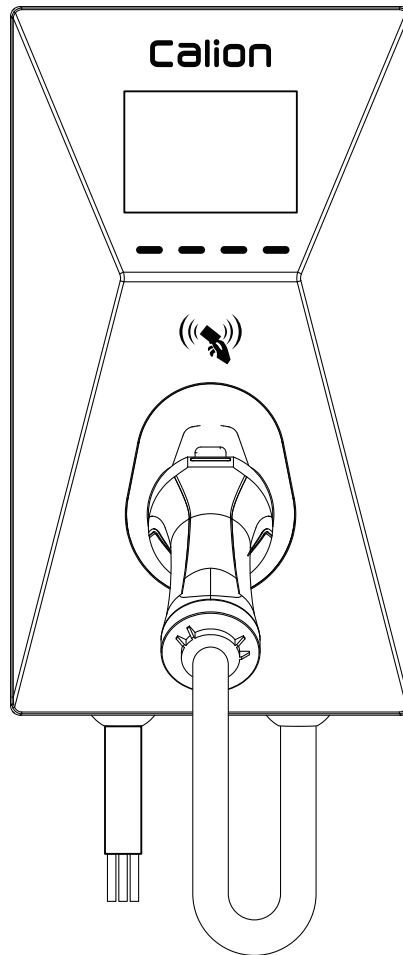




AC EV Charger Wall-mounted Charging Station

Installation and Operation Manual

• Safety Information

For your safety and the safety of others, and to prevent damage to the device and the vehicle it charges, all personnel operating or interacting with this device must read and understand the safety instructions provided in this manual.

(1) "Important Safety Instructions" and "Save These Instructions"

(2) Instructions related to fire or electric shock risks

• Safety Information

Safety information is provided to help prevent personal injury and equipment damage. All safety information begins with a word indicating the hazard level.

DANGER

Indicates an imminent hazard that, if not avoided, will result in death or serious injury to the operator or bystanders.

WARNING

Indicates a potential hazard that, if not avoided, could result in death or serious injury to the operator or bystanders.

• Safety Instructions

The safety information in this manual covers conditions known to Calion. Calion cannot anticipate, evaluate, or advise on all possible hazards. You must ensure that any conditions or procedures encountered do not compromise your personal safety.

Safety Warnings

- Read and follow all warnings and instructions before installing and operating the charger.
- This device must be installed by a licensed electrician in accordance with all local codes and regulations.
- This device must be grounded via a permanent wiring system or equipment grounding conductor.
- Do not install or use this device near flammable, explosive, hazardous, or combustible materials, chemicals, or vapors.

- Supervise children around the device.
- Do not insert fingers or foreign objects into the electric vehicle connector.
- Do not use the device if the flexible power cord or EV charging cable is frayed, broken, damaged, or malfunctioning.
- Do not use the device if the housing or EV connector is cracked, broken, damaged, or malfunctioning.
- Do not operate the device outside its operating temperature range (-31 to 167°F).
- Improper installation and testing may damage the vehicle's battery, components, and/or the device itself.
- Handle the device carefully during transportation. Avoid applying excessive force, impacts, pulling, twisting, coiling, dragging, or stepping on the device to prevent damage.
- For NEMA plug versions, use only NEMA outlets (14-50).
- For individual systems, the neutral line must be connected to the ground upstream at the transformer or distribution panel.

For Electric Vehicles Only

Suitable for electric vehicle use

No Ventilation Required

Copper Conductors Only

- **WARNING**

To reduce the risk of fire or electric shock, do not use this device with an extension cord.

1. Using This Manual

This manual describes the installation and use of the AC EV Charger. Read this manual carefully before installation to familiarize yourself with the instructions for smooth installation and operation.

1.1 Conventions

The following conventions apply to this manual:

- **Bold Text**

Bold text highlights selectable items, such as buttons and menu options. Notes and important information.

- **Note**

Notes provide supplementary information, such as explanations, tips, and comments.

- **Important**

Important notes indicate actions that, if not avoided, may damage the device or vehicle.

- **Hyperlinks**

Hyperlinks in electronic documents direct you to related articles, procedures, or illustrations.

- **Illustrations**

Illustrations in this manual are examples; actual products or screens may vary.

2.General Introduction

AC EV Charger is designed to charge plug-in hybrid electric vehicles (PHEVs) or electric vehicles (EVs) at home or in apartments. Our charger provides a safe, reliable, fast, and smart charging solution.

This manual guides you through the installation and use of this charger.

• Intended Use

AC EV Charger is designed to provide AC charging for electric vehicles. It can be used indoors and outdoors.

Hazard

Using the device in a manner not described in this manual or related documentation may result , injury, or property damage. Use the device only as intended.

