

Grounding Kit Installation

Service Bulletin

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- **Bulletin Published:** September 21, 2020
 - **Affected Models:** CP4323, CP4313, CP4321, and CP4311
 - **Range of Affected Units:** All currently installed ChargePoint CP4323, CP4313, CP4321, and CP4311 stations
 - **Required Action:** Proactive Repair
 - **Required Technician Level:** ChargePoint Approved Technician
 - **Failure:** Although not a safety risk, some additional external metal parts must be electrically grounded to comply with some regional codes.
 - **Repair Summary:**
 - CP4323 and CP4313 Wall Mount Charging Stations: Add a grounding cable from the CMK clamp end and the CMK column to station mounting bracket.
 - CP4321 and CP 4311 Pedestal Charging Stations: Add a grounding cable from the upper CMK clamp end to the lower CMK clamp end and from the lower CMK clamp end to the station mounting bracket.

Before You Begin



DANGER: RISK OF SHOCK. Before performing this procedure, disconnect the power to the station at the service panel. Follow standard practice and local code to de-energize the applicable circuit and lock out/tag out the disconnect before proceeding. Use a multimeter to test that power is off. Keep power off for this circuit until all cover panels are correctly reinstalled and the work scope is completed. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY OR LOSS OF LIFE.



Important: You must be a licensed electrician and complete an online training class to become a ChargePoint approved installer, and to get a login for ChargePoint. If you do not complete this training, you will be unable to complete the installation process.
Go to: chargepoint.com/installers



CAUTION: Do not use power tools during servicing. Over-torquing can damage the equipment.



CAUTION: If you must perform service in rain or wind, you must use a weather-proof shelter that covers all boxes and components.

Note: When replacing a part, ChargePoint recommends taking a photo before removing each part so you can refer to the photo when reassembling.

Do not discard the part you are replacing. Use the new part's packaging whenever possible, and return all removed parts to ChargePoint.

For assistance, go to chargepoint.com/support and find your region's technical support number.

Tools and Materials:

- 99-003246-01 CP4K Grounding Kit (provided by ChargePoint), when retrofitting an existing station:
 - Cable Assembly: Ground, 2 x M8 Ring Lug, 10 Ga, 635 mm (1)
 - Cable Assembly: Ground, M8 Ring Lug, 10 Ga, 241 mm (1)
 - Washers: External tooth, M8, 8.4 mm ID, 15.0 mm OD, 0.8 mm THK, SS (5)
 - Screw: Self threading, M8 x 12 mm, Pan Head, T40 Drive, Steel, Zinc Plated (3)

Note: These grounding components are now included in the station shipping box for new installations.

- Tamper-resistant Torx drivers: T25, T27, T30
- #2 Phillips screwdriver
- 6.8 mm drill bit
- CP4000 station key (unlocks the front panel)
- Cable tie wraps
- Headlamp
- Step ladder
- Floor mat, padded ground covering, or similar material to protect station components

Introduction

Some additional external metal parts must be electrically grounded to comply with some regional codes. These parts are now included with new installation kits. ChargePoint is currently updating the CP4300 installation guides to include connecting the grounding cables.

Determine whether the grounding work is for a retrofit or a new installation, and what model of CP4300 is affected. Then choose from these procedures:

- "Install Grounding on New CP4323 and CP4313 Wall Mount Stations" on page 3
- "Install Grounding on Previously Installed CP4323 and CP4313 Wall Mount Stations" on page 3
- "Install Grounding on New CP4321 and CP4311 Pedestal Stations" on page 11
- "Install Grounding on Previously Installed CP4321 and CP4311 Pedestal Mount Stations" on page 12

Install Grounding on New CP4323 and CP4313 Wall Mount Stations

To install new CP4323 and CP4313 Wall Mount Charging Stations, follow the instructions in the station's installation guide (available on ChargePoint University at chargepoint.com/eu/installers) and this bulletin.

1. Follow the instructions in Chapters 1 and 2 of the *CP4300 Wall Mount Installation Guide*.
2. Complete the steps in Chapter 3 to the end of the section "Build the Station Mounting Bracket".
3. Before you begin the section titled "Install the Station Mounting Bracket", complete steps 18 through 26 of "Install Grounding on Previously Installed CP4323 and CP4313 Wall Mount Stations" on page 3.
4. After you have connected the grounding cables, complete the procedures in the installation guide.

Note: On newer stations, CMK clamps come pre-drilled with holes for grounding screws. Inspect CMK clamps for drilled holes when gathering station parts for assembly.

Install Grounding on Previously Installed CP4323 and CP4313 Wall Mount Stations

1. Power off the charging station at the breaker panel before continuing work. Use a multimeter to test that power is off.



DANGER: RISK OF SHOCK. Before performing this procedure, disconnect the power to the station at the service panel. Follow standard practice and local code to de-energize the applicable circuit and lock out/tag out the disconnect before proceeding. **Use a multimeter to test that power is off before inspection.** Keep power off for this circuit until all cover panels are correctly reinstalled and the work scope is completed. **FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.**

2. Using a T27 Torx driver, remove two M6 screws that secure the trim wall in place (a). When reinstalling, tighten the screws to 6.5 Nm.
3. Remove the trim wall.
4. Locate the strain relief connectors (b) and loosen them from the cable glands next to the station mountain bracket.



