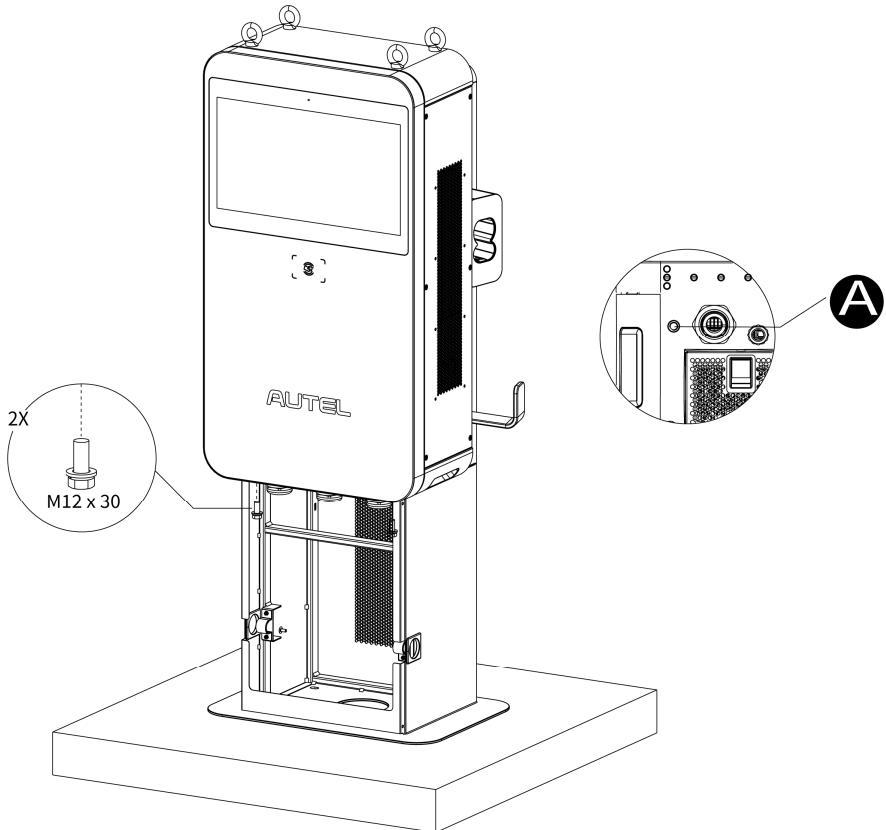


Step 4: Mounting the MaxiCharger

1. Lift the MaxiCharger onto the pedestal by the hoisting equipment. Position the groove (**B**) on the back of the MaxiCharger to fit the protrusion (**A**) of the pedestal as shown below. Ensure the charger is securely attached.



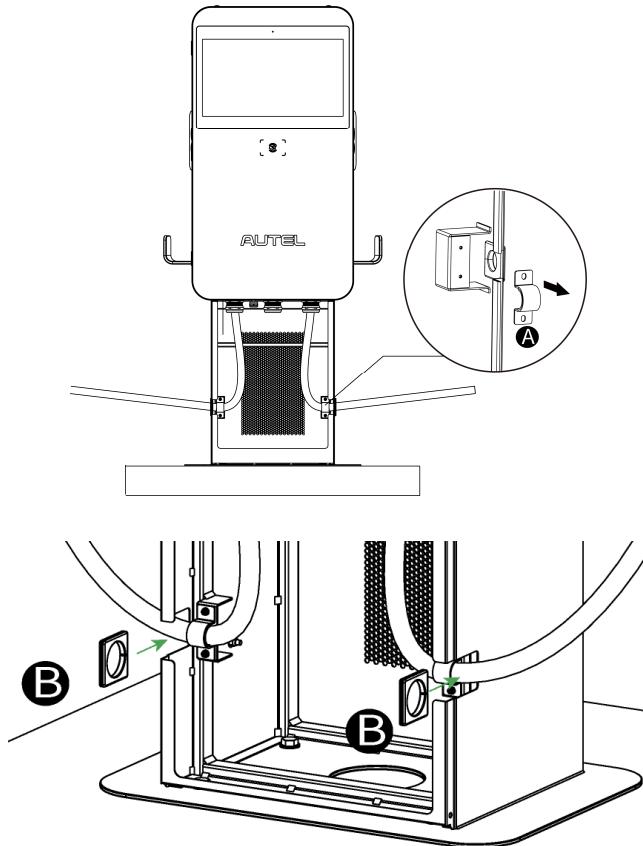
2. Insert and fasten the two M12 x 30 screws to the bottom holes (**A**) of the MaxiCharger using a 19 mm socket wrench to secure the MaxiCharger.



3. Remove the four lifting eyebolts and reinstall the top screws.

Step 5: Organizing the charging cable

1. Remove the two strain reliefs (**A**) by unscrewing the four M4 nuts using the Phillips screwdriver and take down the two rubber rings (**B**) from the pedestal
2. Use the strain reliefs (**A**) to secure the charging cables by screwing the four M4 nuts and tightening them to 1.2 N·m. Install the rubber rings onto the pedestal letting the cables into the rubber rings (**B**) via the openings. Ensure the charging cables are allowed to remain within its bending tolerance.



3. Drape the cables over the cable holders on both sides of the pedestal and plug the connectors into the holsters.

4.4 Installing MaxiCharger Mounted on Pedestal

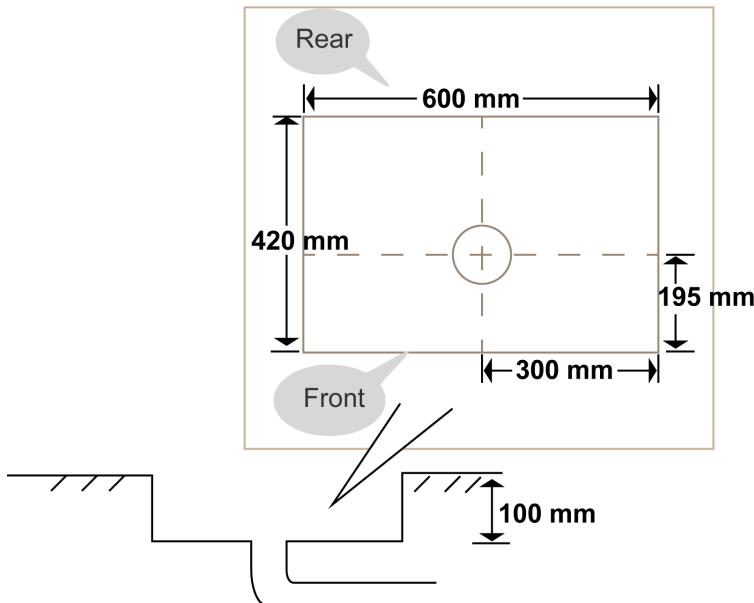
Location Requirements

The pedestal can be installed on an existing concrete. To safely mount a MaxiCharger, the concrete should be at least **80 mm** thick and its surface should be perfectly flat and level.

If a new foundation is required, prepare one according to the recommended dimensions (420 mm x 600 mm x 100 mm) (W x D x H).

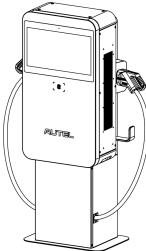
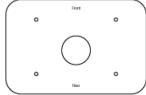
NOTE

The foundation is recommended to be flush with the ground surface.



Checking the Package

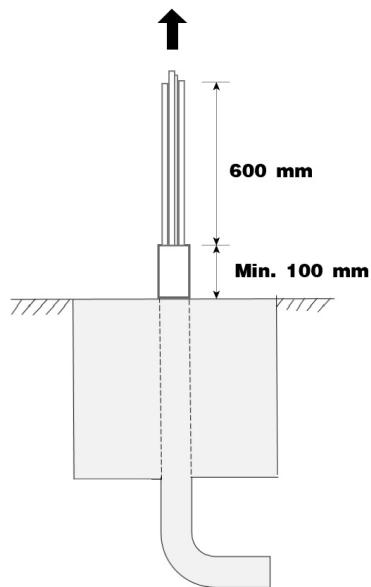
Ensure the following items can be found in the package.

Main Unit	 A diagram of the main unit, which is a vertical rectangular device with a handle on top and a cable attached to the side.	Lifting Eye Bolt (M12) (4 PCS)	 A diagram of a lifting eye bolt, showing a circular base with a threaded shank extending upwards.
Torx Screwdriver (T25)	 A diagram of a Torx screwdriver with a T25 tip and a long handle.	Hex Key (6 mm)	 A diagram of a hex key with a long handle and a hexagonal tip.
Expansion Bolt (M12 x 80) (4 PCS)	 A diagram of an expansion bolt with a threaded shank and a flared base.	Screw (M5 x 20) (For spare use) (4 PCS)	 A diagram of a screw with a Phillips head and a long shank.
Drilling Template	 A diagram of a drilling template, which is a square plate with four small holes around a central circular hole.		

Getting Started

Step 1: Preparing the conduit

1. Trench and excavate a cable tunnel to accommodate the conduit.
2. The conduit stub-up should be minimum 100 mm.
3. Pull the conduit and wire up through the exit opening, leaving 600 mm flexible length for the remaining installation activities.