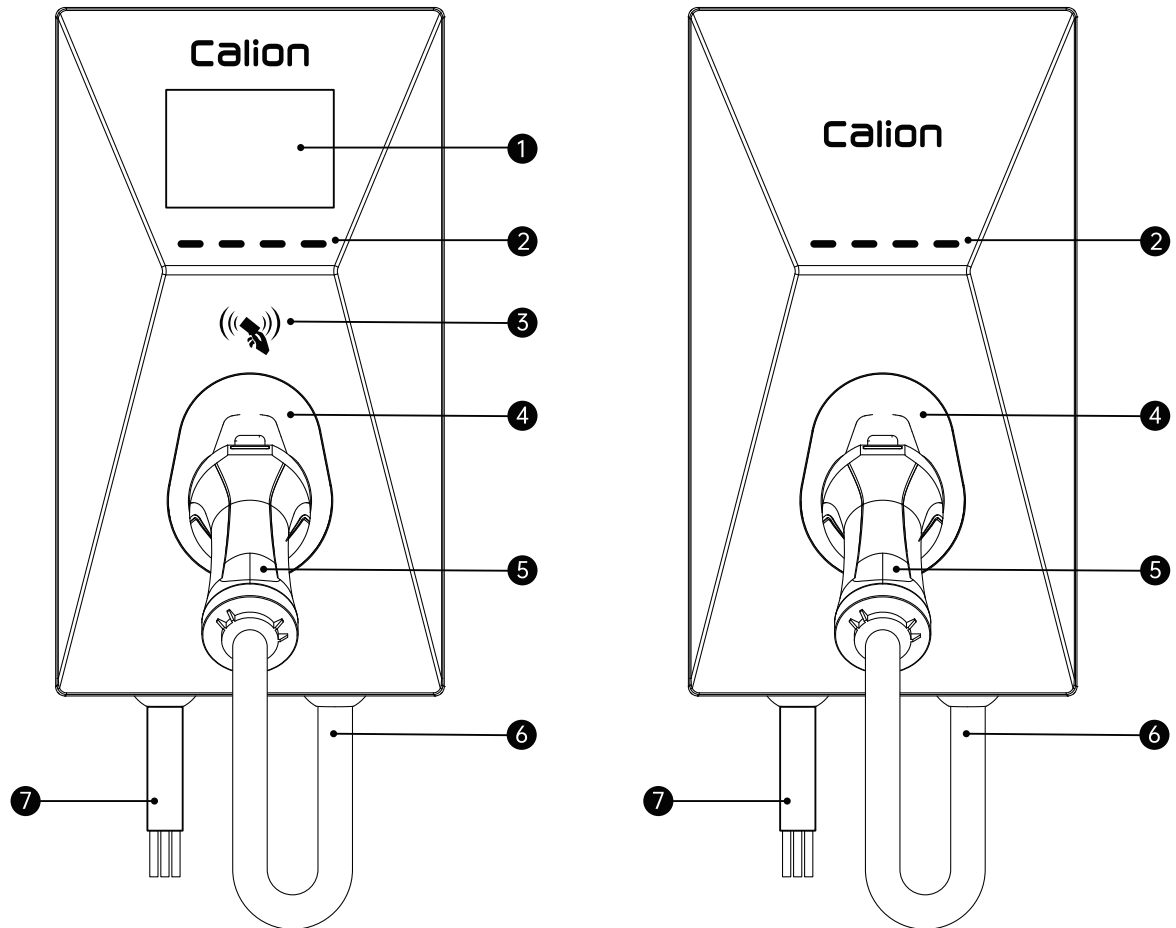
Note

Images and illustrations in this manual may differ from the actual product.

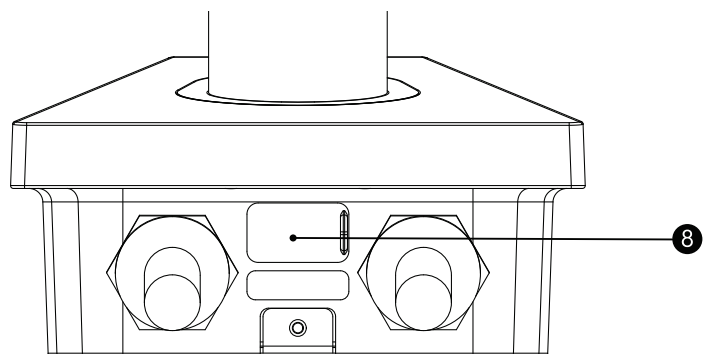
2.1 Product Overview

• Calion AC Charger

This manual guides you through the installation and use of this charger.



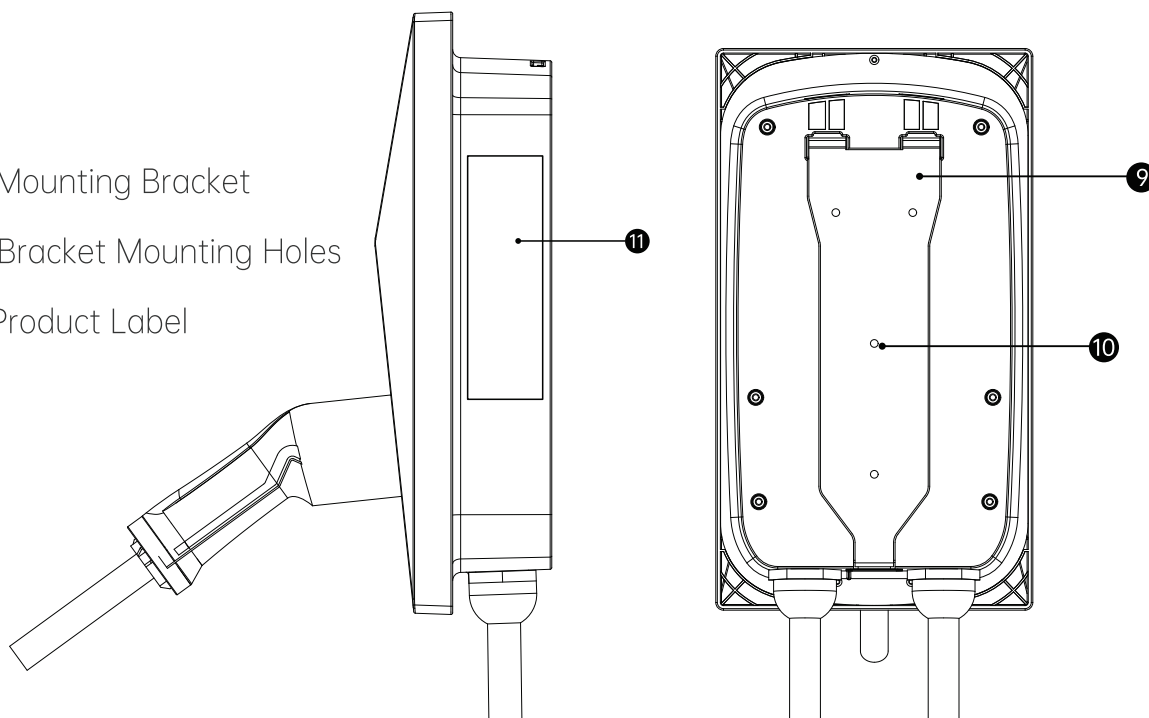
1. Display
2. LED Indicators
3. RFID Reader(Optional)
4. Mounting Bracket
5. Connector
6. EV Charging Cable
7. Bottom AC Input Cable
8. Bottom Ethernet Port(Optional)



