

## Step 1: Prepare Wirebox for Conduit Fittings and Bushings

The default conduit size is 3/4 in (21 mm). 1 in (27 mm) conduit is acceptable if needed.

Based on fittings and conduit size, prepare the wirebox.

- For top or bottom entry: Manually remove the conduit plug.
- For rear entry: Drill with 1-1/8 in (29 mm) step bit to prepare wirebox for fittings.

Table 1. For 3/4 in (21 mm) Conduit






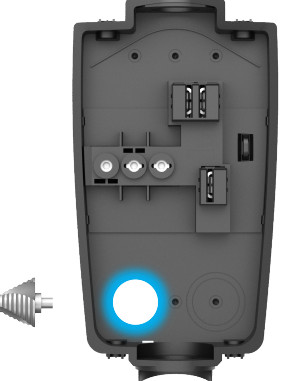


Top Entry	Bottom Entry	Rear Left Entry	Rear Right Entry
		 1-1/8 in (29 mm)	 1-1/8 in (29 mm)

Table 2. For 1 in (27 mm) Conduit

Top Entry	Bottom Entry	Rear Left Entry	Rear Right Entry
Do not expand.	 1-3/8 in (35 mm)	 1-3/8 in (35 mm)	 1-3/8 in (35 mm)

 **NOTE:** For 1 in (27 mm) rear and bottom entry options, drill with 1-3/8 in (35 mm) step bit to prepare wirebox for fittings.



## Step 2: Prepare Mounting Surface

1. If applicable, use a stud finder to locate a wooden support stud. Plywood, or other flat wall surfaces capable of supporting the weight of the Wall Connector, may also be used.



2. Based on the chosen wire entry path, position the included cardboard mounting template onto the installation surface and use a 5/32 in (4 mm) bit to drill two pilot holes (one from the top row and one from the bottom row).



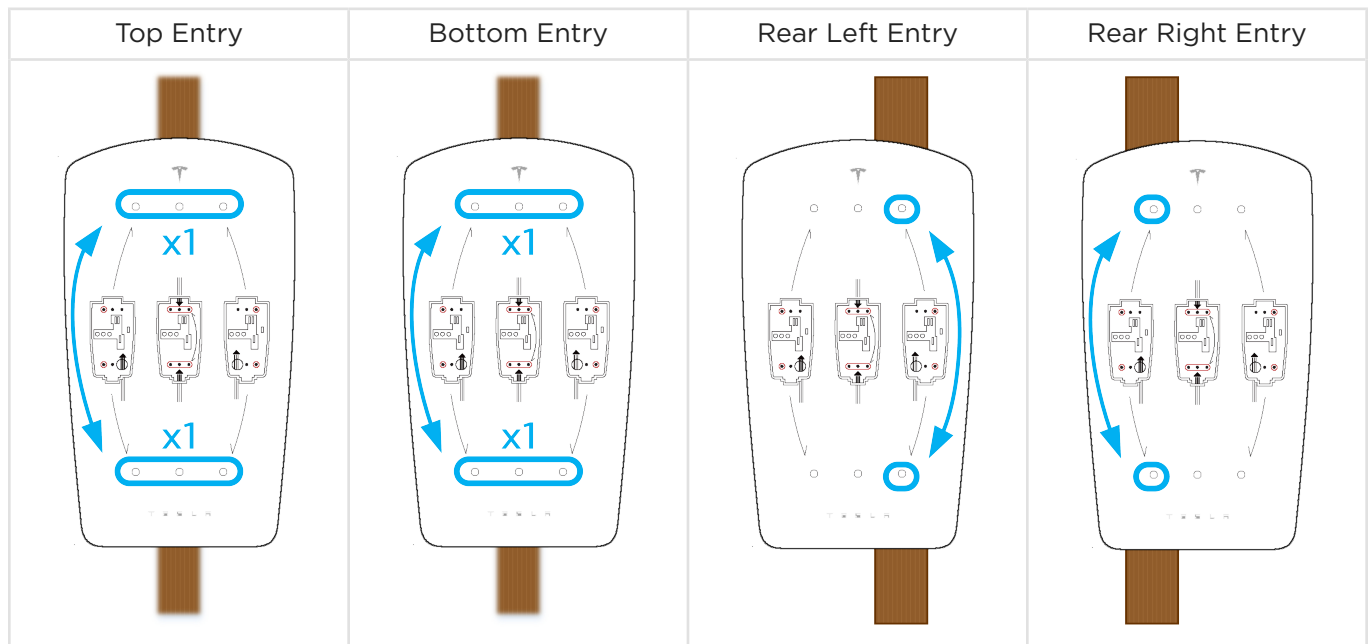
**NOTE:** When installing for rear left or rear right wire entry, select the two mounting holes that are on the opposite side of the wire entry point.



