

ChargePoint Express 100 (CPE100) Charging Station



1-888-758-4389 | [chargepoint.com](https://www.chargepoint.com)

-chargepoint+

963852741



ChargePoint, Inc.
254 E. Hacienda Ave.
Campbell, CA 95008-6617 USA
US toll free: +1-877-370-3802
www.chargepoint.com

Installation Guide

Document P/N: 75-001149-01 Rev. 1

SAVE THESE IMPORTANT SAFETY INSTRUCTIONS

This manual contains important instructions that must be followed during installation of a ChargePoint® Networked Charging Station.

Grounding instructions

The ChargePoint® Charging Station must be connected to a grounded, metal, permanent wiring system; or an equipment-grounding conductor is to be run with circuit conductors and connected to the equipment grounding terminal or lead on the Electric Vehicle Supply Equipment (EVSE). Connections to the EVSE shall comply with all applicable codes and ordinances.

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case, you will be required to correct the interference at your own expense. Important: Changes or modifications to this product not authorized by ChargePoint, Inc., could affect the EMC compliance and revoke your authority to operate this product.

Exposure to Radio Frequency Energy: The radiated power output of the 802.11 b/g/n radio and cellular modem (optional) in this device is below the FCC radio frequency exposure limits for uncontrolled equipment. This device should be operated with a minimum distance of at least 20 cm between the 802.11 b/g/n and cellular antennas and a person's body and must not be co-located or operated with any other antenna or transmitter by the manufacturer, subject to the conditions of the FCC Grant.

Industry Canada

This device complies with Industry Canada license-exempt RSS standard(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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

FCC/IC Compliance Labels

Go to <http://www.chargepoint.com/labels/>.

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 all applicable codes and ordinances.

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 ChargePoint, Inc. ChargePoint, Inc. 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 ChargePoint products are provided "AS IS," and ChargePoint, Inc. 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.

Limitation of liability

IN NO EVENT SHALL CHARGEPOINT, INC. OR ITS AUTHORIZED DISTRIBUTORS BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST PROFITS, LOST DATA, LOSS OF USE, COST OF COVER, OR LOSS OR DAMAGE TO THE CHARGEPOINT® CHARGING STATION, ARISING OUT OF OR RELATING TO THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF CHARGEPOINT, INC. OR ITS AUTHORIZED DISTRIBUTORS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Copyright and trademarks

©2016 ChargePoint, Inc. All rights reserved. This material is protected by the copyright laws of the United States and other countries. It may not be modified, reproduced or distributed without the prior, express written consent of ChargePoint, Inc. CHARGEPOINT is a U.S. and European Union registered trademark and service mark of ChargePoint, Inc. and can not be used without the prior written consent of ChargePoint. All other products or services mentioned are the trademarks, service marks, registered trademarks or registered service marks of their respective holders. ChargePoint, Inc. has several patents filed.

Contents

1 Introduction

Product overview	1-1
Before you begin	1-1
Grounding instructions	1-2
Specifications	1-2
Handle with care	1-3

2 Planning your Installation

Charging cable proximity	2-1
Conduit locations	2-1

3 Installing the CPE100

Tools and materials included	3-1
You will need	3-2
Overview of steps	3-2
Step 1: Position and unpack the shipping crate	3-3
Step 2: Mount the CPE100	3-4
Wall mounting instructions	3-4
Step 3: Connect the wiring	3-6
Before you connect	3-6
Follow these steps	3-7
Step 4: Preparing the CPE100 for operation	3-8
Step 5: Verifying that the CPE100 operates correctly	3-9

4 Preparing the station for activation on ChargePoint

Before you start	4-1
Overview of steps	4-1
Pinpointing the station	4-2
Post-installation Checklist	4-4

5 Operating the CPE100

Starting a charging session	5-1
Stopping a charging session	5-1
Stopping a charging session in an emergency	5-2
Error messages	5-3

6 Maintaining the CPE100

General maintenance6-1

Exterior maintenance6-1

A Mounting the CPE100 on a pedestal

Before you start A-1

Overview of steps A-2

Mounting the pedestal to a new concrete pad A-2

Mounting to an existing concrete surface A-5

Mounting the CPE100 on a pedestal A-7

Introduction

1

This document provides important instructions that must be followed when installing the CPE100.

Important:



- The CPE100 must be installed and serviced by ChargePoint-certified installers only.
- Ensure that the mounting method and all connections comply with local codes and ordinances.
- Observe all local and national safety regulations.
- Observe local regulations regarding wiring different circuits in the same conduit. In general, all conductors occupying the same conduit must have an insulation rating equal to at least the maximum circuit voltage applied to any conductor within the conduit.
- The CPE100 must be connected to a circuit provided with appropriate branch circuit over-current protection in accordance with the National Electrical Code, ANSI/NFPA 70.

Product overview

The CPE100 converts 400-480VAC three phase voltage into DC current to directly charge an electric vehicle's lithium ion battery. The CPE100 uses an SAEJ1772 DC Combo-compliant communications protocol and power connector.

Before you begin

- **Take the online training course to become a ChargePoint Certified Installer and get a log-in for ChargePoint. If you do not complete this training, you will be unable to complete the installation process.**
- Watch the CPE100 charging station installation instructional video, available on the ChargePoint Website at www.chargepoint.com/support-guides/.
- Ensure that the appropriate wiring, circuit protection, and metering is in place at the installation location by reviewing the specifications, wiring diagrams, and grounding requirements described chapters 1 and 2 of this guide.
- Verify that the installation site has a load capacity sufficient to support the CPE100.
- Have a ChargePoint O&M Partner validate the site chosen for the charging station. Contact ChargePoint for site validation inquiries.
- Ensure that adequate CDMA (Verizon or Sprint) or GSM (AT&T, Rogers) cellular coverage is available at the installation location. To ensure adequate signal strength in underground garages or other enclosed parking structures, cellular repeaters may be required.
- Review the contents of this guide to familiarize yourself with the installation steps.

Grounding instructions

The CPE100 must be connected to a grounded, metal, permanent wiring system. An equipment-grounding conductor must be run with circuit conductors and connected to an equipment-grounding terminal or lead on battery charger.

An insulated grounding conductor that is identical in size, insulation material, and thickness to the grounded and ungrounded branch-circuit supply conductors—except that it is green with or without one or more yellow stripes— is to be installed as part of the branch circuit that supplies the unit or system. This grounding conductor is to be grounded to earth at the service equipment or, when supplied by a separately derived system, at the supply transformer.

Specifications

Electrical input

Input Power	26.6kW
Input Voltage	400 - 480VAC 3 phase
Input Current	32A @ 480VAC
Input Frequency	60Hz \pm 5%
Required Service Panel Breaker	3-pole 40A breaker on dedicated circuit, non-GFCI type
Standard Wiring	4-wire 3 phase (L1,L2,L3,Earth)

Electrical output

Nominal Output Power	24kW (@387-460 V)
Output Voltage	300 - 460VDC
Output Current	62A max

Functional interfaces

Connector Types	CCS1 (SAE J1772 DC Combo)
Cable Length	6.1 m (20')
LCD Display	2 line LCD display
Card Reader	ISO 15693, ISO 14443, NFC

Safety and connectivity features

Vehicle Safety Communication	CCS1 -SAE J1772 over PLC
Plug-out Detection	Power terminated per JEVs G104
Power Measurement Accuracy	+/- 2% from 10% to full scale
Power Report/Store Interval	15 minutes, aligned to hour
Wide Area Network	3G GSM, 3G CDMA

Safety and operational ratings

Enclosure Rating	Type 3R, IP 54
Safety Compliance	ETL certified, ETL certification complies with UL standards 2202, 2231-1, 2231-2
Surge Protection	6kV @ 3000A. In geographic areas subject to frequent thunderstorms, supplemental surge protection at the service panel is recommended.
EMC Compliance	FCC Part 15, Subpart B
Efficiency	>94%
Power Factor	0.93
Cooling	Forced air cooled
Operational Altitude	<1800 m (<6,000'), power derating applies at higher altitudes
Operational Temperature	-10 °C to 40 °C (14°F to 104°F) Output power derating may apply @ 30°C (86°F)
Storage Temperature	-10 °C to 40 °C (14°F to 104°F)
Operating Humidity	Up to 95% @ +50 °C (122 °F) non-condensing

Generic specifications

Dimensions (Enclosure with Mounting Bracket)	790 x 490 x 310 mm (31.1"H x 19.3"W x 12.2"D)
Shipping Dimensions	1092 x 635 x 635 mm (43"H x 25"W x 25"D)
Weight	68 kg (150 lb)
Shipping Weight	105 kg (231 lb)

Express 100 Pedestal specifications

Material	Stainless Steel
Installation Footprint (Wall Mount)	330 x 330 mm (13" x 13")
Dimensions	1422 x 584 x 508 mm (56.6"H x 23.9"W x 20.1"D)

NOTE: ChargePoint, Inc. reserves the right to alter product offerings and specifications at any time without notice, and is not responsible for typographical or graphical errors that may appear in this document.

Handle with care



Important: Always transport and store the CPE100 in its original packaging in a horizontal position.

Planning your Installation

2

There are two ways to mount the CPE100:

- On a wall that is capable of supporting a 150-lb. dynamic load
- On a pedestal that has been mounted on a concrete pad (see Appendix A)

Before mounting the CPE100, it is important to determine a suitable mounting location that meets these requirements:

- The mounting location must be capable of supporting 150lb (65Kg).
- The CPE100 must be mounted at least 24" above grade.
- The mounting location should not obstruct air intake and exhaust
- The fasteners used for wall-mounting must countersunk head-type concrete screws or sleeve anchors, ¼" with a minimum length of 1½"



WARNING: The CPE100 employs parts, such as switches and relays, that may produce arcs or sparks when used under normal operating conditions (for example, in a garage). Locate the CPE100 in a room or enclosure consistent with local, state, and national electrical installation guidelines.

Charging cable proximity

When choosing the installation location, it is important to ensure the CPE100's charging connector can easily reach vehicles' charging ports without effort or strain. The CPE100 charging cables can reach up to 14 feet (4.25 m).

Conduit locations

The CPE100 accommodates service wiring through conduit installed above ground. (When the CPE100 is mounted on a pedestal, conduit can be installed underground.)

Above-ground conduit

When service wiring is supplied above ground or down a wall, it enters the CPE100 through the bottom of the station.

