



# Smart Splitter<sup>TM</sup> User Manual





Welcome to the NeoCharge family! As EV drivers, we understand the headaches that come with home charging. Costly rewiring and limited options prompted us to find a better solution for charging at home - one that is easier, more cost-effective, and doesn't require expensive panel upgrades.

Our journey led us to collaborate with industry experts, engineers, utilities, and electricians, resulting in the birth of the Smart Splitter - the first product to enable safe, cost-effective, and effortless home EV charging access without rewiring. It's a significant stride towards making the electrification of homes more affordable and contributing to our climate goals.

But we didn't stop there. We're now focused on optimizing your entire home's energy usage for increased savings, insights, and control - all while reducing the strain on the grid. **Make sure to sign up for exclusive early access to the new NeoCharge Connect app.**

We are truly thankful to have earned the trust of tens of thousands of EV drivers across North America, and we extend that gratitude to you for becoming part of our community as well.



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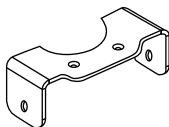
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## What's in the Box

1 Smart Splitter (1x)



2 Mounting Bracket (1x)



3 Thumb Screws (2x)



4 Panhead Screws (2x)



5 Bracket Screws (2x)

**!** The thumb and panhead screws are interchangeable when securing the bracket to the Smart Splitter:

- Thumb Screws: For quick plug-and-play
- Panhead Screws: A low profile option to avoid interfering with the orientation of larger plugs and cords. Screw driver required.

## How it Works

The Smart Splitter functions by monitoring the total power coming from both outlets and shutting off the Secondary side when the total load exceeds the limit of your circuit. Once the Primary side finishes drawing power, the Splitter will automatically switch back and resume power to the Secondary side.

**The Primary outlet** is always active even if the device plugged into the Primary side is not “running”.

Circuit Breaker	Switching Limit *	Max Load (each outlet)
50 Amps	44 Amps	40A on PRI / 32A recommended for SEC
40 Amps	34 Amps	32 Amps
30 Amps	10 Amps	24 Amps
20 Amps	10 Amps	16 Amps

\* 40 and 50 Amp Splitters have the ability to charge two cars simultaneously - See Page 7



### Switching Limits:

- 30A Smart Splitters (NEMA 10-30, 14-30) Smart Splitters are pre-set with 10 Amp switching limits to support Appliance x EV setups.
- 50A Smart Splitters (NEMA 14-50, 10-50, 6-50) are pre-set with 44A switching limits to support simultaneous charging with Dual EV setups.

### APPLIANCE AUTO-SWITCHING



Ev is charging



Appliance starts, EV charging automatically pauses



When appliance finishes, EV charging resumes

### DUAL EV AUTO-SWITCHING



Primary EV is charging, Secondary outlet is shut off



Primary EV completes charging session, power switches to Secondary

## Cautionary Advice



Do not set your EV charging amperage:

>40 Amps on a 50A breaker

>24 Amps on a 30A breaker



Only use your Smart Splitter within the specified operating parameters.



Do not use (or discontinue using) the NeoCharge if it is defective, appears cracked, frayed, broken or otherwise damaged, or fails to operate.



Do not use the NeoCharge in any outlet for which it is not designed.



Do not attempt to open, disassemble, repair, tamper with, or modify your Smart Splitter. The device is not able to be serviced by the user. Please contact NeoCharge Support for any repairs.






Do not disconnect your Smart Splitter when it is supplying power to either output.



Do not plug the NeoCharge into a damaged, loose or worn power outlet. Ensure that the prongs on your device fit snugly into your wall outlet, and secure with the provided mounting bracket if possible.



Do not expose your unit to flammable or harsh chemicals or vapors. Do not use or store your device in a recessed area or below floor level. When using your Smart Splitter indoors, ensure that the device is positioned at least 18 inches (46 cm) above the floor.

-  Avoid and prevent your Smart Splitter from foreign objects as well as moisture and water at all times. If any sort of corrosion or damage is suspected discontinue use immediately. If rain falls during charging, do not allow rain water to run along the length of the charge cable plugged into your device.
-  Do not plug your Smart Splitter into an electrical outlet that is submerged in water or covered in snow. In the event of this situation, turn off your breaker and then unplug your device.
-  Do not touch the Smart Splitter's end terminals with sharp metallic objects such as wire, tools or needles. Do not insert any foreign objects into any part of your device. Avoid the use of cleaning solvents with your device.
-  Do not use private power generation as a source for charging.
-  Do not operate your Smart Splitter in temperatures outside of its operating range of  $-22^{\circ}\text{F}$  to  $122^{\circ}\text{F}$  ( $-30^{\circ}\text{C}$  to  $50^{\circ}\text{C}$ ).
-  Store your device in a clean and dry place inside the temperatures of  $-40^{\circ}\text{F}$  to  $185^{\circ}\text{F}$  ( $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$ ).