**NOTE:** Use a level tool with the cardboard mounting template to ensure a level installation as desired.



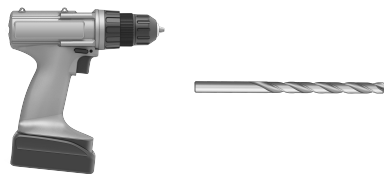
Drill bit, 5/32 in (4 mm)



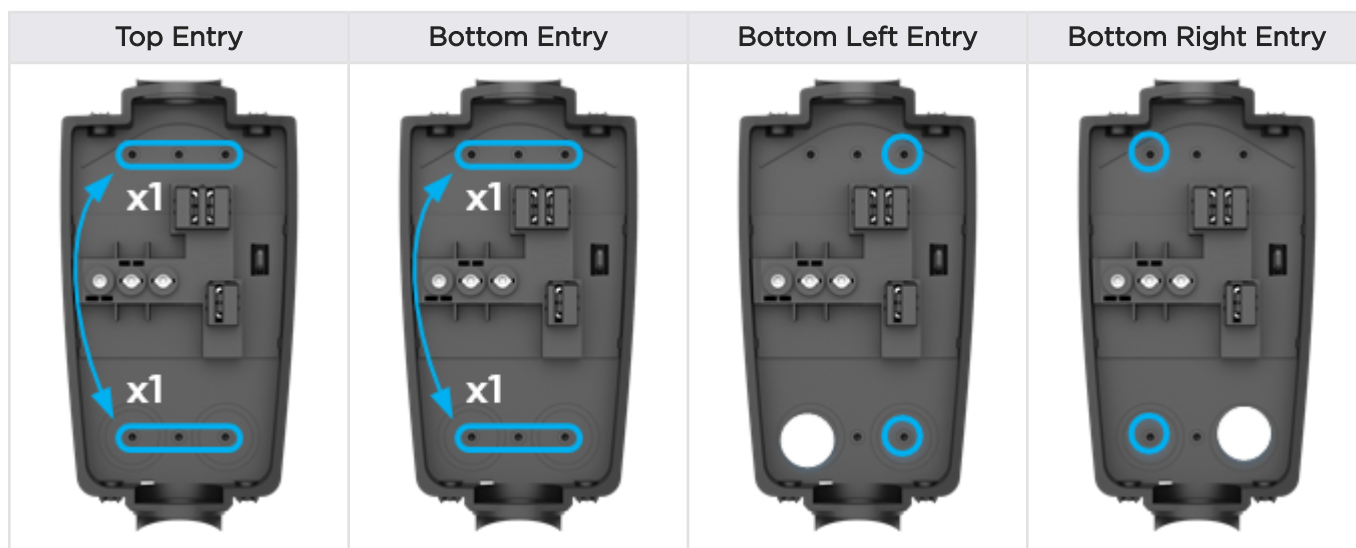


## Step 3: Prepare Wirebox and Mount to Wall

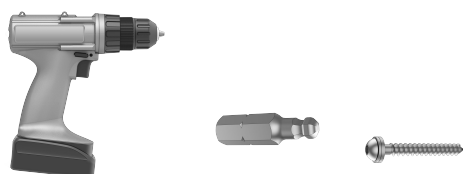
1. Use a 1/4 in (6.5 mm) bit to drill two pilot holes into the wirebox that match the locations chosen on the cardboard mounting template.



Drill bit, 1/4 in (6.5 mm)



2. Attach the wirebox to the mounting location using the included 4 mm hex bit and the two included wood fastener screws.



**NOTE:** Type 3R rating is only possible when washers have sealing gaskets. If mounting to alternate surface (such as a prefabricated pedestal), use alternate fasteners with sealing washers.

