

# CPF50

Networked Charging Station for Fleet Vehicles

## Installation Guide



# IMPORTANT SAFETY INSTRUCTIONS: SAVE THESE INSTRUCTIONS



## WARNING:

- 1. Read and follow all warnings and instructions before installing and operating the ChargePoint® Charging Station.** Install and operate only as instructed. Failure to do so may lead to death, injury, or property damage, and will void the Limited Warranty.
- 2. Only use licensed professionals to install your ChargePoint® Charging Station and adhere to all national and local building codes and standards.** Before installing the ChargePoint® Charging Station, consult with a licensed contractor, such as a licensed electrician, and use a trained installation expert to ensure compliance with local building and electrical codes and standards, climate conditions, safety standards, and all applicable codes and ordinances. Inspect the Charging Station for proper installation before use.
- 3. Always ground the ChargePoint® Charging Station.** Failure to ground the Charging Station can lead to risk of electrocution or fire. The Charging Station must be connected to a grounded, metal, permanent wiring system, or an equipment grounding conductor shall 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.
- 4. Install the ChargePoint® Charging Station on a concrete pad using a ChargePoint approved method.** Failure to install on a surface that can support the full weight of the Charging Station can result in death, personal injury, or property damage. Inspect the Charging Station for proper installation before use.
- 5. This Charging Station is not suitable for use in hazardous locations.**
- 6. This device should be supervised when used around children.**
- 7. Do not put fingers into the electric vehicle connector.**
- 8. Do not use this product if the EV cable is frayed, has broken insulation, or any other signs of damage.**
- 9. Do not use this product if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage.**
- 10. Use 90°C wire copper conductors only.**



**Important:** 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 result from custom installations that are not described in this document or for any failure to adhere to installation recommendations.**

## Product Disposal

Do not dispose of as part of unsorted domestic waste. Inquire with local authorities regarding proper disposal. Product materials are recyclable as marked.



## No Accuracy Guarantee

Commercially reasonable efforts were 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.

## Copyright and Trademarks

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## Symbols Used in This Document

This guide and product use the following symbols:



**DANGER:** Risk of electric shock.



**WARNING:** Risk of personal harm or death.



**CAUTION:** Risk of equipment or property damage.



**Important:** Crucial step for installation success.



Read the manual for instructions.



Ground/protective earth.





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# Introduction 1

ChargePoint provides the all-purpose CPF50 Level 2 charging station for fleet vehicles. The CPF50 can be mounted on a pedestal or a wall.



**Important:** The CPF50 must be installed and serviced by ChargePoint approved installers only. To complete online training and become an approved installer, refer to ChargePoint University at: [ChargePoint.com/installers](https://ChargePoint.com/installers). ChargePoint approved installers can download the Site Design Guide, Installation Guide, Installation Templates, and Data Sheet for this charging station at: [ChargePoint.com/support/guides](https://ChargePoint.com/support/guides)

Follow the instructions in the Installation Guide and heed all warnings.

If the CPF50 is installed by any person other than a ChargePoint approved installer, the CPF50 is not covered under warranty and ChargePoint is not responsible for any malfunctions. Read the entire Installation Guide prior to beginning installation.

## Site Requirements

Ensure that the appropriate wiring, circuit protection, and metering is in place at the installation location by reviewing the Site Design Guide, Data Sheet, as well as reviewing the wiring diagrams and grounding requirements in the [Section 9](#).

## ChargePoint Gateway Requirements

The CPF50 must be located within 45 m (150 ft) line-of-sight from a ChargePoint Gateway (CPGW). Install the Gateway prior to installing charging stations. See the Installation Guide in the CPGW box or Appendix A of this document for installation instructions.

## Power Management

Using ChargePoint Power Management technology, sites can install more stations than otherwise would be supported by the available electrical service. A maximum aggregate load is defined for a group of charging stations, and ChargePoint cloud-based services manage the individual power

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output of each station (or port) to ensure the maximum load is never exceeded.

As shipped, a CPF50 charging station provides up to 50 A of output current to each charging station.

Additional information regarding Power Management for your CPF50 stations is available at [ChargePoint.com/support/guides](https://ChargePoint.com/support/guides).

## Tools Needed

- Bubble level
- #2 Phillips screwdriver
- #3 Phillips screwdriver
- Wire stripper
- Voltage tester
- T10 Security Torx driver
- Gloves

## For Wall Mount Installations

- Drill
- Drill bit suitable for the type of wall material
- 21 mm (3/4 in trade size) conduit and fittings
- 3/8 in hex driver
- On a wood stud only: Stud finder
- On a wood stud only: Nut setter
- On masonry or concrete: 6 mm (1/4 in) internally threaded masonry anchors and screws rated for at least 318 kg (700 lb) pull-out force

## For Pedestal Mount Installation

- Ratchet with 3/8 in and 7/16 in sockets
- 1/2 in drive torque wrench, rated for at east 122 Nm (90 ft-lbs)
- 1 -1/16 in 6-point deep socket
- Adjustable wrench



**Important:** Always check local codes to ensure the installation complies with all applicable codes and ordinances.



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## Overview of the Installation Process



1. Check for the correct number of shipping boxes for your configuration.
2. Check the contents of each shipping box.
3. Proceed to the appropriate Section for your configuration:
  - Wall Mount with no CMK - Section 2.
  - Wall Mount with CMK - Section 3.
  - Pedestal Mount - Section 4 and the applicable section from Section 5-8.
4. Mount the station and connect the service wiring - Section 9.
5. Document the radio group and complete the Post-Installation Checklist - Section 10.

## Check for the Correct Shipping Boxes

The CPF50 includes nine possible configurations. Verify the number of boxes expected for your configuration. Open the Main Unit box first to access this guide.

Configuration	Box List	Completed Installation
Wall Mount	<ul style="list-style-type: none"> <li>• Main Unit</li> </ul>	
Wall Mount with CMK6	<ul style="list-style-type: none"> <li>• Main Unit</li> <li>• Mounting Kit for CMK</li> <li>• CMK6</li> </ul>	

Configuration	Box List	Completed Installation
Wall Mount with CMK8	<ul style="list-style-type: none"> <li>• Main Unit</li> <li>• Mounting Kit for CMK</li> <li>• CMK8</li> </ul>	
Pedestal Mount Single	<ul style="list-style-type: none"> <li>• Main Unit</li> <li>• Pedestal</li> <li>• Single Station (no CMK) Mounting Kit</li> </ul>	
Pedestal Mount Dual	<ul style="list-style-type: none"> <li>• Main Unit (2)</li> <li>• Pedestal</li> <li>• Dual Station (no CMK) Mounting Kit</li> </ul>	
Pedestal Mount Single with CMK6	<ul style="list-style-type: none"> <li>• Main Unit</li> <li>• Pedestal</li> <li>• Single Station with CMK Mounting Kit</li> <li>• CMK6</li> </ul>	
Pedestal Mount Dual with CMK6	<ul style="list-style-type: none"> <li>• Main Unit (2)</li> <li>• Pedestal</li> <li>• Dual Station with CMK Mounting Kit</li> <li>• CMK6</li> </ul>	

Configuration	Box List	Completed Installation
Pedestal Mount Single with CMK8	<ul style="list-style-type: none"><li>• Main Unit</li><li>• Pedestal</li><li>• Single Station with CMK Mounting Kit</li><li>• CMK8</li></ul>	 A vertical orange and white EV charging pedestal mounted on a grey base. The top of the pedestal features a charging station with a white cable and a red cross logo. The text 'EV' and 'CMK8' are visible on the orange section of the pedestal.
Pedestal Mount Dual with CMK8	<ul style="list-style-type: none"><li>• Main Unit (2)</li><li>• Pedestal</li><li>• Dual Station with CMK Mounting Kit</li><li>• CMK8</li></ul>	 A vertical orange and white EV charging pedestal mounted on a grey base. The top of the pedestal features two charging stations side-by-side, each with a white cable. The text 'EV' and 'CMK8' are visible on the orange section of the pedestal.

