

CT500

ChargePoint[®] Networked Charging Station



**Coulomb
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Installation Guide

Safety and compliance

This document provides instructions to install the ChargePoint® Charging Station and should not be used for any other product. Before installing the ChargePoint® Charging Station, you should review this manual carefully and consult with a licensed contractor, licensed electrician and trained installation expert to ensure compliance with local building practices, climate conditions, safety standards, and state and local codes.

The ChargePoint® Charging Station should be installed only by a licensed contractor and a licensed electrician and in accordance with all local and national codes and standards. The ChargePoint® Charging Station should be inspected by a qualified installer prior to the initial use. Under no circumstances will compliance with the information in this manual relieve the user of his/her responsibility to comply with all applicable codes or safety standards. This document describes the most commonly-used installation and mounting scenarios. If situations arise in which it is not possible to perform an installation following the procedures provided in this document, contact Coulomb Technologies. Coulomb Technologies is not responsible for any damages that may occur resulting from custom installations that are not described in this document.

No accuracy guarantee

Reasonable effort was made to ensure that the specifications and other information in this manual are accurate and complete at the time of its publication. However, the specifications and other information in this manual are subject to change at any time without prior notice.

Warranty information and disclaimer

Your use of, or modification to, the ChargePoint® Charging Station in a manner in which the ChargePoint® Charging Station is not intended to be used or modified will void the limited warranty. Other than any such limited warranty, the Coulomb products are provided "AS IS," and Coulomb and its distributors expressly disclaim all implied warranties, including any warranty of design, merchantability, fitness for a particular purposes and non-infringement, to the maximum extent permitted by law.

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IMPORTANT SAFETY INSTRUCTIONS

This Installation Guide contains important instructions that must be followed during installation of the CT500.



Warnings:

- The CT500 must be connected to a grounded, metal, permanent wiring system; or an equipment grounding conductor must be run with the circuit conductors and connected to the CT500's grounding terminal or lead.
- The CT500 must be installed by a qualified electrician and in accordance with all local electrical codes and ordinances.
- Read all instructions before installing the CT500.
- Adult supervision is required when using the CT500 near children.
- Do not operate a CT500 with a visibly damaged cable. Contact Coulomb Technologies immediately.
- Do not operate a CT500 if the enclosure or the EV connector is broken, cracked, open, or shows any other signs of damage. Contact Coulomb Technologies immediately.
- Do not put fingers into the EV connector
- Do not install the CT500 near flammable, explosive, or combustible materials.
- Do not operate the CT500 in temperatures outside its operating range of -22°F to 122°F (-30°C to +50°C).
- The CT500 contains no user-serviceable parts. Do not attempt to repair or service the CT500 yourself. If the CT500 requires servicing, contact Coulomb Technologies.
- Ensure that the CT500's charging cable is positioned so it will not be stepped on, tripped over, or subjected to damage or stress.

SAVE THESE INSTRUCTIONS

Cleaning the CT500

Do not use cleaning solvents to clean any of the CT500's components. The outside of the CT500, the charging cable, and the connector end of the charging cable should be regularly wiped with a clean dry cloth to remove any accumulation of dust and dirt.

FCC Declaration of Conformity

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.

Radio and Television Interference

The equipment described in this manual has been designed to protect against Radio Frequency Interference (RFI). However, there are some instances where high powered radio signals or nearby RF-producing equipment (such as digital phones, RF communications equipment, etc.) could affect operations.

If interference to your CT500 is suspected, relocate or turn off nearby electrical appliances during charging, before contacting Coulomb Technologies for assistance.

Important!

Changes or modifications to this product not authorized by Coulomb Technologies could void the FCC compliance.



At the end of its service life, this product should be recycled according to local laws and regulations. Contact Coulomb Technologies for recycling information.

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This document provides step-by-step instructions on how to install any CT500 ChargePoint® Charging Station.