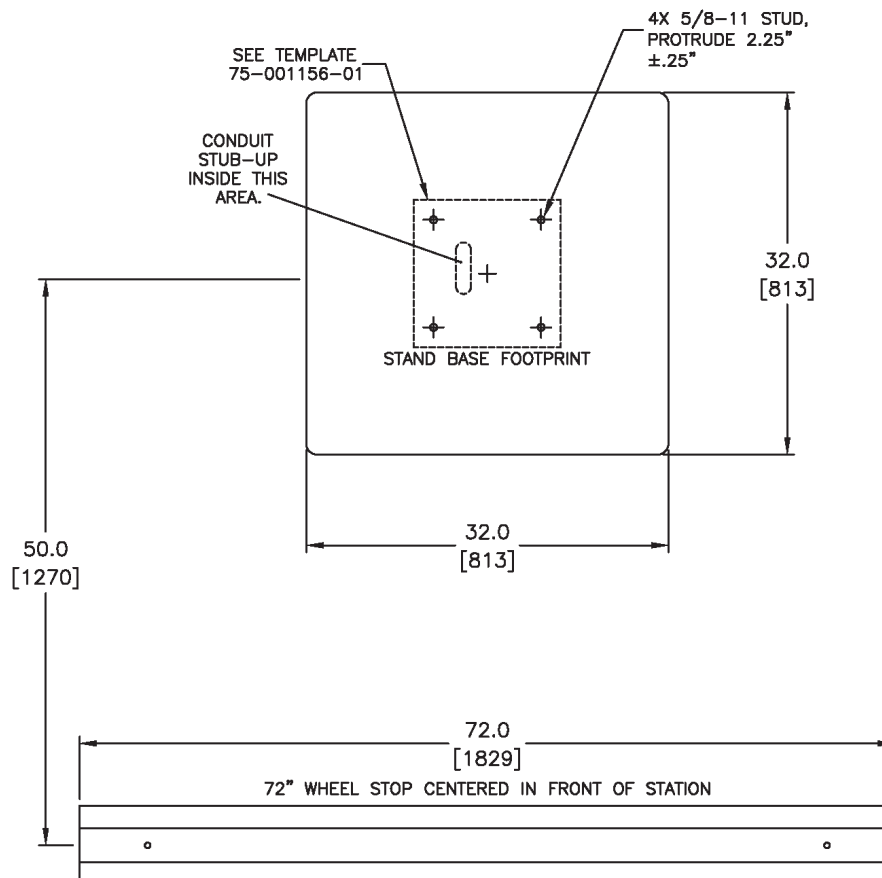
Underground conduit

These are the basic steps for using underground conduit with a pedestal-mounted CPE100. See Appendix A for detailed instructions.

- 1 Fabricate a plywood template using template guide 75-001152-01 (illustrated below) which is stapled into the center of this guide. Print the template at 100% scale on 11" x 17" paper and then verify at least one dimension.
- 2 Create a new concrete pad that meets the requirements specified in Appendix A.
- 3 Install the pedestal.
- 4 Pull the wiring.

NOTES:

1. CONCRETE PAD FOOTING TO BE 24" BELOW GRADE MINIMUM.
2. CONCRETE TO BE 3000 PSI COA CLASS-A.
3. REINFORCE AND DOWEL TO SURROUNDING CONCRETE WITH REBAR.
4. PAD DIMENSIONS SHOWN ARE MINIMUM REQUIRED. MAY NEED TO BE LARGER. CONSULT AN ENGINEER AND LOCAL CODES TO ENSURE A COMPLIANT INSTALLATION.
5. MOUNTING HARDWARE REQUIRED:
 - BOLTS: 5/8-11 X 9" MIN. F1554 GRADE 55 HOT-DIPPED GALVANIZED THREADED BOLTS - 4 EA
 - NUTS: 5/8-11 HEAVY GALVANIZED HEX NUTS (DH RATED) - 16 EA
 - WASHERS: GALVANIZED WASHERS (ASTM F436) - 12 EA



Installing the CPE100

3

After the installation location is prepared as described in Chapter 1, you are ready to begin the installation.



IMPORTANT SAFETY INSTRUCTIONS

- Confirm that the installation site has a load capacity sufficient to support the station.
- Do not block the intake or exhaust ports.
- The CPE100 must be grounded to true earth.
- Shut off the power supply before opening the station.
- Do not touch the inside components of the CPE100 while it is powered or operational.
- The CPE100 includes capacitors that retain energy after the station is powered off. Wait at least 3 minutes with the power off before opening the station.
- Ensure no voltage is applied when you check inside the CPE100.
- Operate the CPE100 only when the station door is closed and locked.

Tools and materials included

- CPE100 Installation Guide
- Tamper-resistant Torx tool
- M6 fasteners for attaching the CPE100 to the mounting bracket
- CPE100 pedestal template guide
- Activation label (for pinpointing the station as described in Chapter 4, 'Preparing the station for activation on ChargePoint'.)

You will need

- #2 PoziDriv screwdriver/torque wrench
- Conduit and wiring—knockout on cabinet bottom is for 1" (25mm) conduit
- Service disconnect (min. 40A rated)

If mounting on a wall:

- 1/4" anchors appropriate for wall-mounting application (x6)
- 1/4" screws appropriate for wall-mounting application (x6)
- Hammer drill
- Drill bit appropriate for the type of wall on which you are mounting the station
- Screwdriver suitable for chosen screws

If mounting on a pedestal (see Appendix A):

- Galvanized nuts 5/8-11 (x12)
- Heavy washers 5/8 ID (x8)
- Headless bolts (threaded rod), 5/8-11 x 9" minimum (x4)
- Concrete, minimum 3000 PSI

Overview of steps

- 1 Position and unpack the shipping crate (see page 3-3).
- 2 Mount the CPE100 (see page 3-4).
- 3 Connect the wiring (see page 3-6).
- 4 Prepare the CPE100 for operation (see page 3-8).
- 5 Verify that the CPE100 operates correctly (see page 3-9).



Important: After installation is complete and before leaving the installation site, you will have to prepare the station for activation. To do so, you will need activation labels for all the stations in this group. An activation label is included in the shipping box with each station.



Important: Preparing the station for activation on ChargePoint involves filling in the Post-installation Checklist on page 4-4, detaching the form from this document, and providing it to the person responsible for activating the station on ChargePoint. After doing so, the installation of the CPE100 charging station is complete.

Step 1: Position and unpack the shipping crate

The CPE100 is enclosed in a wooden crate with foam packing.



CAUTION:

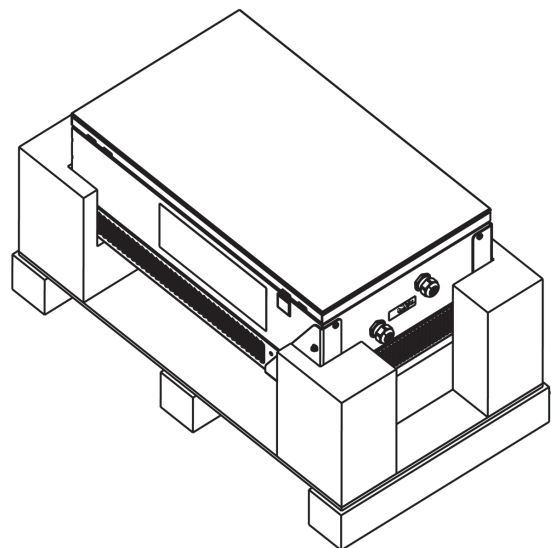
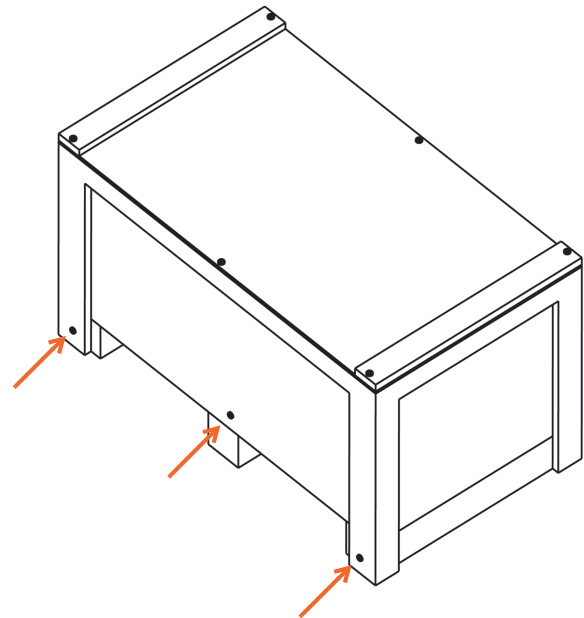
- Transport the CPE100 in its horizontal position only, using appropriate lifting equipment (forklift, pallet jack, engine hoist, crane, straps, and so on).
- Ensure that the personnel lifting the station are able to lift a weight of 150lb (68Kg). You need two people to lift the CPE100 out of its shipping crate.
- Check that the crate is in good condition and that the CPE100 is not damaged. If damage is evident, make a formal complaint to the transporter and notify ChargePoint at 1-877-850-4562.

- 1 Using appropriate lifting equipment, position the crate as close to the installation location as possible.
- 2 Remove the six screws from the bottom of the crate—three from each side, as shown in the figure at right.



Important: Collect all the screws and place them in a plastic bag, or tape them together for proper disposal. Do not leave any screws in the parking area, where they may puncture tires.

- 3 Lift the crate upward and off the base.
- 4 Remove the CPE100 from its packaging and place it on top of the crate for easy access.



