



EspenEV.com



EVC2RT RESIDENTIAL LEVEL 2 EV CHARGER

INSTALLATION AND USER GUIDE



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IMPORTANT SAFETY INSTRUCTIONS SAVE THIS MANUAL



INSTRUCTIONS PERTAINING TO A RISK OF FIRE OR ELECTRIC SHOCK!

Improper connection of the equipment and/or grounding conductor may result in a risk of electric shock, leading to death or serious injury. Installation is required to be performed by a licensed electrician or other qualified professional in accordance with the regional electrical code or Authority Having Jurisdiction (AHJ) of the installation location. Always ensure the EV Charger is properly grounded. Do not modify the provided plug, if it will not fit the outlet, have a proper outlet installed by a licensed electrician or other qualified professional.

GROUNDING INSTRUCTIONS

For Plugged-In Installation:

This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for the electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

WARNING:

Improper connection of the equipment and/or grounding conductor will result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

For Hardwired Installation:

This product must be connected to a grounded, metal, permanent wiring system, or an equipment grounding conductor must be run with the circuit conductors and connected to the equipment grounding terminal or lead on the product.



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INSTRUCTIONS PERTAINING TO A RISK OF FIRE OR ELECTRIC SHOCK!

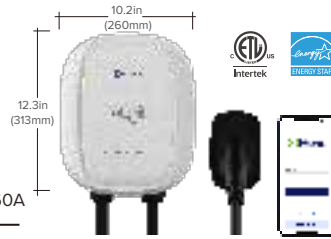
- Read all the instructions before using this product.
- This device should be supervised when used around children.
- Do not put fingers into the electric vehicle connector.
- The EV Charger is intended for use with electric vehicles only. Specifically, it is intended only for charging vehicles not requiring ventilation during charging.
- Do not use the EV Charger in any manner other than specified in this installation guide.
- Refer servicing to qualified service personnel.
- Do not attempt to disassemble or repair any of the components of the EV Charger.
- There are no user serviceable parts inside.
- Do not use this product if the flexible power cord or EV cable is frayed, has broken insulation, or shows any other signs of damage.
- Do not use this product if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage.
- Do not install the EV Charger in environments with explosive gas or vapors; nor where ambient temperature is out of the operating range of -22°F to 122°F (-30°C to 50°C).
- Use 105°C wire, 6 AWG copper for setting 48A rating intended for field wiring connection.

IMPORTANT SAFETY INSTRUCTIONS SAVE THIS MANUAL



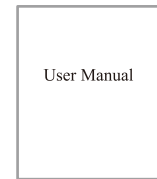
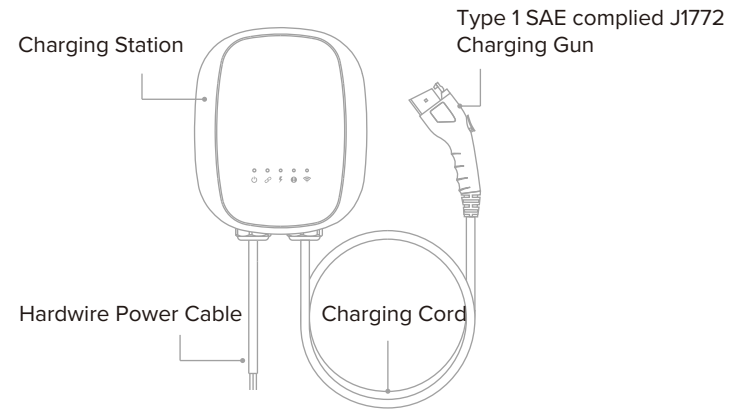
- Improper moving or storage of the EV Charger may result in damage to the product and could result in a risk of fire or electric shock during subsequent use.
- Handle charger and packaging with care and avoid dropping it.
- When moving or lifting the EV Charger, always grasp the unit by the charging station enclosure. Never carry or lift the EV Charger by either the power cable or charging cord.
- Store the EV Charger indoor and in its original packaging until it is ready to be installed.
- Storage temperature should be in the range of -22°F to 122°F (-30°C to 50°C).

Electrical Characteristics	<ul style="list-style-type: none"> > Safety Rated: 48A Max > Single phase input: nominal voltage 208-240 VAC ~60 Hz > Power: 11.5 kW at 240 VAC
Input Cable	<ul style="list-style-type: none"> > Hardwired by licensed electrician > Circuit Breaker must be rated for 60A
Output Cable & Connector	<ul style="list-style-type: none"> > 18 ft/5.5 m cable (25ft/7.5m optional) > SAE J1772 standard compliant
App	<ul style="list-style-type: none"> > Precision measurement of power, energy, voltage & current > Automated notifications: time-of-use in effect, start of charge, end of charge, unit offline, unit back online, car not plugged in by a set time
Smart Grid Connectivity	<ul style="list-style-type: none"> > Built-in WIFI (802.11 b/g/n/2.4GHz) / Bluetooth Connectivity
Firmware	<ul style="list-style-type: none"> > Over-the-air (OTA) upgradeable firmware
Emissions Reduction	<ul style="list-style-type: none"> > Available via optional software upgrade
Enclosure	<ul style="list-style-type: none"> > Dynamic LED lights show charging status: standby, Device connectivity, charging in progress, fault indicator, network connectivity > NEMA Enclosure Type4: Weatherproof, dust-tight > IK10: Resistant polycarbonate case > Quick-release wall mounting bracket included > Operating Temperature: -22°F to 122°F (-30°C to 50°C)
Dimensions	<ul style="list-style-type: none"> > Main enclosure: 12.3in x 10.2in x 4.1in (313mm x 260mm x 105mm)
Codes & Standards	<ul style="list-style-type: none"> > NEC625 compliant, UL2594 compliant, OCPP 1.6J (optional) > FCC Part 15 Class B, Energy Star
Safety	<ul style="list-style-type: none"> > ETL Listed
RFID	<ul style="list-style-type: none"> > Yes
4G module	<ul style="list-style-type: none"> > Optional
Warranty	<ul style="list-style-type: none"> > 2 years limited product warranty