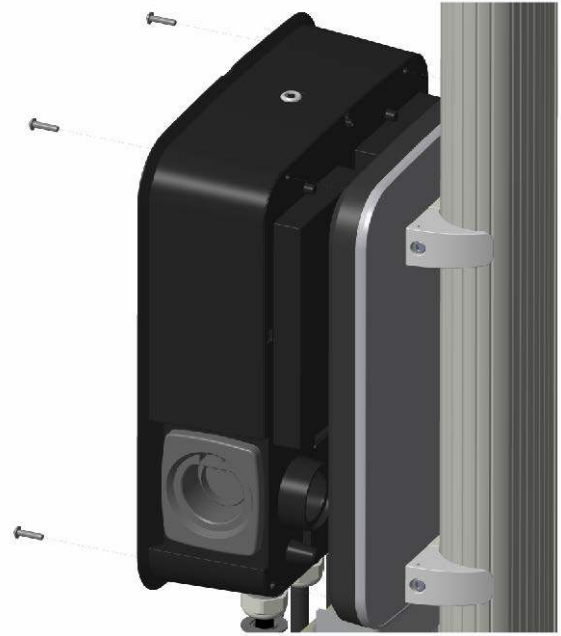
5. Use the station's triangular key to unlock the front panel. Swing the panel open and down.



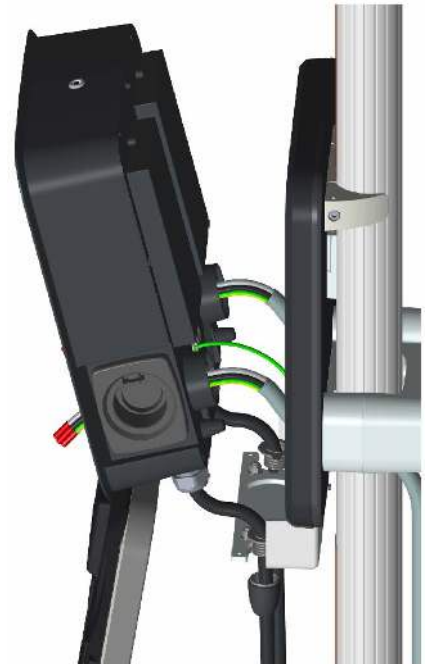
6. Use a Phillips screwdriver to loosen the lower screws in the terminal blocks.
7. Disconnect the Protective Earth (PE) wire from the PE terminal inside the charging station. When reinstalling the PE wire, tighten the lower screw on the PE terminal to no more than 3 Nm.
8. Disconnect the power cables and charging cables from the power station. When reinstalling these cables, tighten the lower screws on the terminals to 3 Nm.
9. Remove the M8 screw and washer connecting the two grounding cables (from the cable cover clamp and pedestal hole plate) to the grounding plate. When reinstalling, tighten the screws to 16 Nm.



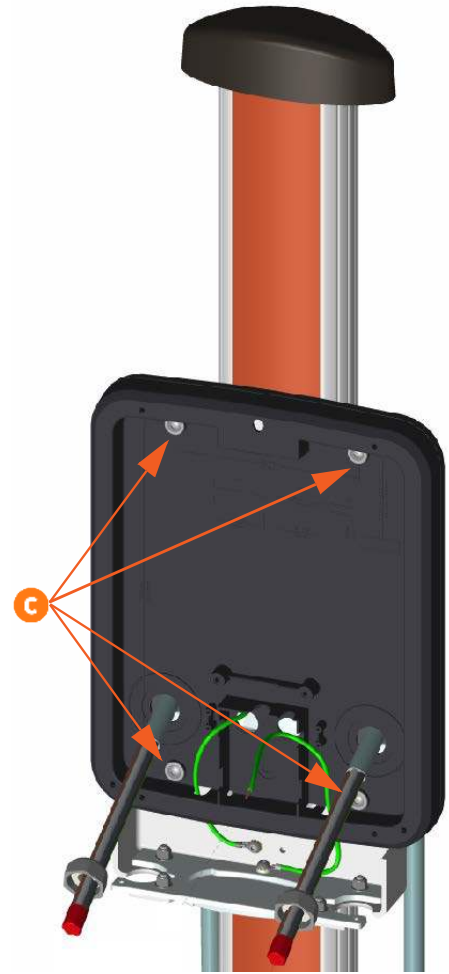
10. Using a T25 Torx driver, remove four 22 mm M6 screws that connect the charging station to the grounding plate. When reinstalling the charging station, tighten the screws to 6.5 Nm.



