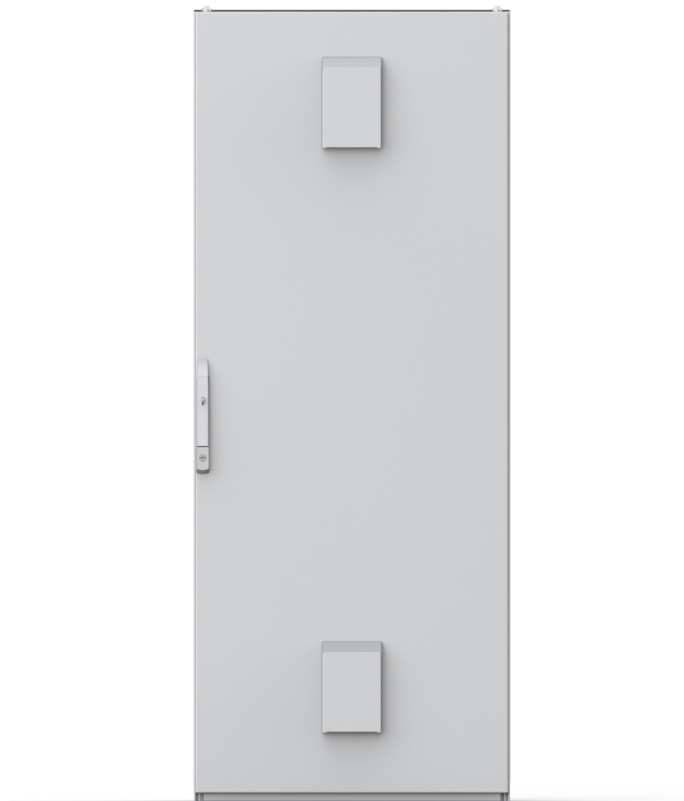


Power Hub

Express Plus DC Fast Charging Platform

Service Guide



IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

This manual contains important instructions for ChargePoint® products that shall be followed during installation, operation and maintenance of each product.

WARNING:



1. **Read and follow all warnings and instructions before servicing, installing, or operating the ChargePoint® product.** 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 product and adhere to all national and local building codes and standards.** Before installing the ChargePoint product, 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 product for proper installation before use.
3. **Always ground the ChargePoint product.** A touch current of >3.5 mA AC RMS is possible in case of a fault condition of loss of electrical continuity of the earthing conductor. Failure to ground the product can lead to risk of electric shock. The product 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 product using a ChargePoint-approved method.** Failure to install on a surface that can support the full weight of the product can result in death, personal injury, or property damage. Inspect the product for proper installation before use.
5. **The product is not suitable for use in Class 1 hazardous locations, such as near flammable, explosive, or combustible vapors or gases.**
6. **Supervise children near this device.**
7. **Do not put fingers into the electric vehicle connector or connector adapter. Do not touch fingers to charging rails.**
8. **Do not use this product if any cable is frayed, has broken insulation, or shows any other signs of damage.**
9. **Do not use this product if the enclosure, the flexible output cable, the vehicle inlet, the electric vehicle connector, or the electric vehicle connector adapter is broken, cracked, open, or shows any other signs of damage. Do not use this product if internal parts are accessible, including wiring.**
10. **Wire and wire terminal information are provided in the ChargePoint product Site Design Guide and Installation Guide.**



11. **Torques for installation of wire terminals are provided in the ChargePoint product Installation Guide.**
12. **The ChargePoint product maximum operating temperature is 50 °C (122 °F).**
13. **Do not use an electric vehicle connector adapter with any charger or EV that is capable of exceeding the adapter's rated voltage of current capacity. Some EVs and EVSE combinations are capable of multiple voltages or limited durations of current overloading designed for normal EVSE-to-EV connections. Use of an electric vehicle connector adapter in these situations could result in unsafe conditions such as fire, burns, or exposure of high voltage.**



IMPORTANT: Under no circumstances will compliance with the information in a ChargePoint guide such as this one relieve the user of the responsibility to comply with all applicable codes and safety standards. This document describes approved procedures. If it is not possible to perform the procedures as indicated, contact ChargePoint. ChargePoint is not responsible for any damages that may result from custom installations or procedures not described in this document or that fail to adhere to ChargePoint recommendations.

Product Disposal

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



Applicable to EU - To comply with Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE), devices marked with this symbol may not be disposed of as part of unsorted domestic waste inside the European Union. Enquire with local authorities regarding proper disposal. Product materials are recyclable as marked.



Document Accuracy

The specifications and other information in this document were verified to be accurate and complete at the time of its publication. However, due to ongoing product improvement, this information is subject to change at any time without prior notice. For the latest information, see our documentation online at [ChargePoint Product Reference Documentation](#).

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Symbols

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



NOTE: Helpful information to facilitate installation success



Read the manual for instructions



Ground/protective earth

Illustrations Used in this Document

The illustrations used in this document are for demonstration purposes only and may not be an exact representation of the product. However, unless otherwise specified, the underlying instructions are accurate for the product.

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Service Guide 1

Follow this guide to service and replace Power Hub components.

Before You Begin

DANGER: RISK OF SHOCK



- Before any procedure, disconnect the power.
- Follow local code and site lockout/tagout procedure to de-energize the station.
- Wait for energy to dissipate (approximately five minutes).
- Keep power off until all covers and panels are reinstalled and the work is complete.

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY, LOSS OF LIFE, OR PROPERTY DAMAGE.



WARNING: Do not perform installation or service in inclement weather. If you work in rain or wind, you must use a weather-proof shelter that covers all boxes and components.



CAUTION: Keep components in original packaging, free of moisture, and protected from damage until you install or service them at the site. Store all shipments of components in a dry covered location and protect from moisture.



CAUTION: Comply with these guidelines to prevent component damage.

- Use appropriately sized tools to torque fasteners.
- Use the given torque values to tighten the fasteners.
- Ensure that the tools such as torque tool, multimeter, and Ethernet tester are calibrated.

CAUTION: Warranty Limitation



- If Power Hub is not installed, commissioned, or serviced by a ChargePoint certified installer or technician using a ChargePoint-approved method, it is *excluded* from all ChargePoint and other warranties and ChargePoint is not responsible.
- You must be a licensed electrician and complete the training at chargepoint.com/installers to become ChargePoint certified and to access the ChargePoint web or app-based installer tools.



IMPORTANT: During servicing, ChargePoint recommends taking a photo before removing each part, so you can refer to the photos when reassembling the system.



WARNING: Follow Service Guide instructions only. Use only ChargePoint-authorized parts.

Additional Documentation

To ensure safety for you and others, do this before you begin:

- Familiarize yourself with the instructions in this Service Guide.
- If you have not installed or serviced the Power Hub recently, orient yourself to the Power Hub by reviewing the Power Hub [Site Design](#), [Installation](#), and [Datasheet](#), as well as any other materials you find helpful.

Access documents at [ChargePoint Product Reference Documentation](#).

Document	Content	Primary Audiences
Datasheet	Full station specifications	Site designer, installer, and station owner
Site Design Guide	Civil, mechanical, and electrical guidelines to scope and construct the site	Site designer or engineer of record
Construction Signoff Form	Checklists used by contractors to ensure the site is correctly completed and ready for product installation	Site construction contractor
Installation Guide	Anchoring, wiring, and powering on	Installer
Operation and Maintenance Guide	Operation and preventive maintenance information	Station owner, facility manager, and technician
Service Guide	Component replacement procedures, including optional components	Service technician
Declaration of Conformity	Statement of conformity with directives	Purchasers and public

Check and Protect Parts

To ensure your safety, do the following:

- Use only authorized parts and accessories sold and supplied by ChargePoint for the unit and model.
- Keep components in original packaging, free of moisture, and protected from damage until you install or service them at the site.
- Store all shipments of components in a dry covered location and protect from moisture.
- Familiarize yourself with the contents of each shipping box.
- Ensure that you have all the parts for the work you plan to perform.
- Have more than one technician or qualified support person present if components are heavy.
- Keep liquids (and objects containing liquid) away from the unit, never on or inside.



NOTE: Do not discard the part you are replacing. Reuse the packaging from the new part to return all removed parts to ChargePoint.

If Damaged, Do Not Service

Do not perform work or remove any signs or covers from the unit if you find any of the following:

- The unit housing shows mechanical damage.
- The unit is unstable or moves at its anchor point.

If you find such damage, *turn off the unit*, advise the site manager to keep the unit off, and contact ChargePoint immediately. Find your region's technical support number at chargepoint.com/support.

Questions

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

Power Off 2

To power off, refer to the following topics:

Tools



Multimeter (meter and probes rated for 1000 V)



Lockout/tagout equipment

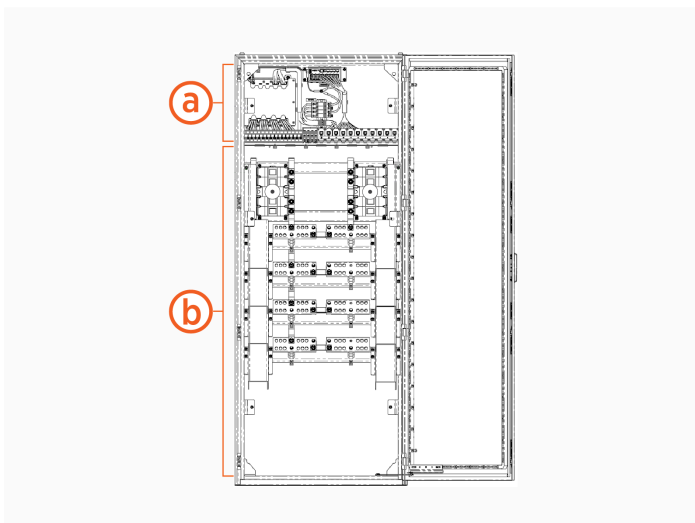


Stepladder

Overview

You must be a ChargePoint certified installer or technician to power off the Power Hub, or warranty limitations apply.

Power Hub is partitioned into two cabinets: a low voltage cabinet and a high voltage cabinet.



(a) Low voltage cabinet

(b) High voltage cabinet

- You must de-energize the low voltage cabinet prior to performing service within. The high voltage cabinet may remain energized, so long as its deadfront remains installed.

- You must de-energize the high voltage cabinet prior to performing service within. The low voltage cabinet may remain energized, so long as its deadfront remains installed.

Prior to performing service in either cabinet, you must end charging sessions at all Power Link 1000s powered through the Power Hub (downstream Power Link 1000s).



IMPORTANT: Failure to end charging sessions before beginning service could damage hardware components. Such damaged components may need to be replaced.