9. Mounting Bracket

10. Bracket Mounting Holes

11. Product Label



LED Descriptions

LED	Description
Charging LED	• Constant green light: The charger is powered on. • Constant blue light: The electric vehicle is connected. • Flashing blue light: The electric vehicle is charging. • Constant blue light: The charging is completed. • No light: The charger is not connected. • Constant red light: A malfunction has occurred.

2.2 Specifications

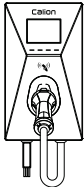
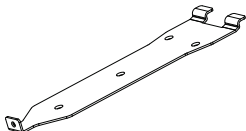
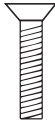
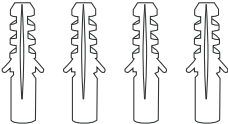
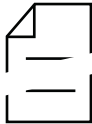
Item	Description
AC Power Output Rating	• Max 7.5kW (240 VAC @ 32 A type) • Max 9.6 kW (240 VAC @ 40 A type) • Max 11.5 kW (240 VAC @ 50 A type)
AC Power Input Rating	• 110/260 VAC, 50Hz/60Hz, 32 A, 40 A, 50 A,
Input Wiring Scheme	• L, N, and Ground (no neutral)
Input Cable	• NEMA 14-50P • Hardwired
Connector Type	• SAE J1772 / Tesla
Display	• 4 LEDs
Metering	• Metering IC $\pm 1\%$
Protection	• Overcurrent, Overvoltage, Undervoltage, Integrated surge protection, Temperature protection, Leakage protection.
Connectivity	• Bluetooth • Wi-Fi (Frequency: 2.4G) • Ethernet (optional)
Card Reader (optional)	• ISO 15693, ISO 14443

Item	Description
Communication Protocol	• OCPP 1.6J (optional) • OCPP 2.0 (optional)
Installation	• Wall-mounted or bracket-mounted
Storage Temperature	• -67 to 167°F
Operating Temperature	• -31 to 131°F
Sizes	• 14.3" x 8.1" x 4.2" (365 x 206 x 107 mm)
Weight	• 13.2 lbs (6 kg) / 11 lbs (5 kg) / 8.8 lbs (4 kg)
Safety & Compliance	• Automatic reset function included • Warning • Includes auto-reset feature
Model	• EV-C02A-US32A • EV-C02A-US40A • EV-C02A-US50A • EV-C02A-TSL32A • EV-C02A-TSL40A • EV-C02A-TSL50A • EV-C02AZ-US32A • EV-C02AZ-US40A • EV-C02AZ-US50A • EV-C02AZ-TSL32A • EV-C02AZ-TSL40A • EV-C02AZ-TSL50A

3. Installation

3.1 Unpacking

Ensure all components are delivered as ordered. Inspect the package to confirm the following parts are included.

Charging Station		Wall Bracket	
Screws (M5 x 40) 4 pcs		Screws (M3 x 6)	
Wall Anchors (5/16") 4 pcs		Quick Reference Guide	
Screwdriver (H2 type)			

 Note:

The above list may not include all tools required for installation. Read the installation steps carefully and prepare all necessary tools before installation.

3.2 Electrical Design

• 3.2.1 Upstream Wiring

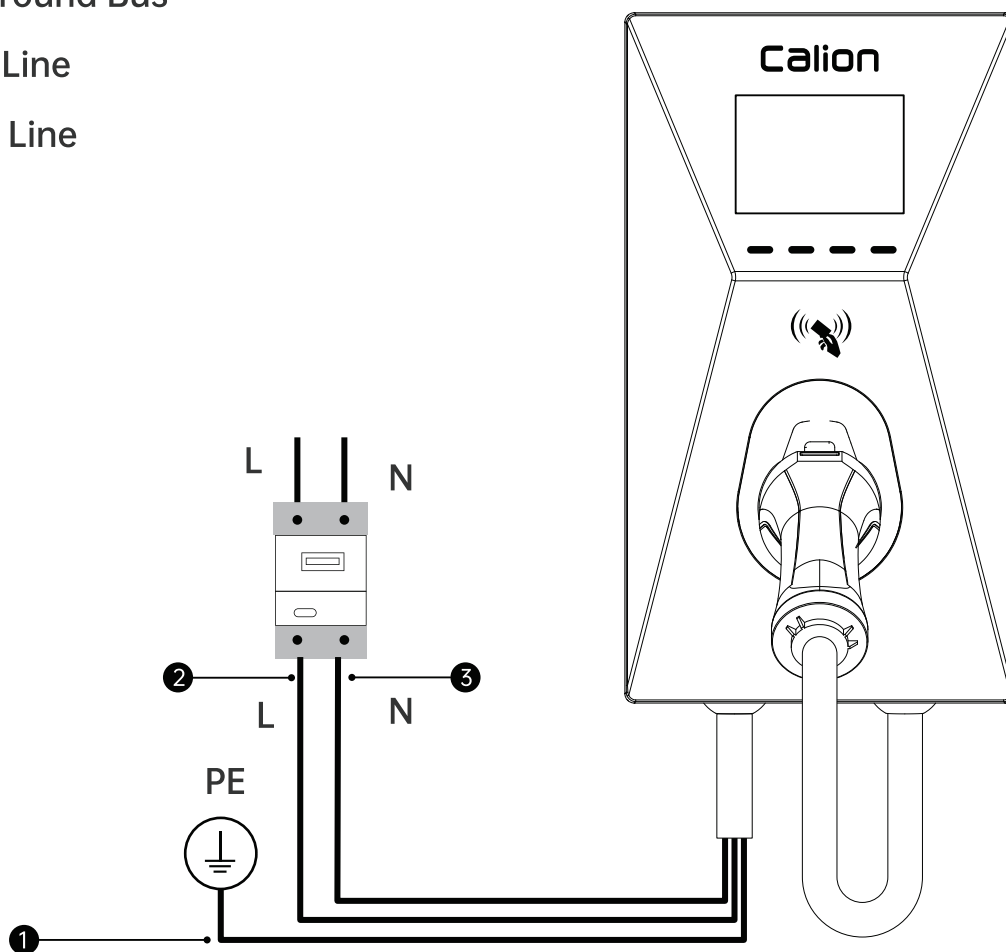
The charging station is considered a continuous load device (EVs draw maximum load for extended periods). Per the National Electrical Code (NEC), branch circuits must be designed for 125% of the load in North America. For a 208/240 V output with a maximum 50 A load, use a 65 A or 70 A circuit breaker.