# Configuration

## ! Ensuring Your Setup Meets Safety Guidelines

The max charging amperage you can utilize as a continuous load is 80% of your breaker rating (US and Canada Electrical Codes).



### Circuit Breaker Amperage



### Charge Amperage

50 Amp Breaker → 40 Amp or less

30 Amp Breaker → 24 Amp or less

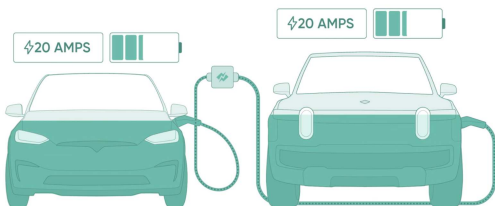


**PRO TIP:** Your charging amperage can be adjusted in most newer EVs and EVSEs (Electric Vehicle Supply Equipment).

## Simultaneous EV Charging (50A Breaker Only)

If you have two EVs/EVSEs with adjustable amperage capabilities, you have the option to charge both EVs simultaneously at half power. As long as the total load from both sides does not exceed the Smart Splitter's switching limits, both cars will receive power.

**To Enable Simultaneous Charging:** Set both EVs (or EVSE's) to charge at 20A or less, so the total amperage does not exceed 40 Amps.





# Installation Overview

## Required Tools

Phillips Screwdriver



## Installation Time

5-10 minutes

## Installation & How it Works - Video Guide

Scan this QR code for a video guide on [Smart Splitter Installation](#):



### Step 6

Plug the appliance into the Primary side, and the EV into the secondary side



# Installation Instructions

## Step 1 - Turn Breaker Off

Turn off the breaker to your 240v outlet then unplug your appliance or EV charger that is currently occupying it.



## Step 2 - Install Mounting Bracket

Determine the correct mounting bracket orientation for your outlet.



Ensure that the slots of the mounting bracket are in alignment with the gold colored mounting points on your Smart Splitter.



Unscrew the corresponding screws from the faceplate, then screw in the bracket using the bracket screws (2x) so the mounting bracket is flush with the faceplate.

### ! NOTES for bracket orientation:

- 240V outlets do not always have a standard orientation and may be mounted “sideways” or “upside down”.

The following are the correct bracket orientations for each outlet:



NEMA 10-30



NEMA 14-30



NEMA 14-50



NEMA 6-50



NEMA 10-50

- NEMA 10-30 and 10-50 are older outlets (homes pre 1997) may use a faceplate that has a single screw above and below the outlets. Use the central screw hole on the provided bracket.
- NEMA 14-30 and 14-50 outlets have commercial-grade variations that have a larger diameter receptacle. These Smart Splitters come with a bracket that fits both the larger diameter of a commercial-grade receptacles (2.5”) and standard-grade receptacles (2.125”).



### WARNING!

An improperly installed bracket will overlap with the Smart Splitter's side receptacles and can cause a short from metal-on-metal contact. Please double check that your Smart Splitter's mounting bracket aligns properly with the mounting points and is secured using the thumb or panhead screws before turning your breaker back on.

Scan this QR Code for a detailed video on Bracket Orientation:



### Step 3 - Plug in Smart Splitter

Plug in your Smart Splitter (it feels good, we know) and secure to the mounting bracket using the thumb screws (x2). Alternatively, you may also use the provided panhead screws (x2) if you would prefer a lower profile or the thumb screws interfere with any of your cables.



### Step 4 - Plug in Your Primary Device

Plug your priority appliance or EV into the Primary Output of your Smart Splitter. Primary is indicated with "PRI" on the side of the Smart Splitter next to the LED indicator.



The device plugged in to the Primary side will always take priority over the device plugged into the Secondary side. This is typically your appliance, or if charging two EVs, the Primary should be the EV you want to charge first.