## Check the Contents of Each Box

### Main Unit

- Installation Guide
- Rating label sheet (inside guide)
- Wall mounting template (inside guide)
- Charging station
- Faceplate
- Mounting skirt
- Wire cover
- 1/4 x 2 in lag screws (3)
- 1/4-20 x 3/8 in Phillips screw
- 1/4-20 x 3/4 in hex bolts (2)
- 6-32 x 3/8 T10 Torx screws (2)
- Spare activation label  
(A duplicate label is attached to front of the charging station. Keep this spare label. It contains important information needed to activate the station on the ChargePoint network.)
- Charging cable



### About the Charging Cable

Charging cables come in two lengths: 5.5 m (18 ft) or 7 m (23 ft). Verify the length. If you ordered a CMK, ensure that the charging cable matches the length of the CMK. The charging cables for use with CMK have a cable clamp (a) preinstalled on the charging cable.

- 99-004507 includes the 5.5 m (18 ft) charging cable for use without CMK
- 99-004501 includes the 7 m (23 ft) charging cable for use without CMK
- 99-004508 includes the 5.5 m (18 ft) charging cable with cable clamp for use with CMK8
- 99-004509 includes the 7 m (23 ft) charging cable with cable clamp for use with CMK6





## Pedestal

The pedestal box contains:

- Main body
- Pedestal covers (3)\*
  - Front (a)
  - Back with CMK (b)
  - Back without CMK (c)
- Pedestal CMK spacer (attached to rear of main body)
- 8-32 x 3/8 in screws (4)
- Charging station sign (attached to front of the main body)

Determine which back cover you need for your installation. Discard the remaining back cover.

**Note:** To prepare the installation site for installing a pedestal mount charging station, you also need the contents of the Pedestal Mount Kit. This ships separately and should already be installed prior to unboxing and installing the CPF50 charging station to allow for concrete or epoxy cure times. For additional information about site preparation, please see the *CPF50 Site Design Guide*.



## Cable Management Kit (CMK)

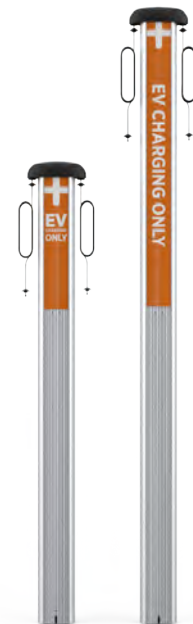
The CMK comes in two sizes: CMK6 or CMK8.

- The CMK6 works with a 5.5 m (18 ft) charging cable.
- The CMK8 works with a 7 m (23 ft) charging cable.

The CMK includes:

- Cable Management assembly with pre-installed “EV Charging Only” sign and attached knot bearings
- Cable clamps (2 extra sets)

**Note:** The cable clamps are pre-installed on the charging cable and these extra sets will not be used when installing the CPF50.



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## Mounting Kit

There are five possible mounting kits. Please ensure that the item you received matches your product configuration. Each mounting bracket is unique to the configuration.

### Wall Mount Kit for CMK Systems

(99-002006)

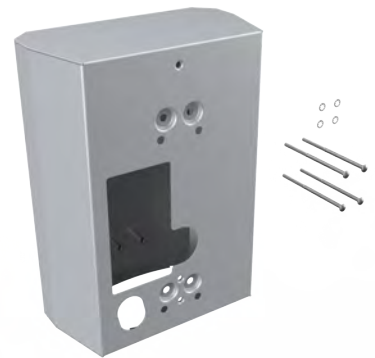
- Back bracket
- Front bracket
- 1/4-20 x 3/4 in hex screws (4)
- 8-32 x 3/8 in screws (6)
- Lock washers (6)
- Lower CMK sign



### Single Station Pedestal (Without CMK) Mount Kit

(99-002007)

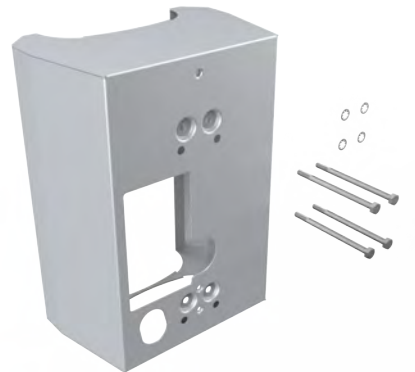
- Bracket
- 10-32 x 4 in screws (4)
- Lock washers (4)



### Single Station Pedestal With CMK Mount Kit

(99-002008)

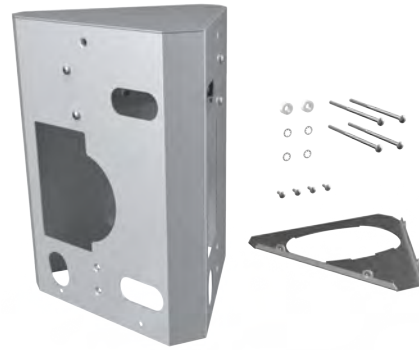
- Bracket
- 1/4-20 x 4 in screws (4)
- Lock washers (4)



## Dual Station (Without CMK) Mount Kit

(99-002009)

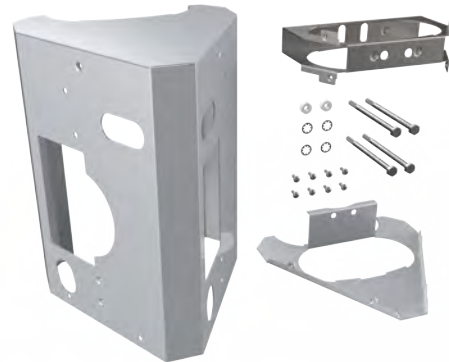
- Bracket
- Bottom bracket cover
- Internal bracket (installed inside bracket)
- 10-32 x 4 in screws (4)
- 8-32 x 3/8 in screws (4)
- Nylon spacers (2)
- Lock washers (4)



## Dual Station With CMK Mount Kit

(99-002010)

- Bracket
- Top internal brace
- Bottom internal brace
- 1/4-20 x 4 in screws (4)
- 8-32 x 3/8 in screws (8)
- Nylon spacers (2)
- Lock washers (4)



## Choose Your Configuration

Once you have confirmed that you have the correct boxes and complete contents for the charging station(s) you are installing, proceed to the next applicable Section based on the configuration you are installing:

- Wall Mount with no CMK - Section 2
- Wall Mount with CMK - Section 3
- Pedestal Mount - Section 4



# Install a Wall Mount CPF50 **2** (Without a CMK)

1. Remove the faceplate and the wire cover from the charging station. Set them aside.



2. Mark the location.
  - For wood stud mounting, mark the center of the stud with a line from 1000-1100 mm (39-43 in) above the finished floor.
  - For masonry or concrete, mark approximate mounting location with a vertical line from 1000-1100 mm (39-43 in) above the finished floor.



3. Hold the station against the wall, with the top of the station approximately 1270 mm (50 in) above ground level.
4. Ensure the charging station is level using a bubble level.
5. Mark the two lower mounting holes.



6. Hold the mounting template against the wall.
7. Align the lower mounting holes on the installation template with the holes marked in the previous step.
8. Mark the top mounting hole from the installation template on the wall.
9. Remove the template from the wall.



10. Drill the three mounting holes using a drill bit suitable for the type of wall material.
  - For wood stud mounting, drive one of the supplied 51 mm (2 in) lag screws into the top mounting hole, leaving a gap between the screw head and the wall of 3 mm (1/8 in).
  - For masonry or concrete mounting, drill the three mounting holes by following the instructions for the wall anchors. Set the three anchors. Insert a screw into the top mounting anchor, leaving a gap between the screw head and the wall of 3 mm (1/8 in) protruding.