End Charging Station Sessions

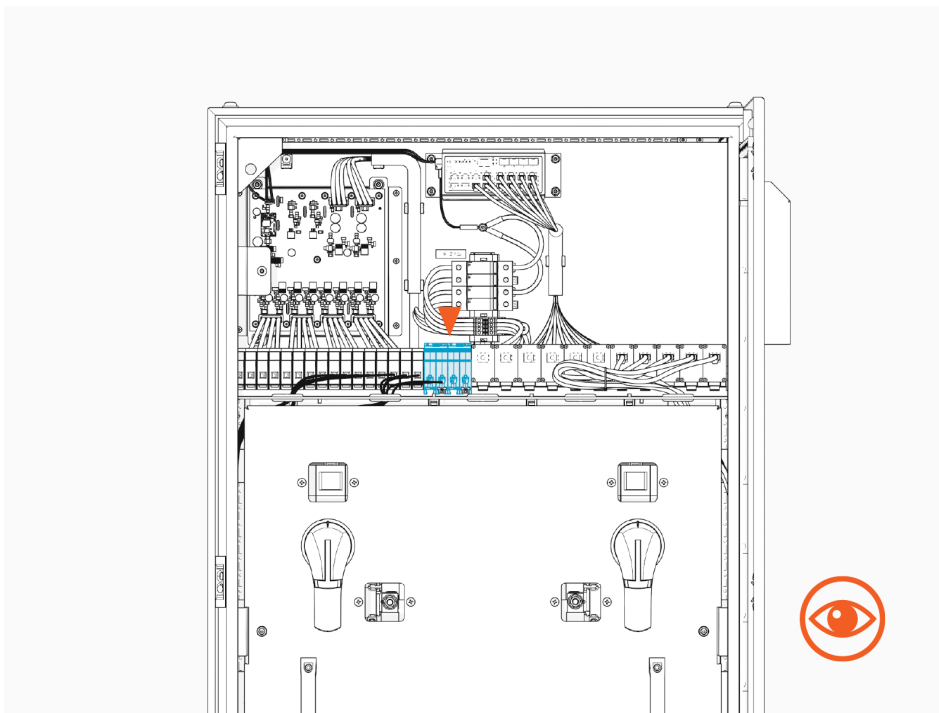
To end charging station sessions, complete the following steps:

1. Refer to the site single line diagram (SLD) and identify the Power Hub to be serviced.
2. Using the SLD diagram, identify all downstream Power Link 1000s.
3. End all charging sessions at the downstream Power Link 1000s.

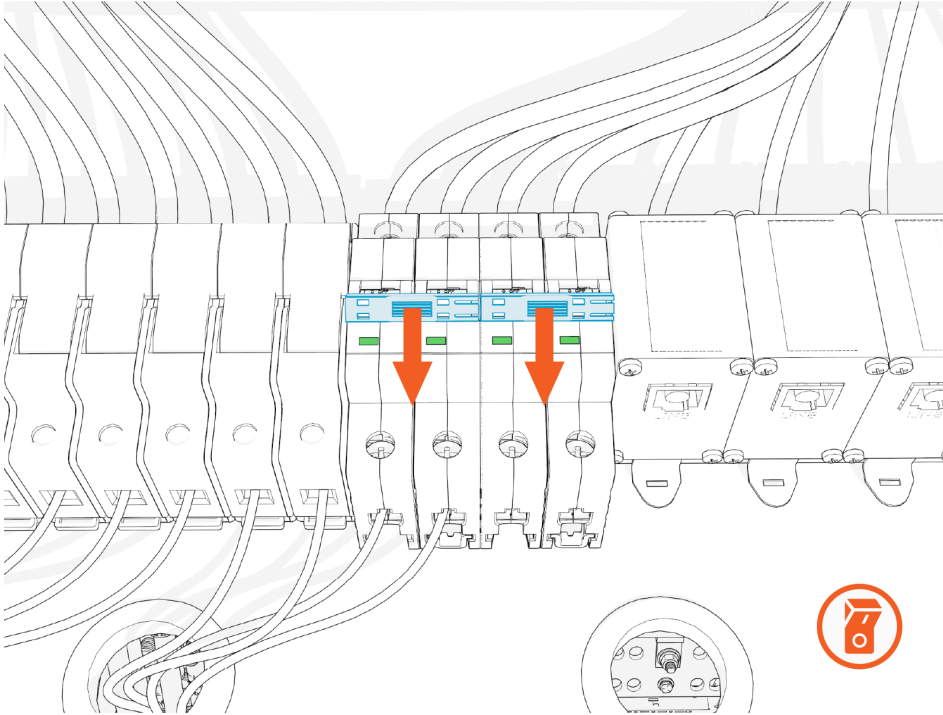
De-Energize Low Voltage Cabinet

To de-energize low voltage cabinet, complete the following steps:

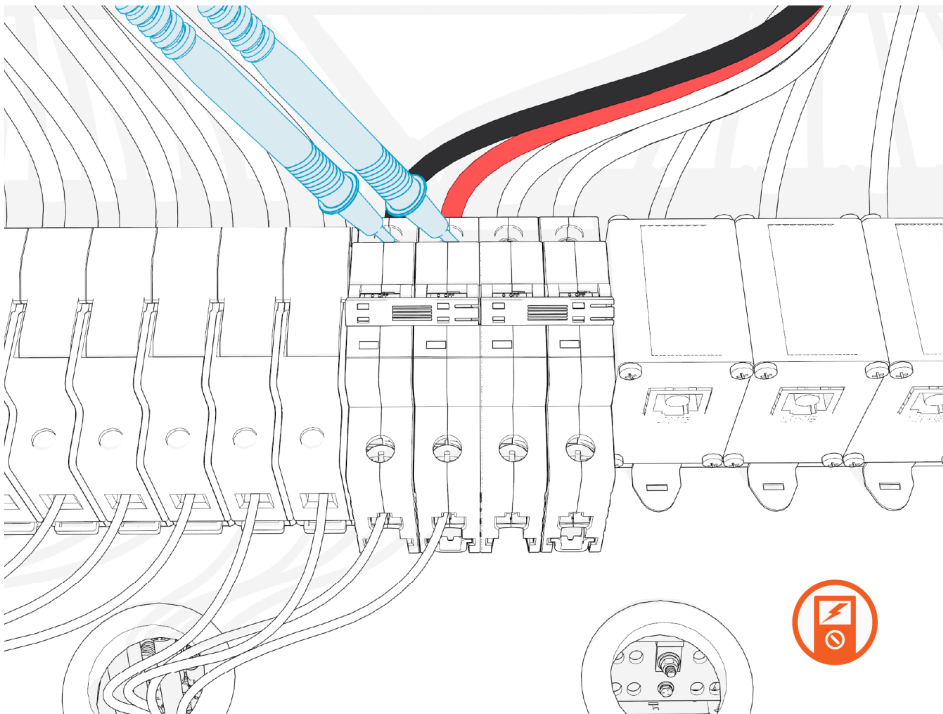
1. Open the front door of the Power Hub.
2. Remove low voltage deadfront from the Power Hub.
3. Locate the input 48 V DC circuit breakers.



4. Flip the circuit breaker switches to OFF. The indicator window should turn green.



5. Use the probes of a multimeter at the circuit breaker's output terminal screws to verify the voltage is zero. Test all breaker pairs in use.



De-Energize High Voltage Cabinet

To de-energize high voltage cabinet, complete the following steps:

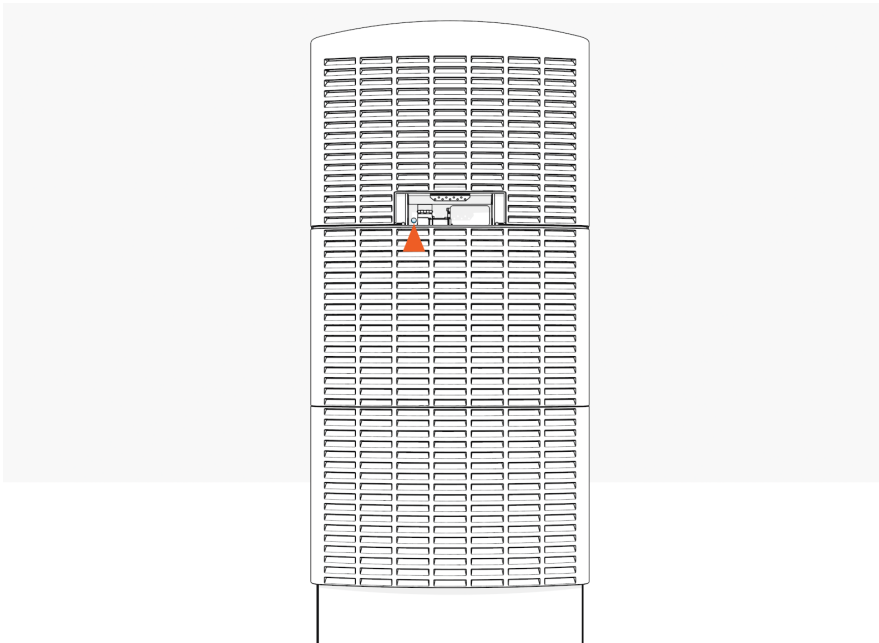
1. Refer to the site single line diagram (SLD) and identify the Power Hub to be serviced.
2. Using the SLD diagram, identify all Power Blocks feeding power to the Power Hub (upstream Power Blocks). Upstream Power Block(s) must be de-energized.
3. Determine where to disconnect power to the Power Block(s). Identify the location of control elements such as circuit breakers and disconnect switches.
 - If you want to power off all Power Blocks and Power Link 1000s at the site, turn the AC circuit breaker switch at the site electrical panel to the off position.
 - If an AC disconnect switch has been installed between a Power Block and the site electrical panel, and you want to power off solely that Power Block, turn the AC disconnect switch to the off position.

IMPORTANT:



- Account for all Power Link 1000s that will be affected by power off, and end charging sessions at those Power Link 1000s prior to power off.
- Follow standard practice and local code to de-energize the applicable circuit and lockout/tagout the disconnect before proceeding.

4. Wait for energy to dissipate (approximately five minutes).
5. Check the status light at each de-energized Power Block:
 - a. Open the security panel to check the status light.



- b. The status light must be off (unlit). If the status light is on (glowing any color), do not proceed with further servicing. Wait the required time for energy to dissipate.