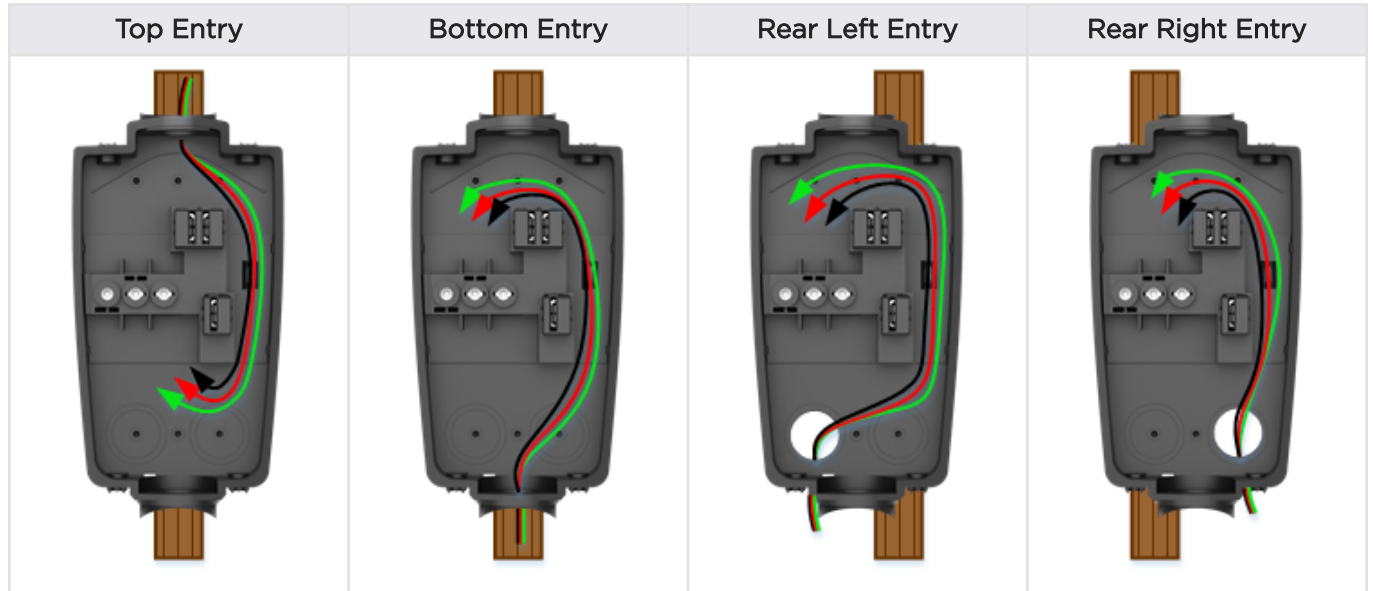


**NOTE:** The wood fastener screws are designed to support the weight of the entire Wall Connector, cable, and charging handle.



## Step 4: Route Wiring Through Wirebox

1. Route wiring into selected entry point and through the service loop channel on the right side of the wirebox.



2. Use appropriate cable glands, bushings, or fittings to secure the wiring in place and protect from water and debris intrusion.



**CAUTION:** Ensure that bushings are in place to avoid damage to conductors and ground wire when pulled into wirebox.



**CAUTION:** Use copper conductors only.



**NOTE:** Compression-style fittings are recommended to prevent interference.



**NOTE:** For top or bottom wire entry, if installing fittings with a set screw, ensure that the screw is positioned to avoid interference with Wall Connector cables.

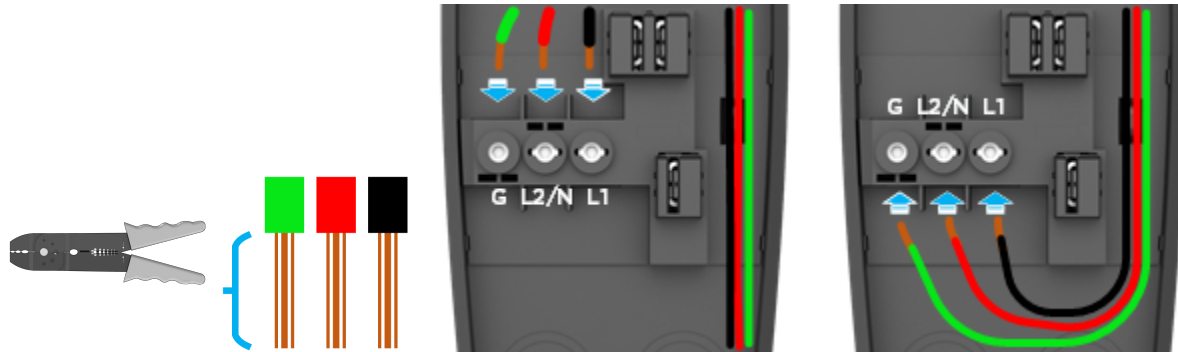


## Step 5: Strip and Land Wiring

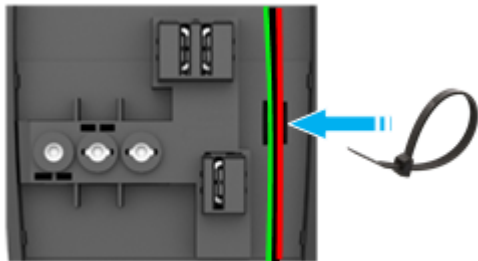
1. Strip insulation from wires  $\sim 1/2$  in ( $\sim 13$  mm), route through service channel, and land each wire in its correct terminal block.



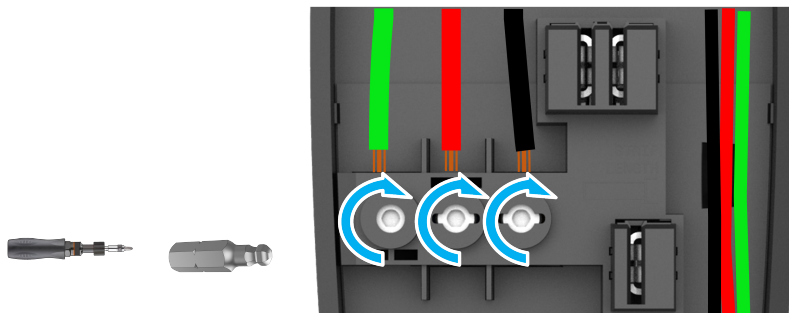
**NOTE:** Terminals are bi-directional.