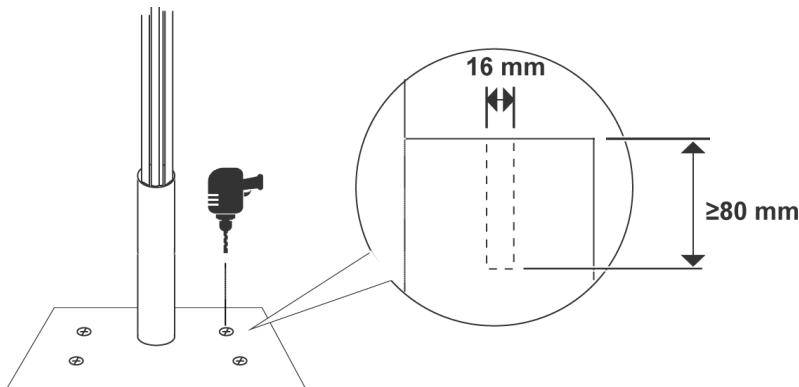
Step 2: Drilling holes

1. Place the drilling template on the concrete surface, aligning its central hole with the exit opening.

NOTE

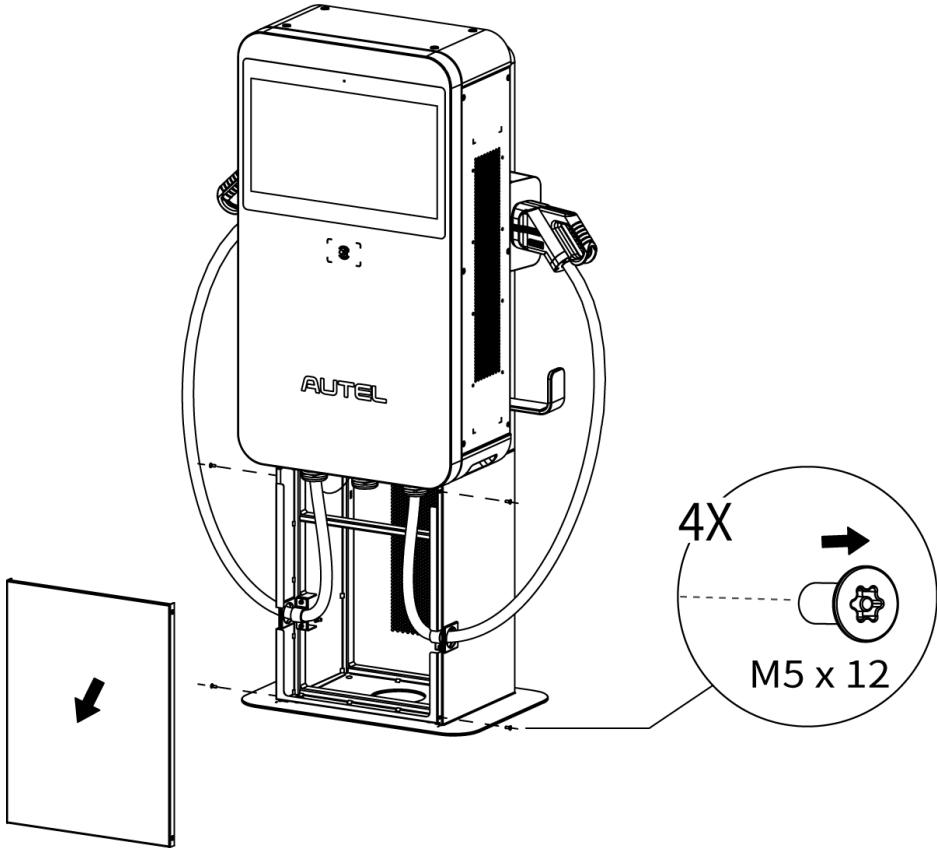
The "Front" side of the drilling template must face forward.

2. Mark four holes on the concrete surface using a marker. Remove the drilling template.
3. Drill four holes at the marked positions measuring 16 mm in diameter and minimum 80 mm in depth.
4. Clean the ashes.



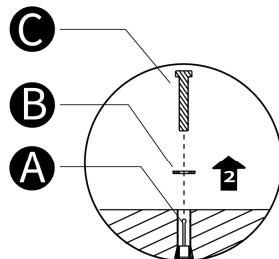
Step 3: Removing the front cover

Loosen the four M5 x 12 screws using the T25 Torx screwdriver to remove the front cover from the pedestal. Set them aside.

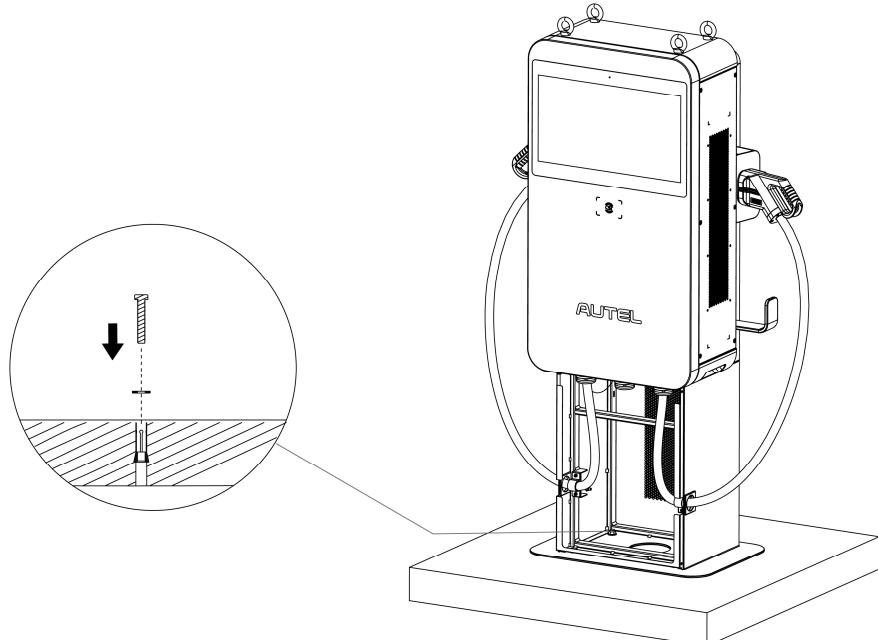


Step 4: Mounting the MaxiCharger mounted on pedestal

1. Screw the four M12 x 80 expansion bolts into the four drilled holes. Remove the threaded bolts (**C**) and flat washers (**B**) when the expansion sleeves (**A**) are stuck. Set them aside.



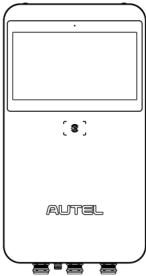
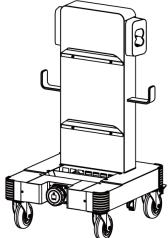
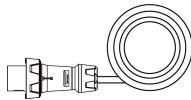
2. Lift the MaxiCharger with pedestal onto the mounting location by the hoisting equipment.
3. Reinsert the flat washers and threaded bolts in order and tighten them using a 19 mm socket wrench to 45–55 N·m.
4. Remove the four lifting eyebolts and reinstall the top screws.



4.5 Installing MaxiCharger and Trolley

Checking the Package

Ensure the following items can be found in the package.

MaxiCharger		Lifting Eye Bolt (M12) (4 PCS)	
Torx Screwdriver (T25)		Hex Key (6 mm)	
Screw (M5 x 20) (For spare use) (4 PCS)		Screw (M12 x 30) (2 PCS)	
Trolley		*Industrial Plug (with Cable)	
*Industrial Plug			



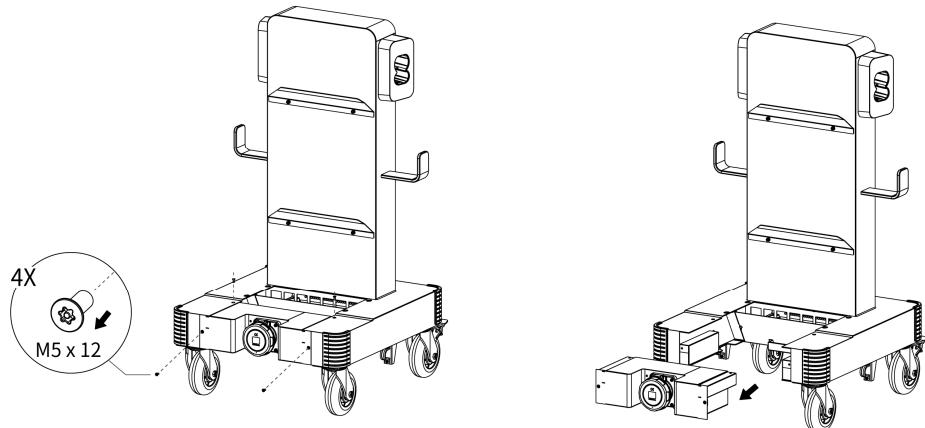
The item marked with an asterisk is optional.

Getting Started

1. Use the T25 Torx screwdriver to loosen the four M5 x 12 screws to remove the front cover of the trolley. Set them aside.

NOTE

The AC input cable has been connected to the front cover of the trolley. Route the cable into the MaxiCharger from the bottom AC inlet hole after the MaxiCharger is securely attached.