Door and Panels 3

To replace doors and panels, refer to the topics below:

Tools



#2 Phillips head screwdriver



Torque screwdriver



Stepladder

Door

To replace the door, complete the following steps:

1. A key unlocks the Power Hub door.

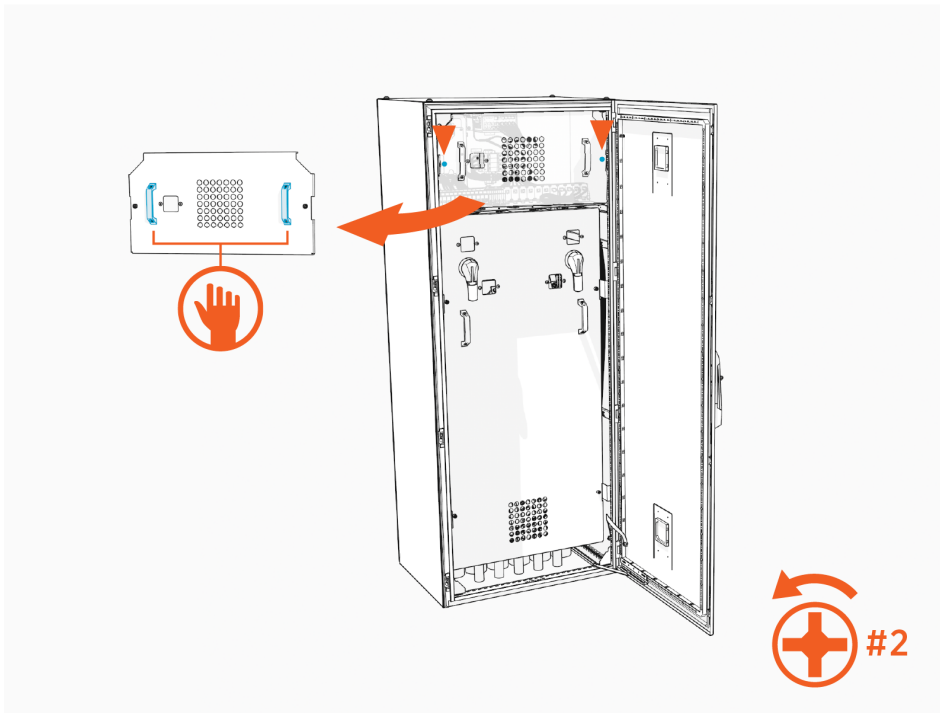


2. Always store the key safely after use, for future servicing of the Power Hub.

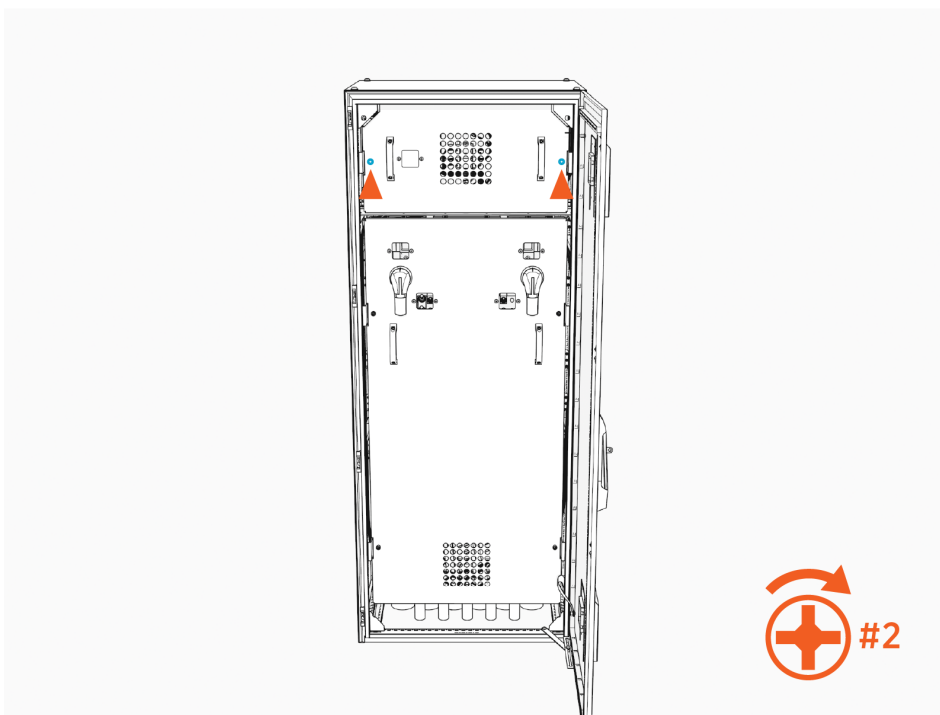
Low Voltage Deadfront

To replace the low voltage deadfront, complete the following steps:

1. To access the low voltage cabinet, loosen two captive screws at the low voltage deadfront and remove the deadfront.



2. To close up the low voltage cabinet, replace the deadfront and tighten two captive screws. **Torque to 5.6 Nm (50 in-lb).**

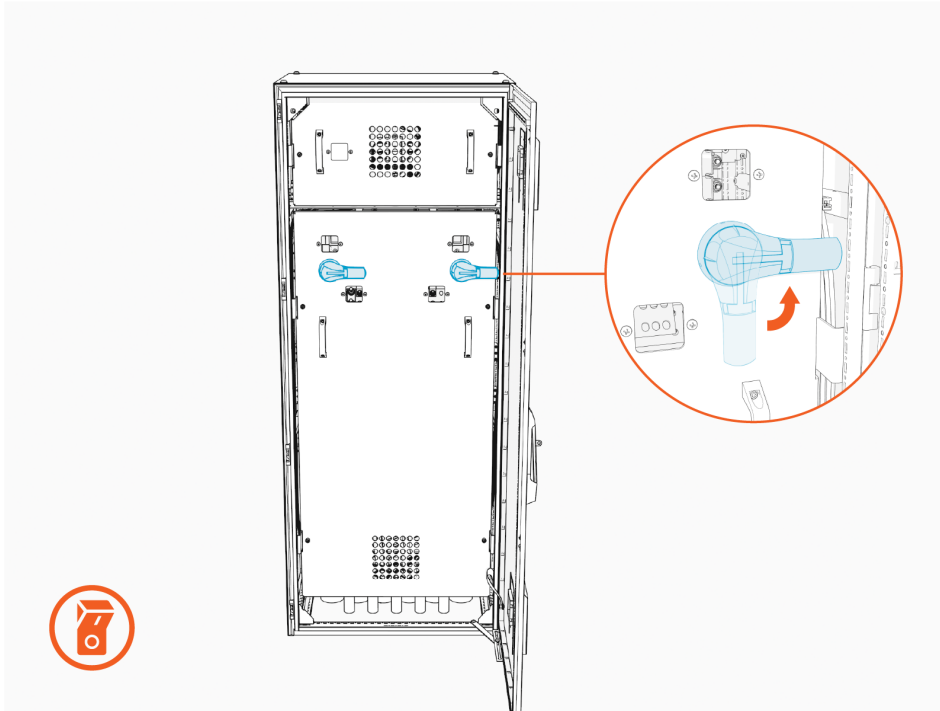


High Voltage Deadfront

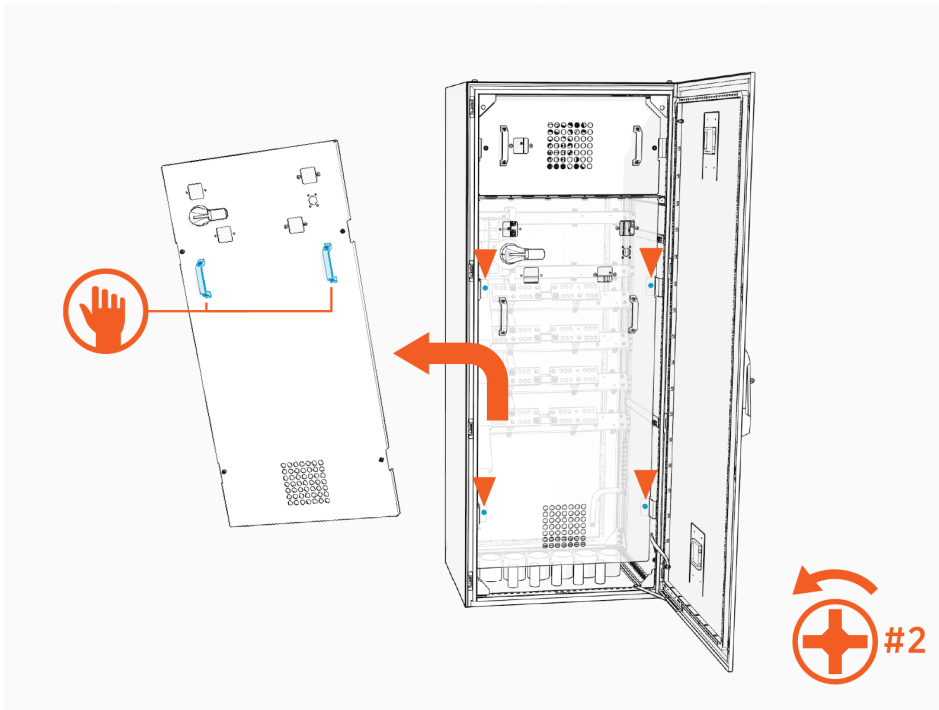
To service the high voltage deadfront, follow the instructions below:

Remove High Voltage Deadfront

1. Ensure all disconnect switch handles on the high voltage deadfront are in the OFF position.

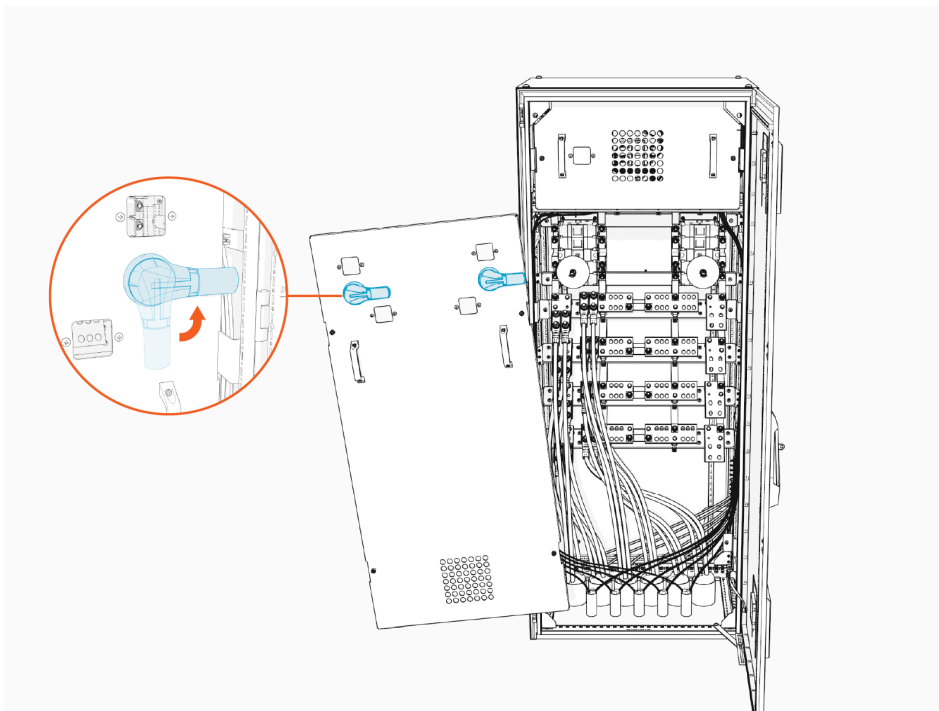


2. Loosen four captive screws at the high voltage deadfront and remove the deadfront.

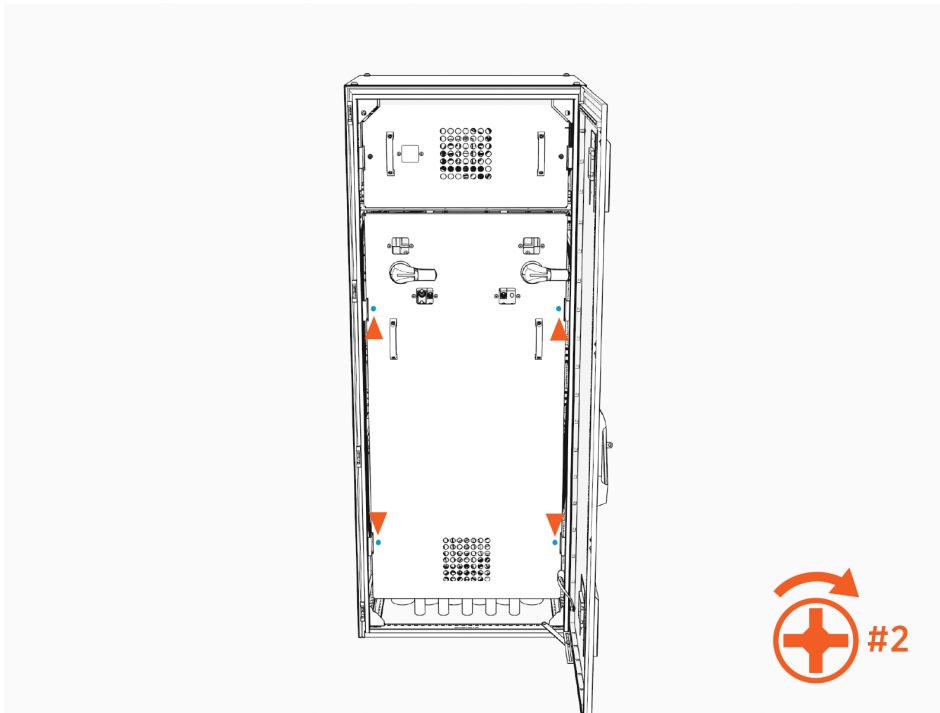


Install High Voltage Deadfront

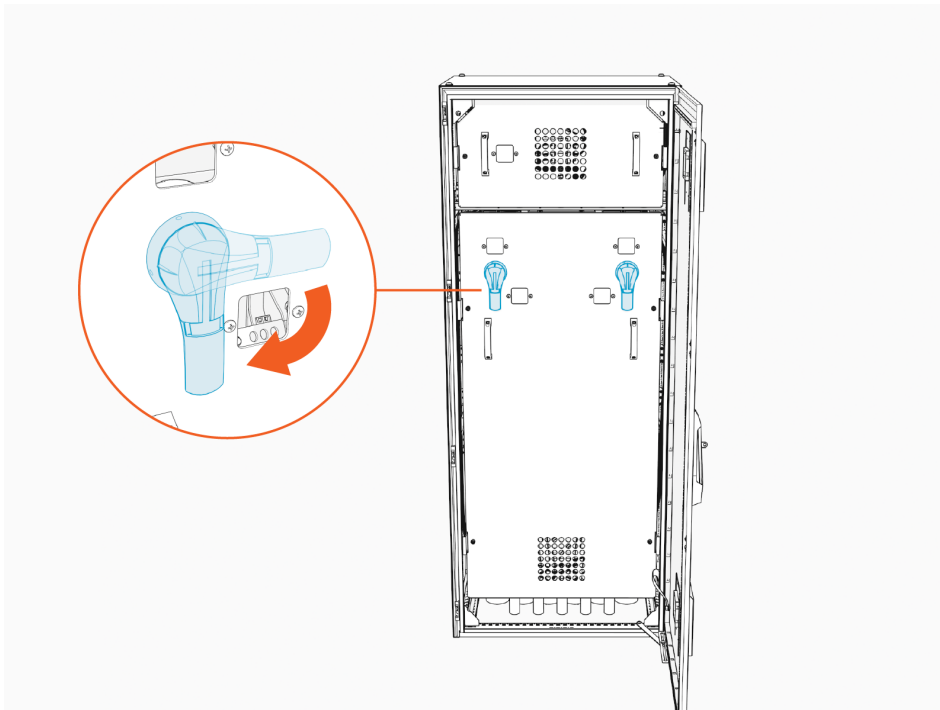
1. Ensure all disconnect switch handles on the high voltage deadfront are in the off position.



2. Replace the deadfront and tighten four captives screws. **Torque to 5.6 Nm (50 in-lb).**



3. Turn each disconnect switch handle to the ON position. Align the fin on the handle with the ON mark.



Ethernet Switch 4

To replace the Ethernet switch, refer to the following topics:

Tools



3/8 in hex socket



Torque wrench



Phillips head screwdriver set (#1, #2)



Flathead screwdriver (3 mm)



Stepladder

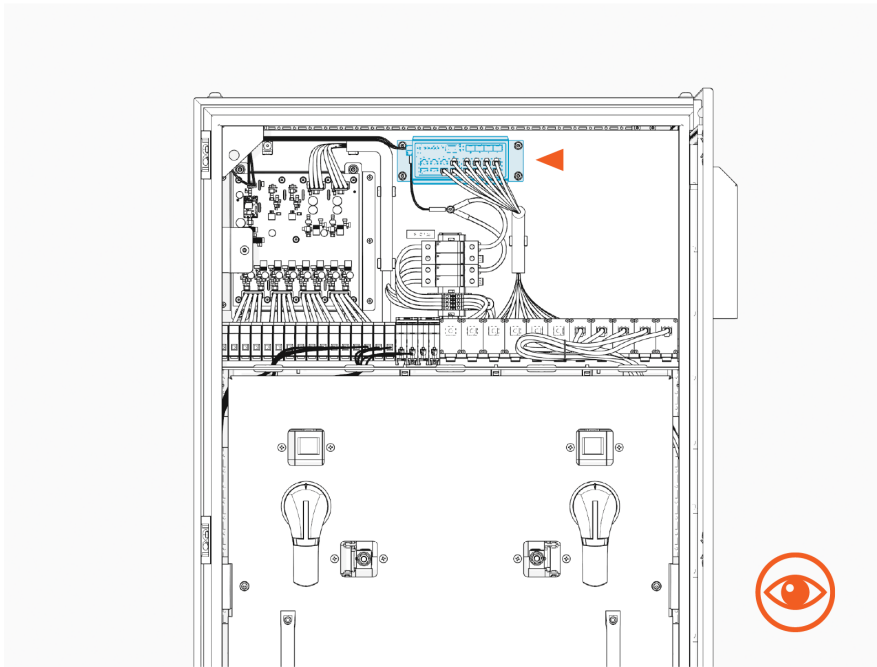
Before You Begin

1. End charging sessions at downstream Power Link 1000s.
2. De-energize the low voltage cabinet.

Replace Ethernet Switch

To replace the Ethernet switch, complete the following steps:

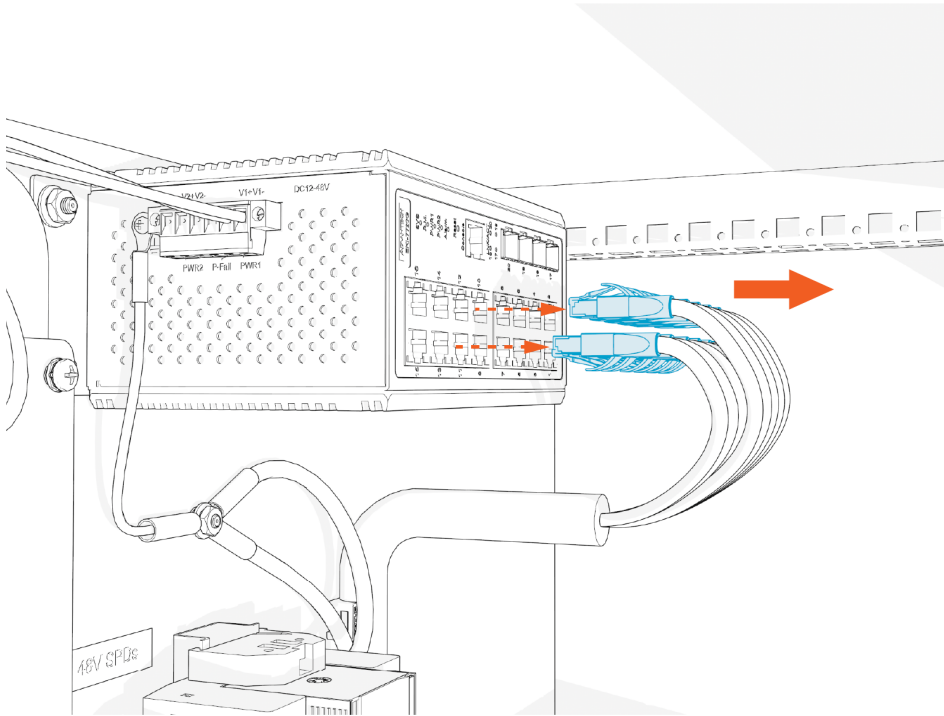
1. Locate the Ethernet Switch in the low voltage cabinet.



2. Disconnect all Ethernet wires from the switch.

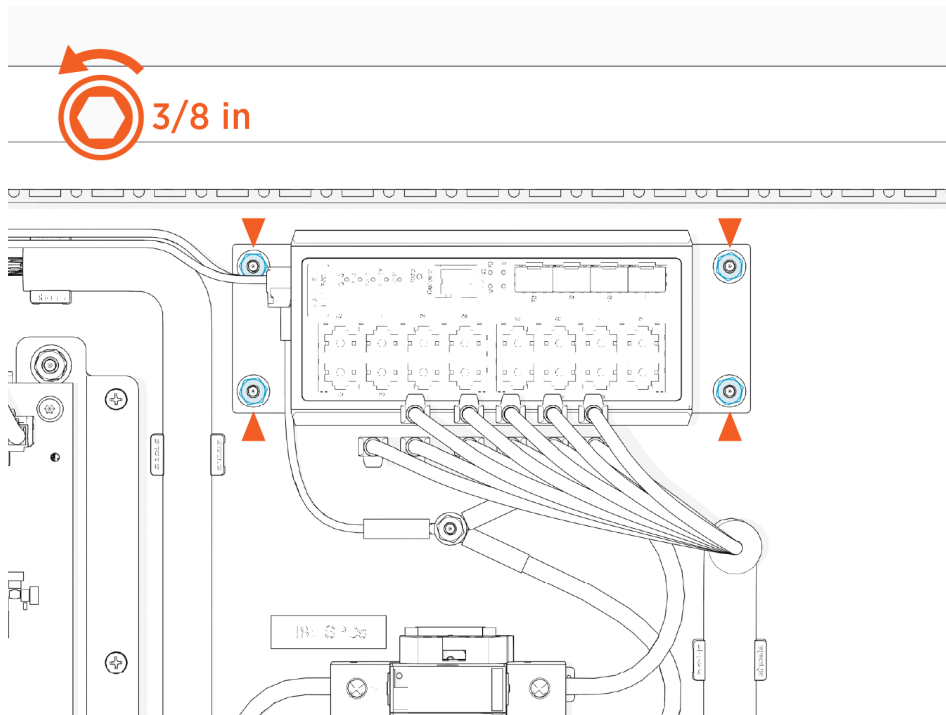


NOTE: Pinch the Ethernet connector latch to disengage the connector.