2. Secure the wiring in the service channel using the included zip tie.



3. Use a torque driver and the included 4 mm hex bit to torque the terminal screws to 50 lbf . in (5.6 Nm).



**NOTE:** When installing Wall Connector in a split phase electrical system, use Line-to-Line instead of Line-to-Neutral.



## Step 6: Attach Wall Connector to Wirebox

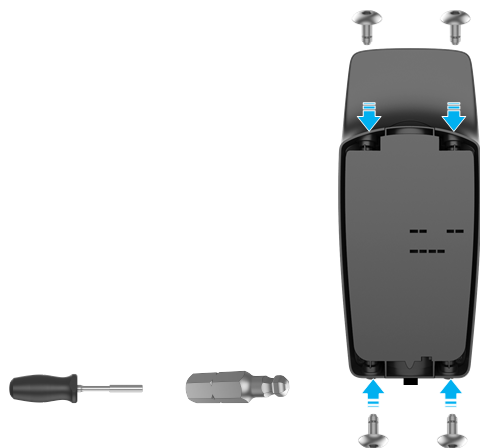
1. Attach the main unit to the wirebox by pushing it inward.



2. Secure the main unit to the wirebox with the four included fasteners and the included 4 mm hex bit using a bit driver, applying pressure to the faceplate during the process to compress the internal seal. Firmly hand-tighten the four fasteners until they are secure.



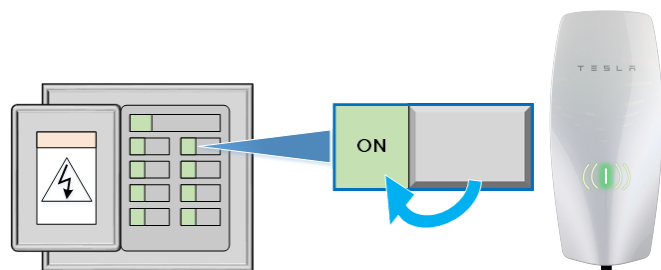
**NOTE:** Do not use a power drill for this step.





## Step 7: Energize Wall Connector

1. Energize the Wall Connector by turning on the upstream circuit breaker.



The Wall Connector's LEDs will turn on. See [Wall Connector LEDs on page 37](#).

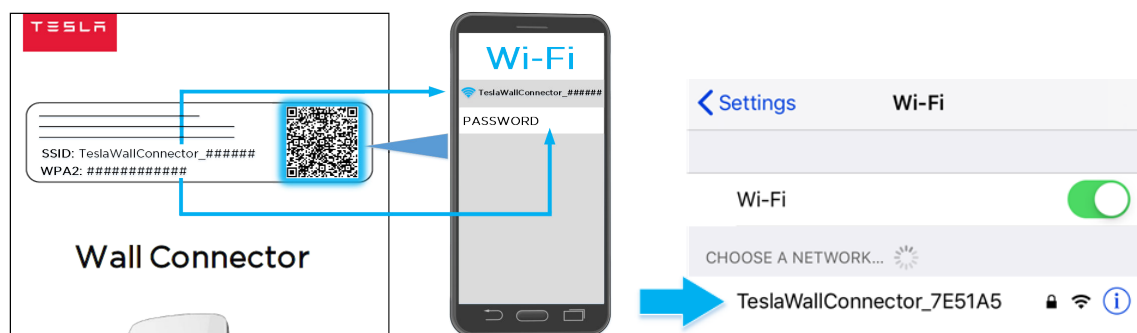
2. Proceed with commissioning.



## COMMISSIONING PROCEDURE

The commissioning process for Wall Connector enables easy configuration of circuit breaker size, Wi-Fi connectivity, and power sharing options.

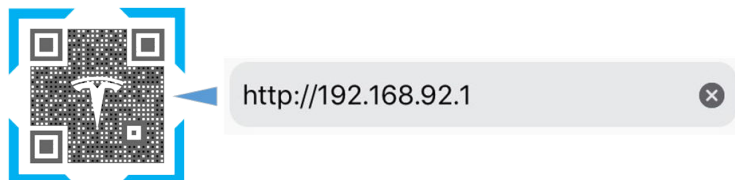
1. Turn on Wall Connector's corresponding branch breaker to energize the unit.  
During startup, Wall Connector will display green LEDs for 10 seconds to indicate the maximum circuit breaker it is configured for.
2. Use a Wi-Fi-enabled device such as a smart phone to connect to the SSID Wi-Fi signal broadcasted by the Wall Connector. Joining the Wall Connector network can be done by scanning the sticker QR code on the Quickstart Guide cover page, or by manually selecting the network and typing in the WPA2 password (found on the sticker on the Quickstart Guide cover page).