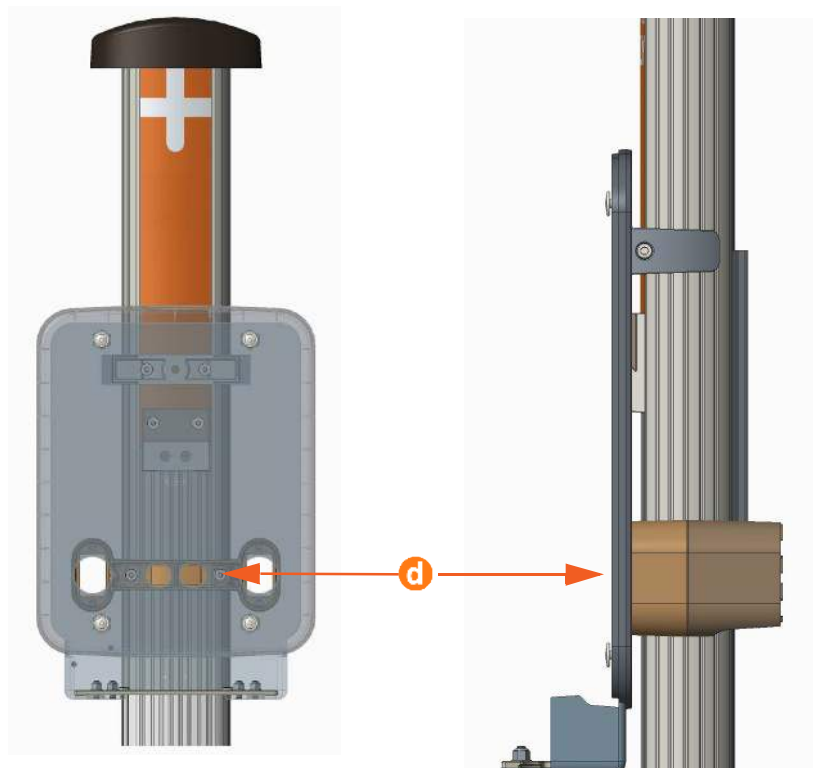
11. Remove the charging station. Gently lay the charging station face up on a padded ground covering.



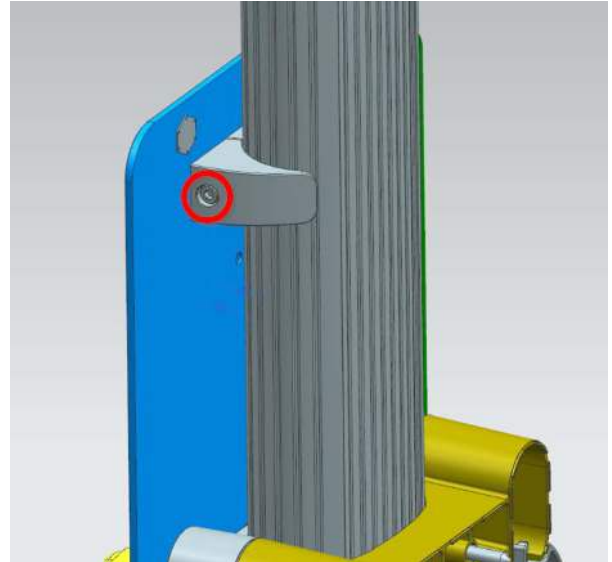
12. Remove four 14 mm M6 screws that secure the grounding plate to the station mounting bracket (c). Remove the grounding plate. When reinstalling the grounding plate, tighten the screws to 16.5 Nm.



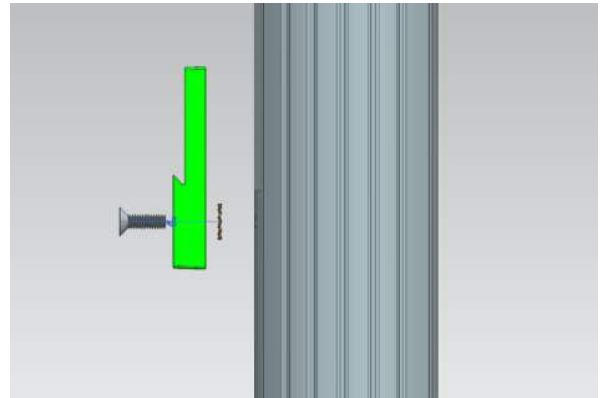
13. Remove two 10 mm M8 screws (d) to unfasten the station mounting bracket from the power cable cover.



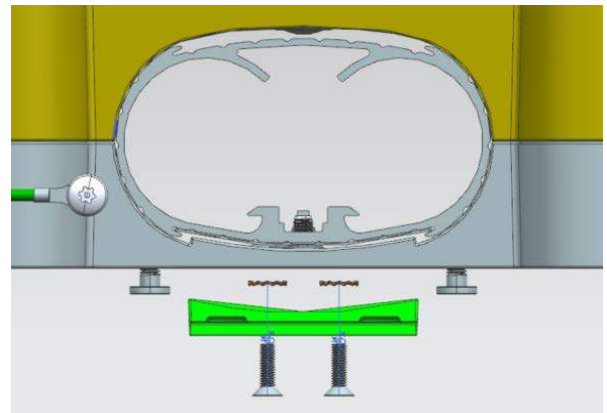
14. Loosen the screws on either side of the CMK clamp assembly and remove the combined station mounting bracket with the CMK clamp assembly from the CMK column.
15. Unseat the station mounting bracket from the hanger bracket and place the assembly carefully to the side.