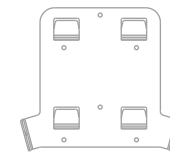
Your EV Charger contains the following items:

If any of these items are missing or if you believe they've been damaged, please contact support immediately.



x 1

EV charger installation manual



x 1

Mounting Bracket



x 1

Gun Cradle



x 8

8pcs Drywall anchors



x 8

8pcs 7/32 inch #12 Phillips screws

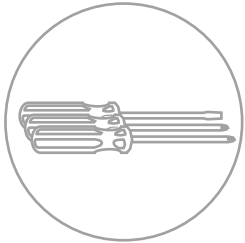


x 2

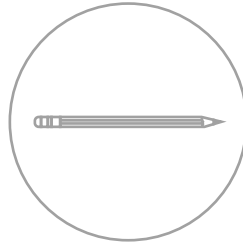
2pcs M4X8 hand-screws

REQUIRED TOOLS

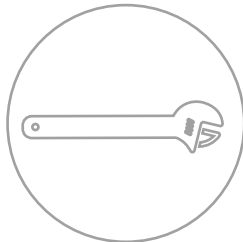
Here are the tools you will need to install the EV Charger.



Phillips, flathead and torx screwdrivers



Pencil



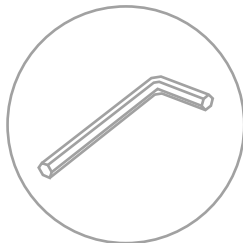
Adjustable wrench



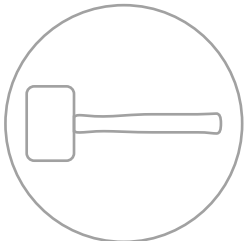
IOS or Android phone or tablet



Drill with a 5/16" drill bit



Allen Wrench



Rubber Mallet



Bubble level

STEP 1: DOWNLOAD THE APP



Use your phone to check the signal strength of your WIFI network where the EV Charger will be installed. Low/no signal may require a WIFI extender for the Charger to work. Download the EV Charger APP onto your phone or tablet from the Apple Store or Google Play, create account and begin the setup process.



Hardware installation, See Step 8a

- EV Charger can supply a maximum charge of 48A to the EV
- Requires a dedicated 60A dual pole breaker for EV Charger maximum charge of 48A.
- Refer to the table below for the required breaker rating at various maximum charge current settings.

Plugged-in installation See Step 8b

- EV Charger can supply a maximum charge of 40A to the EV.
- Requires a dedicated 50A dual pole breaker for EV Charger maximum charge of 40A.
- Follow correlation chart below of maximum charge current setting and breaker rating.
- Requires a NEMA14-50R/6-50R receptacle outlet.



NEMA14-50R



NEMA6-50R

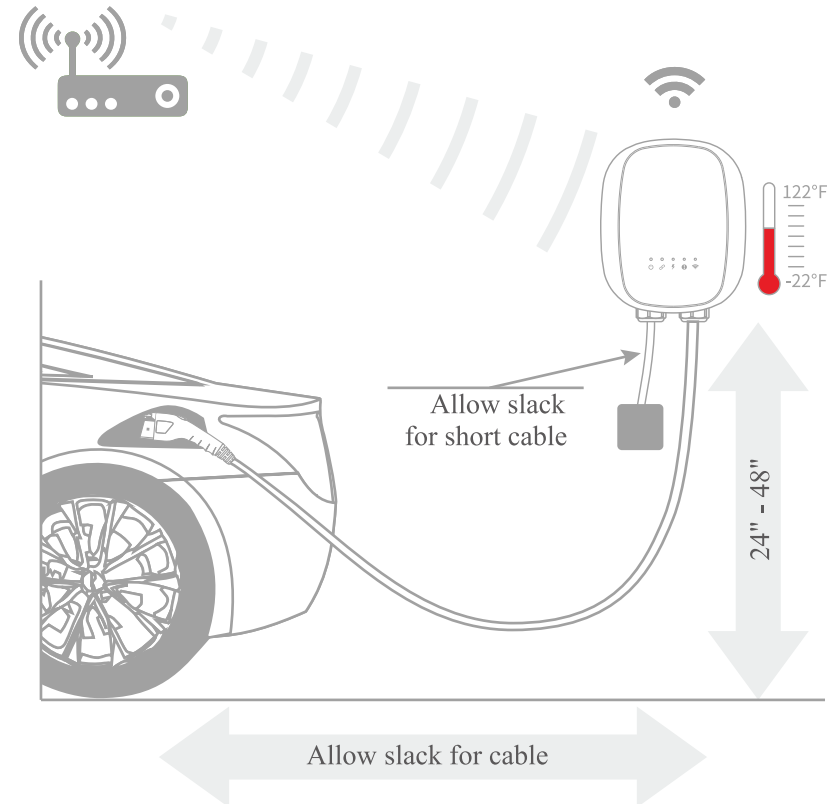
CAUTION: To reduce the risk of fire, connect only to a circuit provided with 60 amperes maximum branch circuit over current protection in accordance with the National Electrical Code, ANSI/NFPA 70, the CSA C22.1-15 Canadian Electrical Code, Part 1 (Canada) or NOM-001-SEDE Electrical installations (Utility) (Mexico) or ANSI NFPA 70 National Electrical Code (USA)