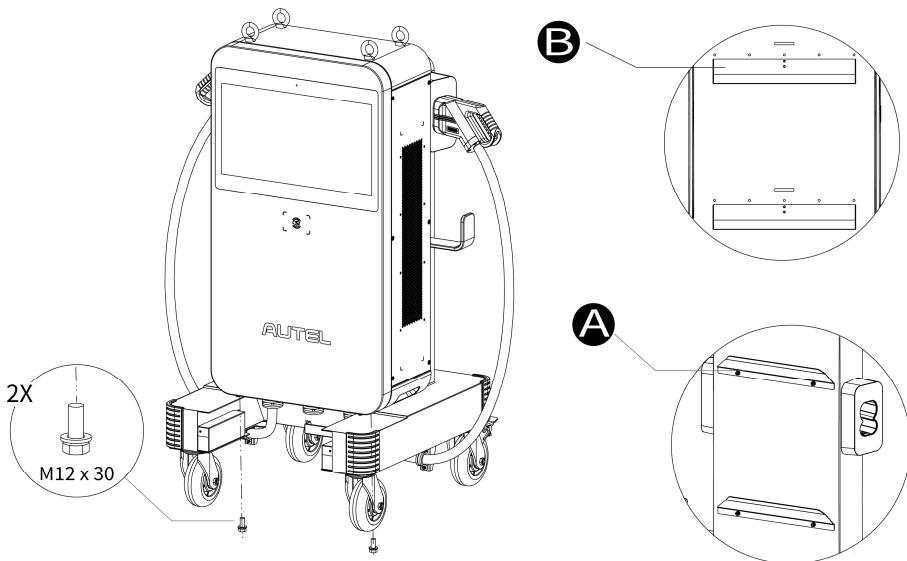


2. Lift the MaxiCharger onto the trolley. Position the groove (**B**) on the back of the MaxiCharger to fit the protrusion (**A**) of the trolley as shown below. Ensure the MaxiCharger is securely attached.

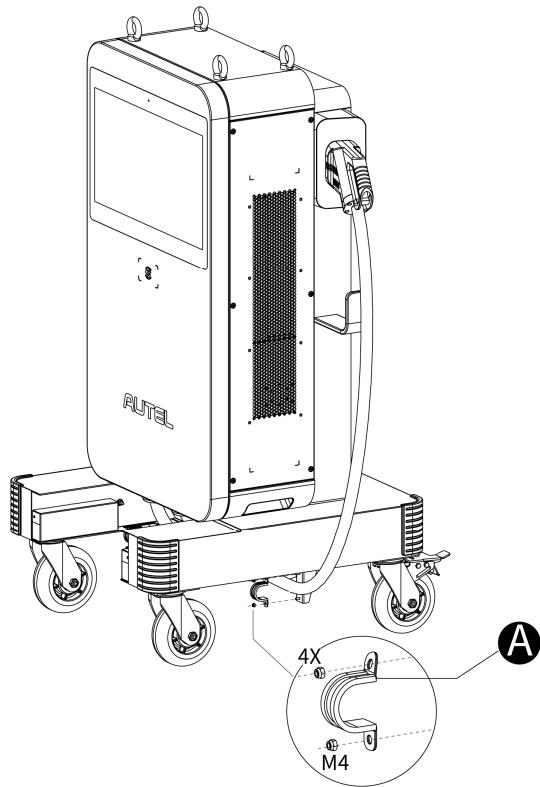
 **NOTE**

When lifting the MaxiCharger onto the trolley, press the foot brakes on the two rear wheels to prevent the trolley from movement.

3. Insert and fasten the two M12 x 30 screws using a 19 mm socket wrench to secure the MaxiCharger.



4. Use the two strain reliefs (**A**) (two M4 nuts for each) to secure the charging cables.

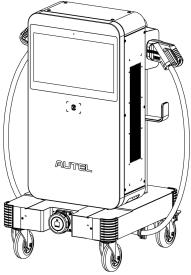
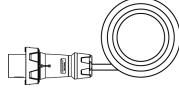


5. Remove the four lifting eyebolts and reinstall the top screws.

4.6 Installing MaxiCharger Mounted on Trolley

Checking the Package

Ensure the following items can be found in the package.

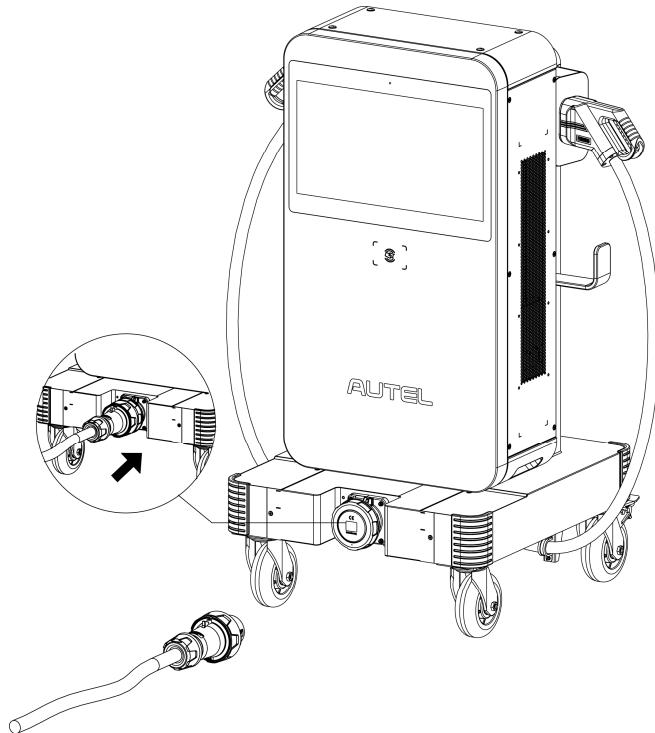
Main Unit		Hex Key (6 mm)	
Torx Screwdriver (T25)		*Industrial Plug (with Cable)	
Screw (M5 x 20) (For spare use) (4 PCS)		*Industrial Plug	

NOTE

The item marked with an asterisk is optional.

Getting Started

No electrical and mechanical installation is needed for the MaxiCharger mounted on trolley. Just prepare the industrial plug to supply power to the MaxiCharger, then the MaxiCharger is ready for operation. See the Section 4.13 for industrial plug wiring.



4.7 Power Supply Wiring

⚠ WARNING

Risk of Electric Shock

- Only a qualified electrician should determine the electrical requirements and connect wires.
 - Ensure the power is off before connecting the wires.
-

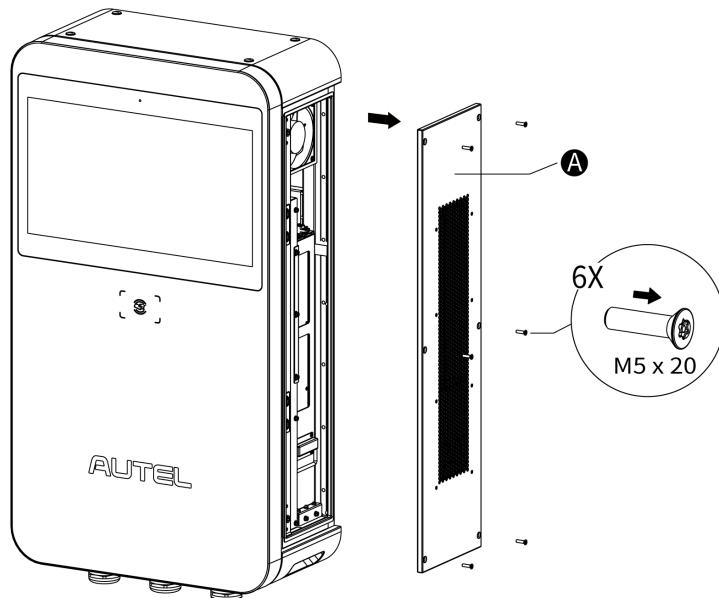
❗ IMPORTANT

Before connecting the wires, ensure the following requirements are met:

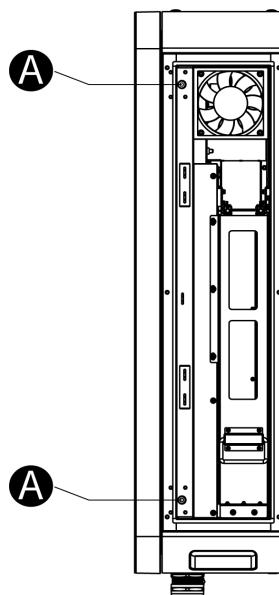
- Use 75 °C copper wire only.
 - The circuit breaker at the panel must be off.
 - The MaxiCharger must be grounded to true earth.
 - An insulated grounding conductor must be installed as part of the branch circuit that supplies the MaxiCharger.
 - The grounding conductor should be grounded to earth at the service equipment or, when supplied by a separately derived system, at the supply transformer.
 - All connections must comply with all local codes and ordinances.
 - Use 25 mm² wires.
-

4.7.1 Opening the Door

1. Remove the six M5 x 20 screws on the right side of the MaxiCharger using the T25 Torx screwdriver to remove the side cover (A). Set them aside.