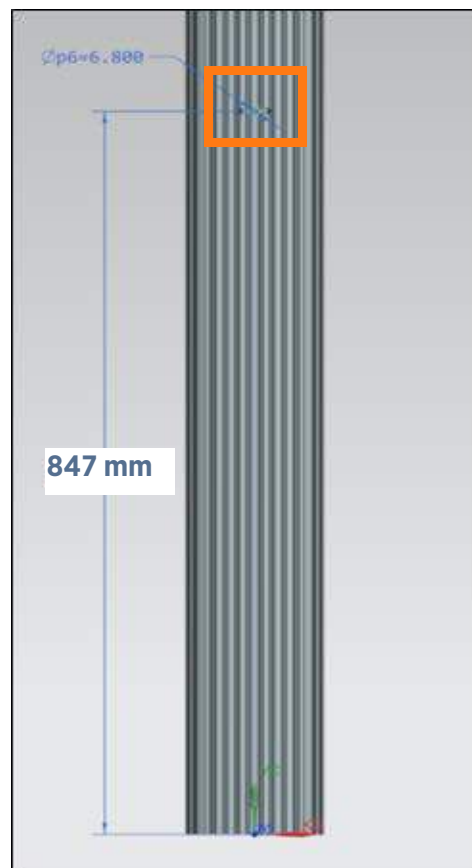
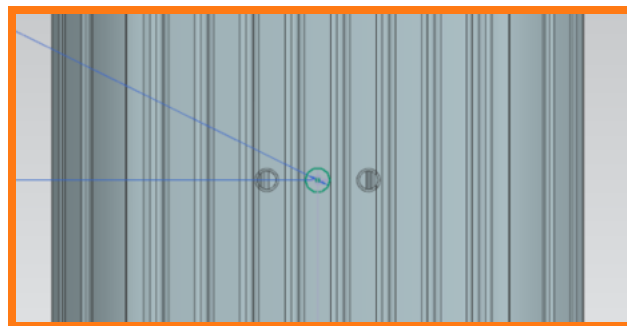
16. Remove two M8 screws that secure to the hanger bracket and remove the hanger bracket from the CMK column.



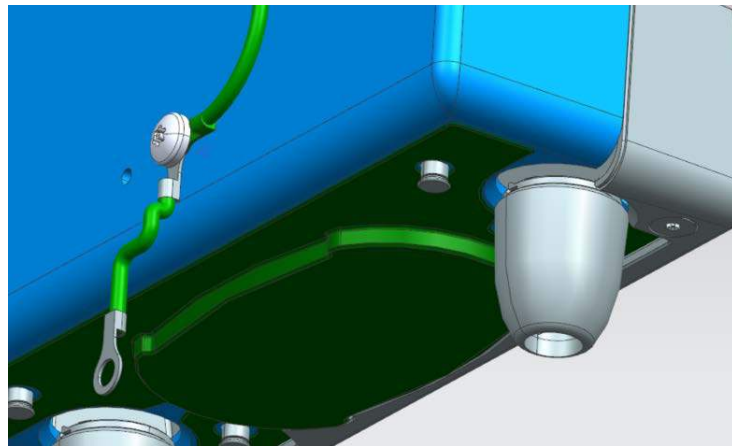
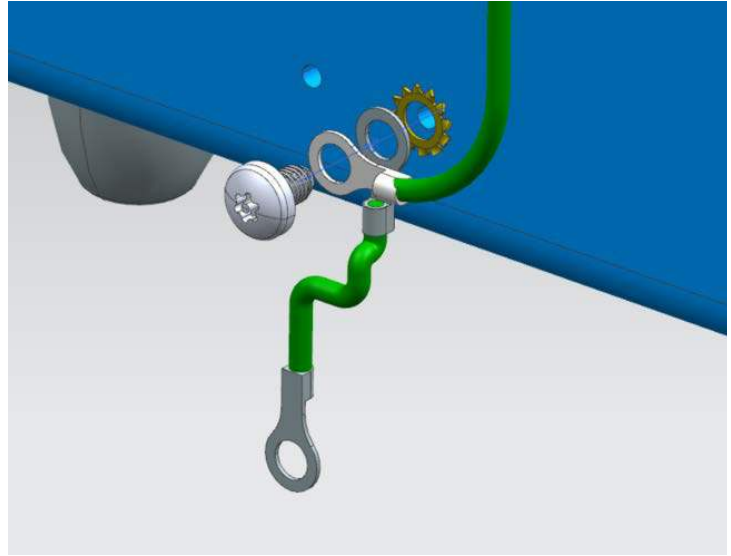
17. Place an M8 star washer between the hanger bracket and the CMK. Using two 10 mm M8 flathead Torx screws, reattach the hanger bracket to the CMK column. Tighten the screws to 16 Nm.
18. Reverse steps 9-14 to reconnect and replace the charging station.



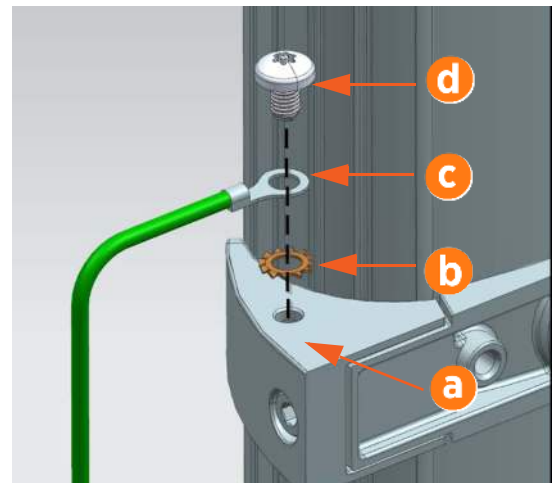
19. Using a 6.8 mm drill bit, drill a hole in the center of the CMK front face, 847 mm from the bottom. Drill the hole between the two holes that are already present.



