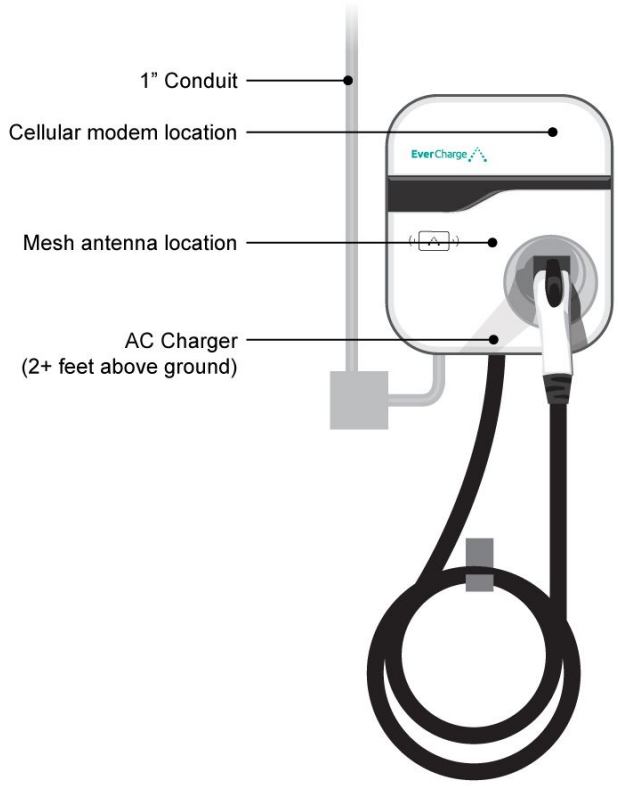
Install Only Document

This 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. Do not solely use this page for system design. Complete install specifications can be reviewed at www.evercharge.net/installspecsfull

Contact EverCharge at install@EverCharge.net or 415.429.2971 if you have any questions. This document was **last updated March 22, 2017**.



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. **Suggested mounting height is 38.5 inches from bottom.**
- Included charge cable (18 feet / 5.5 m) reaches vehicle plug and does not block walkway

Shopping list / required tools

- ▢ 1" trade size (27 mm) conduit and fittings
- ▢ 50A-rated (e.g #6 THHN 75℃ or #8 THHN 90℃) copper conductors
- ▢ Torx T30 and T20 bits
- ▢ 40A 2-pole breaker / local disconnect

Minimum 50A-rated Wire Gauge Requirements	
1-75 Feet (1 dedicated charge station)	#8 THHN 90℃
76+ Feet or multiple EVSE installations	#6 THHN 75℃
250+ Feet	#4 THHN 75℃

After the install (including configuration and testing) is complete, before leaving the site, **make sure to contact EverCharge at install@EverCharge.net or 415.429.2971** so we can update our records and check on the unit. Please email/text a photo of the install too.

1. Installing the EverCharge Charge Station

1.1. Choose an Appropriate Mounting Location

The EverCharge charge station should be mounted on a wall or column adjacent to the electric vehicle parking space. If wall or column is not available, alternative options are available from EverCharge.

Verify the following before mounting:

- ➔ Chargers are installed in their assigned locations as shown on the shipping box
- ➔ Distance to the vehicle charge port is not longer than included charge cord length of 18 feet (5.5 meters)
- ➔ Charge cord does not obstruct a walkway
- ➔ The charge station is protected from a vehicle collision
- ➔ The charge station is at least 18-24 inches (450-600mm) above the ground [NEC Article 625.50]
  Suggested mounting height is 38.5 inches measured from bottom of charge station
- ➔ Access to all three mounting screw-holes is not blocked by conduit or other materials
- ➔ If more than one charge station is shipped, the charge station marked “Primary” has cell service
- ➔ Charge station has near line of sight view to at least one other charge station in Charge Group

1.2 Power and Grounding Requirements

⚠ **Attach the provided “Power Managed” warning sticker to the panel the charge station is supplied from!**

The charge station requires 208-240V across two legs. The charge station must be connected to a grounded, metal, permanent wiring system via the equipment grounding terminal on the charger.

1.3. Mounting and Installation Parts

EverCharge recommends the following parts for an AC Charger installation:

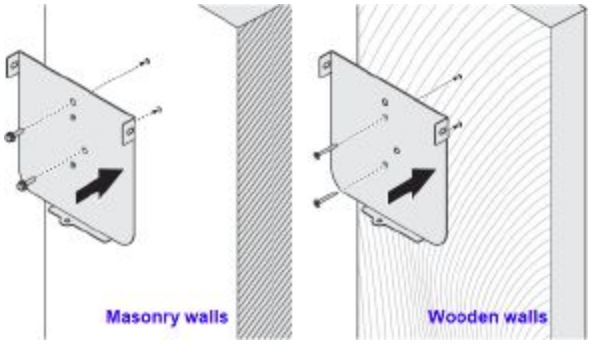
EverCharge-supplied hardware:
- Mounting bracket
- Torx T30 bolts (x3)
- Cable hanger bracket (optional)

Installer-supplied hardware:
- Trade size 1” (27mm) conduit and fittings
- Copper THHN #6 75°C or #8 90°C conductors
- 40 Amp 2-pole circuit breaker