11. Hang the charging station on the protruding screw from the notch on the back of the charging station.



12. Secure the station by inserting the remaining fasteners into the mounting holes located in the stations terminal block area.
  - For wood mounting, use the two 51 mm (2 in) lag screws provided.
  - For masonry or concrete mounting, use the two remaining masonry screws in the anchors.



Proceed to Section 9 to Review the Wiring Diagram.

# Install a Wall Mount CPF50 Bracket and CMK 3

## Mount the Back Bracket

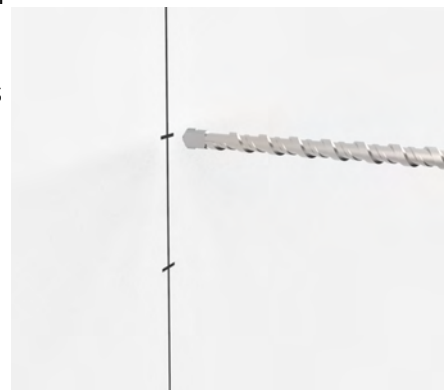
1. Place the back bracket against the wall with the top of the bracket 1270 mm (50 in) above the floor or ground.
2. Place a level along the top of the bracket to ensure the holes are accurately aligned.
3. Mark the drill holes:
  - Use the two center holes if the station is being mounted to a wooden stud (a).
  - Use the four outer holes if mounting to a masonry or concrete wall (b).



4. Use a drill and drill bit appropriate for the type of wall to drill the mounting holes.

**Note:** For masonry or concrete walls, insert masonry anchors (not included) rated for at least 318 kg (700 lbs) of pull-out force.

5. Secure the back bracket to the wall:
  - For wooden stud, use two of the 1/4 x 2 in lag screws provided.
  - For masonry or concrete walls, use four screws appropriate for your anchors.



6. Run service wiring through 19 mm (3/4 in trade size) conduit.
7. Insert the conduit in the hole in the bottom of the back bracket. Run approximately 300 mm (12 in) of service wiring into the bracket.
8. Use a Phillips screwdriver to connect the ground wire to the grounding lug on the back bracket.



## Prepare the CMK

1. Position the CMK packaging so its bottom is located near where the charging station will be installed.

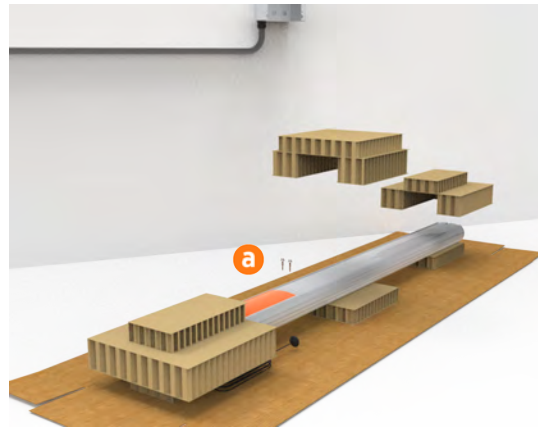
**Note:** Do not unwrap the ropes.

2. With CMK horizontal, remove and discard the two shipping screws (a) from the front of the CMK.



**Important:** Do not tilt or carry the assembly with the top end lower than the bottom end. When you remove the shipping screws, the counterweights are free to move in either direction.

3. Remove the cardboard packaging.



## Mount the CMK

1. Slowly lift the CMK into position against the back bracket and hold it in place.

**Note:** The ropes will rise as the weights inside the CMK lower. Guide the ropes to the top as you gently lift the CMK.

2. Position the front bracket so that the wiring opening is in the lower left corner.

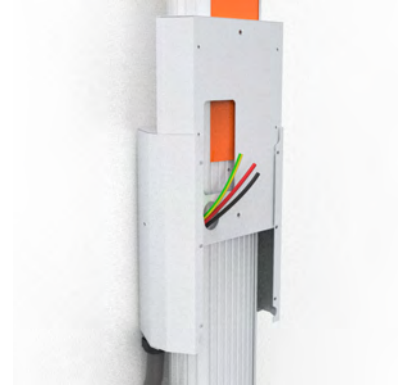




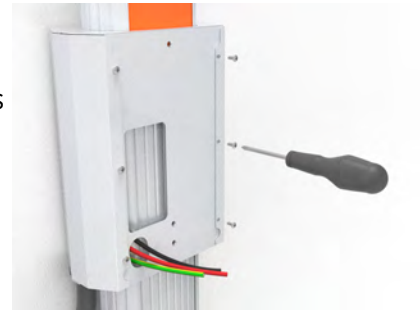
- Slide the front bracket down over the CMK gently (ensuring you do not scratch the CMK sign) until it aligns with the back bracket.



**CAUTION:** When sliding the front bracket down, pull the service wiring out of the way to protect the wires from damage.



- Route the service wiring through the opening in the front bracket.
- Fasten the front bracket to the back bracket using a #2 Phillips screwdriver and the six 3/8 in screws.



## Install the Lower Sign

- Insert the bottom left corner of the sign under the groove on the bottom left corner of the CMK.
- Slide the sign downward as far as possible so that the top of the sign is positioned under the bottom of the mounting bracket.
- Starting with the bottom left corner and working from bottom to top, slide the left side of the sign under the leftmost groove.
- When the left side of the sign is fully inserted, bow the bottom of the sign outward slightly to insert the bottom right corner of the sign under the groove on the bottom right corner.
- Starting with the bottom right corner and working from the bottom to top, slide the right side of the sign under the rightmost groove.



Proceed to Section 9 to mount the charging station.



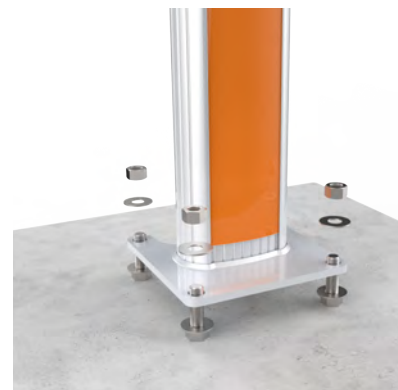
# Install the Pedestal 4

## Mount and Level the Pedestal

1. Ensure the concrete has been prepared with according to the Bolt Pattern Template (PN: 75-001163-01). This includes:
  - Four bolts set into concrete with two nuts and two washers for each bolt with the bolt extending 63.5 mm (2 1/2 in) above the surface
  - Conduit stub-up measuring approximately 0.3 m (1 ft) above the concrete surface
  - Approximately 1.5 m (5 ft) of service wiring extending above the concrete surface
2. Remove the top nut and top washer from each of the four bolts in the pad.
3. Place the pedestal over the conduit, routing the service wiring through the column. Ensure the edge with the cut-out for the CMK is located in the back of the station.
4. Adjust the lower nuts to ensure the pedestal is level.
5. When level, fasten the pedestal to the bolts using the washer and nut removed from the bolt. Torque the top nuts to 122 Nm (90 ft-lbs).

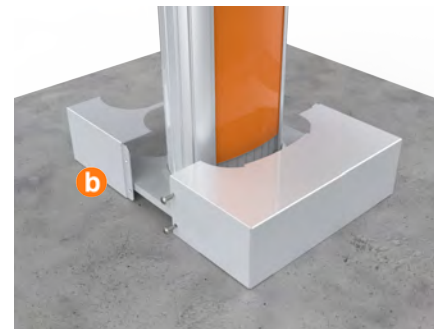
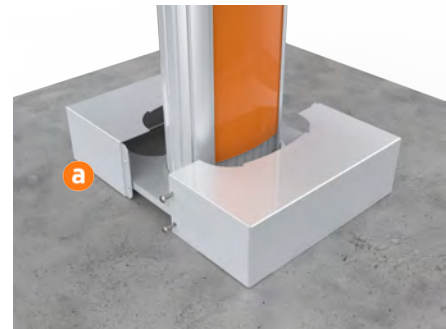


**Important:** Verify the pedestal is level and plumb after each adjustment by positioning the level at various locations on the base plate and on the pedestal.