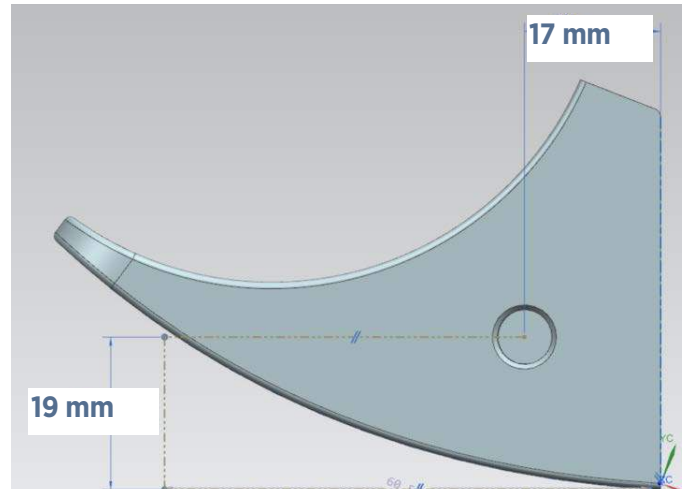
20. Using the thread forming M8 screw and star washer, connect one end of the 635 mm grounding cable and one end of the 241 mm grounding cable to the left (facing the station) M8 hole in the station mounting bracket.



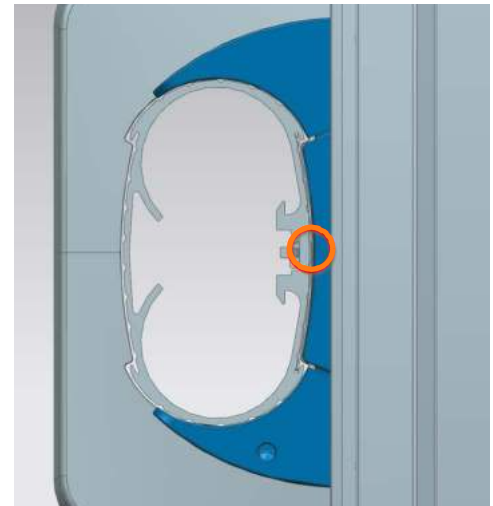
Important: Place the parts in the following sequence wherever a grounding cable is fastened to a part: part (a), washer (b), grounding cable (c), screw (d). This is required to break the anodizing layer and guarantee contact between the bare metal and grounding cable lug.



21. After drilling a pilot hole, use the 6.8 mm bit to drill a hole on the left (facing the station) CMK clamp end.

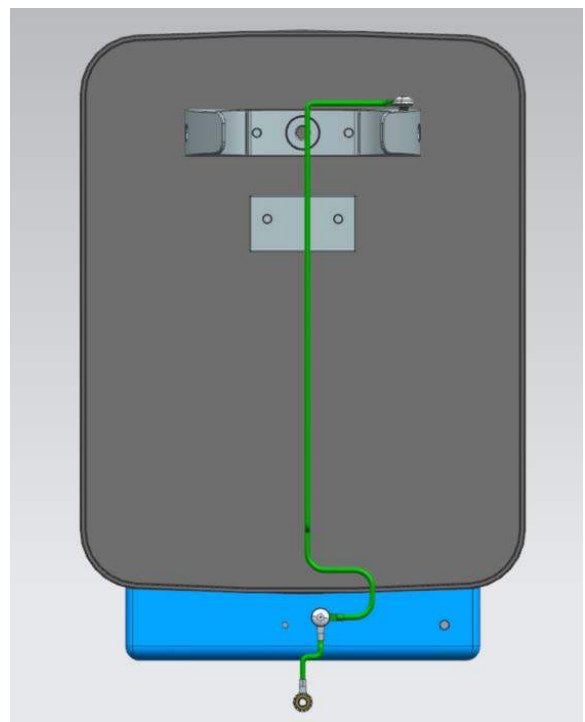


22. Loosen the screw in the left CMK clamp end and pull the CMK clamp end out.
23. Route the 635 mm grounding cable through the gap between the CMK column and the CMK clamp end.



24. Using the thread forming M8 screw and star washer, connect one end of the 635 mm grounding cable to the CMK clamp end.

Note: Use a cable tie to make sure that any excess length of the cable is tied up in loops so that the cable is taut and is not visible when looking at the front of the station.



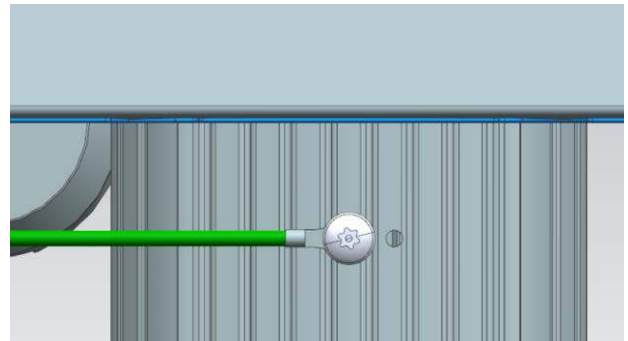
25. Tighten the screw in the CMK clamp end to secure it.