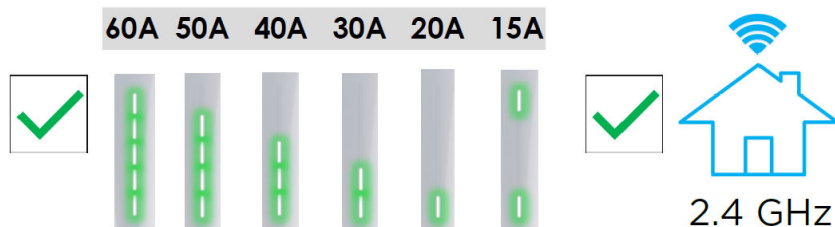
**NOTE:** The Wi-Fi network will broadcast for 15 minutes. To have the Wall Connector broadcast the SSID again, hold the button on the charging handle for 5 seconds or turn the circuit breaker off, then on again.

**NOTE:** If you are unable to connect to the Wall Connector SSID, turn off the cellular data function on your mobile device and try again.

3. Scan the QR code below with the device that is connected to the Wall Connector to access the web browser commissioning interface. Alternatively, manually type the URL address (<http://192.168.92.1>) into the web browser.



4. Follow the onscreen commissioning steps on the web browser to assign Wall Connector to its own circuit breaker and connect it to the local site Wi-Fi network.







# COMMISSIONING PROCEDURE



**NOTE:** To have the Wall Connector broadcast the SSID again, hold the button on the charge handle for 5 seconds or turn the circuit breaker off, then on again.

## Setting Up Access Control

The Charging Access Control feature provides full control over which vehicles are allowed to charge with your Wall Connector and excludes vehicles without access based on user specifications.

### 1. Sign into the commissioning wizard..

Use the [Commissioning Procedure on page 29](#) to sign into the commissioning wizard and connect to the Wall Connector Wi-Fi SSID by clicking on the 'Access Control' card.

### 2. Configure Access Control.

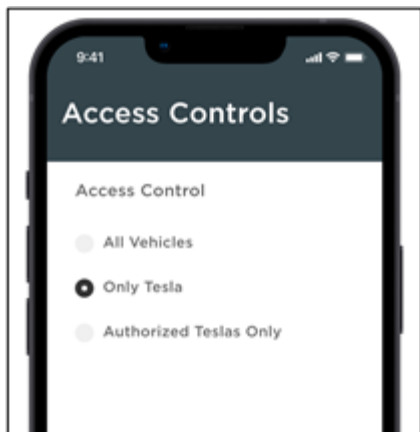
You can choose from three options:

- **'All Vehicles'**

This is the default option and will allow charging on all electric vehicles with a matching charge port. To charge with the older generation Tesla Roadster, you will need to pick the 'All Vehicles' option

- **'Only Tesla'**

This option blocks charging on non-Tesla EVs.

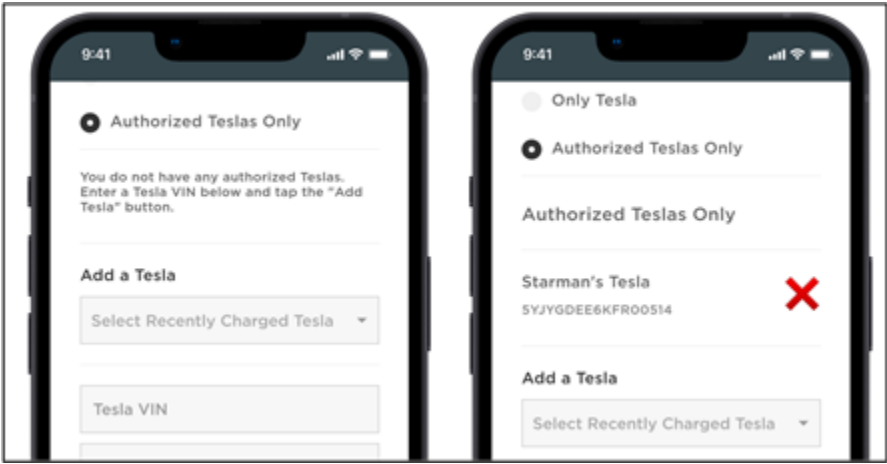


- **'Authorized Teslas Only'**

This option allows you to add up to 10 specified Tesla cars by their VIN and assign an optional name. For convenience, the VIN of the last 10 cars previously connected to the Wall Connector is made available for selection. The VIN is usually displayed on your windshield and can also be found in the 'Software' tab on your vehicle touchscreen.