## Install Pedestal Covers

1. Select the appropriate pedestal covers from the three pieces provided:
  - a. If the station is not using a CMK, use the back pedestal cover without a cut-out.
  - b. If the station is using a CMK, use the back pedestal cover with the cutout for the CMK.
2. Position the two-piece pedestal cover over the bottom of the pedestal.
3. Insert the four 3/8 in screws, two into each side of the pedestal.
4. Tighten the screws using a Phillips screwdriver.
5. If the station is not using a CMK, slide the spacer (c) at the back of the pedestal upward to remove it.
6. Discard the extra pedestal cover (and the spacer, if you are installing a station without a CMK).



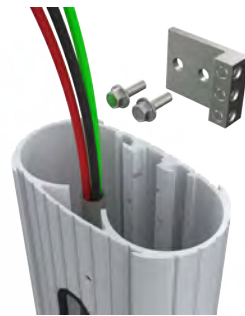
## Choose Your Configuration

Proceed to the next section according to the configuration of the installation:

- For a single station installation with no CMK, proceed to Section 5.
- For a single station installation with CMK, proceed to Section 6.
- For a dual station installation with no CMK, proceed to Section 7.
- For a dual station installation with CMK, proceed to Section 8.

# Mount a Single Station Bracket **5** (Without a CMK)

1. Remove the ground lug from the pedestal using a 7/16 in wrench. Save the screws to reinstall later.
2. Connect the ground wire from the service wiring to the ground lug.
3. Run the ground wire from the ground lug through the wiring opening in the front of the pedestal.
4. Reinstall the ground lug to the pedestal using the 7/16 in wrench and the two screws you removed.



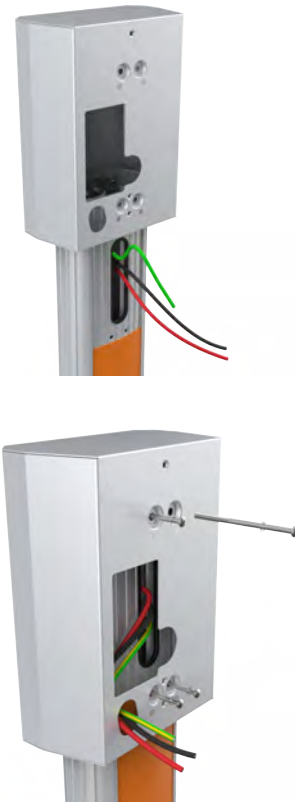
- 
5. Slide the bracket over the pedestal while guiding the remaining service wiring through the opening in the front of the pedestal.



**CAUTION:** The bracket must slide over the service wiring. Lay the wiring as flat as possible against the pedestal to prevent damage.

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6. Align the two holes at the top and the two holes at the bottom of the bracket with the corresponding holes in the pedestal.
7. Fasten the bracket to the pedestal using the four 4 in screws and four #10 lock washers by inserting the screws through the bracket and into the stand-offs on the pedestal.
8. Tighten the screws using a Phillips screwdriver.
9. Route the service wiring through the wiring hole in the front of the bracket.



Proceed to Section 9 to mount the station.

# Mount a Single Station Bracket and CMK 6 and CMK

## Prepare the CMK

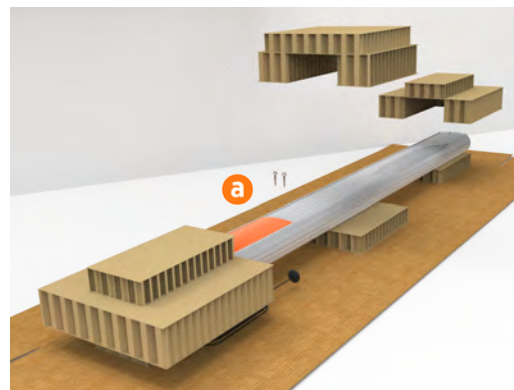
1. Position the CMK packaging so its bottom is located near where the charging station will be installed.

**Note:** Do not unwrap the ropes.

2. Remove and discard the two shipping screws (a) from the front of the CMK.



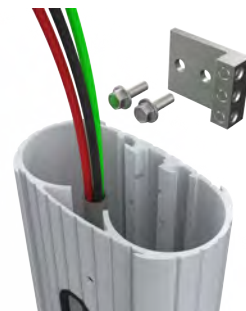
**Important:** Do not tilt or carry the assembly with the top end lower than the bottom end. When you remove the shipping screws, the counterweights are free to move in either direction.



3. Remove the cardboard packaging.

## Mount the Bracket and CMK

1. Remove the ground lug from the pedestal using a 7/16 in wrench. Save the screws to reinstall later.



- 
2. Connect the ground wire from the service wiring to the ground lug.



3. Run the ground wire from the ground lug through the wiring opening in the front of the pedestal.
4. Reinstall the ground lug to the pedestal using the 7/16 in wrench and the two screws you removed.



5. Slide the bracket over the pedestal while guiding the remaining service wiring through the opening in the front of the pedestal.



**CAUTION:** The bracket must slide over the service wiring. Lay the wiring as flat as possible against the pedestal to prevent damage.

6. Align the two holes at the top and the two holes at the bottom of the bracket with the corresponding holes in the pedestal.
7. Insert the four 4 in screws and four #10 lock washers through the bracket at the pedestal.



**Note:** The screws are loose until they are fastened to the CMK later.

8. Route the service wiring through the wiring hole in the front of the bracket.

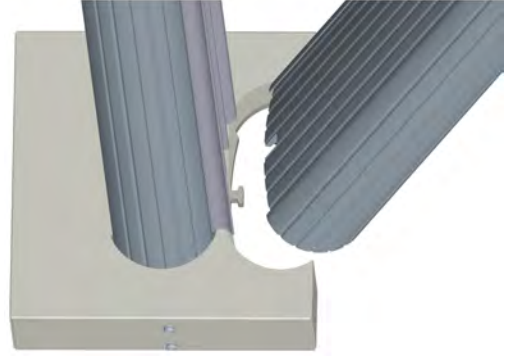




9. Slowly lift the CMK into position with the slot at the bottom of the CMK sliding onto the knob at the bottom of the pedestal.

**Note:** The ropes will rise as the weights inside the CMK lower. Guide the ropes to the top as you slowly lift the CMK.

10. Hold the CMK against the back of the pedestal while aligning the four screws coming through the bracket and pedestal into the corresponding holes in the CMK.



**Note:** The spacer on the pedestal should slide into the ridges on the CMK.

11. While holding the bracket and CMK in place, tighten the four screws using the 7/16 in socket.

Proceed to section 9 to mount the station.



# Mount a Dual Station Bracket 7 (Without a CMK)

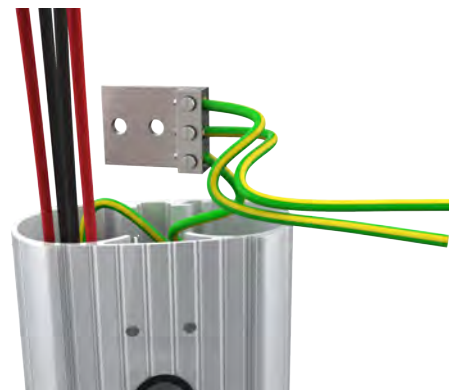
1. Slide the bottom bracket cover (a) over the pedestal, guiding it gently to the bottom.



2. Remove the ground lug from the pedestal using a 7/16 in wrench. Save the screws to reinstall later.



3. Connect the ground wire from the service wiring to the ground lug.
4. Run the ground wires from the ground lug through the wiring opening in the front of the pedestal.
5. Reinstall the ground lug to the pedestal using the 7/16 in wrench and the two screws you removed.