Dedicated Breaker	Charge Power @ 240V	
15A	2.9kW	12A
20A	3.8kW	16A
25A	4.8kW	20A
30A	5.8kW	24A
35A	6.7kW	28A
40A	7.7kW	32A
45A	8.6kW	36A
50A	9.6kW	40A
60A	11.5kW	48A

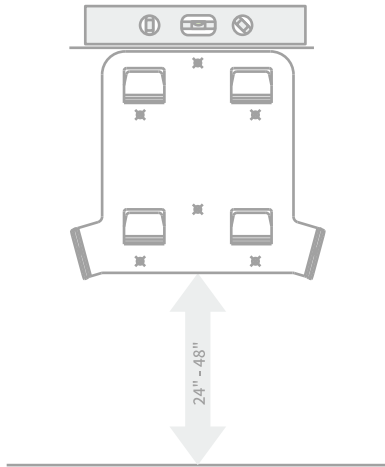


This device shall be mounted at a sufficient height above the Finished Floor, such that:

- The height of the storage means for the coupling device is located between 24"(600 mm) and 48"(1.2 m) from grade;
- The distance from the vehicle allows slack for charging cable;
- Temperatures are between -22°F to 122°F
- The charger is within range of WIFI signal;
- And if plugged-in, the distance from the NEMA outlet allows slack for the input power cable.

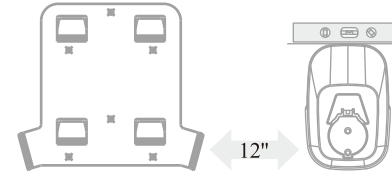


STEP 4: MARK THE MOUNTING BRACKET LOCATION



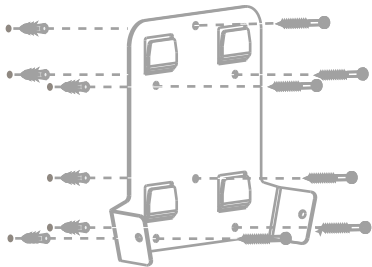
- Using a level draw a horizontal line on the wall to mark the top of the mounting bracket.
- Ensure the bottom of the bracket is 24" to 48" above the finished floor.
- Ensure there is sufficient slack for both the input power cable and Charging connector when plugged into the EV.
- Once the location is verified align the top of the mounting bracket to the line on the wall and mark the location of the 6 mounting holes.

STEP 6: INSTALL THE HANDLE HOLDER



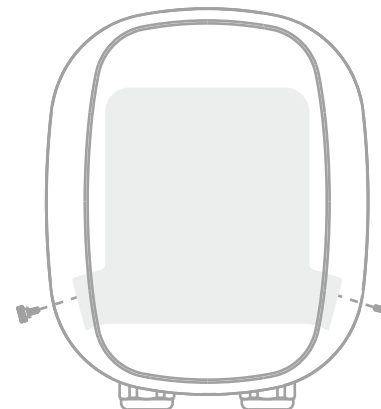
- Using a level draw a horizontal line at least 12" away from the Charger Mounting Bracket at your desired height.
- Align the top of the holder with your line and mark both the top and bottom mounting hole locations.
- If installing on a drywall surface drill a 5/16" hole for each mark.
- Use a rubber mallet to tap the anchors into the wall.
- Install the holder with the provided philips screws into the drywall anchors.

STEP 5: INSTALL THE MOUNTING BRACKET



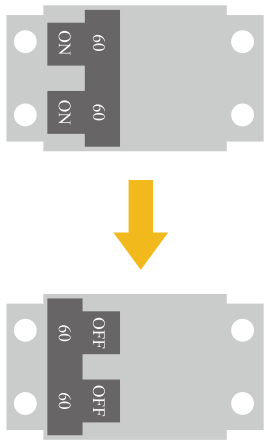
- For each mark, drill a 5/16" hole in the wall.
- Use a Rubber Mallet to tap in the 6 drywall anchors.
- Install the bracket with 6 Phillips screws into the anchors.

STEP 7: MOUNT THE EV CHARGER



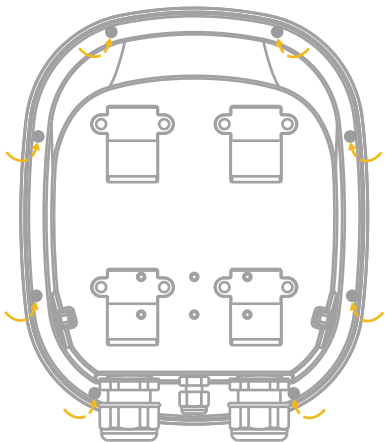
Use the 2 provided M4X8 Thumb-screws to install the EV Charger onto the mounting bracket

STEP 8a-1: HARDWIRING INSTRUCTIONS



- A licensed electrician or other qualified professional can follow these instructions to hardwire the EV Charger to a dedicated breaker.
- If you plan to power your EV Charger with a NEMA 14-50R/6-50R receptacle outlet, skip to Step 8b.
- First, turn off the dedicated dual-pole breaker that will power the EV Charger.