Before installing the CT500

- Ensure that the appropriate wiring, circuit protection, and metering is in place at the installation location. For details, refer to the specifications (page 1-2) and wiring diagrams (page 1-3).
- Ensure that the type of modem in the CT500 station that you are installing is compatible with the type of modem coverage available at the installation site (CDMA or GPRS).
- Disconnect power.
- Determine the appropriate mounting location for the CT500. The CT500 is designed to be secured to a masonry wall or a hollow wall with wood studs 16" apart. If this is not the case, prepare an appropriate mounting surface.
- Familiarize yourself with the installation procedure by thoroughly reviewing *Chapter 2 "Installation Instructions."*

Specifications



Electrical input

Input Power: 7.2 kW

Input Voltage: 208/240 VAC

Input Current: 30 A

Input Power Connections: Line 1, Line 2, Earth

Required Service Panel Breaker: Dual 40 A double pole breaker (non-GFCI type) on dedicated circuit

Standby Power: 5 W typical

Electrical output

Output Charging Power: 7.2 kW

Output Voltage: 208/240 VAC

Output Current: 30 A

Output Charging Connector: SAE J1772™ EV connector on 18' (5m) cable

Functional interfaces

Card Reader: ISO 15693, 14443

Ground Fault Detection: 20 mA CCID with auto retry (15 minute delay, 3 tries)

Plug-Out Detection: Power terminated per SAE J1772™ specification

Power Measurement: 2% at 15 minute intervals

Local Area Network: 2.4 GHz 802.15.4 dynamic mesh network

Wide Area Network: Commercial CDMA or GPRS cellular data network

Safety and operational ratings

Safety Compliance: UL Listed for USA and cUL certified for Canada; Complies with UL 2594, UL 2231-1, UL 2231-2, UL 1998, UL 991, NEC Article 625

Surge Protection: 6 kV @ 3000 A. In geographic areas subject to frequent thunder storms, supplemental surge protection is recommended.

EMC Compliance: FCC Part 15 Class B

Operating Temperature: -22 °F to 122 °F (-30 °C to +50 °C)

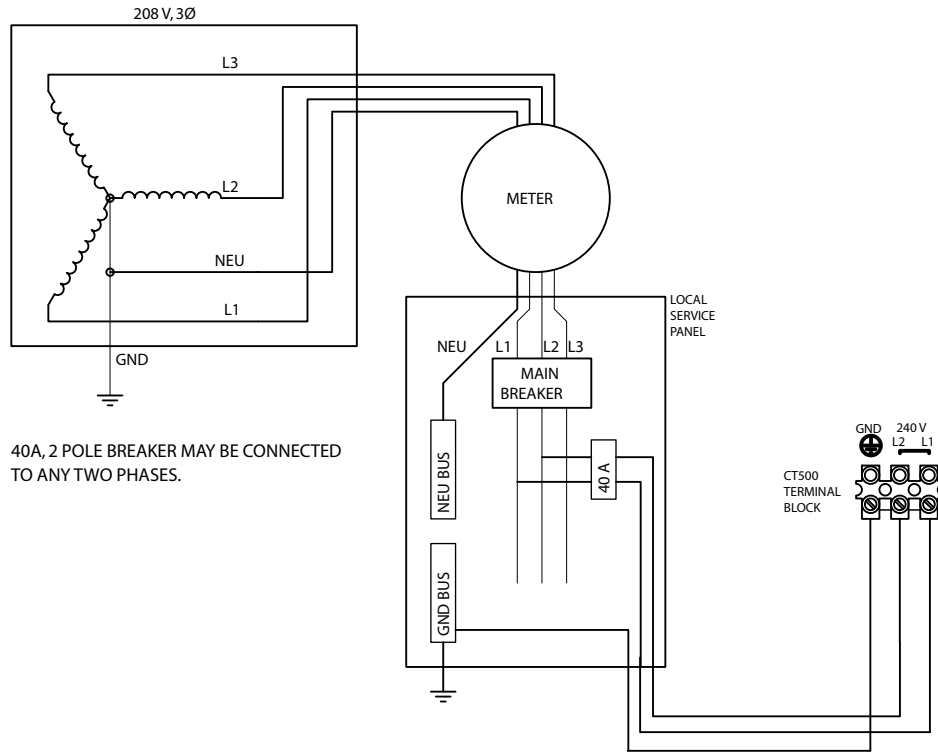
Operating Humidity: Up to 95% non-condensing