## Step 5 - Plug in your Secondary Device

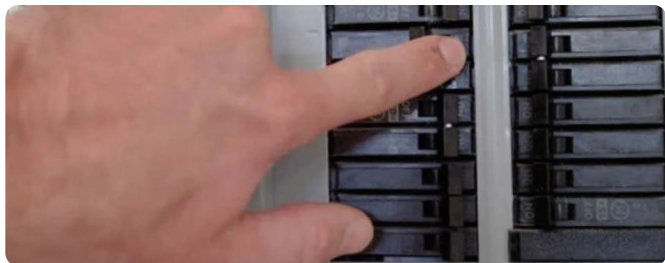
Plug your EVSE cord into the Secondary Output of your Smart Splitter. Secondary is indicated with "SEC" on the side of the Smart Splitter next to the LED indicator.



**!** If you are using an extension cord with your Smart Splitter, please ensure the cord is UL certified and is the proper gauge wire.

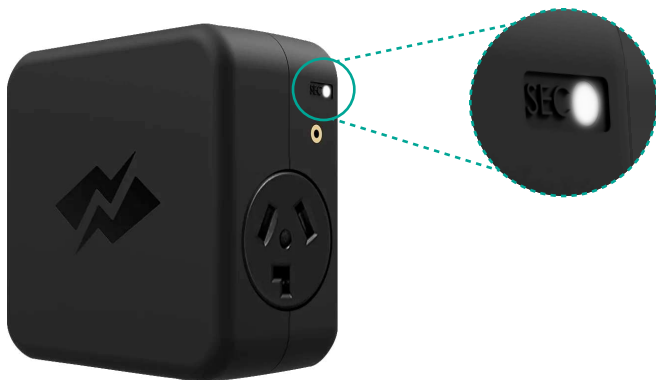
## Step 6 - Turn Breaker On

Turn on the circuit breaker to your outlet and verify that your Smart Splitter is receiving power by ensuring that the indicator lights are on.







The Smart Splitter lights will turn on once the device is powered.


## LED Indicators







### Power Status:

-  **WHITE:** Idle
-  **GREEN:** Receiving power
-  **YELLOW:** Secondary paused by Primary Session
-  **YELLOW (blinking):** Secondary paused by App

### WiFi:

-  **BLUE (double blink):** WiFi Setup - Pairing Mode
-  **PURPLE (Slow blink):** OTA update is available. Will automatically update after session is complete
-  **PURPLE:** OTA in progress

### Error States:

-  **ORANGE:** Secondary Error - Overcurrent
-  **RED (double blink):** Relay or Sensor Error - Hardware fault
-  **ORANGE (double blink):** Secondary Overcurrent Error - Requires Reset
-  **RED (triple blink):** Secondary Overcurrent Error - Requires Reset

\*If you encounter an error, proceed to Troubleshooting steps on Page 14

# Troubleshooting

Having issues with your Smart Splitter? Worry not; we're here to guide you through the troubleshooting process. Follow these simple steps to address common concerns:

## **1. Basic Checks:**

Begin by ensuring that your Smart Splitter is correctly connected to your power source and devices, and your circuit breaker is in the ON position.

Perform a relay check by cycling power to the device and listening for a “click” when the unit turns on. If there is no “click”, please reach out to support as there may be an issue with the relays.

## **2. Check your charging amperage**

Ensure your charging amperage does not exceed the circuit breaker. If the Smart Splitter displays an orange LED or the circuit breaker is tripping, you likely need to lower your charging amperage.

Outlet Type	Circuit Current	Charge Current	Switching Limit
NEMA 10-30	30 Amps	24 Amps or less	27 Amps
NEMA 14-30	30 Amps	24 Amps or less	27 Amps
NEMA 14-50	50 Amps	40 Amps or less	44 Amps
NEMA 10-50	50 Amps	40 Amps or less	44 Amps
NEMA 6-50	50 Amps	40 Amps or less	44 Amps

## **3. Update your Smart Splitter**

Connect your Smart Splitter to WiFi for the device to automatically update to the latest firmware.

### **Step 1.) Factory Reset**

To perform a factory reset, you will need to power cycle your Smart Splitter 5 times - you can do this by flipping the circuit breaker on and off 5 times. Be sure to wait 2 seconds between each ON/OFF flip.

Once the reset is successfully performed, you will see both the indicator LEDs flash RED and then go back to WHITE. You should also hear the device click when the unit boots back up.

The device will be in WiFi Pairing Mode for the next 5 minutes after a reset before timing out. WiFi Pairing Mode is indicated by a flashing BLUE LED light.