STEP 8a-2: HARDWIRING INSTRUCTIONS



From the back of the EV Charger, use the Allen wrench to remove the 8 screws to detach the front cover.

Use an adjustable crescent wrench to remove waterproof cable grips.

CAUTION: There is a cable connecting the cover to the circuit board within the Charger.

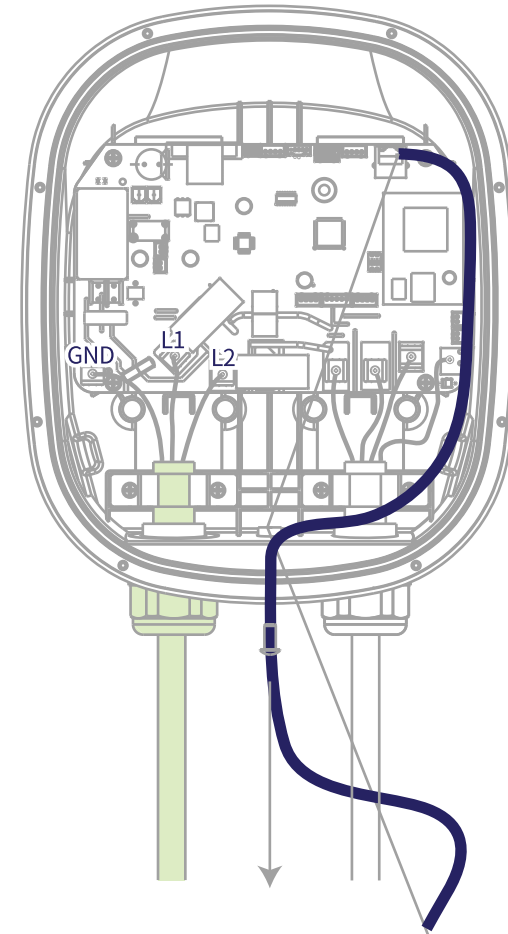
To remove the cable, gently grab the wiring harness and pull away from the circuit board.

Take care not to damage the connector or circuit board.

STEP 8a-3: HARDWIRING INSTRUCTIONS



Unscrew the screws for terminals L1, L2, and GND, to remove the NEMA cable wires.



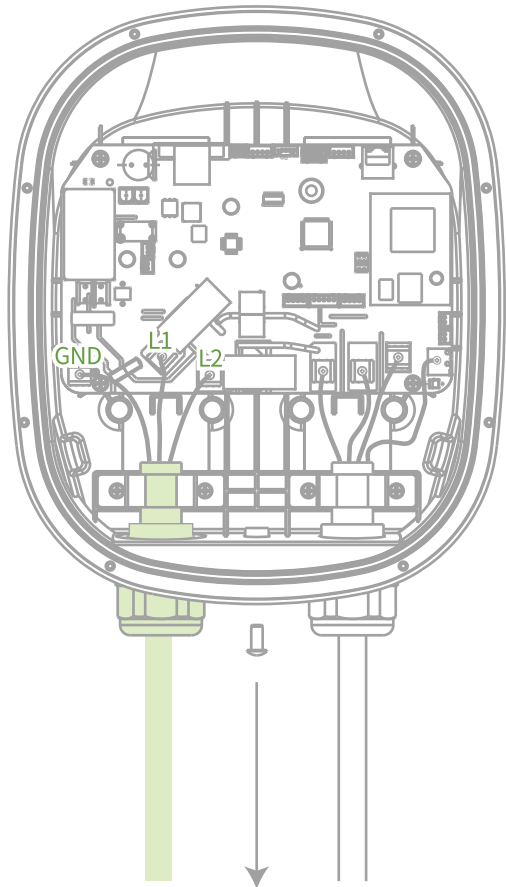
Ethernet Cable as shown

STEP 8a-4: HARDWIRING INSTRUCTIONS

Unscrew the screws to remove the clamps securing power input cable leads.

Remove the NEMA cable from the assembly.

Finally, unscrew the nut holding the cable connector in place and remove it from the assembly.



Pull out the plug from of the middle waterproof connector, insert the Ethernet cable, and tighten the nut.