6. Route the remaining service wiring through the opening in the front of the pedestal.
7. Slide the bracket over the pedestal.



8. Align the two holes at the top and the two holes at the bottom of the bracket with the corresponding holes in the pedestal.



9. Fasten the main bracket to the pedestal using two 4 in screws and lock washers at the top and two 4 in screws and nylon spacers at the bottom.
10. Route the service wiring through the wiring hole on each left corner of the main bracket fronts.



11. Slide the bottom cover up, taking care not to scratch the sign on the front of the pedestal.
12. Fasten it to the main bracket using four 3/8 in screws, two on each side.



Proceed to section 9 to mount the station.

# Mount a Dual Station Bracket and **8** CMK

## Prepare the CMK

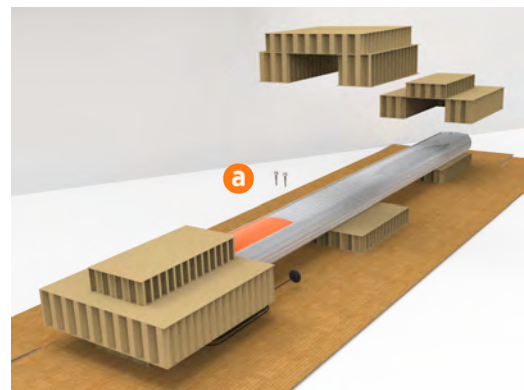
1. Position the CMK packaging so its bottom is located near where the charging station will be installed.

**Note:** Do not unwrap the ropes.

2. Remove and discard the two shipping screws (a) from the front of the CMK.



**Important:** Do not tilt or carry the assembly with the top end lower than the bottom end. When you remove the shipping screws, the counterweights are free to move in either direction.



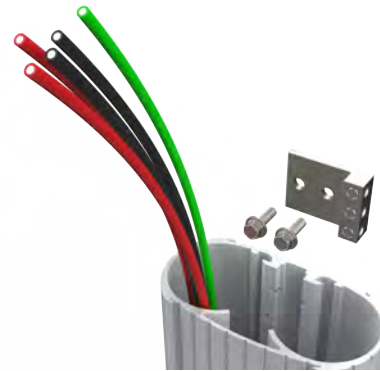
3. Remove the cardboard packaging.

## Mount the Bracket and CMK

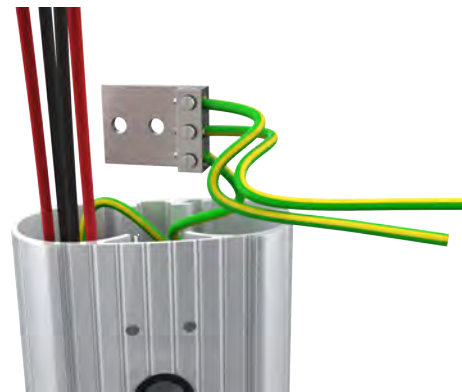
1. Slide the bottom internal brace over the pedestal, guiding it gently to the bottom.



2. Remove the ground lug from the pedestal using a 7/16 in wrench. Save the screws to reinstall later.
3. Connect the ground wire from the service wiring to the ground lug.
4. Run the ground wires from the ground lug through the wiring opening in the front of the pedestal.
5. Reinstall the ground lug to the pedestal using the 7/16 in wrench and the two screws you removed.
6. Route the remaining service wiring through the opening in the front of the pedestal.
7. Install lock washers on each of the four 4 in screws.

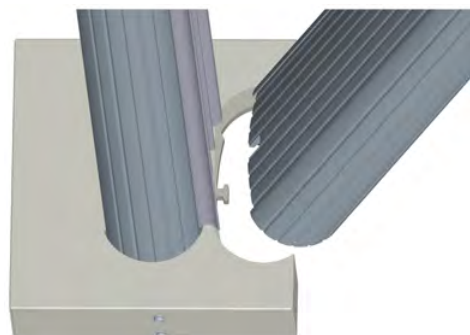
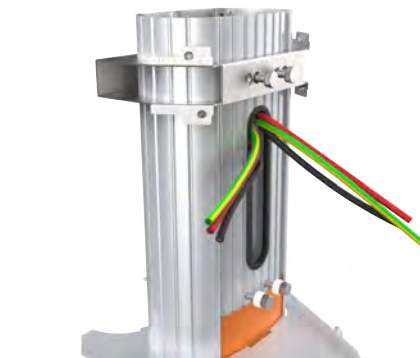


8. Place the top internal brace on the pedestal and align it with the two holes at the top of the pedestal.
9. Insert two of the screws into the holes on the top brace and through the pedestal.
10. Install nylon spacers on the two remaining 4 in screws.
11. Insert the two 4 in screws with spacers through the bottom two holes in the pedestal.



12. Slowly lift the CMK into position with the slot at the bottom of the CMK sliding onto the knob at the bottom of the pedestal.

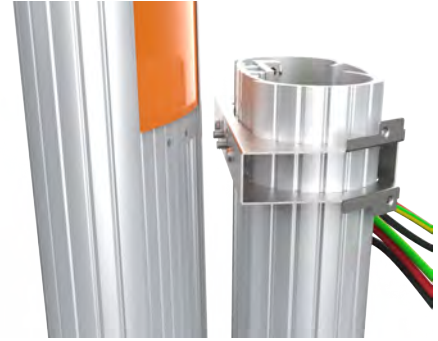
**Note:** The ropes will rise as the weights inside the CMK lower. Guide the ropes to the top as you slowly lift the CMK.



13. Hold the CMK against the back of the pedestal while aligning the four screws coming through the bracket and pedestal into the corresponding holes in the CMK.

**Note:** The spacer on the pedestal should slide into the ridges on the CMK.

14. While holding the bracket and CMK in place, tighten the four screws using the 7/16 in socket.
15. Slide the bracket over the pedestal, aligning the holes in the main bracket with the corresponding holes in the top internal brace.



16. Fasten the main bracket to the pedestal using four 3/8 in screws into the top brace.



17. Route the service wiring through the wiring hole on each left front corner of the bracket.
18. Slide the bottom internal brace up, taking care not to scratch the sign on the front of the pedestal.
19. Fasten it to the main bracket using four 3/8 in screws, two on each side.



Proceed to section 9 to mount the station.