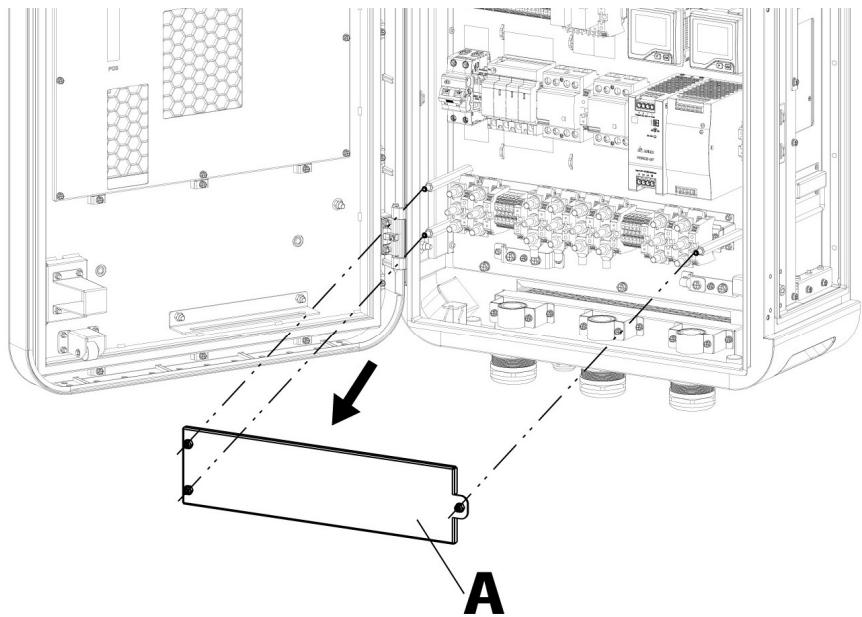


2. Loosen the two M8 hex screws (A) using the hex key and open the front door.



4.7.2 Connecting the AC Input Cable

1. Loosen the three M6 nuts to remove the insulating barrier (A) and set them aside.

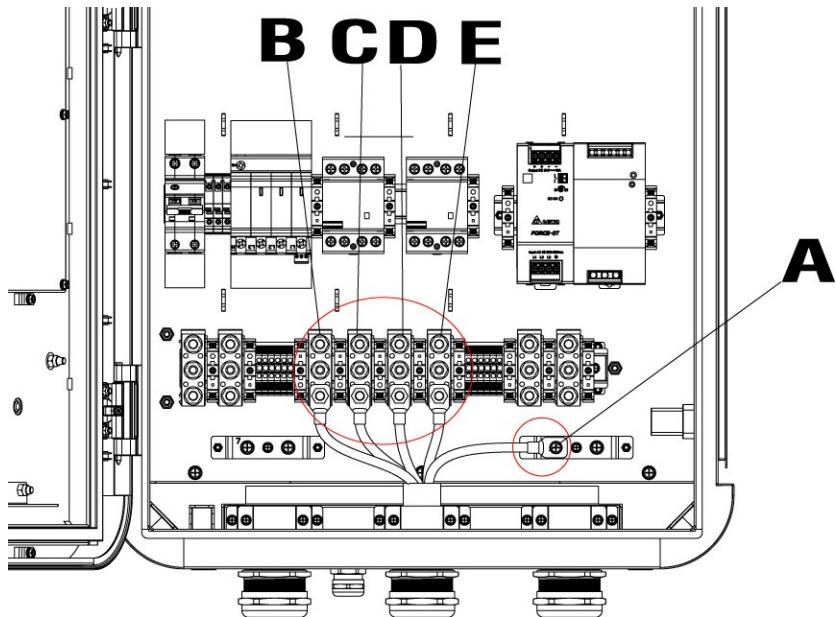


2. Pull the wires and guide them through the bottom AC inlet hole.
3. Use a wire stripper to remove an appropriate length of the insulation from the end of the wires. Ensure the stripped length is compatible with the cable lugs.
4. Use the crimping tool to attach the cable lugs to the end of the wires.

NOTE

The MaxiCharger and Trolley can skip the Step 3 and 4.

5. Loosen the M6 fastener using a 10 mm socket wrench and connect the PE wire to the PE busbar (**A**). Reinsert the fastener and tighten it to 6 N·m.
6. Use a 13 mm wrench to loosen the four M8 fasteners and attach the wires to the connectors:
 - L1 wire to the connector **B**
 - L2 wire to the connector **C**
 - L3 wire to the connector **D**
 - N wire to the connector **E**
7. Reinsert the M8 fasteners and tighten them to the torque 6–12 N·m.

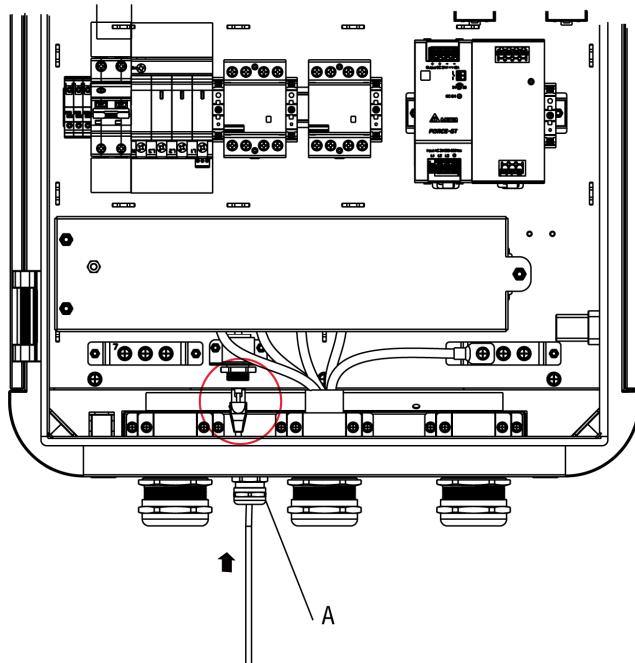


4.8 Connecting the Ethernet Cable

NOTE

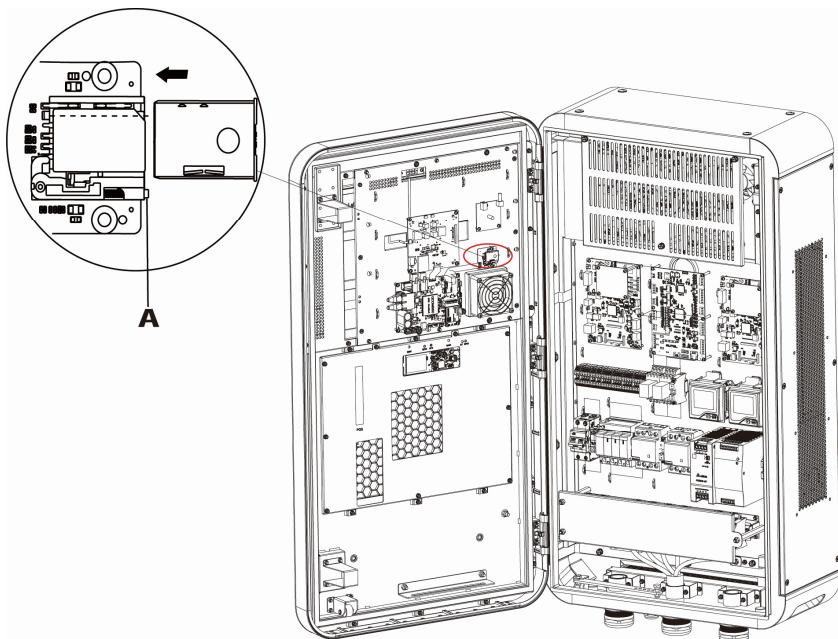
For MaxiCharger and Trolley and MaxiCharger mounted on trolley, cellular data or Wi-Fi is preferred to access the Internet for movability.

1. Loosen the cable gland (**A**).
2. Put the Ethernet cable through the Ethernet cable port at the bottom of the MaxiCharger.
3. Plug the Ethernet cable into the RJ45 port.
4. Tighten the cable gland (**A**).



4.9 Installing the SIM Card

1. Press the button (**A**) to release the SIM card tray.
2. Insert a SIM card into the tray. Ensure the card is placed correctly.
3. Push the SIM card tray into the slot.



4.10 Powering on the MaxiCharger

Before Power-on

- Install the MaxiCharger according to the instructions in this manual.
- Prepare an emergency plan to instruct people what to do in case of an emergency.
- Only the manufacturer or a qualified technician authorized by the manufacturer can commission the MaxiCharger. Contact the manufacturer when the MaxiCharger is ready for commissioning.

NOTE

In the event of ambient temperature lower than -20 °C, it will take 3~5 minutes to preheat the screen when powering on the MaxiCharger. In extreme cases, the display module will be reset to ensure the stability of the MaxiCharger.