Step 2: Mount the CPE100

There are two ways to mount the CPE100:

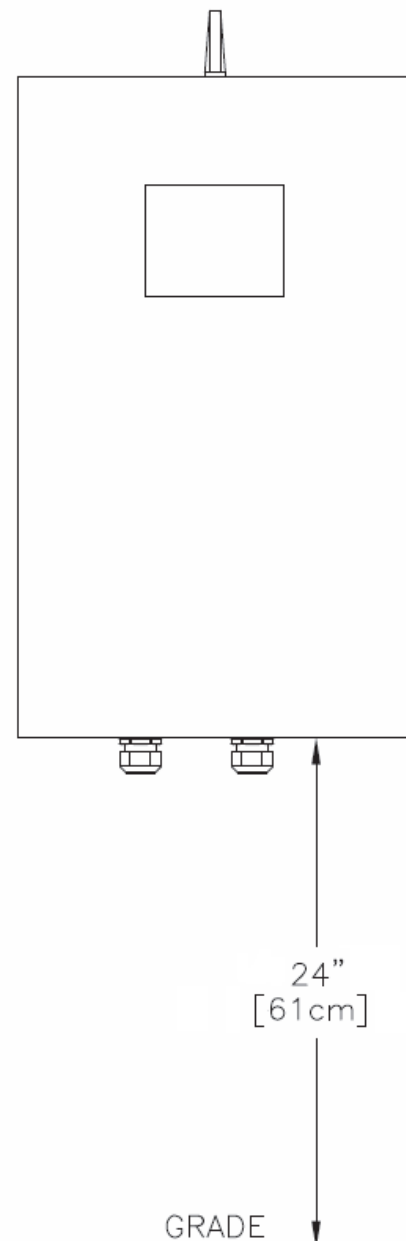
- On a wall that is capable of supporting a 150-lb. dynamic load (described in this section)
- On a pedestal that has been mounted on a concrete pad (see Appendix A for instructions)



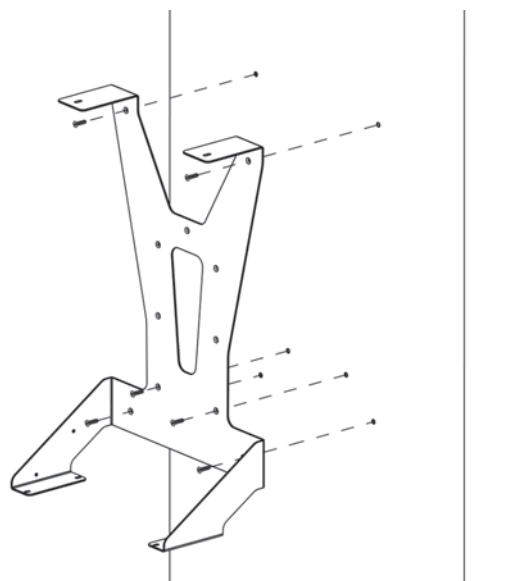
WARNING: The CPE100 employs parts, such as switches and relays, that may produce arcs or sparks when used under normal operating conditions (for example, in a garage). Locate the CPE100 consistent with local, state and national electrical guidelines.

Wall mounting instructions

- 1 Choose a mounting location that is 24" above the base of the wall.
- 2 Choose 1/4" anchors and fasteners that are appropriate for the type of wall. Heads of fasteners must be flat to work with countersunk holes in the mounting bracket.
- 3 Using the tamper-resistant torx tool, remove the 6 screws from the mounting bracket on the back of the CPE100.
- 4 Use the mounting bracket as a template to mark hole locations on the wall. Ensure that you keep the mounting bracket level as you mark the holes.
- 5 Drill the holes appropriate for the type of anchors you have chosen.



- 6** Place the anchors and attach the bracket to the wall.

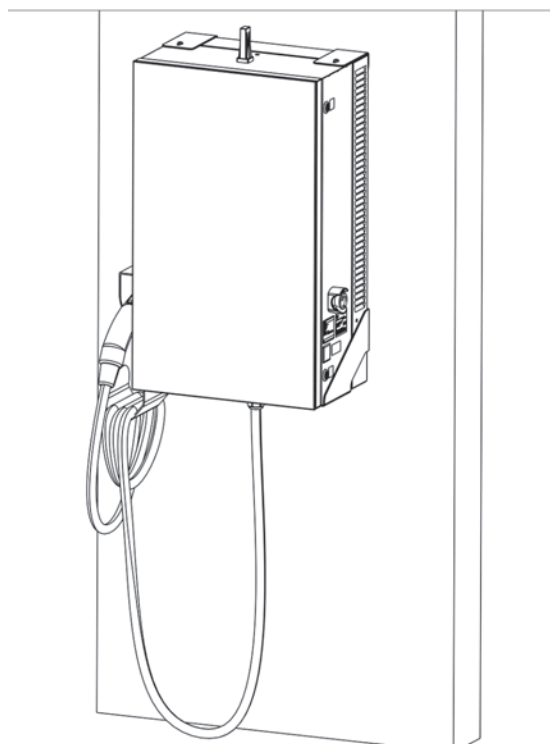
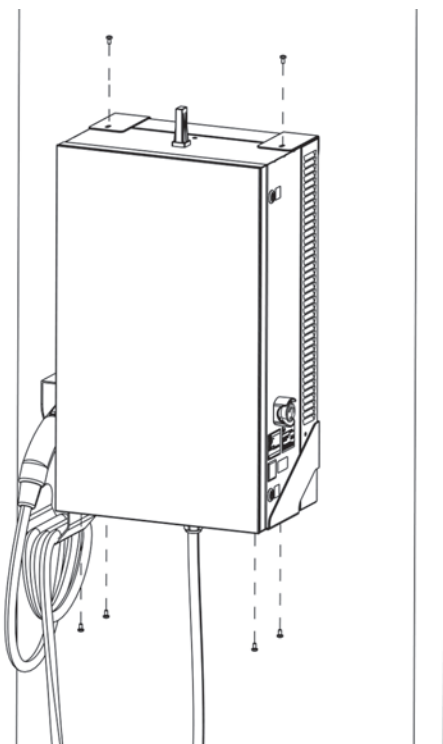


- 7** Lift the CPE100 onto its mounting bracket. Two people are required to lift the CPE100.

- 8** Fasten two (2) screws to the top of the CPE100.

- 9** Fasten four (4) screws to the bottom of the CPE100.

- 10** Mount the holster to the side of the CPE100.



Step 3: Connect the wiring



WARNING: Determining the CPE100's electrical requirements and installing the appropriate wiring must be performed by a qualified electrician.



WARNING: There is danger of electric shock.



WARNING: Ensure the power is off before connecting the wiring.



WARNING: The CPE100 has an integrated UL listed 40A breaker. See NEC Article 625 for installation requirements and check with the local jurisdiction to ensure compliance with electrical requirements.

Before you connect

Before connecting the wiring, note the following requirements:

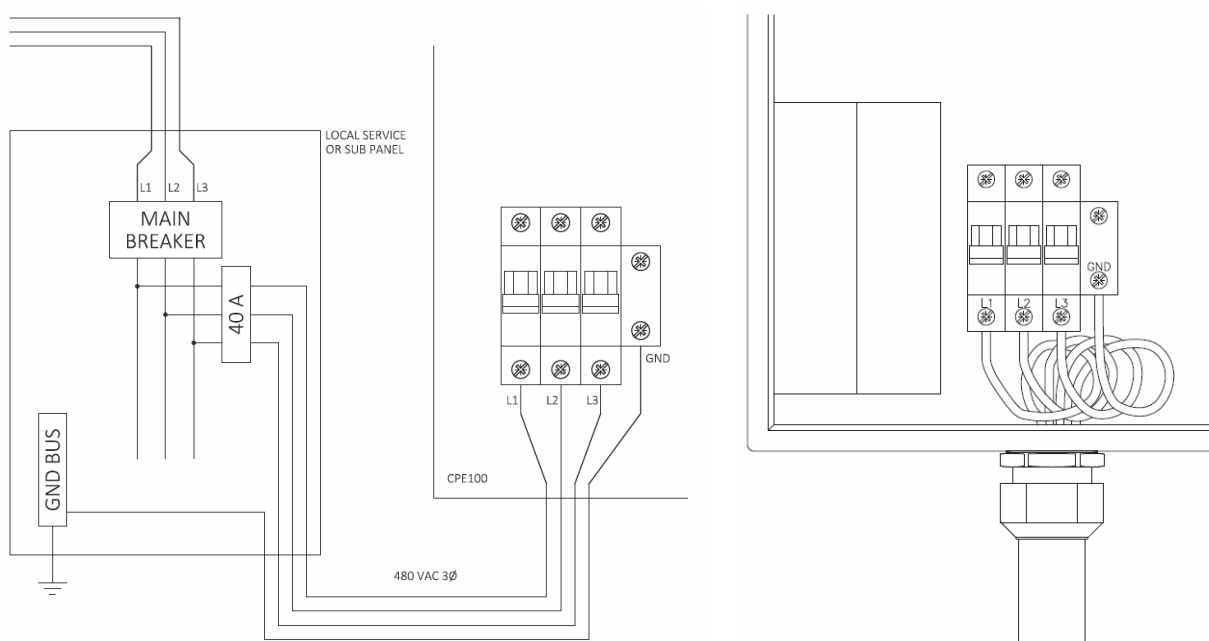
- Electrical input must be 480V three phase in a Wye configuration.
- Use 90 °C copper wire only.
- The circuit breaker at the panel must be OFF.
- The CPE100 must be grounded to true earth.
- You must install an insulated grounding conductor as part of the branch circuit that supplies the CPE100.
- The grounding conductor is to be grounded to earth at the service equipment or, when supplied by a separately derived system, at the supply transformer.
- All connections must comply with all local codes and ordinances.

Follow these steps

The CPE100 has an integrated UL listed 40 Amp breaker. See NEC Article 625 for installation requirements and check with the local jurisdiction having authority for any other electrical requirements.

- 1 Connect the AC input and grounding conductors to suitable 32A 400-480VAC three phase at 50 or 60Hz and 4 wire permanent wiring system that complies to NEC and/or all local codes and ordinances as applicable. Neutral wire is not required.
- 2 Using a #2 Pozidriv screwdriver, tighten input wire clamps to 20 pound-inches (2.3 Nm).

⚠ Important: Use 90 °C copper wire for the 480V 3-phase wiring between the disconnect and the terminal block.



Step 4: Preparing the CPE100 for operation

- 1** Ensure that all electrical connections are clean, tight, and free of wire strands and metal shavings.
- 2** Turn the external circuit breaker on and verify that the station is receiving 480VAC phase to ground and 277VAC phase to phase, +/- 10%. Voltages must be verified by a qualified electrician (480VAC and 120VAC).

Write down the input voltage measurements on the Post-installation Checklist (see page 4-4).
- 3** Turn on the internal circuit breakers.
- 4** Close and lock the station door.
- 5** Unwrap the charging connector and cable and stretch the cable out to remove any kinks.
- 6** Measure the cable to find the best spot to attach it to the retractor. Make sure that once it's attached to the retractor, the cable will not touch the ground.
- 7** Fasten the cable to the retractor, using the retractor coupler, then insert the connector into the holster.
- 8** Remove protective film from door.
- 9** Peel the activation sticker off the display and stick it on the bottom of the Post-installation Checklist (see page 4-4).
- 10** Wipe all surfaces with a soft cloth dampened with warm water.

The CPE100 is now ready for operation.