Enclosure: NEMA 3R

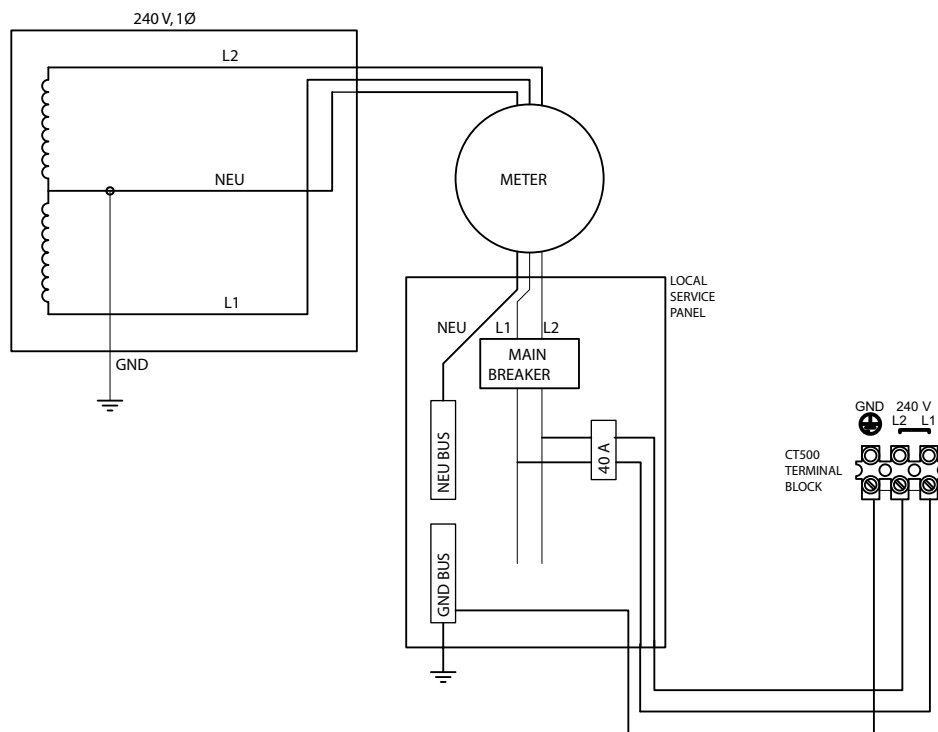
Terminal Block Temperature Rating: 212 °F (100 °C)

Maximum Charging Stations per 802.15.4 Radio Group: 100. Each station must be within 150 feet "line of sight" of at least one other station.

Wiring information



40A, 2 POLE BREAKER MAY BE CONNECTED TO ANY TWO PHASES.



Installation Instructions

2

After the appropriate wiring is in place at the installation site (see “Wiring information” on page 1-3), you are ready to install the CT500. You will need:

- CT500 ChargePoint® Charging Station components (see page 2-2)
- ¾” (19 mm) conduit
- #2 Phillips screwdriver
- 3/8” socket wrench
- ¼” (6 mm) x 2” (50 mm) hex flange lag bolts (4)

Overview of steps

Installing the CT500 ChargePoint® Charging Station involves a few simple steps:

1. Check box for correct contents (see page 2-2)
2. Attach holster (see page 2-3)
3. Remove front panel (see page 2-4)
4. Mount to wall (see page 2-5)
5. Install conduit (see page 2-7)
6. Connect wires to wiring terminals (see page 2-8)
7. Replace front panel (see page 2-9)
8. Attach antennas (see page 2-10)