26. Connect one end of the 241 mm grounding cable to the CMK column using the thread forming M8 screw and the star washer.

Note: Use a cable tie to tie any excess length of cable into loops. Make sure that the cable is taut and that it is not visible when looking at the front of the station.

27. Reconnect the cables and wires disconnected in steps 1 through 8.
28. Replace cable strain connectors and the trim wall.



Install Grounding on New CP4321 and CP4311 Pedestal Stations

To install new CP4321 and CP4311 Pedestal Charging Stations, follow the instructions in the station's installation guide (available on ChargePoint University at chargepoint.com/eu/installers) and this bulletin.

1. Follow the instructions in Chapters 1, 2, and 3 of the *CP4300 Pedestal Installation Guide*.
2. Complete steps 14 through 24 below.
3. After you have connected the grounding cables, complete the procedures in the installation guide.

Note: On newer stations, CMK clamps come pre-drilled with holes for grounding screws. Inspect CMK clamps for drilled holes when gathering station parts for assembly.

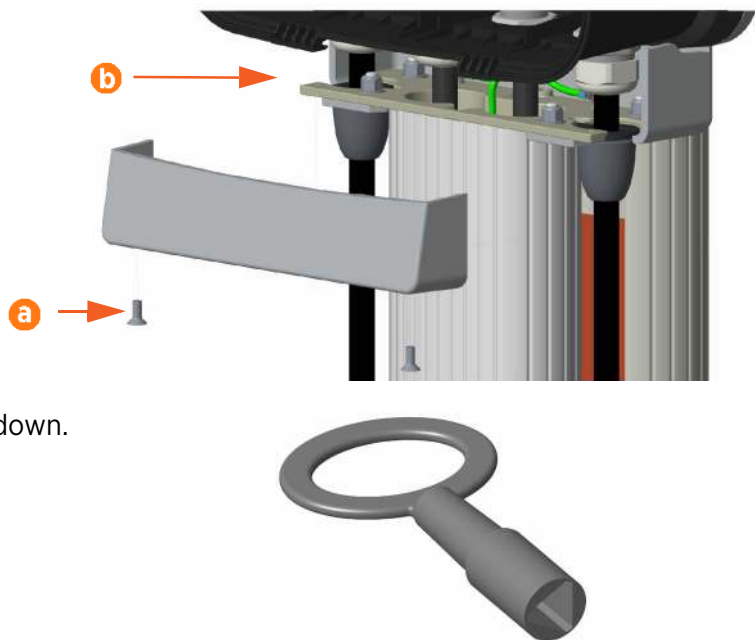
Install Grounding on Previously Installed CP4321 and CP4311 Pedestal Mount Stations

1. Power off the charging station at the breaker panel before continuing work. Use a multimeter to test that power is off.

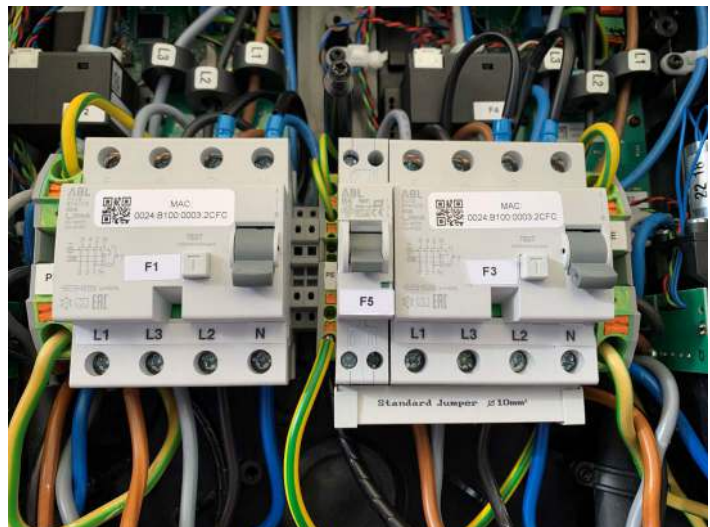


DANGER: RISK OF SHOCK. Before performing this procedure, disconnect the power to the station at the service panel. Follow standard practice and local code to de-energize the applicable circuit and lock out/tag out the disconnect before proceeding. **Use a multimeter to test that power is off before inspection.** Keep power off for this circuit until all cover panels are correctly reinstalled and the work scope is completed. **FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.**

2. Using a T27 Torx driver, remove two M6 screws that secure the trim wall in place (a). When reinstalling, tighten the screws to 6.5 Nm.
3. Remove the trim wall.
4. Locate the strain relief connectors (b) and loosen them from the cable glands next to the station mountain bracket.
5. Use the station's triangular key to unlock the front panel. Swing the panel open and down.