# COMMISSIONING PROCEDURE






# POWER SHARING

## Power Sharing Overview

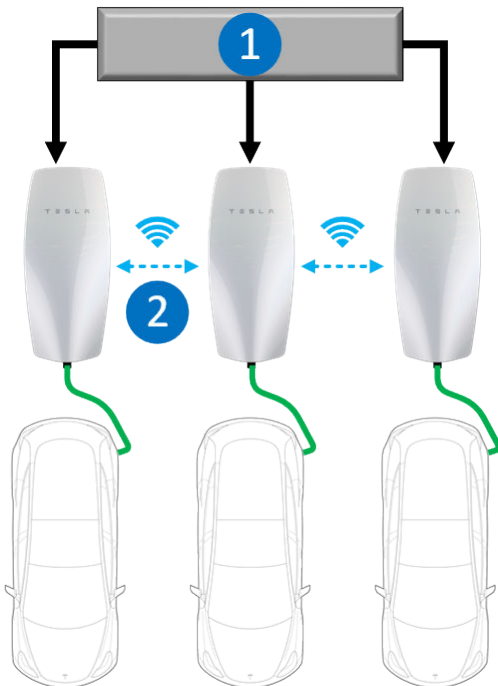
The firmware-based power sharing feature enables up to 6 Wall Connectors installed at the same site to intelligently share the site's total available power via unit-to-unit Wi-Fi. This minimizes the need for many residential and commercial applications to have specific electrical upgrades for concurrent multi-vehicle charging.

During the commissioning process,

- Wall Connectors are allocated to individual branch circuits (each up to 60 amps)
- Total power is allocated to the group of linked Wall Connectors

 **NOTE:** For instructions to commission Wall Connectors in a power sharing network, see [Gen 3 Wall Connector Power Sharing](#).

Total current output of Wall Connectors that share power will never exceed the site's total allocated power.



1. AC feed (service panel)
2. Power sharing via Wi-Fi communication

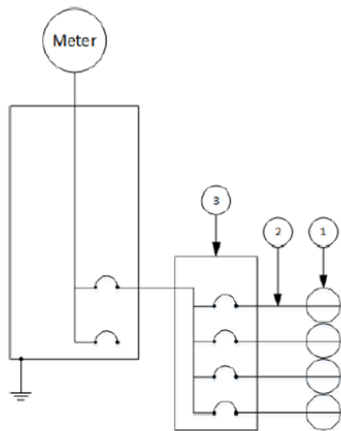


## Breaker and Branch Circuit Setup

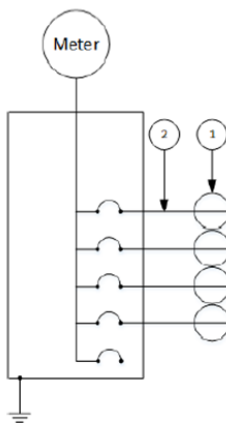
Power sharing circuits may be installed in an electrical panel that supports other loads. If space is limited or the main power supply is far from the Wall Connectors, installing a dedicated load center may be prudent.

See below for examples of Wall Connector power sharing diagrams (one with sub-panel and one without). Each individual Wall Connector in below examples is capable of providing 48 amps when it is the only one in use. As more Wall Connectors begin plugging into vehicles, the system will automatically distribute power based on the total power allocated to the site.

### Power Sharing Setup with Sub-Panel    Power Sharing Setup Without Sub-Panel



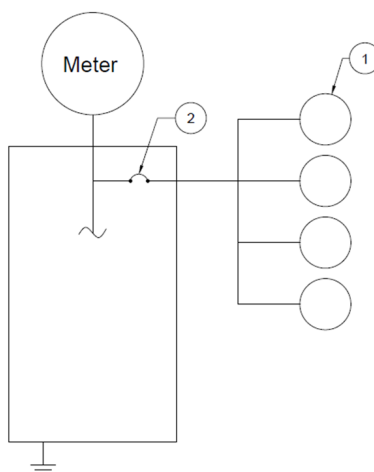
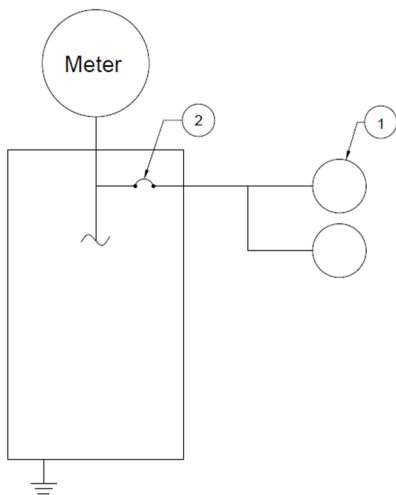
1. Wall Connector
2. 60 A branch circuit
3. 100 A sub-panel / feeder breaker



1. Wall Connector
2. 60 A branch circuit

## Power Sharing Setup With Single Branch Circuit

Power Sharing with Circuit Breaker







## Considerations for Power Sharing

Wall Connector power sharing is achieved wirelessly.