Wiring must comply with NEC standards for continuous load devices. Typically, use 16 mm² or 10 mm² (6 AWG or 8 AWG) insulated cables based on circuit rating and distance between the panel and charger. The terminal block supports up to 16 mm² (6 AWG) wiring.

3.2.2 Upstream Wiring

240 VAC Panel

1. Ground Bus
2. L Line
3. N Line



• 3.2.3 Grounding Requirements

The charger must be connected to a grounded metallic permanent wiring system. The equipment grounding conductor must be routed with circuit conductors and connected to the equipment grounding terminal or lead on the charger.

Ensure the grounding conductor complies with all applicable standards and is properly grounded at the service equipment or, if fed by a separate system, at the supply transformer.

The neutral line is not used to power the charger but must be properly bonded to ground at the panel transformer to provide the necessary voltage reference relative to ground.

3.3 Pre-Installation Preparation

• 3.3.1 Installation Location

- Install the charger on a flat, vertical surface capable of supporting its weight (e.g., finished wall or base). AC EV Charger weighs approximately 13.2 lbs (6 kg).
- Choose a location where the charging cable remains within its bend radius.
- Place the charger where it is unlikely to be damaged.

• 3.3.2 Installation Location Selection

1. Determine required charging current and whether a hardwired circuit is needed. Select based on panel capacity, desired charging speed, and user preference for NEMA plug or hardwired installation.

Circuit Rating	Max Load	Estimated Charging Miles/Hour	NEMA Plug	Hardwired
50A	40A	Up to 38 mi/61 km	Yes	No
40A	32 A	Up to 30 mi/48 km	Yes	No

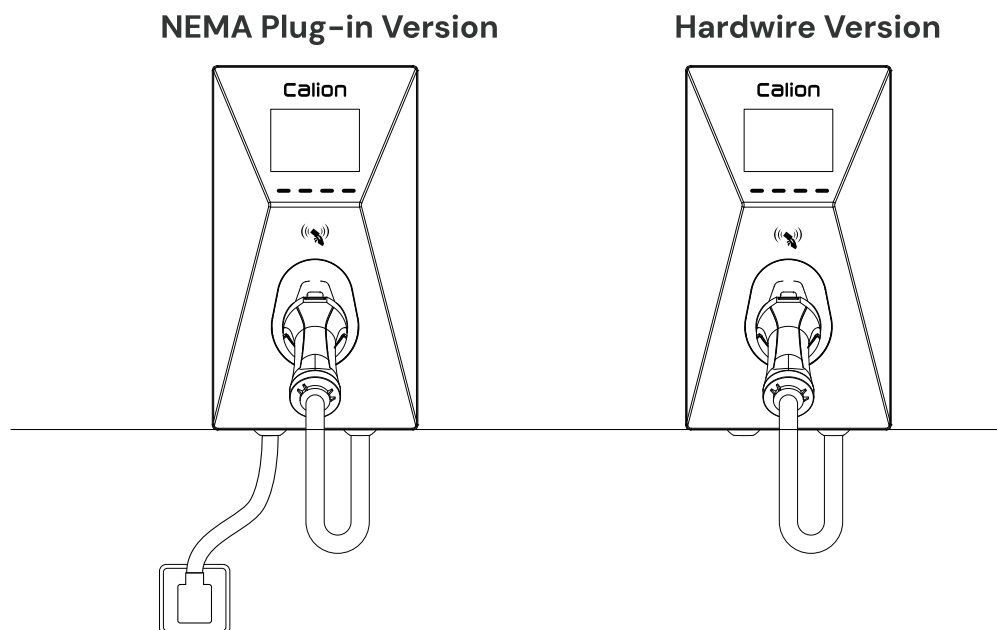
ⓘ Important

In Canada, NEMA plug installations are permitted only for 50A circuits.

AC EV Charger can also be wired to higher-rated circuits. Consult all applicable electrical codes for breaker and wire size requirements. Field wiring terminals are rated for 105°C(221°F) and support up to 6 AWG (16 mm²) wire.