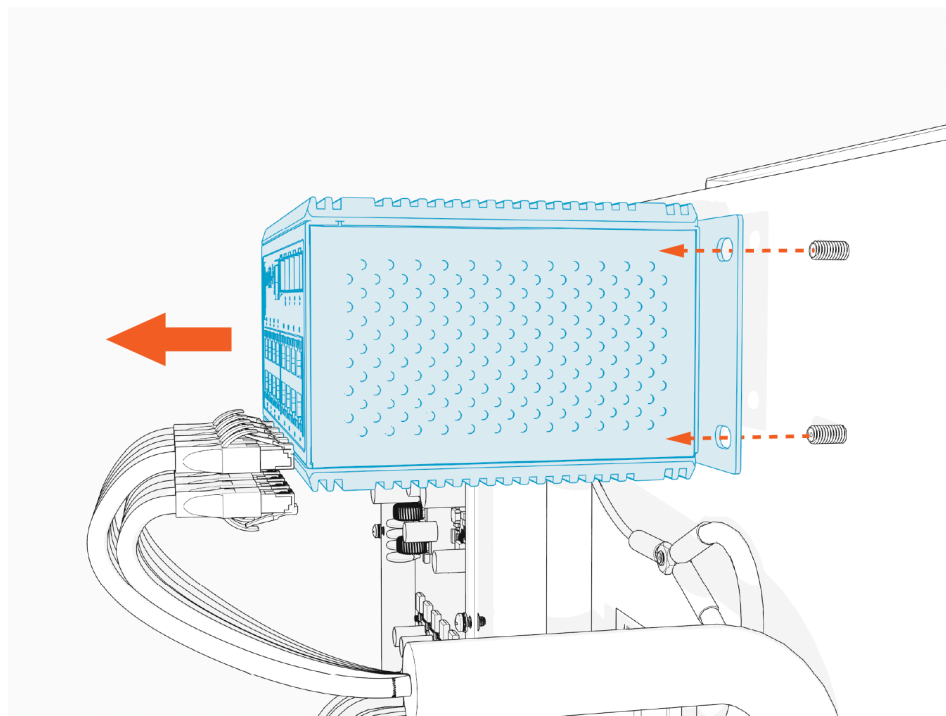
REINSTALL NOTE: When reconnecting Ethernet wires to the replacement Ethernet switch, all ports are equivalent.

3. Using a 3/8 inch hex socket, remove nuts and washers (x4) to free the Ethernet switch.

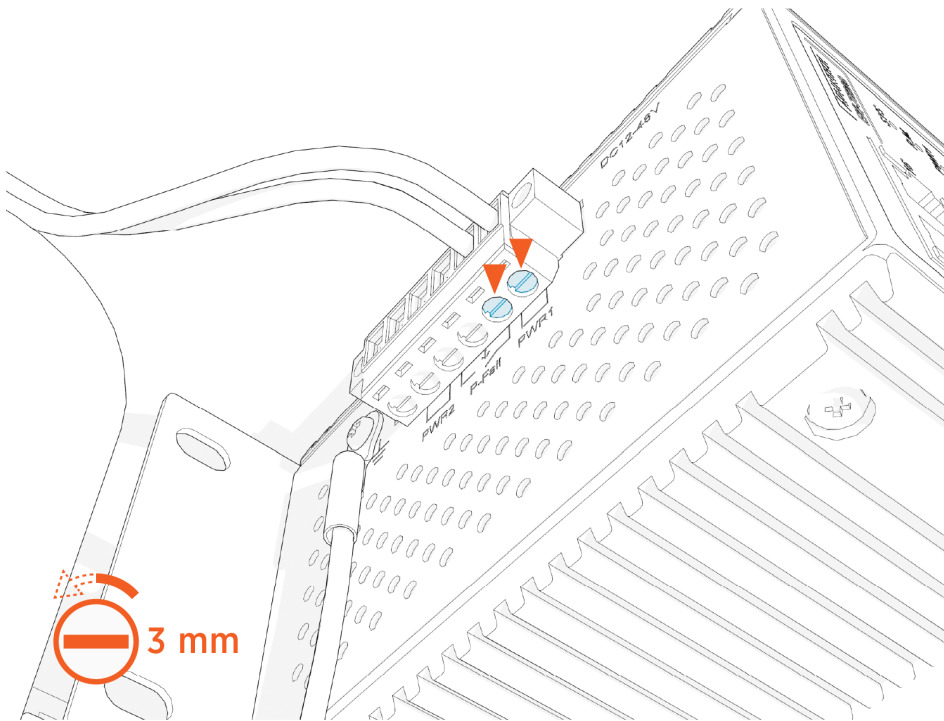


REINSTALL NOTE: When installing the replacement Ethernet switch, torque the fasteners to 3.4 Nm (30 in-lb).

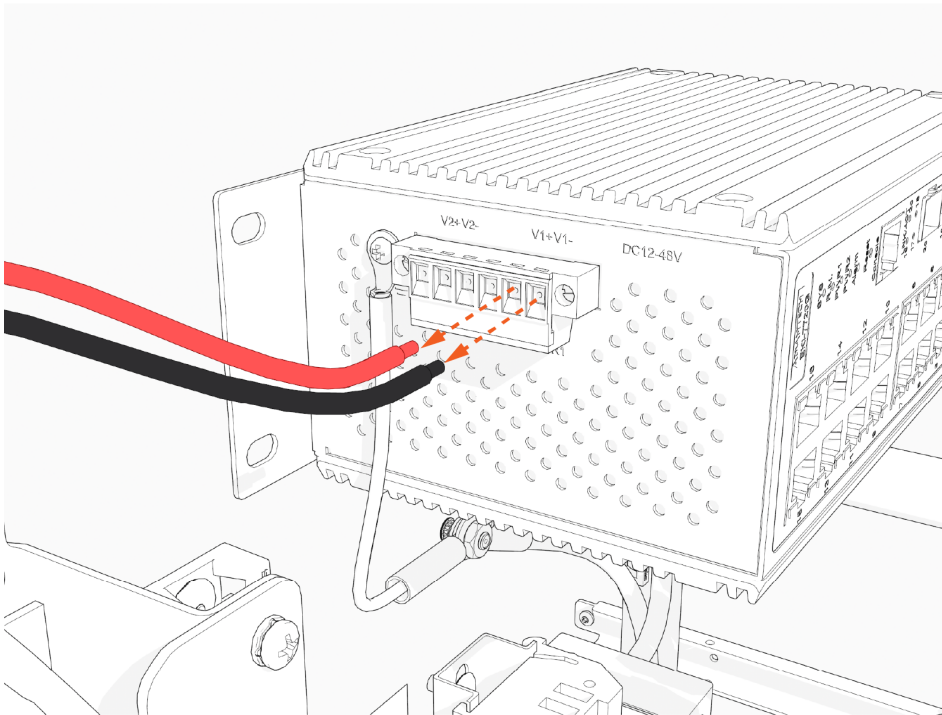
4. Remove the Ethernet switch from the back wall of the cabinet.



-
5. On the left side of the Ethernet switch, use a 3 mm flat head screwdriver to loosen the set screws securing the 24 V DC wires. Do not remove the screws.

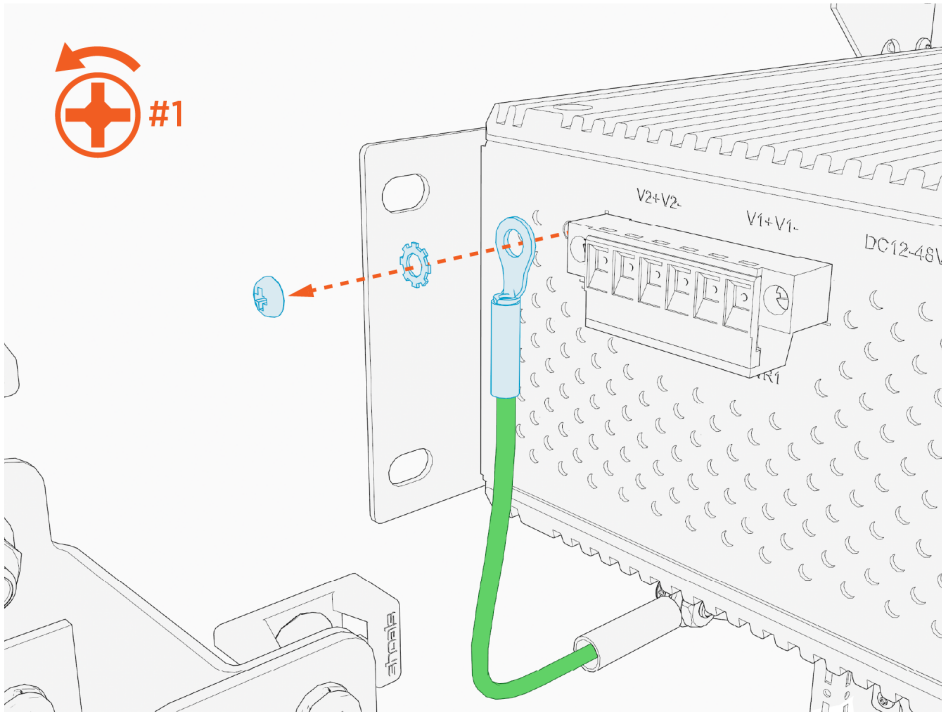


6. Remove the 24 V DC wires (x2) from the terminal block.



REINSTALL NOTE: When installing the replacement Ethernet switch, reinstall the 24 V DC wires into the same terminals. Reinstall the red wire to the positive (+) terminal, and the black wire to the negative (-) terminal.

-
7. Using a #1 Phillips screwdriver, disconnect the ground wire from the Ethernet switch.



Reverse the above steps to install the replacement Ethernet switch.

To complete the service, Power on the Power Hub.