Step 5: Verifying that the CPE100 operates correctly

1 Tap a ChargePoint card on the card reader to start a session.

2 Plug the connector into a vehicle.

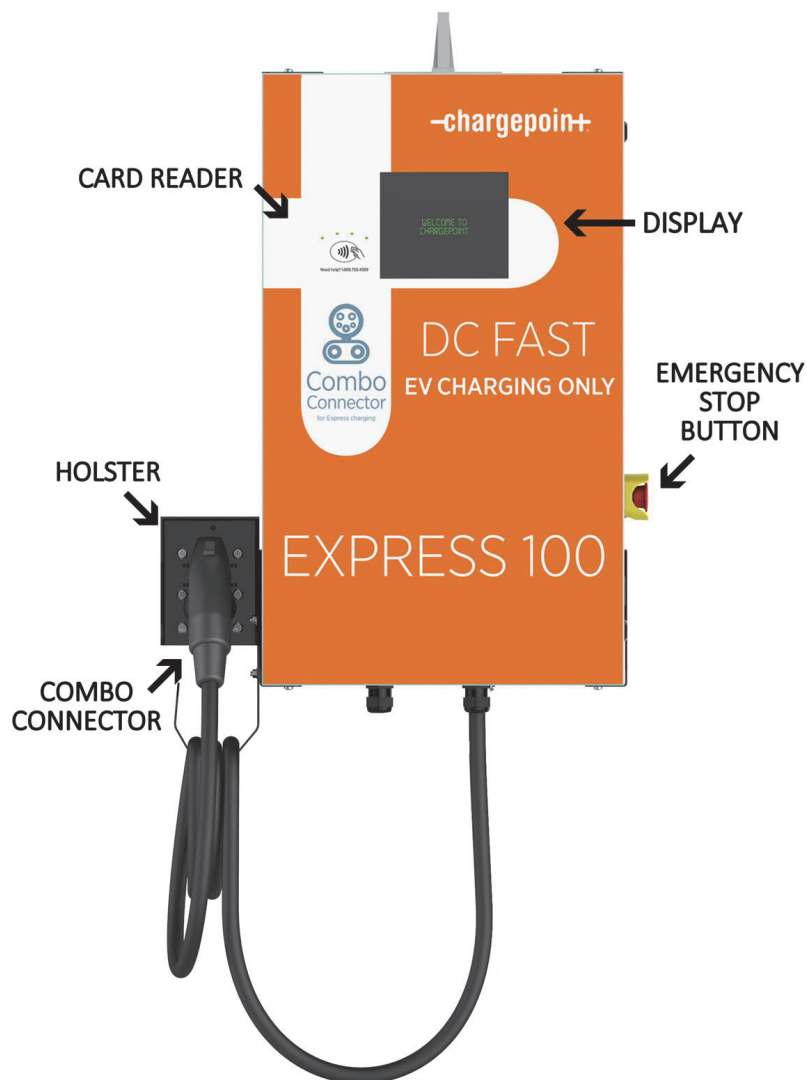
Charging begins.

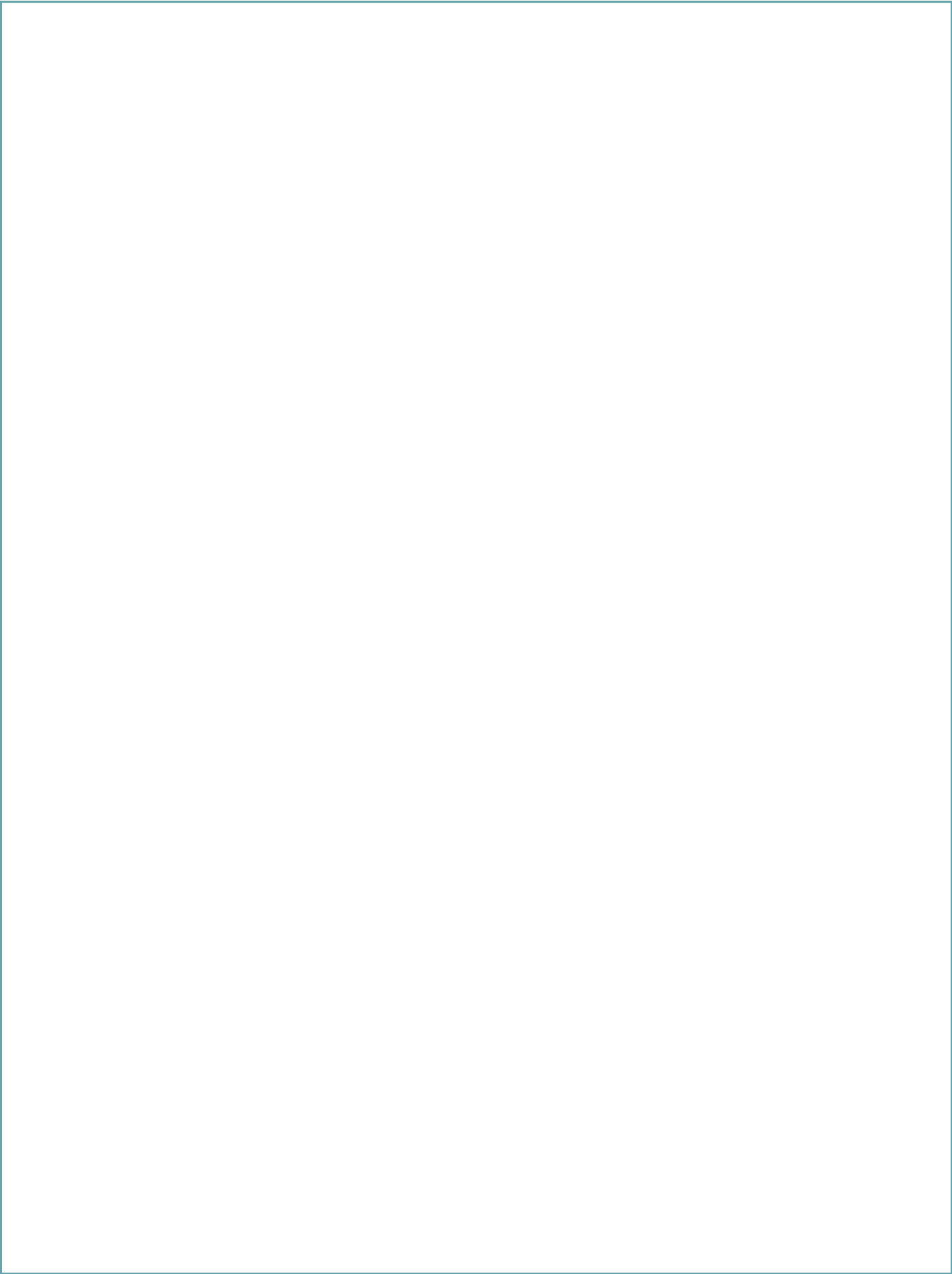
3 Tap the ChargePoint card on the card reader to end the session.

4 Return the connector to the holster.

The display shows session information, and potential error information.

If the station does not start up as expected, confirm that the wiring has been properly connected. If the station has been properly wired and still does not start up, contact ChargePoint at 1-877-850-4562.





Preparing the station for activation on ChargePoint

Before you start

Before leaving the installation site, you must prepare the station for activation. You will need:

- The CPE100's MAC address and activation password. (If you have not already removed it, you can find the Activation Label behind the plastic protection cover on the station display.)
- The exact location (to the parking space) where the CPE100 is physically installed.
- A smart phone with Internet access.
- Installer account information (user name and password) for ChargePoint. This was provided to you when you completed your ChargePoint Certification Training.

Overview of steps

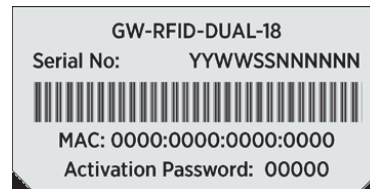
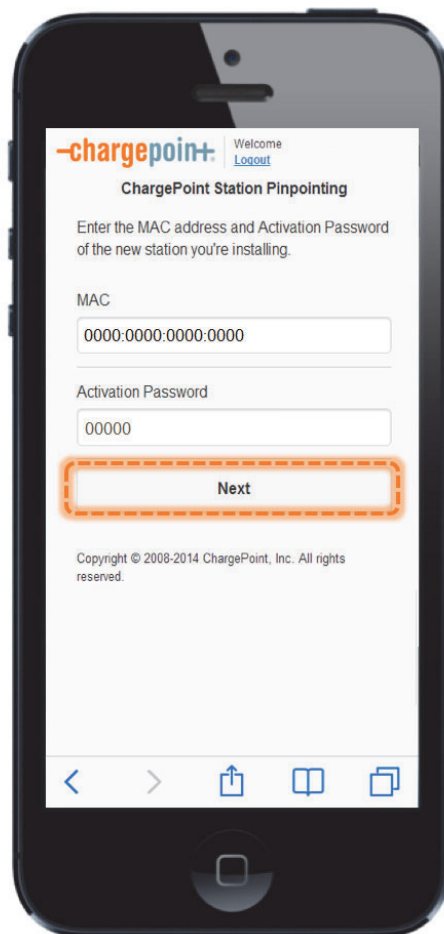
- 1 Pinpoint the station (see page 4-2).
- 2 Complete the post-installation checklist (see page 4-4).
- 3 Affix the Activation Label to the bottom of the Post-installation Checklist (see page 4-4).
- 4 **Contact the person responsible for activating the station on ChargePoint.**

Once you have completed these steps and contacted the person responsible for activating the station, the installation is complete.

Pinpointing the station

To activate the CPE100 and allow drivers to find the station on the ChargePoint map, you must “pinpoint” the station:

- 1 Using your smart phone, navigate to <http://m.chargepoint.com>.
- 2 Log in with your ChargePoint Installer credentials.
- 3 Enter the MAC address and activation password printed on the CPE100's activation label, then touch **Next**.



- 4 Confirm that you are installing a new CPE100 charging station.
- 5 When prompted, touch **OK** to share your GPS location data with the ChargePoint mobile site.
- 6 When prompted, touch **OK** to review the station's location on Google™ Maps.

- 7 Review the station address and zoom in to review the initial position of the station's pin on the map.



- 8 Using your finger, move the pin to the correct parking spot location (as shown in the figure above right).
If necessary, manually adjust the address of the CPE100's location.
- 9 Take a picture of the station using your smart phone, then scroll down to **Upload a Station Picture** and choose the station picture.
- 10 Add helpful information for drivers, such as 'Upstairs in parking garage' or 'By west mall entrance'.
- 11 Touch **SUBMIT** to pinpoint the CPE100 on the ChargePoint map.

Post-installation Checklist

Charge ID _____

Before leaving the installation site, complete this checklist for the CPE100. Then tear out this page and give it to the person responsible for activating the station. Complete one checklist for each station on site.

Customer:

Installer:

Name

Name

Address

Address

Contact

Contact

Phone

Phone

Email

Email

- ☐ All electrical connections are clean and torqued to specification.
- ☐ The conduit is installed properly. All joints are waterproof.
- ☐ The electrical enclosures are clean and free of wire strands and metal shavings.
- ☐ Input voltage measures 480V +/- 10%. L1 - L2 _____ V L2 - L3 _____ V L1 - L3 _____ V
- ☐ All covers have been replaced and all fasteners are properly tightened.
- ☐ The disconnect switch has a padlock to prevent unauthorized entry into the wiring area. No lock is permitted on the operating lever.
- ☐ The station shows a cellular signal strength on the display of at least 2 bars. Signal strength _____
- ☐ The card reader is functional. (Tap the ChargePoint card and verify that the card reader responds.)
- ☐ No error messages appear on the station display
- ☐ The MAC address appears on the station display and matches the MAC address on the activation label.
- ☐ The parking area is clean and free of all crate fasteners, packaging, and debris.
- ☐ All steps of the mobile pinpointing process have been completed.
- ☐ The station display shows the "AVAILABLE - TAP CARD TO START" message.
- ☐ The spare Activation Label is attached below.