Circuit Rating	Max Load	Estimated Charging Miles/Hour	NEMA Plug	Hardwired
70A	50A	Up to 45 mi/72 km	No	Yes

2. For NEMA plug installations, confirm the purchased plug type (e.g., NEMA 14-50P).
3. Ensure the electrical panel supports a 240 V dedicated circuit with a new, dedicated, non-GFCI double-pole breaker compliant with local codes.
4. Recommended mounting height: 43–63 inches (1100–1600 mm). For NEMA plug installations, the outlet must be at least 18 inches (460 mm) above ground and adjacent to the charger.
5. NEMA plug versions require a weatherproof outdoor outlet; hardwired versions require weatherproof hardwired installation.



3.4 NEMA Outlet

This section describes how to install a NEMA outlet (if required).

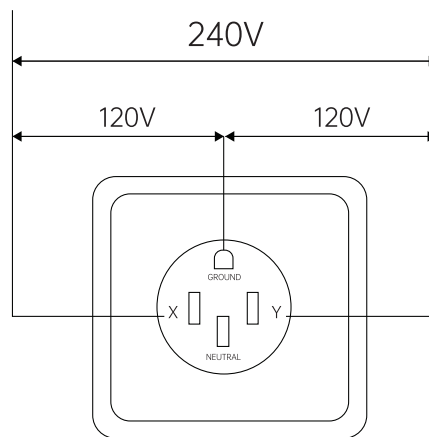
⚠ WARNING

Turn off the circuit breaker for the outlet before installing the charger.

Ensure the NEMA outlet complies with local codes and has the specified breaker and properly sized wiring.

❗ Important

When installing a NEMA 14-50 outlet, ensure the ground pin faces upward as shown below.



NEMA 14-50P

- Ensure permits for this electrical installation are readily available.
- The NEMA outlet must be installed to the left of the charger.
- Power cord length is limited to 11.8 inches (300 mm).

⚠ NEMA 14-50P

To reduce fire risk, connect only to a circuit with 50A branch circuit overcurrent protection compliant with ANSI/NFPA 70 (US) or CSA C22.1 (Canada).

3.5 Charger Installation

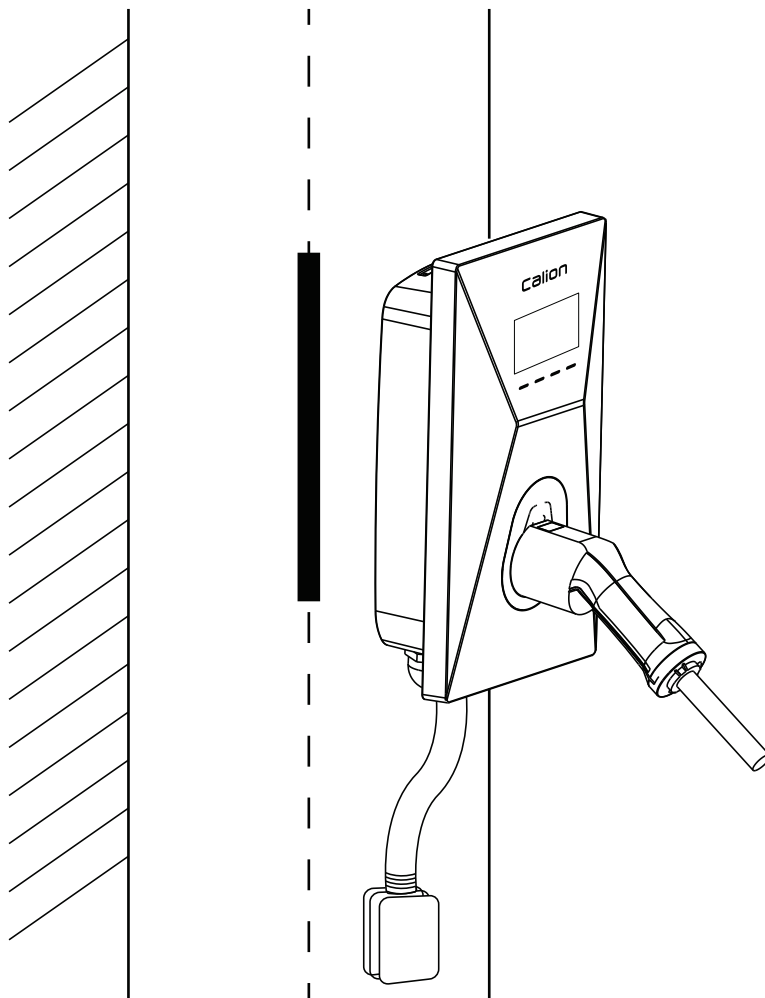
• 3.5.1 NEMA Plug Installation

1. To determine the ideal mounting height:

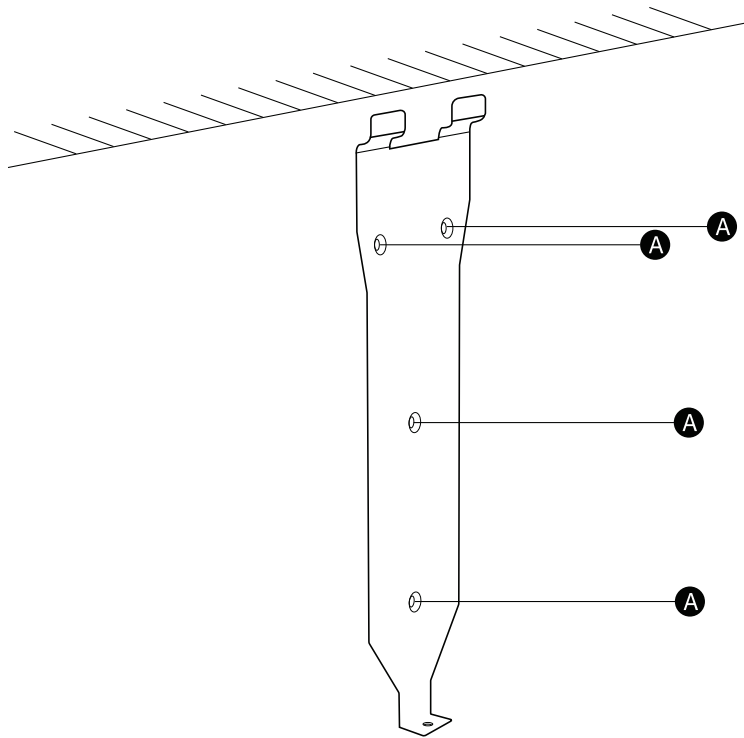
DANGER!

Electric shock hazard. Turn off the circuit breaker to the outlet before installation.

- A. Use a stud finder to locate a wall stud near the NEMA outlet. Draw a vertical line approximately 20 inches (50 cm) along the stud.
- B. Plug the NEMA cable into the outlet and center the charger on the vertical line. Ensure the NEMA cable has a slight bend and is not stretched.
- C. Mark a horizontal line at the bottom of the charger.
- D. Unplug the charger.

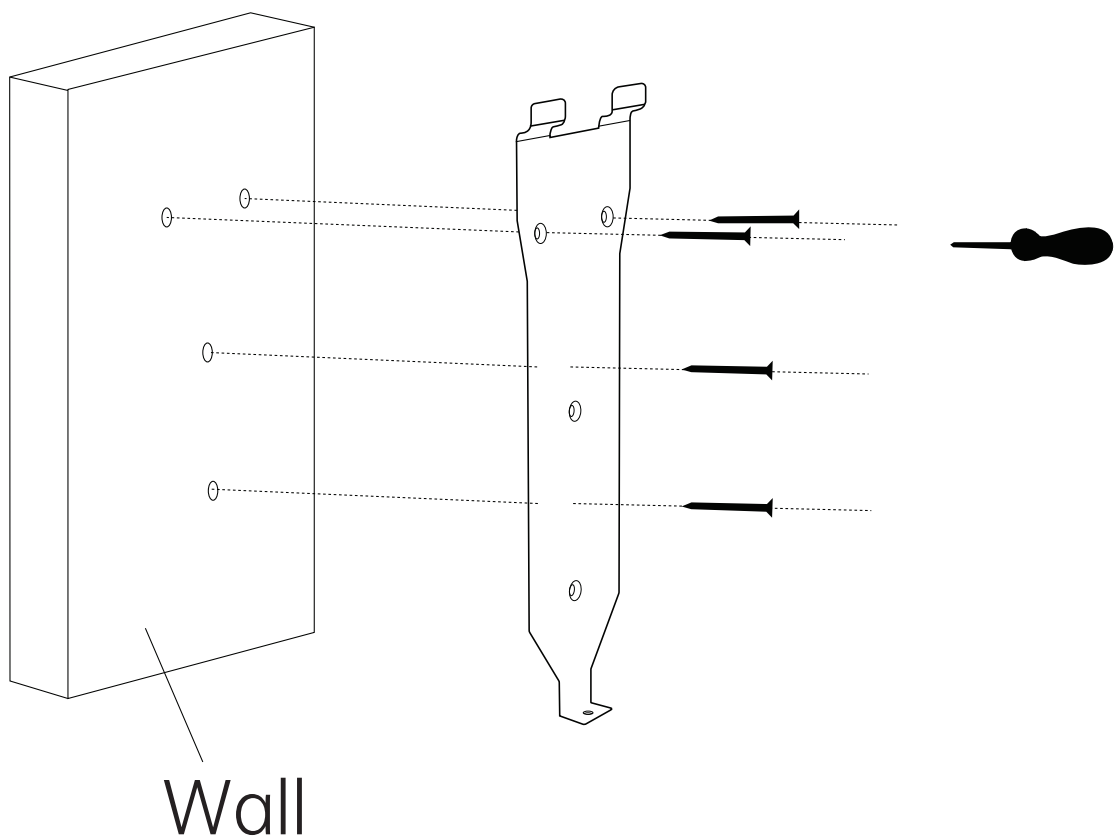


2. Align the wall bracket's bottom edge with the horizontal line and center its holes with the vertical line. Mark the four lower mounting holes (A), then remove the wall bracket.