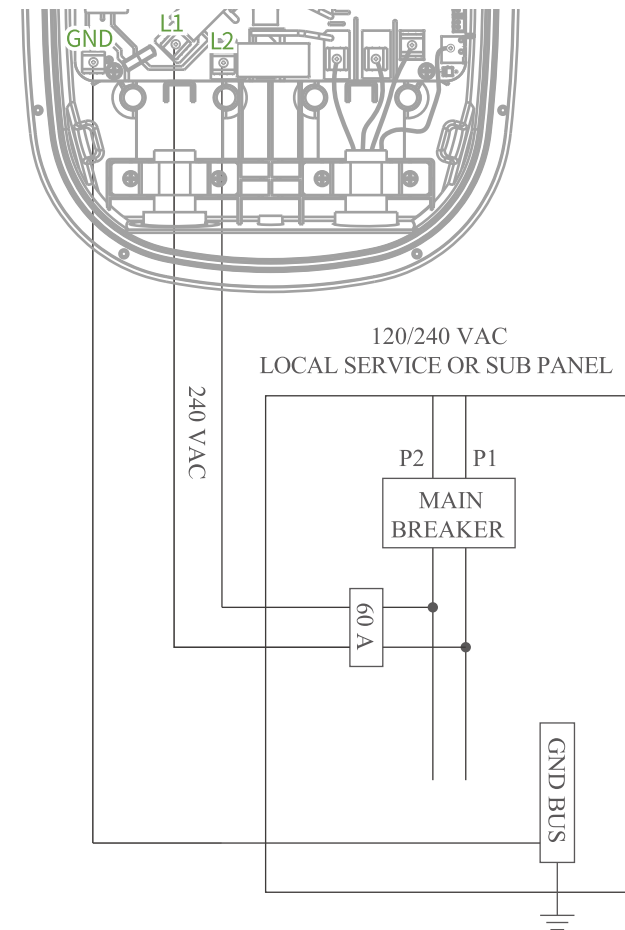
STEP 8a-5: HARDWIRING INSTRUCTIONS



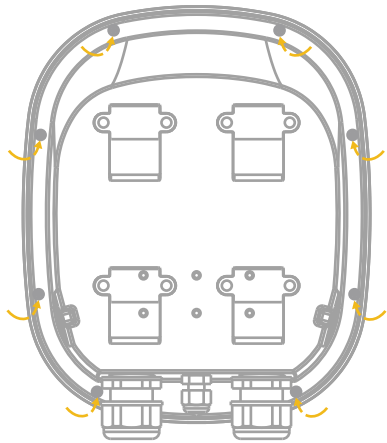
Using 1-1/4" conduit and proper fittings for the connections, pull power from both phases of the breaker along with a grounding conductor.

Leads should meet a minimum requirement of :
Copper only conductors, 105°C & 48 Amp rated, 6 AWG

Bring the leads into the EV Charger assembly making the proper conduit connections. Put the Phase 1 lead into terminal L1, the Phase 2 lead into terminal L2, and the ground into terminal GND and secure them with the screws, applying a tightening torque of 1.2 Nm.

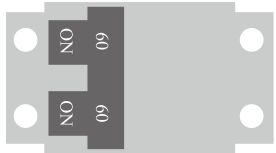
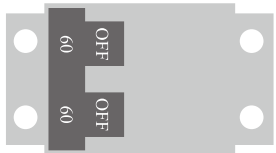


STEP 8a-6: HARDWIRING INSTRUCTIONS

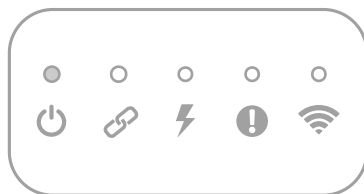


Gently reattach the cable to the cover and the circuit board. Then, from the back of the EV Charger, use the Allen wrench to replace the 8 screws to reattach the front cover.

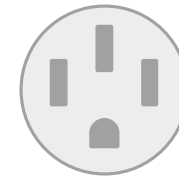
STEP 8a-7: HARDWIRING INSTRUCTIONS



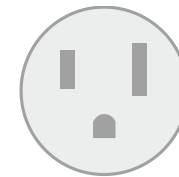
Turn on the breaker and ensure that the power light on the front of the EV Charger is illuminated.



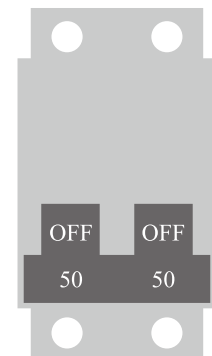
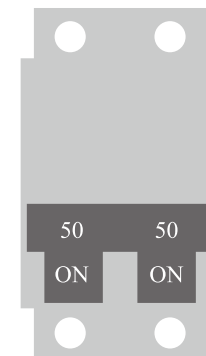
STEP 8b-1: PLUG-IN INSTRUCTIONS



If a NEMA 14-50R receptacle outlet is not already at the EV Charger location, a licensed electrician or other qualified professional can follow these instructions to install one. First, turn off the dedicated dual-pole breaker that will power the EV Charger.



If a NEMA 6-50R receptacle outlet is not already at the EV Charger location, a licensed electrician or other qualified professional can follow these instructions to install one. First, turn off the dedicated dual-pole breaker that will power the EV Charger.