Controller Board 5

To service and replace the controller board, refer to the following topics:

Tools



7/16 in hex socket



Torque wrench



Phillips head screwdriver set



Stepladder

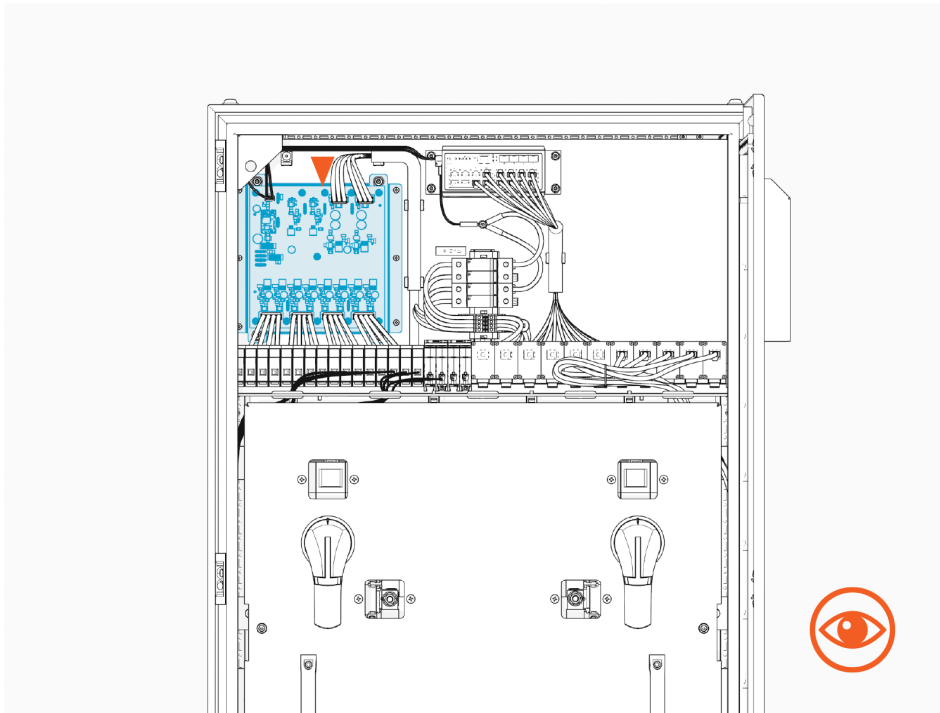
Before You Begin

1. End charging sessions at downstream Power Link 1000s.
2. De-energize the low voltage cabinet.

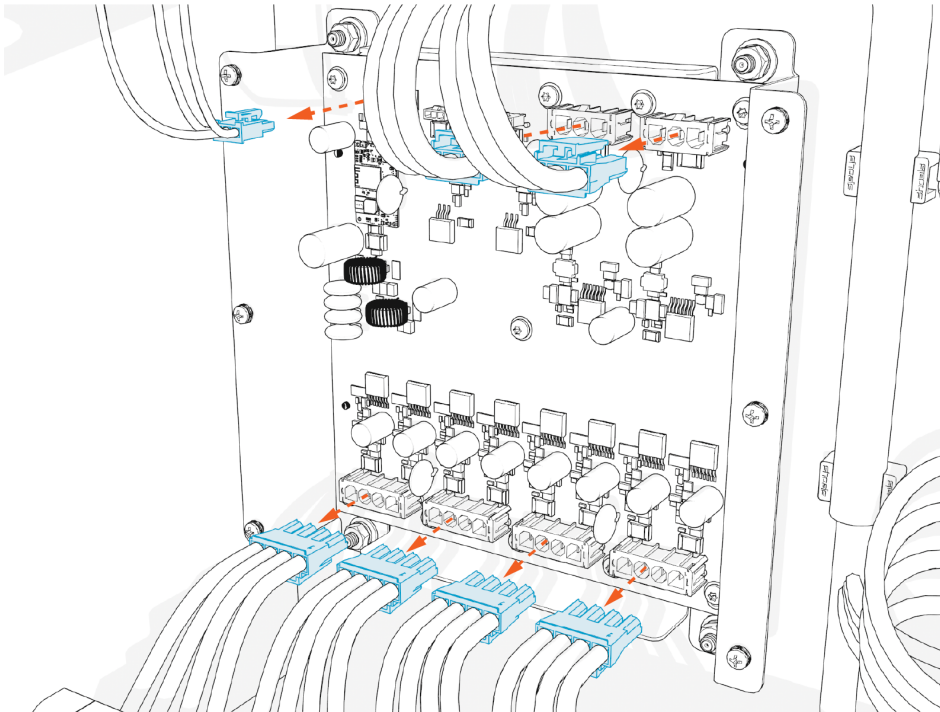
Replace Controller Board

To replace the controller board, complete the following steps:

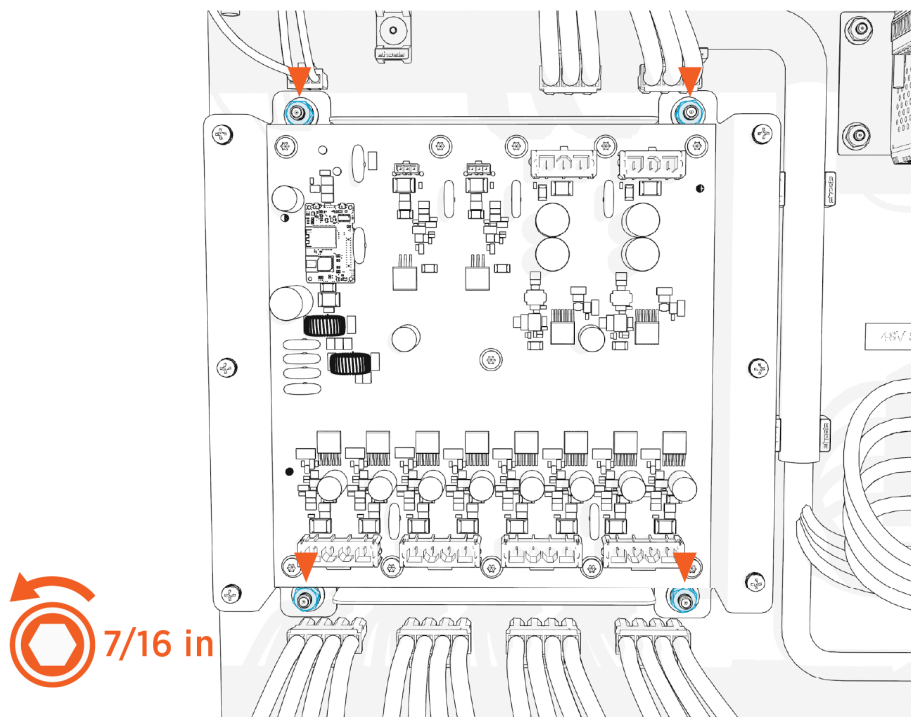
1. Locate the controller board within the low voltage cabinet.



2. Disconnect cables (x7) from the front side of the board.

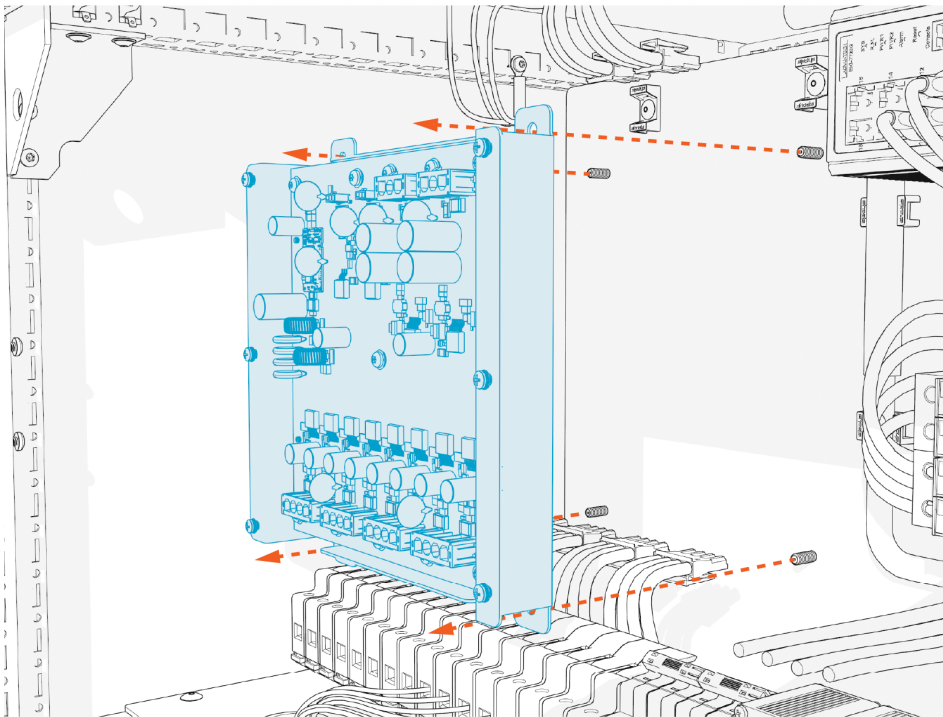


- Using a 7/16 inch hex socket, remove nuts and washer (x4) securing the controller board.



REINSTALL NOTE: When installing the replacement controller board, **torque the fasteners to 6.8 Nm (60 in-lb).**

4. Remove the controller board from the Power Hub.



Reverse the above steps to install the replacement controller board.

To complete the service, Power on the Power Hub.

Fuses 6

To replace the fuses, refer to the following topics:

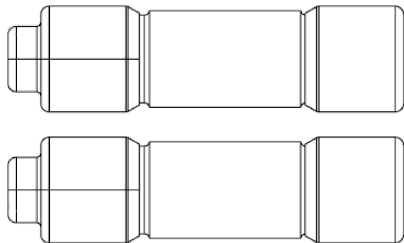
Tools



Stepladder

Service Components

Each kit ships with two replacement fuses.

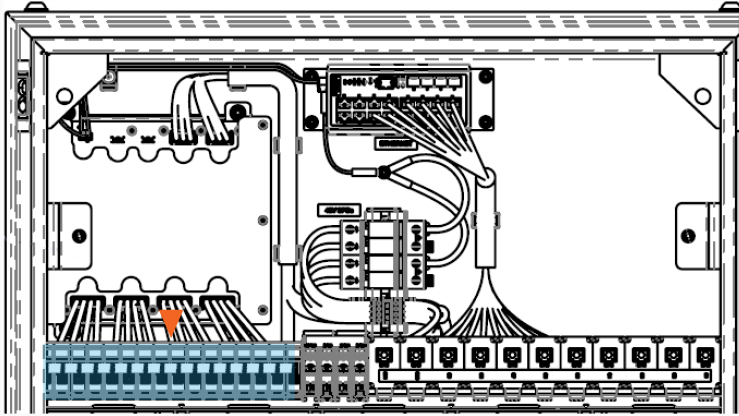


Before You Begin

1. End charging sessions at downstream Power Link 1000s.
2. De-energize the low voltage cabinet.

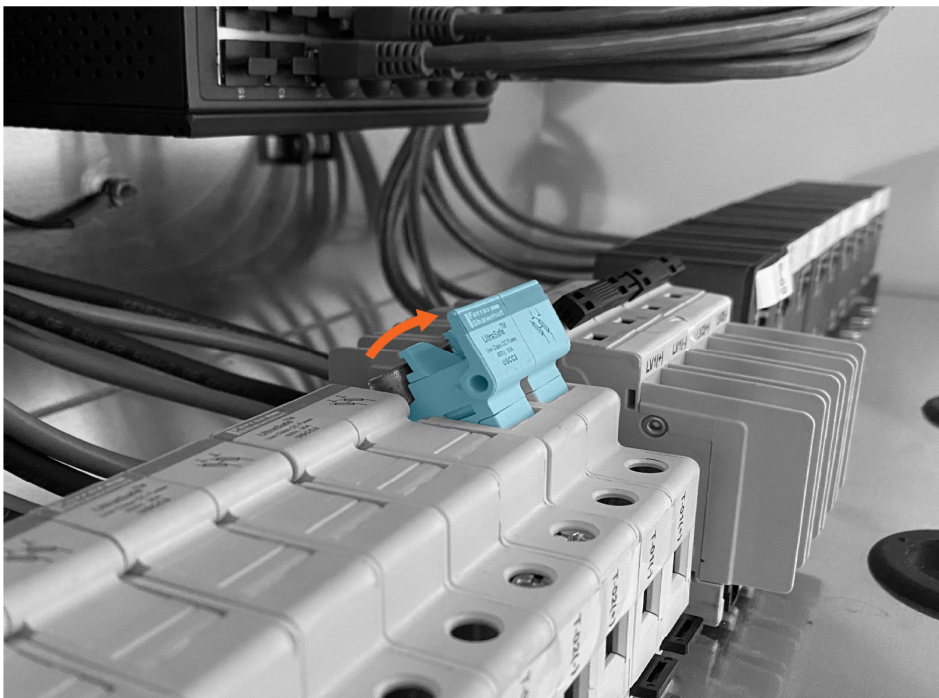
Replace Fuses

To replace fuses, complete the following steps:



There are eight dual-pole fuse blocks in the low voltage cabinet of the Power Hub. Follow the procedure below to replace the fuses in one fuse block.

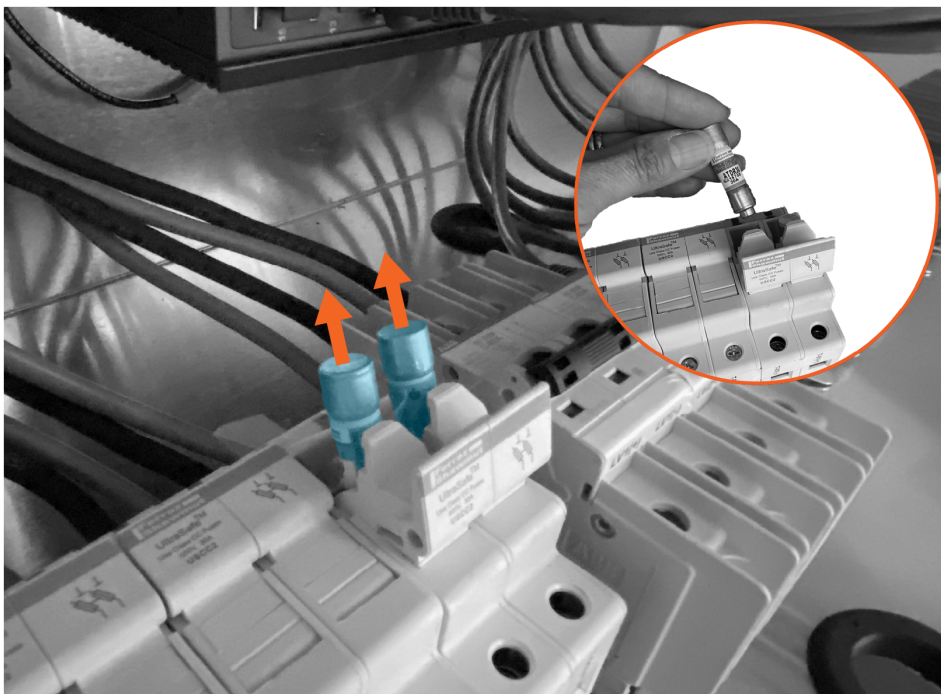
1. Pull up on the fuse holder tab.



-
2. Remove the fuses.



IMPORTANT: Note the orientation of the fuse during removal. Install the replacement fuse with the same orientation.



Reverse the above steps to install the replacement fuses.

To complete the service, Power on the Power Hub.

Vent Hood 7

To replace the vent hood, refer to the following topics:

Tools

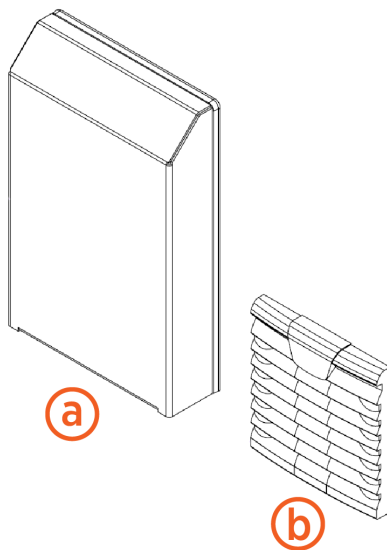


Stepladder

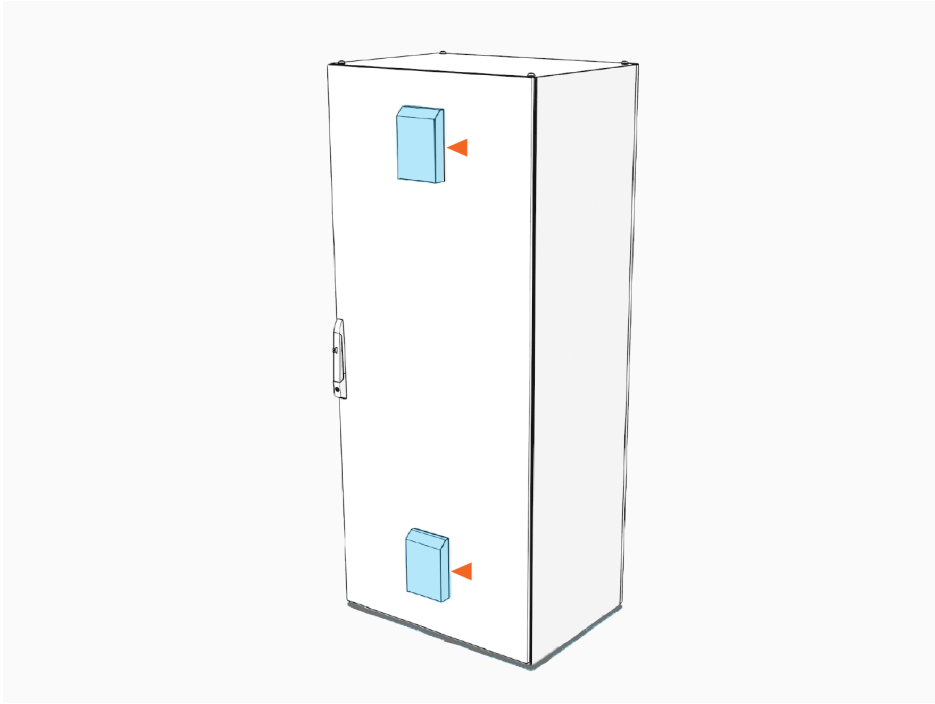
Service Components

The service components are listed as follows:

- (a) Vent hood
- (b) Filter vent



Replace Vent Hood and Filter Vent

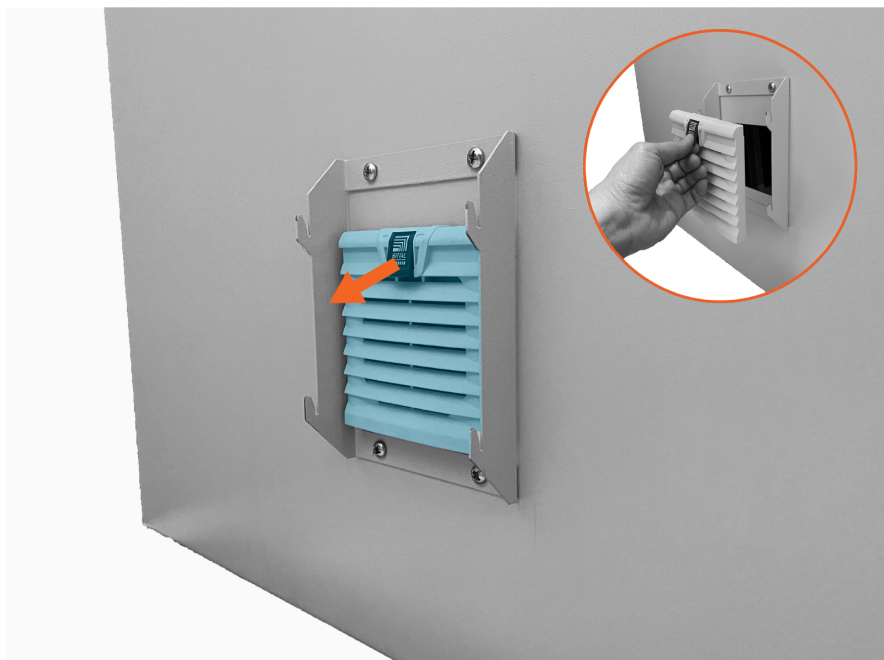


The Power Hub door has two filter vents covered by hoods. Follow the procedure below to remove and replace a hood and filter vent.

1. Slide the hood up to release it from the Power Hub door. Remove the hood.



-
2. Grasp the tab on the filter vent and pull to remove the vent from the door.



Reverse the above steps to install the replacement filter vent and hood.

Door Air Filter 8

To replace the door air filter, refer to the following topics:

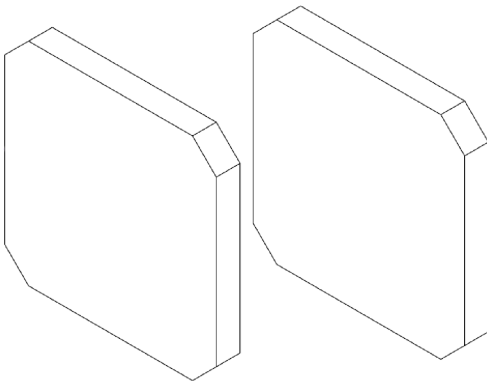
Tools



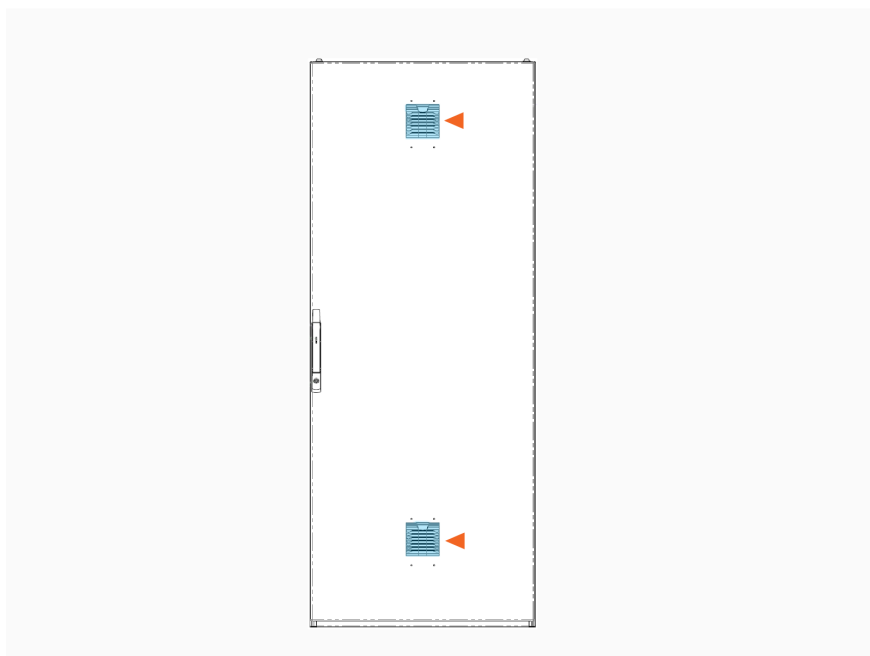
Stepladder

Service Components

Each kit ships with two air filters.