Place Activation Label Here



WARNING: Do not use the CPE100 if a cable shows any sign of damage (for example, is frayed or has damaged insulation).



WARNING: Do not use the CPE100 if the enclosure or the charging connectors are broken, cracked, open or show any indication of damage.

Charging a vehicle with the CPE100 is safe, secure, and easy. The user-friendly display guides the driver through the process. The CPE100 requires drivers to scan a valid ChargePoint card to start a charging session.

Starting a charging session

- 1 Tap the ChargePoint RFID label on the card reader. The RFID label is on the front of this guide.
The CPE100 beeps once and the display message shows if the card was accepted.
If the card was accepted, the station display instructs the driver to plug in the vehicle.
- 2 Plug the charging connector into the vehicle.
- 3 Watch the CPE100's display. Charging begins when the vehicle acknowledges the CPE100.

Stopping a charging session

The CPE100 automatically stops when charging is complete. Fast charging occurs up to 80% of the vehicle battery's state of charge. The CPE100 adjusts its output according to the demands of the vehicle, ambient temperatures and other factors.

To stop charging before the end of the charging cycle follow these steps:

- 1 Tap the ChargePoint card across the card reader.

NOTE: Only the card that started the charging session can stop the charging session.

The display message shows that the charging session is ending.

When the charging session has ended, the vehicle unlocks the charge connector. (You may hear a click.)

- 2 Once the connector is unlocked, press its button and remove it from the vehicle.
- 3 Return the charging connector to the CPE100 holster.

Stopping a charging session in an emergency

If a dangerous situation arises during a charging session, use the Emergency Stop button to end the session quickly.

Such situations include:

- An impact to the vehicle being charged.
- An impact to the charging station that causes it to move, fall, or come loose from where its mounted.
- Any event that causes damage to the vehicle or to the charging station's wiring, charger, charge cord, or charging connector.
- Arcing or sparking noises, smoke, or fire involving the vehicle, cable, or charging station.
- Flooding that may involve water coming into contact with electrically live wires or parts.



Important: Use the Emergency Stop button **ONLY** in case of an emergency.

If there is no immediate danger, **DO NOT** use the Emergency Stop button; contact ChargePoint Support for assistance.

If you are not able to unlock your cable, **DO NOT** use the Emergency Stop button; instead, call ChargePoint Support for assistance.

ChargePoint Support: 1-877-850-4562

To stop a charging session in an emergency:

- 1 Press the **Emergency Stop** button on the right side of the station, as shown in the illustration on page 1.
The charging session stops (it takes about 30 seconds). An emergency-stop message appears on the display.
- 2 When charging has stopped and it is physically safe to do so, remove the connector from the vehicle and return it to the station's holster.

To reset the station after an emergency stop

Do a visual inspection of the station, cables, and connector and ensure that no damage has been sustained.

Damage to station

If you suspect that the station has sustained damage, contact ChargePoint Support at 1-877-850-4562. ChargePoint Support will assess the damage and provide instructions on how to proceed.

No obvious damage

If there has been no damage, or if the Emergency Stop button was pressed in error, you can reset the station yourself.

Turn the Emergency Stop button clockwise until it pops out.

The station is ready for use once it has performed a brief self-test and removed the emergency-stop message from its display.

Error messages

Error Code	Error Message	Description and Causes	Recommended Actions
0x00	ERR_NOERROR	Station is working normally	No action required.
0x01	ERR_Power_Supervisor_Failure	The Power Supervision Unit (PSU board) does not answer or has failed. <ul style="list-style-type: none"> The 24V power supply is OFF. The RJ45 wiring between the CCU and PSU boards is unplugged The CCU or PSU board has failed. 	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x02	ERR_EXT_Emergency_Stop	Emergency stop <ul style="list-style-type: none"> Emergency Stop button is engaged. 'Opened Door' detection is active, unwired, or defective. The RJ45 wiring between the CCU and PSU boards is unplugged CCU or PSU board has failed. Emergency wiring loop is opened. 	<ul style="list-style-type: none"> Check external Emergency Stop button and reset it if necessary. Make sure the station door is fully closed. Contact ChargePoint Support.
0x03	ERR_PSU_Emergency_Stop	Internal Emergency Stop order <ul style="list-style-type: none"> PSU board has sent an Emergency Stop Order via internal communication. Abnormal communication interruption between PSU and CCU boards. 	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x04	ERR_Abnormal_output_Voltage_at_start	Abnormal voltage detected at charger output during charger initialization or during charging initialization. <ul style="list-style-type: none"> A vehicle is connected and remaining voltage is present. Positive relay failure. EV battery relay failed. 	<ul style="list-style-type: none"> End the charging session and disconnect the vehicle. Try charging a different vehicle. Contact ChargePoint Support.
0x05	ERR_Output_Power_Switch_Failure	Abnormal values of voltages before and after the output relays; relays failure.	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x08	ERR_ShortCircuit	Short circuit detected—output voltage less than 30V and current above 5A-. <ul style="list-style-type: none"> The output voltage measurement circuit is not correctly connected. Current sensor failure. 	<ul style="list-style-type: none"> Contact ChargePoint Support.

Error Code	Error Message	Description and Causes	Recommended Actions
0x09	ERR_OverVoltage	Overvoltage—the output voltage rose to the maximum allowed value. <ul style="list-style-type: none"> Battery has reached the Maximum allowed voltage. Vehicle has opened battery relay during charge. Output circuit open (relays are not switched ON, output cable disconnected). Bad calibration. 	<ul style="list-style-type: none"> End the charging session and disconnect the vehicle. Try charging a different vehicle. Contact ChargePoint Support.
0x0A	ERR_ChargerOverHeating	Station is overheating <ul style="list-style-type: none"> The lateral vents are obstructed. Station is exposed to strong sunlight. Fan has failed. Temperature sensor has failed or is not connected. 	<ul style="list-style-type: none"> Remove any debris that is blocking the cooling fins (the heat sinks) on the back of the station. Contact ChargePoint Support.
0x0C	ERR_PSU_ABSENT	PSU is not detected <ul style="list-style-type: none"> 24V is OFF. The RJ45 wiring between the CCU and PSU boards is unplugged. The PSU is not programmed. The PSU board is not correctly plugged into distribution board. 	<ul style="list-style-type: none"> End the charging session and disconnect the vehicle. Try charging a different vehicle. Contact ChargePoint Support.
0x0D	ERR_PSU_TimeoutModeChange	The PSU board has failed.	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x0E	ERR_PSU_BadState	The PSU board has failed.	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x0F	ERR_Abnormal_internal_Voltage_at_start	Abnormal internal voltage detected at start.	<ul style="list-style-type: none"> End the charging session and disconnect the vehicle. Try charging a different vehicle. Contact ChargePoint Support.
0x17	ERR_BatteryUnderVoltage	Output voltage was under-voltage at start or during a charging session. <ul style="list-style-type: none"> Vehicle did not switch on its relays. The charging cable failed. The vehicle battery failed. Vehicle has not closed its battery contactors. 	<ul style="list-style-type: none"> End the charging session and disconnect the vehicle. Try charging a different vehicle. Contact ChargePoint Support.