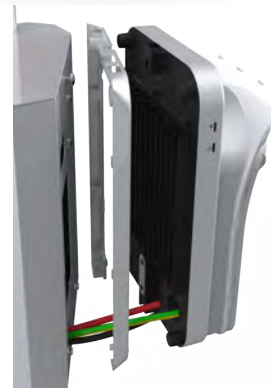




# Install the Station and Charging Cable 9 Cable

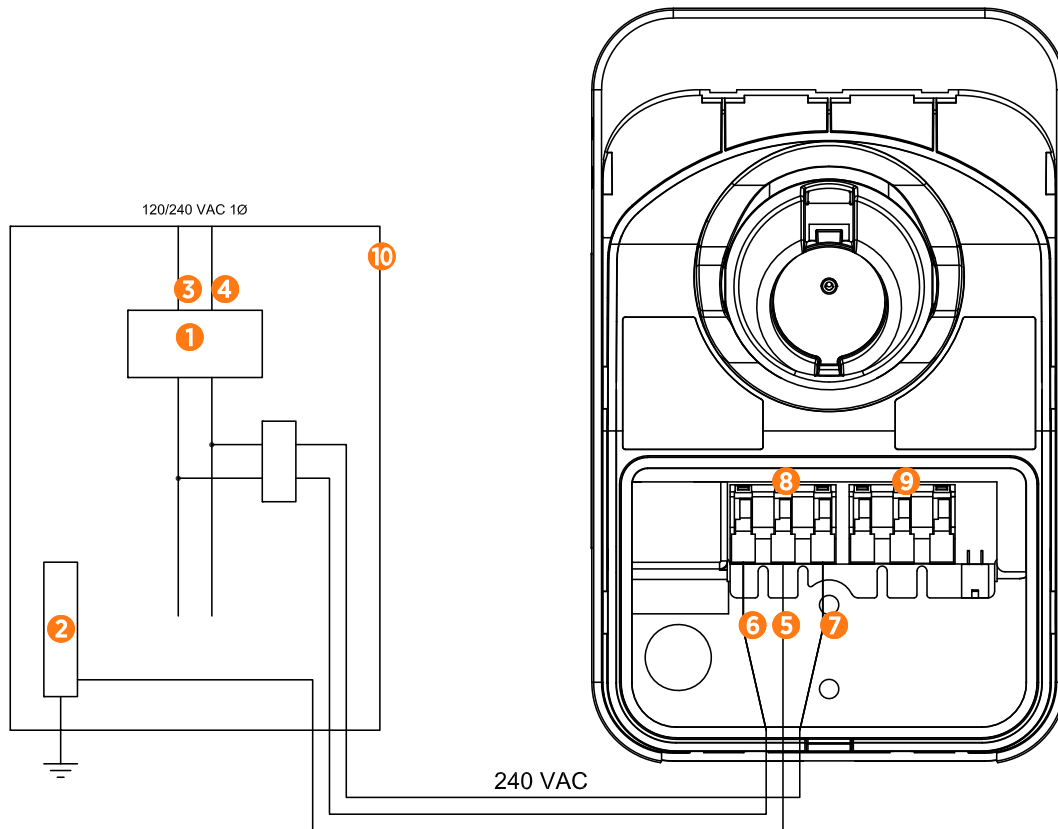
## Mount the Station

1. Remove the faceplate and the wire cover from the charging station. Set them aside.
2. Insert a 3/8 in screw into the top center hole on the front of the bracket using a #2 Phillips screwdriver. Leave the screw protruding approximately 6 mm (1/4 in) to create a 3 mm (1/8 in) gap between the back of the screw head and the bracket.
3. Position the mounting skirt against the back of the main unit.
4. Route the service wiring through the knockout in the back or bottom of the main unit. (This varies by configuration.)
5. Hang the mounting skirt and the main unit on the top protruding screw on the bracket.
6. Secure the main unit by inserting the 3/4 in hex screws through the main unit near the bottom center.
7. Tighten the hex screws using a 3/8 in hex driver.



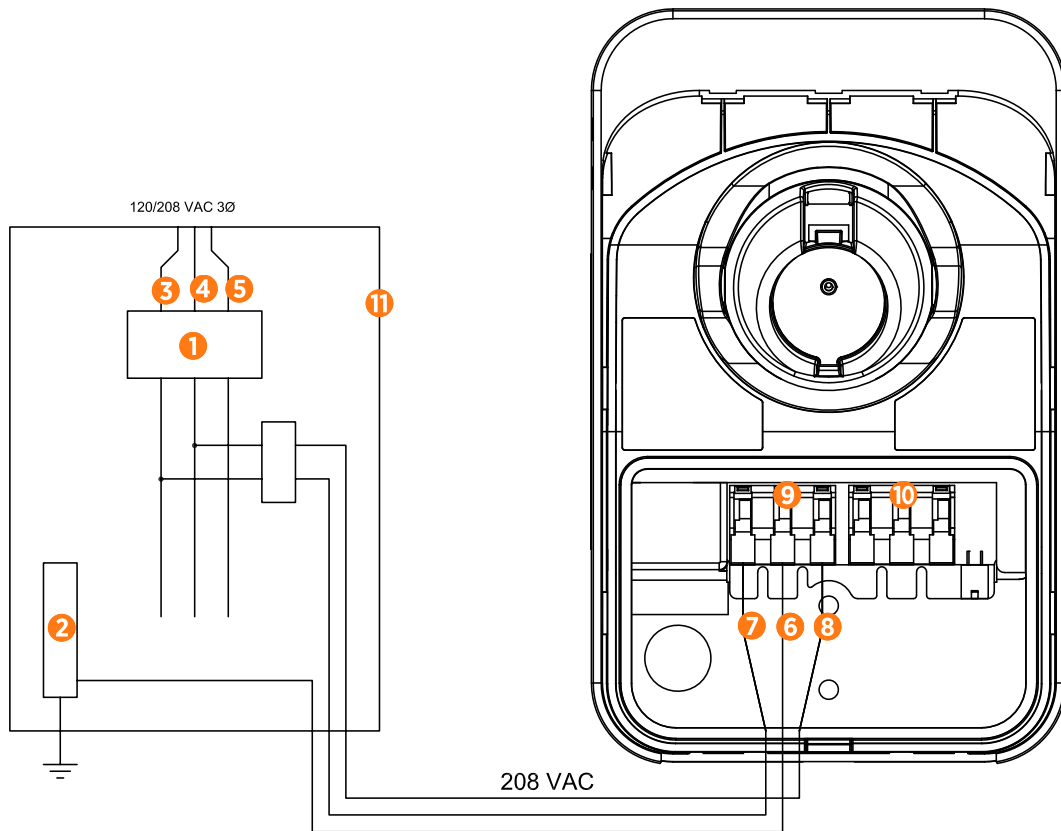
## Review the Wiring Diagram

### 240 VAC Single Phase Panel



- |                 |                                |
|-----------------|--------------------------------|
| 1. Main Breaker | 6. L1                          |
| 2. Ground Bus   | 7. L2                          |
| 3. L1           | 8. Input Terminal Block        |
| 4. L2           | 9. Output Terminal Block       |
| 5. Ground       | 10. Local Service or Sub Panel |

## 208 VAC Three Phase Panel



- |                 |                                |
|-----------------|--------------------------------|
| 1. Main Breaker | 7. L1                          |
| 2. Ground Bus   | 8. L2/N                        |
| 3. L1           | 9. Input Terminal Block        |
| 4. L2           | 10. Output Terminal Block      |
| 5. L3           | 11. Local Service or Sub Panel |
| 6. Ground       |                                |

**Note:** Connect power to any two of the phases.

---

## Connect the Service Wiring

1. Ensure the service wiring can easily reach the connectors on the charging station's terminal block.

**Note:** If mounting CPF50 on an exterior wall and bringing power through the rear knockout, apply sealant around the rear knockout to prevent water ingress.

2. Trim the wiring to remove any excess length.
3. Strip each wire to 12 mm (1/2 in).
4. Ensure the white clips on the terminal block are fully open.
5. Insert the wires into the connectors on the left side of the terminal block.
6. On each connector, press the three levers down until they snap into place.



**CAUTION:** Ensure each wire is fully inserted into the connector with no bare wire showing before pressing it into place with the white clip.

---

## Connect the Charging Cable

1. Remove the cable clip connected to the wiring end of the cable, but do not discard it. Save the clip to use later.
2. Fold the wire ends and insert them into the opening on the lower right side of the station, pushing up until the cable collar is flush against the enclosure.
3. Insert the green wire in the green slot on the left terminal of the output block.
4. Insert the remaining wires into the corresponding connectors on the right side of the terminal block.
5. Push the cables up until the silver conductors are no longer visible.



6. Snap the white levers all the way down on each wire.



**CAUTION:** Ensure each wire is fully inserted into the connector with no bare wire showing before pressing it into place with the white clip.

7. Insert the 4-pin plug into the connector to the right of the output supply wiring.



8. While pushing the cable up, slide the cable clip into the slot until it snaps into place. This secures the cable and provides strain relief.



## Attach the Wire Cover and Faceplate

1. Place the wire cover over the exposed wiring.
2. Use a coin to lock the wire cover in place.

**Note:** To avoid damage to the wire cover, do not use a screwdriver.



3. Apply the appropriate rating label to match the circuit feeding the charging station on the bottom of the station over the default rating displayed (a).