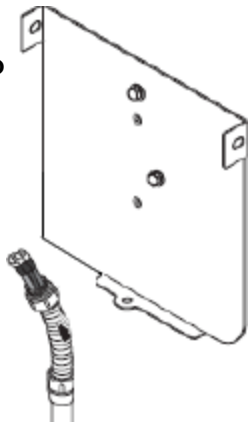
1.4. Step-by-Step EverCharge Charge Station Installation Instructions

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

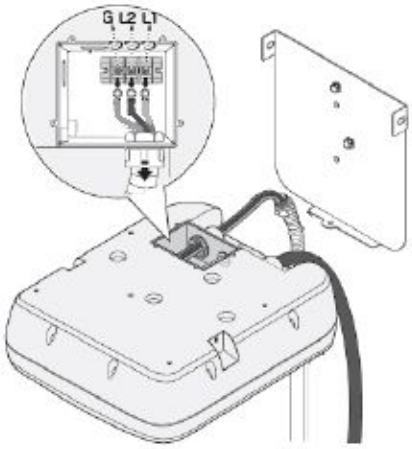
1. **Drill bolt holes** in the wall for the mounting bracket and optional cable hanger.



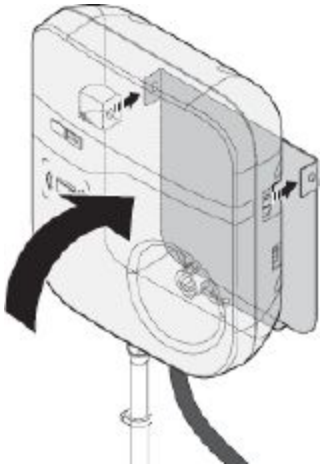
2. **Secure mounting bracket and optional cable hanger to wall** using appropriate bolts. For masonry, use ¼" expansion bolts. For wood studs, use #8 wood screws at least 2 inches in length.



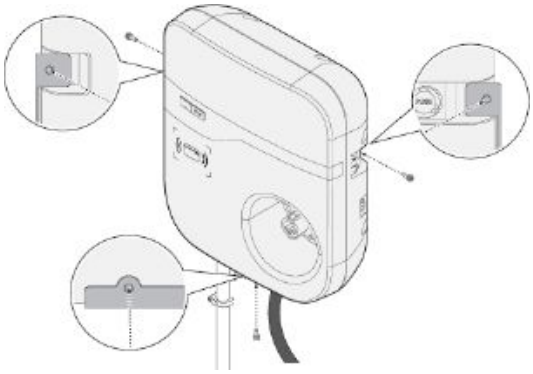
3. **Connect wiring to charger** in accordance with local codes. Use 50A-rated copper conductors. The charger requires 208-240V.



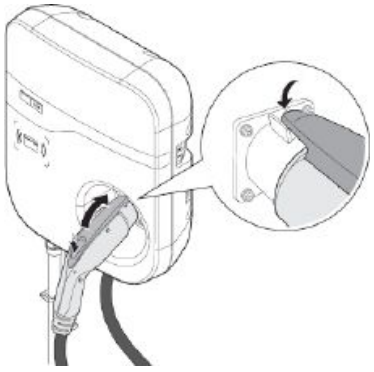
4. **Align screw holes** of the mounting bracket with the AC Charger holes.



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.



With the charger powered on, after initialization (which can take up to a minute), the charger should display a solid green LED. If it keeps flashing red for more than two minutes, contact EverCharge.

2. System Configuration and Testing

After installing all of the AC Chargers, before users can charge cars, the system must be configured so that at no point does the system ever try to draw more power than is allocated. **EverCharge preconfigures units before shipping, so install-day configuration is not required!**

If testing fails or configuration appears necessary, please reach out to EverCharge immediately at 415.429.2971 or install@EverCharge.net so we can supply instructions.

2.1. Testing Instructions

Make sure that each charger is displaying a solid green LED before starting testing. Chargers require roughly a minute to initialize after getting power. If a charger blinks red for more than a minute, contact EverCharge.

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 charge station flashes red or takes longer than 10 seconds to respond after tapping a card, it does not have a good wireless connection with the Primary Charger or the card was not assigned to the tested charger. Make there is no conduit/metal pipe near the antenna side of any Charger. EverCharge can provide relay Network Boxes if necessary to help connect chargers to each other.

2.2. Electrical Layout Reporting

Please report how much power is available to the system **before** taking the 80% rule into account. EverCharge will apply the 80% rule during our configuration. For instance, if the panel powering chargers is being fed with a 125 Amp three-phase breaker, report 125 Amps of three-phase; EverCharge will limit total system draw to 100 Amps. Or, if EverCharge is sharing a panel with other loads report the total capacity available and we will limit draw to 80% of that capacity.

When installing more than one charger, please report to EverCharge how you plan to feed chargers their power, specifically noting what parking space the charger is located, what phase the charger is on, and what chargers share circuit breakers. For instance, something similar to a panel schedule would be useful:

Spot #	Charger serial	Brk	Circuit	Circuit	Brk	Charger serial	Spot #
11	HWT1701-EXAMPLE	40/2	1,3	2,4	40/2	HWT1701-EXAMPLE	12

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
- ❏ Electrical layout (section 2.7) reported to EverCharge
- ❏ AC Chargers are securely and safely mounted on the wall, column, or pedestal adjacent to the electric vehicle parking space **in their assigned location**
- ❏ AC Chargers are connected to 208V-240V via 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, it's phase, and it's serial number (see section 2.7) to install@EverCharge.net. Be sure to include photos of the install!

3. AC Charger Specifications

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