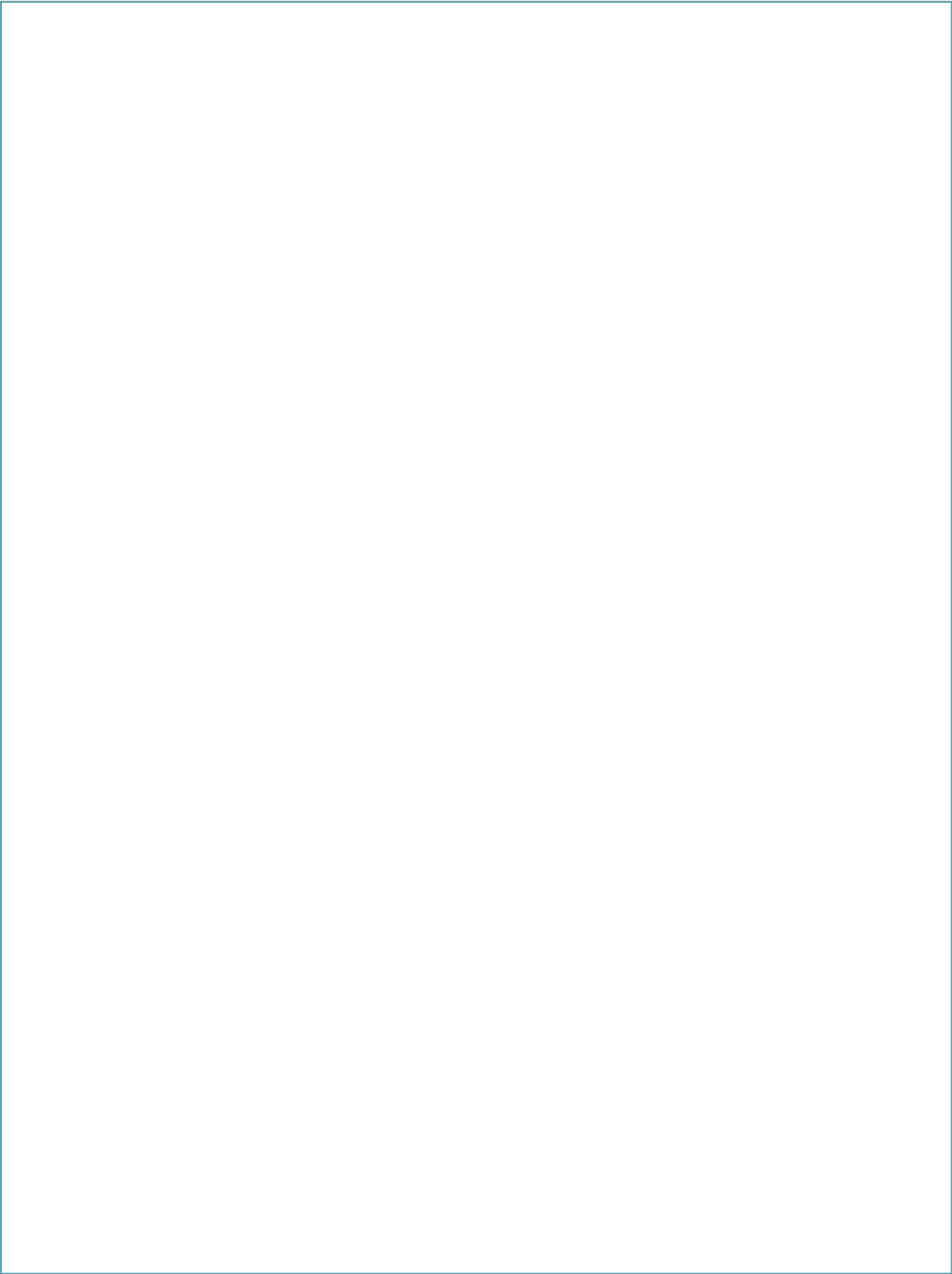
Error Code	Error Message	Description and Causes	Recommended Actions
0x1B	ERR_Insulation_Measure_Failure	Permanent Insulation control error detected <ul style="list-style-type: none"> • A load is connected to the charger output. • Insulation controller is not working properly. • Charger calibration is corrupted. 	<ul style="list-style-type: none"> • Contact ChargePoint Support.
0x1E	ERR_User_Charge_Interrupt	Charging cable was disconnected during a charging session (connector was not locked or was unplugged). Communication with the vehicle failed.	<ul style="list-style-type: none"> • End the charging session and disconnect the vehicle. • Try charging a different vehicle. • Contact ChargePoint Support.
0x1F	ERR_VehicleBadPilotState	The pilot signal has the wrong status. <ul style="list-style-type: none"> • Charging connector is not correctly plugged in. • Pilot signal was disturbed. • The vehicle failure. • The CCU board failed. 	<ul style="list-style-type: none"> • End the charging session and disconnect the vehicle. • Try charging a different vehicle. • Contact ChargePoint Support.
0x23	ERR_Pilot_Bad_State_ch	Pilot signal state changed abnormally during a charging session. Communication with the vehicle failed. <ul style="list-style-type: none"> • The connector not correctly plugged into vehicle. • The pilot signal was disturbed. • An Emergency stop was requested by the vehicle during a charging session. • The CCU failed. 	<ul style="list-style-type: none"> • End the charging session and disconnect the vehicle. • Try charging a different vehicle. • Contact ChargePoint Support.
0x25	ERR_EV_Not_ready	Vehicle is not ready for charging (an error was received from the vehicle)	<ul style="list-style-type: none"> • End the charging session and disconnect the vehicle. • Try charging a different vehicle. • Contact ChargePoint Support.
0x28	ERR_No_pwr_module	No power module available. <ul style="list-style-type: none"> • Power Modules have detected an over-voltage, over-temperature, or other failure and switched to protection mode. • Internal power module failure. • The vehicle has opened a relay during a charging session. 	<ul style="list-style-type: none"> • End the charging session and disconnect the vehicle. • Power off the charging station. Then, re-power the station. • Try charging a different vehicle. • Contact ChargePoint Support.
0x31	ERR_EVFAILED_RESSTemperatureInhibit	Error message sent by vehicle: Vehicle battery is too hot to be charged.	<ul style="list-style-type: none"> • End the charging session and disconnect the vehicle, Wait for the battery temperature to decrease, then try charging a different vehicle. • Contact ChargePoint Support.

Error Code	Error Message	Description and Causes	Recommended Actions
0x32	ERR_EVFAILED_EVShiftPosition	The vehicle's gearshift is in the wrong position.	<ul style="list-style-type: none"> End the charging session and disconnect the vehicle. Try charging a different vehicle. Contact ChargePoint Support.
0x33	ERR_EVFAILED_ChargerConnectorLockFault	Error message sent by vehicle: Vehicle is unable to lock the charging connector.	<ul style="list-style-type: none"> End the charging session and disconnect the vehicle. Try charging a different vehicle. Contact ChargePoint Support.
0x34	ERR_EVFAILED_EVRESSMalfunction	Error message sent by vehicle: Vehicle battery has failed.	<ul style="list-style-type: none"> End the charging session and disconnect the vehicle. Try charging a different vehicle. Contact ChargePoint Support.
0x35	ERR_EVFAILED_ChargingCurrentdifferential	Error message sent by vehicle: There was a mismatch between required current and current provided by the station. <ul style="list-style-type: none"> Power grid problem (cannot supply current requested by vehicle) Power module failure (cannot supply current requested by vehicle) Poor contact (relay has failed, contact has failed) Current sensor fail has failed. Current sensor did not calibrate correctly. 	<ul style="list-style-type: none"> End the charging session and disconnect the vehicle. Try charging a different vehicle. Contact ChargePoint Support.
0x36	ERR_EVFAILED_ChargingVoltageOutOfRange	Error message sent by vehicle: Voltage outside of vehicle tolerance	<ul style="list-style-type: none"> End the charging session and disconnect the vehicle. Try charging a different vehicle. Contact ChargePoint Support.
0x37	ERR_EVReserved_A	There was a timeout Error (V2G). <ul style="list-style-type: none"> Vehicle message was not received in allotted time. No message was received from the vehicle PLC communication was disrupted. 	<ul style="list-style-type: none"> Contact ChargePoint Support.

Error Code	Error Message	Description and Causes	Recommended Actions
0x3A	ERR_EVFAILED_ChargingSystemIncompatibility	Error message sent by vehicle: Incompatibility exists between charging station and vehicle. <ul style="list-style-type: none"> Current or voltage limits or software do not match. Vehicle's software version is not compatible with station's. 	<ul style="list-style-type: none"> End the charging session and disconnect the vehicle. Try charging a different vehicle. Contact ChargePoint Support.
0x3B	ERR_EVNoLink	Station is receiving no communication from the vehicle.	<ul style="list-style-type: none"> End the charging session and disconnect the vehicle. Try charging a different vehicle. Contact ChargePoint Support.
0x3C	ERR_SLACTimeout	SLAC vehicle timeout occurred after PWM started. <ul style="list-style-type: none"> The vehicle is in error mode. The charging connector is not plugged in to the vehicle correctly. There is a problem with the PLC. 	<ul style="list-style-type: none"> End the charging session and disconnect the vehicle. Power off the charging station. Then, re-power the station. Try charging a different vehicle. Contact ChargePoint Support.
0x3D	ERR_ETHNegoFailure	The CCU board has failed.	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x3E	ERR_ETHLinkFailure	The wrong CPL module is installed.	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x3F	ERR_PLCNoLink	No CPL communication. This is a CCU problem.	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x41	ERR_Authorization_TO	Charge authorization not received; there is a communication problem on the network.	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x42	ERR_Unplug_EV	The station is waiting for the driver to unplug the vehicle.	<ul style="list-style-type: none"> End the charging session and disconnect the vehicle. Try charging a different vehicle. Contact ChargePoint Support.
0x43	ERR_CP_CloseSession	The communication board has ended the charging session.	
0x44	ERR_V2G_SequenceError	The CCU software is out of date.	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x45	ERR_V2G_RequestError	The CCU software is out of date.	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x46	ERR_IHM_timeout	Communication timeout.	<ul style="list-style-type: none"> Contact ChargePoint Support.

Error Code	Error Message	Description and Causes	Recommended Actions
0x50	ERR_Connector_OverHeating	The charging connector is overheating.	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x52	ERR_ProxyPilot_Invalid	The pilot signal was not detected during the charging session. The proxy pilot wire is disconnected.	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x53	ERR_EV_Wrong_parameter	The CCU software is out of date.	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x54	ERR_V2G_FrameError	The CCU software is out of date.	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x55	ERR_Connector_Failure	The temperature sensor for the charging connector has failed or is not connected.	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x56	ERR_OUTDeltaV	Output voltage between post-relay and pre-relay is too high. <ul style="list-style-type: none"> The pre-charge request voltage is greater than the real battery voltage. The pre-charge relay is stuck. 	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x60	ERR_RelayJFailure		
0x80	ERR_PSU_FAULT	The PSU board has malfunctioned.	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x81	ERR_PSU_ARU	Refer to Error Code 0x03 on page 5-3.	Refer to Error Code 0x03 on page 5-3.
0x82	ERR_PSU_MODULE_COM	A communication error occurred between the PSU and the power module. <ul style="list-style-type: none"> There was a default on the RJ45 cables. The PSU board failed. The power module failed. A distri board connector failed. The software upgrade failed. 	<ul style="list-style-type: none"> Contact ChargePoint Support.
0x83	ERR_PSU_CCU_COM	A communication problem between the PSU board and the CCU board was detected by the PSU board. <ul style="list-style-type: none"> The RJ45 cable or connector failed The CCU board failed. The PSU board failed. 	<ul style="list-style-type: none"> End the charging session and disconnect the vehicle. Try charging a different vehicle. Contact ChargePoint Support.
0x87	ERR_PSU_COHERENCY	The PSU board failed.	<ul style="list-style-type: none"> Contact ChargePoint Support.

Error Code	Error Message	Description and Causes	Recommended Actions
0x88	ERR_PSU_INSULATION	Refer to Error Code 0x1B on page 5-5.	Refer to Error Code 0x1B on page 5-5.
0x89	ERR_PSU_LIMIT_VMAX	Refer to Error Code 0x09 on page 5-4.	Refer to Error Code 0x09 on page 5-4.
0x8A	ERR_PSU_SHORTCIRCUIT	Refer to Error Code 0x08 on page 5-3.	Refer to Error Code 0x08 on page 5-3.
0x8B	ERR_PSU_VRED	Bad internal Vred voltage has been detected. <ul style="list-style-type: none"> • An input breaker tripped. • An input contactor tripped. • A voltage grid imbalance or loss occurred. • A fuse failed. 	<ul style="list-style-type: none"> • Contact ChargePoint Support.
0x8C	ERR_PSU_INS_CONTROLLER_FAILED	The PSU has failed.	<ul style="list-style-type: none"> • Contact ChargePoint Support.
0x8D	ERR_PSU_DVRED	Unbalanced voltage between the input phases or loss of one of the input phases. Grid voltage instability.	<ul style="list-style-type: none"> • Contact ChargePoint Support.
0xA0	ERR_FL_PSU_FAULT	A problem with the PSU software has occurred. <ul style="list-style-type: none"> • Power supply to the PSU board failed during programming • The PSU board failed. • The power module failed. 	<ul style="list-style-type: none"> • Contact ChargePoint Support.
0xB0	ERR_NOAPPLICATION	The CCU bootloader (the software that boots the CCU) has failed. The CCU needs to be flashed.	<ul style="list-style-type: none"> • Contact ChargePoint Support.
0xB1	ERR_INVALIDAPP	The CCU bootloader has failed because of a software failure.	<ul style="list-style-type: none"> • Contact ChargePoint Support.
0xF0	WARN_INSULATION	Insulation warning	
0xFF	ERR_UNDEFINED	The CCU board has failed.	<ul style="list-style-type: none"> • Contact ChargePoint Support.