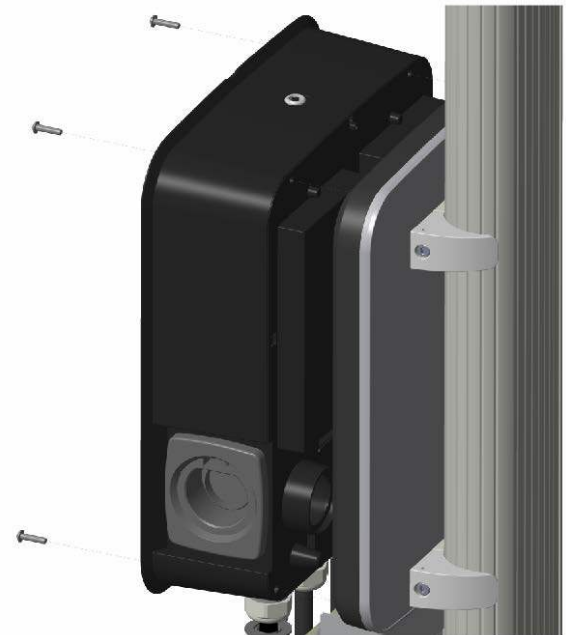


6. Using a Phillips screwdriver, loosen the lower screws in the terminal blocks.
7. Disconnect the Protective Earth (PE) wire from the PE terminal inside the charging station. When reinstalling the PE wire, tighten the lower screw on the PE terminal to no more than 3 Nm.
8. Disconnect the power cables and charging cables from the charging station. When reinstalling these cables, tighten the lower screws on the terminals to 3 Nm.
9. Remove the M8 screw and washer connecting the two grounding cables (from the cable

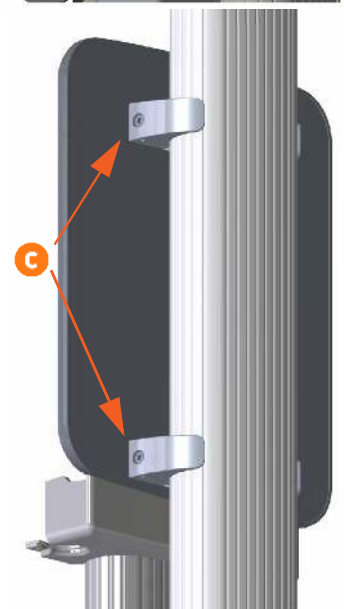


cover clamp and pedestal hole plate) to the grounding plate. When reinstalling, tighten the screws to 16 Nm.

10. Using a T25 Torx driver, remove four 22 mm M6 screws that connect the charging station to the grounding plate. When reinstalling the charging station, tighten the screws to 6.5 Nm.
11. Remove the charging station. Gently lay the charging station face up on a padded ground covering.

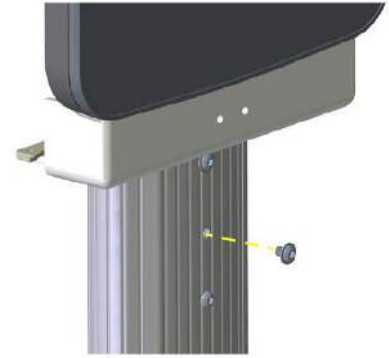


12. Using a 6 mm hex bit, loosen the ends of the clamp ends (c).

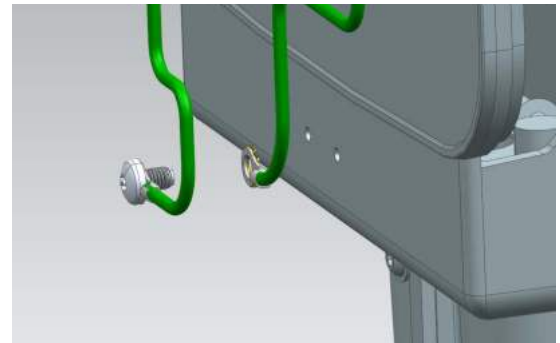


13. Using a T30 Torx driver, remove the two M8 screws holding the station mounting bracket to the pedestal. When reinstalling, torque to 16 Nm.

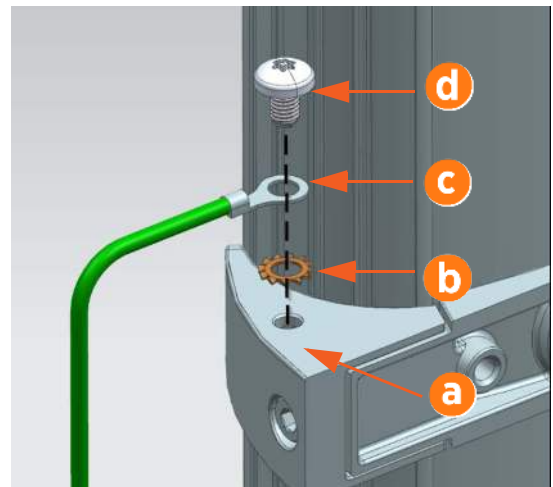
14. Lift the assembled station mounting bracket up gently and lay it face down on a padded ground covering.



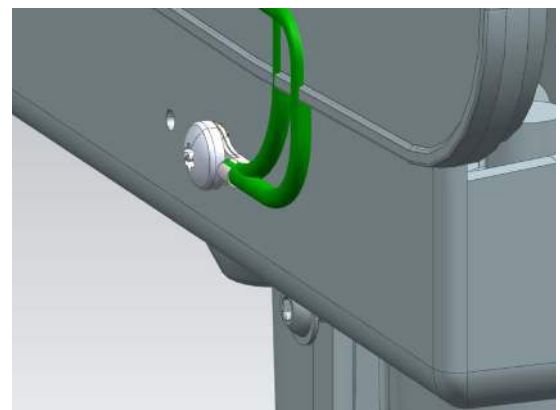
15. Using the thread forming M8 screw and star washer, connect one end of the 635 mm grounding cable and one end of the 241 mm grounding cable to the left (facing the station) M8 hole in the station mounting bracket.



