



Gen 3 Wall Connector Manual

48A Single Phase

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IMPORTANT SAFETY INFORMATION

Read all instructions before using this product. Save these instructions.

This manual contains important instructions for the Tesla Gen 3 Wall Connector that should be followed during installation, operation, and maintenance. Please review all warnings and cautions before installing and using the Wall Connector.



WARNING: When using electric products, basic precautions should always be followed, including the following.

INSTRUCTIONS RELATING TO RISK OF FIRE OR ELECTRIC SHOCK



WARNING: Do not install or use the Wall Connector near flammable, explosive, harsh, or combustible materials, chemicals, or vapors.



WARNING: Turn off power at the circuit breaker before installing or cleaning the Wall Connector.

WARNINGS



WARNING: This product can expose you to one or more chemicals that are known to the state of California to cause cancer.



WARNING: Eaton strongly recommends using only type BR breakers that end in **H** (for instance BR260**H**) for continuous loads such as the Wall Connector.



WARNING: This product needs to be mounted on a flat, vertical surface without significant irregularities. Installations that do not adhere to this requirement are at risk of product failure.



WARNING: This device should be supervised when used around children.



WARNING: The Wall Connector must be grounded through a permanent wiring system or an equipment-grounding conductor.



WARNING: Use the Wall Connector only within the specified operating parameters.



WARNING: Never spray water or any other liquid directly at the wall mounted control box. Never spray any liquid onto the charge handle or submerge the charge handle in liquid. Store the charge handle in the dock to prevent unnecessary exposure to contamination or moisture.



WARNING: Do not use the Wall Connector if it is defective, appears cracked, frayed, broken, or otherwise damaged, or fails to operate.



WARNING: Do not use the Wall Connector if the flexible power cord or cable is frayed, broken, or otherwise damaged, or fails to operate.



WARNING: Do not attempt to disassemble, repair, tamper with, or modify the Wall Connector. The Wall Connector is not user serviceable. Contact Tesla for any repairs or modification.



IMPORTANT SAFETY INFORMATION

 **WARNING:** When transporting the Wall Connector, handle with care. Do not subject it to strong force or impact or pull, twist, tangle, drag, or step on the Wall Connector, to prevent damage to it or any components.

 **WARNING:** Do not touch the Wall Connector's end terminals with fingers or sharp metallic objects, such as wire, tools, or needles.

 **WARNING:** Do not insert fingers or foreign objects into any part of the Wall Connector.

 **WARNING:** Do not forcefully fold or apply pressure to any part of the Wall Connector or damage it with sharp objects.

 **WARNING:** Use of the Wall Connector may affect or impair the operation of any medical or implantable electronic devices, such as an implantable cardiac pacemaker or an implantable cardioverter defibrillator. Check with your electronic device manufacturer concerning the effects that charging may have on such electronic devices before using the Wall Connector.

FCC

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.

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

15.105 (b) - 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 Exposure Information (MPE)

This device has been tested and meets applicable limits for Radio Frequency (RF) exposure. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

ISED Canada Compliance Statement

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.



IMPORTANT SAFETY INFORMATION

CAUTIONS



CAUTION: Do not use private power generators as a power source for charging.



CAUTION: Incorrect installation and testing of the Wall Connector could potentially damage the vehicle's battery, components, and/or the Wall Connector itself. Any resulting damage is excluded from the New Vehicle Limited Warranty and the Charging Equipment Limited Warranty.



CAUTION: Do not operate the Wall Connector in temperatures outside its operating range -22 °F to 122 °F (-30 °C to 50 °C).



CAUTION: Wall Connector should only be installed by personnel who are trained and qualified to work on electrical systems.



CAUTION: No adapters or conversion adapters are allowed to be used.



CAUTION: Cord extension sets are not allowed to be used.



CAUTION: This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.



PRODUCT OVERVIEW

This manual applies to Wall Connectors identified by part number 1457768-**-**.

Product Specifications

Voltage and Wiring	Nominal 200-240 V AC single-phase
Current Output Range	12 – 48 amps
Terminal Blocks	12-4 AWG (3.5 - 25 mm ²), copper only
Supported Conduit Sizing	¾ in (21 mm) default, 1 in (27 mm) optional
Grounding Scheme	TN/TT
Frequency	50/60 Hz
Cable Length	7.3m (24ft)
Wall Connector Dimensions	Height: 13.6 in (345 mm) Width: 6.1 in (155 mm) Depth: 4.3 in (110 mm)
Wire Box Bracket Dimensions	Height: 9.8 in (250 mm) Width: 4.7 in (120 mm) Depth: 2.0 in (50 mm)
Weight (including wirebox)	10 lb. (4.5 kg)
Operating Temperature	-22 ° F to 122 ° F (-30 ° C to 50 ° C)
Storage Temperature	-40 ° F to 185 ° F (-40 ° C to 85 ° C)
Enclosure Rating	Type 3R IP54
Ventilation	Not required
Means of Disconnect	External branch circuit breaker
Ground Fault Circuit Interrupter	Integrated CCID20
Wi-Fi	2.4 GHz, 802.11b/g/n
Agency Approvals	cULus - E351001 



PRODUCT OVERVIEW

Transportation and storage: Ensure that Wall Connector is within storage temperature when moving, transporting, or storing.

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



Circuit Breaker Rating / Maximum Output

Power Output

For maximum power output, install a standard double pole 60 amp circuit breaker. Wall Connector includes a CCID 20.

Wall Connector incorporates automatic load management, which allows the max output to be customized to an existing power supply. If the electrical supply is unable to support the 60 amp configuration, select a lower amperage configuration.

Circuit breaker (amps)	Max output (amps)	Power output at 240 volts (kW)
60	48	11.5
50	40	9.6
40	32	7.6
30	24	5.7
20	16	3.8
15	12	2.8



NOTE: External disconnect switches are neither required nor recommended.



NOTE: Circuit breaker size is programmed during the commissioning process. See [Commissioning Procedure on page 27](#) for details.



NOTE: Some Tesla vehicles may draw less current than the max output. Actual charging rate depends on Wall Connector output and onboard charger in the vehicle.

Branch Circuit Conductors and Ground Wire



WARNING: Do not use Eaton BR branch breakers for Universal Wall Connector when the Electrical Panelboard is made of Aluminum. Recommend instead using Eaton BRH branch breakers.

- If installing for less than maximum power, refer to local electrical code to select correct conductors and ground wire size that are suitable for the chosen circuit breaker.

For maximum power, check temperature rating of circuit breaker used:

For 60°C rated circuit breaker, use minimum 4AWG, 90°C THWN-2-rated copper wire for conductors.

For 75°C rated circuit breaker, use minimum 6AWG, 90°C THWN-2-rated copper wire for conductors.

- For sites with multiple Wall Connectors, the power sharing feature can enable the safe utilization of a single branch circuit. See single line examples in [Breaker and Branch Circuit Setup on page 49](#).
- COPPER WIRE TERMINATIONS ONLY for landing in Wall Connector wirebox terminals. Conductors can be stranded or solid.
- Hardwire branch circuits to disconnects or circuit breakers. Do **NOT** install cord-and-plug type connections.
- For outdoor installations, use watertight fittings when securing feeder wires to the wirebox.



PRODUCT OVERVIEW

Grounding Connections

Wall Connector must have a ground path back to the main equipment earthing point on site. Without a proper ground connection, the Wall Connector will fault during a ground assurance test. Equipment-grounding conductor must be run with the circuit conductors and connected to the equipment-grounding terminal in the wirebox. Install a ground (PE) wire sized according to local electrical code.



Using Wall Connector

1. Open the vehicle charge port by the following methods:
 - a. Press the button on the charge handle.
 - b. Press on the charge port door.
 - c. Open the vehicle charge port by using the mobile app, using the vehicle touchscreen, or by pressing and holding the trunk button on the keyfob.
2. Insert the charge handle into the vehicle charge port.
3. Check the vehicle controls to verify charging.
4. To remove the charge handle from the vehicle, press and hold the button on the handle to unlock the charge port.



NOTE: The vehicle must be unlocked to remove the charge handle.



5. Remove the charge handle from the vehicle charge port.
6. Wrap the charge cable counter-clockwise around the Wall Connector and insert the charge handle into the holster.





PRODUCT OVERVIEW

Features

Connectivity

Wall Connector is equipped with Wi-Fi to communicate with local site routers, vehicles, mobile devices, other Wall Connectors, and other Tesla products.



Hosted Access Point

Wall Connector hosts a WPA2 password-secured, 2.4 GHz, 802.11 Wi-Fi access point network to facilitate commissioning and connecting to other devices.

A unique SSID Wi-Fi network name and WPA2 password for connecting to the Wall Connector are printed on a label at the rear of the main unit, as well as on the front cover of the Quickstart Guide included in the box.



Local Network

Connecting Wall Connector to a local Wi-Fi network enables it to receive over-the-air firmware updates, remote diagnostics access, and usage data tracking capability. A Wi-Fi connection is required for sites that utilize authentication, billing, and other property management features.

Wall Connector only supports WPA2 secured, 2.4 GHz, 802.11 infrastructure mode networks.

 **NOTE:** Networks that are not password protected are not supported. The Wall Connector will not display non-password protected networks in the options list.



Ground Fault Circuit Interruption

Integrated ground fault circuit interruption protection continuously monitors the differential current between the current carrying conductors. When the differential current exceeds the designated threshold, which would indicate a line to ground fault, it will prohibit or rapidly interrupts the charging session.

If a ground fault occurs after 10 seconds of charging, Wall Connector will wait 15 minutes before automatically re-attempting to charge. Up to four attempts to charge will be made before user interaction is required.

If a residual current fault occurs within 10 seconds of charging, Wall Connector will lock out and user interaction is required to restore charging functionality.

Recommended interaction includes pressing the button on the charging handle, or removing the charging handle from the vehicle and reinserting it. If this does not resolve the issue, contact Tesla for any repairs or modification.

Ground Assurance

Wall Connector continuously checks for the presence of a safe ground connection and automatically recovers from faults. Grounded assurance operates by injecting a small amount of current into the ground conductor in order to measure the impedance between line and ground. If high impedance is detected, the Wall Connector will lock out charging and display an fault code of two (2) red blinks. See [Fault Codes on page 53](#) for a full list of fault codes.

For ground assurance to operate on TN grids, one leg of the distribution transformer must be ground-bonded (Neutral). Ground bond should only occur at one location in a site's electrical system.

Wall Connector ground assurance may be adjusted in countries with TT or IT grid configurations and can be disabled in the commissioning procedure.

The Ground Monitor Interrupter feature monitors the Wall Connector ground connection. Select the correct option based on the installation's earthing system and earth impedance.

Depending on country, three options are available:

- **Enable:** Ground connection will be monitored and a high detected ground resistance will disable the Wall Connector. This is the preferred setting to provide protection and should be selected where ground connection is expected to be strong (as in the case on TN networks and most TT networks), and where required by regulation.
- **Monitor:** Ground connection will be monitored but a high detected ground resistance will not disable the Wall Connector. This should be selected if the ground monitoring check yields false positives and ground impedance cannot be improved (as is the case in some TT networks).
- **Disabled:** Ground connection will not be monitored. This should be selected where the ground connection is not made (as is the case for IT networks), or where the current induced by this check would be problematic (as is the case on some TT networks with sensitive residual-current devices).



NOTE: Ground Monitoring is always enabled for installations in North America.

Temporary problems such as ground faults or utility power surges are resolved automatically.

Thermal Monitoring

Wall Connector actively monitors temperatures in multiple locations while charging to ensure stability of the charge session. Temperature sensors are located at the relays, microcontroller, and charge handle to monitor the temperature of the terminals in the wirebox.



PRODUCT OVERVIEW

In warmer conditions, Wall Connector may reduce current and charge speed to protect itself. When this happens, the light bar on the faceplate will continue to display the "streaming green" and a blink code of three red flashes to indicate that charging has been reduced due to high temperatures. If heat continues to rise, Wall Connector will stop charging and display a blink code of three red flashes.



NOTE: See [Fault Codes on page 53](#) for full list of error codes.

For optimal performance, install Wall Connectors in areas where ambient temperature will remain below 50 °C (122 °F). In rare circumstances, Wall Connector may begin reducing amperage at 35 °C (95 °F) ambient temperatures. Adjustments to amperage are automatic and do not require user input; Wall Connector will return to starting current when temperatures are reduced.

Power Outages

If there is a power outage while Wall Connector is charging a vehicle, charging will automatically resume within 1 to 3 minutes after power restoration. The Wall Connector will display a solid blue light on the faceplate to indicate that it is communicating with the vehicle and waiting to resume charging. Alternatively, pressing the button on the charge handle after power restoration will cause Wall Connector to resume charging immediately.



NOTE: Wall Connectors in a power management group maintain their group power management settings after a power loss event.

Firmware Updates

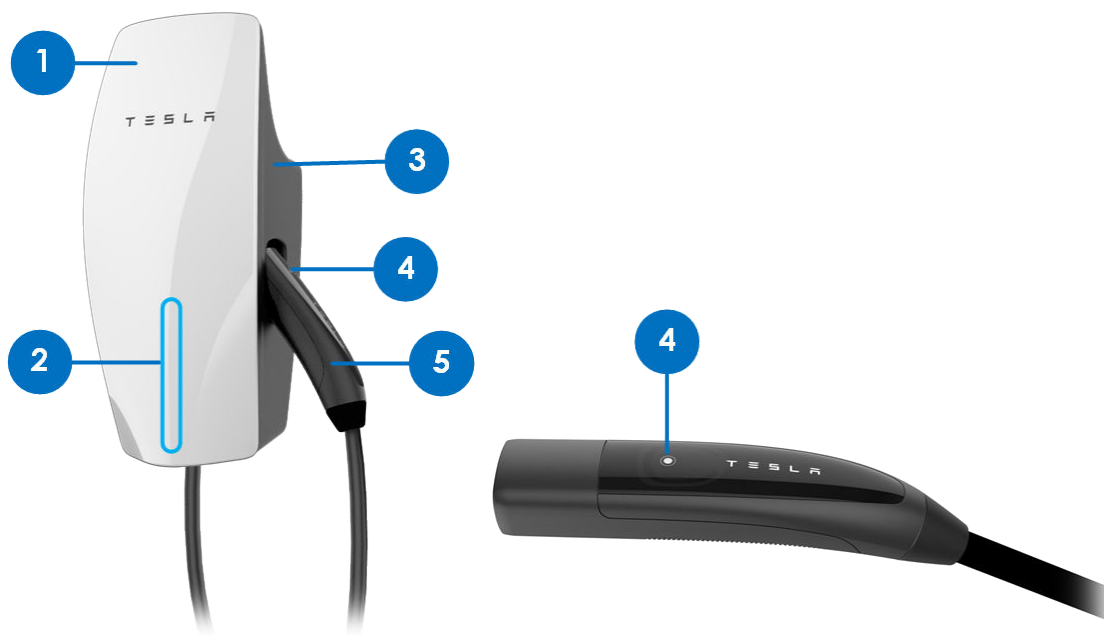
Firmware updates will be automatically applied to the Wall Connector to improve the user experience and introduce new features. Connect Wall Connector to Wi-Fi for access to the most recent firmware update. See [Commissioning Procedure on page 27](#).

Tesla vehicles can provide firmware updates to Wall Connectors.



Wall Connector External Components

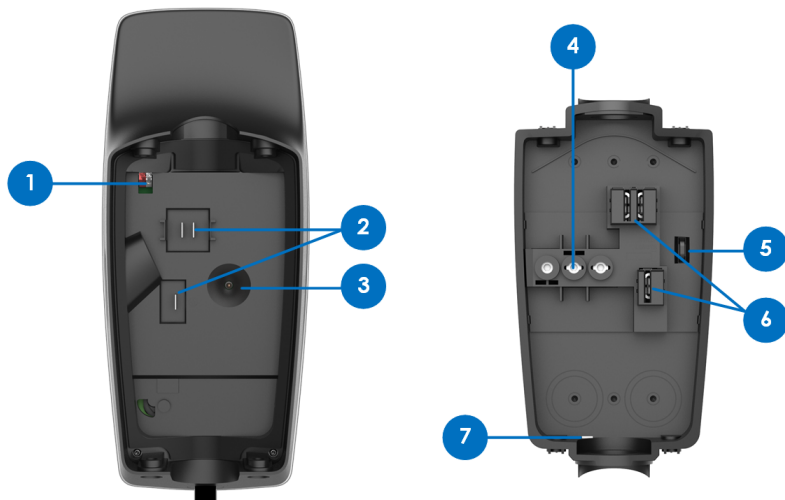
"Wall Connector" refers to the product as a whole.



1. Faceplate
2. Light bar (vertical)
3. Main unit
4. Charge handle button
5. Charge handle



Wall Connector Internal Components



1. RS-485 port
2. Contact blades
3. AC conductor terminals
4. Zip tie anchor
5. Sliding contacts
6. Wirebox drainage opening (enables Type 3R protection)



WALL CONNECTOR LEDS

Light Codes

Startup

Once energized at the circuit breaker, every LED (seven total) on the faceplate will illuminate for up to five seconds.



After Startup

After Wall Connector is energized at the circuit breaker, certain green LEDs (depending on the circuit breaker size) will illuminate for 10 seconds. See table below for exact light codes.

Circuit breaker	60 A	50 A	40 A	30 A	20 A	15 A
Maximum output	48 A	40 A	32 A	24 A	16 A	12 A

NOTE: To re-display the green LEDs after the initial 10 seconds, press and hold the charging handle button.

When multiple Wall Connectors are linked for power sharing, the **center blue LED** will illuminate during the 10-second startup window.

Other

Standby, waiting to plug in	Charging in progress	SSID broadcasting, ready to commission	Waiting to charge, communicating with vehicle
Top green solid	Every green streaming	Green pulsing	Blue solid



Fault Codes

All red blink codes pause for one second, and then repeat.		
Light Bar	What It Means	Details
No Lights	Power supply issue, charging disabled	Verify that the power supply is turned on. If the issue persists, have an electrician remove the Wall Connector from the wirebox and confirm that voltage is present at the terminal block using a multimeter. Record the voltage readings for the following: L1 to L2/N, L1 to Ground, L2/N to Ground.
Solid red	Internal , charging disabled	Turn the circuit breaker off, wait 5 seconds, and turn it back on. If solid red light remains, document part number and serial number, then contact Tesla Energy.
One (1) red blink	Ground fault circuit interruption due to unsafe current path, charging disabled	Inspect the handle, cable, Wall Connector, and vehicle charge port for damage or signs of water ingress. Have an electrician check that ground is not directly connected to a conductor wire in the branch circuit.
Two (2) red blinks	Ground assurance fault, high ground resistance detected, charging disabled	Verify that the Wall Connector is properly grounded. The ground connection must be bonded in the upstream power supply for proper operation. Check all physical connections, including the wirebox terminals, electrical panel(s), and junction boxes. In residential power supplies, check the bond between ground and neutral at the main panel. If connected to a transformer, contact the transformer's manufacturer for direction on how to bond the ground connection.
Three (3) red blinks	High temperature detected; charging limited or disabled	Verify that Wall Connector is connected to Wi-Fi and updated with the latest available firmware for optimal temperature sensing functionality. Check the faceplate and cable handle for excessive warmth. Have an electrician remove the Wall Connector from the wirebox and verify that the conductors used are sized correctly and that the terminal block is torqued to specification. Connect Wall Connector to Wi-Fi so that firmware can update to most recent version. If firmware does not automatically update, use the Commissioning on page 27 procedure to sign into the commissioning wizard and manually update the firmware. If it does not solve the problem, contact our Customer Support team.
Four (4) red blinks	Internet connection lost, online features disabled	Check for objects that could interfere with the area's Wi-Fi signal strength. Confirm that the local Wi-Fi router is operational. If the Wi-Fi password was changed recently, follow the commissioning process on your mobile device to update the Wi-Fi settings.
Five (5) red blinks	Group power management communication issue, charging reduced	Check for objects that could interfere with the area's Wi-Fi signal strength. Follow the commissioning process on your mobile device to re-link the Wall Connectors for group power management.
Six (6) red blinks	Overvoltage or poor grid quality detected, charging disabled	Verify that the power supply is nominal 200-240 volts. If the issue persists, have an electrician remove the Wall Connector from the wirebox and confirm that voltage readings are as expected at the terminal block using a multimeter. Record the voltage readings for the following: L1 to L2/N, L1 to Ground, L2/N to Ground.
Seven (7) red blinks	Vehicle overcurrent detected	Reduce the vehicle's charge current setting. If the issue persists and the attached vehicle is manufactured by Tesla, record the vehicle's VIN and approximate time of the fault and contact Tesla. If the vehicle is not manufactured by Tesla, contact the vehicle's manufacturer.



WALL CONNECTOR LEDS

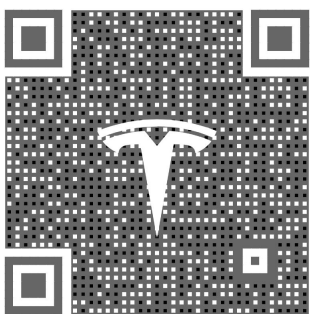
Additional Assistance for Red LED Faults

A Wall Connector's alerts are visible in the browser commissioning wizard (for instructions on how to commission, see [Commissioning Procedure on page 27](#)).

If additional assistance is required, have the following information prepared before contacting Tesla:

- Short video of Wall Connector LED activity during faulted state
- Photo of Wall Connector's part number and serial number (located on the side label)
- Timeframe that the issue was observed
- VIN of vehicle that plugged into Wall Connector at time of faulted state
- Photo of any error messages displayed on the vehicle's screen

Visit tesla.com/support/contact or scan the QR code below to request support.



Optionally, for owner support and issue troubleshooting: (888) 765-2489

For North America Electrician and Installer support: (650) 963-5655



Electric Vehicle Service Equipment (EVSE) Communication Codes

Light Bar	Meaning	Details
Solid blue	Connected to Vehicle, Electric Vehicle Service Equipment ready but vehicle not requesting charge	Verify vehicle is ready to charge and not blocked by settings like scheduled charging
Blue "breathing"	Establishing communications with vehicle	
Two (2) blue blinks	Connected to Vehicle, Electric Vehicle Service Equipment not ready to charge	Verify device configuration to ensure settings like scheduled charging, Open Charge Point Protocol, or access control are not preventing charging