For optimal performance, Wall Connectors within a power sharing network should be installed within view of each other whenever possible.

 **NOTE:** Line of sight is recommended but not required. Wireless communication is capable of reaching around concrete corners but network range may degrade as a result.

Avoid placing Wall Connectors on opposite sides of concrete, masonry, metal studs, and other physical obstructions that would impede Wi-Fi signal strength.


 **NOTE:** If a mobile device is able to connect to the Leader Wall Connector Wi-Fi, it is a good indication that the Follower Wall Connector will also be able to connect.

## Calculating Power Sharing Requirements for Existing Systems

To calculate power supply requirements per number of Wall Connectors for existing electrical systems, use the following equation:


Available continuous amperage:	Number of Wall Connectors:	Max amperage output per Wall Connector when 100% utilized:
_____	_____	_____
_____ ÷ _____ = _____		

 **NOTE:** Maximum number of Wall Connectors for power sharing is 6.

 **NOTE:** When calculating maximum amperage per Wall Connector, 100% utilization must be greater than 6 amps for power sharing operation. If maximum amperage is greater than 48 amps, power sharing is not necessary.

For large scale sites, consider expected parking time in relation to a 100% utilization rate.

Expected Park Time (hours)	Examples	Recommended Amperage per wall Connector at 100% Utilization
6+ (long term)	Long term parking, overnight parking	12+ amps
3-5 (medium term)	Workplace, hospitality	24+ amps
1-2 (short term)	Shopping and dining	32+ amps

 **NOTE:** 100% utilization represents the worst case scenario for charging speeds, where the least amount of power would be available for each individual vehicle. In most situations, not all Wall Connectors would be actively charging a vehicle, which enables faster charging for the remaining vehicles.



## Power Sharing Commissioning Procedure

### 1. Identify and configure the wall connector.

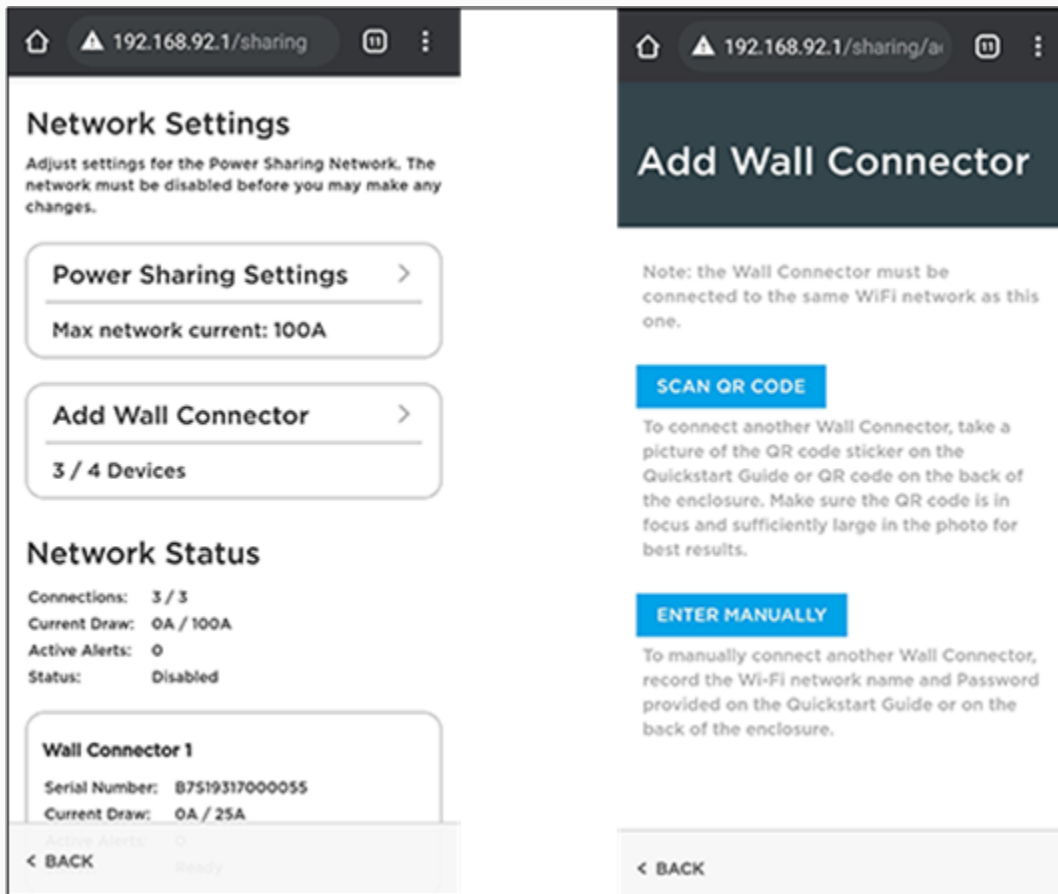
One Wall Connector will be the designated leader and provide the configuration and controls for all followers. Install and configure the leader first. Follow the process in the [Commissioning Procedure on page 29](#) to connect and configure the leader.