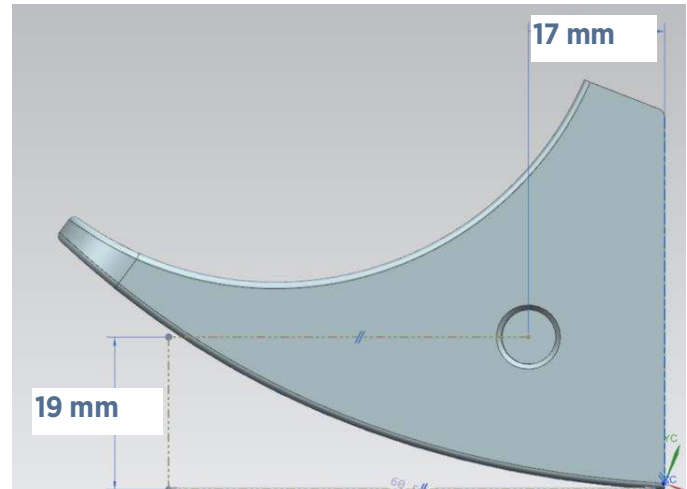
Important: Place the parts in the following sequence wherever a grounding cable is fastened to a part: part (a), washer (b), grounding cable (c), screw (d). This is required to break the anodizing layer and guarantee contact between the bare metal and grounding cable lug.



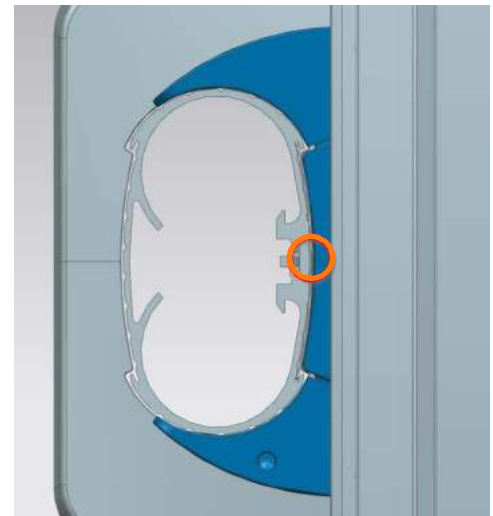
16. Reverse steps 8-13 to reconnect and replace the charging station.



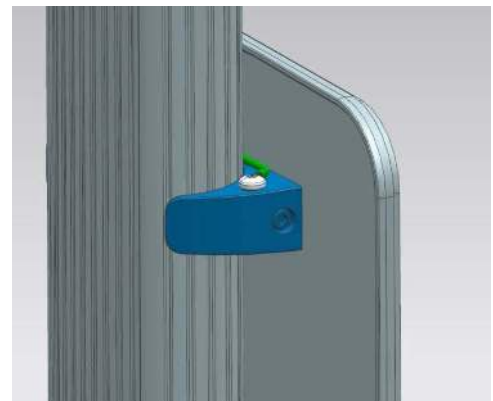
17. After drilling a pilot hole, use the 6.8 mm bit to drill a hole on both the left (facing the station) upper and lower CMK clamp ends.
18. Loosen the screw in the left CMK clamp end and pull the CMK clamp end out.



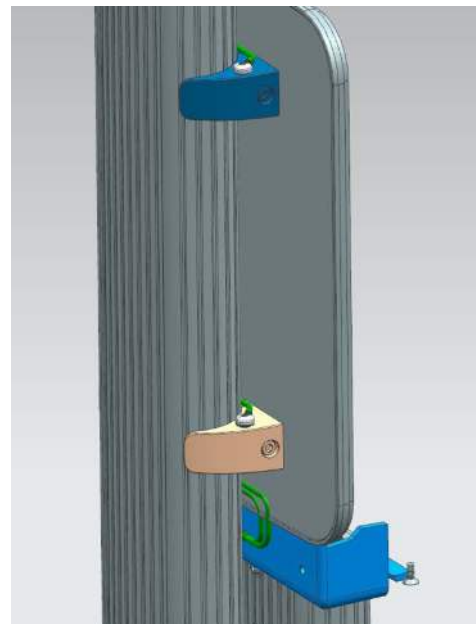
19. Route the 635 mm grounding cable through the gap between the CMK column and the CMK clamp end.



20. Using the thread forming M8 screw and star washer, connect one end of the 635 mm grounding cable to the CMK clamp end.
21. Tighten the CMK clamp end screw to secure the clamp end in place. Torque clamp end screws to 16 Nm.
22. Loosen the screw in the lower left CMK clamp end and pull the CMK clamp end out.
23. Route the 241 mm grounding cable through the gap between the CMK column and the CMK clamp end.



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24. Using the thread forming M8 screw and star washer, fasten one end of the 241 mm grounding cable to the left (facing the station) lower CMK clamp end.
 25. Tighten the CMK clamp end screw to secure the clamp end in place.
 26. Reconnect the cables and wires disconnected in steps 5-7.
 27. Replace cable strain connectors and the trim wall.



Report Completion to ChargePoint

Work with your ChargePoint Support representative to prove completion.



chargepoint.com/support

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