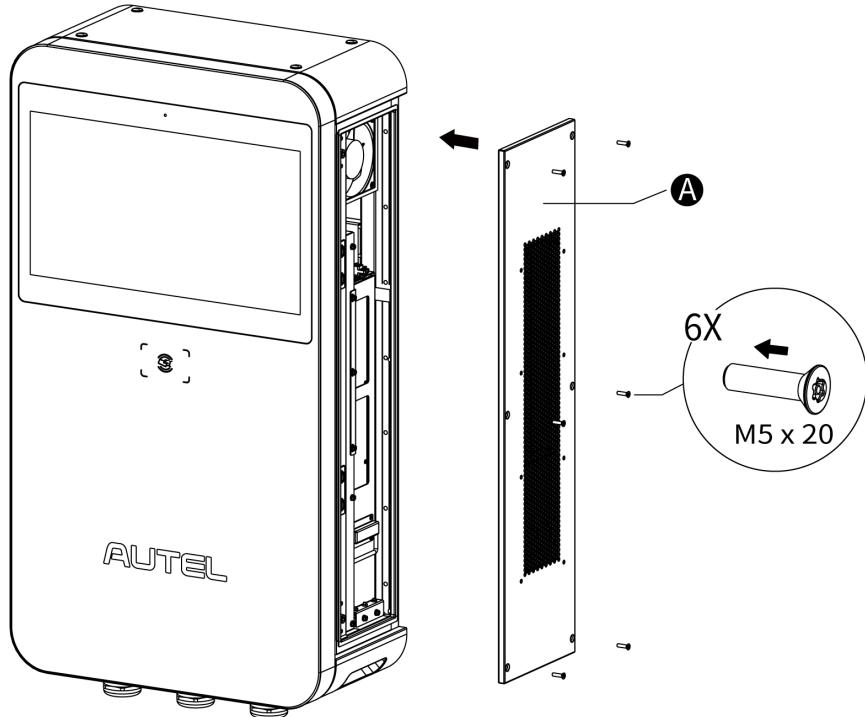
➤ To power on the MaxiCharger

1. Make sure that the upstream breaker stays in the **OFF** position and locked during the procedure.
2. Tighten the screws and bolts of key parts and make sure the cabinet is clean inside. Prevent the electronic components from being damaged by dust or particles.
3. Use the multimeter to check the circuit connections among L1, L2, L3, N, and PE. If short circuit occurs, contact Autel technical support; otherwise, reinstall the insulating barrier.
4. Contact Customer Technical Support to turn on the upstream breaker and check the indicators on CCU, ECU, and TCU and the screen display.
 - If any indicator of CCU, ECU or TCU is off or the screen display is abnormal, please contact Autel technical support;
 - If all indicators and the screen display normal, go to next step.

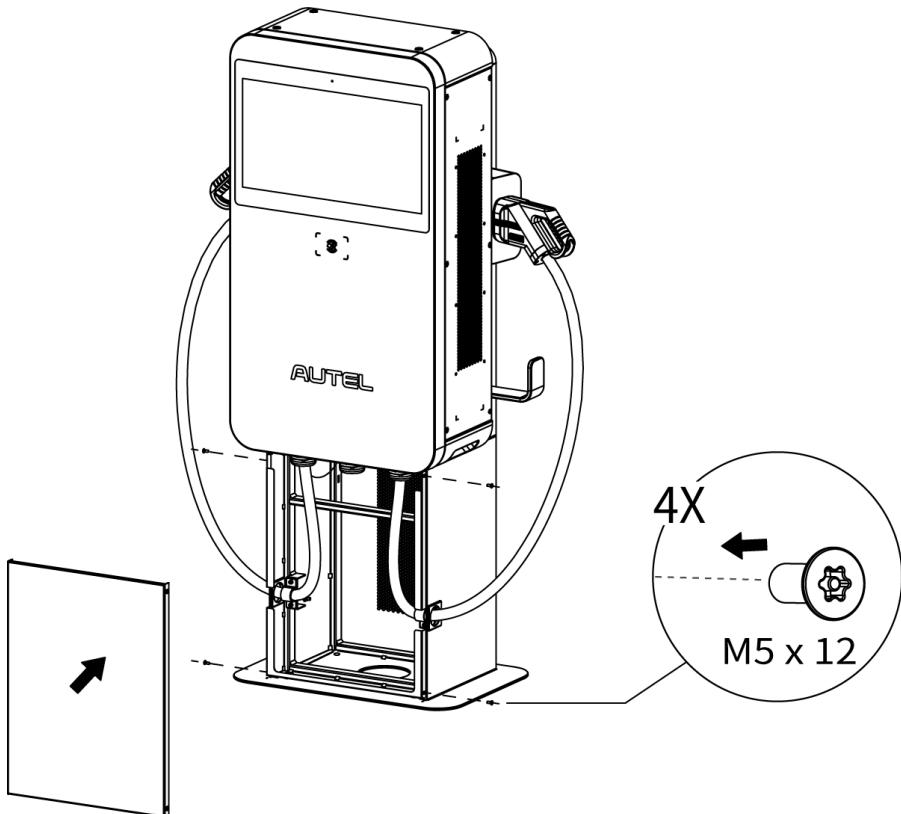
4.11 Completing Installation

4.11.1 For MaxiCharger and Pedestal and MaxiCharger Mounted on Pedestal:

1. Close the front door by reinstalling the two M8 hex screws using the hex key and tightening the screws.
2. Reinstall the side cover (**A**) by inserting and tightening the six M5 x 20 screws to 2 N·m using the T25 Torx screwdriver.

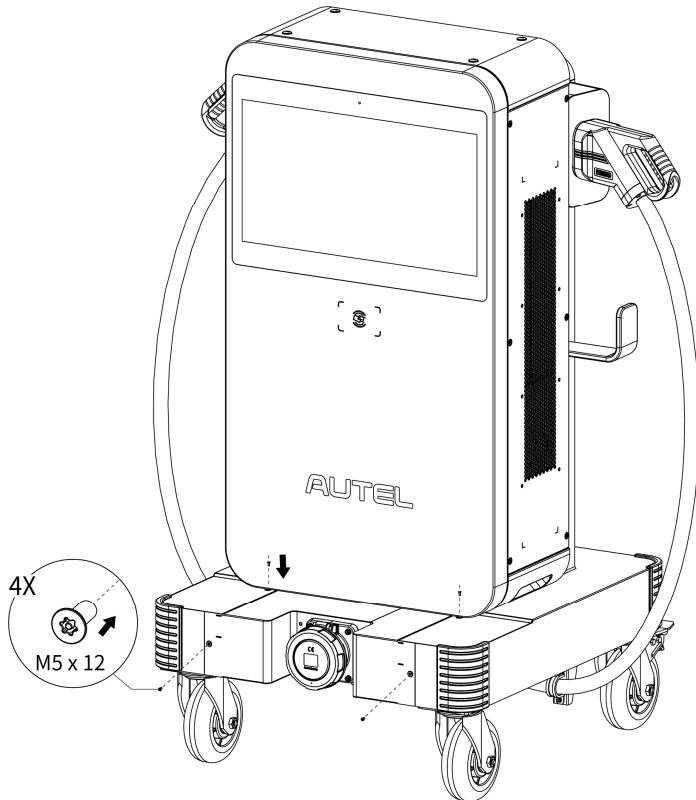


3. Reinstall the pedestal's front cover by screwing the four M5 x 12 screws and tightening them to 2 N·m.



4.11.2 For MaxiCharger and Trolley

1. Close the front door by reinstalling the two M8 hex screws using the hex key and tightening the screws.
2. Reinstall the side cover by inserting and tightening the six M5 x 20 screws to 2 N·m using the T25 Torx screwdriver.
3. Reinstall the front cover of the trolley by inserting and tightening the four M5 x 12 screws.



4.12 Installing the Upstream Protective Device

Devices	Specifications
Dedicated upstream protection device(s)	Options: <ul style="list-style-type: none">● RCD (Type A) + MCB● RCBO (Type A)
Upstream overcurrent protection breaker, such as RCBO or MCB (The breaker serves as the main disconnect switch to the MaxiCharger.)	Breaker rating should not be less than 100 A. Tripping characteristics: type C
Upstream residual-current device (RCD)	Type A, with a rated residual operation current of 30 mA

4.13 Industrial Plug Wiring

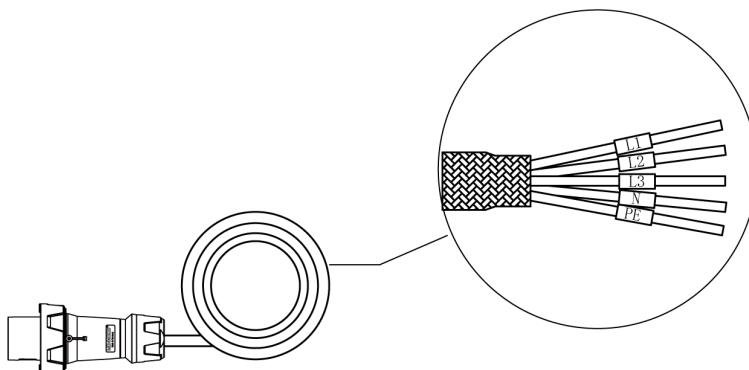
This section applies for MaxiCharger and Trolley and MaxiCharger mounted on trolley.

4.13.1 Industrial Plug with Cable

! IMPORTANT

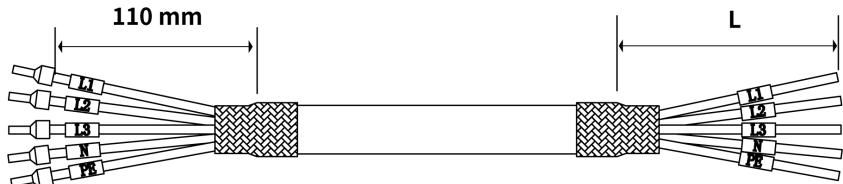
Install a RCD (Type A or higher) and an overcurrent protection breaker (not less than 80 A) on upstream circuit.

1. Install the cable lugs to the individual wires (16 mm^2).
2. Connect the individual wires to the local service panel according to the marks.