- 
4. Remove the spare activation label taped to the front of the main unit (b) and place it on the Document the Radio Group page in Section 10 of this guide.



5. Snap the faceplate onto the charging station.



6. Fasten the faceplate to the bottom of the station using two T10 Security Torx screws.



## Prepare the Charging Cable for Use

### For Stations Without a CMK

1. Extend the charging cable to its full length to remove any kinks or twists.
2. Drape the charging cable over the top of the charging station.
3. Insert the connector in its holster.
4. Proceed to Section 10 to complete the station setup.



### For Stations With a CMK

**Note:** Installing the knot bearing requires no tools. You do not need anything from the extra cable clamp kit that comes with the CMK.

1. Extend the charging cable to its full length to remove any kinks or twists.
2. Align the knot bearing on each rope to its corresponding mating feature on the cable clamp.
3. Turn the knot bearing clockwise approximately one-quarter turn. Push down gently while turning the knot bearing.

**Note:** If you are installing a single station CPF50, attach the charging cable on the left side of the station to minimize interference with the RFID reader.

4. Proceed to Section 10 to complete the station setup.







# Complete Station Setup 10



**Important:** Before completing station setup, you must have the ChargePoint Gateway installed. Do not proceed until the ChargePoint Gateway is ready. The station will not function until the ChargePoint Gateway is properly installed in a location where it has a strong cellular signal and an unobstructed line of sight to the charging station.

To complete the setup, you must have completed the ChargePoint Installer training and received your ChargePoint installer login. To complete the next steps, you need:

- Installer login
- CPF50 MAC address label (found on the main unit under the faceplate)
- A smartphone with a camera, QR code scanning (usually built into the camera app), Internet connectivity, and the ChargePoint app
- The exact location (to the parking space) where the CPF50 charging station is physically installed

## Power Up

Power up the station. If the station does not power up, check the wiring from the electrical panel to the terminal block for issues.

## Pinpoint the Station

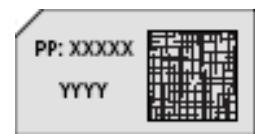
Follow these instructions if your smartphone has a scanning app:

1. Open a QR Code scanning app.
2. Point the camera at the QR code on the label.

The app automatically redirects you to the installer pinpointing page and enters the MAC address of the charging station.

3. Follow the online instructions.

Follow these instructions if your smartphone does not have a scanning app:



1. Using your smartphone, navigate to <https://m.chargepoint.com>.
2. Log into the ChargePoint mobile site from your smartphone with your installer login.
3. Enter the MAC address and activation password printed on the activation label, and touch **Next**.
4. Confirm that you are installing a new 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.
9. If needed, manually adjust the address of the CPF50 location.
10. Take a picture of the station using your smartphone.
11. Scroll down to "Upload a Station Picture" and choose the station picture.
12. Add any helpful information for drivers.
13. Touch **Submit** to pinpoint the CPF50 on the ChargePoint map. The mobile page displays a 3-digit PIN code.



## Start a Charging Session

Once the pinpointing is complete, use the ChargePoint app to start a test session. Verify that you can:

- Initiate a charging session
- Plug the handle into a vehicle or a vehicle emulator (if available)
- Return the handle to the holster

## Document the Radio Group

A radio group consists of a ChargePoint Gateway and up to nine CPF50 charging stations that communicate with it over WiFi. For each radio group, attach the spare activation labels below to document how the stations are organized. After completing this step and the following checklist, provide this information to the person responsible for activating the Gateway and the CPF50 charging stations. Use one page for each radio group (this page is included in all Installation Guides).

<b>Gateway</b>	Attach spare activation label here		
<b>CPF50</b>	Attach spare activation label here	<b>CPF50</b>	Attach spare activation label here
<b>CPF50</b>	Attach spare activation label here	<b>CPF50</b>	Attach spare activation label here
<b>CPF50</b>	Attach spare activation label here	<b>CPF50</b>	Attach spare activation label here
<b>CPF50</b>	Attach spare activation label here	<b>CPF50</b>	Attach spare activation label here
<b>CPF50</b>	Attach spare activation label here	<b>NOTE:</b> Up to nine CPF50s can communicate with a ChargePoint Gateway.	

## Complete the Checklist

Before leaving the installation site, complete the post-installation checklist.

### Customer:

<b>Name</b>	
<b>Site Address</b>	
<b>Contact</b>	

### Installer:

<b>Company</b>	
<b>Address</b>	
<b>Phone</b>	
<b>Installer Name</b>	
<b>Contact</b>	

Earth/ground connection is made to the ground lugs (where applicable).	
Service wiring has been fully inserted into the terminal blocks and all electrical connections are clean and snug.	
Electrical enclosures are clean and free of wire strands and metal shavings.	
All covers are installed and all fasteners are tightened. The station is fully secured and does not rock or wiggle.	
The LED located at the bottom of the ChargePoint Gateway is solid green. (This can take up to 20 minutes.)	
For stations with a CMK, the charging cables operate smoothly through full extension and retraction.	
The parking area is clean and free of all packaging and debris.	
All pinpointing steps from the Installation Guide have been completed.	
A white light is displaying around the CPF50 connector dock.	
The WiFi LED (on the left side of the main unit's cover) is solid green. (This can take up to 10 minutes.)	

Panel ID# \_\_\_\_\_ Breaker # \_\_\_\_\_

Give the checklist and any spare parts (MAC address labels, etc.) to the person responsible for activating the stations in the ChargePoint application. This completes the installation of the CPF50 station.

# ChargePoint Gateway A Installation Guide

A ChargePoint Gateway consists of a cellular LTE modem for wide area networking, and built-in WiFi for local communications to and from CPF50 charging stations.



**Important:** The ChargePoint Gateway must be located where cellular signals are optimum for LTE service, and each ChargePoint Gateway must be located within 45 m (150 ft) line-of-sight to the CPF50 charging stations. Each CPF50 charging station has built-in WiFi capability to communicate with the ChargePoint Gateway to access ChargePoint network services.

## Specifications

Basic specifications for the ChargePoint Gateway are shown in the table below.

Rating	Class II
Input Power	< 4 W
Input Current	< 0.4 A using single-phase 110/120 V, or < 0.2 A using single-phase 208 V service
Input Terminals	100-240 VAC, universal
Physical Placement	0.6-1.2 m (2-4 ft) from CPF50 charging station(s) 1.8-2.4 m (6-8 ft) above floor level
Connectivity	Supports 1-9 CPF50 charging stations
Connectivity Placement	< 30.5-45.7 m (100-150 ft) line-of-sight to associated charging stations

For detailed specifications, refer to the *ChargePoint Gateway Data Sheet* at: <https://chargepoint.com/support/guides>.

## Requirements

Before installing the ChargePoint Gateway, choose an appropriate location by considering the following:

- 
- Power must be available at the installation site.
  - All charging stations must be located within 30-45 m (100-150 ft) line-of-sight.
  - The Gateway relies on an external device for overcurrent protection. The installer must ensure the Gateway is protected by a maximum 20 A branch circuit breaker.
  - In areas subject to thunderstorms, the Gateway, additional surge protection is recommended, such as a surge protector device (SPD) or surge arrester as part of the installation to address transient overvoltages exceeding Overvoltage Category II, 2500 Vpk.
  - The location must receive consistently available LTE cellular coverage. The signal strength should be better than -85dB (for example, -75dB is better than -85dB) if measuring RSSI or better than -110 dBm if measuring RSRP. To ensure adequate signal strength in underground garages or other enclosed parking structures, cellular repeaters may be required.
  - WiFi signal strength between the ChargePoint Gateway and the charging stations is strong, and signals bend (diffract) around narrow columns with low signal loss. Avoid installations where concrete walls are located between the ChargePoint Gateway and the CPF50 charging stations.
  - For maximum cellular coverage, mount the ChargePoint Gateway as high as possible.