## Step 2.) Connect to Wifi

Scan the QR code and follow the WiFi setup instructions.



After connecting to WiFi, the Smart Splitter will automatically update if there is a new firmware version available. The Smart Splitter will only update if there is no power getting drawn from either the Primary or Secondary outlet.

### 4. Contact NeoCharge Support

If you are still having issues, please reach out to NeoCharge Support and our knowledgeable support team will step in to support you.

Scan the QR code to contact support for Smart Splitter Troubleshooting:





## FAQs

Common Questions from Smart Splitter Users:

### **Question: How do I adjust my charging amperage?**

**Answer:** Charging amperage is determined by the settings of the EV or the EVSE (charger). You will need to be able to adjust your charging amperage if you plan on charging from a 30A dryer outlet, as most EVSE are pre-set to charge above 30A. The Smart Splitter does not have the ability to adjust the amperage.

### **Question: What is the difference between an industrial-grade and residential-grade 240V receptacle?**

**Answer:** Industrial-grade receptacles are available for NEMA 14-30 (30A) and 14-50 (50A) outlets. These receptacle variations are have a much more robust design that has a superior clamping mechanism. These are **intended for long session duration** from devices such as heavy machinery and EV charging. **Industry experts strongly recommend upgrading your wall outlet to an industrial grade version made by brands such as Hubbell or Bryant if you intend to regularly charge your EV at home**

### **Question: My mounting bracket doesn't fit / work for my wall outlet?**

**Answer:** Each Smart Splitter comes with a mounting bracket that s designed to fit the most common configuration of each outlet's unique use case. If you have a unique use case where the provided mounting bracket doesn't fit, please scan the QR code to check out our [Mounting Bracket Guide](#):



# Charging Tips

## Take Advantage of Rebates and Incentives

Many governments and local utility companies offer financial incentives and tax credits to encourage the adoption of electric vehicles. These incentives can significantly reduce the upfront cost of purchasing an EV and installing charging at home. There are rebates available for the purchase of the actual car, as well as for Level 2 Chargers and installation costs (which includes the Smart Splitter). Be sure to research the incentives available in your area and take full advantage of them.

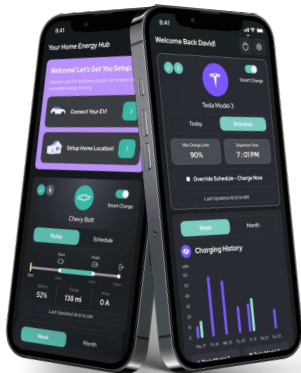
## Charge at Home

Charging at public charging stations is typically 2-3x more expensive than charging at home, and the savings can get even larger if you effectively take advantage of TOU rates.

## Time of Use (TOU) Billing and Smart Charging

Electricity rates can vary based on time of day, with peak demand hours typically being more expensive. Many utilities offer TOU plans, where electricity is cheaper during off-peak hours, usually at night and on weekends. Use a Smart Charging application like [NeoCharge Connect](#) to schedule your car to charge at the cheapest and greenest times, often saving 30+% on charging expenses. Plug in your car whenever you are at home so the Smart Charging algorithm can optimize your charging schedule.

**Scan here for FREE access  
to NeoCharge Connect for  
Upgraded Home EV Charging**



## Warranty

All Smart Splitters are covered with a 3 year limited warranty from the date of purchase.

NeoCharge warrants the Smart Splitter product against defects in materials and workmanship under normal use for two years from the date of purchase. If a Smart Splitter is deemed defective, NeoCharge will repair or replace, at no charge, the Smart Splitter or parts of the Smart Splitter that prove defective.

### **The warranty includes:**

- Defects in materials and workmanship
- Shipping damage
- Any material, equipment, tools, and incidentals necessary to complete repairs including replacements
- Supplier or manufacturer upgrades

### **The warranty excludes:**

- If the device has been opened, altered, abused, or misused by the owner


After receiving a customer notice, the NeoCharge Customer Support team will help troubleshoot and, if defective, issue a return/replacement.

*\*NeoCharge shall make the final decision, with fairness to all parties, as to the legitimacy of the claim to this warranty.*

## Support

We are always ready to help! If you have any questions, you can contact us via the contacts below:

 [support@getneocharge.com](mailto:support@getneocharge.com)

 805-622-2783 (Text Only)

 [www.getneocharge.com](http://www.getneocharge.com)



# Your Feedback Matters!



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Learning From Your Feedback**