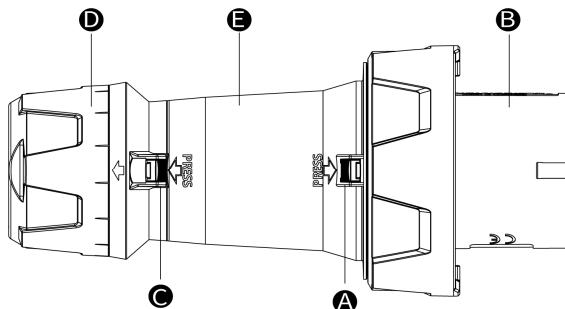


4.13.2 Industrial Plug without Cable

1. Prepare a cable with specification of 5*16 mm² and appropriate length (Recommended: No more than 10 m).
2. Strip the cable by 110 mm for one end to be connected to the industrial plug. For the other end to be connected to the local service panel, the length (L) depends on actual situation.



3. Make wire marks and install cable lugs on the wires.
 - Brown wire: L1
 - Black wire: L2
 - Gray wire: L3
 - Blue wire: N
 - Yellow-green wire: PE
4. Release the front locking tab (A) on the industrial plug and rotate the front housing (B) anticlockwise to disassemble it.
5. Release the rear locking tab (C) on the industrial plug and rotate the bottom end (D) of rear housing (E) anticlockwise to expand the bottom cable-through hole.
6. Slide the cable through the rear housing (E) and connect the individual wires to the corresponding terminals. Tighten the terminal screws.



7. Thread the rear housing into the front housing and rotate clockwise the front housing to secure rear and front housing together.

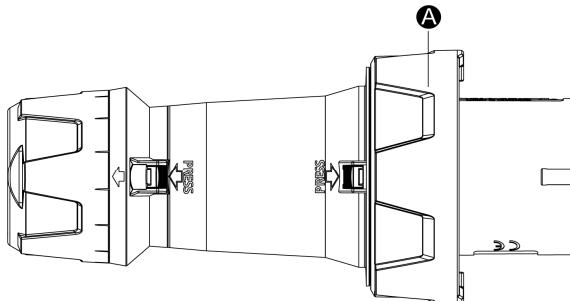
4.14 Connecting the Industrial Plug to the Socket

! IMPORTANT

Before unplugging the industrial plug after the charging session is finished, cut off the power first.

This section applies for MaxiCharger and Trolley and MaxiCharger mounted on trolley. The industrial plug connection steps are as below:

1. Open the socket cover on the trolley.
2. Insert the industrial plug into the socket and push fully the plug inside.
3. Rotate the front end (**A**) of the rear housing clockwise to secure the plug with the socket.



4. Turn on the local service panel switch to supply the power to the MaxiCharger.
5. Unplug the industrial plug after the charging session is completed.

4.15 Preparing for Commissioning

! IMPORTANT

Only a manufacturer qualified service engineer can commission the MaxiCharger.

➤ To perform the commissioning

1. Ensure the site complies the following requirements:
 - The MaxiCharger is installed according to the instructions in this manual.
 - AC input power is available.
 - Internet access is available through a wired Ethernet connection, cellular service or Wi-Fi.
 - An EV of each type of connector must be available for a compatible test during commissioning.
 - The site operator or owner is available to receive instructions from the manufacturer certified service engineer when the MaxiCharger is installed.
2. Ensure the following information is collected:
 - Name and address of the site
 - Contact information of the on-site contact person
 - Specification of the external fuse or breaker at the local service panel
 - Date when the installation is done
 - Photo of the MaxiCharger and the site surroundings
 - Special remarks (if any)
3. Someone should be present for assistance to energize the power to the MaxiCharger on the local service panel.

! IMPORTANT

The conduit opening must be sealed to protect the wiring from the environment.

5 Operation

5.1 Charging Procedure

General charging procedures:

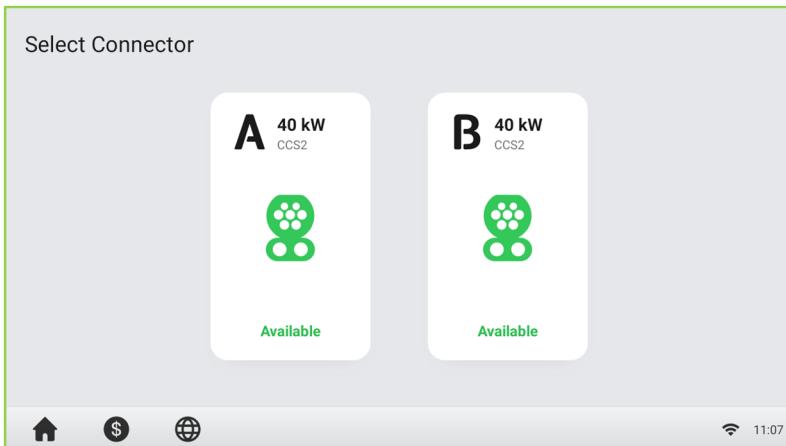
➤ **To charge an EV**

1. Park an EV with the charging port within reach of the connector.
2. Plug in the EV.
3. Start the charging session.
4. Stop the charging session.

⚠ WARNING

- Do not cover the vent during charging.
 - Do not clean or operate in the EV during charging.
-

5.1.1 Standby Mode



After a connector is successfully connected to your EV, the MaxiCharger can automatically recognize the connector, then the corresponding connector's Authorization Screen will appear.

If no operation is performed for a long time on the Authorization Screen, the Standby Screen will appear. Manually select the appropriate connector on the touchscreen.

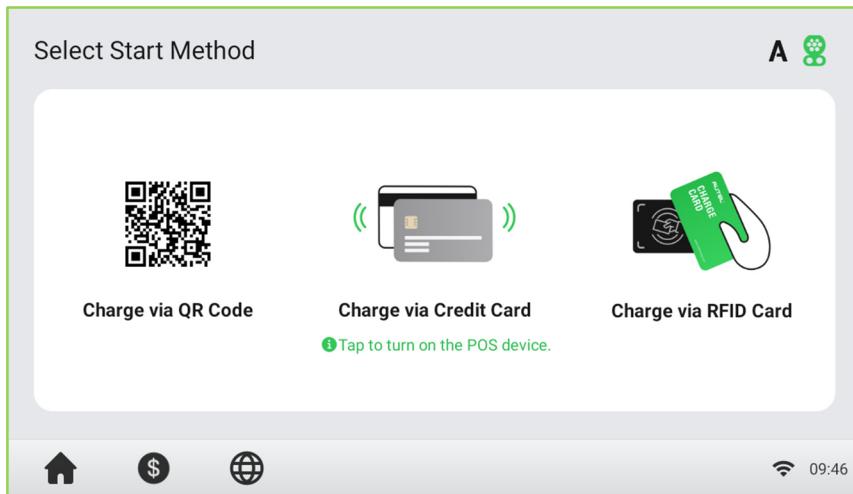
5.1.2 Authorization

! IMPORTANT

- Observe the screen for any abnormalities, such as an error messages, before starting a charging session. Check the surroundings and the MaxiCharger for any abnormalities and damage as well.
- If the screen displays an error message, DO NOT use the MaxiCharger. Contact Autel Technical Support.

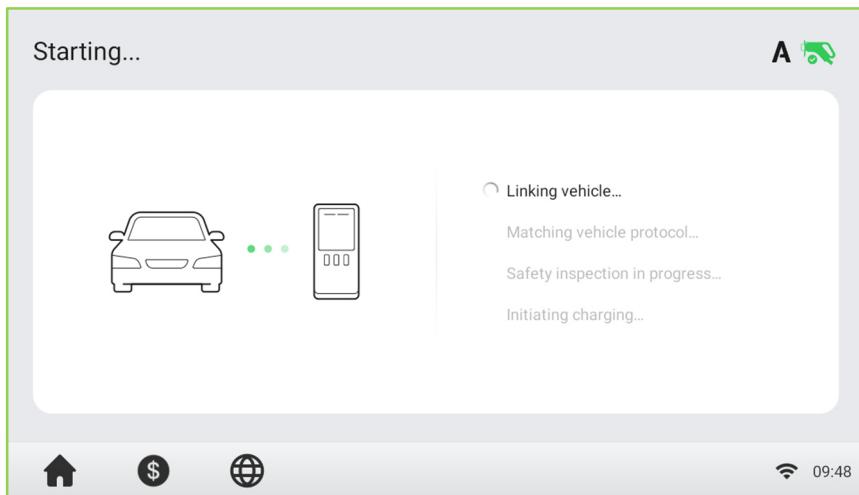
When the Authorization Screen appears, you can use any of the following methods to start a charging session.

- Scan the QR code on the screen
- RFID card
- Plug & Charge
- Credit card (optional)



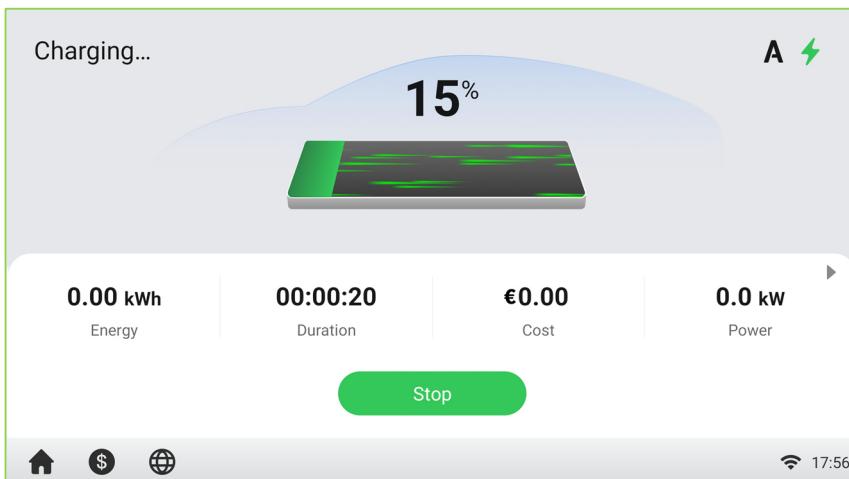
5.1.3 Start Charging

After authorization, the MaxiCharger will set up communication with your EV and necessary safety tests will be performed. Following the safety tests, the charging session will start automatically.