### 2. Add up to five additional followers from the lead Wall Connector.

Click on the power sharing card in the commissioning interface and add additional Wall Connectors to form a power sharing network by wirelessly pairing them to the leader.



**NOTE:** When pairing followers, the leader will restart, and you will lose Wi-Fi connection. If your connection does not automatically return, ensure you are still connected to the leader's Wi-Fi connection and refresh the page.



### 3. Set network limits.

Once all followers have been added, set the network limit. This is the total current that will be intelligently distributed between all devices that have vehicles charging.

The minimum current limit is 6 amps per Wall Connector. A six-unit network will have a minimum limit of 36 amps.

The maximum network limit is the sum of the nameplate ratings of all units in the network, minus one amp. A six-unit network of single-phase Wall Connectors can have a maximum network limit of 287 amps. If 288 amps or more electrical service is available in this scenario, then all units can charge at full power and power sharing is not needed. Chat with your electrician for further understanding of the maximum network limit.



# POWER SHARING



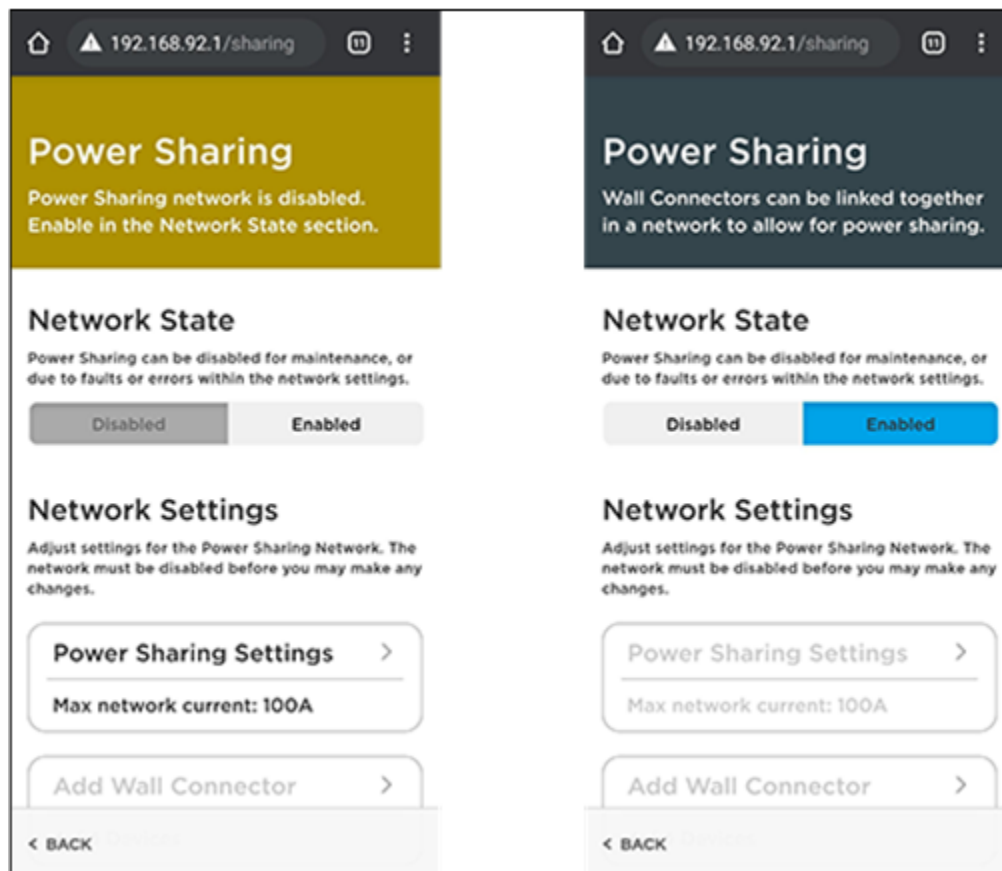
**NOTE:** In the event that your leader and followers have different circuit breakers, you have to individually connect to each of the followers on different breakers via the Wi-Fi broadcast, and then set the correct breaker limit.



**NOTE:** For example, in a four Wall Connector network with two 60 amp breakers, one 50 amp breaker and one 20 amp breaker where the leader has a 60 amp breaker, individually connect to the Wall Connectors with 50 amp and 20 amp breakers and set their current limit in the commissioning interface using the [Commissioning Procedure on page 29](#).

## 4. Enable power sharing network.

Once your power sharing network is fully established (followers paired and network limit set), you will have the ability to enable the network.



**NOTE:** No units in the network will be able to charge the connected vehicles if the power sharing has not been enabled.