Maintaining the CPE100

6



Important: The locking key supplied with the CPE100 must be kept in a secure and known location by an individual that has read and understands the contents of this guide.



WARNING: DO NOT open the front cover at any time when input power is present.



WARNING: Capacitors in the CPE100 have high voltage for a period of time after the input power is disengaged. Wait at least 3 minutes with the power off before opening the station.

General maintenance

Perform weekly visual inspections of the outside of the CPE100.

Ensure that:

- The CPE100 is free of dust, leaves, and other debris.
- The Emergency Stop button is disengaged.
- The charging cable and connectors are undamaged. Look for visible cracks and breaks and other signs of damage.

Perform weekly inspections inside the CPE100.



CAUTION: You must power off the station before performing internal inspections.

Remove the station from service and contact ChargePoint if any of the following conditions are found:

- Abnormal sound from the cooling fans or power units.
- Abnormal odors, changes of inner materials, corrosion, anomaly in appearance, and so on.
- Moisture inside the CPE100. Accumulated moisture indicates a potential leak.
- Damage to the charging cable or connectors.
- Damaged or disconnected conduit or exposed conductors.

Exterior maintenance

Regular cleaning is recommended to avoid accumulation of debris/dust/dirt on or around the station. Wipe surfaces with a soft cloth dampened with water, or use an alcohol-based cleanser for harder-to-remove marks.

Do not spray the station with high pressure washers.

Do not use abrasives, harsh chemicals, or solvents on the station

Exterior Maintenance Checklist

- 1** Wipe surfaces.
- 2** Wipe metalwork.
- 3** Wipe the station display.
- 4** Check the charging connector for debris and inspect its contact pins for corrosion. If corrosion is present, contact ChargePoint.
- 5** Check air intake to the fans. Clear any debris blocking the intake.

Mounting the CPE100 on a pedestal

A

If required, you can mount the CPE100 onto a pedestal instead of a wall.

The pedestal can be mounted onto a newly poured concrete pad. If it is impossible to do so, however, it can be mounted to an existing concrete surface (in the case of a parking garage).

The installation steps and the items and tools required vary depending on the type of installation. This appendix provides basic guidelines for both types of installations.

Before you start



Important: Always check local codes to ensure compliance. The guidelines described here are the minimum requirements. Consult an engineer if necessary to ensure that the installation complies with all applicable codes.

Review the site to ensure that it is suitable for a CPE100 installation. Confirm that there is adequate clearance and that the CPE100 can be properly positioned so that the cable can reach the charge ports of any vehicle parked in the space.

You will need

NOTE: The materials listed here can be purchased from ChargePoint by ordering a CPE100 Concrete Mount Kit (CPE100T-CCM).

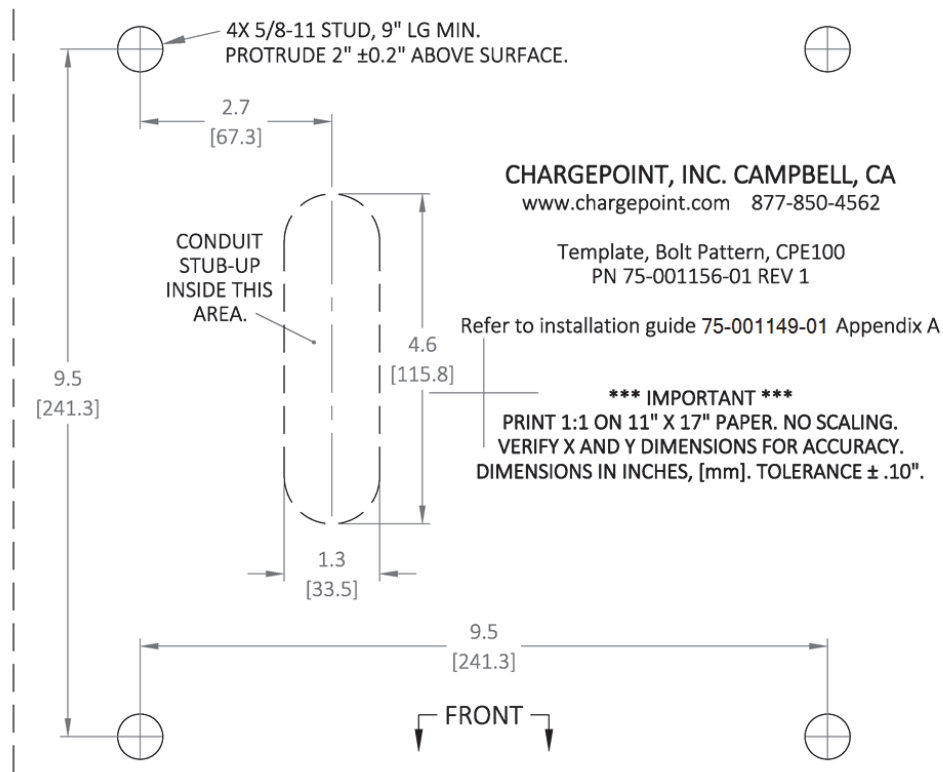
- Bolt Installation Template (1)—Stapled into the center fold of this document or available for download from <http://www.chargepoint.com/support-guides/>

Ensure that the PDF version is accurate by printing it at 100% scale on 11" x 17" paper and then verifying at least one dimension.

- Plywood, ½" thick minimum, 12" x 18" minimum.
- Galvanized Washers [ASTM F436] (x12).
- 5/8" - Heavy Galvanized Hex Nuts [DH Rated] (x12).
- 5/8" - 11 x 9" F1554 Grade 55 hot-dipped galvanized headless bolts (x4).
- Concrete, 3000 PSI minimum.
- 1-1/4" conduit as required, terminating in a threaded female coupling flush with the top surface of the concrete.

NOTE: If you are installing onto an existing concrete surface, you need only 4 of the hex nuts and 4 of the washers. You also need several consumable materials as described on page A-5.

Bolt installation template (not to scale)



Overview of steps

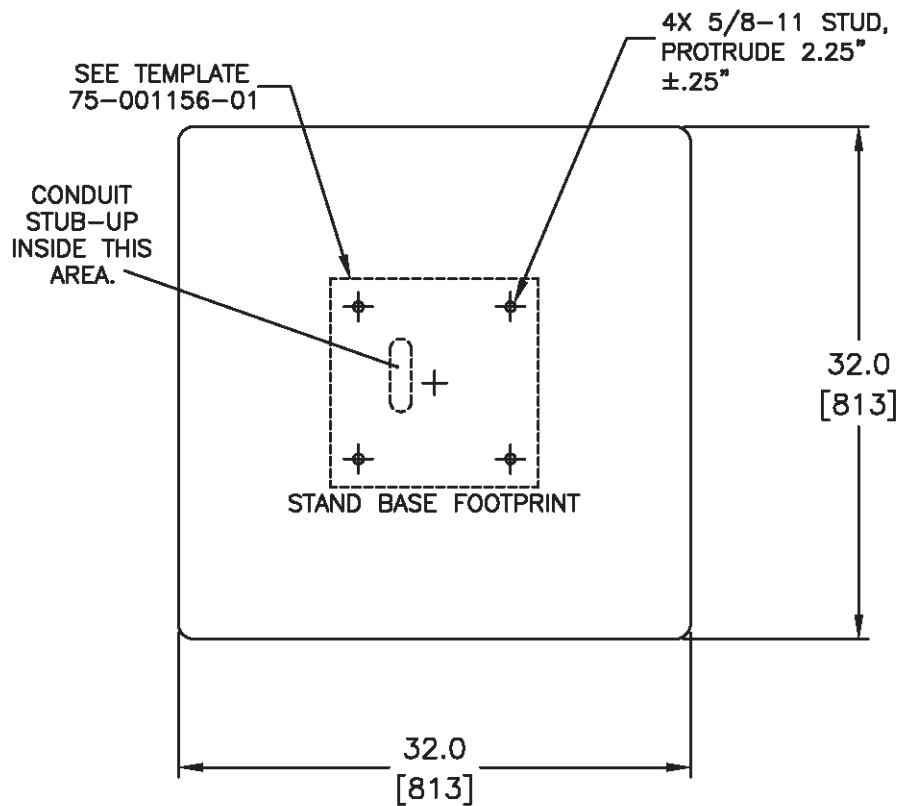
- 1 Mount the pedestal to a new concrete pad (see page A-2).
or
Mount the pedestal to an existing concrete surface (see page A-5).
- 2 Mounting the CPE100 to the pedestal (see page A-7).

Mounting the pedestal to a new concrete pad

Important: Always check local codes to ensure compliance. The guidelines described here are the minimum requirements. You may need to increase the dimensions of the concrete pad if required by local codes or soil conditions.

- The concrete pad must be reinforced with rebar and must measure at least 48" wide x 32" long (front to back), and 24" deep (below grade). This is approximately 1 cubic yard of concrete. ChargePoint recommends that the top of the pad be 6" above grade.
- Use at least 3000 PSI concrete.
- The top surface of the pad must be perfectly flat and level. The CPE100 is bolted directly to the concrete pad. No spacers are to be used under the CPE100.
- The bolt threads must extend 1-3/8" above the concrete.
- The conduit must be 1-1/4" trade size. The top of the female threaded coupling must be flush with the top surface of the concrete.