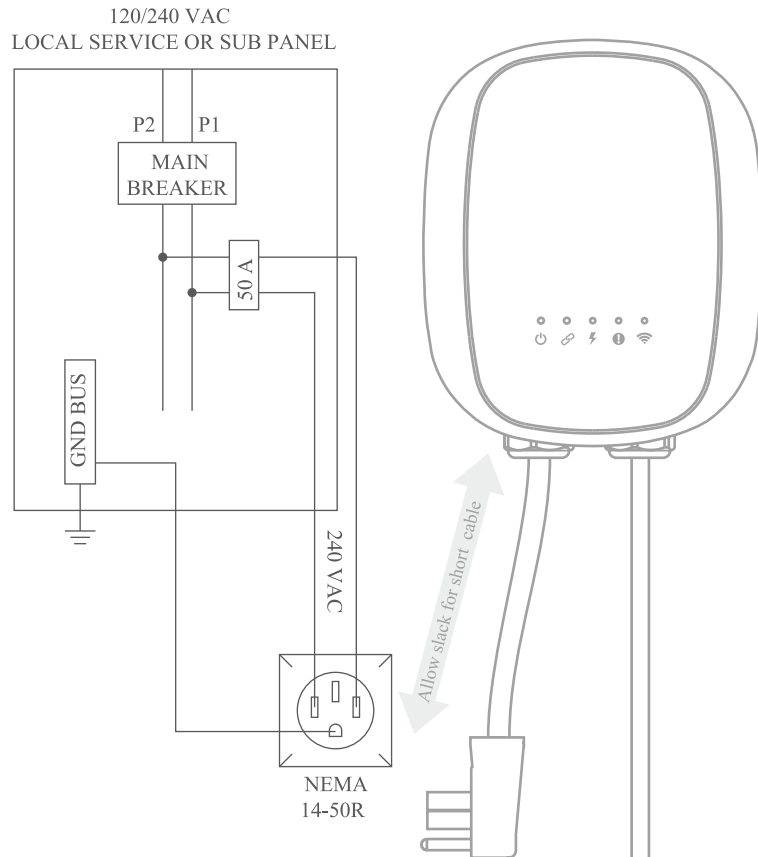


STEP 8b-2: PLUG-IN INSTRUCTIONS

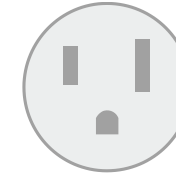


Install a NEMA 14-50R receptacle outlet with the ground facing downward ensuring the distance between the NEMA outlet and the EV Charger allows slack for a short cable.

Bring leads from both phases of the breaker along with a ground/earth lead to the outlet and connect them. Neutral is not required.

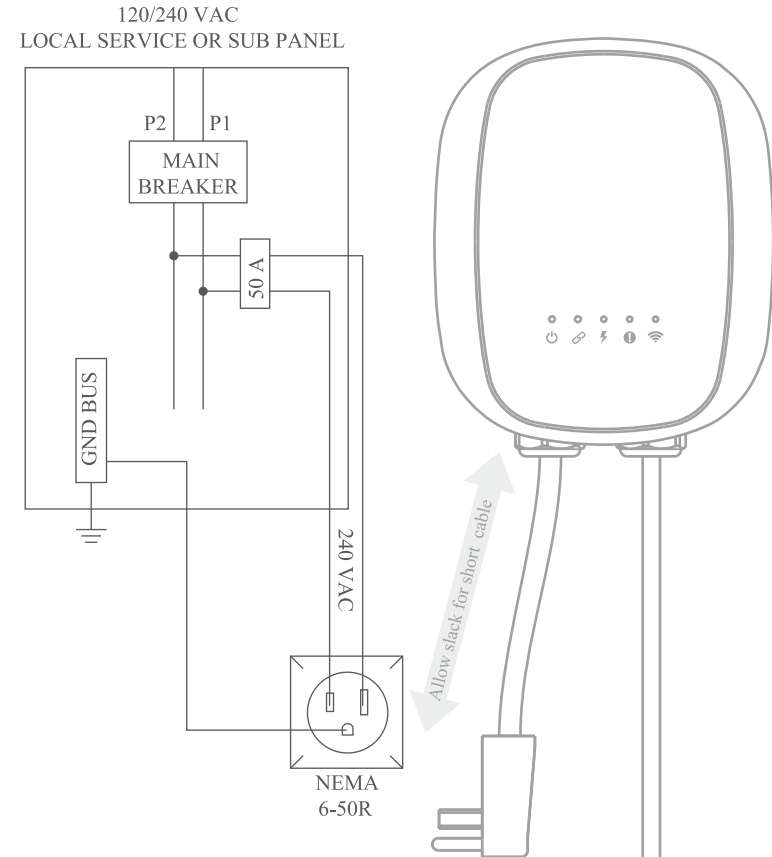


STEP 8B-3: PLUG-IN INSTRUCTIONS



Install a NEMA 6-50R receptacle outlet with the ground facing downward ensuring the distance between the NEMA outlet and the EV Charger allows slack for a short cable.

Bring leads from both phases of the breaker along with a ground/earth lead to the outlet and connect them. Neutral is not required.

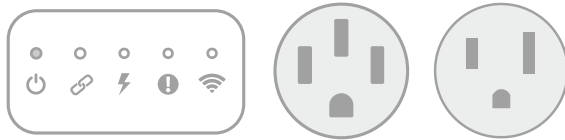
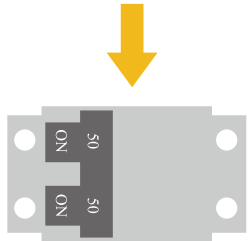


STEP 8b-4: PLUG-IN INSTRUCTIONS



Plug in the NEMA 14-50P/60-50P plug from the EV Charger into the receptacle outlet.

Turn on the breaker and ensure that the power light on the front of the EV Charger is illuminated.



STEP 9: COMPLETE SET UP



Your EV Charger is now ready to charge your vehicle.

Factory setting: Based on the maximum EV charger capacity that the car system will accept.

Default factory setting of charging mode is Plug and Play. To raise or lower the charge rate to match your breaker size and to take advantage of the numerous other features through APP, follow the corresponding steps in Step 10, SimplyEV APP settings.

STEP 10: SIMPLY EV APP

Step 10a: Account Management

1 Create Account and Login

Support 3 types of account login:

- 1 Email
- 2 Apple ID
- 3 Google Account

Register with email address for email login.



2 Create account with an Email Address

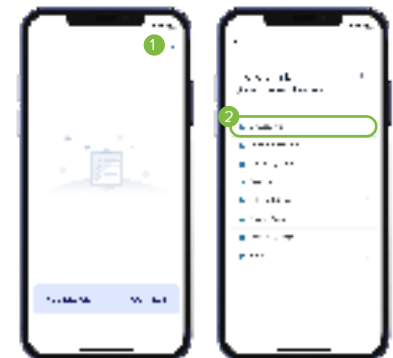
- 1 Click "Create Account" button.
- 2 Enter name, email address and password, then click the "send" button for verification code. Receive the "verification code" from the email and enter it to "code" section.
- 3 Click mark on the "Privacy Policy" and "Term of Service" agreement.
- 4 Click "Register" to complete the process.



3 Log in the Account

Log in the account with email and password.

- 1 Click the "☰" icon at the upper right corner on the App.
- 2 Click 'My Account' to review the email and change 'Name'.





Step 10b: EV Charger Connection

1 Add EV Charger

1 Click 'Connect' button.

Support 3 methods to add EV charger:

2 Bluetooth 3 Scan QR code 4 Enter Code

*Bluetooth is recommended; QR code and Code number locates on the EV charger label.

5 Click "Bluetooth" button.

6 Allow "SimplyEV" to use Bluetooth on the device.

7 Select the EV charger that is found via Bluetooth.



2 Wifi Configuration

Click next to Wifi configuration.

1 Select the desired wifi network from Wifi searching list.

2 Enter the Wifi password.

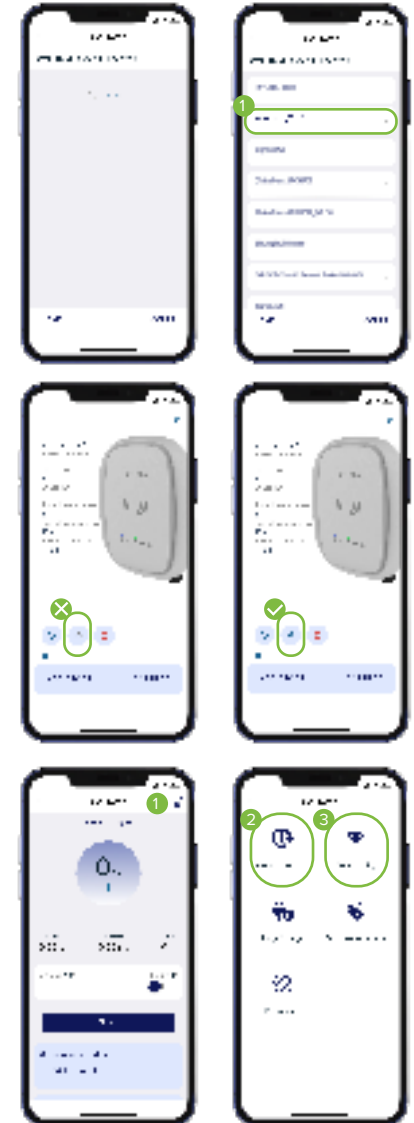
*If the desired Wifi is not shown, please make sure the wifi router in normal operation, search wifi network again.

Complete Wifi configuration.

Once wifi configuration is complete, the network signal icon will turn from Bluetooth to Wifi.

✗ Bluetooth signal icon

✓ Wifi signal icon



3 Other Configurations

1 Click the "⚙️" icon at the upper right corner on the App.

2 Firmware Update: update available when Wifi is connected.

3 Connectivity: When Wifi setting is required to be changed, click 'Connectivity' to reconfigure Wifi network.

*Connect with EV charger via Bluetooth before Wifi reconfiguration.

- 3 Plug&Charge: switch to Plug-and-Charge mode.



- 4 Card Management: click 'ADD CARD' and type RFID card number to add RFID card.



- 5 Rename the EV charger: click the 'rename' icon. Type desired name and click press OK.



Step 10c: Charging Interface

1 Charging Process

- 1 Plug the charger connector into electric vehicle. The status of EV charger changes from 'Please plug in' to 'Ready'.



- 2 Set the charging current to suitable value. Max. charging current of 48A for hardwire installation with 60A breaker; Max. charging current of 40A for NEMA14-50R/6-50R plugged-in installation with 50A breaker.



- 3 Click 'Start' to start charging.

The status of EV charger changes from 'Ready' to 'Charging', EV charger starts charging.



- 4 Click 'Stop' to cease the charging. The status of EV charger changes from 'Charging' to 'Finished', EV charger stops charging.

2 Schedule Charging

1 Click 'Add schedule'.



2 Select charging schedule time and repeat date.



3 Click 'SAVE' to save the schedule setting.

4 Charging schedule is successfully added.



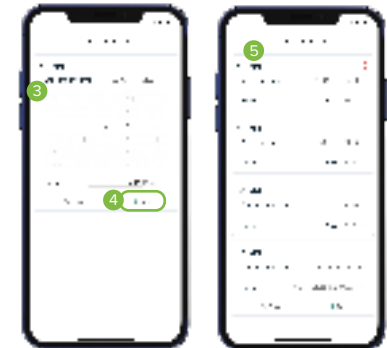
3 Electricity Rates and Statistics

1 Click the "☰" icon at the upper right corner on the App.



2 Click 'New Energy Tariff' to enter electricity rates setting.

3 Select the peak and off-peak period and enter electricity rates.



4 Click 'save'.

5 Fill the other periods for peak and off-peak electricity rates.

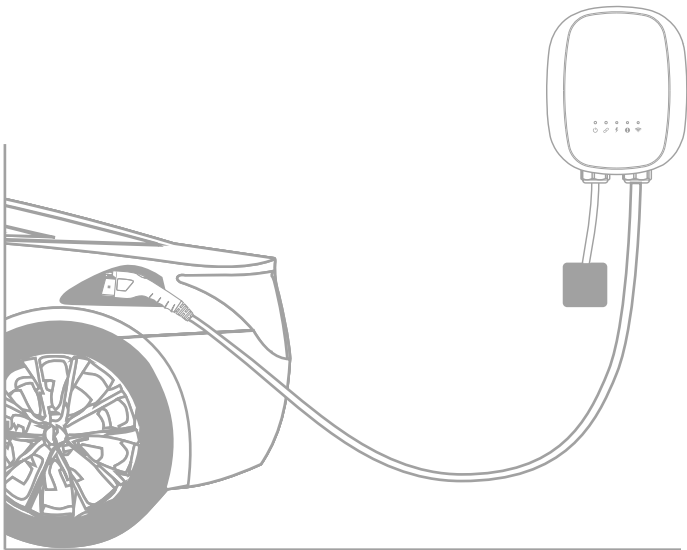


6 Click 'Monthly Statistics' to check the charging data and history.

Default setting: Base on the maximum EV charger capacity that the car system will accept. You can raise or lower this rate through the APP.

Default setting of charging mode is Plug and Play. Please refer to APP instruction for operating mode, current setting and etc. in APP application.

To start charge the vehicle, open the port cover and plug the EV Charger gun into the port. You will see the charge light on the EV Charger switch to solid green when it is connected to the vehicle. It will start flashing green, as the vehicle charges. Additionally, most EVs have indicator lights on the dashboard to let you know that you are charging. Do not attempt to drive your vehicle while the charge cable is connected to your vehicle.



Power	
Off	Charger does not have power
Solid Blue	Charger has power
Connect	
Off	Faulty charging signal from the car
Flash Green	Charge Mode
Solid Green	Pre Charge Mode
Charge	
Off	Idle Mode
Flash Green	Charging Mode
Solid Green	Pre Charge Mode
Wi-Fi/4G	
Off	Not connected to WIFI/4G network
Solid Green	Connected to the WIFI/4G network

CAUTION: Do not touch or use this product in the event of failure. Disconnect the power supply and consult a qualified professional for service.



Fault	
Red light flashing every 3 seconds (once)	Input voltage is too high If plugged in, check that the NEMA14-50P or NEMA6-50P is plugged in securely. Check the supply breaker in your breaker panel for damage and replace if necessary. If issue persists, contact Support.
Red light flashing every 3 seconds (twice)	Input voltage is too low If plugged in, check that the NEMA14-50P or NEMA6-50P is plugged in securely. Check the supply breaker in your breaker panel for damage and replace if necessary. If issue persists, contact Support.
Red light flashing every 3 seconds (threetimes)	Output over current Unplug from car. Disconnect charger from power. Confirm there is no visible damage or foreign material in the EV gun. Return power to charger. If issue persists, contact Support.
Red light flashing every 3 seconds (four times)	Charger has exceeded nominal temperature. Ensure the charger is installed where ambient temperatures will not exceed 122° F (50°C). If issue persists, contact Support.
Red light flashing every 3 seconds (five times)	Current leakage. Unplug from car. Disconnect charger from power. Confirm there is no visible damage or foreign material in the EV gun. Return power to charger. If issue persists, contact Support.
Red light flashing every 3 seconds (six times)	Charger is not grounded Ensure that the EV Charger is properly wired and grounded. Check the line and neutral connections, as they may be reversed in the adapter or outlet. Unplug and reboot EV charger. If issue persists, contact Support.
Red light flashing every 3 seconds (seven times)	CP line not properly connected.
Red light flashing every 3 seconds (eight times)	Relay fused in position Disconnected from power immediately. Contact Support.

The APP is not finding my EV Charger after I've installed it.

Ensure the Charger has power:

- Check for a green power light.
 - Check the EV Charger is wired properly.
 - Check that the breaker powering the EV Charger is turned on.
- Ensure your phone can connect to the EV Charger.
- Check your phone's Bluetooth is on.

Try power cycling the breaker to which the EV Charger is connected.

Try restarting the APP.

Try rebooting your phone.

My vehicle is not responding or charging.

Ensure that the latch on the EV charging cable handle is locked into place.

If the handle is not latched securely, the vehicle will not charge. If the latch is pressed down during charging, charging automatically stops.

Ensure that the vehicle is not set up to begin charging at a specific time of day.



The EV Charger contains

This device complies with Part 15 of the FCC Rules / Industry Canada license-exempt RSS standard (s). 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.

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.

To satisfy FCC / IC RF exposure requirements, a separation distance of 20cm or more should be maintained between the antenna of this device and persons during device operation.

To ensure compliance, operations at closer than this distance is not recommended.

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





Always ensure that after charging, the charging cable is wrapped around the Wall Connector. Regularly inspect the Wall Connector and charging cable for signs of damage. If damage is found, contact the manufacturer.

The Wall Connector contains no user-serviceable components. If the unit is not operating correctly, contact the manufacturer.

Wipe the outside of the wall Connector, the charging cable, and the connector end of the charging cable with a clean dry cloth to remove any accumulation of dust and dirt.

 **WARNING:** Turn off input power at the circuit breaker before cleaning the Wall Connector.

 **WARNING:** Do not use cleaning solvents, scouring, powder, or any type of abrasive pad to clean the wall connector, its charging cable, or the vehicle's charging port.

 **CAUTION:** To reduce the risk of electrical shock or equipment damage, do not allow liquid to enter the wall Connector while cleaning it.



Need more assistance? Contact Espen EV Customer Service:
(562) 529-2938 (Monday - Friday 09:00 - 17:00 PST)
info@espenev.com
<https://espenev.com/contact/>