5.1.4 Charging

You will be informed of the progress during charging. Information about the charging duration, energy, cost, and power will appear on the Charging Screen.



5.1.5 Stop Charging

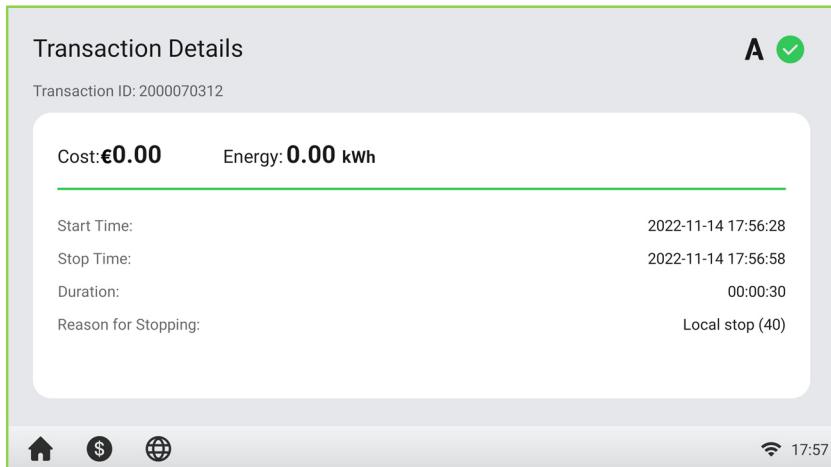
➤ To stop charging

1. Tap the **Stop** button on the screen.

❷ NOTE

When the battery is full, the charging session stops automatically.

2. Normally, you have to authorize again to finish charging, using the same authentication method as was used to start:
 - QR code: Scan the QR code with the Autel Charge app and tap the **Stop** button on the Charging Screen of the Autel Charge app.
 - RFID card: Put the RFID card on the card reader again to finish charging.
 - Credit card: Finish charging directly.
3. When charging is finished, your transaction details will appear.



4. Disconnect

5.1.6 Finish Charging

Return the connector to the holster on the MaxiCharger.

5.2 Charging Errors

This section depicts several common problems that may arise during your charging session, along with possible causes/solutions to help you resolve those problems. If the problem persists, contact your local dealer or Autel Technical Support.

5.2.1 Connector Connection Error

If the connector is not properly connected to your EV, then the Connector Not Connected screen will appear. Insert the connector into your EV's charge port and check the connection.

5.2.2 Authorization Failure

If an error occurs when you start the authorization process but without starting charging, the Authorization Failure screen will appear. The cause and possible solution(s) will display on the screen. Follow the on-screen instructions to resolve the problem, or contact your local dealer or Autel technical support.

5.2.3 Charging Start Failure

If an error occurs when you start charging, the Charge Start Failure screen will appear. The cause and possible solution(s) will display on the screen. Follow the on-screen instructions to resolve the problem.

5.2.4 Charging Failure

If an error occurs during charging, the Charging Failure screen will appear. The cause and possible solution(s) will display on the screen. Follow the on-screen instructions to resolve the problem, or contact your local dealer or Autel Technical Support.

5.3 Powering down the MaxiCharger

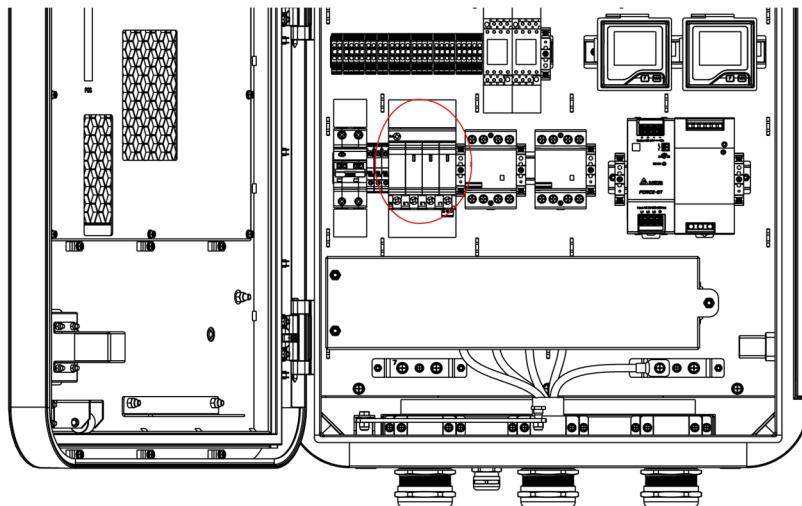
➤ **To power down the MaxiCharger**

1. Set the upstream breaker which provides the power to the MaxiCharger to **OFF** and lock it. Make sure that this breaker stays in the **OFF** position during the procedure.
2. Open the front door.
3. Measure the AC voltage by referring to [*Measuring the AC Voltage*](#). Make sure that all the measured voltages are 0 volts.
4. Measure the DC voltage by referring to [*Measuring the DC Voltage*](#). Make sure that all the measured voltages are 0 volts.
5. Close the front door.

5.3.1 Measuring the AC Voltage

Use a voltage tester to measure the AC voltage between the terminals on the surge protection device switch:

- L1 to L2
- L1 to L3
- L2 to L3
- N to L1/L2/L3



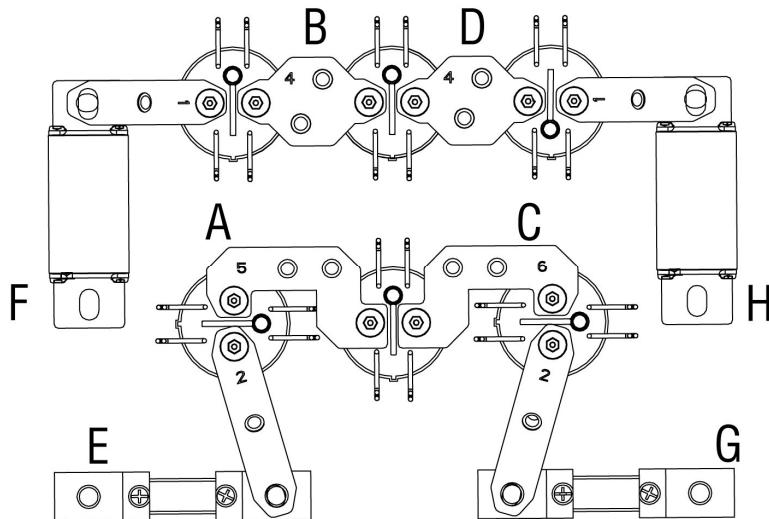
NOTE

The surge protection device switch shows the indications N, L1, L2, and L3.

5.3.2 Measuring the DC Voltage

Use a voltage tester to measure the DC voltage between the output terminals, making sure that all the measured voltages are 0 volts.

- Power module group output 1 — (A) to power module group output 1+ (B)
- Power module group output 2 — (C) to power module group output 2+ (D)
- EV charging cable 1 output — (E) to EV charging cable 1 output + (F)
- EV charging cable 2 output — (G) to EV charging cable 2 output + (H)



5.4 Local Service Portal Operations

5.4.1 Setting the OCPP Parameters

NOTE

The OCPP parameter setting should be performed by an installation engineer.

➤ To set the OCPP parameters

1. Tap the upper-left corner of the screen.
2. Tap **Device Maintenance**. Enter the default password (contact Autel customer service to obtain the password).
3. Tap **Set Parameters**. Wait for the system to load the data. This can take a few seconds.
4. Set the following parameters:
 - **Running environment**: current running environment
 - **OCPP IP**: IP address of the OCPP
 - **OCPP URL**: URL of the OCPP
 - **OCPP PORT**: port number of the OCPP
 - **MGR IP**: IP address of the management platform
 - **MGR URL**: URL of the management platform
 - **MGR PORT**: port number of the operational management platform

NOTE

Make sure that the URL or ID you type is correct and without spaces.

5. Tap **Save** to save your changes.

6 Maintenance

6.1 Routine Maintenance

Routine maintenance can keep the MaxiCharger in safe and stable state.

- Clean the MaxiCharger every quarter: tighten the screws and bolts of key parts, and check whether the wire connection of the MaxiCharger's connector is burned out. If any abnormality is found, replace the parts promptly.
 - Clean the filter at least twice a year.
 - Test the residual current device once a year.
-

WARNING

- Disconnect the power supply to the MaxiCharger during the entire maintenance procedure.
 - Make sure that unauthorized personnel are kept at a safe distance during maintenance.
 - Wear proper personal protective equipment, such as protective clothing, safety gloves, safety shoes, and safety glasses.
 - If you remove the safety devices for maintenance, reinstall them after completing the work.
-

6.1.1 Residual Current Device Maintenance

WARNING

Be careful when you work with electricity.

The internal residual current breaker with overload (RCBO) should be tested annually for correct functioning. Before testing, disconnect the MaxiCharger with the EV and stop any charging processes.