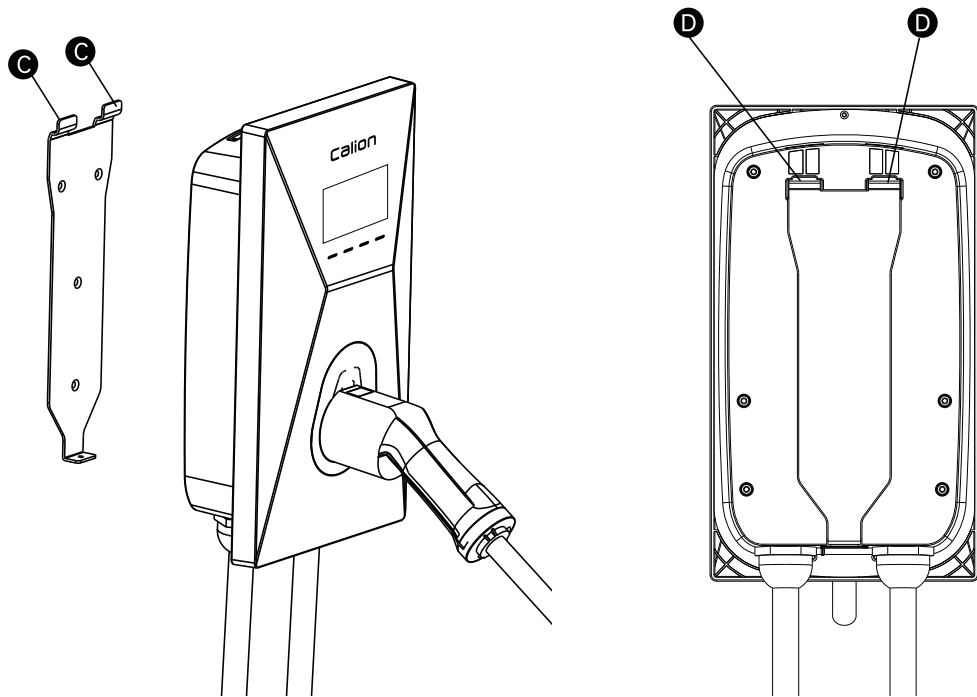


3. Drill two 5/16" (8MM) holes and insert 5/16" (8MM) wall anchors into the lower mounting holes.

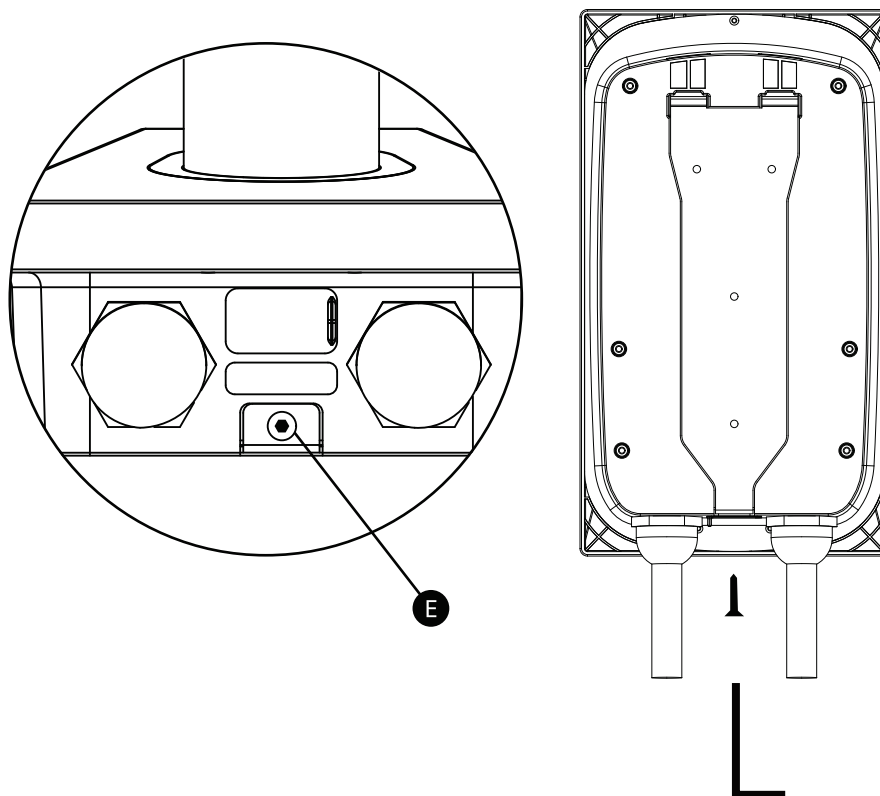
Secure the wall bracket to the lower mounting holes using M5 x 40 screws (B) and a PH2 screwdriver (not included).



4. Mount the charger to the wall bracket by aligning the slots (D) on the charger's back with the tabs (C) on the bracket, then slide the charger downward.



5. Insert M3 x 6 screws (E) into the bottom holes of the charger and tighten using a H2 screwdriver.



• 3.5.2 Hardwired Installation

The AC EV Charger is wired from the bottom. Choose the appropriate wiring method based on the wiring location.

Important Notes

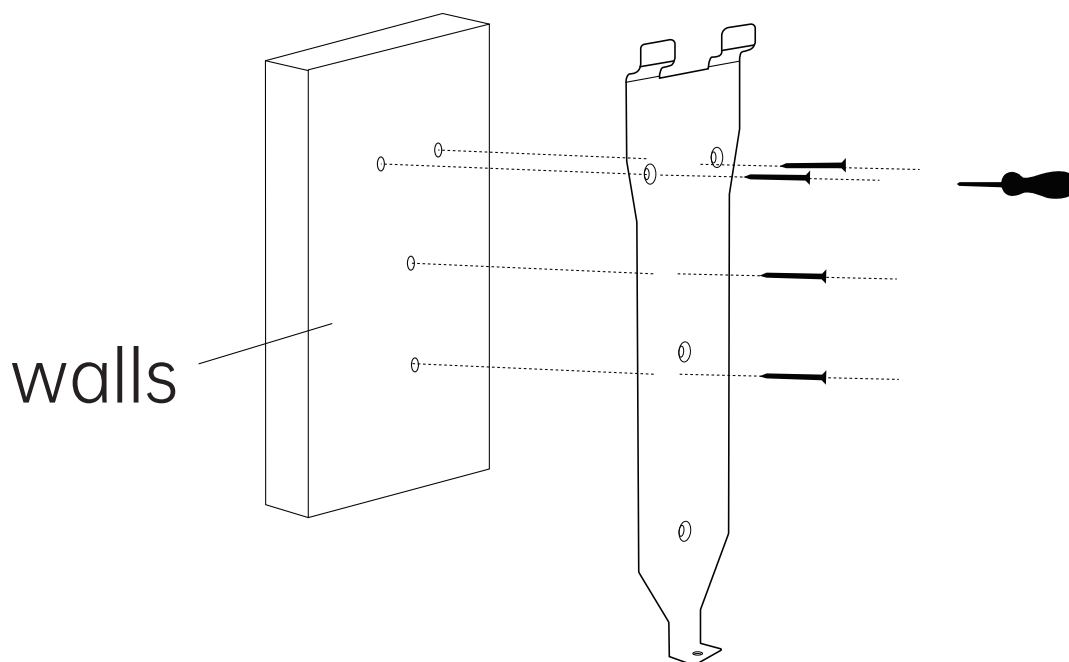
- The wiring is located at the bottom of the charger. Ensure that the charger is installed in a location that is easily accessible to the bottom power cord.