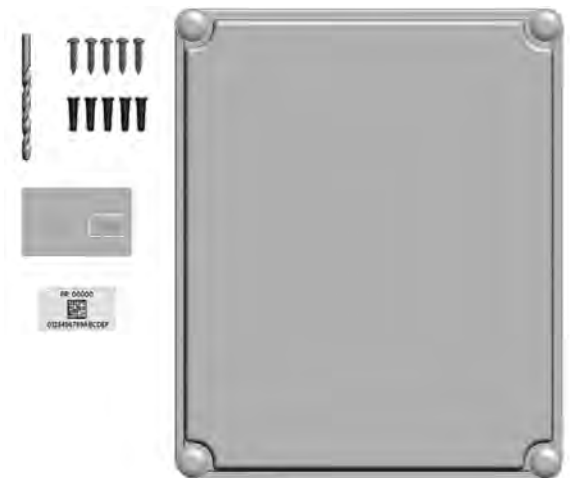


**Important:** ChargePoint recommends permanently installing the ChargePoint Gateway by running service wiring into the bottom of the Gateway through 12 mm (1/2 in trade size) conduit and attaching it to a wall using the supplied screws and wall anchors.

---

## Contents of the Box

- Main unit with cover (1)
- 6 mm (1/4 in) drill bit (1)
- #10 x 25 mm (1 in) screws (5)
- Wall anchors (5)
- Installation template (1) - inserted in the center of the ChargePoint Gateway Installation Guide
- Spare activation label (1) - a duplicate label is attached to the inside of the main unit



## Required Tools



**Important:** Keep the spare activation label. It contains critical information that you need to pinpoint the gateway, which prepares it for activation on the ChargePoint network. See [Activate the Gateway](#).

- Drill
- Phillips screwdriver
- Two adjustable wrenches to remove the internal nut when permanently hard-wiring

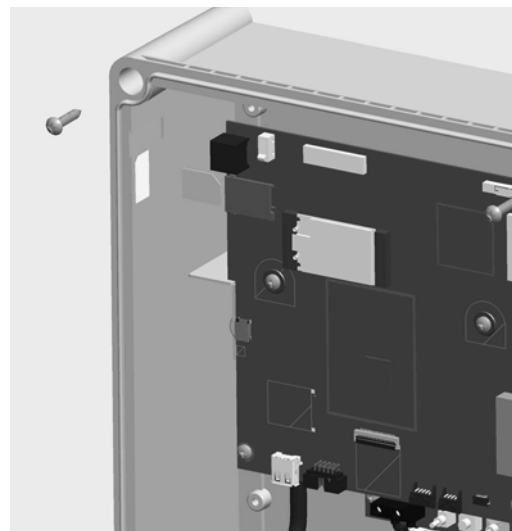
## Install the Gateway

Follow the steps below to install the ChargePoint Gateway at a permanent location.

**Note:** For temporary installation to test connectivity, skip to the [Power On](#) section below. However, ChargePoint recommends hardwiring the installation once the final location is established.

### Mount the Unit

1. Use the installation template to mark the location of the four mounting holes.
2. Drill the four mounting holes and insert the anchors.
3. Loosen the screws on the front of the ChargePoint Gateway to remove the front cover.
4. Align the main unit with the mounting holes and fasten using four of the supplied 10 x 25 mm (1 in) screws and a Phillips screwdriver.



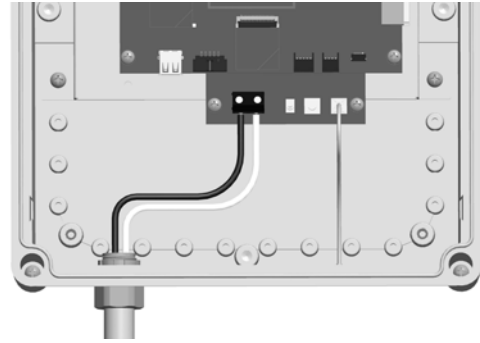
### Remove the Wall Plug

1. Disconnect the wall plug's wiring from the terminal block.
2. Using two wrenches, one on the inside and one on the outside, remove the internal plastic nut.
3. Remove the power cord from the ChargePoint Gateway.

---

## Connect the Wiring

1. Using 16 mm (1/2 in trade size) conduit and the appropriate fittings, route the appropriate length of 6.0 - 2.5 mm<sup>2</sup> (10-14 AWG) stranded or solid service wiring to the ChargePoint Gateway and through the hole in the bottom (where you removed the power cord).
2. Strip service wires 6.4 mm (1/4 in).
3. Connect L1 and L2 (or L and N) service wiring, as shown.



## Install the Cover

Align the cover to the front of the main unit. Turn the screws to lock the cover into place.





## Power On

Power on the ChargePoint Gateway by switching the service breaker ON (or for temporary installations, by plugging it into the power outlet).

As the ChargePoint Gateway powers on, the LED flashes yellow while it attempts to communicate with the cellular network. When cellular communication is established, the LED is solid yellow.

If the Gateway continues to flash yellow for an extended time, check the strength of the cellular signal at the installation location. You may need to strengthen the signal by installing cellular repeaters.



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## Activate the Gateway

After completing the physical installation of the ChargePoint Gateway, you must prepare it for activation on the ChargePoint network by pinpointing its exact location.

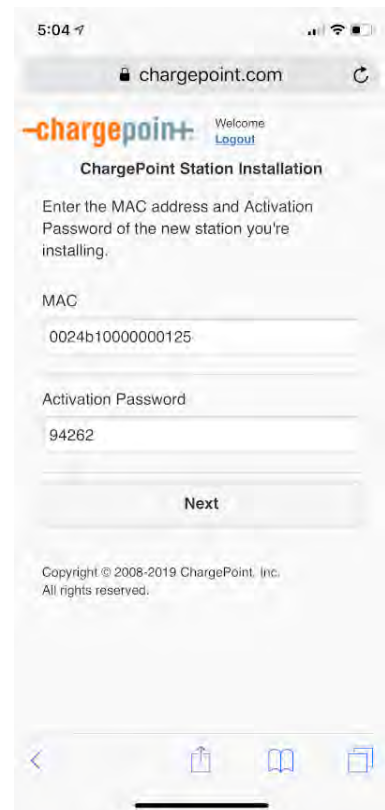
### Required Tools and Information

- The ChargePoint Gateway's MAC address and activation password (this is printed on an activation label that is attached to the main unit, and a spare label is included in the shipping box)
- The exact location where the ChargePoint Gateway is physically installed
- A smartphone with Internet access
- Installer account information (user name and password) on ChargePoint (provided upon completion of training)

### Pinpoint the Gateway

1. Using your smartphone, navigate to the ChargePoint mobile site: <https://m.chargepoint.com>.
2. Log in using your installer credentials.
3. Enter the MAC address and activation password from the activation label.
4. When prompted, touch **OK** to share your GPS location data with the ChargePoint mobile site.
5. When prompted, touch **OK** to review the Gateway's location on Google™ Maps.
6. Review the address and zoom in to check the location of the Gateway's pin on the map.
7. Using your finger, move the pin to the most accurate location possible.
8. If needed, manually adjust the address of the Gateway's location.
9. Take a photo of the Gateway using your smartphone. Scroll down to "Upload a Station Picture" and choose the photo.

Touch **Submit** to pinpoint the Gateway on the ChargePoint map. When the Gateway connects to the ChargePoint network, the LED turns solid green. If this has not happened within 20 minutes, contact ChargePoint Support.



**Warranty Information and Disclaimer**

The Warranty you received with your Charging Station is subject to certain exceptions and exclusions. For example, 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. You should review your warranty and become familiar with the terms thereof. 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.

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[chargepoint.com/support](https://chargepoint.com/support)

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