➤ **To test the RCBO**

1. Open the front door of the MaxiCharger. When the cabinet door is opened, the MaxiCharger should not be directly exposed to wind and rain.
2. The MaxiCharger must be in Standby mode. Tapping the touchscreen will wake up the MaxiCharger.
3. Locate the RCBO, and press the **Test** button to start the test.
 - Pass: The RCBO will trip and restore the **Test** button to its original position.

- Fail: The RCBO does not trip. Please contact Autel technical support. Do not use the MaxiCharger until the repair is completed.
4. Close the front door after the test is finished.
 5. Mark the time when the test is needed to be repeated annually.

6.1.2 Cleaning the MaxiCharger

The MaxiCharger is powder-coated. The coating must be kept in good condition. When the MaxiCharger is in a corrosion sensitive environment, superficial rust may appear on welding points. Visible rust has no risk to the integrity of the MaxiCharger.

➤ To remove rust

1. Stop any charging processes and power off the MaxiCharger.
2. Remove rough dirt by spraying with low-pressure tap water.
3. Apply a neutral or weak alkaline cleaning solution and let it soak.
4. Remove dirt by hand with a damp and non-woven nylon cleaning pad.
5. Rinse thoroughly with tap water.
6. Apply wax or a rust-preventive primer for extra protection if needed.

⚠ WARNING

- Before cleaning, stop any charging processes and do not connect the power to the MaxiCharger. Failure to do so may cause damage and/or personal injury or death.
 - Do not apply high-pressure water jets and avoid water leaking into the MaxiCharger. Make sure that the inside of the MaxiCharger is dry during cleaning.
 - Do not use caustic solvents, sprays, solvents or abrasives. Use cleaning agents with a pH between 6 and 8 for strong stains only.
-

6.1.3 Cleaning and Replacing the Filter

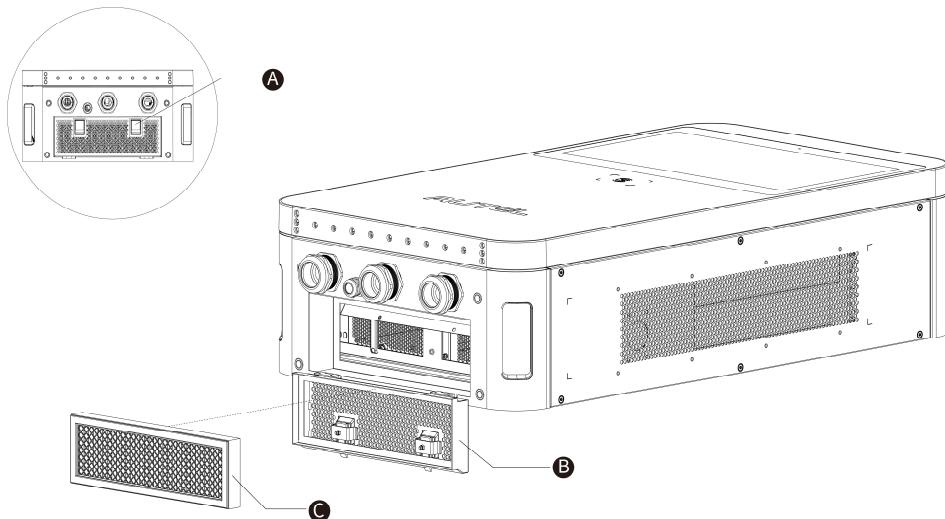
⚠ WARNING

- Before cleaning, stop any charging processes and do not connect the power to the MaxiCharger. Failure to do so may cause damage and/or personal injury or death.
 - Do not apply high-pressure water jets and avoid water leaking into the MaxiCharger. Make sure that the inside of the MaxiCharger is dry during cleaning.
 - Do not use caustic solvents, sprays, solvents or abrasives.
-

The MaxiCharger is equipped with a filter with a large mesh area to prevent the electronic components from being damaged by dust. Clean the filter every 3 months (not to exceed 6 months). Replace the filter annually.

➤ **To clean or replace the filter**

1. Before cleaning and replacing, be sure to stop all charging processes, disconnect the external power supply, and perform the power-off protection.
2. Open the two toggle latches (**A**) at the bottom of the MaxiCharger to flip the bezel (**B**) downward.
3. Remove the filter (**C**).
4. Clean debris or dust of the filter and reinstall a cleaned filter. Alternatively install a new air filter.
5. Flip the bezel (**B**) upwards and close the two toggle latches (**A**).



6.2 Inspection and Maintenance

When the MaxiCharger operates normally, only routine maintenance is needed.

When the MaxiCharger operates abnormally, refer to Troubleshooting to resolve the problem or contact your local dealer or Autel Technical Support promptly.

When parts need to be replaced, completely cut off the power supply upstream and inside the equipment before operating.

Regularly conduct a visual inspection of the following points:

- Cable and connector: Check for cracks or ruptures on the connector or cable.
- Display: Check for damage and cracks. Check whether the touchscreen works.
- MaxiCharger coating: Check for damage, cracks or ruptures.

- MaxiCharger: Check for rust or damage.

The following special inspections are needed for safe use:

- Check if the MaxiCharger was struck by lightning.
- Check if the MaxiCharger was damaged due to an accident or fire.
- Check the MaxiCharger installation site has been flooded.



WARNING

Stop any charging processes and do not connect the power to the MaxiCharger until all the inspections are complete.

6.3 Remote Maintenance

The MaxiCharger has the function of connecting to cloud platform to monitor parameters in real time. This provides remote upgrades, remote diagnosis, and remote service functions, and can timely identify and locate problems in the operation process.

- System self-check for abnormality daily.
- If any operation abnormality is found, contact your local dealer or Autel technical support promptly.
- Autel service engineers can check logs, update configurations and programs, and provide remote maintenance services, such as remote management, diagnosis, configuration, and upgrades.

6.4 Maintenance Schedule

Item	Frequency	Actions
Connector	Every 3 months	Check for cracks or ruptures on the connector.
Input Cable	Every 3 months	Check for cracks or ruptures on the cable.
Filter	Annually	Replace the filter.
MaxiCharger	Every 3 months	Clean and check for damage.

7 Troubleshooting and Service

7.1 Troubleshooting

The table below describes the most common faults when operating the MaxiCharger. Contact Autel technical support if the fault encountered is not in this table.

Error	Error Code	Possible Cause	Solution
CP voltage abnormal	0x2037	It may be caused by signal interference, poor contact or software errors.	Perform remote restart or reset. If the fault persists, contact Autel technical support.
Communication error with the entire charging module group	0x3011	There is a problem with the module's address setting.	Power off the MaxiCharger and restart it.
Overshoot	0x202D	The DC output voltage is above the upper limit of the vehicle or the rated voltage of the MaxiCharger during charging.	Stop the charge session and contact Autel technical support.
Communication error with the power control module	0x200E	The CCU does not receive messages from the ECU and the communication is timed out.	Perform remote restart or reset. If the fault persists, contact Autel technical support.
BMS communication error	0x2007	It may be caused by charging incompatibility.	Perform remote restart or reset. If the fault persists, contact Autel technical support.
Cooling fan abnormality	0x304A	Fan aged or damaged.	Power off the MaxiCharger and contact Autel technical support for repair or replacement of the fan.

Error	Error Code	Possible Cause	Solution
Charging port electronic locking fault	0x2002	It might be caused by a vehicle-related fault.	Contact the vehicle manufacturer and Autel technical support.
CCU auxiliary power supply shutdown	0x202C	Sever power fault due to aged key components or lines.	Power off the MaxiCharger. Then locate the faulty component or line and contact Autel technical support for its repair or replacement.
Meter communication error	0x0001	Aged meter or line.	Stop the charge session and contact Autel technical support.
Insulation monitoring fault	0x2003	If it appears from time to time, it might be due to the vehicle or software error; if it appears frequently, there may be an aged key component.	Perform remote restart or reset. If the fault persists, contact Autel technical support.
AC contactor stuck	0x3008	AC contactor fault or line aging	Power off the MaxiCharger and contact Autel technical support.
FPGA fault	0x3010	Controller fault	Stop the charge session, power off the MaxiCharger, and contact Autel technical support.
CCU current sampling and module output current accumulation fault	0x3014	Charging module output or sampling fault	Perform remote restart or reset. If the fault persists, contact Autel technical support.

Error	Error Code	Possible Cause	Solution
Power distribution contactor sticking (charging possible)	0x3047	Contactor or sensor fault or line aging	Power off the MaxiCharger immediately and contact Autel technical support.
Communication error on one charging module	0x3051	Abnormal charging module	Contact Autel technical support to identify the fault, and then clear the fault or replace the module.
Fan fault with one charging module	0x305A	Abnormal charging module	Contact Autel technical support to identify the fault, and then clear the fault or replace the module.
Inconsistent CCU voltage sampling and the module output voltage	0x305C	Abnormal charging module	Contact Autel technical support to identify the fault, and then clear the fault or replace the module.
Insulation detection alert	0x2040	If it is a one-time problem, there may be a falling object, and no operation is required; if it has occurred for several times, the connector cable may be damaged or there are foreign objects in the busbar.	Power off the MaxiCharger immediately and contact Autel technical support.
Charger offline	0x9001	Communication error between gateway and the Autel Charge Cloud	Check the network connection and OCPP configurations.

7.2 Service

If you cannot find solutions to your problems with the aid from the table above, please contact Autel Technical Support.

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