Installation Location

1. Use a stud finder to locate a wall stud near the power cable on the right side.
2. Draw a vertical line approximately 20 inches (50 cm) long near the installation height, aligned with the wall stud.

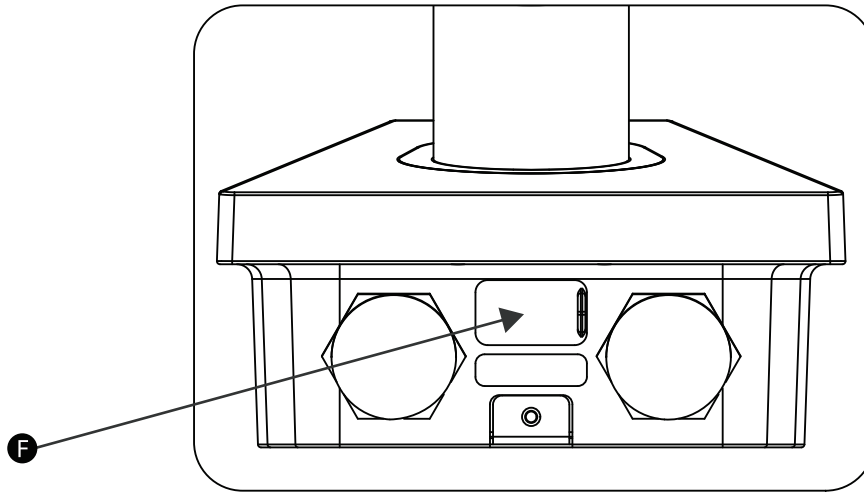
• Mounting the Wall Bracket

1. Drill two 5/16"(8MM) holes and insert 5/16"(8MM) wall anchors into the lower mounting holes.
2. Secure the wall bracket to the lower mounting holes using two M5 x 40 screws (B) and a PH2 screwdriver (not included).



Connecting Ethernet Cable (Optional)

- (F) The bottom Ethernet interface has an RJ45 port.



⚠ WARNING

To reduce fire risk, connect the charger only to a circuit compliant with ANSI/NFPA 70 (US) and CSA C22.1 (Canada), and ensure the branch over

4.Operation

4.1 Power On

For NEMA plug versions, plug the charger into the outlet.

For all models, ensure all electrical connections are secure, then turn on the power from the circuit breaker and wait for the power supply to start. The charger will perform a series of self-tests to ensure proper and safe operation. The power LED should light up green.

WARNING

Exercise caution when operating electrical equipment.

4.2 Adding a Charger

• Steps to Add a Charger:

1. Scan the QR code below and download the application to your mobile device. Alternatively, search for "Smart Life" in the Android or App Store and download the APP for installation.



2. Open the app on your mobile device and log in using your phone number or email. If you don't have an account, register using your phone number.
3. Turn on the Bluetooth and Wi-Fi on your mobile phone, ensure that the device is in the network configuration state, and add the device to proceed with the operation.

4.3 Starting Charging

1. Remove the connector from the charging gun holder.
2. Insert the connector into the electric vehicle's charging port.
3. Choose one of the following methods to start a charging session:
 - If auto-start is enabled in the app, the charger will automatically start charging once the connector is properly connected.
 - If a charging schedule is set in the app, the charger will automatically start the charging session at the scheduled time.
 - If RFID is enabled, bring the RFID card close to the RFID reader.

Note:

Ensure the electric vehicle is charging. The charging LED on the charger should flash blue. If you suspect the vehicle is not charging properly, try reconnecting the charging cable or contact customer support.

4.4 Stop Charging

Note:

- If the EV charging cable is disconnected during charging, the charger will automatically cut power. This will stop all charging operations.
 - When the vehicle is fully charged, the charger will automatically cut power.
1. To stop charging, choose one of the following methods:
 - If scheduled charging or auto-start is enabled, wait for the charging session to end without further action. The charging LED will display a steady blue light.
 - The app will display that your electric vehicle is fully charged.
 - If the Radio Frequency Identification (RFID) function is enabled, you can bring the RFID card close to the RFID reader again.
 2. Remove the connector from the electric vehicle and return it to the charging gun holder.

5.Troubleshooting & Service

5.1 Troubleshooting Table

Item	Issue	Solution
1	The charging process did not start as expected.	Do not insert the connector into the electric vehicle charging port before setting the charging schedule for the first time. Insert the EV charging cable only after the schedule is set.
2	Overvoltage	Use a multimeter to check if the input voltage is too high. If the voltage exceeds the set threshold, protection is activated. The system will automatically resume normal operation once the voltage returns to normal.
3	Undervoltage	Use a multimeter to check if the input voltage is too low. If the voltage drops below the set threshold, protection is activated. The system will automatically resume normal operation once the voltage returns to normal.
4	Overtemperature	Check that the electric vehicle charging cable is firmly connected. Ensure that the operating temperature is within the range specified for the product. Stop charging. Wait until the temperature is within the operating temperature range and restart charging.
5	Overcurrent Protection	Overcurrent Protection: If the current exceeds the warning threshold, the charger will cut off power output, and it will automatically restart after 5 seconds. If the current does not return to normal after three attempts, manual power-off and restart are required to recover.
6	Leakage Protection	Leakage Protection: After leakage protection is activated, manual power-off and restart are required to recover.
7	Power Failure	Ensure that the circuit breaker switch is turned on.

FCC Caution.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

*RF warning for Mobile device:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.