Concrete pad dimensions

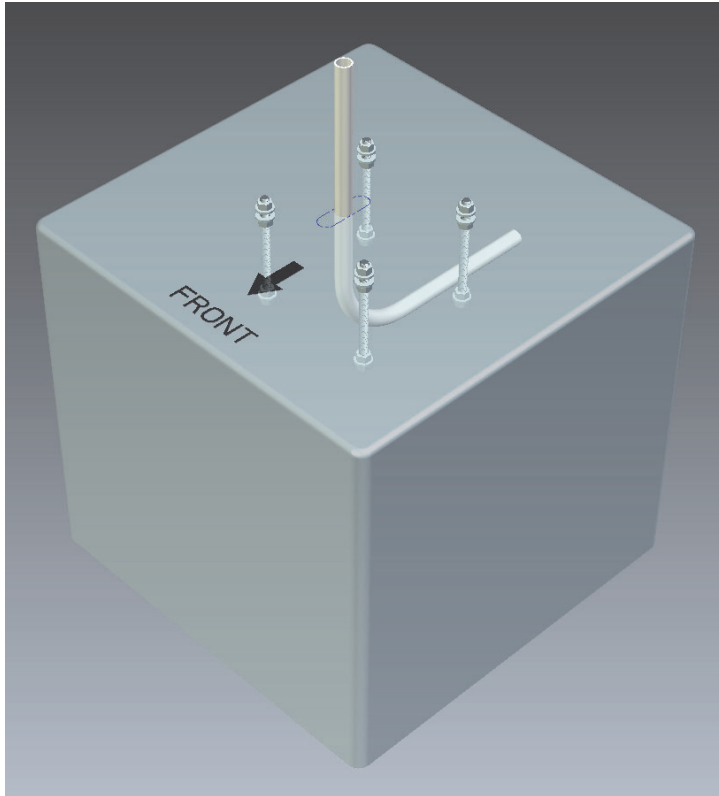


Follow these steps:

- 1 Trench and excavate as necessary.
- 2 Build a concrete form.
- 3 Run 1-1/4" conduit from the disconnect. Thread a nipple or short section of conduit into the coupling. This will determine the position of the plywood template and mounting bolts.
- 4 Add rebar as necessary. Dowel to adjacent concrete if applicable.
- 5 Fabricate a plywood template using template guide 75-001152-01.
Download the guide from <https://www.chargepoint.com/support-guides/>
Tolerance is +/- .05".
- 6 Install two nuts with one washer captured between them (as illustrated on page A-4) onto each of the four bolts. Lock them together so the washer is 1" from the bottom of the bolt.

- 7** Insert the bolts through the template and thread the remaining nuts onto the top end of the bolts. Position the nuts so that the bolts will extend 1-3/8" above the concrete. Take into the account the thickness and height of the plywood template.

Cover the nuts and the exposed end of the bolts with tape to protect them from contamination and to hold them in position.



- 8** Immediately after pouring the concrete, rotate the bolts to draw the concrete into the threads. Make sure the bolts are vertical. Ensure they are aligned correctly and that the top 1-3/8" of the bolts remain exposed.
 - 9** Form a faux curb with score line 6" in from the edge of the concrete.
 - 10** When the concrete is firm, remove the upper nuts and template. Finish smoothing the top surface of the concrete pad.
 - 11** Allow the concrete to cure for at least 48 hours to reach full strength.
- You are now ready to install the CPE100 onto the pedestal. See page A-7.

Mounting to an existing concrete surface



Important: When installing on existing concrete:

- Review the dimensions of the existing concrete slab. For you to safely mount a CPE100, the concrete must be at least 8" thick. At this thickness, all of the mounting bolts must be positioned at least 18" from the front and rear edges and at least 24" from the side edges of the slab.
- The top surface of the concrete must be perfectly flat and level. The CPE100 is bolted directly to the concrete pad. No spacers are to be used under the CPE100.
- If installing into any reinforced or pre-tensioned concrete, you must X-ray the area to ensure that you are not drilling through any rebar.
- Conduit will be brought into the rear of the CPE100 via the surface of the concrete pad.

You will need

- Hammer drill with 1/2" chuck
- 3/4" drill bit designed for drilling concrete
- These consumable materials:

Quantity	McMaster Product #	Description	Purpose
1	7505A55	Epoxy Adhesive for Concrete, 9.3 Ounce Cartridge	Fixing the anchor bolts into the drilled holes.
1	7505A56	Mixing Nozzles for 9.3 Ounce Epoxy Adhesive for Concrete	For use with epoxy. NOTE: You may need extra mixing nozzles to accommodate delays of over three minutes when applying epoxy.
1	7622T23	Ratchet Rod Caulk Gun with Half-Barrel Frame for 10-13 Ounce Cartridge, 6:1 Thrust	For use with epoxy. Any standard caulk gun will work.
1	7437K35	Electrical Cleaning and Maintenance Aerosol, Any Angle Spray Duster, 8 Ounce Net Weight	Removing dust from drilled holes.
1	2960A22	Slow Spiral Round-Shank Masonry Drill Bit, 3/4" diameter, 1/2" Shank, 10" Drill Depth, 12" Length Overall	Drilling 3/4" holes in concrete.
1	7221T13	Nylon Loop-Handle Brush, 3/4" Brush Diameter, 3" Length Brush, 8 1/2" Length Overall	Setting the depth of the bolts.
1	9753K47	Push-on Round Cap, fits 5/8" - 11/16" OD, 1/2" Inside Height, Packs of 100	Removing dust from drilled holes.

Follow these steps:

- 1** Use the template guide 75-001152-01 to fabricate a plywood template. Download the guide from <https://www.chargepoint.com/support-guides/>
Make 5/8" diameter holes in the template at the bolt locations. Tolerance is +/- .05".
- 2** Use the template guide to mark the hole locations in the concrete.
- 3** Drill four 3/4" diameter holes into the concrete. Depth should allow the bolts protrude 1-3/8" above the surface.
- 4** Remove all dust from the holes using a brush and compressed air or a vacuum. Insert a bolt to confirm that the hole depths are correct.
- 5** Insert the bolts through the template and thread the nuts onto the top end of the bolts.
- 6** Fill the four holes with epoxy to 3" below the top. Be mindful of the cure time to make sure you can insert and position the bolts before the epoxy sets up.
- 7** Insert the bolts into the holes. Ensure the bolts protrude 1-3/8" above the concrete.
NOTE: Inserting the threaded bolts displaces the epoxy, causing it to fill the holes to grade level. If the epoxy is below grade level, you can add more after the next step.
- 8** Loosen the nuts and rotate the bolts to ensure the epoxy penetrates the threads. Take care to avoid getting epoxy into the above-grade threads.
- 9** Tighten the nuts again to ensure the bolts are plumb.
- 10** Double check that the bolts protrude 1-3/8" above the concrete.
- 11** Allow the epoxy to cure completely before applying any load. Check the cure time on the manufacturer's data sheet.

You are now ready to install the CPE100. See page A-7.



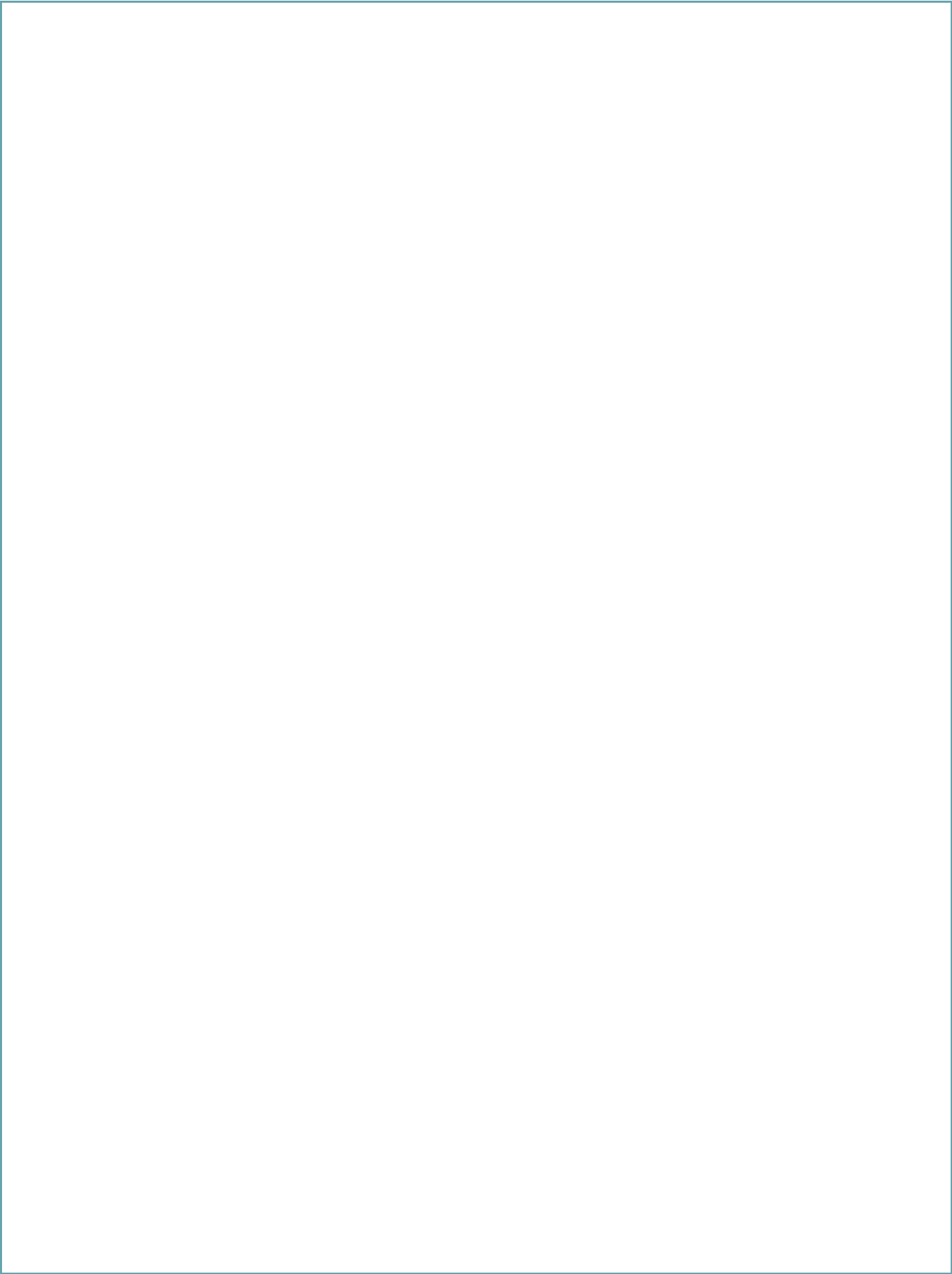
Mounting the CPE100 on a pedestal

After the pedestal has been mounted to a new or existing concrete pad, mount the CPE100 to the pedestal following these steps:

- 1** Prepare liquid-tight conduit ensuring sufficient length to reach the CPE100.
- 2** With the pedestal on its side, feed the conduit and wire through the exit opening.
- 3** With assistance, mount the pedestal onto the anchor bolts.
- 4** Level the pedestal, then remove the protective plastic from the pedestal.
- 5** Torque the bolts to 100 ft-lbs.
- 6** Remove the mounting bracket from the back of the CPE100.
- 7** Lift the CPE100 onto the pedestal's mounting bracket. Two people are required to lift the CPE100.
- 8** Fasten four (4) screws to the bottom of the CPE100.
- 9** Fasten two (2) screws to the top of the CPE100.
- 10** Cut the liquid-tight conduit to size and affix it to input the opening of the CPE100.

You are now ready to connect the wiring. See page 3-6.







ChargePoint, Inc.
254 E. Hacienda Ave.
Campbell, CA 95008-6617 USA
US toll free: +1.877.370.3802
Installer Support: +1.877.850.4562
www.chargepoint.com