Replace Door Air Filter

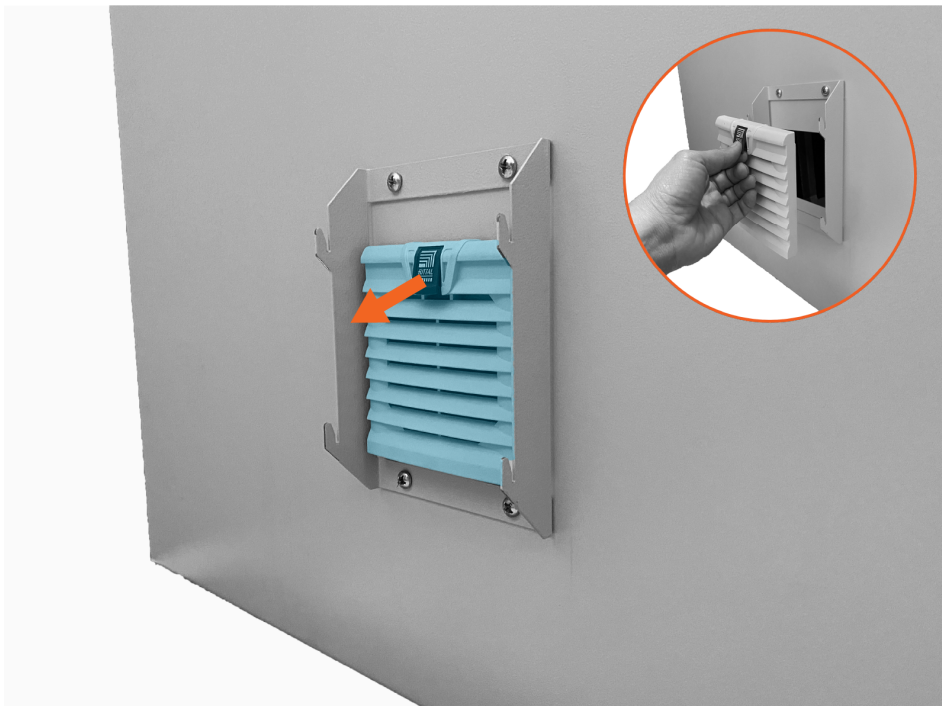


The Power Hub door has two filter vents, located beneath vent hoods. Follow the procedure below to replace the air filter in the vent assembly.

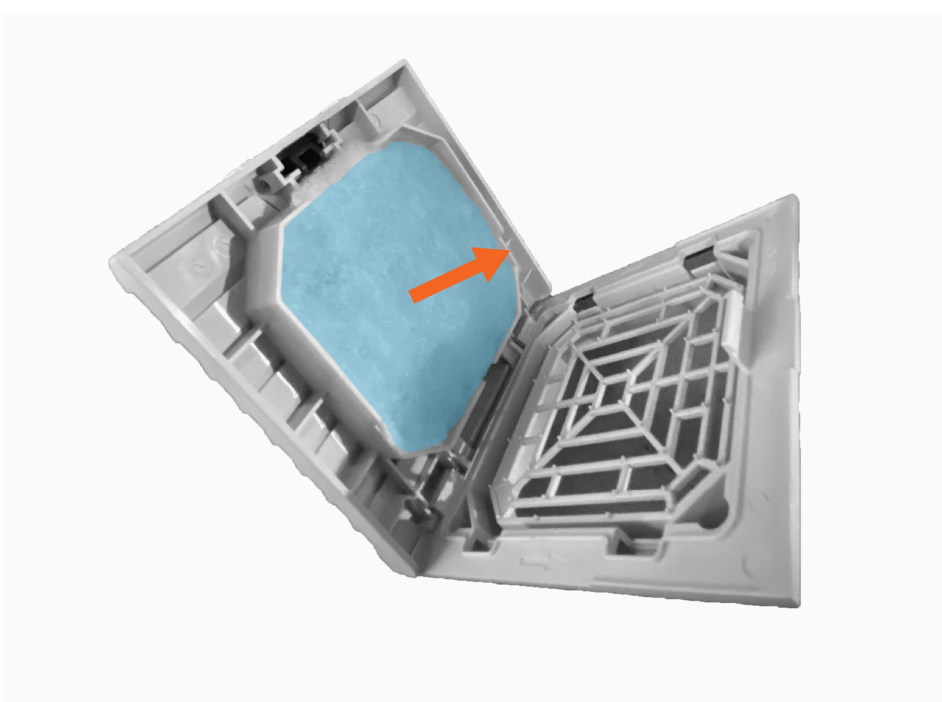
1. Slide the hood up to release it from the Power Hub door. Remove the hood.



-
2. Grasp the tab on the vent assembly and pull to remove the assembly from the door.



3. Open the vent assembly and remove the air filter.



Reverse the above steps to install the replacement air filter.

Power On 9

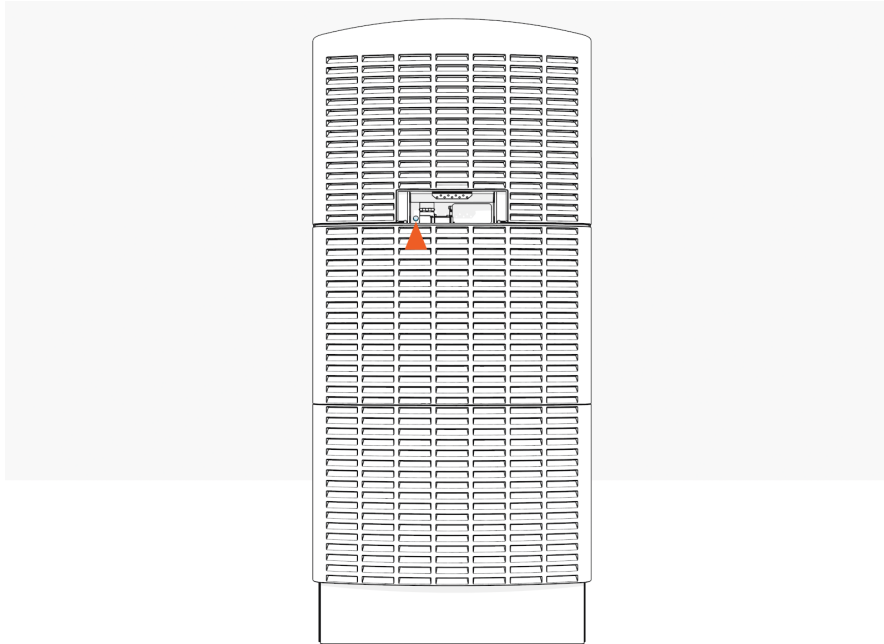
You must be a ChargePoint certified installer or technician to power on the Power Hub, or warranty limitations apply.

1. Turn on power at the same points that you turned it off.
2. Replace all deadfront panels.
3. Close the front door of the Power Hub.



NOTE: Be sure the door key is stored outside of the Power Hub. The door self locks upon closure.

4. If power was turned on by energizing upstream Power Block(s), verify the Power Block status light.
 - a. Open the security panel to check the status light.



- b. Confirm the status light illuminates yellow, and then green.



IMPORTANT: If the status light illuminates red, contact ChargePoint immediately at chargepoint.com/support.

5. The downstream Power Link 1000s will restart and begin self-diagnostics. The process may take several minutes to initiate. You may see messages intermittently until the system fully boots up. Wait for the Power Link 1000 self-diagnostics to run.

Self-Diagnostic	After Installation	After Service or Power Outage
Electrical safety checks	✓	✓
Lighting checks	✓	✓
Display panel checks	✓	✓
Component operation checks	✓	✓
Network connectivity checks	✓	✓

6. View diagnostics information:

- a. Log in to the ChargePoint Platform at na.chargepoint.com or ca.chargepoint.com or eu.chargepoint.com.
- b. Select **Stations**.
- c. Apply filters to locate the desired station.
- d. Select the station name to view the station-specific information.



IMPORTANT: If a red status alert appears, contact ChargePoint immediately at chargepoint.com/support. A yellow status alert provides you with information that may require action (such as maintenance action) or no action.

7. If you have not yet configured the Power Link 1000 (such as pricing, messaging, and additional options), do so after service is complete. Refer to the [Express Plus Power Hub Operation and Maintenance](#).
8. Complete the [post-service checklist](#).
9. Return all removed parts to ChargePoint. Reuse the packaging from the replacement part for the return shipment.

Recommended Checklist **A**

To adhere to ChargePoint best practices, complete the checklist using the following link:

<https://docs.chargepoint.com/ref-docs-sec/content/pdfs/3-dc/power-hub/ph-service-checklist.pdf>

Limited Warranty Information and Disclaimer

The Limited Warranty you received with your charging station is subject to certain exceptions and exclusions. For example, your use of, installation 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 limited 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.

Limitation of Liability

CHARGEPOINT IS NOT LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION LOST PROFITS, LOST BUSINESS, LOST DATA, LOSS OF USE, OR COST OF COVER INCURRED BY YOU ARISING OUT OF OR RELATED TO YOUR PURCHASE OR USE OF, OR INABILITY TO USE, THE CHARGING STATION, UNDER ANY THEORY OF LIABILITY, WHETHER IN AN ACTION IN CONTRACT, STRICT LIABILITY, TORT (INCLUDING NEGLIGENCE) OR OTHER LEGAL OR EQUITABLE THEORY, EVEN IF CHARGEPOINT KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY OF SUCH DAMAGES. IN ANY EVENT, THE CUMULATIVE LIABILITY OF CHARGEPOINT FOR ALL CLAIMS WHATSOEVER RELATED TO THE CHARGING STATION WILL NOT EXCEED THE PRICE YOU PAID FOR THE CHARGING STATION. THE LIMITATIONS SET FORTH HEREIN ARE INTENDED TO LIMIT THE LIABILITY OF CHARGEPOINT AND SHALL APPLY NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY.