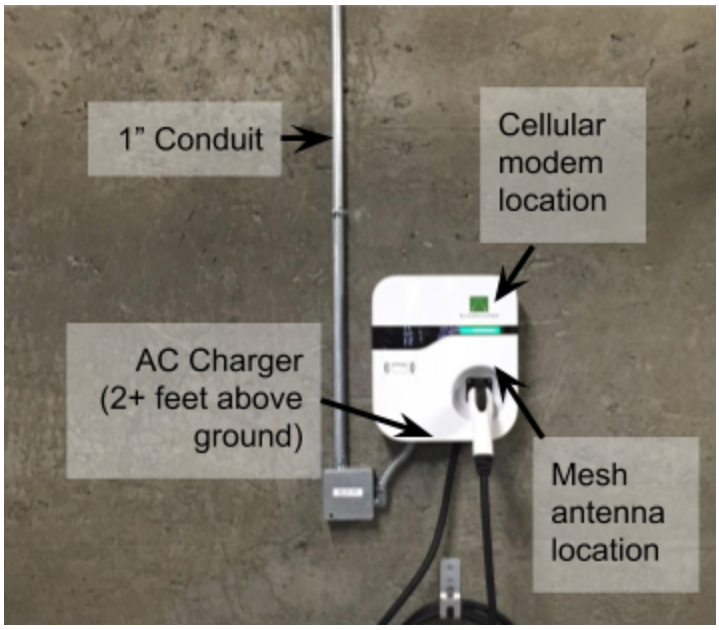
Install-only document

This four-page document specifically intended for installers on the day of installation is designed to serve as an overview of the full EverCharge system installation and testing specifications. **Please read this document in full, as requirements were updated October 4, 2016.**

The full twelve-page design and installation document is also included in the shipping box, and covers topics such as site planning, power requirements, configuration, troubleshooting instructions, and so forth. Contact EverCharge at install@EverCharge.net or 415-429-2971 if you have any questions or need clarification.



Example installation image

AC Charger requirements

- 208-240V @ 40 amps (110-120V NOT OK)
- Cellular signal required for Primary only
- 50A-rated copper conductors
- Individual 40A OCPD for each AC Charger
- 1" trade size conduit
- Mount at least 18 inches (450 mm) above floor inside, 24 inches (600 mm) outdoors
- Included charge cable (18 feet / 5.5 m) reaches vehicle plug and does not block walkway

Shopping list / required tools

- ▢ 1" fitting for AC charger knockout
- ▢ 1" trade size conduit
- ▢ 50A-rated (e.g #6 THHN 75℃ or #8 THHN 90℃) copper conductors
- ▢ Torx T30 and T20 bits
- ▢ 40A 2-pole breaker / local disconnect

After the install (including configuration and testing) is complete, before leaving the site, make sure to contact EverCharge so we can update our records and check on the unit. Please email/text a photo of the install too.

1. Installing the EverCharge AC Charger

1.1. Before installing

1.1.1. Choose an appropriate mounting location

The EverCharge AC Charger should be mounted on a wall or column adjacent to the electric vehicle parking space. Make sure that:

➔ The distance to the vehicle charge port is not longer than the charge cord length of 18 feet (5.5 meters)
➔ The charge cord will not obstruct a walkway
➔ The AC Charger is in a location protected from a vehicle collision
➔ The AC Charger MUST be positioned such that the charging cord receptacle is at least 18-24 inches (450-600 mm) above the ground [NEC 625.50]
➔ If more than one charger is shipped, the charger marked "Primary" must have cell service
➔ Chargers must be within 150 feet of each other on the same level

1.1.2. Power and grounding requirements

Attach the "Power Managed" warning sticker to the panel where the charger is supplied! The AC charger requires 208-240V across two legs. The AC Charger must be connected to a grounded, metal, permanent wiring system via the equipment grounding terminal on the charger.

1.1.3. Mounting and installation parts

EverCharge recommends the following parts for an AC Charger installation:

EverCharge-supplied components:

- Mounting bracket
- Torx T30 bolts (x3) for securing the AC charger to the mounting bracket
- Cable hanger bracket (optional)
- Torx T20 ¼" expansion bolts (x2) for concrete mounting
- No. 8 wood screws (x2) for wood mounting

Installer-supplied components:

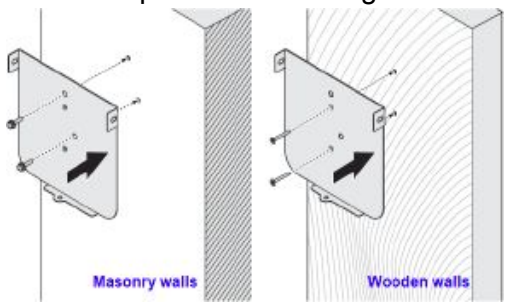
- Conduit of trade size 1" (27mm)
- 1" fitting for conduit knockout on AC Charger
- Enough junction boxes to comply with the Expandability Best Practices
- Copper THHN #6 75℃ or #8 90℃ conductors
- 40 Amp 2-pole circuit breaker

Note that, after installation and initialization, the charger should display a solid green LED. If it keeps flashing red for more than a minute, check that the Ethernet cable is still plugged in.

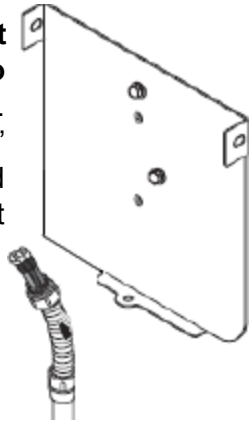
1.2. Step-by-Step AC Charger installation instructions

Disconnect electrical power prior to installing the AC Charger. Failure to do so may cause physical injury or damage to the electrical system and charging unit.

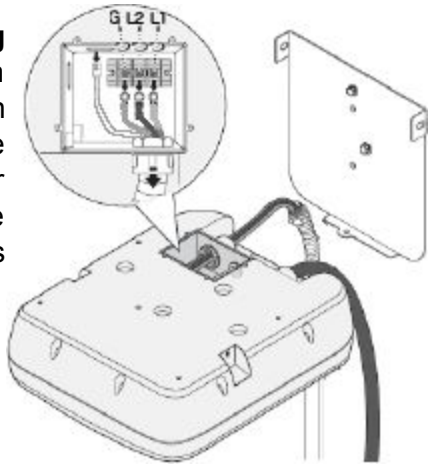
1. **Drill bolt holes** in the wall for the mounting bracket and optional cable hanger.



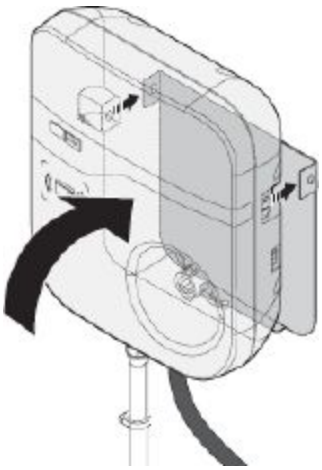
2. **Secure mounting bracket and optional cable hanger to wall** using appropriate bolts. For masonry, use ¼" expansion bolts. For wood studs, use #8 wood screws at least 2 inches in length.



3. **Connect wiring to charger** in accordance with local codes. Use 50A-rated copper conductors. The charger requires 208-240V.



4. **Align screw holes** of the mounting bracket with the AC Charger holes.



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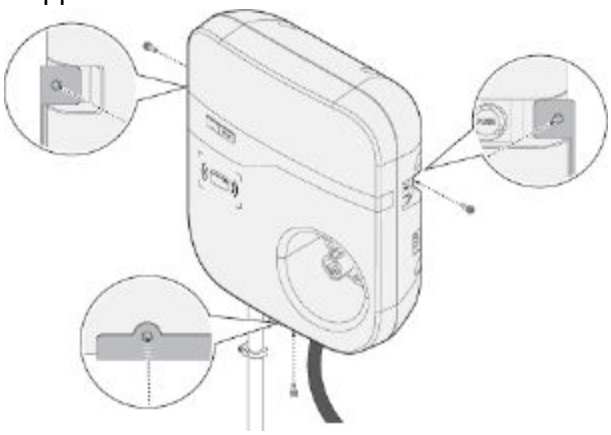
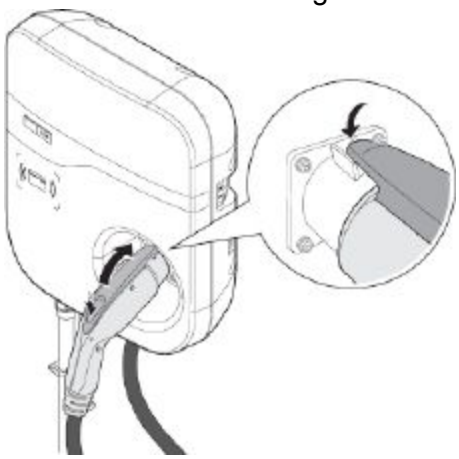
5. **Install and secure** with three screws to the support bracket.



6. **Attach charge cable to plug** and hang the rest of the cable on the cable hanger if installed.



2. System testing and checklist

After physically installing all of the AC Chargers, before users can charge their cars, the system must be configured so that at no point does the system ever try to draw more power than is safe. EverCharge generally preconfigures the system before shipping, leaving only a 10-second testing process to the installers.

Make sure that each charger is displaying a solid green LED before starting testing. If a charger blinks red, it does not have a connection to it's internal network board. Resolve that before attempting to configure and test. Chargers require roughly a minute to initialize after getting power, and the chargers will intermittently flash red during initialization.

Complete configuration instructions are in full twelve-page design and installation document. Please call install support at 415-429-2971 if configuration appears necessary or if testing fails. As long as the primary charger has cellular service, we can help configure the system remotely.

2.1. Testing instructions

Test an assigned card by tapping it to the charger. The charger should beep twice, then within 10 seconds, it should beep twice again and the LED should cycle between green/orange for two minutes, indicating the card was authorized and the system is ready to charge.

If the charger flashes red or takes longer than 10 seconds to respond after tapping a card, it does not have a good connection with the primary charger or the card was not assigned to the tested charger.

2.2 Contact EverCharge before leaving the installation at 415-429-2971

2.3. Installation summary checklist

Use the following checklist to make sure that everything has been installed and configured correctly:

- ❏ Transformer, Main Breaker, Panel, subpanel have available capacity
- ❏ Junction Boxes along the entire electrical run for future expandability
- ❏ If applicable, trunk infrastructure wiring sized for the system breaker size
- ❏ AC Chargers are securely and safely mounted on the wall, column, or pedestal adjacent to the electric vehicle parking space
- ❏ AC Chargers are connected to 208V-240V and an OCPD with 50A-rated conductors
- ❏ Charger marked “Primary” is installed in a location with cellular reception
- ❏ Power Managed warning stickers applied on panel feeding chargers (not to the chargers!)
- ❏ Access cards tested with assigned chargers, in envelopes for customers
- ❏ **Call 415.429.2971 before you leave**. Send EverCharge the site configuration including locations of each charger and it’s serial number at install@EverCharge.net. Be sure to include photos of the install!

3. Specifications

3.1 EverCharge AC Charger

Charging Interface	SAE J1772 compliant charging plug
Input Rating	208-240 Vac, single phase, 40 A, 60 Hz
Connections and Wiring	L1, L2, and grounded, hardwired with terminal block
Standby Power	< 5 W
Output Rating	208-240 Vac, single phase, 30 A maximum, 60 Hz, 7.2 kW max.
Internal Residual Current Detection	20 mA CCID per UL 2231
Upstream Breaker	2-pole breaker, non-GFCI type
Electrical Protection	over current, short circuit, over voltage, under voltage, ground fault, surge protection, over temperature
Status Indicators	standby, charging, fault, warning
Buttons/Switches	charger on/off, stop charging
Operating Temp.	-22 F to +122 F (-30 C to +50 C)
Humidity	95% relative humidity, non-condensing
Charging Cable Length	18ft (5.5 m) straight cable
Ingress Protection	NEMA 3R
Cooling	Natural cooling
Dimensions (W x H x D)	13.8 x 15.7 x 5.0 inches (350 x 400 x 126 mm)
Net Weight	15.4 lbs (7kg)
Certificate	UL, cUL