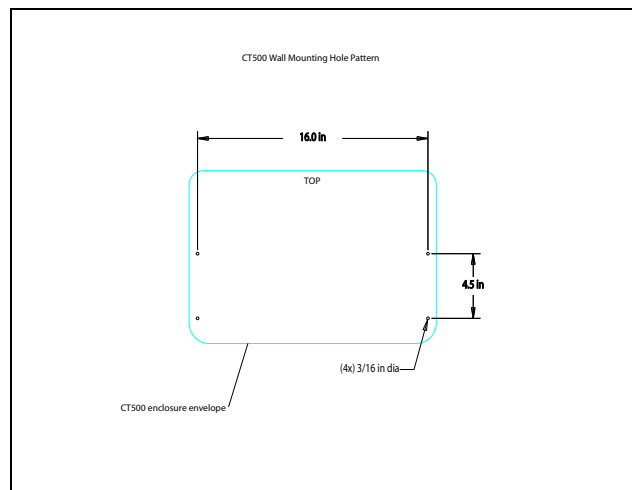
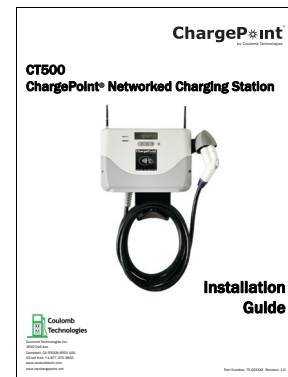
These steps are detailed in the remainder of this chapter.

Step 1 - Check box for correct contents

The CT500 ChargePoint® Charging Station ships in a box containing:

- Main assembly
- Holster
- Holster bolts (3)
- Antenna(s)*
- Mounting template
- Installation Guide

**The CT500 ships with either one or two antennas, depending on the specific model that was ordered.*



Step 2 - Attach holster

Using a #2 Phillips screwdriver, attach the holster to the main assembly using the three supplied Holster bolts.



Step 3 - Remove front panel

Using a #2 Phillips screwdriver, loosen the 2 captive screws located on each side of the front panel. Pull the front panel downward to remove.

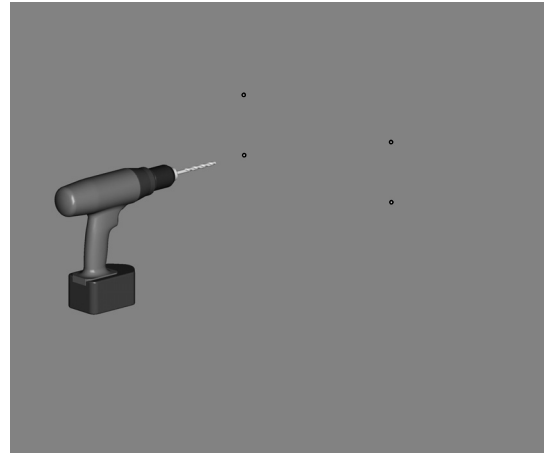


Step 4 - Mount to wall

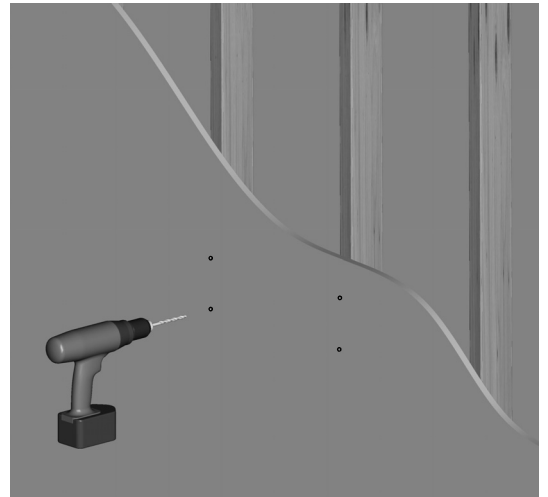
Drill four 3/16" holes in the wall, as illustrated. Use the supplied template to ensure correct alignment.

⚠ IMPORTANT: The top of the CT500 must be mounted no higher than a maximum height of 48" above the surface to comply with the Americans with Disabilities Act (ADA).

Masonry



Sheetrock



Bare studs



Step 4 - Cont'd

Align the CT500 to the mounting surface, and fasten to the wall using a 3/8" socket wrench to fasten the four 1/4" x 2" lag bolts, fasten it to the wall.

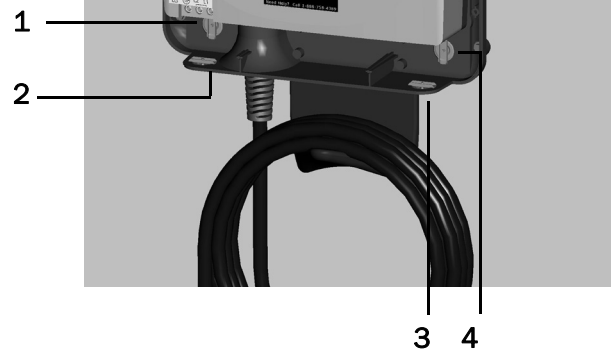


Step 5 - Install conduit

Choose the appropriate conduit opening and, if necessary, remove its cover.

NOTE: The CT500 has four conduit openings, three of which are covered. If you remove a cover, use it to cover the remaining unused conduit opening.

The CT500 has four conduit openings—two openings from the back and two from the bottom



After running the wiring through $\frac{3}{4}$ " (19 mm) conduit, insert the conduit into the selected opening.



Step 6 - Connect wires to wiring terminals

Pull the 240V L1 and L2 wires, and the Ground wire, into body assembly and connect to wiring terminals.

Strip wires ¼" (6 mm), insert in terminal block, and tighten screws to 18 ½ inch-lbs (2.1 Nm).

 **IMPORTANT:**

- Requires dedicated 40A breaker.
- Use copper conductors only.
- Do NOT provide GFCI protection at panel. The CT500 has built-in GFCI protection.
- In areas with frequent thunder storms, add surge protection at the service panel for all circuits.

Before proceeding with the next step, test the unit by restoring power. When the circuit is live, you should see a sequence of power-up message on the CT500's display. If this is not the case, turn off power and check the wiring connections.



Use copper conductors only.
Input terminal recommended tightening torque:
18.5 in.-lbs. (2.1 Nm)
Input terminal wire size range:
6 to 10 AWG (13mm² to 4mm²) solid / stranded.

SEE INSTALLATION GUIDE



Step 7 - Replace front panel

Align the front panel with the main assembly and push upwards into place until the edges meet.

Using a #2 Phillips screwdriver, tighten the two captive screws located on each side of the front panel.



Insert the connector into the holster.



Step 8 - Attach antennas

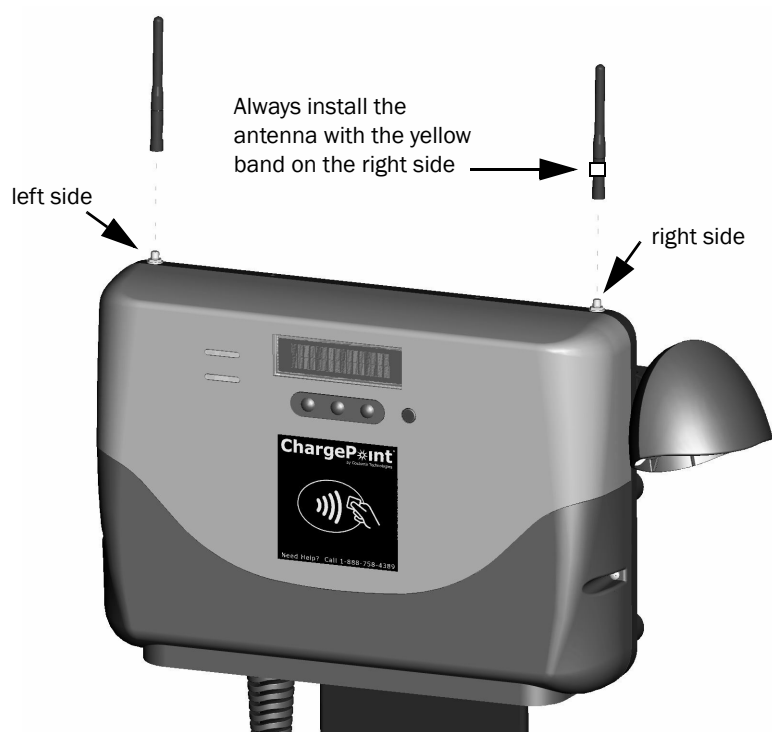
Attach the antennas to the top of the main assembly as shown. Turn the antenna clockwise to hand-tighten.

NOTE: The CT500 ships with either one or two antennas, depending on the specific model that was ordered.

Follow these rules when installing the antenna(s):

- Always install the antenna **WITH** the yellow band on the right side.
- Always install the antenna **WITHOUT** the yellow band on the left side.

You have now finished installing the CT500 ChargePoint® Charging Station.





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